



Sun StorEdge™ 6920 System Release Notes

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Sun StorEdge 6920 System Release Notes

This document contains important information about the Sun StorEdge 6920 system that was not available at the time the product documentation was published. Read this document so that you are aware of issues or requirements that can impact the installation and operation of the Sun StorEdge 6920 system.

The Release Notes consists of the following sections:

- “Installation and Configuration Notes” on page 1
- “Supported Software and Hardware” on page 9
- “System Usage Limitations” on page 12
- “Release Documentation” on page 14
- “Known Issues and Bugs” on page 15
- “Service Contact Information” on page 35

Installation and Configuration Notes

This section contains important information related to the installation and configuration of the Sun StorEdge 6920 system. You must understand this information before installing and configuring the Sun StorEdge 6920 system.

Fibre Channel Switch Zoning Recommendation

If you configure a storage area network (SAN) so that the Sun StorEdge 6920 system is in the same zone as other storage devices, the LUNs for all the devices are visible to the Sun StorEdge 6920 system. To prevent this, you should configure the other storage devices in the SAN to use LUN masking. Alternatively, you can configure the Sun StorEdge 6920 system ports to be in separate zones so that no other array devices are visible to the system.

Data Services Platform Fan Replacement

The fan in the Data Services Platform (DSP) is a field-replaceable unit (FRU). When removing the fan, observe the following caution:



Caution – The fan has unprotected fan blades that might still be spinning when the fan is removed. Be sure that the fan blades have stopped moving completely before removing the fan from the cabinet.

USB in Drive Installation Drawing

The USB in Drive Installation drawing (Figure 2-17) on page 29 of the Getting Started Guide is incorrect. You should use the upper USB port rather than the lower one, as the illustration indicates incorrectly.

Service Panel Label is Incorrectly Cited in the Getting Started Guide

The 6920 Getting Started Guide incorrectly cites a port called Service Console on page 38. There is no Service Console port. The two ports for serial connections are Service Serial and Serial Console.

Installing Patches using the Upgrade CD

The Sun StorEdge 6920 System Storage Service Processor v1.2 Upgrade CD contains patches to update the Storage Service Processor software for the Sun StorEdge 6920 system. It does not reinstall the Storage Service Processor image.

Note – Before proceeding with the upgrade, verify that the system is in a healthy state. Within Configuration Services, the top-right displays Current Alarm status. If necessary, click Current Alarms to see whether any alarms are actionable. If disk firmware patches are recommended for upgrading, quiesce I/O to all of the volumes connected to the array being updated.

There are two steps to updating the software on the Storage Service Processor:

- Preparing to Download Software Updates
- Applying the Software Updates

Preparing to Download Software Updates

1. **Insert the CD into the CD-ROM drive of the Storage Service Processor.**
2. **Open a supported browser.**
3. **Enter the IP address of the system in this format:** `https://<IP_address>:6789`
4. **Enter the user name and password.**
Default User Name: **storage**
Default Password: **!storage**
5. **Click the Log In button.**
The system displays the Sun Web Console page.
6. **Select Storage Automated Diagnostic Environment to enter the system.**
7. **Click Service > Sun Solution Series> Revision Setup.**
The Revision Setup page is displayed.
8. **Change the Revision Maintenance Source field to CD.**
9. **Click Update Options to save the settings.**
Continue to “Applying the Software Updates”.

Applying the Software Updates

1. Click Service > Sun Solution Series > Inventory Maint.

The Inventory Maint page is displayed.

2. Click Generate New Inventory to update the inventory list of the system.

3. When it is completed, click Save New Inventory to update your list.

4. Click Service > Sun Solution Series > Revision Maint.

The Revision Maint page is displayed.

5. Click Update Revisions.

6. Click Create New Patch Report.

It may take a few minutes to report the available patches. You can monitor the status by reviewing the Create Patch Upgrade Report Status. When the patch report is complete, you will see the available software updates for system.

7. Click Select Patches when it becomes active.

The system displays the available patches for storage arrays and other system components.

8. Do one of the following:

- To update software for specific devices, select the devices that you want to update and click Apply Selected.
- To update software for all devices, click Apply All Devices.

When the update is complete, the system displays the Patch Installation Report.

9. To save the installation report, click Move to History.

10. Repeat steps 1 through 9 until there are no more patches available.

Revision Maintenance Updates do not offer all device patches in the first Patch Report. You must repeat steps 1 through 9 until there are no more software updates available to select.

11. When the software update is complete, click Service > Utilities > Eject CD.

For more information about Storage Automated Diagnostic Environment software, refer to the online help.

Host Software and Required Patches

Multipathing software must be installed on each data host that communicates with the Sun StorEdge 6920 system. For Solaris hosts, this software is part of the SAN Foundation Software (SFS). For non-Solaris hosts, this software is the Sun StorEdge Traffic Manager Software (STMS).

If the Sun StorEdge 6920 Host Installation Software CD is not shipped with your system, contact your Sun sales representative.

TABLE 1 lists the source for the multipathing software as well as required operating system patches.

Note – If a data host needs multipathing software, you must install it before you install the patches.

TABLE 1 Data Host Software and Required Patches

Host Platform	Software (Minimum Version)	Minimum OS Patch Level	OS Patch Level Notes
Solaris 9 OS	SAN Foundation Software 4.4*	Solaris 9 113277-12	
OR		Solaris 9 113072-07	Required if you have volumes that are greater than 1 TB (available for Solaris 9 only)
Solaris 8 4/01 OS	SAN Foundation Software 4.4*	Solaris 8 108974-32	
Microsoft Windows 2000 Server and Advanced Server	Sun StorEdge Traffic Manager software 4.4 for Windows 2000	Microsoft Windows 2000 Service Pack, SP 4	Available from Microsoft
Microsoft Windows 2003 Web, Standard, and Enterprise Edition	Sun StorEdge Traffic Manager software 4.4 for Windows 2003	N/A	
IBM AIX 5.1 (32- and 64-bit)	Sun StorEdge Traffic Manager software 4.4 for AIX 5.1	Maintenance Level 5	Available from IBM

TABLE 1 Data Host Software and Required Patches *(Continued)*

Host Platform	Software (Minimum Version)	Minimum OS Patch Level	OS Patch Level Notes
HP-UX 11.00 and 11.1	Sun StorEdge Traffic Manager software 4.4 for HP-UX	Patch set, September 2003	Available from Hewlett-Packard
Red Hat Enterprise Linux AS 2.1	Sun StorEdge Traffic Manager software 4.4 for Linux 2.1	Kernel 2.4.9-e.3	Available from Red Hat Linux
Red Hat Linux ES/WS 2.1	Sun StorEdge Traffic Manager software 4.4 for Linux 2.1	Version 2.4.9-e.12	Available from Red Hat Linux

* To ensure the baseline SAN Foundation Software is version 4.4, download and install the latest patches from the following website:
<http://sunsolve.sun.com/>

Downloading the VERITAS Volume Manager ASL

VERITAS Volume Manager 3.5 and 4.0 provide support for the Sun StorEdge 6920 system in the form of Array Support Library (ASL) software packages. ASL software packages must be installed on the same host system as the Volume Manager 3.5 or 4.0 software so that the ASL software can recognize the arrays in the Sun StorEdge 6920 system.

Download the ASL software packages and accompanying ReadMe file from the Sun Download Center using the following procedure.

- 1. Log in as superuser on the Sun server you are connecting to the Sun StorEdge 6920 system.**

- 2. Go to the All Products listing:**

<http://www.sun.com/software/download/allproducts.html>

- 3. Under the V heading, click VERITAS Volume Manager Array Support Library (ASL).**

- 4. Click the link that is appropriate for your platform.**

- 5. Click Download to go to the Sun Download Center.**

The page identifies the product you selected as VERITAS Volume Manager Array Support Library (ASL) for your platform and language.

- 6. If not previously registered, register:**

- a. Click the Register Now link at the bottom of the left column.**

- b. On the registration page, complete the required fields and click Register.**

- 7. Log in:**

- a. Type your user name and password in the left column, and click Login.**

- b. On the Terms of Use page, read the license agreement, click Yes to Accept, and click Continue.**

- 8. Download the compressed TAR file that contains the ASL package for the Sun StorEdge 6920 system and ReadMe file.**

- 9. Use the `untar` command to expand the TAR file.**

- 10. Refer to the ReadMe file to determine how to install the VERITAS Volume Manager ASL.**

Supported Array and Drive Firmware Levels

The minimum supported array firmware revision level is 3.1.4.

If you are adding existing Sun StorEdge 6120 arrays or expansion trays to the Sun StorEdge 6920 system, you must do the following:

- Upgrade the array controller cards to firmware level 3.1.4 or later by applying patch 115179-11.
- Apply the latest released drive firmware patches to all disks in the arrays (see TABLE 2)

If you are adding Sun StorEdge 6020 arrays from a Sun StorEdge 6320 system to the Sun StorEdge 6920 system, you must upgrade the arrays to the Sun StorEdge 6320 baseline version 1.2.3. (You do not need to apply the array firmware patches; they are installed when you upgrade to the Sun StorEdge 6320 baseline 1.2.3.)

TABLE 2 Drive Firmware Revision Levels and Patches

Vendor	Model	Minimum Patch Level
Seagate	ST336753FC	116748-02
	ST373453FC	113673-01
	ST373307FC	114708-03
	ST3146807FC	114709-03
Fujitsu	MAP3735FC	116514-01
	MAP3147FC	116815-01
	MAS3367FC	116816-01
	MAS3735FC	116817-01
Hitachi	DK32EJ146F	116465-01
	DK32EJ72F	116464-01
	DK32EJ36F	116463-01

Supported Software and Hardware

The software and hardware components described in the following sections have been tested and qualified to work with the Sun StorEdge 6920 system:

- “Supported Web Browsers” on page 9
- “Additional Supported Host Software” on page 10
- “Supported Fibre Channel Switches and HBAs” on page 11
- “Supported Languages” on page 11

Supported Web Browsers

The Sun StorEdge 6920 system supports the web browsers listed in TABLE 3.

TABLE 3 Supported Web Browsers

Browser	Minimum Version
Netscape Navigator	7.0
Microsoft Internet Explorer	5.0
Mozilla	1.2.1

Note – The Sun StorEdge 6920 management software requires that you enable popup windows in your web browser.

Additional Supported Host Software

The software listed in TABLE 4 is compatible for use on hosts with data paths or network connections to the Sun StorEdge 6920 system.

TABLE 4 Supported Sun Host Software

Software	Minimum Version
Sun StorEdge Enterprise Storage Manager	2.1 plus Patch 117367-01
Sun StorEdge Availability Suite	3.2
Sun StorEdge Enterprise Backup Software	7.1
Solstice DiskSuite	4.2.1
Solaris Volume Manager software (embedded in the Solaris 9 Operating System)	N/A
Sun StorEdge Traffic Manager for HP-UX, IBM AIX, Microsoft Windows 2000, and Microsoft Windows 2003	4.4
Sun StorEdge Performance Suite with Sun StorEdge QFS	4.0
Sun StorEdge Utilization Suite with Sun StorEdge SAM-FS	4.0
Sun Cluster software	3.0, update 3
Storage Automated Diagnostic Environment, Device Edition	2.3

The third-party software listed in TABLE 5 is compatible for use on hosts with data paths or network connections to the Sun StorEdge 6920 system.

TABLE 5 Supported Third-Party Software

Software	Version
VERITAS NetBackup Server	5.0
VERITAS NetBackup Enterprise Server	5.0
VERITAS Volume Manager with Dynamic Multipathing (DMP) for Solaris	3.5 and 4.0
VERITAS File System (VxFS) for Solaris	3.5 and 4.0
VERITAS Volume Replicator for Solaris	3.5
Legato NetWorker®	7.1

Supported Fibre Channel Switches and HBAs

The Sun StorEdge 6920 system supports all of the Fibre Channel (FC) switches and host bus adapters (HBAs) supported by SAN Foundation Software 4.4 (and later) with one exception. The Sun StorEdge 6920 system does not support Sun-branded JNI HBAs (P/N SG-(X)PCI2FC-JF2 and SG-(X)PCI21C-JF2).

For a list of supported FC switches and HBAs, see the *Sun StorEdge SAN Foundation Software Release Notes*.

Supported Languages

The Sun StorEdge 6920 management software and Storage Automated Diagnostic Environment application support the languages/locales listed in TABLE 6.

TABLE 6 Supported Languages/Locales

Language	Locale
English	en
French	fr
Japanese	ja
Korean	ko
Simplified Chinese	zh
Traditional Chinese	zh_TW

Note – Man pages are available only in English and Japanese.

System Usage Limitations

TABLE 7 lists maximum values for elements of the Sun StorEdge 6920 system.

TABLE 7 Sun StorEdge 6920 System Limitations

System Attribute	Maximum
Volumes per system	1024 volumes
Virtual disks per tray	2 virtual disks
Volumes per virtual disk	32 striped volumes
Snapshots per volume	8 snapshots
Initiators* that can communicate with the system	256 initiators
Host HBA ports that can communicate with one system port	128 host HBA ports
Volumes that can be mapped to a single host HBA port worldwide name (WWN)	256 volumes
Storage domains	14 storage domains (1 system defined; 13 available for user definition)
Storage pools	64 storage pools
Storage profiles	14 system-defined storage profiles; no limit for user defined profiles

* The term initiator means the “initiator instance” as seen by the Sun StorEdge 6920 system. If a host side HBA port sees ‘N’ ports, the system sees ‘N’ initiators. The 256-initiator limit translates to a maximum of 128 dual path hosts, where each host HBA port can see one port of the system.

Network Connection Limitations

The Sun StorEdge 6920 system firewall that connects to the site (customer) local area network (LAN) supports a half-duplex 10-Mbps network connection. Configure the port settings on your network switch or hub to an “auto-negotiate” setting. If for some reason you cannot use an auto-negotiate setting, set the network switch or hub to half-duplex 10-Mbps.

Fibre Channel Port Limitations

The Sun StorEdge 6920 system is configured with either two or four storage resource card (SRC) sets, each SRC set consists of one SRC and one storage I/O card. Each SRC set has four processors and eight Fibre Channel (FC) ports. One processor serves adjacent FC ports (for example, ports 1 and 2 share a processor, ports 3 and 4 share a processor, and so forth). The FC ports are shared between SAN/host and storage array connections. These arrays are connected to the DSP and physically installed in the Sun StorEdge 6920 system.

As described in the *Sun StorEdge 6920 System Getting Started Guide* and the online help, you should evenly distribute FC ports between SAN/host and storage array connections. For example, in a system with two SRC sets, and a total of 16 FC ports, you would allocate 8 ports for SAN/host connections and 8 ports for storage connections. In a system with four SRC sets, and a total of 32 FC ports, you would allocate 16 ports for SAN/host connections and 16 ports for storage connections.

If you cannot evenly distribute the total number of FC ports between SAN/hosts and storage array connections, you must adhere to the following port allocation rules:

- Adjacent FC ports that share a processor must be used exclusively for SAN/host connections or exclusively for storage array connections. For example, if port 1 is used for a SAN/host connection, port 2 can be used only for a SAN/host connection.
- If only one of the FC ports that share a processor is used for a storage array connection and the other port is unused, the unused port can be used only for a future storage connection. Similarly, if only one of the FC ports sharing a processor is used for a SAN/host connection and the other port is unused, the unused port can be used only for a future SAN/host connection.

These rules apply to the following system configurations:

- 16 FC ports and more than 4 arrays
- 16 FC ports and more than 8 SAN/host connections
- 32 FC ports and more than 8 arrays
- 32 FC ports and more than 16 SAN/host connections

Release Documentation

The following is a list of documents related to the Sun StorEdge 6920 system. For any document number with *nn* as a version suffix, use the most current version available.

You can search for this documentation online at:

- <http://www.sun.com/documentation>
- <http://docs.sun.com>

Subject	Title	Part Number
Unpacking instructions attached to the shipping container	<i>Unpacking Guide</i>	816-5230- <i>nn</i>
System license information	<i>Sun StorEdge 6920 System License Cards</i>	817-5829- <i>nn</i> 817-5225- <i>nn</i>
System planning information	<i>Sun StorEdge 6920 System Site Preparation Guide</i>	817-5224- <i>nn</i>
System regulatory and safety information	<i>Sun StorEdge 6920 System Regulatory and Safety Compliance Manual</i>	817-5230- <i>nn</i>
System installation and initial configuration information	<i>Sun StorEdge 6920 System Getting Started Guide</i>	817-5227- <i>nn</i>
Software installation from CD	<i>Sun StorEdge 6920 System Host Installation Software Guide</i>	817-5831- <i>nn</i>

System overview information, as well as information on system configuration, maintenance, and basic troubleshooting, is covered in the online help included with the software. In addition, the `SSCS(1M)` man page provides information about the commands used to manage storage using the command-line interface (CLI).

Known Issues and Bugs

The following sections provide information about known issues and bugs filed against this product release:

- “Configuration Management Software” on page 15
- “Command-Line Interface” on page 20
- “Storage Automated Diagnostic Environment” on page 22
- “Internationalization” on page 26
- “Other Known Issues and Bugs” on page 27
- “Unclear Messages” on page 28
- “Known Documentation Issues” on page 30

If a recommended workaround is available for a bug, it follows the bug description.

Configuration Management Software

This section describes known issues and bugs related to the configuration management software (GUI).

High Volume Counts May Affect GUI Performance

Bug 4977706 - The performance of the GUI may degrade as volume counts approach 1024.

Storage Pool Details Page: Delete Button Should Be Unavailable

Bug 4985377 - When an In Use storage pool is displayed on the Storage Pool Details page, the Delete button should not be active. If you attempt to delete a storage pool that is in use, the following error is displayed:

None of the storage pools were deleted. The following errors were encountered:

poolname - Item is in use

Storage Profile Summary Page: Inadvertent RAID-5 Configuration

Bug 5010540 - When you change a RAID-5 level storage profile from the Storage > Profiles > Storage Profile Summary page, you can save an invalid drive configuration. For example, if you modify a RAID-5 storage profile and select two drives, the configuration is saved even though the selection is not valid. A RAID-5 storage profile requires a minimum of three drives.

Wizards: Next and Finish Buttons Fail to Indicate Progress

Bug 4936719 - When you click the Next or Finish button in some wizards, you do not always get an indication that the operation is in progress on some browsers. Clicking the Next or Finish button again will not cause any problems. Appearance of the next prompt indicates that the operation is complete.

Administration, General Settings Page: Changing IP Address Causes Browser Session to Terminate

Bug 4987947 - Changing the IP address of the Sun StorEdge 6920 system on the Administrator page causes the browser session to terminate without notification. The new IP address is saved on the Storage Service Processor. This problem does not occur when you change other network settings such as the domain name server (DNS) IP address or gateway address.

Workaround - Log in to the system again using the new IP address.

Volume Summary Page: Stripe Virtualization Strategy May Fail With Unclear Error Message

Bug 4941750 - Creating a volume using the stripe virtualization strategy may fail if the remaining space in the storage pool does not contain stripe partitions that are large enough to be a multiple of the requested volume size. For example, if the storage pool contains three virtual disks, two with 36 gigabytes remaining and one with 18 gigabytes remaining, a request to create a 90-gigabyte volume will fail, since equal-sized stripe elements cannot be allocated. In this case, the largest volume size that can be requested is 72 gigabytes.

Workaround - If you receive the following error when creating a volume using striping, either request a smaller volume size or use the maximum capacity option:

The volume size specified is too large for the devices specified

Identical Storage Pool Names Not Displayed Across Storage Domains

Bug 4993083 - If the same storage pool name is used in more than one storage domain, the GUI does not display the names accurately.

Workaround - When creating storage pools, assign names that are unique across the whole system.

Configuration and Diagnostic Operations Cannot Run Simultaneously

Bug 4953295 - You cannot run diagnostic and configuration operations from the GUI or CLI simultaneously. For example, you cannot replace a hardware field-replaceable unit (FRU) using the Storage Automated Diagnostic Environment interface while performing a configuration operation using the Sun StorEdge 6920 Configuration Service application.

Workaround - Allow all configuration operations invoked from the Sun StorEdge 6920 Configuration Service application or CLI to finish before using the Storage Automated Diagnostic Environment application. Allow all upgrade or maintenance operations invoked in the Storage Automated Diagnostic Environment application to finish before using the Sun StorEdge 6920 Configuration Service application or CLI.

Network Domain Name Cannot Be Changed in GUI

Bug 5046043 - The Sun StorEdge 6920 Configuration Service application does not allow you to change the name of the network domain.

Workaround - Use the command-line interface (CLI) `sscs` command to change the network domain name. For example, the following command changes the network domain name to `NEWNAME`:

```
sscs modify -D NEWNAME net
```

Whenever you change the network parameters, you must log back in to the system.

Current Alarms Window Does Not Have Scroll Bars

Bug 5051403 - The Current Alarms link on the Configuration Services user interface page opens the current alarms list in a new window. The window, however, does not permit you to scroll through entries that are not showing.

Workaround - Access the Current Alarms list from the Storage Automated Diagnostic Environment application. This allows you to scroll through the list of current alarms properly.

Add Storage To Pool Wizard: Displays Invalid Trays

Bug 5049258 - The Add Storage To Pool wizard can erroneously display invalid trays for selection when you attempt to add storage to a pool.

Workaround - After you add storage to a pool, wait at least one minute before attempting to add more storage to a pool (including the same storage pool).

If the Add Storage To Pool wizard shows a list of trays that contains two entries for each tray, cancel the operation and wait another minute. This should clear the invalid trays from the display.

Selecting Multiple Objects Enables Buttons Allowing Selection of Invalid Operations

Bug 4931792 - When you select multiple objects on certain pages, the software incorrectly enables some buttons that allow you to select invalid operations. However, if you select a button that is incorrectly enabled (for example, if you try to take a snapshot of unmapped volumes) an error message indicates that the operation is not valid.

New Profile Wizard: Chunk Size Available for Concatenated Volumes

Bug 4939795 - In the New Profile wizard, the chunk size field is available for use with concatenated volumes.

Workaround - You can only specify chunk size when using the striping virtualization strategy.

Changing Passwords Works Intermittently

Bug 5061119 - If you type a password into the New Password and Password Confirmation fields, then click Set Password, the change might not occur, in spite of the following message:

The password has been successfully changed.

If this happens, and you type the “old” user name and password, the login is accepted.

Workaround - If the password update was not accepted initially, change the password again.

Virtual Disks Are Not Re-Initialized When Re-Assigned To a New Storage Pool

Bug 5069434 - The system software does not prevent you from adding a virtual disk created for one storage pool to another storage pool that has a different storage profile. Because the original attributes of a virtual disk cannot be changed, the result is a virtual disk residing in a storage pool, with attributes that do not match the attributes of the storage pool.

Workaround - Although you cannot re-assign a virtual disk from one storage pool to another pool with a different storage profile, you can delete the virtual disk and create a new one. First, delete the volumes and then delete the virtual disk. Create a new virtual disk in the storage pool with the desired storage profile.

Command-Line Interface

This section describes known issues and bugs in the command-line interface (CLI).

SSCS Command: RAS_Patchlist Option Returns a False Error Message

Bugs 5060085 - After installing a SUNWstads software patch, some SSCS list commands return “No -I allowed while running setuid.”

Workaround - After installing a SUNWstads software patch, run the following script: /opt/SUNWstade/sysbin/fix_exe

Update_rss_console Command: Model Number Has Format Restrictions

Bug 4943441 - When you enter a model number in `update_rss_console`, the model number must begin with uppercase letters “SE”, contain no spaces, and be followed by a specific model number. For example, “SE3960” is a valid model number format.

sscs Command: Import/Export Subcommands Are Not Supported

Bug 4987209 - The `sscs import` and `export` subcommands are not available in this release. The man page incorrectly includes `import` and `export` as valid subcommands.

sscs Command: Volume Create Command Has Format Restrictions

Bug 5021780 - When you create a volume using `sscs` and you include a space after the volume capacity (for example, 20 GB) the volume that is created uses all of the remaining unallocated capacity of the storage pool.

Workaround - Do not use spaces when specifying the volume capacity. For example, enter the volume capacity as shown in the following example:

```
sscs create -p Vol_R5_13dr -s 20GB volume n1
```

sscs Command: Volume Create Command With Block Size Creates Maximum Size

Bug 5070516 - When you create a volume using `sscs` and you specify the size in blocks, the volume is created with the maximum size instead of the size you specified.

Workaround - Specify the size in MB or GB. Alternatively, use the Configuration Services management software (GUI) to specify the size in blocks.

sscs Command: Login Command Cannot Be Run from a Shell Script

Bug 5011797 - The `sscs login` command cannot be run from a shell script.

Workaround - Invoke the shell script through a program (such as Perl) that sets up a `pseudo-tty` pair for process input/output, and then have the program write the password to the `pseudo-tty` as the process input.

Boot -r Command: mp_support Parameter Incorrectly Changed

Bug 4987017 - When you reboot using the `boot -r` command, the `mp_support` parameter is incorrectly changed in the NVRAM area of the array.

Workaround - After the reboot, you can set the failover mode to `mp_support=mpxio` using the following command:

```
sscs modify -f explicit array array-name
```

Storage Automated Diagnostic Environment

This section describes known issues and bugs related to the Storage Automated Diagnostic Environment application.

Patch Upgrades: No Notification Is Sent If Connection to Patch Server is Lost

Bugs 5014270, 5010199 - When performing patch upgrades, notification is not sent specifying that Sun StorEdge 6920 system failed to connect to the patch server.

Workaround - Before performing patch upgrades, test the connection by clicking the Test Revision Maintenance Connection button located on the Service > Sun Solution Series > Revision Setup page.

Patch Upgrades: Patch May Fail to Install During Patch Installation Process

Bug 5060597 - When installing patches, a failure could occur during the patch installation process.

Workaround - Repeat the patch installation process, and do not attempt to back out any patches. If the failure occurs a second time, contact Sun Customer Service.

Firmware Update: Array LEDs May Display Incorrectly After Update

Bug 5045368 - After you perform an array firmware update, the LEDs on the array loop card and enclosure may be amber.

Workaround - Check for errors in the `syslog` file and run the `fru stat` command. If no errors are reported, you can ignore the amber LEDs. In this case, the amber LEDs indicates a sudden burst of interrupts. The LEDs will light green after a reboot.

Firmware Update: Firmware Levels Are Not Restored if Firmware Upgrade Fails

Bug 5015297 - If a failure occurs during a firmware upgrade, the firmware levels are not restored to the versions that existed before the upgrade.

Workaround - Go to Service > Service Advisor > Inventory Maint. and generate a new inventory, fix any reported problems, save the inventory, and then re-run Revision Maintenance. If the problem persists, call Sun Customer Service. Refer to Applying the Software Updates for the full procedure.

Patch Upgrade: Firmware Version Is Not Updated

Bugs 5054792 - After a patch upgrade is completed, the firmware version is not automatically updated.

Workaround - Go to Service > Service Advisor > Inventory Maint. and generate a new inventory, save the inventory, and run Revision Maintenance to update the firmware version. Refer to Applying the Software Updates for the full procedure.

Stopping Patch Report Creation Disables Connection to Storage Service Processor

Bugs 5050990 - Clicking Stop after selecting Create New Patch Report disables the connection to the Sun StorEdge 6920 Storage Service Processor.

Workaround - Do not stop the patch report creation process when it is underway.

Patch Upgrade: Previous Patch Installation Report Remains Visible

Bug 5056678 - When you begin a Revision Maintenance upgrade operation, the previous Patch Installation report remains visible. The previous report should be cleared after you click Clear Reports.

Timestamp in Logs Is Incorrect

Bug 4985811 - The timestamp in the `/var/adm/messages.array` log does not currently match the timestamp in the local `syslog` file for the Storage Service Processor.

Local Notification Information Page: Do Not Select All or Informational

Bug 4995950 - When setting up remote email notification on the Administration > Notification > Local Email > Local Notification Information page of the Storage Automated Diagnostic Environment application, do not select All or Informational. These selections will cause notification to be sent for all events, including those that do not indicate a fault.

Workaround - Select only Warning, Error, and Down when setting up fault notification.

Replacing Standby Switch Fabric Card Causes Actionable Event

Bug 4951253 - When you replace a standby switch fabric card (SFC), an actionable event could occur, even though the card correctly returns to standby mode when the reload is complete.

Communication Errors Occur Between Data Host and Storage Service Processor

Bug 5050511 - Communication errors occur between a data host and the Storage Service Processor, indicating a loss of communication. The actionable event indicates “Lost Communication,” and then a subsequent event indicates “Communication Regained.”

Workaround - Download SUNWstade Support patch StorADE 116720-07 from <http://sunsolve.sun.com/>.

Service Advisor New Array Configuration Procedure Is Incorrect

Bug 5050631 - A step is missing from the “Configure new arrays” procedure under Service > Service Advisor > X-Options > Adding Storage Arrays. An error will occur if you do not release the reservation before you perform step 6. c) “Select and apply any patches as required.”

Workaround - Release the reservation of the cabinet before you select and apply patches for the new array.

Device Summary Report: Inaccurate Power Sequencer Indication

Bugs 5058311 - After a full or partial power shutdown on the Sun StorEdge 6920 system, the 6920 Device Summary report, in the Monitor-Device tab, inaccurately indicates that the rack Power Sequencer status is On.

sscs Command Option ras_patchlist Produces Input Error

Bugs 5059394 - When you use the `ras_patchlist` option of the `sscs` command to generate a report on installed software patches, a false error message is returned and results are not provided.

Workaround - Do not use the `ras_patchlist` command option. Use the Storage Automated Diagnostic Environment GUI to list installed patches. The `patchlist` function is available under Revision Maintenance, in the Sun Solution Series section of the Service tab.

Topology Graphics Not Displayed in Microsoft Internet Explorer

Bugs 5062539 - When using Microsoft Internet Explorer on a Microsoft Windows system, the Topology graphics do not display.

Workaround - Use the Netscape 7.0 browser on a Microsoft Windows system.

Installation of Network Terminal Concentrator (NTC) Patch Renders NTC Inaccessible

Bugs 5061336 - After you install an upgrade patch to the NTC, the NTC may become inaccessible.

Workaround - Reboot the NTC by removing and reapplying power. To reboot the NTC, remove the power connection at the back of the Service Processor Accessory Tray for 10 seconds, then reattach the power connection.

Internationalization

This section describes known issues and bugs related to internationalization and language translation.

Job Descriptions Are Not Displayed Correctly

Bug 5028558 - For jobs that are created in French, Japanese, Korean, Simplified Chinese, and Traditional Chinese, the job descriptions cannot be displayed correctly in a different language environment. This applies to all jobs except the Creating Vdisk job.

Labels on Test from Topology Pages Are Not Translated

Bug 4853278 - Some labels on the Storage Automated Diagnostic Environment (System Edition) Test From Topology pages are not translated and appear in English.

Device Performance Items Are Not Translated

Bug 4991042 - Some labels on the Storage Automated Diagnostic Environment (System Edition) Device Performance page are not translated and appear in English.

Microsoft Internet Explorer Browser Displays Garbled Characters for Traditional Chinese Locale

Bug 5056025 - The display of Traditional Chinese characters is garbled in the Internet Explorer browser. This is because the Traditional Chinese version of the Internet Explorer browser in the Windows environment does not support EUC-TW encoding.

Workaround: Use the Traditional Chinese version of Mozilla (version 1.7) or Netscape (version 7.1) in the Windows environment.

Storage Automatic Diagnostic Environment Online Help Does Not Display on Korean or Traditional Chinese GUI

Bug 5009584 - In the Korean and Traditional Chinese versions of Netscape 7 or Mozilla browser, if the “Default Character Encoding” setting is wrong or not selected, the Storage Automatic Diagnostic Environment online help cannot be displayed.

Workaround - Change the browser settings as follows:

1. From the localized version of Netscape 7 or Mozilla browser, go to Edit > Preferences > Navigator > Languages.
2. Click “Default Character Encoding” and select EUC-KR for Korean or EUC-TW for Traditional Chinese.
3. In the “Language in Order of Preference” field, select [ko] for Korean, or [zh_tw] for Traditional Chinese. Click OK to save the settings.

Other Known Issues and Bugs

This section describes other known issues and bugs found in the system.

ESM Software: Incorrectly Recognizes Virtual Disks

Bug 4976822 - Sun StorEdge Enterprise Storage Manager software incorrectly recognizes individual virtual disks in Sun StorEdge 6920 storage pools.

Workaround - Use the Sun StorEdge 6920 Configuration Service application to obtain correct information about storage pools and virtual disks.

Booting/Rebooting: Errors Occur During Boot for DAS Hosts

Bug 4969489 - When direct-attached storage (DAS) hosts are connected to the Sun StorEdge 6920 system and devices are connected in auto-topology mode, a panic may occur during initial booting.

Workaround - Edit the `jfca.conf` file in `/kernel/drv` using the following values:

```
Loop FcLoopEnabled = 1;
FcFabricEnabled = 0;
Fabric FcLoopEnabled = 0;
FcFabricEnabled = 1;
```

Booting/Rebooting: Booting May Take Several Minutes

Bug 4962951 - During system initialization, wait several minutes until the system is fully reinitialized.

Booting/Rebooting: Emulex HBA Does Not Scan for LUNs After DSP Reboot

Bug 4910795 - If there is an Emulex host bus adapter (HBA) in the configuration, and the system fails over, the HBA does not automatically scan for LUNs.

Workaround - Rescan for LUNs from the Windows host.

Metadata May Remain on Previously Configured Volumes

Bug 5015342 - When you create a host-visible volume on a virtual disk that previously contained files created by another host operating system, some file system metadata remains on the volume. The metadata is recognized by `fsck` or another host-based utility because the Data Services Platform (DSP) does not reinitialize a volume before the volume is created.

Workaround - You can resolve this problem in one of the following ways:

- Before deleting a host-visible volume that has file system metadata, use a host-based utility to reinitialize the volume, removing any metadata that might be seen by other operating systems.
- After creating a host-visible volume, immediately initialize it using a host-based utility before using any other utility that might recognize old metadata.

Unclear Messages

The following messages were reported as incorrect or unclear.

Bug 4986157 - When you select a map from the Volume Summary or Volumes Details pages, the following message is displayed:

```
The initiators were mapped successfully.
```

The message should indicate that the volumes were mapped successfully.

Bug 4994667 - When you create a volume and you specify a size that is too small, the following message is displayed:

```
vol: name is too long.
```

Bug 4969219 - When you create a snapshot of a volume using the command-line interface (CLI) and the volume is not mapped, the following message is displayed:

The specified volume was not found

The error message should indicate that the specified volume was not mapped.

Bug 5008902 - When you unmap more than one volume from the Initiator Details page, the operation completes successfully. However, a message similar to the following is erroneously displayed:

```
Error None of the volume mappings were unmapped The following errors
were encountered:
4800_pc4-> vol51 - vol51
4800_pc4-> vol52 - vol52
```

Bug 4985618 - When an actionable Sun StorEdge Remote Response event occurs, the event message may be truncated. For example, when you remove a PCMCIA flash card from the alternate master management interface card (MIC), the following message is displayed:

```
slave does not have a
```

The event message should be displayed as follows:

```
slave does not have a pc card
```

Bug 5026946 - If you attempt to map a volume with an initiator that is located in a different storage domain, the following message is displayed:

```
Volume creation succeeded. The following errors were encountered:
volume-> servername - The initiator and volume are not in the same
Storage Domain
```

The message should indicate that the mapping failed and the volume was not created. For a volume to be mapped to an initiator, both must be located in the same storage domain.

Bug 5042508 - When you use the command-line interface (CLI) to create an initiator and you specify a worldwide name (WWN) that already exists, the initiator name and storage domain name are changed, and an inaccurate error message is displayed.

The command should fail and display the following error message:

```
<wwn>: already exists
```

The initiator name and storage domain name should not be changed.

Known Documentation Issues

The following topics describe known issues in areas of the documentation:

- “`sscs` CLI Man Page Corrections” on page 30
- “Getting Started Guide Corrections” on page 31
- “Online Help Issues and Corrections” on page 31

`sscs` CLI Man Page Corrections

This section describes corrections for the `sscs` man page.

CLI Man Page to Cancel a Job is Incorrect

Bug 5041614 - The man page incorrectly specifies that the `-c` option in the command `Modify Jobs` cancels the job. The correct option to cancel a job is `-k` (or `--kill`).

Workaround - Use the `-k` option, as follows:

```
modify -k job-id jobs
```

CLI Man Page List Firewall Service is Incorrect

Bug 5040994 - The man page for the command `List Firewall Service` incorrectly uses a dash rather than an underscore, as follows:

```
list firewall-service service
```

Workaround - The man page should use an underscore instead, as follows:

```
list firewall_service service
```

Updating Your Shell Environment to Display Japanese Man Pages

The `sscs` man page in the host software is available in English and Japanese. (The Japanese man page supports the `ja` locale only.) To use the `man` command to display the man pages in Japanese, you must use the `ja` locale environment and update your `MANPATH` variable with one of the following procedures:

To update the `MANPATH` variable using the Bourne or Korn shell:

1. Use an editor to update your `.profile` file `MANPATH` statement to include `/opt/se6x20/cli/man` and export your `MANPATH`:

```
MANPATH="$MANPATH:/opt/se6x20/cli/man"
```

```
export MANPATH
```

2. Save the file and exit the editor.
3. Reload your `.profile` file for your shell session:

```
# . ./profile
```

To update the `MANPATH` statement using the C shell:

1. Use an editor to add `/opt/se6x20/cli/man` to the `MANPATH` statement in your `.login` file:

```
setenv MANPATH "$MANPATH:/opt/se6x20/cli/man"
```

2. Save the file and exit the editor.
3. Reload your `.profile` file for your shell session:

```
# source .login
```

Getting Started Guide Corrections

In the section “Selecting Ports for Additional Storage Connections” of the *Sun StorEdge 6920 System Getting Started Guide*, on page 34 the note incorrectly states that you cannot use ports in column 8 for storage connections. The note should state that you cannot use ports in column 1 for storage.

Online Help Issues and Corrections

The following topics are incorrect in the online help.

Localized Versions Display Online Help in English

Localized versions of the online help is displayed in English. Online help will be translated to all supported languages in the next patch release available from <http://sunsolve.sun.com/>.

About Lights-Out Management

Lights-out management, also called remote power management, enables you to use a remote console to power down and power up the system. The system has the lights-out management feature disabled by default so that the system’s key switch controls power to the system components and the arrays. When you enable the lights-out management feature, the power to these components is controlled by the power relay’s sequencers.

For instructions on enabling and disabling the lights-out management feature, use the following procedure:

1. Go to the Sun Web Console page and click Storage Automated Diagnostic Environment.
2. Click Service > Service Advisor > X-Options.

Powering the System On and Off

By default, powering off the system results in a full shutdown. If the power relay is enabled, you have the option of performing a partial shutdown.

- In a partial shutdown, the system shuts down the storage devices and continues to run, enabling you to restart the system from a remote console. Because the Data Services Platform (DSP) is connected to switch outlets of the power sequencer, the system can restore power to it. Then the management interface card (MIC) powers on the other cards in the DSP.
- In a full shutdown, the system shuts down the storage devices, then gradually shuts down itself. You must restart the system manually.

You must be logged in as the `admin` user to power off the system. Before you power off the system, you must halt any I/O between the data hosts and the system.



Caution – Failure to stop I/O before powering off can cause data loss.

Performing a Partial Shutdown

When you perform a partial shutdown, the system is in the following state:

- The Storage Service Processor in the base cabinet remains powered on.
- The Storage Service Processor Accessory tray remains powered on.
- All storage arrays are powered off.
- The Data Services Platform (DSP) is powered off.
- Only the Power Available LED on the power sequencers are lit.

To perform a partial shutdown of the system:

1. Log in as `admin`.
2. On the Sun Web Console page, click Sun StorEdge 6920 Configuration Service.
3. Click Administration > General Settings.
4. Click the System Partial Shutdown button.

5. Click OK to confirm you want to perform a partial shutdown.

The following message is displayed on the General Settings page:

Partial system shutdown completed successfully

To restore the system, use the following procedure:

1. Log in as admin.
2. On the Sun Web Console page, click Sun StorEdge 6920 Configuration Service.
3. Click Administration > General Settings.
4. Click the System Power Up button.

The power sequencers in the base cabinet and any expansion cabinets are activated and restore power to the components.

Performing a Full Shutdown

To turn the system's power off completely:

1. Log in as admin.
2. On the Sun Web Console page, click Sun StorEdge 6920 Configuration Service.
3. Click Administration > General Settings.
4. Click System Shutdown.
5. Click OK to confirm you want to perform a complete shutdown.

The system is now in the following state:

- The Storage Service Processor in the base cabinet is powered off and under the control of lights-out management.
- The Storage Service Processor Accessory tray remains powered on.
- The Data Services Platform (DSP) remains powered on.
- All storage trays remain powered on.
- The power and cooling unit (PCU) fans are on.
- The PCU Remove LEDs are lit.
- All Power LEDs on the power sequencers are lit.

You must perform the following manual procedure on the system to complete the shutdown:

1. Remove the front trim panel from the base cabinet and any expansion cabinets.

2. At the bottom front and bottom back of each cabinet, raise the AC power sequencer circuit breakers to Off.

The system is now in the following state:

- The Storage Service Processor Accessory tray is powered off.
- The Data Services Platform (DSP) is powered off.
- All storage trays are powered off.
- The PCU fans are off.

If you are servicing the power sequencers or moving the system, disconnect the power cables. Otherwise, leave the power cables connected to ensure a proper grounding path for electrostatic discharge.

Restoring the System After a Full Shutdown

If you want to restore the system after it has been powered off with the full shutdown procedure, you must go to the location of the system and perform the following procedure:

1. Open the front door and back door of the base cabinet and any expansion cabinets.
2. Remove the front trim panel from each cabinet.
3. Verify that the AC power cables are connected to the correct AC outlets.
4. At the bottom front and bottom back of each cabinet, lower the AC power sequencer circuit breakers to On.

The power status LEDs on both the front and back panel illuminate in the following order, showing the status of the front power sequencer:

- Main AC power LED (this lights when the power is applied to the cabinet)
 - Sequencer Stage 1
 - Sequencer Stage 2
5. At the back of the system, locate the power switch for the Storage Service Processor and press the power switch on.
 6. Verify that all components have only green LEDs lit.
 7. Replace the front trim panels and close all doors.

The system is now operating and supports the remote power-on procedure.

Service Contact Information

Contact Sun Customer Service if you need additional information about the Sun StorEdge 6920 system or any other Sun products:

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

