SSL VPN Client (SVC) on ASA with ASDM Configuration Example

Contents

Introduction

Secure Socket Layer (SSL) Virtual Private Network (VPN) technology allows you to connect securely from any location to an internal corporate network using one of these methods:

- **Clientless SSL VPN (WebVPN)**—Provides a remote client that requires an SSL-enabled

Web browser to access HTTP or HTTPS Web servers on a corporate local-area network (LAN). In addition, clientless SSL VPN provides access for Windows file browsing through the Common Internet File System (CIFS) protocol. Outlook Web Access (OWA) is an example of HTTP access.Refer to Clientless SSL VPN (WebVPN) on ASA Configuration Example in order to learn more about the Clientless SSL VPN.

- **Thin-Client SSL VPN (Port Forwarding)**—Provides a remote client that downloads a small Java-based applet and allows secure access for Transmission Control Protocol (TCP) applications that use static port numbers. Post Office Protocol (POP3), Simple Mail Transfer Protocol (SMTP), Internet Message Access Protocol (IMAP), secure shell (ssh), and Telnet are examples of secure access. Because files on the local machine change, users must have local administrative privileges to use this method. This method of SSL VPN does not work with applications that use dynamic port assignments, such as some file transfer protocol (FTP) applications.Refer to Thin-Client SSL VPN (WebVPN) on ASA with ASDM Configuration Example in order to learn more about the Thin-Client SSL VPN.**Note:** User Datagram Protocol (UDP) is not supported.
- **SSL VPN Client (Tunnel Mode)**—Downloads a small client to the remote workstation and allows full secure access to resources on an internal corporate network. You can download the SSL VPN Client (SVC) to a remote workstation permanently, or you can remove the client once the secure session is closed.

This document describes how to configure the SVC on an Adaptive Security Appliance (ASA) using the Adaptive Security Device Manager (ASDM). The command lines that result from this configuration are listed in the Results section.

Prerequisites

Requirements

Before you attempt this configuration, ensure that you meet these requirements:

- SVC starts support from Cisco Adaptive Security Appliance Software Version 7.1 and later
- Local administrative privileges on all remote workstations
- Java and ActiveX controls on the remote workstation
- Port 443 is not blocked anywhere along the connection path

Components Used

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

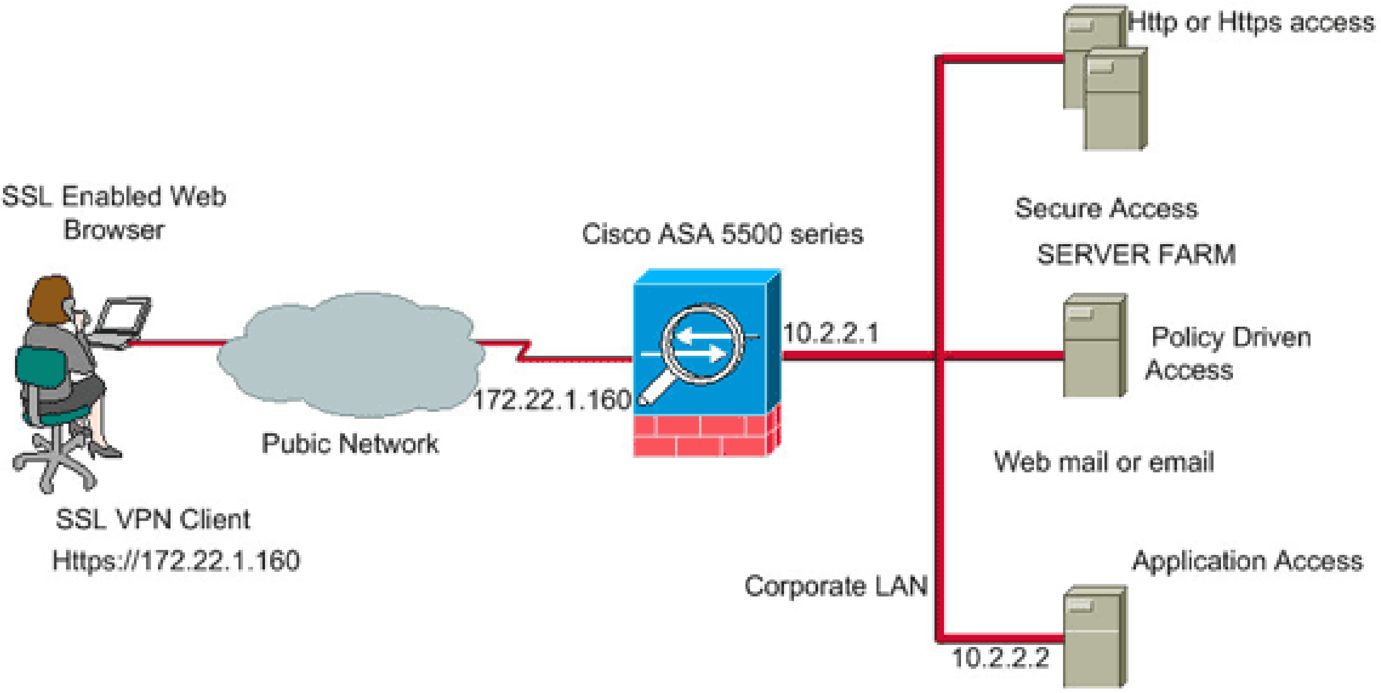
- Cisco Adaptive Security Appliance Software Version 7.2(1)
- Cisco Adaptive Security Device Manager 5.2(1)
- Cisco Adaptive Security Appliance 5510 series
- Microsoft Windows XP Professional SP 2

The information in this document was developed in a lab environment. All devices used in this document started were reset to their default configuration. If your network is live, make sure you understand the potential impact of any command. All IP addresses used in this configuration were selected from RFC 1918 addresses in a lab environment; these IP addresses are not routable on the Internet and are for test purposes only.

Network Diagram

This document uses the network configuration described in this section.

A remote user connects to the IP address of the ASA with an SSL-enabled Web browser. After successful authentication, the SVC is downloaded to the client computer, and the user can use an encrypted secure session for full access to all the permitted resources on the corporate network.



Preconfiguration Tasks

Before you begin, complete these tasks:

- Refer to Allowing HTTPS Access for ASDM in order to allow the ASA to be configured by the ASDM.To access the ASDM application, from your management station, use an SSL-enabled Web browser and enter the IP address of the ASA device. For example: **https://*inside_ip_address*,** where *inside_ip_address* is the address of the ASA. Once ASDM is loaded, you can begin configuration of the SVC.
- Download the SSL VPN Client package (sslclient-win*.pkg) from the Cisco Software Download (registered customers only) website to the local hard drive of the management station from which you access the ASDM application.

WebVPN and ASDM cannot be enabled on the same ASA interface unless you change the port numbers. If you want the two technologies to use the same port (port 443) on the same device, you can enable ASDM on the *inside* interface and enable WebVPN on the *outside* interface.

Conventions

For more information about document conventions, refer to the Cisco Technical Tips Conventions.

Configure the SSL VPN Client on an ASA

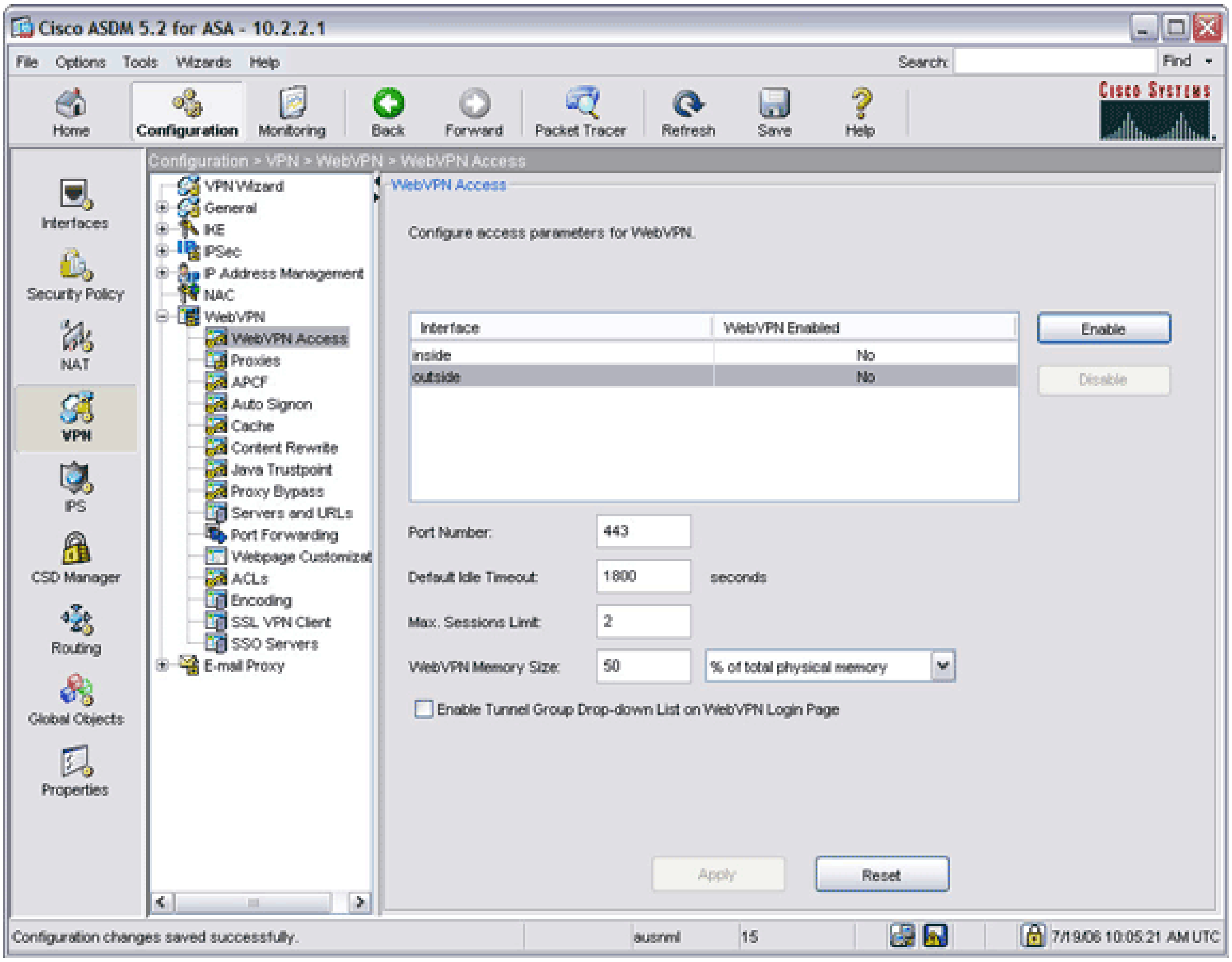
To configure the SSL VPN Client on an ASA, complete these steps:

1. [Enable WebVPN Access on the ASA]
2. [Install and Enable the SSL VPN Client on the ASA]
3. [Enable SVC Installation on Clients]
4. [Enable Rekey Parameters]

Step 1. Enable WebVPN Access on the ASA

To enable WebVPN access on the ASA, complete these steps:

1. Within the ASDM application, click **Configuration**, and then click **VPN**.
2. Expand **WebVPN**, and choose **WebVPN Access**.



Configure access parameters for WebVPN.

Interface	WebVPN Enabled
inside	No
outside	No

Port Number: 443

Default Idle Timeout: 1800 seconds

Max. Sessions Limit: 2

WebVPN Memory Size: 50 % of total physical memory

□ Enable Tunnel Group Drop-down List on WebVPN Login Page

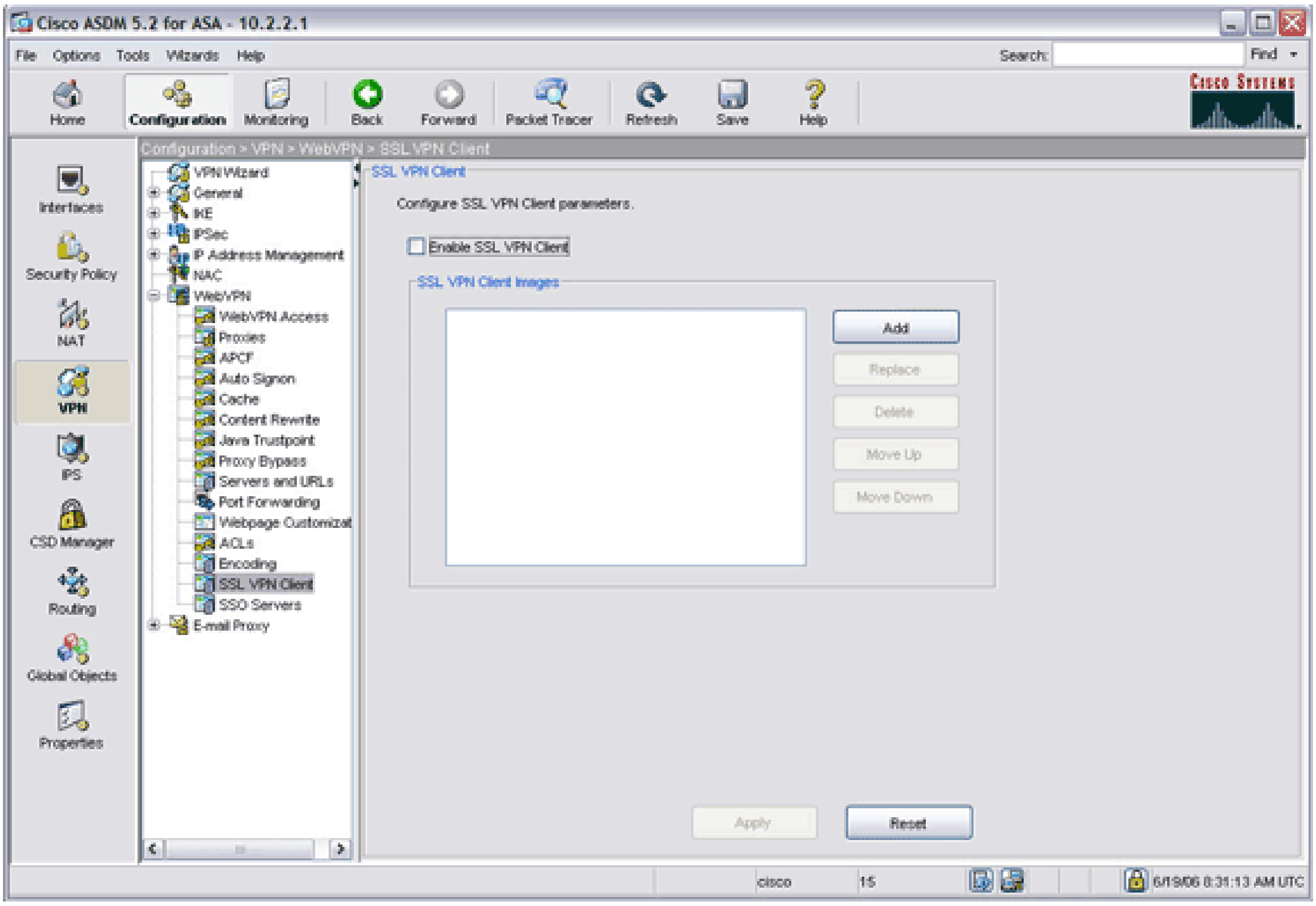
Configuration changes saved successfully. ausrml 15 7/19/06 10:05:21 AM UTC

3. Select the interface for which you want to enable WebVPN, and click **Enable.**

Step 2. Install and Enable the SSL VPN Client on the ASA

To install and enable the SSL VPN Client on the ASA, complete these steps:

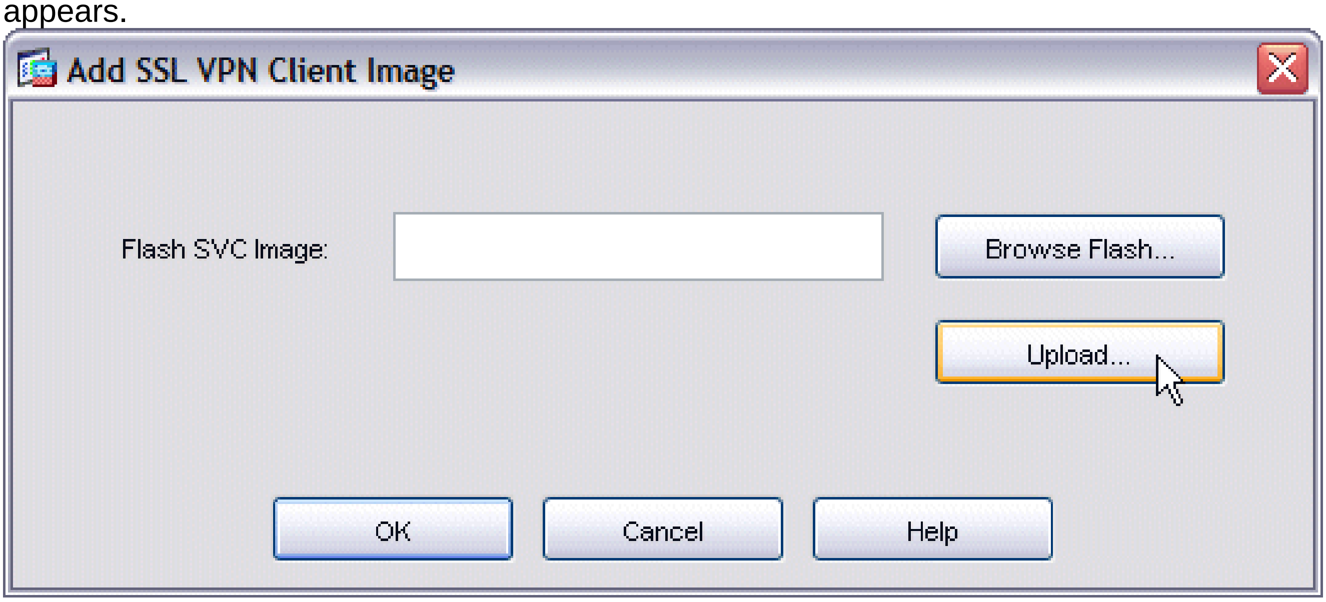
1. Click **Configuration**, and then click **VPN**.
2. In the navigation pane, expand **WebVPN**, and choose **SSL VPN Client**.



Configure SSL VPN Client parameters.

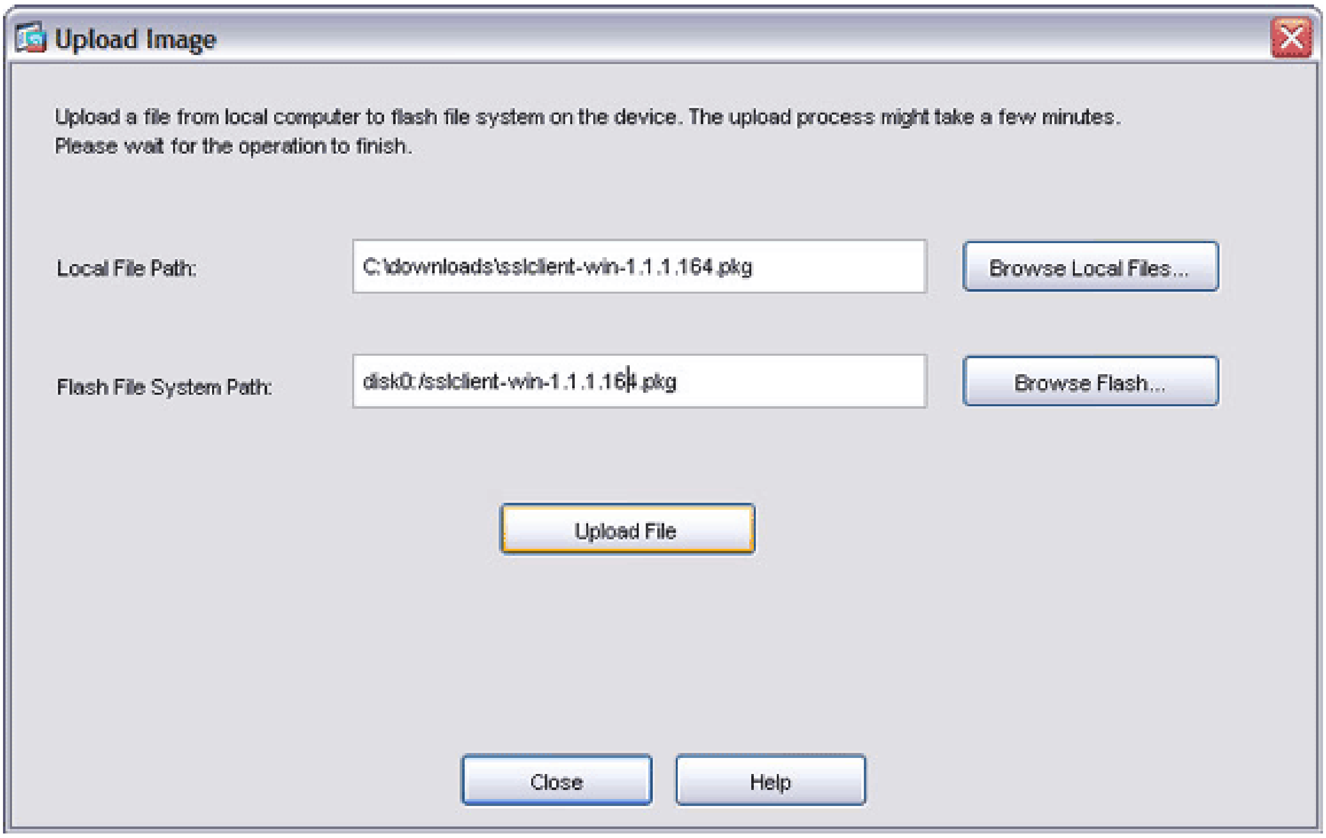
□ Enable SSL VPN Client

3. Click **Add**.The Add SSL VPN Client Image dialog box appears.



Flash SVC Image:

4. Click the **Upload** button.The Upload Image dialog box appears.

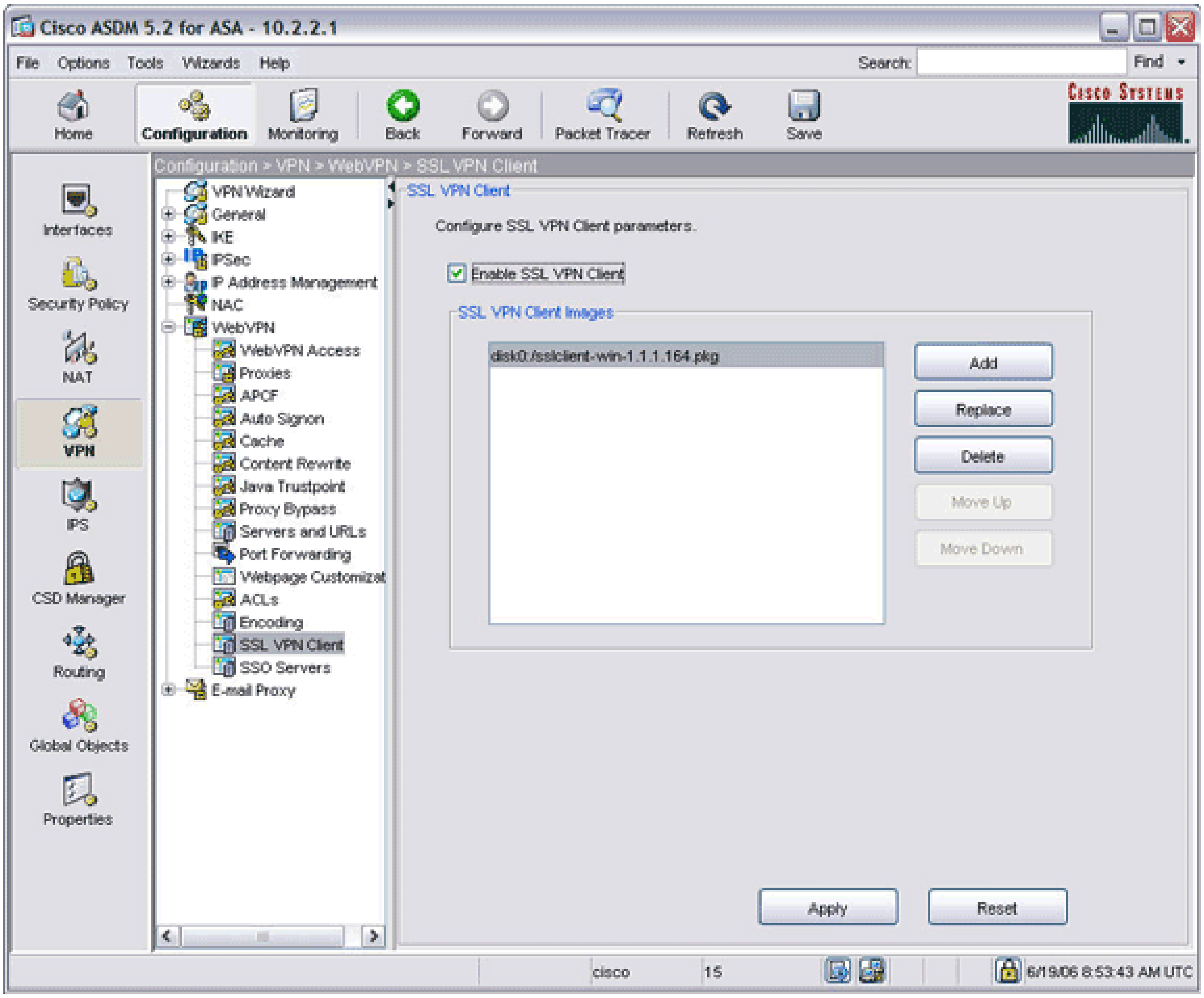


Upload a file from local computer to flash file system on the device. The upload process might take a few minutes. Please wait for the operation to finish.

Local File Path: C:\downloads\sslclient-win-1.1.1.164.pkg

Flash File System Path: disk0:/sslclient-win-1.1.1.164.pkg

5. Click the **Browse Local Files** button to locate a file on your local computer, or click the **Browse Flash** button to locate a file on the flash file system.
6. Locate the client image file to upload, and click **OK**.
7. Click **Upload File**, and then click **Close**.
8. Once the client image is loaded to flash, check the **Enable SSL VPN Client** check box, and then click
   Apply.



Configuration > VPN > WebVPN > SSL VPN Client

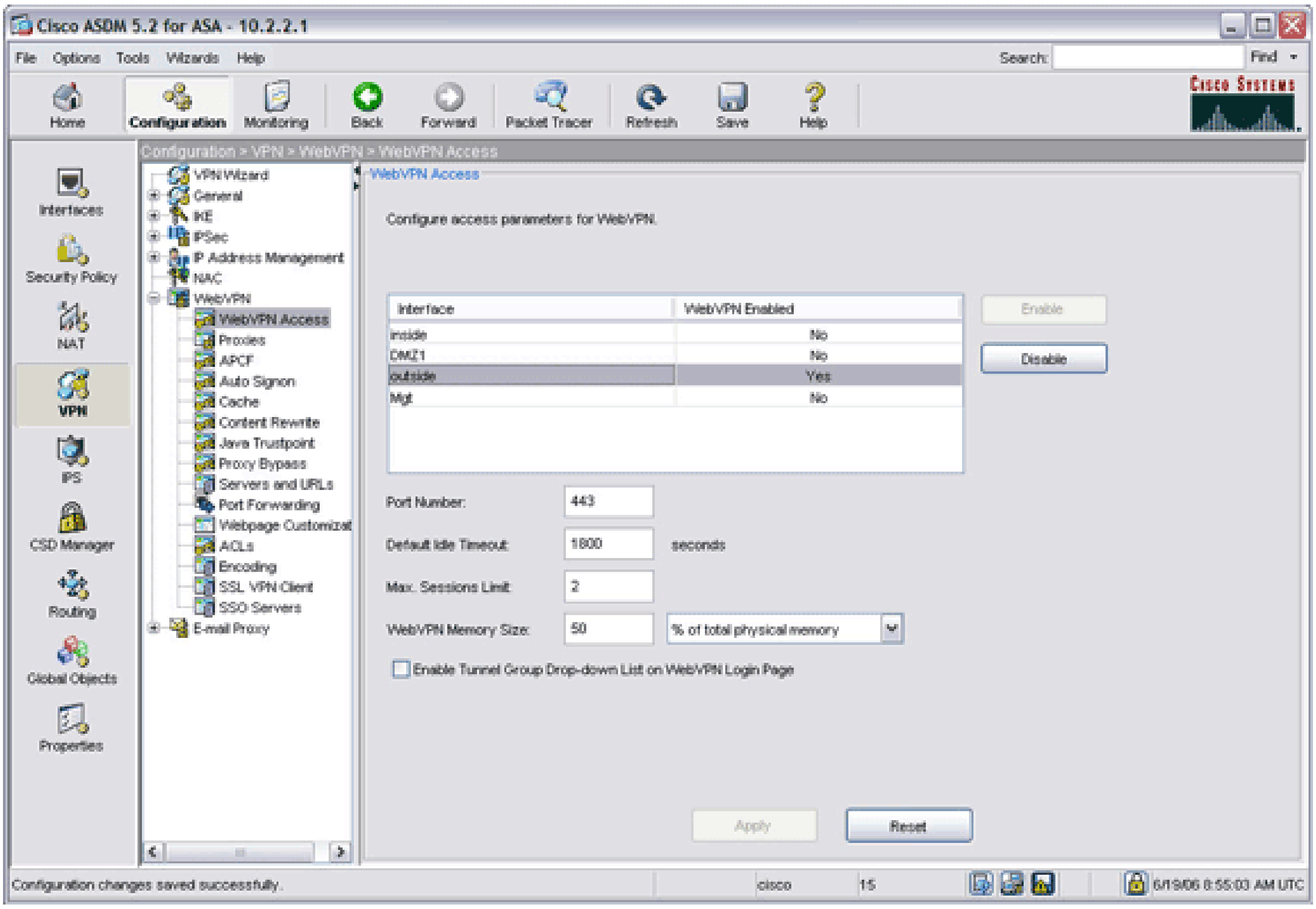
Configure SSL VPN Client parameters.

☑ Enable SSL VPN Client

SSL VPN Client Images

disk0:/sslclient-win-1.1.1.164.pkg

Note: If you receive an error message, verify that WebVPN access is enabled. In the navigation pane, expand **WebVPN**, and choose **WebVPN Access**. Select the interface for which you want to configure access, and click
Enable.


Cisco ASDM 5.2 for ASA - 10.2.2.1
File Options Tools Wizards Help
Search: Find
Home Configuration Monitoring Back Forward Packet Tracer Refresh Save Help
Interfaces Security Policy NAT VPN IPS CSD Manager Routing Global Objects Properties
VPN Wizard General IKE IPSec IP Address Management NAC WebVPN WebVPN Access Proxies APCF Auto Signon Cache Content Rewrite Java Trustpoint Proxy Bypass Servers and URLs Port Forwarding Webpage Customizat ACLs Encoding SSL VPN Client SSO Servers E-mail Proxy
Enable Disable Apply Reset
cisco 15 6/19/06 8:55:03 AM UTC

Configuration > VPN > WebVPN > WebVPN Access

WebVPN Access

Configure access parameters for WebVPN.

Interface	WebVPN Enabled
inside	No
DMZ1	No
outside	Yes
Mgt	No

Port Number: 443

Default Idle Timeout: 1800 seconds

Max. Sessions Limit: 2

WebVPN Memory Size: 50 % of total physical memory

□ Enable Tunnel Group Drop-down List on WebVPN Login Page

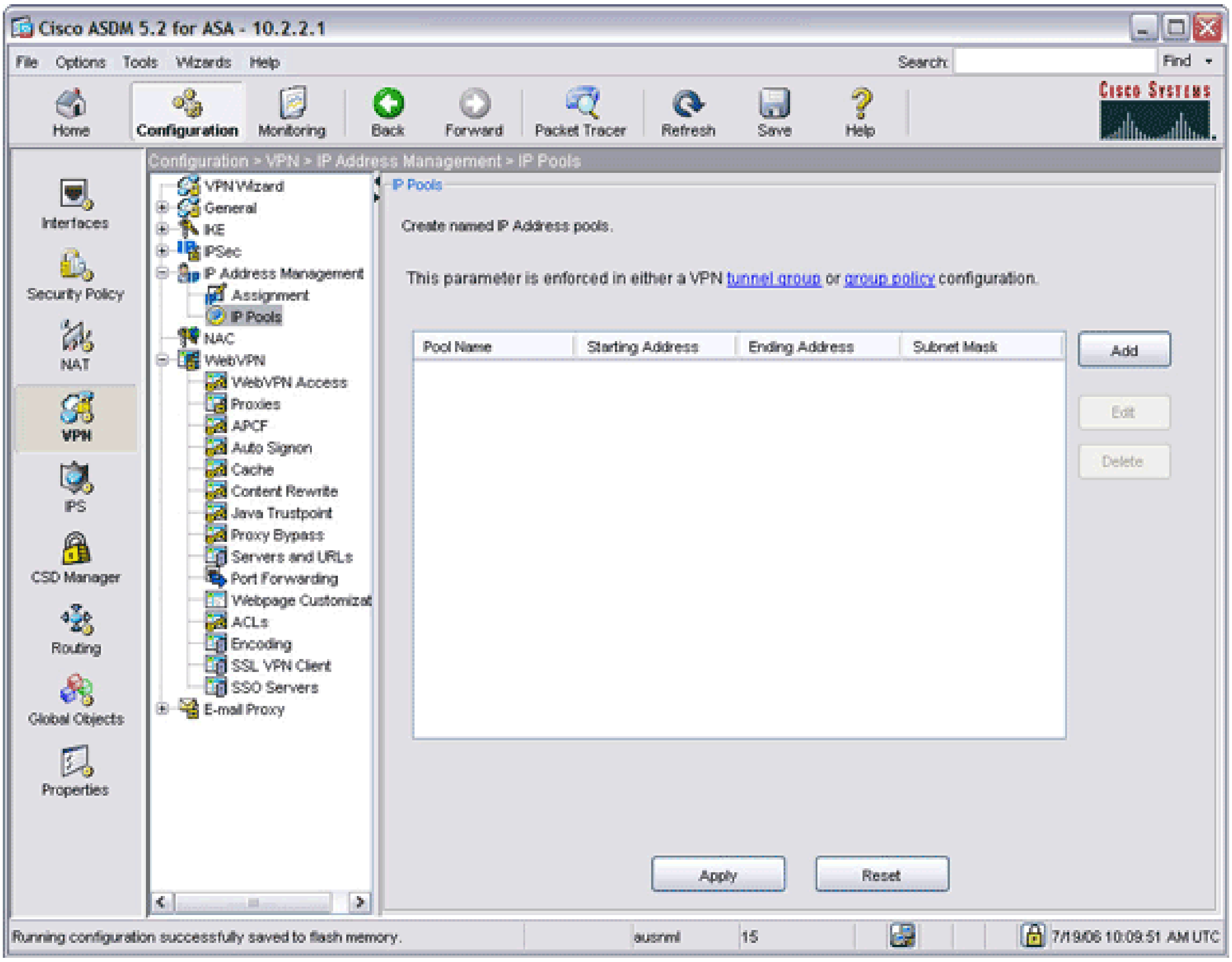
Configuration changes saved successfully.

9. Click **Save**, and then click **Yes** to accept the changes.

Step 3. Enable SVC Installation on Clients

To enable SVC installation on clients, complete these steps:

1. In the navigation pane, expand **IP Address Management**, and choose **IP Pools**.

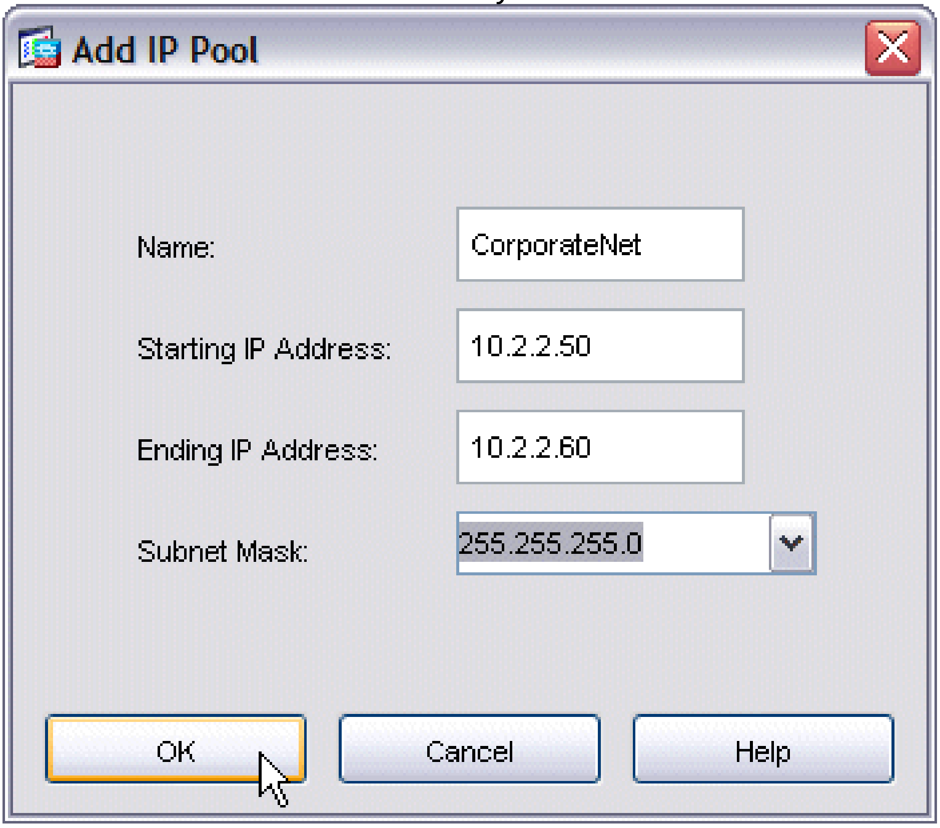


Create named IP Address pools.

This parameter is enforced in either a VPN tunnel group or group policy configuration.

Running configuration successfully saved to flash memory.

2. Click **Add**, enter values in the Name, Starting IP Address, Ending IP Address, and Subnet Mask fields. The IP addresses that you enter for the Starting IP Address and Ending IP Address fields must come from subnets on your internal network.



Name: CorporateNet

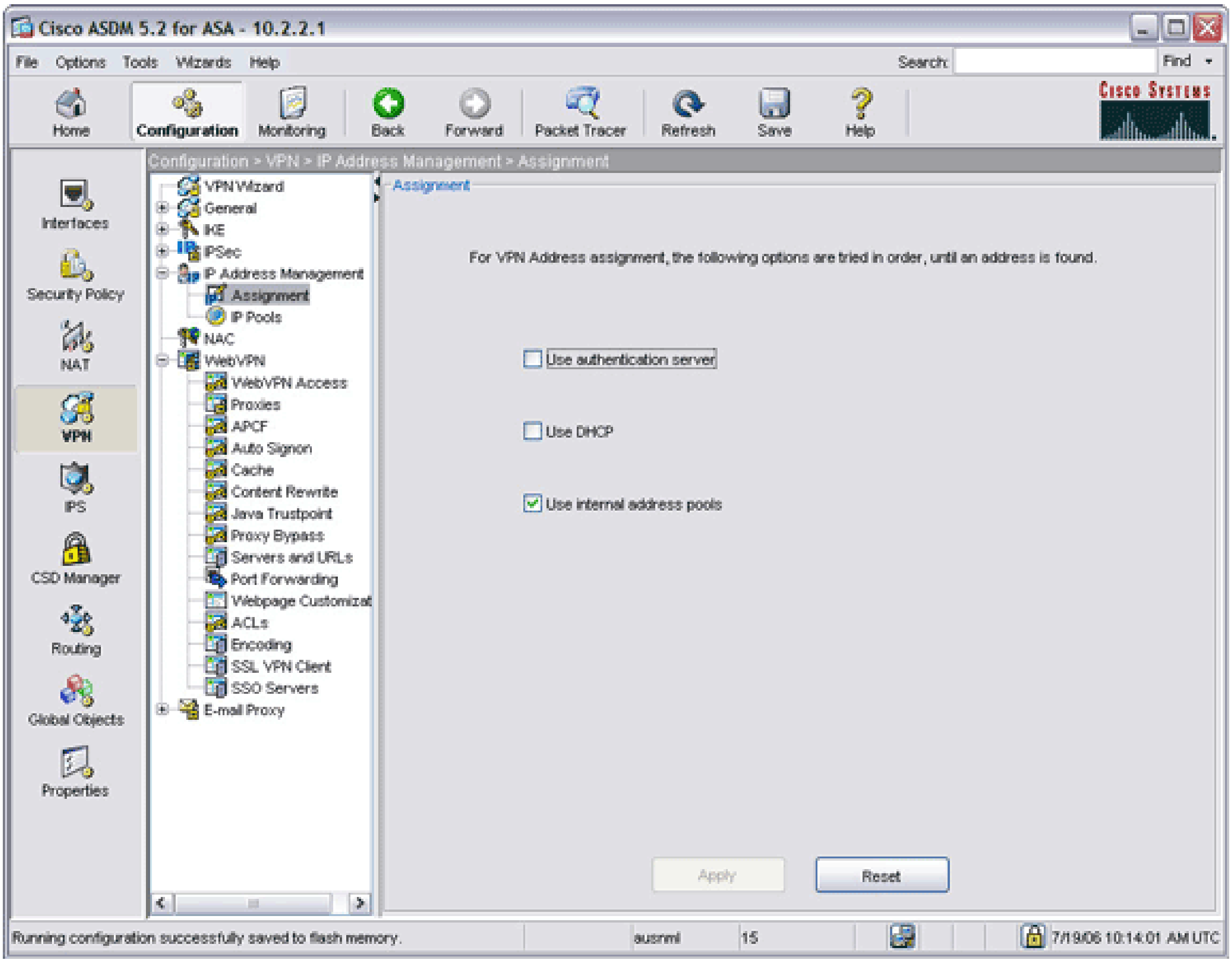
Starting IP Address: 10.2.2.50

Ending IP Address: 10.2.2.60

Subnet Mask: 255.255.255.0

3. Click **OK**, and then click **Apply**.

4. Click **Save**, and then click **Yes** to accept the changes.
5. In the navigation pane, expand **IP Address Management**, and choose **Assignment**.
6. Check the **Use internal address pools** check box, and then uncheck the **Use authentication server** and **Use DHCP** check boxes.



For VPN Address assignment, the following options are tried in order, until an address is found.

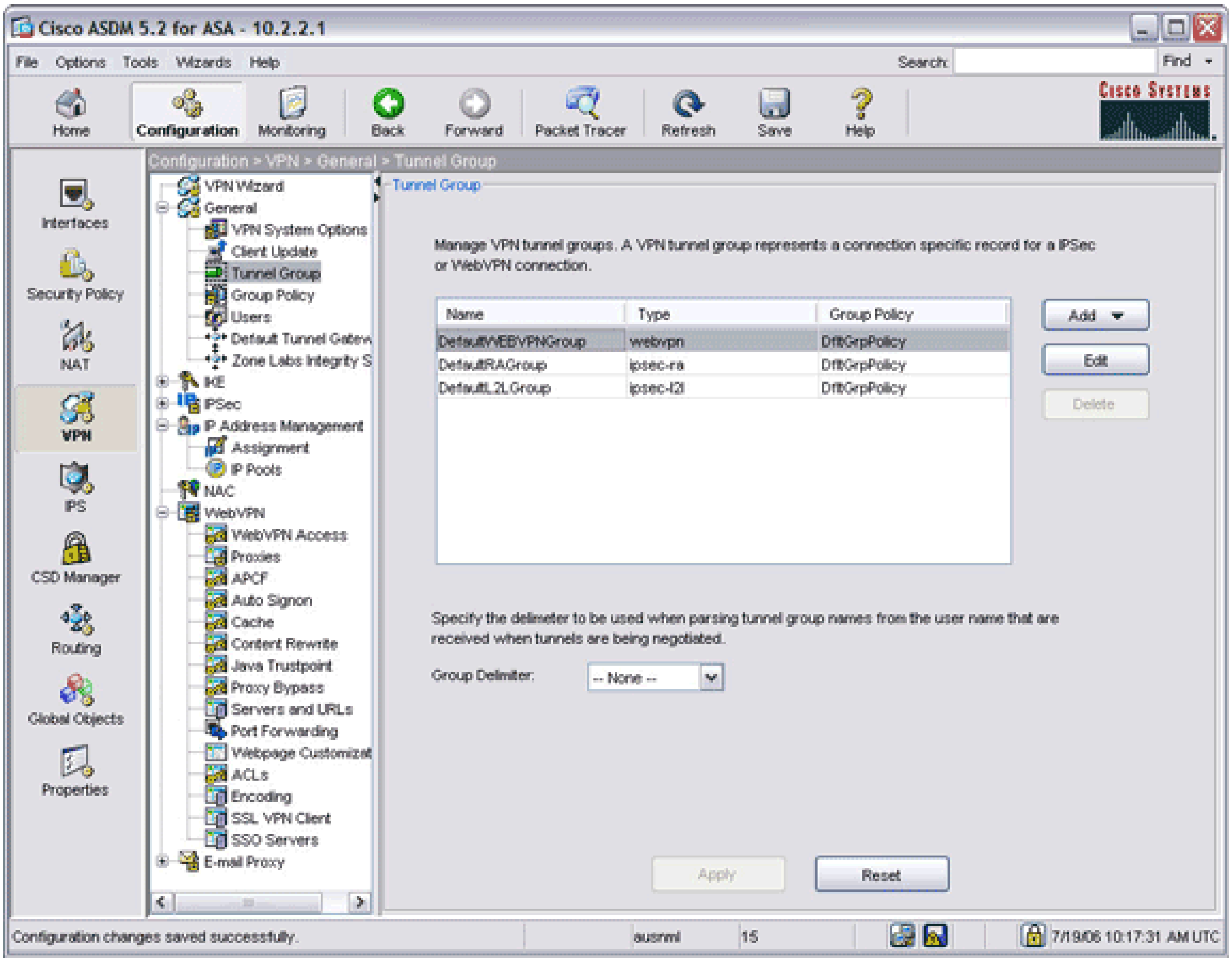
☐ Use authentication server

☐ Use DHCP

☑ Use internal address pools

Running configuration successfully saved to flash memory.

7. Click **Apply**.
8. Click **Save**, and then click **Yes** to accept the changes.
9. In the navigation pane, expand **General**, and choose **Tunnel Group**.
10. Select the tunnel group you want to manage, and click **Edit**.



Manage VPN tunnel groups. A VPN tunnel group represents a connection specific record for a IPSec or WebVPN connection.

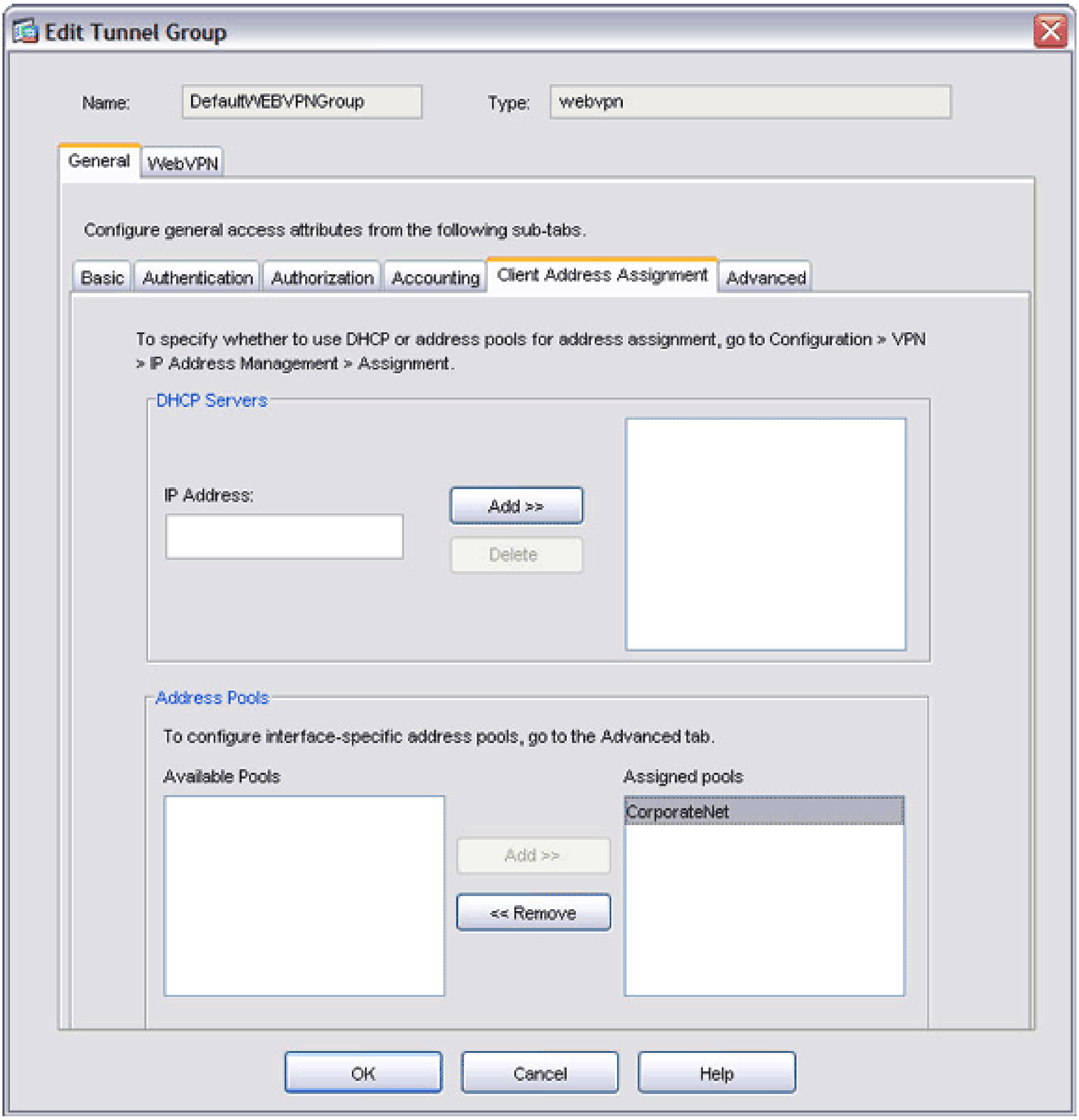
Name	Type	Group Policy
DefaultWEBVPNGroup	webvpn	DfltGrpPolicy
DefaultRAGroup	ipsec-ra	DfltGrpPolicy
DefaultL2LGroup	ipsec-l2l	DfltGrpPolicy

Specify the delimeter to be used when parsing tunnel group names from the user name that are received when tunnels are being negotiated.

Group Delimiter: -- None --

Configuration changes saved successfully. ausnml 15 7/19/06 10:17:31 AM UTC

11. Click the **Client Address Assignment** tab, and select the newly created IP address pool from the Available Pools
list.



Edit Tunnel Group

Name: DefaultWEBVPNGroup

Type: webvpn

Configure general access attributes from the following sub-tabs.

To specify whether to use DHCP or address pools for address assignment, go to Configuration > VPN > IP Address Management > Assignment.

To configure interface-specific address pools, go to the Advanced tab.

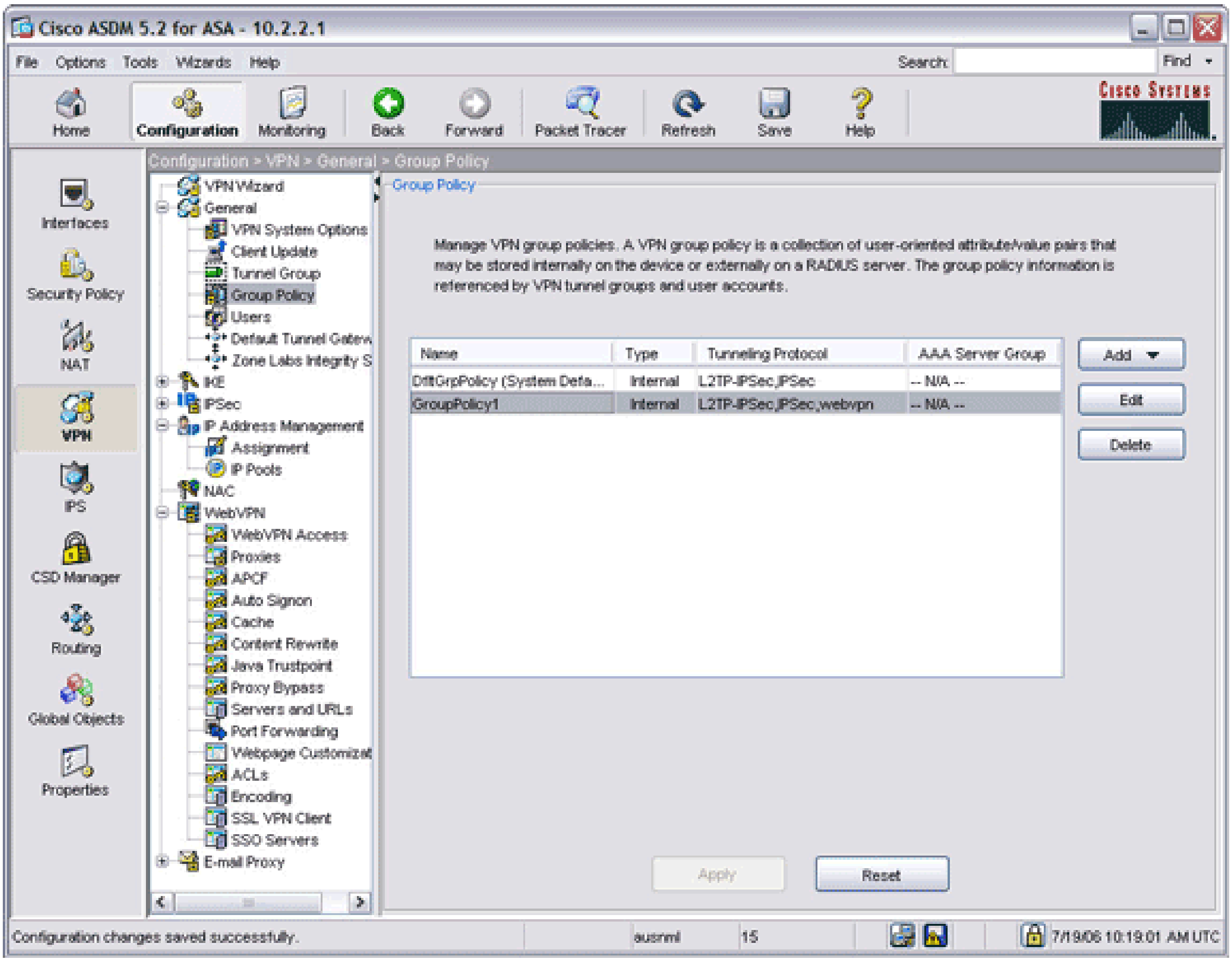
Assigned pools: CorporateNet

12. Click **Add**, and then click **OK**.
13. In the ASDM application window, click **Apply**.
14. Click **Save**, and then click **Yes** to accept the changes.

Step 4. Enable Rekey Parameter

To enable rekey parameters:

1. In the navigation pane, expand **General**, and choose **Group Policy**.
2. Select the policy you want to apply to this group of clients, and click **Edit**.

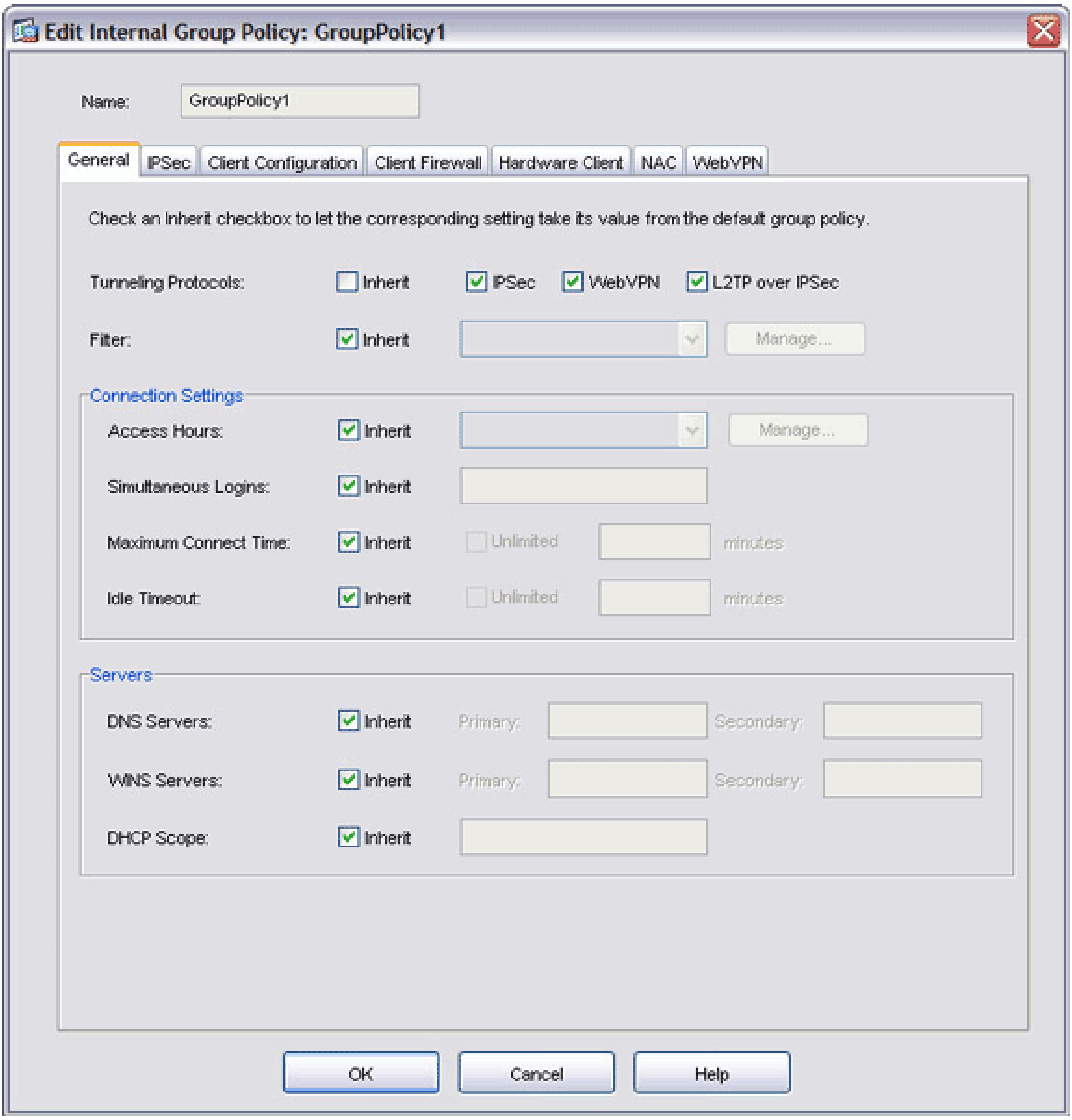


Manage VPN group policies. A VPN group policy is a collection of user-oriented attribute/value pairs that may be stored internally on the device or externally on a RADIUS server. The group policy information is referenced by VPN tunnel groups and user accounts.

Name	Type	Tunneling Protocol	AAA Server Group
DfltGrpPolicy (System Defa...	Internal	L2TP-IPSec,IPSec	-- N/A --
GroupPolicy1	Internal	L2TP-IPSec,IPSec,webvpn	-- N/A --

Configuration changes saved successfully.

3. Under the General tab, uncheck the **Tunneling Protocols Inherit** check box, and check the **WebVPN** check
   box.



Edit Internal Group Policy: GroupPolicy1

Name: GroupPolicy1

Check an Inherit checkbox to let the corresponding setting take its value from the default group policy.

Tunneling Protocols: □ Inherit ☑ IPSec ☑ WebVPN ☑ L2TP over IPSec

Filter: ☑ Inherit

Connection Settings

Access Hours: ☑ Inherit

Simultaneous Logins: ☑ Inherit

Maximum Connect Time: ☑ Inherit □ Unlimited minutes

Idle Timeout: ☑ Inherit □ Unlimited minutes

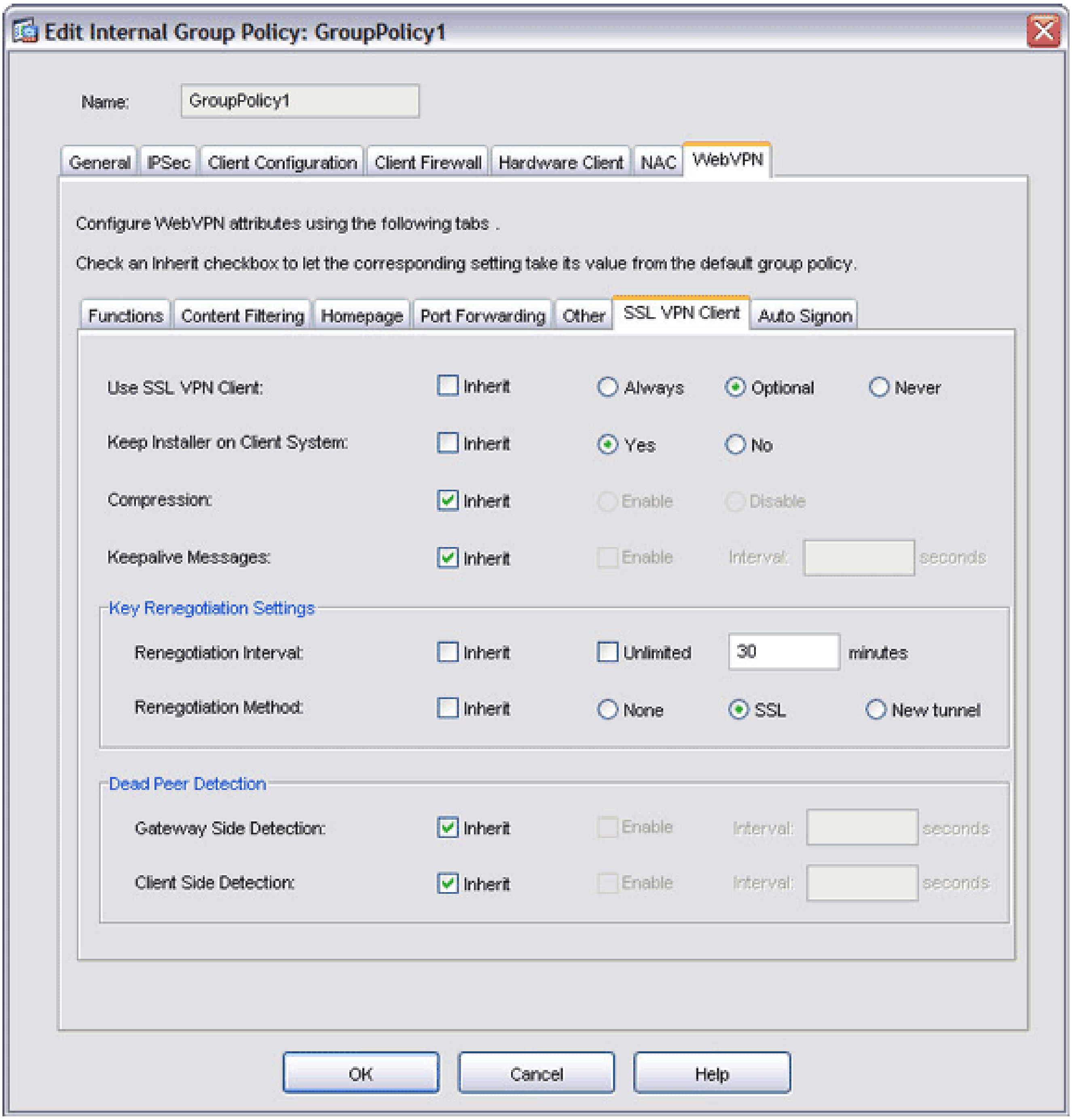
Servers

DNS Servers: ☑ Inherit Primary: Secondary:

WINS Servers: ☑ Inherit Primary: Secondary:

DHCP Scope: ☑ Inherit

4. Click the **WebVPN** tab, click the **SSLVPN Client** tab, and choose these options:For the Use SSL VPN Client option, uncheck the **Inherit** check box, and click the **Optional** radio button.This choice allows the remote client to choose whether or not to download the SVC. The *Always* choice ensures that the SVC is downloaded to the remote workstation during each SSL VPN connection.For the Keep Installer on Client System option, uncheck the **Inherit** check box, and click the **Yes** radio button.This action allows the SVC software to remain on the client machine; therefore, the ASA is not required to download the SVC software to the client each time a connection is made. This option is a good choice for remote users who often access the corporate network.For the Renegotiation Interval option, uncheck the **Inherit** box, uncheck the **Unlimited** check box, and enter the number of minutes until rekey.Security is enhanced by setting limits on the length of time a key is valid.For the Renegotiation Method option, uncheck the **Inherit** check box, and click the **SSL** radio button. Renegotiation can use the present SSL tunnel or a new tunnel created expressly for renegotiation.Your SSL VPN Client attributes should be configured as shown in this image:



Name: GroupPolicy1

Configure WebVPN attributes using the following tabs .

Check an Inherit checkbox to let the corresponding setting take its value from the default group policy.

Use SSL VPN Client: □ Inherit ○ Always ● Optional ○ Never

Keep Installer on Client System: □ Inherit ● Yes ○ No

Compression: ☑ Inherit ○ Enable ○ Disable

Keepalive Messages: ☑ Inherit □ Enable Interval: seconds

Key Renegotiation Settings

Renegotiation Interval: □ Inherit □ Unlimited 30 minutes

Renegotiation Method: □ Inherit ○ None ● SSL ○ New tunnel

Dead Peer Detection

Gateway Side Detection: ☑ Inherit □ Enable Interval: seconds

Client Side Detection: ☑ Inherit □ Enable Interval: seconds

5. Click **OK**, and then click **Apply**.
6. Click **Save**, and then click **Yes** to accept the changes.

Results

The ASDM creates these command-line configurations:

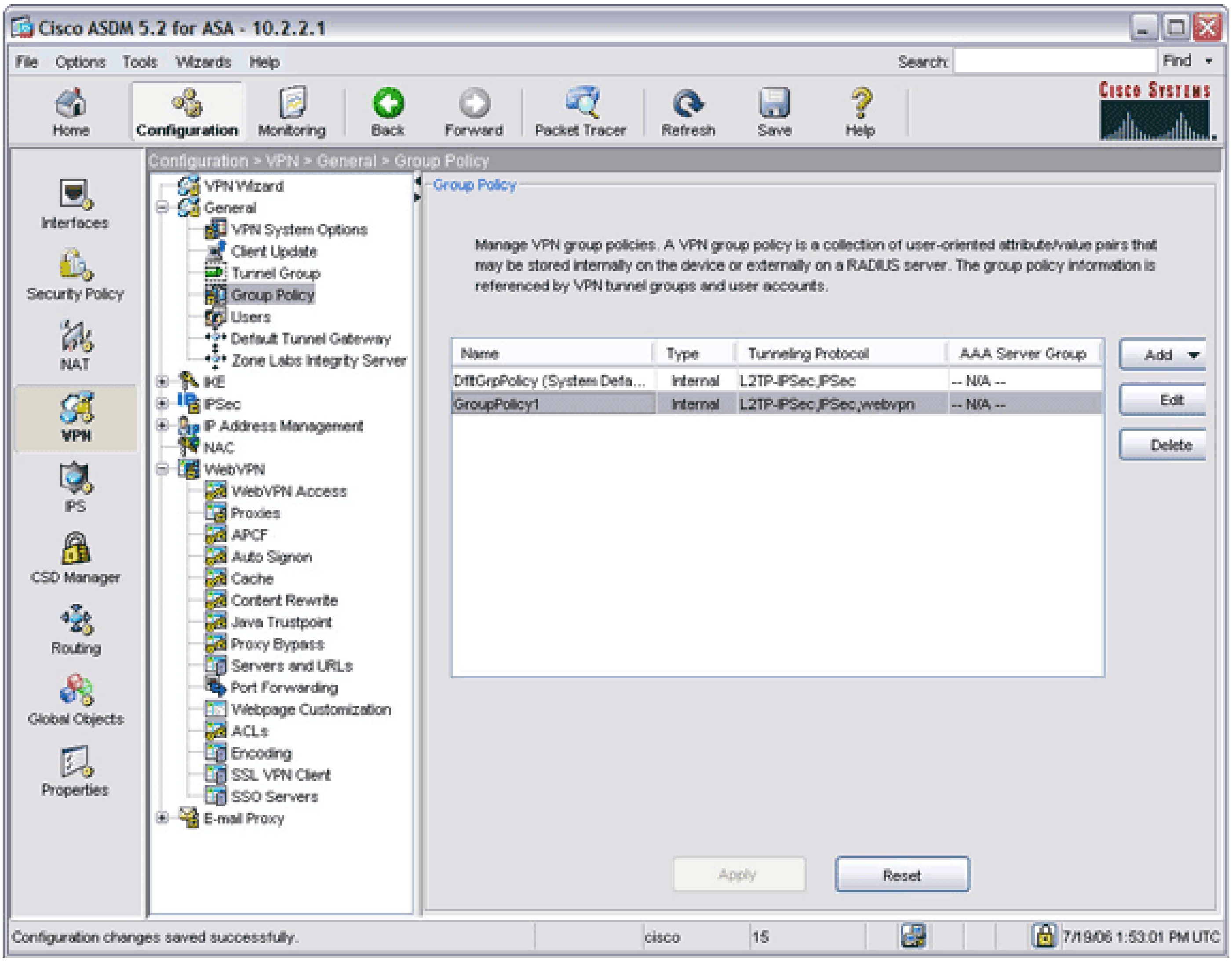
ciscoasa

```
ciscoasa(config)#show run ASA Version 7.2(1) ! hostname
ciscoasa domain-name cisco.com enable password
9jNfZuG3TC5tCVH0 encrypted names dns-guard ! interface
Ethernet0/0 nameif outside security-level 0 ip address
172.22.1.160 255.255.255.0 ! interface Ethernet0/1
nameif inside security-level 100 ip address 10.2.2.1
255.255.255.0 passwd 2KFQnbNIdI.2KYOU encrypted ftp mode
passive dns server-group DefaultDNS domain-name
cisco.com no pager logging enable logging asdm
informational mtu outside 1500 mtu inside 1500 mtu DMZ1
```

```
1500 mtu Mgt 1500 ip local pool CorporateNet 10.2.2.50-
10.2.2.60 mask 255.255.255.0 icmp permit any outside
asdm image disk0:/asdm521.bin no asdm history enable arp
timeout 14400 global (outside) 1 interface nat (inside)
1 0 0 route outside 0.0.0.0 0.0.0.0 172.22.1.1 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 mgcp-pat 0:05:00
timeout sip 0:30:00 sip_media 0:02:00 sip-invite 0:03:00
sip-disconnect 0:02:00 timeout uauth 0:05:00 absolute !
!--- Group Policy Statements group-policy GroupPolicy1
internal group-policy GroupPolicy1 attributes vpn-
tunnel-protocol IPSec l2tp-ipsec webvpn !--- Enable the
SVC for WebVPN webvpn svc enable svc keep-installer
installed svc rekey time 30 svc rekey method ssl !
username cisco password 53QNetqK.Kqqfshe encrypted
privilege 15 ! http server enable http 10.2.2.0
255.255.255.0 inside ! no snmp-server location no snmp-
server contact snmp-server enable traps snmp
authentication linkup linkdown coldstart !--- Tunnel
Group and Group Policy using the defaults here tunnel-
group DefaultWEBVPNGroup general-attributes address-pool
CorporateNet default-group-policy GroupPolicy1 ! no vpn-
addr-assign aaa no vpn-addr-assign dhcp ! telnet timeout
5 ssh 172.22.1.0 255.255.255.0 outside ssh timeout 5
console timeout 0 ! class-map inspection_default match
default-inspection-traffic ! policy-map type inspect dns
preset_dns_map parameters message-length maximum 512
policy-map global_policy class inspection_default
inspect dns preset_dns_map inspect ftp inspect h323 h225
inspect h323 ras inspect rsh inspect rtsp inspect esmtp
inspect sqlnet inspect skinny inspect sunrpc inspect
xdmcp inspect sip inspect netbios inspect tftp !
service-policy global_policy global !--- Enable webvpn
and the select the SVC client webvpn enable outside svc
image disk0:/sslclient-win-1.1.1.164.pkg 1 svc enable !-
-- Provide list for access to resources url-list
ServerList "E-Commerce Server1" http://10.2.2.2 1 url-
list ServerList "BrowseServer" cifs://10.2.2.2 2 tunnel-
group-list enable prompt hostname context
Cryptochecksum:80a1890a95580dca11e3aee200173f5f : end
```

Customize Your Configuration

The procedures described in Configure the SSL VPN Client on an ASA use the ASA default names for group policy (*GroupPolicy1*) and tunnel group (*DefaultWebVPNGroup*) as shown in this image:



Manage VPN group policies. A VPN group policy is a collection of user-oriented attribute/value pairs that may be stored internally on the device or externally on a RADIUS server. The group policy information is referenced by VPN tunnel groups and user accounts.

Name	Type	Tunneling Protocol	AAA Server Group
DfltGrpPolicy (System Defa...	Internal	L2TP-IPSec,IPSec	-- N/A --
GroupPolicy1	Internal	L2TP-IPSec,IPSec,webvpn	-- N/A --

Configuration changes saved successfully. cisco 15 7/19/06 1:53:01 PM UTC

This procedure describes how to create your own custom group policies and tunnel groups and link them together in accordance with the security policies of your organization.

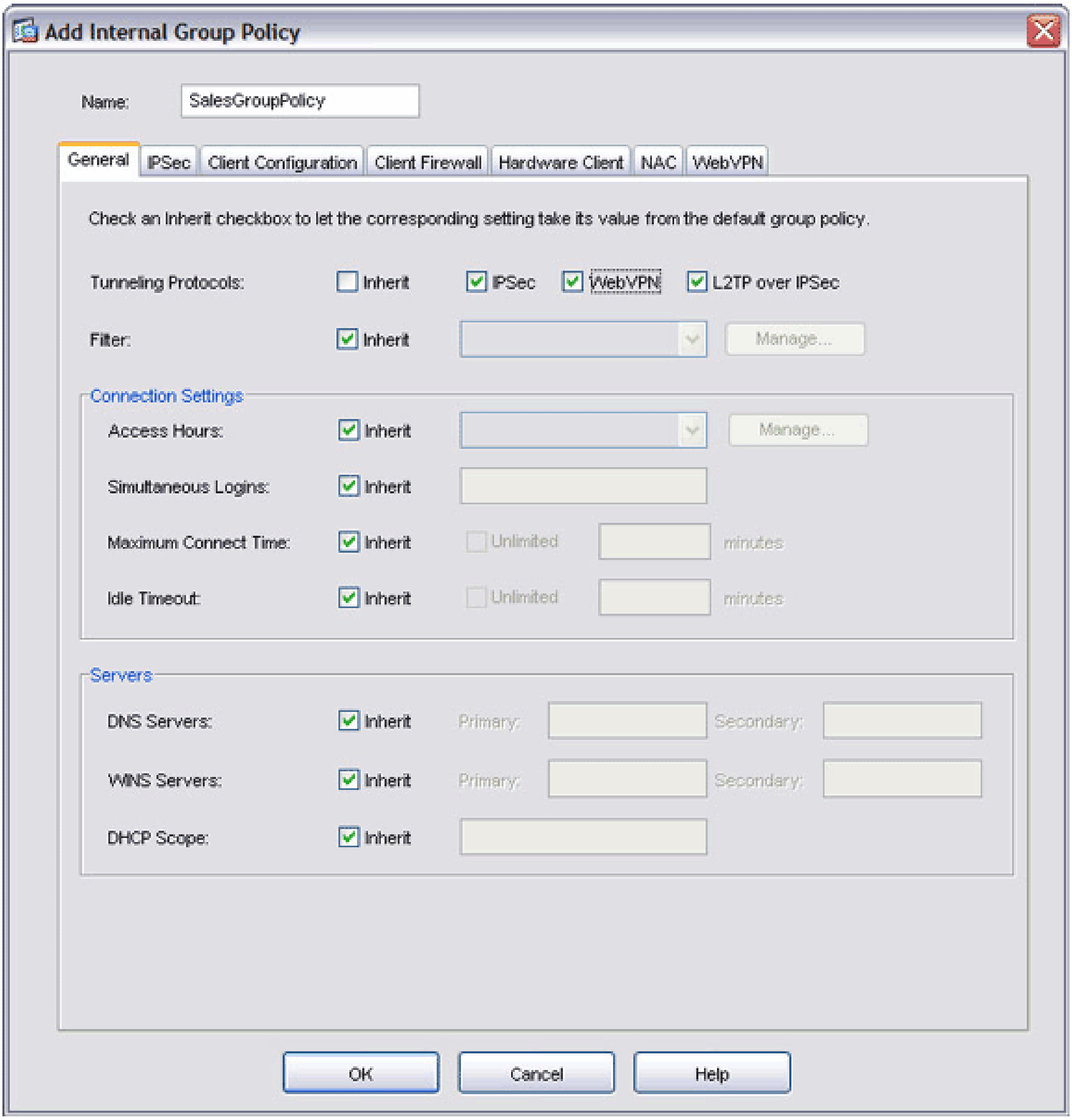
To customize your configuration, complete these steps:

1. Create a Custom Group Policy
2. Create a Custom Tunnel Group
3. Create a User and Add That User to Your Custom Group Policy

Step 1. Create a Custom Group Policy

To create a custom group policy, complete these steps:

1. Click **Configuration**, and then click **VPN**.
2. Expand **General**, and choose **Group Policy**.
3. Click **Add**, and choose **Internal Group Policy**.
4. In the Name field, enter a name for your group policy.In this example, the group policy name has been changed to
   SalesGroupPolicy.



Name: SalesGroupPolicy

Check an Inherit checkbox to let the corresponding setting take its value from the default group policy.

Tunneling Protocols: □ Inherit ☑ IPSec ☑ WebVPN ☑ L2TP over IPSec

Filter: ☑ Inherit

Connection Settings

Access Hours: ☑ Inherit

Simultaneous Logins: ☑ Inherit

Maximum Connect Time: ☑ Inherit □ Unlimited minutes

Idle Timeout: ☑ Inherit □ Unlimited minutes

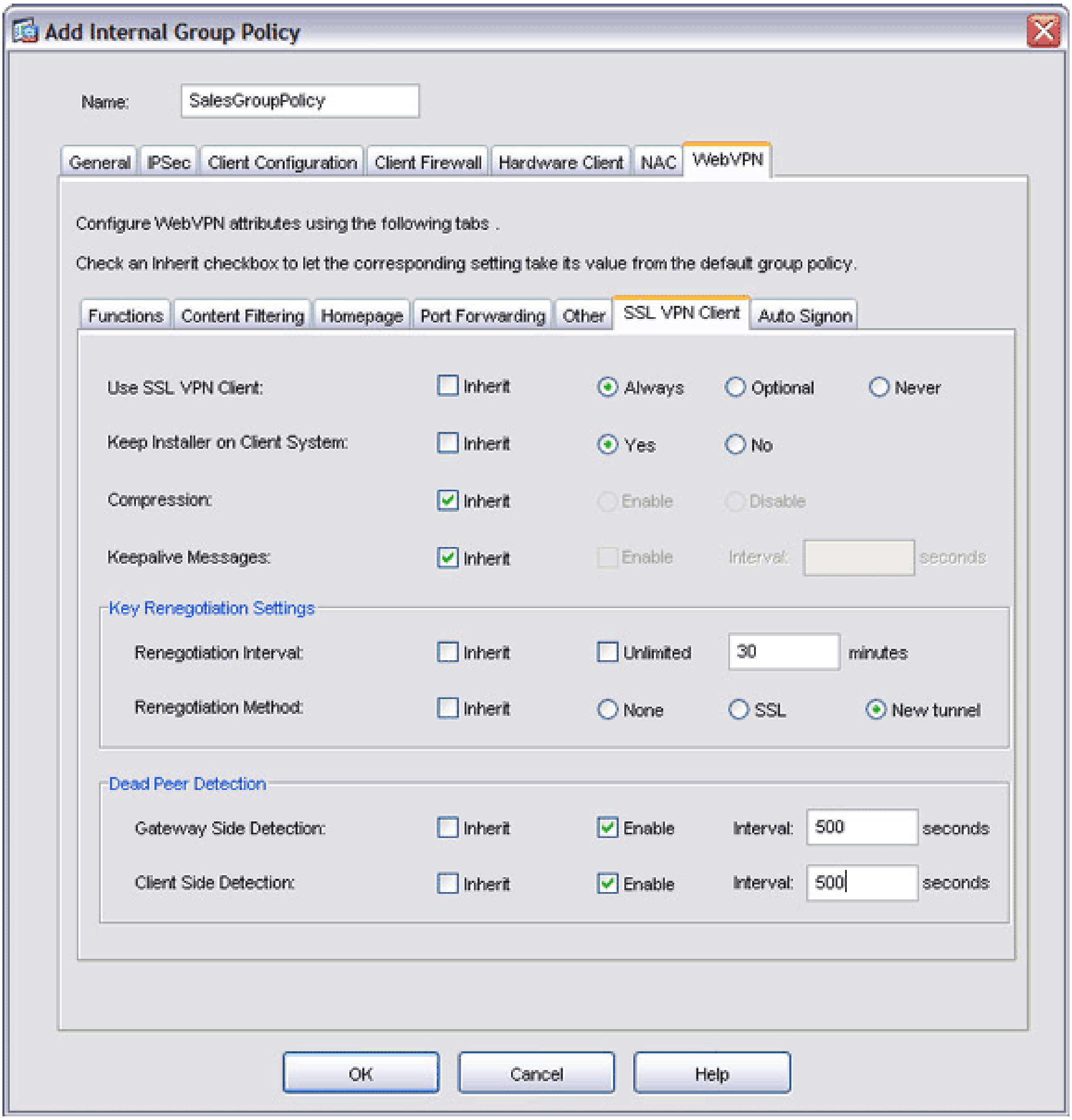
Servers

DNS Servers: ☑ Inherit Primary: Secondary:

WINS Servers: ☑ Inherit Primary: Secondary:

DHCP Scope: ☑ Inherit

5. Under the General tab, uncheck the **Tunneling Protocols Inherit** check box, and check the **WebVPN** check box.
6. Click the **WebVPN** tab, and then click the **SSLVPN Client** tab.In this dialog box, you can also make choices for the behavior of the SSL VPN Client.



Name: SalesGroupPolicy

Configure WebVPN attributes using the following tabs .

Check an Inherit checkbox to let the corresponding setting take its value from the default group policy.

Use SSL VPN Client: □ Inherit ● Always ○ Optional ○ Never

Keep Installer on Client System: □ Inherit ● Yes ○ No

Compression: ☑ Inherit ○ Enable ○ Disable

Keepalive Messages: ☑ Inherit □ Enable Interval: seconds

Key Renegotiation Settings

Renegotiation Interval: □ Inherit □ Unlimited 30 minutes

Renegotiation Method: □ Inherit ○ None ○ SSL ● New tunnel

Dead Peer Detection

Gateway Side Detection: □ Inherit ☑ Enable Interval: 500 seconds

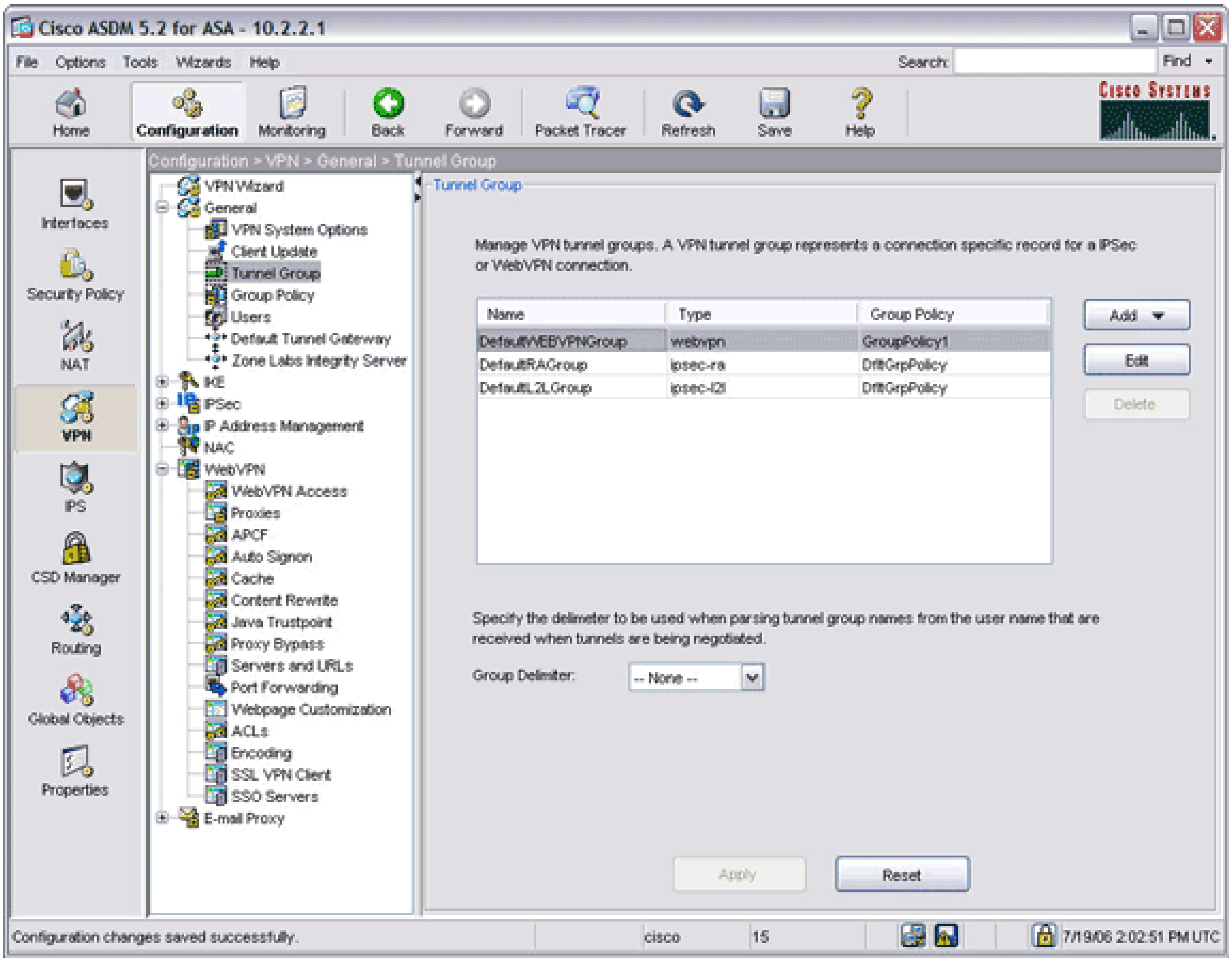
Client Side Detection: □ Inherit ☑ Enable Interval: 500 seconds

7. Click **OK**, and then click **Apply**.
8. Click **Save**, and then click **Yes** to accept the changes.

Step 2. Create a Custom Tunnel Group

To create a custom tunnel group, complete these steps:

1. Click the **Configuration** button, and then click **VPN**.
2. Expand **General**, and choose **Tunnel Group**.



Configuration > VPN > General > Tunnel Group

Tunnel Group

Manage VPN tunnel groups. A VPN tunnel group represents a connection specific record for a IPSec or WebVPN connection.

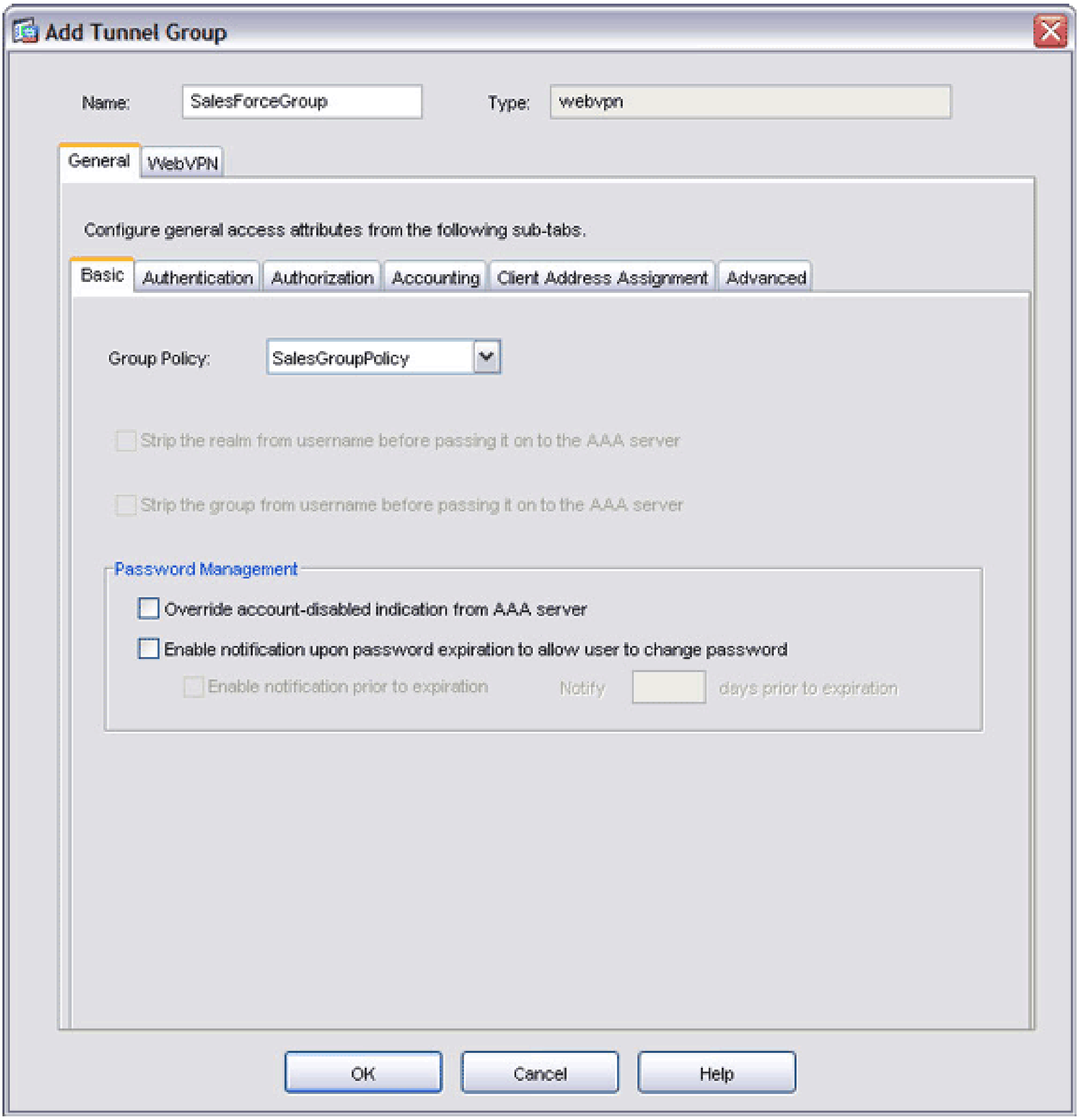
Name	Type	Group Policy
DefaultWEBVPNGroup	webvpn	GroupPolicy1
DefaultRAGroup	ipsec-ra	DfltGrpPolicy
DefaultL2LGroup	ipsec-l2l	DfltGrpPolicy

Specify the delimeter to be used when parsing tunnel group names from the user name that are received when tunnels are being negotiated.

Group Delimiter: -- None --

Configuration changes saved successfully. cisco 15 7/19/06 2:02:51 PM UTC

3. Click **Add**, and choose **WebVPN Access**.
4. In the Name field, enter a name for your tunnel group.In this example, the tunnel group name has been changed to *SalesForceGroup*.
5. Click the **Group Policy** drop-down arrow, and choose your newly created group policy.Your group policy and tunnel group are now
   linked.



Add Tunnel Group

Name: SalesForceGroup

Type: webvpn

Configure general access attributes from the following sub-tabs.

Group Policy: SalesGroupPolicy

□ Strip the realm from username before passing it on to the AAA server

□ Strip the group from username before passing it on to the AAA server

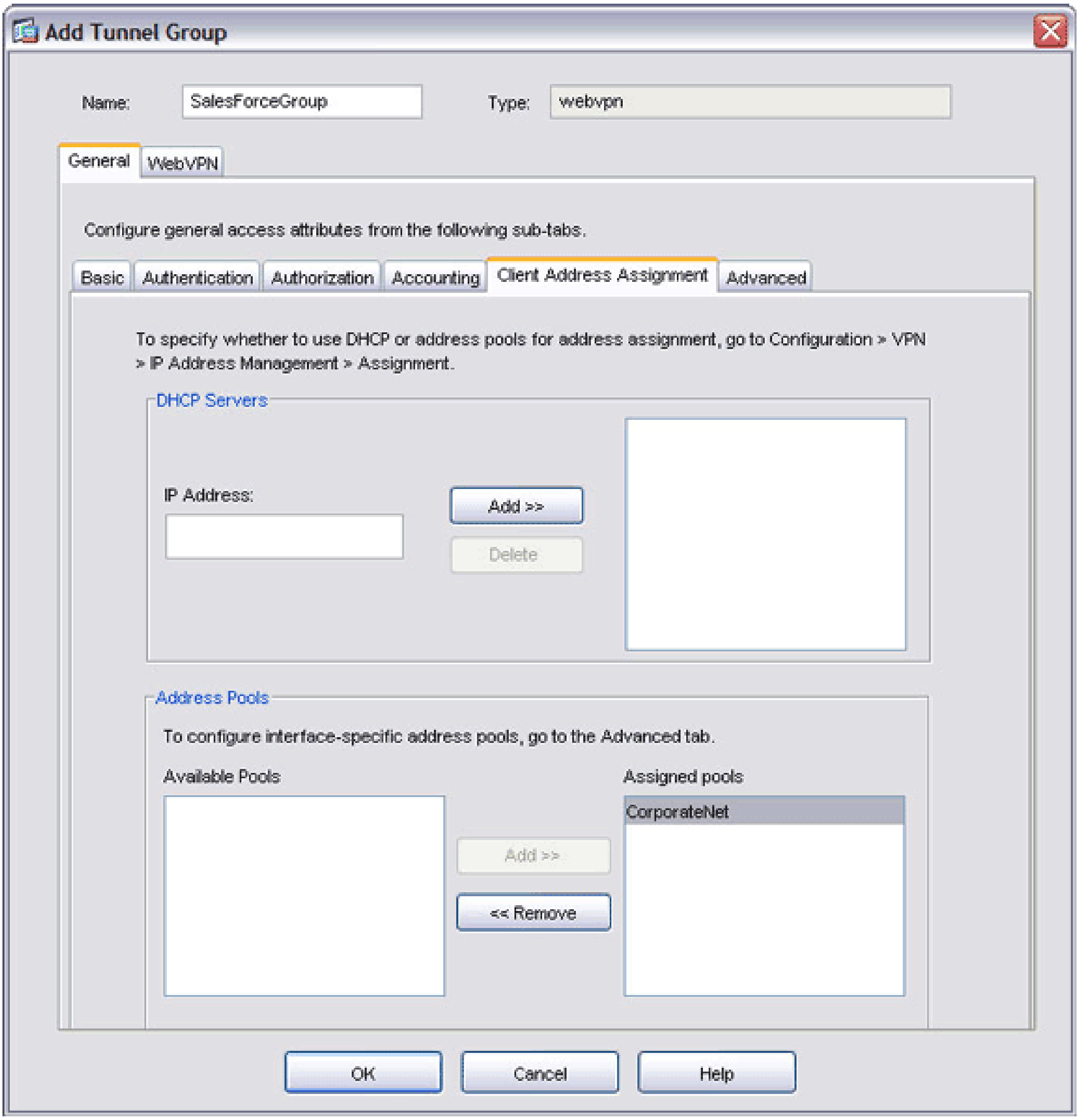
Password Management

□ Override account-disabled indication from AAA server

□ Enable notification upon password expiration to allow user to change password

□ Enable notification prior to expiration Notify days prior to expiration

6. Click the **Client Address Assignment** tab, and enter DHCP Server information or select from a locally created IP
   pool.



Name: SalesForceGroup

Type: webvpn

Configure general access attributes from the following sub-tabs.

To specify whether to use DHCP or address pools for address assignment, go to Configuration > VPN > IP Address Management > Assignment.

To configure interface-specific address pools, go to the Advanced tab.

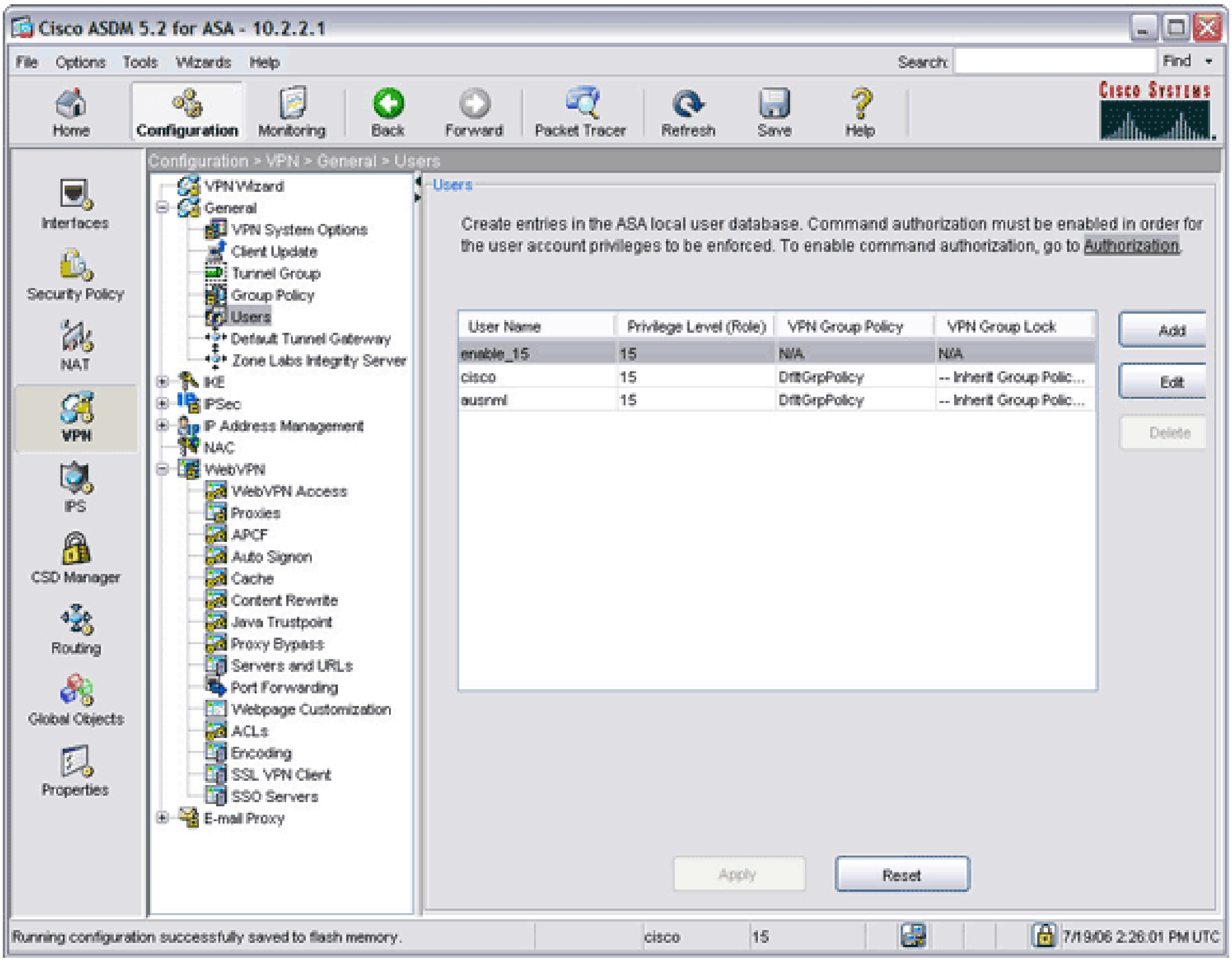
Assigned pools: CorporateNet

7. Click **OK**, and then click **Apply**.
8. Click **Save**, and then click **Yes** to accept the changes.

Step 3. Create a User and Add That User to Your Custom Group Policy

To create a user and add that user to your custom group policy, complete these steps:

1. Click **Configuration**, and then click **VPN**.
2. Expand **General**, and choose **Users**.

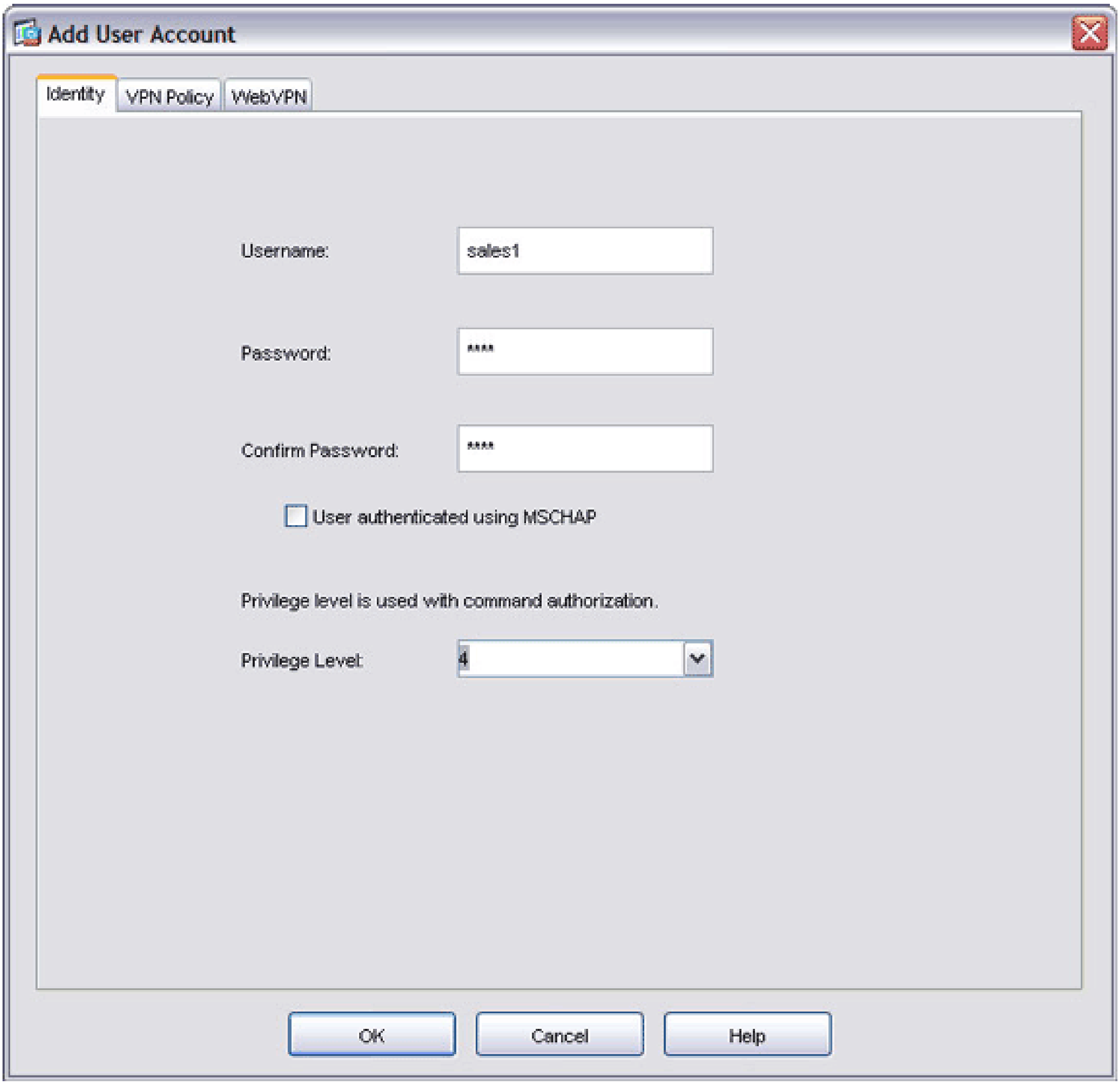


Create entries in the ASA local user database. Command authorization must be enabled in order for the user account privileges to be enforced. To enable command authorization, go to Authorization.

User Name	Privilege Level (Role)	VPN Group Policy	VPN Group Lock
enable_15	15	N/A	N/A
cisco	15	DfltGrpPolicy	-- Inherit Group Polic...
ausnml	15	DfltGrpPolicy	-- Inherit Group Polic...

Running configuration successfully saved to flash memory. cisco 15 7/19/06 2:26:01 PM UTC

3. Click **Add**, and enter user name and password information.



Username: sales1

Password: ****

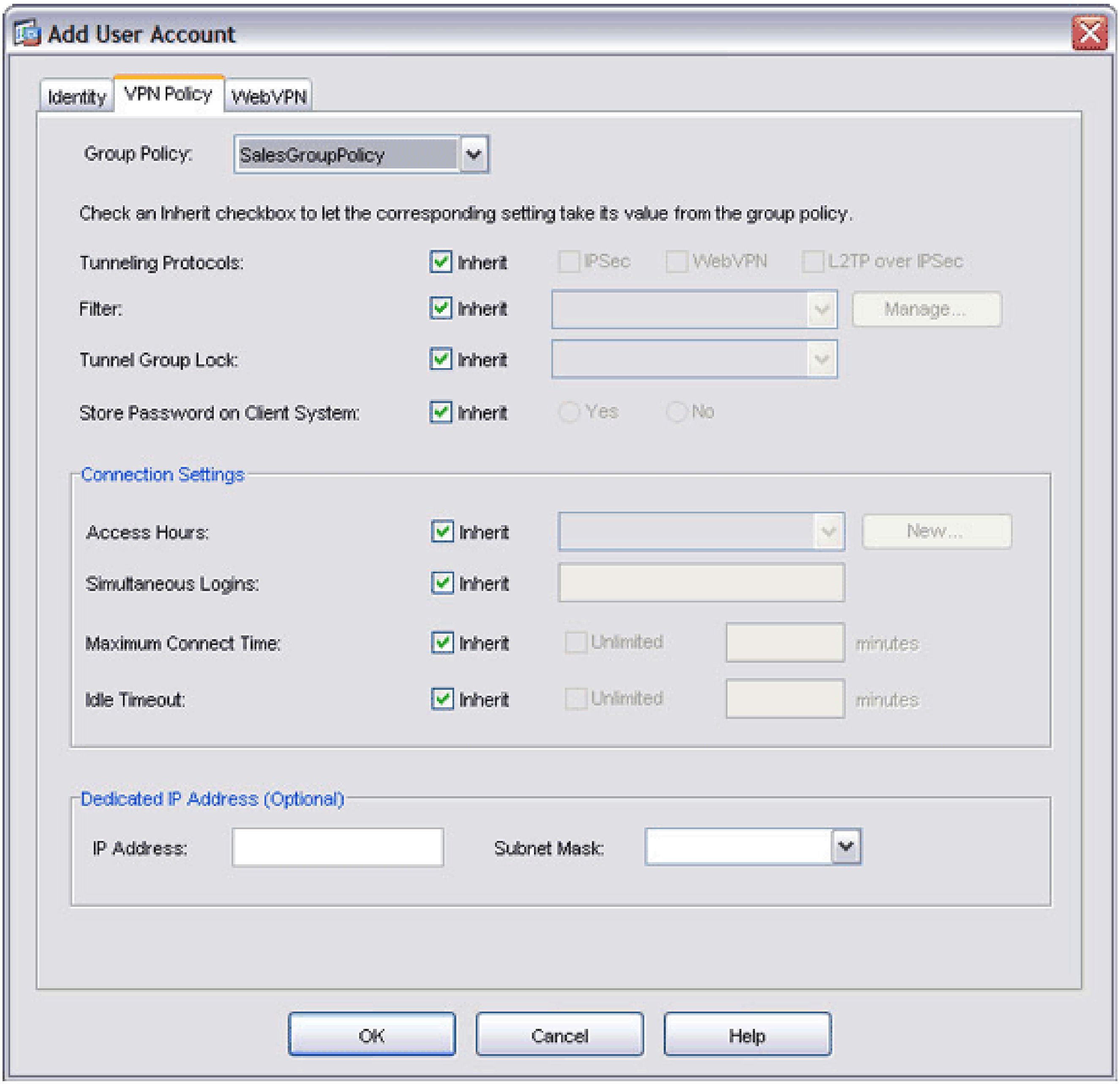
Confirm Password: ****

□ User authenticated using MSCHAP

Privilege level is used with command authorization.

Privilege Level: 4

4. Click the **VPN Policy** tab. Ensure that your newly created group policy displays in the Group Policy field.This user inherits all the characteristics of the new group policy.



Group Policy: SalesGroupPolicy

Check an Inherit checkbox to let the corresponding setting take its value from the group policy.

Tunneling Protocols: ☑ Inherit □ IPSec □ WebVPN □ L2TP over IPSec

Filter: ☑ Inherit Manage...

Tunnel Group Lock: ☑ Inherit

Store Password on Client System: ☑ Inherit ○ Yes ○ No

Connection Settings

Access Hours: ☑ Inherit New...

Simultaneous Logins: ☑ Inherit

Maximum Connect Time: ☑ Inherit □ Unlimited minutes

Idle Timeout: ☑ Inherit □ Unlimited minutes

Dedicated IP Address (Optional)

IP Address: Subnet Mask:

5. Click **OK**, and then click **Apply**.
6. Click **Save**, and then click **Yes** to accept the changes.

Verify

Use this section to confirm that your configuration works properly.

Authentication

Authentication for SSL VPN clients is accomplished using one of these methods:

- Cisco Secure ACS Server (Radius)
- NT Domain
- Active Directory
- One-Time Passwords
- Digital Certificates
- Smartcards

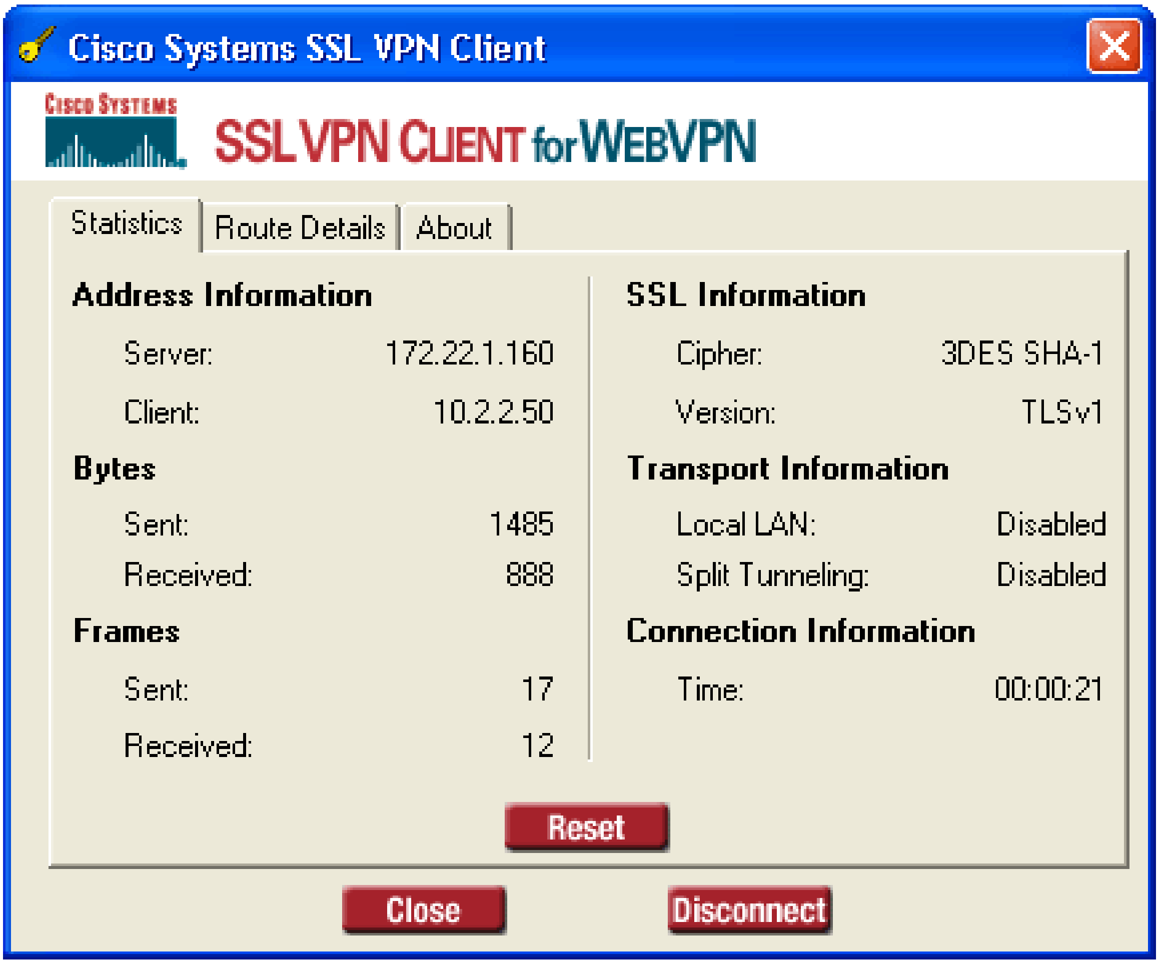
- Local AAA Authentication

This documentation uses a local account created on the ASA device.

Note: If an Adaptive Security Appliance has multiple trustpoints that share the same CA, only one of these trustpoints that share the CA can be used to validate user certificates.

Configuration

To connect to the ASA with a remote client, enter **https://ASA_outside_address** into the address field of an SSL-enabled Web browser. *ASA_outside_address* is the outside IP address of your ASA. If your configuration is successful, the Cisco Systems SSL VPN Client window appears.



Address Information

Server: 172.22.1.160

Client: 10.2.2.50

Bytes

Sent: 1485

Received: 888

Frames

Sent: 17

Received: 12

SSL Information

Cipher: 3DES SHA-1

Version: TLSv1

Transport Information

Local LAN: Disabled

Split Tunneling: Disabled

Connection Information

Time: 00:00:21

Note: The Cisco Systems SSL VPN Client window appears only after you accept the certificate from the ASA and after the SSL VPN Client is downloaded to the remote station. If the window does not appear, make sure it is not minimized.

Commands

Several **show** commands are associated with WebVPN. You can execute these commands at the command-line interface (CLI) to show statistics and other information. For detailed information about **show** commands, refer to Verifying WebVPN Configurations.

Note: The Output Interpreter Tool (registered customers only) (OIT) supports certain **show** commands. Use the OIT to view an analysis of **show** command output.

Troubleshoot

Use this section to troubleshoot your configuration.

SVC Error

Problem

You might receive this error message during the authentication:

```
"The SSl VPN connection to the remote peer was disrupted
and could not be automatically re-estabilished. A new connection requires
re-authentication and must be restarted manually. Close all sensitive networked
applications."
```

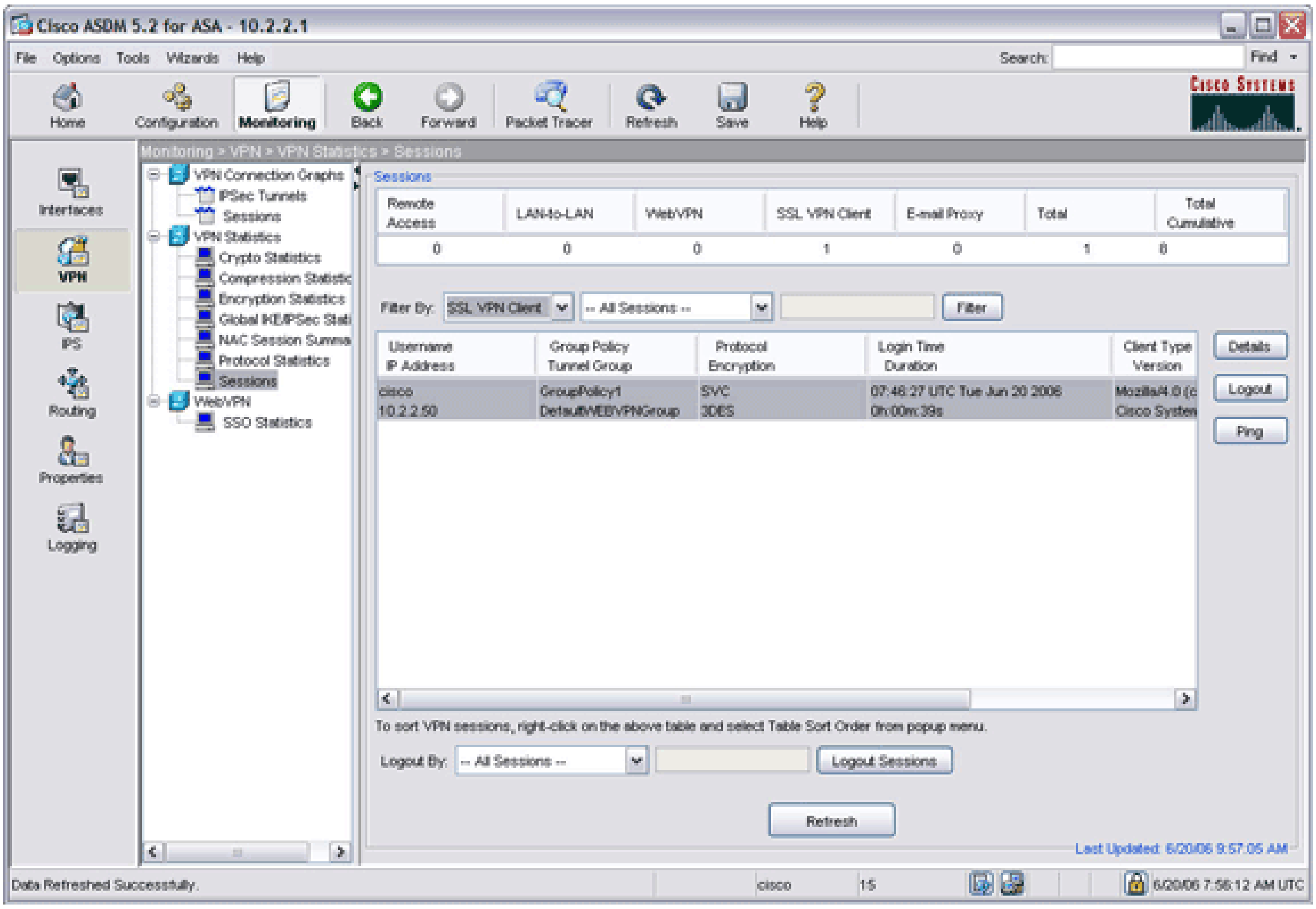
Solution

If a firewall service is running on your PC, it can disrupt the authentication. Stop the service and reconnect the client.

Has the SVC established a secure session with the ASA?

To ensure the SSL VPN Client has established a secure session with the ASA:

1. Click **Monitoring**.
2. Expand **VPN Statistics**, and choose **Sessions**.
3. From the Filter By drop-down menu, choose **SSL VPN Client**, and click the **Filter** button.Your configuration should appear in the sessions list.



Remote Access	LAN-to-LAN	WebVPN	SSL VPN Client	E-mail Proxy	Total	Total Cumulative
0	0	0	1	0	1	8

Filter By: SSL VPN Client -- All Sessions --

Username IP Address	Group Policy Tunnel Group	Protocol Encryption	Login Time Duration	Client Type Version
cisco 10.2.2.50	GroupPolicy1 DefaultWEBVPNGroup	SVC 3DES	07:46:27 UTC Tue Jun 20 2006 0h:00m:39s	Mozilla/4.0 (c Cisco System

To sort VPN sessions, right-click on the above table and select Table Sort Order from popup menu.

Logout By: -- All Sessions --

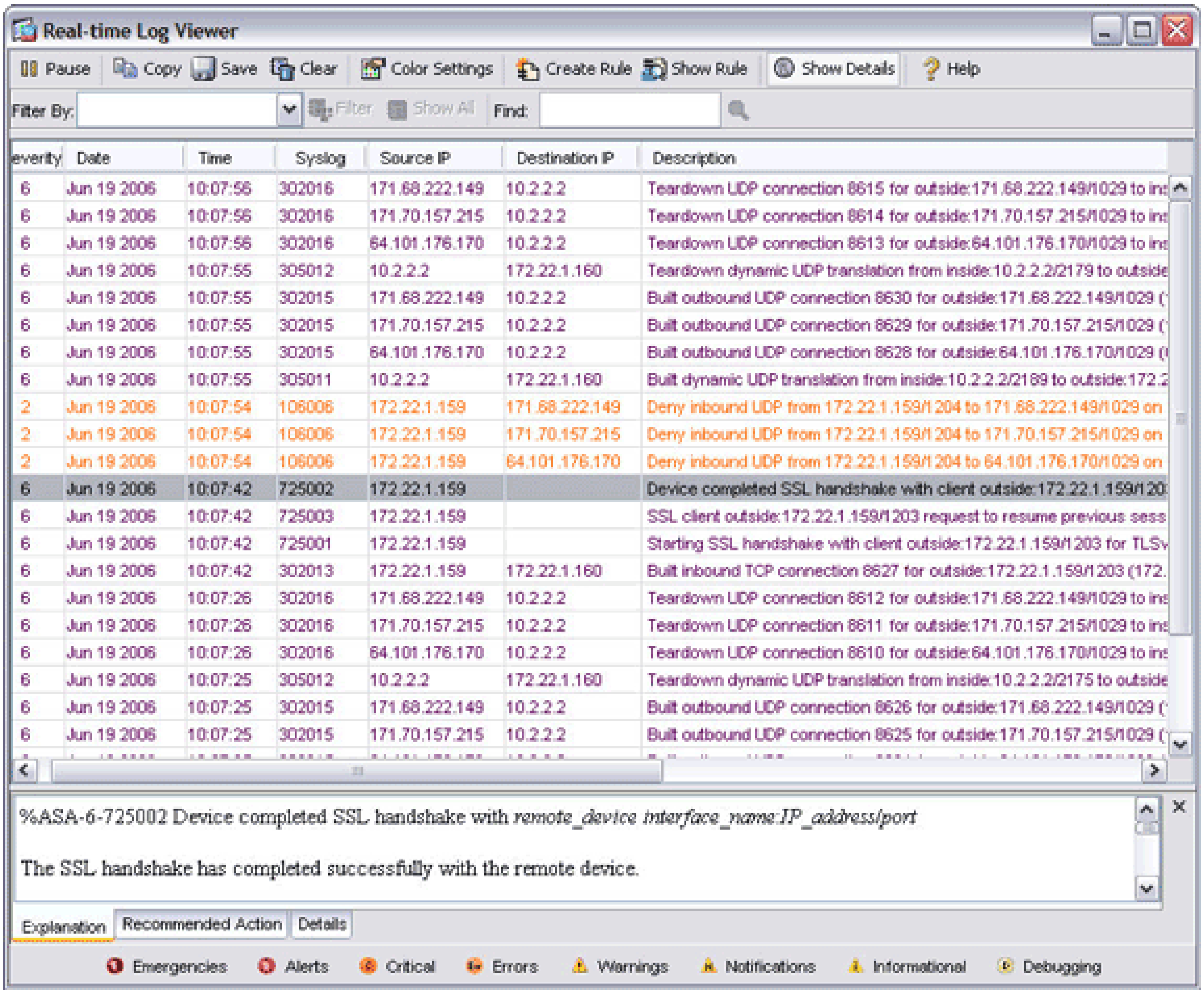
Last Updated: 6/20/06 9:57:05 AM

Data Refreshed Successfully. cisco 15 6/20/06 7:56:12 AM UTC

Are secure sessions being established and terminated successfully?

You can view the real-time logs to ensure sessions are being established and terminated successfully. To view session logs:

1. Click **Monitoring**, and then click **Logging**.
2. Choose the **Real-time Log Viewer** or **Log Buffer**, and then click **View**.



everity	Date	Time	Syslog	Source IP	Destination IP	Description
6	Jun 19 2006	10:07:56	302016	171.68.222.149	10.2.2.2	Teardown UDP connection 8615 for outside:171.68.222.149/1029 to ins
6	Jun 19 2006	10:07:56	302016	171.70.157.215	10.2.2.2	Teardown UDP connection 8614 for outside:171.70.157.215/1029 to ins
6	Jun 19 2006	10:07:56	302016	64.101.176.170	10.2.2.2	Teardown UDP connection 8613 for outside:64.101.176.170/1029 to ins
6	Jun 19 2006	10:07:55	305012	10.2.2.2	172.22.1.160	Teardown dynamic UDP translation from inside:10.2.2.2/2179 to outside
6	Jun 19 2006	10:07:55	302015	171.68.222.149	10.2.2.2	Built outbound UDP connection 8630 for outside:171.68.222.149/1029 (
6	Jun 19 2006	10:07:55	302015	171.70.157.215	10.2.2.2	Built outbound UDP connection 8629 for outside:171.70.157.215/1029 (
6	Jun 19 2006	10:07:55	302015	64.101.176.170	10.2.2.2	Built outbound UDP connection 8628 for outside:64.101.176.170/1029 (
6	Jun 19 2006	10:07:55	305011	10.2.2.2	172.22.1.160	Built dynamic UDP translation from inside:10.2.2.2/2189 to outside:172.2
2	Jun 19 2006	10:07:54	106006	172.22.1.159	171.68.222.149	Deny inbound UDP from 172.22.1.159/1204 to 171.68.222.149/1029 on
2	Jun 19 2006	10:07:54	106006	172.22.1.159	171.70.157.215	Deny inbound UDP from 172.22.1.159/1204 to 171.70.157.215/1029 on
2	Jun 19 2006	10:07:54	106006	172.22.1.159	64.101.176.170	Deny inbound UDP from 172.22.1.159/1204 to 64.101.176.170/1029 on
6	Jun 19 2006	10:07:42	725002	172.22.1.159		Device completed SSL handshake with client outside:172.22.1.159/120
6	Jun 19 2006	10:07:42	725003	172.22.1.159		SSL client outside:172.22.1.159/1203 request to resume previous sess
6	Jun 19 2006	10:07:42	725001	172.22.1.159		Starting SSL handshake with client outside:172.22.1.159/1203 for TLSv
6	Jun 19 2006	10:07:42	302013	172.22.1.159	172.22.1.160	Built inbound TCP connection 8627 for outside:172.22.1.159/1203 (172.
6	Jun 19 2006	10:07:26	302016	171.68.222.149	10.2.2.2	Teardown UDP connection 8612 for outside:171.68.222.149/1029 to ins
6	Jun 19 2006	10:07:26	302016	171.70.157.215	10.2.2.2	Teardown UDP connection 8611 for outside:171.70.157.215/1029 to ins
6	Jun 19 2006	10:07:26	302016	64.101.176.170	10.2.2.2	Teardown UDP connection 8610 for outside:64.101.176.170/1029 to ins
6	Jun 19 2006	10:07:25	305012	10.2.2.2	172.22.1.160	Teardown dynamic UDP translation from inside:10.2.2.2/2175 to outside
6	Jun 19 2006	10:07:25	302015	171.68.222.149	10.2.2.2	Built outbound UDP connection 8626 for outside:171.68.222.149/1029 (
6	Jun 19 2006	10:07:25	302015	171.70.157.215	10.2.2.2	Built outbound UDP connection 8625 for outside:171.70.157.215/1029 (

%ASA-6-725002 Device completed SSL handshake with *remote_device interface_name:IP_address/port*

The SSL handshake has completed successfully with the remote device.

Note: To display only sessions from a specific address, filter by address.

Check the IP Pool in WebVPN Profile

```
%ASA-3-722020: Group group User user-name IP IP_address  No address
available for SVC connection
```

No addresses are available to assign to the SVC connection. Therefore, assign the IP pool address in the profile.

If you create the new connection profile, then configure an alias or group-url in order to access this connection profile. If not, all the SSL attempts will hit the default WebVPN connection profile that did not have an IP pool tied to it. Set this up to use the default connection profile and put an IP pool on it.

Tips

- Make sure routing works properly with the IP address pool that you assign to your remote clients. This IP address pool should come from a subnet on your LAN. You can also use a DHCP server or Authentication Server to assign IP addresses.
- The ASA creates a default tunnel group (*DefaultWebVPNGroup*) and a default group policy (*GroupPolicy1*). If you create new groups and policies, make sure you apply values in accordance with the security policies of your network.

- If you want to enable Windows file browsing through CIFS, enter a WINS (NBNS) server under **Configuration > VPN > WebVPN > Servers and URLs**. This technology uses the CIFS selection.

Commands

Several **debug** commands are associated with WebVPN. For detailed information about these commands, refer to Using WebVPN Debug Commands.

Note: The use of **debug** commands can adversely impact your Cisco device. Before you use **debug** commands, refer to Important Information on Debug Commands.

Related Information

- **Clientless SSL VPN (WebVPN) on ASA Configuration Example**
- **Thin-Client SSL VPN (WebVPN) on ASA with ASDM Configuration Example**
- **ASA with WebVPN and Single Sign-on using ASDM and NTLMv1 Configuration Example**
- **Cisco ASA 5500 Series Adaptive Security Appliances**
- **Technical Support & Documentation - Cisco Systems**