



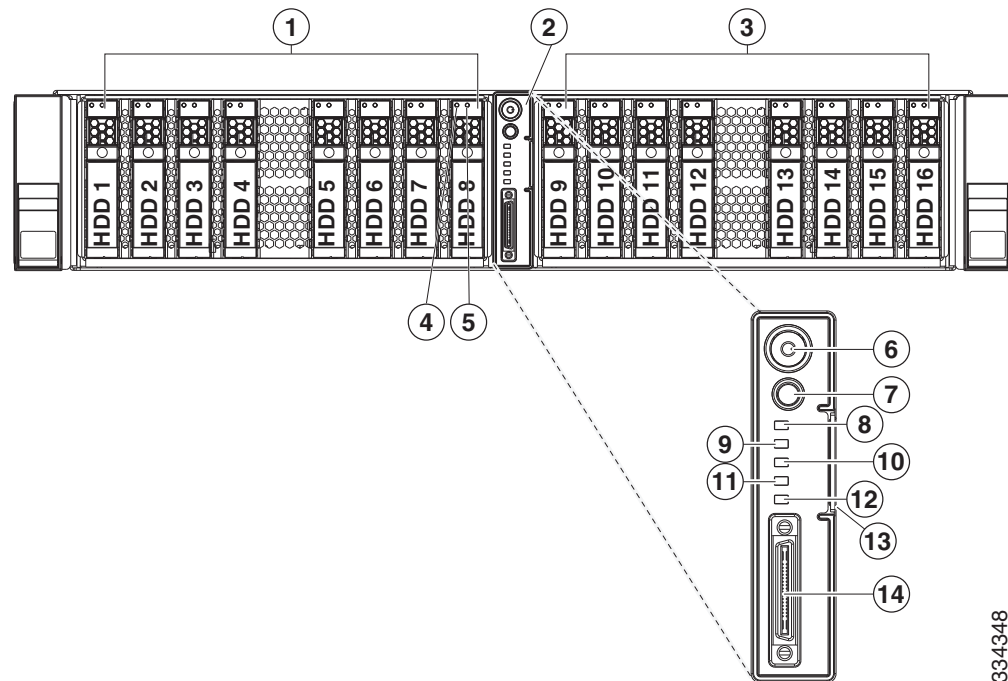
# CHAPTER 1

## Overview of the Cisco UCS C420 Server

This chapter provides an overview of the Cisco UCS C420 server. The figures in this chapter show an overview of external server features. Internal server features are shown in [Figure 3-5 on page 3-10](#).

[Figure 1-1](#) shows the front panel features of the server.

**Figure 1-1 Front Panel Features**

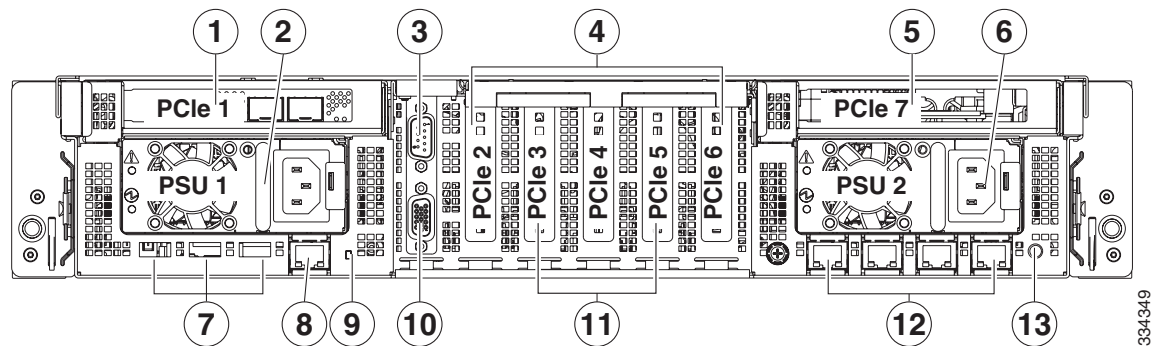


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1	Modular drive bay 1	8	System status LED
2	Operations panel	9	Fan status LED
3	Modular drive bay 2	10	Temperature status LED
4	Hard drive fault LED	11	Power supply status LED
5	Hard drive activity LED	12	Network link activity LED
6	Power button/LED	13	Asset tag (serial number)
7	Identification button and LED	14	KVM console connector (used with a KVM cable that provides two USBs, one VGA, and one serial connector)

Figure 1-2 shows the rear panel features of the server.

**Figure 1-2 Rear Panel Features**



<b>1</b>	Horizontal PCIe slot 1 on riser card (full-height, half-length, x16, with NCSI)	<b>9</b>	Rear system fault LED
<b>2</b>	Power supply 1	<b>10</b>	VGA video connector
<b>3</b>	RS-232 serial connector	<b>11</b>	<i>Optional</i> RAID controller cards (up to 2, supported in designated PCIe slots 3 and 5)
<b>4</b>	PCIe slots 2 through 6 on motherboard (five half-height, half-length, x8 slots). PCIe slot 4 supports NCSI.	<b>12</b>	1-Gb Base-T LOM ports (four, RJ-45)
<b>5</b>	Horizontal PCIe slot 7 on riser card (full-height, half-length, x16, with NCSI)	<b>13</b>	Rear identification button and LED
<b>6</b>	Power supply 2		
<b>7</b>	USB 2.0 ports (three)		
<b>8</b>	10/100/1000 dedicated management Ethernet port (RJ-45)		

Table 1-1 lists the features of the server.

**Table 1-1 Cisco UCS C420 Server Features**

Chassis	Two rack-unit (2RU) chassis.
Processors	Two or four Intel Xeon E5-4600 Series processors.
Memory	The server has 48 DIMM sockets on the motherboard. Each of the four CPUs can support 12 DIMMs.
Multi-bit error protection	This server supports multi-bit error protection.
Storage	Drives are installed into configurable (one or two) drive bay modules that provide hot-pluggable front-panel access.  Each drive bay module can hold up to eight 2.5-inch SAS <sup>1</sup> or SATA <sup>2</sup> hard drives or solid state drives, for a total of 16 drives.
Cisco Flexible Flash drive	The server includes one internal Cisco Flexible Flash drive (SD card). A second drive can be installed.  This drive is preloaded with four virtual drives. The four virtual drives contain, respectively, the Cisco Server Configuration Utility, the Cisco Host Upgrade Utility, the Cisco C-Series server drivers set, and a blank VD on which you can install an OS or a hypervisor.
Disk Management	For a list of supported RAID controller options, see <a href="#">RAID Controller Considerations, page C-1</a> .  There are also two mounting points inside the chassis for the optional LSI RAID battery backup units that can be used with the controller cards.
RAID Backup	There are two mounting points inside the chassis (on the removable air baffle) that can be used for Supercap power module backup units.
PCIe I/O	Seven PCIe <sup>3</sup> expansion slots: <ul style="list-style-type: none"> <li>• Two full-height, half-length, x16 horizontal slots on riser cards</li> <li>• Five half-height, half-length, x8 slots on motherboard</li> </ul> See <a href="#">Replacing a PCIe Card, page 3-43</a> for slot specifications.
InfiniBand	The bus slots in this server support the InfiniBand architecture.
Network and management I/O	The server provides these rear panel connectors: <ul style="list-style-type: none"> <li>• One 10/100/1000 dedicated management Ethernet port</li> <li>• Four 1-Gb Base-T Ethernet ports</li> <li>• One RS-232 serial connector</li> <li>• One 15-pin VGA<sup>4</sup> connector</li> <li>• Three USB<sup>5</sup> 2.0 connectors</li> </ul> The server also has one front-panel KVM connector that is used with the included KVM cable, which provides two USBs, one VGA, and one serial connector.
WoL	The 1-Gb Base-T Ethernet LAN ports support the wake-on-LAN (WoL) standard.
Power	Two power supplies, 1200 W each. Redundant as 1+1.
ACPI	This server supports the advanced configuration and power interface (ACPI) 4.0 standard.

**Table 1-1 Cisco UCS C420 Server Features (continued)**

Cooling	Six fan modules, hot-swappable, redundant. In addition, there is 1 fan in each power supply.
Baseboard management	Pilot III BMC, running Cisco Integrated Management Controller (CIMC) firmware. Depending on your CIMC settings, the CIMC can be accessed through the 10/100/1000 dedicated management ports, the 1-Gb LOM ports, or a Cisco virtual interface card.
Video	Resolution up to 1600 x1200, 16 bpp at 60 Hz. Up to 256 MB of video memory.

1. SAS = serial attached SCSI
2. SATA = serial advanced technology attachment
3. PCIe = peripheral component interconnect express
4. VGA = video graphics array
5. USB = universal serial bus