CHAPTER 1

Starting Up Your Access Server for the First Time

This chapter describes first-time startup procedures for the access server. It describes the following tasks:

- Starting Up the Access Server for the First Time
- Configuring the Access Server Manually
- Using the System Configuration Dialog
- Using AutoInstall
- Verifying Network Connectivity

You can also configure your access server by copying a configuration file from a network (RCP or TFTP) server, though this procedure is not described in this chapter. For more information about either of these procedures, refer to the "Copy Configuration Files from a Network Server to the Router" section in the "Loading System Images, Microcode Images, and Configuration Files" chapter of the *Configuration Fundamentals Configuration Guide*.

This chapter assumes you have already referred to the *Cisco AS5200 Universal Access Server Hardware Installation Guide* to perform the following tasks:

- Connect to the console port of your access server
- Display an EXEC prompt (`Router>`) on your terminal screen (or being able to display it)

Complete these tasks before you perform the tasks in this chapter.

Starting Up the Access Server for the First Time

Before you power on the access server for the first time, be sure you have performed the tasks described in the installation chapter of your hardware installation guide, including connecting a terminal to the console port of the access server.

Follow these steps to power on the access server:

Step 1 Connect the power cable to the access server and the AC power source.

Step 2 Turn on the access server.

Information similar to the following appears on the console screen:

Note The messages displayed vary, depending on the Cisco IOS software release and feature set you selected. The screen displays in this section are for reference only and may not exactly reflect the screen displays on your console.

```
System Bootstrap, Version 11.1(473), SOFTWARE
Copyright (c) 1994-1996 by cisco Systems, Inc.
AS5200 processor with 8192 Kbytes of main memory

program load complete, entry point: 0x3000060, size: 0x22dc88

Notice: NVRAM invalid, possibly due to write erase.
program load complete, entry point: 0x22000060, size: 0x69d85c

              Restricted Rights Legend

Use, duplication, or disclosure by the Government is
subject to restrictions as set forth in subparagraph
(c) of the Commercial Computer Software - Restricted
Rights clause at FAR sec. 52.227-19 and subparagraph
(c) (1) (ii) of the Rights in Technical Data and Computer
Software clause at DFARS sec. 252.227-7013.

           Cisco Systems, Inc.
           170 West Tasman Drive
           San Jose, California 95134-1706
```

```
Cisco Internetwork Operating System Software
IOS (tm) 5200 Software (AS5200-JMZ-L), Experimental Version
11.1(13523)
Copyright (c) 1986-1996 by cisco Systems, Inc.
Compiled Wed 10-Jul-96 17:37 by sichen
Image text-base: 0x220386A4, data-base: 0x00005000

cisco AS5200 (68030) processor (revision A) with 8192K/4096K bytes
of memory.
Processor board ID 02830782
Bridging software.
SuperLAT software copyright 1990 by Meridian Technology Corp).
X.25 software, Version 2.0, NET2, BFE and GOSIP compliant.
TN3270 Emulation software (copyright 1994 by TGV Inc).
Primary Rate ISDN software, Version 1.0.
1 Ethernet/IEEE 802.3 interface.
2 Serial network interfaces.
48 terminal lines.
2 Channelized T1/PRI ports.
128K bytes of non-volatile configuration memory.
8192K bytes of processor board System flash (Read ONLY)
4096K bytes of processor board Boot flash (Read/Write)

Notice: NVRAM invalid, possibly due to write erase.
         --- System Configuration Dialog ---

At any point you may enter a question mark '?' for help.
Use ctrl-c to abort configuration dialog at any prompt.
Default settings are in square brackets '[]'.
```

Timesaver Before responding to the following system prompt, be sure to read through to in this procedure.

```
Would you like to enter the initial configuration dialog? [yes]:
```

Note Cisco recommends that you do not use the initial configuration dialog to configure your access server, because the dialog does not fully configure the access server. We recommend that you configure the system manually. Refer to the section "Configuring the Access Server Manually."

Step 3 Enter **yes** or **no** in response to the prompt.

Your answer depends on which method you want to use to configure the access server. You can either use the system configuration dialog to configure the access server or configure it manually. We recommends that you configure the access server manually. To configure the system manually, type **no** at the system prompt. To use the system configuration dialog, type **yes** or press **Return**.

If you choose to configure the access server manually, proceed to the "Configuring the Access Server Manually" section.

Step 4 If you enter **no** to stop the initial configuration dialog and configure the access server manually, one of two things happens:

- If a TCP/IP host on your network has been preconfigured to provide a configuration file to your access server via one of its serial (WAN) ports, the access server is automatically configured using the AutoInstall function on the access server. If you are set up to run AutoInstall, refer to the section "Using AutoInstall" later in this chapter.
- Approximately 30 seconds after you type **n** to configure the system manually, the following message appears on the console screen:

```
Would you like to terminate autoinstall [yes]:
```

Step 5 If you are not set up to use AutoInstall to configure your router, type **y** or press **Return**.

Timesaver Obtain the correct network addresses from your system administrator or consult your network plan to determine the addresses you will assign to each port on the access server before you begin to configure it.

Configuring the Access Server Manually

Follow these steps to configure the access server manually. This section assumes you typed **no** in response to the following system prompt:

```
Would you like to enter the initial dialog? [yes]: no
```

A few seconds after entering **no**, the user EXEC prompt (Router>) appears.

Step 1 Enter the **enable** command to enter enable mode. You can only make configuration changes in enable mode.

```
Router> enable
```

The prompt changes to the privileged EXEC (enable) prompt:

```
Router#
```

Step 2 Enter the following command at the enable prompt to enter configuration mode:

```
Router# configure terminal
```

You can now enter any changes you want to the configuration. You probably want to perform the following tasks:

(a) Assign a host name for the access server using the **hostname** command.

(b) Enter an enable secret password using the **enable password** command.

(c) Assign addresses to the Ethernet interfaces using the *protocol* **address** command.

(d) Specify which protocols to support on the interfaces.

Refer to subsequent chapters in this publication for more information about configuring the access server.

Step 3 When you are finished configuring the access server, enter the **exit** command until you return to the privileged EXEC prompt (`Router#`).

Step 4 To save the configuration changes to NVRAM, enter the **copy running-config startup-config** command at the privileged EXEC prompt:

```
Router# copy running-config startup-config
********
```

The access server now boots with the configuration you entered. To continue configuring the access server, refer to the subsequent chapters in this guide, as described in Table 1-1.

Table 1-1 Tasks and Concepts Presented in Subsequent Chapters

Chapter	Task
Working with Your Access Server for the First Time	Understanding the Cisco IOS software, including command modes and getting help.
Configuring for ISDN and Analog Calls	Controller, interface, and modem configuration
Configuring Access Services Security	Security configuration.

Using the System Configuration Dialog

Note Cisco recommends that you do not use the initial system configuration dialog to configure your access server, because the dialog does not fully configure the access server. We recommend that you configure the system manually. Refer to the section "Configuring the Access Server Manually."

Using AutoInstall

The AutoInstall process is designed to configure the access server automatically when it is connected to a WAN. For AutoInstall to work properly, a TCP/IP host on your network must be preconfigured to provide the required configuration files. The TCP/IP host can exist anywhere on the network as long as both of the following two conditions are maintained:

- The host must be on the remote side of the access server's synchronous serial connection to the WAN.
- User Datagram Protocol (UDP) broadcasts to and from the access server and the TCP/IP host must be enabled.

This functionality is coordinated by your system administrator at the site where the TCP/IP host is located. Do not attempt to use AutoInstall unless the required files have been provided on the TCP/IP host.

Follow these steps to prepare your access server for the AutoInstall process:

Step 1 Attach the WAN cable to the access server.

Step 2 Connect the power cable to the access server and the AC power source, and then turn on the access server.

The access server loads the operating system image from Flash memory. If the remote end of the WAN connection is connected and properly configured, the AutoInstall process begins.

Step 3 If AutoInstall completes successfully, enter the **copy running-config startup-config** command to write the configuration to the access server's NVRAM:

```
Router# copy running-config startup-config
```

Issuing the **copy running-config startup-config** command saves the configuration settings that the AutoInstall process created to the access server's NVRAM. If you do not issue this command, your configuration will be lost the next time you reload the access server.

Verifying Network Connectivity

After you have installed and configured the access server, you can use the following commands in user EXEC mode to verify network connectivity:

- **telnet**—Logs in to a remote node
- **ping**—Sends a special datagram to the destination device, then waits for a reply datagram from that device
- **trace**—Discovers the routes that packets take when traveling from one access server to another

For more information about these commands, refer to the Cisco IOS software configuration guides and command references. These publications appear online on the documentation CD that shipped your access server.