



Lab 3.4.6a Configure the PIX Security Appliance using Setup Mode and ASDM Startup Wizard

Objective

In this lab exercise, the students will complete the following tasks:

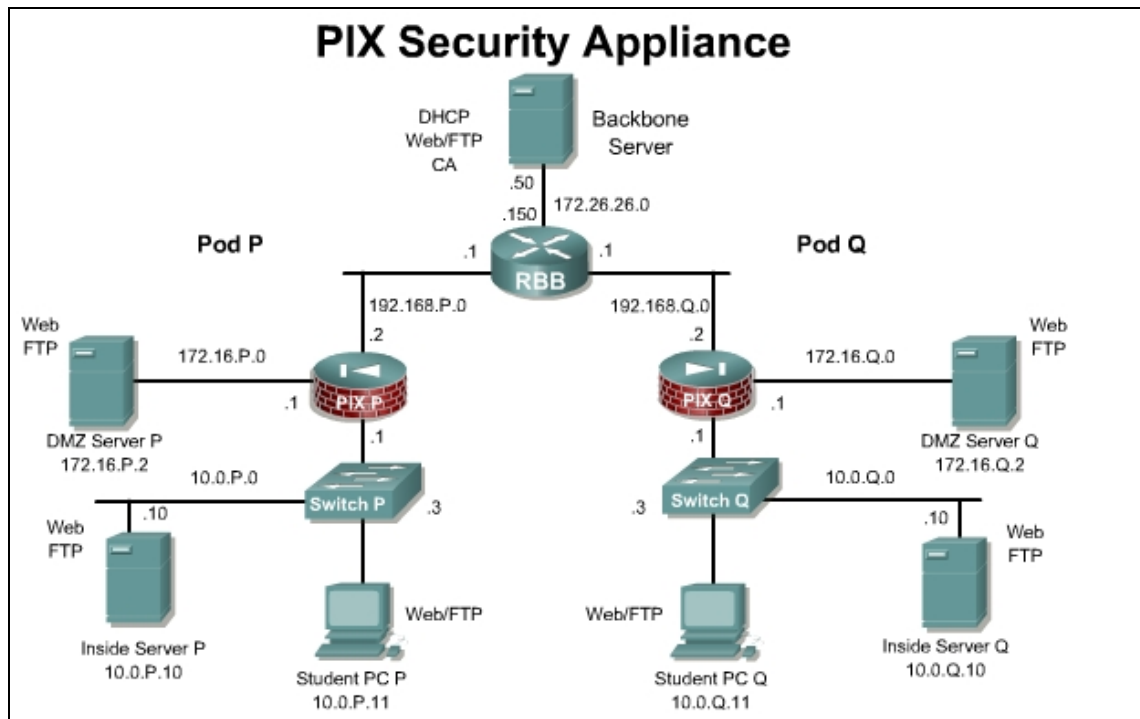
- Verify that the PIX Security Appliance and Student PC are properly cabled and installed
- Erase the current configuration.
- Configure basic settings using the Interactive Setup mode.
- Configure basic settings using the ASDM Startup Wizard.

Scenario

Company XYZ is increasing the security of their current internal network. Plans are also being made to install a publicly accessible web server. A new Cisco PIX Security Appliance has just arrived and has been installed, but requires configuration.

Topology

This figure illustrates the lab network environment:



Preparation

Begin with the standard lab topology. Access the PIX Security Appliance console port using the terminal emulator on the Student PC. If desired, save the PIX Security Appliance configuration to a text file for later analysis.

Review the PIX Security Appliance 515E Quick Start Guide. The Quick Start guide, which ships with the PIX, is also located at the following URL:

http://www.cisco.com/en/US/products/hw/vpndevc/ps2030/products_quick_start09186a00803e01f0.html

Tools and Resources

In order to complete the lab, the following is required:

- Standard PIX Security Appliance lab topology
- Console cable
- HyperTerminal

Additional Materials

Student can use the following link for more information on the objectives covered in this lab:

<http://www.cisco.com/go/pix>

Command List

In this lab exercise, the following commands will be used. Refer to this list if assistance or help is needed during the lab exercise.

| Command | Description |
|--|--|
| enable | Enter into privileged mode |
| copy tftp[:[<i>//location</i>] [<i>/tftp_pathname</i>]] flash[:<i>image</i> <i>asdm</i>]] | Change software images without requiring access to the TFTP monitor mode. |
| reload | Reload the PIX Security Appliance |
| setup | Enter into Interactive setup mode |
| show version | View the current PIX operating system and Adaptive Security Device Manager version |
| write erase | Erase the startup configuration. |

Step 1 Erase the Configuration

Complete the following steps to erase the current PIX Security Appliance configuration and access the PDM wizard:

- In the terminal window, erase the current PIX Security Appliance configuration. When prompted to confirm, press **Enter**.

```
PixP# write erase
```

```
Erase configuration in flash memory? [confirm] <Enter>
```

- b. Reload the PIX Security Appliance. When prompted to confirm, press **Enter**.

```
PixP# reload
```

```
Proceed with reload? [confirm] <Enter>
```

Step 2 Configure the PIX using Setup Mode

- a. When prompted to pre-configure the PIX Security Appliance through interactive prompts, press **Enter**.

- b. Accept the default Firewall mode, routed, by pressing **Enter**

```
Firewall Mode [Routed]: <Enter>
```

- c. Agree to use the current password by pressing **Enter**:

| | |
|-------------|--------------------------------|
| Note | The default password is blank. |
|-------------|--------------------------------|

```
Enable password [<use current password>]: <Enter>
```

- d. Allow password recovery by pressing **Enter**.

```
Allow password recovery [yes]? <Enter>
```

- e. Accept the default year by pressing **Enter**:

```
Clock (UTC):
```

```
Year [2005]: <Enter>
```

- f. Accept the default month by pressing **Enter**:

```
Month [May]: <Enter>
```

- g. Accept the default day by pressing **Enter**:

```
Day [12]: <Enter>
```

- h. Accept the default time stored in the host computer by pressing **Enter**:

```
Time [11:21:25]: <Enter>
```

- i. Enter the inside interface IP address of the PIX Security Appliance:

```
Inside IP address: 10.0.P.1
```

(where P = pod number)

- j. Enter the network mask that applies to inside IP address:

```
Inside network mask: 255.255.255.0
```

- k. Enter the hostname:

```
Host name: PixP
```

(where P = pod number)

- l. Enter the DNS domain name of the network on which the PIX Security Appliance runs:

```
Domain name: cisco.com
```

- m. Enter the IP address of the host running ASDM:

```
IP address of host running Device Manager: 10.0.P.11
```

(where P = pod number)

- n. Enter **y** at the prompt to use the configuration and write it to the Flash memory of the PIX Security Appliance.

Step 3 Verify PIX Version 7.0(1) and PDM 5.0(0) images

Complete the following steps to install the correct image versions:

- a. Enter into enable mode. Press **Enter** when prompted for a password.

```
PixP> en
```

- b. Verify the correct OS image version is running.

```
PixP# show version
```

```
Cisco PIX Security Appliance Software Version 7.0(1)
```

```
Device Manager Version 5.0(0)67
```

- c. If the correct OS image version and ASDM version are running, proceed to Step 4.
- d. If needed, load the PIX operating system file into the PIX Security Appliance:

```
PixP# copy tftp://10.0.P.11/ pix701.bin flash
```

| | |
|-------------|---|
| Note | The instructor will provide the correct location of the binary image file |
|-------------|---|

- e. Reload the PIX.
- f. Configure the PIX using the interactive setup mode as detailed in Step 2.
- g. If needed, load the ASDM files into the PIX Security Appliance:

```
PixP# copy tftp://10.0.P.11/asdm-501.bin flash:asdm
```

(where P = pod number)

| | |
|-------------|--|
| Note | The instructor will provide the correct location of the binary ASDM file |
|-------------|--|

Step 4 Configure the Student PC and Access PDM

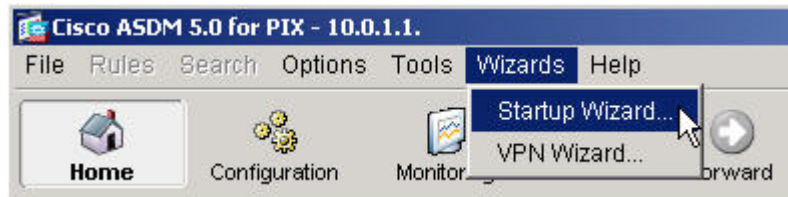
- a. On the Student PC, open the network control panel.
- b. Configure the Student PC address as 10.0.P.11 /24 with a Gateway address of 10.0.P.1.
(where P = pod number)
- c. Access the ASDM console by completing the following sub-steps:
- d. On the Student PC, open a web browser. In the browser, enter **https://10.0.P.1**.
- e. In the Security Alert window, click **Yes**.
- f. When prompted for a username and password, leave the text fields blank and click the **OK** button.
- g. The initial Cisco ASDM 5.0 window opens. Click **Run ASDM as a Java Applet**.
- h. In the Warning – Security window, click **Yes**.

| | |
|-------------|--|
| Note | Multiple security alert windows may appear when launching ASDM. If a security alert window appears, review the message contained in the window, and click Yes to continue |
|-------------|--|

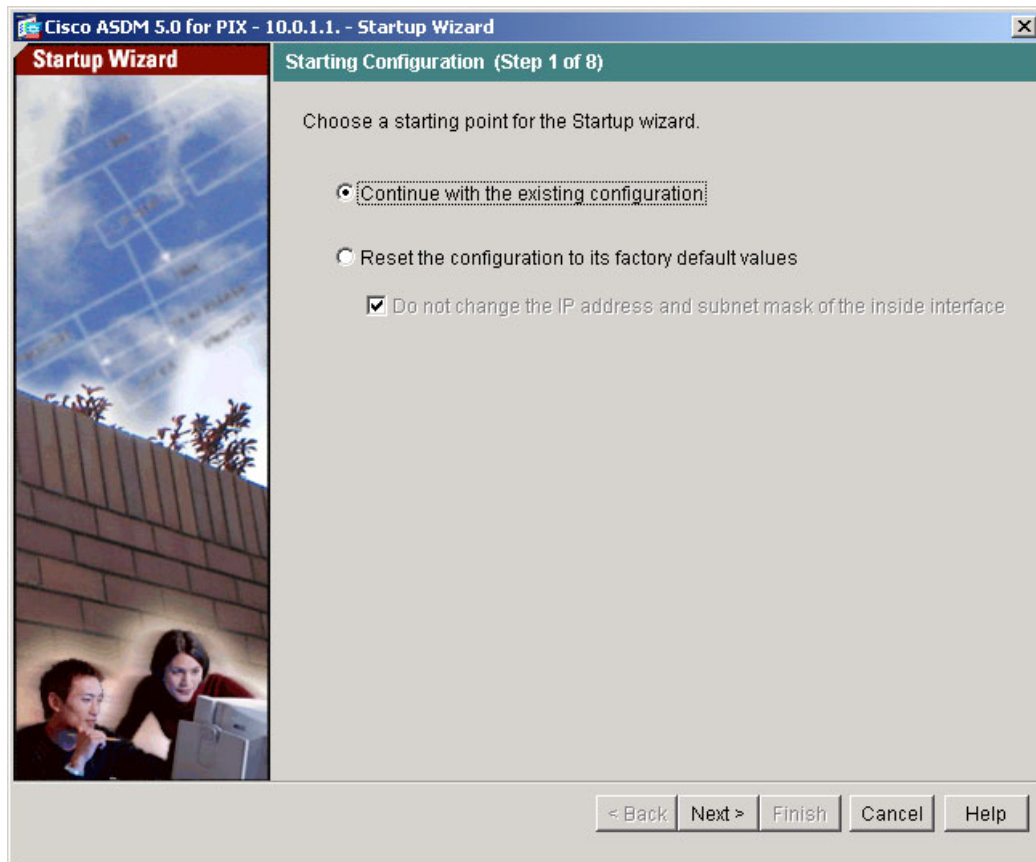
- i. When prompted for the username and password, do not enter a username or password. Click **OK** to launch ASDM.

Step 5 Configure the PIX using the Startup Wizard

- a. Open the Startup Wizard by navigating to **Wizards>Startup Wizard**. Click on Startup Wizard.



- b. The Startup Wizard window appears. Make sure that **Continue with the Current Configuration** is selected and click the **Next** button to continue.



- c. In the **Basic Configuration** window, use the PIX hostname, **PixP** along with the Domain Name of **cisco.com**.

The screenshot shows the 'Basic Configuration (Step 2 of 8)' window in the Cisco ASDM 5.0 for PIX. The window has a title bar that reads 'Cisco ASDM 5.0 for PIX - 10.0.1.1 - Startup Wizard'. On the left side, there is a vertical panel with the text 'Startup Wizard' and a background image of a network diagram and two people working on a computer. The main area of the window contains the following text: 'Enter the host name and the domain name of the PIX. If your Internet Service Provider (ISP) requires that your host uses DHCP, you may need to use the device name supplied by the ISP as the host name of the PIX.' Below this text are two input fields: 'PIX Host Name:' with the value 'Pix1' and 'Domain Name:' with the value 'cisco.com'. Further down, there is a section titled 'Privileged Mode (Enable) Password' which contains the text: 'The privileged mode (enable) password is required to administer the PIX using ASDM or the Command Line Interface (CLI)'. Below this text is a checkbox labeled 'Change privileged mode (enable) password' which is currently unchecked. Underneath the checkbox are three input fields: 'Old Password:', 'New Password:', and 'Confirm New Password:'. At the bottom right of the window, there are five buttons: '< Back', 'Next >', 'Finish', 'Cancel', and 'Help'.

- d. Click the **Next** button.

- e. In the **Outside Interface Configuration** window, set an IP address of 192.168.P.2 / 24 with a default gateway of 192.168.P.1 on Ethernet 0. Name the interface **outside**.

Cisco ASDM 5.0 for PIX - 10.0.1.1 - Startup Wizard

Startup Wizard

Outside Interface Configuration (Step 3 of 8)

You will now decide how you want to configure your outside interface. You may want to check with your ISP to determine which option you should use.

Interface:

Interface Name:

IP Address

☐ Use DHCP

The PIX will obtain an IP address from a DHCP server. Please ensure that a DHCP server is configured on your corporate network or by your ISP.

☒ Use the following IP address

IP Address:

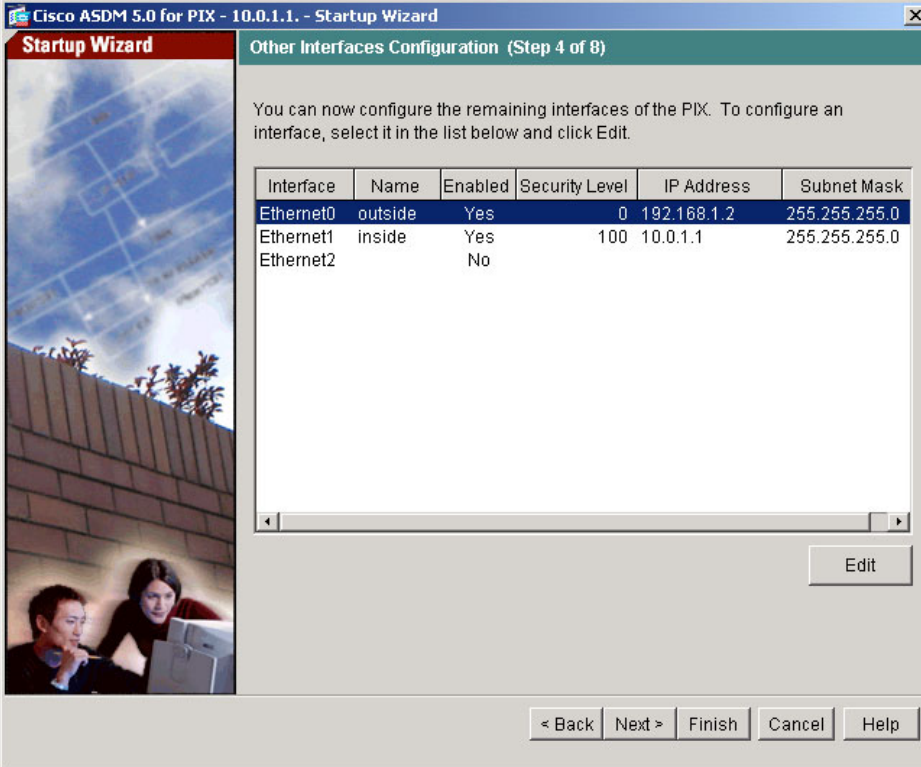
Subnet Mask:

Default Gateway:

< Back Next > Finish Cancel Help

- f. Click the **Next** button.

- g. In the **Other Interfaces Configuration** window, verify the configuration of the inside and outside interfaces. If the configuration is incorrect, click on the **Edit** button to modify. Click the **Next** button.

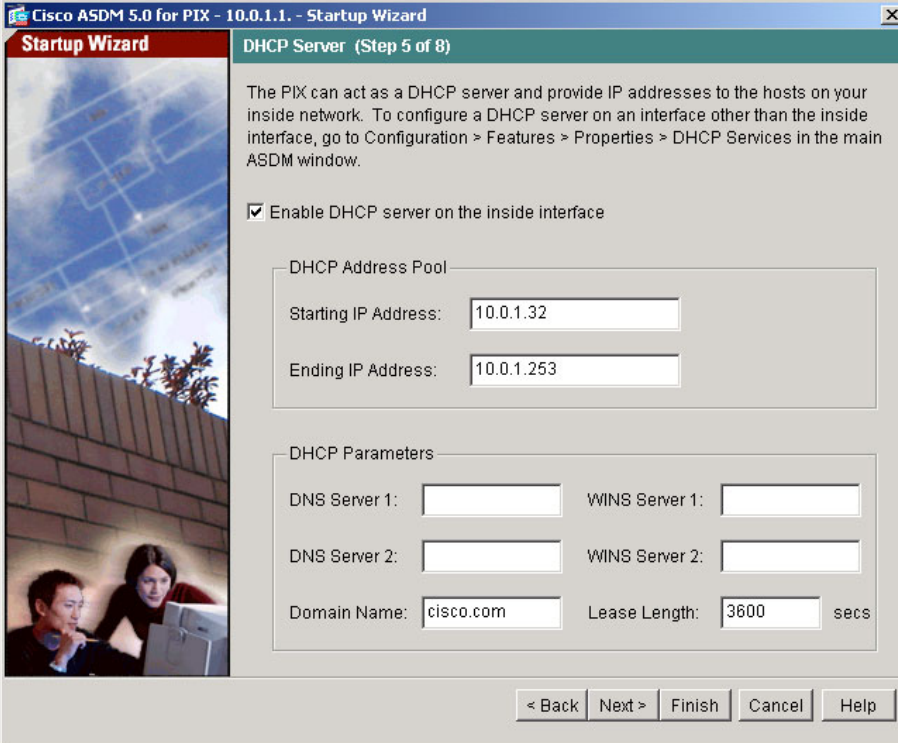


The screenshot shows the 'Other Interfaces Configuration' window in the Cisco ASDM 5.0 for PIX - 10.0.1.1 - Startup Wizard. The window title is 'Cisco ASDM 5.0 for PIX - 10.0.1.1 - Startup Wizard'. The left sidebar shows 'Startup Wizard' with a 'Next >' button. The main content area is titled 'Other Interfaces Configuration (Step 4 of 8)'. It contains a text box stating: 'You can now configure the remaining interfaces of the PIX. To configure an interface, select it in the list below and click Edit.' Below this is a table with the following data:

| Interface | Name | Enabled | Security Level | IP Address | Subnet Mask |
|-----------|---------|---------|----------------|-------------|---------------|
| Ethernet0 | outside | Yes | 0 | 192.168.1.2 | 255.255.255.0 |
| Ethernet1 | inside | Yes | 100 | 10.0.1.1 | 255.255.255.0 |
| Ethernet2 | | No | | | |

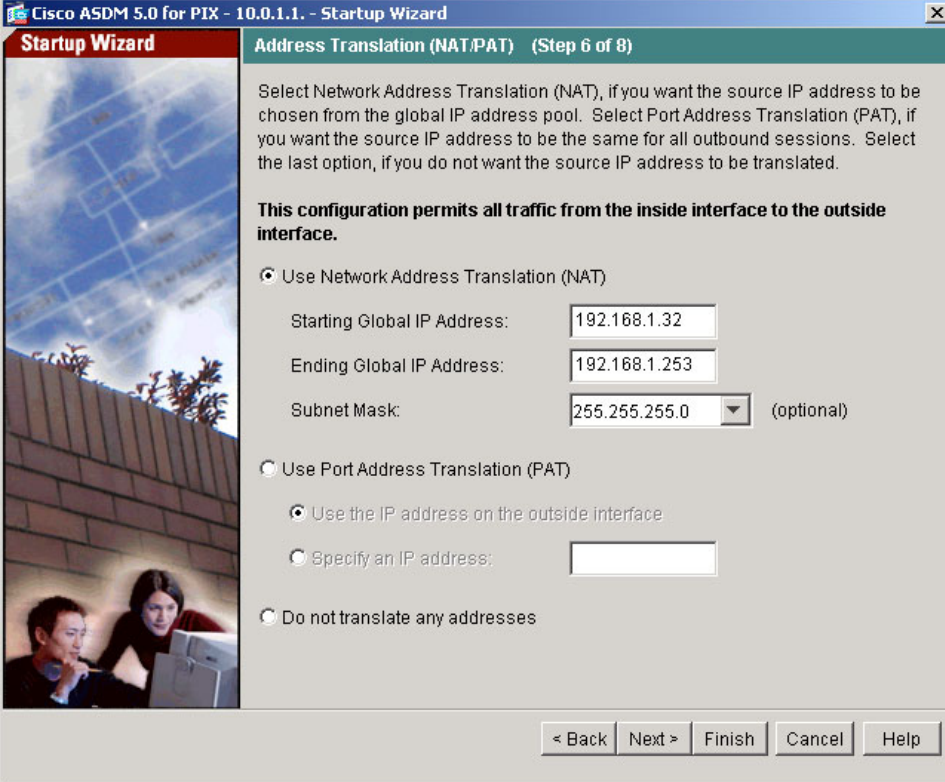
Below the table is an 'Edit' button. At the bottom of the window are navigation buttons: '< Back', 'Next >', 'Finish', 'Cancel', and 'Help'.

- h. In the **DHCP Server** window, enable DHCP server on the inside interface. Use an address pool of 10.0.P.32 to 10.0.P.253. Enter a Domain Name of cisco.com. Use the default lease length of 3600 seconds. Click the **Next** button



The screenshot shows the 'DHCP Server' window in the Cisco ASDM 5.0 for PIX - 10.0.1.1 - Startup Wizard. The window title is 'Cisco ASDM 5.0 for PIX - 10.0.1.1 - Startup Wizard'. The left sidebar shows 'Startup Wizard' with a 'Next >' button. The main content area is titled 'DHCP Server (Step 5 of 8)'. It contains a text box stating: 'The PIX can act as a DHCP server and provide IP addresses to the hosts on your inside network. To configure a DHCP server on an interface other than the inside interface, go to Configuration > Features > Properties > DHCP Services in the main ASDM window.' Below this is a checkbox labeled 'Enable DHCP server on the inside interface' which is checked. Below the checkbox is a section titled 'DHCP Address Pool' with two text boxes: 'Starting IP Address:' with the value '10.0.1.32' and 'Ending IP Address:' with the value '10.0.1.253'. Below this is a section titled 'DHCP Parameters' with four text boxes: 'DNS Server 1:', 'DNS Server 2:', 'WINS Server 1:', and 'WINS Server 2:'. Below these are two more text boxes: 'Domain Name:' with the value 'cisco.com' and 'Lease Length:' with the value '3600' and the unit 'secs'. At the bottom of the window are navigation buttons: '< Back', 'Next >', 'Finish', 'Cancel', and 'Help'.

- i. In the **Address Translation (NAT/PAT)** window, configure a NAT address pool of 192.168.P.32 through 192.168.P.253 with a subnet mask of 255.255.255.0. Click the **Next** button.



The screenshot shows the 'Address Translation (NAT/PAT)' window in the Cisco ASDM 5.0 for PIX - 10.0.1.1 - Startup Wizard. The window is titled 'Startup Wizard' and 'Address Translation (NAT/PAT) (Step 6 of 8)'. It contains instructions on selecting NAT or PAT. The 'Use Network Address Translation (NAT)' option is selected. The 'Starting Global IP Address' is 192.168.1.32, the 'Ending Global IP Address' is 192.168.1.253, and the 'Subnet Mask' is 255.255.255.0. The 'Use Port Address Translation (PAT)' option is not selected. The 'Do not translate any addresses' option is also not selected. The 'Next >' button is highlighted.

Select Network Address Translation (NAT), if you want the source IP address to be chosen from the global IP address pool. Select Port Address Translation (PAT), if you want the source IP address to be the same for all outbound sessions. Select the last option, if you do not want the source IP address to be translated.

This configuration permits all traffic from the inside interface to the outside interface.

☒ Use Network Address Translation (NAT)

Starting Global IP Address: 192.168.1.32

Ending Global IP Address: 192.168.1.253

Subnet Mask: 255.255.255.0 (optional)

☐ Use Port Address Translation (PAT)

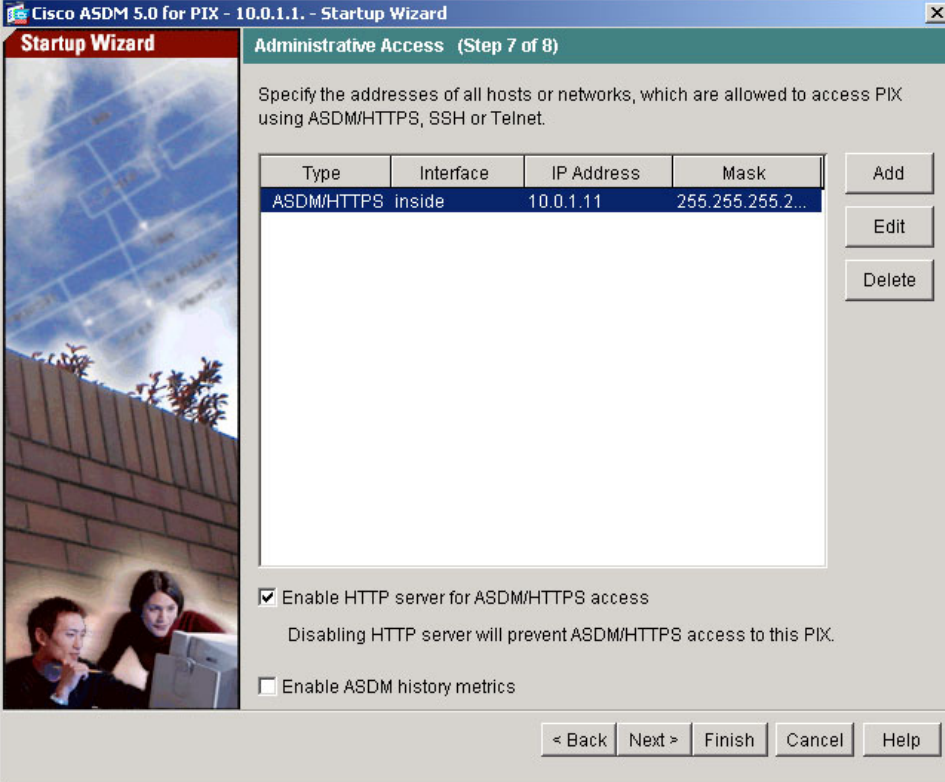
☒ Use the IP address on the outside interface

☐ Specify an IP address:

☐ Do not translate any addresses

< Back Next > Finish Cancel Help

- j. In the **Administrative Access** window, click the **Next** button.



The screenshot shows the 'Administrative Access' window in the Cisco ASDM 5.0 for PIX - 10.0.1.1 - Startup Wizard. The window is titled 'Startup Wizard' and 'Administrative Access (Step 7 of 8)'. It contains instructions on specifying addresses for access. A table lists the access configuration. The 'Add' button is highlighted.

Specify the addresses of all hosts or networks, which are allowed to access PIX using ASDM/HTTPS, SSH or Telnet.

| Type | Interface | IP Address | Mask |
|------------|-----------|------------|------------------|
| ASDM/HTTPS | inside | 10.0.1.11 | 255.255.255.2... |

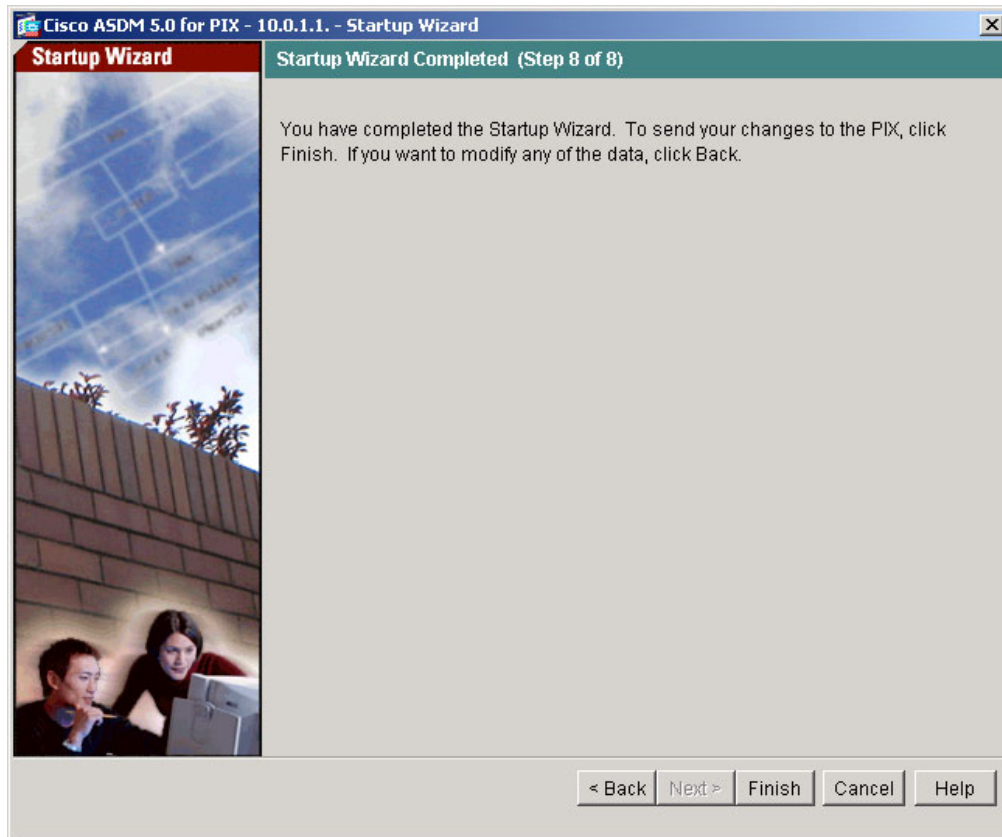
Enable HTTP server for ASDM/HTTPS access

Disabling HTTP server will prevent ASDM/HTTPS access to this PIX.

Enable ASDM history metrics

< Back Next > Finish Cancel Help

- k. Click **Finish** on the **Startup Wizard Completed** window.



- l. If the Preview CLI Commands window appears, click the **Send** button to continue.
- m. Click the **Refresh** button to bring the current PIX Security Appliance configuration into ASDM.

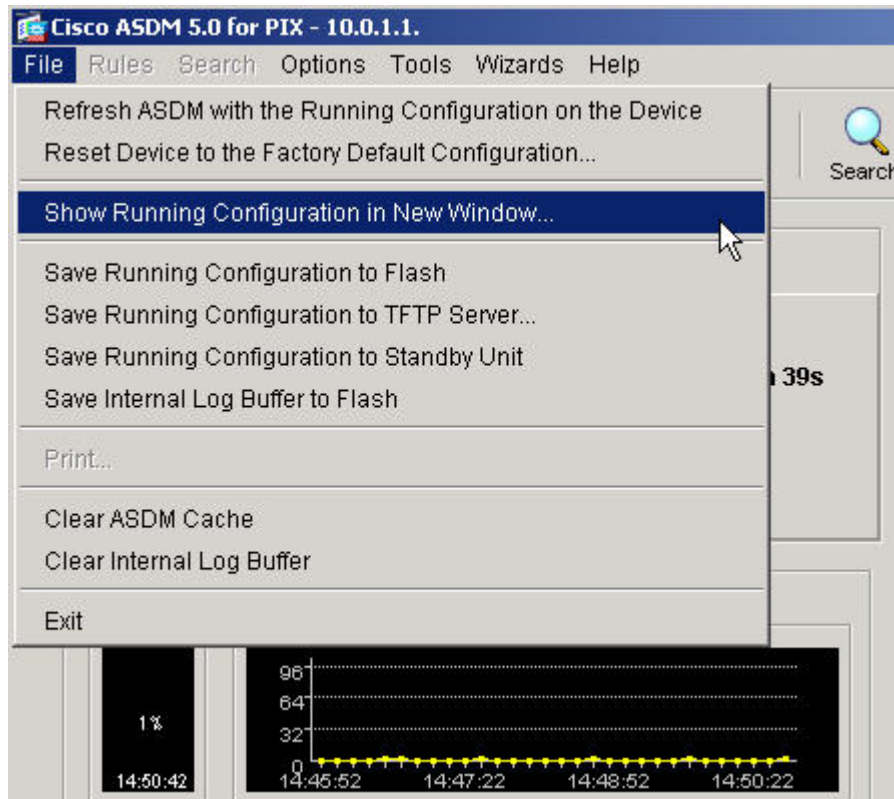


- n. Verify the status of the newly configured outside interface on the ASDM home page.

| Interface Status | | | | |
|------------------|-----------------|------|------|--------------|
| Interface | IP Address/Mask | Line | Link | Current Kbps |
| inside | 10.0.1.1/24 | ↑ up | ↑ up | 1 |
| outside | 192.168.1.2/24 | ↑ up | ↑ up | 0 |

Select an interface to view input and output Kbps

- o. Navigate to **File>Show Running Configuration in New Window**.



- p. Click the **Save** button to save the running configuration to Flash memory. Click the **Yes** button in the confirmation dialog box to continue.
- q. If the Preview CLI Commands window appears, click the **Send** button to continue.
- r. Exit PDM.