



CHAPTER 2

Installing the Server

This chapter describes how to install the server and includes the following sections:

- [Unpacking and Inspecting the Server, page 2-2](#)
- [Preparing for Installation, page 2-3](#)
- [Installing the Server Into a Rack, page 2-4](#)
- [Initial Server Setup, page 2-9](#)
- [System BIOS and CIMC Firmware, page 2-13](#)



Note

Before you install, operate, or service a server, review the *Regulatory Compliance and Safety Information for Cisco UCS C-Series Servers* for important safety information.



Warning

IMPORTANT SAFETY INSTRUCTIONS

This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. Use the statement number provided at the end of each warning to locate its translation in the translated safety warnings that accompanied this device.
Statement 1071

SAVE THESE INSTRUCTIONS



Warning

Only trained and qualified personnel must be allowed to install, replace, or service this equipment.
Statement 1030

Unpacking and Inspecting the Server


Tip

Keep the shipping container in case the server requires shipping in the future.

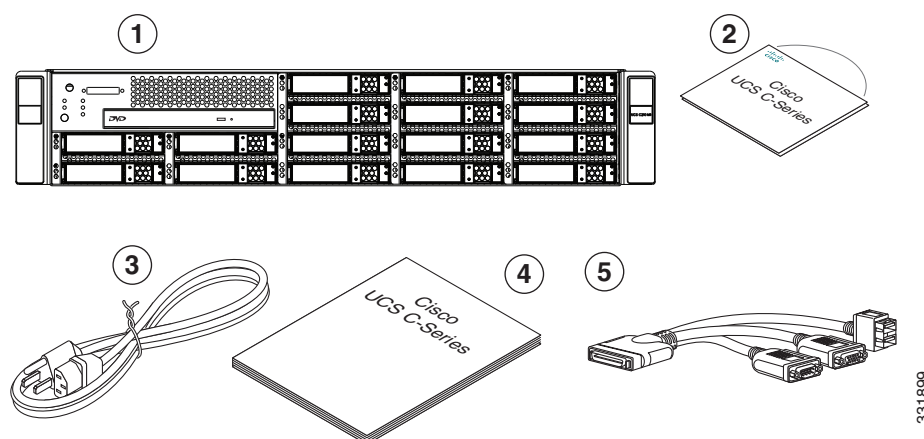

Note

The chassis is thoroughly inspected before shipment. If any damage occurred during transportation or any items are missing, contact your customer service representative immediately.

To inspect the shipment, follow these steps:

- Step 1** Remove the server from its cardboard container—save all packaging material.
- Step 2** Compare the shipment to the equipment list provided by your customer service representative and [Figure 2-1](#). Verify that you have all items.
- Step 3** Check for damage and report any discrepancies or damage to your customer service representative. Have the following information ready:
 - Invoice number of shipper (see the packing slip)
 - Model and serial number of the damaged unit
 - Description of damage
 - Effect of damage on the installation

Figure 2-1 Shipping Box Contents



| | | | |
|----------|----------------------------------|----------|----------------------------|
| 1 | Server | 2 | Drivers and Utilities disc |
| 3 | Power cord (optional, up to two) | 4 | Documentation |
| 5 | KVM cable | | |

Preparing for Installation

This section includes the following topics:

- [Installation Guidelines](#), page 2-3
- [Rack Requirements](#), page 2-4
- [Required Equipment](#), page 2-4

Installation Guidelines



Warning

To prevent the system from overheating, do not operate it in an area that exceeds the maximum recommended ambient temperature of: 35° C (95° F).

Statement 1047



Warning

The plug-socket combination must be accessible at all times, because it serves as the main disconnecting device.

Statement 1019



Warning

This product relies on the building's installation for short-circuit (overcurrent) protection. Ensure that the protective device is rated not greater than: 250 V, 15 A.

Statement 1005



Warning

Installation of the equipment must comply with local and national electrical codes.

Statement 1074

When installing the server, follow these guidelines:

- Plan your site configuration and prepare the site before installing the server. See the [Cisco UCS Site Preparation Guide](#) for the recommended site planning tasks.
- Ensure that there is adequate space around the server to allow for servicing the server and for adequate airflow. The airflow in this server is from front to back.
- Ensure that the air-conditioning meets the thermal requirements listed in the “[Technical Specifications](#)” appendix.
- Ensure that the cabinet or rack meets the requirements listed in [Rack Requirements](#), page 2-4.
- Ensure that the site power meets the power requirements listed in the “[Technical Specifications](#)” appendix. If available, you can use an uninterruptible power supply (UPS) to protect against power failures.



Caution

Avoid UPS types that use ferroresonant technology. These UPS types can become unstable with systems such as the Cisco UCS, which can have substantial current draw fluctuations from fluctuating data traffic patterns.

Rack Requirements

This section provides the requirements for the standard open racks, assuming an external ambient air temperature range of 32 to 95° F (0 to 35° C).

The rack must be of the following type:

- Standard 19-inch (48.3-cm) wide, four-post EIA rack, with mounting posts that conform to English universal hole spacing per section 1 of ANSI/EIA-310-D-1992.
- The rack post holes can be square or round when you use the supplied slide rails.
- The minimum vertical rack space per server must be two rack units (RUs), equal to 3.50 inches (8.89 cm).
- The distance between the front and rear rack posts must be as follows to fit the Cisco slide rails:
 - For the older rails (R200-1032RAIL), 27 to 37 inches (68.6 to 94.0 cm)
 - For the new style rails (R2XX-G31032RAIL), 23.5 to 36 inches (59.7 to 91.4 cm)



Tip

The Cisco R-Series racks and RP-Series PDUs have been designed for optimum performance with Cisco products and are available from Cisco.

Required Equipment

The slide rails supplied by Cisco Systems do not require any tools for installation, but you might want to use a tape measure and level to help level the slide rails during installation.

The slide rails include screws that you can optionally use to apply additional stability. These screws are not required.

Installing the Server Into a Rack

The qualified and supported part numbers for this component are subject to change over time. For the most up-to-date list of replaceable components, see the following URL and then scroll to *Technical Specifications*:
http://www.cisco.com/en/US/products/ps10493/products_data_sheets_list.html

This section describes how to install the server into a rack.



Warning

To prevent bodily injury when mounting or servicing this unit in a rack, you must take special precautions to ensure that the system remains stable. The following guidelines are provided to ensure your safety:

This unit should be mounted at the bottom of the rack if it is the only unit in the rack.

When mounting this unit in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.

If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack.

Statement 1006

To install the slide rails and the server into a rack, follow these steps:

Step 1 Install the slide rails into the rack:



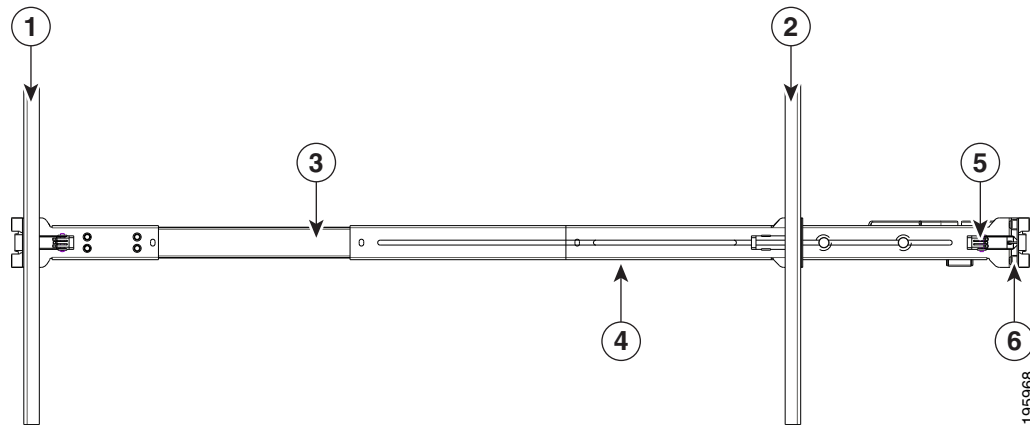
Tip

Use two people to help keep the slide rails and server level during installation. You can use a tape measure and level or count the holes in the rack posts to ensure that the slide rails and server are level.

- a. Align the slide-rail assembly inside the rack posts with the length-adjustment bracket (item 4) toward the rear of the rack (see [Figure 2-2](#)).
- b. Compress the length-adjustment bracket until the mounting pegs (item 6) and locking clips (item 5) on the slide-rail assembly engage the desired rack holes on the front and rear rack posts.

If your rack has #10-32 rack-post holes, align the mounting pegs with the holes and then compress the spring-loaded pegs to expose the #10-32 inner peg (see [Figure 2-3](#)).

Figure 2-2 Attaching a Slide-Rail Assembly

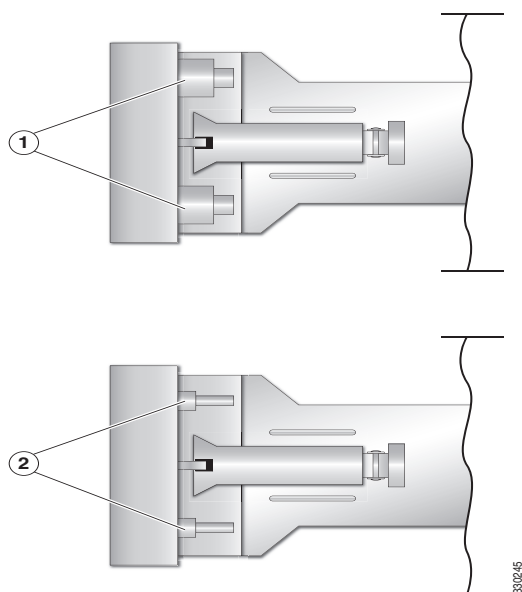


| | | | |
|----------|--|----------|---|
| 1 | Front-left rack post | 2 | Rear-left rack post |
| 3 | Slide-rail assembly | 4 | Length-adjustment bracket |
| 5 | Locking clip (one on each end of assembly) | 6 | Mounting pegs (two on each end of assembly) |



Note

The mounting pegs that protrude through the rack-post holes are designed to fit round or square #12-24 holes, or #10-32 holes when the mounting peg is compressed (see [Figure 2-3](#)). If your rack has #10-32 rack-post holes, align the mounting pegs with the holes and then compress the spring-loaded pegs to expose the #10-32 inner peg.

Figure 2-3 Spring-Loaded Mounting Pegs

| | | | |
|----------|--|----------|---|
| 1 | Pegs in standard (uncompressed) position | 2 | Pegs compressed to expose 10-32 inner peg |
|----------|--|----------|---|

- c. Pull the inner slide rails on each assembly out toward the rack front until they hit the internal stops and lock in place.
- d. Attach the second slide-rail assembly to the opposite side of the rack. Ensure that the two slide-rail assemblies are level and at the same height with each other.
- e. Pull the inner slide rails on each assembly out toward the rack front until they hit the internal stops and lock in place.

**Tip**

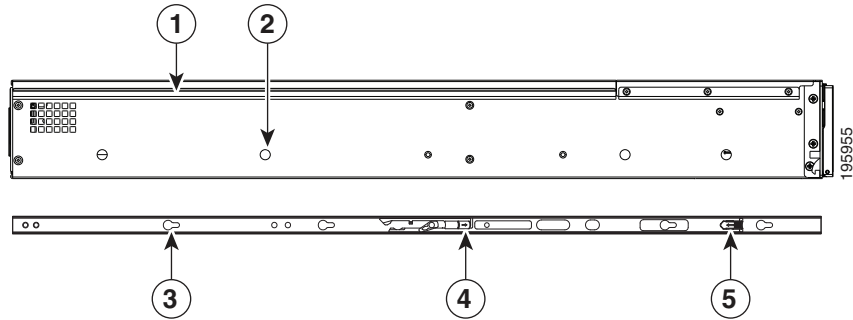
You can optionally use the #2 Phillips screws that come with the slide rails to increase stability after installation. These screws can be installed on the front attachment bracket on each assembly, but are not required.

Step 2 Attach mounting brackets to the server:

- a. Set a mounting bracket (item 3) on the side of the server, aligning its keyed holes over the pegs on the server (item 2). The plastic installation release clip (item 5) on the bracket should be toward the server front. See [Figure 2-4](#).
- b. Push the mounting bracket toward the server rear until the locking clip clicks over the server peg.
- c. Attach the remaining mounting bracket to the opposite side of the server.

**Tip**

You can optionally use the #1 Phillips screws that come with the slide rails to increase stability after installation. You can install two of these screws on each side of the server to more permanently attach the mounting brackets to each side of the server, but they are not required.

Figure 2-4 Attaching Mounting Brackets to the Server

| | | | |
|----------|---------------------------|----------|----------------------|
| 1 | Rear of server | 2 | Mounting peg (four) |
| 3 | Mounting bracket | 4 | Removal release clip |
| 5 | Installation release clip | | |

Step 3 Insert the server into the slide rails:

**Caution**

This server weighs approximately 50 pounds (23 kilograms) when fully loaded with components. We recommend that you use a minimum of two people when lifting the server. Attempting this procedure alone could result in personal injury or equipment damage.

- a. Align the mounting brackets that are attached to the server sides with the front of the empty slide rails.
- b. Push the server into the slide rails until it stops at the internal stops.
- c. Push the plastic installation release clip on each mounting bracket toward the server rear (see item 5 in [Figure 2-4](#)), and then continue pushing the server into the rack until its front flanges touch the rack posts.
- d. Close the front-flange latches to secure the server to the front rack posts.

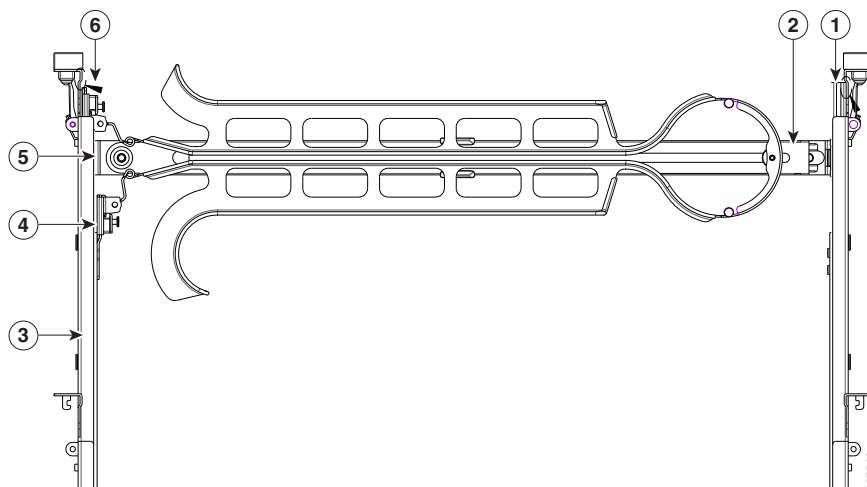
Step 4 Attach the (optional) cable management arm (CMA) to the rear of the slide rails:

**Note**

The orientation in these instructions refers to a view from the front of the server.

- a. Slide the plastic clip on the right end of the CMA length-adjustment slider (item 2) into the rear of the right slide rail (item 1) until it clips onto the plastic retaining flange inside the slide rail. See [Figure 2-5](#).
- b. Expand the CMA length-adjustment slider (item 2) until its left end aligns with the rear of the left slide-rail assembly (item 3).
- c. Slide the innermost CMA attachment clip (item 4) into the rear of the left slide rail (item 3) and clip it onto the CMA flange that is on the mounting bracket that is attached to the server.
- d. Attach the two-hole slotted bracket (item 5) that is on the left end of the CMA length-adjustment slider to the left slide rail. Fit the two-hole slotted bracket over the two pegs inside the slide rail.
- e. Attach the outermost CMA attachment clip (item 6) onto the CMA flange that is on the left slide rail.

Figure 2-5 Attaching the Cable Management Arm



| | | | |
|----------|--|----------|-------------------------------|
| 1 | Rear of right slide rail (plastic retaining flange is inside the rail) | 2 | CMA length-adjustment slider |
| 3 | Rear of left slide rail assembly | 4 | Innermost CMA attachment clip |
| 5 | Two-hole slotted bracket on end of CMA length-adjustment slider | 6 | Outermost CMA attachment clip |

Step 5 Continue with the [“Connecting and Powering On the Server \(Standalone Mode\)”](#) section on page 2-9.

Initial Server Setup

This section contains the following topics:

- [Connecting and Powering On the Server \(Standalone Mode\)](#), page 2-9
- [NIC Modes and NIC Redundancy Settings](#), page 2-12

Connecting and Powering On the Server (Standalone Mode)



Note

This section describes how to power on the server, assign an IP address, and connect to server management when using the server *in standalone mode*. To use the server in UCS integration, specific cabling and settings are required. See [Installation for Cisco UCS Integration](#), page D-1.



Note

The server is shipped with a default NIC mode called *Shared LOM*, default NIC redundancy is active-active, and DHCP is enabled. Shared LOM mode enables the two 1Gb Ethernet ports to access the Cisco Integrated Management Interface (CIMC). If you want to use the 10/100 management ports or a Cisco network adapter card port to access the CIMC, you must first connect to the server and change the NIC mode as described in [Step 3](#) of the following procedure. In that step, you can also change the NIC redundancy and set static IP settings.

Use the following procedure to perform initial setup of the server.

Step 1

Attach a power cord to each power supply in your server, and then attach the power cord to a grounded AC power outlet. See the “[Power Specifications](#)” section on [page A-2](#) for power specifications.

Wait for approximately two minutes to let the server boot in standby power during the first bootup.

You can verify power status by looking at the Power Status LED on the front panel (see [Figure 1-1](#) on [page 1-1](#)):

- Off—The server is not receiving power. Check the power cord connections and the power source of the facility.
- Blinking green—The server is in standby power mode. Power is supplied only to the service processor and some motherboard functions.
- Solid green—The server is in main power mode. Power is supplied to all server components.



Note

During bootup, the server beeps once for each USB device that is attached to the server. Even if there are no external USB devices attached, there is a short beep for each virtual USB device such as a virtual floppy drive, CD/DVD drive, keyboard, or mouse. A beep is also emitted if a USB device is hot-plugged or hot-unplugged during BIOS power-on self test (POST), or while you are accessing the BIOS Setup utility or the EFI shell.

- Step 2** Use the supplied KVM cable to connect a keyboard and VGA monitor to the console connector on the front panel (see [Figure 1-1 on page 1-1](#)).

**Note**

Alternatively, you can use the VGA and USB ports on the rear panel. However, you cannot use the front panel console connector VGA and the rear panel VGA at the same time. If you are connected to one VGA connector and you then connect a video device to the other connector, the first VGA connector is disabled. You can then reactivate the first VGA connector only by rebooting the server.

- Step 3** Set NIC mode, NIC redundancy, and choose whether to enable DHCP or set static network settings:
- Press the **Power** button to boot the server. Watch for the prompt to press F8.
 - During bootup, press **F8** when prompted to open the BIOS CIMC Configuration Utility.

```

CIMC Configuration Utility  Version 1.5  Cisco Systems, Inc.
*****
NIC Properties
NIC mode                               NIC redundancy
Dedicated:      [X]                    None:           [X]
Shared LOM:     [ ]                    Active-standby: [ ]
Cisco Card:     [ ]                    Active-active:  [ ]
IPV4 (Basic)
DHCP enabled:   [ ]                    Factory Defaults
CIMC IP:        10.193.66.111          CIMC Factory Default:[ ]
Subnetmask:     255.255.248.0          Default User (Basic)
Gateway:        10.193.64.1           Default password:
                                           Reenter password:
ULAN (Advanced)
ULAN enabled:   [ ]
ULAN ID:        1
Priority:        0

*****
<Up/Down arrow> Select items    <F10> Save    <Space bar> Enable/Disable
<F5> Refresh                    <ESC> Exit

```

- Set the NIC mode to your choice for which ports you want to use to access the CIMC for server management (see [Figure 1-2 on page 1-2](#) for identification of the ports):
 - Dedicated—The 10/100 management port is used to access the CIMC. You have to select a NIC redundancy and IP setting.
 - Shared LOM (default)—The two 1Gb Ethernet ports are used to access the CIMC. This is the factory default setting, along with Active-active NIC redundancy and DHCP enabled.
 - Cisco Card—The ports on an installed Cisco network adapter card are used to access the CIMC. You have to select a NIC redundancy and IP setting.

**Note**

The Cisco Card NIC mode is currently supported only with a Cisco UCS P81E Virtual Interface Card (N2XX-ACPCI01) that is installed in PCIe slot 1 (see [Figure 3-18 on page 3-34](#)). See also [Special Considerations for the Cisco UCS P81E Virtual Interface Card \(N2XX-ACPCI01\)](#), page 3-35.

- d. Use this utility to change the NIC redundancy to your preference. This server has three possible NIC redundancy settings:
 - None—The Ethernet ports operate independently and do not fail over if there is a problem.
 - Active-standby—If an active Ethernet port fails, traffic fails over to a standby port.
 - Active-active—All Ethernet ports are utilized simultaneously.
- e. Choose whether to enable DHCP for dynamic network settings, or enter static network settings.



Note Before you enable DHCP, your DHCP server must be preconfigured with the range of MAC addresses for this server. The MAC address is printed on a label on the rear of the server. This server has a range of six MAC addresses assigned to the CIMC. The MAC address printed on the label is the beginning of the range of six contiguous MAC addresses.

- f. Optional: Use this utility to make VLAN settings, and to set a default CIMC user password.



Note Changes to the settings take effect after approximately 45 seconds. Refresh with **F5** and wait until the new settings appear before you reboot the server in the next step.

- g. Press **F10** to save your settings and reboot the server.



Note If you chose to enable DHCP, the dynamically assigned IP and MAC addresses are displayed on the console screen during bootup.

Step 4 Connect to the CIMC for server management. Connect Ethernet cables from your LAN to the server by using the ports that you selected by your NIC Mode setting in [Step 3](#). The Active-active and Active-passive NIC redundancy settings require you to connect to two ports.

Step 5 Use a browser and the IP address of the CIMC to connect to the CIMC Setup Utility. The IP address is based upon the settings that you made in [Step 3](#) (either a static address or the address assigned by your DHCP server).



Note The default user name for the server is *admin*. The default password is *password*.

Step 6 To manage the server, see the [Cisco UCS C-Series Rack-Mount Server Configuration Guide](#) or the [Cisco UCS C-Series Rack-Mount Server CLI Configuration Guide](#) for instructions on using those interfaces. The links to these documents are in the C-Series documentation roadmap:

<http://www.cisco.com/go/unifiedcomputing/c-series-doc>

To install or replace hardware components, see the “[Maintaining the Server](#)” section on page 3-1.

NIC Modes and NIC Redundancy Settings

This server has the following NIC mode settings that you can choose from:

- **Dedicated**—The 10/100 management port is used to access the CIMC. You have to select a NIC redundancy and IP setting.
- **Shared LOM (default)**—The two 1-Gb Ethernet ports are used to access the CIMC. This is the factory default setting, along with Active-active NIC redundancy and DHCP enabled.
- **Cisco Card**—The ports on an installed Cisco network adapter card are used to access the CIMC. You have to select a NIC redundancy and IP setting.



Note The Cisco Card NIC mode is currently supported only with a Cisco UCS P81E Virtual Interface Card (N2XX-ACPCI01) that is installed in PCIe slot 1 (see [Figure 3-18 on page 3-34](#)). See also [Special Considerations for the Cisco UCS P81E Virtual Interface Card \(N2XX-ACPCI01\)](#), page 3-35.

This server has the following NIC redundancy settings that you can choose from:

- **None**—The Ethernet ports operate independently and do not fail over if there is a problem.
- **Active-standby**—If an active Ethernet port fails, traffic fails over to a standby port.
- **Active-active**—All Ethernet ports are utilized simultaneously.

System BIOS and CIMC Firmware

This section contains information about the system BIOS and it includes the following sections:

- [Updating the BIOS and CIMC Firmware, page 2-13](#)
- [Accessing the System BIOS, page 2-14](#)

Updating the BIOS and CIMC Firmware



Caution

When you upgrade the BIOS firmware, you must also upgrade the CIMC firmware to the same version or the server will not boot. Do not power down the server until the BIOS and CIMC firmware are matching or the server will not boot.

Cisco provides the Cisco Host Upgrade Utility to assist with simultaneously upgrading the BIOS, CIMC, and other firmware to compatible levels.

The server uses firmware obtained from and certified by Cisco. Cisco provides release notes with each firmware image. There are several methods for updating the firmware:

- **Recommended method for systems running firmware level 1.2 or later:** Use the Cisco Host Upgrade Utility to simultaneously upgrade the CIMC, BIOS, LOM, LSI storage controller, and Cisco UCS P81E VIC firmware to compatible levels.

See the [Cisco Host Upgrade Utility Quick Reference Guide](#) for your firmware level at the documentation roadmap link below.



Note

Your system firmware must be at minimum level 1.2 to use the Cisco Host Upgrade Utility. If your firmware is prior to level 1.2, you must use the methods below to update the BIOS and CIMC firmware individually.

- You can upgrade the BIOS using the EFI interface, or upgrade from a Windows or Linux platform. See the [Cisco UCS C-Series Rack-Mount Server BIOS Upgrade Guide](#).
- You can upgrade the CIMC firmware by using the CIMC GUI interface. See the [Cisco UCS C-Series Rack-Mount Server Configuration Guide](#).
- You can upgrade the CIMC firmware by using the CIMC CLI interface. See the [Cisco UCS C-Series Rack-Mount Server CLI Configuration Guide](#).

For links to the documents listed above, see the documentation roadmap at the following URL:

<http://www.cisco.com/go/unifiedcomputing/c-series-doc>

Accessing the System BIOS

You can change the BIOS settings for your server by using the procedure in this section. Detailed instructions are also printed on the BIOS screens.

Step 1 Enter the BIOS setup utility by pressing the **F2** key when prompted during bootup.



Note The version and build of the current BIOS are displayed on the Main page of the utility.

Step 2 Use the arrow keys to select the BIOS menu page.

Step 3 Highlight the field to be modified by using the arrow keys.

Step 4 Press **Enter** to select the field that you want to change, and then modify the value in the field.

Step 5 Press the right arrow key until the Exit menu screen is displayed.

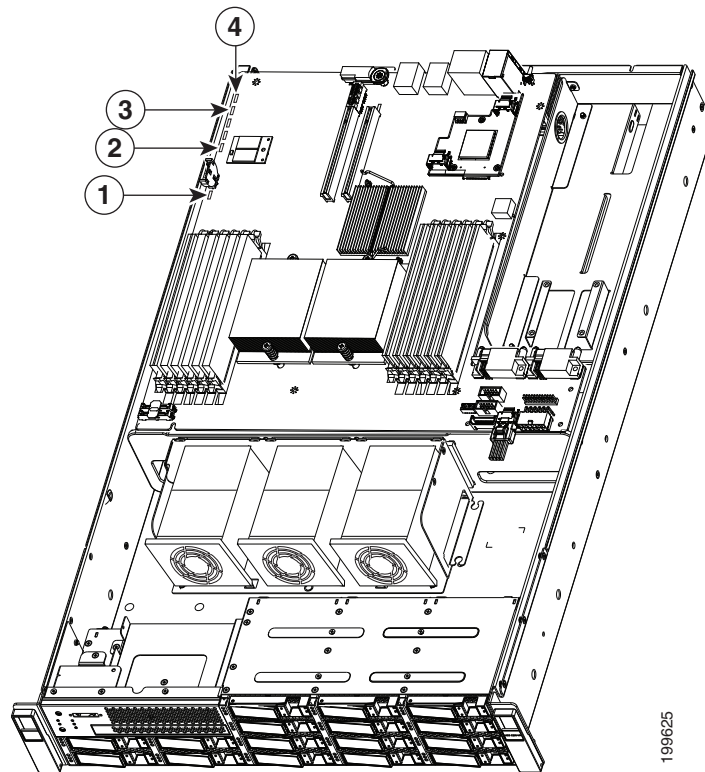
Step 6 Follow the instructions on the Exit menu screen to save your changes and exit the setup utility (or Press **F10**). You can exit without saving changes by pressing **Esc**.

Motherboard Jumpers

These jumpers are adjacent to the CMOS battery (see [Figure 2-6 on page 2-15](#)). This section contains the following topics:

- [Using the BIOS Recovery Jumper J1E5 to Recover Corrupt BIOS, page 2-16](#)
- [Clearing the CIMC Admin Password Using Jumper J45, page 2-17](#)
- [Using the Clear CMOS Jumper J1E6, page 2-18](#)
- [Clearing the BIOS Admin Password Using Jumper J1E4, page 2-19](#)

Figure 2-6 Service Jumper Locations



| | | | |
|----------|-----------------------------|----------|-----------------------------------|
| 1 | Jumper J1E6 (clear CMOS) | 3 | Jumper J45 (clear CIMC password) |
| 2 | Jumper J1E5 (BIOS recovery) | 4 | Jumper J1E4 (clear BIOS password) |

Using the BIOS Recovery Jumper J1E5 to Recover Corrupt BIOS

This jumper is adjacent to the CMOS battery (see [Figure 2-6 on page 2-15](#)). You can use this jumper to force the server to flash a new BIOS, in the case of a system hang. For example, if the system hangs after a BIOS update, use this procedure to force the server to look for the new firmware.

-
- Step 1** Download the BIOS update package and extract it to a temporary location.
 - Step 2** Copy the contents of the extracted UEFI folder to the root directory of a USB thumb drive.
 - Step 3** Power off the server as described in the [“Shutting Down and Powering Off the Server” section on page 3-8](#).
 - Step 4** Disconnect all power cords from the power supplies.
 - Step 5** Slide the server out of the front of the rack far enough so that you can remove the top cover. You might have to detach cables from the rear panel to provide clearance.



Caution If you cannot safely view and access the component, remove the server from the rack.

- Step 6** Remove the top cover as described in the [“Removing and Replacing the Server in a Rack” section on page 3-9](#).
- Step 7** Move the shorting jumper to pins 3 and 4 of the J1E5 header (see [Figure 2-6 on page 2-15](#)).
- Step 8** Reinstall the top cover and reconnect AC power cords to the server. The server powers up to standby power mode, indicated when the Power LED on the front panel is amber.
- Step 9** Insert the USB thumb drive into a USB port on the server.
- Step 10** Return the server to main power mode by pressing the **Power** button on the front panel. The server is in main power mode when the Power LED is green.



Note You must allow the entire server to reboot to main power mode to complete the recovery. This is because the state of the J1E5 jumper cannot be determined without the host CPU running. The server automatically boots into the UEFI shell and updates the BIOS from the USB thumb drive.

- Step 11** Wait for server to complete the BIOS update, then remove the USB thumb drive from the server.
- Step 12** Press the **Power** button to shut down the server to standby power mode, and then remove AC power cords from the server to remove all power.
- Step 13** Remove the top cover from the server.
- Step 14** Move the shorting jumper from header pins 3 and 4, back to its default position on pins 1 and 2.



Note If you do not move the jumper, the server forces a recovery of the new BIOS every time that you power cycle the server.

- Step 15** Replace the top cover, replace the server in the rack, replace power cords and any other cables, then power on the server by pressing the **Power** button.
-

Clearing the CIMC Admin Password Using Jumper J45

This procedure describes how to clear the CIMC admin password back to the default in case the user-selected password is lost or forgotten.

-
- Step 1** Power off the server as described in the “[Shutting Down and Powering Off the Server](#)” section on [page 3-8](#).
- Step 2** Disconnect all power cords from the power supplies.
- Step 3** Slide the server out the front of the rack far enough so that you can remove the top cover. You might have to detach cables from the rear panel to provide clearance.



Caution If you cannot safely view and access the component, remove the server from the rack.

- Step 4** Remove the top cover as described in the “[Removing and Replacing the Server Top Cover](#)” section on [page 3-10](#).
- Step 5** Move the shorting jumper to pins 2 and 3 of the J45 header (see [Figure 2-6 on page 2-15](#)).
- Step 6** Reinstall the top cover and reconnect AC power cords to the server. The server powers up to standby power mode, indicated when the Power LED on the front panel is amber.
- Step 7** Return the server to main power mode by pressing the **Power** button on the front panel. The server is in main power mode when the Power LED is green.



Note You must allow the entire server to reboot to main power mode to complete the password reset. This is because the state of the J45 jumper cannot be determined without the host CPU running. The password is then cleared.

- Step 8** Press the **Power** button to shut down the server to standby power mode, and then remove AC power cords from the server to remove all power.
- Step 9** Remove the top cover from the server.
- Step 10** Remove the shorting jumper from the header pins.



Note If you do not remove the jumper, the password is cleared every time that you power-cycle the server.

- Step 11** Replace the top cover, replace the server in the rack, replace power cords and any other cables, then power on the server by pressing the **Power** button.
-

Using the Clear CMOS Jumper J1E6

You can use this jumper (see [Figure 2-6 on page 2-15](#)) to clear the server's CMOS settings in the case of a system hang. For example, if the server hangs because of incorrect settings and does not boot, use this jumper to invalidate the settings and reboot with defaults.

-
- Step 1** Power off the server as described in the “[Shutting Down and Powering Off the Server](#)” section on [page 3-8](#).
 - Step 2** Disconnect all power cords from the power supplies.
 - Step 3** Slide the server out the front of the rack far enough so that you can remove the top cover. You might have to detach cables from the rear panel to provide clearance.



Caution If you cannot safely view and access the component, remove the server from the rack.

- Step 4** Remove the top cover as described in the “[Removing and Replacing the Server Top Cover](#)” section on [page 3-10](#).
- Step 5** Move the shorting jumper to pins 2 and 3 of the J1E6 header (see [Figure 2-6 on page 2-15](#)).
- Step 6** Reinstall the top cover and reconnect AC power cords to the server. The server powers up to standby power mode, indicated when the Power LED on the front panel is amber.
- Step 7** Return the server to main power mode by pressing the **Power** button on the front panel. The server is in main power mode when the Power LED is green.



Note You must allow the entire server, not just the service processor, to reboot to main power mode to complete the reset. This is because the state of the J1E6 jumper cannot be determined without the host CPU running.

- Step 8** Press the **Power** button to shut down the server to standby power mode, and then remove AC power cords from the server to remove all power.
- Step 9** Remove the top cover from the server.
- Step 10** Remove the shorting jumper from the J1E6 header pins.



Note If you do not remove the J1E6 jumper, the CMOS settings are reset to the default every time that you power-cycle the server.

- Step 11** Replace the top cover, replace the server in the rack, replace power cords and any other cables, then power on the server by pressing the **Power** button.
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Clearing the BIOS Admin Password Using Jumper J1E4

This procedure describes how to clear the BIOS admin password for the BIOS back to the default in case the user-selected password is lost or forgotten.

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- Step 1** Power off the server as described in the “[Shutting Down and Powering Off the Server](#)” section on [page 3-8](#).
- Step 2** Disconnect all power cords from the power supplies.
- Step 3** Slide the server out the front of the rack far enough so that you can remove the top cover. You might have to detach cables from the rear panel to provide clearance.



Caution If you cannot safely view and access the component, remove the server from the rack.

- Step 4** Remove the top cover as described in the “[Removing and Replacing the Server Top Cover](#)” section on [page 3-10](#).
- Step 5** Move the shorting jumper to pins 2 and 3 of the J1E4 header (see [Figure 2-6 on page 2-15](#)).
- Step 6** Reinstall the top cover and reconnect AC power cords to the server. The server powers up to standby power mode, indicated when the Power LED on the front panel is amber.
- Step 7** Return the server to main power mode by pressing the **Power** button on the front panel. The server is in main power mode when the Power LED is green.



Note You must allow the entire server to reboot to main power mode to complete the password reset. This is because the state of the jumper cannot be determined without the host CPU running. The password is then cleared.

- Step 8** Press the **Power** button to shut down the server to standby power mode, and then remove AC power cords from the server to remove all power.
- Step 9** Remove the top cover from the server.
- Step 10** Remove the shorting jumper from the header pins.



Note If you do not remove the jumper, the password is cleared every time that you power-cycle the server.

- Step 11** Replace top cover, replace the server in the rack, replace power cords and any other cables, then power on the server by pressing the **Power** button.
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