Sun StorEdge™ Enterprise Storage Manager 1.2 Release Notes

Includes Locale Installation Information

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Release Notes

The *Sun StorEdge Enterprise Storage Manager 1.2 Release Notes* describes important, late-breaking information about the software, including locale installation instructions.

These notes describe the following topics:

- "System Requirements" on page 2
- "Known Issues and Bugs" on page 5
- "Installing the Localized Software" on page 20
- "Localized Software Issues" on page 35
- "Related Documentation" on page 38
- "Service Contact Information" on page 39

See also the following related product release notes:

- *Sun StorEdge Enterprise Storage Manager 1.2 Topology Reporter Release Notes*
- *Sun StorEdge Configuration Service 1.2 Release Notes*
- *Sun StorEdge Diagnostic Expert 1.2 Release Notes*
- *Storage Automated Diagnostic Environment 2.2 System Edition Release Notes*
- *Storage Automated Diagnostic Environment 2.2 Device Edition Release Notes*

System Requirements

The software packages require that you have the latest network, switch, and host bus adapter software packages and updates. These packages and updates are available from:

`http://www.sun.com/storage/san`

Patches are available at
`http://sunsolve.sun.com/`

TABLE 1 shows the required software operating environment and SAN software for the topology reporter, configuration services, and diagnostic expert software.

TABLE 2 shows supported and required hardware.

TABLE 1 Required Operating Environment and SAN Software

Required SAN Software	The Sun StorEdge Enterprise Storage Manager 1.2 software requires that you have installed the Sun SAN Foundation software, version 4.2. The `SUNWsan` software, related software, and updates are available from:
	`http://www.sun.com/storage/san`
	Patches are available from:
	`http://sunsolve.sun.com/`

Required Operating Environment	Solaris™ 8 10/01 (also known as Update 6) with the latest patch cluster, including patches for the Java™ 2 SDK v1.4.0, available at: http://java.sun.com/j2se/1.4/install-solaris-patches.html Solaris 9
Patches	Fixes in the following patch are already included in the L10N version of the Sun StorEdge Enterprise Storage Manager 1.2 software. Use this patch only if you have installed the software from the English-only product CD. Patch number 114616-*xx* (*xx* indicates the latest patch revision level) See also "Recommended Patch If Your SAN Includes the Sun StorEdge 6320 Storage System" on page 4. Patches are available from: `http://sunsolve.sun.com/`

TABLE 1 Required Operating Environment and SAN Software

Required SAN Software	The Sun StorEdge Enterprise Storage Manager 1.2 software requires that you have installed the Sun SAN Foundation software, version 4.2. The `SUNWsan` software, related software, and updates are available from:
	`http://www.sun.com/storage/san`
	Patches are available from:
	`http://sunsolve.sun.com/`

Required Web Browser (minimum version)	Netscape Navigator version 4.79 Microsoft Internet Explorer version 5.0

TABLE 2 Supported and Required Hardware

CD-ROM Requirement	A CD-ROM drive connected to the host machine where the software is to be installed.
Host Machines, Supported	The software is supported on host machines using the Solaris operating environment. Hosts include but are not limited to: • Sun Enterprise™ server models 220R, 250, 420R, 450 • Sun Enterprise server models 3500, 4500, 5500, 6500 • Sun Fire™ server models 280R, 3800, 4800, 4810, and 6800 Management stations include the above list and the following workstations: • Sun Ultra workstation models 5, 10, 60, and 80
Storage, Supported	Sun StorEdge T3 arrays, minimum firmware release 1.17[1] Sun StorEdge T3+ arrays, minimum firmware release 2.0[1] Sun StorEdge 3510 FC array Sun StorEdge 3900 and 6900 Series storage subsystems Sun StorEdge 6120 Series arrays[1] Sun StorEdge 6320 Series systems[1] Sun StorEdge 9900 Series systems (includes the Sun StorEdge 9910 and Sun StorEdge 9960 system arrays) 1. The configuration service software supports these storage arrays or subsystems
Switches, Supported	Sun StorEdge Network FC Switch8 and Switch-16 Brocade Communications Systems SAN switches McDATA Corp. 2 Gbit per second 16, 32, and 64 port SAN switches
Disk and Memory Space Requirements, Total	1 Gbyte total disk space in the `/opt` directory for all packages 512 Mbytes system memory minimum

TABLE 2 Supported and Required Hardware *(Continued)*

Disk and Memory Space Requirements, Topology Reporter	
	Management station installation and operation: • 640 Mbytes of disk space • 512 Mbytes system memory minimum Agent station installation and operation: • 71 Mbytes of disk space • 512 Mbytes system memory **If the management and agent station is a single machine:** • 711 Mbytes of disk space • 512 Mbytes system memory minimum
Disk and Memory Space Requirements, Configuration Service	
	200 Mbytes of disk space
Disk and Memory Space Requirements, Diagnostic Expert	
	60 Mbytes of disk space in the `/opt` directory (default installation directory) 30 Mbytes of disk space in the `/var/opt` directory (default installation directory) 128 Mbytes system memory

Recommended Patch If Your SAN Includes the Sun StorEdge 6320 Storage System

Note – Fixes in the 114616-xx patch are already included in the L10N version of the Sun StorEdge Enterprise Storage Manager 1.2 software. Use this patch only if you have installed the software from the English-only product CD.

Please install patch number 114616-*xx* if you wish to use the Sun StorEdge Enterprise Storage Manager 1.2 software to help manage a Sun StorEdge 6320 storage system. (*xx* indicates the latest patch revision level.)

Patches are available at
`http://sunsolve.sun.com/`

Known Issues and Bugs

The following paragraphs describe known issues and software bugs.

- "Known Issues" on page 5
- "Known Bugs" on page 13

Known Issues

This section includes the following known issues. See also "Localized Software Issues" on page 35.

- "Use the esminstall Script to Install the Sun StorEdge Enterprise Storage Manager Software" on page 6
- "Ensure that the Agent Stations in Your SLP Scope Use the Same Locale" on page 6
- "Using JNI Host Bus Adapters" on page 7
- "Networks with Multicasting Features Disabled" on page 7
- "Security" on page 7
- "If Sun StorEdge Component Manager Software is Installed on Your Host" on page 8
- "Possible Port Conflicts" on page 9
- "Web Browser Requires the Correct Java Plug-in Application for Switch Software" on page 10
- "Moving Connectors on Switch Ports" on page 10
- "Documentation Errata" on page 11

Use the esminstall Script to Install the Sun StorEdge Enterprise Storage Manager Software

The documentation available for each Sun StorEdge Enterprise Storage Manager software component (topology reporter, configuration service, and diagnostic expert) might include references to installation scripts named `install` or procedures to install software using the `pkgadd`(1M) command.

Do not use these procedures to install the software. Use the `esminstall` script located on the Sun StorEdge Enterprise Storage Manager 1.2 product CD, as described in the Sun StorEdge Enterprise Storage Manager 1.2 Installation Guide.

Ensure that the Agent Stations in Your SLP Scope Use the Same Locale

The management station and agent stations are considered to be in the same SLP scope when each machine has the same scope setting and locale. The *Sun StorEdge Enterprise Storage Manager 1.2 Installation Guide* describes how to configure the SLP scope settings and rules for the topology reporter software.

- **Ensure that the management station and each agent station are configured with matching locales.** The software can only discover devices if each station type is configured in the same locale.
- **Ensure that you configure the same scope setting for all agent stations connected to the same fabric**. (Fabric is defined here as interconnected switches providing physical connections between all fabric members [hosts, host bus adapters, other switches, and storage devices]. A SAN is defined here as consisting of multiple fabrics.)
- **Ensure the management station in this fabric has the same scope setting as each agent station**. The same setting ensures that the agent stations report information to the management station in the fabric.

Using JNI Host Bus Adapters

If your storage network configuration includes a JNI host bus adapter card, ensure that you have the latest version of your card's `JNIsnia` package for the Solaris operating environment. This package is available at the following URL:

`http://www.jni.com`

Also ensure that your JNI HBA card drivers are current. The latest package and drivers are required if you are using the topology reporter software.

Networks with Multicasting Features Disabled

If your management station and agent hosts reside on separate network segments and multicast network traffic cannot pass between these segments (that is, multicasting is disabled on your network), the Sun StorEdge Enterprise Storage Manager software might be prevented from discovering agents deployed to hosts located within a configured network segment.

Security

Note – This security issue results from the use of the Remote Method Invocation (RMI) registry and is not particular to the Sun StorEdge Enterprise Storage Manager 1.2 software.

The RMI Registry used in the Sun StorEdge Enterprise Storage Manager 1.2 software to register look up middle-tier services is unprotected. This situation implies that a malicious user can carry out attacks against the software by using the RMI Registry as the initial point of attack. Possible attacks include, but are not limited to, the following:

- Denial of service - implemented by removing service proxies from the RMI registry; the attack can be launched from the machine hosting the management station software
- Capture of information - implemented by replacing service proxies in the RMI registry; the attack can be launched from the machine hosting the management station software
- Unauthorized access of services - implemented by retrieving service proxies from the RMI registry; the attack can be launched from a remote host

If Sun StorEdge Component Manager Software is Installed on Your Host

If the Sun StorEdge Component Manager software is already installed on the host you have chosen as the management station (including configurations where the management station and agent station are the same host), you might have to select a different web server port number for the topology reporter software.

The default Component Manager non-secure web server port is 8180. The 8180 port is also the default for the topology reporter non-secure (non-SSL) server. *Make sure that the topology reporter software non-secure Tomcat web server port is different from the Component Manager web server port.*

If the already-installed Component Manager non-secure web server port is 8180, respond to the `/opt/SUNWstm/bin/esmconfig` configuration script prompts for the topology reporter software as follows. User responses are in **bold text** in this example showing the port choice as 8280:

```
Run Tomcat non-SSL server on port 8180 [y,n,?] n

Please enter the Tomcat non-SSL server port: 8280

Run Tomcat SSL server on port 8543 [y,n,?] y

Do you want to use the SLP scope nsmscope [y,n,?] y

Configuration successful.
End: TR configuration.
```

See also "Possible Port Conflicts" on page 9 and TABLE 3.

The *Sun StorEdge Enterprise Storage Manager 1.2 Software Installation Guide* describes the installation and configuration procedures in detail.

Possible Port Conflicts

Generally, you can use the default values for web server, telnet, and other ports when prompted by the `/opt/SUNWstm/bin/esmconfig` configuration script. Ensure that the default port numbers do not conflict with any other software you might have installed.

TABLE 3 lists the default ports for the topology reporter, configuration services, and diagnostic expert software located on the Sun StorEdge Enterprise Storage Manager 1.2 product CD.

TABLE 3 Default Ports, Sun StorEdge ESM 1.2 Software

Sun StorEdge ESM 1.2 Software	Non-Secure Socket Layer Port	SSL Port	Apache HTTP Server Port	Postgres SQL Port	Additional Default Ports
Topology reporter	8180	8543	1024	5437	Not applicable
Configuration service	8080	9443	1024	Not applicable	CLI telnet port - 8023 ssh proxy - 8514 Sun StorEdge 9900 Series software - 2001 Solaris CIM/WBEM port - 8181
Diagnostic Expert	8088	8443	Not applicable	Not applicable	Not applicable

Web Browser Requires the Correct Java Plug-in Application for Switch Software

To launch the Brocade Communications Systems WebTools switch software in a web browser from the topology reporter software, ensure that you have the correct Java™ web browser plug-in software installed. For example, the Netscape Communicator web browser might display a blank browser page or issue an error message such as:

```
This page contains information of a type (application/x-java-applet;
version=1.2.2) that can only be viewed with the appropriate Plug-in.
Click OK to download Plugin.
```

See the documentation for your Brocade Communications System switch and web browser for more information about web browser configuration requirements.

Moving Connectors on Switch Ports

If your environment includes a QLogic switch and you have moved a connector to a different switch port, the connector type information is not reflected in the topology reporter database. That is, the connector type information is not updated on the topology reporter web browser interface or in the command-line output and does not show the move to a different port.

- **To show the correct information, reboot the switch after moving connectors.**

  Use the Assets page or the `sstr` command-line interface to see switch port information.

Documentation Errata

- *Sun StorEdge Enterprise Storage Manager 1.2 Topology Reporter Administration and Operations Guide*

1. In Chapter 4, "Specifying the Sun StorEdge T3 Array Application" and "Specifying the Sun StorEdge 6000 Family Application", the Sun StorEdge Configuration Service software selection *app-name* is referred to as SCCS.

   The correct *app-name* is SSCS.

2. In Chapter 3, "To Launch the Software from the Sun Management Center Main Console", the text and referenced figures indicate that you view the topology reporter management and agent station status from the Remote Systems link in the Sun Management Center main console Browser tab.

   In most installations, you view the topology reporter management and agent station status under the Local Applications folder in the Sun Management Center Browser tab.

- *Sun StorEdge Enterprise Storage Manager 1.2 Installation Guide*

1. In Chapter 1, the Supported and Required Hardware table shows total memory space requirements as 256 Mbytes. See TABLE 2 for the correct memory space requirements.

2. In Chapter 2, "The esminstall and esmuninstall Script Options", the second bulleted paragraph states that the esmuninstall script is located in the `/var/opt/SUNWstem/` directory.

   The esmuninstall script is located in the `/opt/SUNWstm/bin/` directory after you install the software.

3. In Chapter 2, "Sun Management Center Integration" and "Before You Can Launch the Topology Reporter Software", a paragraph states the following:

   Ensure that the Sun Management Center `SUNWesagt` package is installed and started on each agent station.

   The corrected paragraph is as follows:

   Ensure that the Sun Management Center agent software (including the `SUNWesagt` package) is installed and started on each agent station.

4. In Chapter 2, "To Launch the Software from the Sun Management Center Main Console", the text and referenced figures indicate that you view the topology reporter management and agent station status from the Remote Systems link in the Sun Management Center main console Browser tab.

   In most installations, you view the topology reporter management and agent station status under the Local Applications folder in the Sun Management Center Browser tab.

- *Sun StorEdge Diagnostic Expert 1.2 Software User's Guide*

  This guide describes how to install the Sun StorEdge Diagnostic Expert 1.2 software by using the `pkgadd`(1M) command. Do not use this command.

  Use the `esminstall` script located on the Sun StorEdge Enterprise Storage Manager 1.2 product CD, as described in the *Sun StorEdge Enterprise Storage Manager 1.2 Installation Guide*.

  See the Sun StorEdge Enterprise Manager 1.2 Installation Guide for complete information about installing and configuring the software.

Known Bugs

This section describes the following known bugs and workarounds, if applicable:

- "Bug 4842420 English Text in Sun StorEdge Diagnostic Expert Test Results Table is Not Localized" on page 14
- "Bug 4841921 View Topology Details and View Topology Zone Topics in the Sun StorEdge Diagnostic Expert Localized Online Help" on page 14
- "Bug 4845512 Message and Other Text are Not Displayed in Simplified Chinese or Japanese If the Diagnostic Expert Server Software was Started on a Machine Using the French Locale" on page 15
- "Bug 4845648 Viewing Components Generates an Internal Error If the Diagnostic Expert Server Software was Started on a Machine Using the French Locale" on page 15
- "Bug 4845789 In the French (fr) Locale, Clicking the Last Two Links in the Left Contents Frame of Online Help Displays Content in The Wrong Frame" on page 16
- "Bug 4845851 The esminstall and esmuninstall Scripts Cannot Install or Uninstall Only the Localized (L10N) Packages for a Locale" on page 17
- "Bug 4846968 Archived Diagnostics Page Navigation Buttons Do Not Work" on page 17
- "Bug 4847208 Web Browser Shows Characters Incorrectly in the Traditional Chinese (zh_TW) Locale" on page 18
- "Bug 4847933 Cannot Open a Man Page Inside a Telnet or ssh CLI Session When the Default Locale in the /etc/default/init File is Set to fr_FR.ISO8859-1" on page 19

Bug 4842420 English Text in Sun StorEdge Diagnostic Expert Test Results Table is Not Localized

Messages in the Test Results table (available from the Assets tab > Switches > Diagnostics feature) are not available in locales other than English. Certain switch diagnostic test messages are produced by third-party or embedded device tests (for example, from Brocade Communications System devices) and have not been localized.

Workaround

None.

Bug 4841921 View Topology Details and View Topology Zone Topics in the Sun StorEdge Diagnostic Expert Localized Online Help

1. The English version of the Sun StorEdge Diagnostic Expert online help contains information about the Topology view details. However, this information is missing in the the online help for other locales.
2. The localized version of the Sun StorEdge Diagnostic Expert online help contains information about the Topology Zone information. The topology zone function does not exist in the Sun StorEdge Diagnostic Expert software, version 1.2. The English version of the help does not contain this information.

Workaround

See the *Sun StorEdge Diagnostic Expert 1.2 Software User's Guide* for information about viewing Topology. Ignore any information about the Topology Zone topic.

Bug 4845512 Message and Other Text are Not Displayed in Simplified Chinese or Japanese If the Diagnostic Expert Server Software was Started on a Machine Using the French Locale

If the Sun StorEdge Diagnostic Export 1.2 software is used as follows, messages and other text might display incorrectly as question marks (??):

1. The software is started on a machine using a non-English locale such as French.
2. The software is then accessed by using a web browser configured for a different locale (Simplified Chinese or Japanese)

Workaround

The Sun StorEdge Diagnostic Export 1.2 software supports Simplified Chinese (zh), French (fr) and Japanese (ja) locales in addition to the English (uppercase C) locale.

To support concurrent access by web browsers that use various locales, always start the Sun StorEdge Diagnostic Expert software in the C (English) locale. If needed, you can stop and restart the server as shown in the following example:

```
# /etc/init.d/init.ssde stop
# /usr/bin/env LC_ALL=C LANG=C /etc/init.d/init.ssde start
```

Bug 4845648 Viewing Components Generates an Internal Error If the Diagnostic Expert Server Software was Started on a Machine Using the French Locale

If you select a device's component ID when using the Sun StorEdge Diagnostic Expert 1.2 software, you might see the following error message:

```
Internal Error

This device is not under monitoring now. The probable cause is
that somebody has removed it.
```

Workaround

See the Workaround described in "Bug 4845512 Message and Other Text are Not Displayed in Simplified Chinese or Japanese If the Diagnostic Expert Server Software was Started on a Machine Using the French Locale" on page 15.

Bug 4845789 In the French (fr) Locale, Clicking the Last Two Links in the Left Contents Frame of Online Help Displays Content in The Wrong Frame

For the Sun StorEdge Configuration Service software installed in the French locale, clicking the last two links on the left (table of contents) frame of online help will display its content in the left frame. This help should display in the main (right) frame. The links are:

- Cannot Find LUN by Name
- To Update Sun StorEdge Array HTML Files

Workaround

Do not click these links in the table of contents frame. If you have clicked these links and seen the content displayed in the left frame, reload the page or reload the frame in your browser to return the help to its original state.

To view this content on the right (main) frame of online help, use one of the following options:

Option 1

1. **Click Help on the menu bar to open online help.**
2. **Click the first link named Contents in the left frame.**
3. **Click the last link named Troubleshooting in the right frame.**
4. **Click the link named Cannot Find LUN by Name in the right frame, or use the scroll bar to scroll down to the bottom of the right frame.**

Option 2

1. **Click Help on the menu bar to open online help.**
2. **Click the link named Troubleshooting in the left frame.**
3. **Use the scroll bar to scroll down to the bottom of the right frame.**

Bug 4845851 The esminstall and esmuninstall Scripts Cannot Install or Uninstall Only the Localized (L10N) Packages for a Locale

You cannot use the `esminstall` script to install and the `esmuninstall` script to remove one or more installed locale packages.

The `esmuninstall` script removes all packages that you have installed.

Workaround

See:

- "Installing Different or Multiple Locales After Previously Installing a Locale Package" on page 28

Bug 4846968 Archived Diagnostics Page Navigation Buttons Do Not Work

When using the Sun StorEdge Diagnostic Expert software in a web browser, the Next page, Previous page, and Go buttons do not work. Theses buttons are found when you navigate to the Assets page, select the Diagnostics link, and select Archive Diagnostics from the pulldown menu. The current page is displayed when using these buttons; the page remains the same. (The First Page and Last Page buttons do work.)

Workaround

None.

Bug 4847208 Web Browser Shows Characters Incorrectly in the Traditional Chinese (zh_TW) Locale

When using the Sun StorEdge Diagnostic Expert software in a web browser using the Traditional Chinese (zh_TW) locale, characters might appear as the question mark character (??).

Workaround

The software is not supported in the Traditional Chinese (zh_TW) locale. Reconfigure your web browser to use a supported locale.

Bug 4847933 Cannot Open a Man Page Inside a Telnet or ssh CLI Session When the Default Locale in the /etc/default/init File is Set to fr_FR.ISO8859-1

If `fr_FR.ISO8859-1` is set as the default locale in your system's `/etc/default/init` file, you might not be able to open the English Sun StorEdge Configuration Service shell man pages in a telnet or ssh CLI section.

Workarounds

You can perform one of the following workaround options:

- **Option 1**

1. **Using a text editor, removed or comment out the default locale setting in the `/etc/default/init` file.**
2. **Shut down and restart the system.**

- **Option 2**
  - Access these man pages from outside a CLI session by invoking the following command in a terminal window:

```
# /usr/bin/man -M /opt/SUNWdm/gre/usr/man/ manpage-name
```

  - Or include `/opt/SUNWdm/gre/usr/man` in your MANPATH. See "To Update Your Shell Environment to Display Japanese Man Pages" on page 37 for procedures describing how to include this path in your MANPATH.

Installing the Localized Software

The Sun StorEdge Enterprise Storage Manager software supports the following locales:

- English (uppercase C)
- Simplified Chinese (`zh`)
- French (`fr`)
- Japanese (`ja`)

Note – The software does not support Traditional Chinese. The documentation is available in English, French, Japanese, Korean, Simplified Chinese, and Traditional Chinese.

The *Sun StorEdge Enterprise Storage Manager 1.2 Installation Guide* describes the default English software preparation, installation, and configuration procedures. This section describes how to install the localized software.

The general steps to install the localized software are as follows:

1. Read the preparation and installation information as described in the *Sun StorEdge Enterprise Storage Manager 1.2 Reporter Installation Guide.*
2. Set the locale and install the localized software for the desired locale/language on the management station and each agent station.
3. Configure the software as described in the *Sun StorEdge Enterprise Storage Manager 1.2 Installation Guide.*

See the following sections:

- "Before You Begin" on page 21
- "How Many Locales Can I Install?" on page 21
- "Information about Removing the Software" on page 21
- "Remove Superuser Environment or Profile Aliases" on page 22
- "The Installation Script Main Menu" on page 23
- "Installing Different or Multiple Locales After Previously Installing a Locale Package" on page 28

Before You Begin

Ensure that you have a copy of the *Sun StorEdge Enterprise Storage Manager 1.2 Installation Guide*, available from the product CD-ROM. Please also read the sections in "Known Issues" on page 5.

How Many Locales Can I Install?

- Sun StorEdge Topology Reporter

  You cannot install multiple locales on a single machine or in the same SLP scope. To use a locale that is different from the one you originally installed, you must first uninstall all packages, then install by selecting the desired locale. See:

  - "Ensure that the Agent Stations in Your SLP Scope Use the Same Locale" on page 6
  - "To Install a Different Localization Software Package (Topology Reporter Software)" on page 29.

- Sun StorEdge Diagnostic Expert and Configuration Service

  You can install multiple locale packages in a single machine; you do not have to remove the related packages. You can install all or selected locales. If you want to remove a locale, use the `pkgrm`(1M) to remove the locale package only. See:

  - "To Install Different or Multiple Localization Software Packages (Diagnostic Expert Software)" on page 30
  - "To Install Different or Multiple Localization Software Packages (Configuration Service Software)" on page 31

Information about Removing the Software

- If you reconfigure the software after the initial configuration by using the `esmconfig` script, the software defaults to the last locale you installed
- If you remove the software, the default supported locale/language remaining on each system is English

See also "The esminstall and esmuninstall Script Options" on page 32.

Remove Superuser Environment or Profile Aliases

If aliases exist in the superuser environment or profile, the software installation and configuration might have unexpected results. Remove any aliases created for the environment (for example, `cp="cp -i"`) before you install or configure the software.

Log in as superuser and type one of the following in a terminal window.

- For the Korn shell:

```
# unalias -a
```

- For the C shell:

```
> unalias *
```

The Installation Script Main Menu

1. When you use the `esminstall` installation script with no arguments, a main installation menu is displayed, as shown in CODE EXAMPLE 1.

For example, to install the software on a management station and three agent stations, install the software as follows:

1. Set the locale first ***on each station*** by choosing `l) Set the locale`

Note – Type the lowercase L character to choose to set the locale. If you do not specify a locale in this step, the default locale that is installed is English (also known as the C locale).

---

2. Management station: to install the software on the management station, choose menu choice `2) Server packages`
3. Agent station: to install the software on each agent station, choose menu choice `3) Agent packages`.

TABLE 4 describes the menu options.

CODE EXAMPLE 1 Installation Script Main Menu

```
=====================================================
Sun StorEdge(tm) ESM 1.2.0 MAIN INSTALL MENU
SSTR: Topology Reporter 1.2.0
SSCS: Configuration Service 1.2.0
SSDE: Diagnostic Expert 1.2.0
=====================================================
1) Default: All packages
(SSTR server, SSTR agent, SSCS, SSDE server, SSDE Agent)
2) Server packages (SSTR server, SSCS, SSDE server)
3) Agent packages (SSTR agent, SSDE agent)
4) SSTR agent
5) SSDE agent
l) Set the locale
q) Quit.
=====================================================
Type a number to install the selected package(s)
[press Enter for default (All), Type q to Quit]:
```

TABLE 4 Installation Menu Choices

If You Wish to Select the Locale	Select This Menu Option	Which...
Perform this step before installing any packages	l) Set the Locale Note: Type the lowercase L character to choose to set the locale	• Specifies the supporting localized and internationalized packages • If you do not specify a locale in this step, the default locale that is installed is English (also known as the C locale)
If You Wish to Install	**Select This Menu Option**	**Which Installs These Components**
All packages on a single machine that acts as a management station and agent station	1) Default: All packages	• Topology reporter server (management and agent station packages) • Configuration service • Diagnostic expert server (management and data-host agent station packages)
The server software packages on a management station	2) Server packages	• Topology reporter management station • Configuration service • Diagnostic expert management station
The agent software on each agent station in your SAN	3) Agent packages	• Topology reporter agent station • Diagnostic expert agent station (data-host agent)
The topology reporter agent software packages	4) SSTR agent	• Topology reporter agent station only
The diagnostic expert agent station software	5) SSDE agent	• Diagnostic expert data-host agent only

▼ To Install the Localized Software

Note – See "Installing Different or Multiple Locales After Previously Installing a Locale Package" on page 28.

---

1. **Log into your machine as superuser.**
2. **Remove any defined aliases for this user as described in "Remove Superuser Environment or Profile Aliases" on page 22.**
3. **Insert the CD into the CD-ROM drive and start the Volume Manager daemon `vold`(1) (if needed):**

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

Note – You only need to start the Volume Manager daemon once. Do not start the daemon again.

---

4. **Run the `esminstall` script:**

```
# cd /cdrom/cdrom0
# ./esminstall
```

The installation main menu is displayed. See also "The esminstall and esmuninstall Script Options" on page 32.

5. **Choose the locale.**
   - Type l at the menu.

Note – Type the lowercase L character to choose to set the locale. If you do not specify a locale in this step, the default locale that is installed is English (also known as the C locale).

   - Select the installation locale.

   The installation script main menu is displayed.

6. **Select a package installation choice depending on your station type.**

   See the *Sun StorEdge Enterprise Storage Manager 1.2 Installation Guide* for more information about station types.

7. **Configure the software and complete the installation.**

   See the *Sun StorEdge Enterprise Storage Manager 1.2 Installation Guide* for more information about configuring the software.

   After installing and configuring the software on each station type (management and agent), the software prompts you with the following message:

```
Would you like to start All Sun StorEdge Topology Reporter
Components now?
```

8. **Type n and see "To Start the Topology Reporter and SLP Software on Each Station" on page 27 to start the topology reporter software.**

▼ To Start the Topology Reporter and SLP Software on Each Station

The topology reporter software needs to be started from the desired locale (`fr`, `ja`, `zh`, or `C`) on each station, to view the web-browser user interface in the desired language (French, Japanese, Simplified Chinese, or English).

1. **Stop the topology reporter and service locator protocol (SLP) software on each machine, if it has been started:**

```
# /etc/init.d/sstrd stop
# /etc/init.d/slpd stop
```

2. **Restart the topology reporter software using the same locale as the one you installed:**

```
# /usr/bin/env LC_ALL=locale /etc/init.d/sstrd start
```

where *locale* is `fr`, `ja`, `zh` or `C` (uppercase `C` specifies the English locale). The software displays messages showing each software process starting.

Note – If you did not specify a locale as described in "To Install the Localized Software" on page 25, the default locale installed is English (uppercase C).

Installing Different or Multiple Locales After Previously Installing a Locale Package

The following sections describe how to install different or multiple locale packages after you have already installed a locale package.

- "To Install a Different Localization Software Package (Topology Reporter Software)" on page 29
- "To Install Different or Multiple Localization Software Packages (Diagnostic Expert Software)" on page 30
- "To Install Different or Multiple Localization Software Packages (Configuration Service Software)" on page 31

▼ To Install a Different Localization Software Package (Topology Reporter Software)

For the topology reporter software, if you want to install a different locale software package after previously installing a localized software package, perform the following procedures. Note the following for the topology reporter software:

- You can only install one locale per system
- You cannot install multiple locales on a system

See also "Ensure that the Agent Stations in Your SLP Scope Use the Same Locale" on page 6 and "How Many Locales Can I Install?" on page 21.

1. **Stop the topology reporter and service locator protocol (SLP) software on each machine:**

```
# /etc/init.d/sstrd stop
# /etc/init.d/slpd stop
```

2. **Remove the currently-installed localized topology reporter software by using the esmuninstall script.**

   See "The esminstall and esmuninstall Script Options" on page 32.

3. **Use the esminstall script with a different locale option to install the topology reporter software.**

   See "To Install the Localized Software" on page 25.

4. **Configure the software and complete the installation.**

   See the *Sun StorEdge Enterprise Storage Manager 1.2 Installation Guide* for more information about configuring the software.

5. **Now start the topology reporter and SLP on each station.**

   See "To Start the Topology Reporter and SLP Software on Each Station" on page 27.

▼ To Install Different or Multiple Localization Software Packages (Diagnostic Expert Software)

1. **Stop the Sun StorEdge Diagnostic Expert software on each machine:**

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

2. **(Optional) Remove the currently-installed localization package by using the** `pkgrm`**(1M) command.**

3. **Install a localization package by using the** `pkgadd`**(1M) command.**
   - Insert the product CD into the CD-ROM drive.
   - Change to the `SSDE_1.2` directory.
   - Add the localization package:

```
# pkgadd -d . package-name
```

   where *package-name* is one of the following:

`SUNWcsade`	Simplified Chinese locale packages
`SUNWfsade`	French locale packages
`SUNWjsade`	Japanese locale packages

4. **Repeat Step 3 to add another localization package.**

5. **Configure the software and complete the installation.**

   See the *Sun StorEdge Enterprise Storage Manager 1.2 Installation Guide* for more information about configuring the software.

6. **Start the Sun StorEdge Diagnostic Expert software.**

```
# /usr/bin/env LC_ALL=C LANG=C /etc/init.d/init.ssde start
```

▼ To Install Different or Multiple Localization Software Packages (Configuration Service Software)

1. **Stop the Sun StorEdge Configuration Service software on each machine:**

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

2. **(Optional) Remove the currently-installed localization package by using the** `pkgrm`**(1M) command.**

3. **Install a localization package by using the** `pkgadd`**(1M) command.**
   - Insert the product CD into the CD-ROM drive.
   - Change to the `SSCS_1.2/L10N/Packages/`*locale*`/` directory, where *locale* is `fr` (French), `ja` (Japanese), or `zh` (Simplified Chinese).
   - Add the localization package:

```
# pkgadd -d . package-name
```

   where *package-name* is one of the following:

`SUNWcdm`	Simplified Chinese locale packages
`SUNWfdm`	French locale packages
`SUNWjdm`	Japanese locale packages

4. **Repeat Step 3 to add another localization package.**

5. **Configure the software and complete the installation.**

   See the *Sun StorEdge Enterprise Storage Manager 1.2 Installation Guide* for more information about configuring the software.

6. **Start the Sun StorEdge Configuration Service software.**

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

The esminstall and esmuninstall Script Options

Note – You must specify a locale by using the -L,--locale option with the -A,--all, -s,--server, or -a,--agent installation options.

The `esminstall` and `esmuninstall` scripts include options that are useful when you want to install or remove the software noninteractively. When you use the scripts with the `-S` (silent) option, you do not need to respond to prompts or messages. Software is installed or removed in silent mode.

- The `esminstall` script file located on the product CD has the options shown in TABLE 5.
- The `esmuninstall` script file located on the product CD and in the `/opt/SUNWstm/bin/` directory has the options shown in TABLE 6.

The scripts can accept short or long names for each option. A short name option requires a single hyphen (-). A long name option requires a double hyphen (--).

For example, to install all packages on a single machine, you can type one of the following:

```
# esminstall --locale fr --all
or
# esminstall -A -L fr
```

This document shows the short name option followed by the long name option, separated by a comma character. The syntax for `esminstall` and `esmuninstall` follows.

Note – When you use a long name option, do not type a space between hyphens.

```
esminstall [-A,--all | -s,--server | -a,--agent) | -t,--tragent |
       [-d,--deagent] [-S,--silent] [-l,--list] [-L,--locale]
       [? | -h,--help]
```

TABLE 5 esminstall Options

Option	Description
-A,--all	Install all packages on a single machine acting as a management and agent station.
-s,--server	Install the management station packages on a single machine.
-a,--agent	Install the agent station packages on a single machine.
-t,--tragent	Install the topology reporter agent station packages.
-d,--deagent	Install the diagnostic expert data-host agent packages.
-S,--silent	Install the selected packages in silent mode. The software installs without displaying messages or prompts. If you do not specify this option, the script prompts you with messages as in "The Installation Script Main Menu" on page 23.
-l,--list	List the available locales.
-L,--locale *locale*	Install the software in the specified locale, where *locale* is one of the following: • `en` - English • `fr` - French • `ja` - Japanese • `zh` - Simplified Chinese You must use the -L,--locale option with the -A,--all, -s,--server, or -a,--agent installation options.
? -h,--help	Displays script option information.

```
esmuninstall [-f,--full] [-S,--silent] [? | -h,--help]
```

TABLE 6 esmuninstall Options

Option	Description
-S,--silent	Uninstall the selected packages in silent mode. The software uninstalls without displaying messages or prompts.
-f,--full	Fully uninstall the software, including the persistence files.
?	Displays script option information.
-h,--help	

Localized Software Issues

The following sections describe issues concerning the localized version of the software.

- "To Install a Different Localization Software Package (Topology Reporter Software)" on page 29
- "Email and Pager Notification Services" on page 35
- "SNMP Notification" on page 36
- "Language Selection for the Simplified Chinese Version of Netscape Navigator" on page 36
- "Man Pages" on page 37

Email and Pager Notification Services

For the topology reporter software, select English as the locale option when sending notification email. Select English as the locale option for sending pager notifications.

These options are available through the topology reporter software Web browser interface or command-line interface. This release does not provide localization support for this feature.

For the Sun StorEdge Configuration Service software, if you do not know if your email or pager system supports the following encodings and character sets, select English as the option when sending sending e-mail or pager notification.

The encodings and character sets used and defined as part of MIME for the software are as follows

French	Content-Type: charset=iso-8859-1
	Content-Transfer-Encoding: 8bit
	X-MIME-Autoconverted: from quoted-printable to 8bit
Japanese:	Content-Type: text/plain; charset=iso-2022-jp
	Content-Transfer-Encoding: 7bit

Simplified Chinese:	Content-Type: text/plain; charset=gb2312
	Content-Transfer-Encoding: 8bit
	X-MIME-Autoconverted: from base64 to 8bit

SNMP Notification

For the Sun StorEdge Configuration Service and Topology Reporter software, select English as the locale option when setting the Simple Network Management Protocol (SNMP). This option is available through the topology reporter software Web browser interface or command-line interface.

This release does not provide localization support for this feature.

Language Selection for the Simplified Chinese Version of Netscape Navigator

For the Sun StorEdge Configuration Service software, to view the Simplified Chinese characters on the Web-browser user interface with Netscape Navigator, select `zh-CN` as the first choice in order of preference of languages. (This selection is available from the Preferences menu. From the Netscape Navigator tool bar, select Edit → Preferences.)

Do not select `zh` or `zh-CH` as the Simplified Chinese characters will not display correctly.

If the version of Netscape Navigator you use does not support Simplified Chinese (`zh-CN`), install a localized version which does support it.

Man Pages

Man pages are available only in English and Japanese.

The Sun StorEdge Configuration Service related man page can be displayed only in English if you are using the man page command for the Sun StorEdge shell. See the *Sun StorEdge Configuration Service 1.2 Administrator's Guide* for information about this shell. To display these man pages in Japanese using the man page command outside the Sun StorEdge shell, you must update your MANPATH variable with one of the following procedures.

▼ To Update Your Shell Environment to Display Japanese Man Pages

- Updating Your MANPATH Variable in a Bourne or Korn Shell

1. **Using a text editor, update your** `.profile` **file MANPATH statement to include** `/opt/SUNWdm/gre/usr/man/` **and make sure your MANPATH is exported.**

```
MANPATH="$MANPATH:/opt/SUNWdm/gre/usr/man/"
export MANPATH
```

2. **Save this file and exit the editor.**
3. **Reload your .profile file for your shell session.**

```
# . ./.profile
```

- Updating Your MANPATH Variable in a C Shell

1. **Using a text editor, add** `/opt/SUNWdm/gre/usr/man/` **to your MANPATH statement in your** `.login` **file.**

```
# setenv MANPATH "$MANPATH:/opt/SUNWdm/gre/usr/man/"
```

2. **Save this file and exit the editor.**
3. **Reload your** `.login` **file for your shell session.**

```
# source .login
```

Related Documentation

Application	Title	Part Number

Man pages	`sstr`
	`ssde`
	`sscs`
		Not applicable

Release and product information	*Sun StorEdge Enterprise Storage Manager 1.2 Roadmap*	817-1039
	Sun StorEdge Configuration Service 1.2 Release Notes	817-0998
	Sun StorEdge Diagnostic Expert 1.2 Release Notes	817-0197
	Sun StorEdge Enterprise Storage Manager 1.2 Topology Reporter Release Notes	817-1111
	Storage Automated Diagnostic Environment 2.2 System Edition Release Notes	817-0194
	Storage Automated Diagnostic Environment 2.2 Device Edition Release Notes	817-0823
	Sun StorEdge SAN Foundation Release Notes	817-0071
	Sun StorEdge Traffic Manager Software Release Notes	817-0385
Installation	*Sun StorEdge SAN Foundation Kit Installation Guide*	817-1244
	Sun StorEdge Enterprise Storage Manager 1.2 Installation Guide	817-1037
	Sun StorEdge SAN Foundation Kit Configuration Guide	817-1245
	Sun StorEdge Traffic Manager Software Installation and Configuration Guide	816-1420
System administration	*Sun StorEdge Enterprise Storage Manager 1.2 Topology Reporter Administration and Operations Guide*	817-1112
	Sun StorEdge Configuration Service 1.2 Administrator's Guide	817-0997
	Service Location Protocol Administration Guide	806-1412
User and diagnostic	*Sun StorEdge Diagnostic Expert 1.2 User's Guide*	817-0195

Service Contact Information

If you need help installing or using this product, call 1-800-USA-4SUN, or go to the following web site:

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