Installing and Connecting the ASA 5500-X

This chapter describes how to rack-mount the ASA and connect the interface cables, and it includes the following sections:

- Rack Mounting the Chassis, page 3-1
- Connecting Cables, Turning on Power, and Verifying Connectivity, page 3-13

Rack Mounting the Chassis

- Rack Mounting Guidelines, page 3-1
- Rack Mounting the ASA 5512-X, 5515-X, and 5525-X With Brackets, page 3-2
- Rack Mounting the ASA 5500-X Chassis with Slide Rail Mounting System, page 3-4

Rack Mounting Guidelines

Warning **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. 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.** Statement 1006

The following information can help plan equipment rack installation:

- Allow clearance around the rack for maintenance.
- If the rack contains stabilizing devices, install the stabilizers prior to mounting or servicing the unit in the rack.
- When mounting a device in an enclosed rack, ensure adequate ventilation. Do not overcrowd an enclosed rack. Make sure that the rack is not congested, because each unit generates heat.
- When mounting a device in an open rack, make sure that the rack frame does not block the intake or exhaust ports.
- If the rack contains only one unit, mount the unit at the bottom of the rack.
- If the rack is partially filled, load the rack from the bottom to the top, with the heaviest component at the bottom of the rack.

Rack Mounting the ASA 5512-X, 5515-X, and 5525-X With Brackets

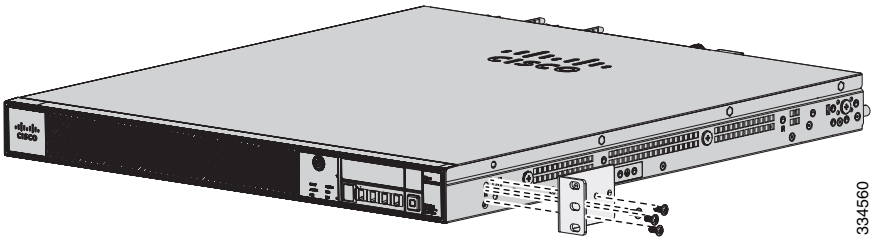
The ASA 5512-X, 5515-X, and 5525-X appliances ship with rack mount brackets installed on the front of the chassis. If you want to mount the chassis to the back of the rack, you can move the brackets from the front to the back of the chassis.

Detailed Steps

Step 1 (Optional) Move the brackets to the back of the chassis to install it in the back of the rack.

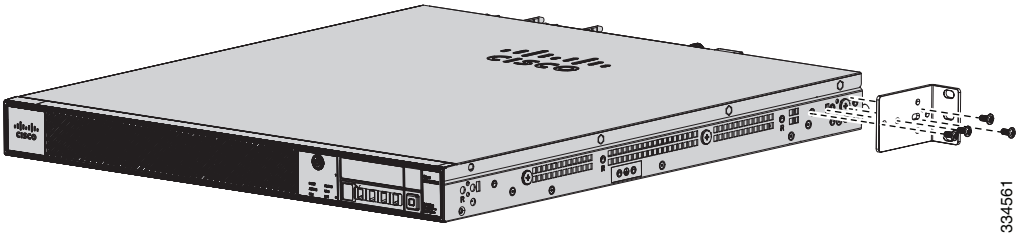
a. Remove the rack-mount brackets from the chassis as shown in Figure 3-1.

Figure 3-1 Removing the Brackets from the Front of the Chassis



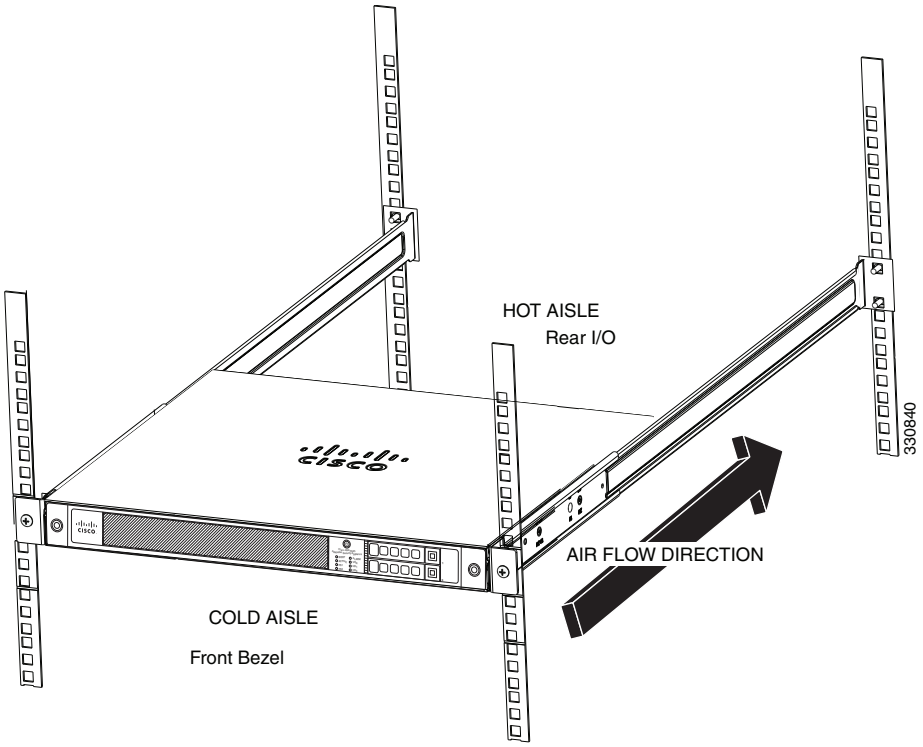
b. Install the brackets on the back of the chassis by attaching the brackets to the holes in the chassis as shown in Figure 3-2. After the brackets are secured to the chassis, you can rack-mount it.

Figure 3-2 Installing the Brackets on the Back of the Chassis



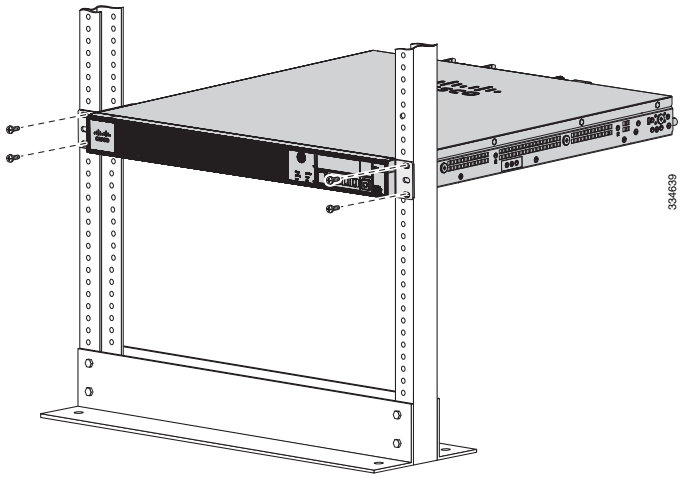
Step 2 We recommend that you install the chassis with the front bezel facing the cold aisle. (See Figure 3-3 for an example of air flow from front to back.)

Figure 3-3 Airflow Direction



Step 3 Attach the chassis to the rack using the supplied screws appropriate for your rack (Figure 3-4).

Figure 3-4 Rack-Mounting the Chassis



Rack Mounting the ASA 5500-X Chassis with Slide Rail Mounting System

The slide rail mounting system provides a quick, convenient, and secure method for rack mounting the chassis. While the 5545-X and 5555-X chassis ship with the slide rail mounting system and can be mounted using this system only, you can use the slide rail mounting system for any of the other ASA 5500-X series chassis, as well.

- Preparing the ASA 5512-X, ASA 5515-X, or ASA 5525-X to Use an Optional Slide Rail Rack Mount System, page 3-4
- Rack Mounting the Chassis with the Slide Rail Mounting System, page 3-5

Preparing the ASA 5512-X, ASA 5515-X, or ASA 5525-X to Use an Optional Slide Rail Rack Mount System

These instructions show how to prepare an ASA 5512-X, ASA 5515-X, or ASA 5525-X chassis for mounting with the slide rail rack mount system. These chassis models ship with preinstalled fixed rack-mount brackets, which must be replaced with the die-cast brackets that ship in the slide rail rack mount kit.

Detailed Steps

Step 1 From the slide rail rack mount kit, locate the two die-cast brackets, the six screws, and the four shoulder screws that you need to prepare your chassis for installation in the side rail rack.

Step 2 Remove the preinstalled fixed rack-mount bracket on either side of the chassis by removing the three bracket screws that hold each bracket in place. (See Figure 3-5.)

Figure 3-5 Remove Preinstalled Screws and Brackets on Either Side of Chassis

Step 3 Install a die-cast bracket to either side of the chassis by aligning and inserting the tab at the end of the bracket into the hole on the chassis and then hinging it into position so that the bracket is flush with the front face plate (bezel) of the chassis. Secure each bracket to the chassis with three screws. (See Figure 3-6.)

Figure 3-6 Install Die-Cast Brackets with Three Screws

Step 4 Install two shoulder screws into the threaded hole locations on either side of the chassis (see Figure 3-7 for one side), and ensure that they are tight.

Figure 3-7 Install Two Shoulder Screws on Either Side of the Chassis

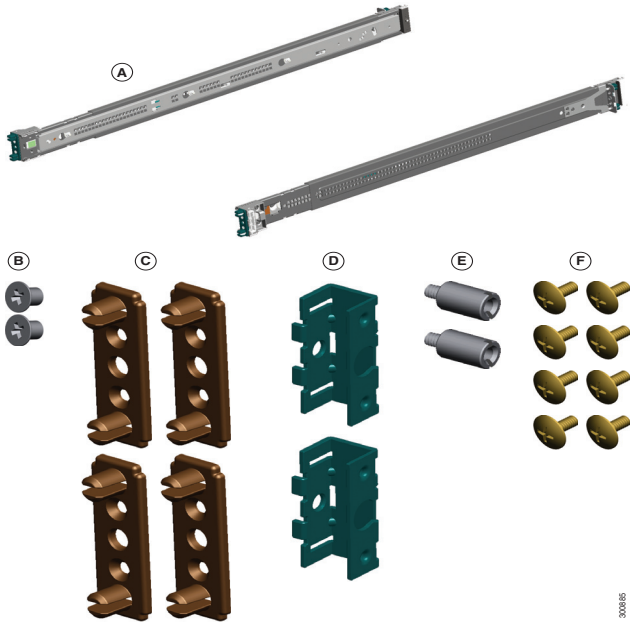
Rack Mounting the Chassis with the Slide Rail Mounting System

This section describes how to rack mount the chassis using the slide rail mounting system.

Although slide rail mounting is preferred, in the case of two-rail racks where the slide rails will not fit, you can use the rack mounting brackets. You must order them separately (ASA-BRACKETS=). Note that there will be a slight bend in the brackets when you attach them. For the procedure for attaching the brackets to the front or back of the chassis, see the "Rack Mounting the ASA 5512-X, 5515-X, and 5525-X With Brackets" section on page 3-2.

Prerequisites

Verify the Box Contents



A	Slide Rails (x2) (preconfigured for square hole racks)	**B**	Phillips flat-head screws for Inner Slide (x2)
C	Round Hole Inserts for round hole racks (x4)	**D**	Threaded Hole Brackets for threaded hole racks (x2)
E	Threaded Hole Standoffs for threaded hole racks (x2)	**F**	Phillips pan-head screws for threaded hole racks (x8)

Verify the Rack Type

The slide rails are pre-assembled for square hole racks. Additional steps are required for round hole racks and threaded hole racks. The following figure shows the slide rail with square hole rack inserts.

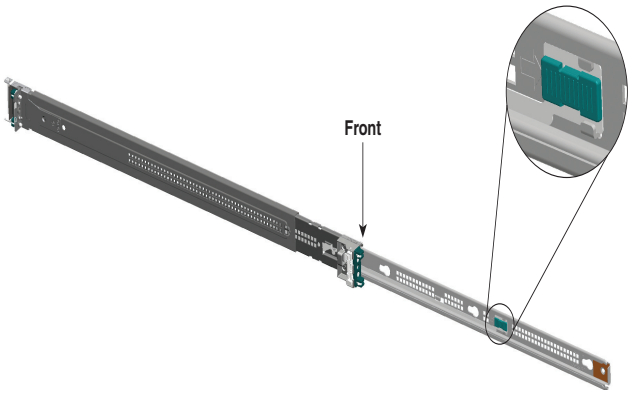
Tools Required

- Phillips screwdriver
- Flat-head screwdriver (for threaded hole racks)

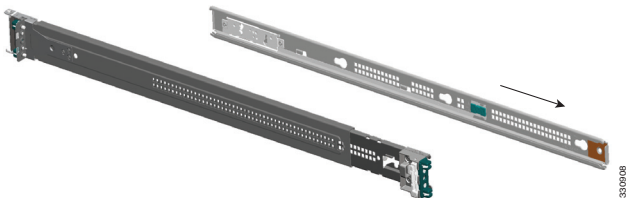
Detailed Steps

Step 1 Disassemble the slide rail.

a. Pull the inner slide rail from the outer slide rail.



b. Slide the plastic tab forward, and pull the inner slide rail to disconnect it from the outer slide rail.



c. Repeat these steps for the other slide rail.

Step 2 Attach the inner rails to the chassis.

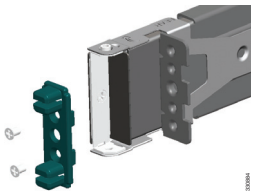
a. Align one of the inner slide rail key holes over the chassis shoulder screw on one side. Slide the inner slide rail forward so that the shoulder screw is securely in place.

b. Use a Phillips screwdriver to secure the inner slide rail with one Phillips flat-head screw (B).

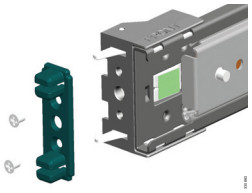
c. Secure the other inner slide rail to the chassis by repeating the previous steps on this page.

Step 3 (Round and Threaded Hole Racks Only) Customize the slide rails for round hole racks or threaded hole racks.

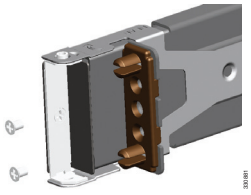
a. Using a Phillips head screwdriver, remove the square insert from the rear of the rail. Keep the two Phillips head screws.



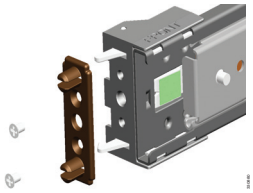
b. Remove the square insert from the front of the rail. Keep the two Phillips head screws.



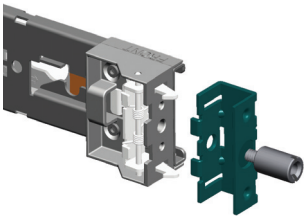
c. (Round hole racks only) Align the round hole (C) insert to the rear of the rail, and secure it with two of the saved screws.



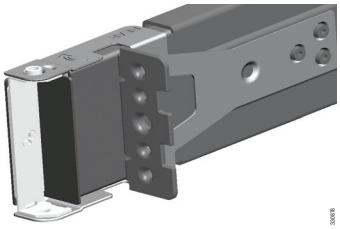
d. Align the round hole insert (C) or threaded hole bracket (D) to the front of the rail over the hooks.
   - **Round hole insert**—Secure it with two of the saved screws.



– **Threaded hole insert**—Secure it with the threaded hole standoff (E) using a flat-head screwdriver.



No additional hardware is necessary for the rear adapter.

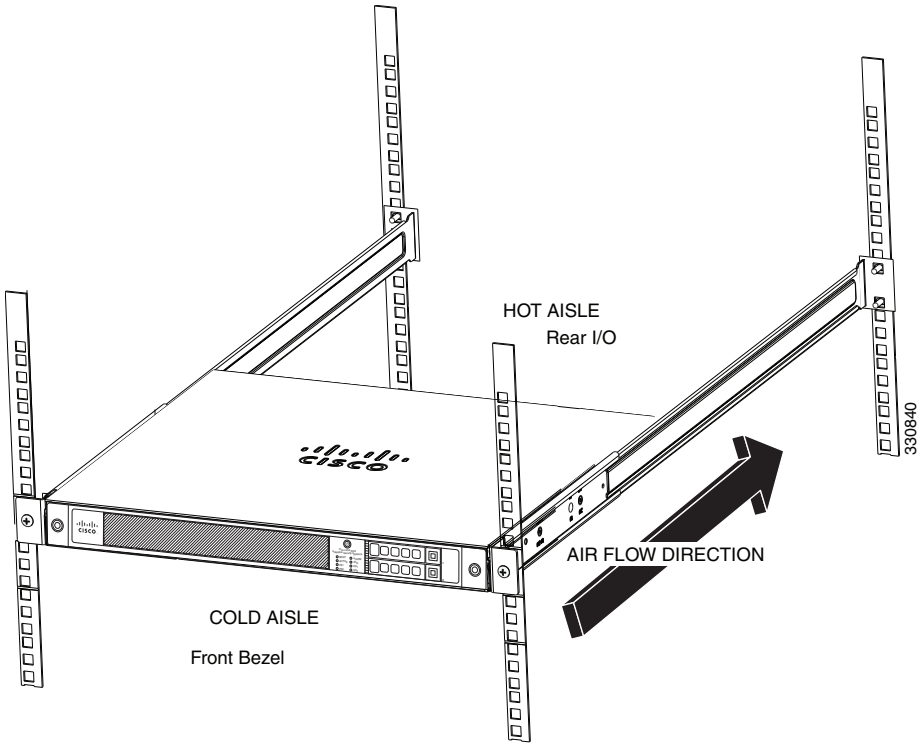


e. Repeat these steps for the other slide rail.

Step 4 Attach the outer slide rail to the rack.

Note We recommend that you install the chassis with the front bezel facing the cold aisle. (See Figure 3-3 for an example of air flow from front to back.)

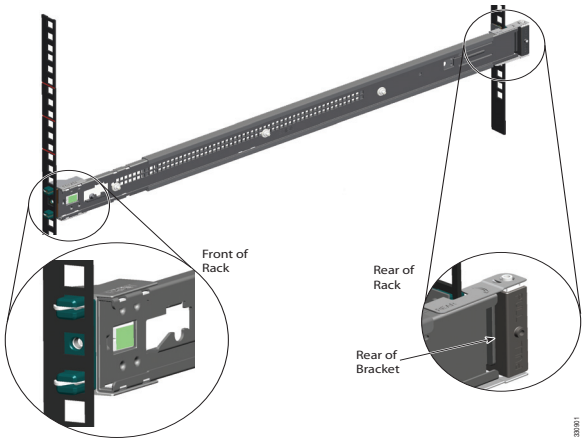
Figure 3-8 Airflow Direction



Round and Square Hole Racks

a. Align the front of one of the outer slide rails with the rack upright, push it forward, and click it into place. Align the rear of the outer slide rail with the rack upright, pull the release tab, push the slide rail toward the rack, release the tab, and click it into place.

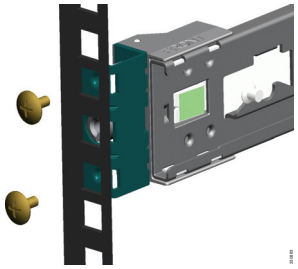
Note For racks shorter than 24 inches in depth, remove the rear bracket with a Phillips head screwdriver, pull the release tab, and adjust the slide rail to the appropriate length for the rack.



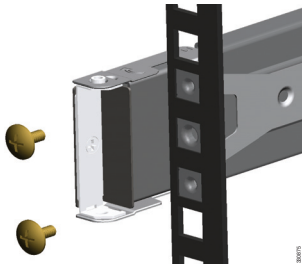
b. Secure the other outer slide rail to the rack.

Threaded Hole Racks

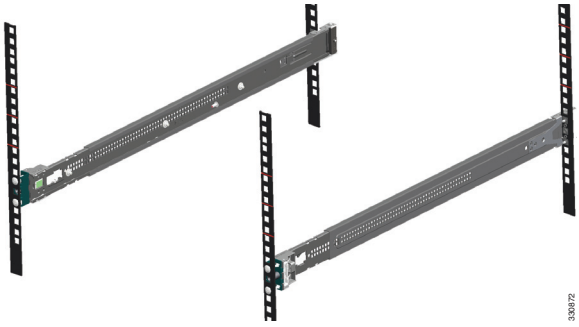
a. Align the slide rail to the front rack post. Secure it with two of the included Phillips pan-head screws (F).



b. Align the slide rail to the rear rack post. Secure it with two of the included Phillips pan-head screws (F).

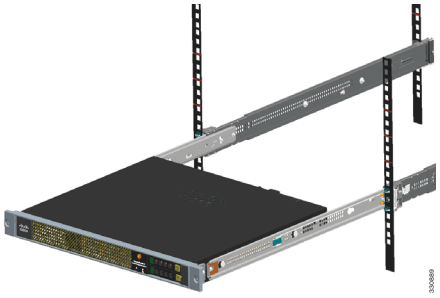


c. Align the other slide rail to the rack.

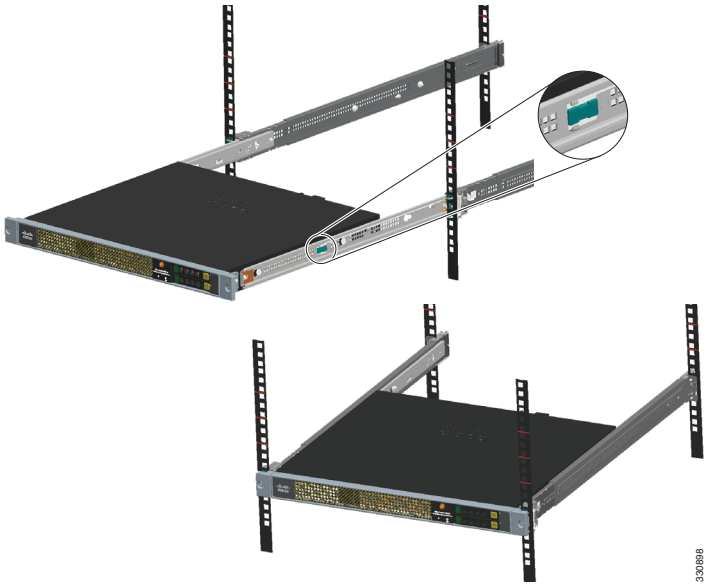


Step 5 Install the chassis.

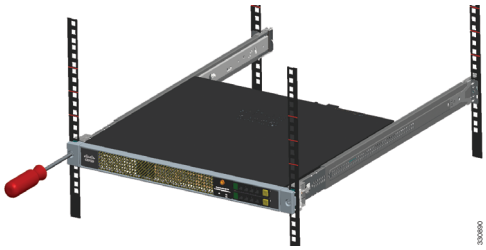
a. Align the inner slide rails to the outer slide rails. Install the inner slide rails into the outer slide rails until they lock into place.



b. Pull the side release tabs to unlock the inner slide rail, and push the chassis assembly into the rack.



Step 6 Secure the chassis to the rack with the front captive screws.



Connecting Cables, Turning on Power, and Verifying Connectivity

This section describes how to connect the cables to the chassis and how to turn on the power.

Guidelines

Warning **Only trained and qualified personnel should install, replace, or service this equipment.** Statement 49

Caution Be sure to read the safety warnings in the Regulatory Compliance and Safety information document for the ASA 5500-X and follow proper safety procedures when performing all tasks in this guide. See the RCSI at http://www.cisco.com/en/US/docs/security/asa/hw/regulatory/compliance/asa5500x_rcsi.html.

The Cisco ASA 5500-X series hardware operates on AC power and supports the ability to restore the previous power state of the system in the event that AC power is lost.

Earlier ASAs (V01) require you to turn on the power with the power switch. Newer ASAs (V02) automatically turn on when you plug in the power cable. To determine your version, do one of the following:

- At the CLI, enter the **show inventory** command and look for V01 or V02 in the output.
- On the back of the chassis, look at the VID PID label for V01 or V02.

For the V01 chassis, see the following limitations:

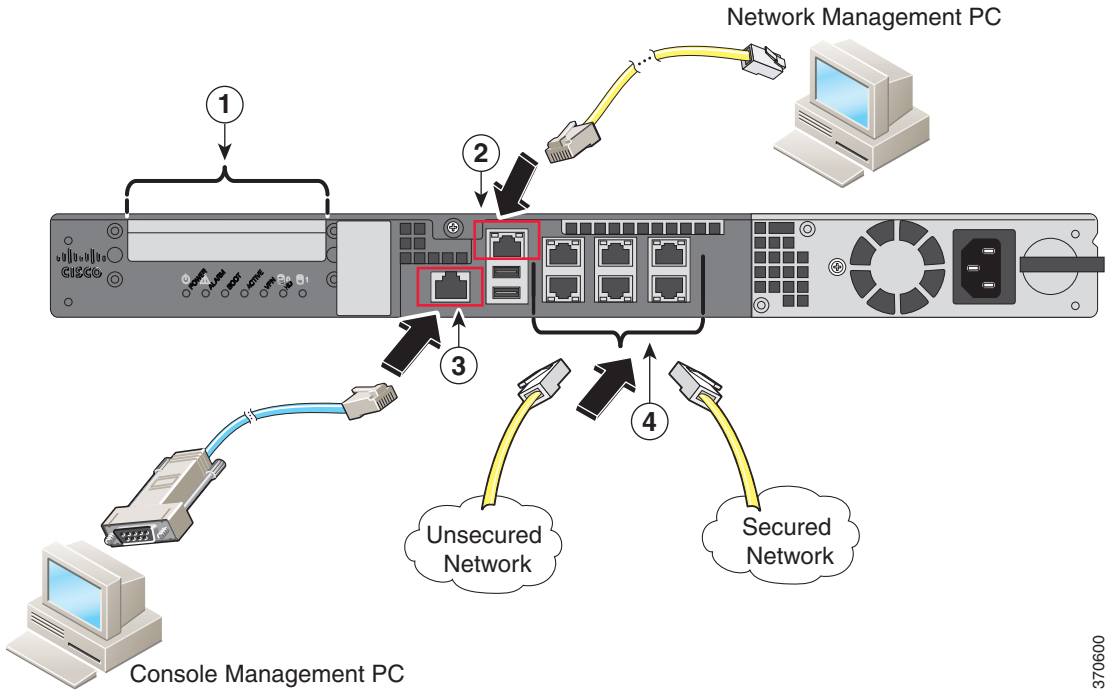
- The ASA requires 50 seconds from the time that AC power is applied before the power state can be updated and stored. This means that any changes to the power state within the first 50 seconds of applying AC power will not be observed if AC power is removed within that time.
- The ASA requires 10 seconds from the time it is placed into standby mode before the power state can be updated and stored. This means any changes to the power state within the first 10 seconds of entering standby mode (including the standby mode itself) will not be observed if AC power is removed within that time.

For the V02 chassis, the above limitations to not apply.

Detailed Steps

Step 1 Place the chassis on a flat, stable surface, or in a rack (if you are rack-mounting it.)

Step 2 Connect the interface cables.



1	(Optional) I/O Card. If you have a fiber I/O card, you need to use SFP modules (not included).	**2**	Management 0/0 interface (RJ-45)
3	Console port (RJ-45)	**4**	Gigabit Ethernet interfaces (RJ-45)

a. Management 0/0 interface—For use with ASDM or CLI. You can connect the management PC directly with an Ethernet cable, or connect the PC and the ASA to the same management network. Make sure the PC is configured to obtain an IP address using DHCP.

Note You can configure any interface to be a management-only interface using the **management-only** command. You cannot disable management-only mode on the management interface.

b. (Optional) Console port—For use with the CLI. Connect the management PC or terminal server using the included serial console cable. The console cable has a DB-9 connector on one end for the serial port on your computer, and the other end is an RJ-45 connector. If your PC does not have a serial port, you will need to obtain a DB-9-to-USB serial adapter.

c. Gigabit Ethernet interfaces—For data networks. For the pre-installed network interfaces, use a standard RJ-45 Ethernet cable. For the optional I/O card, use SFP modules. See the "Installing and Removing the SFP Modules" section on page 4-11.

Note You can use any unused Gigabit Ethernet interface on the ASA as the failover link. The failover link interface is not configured as a normal networking interface; it should only be used for the failover link. You can connect the failover link by using a dedicated switch with no hosts or routers on the link or by using an Ethernet cable to link the units directly.

Step 3 Connect the power cord to the ASA, and connect the other end to your power source.

Step 4 For newer ASAs, the power turns on automatically when you plug in the power cable; do not press the power button on the front panel.

For older ASAs, press the power button.

Step 5 Check the Power LED on the front of the ASA chassis. When it is solid green, the ASA is powered on.

Step 6 Check the Status LED on the front of the ASA chassis. When it is solid green, the ASA has passed power-on diagnostics.