

# Hardware Installation

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This chapter provides complete instructions for installing and cabling the Workgroup WS-C1400 Concentrator. Specific topics covered in this chapter include the following:

- Unpacking and inspection
- Rack-mount installation
- Desktop installation

Before you install the concentrator, read the chapter “Preparing for Installation.”

## Installation Overview

There are many ways to configure and connect the concentrator. The following overview is specific to a UTP installation:

- 1 Unpack and inspect the concentrator.
- 2 Install the line cards. (For instructions, see the appendix “Installing and Removing Line Cards.”)
- 3 Install the rack-mount brackets on the concentrator.
- 4 Place the concentrator in a 19-inch rack or on a desktop.
- 5 Connect the concentrator to a patch panel.
- 6 Install RJ-45 wall sockets at each workstation location.
- 7 Inspect the wiring from the wall plate to the patch panel. Connect the cables to the wall plate and patch panel according to AT&T 258A or the EIA-568 standard. Use a time-domain reflectometer (TDR) to verify that the cable lengths do not exceed CDDI requirements (320 feet [100 m]) for category 5 UTP or STP.

## Unpacking and Inspection

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- 8 Connect each workstation or MAU to the wall plate with the supplied data-grade modular cables.
- 9 Read the section “Applying Power” in the chapter “Connecting to the Network,” and make sure you understand the warning messages.
- 10 Connect a terminal to the EIA/TIA-232 admin. port on the concentrator (optional).
- 11 Configure the attachment type and IP address for the concentrator with the **set attach** and **set ipaddress** commands in privileged mode. (See the appendix “Command Reference” for a description of these commands.)

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**Note** The default for the **set attach** command is dual attachment. If you are using your concentrator in a dual attachment configuration, you do not need to set this parameter.

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- 12 Test your local network for connectivity among the workstations using the **ping** command. (See the section “ping Command” in the appendix “Command Reference.”)
- 13 Connect the concentrator to your CDDI or FDDI network.

## Unpacking and Inspection

Before you install the concentrator, examine all shipping containers and contents for damage and check for missing items. If damage occurred to the containers during shipping, notify your carrier. Unpack and examine the contents of the containers. You should have the following items:

- The Workgroup WS-C1400 Concentrator
- The *CDDI/FDDI C1400 Concentrator Installation and Configuration Guide*
- AC power cable
- Modular RJ-45-to-EIA/TIA-232 adapter cable
- Rack-mount bracket kit
- Warranty registration sheet

Fill out the warranty registration sheet and mail or fax it to Cisco Systems, Inc. today. Report any missing parts and any damage not related to shipping to your customer service representative.

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**Note** Keep the packing materials for reuse. *All materials returned under warranty must be packed in their original packing materials.*

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## Installing the Hardware

You can mount the concentrator in a standard 19-inch rack or place it on a desktop.



**Warning** Do not work on the system or connect or disconnect cables during periods of lightning activity. To see translated versions of this warning, refer to the appendix “Translated Safety Warnings.”



**Warning** Read the installation instructions before you connect the system to its power source. To see translated versions of this warning, refer to the appendix “Translated Safety Warnings.”



**Warning** Only trained and qualified personnel should be allowed to install or replace this equipment. To see translated versions of this warning, refer to the appendix “Translated Safety Warnings.”

### Rack-Mount Installation

The concentrator can be mounted in an open or closed EIA-standard 19-inch rack using the rack-mount bracket kit. The rack-mount bracket kit consists of the following materials:

- Two L-shaped brackets
- Eight Phillips machine screws to attach the brackets to the concentrator
- You provide the rack-mount screws

Following is the procedure for rack-mounting the concentrator:

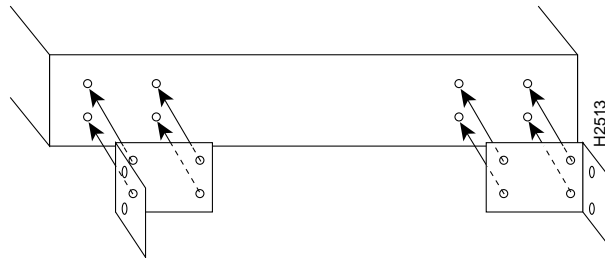
**Step 1** Attach a rack-mount (L-shaped) bracket to each side of the concentrator with the supplied Phillips machine screws. Mount each bracket with the tab positioned toward the front or rear, depending on your installation, of the concentrator. (See Figure 3-1.)



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. To see translated versions of this warning, refer to the appendix “Translated Safety Warnings.” 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.

**Figure 3-1 Attaching the Rack-Mount Brackets to the Concentrator**

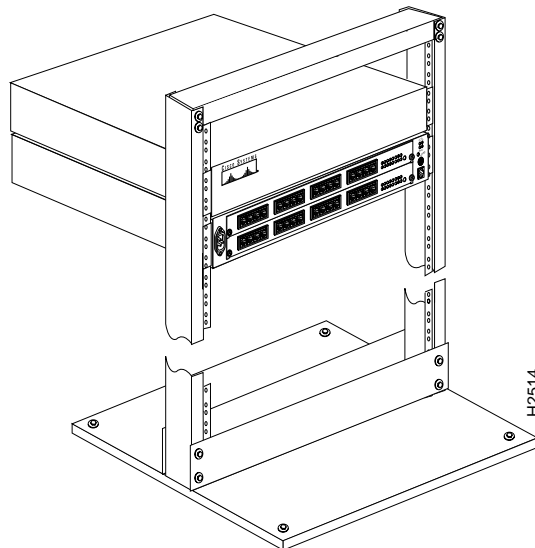


**Step 2** Secure both brackets tightly.

**Step 3** Position the concentrator in the rack at the desired location and align the holes on the bracket tabs with the holes in the rack.

**Step 4** Attach the concentrator to the rack using screws you provide. (See Figure 3-2.)

**Figure 3-2 Rack-Mounted Concentrator—Open Rack Shown**



## What to Do after the Hardware Is Installed

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**Caution** Before you mount the concentrator in a rack, make sure of the following: the rack is secure and in no danger of tipping over; the area around the rack does not exceed a maximum ambient temperature of 104F (40C); there is sufficient airflow around the rack.

**Step 5** Proceed to the section “What to Do after the Hardware Is Installed.”

## Desktop Installation

The concentrator operates at a low noise level, which makes it suitable for any desktop environment. Place it on a clear and level location. Leave at least 3 inches (7.6 cm) clearance at the sides for proper ventilation, and sufficient space at the rear for easy access to cables, LEDs, and line cards. Proceed to the section “What to Do after the Hardware Is Installed.”



**Caution** To prevent overheating damage, do not stack any other equipment on top of the concentrator chassis.

## What to Do after the Hardware Is Installed

After installing the chassis hardware, proceed to the chapter “Connecting to the Network” for the procedures required to attach all cables to the concentrator. For the information necessary to configure the software portion of the system based on your requirements, proceed to the chapter “Configuring the System Software” and the appendix “Command Reference.”