



Installing the Cisco SNS 3415 and Cisco SNS 3495 Hardware Appliances

This chapter describes how to install your Cisco SNS-3415 or Cisco SNS-3495 appliance and connect it to the network.

It contains:

- [Installing the Cisco SNS-3415/3495 Appliance Rack, page 1](#)
- [Cisco Integrated Management Controller \(CIMC\), page 4](#)
- [Configuring CIMC, page 4](#)
- [Connecting Cables, page 6](#)
- [Connecting and Powering On the Cisco SNS-3415/3495 Appliance, page 9](#)

Before you begin the installation, read the [Regulatory Compliance and Safety Information for the Cisco 3415 or 3495 Secure Access Control System](#).

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

Warning: This unit is intended for installation in restricted access areas. A restricted access area can be accessed only through the use of a special tool, lock and key, or other means of security. Statement 1017

Installing the Cisco SNS-3415/3495 Appliance Rack

This section describes how to install the Cisco SNS-3415 or Cisco SNS-3495 appliance 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.

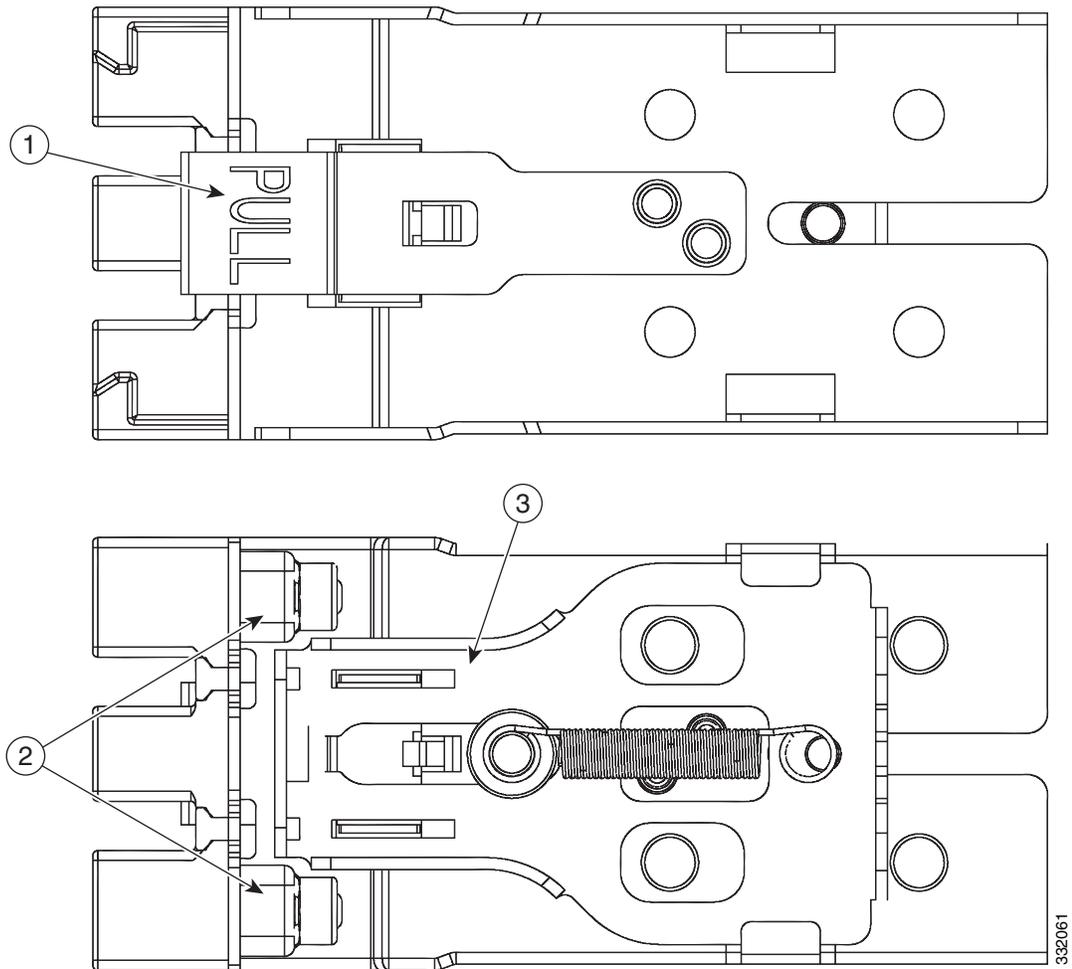
When mounting this unit in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.

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

Statement 1006

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

1. Open the front securing latch (see [Figure 1 on page 2](#)). The end of the slide-rail assembly marked "FRONT" has a spring-loaded securing latch that must be open before you can insert the mounting pegs into the rack-post holes.
 - a. On the rear side of the securing-latch assembly, hold open the clip marked "PULL."
 - b. Slide the spring-loaded securing latch away from the mounting pegs.
 - c. Release the clip marked "PULL" to lock the securing latch in the open position.

Figure 1 Front Securing Latch**Table 0-1**

1	Clip marked “PULL” on rear of assembly	3	Spring-loaded securing latch on front of assembly
2	Front mounting pegs		

2. Install the slide rails onto the rack:

- a.** Position a slide-rail assembly inside the two left-side rack posts (see [Figure 2 on page 3](#)).

Use the “FRONT” and “REAR” markings on the slide-rail assembly to orient the assembly correctly with the front and rear rack posts.

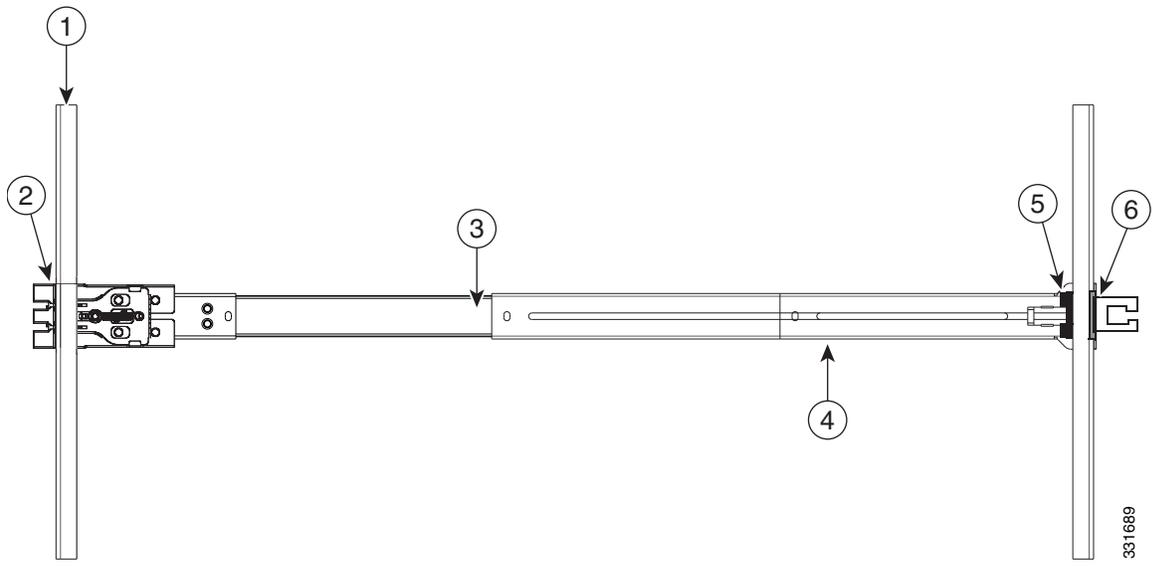
- b.** Position the front mounting pegs so that they enter the desired front rack-post holes from the front.

Note: The mounting pegs that protrude through the rack-post holes are designed to fit round or square holes, or smaller #10-32 round holes when the mounting peg is compressed. 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.

- c.** Expand the length-adjustment bracket until the rear mounting pegs protrude through the desired holes in the rear rack post.

Use your finger to hold the rear securing latch open when you insert the rear mounting pegs to their holes. When you release the latch, it wraps around the rack post and secures the slide-rail assembly.

Figure 2 Attaching a Slide Rail Assembly



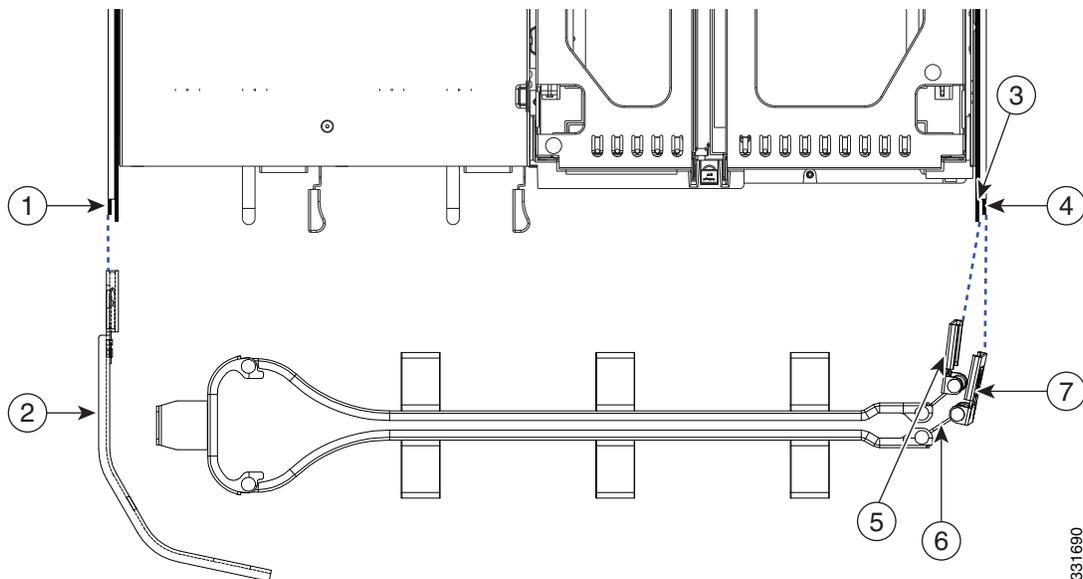
1	Front-left rack post	4	Length-adjustment bracket
2	Front mounting pegs	5	Rear mounting pegs
3	Slide-rail assembly	6	Rear securing latch

- 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.
3. Insert the server into the slide rails:
- Note:** The inner rails are pre-attached to the sides of the server at the factory. You can order replacement inner rails if these are damaged or lost (Cisco PID UCSC-RAIL1-I).
- a. Align the inner rails that are pre-attached to the server sides with the front ends of the empty slide rails.
 - b. Push the server into the slide rails until it stops at the internal stops.
 - c. Push in the plastic release clip on each inner rail (labelled PUSH), and then continue pushing the server into the rack until its front latches engage the rack posts.
4. Attach the (optional) cable management arm (CMA) to the rear of the slide rails:
- Note:** The CMA is designed for mounting on either the right or left slide rails. These instructions describe an installation to the rear of the right slide rails, as viewed from the rear of server.
- a. Slide the plastic clip on the inner CMA arm over the flange on the mounting bracket that attached to the side of the server. See [Figure 3 on page 4](#).

Note: Whether you are mounting the CMA to the left or right slide rails, be sure to orient the engraved marking, “UP” so that it is always on the upper side of the CMA. See [Figure 3 on page 4](#).

- b. Slide the plastic clip on the outer CMA arm over the flange on the slide rail. See [Figure 3 on page 4](#).
- c. Attach the CMA retaining bracket to the left slide rail. Slide the plastic clip on the bracket over the flange on the end of the left slide

Figure 3 Attaching the Cable Management Arm (Rear of Server Shown)



1	Flange on rear of outer left slide rail	5	Inner CMA arm attachment clip
2	CMA retaining bracket	6	“UP” orientation marking
3	Flange on rear of right mounting bracket	7	Outer CMA arm attachment clip
4	Flange on rear of outer right slide rail	8	

5. Continue with the “Connecting and Powering on Cisco SNS-3415/3495 Appliance”.

Cisco Integrated Management Controller (CIMC)

You can monitor the server inventory, health, and system event logs by using the built-in Cisco Integrated Management Controller 1.4.7a (CIMC) GUI or CLI interfaces. See the user documentation for your firmware release at the following URL:

http://www.cisco.com/en/US/products/ps10739/products_installation_and_configuration_guides_list.html

Configuring CIMC

You can perform all operations on the Cisco SNS-3415 or Cisco SNS-3495 appliance through the CIMC. To do this, you must first configure an IP address and IP gateway to access the CIMC from a web-based browser.

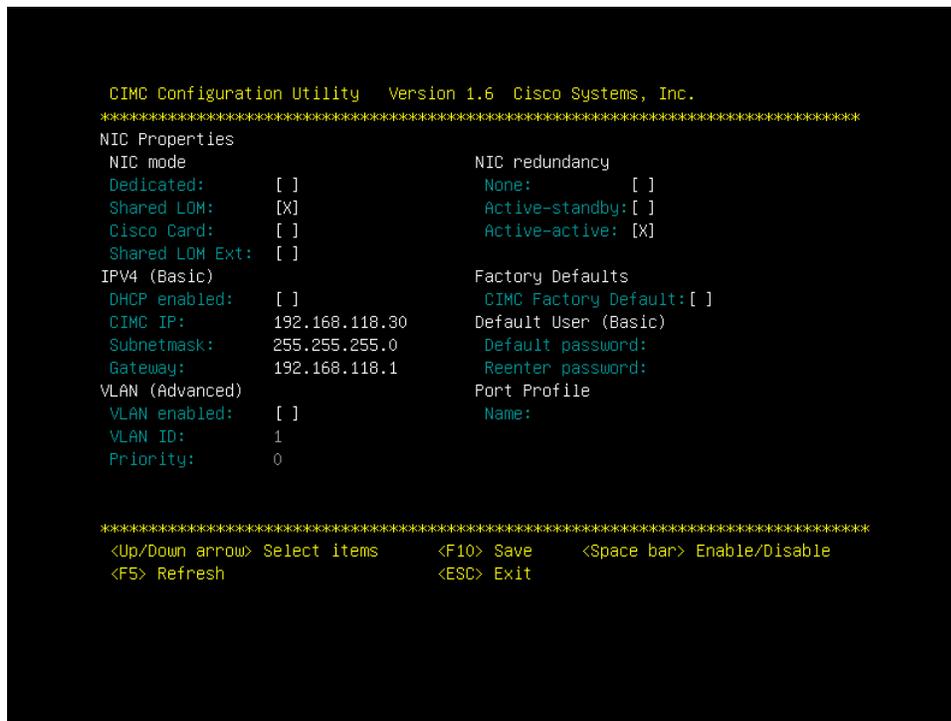
1. Plug in the power cord.

Configuring CIMC

2. Press the **Power** button to boot the server.



3. During bootup, press **F8** when prompted to open the BIOS CIMC Configuration Utility. The following screen appears.



Connecting Cables

4. Set the NIC mode to your choice for which ports to use to access the CIMC for server management (see [Figure 1 on page 3](#) for identification of the ports):
 - Dedicated—The 1-Gb Ethernet management port is used to access the CIMC. You must select NIC redundancy *None* and select IP settings.
 - 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 UCS P81E VIC are used to access the CIMC. You must select a NIC redundancy and IP setting.

Note: The Cisco Card NIC mode is currently supported only with a Cisco UCS P81E VIC (N2XX-ACPCI01) that is installed in PCIe slot 1.

5. 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.
6. Choose whether to enable DHCP for dynamic network settings, or to 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.

7. Optional: Use this utility to make VLAN settings.

8. Use this utility 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.

9. 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.

Note: By default, the baud rate of the serial port is set to 115200. After you configure CIMC, log in to the CIMC user interface and change the serial port baud rate to 9600.

Connecting Cables

This section describes how to connect your Cisco SNS-3415 or Cisco SNS-3495 appliance to the network and the appliance console. This section includes:

- [Connecting the Network Interface, page 7](#)
- [Connecting the Console, page 8](#)
- [Connecting the Keyboard and Video Monitor, page 8](#)
- [Cable Management, page 9](#)

Attach cables (such as keyboard, monitor cables, if required) to the rear of the server. Route the cables properly and use the cable straps to secure the cables to the slide rails. See [Figure 2 on page 3](#) [Figure 2 Cisco SNS-3415/3495 Appliance Rear View, page 3](#) for reference on the rear view of the appliance.

Connecting the Network Interface

Warning: Do not work on the system or connect or disconnect cables during periods of lightning activity. Statement 1001

This section describes how to connect the Cisco SNS-3415 or Cisco SNS-3495 appliance Ethernet port.

The Ethernet connector supports Serial over LAN (SOL) cables. The RJ-45 port supports standard straight-through and crossover Category 5 unshielded twisted-pair (UTP) cables. Cisco does not supply Category 5 UTP cables; these cables are available commercially.

To connect the cable to the appliance Ethernet port:

1. Verify that the appliance is turned off.
2. Connect one end of the cable to the GigabitEthernet 0 port on the appliance.
3. Connect the other end to a switch in your network.

Ethernet Port Connector

The Cisco SNS 3415 or Cisco SNS-3495 appliance comes with two integrated dual-port Ethernet controllers. ACS 5.8 supports multiple NICs. See [Multiple Network Interface Connectors, page 9](#) for more information. These controllers provide an interface for connecting to 10-Mb/s, 100-Mb/s, or 1000-Mb/s networks and provide full-duplex (FDX) capability, which enables simultaneous transmission and reception of data on the Ethernet LAN.

To access the Ethernet port, connect a Category 3, 4, 5, 5E, or 6 unshielded twisted-pair (UTP) cable to the RJ-45 connector on the back of the appliance.

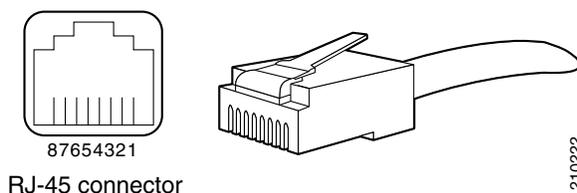
[Table 1 on page 7](#) describes the UTP cable Categories.

Table 1 Ethernet Cabling Guidelines

Type	Description
10BASE-T	EIA Categories 3, 4, or 5 UTP (2 or 4 pair) up to 328 ft (100 m)
100BASE-TX	EIA Category 5 UTP (2 pair) up to 328 ft (100 m)
1000BASE-T	EIA Category 6 UTP (recommended), Category 5E UTP or 5 UTP (2 pair) up to 328 ft (100 m)

[Figure 4 on page 7](#) shows the Ethernet RJ-45 port and plug.

Figure 4 RJ-45 Port and Plug



[Table 2 on page 8](#) lists and describes the RJ-45 pin signals used on the connector.

Table 2 Ethernet Port Pin-out

Ethernet Port Pin	Signal	Description
1	TxD+	Transmit data +
2	TxD-	Transmit data -
3	RxD+	Receive data +
4	Termination network	No connection
5	Termination network	No connection
6	RxD-	Receive data -
7	Termination network	No connection
8	Termination network	No connection

Connecting the Console

Warning: Do not work on the system or connect or disconnect cables during periods of lightning activity. Statement 1001

Your Cisco SNS-3415 or Cisco SNS-3495 appliance has a DCE-mode console port for connecting a console terminal to your appliance. The appliance uses a DB-9 serial connector for the console port.

The console port on the Cisco SNS-3415 or Cisco SNS-3495 appliance includes an EIA/TIA-232 asynchronous serial (DB-9) connector. This serial console connector (port) allows you to access the appliance locally by connecting a terminal—either a PC running terminal-emulation software or an ASCII terminal—to the console port.

To connect a PC running terminal-emulation software to the console port, use a DB-9 female to DB-9 female straight-through cable.

To connect an ASCII terminal to the console port, use a DB-9 female to DB-25 male straight-through cable with a DB-25 female to DB-25 female gender changer.

To connect a terminal or a PC running terminal-emulation software to the console port on the Cisco SNS-3415 or Cisco SNS-3495 appliance:

1. Connect the terminal using a straight-through cable to the console port.
2. Configure your terminal or terminal-emulation software for 9600 baud, 8 data bits, no parity, 1 stop bit, and no hardware flow control.

Connecting the Keyboard and Video Monitor

Warning: Do not work on the system or connect or disconnect cables during periods of lightning activity. Statement 1001

This section describes how to connect a keyboard and video monitor to the Cisco SNS-3415 or Cisco SNS-3495 appliance.

You can connect the keyboard and video monitor to the Cisco SNS-3415 or Cisco SNS-3495 appliance using the KVM connector available in the front panel of the Cisco SNS-3415 or Cisco SNS-3495 appliance. A KVM cable is shipped along with the appliance that provides two USB, one VGA, and one serial connector.

The Cisco SNS-3415 or Cisco SNS-3495 appliance does not provide support for a mouse.

The Cisco SNS-3415 or Cisco SNS-3495 provides USB ports on the rear of the appliance that can be used to connect a keyboard and video monitor.

Connecting and Powering On the Cisco SNS-3415/3495 Appliance

To connect a keyboard and video monitor to the appliance:

1. Verify that the appliance is turned off.
2. Connect the end of the keyboard cable to the PS/2 (keyboard) port which is located on the back panel of the appliance.
3. Connect the end of the video monitor cable to the PS/2 (video monitor) port which is located on the back panel of the appliance.
4. Power on the appliance.

Cable Management

Cable management is the most visual aspect of your appliance setup. However, cable management is often overlooked because it can be time consuming.

Equipment racks and enclosures house more equipment today than ever before. This growth has increased the need for organized cable management both inside and outside the rack. Poor cable management not only leads to damaged cables or increased time for adding or changing cables, but also blocks critical airflow or access. These problems can lead to inefficiencies in the performance of your equipment or even downtime.

There are many solutions to address cable management. They can range from simple cable management rings, to vertical or horizontal organizers, to troughs and ladders.

All Cisco SNS-3415 or Cisco SNS-3495 appliance cables should be properly dressed so as not to interfere with each other or other pieces of equipment. Use local practices to ensure that the cables attached to your appliance are properly dressed.

Proceed to the next section, [Connecting and Powering On the Cisco SNS-3415/3495 Appliance, page 9](#), to continue the installation process.

Connecting and Powering On the Cisco SNS-3415/3495 Appliance

- [Connecting and Powering On the Server \(Standalone Mode\), page 9](#)
- [System BIOS and CIMC Firmware, page 10](#)
- [Service Headers and Jumpers, page 11](#)

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](#).

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 1-Gb Ethernet ports to access the Cisco Integrated Management Interface (CIMC). If you want to use the 1-Gb Ethernet dedicated management port, or a port on a Cisco UCS P81E Virtual Interface Card (VIC) 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.

Connecting and Powering On the Cisco SNS-3415/3495 Appliance

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

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 5](#) 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 (see):

- Off—There is no AC power present in the server.
- Amber—The server is in standby power mode. Power is supplied only to the CIMC and some motherboard functions.
- 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.

2. Connect a USB keyboard and VGA monitor by using the supplied KVM cable connected to the KVM connector on the front panel (see [Figure 1 on page 3](#)).

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.

3. See the [Configuring CIMC, page 4](#) to enter in to the BIOS CIMC Configuration Utility. Use this utility to set NIC mode, NIC redundancy, and choose whether to enable DHCP or set static network settings.
4. Connect to the CIMC for server management. Connect Ethernet cables from your LAN to the server, using the ports that you selected in Step 3. The Active-active and Active-passive NIC redundancy settings require you to connect to two ports.
5. Enter the IP address of the CIMC in your browser to connect to the CIMC Setup Utility. The CIMC IP address is configured in Step 3 (either a static address or the address assigned by your DHCP server).

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>

System BIOS and CIMC Firmware

This section includes information about the system BIOS 1.4.7b.0, and it includes the following sections:

- [Updating the BIOS and CIMC Firmware, page 10](#)
- [Accessing the System BIOS, page 11](#)

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 off 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.

Connecting and Powering On the Cisco SNS-3415/3495 Appliance

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 to 1.4.7a, BIOS 1.4.7b.0, 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 and BIOS firmware by using the CIMC GUI interface. See the Cisco UCS C-Series Rack-Mount Server Configuration Guide.
- You can upgrade the CIMC and BIOS 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

To change the BIOS settings for your server, follow these steps. Detailed instructions are also printed on the BIOS screens.

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.
2. Use the arrow keys to select the BIOS menu page.
3. Highlight the field to be modified by using the arrow keys.
4. Press **Enter** to select the field that you want to change, and then modify the value in the field.
5. Press the right arrow key until the Exit menu screen is displayed.
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**.

Service Headers and Jumpers

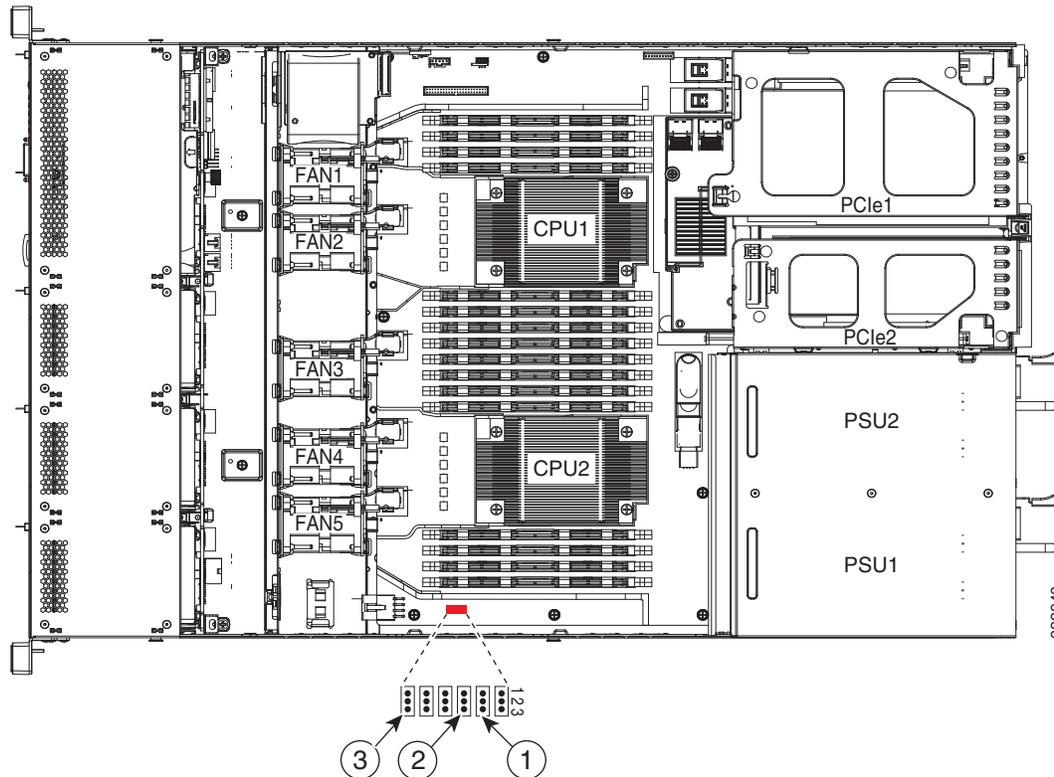
This section includes the following topics:

- [Header Locations on the Motherboard, page 12](#)
- [Using the BIOS Recovery Header J41, page 12](#)
- [Using the Clear CMOS Header J37, page 14](#)

Header Locations on the Motherboard

See [Figure 5 on page 12](#). The block of headers is shown in red. The individual headers are shown in the magnified view. The pin numbering is the same for all headers in the block.

Figure 5 Service Header Locations



1	J41 BIOS RCVR BOOT	2	J37 Clear CMOS
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Using the BIOS Recovery Header J41

Depending on which stage the BIOS becomes corrupted, you might see different behavior.

- If the BIOS BootBlock is corrupted, you might see the system get stuck on the following message:

```
Initializing and configuring memory/hardware
```

- If it is a non-BootBlock corruption, the following message is displayed:

```
****BIOS FLASH IMAGE CORRUPTED****
Flash a valid BIOS capsule file using CIMC WebGUI or CLI interface.
IF CIMC INTERFACE IS NOT AVAILABLE, FOLLOW THE STEPS MENTIONED BELOW.
1. Connect the USB stick with recovery.cap file in root folder.
2. Reset the host.
IF THESE STEPS DO NOT RECOVER THE BIOS
1. Power off the system.
2. Mount recovery jumper.
3. Connect the USB stick with recovery.cap file in root folder.
4. Power on the system.
Wait for a few seconds if already plugged in the USB stick.
REFER TO SYSTEM MANUAL FOR ANY ISSUES.
```

Connecting and Powering On the Cisco SNS-3415/3495 Appliance

Note: As indicated by the message shown above, there are two procedures for recovering the BIOS. Try procedure 1 first, then if that does not recover the BIOS, use procedure 2.

Note: The server must have CIMC version 1.4(6) or later to use these procedures.

Procedure 1: Reboot With recovery.cap File

1. Download the BIOS update package and extract it to a temporary location.
2. Copy the contents of the extracted Initializing and configuring memory/hardware folder to the root directory of a USB thumb drive. The recovery folder contains the recovery file that is required in this procedure.

Note: The recovery.cap file must be in the root directory of the USB thumb drive. Do not rename this file. The USB thumb drive must be formatted with either FAT16 or FAT32 file systems.

3. Insert the USB thumb drive into a USB port on the server.
4. Reboot the server.
5. Return the server to main power mode by pressing the **Power** button on the front panel.

The server boots with the updated BIOS boot block. When the BIOS detects a valid recovery.cap file on the USB thumb drive, it displays this message:

```
Found a valid recovery file...Transferring to CIMC
System would flash the BIOS image now...
System would restart with recovered image after a few seconds....
```

6. Wait for server to complete the BIOS update, then remove the USB thumb drive from the server.

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.

Procedure 2: Use Recovery Jumper and recovery.cap File

See [Figure 5 on page 12](#) for the location of the J41 header.

1. Download the BIOS update package and extract it to a temporary location.
2. Copy the contents of the extracted recovery folder to the root directory of a USB thumb drive. The recovery folder contains the recovery.cap file that is required in this procedure.

Note: The recovery.cap file must be in the root directory of the USB thumb drive. Do not rename this file. The USB thumb drive must be formatted with either FAT16 or FAT32 file systems.

3. Power off the server as described in Shutting Down and Powering Off the Server.
4. Disconnect all power cords from the power supplies.
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: Caution If you cannot safely view and access the component, remove the server from the rack.

6. Remove the top cover as described in Removing and Replacing the Server Top Cover.
7. Move the shorting jumper to pins 2 and 3 of the J41 header (see [Figure 2-5](#)).
8. Reconnect AC power cords to the server. The server powers up to standby power mode.
9. Insert the USB thumb drive that you prepared in Step 2 into a USB port on the server.

10. Return the server to main power mode by pressing the Power button on the front panel.

The server boots with the updated BIOS boot block. When the BIOS detects a valid recovery.cap file on the USB thumb drive, it displays this message:

```
Found a valid recovery file...Transferring to CIMC
System would flash the BIOS image now...
System would restart with recovered image after a few seconds...
```

11. Wait for server to complete the BIOS update, then remove the USB thumb drive from the server.
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.
12. After the server has fully booted, power off the server again and disconnect all power cords.
13. Move the jumper back to the default pins 1 and 2 of the J41 header.
Note: If you do not move the jumper, after recovery completion you see the prompt, "Please remove the recovery jumper."
14. 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 Header J37

See [Figure 5 on page 12](#) for the location of this header. You can jumper this header 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.

Caution: Clearing the CMOS removes any customized settings and might result in data loss. Make a note of any necessary customized settings in the BIOS before you use this clear CMOS procedure.

1. Power off the server as described in Shutting Down and Powering Off the Server.
2. Disconnect all power cords from the power supplies.
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.

4. Remove the top cover as described in Removing and Replacing the Server Top Cover.
5. Move the shorting jumper to pins 2 and 3 of the J37 header (see Figure 2-5).
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.
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 jumper cannot be determined without the host CPU running.

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.
9. Remove the top cover from the server.
10. Move the shorting jumper from header pins 2 and 3, back to its default position on pins 1 and 2.

Connecting and Powering On the Cisco SNS-3415/3495 Appliance

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

- 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.

