



# Sun StorEdge™ Enterprise Storage Manager 1.0 Topology Reporter Release Notes

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# Release Notes

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This document contains important last-minute product information about the Sun StorEdge™ Enterprise Storage Manager 1.0 Topology Reporter.

This document describes the following topics:

- [“Installation and Service Information” on page 2](#)
- [“Related Documentation” on page 3](#)
- [“Product Notes” on page 4](#)
- [“Known Bugs” on page 11](#)
- [“Documentation Errata” on page 17](#)

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# Installation and Service Information

If you are a Sun™ support or service provider, for product information, go to:

<http://webhome.ebay/networkstorage/products/>

For installation services in the U.S., contact Sun at the following number.

1-800-USA4SUN (1-800-872-4786)

For installation services outside the U.S., contact your local sales or service representative.

For information about service, sales, consulting, and support, go to:

<http://www.sun.com/service/support/contactsalesoffice.html>

<http://www.sun.com/service/support/sunsolve/index.html>

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## Related Documentation

A broad selection of Sun system documentation is located at:

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

A complete set of Solaris documentation and many other titles are located at:

<http://docs.sun.com>

Application	Title	Part Number
Man pages	sstr sstr_ctl	N/A
Release	<i>Sun StorEdge Enterprise Storage Manager 1.0 Configuration Service Release Notes</i>	816-4296
Installation	<i>Sun StorEdge Enterprise Storage Manager 1.0 Topology Reporter Installation Guide</i>	816-4291
	<i>Sun StorEdge Enterprise Storage Manager 1.0 Configuration Service Installation Guide</i>	816-4294
	<i>Sun StorEdge Network FC Switch8 and Switch-16 Installation and Configuration Guide, Sun StorEdge SAN 3.0 Release</i>	816-0830
	<i>Sun StorEdge Traffic Manager Software Installation and Configuration Guide</i>	816-1420
System administration	<i>Sun StorEdge Enterprise Storage Manager 1.0 Topology Reporter Administration and Operations Guide</i>	816-4293
	<i>Sun StorEdge Enterprise Storage Manager 1.0 Configuration Service Administrator's Guide</i>	816-4295
	<i>Service Location Protocol Administration Guide</i>	806-1412

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# Product Notes

This section includes the following topics:

- [“Software Installation Order”](#) on page 5
- [“Install the Software as Root”](#) on page 5
- [“Error Messages Appear in the Apache Log File”](#) on page 6
- [“Before You View Zone Details”](#) on page 6
- [“Port Conflicts with Configuration Service and Other Software”](#) on page 6
- [“Refreshing the Web Browser After Performing a Discovery”](#) on page 7
- [“Performing a New Discovery Before a Previous Discovery is Complete”](#) on page 7
- [“Web Browser Requires the Correct Java Plug-in Application for Switch Software”](#) on page 8
- [“Moving Connectors on Switch Ports”](#) on page 8
- [“If The Topology Page Displays An Error”](#) on page 9

# Software Installation Order

If you are installing the Sun StorEdge Traffic Manager (STMS) software and the topology reporter software, ensure that you install and configure the STMS software first. You can then install and configure the topology reporter software. See the *Sun StorEdge Traffic Manager Software Installation and Configuration Guide* for STMS installation and configuration information.

See [“4705898 Stale Data in Topology Reporter Model Database Causes Empty Device Paths to Appear in User Interface” on page 15](#) for related information.

## Install the Software as Root

On the machine you designate as the management station, log in as `root` through the Common Desktop Environment (CDE) Login Manager to install the software on the management station.

- Do not use the `su`, `telnet`, or `rlogin` commands from another machine.
- Do not log in from a text console terminal.

If you do not install the management station software logged in as `root` at the management station through the CDE Login Manager, you will not be able to view topology and device path graphics unless you perform the procedures in [“To Set the Display” on page 9](#).

You can use the `su`, `telnet`, or `rlogin` commands to install the software on the agent station.

# Error Messages Appear in the Apache Log File

Error messages such as those shown here might appear in the Apache Web server log file `/var/opt/SUNWnsm/apache/log/error_log` during topology reporter operation. Typically, the software writes three messages with identical times and dates.

You can ignore these error messages. Example messages follow:

```
[Thu Jun 6 07:54:59 2002] [error] [client 168.0.0.1] FastCGI: incomplete headers
(111 bytes) received from server "/opt/SUNWnsm/util/apache/fcgi-bin/hbaagent"

[Thu Jun 6 07:54:59 2002] [warn] FastCGI: server
"/opt/SUNWnsm/util/apache/fcgi-bin/hbaagent" (pid 25407) terminated by calling
exit with status '0'

[Thu Jun 6 07:54:59 2002] [warn] FastCGI: server
"/opt/SUNWnsm/util/apache/fcgi-bin/hbaagent" restarted (pid 25638)
```

## Before You View Zone Details

Before you attempt to view switch zone details in the software browser user interface, see the following:

- [“4650331 User Might Be Unaware of Switch Communication Problem” on page 13](#)

## Port Conflicts with Configuration Service and Other Software

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**Note** – If you have already installed the Sun StorEdge Component Manager software on port 8180, use the next available port to install the topology reporter software. For example, port 8181.

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Both the Sun StorEdge Enterprise Storage Manager 1.0 Topology Reporter and Configuration Service require you to specify ports when you install them. These software products cannot use the same port.

For example, if you installed the configuration service software first and selected port 8080, select port 8180 when you install the topology reporter software.

As of this release, [TABLE 1](#) shows the default ports for the topology reporter software.



TABLE 1 Default Topology Reporter Ports

Port Number	Description	Used with This Station Type
8180	HTTP port. For example: <code>http://hostname:8180</code>	Management station
8543	SSL HTTP port. For example: <code>https://hostname:8543</code>	Management station
1024	Apache HTTP server port	Agent station
5437	Postgres SQL data base port	Management station

## Refreshing the Web Browser After Performing a Discovery

After performing a discovery (as described in the *Sun StorEdge Enterprise Storage Manager 1.0 Topology Reporter Administration and Operations Guide*), refresh your Web browser to view any asset changes by clicking its Reload or refresh button. Refreshing the Web browser also updates the discovery time stamp when the discovery is finished.

## Performing a New Discovery Before a Previous Discovery is Complete

Do not click the Discover button or use the command-line interface (CLI) to start discovery until the initial or any previous discovery process is finished.

If you click the Discover button or use the `sstr discover` CLI command while a current discovery is occurring, the current discovery aborts and a new one is started.

# 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.

# If The Topology Page Displays An Error

If the Web browser displays an error on the Topology page such as following message, set the display as described:

```
Topology images are not available
```

## ▼ To Set the Display

1. **From the machine where you are trying to display the topology graphics, type the following:**

```
# /usr/openwin/bin/xhost + mgmt-station-hostname
```

Where *mgmt-station-hostname* is the host name of the management station machine. This step enables the management station to access your display.

2. **Log into the management station machine as the `root` user.**
3. **If the topology reporter software is running, stop it:**

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

4. **Edit the `/opt/SUNWnsm/sbin/sstr.tomcat` file and update the `DISPLAY` variable to the host name where you executed the `xhost` command in [Step 2](#).**

Change:

```
# Set display
DISPLAY=localhost:0.0
export DISPLAY
```

to:

```
# Set display
DISPLAY=UI-hostname:0.0
export DISPLAY
```

Where *UI-hostname* is the host name of the machine where you wish to display the topology graphics.

## 5. Start the topology reporter software:

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

---

**Note** – Once the topology reporter software has started, you can reset the `xhost` settings on your machine and the `DISPLAY` setting on the management station. Use the `sstr_ctl -s status` command to check that the topology reporter software components are running.

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# Known Bugs

This section provides workarounds to or information about the following known bugs:

- [“4627559 Running Tomcat on Headless Servers”](#) on page 12
- [“4642875 Topology Reporter Software Fails if One or More Supporting Software Components Fail”](#) on page 12
- [“4650331 User Might Be Unaware of Switch Communication Problem”](#) on page 13
- [“4705898 Stale Data in Topology Reporter Model Database Causes Empty Device Paths to Appear in User Interface”](#) on page 15

4627559

## *Running Tomcat on Headless Servers*

If the Web browser displays an error on the Topology page such as following message or you cannot view topology graphics, see [“To Set the Display” on page 9](#):

```
Topology images are not available
```

4642875

## *Topology Reporter Software Fails if One or More Supporting Software Components Fail*

If any of the supporting topology reporter software components (such as the database or Apache software) fails or crashes, the topology reporter software stops functioning with no alarms generated or notifications sent to the user. Error messages are written to the `/var/sadm/install/logs/SUNWnsm.log` log file.

### **Workaround**

- 1. Check the log files if a component is not running.**
- 2. Stop the software on the management and agent stations:**

```
# /etc/init.d/sstrd stop
# /opt/SUNWnsm/bin/sstr_ctl --status
```

- 3. Fix any errors shown in the log files.**
- 4. Start the software and check its status:**

```
# /etc/init.d/sstrd start
# /opt/SUNWnsm/bin/sstr_ctl --status
```

4650331

## *User Might Be Unaware of Switch Communication Problem*

The discovery agent of the topology reporter software contacts the hardware switch for its status and identification. The switch then requires a user name and password to access the devices. If you have not entered this information through the browser user interface or command-line interface, you might see error messages related to XML parsing or other exceptions.

Use this workaround to add an authorized user so that the switch can report its status to the software.

### **Workaround**

To fix this and make sure the software is receiving the correct information, enter the switch information into the topology reporter software.

## Finding Out the Switch IP Address, User Name, and Password

The typical default login information for a new switch is:

```
Username: admin
Password: password
```

To find out the IP address, contact your system administrator or click the switch graphic on the Topology page. The user name and password must match the settings you entered for the switch when you used the switch's management tool.

### ▼ To Add Switch Credentials - User Interface

---

**Note** – These steps makes the topology reporter software aware of switch user names and passwords and does not change existing switch settings.

---

1. **Click the Administration tab to display the Administration page.**
2. **Click the Out-of-band Credentials link under the Administration tab.**  
The Out-of-band Credentials page is displayed.
3. **Click the Add button.**

**4. Type the required information in the related text field:**

- Address - IP address of the switch
- User Name - The user's login name for the switch. Typically this field is admin.
- Password - The default is a blank password if you choose not to use one.
- Verify Password - If you use a password, type it again.

**5. Click Save.**

A confirmation page is displayed.

## ▼ To Add Switch Credentials - Command-line Interface

Use the `/usr/opt/SUNWnsm/bin/sstr` command to add switch credentials. The syntax is as follows.

```
sstr add-credential
```

This command adds and specifies a user name, password, and IP address profile to associate with a switch device and its related settings.

### Syntax

```
sstr add-credential -u(--username) user-name [-p(--password) password]  
ip-address
```

where:

---

<i>user-name</i>	User name to associate with an IP address.
<i>password</i>	Password to assign to the user. The default is a blank password if you do not use this option.
<i>ip-address</i>	IP address of the user.

---



4705898

## *Stale Data in Topology Reporter Model Database Causes Empty Device Paths to Appear in User Interface*

If you configure a host machine and a Sun StorEdge T3 or T3+ storage array to use the Sun StorEdge Traffic Manager software after you have installed the topology reporter software, the topology reporter user interface (UI) might show empty device paths. These paths are shown when you view storage device LUN details from the Assets page by selecting a storage device and Show LUNs from the More Actions drop-down menu.

In this case, the page might display inconsistent or empty device path details.

### **Workarounds**

To help prevent the inconsistent path reporting, install the STMS software and configure STMS devices before installing the topology reporter software. See [“Software Installation Order” on page 5](#)

If you have configured STMS devices after installing the topology reporter software, create and run the script shown in [CODE EXAMPLE 1](#).

### ▼ **To Run the Script**

- 1. Log into the management station machine as the `root` user.**
- 2. Copy the script commands shown in [CODE EXAMPLE 1](#) into a file and save the file.**  
For example, copy the commands into a file named `/tmp/lunclean.sh`.
- 3. Run the script.**

```
# /tmp/lunclean.sh
```

- 4. If your Web browser is open and you are logged into the topology reporter software, refresh or reload your Web browser page.**

## CODE EXAMPLE 1 Script to Remove Stale LUN Information from the Topology Reporter Database

```
#!/sbin/sh
#
# Copyright (c) 2002 by Sun Microsystems, Inc.
# All rights reserved.
#

# Set SUNWnsm basedir
BASEDIR=`/usr/bin/pkginfo -r SUNWnsmbj 2>&1`
if [ $? -ne 0 ]; then
    BASEDIR=/opt
fi

# Includes
. $BASEDIR/SUNWnsm/sbin/ssstrun

# Check for root
checkuserroot

# Defines
SSTR_DBHOME=$SSTR_HOME/util/pgsql
SSTR_DBBIN=$SSTR_DBHOME/nsml/bin
SSTR_DBSTART=$SSTR_DBBIN/dbstart.sh
SSTR_DBOWNER=sstr001
SSTR_PSQL=$SSTR_DBHOME/bin/psql

# Check if PostgreSQL is already running.
# If it's not running, then start it.
if [ -n "`findprocpgsql`" ]; then
    echo "The PostgreSQL is already running."
else
    /usr/bin/su - $SSTR_DBOWNER -c "$SSTR_DBSTART"
fi

# Delete staled instances of LUNs
DELETE_STRING="DELETE FROM Sun_NWS_HBA_ScsiInterface WHERE isStale\((lastUpdate\
)\);"

# Refresh related virtualtables
DELETE_STRING=$DELETE_STRING"SELECT refresh_VirtualTables\(\)\);"

/usr/bin/su $SSTR_DBOWNER -c ". $SSTR_DBBIN/postgres.env; LD_LIBRARY_PATH=
$SSTR_DBHOME/lib:$SSTR_DBHOME/nsml/lib; export LD_LIBRARY_PATH; echo
$DELETE_STRING | $SSTR_PSQL"
```

---

# Documentation Errata

This section describes corrections and last-minute additions to the topology reporter documentation.

## Administration and Operations Guide, Logging in Through a Web Browser

The Sun StorEdge Enterprise Storage Manager 1.0 Topology Reporter Administrations and Operations Guide *incorrectly* describes how to log into the software through a Web browser. Specifically, page 14, step 2 is incorrect.

The Sun StorEdge Enterprise Storage Manager 1.0 Topology Reporter Installation Guide, page 38, *correctly* describes this step, as follows:

1. **Open Netscape Navigator, version 4.79.**
2. **Type one of the following URLs in the URL text field:**
  - For a non-SSL HTTP server:

```
http://mgmt-station-hostname.domain:port/nsm/
```

where *mgmt-station-hostname.domain* is the management station host name and *port* is the port number you configured (typically 8180).

---

**Note** – If you are concerned about password security, use the SSL HTTP URL.

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- For an SSL HTTP server:

```
https://mgmt-station-hostname.domain:port/nsm/
```

where *mgmt-station-hostname.domain* is the management station host name and *port* is the port number you configured (typically 8543).

The Login page is displayed.

## Administration and Operations Guide, Chapter 2

Figure 2-5, Host Connectivity Detail Table on page 55 is incorrect and shows a column in the table named GBIC. This column is not in the released software.

## Administration and Operations Guide, Chapter 3

### Default User Role, CLI

Chapter 3 includes descriptions of the user role as set by the topology reporter command-line interface (CLI). If you do not specify a user role with the following commands, the default role is `guest`.

- `sstr add-user [-r role] user-name`
- `sstr modify-user [-r role] user-name`

### Specify a Text String Instead of An Integer, CLI

The following commands incorrectly show that you should enter an integer for certain options. The commands accept a text string in this case. The corrected text is in **bold type**.

- `sstr create-email-notification -e(--email-address) email-address [-a(--alarm-level) severity] [-m(--medium) {email | pager}] [-t(--min-interval) interval] [-l(--locale) locale]`

where:

---

<i>email-address</i>	The email address of the user to be notified.
<b>severity</b>	The severity level of the alarm. Valid levels are: <b>down</b> A fatal nonrecoverable error has occurred. <b>critical</b> A serious error has occurred <b>major</b> A somewhat serious error has occurred. <b>minor</b> An annoying error has occurred.
<b>email</b> <b>pager</b>	The medium to use to send the notification. If not specified, the default is <b>email</b> .
<i>interval</i>	The minimum time between messages, in minutes. The default is 0.
<i>locale</i>	The user locale of sent messages. <i>locale</i> is one of the following: English French Japanese German

---

■ `sstr email-notification -e(--email-address) email-address id`  
`[-m(--medium) {email | pager}] [-t(--min-interval) interval]`  
`[-l(--locale) locale]`

where:

---

<i>email-address</i>	The email address of the user to be notified.
<i>id</i>	The notification identification. Use the <code>sstr email-notifications</code> command without options to display the related notification <i>id</i> .
<b>email</b> <b>pager</b>	The medium to use to send the notification. If not specified, the default is <b>email</b> .
<i>interval</i>	The minimum time between messages, in minutes. The default is 0.
<i>locale</i>	The user locale of sent messages. <i>locale</i> is one of the following: English French Japanese German

---

- `sstr create-snmp-notification -h hostname [-a severity] [-p portnumber] [-l locale]`

where:

---

<i>hostname</i>	The host name of the machine receiving the SNMP trap information. <i>hostname</i> must be the fully qualified hostname including the domain. For example: martha.xyzcorp.com
<i>severity</i>	The severity level of the alarm. Valid levels are: <b>down</b> A fatal nonrecoverable error has occurred. <b>critical</b> A serious error has occurred <b>major</b> A somewhat serious error has occurred. <b>minor</b> An annoying error has occurred.
<i>portnumber</i>	The SNMP port of the specified machine. The default port is 162.
<i>locale</i>	The user locale of sent messages. <i>locale</i> is one of the following: English French Japanese German

---

- `sstr snmp-notification id [-h hostname] [-a severity]`  
`[-p portnumber] [-l locale]`

where:

---

<i>id</i>	The notification identification. Use the <code>sstr snmp-notifications</code> command without options to display the related notification <i>id</i> .
<i>hostname</i>	The host name of the machine receiving the SNMP trap information. <i>hostname</i> must be the fully qualified hostname including the domain. For example: <code>martha.xyzcorp.com</code>
<i>severity</i>	The severity level of the alarm. Valid levels are: <b>down</b> A fatal nonrecoverable error has occurred. <b>critical</b> A serious error has occurred <b>major</b> A somewhat serious error has occurred. <b>minor</b> An annoying error has occurred.
<i>portnumber</i>	The SNMP port of the specified machine. The default port is 162.
<i>locale</i>	The user locale of sent messages. <i>locale</i> is one of the following: English French Japanese German

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### **Incorrect Option in `sstr email-notification` Command, page 88**

The table on page 88 for the `sstr email notification` command shows options for the *severity* variable. This command does not use this variable.

