APPENDIX C

Initial Configuration for the Switch

Revised: October 25, 2011

This appendix provides an initial setup procedure for a switch and contains the following topics:

- Connecting to the Switch, page C-2
- Starting the Terminal-Emulation Software, page C-2
- Connecting to a Power Source, page C-2
- Entering the Initial Configuration Information, page C-3

Tip For additional information about the Cisco Catalyst 4500 E-series switches (including configuration examples and troubleshooting information), see the documents listed on this page:

http://www.cisco.com/en/US/products/hw/switches/ps4324/index.html

Note You need to provide the Category 5 straight-through cables to connect the switch ports to other Ethernet devices.

Note If you move a supervisor engine from a Catalyst 4500 series chassis to a Catalyst 4503-E chassis or Catalyst 4506-E chassis, it must use Cisco IOS Release 12.2(37)SG or later releases. See the release note for software upgrade procedures if needed:

http://www.cisco.com/en/US/docs/switches/lan/catalyst4500/release/note/OL_5184.html#wp305142

Connecting to the Switch

You must use the console port to perform the initial configuration. To connect the switch console port to a PC, use an RJ-45-to-DB-9 adapter cable.

To connect the PC or terminal to the switch, follow these steps:

Step 1 Using an RJ-45-to-DB-9 adapter cable, insert the RJ-45 connector into the console port that is located on the front of the supervisor engine.

Step 2 Attach the DB-9 female DTE of the adapter cable to a PC serial port, or attach an appropriate adapter to the terminal.

Starting the Terminal-Emulation Software

Before you power on the switch, start the terminal-emulation session so that you can see the output display from the power-on self-test (POST).

The terminal-emulation software—frequently a PC application such as Hyperterminal or ProcommPlus—makes communication between the switch and your PC or terminal possible.

To start the terminal emulation software, follow these steps:

Step 1 Start the terminal-emulation program if you are using a PC or terminal.

Step 2 Start a terminal-emulation session.

Step 3 Configure the baud rate and character format of the PC or terminal to match these console port default characteristics:

- 9600 baud
- 8 data bits
- 1 stop bit
- No parity
- None (flow control)

Connecting to a Power Source

To connect to a power source, follow these steps:

Step 1 If you are using an AC-input power supply, connect one end of the supplied AC power cord to the power connector on the switch, and then connect the other end of the power cable to a grounded AC outlet.

Step 2 If you are using a DC-input power supply, see the instructions on how to install the DC power supply in Chapter 3, “Installing the Switch.”

As the switch powers on, it begins the POST, which is a series of tests that runs automatically to ensure that the switch functions properly.

The POST lasts approximately 1 minute. After the POST is complete, the system and status LEDs remain green.

If the switch fails POST, the system LED turns amber.

Note POST failures are usually fatal. Call Cisco TAC if your switch does not pass the POST.

If you started the terminal-emulation program before you powered on your switch, the PC or terminal displays the bootloader sequence. You need to press Enter to display the setup program prompt.

Entering the Initial Configuration Information

To set up the switch, you need to assign an IP address and other configuration information necessary for the switch to communicate with the local routers and the Internet. The minimal configuration provided here does not cover most of the features; it simply allows you to perform other configuration tasks using a Telnet connection from your management network. To configure other features and interfaces, see the Software Configuration Guide for your release.

IP Settings

You will need this information from your network administrator:

- Switch IP address
- Subnet mask (IP netmask)
- Default gateway (router)
- Enable secret password
- Enable password
- Telnet password

Performing the Initial Configuration

To complete the initial configuration for the switch, follow these steps:

Step 1 At the terminal prompt, enter the **enable** command to enter privileged exec mode.

```
Switch> enable
Password: password
Switch#
```

Step 2 Set the system time using the **clock set** command in privileged EXEC mode.

```
Switch# clock set 20:09:01 3 Apr 2006
```

Step 3 Verify the change by entering the **show clock** command.

```
Switch# show clock
20:09:06.079 UTC Thu Apr 3 2006
```

Step 4 Enter the **configure terminal** command to enter global configuration mode.

```
Switch# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Switch (config)#
```

Step 5 Configure the system prompt and hostname for the switch, and press **Return**. To remove the new prompt and return the prompt to its default, use the **no hostname** command.

```
Switch (config)# hostname Switch1
```

Step 6 Use the **banner motd** global configuration command to set location information in the login banner. You can also set a system contact using this command.

```
Switch1(config)# banner motd c 170 West Tasman Drive, San Jose, CA c
```

or

```
Switch1 (config)# banner motd c 170 West Tasman Drive, San Jose, CA; Tech Support 408 123
4567 c
```

Step 7 Configure an enable secret password, and press **Return**.

The password can be from 1 to 25 alphanumeric characters, can start with a number, is case sensitive, allows spaces, but ignores leading spaces. The secret password is encrypted and the enable password is in plain text.

```
Switch1 (config)# enable secret SecretPassword
```

Step 8 Configure an enable password, and press **Return**.

```
Switch1 (config)# enable password EnablePassword
```

Step 9 Configure a virtual terminal (Telnet) password, and press **Return**.

The password can be from 1 to 25 alphanumeric characters, is case sensitive, allows spaces, but ignores leading spaces.

```
Switch1 (config)# password terminal-password
Switch1 (config)# line vty 0 15
```

Step 10 Configure the interface that connects to the management network. (The IP address and subnet mask shown are for example only. Use an address appropriate for your network.)

```
Switch1 (config)# ip routing
Switch1 (config)# interface gigabitethernet 3/24
Switch1 (config-if)# no switchport
Switch1 (config-if)# no shutdown
Switch1 (config-if)# ip address 10.4.120.106 255.0.0.0
Switch1 (config-if)# exit
```

Step 11 Exit from global configuration mode:

```
Switch (config)# exit
Switch #
```

Step 12 View the configuration that you have just created and confirm that it is what you want.

```
Switch1# show run
!
hostname Switch1
!
banner motd ^C
170 West Tasman Drive, San Jose, CA ^C
!

!--- Output suppressed.
```

Step 13 Configure a default route.

```
Switch1(config)#ip route 0.0.0.0 0.0.0.0 172.16.1.1
```

Step 14 Verify the IP information by using the **show ip interface brief** and **show ip route** commands.

```
Switch1# show ip interface brief

Interface        IP-Address         OK?    Method      Status      Protocol
Vlan1            10.4.220.206       YES    manual        up          up
FastEthernet1   unassigned         YES    unset         up          up

!--- Output suppressed.
Switch1# show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - ISIS level-1, L2 - ISIS level-2, ia - ISIS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is 172.16.1.1 to network 0.0.0.0

     172.16.0.0/24 is subnetted, 1 subnets
C       172.16.1.0 is directly connected, Vlan1
S*   0.0.0.0/0 [1/0] via 172.16.1.1
Switch1#
```

Step 15 Save the running configuration:

```
Switch1# copy system:running-config nvram:startup-config
```

You have now completed the initial configuration of the switch, so you can now configure other interfaces and features over a network connection without having to directly connect to the console port of the supervisor engine.

To use the CLI to perform additional configuration or management tasks, enter commands at the Switch> prompt through the console port by using a terminal program or through the network by using Telnet. For configuration information, see the switch software configuration guide or the switch command reference.