CHAPTER 2

Installing the Server

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

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

Unpacking and Inspecting the Server

Caution When handling server components, wear an ESD strap and handle modules by the carrier edges only.

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:

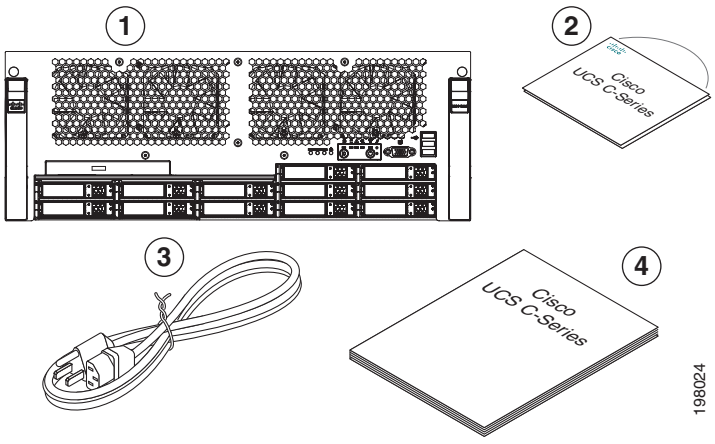
Step 1 Remove the server from its cardboard container and save all packaging material.

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 disk
3	Power cord (optional, up to four)	**4**	Documentation

Preparing for Server Installation

This section provides information about preparing for server installation, and it includes the following topics:

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 you are installing a server, use the following 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 Server Specifications appendix.
- Ensure that the cabinet or rack meets the requirements listed in the "Rack Requirements" section on page 2-4.
- Ensure that the site power meets the power requirements listed in the Server 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 F to 95 F (0 C to 35 C).

The rack must be of the following type:

- A standard 19-in. (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 must be square when you use the supplied slide rails.
- The minimum vertical rack space per server must be four RUs, equal to 7 in. (17.8 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.

Equipment Requirements

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.

Slide Rail Adjustment Range

The slide rails for this server have an adjustment range of 26 to 36 inches (660 to 914 mm).

Installing the Server In 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 in 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

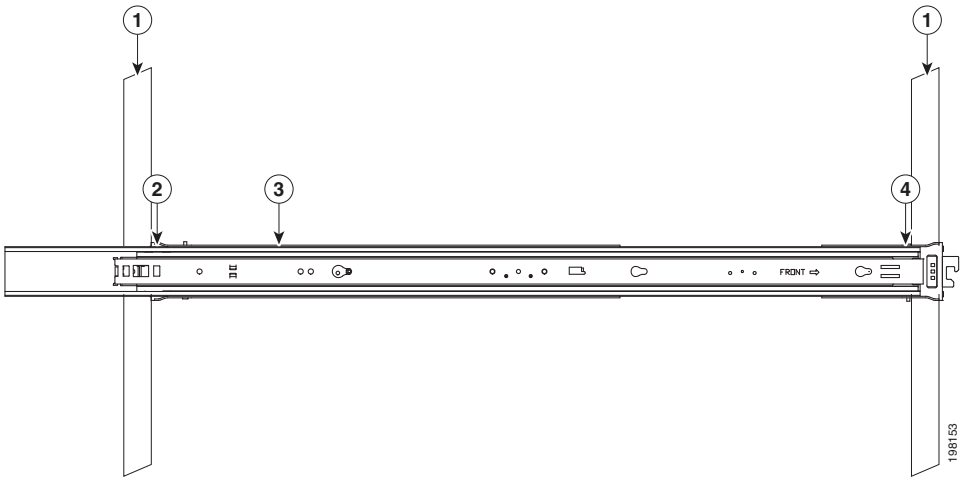
Step 1 Install the slide rail assemblies in the rack. See Figure 2-2.

a. Place the slide-rail assembly (item 3) against the inside of the front and rear rack posts (item 1), with the slide rail facing the inside of the rack and the front mounting pegs in front of the front rack-post holes (item 4).

b. Expand the slide rail assembly toward the rear of the rack, until the rear mounting pegs seat in the rear rack-post holes (item 2).

c. Compress the slide-rail assembly until the mounting pegs are fully seated and the locking clips at both ends of the assembly lock.

Figure 2-2 Installing the Slide Rail Assemblies in the Rack



1	Rack posts	**2**	Rear mounting pegs and locking clip
3	Slide rail assembly	**4**	Front mounting pegs and locking clip

d. Attach the second slide-rail assembly to the opposite side of the rack.

e. Ensure that the two slide-rail assemblies are level and at the same height.

f. Pull the inner slide rails on each assembly out toward the front of the rack until they hit the internal stops and lock in place.

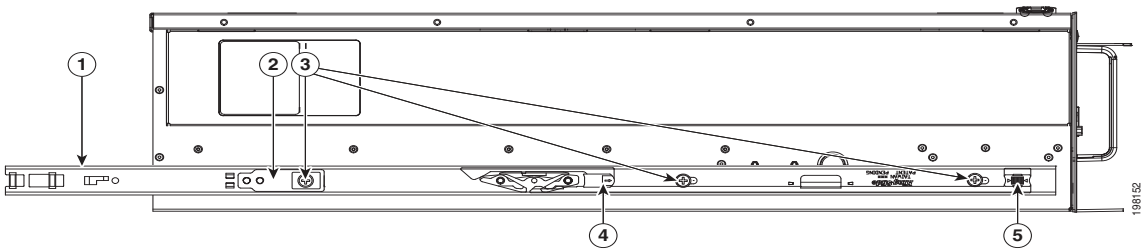
Step 2 Attach mounting brackets to the server. See Figure 2-3:

a. Place the mounting bracket (item 1) against the side of the server, with the end of the bracket marked *Front* toward the front of the server.

b. Match the three bracket mounting holes with the three mounting pegs (item 3) on the side of the server.

c. Slide the bracket toward the rear of the server until the metal tab on the bracket (item 2) locks over the rear mounting peg.

Figure 2-3 Attaching the Mounting Brackets to the Server



1	Mounting bracket	**2**	Metal tab
3	Mounting pegs	**4**	Removal release clip
5	Installation release clip		

Step 3 Insert the server into the slide rails:

a. Align the rear of the mounting brackets with the front of the empty slide rails that you installed in Step 1.

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 2-3).

d. Continue pushing the server into the rack until its front flanges touch the rack posts and the thumb latches engage.

Step 4 (Optional) Attach the Cable Management Arm (CMA) to the rear of the slide rails. Directions in this step use the orientation of facing the rear of the rack and server. See Figure 2-4.

a. Attach the square metal connector with the blue tab (item 4) to the rear of the left slide rail assembly. Push in the clip until it locks in place.

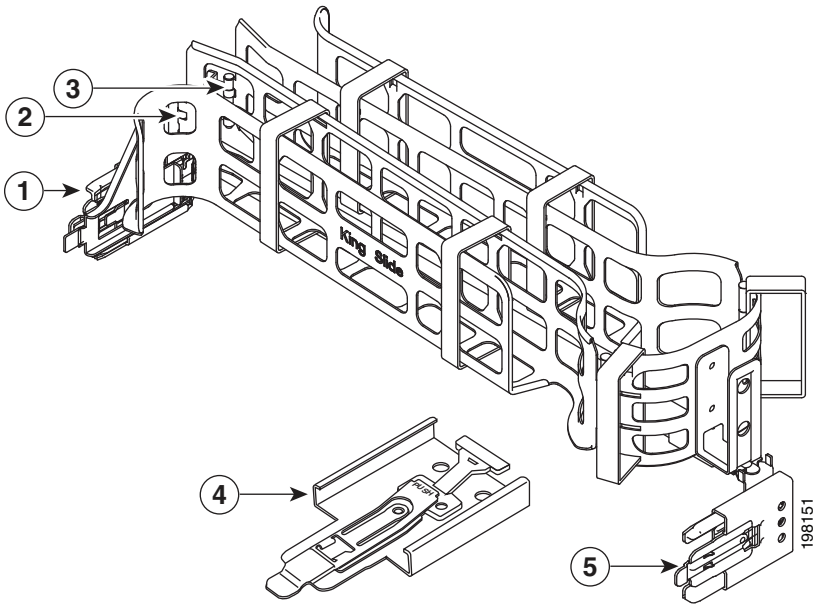
b. Attach Connector B (item 5) to the metal connector that you attached to the left slide rail in step a.

c. Attach Connector A (item 2) to the rear end of the right slide rail. Snap the rectangular hole in the end of the connector over the rectangular peg at the end of the slide rail.

d. Attach the blue clip connector (item 3) to the right slide rail.

e. Attach the metal connector (item 1) to the rear of the mounting bracket that is attached to the right side of the server.

Figure 2-4 Attaching the Cable Management Arm



1	Metal connector	**2**	Connector A
3	Blue clip connector	**4**	Square metal connector with blue tab
5	Connector B		

Step 5 Continue with the Initial Server Setup, page 2-8.

Initial Server Setup

This section contains the following topics:

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 EXT, default NIC redundancy is active-active, and DHCP is enabled. Shared LOM EXT mode enables the 1-Gb Ethernet ports and the ports on any installed Cisco virtual interface card (VIC) to access the Cisco Integrated Management Interface (CIMC). If you want to use the dedicated management ports to access the CIMC, you can 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 supplied 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, page A-2 for power specifications.

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

Note Depending on how much memory is installed in the server, bootup might take two minutes or more because of the memory verification operation during bootup.

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

- Off—The server is in standby power mode or no power is present. Power is supplied only to the CIMC 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 Connect a USB keyboard and VGA monitor to the USB and VGA connectors 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 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:

a. Press the **Power** button to boot the server. Watch for the prompt to press F8.

b. During bootup, press **F8** when prompted to open the BIOS CIMC Configuration Utility.

c. Set the NIC mode to your choice for which ports to use to access the CIMC for server management (see Figure 1-3 on page 1-2 for identification of the ports):

- Shared LOM EXT (default)—This is shared LOM extended mode. This is the factory-default setting, along with Active-active NIC redundancy and DHCP-enabled. With this mode, the shared LOM and Cisco Card interfaces are both enabled.

  In this mode, DHCP replies are returned to both the shared LOM ports and the Cisco card ports. If the system determines that the Cisco card connection is not getting its IP address from a Cisco UCS Manager system because the server is in standalone mode, further DHCP requests from the Cisco card are disabled. Use the Cisco Card NIC mode if you want to connect to the CIMC through a Cisco card in standalone mode.
- Dedicated—The dedicated management port is used to access the CIMC. You must select a NIC redundancy and IP setting.
- Shared LOM—The 1-Gb Ethernet ports are used to access the CIMC. You must select a NIC redundancy and IP setting.
- Cisco Card—The ports on an installed Cisco UCS virtual interface card (VIC) are used to access the CIMC. You must select a NIC redundancy and IP setting.
- Shared LOM 10G—The two 10Gb Ethernet ports are used to access the CIMC. You have to select a NIC redundancy and IP setting.

Note See Using the 10 Gb Ports, page 2-12 for more information about the SFP+ and 10G Base-T ports.

Note The Cisco Card NIC mode is currently supported only with a Cisco UCS VIC that is installed in PCIe slot 1. See also Special Considerations for Cisco UCS Virtual Interface Cards, page 3-42.

d. Use this utility to change the NIC redundancy to your preference. This server has three possible NIC redundancy settings:

- None—(Available only with the Shipping NIC mode) 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. See NIC Modes and NIC Redundancy Settings, page 2-11 for more information.

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

NIC Modes and NIC Redundancy Settings

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

- Shared LOM EXT (default)—This is shared LOM extended mode. This is the factory-default setting, along with Active-active NIC redundancy and DHCP-enabled. With this mode, the shared LOM and Cisco Card interfaces are both enabled.

  In this mode, DHCP replies are returned to both the shared LOM ports and the Cisco card ports. If the system determines that the Cisco card connection is not getting its IP address from a Cisco UCS Manager system because the server is in standalone mode, further DHCP requests from the Cisco card are disabled. If the system determines that the Cisco card connection is getting its IP address from a Cisco UCS Manager system, the reply has parameters that automatically move the server to UCSM mode.
- Dedicated—The dedicated management port is used to access the CIMC. You must select a NIC redundancy and IP setting.
- Shared LOM—The 1-Gb Ethernet ports are used to access the CIMC. You must select a NIC redundancy and IP setting.
- Cisco Card—The ports on an installed Cisco UCS virtual interface card (VIC) are used to access the CIMC. You must select a NIC redundancy and IP setting.
- Shared LOM 10G—The two 10Gb Ethernet ports 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 VIC that is installed in PCIe slot 4. See also Special Considerations for Cisco UCS Virtual Interface Cards, page 3-42.

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

- None—(Available only with the Shipping NIC mode) 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.

  The active/active setting uses Mode 5 or Balance-TLB (adaptive transmit load balancing). This is channel bonding that does not require any special switch support. The outgoing traffic is distributed according to the current load (computed relative to the speed) on each slave. Incoming traffic is received by the current slave. If the receiving slave fails, another slave takes over the MAC address of the failed receiving slave.

Using the 10 Gb Ports

This server has four 10 Gb ports on the rear panel (see Figure 1-3 on page 1-2):

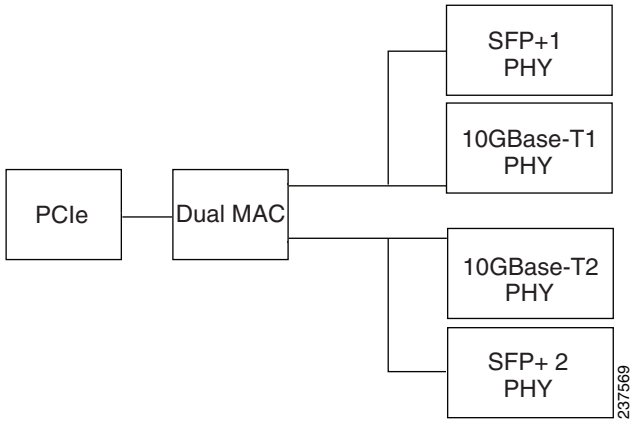
- Two 10GBase-T ports
- Two SFP+ ports

We recommend that you use either the two SFP+ ports or the two 10GBase-T ports.

Although there are four physical ports, only two can have active PHY links at one time. However, the dual media feature of this server does enable more advanced connections that can switch PHY links to alternate media when a PHY link goes down.

The underlying architecture has a dual media-access control (MAC) sub-layer that manages the PHY links for all four ports, as shown in Figure 2-5:

Figure 2-5 10 Gb Port Architecture



Note the following considerations:

- Your OS will report only the two PHY links that are active, rather than the four physical ports (for example, `10GE 1` and `10GE 2`). These could be the SFP+ ports or the 10GBase-T ports, depending on which have active links.
- You can connect to all four physical 10 Gb ports at once. However, only two of the ports will have active links at one time.
- If you connect to all four 10 Gb ports, the 10GBase-T PHY links have priority and they will be the active PHY links. If a 10GBase-T PHY link goes down or is disabled in this configuration, the dual MAC switches traffic to the corresponding SFP+ port.
- The driver firmware allows you to change the PHY link priority to the SFP+ ports, or to disable the PHY links for either the SFP+ or the 10GBase-T ports. Consult with your Cisco service provider for details of this advanced procedure.

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

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.

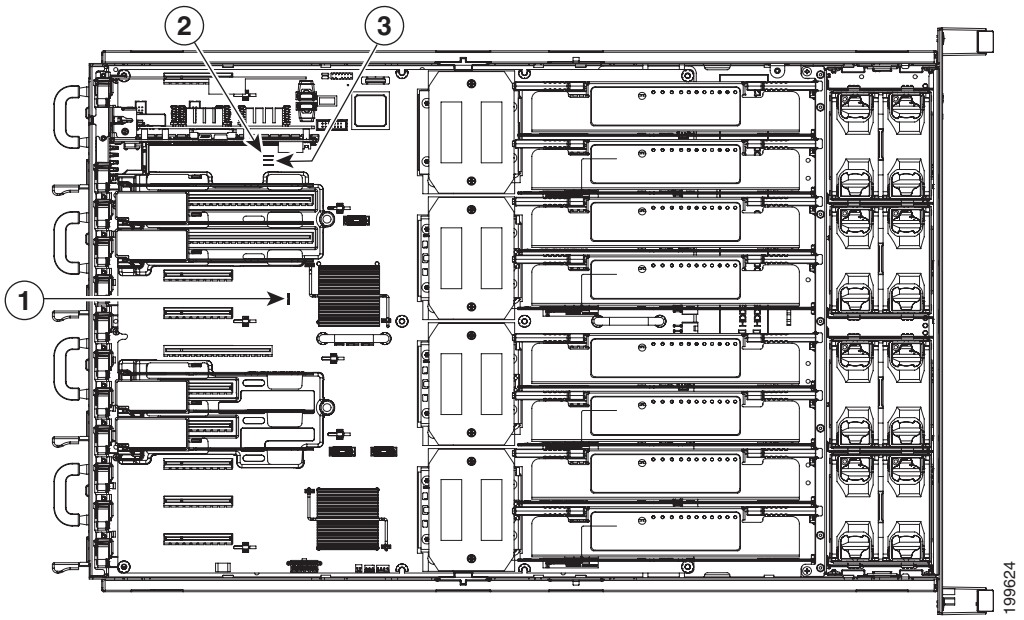
Step 6 Follow the instructions on the Exit menu screen to save your changes and exit the setup utility (or Press **F10**). You can exit without saving changes by pressing **Esc**.

Motherboard Jumpers for Clearing BIOS Settings

You can use the following three jumpers to clear CMOS settings, to clear the BIOS administrator password, and to initiate BIOS recovery.

- Using a BIOS Recovery Jumper on Header J6D1, page 2-15
- Using a Clear BIOS Admin Password Jumper on Header J5C3, page 2-16
- Using a Clear CMOS Jumper on Header J5C2, page 2-17

Figure 2-6 Service Jumper Locations



1	Header J6D1 (BIOS recovery)	**3**	Header J5C3 (clear BIOS password)
2	Header J5C2 (clear CMOS)		

Using a BIOS Recovery Jumper on Header J6D1

The J6D1 jumper is a 3-pin header on the motherboard (see Figure 2-6). You can install a 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 BIOS recovery files to the root directory of a USB thumb drive using either one of the following methods:

- Copy the contents of the extracted UEFI folder to the root directory of a USB thumb drive.
- The recovery folder contains a recovery ISO image. Extract and copy the contents of the recovery ISO image to the root directory of a USB thumb drive.

Step 3 Power off the server as described in Shutting Down and Powering Off the Server, page 3-6.

Step 4 Disconnect all power cords from the power supplies.

Step 5 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 6 Remove the top cover as described in Removing and Replacing the Server Top Cover, page 3-7.

Step 7 Install a shorting jumper on pins 2 and 3 of the J6D1 header (see Figure 2-6).

Step 8 Reinstall the top cover and reconnect AC power cords to the server. The server powers up to standby power mode.

Step 9 Insert the USB thumb drive that you prepared in Step 2 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.

The server boots with the updated BIOS boot block. When the BIOS detects a valid recovery.cap file on the USB thumb drive, it proceeds with the BIOS update.

Note During the BIOS update, the CIMC will shut down the server and the screen will be blank for about 10 minutes. Do not unplug the power cords during this update. The CIMC will power on the server after the update is complete.

Step 11 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 12 Remove the top cover from the server.

Step 13 Remove the shorting jumper from the header pins.

Note If you do not remove the jumper, the CIMC attempts to recover the BIOS every time the server is booted.

Step 14 Reinstall the top cover.

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

Using a Clear BIOS Admin Password Jumper on Header J5C3

The J5C3 jumper is a 3-pin header on the motherboard (see Figure 2-6 on page 2-14). This procedure describes how to clear the Admin password for the BIOS back to the default in case the user-selected password is lost of forgotten.

Step 1 Power off the server as described in the "Shutting Down and Powering Off the Server" section on page 3-6.

Step 2 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 3 Remove the top cover as described in the "Removing and Replacing the Server Top Cover" section on page 3-7.

Step 4 Move the shorting jumper to pins 2 and 3 of the J5C3 header (see Figure 2-6 on page 2-14).

Step 5 Replace the top cover.

Step 6 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 7 Press the **Power** button to shut down the server to standby power mode.

Step 8 Remove the top cover from the server.

Step 9 Replace the jumper to the default pins 1 and 2 on the J5C3 header.

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

Step 10 Replace the top cover.

Step 11 Replace the server in the rack, replace cables, and then power on the server by pressing the **Power** button.

Using a Clear CMOS Jumper on Header J5C2

The J5C3 jumper is a 3-pin header on the motherboard (see Figure 2-6 on page 2-14). You can use this procedure 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.

Note The Clear CMOS function on header J5C2 does not restore the defaults to CIMC-controlled BIOS setup parameters. If you need to restore defaults on CIMC-controlled BIOS setup parameters, go to the CIMC GUI's **Server — BIOS** page, then click **Configure BIOS** to open the Configure BIOS Parameters window. On that window, use the **Restore Defaults** button to restore defaults.

Step 1 Power off the server as described in the "Shutting Down and Powering Off the Server" section on page 3-6.

Step 2 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 3 Remove the top cover as described in the "Removing and Replacing the Server Top Cover" section on page 3-7.

Step 4 Install a shorting jumper to pins 2 and 3 of the J5C2 header and leave it there for about 5 seconds (see Figure 2-6 on page 2-14).

Step 5 Replace the jumper to the default pins 1 and 2 on the J5C2 header.

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

Step 6 Replace the top cover.

Step 7 Replace the server in the rack, replace cables, and then power on the server by pressing the **Power** button.