ASA 8.3 and Later: NTP with and without an IPsec Tunnel Configuration Example

Contents

Introduction

This document provides a sample configuration for synchronizing the Adaptive Security Appliance (ASA) clock with a network time server using Network Time Protocol (NTP). ASA1 communicates directly with the network time server. ASA2 passes NTP traffic through an IPsec tunnel to ASA1, which in turn forwards the packets to the network time server.

Refer to ASA/PIX: NTP with and without an IPsec Tunnel Configuration Example for an identical configuration on Cisco ASA with versions 8.2 and earlier.

Note: A router can also be used as an NTP server for synchronizing the ASA Security Appliance clock.

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

The information in this document is based on these software and hardware versions:

- Cisco ASA with version 8.3 and later
- Cisco Adaptive Security Device Manager (ASDM) version 6.x and later

Note: Refer to Allowing HTTPS Access for ASDM in order to allow the ASA to be configured by the ASDM.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

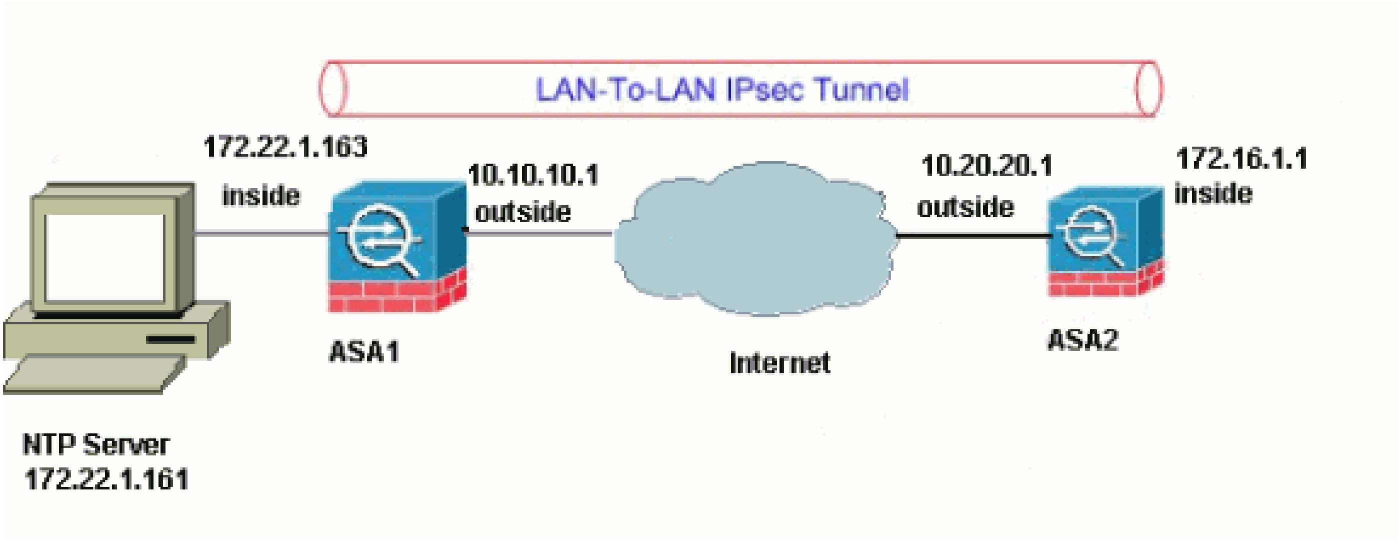
Conventions

Refer to the Cisco Technical Tips Conventions for more information on document conventions.

Configuration

Network Diagram

This document uses this network setup:



Note: The IP addressing schemes used in this configuration are not legally routable on the Internet. They are RFC 1918 addresses, which have been used in a lab environment.

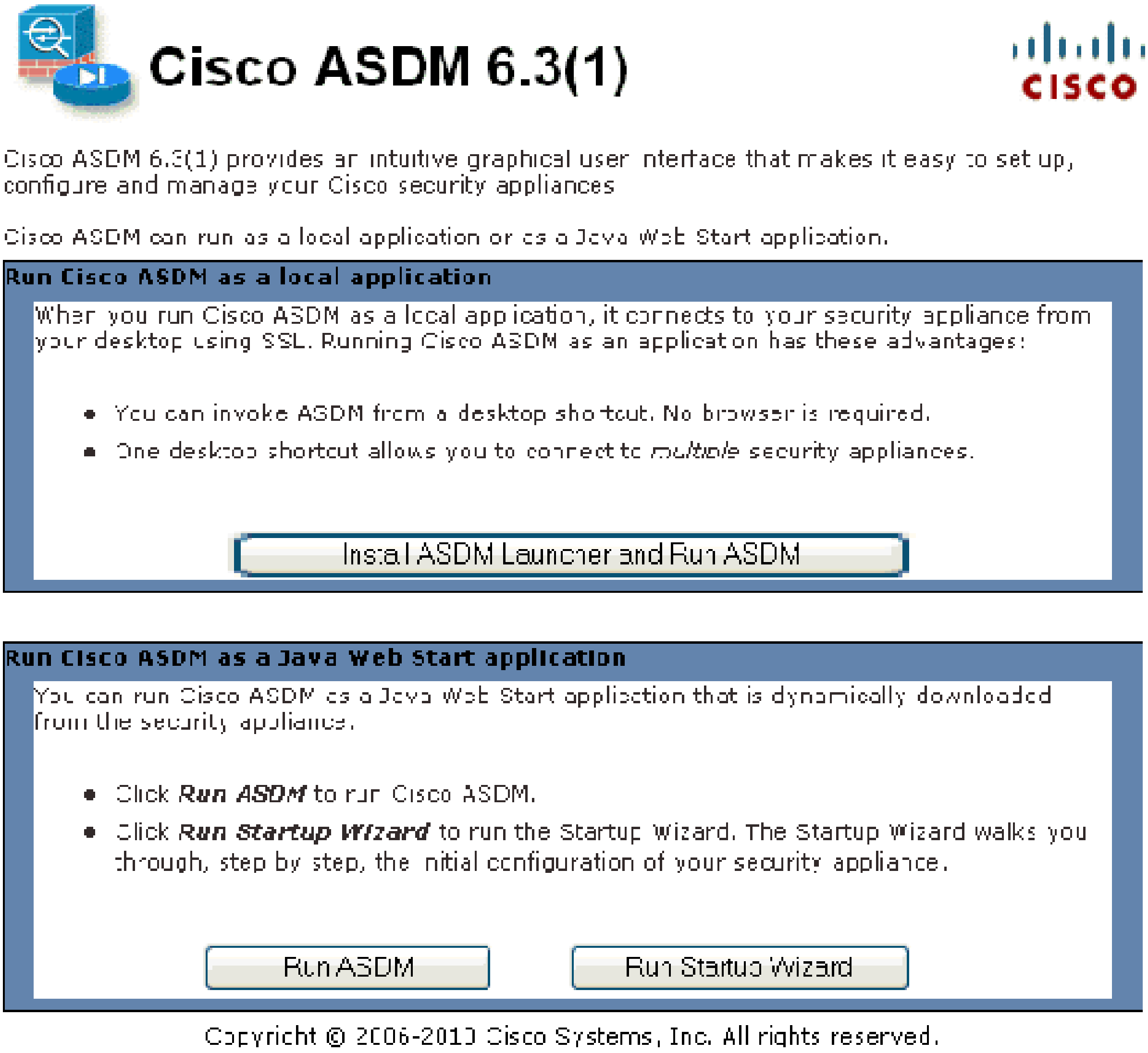
- VPN Tunnel ASDM Configuration
- NTP ASDM Configuration
- ASA1 CLI Configuration
- ASA2 CLI Configuration

VPN Tunnel ASDM Configuration

Complete these steps in order to create the VPN tunnel:

1. Open your browser and type **https://<Inside_IP_Address_of_ASA>** in order to access the ASDM on the ASA.Be sure to authorize any warnings your browser gives you related to SSL

certificate authenticity. The default username and password are both blank.The ASA presents this window in order to allow the download of the ASDM application.



Cisco ASDM 6.3(1)

Cisco ASDM 6.3(1) provides an intuitive graphical user interface that makes it easy to set up, configure and manage your Cisco security appliances

Cisco ASDM can run as a local application or as a Java Web Start application.

Run Cisco ASDM as a local application

When you run Cisco ASDM as a local application, it connects to your security appliance from your desktop using SSL. Running Cisco ASDM as an application has these advantages:

- You can invoke ASDM from a desktop shortcut. No browser is required.
- One desktop shortcut allows you to connect to *multiple* security appliances.

Run Cisco ASDM as a Java Web Start application

You can run Cisco ASDM as a Java Web Start application that is dynamically downloaded from the security appliance.

- Click ***Run ASDM*** to run Cisco ASDM.
- Click ***Run Startup Wizard*** to run the Startup Wizard. The Startup Wizard walks you through, step by step, the initial configuration of your security appliance.

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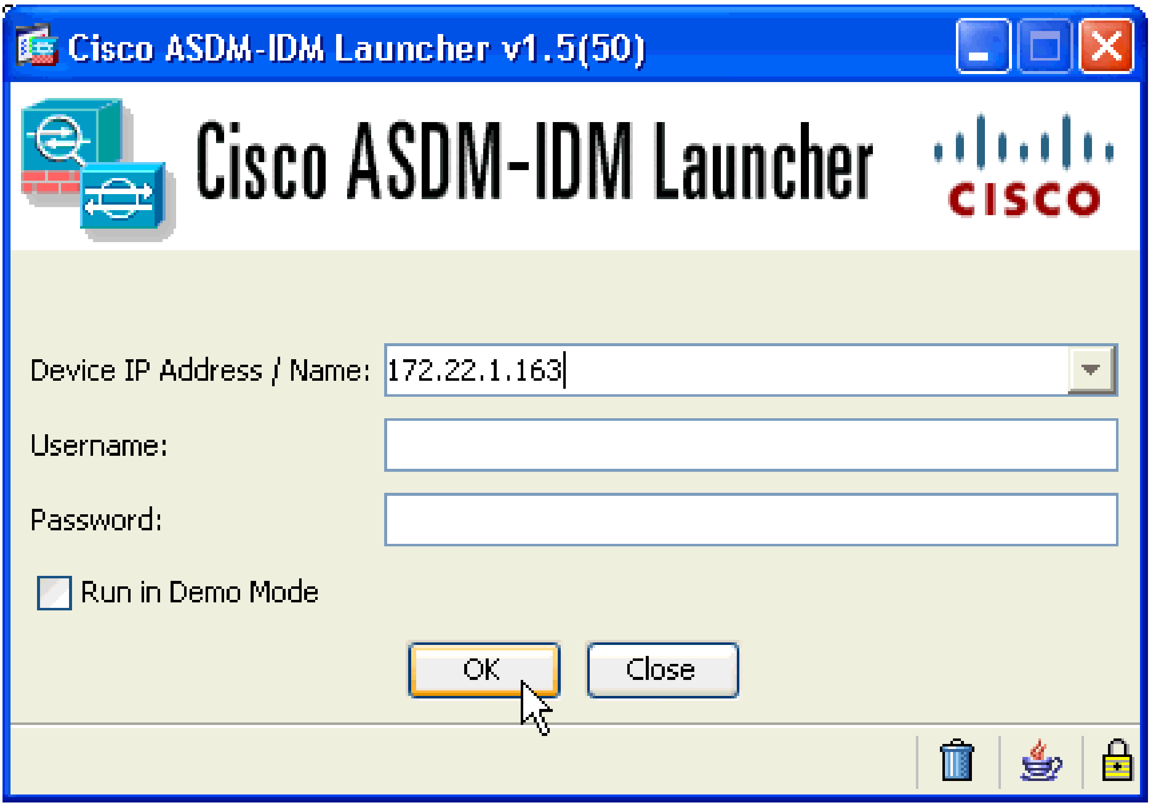
This example loads the application onto the local computer and does not run in a Java applet.

2. Click **Download ASDM Launcher and Start ASDM** in order to download the installer for the ASDM application.
3. Once the ASDM Launcher downloads, complete the steps directed by the prompts in order to install the software and run the Cisco ASDM Launcher.
4. Enter the IP address for the interface you configured with the **http -** command, and a username and password if you specified one.This example uses the default blank username and

password:



Cisco ASDM-IDM Launcher v1.5(50)

Cisco ASDM-IDM Launcher

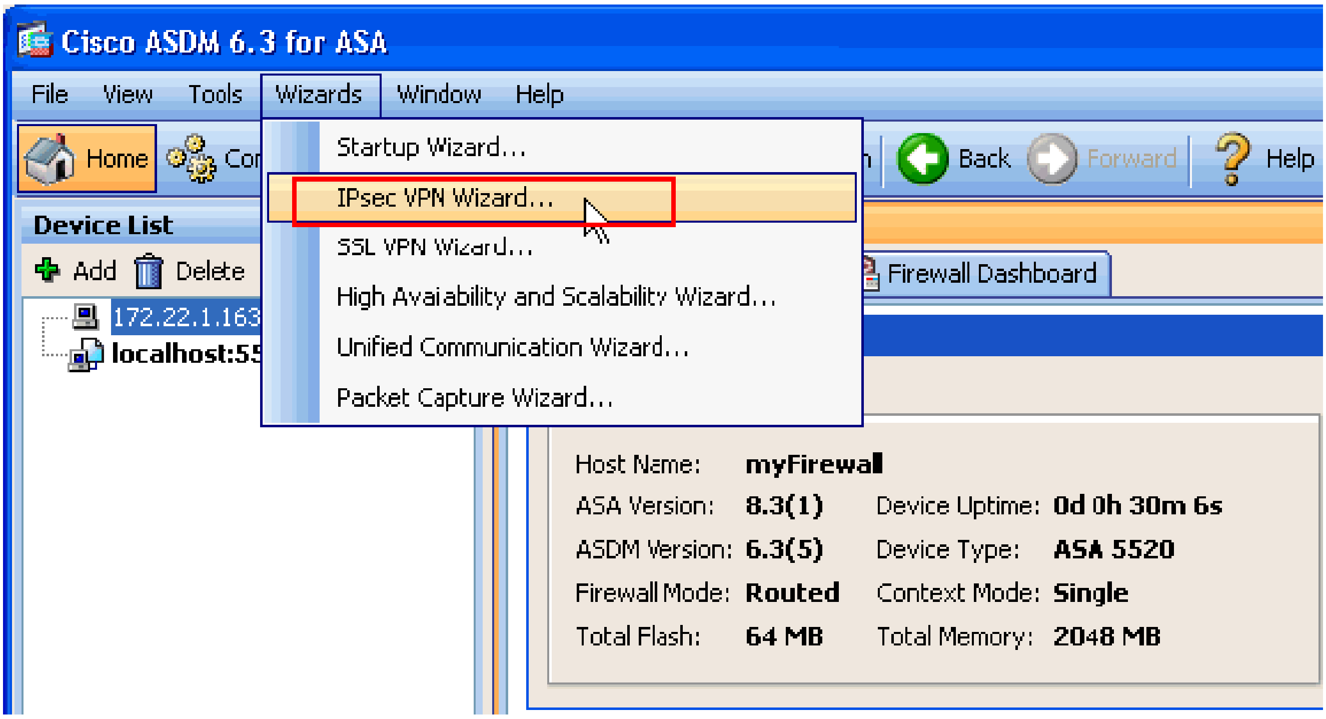
Device IP Address / Name: 172.22.1.163

Username:

Password:

□ Run in Demo Mode

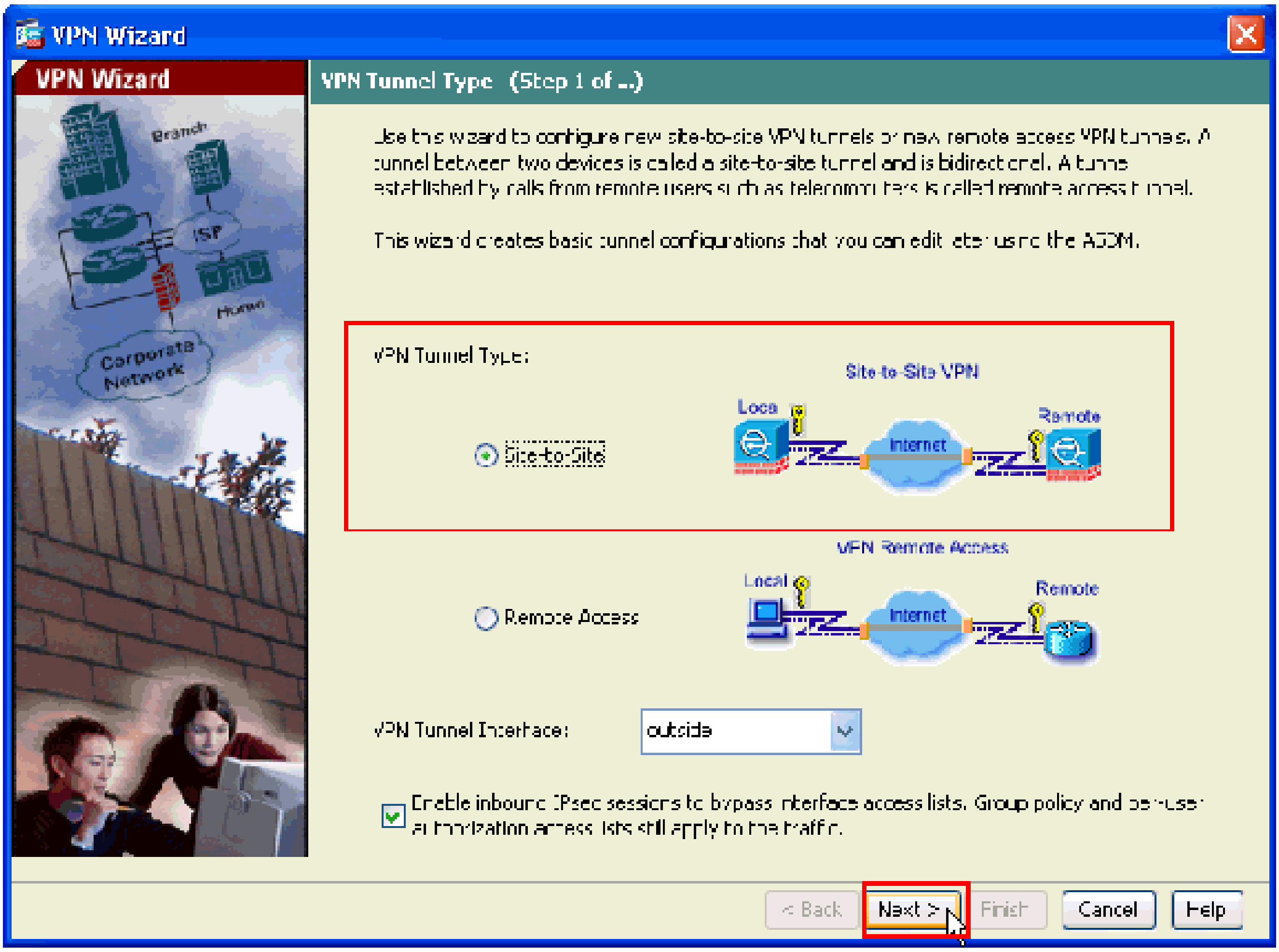
5. Run the VPN Wizard once the ASDM application connects to the ASA.



Cisco ASDM 6.3 for ASA

Host Name: myFirewall
ASA Version: 8.3(1)
Device Uptime: 0d 0h 30m 6s
ASDM Version: 6.3(5)
Device Type: ASA 5520
Firewall Mode: Routed
Context Mode: Single
Total Flash: 64 MB
Total Memory: 2048 MB

6. Choose **Site-to-Site** for the IPsec VPN Tunnel Type, and click **Next**.



VPN Tunnel Type (Step 1 of ...)

Use this wizard to configure new site-to-site VPN tunnels or new remote access VPN tunnels. A tunnel between two devices is called a site-to-site tunnel and is bidirectional. A tunnel established by calls from remote users such as telecommuters is called remote access tunnel.

This wizard creates basic tunnel configurations that you can edit later using the ASDM.

VPN Tunnel Type:

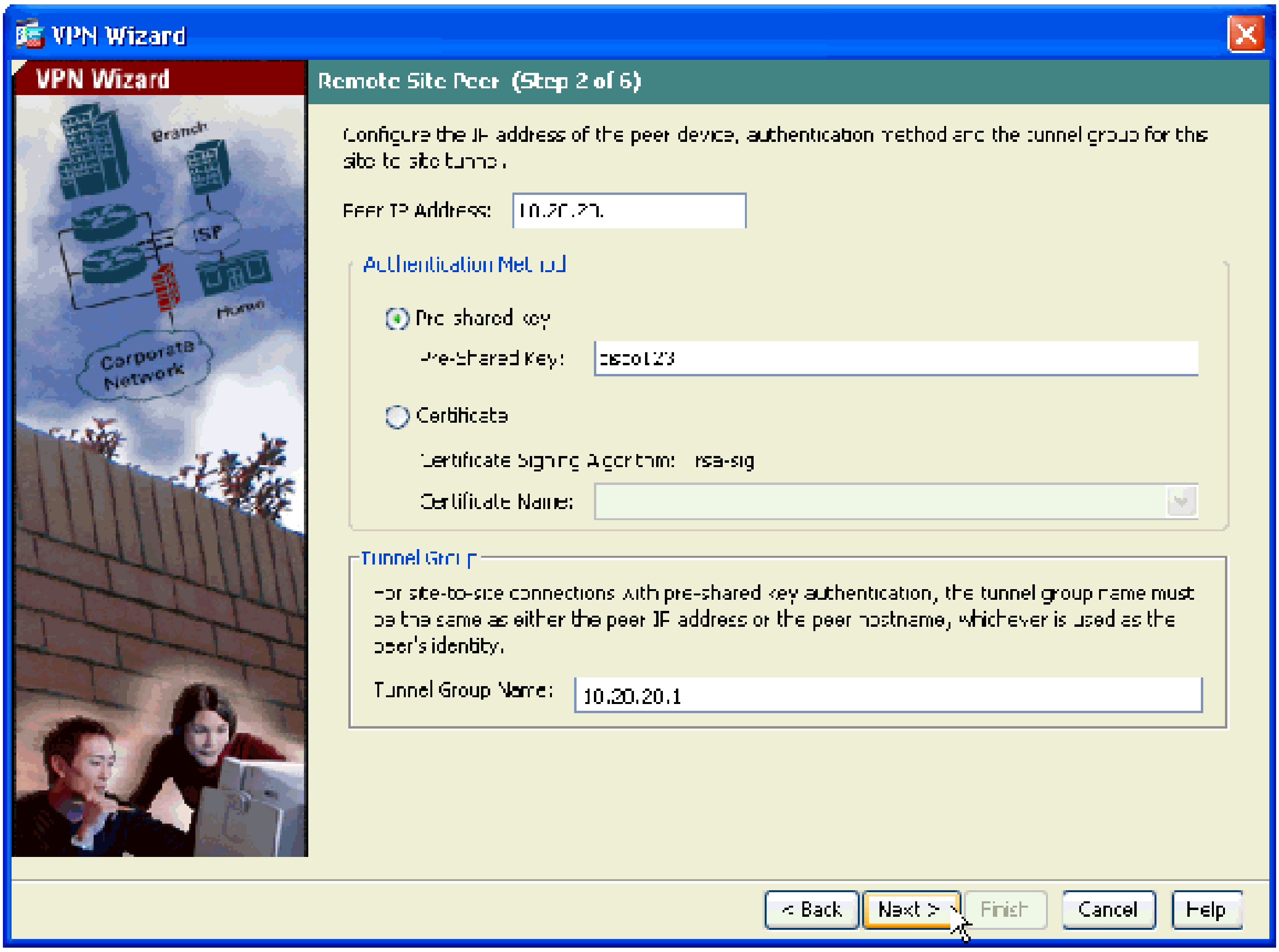
● Site-to-Site

○ Remote Access

VPN Tunnel Interface: outside

☑ Enable inbound IPsec sessions to bypass interface access lists. Group policy and per-user authorization access lists still apply to the traffic.

7. Specify the outside IP address of the remote peer. Enter the authentication information to use, which is the pre-shared key in this example:



Remote Site Peer (Step 2 of 6)

Configure the IP address of the peer device, authentication method and the tunnel group for this site to site tunnel.

Peer IP Address: 10.20.20.

Authentication Method

● Pre-shared key

Pre-Shared Key: cisco123

○ Certificate

Certificate Signing Algorithm: rsa-sig

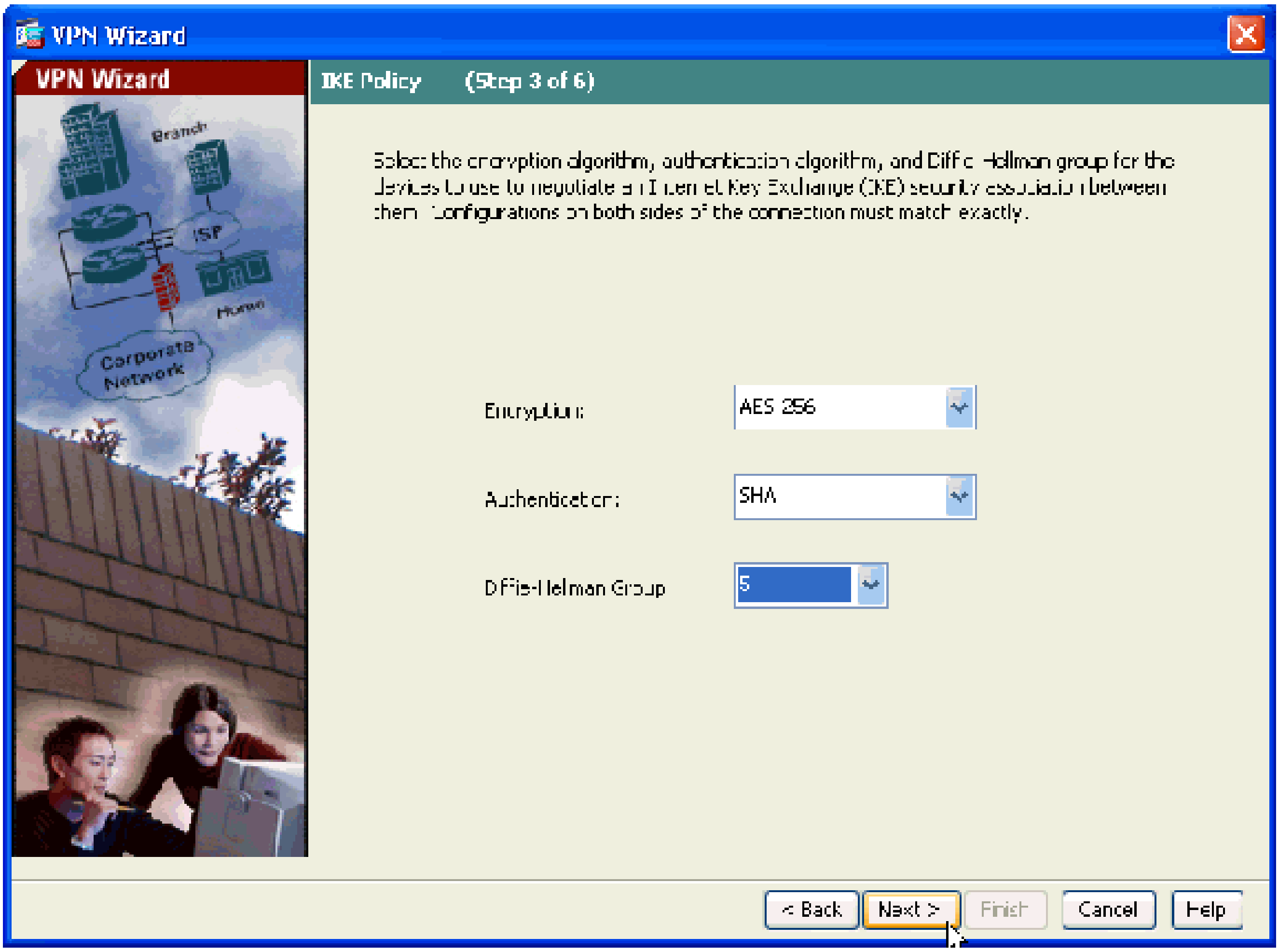
Certificate Name:

Tunnel Group

For site-to-site connections with pre-shared key authentication, the tunnel group name must be the same as either the peer IP address or the peer hostname, whichever is used as the peer's identity.

Tunnel Group Name: 10.20.20.1

8. Specify the attributes to use for IKE, also known as Phase 1. These attributes must be the same on both sides of the
tunnel.



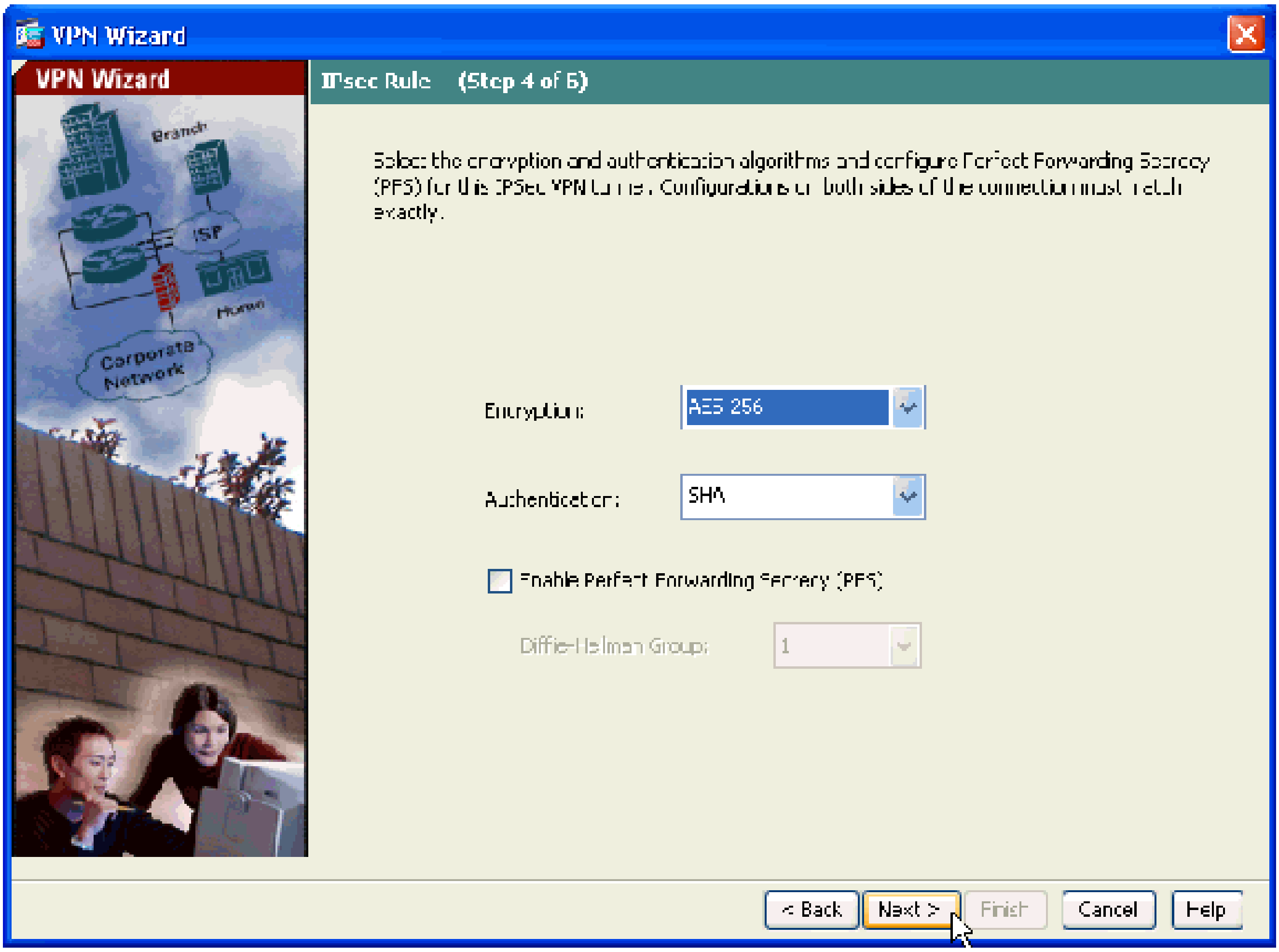
Select the encryption algorithm, authentication algorithm, and Diffie-Hellman group for the devices to use to negotiate an Internet Key Exchange (IKE) security association between them. Configurations on both sides of the connection must match exactly.

Encryption: AES 256

Authentication: SHA

Diffie-Hellman Group: 5

9. Specify the attributes to use for IPsec, also known as Phase 2. These attributes must match on both
   sides.



IPsec Rule (Step 4 of 6)

Select the encryption and authentication algorithms and configure Perfect Forwarding Secrecy (PFS) for this IPSec VPN tunnel. Configurations on both sides of the connection must match exactly.

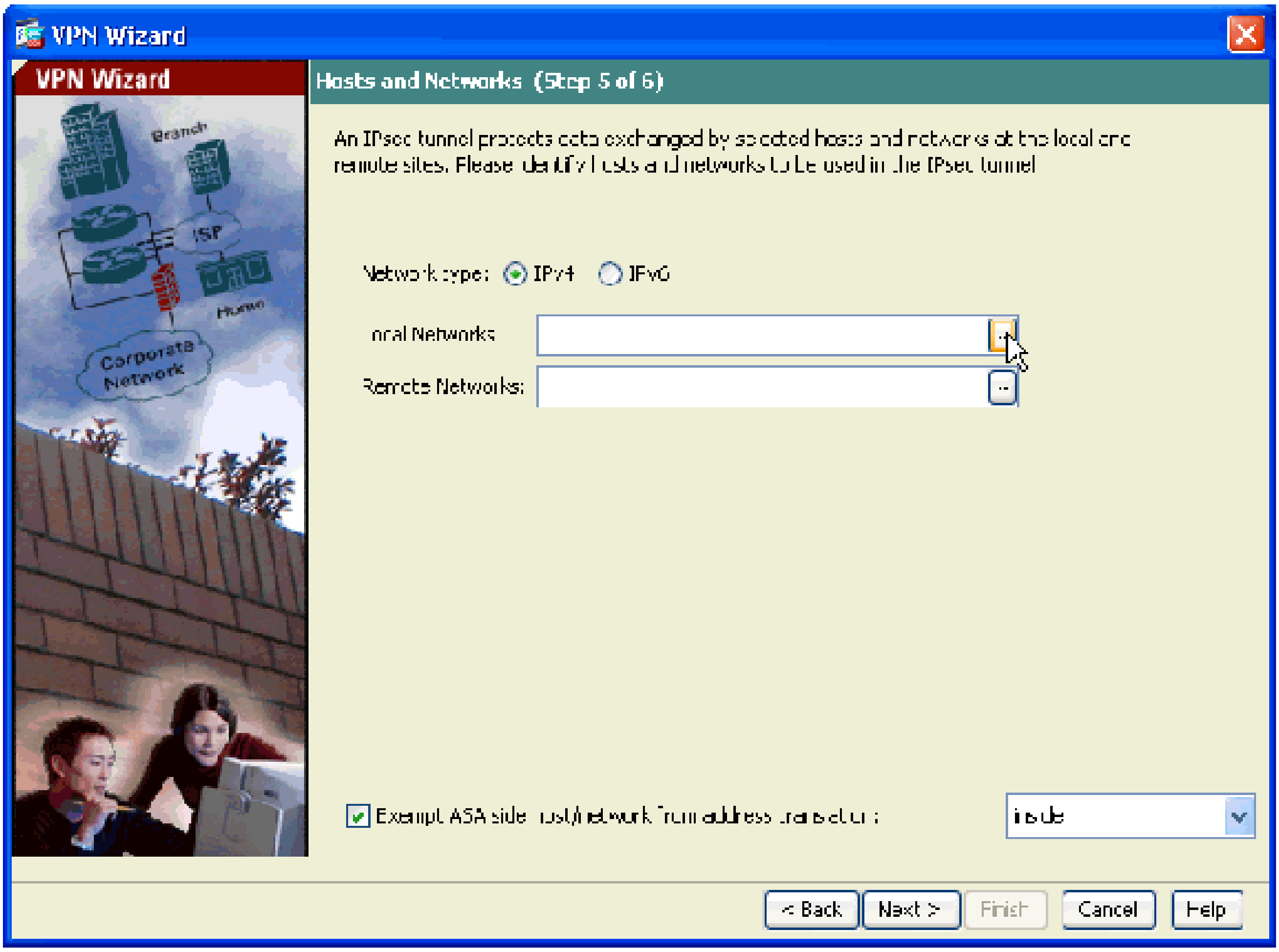
Encryption: AES 256

Authentication: SHA

□ Enable Perfect Forwarding Secrecy (PFS)

Diffie-Hellman Group: 1

10. Specify the hosts whose traffic should be allowed to pass through the VPN tunnel. In this step, you have to provide the Local Networks and Remote Networks for the VPN Tunnel. Click the button next to **Local Networks** (as shown here) in order to choose the local network address from the drop-down menu:



Hosts and Networks (Step 5 of 6)

An IPsec tunnel protects data exchanged by selected hosts and networks at the local and remote sites. Please identify hosts and networks to be used in the IPsec tunnel.

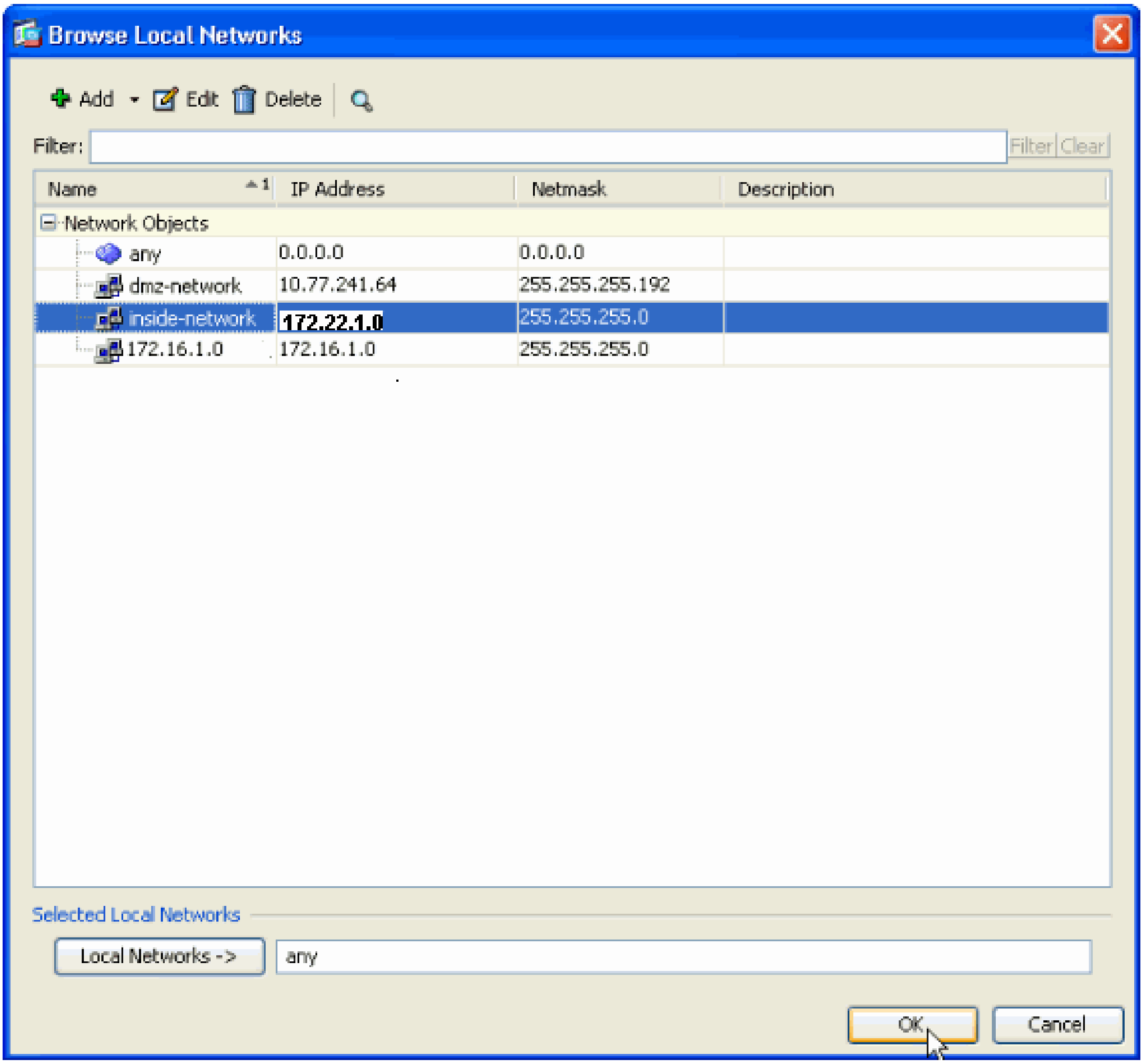
Network type: ● IPv4 ○ IPv6

Local Networks:

Remote Networks:

☑ Exempt ASA side host/network from address translation: inside

11. Choose the **Local Network** address, and click **OK**.



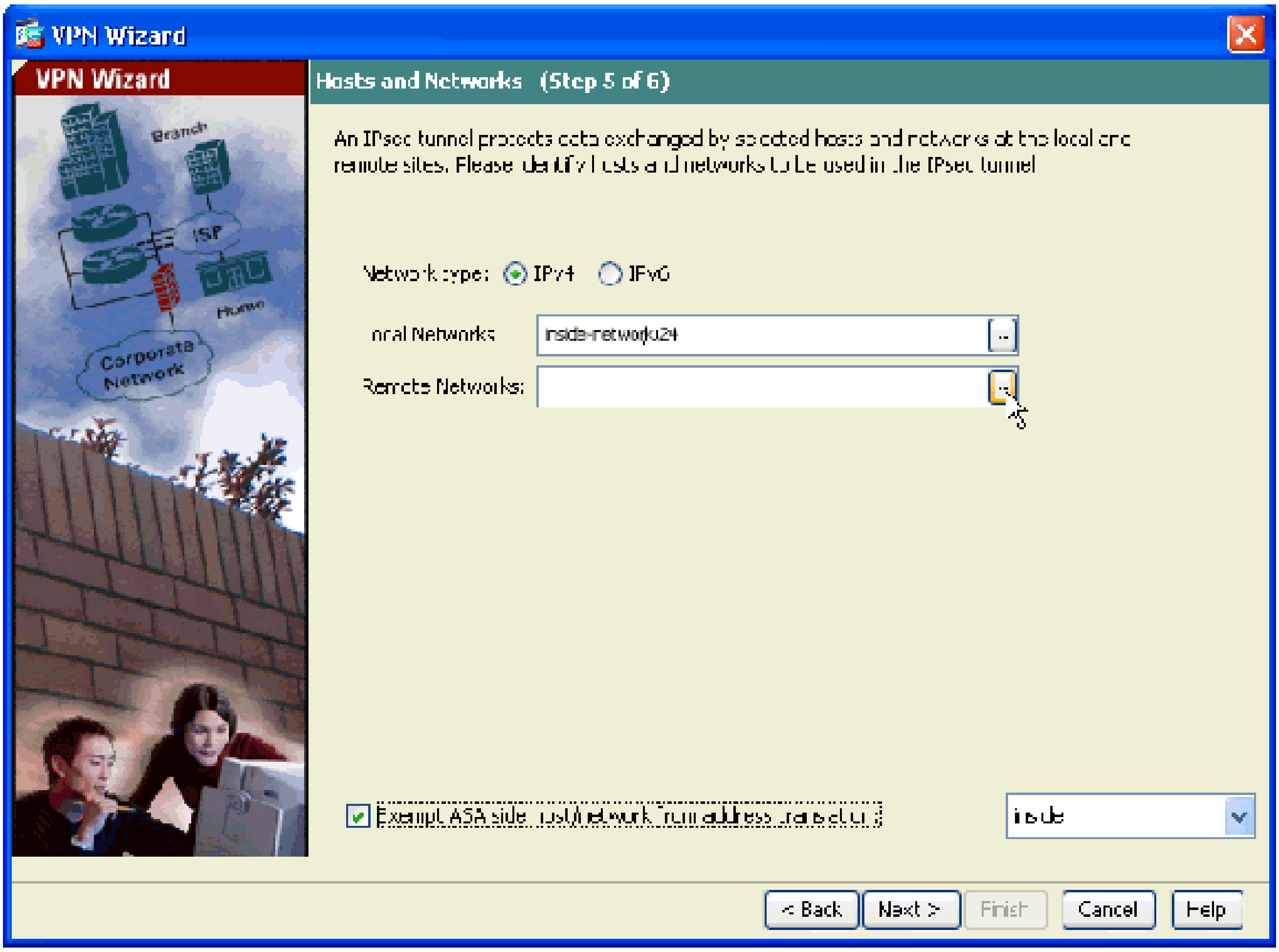
Filter:

Name	IP Address	Netmask	Description
Network Objects			
any	0.0.0.0	0.0.0.0	
dmz-network	10.77.241.64	255.255.255.192	
inside-network	172.22.1.0	255.255.255.0	
172.16.1.0	172.16.1.0	255.255.255.0	

Selected Local Networks

Local Networks -> any

12. Click the button next to **Remote Networks** in order to choose the remote network address from the drop-down
menu.



Hosts and Networks (Step 5 of 6)

An IPsec tunnel protects data exchanged by selected hosts and networks at the local and remote sites. Please identify hosts and networks to be used in the IPsec tunnel.

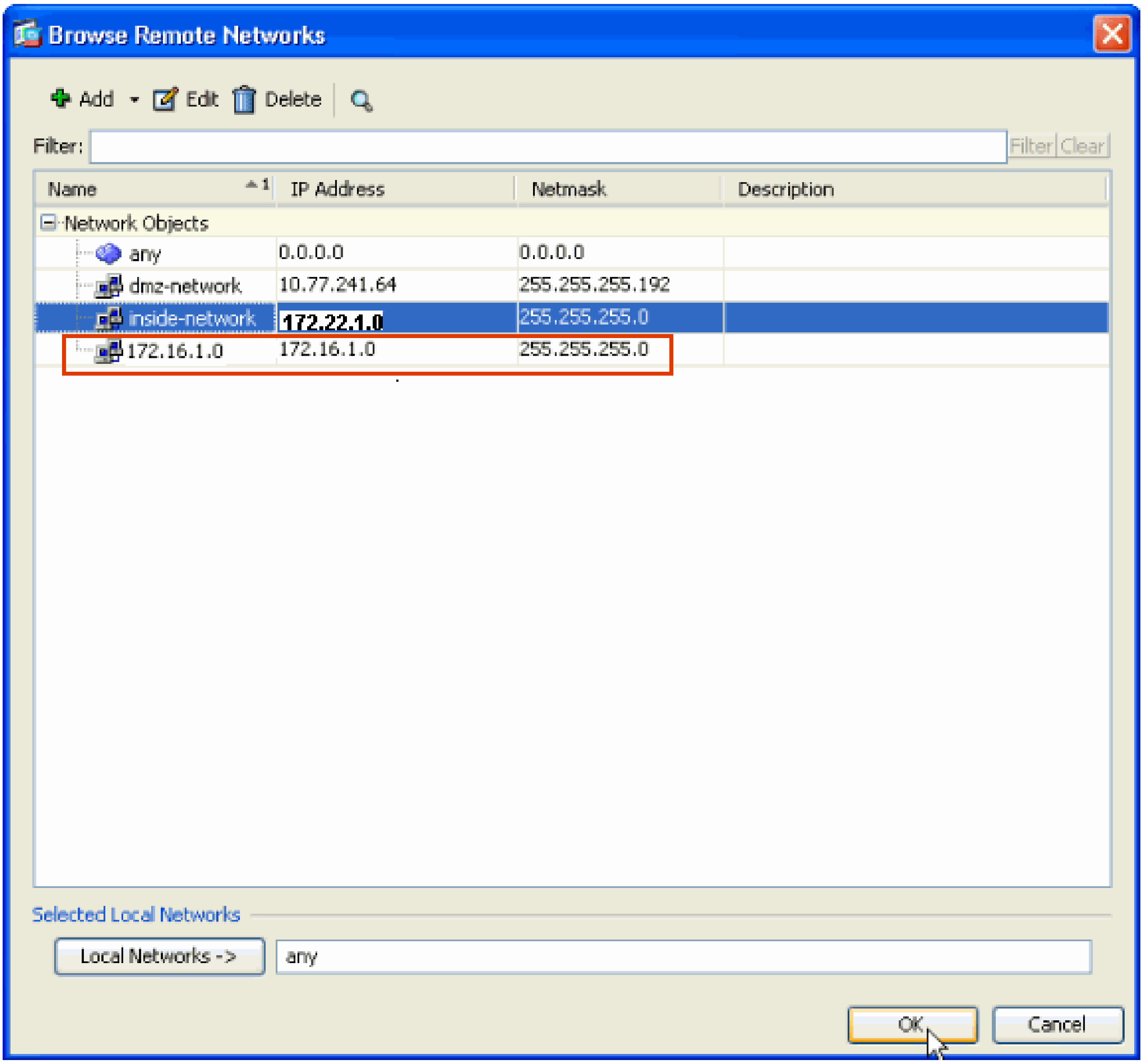
Network type: ● IPv4 ○ IPv6

Local Networks: inside-network/24

Remote Networks:

☑ Exempt ASA side host/network from address translation: inside

13. Choose the **Remote Network** address, and click **OK**.**Note:** If you do not have the Remote Network in the list, then the network has to be added to the list. Click **Add** in order to do so.

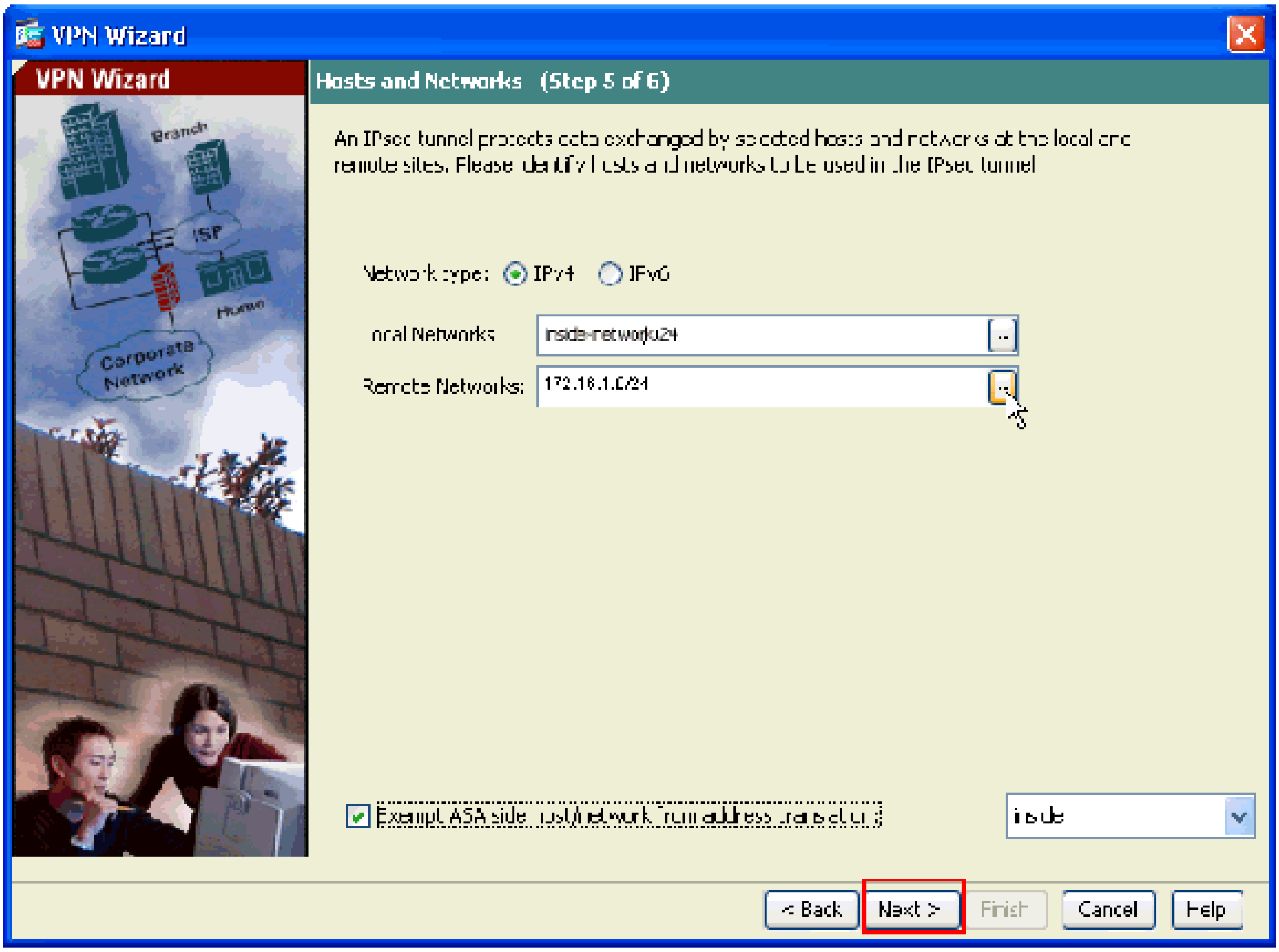


Name	IP Address	Netmask	Description
Network Objects			
any	0.0.0.0	0.0.0.0	
dmz-network	10.77.241.64	255.255.255.192	
inside-network	172.22.1.0	255.255.255.0	
172.16.1.0	172.16.1.0	255.255.255.0	

Selected Local Networks

Local Networks -> any

14. Check the **Exempt ASA side host/network from address translation** checkbox in order to prevent the tunnel traffic from undergoing Network Address Translation. Click **Next**.



Hosts and Networks (Step 5 of 6)

An IPsec tunnel protects data exchanged by selected hosts and networks at the local and remote sites. Please identify hosts and networks to be used in the IPsec tunnel.

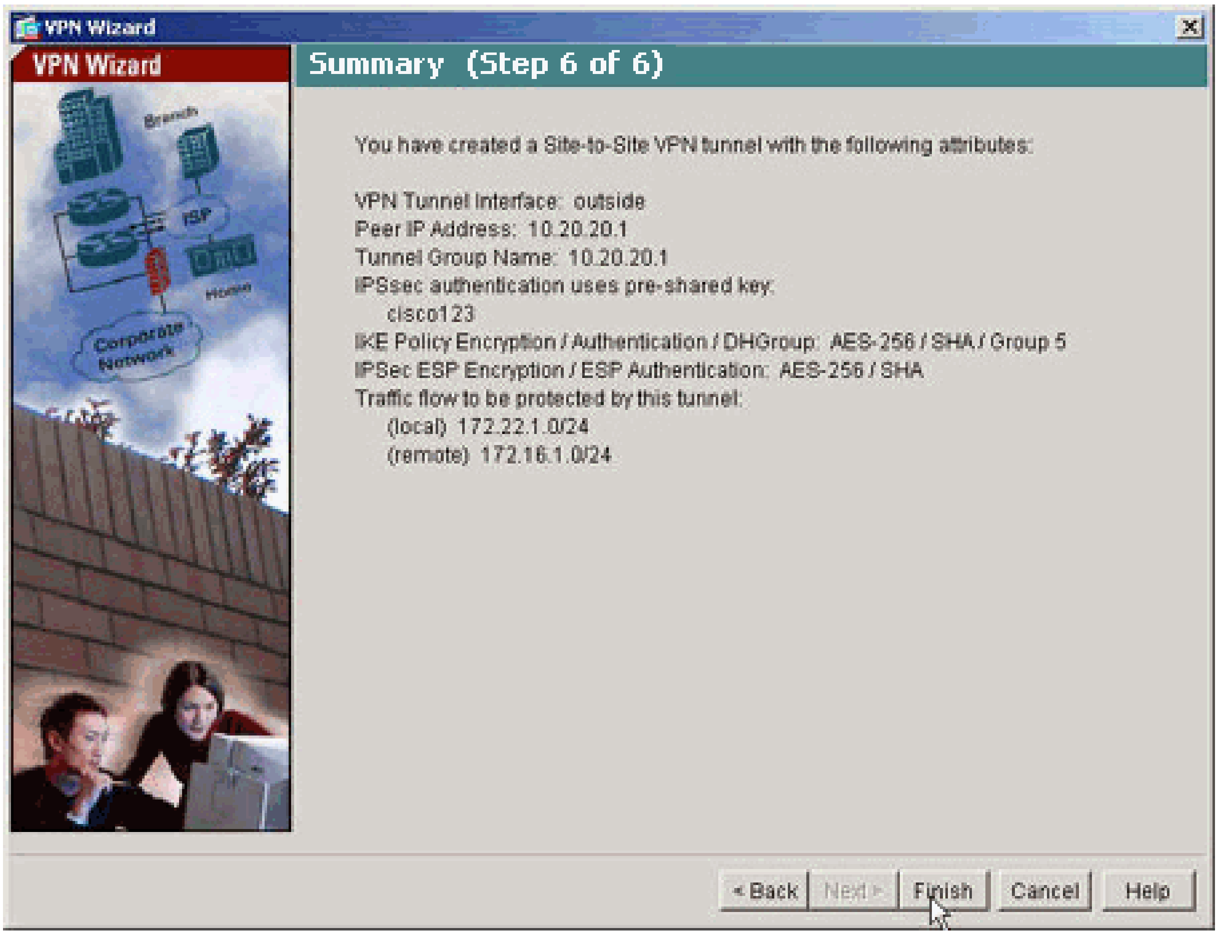
Network type: ● IPv4 ○ IPv6

Local Networks: inside-network/24

Remote Networks: 172.16.1.0/24

☑ Exempt ASA side host/network from address translation: inside

15. The attributes defined by the VPN Wizard are displayed in this summary. Double-check the configuration and click **Finish** when you are satisfied that the settings are correct.



Summary (Step 6 of 6)

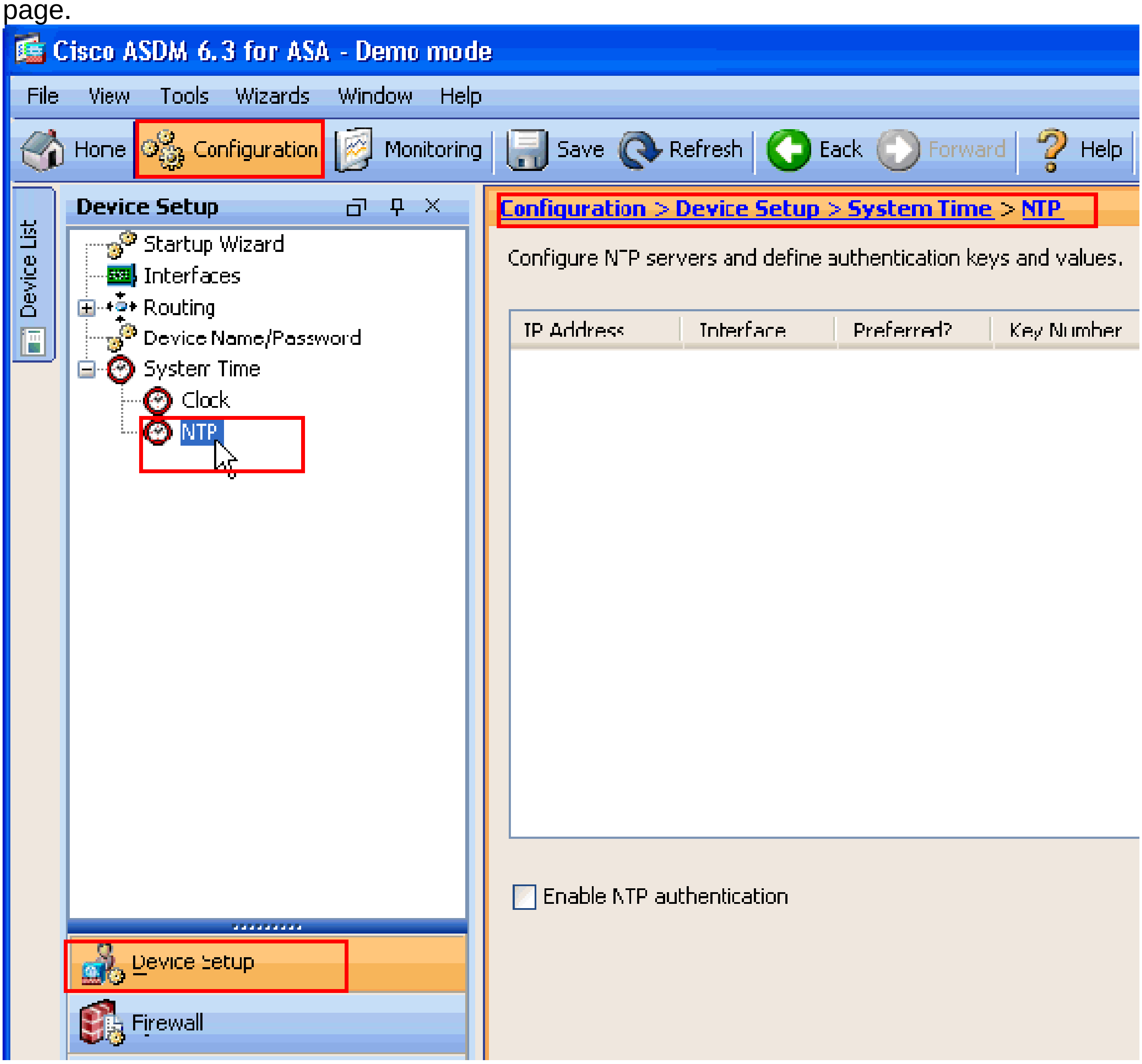
You have created a Site-to-Site VPN tunnel with the following attributes:

VPN Tunnel Interface: outside
Peer IP Address: 10.20.20.1
Tunnel Group Name: 10.20.20.1
IPSsec authentication uses pre-shared key:
cisco123
IKE Policy Encryption / Authentication / DHGroup: AES-256 / SHA / Group 5
IPSec ESP Encryption / ESP Authentication: AES-256 / SHA
Traffic flow to be protected by this tunnel:
(local) 172.22.1.0/24
(remote) 172.16.1.0/24

NTP ASDM Configuration

Complete these steps in order to configure NTP on the Cisco Security Appliance:

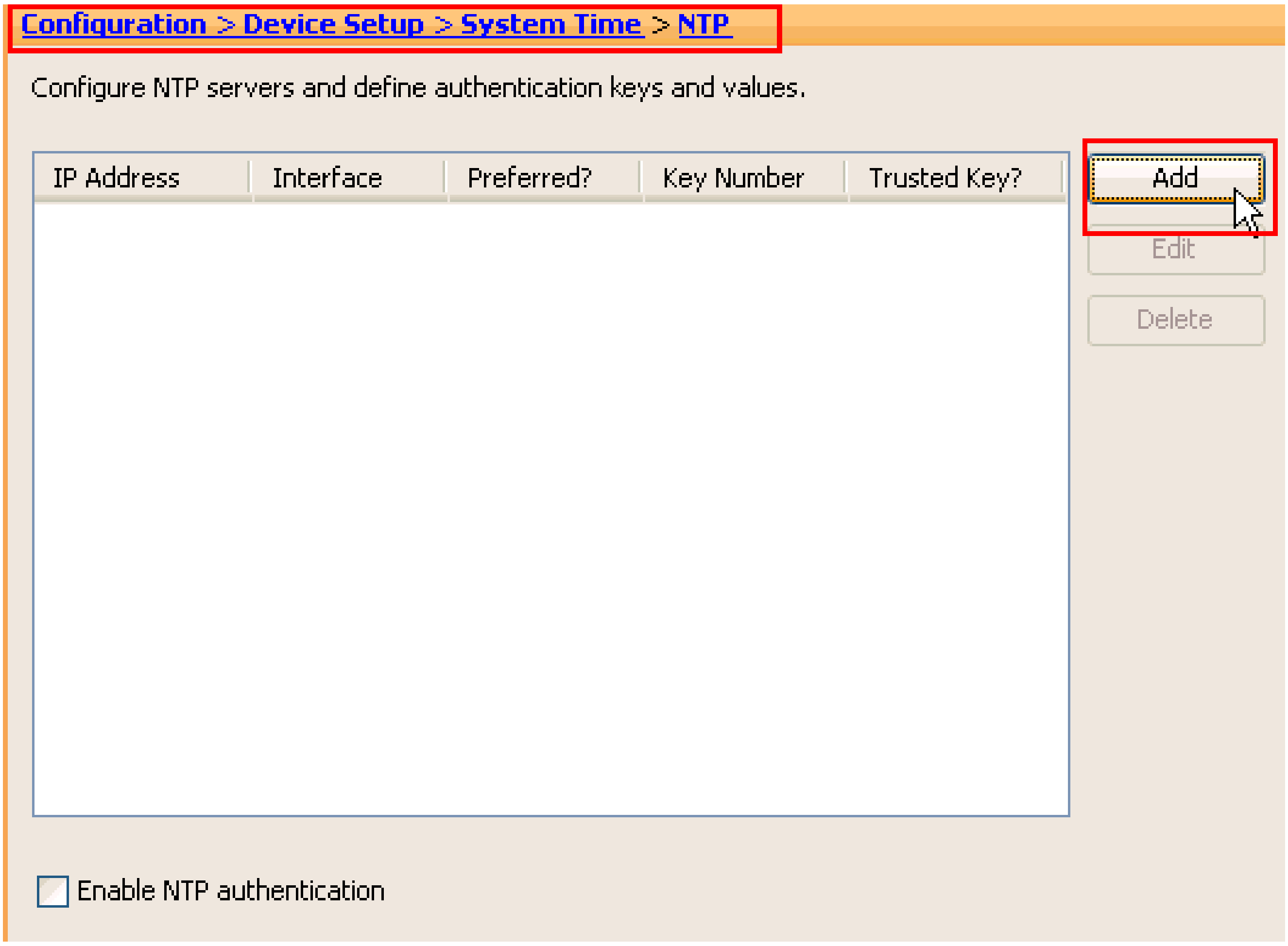
1. Choose **Configuration** in the ASDM home page.


Cisco ASDM 6.3 for ASA - Demo mode
File View Tools Wizards Window Help
Home Configuration Monitoring Save Refresh Back Forward Help
Device List
Device Setup
Startup Wizard
Interfaces
Routing
Device Name/Password
System Time
Clock
NTP
Device Setup
Firewall
Configuration > Device Setup > System Time > NTP
IP Address
Interface
Preferred?
Key Number

Configure NTP servers and define authentication keys and values.

□ Enable NTP authentication

2. Choose **Device Setup** > **System Time** > **NTP** in order to open the **NTP** configuration page of ASDM.



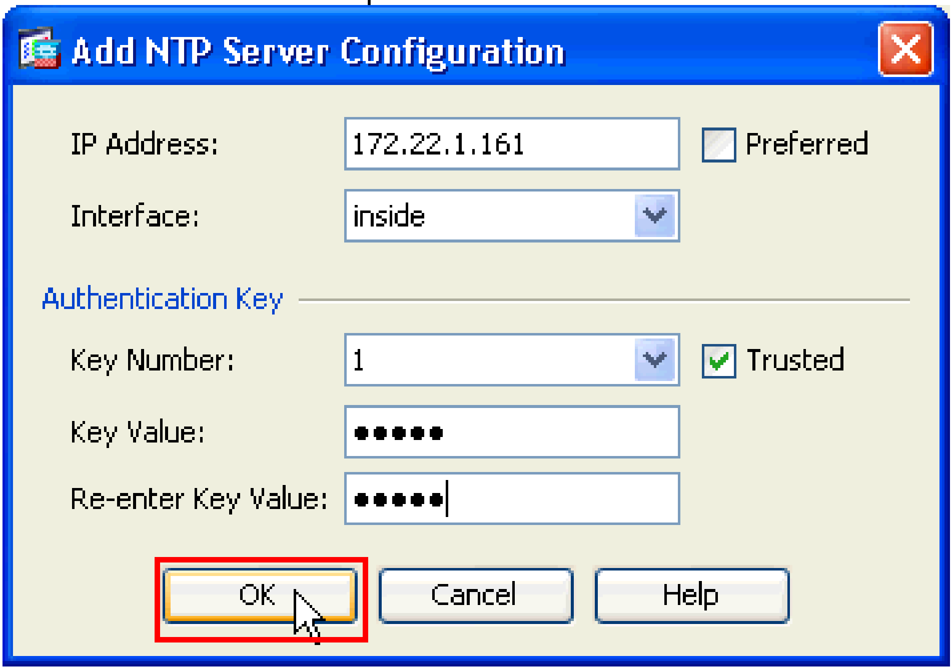
Configuration > Device Setup > System Time > NTP

Configure NTP servers and define authentication keys and values.

IP Address	Interface	Preferred?	Key Number	Trusted Key?

□ Enable NTP authentication

3. Click **Add** in order to add a NTP server and provide the required attributes such as IP address, Interface name (Inside or Outside), key number, and key value for Authentication in the new window that comes up. Click



Add NTP Server Configuration

IP Address: 172.22.1.161 □ Preferred

Interface: inside

Authentication Key

Key Number: 1 ☑ Trusted

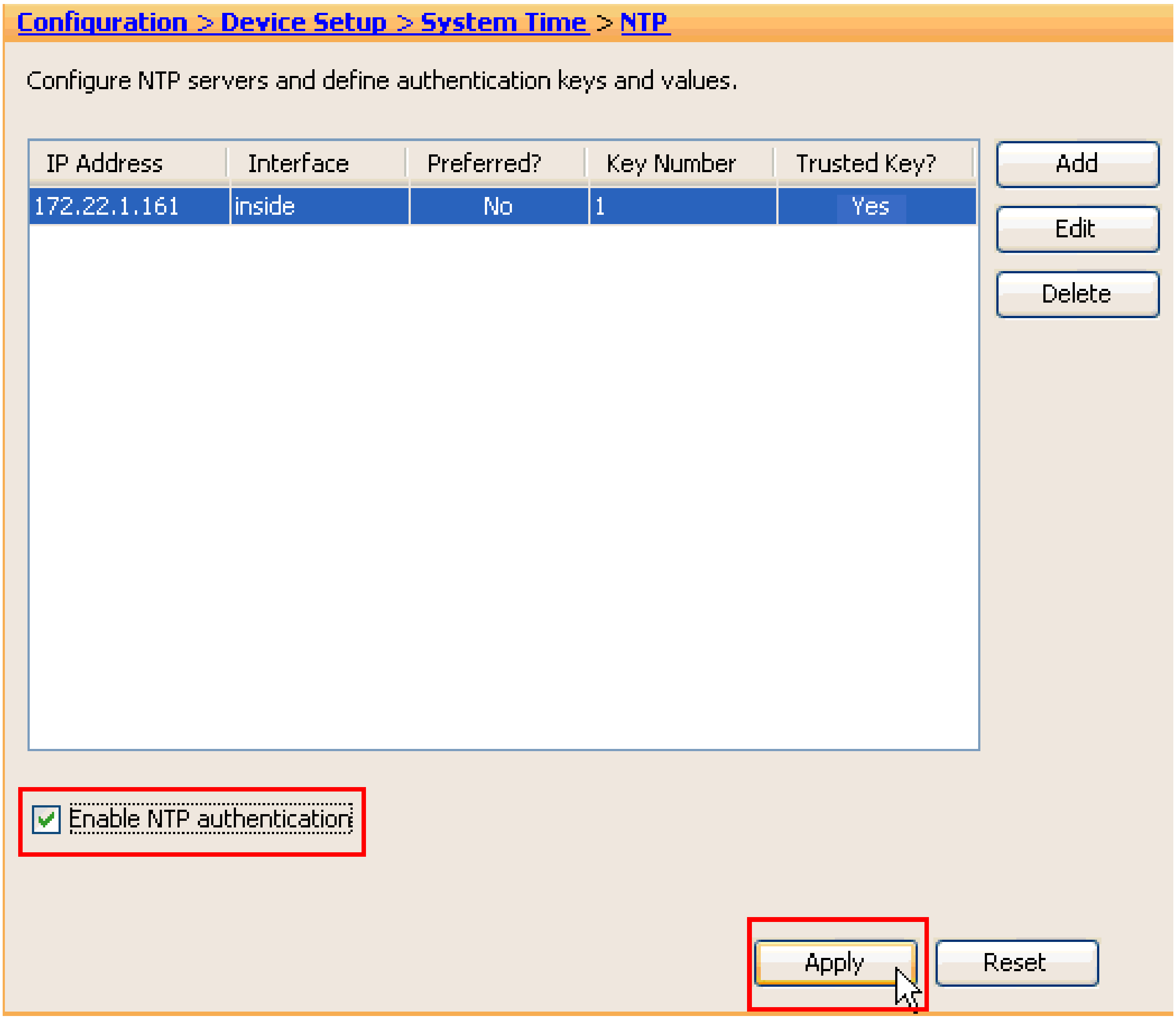
Key Value: •••••

Re-enter Key Value: •••••

OK. **Note:** The interface name should be chosen as inside for ASA1 and outside for ASA2.**Note:** The **ntp authentication key** should be the same in ASA and the NTP server.The Authentication attribute configuration in the CLI for ASA1 and ASA2 are shown here:`ASA1#`**`ntp authentication-key 1 md5 cisco`**` ntp trusted-key 1 ntp server 172.22.1.161 key 1 source insideASA2#`**`ntp authentication-key 1 md5 cisco`**` ntp trusted-key 1 ntp server 172.22.1.161 key 1 source outside`

4. Click the checkbox **Enable NTP Authentication** and click **Apply**, which completes the NTP

configuration task.



Configuration > Device Setup > System Time > NTP

Configure NTP servers and define authentication keys and values.

IP Address	Interface	Preferred?	Key Number	Trusted Key?
172.22.1.161	inside	No	1	Yes

☑ Enable NTP authentication

ASA1 CLI Configuration

ASA1

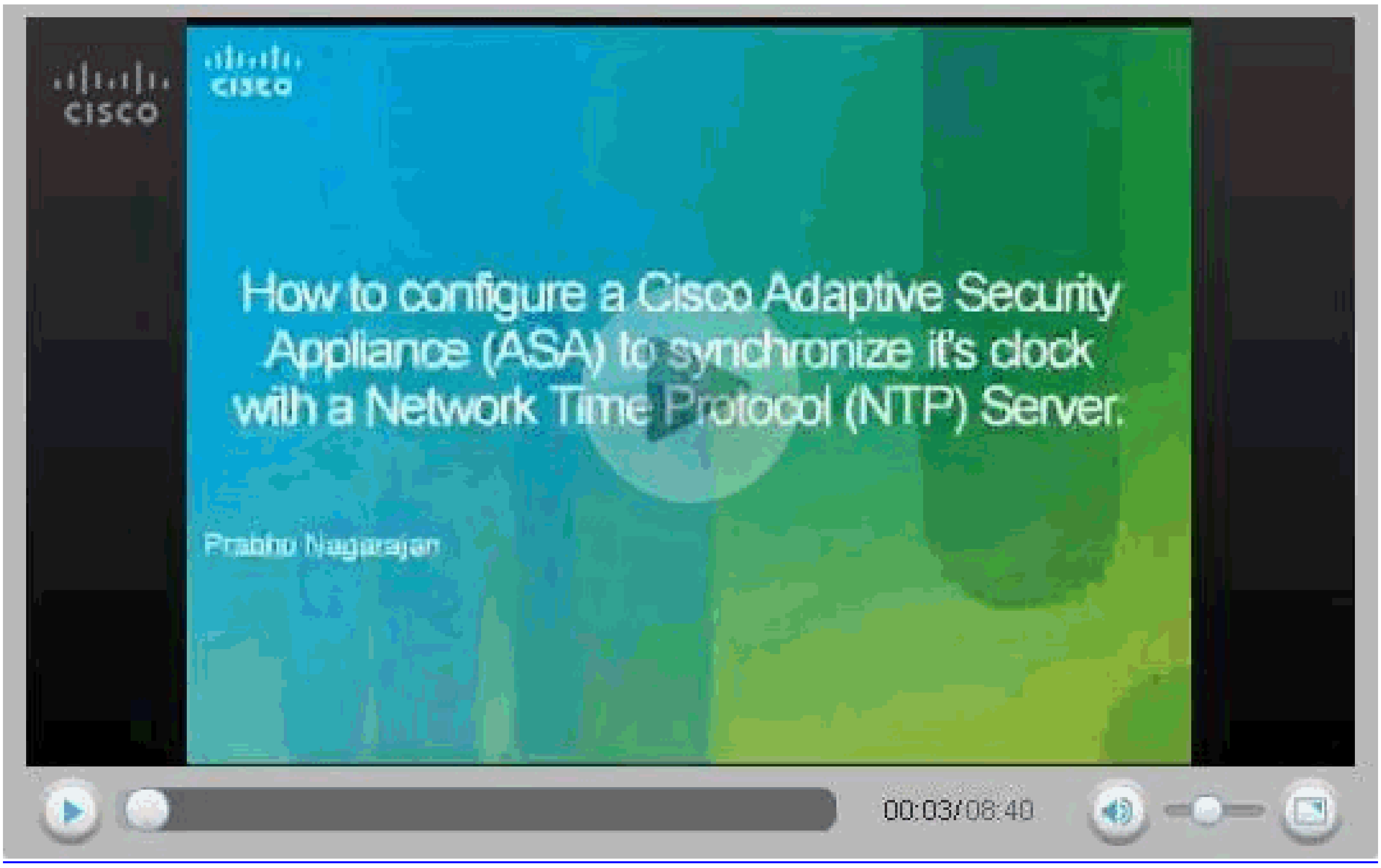
```
ASA#show run : Saved ASA Version 8.3(1) ! hostname ASA1
domain-name default.domain.invalid enable password
8Ry2YjIyt7RRXU24 encrypted names ! interface Ethernet0
nameif outside security-level 0 ip address 10.10.10.1
255.255.255.0 !--- Configure the outside interface. !
interface Ethernet1 nameif inside security-level 100 ip
address 172.22.1.163 255.255.255.0 !--- Configure the
inside interface. ! !-- Output suppressed ! passwd
2KFQnbNIdI.2KYOU encrypted ftp mode passive dns server-
group DefaultDNS domain-name default.domain.invalid
access-list inside_nat0_outbound extended permit ip
172.22.1.0 255.255.255.0 172 .16.1.0 255.255.255.0 !---
This access list (inside_nat0_outbound) is used !---
with the nat zero command. This prevents traffic which
!--- matches the access list from undergoing network
address translation (NAT). !--- The traffic specified by
this ACL is traffic that is to be encrypted and !---
sent across the VPN tunnel. This ACL is intentionally !-
-- the same as (outside_cryptomap_20). !--- Two separate
access lists should always be used in this
```

```
configuration. access-list outside_cryptomap_20 extended
permit ip 172.22.1.0 255.255.255.0 172 .16.1.0
255.255.255.0 !--- This access list
(outside_cryptomap_20) is used !--- with the crypto map
outside_map !--- to determine which traffic should be
encrypted and sent !--- across the tunnel. !--- This ACL
is intentionally the same as (inside_nat0_outbound). !--
- Two separate access lists should always be used in
this configuration. pager lines 24 mtu inside 1500 mtu
outside 1500 no failover asdm image flash:/asdm-631.bin
!--- Enter this command to specify the location of the
ASDM image. asdm history enable arp timeout 14400 object
network obj-local subnet 172.22.1.0 255.255.255.0 object
network obj-remote subnet 172.16.1.0 255.255.255.0 nat
(inside,outside) 1 source static obj-local obj-local
destination static obj-remote obj-remote !--- NAT 0
prevents NAT for networks specified in !--- the ACL
inside_nat0_outbound. route outside 0.0.0.0 0.0.0.0
10.10.10.2 1 timeout xlate 3:00:00 timeout conn 1:00:00
half-closed 0:10:00 udp 0:02:00 icmp 0:00:02 timeout
sunrpc 0:10:00 h323 0:05:00 h225 1:00:00 mgcp 0:05:00
timeout mgcp-pat 0:05:00 sip 0:30:00 sip_media 0:02:00
timeout uauth 0:05:00 absolute http server enable !---
Enter this command in order to enable the HTTPS server
!--- for ASDM. http 172.22.1.1 255.255.255.255 inside !-
-- Identify the IP addresses from which the security
appliance !--- accepts HTTPS connections. no snmp-server
location no snmp-server contact !--- PHASE 2
CONFIGURATION ---! !--- The encryption types for Phase 2
are defined here. crypto ipsec transform-set ESP-AES-
256-SHA esp-aes-256 esp-sha-hmac !--- Define the
transform set for Phase 2. crypto map outside_map 20
match address outside_cryptomap_20 !--- Define which
traffic should be sent to the IPsec peer. crypto map
outside_map 20 set peer 10.20.20.1 !--- Sets the IPsec
peer crypto map outside_map 20 set transform-set ESP-
AES-256-SHA !--- Sets the IPsec transform set "ESP-AES-
256-SHA" !--- to be used with the crypto map entry
"outside_map". crypto map outside_map interface outside
!--- Specifies the interface to be used with !--- the
settings defined in this configuration. !--- PHASE 1
CONFIGURATION ---! !--- This configuration uses isakmp
policy 10. !--- Policy 65535 is included in the config
by default. !--- The configuration commands here define
the Phase !--- 1 policy parameters that are used. isakmp
enable outside isakmp policy 10 authentication pre-share
isakmp policy 10 encryption aes-256 isakmp policy 10
hash sha isakmp policy 10 group 5 isakmp policy 10
lifetime 86400 isakmp policy 65535 authentication pre-
share isakmp policy 65535 encryption 3des isakmp policy
65535 hash sha isakmp policy 65535 group 2 isakmp policy
65535 lifetime 86400 tunnel-group 10.20.20.1 type ipsec-
l2l !--- In order to create and manage the database of
connection-specific !--- records for ipsec-l2l—IPsec
(LAN-to-LAN) tunnels, use the command !--- tunnel-group
in global configuration mode. !--- For L2L connections,
the name of the tunnel group MUST be the IP !--- address
of the IPsec peer. tunnel-group 10.20.20.1 ipsec-
attributes pre-shared-key * !--- Enter the pre-shared-
key in order to configure the !--- authentication
method. telnet timeout 5 ssh timeout 5 console timeout 0
! class-map inspection_default match default-inspection-
traffic ! ! policy-map global_policy class
inspection_default inspect dns maximum-length 512
```

```
inspect ftp inspect h323 h225 inspect h323 ras inspect
netbios inspect rsh inspect rtsp inspect skinny inspect
esmtp inspect sqlnet inspect sunrpc inspect tftp inspect
sip inspect xdmcp ! service-policy global_policy global
!--- Define the NTP server authentication-key,Trusted-
key !--- and the NTP server address for configuring NTP.
ntp authentication-key 1 md5 * ntp trusted-key 1 !---
The NTP server source is to be mentioned as inside for
ASA1 ntp server 172.22.1.161 key 1 source inside
Cryptochecksum:ce7210254f4a0bd263a9072a4ccb7cf7 : end
```

This video posted to the Cisco Support Community explains with a demo, the procedure to configure ASA as NTP client:

How to configure a Cisco Adaptive Security Appliance (ASA) to synchronize its clock with a Network Time Protocol (NTP) Server.



How to configure a Cisco Adaptive Security Appliance (ASA) to synchronize it's clock with a Network Time Protocol (NTP) Server.

Prabhu Nagarajan

ASA2 CLI Configuration

ASA2

```
ASA Version 8.3(1)
!
hostname ASA2
domain-name default.domain.invalid
enable password 8Ry2YjIyt7RRXU24 encrypted
names
!
interface Ethernet0
 nameif outside
 security-level 0
 ip address 10.20.20.1 255.255.255.0
!
```

```
interface Ethernet1
 nameif inside
 security-level 100
 ip address 172.16.1.1 255.255.255.0
!
passwd 2KFQnbNIdI.2KYOU encrypted
ftp mode passive
dns server-group DefaultDNS
 domain-name default.domain.invalid

access-list inside_nat0_outbound extended permit ip
172.16.1.0 255.255.255.0 172
.22.1.0 255.255.255.0
!--- Note that this ACL is a mirror of the
inside_nat0_outbound !--- ACL on ASA1. access-list
outside_cryptomap_20 extended permit ip 172.16.1.0
255.255.255.0 172 .22.1.0 255.255.255.0 !--- Note that
this ACL is a mirror of the outside_cryptomap_20 !---
ACL on ASA1. pager lines 24 mtu inside 1500 mtu outside
1500 no failover asdm image flash:/asdm-631.bin no asdm
history enable arp timeout 14400 object network obj-
local subnet 172.22.1.0 255.255.255.0 object network
obj-remote subnet 172.16.1.0 255.255.255.0 nat
(inside,outside) 1 source static obj-local obj-local
destination static obj-remote obj-remote timeout xlate
3:00:00 timeout conn 1:00:00 half-closed 0:10:00 udp
0:02:00 icmp 0:00:02 timeout sunrpc 0:10:00 h323 0:05:00
h225 1:00:00 mgcp 0:05:00 timeout mgcp-pat 0:05:00 sip
0:30:00 sip_media 0:02:00 timeout uauth 0:05:00 absolute
http server enable http 0.0.0.0 0.0.0.0 inside no snmp-
server location no snmp-server contact crypto ipsec
transform-set ESP-AES-256-SHA esp-aes-256 esp-sha-hmac
crypto map outside_map 20 match address
outside_cryptomap_20 crypto map outside_map 20 set peer
10.10.10.1 crypto map outside_map 20 set transform-set
ESP-AES-256-SHA crypto map outside_map interface outside
isakmp enable outside isakmp policy 10 authentication
pre-share isakmp policy 10 encryption aes-256 isakmp
policy 10 hash sha isakmp policy 10 group 5 isakmp
policy 10 lifetime 86400 tunnel-group 10.10.10.1 type
ipsec-l2l tunnel-group 10.10.10.1 ipsec-attributes pre-
shared-key * telnet timeout 5 ssh timeout 5 console
timeout 0 ! class-map inspection_default match default-
inspection-traffic ! ! policy-map global_policy class
inspection_default inspect dns maximum-length 512
inspect ftp inspect h323 h225 inspect h323 ras inspect
netbios inspect rsh inspect rtsp inspect skinny inspect
esmtp inspect sqlnet inspect sunrpc inspect tftp inspect
sip inspect xdmcp ! service-policy global_policy global
!--- Define the NTP server authentication-key,Trusted-
key !--- and the NTP server address for configuring NTP.
ntp authentication-key 1 md5 * ntp trusted-key 1 !---
The NTP server source is to be mentioned as outside for
ASA2. ntp server 172.22.1.161 key 1 source outside
Cryptochecksum:d5e2ee898f5e8bd28e6f027aeed7f41b : end
ASA#
```

Verify

This section provides information you can use in order to confirm that your configuration works properly.

Certain **show** commands are supported by the Output Interpreter Tool (registered customers only) , which allows you to view an analysis of **show** command output.

- **show ntp status** - Displays the NTP clock information.
  ```
  ASA1#show ntp status Clock is
  synchronized, stratum 2, reference is 172.22.1.161 nominal freq is 99.9984 Hz, actual freq
  is 99.9983 Hz, precision is 2**6 reference time is ccf22b77.f7a6e7b6 (13:28:23.967 UTC Tue
  Dec 16 2008) clock offset is 34.8049 msec, root delay is 4.78 msec root dispersion is 60.23
  msec, peer dispersion is 25.41 msec
  ```
- **show ntp associations [detail]** - Displays the configured network time server associations.
  ```
  ASA1#show ntp associations detail 172.22.1.161 configured, authenticated,
  our_master, sane, valid, stratum 1 ref ID .LOCL., time ccf2287d.3668b946 (13:15:41.212 UTC
  Tue Dec 16 2008) our mode client, peer mode server, our poll intvl 64, peer poll intvl 64
  root delay 0.00 msec, root disp 0.03, reach 7, sync dist 23.087 delay 4.52 msec, offset
  9.7649 msec, dispersion 20.80 precision 2**19, version 3 org time ccf22896.f1a4fca3
  (13:16:06.943 UTC Tue Dec 16 2008) rcv time ccf22896.efb94b28 (13:16:06.936 UTC Tue Dec 16
  2008) xmt time ccf22896.ee5691dc (13:16:06.931 UTC Tue Dec 16 2008) filtdelay = 4.52 4.68
  4.61 0.00 0.00 0.00 0.00 0.00 filtoffset = 9.76 7.09 3.85 0.00 0.00 0.00 0.00 0.00 filterror
  = 15.63 16.60 17.58 14904.3 14904.3 14904.3 14904.3 14904.3
  ```

Troubleshoot

This section provides information you can use to troubleshoot your configuration.

Troubleshooting Commands

Certain **show** commands are supported by the Output Interpreter Tool (registered customers only) , which allows you to view an analysis of **show** command output.

Note: Before issuing **debug** commands, refer to Important Information on Debug Commands.

- **debug ntp validity** - Displays NTP peer clock validity.This is **debug** output from the key mismatch:
  ```
  NTP: packet from 172.22.1.161 failed validity tests 10 Authentication failed
  ```
- **debug ntp packet** - Displays NTP packet information.When there is no response from the server, only the `NTP xmit` packet is seen on the ASA with no `NTP rcv` packet.
  ```
  ASA1# NTP: xmit
  packet to 172.22.1.161:
   leap 0, mode 3, version 3, stratum 2, ppoll 64
   rtdel 012b (4.562), rtdsp 0cb6 (49.652), refid ac1601a1 (172.22.1.161)
   ref ccf22916.f1211384 (13:18:14.941 UTC Tue Dec 16 2008)
   org ccf22916.f426232d (13:18:14.953 UTC Tue Dec 16 2008)
   rec ccf22916.f1211384 (13:18:14.941 UTC Tue Dec 16 2008)
   xmt ccf22956.f08ee8b4 (13:19:18.939 UTC Tue Dec 16 2008)
  NTP: rcv packet from 172.22.1.161 to 172.22.1.163 on inside:
   leap 0, mode 4, version 3, stratum 1, ppoll 64
   rtdel 0000 (0.000), rtdsp 0002 (0.031), refid 4c4f434c (76.79.67.76)
   ref ccf2293d.366a4808 (13:18:53.212 UTC Tue Dec 16 2008)
   org ccf22956.f08ee8b4 (13:19:18.939 UTC Tue Dec 16 2008)
   rec ccf22956.f52e480e (13:19:18.957 UTC Tue Dec 16 2008)
   xmt ccf22956.f5688c29 (13:19:18.958 UTC Tue Dec 16 2008)
   inp ccf22956.f982bcd9 (13:19:18.974 UTC Tue Dec 16 2008)
  ```

Related Information

- **Cisco Adaptive Security Device Manager**

- **Cisco ASA 5500 Series Adaptive Security Appliances**
- **Requests for Comments (RFCs)** ↗
- **Technical Support & Documentation - Cisco Systems**