Sun Fire™ X2100 Server Release Notes

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Sun Fire X2100 Server Release Notes

This document contains known issues and late-breaking information for the Sun Fire™ X2100 Server.

These release notes contain issues and considerations for the Sun Fire X2100 Server:

- "General Information" on page 2
- "Hardware and BIOS Issues" on page 4
- "Linux Issues" on page 11
- "Solaris OS Issues" on page 15
- "Windows Issues" on page 17

General Information

Support for the Sun Fire X2100 Server

For support information for the Sun Fire X2100 Server visit the following URL:

http://www.sun.com/servers/entry/x2100/support.xml

Documentation URL

The following is a list of Sun Fire X2100 Server documents:

- 819-3719 *Sun Fire X2100 Server Setup Guide*
- 819-3720 *Sun Fire X2100 Server Getting Started Guide*
- 819-3721 *Sun Fire X2100 Server User Guide*
- 819-3721 *Sun Fire X2100 Server Safety and Compliance Guide*
- 819-3722 *Sun Fire X2100 Server Release Notes*

For the most updated versions of these documents visit the following URL:

http://www.sun.com/products-n-solutions/hardware/docs/Servers/x64_servers/x2100/index.html

Supported Operating Systems

The Sun Fire X2100 Server supports the following operating systems:

- Solaris 10 6/06 operating system
- Red Hat Enterprise Linux 3 U6 AS/ES/WS (32-bit and 64-bit)
- Red Hat Enterprise Linux 4 U2 AS/ES/WS (32-bit and 64-bit)
- SUSE Linux Enterprise Server 9 SP2 (or greater) (32-bit and 64-bit)
- SUSE Linux Enterprise Server 10 (64-bit)
- Microsoft Windows Server 2003 Standard and Enterprise Edition (32-bit)
- Microsoft Windows Server 2003 x64 Standard and Enterprise Edition (64-bit)

For an overview of the Sun Fire X2100 Server, a list of features, technical specifications, and other information, visit the following URL:

http://www.sun.com/servers/entry/x2100

Accessing and Updating BIOS Versions

The BIOS versions mentioned in this document are available on the following versions of the Sun Fire X2100 Supplemental ISO images:

- BIOS v1.1.7 is available on Sun Fire X2100 Supplemental ISO image 1.7
- BIOS v1.1.5 is available on Sun Fire X2100 Supplemental ISO image 1.6
- BIOS v1.1.2 is available on Sun Fire X2100 Supplemental ISO image 1.5
- BIOS v1.1.1 is available on Sun Fire X2100 Supplemental ISO image 1.4
- BIOS v1.0.9 is available on Sun Fire X2100 Supplemental ISO image 1.3
- BIOS v1.0.7 is available on Sun Fire X2100 Supplemental ISO image 1.2

You can download software for the Sun Fire X2100 Server from the following site:

http://www.sun.com/servers/entry/x2100/downloads.jsp

For information updating/flashing the BIOS, see "BIOS Procedures" on page 5.

Hardware and BIOS Issues

You can resolve some issues in this section by performing some commonly used BIOS-related procedures.

See "BIOS Procedures" on page 5.

The following issues are related to the Sun Fire X2100 Server hardware or BIOS. These issues apply regardless of the operating system installed, unless otherwise stated. This section discusses the following issues:

- "Load Optimized Defaults After Updating the BIOS" on page 6
- "CMOS Checksum Error When Updating the BIOS" on page 6
- "BIOS Setting Might Change When Updating BIOS" on page 6
- "Clear CMOS Jumper Functionality Disabled in BIOS Version 1.1.5" on page 6
- "System Will Not Boot with 2 GB x 4 and IOMMU Set to 64 MB" on page 6
- "Pc-Check Memory Benchmark Test Hangs Keyboard and Mouse" on page 7
- "CMOS Checksum Error When Plugging-in AC Power Cord" on page 7
- "Sel Log Time" on page 7
- "Power LED Issues" on page 7
- "Excluding Devices from Boot Menu (BIOS 1.1.1)" on page 8
- "Sun Crypto Accelerator 6000 Board" on page 8
- "Mirrored NVRAID Causes System Stress Test Failure" on page 9
- "Console Redirection Non-Functional When Moving from SMDC to COM1" on page 9
- "SATA Hot Plug for Windows Only" on page 9
- "Initializing the Boot Sector on RAID Device" on page 9
- "Serial Console Redirection Instructions" on page 10
- "Maximum CPU Speed" on page 10

BIOS Procedures

The following procedures are referenced throughout this section:

Updating (Flashing) the BIOS

1. **Connect a local keyboard and monitor to the Sun Fire X2100 Server.**
2. **Insert the Sun Fire X2100 Supplemental CD into the DVD drive.**
3. **Reboot the server.**

   The Supplemental CD menu appears.
4. **Press 2 to flash the system BIOS.**

Accessing the BIOS Setup Screens

1. **Connect a local keyboard and monitor to the Sun Fire X2100 Server.**
2. **Reboot the server.**

   The system prompts you to press F1 to Continue or to press F2 to enter the BIOS setup screens.
3. **Press F2 to enter the BIOS setup screens.**

Loading Optimized Defaults

1. **Connect a local keyboard and monitor to the Sun Fire X2100 Server.**
2. **Reboot the server.**
3. **Press F2 when prompted to enter the BIOS Setup screen.**

   The BIOS Setup screen displays.
4. **Select the Load Optimized Defaults option.**
5. **Press the Y key and press Enter at the confirmation screen.**
6. **Press the F10 key to save changes and exit.**

Load Optimized Defaults After Updating the BIOS

After updating the BIOS, Sun recommends that you load optimized defaults. See "Loading Optimized Defaults" on page 5.

CMOS Checksum Error When Updating the BIOS

The system might report a CMOS checksum error after you update the BIOS version using the Supplemental ISO image CD. If this happens, load Optimized Defaults. See "Loading Optimized Defaults" on page 5

BIOS Setting Might Change When Updating BIOS

After you update to the BIOS version on the Supplemental CD, the BIOS might reset to the default BIOS settings. Any changes you made might be lost, requiring that you enter your settings again. Access the BIOS setup screens to check, and if necessary, enter your settings. See "Accessing the BIOS Setup Screens" on page 5.

Clear CMOS Jumper Functionality Disabled in BIOS Version 1.1.5

The functionality of the Clear CMOS jumper (JP2) is disabled in BIOS version 1.1.5 (and higher). To clear the CMOS, remove the system battery for several seconds. Procedures for clearing the CMOS have been added to the Sun Fire X2100 Server User Guide. For more information on updated documentation, see "Documentation URL" on page 2.

System Will Not Boot with 2 GB x 4 and IOMMU Set to 64 MB

The system will not boot if memory is configured with four 2 GB DIMMs and if IOMMU is set to 64 MB in the BIOS. To resolve this issue, update to BIOS v1.1.6, which is available on Sun Fire X2100 Supplemental ISO image 1.7. See "Accessing the BIOS Setup Screens" on page 5.

Pc-Check Memory Benchmark Test Hangs Keyboard and Mouse

The keyboard and mouse does not respond when running the Pc-Check memory benchmark test. To resolve this issue update to BIOS v1.1.6, which is available on Sun Fire X2100 Supplemental ISO image 1.7. See "Accessing the BIOS Setup Screens" on page 5.

CMOS Checksum Error When Plugging-in AC Power Cord

The system might report a CMOS checksum error after the AC power cord is plugged in. BIOS version 1.1.5 (or later), available on Sun Fire X2100 Supplemental ISO image 1.6, is required to resolve this issue, see "Accessing and Updating BIOS Versions" on page 3. To update to BIOS version 1.1.5, see "Updating (Flashing) the BIOS" on page 5.

Sel Log Time

The time in the Sel Log will be reset to the EPOCH when standby power is removed.

Power LED Issues

The following issues are related to the power LED:

- The system power LED does not turn off after an abnormal system shutdown, particularly during an operating system installation.
- The IPMI command, `chassis power off`, does not extinguish the power LED.

- The system power LED remains on after shutdown in Solaris 10 Operating System.

To reset the power LED, unplug the AC power cord. Then, plug in the power cord and power on the server.

Excluding Devices from Boot Menu (BIOS 1.1.1)

In systems with BIOS v1.1.1, devices removed from the BIOS/Advanced BIOS Features/Boot Device menu are not available in the boot menu. Additionally, due to a bug, the Boot Other Devices Enabled option does not select all devices.

Follow this procedure to exclude devices from the boot menu (accessed by pressing F8 during boot).

1. **Press the F2 key during system boot.**

   The BIOS setup screen appears.

2. **Enter the Advanced settings menu.**
3. **Remove the device from the Boot Device list.**
4. **Disable the Boot Other Devices option.**
5. **Set a Supervisor password.**
6. **Set the Security option to System.**
7. **Press the F10 key to save your settings and exit.**

   This issue is fixed in BIOS 1.1.2, which is available on Sun Fire X2100 Supplemental ISO image 1.5. See "Accessing and Updating BIOS Versions" on page 3 for more information.

Sun Crypto Accelerator 6000 Board

The Sun Crypto Accelerator 6000 Board (X6000A) requires BIOS 1.1.1, or higher, which is available on the Sun Fire X2100 Supplemental ISO image 1.4. See "Accessing and Updating BIOS Versions" on page 3 for more information.

Mirrored NVRAID Causes System Stress Test Failure

The Pc-Check Diagnostic software system stress test fails when drives are configured as an NVRAID in a mirror. This is fixed in the release of Pc-Check 6.05a, which is available on the Sun Fire X2100 Supplemental ISO image 1.5. See "Accessing and Updating BIOS Versions" on page 3 for more information.

Console Redirection Non-Functional When Moving from SMDC to COM1

If console redirection does not work when moving from the Service Processor (SMDC) to COM1, load Optimized Defaults. See "Loading Optimized Defaults" on page 5.

SATA Hot Plug for Windows Only

SATA hot plug is supported only for the Windows 2003 Server Operating System. If you wish to change hard disks with Linux or Solaris OS, you must perform a reconfigure reboot.

```
reboot -- -r
```

Initializing the Boot Sector on RAID Device

The BIOS RAID function does not initialize the boot sector on RAID device.

To initialize the boot sector:

1. **Boot the server with the Supplemental CD.**
2. **Select option 4, Exit to DOS, from the main menu.**
3. **At the prompt, type the command: `fdisk`**
4. **When the display comes up, select option 4 (Select Other Disk).**
   The system asks whether you want to initialize the other disk.
5. **Select Yes.**

Serial Console Redirection Instructions

To use serial console redirection with the Sun Fire X2100 Server, change the BIOS setting first, as follows:

1. **Connect a local keyboard and monitor to the Sun Fire X2100 Server.**
2. **Reboot the server.**
3. **Press the F2 key when you see the Sun logo screen.**
4. **Select Advanced BIOS Features ->Console Redirect ->Enabled over COM1.**

   With the COM port enabled, you can run an xterm window for console redirection, if you are running Solaris OS or a Linux operating system.

Note – With a tip setup, you may need to press the ESC key twice when moving to a higher level window in the BIOS Setup utility.

Use the following key sequences for the function keys when using serial console redirection with BIOS version 1.0.7 or greater.

Function Key	New Key Sequences for BIOS Version 1.0.7
F1	F1+ F1
F2	F2+F2
F3	ESC+3
F4	ESC+4
F8	ESC+8
F12	ESC+B
ESC	ESC+ESC
CTRL-ALT-DEL	ESC+C

Maximum CPU Speed

The CPU speed shown in `/proc/cpuinfo` is not always the processor maximum speed. Because of the AMD PowerNow power-saving functionality of the processor, the speed shown in `/proc/cpuinfo` will not always be the maximum speed of the processor.

If you need to display the maximum processor speed before displaying the `cpuinfo` contents, type the command:

```
/etc/init.d/cpuspeed stop
```

Linux Issues

This section contains Linux version-specific issues for the Sun Fire X2100 Server:

- "Monitor Not Recognized" on page 11
- "SLES 9 with a Dual-Core Processor Requires SP2" on page 11
- "SLES 9 SP 2, 64-bit on a Dual-Core Processor with 4 GB Memory Panics the Kernel" on page 11
- "SLES 9 32-bit Will Only Use a Single-Core of a Dual-Core Processor" on page 12
- "Keyboard Stuttering With Red Hat Linux OS" on page 14

Monitor Not Recognized

If a Linux OS does not recognize your monitor, you might need to edit the `Xorg.conf` file to match the parameters supplied with your monitor.

SLES 9 with a Dual-Core Processor Requires SP2

A dual-core Sun Fire X2100 Server running SLES 9 SP0 or SP1, 32-bit or 64-bit, will hang or panic the kernel. To resolve this issue you must use SLES 9 SP2, 32-bit or 64-bit.

SLES 9 SP 2, 64-bit on a Dual-Core Processor with 4 GB Memory Panics the Kernel

A dual-core Sun Fire X2100 Server running SLES 9 SP2, 64-bit, panics the kernel when configured with 4 GB of memory.

To resolve this issue, choose one of the following options:

- Upgrade to SLES 9 SP3 (this issue is fixed with SP3).
- Use the 32-bit kernel version of SLES 9 SP2.
- Change the memory configuration to less than 4 GB memory.
- Use the following workaround procedure to disable memory remapping:

Note – If you disable the memory remapping with 4 GB installed, the amount of memory available will be reduced to 3.5 GB.

---

1. **Press the F2 key during boot when you see the SUN logo.**
2. **Select Advanced Chipset Features –>DRAM Configuration.**
3. **Disable both S/W Memory hole remapping and H/W memory hole remapping.**
4. **Reboot the server.**

SLES 9 32-bit Will Only Use a Single-Core of a Dual-Core Processor

A dual-core Sun Fire X2100 server running SLES 9 SP1 or SP2, 32-bit uses only a single core on a dual-core processor system. To resolve this issue do one of the following:

- Upgrade to SP3 (this issue is fixed in SP3).
- For SP 2, use the following procedure to install the patch on the Supplemental CD.

To install the patch for SLES 9 (SP 2) 32-bit:

1. **Do one of the following, depending on whether you have already installed SLES 9 (SP 2):**
   - *If you have not yet installed SLES 9*:
     - Install SLES 9 SP2 from the distribution media.
     - Make sure you install the kernel source RPMs.
     - If there is no explicit checkbox for this during package selection, use the module search feature in the SLES installer and search for "kernel-source".

       The kernel source package should be listed in the search results; check it so that the source RPMs are installed.
   - *If SLES9 SP2 is installed without the source RPM:*
     - Use Install and Remove Software feature in `YaST2` to select and install the kernel source and gcc RPMs.

- Alternatively, you can install the source RPM manually by installing CD 2 from the SLES 9 SP2 distribution.

  The source RPM is in `suse/i586/kernel-source-.`*version*`.i586.rpm`.

  Where *version* is the version of the kernel.

2. **Log into the server as `root` (superuser).**

3. **With the kernel source RPMs installed, change directory to `/usr/src/linux-`*version* and copy the included patch (`sun.patch`) from the Supplemental CD to the `/usr/src/linux-`*version*`/` directory.**

   ```
   # cp /suppl_x.x/sun.patch /usr/src/linux-version/
   ```

   Where `suppl_`*x.x* is the directory on the *x.x* version Supplemental CD and *version* is the version of the kernel.

4. **Apply the patch to the kernel source by typing the following command.**

   ```
   # patch -p1 -g0 --verbose --dry-run < sun.patch
   ```

   This tests the patch without making any changes to the installed kernel source.

5. **Verify that the patch program does not report any failures (it might warn about carriage returns but that is not critical).**

   If any failures are reported, try to reinstall SLES 9, then repeat this procedure.

6. **If there are no failures, apply the patch for real by typing the same command without the `--dry-run` option.**

   ```
   # patch -p1 -g0 --verbose < sun.patch
   ```

7. **Copy the file `/proc/config.gz` to `/usr/src/linux-`*version*, unzip `config.gz`, and rename the resulting `config` file to `.config`.**

   ```
   # cp /proc/config.gz /usr/src/linux-version
   # cd /usr/src/linux-version/
   # gunzip config.gz
   # mv config .config
   ```

8. **Type the following `make` commands:**

   ```
   # make oldconfig
   # make all
   # make modules_install
   # make install
   ```

   A new kernel replaces the old kernel as a boot option on the grub boot loader menu.

9. **Reboot the system and select the new kernel when grub starts.**

Keyboard Stuttering With Red Hat Linux OS

Sometimes the terminal will show several repeated letters when only one letter is typed (keyboard stutter). The extra letters *are* recognized by the system, so the input given might be incorrect. This issue is fixed in BIOS v1.0.7 (and later), which is available on Supplemental CD image 1.2. See "Accessing and Updating BIOS Versions" on page 3.

Solaris OS Issues

This section discusses the following issues, which apply to Solaris 10 OS installed on a Sun Fire X2100 Server.

- "Solaris 10 Telnet Vulnerability Issue" on page 15
- "ZFS Support" on page 15
- "Monitor Not Recognized" on page 15
- "SMDC Soft-off Feature Not Currently Supported in Solaris 10" on page 16
- "Lower USB Connector and Solaris 10 HW1" on page 16

Solaris 10 Telnet Vulnerability Issue

Solaris 10 6/06 and 11/06 has security vulnerability in the in.telnetd(1M) daemon that might allow unauthorized remote users to gain access to a Solaris Host. Patch-ID# 120069-02 addresses this issue. The patch is available on the Sun Fire X2100 Supplemental ISO image 1.7 (see "Accessing and Updating BIOS Versions" on page 3).

Apply the patch manually or run the `install.sh` script on all Solaris 10 6/06 and 11/06 systems. For more information, refer to Sun Security Alert 102802. You can also access this patch (and related patches) at:

`http://www.sun.com/sunsolve`

ZFS Support

ZFS under the Solaris 10 OS requires BIOS 1.1.1 (or later), which is available on Sun Fire X2100 Supplemental ISO image 1.4. See "Accessing and Updating BIOS Versions" on page 3.

Monitor Not Recognized

If the Solaris OS does not recognize your monitor, you might need to edit the `Xorg.conf` file to match the parameters supplied with your monitor.

SMDC Soft-off Feature Not Currently Supported in Solaris 10

The soft-off feature for the SMDC card does not work with Solaris 10.

Lower USB Connector and Solaris 10 HW1

On systems running the Solaris 10 (HW1) operating system, the lower USB connector on the front of the server does not function. Use the top USB connector. To resolve this issue, install patch ID 118844-20 (and/or related patches). You can obtain this patch at: http://sunsolve.sun.com. This was fixed in Solaris 10 HW 1/06.

Windows Issues

The following issue applies when a Windows operating system is installed on the Sun Fire X2100 Server.

Windows Installation With a KVM Switch

When performing a Windows installation with a keyboard, video, mouse (KVM) switch, you must keep the switch set to the current system, until the installation begins formatting the disk. If you switch to a different system and then switch back again, before the disk formatting process has begun, the original system will not recognize the USB keyboard and mouse. Wait until the disk formatting begins, before switching to another system.

RAID Events Not Logged into Windows 2003 System Events

The Windows 2003 RAID Utility does not log RAID events in the Windows System Events. To resolve this issue upgrade the utility to v6.6.3, which is available on Supplemental ISO image 1.7. See "Accessing and Updating BIOS Versions" on page 3.

RAID Degraded on Windows HDD Mode Change

After multiple time-out or CRC errors, RAID degrades when Windows changes a HDD from DMA mode to PIO mode. To resolve this issue, upgrade the RAID driver to version 6.6.6, which is available on Supplemental ISO image 1.7. See "Accessing and Updating BIOS Versions" on page 3.