

## **Sun Storage Common Array Manager**

Software Release Notes, Release 6.9.0



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# Sun Storage Common Array Manager Software Release Notes

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Use this document for instructions about how to download the latest Oracle's Sun Storage Common Array Manager software and learn about new features, related documentation, system requirements, notable bug fixes, and known issues for the CAM 6.9.0 product release.

For installation, configuration, and other instructions, see ["Documentation" on page 5](#).

These Release Notes include the following sections:

- ["About the Software" on page 2](#)
- ["How to Get the Software" on page 2](#)
- ["What You Get with the Software" on page 3](#)
- ["Licensing Optional Premium Features" on page 4](#)
- ["What's New in the CAM 6.9.0 Release" on page 4](#)
- ["Documentation" on page 5](#)
- ["System Requirements" on page 6](#)
- ["Firmware" on page 9](#)
- ["Supported Expansion Modules" on page 11](#)
- ["Notable Fixes" on page 14](#)
- ["Known Issues" on page 15](#)
- ["Contacting Support" on page 29](#)

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# About the Software

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

The software includes a distributed architecture enabling you to designate local and remote domains through which you can configure and manage your storage environment for optimal efficiency and productivity.

Sun Storage Common Array Manager includes the following:

- Browser interface
- Local command line interface
- Remote command line interface

The command line interfaces (CLIs) perform the same control and monitoring functions as the browser interface. If you are unfamiliar with the CLI, it will be easier to manage the array using the browser interface.

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# How to Get the Software

## 1. Go to My Oracle Support:

<https://support.oracle.com>

2. Click **Sign In** and enter your existing account information, or register as a new user.
3. At the top of the page, click the **Patches & Updates** tab.
4. Under the **Patch Search** section: Click the **Search** tab, and then click the **Product or Family (Advanced Search)** link.
5. Check **Include** all products in a family.
6. In the **Product** field, start typing **Sun Storage Common Array Manager (CAM)**, and select it when it appears.
7. In the **Release** field, expand **Sun Storage Common Array Manager (CAM)**, check the release and patches you want to download, and then click **Close**.
8. Click **Search**.

Available patches for the release you selected are displayed.

9. Select a patch for your operating system.
10. Click ReadMe for a patch description and installation instructions.
11. Click Download for a single patch, or Add to Plan to download a group of patches.

*What to do next...*

- See “Documentation” on page 5 to find information about installation, configuration, and more.
- See “Patches” on page 8 for information about the latest software updates.
- Visit <https://support.oracle.com/CSP/main/article?cmd=show&type=NOT&doctype=HOWTO&id=1296274.1> to get details about array firmware, and find out more about downloading Common Array Manager software and its patches.
- Join or start a discussion with Oracle experts and industry peers in the My Oracle Support Community for Storage Disk 6000 and 2000 Series RAID Arrays at: [https://communities.oracle.com/portal/server.pt/community/storage\\_disk\\_6000\\_and\\_2000\\_series\\_raid\\_arrays/465](https://communities.oracle.com/portal/server.pt/community/storage_disk_6000_and_2000_series_raid_arrays/465).

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## What You Get with the Software

TABLE 1 lists the version information for the software included in this release.

**TABLE 1** Sun Storage Common Array Manager Contents

Type	Version
Sun Storage Common Array Manager	6.9.0
Oracle Java Web Console software	3.1
Oracle Java 2 Software Development Kit	1.6 u20
Firmware files	See “Firmware” on page 9
Remote scripting CLI client	2.1.4

# Licensing Optional Premium Features

There are a variety of premium features for which you can purchase licenses. Reference your hardware release notes to see which premium features are available for your array.

When you order licenses, they are sent to you with instructions on how to activate the features. For more information, search the online help pages for these topics:

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

## What's New in the CAM 6.9.0 Release

This release introduces the following enhancements:

- Updated Sun Storage 2530-M2, 2540-M2, 6180, 6580, and 6780 array firmware 07.80.51.10
- Data Services support for 2500-M2 arrays:
  - Snapshots license (up to 128 snapshots per array, 8 per volume)
  - Volume Copy license (up to 255 per array)
  - Storage Domains license (up to 32 per array)
  - Performance Enhancer (increases performance of the base controller)
- Sun Storage 2500-M2 host support for:
  - Oracle Linux 6.0, 5.6, 5.5
  - Oracle VM 2.2.2 (2540-M2 only)
  - Oracle Unbreakable Linux
  - RedHat Linux 6.0, 5.6, 5.5 (2530-M2 and 2540-M2)
  - SuSe Linux 11.1 and 10.4
  - Windows 2003 SP2 R2 clustered and non-clustered
  - Windows Server 2008 R2 SP1 clustered and non-clustered
- CAM enhancements:
  - Microsoft Internet Explorer 9.0 browser support
  - Improvements in ASR connectivity (see ["Configuration Issues" on page 18](#))
  - Snapshot Rollback support
  - Enhanced drive predicted failure analysis (PFA) reporting



- Array temperature reporting
- Improved CAM UI performance
- Enhanced support file bundle content
- Array status does not degrade if firmware is at earlier revision level

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**Note** – Host software upgrades are supported from Sun Storage Common Array Manager release 6.x to 6.9.0.

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## Documentation

For hardware information, refer to the array's release notes and hardware installation guide.

Online help and man pages are incorporated into the Sun Storage Common Array Manager software.

You can search for documentation at:

<http://www.oracle.com/technetwork/documentation/disk-device-194280.html>

**TABLE 2** Sun Storage Common Array Manager Related Documentation

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**Documents Related To Sun Storage Common Array Manager**

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*Sun Storage Common Array Manager Quick Start Guide*

*Sun Storage Common Array Manager Installation and Setup Guide*

*Sun Storage Common Array Manager CLI Guide*

**Documents Related to Supported Arrays**

*Sun Storage Common Array Manager Baseline Firmware Reference*

*Sun Storage F5100 Flash Array Documentation including Release Notes*

*Sun Storage J4200 Array Documentation including Release Notes*

*Sun Storage J4400 Array Documentation including Release Notes*

*Sun Storage J4500 Array Documentation including Release Notes*

*SAS-1/SAS-2 Compatibility Upgrade Guide*

*Sun Blade 6000 Disk Module Documentation including Release Notes*

*Sun Storage 2500-M2 Arrays Documentation including Release Notes*

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**Documents Related To Sun Storage Common Array Manager**

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*Sun StorageTek 2500 Arrays Getting Started Guide*

*Sun StorageTek 2500 Arrays Release Notes*

*Sun StorageTek 2500 Arrays Firmware Upgrade Guide*

*Sun Storage 6x80 Array Release Notes*

*Sun Storage 6580/6780 Hardware Installation Guide*

*Getting Started Guide for Sun Storage 6580/6780 Rack Mounted Arrays*

*Sun StorageTek MPIO Device Specific Module Installation Guide for Microsoft Windows OS Platform*

*Sun StorageTek RDAC Failover Driver Installation Guide for Linux OS*

*Uniform Command-Line Interface User's Guide*

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## System Requirements

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

- [“Supported Arrays” on page 6](#)
- [“Supported Web Browsers” on page 7](#)
- [“Supported Languages” on page 8](#)
- [“Patches” on page 8](#)
- [“Supported Operating Systems” on page 9](#)

## Supported Arrays

Sun Storage Common Array Manager software supports the following Sun storage systems:

- Sun Storage 6180 array
- Sun Storage 6580 array
- Sun Storage 6780 array
- StorEdge 6130 array
- StorageTek 6540 array
- StorageTek 6140 array
- Sun Storage 2530-M2 array

- Sun Storage 2540-M2 array
- StorageTek 2510 array
- StorageTek 2530 array
- StorageTek 2540 array
- StorageTek FLX380 array
- StorageTek FLX280 array
- StorageTek FLX240 array
- Sun Storage F5100 Flash array
- Sun Storage J4200 array
- Sun Storage J4400 array
- Sun Storage J4500 array
- Sun Blade 6000 Disk Module
- Sun Blade 6000 Multi-Fabric Network Express Module
- Sun Blade 6000 10GbE Multi-Fabric Network Express Module
- Sun Blade 6000 Virtualized Multi-Fabric 10GbE Network Express Module

## Supported Web Browsers

**TABLE 3** Supported Web Browsers

Browser	Supported Version
Firefox	3.0 and higher
Microsoft Internet Explorer	9.0, 8.0

## Best Practices for Browser Performance

For best web browser performance:

- Enable pop-up windows.
- Specify No Proxy for the Sun Storage Common Array Manager host to avoid situations where your browser might hang, time out, or generate error messages. From Preferences > Advanced > Proxies (or a similar path, depending on your browser), add the Sun Storage Common Array Manager management host name to the “No Proxy for” section.
- Recent Firefox versions might require you to accept and add a security certificate prior to bringing up the authentication page.

# Supported Languages

Because locales are part of the installation, there is no need to download additional software other than appropriate patches.

For Solaris, Linux, and Windows, the Browser User Interface (BUI) is available in:

- English
- French
- Japanese
- Simplified Chinese

Command-line interface (CLI) is available in:

- English

Online help is available in:

- English
- Simplified Chinese
- Japanese

Man pages are available in:

- English
- Japanese

## Patches

See “[How to Get the Software](#)” on page 2 for instructions on downloading patches.

To obtain patches using Solaris, install Solaris 10 Update 9.

The mpt\_sas driver requires these patches:

- Oracle Solaris 10 10/09 plus patch 142676-02
- Oracle Solaris 10 10/09 plus patch 143523-02

The mpt\_sas driver also requires this Solaris 10 update:

- Oracle Solaris 10 09/10 Update 9

See <http://www.lsi.com/support/sun> for information about LSI HBA packages.

# Supported Operating Systems

**TABLE 4** Supported Host Operating Systems

Operating System	OS Version	Notes
Solaris OS	Solaris 10 OS U10 and U9	
	Solaris 11 Express 2010.11	Sun Storage F5100 array support only
Linux	Oracle Linux 6.0, 5.6, and 5.5	Supports UEK as a kernel option. Before installing CAM on Oracle Linux 6.0 hosts, you must install the packages listed in the “Linux OS Requirements” section of the <i>Sun Storage Common Array Manager Installation and Setup Guide</i> .
	Red Hat Enterprise Linux 6.0, 5.6, and 5.5	Before installing CAM on Red Hat Enterprise Linux 6.0 hosts, you must install the packages listed in the “Linux OS Requirements” section of the <i>Sun Storage Common Array Manager Installation and Setup Guide</i> .
	SUSE Linux Enterprise Server 11.1 SP1 and 10.4 SP3	
Oracle VM	Oracle VM 2.2.2	Management host (out-of-band) support only
Windows	Windows Server 2008 R2 SP2	
	Windows 2003 R2 SP2	Supports both 32-bit and 64-bit
	Windows XP Pro SP3	Management host (out-of-band) support only
	Windows 7	Management host (out-of-band) support only

## Firmware

Firmware delivered with Sun Storage Common Array Manager software can be installed using the Install Firmware Baseline feature. However, moving from one major firmware release to another might require special procedures.

If you attempt an upgrade and it fails, contact My Oracle Support at: <https://support.oracle.com>

For baseline firmware information, such as controller, NVSRAM, IOM, disk drive, version, and firmware file, see *Sun Storage Common Array Software Baseline Firmware Reference*.

## 2500 Arrays Upgrade

For the 25xx arrays, upgrading from a 06.xx.xx.xx version to 07.xx.xx.xx requires a special utility. Consult the My Oracle Support document *Procedure to Upgrade the Sun StorageTek 2500 Series Array Controller Firmware from 06.xx to 07.xx* (Doc ID 1319254.1) which provides links to the upgrade utility and to the *Sun StorageTek 2500 Array Series Firmware Upgrade Guide* (820-6362).

## 2500 Array Support for VMware ESX 4.1 with Firmware 07.35.55.10 and later

VMware ESX 4.1 is supported as a data host platform for StorageTek 2540 arrays with firmware version 07.35.55.10 installed. The corresponding ESXi version 4.1 is also supported by this firmware version. Note that this support is not mentioned in the latest *Sun StorageTek 2500 Series Array Release Notes, Release 1.4*.

## 6540, 6140, and FLX380 Arrays Upgrade

Upgrading from a 06.xx.xx.xx version to 07.xx.xx.xx requires a special utility. Consult the My Oracle Support document *Procedure to Upgrade the Sun StorageTek 6540 Array, 6140 Array or FLX380 Storage Array from Firmware 06.xx to 07.xx*. (Doc ID 1131593.1) which provides links to the upgrade utility and to the *Sun StorageTek 6000 Series Array Firmware Upgrade Guide* (820-7197).

## J4000 Arrays

It is best practice to upgrade HBAs (SG-XPCIE8SAS-E-Z) to Phase 14 firmware (1.26.03 or later) before upgrading JBOD installations to Sun Storage Common Array Manager version 6.6 and above. This helps avoid issues when discovering JBODs that have SIM firmware 3A53 (J4200) or 3R53 (J4400).

## Sun Blade 6000 Disk Module

Before beginning the firmware upgrade process, review this document: *SAS-1/SAS-2 Compatibility Upgrade Guide*. This guide contains information required for a successful firmware upgrade.

## Sun Storage F5100 Flash Array Notes

- The FMod firmware upgrade process requires a manual enclosure power cycle.
- SAS2 HBA connectivity requires 5.04.05 firmware, which is installed only on units shipped by manufacturing. Field upgrades from 5.3.73 firmware to 5.04.05 firmware using CAM are not possible.

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## Supported Expansion Modules

To add expansion modules to an array configuration, follow the procedures documented in Service Advisor.

The following tables list supported expansion modules that can be attached to an array configuration.

**TABLE 5** Supported Expansion Modules: 6000 Series Arrays

Array Controller	Firmware	Supported Expansion Module	IOM Code	
Sun Storage 6180	07.80.51.10	CSM200	98D6	<b>Note</b> - When you upgrade from CAM 6.8.1 and have CSM200 trays with 98E4 IOM code, you will be instructed to load 98D6 IOM code on these trays.
Sun Storage 6580 and Sun Storage 6780	07.80.51.10	CSM200	98D6	
		CSM100 FC	9682	
		CSM100 iSATA	9728	
StorageTek 6540	06.60.22.10	CSM200	98D6	
		CSM100 FC	9682	
		CSM100 SATA	9728	
		FLA200	9330	
		FLA300	9682	
		FLC200-dSATA	9566	
		FLC200-iSATA	9728	

**TABLE 5** Supported Expansion Modules: 6000 Series Arrays *(Continued)*

<b>Array Controller</b>	<b>Firmware</b>	<b>Supported Expansion Module</b>	<b>IOM Code</b>
StorageTek 6540	07.60.56.10	CSM200	98D6
		CSM100 FC	9682
		CSM100 SATA	9728
		FLA200	9330
		FLA300	9682
		FLC200-dSATA	9566
		FLC200-iSATA	9728
StorageTek 6140	06.60.22.10	CSM200	98D6
		CSM100 FC	9682
		CSM100 SATA	9728
		FLA200	9330
		FLA300	9682
		FLC200-dSATA	9566
		FLC200-iSATA	9728
StorageTek 6140	07.60.56.10	CSM200	98D6
		CSM100 FC	9682
		CSM100 SATA	9728
		FLA200	9330
		FLA300	9682
		FLC200-dSATA	9566
		FLC200-iSATA	9728
StorEdge 6130	06.60.22.10	CSM200	98D6
		CSM100 FC	9682
		CSM100 SATA	9728
		FLA200	9330
		FLC200-dSATA	9566



**TABLE 6** Supported Expansion Module: 2500 Series Arrays

Array Controller	Firmware	Supported Expansion Module	IOM Code
Sun Storage 2530-M2	07.80.51.10	2501-M2	0361
Sun Storage 2540-M2	07.80.51.10	2501-M2	0361
StorageTek 2510. 2530. 2540	06.70.54.11	2501*	0196
	07.35.67.10	2501	0196

\* Only Simplex 2501 expansion modules may be attached to a Simplex 2500 series controller tray.

**TABLE 7** Supported Expansion Modules: FLX240, FLX280, and FLX380 Arrays

Array Controller	Firmware	Supported Expansion Modules	IOM Code
StorageTek FLX240	06.60.22.20	CSM200	98D6
		CSM100 FC	9682
		CSM100 SATA	9728
		FLA200	9330
		FLA300	9682
		FLC200-dSATA	9566
		FLC200-iSATA	9728
StorageTek FLX280	06.60.22.20	CSM200	98D6
		CSM100 FC	9682
		CSM100 SATA	9728
		FLA200	9330
		FLA300	9682
		FLC200-dSATA	9566
		FLC200-iSATA	9728
StorageTek FLX380	06.60.22.20	CSM200	98D6
		CSM100 FC	9682
		CSM100 SATA	9728
		FLA200	9330
		FLA300	9682
		FLC200-dSATA	9566
		FLC200-iSATA	9728

**TABLE 7** Supported Expansion Modules: FLX240, FLX280, and FLX380 Arrays

Array Controller	Firmware	Supported Expansion Modules	IOM Code
StorageTek FLX380	07.60.56.10	CSM200	98D6
		CSM100 FC	9682
		CSM100 SATA	9728
		FLA200	9330
		FLA300	9682
		FLC200-dSATA	9566
		FLC200-iSATA	9728

For additional baseline firmware information, such as controller, NVSRAM, disk drive, version, and firmware file, see *Sun Storage Array Baseline Firmware Reference*.

## Notable Fixes

### Common Array Manager—GUI and CLI

RFE 6810967—CAM Seven segment display codes need to be viewable by CAM in both the GUI and the via the CLI

RFE 6952156—ASR page does not show Sun Online Account name or \*\*\*\*\* for password when successfully registered

Bug 7047964 —CAM .JAVA\_HOME set incorrectly when multiple instances of java is installed on Linux.

Bug 7060784—On Linux CAM `uninstall -f -s` option removing directory shared by Ops Center.

Bug 7084599—Output of the `sscs add -d registerarray` command, does not list array types F5100, FLX240 and FLX280.

CAM 6.9.0 ignores the RevisionDeltaEvent for the array when calculating array Health status. Consequently, Health status can now be viewed in the Storage Summary page as an indicator of faults in the array that need attention, even when firmware is not at baseline. An array not a baseline that is otherwise healthy will display a Health status of "OK".

To highlight the presence of the RevisionDeltaEvent, a Warning icon (yellow triangle) will be displayed in the Firmware Version column for those arrays not at baseline. Note that the icon display is tied to the event, thus it can appear for drive firmware, NVSRAM, and other upgradable components.

Bug 7105149—F5100 ASR test yields serial number not found

Bug 7081107—CLI warns before deleting a virtual disk or pool containing volumes

## Documentation Fixes

Bug 7050610—Common Array Manager Online Help and Administration Guide incorrectly stated that 6140 and 6180 arrays support up to 128 drives. The correct number is 112.

Bug 6796540—CLI warning message displays after “sscs add -d registeredarray”

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## Known Issues

The following sections describe known issues and recommended workarounds:

- [“Array Issues” on page 15](#)
- [“Configuration Issues” on page 18](#)
- [“Documentation Issues” on page 23](#)
- [“Firmware Update Issues” on page 23](#)
- [“Installation and Upgrade Issues” on page 25](#)
- [“Linux Issues” on page 26](#)
- [“Solaris Issues” on page 28](#)
- [“Windows Issues” on page 29](#)

## Array Issues

Reference the hardware release notes for more information about known issues that pertain to your arrays.

## *Controller Smart battery replacement procedure*

This Smart battery information is a supplement for the CAM Service Advisor Battery Removal/Replacement procedure.

To determine if a Smart battery is installed, verify by checking the following:

1. Go to Storage Systems > *array name* > Troubleshooting > FRUs.
2. From the FRU Summary page, click Battery.
3. From the Component Summary page for the battery, look at the serial number in the Unique Identifier column.

If the serial number for the battery starts with an "S," it's a Smart battery.

4. Under the Name column, click the battery name.

On the Battery Health Details page, you will see Last Learn Cycle and Next Learn Cycle fields. If the battery is a non-Smart battery, these two fields are not present.

5. When you replace a Smart battery, you do not need to reset the battery age as described in the Service Advisor procedure.

## *Array loses communication during registration when IPV6 is enabled*

**Bug 7096012**—The IPV6 Routable address is not being set correctly during array registration. If the CAM host and array are on different subnets, the address defaults to the local link preventing CAM and the array to communicate.

**Workaround**—You can enable IPV4 for the array, or configure the CAM host and the array to be on the same subnet.

In CAM, go to Storage Systems > *array* > Physical Devices > Controllers. On Controller Summary page, click Specify Network Configuration under the IPV6 section. To obtain the IPV6 IP address, Routable IP address, and Router IP address for the array, use the `netCfgShow` command via the array serial port.

## *Ancient I/O rebooting due to cache block size*

**Bug 7110592**—Firmware 07.80.51.10 can cause ancient I/O reboots if the cache block size does not match the application I/O size.

**Workaround**—Ensure the application I/O size can fit into one cache block. If the cache block size is too small for the application I/O size, it will result in a shortage of an internal structure known as a `buf_t`. By setting the cache block size to match the I/O size, the correct number of `buf_t`'s will be available and the ancient I/O will be avoided.

To set the cache block size, go to the Administration page for the selected array.

Firmware revision 07.80.x.x supports the following cache block sizes:

- 2500-M2: 4k, 8k, 16k, 32k
- 6x80: 4k, 8k, 16k, 32k

### *AIX host type for 6140 arrays*

**Bug 7092652**—The host type setting for AIX hosts with the CAMBEX DPF failover driver should be set to AIX\_FO, not AIX as stated in the *Sun StorageTek 6140 Array Release Notes*.

### *Battery nears expiration: 06.xx write back cache should not be disabled*

**Bug 6983826**—With the 06.xx array firmware, the write back cache is incorrectly inactivated when the batteries enter the near-expiration period. Normally, it should in-activate when the batteries expire.

**Resolution**—Upgrade the array firmware to 07.xx. See [“Firmware” on page 9](#).

### *Both RAID controllers reboot after 828.5 days--2500/6000 arrays*

**Bugs 6872995, 6949589**—Both RAID controllers reboot after 828.5 days of continuous operation. A timer in the firmware (vxWorks) called “vxAbsTicks” is a 32-bit (double word) integer that keeps count in the 0x0000 0000 format. When this timer rolls over from 0xffffffff to 0x00000000 (after approximately 828.5 days), if there is host I/O to volumes, the associated drives fail with a write failure.

**Original Resolution**—Every 24 hours, firmware spawns a task--cfgMonitorTask--that checks the value of the vxworks kernel timing counter. For controllers with 03.xx-06.60 firmware (6000 series) and 03.xx-6.70 firmware (2500 series): Both controllers reboot if counter is greater than 825 days.

**Final Resolution**—Every 24 hours, firmware spawns a task--cfgMonitorTask--that checks the value of the vxworks kernel timing counter.

This fix staggers the reboots of the controllers for approximately five days so the only impact is a small performance degradation while the reboot occurs.

For controllers with firmware 07.15.11.12 or later (6000 series) and firmware 07.35.10.10 or later (2500 series): Controller A reboots if counter is greater than 820 days. Controller B reboots if counter is greater than 825 days.

### *Communication Loss reported from Windows and Linux when registering JBODs on Oracle Enterprise Linux 6 proxy*

**Bug 7044185**—Windows and Solaris management hosts report communication loss.

**Workaround**—Register the JBOD locally or use Solaris management host to manage the Oracle Enterprise Linux 6 proxy.

### *Reboots occur due to ancient I/O being aborted in large configurations*

**Bug 6931169**—In configurations where vdisks include more than 32 volumes, you might see host I/O errors or internal controller reboots from the controller detecting the I/Os that have not been processed within the timeout period (for example, ancient I/Os).

**Workaround**—A best practice is to quiesce host I/O when performing vdisk re-configuration. This helps avoid host I/O errors or internal controller reboots that might occur before setup operations complete.

### *Volume error—evShowVol output: Initialization: Not Completed*

**Bug 6969328**—25xx/6xxx array has a number of volumes with the following in the evfShowVol output: Initialization: Not Completed in the stateCaptureData.dmp file bundled with the support data.

This bug leads to performance issues with RAID 5 configurations.

**Workaround**—Contact Support at <https://support.oracle.com> and reference this Bug number.

## Configuration Issues

### *Reregister Auto Service Request for CAM*

CAM 6.9 uses a new transport protocol for phone home communications with Oracle. Before you update to CAM 6.9, you must unregister CAM with Auto Service Request (ASR), then reregister with ASR after CAM 6.9 is installed.

1. To unregister with ASR, log into CAM and go to General Configuration > Auto Service Request > Unregister.
2. Install CAM 6.9.

3. You can register with ASR during initial setup, or later from the General Configuration > Auto Service Request > Auto Service Request (ASR) Setup page.
4. To complete ASR activation, use the My Oracle Support web site: <http://support.oracle.com>. For more information about ASR activation, see the CAM online help topic “Activating ASR with My Oracle Support.”
5. Refer to the new DTS URLs in the CAM online help topic “Client Security” to verify your firewall settings.

### *Auto Service Request advisory note: DTS Listener transfer*

When performing a firmware update or using Service Advisor to put an array into service mode, messages similar to these may appear in the CAM event log:

```
Nov 3, 2011 10:32:34 AM
com.sun.storage.cam.service.notif.asr.dts.DTSListener
transferAttemptFailed
SEVERE: Message transfer attempt failed: HTTP Error: 404 Not
found Queue not found
Nov 3, 2011 10:32:34 AM
com.sun.storage.cam.service.notif.asr.dts.DTSListener
transferAttemptFailed
SEVERE: Retrying... Time To Live in milliseconds = 960

Nov 3, 2011 10:32:34 AM
com.sun.storage.cam.service.notif.asr.dts.DTSListener
messageSendFailed
SEVERE: Failed to send message.
```

The CAM operation is not affected and these messages may be ignored. Refer to knowledge article 1381185.1 for more information.

### *Array name remains unchanged after a full array reset*

**Bug 7147538**—After performing a full array reset from the Administration page, the CAM array name is not changed to “unlabeled” as was done in previous releases.

**Workaround**—To set the array name, go to the Administration page and click Save.

### *No email notification for critical and above events*

**Bug 7104329**—Configuring email notification for Critical and Down alarms does not send email notification as expected.

**Workaround**—Refer to the Alarm Summary page and Event Details page to get information about major events that occur on the array.

### *Access Configuration: Cascaded J4400 issues*

**Bugs 6924428, 6925163, 6925341**—Auto-save zone template does not import; cascaded J4400s return incorrect PHY port data; hosts connected to ports with no zones see all disks in J4400.

**Workaround**—Use only the “HostOrSimLinkIn” port to cascade J4400 arrays.

### *Access Configuration: Sun Storage 6Gb SAS HBA—OS hangs*

**Bug 6948920**—When both 6Gb SAS ports are connected to a single expander, a X8 wide port results. The OS hangs with dual ports in single-zoned domain. This configuration is invalid.

**Workaround**—Disable X8 wide port configurations in Access Configuration Zoning.

### *Access Configuration fails with error: java.util.HashMap cannot be cast to java.util.Properties*

**Bug 6928490**—This error has been observed in a configuration of cascaded J4200 and J4400 arrays with dual-path to the host (one HBA connected to SIM0 domain and another HBA of the same host connected to SIM1).

**Workaround**—Retry the operation.

### *Access Configuration: non-zoned SAS2 wide port aggregation FRU Report display—F5100 + 6Gb/sec HBA*

**Bug 6960746**—Report for configuration with both HBA ports into single SAS Domain with Zoning disabled yields FRU Report issues such as:

- Chassis.00 FRU reports: One of the two connected Expander 1 Port 0 Cable Status fields is dropped from the report.
- Chassis.00 FRU reports: The second connected port Expander 1 Port 1 Cable Status displayed is Degraded.
- Access Configuration pages are missing port 0.

Attaching both ports from an HBA into the same F5100 expander results in a “wide port” (8 phys). Sun Storage Common Array Manager software models the aggregated connections as a single, logical SAS port. The information displayed in



the Access Configuration Summary only lists the connected port with the higher alphanumeric sort. For example, if Ports 0 and 2 are connected into the same expander, only Port 2 is listed.

This issue also occurs in the CLI where Port options list a single entry under the Connector list.

Other forms of addressing the wide port are still in force. The SAS Address of the port is available for use in operations, presenting a single address for all eight PHYS of the two HBA connectors.

### *Array lock key must be set before configuration files are imported*

If the configuration file to be imported contains secure volumes, the array lock key must be set *before* the import. The verification step of the import fails if a secure volume is found but the array lock key has not been set. The import job will not be started and no settings on the target array will be changed.

### *ComponentInsertEvent not generated for disk drive inserted into J4200*

**Bug 6953638**—When a disk drive is inserted into the J4200, no ComponentInsertEvent is generated and entered into the Event Log. Only ValueChangeEvent [such as (Status +) from Removed to OK for disk in slot x] are generated.

### *Current Jobs page can take more than five minutes to display*

**Bug 6871197**—In a Sun Storage 6180 array with 1023 Volume Copies, it takes over five minutes for the Current Jobs page to display.

**Workaround**—Click the Current Jobs page a second time to display the page more quickly.

### *Expander firmware 5.3.73 does not persist a SAS zone group*

Sun Storage F5100 Flash array expander firmware 5.3.73 does not persist a SAS zone group in the case where an initiator's SAS address changes. Initiator SAS address change can be caused by a host reboot or when a new initiator is plugged into a previously zoned F5100 port. When a SAS address changes, Sun Storage Common Array Manager will still report the initiator and the devices are associated; however, the F5100 expander has actually disassociated the host from the zoned devices. This results in the host losing access to zoned devices.

**Workaround** –Re-zone the new initiator address with the existing devices, to ensure the new host initiator is associated with the target devices. This issue is fixed in F5100 expander firmware 5.4.4.

### *Replication status incorrect when primary volume fails*

**Bug 6561709** –When the primary volume in a replication set (6xxx arrays) fails, the management software might incorrectly list the volume as replicating.

### *Service Advisor: replacing failed SIM with dual path configurations*

If you have dual paths to hosts in zones with cascaded JBODs and you need to replace a failed SIM, you might encounter a problem when you have to plug in the SAS cables to the new SIM. This is because the new SIM is not zoned and all hosts see all disks until the old zone is restored.

**Workaround**—Before you replace a failed SIM, be sure to **stop all I/O, even in dual path configurations**. When you insert the new SIM, you have to upgrade the firmware which requires stopping the I/O anyway. Taking this step before replacing a failed SIM enables rezoning the new SIM before attempting further I/O.

### *Volumes not deleting from the Single Page window*

**Bug 6807053**—Unable to delete volumes with the “Show Data in Single Page” option from the Volume Summary page. After multiple volumes are deleted, the Volume Summary Page still shows the same number of volumes as before.

**Workaround**—Use paginated view to delete volumes.

### *Attempt to delete partner replication set on secondary array fails*

**Bug 7057616**—When you delete a replication set using the CLI or GUI, the partner replication set on the secondary array will not be deleted if the controller that is participating in the replication has a port that is down.

**Workaround**—Go to the secondary array and delete the partner replication set from that array.

# Documentation Issues

## *2500 Series Release Notes: Simplex vs. Duplex Configurations*

The *Sun StorageTek 2500 Series Array Release Notes, Release 1.4* document contains contradictory information on pages one and 21 concerning the StorageTek 2501 Expansion Module in simplex and duplex configurations. The correct information is this: **Only Simplex 2501 expansion modules may be attached to a Simplex 2500 series controller tray.**

## *Disk Locked description is inaccurate in online help*

**Bug 7145187**—The field description for Disk Details > Disk Locked is inaccurate.

**Correction**—For disks supporting Data Encryption Services, a value of True means this disk is locked and cannot accept read or write operations. False means the disk is not locked.

# Firmware Update Issues

For notable fixed issues related to firmware, see [“Notable Fixes” on page 14](#).

## *Firmware upgrade fails with error: FWR\_UPGRADE\_FAILURE,6 for J4200/J4400 arrays*

**Bugs 6871188, 6919285, 6925388**—Upgrading firmware on J4200/J4400 attached to x6250 blade fails, with the following error message:

Error upgrading firmware. Check the following error message and array alarm page for possible problems. `flash firmware image failed FWR_UPGRADE_FAILURE, 6`

The firmware on the JBOD remained at 3R21 and all disks remained at the same FW level.

**Workarounds**—For this symptom—SUSE Linux host, J4400 SIM upgrade failed with return code 6, possibly leading to SIM firmware mismatch—there are two possible workarounds:

- If the upgrade failed without firmware mismatch, do this:
  - Power cycle the array and rerun the firmware upgrade wizard GUI.
- If the upgrade failed with firmware mismatch, do this:

Power cycle the array and rerun the firmware upgrade using one of the following CLI commands:

```
sscs modify -a <array-name> -f -t sim -o -w firmware
```

or

```
csmservice -i -a <array-name> -f -t sim -o -w
```

### *Firmware upgrade fails on J4400 SATA drives*

**Bug 6939824**—When upgrading a J4400, the SATA disk firmware upgrade fails.

**Workaround**—Move affected disks to another slot before upgrading so they do not remain in a degraded state.

### *Firmware upgrade fails when expander and disks are upgraded together*

**Bug 6916355**—Errors occur when you attempt to upgrade expander and disk firmware at the same time.

**Workaround**—Power-cycle the array and re-run the firmware install wizard. Then resume the disk drive firmware upgrade.

### *Firmware upgrade not recognized by GUI until agent runs*

**Bug 6873568**—After a firmware upgrade, the CAM GUI is not updated with the correct version.

**Workaround**—Wait 5 minutes for the agent to run or run the agent manually.

### *Sun Blade 6000 firmware upgrade error: No such expander - 50800200006deabf SIGSEGV in Linux libSTORARC.so*

**Bug 6952753**—During a Sun Blade 6000 firmware upgrade, the following error was reported:

```
No such expander - 50800200006deabf SIGSEGV in Linux  
libSTORARC.so
```

**Workaround**—Use a non-Adaptec HBA (mixed blade environment with SAS controller).

### *Sun Blade 6000 firmware upgrade fails with down-level expander*

**Bug 6948014**—An attempt to upgrade Sun Blade 6000 firmware fails if the associated NEM is not at current revision level.

**Workaround**—When the Network Expansion Module (NEM) and Sun Blade 6000 Disk Module are flagged for upgrade, execute an upgrade on the NEM first. Then, the upgrade works for the Sun Blade 6000 Disk Module storage. For more information, see the *SAS Compatibility Firmware Guide*.

### *Sun Blade 6250 and 6270—upgrading network expansion modules fails*

**Bug 6965677**—CAM reports that the upgrade of the NEM expanders completed successfully. However, the updated firmware is not reflected in the GUI.

**Workaround**—Retry the upgrade (multiple attempts might be needed) or use a non-Adaptec HBA.

## Installation and Upgrade Issues

### *Error occurs when upgrading 2510 controller and drive firmware*

**Bug 7042337, 7143862**—When you upgrade controller and drive firmware for the StorageTek 2510 array, the upgrade fails and the Install wizard displays “Error upgrading firmware.”

**Workaround**—Perform the upgrade in two steps. First upgrade only the controller firmware, and then upgrade the drive firmware.

### *Installation fails on SUSE 10.3 32-bit and 64-bit hosts*

**Bug 7112028**—Installation of CAM fails with the error:

The package jdk- did not install successfully.

**Workaround**—Run `uninstall -f` and then reinstall the CAM software. The uninstall removes the jdk so you do not have to remove it manually.

### *Oracle Java Web Console service fails—InstallShield gives wrong switch*

**Bugs 6792599 and 6753860**—InstallShield provides wrong switch (should be `-c`) in error message.

- Invalid switch option is given on GUI-based install failure.
- Oracle Java Web Console Service Default is 40bit SSL keys fail FIPS/Fed autids.
- When attempting to install Sun Storage Common Array Manager via text-based install, the installer is unable to run in graphical mode unless the correct switch is added.

**Workaround**—Run the installer with:

```
-c flag
```

```
root@sx-dimen-a04# ./RunMe.bin -c
```

---

**Note** – Contact Support at <https://support.oracle.com> for instructions on how to modify the default ciphers for JVM or modify Tomcat configuration files.

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## Linux Issues

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**Note** – Before installing CAM on Oracle Enterprise Linux 6.0 or Red Hat Enterprise Linux 6.0, you must install the packages listed in the “Linux OS Requirements” section of the *Sun Storage Common Array Manager Installation and Setup Guide*.

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### *“Require-Stop” not working in SUSE11.1 innserv jexec init.d script*

**Bug 7013981**—The dependency boot sequence LSB comment for “Require-Stop” is missing in the `/etc/init.d jexec` script. Currently, this generates warnings whenever an administrator installs other unrelated products such as RPMS, HBA management applications, or failover RDAC packages.

**Workaround**—Add the following line in `/etc/init.d/jexec`:

```
# Required-Stop: $local_fs
```

### *Logging in to CAM on SUSE11 using invalid password*

**Bug 6911829**—If you enter an invalid password when logging into CAM on SUSE11, login ceases to work even when valid password is provided.

**Workaround**—Close the browser, then open it again and log in to CAM using the correct password.

## *Adding or removing SATA drives requires host boot*

**Bug 6835314**—Linux kernel:mptbase(Abort) occurs on both RedHat 5.2 and SUSE 10.

Adding or removing SATA drives to a Linux host yields the following message:

```
kernel: mptsas: ioc2: removing sata device: fw_channel 0, fw_id 4, phy 4, sas_addr 0x500163600010a390
```

```
kernel: mptbase: ioc1: LogInfo(0x31120101): Originator={PL}, Code={Abort}, SubCode(0x0101)
```

The following message is also common:

```
multipathd: sdd: checker msg is "tur checker reports path is down"
```

Normally the (kernel: mptsas) messages are seen for zoning operations but when the (kernel:mptbase) message is also seen, only a reboot will recover the hosts' ability to properly see the drives.

**Workaround**—Reboot host.

## *Sun Storage J4000 and F5100 Flash arrays—Linux hot plug issues*

Two categories of J4x00/F5100 Hot Plug issues have been identified--those that require a Linux host reboot and those in which the hot plug is not supported. These are separated into two sub-sections:

1. **Linux host reboot is required if the array or any of its components are not recognized after changes such as cable re-configurations, firmware upgrades, etc.**
  - StorageTek SAS RAID HBA hot plug is not supported.
  - Sun StorageTek SAS RAID HBA is inconsistent with reports and missing FRU disk information. This is expected J4x00 registration behavior during SAS bus re-scan.
  - Firmware upgrade failed for Sun Blade 6000 Disk Module.
  - J4x00—Name issues during registration and upgrade connected to B0/B1 side.
  - J4x00—Linux J4x00 registration—sg\_map -i must be clear of all errors or it fails; leads to host reboot to clear sg\_map.
  - Newly added or removed targets (i.e. disks) due to changes in Access Configuration, cable re-configuration, firmware upgrades, or the addition of new storage can potentially cause the host to hang or panic due to known Linux kernel issues.

**Bug 6731595**—J4200/J4400: Sun StorageTek PCI-Express SAS Host Bus Adapter B3: SUSE 9 SP4: Multipath (device mapper): Alternate SIM failure causes host to hang.

**Bug 6732411**—J4200/J4400: Sun StorageTek PCI-Express SAS Host Bus Adapter B3: SLES9SP4: Multipath: Lost Communication to JBOD after Sun Storage Common Array Manager software SIM firmware upgrade.

**Bug 6777089**—MPT 3.16.00.00 pandora hba SAS cable insert, expander reset or power cycle hang x86 host until reset.

**Bug 6817878**—OS does not see zoning filtering through to proxy server correctly. This issue is specific to Linux hosts.

**Bug 6830042**—As a result of JBOD expander firmware upgrade, expander reset might hang Linux OS.

**Bug 6833156**—1.26.03.00: linux missing targets, fdisk -l and sg\_map -i hangs after JBOD second power cycle.

**2. Sun StorageTek SAS RAID HBA hot plug is not supported. Generally, the workaround is to reboot the array between any cable changes etc.**

**Bug 6723686**—J4x00 failed disk drive (Sun StorageTek SAS RAID HBA) not reported.

**Bug 6732704**—J4x00 Windows agent (Sun StorageTek SAS RAID HBA) 0.0 MB reported; drive FRU missing unique identifier.

## Solaris Issues

*Error—"no execute access to opt/SMgr/agent/notifysmagent.sh"—occurs during system boot-up*

**Bug 6934913**—This error occurs when `/opt(SMagent install directory)` is built on a disk partition other than root partition.

**Workaround**—Though event notification is lost as a result, there are no adverse effects because the SMagent detects the disk device(UTM volume) during re-scan. The `notifysmagent.sh` script should be available to the `syseventd` since the script is located in the same directory of the SMagent startup script.

### *UTM LUNs Controlled by "Solaris Traffic Manager" 6000/2500 arrays*

After you upgrade to S10U3 (or later), the in-band management UTM LUNs 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 LUNs are not controlled by MPxIO.



**Workaround**—Use the `format inquire` command to get the eight-character Vendor (VID) and Product IDs. Follow this procedure

**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 result when the system is rebooted.
```

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

## Windows Issues

### *Support Data does not save using Windows 2008 R2 SP1 Servers*

**Bug 7076972**—Application support data files cannot be saved using Windows 2008 R2 SP1 servers. Support data for an array is collected and saved in the Common Array Manager by selecting *array* > General Configuration > Support Data.

**Workaround**—On the Windows 2008 server, disable “Do not save encrypted pages to disk.” Go to Tools > Internet Options > Advanced > Security and uncheck “Do not save encrypted pages to disk.”

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## Contacting Support

Contact Support at: <https://support.oracle.com>