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Sun Fire X4540 Server
Product Notes

This document contains late-breaking information and issues for the Sun Fire™ X4540 server.

The following issues are covered in these product notes:

Orderable Software CDs

You can order a software CD kit for the Sun Fire X4540 server for a nominal fee. This kit includes:

- Sun Fire Servers Bootable Diagnostics CD 7.0 ps2 or later
- Sun Fire X4540 Tools and Drivers CD
- Sun Fire X4540 Sun Installation Assistant CD 2.1.2.0 or later

Based on input from customers and our Eco Responsibility Initiative, Sun is reducing the amount of paper and other materials shipped with your server. However, you can order this kit as needed. The most up-to-date documentation and software are online and downloadable for free at www.sun.com.

Supported Operating Systems

For a complete list of operating system support for your Sun Fire server, check the Sun web site:

http://www.sun.com/servers/x64/x4540/os.jsp

Sun Installation Assistant (SIA)

The Sun Installation Assistant (SIA) is a bootable tool used to assist in the installation of the operating system for the server. SIA performs the following tasks:

- Identifies the hardware on your system and prepares Sun server drivers for the OS installation. **SIA eliminates the need to create a Driver CD.**
- Provides tools that you might use to upgrade system BIOS, SP firmware, installed device firmware, recover an inaccessible SP, and more. Tools available are system-specific and might vary.
- Launches the OS vendor's native installation program.

■ Identifies and installs appropriate drivers and platform-specific software during the OS installation process.

You can download the latest image (for CD or USB flash drive) for your server from the web, at:

http://www.sun.com/servers/x64/x4540/downloads.jsp

The latest documentation for your version of SIA can be found at:

http://docs.sun.com/app/docs/prod/install.x64svr

Tools and Drivers CD

The Tools and Drivers CD contains the Sun drivers and optional software for your server. The drivers and optional software enable you to choose from a variety of operating systems to run on your server, along with tools manage, and enhance the functionality of your server.

You can download the latest version of the Tools and Drivers CD for your server from the web, at:

http://www.sun.com/servers/x64/x4540/downloads.jsp

Drivers for Option Cards

Option cards supported by operating systems are listed on the platform-specific product webpage under Companion Products. To check if the driver of your option card is available for download, check the Option Cards link on the Product Page.

For complete platform listings please visit:

http://www.sun.com/servers/index.jsp?tab=2

Hard Drive and Solid-State Drive Requirements

2TB Hard Drive as Boot Drive Requires Solaris 10 10/09

The Sun Fire X4540 server supports the 2TB hard drive as a boot device, however the system must first be upgraded to Solaris 10 10/09.

Solid-State Drive System Requirements

The following are important restrictions when using SSDs:

- Do not mix SSDs of different manufacturers. Do not mix drives of the same manufacturer with different drive capacities.
- Using SSDs in the Sun Fire X4540 is independent of OS or OS version, but requires LSI SAS BIOS version 6.26.00 and firmware version 1.27.02 which are supported in software release 2.0 or later.
- The Sun Fire X4540 servers support solid-state drives (SSDs) under the following conditions:
  - One to eight SSDs can be installed into the system.
  - SSDs are *not* to be installed in the boot drive slots.
- SSDs can only be installed in Slots 16, 20, 24, 28, 32, 36, 40, and 44.

For more information, see *Sun Fire X4500/X4540 Server Service Manual*.

Cable Management Arm Installation Advisory

To o check the installation of your cable management arm (CMA) for proper operation, do the following:

1. **Inspect the attached cables for any binding or kinks.**

2. Verify that the CMA extends and does not bind in the slide-rails.

3. Make sure that the power cords are secured to the chassis with the clips on each power supply.

4. Adjust the cable hangers and CMA as required, and then retest the operation of the slide-rails and CMA.

Tip – To maximize airflow, tie-wrap the power cords at the bottom of the CMA troughs and the data cables at the top of these troughs.

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5. If the CMA tends to extend past the rear of the rack when at rest, reposition the last (left-most) hook-and-loop strap as follows:

    i. From the front of the rack, pull the server out of the rack approximately 12 inches, then go to the rear of the rack.

    ii. With the CMA in the slightly folded position, pull the last strap through the opening of the CMA so that it comes toward you.

    iii. Pull the strap toward the left side and route the strap around the hinge also capturing the cables so they are secured in place.

    iv. Route the cable around the back of that CMA section and through the opening in the CMA. Tightly secure the end of the strap into place so that it forces the left hinge to stay at a right angle. This procedure allows the CMA to freely unfold, as it was designed, for procedures that require that the system is pulled out from the rack from the front.

Note – If the hook-and-loop strap has already been routed in this manner before you install additional cables, ensure that after you have added the additional cables, to reroute the strap so that the bracket and hinge are at a right angle as shown in .

⚠️ **Caution –** Release the strap before pulling the CMA outwards to add more cables. Failure to do so stresses the CMA and may result in bending the left bracket.

FIGURE 0-1   CMA Strap Procedure to Prevent CMA from Unfolding
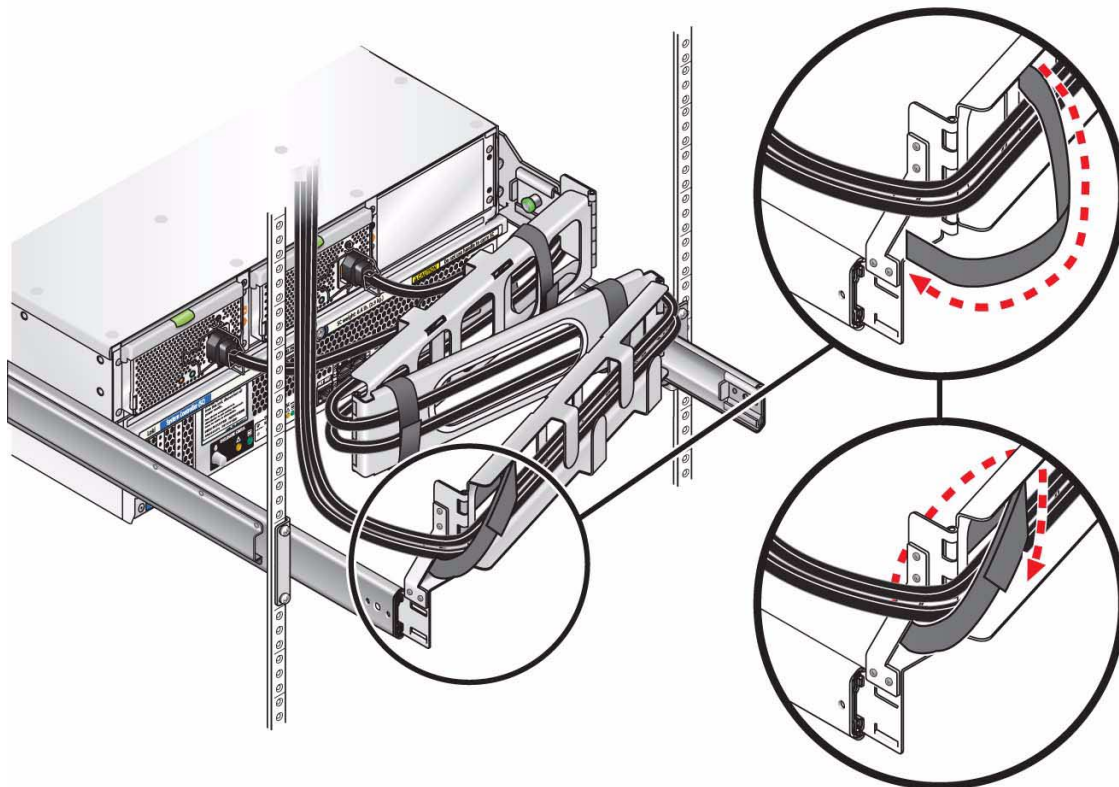
Sun Disk Control and Monitoring Application for Windows

The following issues relate to the optional Disk Control and Monitoring application software running on the Windows OS.

- "Remove Disk Command" on page 7
- "Installing Disk Control and Monitoring (DCM) Remote Scripts" on page 7

Remove Disk Command

Use caution when removing dynamic drives with volumes.

Note – The `Remove Disk` command deletes the volume(s) on the selected disk. Do not perform this action on disks that have data you want to keep as the data will be lost.

For more information, see the DCM Operation Examples section in the *Sun Fire X4540 Server Windows Operating System Installation Guide*.

Installing Disk Control and Monitoring (DCM) Remote Scripts

`InstallPack.exe` is used to install the Disk Control and Monitoring (DCM) application on the Sun Fire X4540 server. During installation, the DCM Remote Script installer (`DCMRemoteSetup1.1.1.msi`) is copied to the Windows desktop.

In order to install and use the DCM Remote Script feature, refer to the instructions on disk control and monitoring in the *Sun Fire X4540 Server Windows Operating System Installation Guide*.

Documentation X-option Media Kit

The documentation X-option Media Kit is no longer an orderable item. To access the latest documenation, go to:

http://docs.sun.com/app/docs/prod/sf.x4540

Optional Software

There is optional software available for your Sun Fire server. Some of it might be pre-installed, downloaded, or purchased as an option (Solaris™, Sun Java™ Enterprise System).

There are also optional software tools available on the Tools and Drivers CD (HERD, Disk Control and Monitoring utility). These optional software components are explained in more detail in the following sections:

Solaris 10 Operating System

The Solaris 10 Operating System (OS) delivers the security, manageability, and performance that IT professionals need to help increase service levels and decrease costs and risk. It also serves as the foundation for the Sun Java Enterprise System, an integrated, open, standards-based software system delivered using a new predictable approach for development, testing, and servicing. The Solaris OS is preinstalled on your server.

If you need to reinstall the Solaris 10 OS after removing it, you can download the DVD image.

To download the DVD image, visit:

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

Online documentation for Solaris 10 OS can be found at:

http://docs.sun.com/

Solaris Adds Support For GRUB-Based Booting

Starting with the Solaris 10 11/06 OS release, the open-source GNU Grand Unified Bootloader (GRUB) has been implemented on x86-based systems that are running the Solaris OS. GRUB is the boot loader that is responsible for loading a boot archive into a system's memory. The boot archive contains the kernel modules and configuration files that are required to boot the system. For more information on GRUB, you can see the grub(5) man page.

For information on how to boot a server that is running Solaris 10 11/06 OS or later in a GRUB-based environment, refer to the *Solaris 10 System Administration Guide: Basic Administration.*

Sun Java Enterprise System

Sun Java Enterprise System (Java ES) is a set of software components that provide services needed to support enterprise-strength applications distributed across a network or Internet environment. The Java ES is preloaded on your server.

Online documentation for Java ES can be found at:

http://docs.sun.com

hd Hard Disk Mapping Utility

The hd utility runs on Solaris, Linux and Windows and provides a logical-to-physical mapping of the server's 48 hard drives. For more information, refer to the *x64 Servers Utilities Reference Manual* (820-1120).

Disk Control and Monitoring Utility

The Disk Control and Monitoring (DCM) utility is a program for the Sun Fire X4540 server running the Microsoft Windows Server 2003 R2, Windows Server 2003 R2 SP2, Red Hat 4.5 Linux, or SUSE 10 Linux operating systems. DCM assists with drive insertion and removal, reports changes in disk configuration, and synchronizes the disk FRU (Field Replacable Unit) information with information stored in the Sun Fire X4540's BMC (also known as the Service Processor).

For details, refer to the *Sun Fire X4540 Server Operating System Installation Guide*, for Solaris and Linux systems) or the *Sun Fire X4540 Server Windows Operating System Installation Guide*.

Hardware Error Report and Decode (HERD) Utility

Hardware Error Report and Decode (HERD) is a utility that runs on Linux for monitoring, decoding, and reporting correctable hardware errors. For more information, refer to the *x64 Servers Utilities Reference Manual*. See "HERD Utility for Linux Is Not Compatible With Xen Kernel" on page 32.

Sun xVM Ops Center

Sun xVM Ops Center is a highly scalable, unified management platform for physical and virtual environments. Sun xVM Ops Center manages multi-platform x64 and SPARC systems distributed throughout a global datacenter and integrates with existing toolsets. Sun xVM Ops Center facilitates many aspects of compliance reporting (ITIL), data center automation, and enables the simultaneous management of thousands of systems.

Pc-Check

Diagnostic output is accessible on systems that are running supported Linux or Solaris operating systems. If you are having specific problems with your system, use the Pc-Check Diagnostics software to diagnose and resolve these issues. Pc-Check 6.22 is supported on ILOM 3.0 and launches with ILOM 3.0.

Latest Firmware Updates

The latest firmware updates for the Sun Fire X4540 server are available on the Tools and Drivers CD supplied with your system. Or, you can download the latest version of the Tools and Drivers CD from the web, at:

http://www.sun.com/servers/x64/x4540/downloads.jsp

Component Versions By Release

The SP and BIOS must always be updated together as a bundle. Separate BIOS updates or separate SP updates are not supported.

To learn more about Integrated Lights Out Manager (ILOM), see the appropriate ILOM documentation.

Check for the latest versions of BIOS and LSI firmware and be sure you update your system to the latest version. You can upgrade the LSI firmware by using Sun Installation Assistant (SIA). SIA is available for supported Microsoft Windows and Linux installations. A list of supported operating systems is available on the Sun software web site:

http://www.sun.com/os.jsp

SIA is available in the Sun-provided SIA distribution media (CD, ISO CD-ROM, USB, or Zip) image that is optionally shipped with each Sun system, or at:

http://www.sun.com/systemmanagement/sia.jsp

To update your LSI firmware, go to this collection and follow the instructions in the *Sun Installation Assistant for Windows and Linux User's Guide*:

http://docs.sun.com/app/docs/coll/x4540?l=en

The ILOM firmware update process enables you to install new ILOM firmware and update other modules for your platform, such as BIOS on x64, OpenBoot PROM, and Hypervisor software on SPARC. For documentation on Integrated Lights Out Manager (ILOM), see *Sun Integrated Lights Out Manager 2.0 User's Guide*, 820-1188.

The following tables list the Sun Fire X4540 software component versions for the following software releases:

- TABLE 1 — Software release 2.1
- TABLE 2 — Software release 2.0
- TABLE 3 — Software release 1.1
- TABLE 4 — Software release 1.0.2
- TABLE 5 — Software release 1.0.1
- TABLE 6 — Software release 1.0

TABLE 1   Software Release 2.1 Components

Component Name	Sun Fire X4540 Server Version
ILOM FW 3.0.6.17	SP Build 49460
BIOS 37	0ABNF037.ROM
LSI BIOS	v6.26.00
LSI FW	1.27.02.00-IT FW12702_B62600.iso
LSI driver for RHEL 4.x	mptlinux-redhat4.0-3.16.00.00-1.x86_64.rpm mptlinux-3.16.00.00-1.src.rpm
LSI driver for RHEL 5.x	mptlinux-4.18.00.00-1-rhel5.x86_64.rpm mptlinux-4.18.00.00-1.src.rpm
LSI driver for SLES 10, 64bit	mptlinux-4.18.00.00-1-sles10.x86_64.rpm mptlinux-4.18.00.00-1.src.rpm
LSI driver for SLES 11, 64bit	mptlinux-4.18.00.00-2-sles11.x86_64.rpm mptlinux-4.18.00.00-1.src.rpm

TABLE 2 Software Release 2.0 Components

Component Name	Sun Fire X4540 Server Version
ILOM FW 3.0.3.36	SP Build 45489
BIOS 32	0ABNF032.ROM
LSI BIOS	v6.26.00
LSI FW	1.27.02.00-IT FW12702_B62600.iso
LSI driver for RHEL 4.x	mptlinux-redhat4.0-3.16.00.00-1.x86_64.rpm mptlinux-3.16.00.00-1.src.rpm
LSI driver for RHEL 5.x	mptlinux-4.18.00.00-1-rhel5.x86_64.rpm mptlinux-4.18.00.00-1.src.rpm
LSI driver for SLES 10, 64bit	mptlinux-4.18.00.00-1-sles10.x86_64.rpm mptlinux-4.18.00.00-1.src.rpm
LSI driver for SLES 11, 64bit	mptlinux-4.18.00.00-2-sles11.x86_64.rpm mptlinux-4.18.00.00-1.src.rpm

TABLE 3 Software Release 1.1 Components

Component Name	Sun Fire X4540 Server Version
ILOM FW 2.0.2.15	SP Build 39379
BIOS 22	0ABNF022.ROM
LSI BIOS	v6.18.01.00
LSI FW	1.23.94.00-IT X4540_12394B2.fw
LSI driver for RHEL 4.7	mptlinux-redhat4.0-3.13.04.00-2.x86_64.rpm mptlinux-3.13.04.00-2.src.rpm
LSI driver for RHEL 5.1	mptlinux-4.00.22.00-1-rhel5.x86_64.rpm mptlinux-4.00.22.00-1.src.rpm
LSI driver for RHEL 5.2	mptlinux-4.00.41.00-1-rhel5.x86_64.rpm mptlinux-4.00.41.00-1.src.rpm
LSI driver for SLES 10 SP1, 64bit	mptlinux-4.00.22.00-1-sles10.x86_64.rpm mptlinux-4.00.22.00-1.src.rpm
LSI driver for SLES 10 SP2, 64bit	mptlinux-4.00.41.00-1-sles10.x86_64.rpm mptlinux-4.00.41.00-1.src.rpm

TABLE 4   Software Release 1.0.2 Components

Component Name	Sun Fire X4540 Server Version
ILOM FW 2.0.2.5	SP Build 37832
BIOS 11	0ABNF011.ROM
LSI BIOS	v6.18.01.00
LSI FW	1.12.93.00-IT X4540_12394B2.fw
LSI driver for RHEL 4.6 64-bit	mptlinux-redhat4.0-3.12.27.00-1.x86_64.rpm mptlinux-3.12.27.00-2.src.rpm
LSI driver for RHEL 5.1 64-bit	mptlinux-4.00.22.00-1-rhel5.x86_64.rpm mptlinux-4.00.22.00-1.src.rpm
LSI driver for SLES 10 SP1 64-bit	mptlinux-4.00.22.00-1-sles10.x86_64.rpm mptlinux-4.00.22.00-1.src.rpm

TABLE 5   Software Release 1.0.1 Components

Component Name	Sun Fire X4540 Server Version
ILOM FW 2.0.2.5	SP Build 37049
BIOS 10	0ABNF010.ROM
LSI BIOS	v6.18.01.00
LSI FW	1.12.93.00-IT X4540_12394B2.fw
LSI driver for RHEL 4.6 64-bit	mptlinux-redhat4.0-3.12.27.00-1.x86_64.rpm mptlinux-3.12.27.00-2.src.rpm
LSI driver for RHEL 5.1 64-bit	mptlinux-4.00.22.00-1-rhel5.x86_64.rpm mptlinux-4.00.22.00-1.src.rpm
LSI driver for SLES 10 SP1 64-bit	mptlinux-4.00.22.00-1-sles10.x86_64.rpm mptlinux-4.00.22.00-1.src.rpm

TABLE 6   Software Release 1.0 Components

Component Name	Sun Fire X4500 Server Version
ILOM FW 2.0.2.5	SP Build 32394
BIOS 10	0ABNF010.ROM
LSI BIOS	v6.18.01.00
LSI FW	1.12.93.00-IT
LSI driver for RHEL 4.6 64-bit	mptlinux-redhat4.0-3.12.27.00-1.x86_64.rpm mptlinux-3.12.27.00-2.src.rpm
LSI driver for RHEL 5.1 64-bit	mptlinux-4.00.22.00-1-rhel5.x86_64.rpm mptlinux-4.00.22.00-1.src.rpm
LSI driver for SLES 10 SP1 64-bit	mptlinux-4.00.22.00-1-sles10.x86_64.rpm mptlinux-4.00.22.00-1.src.rpm

Hardware, Firmware, and BIOS Issues

The following issues apply to the Sun Fire X4540 server hardware, firmware, service processor (SP) or BIOS:

- "Recommended Racks" on page 16
- "Replacement of a Hard Drive" on page 16
- "Ejecting System Controller Requires Stylus or Nonconducting Pointed Device" on page 16
- "Press Firmly When Inserting the System Controller" on page 17
- "Take Precautions Before Removing Hard Drives 0, 1, 8, or 9" on page 17
- "Do Not Open the Fan Tray Cover for More Than 60 Seconds" on page 17
- "Do Not Leave the Drives Access Cover Open Longer Than Necessary When an Drive Slot Is Empty" on page 18
- "Fan Tray LEDs" on page 18
- "Locate LED" on page 18
- "Do Not Lift the Server by the Rear Slots" on page 19
- "Cable on PCI Card Is Difficult to Connect and Disconnect" on page 19
- "System Cooling Might Be Affected by Dust" on page 19
- "System Fails to Boot If BIOS Setup Option Is Not Supported by Installed Devices (6678497)" on page 44

Recommended Racks

Because of its depth, the Sun Fire X4540 server fits best in 1000-mm racks. Sun recommends the Sun Rack 1000-42 and Sun Rack 1000-38. Installation documentation for these racks is included in the *X4540-J Slide Rail Installation Guide* and is shipped in the orderable rail kit box and is available online. This document is suitable for Sun products that list this kit as an accessory or option.

This document is online at:

http://docs.sun.com/app/docs/prod/sf.x4540

For more information on Sun racks, see:

http://www.sun.com/servers/rack/index.html

Replacement of a Hard Drive

When replacing a hard drive, press the hard drive module firmly to ensure that it is properly seated.

Ejecting System Controller Requires Stylus or Nonconducting Pointed Device

Use a stylus or other nonconducting pointed device to push the system controller eject handle release button.

Press Firmly When Inserting the System Controller

When inserting the system controller, push it in most of the way until you encounter resistance, then push again to ensure that it is well seated before lifting the system controller handle and clicking it into place.

Take Precautions Before Removing Hard Drives 0, 1, 8, or 9

The drives in slots 0, 1, 8, and 9 are the system bootable drives as shipped. You should not remove hard drive in slot 0 until Solaris 10 OS is shut down correctly.

Note – This does not apply to the Windows operating system.

The LEDs on each disk drive indicate its condition.

If the software detects that any drive has failed, the amber LED lights.

- For the **non-bootable drives**, unconfigure the failed drive. This causes the blue LED to light, signalling that you can replace the drive.
- For the **bootable drives**, the amber LED lights, but the blue LED does not.

To replace a bootable drive, you must use additional steps:

- To remove the drive you booted from, you must shut down the system.

  For example, if you booted from 0 and the amber LED on 0 lights up, you must shut down the system to replace it.
- To remove a bootable drive that you did not boot from, use the `cfgadm` command to unconfigure the disk. When the blue LED lights, you can replace it.

  For example, if you booted from slot 0, and the amber LED on slot 1 lights up, you can use cfgadm to unconfigure slot 1, and when the blue LED lights, you can replace it.

Do Not Open the Fan Tray Cover for More Than 60 Seconds

If you open the fan tray cover while the server is running, you must replace it within 60 seconds to keep the server from potentially overheating.

Do Not Leave the Drives Access Cover Open Longer Than Necessary When an Drive Slot Is Empty

Do not leave the drives access cover open longer than necessary. The access cover should be closed as soon as any drive service action is complete.

Sun supports the removal or replacement of only one hard drive at a time. Never remove more than one hard drive, even temporarily, from a system that is running.

Caution – The combination of an open drives access cover and empty slots can cause the system to overheat rapidly.

Fan Tray LEDs

The fan tray LEDs operate as follows:

- Green LEDs are on when the fan is functioning normally.
- Amber LEDs are on if either or both fans are slow or stopped.
- The front panel fault indicator for TOP is on if a fan tray has a fault condition.

Note – The front panel TOP indicator might also indicate that a service action is required for a hard drive.

Locate LED

Normally, holding down the locate button for five seconds causes all indicators to come on for 15 seconds. However, when you do this, the locate LED might not stay on as long as expected.

Note – There are two locate LEDs: one on the front panel of the system and one on the rear panel of the system.

Do Not Lift the Server by the Rear Slots

The rear of the server includes three slots that can contain power supplies and a filler panel.

Caution – Using any of these locations to lift the server might damage it or cause personal injury.

Cable on PCI Card Is Difficult to Connect and Disconnect

The X4540 rear panel is very dense. Cables for the following Mellanox InfiniBand PCI cards are difficult to install and remove:

- MHET2X-2SC
- MHXL-CF256-T

Use care when installing or removing cables for these PCI cards.

System Cooling Might Be Affected by Dust

System cooling might be affected by dust and contaminant build-up. It is recommended that systems be opened and checked approximately every six months or more often in dirty operating environments. Check system heat sinks, fans, and air openings. If necessary, clean systems by brushing or blowing contaminants or carefully vacuuming contaminants from the system.

Memory in Unganged Mode (6693114)

When memory is set to unganged mode in the BIOS Setup page and an uncorrectable ECC memory error occurs, platform BIOS is not able to pinpoint the failing DIMM pair. In this case, an uncorrectable memory error correctly results in a system reset, with error information logged to the BMC (SP?) SEL. However, this information does not explicitly identify which DIMM pair failed.

Workaround: Study the SP SEL and search for "`080813`" string in the SEL events. This line contains Machine Check data related to the memory failure. In that line, the first 4 digits indicate which processor owns the failing memory. If the line begins with `0018`, processor 0 owns the failing memory. `0019` indicates processor 1. `001A` indicates processor 2. `001B` indicates processor 3. For the processor with the failing memory, remove or replace all memory on that processor.

Workaround: Do not change the default of ganged mode.

Power-Glitch Detection Is Disabled (6612947)

Power-glitch detection is temporarily disabled. A brief power interruption causes the host to hang rather than reset and restart. The feature in the field-programmable gate array (FPGA), which can be used to detect such events, is functioning as expected.

Error Messages Are Displayed When System Operates in Low Ambient Temperature Environments

Error messages might appear when the system operates in a low ambient temperature environment.

Delay For SSH Connections After Setting Alert Rules (6715659)

After setting alerts on a system with Integrated Lights Out Manager (ILOM) 2.0.2.5, there is a delay in connecting to the system using SSH.

ILOM 2.0: GUI/CLI Sessions Does Not Time Out When Cookies on Browser Are Not Enabled (6581097)

The ILOM Web interface requires that cookies are enabled in the browser. If login attempts are made with cookies disabled, system session resources could become depleted preventing further logins from succeeding.

Workaround: Disable the Web service to prevent this from occurring. Alternatively, always enable cookies in user browser. Reset the Service Processor (SP) to clear the resource failure.

Unable To Format the Virtual Floppy From Solaris Host (6593484)

Unable to format the virtual floppy disk with a Solaris system as a host. This issue was observed when the following steps were taken:

1. Redirect the floppy device from a Windows XP system as a client.

2. Execute "rmformat -F force virtualFloppyRawDevice" from a Solaris system as a host (formatting a physical floppy disk attached directly to the system).

JavaRConsole Multiple Tab Support Is Not Functional (6606701)

Once launched from the web UI, a single JavaRConsole window enables the use of multiple tabs to connect simultaneously to multiple Service Processor (SP) IP addresses. This functionality is broken when connecting to multiple AST2000-based SPs or a combination of G3- and AST2000-based SPs.

Workaround: Launch a separate JavaRConsole session from each ILOM Service Processor (SP) GUI.

ILOM 2.0: ILOM WebGUI Hangs For Other Users When Firefox Displays Warning About Certificate (6681331)

Log into ILOM WebGUI from one host. Verify WebGUI is responding. Open up a WebGUI with Firefox from another machine and wait for a warning message.

On Solaris the warning message says:

```
Website Certified by an unknown Authority
Unable to verify the identity of sun-ilon as a trusted site
```

On Windows the warning message says:

```
Security Error: Domain Name mismatch
You have attempted to establish a connection with "x.x.x.x"
```

While this window is up, the other WebGUI clients cannot access ILOM.

Mozilla Firefox's browser holds open the TCP transaction while displaying the confirmation dialog to the end user to ask whether the SSL certificate should be accepted. This prevents usage by other users because the ILOM web server (webgo) is a single-instance, single-threaded application.

Workaround: Answer the confirm dialog in a timely manner.

ILOM 2.0: Solaris Keyboard Redirection Not Working When Another JavaRConsole Is Already Open (6696796)

Solaris keyboard redirection does not work in the following scenario:

- JavaRConsole (from a Windows or Red Hat client (both 32-bit with Java Runtime Environment (JRE) 1.6).
- Boot host machine to Preboot Execution Environment (PXE) menu.
- Verify keyboard is working by selecting arrow up and down.

Adding PCI-e Option Cards Might Disable Boot Devices on Other Cards or On-board Devices (6639184)

Option ROMs (OpROMs) loaded by the system BIOS during power-on self test (POST) allow booting from both on-board devices and PCI-e option cards. This includes hard drives and network ports. The PC architecture limits the space for OpROMs to 128KB. The system BIOS loads OpROMs as they are found, according to PCI Bus and Device numbers. If the BIOS runs out of space for loading OpROMs some might not be loaded. In this case, the BIOS POST screen should report an error such as `Not Enough Space to Copy OpROM`. This is a limitation of the PC architecture.

Workaround: If adding a PCI-e option card prevents booting from other cards or on-board devices, use the BIOS Setup to disable OpROMs for those devices not needed for booting.

Mixing Single-rank and Dual-rank DIMMs Controlled by One CPU

For optimum performance, all DIMMs controlled by a given CPU should be the same capacity and all single-rank or dual-rank. Mixed configurations are supported, but could result in lower memory performance. Note that all supported 4-GB and 8-GB DIMMs are dual-rank. For 1-GB and 2-GB DIMMs, you can identify the type by counting the DRAMs; single-rank DIMMs have 18 DRAMs, while dual-rank DIMMs have 36 DRAMs.

SunService Disabled with ILOM 3.0

The SunService account is not supported in ILOM 3.0. If your system has installed ILOM 3.0, you must contact your SunService representative if you want to enable your SunService account. The sunservice account is for the use of SunService representatives only. Do not use the SunService account unless you are instructed to do so in a procedure developed by Sun Microsystems.

BIOS Setup Requires Cold Boot for Changes to Take Effect (6765650)

If you reboot the system without powering it off, the BIOS changes will not be saved. The BIOS setup for software 1.1 requires a power cycle reboot for changes to take effect.

Workaround: Issue a cold boot for changes to become effective.

SEL Does Not Show Correctable ECC DIMMs in POST (6607865)

Turn off the system, insert correctable ECC DIMMs into DIMM Slots 0 and 1, turn on the system and the correctable ECC DIMMs is not shown in SEL list.

Static IP Config Cannot Be Set if DHCP is Set Without Valid Entry (6785026)

The Sun Fire X4540 ILOMs require a valid client entry configured prior to using DHCP. Failure to do so can prevent changes being made to BMC network parameters.

BIOS Version Shown as Unknown After Flashing SP via WebGUI (6832811)

When flashing SP from ILOM 2.0 to ILOM 3.0, or from 2.0 to 3.0, through the webGUI, the existing BIOS version is listed as unknown and the start flash process does not begin.

Installing Summit-E and Summit Cards Causes Sync Errors in SEL Log (6841436)

When installing the Summit-E or Summit 2-port FC HBA card into a PCIe slot, the errors are reported in the SEL for that slot.

WebGUI Disk Sensor Reading is not Viewable in ILOM 3.0 (6882865)

To view disk information, use the `ipmitool sdr data` command. The ILOM 3.x Sensor Readings GUI screen does not provide drive information.

System Management and Service Processor Issues

The following issues apply to the Sun Fire X4540 server Integrated Lights Out Manager (ILOM) and Service Processor (SP):

- "`help targets` Command Does Not Show All Objects Under `/SYS`" on page 25
- "Fan Readings Displayed in System Event Log (6672284)" on page 25
- "Preserved Configuration Is Not Selectable in ILOM Service Processor GUI (6676365)" on page 25
- "Error Messages Are Displayed When Incorrect ILOM Firmware Image is Selected (6681810)" on page 26

`help targets` Command Does Not Show All Objects Under `/SYS`

Typing the `help targets` command does not show all the valid targets under `/SYS`. This is a known issue.

Fan Readings Displayed in System Event Log (6672284)

When the server is power cycled, lower, non-critical fan speed readings might intermittently appear in the IPMI SEL (system event log).

Workaround: Ignore the non-critical fan warnings in Service Processor IPMI SEL.

Preserved Configuration Is Not Selectable in ILOM Service Processor GUI (6676365)

If the firmware upgrade is canceled and retried in the ILOM Service Processor GUI, the preserved configuration choice is then dimmed and not selectable.

Workaround: Exit the GUI session, log out of the ILOM GUI, and retry the firmware upgrade process. Or, upgrade without preserving the configuration.

Error Messages Are Displayed When Incorrect ILOM Firmware Image is Selected (6681810)

When an incorrect ILOM firmware image is selected in the firmware upgrade GUI, extraneous error messages are displays.

Workaround: Ignore the extraneous error messages.

General Software Issues

This section contains issues that apply to Sun Fire X4540 servers running Sun optional software.

- "A Test Parameter in the SunVTS Disktest Is Set to a Default That Causes a Longer Running Time (6548088)" on page 26
- "Configuring PowerNow! for Your OS" on page 27
- "After Upgrade, Error Message During LSI Initialization (6852354)" on page 27
- "Errors on Non-Solaris 2TB Hard Drives (6900074)" on page 27

A Test Parameter in the SunVTS Disktest Is Set to a Default That Causes a Longer Running Time (6548088)

One of the test parameters in the SunVTS™ disktest, Media Transfer Size, is set to 32 KB by default. It can take a long time for the disktest to complete one pass.

Workaround: To improve the performance:

1. Before starting the SUNVTS test, right-click the disktest and select Test Parameters Options.

2. Select 256KB for the Media Transfer Size.

3. Select Apply to All for Across All Instances.

This setting allows the test to complete one run in a few hours.

Configuring PowerNow! for Your OS

The Sun Fire X4540 server includes AMD's PowerNow! technology, developed by AMD to reduce power consumption and heat dissipation. PowerNow! accomplishes this by lowering the CPU frequency and voltage when the kernel load is low.

Note that changes in CPU frequency and voltage with PowerNow! cause fluctuations in the clock speed. Depending on your utilization of system resources, the indicated speed might be substantially lower than the actual (maximum) rating of your CPU. For example, if you installed a 2.2 GHz processor; at times of low demand, the CPU could clock down and indicate only approximately 1.0 GHz. This is normal and indicates that your system is in a power-saving mode.

Note – PowerNow! is not supported on all operating systems. On some operating systems that do support it, PowerNow! is enabled by default. Read the following information carefully for your particular operating system.

After Upgrade, Error Message During LSI Initialization (6852354)

After installing SW 2.0, during bootup, system receives the error message, `Adapter configuration may have changed, reconfiguration is suggested!` Before the installation, in the LSI Configuration utility, the controllers were named `SAS1068E` and after the installation, they are named `C1086E`. The system continues to boot and operates as expected.

Workaround: This error message is benign and safe to ignore.

Errors on Non-Solaris 2TB Hard Drives (6900074)

On the X4540 (configured with all 2TB hard drives) with pre-installed Solaris 10 10/09, when embeded SunVTS 7.0ps7 runs disktest, it reports the following fatal error:

```
Invalid seekpoint specified is greater than Number of blocks on the
partition
```

Workaround: Please use other diagnostic tools to check the non-Solaris 2TB hard drive.

Solaris OS Issues

This section lists issues that are specific to the Solaris operating system.

- "Message "Bad PBR Sig" Appears During Boot" on page 28
- "Solaris 9 SPARC Client Cannot Redirect CD-ROM or USB Diskette Devices (6415385)" on page 28
- "How to Reinstall Solaris OS" on page 29
- "Error Message Is Displayed When Executing svcs -xv Command" on page 29
- "sd Treats An fdisk-Partitioned Disk As An EFI-Partitioned Disk (6355349)" on page 30
- "Solaris 10 11/06: Self-Signed Certificate Hostname Mismatch (6587000)" on page 30
- "NVIDIA Gigabit Ethernet (nge) Transmit Stalls Under Load (6772312)" on page 31

Message "Bad PBR Sig" Appears During Boot

The message "Bad PBR sig" during booting indicates that you are trying to boot from a non-bootable device.

Workaround: To correct this, boot from a bootable drive. See the *Sun Fire X4540 Installation Guide.*

Solaris 9 SPARC Client Cannot Redirect CD-ROM or USB Diskette Devices (6415385)

The Solaris 9 SPARC client cannot redirect CD-ROM or USB floppy devices due to a lack of JavaRConsole required libraries on the platform. Other redirection functionality works as expected, for example keyboard, video, and mouse redirection.

Workaround: Use Solaris 10 clients.

How to Reinstall Solaris OS

Your Sun Fire X4540 Server comes preinstalled with the Solaris 10 10/09 OS. If you need to reinstall Solaris 10 10/09, it is available from the Sun Download Center at:

http://www.sun.com/software/solaris/get.jsp

To re-create the factory installed configuration:

1. **Install Solaris 10 5/08 OS.**

2. **Install the** `hd` **utility for the Solaris OS from:**

   http://www.sun.com/servers/x64/x4540/downloads.jsp

3. **Mirror the two bootable disks.**

   For more information, see the *Sun Fire X4540 Server Administration Guide*.

4. **Ongoing recommended patches are made available at the following web site:**

   http://www.sun.com/servers/x64/x4540/downloads.jsp

Error Message Is Displayed When Executing `svcs` `-xv` Command

Executing `svcs -xv` command returns the following error message:

```
svc:/system/webconsole:console (java web console)
 State: maintenance since Tue Jun 24 15:44:26 2008
Reason: Maintenance requested by an administrator.
   See: http://sun.com/msg/SMF-8000-63
   See: man -M /usr/share/man -s 1M smcwebserver
   See: /var/svc/log/system-webconsole:console.log
Impact: This service is not running.
```

Workaround: Issue the following command:

```
/usr/share/webconsole/private/bin/wcremove -i console
```

After this command is issued, reboot the server and verify that service is available by again issuing the `svcs -xv` command in a shell prompt.

`sd` Treats An `fdisk`-Partitioned Disk As An EFI-Partitioned Disk (6355349)

If a GUID Partition Table (GPT) backup header is left on a disk after the disk is repartitioned to a format other than Extensible Firmware Interface (EFI) or GPT, the Solaris OS might treat the disk as EFI or GPT labeled. This error occurs only if an EFI or GPT labeled disk is repartitioned with earlier releases of Solaris or by using a utility that is not EFI or GPT aware. If the GPT backup is used, the following warning is displayed:

```
primary label corrupt; using backup
```

Workaround 1: Clear the entire disk before you repartition the disk.

```
dd if=/dev/zero of=/dev/rdsk/c1t3d0
```

Workaround 2: Clear the GPT backup header that resides in the last block of the disk. Perform the following steps:

1. Run the format command on the disk and specify the verify option. Note the values of the sectors.

   ```
   #echo  "verify" | format /dev/rdsk/c1t3d0 | grep "^sectors"
   
   Reading the primary EFI GPT label failed.  Using backup label.
   Use the 'backup' command to restore the primary label.
   
       sectors = 143374743
   ```

2. (Optional) Copy the contents of the specified block.

   ```
   dd if=/dev/rdsk/c1t3d0 of=/var/tmp/lastblock iseek=143374743
   ```

3. Clear the specified block.

   ```
   dd if=/dev/zero of=/dev/rdsk/c1t3d0 oseek=143374743
   ```

Solaris 10 11/06: Self-Signed Certificate Hostname Mismatch (6587000)

On Solaris 10 11/06, A hostname mismatch in a self-signed X.509 Certificate can cause the Lockhart console services to stop. To confirm that Lockhart console services are stopped, issue the command `wcadmin list -a`. If all Lockhart console services are stopped, then remove the Lockhart instance by running `/usr/share/webconsole/private/bin/wcremove -i console` and restart the Lockhart console by running `smcwebserver start`.

NVIDIA Gigabit Ethernet (nge) Transmit Stalls Under Load (6772312)

Under intensive network load, NVIDIA onboard gigabit ethernet interfaces may experience transmit stalls, followed by interface reset. A fix will be available in a future release.

Linux OS Issues

This section lists issues that are specific to the Linux operating system.

- "`hd` and `dcmu` Do Not Function When LSI rhea Option Cards Are Installed (6841479)" on page 35

Ethernet Interface Name Re-ordering

Linux automatically reconfigures the device numbers when ethernet option cards are inserted and configured. This might confuse the PXE installation and users.

Workaround: Use the interactive PXE installation method which lets you select the appropriate ethernet device during run time. To enable the interactive method:

1. Add an "interactive" macro in the kickstart file.

2. Change the default file under the PXE server to present the ethernet device. An example default file entry might look like:

```
label th-rhel4.5-64-everything
kernel os_images/rhel4.5as_64/images/pxeboot/vmlinuz
append initrd-4500/rhel4.5as_64/initrd.img ksdevice=eth0 load_ramdisk=1 network
ks=nfs:xx.xx.xx.xx:/data/shared/pxeboot/4500/rhel4.5as_64/ks_everything.cfg
```

The value `ksdevice=eth0` hard codes the ethernet device `eth0`. Since `eth0` can change to `eth4` or `eth5`, do not hard code the value.

3. This step applies to a system which is up and running. This binds the device number to the mac address of the ethernet device.

   a. For `ifconfig ethX`, replace `X` with the corresponding numeral, for example: `eth0`.

   b. Copy the mac address.

   c. Edit the `ifcfg` file that corresponds to the device `/etc/sysconfig/network-scripts/ifcfg-ethX`. Replace X with the corresponding numeral, for example: `eth0`.

   d. Add the previously copied mac line: `HWADDR=XX:XX:XX:XX:XX:XX`

SIA Installation of RHEL 4.7 Fails on System With 10-GB Intel Network Card (6772570)

When using Sun Install Assistant (SIA) to install RHEL 4.7 x86 (64 bit), the installation fails if an Intel 82598 10-Gigabit Ethernet option card is installed on the system. The OS install process succeeds, but the boot process fails when the GRUB boot tool cannot locate the `initrd` file.

Workaround: Remove the Intel 82598 10 Gigabit Ethernet controller before installing the OS.

HERD Utility for Linux Is Not Compatible With Xen Kernel

Hardware Error Report and Decode (HERD) tool for the X4540 does not run in a Xen kernel on Red Hat Enterprise Linux (RHEL) 5.x or SLES 10.

Workaround: Boot into a non-Xen kernel before using HERD.

Turning Off ACPI and MSI (6684720)

Some option cards might be unusable when you use non-Advanced Configuration and Power Interface (ACPI) or have configured an OS to turn off both ACPI and Message Signaled Interrupts (MSI).

Workaround: Do not turn off ACPI and MSI.

Software 2.0 SLES 11 Inbox Infiniband Driver Does Not Work With 1B-HCA (6833825)

Sun Fire X4540 Software 2.0 SLES 11 inbox Infiniband driver, OFED1.4, does not work with IB-HCA:X1236A-Z and X4217A-Z.

RHEL4.7-x86_64 Fails to Install Via DVD/CD Media (6769100)

When installing RHEL4.7-x86_64 from the DVD media using the USB interface, with Installation Method selected as *Local CDROM*, a screen informs that *No driver found*.

Workarounds:

- Select *NFS Image* from the Installation Method screen and point to Installerator's NFS image the installation proceeds correctly.
- When installing RHEL4.6-x86_64 as a reference point, this issue was not present.
- Use the SIA CD to launch the RHEL 4.7 installer

`hd` 1.08 Returns Incomplete Device Name on SLES11 (6827670)

A system with SLES 11 and `hd` 1.08 returns unexpected results. The hd command always reports mapped 48 hard drives without full device name. For example, device *sdw* only shows *w*.

NVIDIA NIC `forcedeth` `tx_timeout` Under Load (6775868)

Under intensive network load, the NVIDIA MCP55 NICs experience timeout resets.

Workaround: This issue is fixed with the `nvnet1.31` driver that is provided in the Tools and Drivers CD 2.0:

- `nvnet-rhel4.7-1-31.x86_64.rpm`
- `nvnet-rhel5.2-1-31.x86_64.rpm`
- `nvnet-sles10sp2-1-31.x86_64.rpm`

The workaround for RHEL 4.8 will be provided in a future release.

NVIDIA MCP55 NIC Time-Out Resets Under Intensive Network Load (6775868, 6845350)

RHEL4.8: Nvidia NICS generates `tx_timeout` errors under high stress.

Workaround: Add `options forcedeth msix=0` to the end of the `/etc/modprobe.conf` file.

Many AER errors reported by SLES10-SP2 (6812224)

After installation of SLES10-SP2 64bit OS on an X4540 with BIOS32, the system reports many AER-related errors in demsg.

Workaround: There is no workaround for this issue. This issue will be fixed in a future release.

Failed to Allocate I/O Resource With 3 PCIe Cards (6840925)

I/O resource could not be allocated when 2 network cards and one storage card is installed due to not enough I/O space for smbus device in bus 80.

Workaround: Check your I/O space status by using `cat /proc/ioports`, then remove the card.

`hd` and `dcmu` Do Not Function When LSI rhea Option Cards Are Installed (6841479)

`dcmu` and `hd` do not function on a SLES 10 SP2 x86_64 system when StorageTek PCIe Dual-Channel Ultra 320 SCSI HBA cards are present in slots.

Workaround: Rebuild `initrd` with the following command:

```
mkinitrd -m "mptsas mptspi"
```

Windows OS Issues

This section lists an issue that is specific to the Windows operating system.

Windows 2008 Fails to Initialize ZFS-Controlled Devices (6769717)

When Windows 2008 is installed onto a disk with Solaris 10 10/08, the remaining 47 disks cannot be initialized or brought online by the disk management wizard. Additionally, cleaning the drives using diskpart did not solve the issue for the majority of the drives.

Workaround:

1. Do the following using diskpart and Device Manager:

   a. **From a command line prompt, launch** diskpart**. At the diskpart prompt type** san policy = onlineall**. Exit** diskpart**.**

   b. **Start Device Manager. Expand "Disk Drives." Right-click each affected drive, and select "Uninstall" to uninstall the drive. When finished, exit Device Manager.**

   c. **Start Disk Management. From the "Action" pull-down menu, run "Rescan Disks." Right-click each affected drive and Initialize.**

Or:

2. Use Sun Installation Assistant (SIA) from software version 1.1 or later to install Windows 2008.

Resolved Hardware, Firmware, and BIOS Issues

The following issues were resolved for this release:

- "System Tries to Boot Off of SATA Port 0/2, When Ports 0/0 and 0/1 Are Empty (6696443)" on page 37
- "F2, F8, and F12 Messages Not Displayed in POST (6652479)" on page 37

- "System Fails to Boot If BIOS Setup Option Is Not Supported by Installed Devices (6678497)" on page 44
- "Flash Upgrade Fails When Concurrent Upgrade Already in Progress (6684204)" on page 44

System Tries to Boot Off of SATA Port 0/2, When Ports 0/0 and 0/1 Are Empty (6696443)

When the hard drive Ports 0 and 1 are empty, the server tries to boot off of the hardware SATA Port 0/2, which is not expected behavior.

F2, F8, and F12 Messages Not Displayed in POST (6652479)

The serial console might not display F2, F8, and F12 messages in the Power-On Self-Test (POST) screen when option cards are installed.

Workaround: Use the ILOM Remote Console to view the messages.

System Fails To Boot After AC Power Cycle In Standby Mode (6700772)

The system fails to boot after an AC power cycle in standby mode. The following steps were executed when this error occurred:

1. **The system boots up with Windows 2003 32 bit or 64-bit.**

2. **The system is put into standby mode by selecting the power option or by selecting shutdown, then standby.**

If the AC power cables are removed and then reinserted for AC-power cycling while the system is still in standby mode, the system powers up but fails to turn on.

Using the `ipmitool` command shows that the chassis power is off.

Workaround: Press the power button, or use IPMI command to turn the system on.

Pause and Hot Keys Intermittently Do Not Work When Attempting to Pause Memory Check (6681749)

Pause and ESC keys intermittently do not work when attempting to pause the memory check display. After using the Pause key, other hot keys such as F2, F8, F12, and Esc might fail to function correctly.

Workaround: To pause the display, press the key a second time. If you press the Pause key, you must tap the Ctrl key once to use hot keys such as F2, F8, F12, or Esc.

Server Hangs At The End Of POST With 10-GB HBA Installed (6717046)

When the X4540 has a 10-GB Host Bus Adapter (HBA) installed in slot 0 and has BIOS 10 (version 0ABNF010) installed, the server hangs at the end of Power-on Self-test (POST). This issue might be present, but not limited to, when a 10GbE PCI-E card or the 4-port GbE NIC (Atlas QGE) card is installed.

Workaround: Ensure that the 10-GB Host Bus Adapter (HBA) is installed in Slot 1 or Slot 2.

BIOS Gets Flashed Twice When ILOM Is Upgraded (6706794)

The ILOM Service Processor upgrades the BIOS twice during ILOM upgrade, once during the upgrade and again immediately after upgrade completes. The two BIOS flash upgrades during ILOM upgrade does not break any functionality and can be ignored.

Idle Screen Is Corrupted When ILOM WebGUI Screen Is Resized on a JavaRConsole Client (6688489)

When the ILOM WebGUI screen on a JavaRConsole remote client is resized, the idle screen is corrupted. This occurs when the default setting of scaling enabled for video has been applied.

Workarounds: Stop and restart redirection, type anything into the Java console window, then disable video scaling.

Incorrect Time Stamps in IPMI System Event Log During BIOS POST (6670609)

ILOM Service Processor Intelligent Platform Management Interface (IPMI) SEL (System Event Log) messages during BIOS Power-On Self-Test (POST) display incorrect time stamps. These incorrect time stamps can be safely ignored.

Service Processor Factory Option Under `reset_to_defaults` Does Not Work (6672926)

The service processor includes a `reset_to_defaults` selection, which normally offers the following choices: user accounts, all, and factory.

In SW1.0, the "factory" selection does not work.

Workaround: When using `reset_to_defaults`, use the "all" selection. Alternately, you can reinstall the service processor without preserving the configuration.

FRU Information Is Not Updated in FRUtool (6661109)

Field Replaceable Units ID (FRUID) information for Power Supply Unit (PSU) is not updated quickly in FRUtool.

Workaround: Reset the service processor after hot-swapping PSUs if FRU information is needed.

Error Messages Are Displayed After Incorrect Load Command Is Entered (6676403)

When the load command is entered incorrectly, extraneous error messages are displayed.

Workaround: Retry the command with the correct arguments.

Drive LEDs Remain Lit after Locate Button is Pressed (6640032)

When the Locate button is pressed for more than 15 seconds, the drive LEDs remain illuminated.

Workaround: Verify that the front or rear locate buttons are not stuck in the down position, and then reset the service processor, using the GUI, CLI, SNMP, or IPMI interfaces. If the problems persist, reset the system controller and cycle the AC power.

Date of Time Changes After Software Reboot (6713425)

Time of date intermittently shows incorrect year after a software reboot.

Driver Fails To Attach and Interface Is Unavailable (6501159)

Please note that for the MCP55 chipset (X2100 M2, X2200 M2, X4x40) a workaround exists for CR6648502 which can eliminate the interface-attach failure which does not require unplugging the power cable.

1. While running `NICDRV load_unload`, the NVIDIA Gigabit-Ethernet (nge) driver for the interface controllers fails to attach to the interfaces and the nge interface is unavailable.

   Workaround: Unplug the power cable to the server and reboot. This eliminates the occurance of the driver failing to attach.

2. If an nge port is linked to a switch and is forced to 100fdx (with autoneg disabled), but the autoneg of the switch is enabled, then the nge port transfers at 100fdx and the switch transfers at 100hdx. After some data transition, the port hangs. Issuing the `plumb/unplumb`, commands does not recover from this hang. After rebooting the system, the controllers continue to fail to attach.

   Workaround: Unplug the power cable to the server and reboot. This eliminates the occurance of the driver failing to attach.

3. If a nge port is not used for an unspecified duration and the system is rebooted, the fail-to_attach issue persists.

   Workaround: Unplug the power cable to the server and reboot. This eliminates the occurrence of the driver failing to attach.

ILOM CLI Cannot Properly Parse Values Surrounded by Quotation Marks (6559544)

When entering a value that contains spaces for the property `binddn` under `/SP/clients/ldap`, the value is incorrectly parsed and results in a bad value.

Workaround: Add additional escape characters to make the value work properly.

Upgrade Fails When Upgrading From a Non-root Administrator Account (6682360)

When a firmware upgrade from a non-root administrator account is attempted in the ILOM firmware upgrade GUI, upgrade failure messages are displayed.

Workaround: Retry the ILOM firmware upgrade from the root account. If the firmware image is corrupted, then the host-based service processor recovery process is required. For this process, you can use the DOS `socflash.exe` utility, which is found on the Tools and Drivers CD.

Baud Rate and Flow Control Not Saved (6647450)

ILOM Service Processor settings for serial port baud rate and flow control on host and Service Processor serial port interfaces are not saved across Service Processor resets.

Workaround: Use 9600 baud or set an alternative baud rate after each Service Processor reset.

Download Fails on Certain Drives (6653884)

The `download microcode` command fails on certain drives with Solaris 11, and Solaris 10 update 5, Windows OS 5, while the command works with other drives. This failure could be due to the large firmware file size.

Workaround: Download the code on an LSI Host Bus Adapter.

Service Processor Flash Through The USB/KCS Interface Occurs With Sequent Failures (6607039)

A Service Processor flash from 2.0.2.1 (build 36) to some releases through a USB interface is occasionally fails.

ipmiflash Exits With "lost contact with host" (6694423)

During Service Processor firmware upgrade, ipmiflash gives the error message, "lost contact with host" and exits.

Workaround: When ipmiflash comes back up, the system has been upgraded with the correct version of the firmware.

Fork Appears To Cause `pthread seg` Fault (6714006)

In rare circumstances, the Integrated Lights Out Manager (ILOM) Service Processor becomes unresponsive on Intelligent Platform Management Interfaces (IPMI), and BIOS displays `BMC Not Responding`, during boot.

Workaround: Reset the ILOM service processor using GUI, CLI, or SNMP interfaces, if it becomes unresponsive on IPMI interfaces, and BIOS displays `BMC Not Responding` during boot.

Multiple System Reboots With Memory Parity Errors (6752784)

System makes several reboots with memory parity errors in system event log (SEL) on non-existent CPU or DIMM pair.

There is no known workaround for this issue.

NVIDIA MCP55 NICs Timeout Reset Under Intensive Network Load (6775868)

After running a combination of `uperf` and `rcp`, on-board NICs timeout and network interface connections drop and come back up. The system is using the latest NVIDIA MCP55 driver (0.62) from DRV_PKG_1.25. This issue is also experienced on Solaris.

CLI Sessions Might Lose Data Due to `tftp` Timeout (6544091)

An ILOM CLI session might lose data if a new image upload fails due to a timeout tftp during download.

Workaround: Close the current ILOM CLI session and open a new session.

Physical Fan LEDs Not Present In `ftx.ok2rm.led` (6671800)

The ILOM Service Processor (SP) provides information on sensors and indicators. Physical fan LEDs are not present in ftx.ok2rm.led. They are documented with the wrong header.

Workaround: Ignore fan tray `ok2rm` LEDs in the user interface, which does not physically exist. Fans are hot-swappable. There is no service procedure to prepare the fans for removal.

Ability to Monitor and Control Hard Drives Using IPMI on the Host OS Is Not Supported (6434272)

You cannot control or monitor the hard drives via the Service Processor or IPMI.

The Ready to Remove and Fault LEDs on the hard drives do not provide reliable information about the state of the hard drive.

System Fails to Boot If BIOS Setup Option Is Not Supported by Installed Devices (6678497)

The system might fail to boot if a CPU timing or memory timing BIOS setup option is not supported by the installed devices. These options are designed to optimize performance and reliability and should not be changed.

Workaround: Clear CMOS and reboot. For instructions, see your service manual.

Flash Upgrade Fails When Concurrent Upgrade Already in Progress (6684204)

A flash upgrade fails when another flash upgrade is already in progress. A message alerts you that an illegal operation is being attempted.

`ipmiflash` utility for X4140, X4540, and X4150 does not check if a flash upgrade is already in progress, which might cause one or both flash upgrades to fail. There is also a small possibility that the ILOM flash image will be corrupted, requiring flash recovery using the ILOM `socflash.exe` program.

Workaround: Avoid concurrent flashes. If the ILOM flash image is corrupted, use the ILOM `socflash.exe` program to recover.

Resolved Solaris Issues

ZFS Data Synchronization Slows System Performance (6430480)

ZFS data synchronization of data slows system performance. Any thread which requires config lock for writing during heavy I/O load can take a long time. Determine if the device needs to be replaced and clear the errors using `zpool clear` or replace the device with `zpool replace` command.

Resolved Linux Issues

The following issues were resolved for this release:

- "Kudzu/Anaconda Not Seeing All SCSI Devices (6487566)" on page 45
- "Linux Boot Messages on Startup (6659995)" on page 46
- "Removing or Replacing a Drive (6688264)" on page 46

Kudzu/Anaconda Not Seeing All SCSI Devices (6487566)

A Kudzu bug prevents the installer from detecting the virtual CD-ROM and floppy or an external USB CD-ROM when the system is populated with a large number of disks.

For more information, refer to this web page:

https://bugzilla.redhat.com/bugzilla/show_bug.cgi?id=206641

Workaround: Do one of the following:

- Perform an installation with the SIA installation CD.
- Perform an installation with fewer disks on the system.

Linux Boot Messages on Startup (6659995)

When Service Processor boots, there are Linux boot messages on startup. These messages do not provide diagnostic information and can be safely ignored.

Removing or Replacing a Drive (6688264)

When a drive is removed from the chassis, `cfgdisk` utility does not report the device as removed. When a drive is inserted into the chassis, the event is recorded only after `cfgdisk -o connect -d sata` *location* command is executed.

Resolved Windows Issues

The following issues were resolved for this release:

- "Windows 2008 Install Pack Fails During Installation (6776403)" on page 46
- "Boot Disk Is Difficult to Determine During Windows Installation (6486425)" on page 47
- "Windows Installation Might Fail" on page 47
- "Windows 2008 `hd` Does Not Work As Expected With LSI SAS HBA (6822451)" on page 47

Windows 2008 Install Pack Fails During Installation (6776403)

During installation of Windows 2008 "InstallPack," the installation hangs with a script error. Since this system has an Intel card installed in one of the PCI-E slots, Intel NIC teaming was automatically selected during the installation.

Boot Disk Is Difficult to Determine During Windows Installation (6486425)

If you are using a physical USB floppy drive connected to the server to supply the mass storage drivers, you must connect the drive to the upper rear USB port to be correctly recognized as A.

If Solaris OS is currently installed, the Windows installer will not correctly display the disk drives. To correctly select the boot drive, press Enter in the drive selection dialog.

- Pressing the up or down arrow keys to scroll through the list of drives will **not** display the boot drive.
- If an arrow key is pressed, you must restart the Windows installation to be able to select the correct boot drive.

A 48-disk system is the only supported configuration. When the system is fully populated with 48 drives, the Windows drive numbers are different than the physical drive numbers. For example, the Windows boot drive number is 24, while the corresponding physical drive number is 0.

For detailed instructions on installing the Windows operating system see the *Sun Fire X4540 Server Windows Operating System Installation Guide*.

Windows Installation Might Fail

The Windows 2008 server OS installation might fail if the "Reformat ALL internal disks" check box is not selected and a Windows bootable disk is present in one of the non-bootable drives.

Workaround: Use the SIA option of "Reformat ALL internal disks" to install Windows 2008.

Windows 2008 `hd` Does Not Work As Expected With LSI SAS HBA (6822451)

When running `hd` 1.07 on system with a PCIe card installed (with no SAS storage connection), the command `hd -q` does not return results and `hd -x` causes the `hd` program to terminate.

Documentation Issues

The following issues were found in the documentation:

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Getting Started Guide Lists Incorrect Document

The *Sun Fire X4540 Getting Started Guide* lists a document that does not apply to the server. The *Sun LSI 106x RAID User's Guide* is not part of the documentation set.

Incorrect Example In Section Titled, "Edit Existing IP Addresses in ILOM Using the CLI" (6654413)

IP Addresses in the *Sun Integrated Lights Out Manager 2.0 User's Guide* procedure, "Edit Existing IP Addresses in ILOM Using the CLI" provides instructions where `set pendingipnetmask=` appears twice in the example. Instead, the line `pendingipgateway=` should be included.

Addendum to the Sun Integrated Lights Out Manager 2.0 User's Guide Contains Information That Does Not Apply

The *Addendum to the Sun Integrated Lights Out Manager 2.0 User's Guide* covers a wide range of x64 servers. Thus, some of the information in that document does not apply to the Sun Fire X4540 server.

The following lists which topics in the *Addendum* apply to the Sun Fire X4540 servers. All other topics do **not** apply.

- ILOM CLI Cannot Properly Parse Values Surrounded by Quotation Marks (6559544)
- Documentation Error: Edit Existing IP Addresses in ILOM Using the CLI Procedure Gives Incorrect Instruction (6654413)