Sun Blade™ X6220 Server Module Product Notes

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Contents

Preface

This document describes hardware issues, software issues, and documentation issues for the Sun Blade™ X6220 server module.

These Product Notes are intended to bring you late-breaking information about the system, as well as workarounds for problems you might encounter when installing, configuring, or operating your Sun Blade X6220 server module. This information is designed for system administrators who are experienced with the installation and configuration of the basic system components and its software.

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.

Product Updates and Drivers

For product updates that you can download for the Sun Blade X6220 server module, follow the links at the following Web site:

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 Blade X6220 server module, see the *Where To Find Sun Blade X6220 Server Module Documentation* sheet that is packed with your system and also posted at the product's documentation site at this URL:

http://docs.sun.com/app/docs/prod/blade.x6220

Translated versions of some of these documents are available at the web site described above in French, Simplified Chinese, Traditional Chinese, Korean, and Japanese. English documentation is revised more frequently and might be more up-to-date than the translated documentation.

Solaris and other software documentation is available at:

http://docs.sun.com

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Please include the title and part number of your document with your feedback: *Sun Blade X6220 Server Module Product Notes*, part number, *820-0048*

Introduction

This chapter provides a brief summary of software available on your server and other features. It covers the following topics:

- "Software and Firmware Updates" on page 1
- "Available Software" on page 5
- "Available Utilities" on page 8
- "Diagnosing Server Problems With the Bootable Diagnostics CD-ROM" on page 10

Software and Firmware Updates

The Sun Blade and server module service processors must all be upgraded to the latest firmware release. Make sure to update the server modules first, then the chassis to the latest firmware, using ILOM CLI, Web interface, or IPMI interfaces. Refer to the *Sun Blade X6220 Server Module Release Notes* for more information on updating the server firmware.

You can download updates for the Sun Blade X6220 software and firmware as follows:

1. **Go to the Sun download site:**

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

2. **Locate the Hardware Drivers under View Categories.**

3. **Click X64 Servers and Workstations.**

4. **Click on the Sun Blade X6220 Server Module release that you wish to download.**

5. **Click Download.**

6. **Enter your Username and Password.**

Tip – If you do not have a Username and Password, you can register free of charge by clicking Register Now.

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7. **Click Accept License Agreement.**

   The following topics describe the software updates that are currently available for the Sun Blade X6220 server module:

Note – If you install the Sun Blade X6220 server module into a chassis that is running ILOM version 2.0.*x*, you must upgrade the Sun Blade X6220 server module to ILOM version 2.0.*x* (software release 1.1a or later) in order for the server module to function properly in the chassis.

Software Release 3.0

The Sun Blade X6220 server module software release 3.0 contains ILOM service processor firmware version 3.0.3.34, build 42258. The BIOS version is 0ABJT114.

In addition, software release 3.0 contains the following updates:

- The Tools and Drivers CD contains LSI cfggen 2.02, updated drivers and PXE files.
- LSI Phase 14 (firmware 1.26.92/BIOS 6.24.01)
- IPMItool and IPMIflash, MSM 2.88

Software Release 2.1

The Sun Blade X6220 server module software release 2.1 contains ILOM service processor firmware version 2.0.3.10, build 36968. The BIOS version is 0ABJT110 (same as software 2.0).

In addition, software release 2.1 contains the following updates:

- The Tools and Drivers CD contains updated drivers for RHEL5.2 64-bit and SLES10 SP2 64-bit
- LSI Phase 12 (firmware 1.24.93/MPTBIOS 6.20.03)
- LSI MSM version 2.63 with LSI SNMP agent is included
- IPMItool and IPMIflash 1.8.9.4

Software Release 2.0

The Sun Blade X6220 server module software release 2.0 contains ILOM firmware version 2.0.3.3, service processor build 34514. The BIOS version is 0ABJT110.

In addition:

- The Tools and Drivers CD contains updated drivers for SLES9 SP4 64-bit, Windows Server 2008 Data Center 32-bit and 64-bit, Solaris 10 5/08, VMware 3.5 Update 1.
- LSI Phase 11 B2 (firmware 1.23.95/MPTBIOS 6.18.01)
- The Sun Installation Assistant (SIA) adds support for Windows 2008
- HERD has been updated to version 1.9
- LSI MSM version 2.29 with LSI SNMP agent is included

Software Release 1.2

The Sun Blade X6220 server module software release 1.2 contains ILOM firmware version 2.0.3.2, service processor build 30997. The BIOS version is 0ABJT106. The LSI firmware version is the same as the Release 1.1.

In addition:

- The Tools and Drivers CD contains updated drivers for the following operating systems: RHEL4 U6 (32-bit and 64-bit) and RHEL5 U1 (64-bit).
- HERD has been updated to version 1.8.
- SunCFG 1.05 will not be part of SW 1.2.

Software Release 1.1a

The Sun Blade X6220 server module software release 1.1a contains ILOM firmware version 2.0.3.1 and BIOS version 30, as well as additional utilities. Refer to "Available Utilities" on page 8 for information on utilities that are included with this release.

Note – If you previously updated your firmware to software release 1.1, you will need to update your firmware to software release 1.1a. See the *Sun Blade X6220 Server Module Release Notes* for further information.

Software Release 1.0.2

Software Release 1.0.2 contains all of the features of release 1.0.1, and also includes an update from BIOS 25 to BIOS 26.

Chapter 6 the issues that have been fixed with software release 1.0.1.

Software Release 1.0.1

The Sun Blade X6220 software release 1.0.1 provides the following updates:

- VMware and RHEL 5 support has been added
- ILOM version has been upgraded from 1.1.6 to 1.1.8

Chapter 6 lists the issues that have been fixed with software release 1.0.1.

Refer to the *Sun Blade X6220 Software Release Notes* for more information.

Available Software

The following software might be included with your Sun Blade X6220 server module:

- "Solaris 10 Operating System" on page 6
- "Sun Java Enterprise System" on page 7
- "Sun N1 System Manager" on page 7

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

Some server modules are shipped with the preinstalled Solaris™ 10 Operating System (OS). 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 might preinstalled on your server, depending on your server configuration.

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

Online documentation for Solaris 10 OS can be found at:

http://docs.sun.com/documentation

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 is the Solaris OS is also preinstalled.

Online documentation for Java ES can be found at:

http://docs.sun.com/documentation

Sun xVM Ops Center

The 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.

Refer to the following URLs for more information:

http://wikis.sun.com/display/xVM/Sun+xVM+Ops+Center

http://www.sun.com/software/products/xvmopscenter/index.jsp

Sun N1 System Manager

Note – Sun N1 System Manager is no longer included with the Sun Blade X6220 server. This software has been replaced by Sun xVM Ops Center.

Sun N1 System Manager is an aggregated system manager that helps administrators reduce cost and complexity while providing the agility to manage hundreds of systems. Using the N1 System Manager software, administrators can discover, provision, patch, monitor and manage anywhere from one to hundreds of Sun systems. The benefits of the N1 System Manager software include a centralized, interactive, easy-to-use browser and command line interface (CLI), allowing administrators to make quick and accurate changes to single systems or groups of systems. The Sun N1 System Manager is shipped in the system box as a DVD or is shipped as part of an optional accessory kit.

Online documentation for Sun N1 System Manager can be found at:

http://docs.sun.com/documentation

For more information, go to:

http://www.sun.com/software/products/system_manager

Available Utilities

Utilities available for Software Release 1.1a include the following:

TABLE 1-1 Utilities Available with Software Release 1.1a

Operating System Affected	Utilities Available
Solaris	• ipmitool • LSI cfggen • ipmiflash • suncfg
Linux Red Hat Enterprise Linux (RHEL) and SUSE Linux Enterprise Server (SLES)	• Herd (v1.6) • MSM 2.18 with LSI SNMP agent • ipmitool • ipmiflash • LSI cfggen • suncfg
Windows	• MSM 218 with LSI SNMP agent • ipmitool • LSI cfggen • suncfg

Further information on these utilities can be found from the following sources:

- LSI cfggen, suncfg Herd: *X64 Servers Utilities Reference Manual*
- MSM: *Sun LSI 106x RAID User's Guide*
- ipmitool:
  - ipmitool man page: http://ipmitool.sourceforge.net/manpage.html
  - *Sun Integrated Lights Out Manager 2.0 User's Guide* for using ipmitool with ILOM
  - Windows Server 2003 IPMI driver installation is described in the *Sun Blade X6220 Server Module Windows Operating Installation Guide*.

- ipmiflash:
  - `ipmiflash` man page
  - "ipmiflash Utility" on page 9

`ipmiflash` Utility

A new `ipmiflash` utility is introduced on the Tools and Drivers CD. This utility provides additional methods to upgrade the ILOM service processor and BIOS remotely over the management network and locally from the server. This utility is available for Linux and Solaris operating systems.

Note that local flash upgrade requires root access, and may require pre-loading of kernel modules, depending on the OS.

See the `ipmiflash` man page for more information.

Caution – The server is powered off during BIOS upgrade. Do not remove AC power from the server until the upgrade has completed, and the service processor has rebooted. If a flash upgrade is interrupted, retry the process.

Use the commands that are appropriate for your operating system and interface:

- "Solaris with Network Interface" on page 9
- "Linux with KCS Interface" on page 9
- "Linux with USB SCSI Interface" on page 10

Solaris with Network Interface

To perform a remote flash upgrade on a Solaris client, use the network interface with the following command:

$ **ipmiflash -U root -P changeme -H** *service_processor_ipaddress* **write ilom.***firmwareversion***.ima**

service_processor_ipaddress is the service processor IP address

firmwareversion is the version of the firmware that you are upgrading to. For example: `ilom.X6220-2.0.3.1.ima`

Linux with KCS Interface

To perform a local flash upgrade on a Linux client with the Keyboard Controller Style (KCS) interface, use the following commands:

```
# /usr/share/ipmitool/ipmi.init.basic

# ipmiflash write ilom.firmwareversion.ima
```

Linux with USB SCSI Interface

To perform a local flash upgrade on a Linux client with the USB SCSI interface, without preserving the ILOM configuration, use the following commands:

```
# modprobe sg

# ipmiflash -I usb write ilom.firmwareversion.ima noconfig
```

firmwareversion is the version of the firmware that you are upgrading to. For example: `ilom.X6220-2.0.3.1.ima`

Note – Sun servers with the ast2000 service processor allow flash recovery using the `ipmiflash -I pci` interface. This command currently does not flash the BIOS—you must perform another flash upgrade using another method, after flash recovery with the pci interface.

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.

You can attach these peripherals directly to the server dongle or to a remote system. See the *Sun Blade X6220 Server Module Service Manual* for more information.

Hardware Issues and Notes

This chapter describes hardware issues related to the Sun Blade X6220 server module. It includes the following issues:

- "Hardware Issues" on page 11
- "Hardware Notes" on page 17

Hardware Issues

This sections lists issues that might affect your system, regardless of the operating system installed.

Boot From SIA CD Might Fail Using USB CD-ROM Connected to the Dongle (6680165, 6743106)

Booting the Sun Installation Assistant (SIA) from a USB CD-ROM or redirecting the .iso image from the ILOM Remote Console might fail.

Workaround

1. **Enter the BIOS Setup Utility.**

2. **Do one of the following in the BIOS Setup Utility:**
   - Set "USB 1.1 only" or
   - Disable "Memory Hole Remapping"

Refer to the *Sun Blade X6220 Service Manual* for more information on using the BIOS Setup Utility.

Upgrading LSI FW Generates Mismatch Error (6690569)

If you have Phase 9 LSI firmware (firmware 1.20/BIOS 6.14) loaded on a Sun Blade X6220 server and attempt to upgrade the firmware to Phase 10 (firmware 1.22.01/BIOS 6.16), the firmware update tool (sasflash) will produce a warning message indicating that the product ID and vendor ID don't match. This error is benign and does not affect firmware functionality.

To proceed with the firmware update:

● **Select y when prompted.**

GbE PCI EM (X7282A-Z) LED Colors Are Different Than Usual GbE NIC Cards (6667636)

The LEDs on the Gigabit Ethernet (GbE) PCI ExpressModule (PCI EM), part number X7282A-Z, used in the Sun Blade modular systems are different from the other GbE NIC PCI EMs.

The LED behavior for the GbE PCI EMs are as follows:

■ X7282A-Z GbE NIC PCI EMs:

  ■ At 100 Mbps, the LED is green.

  ■ At 1 Gbps, the LED is amber.

■ Other GbE NIC PCI EMs

  ■ At 100 Mbps, the LED is amber.

  ■ At 1Gbps, the LED is green.

Undetermined System Hardware Failure in SEL When Installing or Removing a PCI EM (6658048)

When installing or removing a PCI EM during POST, a System Event #0x12: "Undetermined system hardware failure" is shown as an asserted error in the system event log (SEL) list.

Workaround

Do not insert or extract a PCI EM during system POST.

Sun Keyboard Does Not Work During POST if Connected to Top USB Port (6501086)

When a Sun Microsystems USB mouse (part number 370-3632-02) is plugged into the bottom USB port of the two ports on the dongle with a Sun Microsystems keyboard on the top port, the keyboard or mouse might work intermittently or not at all during BIOS POST.

Workaround

Remove the mouse or switch ports for the devices.

CMOS Boot Device Setting Reverts to Default Value (6506911)

Occasionally, when rebooting the system the CMOS boot device setting reverts to the default value.

Workaround

Reassign the CMOS boot device setting in the BIOS Setup Utility.

FSCK SCSI Appears in System Log (6487329)

FSCK (File System Check) SCSI might appear in the system log when heavy load disk tests (multiple instances of the I/O stress test) are running.

This issue will be fixed in a future release.

Slow Mouse Redirection Through JavaRConsole (6502777)

When running Linux RHEL4 U4 or a Windows XP SP2 client and using the Internet Explorer 7 or Mozilla browser, mouse redirection might be slow through the JavaRConsole.

Workaround

Terminate the `rhn phyton` script, then enable the mouse again. To terminate the `rhn phyton` script, type the following command:

```
Kill -9 rhn
```

HDD Activity LED Does Not Blink (6523000)

Hard disk drive activity LED does not blink when there is activity on the disk. The Activity LED is on constantly when the disk is installed and the server module is powered on.

This issue will be fixed in a future release.

Removing Disk Drive Damages EMI Gasket (6527633)

Removing the disk drive from the server module causes damage to the top EMI gasket on the hard drive bracket.

Caution – Do not remove the hard disk drives from the server modules. The EMI spring fingers may break off and get stuck in the chassis and could cause other damage.

SCSI Errors on RAID Arrays During Hot or Cold Swap (6529280)

After a hot or cold swap, and a successful disk resynchronization, the RAID volume moves to an optimum state. You might see the following SCSI error messages in the system logfiles:

```
READ CAPACITY failed.
  status=0, message=00, host=1, driver=00
  sense not available.
  Write Protect is off
  Mode Sense: 00 00 00 00
  asking for cache data failed
  assuming drive cache: write through
  READ CAPACITY failed.
  status=0, message=00, host=1, driver=00
  sense not available.
  Write Protect is off
  Mode Sense: 00 00 00 00
  asking for cache data failed
  assuming drive cache: write through
  <6>sd 0:0:10:0: SCSI error: return code = 0x00010000
  end_request: I/O error, dev sde, sector 0
  Buffer I/O error on device sde, logical block 0
  sd 0:0:10:0: SCSI error: return code = 0x00010000
  end_request: I/O error, dev sde, sector 0
  Buffer I/O error on device sde, logical block 0
```

Workaround

You can safely ignore these messages.

I2C Bridge Chip Timeout (6532202)

The I2C bridge chip might timeout when the number of simultaneous requesters exceeds ten. This timeout might cause missing FRU information for the Sun Blade X6220 server module service processor.

Workaround

Reboot the service processor.

SCSI Timeout Message At Boot (6559618)

During a system boot, the Sun Blade X6220 server module might report SCSI transport failed warning messages. The following messages might display, but can be safely ignored:

```
May  7 22:23:31 mpk12-3214-189-237 genunix: [ID 408822 kern.info]
NOTICE: mpt0: fault detected in device; service still available
May  7 22:23:31 mpk12-3214-189-237 genunix: [ID 611667 kern.info]
NOTICE: mpt0: Disconnected command timeout for Target 0
May  7 22:23:31 mpk12-3214-189-237 scsi: [ID 107833 kern.notice]
/pci@0,0/pci10de,5d@c/pci1000,3060@0 (mpt0):
May  7 22:23:31 mpk12-3214-189-237 mpt_flush_target discovered
non-NULL cmd in slot 174, tasktype 0x3
May  7 22:23:31 mpk12-3214-189-237 scsi: [ID 365881 kern.info]
/pci@0,0/pci10de,5d@c/pci1000,3060@0 (mpt0):
May  7 22:23:31 mpk12-3214-189-237 Cmd (0xffffffff88151010) dump
for Target 0 Lun 0:
May  7 22:23:31 mpk12-3214-189-237 scsi: [ID 365881 kern.info]
/pci@0,0/pci10de,5d@c/pci1000,3060@0 (mpt0):
May  7 22:23:31 mpk12-3214-189-237 cdb=[ 0x28 0x0 0x0 0x62 0xd1
0x21 0x0 0x0 0x2 0x0 ]
May  7 22:23:31 mpk12-3214-189-237 scsi: [ID 365881 kern.info]
/pci@0,0/pci10de,5d@c/pci1000,3060@0 (mpt0):
May  7 22:23:31 mpk12-3214-189-237 pkt_flags=0x4000
pkt_statistics=0x0 pkt_state=0x0
May  7 22:23:31 mpk12-3214-189-237 scsi: [ID 365881 kern.info]
/pci@0,0/pci10de,5d@c/pci1000,3060@0 (mpt0):
May  7 22:23:31 mpk12-3214-189-237 pkt_scbp=0x0 cmd_flags=0x860
May  7 22:23:31 mpk12-3214-189-237 scsi: [ID 107833 kern.warning]
WARNING: /pci@0,0/pci10de,5d@c/pci1000,3060@0/sd@0,0 (sd2):
May  7 22:23:31 mpk12-3214-189-237 SCSI transport failed: reason
'reset': retrying command
May  7 22:23:34 mpk12-3214-189-237 scsi: [ID 107833 kern.warning]
WARNING: /pci@0,0/pci10de,5d@c/pci1000,3060@0/sd@0,0 (sd2):
May  7 22:23:34 mpk12-3214-189-237 Error for Command: read(10)
Error Level: Retryable
May  7 22:23:34 mpk12-3214-189-237 scsi: [ID 107833 kern.notice]
Requested Block: 6476065                    Error Block: 6476065
May  7 22:23:34 mpk12-3214-189-237 scsi: [ID 107833 kern.notice]
Vendor: SEAGATE                      Serial Number: 060410DJ78
May  7 22:23:34 mpk12-3214-189-237 scsi: [ID 107833 kern.notice]
Sense Key: Unit Attention
May  7 22:23:34 mpk12-3214-189-237 scsi: [ID 107833 kern.notice]
ASC: 0x29 (scsi bus reset occurred), ASCQ: 0x2, FRU: 0x2
```

Hardware Notes

This section lists information that you might want to know regarding your system.

Dongle Cables

Dongle cables are included with each Sun Blade chassis to provide I/O to the server modules installed in the chassis. This section describes the dongles that might be available for your system, and provides pinout information for the connectors.

Caution – The cable dongle is for temporary connections only. The cable dongle has not been evaluated for electromagnetic compatibility (EMC). The cable dongle or server module connectors could be damaged by closing rack doors or other impacts. Remove the cable dongle during normal system operation.

Types of Dongle Cables

There are two possible types of dongle that might be included with your system chassis. The two types are described in this section.

- Four-connector cable dongle: This dongle has dual-USB, RJ-45, VGA, and DB9 connectors. See FIGURE 2-1.

  - VGA connector: This connector can be used for setting up a video monitor to the server module.

  - USB connectors: These connectors are used to connect USB devices to the server. For example, an external CD drive can be attached to the server module with this connector.

  - DB9 serial connector: This connector is used to connect to a serial console. A DB9 to RJ-45 adapter is also included with the chassis to enable RJ-45 serial connections.

  - RJ-45 connector: This connector is not used for this server module.

FIGURE 2-1   Four-Connector Dongle Cable

RJ45 - not used

DB9 serial connector

Two USB 2.0 connectors

VGA video
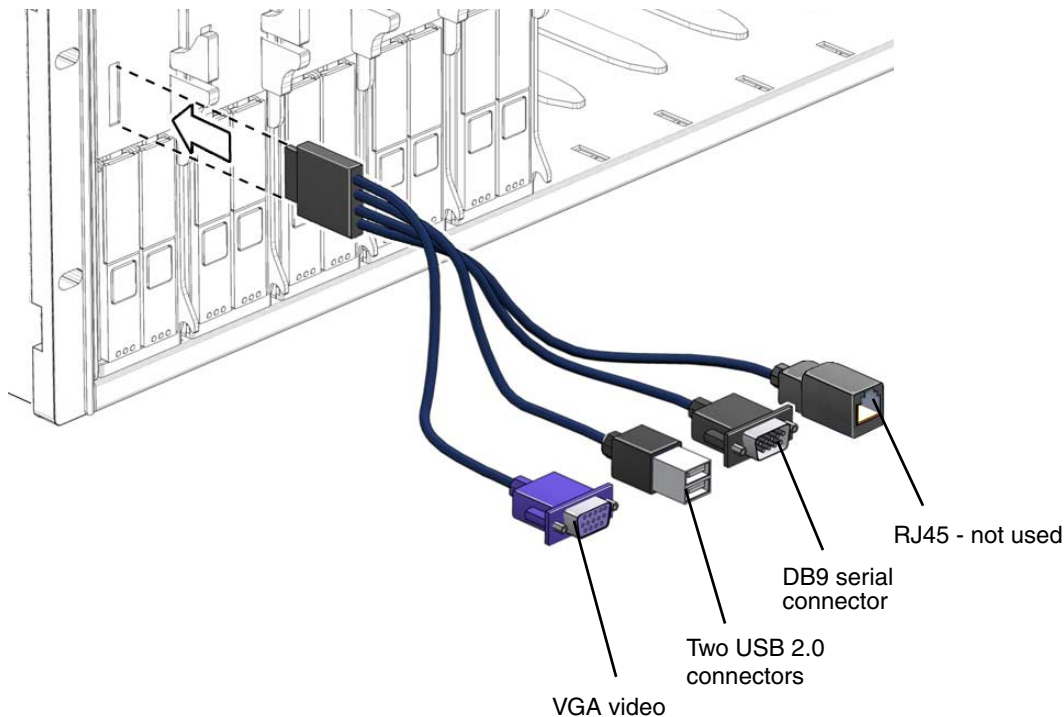
- Three-connector dongle cable: This dongle has dual-USB, RJ-45 and VGA connectors. See FIGURE 2-2.

  These connectors are used as followed:

  - USB connectors: These connectors are used to connect USB devices to the server. For example, an external CD drive can be attached to the server module with this connector.
  - RJ-45 connector: This connector is used to connect to a serial console. For example, you can use this to connect to the ILOM CLI.
  - VGA connector: This connector can be used for setting up a video monitor to the server module.

FIGURE 2-2   Three-Connector Dongle Cable
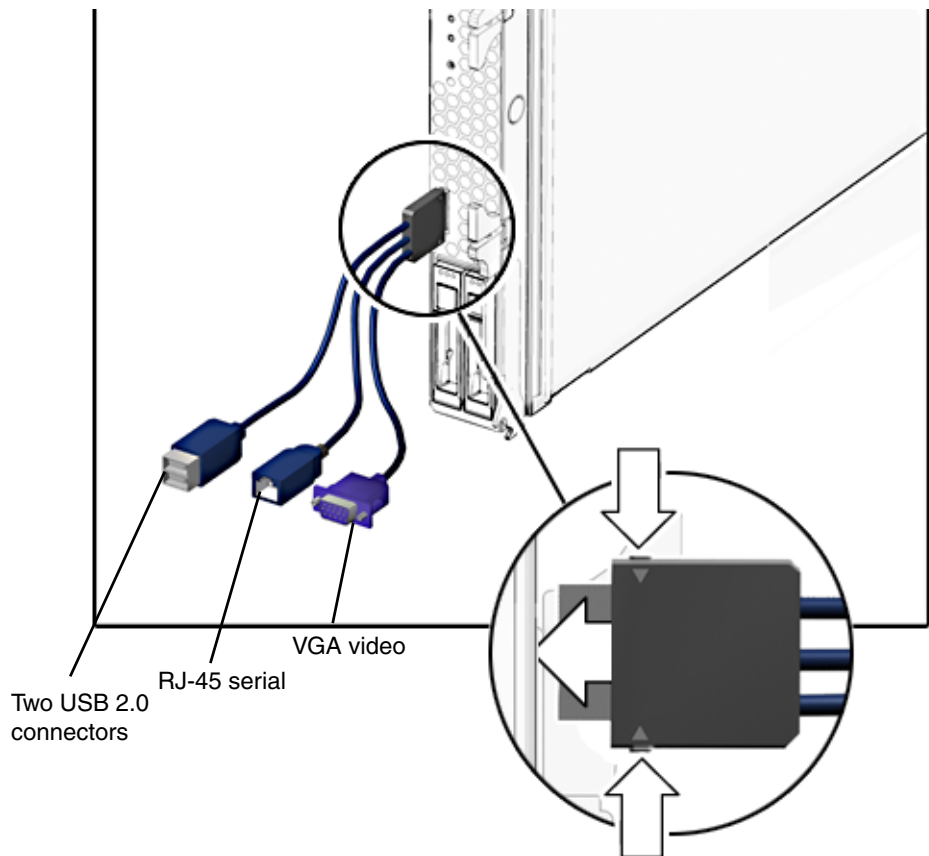
Software Notes and Issues

This chapter describes software issues related to the Sun Blade X6220 server module. It includes the following subjects:

- "General Software Issues" on page 21
- "Solaris Issues" on page 22
- "Linux Issues" on page 27
- "Windows Issues" on page 38

General Software Issues

This section lists issues that are not specific to any operating system or apply to more than one operating system.

Some Arguments in `suncfg` Tool Cause System Hang (6653448)

If you use the following arguments with the `suncfg` tool, the system will hang:

```
-get_all
-get_ilom_network_config
-set_ilom_password
-set_ilomo_network_config
```

The `suncfg` tool will not be included in the SW 1.2 Tools and Drivers CD.

Solaris Issues

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

Hot Swap Function for Some PEMs Does Not Work in Solaris 10 10/08 (6832875, 6809171, 6810312, 6810949)

During a hot-swap, if you insert any of these PEM's:

SG-(X)PCIE2FCGBE-E-Z, SG-(X)PCIE2FCGBE-Q-Z, or X7284A-Z

you might encounter configuration failure errors.

In the Solaris message file, you might see the following error message:

```
pcie: [ID 323744 kern.warning] WARNING: PCIE init err info
failed BDF 0x8100
```

If you manually configure the PEM with the `cfgadm` command, it will return the following error message:

```
cfgadm: Hardware specific failure: configure failed
```

Workaround

Reboot Solaris 10 10/08 with PEM installed.

Checksum Error in UDP Application on Solaris 10 10/08 With X7287A-Z and X1028A-Z PCI Ems (6832874, 6771690)

The UDP application may show an `RCR L4_CSUM_ERROR` in the Solaris message file.

The incorrect UDP checksum causes this error in the Solaris message file on Solaris 10 10/08 with X7287A-Z and X1028A-Z PCI EMs.

Workaround

This issue will be solved in the next Solaris release. For now, install patch 139570-05 or 138899-07 to fix this problem.

NIC Path Names Change if the X7284A-Z PCI EM Is Inserted Into Slot 1 (6705317)

After you hotplug X7284A-Z PCI EM into Slot 1 and reboot Solaris 10 5/08, the NIC path name of the second on-board NGE interface will change to `nge2` from `nge1`.

If a X7287A-Z PCI EM is also in Slot 0 as well, the NIC path name of the nxge interfaces might change to `nxge4`, `nxge5`, `nxge6`, and `nxge7`, from the original values os `nxge0`, `nxge1`, `nxge2`, and `nxge3`.

Workarounds

- Use the new instance number for the nge and nxge devices.

Or

- Always use the boot system without a X7284A-Z PCI EM. Every time after the system boots up, hotplug the X7284A-Z into slot 1.

FMA Error With A SG-(X)PCIE8SAS-EB-Z PCI EM (6717153)

After hotplugging an SG-(X)PCIE8SAS-EB-Z PCI ExpressModule (PCI EM) into Sun Blade X6220 server with S10 5/08 installed, a message similar to the following will display:

```
Jun 23 14:07:12 nsgsh-dhcp-217 fmd: [ID 441519 daemon.error] SUNW-
MSG-ID: SUNOS-8000-1L, TYPE: Defect, VER: 1, SEVERITY: Minor
Jun 23 14:07:12 nsgsh-dhcp-217 EVENT-TIME: Mon Jun 23 14:07:12 CST
2008
Jun 23 14:07:12 nsgsh-dhcp-217 PLATFORM: Sun Blade X6220 Server
Module, CSN: 0111APO-0749BZ
055C , HOSTNAME: nsgsh-dhcp-217
Jun 23 14:07:12 nsgsh-dhcp-217 SOURCE: eft, REV: 1.16
Jun 23 14:07:12 nsgsh-dhcp-217 EVENT-ID: 2e500640-3f7a-c7cc-d33e-
d560f3b08735
Jun 23 14:07:12 nsgsh-dhcp-217 DESC: The EFT Diagnosis Engine
encountered telemetry for which it is unable to produce a
diagnosis. Refer to http://sun.com/msg/SUNOS-8000-1L for more
information.
Jun 23 14:07:12 nsgsh-dhcp-217 AUTO-RESPONSE: Error reports from
the component will be logg ed for examination by Sun.
Jun 23 14:07:12 nsgsh-dhcp-217 IMPACT: Automated diagnosis and
response for these events will not occur.
Jun 23 14:07:12 nsgsh-dhcp-217 REC-ACTION: Run pkgchk -n SUNWfmd
to ensure that fault management software is installed properly.
Contact Sun for support.
```

This message can be safely ignored. Later Solaris releases will eliminate this
message.

Upgrade to BIOS 30 (or Higher) From BIOS 29 (or Lower) Causes Solaris NIC Path Change (6648545)

When upgrading Gemini BIOS from 29 (or lower version) to 30 (or higher), the PCI
bus number of the second nge interface changes from 7b to 7c in Solaris. This
changes the instance number from nge1 to nge2 in /etc/path_to_inst.

After the BIOS upgrade, you will need to use nge2 to refer the second nge interface,
rather than nge 1.

Solaris OS Does Not Support Hot-insertion or Hot-removal of an Infiniband PCI EM (6424701)

When the Solaris OS is running, Infiniband PCI ExpressModules (PCI EMs) cannot
be removed or installed.

Workaround

Shut down the Solaris OS gracefully before removing or inserting the Infiniband PCI EM.

PCI SERR is Logged When Solaris 10 Boots (6603801)

Every time the Solaris operating system boots, a PCI system error signal (SERR) is logged regarding the SAS3081E-S PCI-E-to-SAS adapter.

The error messages can be ignored.

Certificate Hostname Mismatch Causes Web Interface Services to Stop (6587000)

Users running Solaris 10 11/06 (or higher) installed, will see that Web interface console services are stopped after the system is reconfigured.

Note – The Web interface consists of the Sun Java Web Console, and the Sun Java Web User Interface Components. The Console provides a common point for Sun web-based system management applications to be registered and accessed.

Starting with Solaris 10 11/06, the Web interface starts automatically as an smf service when the OS boots. When a Web interface instance is first created, a self-signed x.509 certificate is generated based on the machine hostname. The hostname is stored in the CN Relative Distinguished Name (RDN) of the Distinguished Name (DN) of the certificate.

For SSL exchanges to succeed, the hostname in the CN RDN of the DN of the certificate must be the same as the hostname of the system. If you sys-unconfig a system and change the hostname, the Web interface x.509 self-signed remains associated with the previous hostname. Any SSL exchange between a client (i.e., wcadmin) and the web server will fail due to the hostname mismatch in the x.509 certificate.

Workaround

Run the following command to remove the entire instance of the web interface from the OS.

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

Removing the Web interface console instance also deletes the x.509 certificate. The next time the Web interface console is started, a new certificate is generated based on the current hostname.

SunVTS 6.3 Might Encounter an Issue in Solaris 10 Update 3

Systest in SunVTS 6.3 might run into known issue in `libmtsk.so` bundled in Solaris 10 Update 3.

Workaround

Install patch 120754-05 or later before running SunVTS 6.3 with Solaris 10 Update 3.

Opening a Kernel Debugging Session on the Default Console Cause a System Hang (6506791)

Invoking the Solaris kernel debugger with the **command mdb -K -F**, might cause the system to hang at high `IOPL` if the console is set to text, which is the default setting.

Workaround

Set the console to `ttya`. By setting the console to `ttya`. This causes the system to transfer control of the debugger to the serial console port.

AMD Erratum 131 Warning Message During Solaris Startup (6447850)

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 Sun Blade X6220 server module BIOS implements a superset workaround that includes the workaround required for Erratum 131. This warning message can be safely ignored.

Note – This issue was resolved in Solaris 10 5/08.

Linux Issues

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

nxge Gigabit Ethernet Drivers For X1028A-Z and X7287A-Z PCI EMs on RHEL5.3 (6832823)

The following RPM packages are provided in the given directories for RedHat and SuSE respectively:

RedHat

`/usr/src/redhat/RPMS/x86_64/sun-nxge-1.0-1.x86_64.rpm`

SuSE

```
/usr/src/packages/RPMS/x86_64/sun-nxge-1.0-1.x86_64.rpm
```

To load the nxge drivers for X1028A-Z and X7287A-Z PCI EMs:

1. **From** http://www.sun.com/download/products.xml?id=45a593ce

   extract the nxge driver from the Sun_10_Gigabit_Ethernet_driver_update_12.zip file.

2. **To install the nxge binaries run the following command:**

   rpm -ivh sun-nxge-1.0-1.x86_64.rpm

   The driver binary is installed as:

   ```
   /lib/modules/<KERNEL VERSION>/kernel/drivers/net/nxge.ko
   ```

   The config tool binary is installed as:

   ```
   /usr/local/bin/nxge_config
   ```

   The man page is installed as:

   ```
   /usr/share/man/man7/nxge.7.gz
   ```

3. **To load the module using modprobe:**

   ```
   # modprobe nxge
   ```

4. **Add the nxge interfaces to the** /etc/modprobe.conf **file for loading at boot time.**

   ```
   alias <if_name> nxge
   ```

5. **Use ethtool command to check the properties of each interface:**

   ```
   ethtool -i <if_name>
   ```

6. **Assign an IP address to the interface by entering the following:**

   ```
   ifconfig <if_name> <IP_address>
   ```

7. **Verify that the interface works. Enter the following, where <IP_address> is the IP address for another machine on the same subnet as the interface that is being tested:**

   ```
   ping  <IP_address>
   ```

Drivers Not Available for X1028A-Z and X7287A-Z PCI EMs for SLES 9 SP 4 64-bit (6706014)

Drivers are not currently available for the X1028A-Z and X7287A-Z PCI ExpressModules (PCI EMs) if you are running SLES SP4 64-bit.

Hot Swap of PCI EMs Might Not Work With RHEL 4 Update 6 64-bit (6721600)

When hot-plugging a PCI EM when running RHEL 4 Update 6 (both 32- and 64-bit), there will be a `"acpiphp_glue: _HPP evaluation failed"` message displayed. After several instances of this message, the hot swap can fail.

Workaround

If hot swap issues occur within this configuration, reboot the operating system to correct the problem.

Hot Plugging of a X7284A-Z PCI EM Does Not Work With SLES 9 SP4 64-bit (6706585)

If you are running SLES 9 SP4 64-bit, hot-plugging of the X7284A-Z PCI EM is not supported. You will need to power down the Sun Blade X6220 before installing the PCI EM.

Swap File Not Mounted for SLES 10 SP1 Under Xen FV (6655098)

When SUSE Linux Enterprise Server 10 SP1 is installed as a fully virtualized guest under Xen, the swap file might not be mounted automatically. This can cause application failure due to unavailable swap space.

Workaround

Modify the file system configuration as follows.

1. **Edit** `/etc/fstab` **on the guest.**

2. **Change the following line:**

   `/dev/disk/by-id/ata-QEMU_HARDDISK_QM00001-part1`

   to

   `/dev/hda1`

3. **Change the following line:**

   `/dev/disk/by-id/ata-QEMU_HARDDISK_QM00001-part2`

   to

   `/dev/hda2`

4. **Save the file.**

5. **Reboot the guest operating system.**

   These changes should cause the swap file to be mounted automatically.

Onboard NIC Network Throughput is Less Than Expected With a Linux OS (6647098)

You might encounter less than the expected throughput of 125 MB/second with the onboard NVIDIA Gigabit Ethernet NIC on all supported Linux OSes.

Workaround

For Red Hat Linux:

1. **In a text editor, open** `/etc/modprobe.conf`

2. **Add the line: `options  forcedeth  max_interrupt_work=100`**

Note – This workaround only works on RHEL 5 U1. The workaround does not work for RHEL 4 U6. See CR6668885 for more information.

For SUSE Linux:

1. **In a text editor, open:** `/etc/modprobe.conf.local`

2. Add the line: `options forcedeth max_interrupt_work=100`

CF Access and Booting Not Supported for RHEL 5.0 (6639144)

RHEL5.0 has some bugs which might result in file system corruption during heavy I/O to the compact flash (CF). It is not recommended that you use RHEL 5.0 to access the CF for I/O intensive applications.

Workaround

Update your OS to RHEL 5.1.

NEM NIC Fails When Network Stress is Heavy With SLES10 SP1 and SLES9 SP3 (6610532)

If you are running an application on SLES10 SP1 and SLES9 SP3 that requires heavy network activity, the application program might fail on the NVIDIA Gigabit Ethernet NEM NIC.

Workaround

Use a PCI EM Intel NIC instead of the NEM NIC. Part numbers for these PCI EMs are X7282A-Z or X7283A-Z.

Full Red Hat Enterprise Linux 4U4 Installation Might not Fit on the Compact Flash (6564755)

If you select the "Everything" option during Red Hat Enterprise Linux 4 (RHEL 4) U4. the installation might require more space than available in the compact flash (8GB).

Workaround

Deselect some packages during the installation so that installation size requirement matches the size of the available storage.

RHEL 4U4, 4U5 and RHEL 5 Do Not Work With Root Partition Installed on LVM (6566104)

RHEL 4U4, 4U5 and RHEL 5 installation is not supported with a root partition on Linux Volume Manager (LVM) for a compact flash-based installation.

This installation will cause a kernel panic on bootup.

Workaround

Configure RHEL with root on a non-LVM partition.

During installation, choose manual partitioning using disk druid. Delete the existing (if any) partitions and create two new partitions 100M (mounted as /boot) and rest of the disk mounted as root (/)

Red Hat Enterprise Linux 5 Guest OS Might Hang Using Default Memory Allocation (6536456)

Some fully virtualized Red Hat Enterprise Linux 5 guests will hang when they are given 500 or 1000MB of memory.

Workaround

When setting up a RHEL 5 guest OS, make sure to allocate at least 512 or 1024MB of memory to the fully virtualized Red Hat Enterprise Linux 5 guests.

PCI Express Hotplug Requirement (6525667)

PCI Express hotplugging may not work on RHEL4 U4 and SLES10 operating systems.

Workaround

Execute the following command before hotplugging PCI ExpressModules:

```
# modprobe acpiphp
```

Linux Installation From CD Fails (6495764)

During the installation of a Linux or Windows operating system using a CD/DVD drive connected via USB, the following message might appear:

```
Insert CD 1 to drive is shown
```

Once the CD is inserted, the installation program might not recognize it.

Workaround

To avoid this issue, you must enable memory hole remapping in the BIOS setup as follows:

1. **Power on or reboot the Sun Blade X6220 server module.**

2. **Press F2 when prompted to enter the BIOS Setup Utility.**

3. **Navigate to the Chipset menu.**

4. **Make the following selections in order:**

   a. **NorthBridge Configuration**

   b. **Memory Configuration**

   c. **Memory Hole Remapping**

5. **Enable Memory Hole Remapping by pressing the + key until the value is set to Enabled.**

6. **Press F10 to save and exit the BIOS.**

RHEL4 U4 Reboot Hangs Intermittently (6492128)

When a Sun Blade X6220 server module running the RHEL4 U4 operating system is rebooted, it could hang intermittently at different stages of reboot.

Workaround

Disable the ACPI2.0 objects in the BIOS by performing the following steps:

1. **Select Advanced, CPU Configuration, ACPI2.0 objects, and then select disable option.**

2. **Reboot the system and disable** kudzu **from running by using the command:**

```
# chkconfig --levels 345 kudzu off
```

RHEL4 U4 x64 Cannot Find CD Media Right Before Mediacheck Option (6497631)

If you are installing RHEL4 U4 x64 version from CD media using an external USB CD-ROM drive, the operating system might report that it cannot find the CD media right before the media check dialog.

Workaround

Enable memory hole remapping in the BIOS Setup Utility before installing the operating system.

Bootup Warning Message While Initializing TSC (6507275)

When the Linux OS starts, the following console message might appear for every CPU/Core in the system. You can safely ignore this message.

```
BIOS BUG: CPU#0 improperly initialized, has 2 usecs TSC skew! FIXED
```

SLES 10 Installation Might Cause a Blank Screen (6507278)

When installing SLES 10 with the Web interface installation selected, you might receive a blank screen. This occurs because the monitor or LCD screen cannot handle the high refresh rates chosen as default by installer.

Workaround

Choose one of the following workarounds:

■ Install the operating system by using the remote Java console.

■ Install the operating system by selecting VESA mode from the installer display menu before installation begins.

Ethernet Device Reorders When Ethernet PCI EMs are Inserted (6507284)

When Ethernet PCI EMs are inserted and configured, Linux automatically reconfigures the device numbers. For example, eth0 would be renumbered to eth5 or eth4.

Workaround

You can avoid this issue by binding the device number to Ethernet device MAC address. To bind the device number to an Ethernet device MAC address, perform the following steps.

1. **Type the following command to find the Ethernet device MAC address:**

   ```
   # ifconfig ethx
   ```

   Replace *x* with the corresponding numeral like eth0

2. **Record the Ethernet device MAC address.**

3. **Edit the** ifcfg **file** /etc/sysconfig/network-scripts/ifcfg-ethx **as follows:**

a. Type the following command:

For example:

```
# vi /etc/sysconfig/network-scripts/ifcfg-eth0
```

b. Add the previously recorded MAC address.

HWADDR=$XX:XX:XX:XX:XX:XX$

For example, **HWADDR=00:09:3D:00:23:8D**

4. Save the file to make the modifications permanent.

Error Message Displayed in /var/log/messages (6514173, 6624282)

The following error message might display several times in /var/log/messages:

```
drivers/sub/input/hid-core.c: input irq status -71
```

The following message might also display in /var/log/messages after updating to the mptlinux-4.00.13.00-1 driver:

```
usr/src/packages/BUILD/mptlinux-4.00.13.00/drivers/message/
fusion/mptctl.c::mptctl_ioctl() @636 - ioc1 not found!
```

These messages can be safely ignored.

Bootup Warning Message (6518362)

When the Sun Blade X6220 server module boots, the following message might appear on the screen.

```
Freeing initrd memory: 2470k freed not found
```

Workaround

This message can be safely ignored.

RHEL4 U4 Inaccessible Via the Service Processor (6492134)

RHEL4 U4 might not be accessible via the service processor (SP). This will happen when the ILOM service processor does not display serial output from Linux OS.

Workaround

You can avoid this issue by ensuring that the following conditions are met:

- `grub.conf` is configured without using the `serial` command.
- The splash graphical banner is not enabled when the serial console is in use.

`OFED1.1` Driver Does Not Compile on RHEL4 U4 and SLES 10 Operating Systems (6553612, 6529180, 6528151, 6528155)

The `OFED1.1` Infiniband driver will not compile on RHEL4 U4 and SLES10 operating systems. Therefore the Infiniband PEM (`X1288A-Z`) is not supported when using these operating systems. You might receive the following error messages when trying to compile the Infiniband driver:

```
ERROR: Failed to execute: make -C /lib/modules/2.6.16.21-0.8-
smp/build SUBDIRS=/var/tmp/IBGD//tmp/openib/infiniband
CONFIG_INFINIBAND=m CONFIG_INFINIBAND_MELLANOX_HCA=m
CONFIG_INFINIBAND_IPOIB=m CONFIG_INFINIBAND_USER_CM=n
CONFIG_INFINIBAND_SDP=n CONFIG_INFINIBAND_DAPL=n
CONFIG_INFINIBAND_DAPL_SRV=n CONFIG_DAT=n
CONFIG_INFINIBAND_KDAPL=n CONFIG_INFINIBAND_KDAPLTEST=n
CONFIG_INFINIBAND_SRP=n CONFIG_INFINIBAND_SRP_TARGET=n
KERNELRELEASE=2.6.16.21-0.8-smp EXTRAVERSION=.21-0.8-smp V=1
modules
See /var/tmp/IBGD//tmp/openib/build_kernel_modules.log for more
details
```

Warning Message During RHEL4 U5 Bootup (6603550)

When booting a server module running RHEL4 U5, the following error message might appear a few times:

```
Uhhuh. NMI received for unknown reason 2c.
Dazed and confused, but trying to continue
Do you have a strange power saving mode enabled?
```

This message can be safely ignored.

Windows Issues

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

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" on page 5.

Cannot Restore Video When Booted Without Dongle/VGA Cable (6534613)

If Windows 2003 Server is booted with the dongle unplugged, or the dongle plugged in but the VGA cable unplugged, video can only be restored by rebooting Windows. Windows requires that both the dongle and the VGA monitor cable both be plugged in before booting Windows.

Workaround

Before booting Windows, make sure the dongle and the VGA monitor cable are connected to the server module (blade).

VMware Issues

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

VMware ESX 3.0.1 Does not Support Ethernet Ports (6521550)

VMware ESX 3.0.1 does not support the onboard Ethernet interfaces. A device driver for the on board interfaces is not available. To use or install ESX, you must install the supported PCI ExpressModule for network interfaces.

Workaround

You must install the supported PCI ExpressModule for network interfaces to use or install ESX.

VMware ESX 3.0.1 Reverses Network Interface Numbers (6521559)

VMware ESX 3.0.1 numbers network interfaces differently than other operating systems. When a network PCI ExpressModule is installed, the system specifies interface 1 as `vmnic0` and interface 0 as `vmnic1`.

For ESX to operate correctly, the system console must have network connectivity. By default, ESX assigns `vmnic0` to the system console.

Workaround

You should ensure that network interface 1 is the top network interface, and that it is connected and operational.

BIOS Issues

This chapter describes BIOS issues. It includes the following issues:

Hard Disk Drive String Disappears When `Ctrl-C` is Pressed (6483593)

Pressing Ctrl-c during the system bootup causes the LSI option ROM to stop scanning its disks. If only F2 is pressed, system boots to the setup and shows the hard disks present in the system properly under the Boot screen in BIOS setup.

Workaround

You can avoid this issue by choosing one of the following options:

- Press F2 to request BIOS setup.
- Press Ctrl-c to request LSI Configuration but not both at POST.

Service Processor Issues

This chapter describes the Sun Integrated Lights Out Manager (ILOM) Service Processor (SP) issues. It includes the following issues:

- "Issues Specific to ILOM Version 2.0.3.1 (Software 1.1 Release)" on page 44
- "Additional Service Processor Issues" on page 49

Note – If you install the Sun Blade X6220 server into a chassis that is running ILOM version 2.0.*x*, you must upgrade the Sun Blade X6220 server module to the latest ILOM 2.0.*x* version in order for the server module to function properly in the chassis.

Issues Specific to ILOM Version 3.0.3.34 (Software 3.0 Release)

No Sensor Support for `/SYS/VPS` (6819320)

Due to a hardware limitation, there is no sensor to support showing the /SYS/VPS value.

Workaround

Currently, there is no workaround.

Maximum Open Sessions Cause Out Of Memory Problem (6821203)

ILOM 3.0 memory can only support four user sessions. If additional user sessions are created, it might terminate existing sessions. Also, under some conditions, it might crash the BIOS.

Workaround

Do not create more than four sessions to ILOM while upgrading ILOM through the Web interface.

ipmi Flash With KCS Interface Does Not Work When Upgrading from ILOM 2.0.3.10 to 3.0.3.34

Due to an error in the 2.0.3.10 code, do not use the KCS interface when upgrading from 2.0.3.10 to 3.0.3.34.

Workaround

Currently, there is no workaround.

Issues Specific to ILOM Version 2.0.3.1 (Software 1.1 Release)

Fix for ILOM 2.0.3.1

Software 1.1 for the Sun Blade X6220 server module contains a build of ILOM 2.0.3.1 with a serious bug. Upgrading to this ILOM version causes FRU data to be lost. Because of this, Software 1.1 has been withdrawn and replaced by Software 1.1a.

ILOM Configuration Corruption (6626767)

The ILOM service processor (SP) provides a persistent SP configuration, which is stored in the internal file system. There are circumstances during which the internal copy of the configuration can be corrupted, making it impossible for an administrator to log in and correct the configuration. These circumstances may include flash upgrade interruption or power interruption.

Use the `preferred` variable in U-boot to recover from this situation:

1. **To enter the SP U-boot environment, type `xyzzy` when the Booting Linux prompt is displayed on the serial management port:**

   ```
   Booting linux in 2 seconds...

   xyzzy
   ```

2. **Modify the preferred variable to `0` or `1`, if present, and boot using the `bootpkg` command:**

   printenv

   setenv preferred 0

   bootpkg

3. **Perform another flash upgrade of the ILOM SP without preserving the configuration.**

Control MIB Documentation (6555038)

The ILOM Control MIB is not documented in the *ILOM 1.1 Administration Guide*. It is discussed only briefly in the *Sun Integrated Lights Out Manager 2.0 User's Guide*.

Workaround

A more detailed description of the ILOM Control MIB is included in the *ILOM User's Guide* that will accompany the ILOM 3.0 firmware release. This additional Control MIB information will include:

"The Sun Control MIB provides objects for configuring and managing all Sun Integrated Lights Out Management functions. Configuration covered by this MIB includes functions such as authorization, authentication, logging, services, networking, and firmware management."

Certain Keys and Key Combinations Are Unsupported on International Keyboards (6637412)

When accessing the ILOM Remote Console application (Java Remote Console) using an international keyboard (non-English), certain international keyboard keys and key combinations do not operate correctly. In addition, this issue applies to some international keys that represent more than one character (for example, Shift and AltGraph). This issue pertains to the following locales and international keyboards:

- German
  - Locale: de_DE
  - Keyboard: de
- French
  - Locale: fr_FR
  - Keyboard: fr
- Spanish
  - Locale: es_ES
  - Keyboard: es
- Portuguese
  - Locale: pt_PT
  - Keyboard: pt
- Italian
  - Locale: it_IT
  - Keyboard: it
- Turkey
  - Locale: tr_TR
  - Keyboard: tr
- Estonian
  - Locale: et_EE
  - Keyboard: ee

Workaround

There is currently no ideal workaround as this issue is a language-dependent problem that results from a deficit in the Java software used by Java Remote Console. Sun Field Service personnel should monitor CR 6253172 for information that relates to workarounds for specific locales and international keyboards.

ipmiflash Is Extremely Slow Using the `open` and `bmc` Interfaces (6597289)

When ipmiflash is used with the `open` interface (Linux) or the `bmc` interface (Solaris) data transfer is extremely slow.

Workaround

Use the lanplus interface wherever possible. For example, suppose you are using the following Linux command:

`ipmiflash -I open write` *imagefile*

Or the following Solaris command:

`ipmiflash -I bmc write` *imagefile*

These should both be changed to:

`ipmiflash -I lanplus -H` *ipaddress imagefile*

Where *ipaddress* is the service processor IP address, and *imagefile* is the image file being flashed.

Locating Uncorrectable and Correctable DIMM Errors (6613126)

To locate the uncorrectable error (UE) DIMM, do the following:

1. **Remove the server module from the chassis, and open the server module cover.**

2. **Press the DIMM error LED button to locate the pair of UE DIMMs.**

   Refer to the *Sun Blade X6220 Server Module Service Manual* for the location of this button.

3. **Replace both DIMMs in the pair.**

To locate the correctable error (CE) DIMM, do the following:

1. **Log on to the SP with sunservice account.**

2. **Run the following command to locate the CE system event log (SEL) message:**
   `ipmitool -H localhost -U root -P changeme sel elist | grep ECC`

3. **Look for a message such as:**

```
800 | 10/15/2007 | 13:55:45 | Memory | Correctable ECC |
Asserted | CPU 1 DIMM 6
```

Unable to Copy Any File From the Redirected CD-ROM External USB Hard Drive (6611170)

ILOM service processor provides virtual USB CD-ROM media for server OS installation.

The SLES10 SP1 operating system might have problems accessing files on the virtual USB CD-ROM media.

Workaround

The workaround is to use another method to access files on CD-ROMs, such as the `linux mount -o loop` capability to mount CD-ROM images directly, for example:

mount *isoimage.iso* **/mnt -o loop**

ILOM Service Processor Might Become Partially Unresponsive After Long Periods of Operation (6590804)

Some functionality of the service processor might not be accessible after it has been operating for long periods of time, such as a couple of weeks. The IPMI interfaces are usually the most resilient, and will respond.

Workaround

The workaround is to reset the ILOM service processor. For example:

ipmitool -U root -P changeme -H *sp_ipaddress* **bmc reset cold**

In rare circumstances, the sunservice Linux account must be used to reboot the service processor. For example:

ssh -l sunservice *sp_ipaddress* **reboot**

password: *root_password*

CMM Remote Console Cannot Detect Changed Server Module IP Address (6581709)

If you change the network address of a server module, the CMM Remote Console might not detect the change.

Workaround

ILOM CMM Remote Console must be relaunched after changes to the network addresses of blade SPs.

Serial Baud Setting of 19200 Causes Console to Display Garbage Characters (6574078)

If the ILOM service processor is set to the 19200 baud rate, garbage characters might display with start SP console.

Workaround

Use 9600 baud, or 115200, if problems occur.

Additional Service Processor Issues

ipmiflash With KCS/Open Cannot Be Used to Flash the SP (6749838)

Use an alternative method to flash the Sun Blade X6220 server module SP.

Information on updating the SP firmware can be found in the *Sun Integrated Lights Out Manager 2.0 User's Guide* and *Sun Blade X6220 Server Release Notes*.

ILOM Upgrade Must Be Done Twice (6700197)

A fix of CR6673674 modifies u-boot. If you upgrade the SP from a version before 2.0.3.2 to 2.0.3.2 or later, you must upgrade the SP twice to ensure that u-boot is upgraded.

See "Resetting SP Without Rebooting OS Disables Console (6673674)" on page 60 for more information.

ILOM SP Lockup (6471005, 6535963)

The ILOM service processor (SP) might in rare circumstances stop responding on the serial management port. If the ILOM SP or one of the user interfaces become unresponsive, reset and restart the SP using one of the following methods:

Workaround

- From the CMM, using `ssh` or a serial management port session, enter the following command:

```
reset /CH/BLN/SP
```

- From the service processor, using `ssh` or a serial management port session, enter the following command:

```
reset /SP
```

- From a remote IPMI session, enter the following command:

```
ipmitool -U root -P changeme -H <spipaddress> bmc reset cold
```

- From the service processor Web interface, select **Maintenance tab**, then click **Reset SP**.
- To power cycle the entire server module, you should partially remove and reinsert the server module.

- To power cycle all server modules using the CMM, you should enter the
  following commands:

```
stop /CH
start /CH
```

⚠ **Caution –** Power cycling all server modules using the CMM commands will shut
off power from all server modules.

/CH fault_state clear_fault Action Must be Correctly Updated (6488637)

The fault_state/clear_fault properties actions are not operational on the
ILOM.

Workaround

To monitor faults and Chassis Monitoring Module (CMM) status, view the existing
IPMI, SDR, and sensor indicators.

Green Power OK LED Does Not Illuminate Until SP Boots (6523507, 6464862)

The green power OK LED does not illuminate until the SP boots.

This fix is planned for a future release.

/SYS/HDDx/STATE Displays Not Present (6519952)

The ILOM service processor CLI does not display correct hard drive (HDD) STATE
information. The Sun Blade X6220 server module does not have hard drive sensors,
this causes the Not Present instead of N/A state information to display in the CLI.

You can safely ignore this message.

Workaround

Do not use the IPMI protocol command to warm reset the BMC (Baseboard Management Controller).

`show -l all` Command Returns Partial Results (6527725)

The **show all** command returns partial results when two show all commands are run simultaneously.

Workaround

To avoid this issue, do not execute two **show -l all** commands simultaneously.

CMM Does Not Change or Detect Sun Blade T6300 Server Module SP (6531753, 6529037)

The CMM might not allow you to change or detect the Sun Blade T6300 server module IP address. To change the IP address, connect to the server module service processor, then use the server module service processor ILOM interfaces to update and display the IP address.

There are several methods available to access the blade ILOM, use one of the following workarounds:

Workaround

- From the blade server, use the IPMI KCS interface.
- From a network host, use the IPMI protocol and management network.
- From the ILOM CLI, use ssh and the management network.
- From the CMM ILOM CLI, use the following start command:

```
start /CH/BLN/SP/cli
```

IPMItool SEL Log Displays Predictive Failure Messages for Drive Slots (6483600, 6646035)

When running a Linux operating system, the IPMItool SEL Log might display predictive failure messages. If this happens, you might see the following messages:

```
ipmitool -H <spip> -U <username> -P <password> sensor sel list | grep
Drive

2a00 | 01/26/2007 | 14:22:19 | Drive Slot #0x25 | Predictive
Failure Asserted
2b00 | 01/26/2007 | 14:22:20 | Drive Slot #0x24 | Predictive
Failure Asserted
2c00 | 01/26/2007 | 14:22:21 | Drive Slot #0x23 | Predictive
Failure Asserted
2d00 | 01/26/2007 | 14:22:22 | Drive Slot #0x22 | Predictive
Failure Asserted
```

You can safely ignore these messages. This will be fixed in a further release.

CLI Does Not Display Updated Sensor Threshold Information (6512503)

The CLI does not display newly generated sensor threshold information correctly.

Workaround

To view the updated sensor threshold information, use the following IPMItool command:

```
ipmitool -H <spip> -U <username> -P <password> sensor
```

Fixed Issues

This chapter contains issues that have been fixed for the Sun Blade X6220 server module. This chapter covers the following topics:

-
-

General Fixed Issues

LSI RAID Requires 1.6 GB Disk Space (6535552)

In order to create a RAID volume by migrating data from the primary disk to the secondary disk, you must preserve at least 1.6GB of disk space as metadata space for LSI RAID.

This issue was fixed with LSI BIOS Phase 10 release.

Unable to Establish Connections After Multiple TCP/UDP Connections (6425708)

After running hundreds of `sync_netperf` TCP/UDP connections, the `nge` interface is not available.

Workaround

To avoid this issue, perform the following steps:

1. **Open the** `/etc/system` **file using a text editor.**

2. **Add the following line to the end of the** `system` **file.**

   `set ip:dohwcksum=0`

3. **Reboot the system.**

This issue was fixed with Solaris 10 8/07.

`raidctl` Utility Reports `RAID-1E` Volumes as `IS` Rather Than `IME` (6508590)

When using the `raidctl` utility with a Solaris 10 11/06 operating system, `RAID-1E` volumes might be reported as volume type `IS` instead of `IME`.

This issue was fixed with Solaris 10 8/07.

Service Manual Does Not Have a Complete Description of HDD LED Activity Status (6686568)

The Sun Blade X6220 Server Module Service Manual, 820-0046-10, currently states:

The hard disk drives have three LEDs. The order listed below is when the server module is installed in the chassis:

- Right LED (green): Fast blink means normal disk activity, slow blink means RAID activity, and off means power is off or no disk activity.
- Middle LED (amber): System has detected a hard disk fault. This LED is controlled by the service processor.
- Top LED (blue): This LED is not used.

The correct behavior for all HDD activity LEDs is as follows:

- Power ON (HDD is operational but not active) = green steady on
- Drive actively reading/writing = green on but flickering OFF commensurate with activity
- Drive building a RAID array (or any other normal transitory activity) = green slow blink (1 Hz @ 50% duty cycle)

- Power off = no light

This section, External Status LEDs, of the *Sun Blade X6220 Server Module Service Manual*, 820-0046 has been corrected.

Issues Fixed in Software Releases

This section covers the following topics:

Issues Fixed in Software Release 3.0

None reported.

Issues Fixed in Software Release 2.0

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

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 reseat 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 reseat all DIMMs on the module.

AMD Erratum 131 Warning Message During Solaris Startup (6447850)

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 Sun Blade X6220 server module BIOS implements a superset workaround that includes the workaround required for Erratum 131. This warning message can be safely ignored.

Note – This issue was resolved in Solaris 10 5/08.

Issues Fixed in Software Release 1.2

ILOM CMM Service Processor Does Not Gracefully Shut Down Server Modules (6591428)

If you use the `stop /CH` command to shut down the chassis CMM, the server modules will shut down immediately.

Workaround

Connect to each server module LOM and to gracefully shut it down. Then shut down the chassis.

Removing a Server Module Might Interrupt a Firmware Upgrade (6527687)

When you power down a server module in preparation for removal from the chassis, the blue ready-to-remove light is illuminated. However, It is possible that a firmware upgrade could be in process, even after the blue light goes on.

Workaround

Check with your system administrator before removing the server module to make sure there is no firmware upgrade in process.

Resetting SP Without Rebooting OS Disables Console (6673674)

If you reset the service processor without rebooting the operating system, you are unable to open a system console with the command start **/SP/console**.

Disk Fault LEDs All Light During Boot, But System Operating Normally (6652390)

When the system boots up, all four disk fault LEDs are on amber, even though the system OS is booting and operating normally.

Issues Fixed in Software Release 1.1

The following issue is fixed in the phase 10 release of the LSI firmware.

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

The `clients/syslog` destination ip1 or ip2 cannot be set with a standalone zero (0) in the IP address. For example, `10.10.10.10` and `100.100.100.100` works. `19.52.0.17` does not work.

There is no workaround.

Unable to Set Some Valid IP Addresses to `ntp` Server in CLI (CR 6543859)

Some `ntp` IP address will be considered invalid when set in the CLI.

Workaround

Use the WebGUI to set `ntp` IP addresses.

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

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

Workaround

Close the current CLI session and open a new session.

CLI Processor Might Have Issues Setting Multiple Properties Simultaneously (CR 6544145)

The ILOM CLI might have issues setting multiple properties simultaneously.

Workaround

You must set properties individually. For example, to set `ipaddress` to
`10.8.168.64`:

```
set /SP/clients/ldap ipaddress=10.8.168.64
```

Fan Thresholds Not Read by the CMM and Blades (6513836)

The ILOM service processor only reports information about thresholds that are used
or controlled by the service processor. Therefore, fan and power supply threshold
values cannot be read by the CMM and blades.

This fix is planned for a future release.

RAID-1 System Fails to Boot Solaris if Primary Disk on `Slot 0` is Removed (6534659)

When a Raid 1 system with a hotspare is created, the system might fail to boot the
Solaris OS and will keep attempting to reboot after the primary disk on `slot 0` is
removed.

Workaround

Leave the primary disk in `slot 1`, then move the secondary disk from `slot 2` to
`slot 0`.

Issues Fixed in Software Release 1.0.2

The following issue is fixed with the software 1.0.2 update. In addition, all issues that are listed in will also be resolved if you update from software release 1.0 to software release 1.0.2.

PowerNow Feature Must Be Disabled for Linux and Windows Operating Systems (6567159)

To avoid system reboots due to memory errors for server modules running Linux or Windows operating systems, you will need to disable the AMD PowerNow feature. This issue affects BIOS 0ABJT025 and is fixed in BIOS 0ABJT026 included in software release 1.0.2.

Workaround

There are two options that you can use to disable PowerNow: Either disable PowerNow in the operating system or disable PowerNow in the BIOS.

To disable PowerNow in the BIOS:

1. **Boot or reboot the server.**

2. **Press F2 to enter the BIOS Setup Utility.**

3. **Click on the Advanced menu.**

4. **Click on the CPU Configuration option.**

5. **Change the ACPI 2.0 Objects setting to Disabled.**

6. **Press F10 to save the changes and exit.**

Issues fixed in Software Release 1.0.1

This chapter describes the issues that have been fixed in the ILOM 1.1.8 version of the Sun Blade X6220 server module software 1.0.1 release.

CMM Power LED Does Not Power On Until SP Has Booted (6474460)

The CMM front panel power LED does not power on as soon as 3.3V_AUX is available because the ILOM service processor could take up to two minutes to boot after a blade is inserted.

Workaround

The service processor must boot before LEDs are switched on. Please wait until ILOM has booted before checking front panel power LEDs.

ILOM SP Might Fail During BIOS Flash Upgrade (6512861)

The ILOM service processor might fail during the BIOS flash upgrade. If this should occur, power on the server, then retry the ILOM flash upgrade.

ILOM1.1.1 Java Console Cannot Be Loaded (6494290)

The service processor hangs and the JavaConsole cannot be loaded when a browser is used to start the service processor WebGUI. When the using the following selections: **Remote Control**-> **Redirection**, press **Launch Redirection**, the following screen prompt appears before the service processor hangs:

```
Analyzing configuration
```

Workaround

To avoid this issue, use one of the following workarounds:

- Use another client/browser.
- Clear all cookies, then restart the browser.
- Reduce security on the client.

This fix is planned for a future release.

CLI WebGUI Does Not Show Fan Fault State (6496334)

The CLI WebGUI does not show the fan fault state. This fix is planned for a future release.

Workaround

You can inspect the fan fault state through `/CH/FMx/FAIL`.

`/sys/ok2rm` and `/sys/service` Indicators Will Not Activate (6517403)

The ILOM service processor cannot set the LEDs on when using the WebGUI. When in the WebGUI, and the `/sys/ok2rm` and `/sys/service` sensors are turned off, there is no way to turn them on. When these two sensors are turned on using CLI, and not using the WebGUI, the sensors can be turned off.

Workaround

To control the LEDs, use the IPMI or ILOM CLI to turn `/sys/ok2rm` and `sys/service` indicators on and off.

`/CH/BLn/SP/cli` Not Usable When Chassis Power is Off (6520950)

The **`/CH/BLn/SP/cli`** command is not usable when the chassis power is off. This fix is planned for a future release.

Workaround

To avoid this issue, turn the chassis power on.

WebGUI Shows PSU `VINOK` and `PWROK` Sensors as Fault LEDs (6525125)

The ILOM WebGUI displays power supply unit (PSU) `VINOK` and `PWROK` sensor information as fault LEDs.

Workaround

You can safely ignore this PSU information.

BMC Warm Reset Terminates `IPMIstack` (6539641)

When the IPMI command is used to perform a warm reset of the BMC (Baseboard Management Controller), the `CLI` user might get logged out, or the following error message might be displayed:

```
Read error on /dev/mtd0: Cannot allocate memory
```

Workaround

Do not use the IPMI protocol command to warm reset the BMC (Baseboard Management Controller).

Single Sign-on for JavaRConsole is Not Working (6525714)

The single sign-on feature for the JavaConsole is not working.

Workaround

To avoid this issue, you can log in to JavaRConsole using the same login and password as the web browser.

Message `Could not create directory /home/0/.ssh` Displays When Starting the CLI (6520952)

The following message might display when running a Linux operating system and starting the blade CLI.

```
Could not create directory /home/0/.ssh
```

Workaround

You can safely ignore this message.

SEL List Displays Periodic Critical IPMI Events (6533044)

The SEL list periodically reports critical IPMI events about the system devices even though the system and SDR log reports that the system is okay.

For example, you might see the following messages about devices and sensors (bl8.prsnt, bl6.prsnt, ps0.vinok0, ps1.prsnt, and ps1.vinok).

```
43     Fri Mar  9 17:37:51 2007   IPMI      Log        critical
       ID =   29 : 03/09/2007 : 17:37:51 : Entity Presence :
bl8.prsnt : Device Absent
33     Fri Mar  9 15:57:52 2007   IPMI      Log        critical
       ID =   1f : 03/09/2007 : 15:57:52 : Entity Presence :
bl6.prsnt : Device Absent
35     Fri Mar 9 16:38:01 2007   IPMI      Log        critical
     ID =   21 : 03/09/2007 : 16:38:01 : Power Supply : ps1.vinok1:
State Asserted
38     Fri Mar  9 16:57:37 2007   IPMI      Log        critical
       ID =   24 : 03/09/2007 : 16:57:37 : Entity Presence :
ps1.prsnt : Device Absent
```

You can safely ignore these messages.

ILOM 1.1 SP Flash Upgrade Failure (6544059)

When using ILOM 1.1 or higher and you attempt to flash upgrade the service processor, you might receive a partial flash failure.

Workaround

Reset the service processor and reattempt the flash upgrade. You should ensure that you are using the correct pathname.

Documentation Issues

This chapter describes issues related to the Sun Blade X6220 server module documentation.

Fixed Documentation Issues

Service Manual Does Not Have a Complete Description of HDD LED Activity Status (6686568)

The following information has been added to the *Sun BladeX6220 Server Module Service Manual.*

The correct behavior for all HDD activity LEDs is as follows:

- Power ON (HDD is operational but not active) = green steady on
- Drive actively reading/writing = green on but flickering OFF commensurate with activity
- Drive building a RAID array (or any other normal transitory activity) = green slow blink (1 Hz @ 50% duty cycle)
- Power off = no light

This section, External Status LEDs, of the *Sun Blade X6220 Server Module Service Manual* 820-0046 has been corrected.

References to Integrated Lights Out Manager (ILOM) Documentation

You will need to refer to specific documentation for the ILOM, depending on which ILOM version you are using.

TABLE 1 ILOM Documentation

ILOM Version	Reference Documents
1.1.x	• *Integrated Lights Out Manager (ILOM) Administration Guide for ILOM 1.1.1* • *Integrated Lights Out Manager (ILOM) Supplement for Sun Blade X6220 Server Module*
2.0.*x*	*Sun Integrated Lights Out Manager 2.0 User's Guide*
3.0	• *Sun Integrated Lights Out Manager 3.0 User's Guide* • *Integrated Lights Out Manager 3.0 (ILOM) Supplement for Sun Blade X6220 Server Module*

The listed documents are posted on the product documentation site at:

http://docs.sun.com/app/docs/prod/blade.x6220