



Installation and Initial Setup

This chapter includes rack and installation requirements, installation instructions, and initial setup instructions for connecting to your network.

- [Installation Warnings and Guidelines](#), on page 1
- [Rack Requirements](#), on page 3
- [Installing the Server Chassis in a Rack](#), on page 4
- [Installing the Cable Management Arm \(Optional\)](#), on page 6
- [Reversing the Cable Management Arm \(Optional\)](#), on page 7
- [Initial Compute Node Setup](#), on page 8
- [NIC Mode and NIC Redundancy Settings](#), on page 13
- [Updating the BIOS and Cisco IMC Firmware](#), on page 14
- [Accessing the System BIOS](#), on page 15
- [Smart Access Serial](#), on page 15
- [Smart Access USB](#), on page 15

Installation Warnings and Guidelines



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



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



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



Caution To ensure proper airflow it is necessary to rack the servers using rail kits. Physically placing the units on top of one another or “stacking” without the use of the rail kits blocks the air vents on top of the servers, which could result in overheating, higher fan speeds, and higher power consumption. We recommend that you mount your servers on rail kits when you are installing them into the rack because these rails provide the minimal spacing required between the servers. No additional spacing between the servers is required when you mount the units using rail kits.



Caution Avoid uninterruptible power supply (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.

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 accessing 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 [Environmental Specifications](#).
- Ensure that the cabinet or rack meets the requirements listed in the [Rack Requirements, on page 3](#).
- Ensure that the site power meets the power requirements listed in the [Power Specifications](#). If available, you can use an uninterruptible power supply (UPS) to protect against power failures.

Rack Requirements

This section provides the requirements for installing the server chassis in a standard open rack, assuming an external ambient air temperature range of 50 to 95°F (10 to 35°C).

The Cisco R-Series Racks are an ideal choice. If you use other racks, 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 can be square 0.38-inch (9.6 mm), round 0.28-inch (7.1 mm), #12-24 UNC, or #10-32 UNC when you use the Cisco-supplied slide rails.
- The minimum vertical rack space per server must be two rack units (RUs), equal to 3.5 in. (88.9 mm).

Supported Cisco Slide Rail Kits

The server supports the following rail kit options:

- Cisco part UCSC-RAILB-C4200= (ball-bearing slide rail kit)
- Cisco part UCSC-CMAF-C4200= (cable management arm)

Rack Installation Tools Required

The slide rails sold by Cisco Systems for this server do not require tools for installation.

Slide Rail and Cable Management Arm Dimensions

The slide rails for this server have an adjustment range of 24 to 36 inches (610 to 914 mm).

The optional cable management arm (CMA) adds additional length requirements:

- The additional distance from the rear of the server to the rear of the CMA is 5.4 inches (137.4 mm).
- The total length of the server including the CMA is 35.2 inches (894 mm).

Installing the Server Chassis 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.

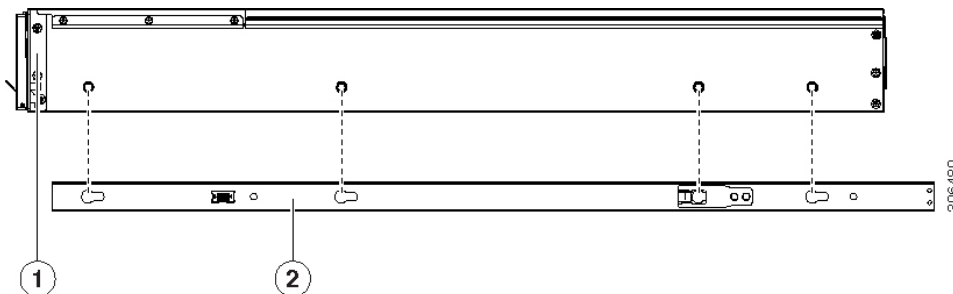
If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack.

Statement 1006

Step 1 Attach the inner rails to the sides of the server:

- Align an inner rail with one side of the server so that the four keyed slots in the rail align with the four pegs on the side of the server.
- Set the keyed slots over the pegs, and then slide the rail toward the front to lock it in place on the pegs.
- Install the second inner rail to the opposite side of the server.

Figure 1: Attaching the Inner Rail to the Side of the Server



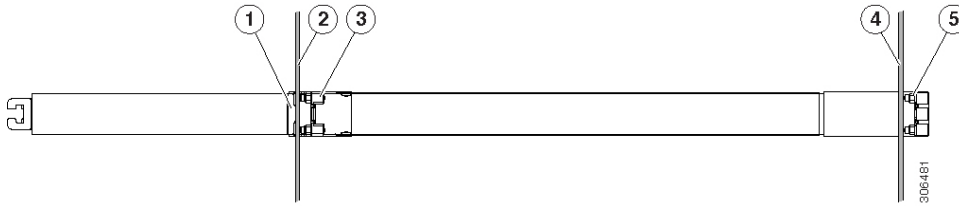
1	Front of server	2	Inner rail
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Step 2 Install the outer slide rails into the rack:

- Align one slide-rail assembly front end with the front rack-post holes that you want to use.
The slide rail front-end wraps around the outside of the rack post and the mounting pegs enter the rack-post holes from the outside-front. See [Figure 2: Attaching the Slide Rails to the Rack \(View from Inside Rack\)](#), on page 5.
- Push the mounting pegs into the rack-post holes from the outside-front.
- Adjust the slide-rail length, and then push the rear mounting pegs into the corresponding rear rack-post holes from the *inside* of the rack post. You must push aside the spring-loaded securing clip that wraps around the rear rack post.

Note The slide rail must be level front-to-rear.

Figure 2: Attaching the Slide Rails to the Rack (View from Inside Rack)



1	Rear peg securing clip, wrapping around rear rack post.	4	Front rack post
2	Rear rack post	5	Front pegs entering rack post from the outside
3	Rear pegs entering rack post from the inside	-	

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

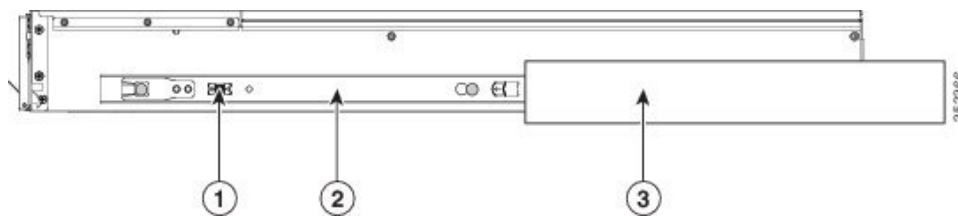
Step 3

Insert the server into the slide rails:

Caution This system can weigh up to 95.8 pounds (43.5 kilograms) when fully loaded with components. We recommend that you use a minimum of two people or a mechanical lift when lifting the server. Attempting this procedure alone could result in personal injury or equipment damage. Consider removing compute nodes from the chassis while you lift the chassis.

- a) Align the rear ends of the inner rails that are attached to the server sides with the front ends of the empty slide rails on the rack.
- b) Push the inner rails into the slide rails on the rack until they stop at the internal stops.
- c) Slide the inner-rail release clip toward the rear on both inner rails, and then continue pushing the server into the rack until its front slam-latches engage with the rack posts.

Figure 3: Inner-Rail Release Clip



1	Inner-rail release clip	3	Outer slide rail attached to rack post
2	Inner rail attached to server and inserted into outer slide rail	-	

Step 4

(Optional) Secure the server in the rack more permanently by using the two screws that are provided with the slide rails. Perform this step if you plan to move the rack with servers installed.

With the server fully pushed into the slide rails, open a hinged slam latch lever on the front of the server and insert a screw through the hole that is under the lever. The screw threads into the static part of the rail on the rack post and prevents the server from being pulled out. Repeat for the opposite slam latch.

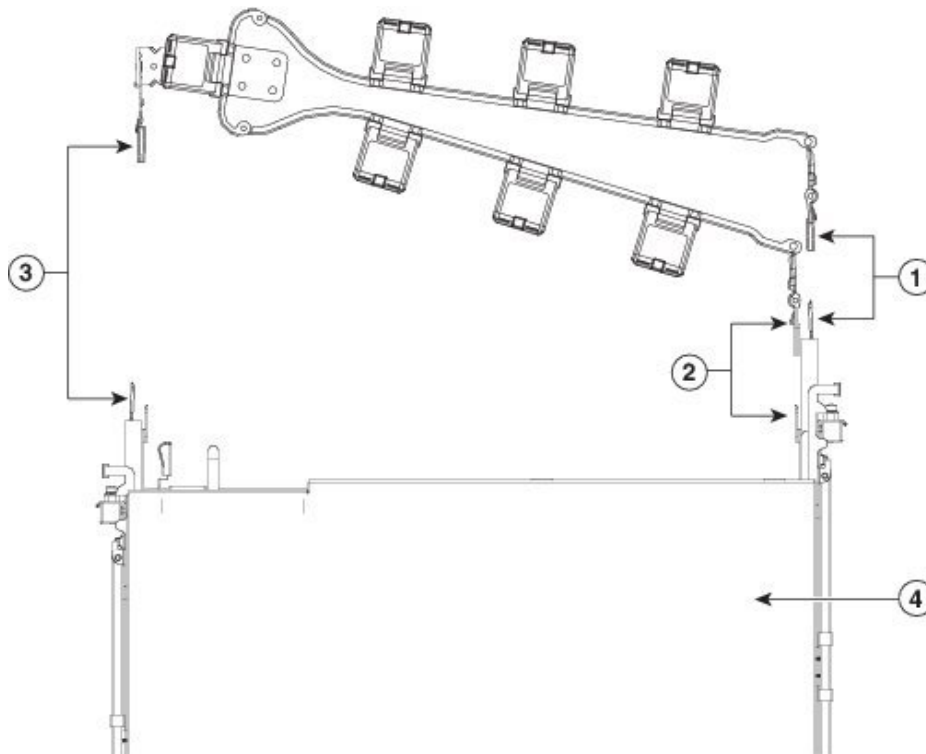
Installing the Cable Management Arm (Optional)



Note The cable management arm (CMA) is reversible left-to-right. To reverse the CMA, see [Reversing the Cable Management Arm \(Optional\)](#), on page 7 before installation.

Step 1 With the server pushed fully into the rack, slide the CMA tab of the CMA arm that is farthest from the server onto the end of the stationary slide rail that is attached to the rack post. Slide the tab over the end of the rail until it clicks and locks.

Figure 4: Attaching the CMA to the Rear Ends of the Slide Rails



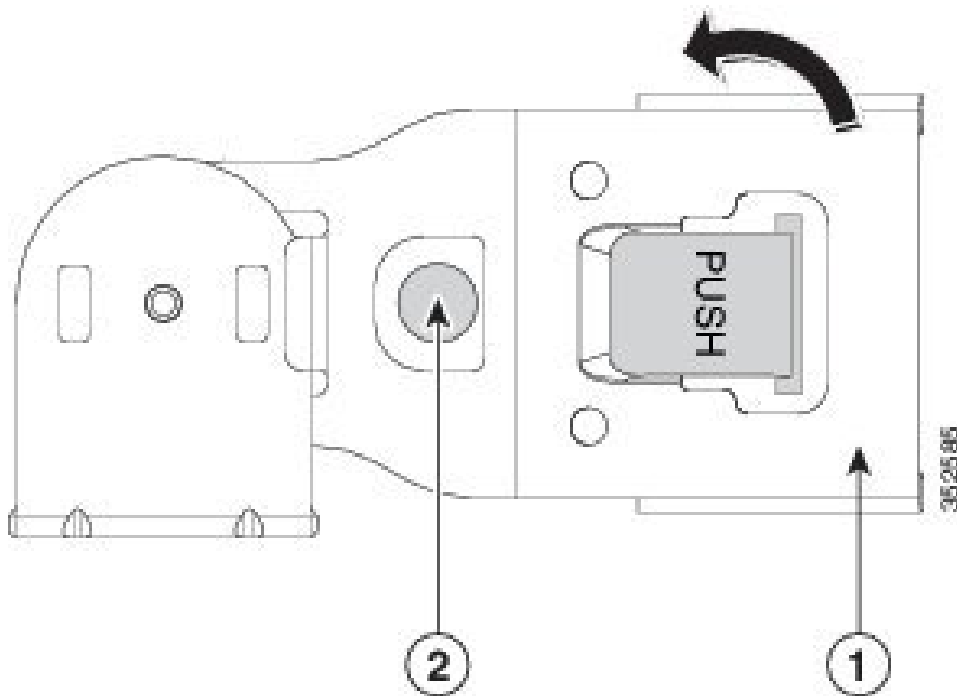
1	CMA tab on arm farthest from server attaches to end of stationary outer slide rail.	3	CMA tab on width-adjustment slider attaches to end of stationary outer slide rail.
2	CMA tab on arm closest to the server attaches to end of inner slide rail attached to server.	4	Rear of server

- Step 2** Slide the CMA tab that is closest to the server over the end of the inner rail that is attached to the server. Slide the tab over the end of the rail until it clicks and locks.
- Step 3** Pull out the width-adjustment slider that is at the opposite end of the CMA assembly until it matches the width of your rack.
- Step 4** Slide the CMA tab that is at the end of the width-adjustment slider onto the end of the stationary slide rail that is attached to the rack post. Slide the tab over the end of the rail until it clicks and locks.
- Step 5** Open the hinged flap at the top of each plastic cable guide and route your cables through the cable guides as desired.

Reversing the Cable Management Arm (Optional)

- Step 1** Rotate the entire CMA assembly 180 degrees, left-to-right. The plastic cable guides must remain pointing upward.
- Step 2** Flip the tabs at the ends of the CMA arms so that they point toward the rear of the server.
- Step 3** Pivot the tab that is at the end of the width-adjustment slider. Depress and hold the metal button on the outside of the tab and pivot the tab 180 degrees so that it points toward the rear of the server.

Figure 5: Reversing the CMA



1	CMA tab on end of width-adjustment slider	2	Metal button on outside of tab
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Initial Compute Node Setup



Note This section describes how to power on the system, assign an IP address to each compute node BMC, and connect to Cisco IMC management when using the system in *standalone* mode. To use the system in Cisco UCS Manager integration (*UCSM mode*), specific cabling and settings are required. See [Installation For Cisco UCS Manager Integration](#).



Note All nodes in a C4200 chassis must be either all managed in standalone mode or all managed in UCSM mode. Mixing in a chassis is not supported.



Note Each compute node in your chassis is managed independently and so the following initial setup procedures must be repeated for each node.

Node Default Settings

The node is shipped with these default settings:

- The NIC mode is *Shared LOM EXT*.

Shared LOM Extended mode enables the Ethernet ports on an installed OCP adapter card *and* the ports on an installed Cisco virtual interface card (VIC) to access the Cisco Integrated Management Interface (Cisco IMC). If you want to use the 10/100/1000 dedicated management ports to access Cisco IMC, you can connect to the compute node and change the NIC mode.

- The NIC redundancy is *Active-Active*. All Ethernet ports are utilized simultaneously.
- DHCP is enabled.
- IPv4 is enabled.

Connection Methods

There are two methods for connecting to the system for initial setup:

- Local setup—Use this procedure if you want to connect a keyboard and monitor directly to the compute node for setup. This procedure can use a KVM cable (Cisco PID N20-BKVM) or the ports on the rear of the server.
- Remote setup—Use this procedure if you want to perform setup through your dedicated management LAN.



Note To configure the system remotely, you must have a DHCP server on the same network as the system. Your DHCP server must be preconfigured with the range of MAC addresses for this compute node. The MAC address is printed on a label that is on the pull-out asset tag. This compute node has a range of six MAC addresses assigned to the Cisco IMC. The MAC address printed on the label is the beginning of the range of six contiguous MAC addresses.

Connecting to the Node Locally For Setup

This procedure requires the following equipment:

- VGA monitor
- USB keyboard
- The supported Cisco KVM cable (Cisco PID N20-BKVM).

Step 1 Connect a power cord to each power supply in your chassis, and then connect each power cord to a grounded AC power outlet.

Wait for approximately two minutes to let installed compute nodes boot to standby power during the first bootup. You can verify compute node power status by looking at the node power status LED on the face of the node. The node is in standby power mode when the LED is amber.

Step 2 Connect an optional KVM cable (Cisco PID N20-BKVM) to the KVM connector on the face of the node. Connect your USB keyboard and VGA monitor to the KVM cable.

Step 3 Open the Cisco IMC Configuration Utility:

- a) Press and hold the node power button for four seconds to boot the node.
- b) During bootup, press **F8** when prompted to open the Cisco IMC Configuration Utility.

Note The first time that you enter the Cisco IMC Configuration Utility, you are prompted to change the default password. The default password is *password*. The Strong Password feature is enabled.

The following are the requirements for Strong Password:

- The password can have minimum 8 characters; maximum 14 characters.
- The password must not contain the user's name.
- The password must contain characters from three of the following four categories:
 - English uppercase letters (A through Z)
 - English lowercase letters (a through z)
 - Base 10 digits (0 through 9)
 - Non-alphabetic characters !, @, #, \$, %, ^, &, *, -, _, =, “

Step 4 Continue with [Setting Up the Node With the Cisco IMC Configuration Utility, on page 11](#).

Connecting to the Node Remotely For Setup

This procedure requires the following equipment:

- One RJ-45 Ethernet cable that is connected to your management LAN.

Before you begin



Note To configure the system remotely, you must have a DHCP server on the same network as the system. Your DHCP server must be preconfigured with the range of MAC addresses for this compute node. The MAC address is printed on a label that is on the pull-out asset tag. This compute node has a range of six MAC addresses assigned to the Cisco IMC. The MAC address printed on the label is the beginning of the range of six contiguous MAC addresses.

Step 1 Connect a power cord to each power supply in your chassis, and then connect each power cord to a grounded AC power outlet.

Wait for approximately two minutes to let the compute node boot to standby power during the first bootup. You can verify node power status by looking at the power status LED on the face of the node. The node is in standby power mode when the LED is amber.

Step 2 Plug your management Ethernet cable into the dedicated management port on the face of the node.

Step 3 Allow your preconfigured DHCP server to assign an IP address to the node.

Step 4 Use the assigned IP address to access and log in to the Cisco IMC for the server node. Consult with your DHCP server administrator to determine the IP address.

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

Step 5 From the Cisco IMC Server Summary page, click **Launch KVM Console**. A separate KVM console window opens.

Step 6 From the Cisco IMC Summary page, click **Power Cycle Server**. The system reboots.

Step 7 Select the KVM console window.

Note The KVM console window must be the active window for the following keyboard actions to work.

Step 8 When prompted, press **F8** to enter the Cisco IMC Configuration Utility. This utility opens in the KVM console window.

Note The first time that you enter the Cisco IMC Configuration Utility, you are prompted to change the default password. The default password is *password*. The Strong Password feature is enabled.

The following are the requirements for Strong Password:

- The password can have minimum 8 characters; maximum 14 characters.
- The password must not contain the user's name.
- The password must contain characters from three of the following four categories:

- English uppercase letters (A through Z)
- English lowercase letters (a through z)
- Base 10 digits (0 through 9)
- Non-alphabetic characters !, @, #, \$, %, ^, &, *, -, _, =, “

Step 9 Continue with [Setting Up the Node With the Cisco IMC Configuration Utility](#), on page 11.

Setting Up the Node With the Cisco IMC Configuration Utility

Before you begin

The following procedure is performed after you connect to the compute node and open the Cisco IMC Configuration Utility.



Note Each compute node in your chassis is managed independently and so the following initial setup procedure must be repeated for each node.

Step 1 Set the NIC mode to choose which ports to use to access Cisco IMC for server management:

- *Shared LOM EXT* (default)—This is the shared LOM extended mode, the factory-default setting. With this mode, the *Shared LOM* and *Cisco Card* interfaces are both enabled. You must select the default *Active-Active* NIC redundancy setting in the following step.

In this NIC mode, DHCP replies are returned to both the OCP adapter card LOM ports and the Cisco virtual interface card (VIC) ports. If the system determines that the Cisco VIC 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 VIC are disabled.

If you want to connect to Cisco IMC through a Cisco VIC in standalone mode, it is recommended that you use the *Cisco Card* NIC mode.

- *Shared LOM*—The OCP adapter card LOM ports are used to access Cisco IMC. You must select either the *Active-Active* or *Active-standby* NIC redundancy setting in the following step.
- *Dedicated*—The dedicated management port on the node is used to access Cisco IMC. You must select the *None* NIC redundancy setting in the following step.
- *Cisco Card*—The ports on an installed Cisco UCS Virtual Interface Card (VIC) are used to access the Cisco IMC. You must select either the *Active-Active* or *Active-standby* NIC redundancy setting in the following step.

Step 2 Set the NIC redundancy to your preference. The node has three possible NIC redundancy settings:

- *None*—The Ethernet ports operate independently and do not fail over if there is a problem. This setting can be used only with the *Dedicated* NIC mode.

- *Active-standby*—If an active Ethernet port fails, traffic fails over to a standby port. Shared LOM and Cisco Card modes can each use either Active-standby or Active-active settings.
- *Active-active* (default)—All Ethernet ports are utilized simultaneously. The Shared LOM EXT mode must use only this NIC redundancy setting. Shared LOM and Cisco Card modes can each use either Active-standby or Active-active settings.

Step 3 Choose whether to enable DHCP for dynamic network settings, or to enter static network settings.

Note To configure the system remotely, you must have a DHCP server on the same network as the system. Your DHCP server must be preconfigured with the range of MAC addresses for this compute node. The MAC address is printed on a label that is on the pull-out asset tag. This compute node has a range of six MAC addresses assigned to the Cisco IMC. The MAC address printed on the label is the beginning of the range of six contiguous MAC addresses.

The *static* IPv4 and IPv6 settings include the following:

- The Cisco IMC IP address.
For IPv6, valid values are 1 - 127.
- The gateway.
For IPv6, if you do not know the gateway, you can set it as none by entering :: (two colons).
- The preferred DNS server address.
For IPv6, you can set this as none by entering :: (two colons).

Step 4 (Optional) Make VLAN settings.

Step 5 Press **F1** to go to the second settings window, then continue with the next step.

From the second window, you can press **F2** to switch back to the first window.

Step 6 (Optional) Set a hostname for the node.

Step 7 (Optional) Enable dynamic DNS and set a dynamic DNS (DDNS) domain.

Step 8 (Optional) If you check the Factory Default check box, the node reverts to the factory defaults.

Step 9 (Optional) Set a default user password.

Note The factory default username for the node is *admin*. The default password is *password*.

Step 10 (Optional) Enable auto-negotiation of port settings or set the port speed and duplex mode manually.

Note Auto-negotiation is applicable only when you use the Dedicated NIC mode. Auto-negotiation sets the port speed and duplex mode automatically based on the switch port to which the server is connected. If you disable auto-negotiation, you must set the port speed and duplex mode manually.

Step 11 (Optional) Reset port profiles and the port name.

Step 12 Press **F5** to refresh the settings that you made. You might have to wait about 45 seconds until the new settings appear and the message, “Network settings configured” is displayed before you reboot the node in the next step.

Step 13 Press **F10** to save your settings and reboot the node.

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

Step 14 Repeat the setup for all compute nodes in your chassis.

What to do next

Use a browser and the IP address of the Cisco IMC to connect to the Cisco IMC management interface. The IP address is based upon the settings that you made (either a static address or the address assigned by your DHCP server).



Note The factory default username for the server is *admin*. The default password is *password*.

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 for your Cisco IMC release: [Cisco IMC Configuration Guides](#)

NIC Mode and NIC Redundancy Settings

Table 1: Valid NIC Redundancy Settings For Each NIC Mode

NIC Mode	Valid NIC Redundancy Settings
Shared LOM EXT	Active-active
Shared LOM	Active-active Active-standby
Dedicated	None
Cisco Card	Active-active Active-standby

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

- *Shared LOM EXT* (default)—This is the shared LOM extended mode, the factory-default setting. With this mode, the *Shared LOM* and *Cisco Card* interfaces are both enabled. You must select the default *Active-Active* NIC redundancy setting in the following step.

In this NIC mode, DHCP replies are returned to both the OCP adapter card LOM ports and the Cisco virtual interface card (VIC) ports. If the system determines that the Cisco VIC 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 VIC are disabled.

If you want to connect to Cisco IMC through a Cisco VIC in standalone mode, it is recommended that you use the *Cisco Card* NIC mode.

- *Shared LOM*—The OCP adapter card LOM ports are used to access Cisco IMC. You must select either the *Active-Active* or *Active-standby* NIC redundancy setting in the following step.

- *Dedicated*—The dedicated management port on the node is used to access Cisco IMC. You must select the *None* NIC redundancy setting in the following step.
- *Cisco Card*—The ports on an installed Cisco UCS Virtual Interface Card (VIC) are used to access the Cisco IMC. You must select either the *Active-Active* or *Active-standby* NIC redundancy setting in the following step.

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. This setting can be used only with the Dedicated NIC mode.
- *Active-standby*—If an active Ethernet port fails, traffic fails over to a standby port. Shared LOM and Cisco Card modes can each use either Active-standby or Active-active settings.
- *Active-active* (default)—All Ethernet ports are utilized simultaneously. The Shared LOM EXT mode must use only this NIC redundancy setting. Shared LOM and Cisco Card modes can each use either Active-standby or Active-active settings.

Updating the BIOS and Cisco IMC Firmware



Caution

When you upgrade the BIOS firmware, you must also upgrade the Cisco IMC firmware to the same version or the server does not boot. Do not power off the server until the BIOS and Cisco IMC firmware are matching or the server does not boot.

Cisco provides the *Cisco Host Upgrade Utility* to assist with simultaneously upgrading the BIOS, Cisco IMC, 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 possible methods for updating the firmware:

- **Recommended method for firmware update:** Use the Cisco Host Upgrade Utility to simultaneously upgrade the Cisco IMC, BIOS, and component firmware to compatible levels.
See the *Cisco Host Upgrade Utility Quick Reference Guide* for your firmware release at the documentation roadmap link below.
- You can upgrade the Cisco IMC and BIOS firmware by using the Cisco IMC GUI interface.
See the *Cisco UCS C-Series Rack-Mount Server Configuration Guide*.
- You can upgrade the Cisco IMC and BIOS firmware by using the Cisco IMC CLI interface.
See the *Cisco UCS C-Series Rack-Mount Server CLI Configuration Guide*.

For links to the documents listed above, see the [Cisco UCS C-Series Documentation Roadmap](#).

Accessing the System BIOS

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 tab.

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**.

Smart Access Serial

This server supports the Smart Access Serial feature. This feature allows you to switch between host serial and Cisco IMC CLI.

- This feature has the following requirements when used with compute nodes:
 - A DB-9 serial cable connection, using the KVM cable (Cisco PID N20-BKVM) on the KVM console connector on the face of the compute node.
 - Console redirection must be enabled in the server BIOS.
 - Terminal type must be set to VT100+ or VTUFT8.
 - Serial-over-LAN (SOL) must be disabled (SOL is disabled by default).
- To switch from host serial to Cisco IMC CLI, press **Esc+9**.
You must enter your Cisco IMC credentials to authenticate the connection.
- To switch from Cisco IMC CLI to host serial, press **Esc+8**.



Note You cannot switch to Cisco IMC CLI if the serial-over-LAN (SOL) feature is enabled.

- After a session is created, it is shown in the CLI or web GUI by the name `serial`.

Smart Access USB

This server supports the Smart Access USB feature. The board management controller (BMC) in the compute node can accept a USB mass storage device and access the data on it. This feature allows you to use a USB

device as a medium to transfer data between the BMC and the user without need for network connectivity. This can be useful, for example, when remote BMC interfaces are not yet available, or are not accessible due to network misconfiguration.

- This feature has the following requirements:
 - The KVM cable (Cisco PID N20-BKVM) connected to the KVM console connector on the compute node.
 - A USB storage device connected to one of the USB 2.0 connectors on the KVM cable. The USB device must draw less than 500 mA to avoid disconnect by the current-protection circuit.



Note Any mouse or keyboard that is connected to the KVM cable is disconnected when you enable Smart Access USB.

- You can use USB 3.0-based devices, but they will operate at USB 2.0 speed.
- We recommend that the USB device have only one partition.
- The file system formats supported are: FAT16, FAT32, MSDOS, EXT2, EXT3, and EXT4. NTFS is not supported.
- The KVM connector has been designed to switch the USB port between Host OS and BMC.
- Smart Access USB can be enabled or disabled using any of the BMC user interfaces. For example, you can use the Cisco IMC Configuration Utility that is accessed by pressing **F8** when prompted during bootup.
 - Enabled: the USB device is connected to the BMC.
 - Disabled: the USB device is connected to the host.
- In a case where no management network is available to connect remotely to Cisco IMC, a Device Firmware Update (DFU) shell over serial cable can be used to generate and download technical support files to the USB device that is attached to the node USB port.