

# ASA 8.3及更高版本：使用可下載ACL透過CLI和ASDM進行VPN訪問的RADIUS授權(ACS 5.x)配置示例

## 目錄

[簡介](#)  
[必要條件](#)  
[需求](#)  
[採用元件](#)  
[慣例](#)  
[背景資訊](#)  
[設定](#)  
[網路圖表](#)  
[設定遠端存取VPN \(IPsec\)](#)  
[使用CLI配置ASA](#)  
[為個人使用者配置可下載ACL的ACS](#)  
[為組的可下載ACL配置ACS](#)  
[為網路裝置組的可下載ACL配置ACS](#)  
[為使用者組配置IETF RADIUS設定](#)  
[Cisco VPN客戶端配置](#)  
[驗證](#)  
[Show Crypto命令](#)  
[適用於使用者/群組的可下載ACL](#)  
[Filter-Id ACL](#)  
[疑難排解](#)  
[清除安全性關聯](#)  
[疑難排解指令](#)  
[相關資訊](#)

## 簡介

本文檔介紹如何配置安全裝置以對使用者進行網路訪問進行身份驗證。由於您可以隱式啟用RADIUS授權，因此本文檔不包含有關安全裝置上配置RADIUS授權的資訊。它提供關於安全裝置如何處理從RADIUS伺服器接收的訪問清單資訊的資訊。

您可以配置RADIUS伺服器以在身份驗證時將訪問清單下載到安全裝置或訪問清單名稱。使用者僅有權執行使用者特定存取清單中允許的作業。

當您使用Cisco Secure Access Control Server (ACS)為每個使用者提供適當的訪問清單時，可下載訪問清單是最具可擴充性的方法。有關可下載訪問清單功能和Cisco Secure ACS的詳細資訊，請參

閱將RADIUS伺服器配置為傳送可下載訪問控制清單和可下載IP ACL。

有關在8.2及更低版本的Cisco ASA上進行相同配置的詳細資訊，請參閱ASA/PIX 8.x：使用可下載ACL和CLI進行RADIUS授權(ACS)網路訪問的配置示例。

## 必要條件

### 需求

本文檔假定自適應安全裝置(ASA)完全正常運行且已配置為允許思科自適應安全裝置管理器(ASDM)或CLI進行配置更改。

注意：要允許透過ASDM或Secure Shell (SSH)遠端配置裝置，請參閱允許ASDM進行HTTPS訪問。

### 採用元件

本文中的資訊係根據以下軟體和硬體版本：

- Cisco ASA軟體8.3版及更高版本
- Cisco ASDM 6.3版及更高版本
- Cisco VPN Client版本5.x及更高版本
- Cisco安全ACS 5.x

本文中的資訊是根據特定實驗室環境內的裝置所建立。文中使用到的所有裝置皆從已清除（預設）的組態來啟動。如果您的網路正在作用，請確保您已瞭解任何指令可能造成的影響。

### 慣例

如需文件慣例的詳細資訊，請參閱思科技術提示慣例。

## 背景資訊

您可以使用可下載的IP ACL來建立可套用到許多使用者或使用者群組的ACL定義集。這些ACL定義集稱為ACL內容。

可下載IP ACL的運作方式如下：

1. 當ACS向使用者授予網路訪問許可權時，ACS將確定是否將可下載IP ACL分配給結果部分中的授權配置檔案。
2. 如果ACS找到分配給授權配置檔案的可下載IP ACL，則ACS會傳送指定命名ACL和命名ACL版本的屬性（作為使用者會話的一部分，在RADIUS access-accept資料包中）。
3. 如果AAA客戶端回應其快取中沒有當前版本的ACL（即，該ACL是新的或已更改），則ACS會

向裝置傳送ACL（新的或已更新）。

可下載IP ACL是替代在每個使用者或使用者群組的RADIUS Cisco-av-pair屬性[26/9/1]中設定ACL的選項。您可以建立一個可下載IP ACL一次，為其命名，然後將該可下載IP ACL分配給任何授權配置檔案（如果引用其名稱）。與為授權配置檔案配置RADIUS Cisco-av-pair屬性相比，此方法更有效。

在ACS Web介面中輸入ACL定義時，請勿使用關鍵字或名稱條目；在所有其他方面，請為您要應用可下載IP ACL的AAA客戶端使用標準ACL命令語法和語義。您在ACS中輸入的ACL定義包含一條或多條ACL命令。每個ACL命令必須位於單獨的行上。

在ACS中，您可以定義多個可下載IP ACL並在不同的授權配置檔案中使用。根據Access Service Authorization規則中的條件，您可以將包含可下載IP ACL的不同授權配置檔案傳送到不同的AAA客戶端。

此外，您可以變更ACL內容在可下載IP ACL中的順序。ACS從表頂部開始檢查ACL內容，並下載找到的第一個ACL內容。設定順序時，如果您將最廣泛適用的ACL內容放在清單中的較高位置，就可以確保系統效率。

要在特定AAA客戶端上使用可下載的IP ACL，AAA客戶端必須遵守以下規則：

- 使用RADIUS進行身份驗證
- 支援可下載的IP ACL

以下是支援可下載IP ACL的Cisco裝置示例：

- ASA
- 執行IOS版本12.3(8)T和更新版本的思科裝置

以下是必須在ACL定義框中輸入ASA ACL的格式示例：

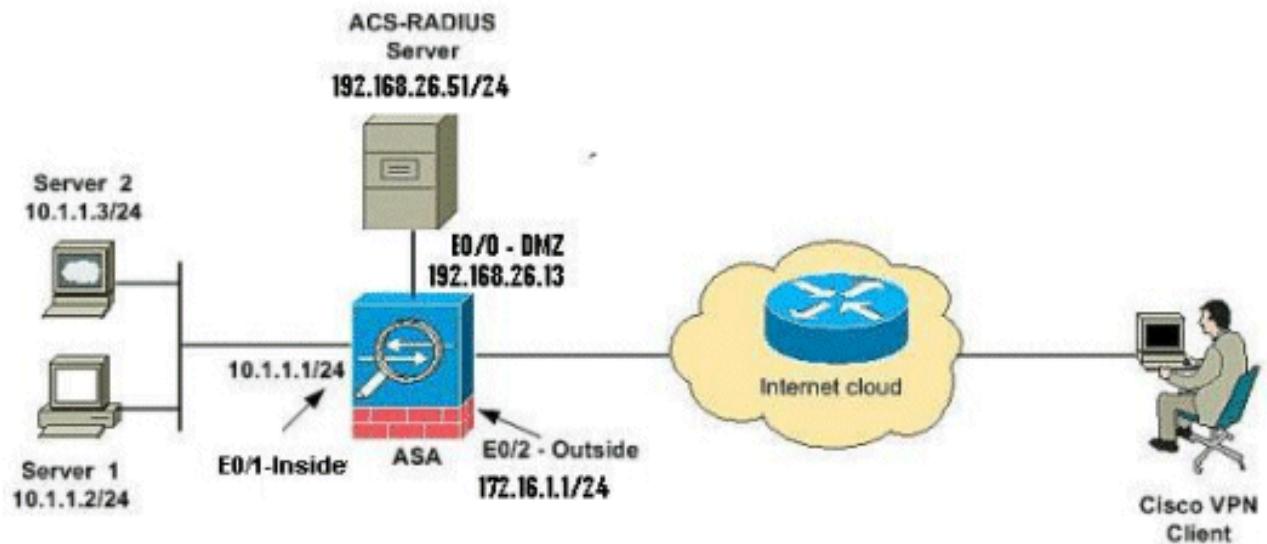
```
permit ip 10.153.0.0 0.0.255.255 host 10.158.9.1
permit ip 10.154.0.0 0.0.255.255 10.158.10.0 0.0.0.255
permit 0 any host 10.159.1.22
deny ip 10.155.10.0 0.0.0.255 10.159.2.0 0.0.0.255 log
permit TCP any host 10.160.0.1 eq 80 log
permit TCP any host 10.160.0.2 eq 23 log
permit TCP any host 10.160.0.3 range 20 30
permit 6 any host HOSTNAME1
permit UDP any host HOSTNAME2 neq 53
deny 17 any host HOSTNAME3 lt 137 log
deny 17 any host HOSTNAME4 gt 138
deny ICMP any 10.161.0.0 0.0.255.255 log
permit TCP any host HOSTNAME5 neq 80
```

## 設定

本節提供用於設定本文件中所述功能的資訊。

## 網路圖表

此文件使用以下網路設定：



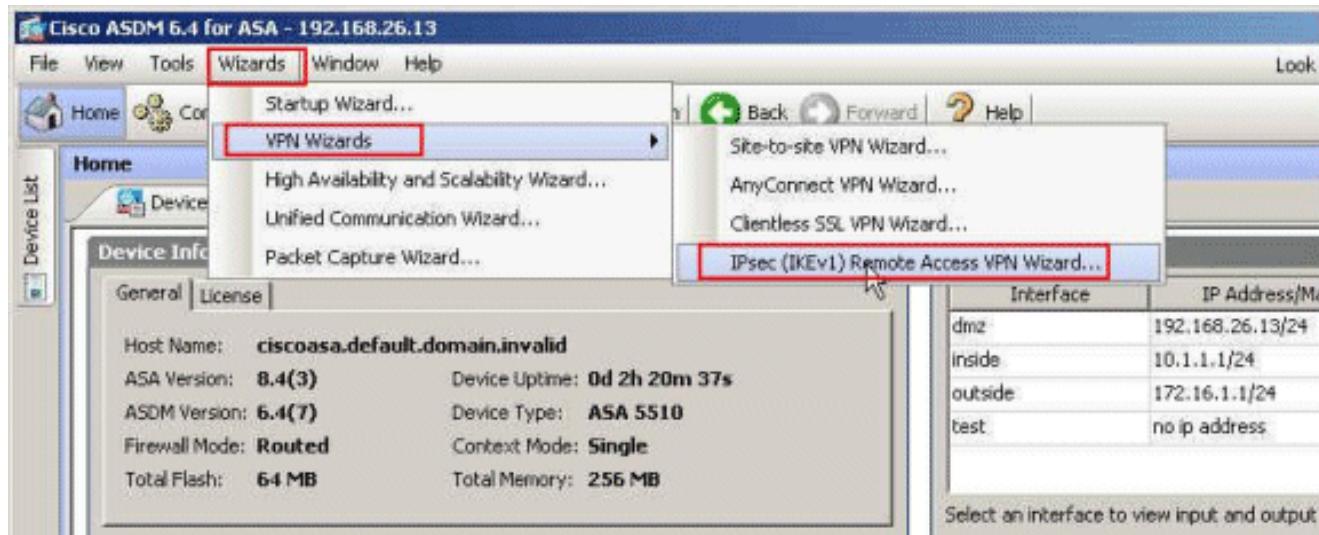
注意：此配置中使用的IP編址方案在Internet上無法合法路由。這些地址是在實驗室環境中使用的RFC 1918地址。

## 設定遠端存取VPN (IPsec)

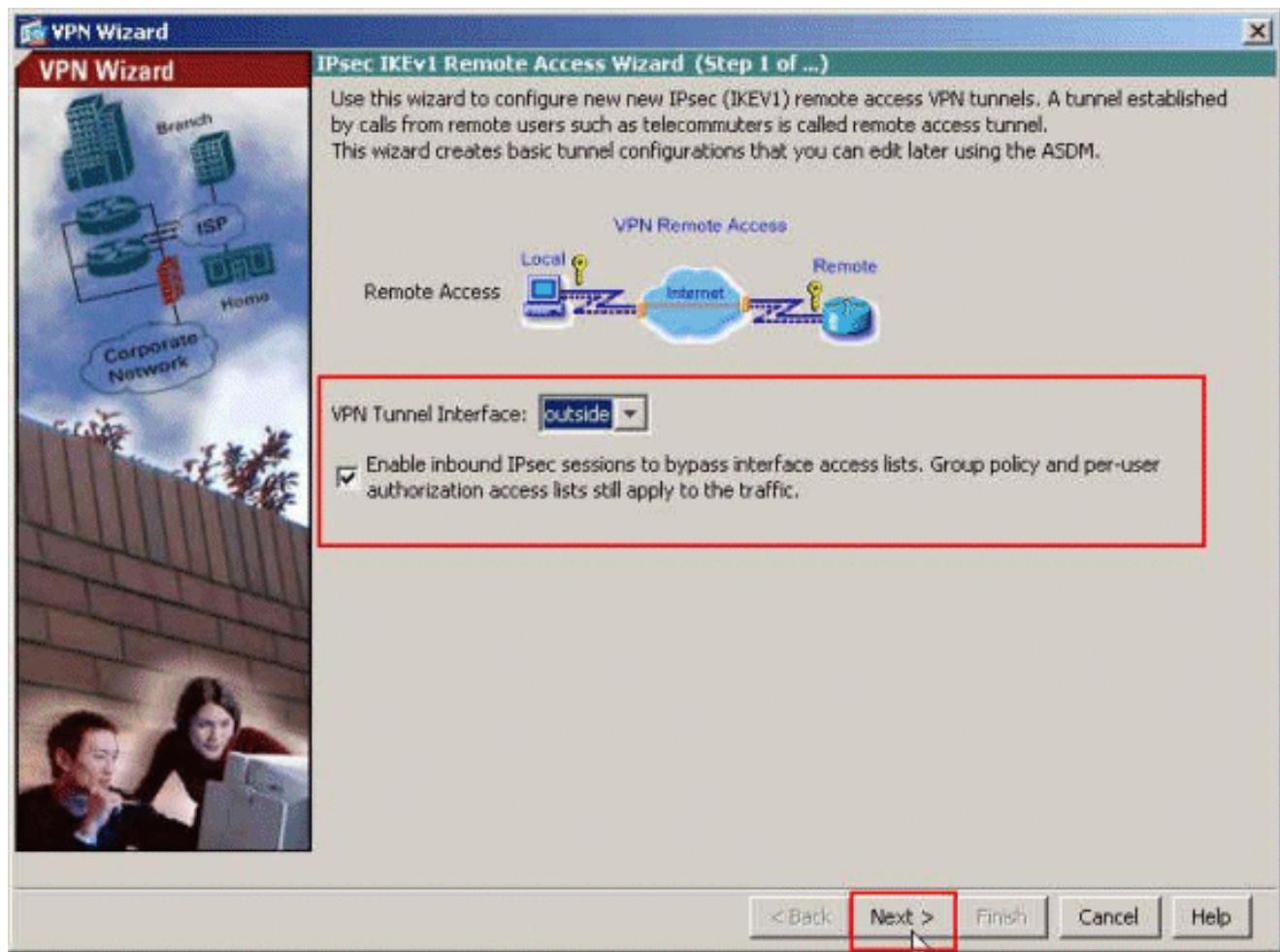
### ASDM過程

完成以下步驟以配置遠端訪問VPN：

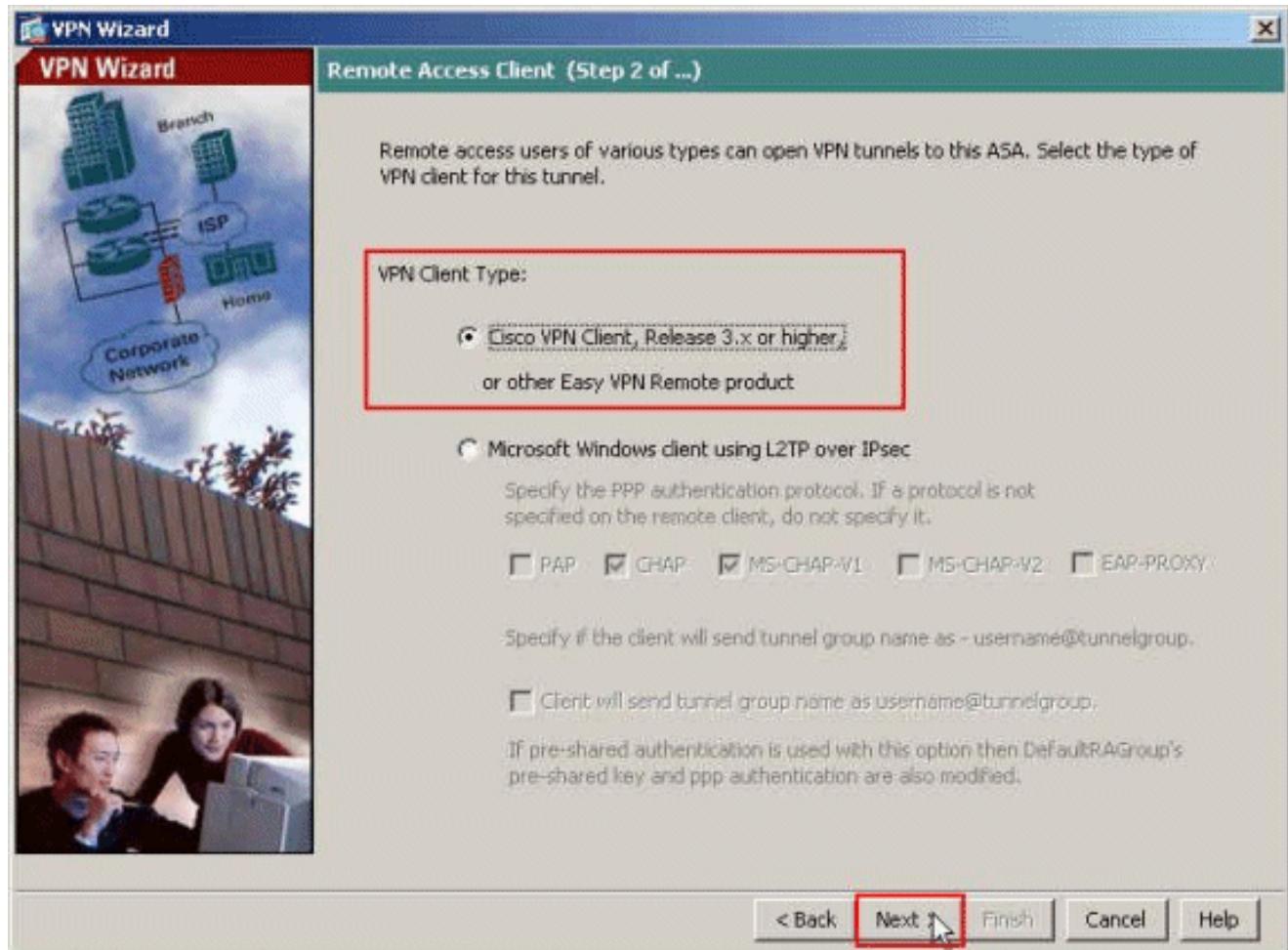
1. 從主窗口中選擇Wizards > VPN Wizards > IPsec(IKEv1) Remote Access VPN Wizard。



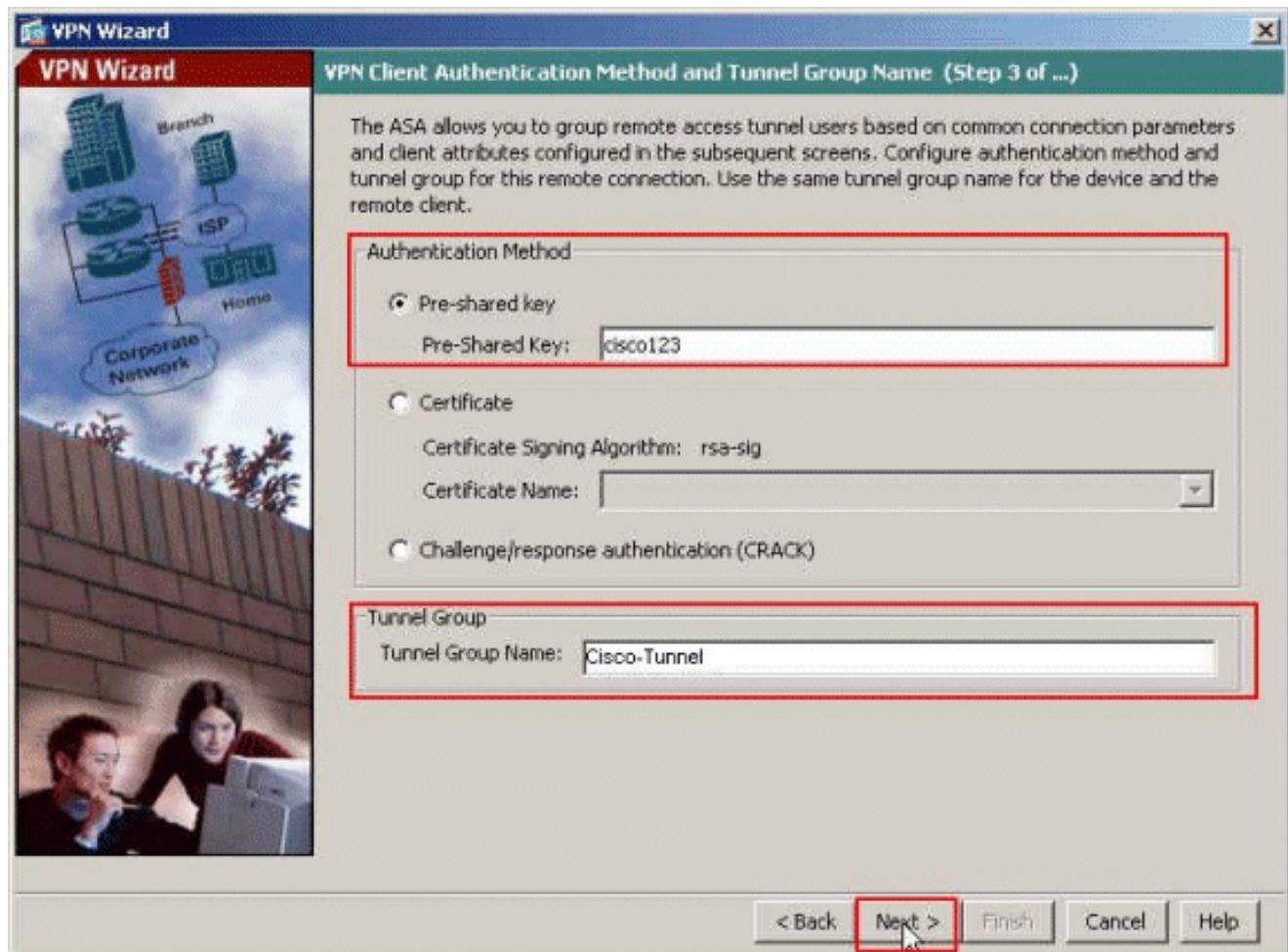
2. 根據需要選擇VPN Tunnel Interface(在本示例中為Outside)，並確保已選中Enable inbound IPsec sessions to bypass interface access lists旁邊的覈取方塊。



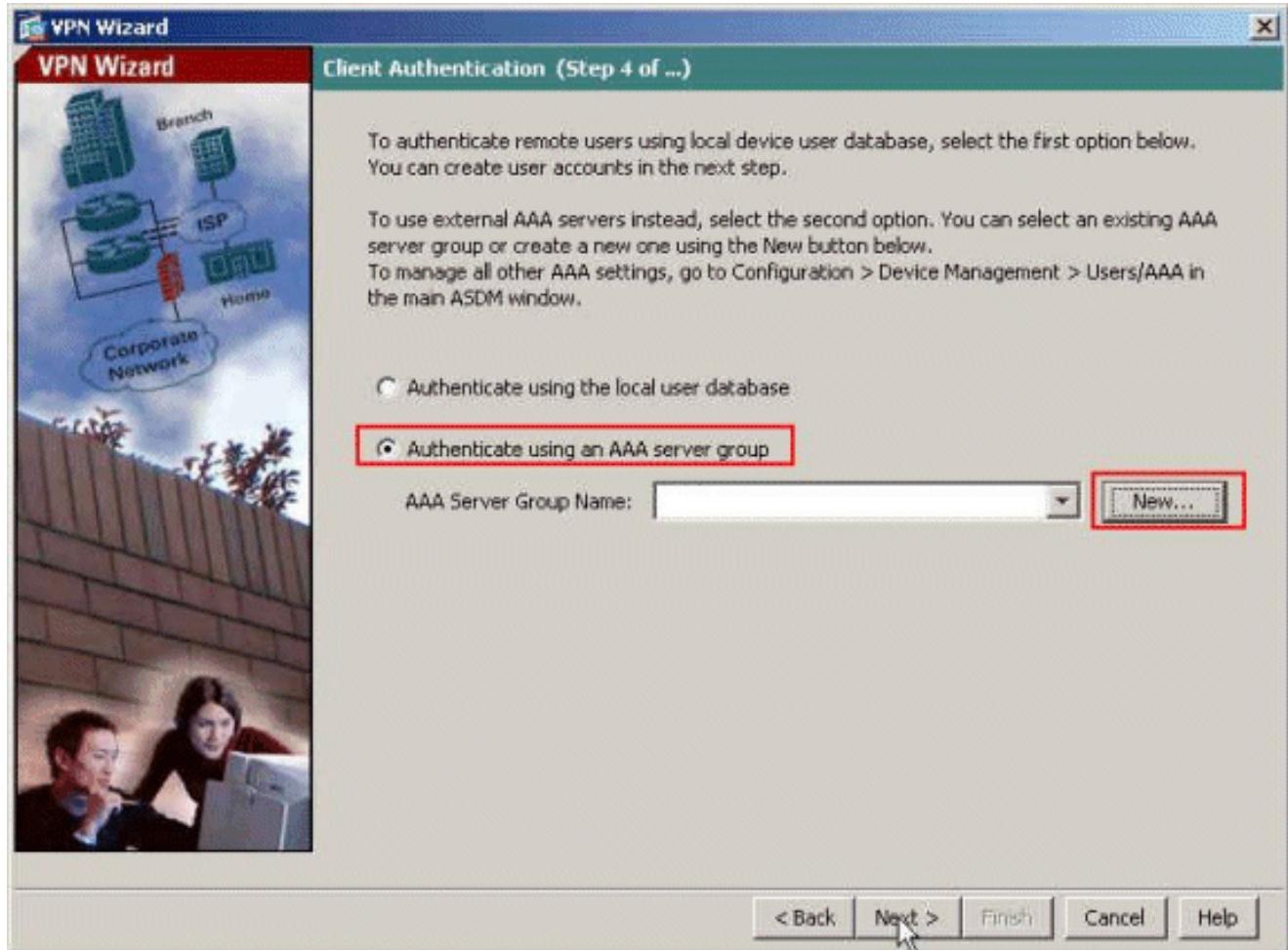
3. 選擇VPN Client Type作為Cisco VPN Client Release 3.x or higher。按「Next」（下一步）。



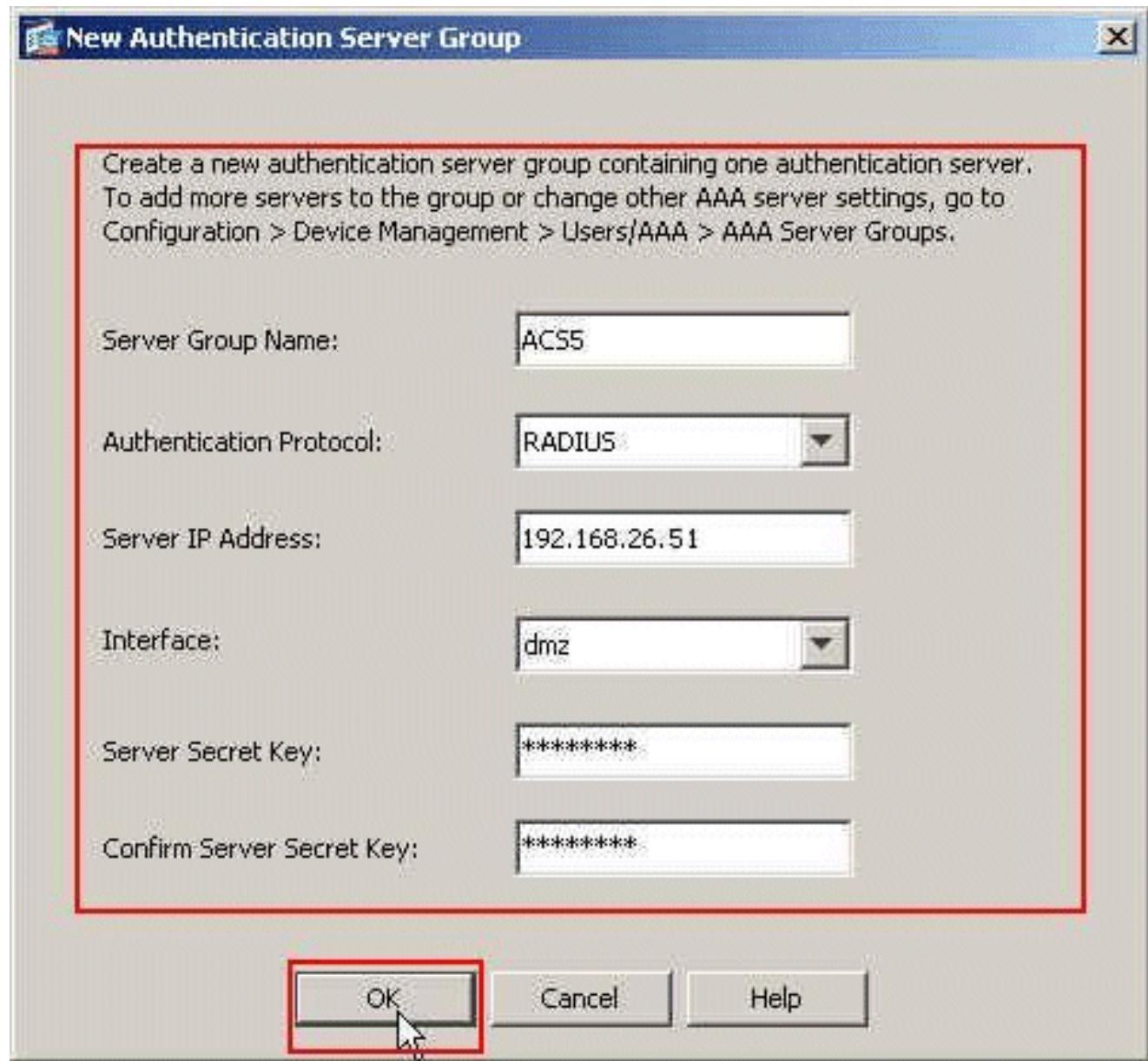
4. 選擇Authentication Method並提供身份驗證資訊。此處使用的身份驗證方法為預共用金鑰。另外，請在提供的空白處提供隧道組名稱。此處使用的預共用金鑰是cisco123，此處使用的隧道組名稱是Cisco-Tunnel。按「Next」（下一步）。



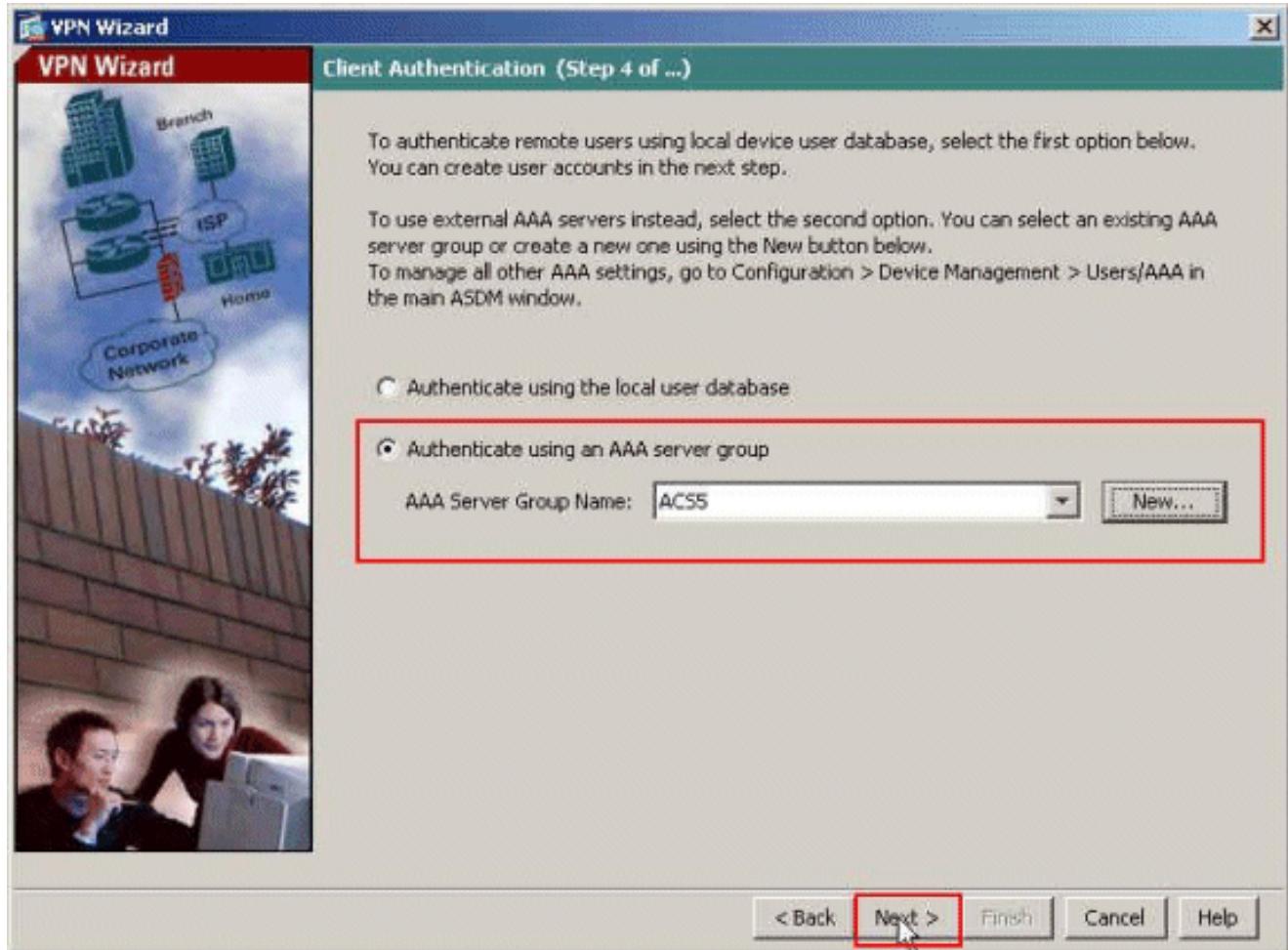
5. 選擇是要向本地使用者資料庫還是向外部AAA伺服器組驗證遠端使用者。此處我們選擇 Authenticate using an AAA server group。按一下「AAA Server Group Name」欄位旁的 New，以便建立新的AAA伺服器組名稱。



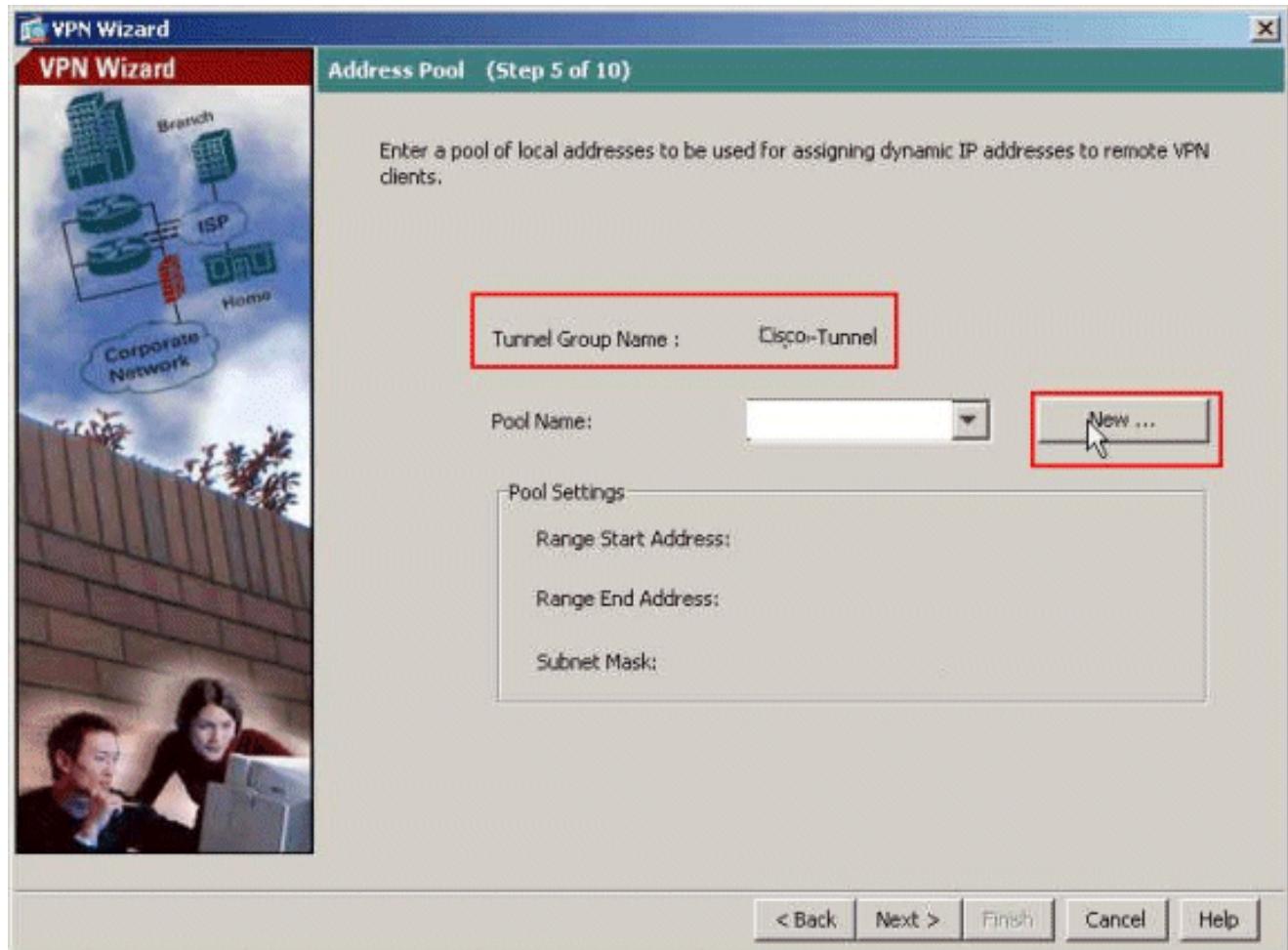
6. 在所提供的相應空白處提供伺服器組名稱、身份驗證協定、伺服器IP地址、介面名稱和伺服器金鑰，然後按一下OK。



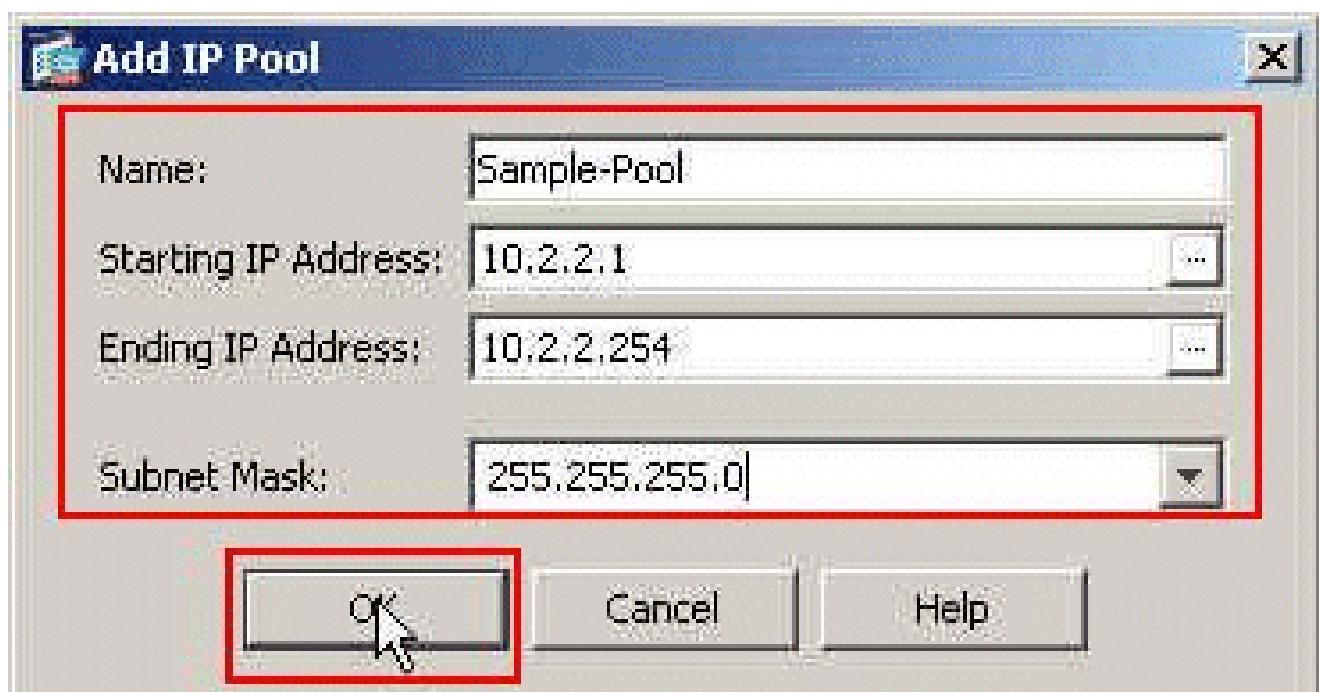
7. 按「Next」(下一步)。



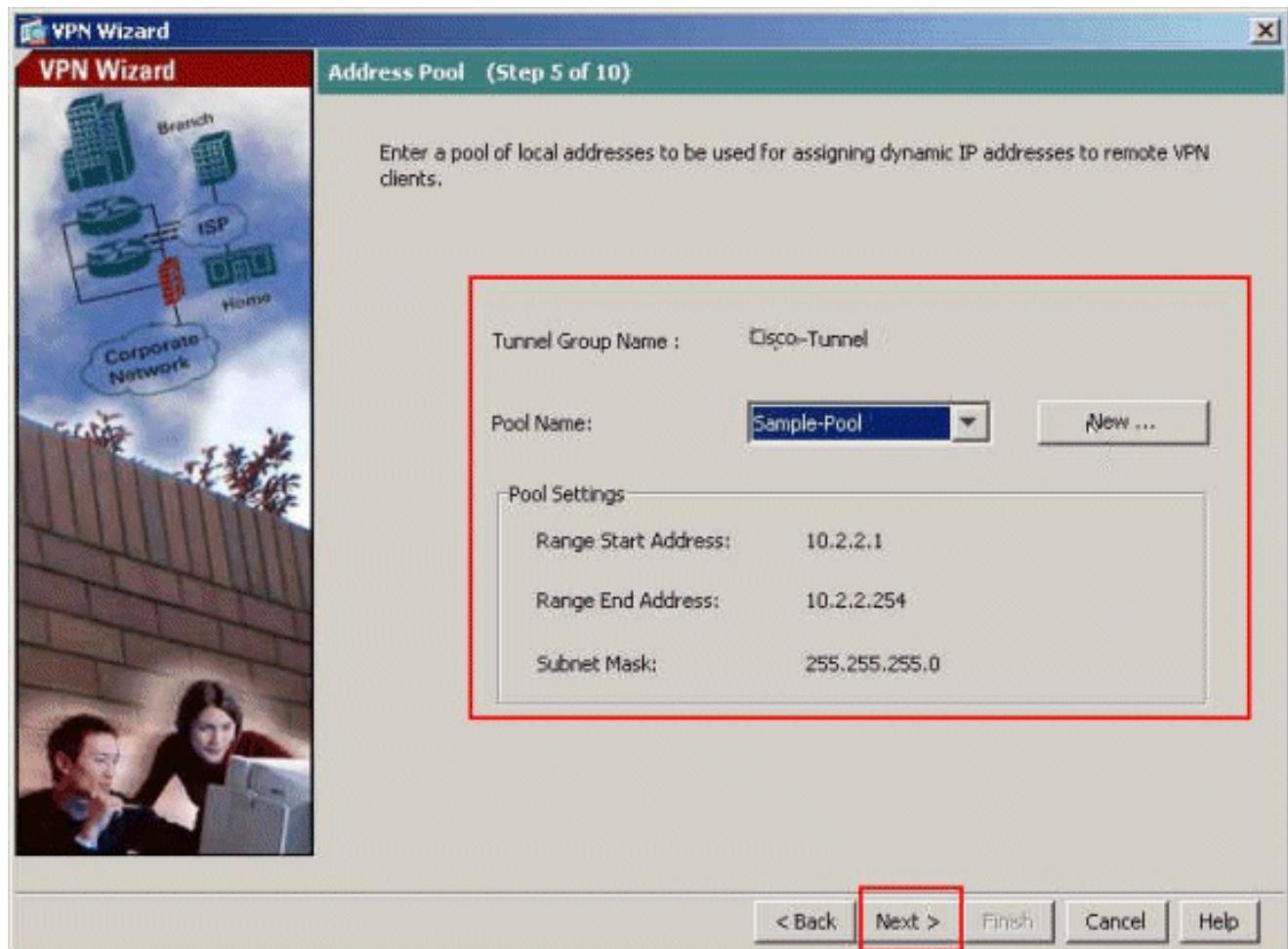
8. 定義在遠端VPN客戶端連線時將動態分配給這些客戶端的本地地址池。按一下New以建立一個新的本地地址池。



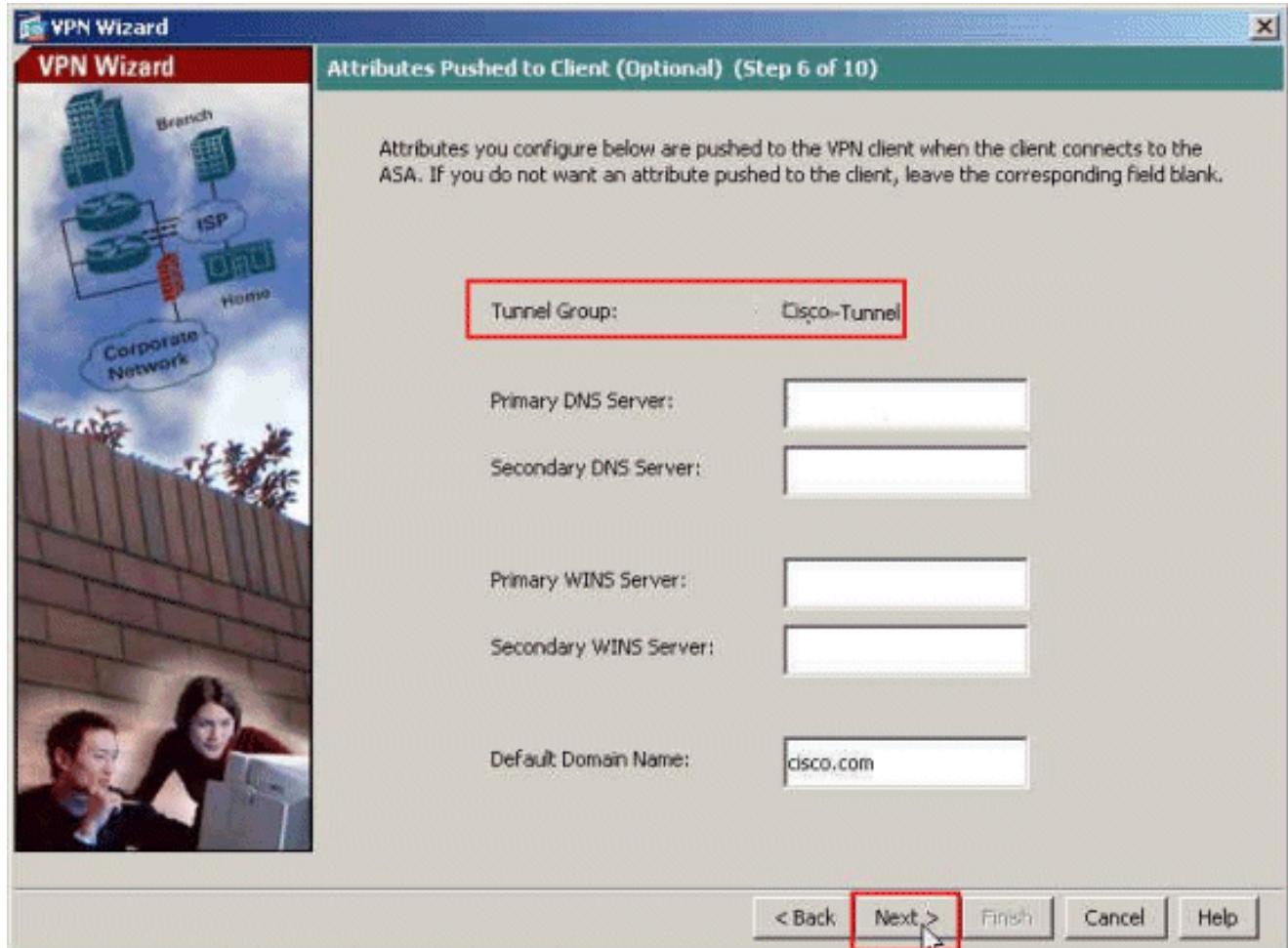
9. 在Add IP Pool窗口中，提供池名稱、起始IP地址、結束IP地址和子網掩碼。按一下「OK」(確定)。



10. 從下拉選單中選擇Pool Name，然後按一下Next。本示例的池名稱是在步驟9中建立的 Sample-Pool。



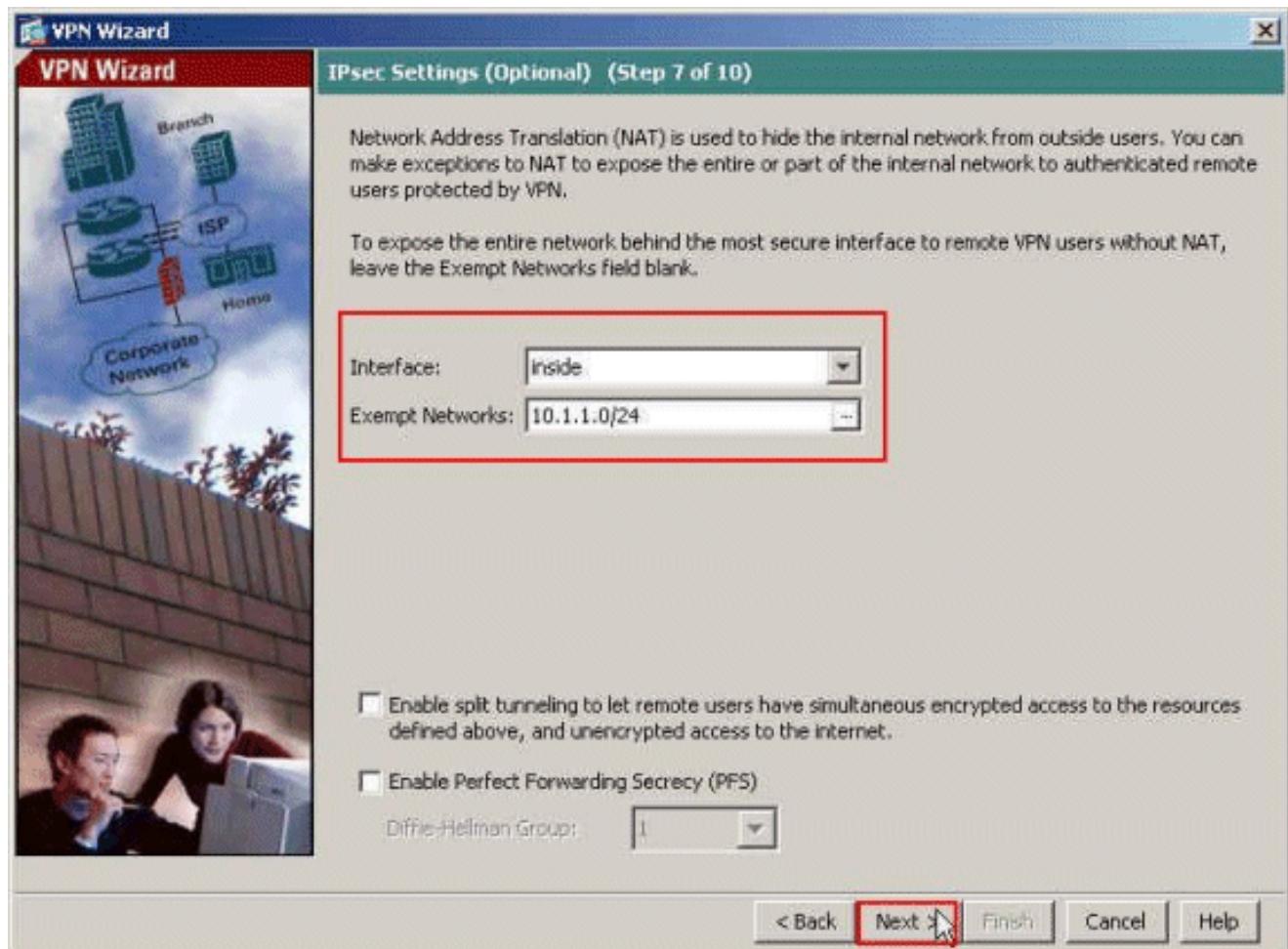
11. 可選：指定要推送到遠端VPN客戶端的DNS和WINS伺服器資訊以及預設域名。



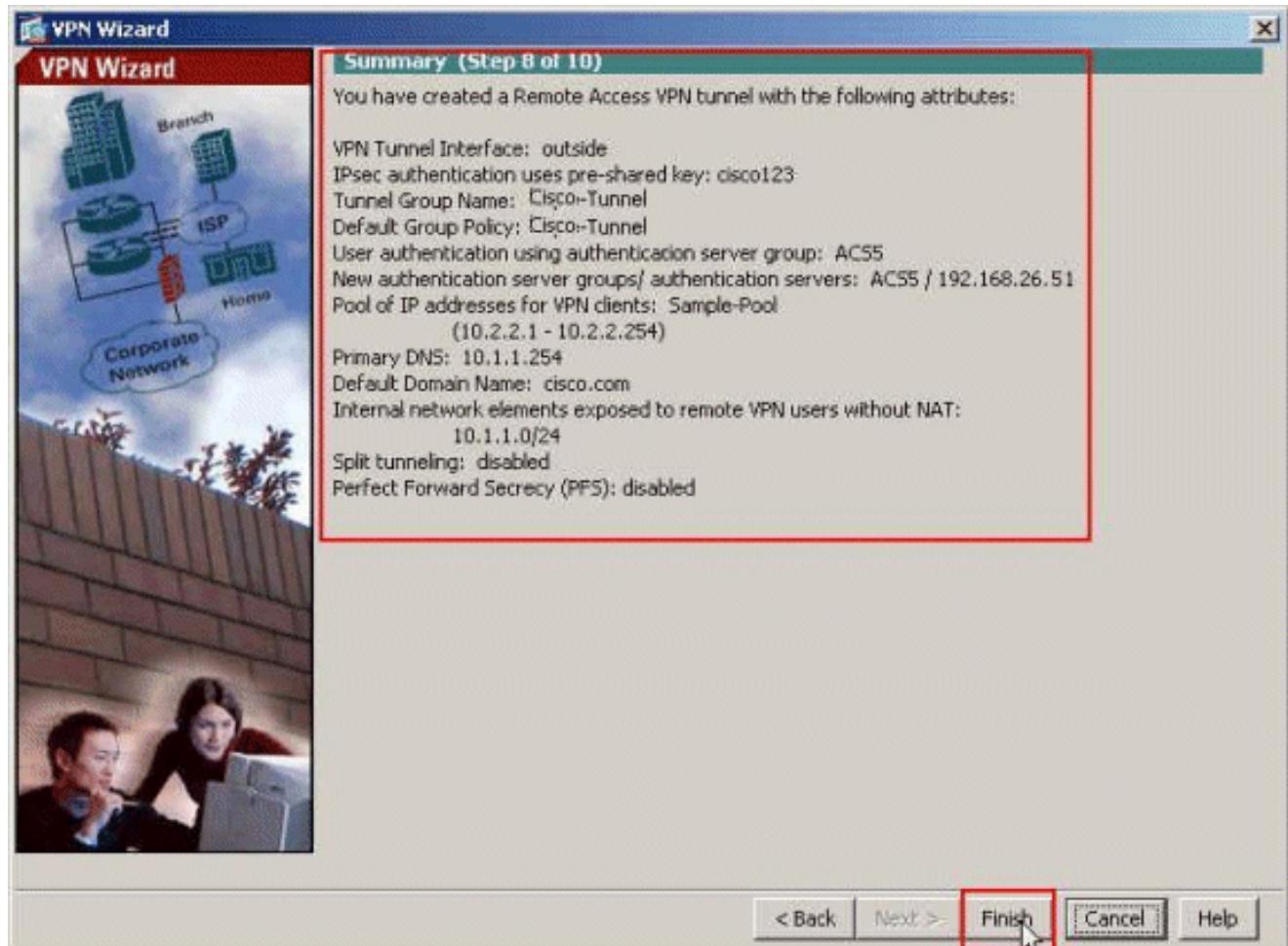
12. 指定哪些內部主機或網路應向遠端VPN使用者公開（如果有）。在Exempt Networks欄位中提供介面名稱和要免除的網路，然後按一下Next。

如果將此清單留空，則允許遠端VPN使用者訪問ASA的整個內部網路。

您也可以在此窗口中啟用分割隧道。分割隧道會加密發往本過程前面定義的資源的流量，並透過不對該流量進行隧道傳輸來提供對整個Internet的未加密訪問。如果未啟用分割隧道，則來自遠端VPN使用者的所有資料流將透過隧道傳輸到ASA。根據您的配置，這會佔用大量頻寬和處理器。



13. 此視窗顯示您已經採取的動作摘要。如果對配置感到滿意，請按一下Finish。



## 使用CLI配置ASA

以下是CLI配置：

```
<#root>
ASA#
sh run
ASA Version 8.4(3)
!
!--- Specify the hostname for the Security Appliance.

hostname ciscoasa
enable password y.tvDXf6yFbMTAdd encrypted
passwd 2KFQnbNIIdI.2KYOU encrypted
names
!

!--- Configure the outside and inside interfaces.

interface Ethernet0/0
nameif dmz
```

```
security-level 50
ip address 192.168.26.13 255.255.255.0
!
interface Ethernet0/1
nameif inside
security-level 100
ip address 10.1.1.1 255.255.255.0
!
interface Ethernet0/2
nameif outside
security-level 0
ip address 172.16.1.1 255.255.255.0
!
```

*!--- Output is suppressed.*

```
boot system disk0:/asa843-k8.bin
ftp mode passive
```

```
object network NETWORK_OBJ_10.1.1.0_24
subnet 10.1.1.0 255.255.255.0
object network NETWORK_OBJ_10.2.2.0_24
subnet 10.2.2.0 255.255.255.0
```

```
access-list OUTIN extended permit icmp any any
```

*!--- This is the Access-List whose name will be sent by !--- RADIUS Server(ACS) in the Filter-ID attribute.*

```
access-list new extended permit ip any host 10.1.1.2
access-list new extended deny ip any any
```

```
pager lines 24
logging enable
logging asdm informational
mtu inside 1500
mtu outside 1500
mtu dmz 1500
```

```
ip local pool Sample-Pool 10.2.2.1-10.2.2.254 mask 255.255.255.0
```

```
no failover
icmp unreachable rate-limit 1 burst-size 1
```

*!--- Specify the location of the ASDM image for ASA !--- to fetch the image for ASDM access.*

```
asdm image disk0:/asdm-647.bin
no asdm history enable
arp timeout 14400
```

*!--- Specify the NAT from internal network to the Sample-Pool.*

```
nat (inside,outside) source static
NETWORK_OBJ_10.1.1.0_24 NETWORK_OBJ_10.1.1.0_24 destination static
NETWORK_OBJ_10.2.2.0_24 NETWORK_OBJ_10.2.2.0_24
```

```
no-proxy-arp route-lookup
```

```
access-group OUTIN in interface outside
```

*!--- Create the AAA server group "ACS5" and specify the protocol as RADIUS. !--- Specify the ACS 5.x server IP address.*

```
aaa-server ACS5 protocol radius
aaa-server ACS5 (dmz) host 192.168.26.51
timeout 5
key *****
```

```
aaa authentication http console LOCAL
http server enable 2003
http 0.0.0.0 0.0.0.0 inside
```

*!--- PHASE 2 CONFIGURATION ---! !--- The encryption & hashing types for Phase 2 are defined here. We are specifying the transform-sets.*

```
crypto ipsec ikev1 transform-set ESP-AES-256-MD5 esp-aes-256 esp-md5-hmac
crypto ipsec ikev1 transform-set ESP-DES-SHA esp-des esp-sha-hmac
crypto ipsec ikev1 transform-set ESP-3DES-SHA esp-3des esp-sha-hmac
crypto ipsec ikev1 transform-set ESP-DES-MD5 esp-des esp-md5-hmac
crypto ipsec ikev1 transform-set ESP-AES-192-MD5 esp-aes-192 esp-md5-hmac
crypto ipsec ikev1 transform-set ESP-3DES-MD5 esp-3des esp-md5-hmac
crypto ipsec ikev1 transform-set ESP-AES-256-SHA esp-aes-256 esp-sha-hmac
crypto ipsec ikev1 transform-set ESP-AES-128-SHA esp-aes esp-sha-hmac
crypto ipsec ikev1 transform-set ESP-AES-192-SHA esp-aes-192 esp-sha-hmac
crypto ipsec ikev1 transform-set ESP-AES-128-MD5 esp-aes esp-md5-hmac
```

*!--- Defines a dynamic crypto map with !--- the specified transform-sets created earlier. We are specifying the transform-sets.*

```
!--- transform-sets.

crypto dynamic-map SYSTEM_DEFAULT_CRYPTO_MAP 65535 set ikev1 transform-set
    ESP-AES-128-SHA ESP-AES-128-MD5
ESP-AES-192-SHA ESP-AES-192-MD5 ESP-AES-256-SHA ESP-AES-256-MD5 ESP-3DES-SHA
    ESP-3DES-MD5 ESP-DES-SHA ESP-DES-MD5
```

*!--- Binds the dynamic map to the IPsec/ISAKMP process.*

```
crypto map outside_map 65535 ipsec-isakmp dynamic SYSTEM_DEFAULT_CRYPTO_MAP
```

*!--- Specifies the interface to be used with !--- the settings defined in this configuration.*

```
crypto map outside_map interface outside
```

*!---- PHASE 1 CONFIGURATION ---! !---- This configuration uses ISAKMP policies defined with all the perm*

```
crypto ikev1 enable outside
```

```
crypto ikev1 policy 10
authentication crack
encryption aes-256
hash sha
group 2
lifetime 86400
```

```
crypto ikev1 policy 20
authentication rsa-sig
encryption aes-256
hash sha
group 2
lifetime 86400
```

```
crypto ikev1 policy 30
authentication pre-share
encryption aes-256
hash sha
group 2
lifetime 86400
```

```
crypto ikev1 policy 40
authentication crack
encryption aes-192
hash sha
group 2
lifetime 86400
```

```
crypto ikev1 policy 50
authentication rsa-sig
encryption aes-192
hash sha
group 2
lifetime 86400
```

```
crypto ikev1 policy 60
authentication pre-share
encryption aes-192
hash sha
group 2
lifetime 86400
```

```
crypto ikev1 policy 70
authentication crack
encryption aes
hash sha
group 2
lifetime 86400
```

```
crypto ikev1 policy 80
authentication rsa-sig
encryption aes
hash sha
group 2
lifetime 86400
```

```
crypto ikev1 policy 90
```

```
authentication pre-share
encryption aes
hash sha
group 2
lifetime 86400

crypto ikev1 policy 100
authentication crack
encryption 3des
hash sha
group 2
lifetime 86400

crypto ikev1 policy 110
authentication rsa-sig
encryption 3des
hash sha
group 2
lifetime 86400

crypto ikev1 policy 120
authentication pre-share
encryption 3des
hash sha
group 2
lifetime 86400

crypto ikev1 policy 130
authentication crack
encryption des
hash sha
group 2
lifetime 86400

crypto ikev1 policy 140
authentication rsa-sig
encryption des
hash sha
group 2
lifetime 86400

crypto ikev1 policy 150
authentication pre-share
encryption des
hash sha
group 2
lifetime 86400

webvpn
group-policy Cisco-Tunnel internal
group-policy Cisco-Tunnel attributes
vpn-tunnel-protocol ikev1
default-domain value cisco.com
username admin password Cd0TKv3uhDhHIw3A encrypted privilege 15
!--- Associate the vpnclient pool to the tunnel group using the address pool. !--- Associate the AAA s

tunnel-group Cisco-Tunnel type remote-access
tunnel-group Cisco-Tunnel general-attributes
```

```
address-pool Sample-Pool  
authentication-server-group ACS5  
default-group-policy Cisco-Tunnel
```

*!---- Enter the pre-shared-key to configure the authentication method.*

```
tunnel-group Cisco-Tunnel ipsec-attributes  
ikev1 pre-shared-key *****  
  
prompt hostname context  
Cryptochecksum:e0725ca9ccc28af488ded9ee36b7822d  
: end  
ASA#
```

## 為個人使用者配置可下載ACL的ACS

您可以將Cisco Secure ACS 5.x上的可下載訪問清單配置為命名許可權對象，然後將其分配到將在Access-Service規則的結果部分中選擇的授權配置檔案。

在本示例中，IPsec VPN使用者「cisco」成功進行了身份驗證，RADIUS伺服器向安全裝置傳送了一份可下載訪問清單。使用者「cisco」只能存取10.1.1.2伺服器，但拒絕所有其他的存取。要驗證ACL，請參閱[適用於使用者/組的可下載ACL](#)部分。

要在Cisco Secure ACS 5.x中配置RADIUS客戶端，請完成以下步驟：

1. 選擇Network Resources > Network Devices and AAA Clients，然後按一下Create以在RADIUS伺服器資料庫中為ASA增加條目。



2. 為ASA輸入本地有效名稱(在本示例中為sample-asa)，然後在IP address欄位中輸入192.168.26.13。透過選中RADIUS覈取方塊在Authentication Options部分中選擇RADIUS，並在Shared Secret欄位中輸入cisco123。按一下Submit。

Network Resources > Network Devices and AAA Clients > Create

Name: sample-asa	Description:
Network Device Groups	
Location: All Locations	Select
Device Type: All Device Types	Select
IP Address	
<input checked="" type="radio"/> Single IP Address <input type="radio"/> IP Range(s) By Mask <input type="radio"/> IP Range(s)	
<input checked="" type="radio"/> IP: 192.168.26.13	
Authentication Options	
<input checked="" type="radio"/> TACACS+ <input type="checkbox"/>	
Shared Secret: <input type="text"/> Show	
<input type="checkbox"/> Single Connect Device	
<input type="radio"/> Legacy TACACS+ Single Connect Support	
<input type="radio"/> TACACS+ Draft Compliant Single Connect Support	
<input checked="" type="checkbox"/> RADIUS	
Shared Secret: <input type="text"/> Show	
CoA port: 1700	
<input type="checkbox"/> Enable KeyWrap	
Key Encryption Key: <input type="text"/>	
Message Authenticator Code Key: <input type="text"/>	
Key Input Format: <input type="radio"/> ASCII <input checked="" type="radio"/> HEXADECIMAL	
<small>● = Required fields</small>	
<input type="button" value="Submit"/> <input type="button" value="Cancel"/>	

3. ASA已成功增加到RADIUS伺服器(ACS)資料庫。

Network Resources > Network Devices and AAA Clients

### Network Devices

<input type="checkbox"/>	Name	IP Address	Description	NDG:Location	NDG:Device Type
<input checked="" type="checkbox"/>	sample-asa	192.168.26.13/32		All Locations	All Device Types

|

4. 選擇Users and Identity Stores > Internal Identity Stores > Users，然後按一下Create以便在ACS的本地資料庫中為VPN身份驗證建立一個使用者。

The screenshot shows the 'Internal Users' list page. The left sidebar has 'Users and Identity Stores' selected. The main area displays a table with one row: 'No data to display'. Below the table are several buttons: Create, Duplicate, Edit, Delete, Change Password, File Operations, and Export. The 'Create' button is highlighted with a red box.

- 輸入使用者名稱cisco。選擇Internal Users作為口令型別，然後輸入口令(本示例中為cisco123)。確認口令，然後按一下Submit。

The screenshot shows the 'Create User' dialog box. It has several sections: 'General' (Name: cisco, Status: Enabled), 'Password Information' (Password Type: Internal Users, Password: cisco123, Confirm Password: cisco123), 'Enable Password Information' (Password must contain 4-32 characters), and 'User Information' (no additional identity attributes defined). The 'General' and 'Password Information' sections are highlighted with red boxes. At the bottom are 'Submit' and 'Cancel' buttons, with 'Submit' highlighted with a red box.

- 使用者cisco已成功建立。

The screenshot shows the 'Internal Users' list page again. The table now has one row for 'cisco'. The 'cisco' entry is highlighted with a red box. The table columns are Status, User Name, Identity Group, and Description. The 'User Name' column shows 'cisco' with a green status icon. The 'Identity Group' column shows 'All Groups'. The 'Create', 'Duplicate', 'Edit', 'Delete', 'Change Password', 'File Operations', and 'Export' buttons are at the bottom.

- 要建立可下載ACL，請選擇Policy Elements > Authorization and Permissions > Named Permission Objects > Downloadable ACLs，然後按一下Create。

**Downloadable Access Control Lists**

Filter:  Match if:  Go ▾

<input type="checkbox"/>	Name	Description
<input type="checkbox"/>	No data to display	

**Action Buttons:** Create (highlighted with a red box), Duplicate, Edit, Delete, File Operations, Export.

8. 提供可下載ACL的名稱以及ACL內容。按一下Submit。

Policy Elements > Authorization and Permissions > Named Permission Objects > Downloadable ACLs > Create

**General**

Name: Sample-DACL  
 Description:

**Downloadable ACL Content**

```
permit ip any host 10.1.1.2
deny ip any any
```

■ = Required fields

**Action Buttons:** Submit (highlighted with a red box), Cancel.

9. 可下載ACL Sample-DACL已成功建立。

Policy Elements > Authorization and Permissions > Named Permission Objects > Downloadable ACLs

**Downloadable Access Control Lists**

Showing 1-1 of 1 50 per page Go ▾

<input type="checkbox"/>	Name	Description
<input type="checkbox"/>	Sample-DACL	

**Action Buttons:** Create, Duplicate, Edit, Delete, File Operations, Export.

10. 要為VPN身份驗證配置訪問策略，請選擇Access Policies > Access Services > Service Selection Rules，然後確定哪個服務符合RADIUS協定。在本示例中，規則1匹配RADIUS，而Default Network Access將滿足RADIUS請求。

Access Policies > Access Services > Service Selection Rules

Single result selection  Rule based result selection

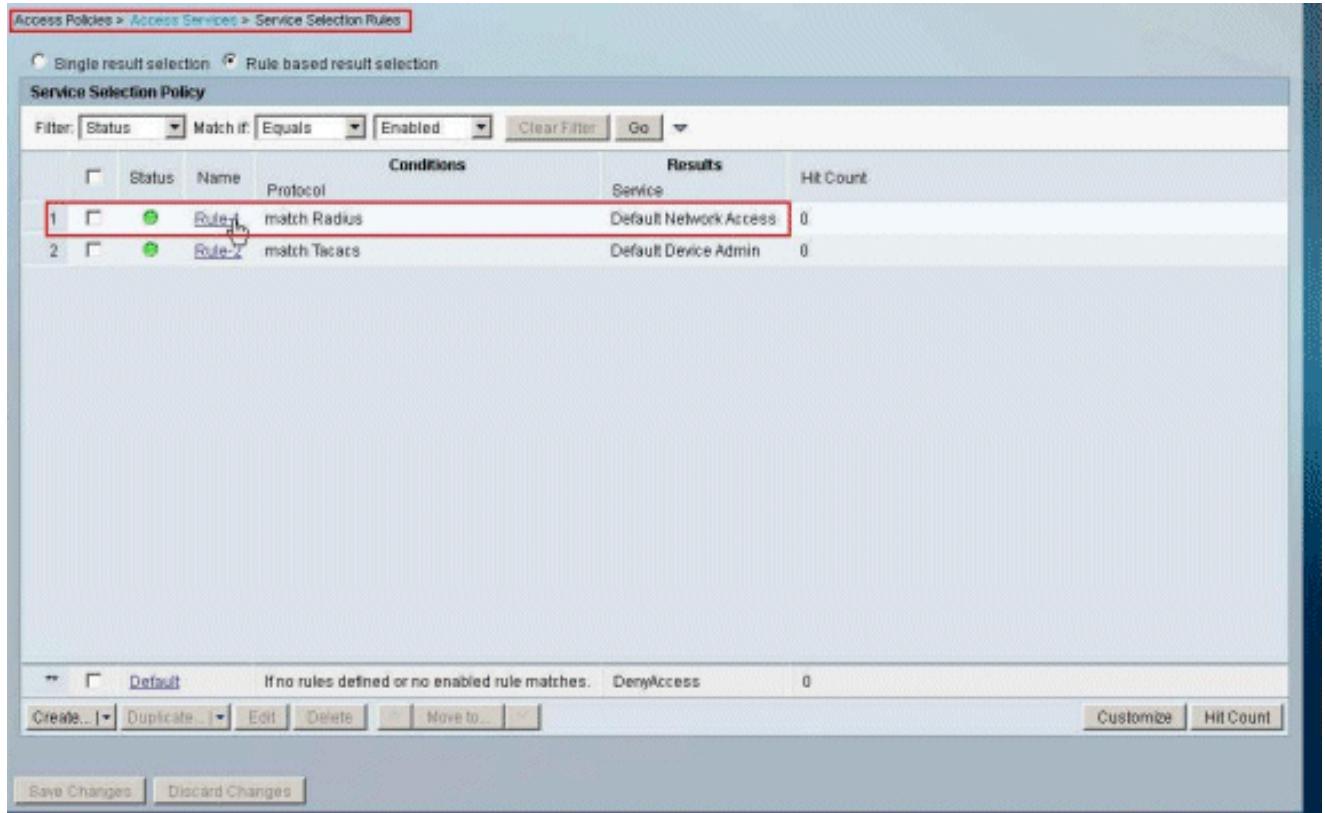
Service Selection Policy

	Status	Name	Protocol	Conditions	Results	Hit Count
1	<input type="checkbox"/>	Rule_1	match Radius		Default Network Access	0
2	<input type="checkbox"/>	Rule_2	match Tacacs		Default Device Admin	0

If no rules defined or no enabled rule matches. DenyAccess 0

Create...  Duplicate  Edit  Delete  Move to...  Customize  Hit Count

Save Changes  Discard Changes



11. 選擇步驟10中決定的Access Service。本例中使用的是預設網路訪問。選擇Allowed Protocols頁籤，並確保已選擇Allow PAP/ASCII和Allow MS-CHAPv2。按一下Submit。

General Allowed Protocols

Process Host Lookup

**Authentication Protocols**

- ▶  Allow PAP/ASCII
- ▶  Allow CHAP
- ▶  Allow MS-CHAPv1
- ▶  Allow MS-CHAPv2
- ▶  Allow EAP-MD5
- ▶  Allow EAP-TLS
- ▶  Allow LEAP
- ▶  Allow PEAP
- ▶  Allow EAP-FAST

Preferred EAP protocol

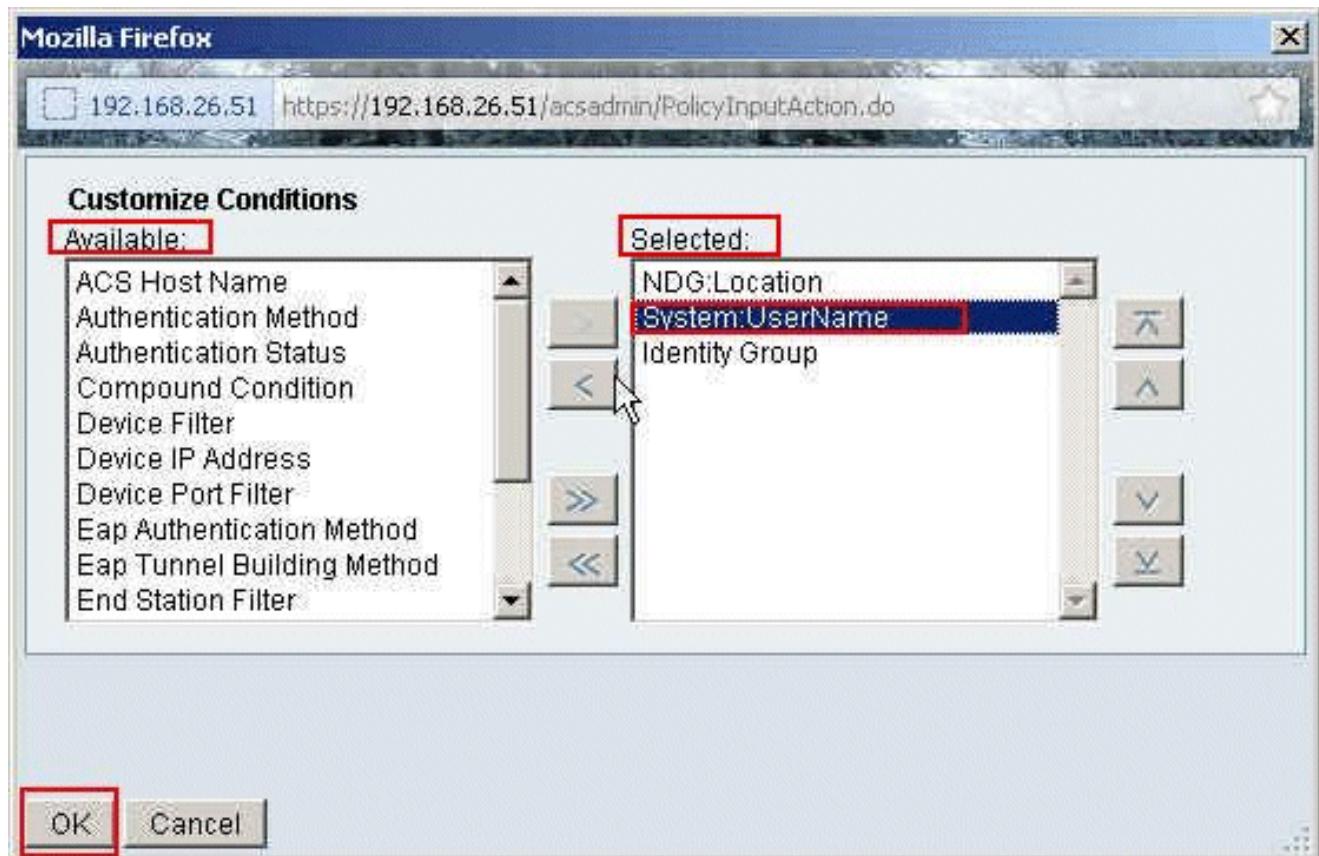
12. 按一下Access Services的Identity部分，並確保已選擇Internal Users作為Identity Source。在本例中，我們採用預設網路訪問。

The screenshot shows the 'Access Policies' section of a management interface. The left sidebar has a tree view with nodes like 'My Workspace', 'Network Resources', 'Users and Identity Stores', 'Policy Elements', 'Access Policies' (which is selected and highlighted in green), 'Access Services' (selected and highlighted in red), 'Service Selection Rules', 'Default Device Admin', 'Default Network Access' (selected and highlighted in red), 'Identity' (selected and highlighted in red), 'Authorization', 'Max User Session Policy', 'Monitoring and Reports', and 'System Administration'. The right panel shows the 'Identity' configuration for 'Default Network Access'. It includes options for 'Single result selection' and 'Rule based result selection', with 'Single result selection' selected. The 'Identity Source' is set to 'Internal Users' with a 'Select' button. A 'Advanced Options' link is also present.

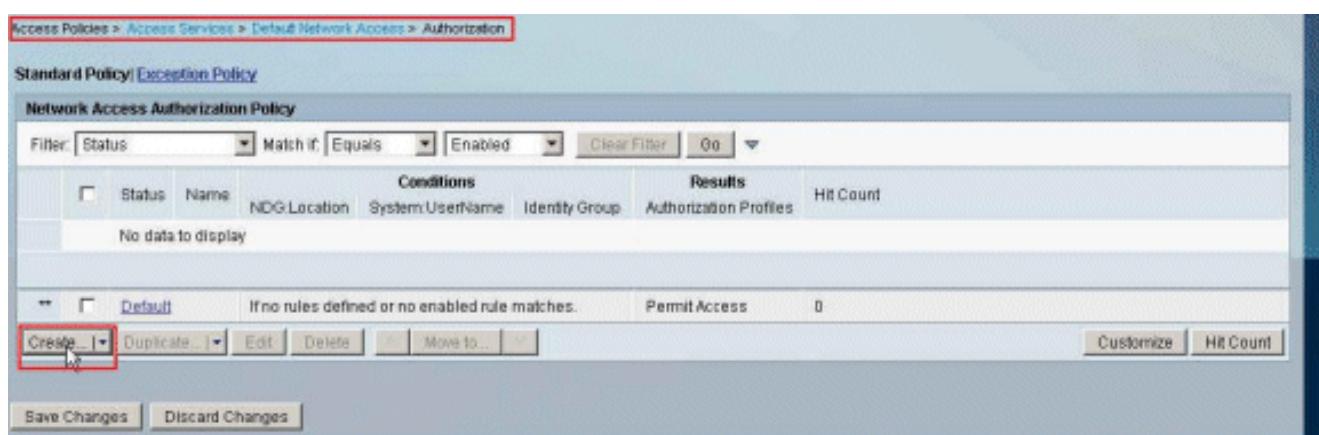
13. 選擇Access Policies > Access Services > Default Network Access > Authorization , 然後按一下Customize。

The screenshot shows the 'Authorization' configuration screen for 'Default Network Access'. The top bar indicates the full path: 'Access Policies > Access Services > Default Network Access > Authorization'. The main area is titled 'Network Access Authorization Policy' and contains a table with columns: Status, Name, NDO Location, Conditions, Results, and Hit Count. A filter bar at the top of the table allows filtering by Status, Match if, and Enabled status. Below the table, a message says 'No data to display'. At the bottom, there are buttons for 'Create...', 'Duplicate...', 'Edit', 'Delete', 'Move to...', 'Default' (selected), 'If no rules defined or no enabled rule matches: Permit Access', 'Customize' (highlighted with a red box), 'Hit Count', 'Save Changes', and 'Discard Changes'.

14. 將System : UserName從Available列移到Selected列 , 然後按一下OK。



15. 按一下Create以建立新規則。



16. 確保選中System : UserName旁邊的覈取方塊，從下拉選單中選擇equals，然後輸入使用者名稱cisco。

Cisco Secure ACS - Mozilla Firefox

192.168.26.51 https://192.168.26.51/acsadmin/PolicyInputAction.do

**General**

Name: Rule-2 Status: Enabled

The Customize button in the lower right area of the policy rules screen controls which policy conditions and results are available here for use in policy rules.

**Conditions**

NDG:Location: -ANY-

System:UserName: equals

Identity Group: -ANY-

**Results**

Authorization Profiles:

You may select multiple authorization profiles. Attributes defined in multiple profiles will use the value from the first profile defined.

Select Deselect

OK Cancel Help

The screenshot shows the 'Policy Input Action' dialog box. In the 'Conditions' section, the 'System:UserName' condition is selected (indicated by a red border) and set to 'equals' with the value 'cisco'. In the 'Results' section, there is a list box for 'Authorization Profiles' which is currently empty. A note states that multiple profiles can be selected, and their attributes will use the value from the first profile defined. At the bottom, there are 'OK', 'Cancel', and 'Help' buttons.

17. 按一下選擇。

Cisco Secure ACS - Mozilla Firefox

192.168.26.51 https://192.168.26.51/acsadmin/PolicyInputAction.do

**General**

Name: Rule-2 Status: Enabled

The Customize button in the lower right area of the policy rules screen controls which policy conditions and results are available here for use in policy rules.

**Conditions**

NDG:Location: -ANY-

System:UserName: equals

Identity Group: -ANY-

**Results**

Authorization Profiles:

You may select multiple authorization profiles. Attributes defined in multiple profiles will use the value from the first profile defined.

Select Deselect

OK Cancel Help

The screenshot shows the 'Cisco Secure ACS - Mozilla Firefox' window with the URL 'https://192.168.26.51/acsadmin/PolicyInputAction.do'. The main content is a 'Policy Input Action' dialog box. In the 'General' section, 'Name' is set to 'Rule-2' and 'Status' is 'Enabled' with a green indicator. A note says: 'The Customize button in the lower right area of the policy rules screen controls which policy conditions and results are available here for use in policy rules.' Under 'Conditions', there are three checkboxes: 'NDG:Location: -ANY-' (unchecked), 'System:UserName: equals' (checked with value 'cisco'), and 'Identity Group: -ANY-' (unchecked). The 'Results' section is titled 'Authorization Profiles:' and contains a list box with four small gray arrows pointing up and down. To the right of the list box is a note: 'You may select multiple authorization profiles. Attributes defined in multiple profiles will use the value from the first profile defined.' Below the list box are two buttons: 'Select' (highlighted with a red box) and 'Deselect'. At the bottom of the dialog are 'OK', 'Cancel', and 'Help' buttons.

18. 按一下Create以建立新的授權配置檔案。

Cisco Secure ACS - Mozilla Firefox

192.168.26.51 https://192.168.26.51/acs-admin/NetworkAccessLPIInputAction.ds

Showing 1-2 of 2 50 per page Go

**Authorization Profiles**

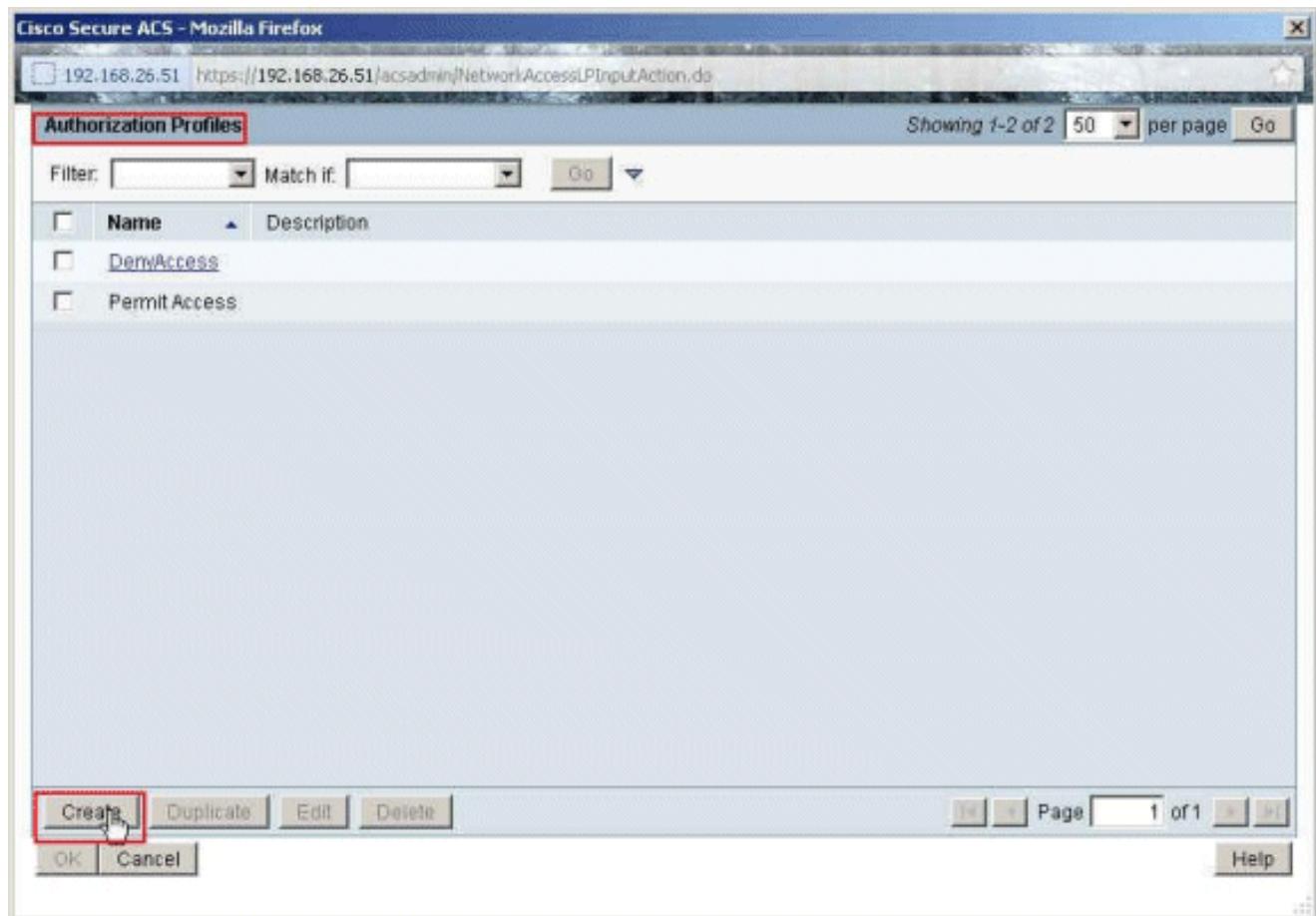
Filter: [ ] Match if: [ ] Go [ ]

<input type="checkbox"/>	Name	Description
<input type="checkbox"/>	DenyAccess	
<input type="checkbox"/>	Permit Access	

Create [ ] Duplicate [ ] Edit [ ] Delete [ ]

Page [ ] 1 of 1 [ ] [ ] Help [ ]

OK [ ] Cancel [ ]



19. 為Authorization Profile提供一個名稱。此示例中使用Sample-Profile。

Cisco Secure ACS - Mozilla Firefox

192.168.26.51 https://192.168.26.51/acs-admin/NetworkAccessLPIInputAction.ds

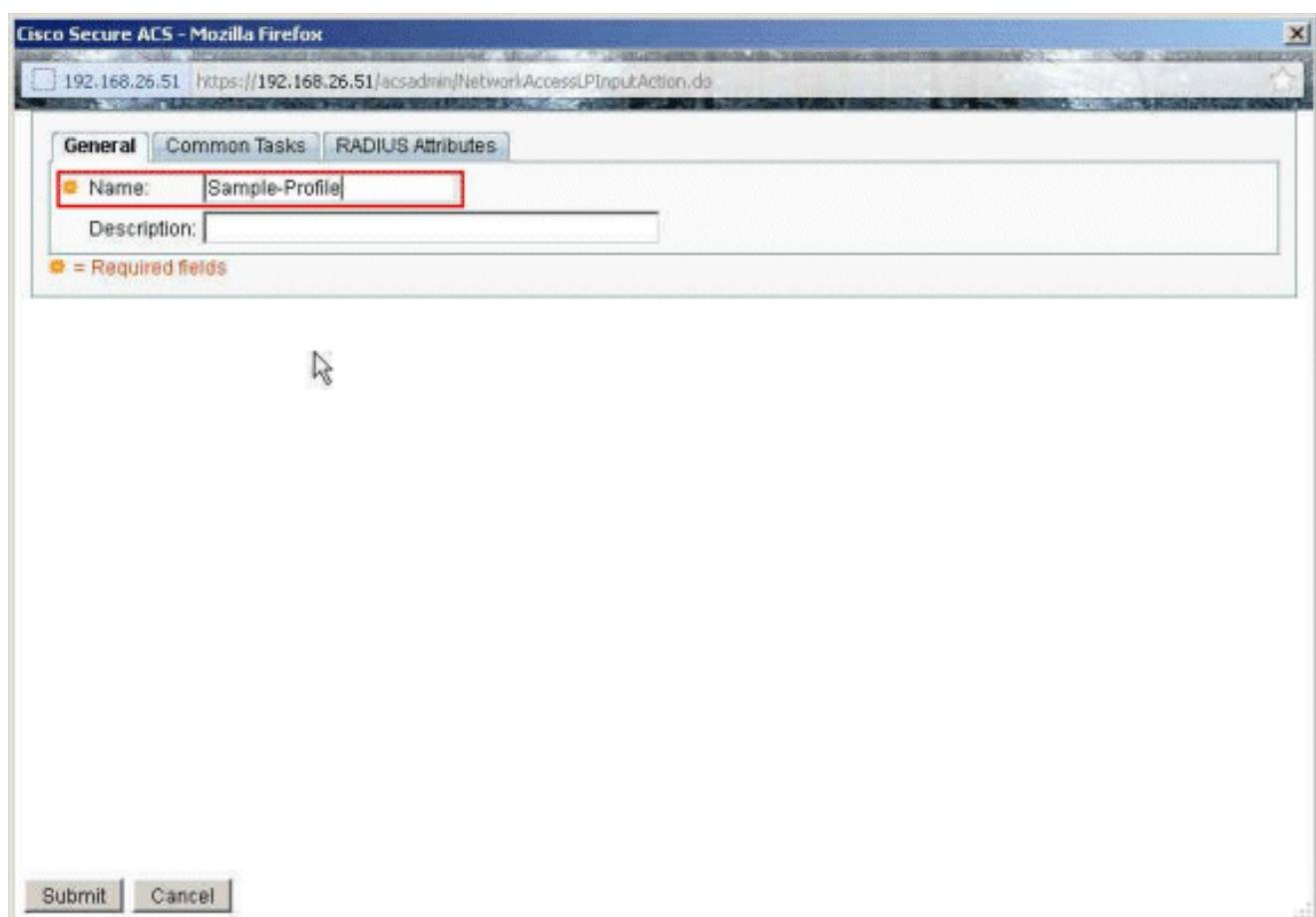
General Common Tasks RADIUS Attributes

Name: Sample-Profile [ ]

Description: [ ]

\* = Required fields

Submit [ ] Cancel [ ]



20. 選擇Common Tasks頁籤，然後從Downloadable ACL Name的下拉選單中選擇Static。從Value下拉選單中選擇新建立的DACL (Sample -DACL)。

The screenshot shows the 'Cisco Secure ACS - Mozilla Firefox' interface. The URL in the address bar is `https://192.168.26.51/acsadmin/NetworkAccessLPIInputAction.d`. The 'Common Tasks' tab is selected. The 'ACLs' section is highlighted with a red box. Inside 'ACLs', the 'Downloadable ACL Name' dropdown is set to 'Static' and the 'Value' dropdown is set to 'Sample-DACL'. Other sections like 'Voice VLAN', 'VLAN', 'Reauthentication', 'QoS', '802.1X-REV', and 'URL Redirect' have dropdown menus set to 'Not in Use'. At the bottom are 'Submit' and 'Cancel' buttons.

21. 按一下Submit。

Cisco Secure ACS - Mozilla Firefox

192.168.26.51 https://192.168.26.51/acsadmin/NetworkAccessLPIInputAction.ds

General	Common Tasks	RADIUS Attributes
<b>ACLs</b>		
Downloadable ACL Name:	Static	<input checked="" type="radio"/> Value Sample-DACL
Filter-ID ACL:	Not in Use	
Proxy ACL:	Not in Use	
<b>Voice VLAN</b>		
Permission to Join:	Not in Use	
<b>VLAN</b>		
VLAN ID/Name:	Not in Use	
<b>Reauthentication</b>		
Reauthentication Timer:	Not in Use	
Maintain Connectivity during Reauthentication:		
<b>QoS</b>		
Input Policy Map:	Not in Use	
Output Policy Map:	Not in Use	
<b>802.1X-REV</b>		
LinkSec Security Policy:	Not in Use	
<b>URL Redirect</b>		
When a URL is defined for Redirect an ACL must also be defined		
URL for Redirect:	Not in Use	
<input type="button" value="Submit"/>		<input type="button" value="Cancel"/>

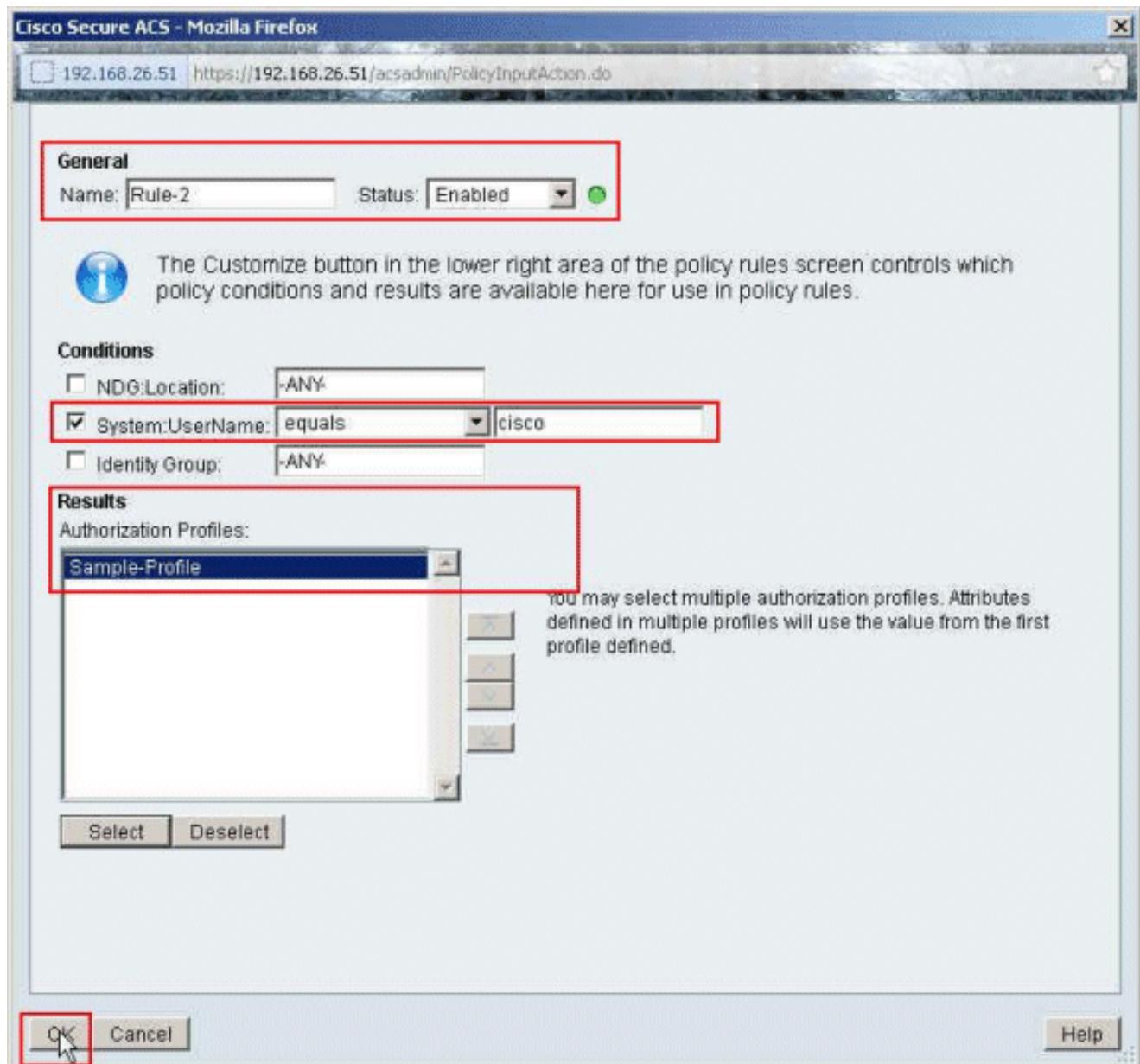
22. 確保選中Sample-Profile ( 新建立的授權配置檔案 ) 旁邊的覈取方塊，然後按一下OK。

Cisco Secure ACS - Mozilla Firefox

192.168.26.51 https://192.168.26.51/acsadmin/NetworkAccessLPIInputAction.ds

Showing 1-3 of 3 50 per page Go	
<b>Authorization Profiles</b>	
Filter:	Match if:
<input type="checkbox"/>	Name Description
<input type="checkbox"/>	DenyAccess
<input type="checkbox"/>	Permit Access
<input checked="" type="checkbox"/>	Sample-Profile
<input type="button" value="Create"/> <input type="button" value="Duplicate"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>	
Page 1 of 1 <input type="button" value="First"/> <input type="button" value="Previous"/> <input type="button" value="Next"/> <input type="button" value="Last"/>	
<input type="button" value="OK"/> <input type="button" value="Cancel"/> Help	

23. 驗證在Authorization Profiles欄位中選擇了新建立的Sample-Profile後，按一下OK。



24. 驗證是否已使用System : UserName equals cisco條件和Sample-Profile 建立新規則(Rule-2)。按一下Save Changes。已成功建立規則2。

Condition	Value
NDG:Location	-ANY
System:UserName	equals cisco
Identity Group	-ANY

## 為組的可下載ACL配置ACS

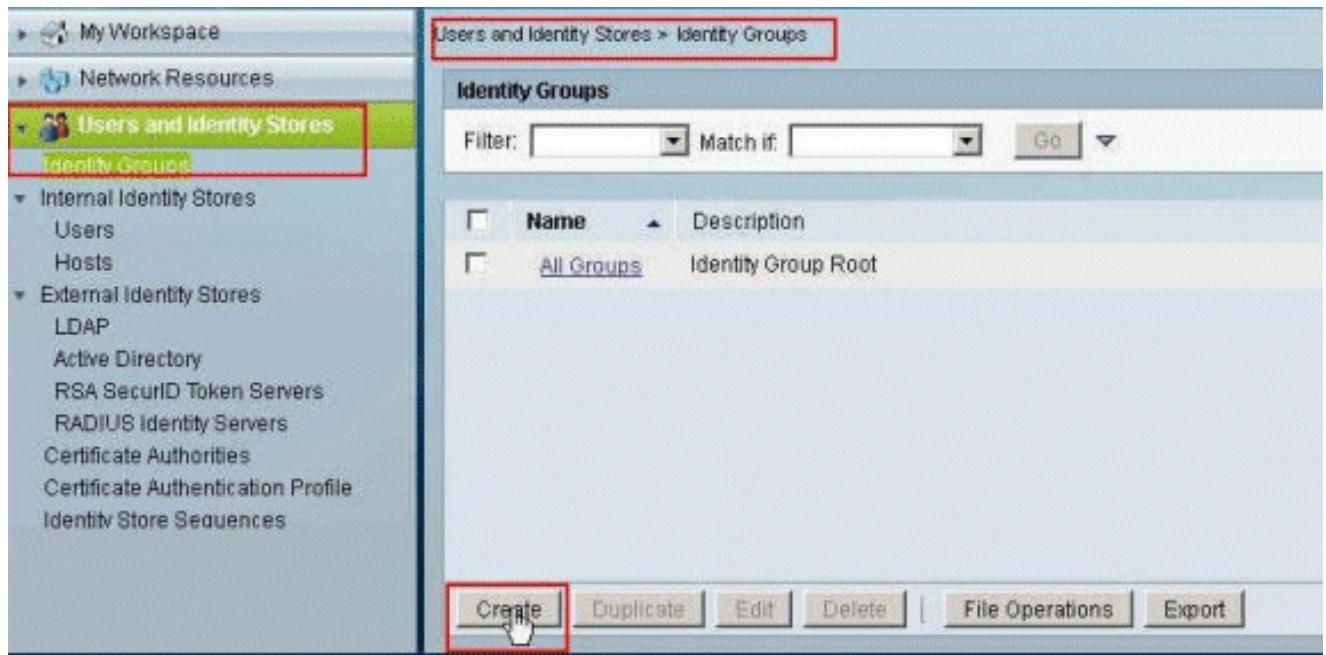
完成為適用於個人使用者的可下載ACL配置ACS 中的步驟1到12，然後執行以下步驟，在Cisco

Secure ACS中為組配置可下載ACL。

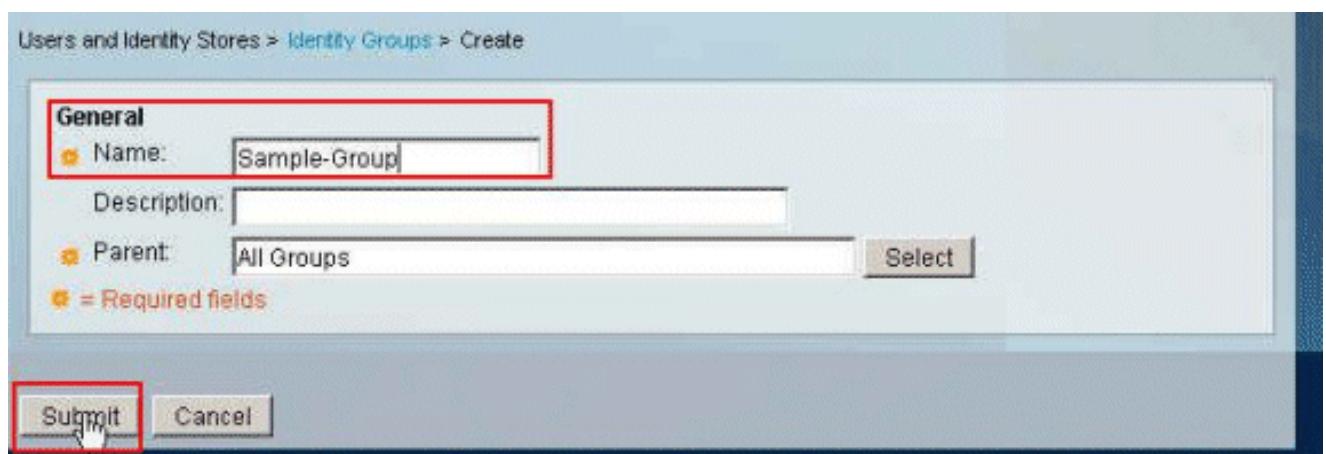
在本示例中，IPsec VPN使用者「cisco」屬於Sample-Group。

示例組使用者「cisco」已成功進行身份驗證，RADIUS伺服器將向安全裝置傳送一份可下載訪問清單。使用者「cisco」只能存取10.1.1.2伺服器，但拒絕所有其他的存取。要驗證ACL，請參閱適用於使用者/組的可下載ACL部分。

1. 在導航欄中，按一下Users and Identity Stores > Identity Groups，然後按一下Create以建立新組。



2. 提供組名(Sample-Group)，然後按一下Submit。



3. 選擇User Identity Stores > Internal Identity Stores > Users，然後選擇使用者cisco。按一下Edit以更改此使用者的組成員資格。

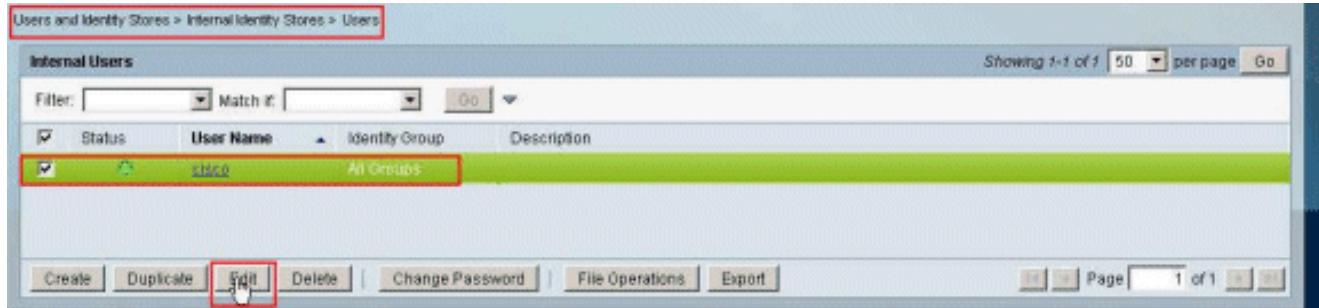
Users and Identity Stores > Internal Identity Stores > Users

Internal Users

Showing 1-1 of 1 50 per page Go

Filter:	Status	User Name	Identity Group	Description
	<input checked="" type="checkbox"/>	cisco	All Groups	

Create Duplicate Edit Delete Change Password File Operations Export Page 1 of 1



4. 按一下「Identity Group」旁邊的Select。

Users and Identity Stores > Internal Identity Stores > Users > Edit: "cisco"

General

Name: cisco Status: Enabled

Description:

Identity Group: All Groups Select

User Information

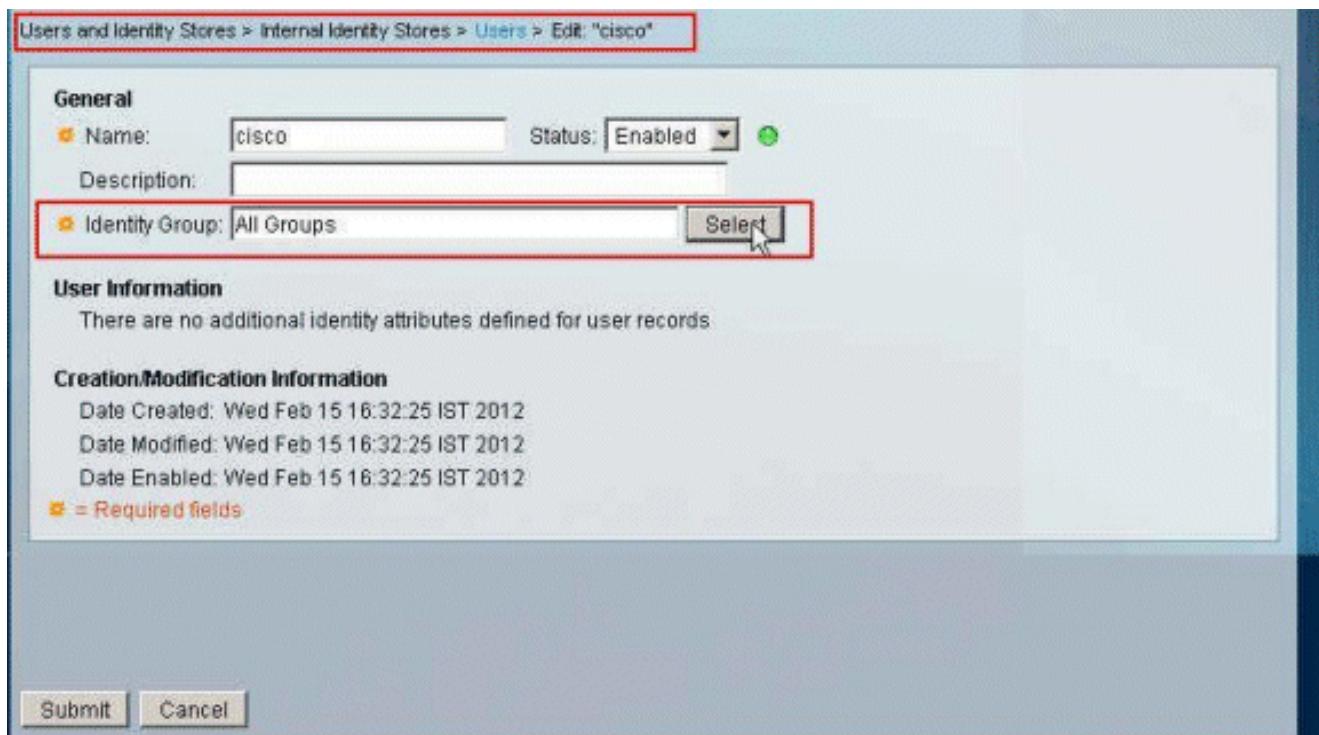
There are no additional identity attributes defined for user records

Creation/Modification Information

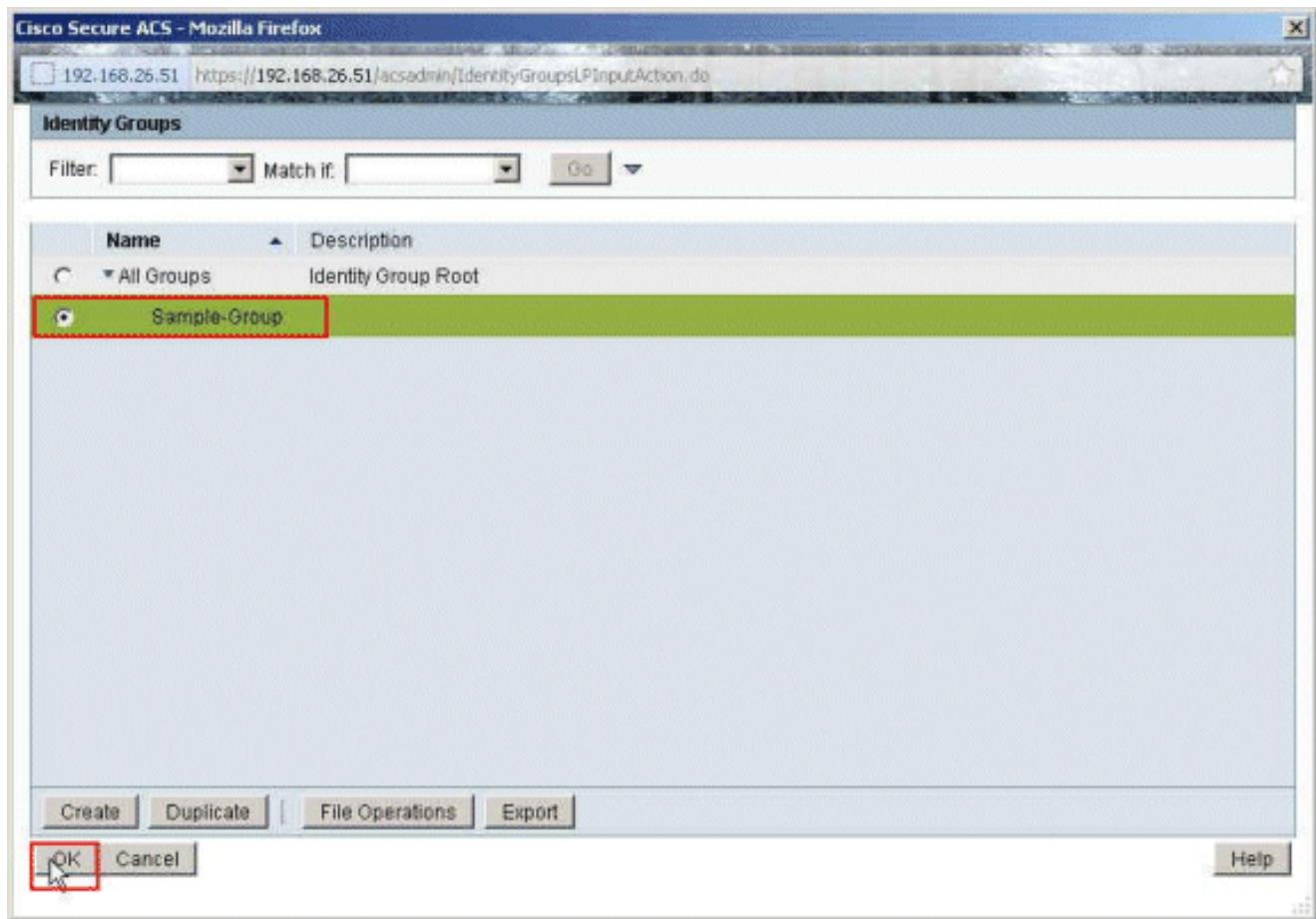
Date Created: Wed Feb 15 16:32:25 IST 2012  
Date Modified: Wed Feb 15 16:32:25 IST 2012  
Date Enabled: Wed Feb 15 16:32:25 IST 2012

\* = Required fields

Submit Cancel



5. 選擇新建立的組(即Sample-Group)，然後按一下OK。



6. 按一下Submit。

<b>General</b>	
Name: <input type="text" value="cisco"/> Status: <input type="button" value="Enabled"/>	
Description: <input type="text"/>	
Identity Group: <input type="text" value="All Groups:Sample-Group"/> <input type="button" value="Select"/>	
<b>User Information</b>	
There are no additional identity attributes defined for user records	
<b>Creation/Modification Information</b>	
Date Created: Wed Feb 15 16:32:25 IST 2012	
Date Modified: Wed Feb 15 16:32:25 IST 2012	
Date Enabled: Wed Feb 15 16:32:25 IST 2012	
= Required fields	
<input type="button" value="Submit"/> <input type="button" value="Cancel"/>	

7. 選擇Access Policies > Access Services > Default Network Access > Authorization，然後按一下Create以建立新規則。

Access Policies > Access Services > Default Network Access > Authorization
Standard Policy   Exception Policy
<b>Network Access Authorization Policy</b>
Filter: Status Equals Enabled Clear Filter Go
No data to display
Default If no rules defined or no enabled rule matches. Permit Access 0
Create... <input type="button" value="Create"/>
Save Changes Discard Changes

8. 確保選中Identity Group旁邊的覈取方塊，然後按一下Select。

Cisco Secure ACS - Mozilla Firefox

192.168.26.51 https://192.168.26.51/acsadmin/PolicyInputAction.do

**General**

Name: Rule-1 Status: Enabled

The Customize button in the lower right area of the policy rules screen controls which policy conditions and results are available here for use in policy rules.

**Conditions**

NDG:Location: -ANY-  
 System:UserName: -ANY-  
 Identity Group: In

**Results**

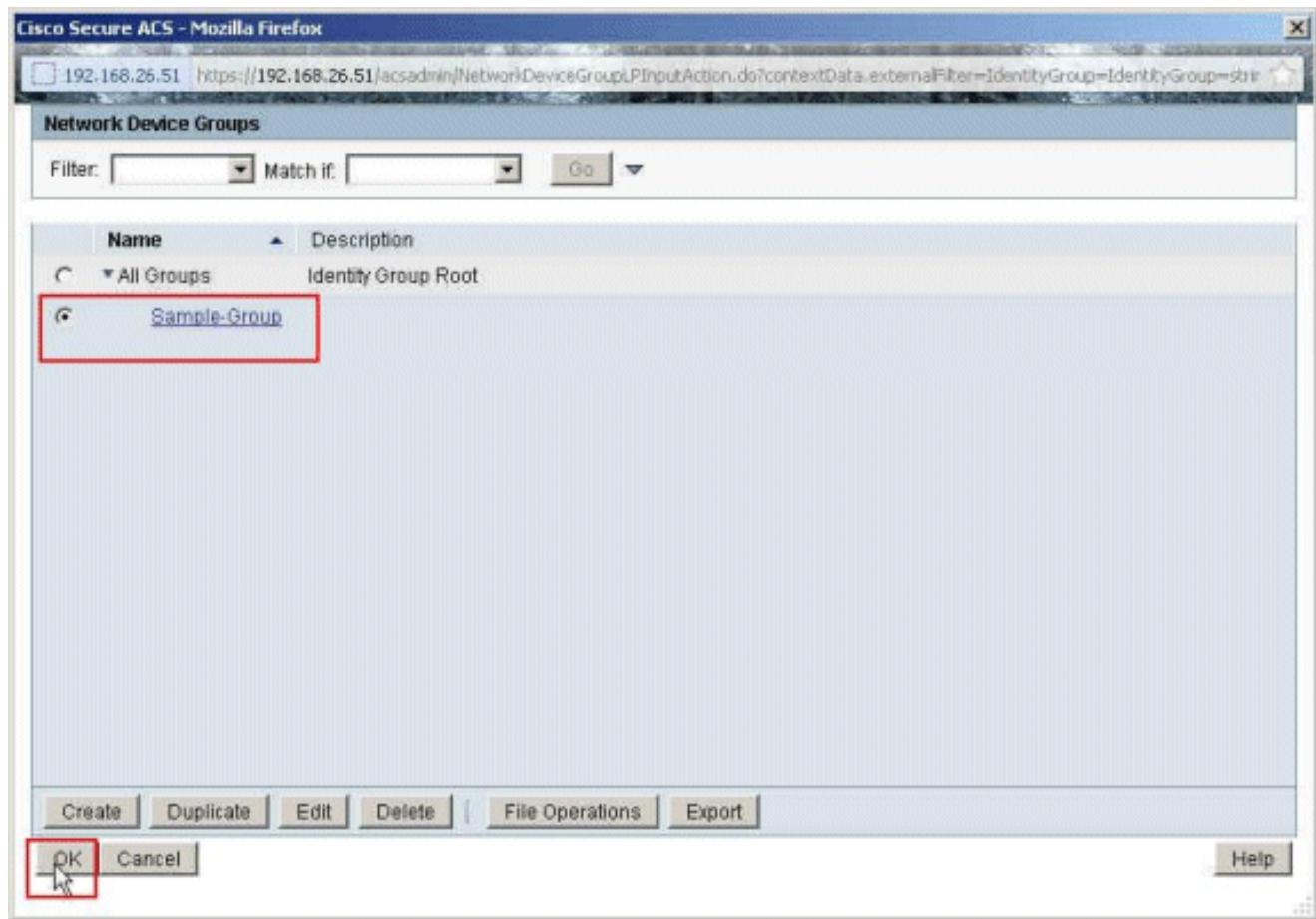
Authorization Profiles:

You may select multiple authorization profiles. Attributes defined in multiple profiles will use the value from the first profile defined.

Select Deselect

OK Cancel Help

9. 選擇Sample-Group，然後按一下OK。



10. 在Authorization Profiles部分中，按一下Select。

Cisco Secure ACS - Mozilla Firefox

192.168.26.51 https://192.168.26.51/acsadmin/PolicyInputAction.do

**General**

Name: Rule-1 Status: Enabled

The Customize button in the lower right area of the policy rules screen controls which policy conditions and results are available here for use in policy rules.

**Conditions**

NDG:Location: -ANY-  
 System:UserName: -ANY-  
 Identity Group: in  All Groups:Sample-Group

**Results**

Authorization Profiles:

You may select multiple authorization profiles. Attributes defined in multiple profiles will use the value from the first profile defined.

Select Deselect

OK Cancel Help

11. 按一下Create以建立新的授權配置檔案。

Cisco Secure ACS - Mozilla Firefox

192.168.26.51 https://192.168.26.51/acsadmin/NetworkAccessLPIInputAction.ds

Showing 1-2 of 2 50 per page Go

**Authorization Profiles**

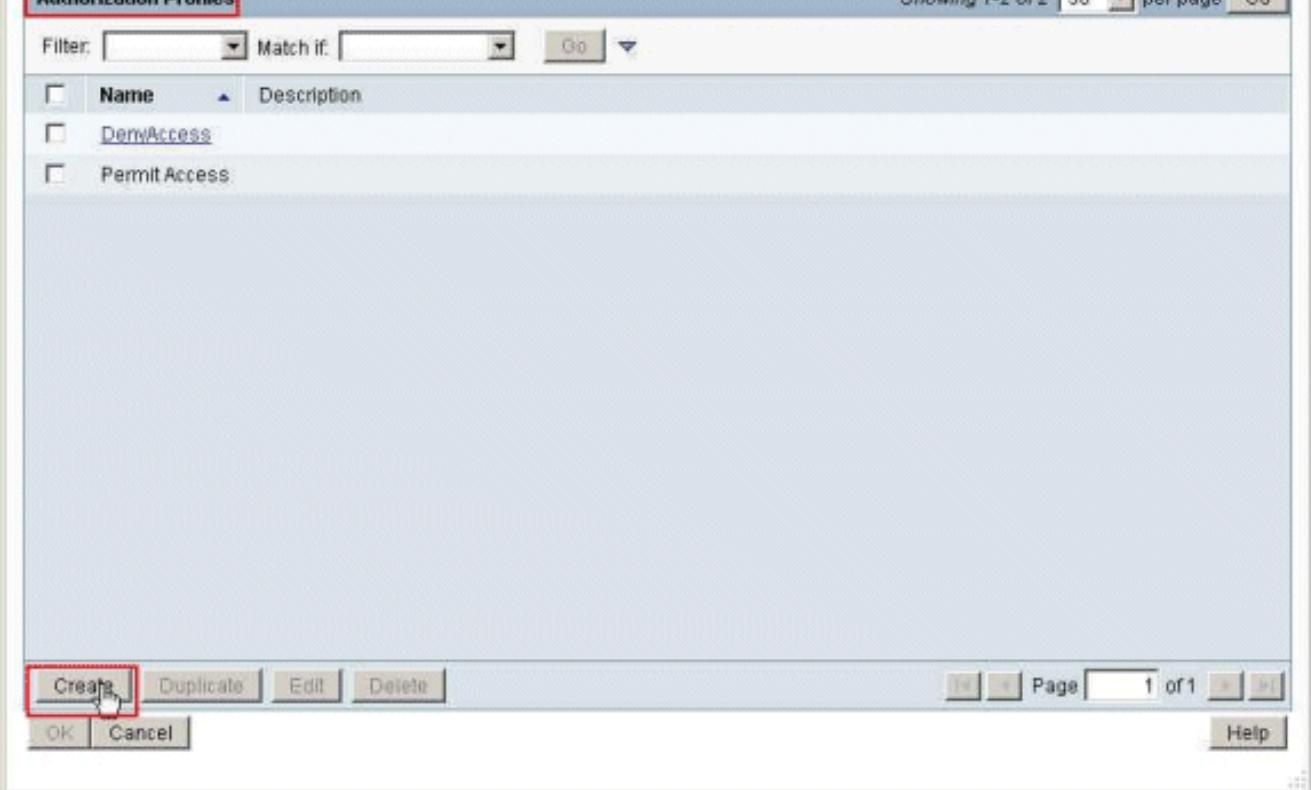
Filter: [ ] Match if: [ ] Go [ ]

<input type="checkbox"/>	Name	Description
<input type="checkbox"/>	DenyAccess	
<input type="checkbox"/>	Permit Access	

Create [ ] Duplicate [ ] Edit [ ] Delete [ ]

Page [ ] 1 of 1 [ ] [ ] Help [ ]

OK [ ] Cancel [ ]



12. 為Authorization Profile提供一個名稱。Sample-Profile是本示例中使用的名稱。

Cisco Secure ACS - Mozilla Firefox

192.168.26.51 https://192.168.26.51/acsadmin/NetworkAccessLPIInputAction.ds

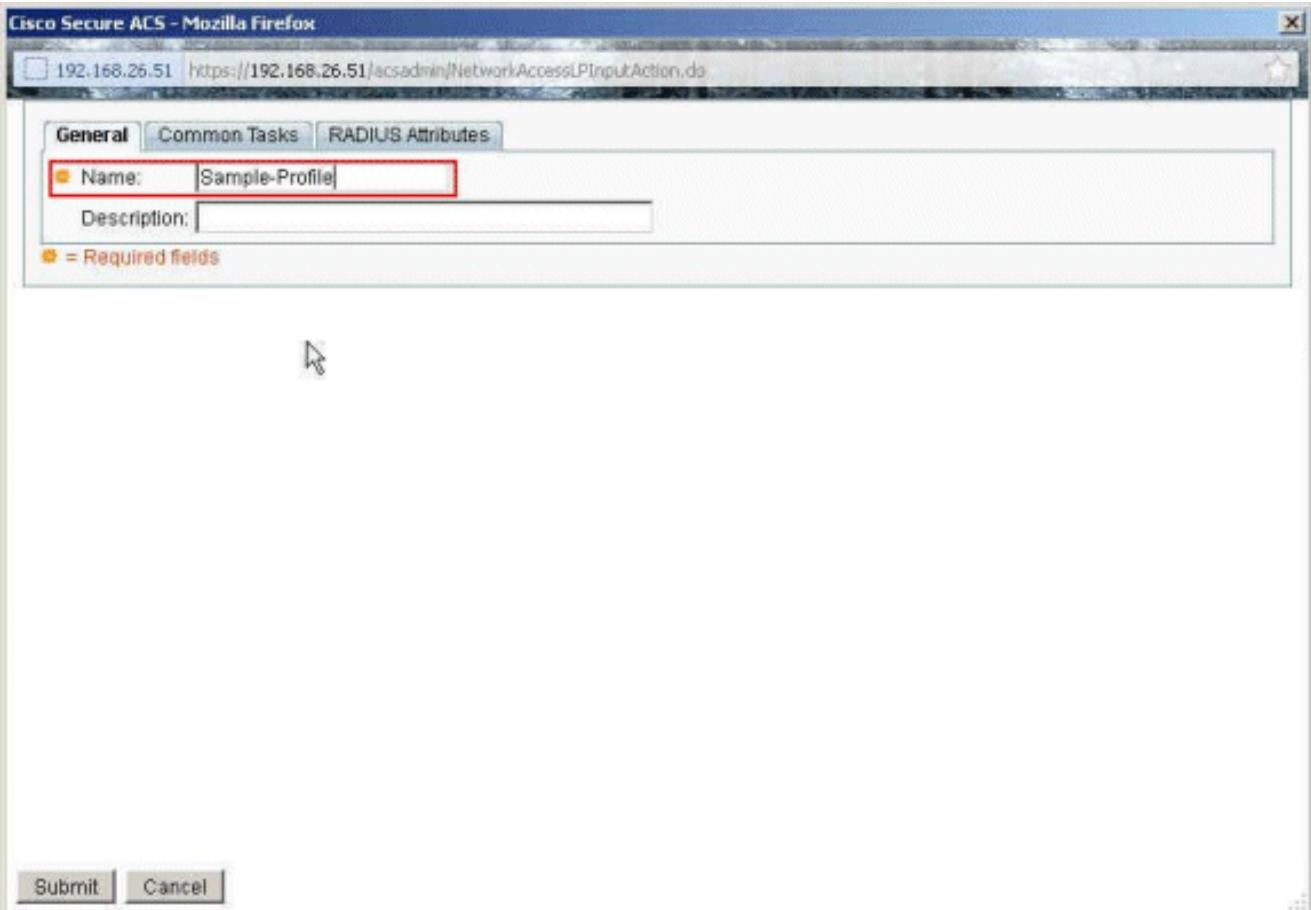
General Common Tasks RADIUS Attributes

Name: Sample-Profile [ ]

Description: [ ]

\* = Required fields

Submit [ ] Cancel [ ]



13. 選擇Common Tasks頁籤，然後從Downloadable ACL Name的下拉選單中選擇Static。從Value下拉選單中選擇新建立的DACL (Sample -DACL)。

The screenshot shows the 'Cisco Secure ACS - Mozilla Firefox' window with the URL <https://192.168.26.51/acsadmin/NetworkAccessLPIInputAction.ds>. The 'Common Tasks' tab is selected. The 'ACLs' section is highlighted with a red box, showing 'Downloadable ACL Name: Static' and 'Value: Sample-DACL'. Other sections like 'Voice VLAN', 'VLAN', 'Reauthentication', 'QoS', '802.1X-REV', and 'URL Redirect' are visible but not selected.

**ACLs**

Downloadable ACL Name:  Value:

Filter-ID ACL: Not in Use

Proxy ACL: Not in Use

**Voice VLAN**

Permission to Join: Not in Use

**VLAN**

VLAN ID/Name: Not in Use

**Reauthentication**

Reauthentication Timer: Not in Use

Maintain Connectivity during Reauthentication:

**QoS**

Input Policy Map: Not in Use

Output Policy Map: Not in Use

**802.1X-REV**

LinkSec Security Policy: Not in Use

**URL Redirect**

When a URL is defined for Redirect an ACL must also be defined

URL for Redirect: Not in Use

14. 按一下Submit。

Cisco Secure ACS - Mozilla Firefox

192.168.26.51 https://192.168.26.51/acsadmin/NetworkAccessLPIInputAction.ds

General	Common Tasks	RADIUS Attributes
<b>ACLs</b>		
Downloadable ACL Name:	Static	Value Sample-DACL
Filter-ID ACL:	Not in Use	
Proxy ACL:	Not in Use	
<b>Voice VLAN</b>		
Permission to Join:	Not in Use	
<b>VLAN</b>		
VLAN ID/Name:	Not in Use	
<b>Reauthentication</b>		
Reauthentication Timer:	Not in Use	
Maintain Connectivity during Reauthentication:		
<b>QoS</b>		
Input Policy Map:	Not in Use	
Output Policy Map:	Not in Use	
<b>802.1X-REV</b>		
LinkSec Security Policy:	Not in Use	
<b>URL Redirect</b>		
When a URL is defined for Redirect an ACL must also be defined		
URL for Redirect:	Not in Use	
<input type="button" value="Submit"/> <input type="button" value="Cancel"/>		

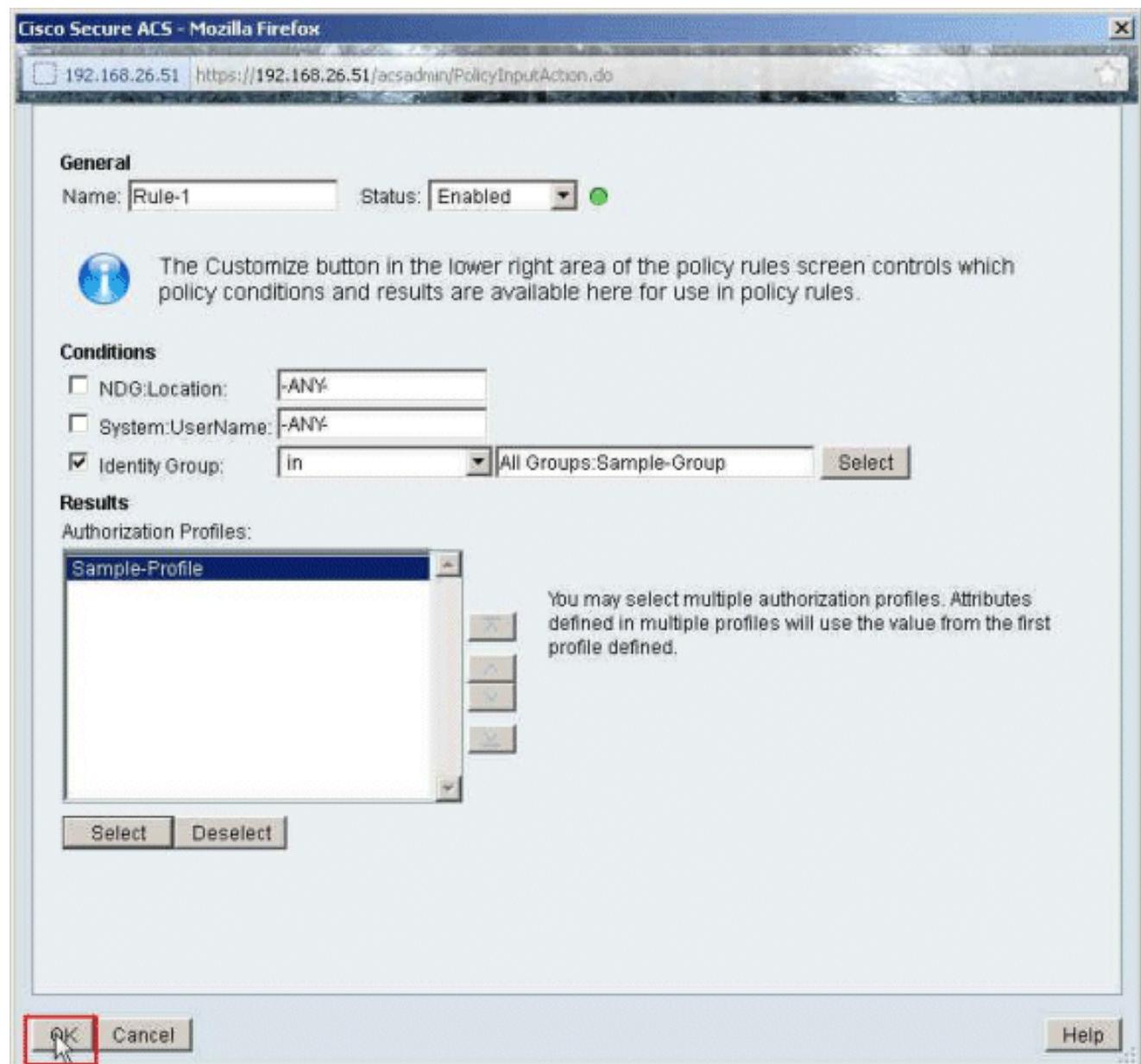
15. 選擇之前建立的授權配置檔案Sample-Profile，然後按一下OK。

Cisco Secure ACS - Mozilla Firefox

192.168.26.51 https://192.168.26.51/acsadmin/NetworkAccessLPIInputAction.ds

<b>Authorization Profiles</b>		Showing 1-3 of 3 50 per page Go
Filter:	Match if:	Go
<input type="checkbox"/>	Name	Description
<input type="checkbox"/>	DenyAccess	
<input type="checkbox"/>	Permit Access	
<input checked="" type="checkbox"/>	Sample-Profile	
<input type="button" value="Create"/> <input type="button" value="Duplicate"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>	Page	1 of 1
<input type="button" value="OK"/> <input type="button" value="Cancel"/> <input type="button" value="Help"/>		

16. 按一下「OK」（確定）。



17. 確保已建立Rule-1，並且以身份組Sample-Group作為條件，以Sample-Profile作為結果。按一下Save Changes。

## 為網路裝置組的可下載ACL配置ACS

完成為適用於個人使用者的可下載ACL配置ACS 中的步驟1到12，然後執行以下步驟，在Cisco Secure ACS中為網路裝置組配置可下載ACL。

在本示例中，RADIUS客戶端(ASA)屬於網路裝置組VPN-Gateways。來自ASA的使用者「cisco」的VPN身份驗證請求已成功進行身份驗證，RADIUS伺服器將向安全裝置傳送一份可下載訪問清單。使用者「cisco」只能存取10.1.1.2伺服器，但拒絕所有其他的存取。要驗證ACL，請參閱適用於使用者/組的可下載ACL部分。

1. 選擇網路資源 > 網路裝置組 > 裝置型別，然後按一下建立以建立新的網路裝置組。

2. 提供網路裝置組名稱(在本示例中為VPN-Gateways)，然後按一下Submit。

**Device Group - General**

Name:   

Description:

Parent:  Select

\* = Required fields

Submit Cancel

3. 選擇Network Resources > Network Devices and AAA Clients，然後選擇之前建立的RADIUS Client sample-asa。按一下Edit以更改此RADIUS客戶端(asa)的網路裝置組成員資格。

Network Resources > Network Devices and AAA Clients					
Showing 1-1 of 1 50 per page Go					
Name	IP Address	Description	NDG:Location	NDG:Device Type	
sample-asa	192.168.26.1932		All Locations	All Device Types	
<span style="border: 1px solid #ccc; padding: 2px;">Create</span>	<span style="border: 1px solid #ccc; padding: 2px;">Duplicate</span>	<span style="border: 1px solid red; padding: 2px;">Edit</span>	<span style="border: 1px solid #ccc; padding: 2px;">Delete</span>	<span style="border: 1px solid #ccc; padding: 2px;">File Operations</span>	<span style="border: 1px solid #ccc; padding: 2px;">Export</span>
<span style="border: 1px solid #ccc; padding: 2px;">Page</span>			1 of 1		

4. 按一下「Device Type」旁邊的Select。

Network Resources > Network Devices and AAA Clients > Edit: "sample-asa"

Name:

Description:

**Network Device Groups**

Location:  Select

Device Type:  Select

**IP Address**

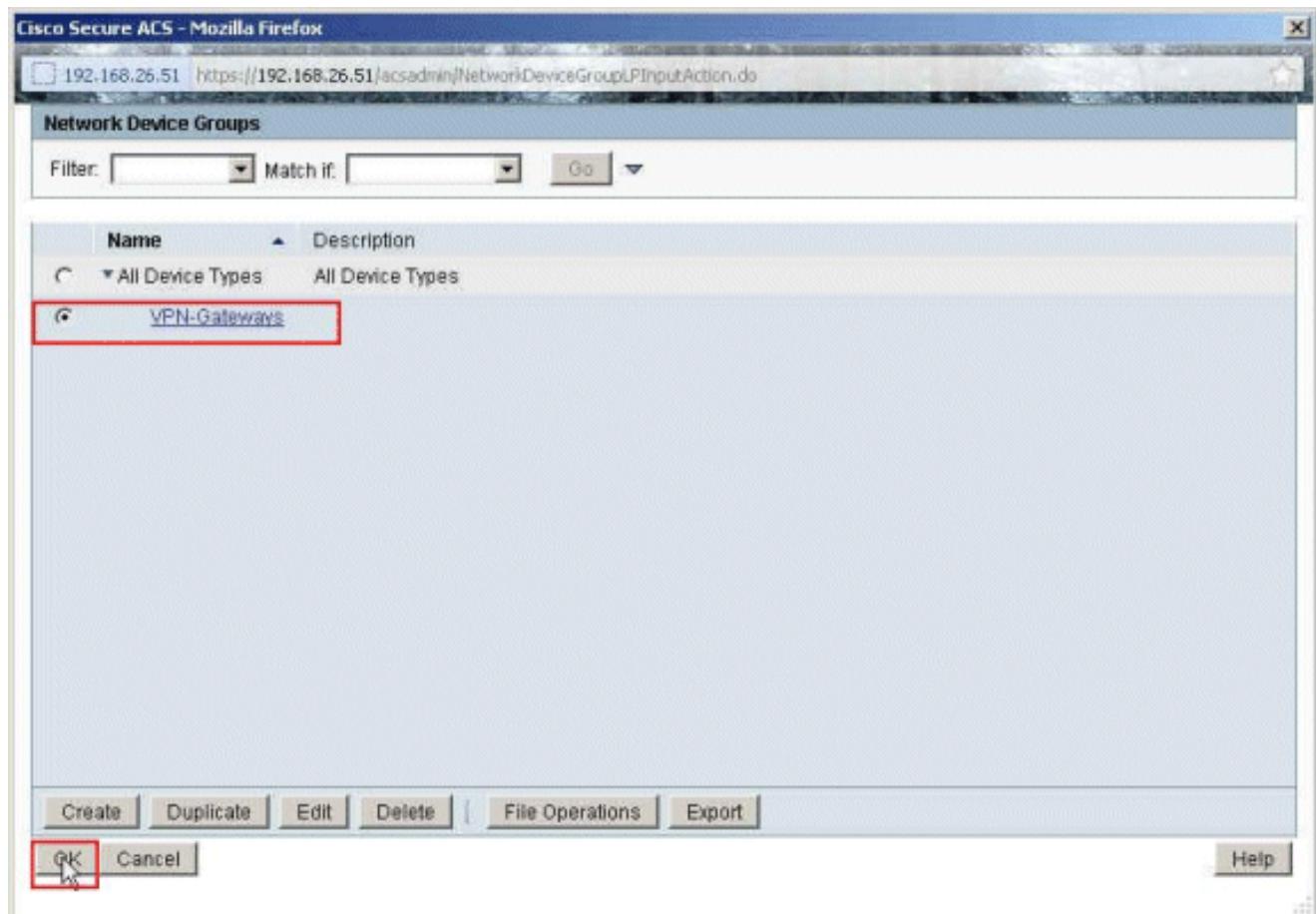
Single IP Address    IP Range(s) By Mask    IP Range(s)

IP:

\* = Required fields

Submit Cancel

5. 選擇新建立的網路裝置組(即VPN-Gateways)，然後按一下OK。



6. 按一下Submit。

The screenshot shows the 'Edit: "sample-asa"' configuration page. At the top, it displays the path 'Network Resources > Network Devices and AAA Clients > Edit: "sample-asa"'. The main form has a 'Name' field set to 'sample-asa' and a 'Description' field that is empty. Below this is a 'Network Device Groups' section with 'Location' set to 'All Locations' and 'Device Type' set to 'All Device Types:VPN-Gateways'. In the 'IP Address' section, 'Single IP Address' is selected, and the IP address is set to '192.168.26.13'. In the 'Authentication Options' section, 'TACACS+' is unselected, and 'RADIUS' is selected with a checked checkbox. A note at the bottom left says '\* = Required fields'. At the bottom are 'Submit' and 'Cancel' buttons, with 'Submit' also highlighted with a red border.

7. 選擇Access Policies > Access Services > Default Network Access > Authorization，然後按一下Customize。

Access Policies > Access Services > Default Network Access > Authorization

Standard Policy|Exception Policy

Network Access Authorization Policy

Status	Name	NDG:Location	System:UserName	Identity Group	Conditions	Results	Hit Count
<input type="checkbox"/>	Default	If no rules defined or no enabled rule matches.				Permit Access	0
<input type="button" value="Create..."/> <input type="button" value="Duplicate..."/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Move to..."/> <input type="button" value="Customize"/> <input type="button" value="Hit Count"/>							
<input type="button" value="Save Changes"/> <input type="button" value="Discard Changes"/>							

8. 將NDG : Device Type從Available部分移動到Selected部分，然後按一下OK。

Mozilla Firefox

192.168.26.51 https://192.168.26.51/acsadmin/PolicyInputAction.do

Customize Conditions

Available:  Compound Condition  
 Device Filter  
 Device IP Address  
 Device Port Filter  
 Eap Authentication Method  
 Eap Tunnel Building Method  
 End Station Filter  
 Protocol  
 Time And Date  
 UseCase  
 Wcc Machine Authenticated

Selected:  NDG:Location  
 System:UserName  
 Identity Group  
 NDG:Device Type

9. 按一下Create以建立新規則。

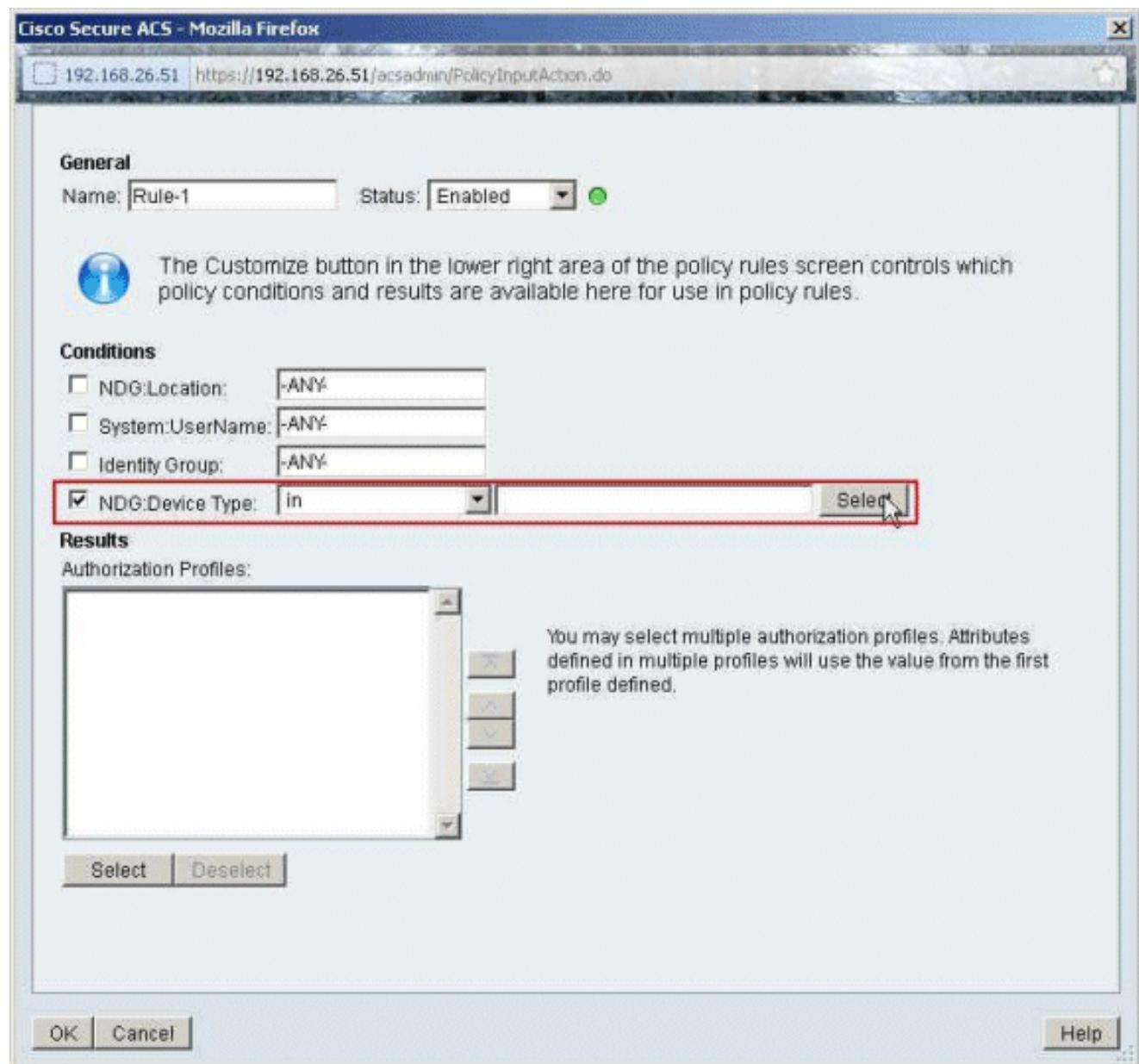
Access Policies > Access Services > Default Network Access > Authorization

Standard Policy|Exception Policy

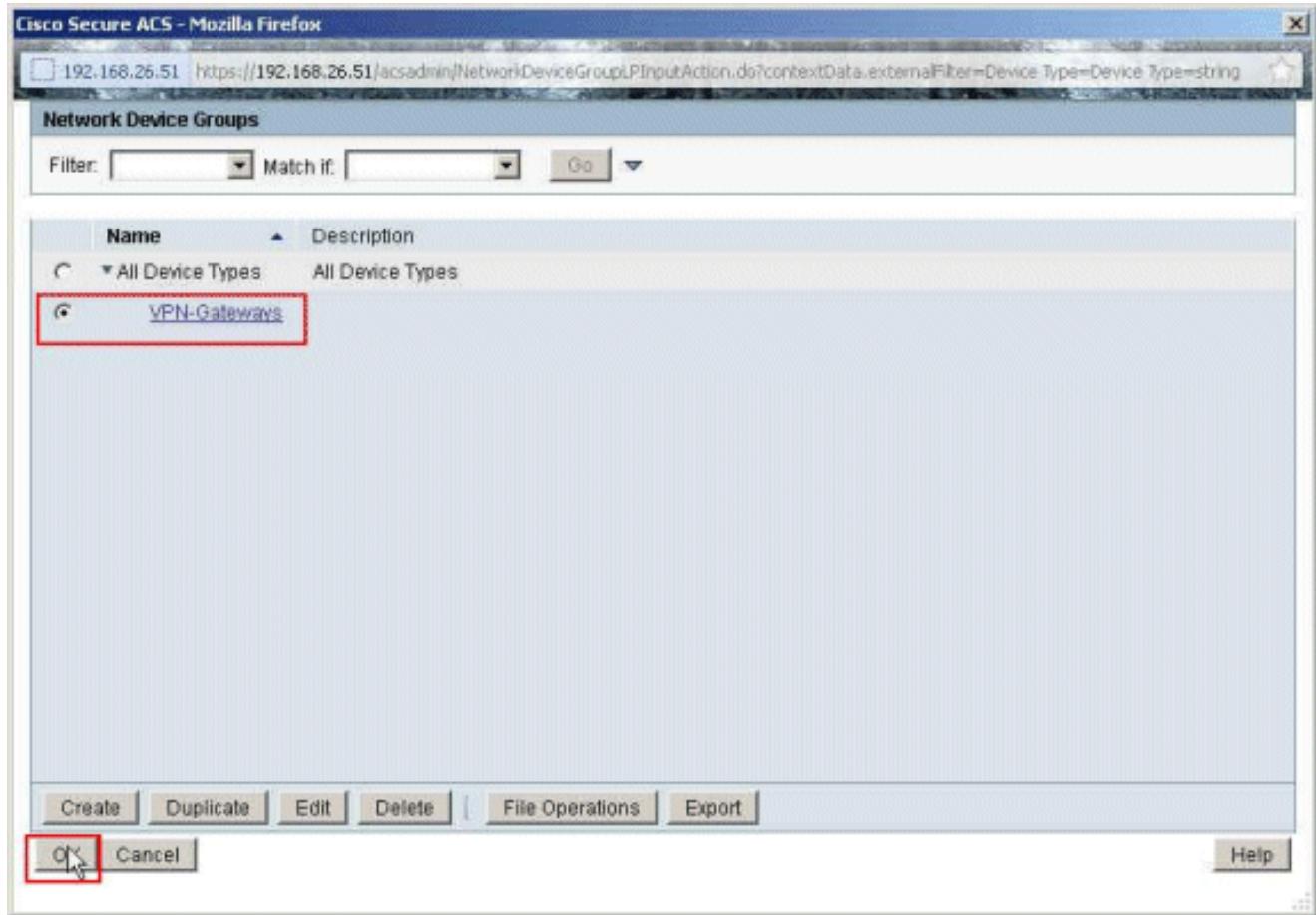
Network Access Authorization Policy

Status	Name	NDG:Location	System:UserName	Identity Group	Conditions	Results	Hit Count
<input type="checkbox"/>	Default	If no rules defined or no enabled rule matches.				Permit Access	0
<input type="button" value="Create..."/> <input type="button" value="Duplicate..."/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Move to..."/> <input type="button" value="Customize"/> <input type="button" value="Hit Count"/>							
<input type="button" value="Save Changes"/> <input type="button" value="Discard Changes"/>							

10. 確保選中NDG : Device Type旁邊的竅取方塊，並從下拉選單中選擇in。按一下選擇。



11. 選擇之前建立的網路裝置組VPN-Gateways，然後按一下OK。



12. 按一下選擇。

Cisco Secure ACS - Mozilla Firefox

192.168.26.51 https://192.168.26.51/acsadmin/PolicyInputAction.do

**General**

Name: Rule-1 Status: Enabled

The Customize button in the lower right area of the policy rules screen controls which policy conditions and results are available here for use in policy rules.

**Conditions**

NDG:Location: -ANY

System:UserName: -ANY

Identity Group: -ANY

NDG:Device Type: in  All Device Types\VPN-Gateways

**Results**

Authorization Profiles:

Select Deselect

You may select multiple authorization profiles. Attributes defined in multiple profiles will use the value from the first profile defined.

OK Cancel Help

This screenshot shows the 'Policy Input Action' dialog box in Mozilla Firefox. The 'General' tab is selected, displaying a rule named 'Rule-1' with an enabled status. A note about customizing policy conditions and results is present. The 'Conditions' section includes checkboxes for location, user name, identity group, and device type, with 'Device Type' currently selected. The 'Results' section shows an empty list for authorization profiles, with a 'Select' button highlighted by a red box. A note states that selecting multiple profiles will use the value from the first defined. At the bottom are 'OK', 'Cancel', and 'Help' buttons.

13. 按一下Create以建立新的授權配置檔案。

Cisco Secure ACS - Mozilla Firefox

192.168.26.51 https://192.168.26.51/acsadmin/NetworkAccessLPIInputAction.ds

Showing 1-2 of 2 50 per page Go

**Authorization Profiles**

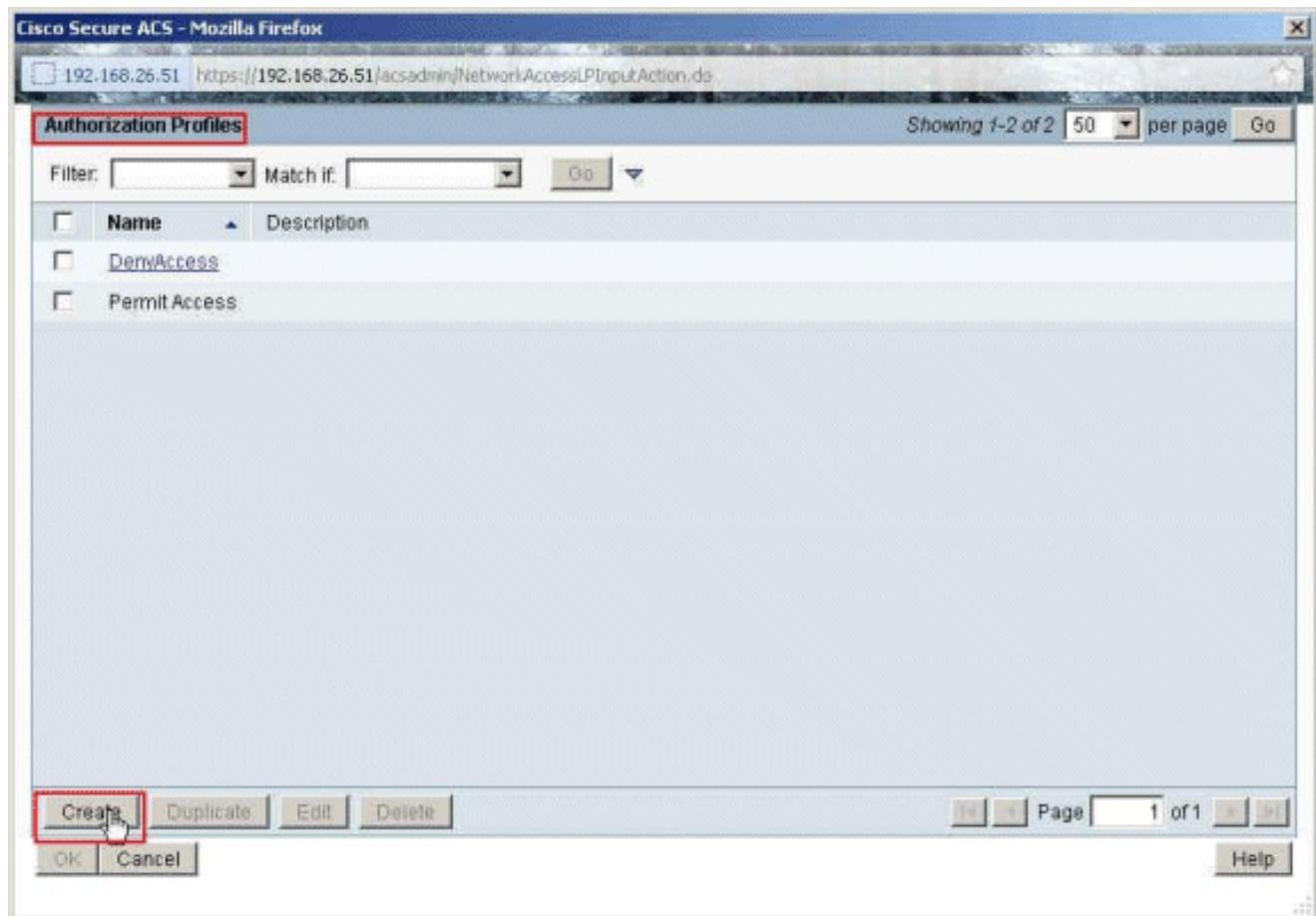
Filter: [ ] Match if: [ ] Go [ ]

<input type="checkbox"/>	Name	Description
<input type="checkbox"/>	DenyAccess	
<input type="checkbox"/>	Permit Access	

Create [ ] Duplicate [ ] Edit [ ] Delete [ ]

Page [ ] 1 of 1 [ ] [ ] Help [ ]

OK [ ] Cancel [ ]



14. 為Authorization Profile提供一個名稱。Sample-Profile是本示例中使用的名稱。

Cisco Secure ACS - Mozilla Firefox

192.168.26.51 https://192.168.26.51/acsadmin/NetworkAccessLPIInputAction.ds

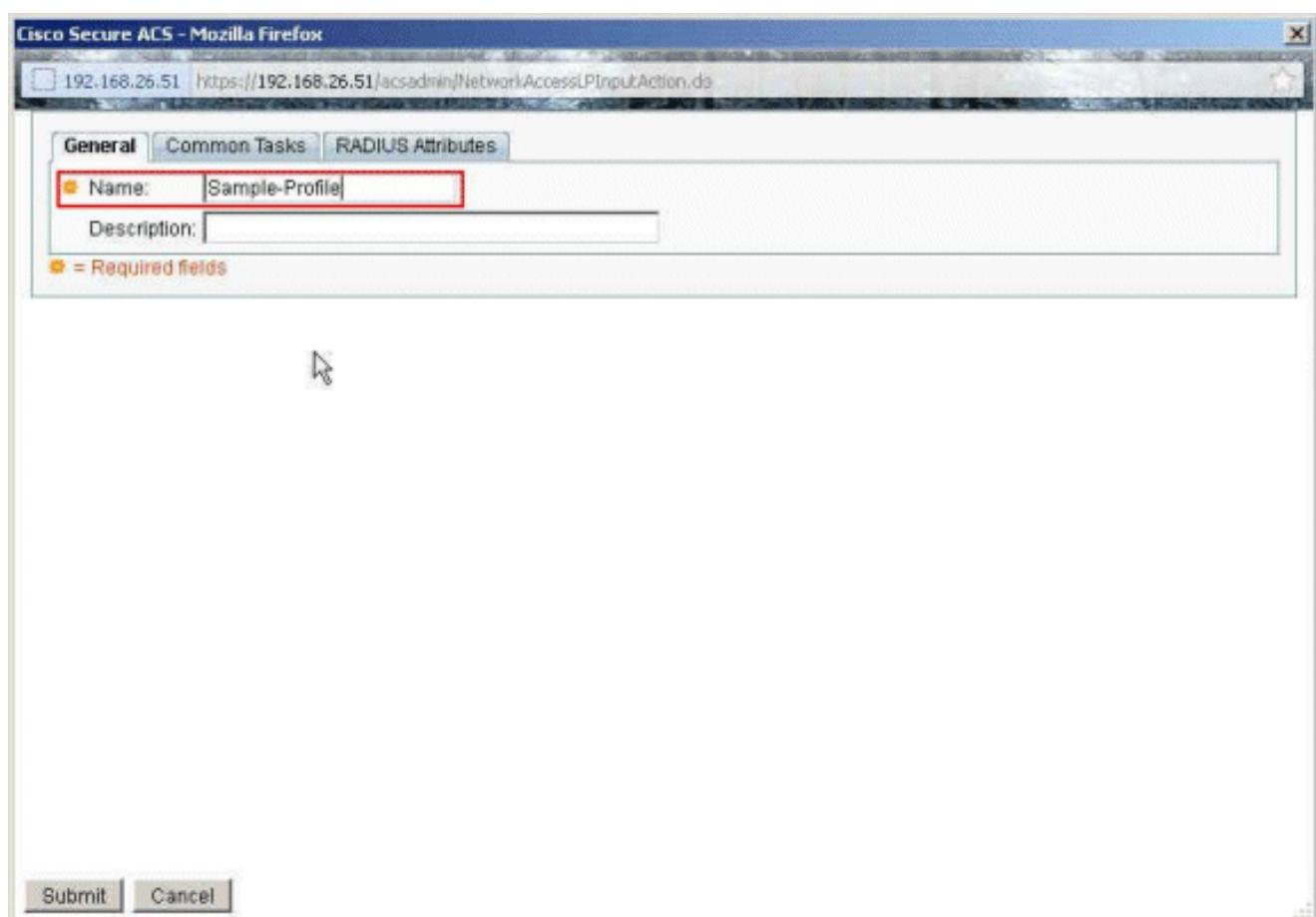
General Common Tasks RADIUS Attributes

Name: Sample-Profile [ ]

Description: [ ]

\* = Required fields

Submit [ ] Cancel [ ]



15. 選擇Common Tasks頁籤，然後從Downloadable ACL Name的下拉選單中選擇Static。從Value下拉選單中選擇新建立的DACL (Sample-DACL)。

The screenshot shows the 'Cisco Secure ACS - Mozilla Firefox' interface. The URL in the address bar is `https://192.168.26.51/acsadmin/NetworkAccessLPIInputAction.d`. The 'Common Tasks' tab is selected. The 'ACLs' section is highlighted with a red box. Inside the 'ACLs' section, the 'Downloadable ACL Name' dropdown is set to 'Static' and the 'Value' dropdown is set to 'Sample-DACL'. Other sections like 'Voice VLAN', 'VLAN', 'Reauthentication', 'QoS', '802.1X-REV', and 'URL Redirect' have dropdown menus set to 'Not in Use'. At the bottom, there are 'Submit' and 'Cancel' buttons.

16. 按一下Submit。

Cisco Secure ACS - Mozilla Firefox

192.168.26.51 https://192.168.26.51/acsadmin/NetworkAccessLPInputAction.do

General	Common Tasks	RADIUS Attributes
<b>ACLs</b>		
Downloadable ACL Name:	Static	Value Sample-DACL
Filter-ID ACL:	Not in Use	
Proxy ACL:	Not in Use	
<b>Voice VLAN</b>		
Permission to Join:	Not in Use	
<b>VLAN</b>		
VLAN ID/Name:	Not in Use	
<b>Reauthentication</b>		
Reauthentication Timer:	Not in Use	
Maintain Connectivity during Reauthentication:		
<b>QoS</b>		
Input Policy Map:	Not in Use	
Output Policy Map:	Not in Use	
<b>802.1X-REV</b>		
LinkSec Security Policy:	Not in Use	
<b>URL Redirect</b>		
When a URL is defined for Redirect an ACL must also be defined		
URL for Redirect:	Not in Use	
<input type="button" value="Submit"/>	<input type="button" value="Cancel"/>	

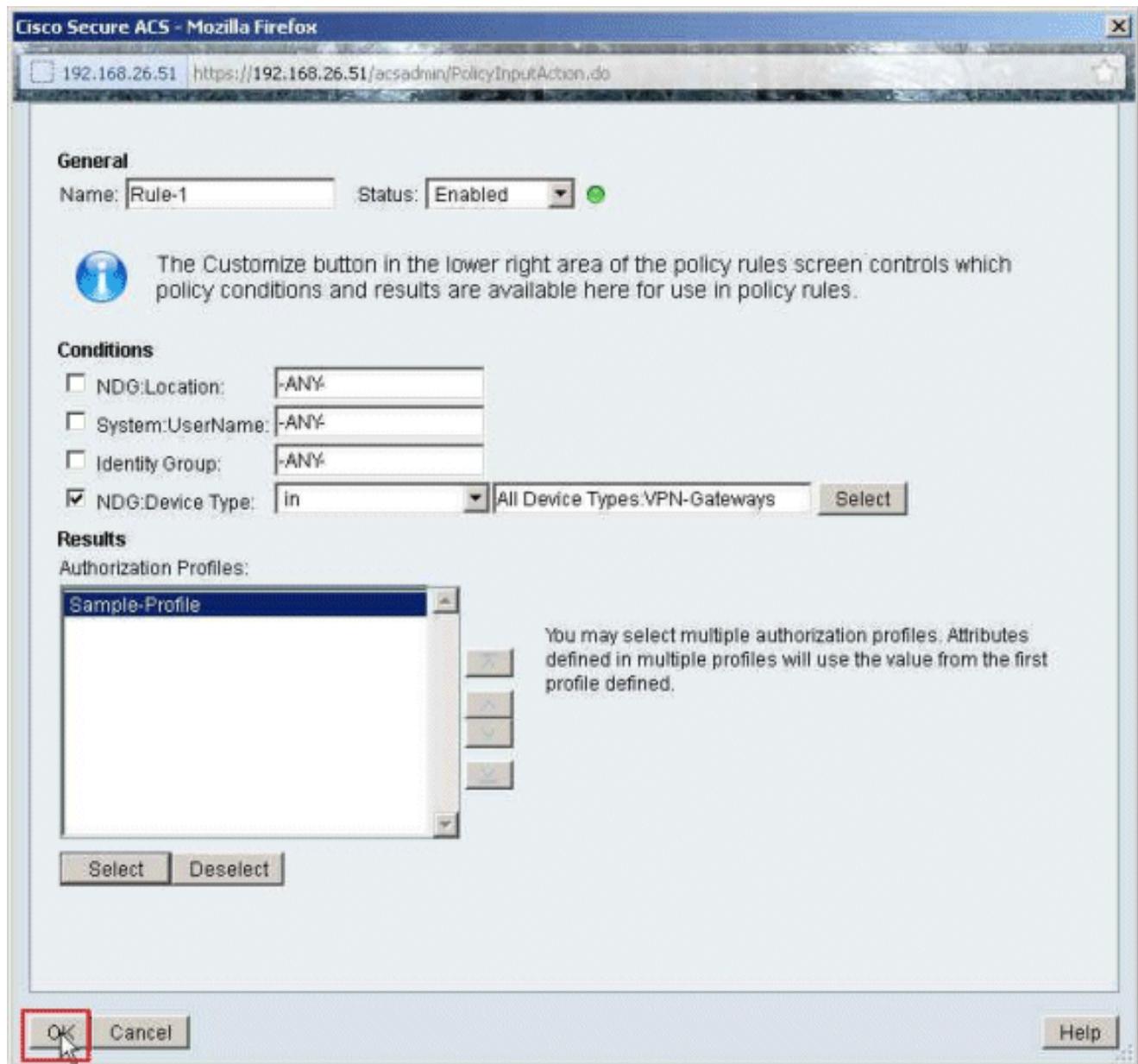
17. 選擇Sample-Profile (之前已建立)，然後按一下OK。

Cisco Secure ACS - Mozilla Firefox

192.168.26.51 https://192.168.26.51/acsadmin/NetworkAccessLPInputAction.do

Showing 1-4 of 4		50	per page	Go
Authorization Profiles				
Filter:	Match if:	Go		
<input type="checkbox"/>	Name	Description		
<input type="checkbox"/>	<a href="#">DenyAccess</a>			
<input type="checkbox"/>	<a href="#">Filter-Id</a>			
<input type="checkbox"/>	<a href="#">Permit Access</a>			
<input checked="" type="checkbox"/>	<a href="#">Sample-Profile</a>			
<input type="button" value="Create"/> <input type="button" value="Duplicate"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>		Page 1 of 1		
<input type="button" value="OK"/> <input type="button" value="Cancel"/> <input type="button" value="Help"/>				

18. 按一下「OK」(確定)。



19. 驗證是否已建立Rule-1，並以VPN-Gateways作為NDG : Device Type作為條件，以Sample-Profile作為結果。按一下Save Changes。

	Status	Name	NDG Location	System Username	Conditions	Results	Hit Count
1	<input checked="" type="checkbox"/>	Rule-1	-ANY	-ANY	-ANY	in All Device Types:VPN-Gateways	Sample-Profile 4

Default: If no rules defined or no enabled rule matches. Permit Access 0

Create... Duplicate... Edit Delete Move to... Customize Hit Count

Save Changes Discard Changes

## 為使用者組配置IETF RADIUS設定

要在使用者身份驗證時從RADIUS伺服器下載已在安全裝置上建立的訪問清單的名稱，請配置IETF RADIUS filter-id屬性（屬性編號11）：

```
<#root>
filter-id=acl_name
```

示例組使用者cisco已成功進行身份驗證，RADIUS伺服器將為已在安全裝置上建立的訪問清單下載ACL名稱（新）。使用者「cisco」可以訪問ASA網路內部的所有裝置，除了10.1.1.2伺服器。要驗證ACL，請參閱[Filter-Id ACL](#)部分。

根據本示例，名為new 的ACL配置為在ASA中過濾：

```
<#root>
access-list new extended deny ip any host 10.1.1.2
access-list new extended permit ip any any
```

這些引數只有在為真時才會出現。您已設定：

- AAA客戶端在網路配置中使用其中一個RADIUS協定

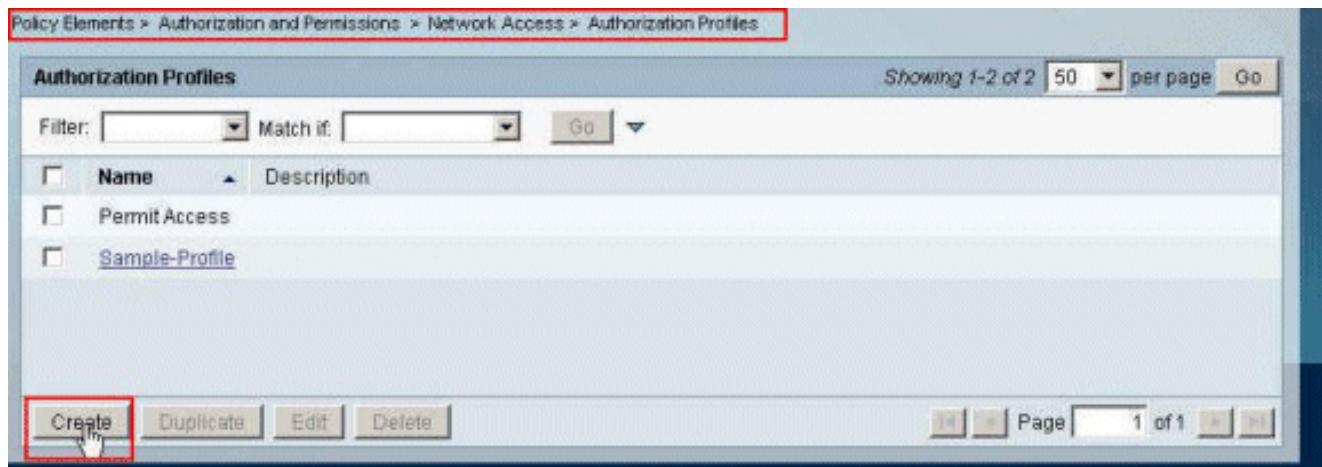
- 在Access-Service中規則的結果部分下選擇具有RADIUS (IETF) Filter-Id的授權配置檔案。

RADIUS屬性作為每個使用者的配置檔案從ACS傳送到發出請求的AAA客戶端。

完成為適用於個人使用者的可下載ACL配置ACS中的步驟1到6以及10到12，然後完成為適用於組的可下載ACL配置ACS中的步驟1到6，並執行以下部分中的步驟，以便在Cisco Secure ACS中配置Filter-Id。

要配置在授權配置檔案中應用的IETF RADIUS屬性設定，請執行以下步驟：

- 選擇Policy Elements > Authorization and Permissions > Network Access > Authorization Profiles，然後按一下Create以建立新的授權配置檔案。



- 為Authorization Profile提供一個名稱。Filter-Id是本示例中選擇的授權配置檔名稱，為簡單起見。

The screenshot shows the 'Create Authorization Profile' dialog. The 'General' tab is active. The 'Name' field contains 'Filter-Id' and is highlighted with a red border. Below it is a 'Description' field. A note at the bottom left says '\* = Required fields'. At the bottom are 'Submit' and 'Cancel' buttons.

- 按一下Common Tasks頁籤，然後從Filter-ID ACL的下拉選單中選擇Static。在Value欄位中以new形式輸入訪問清單名稱，然後按一下Submit。

General	<b>Common Tasks</b>	RADIUS Attributes
<b>ACLs</b>		
Downloadable ACL Name:	Not in Use	
Filter-ID ACL:	Static	Value new
Proxy ACL:	Not in Use	
<b>Voice VLAN</b>		
Permission to Join:	Not in Use	
<b>VLAN</b>		
VLAN ID/Name:	Not in Use	
<b>Reauthentication</b>		
Reauthentication Timer:	Not in Use	
Maintain Connectivity during Reauthentication:		
<b>QoS</b>		
Input Policy Map:	Not in Use	
Output Policy Map:	Not in Use	
<b>802.1X-REV</b>		
LinkSec Security Policy:	Not in Use	
<b>URL Redirect</b>		
When a URL is defined for Redirect an ACL must also be defined		
URL for Redirect:	Not in Use	
URL Redirect ACL:	Not in Use	
<input checked="" type="checkbox"/> = Required fields		
<input type="button" value="Submit"/> <input type="button" value="Cancel"/>		

4. 選擇Access Policies > Access Services > Default Network Access > Authorization，然後按一下Create以建立新規則。

Access Policies > Access Services > Default Network Access > Authorization						
Standard Policy Exception Policy						
Network Access Authorization Policy						
Filter:	Status	Match if:	Equals	Enabled	<input type="button" value="Clear Filter"/>	0
<input type="checkbox"/>	Status	Name	MDG Location	System:UserName	Identity Group	Results Authorization Profiles Hit Count
No data to display						
**	<input type="checkbox"/>	Default	If no rules defined or no enabled rule matches:			Permit Access: 0
<input type="button" value="Create..."/> <input type="button" value="Duplicate..."/> <input type="button" value="Edit"/> <input type="button" value="Delete"/> <input type="button" value="Move to..."/>						<input type="button" value="Customize"/> <input type="button" value="Hit Count"/>
<input type="button" value="Save Changes"/> <input type="button" value="Discard Changes"/>						

5. 確保選中Identity Group旁邊的覈取方塊，然後按一下Select。

Cisco Secure ACS - Mozilla Firefox

192.168.26.51 https://192.168.26.51/acsadmin/PolicyInputAction.do

**General**

Name: Rule-1 Status: Enabled

The Customize button in the lower right area of the policy rules screen controls which policy conditions and results are available here for use in policy rules.

**Conditions**

NDG:Location: -ANY-

System:UserName: -ANY-

Identity Group: in

**Results**

Authorization Profiles:

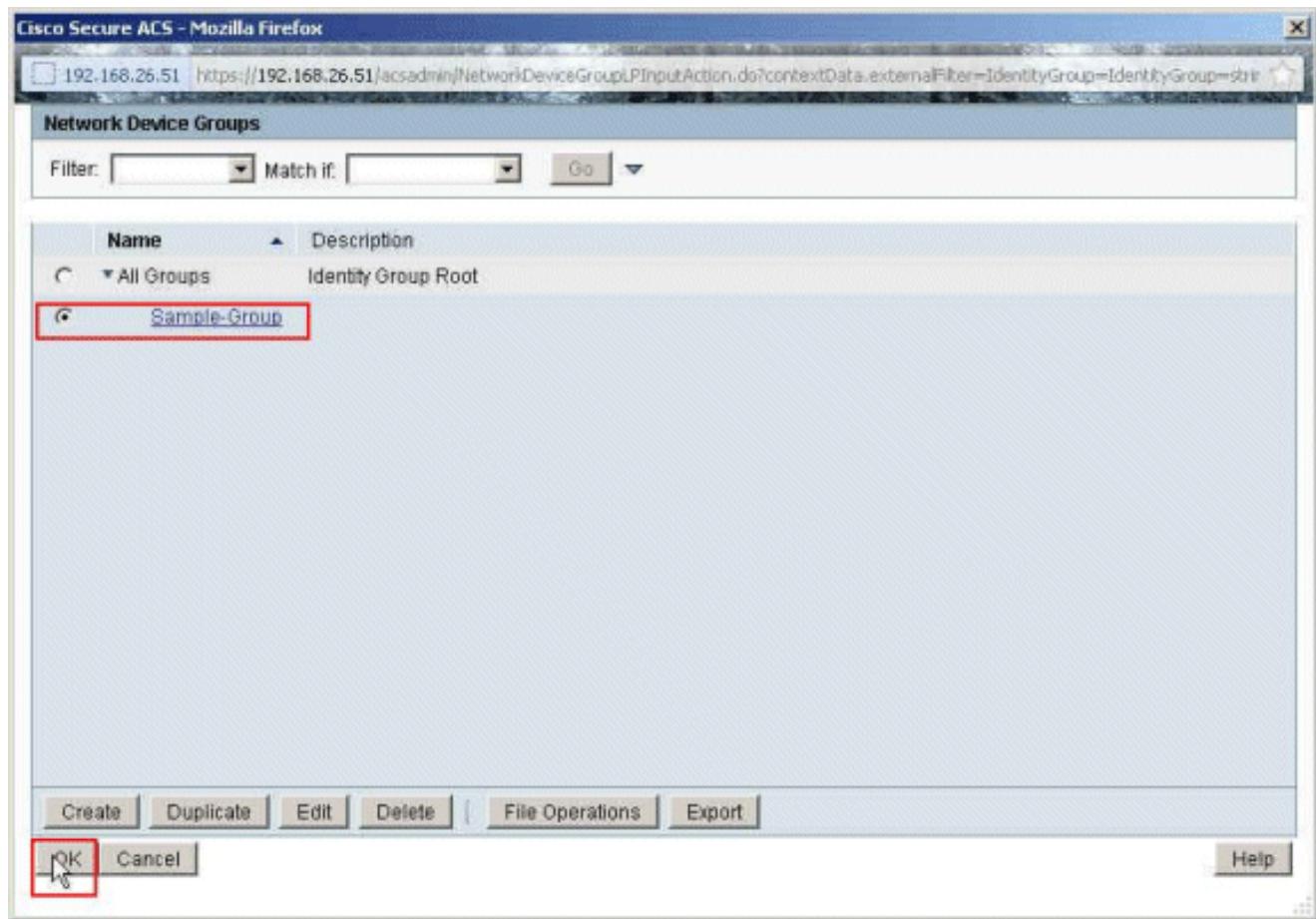
You may select multiple authorization profiles. Attributes defined in multiple profiles will use the value from the first profile defined.

Select Deselect

OK Cancel Help

The screenshot shows the 'Identity Group' field highlighted with a red box. The 'in' dropdown menu is open, and the 'Select' button is visible next to it. Below the list box, there are 'Select' and 'Deselect' buttons. A note on the right explains that selecting multiple profiles will use the value from the first one.

6. 選擇Sample-Group，然後按一下OK。



7. 在Authorization Profiles部分中，按一下Select。

Cisco Secure ACS - Mozilla Firefox

192.168.26.51 https://192.168.26.51/acsadmin/PolicyInputAction.do

**General**

Name: Rule-1 Status: Enabled

The Customize button in the lower right area of the policy rules screen controls which policy conditions and results are available here for use in policy rules.

**Conditions**

NDG:Location: -ANY-  
 System:UserName: -ANY-  
 Identity Group: in  All Groups:Sample-Group

**Results**

Authorization Profiles:

You may select multiple authorization profiles. Attributes defined in multiple profiles will use the value from the first profile defined.

Select Deselect

OK Cancel Help

8. 選擇之前建立的授權配置檔案Filter-Id，然後按一下OK。

Cisco Secure ACS - Mozilla Firefox

192.168.26.51 https://192.168.26.51/acsadmin/NetworkAccessLPIInputAction.ds

Showing 1-4 of 4 50 per page Go

**Authorization Profiles**

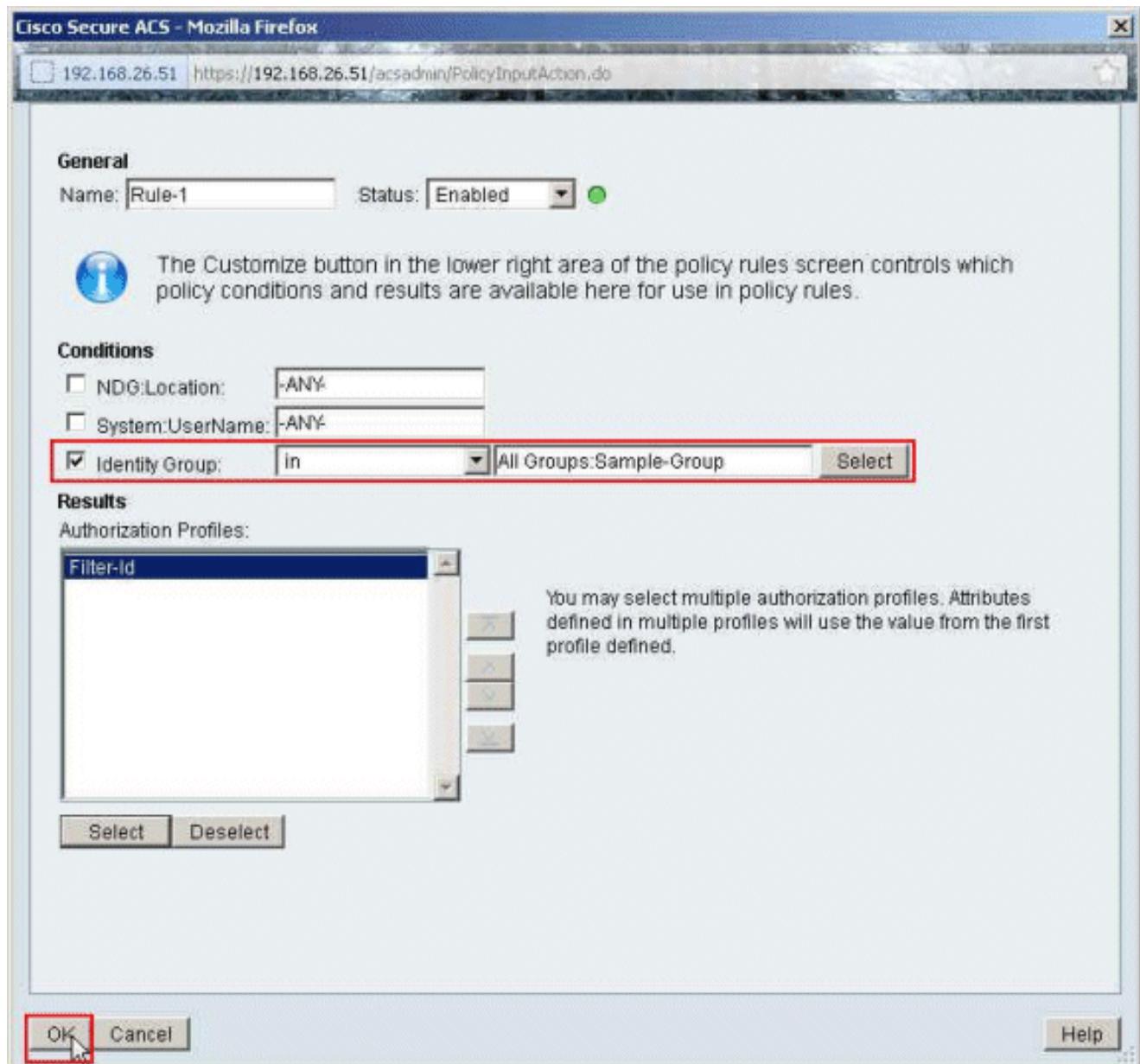
Name	Description
<input type="checkbox"/> DenyAccess	
<input checked="" type="checkbox"/> Filter-Id	
<input type="checkbox"/> Permit Access	
<input type="checkbox"/> Sample-Profile	

Create Duplicate Edit Delete Page 1 of 1 Help

OK Cancel

The screenshot shows a web-based administrative interface for Cisco Secure ACS. The title bar reads 'Cisco Secure ACS - Mozilla Firefox'. The address bar shows the URL '192.168.26.51 https://192.168.26.51/acsadmin/NetworkAccessLPIInputAction.ds'. The main content area is titled 'Authorization Profiles'. A table lists four profiles: 'DenyAccess', 'Filter-Id' (which is highlighted with a green background and has a red box around it), 'Permit Access', and 'Sample-Profile'. Below the table are buttons for 'Create', 'Duplicate', 'Edit', and 'Delete'. At the bottom are buttons for 'OK' (with a red box around it) and 'Cancel'. The status bar at the bottom right shows 'Page 1 of 1'.

9. 按一下「OK」（確定）。



10. 驗證是否已建立Rule-1，將身份組Sample-Group作為條件，將Filter-Id作為結果。按一下Save Changes。

Access Policies > Access Services > Default Network Access > Authorization

Standard Policy | Exception Policy

Network Access Authorization Policy

	Status	Name	NDG:Location	Conditions	Results	Hit Count
1	<input checked="" type="checkbox"/>	Rule-1	-ANY	-ANY System:UserName: In All Groups	Identity Group: Sample-Group Authorization Profiles: Filter-Id	0

If no rules defined or no enabled rule matches. PermitAccess: 0

Create... | Duplicate... | Edit | Delete | Move to... | Customize | Hit Count

Save Changes | Discard Changes

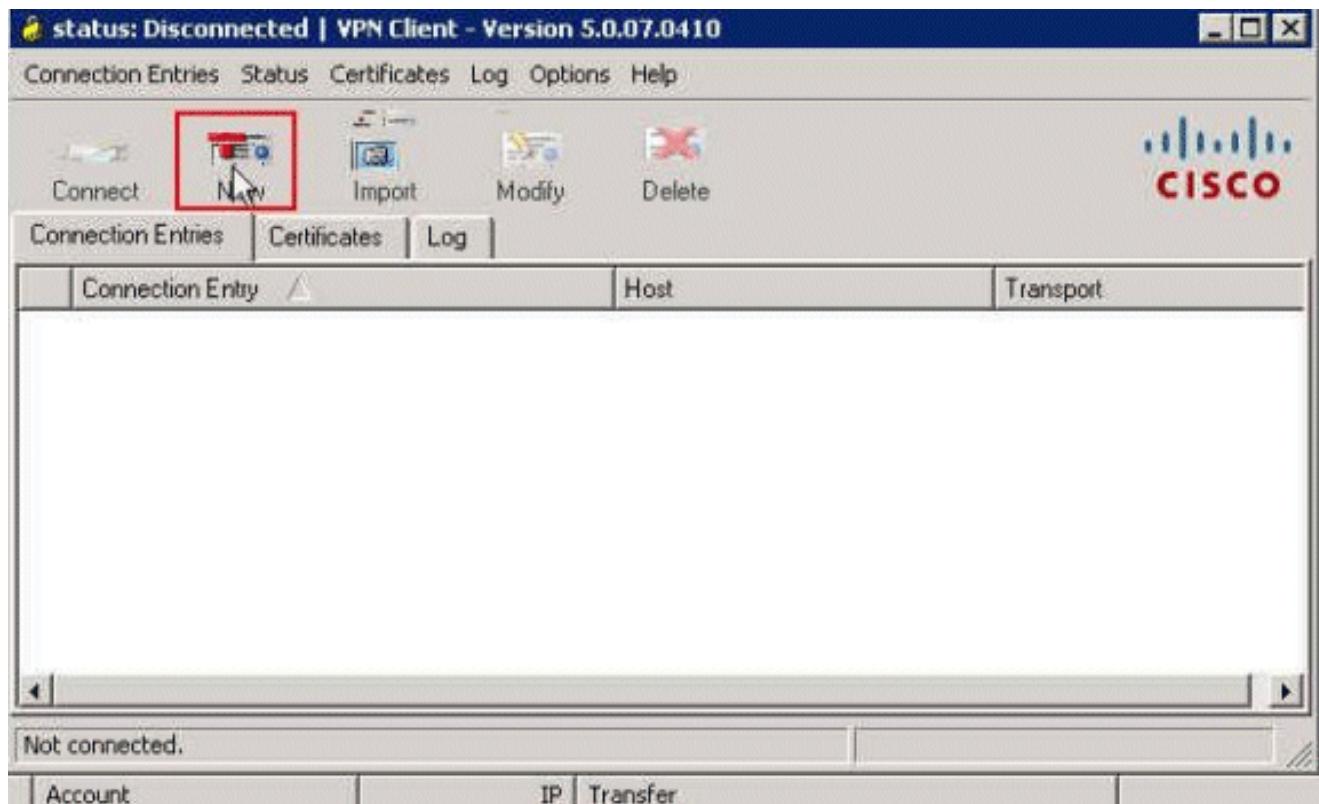
The screenshot shows the ASA's Network Access Authorization Policy configuration. It displays a table of rules with columns for Status, Name, NDG:Location, Conditions, Results, and Hit Count. A single rule named 'Rule-1' is listed, which matches any user from all groups against any identity group and authorization profile. The 'Save Changes' button at the bottom left is highlighted with a red box.

## Cisco VPN客戶端配置

使用Cisco VPN客戶端連線到Cisco ASA，以驗證是否成功配置了ASA。

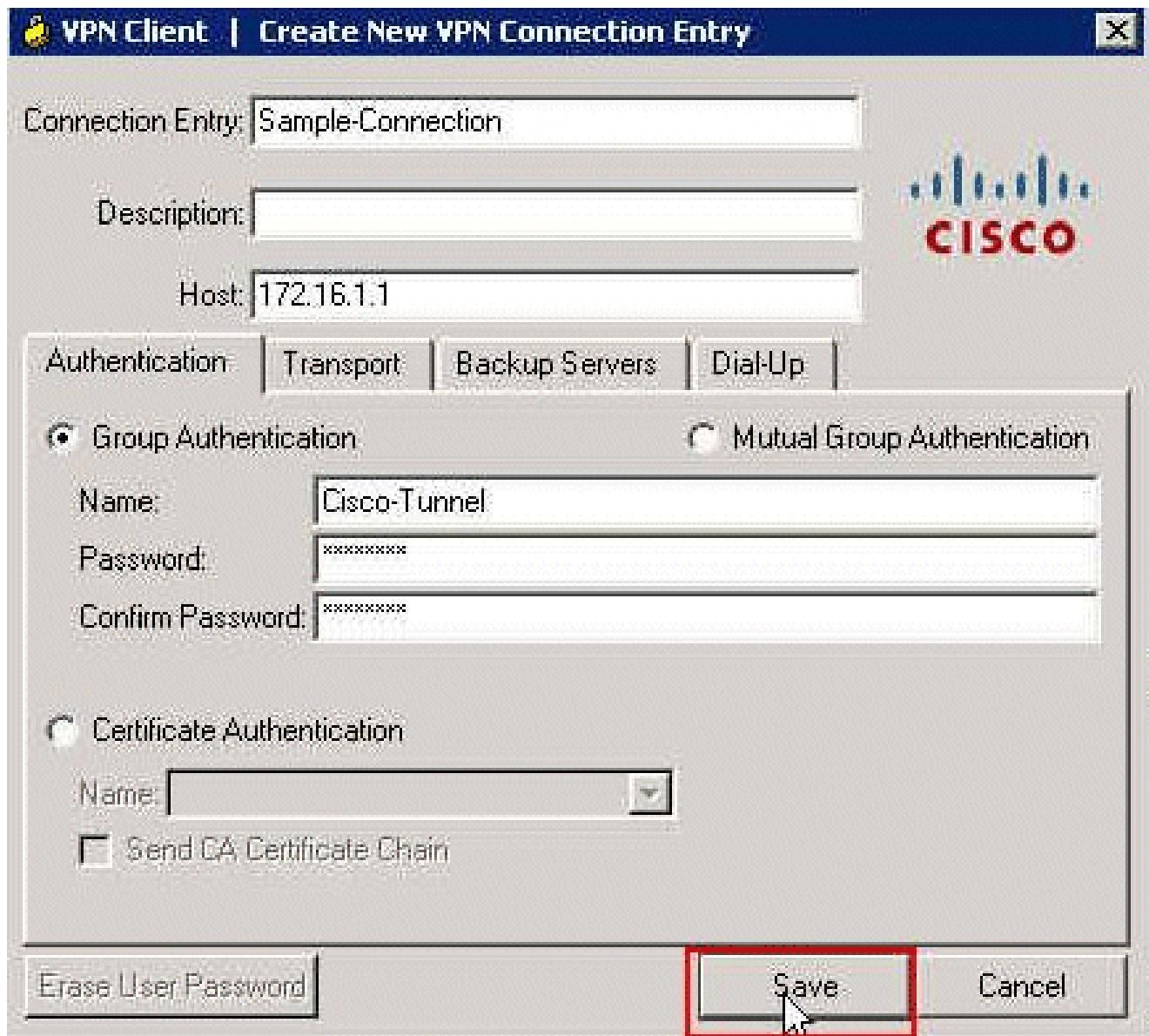
請完成以下步驟：

1. 選擇Start > Programs > Cisco Systems VPN Client > VPN Client。
2. 按一下New以啟動Create New VPN Connection Entry窗口。

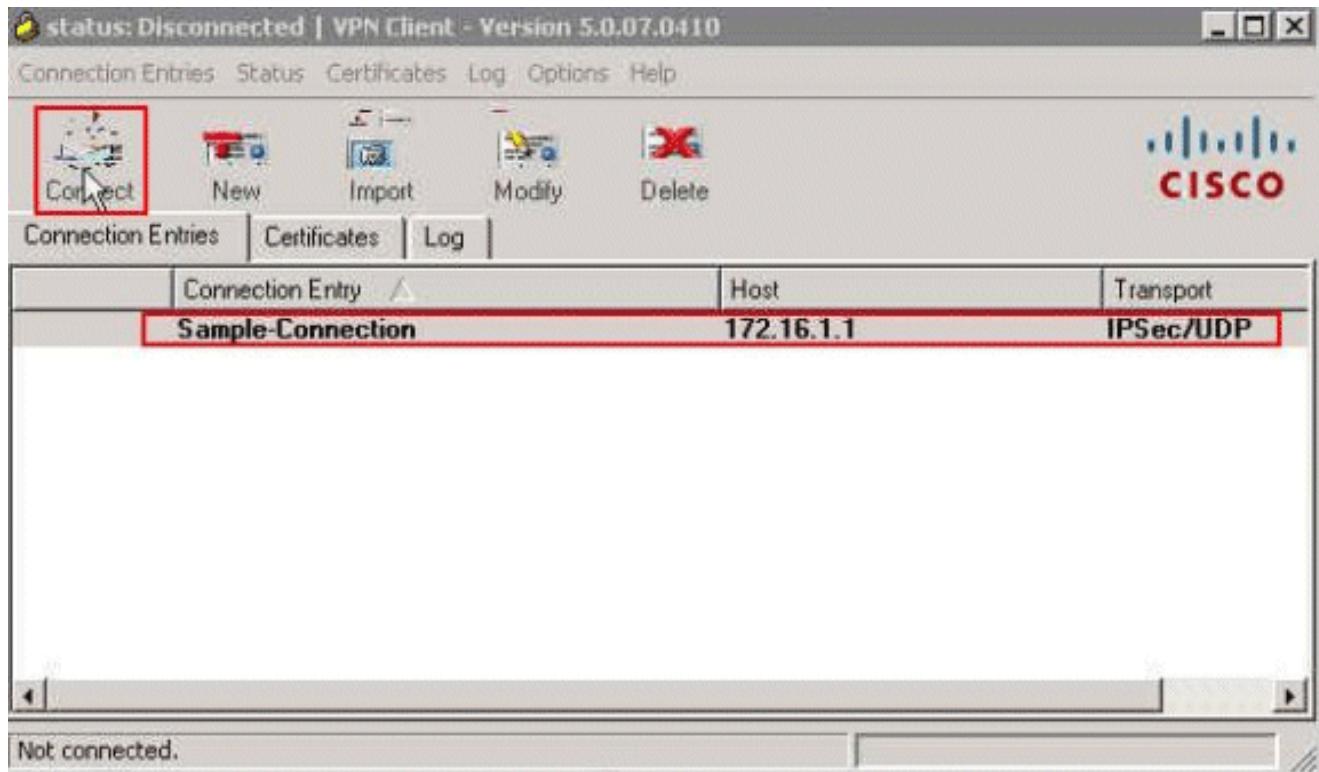


3. 填寫新連線的詳細資訊：

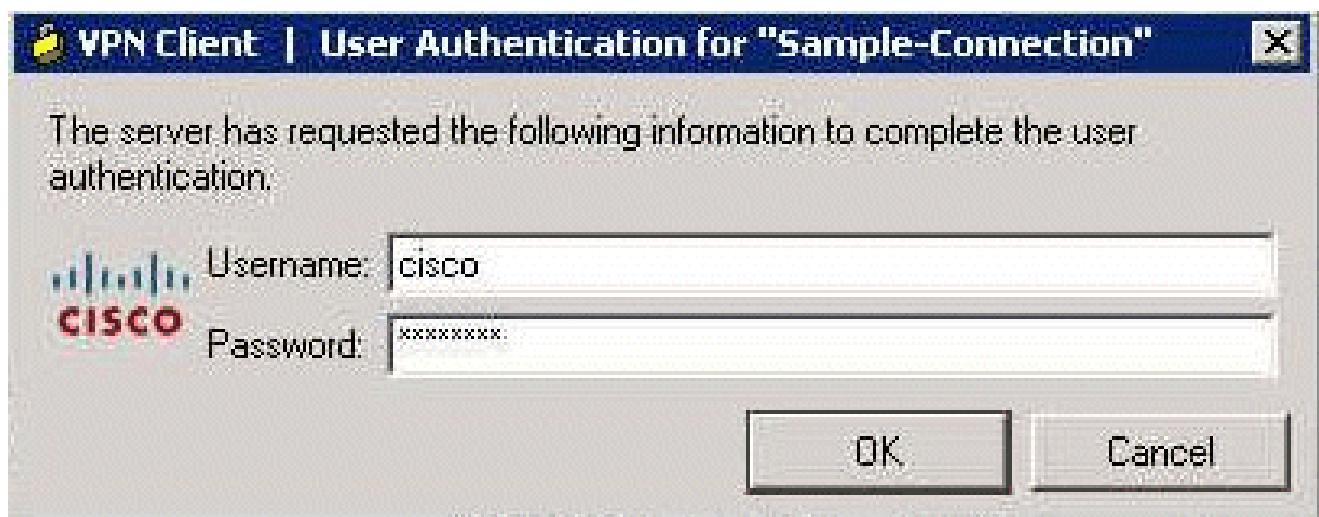
- a. 輸入連線條目的名稱和說明。
- b. 在Host框中輸入ASA的外部IP地址。
- c. 輸入在ASA中配置的VPN隧道組名稱(Cisco-Tunnel)和密碼(預共用金鑰- cisco123)。
- d. 按一下Save。



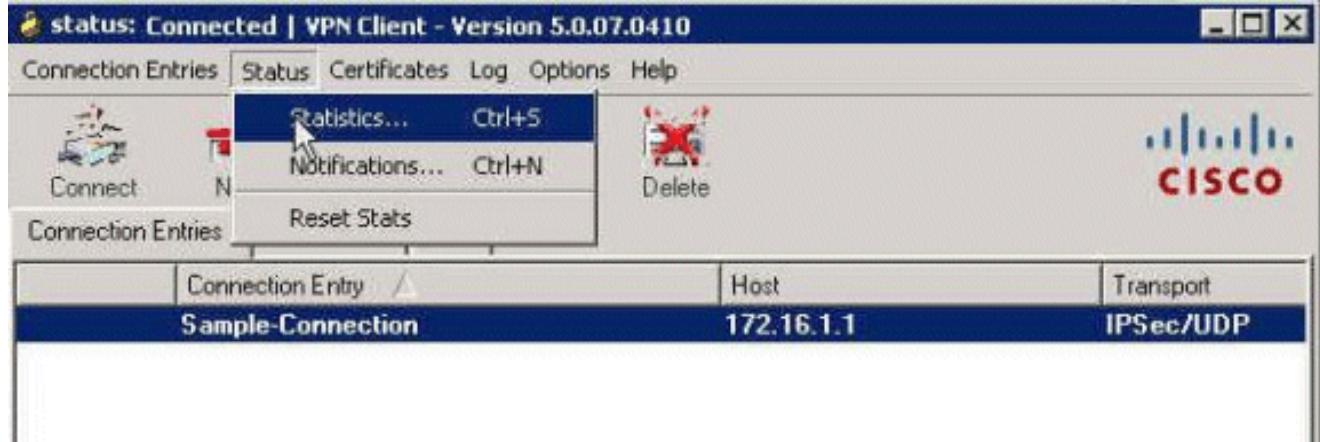
4. 按一下要使用的連線，然後在VPN客戶端主窗口中按一下Connect。



5. 出現提示時，輸入在ASA中配置的用於身份驗證的使用者名稱cisco和口令cisco123，然後按一下OK以連線遠端網路。



6. 成功建立連線後，在Status選單中選擇Statistics以驗證隧道的詳細資訊。



## 驗證

使用本節內容，確認您的組態是否正常運作。

[輸出直譯器工具](#)(僅供註冊客戶使用) (OIT)支援某些show指令。使用OIT檢視對show命令輸出的分析。

### Show Crypto命令

- show crypto isakmp sa -顯示對等體上的所有當前IKE安全關聯(SA)。

```
<#root>
ciscoasa#
sh crypto isakmp sa
```

IKEv1 SAs:

```
Active SA: 1
Rekey SA: 0 (A tunnel will report 1 Active and 1 Rekey SA during rekey)
Total IKE SA: 1

1  IKE Peer: 172.16.1.50
    Type      : user          Role      : responder
    Rekey     : no           State    : AM_ACTIVE
ciscoasa#
```

- show crypto ipsec sa -顯示當前SA使用的設定。

```
<#root>
ciscoasa#
sh crypto ipsec sa
interface: outside
    Crypto map tag: SYSTEM_DEFAULT_CRYPTO_MAP, seq num: 65535, local addr:
```

```
172.16.1.1
```

```
local ident (addr/mask/prot/port): (0.0.0.0/0.0.0.0/0/0)
remote ident (addr/mask/prot/port): (10.2.2.1/255.255.255.255/0/0)
current_peer: 172.16.1.50, username: cisco
dynamic allocated peer ip: 10.2.2.1

#pkts encaps: 4, #pkts encrypt: 4, #pkts digest: 0
#pkts decaps: 333, #pkts decrypt: 333, #pkts verify: 333
#pkts compressed: 0, #pkts decompressed: 0
#pkts not compressed: 0, #pkts comp failed: 0, #pkts decomp failed: 0
#pre-frag successes: 0, #pre-frag failures: 0, #fragments created: 0
#PMTUs sent: 0, #PMTUs rcvd: 0, #decapsulated frgs needing reassembly:
    0
#send errors: 0, #recv errors: 0

local crypto endpt.: 172.16.1.1/0, remote crypto endpt.: 172.16.1.50/0
path mtu 1500, ipsec overhead 74, media mtu 1500
current outbound spi: 9A06E834
current inbound spi : FA372121

inbound esp sas:
    spi: 0xFA372121 (4197916961)
        transform: esp-aes esp-sha-hmac no compression
        in use settings ={RA, Tunnel, }
        slot: 0, conn_id: 16384, crypto-map: SYSTEM_DEFAULT_CRYPTO_MAP
        sa timing: remaining key lifetime (sec): 28678
        IV size: 16 bytes
        replay detection support: Y
        Anti replay bitmap:
            0xFFFFFFFF 0xFFFFFFFF
outbound esp sas:
    spi: 0x9A06E834 (2584143924)
        transform: esp-aes esp-sha-hmac no compression
        in use settings ={RA, Tunnel, }
        slot: 0, conn_id: 16384, crypto-map: SYSTEM_DEFAULT_CRYPTO_MAP
        sa timing: remaining key lifetime (sec): 28678
        IV size: 16 bytes
        replay detection support: Y
        Anti replay bitmap:
            0x00000000 0x00000001
```

## 適用於使用者/群組的可下載ACL

驗證使用者Cisco的可下載ACL。 ACL會從CSACS下載。

```
<#root>

ciscoasa#
sh access-list

access-list cached ACL log flows: total 0, denied 0 (deny-flow-max 4096)
    alert-interval 300
access-list OUTIN; 1 elements; name hash: 0x683c318c
access-list OUTIN line 1 extended permit icmp any any (hitcnt=1) 0x2ba5809c

access-list #ACSAACL#-IP-Sample-DACL-4f3b9117; 2 elements; name hash: 0x3c878038
```

```
(dynamic)
access-list #ACSACL#-IP-Sample-DACL-4f3b9117 line 1 extended permit ip any host
    10.1.1.2 (hitcnt=0) 0x5e896ac3
access-list #ACSACL#-IP-Sample-DACL-4f3b9117 line 2 extended deny ip any any
    (hitcnt=130) 0x19b3b8f5
```

## Filter-Id ACL

[011] Filter-Id已應用於Group - Sample-Group，並且根據ASA中定義的ACL（新）過濾該組的使用者。

```
<#root>

ciscoasa#
sh access-list

access-list cached ACL log flows: total 0, denied 0 (deny-flow-max 4096)
    alert-interval 300
access-list OUTIN; 1 elements; name hash: 0x683c318c
access-list OUTIN line 1 extended permit icmp any any (hitcnt=1) 0x2ba5809c
access-list new; 2 elements; name hash: 0xa39433d3

access-list new line 1 extended permit ip any host 10.1.1.2 (hitcnt=4)
    0x58a3ea12
access-list new line 2 extended deny ip any any (hitcnt=27) 0x61f918cd
```

## 疑難排解

本節提供的資訊可用於對組態進行疑難排解。還顯示了debug輸出的示例。

注意：有關遠端訪問IPsec VPN故障排除的詳細資訊，請參閱[最常見的L2L和遠端訪問IPsec VPN故障排除解決方案](#)。

### 清除安全性關聯

進行故障排除時，請確保在進行更改後清除現有的SA。在PIX的特權模式下，使用以下命令：

- clear [crypto] ipsec sa -刪除活動的IPsec SA。關鍵字crypto是可選的。
- clear [crypto] isakmp sa -刪除活動的IKE SA。關鍵字crypto是可選的。

### 疑難排解指令

[輸出直譯器工具\(僅供註冊客戶使用\)](#) (OIT)支援某些show指令。使用OIT檢視對show命令輸出的分析。

附註：使用 debug 指令之前，請先參閱[有關 Debug 指令的重要資訊](#)。

- debug crypto ipsec 7 -顯示第2階段的IPsec協商。
- debug crypto isakmp 7 -顯示第1階段的ISAKMP協商。

## 相關資訊

- [Cisco ASA 5500系列自適應安全裝置支援頁](#)
- [Cisco ASA 5500系列自適應安全裝置命令參考](#)
- [思科調適型資安裝置管理員](#)
- [IPsec協商/IKE通訊協定支援頁面](#)
- [Cisco VPN客戶端支援頁](#)
- [思科安全存取控制系統](#)
- [要求建議 \(RFC\)](#)
- [技術支援與文件 - Cisco Systems](#)

## 關於此翻譯

思科已使用電腦和人工技術翻譯本文件，讓全世界的使用者能夠以自己的語言理解支援內容。請注意，即使是最佳機器翻譯，也不如專業譯者翻譯的內容準確。Cisco Systems, Inc. 對這些翻譯的準確度概不負責，並建議一律查看原始英文文件（提供連結）。