



# **Cisco Connected Grid Appliance 220 Non-Hardened Server Quick Start Guide**

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**OL-29982-01**



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**Cisco Systems, Inc.**  
[www.cisco.com](http://www.cisco.com)

# About This Guide and Related Documentation

This guide identifies server components and provides installation and setup instructions for the hardware. This guide helps you connect to an IP address on the server, at which point you can use other documentation in the set to manage and configure the server. For additional installation and configuration information for the Cisco Connected Grid Appliance 220NH hardware and software, see the documentation roadmap on Cisco.com:



<http://www.cisco.com/go/unifiedcomputing/c-series-doc>



See the *Regulatory Compliance and Safety Information for Cisco UCS C-Series Servers* link in the roadmap at the above URL for important safety notices before performing any procedures.

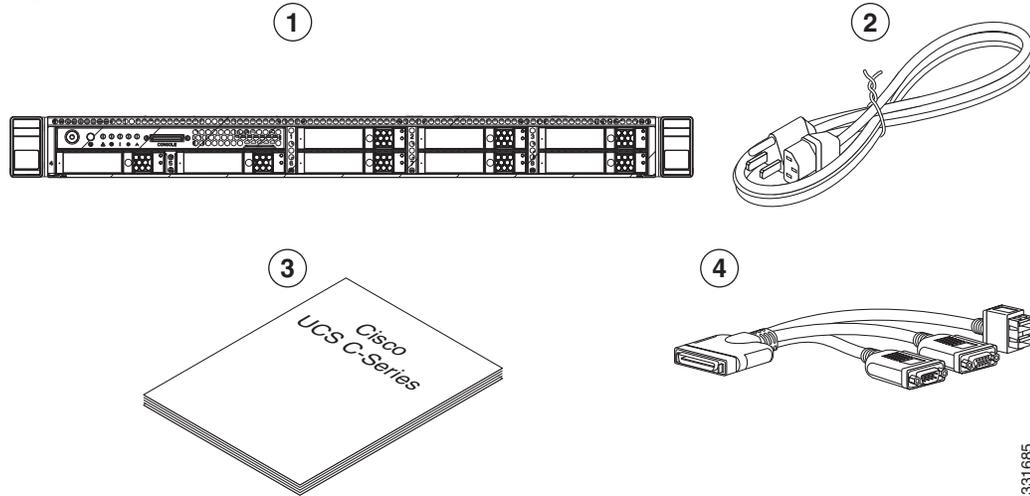
## Unpacking the Server

Verify that you have received the items shown below. If any item is missing or damaged, contact your Cisco representative or reseller for instructions.

For additional, up to date, documentation surrounding the Cisco Connected Grid Appliance 220NH or the Cisco Connected Grid Design Suite-Substation workbench visit:

[http://www.cisco.com/en/US/products/ps13053/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/ps13053/tsd_products_support_series_home.html)

**Figure 1**      **Boxed Contents**

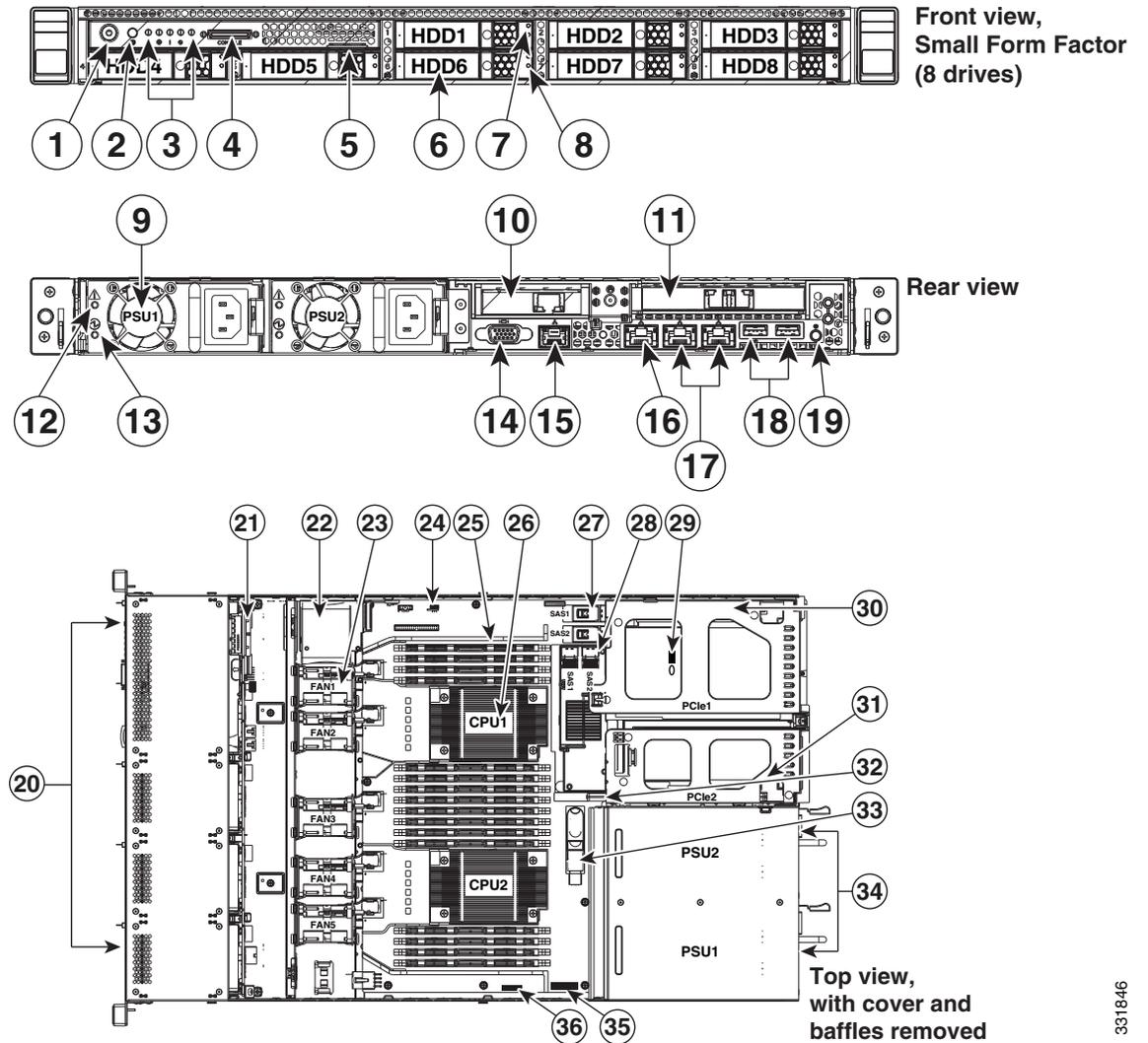


1	Server (Cisco Connected Grid Appliance 220NH shown)
2	AC power cord (optional, up to two)
3	Documentation
4	KVM console cable

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# Cisco Connected Grid Appliance 220NH Server Overview

Figure 2 Overview



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<b>1</b>	<b>Power button/LED</b>
<b>2</b>	Identification button/LED
	Operations panel LEDs, left to right: System status LED Fan status LED Temperature status LED Power supply status LED
<b>3</b>	Network activity LED
<b>4</b>	KVM cable connector
<b>5</b>	Asset tag (serial number)
<b>6</b>	Drive bays (eight)
<b>7</b>	Drive fault LED
<b>8</b>	Drive activity LED
<b>9</b>	Power supply (up to two)
<b>10</b>	Low-profile PCIe slot on riser
<b>11</b>	Standard-profile PCIe slot on riser
<b>12</b>	Power supply fault LED
<b>13</b>	Power supply AC OK LED
<b>14</b>	VGA video port
<b>15</b>	RS-232 serial port (RJ-45 connector)
<b>16</b>	1-Gb Ethernet dedicated management port
<b>17</b>	Dual 1-Gb Ethernet ports (LAN1 and LAN2)
<b>18</b>	USB ports
<b>19</b>	Identification button/LED
<b>20</b>	Drives, hot-swappable
<b>21</b>	Drive backplane
<b>22</b>	RAID battery backup unit mounting bracket on air baffle (not shown)
<b>23</b>	Cooling fans (five, hot-swappable)
<b>24</b>	Integrated RAID SCU ROM jumper JP7
<b>25</b>	DIMM slots (sixteen)
<b>26</b>	CPUs and heatsinks (two)
<b>27</b>	Integrated RAID mini-SAS connectors
<b>28</b>	Mezzanine RAID card mini-SAS connectors
<b>29</b>	Trusted platform module socket on motherboard
<b>30</b>	Standard profile PCIe riser 1
<b>31</b>	Low-profile PCIe riser 2
<b>32</b>	SD card slots on PCIe riser 2 (two)
<b>33</b>	Internal USB slot on motherboard
<b>34</b>	Power supplies (two, hot-swappable 1+1)
<b>35</b>	RTC battery on motherboard
<b>36</b>	Integrated RAID 5 software key jumper JP6

# Installing the Server in a Rack

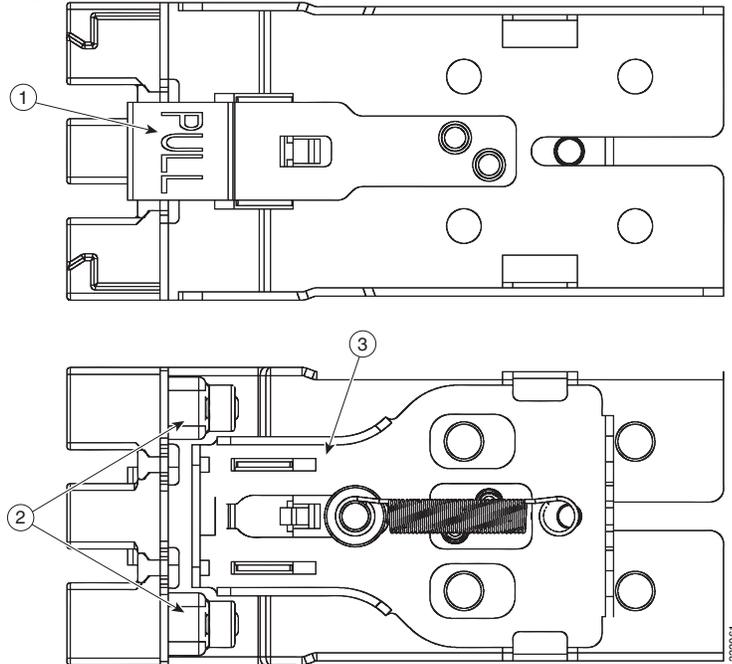

**Note**

To install components before rack installation, see section 7 “Installing Optional Components”.

Use this procedure to install the server into a rack using the toolless slide rails from Cisco:

- Step 1** Open the front securing latch (see Figure 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.
- On the rear side of the securing-latch assembly, hold open the clip marked “PULL.”
  - Slide the spring-loaded securing latch away from the mounting pegs.
  - Release the clip marked “PULL” to lock the securing latch in the open position.

**Figure 3** *Opening the Front Securing Latch*



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

**Step 2** Install the slide rails onto the rack:

- a. Position a slide-rail assembly inside the two left-side rack posts (see Figure 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. The rack post should be between the mounting pegs and the spring-loaded front securing latch.

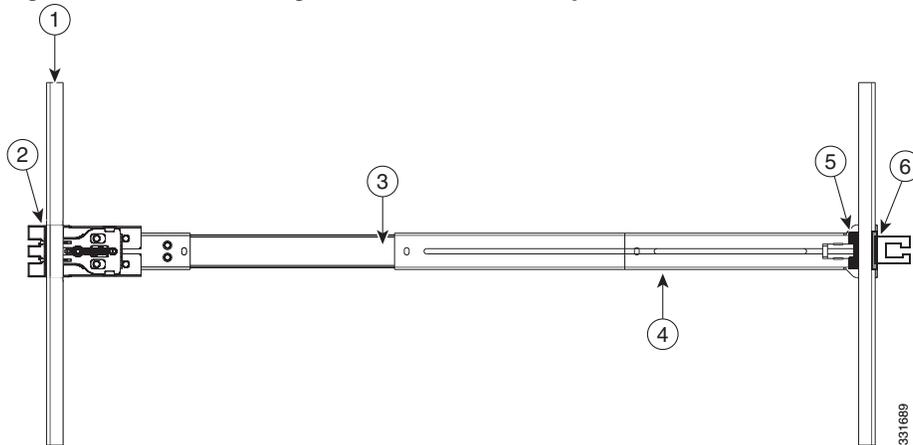


**Note**

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. Close the spring-loaded front securing latch. On the rear side of the latch assembly, pull open the clip marked “PULL” to release and close the latch (see Figure 2).
- d. 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.
- e. 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.
- f. Pull the inner slide rails on each assembly out toward the rack front until they hit the internal stops and lock in place.

**Figure 4** Attaching the 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

- Step 3** Insert the server into the slide rails:
- Align the mounting brackets that are pre-attached to the server sides with the front ends of the empty slide rails.
  - Push the server into the slide rails until it stops at the internal stops.
  - Push in the plastic release clip on each inner slide rail (labelled PUSH), and then continue pushing the server into the rack until its front latches engage the rack posts.
- Step 4** Optional: Attach the cable management arm (CMA) to the rear of the slide rails (see Figure 4):

**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.

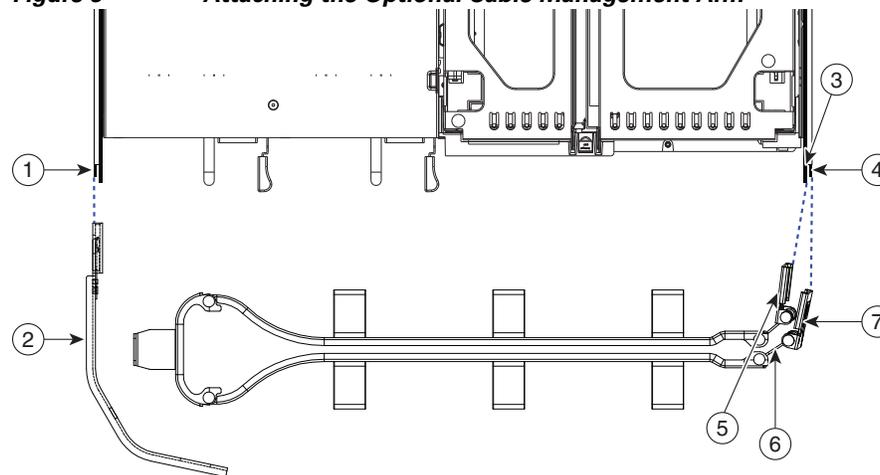
- Slide the plastic clip on the inner CMA arm over the flange on the mounting bracket that attached to the side of the server. See Figure 4.

**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 4.

- Slide the plastic clip on the outer CMA arm over the flange on the slide rail. See Figure 4.
- 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 rail. See Figure 4.

**Figure 5** Attaching the Optional Cable Management Arm



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		

# Connecting and Powering On

Use this procedure to begin the installation process for the base operating system for the CGDS - Substation Workbench server software, Red Hat Enterprise Linux (RHEL) 6.3. Note that the Connected Grid Appliance 220NH does not include an internal optical drive, installation of RHEL 6.3 via the Installation DVD requires the use of an external DVD drive (not included) or equivalent.

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- Step 1** Attach a power cord to each power supply in the server, then attach each power cord to a grounded AC power outlet.
  - Step 2** Use the supplied KVM cable to connect a keyboard and VGA monitor to the console connector on the front panel. Alternatively, you can use the VGA and USB ports on the rear panel. Note however, that you cannot use the front panel VGA and the rear panel VGA at the same time.
  - Step 3** Connect Ethernet cables from your LAN to the server.
  - Step 4** Connect an external USB DVD drive to a USB port on the KVM cable or on the rear panel of the server.
  - Step 5** Press the **Power** button to boot the server.
  - Step 6** Insert the Connected CGDS Installation DVD into the external DVD drive.
  - Step 7** The default boot order should specify to boot from the external DVD drive since no operating system is present.
  - Step 8** Follow the directions outlined in the CGDS - Substation Workbench Installation Guide (78-21154-01), Chapter 2 Installing the CGDS - Substation Workbench Server Software to continue installation of the base operating system and the CGDS - Substation Workbench server software.




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**Note**

The default user name is *admin*. The default password is *password*.

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**Note**

This guide, along with all other related Connected Grid Design Suite materials can be found at [http://www.cisco.com/en/US/partner/products/ps13053/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/partner/products/ps13053/tsd_products_support_series_home.html)

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