Sun StorEdge™ 3000 Family Software Installation Guide

Sun StorEdge Configuration Service 1.5

Sun StorEdge Diagnostic Reporter 1.5

Sun StorEdge Command-Line Interface 1.6

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Preface

This guide explains how to install Sun StorEdge™ Configuration Service, Sun StorEdge Diagnostic Reporter, and the command-line interface (CLI).

Sun StorEdge Configuration Service enables you to monitor and manage your Sun StorEdge 3000 family product through a graphical user interface (GUI). For information about using Sun StorEdge Configuration Service, refer to the *Sun StorEdge 3000 Family Configuration Service User's Guide*.

Sun StorEdge Diagnostic Reporter is a companion utility of Sun StorEdge Configuration Service that reports your storage system events to specified email addresses. For information about using Sun StorEdge Diagnostic Reporter, refer to the *Sun StorEdge 3000 Family Diagnostic Reporter User's Guide*.

The CLI enables you to perform many of the same operations as Sun StorEdge Configuration Service or the firmware application. For information about using the CLI, refer to the *Sun StorEdge 3000 Family CLI User's Guide*.

Unless otherwise specified, the Sun StorEdge 3120 SCSI array, Sun StorEdge 3310 SCSI array, Sun StorEdge 3510 FC array, and Sun StorEdge 3511 FC array are referred to as the *array or arrays*.

This guide is written for experienced system administrators who are familiar with Sun hardware and software products.

How This Book Is Organized

This book covers the following topics:

Chapter 1 covers information to be aware of before installing Sun StorEdge Configuration Service, Sun StorEdge Diagnostic Reporter, or the command-line interface (CLI).

Chapter 2 provides system requirements and installation procedures for Sun StorEdge Configuration Service agents and consoles on a Solaris™ host.

Chapter 3 provides system requirements and installation procedures for Sun StorEdge Configuration Service agents and consoles on a Windows NT, Windows 2000, and Windows 2003 host.

Chapter 4 provides system requirements and installation procedures for Sun StorEdge Configuration Service agents and consoles on a Linux host.

Chapter 5 provides system requirements and installation procedures for Sun StorEdge Configuration Service agents and consoles on an HP-UX host.

Chapter 6 provides system requirements and installation procedures for Sun StorEdge Configuration Service agents and consoles on an IBM AIX host.

Chapter 7 provides system requirements and installation procedures for Sun StorEdge Diagnostic Reporter.

Chapter 8 provides system requirements and installation procedures for the CLI.

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 the following for this information:

- Software documentation that you received with your system
- Solaris operating system documentation, which is at

  `http://docs.sun.com`

Shell Prompts

Shell	Prompt
C shell	*machine-name*`%`
C shell superuser	*machine-name*`#`
Bourne shell and Korn shell	`$`
Bourne shell and Korn shell superuser	`#`

Typographic Conventions

Typeface[1]	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. Replace command-line variables with real names or values.	Read Chapter 6 in the *User's Guide*. These are called *class* options. You *must* be superuser to do this. To delete a file, type `rm` *filename*.

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

Related Documentation

For a complete list of related documentation for your Sun StorEdge 3000 family product, refer to the *Sun StorEdge 3000 Family Installation, Operation, and Service Manual* for your product.

Accessing Sun Documentation

All Sun StorEdge 3000 family documentation is available online in both PDF and HTML format at the following location:

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

The following locations are specific for the SCSI array and FC array:

http://docs.sun.com/db/coll/3120SCSIarray

http://docs.sun.com/db/coll/3310SCSIarray

http://docs.sun.com/db/coll/3510FCarray

http://docs.sun.com/db/coll/3511FCarray

You can view, print, or purchase a broad selection of Sun documentation at:

http://www.sun.com/documentation

Contacting Sun Technical Support

For late-breaking news and troubleshooting tips, review the *release notes* for your array located in the appropriate directory:

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

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

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

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

800-USA-4SUN

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

http://www.sun.com/service/contacting/sales.html

508 Accessibility Features

The Sun StorEdge documentation is available in 508-compliant HTML files that can be used with assistive technology programs for visually impaired personnel. These files are provided on the Documentation CD for your product as well as on the websites identified in the previous "Accessing Sun Documentation" section. Additionally, the software and firmware applications provide keyboard navigation and shortcuts, which are documented in the user's guides.

Sun Welcomes Your Comments

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Please include the title and part number of your document with your feedback: *Sun StorEdge 3000 Family Software Installation Guide*, part number 817-3764-12.

CHAPTER 1

Before You Begin

This chapter covers important information you need to be aware of before you install Sun StorEdge Configuration Service, Sun StorEdge Diagnostic Reporter, and the CLI. Topics covered in this chapter include:

- "Release Notes" on page 1
- "Superuser Privileges" on page 1
- "Operating System Information" on page 2

Release Notes

Be sure to read the release notes for your array to determine whether the operating systems covered in this guide are supported by your Sun StorEdge family product and for other supported software information.

Superuser Privileges

You must be superuser (administrator) to install Sun StorEdge Configuration Service, Sun StorEdge Diagnostic Reporter, and the CLI and to run the Sun StorEdge Configuration Service console.

Operating System Information

This section covers information about the operating system (OS).

- For the Sun StorEdge 3310 SCSI array, Sun StorEdge 3510 FC array, and Sun StorEdge 3511 FC array, before you install Sun StorEdge Configuration Service:
  - Install OS updates. To use Sun StorEdge Configuration Service on a Solaris host, you need to install the most current Sun recommended OS patches and Java™ runtime environment software patches. For a list of Sun recommended patches, refer to the release notes for your array.
  - Make sure that the host server that the Sun StorEdge Configuration Service agent is installed on is connected to a channel with a primary ID assigned. Refer to the *Sun StorEdge 3000 Family Installation, Operation, and Service Manual* for your array for controller defaults and initial configuration information.
  - Make sure that the server is connected to the storage and the server recognizes the storage.
- For the Sun StorEdge 3310 SCSI array, before you install Sun StorEdge Configuration Service on a Solaris host, make sure the OS can recognize multiple logical unit numbers (LUNs) under the same ID. You might need to modify `/kernel/drv/sd.conf` for additional host LUN assignments. For information on how to modify this file, refer to the *Sun StorEdge 3000 Family Installation, Operation, and Service Manual* for your SCSI array. If you make any changes to the `sd.conf` file, you need to reboot the workstation for the modifications to take effect.
- If your OS contains an enterprise management console, you can configure agents to send trapped events to the console using the Simple Network Management Protocol (SNMP) service. The SNMP service is included with the OS and is installed after installing the TCP/IP protocol stack. If you want the servers on your network to send SNMP traps to the enterprise management console, refer to the "Email and SNMP" appendix in the *Sun StorEdge 3000 Family Configuration Service User's Guide.*

Upgrading Software – Agent and Console Version Compatibility

Because the communication protocol changes from version to version, you must install *both* the agent and console when upgrading. If different versions of the agent and console co-exist, Sun StorEdge Configuration Service is not able to discover previously configured arrays.

CHAPTER 2

Installing Sun StorEdge Configuration Service on a Solaris Host

This chapter provides procedures for installing Sun StorEdge Configuration Service consoles and agents on a Solaris host. Topics covered in this chapter include:

- "Before Installing Sun StorEdge Configuration Service" on page 5
- "System Requirements" on page 6
- "Installing Software" on page 7
- "Users and Passwords" on page 14
- "Uninstalling Sun StorEdge Configuration Service" on page 16
- "Restoring a Configuration" on page 17
- "Troubleshooting" on page 18

Before Installing Sun StorEdge Configuration Service

Before installing the program and its related software components, take the following steps:

- Be sure to read the release notes for your array.
- Install OS updates. To use Sun StorEdge Configuration Service on a Solaris host, you need to install the most current Sun recommended OS patches and Java runtime environment software patches for the Solaris 8 and Solaris 9 OS. For a list of Sun recommended patches, refer to the release notes for your array.

System Requirements

This section lists the system requirements for the Solaris host.

- Netscape Navigator™ web browser – You require the web browser to view online help. Versions earlier than 4.0 are not supported.
- TCP/IP-compliant network interface – Each console must have a TCP/IP-compliant network interface (such as an Ethernet or Token Ring network card, or a serial line with a modem). Each agent must have a TCP/IP-compliant network interface and driver set (included with the operating system).
- Color monitor – The console is best viewed with a monitor resolution of 1024 x 768 pixels with 256 colors.
- OS, memory, and disk space – TABLE 2-1 lists the console system requirements for the Solaris OS. TABLE 2-2 lists the agent system requirements for the Solaris OS.

TABLE 2-1 Console System Requirements for Solaris OS

Solaris OS Version	Memory	Disk Space
Solaris 2.6 with Sun recommended patches. Solaris 8 and Solaris 9 with Sun recommended patches on SPARC platforms. Solaris 9 x86 Platform Edition (9 08/03) with Sun recommended patches. (For a list of Sun recommended patches, refer to the release notes for your array.)	256 Mbyte required 512 Mbyte recommended	40 Mbyte minimum 100 Mbyte recommended

TABLE 2-2 Agent System Requirements for Solaris OS

Solaris OS Version	Memory	Disk Space
Solaris 2.6 with Sun recommended patches Solaris 8 with Sun recommended patches on SPARC platforms Solaris 9 x86 Platform Edition (9 08/03) with Sun recommended patches. (For a list of Sun recommended patches, refer to the release notes for your array.)	128 Mbyte required 512 Mbyte recommended	20 Mbyte minimum 100 Mbyte recommended

Installing Software

Sun StorEdge Configuration Service includes the following components:

- Sun StorEdge Configuration Service agent
- Sun StorEdge Configuration Service console
- Sun StorEdge Diagnostic Reporter (optional utility)
- Command-Line Interface (CLI)

For installation information for Sun StorEdge Diagnostic Reporter, see "Installing Sun StorEdge Diagnostic Reporter" on page 55. For installation information for the CLI, see "Installing and Accessing the Command-Line Interface" on page 67.

Note – Before installing Sun StorEdge Configuration Service, be sure to read the release notes for your array.

Note – You must be superuser to install Sun StorEdge Configuration Service and to run the console.

Upgrading Software – Agent and Console Version Compatibility

Because the communication protocol changes from version to version, you must install *both* the agent and console when upgrading. If different versions of the agent and console co-exist, Sun StorEdge Configuration Service is not able to discover previously configured arrays.

Installation Packages

The Sun StorEdge Configuration Service agent and console installation packages are contained on the Sun StorEdge 3000 Family Professional Storage Manager CD. Sun StorEdge Configuration Service on a Solaris OS offers language support for French, Japanese, Simplified Chinese, Traditional Chinese, and Korean. TABLE 2-3 specifies which files are required for each language.

Note – Each language requires the English installation package for the console and the agent.

TABLE 2-3 Required Sun StorEdge Configuration Service Installation Packages for Solaris OS Language Support

	English	French	Japanese	Simplified Chinese	Traditional Chinese	Korean
Agent	SUNWscsd	SUNWscsd SUNWfscsd	SUNWscsd SUNWjscsd	SUNWscsd SUNWcscsd	SUNWscsd SUNWtscsd	SUNWscsd SUNWkscsd
Console	SUNWscsu	SUNWscsu SUNWfscsu	SUNWscsu SUNWjscsu	SUNWscsu SUNWcscsu	SUNWscsu SUNWtscsu	SUNWscsu SUNWkscsu

▼ To Install the Agent and Console

Install the agent on each of the servers that is part of Sun StorEdge Configuration Service. Install the console on the computer or workstation you plan to use for managing and maintaining the storage system.

The console can be installed on the server or on any client system. The agent must be installed on the server to which the storage is attached.

Complete the following steps to install the agent, console, or both. You must install at least one agent and one console for the program to run.

If you are installing only the English version of the package, follow only the instructions for English. If you are adding language support, you must install the English version of the program *first*.

If you are upgrading, you must install *both* the agent and console. If different versions of the agent and console co-exist, Sun StorEdge Configuration Service is not able to discover previously configured arrays.

Note – Make sure that Java runtime environment software is installed on the computer or workstation on which you are installing Sun StorEdge Configuration Service. The earliest release of Java runtime environment software that is compatible with Sun StorEdge Configuration Service on a Solaris 2.6 host is 1.3.1. The earliest release of Java runtime environment software that is compatible with Sun StorEdge Configuration Service on a Solaris 8 or 9 host is 1.2.

Note – You must uninstall earlier versions of Sun StorEdge Configuration Service when upgrading the console or agent. For details on uninstalling, see "Uninstalling Sun StorEdge Configuration Service" on page 16.

---

1. **Insert the Sun StorEdge 3000 Family Professional Storage Manager CD and type:**

```
# cd /cdrom/cdrom0/product/solaris/$ARCH
```

   where *$ARCH* is either `sparc` or `i386`, depending on the Solaris OS version.

2. **Install the packages in one of the following ways:**

   - To install only the agent (English), type:

```
# pkgadd -d . SUNWscsd
```

   - (Optional) To add language support, type:

```
# pkgadd -d . SUNWxscsd
```

   where *x* is `f`, `j`, `c`, `t`, or `k`, depending on what language you are installing. See TABLE 2-3 for package names.

   - To install only the console (English), type:

```
# pkgadd -d . SUNWscsu
```

- (Optional) To language support, type:

```
# pkgadd -d . SUNWxscsu
```

where *x* is `f`, `j`, `c`, `t`, or `k`, depending on what language you are installing. See TABLE 2-3 for installation package names.

- To install all packages, type:

```
# pkgadd -d . all
```

- To choose which packages to install from a menu, type:

```
# pkgadd -d .
```

- To install English versions of both agents (Sun StorEdge Configuration Service and Sun StorEdge Diagnostic Reporter) type:

```
# pkgadd -d . SUNWscsd SUNWscsa
```

- (Optional) To language support, type:

```
# pkgadd -d . SUNWxscsd SUNWxscs
```

where *x* is `f`, `j`, `c`, `t`, or `k`, depending on what language you are installing. See TABLE 2-3 for installation package names. For Sun StorEdge Diagnostic Reporter package names, see "Installing Sun StorEdge Diagnostic Reporter" on page 55.

3. **Provide appropriate responses to each of the standard installation prompts.**

The installation prompts are standard `pkgadd` prompts regarding which packages to install and how to process scripts (with superuser privileges).

a. **At the `Select` packages prompt, type the appropriate response depending on the install method.**

For example, if you chose to install only the agent (English), type `1` and press Return.

```
Select package(s) you wish to process (or 'all' to process all
packages). (default:all) [?,??,q]: 1
```

If asked if you want to restore the agent configuration, type **y**. (If you type **n**, you will need to re-enable the managing servers.)

```
The previous configuration was saved. User passwords must be
reentered. Do you want to restore the configuration [y,n,?,q]: y
```

Note – User passwords are deleted when Sun StorEdge Configuration Service is uninstalled. If you had a previous configuration, you have to reenter the `ssmon`, `ssadmin`, and `ssconfig` passwords as described in "Users and Passwords" on page 14.

If asked if you want to restore the console configuration, type **y**. (If you type **n**, you will need to readd the server information.)

```
The previous configuration was saved. Do you want to restore the
configuration [y,n,?,q]: y
```

b. To continue with the installation, type `y` and press Return.

```
Do you want to continue with the installation [y,n,?] y
```

After the agent is installed, the following message is displayed, indicating the agent was installed successfully and has started.

```
Configuring and starting Sun StorEdge(tm) Configuration Service
agent daemons:
       The configuration is complete.
      Sun StorEdge(tm) Configuration Service agent server daemon
has started.
     Sun StorEdge(tm) Configuration Service agent monitor daemon
has started.
Sun StorEdge(tm) Configuration Service agent startup is complete.

Installation of <SUNWscsd> was successful.
```

The installation program checks that Java runtime environment software is installed. The earliest release of Java runtime environment software that is compatible with Sun StorEdge Configuration Service is 1.2. If the installation program cannot find it, you are asked to specify the path. If you know that Java runtime environment 1.2.2, 1.3, or 1.4 software has been installed but the installation program cannot find it, check the `/usr` directory to confirm there is a link to the latest version. For instructions on creating the link, see, "Troubleshooting" on page 18.

The agent and console are installed in `/opt/SUNWsscs/sscsconsole`.

After the installation is complete, the agent starts automatically.

4. **To access online help, you need to specify the path to the web browser.**

   a. **Change to** `/opt/SUNWsscs/sscsconsole` **and type:**

```
./config_sscon
```

   b. **Type the absolute path to the web browser.**

Note – You can configure the web browser path name at any time; however, if you do not specify a path name at some point, you cannot access online help.

---

5. **For Sun StorEdge 3310 SCSI arrays, edit** `/kernel/drv/sd.conf` **if LUNs other than LUN 0 are mapped from the array to the host and an onboard HBA for Sun servers or if third-party HBAs are used for connecting the device:**

   Add lines for LUNs as appropriate for your configuration. LUNs can be numbered from 0-31. Generally, do not add more LUN definitions than you actually plan to have, since doing so increases the time needed to scan each SCSI bus. For information on modifying the `sd.conf` file, refer to the *Sun StorEdge 3000 Family Installation, Operation, and Service Manual* for your SCSI array.

6. **If the** `sd.conf` **file has been edited, perform a reconfiguration reboot.**

   If the `sd.conf` file has not been edited, you do not have to perform a reconfiguration reboot and the agent starts automatically.

▼ To Stop or Start the Agent

The agent can be stopped and started manually by using the run commands script in `/etc/init.d/ssagent`.

1. **To stop the agent, type:**

```
# /etc/init.d/ssagent stop
```

2. **To start the agent, type:**

```
# /etc/init.d/ssagent start
```

Note – You must be superuser to start the agent.

If you use `start` without first using `stop`, the script restarts any agents that have stopped. If all the agents have stopped (as with a `stop` option), the script reconfigures the runtime environment before restarting the agents.

3. **To determine if the agent is running, type:**

```
# ps -e | grep ss
```

Both `ssmon` and `ssserver` are displayed in the output. If you have enabled SNMP trap generation, you also see the name `sstrapd`.

4. **If the storage system is not being displayed after initial boot, stop the agent, and at the command prompt, run:**

```
# format
```

5. **Label the desired disks, and then restart the agent.**

Users and Passwords

The following sections explain how to create users and passwords.

Administrative (User) Security Levels and Guidelines

If you are running the program on a Solaris host, *administrator security levels are automatically created during the installation process*. You only need to set passwords and assign users according to the desired permission levels.

Administrative functions require access logins and passwords to prevent the possibility of one administrator reallocating or removing storage resources belonging to other clients and hosts without authorization.

You assign separate passwords for the three levels of security for the program. You do this by setting up three users on the agents that have storage devices that are managed by the program. These three users are automatically added during the installation of the agent.

The security levels must have these exact names:

- `ssmon`

  Represents the monitoring level of the software.

- `ssadmin`

  Represents the administration level of the software and provides access to the Rebuild, Parity Check, and Schedule Parity Check functions, as well as monitoring.

- `ssconfig`

  Represents the configuration level of the software and gives the installer direct access to the configuration functions and all other related aspects of the program.

These login names are required for the three security levels. After installation, you must assign a password to each security name.

Note – User passwords are deleted when Sun StorEdge Configuration Service is uninstalled. If you had a previous configuration, you have to reenter the `ssmon`, `ssadmin`, and `ssconfig` passwords.

The `ssmon`, `ssadmin`, and `ssconfig` names are logins that correspond only to security levels within the program. For UNIX operating environments, the default shell for these accounts is assigned to `/bin/false` to prevent the user IDs from being used for interactive logins.

You can set up Sun StorEdge Configuration Service so that monitoring does not require users to type the `ssmon` password. To do so, select the Auto Discovery option when the servers are added to the Managed Servers list at the console. You can set up these three logins and passwords locally on each server. (The accounts can have different passwords on each server, if desired.)

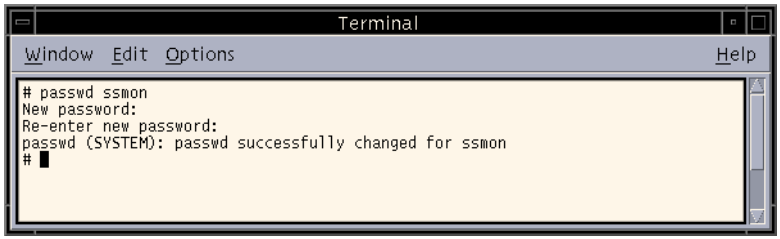
Once you have set up these three logins on the agents to be managed, the system administrator typically provides user access to the program by assigning employees appropriate passwords, which are based on the level of security required to complete tasks. For example, everyone who has administration privileges on a particular server is assigned the same password that was established for the user `ssadmin`.

Note – To add servers to the Managed Servers list, refer to the *Sun StorEdge 3000 Family Configuration Service User's Guide*.

▼ To Create Passwords and Permissions

Create a password for each of the new users by typing:

```
# passwd user-name
```



Administrators might also want to change group permissions, which are defined in the `svrlist.dat` file located in the `/opt/SUNWsscs/sscsconsole` directory during installation.

The console is a Java technology-based utility, and as such, cannot provide facilities to control permissions or ownership of files that Sun StorEdge Configuration Service creates. The `svrlist.dat` file is easily readable by various forms of ASCII text processors. It contains the encrypted password for the user `ssmon` and can be decrypted.

Note – Do not change the permissions and group ownership of `svrlist.dat` after adding all agents that are being monitored.

Uninstalling Sun StorEdge Configuration Service

You must uninstall earlier versions of Sun StorEdge Configuration Service when upgrading the console or agent. Note that some files are not removed because they are created after the installation and are still valid for the upgrade environment.

▼ To Uninstall Sun StorEdge Configuration Service

Use the `pkgrm` command followed by the package you want to uninstall.

Note – If you added French, Japanese, or Simplified Chinese language support, you need to uninstall those packages *before* uninstalling the English package.

```
# pkgrm package-name
```

where *package-name* is the package you are uninstalling. See "Installation Packages" on page 8 for a list of package names.

Restoring a Configuration

If you reinstall the agent or console, during the installation procedure you are asked whether you want to restore the configuration. If you select to have the configurations restored, the information is restored from the following files:

- `/var/opt/SUNWsscs/sscsagt.cfg.tar` – Sun StorEdge Configuration Service agent
- `/var/opt/SUNWsscs/sscscon.cfg.tar` – Sun StorEdge Configuration Service console

Note – If you are removing Sun StorEdge Configuration Service permanently, you might want to manually remove these files; however, if you later reinstall the program, you will not be able to restore the agent and console configurations.

Troubleshooting

When installing Sun StorEdge Configuration Service, running `java -version` might return a pre 1.2.2 software version even if the machine has Java runtime environment 1.2.2, 1.3, or 1.4 installed. If this happens, check that there is a link from Java runtime environment software to the latest version.

Check the `/usr` directory to confirm there is a link to the latest version of the Java runtime environment by typing:

```
# cd /usr
ls | grep java
```

If the link is not to the latest version listed, type:

```
rm java
ln -s /usr/xxx /usr/java
```

where *xxx* is the latest version of the Java runtime environment software.

CHAPTER 3

Installing Sun StorEdge Configuration Service on a Microsoft Windows Host

This chapter provides procedures for installing Sun StorEdge Configuration Service consoles and agents on a Windows NT, Windows 2000, and Windows 2003 host. Topics covered in this chapter are as follows:

- "System Requirements" on page 19
- "Installing Software" on page 20
- "Users and Passwords" on page 23
- "Uninstalling Sun StorEdge Configuration Service" on page 25

System Requirements

This section lists the system requirements for a Microsoft Windows host.

- Netscape Navigator or Microsoft Internet Explorer web browsers – You require a web browser to view online help. Versions earlier than 4.0 are not supported.
- TCP/IP-compliant network interface for the console – Each console must have a TCP/IP-compliant network interface (such as an Ethernet or Token Ring network card, or a serial line with a modem). Each agent must have a TCP/IP-compliant network card interface and driver set (included with the operating system).
- Color monitor – The console is best viewed with a monitor resolution of 1024 x 768 pixels with 256 colors.
- OS, memory, and disk space – TABLE 3-1 lists the console system requirements for a Microsoft Windows host. TABLE 3-2 lists the agent system requirements for a Microsoft Windows host.

TABLE 3-1 Console System Requirements for Microsoft Windows OS

Microsoft Windows OS Version	Memory	Disk Space
Windows NT 4.0 (Service Pack 6A) Windows 2000 (Service Pack 3) Windows 2003	64 Mbyte minimum 512 Mbyte recommended	40 Mbyte minimum 400 Mbyte recommended

TABLE 3-2 Agent System Requirements for Microsoft Windows OS

Microsoft Windows OS Version	Memory	Disk Space
Windows NT 4.0 (Service Pack 6A) Windows 2000 (Service Pack 3) Windows 2003	64 Mbyte minimum, 512 Mbyte or more recommended. Requirement is determined by other large application programs, such as databases.	20 Mbyte minimum 400 Mbyte recommended

Installing Software

Sun StorEdge Configuration Service includes the following components:

- Sun StorEdge Configuration Service agent
- Sun StorEdge Configuration Service console
- Sun StorEdge Diagnostic Reporter (optional utility)
- Command-Line Interface (CLI)

For installation information for Sun StorEdge Diagnostic Reporter, see "Installing Sun StorEdge Diagnostic Reporter" on page 55. For installation information for the CLI, see "Installing and Accessing the Command-Line Interface" on page 67.

Note – Before installing Sun StorEdge Configuration Service, be sure to read the release notes for your array.

Note – You must have administrator privileges to install Sun StorEdge Configuration Service and run the console.

Upgrading Software – Agent and Console Version Compatibility

Because the communication protocol changes from version to version, you must install *both* the agent and console when upgrading. If different versions of the agent and console co-exist, Sun StorEdge Configuration Service is not able to discover previously configured arrays.

Installation Packages

The installation package, `setup.exe`, is contained on the Sun StorEdge 3000 Family Professional Storage Manager CD, and includes the following components:

- Sun StorEdge Configuration Service agent
- Sun StorEdge Configuration Service console

▼ To Install the Agent and Console

You need to install the agent on every Windows NT, Windows 2000, or Windows 2003 server whose storage you want Sun StorEdge Configuration Service to manage. Install the console on the computer or workstation you plan to use for managing and maintaining the system storage.

If you are upgrading, you must install *both* the agent and console. If different versions of the agent and console co-exist, Sun StorEdge Configuration Service is not able to discover previously configured arrays.

Note – Make sure that Java runtime environment software is installed on the computer or workstation on which you are installing the console. The earliest release of Java runtime environment software that is compatible with Sun StorEdge Configuration Service is 1.2.

---

1. **To make sure the software installation utility functions optimally, close all open applications.**
2. **Insert the Sun StorEdge 3000 Family Professional Storage Manager CD and change to the** `\product\windows` **directory.**
3. **Double-click** `setup.exe` **and select the software component to install,** `SUNWsscs Agent` **or** `SUNWsscs Console`**.**

4. **In the Choose Destination Location window, install the default folder and click Next.**

   The agent is installed in `C:\Program Files\Sun\ssagent`. The console is installed in `C:\Program Files\Sun\sscs`.

   To install to a different folder, click Browse, select another folder, and click Next.

   After the installation is complete, the agent starts automatically.

▼ To Stop or Start the Agent on a Windows NT Host

To stop the agent, choose Settings → Control Panel → Services, choose the agent you want to stop, and click Stop.

To start the agent on the server, you must either reboot the server or start the three Sun StorEdge Configuration Service services: SUNWscsd Startup, SUNWscsd Server, and SUNWscsd Monitor under Settings → Control Panel → Services.

▼ To Stop and Start the Agent on a Windows 2000 or Windows 2003 Host

1. **On a Windows 2000 host, choose Start → Programs → Administrative Tools → Computer Management.**

   On a Windows 2003 host, choose Start → Administrative Tools → Computer Management**.**

   Alternatively, you can right-click My Computer and select Manage.

2. **Click Services & Applications.**

3. **Right-click the service (SUNWscsd Monitor, SUNWscsd Server, SUNWscsd Startup) you want to start or stop.**

Users and Passwords

The following sections explain how to create users and passwords.

Administrative (User) Security Levels and Guidelines

Administrative functions require access logins and passwords to prevent the possibility of one administrator reallocating or removing storage resources belonging to other clients and hosts without authorization.

You assign separate passwords for the three levels of security. You do this by setting up three users on the agents that have storage devices that are managed by the program.

The security levels must have these exact names:

- `ssmon`

  Represents the monitoring level of the software.

- `ssadmin`

  Represents the administration level of the software and provides access to the Rebuild, Parity Check, and Schedule Parity Check functions, as well as monitoring.

- `ssconfig`

  Represents the configuration level of the software and gives the installer direct access to the configuration functions and all other related aspects of the program.

These names are required for the three security levels. After installation, you must assign a password to each security name.

The `ssmon`, `ssadmin`, and `ssconfig` names are logins that correspond only to security levels within the program.

You can set up Sun StorEdge Configuration Service so that monitoring does not require users to enter the `ssmon` password. To do so, select the Auto Discovery option when the servers are added to the Managed Servers list at the console. You can set up these three logins and passwords locally on each server. (The accounts can have different passwords on each server.)

Once you have set up these three logins on the agents to be managed, the system administrator then typically provides user access to the program by assigning employees appropriate passwords, which are based on the level of security required

to complete tasks. For example, everyone who has administration privileges on a particular server would be assigned the same password that was established for the user `ssadmin`.

Note – To add servers to the Managed Servers list, refer to the *Sun StorEdge 3000 Family Configuration Service User's Guide*.

Global Passwords on Multiple Servers

If you have a large network and do not want to set up logins individually, and it is acceptable to have the same passwords on multiple servers, you can establish the three logins on a domain server under Microsoft Windows. As a result, all other servers within the Microsoft Windows domain can access the three logins along with their respective passwords.

▼ To Create Windows NT Users

1. **Add users with the NT User Manager program.**
2. **Select Policies and then User Rights.**
3. **Select Show Advanced User Rights.**
4. **Give the NT User Administrator the Rights to Act as a part of the operating system.**
5. **Under User Properties, deselect User Must Change Password at Next Login.**
6. **Under User Properties, select User Cannot Change Password and Password Never Expires.**
7. **If you plan to set up the user names on a domain server so that multiple server setups are not required, be sure that the servers you want to manage belong to the domain where you have established the Sun StorEdge Configuration Service user account.**

   Refer to your Windows NT documentation for more information.

▼ To Create Windows 2000 or Windows 2003 Users

1. **On a Windows 2000 host, choose Start → Settings → Control Panel → Administrative Tools → Computer Management → System Tools → Local Users and Groups.**

   On a Windows 2003 host, choose Start → Administrative Tools → Computer Management → Local Users and Groups.

2. **Right-click the Users folder and choose New User to add the three users (**`ssmon`**,** `ssconfig`**, and** `ssadmin`**).**

3. **Add one of the users under User name. If desired, enter a description under Description.**

4. **Enter a password and, if desired, select User Cannot Change Password and Password Never Expires.**

Uninstalling Sun StorEdge Configuration Service

Use the Windows Add/Remove Programs utility to remove Sun StorEdge Configuration Service from a Microsoft Windows console.

▼ To Uninstall Sun StorEdge Configuration Service

1. **Choose Start → Settings → Control Panel → Add/Remove Programs.**

2. **Choose Sun StorEdge Configuration Service Agent and choose Add/Remove.**

   Respond appropriately to the prompts.

3. **Choose Sun StorEdge Configuration Service Console and select Add/Remove.**

   Respond appropriately to the prompts.

CHAPTER 4

Installing Sun StorEdge Configuration Service on a Linux Host

This chapter provides procedures for installing Sun StorEdge Configuration Service consoles and agents on a Sun Linux or Red Hat Linux host. Topics covered in this chapter are as follows:

- "System Requirements" on page 27
- "Installing Software" on page 28
- "Users and Passwords" on page 32
- "Uninstalling Sun StorEdge Configuration Service" on page 35

System Requirements

This section lists the system requirements for the Linux host.

- Netscape Navigator web browser – You require the web browser to view online help. Versions earlier than 4.0 are not supported.
- TCP/IP-compliant network interface – Each console must have a TCP/IP-compliant network interface (such as an Ethernet or Token Ring network card, or a serial line with a modem). Each agent must have a TCP/IP-compliant network interface and driver set (included with the operating system).
- Color monitor – The console is best viewed with a monitor resolution of 1024 x 768 pixels with 256 colors.
- OS, memory, and disk space – TABLE 4-1 lists the console system requirements for the Linux OS. TABLE 4-2 lists the agent system requirements for the Linux OS.

TABLE 4-1 Console System Requirements for Linux OS

Linux OS Version	Memory	Disk Space
Sun Linux 5.0 on a Sun™ LX50 server (SCSI only) Red Hat Advanced Server 2.1	256 Mbyte minimum 512 Mbyte recommended	40 Mbyte minimum 100 Mbyte recommended

TABLE 4-2 Agent System Requirements for Linux OS

Linux OS Version	Memory	Disk Space
Sun Linux 5.0 on a Sun LX50 server (SCSI only) Red Hat Advanced Server 2.1	128 Mbyte minimum 512 Mbyte recommended	20 Mbyte minimum 100 Mbyte recommended

Installing Software

Sun StorEdge Configuration Service software includes the following components:

- Sun StorEdge Configuration Service agent
- Sun StorEdge Configuration Service console
- Sun StorEdge Diagnostic Reporter (optional utility)
- Command-Line Interface (CLI)

For installation information for Sun StorEdge Diagnostic Reporter, see "Installing Sun StorEdge Diagnostic Reporter" on page 55. For installation information for the CLI, see "Installing and Accessing the Command-Line Interface" on page 67.

Note – Before installing Sun StorEdge Configuration Service, be sure to read the release notes for your array.

Note – You must be superuser to install Sun StorEdge Configuration Service and run the console.

Upgrading Software – Agent and Console Version Compatibility

Because the communication protocol changes from version to version, you must install *both* the agent and console when upgrading. If different versions of the agent and console co-exist, Sun StorEdge Configuration Service is not able to discover previously configured arrays.

Installation Packages

The installation packages are contained on the Sun StorEdge 3000 Family Professional Storage Manager CD, and include the following files:

- `SUNWscsd.rpm` – Sun StorEdge Configuration Service agent
- `SUNWscsu.rpm` – Sun StorEdge Configuration Service console

▼ To Install the Agent and Console

Install the agent on each of the servers that is part of Sun StorEdge Configuration Service. Install the console on the computer or workstation you plan to use for managing and maintaining the storage system.

The console can be installed on the server or on any client system. The agent must be installed on the server to which the storage is attached.

Complete the following steps to install the agent, console, or both. You must install at least one agent and one console for the program to run.

If you are upgrading, you must install *both* the agent and console. If different versions of the agent and console co-exist, Sun StorEdge Configuration Service is not able to discover previously configured arrays.

Note – Make sure that Java runtime environment software is installed on the computer or workstation on which you are installing Sun StorEdge Configuration Service. The earliest release of the Java runtime environment software that is compatible with Sun StorEdge Configuration Service is 1.2.

---

1. **If Java runtime environment software is not installed on the computer or workstation on which you are installing Sun StorEdge Configuration Service, install it now.**

   To check the Java runtime environment software version, type:

```
# java -version
```

2. **Mount the CD on your file system if it is not already mounted.**

```
# cd mount /dev/cdrom /mnt/cdrom
```

3. **Insert the Sun StorEdge 3000 Family Professional Storage Manager CD and type:**

```
# cd /mnt/cdrom/product/linux
```

4. **Install the packages in one of the following ways:**

   - To install only the agent, type:

```
# rpm -ivh SUNWscsd.rpm
```

   - To install only the console, type:

```
# rpm -ivh SUNWscsu.rpm
```

5. **To access online help, install Netscape Navigator on the system on which you are installing the console.**

   Versions earlier than 4.0 are not supported. If Netscape Navigator is not detected, you are asked to specify the path.

   a. Change to `/opt/SUNWsscs/sscsconsole` **and type:**

```
./config_sscon
```

   b. Type the absolute path to the web browser.

Note – You can configure the web browser path name at any time; however, if you do not specify a path name at some point, you cannot access online help.

After the agent is installed, the following message is displayed, indicating the components were installed successfully and have started:

```
# rpm -ivh SUNWscsd.rpm Preparing...
########################################### [100%] 1:SUNWscsd
########################################### [100%] add user ssmon
add user ssadmin add user ssconfig Configuring and starting Sun
StorEdge(tm) Configuration Service daemons[ OK ]
Starting Sun StorEdge(tm) Configuration Service agent daemon[ OK ]
Starting Sun StorEdge(tm) Configuration Service agent monitor
daemon[ OK ]
```

After the console is installed, the following message is displayed, indicating the components were installed successfully and have started:

```
# rpm -ivh SUNWscsu.rpm Preparing...
########################################### [100%] 1:SUNWscsu
########################################### [100%]
Installation completed successfully!
```

The agent and console are installed in `/opt/SUNWsscs/sscsconsole`.

▼ To Stop or Start the Agent

You can stop and start the agent manually by using the run commands script in `/etc/init.d/ssagent`.

1. **To stop the agent, type:**

```
# /etc/init.d/ssagent stop
```

2. **To start the agent, type:**

```
# /etc/init.d/ssagent start
```

or

```
# service ssagent start
```

Note – You must be superuser to start the agent.

If you use `start` without first using `stop`, the script restarts any agents that have stopped. If all the agents have stopped (as with a `stop` option), the script reconfigures the runtime environment before restarting the agents.

3. **To determine if the agent is running, type:**

```
# ps -e | grep ss
```

or

```
# service ssagent status
```

Both `ssmon` and `ssserver` are displayed in the output. If you have enabled SNMP trap generation, you also see the name `sstrapd`.

Users and Passwords

The following sections explain how to create users and passwords.

Administrative (User) Security Levels and Guidelines

If you are running the program on a Linux host, *administrator security levels are automatically created during the installation process*. You only need to set passwords and assign users according to the desired permission level.

Administrative functions require access logins and passwords to prevent the possibility of one administrator reallocating or removing storage resources belonging to other clients and hosts without authorization.

You assign separate passwords for the three levels of security for the program. You do this by setting up three users on the agents that have storage devices that are managed by the program. These three users are automatically added during the installation of the agent.

The security levels must have these exact names:

- `ssmon`

  Represents the monitoring level of the software.

- `ssadmin`

  Represents the administration level of the software and provides access to the Rebuild, Parity Check, and Schedule Parity Check functions, as well as monitoring.

- `ssconfig`

  Represents the configuration level of the software and gives the installer direct access to the configuration functions and all other related aspects of the program.

These names are required for the three security levels. After installation, you must assign a password to each security name.

Note – User passwords are deleted when Sun StorEdge Configuration Service is uninstalled. If you had a previous configuration, you have to reenter the `ssmon`, `ssadmin`, and `ssconfig` passwords.

The `ssmon`, `ssadmin`, and `ssconfig` names are logins that correspond only to security levels within the program. For UNIX operating environments, the default shell for these accounts is assigned to `/bin/false` to prevent the user IDs from being used for interactive logins.

You can set up Sun StorEdge Configuration Service so that monitoring does not require users to type the `ssmon` password. To do so, select the Auto Discovery option when the servers are added to the Managed Servers list at the console. You can set up these three logins and passwords locally on each server. (The accounts can have different passwords on each server, if desired.)

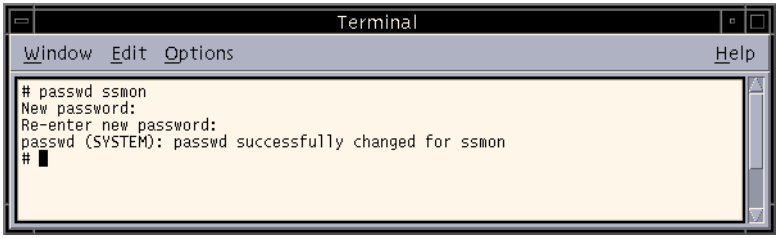
Once you have set up these three logins on the agents to be managed, the system administrator typically provides user access to the program by assigning employees appropriate passwords, which are based on the level of security required to complete tasks. For example, everyone who has administration privileges on a particular server is assigned the same password that was established for the user `ssadmin`.

Note – To add servers to the Managed Servers list, refer to the *Sun StorEdge 3000 Family Configuration Service User's Guide*.

▼ To Create Passwords and Permissions

Create a password for each of the new users by typing:

```
# passwd user-name
```



Administrators might also want to change group permissions, which are defined in the `svrlist.dat` file located in the `/opt/SUNWsscs/sscsconsole` directory during installation.

The console is a Java technology-based utility, and as such, cannot provide facilities to control permissions or ownership of files that Sun StorEdge Configuration Service creates. The `svrlist.dat` file is easily readable by various forms of ASCII text processors. It contains the encrypted password for the user `ssmon` and can be decrypted.

Note – Do not change the permissions and group ownership of `svrlist.dat` after adding all agents that are being monitored.

Uninstalling Sun StorEdge Configuration Service

You must uninstall earlier versions of Sun StorEdge Configuration Service when upgrading the console or agent. Note that some files are not removed because they are created after the installation and are still valid for the upgrade environment.

▼ To Uninstall Sun StorEdge Configuration Service

Use the `rpm -e` command followed by the package you want to uninstall , `SUNWscsd` (agent) or `SUNWscsu` (console).

```
# rpm -e SUNWscsd
# rpm -e SUNWscsu
```

CHAPTER 5

Installing Sun StorEdge Configuration Service on an HP-UX Host

This chapter provides procedures for installing Sun StorEdge Configuration Service consoles and agents on an HP-UX host. Topics covered in this chapter are as follows:

- "System Requirements" on page 37
- "Installing Software" on page 38
- "Users and Passwords" on page 42
- "Uninstalling Sun StorEdge Configuration Service" on page 45

System Requirements

This section lists the system requirements for the HP-UX host.

- Netscape Navigator web browser – You require the web browser to view online help. Versions earlier than 4.6 are not supported.
- TCP/IP compliant network interface – Each console must have a TCP/IP-compliant network interface (such as an Ethernet or Token Ring network card, or a serial line with a modem). Each agent must have a TCP/IP capable network card interface and driver set (included with the operating system).
- Color monitor – The console is best viewed with a monitor resolution of 1024 x 768 pixels with 256 colors.
- OS, memory, and disk space – TABLE 5-1 lists the console system requirements for the HP-UX OS. TABLE 5-2 lists the agent system requirements for the HP-UX OS.

TABLE 5-1 Console System Requirements for HP-UX OS

HP-UX OS Version	Memory	Disk Space
11.0 and 11i	256 Mbyte minimum 512 Mbyte recommended	40 Mbyte minimum 100 Mbyte recommended

TABLE 5-2 Agent System Requirements for HP-UX OS

HP-UX OS Version	Memory	Disk Space
11.0 and 11i	128 Mbyte minimum 512 Mbyte recommended	10 Mbyte minimum 100 Mbyte recommended

Installing Software

Sun StorEdge Configuration Service software includes the following components:

- Sun StorEdge Configuration Service agent
- Sun StorEdge Configuration Service console
- Sun StorEdge Diagnostic Reporter (optional utility)
- Command-Line Interface (CLI)

For installation information on Sun StorEdge Diagnostic Reporter, see "Installing Sun StorEdge Diagnostic Reporter" on page 55. For installation information on the CLI, see "Installing and Accessing the Command-Line Interface" on page 67.

Note – Before installing Sun StorEdge Configuration Service, be sure to read the release notes for your array.

Note – You must be superuser to install Sun StorEdge Configuration Service and run the console.

Upgrading Software – Agent and Console Version Compatibility

Because the communication protocol changes from version to version, you must install *both* the agent and console when upgrading. If different versions of the agent and console co-exist, Sun StorEdge Configuration Service is not able to discover previously configured arrays.

Installation Packages

The installation packages are contained on the Sun StorEdge 3000 Family Professional Storage Manager CD, and include the following files:

- `SUNWscsd.depot` – Sun StorEdge Configuration Service agent
- `SUNWscsu.depot` – Sun StorEdge Configuration Service console

▼ To Install the Agent and Console

Install the agent on each of the servers that is part of Sun StorEdge Configuration Service. Install the console on the computer or workstation you plan to use for managing and maintaining the storage system.

The console can be installed on the server or on any client system. The agent must be installed on the server to which the storage is attached.

Complete the following steps to install the agent, console, or both. You must install at least one agent and one console for the program to run.

If you are upgrading, you must install *both* the agent and console. If different versions of the agent and console co-exist, Sun StorEdge Configuration Service is not able to discover previously configured arrays.

Note – Make sure that Java runtime environment software is installed on the remote login host. The earliest release of Java runtime environment software that is compatible with Sun StorEdge Configuration Service is 1.2. If you are not using a remote login host environment, it must be installed on the HP-UX machine on which you are installing Sun StorEdge Configuration Service.

---

1. **If Java runtime environment software is not installed on the computer or workstation on which you are installing Sun StorEdge Configuration Service, install it now.**

   To check the Java runtime environment software version, type:

```
# java -version
```

2. **Make sure that a mounting point has been created for the CD.**
3. **Insert the Sun StorEdge 3000 Family Professional Storage Manager CD.**
4. **Determine the device entry for the CD:**

```
# ioscan -fnC disk
```

   Note the device entry, for example:

```
/dev/dsk/c2t5d0
```

5. **Mount the CD on your file system if it is not already mounted:**

```
# mount -r device entry   mounting point
```

6. **To install the agent, type:**

```
# swinstall -s /cdrom/product/hpux/SUNWscsd.depot
```

7. **To install the console, type:**

```
# swinstall -s /cdrom/product/hpux/SUNWscsu.depot
```

   The agent is installed in `/opt/SUNWsscs/ssagent`. The console is installed in `/opt/SUNWsscs/sscsconsole`.

▼ To Display the Console

You cannot start the console until you set the display to show the console.

1. **Specify a name for the remote login host and press Return.**

   If you are not using a remote login host environment, specify the name of the HP-UX machine:

   ```
   # xterm -display ipaddress of remote login host:0.0 -title name of remote login host or HP-UX machine
   ```

   A terminal window is displayed with the name of the remote login host or HP-UX machine you specified in the previous step. This is the terminal window from which you start Sun StorEdge Configuration Service, as described in the *Sun StorEdge 3000 Family Configuration Service User's Guide*.

2. **Specify the default web browser.**

   To access online help, Netscape Navigator must be installed on the system on which you are installing the console. Netscape Navigator is usually installed in either `/opt/netscape/netscape` or `/usr/bin/netscape`.

Note – You can configure the web browser path name at any time; however, if you do not specify a path name at some point, you cannot access online help.

▼ To Stop or Start the Agent

The agent can be stopped and started manually.

1. **To stop the agent, type:**

   ```
   # /sbin/init.d/ssagent stop
   ```

2. **To start the agent, type:**

   ```
   # /sbin/init.d/ssagent start
   ```

Note – You must be superuser to start the agent.

If you use `start` without first using `stop`, the script restarts any agents that have stopped. If all the agents have stopped (as with a `stop` option), the script reconfigures the runtime environment before restarting the agents.

3. **To determine if the agent is running, type:**

```
# ps -e | grep ss
```

Both `ssmon` and `ssserver` are displayed in the output. If you have enabled SNMP trap generation, you also see the name `sstrapd`.

Users and Passwords

The following sections explain how to create users and passwords.

Administrative (User) Security Levels and Guidelines

If you are running the program on an HP-UX host, *administrator security levels are automatically created during the installation process*. You only need to set passwords and assign users according to the desired permission level.

Administrative functions require access logins and passwords to prevent the possibility of one administrator reallocating or removing storage resources belonging to other clients and hosts without authorization.

You assign separate passwords for the three levels of security for the program. You do this by setting up three users on the agents that have storage devices that are managed by the program. These three users are automatically added during the installation of the agent.

The security levels must have these exact names:

- `ssmon`

  Represents the monitoring level of the software.

- `ssadmin`

Represents the administration level of the software and provides access to the Rebuild, Parity Check, and Schedule Parity Check functions, as well as monitoring.

- `ssconfig`

  Represents the configuration level of the software and gives the installer direct access to the configuration functions and all other related aspects of the program.

These names are required for the three security levels. After installation, you must assign a password to each security name.

Note – User passwords are deleted when Sun StorEdge Configuration Service is uninstalled. If you had a previous configuration, you have to reenter the `ssmon`, `ssadmin`, and `ssconfig` passwords

---

The `ssmon`, `ssadmin`, and `ssconfig` names are logins that correspond only to security levels within the program. For UNIX operating environments, the default shell for these accounts is assigned to `/bin/false` to prevent the user IDs from being used for interactive logins.

You can set up Sun StorEdge Configuration Service so that monitoring does not require users to type the `ssmon` password. To do so, select the Auto Discovery option when the servers are added to the Managed Servers list at the console. You can set up these three logins and passwords locally on each server. (The accounts can have different passwords on each server, if desired.)

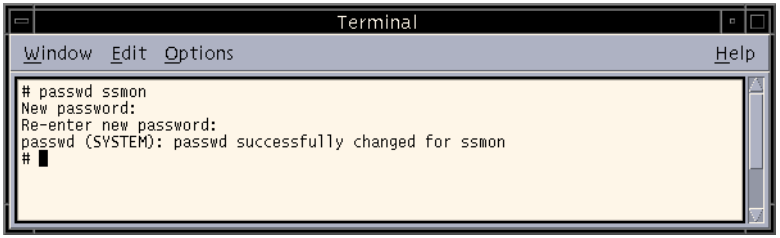
Once you have set up these three logins on the agents to be managed, the system administrator typically provides user access to the program by assigning employees appropriate passwords, which are based on the level of security required to complete tasks. For example, everyone who has administration privileges on a particular server is assigned the same password that was established for the user `ssadmin`.

Note – To add servers to the Managed Servers list, refer to the *Sun StorEdge 3000 Family Configuration Service User's Guid*e.

▼ To Create Passwords and Permissions

Create a password for each of the new users by typing:

```
# passwd user-name
```



Administrators might also want to change group permissions, which are defined in the `svrlist.dat` file located in the `/opt/SUNWsscs/sscsconsole` directory during installation.

The console is a Java technology-based utility, and as such, cannot provide facilities to control permissions or ownership of files that Sun StorEdge Configuration Service creates. The `svrlist.dat` file is easily readable by various forms of ASCII text processors. It contains the encrypted password for the user `ssmon` and can be decrypted.

Note – Do not change the permissions and group ownership of `svrlist.dat` after adding all agents that are being monitored.

Uninstalling Sun StorEdge Configuration Service

You must uninstall earlier versions of Sun StorEdge Configuration Service when upgrading the console or agent. Note that some files are not removed because they are created after the installation and are still valid for the upgrade environment.

▼ To Uninstall Sun StorEdge Configuration Service

Use the `swremove` command followed by the package you want to uninstall, `SUNWscsd` (agent) or `SUNWscsu` (console).

```
# swremove SUNWscsd
# swremove SUNWscsu
```

CHAPTER 6

Installing Sun StorEdge Configuration Service on an IBM AIX Host

This chapter provides procedures for installing Sun StorEdge Configuration Service consoles and agents on an IBM AIX host. Topics covered in this chapter are as follows:

- "System Requirements" on page 47
- "Installing Software" on page 48
- "Users and Passwords" on page 51
- "Uninstalling Sun StorEdge Configuration Service" on page 54

System Requirements

This section lists the system requirements for the IBM AIX host.

- Netscape Navigator web browser – You require the web browser to view online help. Versions earlier than 4.08 are not supported.
- TCP/IP-compliant network interface – Each console must have a TCP/IP-compliant network interface (such as an Ethernet or Token Ring network card, or a serial line with a modem). Each agent must have a TCP/IP-compliant network interface and driver set (included with the operating system).
- Color monitor – The console is best viewed with a monitor resolution of 1024 x 768 pixels with 256 colors.
- OS, memory, and disk space – TABLE 6-1 lists the console system requirements for the IBM AIX OS. TABLE 6-2 lists the agent system requirements for the IBM AIX OS.

TABLE 6-1 Console System Requirements for IBM AIX OS

IBM AIX OS Version	Memory	Disk Space
4.3.3 and 5.1L	256 Mbyte minimum 512 Mbyte recommended	40 Mbyte minimum 100 Mbyte recommended

TABLE 6-2 Agent System Requirements for IBM AIX OS

IBM AIX OS Version	Memory	Disk Space
4.3.3 and 5.1L	128 Mbyte minimum 512 Mbyte recommended	20 Mbyte minimum 100 Mbyte recommended

Installing Software

Sun StorEdge Configuration Service software includes the following components:

- Sun StorEdge Configuration Service agent
- Sun StorEdge Configuration Service console
- Sun StorEdge Diagnostic Reporter (optional utility)
- Command-Line Interface (CLI)

For installation information for Sun StorEdge Diagnostic Reporter, see "Installing Sun StorEdge Diagnostic Reporter" on page 55. For installation information for the CLI, see "Installing and Accessing the Command-Line Interface" on page 67.

Installation Packages

The installation packages are contained on the Sun StorEdge 3000 Family Professional Storage Manager CD, and include the following files:

- `SUNWscsd.bff` – Sun StorEdge Configuration Service agent
- `SUNWscsu.bff` – Sun StorEdge Configuration Service console

Note – Before installing Sun StorEdge Configuration Service, be sure to read the release notes for your array.

Note – You must be superuser to install Sun StorEdge Configuration Service and run the console.

Upgrading Software – Agent and Console Version Compatibility

Because the communication protocol changes from version to version, you must install *both* the agent and console when upgrading. If different versions of the agent and console co-exist, Sun StorEdge Configuration Service is not able to discover previously configured arrays.

▼ To Install the Agent and Console

Install the agent on each of the servers that is part of Sun StorEdge Configuration Service. Install the console on the computer or workstation you plan to use for managing and maintaining the storage system.

The console can be installed on the server or on any client system. The agent must be installed on the server to which the storage is attached.

Complete the following steps to install the agent, console, or both. You must install at least one agent and one console for the program to run.

If you are upgrading, you must install *both* the agent and console. If different versions of the agent and console co-exist, Sun StorEdge Configuration Service is not able to discover previously configured arrays.

Note – Make sure that Java runtime environment software is installed on the computer or workstation on which you are installing Sun StorEdge Configuration Service. The earliest release of Java runtime environment software that is compatible with Sun StorEdge Configuration Service is 1.3.

1. **If Java runtime environment software is not installed on the computer or workstation on which you are installing Sun StorEdge Configuration Service, install it now.**

   To check the Java runtime environment software version, type:

   ```
   # java -version
   ```

2. **Insert the Sun StorEdge Professional Storage Manager CD and type:**

   ```
   # mount -v cdrfs -o ro CD-ROM-drive
   ```

3. **To install the agent, type:**

   ```
   # installp -a -d /cdrom/product/aix/SUNWscsd.bff
   ```

4. **To install the console, type:**

   ```
   # installp -a -d /cdrom/product/aix/SUNWscsu.bff
   ```

   After the agent or console is installed successfully, "SUCCESS" is displayed in the Result column of the Installation Summary.

5. **Specify a path to the default web browser.**

   To access Sun StorEdge Configuration Service online help, Netscape Navigator must be installed on the system on which you are installing the console. Versions earlier than 4.08 are not supported. If a web browser is not detected, you are asked to specify the path to the web browser.

   Netscape Navigator is usually installed in `/usr/bin/netscape`.

Note – You can configure the web browser path name at any time; however, if you do not specify a path name at some point, you cannot access online help.

The agent is installed in `/usr/SUNWsscs/ssagent`. The console is installed in `/usr/SUNWsscs/sscsconsole`.

▼ To Stop or Start the Agent

The agent can be stopped or started manually.

1. **To stop the agent, type:**

```
# /etc/ssagent.rc stop
```

2. **To start the agent, type:**

```
# /etc/ssagent.rc start
```

Note – You must be superuser to start the agent.

If you use `start` without first using `stop`, the script restarts any agents that have stopped. If all the agents have stopped (as with a `stop` option) the script reconfigures the runtime environment before restarting the daemons.

3. **To determine if the agent is running, type:**

```
# ps -e | grep ss
```

Both `ssmon` and `ssserver` are displayed in the output. If you have enabled SNMP trap generation, you also see the name `sstrapd`.

Users and Passwords

The following sections explain how to create users and passwords.

Administrative (User) Security Levels and Guidelines

If you are running the program on an IBM AIX host, *administrator security levels are automatically created during the installation process*. You only need to set passwords and assign users according to the desired permission level.

Administrative functions require access logins and passwords to prevent the possibility of one administrator reallocating or removing storage resources belonging to other clients and hosts without authorization.

You assign separate passwords for the three levels of security for the program. You do this by setting up three users on the agents that have storage devices that are managed by the program. These three users are automatically added during the installation of the agent.

The security levels must have these exact names:

- `ssmon`

  Represents the monitoring level of the software.

- `ssadmin`

  Represents the administration level of the software and provides access to the Rebuild, Parity Check, and Schedule Parity Check functions, as well as monitoring.

- `ssconfig`

  Represents the configuration level of the software and gives the installer direct access to the configuration functions and all other related aspects of the program.

These names are required for the three security levels. After installation, you must assign a password to each security name.

Note – User passwords are deleted when Sun StorEdge Configuration Service is uninstalled. If you had a previous configuration, you have to reenter the `ssmon`, `ssadmin`, and `ssconfig` passwords

---

The `ssmon`, `ssadmin`, and `ssconfig` names are logins that correspond only to security levels within the program. For UNIX operating environments, the default shell for these accounts is assigned to `/bin/false` to prevent the user IDs from being used for interactive logins.

You can set up Sun StorEdge Configuration Service so that monitoring does not require users to type the `ssmon` password. To do so, select the Auto Discovery option when the servers are added to the Managed Servers list at the console. You can set up these three logins and passwords locally on each server. (The accounts can have different passwords on each server, if desired.)

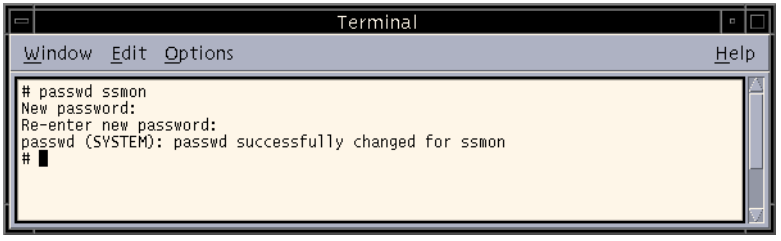
Once you have set up these three logins on the agents to be managed, the system administrator typically provides user access to the program by assigning employees appropriate passwords, which are based on the level of security required to complete tasks. For example, everyone who has administration privileges on a particular server is assigned the same password that was established for the user `ssadmin`.

Note – To add servers to the Managed Servers list, refer to the *Sun StorEdge 3000 Family Configuration Service User's Guide*.

▼ To Create Passwords and Permissions

Create a password for each of the new users by typing:

```
# passwd user-name
```



Administrators might also want to change group permissions, which are defined in the `svrlist.dat` file located in the `/usr/SUNWsscs/sscsconsole` directory during installation.

The console is a Java technology-based utility, and as such, cannot provide facilities to control permissions or ownership of files that Sun StorEdge Configuration Service creates. The `svrlist.dat` file is easily readable by various forms of ASCII text processors. It contains the encrypted password for the user `ssmon` and can be decrypted.

Note – Do not change the permissions and group ownership of `svrlist.dat` after adding all agents that are being monitored.

Uninstalling Sun StorEdge Configuration Service

You must uninstall earlier versions of Sun StorEdge Configuration Service when upgrading the console or agent. Note that some files are not removed because they are created after the installation and are still valid for the upgrade environment.

▼ To Uninstall Sun StorEdge Configuration Service

Use the `installp -u` command followed by the package you want to uninstall,. `SUNWscsd` (agent) or `SUNWscsu` (console).

```
# installp -u SUNWscsd
# installp -u SUNWscsu
```

CHAPTER 7

Installing Sun StorEdge Diagnostic Reporter

This chapter provides steps on installing Sun StorEdge Diagnostic Reporter on a Solaris, Linux, HP-UX, IBM AIX, Windows NT, Windows 2000, and Windows 2003 host. Topics covered in this chapter include:

- "System Requirements" on page 56
- "Installing Software" on page 56
- "Manually Stopping and Starting Sun StorEdge Diagnostic Reporter" on page 63
- "Uninstalling Sun StorEdge Diagnostic Reporter" on page 65

System Requirements

TABLE 7-1 lists the system requirements for each of the supported platforms.

TABLE 7-1 System Requirements for Sun StorEdge Diagnostic Reporter

OS Version	Memory	Disk Space
Solaris2.6 Solaris 8 and Solaris 9 on SPARC platforms Solaris 9 x86 Platform Edition (9 08/03)	256 Mbyte minimum 512 Mbyte recommended	40 Mbyte minimum 100 Mbyte recommended
Windows NT 4.0 Windows 2000 Windows 2003	64 Mbyte minimum 512 Mbyte recommended	40 Mbyte minimum 400 Mbyte recommended
Sun Linux 5.0 on a Sun™ LX50 server (SCSI only) Red Hat Advanced Server 2.1	256 Mbyte minimum 512 recommended	40 Mbyte minimum 100 Mbyte recommended
HP-UX 11.0 and 11i	256 Mbyte minimum 512 recommended	40 Mbyte minimum 100 Mbyte recommended
IBM AIX 4.3.3 and 5.1L	256 Mbyte minimum 512 Mbyte recommended	40 Mbyte minimum 100 Mbyte recommended

Installing Software

This section lists the installation packages and provides steps for installing Sun StorEdge Diagnostic Reporter.

Note – Before installing Sun StorEdge Diagnostic Reporter, be sure to read the release notes for your array.

Note – You must be superuser to install Sun StorEdge Diagnostic Reporter.

Installation Packages

Installation packages are contained on the Sun StorEdge 3000 Family Professional Storage Manager CD. TABLE 7-2 specifies which files are required for which OS. Sun StorEdge Diagnostic Reporter on a Solaris OS also offers language support for French, Japanese, Simplified Chinese, Traditional Chinese, and Korean. TABLE 7-2 specifies which files are required for each language.

TABLE 7-2 Sun StorEdge Diagnostic Reporter Installation Packages

	Solaris OS	Microsoft Windows OS	Linux OS	HP-UX OS	IBM AIX OS
Agent	SUNWscsa	setup.exe	SUNWscsa.rpm	SUNWscsa.depot	SUNWscsa.bff
Config Tool (UI)	SUNWscui		SUNWscui.rpm	SUNWscui.depot	SUNWscui.bff

Language Support for the Solaris Host

In addition to the English-only installation packages listed in TABLE 7-2, language support in French, Japanese, and Simplified Chinese, Traditional Chinese, and Korean is provided for the Solaris host. TABLE 7-3 lists the required installation packages for these languages.

Note – Each language requires the English installation package for the Sun StorEdge agent and the Config Tool.

TABLE 7-3 Required Sun StorEdge Diagnostic Reporter Installation Packages for Solaris OS Language Support

	English	French	Japanese	Simplified Chinese	Traditional Chinese	Korean
Agent	SUNWscsa	SUNWscsa SUNWfscs	SUNWscsa SUNWjscs	SUNWscsa SUNWcscs	SUNWscsa SUNWtscs	SUNWscsa SUNWkscs
Config Tool (UI)	SUNWscui	SUNWscui SUNWfscui	SUNWscui SUNWjscui	SUNWscui SUNWcscui	SUNWscui SUNWtscui	SUNWscui SUNWkscui

▼ To Install Sun StorEdge Diagnostic Reporter on a Solaris Host

If you are installing only the English version of the package, follow only the instructions for English. If you are adding language support, you must install the English version of the program *first*.

Note – You must install the Sun StorEdge Configuration Service agent before installing the Sun StorEdge Diagnostic Reporter agent and Config Tool.

Note – Make sure that Java runtime environment software is installed on the computer or workstation on which you are installing Sun StorEdge Configuration Service. The earliest release of Java runtime environment software that is compatible with Sun StorEdge Configuration Service on a Solaris 2.6 host is 1.3.1. The earliest release of Java runtime environment software that is compatible with Sun StorEdge Configuration Service on a Solaris 8 or 9 host is 1.2.

---

1. **Insert the Sun StorEdge 3000 Family Professional Storage Manager CD and type:**

```
# cd /cdrom/cdrom0/product/solaris
```

2. **To install the agent (English), type:**

```
# pkgadd -d SUNWscsa
```

To add language support, type:

```
# pkgadd -d SUNWxscs
```

where *x* is `f`, `j`, `c`, `t`, or `k`, depending on what language you are installing. See TABLE 7-3, "Required Sun StorEdge Diagnostic Reporter Installation Packages for Solaris OS Language Support" on page 57 for package names.

3. **To install the Config Tool (UI) (English), type:**

```
# pkgadd -d SUNWscui
```

To add French, Japanese, or Simplified Chinese language support, type:

```
# pkgadd -d SUNWxscui
```

where *x* is `f`, `j`, `c`, `t`, or `k`, depending on what language you are installing. See "Required Sun StorEdge Diagnostic Reporter Installation Packages for Solaris OS Language Support" on page 57 for package names.

4. **Provide appropriate responses to each of the standard installation prompts.**

The installation prompts are standard `pkgadd -d` prompts regarding which packages to install and how to process scripts (with superuser privileges).

5. **When the installation procedure is complete, reboot to activate the driver and the server daemons.**

The agent is installed in `/opt/SUNWsscs/ssdiagreporterd`. The Config Tool is installed in `/opt/SUNWsscs/ssdiagreporterui`.

▼ To Install Diagnostic Reporter on a Microsoft Windows Host

Note – You must install the Sun StorEdge Configuration Service agent before installing the Sun StorEdge Diagnostic Reporter agent and Config Tool.

Note – Make sure that Java runtime environment software is installed on the computer or workstation on which you are installing Sun StorEdge Configuration Service. The earliest release of Java runtime environment software that is compatible with Sun StorEdge Configuration Service is 1.2.

---

1. **To make sure the software installation utility functions optimally, close all open applications.**
2. **Insert the Sun StorEdge 3000 Family Professional Storage Manager CD and change to the `\product\windows` directory.**
3. **Double-click `setup.exe` and select SUNWsscs Diag Reporter.**

4. **In the Choose Destination Location window, install the default folder, `C:\Program Files\Sun\ssdgrpt`, and click Next.**

   To install to a different folder, click Browse, select another folder, and click Next.

5. **When the next window is displayed, click Full Installation and click Next.**
   - Full Installation – Installs all three software components (Service, Config Tool, and Mail Receiver Tool)
   - Service Installation – Installs only the background Service software; note that the Service function can be configured remotely from the Config Tool
   - UI Installation – Installs only the Config and Mail Receiver Tools (not the Service)

Note – If you are not the administrator or you did not install Java runtime environment software, error messages that the Sun StorEdge Diagnostic Reporter Service is not running or is failing are displayed and you are unable to complete installation.

---

6. **After the components are installed, click Finish to complete the installation.**

▼ To Install Diagnostic Reporter on a Linux Host

Note – You must install the Sun StorEdge Configuration Service agent before installing the Sun StorEdge Diagnostic Reporter agent and Config Tool.

Note – Make sure that Java runtime environment software is installed on the computer or workstation on which you are installing Sun StorEdge Configuration Service. The earliest release of Java runtime environment software that is compatible with Sun StorEdge Configuration Service is 1.2.

---

1. **Insert the Sun StorEdge 3000 Family Professional Storage Manager CD and type:**

```
# cd /cdrom/cdrom0/product/linux
```

2. **To install the agent, type:**

```
# rpm -ivh SUNWscsa.rpm
```

3. **To install the Config Tool (UI), type:**

```
# rpm -ivh SUNWscui.rpm
```

4. **When the installation procedure is complete, the agent starts automatically.**

   The agent is installed in `/opt/SUNWsscs/ssdiagreporterd`. The Config Tool is installed in `/opt/SUNWsscs/ssdiagreporterui`.

▼ To Install Diagnostic Reporter on an HP-UX Host

Note – You must install the Sun StorEdge Configuration Service agent before installing the Sun StorEdge Diagnostic Reporter agent and Config Tool.

Note – Make sure that Java runtime environment software is installed on the remote login host. The earliest release of Java runtime environment software that is compatible with Sun StorEdge Diagnostic Reporter is 1.2. If you are not using a remote login host environment, it must be installed on the HP-UX machine on which you are installing Sun StorEdge Diagnostic Reporter.

---

1. **If Java runtime environment software is not installed on the remote login host or computer or workstation on which you are installing Sun StorEdge Configuration Service, install it now.**
2. **Make sure that a mounting point has been created for the CD.**
3. **Insert the Sun StorEdge 3000 Family Professional Storage Manager CD.**
4. **Determine the device entry for the CD:**

```
# ioscan -fnC disk
```

   Note the device entry, for example:

```
/dev/dsk/c2t5d0
```

5. **Mount the CD on your file system if it is not already mounted.**

```
# mount -r device-entry  mounting-point
```

6. **To install the agent, type:**

```
# swinstall -s /cdrom/product/hpux/SUNWscsa.depot
```

7. **To install the Config Tool (UI), type:**

```
# swinstall -s /cdrom/product/hpux/SUNWscui.depot
```

The agent is installed in `/opt/SUNWsscs/ssdiagreporterd`. The Config Tool is installed in `/opt/SUNWsscs/ssdiagreporterui`.

▼ To Install Diagnostic Reporter on an IBM AIX Host

Note – Make sure that Java runtime environment software is installed on the computer or workstation on which you are installing Sun StorEdge Configuration Service. The earliest release of Java runtime environment software that is compatible with Sun StorEdge Configuration Service is 1.3.

---

1. **If Java runtime environment software is not installed on the computer or workstation on which you are installing Sun StorEdge Diagnostic Reporter, install it now.**

   To check the Java runtime environment software version, type:

```
# java -version
```

2. **Insert the Sun StorEdge Professional Storage Manager CD and type:**

```
# mount -v cdrfs -o ro CD-drive
```

3. **To install the agent, type:**

```
# installp -a -d /cdrom/product/aix/SUNWscsd.bff
```

4. **To install the Config Tool (UI), type:**

```
# installp -a -d /cdrom/product/aix/SUNWscui.bff
```

After the agent or console is installed successfully, "SUCCESS" is displayed in the Result column of the Installation Summary.

The agent is installed in `/usr/SUNWsscs/ssdiagreporterd`. The Config Tool is installed in `/usr/SUNWsscs/ssdiagreporterui`.

Manually Stopping and Starting Sun StorEdge Diagnostic Reporter

This section explains how to manually stop and start Sun StorEdge Diagnostic Reporter.

Note – You must be superuser to start and stop the agents (daemons).

▼ To Stop and Start Sun StorEdge Diagnostic Reporter on a Solaris or Linux Host

Type:

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

▼ To Stop and Start Sun StorEdge Diagnostic Reporter on a Windows NT Host

To stop the Sun StorEdge Configuration Service agents, choose Settings → Control Panel → Services, select the agent you want to stop, and click Stop.

To start the agent software on the server, you must either reboot the server or start Sun StorEdge Diagnostic Reporter Service under Settings → Control Panel → Services.

▼ To Stop and Start Sun StorEdge Diagnostic Reporter on a Microsoft Windows 2000 or 2003 Host

1. **On a Windows 2000 host, choose Start → Programs → Administrative Tools → Computer Management.**

   On a Windows 2003 host, choose Start → Administrative Tools → Computer Management.

   Alternatively, you can right-click My Computer and select Manage.

2. **Click Services & Applications.**

3. **Select the Sun StorEdge Diagnostic Reporter Server, and right-click the service you want to start or stop.**

▼ To Stop and Start Sun StorEdge Diagnostic Reporter on an HP-UX Host

Type:

```
# /sbin/init.d/ssdgrptd stop
# /sbin/init.d/ssdgrptd start
```

▼ To Stop and Start Sun StorEdge Diagnostic Reporter on an IBM AIX Host

Type:

```
# /usr/sbin/ssdgrptd stop
# /usr/sbin/ssdgrptd start
```

Uninstalling Sun StorEdge Diagnostic Reporter

This section explains how to uninstall Sun StorEdge Diagnostic Reporter.

▼ To Uninstall Sun StorEdge Diagnostic Reporter on a Solaris Host

---

Note – If you added French, Japanese, or Simplified Chinese language support, you need to uninstall them *before* uninstalling the English version.

Use `pkgrm` (with the package names) to remove either or both portions of Sun StorEdge Diagnostic Reporter. See "Required Sun StorEdge Diagnostic Reporter Installation Packages for Solaris OS Language Support" on page 57 for package names.

▼ To Uninstall Sun StorEdge Diagnostic Reporter on a Linux Host

Use the `rpm -e` command followed by the package you want to uninstall, `SUNWscsa` (agent) or `SUNWscui` (Config Tool).

```
# rpm -e SUNWscsa
# rpm -e SUNWscui
```

▼ To Uninstall Sun StorEdge Diagnostic Reporter on a Microsoft Windows Host

Use the Windows Add/Remove Programs utility to remove Sun StorEdge Diagnostic Reporter.

1. **On a Windows NT and Windows 2000 host, choose Start → Settings → Control Panel → Add/Remove Programs.**

   On a Windows 2003 host, choose Start → Control Panel → Add/Remove Programs.

2. **Select the Sun StorEdge Diagnostic Reporter application and select Add/Remove.**

   Respond appropriately to the prompts.

▼ To Uninstall Sun StorEdge Diagnostic Reporter on an HP-UX Host

Use the `swremove` command followed by the package you want to uninstall, `SUNWscsa` (agent) or `SUNWscui` (Config Tool).

```
# swremove SUNWscsa
# swremove SUNWscui
```

▼ To Uninstall Sun StorEdge Diagnostic Reporter on an IBM AIX Host

Use the `installp -u` command followed by the package you want to uninstall, `SUNWscsa` (agent) or `SUNWscui` (Config Tool).

```
# installp -u SUNWscsa
# installp -u SUNWscui
```

CHAPTER 8

Installing and Accessing the Command-Line Interface

This chapter explains how to install the command-line interface (CLI) on a Solaris, Linux, HP-UX, IBM AIX, Windows NT, Windows 2000, and Windows 2003 host. The CLI enables you to perform many of the same operations you perform by choosing menu options from the firmware application or Sun StorEdge Configuration Service. CLI commands have the advantage of being scriptable, which is especially useful in large data center environments with many arrays that need to be configured similarly. Topics covered in this chapter include:

- "Before You Begin Installing the CLI" on page 67
- "System Requirements" on page 68
- "Installing Software" on page 68
- "Uninstalling the CLI" on page 72

Before You Begin Installing the CLI

- Be sure to read the release notes for your array.
- Make sure that a logical drive is mapped to the primary controller.

System Requirements

TABLE 8-1 lists the system requirements for each of the supported platforms.

TABLE 8-1 System Requirements for CLI

OS Version	Disk Space
Solaris 2.6 Solaris 8 and Solaris 9 on SPARC platforms Solaris 9 x86 Platform Edition (9 08/03)	4 Mbyte minimum
Windows NT 4.0 Windows 2000 Windows 2003	3 Mbyte minimum
Sun Linux 5.0 on a Sun LX50 server (SCSI only) Red Hat Advanced Server 2.1	3 Mbyte minimum
HP-UX 11.0 and 11i	3 Mbyte minimum
IBM AIX 4.3.3 and 5.1L	4 Mbyte minimum

Installing Software

This section lists the installation package and provides steps for installing the CLI on each of the supported platforms.

Note – You must be superuser (administrator) to install the CLI.

Installation Packages

The CLI installation package is contained on the Sun StorEdge 3000 Family Professional Storage Manager CD, and includes the files listed in TABLE 8-2. The package must be installed on a server that is attached to the array.

TABLE 8-2 Installation Packages for the Command-Line Interface

Solaris OS	Microsoft Windows OS	Linux OS	HP-UX OS	IBM AIX OS
SUNWsccli	SUNWsccli.exe	SUNWsccli-linux.rpm	SUNWsccli-hp-ux.depot	SUNWsccli-aix.bff

▼ To Install the CLI on a Solaris Host

1. **Insert the Sun StorEdge 3000 Family 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 on which you installed the CLI (and that is attached to the array), and type:**

```
# sccli (with options and subcommands)
```

For a list of options and subcommands, see the man page.

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

The CLI is installed in `/opt/SUNWsscs/sbin/sccli`.

▼ To Install a Japanese Version of the Man Page

The CLI for the Solaris host offers a Japanese version of the man page. To install it, insert the Sun StorEdge 3000 Family Professional Storage Manager CD and type:

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

▼ To Install the CLI on a Microsoft Windows Host

1. **Insert the Sun StorEdge 3000 Family Professional Storage Manager CD and change to the** `\product\windows` **directory.**
2. **Double-click** `setup.exe` **and select Sun StorEdge Command-Line Interface.**

   The default installation directory is `C:\Program Files\Sun\sccli`.
3. **If CLI is installed on the same machine as the device you want to manage, to access the CLI, choose Start → Programs → Sun StorEdge 3000 Family → Command-Line Interface.**
4. **If the CLI is installed on a different machine from the device you want to manage, to access the CLI, choose Start → Run and type** `sccli` **followed by the IP address of the device you want to manage.**

▼ To Install the CLI on a Linux Host

1. **Mount the CD drive on your file system if it is not already mounted.**

```
# mount /dev/cdrom /mnt/cdrom
```

2. **Insert the Sun StorEdge 3000 Family Professional Storage Manager CD and type:**

```
# cd /mnt/cdrom/product/linux
```

3. **Type:**

```
# rpm -ivh SUNWsccli.rpm
```

   To access the CLI, log in as `root` **on the server on which you installed the CLI (and that is attached to the array), and type:**

```
# sccli (with options and subcommands)
```

   For a list of options and subcommands, see the man page.

   The CLI is installed in `/opt/SUNWsscs/sbin/sccli`.

▼ To Install the CLI on an HP-UX Host

1. **Make sure that a mounting point has been created for the CD.**
2. **Insert the Sun StorEdge 3000 Family Professional Storage Manager CD.**
3. **Determine the device entry for the CD:**

```
# ioscan -fnC disk
```

Note the device entry, for example:

```
/dev/dsk/c2t5d0
```

4. **Mount the CD on your file system if it is not already mounted.**

```
# mount -r device-entry  mounting-point
```

5. **Type:**

```
# swinstall -s /cdrom/product/hpux/SUNWsccli-hpux.depot
```

The CLI is installed in `/opt/SUNWsscs/sbin/sccli`.

▼ To Install the CLI on an IBM AIX Host

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

```
# mount -v cdrfs -o ro CD-drive
```

2. **Type:**

```
# installp -a -d /cdrom/product/aix/SUNWsccli-aix.bff
```

After the CLI is installed successfully, "SUCCESS" is displayed in the Result column of the Installation Summary.

The CLI is installed in `/usr/SUNWsscs/sbin/sccli`.

Uninstalling the CLI

This section explains how to uninstall the CLI.

▼ To Uninstall the CLI on a Solaris Host

Use the `pkgrm` command to uninstall the CLI.

```
# pkgrm SUNWsccli
```

▼ To Uninstall the Japanese Version of the Man Page

If you installed the Japanese version of the man page, use the `pkgrm` command to uninstall it.

```
# pkgrm SUNWjsccl
```

▼ To Uninstall the CLI on a Microsoft Windows Host

Use the Microsoft Windows Add/Remove Programs utility to remove the CLI.

1. **Choose Start → Settings → Control Panel → Add/Remove Programs.**
2. **Select** `SUNWsccli` **and select Add/Remove.**

   Respond appropriately to the prompts.

▼ To Uninstall the CLI on a Linux Host

Use the `rpm -e` command to uninstall the CLI.

```
# rpm -e SUNWsccli
```

▼ To Uninstall the CLI on an HP-UX Host

Use the `swremove` command to uninstall the CLI.

```
# swremove SUNWsccli
```

▼ To Uninstall the CLI on an IBM AIX Host

Use the `installp -u` command to uninstall the CLI.

```
# installp -u SUNWsccli
```

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