

# Sun Fire X4450 Server

## Product Notes



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# Sun Fire X4450 Server Product Notes

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This document contains late-breaking information and issues for the Sun Fire X4450 server.

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**Note** – The information in the English version of the Product Notes might be more up-to-date than the translated versions.

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The following issues are covered in these product notes:

- “Software Information” on page 2
- “Critical Issues” on page 11
- “Diagnostic Issues” on page 14
- “Hardware and BIOS Issues” on page 16
- “System Management Issues” on page 30
- “Sun Installation Assistant Issues” on page 37
- “Solaris Operating System Issues” on page 40
- “Linux Issues” on page 45
- “Windows Notes and Issues” on page 49
- “VMware Issues” on page 53
- “LSI 3081E Host Bus Adapter Issues” on page 54
- “StorageTek SAS Controller Issues” on page 56
- “Documentation Issues” on page 58
- “Fixed Issues” on page 58

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# Software Information

This section contains the following software information:

- [“Supported Operating Systems” on page 2](#)
- [“Software and Firmware Options” on page 2](#)
- [“CPLD Update Might Be Required Before Firmware Update” on page 11](#)

## Supported Operating Systems

The following operating systems versions are supported on the Sun Fire X4450 server:

- Red Hat Enterprise Linux (RHEL 32-bit/64-bit) 4.5, 4.6, 4.7, 4.8, 5.1, 5.2, 5.3, 5.4
- SUSE Linux Enterprise Server (SLES) 9 SP4 (64-bit), SLES) 10 SP1 (64-bit); SLES 10 SP2 (64-bit), SLES 10 SP3 (64-bit/XEN), SLES 11 (64-bit)
- Windows Server 2003 EE R2 SP2 (32-bit/64-bit),
- Windows Server 2008 (32-bit/64-bit), Windows Server 2008 R2 (64-bit)
- Solaris™ OS 10 5/08, Solaris OS 10 10/08, Solaris OS 10 5/09, Solaris 10 10/09
- VMware ESX/ESXi 3.5U5, VMware ESX/ESXi 4.0U1
- OpenSolaris 2009.06
- Oracle Enterprise Linux (OEL) 4.8, 5.3 (32-bit/64-bit)
- OVM 2.x

## Software and Firmware Options

- [“Software Supplemental” on page 3](#)
- [“Tools and Drivers DVD” on page 5](#)
- [“Preinstalled Operating Systems” on page 9](#)
- [“Sun Validation Test Suite” on page 10](#)
- [“Sun Installation Assistant” on page 10](#)

# Software Supplemental

The software supplemental releases include BIOS and ILOM updates only. The Tools and Drivers CD is not updated for these releases. You can download the supplemental software updates at:

<http://www.sun.com/servers/x64/x4450/downloads.jsp>

## *Software Supplemental 3.3.1*

The firmware versions include:

- BIOS: 3B68
- ILOM: 3.0.6.15 build r59587

## *Software Supplemental 3.3.0*

The firmware versions include:

- BIOS: 3B67
- ILOM: 3.0.6.15b build r56497

## *Software Supplemental 3.0.2*

Sun Fire X4450 Software Supplemental 3.0.2 firmware package is now available for download:

The firmware versions include:

- BIOS: 3B62
- ILOM: 3.0.6.15 build r48374

The following issue was introduced in 3.0.3.30 build r48374: [“Correctable Errors Incorrectly Listed in the ILOM SEL as a Critical Error”](#) on page 35

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**Note** – Refer to [“Issues Fixed in Software Supplemental 3.2.0”](#) on page 59 for information on issues that have been fixed with this release.

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## *Software Supplemental 3.0.1*

Sun Fire X4450 Software Supplemental 3.0.1 firmware package is now available for download.

The firmware versions include:

- BIOS: 3B61
- ILOM: ILOM 3.0.3.30 r47608

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**Note** – Refer to [“Issues Fixed in Software Supplemental 3.0.1”](#) on page 60 for information on issues that have been fixed with this release.

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## Tools and Drivers DVD

The Tools and Drivers CD/DVD includes firmware and software for the Sun Fire X4450 server. The Tools and Drivers CD or DVD is offered as an option to order with your system. Latest versions of the Tools and Drivers CD/DVD images are available at the following download site:

<http://www.sun.com/servers/x64/x4450/downloads.jsp>

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**Note** – See “CPLD Update Might Be Required Before Firmware Update” on page 11 before updating your system firmware.

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### *Tools and Drivers 3.2.0*

- ILOM version: 3.0.6.15a Build r52422
- BIOS: 3B65
- Sun StorageTek SAS RAID HBA Firmware Update:
  - Firmware version: 16732
  - Sun StorageTek SAS RAID HBA Drivers for Windows (16732), Linux (1.1.5-2463)
- Additional driver updates include:
  - RHEL 5.4 (32-bit/64-bit)
  - Solaris OS 10 10/09
  - SLES 11 SP3 (64-bit/XEN)
  - OEL 4.8 and 5.3 (32-bit/64-bit)
  - Intel NIC Driver 14.8
  - AST2000 Driver 090
- Pc-Check: 6.24s
- ipmitool 1.8.10.2
- VGA 090

Additional software updates include:

- SunVTS Diagnostics CD Bootable CD 7.0 ps7
- Sun Installation Assistant 2.3.17.0
- Sun StorageTek PCIe SAS RAID Host Bus Adapter ASM: 17551

## *Tools and Drivers DVD 3.1.1*

The updates for Tools and Drivers DVD 3.1.1 include:

- ILOM version: 3.0.6.15 Build r50607
- BIOS: 3B64
- Sun StorageTek SAS RAID HBA Firmware Update:
  - Firmware version: 16732
  - Sun StorageTek SAS RAID HBA Drivers for Windows (16732), Linux ((1.1.5-2463)
- Additional driver updates include:
  - RHEL 4.8 (32-bit/64-bit)
  - Solaris OS 10 10/09
  - SLES 10 SP3 (64-bit/XEN)
  - OEL 4.8 and 5.3 (32-bit/64-bit)
  - Intel NIC Driver 14.3
  - AST2000 Driver 089
- PC Check: 6.23s
- ipmitool 1.8.10.2

Additional software updates include:

- SunVTS Diagnostics CD Bootable CD 7.0 ps7
- Sun Installation Assistant 2.3.14.0
- Sun StorageTek PCIe SAS RAID Host Bus Adapter ASM: 17551

For further information on ILOM 3.x, refer to the ILOM 3.0 documentation included in the Sun Fire X4450 server documentation set.

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**Note** – Refer to [“Issues Fixed in Tools and Drivers DVD 3.1.1”](#) on page 60 for information on issues that have been fixed with this release.

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## *Tools and Drivers DVD 3.1.0*

The updates for Tools and Drivers DVD 3.1.0 include:

- ILOM version: 3.0.6.15
- BIOS: 3B63
- Sun StorageTek SAS RAID HBA Firmware Update:
  - Firmware version: 16732



- Sun StorageTek SAS RAID HBA Drivers for Windows (16732), Linux ((1.1.5-2463)
- Additional driver updates include:
  - RHEL 4.8 (32-bit/64-bit)
  - Solaris OS 10 10/09
  - SLES 10 SP3(64-bit/XEN)
  - OEL 4.8 and 5.3 (32-bit/64-bit)
  - Intel NIC Driver 14.3
  - AST2000 Driver 089
- PC Check: 6.23s
- ipmitool 1.8.10.2

Additional software updates include:

- SunVTS Diagnostics CD Bootable CD 7.0 ps7
- Sun Installation Assistant 2.3.14.0
- Sun StorageTek PCIe SAS RAID Host Bus Adapter ASM: 17551

For further information on ILOM 3.x, refer to the ILOM 3.0 documentation included in the Sun Fire X4450 server documentation set.

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**Note** – Refer to [“Issues Fixed in Tools and Drivers DVD 3.1.0”](#) on page 60 for information on issues that have been fixed with this release.

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The following sections contain information on previous Tools and Drivers CD/DVD updates.

### *Tools and Drivers DVD 3.0*

The updates for Tools and Drivers 3.0 include:

- ILOM version: 3.0.3.30
- BIOS: 1ADQW060
- Sun StorageTek SAS RAID HBA Firmware Update:
  - Firmware version: 15872
- Sun StorageTek SAS RAID HBA Drivers (Windows: 15882, Linux: 2459, Solaris: 15872)

Additional driver updates include:

- RHEL 5.3 (32-bit/64-bit)
- Intel NIC Driver 13.5

- AST2000 Driver 088
- PC Check: 6.22s
- ipmitool 1.8.10.0

Diagnostics CD Bootable CD Update: SunVTS 7.0 ps4 is also included in this software update.

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**Note** – Refer to [“Issues Fixed in Tools and Drivers DVD 3.0.0”](#) on page 61 for information on issues that have been fixed with this release.

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### *Tools and Drivers DVD 2.3.1*

The Sun Fire X4450 Tools and Drivers DVD 2.3.1 is the latest ILOM and BIOS update for the Sun Fire X4450 server. The firmware versions include:

- ILOM: 2.0.2.10 r40317
- BIOS: 3B56

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**Note** – Refer to [“Issues Fixed in Tools and Drivers DVD 2.3.1”](#) on page 61 for information on issues that have been fixed with this release.

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### *Tools and Drivers DVD 2.3.0*

The Sun Fire X4450 Tools and Driver 2.3.0 DVD contains BIOS version 3B55 and ILOM version 2.0.2.10 build 39321.

See [“Issues Fixed in Tools and Drivers 2.3 Release”](#) on page 62 for information on the item that has been fixed in this release.

### *Tools and Drivers DVD 2.2.1*

The Sun Fire X4450 Tools and Driver 2.2.1 DVD contains BIOS version 3B55 and ILOM version 2.0.2.6 build 38980.

See [“Issues Fixed in Tools and Drivers 2.2.1 Release”](#) on page 62 for information on the item that has been fixed in this release.

## *Tools and Drivers DVD 2.2*

The Sun Fire X4450 Tools and Driver 2.2 DVD contains BIOS version 3B54 and ILOM version 2.0.2.6 build 37007.

See [“Issues Fixed in Tools and Drivers 2.2 Release”](#) on page 63 for information on the item that has been fixed in this release.

## *Tools and Drivers DVD 2.1*

The Sun Fire X4450 Tools and Driver 2.1 DVD contains BIOS version 3B53, which includes support for the 6-core Intel® Xeon® 7400 series CPU.

See [“Intel Xeon Processor 7400 Series Issues”](#) on page 21 more information.

## *Tools and Drivers DVD 2.0*

Sun Fire X4450 Tools and Driver 2.0 DVD contains the following firmware updates

- System BIOS - 3B50
- Service Processor - ILOM 2.0.2.6

Tools and Drivers 2.0 DVD contains an update to the Integrated Lights Out Manager (ILOM) system management firmware. Refer to the following documentation for additional information on system management for the Sun Fire X4450 server:

- ELOM information: *Embedded Lights Out Manager Administration Guide for the Sun Fire X4450 Server*
- ILOM information: *Integrated Lights Out Manager 2.0 User's Guide*
- ELOM to ILOM transition: *ELOM-to-ILOM Migration User's Guide*

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**Note** – Refer to [“Issues Fixed in Tools and Drivers 2.0 Release”](#) on page 63 for information on bugs that have been fixed with the latest firmware release.

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## Preinstalled Operating Systems

The following operating systems are available preinstalled on the Sun Fire X4450 server.

- OpenSolaris 2009.06 (available soon)
- Solaris 10 5/09
- Windows Server 2003 32-bit and 64-bit

Refer to the *Sun Fire X4450 Server Installation Guide* for information on configuring the preinstalled operating systems.

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**Note** – The printed version of the *Sun Fire X4450 Server Installation Guide* might not have information on configuring the preinstalled OpenSolaris OS at the time that the OS is available preinstalled on the servers. Refer to the online version of the *Sun Fire X4450 Server Installation Guide* for information on configuring the preinstalled OpenSolaris.

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## Sun Validation Test Suite

Sun Validation Test Suite (SunVTS) provides a comprehensive diagnostic tool that tests and validates Sun hardware by verifying the connectivity and functionality of most hardware controllers and devices on Sun platforms. SunVTS software can be tailored with modifiable test instances and processor affinity features.

SunVTS is an orderable software option and can also be downloaded from:

<http://www.sun.com/oem/products/vts/>

For the most up-to-date information on SunVTS software, go to:

<http://docs.sun.com/app/docs/prod/test.validate>

Make sure to read the most recent product Release Notes before running SunVTS on your server.

## Sun Installation Assistant

The Sun Installation Assistant (SIA) is a tool supported for use with x64 Sun Fire and Sun Blade servers that assists in the installation of supported Linux and Microsoft Windows operating systems (OS). With SIA, you can install the OS, the appropriate drivers, and if necessary, additional system software by simply booting the SIA media and following the prompts.

SIA is an orderable software option, and can also be download from the Sun Download page at:

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

Updates to the SIA program can be obtained easily during the SIA installation by using the Remote Update option in the SIA. For more information on the Sun Installation Assistant, see the *Sun Installation Assistant for Windows and Linux User's Guide For Sun Fire and Sun Blade Series Servers*.

# CPLD Update Might Be Required Before Firmware Update

Prior to updating your server to ILOM, it is recommended that you update the CPLD to the latest version for optimum system performance.

## ▼ Updating the CPLD

1. **Start the Embedded LOM (ELOM) SP web GUI by typing the IP address of the SP into a browser.**

See the *Embedded Lights Out Manager Administration Guide* for instructions on using the ELOM web GUI.

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**Note** – If you have Tools and Drivers CD 2.0 or later, all CPLD files will be integrated to the ILOM package so there is no need to create a folder for CPLD alone. You can skip [Step 2](#).

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2. **Copy the file from /CPLD/S93\_V060.jbc to the local drive from the Tools and Drivers version 1.1d DVD.**
3. **Log in to the SP.**
4. **Click on the Maintenance Tab and choose Firmware Update.**

Shut the server down if you are prompted.  
The Firmware Update screen is displayed.
5. **From the CPLD Update option, click Browse and navigate to the location of the flash file.**
6. **Click Update.**

The firmware uploads.
7. **After the firmware is uploaded, you are asked to remove AC power for 10 seconds to allow the CPLD to be loaded.**

Power the server off and then restart the server.

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## Critical Issues

The following are critical issues for the Sun Fire X4450 server:

- “Important Precautions to Take Prior to Updating Firmware Remotely” on page 12
- “Security Alerts With the Java Runtime Environment” on page 13

## Important Precautions to Take Prior to Updating Firmware Remotely

This precaution only applies if you intend to remotely update the system firmware from a BIOS version earlier than 3B17 (found on any Tools and Driver release prior to 1.1d) to any version 3B17 or later. This precaution does not apply if you plan to update the BIOS by booting the Tools and Drivers DVD and flash updating from DOS.

A condition might exist that leaves a portion of the BIOS chip in a locked state if the system is powered off at any point during BIOS POST prior to loading the operating system. If the system is powered off in this state, the remote firmware update might fail with an error -6 or hang at about the 90% point.

In order to avoid this issue, boot any operating system and shutdown the system normally prior to updating the BIOS. Please take the following precautionary steps to assure a successful firmware update:

- **If the system has any operating system installed:**
  - a. **Boot the operating system.**
  - b. **Log in and shut down the system normally so that the system powers off normally (for example: power-off on Solaris and Linux; Start->Shutdown on Windows).**
  - c. **Flash update the firmware remotely.**
- **If the system does not have an operating system installed and it is not possible to boot any OS (including DOS) from either the Tools and Drivers DVD or a USB flash drive:**
  - a. **Log into the ELOM web interface.**
  - b. **Launch the Remote Console window.**
  - c. **Select Remote Control -> Remote Power Control Tab. From the drop down menu, select "Boot Option: Pc-Check".**
  - d. **Click Save.**
  - e. **Click on Remote Console window, and wait until the Pc-Check menu appears following the system reset.**

- f. Select from the "Remote Power Control Tab", "Power Off", and click Save.
- g. Perform the firmware upgrade from the Maintenance tab.

## Security Alerts With the Java Runtime Environment

There is a security vulnerability in the Java Runtime Environment with Applet Caching which can allow Network Access Restrictions to be circumvented.

See Sun JRE: Sun Alert 103079

<http://sunsolve.sun.com/search/document.do?assetkey=1-26-103079-1>

A vulnerability was found in the Java Runtime Environment with Applet Caching that can allow an untrusted applet that is downloaded from a malicious web site to make network connections to network services on machines other than the one from which the applet was downloaded. This can allow network resources and vulnerabilities that exist on these network resources to be accessed or exploited even though those network resources are not otherwise normally accessible.

There are no signs or symptoms to indicate that the issue above is currently being exploited. To mitigate against DNS rebinding attacks, sites can remove internal IP addresses in DNS lookup results from external DNS servers. This can be done by either filtering such packets at the firewall or by modifying the DNS servers used by clients inside the firewall.

Sun has included changes that perform additional hostname matching using DNS reverse mapping data to mitigate these issues in the following releases. Sun is working with industry partners to more fully address these issues and will include additional improvements in later update releases.

Mitigations are included in the following releases (for Windows, Solaris and Linux):

- JDK and JRE 6 Update 3 and later
- JDK and JRE 5.0 Update 13 and earlier
- SDK and JRE 1.4.2\_16 and earlier

Mitigations will be included in the following release (for Windows and Solaris 8):

- SDK and JRE 1.3.1\_21 and later

JDK and JRE 6 Update 3 is available for download at:

<http://java.sun.com/javase/downloads/index.jsp>

<http://java.com>

JDK 6 Update 3 for the Solaris OS is available in the following patches:

- Java SE 6: Update 3 (as delivered in patch 125136-04 or later)
- Java SE 6: Update 3 (as delivered in patch 125137-04 or later 64-bit)
- Java SE 6\_x86: Update 3 (as delivered in patch 125138-04 or later)
- Java SE 6\_x86: Update 3 (as delivered in patch 125139-04 or later 64bit)

JDK and JRE 5.0 Update 13 is available for download at:

[http://java.sun.com/javase/downloads/index\\_jdk5.jsp](http://java.sun.com/javase/downloads/index_jdk5.jsp)

JDK 5.0 Update 13 for Solaris is available in the following patches:

- J2SE 5.0: Update 13 (as delivered in patch 118666-14 or later)
- J2SE 5.0: Update 13 (as delivered in patch 118667-14 or later 64-bit)
- J2SE 5.0\_x86: Update 13 (as delivered in patch 118668-14 or later)
- J2SE 5.0\_x86: Update 13 (as delivered in patch 118669-14 or later 64-bit)

SDK and JRE 1.4.2\_16 is available for download at:

<http://java.sun.com/j2se/1.4.2/download.html>

SDK and JRE 1.3.1 for the Solaris 8 OS is available for download at:

<http://java.sun.com/j2se/1.3/download.html>

SDK and JRE 1.3.1 has completed the Sun End of Life (EOL) process and is only supported for customers with the Solaris 8 OS and Vintage Support Offering support contracts (see <http://java.sun.com/j2se/1.3/download.html>). Sun strongly recommends that users upgrade to the latest releases.

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**Note** – When installing a new version of the product from a source other than a Solaris patch, it is recommended that the previous affected versions be removed from your system. To remove old affected versions on the Windows platform, please see [http://java.com/en/download/help/uninstall\\_java.xml](http://java.com/en/download/help/uninstall_java.xml)

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## Diagnostic Issues

The following topics are contained in this section:

- “SunVTS Issues” on page 15
- “Pc-Check Issues” on page 15



## SunVTS Issues

The following issue applies to SunVTS diagnostics software.

### SunVTS 7.0 ps2 Does Not Support Network Loopback Testing

Running the "Network" test on the X4450 platform fails due to lack of support in Solaris for the ESB-2 nic loopback operations.

This will be fixed in a future version of SunVTS 7.0.

## Pc-Check Issues

The following issues apply to the Sun Fire X4450 server Pc-Check software included on the Tools and Drivers DVD that comes with the system.

- ["Running Selected Memory Tests Takes a Long Time to Complete" on page 15](#)
- ["Serial Port Test Fails" on page 15](#)
- ["CD-ROM Test Is Not Supported" on page 15](#)

### Running Selected Memory Tests Takes a Long Time to Complete

Running all selected memory tests takes a long time to complete: For example, running thirty-two 2GB DIMMs takes 96 hours to complete.

### Serial Port Test Fails

The Serial Port test fails. Pc-Check does not have support for the RJ45 serial connector.

### CD-ROM Test Is Not Supported

The CD-ROM test is not supported. Support will be added in a future release.

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## Hardware and BIOS Issues

The following issues apply the server hardware and BIOS:

- “Hard Drives Can Be Difficult to Remove From Right-Side Drive Bays” on page 17
- “32-GB SSD Available for Sun Fire X4450 Server” on page 18
- “LV-DIMMs Requirements” on page 20
- “Enabling the Open I/O AT Feature in BIOS Setup Menu” on page 21
- “Intel Xeon Processor 7400 Series Issues” on page 21
- “Pc-Check DMA Register Test Might Fail With BIOS 3B53” on page 23
- “PCI Slot Probe Order and SAS HBA Slot” on page 24
- “Hard Disks Information” on page 24
- “Support for Pushing Video to Onboard or PCI-E Video Card” on page 24
- “Sun 10G Network Adapter May Require a Firmware Update to Version 3.12” on page 24
- “All Keyboard LEDs Light on First Power On” on page 25
- “SAS HBA Card Default Location” on page 25
- “BIOS Serial Port Default Settings Have Changed for Firmware Update 1.1d” on page 25
- “Prevent Inadvertent Disconnection of the DVD Assembly When Removing USB Front Panel Devices” on page 29

### Systems with Adaptec RAID Card and SLES 11 With XEN Fail When SW3.3.0 or SW3.3.1 Are Installed (CR 6966617 and 6974068)

If you upgrade to SW3.3.0 or SW3.3.1 on a system with an Adaptec RAID card and SLES11 or SLES11 SP1 with XEN, the system might hang or be unable to boot.

If your system has an Adaptec RAID card, do not install this combination of software. Instead, you can: either install SLES 11 without the XEN kernel, or do not upgrade to SW3.3.0 or SW3.3.1.

# Hard Drives Can Be Difficult to Remove From Right-Side Drive Bays

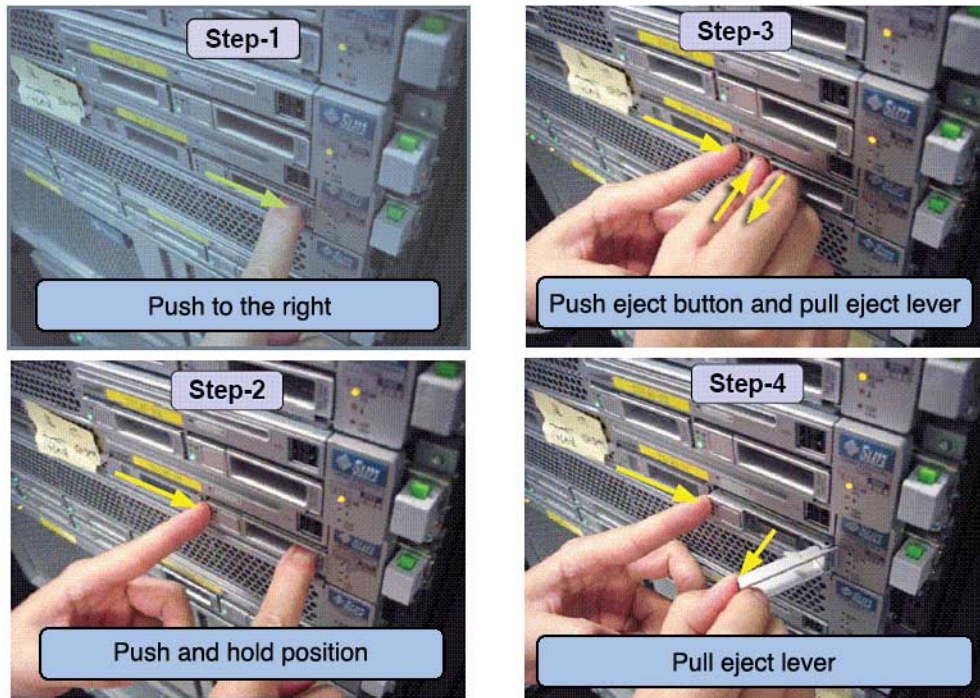
Hard Drives in the right-side drive bays can be difficult to remove.

## *Workaround*

Until a mechanical fix is implemented, use the following procedure to remove hard drives from right-side drive bays.

- 1. Press the drive to the right. See Step 1 in the following figure.**
- 2. Push in on the drive, while holding it pressed to the right. See Step 2 in the following figure.**
- 3. Press the drive eject button and pull on the eject lever. See Step 3 in the following figure.**
- 4. Use the eject lever to slide the drive out of the bay.**

**FIGURE 1** Removing Hard Drives From Right-Side Bays



## 32-GB SSD Available for Sun Fire X4450 Server

32-bit GB solid state drives (SSDs) are now available for the Sun Fire X4450 server. Read the following guidelines before installing SSDs on the server.

There are two configurations for SSDs on the Sun Fire X4450 server that are currently supported:

- [“SSD Configuration Using One Motherboard ESB Connection”](#) on page 18
- [“SDD Configuration Using Both Motherboard ESB Connections”](#) on page 20
- [“LV-DIMMs Requirements”](#) on page 20

### SSD Configuration Using One Motherboard ESB Connection

Use the following guidelines for installing SSDs with one Enterprise South Bridge (ESB) connection:

- The server must be running a minimum BIOS version of 3B55.
- A maximum of 4 SSDs are currently supported.
- Populate the HDD slots as follows:
  - For HDD slots 0-3:
    - Drives 0-3 plug into the ESB connection on the motherboard (labeled SATA 0-3).
    - SSDs or fillers must be used for drive slots 0-3.
    - No SAS HDD can be plugged into slots 0-3, as the ESB will not work with SAS.
  - For HDD slots 4-7:
    - Slots 4-7 can be populated with SAS drives.
    - The backplane cable for drives 4-7 is plugged into HBA card port 0.
    - HBA port 1 is unpopulated.

## SDD Configuration Using Both Motherboard ESB Connections

Use the following guidelines for installing SSDs with both ESB connections:

- The server must be running a minimum BIOS version of 3B55.
- A maximum of 6 SSDs are currently supported.
- Populate the HDD slots as follows:
  - For HDD slots 0-5:
    - SSDs or fillers must be used for drive slots 0-5.
    - No SAS HDD can be plugged into slots 0-5, as the ESB will not work with SAS.
  - For HDD slots 6-7:
    - Slots 6-7 must be populated with fillers, as there is no HDD connection available for these slots.

## SSD Configuration Using Both Intel HBA Connections

- The server must be running a minimum BIOS version of 3B55, which is the Intel PCI-E 8-Channel SAS RAID HBA for Internal I/O FW version of 16732.
- A maximum of 8 SSDs are currently supported.
- SSDs and SAS HDDs can be mixed.

---

**Note** – The *Sun Fire X4450 Server Service Manual* contains further information on cabling the HDDs. This document will be updated with more detailed information on installing SSDs at a later date.

---

## LV-DIMMs Requirements

LV-DIMMs (low voltage DIMMs) are now available for the Sun Fire X4450 server. The following guidelines apply for LV-DIMMs:

- In order to support LV-DIMMs, update the server to BIOS version 3B55 or later.
- Do not mix LV-DIMMs with standard voltage DIMMs.

# Enabling the Open I/O AT Feature in BIOS Setup Menu

When running Intel I/O AT test tool, the feature needs to be enabled in the BIOS menu first.

- In the BIOS Setup menu, select Advanced -> PCI Configuration -> Ethernet IOAT to enable the feature.

## Intel Xeon Processor 7400 Series Issues

The issues in this section apply to Intel® Xeon® processor 7400 series CPUs installed in the Sun Fire X4450 servers.

## Red Hat Linux Versions Supported With Intel Xeon Processor 7400

The Intel Xeon 7400 processors are supported with Red Hat versions RHEL 4 Update 7 (32-bit/64-bit) and RHEL 5 Update 3 (32-bit/64-bit) and later.

## Identifying an Intel Xeon Processor 7400 Series

To determine that an Intel Xeon processor 7400 series CPU is installed in your server, run the following command:

```
psrinfo -pv
```

You will get output similar to the following:

```
The physical processor has 6 virtual processors (0 4-8)
x86 (chipid 0x0 GenuineIntel family 6 model 13 step 1 clock
2400 MHz)
Intel(r) CPU @ 2.40GHz
```

```
The physical processor has 6 virtual processors (1 9-13)
x86 (chipid 0x1 GenuineIntel family 6 model 13 step 1 clock
2400 MHz)
Intel(r) CPU @ 2.40GHz
```

```
The physical processor has 6 virtual processors (2 14-18)
x86 (chipid 0x2 GenuineIntel family 6 model 13 step 1 clock
2400 MHz)
Intel(r) CPU @ 2.40GHz
```

The physical processor has 6 virtual processors (3 19-23)  
x86 (chipid 0x3 GenuineIntel family 6 model 13 step 1 clock  
2400 MHz)

Intel(r) CPU @ 2.40GHz

GenuineIntel family 6 model 13 identifies the Intel Xeon  
Processor 7400 series CPU.

## Minimum BIOS Versions Needed

ILOM BIOS version 3B50 (found on Tools and Drivers DVD v2.0) is the minimum required version needed to boot and support the Intel Xeon processor 7400 series CPU.

BIOS version 3B53 (found on Tools and Drivers DVD 2.1) is the first fully supported BIOS version for this CPU.



---

**Caution** – Neither ELOM nor the ELOM BIOS series (versions less than 3B50) will function with an Intel Xeon processor 7400 series CPU. Systems must be upgraded to ILOM and BIOS version 3B53 or later prior to installing these CPUs or the system will not POST. Flashing to a BIOS version earlier than 3B50 will render the machine unbootable.

---

## Solaris OS 10 Patch 137112-02 is Required to Install or Boot Solaris

If you need to install a version of Solaris older than Solaris OS 10 10/08, then you will need to include patch 137112-02. Instructions for how to install this patch can be found in Sun Solve document ID 209501, titled *Installing a patch to a Solaris™ 10 Operating System 1/06 or later x86/x64 miniroot*.

You can search for this document at: <http://sunsolve.sun.com/>

## Solaris 10 Patch 137112-02 is Required to Install Bootable Sun VTS 7.1

When installing the bootable version of SunVTS 7.1 on a system with a 6-core Intel Xeon processor 7400 series CPU, the system will panic and reboot due to the missing patch 137112-02.

The same applies to running SunVTS from a CD-ROM with patch 137112-02 missing.



SunVTS will run with the factory pre-installed Solaris 10 5/08, which has this patch integrated. For instructions on how to integrate a patch into a Solaris image, refer to Sun Solve document ID 209501 titled *Installing a patch to a Solaris™ 10 Operating System 1/06 or later x86/x64 miniroot*. You can search for this document at: <http://sunsolve.sun.com/>

## CPU Might Incur Performance Issues with Solaris 10

Systems with an Intel Xeon processor 7400 series CPU running Solaris 10 might experience slightly reduced performance or increased power consumption under light utilization due to an issue where the CPUs might not idle fully.

### *Workaround*

1. Add the following line to the `/etc/system` file:

```
set idle_cpu_prefer_mwait=0
```

2. Reboot the system.

A fix for this issue is planned for a future Solaris update.

Refer to CR6726459 for more information.

## Solaris x86 X-Server Issues

If the Solaris x86 X-Server fails to start on a system with an Intel Xeon processor 7400 series CPU, after enabling it with `dtconfig -e`, do the following:

● Add the following option to the `xorg.conf` file:

```
Option "NoDDC" "True"
```

Refer to CR6741388 for more information.

## Pc-Check DMA Register Test Might Fail With BIOS 3B53

With BIOS version 3B53, the Pc-Check DMA register test might fail. This is expected for this BIOS version and will be looked into for a future BIOS release.

## PCI Slot Probe Order and SAS HBA Slot

The PCI-E slot probe order for the Sun Fire X4450 server is slot 3, slot 2, slot 5, slot 4, slot 0, and slot 1.

The primary SAS host bus adapter (HBA) must be installed in Slot 0 due to cable length limitations. Installing any other PCI-E HBA that contains additional bootable devices into PCI-E slots 2 to 5 might change the boot device on the primary HBA. This depends on which OS is installed.

If this occurs, you might need to reconfigure the OS devices on the primary HBA after installing additional HBAs into the system.

## Hard Disks Information

Hard disks are not seen by the BIOS until they are initialized and a volume or RAID is created when using the Sun StorageTek SAS Internal RAID HBA.

## Support for Pushing Video to Onboard or PCI-E Video Card

If a PCI-E video card is used in the server, support has been added to display the video to either the onboard AST2000 video controller or through the PCI-E video card. This change can be made in the System BIOS as follows.

1. **Click the Advanced tab.**
2. **Click the PCI Configuration tab.**
3. **Change the Boot graphic Adapter Priority. The default is Onboard VGA.**

## Sun 10G Network Adapter May Require a Firmware Update to Version 3.12

The Sun 10G network adapter may require a firmware update to version 3.12 and later for correct operation in the Sun Fire x4450. The link for this firmware update is below.

<http://www.sun.com:80/download/products.xml?id=45a593ce>

# All Keyboard LEDs Light on First Power On

When using the Sun Type 7 keyboard, all keyboard LED's will light up on the initial power-on. Press the Num Lock key and the LED's turns off.

## SAS HBA Card Default Location

The default location for the LSI or SunStorageTEK SAS HBA card is PCI-E slot 0.

## BIOS Serial Port Default Settings Have Changed for Firmware Update 1.1d

The BIOS serial port default settings have changed in the 1.1d firmware update. If you are using the serial console, you might need to change your default settings. Prior to the 1.1d release, the default settings were COM2/ttyb/115200 and this firmware updates the settings to the more accepted default of COM1/ttya/9600. If you have reconfigured an existing installation to match the previous defaults of COM2/ttyb/115200, you will need to change your settings.

---

**Note** – For new installations of Solaris 10 8/07 or Solaris 10 5/08 with this firmware update already applied, this does not affect the OS installation as these settings match the defaults.

---

If the serial console was configured and running to display output of the OS on any release prior to 1.1d, the OS output will no longer be displayed unless the changes are made prior to updating the firmware. The following sections contain instructions for changing the serial console settings for the firmware version that you are using:

- [“Red Hat Linux Enterprise Server \(RHEL\)” on page 25](#)[“SuSE Linux Enterprise Server \(SLES\)” on page 27](#)
- [“Solaris 10 OS” on page 28](#)

## Red Hat Linux Enterprise Server (RHEL)

Minimum versions for this procedure: RHEL 3.7 and RHEL 4.3.

Use the procedure that corresponds to the firmware version that you are using:

[“Firmware Versions Earlier Than 1.1d” on page 26](#)

[“Firmware Version 1.1d or Later” on page 26](#)

## *Firmware Versions Earlier Than 1.1d*

1. Use a text editor to edit the `/etc/grub.conf` file.

2. Append the following to the kernel boot parameter line:

```
console=tty1 console=ttyS1, 115200
```

For example, the new kernel boot parameter line should look similar to this:

```
kernel /vmlinuz-2.x.x ro root=LABEL/1 rhgb quiet console=tty1  
console=ttyS1, 115200
```

3. Edit `/etc/securetty`.

a. Add the `ttyS1` to the bottom of the file.

b. Save and exit the file.

4. Edit `/etc/inittab`.

a. Change `id:5:initdefault:` to `id:3:initdefault:`

5. Under the section "Run gettys in standard runlevels" add the following as the first line:

```
co:2345:respawn:/sbin/agetty ttyS1 115200 vt100B
```

b. Save and exit the file.

6. Reboot.

## *Firmware Version 1.1d or Later*

1. Use a text editor to edit the `/etc/grub.conf` file.

2. Append the following to the kernel boot parameter line:

```
console=tty0 console=ttyS0, 9600
```

For example, the new kernel boot parameter line should look similar to this:

```
kernel /vmlinuz-2.x.x ro root=LABEL/1 rhgb quiet console=tty1  
console=ttyS0, 9600
```

3. Edit `/etc/securetty`

a. Add the `ttyS0` to the bottom of the file.

b. Save and exit the file.

4. Edit `/etc/inittab`

- a. **Change** `id:5:initdefault:` **to** `id:3:initdefault:`
- b. **Under the section “Run gettys in standard runlevels” add the following as the first line:**

```
co:2345:respawn:/sbin/agetty ttyS0 9600 vt100B
```

- c. **Save and exit the file.**

## 5. Reboot.

# SuSE Linux Enterprise Server (SLES)

Minimum versions for this procedure: SLES 10 SP1 64-bit.

Use the procedure that corresponds to the firmware version that you are using:

- [“Firmware Versions Earlier Than 1.1d” on page 26](#)
- [“Firmware Version 1.1d or Later” on page 28](#)

## *Firmware Versions Earlier Than 1.1d*

1. **Use a text editor to edit the** `/boot/grub/menu.lst` **file.**
2. **Append the following to the kernel boot parameter line:**

```
console=ttyS1, 115200
```

For example, the new kernel boot parameter line should look similar to this:

```
kernel /boot/vmlinux root=/dev/sda2 resume=/dev/sda1  
splash:silent showps console=tty0 console=ttyS1, 115200
```

3. **Edit the** `/etc/securetty` **file.**

- a. **Add** `ttyS1` **to the bottom of the file.**

- b. **Save and exit the file.**

4. **Edit the** `/etc/inittab` **file.**

- a. **Change** `id:5:initdefault:` **to** `id:3:initdefault:`

- b. **Under “getty-programs for normal runlevels” add the following line:**

```
S0:12345:respawn:/sbin/agetty -L 115200 ttyS1 vt100
```

5. **Save and exit the file.**

6. **Reboot.**

## *Firmware Version 1.1d or Later*

**1. Use a text editor to edit the `/boot/grub/menu.lst` file.**

**2. Append the following to the kernel boot parameter line:**

```
console=ttyS0, 9600
```

For example, the new kernel boot parameter line should look similar to this:

```
kernel /boot/vmlinux root=/dev/sda2 resume=/dev/sda1  
splash:silent showps console=tty0 console:ttyS0, 9600
```

**3. Edit the `/etc/securetty` file.**

**a. Add `ttyS0` to the bottom of the file.**

**b. Save and exit the file.**

**4. Edit the `/etc/inittab` file.**

**a. Change `id:5:initdefault:` to `id:3:initdefault:`**

**b. Under “`getty-programs for normal runlevels`” add the following line:**

```
S0:12345:respawn:/sbin/agetty -L 9600 ttyS0 vt100
```

**c. Save and exit the file.**

**5. Reboot.**

## Solaris 10 OS

Use the procedure that corresponds to the firmware version that you are using:

[“Firmware Versions Earlier Than 1.1d” on page 27](#)

[“Firmware Version 1.1d or Later” on page 29](#)

## *Firmware Versions Earlier Than 1.1d*

**1. Edit the `/boot/solaris/bootenv.rc` file to read:**

```
setprop console "ttyb"  
setprop ttyb-mode 115200,8,n,1,-
```

**2. Edit the `/boot/grub/menu.lst` file to read:**

```
kernel /platform/i86pc/multiboot -B console=ttyb
```

**3. Edit the `/kernel/drv/asy.conf` file and add the following:**

```
name="asy" parent="isa" reg=1,0x2f8,8 interrupts=3;
```

**4. Edit the /var/svc/manifest/system/console-login.xml file to read:**

```
<propval name='label' type='astring' value='115200' />
```

**5. Save and exit the file.**

**6. Reboot the system using the following command:**

```
reboot -r
```

### *Firmware Version 1.1d or Later*

**1. Edit the /boot/solaris/bootenv.rc file to read:**

```
setprop console "ttya"  
setprop ttya-mode 9600,8,n,1,-
```

**2. Edit the /boot/grub/menu.lst file to read:**

```
kernel /platform/i86pc/multiboot -B console=ttya
```

**3. Edit the /kernel/drv/asy.conf file and add the following:**

```
name="asy" parent="isa" reg=1,0x2f8,8 interrupts=3;
```

**4. Edit the /var/svc/manifest/system/console-login.xml file to read:**

```
<propval name='label' type='astring' value='9600' />
```

**5. Save and exit the file.**

**6. Reboot the system using the following command:**

```
reboot -r
```

## Prevent Inadvertent Disconnection of the DVD Assembly When Removing USB Front Panel Devices

The DVD/USB container assembly can be inadvertently disconnected from the Disk Backplane when a direct-connect USB device or USB cable is pulled from a front panel USB port.

## *Workaround*

Apply counter-pressure to the DVD assembly when removing a USB device. In addition, do not remove a USB device when the DVD is operating. This issue will be addressed in the future with a redesigned DVD assembly.

---

# System Management Issues

This section contains issues relating to system management for the Sun Fire X4450 server. Additional OS-specific issues can be found in sections of this document that address specific operating systems.

With Tools and Drivers DVD 2.0, you now have the option to install either ELOM or ILOM system management software on your system.

The topics in this section are:

- [“ILOM 3.0 Issues” on page 30](#)
- [“ELOM and ILOM System Management Issues” on page 32](#)
- [“ILOM System Management Issues” on page 34](#)
- [“ELOM System Management Issues” on page 36](#)

## ILOM 3.0 Issues

The following issues are specific to ILOM 3.0. Additional ILOM 3.0 information is available in Sun Integrated Lights Out Manager (ILOM) Feature Updates and Release Notes.

### When Updating From ILOM 2.0 to 3.0 the Delay BIOS Is Not Available in the CLI (6786140)

When you upgrade from an ILOM 2.0.2.10 to a 3.0 version, you do not have the option to delay the BIOS update in the CLI.

## *Workaround*

Use the WebGUI to update from ILOM 2.0.2.10 to 3.0 if you want to use the Delay BIOS option.



## The System Shuts Down When CPU Temperature Rises Without SEL or LED Notification (6790299)

When the CPU temperature reaches its upper critical limit, the system shuts down, though there is no event logged in the system event log (SEL) and the Tempfail LED does not light.

## Do Not Start New Flash Process While SP Is Already in a Flash Process (6778713)

While the SP is being updated (flashed), do not start a new flash process. Wait until the current flash is completed before you start a new one.

## ILOM Update To or From ILOM 3.0 Causes BIOS Version to Not Be Viewable (6789995)

When ILOM is downgraded from ILOM 3.0 to ILOM 2.0 or upgraded from ILOM 2.0 to 3.0, the BIOS version might not appear in the Firmware Upgrade section of the web interface. TABLE 3 indicates when you can expect to see the BIOS version visible in the Firmware Upgrade section of the ILOM web interface.

**TABLE 1** When BIOS Viewable in Web Interface

<b>ILOM State</b>	<b>BIOS Update Required?</b>	<b>Existing BIOS Version Viewable in Web Interface?</b>	<b>New BIOS Version Viewable in Web Interface?</b>
Upgraded from 2.0 to 3.0	Optional	No	Yes
Downgraded from 3.0 to 2.0	Mandatory	No	No

### *Workaround*

If you can not get the BIOS version from web interface while it is updating, you can view the BIOS version connected with the ILOM version from these product notes. See [“Tools and Drivers DVD”](#) on page 5.

If the BIOS is currently running and not in update mode, you can obtain the BIOS version from BIOS Setup utility or ILOM CLI.

# ELOM and ILOM System Management Issues

The issues in this section apply whether you are running ILOM or ELOM. The following issues are included in this section:

- [“ELOM to ILOM Upgrade Issues”](#) on page 32
- [“Remote OS Installation Over an RKVM Requires the User to Unmount and Remount the Virtual CD-ROM”](#) on page 33
- [“Disabling the Web GUI Time-Out Function”](#) on page 33
- [“Minimum Supported Browsers”](#) on page 33
- [“Configuring the Java Runtime Environment for Each Browser”](#) on page 34
- [“Streaming Video and KVMS Over IP”](#) on page 34

## ELOM to ILOM Upgrade Issues

- Prior to the ILOM upgrade, it is recommended that you update the backplane and CPLD firmware.
- Following an update, all SP SEL is timestamped 1970 until the System is first powered on.
- Following upgrade to ILOM, the following message appears in the SEL: “Upgrade to version unknown succeeded”. The upgrade has succeeded, the version will be 2.0.2.6 for the SP firmware.
- Yellow bang icon appears in device manager next to onboard NICS after ELOM to ILOM transition.

In some circumstances, when updating from ELOM to ILOM using the web GUI or CLI on a Windows system, a yellow bang icon might appear in device manager for the onboard NICS.

If this occurs, do the following:

- a. **Shut down the Windows OS.**
- b. **Remove AC power for 20 seconds.**
- c. **Power system back on.**

The yellow bang icon is no longer visible.

## CD-ROM Redirection Must Be Enabled for Floppy Redirection to Work

Before attempting a floppy device or floppy image redirection in the Remote Console, you must first redirect the CD-ROM device or CD-ROM image and leave it redirected while the floppy is being redirected.

# Remote OS Installation Over an RKVM Requires the User to Unmount and Remount the Virtual CD-ROM

When installing an operating system remotely using a RKVM session, each CD-ROM from an installation requires the user to unmount and remount the virtual CD-ROM. When a virtual CD is ejected, the OS treats it as a USB device removal, and it must be remounted to continue the installation.

## Disabling the Web GUI Time-Out Function

It is best to disable the web GUI time-out function when performing remote installations. To disable the web GUI time-out function:

**1. From the main menu, click the System Information tab.**

The Versions, Session Time-Out, and Components submenu tabs appear.

**2. Select the Session Time-Out tab.**

The Session Time-Out screen appears.

**3. Click the Disable Time-Out radio button.**

**4. Click the Submit button to disable the session time-out.**

## Minimum Supported Browsers

The following table shows the minimum versions that are supported for running the web GUI for the Sun Fire X4450 server on Solaris and Linux operating systems.

**TABLE 2** Version Numbers for Browsers

	Solaris X86	RHEL 32-bit	RHEL 64-bit	SLES 32-bit	SLES 64-bit	Windows
Mozilla	1.7	1.7.12	1.7.13	1.7.8	1.7.13	N/A
Firefox	1.5.0.4	1.0.7	1.5.0.4	1.5.0.4	1.5.0.4	1.5.0.4
Internet Explorer	N/A	N/A	N/A	N/A	N/A	6

## Configuring the Java Runtime Environment for Each Browser

Java Runtime Environment (JRE) 5 Update 7 is the minimum supported version for the browsers to run the web GUI. Follow the steps below to download the JRE 5 Update 7 for Mozilla and Firefox browsers.

---

**Note** – It is recommended that you download and run the latest Java release.

---

**1. Go to the following URL:**

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

**2. Click the Get Java for Your Desktop button.**

**3. Click Free Java Download in the new window that opens.**

The web site displays the appropriate plug-in options for the operating system that you are running.

**4. Click Download to download the appropriate plug-in.**

Installation instructions and plug-in verification are also available on this site.

## Streaming Video and KVMS Over IP

The keyboard, video, mouse, and storage (KVMS) over IP feature of the SP is designed for administering your system. Applications requiring heavy video bandwidth (for example, watching videos) do not perform well with KVMS over IP.

## ILOM System Management Issues

The issues in this section apply to a system running ILOM. The following issues are included in this section:

- “Correctable Errors Incorrectly Listed in the ILOM SEL as a Critical Error” on page 35
- “Select Mouse Mode Settings According to Host OS (ILOM)” on page 35
- “Switch Control Between Local Mouse and Host Mouse (ILOM)” on page 36
- “User Information Not Available in Web GUI When Users Are Created in IPMITool” on page 36
- “ILOM SP Not Responding During BIOS Post” on page 36
- “IPMITool 1.8.9.4 or Later is Needed to Correctly Display Memory Errors on ILOM” on page 36

## Correctable Errors Incorrectly Listed in the ILOM SEL as a Critical Error

Correctable errors detected by the background scrubber in ILOM: 3.0.3.30 build r48374 are incorrectly listed in the ILOM system event log (SEL) as a critical error with the following description:

```
Memory Scrub Failed
```

These messages are caused by Correctable ECC Error, which should have a severity of minor, not critical. This SEL message will be fixed in a future release.

## Time on SP Resets to January 1, 1970, When the System is Power-Cycled (6739868)

ILOM stores the time in a file every 15 minutes. After the system reboots, the time is restored to whatever time was last written to that file plus a small delta.

During the boot process, the date might temporarily be displayed as January 1, 1970. This will automatically change to the current time once the boot process reaches the timestamp file check.

## Must Be Physically Present When Logging Into Serial Console With the Default Account

Physical presence is required when you try to log in with default account from the serial console. You will need to press the Locate button twice for the system to recognize your physical presence.

## Select Mouse Mode Settings According to Host OS (ILOM)

You need to select the correct mouse mode corresponding to the host OS in order for your local mouse to manage the host remotely via the ILOM web interface.

### 1. Select the appropriate mouse mode:

- Select Absolute mouse mode if your host is running Windows OS or Solaris
- Select Relative mouse mode for Linux OS.

2. Reset the SP to apply this change.

## Switch Control Between Local Mouse and Host Mouse (ILOM)

In order to switch control between local mouse and host mouse, you can press “Alt +m”.

## User Information Not Available in Web GUI When Users Are Created in IPMITool

After adding a user with `ipmitool`, if the password and privilege are not specified when the user is created, then the web GUI will not display any user information.

### *Workaround*

Set the user role and password using the CLI. Refer to the *Sun Integrated Lights Out Manager 2.0 User's Guide* for detailed information on managing user information.

## ILOM SP Not Responding During BIOS Post

Under rare circumstances, you may see an SP not responding message during BIOS POST. If the BIOS halts and reports this message, please press Ctl-Alt-Del and reboot again. This will be fixed in a future release [as CR6714006].

## IPMITool 1.8.9.4 or Later is Needed to Correctly Display Memory Errors on ILOM

IPMITool 1.8.9.4 can be obtained from `utilities/ipmitool` directory from Tools and Drivers DVD version 2.1 or later.

## ELOM System Management Issues

The issues in this section apply for a system running ELOM. The following issues are included in this section:

- [“How to Update the Disk Backplane Firmware \(ELOM\)” on page 37](#)

## How to Update the Disk Backplane Firmware (ELOM)

1. **Start the embedded LOM sp web GUI by typing the IP address of the SP into the browser.**
2. **Copy the file /utilities/backplane/MG9073S\_v14.bin.**
3. **Log into the SP.**
4. **Power on the server.**
5. **Click on the Maintenance tab and choose firmware Update.**

---

**Note** – The system must be powered on for the option to appear. Under Upgrade MG9073 firmware (Hard disk backplane), click browse and point to the MG9073S\_v14.bin file copied in step 2.

---

6. **Click the Upgrade button.**
7. **A success message appears when complete.**

---

## Sun Installation Assistant Issues

The following issues are related to the use of Sun Installation Assistant (SIA) for installing an OS on the server:

- [“SLES 9 SP4 is not supported in SIA 2.3.14.0” on page 37](#)
- [“PXE Installation of SLES9 SP4 64-bit Using SIA 2.2.16.0 Installs Automatically \(6828400\)” on page 38](#)
- [“Installing Windows Server 2003 Using SIA From a NFS Share or FTP Share Does Not Work” on page 38](#)
- [“Monitor Resolution Might Need to be Reset After Installing Linux Using SIA” on page 38](#)
- [“Unusable Network Drivers for RHELv5.1 64-bit With Sun Installation Assistant” on page 39](#)

### SLES 9 SP4 is not supported in SIA 2.3.14.0

SLES 9 SP4 is not supported in SIA 2.3.14.0.

*Workaround:* Use SIA 2.2.16.0 which is in SW 3.0.0 to install SLES 9 SP4.

## PXE Installation of SLES9 SP4 64-bit Using SIA 2.2.16.0 Installs Automatically (6828400)

If you use PXE to install SLES 9 SP4 64-bit on the Sun Fire X4450 server using SIA 2.2.16.0, the installer will be launched right after the installation URL is entered without the user confirmation that SIA usually provides for other OS installations.

## Installing Windows Server 2003 Using SIA From a NFS Share or FTP Share Does Not Work

Installing Windows Server 2003 from a NFS share or FTP share does not work with SIA.

This is planned to be fixed in a future release of SIA.

## Windows Boot Disk Selection in SIA

The way that SIA presents the disks to select from for choosing the Windows boot disk (it's a control on the screen where one enters in other Windows information, like the CD key) might be unclear for a Windows user who is used to seeing things like 'C:' and not LUN-something. We should document how to interpret the disk information that SIA is presenting. We must also note that it is imperative that the user select the disk that is the default HDD boot device set in BIOS.

## Monitor Resolution Might Need to be Reset After Installing Linux Using SIA

For most Linux installations using SIA, the monitor resolution will need to be reset during the first-time-boot configuration, which runs after the OS installation is completed.

To reset the monitor resolution:

- 1. Configure the type (make/model) of the monitor.**



## 2. Set the correct monitor resolution.

# Unusable Network Drivers for RHELv5.1 64-bit With Sun Installation Assistant

After installing and configuring Red Hat Enterprise Linux (RHEL) v. 5.1 (64-bit), the network devices are there and mapped as expected, but the interfaces are non-functional.

This issue occurs with the following configuration:

- Network cables are not plugged into all NICs.  
If the network cables are plugged in all NICs, this problem does not occur.
- User chooses to activate all NICs on boot.  
If user chooses to activate only the NIC with network cable plugged, this problem will not occur.
- User configures all NICs with static IP addresses.  
This problem will not occur if DHCP is chosen.
- User configures the same network/gateway for all NICs  
If different networks are configured for different NICs, this problem is not seen.

## Workaround

After booting the installed system, perform the following:

### 1. Log in as root.

### 2. Enter the `ifdown` command for all the interfaces.

```
ifdown eth0  
ifdown eth1  
ifdown eth2  
ifdown eth3
```

### 3. Enter the `ifup` command for the interface with network cable plugged in.

For example:

```
ifup eth0
```

At this point, the network should be up and running.

### 4. To make this configuration persistent across reboots, you can make only the interface with network cable active on boot by doing the following:

a. Change to the `network-scripts` directory.

```
cd /etc/sysconfig/network-scripts
```

b. For the NICs that are not being used, edit the `cfg-eth[1...n]` file and change the line `ONBOOT=yes` to `ONBOOT=no`.

---

**Note** – Keep the `ONBOOT=yes` setting for the NIC with the network cable.

---

## Solaris Operating System Issues

This section addresses issues that apply to Sun Fire X4450 servers running the Solaris 10 operating system.

- [“Serial Console Switched From `ttya` to `ttyb` Between Firmware 3.1.1 and 3.2.0 \(6932550\)”](#) on page 40
- [“Solaris Remote Console Session Requires Java Plug-in”](#) on page 41
- [“Virtually Mounted CD-ROM Does Not Always Mount Successfully On a Solaris System”](#) on page 42
- [“Minimum Supported Version for a Remote SPARC System”](#) on page 42
- [“Cannot Virtually Mount Multiple Devices Running SLES as the Host System Connecting Remotely to the Solaris OS on the X4450 Server”](#) on page 43
- [“Solaris 10 8/07 Does Not Recognize a Disk Larger Than 1 Terabyte”](#) on page 43
- [“Solaris Xserver and NIC Interfaces”](#) on page 43
- [“Some KVM Switches Out of Sync Following Solaris OS Installation”](#) on page 43
- [“Remote Console and Virtual Devices on the Solaris OS”](#) on page 44
- [“Intel PCI-E NIC Cards”](#) on page 44

### Serial Console Switched From `ttya` to `ttyb` Between Firmware 3.1.1 and 3.2.0 (6932550)

Symptom: Upgrading firmware to SW 3.2.0 from SW 3.1.1 causes the serial console output to switch from `ttya` to `ttyb` resulting in no SP serial console output after upgrading.

## Workaround

In Solaris 10:

**1. Edit the /boot/solaris/bootenv.rc file to read:**

```
setprop console `ttyb`  
setprop ttyb-mode 9600,8,n,1,-
```

**2. Edit the /boot/grub/menu.lst file to read:**

```
kernel /platform/i86pc/multiboot -B console=ttyb
```

---

**Note** – This issue will be fixed in the next software release.

---

## Do Not Install the STK 15872 Driver for Solaris 10 5/09

Do not install the driver from the Tools and Drivers CD if you are running Solaris 10 5/09. The Sun StorageTek RAID driver is included in the Solaris 10 5/09 distribution. The STK 15872 driver on the Tools and Drivers CD can be used for previous versions of Solaris.

## Solaris Remote Console Session Requires Java Plug-in

When you launch a Remote Console session on a Solaris system, the system prompts you for a decision regarding the `javaRKVM.jnlp` file. You have the following two options:

- If you are logged in as root, choose the option to open this file with its default application.
- If you are logged in as a user other than root, do the following:

**1. Choose the option to save the file.**

**2. The `javaRKVM.jnlp` file will be downloaded and must be run manually.**

The download manager will display the location of this file.

**3. Move the javaRKVM.jnlp file to the /tmp directory.**

```
% mv /location_of_javaRKVM.jnlp/javaRKVM.JNLP /tmp
```

Where *location\_of\_javaRKVM.JNLP* is the directory where *javaRKVM.JNLP* resides.

**4. To find the location of the javaws application, type the following in a terminal window:**

```
% which javaws
```

**5. Execute the following command from the terminal window:**

```
% /location_of_javaws/javaws /tmp/javaRKVM.JNLP
```

Where *location\_of\_javaws* is the directory where *javaws* resides.

**Example:**

Assume the *javaws* application is run from the */usr/bin* directory:

```
% /usr/bin/javaws /tmp/javaRKVM.JNLP
```

This opens a Remote Console session. Once the remote console window is closed, the */tmp/javaRKVM.jnlp* is removed.

## Virtually Mounted CD-ROM Does Not Always Mount Successfully On a Solaris System

The virtual CD-ROM might not mount successfully connecting from a client system running a Linux Operating System to a X4450 running Solaris 10.

This issue is under investigation.

## Minimum Supported Version for a Remote SPARC System

When running the WebGUI from a SPARC based system, Solaris 10 is the minimum version that is supported.

## Cannot Virtually Mount Multiple Devices Running SLES as the Host System Connecting Remotely to the Solaris OS on the X4450 Server

If you run SLES as the host system connecting remotely to the Solaris OS on the X4450 server, you can connect only one virtual device at a time.

This issue is under investigation

## Solaris 10 8/07 Does Not Recognize a Disk Larger Than 1 Terabyte

Solaris 10 8/07 does install to a RAID configured disk larger than 1Terabyte.

### *Workaround*

Do not create a stripe RAID disk larger than 1TB. This issue is a known issue with Solaris and is currently under investigation.

## Solaris Xserver and NIC Interfaces

In order to start the Solaris Xserver, all of the configured network interface cards (NIC) must be connected to the network. If a NIC is not configured, it does not need to be connected.

## Some KVM Switches Out of Sync Following Solaris OS Installation

When installing the Solaris 10 6/06 in a rack with a KVM switch, the monitor might go out of sync when the Xserver starts to log into the OS.

### *Workarounds*

- 1. Install the Solaris OS in text mode, then do the following:**
  - a. Run the `install.sh` script from the Tools and Drivers DVD.**

**b. Reboot the server.**

Running `install.sh` resolves the issue, because it installs the updated AST2000 VGA driver. See the *Sun Fire X4450 Server Operating System Installation Guide*, 820-2706-10, for additional instructions on running the `install.sh` script for the Solaris OS.

**2. Use KVMS over IP with the Embedded Lights Out Manager (LOM) GUI.**

See the *Embedded Lights-Out Management Administration Guide*, 819-6588, for additional instructions on KVMS over IP.

**3. Install the Solaris OS in GUI mode, and then do the following:**

**a. Boot failsafe or kill the Xserver prior to starting.**

**b. Run the `install.sh` script on the Tools and Drivers DVD.**

See the *Sun Fire X4450 Server Operating System Installation Guide*, 820-2706-10, for additional instructions on running the `install.sh` script for Solaris.

## Remote Console and Virtual Devices on the Solaris OS

If you are running the Solaris OS on your remote console system, you must log into the operating system as root (superuser) to mount any virtual devices.

## Intel PCI-E NIC Cards

Intel PCIe NIC cards have different e1000gXX labels depending on which slot the card is inserted for the Solaris OS.

**TABLE 3** Intel PCI-E NIC Cards

<b>Cards Inserted</b>	<b>Intel NIC</b>	<b>On board</b>
Slot 1	e1000g2/e1000g3	e1000g0/e1000g1/e1000g4/e1000g5
Slot 2	e1000g0/e1000g1	e1000g2/e1000g3/e1000g4/e1000g5
Slot 3	e1000g0/e1000g1	e1000g2/e1000g3/e1000g4/e1000g5
Slot 4	e1000g2/e1000g3	e1000g0/e1000g1/e1000g4/e1000g5
Slot 5	e1000g0/e1000g1	e1000g2/e1000g3/e1000g4/e1000g5

---

# Linux Issues

The following issues apply to Sun Fire X4450 servers running the supported Red Hat or SUSE operating systems.

- “Minimum Supported JRE for Red Hat Enterprise Linux 5” on page 45
- “When Using RHEL 3, the System Does Not See Any Virtual CD-ROM Devices” on page 45
- “How to Manually Mount a Virtual Device Remotely Connected to a Red Hat Enterprise Linux 5 System” on page 46
- “How to Mount a Virtual USB Drive in RHEL 5” on page 47
- “How to Mount More Than One Virtual Device on a RHEL 4 System” on page 48
- “RHEL 4.4 PXE Installation” on page 48
- “RHEL 4.4 and RHEL 5 Error Message” on page 48
- “Random System Crashes With RHEL 4.5” on page 48
- “RHEL 5 PCI BIOS Message” on page 49
- “Red Hat Kernel Panics With Greater Than 64GB of Memory Installed” on page 49
- “RHEL 5 64-bit XEN Kernel Panics With Greater Than 64GB of Memory” on page 49

## Minimum Supported JRE for Red Hat Enterprise Linux 5

The minimum supported JRE to run a remote console on RHEL 5 is JRE6 Update4.

## When Using RHEL 3, the System Does Not See Any Virtual CD-ROM Devices

To fix this discrepancy, use the following procedure:

1. **Check the ID of the CD/DVDROM by typing:** `ls -al /dev/cdrom.`

The output of the command will return something similar to the following:

```
/dev/cdrom -> /dev/hda
```

Use `hda` to append to the boot loader in the next step.

**2. Append the following depending on the boot loader:**

```
xxx=ide-scsi
```

**3. Replace xxx with the output from dev/hda from Step 1.**

The `lilo.conf` file appears, similar to this:

Lilo:

---

```
image=/boot/bmlinux-2.4.21-40.EL
label=linux
initrd=/boot/initrd--2.4.21.40.EL.img
read-only
root=/dev/hda1
append=hda=ide-scsi
```

Another example:

Grub:

----

```
timeout=1-
splashimage=(hd0,0)/grub/splash.xpm.gz
title Red Hat Enterprise Linux AS (2.4.21-40.EL)
root (hd0,0)
kernel /vmlinuz-2.4.21-40.EL ro root=LABEL=/ hda=ide-scsi
```

Notice that the output from Step 2, `hda`, now prefixes `=ide-scsi`.

```
initrd-2.4.21-40.EL.img
```

**4. Reboot the system.**

## How to Manually Mount a Virtual Device Remotely Connected to a Red Hat Enterprise Linux 5 System

When mounting a virtual device, sometimes the device does not automount on the remote system running RHEL 5. Follow the steps below to manually mount the device:

- 1. Double click on the computer icon on desktop.**
- 2. Right-Click on the new device and select mount.**



# How to Mount a Virtual USB Drive in RHEL 5

1. **Edit the file** `/usr/share/hal/fdi/policy/10osvendor/20-storage-methods.fdi`.

2. **Search for the following string:** `<match key="volume.fsusage" string="filesystem">`.

The search returns the following information:

```
<append key="volume.mount.valid_options" type="strlist">codepage=</append>
<append key="volume.mount.valid_options" type="strlist">iocharset=</append>
<append key="volume.mount.valid_options" type="strlist">umask=</append>
<append key="volume.mount.valid_options" type="strlist">uid=</append>
</match>
</match>
```

3. **Add the following text to the file. Place it immediately after the text that was returned in Step 2.**

```
<match key="@block.storage_device:storage.vendor" string="Virtual">
  <match key="@block.storage_device:storage.model" string="DVD/CD-ROM">
    <match key="info.category" string="volume">
      <match key="block.is_volume" bool="true">
        <match key="volume.fsusage" string="">
          <merge key="volume.fsusage" type="string">filesystem</merge>
          <merge key="volume.fstype" type="string">iso9660</merge>
        </match>
      </match>
    </match>
  </match>
</match>
```

4. **Reboot the system**

# How to Mount More Than One Virtual Device on a RHEL 4 System

To mount more than 1 virtual device on X4450 running RHEL 4 perform the following steps:

1. **In the `/etc/modprobe.conf` file add the following line:**

```
options scsi_mod max_luns=xxx
```

2. **Add the number of LUNs to support in place of `xxx`.**

3. **Build the initial ramdisk to implement the change.**

```
mkinitrd -f /boot/newimage-2.6.xx 2.6.xx
```

4. **Add the exact kernel version you have in place of `xx`.**

5. **Change the `boot/grub/menu.1st` parameter to `newimage-2.6.xx`.**

6. **Reboot the system.**

After the reboot, the LUNs should appear.

## RHEL 4.4 PXE Installation

RHEL 4.4 cannot be PXE installed using NET 0/1.

### *Workaround*

Use NET 3/4 or to install from media.

## RHEL 4.4 and RHEL 5 Error Message

When running RHEL 4.4 or RHEL 5, Dmesg might list the following message:  
USB1.1: device not accepting address 2, error 71

This message can be ignored.

## Random System Crashes With RHEL 4.5

Random system crashes can occur when running RHEL 4.5. This could be the result of a known issue with RHEL 4.5. If this occurs:

- There might be an IERR event in the BMC event log.
- The CPU fault LED might be lit for some or all installed CPUs. This problem has been resolved in RHEL 4.6.

## RHEL 5 PCI BIOS Message

The following message occurs when booting or running the `dmesg` command in RHEL 5.

```
MCFT Area at e000000 is Not E820-resend
```

This message can be ignored.

## Red Hat Kernel Panics With Greater Than 64GB of Memory Installed

The following message occurs when there is greater than 64GB of memory installed:

```
Panic on CPU0: Not enough RAM for domain 0 allocation
```

All Red Hat 32-bit kernels panic with more than 64GB of memory installed. It is recommended to use the 64-bit kernels when using more than 64GB of memory.

## RHEL 5 64-bit XEN Kernel Panics With Greater Than 64GB of Memory

Refer to the following link for information on how to work around this issue:

[http://kbase.redhat.com/faq/FAQ\\_103\\_10264.shtm](http://kbase.redhat.com/faq/FAQ_103_10264.shtm)

---

## Windows Notes and Issues

- “LSI MegaRaid Storage Manager Does Not Work Properly With Intel Network Connections in Windows Server 2003 64-bit” on page 50
- “Adaptec Driver Cannot Be Updated With the Tools and Drivers DVD v2.3.1 (and earlier) Auto Install” on page 50
- “Need to Manually Install Adaptec Driver With RIS Installation” on page 51

- “Windows Server 2008 Autorun is Not Supported With Tools and Drivers 2.1 DVD” on page 51
- “Factory-Installed Windows Server 2003 R2 Operating System Setup” on page 51
- “Recovering the Windows Server 2003 Operating System” on page 52
- “Support for Windows Server 2003 Reburn Script Running on a Windows Operating System” on page 52
- “Support in the Tools and Drivers CD 1.1c for Windows Autorun” on page 53
- “CPU IERR After Logging Into Windows 2003 with Qlogic Dual Port and LSI SCSI Card in Specific PCI-E Slots” on page 53
- “BSOD Occurs When Performing Windows 2003 Express Install With SunStorageTEK Drivers” on page 53

## LSI MegaRaid Storage Manager Does Not Work Properly With Intel Network Connections in Windows Server 2003 64-bit

After installing the MegaRaid Storage Manager and Intel Network Connections (NIC Teaming), the `mrmonitor` service stops unexpectedly and cannot start. This affects servers running Windows Server 2003 64-bit.

### *Workaround*

Do not install the NIC Teaming software if the LSI Storage Manager software is required.

## Adaptec Driver Cannot Be Updated With the Tools and Drivers DVD v2.3.1 (and earlier) Auto Install

The Adaptec driver cannot be updated with the Tools and Drivers CD v2.3.1 (and earlier) auto install on Windows Server 2003 (32-bit/64-bit) and Windows Server 2008 (32-bit/64b-bit).

### Workaround

Manually install this driver as follows:

1. **Open the Windows Device Manager.**
2. **Right click the device with the yellow question mark.**
3. **Choose Update Driver.**
4. **Find the driver in \drivers\windows\RAID\StorageTEK\2003 or \drivers\windows\RAID\StorageTEK\2008.**
5. **Click OK to install the driver.**

## Need to Manually Install Adaptec Driver With RIS Installation

The Adaptec driver cannot be fully updated after installing the Windows Server 2003 OS with the RIS method.

### Workaround

Manually install this driver.

## Windows Server 2008 Autorun is Not Supported With Tools and Drivers 2.1 DVD

Support for Windows 2008 Autorun is planned for future Tools and Drivers DVD releases.

## Factory-Installed Windows Server 2003 R2 Operating System Setup

Servers shipped with the factory-installed Windows Server 2003 R2 operating system include a Getting Started Guide. Read this guide before performing the initial setup of the Windows Server 2003 R2 operating system. For the initial setup procedure, refer to the *Sun x64 Servers Windows Server 2003 R2 Operating System Preinstall Release Notes* (820-4066).

# Recovering the Windows Server 2003 Operating System

If you need to restore your system to the default factory-installed Windows operating system, follow the directions in the *Sun x64 Servers Windows Server 2003 R2 Recovery Installation Guide* (820-3674) enclosed in the optional recovery media kit and posted online. If you do not have the recovery media kit, contact your support representative.

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## Support for Windows Server 2003 Reburn Script Running on a Windows Operating System

This section describes how to run the new Windows 2003 CD reburn script when using Windows as the Operating System.

1. Copy all contents located on the tools and driver cd from the `/utilities/reburn/windows/` directory to `c:\reburn`.
2. Insert the Windows 2003 CD.
3. Run the `c:\reburn\2003Reburn.bat` script.
4. At the prompt, insert the Tools and Driver CD. (It must be version 1.1b or later).
5. Follow the prompts for the location of the `bootimg.ima` file (`c:\reburn_image\bootimg.ima`) and other needed information for burning the ISO image.



---

**Caution** – The windows reburn scripts DO NOT generate the ISO image since there is no native support in XP or 2003 for burning CDROMS. The user must make the decision to use the contents of `c:\reburn_image` to generate the bootable CD.

---

A log file is generated at `c:\windows\sun_reburn.log`.

## Support in the Tools and Drivers CD 1.1c for Windows Autorun

Support has been added to the Tools and Drivers CD 1.1c for Windows autorun to install software and drivers.

## CPU IERR After Logging Into Windows 2003 with Qlogic Dual Port and LSI SCSI Card in Specific PCI-E Slots

If using the Qlogic dual port and LSI SCSI PCI-E cards, these must be inserted in the following slots:

- SLOT - 1 LSI SCSI
- SLOT - 4 Qlogic dual port

or

- SLOT - 1 LSI SCSI
- SLOT - 2 Qlogic dual port

## BSOD Occurs When Performing Windows 2003 Express Install With SunStorageTEK Drivers

Installing Windows 2003 in Express Mode using the SunStorageTEK drivers from the USB floppy will result in a BSOD.

To avoid the BSOD, select Custom install when installing Windows 2003.

---

**Note** – This is fixed with SunStorageTEK drivers included on the 1.1d release (version 15825).

---

## VMware Issues

- [“Virtual Machines Running ESX 3.5 Might Hang after ILOM Migration”](#) on page 54

- [“X1027A-Z Sun Dual 10-Gigabit Ethernet Fiber PCIe Card is Not Supported With VMware ESXi 5.0” on page 54](#)

## Virtual Machines Running ESX 3.5 Might Hang after ILOM Migration

For ESX 3.5 installed with multiple virtual machines (VMs) booted and operational, you might encounter the following issue after migrating from ELOM to ILOM.

After shutting down the VMs and upgrading to ILOM, when the ESX host is booted, the VMs hang at 95% of the startup process, and a yellow bang appears. The following message is displayed in the "Summary" tab in VI:

```
msg.uuid.moved:The location of this virtual machine's
configuration file has changed since it was last powered on.
If the virtual machine has been copied, you should create a new
unique identifier (UUID). If it has been moved, you should keep
its old identifier.
If you are not sure, create a new identifier.
What do you want to do?
```

- **Select KEEP.**

The virtual machine now boots as expected with the same identifier and will operate properly.

## X1027A-Z Sun Dual 10-Gigabit Ethernet Fiber PCIe Card is Not Supported With VMware ESXi 5.0

Oracle's Sun Dual 10-Gigabit Ethernet Fiber PCIe card is not supported in a Sun Fire X4450 server running VMWare ESXi 5.0 as there is currently no driver support for this card.

---

## LSI 3081E Host Bus Adapter Issues

The following issues relate to Sun Fire X4450 servers with the LSI 3081E HBA installed:



- [“Updating to the Latest LSI Firmware”](#) on page 55
- [“HDD Space Required When Upgrading to a Mirror Configuration”](#) on page 55
- [“Only One Upgrade Path that Supports Data Merging”](#) on page 55
- [“Server Can Hang With RAID Configuration in Sync Mode”](#) on page 56

## Updating to the Latest LSI Firmware

---

**Note** – Make sure to read [“Important Precautions to Take Prior to Updating Firmware Remotely”](#) on page 12 before updating the SAS controller firmware.

---

1. **Insert and boot the Tools and Driver DVD (1.1d or later).**
2. **Select the option in main menu to enter to DOS.**
3. **Run the following:**

```
\firmware\lsi\flash.bat
```

## HDD Space Required When Upgrading to a Mirror Configuration

You must leave 100MB of free unpartitioned space at the end of the HDD if upgrade to a mirror is required.

## Only One Upgrade Path that Supports Data Merging

The only upgrade path that supports data merging is from a single disk to a mirror. This is a limitation of the card. If you want to upgrade from a single disk to an IME (Integrated Mirror Extension) or an IMS (Integrated Mirror Stripe), the data and OS is lost and a reinstallation and restore are required.

# Server Can Hang With RAID Configuration in Sync Mode

When a RAID set of disks is in sync mode, the server might hang if a reboot is issued. This issue causes the user to lose the RAID configuration. Do not reboot while the sync is in progress and the issue is being investigated.

---

## StorageTek SAS Controller Issues

The following issues relate to Sun Fire X4450 servers with the Sun StorageTek SAS Controller installed:

- [“Updating the SAS Controller Firmware to 16732”](#) on page 56
- [“Use StorageTek BIOS Setup Utility to Initialize Drives and Create Array Before Accessing Them With the OS”](#) on page 57
- [“How to Configure Sun StorageTek Manager for RHEL 5 32-bit”](#) on page 57

## Updating the SAS Controller Firmware to 16732

---

**Note** – Make sure to read [“Important Precautions to Take Prior to Updating Firmware Remotely”](#) on page 12 before updating the SAS controller firmware.

---

To update the SAS controller firmware to version 16732:

1. **Insert and boot the Tools and Drivers DVD (1.1d or later).**
2. **Select the option in the main menu to enter to DOS.**
3. **Run the following:**

```
\firmware\SST\flash.bat
```

# Use StorageTek BIOS Setup Utility to Initialize Drives and Create Array Before Accessing Them With the OS

Before the operating system can use hard disks attached to a StorageTek SAS Controller, the drives must first be initialized and the array created using the StorageTek BIOS setup utility. The StorageTek BIOS setup utility can be accessed using the CTRL-A keystroke combination during server POST.

## How to Configure Sun StorageTek Manager for RHEL 5 32-bit

If you run Sun StorageTek manager on RHEL 5 32-bit, the following error message is displayed:

```
sh /usr/StorMan/StorMan.sh

Exception in thread "main" java.lang.UnsatisfiedLinkError:
/usr/StorMan/jre/lib/
i386/libawt.so: libXp.so.6: cannot open shared object file: No
such file or directory

at java.lang.ClassLoader$NativeLibrary.load(Native Method) at
java.lang.ClassLoader.loadLibrary0(Unknown Source)
    at java.lang.ClassLoader.loadLibrary(Unknown Source)
    at java.lang.Runtime.loadLibrary0(Unknown Source)
    at java.lang.System.loadLibrary(Unknown Source)
    at sun.security.action.LoadLibraryAction.run(Unknown Source)
    at java.security.AccessController.doPrivileged(Native Method)
    at sun.awt.NativeLibLoader.loadLibraries(Unknown Source)
    at sun.awt.DebugHelper.<clinit>(Unknown Source)
    at java.awt.Component.<clinit>(Unknown Source)
```

To resolve this error, add the package `xorg-x11-deprecated-libs-6.8.1-12.FC3.1.i386.rpm`, which is available on the Internet.

---

## Documentation Issues

The following issue relates to Sun Fire X4450 server documentation:

### New Operating System Installation Guides Now Available

An updated installation guide for Solaris 10, Red Hat Enterprise Linux (RHEL), SUSE Linux Enterprise Server (SLES), and VMware ESX Server operating systems is now available. This document combines operating system installation for the Sun Fire X4150, Sun Fire X4250, and Sun Fire X4450 servers. This document is available at:

<http://docs.sun.com/app/docs/prod/sf.x4450>

---

## Fixed Issues

Refer to the following sections for information on issues that have been fixed:

- “Issues Fixed in Software Supplemental 3.2.0” on page 59
- “Issues Fixed in Software Supplemental 3.0.1” on page 60
- “Issues Fixed in Tools and Drivers DVD 3.1.0” on page 60
- “Issues Fixed in Tools and Drivers DVD 3.1.1” on page 60
- “Issues Fixed in Tools and Drivers DVD 3.0.0” on page 61
- “Issues Fixed in Tools and Drivers DVD 2.3.1” on page 61
- “Issues Fixed in Tools and Drivers 2.3 Release” on page 62
- “Issues Fixed in Tools and Drivers 2.2.1 Release” on page 62
- “Issues Fixed in Tools and Drivers 2.2 Release” on page 63
- “Issues Fixed in Tools and Drivers 2.0 Release” on page 63
- “Issues Fixed in Tools and Drivers 1.1d Release” on page 63
- “Incorrect Power Supply Labeling in Installation Guide” on page 67

## Issues Fixed in Software Supplemental 3.2.0

The following issues have been fixed in Sun Fire X4450 Software Supplemental 3.0.2:

VMWare issues fixed:

- CR 6871221: A server running VMware ESX 4.0 hangs due to a BIOS error.

ILOM Issues fixed:

- CR 6887273: ILOM 3.0 Daylight Savings time is inconsistent
- CR 6870405: ILOM 3.0.6.0 does not report DIMM location when encountering Memory Configuration Errors
- CR 6911547: Sun Fire X4450's manufactured prior to August 2008 returned the wrong Product Serial number from the ILOM Service Tag.

Upgrading to the current version of ILOM (3.0.3.30 and above) corrects the Product Serial number automatically.

If you find that the product serial number is not the same as the chassis serial number on your Sun Fire X4150/X4250/X4450 systems, upgrade your ILOM to the latest version to fix this problem.

The SEL log in CLI or the Web interface reminds you to reboot ILOM to make the change take effect. This correction check happens every time ILOM reboots. If the reboot is not successful, repeat the ILOM reboot to retry.

- CR 6900133: SYS serial part number is changed after ILOM is upgraded from 2.0.2.10 to 3.0.3.30.

---

**Note** – The `fru_serial_number` was added to show chassis serial number to avoid confusion when the chassis serial number is different from that of the product.

---

- CR 6877870: ILOM does not allow # character in snmp community string.
- CR 6892806: System hangs during SAS HBA initialization

BIOS issues fixed:

- CR 6840570: An SMM fix, identified by Intel.
- CR 6893582: SP unusable after repeated cold reset using `ipmitool`.
- CR 6773429: Space of `/coredump` was not managed, so `logmgr.log` will not always have enough space

## Issues Fixed in Software Supplemental 3.0.1

The following issues have been fixed in Sun Fire X4150 and X4250 Software Supplemental 3.0.1:

BIOS issues fixed:

- CR6770828: BIOS should provide CSD ACPI structures to OS.
- CR6791340: BIOS does not show the correct CPU model.
- CR6807462: DIMM product part number information is not available.
- CR6870328: Support is needed for Windows 2008 R2 and WLK 1.4 test.
- CR6851029: Qlogic card option ROM cannot be disabled by the BIOS setup menu.
- CR6851028: Server hangs during scanning of option ROMs in specific HBA configurations.

ILOM issues fixed:

- CR6823488 Cannot add an SSH key for automatic password authentication.
- CR6848980 Unable to run `ipmitool -I open sunoem led get` command and view sensors or LEDs via the web at the same time.
- CR6823516 The number 5 cannot be set as a value for retries under `/SP/clients/dns`.
- CR6862166 BMC IP cannot be changed from DHCP to Static in the BIOS setup menu.

## Issues Fixed in Tools and Drivers DVD 3.1.1

- 6905018: System Serial Number shows "To Be Filled By OEM" in BIOS set up menu

## Issues Fixed in Tools and Drivers DVD 3.1.0

### Issues Fixed in Tools and Drivers DVD 3.1.0

The following BIOS issues have been fixed in Sun Fire X4450 3.1.0 DVD:

- 6881539: When the BIOS finds a DIMM correctable error during memory initialization, the BIOS disables the DIMM.
- 6902797: The BIOS and SP treat all memory scrub errors as critical, though there should be two types: correctable and uncorrectable.

The following ILOM issues have been fixed in Sun Fire X4450 3.1.0 DVD:

- 6810948: Green LED does not blink while SP boots and during the system POST.
- 6862498: Add virtual DIMM presence sensors.
- 6848936: Enable `sensor_history_sys_vps_feature`.
- 6727934: Available power shows 1350 watts but the PSU only has 1100 watts.
- 6687590: Back panel and Locate and Alert LEDs are on when the SP comes up.
- 6713949: Console redirection fails to start.
- 6893206: `xvmoc-compliance-test` fails when a product name has a blank at the end of the string.

### *Remote KVM Does Not Respond Under Some Circumstances (6818246)*

The Remote KVM does respond if the connection is terminated ungracefully due to any of the following actions:

- Changing the SP's management IP address with any existing Java Remote Console (JRC) client sessions running.
- Unplugging a KVMS session JRC client
- Disconnecting the network between a JRC client and the SP.

If the remote KVM session does not respond due to any of these conditions, either reset SP or wait 30 minutes for the remote session to restart.

## Issues Fixed in Tools and Drivers DVD 3.0.0

The following issues have been fixed in Sun Fire X4450 Tools and Drivers DVD 3.0.0:

- 6773373: Varying the value of serial port sharing from SP cannot be reflected by BIOS
- 6789637: Severity of memory configuration error should be minor.

## Issues Fixed in Tools and Drivers DVD 2.3.1

- CR6771518: The severity should not be critical with a "single-bit error".  
Some non-critical event are marked as "critical". These events are changed to "minor" in Tools and Drivers DVD 2.3.1.
- CR6758579: Receiving memory errors in SEL log to non-decodable address.  
There are some non-decodable addresses of memory error events sent from the BIOS. This will be fixed to define a field to support number of DIMM error.

- CR6774048: BIOS sends a hard reset to the SEL log while system power is on or system is power cycled.

When performing a "power on" action, the BIOS sends out a "initiated by hard reset" event to the SEL log. This is changed to "initiated by power up" in Tools and Drivers CD 2.3.1.

## Issues Fixed in Tools and Drivers 2.3 Release

The following issues have been fixed with the ILOM update included on this Tools and Drivers CD:

- 6721746: ILOM cannot detect failure or rotation stop of the PSU's fan or monitor PSU fault states.
- 6746140: Abnormal date and time in the description of ILOM message.
- 6715208: The **capilectest get** command returns wrong status codes.
- 6742808 Uploading an ILOM .ima file for another platform hangs the system.
- 6580094: SUN-HW-TRAP: Wrong traps sent for /SYS/PWRGOOD assertion and deassertion.
- 6762982: sunHwTrapPowerSupplyOk message sent when power supply is unplugged.
- 6698177: ILOM does not allow hyphen "-" character in SNMP community string.
- 6763926: Cannot read FRUID from new paddle board/backplane board.
- 6760277: SNMP trap is not sent for fan module removal.
- 6727934: Available power does not show correctly in ILOM.
- 6767665 LOM does not perform a real reset. Instead it performs a power cycle.

## Issues Fixed in Tools and Drivers 2.2.1 Release

- 6782027 - The server does not support TPM 1.2 features correctly.
- 6748340 - When memory is missing from the server, a failure is not reported in SEL.
- 6782030 - Option ROM for PCI-E slot 5 is not available when Northstar Quad-Port PCI-E card is in slot 3.
- 6759467 - Using the Quad Gigabit-Ethernet Copper 4-Port Northstar QGE (Part # XX446A-Z) option card in slot 3 hangs Windows 2003 32-bit.
- 6782662 -BIOS GUID needs the format to be changed from Big Endian to Little Endian.
- 6746052 -SMBIOS does not correctly display PCI population.



## Issues Fixed in Tools and Drivers 2.2 Release

The “BIOS Restore on AC Power Loss” option did not function correctly when set to “LAST STATE”. This has been fixed in BIOS version 3B54.

## Issues Fixed in Tools and Drivers 2.0 Release

The following issues have been fixed with Tools and Drivers DVD 2.0 Release:

- 6663466 - Need ability to disable PCI option ROMs per slot
- 6676595 - User of X4450 cannot send break from ELOM
- 6707322 - It is not possible to create SP users with the “\_” character
- 6709944 - ELOM(SP) can Not detect the failure or rotation stop of PSU
- 6673922 - Service processor MIB not implemented. See [“Keyboard LED Test Fails” on page 63](#).
- 6623581 - Pc-Check keyboard LED test fail. See [“SNMP Issues” on page 63](#).

## Keyboard LED Test Fails

Running the keyboard LED test might fail. Do not to run this test.

## SNMP Issues

The agent does not return anything for SUN-PLATFORM MIB. Currently there is no support for this issue.

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**Note** – This will be implemented in a future release.

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See [“Linux Issues” on page 45](#)

## Issues Fixed in Tools and Drivers 1.1d Release

The following bugs have been fixed in the 1.1d release:

- [“Raw Data Written to SEL With Windows Pre-install Image” on page 64](#)
- [“Running the USB Controller Test Hangs the System” on page 65](#)
- CR 6656551 - Remove AC power from 1 of 2 PSU does not trip the fault light

- CR 6656551 - SP sends malformed packets
- CR 6656668 - Removing a fan does not write a SEL message
- CR 6673708 - Does not write any event messages after SP is reset
- CR 6673700 - Clock is changed to 1970 after SP is reset
- CR 6670525 - DCU prefetcher should be disabled by default
- CR 6688989 - Hardware prefetcher and adjacent cache line prefetcher should be disabled by default
- CR 6643503 - SMBIOS information (ID 1) should be set to product properties
- CR 6696106 - Disabling quick boot in BIOS with greater than 16GB will cause a reboot loop
- CR 6643500 - SMBIOS information should include type 3 records
- CR 6675987 - SP serial port should be 9600 and TTYA
- CR BSOD Occurs When Performing Windows 2003 Express Install With SunStorageTEK Driver
- BSOD Occurs When Performing Windows 2003 Express Install With SunStorageTEK Drivers
- Algorithm to manage single bit ECC errors (Need 24 CE's in 24hrs to produce fault)
- Setting timezoneID returns "Could not be set TimeZoneID"
- SSH randomly closes when viewing details of clock
- Support for SP changing setting to DHCP or static in BIOS
- -6 error returned when updating firmware remotely to 1.1c

## Raw Data Written to SEL With Windows Pre-install Image

If a system has a Windows Pre-install image, the following raw data will be written to the SEL and can be ignored. To avoid the message, remove the ipmitool utility and driver from the Windows Operating System.

```
ipmitool dump:
  1 | 12/05/2007 | 06:54:26 | OS Stop/Shutdown | OS graceful shutdown |
Asserted
  2 | 12/05/2007 | 06:54:26 | OEM record dd | 000137 | 000000008500
  3 | 12/05/2007 | 06:54:26 | OEM record dd | 000137 | 017300610000
  4 | 12/05/2007 | 06:54:26 | OEM record dd | 000137 | 026400660000
  5 | 12/05/2007 | 07:01:42 | OS Stop/Shutdown | OS graceful shutdown |
Asserted
  6 | 12/05/2007 | 07:01:42 | OEM record dd | 000137 | 000000008500
```

```
7 | 12/05/2007 | 07:01:42 | OEM record dd | 000137 | 016100730000
8 | 12/05/2007 | 07:01:42 | OEM record dd | 000137 | 026400660000
Windows Event log in BIOS:
02 00 DD F2 9A 56 47 37 01 00 00 00 00 85 00
01 00 02 F2 9A 56 47 41 00 04 20 00 6F 93 FF FF
```

## Running the USB Controller Test Hangs the System

To prevent the system from hanging, manually remove the USB controller tests before running the USB controller test or any of the diagnostic scripts with Pc-Check, when booted from the Service Processor. These tests are removed from the Diagnostic scripts when run from the CD-ROM.

## Updating the CPLD

Before updating your system's firmware, you must update the CPLD first. You must perform these instructions exactly as described to ensure correct operation of your server.

4. **Start the Embedded LOM SP web GUI by typing the IP address of the SP into a browser.**

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**Note** – See the Embedded Lights Out Manager Administration Guide for instructions on using the Embedded LOM web GUI.

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5. **Copy the file /CPL/s93v060.jbc to the local drive from the Tools and Drivers Version 1.1d CD.**

6. **Log in to the SP.**

7. **Click on the Maintenance Tab and choose Firmware Update.**

8. **Shut the server down if you are prompted.**

The Firmware Update screen is displayed.

9. **From the CPLD Update option, click Browse and navigate to the location of the flash file.**

10. **Click Update.**

The firmware uploads.

11. **After the firmware is uploaded, you are asked to remove AC power for 10 seconds to allow the CPLD to load.**

Turn the server off and then restart the server.

12. **After the CPLD update is complete, the BIOS/SP can be updated from the bootable Tools and Drivers Version 1.1d CD or through the documented TFTP interface and Web Interface.**

## Updating the System Firmware <Does this section apply to ILOM update?>

- Applies if you intend to remotely update the system firmware from a BIOS version earlier than 3B17 to version 3B17.
- Does *not* apply if the BIOS is to be updated by booting the tools and drivers CD. Follow this procedure in order to avoid a potential situation which could lead to an error -6 or the flash process hanging at around 90% during the upgrade process.

### BIOS Chip in a Locked State

If the system was powered off at any point during BIOS POST, prior to loading the operating system, the BIOS chip may be left in a locked state. If the system was powered off in this state, the remote firmware update may fail with an error -6 or hang at about the 90% point. To avoid this issue, boot any operating system and shutdown the system normally prior to updating the firmware to BIOS 3B17.

### To assure a successful firmware update:

#### *With an Operating System Installed*

1. **If the system has an operating system installed:**
  - c. **Boot the operating system. Login and shut down the system so that the system powers off normally (i.e. power-off on Solaris and Linux; Start->Shutdown on Windows).**
  - d. **Flash update the firmware remotely.**

## *Without an Operating System Installed*

2. **If the system does not have an operating system installed and it is not possible to boot an OS (including DOS) from either the tools and drivers CD or a USB flash drive then:**
  - a. **Log into the eLOM webgui**
  - b. **Launch the remote console window**
  - c. **Select Remote Control > Remote Power Control Tab**
  - d. **From drop down menu, select Boot Option: PCcheck**
  - e. **Click Save**
  - f. **Click on Remote console window, and wait until pccheck 1st menu appears following system reset.**
  - g. **Select from the Remote Power Control Tab > Power Off and click Save**
  - h. **Perform firmware upgrade from the maintenance tab**

## **Incorrect Power Supply Labeling in Installation Guide**

The *Sun Fire X4450 Server Installation Guide*, 820-2709-10, has the PSU location incorrectly illustrated with PSU 0 on top. The chassis label is correct with PSU 0 as the bottom power supply.

