Sun Fire™ X4600 Server Release Notes For Software Releases 1.4.1 and 1.5

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www.sun.com

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Preface

This document contains procedures and special information for upgrading your Sun Fire X4600 server to Software Release 1.4.1 or Software Release 1.5.

Related Documentation

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

http://docs.sun.com/app/docs/prod/sf.x4600m2

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

http://docs.sun.com/app/docs/prod/sf.x4600m2?l=fr
http://docs.sun.com/app/docs/prod/sf.x4600m2?l=zh
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English documentation is revised more frequently and might be more up-to-date than the translated documentation.

For all Sun software and hardware manuals, go to:

http://docs.sun.com

For other documentation, go to:

http://www.sun.com/documentation

Product Updates

For product updates that you can download for the Sun Fire X4600 server, please follow the links from the following Web site:

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

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

Contacting Sun Technical Support

If you have technical questions about the Sun Fire X4600 server that are not answered in this document, go to:

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

See the Support menu for links to the Knowledgebase.

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

- Description of the problem, including the situation where the problem occurs and its impact on your operation
- Machine type, operating system version, and product version, including any patches and other software that might be affecting the problem
- Detailed steps on the methods you have used to reproduce the problem
- Any error logs or core dumps

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Sun Fire X4600 Servers Release Notes For Software Releases 1.4.1 and 1.5, part number 820-5636-11

CHAPTER 1

Description of Software Releases

This chapter describes the contents of the following releases:

– Software 1.5

– Software 1.4.1

It has the following sections:

- "Important Changes" on page 1
  - "Software 1.5" on page 1
  - "Software 1.4.1" on page 2
- "Operating System Support" on page 2
  - "Software 1.5" on page 2
  - "Software 1.4.1" on page 2
  - "Updated OS Support Information" on page 3
- "Software Versions and Enhancements" on page 3
  - "Software 1.5" on page 3
  - "Software 1.4.1" on page 4
- "Component Versions By Release" on page 4
- "LSI Firmware Features for Phase 10" on page 6

Important Changes

Software 1.5

Changes in Sofware 1.5 include:

- Support for Red Hat Enterprise Linux 5.2 (64-bit only).
- A CD image for SIA 2.2.11, which supports RHEL 5.2 and includes the latest sytem firmware.
- HERD 2.0.
- A system BIOS update that includes a workaround for a hardware bug 6707305. For more information, see the *Sun Fire X4600 Product Notes*.

Software 1.4.1

Changes in Software 1.4.1 include:

- Support for VMware ESX 3.5.
- Ipmitool and ipmiflash 1.8.9.4.
- Suncfg 1.12

Operating System Support

Software 1.5

- Red Hat Enterprise Linux 5 Update 2 (64-bit only)
- Red Hat Enterprise Linux 4 Update 4 and Update 5 (64-bit only)
- Solaris 10 OS 8/07
- SUSE Linux Enterprise Server 10 (64-bit only)
- SUSE Linux Enterprise Server 9 SP3 (64-bit only)
- Windows 2003 Server SP2 (both 32-bit and 64-bit; Standard and Enterprise editions)
- VMware ESX 3.5

Software 1.4.1

- Red Hat Enterprise Linux 4 Update 4 and Update 5 (64-bit only))
- Red Hat Enterprise Linux 3 Update 9 (64-bit only; Quad-Core AMD Opteron processors not supported; 8-GB DIMMs not supported)
- Solaris 10 OS 8/07

- SUSE Linux Enterprise Server 10 SP1 (64-bit only)
- SUSE Linux Enterprise Server 9 SP3 (64-bit only)
- Windows 2003 Server SP2 (both 32-bit and 64-bit; Standard and Enterprise editions)
- VMware ESX 3.5

Updated OS Support Information

For a current list of supported operating systems, refer to this web page:

http://www.sun.com/servers/x64/x4600/os.jsp

Software Versions and Enhancements

Software 1.5

Software 1.5 includes the following software:

- LSI MPT SAS firmware 1.22.01 and MPT BIOS 6.16.00 (Phase 10))
- BIOS 51 (0ABHA051)
- ILOM Service Processor firmware 2.0.2.5, Build 41803
- Bootable Diagnostics CD 2.3, which includes SunVTS 7.0ps4
- Sun Installation Assistant (SIA) for Linux and Windows CD version 2.2.11
- Tools and Drivers CD version 1.5
- MSM 2.18 for Linux and Windows
- LSI SNMP agent 3.11
- LSI cfggen utility (DOS version) for configuration of RAID arrays on internal disks
- IPMItool and IPMIflash 1.8.9.4
- SunCFG 1.12
- HERD 2.0

Software 1.4.1

Software 1.5 includes the following software:

- LSI MPT SAS firmware 1.22.01 and MPT BIOS 6.16.00 (Phase 10))
- BIOS 48 (0ABHA048)
- ILOM Service Processor firmware 2.0.2.5, Build 37165
- Bootable Diagnostics CD 2.3, which includes SunVTS 7.0ps4
- Sun Installation Assistant (SIA) for Linux and Windows CD version 2.0.141
- Tools and Drivers CD version 1.4
- MSM 2.18 for Linux and Windows
- LSI SNMP agent 3.11
- LSI cfggen utility (DOS version) for configuration of RAID arrays on internal disks
- SunCFG 1.12
- HERD 1.6

Component Versions By Release

The service processor (SP) and BIOS software and the LSI firmware versions might be updated in each new release. Version numbers are listed in the tables below.

.

TABLE 1-1 Server Release 1.5 Component Versions

Component Name	Sun Fire X4600 Server Version
ILOM FW 2.0.2.5	SP build 41803
BIOS	0ABHA051 (BIOS 51)
LSI Firmware	fw1.22.01-bios6.16.00

.

TABLE 1-2 Server Release 1.4.1 Component Versions

Component Name	Sun Fire X4600 Server Version
ILOM FW 2.0.2.5	SP build 37165
BIOS	0ABHA048 (BIOS 48)
LSI Firmware	fw1.22.01-bios6.16.00

.

TABLE 1-3 Server Release 1.3a Component Versions

Component Name	Sun Fire X4600 Server Version
ILOM FW 2.0.2.1	SP build 23233
BIOS	0ABHA047 (BIOS 47)
LSI Firmware	fw1.22.01-bios6.16.00

.

TABLE 1-4 Server Release 1.2 Component Versions

Component Name	Sun Fire X4600 Server Version
ILOM FW 1.1.1.1	SP build 16618
BIOS	0ABHA044 (BIOS 44)
LSI Firmware	fw1.16.00-bios6.10.00

TABLE 1-5 Server Release 1.1 Component Versions

Component Name	Sun Fire X4600 Server Version
ILOM FW 1.0.2	SP build 10708
BIOS	0ABHA041 (BIOS 41)
LSI Firmware	fw1.10.00-bios6.06.06

TABLE 1-6 Server Release 1.0 Component Versions

Component Name	Sun Fire X4600 Server Version
ILOM FW 1.0	SP build 14023
BIOS	0ABIT035 (BIOS 35)
LSI Firmware	fw1.10.00-bios6.06.06

LSI Firmware Features for Phase 10

These releases contains LSI Firmware Phase 10. Features introduced in LSI Firmware phase 10 are listed in

.

TABLE 1-7 LSI Firmware Phase 10 Features

Feature	Description
8MB Flash Part Support	Allows the support of 8 MB flash parts. Flash layout is being modified to support 8 MB parts.
Self Configuring Expander Support: Self Configuring	When the expander reports that it is a self-configuring expander, MPT firmware will not program route tables on that expander.
Self Configuring Expander Support: Configure Others	When the expander reports that it will configure others in the topology, MPT firmware will not program route tables in the topology where applicable.
Self Configuring Expander Support: Table-to-Table Routing	If the expander reports that table-to-table connections are allowed, do not flag it as an error or report it to the host.
Update Drive Firmware	Allows the user to prepare to update drive firmware via a new RAID Action Request.

TABLE 1-7 LSI Firmware Phase 10 Features *(Continued)*

Feature	Description
Change LED Behavior With SMART Filtering Enabled in BIOS	Allows control of SMART polling in firmware for IR volumes.
Protocol Specific Write-Cache Enable	Allows control of write cache on protocol basis.
Support for Enable and Disable of Hiding of Drives With DDF Metadata	n/a

CHAPTER 2

Flash Upgrading Your Server

This chapter contains procedures and information for upgrading Sun Fire™ X4600 server firmware. See the following sections:

- "How to Flash Upgrade Your Server" on page 9
- "How to Determine The Firmware Version of Your Server" on page 11
- "Special Considerations" on page 14
- "Recovering From a Failed Flash Update" on page 17
- "Upgrading LSI Firmware and BIOS" on page 22

How to Flash Upgrade Your Server

This release contains firmware for the Integrated Light Out Manager (ILOM), the BIOS, and the LSI disk controller. The ILOM firmware and the BIOS are tightly coupled and are always updated together. The LSI firmware is updated separately; this can occur before or after the other firmware updates.

In addition to the firmware updates, this release contains a number of optional enhancements to the software that was shipped with earlier releases

The following section shows a summary of the steps you should perform to update your server.

Summary of ILOM SP/BIOS Flash Upgrade Steps

1. Determine which version of the ILOM firmware that you currently have. See "How to Determine The Firmware Version of Your Server" on page 11.

Release Version	Firmware version	Firmware Build
Release 1.5	FW 2.0.2.5	41803
Release 1.4.1	FW 2.0.2.5	37165
Release 1.3a	FW 2.0.2.1	26075
Release 1.2	FW 1.1.1.1	16618
Release 1.1	FW 1.0.2	10708
Release 1.0	FW 1.0.0	14023

Note – If your ILOM software is build 23233, then you have installed the faulty ILOM firmware provided with Software 1.3. You will need to take the remediation steps described in "ILOM in Software 1.3 Causes FRU Data to be Lost (6631275)" on page 14.

2. Review the section "Special Considerations" on page 14 for known issues and considerations regarding the flash upgrade.
3. Download theflash image file by following the links from the URL below:

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

4. Use the ILOM GUI, the ILOM CLI `load` command, or N1 System Manager to perform the flash upgrade.

   Because of the increased memory usage during web-based GUI operations, you might need to use the ILOM CLI `load` command to upgrade the ILOM firmware. For example:

   From the ILOM CLI, use the following command

   `load -source tftp://`*`tftpserver`***`/`***`firmware.ima`***

Caution – To ensure a successful flash upgrade, do *not* attempt to modify the ILOM configuration, or use other ILOM GUI, CLI, SNMP, or IPMI interfaces during the flash upgrade process. Wait until after the flash upgrade succeeds to make further ILOM configuration changes. Note that the ILOM upgrade procedure might reset the service processor if it detects recent ILOM configuration changes, or multiple ILOM users or connections.

Note – A firmware upgrade causes the server and ILOM to reset. An upgrade takes about 20 minutes to complete. ILOM will enter a special mode to load new firmware. No other tasks can be performed in ILOM until the firmware upgrade is complete and the ILOM is reset.

5. If you cannot get output to your serial console after the flash upgrade, you might have to clear CMOS settings. This is because your default CMOS settings might have been changed by the new BIOS upgrade.

   To clear CMOS settings, use the following commands (in this example, the default username, root, and the defaultpassword, changeme, are used):

   ipmitool -U root -P changeme -H *<SP IP>* **chassis power off**

   ipmitool -U root -P changeme -H *<SP IP>* **chassis bootdev disk clear-cmos=yes**

6. Optional step: If you have any problems with the flash upgrade, refer to the section"Recovering From a Failed Flash Update" on page 17.

How to Determine The Firmware Version of Your Server

There are three alternate procedures in this section that you can use:

- "Determining the Firmware Version Using the CLI Through the Management Ethernet Port" on page 11
- "Determining the Firmware Version Using the CLI Through the Serial Port" on page 12
- "Determining the Firmware Version Using the Web GUI" on page 13

Determining the Firmware Version Using the CLI Through the Management Ethernet Port

1. **Connect an RJ-45 Ethernet cable to the NET MGT Ethernet port on the back panel.**

2. **Establish an SSH connection using the following command, then enter the default password** (`changeme`) **when you are prompted:**

   `# ssh -l root` *address*

   After you have successfully logged in, the SP displays its default command prompt:

   ```
   ->
   ```

3. **Type the** `version` **command, which will return output similar to the following:**

```
-> version
  SP firmware version: 1.0
  SP firmware build number: 14023
  SP firmware date: Tue Sep 13 12:50:37 PDT 2006
  SP filesystem version: 0.1.13
```

The ILOM firmware build version is the `build number` listed above.

Determining the Firmware Version Using the CLI Through the Serial Port

1. **Configure your terminal device or the terminal emulation software running on a laptop or PC to the following settings:**

- 8N1: eight data bits, no parity, one stop bit
- 9600 baud
- Disable hardware flow control (CTS/RTS)
- Disable software flow control (XON/XOFF)

2. **Connect a serial cable from the RJ-45 SER MGT port on your server's back panel to your terminal device or PC.**

3. **Press Enter on the terminal device to establish a connection between that terminal device and the server's SP.**

   The SP displays a login prompt.

   `SUNSP`*`0003BA84D777`* `login:`

   In this example login prompt, *0003BA84D777* is the Ethernet MAC address of the SP. This will be different for each server.

4. **Log in to the ILOM SP and type the default user name (`root`) with the default password (`changeme`).**

   After you have successfully logged in, the SP displays its default command prompt:

   ```
   ->
   ```

5. **Type the `version` command, which will return output similar to the following:**

```
-> version
  SP firmware version: 1.0
  SP firmware build number: 14023
  SP firmware date: Tue Sep 13 12:50:37 PDT 2006
  SP filesystem version: 0.1.13
```

The ILOM firmware build version is the `build number` listed above.

Determining the Firmware Version Using the Web GUI

1. **Connect to the ILOM Web GUI by typing the IP address of the server's SP into your browser's URL field. For example:**

   ```
   https://129.146.53.150
   ```

2. **Log in to the ILOM SP and type the default user name (`root`) with the default password (`changeme`).**

   The first web page that is presented is the System Information -> Versions page, which includes the Build Number.

How to Reset the SP

To reset the ILOM SP, there are several methods you can use (for complete details, see the *Integrated Lights-Out Manager Administration Guide*, 819-1160):

- From the ILOM SP graphical web interface, navigate to the Maintenance tab, then use the Reset SP action.
- From the ILOM CLI, use the following command:

  `reset /SP`

- Using IPMItool, use the following command:

  `ipmitool -U root -P` <*password*> **`-H`** <*sp_ipaddress*> **`bmc reset cold`**

- You can also reset the ILOM SP by shutting down the host, then removing and restoring AC power cords to the system.

Special Considerations

This section describes considerations that might affect the firmware upgrade.

Current Issues

ILOM in Software 1.3 Causes FRU Data to be Lost (6631275)

Software 1.3 for the Sun Fire X4600 contains a build of ILOM 2.0.2.1 with a serious bug. Upgrading to this ILOM version causes FRU data to be lost. Because of this, Software 1.3 has been withdrawn and replaced by Software 1.3a.

If you *have not* yet upgraded to the ILOM provided with Software 1.3, this issue does not affect you. Simply discard any copies of Software 1.3 and obtain Software 1.3A, which contains ILOM firmware with the fix.

If you *have* upgraded to the ILOM provided with Software 1.3, you must install the ILOM firmware provided with Software 1.3A. Doing so will both remove the bug and recover some of the lost FRU data. The remaining FRU data must be re-entered manually.

Caution – If you have installed the ILOM firmware included in Software 1.3 *do not downgrade to an older version of the ILOM firmware*. Doing so will prevent any of the lost data from being recovered. The only recovery mechanism is to install the ILOM build provided with Software 1.3A.

Identifying your ILOM Firmware

You can identify your ILOM firmware using the ILOM CLI or WebGUI:

- From the CLI enter the `version` command.
- From the WebGUI, bring up the System Information/Versions tab.

In the information you obtain, find the “Firmware Version” (just “Firmware” in the CLI) and “Firmware Build Number”. Depending on the values you obtain, you should take one of the following actions:

- If the “Firmware Version” is 2.0.2.1 and the “Firmware Build Number” is 23233, then you have installed the ILOM firmware included in Software 1.3. You must install the replacement ILOM firmware in Software 1.3A and re-enter some lost data, as described in “Lost FRU Data and How To Recover it.” on page 15
- If the “Firmware Version” is 2.0.2.1 and the “Firmware Build Number” is 26075, then you have already installed the ILOM firmware included in Software 1.3A. No further action is required.
- If the “Firmware Version” and “Firmware Build Number” are any other values, then this issue does not affect you.

Lost FRU Data and How To Recover it.

The ILOM bug causes the following FRU data to be lost:

- Product Part Number
- Product Serial Number
- Chassis Serial Number

You can recover the Product Part Number and Product Serial Number by installing the ILOM firmware provided with Software 1.3A. If you downgraded the ILOM after observing the problem, Product Part Number and Product Serial Number are lost permanently, and must be re-entered. Chassis Serial Number must be re-entered in any case.

Follow these steps to re-enter the lost FRU data:

1. **Use SSH to log in to the “sunservice” ILOM account. From the Solaris or Linux command line:**

   `ssh -l sunservice` *ipaddress*

   where *ipaddress* is the Service Processor IP address.

2. **Enter one of the following commands. If you only need to re-enter the chassis serial number, enter:**

   `servicetool --fru_chassis_serial_number`

   If you need to re-enter all three FRU values, enter:

   `servicetool --fru_product_part_number`
   `--fru_product_serial_number --fru_chassis_serial_number`

3. **Enter the FRU information when prompted.**

FRU Information Appears Empty After Updating the ILOM Firmware and the BIOS (6406138)

The host CPU and DIMM FRU information shown by the service processor is provided to the service processor during each BIOS power-on-self-test (POST). Therefore, after a BIOS/ILOM upgrade, this FRU information is empty until the first host BIOS POST.

Workaround

This is expected behavior. Reset the server and allow it to complete POST during bootup to repopulate the FRU lists.

Performing Update From CLI Might Result in Keyboard Redirection Error Dialog Box in JavaRConsole (6485951)

If you use the CLI to perform the update and JavaRConsole is active, a dialog box might appear in JavaRConsole with the following message and an OK button:

```
Keyboard redirection error: an established connection was
aborted by the software in your host machine
```

Workaround

This is expected behavior. Click OK in the dialog box to continue. It is possible that clicking the OK button will not close the dialog box. In that case, terminate the JavaRConsole process. For example, on a Windows platform, press Control+Alt+Delete to bring up the list of open processes, then terminate the JavaRConcole process.

Serial Console on Host System Might Stop Working After BIOS Update Until CMOS Settings Are Cleared (6489959)

After updating the system BIOS, you might need to clear CMOS settings to get serial console output from the host. This is because CMOS defaults might be changed from your existing settings in the new BIOS.

Workaround

If you cannot get serial console output, clear the CMOS settings. To clear CMOS settings, use the following commands (in this example, the default username, root, and the defaultpassword, changeme, are used):

ipmitool -U root -P changeme -H <*SP IP*> **chassis power off**

ipmitool -U root -P changeme -H <*SP IP*> **chassis bootdev disk clear-cmos=yes**

Recovering From a Failed Flash Update

This section contains instructions for recovering from a failed Sun Fire X4600 ILOM firmware upgrade. Several issues have been identified with the firmware upgrade, which could result in a failed or incomplete firmware upgrade.

Use the following procedure to recover from a failed firmware upgrade. Note that in a small percentage of cases (such as when no output is displayed on the SP serial port), the Graphics Redirect and Service Processor (GRASP) board must be replaced.

Prerequisites:

- A trivial file-transfer protocol (TFTP) server is required to reload the ILOM firmware.
- The host system must also remain powered off for the duration of the recovery process.

Note – Numbers printed below are in hexidecimal unless otherwise noted.

Recovery Steps:

1. **Determine if the ILOM SP first-level booter (referred to in this procedure as U-Boot) is intact. Follow documented procedures to connect to the SP serial port, apply power to the system, and observe the initial ILOM boot messages.**

   See the *Sun Fire X4600 Server Installation Guide*, 819-4341 for details.

- If no screen output is displayed, stop here. The GRASP board must be replaced. Refer to the *Sun Fire X4600 Server Service Manual*, 819-4342 for instructions.
- If screen output is displayed, continue to the next step.

2. **Enter the ILOM SP U-Boot command interpreter with `xyzzy`.**

When the message, `Booting linux in 2 seconds...` is displayed, during ILOM initial boot, type **`xyzzy`** to enter the U-Boot command interpreter.

Note – The characters typed will not echo. Cutting and pasting the characters improves the chance of success. You might need to try the process of applying power to the system and entering **`xyzzy`** several times.

---

3. **Disable automatic reboot.**

Set the U-Boot environment variable, `bootretry`, to `-1` to temporarily disable automatic reboot:

```
set bootretry -1
```

4. **Configure the network for TFTP access.**

   a. **Copy the ILOM SP firmware image to a TFTP server that is accessible on the same IP subnet as the ILOM SP network port.**

   b. **Set the IP address for the ILOM SP and the TFTP server IP address by setting the `ethaddr` and `serverip` U-Boot variables.**

      `set ipaddr` *n.n.n.n*
      `set serverip` *n.n.n.n*

5. **Use the U-Boot `tftp` command to download the ILOM firmware image.**

`tftp 100000` <*firmware image*>

Note – If the TFTP server or filename is incorrect, you might need to enter ^C to halt the `tftp` command, then repeat this recovery procedure.

Be sure that the complete flash image is actually downloaded successfully before proceeding. You should see a message similar to:

```
=> tftp 100000 r15028.rom.ima
Using FCC1 ETHERNET device
TFTP from server 10.6.154.8; our IP address is 10.6.154.99
Filename 'r10644.rom.ima'.
Load address: 0x100000

Loading:
#################################################################

#################################################################

#################################################################
```

```
#############################################################

#########################

done

Bytes transferred = 13107200 (c80000 hex)
```

6. Confirm that the download succeeded:

a. Confirm that the `tftp` **command output ends with**
`Bytes transferred =` *ByteCount*

b. Use the `md` **command and confirm that its output displays strings from the beginning of the firmware image file. For example:**

=> **md 100000**

```
00100000: 244d4f44 554c4524 01004000 00000200    $MODULE$..@.....
00100010: 00000000 000000f2 67726173 70000000    ........grasp...
00100020: 01000200 40000000 61000000 0000ffff    ....@...a.......
00100030: ffff0000 00000100 00000000 0000aa55    ...............U
00100040: 46575f56 45525349 4f4e3d31 2e302e31 FW_VERSION=1.0.1
00100050: 0a46575f 44415445 3d4d6172 20203320 .FW_DATE=Mar  3
00100060: 32303036 0a46575f 4255494c 4454494d    2006.FW_BUILDTIM
00100070: 453d3130 3a35363a 30370a46 575f4445    E=10:56:07.FW_DE
00100080: 53433d57 41524e49 4e47203a 20554e4f    SC=WARNING : UNO
00100090: 46464943 49414c20 4255494c 44212120    FFICIAL BUILD!!
001000a0: 0affffff ffffffff ffffffff ffffffff    ................
```

7. Erase the existing ILOM flash image:

Caution – Interrupting the flash recovery process from this point onwards, or entering an incorrect U-Boot command, might result in a disabled service processor, which will require replacement. DO NOT stop or remove power from the system from this point onward.

a. Erase the exiting flash image with the `erase ff380000 ffffffff` **command.**

A series of dots will be displayed indicating the progress of the erase. For example:

=> **erase ff380000 ffffffff**

```
................................................................
..............Erased 200/200 sectors
```

b. If a failure occurs, retry the `erase` command repeatedly until it succeeds.

Note – If a persistent failure occurs, the service processor is not flash-upgradable, and must be replaced. Refer to the *Sun Fire X4600 Server Service Manual*, 819-4342, for details on replacing the GRASP board.

---

8. Program the new ILOM firmware image:

a. Use the U-Boot `cp.b` command to copy the new ILOM firmware image from the download location at 100000 to ff380000, until end address ffffffff.

For example:

=> **`cp.b 100000 ff380000 ffffffff`**

```
Copy to Flash
................................................................
................................................................
.......done
```

b. Use the `fmh` command to verify the new ILOM firmware image.

Before resetting, make sure the copy succeeded, using the `fmh` command, which should display firmware sections. For example:

```
=> fmh
Listing FMH Modules
Flash Size : 32768 KB
Erase Size : 64 KB
Sector Count : 512

FMH Located at 0xff380000 of Size 0x00020000
Name    : grasp
Ver     : 1.0
Type    : 0x0002
Flags   : 0x0000
Size    : 0x00000061
Location: 0xff380040
LoadAddr: 0xffffffff
CheckSum: Not Computed
---------------------------------------------------

FMH Located at 0xff3a0000 of Size 0x00120000
Name    : sysbios
Ver     : 1.31
```

```
Type    : 0x0000
Flags   : 0x0100
Size    : 0x00100000
Location: 0xff3c0000
LoadAddr: 0xffffffff
CheckSum: Valid
-------------------------------------------------

FMH Located at 0xff4c0000 of Size 0x000c0000
Name    : osimage
Ver     : 1.0
Type    : 0x0006
Flags   : 0x0119
Size    : 0x000ac9c8
Location: 0xff4c0040
LoadAddr: 0x00c00000
CheckSum: Valid
...
```

Note – If the command output does not show anything, you may have entered an incorrect memory address. Repeat the `tftp`, `erase` and `cp.b` commands until the image is properly copied. Note that you must erase the existing firmware image before attempting to copy a new image.

---

9. **Reset the ILOM service processor.**

   Once you are certain that the service processor firmware image has been recovered, you can restart the service processor with the `reset` command.

   => **`reset`**

10. **Recover the system BIOS:**

Note – This manual ILOM SP recovery process does *not* reflash the system BIOS. Repeat the firmware upgrade process, using the ILOM GUI or CLI procedures as described in "How to Flash Upgrade Your Server" on page 9 and the *Integrated Lights-Out Manager Administration Guide*, 819-1160.

Be sure to reset your service processor and BIOS configuration settings as needed, because they might be lost during this recovery.

Upgrading LSI Firmware and BIOS

Note – LSI MPT SAS firmware and MPT BIOS must be upgraded to LSI FW 1.22.01 and MPTBIOS 6.16.00 for this release.

To update the LSI firmware and BIOS, use the following steps:

1. **Download the image file and burn it to a CD.**
2. **Boot from the CD you just created, then select option 1 from the list that is displayed:**

```
Press 1 to update

Press 2 to exit to DOS
```