



Sun StorageTek™ Common Array Manager Software Release Notes

Release 6.1.1

Sun Microsystems, Inc.
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Sun StorageTek Common Array Manager Software Release Notes

This document contains important information about Release 6.1.1 of the Sun StorageTek™ Common Array Manager software, including issues and requirements that can affect installation and operation.

These Release Notes include the following sections:

- [“Common Array Manager Software Features” on page 2](#)
- [“Release Documentation” on page 5](#)
- [“System Requirements” on page 8](#)
- [“Installing Packages and Patches” on page 15](#)
- [“Firmware” on page 21](#)
- [“Known Issues and Operational Information” on page 33](#)
- [“Service Contact Information” on page 57](#)
- [“Third-Party Web Sites” on page 57](#)

Common Array Manager Software Features

The Sun StorageTek Common Array Manager (CAM) software provides an easy-to-use interface from which you can configure, manage, and monitor Sun StorageTek and Sun Storage arrays.

Overview

CAM software provides the following:

- Browser interface
- New Local Command Line Interface
- Remote Command Line Interface

The Command Line Interfaces (CLIs) perform the same control and monitoring functions as the browser interface.

For most new users, managing the array with the browser interface is recommended.

Note – See [“Release Documentation” on page 5](#) for more information about managing the J4200 and J4400 arrays using CAM software, installation and configuration instructions.

New Features

- JBOD Support (J4200 / J4400 Arrays)
- Support for 7.10.xx.xx firmware for the 6140, 6540, and FLX380 arrays with the following features:
 - RAID 6 (6140 arrays only)
 - >2TB LUN Support
 - Portable Volume Groups
 - Batch Volume Operations
 - 8K Cache Block size
- Support for in-band management for Solaris x86 and Microsoft Windows
- CLI Minimal Installation

- Data In Place Migration (DIPM) and the concept of portable vdisks
- Third Expansion Tray (48-Drive) Cabling patch for the 2500 Series Arrays

Release Contents

[TABLE 1](#) lists the version information for the software included in this release.

TABLE 1 Sun StorageTek CAM CD Contents

Type	Version
Common Array Manager	6.1.1
Java WebConsole software	3.0.5
Java 2 Software Development Kit	1.5
Firmware files, as listed in “Firmware” on page 21	06.60.11.10 06.70.54.10 06.60.11.20
Remote scripting CLI client	2.1.4

Licensing Optional Premium Features

Note – Premium features are not supported for the J4000 Array Family.

To use optional premium features, you must purchase licenses. When you order licenses, they will be sent to you with instructions on how to activate the features. For more information, search for these topics in the online Help:

- About Licensed Features
- Adding a License
- Displaying License Information
- Managing Licenses

The following licenses for premium features are available from Sun:

TABLE 2 Premium Feature Licenses: 06.nn.nn.nn and 07.nn.nn.nn Controller Firmware

Premium Feature	6540 Array	6140 Array	6130 Array	2500 Arrays	FLX240 Array	FLX280 Array	FLX380 Array
Data Snapshot	X	X	X	X	X	X	X
Data Volume Copy	X	X	X		X	X	X
Data Replicator	X	X	X		X	X	X
4 Domains	X	X		X	X	X	X
Upgrade 4 to 8 Domains	X	X			X	X	X
8 Domains	X	X		X	X	X	X
Upgrade 8 to 16 Domains	X	X	X		X	X	X
16 Domains	X	X	X	X	X	X	X
Upgrade 16 to 64 Domains	X	X	X		X	X	X
64 Domains	X	X	X		X	X	X
Combo Data Snapshot and 8 Domains	X	X				X	X
Combo Data Snapshot, Data Volume Copy, Data Replicator, and 64 Domains	X	X	X		X	X	X
Combo Data Snapshot, Data Volume Copy	X	X	X		X	X	X
Combo Data Snapshot, Data Volume Copy, and Data Replicator	X	X	X		X	X	X

TABLE 3 Premium Feature Licenses for 07.nn.nn.nn Controller Firmware Only

Premium Feature	6540 Array	6140 Array
Enhanced Data Snapshot	X	X
Enhanced Data Snapshot Upgrade	X	X
Enhanced Data Replicator	X	X
Enhanced Data Replicator Upgrade	X	X
2 Domains	X	X

TABLE 3 Premium Feature Licenses for 07.nn.nn.nn Controller Firmware Only

Premium Feature	6540 Array	6140 Array
Upgrade 2 to 4 Domains	X	X
Upgrade 16 to 32 Domains	X	X
32 Domains	X	X
Upgrade 32 to 64 Domains	X	X
Upgrade 64 to 96 Domains	X	X
96 Domains	X	X
Upgrade 96 to 128 Domains	X	X
128 Domains	X	X
Upgrade 128 to 256 Domains	X	
256 Domains	X	
Upgrade 256 to 512 Domains	X	
512 Domains	X	

Release Documentation

Following is a list of documents related to CAM.

TABLE 4 Release Documentation for Mid-Range Arrays

Application	Title	Part Number
CLI command reference	<i>Sun StorageTek Common Array Manager sscs (1M) CLI Quick Reference</i>	820-2932
Installation and initial configuration instructions	<i>Sun StorageTek Common Array Manager Software Installation Guide</i>	820-4193
Installation and configuration instructions. Managing the J4200 and J4400 arrays using CAM software.	<i>Sun StorageTek Common Array Manager User Guide for the J4000 Array Family</i>	820-3765

In addition, CAM software includes online Help and man pages for CLI commands.

For hardware information, refer to the array's release notes and hardware installation guide. You can search for this documentation at <http://www.sun.com/documentation>.

The following pages lists release documentation for the Sun Storage J4000 Array Family and the Sun Storage J4500 Array Family.

TABLE 5 Release Documentation for the J4000 Array Family

Application	Title	Part Number
Regulatory and safety information	<i>Sun StorageTek Regulatory and Safety Compliance Manual</i>	96272
Multilanguage safety information	<i>Important Safety Information for Sun Hardware Systems</i>	816-7190
Site planning information	<i>Sun Storage J4200/J4400 Array Site Preparation Guide</i>	820-3219
Installation at a glance	<i>Sun Storage J4200 Array Setup Poster</i>	820-3221
Installation at a glance	<i>Sun Storage J4400 Array Setup Poster</i>	820-4691
Complete details of the hardware components, rail and tray installation, and cabling.	<i>Sun Storage J4200/J4400 Array Hardware Installation Guide</i>	820-3218
Late-breaking information not included in the information set	<i>Sun Storage J4200/J4400 Array Release Notes</i>	820-3222
Installation and use of the management software using a GUI	<i>Sun StorageTek Common Array Manager User Guide for the J4000 Array Family</i>	820-3765
Installation and use of the management software using a CLI	<i>Sun StorageTek Common Array Manager CLI Guide for the J4000 Array Family</i>	820-4419
General operation and troubleshooting	<i>Sun Storage J4200/J4400 Array System Overview</i>	820-3223
Disk drive replacement procedures	<i>Sun Storage J4200/J4400 Array Disk Drive Replacement Guide</i>	820-3225
SIM board replacement procedures	<i>Sun Storage J4200 Array SIM Board Replacement Guide</i>	820-3226
SIM board replacement procedures	<i>Sun Storage J4400 Array SIM Board Replacement Guide</i>	820-4600
Power supply replacement procedures	<i>Sun Storage J4200 Array Power Supply Replacement Guide</i>	820-3227
Fan replacement procedures	<i>Sun Storage J4200 Array Fan Replacement</i>	820-3229

Application	Title	Part Number
Power supply and fan replacement procedures	<i>Sun Storage J4400 Array Power Supply/Fan Replacement Guide</i>	820-3228
Chassis replacement procedures	<i>Sun Storage J4200 Chassis Replacement</i>	820-4413
Chassis replacement procedures	<i>Sun Storage J4400 Chassis Replacement</i>	820-4601
Rail kit installation procedures	<i>Sun Storage J4200/J4400 Array Rail Kit Installation Guide</i>	820-3764

TABLE 6 Release Documentation for the J4500 Array Family

Application	Title	Part Number
Listing of late-breaking information, known issues and workarounds.	<i>Product Notes</i>	820-3162
Graphical depicting initial setup and configuration.	<i>Setup Poster</i>	820-3152
Installing the array enclosure into a rack using the X4500-J slide rail system.	<i>X4500-J Slide Rail Installation Guide</i>	820-1858
Configure and learn about your Sun Storage J4500 array.	<i>System Overview</i>	820-3163
Install, replace and troubleshoot hardware components.	<i>Service Manual</i>	820-3160
Troubleshoot and isolate system problems with available diagnostic tools and logs.	<i>Diagnostics Guide</i>	819-4363
Review safety information.	<i>Safety and Compliance Guide</i>	820-3161

System Requirements

System requirements for the Sun StorageTek Common Array Manager software are described in the following sections:

- [“Supported Arrays” on page 8](#)
- [“Supported Platforms and Required Packages” on page 9](#)
- [“Required Patches” on page 11](#)
- [“File Space Requirements” on page 11](#)
- [“About Windows Service Packs” on page 12](#)
- [“Supported Platforms for the Remote CLI Client” on page 13](#)
- [“Supported Web Browsers” on page 13](#)
- [“Supported Languages” on page 14](#)

Supported Arrays

CAM software supports the following Sun storage systems:

- Sun StorageTek Flexline 240 Array
- Sun StorageTek Flexline 280 Array
- Sun StorageTek Flexline 380 Array
- Sun StorageTek 2510 (iSCSI)
- Sun StorageTek 2530 Array (SAS)
- Sun StorageTek 2540 Array (FC)
- Sun StorEdge 6130 Array
- Sun StorageTek 6140 Array
- Sun StorageTek 6540 Array
- Sun Storage J4200 Array
- Sun Storage J4400 Array

Supported Platforms and Required Packages

TABLE 7 Management Host Platforms

Platform	Operating System	CPU	Memory
SPARC server or workstation	Solaris 8 OS 4/01 Solaris 9 OS 8/03 Solaris 10 OS	UltraSPARC 3 or better (750 MHz)	1 Gigabyte
Windows Servers	Windows 2000 with Service Pack 4 Windows 2003 with Service Pack 1 Windows XP Professional with Service Pack 2*	1.5 GHz PC	500 Megabytes
x64 computer	Red Hat Enterprise Linux AS Release 4 (Nahant update 4) (x86_64) Red Hat Enterprise Linux AS Release 3 (Taroon update 8) (x86_64) SuSE Linux Enterprise Server 10 (x86_64) SuSE Linux Enterprise Server 9	x64	500 Megabytes
x64 or x86 computer	Solaris 10 OS	x64 or x86	1 Gigabyte

* Windows XP Home Edition is not supported.

[TABLE 8](#) lists Solaris packages that must be installed on your Solaris host. Installing the minimum Solaris operating system package as listed in [TABLE 7](#) will install all but the last four packages. Those packages are required by Java, but are not used by the management software.

TABLE 8 Required Solaris Packages

File	Description
SUNWtcatu	Tomcat Servlet/JSP Container
SUNWcar	Core Architecture, (Root)
SUNWcsd	Core Solaris Devices
SUNWcsl	Core Solaris, (Shared Libs)
SUNWcsr	Core Solaris, (Root)
SUNWcsu	Core Solaris, (Usr)
SUNWkvm	Core Architecture, (Kvm)

TABLE 8 Required Solaris Packages

File	Description
SUNWlibC	Sun Workshop Compilers Bundled libC
SUNWmfrun	Motif RunTime Kit
SUNWxwice	X Window System Inter-Client Exchange (ICE) Components
SUNWxwplt	X Window System platform software
SUNWxwrtl	X Window System & Graphics Runtime Library Links in /usr/lib

[TABLE 9](#) lists Linux packages and libraries that must be installed on your Linux host. The 32-bit versions of the packages and files are required.

TABLE 9 Required Linux Packages

File	Version
fileutils	4.0-8
gawk	3.0.4-1
glibc	2.1.2-11
ld-linux.so.2	-
libc.so.6	-
libc.so.6	(GLIBC_2.0)
libc.so.6	(GLIBC_2.1)
libc.so.6	(GLIBC_2.1.2)
libc.so.6	(GLIBC_2.1.3)
libcrypt.so.1	-
libcrypt.so.1	(GLIBC_2.0)
libdl.so.2	-
libpam.so.0	-
sh-utils	2.0-1
textutils	2.0-2

Required Patches

For the latest patches available for your system, check SunSolve at <http://www.sunsolve.sun.com>

File Space Requirements

TABLE 10 File Space Requirements: CAM 6.1.1

Operating System	Disk Space	Directory Space
Solaris 8 OS 4/01	795 Mbytes	root – 5 Mbytes
Solaris 9 OS 8/03		/tmp – 165 Mbytes
Solaris 10 OS		/usr – 40 Mbytes
		/var – 95 Mbytes
		/opt – 480 Mbytes
Windows 2000 with SP (Service Pack) 4 or higher	690 MBytes on system drive	Not Applicable
Windows 2003 with SP1 or higher		
Windows XP Professional Edition with SP2 or higher		
NOTE: Windows XP Home Edition is not supported.		
Red Hat Enterprise Linux AS Release 3 and 4	775 Mbytes	root – 5 Mbytes
SuSE Linux 10 and 9		/tmp – 120 Mbytes
		/usr – 155 Mbytes
		/var – 100 Mbytes
		/opt – 395 Mbytes

About Windows Service Packs

If needed, download the files from the Microsoft Download site. You must be logged in to the Windows system as an administrative user.

The array installation files and installers are provided in a compressed file on the CD. The process unpacks the contents of the file on the host and then proceeds with the installation.

After the installation on a Windows platform, you will need to configure the Windows firewall on each host to allow an exception for port 6789.

Note – For more information, see the *Sun StorageTek Common Array Manager Software Installation Guide* (part number 820-4193) or the *Sun StorageTek Common Array Manager User Guide for the J4000 Array Family* (part number 820-3765).

Open Ports Required on Management Host

Open the following incoming and outgoing ports for secure-by-default Solaris, Linux, and Windows platforms:

- Incoming Ports
 - TCP 6788 - console HTTP port that redirects to 6789
 - TCP 6789 - console HTTPS port
- Outgoing Ports
 - TCP 25 - SMTP used for email event notification from FMS
 - UDP 161 - SNMP used for event notification traps from FMS
 - TCP 2463 - used for RPC (remote procedure calls) with the arrays

If a proxy agent is used, then an open port is required, in addition to the above ports. This allows for TCP (protocol) traffic. Use open port 8653 only if a proxy agent is used.

For Windows, refer to the documentation for instructions on how to open a port through the firewall.

Supported Platforms for the Remote CLI Client

The remote scripting command-line interface client sends commands to a management host, which in turn sends the commands to the array.

[TABLE 11](#) lists remote platforms from which you can run the CLI client:

TABLE 11 Remote CLI Client Platforms

OS	Version
Solaris 8 SPARC	4/01 or higher
Solaris 9 SPARC	8/03 or higher
Solaris 10 SPARC	any
Solaris 10 x86	any
Windows 2000 Server	Server (SP4) and Advanced Server (SP4)
Windows Server 2003	Standard/Web/ Enterprise Edition; SP2
Windows XP Professional Ed.	SP2
Red Hat Linux	3, 4
SuSE Linux	9, 10
IBM AIX	3.5
HP-UX	B.11.23

Supported Web Browsers

TABLE 12 Supported Web Browsers

Browser	Minimum Version
Netscape Navigator	6.2 or newer
Mozilla	1.4 or newer
Firefox	1.0 or newer
Microsoft Internet Explorer	5.5 (version 7 is not supported)

Best Practices for Browser Performance

For best web browser performance while using CAM, do the following:

- Enable pop-up windows.
- Specify No Proxy for the Common Array Manager host, to avoid situations where your browser might hang, time out, or generate incorrect error messages. From Preferences > Advanced > Proxies (or a similar path, depending on your browser), add the Common Array Manager management host name to the “No Proxy for” section.
- Be aware that Firefox and Mozilla browsers share session information: If you log in to Common Array Manager and then open another browser instance or tab pointed to the same URL, you access it through the same user session, so there is no need to log in again. The Current Logins field in the Common Array Manager does not increment to include the new window as another login. Therefore, if you require a different user session, you must define a different profile or log in from a different machine. This does not happen with Microsoft Internet Explorer browsers, so you can also open a new session using that browser.

Note – Microsoft Internet Explorer version 7 is not supported.

DNS Delays on Windows Hosts

To avoid DNS-lookup delays, be sure arrays are connected. Otherwise, Windows might take a long time looking up information for arrays that are not being managed by CAM, if you have them listed in the system as being connected to the system. Make sure the array names are in DNS or add them to the hosts table in the Windows OS.

Note – This does not apply to JBOD array unless there is a mixture of JBOD's along with arrays that are communicated with via Ethernet.

Supported Languages

For Solaris, Linux and Windows, the Browser User Interface for the Sun StorageTek Common Array Manager is available in:

- English
- French
- Japanese

- Simplified Chinese

The command-line interface is available in:

- English

The online Help is available in:

- English
- Japanese
- Simplified Chinese

The man pages are available in:

- English
- Japanese

Installing Packages and Patches

CAM installation procedures are described in the *Sun StorageTek Common Array Manager Software Installation Guide* (part number 820-4193) and the *Sun StorageTek Common Array Manager User Guide for the J4000 Array Family* (part number 820-3765). This section describes release-specific steps for firmware and management software patch upgrades that you must perform:

- [“Prerequisites” on page 16](#)
- [“Supported Upgrades” on page 17](#)
- [“Installation Logs” on page 17](#)
- [“Uninstalling a Previous CAM Version” on page 21](#)
- [“Installing and Upgrading CAM Software” on page 17](#)
- [“Command-Line \(Minimal\) Installation” on page 19](#)

Prerequisites

Before you perform an installation procedure, do the following:

1. Locate the management software.

The management software is distributed on the Sun StorageTek Common Array Manager Software CD and is also available from the Sun Download Center (Systems Administration > Storage Management) from <http://www.sun.com/download/>

You can also navigate to the most current release by clicking the New Downloads tab from <http://www.sun.com> and scrolling to find it in the list.

2. Locate the most current patches.

For the latest patches available for your system, check SunSolve at <http://www.sunsolve.sun.com>

3. If supported by your array types, verify that you have license certificates for all premium features, including storage domains.

See [“Licensing Optional Premium Features” on page 3](#).

4. Read the installation instructions.

See your *Sun StorageTek Common Array Manager Software Installation Guide* (part number 820-4193) or *Sun StorageTek Common Array Manager User Guide for the J4000 Array Family* (part number 820-3765).

5. Log in as `root` (Solaris and Linux) or as a user with administrator privilege (Windows) on the management host.

6. Note that before starting the installation script, the CD verifies host requirements, such as the following:

- Unsupported versions of related software such as CAM releases prior to 5.x, Storage.
- Unsupported versions of operating systems or software
- Insufficient disk space (see [“File Space Requirements: CAM 6.1.1” on page 11](#))

If the host meets the requirements, the script will search for earlier versions and determine if a new installation or an upgrade/baseline installation is necessary. If the script detects that there is no earlier version installed, it will perform a complete new installation.

Prerequisites for Solaris Zones

- Before you install CAM in a sparse-root zone, install Lockhart 3.0.5 with its L10N (Localization) packages in the global zone.
- For Solaris 10, do not attempt to run the Lockhart setup script when logged into the local zone. The CAM installation prevents this. Either install Lockhart into a whole root zone or install/upgrade Lockhart in the global zone before installing CAM into the local zone.

For more information, contact Sun Microsystems Support Services. ([“Service Contact Information” on page 57](#))

Supported Upgrades

Solaris: Upgrades from CAM 5.0.0.8, 5.0.1.1, 5.0.2.1, 5.1.0.10, 5.1.0.11, 5.1.1.2, 5.1.2.2, 5.1.3.2, and 6.x to this release are supported. You are not required to uninstall the existing CAM version before installing this release.

Linux: Upgrades are supported.

Windows: Upgrade to this build is not supported in 64-bit Windows 2003. Uninstall of previous CAM version is required before installing this build in 64-bit Windows 2003. In other Windows platforms, upgrade to this build is supported.

Installation Logs

If installation failure occurs, check the available disk space.

For more information, consult the installation log:

Solaris: `/var/sadm/install/se6000/se6000_Host_SW.log`

Linux: `/var/opt/cam`

Windows: `\Program Files\Common Files\Sun Microsystems\se6000`

Installing and Upgrading CAM Software

If you are installing the management software on a new host, check the installation requirements and follow the entire installation and configuration procedure described in the *Sun StorageTek Common Array Manager User Guide for the J4000 Array Family* (part number 820-3765) or the *Sun StorageTek Common Array Manager Software Installation Guide* (part number 820-4193).

Installation Requirements

You can install CAM on a local management host or on a central management server

Before installing the management software, do the following:

- Read the entire installation instructions. See *Sun StorageTek Common Array Manager User Guide for the J4000 Array Family* (part number 820-3765).
- Complete the array hardware installation.
- Check the installation space requirements.

Download the latest version of the Common Array Manager software (Systems Administration > Storage Management) from <http://www.sun.com/download>.

The current URL is: <http://www.sun.com/download/index.jsp?cat=Systems%20Administration&tab=3&subcat=Storage%20Management>

After initial installation and configuration, you can upgrade the management software and firmware with each release.

During installation, the firmware update bundle is installed on the host server. For details about upgrading array firmware, see the *Sun StorageTek Common Array Manager Software Installation Guide* (part number 820-4193) or *Sun StorageTek Common Array Manager User Guide for the J4000 Array Family* (part number 820-3765).

About the Software Installation CD

The Sun StorageTek Common Array Manager Installation Software CD provides three installation-related wizards:

- GUI software installer – Enables you to use a graphical user interface wizard to install a selection of applications to support a local or remote management host.
- CLI software installers – Enables you to use either a command-line interface (CLI) script to install a selection of applications to support a local or remote management host.
- Uninstaller – Enables you to uninstall the management and remote host software from a host. See Appendix B in the for CLI options.

Installing From a Downloaded File

You can download the latest version of the Common Array Manager software (Systems Administration > Storage Management) from <http://www.sun.com/download>.

The current URL is: <http://www.sun.com/download/index.jsp?cat=Systems%20Administration&tab=3&subcat=Storage%20Management>

Command-Line (Minimal) Installation

You can perform a minimal installation that enables one of two options: a command-line interface only or a command-line interface with firmware.

The CLI in previous versions of CAM software required the web server in order to run. Minimal installation does not require the web server to be running in order to function and is limited to calls on the management host where the management software is installed.

This light-weight management solution is installed on a data host attached to the array. The data host can also serve as a management host using the CLI only installation option and provides:

- Array management and monitoring capabilities
- Remote proxy agent
- Local CLI
- Single array management
- Optional array firmware

This option is also used to load the proxy agent that allows communication between the full management software on a central management server and the array.

Minimal Installation can stand alone, whereas Remote Client installation requires a fully installed image on a separate host.

Note – The CLI-only software manages the array without using the proxy agent. Be sure to deactivate the proxy agent when the management host is directly attached.

For complete instructions on CLI Minimal Installation, see the *Sun StorageTek Common Array Manager User Guide for the J4000 Array Family* (part number 820-3765) or the *Sun StorageTek Common Array Manager Software Installation Guide* (part number 820-4193).

Performing a Minimal CLI CAM Installation

For complete instructions on CLI Minimal Installation, see the *Sun StorageTek Common Array Manager User Guide for the J4000 Array Family* (part number 820-3765) or the *Sun StorageTek Common Array Manager Software Installation Guide* (part number 820-4193).

1. **From the Common Array Manager Installation page, select one of these options in the Select a feature bundle list:**

- Command-Line Only with Firmware (management host software; CLI for local users, remote users, and remote management host; array firmware)
OR
- Command-Line Only (management host software; CLI for local users, remote users, and remote management host)

Note – Array firmware files are not installed with the Command-Line Only option. Because firmware is not installed, the firmware analysis feature is not available with this installation.

2. Click Next and follow the prompts by pressing 1 for Next, 3 to Cancel, or 5 to Redisplay.

The software will notify you as it checks your system and does any or all of the following:

- uninstalls any old features
- installs Java 2 Standard Edition
- installs Sun StorageTek Configuration Service BUI
- installs Sun StorageTek Fault Management Services
- installs Sun StorageTek Array Firmware
- installs Sun StorageTek Common Array Manager
- creates uninstaller
- finalizes the Vital Product Data Registry.

3. Press 3 to Finish or 5 to Redisplay.

Uninstalling a Minimal CLI CAM Installation

1. From the host software installer, select Uninstall.

2. Click Next and follow the prompts by pressing 1 for Next, 3 to Cancel, or 5 to Redisplay.

The software will notify you as it checks your system and does any or all of the following:

- prepares for uninstallation
- uninstalls Java 2 Standard Edition
- uninstalls Sun StorageTek Fault Management Services
- finalizes the Vital Product Data Registry
- post-uninstallation action

The system will notify you that the un-installation has been successful.

3. Press 3 to Finish or 5 to Redisplay.

Uninstalling a Previous CAM Version

1. Log in to the CLI on the management host or using the remote CLI client as documented in the *Sun StorageTek Common Array Manager Software Installation Guide* (part number 820-4193) and the *Sun StorageTek Common Array Manager User Guide for the J4000 Array Family* (part number 820-3765).

Navigate to the appropriate directory for your operating system:

For Windows, navigate to:

```
%systemdrive%\Sun\CommonArrayManager\Host_Software_6.0.0.10\  
bin\uninstall.bat
```

For Solaris and Linux, navigate to:

```
/var/opt/CommonArrayManager/Host_Software_6.0.0.10/bin/uninstall
```

For the Suse 9 platform, CLI uninstall requires the following rpm packages:

- libgcj-3.3.3-43.24.x86_64.rpm
- gettext-0.1.14.1-30.1.x86_64.rpm

2. Enter the command `uninstall -f`

If you still have problems, enter the command `uninstall -f -s`

The command will remove the current installation.

Firmware

Note – Contact Sun Microsystems Support Services (see [“Service Contact Information” on page 57](#)) to install the new 07.10.x.xx firmware for the 6140, 6540, and FLX380 arrays.

For the latest patches available for your system, check SunSolve at:
<http://www.sunsolve.sun.com>.

Firmware Install Locations

CAM firmware is installed in the following locations:

- Solaris: /opt/SUNWstcam/share/fw
- Windows: <system drive>:\Program Files\Sun\Common Array Manager\Component\SunStorageTekArrayFirmware\
 - Windows (64-bit) - C:\Program Files (x86)\Sun\Common Array Manager\Component\SunStorageTekArrayFirmware
 - Windows (32-bit) - C:\Program Files\Sun\Common Array Manager\Component\SunStorageTekArrayFirmware
- Linux - /opt/sun/cam/share/fw/
- Linux - sun-cam-fw-j4000-*.rpm
- Firmware files are located in the images subdirectory.
 - Controller firmware is located in images/nge.
 - SIM firmware - images/qnt/*.fw
 - Disk drive firmware is in images/sun: images/sun/*.fw
 - Baseline/j4200.properties
 - Baseline/j4400.properties

Within the directory where you installed the firmware, a README file for each array type define the firmware baseline.

- README_2500.txt defines the firmware baseline for the Sun StorageTek 2500 Series Arrays.
- README_J4000.txt defines the firmware baseline for the J4000 Array Family.
- README_6000.txt defines the firmware baseline for the Sun StorageTek 6130, 6140, 6540, FLX240, FLX280, and FLX380 arrays.

Note – The following does not apply to J4000 arrays: After an upgrade to the 7.10 firmware version, the Cache Block size will reset to 4KB. In previous firmware levels, the default size was 16K. The GUI and CLI have options to change the default Cache Block size, if necessary, to the previous 16KB size.

TABLE 13 Release Firmware Level

Array	Firmware Version
Sun Storage J4200	3A24
Sun Storage J4400	3R11
Sun StorageTek 6540, 6140, and 6130 Arrays	06.60.11.10

TABLE 13 Release Firmware Level

Array	Firmware Version
Sun StorageTek 2500 Series Arrays	06.70.54.10
Sun StorageTek Flexline 240, 280, and 380 Arrays	06.60.11.20
Sun Storage J4200 SIM Firmware	3A24
Sun Storage J4400 SIM Firmware	3R11

Check the build notes file distributed with the software for the exact firmware build. CAM will support one prior version of the firmware for legacy features on previously supported arrays. (This does yet apply to the new Sun StorageTek 2500 Series Arrays or the J4000 Family Series).

For information about how to install firmware, see [“Installing the Firmware Baseline” on page 28](#).

Note – Contact Sun Microsystems Support Services (see [“Service Contact Information” on page 57](#)) to install the new 07.10.x.xx firmware for the 6140, 6540, and FLX380 arrays.

Sun StorageTek 2500 Series Array and Disk Firmware Version Information

For the latest patches available for your system, check SunSolve at:
<http://www.sunsolve.sun.com>.

In the following tables, the paths listed in the Firmware File column is relative to the images subdirectory where firmware files are located.

TABLE 14 Controller Information: Sun StorageTek 2500 Series Arrays

Controller	Version	Firmware File
2510	06.70.54.10	nge/RC_06705410_desperado_apollo_1532.dlp
2530	06.70.54.10	nge/RC_06705410_desperado_apollo_133x.dlp
2540	06.70.54.10	nge/RC_067054SA0410_desperado_apollo_1932.dlp

TABLE 15 NVSRAM Information: Sun StorageTek 2500 Series Arrays

NVSRAM	Version	Firmware File
2510	N1532-670843-001	nge/N1532-670843-001.dlp

TABLE 15 NVSRAM Information: Sun StorageTek 2500 Series Arrays

NVSRAM	Version	Firmware File
2510-Simplex	N1532-670843-901	nge/N1532-670843-901.dlp
2530	N133X-670843-001	nge/N133X-670843-001.dlp
2530-Simplex	N133X-670843-901	nge/N133X-670843-901.dlp
2540	N1932-670843-001	nge/N1932-670843-001.dlp
2540-Simplex	N1932-670843-901	nge/N1932-670843-901.dlp

TABLE 16 IOM Information: Sun StorageTek 2500 Series Arrays

IOM	Version	Firmware File
2500 SAS	0186	nge/esm0186.esm

TABLE 17 Disk Drive Information: Sun StorageTek 2500 Series Arrays

Disk Drive	Version	Firmware File
HDS7250SASUN500G	AJ0A	sun/D_HDS7250SASUN500G_AJ0A_LCA.dlp
HUA7210SASUN1.0T	A90A	sun/D_HUA7210SASUN1.0T_A90A_LCA.dlp
HUA7250SBSUN500G	A90A	sun/D_HUA7250SBSUN500G_A90A_LCA.dlp
HUA7275SASUN750G	A90A	sun/D_HUA7275SASUN750G_A90A_LCA.dlp
HUS1514SBSUN146G	SA04	sun/D_HUS1514SBSUN146G_SA04_LCA.dlp
HUS1530SBSUN300G	SA04	sun/D_HUS1530SBSUN300G_SA04_LCA.dlp
HUS1573SBSUN72G	SA04	sun/D_HUS1573SBSUN72G_SA04_LCA.dlp
ST314655SSUN146G	0B92	sun/D_ST314655SSUN146G_0B92.dlp
ST330055SSUN300G	0B92	sun/D_ST330055SSUN300G_0B92.dlp
ST340008SSUN0.4T	0543	sun/D_ST340008SSUN0.4T_0543.dlp
ST373455SSUN72G	0B92	sun/D_ST373455SSUN72G_0B92.dlp
ST37500NSSUN750G	3AZQ	sun/D_ST37500NSSUN750G_3AZQ_LCA.dlp

Sun StorageTek 6130, 6140, 6540, FLX240, FLX280, and FLX380 Array and Disk Firmware Version Information

In the following tables, the path listed in the Firmware File column is relative to the images subdirectory where firmware files are located.

TABLE 18 Controller Information: Sun StorageTek 6130, 6140, 6540, FLX240, FLX280, and FLX380 Arrays

Controller	Version	Firmware File
6130	06.60.11.10	nge/RC_06601110_chromium2_apollo_288x.dlp
6140	06.60.11.10	nge/RC_06601110_chromium2_apollo_399x.dlp
6540	06.60.11.10	nge/RC_06601110_chromium2_apollo_6091.dlp
FLX240	06.60.11.20	nge/RC_06601120_chromium2_silverado_288x.dlp
FLX280	06.60.11.20	nge/RC_06601120_chromium2_silverado_588x_06600100.dl P
FLX380	06.60.11.20	nge/RC_06601120_chromium2_silverado_6091.dlp

TABLE 19 NVSRAM Information: Sun StorageTek 6130, 6140, 6540, FLX240, FLX280, and FLX380 Arrays

NVSRAM	Version	Firmware File
6130	N288X-660843-003	nge/N288X-660843-003.dlp
6140	N399X-660843-003	nge/N399X-660843-003.dlp
6540	N6091-660843-003	nge/N6091-660843-003.dlp
FLX240	N288X-660855-003	nge/N288X-660855-003.dlp
FLX280	N588X-660855-003	nge/N588X-660855-003.dlp
FLX380	N6091-660855-003	nge/N6091-660855-003.dlp

TABLE 20 IOM Information: Sun StorageTek 6130, 6140, 6540, FLX240, FLX280, and FLX380 Arrays

IOM	Version	Firmware File
6130 FC	9643	nge/esm9643.s3r
6130 FC CSM100 trays	9673	nge/esm9673.s3r
6130 iSATA	9726	nge/esm9726.dl
6130 iSATA CSM100 trays	9728	nge/esm9728.dl
6140	98B4	nge/esm98B4.esm

TABLE 20 IOM Information: Sun StorageTek 6130, 6140, 6540, FLX240, FLX280, and FLX380 Arrays

IOM	Version	Firmware File
6140 CSM100 trays	98B4	nge/esm98B4.esm
FLA300	9643	nge/esm9643.s3r
FLA200	9330	nge/esm9330.s3r
FLC200 iSATA	9726	nge/esm9726.dl
FLC200 iSATA CSM100 trays	9728	nge/esm9728.dl
FLC200 dSATA	9565	nge/esm9565.dl
FLC200 dSATA CSM100 trays	9566	nge/esm9566.dl

TABLE 21 Disk Drive Information: Sun StorageTek 6130, 6140, 6540, FLX240, FLX280, and FLX380 Arrays

Disk Drive	Version	Firmware File
HDS7225SCSUN250G	0603 (LP1153-A5DA)	sun/D_HDS7225SCSUN250G_0603.dlp
HDS7240SBSUN400G	AC7A	sun/D_HDS7240SBSUN400G_AC7A.dlp
HDS7250SASUN500G	0604 (LP1153-AJ0A)	sun/D_HDS7250SASUN500G_0604.dlp
HUA7210SASUN1.0T	0605	sun/D_HUA7210SASUN1.0T_0605.dlp
HUA7250SBSUN500G	0605	sun/D_HUA7250SBSUN500G_0605.dlp
HUA7275SASUN750G	0605	sun/D_HUA7275SASUN750G_0605.dlp
HUS1014FASUN146G	2A08	sun/D_HUS1014FASUN146G_2A08.dlp
HUS1030FASUN300G	2A08	sun/D_HUS1030FASUN300G_2A08.dlp
HUS1073FASUN72G	2A08	sun/D_HUS1073FASUN72G_2A08.dlp
MAT3073FSUN72G	1403	sun/D_MAT3073FSUN72G_1403.dlp
MAT3147FSUN146G	1403	sun/D_MAT3147FSUN146G_1403.dlp
MAT3300FSUN300G	1403	sun/D_MAT3300FSUN300G_1403.dlp
MAW3073FCSUN72G	1303	sun/D_MAW3073FCSUN72G_1303.dlp
MAW3147FCSUN146G	1303	sun/D_MAW3147FCSUN146G_1303.dlp
MAW3300FCSUN300G	1303	sun/D_MAW3300FCSUN300G_1303.dlp
MAX3073FDSUN72G	0403	sun/D_MAX3073FDSUN72G_0403.dlp

TABLE 21 Disk Drive Information: Sun StorageTek 6130, 6140, 6540, FLX240, FLX280, and FLX380 Arrays

Disk Drive	Version	Firmware File
MAX3147FDSUN146G	0403	sun/D_MAX3147FDSUN146G_0403.dlp
ST314655FSUN146G	3092	sun/D_ST314655FSUN146G_3092.dlp
ST314670FSUN146G	055A	sun/D_ST314670FSUN146G_055A.dlp
ST314680FSUN146G	0407	sun/D_ST314680FSUN146G_0407.dlp
ST314685FSUN146G	042D	sun/D_ST314685FSUN146G_042D.dlp
ST314695FSUN146G	0409	sun/D_ST314695FSUN146G_0409.dlp
ST32500NSSUN250G	0605 (LP1153-3AZQ)	sun/D_ST32500NSSUN250G_0605.dlp
ST330000FSUN300G	055A	sun/D_ST330000FSUN300G_055A.dlp
ST330055FSUN300G	3092	sun/D_ST330055FSUN300G_3092.dlp
ST340008FSUN0.4T	0343	sun/D_ST340008FSUN0.4T_0343.dlp
ST35000NSSUN500G	0605 (LP1153-3AZQ)	sun/D_ST35000NSSUN500G_0605.dlp
ST373207FSUN72G	055A	sun/D_ST373207FSUN72G_055A.dlp
ST373307FSUN72G	0407	sun/D_ST373307FSUN72G_0407.dlp
ST373453FSUN72G	0449	sun/D_ST373453FSUN72G_0449.dlp
ST373454FSUN72G	042D	sun/D_ST373454FSUN72G_042D.dlp
ST373455FSUN72G	3092	sun/D_ST373455FSUN72G_3092.dlp
ST373554FSUN72G	0409	sun/D_ST373554FSUN72G_0409.dlp
ST37500NSSUN750G	0605 (LP1153-3AZQ)	sun/D_ST37500NSSUN750G_0605.dlp

Installing the Firmware Baseline

You can upgrade array firmware by using CAM's Install Firmware Baseline feature. The software prompts you when it's time to upgrade array firmware.

Note – You do *not* need to uninstall existing firmware before following this procedure.

For optimal performance, Sun Microsystems recommends that the firmware on all arrays be at the level of the current firmware baseline. New features are not supported with non-baseline firmware. You can update your array firmware by clicking the Install Baseline Firmware button on the Storage System Summary page or the array's Administration page.

As part of the CAM installation, the script puts the array firmware files in a directory on the management host. When you upgrade the firmware, the software analyzes the firmware installed on the array. If the baseline firmware on the host is newer, and you choose to install, the software installs the baseline firmware on the array.

Prerequisites

- Before you perform this task, be sure the array is not in a degraded state. If it is degraded, the upgrade will fail. If the array is degraded because it is not at the baseline, you can upgrade the array.
- Check to see if there are any alarms and resolve them. Alarms can be checked in the Java Web Console masthead or in the Alarms Summary link in the Navigation Tree on the left. Use Service Advisor to fix any alarms.
- Log in to the management software as documented in the *Sun StorageTek Common Array Manager Software Installation Guide* (part number 820-4193) or the *Sun StorageTek Common Array Manager User Guide for the J4000 Array Family* (part number 820-3765).

3. **From the Java WebConsole page, click Sun StorageTek Common Array Manager.**
4. **From the Storage System Summary page, select the array for which the firmware needs to be installed/upgraded.**
5. **Click Install Firmware Baseline, and follow the prompts.**

Firmware Notes for 6000 Series and Flexline Arrays

To add trays with data already on them, contact your service representative for assistance to avoid data loss.

Refer to [“Upgrading Firmware for Additional Expansion Trays” on page 31](#) for the procedure to upgrade trays without data.

Controller firmware 06.19.x.x or higher allows tray mixing of 6540, 6140, 6130, FLX240, FLX280, and FLX380 array controllers modules and the Sun StorageTek CSM100, CSM200, FLA200, FLC200, and FLA3 expansion modules. After installing the firmware, 6130 controllers can use CSM200 expansion modules and CSM100 expansion modules can be used with 6540 and 6140 controllers.

CSM200 Requirements

When you add a new CSM200 expansion module to an existing array in a production or active environment, you must cable and add the trays while the RAID controller module is powered on.

Before connecting any replacement drive or additional expansion module to an existing functioning array, it is best practice to contact Sun Microsystems Support Services (see [“Service Contact Information” on page 57](#)). One reason for this is to avoid issues related to DACstore, the configuration and status database maintained by the array firmware, that stores its information on each of the disk drives.

Note – Not following correct procedures could result in loss of customer data.

Because corrective actions for a DACstore issue may require a configuration restoration, it is important to maintain a current image of the configuration. And, as always, it is best practice to maintain recoverable backups of your data.

Affected arrays are:

- Sun StorEdge 6130 Array
- Sun StorageTek 6140 Array
- Sun StorageTek 6540 Array
- StorageTek FLX280 Array
- StorageTek FLX380 Array

Contact Sun Microsystems Support Services (see [“Service Contact Information” on page 57](#)) promptly upon experiencing any of the following symptoms:

- loss of management or data access

- inability to apply feature licenses
- inability to upgrade/install the baseline for array firmware
- incorrect component details in the management tool
- host operating system reports the wrong product identifier
- array registration or discovery fails to complete
- persistent or unrecoverable multipathing failover

Supported Expansion Modules

Note – There are no expansion modules for the J4000 Array Family.

The following tables list the supported expansion modules:

TABLE 22 Supported Expansion Modules: 6000 Series Arrays

Array Controller	Original Supported Expansion Modules	Supported Expansion Modules with Controller Firmware 06.19.25.16
Sun StorageTek 6540 Array	CSM200	CSM100, CSM200, FLA200, FLC200, FLA300
Sun StorageTek 6140 Array	CSM200	CSM100, CSM200, FLA200, FLC200, FLA300
Sun StorageTek 6130 Array	CSM100	CSM100, CSM200, FLA200, FLC200, FLA300

TABLE 23 Supported Expansion Module: 2500 Series Array

Array Controller	Supported Expansion Modules
Sun StorageTek 2500 Series Arrays	2501

TABLE 24 Supported Expansion Module: Sun StorageTek FLX240, FLX280, and FLX380 Arrays

Array Controller	Supported Expansion Modules
Sun StorageTek FLX240 Array	CSM100, CSM200, FLA200, FLC200, FLA300
Sun StorageTek FLX280 Array	CSM100, CSM200, FLA200, FLC200, FLA300
Sun StorageTek FLX380 Array	CSM100, CSM200, FLA200, FLC200, FLA300

Upgrading Firmware for Additional Expansion Trays

Controller firmware 06.19.*nn.nn* allows tray mixing of array controllers modules, two versions of expansion modules for the Sun StorageTek 6130, 6140, and 6540 arrays, and the FLX240, FLX280, and FLX380 arrays.

- To add trays with data already on them, contact your service representative for assistance to avoid data loss.
- Mixing trays is not supported for the Sun StorageTek 2500 Series Arrays.
- Refer to [TABLE 22](#), [TABLE 23](#), and [TABLE 24](#) for a list of the supported modules for intermixing trays without data.

07.10.x.xx Firmware Supported in 6.1.1

You must contact Sun Microsystems Support Services (see [“Service Contact Information” on page 57](#)) to install the new 07.10.x.xx firmware for the 6140, 6540, and FLX380 arrays. After the initial installation, you can install future changes to the 07 baseline firmware using the procedure that follows.

Note – 07.10.x.xx is not available for the 6130, FLX240, 280, 2500 and J4000 arrays.

This following does not apply to J4000 arrays: After an upgrade to the 7.10 firmware version, the Cache Block size will reset to 4KB. In previous firmware levels, the default size was 16K. The GUI and CLI have options to change the default Cache Block size, if necessary, to the previous 16KB size.

Upgrading Expansion Modules

Prerequisite: Before discovering a Sun StorageTek FLX240, FLX280, FLX380 array using CAM and before performing any tray migration (for example, adding FLA300 expansion trays behind an existing 6130, 6140 or 6540 controller), you must upgrade the arrays and associated trays to the firmware version 6.19.25.00 or later. After you register the arrays with CAM, you can upgrade to the current baseline firmware.

Adding a New Expansion Module to an Existing Array

1. **Before cabling the newly supported expansion module, upgrade the existing controller and trays.**
2. **Add the expansion module.**
3. **Upgrade the array again.**

Adding an Existing Expansion Tray to a New Array

1. **Install the new controller and trays.**
2. **Perform the firmware upgrade.**
3. **Add the expansion tray.**
4. **Upgrade the array again.**

Upgrading Firmware for Additional Expansion Modules

For adding trays to arrays managed by CAM:

1. **Do not cable the additional expansion tray.**
2. **Install the Common Array Manager release following the standard installation procedure.**
 - There are separate procedures for Solaris, Windows, and Linux management hosts. The software update places a copy of the latest firmware on the management software server.
 - Tray IDs must be unique within an array. The tray ID for the CSM200 tray is automatically set to the next available ID number upon power up. All other trays must be set manually.
3. **Register the array, if needed.**

4. From the Storage Summary page or Array Administration page, click the Install Firmware Baseline button.
5. Accept the upgrade.
6. Use Service Advisor to cable the additional expansion tray and add it to the array.
7. Upgrade the array again to update the firmware on the new tray.

Third Expansion Tray (48-Drive) Cabling for 2500 Series

Support has been added for a third expansion tray and 48 drives.

For the most current cabling information, see the *Sun StorageTek 2500 Series Release Notes*.

Known Issues and Operational Information

The following sections provide information about known issues and recommended workarounds, as well as operational information not found elsewhere in the documentation:

- [“Array Issues” on page 34](#)
- [“Configuration Issues” on page 40](#)
- [“Documentation Issues” on page 45](#)
- [“Firmware Issues” on page 46](#)
- [“In-Band Array Management Issues” on page 47](#)
- [“Localization Issues” on page 54](#)

Array Issues

6130 Battery does not have a Unique Identifier Listed

Bug 6590617 –Since the Sun StorageTek 6130 array does not report asset data for the cache backup batteries, the management software inserts a dash (-) instead of a value in the Unique Identifier field on Component Summary for Battery page (Troubleshooting > FRUs > Battery).

Workaround –Use the sscs CLI service command to manage data channels 3 and 4.

Alarm Summary Page: Selecting Device Name Displays Error

Bug 6698254 –When you select the device name link from the Alarm Summary page, you might get an exception or an error. For instance, a java stack trace might display in the main UI window.

Workaround –Select the device from the main window.

Array Out of Compliance Yields Errors

When an array is out of compliance, a number of operations might not occur, such as:

- Standard RAID Volume creation
- Automatic Configuration
- Creation of Storage Partitons Mappings
- Hot Spare Assignments
- DSS
- DCE/DVE
- Snapshot Volume Creation

Cache Stop % Cannot be Greater than Cache Start %

Bug 6590637 –Attempting to modify the Cache Start% and Cache Stop% parameters from the array's Administration page so that the value assigned to Cache Stop% is greater than the value assigned to Cache Start% results in the error message "setCacheParams operation failed:43".

Workaround – Use valid values. Since the Cache Stop% is the percentage of unwritten data in the cache that will stop a cache flush that is currently in progress, it must not be greater than the value for Cache Start%, which is the percentage of unwritten data in the cache that will trigger a cache flush.

Cannot Cancel Some Jobs

Bug 6600387 –Some jobs, like volume creation jobs, cannot be cancelled on the array once they have started. However, if multiple jobs are queued up for an array, any job in the queue can be cancelled before the array actually starts the job.

CLI - Addition of Two or More Unnamed or Unlabeled Arrays Indeterminate

Bug 6681173 –List devices can show multiple unlabeled entries. List storage systems can show multiple unlabeled entries as well. The CLI user is unable to differentiate between unlabeled entries.

Workaround –Rename each unlabeled device to a unique Temporary Name. Use list controller to determine IP address for the TN. Then rename TN to desired.

Critical Alarm: Property Status for PowerSupply.00 on 0744QCJ005 changed from OK to CRITICAL

Bug 6698735 –When a power cord for a power/fan CRU on a J4200 is disconnected, the following CAM critical alarm is generated:

"The property Status for PowerSupply.00 on 0744QCJ005 has changed from OK to CRITICAL."

Workaround –Check the following and take appropriate action:

- 1. Has the power supply been removed?
- 2. Has the power supply has stopped working?
- 3. Are the power cords disconnected?

Defragmentation Jobs may not Display in the Jobs Summary Page

Bug 6592811 –For small virtual disks, disk defragmentation jobs may complete too quickly for a job task to be created and listed on the Jobs Summary page. If an 820-4996-10 does occur during execution, the user will be notified.

Workaround –This should have no impact but if the status needs to be seen, run defragmentation jobs using the CLI.

Disk Drive Failure Affects Vdisk Redundancy

Bug 6592877–When a drive fails, the vdisk to which it belongs is no longer redundant. A stand-by hot-spare drive is chosen and integrated into that volume group automatically if possible.

The drive is chosen to satisfy the following conditions:

- The chosen drive must be <PRESENT, STANDBY-HOT-SPARE, OPTIMAL>.
- The chosen drive must be of the same technology (FC, SATA, etc.) as the FAILED drive.
- The chosen drive must have adequate capacity to contain the piece(s) of the volume(s) defined on that volume group in addition to all required metadata.
- The chosen drive should match the spindle speed of other drives in the volume group if possible.
- If the volume group to which the failed drive belongs had Tray-Loss Protection (TLP), it is best to choose a hot spare drive that provides TLP for the volume group.

Disk Failure - Reconstruct Attempt Results in “error.reason.100404”

Bug 6682034 –Attempting to reconstruct a disk results in message “error.reason.100404.” The vdisk to which the drive belongs is in an invalid state and cannot be reconstructed.

This occurs because of the loss of redundancy that results from more disk failures than a given RAID level can recover. This fix is in progress and will be available by release 6.2.

DNS Delays on Windows Hosts

To avoid DNS-lookup delays, be sure arrays are connected. Otherwise, Windows might take a long time looking up information for arrays that are not being managed by CAM, if you have them listed in the system as being connected to the system. Make sure the array names are in DNS or add them to the hosts table in the Windows OS.

Note – This does not apply to JBOD array unless there is a mixture of JBOD's along with arrays that are communicated with via Ethernet.

Drive Order Cannot Be Specified During Volume Creation

Bug 6515237 –CAM does not allow the disk drive order to be specified during volume creation.

Workaround – Use the CLI to specify disk drive order.

Error Message During Data Replication Configuration is Misleading

Bug 6498717 –When creating a data replication set, if the primary array cannot communicate with the secondary array, a misleading error message displays stating that it is “unable to get volume candidate list from array.”

Workaround – Verify that the arrays can communicate before replicating data.

Errors - General Password Mismatch

Bug 6590097, 6577775, 6592717, 6592703 –Using an invalid array password may result in configuration error messages.

Workaround – Use the correct array password.

Install Lockhart and its L10N Packages before installing CAM in a Sparse-Root Zone

Bug 6661200 – Lockhart 3.0.4 cannot be installed or upgraded in a sparse-root zone.

Workaround – Before you install CAM in a sparse-root zone, install Lockhart 3.0.5 with its L10N packages in the global zone.

JBODs Will Not Register on Win2003 Server

Bug 6684195 –Unable to register J4200/4400 on Win2003 server. Process stops at 99% complete. The windows disk and device manager can see the JBODs. CAM and the Quanta management tool can not.

Workaround –Upgrade the 4200 JBOD to Firmware 3A24 or the 4400 JBODs to 3R11. See [“Release Firmware Level” on page 22](#) for more information. The issue appears to resolve with CAM 6.1.1.8, as long as the hotfix and JBOD firmware levels are in sync with the installed CAM version.

Jobs Checkbox does not Display; Job will not Cancel

Bug 6600387 –When a long job is running, such as large volume creation, the Cancel checkbox does not display on current job status. Some jobs cannot be cancelled once they have started on the array.

Workaround –If the queue includes multiple jobs for the array to perform, the job can be cancelled at the point where the GUI sends the next job to the array.

Registration Page Displays Upon Initial Installation

When you install the CAM software for the first time, upon logging into the Browser User Interface, a registration page will display. Fill out the information before continuing.

During the initial storage array registration process, CAM prompts you to register with the Auto Service Request service by displaying the Auto Service Request (ASR) Setup page. This page continues to display until you either fill out the page and click OK, or click Decline to either decline or defer ASR service registration.

Note – You must register the array with ASR before using the Test button.

Upgrading from Existing 5.1.x Removes Non-Default Users

Bug 6620034 –Upgrading from an existing 5.1.x installation causes non-default users to be removed. Default users are: root, storage, and guest.

Workaround –To add non-default users to the system:

1. Create a temporary “root” or “storage” user on host.
2. Log into the WebConsole as the temporary “root” or “storage” user.

3. Select **Common Array Manager > General Administration > User Roles**.
4. Click **Add**, and add non-default users back into the system.
5. Remove the temporary users as necessary.

Volume Copy License Not Enabled in Microsoft Internet Explorer 7

Bug 6684322 –Cannot enable volume copy license by specifying the license file using Internet Explorer 7.

Workaround –Internet Explorer version 7 is not supported. Use a supported browser listed in [TABLE 12](#).

Windows DNS Issue

There may be significant DNS delays on Windows hosts.

Workaround –To avoid DNS-lookup delays, be sure arrays are connected. Otherwise, Windows might take a long time looking up information for arrays that are not being managed by CAM, if you have them listed in the system as being connected to the system. Make sure the array names are in DNS or add them to the hosts table in the Windows OS.

Note – This does not apply to JBOD array unless there is a mixture of JBOD's along with arrays that are communicated with via Ethernet.

Windows Proxy issue: proxycfg.bat does not exist

Bug 6709828 –When using either the command-line interface only or command-line interface with firmware option for installation on the Windows platform, other CAM installations are unable to discover the JBOD array via the Windows proxy (%ProgramFiles%\Sun Microsystems\Common Array Manager\Component\fms\sbin\proxycfg.bat).

Workaround –Because the proxy has not been set up correctly on the Windows platform during installation, you must manually execute the proxycfg.bat file.

Configuration Issues

Access Volume Cannot be Mapped Using the CLI

Bug 6577194 –The sscs CLI client does not allow mapping to the access volume for in-band management.

Workaround –To map the access volume, use the Common Array Manager Browser User Interface.

Administration Page Not Displaying

Bug 6698905 – The Administration page is not displaying. An NPE was observed in the UI log file. Alarms, Volumes, and other pages display, but the Administration page will not display.

Workaround –Try refreshing your system. A fix for this bug is in progress.

CLI Commands - Special Characters Enclosed in Quotes

Bug 654985 –In the sscs CLI, special shell characters (or phrases that use them) have to be enclosed in double quotes.

For Windows only, the comma (,) is a special character. Options separated by commas should be enclosed in quotes, as shown in the following example:

```
sscs create -p Default -s 100MB -d "t1d01, t1d02, t1d03" volume dhamo_new_vdisk
```

CLI Remote Login Might Fail Using NIS

Bug 659945 –Logging into the sscs CLI client remotely may fail when a Solaris machine is configured to use NIS for name resolution if the login host is not contained in the NIS map.

CLI - sscs Manpage Delivered on the Solaris Platform Only

Bug 661094 –The sscs manpage was delivered only on the Solaris platform.

Workaround –Refer to the *CLI Quick Reference Guide* (part number 820-4192) for a command list and command syntax.

CLI - sscs list fru Command does not list FLX240 and FLX280 Fans

Bug 6587666 –The CLI command sscs list fru does not list the number of fans installed on the Sun StorageTek FLX240 and FLX280 arrays.

Workaround –Use the Common Array Manager Browser User Interface to view the number of fans installed.

CLI Command sscs switch type Command Options not yet Implemented

Bug 6584193 –Although type generic and type vlac are listed as options with the CLI sscs switch command, these options are not yet implemented.

Communication Test May Return False Results

Bug 6597344 –Clicking the Test Communications button for an offline controller may erroneously report that the communications test has passed.

Workaround –Verify a controller's offline state by viewing its alarms.

Disabled Snapshot will be Reenabled after a Firmware Update

Bug 6529172 –A snapshot volume that is disabled will be automatically reenabled after a firmware update occurs. If the snapshot volume is full, it can start generating warning events.

Workaround–Disable the snapshot again after the firmware update.

Event List Shows Different Events but Alarms are Consistent

Bug 6612858 –The Event list from two different hosts against the same array shows different events, even though the alarms generated are consistent.

Workaround –To display results based on the polling frequency and polling times of the arrays, select the Advanced Aggregation Filter option from the CAM Events page. When this option is de-selected, all hosts show consistent output. Therefore, this is working as designed.

Firmware Upgrade can Lock Volumes While Appearing Completed and Array Showing Optimal State.

Bug 6595884 –A firmware upgrade/baseline installation can lock volumes longer than the process indicates. The array can report the upgrade completed and show an optimal state but the process can still lock the volumes.

Workaround –Wait an extra five to ten minutes and try again.

Patch for Linux Hosts

Bug 6701605 –WebConsole 3.1 patch is breaking the CAM UI on Linux host.

Workaround –Download patch 125954-16 or later from sunsolve.sun.com for Linux hosts and apply it to the CAM server to upgrade the WebConsole to 3.1. For Solaris and Windows, the upgrade is seamless but for Linux the CAM interface might have problems in which case you can refer to your Linux documentation.

Fix in progress. Look for version -17 to come out for the WebConsole 3.1 patch soon.

Note – For the latest patches available for your system, check SunSolve at <http://www.sunsolve.sun.com>

Primary Volume Create Commands do not Display

Bug 6608890 –The array is limited in commands it can process simultaneously and CAM is not doing validation and queuing of (primarily volume create) commands.

Workaround –Check scripts for volume modification status before you issue new volume modification commands.

Primary Volume in a Replication Set Cannot Exceed the Size of the Secondary Volume

Bug 6596281 – If a data replication set is created between two volumes with the primary volume having a size less than the secondary volume, the primary volume can be expanded till it reaches the size of the secondary volume.

Replication Status May be Listed Incorrectly when the Primary Volume Fails

Bug 6561709 –When the primary volume in a replication set fails, the management software may incorrectly list the volume as replicating.

Replication Set Detail Page Shows Incorrect Dedicated Port

Bug 6684018 –Replication Set Detail page shows an incorrect replication dedicated port for 6540 array.

The fix will be delivered with the 6.2 release of the CAM software.

Service Advisor Does Not Verify Disk is Ready to be Removed

Bug 6501029 –When the management software lists a disk as failed and the Service Advisor procedure for replacing drives is followed, the step to verify that the disk is ready to remove may not list the failed disk.

Workaround –Use an alternative menu option, Array Troubleshooting and Recovery, to view the status of the disk.

Snapshot Quantity Incorrect: Snapshot Details and License Summary Pages

Bug 6681459 –There is a discrepancy in the snapshot quantity shown on Snapshot details and License summary pages.

Workaround –Use the License page for accurate snapshot quantity details.

Snapshot Reserve Space is Insufficient and Fails Resnap

Bug 6523608 –Refreshing a snapshot does not update the filesystem if there is insufficient reserve space, yet a message displays indicating success. The array's event log says the resnap completed successfully.

Workaround –In the snapshot feature of the management software, configure snapshots to fail if sufficient reserve space is not available. The fail message will prompt you to increase the reserve space.

Snapshot Volumes do not Support Read-ahead

Bug 6560461 –Although both the base volume and the snapshot reserve volume support read-ahead, the snapshot volume itself does not support read-ahead. As a result, the Read-ahead Enabled Option is set to False on the Snapshot Details page.

This works as designed.

Volumes not Created Using Fractional Sizes

Bug 6665635 –Creating volumes with sizes that contain a fraction does not work in locales using a comma as decimal point. The check for a legal numeric value is not localized, but the interpretation of the number afterwards is. If you correctly enter the locale with a comma as 17,352, you will get this error message: “You must provide a numeric capacity value.”

Example –When you create a volume with 17.352GB under the standard “en” locale, you can enter the size as 17.352 and select GB as unit. However, under the “de” locale, the dot is interpreted as 1000-separator. A 17.352 size with a 1GB unit would try to create a ~17 TB volume and likely fail with this error message: “The size entered for the new volume exceeds the maximum space available on the selected pool.”

Workaround –For GB and TB values you can multiply by 1024 and enter as MB or GB.

Volume Segment Size Associated Requires a New Profile with a Variable Number of Disks when Changed

Bug 6599933 –Changing a volume created with a one segment size to one with a different segment size requires that you create a new profile with the desired segment size, create a pool using that profile, and apply the new pool to the volume. However, if the original profile was created using a fixed number of disks instead of a variable number of disks, then an error is returned.

Workaround –Adjust the new profile so that the number of disks is variable instead of fixed.

Write Consistency Group Members Not All Consistent

Bug 6598844 –Members of a replication write consistency group should all have matching attributes and roles.

Documentation Issues

CLI Guide: Special Characters Note Correction

Sun StorageTek Common Array Manager sscs (1M) CLI Quick Reference Guide (part number 820-4192) says: “Do not use spaces, commas, colons (:), or the special characters ?,*,!,@,%, or & as a character in any name you specify. Numbers in braces {0} and {1} represent variables.”

The *correct* wording in the note should be as follows:

Do not use spaces, commas, colons (:), or the special characters ?,*,!,@,%, or & as a character in any name you specify unless you are prepared to escape them in the shell. Numbers in braces {0} and {1} represent variables in some error messages.

CLI Command Changes for sscs map initiator and sscs map snapshot

Bug 6599146 –Although the CLI command `sscs map initiator` is listed in the CLI manpage, it is not implemented. And, although the CLI manpage lists the `-i` option for use with the CLI commands `sscs map volume` and `sscs map initiator`, this option is not yet implemented.

CLI - sscs modify firmware Command -p Option Requires the File Path of the Firmware Image

The *CLI Quick Reference Guide* and the *CLI manpage* docs do not specify that when using the `-p` option with the `sscs modify firmware` command, you must supply the file path of the firmware image file.

CLI - sscs modify volume Command Correction

Bug 6592776 – The manpage for the CLI command `sscs modify volume` should define the usage for the `-c` option, which enables you to select a controller, as follows:

```
[ -c, --controller A | B ]
```

CLI - List Firmware Command Correction

In “list firmware,” “-x unit-type” should be “-x fru-type.”

In synopsis and options, fru-type and unit-type are used in an interchangeable way. For both -t and -x, use “fru-type” instead of “unit-type” to be consistent.

Volumes Supported on the Sun StorageTek 6130 Array up to 1022

Bug 6540170 – CAM can be used to create up to 1022 volumes (volumes 0 through 1021) on the Sun StorageTek 6130 array. However, if the Access LUN is in use, up to 1023 volumes (volumes 0-1022) can be created. If you attempt to create more than the supported number of volumes, an error message is returned.

Volume Copy not Supported for 2500 Arrays

Sun StorageTek 2500 series does not support volume-copy. Any instances in the Browser User Interface or documentation that imply there is a command or function for this task is misleading.

Firmware Issues

New 7.10.x.xx Firmware Supported in 6.1.1

To avoid issues regarding the new 7.10.x.xx firmware:

- Contact Sun Microsystems Support Services (see [“Service Contact Information” on page 57](#)) to install the new 07.10.x.xx firmware for the 6140, 6540, and FLX380 arrays.
- After the initial installation, you can install future changes to the 07 baseline firmware using the procedure above.
- Be aware that the firmware upgrade utilities provided with CAM 6.1.1 are not able to perform the upgrade operation to the 7.10.xx.xx firmware release.

Install Wizard Might Display a False Warning

Bug 6593508 – The review step of firmware Install wizard might display a false warning that the array health is not optimal.

Workaround –Check the Alarm Summary page to verify the alarm.

SAS not Available Drive Type for 6xxxx and FLX Arrays

In this release, SAS *is not* an available drive type for the 6xxxx and Flexline arrays. It will be available in future firmware releases and documented as such in Release Notes. However, SAS *is* an available drive type for the 2500 Series arrays.

For the complete list of drives, refer to Table 5 in the *Sun StorageTek 2500 Series Array Release Notes, Version 1.3*.

In-Band Array Management Issues

There are two different agents that can be used for communication to arrays via the in-band (data) path, dependant upon the array type: the CAM Proxy Agent and the RAID Array LSI Proxy Agent. In-band management is supported on the Sun StorageTek 6130, 6140, 6540, 2530 and 2540 arrays.

About the RAID Array Proxy Agent

Note – This information applies only to FLX240, FLX280, FLX380, 6130, 6140, 6540, 2510, 2530 and 2540 arrays.

The in-band management proxy agent is a package which is added to a host (or group of hosts) with in-band connectivity via Fibre Channel to the storage array. An external management station can then talk to this proxy host via an out-of-band connection and the management commands are then relayed to the storage device via the in-band path. This is a transparent proxy agent which simply converts the RPC request packets to UTM SCSI- specific messages. The API CAM uses to manage the arrays is identical whether the array is managed via the in-band or out-of-band path.

Multiple in-band proxy hosts may be used to access the same array and multiple arrays are allowed behind a single proxy host.

Installation of the proxy agents is accomplished via the standard package addition tools inherent to the specific operating system. For example, the `pkgadd (1M)` command would be used to install the Solaris agent and the associated Java Runtime package should also be installed. For Linux, the packages are RPM based and a runtime package is also needed. For windows, the installation packages are executable files that include their own “Install Anywhere” installer.

Note – CAM 6.1 added support for Solaris (x86) and Windows proxy agents.

Known RAID Array Proxy Agent Limitations

Note – This information applies only to FLX240, FLX280, FLX380, 6130, 6140, 6540, 2510, 2530 and 2540 arrays.

A proxy agent restart is required after disruptive changes to the storage configuration. This does not apply to changes in volumes exposed from a single array but it does apply if storage arrays are re-cabled differently or if the storage array configuration has changed (i.e. adding new storage arrays to the configuration).

The in-band proxy agents will start when the host boots, but they will terminate if storage is not immediately seen. A restart of the agent (instructions below) will force a re-scan for storage arrays and, if any are found, the agent will remain running.

Solaris: Checking the UTM LUN's and Start/Stop of the Proxy Agent

Note – This information applies only to FLX240, FLX280, FLX380, 6130, 6140, 6540, 2510, 2530 and 2540 arrays.

Download CAM in-band proxy agents for Solaris from here:

<http://www.sun.com/download/products.xml?id=471e7573>

To verify the host sees the arrays management (UTM) LUN, do the following:

1. Start / Stop the Agent (Solaris):

```
/opt/SMgr/agent/SMagent start
```

If the agent is already running, this will stop and then restart it.

2. Check the status of the agent:

```
# ps -ef | grep SMagent | grep -v grep
root 5144      1    0 11:58:24 pts/3          0:01
/opt/SMgr/agent/jre/bin/java -classpath
/opt/SMgr/agent/SMagent.jar devmgr.launch
```

Linux: Checking The UTM LUNs and Start/Stop of the Proxy Agent

Note – The SMagent requires Red Hat 5.1 (also known as “5 update 1”) or higher. It is not supported on Red Hat 5.0.

Note – This information applies only to FLX240, FLX280, FLX380, 6130, 6140, 6540, 2510, 2530 and 2540 arrays.

Download CAM in-band proxy agents for Linux from here:
<http://www.sun.com/download/products.xml?id=471e7573>

To verify the host sees the arrays management (UTM) LUN:

1. Start/Stop Agent

```
[root@nsvr-150 agent]# /opt/SMgr/agent/SMagent start
Stopping Agent process 12632.
SMagent started.

[root@nsvr-150 agent]# SANtricity Storage Array Host Agent,
Version 09.17.A0.03

Built Tue Dec 05 14:52:38 CST 2006

Copyright (C) 1999-2006 LSI Logic Corporation. All rights
reserved.

Checking device /dev/sda (/dev/sg0): Skipping
Checking device /dev/sdb (/dev/sg1): Skipping
Checking device /dev/sdc (/dev/sg2): Activating
Running...
```

2. Checking for UTM LUN

```
[root@nsvr-150 agent]# java -classpath
/opt/SMgr/agent/SMagent.jar
devmgr.versioned.agent.DeviceIdentifier | grep "Volume
Access" /dev/sdc

(/dev/sg2) [Storage Array fms-lca1, Volume Access, LUN 31,
Volume ID <600a0b80002fc0740000000000000000>]
```

Windows: Checking The UTM LUN's and Start/Stop of the Proxy Agent

Note – This information applies only to FLX240, FLX280, FLX380, 6130, 6140, 6540, 2510, 2530 and 2540 arrays.

To verify the host sees the arrays management (UTM) LUN, do the following:

1. Start/Stop Agent

```
E:\Program Files (x86)\StorageManager\agent>net start  
"SANtricity Storage Manager Agent"
```

The Storage Manager Agent service is starting.

The Storage Manager Agent service was started successfully.

2. Checking for UTM LUN

```
E:\Program Files (x86)\StorageManager\agent>C:\Java\  
jdk1.5.0_11\bin\java -classpath SMagent.jar  
devmgr.versioned.agent.DeviceIdentifier |  
findstr Access  
  
\\.\PHYSICALDRIVE0 [Storage Array fms-lca1, Volume Access,  
LUN 31, Volume ID <600a0b80002458d20000000000000000>]  
  
\\.\PHYSICALDRIVE1 [Storage Array fms-lca1, Volume Access,  
LUN 31, Volume ID <600a0b80002fc074
```

Access LUN does not Correlate with Host to which it is Mapped

Note – This information applies only to FLX240, FLX280, FLX380, 6130, 6140, 6540, 2510, 2530 and 2540 arrays.

Bug 6584815 –When an access LUN is mapped to a proxy agent host for in-band management use, you must correlate the mappings between the LUNs and the host by using the `format` command at the UNIX prompt. The system will list the access LUNs and the array ports from the UI or the CLI, and it will then compare the results.

For example:

a. format

```
7. c8t0d31 <SUN-UniversalXport-9617 cyl 8 alt 2 hd 64 sec 64>
    /pci@8,700000/fibre-channel@2/fp@0,0/ssd@w200500a0b82fbc3c,1f
13. c9t0d31 <SUN-UniversalXport-9617 cyl 8 alt 2 hd 64 sec 64>
    /pci@8,700000/fibre-channel@2,1/fp@0,0/ssd@w200400a0b82fbc3c,1f
```

b. List the array ports using the UI or CLI:

```
A/1 A Up FC 2 Gbps 20:04:00:A0:B8:2F:BC:3B
A/2 A Up FC 2 Gbps 20:04:00:A0:B8:2F:BC:3C
B/1 B Up FC 2 Gbps 20:05:00:A0:B8:2F:BC:3B
B/2 B Up FC 2 Gbps 20:05:00:A0:B8:2F:BC:3C
```

c. Correlate WWN's

In this example, Port A/2 exposes c9t0d31 and Port B/2 exposes c8t0d31

Array Removal Might Not Complete Successfully

Bug 6593318 – When a number of in-band managed arrays are selected for removal, the operation appears to complete successfully. However, one array may still be listed on the Storage System Summary page.

Controller Resetting Issues on an In-band Managed Array

Note – For best performance, ensure both controllers are connected during configuration.

Note – This information applies only to FLX240, FLX280, FLX380, 6130, 6140, 6540, 2510, 2530 and 2540 arrays.

Bug 6603978 –The controller for an in-band managed array cannot not be reset even when physical connectivity between the array and the management host has been verified.

Workaround –If physical connectivity is valid, un-register and then re-register the array.

Error: Could not Communicate with Controller to Complete Request

Note – This information applies only to FLX240, FLX280, FLX380, 6130, 6140, 6540, 2510, 2530 and 2540 arrays.

Bugs 6610504, 6609734, 6609155, 6607104, 6609732, 6612120 –An occasional problem exists where the in-band proxy agent may return the paths to the controllers in reverse order. This error can occur on any platform.

The net result is an immediate communications error. The error message will typically read “Error: Could not communicate with the controller to complete this request. Possible causes include network or connection problems, controller problems, or no power to the host or storage array. Check these possible causes, then retry the operation.”

This error might occur when performing the following operations:.

- volume expansion
- snapshot copy, re-snap and disable
- virtual disk defragmentation

Workaround –Change the Current Volume Ownership when a “communication error” is encountered during volume expansion: From the Volumes page, select the “Specific Volume” and then change the value of the “Owning Controller.”

Changing the Current Volume Ownership will create an Alarm because the volume is not on the preferred controller. Select one of two actions:

- Change the Volume back to the original owner after performing the desired command.
OR
- Change the Preferred Volume Ownership of the desired volumes via sscs(1m).

Note – For best performance, ensure both controllers are connected during configuration.

In-band Managed Array Listed as Managed Out-of-band When Communication is Lost

Note – This information applies only to FLX240, FLX280, FLX380, 6130, 6140, 6540, 2510, 2530 and 2540 arrays.

Bug 6588699 – When an in-band managed array loses communication with management host, the network address listed in the Storage Summary page displays as an out-of-band address instead of an in-band address.

Workaround – If communication is lost with the array, view the alarms to determine if an in-band or out-of-band connection is lost.

Linux (Red Hat) 5.1 Version is Required - 5.0 not Supported

Note – This information applies only to FLX240, FLX280, FLX380, 6130, 6140, 6540, 2510, 2530 and 2540 arrays.

Bug 6661742 – SMagent-LINUX-10.00.A2.02-1.i386.rpm will not load. SMagent is not supported on Redhat 5.0.

Workaround – The SMagent requires Red Hat 5.1 (also known as “5 update 1”) or higher.

Network Address Column Shows Change from Out-of-band to In-band when Registering an In-band Array

Note – This information applies only to FLX240, FLX280, FLX380, 6130, 6140, 6540, 2510, 2530 and 2540 arrays.

Bug 6612214 – When one of the arrays behind an in-band management proxy is removed in CAM, the software will change the management of the other arrays behind the proxy to out-of-band management if that path exists. An in-band discovery of the proxy agent would return them to in-band management in this case.

Performance Monitoring Page Does Not Display In-band Statistics

Note – This information applies only to FLX240, FLX280, FLX380, 6130, 6140, 6540, 2510, 2530 and 2540 arrays.

Bug 6681582 –Performance Monitoring page lists the Performance statistics as Unavailable.

Workaround –Check the physical connectivity from the management host to the array. If the connectivity is good, try un-registering and then re-registering this array.

Localization Issues

Apostrophe Displays Incorrectly for French

Bug 6648569 –Apostrophes display incorrectly in the Browser User Interface in some cases for the French language.

Workaround –Please set your browser language to en-us instead.

Array Name Displays as ??

6700357 –Array name may be displayed as “??” for zh and ja on the left panel, when CAM software is working on asia locales.

Workaround –Install the software under C locale and make sure the array name contains ASCII characters only.

Copyright and License Information Issues in French

Bug 6490238 –When installing the French version of Common Array Manager on Solaris and LINUX platforms, non-ASCII characters display as garbled text in the copyright and license sections when the correct locale is not used.

Workaround –Use the correct locale (for example, fr_CA.ISO8859-1 for Solaris and fr_FR.iso88591 for LINUX) or use the browser in the English locale.

Messages of FMS for J4000 Array Family Not Localized

Bug 6688583 –J4200 and J4400 message files are missing in localized packages.

Workaround –Please set your browser language to en-us.

Solaris Issues

SES vs. SD Paths for UTM LUNs

Note – This information applies only to 6000 and 2500 arrays.

Bug 6500605 –For Solaris 10u4 and Solaris 8 and 9, the host cannot see the storage device's management UTM LUN.

Workaround –Perform the following commands on the data host:

```
# setenv LD_LIBRARY_PATH /opt/SMgr/agent
# java -classpath /opt/SMgr/agent/SMagent.jar
devmgr.versioned.agent.DeviceIdentifier | grep "Volume
Access"
```

You should then receive output like the following, indicating which arrays have access LUNs visible to the agent:

```
/dev/rdisk/c5t200600A0B82458D4d31s2 [Storage Array fms-lca1,
Volume
Access, LUN 31, Volume ID <600a0b80002458d20000000000000000>]

/dev/rdisk/c5t200700A0B82458D3d31s2 [Storage Array fms-lca1,
Volume
Access, LUN 31, Volume ID <600a0b80002fc07400000000000000000>]
```

UTM LUNs Controlled by “Solaris Traffic Manager”

This information applies only to 6000 and 2500 arrays.

Bug 6594360 –After you upgrade to S10U3 (or later), the in-band management UTM LUN's are controlled by Solaris Traffic Manager (MPxIO). In most cases, in-band management will not fail as a result of this; however, it is best practice to ensure that the UTM LUN's are not controlled by MPxIO. Performing the following workaround task will help prevent problems.

Workaround –Use the format `inquire` command to get the Vendor and Product IDs. (The VID needs to be 8 characters.)

1. Edit the file `/kernel/drv/scsi_vhci.conf`

The following line should read:

```
device-type-scsi-options-list = "SUN Universal Xport",
"disable-option"; disable-option = 0x7000000
```

2. Run the `stmsboot -u` command.

Respond to the prompts as follows:

```
WARNING: This operation will require a reboot.
```

```
Do you want to continue? [y/n] (default: y) y
```

The changes will come into effect after rebooting the system.

```
Reboot the system now? [y/n] (default: y) y
```

Service Contact Information

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

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

Note – For the latest patches available for your system, check SunSolve at:
<http://www.sunsolve.sun.com>

Note – To download Common Array Manager software, go to
<http://www.sun.com>, click the New Downloads tab, and scroll down the list to find the link.

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