



Sun StorEdge™ 6320 System 1.2 Release Notes

Release 1.2.4

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Sun StorEdge 6320 System Release Notes

The Sun StorEdge™ 6320 systems are complete, preconfigured storage solutions.

These release notes provide the latest information about the Sun StorEdge™ 6320 system. The information could affect the installation and operation of the system. Be sure to read this document before you begin the system installation or read other array documentation.

This document applies to Release 1.2.4. The Release Notes consists of the following sections:

- “Release 1.2.4 Changes” on page 2
- “Release 1.2.3 Changes” on page 2
- “Release 1.2.2 Changes” on page 2
- “Release 1.2.1 Features” on page 3
- “System Requirements” on page 6
- “Software Packages” on page 6
- “Known Issues and Bugs” on page 14
- “Release Documentation” on page 20
- “Sun StorEdge 6320 System Terminology” on page 22
- “Service Contact Information” on page 22

Release 1.2.4 Changes

Release 1.2.4 consists of array firmware and an upgrade to version 1.4.2 of Java. For more information about obtaining and installing the firmware patch, go to the following sections:

- “6320 Baseline Patches” on page 10
- “Important Note on Java Upgrade Usage Restriction” on page 10

Release 1.2.3 Changes

Release 1.2.3 consists of updates to the array firmware and several general performance improvement patches. For information about obtaining and installing the firmware patch, go to the following sections:

- “6320 Baseline Patches” on page 10

Release 1.2.2 Changes

Release 1.2.2 consists of updates to the array firmware and provides guidelines for replacing array batteries. For information about obtaining and installing the firmware patch and replacing array batteries, go to the following sections:

- “Battery Replacement” on page 2
- “Software Packages” on page 6

Battery Replacement

Sun array batteries should be replaced every four years or if they fail the array's automatic battery tests. Battery tests periodically check for battery health, hold-time, temperature, and refresh cycles. Battery tests resulting in failure generate an error message to the `syslog` file.

Release 1.2.1 Features

Release 1.2.1 adds the following features:

- “Localized Help” on page 3
- “Adding Arrays to the System” on page 3
- “Array Hot Spares” on page 3
- “Disk Scrubber” on page 3
- “Backend Fault Isolation Task (BEFIT)” on page 5
- “Other Changes” on page 6

Localized Help

Release 1.2.1 adds localized online help for the Sun StorEdge Configuration Service software to manage the Sun StorEdge 6320 system.

Adding Arrays to the System

Release 1.2.1 enables you to add 6120 arrays to an existing Sun StorEdge 6320 system without having to edit the `syslog.conf` file.

Array Hot Spares

The array hot spare feature enables you to designate disks as hot standbys to substitute for failed drives. You can configure hot spares to be global for the array or to be dedicated to a specific pool.

Disk Scrubber

The disk scrubber feature continuously reviews the volumes for consistency. As a result, you will see the disk LEDs flash green regardless of I/O. The disk scrubber feature is enabled by default.

Caution – Do not disable the disk scrubber. Disabling the disk scrubber may lead to latent disk block errors, which could cause multiple disk failures and loss of data.

Media Errors

The disk scrubber may find certain media errors on a read for all RAID levels. For RAID0 volumes it reports this to the syslog. For RAID-1 and RAID-5 volumes, the errors will be fixed.

This condition will be indicated by a syslog entry as shown in the example below:

- Media Error on uld02:

```
uld02 Sense Key = 0x3, Asc = 0x11, Ascq = 0x0
Jan 09 09:08:42 array00 ISR1[1]: W: uld02 Sense Data
Description Unrecovered Read Error
```

- RAID-1: Messages from the disk scrubber task:

```
Jan 09 09:08:42 array00 SX11[1]: N: ulctr fixing data on
verify scb=441069c
```

- RAID-5: Messages from the disk scrubber task:

```
Jan 09 09:24:13 array00 SX11[1]: N: ulctr fixing parity on
verify scb=433bde0
```

- Messages sent after the fix:

```
Jan 09 09:08:42 array00 ISR1[1]: N: uld02 Sense Key =0x1, Asc
= 0xc, Ascq = 0x1
```

```
Jan 09 09:08:42 array00 ISR1[1]: N: uld02 Sense Data
Description = Write Error - Recovered With Auto Reallocation
```

Data and Parity Errors

If the disk scrubber feature finds any inconsistencies in the data and its computed parity, it sends messages to the array syslog file.

These inconsistencies are also fixed as seen in the example messages below:

- No mismatch output:

```
Sep 22 18:02:25 psc0[1]: N: Vol verify (m1) started
Sep 22 18:02:28 psc0[1]: N: Vol verify (m1) ended
RAID-5: Computed parity and read parity mismatch
Sep 22 18:06:17 psc0[1]: N: Vol verify (m1) started
```

```
Sep 22 18:06:18 WXFT[1]: E: ulctr: vol (m1), Slice
Name:(m1slice) vol verify detected
data parity mismatch on Stripe: 7, Lun:0
Sep 22 18:06:18 WXFT[1]: N: ulctr Parity on stripe 7 is fixed
in vol (m1)
Sep 22 18:06:20 psc0[1]: N: Vol verify (m1) ended
■ RAID-1:Data and mirror copy mismatch
Sep 22 18:06:17 psc0[1]: N: Vol verify (m1) started
Sep 22 18:06:18 WXFT[1]: E: ulctr: vol (m1), Slice
Name:(m1slice) vol verify detected data and mirror mismatch
on block: 31, Lun:0
Sep 22 18:12:46 WXFT[1]: N: ulctr Mirror block 31 is fixed in
vol (m1)
Sep 22 18:12:56 psc0[1]: N: Vol verify (m1) ended
```

For information on managing this feature, refer to the *Sun StorEdge 6320 System 1.2 Reference and Service Manual*.

Backend Fault Isolation Task (BEFIT)

The BEFIT feature, also known as online loop diagnostic mode, maintains the availability of backend drives at all times by detecting, isolating, and correcting faulty Field Replaceable Units (FRUs).

BEFIT is enabled by default during system boot and automatically completes diagnostics on the system. If BEFIT detects a faulty FRU during system boot, it isolates the failure and applies corrective action. Corrective action may include bypassing the faulty FRU. After the system is booted, BEFIT checks system health every 5 seconds.

Note – If BEFIT fails to detect and correct a problem, the system can reset itself to ensure that customer data is safe from corruption.

When BEFIT detects a fault, it halts I/O and executes diagnostics. When BEFIT finishes, host I/O resumes. If a faulty FRU is disabled, diagnostic LEDs on the FRU are lit. BEFIT messages are also sent to the array `syslog` file. View the `syslog` file from the Storage Automated Diagnostic Environment application.

Other Changes

Release 1.2 also adds:

- Management software upgrades, including a graphical array overview, a storage object tree menu, and improved navigation.
- Support for four node clusters.
- Array and drive performance improvements, detailed in the *Sun StorEdge 6120 Array Release Notes*.
- Documentation changes:
 - Improved installation procedures.
 - Added tasks involving the browser-based graphical user interface (GUI) to the *Sun StorEdge 6320 System 1.2 Reference and Service Manual*.
 - Verified online help and man pages.

System Requirements

For information about the Sun StorEdge 6320 hardware and software platform installation requirements, refer to the *Sun StorEdge 6320 System Installation Guide*.

For information on the required software packages and patches to update to this release, refer to the next section.

Software Packages

You can manage the Sun StorEdge 6320 system array with one of the following software packages installed on a host with an Ethernet connection to the array.

- Software packages for Solaris hosts
 - Sun StorEdge 6000 Family Host Installation Software

This package can be used on a Solaris host and includes the Configuration Service software, the Storage Automated Diagnostic Environment (Device Edition) software, and the remote configuration CLI (sscs).

Refer to the *Sun StorEdge 6000 Family Host Installation Software Guide* for additional information.
- Software packages for hosts other than Solaris

- Traffic Manager
- Remote CLI client (thin-scripting client)
- VERITAS Array Support Library

This is needed if you require VERITAS Volume Manager support with the array.

▼ To Install the Software Packages

1. Go to:

<http://www.sun.com/download>

2. In the Browse By Category window, click the Search tab.

3. In the Search window, enter 6000.

4. Click Sun StorEdge 6000 Family Host Installation Software 2.3.

The “download” listing links you to downloads for all platforms.

5. Click Download.

6. Provide the user name and password to log in.

The license agreement is displayed.

7. Click Accept to accept the license agreement, and then click Continue.

8. To download files, click the file names that are appropriate for your operating system.

9. Run the installation script (`install.sh`) as described in the *Sun StorEdge 6000 Family Host Installation Software Guide*.

Data Host Software Patches

TABLE 1 lists the minimum level of the software patches required on the data host.

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

TABLE 1 Data Host Software Patches

Platform	Patch Number/Source	Patch Description
Solaris 9 operating system, first release or later, and Solaris 8 04/01 or later	http://www.sunsolve.sun.com 112392-05 or later http://www.sunsolve.sun.com	Sun StorEdge SAN Foundation 4.2 or higher software: For patch and product information, refer to the <i>Sun StorEdge SAN Foundation 4.x Installation Guide</i> at http://www.sun.com/storage/san VERITAS VxVM 3.5 general patch*
Microsoft Windows NT operating systems	Microsoft http://www.sunsolve.sun.com	Microsoft Windows NT Service Pack, SP 6A Sun StorEdge Traffic Manager 3.x NT
Microsoft Windows 2000 Server and Advanced Server	Microsoft http://www.sunsolve.sun.com	Microsoft Windows 2000 Service Pack, SP 3 Sun StorEdge Traffic Manager 3.x Windows 2000
IBM AIX 4.3.3	IBM http://www.sunsolve.sun.com	ML 10 Sun StorEdge Traffic Manager 3.x AIX
IBM AIX 5.1 32 and 64 bit	IBM http://www.sunsolve.sun.com	ML 03 Sun StorEdge Traffic Manager 3.x AIX
HP-UX 11.00 and 11.i	Available from Hewlett-Packard http://www.sunsolve.sun.com	Patch set, September 2002 Sun StorEdge Traffic Manager 3.x HP-UX
Red Hat Linux 7.2 (single-path support only)	Red Hat Linux	Version 2.4.7-10

* Required only for systems running VERITAS Volume Manager with the array.

▼ To Install the Data Host Software Patches

1. **Determine the required data host software patches from the list in TABLE 1.**
2. **Go to:**
`http://www.sunsolve.sun.com`
3. **Navigate to Patch Portal PatchPro → Network Storage Products.**
4. **Download the required patches.**
5. **Use the `patchadd(1M)` command in a CLI session to install the host software patches.**
Refer to the README files for more patch information.

Before Upgrading Array Firmware

Before beginning the 3.1.x array firmware upgrade procedure, you must first scrub the disk drives using the Storage Automated Diagnostic Environment program. If the disk scrub identifies any problems, you must fix those problems before upgrading. After your disk drives are clean, you can install 3.1.x firmware. The firmware enables the disk scrubbing feature by default, automatically ensuring the integrity of your data. See “Disk Scrubber” on page 3 for more information about this new feature.

Refer to the Storage Automated Diagnostic Environment online help for more information about `vol verify`.

If desired, run a backup before beginning the procedure.

Note – Before beginning a disk drive firmware upgrade, quiesce all I/Os to all the volumes that are connected to the array being updated.

1. **In the Storage Automated Diagnostic Environment program, go to `Manage > Utilities > Continuous Volume Verify`.**
2. **Select the `Activate Vol Verify Subsystem` check box.**
3. **Select the `Run with Fix` option.**
The systems displays a warning that the fix option could change parity so a backup may be desired.
4. **Configure the software so that `Volume Verify` runs on each array for 1 day.**
5. **For the day of the week, select the hour during which `Volume Verify` will run.**

6. Select the execution rate.

Fast has a very high performance impact; medium has a high performance impact; slow has a low performance impact.

7. Click Save Options.

8. Click the Start Volume Verify link at the top of the screen.

The `vol verify` operation can take up to several hours to run, depending on system activity and the verification rate selected.

6320 Baseline Patches

The following lists the management software patches needed to meet the baseline requirements for Releases 1.2.4, 1.2.3, 1.2.2, 1.2.1, and 1.2.

Release 1.2.4

115179-12 – Array Firmware patch 3.1.5

115589-09 – SP Software

114596-07 – SSRR

118262-01 – Java Upgrade

113672-01 – Seagate (ST336752F) 36 GB 15K 0708

114708-05 – Seagate (ST373307F) 73 GB 10K 0407

114709-05 – Seagate (ST3146807F) 146 GB 10K 0407

116819-04 – Network terminal concentrator (NTC) firmware patch

Note – After the system installs the Java Upgrade Patch (118262-01), you must wait 30 minutes before attempting any further management functions (either StorADE or EM).

Release 1.2.3

115179-11 – Firmware patch 3.1.4

115589-06 – Sun StorEdge 6320 Storage Service Processor revision change

- 114591-20 – Storage Automated Diagnostic Environment Support Patch (Storage Service Processor only)
- 116656-02 – Localization patch for Control Software for the Storage Service Processor
- 113193-04 – PatchPro patch
- 116819-01 – Network terminal concentrator (NTC) firmware patch
- 117106-01 – FBR patch

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- 115179-06 – Firmware patch 3.1.3
- 115589-05 – Sun StorEdge 6320 Storage Service Processor revision change
- 114708-02 – 72 gigabit 10k drive firmware patch
- 114709-02 – 146 gigabit 10k drive firmware patch

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- 115179-04 – Firmware patch 3.1.2
- 114591-19 – Storage Automated Diagnostic Environment Support Patch (Storage Service Processor only)
- 115589-04 – Sun StorEdge 6320 Storage Service Processor revision change
- 116656-01 – Localization patch for Control Software for the Storage Service Processor
- 116655-01 – Localization patch for Control Software on external hosts

Release 1.2

- 114960-04 – Management Software - Configuration Service application for SE6320
- 114961-01 – Needed by any Solaris machine running the standalone SSCS package
- 112945-19 – WBEM needed by 114960-04
- 115179-03 – Firmware patch 3.1. Use the Storage Automated Diagnostic Environment software installed on the Storage Service Processor to automatically determine and install the baseline patches
- 113193-03 – PatchPro patch

114591-18 – Storage Automated Diagnostic Environment SUNWstads Support patch
(Storage Service Processor only)

114596-03 – SSRR MIRE 28 OPIE patch

115589-03 – Sun StorEdge 6320 Service Processor patch

115704-01 – SUNWstads patch from baseline 1.0.4

113273-04 – SSH (security patch for ssh utilities)

Note – Install any needed management software packages and data host patches before you install the baseline patches.

▼ To Install the Management Host Baseline

Note – Before beginning the array firmware upgrade procedures, see “Before Upgrading Array Firmware” on page 9.

1. Log in to the Storage Automated Diagnostic Environment software on the Storage Service Processor.

For example, enter:

```
https://host-name:7443
```

```
Login: storage
```

```
Password: !storage
```

2. Select Monitor > Monitor Devices to view devices that can be monitored.

3. Check for alerts on monitored arrays by clicking the array names (for example, sp0-array0).

4. If the arrays are displaying alerts, fix the errors and verify that the arrays are healthy before proceeding.

Refer to the *Sun StorEdge 6320 System 1.2 Reference and Service Manual* for array troubleshooting information.

5. If you need to change the PatchPro source from PatchPro Server to CD-ROM, select Manage > Revision Setup > Change PatchPro Source to CD > Update Options.

6. Create a new system inventory snapshot:

- a. **Select Manage > Service > Inventory Maintenance and click Generate New Inventory. This generates an up-to-date system inventory list.**
 - b. **Click Save New Inventory.**
- 7. Determine and apply the required patches:**
- a. **Click Manage > Service > Revision Maintenance.**
 - b. **Click Create New Patch Report.**

The system takes about 1 minute to display the Selected Patches link.
You can tell the status by reviewing the Patch Report Status.
 - c. **Click Select Patches.**

The system displays the available patches for each device (arrays and the Storage Service Processor).
 - d. **Select the devices that you want to update and click Apply Selected. Alternatively, to update patches in all devices, click Apply All Devices.**

The Patch Installation Report generates a log of the applied changes.
 - e. **Click Show Log.**

The log displays the progress in installing patches one device at a time. When all of the patches for one device are installed, the log clears and the patches for the next device start logging. (For example, after all the Storage Service Processor patches are installed, the log clears and starts showing the installation of the Array patch.) The log displays a completion message when the session has finished.
-
- Note** – These additional updates depend on your system’s current baseline installation. Verify that the Storage Service Processor is powered on before repeating the steps. If needed, the first pass will install a required patch and subsequent passes will install all the other patches necessary to meet the new baseline requirements.
-
- f. **Repeat Step 6 through Step 7c to rerun the Patch Status Report.**
 - g. **If the Patch Status Report still lists patches to update, repeat Step 7c, Step 7d, and Step 7e.**
- 8. Click Move to History to save the installation report.**
- For more information about Storage Automated Diagnostic Environment software, refer to the *Storage Automated Diagnostic Environment 2.2 User’s Guide*.

Known Issues and Bugs

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

- “Known Issues” on page 14
- “Bugs” on page 17

Known Issues

This section includes known issues about this product that are not associated with a Sun bug ID number. This section contains the following topics:

- “Changing the Segment Size of an Existing Pool That is in Use Causes Loss of Data” on page 14
- “Set Timezone Errors and u1 Controllers” on page 14
- “Secure Shell” on page 15
- “Authenticated Proxy Server” on page 15
- “Updating Storage Automated Diagnostic Environment Software Drops the Connection” on page 16
- “Managing the Sun StorEdge 6320 System” on page 16
- “Netscape Version 4.79” on page 16
- “Older Browser Versions” on page 16

Changing the Segment Size of an Existing Pool That is in Use Causes Loss of Data

Changing the segment size of an existing pool that is in use removes the existing pool from the volume, and the data is lost. Therefore, you should not change the segment size of a pool that is in use.

Set Timezone Errors and u1 Controllers

Note – This applies to authorized service personnel only when using diagnostic commands.

There is an intermittent issue with u1 controllers becoming disabled in the storage arrays within the system racks.

The issue does not cause any data loss or corruption. The secondary controller takes over and the data can still be accessed, but trained personnel must perform a procedure to re-enable the master controller.

The error occurs intermittently after a sequence of commands, including use of the management software to set the time zone. Typically, these commands are issued only during initial system configuration, system reconfiguration, or new operating system installation. The error appears to be more common in systems with a high number of arrays such as racks with 5 2x2 arrays.

The error results in the following sequence of events:

1. A master controller fails over to the alternate master controller.

The array's architecture acts as designed to handle failures and prevent loss of data. The secondary controller takes over the LUNs and allows the host to continue accessing the data. There is no data corruption or loss; the original controller does not acknowledge the data transfer from the host until its cache is mirrored on the remote controller.

2. The master controller goes into a disabled state.

Recovery Procedure

Trained service personnel can re-enable the master controller to bring it back online and restore array redundancy with the following steps:

1. Use the management software to bring the failed controller back online.
2. Reset the timezone.

Since the time zone function fails only intermittently; it is likely to work the second time.

Normal operations should resume.

Secure Shell

Secure shell (SSH) through a Sun StorEdge Remote Response/Point-to-Point Protocol interface is supported. LAN SSH connections, however, are not allowed.

Authenticated Proxy Server

You cannot use an authenticated proxy server, which requires a proxy user name and password, to connect to the Internet and access the Sun external patch distribution server.

6320 Service Processor Accessory Tray Cabling

Caution – To reduce the risk of fire, use only a No. 26 AWG or larger UL Listed or CSA Certified telecommunication line cord.

Updating Storage Automated Diagnostic Environment Software Drops the Connection

After the Storage Automated Diagnostic Environment software patch is installed, the application restarts automatically, which enables the changes to take effect. For a brief period, you have no connection to the Storage Automated Diagnostic Environment software. When the restart has finished, you must refresh the display to reestablish the connection.

Managing the Sun StorEdge 6320 System

The Sun StorEdge 6320 system can be managed through either a browser-based graphical user interface (GUI) or a command-line interface (CLI). You can load the CLI client from the Sun StorEdge Configuration Service host CD or download the CLI client from the Sun web site. You install the CLI client on a supported host system on the customer LAN.

Netscape Version 4.79

If you double-click the top bar of the Netscape™ Version 4.79 window or resize the window, there can be a loss of context on the screen. If this happens, bring up the window menu and select Reload.

Older Browser Versions

If you are managing the Sun StorEdge 6320 system using an older generation (HTTP 1.0-based) Web browser such as Netscape 4.x or earlier, you could experience time-out conditions from the browser when configuring large Sun StorEdge 6320 systems. In large configurations, older browsers need more time to calculate capacities and can time out before those calculations are complete. In this case, you might need to reload the browser page to continue working with the system.

If time outs become an issue, update your browser to a version that supports HTTP 1.1 (Netscape 6 or higher).

Updating FRU Versions

After adding a field-replaceable unit (FRU), you must make sure that the FRU version is supported and matches other components. Update the system with the latest patches to update the FRU to the correct version. Use the Storage Automated Diagnostic Environment software installed on the Storage Service Processor to automatically determine and install the baseline patches. See “6320 Baseline Patches” on page 10.

Bugs

This section contains a list of bugs for this release:

SP Patch

Bug 4982129 - Release note for SP patch need to be updated

NTC Firmware

Bug 5089904 - NTC enable to be configured properly during firewall unconfigure.

Array Firmware 3.1.5

Bug 5047217 - 6120: Unplugging one loopcard in 2x6 turns on amber LED on other loopcards.

Bug 5038486 - T3B/3.1.4.11: Data miscompare - 128 words in error.

Bug 4992011 - OFDG/ONDG: u2 health checks on back-end loops always fail.

Bug 5033787 - 6120: “boot -r” may cause Assert.

Bug 5035207 - 6120/3.1.3.10: Error on read block 100 for 16 - lun failover takes too much time.

Bug 5046359 - 6120: All enclosures drive LED turn amber when any loopcard is disabled.

Bug 5043978 - s07: Failed due to multiple drivers “broken” after enable u412.

Bug 5044894 - Shelf life check should not be done on T3.

Bug 5053308 - 6120/3.2.0.12: Array asserts during reset, after disk format cmd was issued to u.

Bug 5043884 - 6120: lpc firmware download causes array reboot.

Bug 5059651 - Commands getstuck in svd layer for quite sometime.

Bug 4978663 - .disk linkstat works only for a drive in a tray with an enabled RAID controller.

Bug 5033152 - T3B/3.1.3.10: When drive is fault/disabled, amber led is not on.

Bug 5043408 - T3B: Original IP is not preserved during the 1.18 to 3.1.4 upgrade.

Bug 5037853 - 6120: Failover failed to complete.

Bug 5009611 - seg command to allow Ops to read/write segments.

Bug 4964912 - 6120: Both controllers of 2x4 or 2x2 system become master.

Bug 4984663 - Set flags 0x80000000 command sets incorrect flags value.

Bug 4997002 - Assert failure in svh_accept_scsi_cmd().

Bug 4986534 - 6120: syslog get's flooded when a raid5 disk resyncs.

Bug 5018930 - 6120: 1st lun permission gets overwritten if permission limit is exceeded.

Bug 4974618 - T3B/313_2: syslog data prints to console instead of log file.

Bug 5021108 - 6120: Panic in runScheduler implicating time(..) routine.

Bug 5006522 - RAMDISK: File system support.

Bug 4935307 - 6120:2x6: Disable u4 during vol init parallel, after completion, init restarts.

Bug 4993287 - Adjust NOTICE messages to INFO messages.

Bug 5004498 - Separate loglevel 4 (INFO) from DEBUG.

Bug 4981571 - T3B: vol verify logs failure when terminated by running another vol command.

Bug 4998395 - Change some LOG_NOTICE debug messages to LOG_INFO.

Bug 4965335 - T3B 3.1.1: No battery warnings logged in when date is set beyond expiration.

Bug 4944443 - T3B: Token for fruLoopVersion does not match lpc version.

Bug 4936086 - 6120/T3: PGR IN read keys CDB response has incorrect additional length data.

Bug 5005538 - savecore altmaster live dump fails if any drive is disabled on u1.

Bug 4989760 - T3B--313.7 & 2.1.6: ctrl stuck at "POST Failed. Hit c to continue" while booting.

Bug 4991427 - Change some LOG_INFO messages to LOG_DEBUG.

Bug 4998390 - T3B/6120: svd should heal loop A during failover.

Bug 4965873 - 6120: Command 'unconfig ud[1-14]' turns AMBER led on wrong drive ON.

Bug 4989074 - Enhance crashdump message buffer.

Bug 4252684 - Reconstruction rate does not change dynamically.

Bug 4946781 - 6120/T3B: pcu's with failed batteries do not show amber LEDs.

Bug 5107602 - Removing or adding volumes across pools fails if more than 5 volumes per pool, or ten total are done at the same time. Also, removing or adding 9 volumes, at the same time, in one pool fails.

Workaround - Don't remove more than 4 volumes at the same time.

Java Upgrade

Bug 4854885 - CIMOM process using a lot of CPU - seems to be spinning.

Bug 6184342 - The version of Java needs to be updateable on a 6320.

SSRR

Bug 5082697 - Patch not restarting svr_tty.

Bug 4785773 - Add the capability to update_rss_console to restore the rss_params.

Bug 4795811 - Run the 'hostid' command during update_rss_console to prompt as default.

Bug 4859478 - update_rss_console needs to prompt for two additional pieces of information.

Bug 4904658 - The sysbak backup_list needs to omit the file SEcfglog file.

Bug 4921561 - Turn off svr_tty_mon.

Bug 4929206 - update_rss_console fails with command not found error.

Bug 4930396 - Add questions to update_rss_console to fill rss_params w/storage info.

Bug 4943446 - Example in update_rss_console cannot show spaces in StorEdge Type entry.

Bug 4951129 - Cannot CallHome and Connect to multiple storage systems..

Bug 4971208 - User login prompt is not changing to sitename after update_rss_console.

Bug 5044291 - System not phoning home.

Disk Firmware (113672-01 ST336752F 36GB 15k drive firmware)

Bug 4784366 - T4: X15: Drive spindown during s03 test.

Disk Firmware (114708-05 ST373307F 73GB 10k drive firmware)

Bug 5069315 - Ch7 motor spindle may cause media error.

Disk Firmware (114709-05 ST3146807F 146GB 10k drive firmware)

Bug 5069315 - Ch7 motor spindle may cause media error.

Release Documentation

TABLE 2 lists the documentation for the 6320 and related products. The suffix *nn* in a part number indicates that you should use the most current version. This documentation is available online at:

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

TABLE 2 Sun StorEdge 6320 System and Related Documentation

Application	Title	Part Number
Site preparation	<i>Sun StorEdge 6320 System 1.2 Site Prep Guide</i>	816-7877- <i>nn</i>
Safety requirements	<i>Sun StorEdge 6320 System 1.2 Regulatory and Compliance Guide</i>	816-7876- <i>nn</i>
Sun StorEdge 6320 installation procedures	<i>Sun StorEdge 6320 System 1.2 Installation Guide</i>	816-7878- <i>nn</i>
Overview, service, reference, and CLI administration	<i>Sun StorEdge 6320 System 1.2 Reference and Service Manual</i>	816-7879- <i>nn</i>
Management and configuration help	<i>Sun StorEdge Configuration Service online help</i>	n/a
	<i>Sun StorEdge SCS (1M) man page</i>	n/a

TABLE 2 Sun StorEdge 6320 System and Related Documentation (*Continued*)

Application	Title	Part Number
Sun StorEdge 6120 release information	<i>Sun StorEdge 6120 Array Release Notes</i>	817-0201-17
Sun StorEdge 6120 site preparation	<i>Sun StorEdge 6120 Array Site Preparation Guide</i>	817-0960- <i>nn</i>
Sun StorEdge 6120 safety requirements	<i>Sun StorEdge 6120 Array Regulatory and Safety Compliance Manual</i>	817-0961- <i>nn</i>
Sun StorEdge 6120 array installation	<i>Sun StorEdge 6120 Array Installation Guide</i>	817-0199- <i>nn</i>
Sun StorEdge 6120 overview, service, reference, and CLI administration	<i>Sun StorEdge 6020 and 6120 Arrays System Manual</i>	817-0200- <i>nn</i>
Storage Automated Diagnostic Environment software troubleshooting and diagnostics	<i>Storage Automated Diagnostic Environment 2.2 User's Guide</i>	817-0822- <i>nn</i>
	<i>Storage Automated Diagnostic Environment 2.2 Release Notes</i>	817-0823- <i>nn</i>
SAN Foundation	<i>Sun StorEdge SAN Foundation 4.2 Release Notes</i>	817-1246- <i>nn</i>
	<i>Sun StorEdge SAN Foundation 4.2 Installation Guide</i>	817-1244- <i>nn</i>
Multipathing support	<i>Sun StorEdge Traffic Manager Software Release Notes</i>	817-0385- <i>nn</i>
Cabinet information	<i>Sun StorEdge Expansion Cabinet Installation and Service Manual</i>	805-3067- <i>nn</i>

Sun StorEdge 6320 System Terminology

The Storage Networking Industry Association (SNIA) is developing a standard set of terminology. When it has been adopted by all storage manufacturers, this terminology standard will make it easier for customers to understand terms used by different vendors.

Sun Microsystems is adopting the SNIA terms now. The Sun StorEdge 6320 system is the first storage product to use the new SNIA terminology list.

TABLE 3 the Sun StorEdge 6120 terms and the corresponding SNIA terms used for the Sun StorEdge 6320 system.

TABLE 3 Sun StorEdge 6320 Terminology

Sun StorEdge 6120 Array CLI Terminology¹	Sun StorEdge 6320 Terminology
Volume	Storage pool
Slice	Volume
LUN	Volume
Administrative domain	Storage array
Partner Group	HA configuration
Array	Tray
Enclosure	Tray
Expansion unit	Expansion unit

¹—This is the Tenet-based CLI terminology used on the Sun StorEdge 6120 arrays.

Service Contact Information

If you need help installing or using this product, go to:

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