# Sun Fire™ V215 and V245 Servers Installation Guide

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# Preface

The *Sun Fire V215 and V245 Servers Installation Guide* provides instructions, background information, and reference material to help you install a Sun Fire™ V215 and V245 server.

The instructions in this document assume that you are a system administrator who is experienced with the Solaris™ Operating System (Solaris OS).

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**Note –** All internal components must be installed by a Sun™ qualified service technician.

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## How This Document Is Organized

This guide is organized in this way:

Chapter 1 provides an overview of the installation process.

Chapter 2 provides instructions for installing a Sun Fire V215 or V245 server.

Chapter 3 provides instructions for powering on the server and configuring the preinstalled software.

# Using UNIX Commands

This document might not contain information about basic UNIX® commands and procedures such as shutting down the system, booting the system, and configuring devices. Refer to the following for this information:

- Software documentation that you received with your system
- Solaris OS documentation, which is at:

  http://docs.sun.com

# Shell Prompts

| Shell | Prompt |
|---|---|
| C shell | *machine-name*% |
| C shell superuser | *machine-name*# |
| Bourne shell and Korn shell | $ |
| Bourne shell and Korn shell superuser | # |

# Typographic Conventions

| Typeface* | Meaning | Examples |
|---|---|---|
| `AaBbCc123` | The names of commands, files, and directories; on-screen computer output | Edit your `.login` file.<br>Use `ls -a` to list all files.<br>`% You have mail.` |
| **`AaBbCc123`** | What you type, when contrasted with on-screen computer output | `% su`<br>`Password:` |
| *AaBbCc123* | Book titles, new words or terms, words to be emphasized. Replace command-line variables with real names or values. | Read Chapter 6 in the *User's Guide*.<br>These are called *class* options.<br>You *must* be superuser to do this.<br>To delete a file, type `rm` *filename*. |

* The settings on your browser might differ from these settings.

# Related Documentation

Unless otherwise stated, the documents listed in the following table are at:

http://www.sun.com/documentation

| Title | Description | Part Number |
|---|---|---|
| *Sun Fire V215 and V245 Servers Product Notes* | Includes late breaking information. | 819-3040 |
| *Sun Fire V215 and V245 Servers Getting Started Guide* | Provides an overview of the servers, installation process, site planning, and documentation. | 819-3041 |
| *Sun Fire V215 And V245 Servers System Administration Guide* | Provides instructions for administrative tasks that are specific to the Sun Fire V215 and V245 servers. | 819-3036 |
| *Sun Fire V215 and V245 Servers Service Manual* | Provides instructions for removing and replacing parts in the servers. | 819-3038 |
| *Sun Fire V215 and V245 Compliance and Safety Manual* | Provides the declarations of conformity and platform-specific safety information. | 819-3039 |
| *Advanced Lights Out Manager (ALOM) 1.6 Administration Guide* | Provides instructions for using the Advanced Lights Out Manager (ALOM) software. | 819-2445 |

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|---|---|
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CHAPTER 1

# Preparing for Installation

This chapter provides background information about the Sun Fire V215 and V245 server installation procedures that are provided in Chapter 2.

This chapter contains these topics:


- "Tools Needed" on page 1
- "Shipping Kit Inventory List" on page 1
- "Installation Overview" on page 2
- "Safety Precautions" on page 4


## Tools Needed

You need the following tools to complete the installation:

- No. 2 Phillips screwdriver
- ESD mat and grounding strap

## Shipping Kit Inventory List

Standard and optional components of Sun Fire V215 and V245 servers are installed at the factory. However, if you ordered a keyboard or a monitor, these are shipped separately.

**Note –** Inspect the shipping cartons for evidence of physical damage. If a shipping carton appears damaged, request that the carrier's agent be present when the carton is opened. Keep all contents and packing material for the agent's inspection.

The following list includes the components that you should have received:

- Sun Fire V215 or V245 server chassis
- Slide rail assemblies
- Assessories kit that includes printed documentation and mounting screws and nuts in assorted sizes to fit various types of racks and cabinets
- Cable management arm with six preinstalled cable clips
- Manufacturer's instruction sheet for the cable management arm

# Installation Overview

This installation guide provides procedures that must be performed in the following order:

1. Verify that you have received all of the components.
2. Gather the configuration information for the server. You will need the following parameters:
   - Netmask
   - IP address for the system controller
   - Gateway IP address
3. Mount the server into the rack. See "Installing the Server in a Rack" on page 5.
4. Connect the server to a serial terminal or a terminal emulator. See "Powering On the System Controller" on page 23.

**Tip –** Connect the serial terminal or a terminal emulator before you connect the power cables so that you see the system messages.

5. Connect the data cables to the server. See "Cabling the Server" on page 18.
6. Connect one or two AC power cable to the server and examine the display for any error messages. See "Powering On the System Controller" on page 23.

**Caution –** There is a potential for electric shock if the server and related equipment are not properly grounded.

**Note –** The system controller (SC) runs on the 3.3V standby voltage. As soon as AC power is connected to the system, the system controller immediately powers on, runs diagnostics, and initializes the Sun Advanced Lights Outs Management (ALOM) firmware.

7. After the system controller boots, access the ALOM command-line interface through the serial management port. See "To Log Into the System Controller" on page 26.

8. Configure the SC network addresses. See "To Configure the System Controller Network Management Port" on page 26.

**Note –** The SC network management port is not operational until you configure the network settings for the system controller (through the SC serial management port).

9. Enable the new configuration by resetting the system controller. See "To Reset the System Controller" on page 28.

10. Power on the server from a keyboard using the ALOM software. See "Powering On the System Controller" on page 23.

11. Go to the preinstalled software site to obtain configuration information, patches, and updates:

    `http:www.sun.com/software/preinstalled`

12. Configure the Solaris OS. See "Booting the Solaris Operating System" on page 32.

    The Solaris OS is preinstalled on the server. When you power on the server, you are automatically guided through the Solaris OS configuration procedure.

13. Install any required patches or updates to the server.

14. (Optional) Load additional software from the Solaris OS media kit.

    The Solaris OS media kit (sold separately) includes several CDs containing software to help you operate, configure, and administer your server. Refer to the documentation provided with the media kit for a complete listing of included software and detailed installation instructions.

# Safety Precautions

Read the following safety precautions before you attempt to install the server:

- Deploy the antitilt bar on the cabinet or rack before beginning an installation.
- The server weighs approximately 40 lb (18 kg). Two people are required to lift and mount the system into a rack enclosure when using the procedures in this chapter.

CHAPTER 2

# Installing the Sun Fire V215 and V245 Servers

The instructions for installing the Sun Fire V215 and V245 servers are nearly identical. Thus, the instructions in this chapter focus on installing the Sun Fire V245 server. Any difference in the installation process is noted in the individual step.

This chapter contains the following sections:


- "Installing the Server in a Rack" on page 5
- "Cabling the Server" on page 18


**Note –** References to *left* and *right* are from your viewpoint as you face either the front or rear of the equipment.

## Installing the Server in a Rack

The rackmount kit contains two slide rail assemblies. A slide rail assembly can be installed on either the right or left side of the rack.

A slide rail assembly consists of two parts, a slide rail and a removeable mounting bracket. The slide rail attaches to the rack posts, and the mounting bracket attaches to the Sun Fire V215 and V245 chassis.

**Note –** Ensure that you have all of the parts in the rackmount kit before you begin the installation of the server. See "Shipping Kit Inventory List" on page 1.

## ▼ To Install the Slide Rail Assemblies

1. **Pull both mounting brackets completely out of their respective slide rails:**

   a. **Simultaneously press and hold the upper and lower lock buttons of the slide rail lock (FIGURE 2-1).**

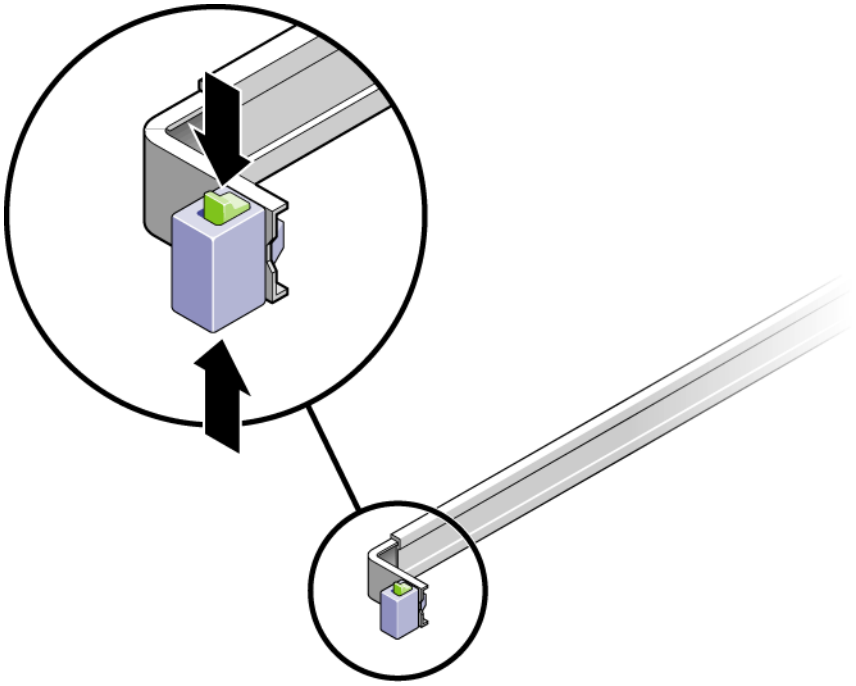

**FIGURE 2-1** Unlocking the Slide Rail Assembly

   b. **Pull the mounting bracket out until it locks in the extended position.**

   c. **Slide the mounting bracket release button in the direction shown in FIGURE 2-2, then slide the mounting bracket out of the slide rail.**

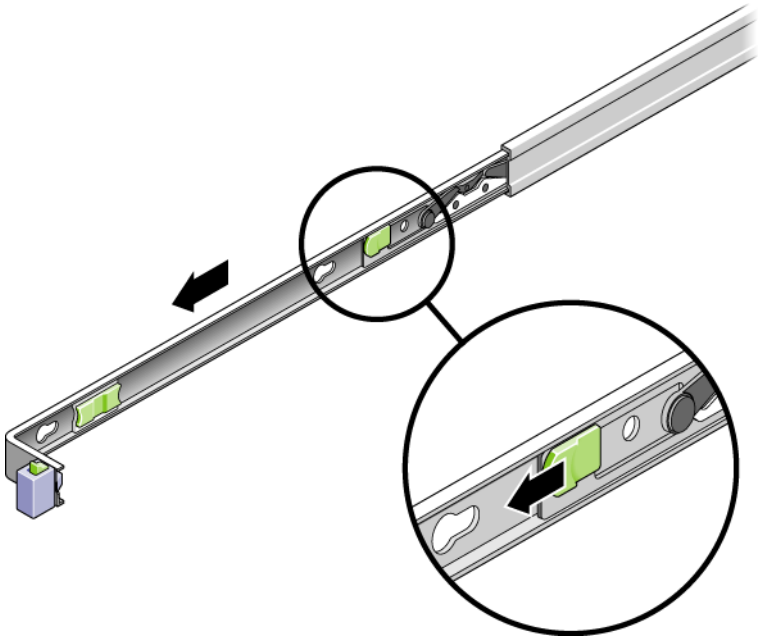

**FIGURE 2-2** Location of the Mounting Bracket Release Button

**d. Press the metal lever (labeled Push) on the middle section (FIGURE 2-3) of the sliding rail, then push the middle section back into the rack.**

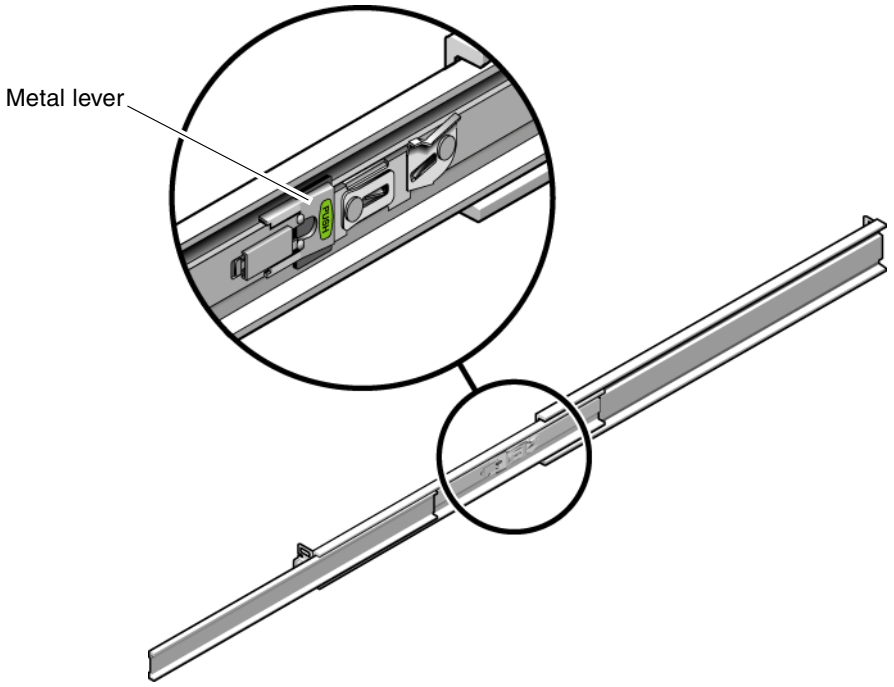


**FIGURE 2-3** Unlocking the Slide Rail Middle Section

2. **Attach a mounting bracket to the right side of the chassis.**

   a. **Position the mounting bracket against the server chassis (FIGURE 2-4) so that the slide rail lock is at the front and the three keyed openings on the mounting bracket are aligned with the three locating pins on the side of the chassis.**

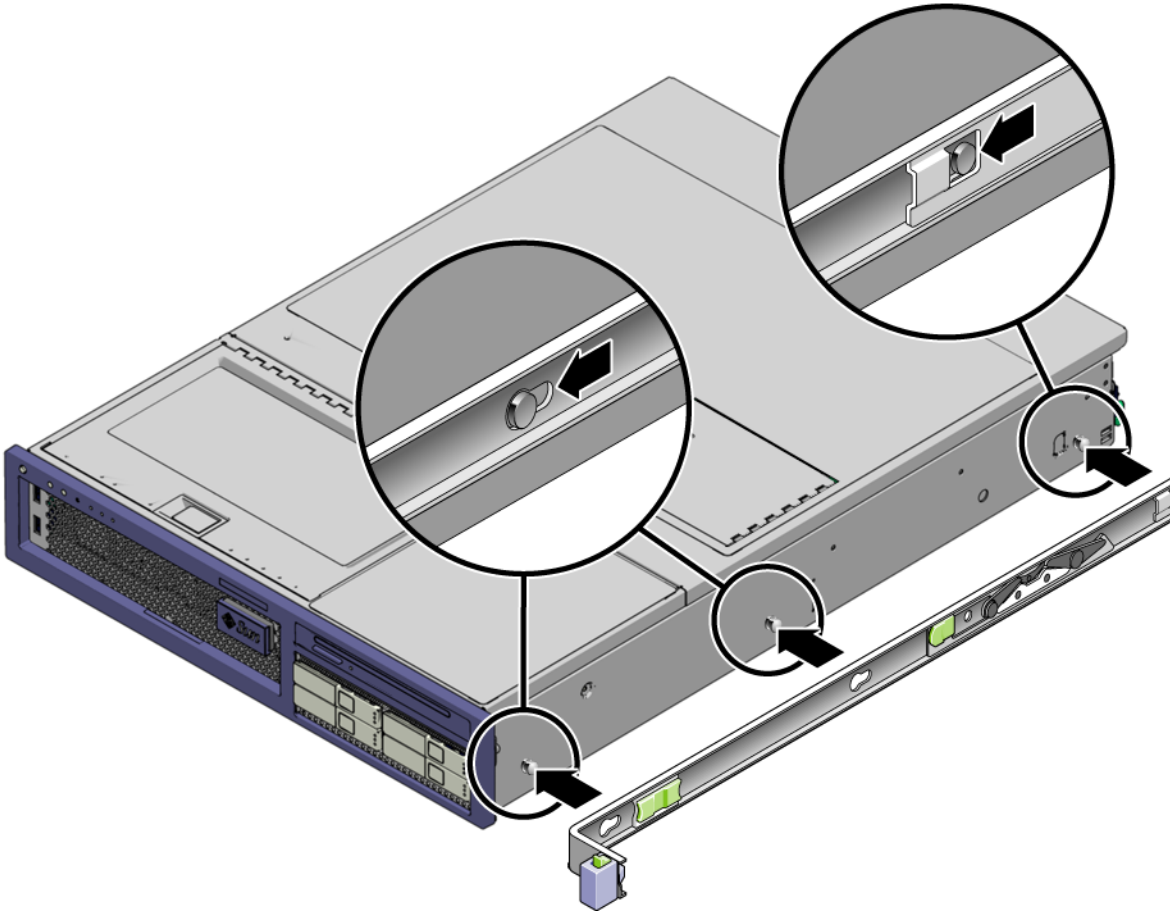

**FIGURE 2-4** Attaching a Mounting Bracket to the Chassis

**b. With the heads of the three locating pins protruding though the three keyed openings in the mounting bracket, pull the mounting bracket toward the front of the chassis until the bracket locks into place with an audible *click*.**

**c. Verify that all three locating pins are trapped in the keyed openings and that the rear locating pin has engaged the mounting bracket lock, as shown in the right side of** FIGURE 2-4**.**

**3. Attach the second mounting bracket to the left side of the chassis.**

**4. Determine which rack hole numbers to use when attaching the slide rails to the rack posts.**

The Sun Fire V245 server is two rack units tall (2U). The slide rails occupy the lower half of the 2U space.

The Sun Fire V215 server is one rack unit tall, so the slide rails occupy the same rack unit.

5. **Determine which screws you will use to mount the slide rails.**
   - If your rack has threaded mounting holes in the rack posts, determine whether the threads are metric or standard. Select the appropriate screws from the package included in the mounting kit.
   - If your rack does not have threaded mounting holes, the mounting screws are secured with a caged nut.
6. **Attach a slide rail to the right front rack post.**
   a. **Loosely attach the front of a slide rail to the right front rack post (**FIGURE 2-5**) using two screws.**

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**Note –** Do not tighten the screws yet.

---

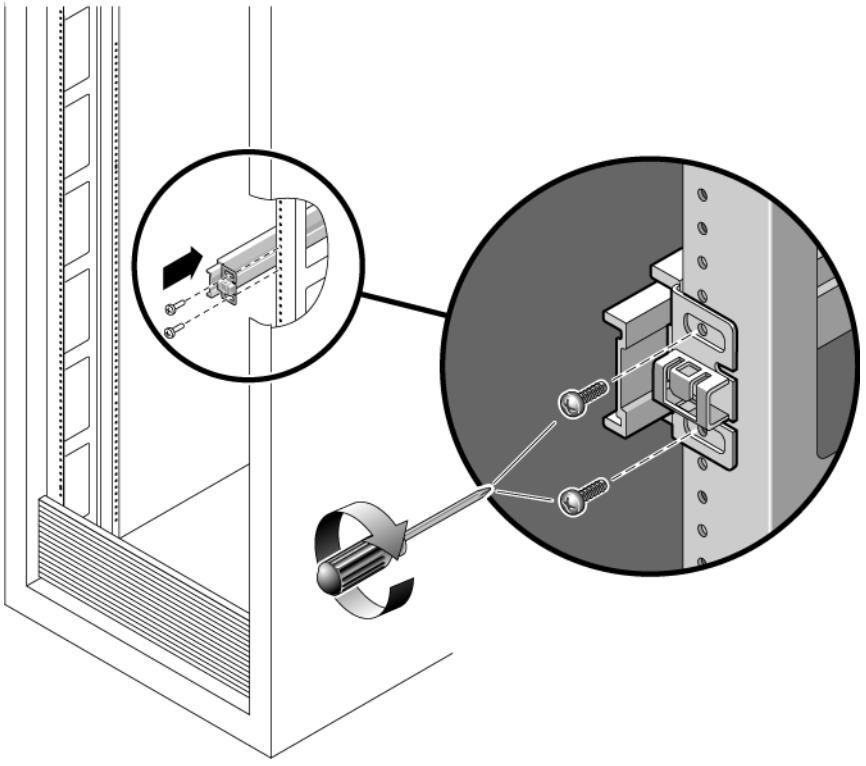

**FIGURE 2-5** Mounting a Slide Rail

**b. Adjust the length of the slide rail by sliding the rear mounting flange to reach the outside edge of the rear rack post.**

**c. Loosely attach the rear of the slide rail to the rear rack post with two screws.**

**7. Attach the second slide rail to the left rack posts in a similar manner.**

Do not tighten the screws.

**8. Use the slide rail spacing tool to adjust the distance between the slide rails:**

**a. At the front of the rack, plug the left side of the tool into slots at the end of the left rail (**FIGURE 2-6**).**

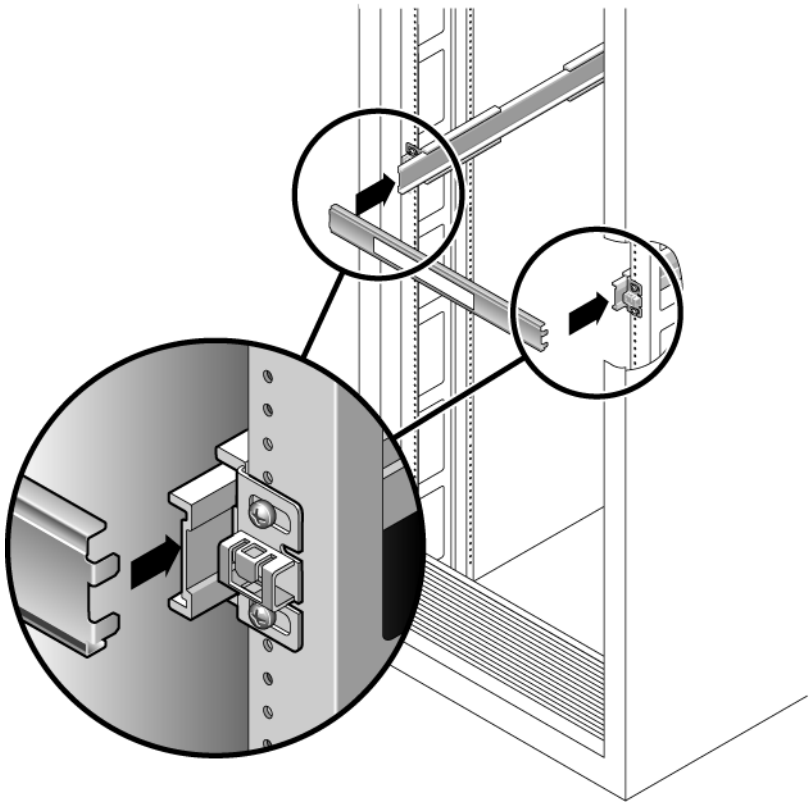

**FIGURE 2-6** Using the Slide Rail Spacing Tool to Adjust the Distance Between the Slide Rails

b. **Insert the right side of the tool into the front end of the right rail, while sliding the end of the rail to the right or left as needed to enable the the ends of the tool to enter the ends of both rails.**

   The distance between the rails is now equal to the width of the server with mounting brackets.

c. **Tighten the screws to lock the ends of the rails in place.**

d. **At the rear of the rack, repeat Step a through Step c for the rear ends of the rails.**

9. **Deploy the antitilt bar, if the rack is so equipped.**

**Caution –** The weight of the server can be enough to overturn a rack.

**Caution –** The server weighs approximately 40 lb (18 kg). Two people are required to lift and mount the system into a rack enclosure.

10. **Insert the ends of the mounting brackets into the slide rails (**FIGURE 2-7**).**

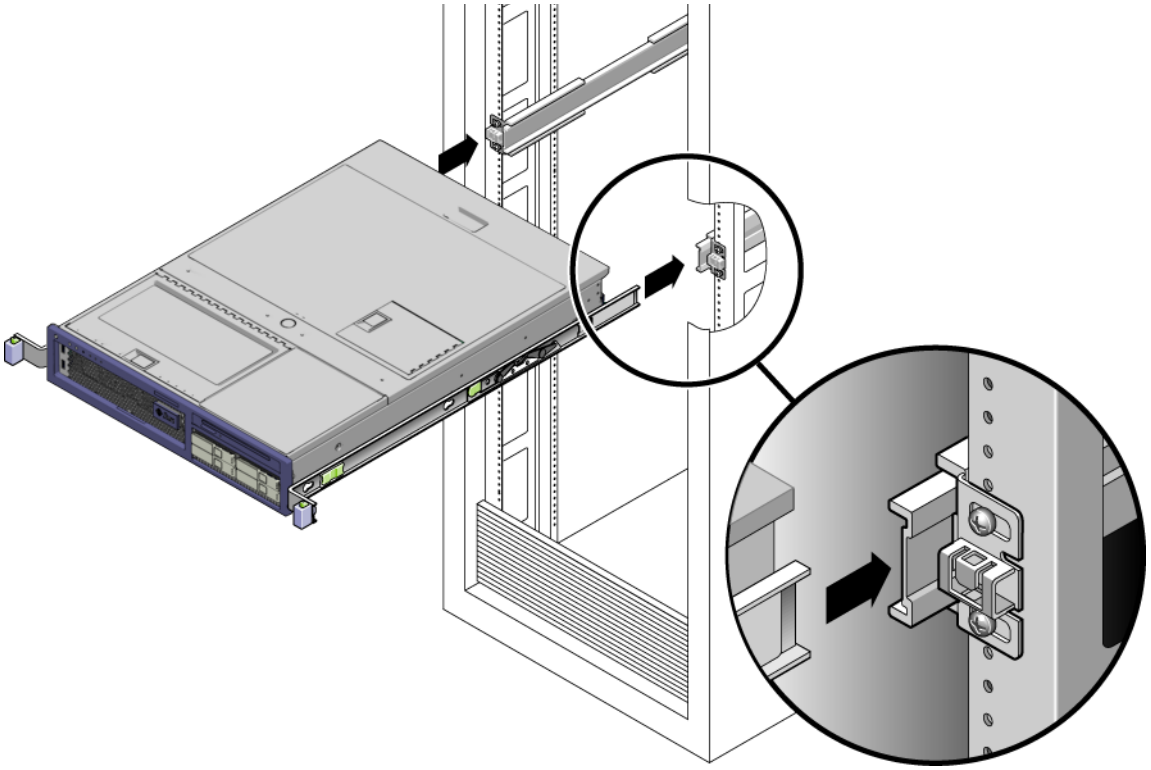

**FIGURE 2-7** Mounting the Chassis on the Slide Rails

11. **Slide the chassis into the rack.**

**Caution –** Verify that the server is securely mounted in the rack and that the slide rails are locked to the mounting brackets.

## ▼ To Install the Cable Management Assembly

The cable management assembly (CMA) clips into the ends of the left and right slide rail assemblies. No screws are necessary for mounting the CMA.

**Caution –** Support the CMA during this installation. Do not allow the assembly to hang by its own weight until it is secured by all three attachment points.

1. **At the rear of the rack, plug the CMA rail extension into the end of the left slide rail assembly (**FIGURE 2-8**).**

   The tab at the front of the rail extension clicks into place.

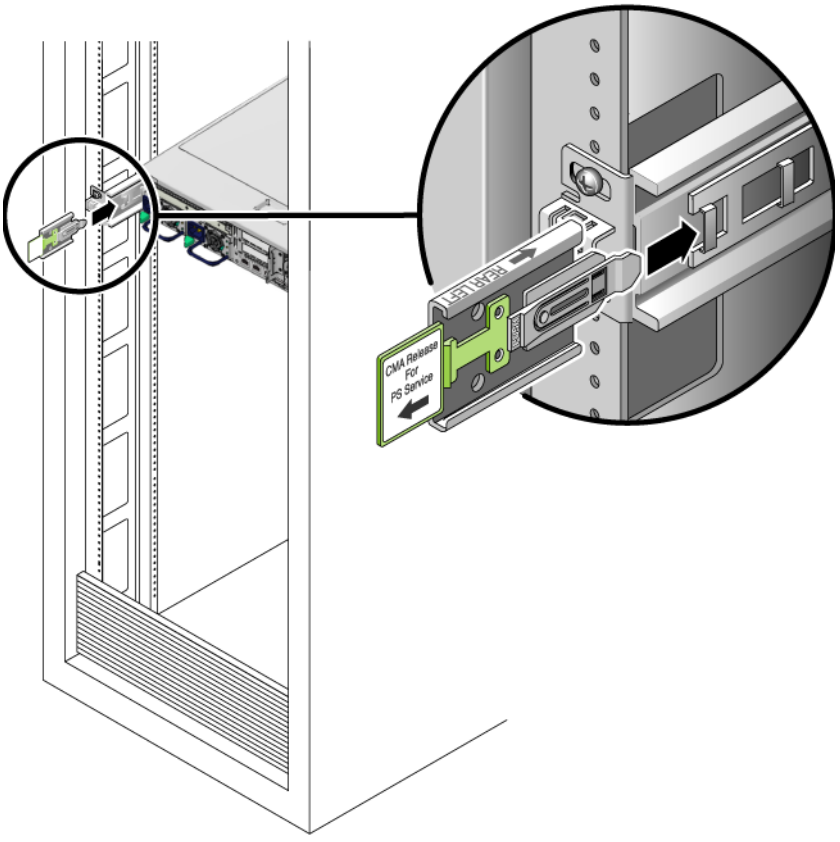


**FIGURE 2-8** Inserting the CMA Rail Extension Into the Rear of the Left Slide Rail

   The right sides of the two CMA arms have hinged extensions. The smaller extension attaches to the right mounting bracket. The larger extension attaches to the right slide rail.

2. **Insert the smaller extension into the clip located at the end of the mounting bracket (**FIGURE 2-9**).**

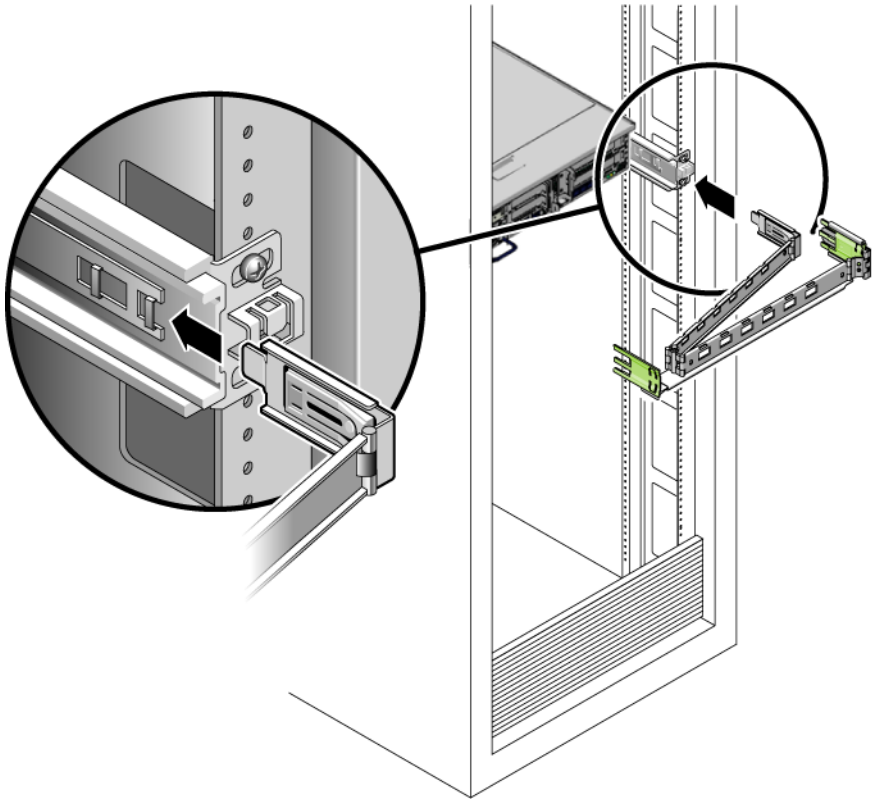

**FIGURE 2-9** Mounting the Inner CMA Connector

3. **Insert the larger extension into the end of the right slide rail (**FIGURE 2-10**).**

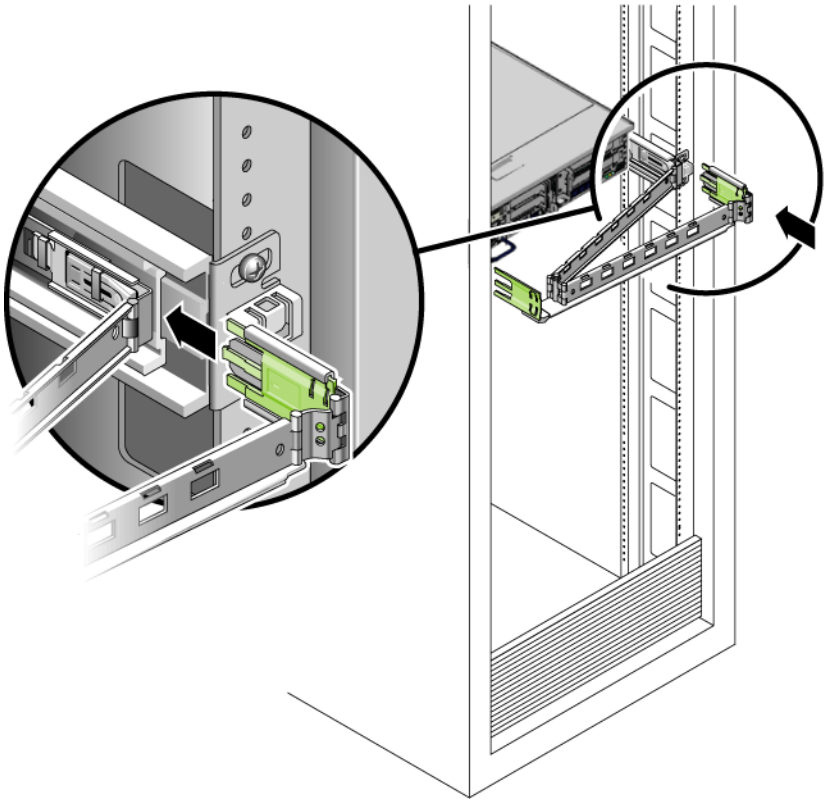

**FIGURE 2-10** Attaching the Outer CMA Connector

4. **Insert the hinged plastic connector at the left side of the CMA fully into the CMA rail extension (**FIGURE 2-11**).**

   The plastic tab on the CMA rail extension locks the hinged plastic connector in place.

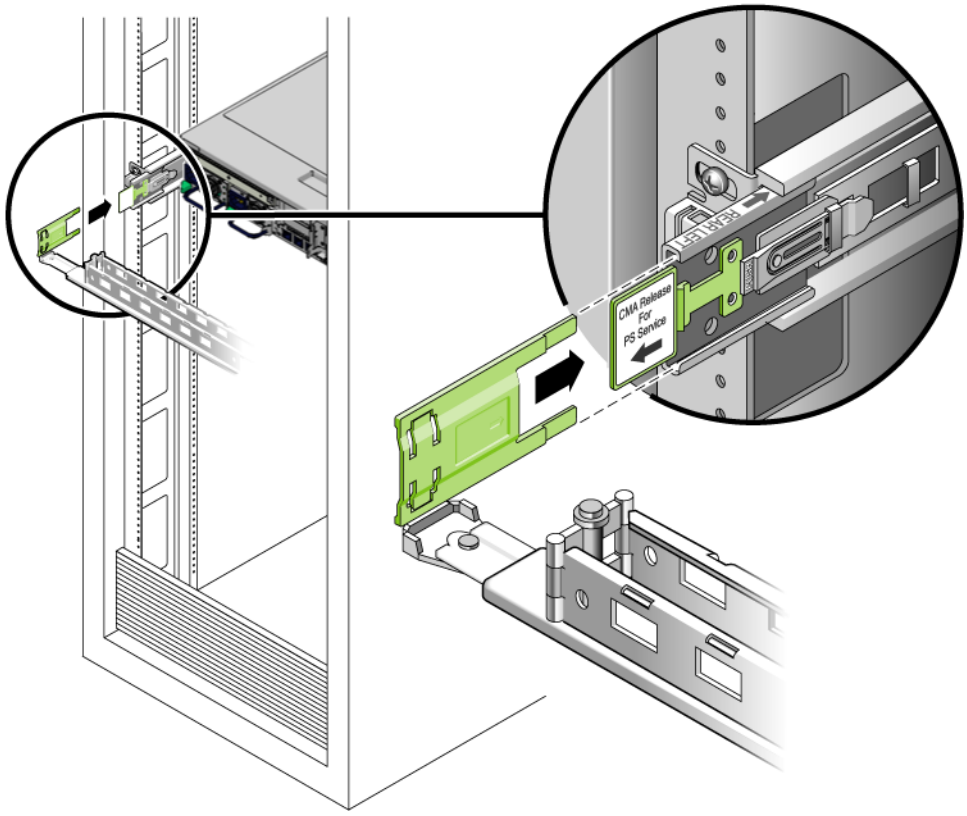


**FIGURE 2-11** Mounting the Left Side of the Slide Rail

# Cabling the Server

For visual reference to the server ports, refer to the *Sun Fire V215 and V245 Servers Getting Started Guide*.

## ▼ To Cable the Server

1. **Open the cable clips by pressing the front of the clip and lifting the hinged top.**

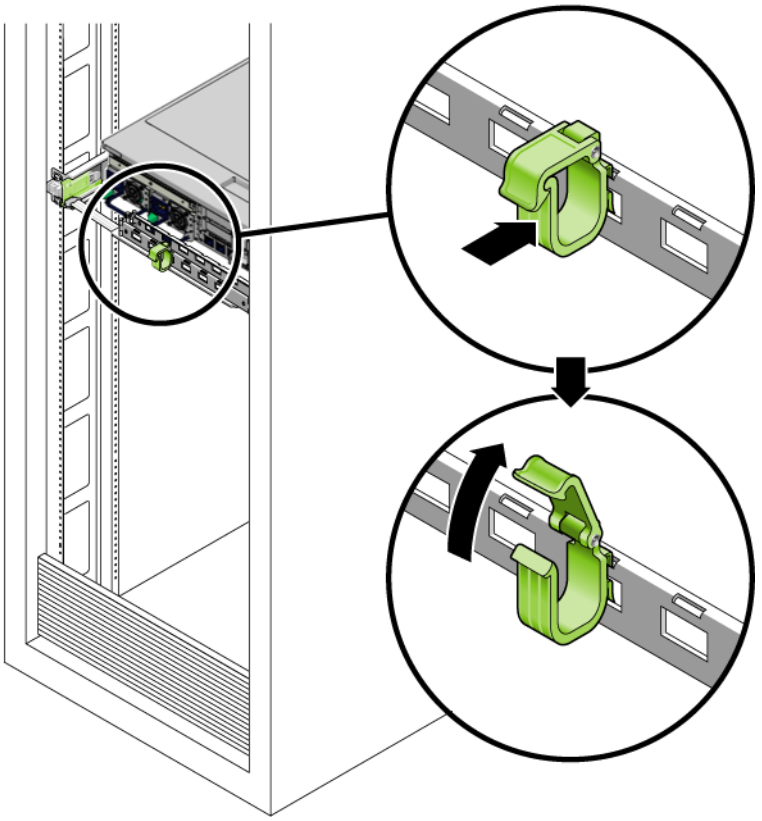

**FIGURE 2-12** Opening a Cable Clip

2. **Connect a Category 5 cable from your network switch or hub to Ethernet Port 0 (NET0) on the rear of the chassis.**

3. **As needed, connect Category 5 cables from your network switch or hub to the remaining Ethernet ports (NET1, NET2, NET3).**
4. **Connect a Category 5 cable from the SC serial management port to the terminal device.**
5. **Connect a Category 5 cable from your network switch or hub to the network management port (NET MGT).**
6. **Position the power cables up to the server, but do not plug them in.**

   The Sun Fire V215 server has only one power cable.
7. **Route cables through the clips, then press the top of the clips to lock them.**

# Verifying the Operation of the Slide Rails and CMA

Before you power on the server and configure the preinstalled software, you must verify that the slide rails and the CMA are operating properly.

---

**Tip –** Two people are needed for this procedure, one to move the server in and out of the rack and one to observe the cables and CMA.

---

## ▼ To Verify the Operation of the Slide Rails and the CMA

1. **Deploy the antitilt bar.**
2. **Unlock the slide lock buttons (**FIGURE 2-13**) at the right and left sides of the chassis, and slowly pull the server out of the rack until the slide rails reach their stops.**

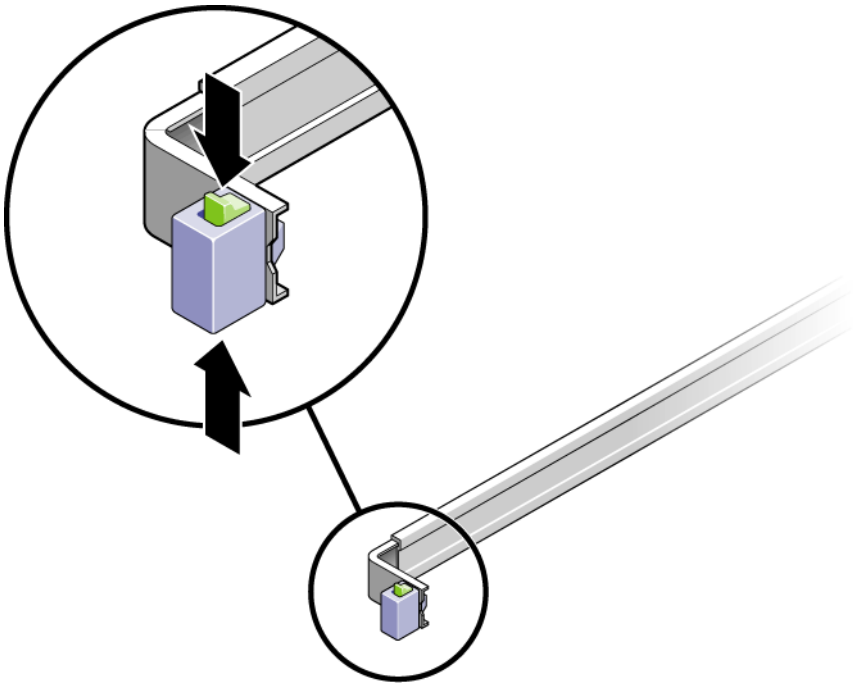

**FIGURE 2-13** Unlocking the Slide Rail Assembly

3. **Inspect the attached cables for any binding or kinks.**
4. **Verify that the CMA extends fully and does not bind in the slide rails.**
5. **When the server is fully extended, release the slide rail lever stops (**FIGURE 2-14**).** Push both levers simultaneously and slide the server back into the rack.

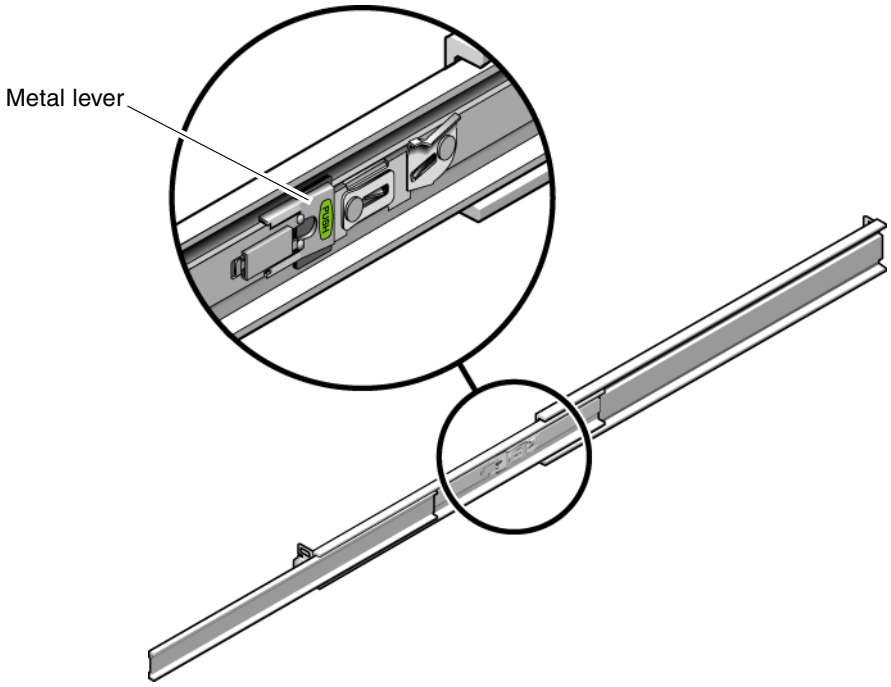


**FIGURE 2-14** Unlocking the Slide Rail Lever Stops

6. **Simultaneously unlock both slide rail release buttons (**FIGURE 2-15**), and push the server completely into the rack.**

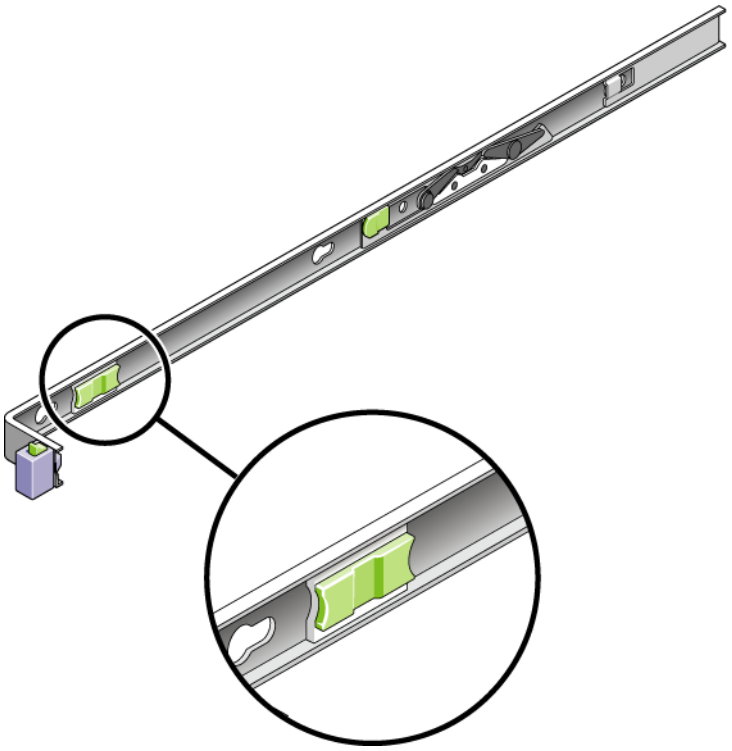

**FIGURE 2-15** Slide Rail Release Button

The server should stop after approximately 15 inches (40 cm) of travel.

7. **Verify that the cables and the CMA retracted without binding.**
8. **Adjust the cable hangers and CMA as required.**

CHAPTER 3

# Powering On the System

This chapter includes instructions for booting the Sun Fire V215 and V245 servers and for enabling the system controller network management port.

The following topics are discussed:


- "Powering On the System Controller" on page 23
- "Enabling the System Controller Network Management Port" on page 25
- "Logging Into the System Controller" on page 25
- "Booting the Solaris Operating System" on page 32


## Powering On the System Controller

The system controller runs on the 3.3V standby voltage. As soon as AC power is connected to the system, the system controller powers on, runs diagnostics, and initializes the ALOM firmware.

**Note –** If you are not logged in, ALOM times out after 60 seconds and reverts to the system console. For more information, refer to the *Advanced Lights Out Management (ALOM) User's Guide*.

### ▼ To Power On the System Controller

1. **Connect a terminal or a terminal emulator to the SC serial management port.**
2. **Configure the terminal or terminal emulator with these settings:**
   - 9600 baud
   - 8 bits

- No parity
- 1 Stop bit
- No handshaking

3. **Turn on the terminal or terminal emulator.**
4. **Connect the AC power cable(s).**
5. **Watch the terminal for system messages.**

   After the system controller boots, the system controller login prompt is displayed on the serial console. The following example shows a partial output from the system controller boot sequence leading to the login prompt.

**CODE EXAMPLE 3-1** Example of System Controller Output

```
ALOM POST 1.0


Dual Port Memory Test, PASSED.

TTY External - Internal Loopback Test
          TTY External - Internal Loopback Test, PASSED.

TTYC - Internal Loopback Test
          TTYC - Internal Loopback Test, PASSED.

TTYD - Internal Loopback Test
          TTYD - Internal Loopback Test, PASSED.

.....................


Full VxDiag Tests - PASSED



    Status summary  -  Status = 7FFF

       VxDiag     -           -  PASSED
       POST       -           -  PASSED
       LOOPBACK   -           -  PASSED

       I2C        -           -  PASSED
       EPROM      -           -  PASSED
       FRU PROM   -           -  PASSED
```

**CODE EXAMPLE 3-1** Example of System Controller Output *(Continued)*

```
        ETHERNET   -           -   PASSED
        MAIN CRC   -           -   PASSED
        BOOT CRC   -           -   PASSED

        TTYD       -           -   PASSED
        TTYC       -           -   PASSED
        MEMORY     -           -   PASSED
        MPC885     -           -   PASSED


Please login:
```

# Enabling the System Controller Network Management Port

The system controller network management port is not operational until you configure the network settings for the system controller. Configure the system controller in this order:

1. After the system controller boots, access the ALOM command-line interface through the serial management port. See "To Log Into the System Controller" on page 26.
2. Configure the system controller. See "To Configure the System Controller Network Management Port" on page 26.
3. Enable the new values by resetting the system controller. See "To Reset the System Controller" on page 28.

# Logging Into the System Controller

When you power on the system for the first time, you use the system controller serial port to power on the server and run POST.

## ▼ To Log Into the System Controller

After the system controller boots, the `sc>` prompt is displayed. The default configuration provides an ALOM user account called `admin`. There is no default password, so you must create a password using the system controller `password` command.

1. **Use the `password` command to set the `admin` password.**

```
sc> password
password: Changing password for admin
Setting password for admin.
New password: new-password

Re-enter new password: new-password

sc>
```

2. **Enter `admin` for the login name followed by your password.**

```
sc>
Please login: admin
Please Enter password: password
       (Press Return twice)
sc>
```

## ▼ To Configure the System Controller Network Management Port

To access the system controller using the network for the first time, you must first configure the SC network management port through the SC serial management port.

Set these network parameters according to the specific details of your network configuration:

- `netsc_ipnetmask` – Netmask for the system controller subnet
- `netsc_ipaddr` – IP address of the system controller
- `netsc_ipgateway` – IP address of the gateway for the subnet
- `if_network` – Specified whether the SC is on the network or not

To configure these parameters you must use the `setsc` command. The usage is:

`setsc` *parameter*

1. **Set the netmask for the system controller.**

```
sc> setsc netsc_ipnetmask 255.255.255.0
```

This example uses `255.255.255.0` to set the netmask. Your network environment subnet might require a different netmask. Use a netmask number most appropriate to your environment.

2. **Set the IP address for the system controller.**

```
sc> setsc netsc_ipaddr service-processor-IPaddr
```

3. **Set the IP address for the system controller gateway.**

```
sc> setsc netsc_ipgateway gateway-IPaddr
```

4. **Set the `if_network` parameter to `true`.**

```
sc> setsc if_network true
```

5. **Use the `showsc` command to verify that the parameters were set correctly.**

The `showsc` command displays all the configuration parameters and their values, as listed in TABLE 3-1.

**TABLE 3-1** Sample Configuration Parameter Settings

| Parameter | Sample Value |
|---|---|
| netsc_enetaddr | 00:03:ba:81:2d:02 |
| if_network* | true |
| if_modem | false |
| if_emailalerts | false |
| sys_autorestart | xir |
| sys_xirtimeout | 900 |
| netsc_tpelinktest | true |
| netsc_dhcp | false |
| netsc_ipaddr* | 129.148.40.30 |
| netsc_ipnetmask* | 255.255.255.0 |

**TABLE 3-1** Sample Configuration Parameter Settings *(Continued)*

| Parameter | Sample Value |
|---|---|
| netsc_ipgateway* | 129.148.40.254 |
| mgt_mailhost | mgt_mailalert |
| sc_customerinfo | |
| sc_escapechars | #. |
| sc_powerondelay | false |
| sc_powerstatememory | false |
| sc_clipasswdecho | true |
| sc_cliprompt | sc |
| sc_clitimeout | 0 |
| sc_clieventlevel | 2 |
| sc_backupuserdata | true |
| sys_eventlevel | 2 |
| sys_confighost | wgs40-80 |
| sys_configip | 129.148.40.80 |
| ser_baudrate | 9600 |
| ser_parity | none |
| ser_stopbits | 1 |
| ser_data | 8 |
| netsc_enetaddr | 00:03:ba:81:2d:02 |
| sys_hostname | |
| sys_enetaddr | 00:03:ba:81:2c:f9 |

* These parameters must be set according to the specific details of your network configuration for the network management port to function properly.

## ▼ To Reset the System Controller

After all of the configuration parameters are set, you must reset the system controller for the new values to take affect.

1. **Issue the** `resetsc` **command.**

2. **Reply `y` when you are prompted to confirm that you want to reset the system controller.**

```
sc> resetsc
Are you sure you want to reset the SC [y/n]? y
User Requested SC Shutdown
```

---

**Note –** You can specify the `-y` flag to the `resetsc` command and bypass the confirmation message.

---

The system controller resets, runs diagnostics, and returns to the login prompt.

```
ALOM POST 1.0


Dual Port Memory Test, PASSED.

TTY External - Internal Loopback Test
          TTY External - Internal Loopback Test, PASSED.

TTYC - Internal Loopback Test
          TTYC - Internal Loopback Test, PASSED.

TTYD - Internal Loopback Test
          TTYD - Internal Loopback Test, PASSED.

.....................


Full VxDiag Tests - PASSED



    Status summary  -  Status = 7FFF

       VxDiag     -           -  PASSED
       POST       -           -  PASSED
       LOOPBACK   -           -  PASSED

       I2C        -           -  PASSED
       EPROM      -           -  PASSED
       FRU PROM   -           -  PASSED
```

```
        ETHERNET   -           -   PASSED
        MAIN CRC   -           -   PASSED
        BOOT CRC   -           -   PASSED

        TTYD       -           -   PASSED
        TTYC       -           -   PASSED
        MEMORY     -           -   PASSED
        MPC885     -           -   PASSED


Please login:
```

## ▼ To Log Into the System Controller Using the Network Management Port

---

**Note –** You must configure the system controller parameters shown in "To Configure the System Controller Network Management Port" on page 26 before you can use the network management port.

---

1. **Open a Telnet session and connect to the system controller by specifying its network address.**

```
% telnet 129.148.40.30
Trying 129.148.40.30...
Connected to 129.148.40.30.
Escape character is '^]'.
Copyright 2003 Sun Microsystems, Inc. All rights reserved.
Use is subject to license terms.
Sun(tm) Advanced Lights Out Manager 1.0.11 ()
Please login:
```

2. **Login as** `admin` **using the password you previously set.**

```
Please login: admin
Please Enter password: password
sc>
```

# Powering On the Server

After you have enabled the network management port on the system controller, power on the server and connect to the system console by following the procedures in this section.

## ▼ To Power On the System

Powering on the system requires you to use the `poweron` command at the SC console.

- **To initiate the power-on sequence, issue the `poweron` command.**

  You see an `sc>` alert message on the system console. This indicates that the system has reset.

```
sc> poweron
SC Alert: Host System has Reset
sc>
```

## ▼ To Connect to the System Console

Output from POST, OpenBoot™, and the Solaris OS is displayed in the system console using the network console on the system controller.

- **Execute the `console` command, and use the `-f` option to force the console to be attached to your session.**

  Multiple users can be connected to the console, but only one can be attached.

```
sc> console -f
Enter #. to return to ALOM.
```

# Booting the Solaris Operating System

After you have connected to the system console, you are ready to boot the Solaris OS. The Solaris OS is preinstalled on Sun Fire V215 and V245 servers on the disk in slot 0. The Solaris OS is not configured (that is, the `sys-unconfig` command was run in the factory). If you boot the system from this disk, you will be prompted to configure the Solaris OS for your environment.

## ▼ To Boot the Solaris Operating System

1. **At the `ok` prompt, boot from the disk that contains the Solaris OS.**
   - If you know which disk to boot from, skip Step n and perform Step 2.
   - If you need to determine which disk to boot from, issue the `show-disks` command at the `ok` prompt to see the path to the configured disk.

```
ok show-disks
a) /pci@7c0/pci@0/pci@2/pci@0,2/LSILogic,sas@4/disk
q) NO SELECTION
Enter Selection, q to quit: q
ok
```

2. **Type the `boot` command at the `ok` prompt.**

   Use the value from Step 1 to construct the `boot` command. You must append the target to the disk path. In the following example, the system is being booted from disk 0 (zero), so `@0,0` is appended to the disk path.

```
ok boot /pci@7c0/pci@0/pci@2/pci@0,2/LSILogic,sas@4/disk@0,0
```

   The Solaris OS should boot at this point.

3. **Use the configuration information you gathered during preparing for the installation, and follow the instructions on the preinstalled software site.**
4. **Install the necessary patches and updates, if needed.**
5. **Install any optional software at this time.**

   If you have purchased any optional software, you should install it now by following the instructions provided with the software. Otherwise, at this point, you should be done with the installation of the server.