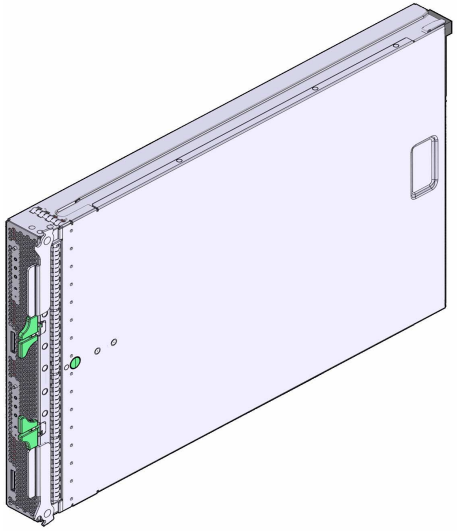
Sun Blade X6275 Server Module

Product Notes



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Preface

The *Sun Blade X6275 Server Module Product Notes* contains late-breaking information about the Oracle Sun Blade X6275 server module.

Related Documents

To see a list of the Sun Blade™ X6275 server module documentation, refer to the *Getting Started Guide* that is packed with your system and also posted at the product's documentation site.

Translated versions of some of these documents are available at the web product documentation page in Simplified Chinese, French, and Japanese. English documentation is revised more frequently and might be more up-to-date than the translated documentation. See TABLE P-1 for more information.

Oracle Online

TABLE P-1 Sun Blade X6275 Server Module Online Pages

Page	URL	Description
Sun Blade X6275 product page	http://www.oracle.com/us/products/servers-storage/servers/previous-products/index.html	Describes the product and provides links to downloads, OS support, and so on.
Sun Blade X6275 product documentation	http://download.oracle.com/docs/cd/E19464-01/index.html	Navigate to the Sun Blade X6275 server module document page and then download PDF and view HTML documents.
Support	http://support.oracle.com	Obtain technical support and download patches.
Training	http://education.oracle.com	Learn about Oracle courses.
Warranty	http://www.oracle.com/support/collateral/oracle-hardware-warranty.pdf	Obtain specific details regarding your warranty.
General Oracle Softwarre Product Updates	http://www.oracle.com/technology/software/sun_az_index.html	Click the product name in the list to get downloads and other information.

CHAPTER 1

System Software Release Features

This chapter contains the following sections describing the system software release features for the Sun Blade X6275 server module:

- "Hardware Configurations" on page 1
- "Firmware Versions" on page 2
- "Supported Operating Systems" on page 3
- "Additional Software" on page 3
- "Optional Software" on page 4
- "Supported Modular System Chassis" on page 4
- "Power Management Support in ILOM" on page 5

Hardware Configurations

These are the supported versions of the Sun Blade X6275 server module:

- Sun Blade X6275 IB server module installed into a Sun Blade 6048 modular system chassis with InfiniBand QDR Switched Network Express Module (Q Nem)
- Sun Blade X6275 1GbE server module with integrated GbE support installed into a Sun Blade 6000 or Sun Blade 6048 modular system chassis

Firmware Versions

The following table lists the released versions of the server module firmware.

TABLE 1-1 Sun Blade X6275 Server Module Released Firmware Versions

Software Release	ILOM Firmware	System BIOS	CPLD	IB Firmware*	FMOD Firmware	Minimum CMM Firmware Required
2.8	3.0.10.10.d (r79845)	10.02.12.00	17	2.7.8100_2.9	D20R	3.0.10.15
2.7	3.0.10.10.c (r67705)	10.02.10.00	17	2.7.8100_2.9	D20R	3.0.10.15
2.6	3.0.10.10 (r61375)	10.02.09.00	17	2.7.8100_2.9	D20R	3.0.10.15
2.5	3.0.10.10 (r59586)	10.02.07.00	17	2.7.8100_2.9	D20R	3.0.10.15
2.4	3.0.10.10 (r57417)	10.02.04.00	17	2.7.000-2.5	D20R	3.0.10.15
2.3	3.0.8.10 (r53304)	10.01.41.00	17	2.7.000-2.5	D20R	3.0.6.11b
2.2	3.0.8.10 (r50660)	10.01.40.00	17	2.7.000	D20R	3.0.6.11b
2.1	3.0.8.10 (r48988)	10.01.39.00	17	2.6.200	49M	3.0.6.11b
2.0	3.0.4.10 (r47119)	10.01.32.00	14	2.6.200	49M	3.0.6.11
1.1	2.0.3.17 (r45307)	10.01.28.00	14	2.6.0	49M	2.0.3.13
1.0	2.0.3.13 (r42414)	10.01.24.00	14	2.6.0	49M	2.0.3.13

Note – *The IB firmware consists of three components: a `.mlx` raw firmware file, a `.ini` configuration file specific to X6275 and a `.rom` file.

Note – The latest firmware updates for the Sun Blade X6275 server module are available from the product page, listed in "Oracle Online" on page x.

Supported Operating Systems

The following operating systems are supported on the Sun Blade X6275 server module using the latest software release:

- Oracle Solaris 10 5/09 (with patch 141782-02)
- Oracle Solaris 10 10/09
- Oracle Solaris 10 09/10 -- support for 1GbE models only
- Oracle Linux 4.8 (64-bit)
- Oracle Linux 5.3 (64-bit)
- Oracle Linux 5.4 (64-bit)
- Oracle Linux 5.5 (64-bit)
- Red Hat Enterprise Linux (RHEL) 4.8 (64-bit)
- Red Hat Enterprise Linux (RHEL) 5.3 (64-bit)
- Red Hat Enterprise Linux (RHEL) 5.4 (64-bit)
- Red Hat Enterprise Linux (RHEL) 5.5 (64-bit)
- SUSE Linux Enterprise Server (SLES) 10 SP2 (64-bit)
- SUSE Linux Enterprise Server (SLES) 10 SP3 (64-bit)
- SUSE Linux Enterprise Server (SLES) 11 (64-bit)
- SUSE Linux Enterprise Server (SLES) 11 SP1 (64-bit)
- CentOS 5.3 (64-bit)
- Microsoft Windows Server 2008 (64-bit) -- support for this operating system beginning with server module software release 1.1

Note – For Oracle Linux, see `http://www.oracle.com/us/technologies/linux/index.html` for support and download information.

Additional Software

The following additional software is available for your server and can be downloaded from the Oracle web site:

- Tools and Drivers CD/DVD (available on the web as an ISO image). Contains all required software for the server, including:

- Server-specific drivers for all supported operating systems.
- Server-specific firmware (BIOS/ILOM, FMod, Mellanox ConnectX 10G HCA).
- IPMItool, a simple command-line interface that is useful for managing IPMI-enabled devices. Available as a supplement to ILOM.
- SNMP mibs, for use with management software that supports SNMP.
- PC-Check (version 6.27s), a system diagnostics utility available through ILOM Remote Control Diagnostics, or run separately.

- Oracle Validation Test Suite (also known as "SunVTS") Bootable Diagnostic, version 7.0ps8

Optional Software

Optional software is available for your server. Some of it might be preinstalled, downloaded, or purchased as an option (Oracle Solaris, Oracle Java Enterprise System, SunVTS, Oracle Enterprise Manager Ops Center). There are also optional software tools available on the Tools and Drivers CD/DVD for your server.

Supported Modular System Chassis

The Sun Blade X6275 server module is supported for use in a Sun Blade 6000/6048 Modular System chassis. Additionally, the Chassis Monitoring Module (CMM) for the Sun Blade 6000 and 6048 Modular System chassis must meet the following *minimum* compatibility requirements.

TABLE 1-2 Chassis Monitoring Module Minimum Firmware Version

CMM ILOM Firmware Version	Supported Chassis for X6275	ILOM Firmware Build
2.0.3.13	Sun Blade 6048 Modular System Chassis	r47352
3.0.6.11b	Sun Blade 6000 Modular System Chassis	r48988

For the *required* CMM firmware version for your software release, see "Firmware Versions" on page 2.

Sun Blade 6000 Network Express Modules (NEMs)

There are three Sun Blade 6000 NEMs supported for X6275 1GbE Server Module:

- Gigabit Ethernet (CU) 10-port Pass-Thru Network Express Module (Recommended)
- Sun Blade 6000 Virtualized Multi-Fabric 10GbE Network Express Module
- Sun Blade 6000 Multi-Fabric Network Express Module
- Sun Blade 6000 10GbE Multi-Fabric Network Express Module

Note – The Sun Blade X6275 1GbE server module only leverages the GbE Pass-Thru support provided in the above mentioned NEMs.

Power Management Support in ILOM

The power management capping feature is a capability within the service processor (ILOM) that monitors measurable values, determines whether adjustments are needed in consumed power, then applies power capping methods to achieve the adjustment.

You can adjust the power capping by setting the target power consumption in ILOM where you can monitor:

- IPMI current/voltage sensors to keep track of total system power
- Settings to adjust the desired maximum power level of the system. The Power Management settings are available through IPMI, SNMP, CLI, and the Web interface.

▼ How to Use the Power Budget Feature in ILOM:

1. **Determine the workload that will operate on the server.**
2. **Enable power limiting in ILOM.**
3. **Set the Target Limit property in ILOM that is near (for example, at or slightly above) to the workload's normal operating power consumption.**
4. **Set the capping policy to be either hardcap or softcap.**

5. **Determine the violation actions to be taken when the power limit cannot be achieved within the grace period.**
6. **If power cannot be capped to the value provided in Target Limit, a Violation warning will be seen in ILOM.**

Documentation for the Power Budget Feature

See the *Oracle Integrated Lights Out Manager (ILOM) 3.0 Feature Update and Release Notes*, (820-7329) for detailed information. The Integrated Lights Out Manager (ILOM) 3.0 document collection is available from:

http://download.oracle.com/docs/cd/E19860-01/index.html

Note – For the X6275 server module, the minimum operating system support for power management is: Oracle Solaris 10 10/09, SUSE Linux Enterprise Server 11, Oracle Linux 5.4, and Red Hat Enterprise Linux 5.4.

CHAPTER 2

Hardware, Firmware, and BIOS Notes and Issues

This chapter contains the following sections describing hardware, firmware and BIOS issues that apply to the Sun Blade X6275 server module:

- "Hardware Notes and Issues" on page 7
- "Firmware and BIOS Features and Issues" on page 11

Hardware Notes and Issues

- "FMOD Caution" on page 7
- "Setup and Power-On Recommendations for the Sun Blade 6000 or 6048 System Module Chassis" on page 8
- "PCI Express Module Assignment In the Sun Blade X6048 System Module Chassis" on page 10
- "Memory Reference Code Issue Causes Faulty DIMM to Be Misidentified (6964312)" on page 10
- "Identifying a Node's Onboard Device Versus a Node's PCIe EM (7072665)" on page 11

FMOD Caution

Extra attention must be paid to flash modules when they are inserted or removed with the blades or when powering the chassis on/off. The following rules must be followed.

- After AC power cycling the Sun Blade X6275 Server Module, that is, removing the blade from the chassis or powering off the shelf, you must wait for 20 seconds before reinserting the blade or powering on the shelf. Check to see that the green LED on the motherboard (next to FMOD) is no longer lit. It will take approximately 20 seconds.

Caution – Damage to the flash module can occur if the FMOD is installed (while the green LED is lit) and the flash modules might not be recognized by the host nodes.

- When the X6275 modules are inserted in the chassis for the first time, wait two minutes before pulling it out or powering the shelf down. This is the time required to charge the supercaps. The same action applies when the shelf or blade is powered down for some time. When the blade is inserted never pull it out quickly. Wait for two minutes before removing the blade.
- If the FMOD does become corrupted use the Sun supplied utility to perform a low level format. Once the format is done, you will need to AC power cycle the blade by pulling it out. Wait a minimum of two minutes before plugging the blade back in.

Setup and Power-On Recommendations for the Sun Blade 6000 or 6048 System Module Chassis

The recommended setup and power-on method for the Sun Blade 6000/6048 System Module chassis with X6275 server modules is different depending on whether you are starting with an empty system chassis, or a pre-configured system chassis. Follow the recommended procedure for your installation as described below.

▼ Setup and Power-on Recommendations With an Empty System Chassis

1. **Before installing server blades, make sure that all of the chassis components are installed (power supplies, fans, NEMs, EMs, etc.).**
2. **Connect required I/O cables for the chassis (Ethernet, InfiniBand, etc.).**
3. **Install and fully seat Blade 0.**
4. **Attach all six AC power cables from the system chassis power interface module to a power source.**

   The chassis automatically applies main power to all blades in the chassis after power is provided to the power supplies. Ensure that all power LEDs are lit.

5. **Set up your CMM IP address with a DHCP/Static address.**
6. **Verify the CMM network and check/setup the blade SP network.**
7. **Install other blades with a 30 second interval between each blade insertion.**

   For example, after Blade 0 has been powered, wait 30 seconds. Then install and fully seat Blade 1 and wait 30 seconds for them to power on.

   Then install and fully install Blade 2 and wait 30 seconds for them to power-on. Repeat the process until all blades are installed.
8. **Verify that no fault (amber) LEDs are lit on blade or chassis components (CMM, PSU, blades, etc.).**

If fault LEDs are lit, follow the troubleshooting procedures described in the system *Diagnostics Guide* and refer to the *Product Notes* for any known issues.

▼ Setup and Power-on Recommendations With a Preconfigured System Chassis

1. **Connect required I/O cables for the chassis (Ethernet, InfiniBand, etc.).**
2. **Attach all six AC power cables from the system chassis power interface module to a power source.**

   The chassis automatically applies main power to all modules in the chassis after power is provided to the power supplies. Ensure that all power LEDs are lit.
3. **Wait five minutes for the CMM to boot and then verify/setup the CMM network.**
4. **Login to the CMM CLI, check/setup the blade SP network and verify the MAC address and collect the SP IP address for each node by entering the** `show` **command from the CMM CLI prompt. For example:**

   ```
   -> show /CH/BL0/SP/network
   ```

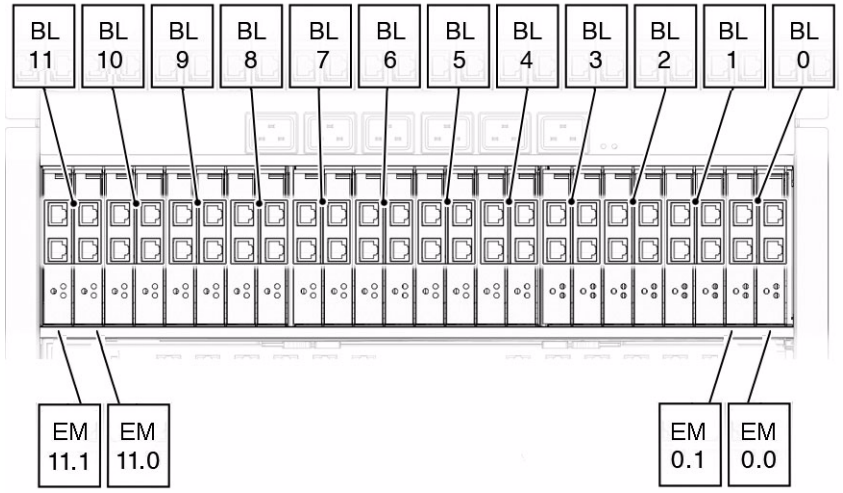
   For any node that does not display network information, reseat the blade, wait 5 minutes, and recheck the SP network information.
5. **Verify that no fault (amber) LEDs are lit on blade or chassis components (CMM, PSU, blades, etc.), and that the blades are showing normal operation:**
   - If fault LEDs are lit, follow the troubleshooting procedures described in the system *Diagnostics Guide* and refer to the corresponding *Product Notes* for any known issues.
   - If the green OK LED is blinking or not on for a blade server, press the power button for the blade to see if it will power on. The power-on sequence can take one to two minutes. Alternatively, you can log into each node's ILOM CLI and start the host by entering the command from the CLI prompt:

```
-> start /SYS
```

For any host that does not boot, reseat the blade.

PCI Express Module Assignment In the Sun Blade X6048 System Module Chassis

In the Sun Blade 6048 System Module chassis, there are two PCI EM slots assigned to each blade slot. The slots are numbered PCI EM 0.0 to 11.1 right to left as viewed from the rear of the chassis and assigned to blade slots as shown below:



When the Sun Blade X6275 server module is installed in a blade slot, its two PCI EM slots are assigned as follows:

- PCI EM *x*.0 is assigned to blade Node1
- PCI EM *x*.1 is assigned to blade Node0

Where *x* represents the slot number in which the blade is installed.

Memory Reference Code Issue Causes Faulty DIMM to Be Misidentified (6964312)

Due to an issue with the Memory Reference Code (MRC), if a DIMM fails, the system might flag the wrong DIMM as the failing DIMM. This misidentification can happen to DIMMs that reside on the same channel as the faulty DIMM.

Workaround: If the system error log or FMA utilities show multiple DIMM failures in the same channel, do the following:

1. **Remove both of the DIMMs flagged as failing from the system.**

   Refer to the Service Manual for more information on removing DIMMs.

2. **Install one of the DIMMs in an alternate channel (that has shown no errors).**

   Each processor has three memory channels with two slots per channel (for example, D0/D1 is a channel, D2/D3 is a channel, and D4/D5 is a channel).

3. **Reboot the system and look for DIMM errors.**

4. **If DIMM failures now occur on the alternate channel, the DIMM you installed is faulty and must be relpaced.**

5. **If there are no errors on the alternate channel, the DIMM you installed is good and the other DIMM is faulty and must be replaced.**

Identifying a Node's Onboard Device Versus a Node's PCIe EM (7072665)

If you have a Sun Blade X6275 server module with onboard InfiniBand that has, for example, a network issue, it might be difficult to identify a faulty device if you have other similar devices on the node's pci bus.

When using a unix-based tool such as `lspci` at the host to find connected PCI devices, output can be interpreted as follows:

- `02:00.0` refers to the host node's onboard Mellanox IB ConnectX controller.
- `08:00.0` refers to the host node's PCIe EM (which might also use Mellanox IB ConnectX technology).

Firmware and BIOS Features and Issues

The following firmware and BIOS features and issues apply to the Sun Blade X6275 server module.

- "BIOS Options to Enable/Disable Any Available USB Ports (6880508)" on page 12
- "Intel SMM Security Issue (6857157)" on page 12
- "Sun StorageTek Dual 4 Gb Fibre Channel Dual GbE ExpressModule Host Bus Adapter (Emulex SG-XPCIE2FCGBE-E-Z) is Sometimes Not Visible in BIOS" on page 12

- "Flash Modules Not Found After Power Cycle (6798255)" on page 13
- "(Fixed) System Unable to Boot from Fibre Channel Express Modules (6804868)" on page 13
- "(Fixed) BIOS Does Not Execute `Set SEL time` Command During POST (6879630)" on page 13
- "CPU and DIMM FRU Data Can Be Lost After SP Firmware Upgrade (6913602)" on page 14
- "Updating Firmware That Includes New CPLD Version" on page 14
- "PCIe Link Speed Reduced With BIOS 10.2.6.0 (6994690)" on page 14

BIOS Options to Enable/Disable Any Available USB Ports (6880508)

There are extra options available in the BIOS Set Up Menu to Enable/Disable any available USB Ports.

Note – This feature is available in BIOS version 10.0.39.0 or later.

Intel SMM Security Issue (6857157)

Security vulnerabilities in the BIOS might allow a local privileged user who has the ability to run fully privileged code to gain access to the CPU's System Management Mode.

Note – This issue is fixed in BIOS version 10.0.39.0 or later.

Sun StorageTek Dual 4 Gb Fibre Channel Dual GbE ExpressModule Host Bus Adapter (Emulex SG-XPCIE2FCGBE-E-Z) is Sometimes Not Visible in BIOS

On rebooting the system, the Sun StorageTek card occasionally disappears from BIOS and can no longer be used.

Workaround: Power cycle the blade. When the blade powers back on, the card should be visible again.

Flash Modules Not Found After Power Cycle (6798255)

In rare instances, after power cycling a Sun Blade X6275 server module node, the system might not be able to find the Flash Modules (FMODs). If the flash module is the boot device with an installed operating system, the system will fail to boot.

Workaround: If you encounter this problem, remove and reinsert the blade into the blade chassis. After removing the blade from the chassis, you must wait for at least 20 seconds before reinserting the blade. If you do not, the flash modules might not be recognized by the host nodes.

(Fixed) System Unable to Boot from Fibre Channel Express Modules (6804868)

The Sun Blade X6275 system BIOS does not have enough memory space to load the option ROM code for Fibre Channel Express Module cards and the dual-function Fibre Channel Express Module cards. This means you cannot boot the system from these devices. If this happens, you will receive the following BIOS error:

```
Not enough Space to copy PCI Option ROM
```

Note – This issue is fixed in BIOS version 10.0.28.0 or later.

(Fixed) BIOS Does Not Execute `Set SEL time` Command During POST (6879630)

The Sun Blade X6275 system service processor ILOM did not support the `Set SEL time` command. Therefore, BIOS could not send the RTC time to service processor. BIOS has been changed in parallel with the new fix in service processor ILOM.

Note – This issue is fixed in BIOS version 10.0.39.0 or later.

CPU and DIMM FRU Data Can Be Lost After SP Firmware Upgrade (6913602)

After upgrading ILOM/SP firmware for the server, you might not be able to view CPU and/or DIMM FRU data through ILOM. This issue can occur after any ILOM upgrade if the `set reset_to_defaults=factory` command is issued to reset the SP while the host still powered on.

Workaround: To clear this condition, power off the host (from ILOM, issue the **`stop /SYS`** command) and then reset SP.

Updating Firmware That Includes New CPLD Version

If the firmware you are upgrading to includes a new CPLD (Complex Programmable Logic Device) version, you must power off the server module nodes and reseat the blade in the chassis for the server to use the new CPLD code.

See "Firmware Versions" on page 2 for firmware release information.

Note – If you are downgrading to an earlier firmware version, CPLD will not be downgraded (even if the firmware includes an earlier version of CPLD) and therefore the blade will not need to be reseated in the chassis.

PCIe Link Speed Reduced With BIOS 10.2.6.0 (6994690)

If your Sun Blade X6275/X6275 M2 server module is running BIOS version 10.2.6.0, the PCIe EM bus speed is reduced to PCIe Gen1 speeds. This issue only affects the Dual Port Quad Data Rate (QDR) InfiniBand HCA PCIe EM card. Other supported PCIe EM cards run at lower speeds and are therefore not affected.

There is currently no workaournd for this issue. If you have a Sun Blade X6275 or X6275 M2 server module with a BIOS version lower than 10.2.6.0 and are using the Dual Port Quad Data Rate (QDR) InfiniBand HCA PCIe EM card, do not upgrade the server BIOS to a later version until a fix is available.

CHAPTER 3

Server Management and ILOM Notes and Issues

This chapter describes server management and ILOM service processor (SP) issues that apply to the Sun Blade X6275 server module.

- "General Notes and Issues" on page 15
- "ILOM Fixed and Open Issues" on page 21

General Notes and Issues

- "Dynamic Field Replaceable Unit (FRU) ID Information" on page 15
- "Restricted Bash Shell" on page 16
- "Power Values in ILOM Web Interface" on page 16
- "Reading Sun Blade X6275 Power Consumption in the CMM" on page 17
- "Enabling and Disabling the Sun Cooling Door" on page 18
- "Sun Blade X6275 Does Not Boot if the CMM is Off-Line" on page 18
- "Locate LED Programmed to Stay On For 30 Minutes (6793865)" on page 18
- "Proving Physical Presence (6881237)" on page 19
- "Understanding the Node `available_power` Statistic (6892763)" on page 19

Dynamic Field Replaceable Unit (FRU) ID Information

The following information is available from the server module ILOM when FRUs are inserted:

- Installation records when FRUs are inserted
- Power history (power on time, power events)
- Temperature history

Restricted Bash Shell

ILOM provides a restricted shell, which allows access to logs and commands to view and search them such as `grep/less`. In addition, access to administrative commands such as uptime as well as commands to safely reboot the SP are provided.

▼ Entering the Restricted Shell

Use the root account to enter the restricted shell through the spsh shell.

Note – You cannot enter the restricted shell from an spsh shell that was spawned through ipmitool.

Power Values in ILOM Web Interface

From the ILOM web interface, access the power values from Power Management> Allocation > Power Allocation Plan, Target Limit. The value can be in watts or a percent between:

- Installed Hardware Minimum power (138 watts) and
- Allocated Power (295 watts).

Note – Installed Hardware Minimum power is the recommended minimum power you can set and should be regarded as a reference.

Capping the power to this minimum value will have two issues:

1. **CPU performance will be severely downgraded.**

2. **You may see a "power violation" in the CLI and ILOM SEL log as described in "Details of the Error Message" on page 17. This is due to the minimum power calculation which is hard to perfect.**

   The calculation's accuracy should be taken into account for each component and for different usage patterns. The Violation status occurs since the system is not able to reduce power to below the Installed Hardware Minimum power due to the usage pattern.

Caution – To avoid the issue described above, do not cap the power to this minimum value.

Details of the Error Message

On the "Consumption" tab under "Power Management" in the ILOM Web interface, the following `Warning` might be seen for the target limit:

- In case of a hard cap:

```
Warning: /Peak Permitted/ exceeds /Target Limit/
```

- In case of a soft cap:

```
Warning: /Actual Power/ exceeds /Target Limit/.
```

Through the ILOM CLI, the event is recorded as follows:

```
/SP/powermgmt/budget

 Properties:

        activation_state = enabled

        status = violation
```

The ILOM SEL records a IPMI log similar to the following:

```
ID = 10e2 : 10/27/2009 : 14:28:56 : Power Supply : PWRBS :
State Asserted
```

Reading Sun Blade X6275 Power Consumption in the CMM

As viewed from the Chassis Management Module (CMM) ILOM interface, the power budget as shown in the CMM is on a per blade basis. For the Sun Blade X6275, it shows total power consumption of the blade (both nodes together).

Enabling and Disabling the Sun Cooling Door

A policy has been added to the CMM ILOM to support the Sun Cooling Door that might be used with your chassis. Sun supports two types of cooling doors: the Sun Cooling Door 5200 and the Sun Cooling Door 5600.

- If your chassis has a Sun Cooling Door installed, you must enable the cooling door policy in the CMM.
- If your chassis does not have a Sun Cooling Door, you must disable the cooling door policy in the CMM. This is the default.

To configure the Sun Cooling Door policy using the ILOM web interface or CLI, see the *Sun Integrated Lights Out Manager (ILOM) 3.0 Feature Update and Release Notes*, (820-7329) for detailed information. The Integrated Lights Out Manager (ILOM) 3.0 document collection is available from:

http://www.oracle.com/pls/topic/lookup?ctx=ilom30&id=homepage

Sun Blade X6275 Does Not Boot if the CMM is Off-Line

If the Chassis Monitoring Module (CMM) is offline (due to a problem with the CMM or because the CMM is going through the boot process), the Sun Blade X6275 will not power on.

Workaround:

1. Ensure that the CMM is online before booting the Sun Blade X6275.
2. To power on the blade, run **`start -force`**.

Locate LED Programmed to Stay On For 30 Minutes (6793865)

According to the IPMI specification, the locate LED on the front of the blade is supposed to turn itself off after 15 seconds. However, Oracle has determined that this might not give the customer sufficient time to physically locate the system. For this reason, Oracle has chosen to deviate from the IPMI specification and set the default time-out value to 30 minutes.

You can choose to turn the locate LED off by using one of the following methods:

- Turn off the locate LED manually by pressing locate button on the blade.
- Use the ILOM web interface or CLI to turn off the locate LED.

- Use the IPMItool `chassis identify` command to turn off the locate LED by setting the time-out value to zero.

Wait 30 minutes for the locate LED to automatically turn off on its own.

Proving Physical Presence (6881237)

You can use the preconfigured ILOM default user account to recover a lost password or re-create the root account. The default user account cannot be changed or deleted and is only available through a local serial console connection (refer to the *Sun Blade X6275 Server Module Service Manual*). In order to access the default user account, you must prove physical presence.

To prove physical presence for a node of the Sun Blade X6275 server module, press the Locate button for the node on the server module front panel when prompted by ILOM. For information about the server module front panel and indicators, refer to *Sun Blade X6275 Server Module Installation Guide*.

Understanding the Node `available_power` Statistic (6892763)

When using a node's ILOM CLI to review power consumption, the following command can be used:

```
-> show /SP/powermgmt
```

This displays output similar to:

```
/SP/powermgmt
  Targets:
    budget
    powerconf
  Properties:
    actual_power = 56
    permitted_power = 190
    allocated_power = 190
    available_power = 380
    threshold1 = 0
    threshold2 = 0
```

Where:

- **actual_power** displays the current system input power (in watts) consumption.
- **permitted_power** displays the maximum power consumption (in watts) expected for the system.
- **available_power** displays the input power capacity (in watts) that is available to system components. The CMM uses the `available_power` number listed in node 0 to determine how much power to allocate to the entire blade.

When logged into node 0, the `available_power` listed is actually the combined available power for the entire blade (node 0 plus node 1). To calculate the available power for node 0, subtract the `available_power` number listed when logged into node 1 from the total `available_power` number listed for node 0.

ILOM Fixed and Open Issues

This section contains fixed and open issues for Oracle Integrated Lights Out Management (ILOM).

- "ILOM Fixed Issues" on page 21
- "ILOM Open Issues" on page 27

ILOM Fixed Issues

The following issues have been fixed.

TABLE 3-1 ILOM Fixed Issues

Description of Issue	Status	Release Fixed
"(Fixed) Sensor List For X6275 Blade Node 1 Is Not Correct When In Sun Blade 6048 (6924167)" on page 22	Fixed	2.3
"(Fixed) Blades Cannot Clear Fan Faults (6920801)" on page 22	Fixed	2.3
"(Fixed) During Chassis Boot, at Least One Sun Blade X6275 Server Module Must Be Installed" on page 22	Fixed	2.1
"(Fixed) `pecitool` Shows Wrong CPU Number (6890473)" on page 22	Fixed	2.1
"(Fixed) `Hostdiag` Reports CPU Number Reversed In 2.0.3.xx and 3.0.4.10 (6857083)" on page 23	Fixed	2.1
"(Fixed) FRU Properties Change Intermittently (6804445)" on page 23	Fixed	2.0
"(Fixed) Erroneous Chassis Hot Insertion Event Logged After CMM Reboot (6797938)" on page 23	Fixed	2.1
"(Fixed) Host Intermittently Cannot Connect to RKVM Session (6783184)" on page 23	Fixed	2.1
"(Fixed) CMM ILOM Interface Becomes Unresponsive After Repeated Use (6798257)" on page 24	Fixed	2.1
"(Fixed) BIOS Does Not Set Service Processor Time (6801525)" on page 24	Fixed	2.1
"(Fixed) Confusing Critical Events Logged in SEL at Service Processor Boot (6808890)" on page 25	Fixed	2.1
"(Fixed) `ipmiflash -I pci` Causes SP to Lose All Network Connections (6850823)" on page 25	Fixed	2.1
"(Fixed) ILOM Configurations Are Preserved During Upgrade Even After Specifying "No" (6971164)" on page 26	Fixed	2.7

(Fixed) Sensor List For X6275 Blade Node 1 Is Not Correct When In Sun Blade 6048 (6924167)

When the X6275 blade is in the Sun Blade 6048 chassis, the sensor list shown from node 1 incorrectly shows the output for when the blade is inserted into a Sun Blade 6000. Shared sensors, such as `BLx/STATE, BLx/ERR, FMx/ERR, FMx/Fy/TACH, PSx/PRSNT, PSx/Sy/V_OUT_OK and PSx/Sy/V_IN_ERR` are not all shown.

(Fixed) Blades Cannot Clear Fan Faults (6920801)

SP Faults on fan modules are not clearing. Once the SP logs the error, there appears to be no way to clear the condition.

The FAULT capability on the chassis FRUs, specifically, NEMs, FMs and the CMM was not functioning correctly. FAULT capability was added to all chassis FRUs.

(Fixed) During Chassis Boot, at Least One Sun Blade X6275 Server Module Must Be Installed

---

Note – This applies to CMM 2.0.3.13 only.

When the blade chassis boots up, there must be at least one Sun Blade X6275 server module in the chassis. Then, the CMM will enable the Sun Blade X6275 server module mode, which supports two nodes in one blade. Otherwise, if you install your first Sun Blade X6275 server after the blade chassis boots, only one of the blade's nodes will be seen by the ILOM CMM web interface.

(Fixed) `pecitool` Shows Wrong CPU Number (6890473)

When running `pecitool` on a single CPU reference numbers can appear to be reversed.

Note – This issue has been fixed in ILOM 3.0.8.10.

(Fixed) `Hostdiag` Reports CPU Number Reversed In 2.0.3.xx and 3.0.4.10 (6857083)

The CPU reference numbers appear to be reversed due to an error in the motherboard silkscreen. The reference numbers were internally reversed in `hostdiag` to accommodate the silkscreen. The Sun Blade X6275 does not need this reversal, as the CPU designators appear correctly on the motherboard.

Note – This issue has been fixed in ILOM 3.0.8.10.

(Fixed) FRU Properties Change Intermittently (6804445)

Some of the blade Field Replaceable Unit (FRU) information might become corrupt or unavailable when viewed through the CMM.

Workaround: If this happens, login to the desired blade node from ILOM web interface or CLI to read FRU data.

(Fixed) Erroneous Chassis Hot Insertion Event Logged After CMM Reboot (6797938)

After a CMM reboot, there might be an erroneous hot insertion event for the Sun Blade X6275 server module logged in the CMM event log, even though the blade was not removed from the chassis.

You may safely ignore this event.

(Fixed) Host Intermittently Cannot Connect to RKVM Session (6783184)

On rare occasions, the host will not be able to establish remote control redirection (RKVM session) through the ILOM service processor. This might happen after you change the service processor IP address. You might also see the following warning messages:

```
Video redirection error
```

or

```
Could not connect to host <new_ip>. Please verify your host IP
or name.
```

Workaround: Retry the remote connection. If that does not solve the problem, log in to the host service processor using ILOM and reset the service processor. You can do this using the ILOM web interface or CLI.

(Fixed) Blade Node1 System Event Log Lists False /SYS/NEM1 or /SYS/PEM Hot Removal Messages (6791106)

In rare cases, you may see a number of false events in the System Event Log for Node1 of the Sun Blade X6275 server module relating to NEM and PEM removal. There are no such events listed in the System Event Log for Node0.

The false messages in the Node1 System Event Log can be safely ignored. However, please contact your Sun service provider so that Sun might track these occurrences.

(Fixed) CMM ILOM Interface Becomes Unresponsive After Repeated Use (6798257)

Due to a memory leak in the ILOM software, repeated use of ILOM to monitor sensors and components may result in ILOM becoming sluggish, erratic, and/or non-responsive.

Workaround: Reset the Sun Blade x6275's service processor or the chassis CMM, depending on which device becomes sluggish, erratic, and/or non-responsive.

(Fixed) BIOS Does Not Set Service Processor Time (6801525)

The Sun Blade X6275 server module BIOS does not set service processor time at POST. IPMI commands can also be used to set the service processor clock.

Workaround: The time for the service processor can be set using the ILOM interface or Network Time Protocol (NTP).

(Fixed) Confusing Critical Events Logged in SEL at Service Processor Boot (6808890)

Several IPMI critical events are logged in SEL at every service processor boot. In the ILOM event log, you will see these messages after the SP boot.

```
ID =   b : 03/09/2009 : 09:46:34 : Entity Presence : PEM/PRSNT
: Device Absent

ID = 2f : 02/23/2009 : 11:43:39 : Power Supply : PS1/AC1_ERR :
State Deasserted

ID = 2e : 02/23/2009 : 11:43:39 : Power Supply : PS0/PWROK0 :
State Deasserted

ID = 2c : 02/23/2009 : 11:43:38 : Power Supply : PS1/AC2_ERR :
State Deasserted

ID = 2b : 02/23/2009 : 11:43:38 : Power Supply : PS0/PWROK1 :
State Deasserted
```

These events can safely be ignored.

(Fixed) `ipmiflash -I pci` Causes SP to Lose All Network Connections (6850823)

The correct command for running `ipmiflash -I pci` is:

```
ipmiflash -I pci write ILOM.pkg :: --platform-type vayu_QDR_IB
--id-num 38 -l 0xa0000
```

Note – "::" are required in this command.

(Fixed) ILOM Configurations Are Preserved During Upgrade Even After Specifying “No” (6971164)

When performing a firmware upgrade of ILOM, you are given the choice of preserving the configuration information for the current ILOMversion before it is upgraded. This includes information configured by the user (account information, network configurations, management settings, etc.). This information is stored in the SP and will be used if you ever decide to go back to the previous version of ILOM.

For example:

```
-> load -source tftp://serverfolder/ILOM-version-
Sun_Blade_X6275M2.pkg
```

Typically, you would opt to preserve existing configurations in case you need to roll back to the previous version of ILOM after an upgrade. However, if you choose to not preserve ILOM configurations during the upgrade and answer **no** to the prompt to `Preserve existing configuration (y/n)?`, the configurations might be saved anyway.

This action is harmless and can occur intermittently.

Workaround: Try performing the upgrade again, answering no to the prompt to Preserve existing configuration (y/n)? during an upgrade.

ILOM Open Issues

The following issues are open.

TABLE 3-2 ILOM Open Issues

Description of Issue	Status
"Resetting the SP to Factory Defaults With Host Powered On Causes Permitted Power Miscalculation (6960011)" on page 27	Open
"Set Port Sharing Error Message From SP via SP Web Interface (6895495)" on page 28	Open
"Green LED Should Slow Blink (1 Hz) During FW Upgrade (6862377)" on page 28	Open
"Products Cannot Be Registered, (6861523)" on page 29	Open
"Ipmiflash Over USB Interface Fails Due to Unexpected Response to File-upload Command (6856369)" on page 29	Open
"Setting the Serial Baud Rate in the System BIOS Does Not Propagate to the Service Processor (6784341)" on page 30	Open
"CMM ILOM Becomes Unresponsive With Multiple CLI Sessions Open (6780171)" on page 30	Open
"Blade Power On Issues With the `start /SYS` Command (6784708)" on page 30	Open
"Missing Warning Message While Doing Backup Configuration Without Pass Phrase (6859295)" on page 31	Open
"After CMM is Reset Fan and Blade Events in Blade Event Logs Show Different Events (6864597)" on page 31	Open
"Powering On Batches of Blades Might Cause a Node to Fail to Power On (6813202)" on page 32	Open
"More Than Ten Open ILOM CLI Sessions Degrades Performance (6787190)" on page 32	Open
"Resetting the SP to Factory Defaults With Host Powered On Causes DIMM FRU Information to Be Lost (6970476, 6913602)" on page 33	Open

Resetting the SP to Factory Defaults With Host Powered On Causes Permitted Power Miscalculation (6960011)

If you reset the SP to factory defaults when the host is on, permitted power is miscalculated and power operations might have strange results.

Workaround:

1. **From the CLI, `set /SP/ reset_to_defaults=factory`.**
2. **Reseat the blade.**

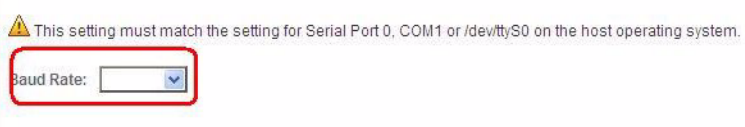
Set Port Sharing Error Message From SP via SP Web Interface (6895495)

An error message might occur under the following conditions:

1. **Log in to SP from the web interface through Internet Explore 8.**
2. **Go to Configuration >Serial Port Settings.**
3. **Set the Serial Port sharing from Service Processor to Host Server, then click the Save button. An error message window appears with the following:**

   ```
   Error: Unable to get serial port property
   ```

4. **After the OK button is clicked, the baud rate of the host serial port turns blank, as seen below.**
   (The baud rate turns blank only in Internet Explorer).



This error message will appear in both Firefox and Internet Explorer. The error message does not occur when the port sharing is used from CLI.

Green LED Should Slow Blink (1 Hz) During FW Upgrade (6862377)

When SP or BIOS FW is getting the upgrade, the green LED should slow blink (1 Hz) with 0.5 second on and 0.5 second off.

Currently, the ILOM code does not change the state of the green LED. If it is solid on, it remains as solid on during FW upgrade.

Products Cannot Be Registered, (6861523)

When registering blades, they might contain invalid reference ids. The error message is:

```
products cannot be registered, they contain invalid reference
ids
```

Ipmiflash Over USB Interface Fails Due to Unexpected Response to File-upload Command (6856369)

If the Service Processor firmware is flashed using Ipmiflash over the USB interface by specifying the `-I usb` parameter, file transfer will be terminated and flashing of the SP will fail. Therefore the following command will fail:

```
# ipmiflash -I usb -U root  write SP_FW.pkg

351K [sending...]unexpected response to our file-upload command

(ccode = 0x0c)
```

Workaround: The Service Processor can be flashed using the open option in ipmiflash as follows:

```
# ipmiflash -I open -U root  write SP_FW.pkg config
```

The Service Processor can also be flashed using the pci option by replacing the parameter "open" with "pci" in the above example.

Flashing of the firmware can also be done from the ILOM Web interface, CLI or through the Preboot Menu. For more information please refer to Chapters 2 and 3 of the *Sun Integrated Lights Out Manager 2.0 Supplement* for the *Sun Blade X6275 Server Module*, 820-6851. This document is available from:

http://download.oracle.com/docs/cd/E19464-01/index.html

Setting the Serial Baud Rate in the System BIOS Does Not Propagate to the Service Processor (6784341)

If you set the system serial port baud rate from 9600 to 115200 in the system BIOS and then save the new settings, the new settings are not propagated to the system's service processor.

Workaround: Change the serial port baud rate of the service processor through the Keyboard Problem With Multiple JavaRConsole Sessions Open to Same Service Processor (6795975)

Note – When multiple JavaRConsole sessions are opened to the same service processor on the Sun Blade X6275 server module, the additional session's keyboard interface may not work. The first session's keyboard is not affected.

Workaround: If this occurs, perform one of the following actions.

- Double-click anywhere inside the JavaRConsole window to ensure it is the active window. Then, move the mouse around which will activate the keyboard.

  OR

- From the JavaRConsole menu, select **Devices->Mouse** and then move the mouse around which will activate the keyboard.

CMM ILOM Becomes Unresponsive With Multiple CLI Sessions Open (6780171)

If you are upgrading the CMM ILOM image using web interface and have five or more ILOM CLI sessions open, the CMM may run out of memory and may become unresponsive and/or reset.

Workaround: Do not invoke more than four ILOM CLI sessions while upgrading firmware from the CMM ILOM web interface. Close those that are not in use.

Blade Power On Issues With the `start /SYS` Command (6784708)

When the ILOM `start /SYS` command is issued to power on the host, it will occasionally fail with the following message:

```
start: Insufficient power available for this operation: The
chassis Available Power must exceed the chassis Ticketed Power
by greater than the power budget requirement of this blade (see
power ticket denied message in the CMM event log)
```

The above message might not accurately describe the correct reason for the failure of the host system to power on. Although insufficient available power is one possible cause, other factors such as hardware malfunction, system faults on the peer node of the same blade, or chassis CMM failures might result in the same error.

If you encounter this error, do the following to help in identifying the source of the problem:

- Check the health of the peer node on the same blade.
- Check the health of the chassis CMM.
- Inspect the system event logs for issues that might be related.
- Confirm that sufficient power is available at the chassis level.

Missing Warning Message While Doing Backup Configuration Without Pass Phrase (6859295)

While doing a backup configuration without entering pass phrase, you do not receive a warning message saying sensitive data will not be backed up. However, the backup occurs immediately.

If the configuration backup is done, while restoring it without entering the pass phrase, you do not receive a message asking for the pass phrase. The restore occurs immediately.

After CMM is Reset Fan and Blade Events in Blade Event Logs Show Different Events (6864597)

After CMM reset, the SP SEL log shows meaningless fan failure messages. Two nodes might show different messages, as follows:

1. **Reset CMM.**
2. **Check logs in blade.5**
3. **You may see this kind of message in node 0:**

```
    11       IPMI       Log       critical       Fri Jul 24
18:47:50 2009       ID = 6 : 07/24/2009 : 18:47:50 : Fan :
FM6/ERR : Predictive Failure Deasserted
```

And different report in node 1:

```
     19       IPMI       Log       critical       Fri Jul 24
18:48:49 2009       ID = b : 07/24/2009 : 18:48:49 : Fan :
FM5/ERR : Predictive Failure Deasserted

     18      IPMI      Log      critical      Fri Jul 24 18:48:49
2009      ID = a : 07/24/2009 : 18:48:49 : Fan : FM0/ERR :
Predictive Failure Deasserted
```

Workaround: You can ignore this kind of "Predictive Failure Deasserted" error event in both nodes.

Powering On Batches of Blades Might Cause a Node to Fail to Power On (6813202)

On rare occasions, when power cycling batches of blade nodes by either individually issuing a power-on command using `ipmitool` or `/start/ SYS`, or when powering on a Sun Blade 6048 Modular System chassis with a rack full of blades, a node might fail to power on. The failed node will return an OFF status when an ipmi power status query is made.

Workaround: If you encounter this issue, try the following:

- Login to the node's service processor and reset the service processor.
- If the above doesn't work, remove and reinsert the blade in the chassis.

More Than Ten Open ILOM CLI Sessions Degrades Performance (6787190)

If more than ten ILOM CLI sessions are opened, system response time can degrade proportionally. When ILOM web interface sessions are included among the 10 open sessions, performance is likely to degrade at a higher rate.

Workaround: Do not invoke more then ten ILOM CLI sessions. Close those that are not in use to optimize performance. Close ILOM web interface sessions first for the best results.

Resetting the SP to Factory Defaults With Host Powered On Causes DIMM FRU Information to Be Lost (6970476, 6913602)

If you reset the SP to factory defaults when the host is on, you might no longer see DIMM FRU information in ILOM.

Workaround:

1. **Open a terminal window and log in to the node ILOM SP using an SSh connection.**
2. **From the prompt, power off the node host by entering the command:**

   -> **`stop /SYS`**
3. **Reset the SP by entering the command:**

   -> **`set /SP/reset_to_defaults=factory`**
4. **Reboot the node SP by entering the command:**

   -> **`reset /SP`**
5. **After the SP successfully reboots, power on the node host by entering the command:**

   -> **`start /SYS`**

You should now be able to view DIMM FRU information using ILOM.

CHAPTER 4

Software Notes and Issues

This chapter contains the following sections describing issues with the various supported operating system platforms and the Sun Blade X6275 server module:

- "General OS Issues" on page 35
- "Oracle Solaris OS Issues" on page 38
- "CentOS Issues" on page 39
- "Oracle Linux and Red Hat Enterprise Linux (RHEL) Issues" on page 40
- "SUSE Linux Enterprise Server (SLES) Issues" on page 43
- "Windows Server 2008 Issues" on page 45

General OS Issues

The following issues apply to the Sun Blade X6275 server module running any supported operating system.

- "(Sun Blade X6275 1GbE only) Rx_mixed Errors (6913783)" on page 36
- "Softcap Does Not Work When Host is Powered on After SP Reboots (6890841)" on page 36
- "PCIe ExpressModule Native Hot Plug Does Not Work (6804272)" on page 36
- "Setting the Power Management Hardcap Power Limit Prior to Booting the System Does Not Control System Power" on page 37

(Sun Blade X6275 1GbE only) Rx_mixed Errors (6913783)

If you run `netperf` to stress the 1Gb network port and then use `ethtool` to check the port status, you might find `rx_missed` errors. This error affects the network performance but does not cause data loss.

To prevent this kind of error message, you can enable flow control on both the server module (blade) and on the switch.

Softcap Does Not Work When Host is Powered on After SP Reboots (6890841)

If the power management policy is set to softcap by enabling power limiting with timelimit not equal to zero prior to rebooting SP and powering on the host, the power limit is not adhered to by the system.

Workaround:

After the SP is booted and host is powered on, do the following:

1. **Disable the budget activation state.**
2. **Re-enable the budget activation state.**

Note – This must be done each time the SP is reset and the host is powered on.

PCIe ExpressModule Native Hot Plug Does Not Work (6804272)

Attempting to hot plug a PCIe ExpressModule might cause the ExpressModule to fail or not be properly recognized by the system.

Workaround: Do not attempt to hot plug an ExpressModule. Be sure to power down the system before installing an ExpressModule.

Setting the Power Management Hardcap Power Limit Prior to Booting the System Does Not Control System Power

This applies to OpenSolaris 2009.06, Solaris 10 5/09, and Linux.

OpenSolaris

If you set a power limit with `timelimit=0` (none) prior to booting the system and the operating system (OS) is OpenSolaris 2009.06, the power limit is not adhered to by the system.

Workaround:

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

   ```
   cpupm enable poll-mode
   ```

2. **Reboot the OS.**

Note – When this procedure is complete, the hardcap (`timelimit=0`) power limits will work for all subsequent boots.

Oracle Solaris OS

If you set a power limit with `timelimit=0` (none) prior to booting the system and the operating system (OS) is Solaris 10 5/09, the power limit is not adhered to by the system.

Workaround:

After the OS is booted, do the following:

1. **Disable the budget activation state.**

2. **Re-enable the budget activation state.**

Note – This must be done each time after the OS is booted.

Linux

If you set a power limit with `timelimit=0` (none) prior to booting the system and the operating system (OS) is RHEL 5.4 or Sles11 the power limit is not adhered to by the system.

Workaround:

After the OS is booted, do the following:

1. **Disable the budget activation state.**
2. **Re-enable the budget activation state.**

Note – This must be done each time after the OS is booted

Oracle Solaris OS Issues

- "InifiniBand Devices Show Low Throughput on Solaris 10 10/09 (6901056)" on page 38
- "Solaris 10 5/09 Kernel Warnings: `cpu_acpi error parsing _TSS for CPU instance x`." on page 39
- "Hotplug of Express Modules Containing a PCIe Bridge Chip Do Not Work With Solaris 10 5/09 and OpenSolaris 2009.06" on page 39

InifiniBand Devices Show Low Throughput on Solaris 10 10/09 (6901056)

During netperf testing, IB devices show very low throughput on Solaris 10 10/09, compared with RHEL5.4/SLES11.

Workaround:

1. **To re-enable LSO, install the relevant patch: 143353-01 (x86)**
2. **Set up xmit/recv to 1MB (1048576)**

```
bash-3.00# ndd -set /dev/tcp tcp_recv_hiwat 1048576
bash-3.00# ndd -set /dev/tcp tcp_xmit_hiwat 1048576
```

Solaris 10 5/09 Kernel Warnings: `cpu_acpi error parsing _TSS for CPU instance x.`

These messages get logged in `/var/adm/messages` when the system does not support CPU ACPI T-States.

Workaround: None. You can safely ignore these harmless messages. These warnings are no longer seen in Solaris 10 10/09.

Hotplug of Express Modules Containing a PCIe Bridge Chip Do Not Work With Solaris 10 5/09 and OpenSolaris 2009.06

Solaris 10 5/09 and OpenSolaris 2009.06 do not support PCIe hotplug events when the device being inserted or removed contains a PCIe bridge chip. Therefore, the following hotpluggable devices do not work

- Sun x4 PCIe Quad GbE ExpressModules (Intel), P/N X7284A-z
- Sun StorageTek Dual 4Gb Fibre Channel Dual GbE Express Module Host Bus Adapter (Qlogic), P/N SG-XPCIE2FCGBE-Q-Z
- Sun StorageTek Dual 4Gb Fibre Channel Dual GbE Express Module Host Bus Adapter (Emulex), P/N SG-XPCIE2FCGBE-E-Z

In the `/var/adm/messages` file, you might see the following error message:

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

Manually configuring the PEM with the `cfgadm` command will return the following error message:

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

Workaround: Installing the card before powering on the system will ensure that it functions appropriately. This issue is no longer seen with Solaris 10 10/09.

CentOS Issues

The following issue applies to the Sun Blade X6275 server module running the CentOS operating system.

`PCI: Ignore Bogus Resource 6 [0:0]` Error Message (6781943)

During boot, you might see this non-fatal warning indicating that the kernel thinks that PCI device 0000:20:05.0 has requested the PCI region defined by its BAR 6. The size of the region, however, is 0 ([0:0]). If you encounter this error, the following message displays:

```
PCI: Ignore bogus resource 6 [0:0] of 0000:0d:05.0
```

The resource number corresponds to the device ID of the embedded VGA controller on the system's ASPEED AST2100 service processor.

You can safely ignore this message.

Oracle Linux and Red Hat Enterprise Linux (RHEL) Issues

The following issues apply to the Sun Blade X6275 server module running the RHEL operating system.

- "Hot Plugging ExpressModules Containing a PCIe Bridge Chip Does Not Work With Red Hat Enterprise Linux 4.8" on page 41
- "`PCI: Ignore Bogus Resource 6 [0:0]` Error Message (6781943)" on page 41
- "`PCI: BIOS Bug MCFG area at e0000000 is not E820-reserved` Error Message" on page 42
- "Sound Server Informational Message: Error While Initializing the Sound Driver" on page 42
- "Setting the Power Management Hardcap Power Limit Prior With the Host Power Off Does Not Control System Power (7009666)" on page 42

Hot Plugging ExpressModules Containing a PCIe Bridge Chip Does Not Work With Red Hat Enterprise Linux 4.8

Red Hat Enterprise Linux 4.8 does not support PCIe hot-plug events when the device being inserted or removed contains a PCIe bridge chip. Therefore, the following hot-pluggab devices do not work coherently:

- Sun x4 PCIe Quad GbE ExpressModules (Intel), P/N X7284A-z
- Sun StorageTek Dual 4Gb Fibre Channel Dual GbE Express Module Host Bus Adapter (Qlogic), P/N SG-XPCIE2FCGBE-Q-Z
- Sun StorageTek Dual 4Gb Fibre Channel Dual GbE Express Module Host Bus Adapter (Emulex), P/N SG-XPCIE2FCGBE-E-Z

For more information see the Red Hat Knowledge Base article:

http://kbase.redhat.com/faq/docs/DOC-19445

Workaround: Installing the card before powering on the system will ensure that it functions correctly.

PCI: Ignore Bogus Resource 6 [0:0] Error Message (6781943)

During boot, you might see this non-fatal warning indicating that the kernel thinks that PCI device 0000:20:05.0 has requested the PCI region defined by its BAR 6. The size of the region, however, is 0 ([0:0]). If you encounter this error, the following message displays:

```
PCI: Ignore bogus resource 6 [0:0] of 0000:0d:05.0
```

The resource number corresponds to the device ID of the embedded VGA controller on the system's ASPEED AST2100 service processor.

You can safely ignore this message. For more information see the Red Hat Knowledge Base article:

http://kbase.redhat.com/faq/docs/DOC-15727

`PCI: BIOS Bug MCFG area at e0000000 is not E820-reserved` Error Message

Due to an issue in the Red Hat Enterprise Linux 5 Xen kernel, this erroneous error message regarding the reservation of a specific range of memory might be displayed during boot.

You can safely ignore this message. For more information see the Red Hat Knowledge Base article:

http://kbase.redhat.com/faq/docs/DOC-15977

Sound Server Informational Message: Error While Initializing the Sound Driver

In Red Hat 4.8, when the Konqueror browser is used, the following message appears:

```
Sound server message: "Error while initializing the sound
driver: /device /dev/dsp can't be opened (No such file or
directory).
```

The sound server will continue, using the null output device.

KDE always checks to see if a sound card is available and since X6275 does not have one, this error appears.

Workaround: You can prevent this error from appearing by:

- Clicking on the checkbox for "Do not show this message again"
- From KDE Control Center -> Sound & Multimedia -> Sound System and turning off the checkbox for "Enable the sound system".

This message is informational and has no impact on performance.

Setting the Power Management Hardcap Power Limit Prior With the Host Power Off Does Not Control System Power (7009666)

If you set a system power limit in ILOM with host main power off, and the operating system (OS) is Oracle Linux 5.5 or RHEL 5.5, the power limit is not adhered to by the system once it is powered back on.

For example:

1. **With the node host powered off, but logged into the node ILOM SP, enter the command:**

   -> cd /SP/powermgmt/budget

2. **Set the power limit:**

   -> **set pendingpowerlimit=140 commitpending=true**

   The following output is displayed:

   ```
   Set 'pendingpowerlimit' to '140'
   Set 'commitpending' to 'true'
   ```

Even though you set a power budget cap of 140 watts, the host system will ignore this limit once it is powered on.

Workaround: Set your system power limit caps in ILOM only when the host system is fully powered on.

SUSE Linux Enterprise Server (SLES) Issues

The following issues apply to the Sun Blade X6275 server module running the SLES operating system.

- "Unable to Start `openibd` and `opensmd` and Unable to load HCA driver on SLES 11 (6812736)" on page 43
- "PCIEHP Hot-Plug Default Driver Is Not Supported by SLES10 SP2 and SP3" on page 44
- "Additional Software Driver Added To SLES11 Might Not Work" on page 44
- "`Hotpluggable processor device is not present` Error Message" on page 45

Unable to Start `openibd` and `opensmd` and Unable to load HCA driver on SLES 11 (6812736)

In SLES 11, when attempting to load `openibd`, `opensmd`, and the HCA driver an error will be seen and the components will not start or load.

```
#/etc/init.d/opensmd start
```

```
OpenSM not installed

#/etc/init.d/openibd start

Loading eHCA driver: [FAILED]

Loading HCA driver and Access Layer: [FAILED]
```

Workaround: Edit the following files:

- `/etc/infiniband/openib.conf`

  `Change EHCA_LOAD=yes to EHCA_LOAD=no.`

- `/etc/init.d/opensmd`

  `Change prog=/usr/bin/opensm to prog=/user/sbin/opensm.`

PCIEHP Hot-Plug Default Driver Is Not Supported by SLES10 SP2 and SP3

SLES10 SP2 and SP3 has disabled interrupts on the PCI Express root ports. As a result, pciehp hot-plug does not function properly with default driver options.

Workaround: You must load the pciehp driver with the following parameter.

```
pciehp_poll_mode=1
```

For example:

```
modprobe pciehp pciehp_poll_mode=1
```

Additional Software Driver Added To SLES11 Might Not Work

If an additional software driver is added to Novell SUSE Linux Enterprise Server 11, the driver may not work because SLES flags it as an unsupported driver.

Workaround: To allow the loading of unsupported modules in SLES11, set **`allow_unsupported_modules 1`** in `etc/modprobe.d/unsupported-modules`.

After making this change, modules missing the "supported" flag will be allowed to load.

For the Novell SLES11 new module probe rule, go to:
http://www.novell.com/support/search.do?cmd=displayKC&docType=kc&externalId=7002793&sliceId=1&docTypeID=DT_TID_1_1

All supported Linux kernel modules contain an internal "supported" flag which denotes that module is officially supported by Novell. Beginning with SLES 11, modules that do not contain this flag are prevented from being loaded automatically or manually by the `modprobe` command. This is the default configuration of SLES11 servers, but loading unsupported modules can be allowed through one configuration change.

For additional information, refer to the *Novell SUSE Linux Enterprise Server Document* ID: 7002793.

`Hotpluggable processor device is not present` Error Message

You might see "`Hotpluggable processor device is not present`" error messages.

These messages appear to be informational and have no impact on performance.

Windows Server 2008 Issues

"Hot-Plug is Not Supported By Windows 2008 For Some ExpressModules (6793369)" on page 45

"Windows Server 2008 Limited Support on Sun Blade X6275" on page 46

Hot-Plug is Not Supported By Windows 2008 For Some ExpressModules (6793369)

With Windows 2008 the following ExpressModules cannot be hot-plugged:

- Sun Fibre Channel - 4 Gigabit/Sec PCI-E Dual FC / Dual Gigabit Ethernet Host Adapter Express Module (EM) (Qlogic) (SG-XPCIE2FCGBE-Q-Z)
- Fibre Channel - 4 Gigabit/Sec PCI-X Dual FC Host Adapter (Emulex) (SGXPCIE2FCGBE-E-Z)
- Sun Quad Gigabit Ethernet Module (X7284A-Z)

Workaround: Insert the affected modules and reboot in order for them to be recognized.

Windows Server 2008 Limited Support on Sun Blade X6275

Windows Server 2008 64-bit is the only supported version of Windows on the Sun Blade X6275 Server Module and it is only supported with software release 1.1.

The autorun menu in the Tools and Drivers DVD displays "Make a Windows Server 2003 Mass-Storage driver disk" as an option. This option is not available on the Sun Blade X6275 Server Module. Selecting this option will result in an error message. This error message can be ignored.

FIGURE 4-1 Tools and Drivers CD/DVD autorun menu

CHAPTER 5

Documentation Issues

The following issue relates to the Sun Blade X6275 Server Module documentation.

Error on Service Card for RTC Battery Replacement

The diagram for task 5 is not correct. The plus (+) side of the battery should face out, not the negative (-) side. Putting the battery in backwards will not damage the battery, but there will be no output to the clock circuit. This service task is shown correctly in the *Sun Blade X6275 Server Module Service Manual* (820-6849).