



Sun StorEdge™ Configuration Service 1.2 Administrator's Guide

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Preface

The *Sun StorEdge Configuration Service 1.2 Administrator's Guide* provides procedures for configuring and managing storage with the Sun StorEdge Configuration Service 1.2 software.

Before You Read This Book

For the latest Sun StorEdge Configuration Service 1.2 software information, please see the *Sun StorEdge Configuration Service 1.2 Release Notes*.

How This Book Is Organized

This book contains the following sections:

Chapter 1 explains the software and provides an overview to the web-browser user interface (WUI).

Chapter 2 explains a brief overview of the command-line interface (CLI).

Chapter 3 explains how to configure the software.

Chapter 4 explains how to configure and manage Sun StorEdge T3, T3+, 6120 or 9900 Series arrays.

Chapter 5 explains how to view and manage alarms and log entries.

Chapter 6 explains troubleshooting.

Using UNIX Commands

This document may 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 environment
- Other software documentation that you received with your system

Typographic Conventions

Typeface	Meaning	Examples
AaBbCc123	The names of commands, files, and directories; on-screen computer output	Edit your <code>.login</code> file. Use <code>ls -a</code> to list all files. % You have mail.
AaBbCc123	What you type, when contrasted with on-screen computer output	% su Password:
<i>AaBbCc123</i>	Book titles, new words or terms, words to be emphasized	Read Chapter 6 in the <i>User's Guide</i> . These are called <i>class</i> options. You <i>must</i> be superuser to do this.
	Command-line variable; replace with a real name or value	To delete a file, type <code>rm filename</code> .

Shell Prompts

Shell	Prompt
C shell	<i>machine_name</i> %
C shell superuser	<i>machine_name</i> #
Bourne shell and Korn shell	\$
Bourne shell and Korn shell superuser	#

Related Documentation

Application	Title	Part Number
Installation	<i>Sun StorEdge Enterprise Storage Manager 1.2 Installation Guide</i>	817-1037-10
Release notes	<i>Sun StorEdge Configuration Service 1.2 Release Notes</i>	817-0998-10
User's guide	<i>Sun StorEdge Diagnostic Expert 1.2 User's Guide</i>	817-0195-10
Administration	<i>Sun StorEdge T3+ Array Administrator's Manual, Version 2.1 Controller Firmware</i>	816-4769-10
Installation and configuration	<i>Sun StorEdge T3+ Array Installation and Configuration Manual: Version 2.1 Controller Firmware</i>	816-4770-10

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<http://www.sun.com/products-n-solutions/hardware/docs>

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<http://docs.sun.com>

Overview

This chapter provides an overview to the Sun StorEdge Configuration Service Software by explaining some of the software features, how to start the software, and an introduction to the web-browser user interface (WUI).

This chapter describes the following topics:

- [“Introduction to the Configuration Service Software” on page 2](#)
- [“Starting and Stopping the Daemons” on page 5](#)
- [“Logging Into the Web Browser” on page 6](#)
- [“About the Web User Interface” on page 7](#)

Introduction to the Configuration Service Software

The Sun StorEdge Configuration Service software enables you to view and manage your storage devices. Using a web-browser user interface (WUI) or the command-line interface (CLI), you can:

- View hardware assets such as storage devices
- Manage asset reporting (also known as [discovery](#))
- Manage alarms and assets

The Sun StorEdge Configuration Service 1.2 command-line interface is described in Chapter 2.

Using the WUI only, you can:

- Set Configuration Service software attributes
- Launch other web browser-based applications related to devices in your environment

This section contains the following topics:

- “Notification Services” on page 3
- “Starting Related Applications” on page 3
- “Configuration Service Log Files” on page 4

Command-Line Interface (CLI)

The Sun StorEdge Configuration Service 1.2 command-line interface is described in Chapter 2.

Notification Services

The Configuration Service software uses the Simple Mail Transfer Protocol (SMTP) to send e-mail to users each time an alarm occurs. You can decide which alarm severity level gets reported to the user and how often it is reported.

The software also enables you to send information to applications that are able to receive Simple Network Management Protocol (SNMP) traps.

See [Chapter 3](#) for additional information.

Starting Related Applications

The Configuration Service software enables you to start applications related to your storage devices. These applications include:

- Sun Storage Diagnostic Expert (SSDE) software (see “To Launch the SSDE Software” on page 8)
- Sun StorEdge 9900 series management software (see “Managing the Sun StorEdge 9900 Series” on page 31)

Note – You must install these launchable applications on all relevant platforms in your environment.

Configuration Service Log Files

The Configuration Service software logs information to the log files described in TABLE 1-1.

TABLE 1-1 Configuration Service Log Files

File Name	Function
/opt/SUNWdm/gre/var/log/access. <i>date</i> .log	Tracks access to servers.
/opt/SUNWdm/gre/var/log/sscsd.log	Captures unviewable serial object data.
/opt/SUNWdm/gre/var/log/sscsd.txt	Captures viewable serial object data.
/opt/SUNWdm/gre/var/log/sscsd.stdio	Captures daemon log entries.
/opt/SUNWdm/var/sadm/wbem/	CIMOM log files

Starting and Stopping the Daemons

Be sure to start the software on the management station and each agent station after you install and configure the software, as described in the *Sun StorEdge Enterprise Storage Manager 1.2 Installation Guide*.

- To start the Configuration Service daemons, open a terminal window and type:

```
# /etc/init.d/prngd start # only on Solaris 8
# /etc/init.d/sshd start
# /etc/init.d/sscs.wbem start
# /etc/init.d/sscs start
```

- To stop the Configuration Service daemons, open a terminal window and type:

```
# /etc/init.d/sscs stop
# /etc/init.d/sscs.wbem stop
# /etc/init.d/sshd stop
# /etc/init.d/prngd stop # only on Solaris 8
```

Note – After stopping and restarting the daemons and logging in to the Sun StorEdge Configuration Service software, you may get a temporary message that it is acquiring storage devices.

Logging Into the Web Browser

If you have successfully installed the software and started the daemons, log in to the Configuration Service software in a web browser.

Note – If you did not use the default value, you will need the port number you defined during the configuration process. (See “To Configure the Configuration Service Software” in the *Sun StorEdge Enterprise Storage Manager 1.2 Installation Guide*.)

1. **Open a cookie-accepting web browser.**
2. **If you are using Netscape Communicator, set the browser cache setting to Always (recommended), or Once Per Session, but not to Never.**
3. **Type one of the following URLs in the URL text field:**
 - For a non-secure web server, type a URL with the following format in a browser:

`http://nodename.domain:port-number`

An example with the default port number is:

`http://happy.eng:8080`

- For a secure web server, type a URL with the following format in a browser:

`https://nodename.domain:port-number`

An example with the default port number is:

`https://happy.eng:9443`

4. **At the Login page, enter the User Name and Password provided by your system administrator.**
5. **Click the Log In button to log in.**

The Asset page is loaded. There may be a message that the software is momentarily in the process of acquiring devices.

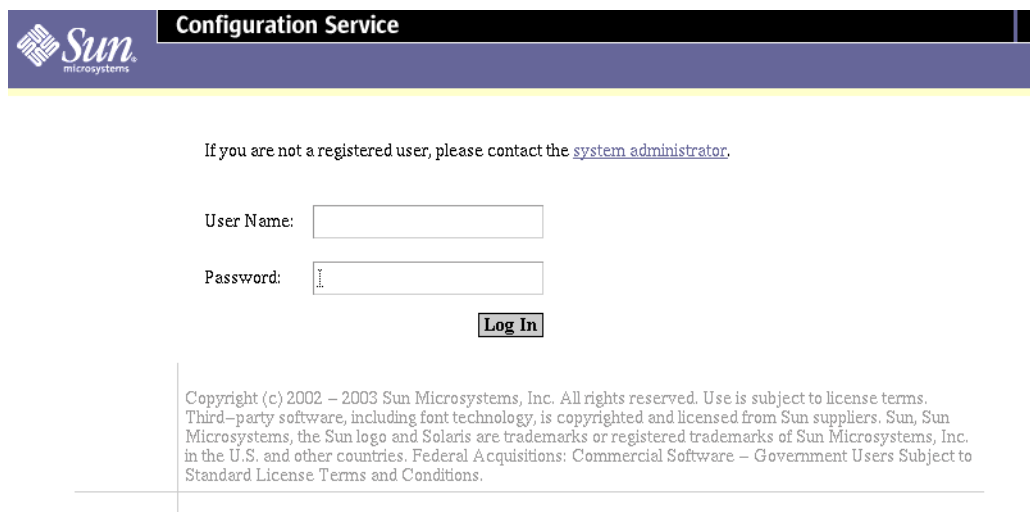
About the Web User Interface

The Configuration Service WUI consists of the tabs and pages listed below. After you login, you can access each page by clicking its labelled tab.

- “Login Page” on page 7
- “Assets Tab” on page 8
- “Alarm Tab” on page 8
- “Logs Tab” on page 8
- “Health Tab” on page 8
- “Administration Tab” on page 9

Login Page

FIGURE 1-1 shows the Login Page which includes the User Name and Password fields required to gain access to the Configuration Service WUI.



Configuration Service

If you are not a registered user, please contact the [system administrator](#).

User Name:

Password:

Log In

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FIGURE 1-1 Sun StorEdge Configuration Service login

Assets Tab

The Assets page enables you to manage and display information about your storage devices. The default Assets page shows an Assets Summary table of all Sun StorEdge T3, T3+, and 6120 assets.

- **Click one of the links under the Assets page tab to show details about the asset:**
 - Arrays for Sun StorEdge T3, T3+, and 6120 disk arrays
 - 9900 Family for the Sun StorEdge 9900 series

For additional information on functionality available on the Asset tab, see “Managing and Configuring the Sun StorEdge Arrays” on page 31.

Alarm Tab

The Alarms page enables you to filter and display information about any current alarms from your storage devices or the Configuration Service software. For additional information on the Alarm tab, see “Managing Alarms” on page 50.

Logs Tab

The Logs page enables you to filter and display information about any log entries from your storage devices or the Configuration Service software. For additional information on the Log tab, see “Managing Logs” on page 53.

Health Tab

When you click the Health tab, you can access the Sun Storage Diagnostic Expert (SSDE) software. For additional information on how to use the SSDE software, see the *Storage Diagnostic Expert User's Guide*.

▼ To Launch the SSDE Software

1. **Click the Health tab.**
2. **Click Launch Sun StorEdge Diagnostic Expert (SSDE).**

▼ To Configure the Configuration Service Software to Access the SSDE Software

1. Run the `esmconfig` script.

See “To Run the Configuration Script” in the *Sun StorEdge Enterprise Storage Manager 1.2 Installation Guide*.

2. When prompted, enter the Sun StorEdge SSDE URL.

You can accept the default URL or reconfigure that value.

3. Restart the Configuration Service software.

```
# /etc/init.d/sscs stop  
# /etc/init.d/sscs start
```

Administration Tab

The Administration page enables you to configure e-mail notification, logging, and other parts of the Configuration Service software. In addition, use this tab for discovering multiple devices. For additional information on the Administration tab, see Chapter 3.

Using the Web-Browser User Interface

The following topics are useful when using the WUI.

- “Navigation Tips” on page 10
- “Discovering Devices” on page 11

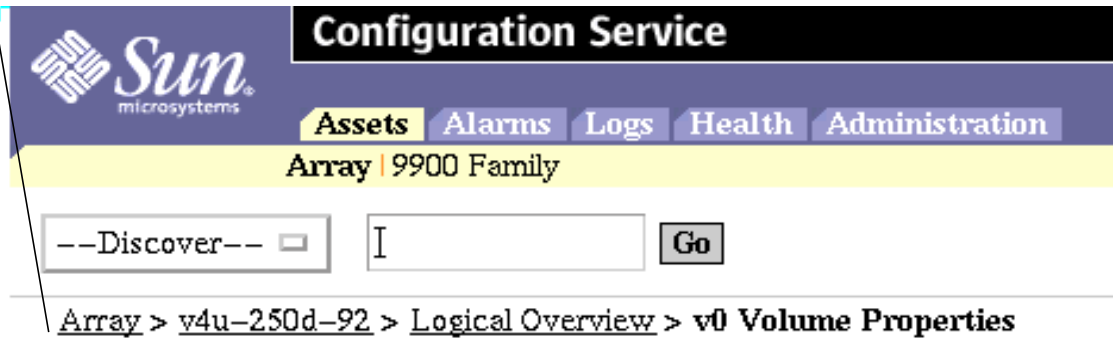
Navigation Tips

You can display various levels of detail about your storage. Typically, you click links and buttons as you would on any other web page to navigate the software.

The software also displays a logical nesting of functionality to show how you arrived at a page. This path includes underlined links so that you can return to a certain point in your navigation instead of starting at a top-level page or tab.

For example, if you just viewed LUN properties, you can click the device name link to perform other operations on it. See FIGURE 1-2

Click the device name link to perform other operations on it.



v0 Volume Properties

FIGURE 1-2 Navigation Link Example

Discovering Devices

There are two ways of discovering Sun StorEdge T3, T3+, and 6120 arrays. You can discover arrays individually with the Discover pull-down menu which appears on most pages in the WUI. You can also setup reusable discovery criteria which can be applied to more than one device. For additional information on setting up discovery criteria, see “Operations for Multiple Sun StorEdge T3, T3+, and 6120 Arrays” on page 44.

▼ To Use the Pull-Down Menu

The Discover pull-down menu appears on each page in the WUI.

- **To discover a Sun StorEdge T3, T3+, or 6120 array, enter either IP address or Device Name and click Go.**

Note – If you discover devices using the Discover pull-down menu, you may be prompted for the device password when configuring it.

Sun StorEdge Configuration Service Command-Line Interface (CLI)

The Configuration Service software provides a secure command-line interface for all Configuration Service, Sun StorEdge T3, T3+, or 6120 array, alarm, and log management functionality. There are two options for logging in to this interface, the Secure Shell, and `telnet`.

This section contains the following topics:

- “Using telnet” on page 14
- “Using the Secure Shell” on page 15
- “Using the Command-Line Interface” on page 15
- “Command-Line Interface (CLI) and StorEdge Shell Man Pages” on page 21

Using telnet

In locations where security is not an issue, you can use the `telnet` interface.

1. Telnet to the host with the specified CLI port.

The default port is 8023.

```
$ telnet hostname.domain port-number
Trying 127.0.0.1...
Connected to localhost.
Escape character is '^]'.

TelnetD library (embeddable telnet daemon)
Copyright (c) 2000, Dieter Wimberger
All rights reserved.

login: root
Password:

Welcome to the StorEdge Shell V1.2.0
```

The login name can be root or any user name registered with the Sun StorEdge Configuration Service by way of the `esmconfig` script. For more information about the `esmconfig` script, see the *Sun StorEdge Enterprise Storage Manager 1.2 Installation Guide*.

2. To run device specific commands, navigate to `/devices/array/sun`.

```
SeSh [1] cd devices/array/sun
```

Using the Secure Shell

One way to access the command-line interface is by way of the Secure Shell client (ssh) available on Solaris 8 and 9. Depending upon how your SSH environment is configured, you may need to see the `ssh.1m` man page for additional information on starting a session.

1. To initiate a Secure Shell client session on a host, enter the following:

```
# ssh -c 3des hostname
```

This logs you into the Configuration Service command line interface (CLI).

2. To run device specific commands, navigate to `/devices/array/sun`.

```
SeSh [1] cd /devices/array/sun
```

Using the Command-Line Interface

Listed below are some useful CLI procedures.

- “To List Built-In CLI Commands” on page 16
- “To View Sun StorEdge T3, T3+, or 6120 Arrays Being Managed” on page 16
- “To Display Command Sub-command Usage” on page 16
- “To Add Sun StorEdge T3, T3+, or 6120 Arrays and Set the Password” on page 16
- “To Set the Array Credential” on page 17
- “To Set the Array Password” on page 18
- “To View Volume Configuration” on page 18
- “To Create and Bring a Volume Online” on page 18
- “To Display System Information” on page 19
- “To Display Unit Information” on page 19
- “To Display FRU Information” on page 20
- “To Create a LUN with Volume Slicing Enabled” on page 20
- “To View Alarm Entries” on page 21
- “To View Log Entries” on page 21

▼ To List Built-In CLI Commands

```
SeSh [1] help
```

▼ To View Sun StorEdge T3, T3+, or 6120 Arrays Being Managed

- **Navigate to the `devices/array/sun` directory and display discovered arrays.**

```
SeSh [2] cd devices/array/sun
SeSh [3] ls
```

▼ To Display Command Sub-command Usage

- **From the `devices/array/sun` directory, type one of the following:**

- `asset`
- `config`
- `control`
- `discovery`
- `inventory`
- `/services/alarm`
- `/services/log`

▼ To Add Sun StorEdge T3, T3+, or 6120 Arrays and Set the Password

1. **Navigate to the `devices/array/sun` directory.**

```
SeSh [3] cd devices/array/sun
```

2. **To add Sun StorEdge T3, T3+, or 6120 arrays, enter the `discovery add` command:**

```
SeSh [4] discovery add array-name array-name array-name...
```

3. Use the `config credential` command to set the password the Sun StorEdge Configuration Service software will use with the device for configuration.

```
SeSh [5] config credential array-name1 array-name2 array-name3
```

4. Set passwords with the `config password` command.

```
SeSh [6] config password array-name1 array-name2 array-name3
Please enter T3 password:
Please confirm T3 password:
config: INFO: credential: successfully set credential for array-name1
config: INFO: credential: successfully set credential for array-name2
config: INFO: credential: successfully set credential for array-name3
```

5. Verify passwords have been set with the `inventory info` command.

```
SeSh [7] inventory info
```

If the Password column has 'admin', you have set the root password. You may need to allow some time for the output of 'inventory info' to be updated since it uses cached values.

▼ To Set the Array Credential

1. Use the `config credential` command to set the password the Sun StorEdge Configuration Service software will use with the device for configuration.

```
SeSh [8] config credential array-name1 array-name2 array-name3
```

2. When prompted, enter the password.
3. When prompted, enter the confirm password by entering it again.

▼ To Set the Array Password

1. Use the `config password` command to set the password for the Sun StorEdge T3, T3+, or 6120 arrays.

```
SeSh [8] config password array-name1 array-name2 array-name3
```

2. When prompted, enter the SSCS (Sun StorEdge Configuration Service) root password.
3. When prompted, enter the password.
4. When prompted, enter the confirm password by entering it again.

▼ To View Volume Configuration

- Run `config status` command to view the volume information on a device.

```
SeSh [10] config status array-name
```

▼ To Create and Bring a Volume Online

1. Determine available sizes.

```
SeSh [11] config volcreate -f -p -u unit-id -r raid-level array-name
```

Using the `-p` option will allocate for a hot spare and the hot spare will not appear as available space.

2. Create volume.

When you create a volume, you must specify the volume size with the `-i` option, which indicates the corresponding size by index, or with the `-s` option, whereby you specify volume size in Gbytes. Use the `-a` option in 'config volcreate' command to automatically bring the volume online after the initialization.

- a. Use the `-i` option to choose the size from the list when creating a volume.

```
SeSh [12] config volcreate -a -u unit-id -r raid-level -i index -p array-name
```

b. Use the `-s` option to specify the size on your own.

```
SeSh [12] config volcreate -a -u unit-id -r raid-level -s size -p array-name
```

When using the `-s` option, you will be prompted with a list of available sizes.

The Sun StorEdge T3, T3+, or 6120 arrays only allow 2 volumes per device, so if you don't use the rest of the space for the second volume, you will be wasting some space. You will get the warning, but the operation will continue.

WARNING: Inefficient Use of Available Space

Creating the second volume with less than the maximum capacity available leaves a segment of space that can not be used.

3. Check volume initialization for completion.

```
SeSh [13] config info -v vol-name array-name
```

Once the operation is done, you can mount the volume.

▼ To Display System Information

- Execute the following command:

```
SeSh [13] asset info array-name
```

▼ To Display Unit Information

- Execute the following command:

```
SeSh [13] asset info -u * array-name
```

Pass `*` to the `unit-id` to get all the unit information.

▼ To Display FRU Information

- Execute the following command:

```
SeSh [13] asset info -m * array-name
```

Pass '*' to the *fru-id* to get all the unit information.

▼ To Create a LUN with Volume Slicing Enabled

Note – This is only available on Sun StorEdge T3+ with firmware version 2.1 or greater.

1. View if slicing feature is enabled.

```
SeSh [24] config status array-name
```

2. Enable volume slicing.

```
SeSh [25] config set -p "volslicing=enable" array-name
```

3. Create the LUN.

```
SeSh [26] config luncreate-n lun-name -v vol-name -s size -p array-name
```

4. Verify the LUN information.

```
SeSh [27] config status -l * array-name
```


▼ To View Alarm Entries

1. **Navigate to the `/services` directory.**

```
SeSh [16] cd /services
```

2. **Display alarms.**

```
SeSh [17] alarm list
```

▼ To View Log Entries

1. **Navigate to the `/services` directory.**

```
SeSh [16] cd /services
```

2. **Display log entries.**

```
SeSh [17] log list
```

Command-Line Interface (CLI) and StorEdge Shell Man Pages

See the man pages listed in TABLE 2-1 for additional information on the StorEdge Shell. See the man pages listed in TABLE 2-2 for additional information on Sun StorEdge Configuration Service CLI man pages for the Sun StorEdge T3, T3+, or 6120 array.

StorEdge Shell Man Pages

See the man pages listed in TABLE 2-1 for additional information on the StorEdge Shell.

TABLE 2-1 CLI Command Information

CLI command	Description
intro	Introduction to StorEdge Shell UNIX commands
alarm	Add, list or remove alarms from the log in the StorEdge Shell
attributes	Command characteristics unique to the StorEdge Shell
cd	Change the working directory in the StorEdge Shell
echo	Echoing arguments in the StorEdge Shell
environ	User environment variables for the StorEdge Shell
exit	Display exit status for functions executed in the StorEdge Shell
help	Lists available commands in the StorEdge Shell
log	Add or list alarms from the StorEdge Shell
ls	Lists storage resources in the StorEdge Shell
man	Man page command for the StorEdge Shell
pwd	Print working directory in the StorEdge Shell
sesh	StorEdge shell command interpreter
set	Setting environment variables in the StorEdge Shell
unset	Unsetting environment variables in the StorEdge Shell

Sun StorEdge Configuration Service CLI Man Pages for the Sun StorEdge T3, T3+, or 6120 Arrays

See the man pages listed in TABLE 2-2 for additional information on the StorEdge Shell.

TABLE 2-2 Sun StorEdge Configuration Service CLI Man Pages for the Sun StorEdge T3, T3+, or 6120 array

CLI command	Description
asset	Display component information for a Sun StorEdge T3, T3+, or 6120 array
config	Perform configuration actions on Sun StorEdge T3, T3+, or 6120 arrays
control	Enable, disable, and reset operations for Sun StorEdge T3, T3+, or 6120 arrays
discovery	Add an array to, or remove an array from the list of discovered disk arrays
intro	Introduction to Sun StorEdge T3, T3+, or 6120 array commands
inventory	Display inventory overview for Sun StorEdge T3, T3+, or 6120 arrays

Setting Up the Configuration Service

The Configuration Service software can be configured to notify, by e-mail, anyone interested in a storage device's alarms or log entries. In addition, you can configure notification for all or limited log classifications. This section contains the following procedures:

- “Configuring E-Mail Notification” on page 25
- “Configuring SNMP Notification” on page 28
- “Configuring Logging and Miscellaneous Contact E-mail” on page 30

Configuring E-Mail Notification

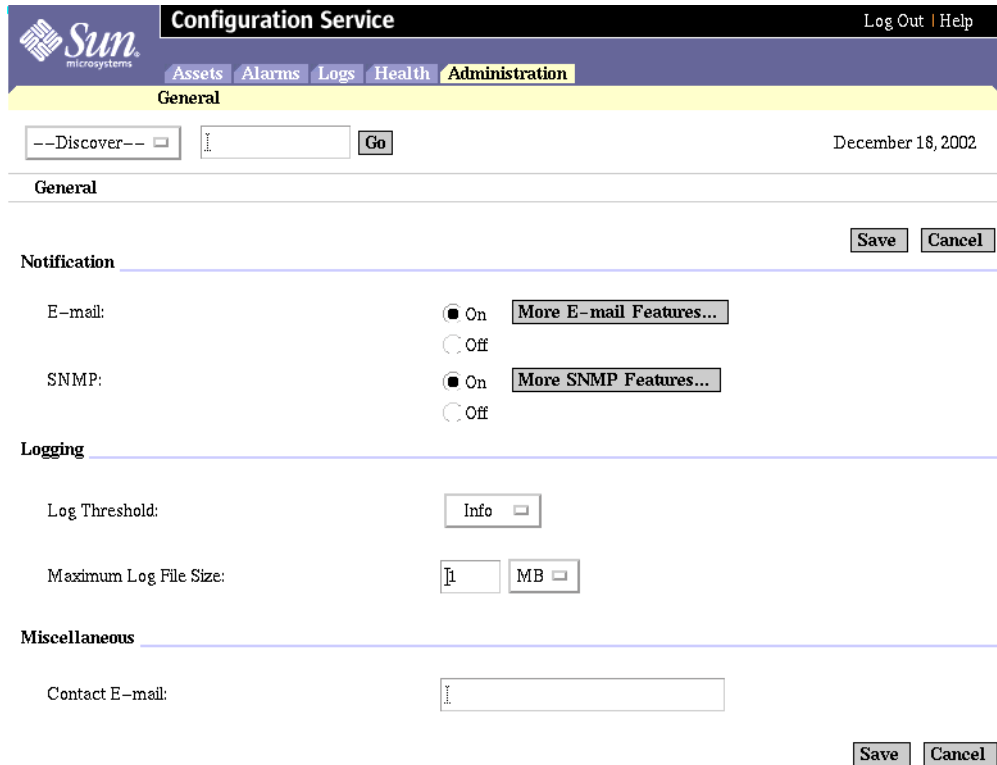
This section contains the following topics:

- “To Configure E-Mail Notification” on page 26
- “To Modify or Delete Notification E-Mail Addresses” on page 28

▼ To Configure E-Mail Notification

1. Click the Administration tab.

The Administration page is displayed.



The screenshot shows the Sun Configuration Service web interface. At the top, there is a header bar with the Sun Microsystems logo on the left, the text "Configuration Service" in the center, and "Log Out | Help" on the right. Below the header is a navigation bar with tabs: "Assets", "Alarms", "Logs", "Health", and "Administration" (which is highlighted). Under the "Administration" tab, the "General" sub-tab is selected. The main content area is divided into sections: "General", "Notification", "Logging", and "Miscellaneous". In the "General" section, there is a "--Discover--" button, a text input field, and a "Go" button. The date "December 18, 2002" is displayed on the right. The "Notification" section contains two rows of settings. The first row is for "E-mail" with a radio button set to "On" and a "More E-mail Features..." button. The second row is for "SNMP" with a radio button set to "On" and a "More SNMP Features..." button. The "Logging" section has a "Log Threshold:" label with an "Info" button and a "Maximum Log File Size:" label with a text input field containing "1" and a "MB" button. The "Miscellaneous" section has a "Contact E-mail:" label with a text input field. At the bottom right of the page, there are "Save" and "Cancel" buttons.

Configuration Service Log Out | Help

Assets Alarms Logs Health Administration

General

--Discover-- [] Go December 18, 2002

General

Save Cancel

Notification

E-mail: ☒ On [More E-mail Features...](#)
☐ Off

SNMP: ☒ On [More SNMP Features...](#)
☐ Off

Logging

Log Threshold: Info []

Maximum Log File Size: 1 MB []

Miscellaneous

Contact E-mail: []

Save Cancel

FIGURE 3-1 General Administration Page

2. Select the radio buttons of the type of notification you desire.

3. For additional e-mail configuration, click More E-mail Features

The screenshot shows the Sun Configuration Service Administration interface. At the top, there's a navigation bar with 'Assets', 'Alarms', 'Logs', 'Health', and 'Administration' (which is highlighted). Below this is a 'General' section with a '--Discover--' button, a text input field containing 'I', and a 'Go' button. The date 'December 18, 2002' is displayed on the right. A breadcrumb trail shows 'General > More E-mail Features'. The 'Specify SMTP Server' section has a text input field for 'IP or Host' containing 'localhost' and an 'Update' button. The 'Alarm Levels' section has an 'E-mail Addresses' subsection with 'Add', 'Delete', and 'Modify' buttons. Below these is a table with columns: 'Alarm Level', 'Medium', 'E-mail Address', 'Minimum Time', and 'Locale'. The table currently shows 'No items were found.'

FIGURE 3-2 Configuration Service More E-mail Feature Administration

4. Type SMTP Server IP address or Host name and click Update.

5. Click Add to enter an e-mail address for notification.

6. Select Alarm Level from the pull-down menu.

7. Select Medium from the pull-down menu.

If selecting e-mail as your notification medium, *all* alarms will be sent to an e-mail account. The messages will be sent at the intervals specified by the Minimum Time Between Messages field.

For pagers, *only* the first alarm during the time interval specified by the Minimum Time Between Messages will be sent.

8. Enter number of minutes, days or hours in the field and select from the pull-down menu.

9. Select the locale to which the message is being sent from the pull-down menu.

10. Click Save.

After receiving a message that the new e-mail address was saved, you may need to click Cancel to return to the More E-Mail Features page.

▼ To Modify or Delete Notification E-Mail Addresses

1. Click the **Administration** tab.
2. Click **More E-Mail Features**.
3. Click the check box of the e-mail address.
4. Click **Modify** or **Delete**.

Configuring SNMP Notification

This section contains the following procedures:

- “To Configure SNMP Notification” on page 28
- “To Modify SNMP Alarms” on page 29
- “To Delete SNMP Alarms” on page 30

▼ To Configure SNMP Notification

1. Click the **Administration** tab.
2. Click the **SNMP On** radio button.
3. Click **More SNMP Features**.

The More SNMP Features pages is displayed.

Configuration Service Log Out | Help

Assets Alarms Logs Health **Administration**

General

--Discover-- December 18, 2002

[General](#) > [More SNMP Features](#)

Alarm Levels

SNMP Notification

Alarm Level	Hostname	Port Number	Locale
No items were found.			

FIGURE 3-3 Configuration Service More SNMP Feature Administration

4. Click add.
5. Select alarm level from the pull-down menu, enter hostname, modify Port Number (if desired), and click Save.

After receiving a message that the new SNMP contract was added, you may need to click Cancel to return to the More SNMP Features page.

▼ To Modify SNMP Alarms

1. Click the Administration tab.
2. Click More SNMP Features.
3. Click the button of the SNMP notification.
4. Click Modify.
5. Enter desired modifications to Hostname or Port Number, and click Save.

▼ To Delete SNMP Alarms

1. Click the **Administration** tab.
2. Click **More SNMP Features**.
3. Click the button of the **SNMP Notification**.
4. Click **Delete**.
5. Click **Delete** again to confirm and complete the operation.

Configuring Logging and Miscellaneous Contact E-mail

In addition to e-mail and SNMP notification, you can also configure logging and miscellaneous contact e-mail from the Administration page.

▼ To Configure Logging and Miscellaneous Contact E-mail

1. Click the **Administration** tab.
2. Select **Logging Threshold** from the pull-down menu.
3. Type the maximum log file size.
You must stop and restart the daemons for any log file size changes to take effect (see “Starting and Stopping the Daemons” on page 5).
4. Type the **Contact E-mail** address.
5. Click **Save**.

Managing and Configuring the Sun StorEdge Arrays

This section provides procedures to manage and configure arrays. This section contains the following topics:

- “Managing the Sun StorEdge 9900 Series” on page 31
- “Operations for Individual Sun StorEdge T3, T3+, and 6120 Arrays” on page 32
- “Operations for Multiple Sun StorEdge T3, T3+, and 6120 Arrays” on page 44

Managing the Sun StorEdge 9900 Series

For additional information on Sun StorEdge 9900 series functionality available on the Asset tab, see the following procedures:

- “To Start the Sun StorEdge 9900 Series Software” on page 31
- “To Configure the Configuration Service Software to Access the Sun StorEdge 9900 Series Software” on page 32.

For additional information on how to use the Sun StorEdge 9900 Series Software, see the documentation shipped with it

▼ To Start the Sun StorEdge 9900 Series Software

1. Click the **Assets** tab.
2. Click the **9900 Family** sub-tab.
3. Click **Launch Sun StorEdge 9900 Series Software**.

▼ To Configure the Configuration Service Software to Access the Sun StorEdge 9900 Series Software

1. Run the `esmconfig` script.

See “To Configure the Configuration Service Software” in the *Sun StorEdge Enterprise Storage Manager 1.2 Installation Guide*.

2. When prompted, enter the Sun StorEdge 9900 Series Software URL.

3. Restart the Configuration Service software.

```
# /etc/init.d/sscs stop  
# /etc/init.d/sscs start
```

Operations for Individual Sun StorEdge T3, T3+, and 6120 Arrays

This section contains procedures which you can perform on one array at a time. You can create volumes and LUNs and display information about different array components. You must perform some operations on each individual array.

The functionality available is organized into three different views:

- “Physical Overview View” on page 33
- “System Settings View” on page 34
- “Logical Overview View” on page 37

Physical Overview View

The Physical Overview contains functions which enable you to manage physical attributes of an array. If you see a warning message displayed when viewing the Physical Overview of an array, you may need to upgrade the HTML pages on the array. See “To Update Sun StorEdge Array HTML Files” on page 63.

This section contains the following procedures:

- “To View System Properties” on page 33
- “To View Component Properties” on page 33
- “To Enable or Disable a Partner Pair Controller” on page 33
- “To Shutdown an Array From the Physical Overview” on page 34
- “To Reset an Array From the Physical Overview” on page 34

▼ To View System Properties

- From the Assets tab Array page, click a device name.

▼ To View Component Properties

1. From the Assets tab Array page, click a device name.
2. Click a unit number.
3. Click a component.
 - Disk
 - Controller
 - Power/Cooling Unit
 - Interconnect card
 - Port 1

▼ To Enable or Disable a Partner Pair Controller

1. From the Assets tab Array page, click a device name.
2. Click Controller.
3. Click Enable or Disable.

▼ To Shutdown an Array From the Physical Overview

1. From the Assets tab Array page, click the device name of the array you want to shut down.
2. Select Shutdown from the Actions pull-down menu.

▼ To Reset an Array From the Physical Overview

1. From the Assets tab Array page, click the device name of the array you want to restart.
2. Select Restart from the Actions pull-down menu.
3. Click OK.

System Settings View

This section contains the following procedures:

- “To Configure Cache Information” on page 34
- “To Configure MultiPath Support” on page 35
- “To Configure Network Properties” on page 35
- “To Configure Fibre Channel Topology” on page 36

▼ To Configure Cache Information

1. From the Assets tab Array page, click the device name of the array you want to configure.
2. Select System Settings from the View pull-down menu.
3. Select Auto or Off for Cache Mirroring.
4. Select Stripe Size, if available
5. Select Cache Mode from the pull-down menu.
6. Select On or Off for Read Ahead Mode.
7. Select Disk Reconstruction Rate from the pull-down menu and click Save.

8. Reset the array.

For more information, see “To Reset an Array From the Physical Overview” on page 34.

▼ To Configure MultiPath Support

1. **From the Assets tab Array page, click the device name of the array you want to configure.**
2. **Select System Settings from the View pull-down menu.**
3. **Select MultiPath Support from the pull-down menu.**
4. **Click Save.**
5. **Reset the array.**

For more information, see “To Reset an Array From the Physical Overview” on page 34.

▼ To Configure Network Properties

1. **From the Assets tab Array page, click the device name of the array you want to configure.**
2. **Select System Settings from the View pull-down menu.**
3. **Type the IP Address, Subnet Mask, and Gateway IP Address.**
4. **Select Rarp Enabled, if desired.**
5. **Click Save.**
6. **Reset the array.**

For more information, see “To Reset an Array From the Physical Overview” on page 34.

▼ To Configure Fibre Channel Topology

Note – This is only available with Sun StorEdge T3+ and 6120 arrays with firmware version 2.1.

1. From the Assets tab Array page, click the array name that you want to configure.
2. Select System Settings from the View pull-down menu.
3. Select Fibre Channel Topology from the pull-down menu.
4. Click Save.
5. Reset the array.

For more information, see “To Reset an Array From the Physical Overview” on page 34.

Logical Overview View

The Logical Overview view contains all Configuration Service functions pertaining to volumes and LUNs.

This section contains the following procedures:

- “To Add a Volume” on page 37
- “To Delete a Volume” on page 38
- “To Bring a Volume Offline” on page 39
- “To Show LUNs” on page 39
- “To View Volume Properties” on page 39
- “To Create a LUN” on page 39
- “To Delete a LUN” on page 40
- “To Modify a LUN” on page 40
- “To View Initiator” on page 41
- “To Create an Initiator Group” on page 42

▼ To Add a Volume

1. From the Assets tab Array page, click the array name where you want to add a volume.
2. Select Logical Overview from the View pull-down menu.
3. Click Add.

Note – Resizing the Add Volume wizard will restart it. You will lose any entries you have made.

4. Review Add Volume wizard Global Properties and click Next.
5. Select unit and click Next.
6. Type volume Name, select RAID Level from the pull-down menu, select an automount (Auto Online) option, and click Next.
7. Choose a Volume Size from the pull-down menu and click Next.
8. Confirm choices and click Finish or click Back to change your selections.

9. When creating a second volume, verify hot spare.

When adding a second volume, the Sun StorEdge Configuration Service software may not indicate the presence of a hot spare. To verify the presence of a hot spare, perform the following:

a. Use `telnet` to create a session with the array.

```
% telnet array-name
```

b. Use `vol list` to display hot spare information.

```
array-name: / :<1>vol list
```

▼ To Delete a Volume

1. From the Assets tab Array page, click the array name where you want to delete a volume.
2. Select Logical Overview from the View pull-down menu.
3. Click the check box of the volume you want to delete.
4. Click Delete.

A volume must be unmounted before deleting it. See “To Bring a Volume Offline” on page 39 for further information.

5. Click OK.

▼ To Bring a Volume Online

1. From the Assets tab Array page, click the name of the array containing the volume you want to bring online
2. Select Logical Overview from the View pull-down menu.
3. Click the check box of the volume you want to bring online.
4. Click Online.

▼ To Bring a Volume Offline

1. From the Assets tab Array page, click the name of the array containing the volume you want to bring offline.
2. Select Logical Overview from the View pull-down menu.
3. Click the check box of the volume you want to bring offline.
4. Click Offline.
5. Click OK.

▼ To Show LUNs

1. From the Assets tab Array page, click the device name.
2. Select Logical Overview from the View pull-down menu.
3. Select Show LUNs from the More Actions pull-down menu.

▼ To View Volume Properties

1. From the Assets tab Array page, click the device name.
2. Select Logical Overview from the View pull-down menu.
3. Click the Volume Name link.

▼ To Create a LUN

Note – When creating a LUN after deleting it, you will only be able to recreate the LUN the same size it was before.

1. From the Assets tab Array page, click the device name.
2. Select Logical Overview from the View pull-down menu.
3. Click the check box of the volume you want to view.
4. Select Show Luns from the Actions pull-down menu.
5. Click Create LUN.

Note – Resizing the Create LUN wizard will restart it. You will lose any entries you have made.

6. Select volume from the Volume pull-down menu.
7. Select LUN number, click Available Free Space or type the Desired Size, select mode from the Default Permission pull-down menu, and click Next.
8. Confirm your choices and click Finish, or click Back to change your selections.

▼ To Delete a LUN

Note – When creating a LUN after deleting it, you will only be able to recreate the LUN the same size it was before.

1. From the Assets tab Array page, click the device name.
2. Select Logical Overview from the View pull-down menu.
3. Click the check box of the LUN you want to view.
4. Select Show Luns from the More Actions pull-down menu.
5. Select a LUN by clicking the check box.

Note – Although it is possible to delete multiple LUNs at one time, you may find the software more responsive when removing fewer LUNs at one time.

6. Click Delete LUN.
7. Click OK.

▼ To Modify a LUN

Note – This is only available with Sun StorEdge T3+ and 6120 arrays with firmware version 2.1.

1. From the Assets tab Array page, click the device name.
2. Select Logical Overview from the View pull-down menu.

3. Click the check box of the LUN you want to view.
4. Select **Show Luns** from the **More Actions** pull-down menu.
5. Click the check box to select a LUN.
6. Click **Modify LUN**.

Note – Resizing the Modify LUN wizard will restart it. You will lose any entries you have made.

7. Select **All, WWN, or Initiator Group** from the **Show All** pull-down menu.
8. Select an initiator from the table and click **Next**.
9. Select **none, read-only, or read-write** from the **Permission** pull-down menu, and click **Next**.
10. Click **Finish**.

▼ To View Initiator

Note – This is only available with Sun StorEdge T3+ and 6120 arrays with firmware version 2.1.

1. From the **Assets** tab **Array** page, click the device name.
2. Select **Logical Overview** from the **View** pull-down menu.
3. Click the check box of the LUN you want to view.
4. Select **Initiators** from the **More Actions** pull-down menu.

Note – Resizing the wizard will restart it. You will lose any entries you have made.

5. Select **All, WWN, or Initiator Group** from the **Show** pull-down menu and click **Next**.
6. Select **none, read-only, or read-write** from the **Default Permission** pull-down menu and click **Next**.
7. Confirm choices and click **Finish** or click **Back** to change your selections.

▼ To Create an Initiator Group

Note – This is only available with Sun StorEdge T3+ and 6120 arrays with firmware version 2.1.

1. From the Assets tab Array page, click the device name.
2. Select Logical Overview from the View pull-down menu.
3. Click the check box of the LUN you want to view.
4. Select Initiator Groups from the More Actions pull-down menu.
5. Click Create.
6. Enter Name.
7. Add or remove Available Initiators.
Select an Available Initiator and click Add.
Select a Selected Initiator and click Remove.
8. To add a new initiator, make an entry in New Initiator and click Add New Initiator.
9. Save.

▼ To Delete an Initiator Group

Note – This is only available with Sun StorEdge T3+ and 6120 arrays with firmware version 2.1.

1. From the Assets tab Array page, click the device name.
2. Select Logical Overview from the View pull-down menu.
3. Click the check box of the LUN you want to view.
4. Select Initiator Groups from the More Actions pull-down menu.
5. Click check box of initiator.
6. Click Delete.

▼ To Enable Volume Slicing

Note – This is only available with Sun StorEdge T3+ and 6120 arrays with firmware version 2.1.

1. From the Assets tab Array page, click a device name.
2. Select Logical Overview from the pull-down menu.
3. Click Enabled button.

Operations for Multiple Sun StorEdge T3, T3+, and 6120 Arrays

The Configuration Service software enables you to create discovery criteria (for example, a range of device IP addresses) that you can save and apply to arrays.

This section contains the following discovery procedures:

- “To Add a Discovery Task” on page 44
- “To Remove a Discovery Task” on page 45
- “To Start Discovery” on page 45
- “To Stop Discovery” on page 46

Although operations which perform on multiple arrays are limited, they are useful for saving time.

This section also contains the following operations on multiple arrays:

- “To Shut Down Multiple Storage Devices” on page 46
- “To Reset Multiple Storage Devices” on page 46
- “To Store Passwords on Multiple Devices” on page 47
- “To Change Passwords on Multiple Devices” on page 47
- “To Remove Multiple Devices” on page 47

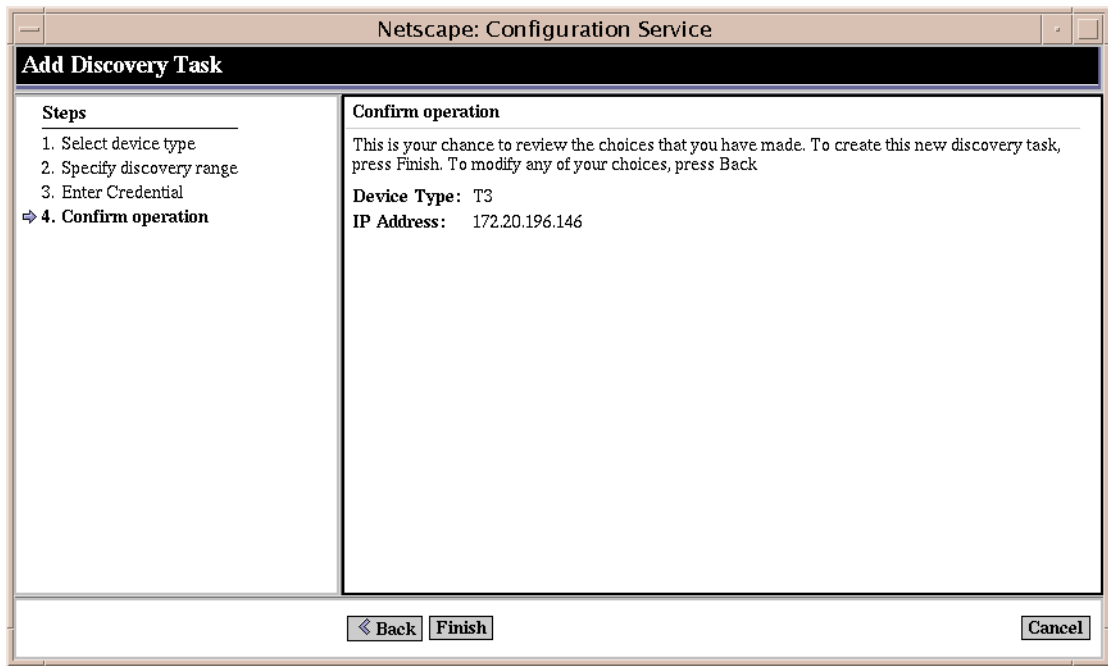
▼ To Add a Discovery Task

1. **Click the Asset tab.**
2. **Select Discovery Criteria from the More Storage Actions pull-down menu.**
3. **Click Add.**

Note – Resizing the Add Discovery Task wizard will restart it. You will lose any entries you have made.

4. **Select the Device Type from the pull-down menu, and click Next.**
5. **Select the IP address type, enter a range of IP addresses or a CIDR address, and click Next.**
6. **Type the User ID, password, and click Next.**

7. Review the discovery criteria and click Finish.



▼ To Remove a Discovery Task

1. Click the Asset tab.
2. Select Discovery Criteria from the More Storage Actions pull-down menu.
3. Click the check box of the desired Discovery Criteria.
4. Click Remove.

▼ To Start Discovery

1. Click the Asset tab.
2. Select Discovery Criteria from the More Storage Actions pull-down menu.
3. Click the check box of the desired Discovery Criteria.

4. Click Start.

You may be prompted for a password when executing discovery criteria if the password was entered incorrectly when the discovery criteria was created.

▼ To Stop Discovery

- 1. Click the Asset tab.**
- 2. Select Discovery Criteria from the More Storage Actions pull-down menu.**
- 3. Click the check box of the desired Discovery Criteria.**
- 4. Click Stop.**

▼ To Shut Down Multiple Storage Devices

- 1. From the Assets tab Array page, click the check boxes of the arrays you want to shut down.**
- 2. Click Shutdown.**
- 3. Click OK.**
- 4. If prompted, type the current root password and click Save & Retry.**

▼ To Reset Multiple Storage Devices

- 1. From the Assets tab Array page, click the check boxes of the arrays you want to shut down.**
- 2. Click Reset.**
- 3. Click OK.**
- 4. If prompted, type the password, confirm the password, and click Save and Retry.**

▼ To Store Passwords on Multiple Devices

1. From the Assets tab Array page, click the check boxes of the arrays for which you want to set the password for the first time.
2. Select Store Password from the More Storage Actions pull-down menu.
3. Type the Device Password, Confirm Password, and click Save.

▼ To Change Passwords on Multiple Devices

1. From the Assets tab Array page, click the check boxes of the arrays for which you want to change the password.
2. Select Change Password from the More Storage Actions pull-down menu.
3. Type the Root Password (for the Sun StorEdge Configuration Service software host), New Password, Confirm Password, and click Save.

▼ To Remove Multiple Devices

1. From the Assets tab Array page, click the check boxes of the arrays you want to shut down.
2. Select Remove Device from the More Storage Actions pull-down menu.

Managing Logs and Alarms

This section contains the following topics regarding the Log and Alarm tabs and how to manage log entries and alarms.

- “Managing Alarms” on page 50
- “Managing Logs” on page 53

Managing Alarms

This section describes the procedures for viewing and managing alarms. This section contains the following topics:

- [“Alarm Severity Levels” on page 50](#)
- [“To Display Alarm Information” on page 51](#)
- [“To Delete Alarms” on page 52](#)

Alarm Severity Levels

The Sun StorEdge Configuration Service software reports alarms occurring at four alarm levels.

TABLE 5-1 Alarm Severity Levels

Alarm Severity Level	Description
Down	A fatal, nonrecoverable error has occurred. For example, this error level occurs when a storage array is offline or unreachable.
Critical	A serious error has occurred. For example, this alarm type might occur if one or more subsystems fail. This alarm type requires your attention now.
Major	A serious error has occurred. For example, this alarm type might occur if one subsystem has failed. This alarm type requires your attention now.
Minor	An error or user action has occurred that requires your attention. For example, a user might have removed an asset. However, the error does not require your immediate attention.

▼ To Display Alarm Information

1. Click the Alarms tab.

The Alarms page is displayed. The default view in the Alarms table is to show all alarms.

2. Perform one of the following:

a. Click one of the following sub-tabs below the Alarms tab to view alarms of that severity level.

- All
- Down
- Critical
- Major
- Minor

b. Click the link in the Description column to view details about that alarm.

FIGURE 5-1 shows alarm details. See TABLE 5-1 for a description of log severity levels.

The screenshot shows the 'Configuration Service' interface. At the top, there's a navigation bar with 'Assets', 'Alarms' (selected), 'Logs', 'Health', and 'Administration'. Below this, a sub-navigation bar shows 'All', 'Down' (selected), 'Critical', 'Major', and 'Minor'. A search bar contains '--Discover--' and a 'Go' button. The date 'December 18, 2002' is displayed on the right. The main section is titled 'Alarms' and shows a 'Down Entry Details' table.

Property	Value
Source:	v4u-250d-93(172.20.196.93)
Subject:	Sun Array Instance
Time:	Dec 7, 2002 5:15:47 AM
Description:	Unable to connect to device, device appears to be down. Please check to ensure that the device is powered on and connected to the network.

FIGURE 5-1 Configuration Service Alarm Information Details

If a large number of alarms exist, it might take a few minutes to display them all.

3. Click the All link to return to the alarm summary table.

▼ To Delete Alarms

1. **Click the Alarms tab.**

The Alarms page is displayed. The default view in the Alarms table is to show all alarms.

2. **If desired, choose one of the following links below the Alarms tab to view alarms of that severity level.**

- Down
- Critical
- Major
- Minor

See TABLE 5-1 for a description of alarm severity levels.

3. **Click the check boxes of one or more alarms.**

4. **Click the Remove Alarms button.**

A confirmation page is displayed.

5. **Click the OK.**

Managing Logs

This section describes the procedures for viewing and managing log entries. This section contains the following topics:

- [“Log Severity Levels” on page 53](#)
- [“To Display Log Information” on page 54](#)

Log Severity Levels

The software reports logs occurring at four log levels.

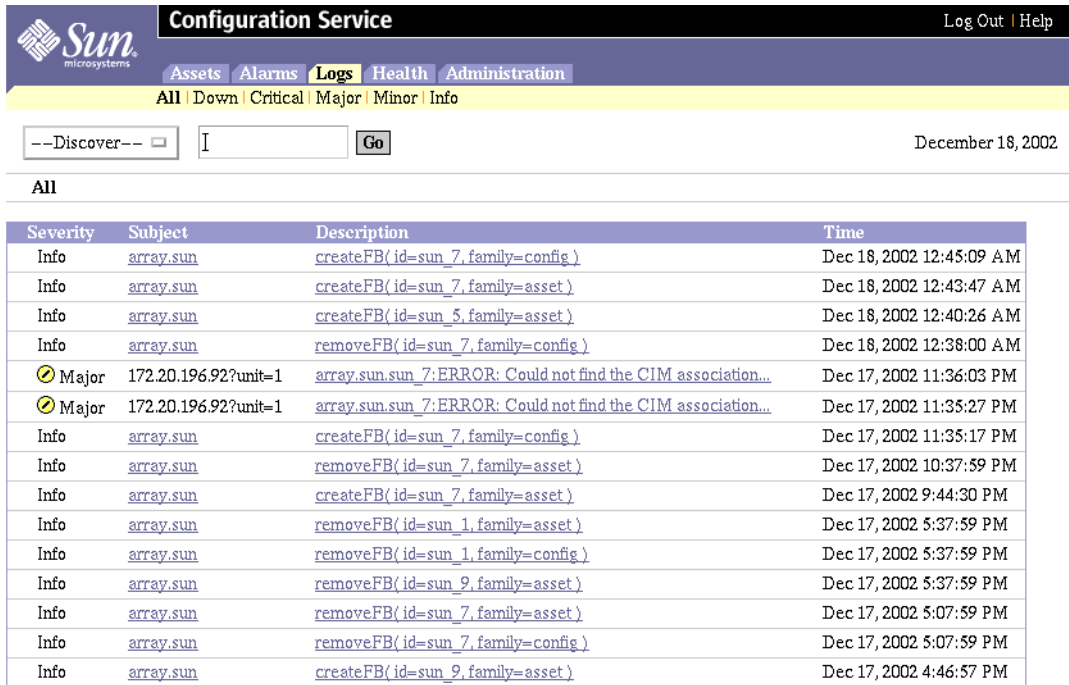
TABLE 5-2 Log Severity Levels

Log Severity Level	Description
Critical	A serious error has occurred. For example, this log type might occur if one or more subsystems fail. This log type requires your attention now.
Info	An event has occurred.
Major	A serious error has occurred. For example, this log type might occur if one subsystem has failed. This log type requires your attention now.
Minor	An error or user action has occurred that requires your attention. For example, the user might have removed an asset. However, the error does not require your immediate attention.

▼ To Display Log Information

1. Click the Logs tab.

The Logs page is displayed. The default view in the Log table is to show all logs



Severity	Subject	Description	Time
Info	array.sun	createFB(id=sun_7, family=config)	Dec 18, 2002 12:45:09 AM
Info	array.sun	createFB(id=sun_7, family=asset)	Dec 18, 2002 12:43:47 AM
Info	array.sun	createFB(id=sun_5, family=asset)	Dec 18, 2002 12:40:26 AM
Info	array.sun	removeFB(id=sun_7, family=config)	Dec 18, 2002 12:38:00 AM
Major	172.20.196.92?unit=1	array.sun.sun_7:ERROR: Could not find the CIM association...	Dec 17, 2002 11:36:03 PM
Major	172.20.196.92?unit=1	array.sun.sun_7:ERROR: Could not find the CIM association...	Dec 17, 2002 11:35:27 PM
Info	array.sun	createFB(id=sun_7, family=config)	Dec 17, 2002 11:35:17 PM
Info	array.sun	removeFB(id=sun_7, family=asset)	Dec 17, 2002 10:37:59 PM
Info	array.sun	createFB(id=sun_7, family=asset)	Dec 17, 2002 9:44:30 PM
Info	array.sun	removeFB(id=sun_1, family=asset)	Dec 17, 2002 5:37:59 PM
Info	array.sun	removeFB(id=sun_1, family=config)	Dec 17, 2002 5:37:59 PM
Info	array.sun	removeFB(id=sun_9, family=asset)	Dec 17, 2002 5:37:59 PM
Info	array.sun	removeFB(id=sun_7, family=asset)	Dec 17, 2002 5:07:59 PM
Info	array.sun	removeFB(id=sun_7, family=config)	Dec 17, 2002 5:07:59 PM
Info	array.sun	createFB(id=sun_9, family=asset)	Dec 17, 2002 4:46:57 PM

FIGURE 5-2 Configuration Service Log Page


2. Perform one of the following:

a. Click one of the following sub-tabs below the Logs tab to view logs of that severity level.

- All
- Down
- Critical
- Major
- Minor

b. Click the link in the Description column to view details about that log.

FIGURE 5-3 shows the details of a log entry. See TABLE 5-2 for a description of log severity levels.



Configuration Service

Log Out | Help

AssetsAlarmsLogsHealthAdministration

All | Down | Critical | Major | Minor | Info

--Discover--

I

Go

December 18, 2002

Logs

Minor Entry Details

Property	Value
Subject:	login
Source:	UI
Time:	Nov 27, 2002 3:34:30 PM
Description:	Invalid login attempt by user: root

FIGURE 5-3 Configuration Service Log Information Details

3. To return to the log summary table, click Back button.

Troubleshooting

This section contains the following topics:

- “Authorization failed. Please set credential first, then try this command later.” on page 57
- “Cannot Find LUN by Name” on page 59
- ““Could not locate the CIMOM.”, “WARN: logic entity is not ready for operations yet”, or “WARN: connection to CIMOM is down”” on page 59
- “sesh: ERROR: Invalid storage user: user-login” on page 61
- “Verify that the token_lock parameter is set to off.” on page 58

Authorization failed. Please set credential first, then try this command later.

This message indicates the Sun StorEdge T3 root password is not set.

Some `config` command-line interface (CLI) operations (`addhwn`, `addinitator`, `delete`, `luncreate`, `offline`, `online`, `password`, `rmh`, `wn`, `set` and `volcreate`) and `control` operations (`disable`, `enable`, `reset`, and `shutdown`) require Sun StorEdge T3 root password to be set.

User Action

1. Configure the password.

```
SeSh [4] config password array
```

2. If desired, verify that the password was set.

```
SeSh [5] inventory info
```

If the Password column has an “admin” entry, you have the root password.

3. Re-execute the original command which displayed the “Authorization Failed” error message.

4. Verify that the `token_lock` parameter is set to off.

If the `token_lock` field is set to on, the software is unable to communicate with the device even though it is up.

```
6120:/:<1> set
bootmode auto
bootdelay 3
ip 172.20.195.222
netmask 255.255.248.0
gateway 172.20.199.248
tftpserver 192.9.10.254
tftpfile
hostname t4-2
timezone
token_lock off # <- This field should off
logto *
loglevel 3
rarp on
mac 00:03:ba:27:d7:c7
```

Cannot Find LUN by Name

When upgrading array firmware, you must update array HTML files. In addition, the Sun StorEdge Configuration Service requires each Sun StorEdge array have the required HTML files. Running the `update_html_files` script easily updates any arrays needing HTML files.

▼ To Update Sun StorEdge Array HTML Files

Note – To use the `update_html_files` script, you must have the IP addresses of all Sun StorEdge arrays you intend to update.

- Type the following:

```
# cd /opt/SUNWdm/gre/bin
# ./update_html_files
```

“Could not locate the CIMOM.”,
“WARN: logic entity is not ready for
operations yet”, or “WARN: connection
to CIMOM is down”

These messages indicate that CIMOM is down.

You will see a message on the WUI Asset tab indicating CIMOM is down.

If you attempt to start a CLI session when CIMOM is down, you will get the following message:

```
TelnetD library (embeddable telnet daemon)
```

```
Copyright (c) 2000, Dieter Wimberger
```

```
All rights reserved.
```

```
login: root
```

```
Password:
```

```
Could not locate the CIMOM.
```

If you are already logged in when CIMOM went down, you will get one of the following messages:

```
array_name:WARN: logic entity is not ready for operations yet
```

```
array_name:WARN: connection to CIMOM is down
```

User Action

- Restart CIMOM using the following command:

```
# /etc/init.d/sscs.wbem start
```

sessh: ERROR: Invalid storage user: *user-login*

This message indicates the login is not a registered user.

User Action

1. **Add the user by way of the `esmconfig` script.**

For more information on using the configuration script, see the *Sun StorEdge Enterprise Storage Manager 1.2 Installation Guide*.

2. **Stop the Sun StorEdge Configuration Service daemons.**

See the “Starting and Stopping the Daemons” on page 5.

3. **Start the Sun StorEdge Configuration Service daemons.**

See the “Starting and Stopping the Daemons” on page 5.

WARN: connection to T3 device is down

This message indicates you executed a command-line interface (CLI) command when an array was down. In the WUI, the Asset page device name link will become inactive and the State will be DOWN.

User Action

1. **Make sure the array is on and connected to the network.**
2. **For Sun StorEdge 6120 arrays, create a telnet a session with the array.**

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