



# Sun StorEdge™ 6320 System 1.3 Release Notes

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Release 1.3

Sun Microsystems, Inc.  
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# Sun StorEdge 6320 System 1.3 Release Notes

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The Sun StorEdge™ 6320 systems is a complete, preconfigured storage solution.

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 1.3. The Release Notes consists of the following sections:

- “Release 1.3 Changes” on page 2
- “System Requirements” on page 3
- “Software Packages” on page 3
- “Known Issues and Bugs” on page 8
- “Release Documentation” on page 11
- “Sun StorEdge 6320 System Terminology” on page 13
- “Service Contact Information” on page 13

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# Release 1.3 Changes

Release 1.3 consists of array firmware updates and software upgrades. For more information about obtaining and installing the upgrades, go to “6320 Baseline Patches” on page 6.

## Online Disk Firmware Download

The Online Disk Firmware Download feature allows you to continue to access data on an affected volume during the disk firmware download process. Volumes can remain online while performing the procedure. The overall process is faster, less cumbersome, and requires minimal user intervention.

## Increased Disk Fault Tolerance

The Increased Disk Fault Tolerance feature is designed to increase the availability of customer data even when one or more drives have disk failures, ranging from simple media errors to an entire disabled drive. The feature reduces the time for which the system is in a degraded state, during which it could be exposed to a double disk failure.

## Latent Fault Detection for Hotspares

The Latent Fault Detection feature allows the array to proactively detect and fix any media errors on disk drives that are not currently part of any active RAID sets. Essentially, this is an enhancement to the disk scrubber where, after the volume disks are scrubbed, remaining unused drives are also scrubbed for media errors.

## Enhanced Backend Fault Isolation Task (BEFIT)

BEFIT monitors the system for Loop Initialization Protocol (LIP) storms and transients faults, and can automatically failover I/O to the alternate drive path while running the tests required to isolate the transient fault condition down to the defective FRU.

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# 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.

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## Software Packages

You can manage the Sun StorEdge 6320 system 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 Sun StorEdge Configuration Service software, the Storage Automated Diagnostic Environment (Device Edition) software, and the remote configuration command-line interface (CLI) (*sscs*).

Refer to the *Sun StorEdge 6000 Family Host Installation Software Guide* for additional information.

- Software packages for hosts other than Solaris

- Sun StorEdge Traffic Manager software

- 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.

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

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**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	<a href="http://www.sunsolve.sun.com">http://www.sunsolve.sun.com</a>  112392-05 or later <a href="http://www.sunsolve.sun.com">http://www.sunsolve.sun.com</a>	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 <a href="http://www.sun.com/storage/san">http://www.sun.com/storage/san</a>  VERITAS VxVM 3.5 general patch*
Microsoft Windows NT operating systems	Microsoft  <a href="http://www.sunsolve.sun.com">http://www.sunsolve.sun.com</a>	Microsoft Windows NT Service Pack, SP 6A  Sun StorEdge Traffic Manager 3.x NT
Microsoft Windows 2000 Server and Advanced Server	Microsoft	Microsoft Windows 2000 Service Pack, SP 3

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

Platform	Patch Number/Source	Patch Description
	<a href="http://www.sunsolve.sun.com">http://www.sunsolve.sun.com</a>	Sun StorEdge Traffic Manager 3.x Windows 2000
IBM AIX 4.3.3	IBM	ML 10
	<a href="http://www.sunsolve.sun.com">http://www.sunsolve.sun.com</a>	Sun StorEdge Traffic Manager 3.x AIX
IBM AIX 5.1 32 and 64 bit	IBM	ML 03
	<a href="http://www.sunsolve.sun.com">http://www.sunsolve.sun.com</a>	Sun StorEdge Traffic Manager 3.x AIX
HP-UX 11.00 and 11.i	Available from Hewlett-Packard	Patch set, September 2002
	<a href="http://www.sunsolve.sun.com">http://www.sunsolve.sun.com</a>	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.

## 6320 Baseline Patches

The following lists the management software patches needed to meet the baseline requirements for Release 1.3.

115589-11 – Storage Service Processor software

113193-06 – PatchPro patch

116931-18 – Array firmware 3.2.2

114591-21 – Storage Automated Diagnostic Environment software patch

113673-04 – Seagate (ST373453F) 72 GB 0449

116748-04 – Seagate (ST336753F) 36 GB 0449

### ▼ To Install the Management Host Baseline Patch

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**Note** – Both loopcard firmware 7.20 and controller firmware 3.1 MUST be in SYNC. Please check 6120/6020 controller and loopcard firmware versions after applying these patches.

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**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 1.3 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 > Service > Revision Setup, and under the Patch Source option click on the down arrow to select CD.**

**6. Click Update Options.**



**7. 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.**

This updates your list.

**8. 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.

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**Note** – The following steps depend on your system's current baseline installation. 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.

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- f. Repeat Step 7 through Step 8c to rerun the Patch Status Report.**

- g. If the Patch Status Report still lists patches to update, repeat Step 8d and Step 8e.**

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**Note** – The PatchPro patch (113193-06) needs to be installed before the Storage Automated Diagnostic Environment software patch (114591-21). The patch CD recommends that you install both patches together. Installation will fail on the first pass for the Storage Automated Diagnostic Environment software patch. The Patch Status Report will list the patch, and installation will succeed on the next pass.

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**9. 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 User's Guide*.

**10. From the Storage Service Processor, use this command to check for correct patch installation of the to see whether the new patches were installed correctly using this command:**

```
[sp0]# showrev -p
```

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## Known Issues and Bugs

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

- “Known Issues” on page 8
- “Bugs” on page 10

### 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 9
- “Secure Shell” on page 9
- “Authenticated Proxy Server” on page 9
- “Updating Storage Automated Diagnostic Environment Software Drops the Connection” on page 9
- “Managing the Sun StorEdge 6320 System” on page 9
- “Netscape Version 4.79” on page 9
- “Older Browser Versions” on page 10

## *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.

## *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.

## *Service Processor Accessory Tray Cabling*

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

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## *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 try to configure a large 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. 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 timeouts 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 6.

## Bugs

There are no open bugs related to this release. Refer to the patch README file for a list of fixed bugs.

# 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/products-n-solutions/hardware/docs/Network\\_Storage\\_Solutions/Midrange/6320/index.html](http://www.sun.com/products-n-solutions/hardware/docs/Network_Storage_Solutions/Midrange/6320/index.html)
- <http://www.sun.com/documentation>

**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
Sun StorEdge 6120 release information	<i>Sun StorEdge 6120 Array Release Notes</i>	817-0201- <i>nn</i>
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>

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

<b>Application</b>	<b>Title</b>	<b>Part Number</b>
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 shows 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 Terminology <sup>1</sup>	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>

