

# Sun™ Enterprise™ x500 to Sun™ Enterprise™ x500 Systems Upgrade Guide

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*Instructions for Upgrading a Sun Enterprise 3500,  
4500, or 5500 System to a Larger Sun Enterprise  
System*



THE NETWORK IS THE COMPUTER™

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# Sun Enterprise x500 Server Family Upgrades

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This document provides upgrade information for Sun™ Enterprise™ x500 systems to larger Sun Enterprise x500 systems.

- From Sun Enterprise 3500 to Sun Enterprise 4500 or 5500—page 2-1
- From Sun Enterprise 4500/5500 to Sun Enterprise 6500—page 2-2

The procedure for each of these upgrades includes:

1. Prepare your system for upgrade.
2. Exchange items that will not be reused in the upgraded system for new parts.
3. Once the upgrade parts are received, install new and reusable parts as appropriate.

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## 1.1 Related Documents

During the upgrade process, refer to the documents in TABLE 1-1 for information on removal and installation of components.:

TABLE 1-1 Related Documents

Document	Part Number
<i>Sun Enterprise 3500 System Installation Guide</i>	805-2629
<i>Sun Enterprise 3500 System Reference Manual</i>	805-2630
<i>Sun Enterprise 6500/5500/4500 Systems Installation Guide</i>	805-2631
<i>Sun Enterprise 6500/5500/4500 Systems Reference Manual</i>	805-2632

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## 1.2 Preparing Your System

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**Caution** – Before powering-off your system, halt the operating system using the appropriate commands. Failure to do so can cause the loss of disk drive data. For more information, refer to the *Solaris Handbook for SMCC Peripherals* that corresponds to your operating system.

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### 1. Power-off the server.

- For Enterprise 3500 systems, refer to Chapter 11, “Powering Off and On,” in the *Sun Enterprise 3500 System Reference Manual*
- For Enterprise 4500/5500 systems, refer to Chapter 11, “Powering Off and On,” in the *Sun Enterprise 6500/5500/4500 Systems Reference Manual*

### 2. Remove the reusable parts listed in TABLE 1-2 (for Enterprise 3500 systems) or TABLE 1-3 (for Enterprise 4500/5500 systems) from your Sun Enterprise server.

Refer to the referenced sections in your system manual for detailed procedures.

The following items should receive special consideration during the upgrade, as migration will cause the system to run at the slower speed of the gigaplane or CPU MHz. Migrate these parts only if the slower speed is to be maintained.

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**Note** – You may mix old and new boards in your upgraded server. The gigaplane will run at the speed of the slowest board. A flash PROM may be required: Enterprise x500 servers require PROM version 3.2.14 or later. See “CPU Modules” in the following list for more information on PROM versions.

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## 1. CPU modules

336 MHz, 250 MHz and 167 MHz modules are supported. However, if you are migrating a 167 MHz module, you will need to ensure that your PROM version is 3.2.14 or higher.

To determine what PROM version is on your system, use POST (power-on self-test). If the version listed is earlier than 3.2.14, you can download a patch for the PROM level upgrade at URL: <http://sunsolve.sun.com/>, or contact your Sun service provider. For further information on POST and PROM version upgrades, refer to the *Sun Enterprise 6x00/5x00/4x00/3x00 Systems Flash PROM Programming Guide*, part number 802-5579.

## 2. CPU/Memory board

An upgrade exists for the 2600 CPU/Memory board. Please contact your Sun sales representative for information.

## 3. SBus I/O board

## 4. Graphics I/O board

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**Note** – Hard disks in the Sun Enterprise 3500 server *cannot* migrate to the Sun Enterprise 4500 or 5500 Server. Please contact your Sun sales representative for information on disk upgrade (trade-in) options.

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**TABLE 1-2** List of Reusable Parts for 3500 Systems

Reusable Part	Reuse in 4500/5500	Removal procedure in <i>Sun Enterprise 3500 System Reference Manual</i>
SIMMs	Yes	Section 3.4
Peripheral power supply/AC	No	Section 7.3
Power/cooling module (PCM)	Yes	Section 7.4
Tape drive	Yes	Section 7.2
CPU/Memory board <sup>1</sup>	Yes	Section 3.4
CPU Modules <sup>1</sup>	Yes	Section 3.4
SBus I/O board <sup>1</sup>	Yes	Section 4.5
Graphics I/O board <sup>1</sup>	Yes	Section 4.5
Clock board	Yes	Section 5.2
CD-ROM drive	Yes	Section 8.1

1. Migrate these parts ONLY if the slower speed of the Gigaplane or CPU MHz is to be maintained.

**TABLE 1-3** List of Reusable Parts for 4500/5500 Systems

Reusable Part	Use in E6500	Removal procedure in <i>Sun Enterprise 6500/5500/4500 Systems Reference Manual</i>
SIMMs	Yes	Section 3.4
Power/cooling module (PCM)	Yes	Section 7.4
Tape drive	Yes	Section 8.1
Disk board	Yes	Section 5.5
Peripheral power supply	Yes	Section 7.3
CPU/Memory board <sup>1</sup>	Yes	Section 3.4
CPU Modules <sup>1</sup>	Yes	Section 3.4
SBus I/O board <sup>1</sup>	Yes	Section 4.5
Graphics I/O board <sup>1</sup>	Yes	Section 4.5
Clock board	Yes	Section 6.2
CD-ROM drive	Yes	Section 8.2

1. Migrate these parts ONLY if the slower speed of the Gigaplane or CPU MHz is to be maintained.

## 1.3 New and Exchangeable Parts

The upgrade package includes items that are to be exchanged as well as several new items. Exchanged items include:

- System enclosure or chassis
- System boards
- Power supplies
- Power/Cooling modules (PCM)

It is the customer's responsibility to ensure that returned equipment is packaged adequately to prevent damage and expedite shipping.

- 1. Pack the returnable parts in appropriate shipping boxes.**
- 2. Label the boxes "Box 1 of  $n$ ," "Box 2 of  $n$ ," and so forth, where  $n$  is the total number of boxes shipped.**
- 3. Attach the Return Materials Authorization(RMA) label to Box 1 of  $n$ .**

The RMA label is contained in the Sun Enterprise X500 Server Family system upgrade kit.







# Upgrade Procedures

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## 2.1 Sun Enterprise 3500

The Sun Enterprise 3500 system can be upgraded to a Sun Enterprise 4500 or 5500 system.

### 2.1.1 Upgrading to a Sun Enterprise 4500 or 5500

Once you have completed the procedure in Section 1.2 “Preparing Your System”, remove the parts listed in TABLE 1-4 and return them to Sun Microsystems, Inc. for exchange using the procedure in Section 1.3 “New and Exchangeable Parts.”

The following items require special consideration. For more detailed information, refer to Appendix D, “Rules for System Configuration,” in the *Sun Enterprise 6500/5500/4500 Systems Reference Manual*

- Filler boards are required in every unpopulated board slot in the Sun Enterprise card cage.
- PCM filler panels are required for every unpopulated PCM slot.
- One PCM is required for every two installed boards.
- The PCM must be adjacent to the installed boards.

#### 2.1.1.1 Installing Parts in the 4500 or 5500 System

1. **Unpack and prepare the new Sun Enterprise 4500 or 5500 server.**  
Refer to the *Sun Enterprise 6500/5500/4500 Systems Installation Guide*.

**2. Install all new parts that were exchanged.**

Refer to the *Sun Enterprise 6500/5500/4500 Systems Installation Guide*.

**3. Install the parts to be reused (TABLE 1-2) in the Sun Enterprise 4500 or 5500 server.**

Refer to the referenced sections in the *Sun Enterprise 6500/5500/4500 Systems Manual* for instructions on installing these parts.

**4. Cable the Sun Enterprise 4500 or 5500 server.**

Refer to Chapter 2, “Cabling the System,” in the *Sun Enterprise 6500/5500/4500 Systems Installation Guide* and connect the cables.

**5. Power on the Sun Enterprise 4500 or 5500 server.**

Refer to Chapter 3, “Powering the System On and Off,” in the *Sun Enterprise 6500/5500/4500 Systems Reference Manual* to complete the upgrade.

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## 2.2 Sun Enterprise 4500 or 5500

A Sun Enterprise 4500 or 5500 system can be upgraded to Sun Enterprise 6500 system using the procedures that follow.

### 2.2.1 Upgrading to a Sun Enterprise 6500

Once you have completed the procedure in Section 1.2 “Preparing Your System, remove the parts listed in TABLE 1-4 and return them to Sun Microsystems, Inc. for exchange using the procedure in Section 1.3 “New and Exchangeable Parts.

The following items require special consideration. For more detailed information, refer to Appendix D, “Rules for System Configuration,” in the *Sun Enterprise 6500/5500/4500 Systems Manual*:

- Load boards are required in every unpopulated board slot in the Sun Enterprise 6500 server.
- PCM filler panels are required for every unpopulated PCM slot.
- One PCM is required for every two installed boards.
- The PCM must be adjacent to the installed boards.
- Disk boards must be installed only in slots 14 and 15.
- When only one Disk board is installed, it must be in slot 15.

## 2.2.1.1 Installing Parts in the 6500 System

### 1. Unpack and prepare the new Sun Enterprise 6500 server.

Refer to the *Sun Enterprise 6500/5500/4500 Systems Installation Guide*

### 2. Install all new parts that were exchanged.

Refer to the *Sun Enterprise 6500/5500/4500 Systems Installation Guide*.

### 3. Install the reusable parts, listed in TABLE 1-3 in the Sun Enterprise 6500 server.

Refer to the referenced sections in the *Sun Enterprise 6500/5500/4500 Systems Manual* for instructions on installing these parts.

### 4. Cable the Sun Enterprise 6500 server.

Refer to Chapter 2, “Cabling the System,” in the *Sun Enterprise 6500/5500/4500 Systems Installation Guide* and connect the cables.

### 5. Power on the Sun Enterprise 6500 server.

Refer to Chapter 3, “Powering the System On and Off,” in the *Sun Enterprise 6500/5500/4500 Systems Installation Guide* to complete the upgrade.

