ASA 8.X: Routing SSL VPN Traffic through Tunneled Default Gateway Configuration Example

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Introduction

This document describes how to configure the Adaptive Security Appliance (ASA) to route the SSL VPN traffic through the tunneled default gateway (TDG). When you create a default route with the tunneled option, all traffic from a tunnel terminating on the ASA that cannot be routed using learned or static routes is sent to this route. For traffic emerging from a tunnel, this route overrides any other configured or learned default routes.

Prerequisites

Requirements

Ensure that you meet these requirements before you attempt this configuration:

- ASA that runs on version 8.x
- Cisco SSL VPN Client (SVC) 1.x**Note:** Download the SSL VPN Client package (sslclient-win*.pkg) from Cisco Software Download (registered customers only) . Copy the SVC to the flash memory on the ASA. The SVC needs to be downloaded to the remote user computers in order to establish the SSL VPN connection with the ASA.

Components Used

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

- Cisco 5500 Series ASA that runs software version 8.x
- Cisco SSL VPN Client version for Windows 1.1.4.179
- PC that runs Windows 2000 Professional or Windows XP
- Cisco Adaptive Security Device Manager (ASDM) version 6.1(5)

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.

Background Information

The SSL VPN Client (SVC) is a VPN tunneling technology that gives remote users the benefits of an IPSec VPN client without the need for network administrators to install and configure IPSec VPN clients on remote computers. The SVC uses the SSL encryption that is already present on the remote computer as well as the WebVPN login and authentication of the Security Appliance.

In the current scenario, there is an SSL VPN client connecting to the internal resources behind the ASA through the SSL VPN tunnel. The split-tunnel is not enabled. When the SSL VPN client is connected to the ASA, all the data will be tunneled. Besides accessing the internal resources, the main criterion is to route this tunneled traffic through the Default Tunneled Gateway (DTG).

You can define a separate default route for tunneled traffic along with the standard default route. Unencrypted traffic received by the ASA, for which there is no static or learned route, is routed through the standard default route. Encrypted traffic received by the ASA, for which there is no static or learned route, will be passed to the DTG defined through the tunneled default route.

In order to define a tunneled default route, use this command:

```
route <if_name> 0.0.0.0 0.0.0.0 <gateway_ip> tunneled
```

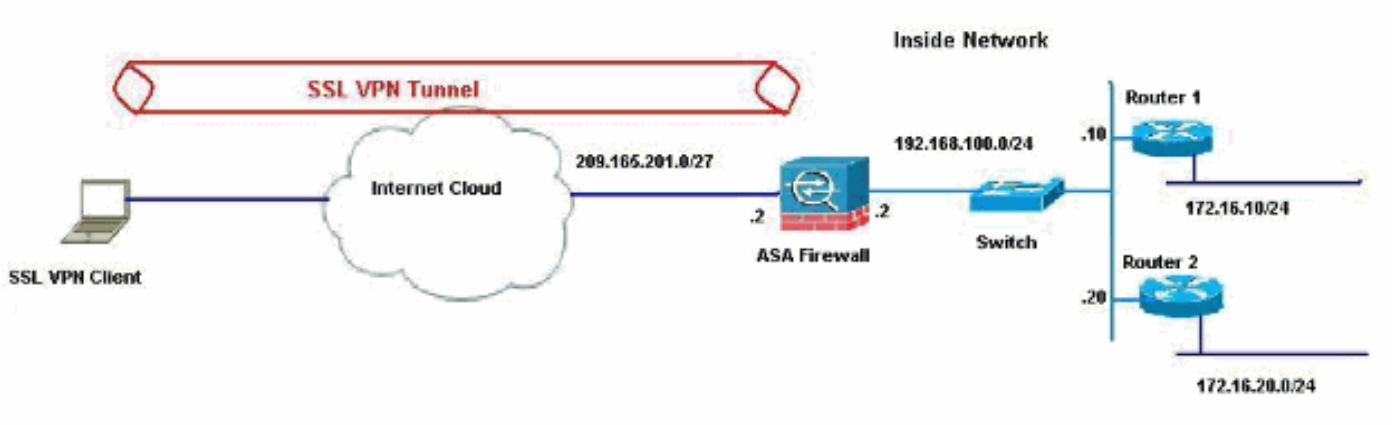
Configure

In this section, you are presented with the information to configure the features described in this document.

Note: Use the Command Lookup Tool (registered customers only) to obtain more information on the commands used in this section.

Network Diagram

This document uses this network setup:



In this example, the SSL VPN Client accesses the inside network of the ASA through the tunnel. The traffic meant for destinations other than the inside network are also tunneled, as there is no split-tunnel configured, and are routed through the TDG (192.168.100.20).

After the packets are routed to the TDG, which is Router 2 in this case, it performs the address translation to route those packets ahead to the Internet. For more information on configuring a router as an Internet Gateway, refer to How to Configure a Cisco Router Behind a Non-Cisco Cable Modem.

ASA Configuration using ASDM 6.1(5)

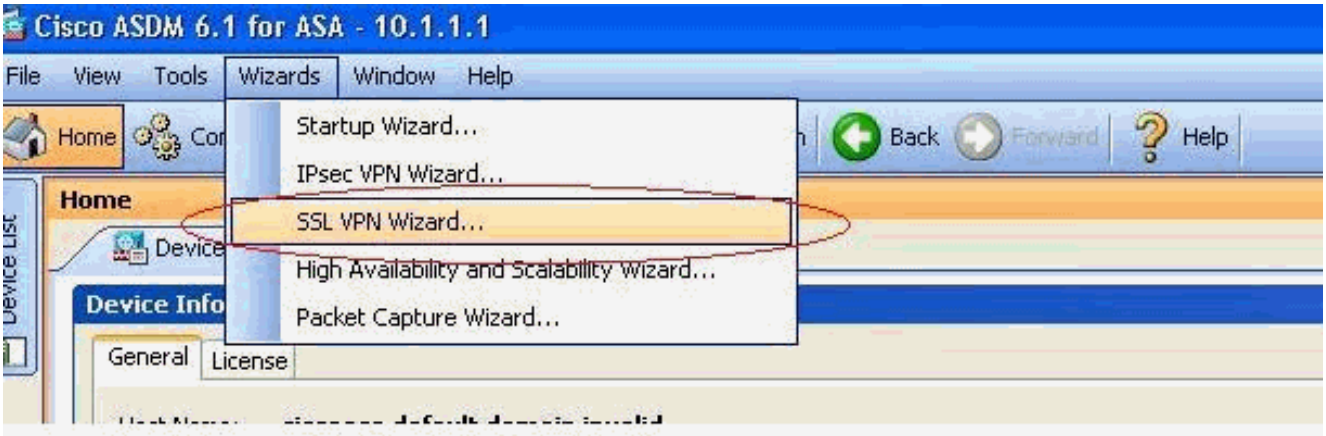
This document assumes the basic configurations, such as interface configuration, are complete and work properly.

Note: Refer to Allowing HTTPS Access for ASDM for information on how to allow the ASA to be configured by the ASDM.

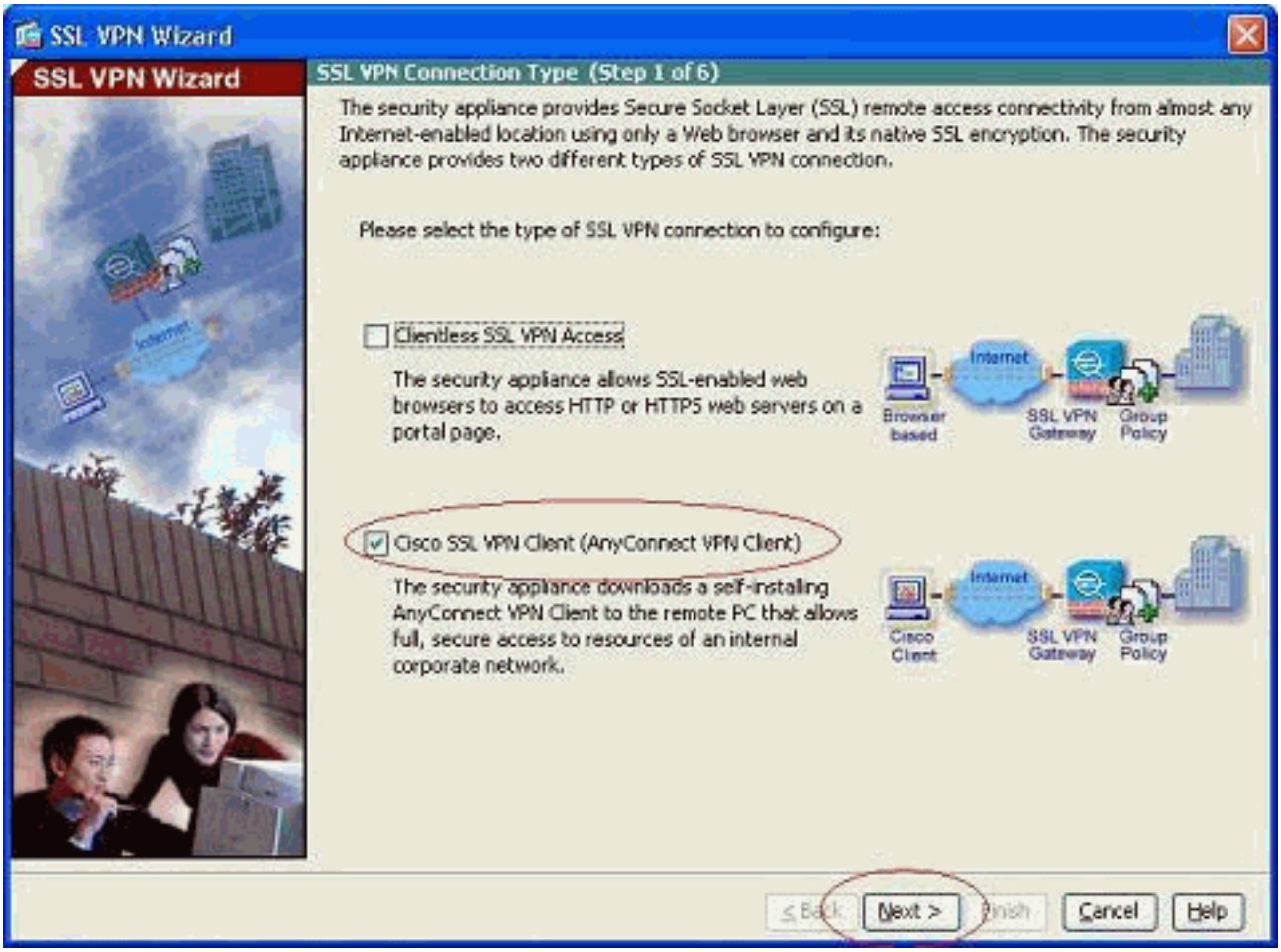
Note: WebVPN and ASDM cannot be enabled on the same ASA interface unless you change the port numbers. Refer to ASDM and WebVPN Enabled on the Same Interface of ASA for more information.

Complete these steps in order to configure the SSL VPN by using the SSL VPN Wizard.

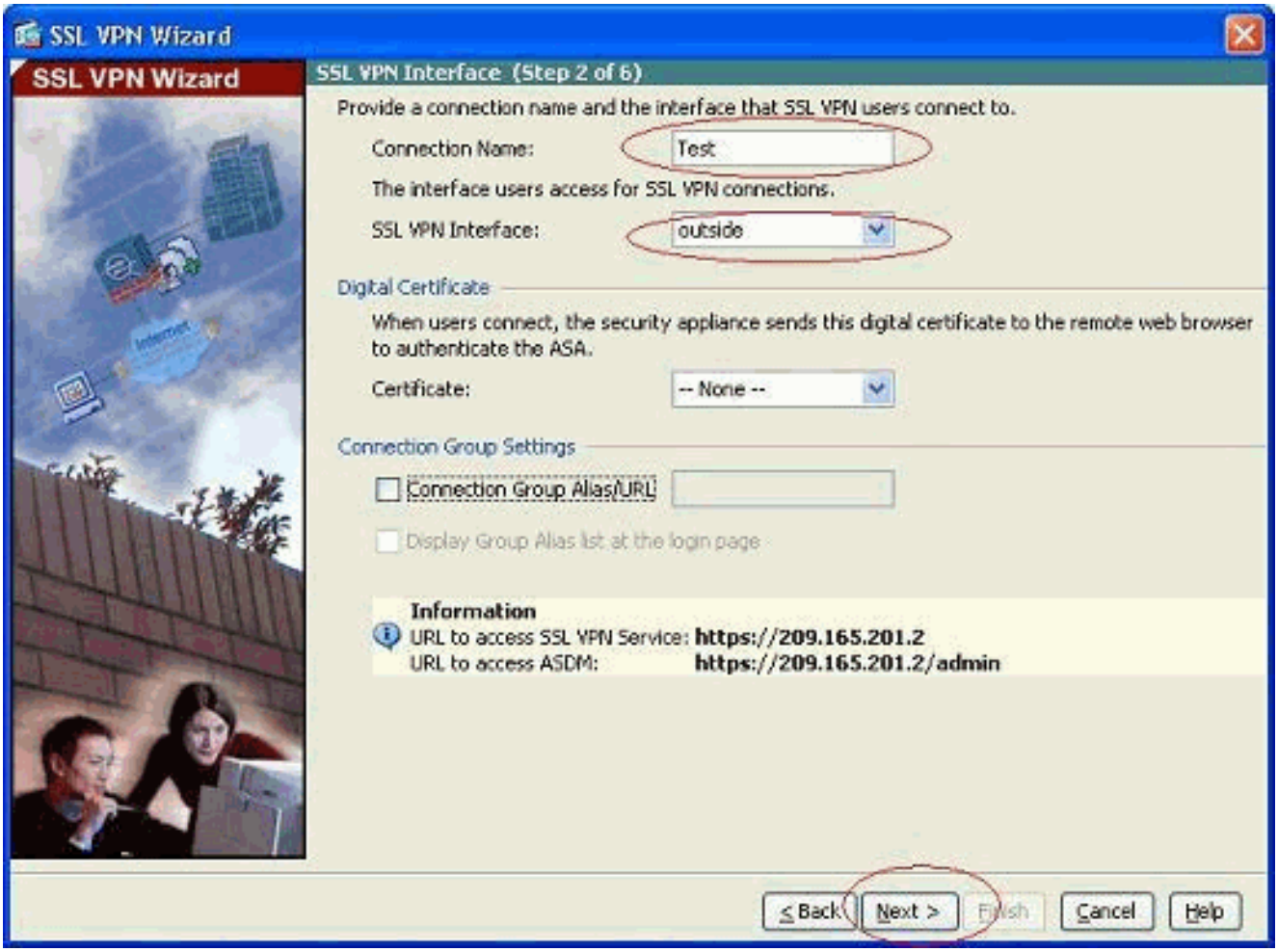
1. From the Wizards menu, choose **SSL VPN Wizard**.



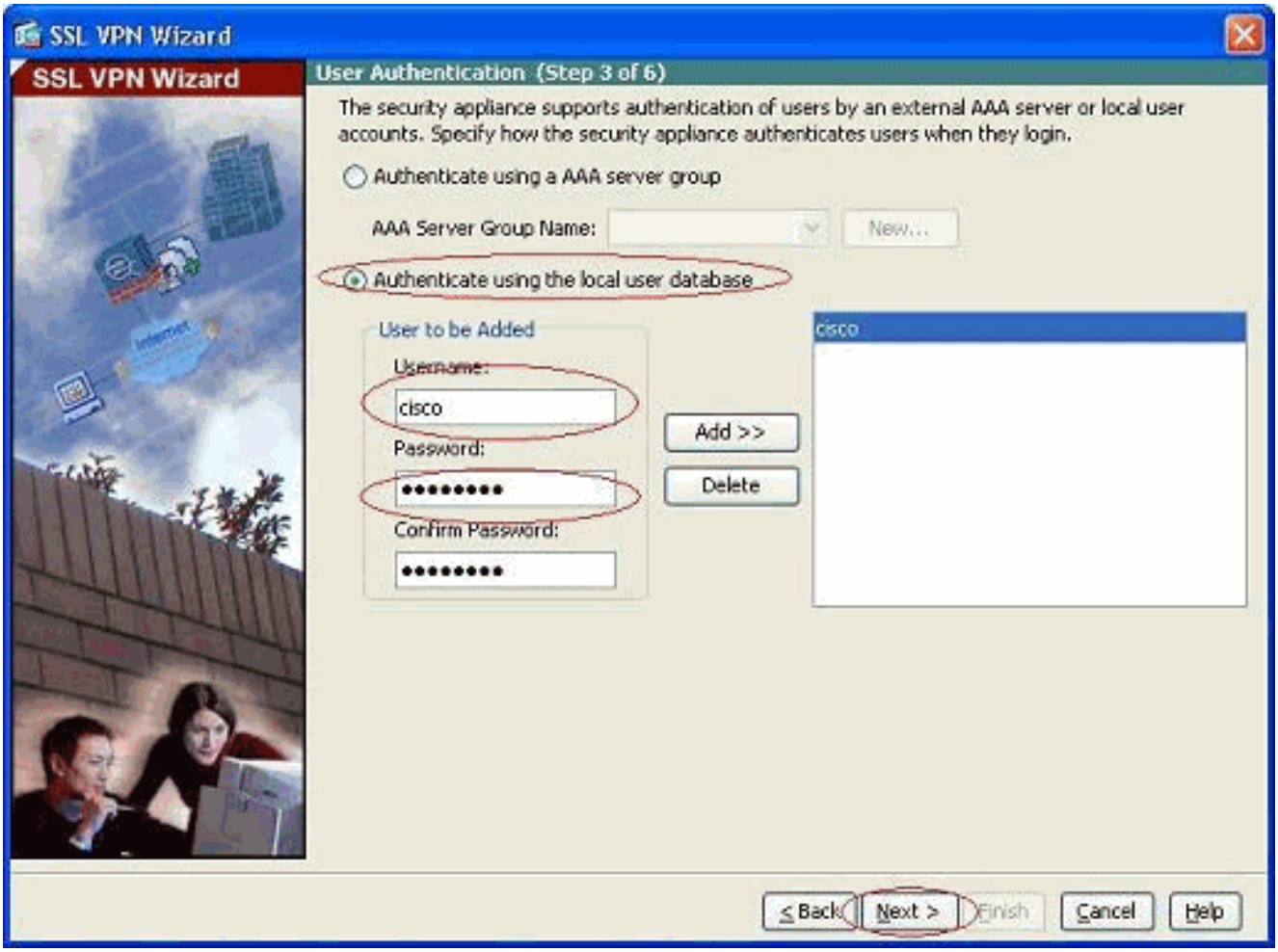
2. Click the **Cisco SSL VPN Client** check box, and click **Next**.



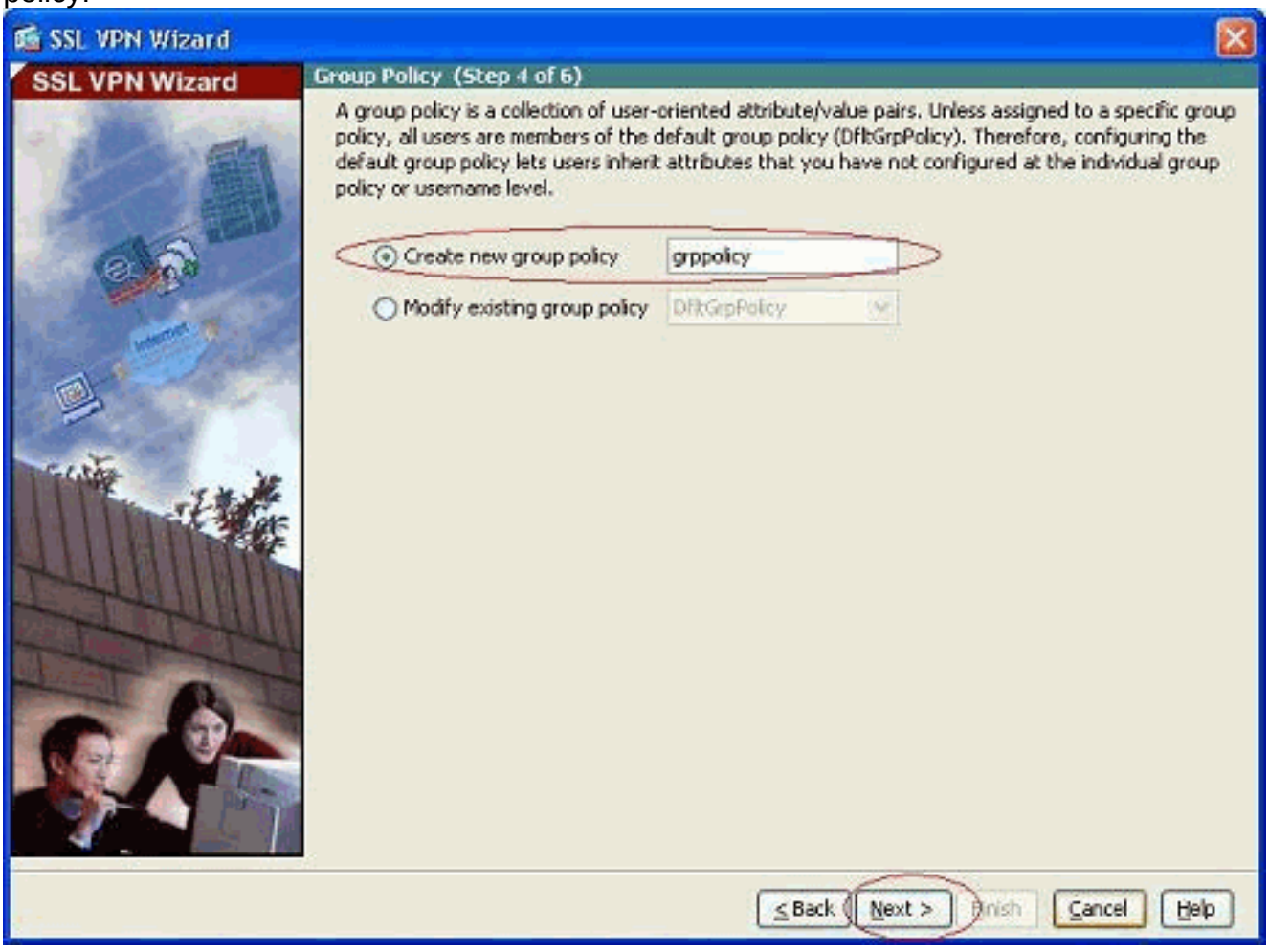
3. Enter a name for the connection in the Connection Name field, and then choose the interface that is being used by the user to access the SSL VPN from the SSL VPN Interface drop-down
   list.



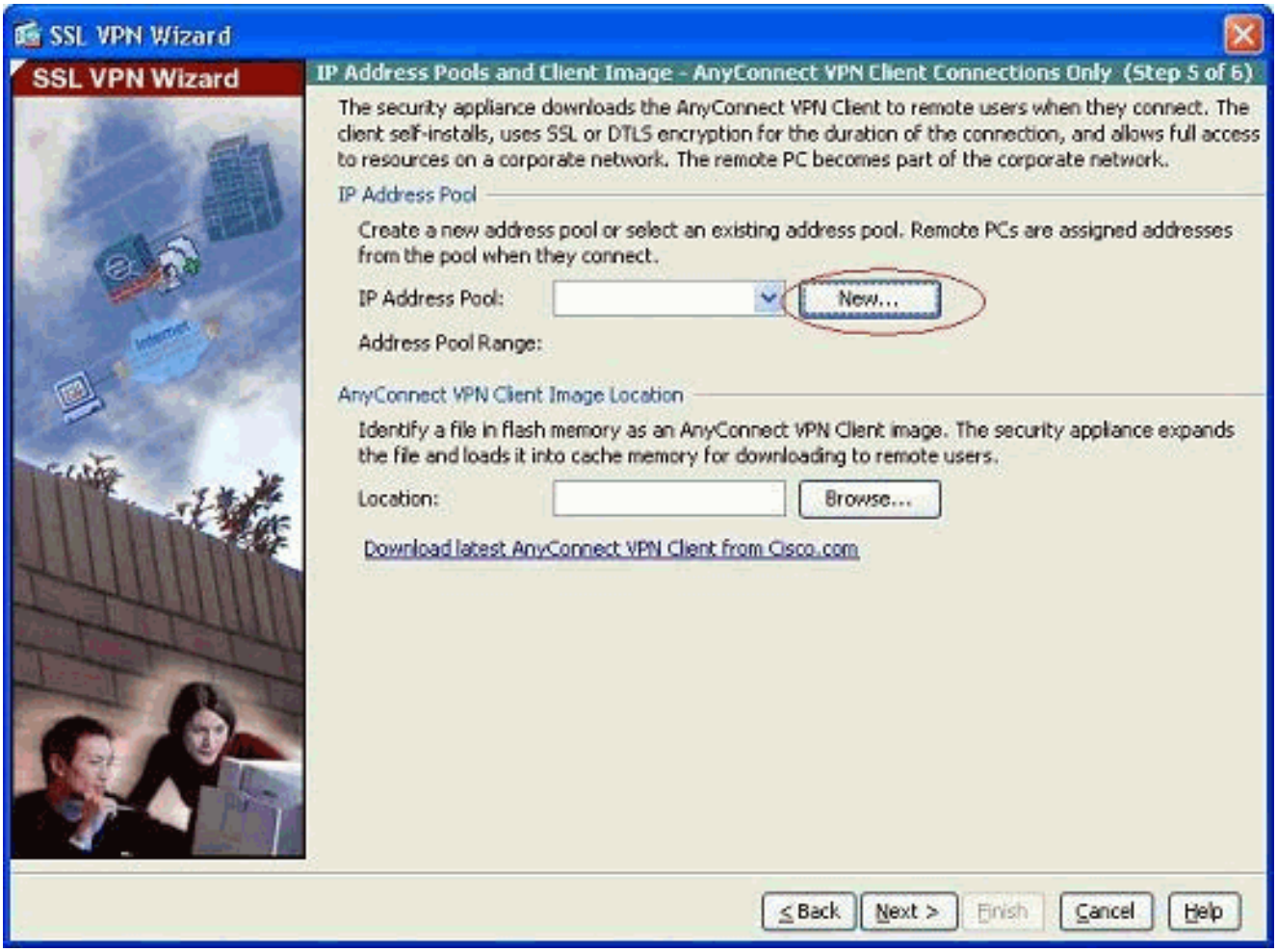
4. Click **Next**.
5. Choose an authentication mode, and click **Next**. (This example uses local authentication.)



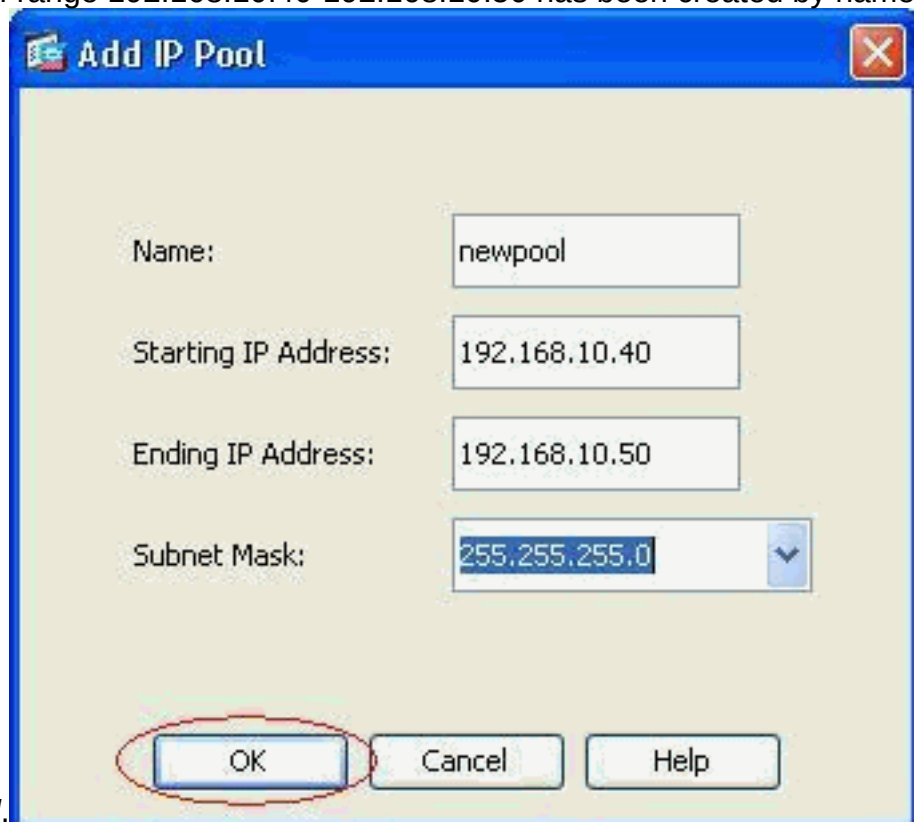
6. Create a new group policy other than the existing default group policy.



7. Create a new pool of addresses which will be assigned to the SSL VPN client PCs once they get
connected.

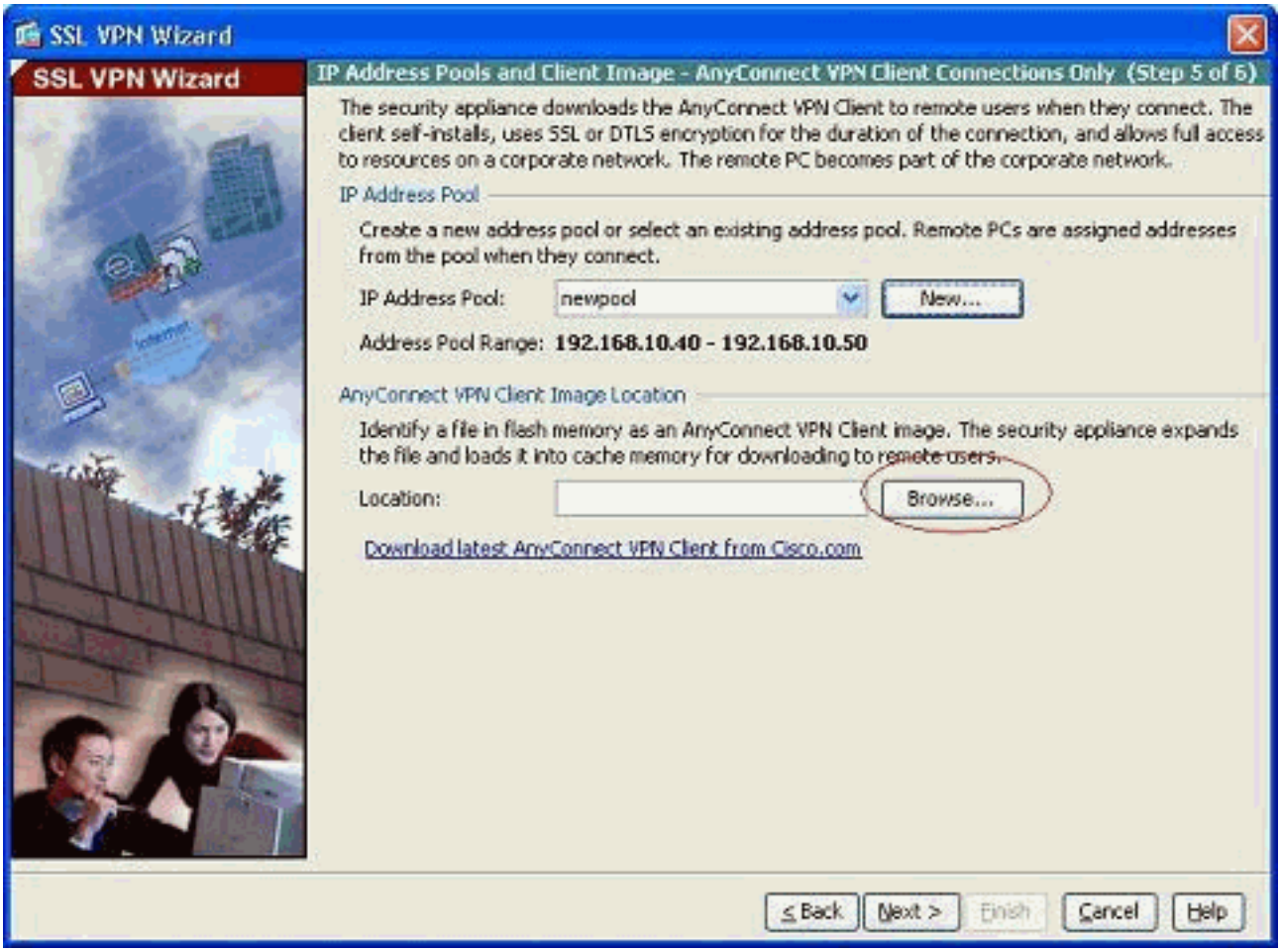


A pool of range 192.168.10.40-192.168.10.50 has been created by name *newpool*.

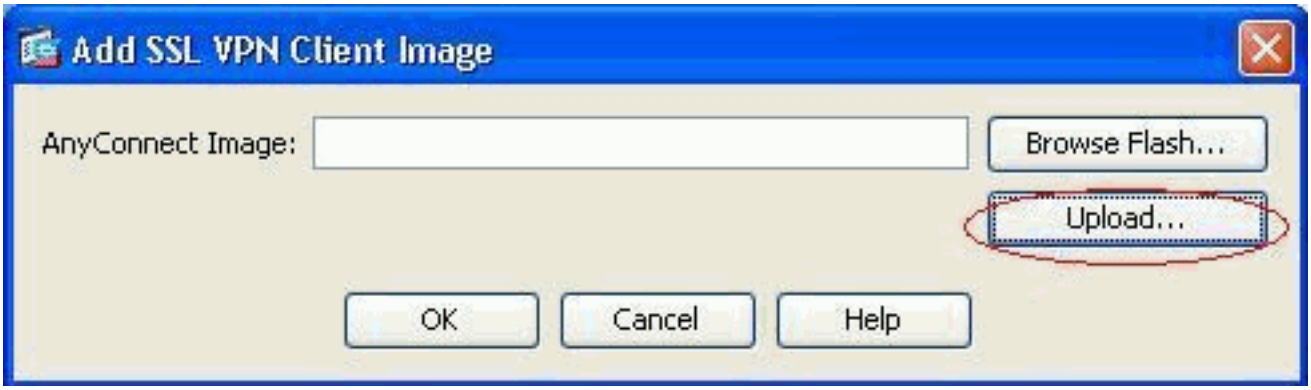


8. Click **Browse** in order to choose and upload the SSL VPN Client image to the flash memory

of the
ASA.

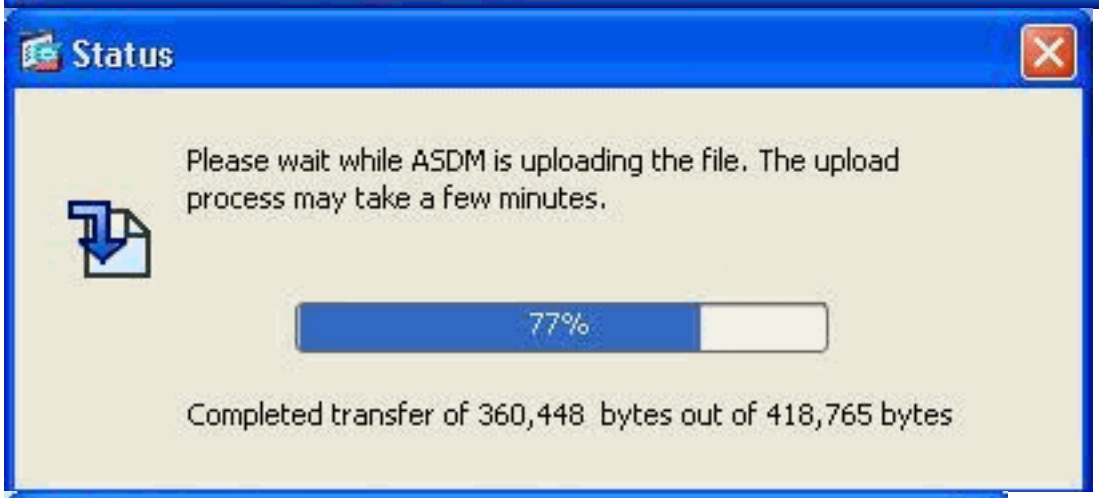


9. Click **Upload** in order to set the file path from the local directory of the machine.



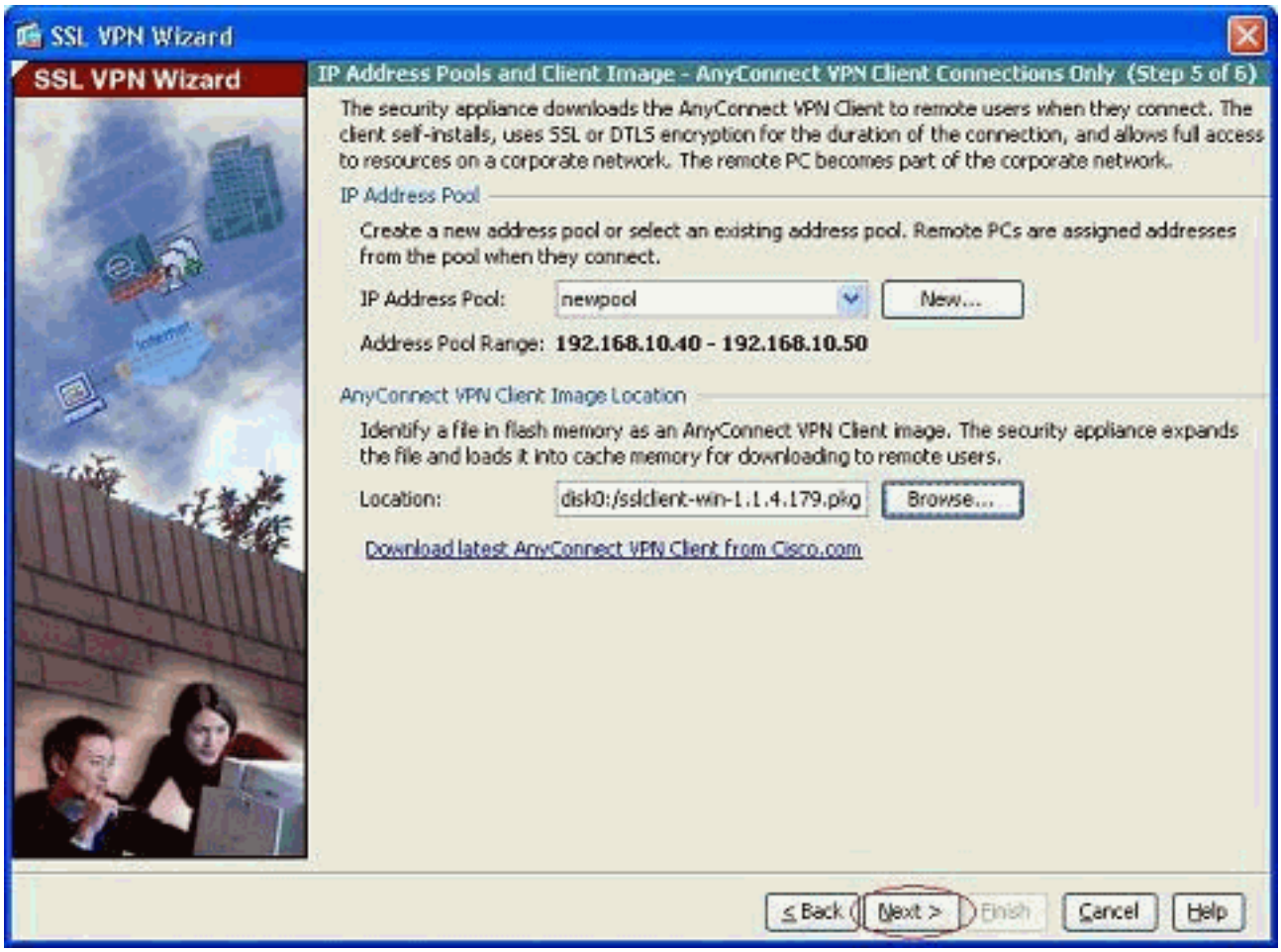
10. Click **Browse Local Files** in order to select the directory where the sslclient.pkg file exists.

11. Click **Upload File** in order to upload the selected file to the flash of ASA.

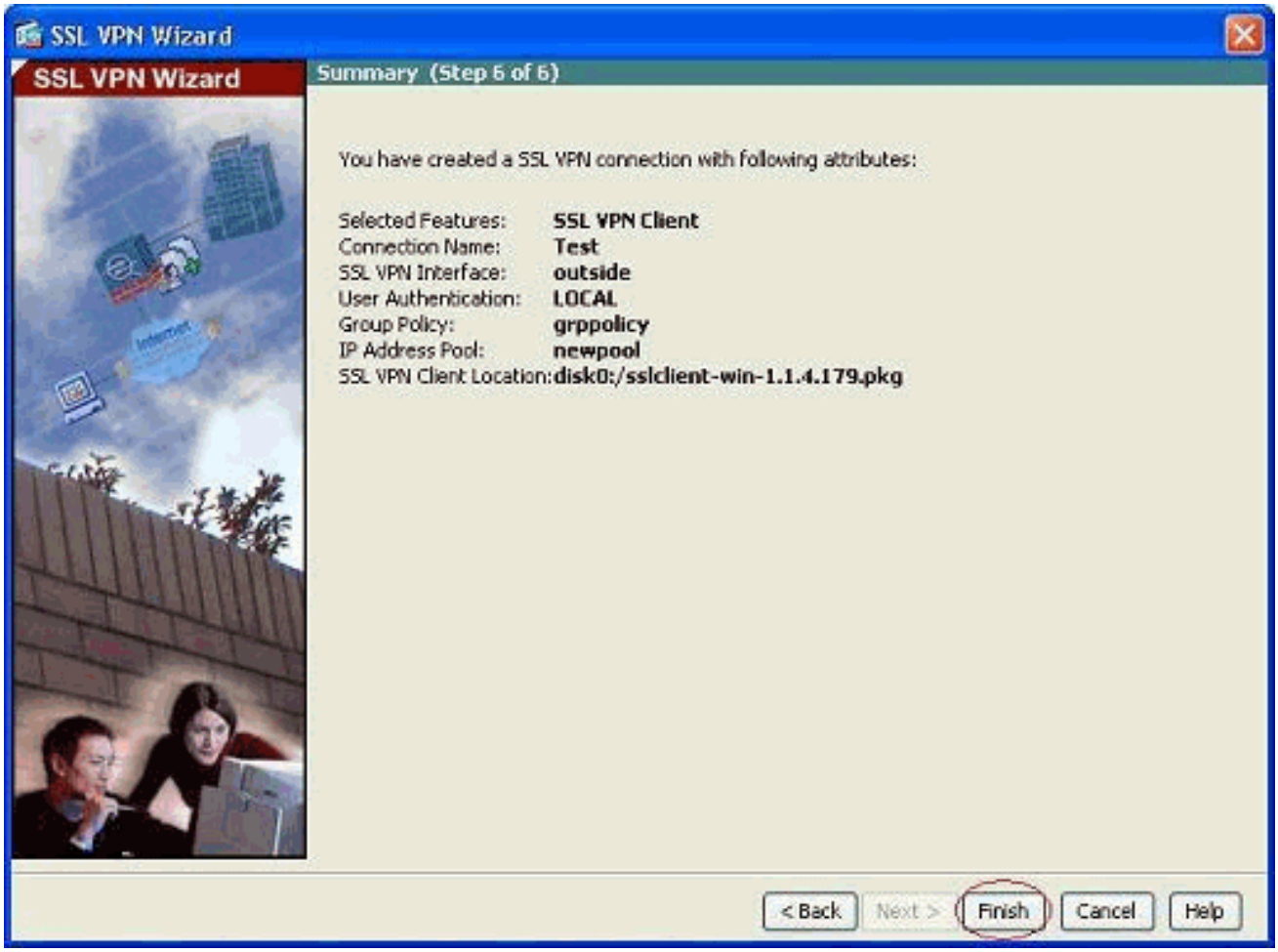


12. Once the file is uploaded on to the flash of ASA, click **OK** to complete that task.

13. Now it shows the latest anyconnect pkg file uploaded on to the flash of ASA. Click **Next**.



14. The summary of the SSL VPN client configuration is shown. Click **Finish** to complete the wizard.



The configuration shown in ASDM mainly pertains to the SSL VPN client Wizard configuration.

In the CLI, you can observe some additional configuration. The complete CLI configuration is shown below and important commands have been highlighted.

ciscoasa

```
ciscoasa#show running-config : Saved : ASA Version
8.0(4) ! hostname ciscoasa enable password
8Ry2YjIyt7RRXU24 encrypted names ! interface Ethernet0/0
nameif outside security-level 0 ip address 209.165.201.2
255.255.255.224 ! interface Ethernet0/1 nameif inside
security-level 100 ip address 192.168.100.2
255.255.255.0 ! interface Ethernet0/2 nameif manage
security-level 0 ip address 10.1.1.1 255.255.255.0 !
interface Ethernet0/3 shutdown no nameif no security-
level no ip address ! interface Ethernet0/4 shutdown no
nameif no security-level no ip address ! interface
Ethernet0/5 shutdown no nameif no security-level no ip
address ! passwd 2KFQnbNIdI.2KYOU encrypted ftp mode
passive access-list nonat extended permit ip
192.168.100.0 255.255.255.0 192.168.10.0 255.255.255.0
access-list nonat extended permit ip 192.168.10.0
255.255.255.0 192.168.100.0 255.255.255.0 !--- ACL to
define the traffic to be exempted from NAT. no pager
logging enable logging asdm informational mtu outside
1500 mtu inside 1500 mtu manage 1500 !--- Creating IP
address block to be assigned for the VPN clients ip
local pool newpool 192.168.10.40-192.168.10.50 mask
255.255.255.0 no failover icmp unreachable rate-limit 1
burst-size 1 asdm image disk0:/asdm-615.bin no asdm
history enable arp timeout 14400 global (outside) 1
interface nat (inside) 0 access-list nonat !--- The
```

```
traffic permitted in "nonat" ACL is exempted from NAT.
nat (inside) 1 192.168.100.0 255.255.255.0 route outside
0.0.0.0 0.0.0.0 209.165.201.1 1 !--- Default route is
configured through "inside" interface for normal
traffic. route inside 0.0.0.0 0.0.0.0 192.168.100.20
tunneled !--- Tunneled Default route is configured
through "inside" interface for encrypted traffic !
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
dynamic-access-policy-record DfltAccessPolicy http
server enable !--- Configuring the ASA as HTTP server.
http 10.1.1.0 255.255.255.0 manage !--- Configuring the
network to be allowed for ASDM access. ! !--- Output is
suppressed ! telnet timeout 5 ssh timeout 5 console
timeout 0 threat-detection basic-threat threat-detection
statistics access-list ! 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 netbios
inspect rsh inspect rtsp inspect skinny inspect esmtp
inspect sqlnet inspect sunrpc inspect tftp inspect sip
inspect xdmcp ! service-policy global_policy global ! !-
-- Output suppressed ! webvpn enable outside !--- Enable
WebVPN on the outside interface svc image
disk0:/sslclient-win-1.1.4.179.pkg 1 !--- Assign the
AnyConnect SSL VPN Client image to be used svc enable !-
-- Enable the ASA to download SVC images to remote
computers group-policy grppolicy internal !--- Create an
internal group policy "grppolicy" group-policy grppolicy
attributes VPN-tunnel-protocol svc !--- Specify SSL as a
permitted VPN tunneling protocol ! username cisco
password ffIRPGpDSOJh9YLq encrypted privilege 15 !---
Create a user account "cisco" tunnel-group Test type
remote-access !--- Create a tunnel group "Test" with
type as remote access tunnel-group Test general-
attributes address-pool newpool !--- Associate the
address pool vpnpool created default-group-policy
grppolicy !--- Associate the group policy "clientgroup"
created prompt hostname context
Cryptochecksum:1b247197c8ff70ee4432c13fb037854e : end
ciscoasa#
```

Verify

The commands given in this section can be used to verify this configuration.

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

- **show webvpn svc**——Displays the SVC images stored in the ASA flash memory.
- **show VPN-sessiondb svc**—Displays the information about the current SSL connections.

Troubleshoot

There is currently no specific troubleshooting information available for this configuration.

Related Information

- **Cisco 5500 Series Adaptive Security Appliance Support**
- **PIX/ASA and VPN Client for Public Internet VPN on a Stick Configuration Example**
- **SSL VPN Client (SVC) on ASA with ASDM Configuration Example**
- **Technical Support & Documentation - Cisco Systems**