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Sun StorEdge™
Enterprise Storage Manager 2.1
Release Notes

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Contents

Introduction

The Sun StorEdge™ Enterprise Storage Manager 2.1 software is an open, standards-based, and scalable end-to-end storage network management tool. The software consists of two components:

- SAN Manager: View and manage your SAN or DAS environment
- Capacity Reporter: View capacity usage summaries on the hardware and software storage elements in your network

You can install the SAN Manager component alone or install both components. The installation script guides you through the installation of the components and their stations.

This document describes important, late-breaking information about the software.

Note – The Sun StorEdge Enterprise Storage Manager 2.1 Release Notes will be updated and posted to the web as necessary. To ensure that you have the latest version, go to:
`http://docs.sun.com/db/prod/software.storage`

System Preparation

Your network storage environment must have the required software, hardware, disk space, and memory to install the Sun StorEdge Enterprise Storage Manager software. The installation procedure terminates if it detects that your environment does not meet the minimum installation requirement.

This section describes the following topics:

Required Software

The following table lists the supported and required software for the installation.

Required Operating Environment Version for the SAN Manager Component	For installations that include *only* the SAN Manager component of the Sun StorEdge Enterprise Storage Manager: **Management Station:** • Solaris 9, **or** • Solaris 8, update 4 Note that the Solaris 8, update 4 operating environment requires the latest patch cluster, including patches for the Java™ 2 SDK v1.4, which is available at the following URL: `http://sunsolve.sun.com` To download the patch cluster: 1. Click Patches under the SunSolve title on the left side of the page. 2. Click Patch Finder under the Patches title on the left side of the page. 3. Click 4. J2SE Solaris 8 (65.1M) in the Recommended Solaris Patch Clusters and J2SE Clusters list box in the center of the page. 5. Click the radio button for the Readme file. 6. Choose Download HTTP or Download FTP as the method to download the patch cluster. 7. Click Go to download the patch cluster. 8. Refer to the Readme file for information about installing the patches. **Agent Stations:** Solaris 8, update 4
Required Operating Environment Version for the Capacity Reporter Component	For installations that *also* include the Capacity Reporter component of the Sun StorEdge Enterprise Storage Manager: **Management Station:** Solaris 9, update 2 Refer to the Oracle product documentation for the latest information about supported operating systems. **Agent Stations:** Solaris 8, update 4

Required SAN software on each agent station	Sun StorEdge SAN Foundation Software 4.4.
	Though your system might already include the Sun StorEdge SAN Foundation Software 4.4, the Sun StorEdge Management Software CD includes `SUNWsan` and related software, which is also available from `http://www.sun.com/storage/san/`.
	Note: Before you install the Sun StorEdge SAN Foundation Software 4.4, check the web site to make sure you have the most recent version of the software. Patches are available at the following URL:
	`http://sunsolve.sun.com/`
Minimum Web Browser Version[*]	Netscape Navigator™ version 7.0
	Microsoft Internet Explorer version 5.5 (if your installation includes the Capacity Reporter component of the Sun StorEdge Enterprise Storage Manager software)
	Microsoft Internet Explorer version 5.1
	Mozilla™ 1.1
Sun StorEdge Traffic Manager 4.4	*If you plan to use the SAN Manager component of the Sun StorEdge Enterprise Storage Manager to monitor Windows or HP-UX agent stations:*
	You must install the Sun StorEdge Traffic Manager 4.4 software on non-Solaris agent stations that you want to discover and monitor. The software is available from:
	`http://www.sun.com/storage/san/multiplatform_support.html`.
Required Database Software	*If you plan to use the Capacity Reporter component of the Sun StorEdge Enterprise Storage Manager software:*
	• Oracle 9i Release 2 (9.2.0.2) Standard Edition Database Server software installed on any platform
	• Oracle 9i Release 2 (9.2.0.2) Standard Edition Client software installed on the Sun StorEdge Enterprise Storage Manager management station
	Start the Oracle database software before you install the Sun StorEdge Enterprise Storage Manager software.

[*] Enable Javascript and cookies on your web browser.

Required and Supported Hardware

TABLE 1 lists the supported and required hardware.

TABLE 1   Supported and Required Hardware

CD-ROM	A CD-ROM drive connected to the host machine where you plan to install the software.
Host Machines	Host systems that use the Solaris operating environment support Sun StorEdge Enterprise Storage Manager software. Hosts include but are not limited to: • Sun Enterprise™ server models 220R, 250, 420R, 450 • Sun Enterprise server models 3500, 4500, 5000, 5500, 6500, 1000 • Sun Fire™ server models 280R, v1280, 3800, 4800, 4810, and 6800 • Sun Fire server models v480, v880, v880z • Sun Fire server models 12000, 15000 Management stations include the servers listed above. For the SAN Manager component of the Sun StorEdge Enterprise Storage Manager software only, management stations include the Sun Ultra™ workstation model 80.
Discoverable Non-Solaris Host Systems[*]	Non-Solaris host systems that use the following operating systems: • Windows 2000 Server • Windows 2000 Advanced Server • Windows 2003 Enterprise Edition • HP-UX 11.00 • HP-UX 11i
Supported and Discoverable Attached Storage	Sun StorEdge T3 arrays, minimum firmware release 1.18 Sun StorEdge T3+ arrays, minimum firmware release 2.0 Sun StorEdge 3510FC series arrays Sun StorEdge 6120 and 6320 system arrays Sun StorEdge 3900 and 6900 series storage subsystems[‡] Sun StorEdge 9900 series systems (includes the Sun StorEdge 9910, 9960, 9970, and 9980 system arrays)

TABLE 1   Supported and Required Hardware *(Continued)*

Supported Switches	Sun StorEdge Network FC Switch, 1 GBps, 8 and 16-port SAN switches
	Sun StorEdge Network FC Switch, 2 GBps, 8, 16, and 64-port SAN switches
	Brocade Communications Systems, 1 GBps, 8 and 16-port SAN switches
	Brocade Communications Systems, 2 GBps, 8, 16, and 64-port SAN switches
	McDATA Corporation, 2 GBps, 12, 24, 64, and 140-port SAN switches
	INRANGE FC, 2 GBps, 64 or 128-port Edge Switches (for the SAN Manager component of the Sun StorEdge Enterprise Storage Manager software only)[§]
Supported HBAs	Sun StorEdge, 1 GBps, single and dual port host bus adapters
	Sun StorEdge, 2 GBps, single and dual port host bus adapters
	Emulex LP9002L and LP952L host bus adapters[**]
	JNI, 2 GBps, single and dual port host bus adapters
	Qlogic 2310/2342 host bus adapters[††]
Supported Tapes and Tape Libraries[†]	IBM LTO2 tape drives
	StorageTek 9840B and 9840C tape drives
	StorageTek L180and L700 FC tape libraries

* These systems must include the Sun StorEdge Traffic Manager 4.4 software so that the Sun StorEdge Enterprise Storage Manager management station can monitor them.

† Tapes and tape libraries are supported for discovery only.

‡ SNMP discovery of Sun StorEdge 3900 series and 6900 series arrays require Service Processor 2.3.1 Upgrade on the arrays. Arrays with a service processor image prior to the 2.3.1 release will be discovered incorrectly as a Solaris host. Refer to the README and the 3900/6900 Array Administration Guide for instruction on how to upgrade the array.

§ INRANGE switches are supported for discovery and monitoring only.

** These are Windows platform HBAs.

††These are Windows platform HBAs.

Required Disk Space and Memory

TABLE 2 lists the space requirements for the Sun StorEdge Enterprise Storage Manager installation. As the number of storage elements and the number of scan increases, more space must be allocated.

TABLE 2   Required Space and Memory for Installation and Operation

	SAN Manager and Capacity Reporter		SAN Manager	
	Disk Space	System Memory	Disk Space	System Memory
Management Station	1 GB	1 GB	800 MB	1 GB
Agent Station	115 MB	256 MB	71 MB	256 MB
Management and Agent Station on Same System	1.25 GB	1 GB	1 GB	1 GB
Host System of Oracle Database Server[*]	1.5 GB	512 MB		
Host System of Management Station for Reports Directory	1 GB			
Host System of Management Station for Scan Repository	1 GB			

[*] The size allocated for tablespaces and data files supports one database schema and one installation of the management station. For more schemas and more installations in Untrusted mode, allocate more space the additional tablespaces and data files.

Installing the Software

The *Sun StorEdge Management Software 2.1 Getting Started Guide* describes the software on the Sun StorEdge Management Software Kit compact disc. Use the guide to select the applications you want to install and then use the *Sun StorEdge Enterprise Storage Manager 2.1 Software Installation Guide* for instructions in preparing for and installing the components of the Sun StorEdge Enterprise Storage Manager software. On the product CD, the *Sun StorEdge Enterprise Storage Manager 2.1 Software Installation Guide* is located in `/docs/en/ESM2.1_Installation_Guide.pdf`.

Both components of the Sun StorEdge Enterprise Storage Manager software require the Java 2 Software Development Kit, version, j2sdk1.4.1_03 or later. If the system does not have a proper version, the installation procedure installs the j2sdk1.4.1_03 version in the /opt/SMICC_Java directory.

Installing the Software Over an Existing Installation

When you upgrade from the version 2.0 software to the version 2.1 software, make sure that you upgrade **all** your agent stations as well as the management station. Agent stations that run the version 2.0 software are not compatible with the version 2.1 software. You must perform a complete upgrade to your SAN environment to take advantage of the new features available with the Sun StorEdge Enterprise Storage Manager 2.1 software.

Version 2.0 Answer Files are Invalid for Version 2.1 Installations

Because the Sun StorEdge Enterprise Storage Manager Version 2.1 installation procedure includes new configuration attributes, which prompt you for information, you cannot use Version 2.0 answer files for a Version 2.1 installation.

Known Issues

The installation process displays information about patches required for Solaris 8 and then pauses. Although it appears the installation procedure has stopped, it is continuing to install the software. A future release will display a message to confirm that the installation is continuing. (BugID 4915896)

Checking the Sun Web Console

The installation procedure verifies that the Sun Web Console software is installed. If the software is not present, the installation procedure installs it. At any time, you can verify that the Sun Web Console software is running, using the following command:

```
/usr/sbin/smcwebserver status
```

When you uninstall the Sun StorEdge Enterprise Storage Manager software, the Sun Web Console software is not removed because other applications might rely on it. To remove the Sun Web Console software:

1. Remove the localization packages. Type:

```
pkgrm SUNWcmcon SUNWfmcon SUNWjmcon
```

The localization packages include:

SUNWcmcon	Simplified Chinese locale package
SUNWfmcon	French locale package
SUNWjmcon	Japanese locale package

2. Remove the English software. Type:

```
/usr/lib/webconsole/setup -uf
```

To use either component of the Sun StorEdge Enterprise Storage Manager software, log into the Sun Web Console, according to the instructions in the *Sun StorEdge Enterprise Storage Manager 2.1 Software Installation Guide.*

Known Issues

The Sun Web Console software does not start at installation.

If the following error message is displayed during installation, the system was configured to set all default user shells at a high level of security, preventing the Sun Web Console from setting up completely.

```
Starting Sun(TM) Web Console Version 2.0...
Startup failed: cannot assume user identity "noaccess".
Check to make sure "noaccess" has a valid login shell.
```

To allow the setup to complete, change to root access and edit the password file using the following procedure:

1. **Open the password file, using the following command:**

```
vi /etc/passwd
```

2. **Locate the following line:**

```
noaccess:x:60002:60002: No Access User:/:/usr/bin/true
```

3. **Replace "/usr/bin/true" with "/usr/bin/sh" as shown in the following:**

```
noaccess:x:60002:60002: No Access User:/:/usr/bin/sh
```

4. **Save and close the file.**

5. **Start the Sun Web Console, using the following command:**

```
/usr/sbin/smcwebserver start
```

You are unable to log on to the Sun Web Console.

The following error message indicates you must change the privileges on the consolelogin.conf file:

```
Authentication Failed Reenter your username and password
```

To change the privileges, use the following procedure:

1. **Stop the Sun Web Console software:**

   ```
   /usr/sbin/smcwebserver stop
   ```

2. **Change to the webconsole directory:**

   ```
   cd /etc/opt/webconsole
   ```

3. **Change the privilege**

   ```
   chmod 644 consolelogin.conf
   ```

4. **Restart the Sun Web Console software**

   ```
   /usr/sbin/smcwebserver start
   ```

The Sun Web Console's inactivity timer expires before you log on.

If you attempt to log in and see message that the Sun Web Console has expired, click on the browser's Back button and log in again.

You can change the duration of the inactivity timer. For example, use the following command to set the timer to one hour:

```
/usr/sbin/smreg add -p -c session.timeout.value=60
```

The Sun Web Console software does not allow you to select one of the components.

The Sun Web Console window lists the SAN Manager or Capacity Reporter component but you are unable to select it. Even though the smcwebserver status command reports that the Sun Web Console software is running, underlying connections have been interrupted. (BugID 4916000) To restore the connections, stop and start the Sun Web Console software, using the following command:

```
/usr/sbin/smcwebserver restart
```

Using the Web Browser

Known Issues

SunMC Software Might Launch Unsupported Web Browser

If you use the Sun Management Center (SunMC) software with Sun StorEdge Enterprise Storage Manager software, the SunMC software might launch an unsupported version of the Netscape Navigator web browser. Make sure that you use the Netscape Navigator version 7.0 web browser.

Change Popup Blocking To Allow Wizard Support

Popup window blockers such as those available in Netscape or as third-party software might also block the wizard windows. To allow popups, use the following procedure for Netscape 7.02 or later:

1. **From the Edit menu, select Preferences.**

2. **In the Preferences dialog box, select Privacy & Security → Popup Window Controls.**

3. **Either select Allow Popups to disable the blocking software or add your domain to the Allowed Sites list, for example,** *mydomain***:6789.**

4. **Click OK.**

Set Cache Settings

You can set your browser to cache data, forms, and passwords. For the proper operation of the Capacity Reporter component of the Sun StorEdge Enterprise Storage Manager, do not cache forms or data because caching prevents updated data from being displayed. For example, in Netscape, use the following procedure to prevent automatic caching of forms, data, and passwords:

1. **From the Edit menu, select Preferences.**

2. **In the Preferences dialog box, select Privacy & Security and then Forms.**

3. **Clear the checkbox for the Forms Manager.**

4. **Return to the Privacy & Security page and select Passwords.**

5. **Clear the Remember Password checkbox.**

6. **Click OK.**

Clear Disk Cache So Pages Refresh

If you use the Internet Explorer web browser to access the software's UI, you might fill the allocated space for the Temporary Internet files folder; clear the disk cache so that the UI pages refresh correctly.

To see how much space you have allocated for the Temporary Internet files folder:

1. From the Tools menu, click Internet Options...

2. From the General tab, click Settings...

Fabric Details Page Has Broken Links

If you use the Netscape Navigator 4.79 web browser, you might see broken links on the Fabric Details page; use the Netscape Navigator 7.0 web browser to display the page correctly.

Brocade Communications Software Requires Java Plug-In

The Brocade Communications Systems WebTools software requires your web browser to have the correct Java™ plug-in software. If you launch the WebTools software as a supporting application from either the SAN Manager component or the Capacity Reporter component and the web browser displays a blank page or issues an error message, see the Brocade Communications System switch documentation.

Log Out To End The Session

To end your session, log out of Sun Web Console. Do not rely on the browser's Close button to end your session.

Checking Enterprise Storage Manager

The software supplies various commands to check on and control its processes. Change to root access to use these commands.

At any time, you can check the software's processes using the following command:

```
/opt/SUNWstm/bin/esmcheck
```

To start the software's processes, use the following command:

```
/opt/SUNWstm/bin/esmcontrol start
```

To stop the software's processes, use the following command:

```
/opt/SUNWstm/bin/esmcontrol stop
```

To stop and start the processes, use the following command:

```
/opt/SUNWstm/bin/esmcontrol restart
```

Related Documentation

TABLE 3 lists all the documents for this product and for related products. You can view, print, or purchase a broad selection of Sun documentation, including localized versions, at:

```
http://www.sun.com/documentation
```

TABLE 3   Related Documents for Sun StorEdge Enterprise Storage Manager

Type of Document	Title	Part Numbers

Man pages[*]	`esminstall(1M)`
	`esmuninstall(1M)`
	`esmconfig(1M)`
	`esmcontrol(1M)`
	`esmcheck(1M)`
		Not applicable

Release and product information	*Sun StorEdge Management Software Kit 04/04 Getting Started Guide*	817-4797
	Sun StorEdge SAN Foundation Software 4.4 Guide to Documentation	817-3670
	Sun StorEdge SAN Foundation Software 4.4 Release Notes,Including Sun StorEdge Traffic Manager for the Solaris Operating System	817-3673
Installation and configuration	*Sun StorEdge Enterprise Storage Manager 2.1 Software Installation Guide*	817-4798
	Sun StorEdge SAN Foundation Software 4.4 Installation Guide	817-3671
	Sun StorEdge SAN Foundation 4.4 Configuration Guide	817-3672
User and diagnostic	*Sun Management Center 3.5 User's Guide*	816-2716

* To use these man pages, set the MANPATH environment variable to `/opt/SUNWstm/man`.

Documentation Errata

Capacity Reporter Online Help

> If you click **Introducing Capacity Reporter**->**Web Browser User Interface**->**UI Control and Indicators**, the table lists the SAN Manager and Save and Close buttons. Neither button exists in the user interface.

Terminology in Manual Discovery Wizard Might be Confusing

The Manual Discovery Wizard refers to resident and remote hosts, which are defined as follows:

- Remote Host — A system that does not have Capacity Reporter agent software installed, but instead uses the Capacity Reporter management station's agent software. The Capacity Reporter management station's agent software collects data about the remote host, and submits the data back to itself, through the host that initiates scans. This data is then displayed in the web browser UI.

- Resident Host — A host that has Capacity Reporter agent software installed locally.

Service Contact Information

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

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

Sun StorEdge Enterprise Storage Manager SAN Manager Notes

This section describes the following topics:

- "Features In This Release" on page 15
- "After Installing the Sun Manager Component" on page 17
- "Known Issues" on page 18
- "Bugs" on page 25

Features In This Release

The SAN Manager component of the Sun StorEdge Enterprise Storage Manager software enables you to:

- Discover existing and new storage elements in your SAN.
- View storage elements in a graphical view of your environment.
- View and manage fabrics, zones, and zone sets.
- Track events, such as alarms. You can be notified by email, by mobile device email, and by SNMP traps when alarms occur.
- Configure user email notification and network host notification.
- Run diagnostic tests on storage elements.
- Launch supporting applications to help manage other devices in the SAN.
- Manage installed firmware revision levels.
- Use the software to show connections between host systems and logical disks in an HP OpenView Network Node Manager console.
- Enable Sun Remote Service (SRS) Net Connect notification of events for Sun service action.
- SMI-S capability for volume creation, provided that you have an SMI-S provider.

Available Diagnostic Tests

The diagnostic tests for specific devices available include, but are not limited to:

Device	Test Name
Sun StorEdge 3510FC series arrays	Echo Test
	Loop Test
	Show Bypass Device
	Show Loop Map
	Write/Read Buffer Test
Sun StorEdge 3910 system arrays	3910 Configuration Test
	SE Test
Sun StorEdge 6120 system arrays	6120-LUN
	Volume Verify
	Loopback Diagnostic
Sun StorEdge 6320 system arrays	SE-2 Test
	6320 Configuration Test
Sun StorEdge T3 arrays	T3-LUN
	Health Check
	Volume Verify
	Loopback Diagnostic
Sun StorEdge 1 GB w/non-FC2 compliant firmware	Switch Test
	Port Status Test
	Port Loopback Test
Sun StorEdge 1 GB w/ FC2 compliant firmware and 2 GB switches	Switch Loopback and Pattern Test
Brocade Switches	Brocade Loopback and Pattern Test

For more information about diagnostic tests, refer to the Storage Automated Diagnostic Environment product documentation.

Note – Currently there are no diagnostic tests for Sun StorEdge 9910 and 9980 system arrays, and McDATA switches.

After Installing the Sun Manager Component

This section describes some tasks you must complete before using the SAN Manager software:

Install Supporting Applications

The SAN Manager component can start another application without requiring you to log out of the SAN Manager component of the Sun StorEdge Enterprise Storage Manager software. Before you can launch one of these supporting applications, you must first install it and then configure it, assigning it to a device. Refer to the online help for more information about configuring and assigning supporting applications.

Because there are new supporting applications and supporting application attributes have changed in version 2.1 of the software, you must re-establish the installation of default supporting applications if you are upgrading from the version 2.0 software. (BugID 4994401)

1. **From the Administration tab, click Supporting Applications.**

2. **In your web browser's location bar, add** `?mgmtStation=`*host-name* **to the end of the URL.**

   For example:

   `https://nemo:6789/esm/admin/ListSupportApps?mgmtStation=nemo`

3. **Refresh the web browser page to update the supporting application information.**

4. **After about one minute, refresh the web browser again to see the new values in the Supporting Applications page.**

Note – You cannot modify default supporting application names and associated device types. However, you can customize default supporting application attributes by creating a new supporting application manually and including the desired values.

Setting Up and Configuring Switches

Check `http://sunsolve.sun.com` to make sure you have the latest patches.

Install the McData Switch Supporting Software

The McData switch has optional software that allows the SAN Manager component to collect information about the switch. To see the full topology view of the switch, install this optional software on the switch. If it is not installed, the switch is displayed but its information is limited.

Known Issues

This section includes the following known issue:

- "Factors That Affect Performance" on page 19
- "Unsupported Java SDK Prevents Switch Information" on page 19
- "Unresolved Identification Prevents Launch of Support Applications" on page 19
- "Storage Details Page and Element Details Page List Disk Drives Differently" on page 20
- "Arrays Discovered as Generic Storage If You Do Not Create Storage Pools" on page 20
- "Naming Restriction" on page 20
- "Volume Slicing Affects Reports" on page 20
- "Inconsistent Storage Array Terminology" on page 20
- "Health Summary Reports" on page 21
- "Alarm Description for Unmonitored Elements" on page 21
- "McDATA Fabric Details Page Might Display Zoning Information About Unselected Switches" on page 22
- "HP OpenView Plugin Functionality" on page 22
- "ESM Icons Might Display After Uninstalling HP OpenView Plugin" on page 22
- "Discovering Sun StorEdge 9900 Series Systems" on page 23

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Factors That Affect Performance

The software's performance might be affected by factors, such as:

- CPU size
- Available memory
- Number of elements in your SAN
- Other applications running on the system

Tests of the software show that lower end Sun servers (such as the Sun Fire server model 250) with less than 2 gigabytes of memory might provide less than optimal system performance. If you plan to use a less capable platform as the Sun StorEdge Enterprise Storage Manager management station, make sure that your SAN includes less than 20 elements and that none of them are rack solutions.

Unsupported Java SDK Prevents Switch Information

The Sun StorEdge Enterprise Storage Manager software relies on Version 1.4.1_03 or later of the Java 2 SDK. If your system uses an unsupported version, switches are not reported properly in the SAN Elements tables or on the Topology page. You might also have a JVM failure. If your system has more than one version installed, use the JAVA_HOME environment variable to ensure the proper version is in effect. For a JVM failure, change to root and then run the following script:

```
/opt/SUNWstm/bin/esmcontrol start
```

Unresolved Identification Prevents Launch of Support Applications

When you set up a supporting application, the Edit Supporting Application wizard lists various identification tokens for the storage element such as ${ID}, ${IP}, and ${WWN} from which you can choose. When you launch the supporting application, the storage element resolves the token with its specific information. For example, if you specify the {IP} token and the storage element has an IP address, the application launches. However, the Sun StorEdge Enterprise Storage Manager is unable to anticipate which tokens are appropriate for a particular storage element. If you specify a token and the information is not available, the token remains unresolved and the application cannot start.

Storage Details Page and Element Details Page List Disk Drives Differently

For devices that include disk caddies (such as Sun StorEdge 6120, and 6320 system arrays), it might appear that the software reports the disk drive total inconsistently. The Storage Details page displays the number of actual disk drives, however, the Element Details page lists the number of disk drives *plus* the disk caddies.

Arrays Discovered as Generic Storage If You Do Not Create Storage Pools

If you do not create storage pools for Sun StorEdge 6x20 system arrays, the Sun StorEdge Enterprise Storage Manager software discovers the arrays as generic storage. When you configure the storage pools, the software discovers the arrays correctly. However, you must manually remove the generic storage.

Naming Restriction

When creating device logical names, do not use < or > characters. The software might misinterpret these characters as unterminated XML or HTML tags.

Volume Slicing Affects Reports

If you view the Storage Details page for Sun StorEdge T3 arrays, note that volume slicing affects the report. If the array does not support volume slicing or you have not enabled volume slicing, the volume and pool links in the Related Logical Reports table represent the same logical device. If you enabled volume slicing on the array, the:

- Pool link represents a set of physical disks, which have been configured with a specific RAID capability
- Volume link represents the allocation of storage from the pool

Inconsistent Storage Array Terminology

The software uses generic terminology to describe storage array components. You might notice that the terminology throughout the UI might be inconsistent with an array vendor's documentation or software applications. For example:

- On the Storage Details page for a Sun StorEdge T3 or Sun StorEdge 6120 system array, you might expect the Related Physical Reports table to list a volume link, rather than the pool link. Consequently, you might have to click the Pools link to view a volume details report.

■ On the Storage Details page for a Sun StorEdge T3 or Sun StorEdge 6120 system array, you might expect the Related Logical Reports table to list a volume slice link, rather than the volume link.

Health Summary Reports

The health summary reports for Sun StorEdge T3 arrays and Sun StorEdge 6120 system arrays might display property values that are inconsistent with the arrays' documentation.

The following table lists property values, which the software displays, and the corresponding values in the array documentation.

Property	Value Displayed by the Software	Value Listed in the Array Documentation
Read Ahead	0	Off
	2	On
Reconfiguration Rate	1-4	Low
	5-11	Medium
	12-16	High

Alarm Description for Unmonitored Elements

For elements other than hosts, even though the All Physical Elements page reports a an element's Monitor Status as Monitored and the Status as OK, the Alarms details page might display the following description of an alarm for the element:

```
The device is either not configured or has failed to monitor.
```

When an element's Monitor Status is Monitored, the software continues to perform instrumentation operations every 5 minutes to gather health and fault management information about the element. When you choose to unmonitor the element, the software no longer performs the regular instrumentation operations on the element. The alarm indicates that the software has not been able to perform an instrumentation operation because of the unmonitored status. If you change the element's status back to Monitored, the next instrumentation operation attempts to monitor and instrument the element.

McDATA Fabric Details Page Might Display Zoning Information About Unselected Switches

If you enable zoning in a McDATA fabric, the Fabric Details page might display zoning information about switches other than the one you select or switches in another fabric.

For McDATA fabrics, the zoning database resides on the EFCM server. Therefore a zoning database is common to all the McDATA fabrics that are managed by the same EFCM server. Because the Fabric Details page extracts information from this common zoning database, you might see information about other switches that are managed by the same server as a selected switch. Note that this does not affect your ability to select a zone set and activate it.

HP OpenView Plugin Functionality

The HP OpenView plugin displays the availability of connected data paths to the HP OpenView Network Node Manger console. A data path can remain connected, but lose availability so that the Sun StorEdge Enterprise Storage Manager software generates alarms that pertain to the data path. In this case, the software sends an SNMP trap (if you created an SNMP Contract) and the plugin updates the data path status in the HP OpenView Network Node Manger console.

If an element loses connectivity, the software does not send an SNMP trap.

Before you reconfigure a device:

1. From the Sun StorEdge Enterprise Manager management station, remove the device.

2. Reconfigure the device.

3. From the Sun StorEdge Enterprise Manager management station, rediscover the device.

Otherwise, the HP OpenView Network Node Manager GUI might display incorrect or confusing data. (BugID 4994838)

ESM Icons Might Display After Uninstalling HP OpenView Plugin

After you uninstall the HP OpenView plugin, ESM icons might continue to display in the HP OpenView Network Node Manager GUI. Before you uninstall the plugin:

1. Go to the system that is running the HP OpenView Network Node Manager software.

2. Click **ESM** > **Stop** on the console menu to stop the HP OpenView plugin.

3. Select an ESM icon, click the right mouse button, and select **Delete** to remove the icon.

4. Repeat Step 3 for each ESM icon that displays in the GUI.

5. Exit from the GUI.

6. From the Sun StorEdge Enterprise Manager management station, run the `esmuninstall` script to uninstall the plugin from the system that is running the HP OpenView Network Node Manager software.

Discovering Sun StorEdge 9900 Series Systems

Before the software can perform an out-of-band discovery of a Sun StorEdge 9900 Series system array, the array's service processor (SVP) laptop Windows 95 or 98 PC must be accessible to the management station and have its SNMP security settings accessible to the management station's IP address.

To set the SNMP security settings:

1. For Sun StorEdge 9910 and 9960 system arrays, use the arrays' SVP Windows 95 or 98 laptop PC and reboot.

2. For Sun StorEdge 9970 and 9980 system arrays, use the arrays' *embedded* HDS Storage Navigator GUI.

3. From the management station, use any SNMP MIB Browser to test that security access is properly enabled.

   Enter the IP address of the management station, which the management station uses to communicate with the SVP SNMP.

On a corporate wide-area network (WAN), use only one management station to perform an out-of-band discovery on a single Sun StorEdge 9900 Series system array at a time. Make sure that you do not schedule the discovery to occur at the same time that the HDS HiCommand Device Server performs a scan.

If an SNMP query times out, the status of the array on the All Physical Elements page displays as Unknown or as Lost Communication. Note that:

- Sun StorEdge 9900 Series system array SVP SNMP queries might time out.
- HDS HiCommand Device Server SNMP queries might also time out when scanning the array.
- The array might time out when its software performs regular self checking.

To avoid SNMP query times out, increase the time out value in Enter Discovery Options window to the maximum value of 100 seconds.

Note that an Unknown status for an array is correct if the discovery of a host incidentally encounters and displays a LUN from the array. To determine the status and health of the array, perform an out-of-band discovery scan of the array.

Discovering Sun StorEdge 3510FC Series Arrays

For Sun StorEdge 3510FC series arrays, the Storage Details page displays:

- The disk count value, which relates to the total number of disk drives on the system. Under certain circumstances, the disk drive quantity differs from the disk count in the Details section. Component ID entries on the Disk Drive Summary page might display the value ".error."; however the software displays these entries incorrectly as actual disk drives.
- The power count quantity as zero (0). The page will display the correct information when BugID 5025408 is fixed.

Diagnostic Job Page Might Show Progress as Incomplete

On Sun StorEdge 3900 and 6900 series arrays, the Diagnostic Job page might display the test progress of the Config diagnostic test as 1% complete continuously and does not report diagnostic test output. This is due to a bug (BugID 5030987) in the Storage Automated Diagnostic Environment System Edition software patch, version 114591-20 or earlier.

Bugs

The following are known bugs:

- When you select a HiCommand 99xx series array and then start the Capacity Reporter component, the array is identified by a different name in Capacity Reporter than is used in the SAN Manager component. (BugID 4908231)

- When you see a message that reports a database error, the error usually indicates that the storage element has not been identified in the Capacity Reporter's database. Discover, manage, and scan the storage element before you launch the Capacity Reporter component. (BugID 4921325)

- If you use the Netscape or Internet Explorer web browsers on a PC to access the Sun StorEdge Enterprise Storage Manager UI, you must install X Windows enabling software on the PC to link and launch the SANbox manager software. (BugID 4969490)

- You cannot perform some operations on internal disk drives. The software displays an error message if you choose:
  - View Capacity to launch the Capacity Reporter module
  - The Launch Supporting Applications option
  - View Revision Upgrade Details

  (BugID 4970502)

- If you install the EFCMLite software for McDATA switches and the Sun StorEdge Enterprise Storage Manager management station software on the same host, there might be a port conflict. During installation, you can choose to set advanced configuration attributes and change the default RMI registry value. After installation, you can run the `emsconfig` script to change the default RMI registry value. (BugID 4971225)

- SAN Manager SNMP traps might not appear in the HP OpenView Alarm Browser. The software must generate a DataPathDown Alarm before it can send an SNMP trap notification. Because of a known timing problem, the software does not generate the DataPathDown Alarm that will trigger an SNMP trap.

  Subscribe to e-mail notification for the Communication State Change alarm, which the software generates when the link between two devices goes down, so that the software notifies you when a datapath goes down. (BugID 4972341)

- If you navigate to the Fabric Details page, the web browser might time out before the software can display fabric details information. (BugID 497362)

- The Revision Analysis feature does not support hosts, direct-attached storage devices, Sun Rack Solution Arrays or Sun StorEdge 9900 series arrays. Consequently, the Revision Upgrade Details page of the UI reports the status of unsupported elements as "No Successful Report". (BugID 4974186, BugID 4974213)

- If you use the Netscape 4.x web browser, the Review Revision Upgrade Details button on the Revision Upgrades Summary (Elements-View) page displays as active (that is, not gray) if you select more than one element. You can select only **one** element at a time and request revision upgrade details. (BugID 4975263)

- If you add a FRU to an unconfigured storage device, the All Events page under the Administration tab might not include complete information and the software might not generate corresponding alarms. Use the `cfgadm` utility to configure storage devices to make sure that the software displays all events and generates corresponding alarms. (BugID 4976807)

- SNMP traps from the San Manager component do not display in the HP OpenView Alarm Browser. (BugID 49802341)

- If you select a Sun StorEdge T3 storage array and click **Unmonitor**, the software might continue to display alarms even though the storage array is now unmonitored. (BugID 4983006)

- You cannot run the Config diagnostic test for Sun StorEdge 3910 storage subsystems successfully. (BugID 4995264)

- If port information about an array displays inconsistently in the Related Logical Reports table of the Storage Details page and the Fibre Port Summary page, wait until the software completes instrumentation and discovery procedures. At completion, the Storage Summary page displays the array's status as OK and the software reports the port information correctly. (BugID 4995309)

- If the Topology page displays the fabric or zone scope view, you cannot launch the Capacity Reporter component successfully by clicking View Fabric Capacity or View Zone Capacity from the Select Topology Actions menu. (BugID 5000617)

- The software does not generate alarms for Sun StorEdge 9900 series system arrays. (BugID 5004067)

- If the web browser displays empty pages, the PostgreSQL database might not be functioning correctly. Use the `esmcontrol restart` command to start the software again, which causes the PostgreSQL database to function correctly. (BugID 5016928)

- If you install and start the WBEM Solutions, Inc. J Server CIMOM before you install the Sun StorEdge Enterprise Storage Manager software, the software might not discover the related storage device.

  So that the software displays correctly:

1. Stop the CIMOM:

   ```
   /opt/wsi/server/jws/bin/stop_server -u root
   ```

2. Enter the host system's password, which will display in clear text.

3. Restart the Sun StorEdge Enterprise Storage Manager process:

   ```
   /opt/SUNWstm/bin/esmcontrol restart
   ```

4. Start the CIMOM:

```
/opt/wsi/server/jws/bin/stop_server
```

(BugID 5018719)

- The software does not support more than one management station discovering an agent station. If a discovery operation fails and the management station becomes extremely slow:

1. Run the `prstat` command on the management station.

2. Check for `fcdiscocmd` processes.

   These processes end quickly. If you continue to see them, you might have an invalid configuration in which more than one management station discovers an agent station.

3. Find the extra management station (or stations).

   On each agent station, type:

   ```
   cd /var/opt/SUNWstm/sssm/apache/logs
   ```

   ```
   tail -100 access_log| grep -v <your_management_station_IP_address>|
   cut -f 1 -d ' ' | sort | uniq
   ```

   These commands print the IP address of any other management station that is sharing the agent station.

4. On each of the extra management stations, remove the shared agent station from the SAN Elements list, which also removes the hanging `fcdiscocmd` processes.

   Your management station eventually returns to its normal state when you remove all `fcdiscocmd` processes.

5. If you do not want to wait for the management station to return to its normal state, reboot it.

   (BugID 5020471)

- The Alarms Summary page might not display information in the Element Name or Element Type fields. Click the Topic entry to display the Alarm Details page, which identifies the element that is associated with the alarm.

  The Element Name or Element Type fields might not include information if the software does not initially perform an instrumentation operation on an element, but performs the instrumentation operation at a later time. To correct the display, remove the element and perform a discovery. (BugID 5021291)

- Discovered hosts might complete an in-band discovery of internal switches on the following storage arrays:

  - Sun StorEdge 3910 storage arrays

  - Sun StorEdge 3960 storage arrays

- Sun StorEdge 6910 storage arrays
- Sun StorEdge 6960 storage arrays

The software's UI displays the internal switches as QLogic switches with a name of `<sysName undefined>`. Remove the switches if the software continues to display them in the UI after you perform an explicit discovery of the array. (BugID 5024621)

- On systems that run the Solaris 8 Operating System, the Revision Upgrades Summary (Elements View) page might display the following message when you run a revision analysis on an element:

  ```
  No Successful Report
  ```

  The next release of the Storage Automated Diagnostic Environment software will correct this problem. (BugID 5029217)

- On systems that run the Solaris 8 Operating System, the diagnostic test list might not display for a particular device. (BugID 5030877)

Sun StorEdge Enterprise Storage Manager Capacity Reporter Notes

This section describes the following topics:

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-
-

Features In This Release

The Capacity Reporter component provides features so that you can:

- Scan, capture, and report capacity utilization information on Sun StorEdge arrays and systems
- Scan, capture, and report capacity utilization information on Sun Solaris OE-base file systems
- Set capacity utilization thresholds and be alerted when these thresholds are exceeded.
- Discover existing and new storage elements in your Enterprise
- Track events, such as alarms. You can be notified by email, mobile device email, and by SNMP traps when alarms occur or you can specify a script to run when the event occurs.
- Manage event alarm reports
- Manage element reporting
- Launch supporting applications to help manage other devices in the Enterprise.

This release requires the following patches:
- 116251-01
- 116252-01
- 116253-01
- 116254-01

The patches provide multilingual support and fixes problems with internationalization in addition to fixing the following bugs, reported in the previous release:

- Pages with tables, which have selection checkboxes in a column now display the rows properly and can now sort the column.(Bug 4919115)
- The software can now support having more than one wizard or popup open at a time. (BugID 4921349)

- The software can now scan storage arrays that use the following JNI HBA device configurations:(Bug ID 4922680)
    JNI FCE-6460 fcode 3.8.9 driver 5.2.1 JNIsnia 2.0.b.020909-11
    JNI FCE-6460 fcode 3.9 driver 5.3.0.1 JNIsnia 2.0.b.030717-16
    JNI FCI-1063 fcode unknown driver 2.6.13 JNIsnia 2.0.b.020523-13

Known Issues

This section includes the following known issues:

Installing and Uninstalling Capacity Reporter

- After an installation, discover and manage the host system of the management station before other systems. The Capacity Reporter software can then monitor the Reports directory.

- Before you uninstall the kit, make sure that the ORACLE_HOME environment variable is defined and specifies a valid Oracle client.

- When you install a new kit, you must uninstall and delete the previous kit. If a previous installation is not uninstalled completely, the current installation procedure detects it and stops.

- When you uninstall the software, it uses the same mode to uninstall as was used when the software was installed. Therefore, because the Trusted mode creates the database schema, role, tablespaces, and user, the uninstallation process removes these attributes. In effect, in Trusted mode, there is no difference between the esmuninstall command and the esmuninstall command with its full option. If you do not know in which mode the software was installed, look at the answerfile in /tmp/esm.answer or the installation log file in /var/sadm/install/log/esm.log.

- During installation, you provide an encryption password. If you need to change the password after installation, use the following script: /opt/SUNWstm/support/dpfconfig

- The --silent option (-s) is intended to write all output to the log file instead of to the screen. However, when installing the software in Trusted mode with the silent option, the portion of the installation in which the Sun Web Console registers the application is displayed on the screen and is not recorded in the log file. (4919525) If it is necessary to have a complete record of the installation, use the answerfile option and disable the screen output, using the following command:

    ```
    esminstall -A <answerfile_path> > /dev/null
    ```

For example:

```
esminstall -A /tmp/esm.answer > /dev/null
```

- During the uninstallation process for an agent station, scans for any managed storage element that use the agent station are disabled. As a result, scheduled scans for these storage elements are not performed. To determine if a scan has been disabled, go to the Details page for the storage element and click on the "More Actions" drop down list. If "Enable Scan" appears, the scan is disabled. Select the "Enable Scan" action to restart scheduled scans. At any time, users can select the "Run Element Scan" action for the managed storage element from the Summary page, but this results in a scan failure until the agent station is re-installed. To be informed about any storage elements affected by an agent station uninstallation, change the trace.level in the /opt/SUNWstm/etc/MT_logging.properties file from SEVERE to INFO. During the ARPS uninstallation, the names of any managed storage element that depend on it are logged to the /opt/SUNWstm/etc/MT_logging.properties file.

- When you uninstall software that was installed in Untrusted mode, you will not be able to re-install the software until the Database Administrator removes the persistent data. If you attempt to re-install, you will see an error message when the installation procedure attempts to create the Metadata Schema when one already exists.

- The /usr/sbin/passmgmt file might remain after you uninstall the software. Check for this file and, if it remains, delete it manually.

- When you configure supporting applications, you must provide a fully-qualified host name or an IP address. The software does not prevent you from entering incorrect or incomplete identification for the system where the application resides.

Discovering a Storage Element

- A 3900 series array presents itself as multiple elements:
  - Using in-band protocols, the array looks like a set of independent T3 arrays.
  - Using SNMP, the array looks like a 3900 series array.

  Therefore, when you discover a 3900 array, the discovery finds the 3900 array and then reports on the individual T3 arrays to enable management and proper scanning.

- The Sun StorEdge 6960 array cannot report accurate information about its array volumes because it has multiple virtualization engines and all of the array volumes might not be visible through each the virtualization engines. (Bug ID: 4925593)To get an accurate information and a list of the array volumes, use the following procedure:

1. **Find the virtualization engine's WWN. Use TELNET to connect to the array and then issue this command to its management software:**
   `showvemap -n <virtualization_engine> -l`
   Select a UID from the Virtualization Engine Summary section. Then issue the `luxadm -e host and luxadm -e dump_map` commands on the access host and find the NodeWWN that corresponds to the UID.

2. **Use the Manual Registration wizard to discover and scan the array and include the WWNs of the secondary virtualization engine.**

3. **Scan a virtualization engine in each of the array's pairs of virtualization engines**

   Scans of the Sun StorEdge T3 and 6120 system arrays, which are set up in partner-pair configurations, might show some array volumes with a blank capacity. This happens when the array is scanned through only one of its controllers. During discovery, the primary controller is discovered but the secondary one is not. Use the Manual Registration wizard to scan the secondary controller, providing the controller's NodeWWN.

   For example, with a T3 pair, TELNET to the array and issue the `port list` command to show the PortWWN of the master and secondary controllers for the array. Use the Solaris `luxadm` commands to get the NodeWWN and then use the Manual Registration wizard to register the secondary controller. (Bug ID: 4924217)

Scanning and Managing Storage Elements

To manage the capacity of a storage element, you must discover the storage element, then manage it, and then scan it.

- For scheduled scans, the results can take up to five minutes to be reported and then up to another five minutes to generate alarms. This is because both operations are handled by a job that runs every five minutes. Depending on when the scan starts, you might have to wait up to 10 minutes.

- A host is managed as a remote host or as a resident host, depending on whether the agent software is installed on the host. After a host has been managed, the difference is indicated by the presence or absence of the Scan Configuration section on the host's Details page. If the page includes a Scan Configuration section, the host was scanned as a remote host and does not have the agent software installed.

- During discovery scans, blank rows appear sometimes in the Current Jobs page. This is caused by the software's delay between getting a count of rows from the database and getting the actual row data. In the meantime, jobs continue to complete between the two queries. Constructing the table of jobs is affected by the time delay and the rapid reloading of the page. Wait a few minutes for the database responses to catch up with the display of the table and the blank rows are removed. (Bug ID: 4921080)

- If you schedule a large number of elements to be scanned frequently, for example, every 15 minutes, the Historical Jobs page can grow to thousands of jobs. (Bug ID 4929387) The Capacity Reporter software deletes jobs that are older than seven days every week, but some sites might not find that sufficient. To delete these older jobs at any time, you can run the software job manually, using the following procedure:

1. **On the Capacity Reporter management station, open a terminal window.**

2. **Issue the following command:**

   ```
   /opt/SUNWstm/support/submitJob
   com.sun.netstorage.mgmt.service.servicetierjobs.cruftjob.Cruft
   JobOldByDays=#I<days>
   ```

   where *days* is the number of days. Any jobs older than this number of days are deleted.

- The software fails when it attempts to save historical data on a volume group in a cluster. The error is reported in the log file and no historical data is available for charting the volume group. A cluster scan is not distinguished from a host scan so the Job name "Host Scan" is used for a cluster scan as well as a host scan.

Bugs

This section includes the following bugs:

Installation

- When performing an agent installation, you might encounter the following error message:

```
Job failed to complete
reg_target Failure
WARNING: Unable to register the ARP with the Management
Station at this time. Please manually register the ARP when
convenient using the following commands:
```

```
/opt/SUNWstm/bin/reg_arp "management station host":4567
"Agent host" 1141
```

```
/opt/SUNWstm/bin/reg_target "management station host""4567
"Agent host" host solaris "Agent Host"
```

If you see this error, perform the following to verify whether the agent installation actually occurred successfully:

1. Log into Capacity Reporter.

2. From the Storage Elements tab, access the Host Summary report.

3. Locate the host for which you installed the agent software, and ensure that its state is Managed.

4. If the host is managed, click on its name link to access its detailed report and choose **Actions** ->**Run Element Scan**.

5. From the Jobs tab, ensure that the scan completed successfully.

If the host is managed and its scan completed successfully, then disregard the error message. The agent installation was successful.

If the host is *not* managed, perform the following:

- **If you are using NIS as the primary method for name resolution**, check to see if the management station is up and running. If the management station is down, restart the management station.

- **If you are using DNS along with NIS as your method for name resolution**, access the following file on the management station system:
  `/etc/nsswitch.conf`
  Scroll down to the `hosts:` line and ensure that DNS is listed before NIS. For example:
  `hosts: files dns nis`
  If DNS is not listed before NIS, rearrange the order appropriately and save the file. (Bug ID 4924227)

- The `esmcheck` command is not fully implemented. (Bug ID: 4923328) The workaround is to use the `ps|grep` commands to monitor the processes; you must specify the log file locations to monitor the files. The `esmconfig` command is not fully implemented (Bug ID: 4923331) The workaround is to edit the configuration files.

General Issues

- When you select a page, wait for the page to load completely, according to the browser indicator. Otherwise, if you click on another page or attempt an operation on that page before it loads completely, you create an error condition. Click on the Reload button to load the page again.

- In Netscape 7.x, the online Help's Search function does not highlight words. In all browsers, the online Help's Previous and Next buttons do not gray out when they are disabled.

- The agent station has a log file for troubleshooting purposes. When this file is enabled, it can increase in size until the agent software is no longer able to operate. The file and location is /var/opt/SUNWstm/agent/log/agent_log. If you enable this file, check this location routinely and delete the file. When you complete your investigation, disable this log file.

- The All Fabric Summary page, <specific> Fabric Summary page, and <specific> Zone Summary page do not show the correct column headings. (BugID 4917497)

- For managed Sun StorEdge Enterprise Storage Manager host systems with the Sun SAM-FS version 4.1 and later software package, the Sun StorEdge Enterprise Storage Manager software might not detect SAM-FS filesystems. (BugID 5031526)

Discovery, Management, and Scan

- The installation procedure advises you to allocate a minimum of 1 GB of disk space for the Scan Repository. You might fill this space if you scan a large number of storage elements or scan frequently. If you notice that schedule scans are not being performed or the log file contains synchronization errors, the space is filled and the repository data is at risk of being corrupted. To restore the scans, reclaim disk space and restart the Sun StorEdge Enterprise Storage Manager software. If the scans do not begin, contact Sun Service for help in running a recovery script.

- The Sun StorEdge 3510 array cannot be discovered automatically. Use the Manual Registration wizard to set up the device. (BugID 4920547)

- Do not attempt to manage two Sun StorEdge 6320 arrays at the same time, because only will become managed. Manage each one separately. (BugID 4921836)

Report and Detail Pages

- If the Jobs page is blank and you receive an out-of-memory error, increase JVM's system memory to 256 MB, using the following command: (BugID 4920600)

```
/usr/sbin/smreg add –p java.options="–server –XX:+BackgroundCompilation –Xmx256m"
```

Stop and start the Sun Web Console software, using the following commands. Do not use the restart command.

```
/usr/sbin/smcwebserver stop
```

```
/usr/sbin/smcwebserver start
```

- With Internet Explorer, a table of several thousand rows can freeze the application and you must close the browser to recover. (BugID 4921158)

- On the Current Jobs page, the table might display blank rows intermittently. This occurs when you update the page repeatedly but the query to the database to get the current jobs did not complete in time. Wait a few minutes before updating the page. (BugID 4921080)

Policies, Alarms, and Thresholds

- The e-mail notification of capacity alarms displays the capacity in bytes instead of the conventional gigabytes. To estimate of the number of gigabytes, move the decimal point nine places to the left. To convert bytes to gigabytes accurately, divide by 1024.

- E-mail notification runs as one of the software's jobs so, depending on when the message is sent, it can take up to ten minutes to arrive. The same message is recorded in the file, /var/opt/SUNWStm/trace/esmMT_trace.log.

- On the Policies page, you can sort the entries in the Policy Name column. However, the default policies are always placed at end of the column, after the other policies. (BugID 4910368)

- When creating and editing policies, the wizard allows you to click on the Next button before it completes the current operation. Because the current operation includes a database query, the Next button causes a second query to be sent. Wait for the operation to complete before you click the Next button. (BugID 4910439)

Supporting Applications

- To launch the Sun StorEdge 3910 and 6910 management applications, you enter the management application in the Unmanaged to Managed wizard. For the StorEdge 6910 array, the wizard provides a default option, but for the StorEdge 3910 array, you must select the host on which its configuration services are installed.

- You can select a host or an array and launch the SAN Manager component to see information about it. However, when you select a HiCommand 99xx series array and then start the SAN Manager component, the array is identified by a different name in SAN Manager because it retrieves the array's identification from different location than is used in Capacity Reporter. (BugID 4908231)

SAN, Fabrics, and Zones

- If you remove the primary switch in the fabric, a new scan reports a new fabric that includes the remaining storage elements. However, the scan also reports the old fabric, with no storage elements. (BugID 4918202)

Clusters

- Before you install agent software on a Sun or VERITAS cluster member, either enable or remove the cluster software on the host. The agent installation will fail if cluster software is installed and clustering is disabled. (BugID 4924069)

- Each cluster member in a managed cluster is also managed, and it is not possible to unmanage one of them. If a cluster member, a host, is removed from the cluster or from the network, the cluster continues to report that host as a member of the cluster. (BugID 4908365) To remove a cluster member, you must remove the cluster and then create a new cluster, containing only the members you want. However, when you remove a cluster, the history of the cluster is not kept.

- For VERITAS Volume Manager volumes, the Volume Summary report is not reporting capacity for QFS file systems. (BugID 4919914)

Oracle Database

- The Oracle database must be started and running at the time when Sun StorEdge Enterprise Storage Manager is started. This means that the Oracle database must be running already when Sun StorEdge Enterprise Storage Manager is installed and, if the Oracle database resides on the same system as the management station, it must be started before Sun StorEdge Enterprise Storage Manager is started whenever the system is rebooted. If the Oracle database is not running first, the Sun StorEdge Enterprise Storage Manager software cannot process new data even though new scans are occurring. This condition is indicated only by noticing that displayed data is not changing even though scans are successful. To recover, stop the Sun StorEdge Enterprise Storage Manager software and then restart it. (BugID 4911112)