CHAPTER 3

Installing the Universal Access Server

This chapter describes how to install the access server and includes the following sections:

- Required Tools and Equipment
- Setting Up the Chassis
- Connecting to the Network
- Connecting the Console Terminal and Modem
- Wiring the DC Power Supply

Warning This unit is intended for installation in a restricted access area. A restricted access area is where access can only be gained by service personnel through the use of a special tool, or lock and key, or other means of security, and is controlled by the authority responsible for the location.

Warning Only trained and qualified personnel should be allowed to install or replace this equipment.

Warning This equipment is intended to be grounded. Ensure that the host is connected to earth ground during normal use.

Required Tools and Equipment

The following items are included with the access server:

- 19- and 24-inch rack-mount brackets
- Rubber feet for desktop installation
- Jackscrews and slide-latch connector kit for your optional Ethernet transceiver (transceiver not included)
- RJ-45-to-DB-9 female DTE adapter (labeled Terminal)
- RJ-45-to-DB-25 female DTE adapter (labeled Terminal)
- RJ-45-to-DB-25 male DCE adapter (labeled Modem)
- RJ-45-to-RJ-45 rollover cable
- ESD-preventive wrist strap
- Nylon cable tie
- Cable tie holder
- Grounding lug

You might need the following equipment, which is not included:

- Four screws for installing the access server in a rack
- Ethernet transceiver and straight-through RJ-45-to-RJ-45 cable (for connection from the Ethernet transceiver to an Ethernet hub)
- Ethernet hub or PC with a network interface card for Ethernet LAN connections
- Ethernet AUI cable
- Straight-through RJ-48C-to-RJ-48C cable for a T1 connection
- Serial transition cable for connection to the synchronous serial ports
- E1 cable for an E1 connection
- CSU/DSU
- PC running terminal emulation software for local administrative access
- Modem for remote administrative access

Setting Up the Chassis

You can set the chassis on a desktop or other flat surface, or install it in a rack. Proceed to the procedure in this section that best meets the needs of your network.

Setting the Chassis on a Desktop

Take these steps:

Step 1 Locate the rubber feet on the black adhesive strip that shipped with the chassis.

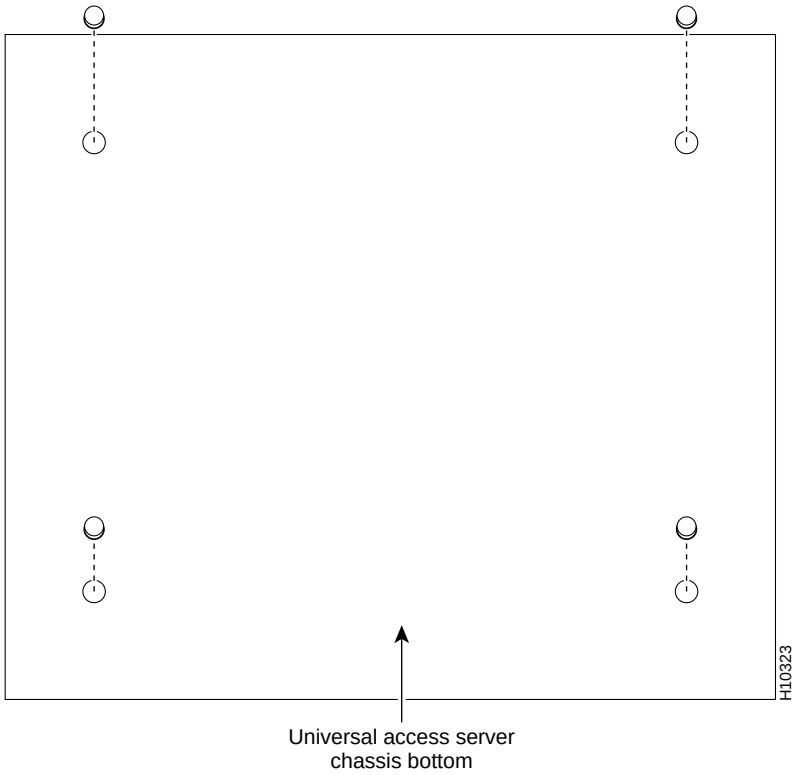
Step 2 Place the access server upside-down on a smooth, flat surface.

Step 3 Peel off the rubber feet from the black adhesive strip and place them adhesive-side down at each corner of the chassis bottom. (See Figure 3-1.)

Step 4 Place the access server right-side up on a flat, smooth, secure surface.

Caution Do not place anything on top of the access server that weighs more than 10 lbs (4.5 kg). Excessive weight could damage the chassis.

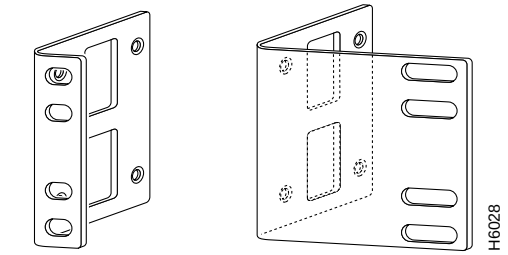
Figure 3-1 Attaching the Rubber Feet



Rack-Mounting the Chassis

This section describes how to rack-mount the chassis. The access server comes with 19-inch rack-mount brackets and larger brackets for use with a 23- or 24-inch rack. (See Figure 3-2 and Figure 3-3). You can also order telco rack-mount brackets (Figure 3-3) from Cisco. The part number for telco brackets is AS52/3RM-TELCO-19"=.

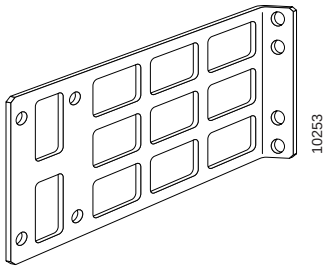
Figure 3-2 Standard Rack-Mount Brackets



Bracket for use with a 19-inch rack

Bracket for use with a 23- or 24-inch rack or for wall-mounting

Figure 3-3 Telco Rack-Mount Bracket



Attaching the Brackets

To install the chassis in a rack, attach the brackets in one of the following ways:

- With the standard brackets on the side panels of the access server with the front panel forward or rear panel forward, as shown in Figure 3-4 and Figure 3-5.
- With the telco brackets on the side panels of the access server with the rear panel forward, as shown in Figure 3-6.

Note Although the installations show the 19-inch brackets, the procedure is the same for the larger brackets.

Figure 3-4 Standard Bracket Installation—Front Panel Forward

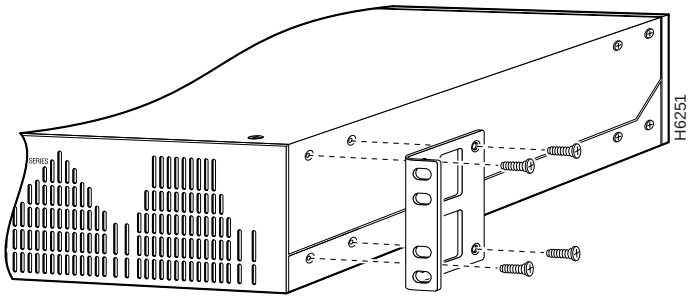
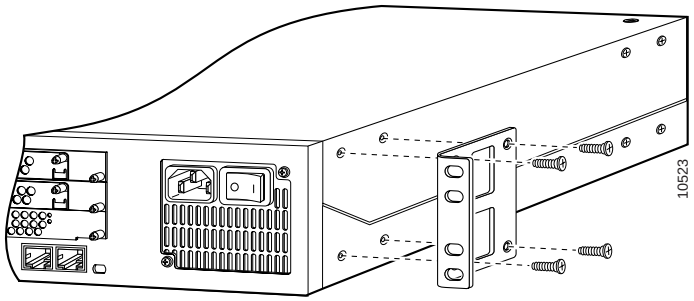
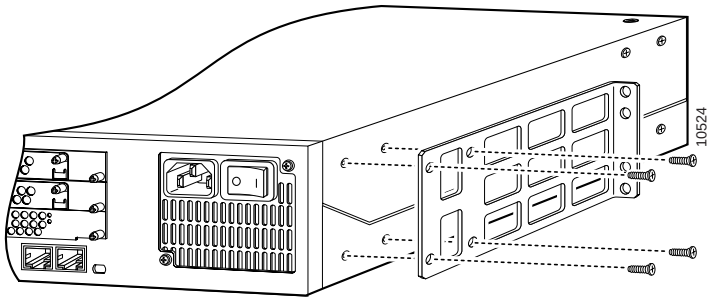


Figure 3-5 Bracket Installation—Rear Panel Forward



Note: The second bracket attaches to the other side of the chassis.

Figure 3-6 Optional Telco Bracket Installation—Rear Panel Forward

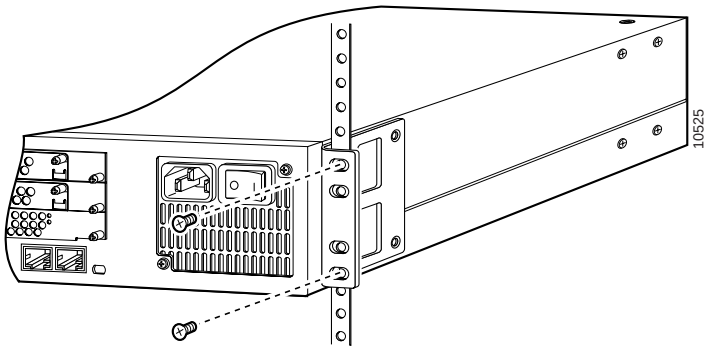


Note: The second bracket attaches to the other side of the chassis.
The brackets can also be installed with the front panel forward.

Installing in a Rack

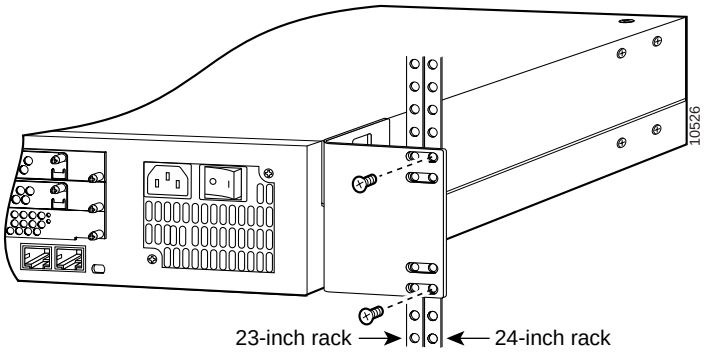
After the brackets are secured to the chassis, you can rack-mount the access server. Using the screws that you provide, attach the chassis to the rack as shown in Figure 3-7 or Figure 3-8.

Figure 3-7 Attaching the Chassis to the 19-Inch Rack—Rear Panel Forward



Note: The second bracket attaches to the rack at the other side of the chassis. The brackets can also be installed with the front panel forward.

Figure 3-8 Attaching the Chassis to the 23- or 24-Inch Rack—Rear Panel Forward



Note: The second bracket attaches to the rack at the other side of the chassis. The brackets can also be installed with the front panel forward.

Connecting to the Network

This section describes how to connect the access server to your network.

The cables required to connect the access server to a network are not provided. For ordering information, refer to the section “Getting Help” in the appendix “Troubleshooting the Universal Access Server.” Or if you prefer to make your own cables, refer the appendix “Cabling Specifications for the Universal Access Server” for cable and port pinouts.

Warning Do not work on the system or connect or disconnect cables during periods of lightning activity.

Connecting to an Ethernet Network

You can connect the access server to an Ethernet network in one of the following ways:

- Use an Ethernet transceiver and straight-through 10BaseT cable to connect the Ethernet AUI port to a 10BaseT hub. (See Figure 3-9.)
- Use an Ethernet AUI cable to connect the Ethernet AUI port to an Ethernet hub. (See Figure 3-10.)

If your Ethernet connection requires jackscrews, remove the slide-latch connector from the AUI connector and attach the jackscrews provided.

Figure 3-9 Connecting to a 10BaseT Hub

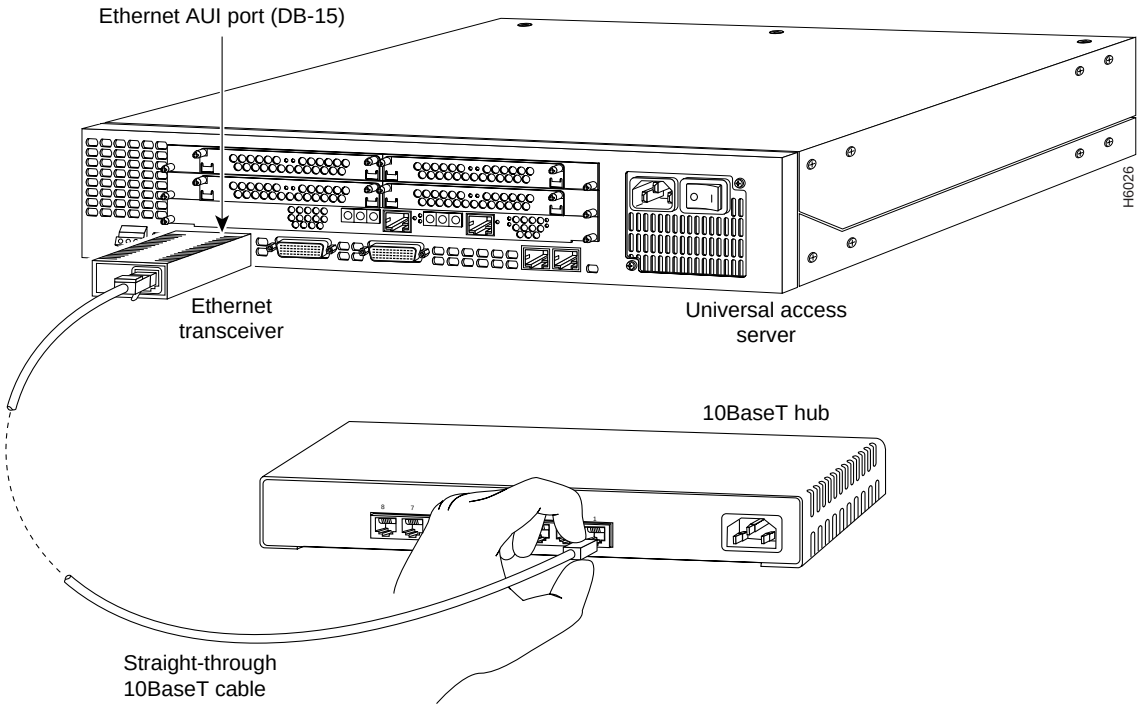
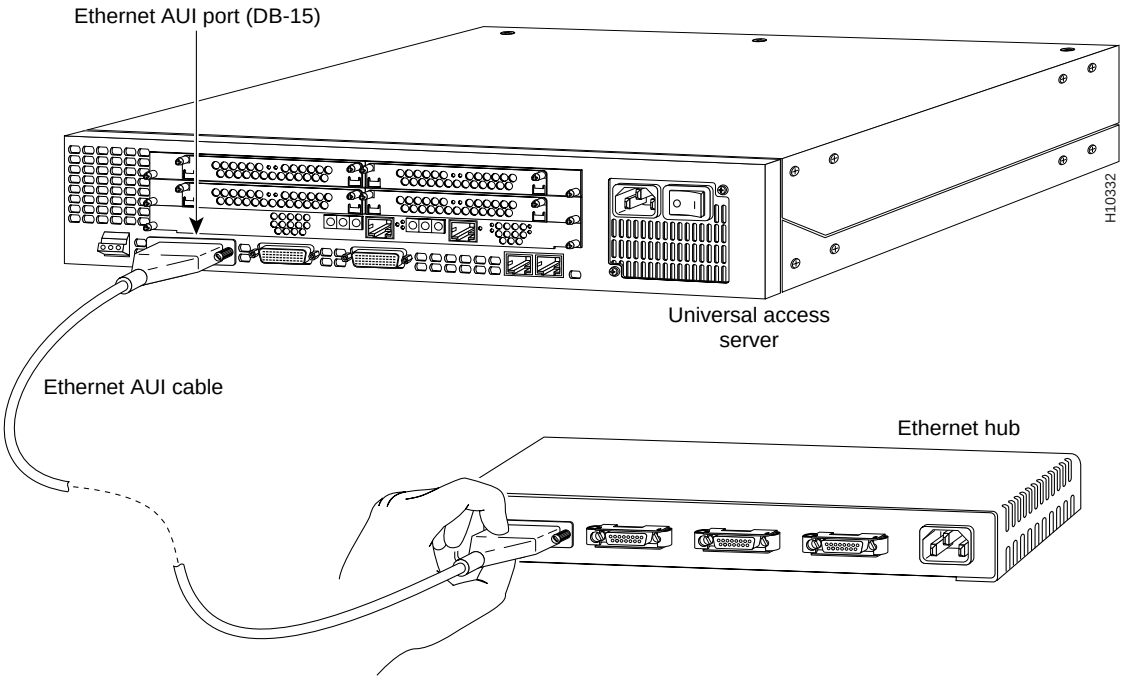


Figure 3-10 Connecting to an Ethernet Hub



Connecting to a WAN

You can connect the access server to a WAN in the following ways:

- Use a straight-through RJ-48-to-RJ-48 cable to connect the T1/PRI port to an RJ-48C jack. (See Figure 3-11.)
- Use an E1 cable to connect the E1/PRI port to an E1 CSU/DSU (See Figure 3-12.)
- Use a serial transition cable to connect the synchronous serial port to a modem or CSU/DSU. (See Figure 3-13.)

Figure 3-11 Connecting to an RJ-48C (T1) Jack

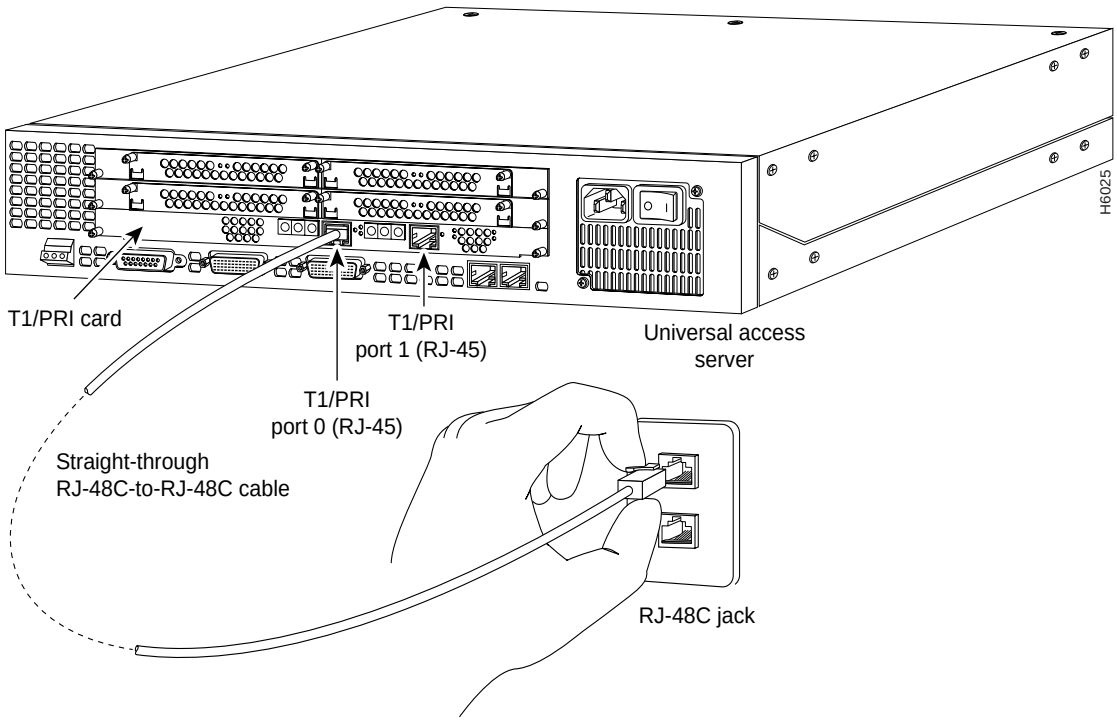


Figure 3-12 Connecting to an E1 CSU/DSU

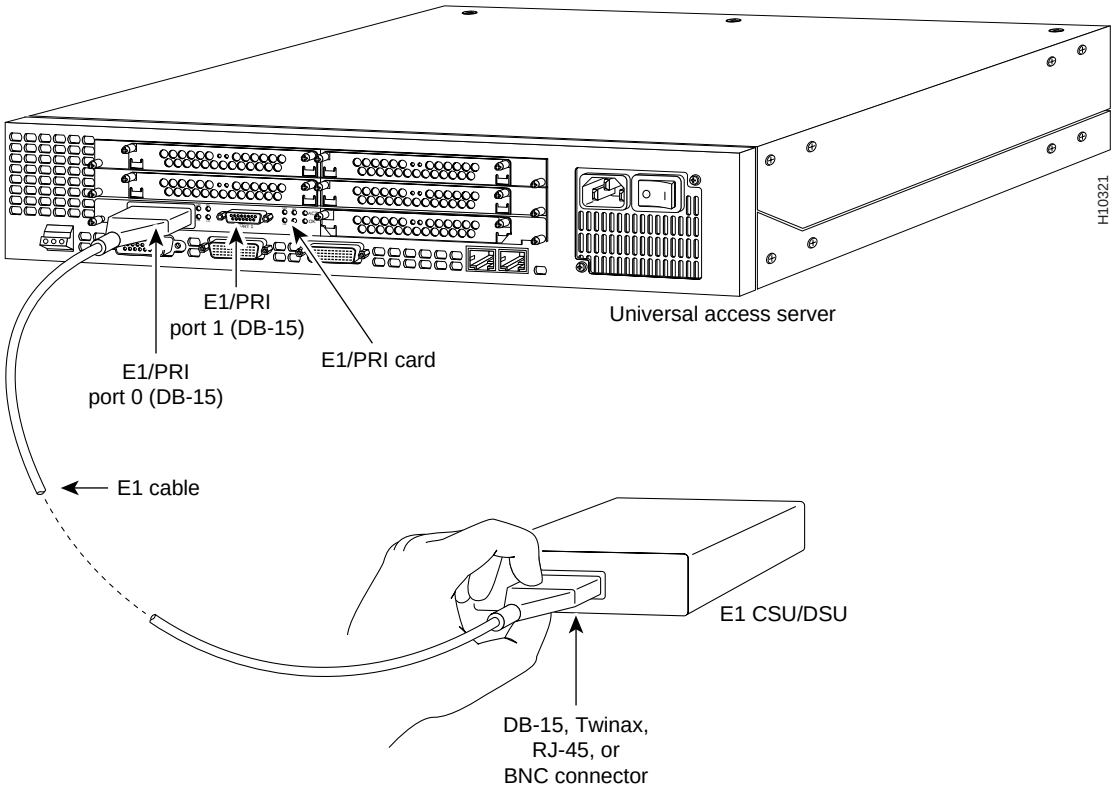
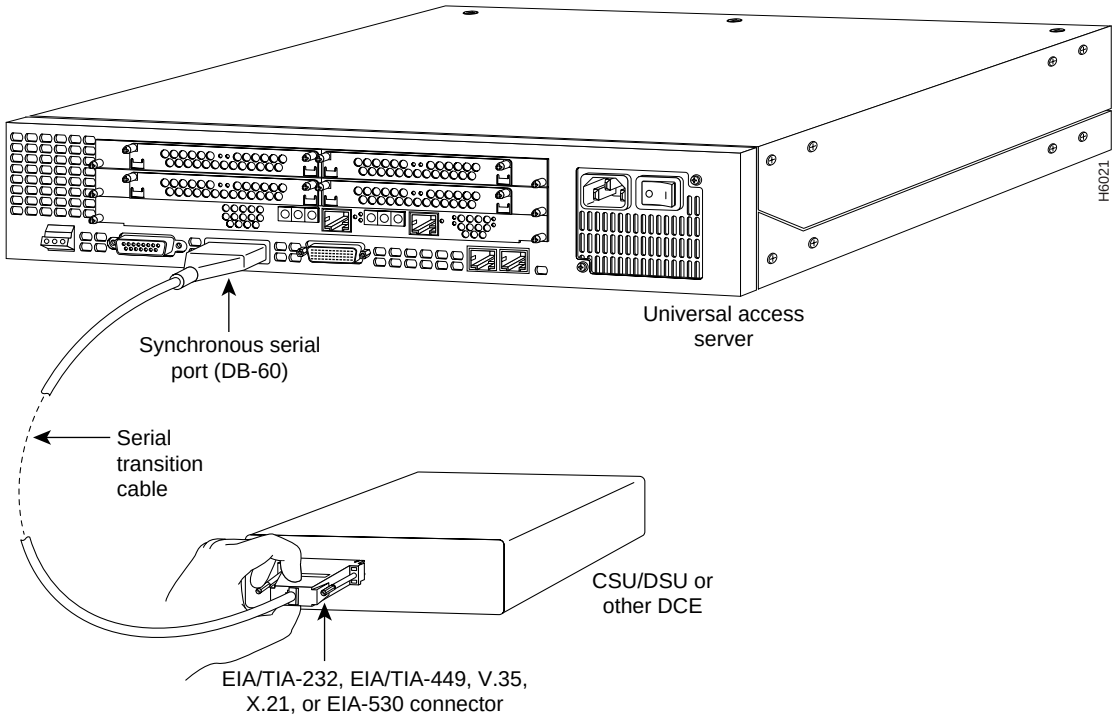


Figure 3-13 Connecting to a CSU/DSU



Caution If the access server is configured with fewer than three feature cards or modules, install a blank slot cover over all unused slots to ensure proper airflow within the chassis.

Connecting the Console Terminal and Modem

Use the console terminal for local administrative access to the access server. You can only connect a terminal to the console port. Use the auxiliary port to connect a terminal or a modem for remote access.

Connecting to the Console Port

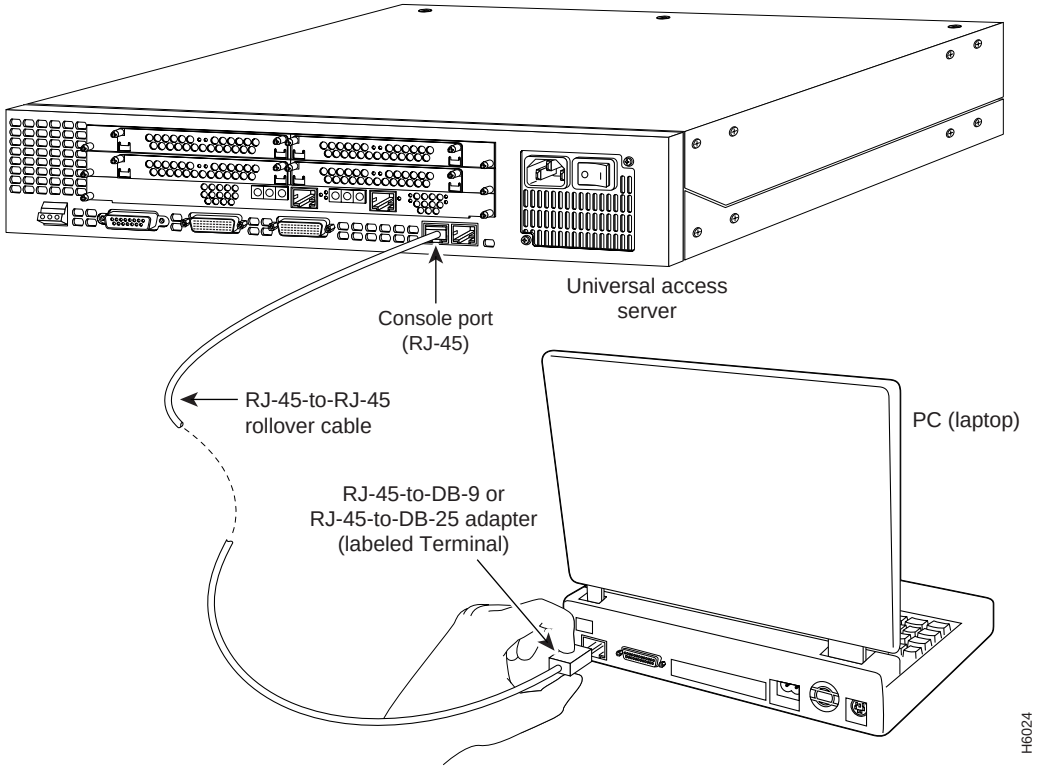
Take these steps:

Step 1 Connect the terminal using an RJ-45-to-RJ-45 rollover cable and an RJ-45-to-DB-9 or RJ-45-to-DB-25 adapter. The adapters provided are labeled Terminal. Other types of adapters are not included. (See Figure 3-14.)

For additional information about rollover cable pinouts, see the appendix "Cabling Specifications for the Universal Access Server."

Step 2 Configure your terminal or PC terminal emulation software for 9600 baud, 8 data bits, no parity, and 2 stop bits.

Figure 3-14 Connecting the Console Terminal



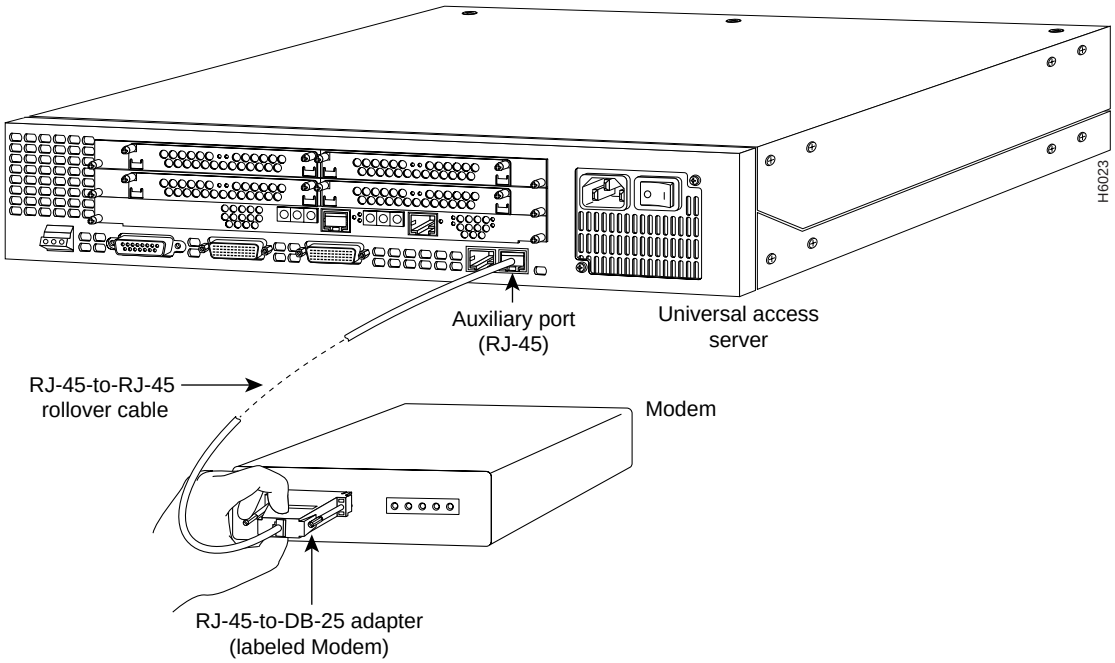
Connecting a Modem to the Auxiliary Port

Take these steps:

Step 1 Connect a modem to the auxiliary port using an RJ-45-to-RJ-45 rollover cable with an RJ-45-to-DB-25 adapter. The adapter provided is labeled Modem. (See Figure 3-15.)

Step 2 Make sure that your modem and the auxiliary port on the access server are configured for the same transmission speed (38400 baud is typical) and hardware flow control with Data Carrier Detect (DCD) and Data Terminal Ready (DTR) operations.

Figure 3-15 Connecting a Modem to the Auxiliary Port



Wiring the DC Power Supply

If you ordered the access server with a DC power supply, follow the procedure in this section to wire the terminal block.

Warning Before performing any of the following procedures, ensure that power is removed from the DC circuit. To ensure that all power is OFF, locate the circuit breaker on the panel board that services the DC circuit, switch the circuit breaker to the OFF position, and tape the switch handle of the circuit breaker in the OFF position.

Note This product is intended for installation in restricted access areas and is approved for connection using minimum 14 AWG copper conductors only. The installation must comply with all applicable codes.

Refer to Figure 3-16 and take these steps:

Step 1 Remove the terminal block cover plate.

Step 2 Attach the appropriate lugs at the wire end of the power supply cord.

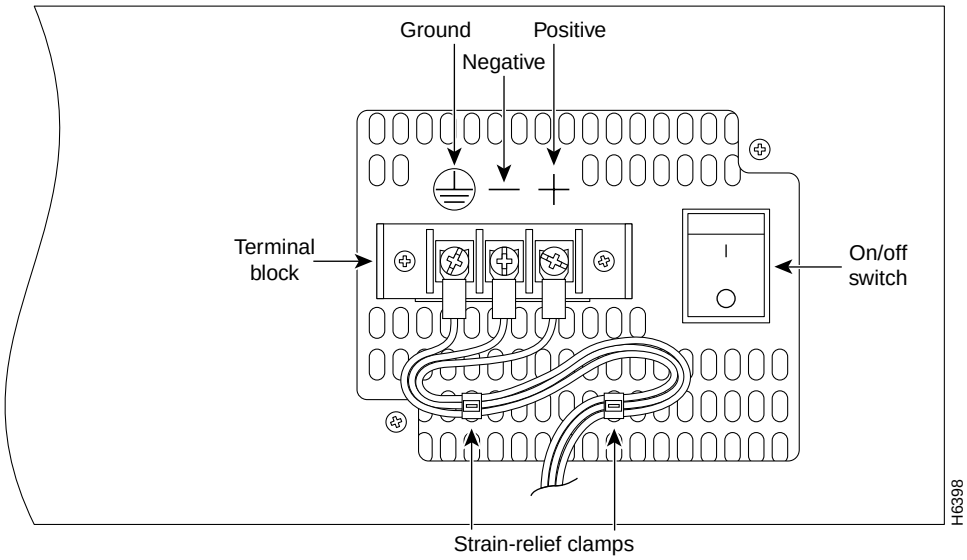
Step 3 Wire the DC power supply cord to the terminal block.

Step 4 Secure the power supply cord to the cable strain-relief clamps on the DC power supply with cable ties.

Step 5 Install the terminal block cover plate.

Warning The illustration shows the DC power supply terminal block. Wire the DC power supply using the appropriate lugs at the wiring end, as illustrated. The proper wiring sequence is ground to ground, positive to positive (line to L), and negative to negative (neutral to N). Note that the ground wire should always be connected first and disconnected last.

Figure 3-16 DC Power Supply Connections



Warning When stranded wiring is required, use approved wiring terminations, such as closed-loop or spade-type with upturned lugs. These terminations should be the appropriate size for the wires and should clamp both the insulation and conductor.

Caution Do not overtorque the terminal block captive thumbscrew or terminal block contact screws. The recommended torque is 8.2 ± 0.4 inch-lb.

Warning After wiring the DC power supply, remove the tape from the circuit breaker switch handle and reinstate power by moving the handle of the circuit breaker to the ON position.