

Sun Fire[™] X4600 M2 Server
Product Notes



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Preface

This document describes issues for the Sun Fire™ X4600 M2 server.

Issues include information that you should know about, such as prerequisites, tips, troubleshooting hints, and change requests. Change requests have tracking numbers shown in parentheses. For updates on change requests and for patches, see the SunSolveSM web site at

<http://sunsolve.sun.com>.

Note – The software on the CDs that are shipped with the system is the latest available at the time of shipping and can be used for reinstallation or system recovery. Because software versions are updated frequently, check the product download site for the latest versions of the software that are qualified by Sun.

Product Updates

For product updates that you can download for the Sun Fire X4600 server, go to the following URL and navigate to Servers & Workstations for this product:

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

This site contains updates for firmware and drivers, as well as CD-ROM .iso images.

Related Documentation

For a description of the document set for the Sun Fire X4600 server, see the *Where To Find Documentation* sheet that is packed with your system and also posted at the product's documentation web page:

<http://docs.sun.com/app/docs/coll/x4600>

Translated versions of some of these documents are available in French, Simplified Chinese, Traditional Chinese, Korean, and Japanese.

<http://docs.sun.com/app/docs/coll/x4600-fr?l=fr>

<http://docs.sun.com/app/docs/coll/x4600-zh?l=zh>

http://docs.sun.com/app/docs/coll/x4600-zh_TW?l=zh_TW

<http://docs.sun.com/app/docs/coll/x4600-ko?l=ko>

<http://docs.sun.com/app/docs/coll/x4600-ja?l=ja>

English documentation is revised more frequently and might be more up-to-date than the translated documentation.

For all Sun software and hardware manuals, go to:

<http://docs.sun.com>

For other documentation, go to:

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

Contacting Sun Technical Support

If you have technical questions about the server that are not answered in this document, go to:

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

See the Support menu for links to the Knowledgebase.

If you need to contact Sun technical support, please have the following information available so that we can best assist you in resolving problems:

- A description of the problem, including the situation where the problem occurs and its impact on your operation

- The machine type, operating system version, and product version, including any patches and other software that might be affecting the problem
- Detailed steps on the methods you have used to reproduce the problem
- Any error logs or core dumps

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Please include the title and part number of your document with your feedback:

Sun Fire X4600 M2 Server Product Notes, part number 819-5032-24

Introduction

This chapter provides a brief summary of software available on your server and other features.

- [“Software” on page 1](#)
- [“Diagnosing Server Problems With the Bootable Diagnostics CD-ROM” on page 3](#)

Software

The following software might be included with your Sun Fire X4600 M2 server:

- [“Windows Server 2003 R2 Operating System” on page 1](#)
- [“Solaris 10 Operating System” on page 2](#)
- [“Sun Java Enterprise System” on page 2](#)
- [“Sun xVM Ops Center” on page 3](#)
- [“MegaRAID Storage Manager” on page 3](#)

Windows Server 2003 R2 Operating System

Some server modules are shipped with the preinstalled Windows Server 2003 operating system.

Initial Setup of the Factory-Installed Windows Server 2003 R2 Operating System

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 initial setup procedure, refer to the *Sun x64 Servers Windows Server 2003 R2 Operating System Preinstall Release Notes*.

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* enclosed in the optional recovery media kit and posted online. If you do not have the recovery media kit, contact your support representative.

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 re-install the Solaris 10 OS after removing it, you can download the DVD image.

To download the DVD image, see:

<http://www.sun.com/software/downloads>

The raidctl patch for Solaris OS (119851-13) can be downloaded from the SunSolve web site at:

<http://sunsolve.sun.com>

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 Sun Java ES is preloaded on your server.

Sun xVM Ops Center

Sun xVM Ops Center is a highly scalable, unified management platform for physical and virtual environments. Use Sun xVM Ops Center to manage multi-platform x64 and SPARC systems distributed throughout a global datacenter and integrate with existing toolsets. Ready to facilitate many aspects compliance reporting (ITIL) and data center automation, Sun xVM Ops Center enables management of thousands of systems simultaneously.

MegaRAID Storage Manager

MegaRAID Storage Manager (MSM) configuration setup application enables you to configure, monitor, and maintain storage configurations on Integrated RAID controllers. The graphical user interface (GUI) makes it easy for you to create and manage storage configurations. The application is available on the Tools and Drivers CD or the Tools and Drivers CD image on the product download site.

MSM enables you to easily configure the controllers, disk drives, and virtual disks on your system. The Configuration Wizard greatly simplifies the process of creating disk groups and virtual disks. The Configuration Wizard guides you through several simple steps to create your storage configurations.

For more information on MSM, see the x64 Servers Utilities Reference Manual, which is on the product documentation web site.

Diagnosing Server Problems With the Bootable Diagnostics CD-ROM

The server is shipped with a bootable diagnostics CD-ROM. This CD-ROM is designed so that the server will boot using the Solaris OS on the CD-ROM and start SunVTS software. Diagnostic tests will run and write output to log files that the service technician can use to determine the problem with the server.

Requirements

- To use the bootable diagnostics CD, you must have a keyboard, mouse, and monitor attached to the server on which you are performing diagnostics.

Firmware and BIOS Issues

This chapter describes the LSI firmware, Sun Integrated Lights Out Manager (ILOM) service processor (SP), and BIOS issues related to the Sun Fire X4600 M2 server. The numbers given in the section titles are internal tracking numbers for change requests related to the issues. These issues are divided into the following topics:

- [“Service Processor Firmware Issues” on page 5](#)
- [“Resolved Service Processor Issues” on page 9](#)
- [“BIOS Issues” on page 15](#)
- [“Resolved BIOS Issues” on page 22](#)
- [“LSI Firmware Issues” on page 25](#)

Service Processor Firmware Issues

The following are current issues.

[“Mouse Pointers Out of Sync on Windows 2003 at High Resolution \(6669368\)” on page 6](#)

[“Special Character in FTP Password Disables Snapshot Feature \(6674741\)” on page 7](#)

[“Service Processor Does Not Log Event or Provide Visual Alert After Hard Disk Is Removed” on page 7](#)

[“Recovery For Accidentally Flashing Wrong Platform Firmware on Sun Fire X4600 M2 Server” on page 7](#)

Use -f Option To Upgrade ILOM when Updating Firmware

When you upgrade the system firmware, use the `load` command with the `-f` option. This upgrades the ILOM as well.

```
-> load -f other_options
```

See the ILOM documentation collection for additional details.

OEM Error Messages In ILOM Logs (6608347)

If you see OEM error messages in the event log, contact Oracle Customer Support.

The following table shows an example of OEM error messages in the event log:

7b02	09/13/2007	16:07:27	OEM #0x12	Asserted
7c02	OEM record e0		00004800001111032000000000	
7d02	OEM record e0		10ab000000810000006040012	
7e02	OEM record e0		10ab0000001111002011110020	

Mouse Pointers Out of Sync on Windows 2003 at High Resolution (6669368)

When JavaRConsole is used to access Windows 2003, and the remote display resolution is greater than 1024x768, the local mouse pointer goes out of sync with the remote mouse pointer. This occurs because the resolution directly supported by JavaRConsole is 1024x768; the Windows display driver detects this, and simulates the larger display using panning. This confuses the local mouse driver.

Workaround

Simply ignore the local mouse pointer while interacting with the remote system. Alternately, you can use a display resolution of 1024x768 or less.

Special Character in FTP Password Disables Snapshot Feature (6674741)

The ILOM snapshot feature does not work if an FTP password with special characters is used. For example, suppose an FTP account on server “ftp” has a user name of “user”, a password of “abc@123”. You should be able to specify that account as a snapshot with the following command:

```
set dump_uri=ftp://user:abc%40123@ftp/
```

In this URI, the “%40” represents the “@” character. This syntax is not interpreted correctly, and the FTP login fails.

Service Processor Does Not Log Event or Provide Visual Alert After Hard Disk Is Removed

If a hard disk is removed from a system, the service processor (SP) neither logs an event nor provides a visual alert. This is expected behavior because the service processor does not receive events from the LSI SAS controller when a disk drive is removed and visual alerts do not occur.

Recovery For Accidentally Flashing Wrong Platform Firmware on Sun Fire X4600 M2 Server

If you accidentally flash the wrong platform firmware onto a Sun Fire X4600 M2 server, use IPMITool to verify the hardware version. For example, if the SP IP address is 10.0.0.13 and the root password is “changeme”, you might enter the command as follows (boldface indicates user input):

```
# ipmitool -H 10.0.0.13 -U root -P changeme fru
FRU Device Description : p0.card.fru (ID 10)
Board Product : ASSY,CPU BOARD,X4600
Board Serial : 002555
Board Part Number : 501-7321-03
Board Extra : 01
Board Extra : G4_CPU
```

If the Board Product line lists something other than **ASSY,CPU BOARD,X4600 M2**, then the server has the wrong firmware. For example, if it lists **ASSY,CPU BOARD,X4600**, then you have accidentally flashed the Sun Fire X4600 firmware onto the Sun Fire X4600 M2.

▼ Recovery Steps

The system will not reboot, but the service processor is still functional; you can return to the Sun Fire X4600 M2 firmware.

1. **Download and flash upgrade the server to the latest version of the Sun Fire X4600 M2 firmware.**
2. **Reboot the server.**
3. **Use IPMITool to verify the hardware version, as shown above.**

```
# ipmitool -H 10.0.0.13 -U root -P changeme fru
```

If the Board Product line includes X4600 M2, then the server has the correct firmware.

Unimplemented Simple Network Management Protocol (SNMP) Traps (6300437)

The following traps are currently not supported:

- SUN-PLATFORM-MIB
 - sunPlatObjectCreation
 - sunPlatObjectDeletion
 - sunPlatCommunicationsAlarm
 - sunPlatEnvironmentalAlarm
 - sunPlatEquipmentAlarm
 - sunPlatProcessingErrorAlarm
 - sunPlatStateChange
 - sunPlatAttributeChangeInteger
 - sunPlatAttributeChangeString
 - sunPlatAttributeChangeOID
 - sunPlatQualityOfServiceAlarm
 - sunPlatIndeterminateAlarm
- ENTITY-MIB
 - entConfigChange
- SNMPv2-MIB
 - coldStart

- warmStart
- authenticationFailure

SNMP Agent Does Not Handle All SETs (6255301)

The SNMP agent does not currently handle SETs for the Entity and Sun Platform MIBs. This causes compliance tests involving SETs to fail. Use other services to perform the needed tasks.

Resolved Service Processor Issues

SP Does Not Automatically Notify User When SSL Certificate is Updated (6476473)

(Fixed in Software 1.1.)

To establish a secure HTTPS connection to the ILOM, you must upload an SSL certificate and a private key into the ILOM. When the certificate is uploaded through the web, it is put in `/conf/actualcert.pem` on the SP. Similarly, the private key is put in `/conf/actualprivkey.pem`. The SP must be reset for the update to be applied. See the *Integrated Lights-Out Manager (ILOM) Administration Guide* (819-1160) for more information on updating SSL certificates.

After the SP resets, a pop-up message should inform the user that the keys have changed and prompt whether to accept them for a one-time login, or permanently. However, this pop-up message is not displaying for Sun Fire X4600 M2 servers.

▼ *Workaround*

To view whether the SSL certificate and key were updated, use the following procedure:

1. **Quit and restart your browser.**
2. **Use the browser to connect to the server's IP address (using HTTPS).**
3. **Accept a pop-up message that indicates that the URL does not match the hostname in the certificate.**

4. Click the **View Certificate** button to see the SSL certificate version that the server is using.

Web Interface Hangs After Change to Network Settings (6496326)

(Fixed in Software 1.2.)

After the Web interface is used to change the service processor network settings, the Web GUI might hang.

Workarounds

- Use the CLI or IPMITool to reconfigure the network interface.
- After using the Web GUI to reconfigure the network interface, restart the browser.

Service Processor Incorrectly Indicates Power Supply Fault After Shutdown (6516944)

(Fixed in Software 1.2.)

On systems running Service Processor firmware 1.1.1, the power supply fault LED is lit when the system is powered down, even if there is no power supply problem. The LED behaves correctly when the system is powered up.

Workarounds

- Power up the system and re-check the power supply fault LED.
- Query the IPMI Sensor Data Record (SDR). (The SDR is accessible through IPMI, the SP GUI, and the SP command line.) Refer to the psX.prnt (present) and the psX.vinok (voltage in OK) indicators.
- Query the IPMI System Event Log (SEL) to determine if critical power supply or voltage events have occurred.

JavaRConsole Does Not Notify User Of SP Disconnect Right Away (6487885)

(Fixed in Software 1.3)

JavaRConsole continues to work (for example, redirecting a CD-ROM image) even after it is disconnected from the service processor. When the service processor is reset, the user is not informed that the connection has been lost until the service processor is finished rebooting.

Workaround

When a service processor is reset, or its network configuration changes, restart the client application or the browser running the Web GUI.

System Hangs During POST (6618895)

(Fixed in Software 1.3.)

The system might hang during POST. Often the system freezes shortly after the console displays the manufacturer's logo. This problem is caused by a bug in the ILOM software that supports configuring the Serial Management port. This problem can be triggered by referencing the `/SP/serial` part of the ILOM object tree from the ILOM command line. Avoid commands such as these:

```
show /SP/serial/host
show -level all
```

Also avoid using the Configuration/Serial Port tab in the ILOM Web interface.

Workaround

To work around this problem, clear the internal software state that causes it. Use any of the following methods:

- Display the Configure/Serial Port tab in the ILOM Web interface. There is no need to change any options; simply displaying the tab toggles the condition
- From the ILOM command line, enter this command:

```
show /SP/serial/external
```

- Reset the Service Processor.

Cannot Set Syslog IP Address When Zeros Are Used (6547470)

(Fixed in Software 1.3.)

An attempt to set the syslog IP address fails if the address contains an octet of 0. For example, 10.10.10.10 and 100.100.100.100 works, while 19.52.0.17 does not work.

Unable to Set Multiple Properties in a Single Command (6544145)

(Fixed in Software 1.3)

The ILOM CLI sometimes reports an internal error for a command that attempts to set multiple properties.

Workaround

Set properties one at a time.

CLI Cannot Set ntp Server Address to Some IP Addresses (6543859)

(Fixed in Software 1.3)

The ILOM CLI cannot set the ntp server address to an IP address with a 0 as the second or third octet, such as 10.13.0.20 or 10.0.60.20. These addresses are rejected as "invalid."

Workaround

Use the Web interface to set the ntp server address.

Uploading SSL Certificate Without the Key Causes Port 443 to Not Open (6550394)

(Fixed in Software 1.3.)

If the SSL certificate is uploaded without the key, it causes 443 to not open.

Workaround

Errors uploading the SSL certificate can disable the https interface. Use the CLI or ipmi to reflash the ILOM SP. Do not preserve the configuration.

CLI Sessions Can Lose Data Due to TFTP Timeout (6544091)

(Fixed in Software 1.3.)

Workaround

Close the CLI session and open a new one.

Reported Fan Speed is Always Non-Zero, Even When Fan Has Failed or Been Removed (6493168)

(Fixed in Software 1.3.)

The ILOM SP always reports a non-zero fan speed, even when the fan has failed or been removed.

Workaround

Use the fan RPM level and the lower non-recover IPMI event in the IPMI sel log to determine that a fan has failed or been removed.

System Powers Off During Reboot After Thermal Shutdown (6494327)

(Fixed in Software 1.3.)

If overheating forces a system shutdown, the system might power off during reboot.

Workaround

After a thermal shutdown, be sure to give the system enough time to cool off (up to 30 minutes). If the system still powers down, power it back up. It might take 2 or 3 tries to reboot.

Web Interface Power Supply Alert Doesn't Work (6494817)

(Fixed in Software 1.3.)

The Web interface does not update the PWROK and VINOK indicators when power is lost.

Workaround

Use IPMItool output to detect loss of power.

Web Interface Hangs After Changing SP's IP Address (6496327)

(Fixed in Software 1.3.)

When the Web interface is used to change the service processor's static IP address, the Web GUI might hang.

Workaround

Reset the service processor to reestablish the connection. To avoid this problem, do not use the Web GUI to change the IP address; use IPMITool or the CLI instead.

Cannot Set `ipgateway` to 0.0.0.0 (6675084)

(Fixed in Software 2.1.)

The `ipgateway` target cannot be set to 0.0.0.0. Attempting to do so may cause existing network settings to be lost.

Web Interface May Be Temporarily Unavailable after Changing Network Settings (6669412)

(Fixed in Software 2.1.)

Changing the network setting can cause the Web interface to become temporarily unavailable for up to 20 minutes. The ILOM's web server process blocks, and web client requests are not honored.

Workaround

Kill and restart the Web interface process.

Cannot Start Services (6544951)

(Fixed in Software 2.2.)

The ILOM may be unable to start services when the maximum number of users or communities are configured, or multiple commands are issued in a short period.

Workaround

Do not configure the maximum number of users or communities. Wait several seconds between configuration commands.

Control Keys to Host Console via ILOM CLI During POST Scan of Onboard NIC Can Hang System (6767733)

(Fixed in Software 2.3.)

The host console can be viewed remotely using the following ILOM CLI command:

```
start /SP/console
```

If the host console is opened this way while the system is being powered up, pressing Control-S, Control-E, Control-P, or Control-N during the POST scan of the onboard NIC can cause the system to hang.

BIOS Issues

The following are current issues.

[“Upgrade Past Software 2.2 Causes Device Enumeration For PCI Slots 5, 6, and 7 to Change \(6719935\)”](#) on page 16

[“Cannot Boot From Internal Disk With Sun Multithreaded 10 GbE Card in Slot 2, 3, or 4 \(6711405, 6764001\)”](#) on page 16

[“Erroneous Report that PowerNow! Not Supported \(6768326\)”](#) on page 17

[“Abnormal and Intermittent Delays on Boot on 6P and 8P Systems \(6734988\)”](#) on page 17

[“Option ROM Space For PXE Booting Can Be Exhausted Before All Devices Can Be Scanned \(6453144, 6403173, 6272514, 6393809, 6439856, 6462303\)”](#) on page 18

[“Twelve-Boot-Device Limitation Can Be Exceeded Before All Devices Can Be Scanned By BIOS \(6268877, 6439856\)”](#) on page 20

Upgrade Past Software 2.2 Causes Device Enumeration For PCI Slots 5, 6, and 7 to Change (6719935)

A change in the system BIOS, introduced after Software 1.3, changes the way the system enumerates PCIe cards in slots 5, 6, and 7, as well as the devices connected to these cards. Upgrading the BIOS can cause the names of disk partitions and network interfaces to change.

Workaround

BIOS 126, included with Software 2.3, contains a setting that restores the old device enumeration. After flashing new system firmware, but before starting the host operating system, enable the following system BIOS option:

- Advanced/Hardware Error Handling/Unused PCIE Root Port

Note – Do not enable this option if you are already running a BIOS later than BIOS 50 (included in Software 1.3).

Cannot Boot From Internal Disk With Sun Multithreaded 10 GbE Card in Slot 2, 3, or 4 (6711405, 6764001)

A system with a Sun Multithreaded 10Gb Ethernet card (X1027A-z or X1107A-z) in slot 2, 3, or 4 is unable to boot from the local disk. This problem occurs because the Ethernet card has a large option ROM. When the Ethernet card is scanned first before the embedded HBA, there is not enough space left to load the HBA option ROM, and the internal disks become inaccessible.

Workaround

There are two workarounds:

- Install the Ethernet card in a slot other than 2, 3, or 4.
- Disable any unneeded option ROM.

Erroneous Report that PowerNow! Not Supported (6768326)

The Red Hat Enterprise Linux 5.2 XEN kernel reports the following in the system event log:

```
powernow-k8: Your BIOS does not provide _PSS objects.  
PowerNow! does not work on SMP systems without _PSS objects.  
Complain to your BIOS vendor.
```

This message is not correct and can be safely ignored.

Abnormal and Intermittent Delays on Boot on 6P and 8P Systems (6734988)

A system with 6 or 8 CPU modules normally experiences a delay of 1 to 2 minutes between power-on or reset and the appearance of the first BIOS messages on the console display. Some systems experience intermittent delays beyond 2 minutes. These are the symptoms:

- Delay occurs before any BIOS message appears on the system console.
- The last message in the IPMI System Event Log is “System Firmware Progress | Primary CPU initialization | Asserted”. If the subsequent message “System Firmware Progress | Keyboard controller initialization | Asserted” appears, the delay is over or did not occur.
- No system delays consistently. A system will rarely delay for a long period twice during two successive boots.
- The length of the delay varies considerably. The system may resume booting after a few minutes, or it may not resume for hours.

Workaround

If the console remains blank for 4 minutes or more, reset the system. In most cases it will take one reset to get past the delay; in a few cases it will take two.

Option ROM Space For PXE Booting Can Be Exhausted Before All Devices Can Be Scanned (6453144, 6403173, 6272514, 6393809, 6439856, 6462303)

The amount of BIOS option ROM space is limited and can be exhausted when many option cards are installed in the system.

This is expected behavior.

Possible Effects:

- Cannot PXE boot through the Ethernet ports and the following error message is displayed: Not enough space to copy PCI Option ROM
- Cannot PXE boot through the Ethernet ports and the following error message is displayed: Base-Code ROM ID structure not found
- PCI cards cannot PXE boot as desired if they are installed in a PCI slot that is scanned after the option ROM space is exhausted.
- HBA card and its attached HDD array are not detected if installed in a PCI slot that is scanned after the option ROM space is exhausted.

The devices and PCI slots are detected by the BIOS during startup in the following order (also see FIGURE 2-2 for the placement of the PCI slots):

1. PCI-E slot 2
2. PCI-E slot 3
3. PCI-E slot 4
4. On-board Intel NIC
5. PCI-X slot 0
6. PCI-X slot 1
7. On-board LSI SCSI controller
8. PCI-E slot 5
9. PCI-E slot 6
10. PCI-E slot 7

Workarounds

There are two possible workarounds to ensure that you have enough option ROM space to PXE boot from your devices as desired.

- If the device you want to boot from appears in the list of boot devices in the BIOS, perform Option 2 below to change the scanning order.
- If the device you want to boot from does not appear in the list of boot devices, perform Option 1 below so that the device appears in the list, then perform Option 2 to change the scanning order.

▼ Option 1

Disable option ROM scanning on all devices that do not need to PXE boot. This will preserve the option ROM space for the devices that you do want to PXE boot. Use the following procedure.

1. Enter the BIOS Setup utility by pressing the F2 key while the system is booting up and performing POST.
2. On the BIOS Main Menu screen, select the PCIPnP tab to open the PCI/PnP Settings screen.
3. Change the fields to Disabled for those PCI cards or NICs that will not be PXE booted.
4. Press and release the right arrow key until the Exit menu screen is displayed.
5. Follow the instructions on the Exit menu screen to save your changes and exit the Setup utility.

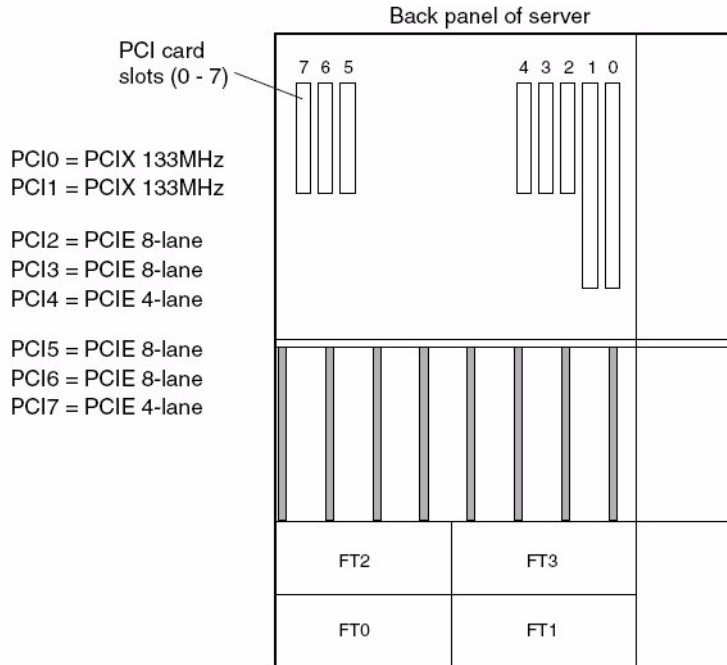
▼ Option 2

Manually set the BIOS boot order so that the devices that you want to PXE boot from are early enough in the boot order to be scanned before the option ROM space is exhausted. Use the following procedure:

1. Enter the BIOS Setup utility by pressing the F2 key while the system is booting and performing POST.
2. On the BIOS Main Menu screen, select the Boot tab to open the Boot menu main screen.
3. Select Boot Device Priority, or select Hard Disk Drives from the list to change hard-disk drives.
4. Change the selections for the boot devices or hard-disks drives to set the required device order.
5. Press and release the right arrow key until the Exit menu screen is displayed.

6. Follow the instructions on the Exit menu screen to save your changes and exit the Setup utility.

FIGURE 2-1 PCI Designation and Speeds of PCI Slots



Twelve-Boot-Device Limitation Can Be Exceeded Before All Devices Can Be Scanned By BIOS (6268877, 6439856)

The server BIOS can scan up to 12 devices, but depending on what is installed in the server, this limit can be exceeded before all devices in the server can be scanned. For example, if you install an HBA with an attached disk array into a PCI slot that is scanned before the on-board LSI SAS controller, the internal HDDs might not be scanned if the HBA and its attached HDDs exceed the 12-device limit.

This is expected behavior. Devices in excess of the 12-device limit will be seen at the OS level, but are not scanned by the BIOS during POST.

Possible Effects:

- Cannot boot from internal HDDs.
- NICs are not scanned and therefore cannot be used for PXE booting.

The BIOS scans devices in ascending order (from low PCI address to high PCI address). The scanning priority is:

1. PCI-E slot 2
2. PCI-E slot 3
3. PCI-E slot 4
4. On-board Intel NIC
5. PCI-X slot 0
6. PCI-X slot 1
7. On-board LSI SCSI controller
8. PCI-E slot 5
9. PCI-E slot 6
10. PCI-E slot 7

Workaround

Perform Option 1 below so that the device appears in the list, then perform Option 2 to change the scanning order.

▼ Option 1

Disable option ROM scanning on all devices that do not need to PXE boot. This will preserve the option ROM space for the devices that you do want to PXE boot. Use the following procedure.

Enter the BIOS Setup utility by pressing the F2 key while the system is booting up and performing POST.

- 1. On the BIOS Main Menu screen, select the PCIPnP tab to open the PCI/PnP Settings screen.**
- 2. Change the fields to Disabled for those PCI cards or NICs that will not be PXE booted.**
- 3. Press and release the right arrow key until the Exit menu screen is displayed.**
- 4. Follow the instructions on the Exit menu screen to save your changes and exit the Setup utility.**

▼ Option 2

Manually set the BIOS boot order so that the devices that you want to PXE boot from are early enough in the boot order to be scanned before the option ROM space is exhausted. Use the following procedure:

1. **Enter the BIOS Setup utility by pressing the F2 key while the system is booting and performing POST.**
2. **On the BIOS Main Menu screen, select the Boot tab to open the Boot menu main screen.**
3. **Select Boot Device Priority, or select Hard Disk Drives from the list to change hard-disk drives.**
4. **Change the selections for the boot devices or hard-disks drives to set the required device order.**
5. **Press and release the right arrow key until the Exit menu screen is displayed.**
6. **Follow the instructions on the Exit menu screen to save your changes and exit the Setup utility.**

Resolved BIOS Issues

[“Quad-Core System Won’t Boot When Hypertransport Coherent Link Widths Are Set To 2 Bits \(6710259\)” on page 22](#)

[“IO Address Conflict \(6540138\)” on page 23](#)

[“Uncorrected ECC Error Reported on Wrong DIMM Pair on 8-DIMM CPU Module \(6509975\)” on page 23](#)

[“Random Panics Might Occur When HPET Timer is Enabled \(6478355\)” on page 24](#)

Quad-Core System Won’t Boot When Hypertransport Coherent Link Widths Are Set To 2 Bits (6710259)

(Fixed in Software 2.3)

If the BIOS settings for Hypertransport Coherent Link Width are 2 bits, then a system with quad-core processors

Workaround

In BIOS setup, set each of the Hypertransport Coherent Link Widths to a value other than “2” or “4”.

Note – This problem can prevent the BIOS itself from starting up, which makes it impossible to change the BIOS setup. If that happens you must clear the system CMOS, so the BIOS can start with its default settings. Note that any other changes you have made to the BIOS settings will be lost. To clear the CMOS, refer to “Clearing a Server’s CMOS Settings” in the Service Manual.

IO Address Conflict (6540138)

(Fixed in Software 2.0)

IO address conflicts might occur in systems with 2 PCI-X and 6 PCI-E slots populated, with a Sun PCI-E Quad Gigabit Ethernet Card (X4446A-Z) in slot 5, 6, or 7. Systems running Solaris OS might reset before the boot sequence is complete, leading to a reboot cycle.

Workaround

Move the Quad Gigabit Ethernet Card to slot 2, 3, or 4.

Uncorrected ECC Error Reported on Wrong DIMM Pair on 8-DIMM CPU Module (6509975)

(Fixed in Software 2.0)

When an uncorrected ECC error occurs on an 8-DIMM CPU module, the error might be reported on the lowest-numbered DIMM pair (the pair closest to the CPU) regardless of where the error actually occurred. For example, in a fully-populated module, an error in Pair 3 (DIMM7 and DIMM6), Pair 2 (DIMM5 and DIMM4), or Pair 1 (DIMM3 and DIMM2) may be reported as occurring in Pair 0 (DIMM1 and DIMM0).

This problem can cause the system to reboot repeatedly, with no output on the video display. If this occurs, check the ILOM System Event Log for frequent ECC errors in a lowest-numbered pair.

Workarounds

- Carefully reseal the CPU. Check for bent or dirty pins and for misplaced thermal grease.

- Replace one or more higher-numbered pairs with known-good DIMMs.
- Carefully reseal all DIMMs on the module.

Random Panics Might Occur When HPET Timer is Enabled (6478355)

(Fixed in Software 1.2)

The interaction of some operating systems with the high-performance event timer (HPET) on this server might result in system panics (reboots). When this happens, the following message appears after the last POST window during a boot process, and in the `/var/log/messages` file:

MT-BIOS bug: 8254 timer not connected to IO-APIC

▼ *Workaround*

If this problem occurs, you can disable the HPET timer. This setting is in the BIOS Configuration Utility's Advanced menu, on the ACPI Configuration Screen.

1. Enter the BIOS Setup utility by pressing the F2 key while the system is booting up and performing POST.
2. On the BIOS Main Menu screen, select the Advanced tab to open the Advanced menu screen.
3. On the Advanced menu screen, select ACPI Configuration.
4. On the ACPI configuration screen, select Advanced ACPI Configuration.
5. Change the field to Disabled for ACPI HPET Support.
6. Press and release the right arrow key until the Exit menu screen is displayed.
7. Follow the instructions on the Exit menu screen to save your changes and exit the Setup utility.

LSI Firmware Issues

The following are current issues.

Error Message After Disk Swap (6766054)

In testing, error messages appeared for disk swaps on a RAID1 or RAID1E array created using the onboard LSI controller BIOS:

```
mptsas: ioc0: ERROR - mptsas_test_unit_ready:  
fw_channel=0 fw_id=1: tur failed due to no  
device.
```

This message does not reflect a real RAID problem and can be safely ignored.

RAID Volume Requires 64 Mbytes of Unpartitioned Hard-Disk Space for Metadata (6312581)

To create a RAID volume, the firmware and BIOS must write metadata at the end of the hard-disk drive (HDD). At least 64 Mbytes of unpartitioned hard-disk space are required.

In servers shipped with the preinstalled Solaris 10 1/06 (and later) OS, the preinstall image includes more than 64 Mbytes of unpartitioned hard disk space for metadata. No further action is required.

Software Issues

This chapter describes software issues related to the Sun Fire X4600 M2 server. The numbers given in the section titles are internal tracking numbers for change requests related to the issues.

This chapter includes the following topics:

- [“VMware ESX and VMware ESXi Issues” on page 27](#)”
- [“Solaris Operating System Issues” on page 29](#)”
- [“Resolved Solaris Issues” on page 31](#)”
- [“Linux Operating System Issues” on page 32](#)”
- [“Resolved Linux Issues” on page 44](#)”
- [“Sun VTS Diagnostics Issues” on page 48](#)”
- [“Utilities Issues” on page 48](#)”
- [“Resolved Utilities Issues” on page 49](#)”
- [“Windows Operating System Issues” on page 50](#)”
- [“Resolved Windows Issues” on page 54](#)”

VMware ESX and VMware ESXi Issues

Incorrect CPU Family Reported in ESX/ESXi 4.0 (6843753)

ESX/ESXi 4.0 displays incorrect information about the Sun Fire X4600 processor family in the `/proc/vmware/cpuinfo` file. The correct family number is 16, and ESX 4.0 displays 15.

This issue does not affect server or ESX functionality.

Network Interface Enumeration Changes After Fibre Channel HBA Installed (6541032)

If a Dual Port U320 SCSI Fibre Channel HBA (XPCIE2SCSIU320Z) is installed, the vmnic number changes from 0 to 11.

8-GB DIMMs Not Supported with 3.5 U1

Memory errors occur when 8-GB DIMMs are used with VMware ESX 3.5 Update 1. Use of 8-GB DIMMs with systems running these or previous versions of ESX is not supported. If vSwitch0 uses the default mapping to vmnic0, the network interface ceases to work.

Workaround

Manually remap the vmnic.

Error Messages With Little or No Impact (6486386)

The following messages generated by VMware ESX have little or no impact on system availability or performance.

- “Unexpected IO-APIC error” appears in the kernel message buffer.
- “BIOS reporting unknown devices” appears frequently in the kernel message buffer. The devices referred to are beyond the control of VMware ESX.
- “Syncing Hardware Clock to System Time [Failed]” appears during VMware ESX shutdown.

Solaris Operating System Issues

The following are current issues.

How to Identify Physical PCI Slots in the Solaris OS

To identify physical PCI slots in the Solaris OS, insert a PCI card in each slot one-by-one, and record the corresponding path information.

The following example shows the output for a system with Solaris 10 10/9 and BIOS 129:

```
PCI-X Slot 0    /pci@0,0/pci1022,7458@11/<device>@1
PCI-X Slot 1    /pci@0,0/pci1022,7458@11/<device>@2
PCI-E Slot 2    /pci@0,0/pci10de,5d@d/<device>
PCI-E Slot 3    /pci@0,0/pci10de,5d@e/<device>
PCI-E Slot 4    /pci@0,0/pci10de,5d@c/<device>
PCI-E Slot 5    /pci@7a,0/pci10de,5d@d/<device>
PCI-E Slot 6    /pci@7a,0/pci10de,5d@e/<device>
PCI-E Slot 7    /pci@7a,0/pci10de,5d@c/<device>
```

The display might be different with a different OS and BIOS.

Error Message Is Displayed With Solaris 10 5/09 and Certain Adapter Cards (6838860)

When loading the drivers for the following adapter cards on a server running Solaris 10 5/09:

- Sun Quad GbE x8 PCIe Low Profile Adapter (X4447A-Z)
- Sun Dual 10GbE XFP PCI Express Card (X1027A-Z)

you might encounter the following error message:

```
WARNING: nxge : ==> nxge_rxdma_databuf_free: DDI
```

This message can be safely ignored.

Limited Support for PCI Express Cards (6879524)

Support for the following PCI Express cards is limited to Solaris 10 and Linux operating systems.

- Sun Quad GbE x8 PCIe Low Profile Adapter (X4447A-Z)
- Sun Dual 10GbE XFP PCI Express Card (X1027A-Z)

Note – These adapter cards are not supported for Windows 2008 Server R2 and VMware ESX 4.0 and ESXi 4.0.

Can't Install Solaris OS under VMware with More Than 2 Virtual NICs

A Solaris OS install under VMware with the recommended minimum virtual memory (512 MB) and more than 2 virtual network interface cards will fail.

Workaround

Increase virtual memory to 1GB.

Solaris 10 OS Driver Does Not Work for Infiniband HCA (6732922)

The driver provided with Solaris 10 5/08 does not work for the Infiniband HCA X4217A-Z. The Solaris IB Update 3 package is required.

Workaround

Download the package from this web page:

<http://www.sun.com/download/index.jsp?cat=Hardware%20Drivers&tab=3&subcat=InfiniBand>

Follow the readme file to install the update package.

Solaris OS Under VMware ESX Needs 1 GB (6551715, 6548384)

Solaris OS 10 11/06 might have problems running under VMware ESX if the virtual machine is allocated the default 512 MB. Reported problems include:

- Install of OS hangs.
- Plumbing NIC ports with ifconfig fails.

Workaround

Before installing Solaris 11/06 OS as a guest, configure the virtual machine to use at least 1 GB of RAM.

Resolved Solaris Issues

Patch Required to Prevent Data Corruption (6490454)

(Fixed in Solaris 10 8/07.)

Servers running Solaris OS 10 require the latest version of patch 123776. Data corruption resulting in disk errors may result if this patch is not installed.

AMD Erratum 131 Warning Message Can Be Safely Ignored During Solaris OS Startup (6438926, 6447850)

(Fixed in Solaris 10 8/07.)

Solaris AMD x64 support includes a boot-time check for the presence of a BIOS workaround for the AMD Opteron Erratum 131. If Solaris detects that the workaround for Erratum 131 is needed but it is not yet implemented, Solaris logs and displays the following warning message:

WARNING: BIOS microcode patch for AMD Athlon(tm) 64/Opteron(tm) processor erratum 131 was not detected; updating your system's BIOS to a version containing this microcode patch is HIGHLY recommended or erroneous system operation may occur.

Workaround

The BIOS implements the workaround required for Erratum 131, so this warning message can be safely ignored.

Solaris OS Can Hang or Panic During Lengthy Boot (6548176)

(Fixed in Solaris 10 5/08 OS.)

An attempt to boot Solaris OS can result in a hang or panic if all CPUs are not ready within 20 seconds. Error messages report that one or more CPUs failed to start.

Workaround

Do not use verbose startup on systems with a large number of processors.

Solaris OS Supports a Maximum of 21 Cores on x64 System (5081104)

(Fixed in Solaris 10 08/07.)

In Solaris OS version 10 11/06 or earlier, the maximum number of processor cores seen on x64 systems is 21. This is less than the number of cores available in a quad-core X4600 M2 system with 6 or 8 CPU modules. Such systems must run Solaris 10 08/07 or later.

Linux Operating System Issues

The following are current issues.

SAS Driver Behavior (6572673)

For RHEL5 and SLES10, when the LSI RAID and the normal hard drive coexist, OS (MPT SAS driver) always recognize the normal hard drive ahead of the LSI RAID.

For example, when hard drives in slot0 and slot1 are used to create a RAID1, and a normal hard drive is in slot2, SLES10 and RHEL5 enumerate RAID1 as sdb, with the normal hard drive in slot2 as sda. However SLES9 and RHEL4 enumerate RAID1 as sda, with the normal harddrive in slot2 as sdb.

Logs for Red Hat OS Installation Using SIA Are Not Available (6812783)

When using SIA to install RHEL 4.8 or 5.3, the `SunInstallationAssistant.log` file might not appear on the disk. Check for an SIA update to fix this issue.

SLES9 SP4 Might Not Boot After Installation on Quad-Core Systems (6717129)

SUSE Linux Enterprise Server 9 SP4 might not boot after installation on systems with quad-core processors.

Workaround

A kernel with a fix for this problem (2.6.5-7.311 or later) can be downloaded from the Novell web site.

RHEL 4.4 Panics After BIOS Upgrade (6709421)

A change made in the system BIOS is Software 2.0 causes Red Hat Enterprise Linux 4.4 to panic.

Workaround

The BIOS included with Software 2.3 contains a workaround for this problem. After flashing new system firmware, disable the following options in the system BIOS:

- Advanced/ACPI Configuration/Advanced IRQ0 Legacy Routing for HPET
- Advanced/CPU Configuration/Boot CPU APIC ID Lifting

Boot Error Message on RHEL 4U4 (6791882)

A change in Software 2.3 can cause boot error messages similar to the following to occur:

```
APIC error on CPU0: 08(08)
APIC error on CPU0: 08(08)
APIC error on CPU0: 08(08)
```

If this message appears while booting Red Hat Enterprise Linux 4U4 on a system with 6 or 8 processors, it does not represent an actual error and can be safely ignored. It should not be ignored on other versions of RHEL or other hardware configurations.

RHEL 5 Systems Likely to Enumerate PCI-E Ethernet Ports First (6758623)

Because of changes in the drivers for Red Hat Enterprise Linux 5, ethernet port assignments may not start with the four built-in ports connected to the onboard network controller. If any ethernet PCI-E option cards are installed, ports on these option cards will probably get the first port numbers.

In RHEL 4, you can assume that the built-in ports will be assigned port number 0-3. That assumption may not be valid after an upgrade to RHEL 5.

Storage Device Connected By USB 2.0 Cannot Be Used to Install RHEL3U9 (6583814)

Red Hat Enterprise Linux 3U9 does not support installation using a CD or DVD drive connect via a USB 2.0 interface.

Workaround

Before installing the OS, change the BIOS settings to use USB 1.1.

Limited Memory Support for RHEL 5U1, 4U6, and 3U9 (6733868)

Certain version of Red Hat Enterprise Linux are not supported with full memory configurations on the Sun Fire X4600 M2 server. Using more memory than is supported for these RHEL versions causes memory errors. Supported memory configurations are:

- RHEL 5U1: maximum 256 GB.
- RHEL 4U6: maximum 256 GB.
- RHEL 3U9: maximum 128 GB.

RHEL 5U2 has passed tests with 512 GB and is supported in that configuration.

Xen-Enabled RHEL 5U1 Hangs (6544259)

A problem with the `lpfc` driver can cause Red Hat Enterprise Linux 5U1 to hang when the Xen-enabled kernel is used. To fix this problem, update the `lpfc` driver to 8.2.0.1, or upgrade to RHEL 5U2.

CPU Frequency Not Lowered On Idle (6551339)

The `cpuspeed` service may fail to lower the CPU frequency when the system is idle.

Workaround

Restart the service when the system is idle:

```
service cpuspeed restart
```

SIA Install of RHEL5.1 Fails (6681828)

SIA Installations of RHEL5.1 fails because of legacy “dmraid” information on supplied disks.

Workaround

The legacy “dmraid” information is on the last 2000 disk sectors. The following shell command overwrites these sectors with zeros:

```
dd if=/dev/zero of=/dev/sda bs=$(blockdev --getss /dev/sda)  
count=2000 seek=$(expr $(blockdev --getsize /dev/sda) - 2000)
```

Virtual Floppy and DVD Not Detected (6570949)

The Service Processor implements virtual floppy and DVD drives so that they each have their own logical unit number (LUN). This may prevent them from being detected on systems that only configure LUN 0 on each port.

Workaround

Configure the system to scan all possible LUNs at boot time.

1. Add the following line to `/etc/modules.conf`:

```
options scsi_mod max_scsi_luns=n
```

Where *n* is the largest number of devices on any port.

2. Go to the `/boot` directory:

```
cd /boot
```

3. Run `mkinitrd` to rebuild the boot-time RAM disks. On Red Hat systems:

```
mkinitrd -k vmlinuz-kernel -i initrd-kernel
```

On SUSE systems:

```
mkinitrd -v initrd-kernel.img kernel
```

Where *kernel* is a kernel-level identifier, such as “2.4.21-292-smp”. You can identify the currently running kernel with this command:

```
uname -r
```

You should also rebuild the RAM disks for any other kernel images in `/boot` that you might use.

4. Reboot.

Mismatch Error on RHEL4 U3 When X Windows Server Starts Up (6459079)

The following error might appear when X Windows starts up on Red Hat Linux 4 U3:

```
mtrr: type mismatch for fd000000,800000 old: write-back new:  
write-combining
```

You can safely ignore this message. System functionality is not affected.

Ignorable Error Message Received When Using USB 1.1 With Certain Linux Platforms (6396561)

On servers running RHEL4 U3/U4 or SUSE Linux Enterprise Server 9 service pack 3 (SLES9 SP3), when USB1.1 only or USB 1.1 + USB2.0 is configured in the BIOS Setup Utility, the dmesg log shows the following error message if devices are plugged into any USB port on the server:

```
drivers/usb/input/hid-input.c: event field not found
```

This message can be safely ignored.

RHEL4 U3 Does Not Support USB 2.0 (6396407)

Use of USB 2.0 with RHEL4 U3 may lead to unexpected behavior. Only USB 1.1 is supported.

▼ Workaround

Set the BIOS USB Controller Support option to USB 1.1 only:

1. Enter the BIOS Setup utility by pressing the F2 key while the system is booting up and performing the power-on self-test (POST).
2. On the BIOS Main Menu screen, select the Advanced tab to open the Advanced Menu screen.
3. On the Advanced Menu screen, choose USB Configuration.
4. On the USB Configuration screen, change USB Controller Support to USB1.1.
5. Press and release the right arrow key until the Exit menu screen is displayed.
6. Follow the instructions on the Exit menu screen to save your changes and exit the Setup utility.

RHEL4 U4 Lost Timer Ticks Messages Can Be Safely Ignored (6483062)

Under heavy load, the RHEL4 message file and dmesg log file might show messages similar to the following:

```
Warning many lost ticks
```

```
Your time source seems to be unstable or some driver is hogging
interrupts.
```

This message is caused by the contention between different IRQ handlers, but there is no negative impact to the system.

Workaround

None.

RHEL4 U3/U4 CD/DVD-ROM Packet Command Errors Caused by Trayless Drive (6397835, 6461354)

During the boot process of RHEL4 U3/U4, the following error message might be displayed:

```
hda: packet command error: status=0x51 { DriveReady
SeekComplete Error }
```

```
hda: packet command error: error=0x50
```

```
ide: failed opcode was 100
```

This error is a known problem with how the IDE driver handles the trayless CD/DVD-ROM drive that is contained in the server. This error is caused by the fact that the driver is attempting to close the CD/DVD-ROM drive tray. Because this drive does not have a tray, an error is reported.

Workaround

None. It is safe to ignore this error.

Ignorable Error Message Received When Booting the GUI in RHEL4 U3/U4 and SLES9 SP3 (6396561)

On servers running RHEL4 U3/U4 or SLES9 SP3, when booting into the graphical user interface, the dmesg log might show the following error message more than once:

```
drivers/usb/input/hid-input.c: event field not found
```

During X initialization, some devices can get out of sync and some EV_REP events can get incorrectly interpreted as input events. This is caused by a bug in the HID driver. This message can be safely ignored.

Cannot Create 128 GB Swap Partition During SLES9 SP3 Installation (6480937)

When installing SLES9 SP3 using YaST, the hard disk preparation operation might return an error message that says:

```
Error: Could not set up swap partition /dev/sda1
```

Click on OK and finish the installation. You can then set up your desired swap partition using the commands below.

▼ Workaround

You can set the swap partition manually as described in the following steps.

1. After SLES9 SP3 has finished installation and the server has booted, login as the root user.
2. Issue the following commands in a terminal window:

```
# mkswap swap  
# swapon swap
```

Where *swap* is the swap partition space.

3. In the `/etc/fstab` file, make an entry for swap partition (if it not already present), with option default. It should look like the following:

```
/dev/sdj5 swap swap defaults 0 0
```

Boot-Up ACPI Error Message for SLES9 SP3: Incorrect Return Object Type (6461361)

During SLES9 SP3 boot up, the following message is displayed:

```
ACPI-0201: *** Error: Return object type is incorrect  
[SB_.LATA._CRS]
```

```
(Node 00000107fffdc180), AE_TYPE
```

System functionality is not affected. The message can be safely ignored.

Duplicate Boot-Up Messages for Floppy Driver for SLES9 SP3 (6461350)

During boot up, the SLES9 SP3 kernel prints multiple floppy drive assignment messages:

```
Attached scsi removable disk sdb at scsi2, channel 0, id 0, lun 0
```

```
Attached scsi generic sg2 at scsi2, channel 0, id 0, lun 0, type 0
```

```
Vendor: AMI Model: Virtual Floppy Rev: 1.00
```

```
Type: Direct-Access ANSI SCSI revision: 02
```

Each multiple message displays a different drive name. In the example shown above, the drive letter is sdb.

Use the drive name from the first message and ignore the subsequent messages.

Error Message: Not a Capable Intel Processor for SLES9 SP3 (6461373)

During SLES9 SP3 system boot messages similar to this example are displayed:

```
IA-32 Microcode Update Driver: v1.13 <tigran@veritas.com>
```

```
microcode: CPU1 not a capable Intel processor
```

```
microcode: CPU0 not a capable Intel processor
```

You can safely ignore these messages.

SLES9 SP3 Graphical Mode Installation Displays not enough memory Message (6368933)

If you choose to install SLES9 SP3 from a CD using the graphical mode, you receive a text message informing you that there is less than the required 96 MB of memory available for installation in this mode.

Workaround

Switch to the text mode to install the product.

Warning Message Received When `cdrecord-scanbus` Command Is Issued on SLES9 SP3 (6461376)

On SLES9 SP3 systems, when you enter the `cdrecord-scanbus` command, you receive the following warning message:

```
pg: module not supported by Novell, setting U taint flag.  
pg: pg version 1.02, major 97  
pga: Autoprobe failed  
pg: No ATAPI device detected
```

PowerNow Not Enabled by Default on RHEL4U4 32-Bit (6514403)

Red Hat Enterprise Linux 4 U4 (32-bit) supports PowerNow, but does not enable it by default.

Workaround

To enable PowerNow, enter these commands:

```
# modprobe powernow-k8  
# service cpuspeed start
```

To verify processor speed changes, use the following command:

```
# cat /sys/devices/system/cpu/cpuX/cpufreq/scaling_cur_freq
```

Do not refer to `/proc/cpuinfo`; this file might give misleading results.

Hot-Plugging USB Devices Gives Floppy Warning Message on RHEL3 (6514341)

When a USB device is hot-plugged (connected while the system is live) to a system running Red Hat Enterprise Linux 3, a warning message similar to the following might be written to the kernel ring buffer:

```
inserting floppy driver for 2.4.21-47.ELsmp  
floppy0: no floppy controllers found
```

This occurs because hot-plugging a USB device causes the floppy module to be loaded by the kernel. When the module discovers that no floppy drives are available, it prints the warning message and exits.

Workaround

This message can safely be ignored. To suppress the message, add the following line to `/etc/modules.conf`:

```
alias floppy off
```

Red Hat Enterprise Linux 3 U5 (64-bit): Ignore Keyboard Reset Failed Message (6513780)

If the USB keyboard is connected to either the front or back USB ports, the system running RHEL 3 U5 (64-bit) always shows the following error message in the kernel ring buffer after a reboot.

```
initialize_kbd: Keyboard reset failed, no ACK
```

This message can be safely ignored.

Red Hat Enterprise Linux 3 U8 (64-bit) Gives Kernel Error Messages About IRQs for PCI devices (6513776)

On a system running Red Hat Enterprise Linux 3 U8 (64-bit), a message similar to the following might appear in the kernel ring buffer:

```
PCI: No IRQ known for interrupt pin A of device 00:01.1
```


These messages are accompanied by numerous insmod failures. They might be caused by OS ACPI table creation errors related to an incompatibility between the BIOS and the OS. No fix is expected.

This message can be safely ignored.

Front Panel USB Ports Disabled When Running SLES10_64bit (6516732)

Front Panel USB ports might be completely inoperative on systems running SUSE Linux Enterprise Server 10 (64 Bit) when USB 2.0 is enabled. This problem does not occur if a USB device is connected to the front panel at boot time or if USB 2.0 is disabled.

Workarounds

There are three workarounds:

- Plug a USB device into the front panel before booting the system.
- Configure the BIOS to use USB 1.1 only.
- After booting, if the front panel USB ports are found to be inoperative, remove and reinsert the ehci_hcd module.

SLES10 Might Crash While Recovering from Error in SCSI Bus or Device (6520854)

SUSE Linux Enterprise Server 10 might hang while recovering from an error in a SCSI bus or device when an LSI 22320 or LSI 20320 card is used. This problem is fixed in SUSE version 2.6.16.21-0.15 of the Linux kernel.

Option Card Drivers Not Available for RHEL5 (6542146)

Drivers for Red Hat Enterprise Linux 5 are not available for the following Sun option cards:

- Sun Multithreaded 10-GbE Networking Card PCI-E (X1027A-z)
- Sun Dual Port 4x IB Host Channel Adapter PCI-E (X1236A-Z)
- Sun 10-GbE, 133-MHz PCI-X (X5544A-4)
- Sun Dual Port 4x IB Host Channel Adapter PCI-X (X1333A-4)

- Sun Quad Gigabit 4x Ethernet UTP Low Profile Adapter PCI-E (X4446A-Z)

Resolved Linux Issues

HBAs Require Updated Drivers for SLES9SP3 (6655761)

(Fixed in Software 2.2.)

The following HBAs will not work correctly with the lpfc drivers included in SUSE Linux Enterprise Server 9 SP 3.

- SG-XPCIE1FC-EM4
- SG-XPCIE2FC-EM4
- SG-XPCI1FC-EM4-Z
- SG-XPCI2FC-EM4-Z

You must download and install updated drivers provided by Novell. These are currently available at the following URL:

```
http://forgeftp.novell.com/driver-  
process/pub/update/SUN/sle9/common/x86_64/update/SUSE-  
SLES/9/rpm/x86_64/emulex-lpfc-2.6.5_7.244_smp.x86_64.rpm
```

Two Network Cards Not Supported (6675974)

(Fixed in Software 2.2.)

This issue applies to the following network cards:

- X5544A-4, 10Gb PCI-X Ethernet Adapter
- X1027A-Z, PCI Express Dual 10-Gigabit Ethernet Fiber

No drivers are available for these cards on the following operating systems:

- Red Hat Enterprise Linux 3.9 (64-bit)
- Red Hat Enterprise Linux 5.1 (64-bit)
- Red Hat Enterprise Linux 4.6 (32-bit and 64-bit)

- SUSE Linux Enterprise Server 10 SP1 (64-bit)

Sync Flood Errors While Installing RHEL5.1 as Xen Guest (6692466)

(Fixed in Software 2.1.)

A system with 8 quad-core CPU modules might crash with Sync Flood errors while installing Red Hat Enterprise Linux 5.1 as a Xen guest operating system. The problem was not observed on systems with 4 quad-core CPU modules.

Workarounds

Use Red Hat Enterprise Linux 5.2. If more than 200GB of RAM is installed, specify `mem=200g` as a parameter in the kernel command in `/boot/grub/menu.lst`.

RAID Driver Not Installed on RHEL4U4 (6551425)

(Fixed in Software 2.0.)

The supplied RAID drivers do not install correctly on Red Hat Enterprise Linux 4 U4.

▼ Workaround

1. **Install** `mptlinux-3.02.83.01-1.rhel4.x86_64.rpm`.
2. **Edit** `/etc/modprobe.conf`, **replacing the line:**

```
alias scsi_hostadapter1 mptscsi
```

With:

```
alias scsi_hostadapter1 mptscsih
alias scsi_hostadapter3 mptctl
```

3. **Regenerate the initrd boot image with the following commands:**

```
rm -f /boot/initrd-2.6.9-42.ELsmp.img
mkinitrd /boot/initrd-2.6.9-42.ELsmp.img 2.6.9-42.ELsmp
```

4. Reboot the system.

MSM Not Supported for RHEL5 64-Bit (6551781)

(Fixed in Software 2.0.)

As of Software 1.2, MegaRAID Storage Manager (MSM) is not supported with Red Hat Enterprise Linux 5, 64-bit.

Error Messages When LSI SNMP Agent Stopped on SLES10 (6546725)

(Fixed in Software 2.0.)

On a system running SUSE Linux Enterprise Server 10, error messages are printed when the LSI SNMP agent is stopped. These messages indicate a shared memory error. No actual problems have been reported in connection with these messages.

RHEL 5 Filesystem Becomes Read-Only When RAID Disk is Pulled (6543466)

(Fixed in Software 1.2.)

If a RAID 1 slot 1 disk is pulled from a system running Red Hat Enterprise Linux 5, many errors appear in the buffer, and the file system containing the OS becomes read-only.

Workaround

None.

RHEL Error Messages Relating to mptscsi (6532534)

(Fixed in Software 1.2.)

When Red Hat Enterprise Linux is upgraded to RHEL4U4 (mptlinux driver version 3.02.83.01-1) the mptscsi.ko driver is no longer needed, but is not removed. As a result, a number of messages that begin “mptscsi: Unknown symbol” and “mptscsi: disagrees about version of symbol” are written to the kernel ring buffer.

These messages can be safely ignored.

RHEL4 U3: LSI Hardware RAID Does Not Work With LVM-Partitioned Drives (6450742)

(Fixed in Software 1.2.)

If you install Red Hat Enterprise Linux 4 U3 with LVM hard-drive partitioning, then attempt to use the LSI SAS Utility to set up RAID on your hard drives, the following message is displayed:

Data will be destroyed

Workaround

Do not install RHEL4 U3 with LVM partitioning if you plan on using RAID with your hard drives.

POST Does Not Complete With Emulex LPe11002 HBA Card (6480975)

(Fixed in Software 1.2.)

The system reboots after the memory count during POST when an Emulex LPe11002 host bus adapter (HBA) is installed in any of the PCIe slots.

Workarounds

1. For devices implementing Advanced Error Reporting, set the “Unsupported Request Error Mask” bit in the “Uncorrectable Error Mask” register.
2. Do not set the legacy “SERR Enable” bit, and instead use the PCI-Express specific bits in the “Device Control Register” to control PCIe error reporting. Set the “Non-Fatal” and “Fatal Error Reporting Enable” bits, but not the “Unsupported Request Reporting Enable” bit.
3. Do not treat ERR_NONFATAL messages as a fatal system error (use ERR_FATAL for fatal errors).

Sun VTS Diagnostics Issues

The following are current issues.

VTS Might Require Login and Password (6732215)

The default login and password are `root` and `solaris`.

Meter Button in Bootable Diagnostics CD, Version 2.1f Does Not Work (6465167)

SunVTS 6.2 Graphical User Interface (GUI), shipped on the Bootable Diagnostics CD, Version 2.1f, has a Meter button. This Meter button does not work because it requires the Solaris `stdperformer` utility, which is not available for bootable diagnostics.

Utilities Issues

The following are current issues.

Loading Saved Configuration File Hangs MSM under Windows OS (6713250)

If MSM is running under Windows 2003 or Windows 2008, the following sequences of actions can cause MSM to hang.

1. Pull a RAID disk.
2. Clear the configuration file.
3. Plug in a new disk.
4. Load a configuration file.

When the hang occurs, you must use Task Manager to kill MSM, then reboot the system.

Workaround

Replace the disk before loading a configuration file.

MSM Might Not Update Status Log When Disk Removed

In non-RAID configurations, MSM-IR does not update its status log when a disk is removed. Refreshing with F5 does not help. The log is updated when the disk is re-inserted.

Resolved Utilities Issues

Cfggen Does Not Show Correct Synchronization Progress (6600993)

(Fixed in Software 2.3.)

The synchronization progress reported by the `cfggen` status command is not accurate. This was first observed in DOS version 2.00.18 of `cfggen`.

MSM Client Cannot Find Servers On Different Subnet (6533271)

(Fixed in Software 1.5.)

The MSM client is not able to find servers that are not on the same IP subnet as the client.

Workaround

Set the server IP address manually.

MSM Utilities Might Show Incorrect Disk Drive Count After Drive Inserted or Removed (6522536)

(Fixed in Software 1.2.)

The MSM utilities might show incorrect disk drive counts after a drive is inserted or removed. This only occurs in non-RAID configurations.

▼ Workaround

On Windows you can work around this defect by restarting the MSM utilities.

1. **Close the MSM-IR application.**
2. **Using the Windows Service Manager, restart MRMonitor and MSMFramework**
3. **Reopen the MSM-IR application.**

Windows Operating System Issues

The following are current issues.

[“Intel Team Suite Can’t Be Installed on Windows 2008 SP2 and Windows 2008 R2 Platforms \(6907769\)”](#) on page 51

[“On-Board Network Ports Cannot Be Used to Initiate Teaming in Windows Server 2008 R2 \(6868558\)”](#) on page 51

[“Copying Large File To or From USB Device Can Cause Reboot \(6707305\)”](#) on page 52

[“Continuous Reboots with Sun StorageTek SAS RAID HBA External \(6774215\)”](#) on page 52

[“Patch May Be Required To See All Cores \(6685074\)”](#) on page 53

[“Preinstalled Windows Server 2003 R2”](#) on page 53

[“Windows Utility mkfloppy.exe Does Not Select Correct Floppy Drive If More Than One Floppy Drive Is Present”](#) on page 53

Intel Team Suite Can't Be Installed on Windows 2008 SP2 and Windows 2008 R2 Platforms (6907769)

The Intel 82546 Dual-port GB Ethernet Controllers are connected through PCI-X bus. The new Intel Team suite is not compatible with Windows 2008 SP2 and Windows 2008 R2 platforms. The Intel Team suite can be installed successfully on Windows 2003 and Windows 2008 SP1.

On-Board Network Ports Cannot Be Used to Initiate Teaming in Windows Server 2008 R2 (6868558)

Intel network interface card (NIC) teaming is not supported with PCI-X network interface cards running on Windows Server 2008 R2. Your server's on-board network ports are on the PCI-X bus and therefore cannot be used to create an Intel NIC team with Windows Server 2008 R2. Your Windows installation uses a generic NIC driver that does not include the teaming feature.

▼ Workaround

If you want to include the on-board network ports as part of an Intel NIC team, do the following:

- 1. Install an optional Intel 82571-based (or newer) PCIe network interface card (NIC) supported for Windows Server 2008 R2.**
- 2. Install the NIC driver.**

This driver provides Intel's Advanced Networking Services. This driver is either included with your card, available from the card manufacturer's web site or from Intel:

<http://www.intel.com>

Include the on-board network ports as part of a multi-vendor team initiated from the Intel PCIe network card.

Copying Large File To or From USB Device Can Cause Reboot (6707305)

Copying a large file (more than 6 GB) between an internal disk and a USB device can cause the system to reboot. This has been seen on Windows 2003 R2 SP2, 64-bit.

Workaround

BIOS 126, which is included in Software Release 2.3, contains a workaround for this problem. Because the workaround impairs I/O performance, it is not enabled by default.

To use this workaround, install Software Release 2.3 firmware as described in the software release notes. To enable the workaround, set the BIOS option “Chipset/SouthBridge Configuration/Force MMIO write non-Posted” to “Enabled.”

Continuous Reboots with Sun StorageTek SAS RAID HBA External (6774215)

System with a Sun StorageTek SAS RAID HBA External (SG-XPCIESAS-R-EXT-Z), Windows 2008 (both 32-bit and 64-bit) might reboot continuously. This is caused by the option card picking up the wrong IRQ number, resulting in PCI errors and a HyperTransport sync flood.

▼ Workaround

Put the option card in a slot other than 2. If this is not practical, follow these steps:

1. Download the latest driver from this web page:

http://downloadcenter.intel.com/Product_Filter.aspx?ProductID=2870

2. Temporarily remove Sun StorageTek SAS RAID HBA External, from slot 2.

1. Install Windows 2008.

2. Power the system down and insert the option card into slot 2.

3. Boot the OS in safe mode.

4. Install the driver you downloaded.

5. Reboot.

Patch May Be Required To See All Cores (6685074)

Windows 2003 Server SP1 may be unable to see all cores on dual-core or quad-core systems. Microsoft provides a patch to correct this problem. You can also correct this problem by upgrading to Windows 2003 Server SP2.

For more information, refer to Microsoft Knowledge Base articles 899656 and 914962. These are currently available from the following URLs:

- <http://support.microsoft.com/kb/899656>
- <http://support.microsoft.com/kb/914962>

Preinstalled Windows Server 2003 R2

The Windows Server 2003 R2 operating system might be preinstalled on your system. For more information, see Windows Server 2003 R2 Operating System in “Introduction” on page 1.

Windows Utility `mkfloppy.exe` Does Not Select Correct Floppy Drive If More Than One Floppy Drive Is Present

The `mkfloppy.exe` utility that is included in `FloppyPack.zip` can be run on any Windows system; it is used to create the Mass Storage Driver floppy that is used during Windows Server 2003 installation.

However, if there is more than one floppy drive present in the system (including USB-attached floppy drives), `mkfloppy.exe` does not select the correct floppy drive.

Workaround

Ensure that the system has only one floppy drive present when using `mkfloppy.exe`.

Resolved Windows Issues

InstallPack fails to install Windows 2008 Packages (6705083)

(Fixed in Software 2.2.)

Due to a BIOS error, InstallPack fails to install the packages required by the Windows 2008 OS.

Hardware Issues

This chapter describes hardware issues related to the Sun Fire X4600 M2 server.

- [“Mixing DIMMs Impacts Memory Performance” on page 57](#)
- [“Enhanced Quad-Core: Sync Flood Error Before POST \(6772148\)” on page 57](#)
- [“Quad-Core Systems with 1 GB DIMMs Not Tested or Supported” on page 57](#)
- [“Spontaneous Reboot With “OEM 0#x12 SEL” Messages and No Memory Errors \(6652566\)” on page 58](#)
- [“System Does Not Boot With 6 QGE Cards \(6555627\)” on page 58](#)
- [“Mouse and Keyboard Hang During Stress Test \(6499312\)” on page 59](#)
- [“USB Ports Become Disabled \(6424279\)” on page 59](#)
- [“Resolved Hardware Issues” on page 59](#)

The following are current issues.

Systems with Mixed Dual- and Quad-Core CPUs Require 950W Power Supply (6729680)

Most systems have either dual-core CPUs or quad-core CPUs. However, some systems support a combination of four dual-core CPUs and four quad-core CPUs.

These systems require a 950W power supply.

Before you upgrade a system with dual-core CPUs by adding quad-core CPUs, you must ensure that it has a 950W power supply.

To check the rating of the power supply, pull it out of the system (after shutting it down properly) and look at the rating on the wattage rating on the side.

For instructions, see the *Sun Fire X4600 and Sun Fire X4600 M2 Service Manual*.

Power Redundancy is Reduced on Fully Loaded System with 120W CPUs (6724117)

If your system is configured with six or eight 120W CPUs, power supply redundancy is reduced to 3+1.

If you are not certain what kind of CPUs your system has, see your system handbook.

DIMM Numbering Shown in Diagnostics Guide is Incorrect

The diagram that shows the DIMM numbering sequence in the *Sun Fire X4600 and Sun Fire X4600 M2 Server Diagnostics Guide* is incorrect. It shows the sequence as 0-1-2-3-CPU.

The correct sequence is 3-2-1-0-CPU.

The sequence is shown correctly in the *Sun Fire X4600 and Sun Fire X4600 M2 Server Service Manual*.

Support Added For 2-Socket and 6-Socket Configurations (6846538)

The Sun Fire X4600 M2 server supports 2-socket and 6-socket configurations.

Newer CPLD Improves Power Supply Redundancy (6738256)

Starting with CPLD Version 8, power supply redundancy is increased to 2+2.

Systems with CPLD versions 7 and lower have 3+1 power supply redundancy.

Look at the POST messages to find the CPLD level.

Mixing DIMMs Impacts Memory Performance

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 4GB and 8GB DIMMs are dual-rank. For 1GB and 2GB DIMMs, you can identify the type by counting the DRAMs; single-rank DIMMs, have 18 DRAMs, while dual-rank DIMMs have 36 DRAMs.

Enhanced Quad-Core: Sync Flood Error Before POST (6772148)

This problem occurs only on systems with the new enhanced quad-core CPU. The system may experience a sync flood error at boot time, just before the POST messages would have been displayed. This causes an immediate reboot, so it is easy to miss the fact that an unsuccessful boot occurred.

The most obvious symptom is a loss of memory capacity due to spurious DIMM errors. Unrecoverable errors such as the following appear in the system event log.

Memory Uncorrectable Error Asserted CPU 0 DIMM 6
Memory Uncorrectable Error Asserted CPU 0 DIMM 7
Memory Uncorrectable Error Asserted CPU 0 DIMM 6
Memory Memory Device Disabled Asserted CPU 0 DIMM 7

Performing a warm boot (rebooting the OS without powering down the system) does not clear the condition.

Workaround

Power the system down and reboot. You may need to do this more than once.

Quad-Core Systems with 1 GB DIMMs Not Tested or Supported

The tested configurations for the Sun Fire X4600 M2 server do not include systems with both quad-core processors and 1 GB DIMMs. Such configurations may work, but are not supported.

Spontaneous Reboot With “OEM 0#x12 SEL” Messages and No Memory Errors (6652566)

Spontaneous reboots can occur with no memory errors reported. This problem is associated with an entry in the System Event Log (SEL) labeled “OEM #0x12” followed by a series of entries labeled “OEM record e0”. Here is an example:

```
6502 | 12/22/2007 | 07:41:21 | OEM #0x12 | | Asserted
6602 | OEM record e0 | 00000000040f0c0200100000f2
6702 | OEM record e0 | 01000000040000000000000000
```

The hexadecimal value in “OEM record e0” entries may be different from those in the example.

If this problem occurs on your system, you should take basic steps to eliminate possible causes, as described below. If you take these steps, and the problem continues to occur, contact Sun Support for additional remediation.

▼ Remedial Steps

The following steps may eliminate the problem. Retest the system after each step:

1. **Verify that the system BIOS, other system firmware, and PCI card firmware is up to date. For information on verifying and updating system BIOS and firmware, consult the Software Release Notes.**
2. **Remove all PCI cards and CPU modules. Use canned compressed air to clean their contacts and slots, then reseal them.**
3. **If PCI cards have been added to the system recently, try rearranging the PCI cards. Note any change in symptoms after the cards are rearranged.**

System Does Not Boot With 6 QGE Cards (6555627)

A system does not boot if the PCI slots contain 6 Sun Quad Gigabit Ethernet (QGE) cards. Test systems have run reliably with 5 QGE cards.

Mouse and Keyboard Hang During Stress Test (6499312)

During a lengthy stress test, a USB mouse and keyboard were both hung. At the time, floppy and DVD were both redirected to physical USB drives.

Workaround

Disconnect and reconnect mouse and keyboard.

USB Ports Become Disabled (6424279)

USB ports might become disabled during operation. This appears to be a hardware problem related to the Nvidia USB controller.

When this happens, the device attached to the USB port becomes inactive. A message similar to the following is reported in the file:

```
[ID 691482 kern.warning] WARNING: /pci@0,0/pci108e,cb84@2
(ohci0): Connecting device on port 1 failed
```

Workaround

Reboot the server to re-enable the USB ports.

Resolved Hardware Issues

System Panics Under Heavy I/O Workload (6544011)

(Fixed in Software 2.0.)

A test system configured with 16 RAID storage arrays connected to 8 PCI HBAs panicked and rebooted during tests involving a heavy I/O workload. The problem could not be reproduced with fewer than 16 arrays. The problem only occurred when read size was 256K or more.

