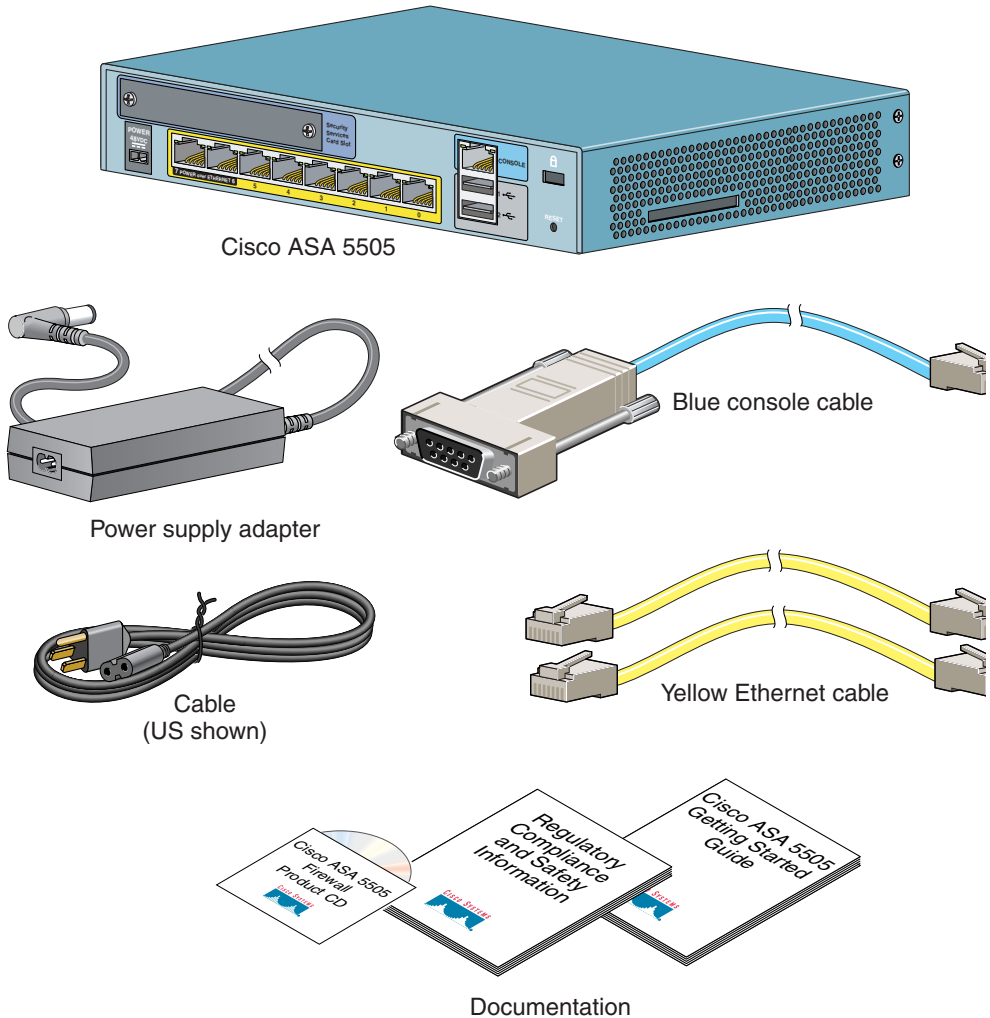**C H A P T E R 4**

Installing the ASA 5505

This chapter describes how to install the ASA 5505 adaptive security appliance. This chapter includes the following sections:

Verifying the Package Contents

Verify the contents of the packing box to ensure that you have received all items necessary to install your Cisco ASA 5505 adaptive security appliance, as shown in Figure 4-1.

Figure 4-1   *Contents of ASA 5505 Package*

Cisco ASA 5505

Power supply adapter

Blue console cable

Cable
(US shown)

Yellow Ethernet cable

Documentation

PoE Ports and Devices

On the ASA 5505, switch ports Ethernet 0/6 and Ethernet 0/7 support PoE devices that are compliant with the IEEE 802.3af standard, such as IP phones and wireless access points. If you install a non-PoE device or do not connect to these switch ports, the adaptive security appliance does not supply power to the ports and the device must be powered on its own.

These ports are the only ports that can provide power for IP phones or other PoE devices. However, these ports are not restricted to that use. They can also be used as Ethernet switch ports, like the Ethernet switch ports numbered 0 through 5. If a PoE device is not attached, power is not supplied to the port.

When connecting PoE devices, use the following guidelines:

- Use straight-through cable only. Using crossover cable does not enable the ASA 5505 to provide power to the PoE ports.

- Do not disable auto-negotiation (force speed and duplex) on E0/6 and E0/7 when using them to connect PoE devices. If auto-negotiation is disabled, the ASA 5505 does not recognize that a PoE device is attached. In this case, power is not provided to the port.

> **Note** Be careful when connecting a Cisco PoE device to a non-PoE switch port (E0/0 through E0/5). If auto-negotiation is disabled for that switch port, a network loopback might occur with some Cisco Powered Device (PD) models.

- Cisco IP Phone 7970 is always in low-power mode when drawing power from the ASA 5505.

Installing the Chassis

To install the ASA 5505, perform the following steps:

Step 1 Place the chassis on a flat, stable surface. The chassis is not rack mountable.

Step 2 Connect Port 0 to the public network (that is, the Internet):

   a. Use a yellow Ethernet cable to connect the device to a switch or hub.

    b. Use one of the yellow Ethernet cables to connect the device to a cable/DSL/ISDN modem.

        ✎

   **Note**   By default, switch port 0 is the outside port.

Step 3   Connect your network devices with an Ethernet cable to one of the remaining seven switched ports (numbered 1 through 7).

    If you are connecting any Power over Ethernet (PoE) devices, connect them to one of the switch ports that support PoE (ports numbered 6 and 7).

Connecting to Network Interfaces

To connect to a network interface, perform the following steps:

Step 1   Locate an RJ-45 to RJ-45 Ethernet cable.

Step 2   Connect one end of the Ethernet cable to an Ethernet port (ports 0 through 7) as shown in Figure 4-2. (Typically Ethernet port 0 is used to connect to an Internet router.)

Figure 4-2   Connecting to an Ethernet Interface
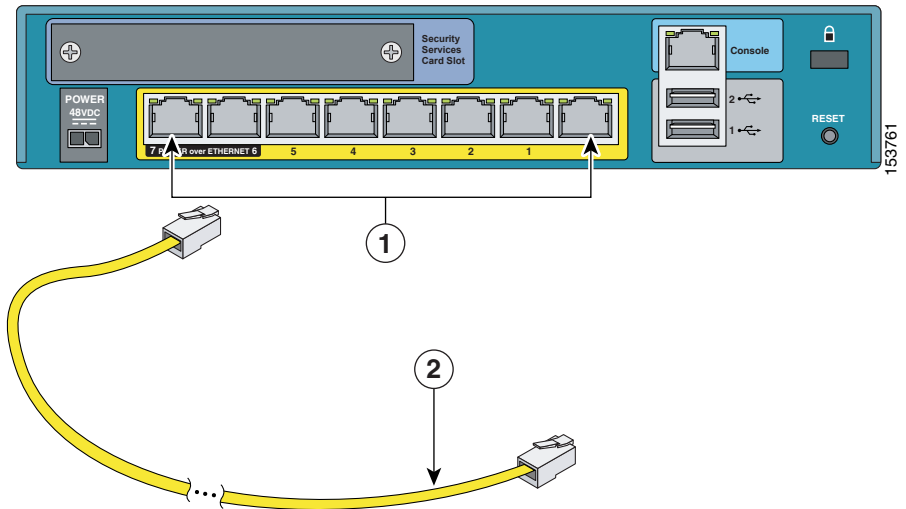
1	Ethernet switch ports	**2**	Ethernet cable

Step 3   Connect the other end of the Ethernet cable to a device, such as a router, desktop computer, or printer.

Powering on the ASA 5505

To power on the ASA 5505, perform the following steps:

Step 1   Connect the power supply with the power cable.

Step 2   Connect the small, rectangular connector of the power supply cable to the power connector on the rear panel.

Step 3   Connect the AC power connector of the power supply input cable to an electrical outlet.

> ✎
>
> **Note** The ASA 5505 does not have a power switch. Completing Step 3 powers on the device.

Step 4 Check the power LED; if it is solid green, then the device is powered on.

For more information, see the "Front Panel Components" section on page 4-9.

Setting Up a PC for System Administration

You can perform setup, configuration and management tasks from a PC using the command-line interface or with the Adaptive Security Device Manager (ASDM) application, which provides an intuitive graphical user interface (GUI).

In addition to configuration and management capability, ASDM also provides configuration wizards for initial configuration, VPN configuration, and high-availability configuration.

For more information about using ASDM for setup and configuration, see Chapter 5, "Configuring the Adaptive Security Appliance."

To set up a PC from which you can configure and manage the ASA 5505, perform the following steps:

Step 1 Make sure that the speed of the PC interface to be connected to one of the ASA 5505 inside ports is set to autonegotiate. This setting provides the best performance.

By default, the ASA 5505 automatically negotiates the inside interface speed. If autonegotiate is not an option for the PC interface, set the speed to either 10 or 100 Mbps half duplex. Do not set the interface to full duplex; this causes a duplex mismatch that significantly impacts the total throughput capabilities of the interface.

Step 2 Configure the PC to use DHCP (to receive an IP address automatically from the ASA 5505), which enables the PC to communicate with the ASA 5505 and the Internet as well as to run ASDM for configuration and management tasks.

Alternatively, you can assign a static IP address to your PC by selecting an address in the 192.168.1.0 subnet. (Valid addresses are 192.168.1.2 through 192.168.1.254, with a mask of 255.255.255.0 and default route of 192.168.1.1.)

When you connect other devices to any of the inside ports, make sure that they do not have the same IP address.

✎
Note   The MGMT interface of the adaptive security appliance is assigned 192.168.1.1 by default, so this address is unavailable.

Step 3   Use an Ethernet cable to connect the PC to a switched inside port on the rear panel of the ASA 5505 (one of the ports numbered 1 through 7).

Step 4   Check the LINK LED to verify that the PC has basic connectivity to the ASA 5505.

When connectivity is established, the LINK LED on the front panel of the ASA 5505 lights up solid green.

You can now access the ASDM and the ASDM Startup Wizard. See Chapter 5, "Configuring the Adaptive Security Appliance" for information about how to perform initial setup and configuration of the ASA 5505.

Optional Procedures

This section describes how to perform tasks that are not required for the initial setup of the ASA 5505. This section includes the following topics:

- "Connecting to the Console" section on page 4-7
- "Installing a Cable Lock" section on page 4-8

Connecting to the Console

You can access the command line for administration using the console port on the ASA 5505. To do so, you must run a serial terminal emulator on a PC or workstation as shown in Figure 4-3.

Figure 4-3   Connecting to the Console
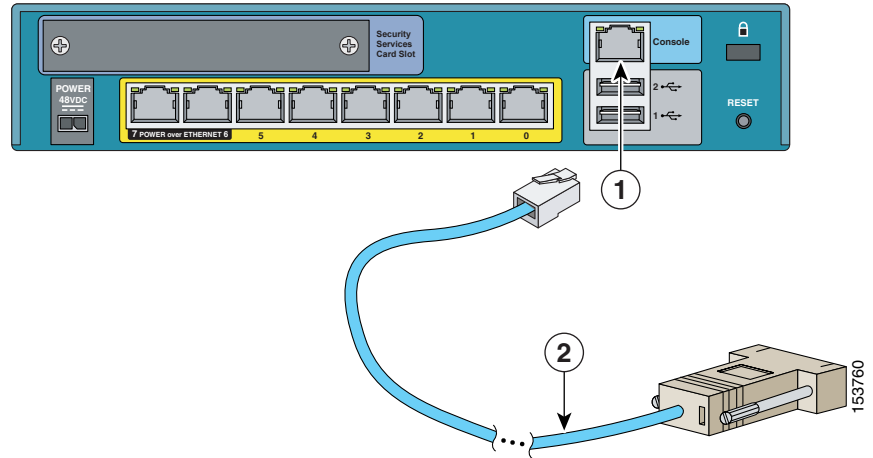
1	Console port	2	Console cable

To connect a console for local, command-line administrative access, perform the following steps:

Step 1   Plug one end of the PC terminal adapter into a standard 9-pin PC serial port on your PC.

Step 2   Plug one end of the blue console cable into the PC terminal adapter.

Step 3   Plug the other end of the blue console cable into the CONSOLE port.

Step 4   Configure the PC terminal emulation software or terminal for 9600 baud, 8 data bits, no parity, and 1 stop bit.

Installing a Cable Lock

The ASA 5505 includes a slot that accepts standard desktop cable locks to provide physical security for small portable equipment, such as a laptop computer. The cable lock is not included.

To install a cable lock, perform the following steps:

Step 1   Follow the directions from the manufacturer for attaching the other end of the cable for securing the adaptive security appliance.

Step 2   Attach the cable lock to the lock slot on the back panel of the ASA 5505.

Ports and LEDs

This section describes the front and rear panels of the ASA 5505. This section includes the following topics:

Front Panel Components

The LINK/ACT indicators on the front panel of the ASA 5505 are normally solid green when a link is established and flashing green when there is network activity. Each Ethernet interface (numbered 0 through 7) has two LEDs: one to indicate the operating speed and the other to indicate whether the physical link is established.

Figure 4-4 illustrates the front panel of the ASA 5505.

Figure 4-4   *ASA 5505 Front Panel*
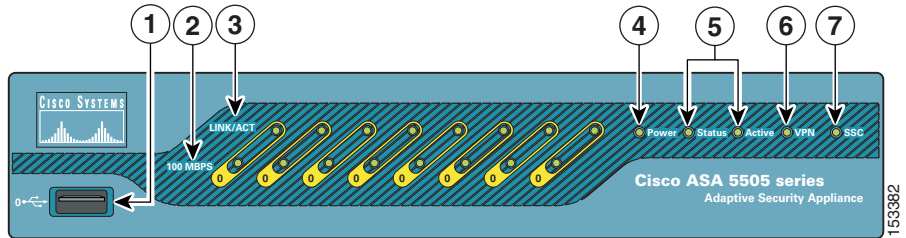
	Port / LED	Color	State	Description
1	USB Port	—	—	Reserved for future use.
2	Speed Indicators	Not lit	—	Network traffic is flowing at 10 Mbps.
		Green	On	Network traffic is flowing at 100 Mbps.
3	Link Activity Indicators	Green	Solid	The physical link established.[*]
		Green	Flashing	There is network activity.
4	Power	Green	On	The device is powered on.
		Off	—	The device is powered off.
5	Status	Green	Flashing	The power-up diagnostics are running or the system is booting.
			Solid	The system is operational.
		Amber	Solid	The system has encountered a problem.

	Port / LED	Color	State	Description
6	Active	Green	Solid	The system is forwarding traffic.
				If the system is part of a high availability setup, a solid green light indicates that the link is forwarding traffic.
		Amber	Solid	The system is on standby.
				If the system is part of a high availability setup, a solid amber light indicates that this is the standby unit.
7	VPN	Green	Solid	The VPN tunnel is established.
			Flashing	The system is initiating the VPN tunnel.
		Amber	Solid	The tunnel failed to initiate.
8	SSC	—	—	An SSC card is present in the SSC slot.

*   If the LINK/ACT LED does not light up, the link could be down if there is a duplex mismatch. You can fix the problem by changing the settings either on the ASA 5505 or on the other end.   If auto-negotiation is disabled (it is enabled by default), you might be using the wrong type of cable. Try replacing the yellow (straight-through) Ethernet cable with the orange (crossover) Ethernet cable.

Rear Panel Components

Figure 4-5 illustrates the back panel of the ASA 5505.

Figure 4-5   *ASA 5505 Rear Panel*
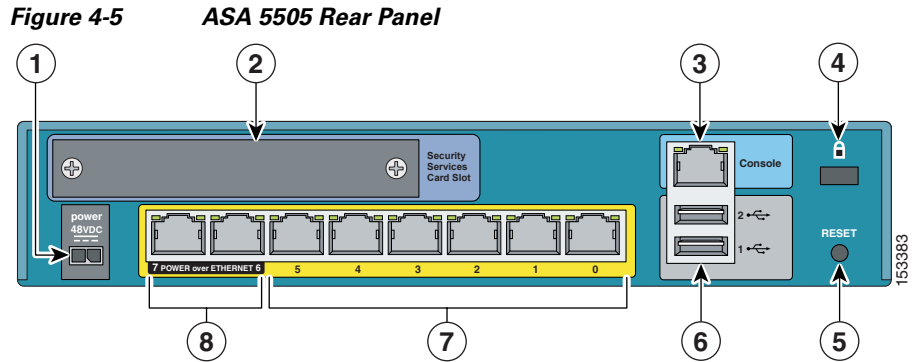
	Port or LED	Purpose
1	Power connector	Attaching the power cord.
2	Security service card slot	Reserved for future use.
3	Serial console port	Managing the device using the CLI (command-line interface).
4	Lock device	Reserved for future use.
5	RESET button	Reserved for future use.

6	2 USB ports v2.0 ports	Reserved for future use.
7	Ethernet switch ports 0–7	Layer 2 switch ports that provide flexible VLAN configuration.
		Note Ethernet switch ports 6 and 7 also support PoE devices. If a PoE device is not attached, power is not supplied to the port and the device must be powered on its own.
8	PoE switch ports 6–7	Can be used for PoE devices, that is, devices that can be powered by the network interface, such as IP phones.
		These ports are the only ports that can be used for IP phones or other PoE devices. However, these ports are not restricted to that use. They can also be used as Ethernet switch ports, as are the ports numbered 0 through 5. If a PoE device is not attached, power is not supplied to the port and the device must be powered on its own.

What to Do Next

Continue with Chapter 5, "Configuring the Adaptive Security Appliance."