



## Install the Appliance

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## Appliance Installation Workflow

Complete the tasks described in this chapter to physically install your Cisco DNA Center appliance. Complete these tasks for each appliance you want to install, and be sure to install all of the appliances before configuring the primary node.

After you have completed all of these tasks successfully, continue with the steps described in [Prepare for Appliance Configuration](#).

## Unpack and Inspect the Appliance



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**Caution**

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

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- Step 1** Remove the appliance from its cardboard container and save all the packaging material (in case the appliance requires shipping in the future).
- Step 2** Compare the shipment with the equipment list provided by your customer service representative. Verify that you have all the items.
- Step 3** Check for damage and report discrepancies or damage, if any, to your customer service representative immediately. Have the following information ready:
- Invoice number of the shipper (see the packing slip)
  - Model and serial number of the damaged unit

- Description of damage
- Effect of damage on the installation

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## Review the Installation Warnings and Guidelines



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**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.

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**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

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

Statement 1047

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

Statement 1019

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**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**

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

Statement 1074

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**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

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The following four warnings are specific to the 112-core appliance:



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**Warning** This equipment must be grounded. Never defeat the ground conductor or operate the equipment in the absence of a suitably installed ground conductor. Contact the appropriate electrical inspection authority or an electrician if you are uncertain that suitable grounding is available.

Statement 1024

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**Warning** For Nordic countries (Norway, Finland, Sweden and Denmark) this system must be installed in a Restricted Access Location, where the voltage of the main ground connection of all equipment is the same (equipotential earth) and the system is connected to a grounded electrical outlet.

Statement 328

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**Warning** High leakage current – earth connection essential before connection to system power supply.

Statement 342

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**Warning** This equipment must be externally grounded using a customer-supplied ground wire before power is applied. Contact the appropriate electrical inspection authority or an electrician if you are uncertain that suitable grounding is available.

Statement 366

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

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**Caution** Avoid UPS models that use ferroresonant technology. These UPS models can become unstable with systems such as the Cisco UCS, which can have substantial current-draw fluctuations because of fluctuating data traffic patterns.

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When you install an appliance, follow these guidelines:

- Plan your site configuration and prepare the site before installing the appliance. See the [Cisco UCS Site Preparation Guide](#) for help with the recommended site planning and preparation tasks.
- Ensure that there is adequate space around the appliance to enable servicing, and for adequate airflow. The airflow in this appliance is from front to back.
- Ensure that the site's air-conditioning meets the thermal requirements listed in [Environmental Specifications](#).
- Ensure that the cabinet or rack meets the requirements listed in [Review the Rack Requirements](#).
- Ensure that the site's power meets the requirements listed in [Power Specifications](#). If available, use a UPS to protect against power failures.

## Review the Rack Requirements

For proper operation, the rack in which you install the appliance must meet the following requirements:

- 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-in. (9.6 mm), round 0.28-in. (7.1 mm), #12-24 UNC, or #10-32 UNC when you use the supplied slide rails.
- The minimum vertical rack space per server must be:
  - For the 44 and 56-core appliance, one RU, which equals 1.75 in. (44.45 mm).
  - For the 112-core appliance, four RUs, which equals 7.0 in. (177.8 mm).

## Connect and Power On the Appliance

This section describes how to power on the appliance and check that it is functional.

**Step 1** Attach a supplied power cord to each power supply in the appliance and then attach the power cords to a grounded AC power outlet. See [Power Specifications](#) for details.

**Note** For the 44 and 56-core appliance, you can use either one or both of the power supplies that come with the appliance. For the 112-core appliance, use at least 3 of its 4 power supplies.

Wait for approximately two minutes to let the appliance boot into standby power mode during the first boot up.

The Power Status LED indicates the appliance's power status:

- Off: There is no AC power present in the appliance.
- Amber: The appliance is in standby power mode. Power is supplied only to the CIMC and some motherboard functions.
- Green: The appliance is in main power mode. Power is supplied to all the appliance components.

For more information on these and other appliance LEDs, see [Front and Rear Panels](#).

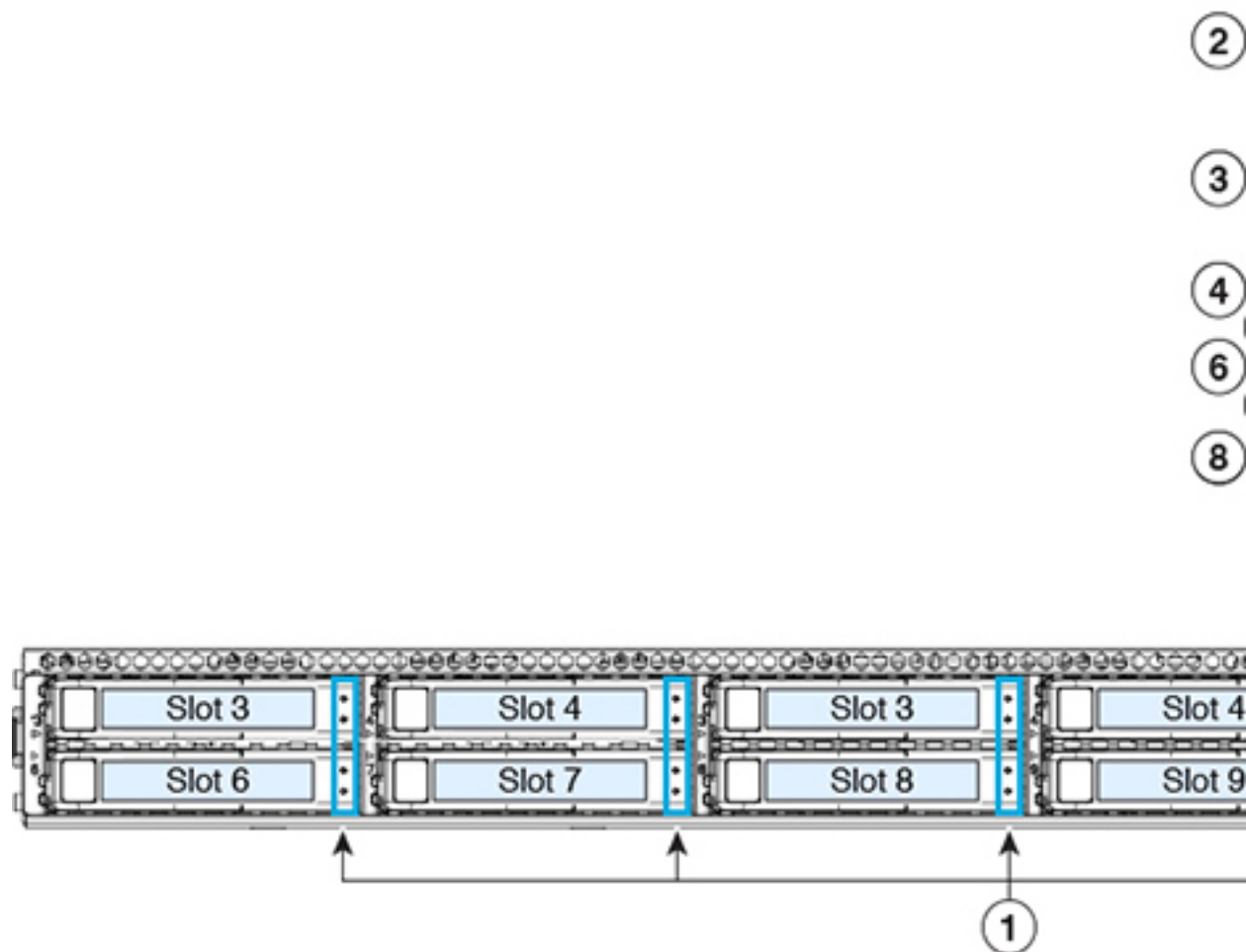
- Step 2** Connect a USB keyboard and VGA monitor to the server, using the supplied KVM cable connected to the KVM connector on the front panel. Alternatively, you can use the VGA and USB ports on the rear panel. You can only connect to one VGA interface at a time.

## Check the LEDs

After you have powered up the appliance, check the state of the front-panel and rear-panel LEDs and buttons to ensure it is functioning.

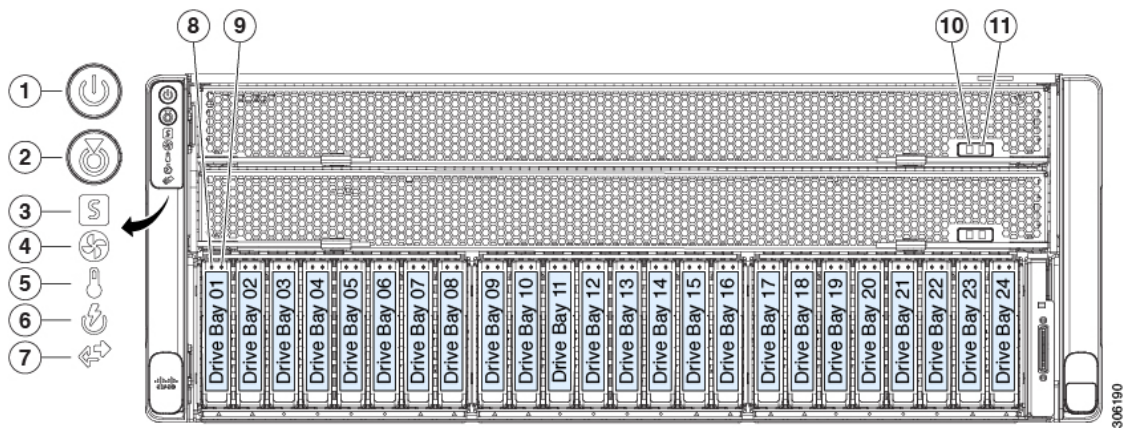
The following illustrations show the LEDs for a functional appliance after physical installation and first power-up and before configuration.

**Figure 1: 44 and 56-Core Appliance Front Panel LEDs**



LED	Desired Status Indicator
1	<ul style="list-style-type: none"> <li>• Drive Fault LEDs: Off</li> <li>• Drive Activity LEDs: Green</li> </ul>
2	Power Status: Green
3	Unit identification: Off
4	System Status: Green
5	Power Supply Status: Green
6	Fan Status: Green
7	Network Link Activity: Off
8	Temperature Status: Green

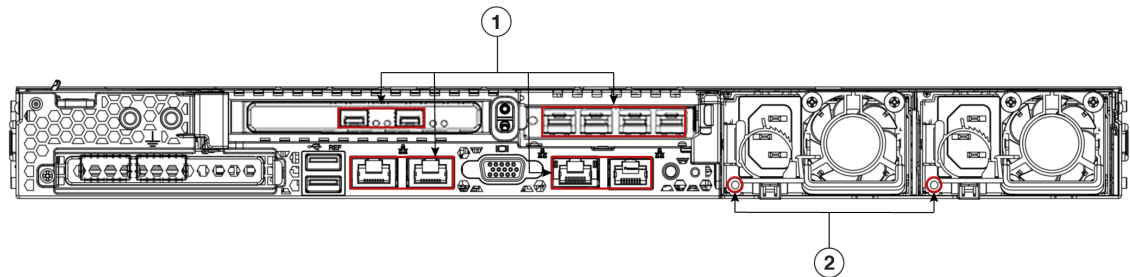
Figure 2: 112-Core Appliance Front Panel LEDs



LED	Desired Status Indicator
1	Power Status: Green
2	Unit identification: Off
3	System Status: Green
4	Fan Status: Green
5	Temperature Status: Green
6	Power Supply Status: Green
7	Network Link Activity: Off
8	Drive Fault LEDs: Off

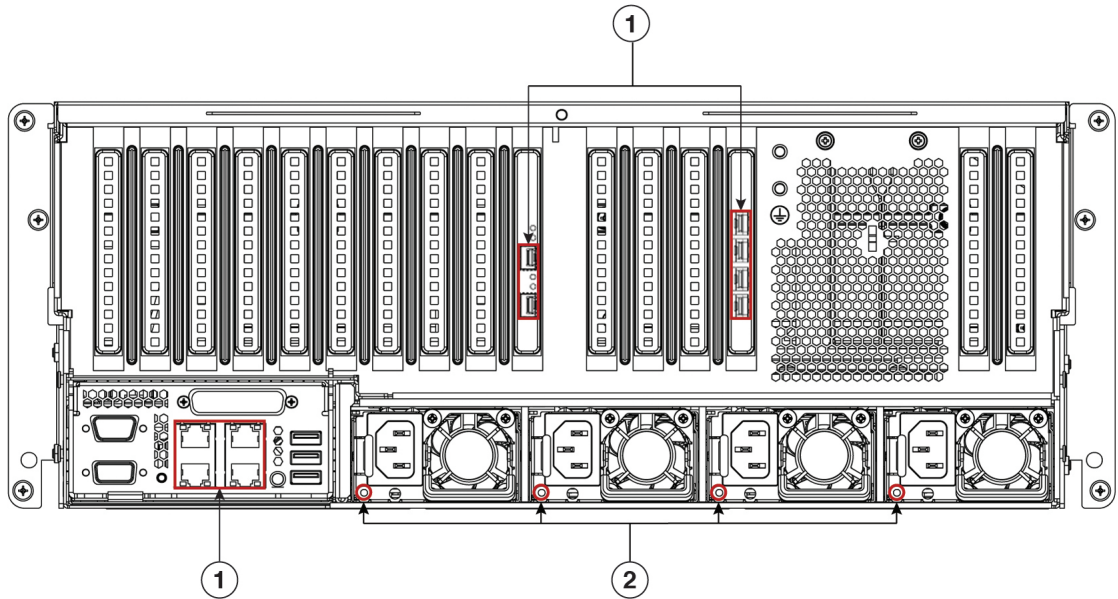
LED	Desired Status Indicator
9	Drive Activity LEDs: Green
10	CPU module power status: Green
11	CPU module fault: Off

Figure 3: 44 and 56-Core Appliance Rear Panel LEDs



LED	Desired Status Indicator
1	<p>After initial power-up, all the ports should have their Link Status and Link Speed LEDs showing as off.</p> <p>After network settings are configured and tested using either the Maglev Configuration wizard (see <a href="#">Configure the Primary Node Using the Maglev Wizard</a> and <a href="#">Configure Add-on Nodes Using the Maglev Wizard</a>) or browser-based configuration wizard (see <a href="#">Configure the Primary Node Using the Advanced Install Configuration Wizard</a> and <a href="#">Configure a Secondary Node Using the Advanced Install Configuration Wizard</a>), the Link Status and Link Speed LEDs for all <b>cabled</b> ports should be green. The LED for all <b>uncabled</b> ports should remain unchanged.</p>
2	AC Power Supply Status LEDs: Green

Figure 4: 112-Core Appliance Rear Panel LEDs



LED	Desired Status Indicator
1	<p>After initial power-up, all the ports should have their Link Status and Link Speed LEDs showing as off.</p> <p>After network settings are configured and tested using either the Maglev Configuration wizard (see <a href="#">Configure the Primary Node Using the Maglev Wizard</a> and <a href="#">Configure a Secondary Node Using the Maglev Wizard</a>) or browser-based configuration wizard (see <a href="#">Configure the Primary Node Using the Advanced Install Configuration Wizard</a> and <a href="#">Configure a Secondary Node Using the Advanced Install Configuration Wizard</a>), the Link Status and Link Speed LEDs for all <b>cabled</b> ports should be green. All <b>uncabled</b> port LEDs should be unchanged.</p>
2	AC Power Supply Status LEDs: Green

If you see LEDs with colors other than those shown above, you may have a problem condition. See [Front and Rear Panels](#) for details on the likely causes of the status. Be sure to correct any problem conditions before proceeding to configure the appliance.