

配置FlexVPN遠端使用者的RADIUS屬性對映

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簡介

本文檔介紹如何使用思科身份服務引擎(ISE)配置FlexVPN以驗證身份並執行屬性組對映。

必要條件

需求

思科建議您瞭解以下主題：

- 透過CLI在Cisco IOS® XE路由器上配置具有IKEV2/IPsec的遠端訪問虛擬專用網路(RA VPN)
- 思科身份服務引擎(ISE)配置
- 思科安全使用者端(CSC)
- RADIUS通訊協定

採用元件

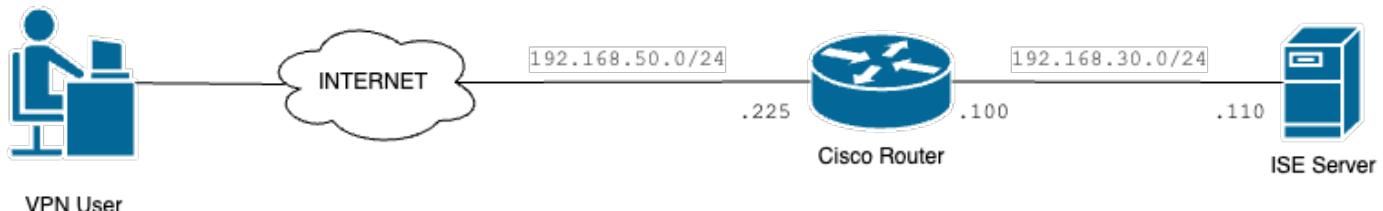
本檔案根據這些軟體和硬體版本：

- Cisco CSR1000V (VXE) - 17.03.04a版
- 思科身分辨識服務引擎(ISE) - 3.1
- 思科安全使用者端(CSC) - 5.0.05040版
- Windows 11

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。如果您的網路運作中，請確保您瞭解任何指令可能造成的影響。

設定

網路圖表



基本網路圖表

組態

路由器配置

步驟 1. 在裝置上配置RADIUS伺服器進行身份驗證和本地授權：

```
aaa new-model
aaa group server radius FlexVPN-Authentication-Server
server-private 192.168.30.110 key Cisco123
aaa authentication login FlexVPN-Authentication-List group FlexVPN-Authentication-Server
aaa authorization network FlexVPN-Authorization-List local
```

aaa authentication login <list_name>命令是指身份驗證、授權和記帳(AAA)組（用於定義RADIUS伺服器）。

aaa authorization network <list_name> local命令宣告將使用本地定義的使用者/組。

步驟2. 配置信任點以儲存路由器證書。由於路由器的本地身份驗證型別為RSA，因此裝置要求伺服器使用證書對自身進行身份驗證：

```
crypto pki trustpoint FlexVPN-TP
enrollment url http://192.168.50.230:80
subject-name CN=192.168.50.225
revocation-check none
rsakeypair FlexVPN_KEY
```

步驟 3. 為每個不同的使用者組定義IP本地池：

```
ip local pool group1 172.16.10.1 172.16.10.50
ip local pool group2 172.16.20.1 172.16.20.50
```

步驟 4. 配置本地授權策略：

```
crypto ikev2 authorization policy FlexVPN-Local-Policy
```

由於身份驗證伺服器負責根據使用者所屬的組傳送相關值（DNS、池、受保護的路由等），因此無需對授權策略進行配置。但是，必須將其配置為在本地授權資料庫中定義使用者名稱。

步驟5（可選）。建立IKEv2方案和策略（如果未配置，則使用智慧預設值）：

```
crypto ikev2 proposal IKEv2-prop
  encryption aes-cbc-256
  integrity sha256
  group 14
```

```
crypto ikev2 policy IKEv2-pol
  proposal IKEv2-prop
```

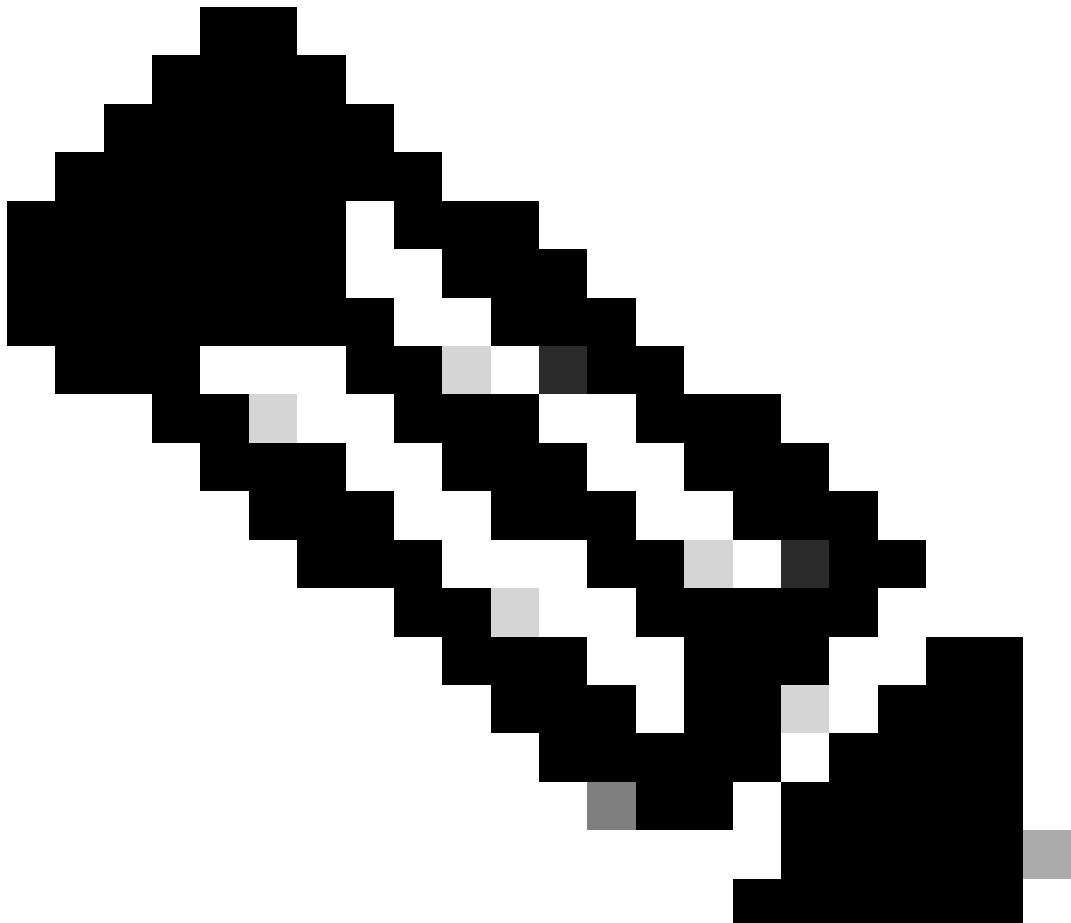
步驟6（可選）。配置轉換集（如果未配置，則使用智慧預設值）：

```
crypto ipsec transform-set TS esp-aes 256 esp-sha256-hmac
  mode tunnel
```

步驟 7. 使用正確的本地和遠端身份、身份驗證方法（本地和遠端）、信任點、AAA以及用於連線的虛擬模板介面配置IKEv2配置檔案：

```
crypto ikev2 profile FlexVPN-IKEv2-Profile
  match identity remote key-id cisco.example
  identity local dn
  authentication local rsa-sig
  authentication remote eap query-identity
  pki trustpoint FlexVPN-TP
  aaa authentication eap FlexVPN-Authentication-List
  aaa authorization group eap list FlexVPN-Authorization-List FlexVPN-Local-Policy
  aaa authorization user eap cached
  virtual-template 100
```

命令aaa authorization user eap cached指定必須快取在EAP身份驗證期間接收的屬性。此命令對於配置非常重要，因為如果沒有此命令，則不會使用身份驗證伺服器傳送的資料，從而導致連線失敗。



注意：遠端金鑰ID必須與XML檔案中的金鑰ID值匹配。如果未在XML檔案中對其進行修改，將使用預設值(*\$AnyConnectClient\$*)，並且必須在IKEv2配置檔案中進行配置。

步驟 8. 配置IPsec配置檔案並分配轉換集和IKEv2配置檔案：

```
crypto ipsec profile FlexVPN-IPsec-Profile  
set transform-set TS  
set ikev2-profile FlexVPN-IKEv2-Profile
```

步驟 9. 配置環回介面。虛擬訪問介面從它借用IP地址：

```
interface Loopback100
ip address 10.0.0.1 255.255.255.255
```

步驟 10. 建立將用於建立不同虛擬訪問介面的虛擬模板，並連結第8步中建立的IPSec配置檔案：

```
interface Virtual-Template100 type tunnel
ip unnumbered Loopback100
tunnel mode ipsec ipv4
tunnel protection ipsec profile FlexVPN-IPsec-Profile-1
```

步驟 11. 在路由器上停用基於HTTP-URL的證書查詢和HTTP伺服器：

```
no crypto ikev2 http-url cert
no ip http server
no ip http secure-server
```

身份服務引擎(ISE)配置

步驟 1. 登入到ISE伺服器並導航到管理>網路資源>網路裝置：

The screenshot shows the Cisco ISE Administration interface. The top navigation bar includes tabs for Dashboard, Context Visibility, Operations, Policy, Administration (which is highlighted with a red box), and Work Centers. Below the navigation is a search bar. On the left, there's a sidebar with Recent Pages (Identities, Groups, Authorization Profiles, Results, Network Devices, Policy Sets) and Shortcuts (Expand menu, Collapse menu). The main content area is divided into several sections: System (Deployment, Licensing, Certificates, Logging, Maintenance, Upgrade, Health Checks, Backup & Restore, Admin Access, Settings), Network Resources (Network Devices, Network Device Groups, Network Device Profiles, External RADIUS Servers, RADIUS Server Sequences, NAC Managers, External MDM, Location Services), pxGrid Services (Summary, Client Management, Diagnostics, Settings), Feed Service (Profiler), Device Portal Management (Blocked List, BYOD, Certificate Provisioning, Client Provisioning, Mobile Device Management, My Devices, Custom Portal Files, Settings), and Threat Centric NAC (Third Party Vendors). A 'Make a wish' button is at the bottom left.

ISE常規選單

步驟 2. 按一下Add將路由器配置為AAA客戶端：

Network Devices Network Device Groups Network Device Profiles External RADIUS Servers RADIUS Server Sequences More ▾

Network Devices Default Device Device Security Settings

Selected 0 Total 1 ⚡ ⚙️

All ▾ 🔍

Name	IP/Mask	Profile Name	Location	Type	Description
CISCO_ROU...	...	Cisco	All Locations	All Device Types	

增加新網路裝置

輸入網路裝置名稱和IP地址欄位，然後選中RADIUS Authentication Settings框並增加共用金鑰，此值必須與建立路由器上的RADIUS伺服器對象時使用的金鑰相同。

Network Devices

Name CISCO_ROUTER

Description

IP Address IP : 192.168.30.110 / 32 ⚙️

名稱和IP地址



✓ RADIUS Authentication Settings

RADIUS UDP Settings

Protocol RADIUS

Shared Secret

Show

Use Second Shared Secret i

networkDevices.secondSharedSecret

Show

Radius密碼

按一下Save。

步驟 3.導航到管理>身份管理>組：

The screenshot shows the Cisco ISE Administration interface. The top navigation bar has tabs: Dashboard, Context Visibility, Operations, Policy, Administration (which is highlighted with a red box), and Work Centers. On the left, there's a sidebar with 'Recent Pages' (Identities, Groups, Authorization Profiles, Results, Policy Sets) and 'Shortcuts' (+ / - Expand menu, esc - Collapse menu). The main content area is divided into several sections: 'System' (Deployment, Licensing, Certificates, Logging, Maintenance, Upgrade, Health Checks, Backup & Restore, Admin Access, Settings), 'Network Resources' (Network Devices, Network Device Groups, Network Device Profiles, External RADIUS Servers, RADIUS Server Sequences, NAC Managers, External MDM, Location Services), 'pxGrid Services' (Summary, Client Management, Diagnostics, Settings), 'Feed Service' (Profiler), 'Device Portal Management' (Blocked List, BYOD, Certificate Provisioning, Client Provisioning, Mobile Device Management..., My Devices, Custom Portal Files, Settings), and 'Threat Centric NAC' (Third Party Vendors). A red box highlights the 'Groups' link under the 'Identity Management' section of the 'System' category.

ISE常規選單

步驟 4.按一下User Identity Groups，然後按一下Add：

Identity Groups

< View Settings

> Endpoint Identity Groups

> User Identity Groups

User Identity Groups

Selected 0 Total 10 Edit Delete Import Export All ▼

Name	Description
User ALL_ACCOUNTS (default)	Default ALL_ACCOUNTS (default) User Group
User Employee	Default Employee User Group
User GROUP_ACCOUNTS (default)	Default GROUP_ACCOUNTS (default) User Group

增加新組

輸入組Name，然後按一下Submit。

Identity Group

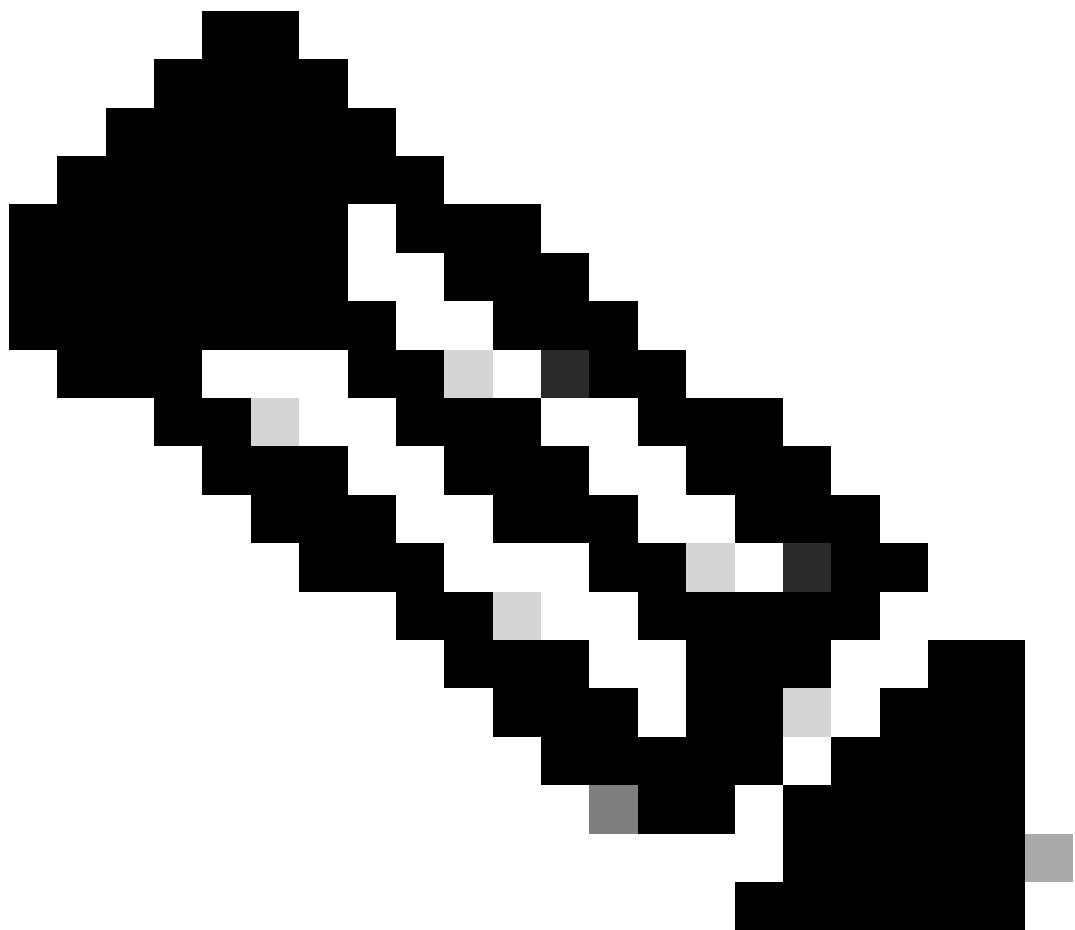
* Name

Description

Submit

Cancel

群組資訊



注意：重複步驟3和4，根據需要建立多個組。

步驟 5. 導航到管理>身份管理>身份：

The screenshot shows the Cisco ISE Administration interface. The top navigation bar includes links for Dashboard, Context Visibility, Operations, Policy, Administration (which is highlighted with a red box), and Work Centers. On the left, there's a sidebar with 'Recent Pages' (Groups, Network Devices, Authorization Profiles, Results, Policy Sets) and 'Shortcuts' (Expand menu, Collapse menu). The main content area is divided into several sections: 'System' (Deployment, Licensing, Certificates, Logging, Maintenance, Upgrade, Health Checks, Backup & Restore, Admin Access, Settings), 'Network Resources' (Network Devices, Network Device Groups, Network Device Profiles, External RADIUS Servers, RADIUS Server Sequences, NAC Managers, External MDM, Location Services), 'pxGrid Services' (Summary, Client Management, Diagnostics, Settings), 'Feed Service' (Profiler), 'Device Portal Management' (Blocked List, BYOD, Certificate Provisioning, Client Provisioning, Mobile Device Manageme...), and 'Threat Centric NAC' (Third Party Vendors). A large red box highlights the 'Identity Management' section under 'System'. Within 'Identity Management', another red box highlights the 'Identities' tab, which lists 'Groups', 'External Identity Sources', 'Identity Source Sequences', and 'Settings'. A watermark of a fingerprint is visible on the right side.

ISE常規選單

步驟 6.按一下Add，以便在伺服器本地資料庫中建立新使用者：

The screenshot shows the 'Network Access Users' page in the Cisco ISE interface. The top navigation bar has tabs for Identities, Groups, External Identity Sources, Identity Source Sequences, and Settings. On the left, a sidebar shows 'Users' (with a red box around it) and 'Latest Manual Network Scan Res...'. The main content area is titled 'Network Access Users' and features a toolbar with 'Edit', 'Add' (highlighted with a red box), 'Change Status', 'Import', 'Export', 'Delete', and 'Duplicate'. Below the toolbar is a table header with columns: Status, Username, Description, First Name, Last Name, Email Address, User Identity Grou..., and Admin. The table body displays the message 'No data available'. A red box highlights the 'Add' button in the toolbar.

新增使用者

輸入Username 和Login Password。然後，導航到此頁面末尾，選擇User Group：

✓ Network Access User

* Username user1

Status Enabled

Email

✓ Passwords

Password Type: Internal Users

Password

Re-Enter Password

* Login Password

.....

Generate Password

(i)

Enable Password

Generate Password

(i)

使用者名稱和密碼

✓ Account Options

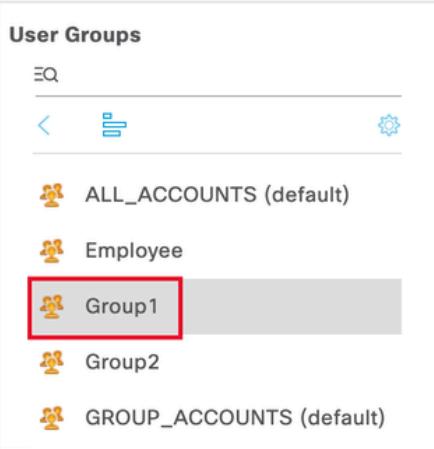
Description

Change password on next login

✓ Account Disable Policy

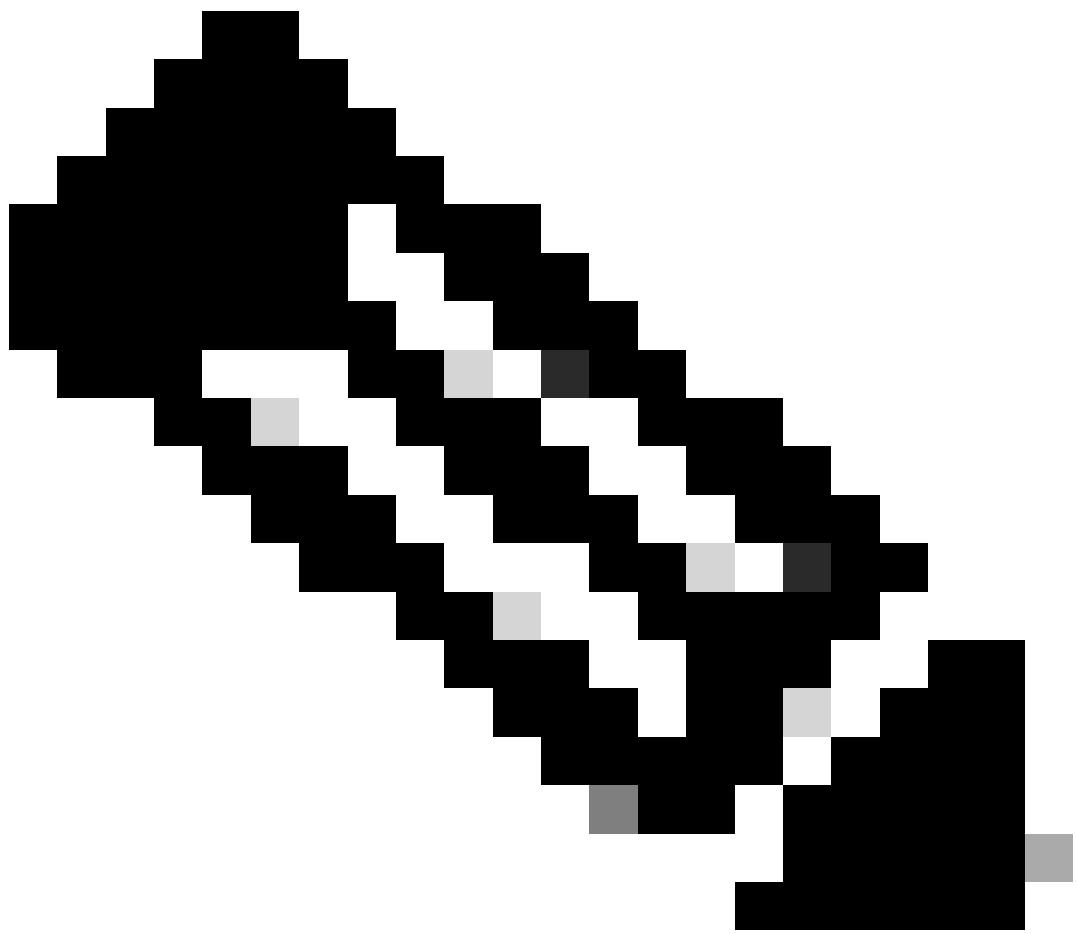
Disable account if date exceeds 20

✓ User Groups



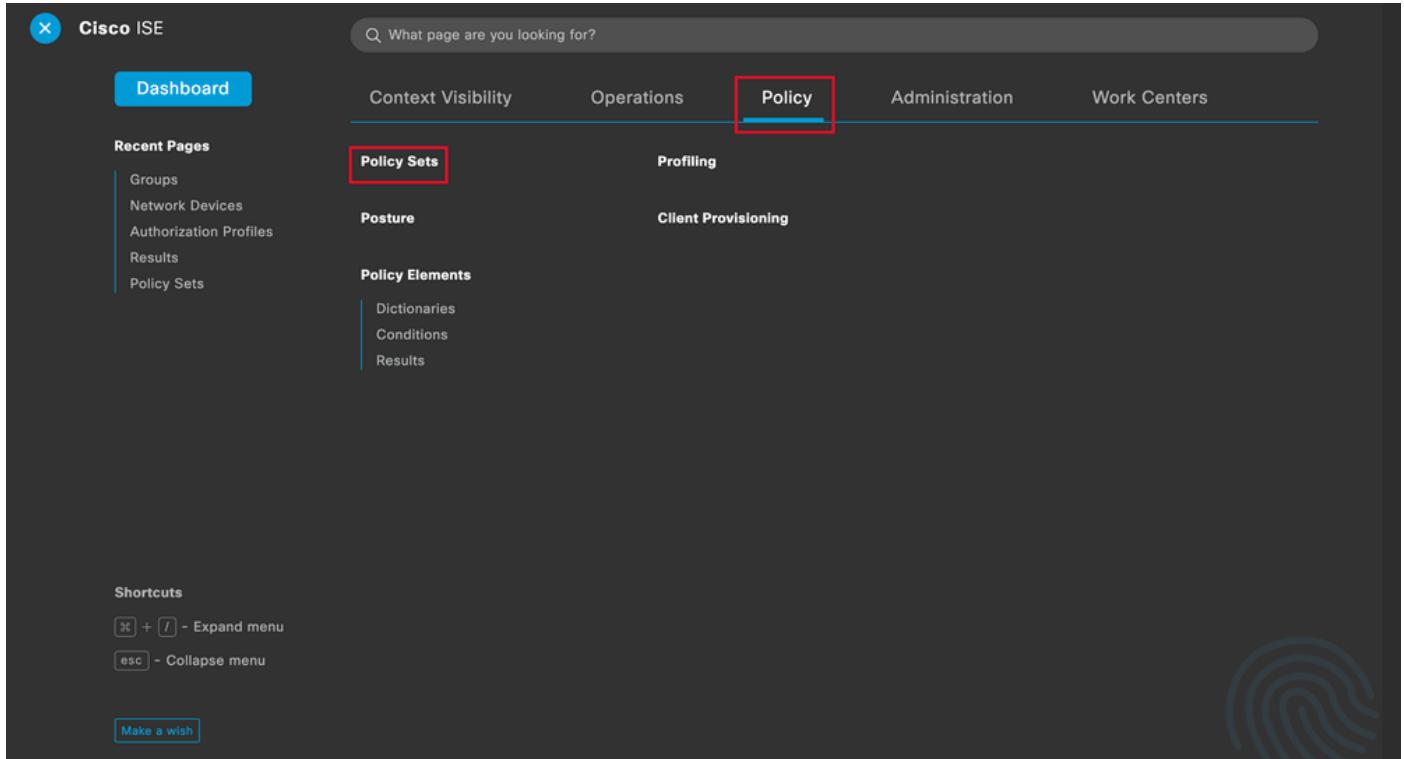
將正確的群組指派給使用者

按一下Save。



附註：重複步驟5和6，建立您需要的使用者，並將他們指派給對應的群組。

第7步：導航到策略>策略集：



ISE常規選單

透過按一下螢幕右側的箭頭來選擇預設授權策略：

The screenshot shows the 'Policy Sets' page. At the top, there are buttons for 'Reset', 'Reset Policyset Hitcounts', and 'Save'. Below is a table with columns: Status, Policy Set Name, Description, Conditions, Allowed Protocols / Server Sequence, Hits, Actions, and View. A search bar labeled 'Search' is at the top of the table. A row for 'Default' is selected, showing 'Default policy set' in the 'Policy Set Name' column. To the right of this row are buttons for 'Default Network Access' (with icons for edit, delete, and add), '35' (likely hits or rules), a gear icon (settings), and a red-bordered arrow icon (likely for cloning or sharing).

選擇授權策略

步驟 8. 點選Authorization Policy旁邊的下拉選單箭頭以展開它。然後，按一下add (+)圖示以增加新規則：

The screenshot shows the 'Authorization Policy' page. A red box highlights the 'Authorization Policy (14)' dropdown arrow. Below is a table with columns: Status, Rule Name, Conditions, Profiles, Security Groups, Hits, and Actions. A search bar labeled 'Search' is at the top of the table. A red-bordered '+' icon is located in the 'Status' column of the first row, indicating where to click to add a new rule.

增加新授權規則

輸入規則的名稱，然後在條件欄下選取add (+)圖示：

The screenshot shows the 'Rule Name' field containing 'Group1_AuthZ_Rule' and the 'Conditions' tab selected. A red box highlights the 'Rule Name' field and the 'Conditions' tab.

增加條件

步驟 9. 在「屬性編輯器」文字方塊中按一下，然後按一下Identity群組。選擇Identity group - Name屬性：

Conditions Studio

The screenshot shows the Conditions Studio interface with the 'Library' and 'Editor' tabs. The 'Editor' tab is active, showing the 'Select attribute for condition' dialog. The 'Dictionary' column lists various categories like CWA, IdentityGroup, InternalUser, and PassivelD. The 'Attribute' column lists corresponding attributes like CWA_ExternalGroups, Description, IdentityGroup, and IdentityGroup. The 'IdentityGroup' row is highlighted with a red box. A red box also highlights the 'Click to add an attribute' button in the editor area.

Dictionary	Attribute	ID	Info
CWA	CWA_ExternalGroups	(i)	
IdentityGroup	Description	(i)	
IdentityGroup	Name	(i)	
InternalUser	IdentityGroup	(i)	
PassivelD	PassivelD_Groups	(i)	

選取條件

選擇與運算子相同，然後按一下下拉選單箭頭以顯示可用選項，然後選擇使用者身份組 : <GROUP_NAME>。

Editor

IdentityGroup·Name

Equals Choose from list or type

User Identity Groups:GROUP_ACCOUNTS (default)

User Identity Groups:Group1 User Identity Groups:Group1

User Identity Groups:Group2

User Identity Groups:GuestType_Contractor (default)

User Identity Groups:GuestType_Daily (default)

Save

選取群組

按一下「儲存」。

第10步：在配置檔案列中，點選增加(+)圖示並選擇建立新授權配置檔案：

Results					
Status	Rule Name	Conditions	Profiles	Security Groups	Hits Actions
<input checked="" type="checkbox"/>	Group1_AuthZ_Rule	<input checked="" type="checkbox"/> IdentityGroup-Name EQUALS User Identity Groups:Group1	Select from list +	Select from list +	10
<input checked="" type="checkbox"/>	Wireless Black List Default	AND <input checked="" type="checkbox"/> Wireless_Access <input checked="" type="checkbox"/> IdentityGroup-Name EQUALS Endpoint Identity Groups:Blacklist	Create a New Authorization Profile +	Select from list +	0

建立授權配置檔案

輸入設定檔名稱

Add New Standard Profile

Authorization Profile

* Name

Description

* Access Type

Network Device Profile   

Service Template

Track Movement 

Agentless Posture 

Passive Identity Tracking 

設定檔資訊

瀏覽至此頁末的進階屬性設定，然後按一下下拉式功能表箭頭。然後按一下Cisco，然後選擇cisco-av-pair-[1]：

Advanced Attributes Settings

Select an item  =  

Cisco

cisco-abort-cause--[21]
cisco-account-info--[250]
cisco-assign-ip-pool--[218]
cisco-av-pair--[1]
cisco-call-filter--[243]
cisco-call-id--[141]

Attributes Details
Access Type = ACCESS_ACCEPT

選取屬性型別

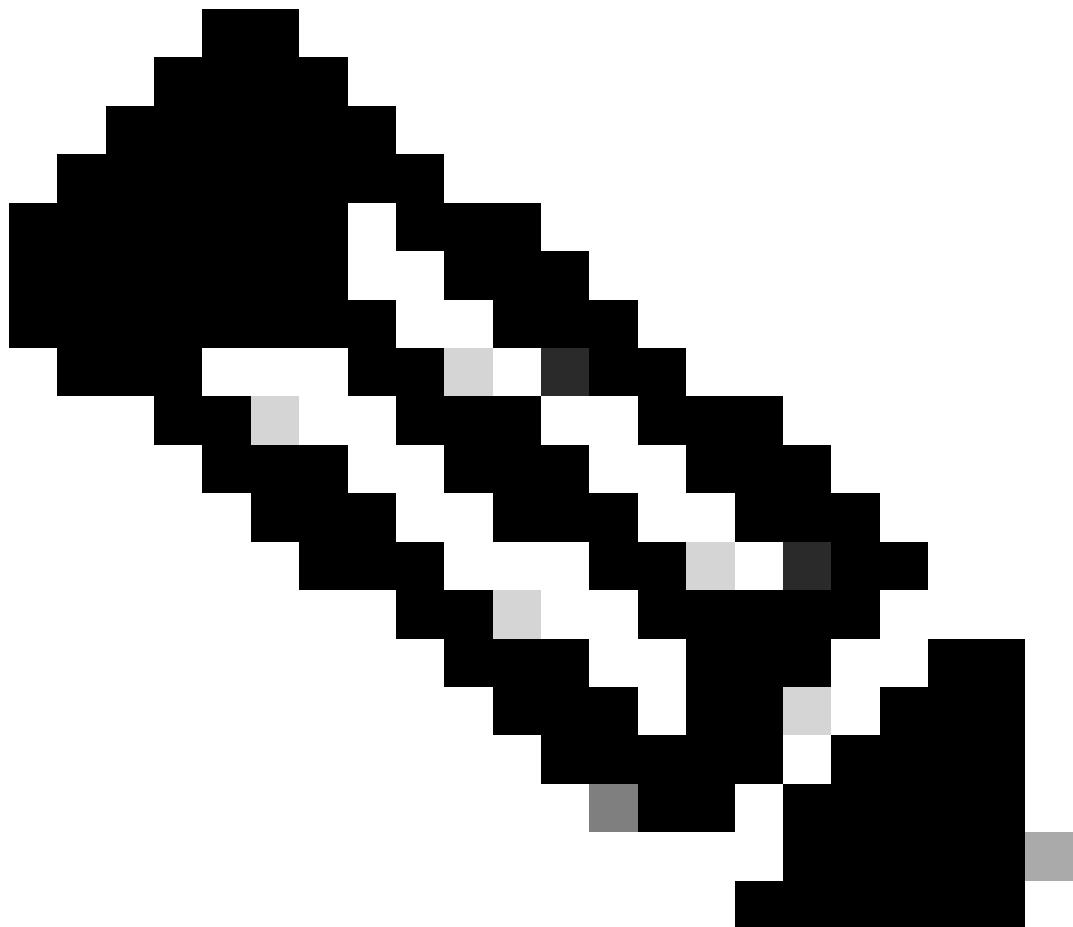
◦

增加要配置的cisco-av-pair屬性，並按一下add (+)圖示增加另一個屬性：

◦ Advanced Attributes Settings

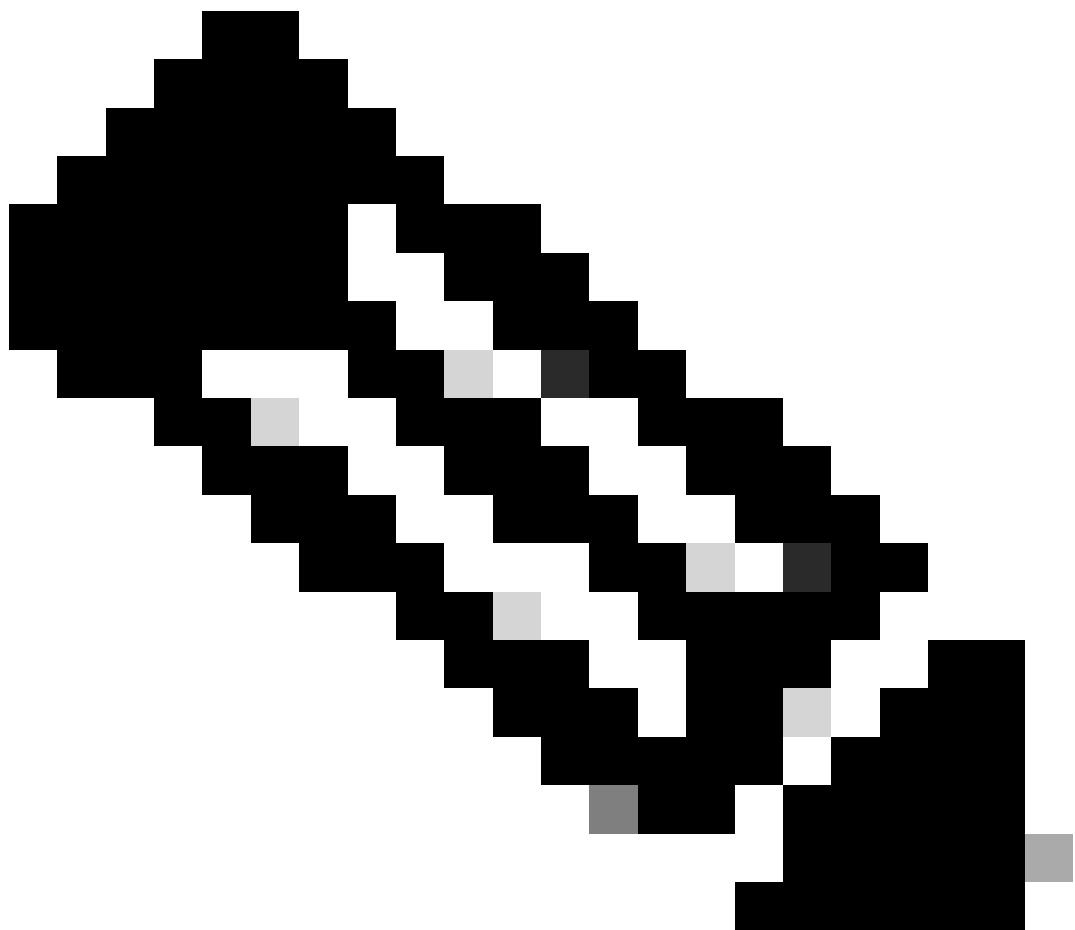
Cisco:cisco-av-pair = ipsec:dns-servers=10.0.50.10 +

配置屬性



注意：有關屬性規範（名稱、語法、說明、示例等），請參閱FlexVPN RADIUS屬性配置指南：

[FlexVPN和網際網路金鑰交換版本2配置指南，Cisco IOS XE Fuji 16.9.x -支援的RADIUS屬性](#)



附註：重複上一步以建立必要的屬性。

按一下Save。

接下來的屬性已指定給每個群組：

- 群組1屬性：

✓ Advanced Attributes Settings

⋮ Cisco:cisco-av-pair	▼	=	ipsec:dns-servers=10.0.50.10	▼	‑
⋮ Cisco:cisco-av-pair	▼	=	ipsec:route-set=prefix 192.168.100.0/24	▼	‑
⋮ Cisco:cisco-av-pair	▼	=	ipsec:addr-pool=group1	▼	‑ +

✓ Attributes Details

```
Access Type = ACCESS_ACCEPT
cisco-av-pair = ipsec:dns-servers=10.0.50.101
cisco-av-pair = ipsec:route-set=prefix 192.168.100.0/24
cisco-av-pair = ipsec:addr-pool=group1
```

Group1屬性

- 群組2屬性：

✓ Advanced Attributes Settings

⋮ Cisco:cisco-av-pair	▼	=	ipsec:dns-servers=10.0.50.20	▼	‑
⋮ Cisco:cisco-av-pair	▼	=	ipsec:route-set=prefix 192.168.200.0/24	▼	‑
⋮ Cisco:cisco-av-pair	▼	=	ipsec:addr-pool=group2	▼	‑ +

✓ Attributes Details

```
Access Type = ACCESS_ACCEPT
cisco-av-pair = ipsec:dns-servers=10.0.50.202
cisco-av-pair = ipsec:route-set=prefix 192.168.200.0/24
cisco-av-pair = ipsec:addr-pool=group2
```

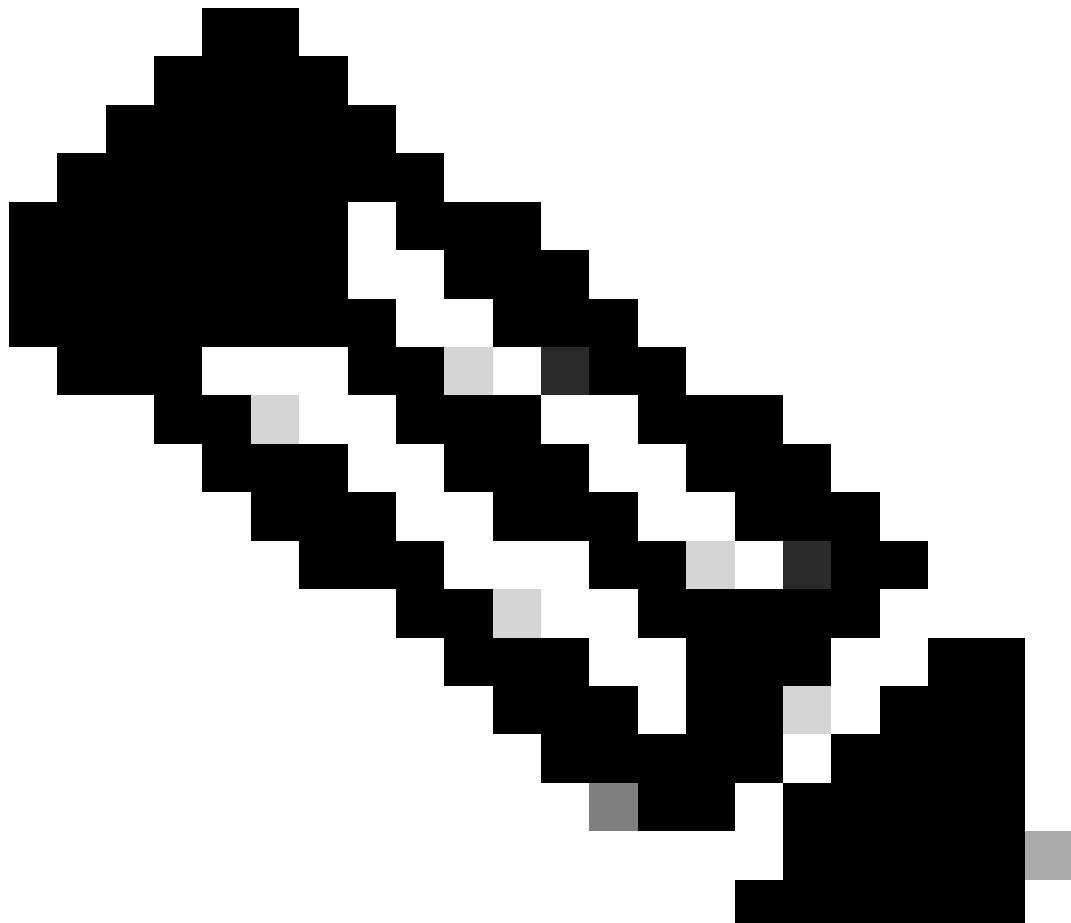
群組2屬性

第11步：點選下拉選單箭頭，選擇第10步中建立的授權配置檔案：

Status	Rule Name	Conditions	Profiles	Security Groups	Hits	Actions
<input type="text"/> Search						
✓	Group1_AuthZ_Rule	🔍 IdentityGroup-Name EQUALS User Identity Groups:Group1	Select from list ^ +	Select from list ^ + 10		⚙️
✓	Wireless Black List Default	AND 🔍 Wireless_Access IdentityGroup-Name EQUALS Endpoint Identity Groups:Blacklist	DenyAccess	Select from list ^ + 0		⚙️
✓	Profiled Cisco IP Phones	🔍 IdentityGroup-Name EQUALS Endpoint Identity Groups:Profiled:Cisco-IP-Phone	NSP_Onboard	Select from list ^ + 0		⚙️
✓	Profiled Non Cisco IP Phones	🔍 Non_Cisco_Profiled_Phones	Non_Cisco_IP_Phones	PermitAccess	Select from list ^ + 0	⚙️
			Profile_group1	Non_Cisco_IP_Phones X ^ +	Select from list ^ + 0	⚙️

分配授權配置檔案

按一下Save。



注意：重複步驟8到11為每個組建立必要的授權規則。

步驟12（可選）。如果需要編輯授權配置檔案，請導航到策略>結果：

ISE常規選單

導航到授權>授權配置檔案。按一下要修改的配置檔案的覈取方塊，然後按一下Edit：

<input type="checkbox"/>	Name	Profile	Description
<input type="checkbox"/>	Blackhole_Wireless_Access	Cisco	Default profile used to blacklist wireless devices. Ensure that you correctly map this profile to the appropriate port or interface.
<input type="checkbox"/>	Cisco_IP_Phones	Cisco	Default profile used for Cisco Phones.
<input type="checkbox"/>	Cisco_Temporal_Onboard	Cisco	Onboard the device with Cisco temporal agent.
<input type="checkbox"/>	Cisco_WebAuth	Cisco	Default Profile used to redirect users to the CWA portal.
<input type="checkbox"/>	NSP_Onboard	Cisco	Onboard the device with Native Suplicant Provisioning.
<input type="checkbox"/>	Non_Cisco_IP_Phones	Cisco	Default Profile used for Non Cisco Phones.
<input checked="" type="checkbox"/>	Profile_group1	Cisco	
<input type="checkbox"/>	Profile_group2	Cisco	
<input type="checkbox"/>	UDN	Cisco	Default profile used for UDN.
<input type="checkbox"/>	DenyAccess	Cisco	Default Profile with access type as Access-Reject.
<input type="checkbox"/>	PermitAccess	Cisco	Default Profile with access type as Access-Accept.

編輯授權配置檔案

客戶端配置

步驟 1. 使用XML配置檔案編輯器建立XML配置檔案。以下範例是用來建立本檔案的範例：

```

<#root>

<AnyConnectProfile xmlns="http://schemas.xmlsoap.org/encoding/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
<ClientInitialization>
<UseStartBeforeLogon UserControllable="true">true</UseStartBeforeLogon>
<AutomaticCertSelection UserControllable="false">true</AutomaticCertSelection>
<ShowPreConnectMessage>false</ShowPreConnectMessage>
<CertificateStore>All</CertificateStore>
<CertificateStoreMac>All</CertificateStoreMac>
<CertificateStoreLinux>All</CertificateStoreLinux>
<CertificateStoreOverride>true</CertificateStoreOverride>
<ProxySettings>Native</ProxySettings>
<AllowLocalProxyConnections>true</AllowLocalProxyConnections>
<AuthenticationTimeout>30</AuthenticationTimeout>
<AutoConnectOnStart UserControllable="true">false</AutoConnectOnStart>
<MinimizeOnConnect UserControllable="true">true</MinimizeOnConnect>
<LocalLanAccess UserControllable="true">false</LocalLanAccess>
<DisableCaptivePortalDetection UserControllable="true">false</DisableCaptivePortalDetection>
<ClearSmartcardPin UserControllable="false">true</ClearSmartcardPin>
<IPProtocolSupport>IPv4,IPv6</IPProtocolSupport>
<AutoReconnect UserControllable="false">
    true
    <AutoReconnectBehavior UserControllable="false">ReconnectAfterResume</AutoReconnectBehavior>
</AutoReconnect>
<SuspendOnConnectedStandby>false</SuspendOnConnectedStandby>
<AutoUpdate UserControllable="false">true</AutoUpdate>
<RSASecurIDIntegration UserControllable="false">Automatic</RSASecurIDIntegration>
<WindowsLogonEnforcement>SingleLocalLogon</WindowsLogonEnforcement>
<LinuxLogonEnforcement>SingleLocalLogon</LinuxLogonEnforcement>
<WindowsVPNEstablishment>AllowRemoteUsers</WindowsVPNEstablishment>
<LinuxVPNEstablishment>LocalUsersOnly</LinuxVPNEstablishment>
<AutomaticVPNPolicy>false</AutomaticVPNPolicy>
<PPPExclusion UserControllable="false">
    Disable
    <PPPExclusionServerIP UserControllable="false"/>
</PPPExclusion>
<EnableScripting UserControllable="false">false</EnableScripting>
<EnableAutomaticServerSelection UserControllable="false">
    false
    <AutoServerSelectionImprovement>20</AutoServerSelectionImprovement>
    <AutoServerSelectionSuspendTime>4</AutoServerSelectionSuspendTime>
</EnableAutomaticServerSelection>
<RetainVpnOnLogoff>false </RetainVpnOnLogoff>
<CaptivePortalRemediationBrowserFailover>false</CaptivePortalRemediationBrowserFailover>
<AllowManualHostInput>true</AllowManualHostInput>
</ClientInitialization>
<ServerList>
<HostEntry>
<HostName>
FlexVPN_HUB
</HostName>
<HostAddress>
192.168.50.225
</HostAddress>
<PrimaryProtocol>
IPsec

```

```
<StandardAuthenticationOnly>
true
<AuthMethodDuringIKENegotiation>
EAP-MD5

</AuthMethodDuringIKENegotiation>
<IKEIdentity>

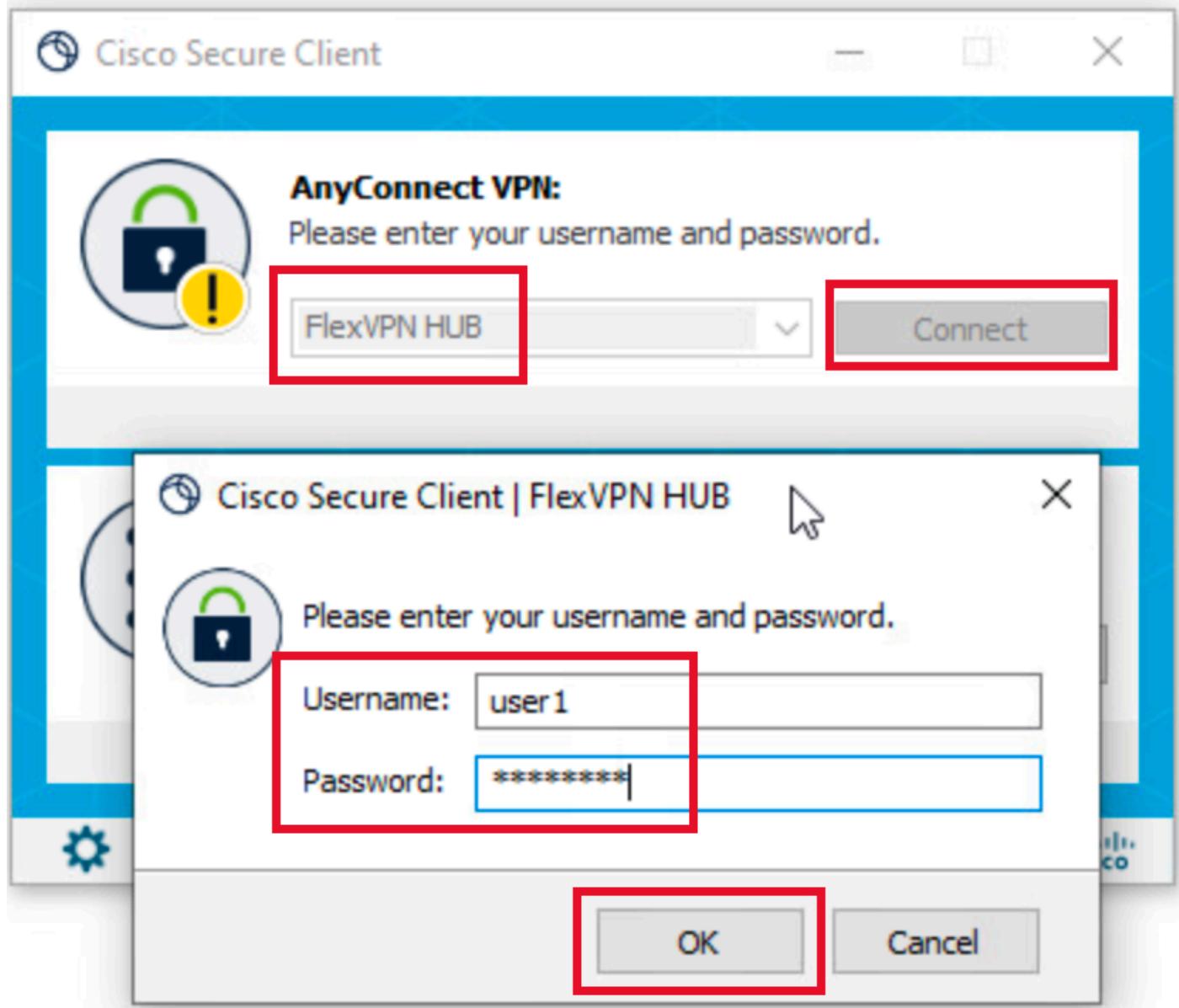
cisco.example

</IKEIdentity>
</StandardAuthenticationOnly>
</PrimaryProtocol>
</HostEntry>
</ServerList>
</AnyConnectProfile>
```

- <主機名> -用於表示主機、IP地址或完全限定域名(FQDN)的別名。這會顯示在CSC方塊中。
- <HostAddress> - FlexVPN集線器的IP地址或FQDN。
- <PrimaryProtocol> -必須設定為IPsec以強制客戶端使用IKEv2/IPsec而不是SSL。
- <AuthMethodDuringIKENegotiation> -必須設定為在EAP中使用EAP-MD5。這是根據ISE伺服器進行身份驗證所必需的。
- <IKEIdentity> -此字串由客戶端作為ID_GROUP型別ID負載傳送。這可用於將客戶端與中心上的特定IKEv2配置檔案進行匹配。

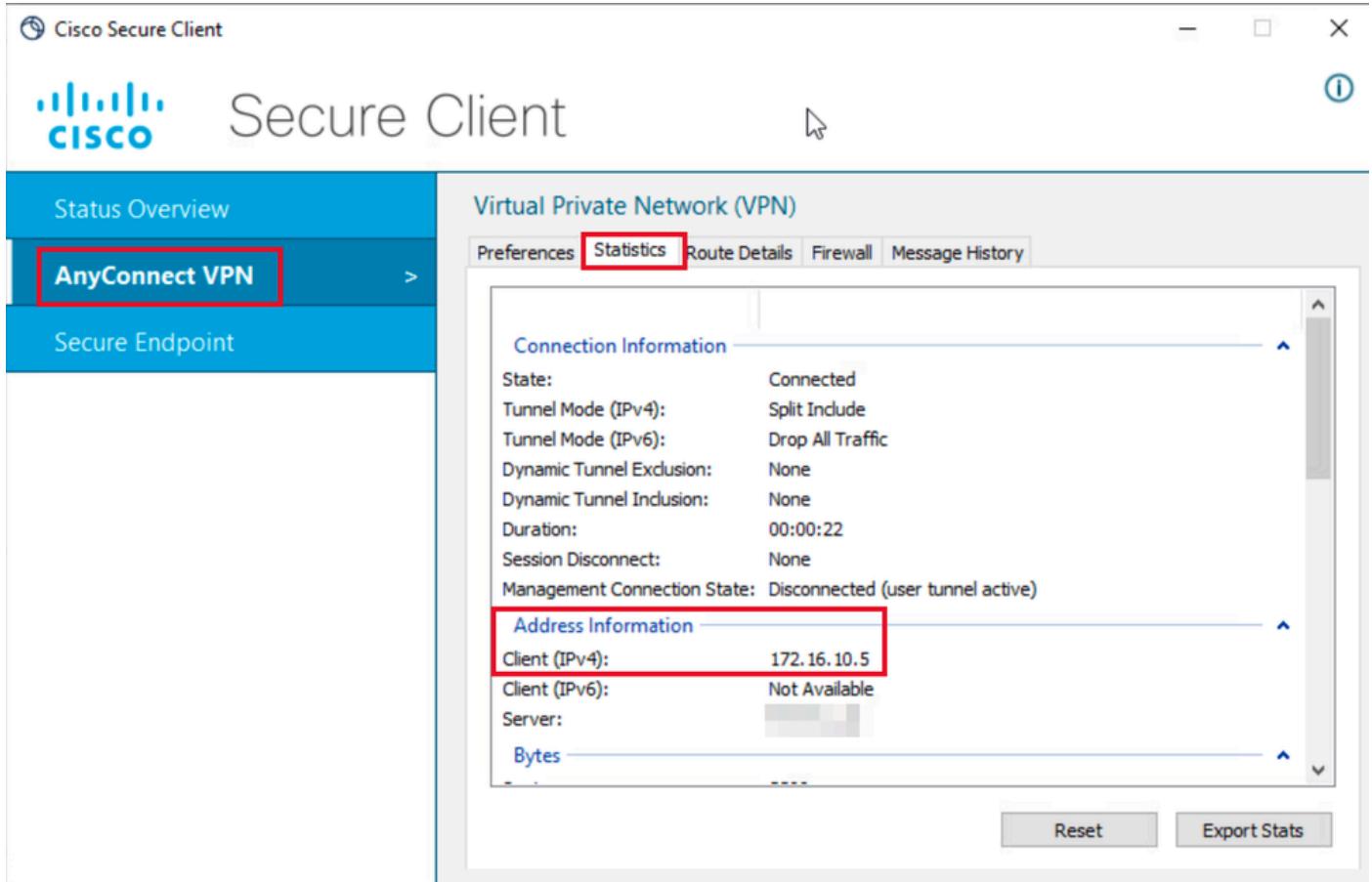
驗證

步驟 1. 導航到安裝CSC的客戶端電腦。連線到FlexVPN中心並輸入user1憑證：



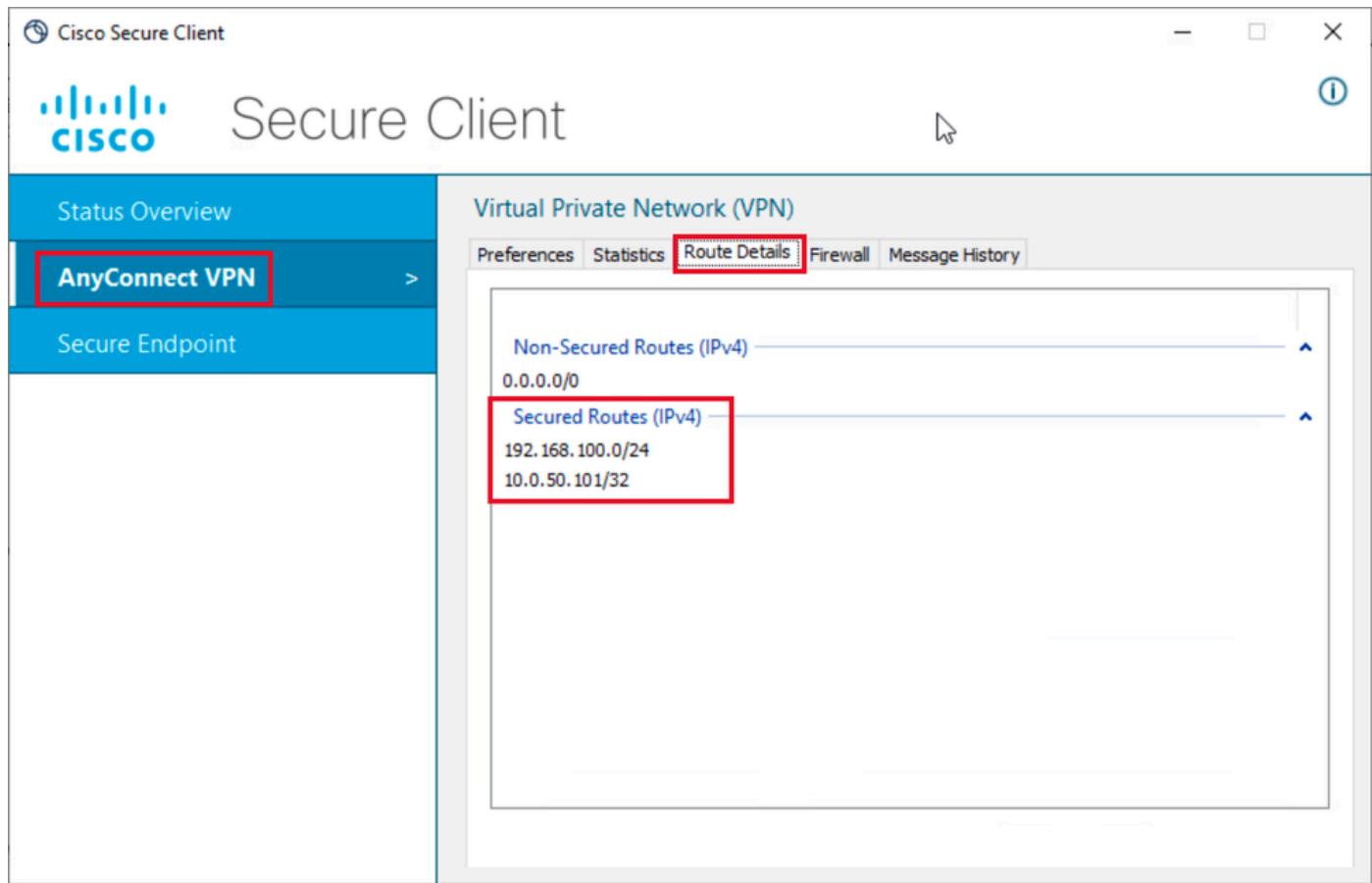
User1身份證明

步驟 2. 建立連線後，點選齒輪圖示（左下角）並導航到AnyConnectVPN > Statistics。在Address Information部分中確認所分配的IP地址屬於為組1配置的池：



User1統計

導航到AnyConnectVPN > Route details，確認顯示的資訊對應於為group1配置的安全路由和DNS：



User1路由詳細資訊

步驟 3. 對使用者2憑證重複第1步和第2步，檢查資訊是否與在ISE授權策略上為此組配置的值匹配

:



Cisco Secure Client



AnyConnect VPN:

Please enter your username and password.

FlexVPN HUB

Connect



Cisco Secure Client | FlexVPN HUB



Please enter your username and password.

Username: user2

Password: *****

OK

Cancel

使用者2身份證明

Cisco Secure Client

Secure Client

Status Overview

AnyConnect VPN >

Secure Endpoint

Virtual Private Network (VPN)

Preferences Statistics Route Details Firewall Message History

Connection Information

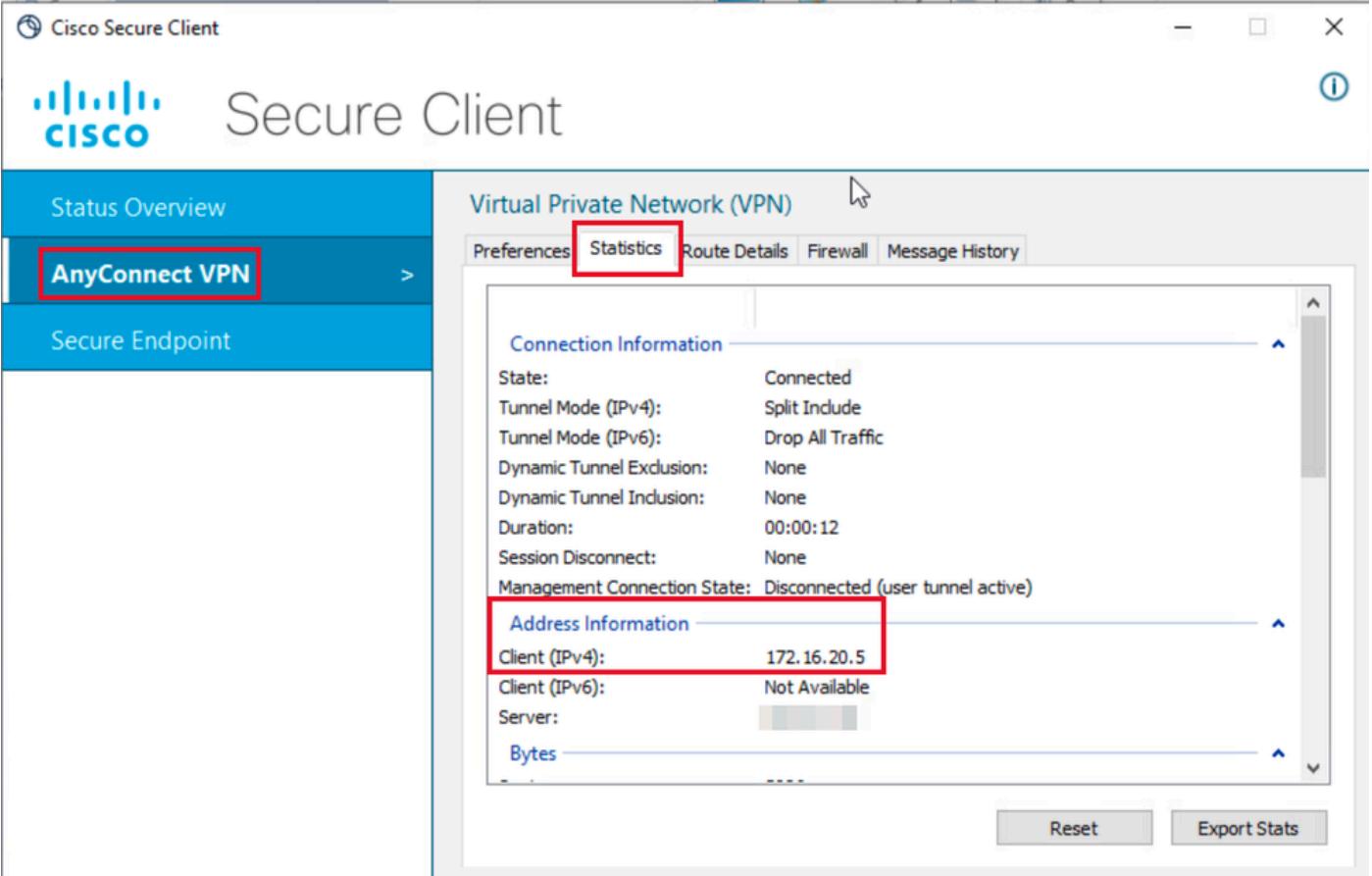
State:	Connected
Tunnel Mode (IPv4):	Split Include
Tunnel Mode (IPv6):	Drop All Traffic
Dynamic Tunnel Exclusion:	None
Dynamic Tunnel Inclusion:	None
Duration:	00:00:12
Session Disconnect:	None
Management Connection State:	Disconnected (user tunnel active)

Address Information

Client (IPv4):	172.16.20.5
Client (IPv6):	Not Available
Server:	[redacted]

Bytes

Reset Export Stats



使用者2統計資訊

Cisco Secure Client

Secure Client

Status Overview

AnyConnect VPN >

Secure Endpoint

Virtual Private Network (VPN)

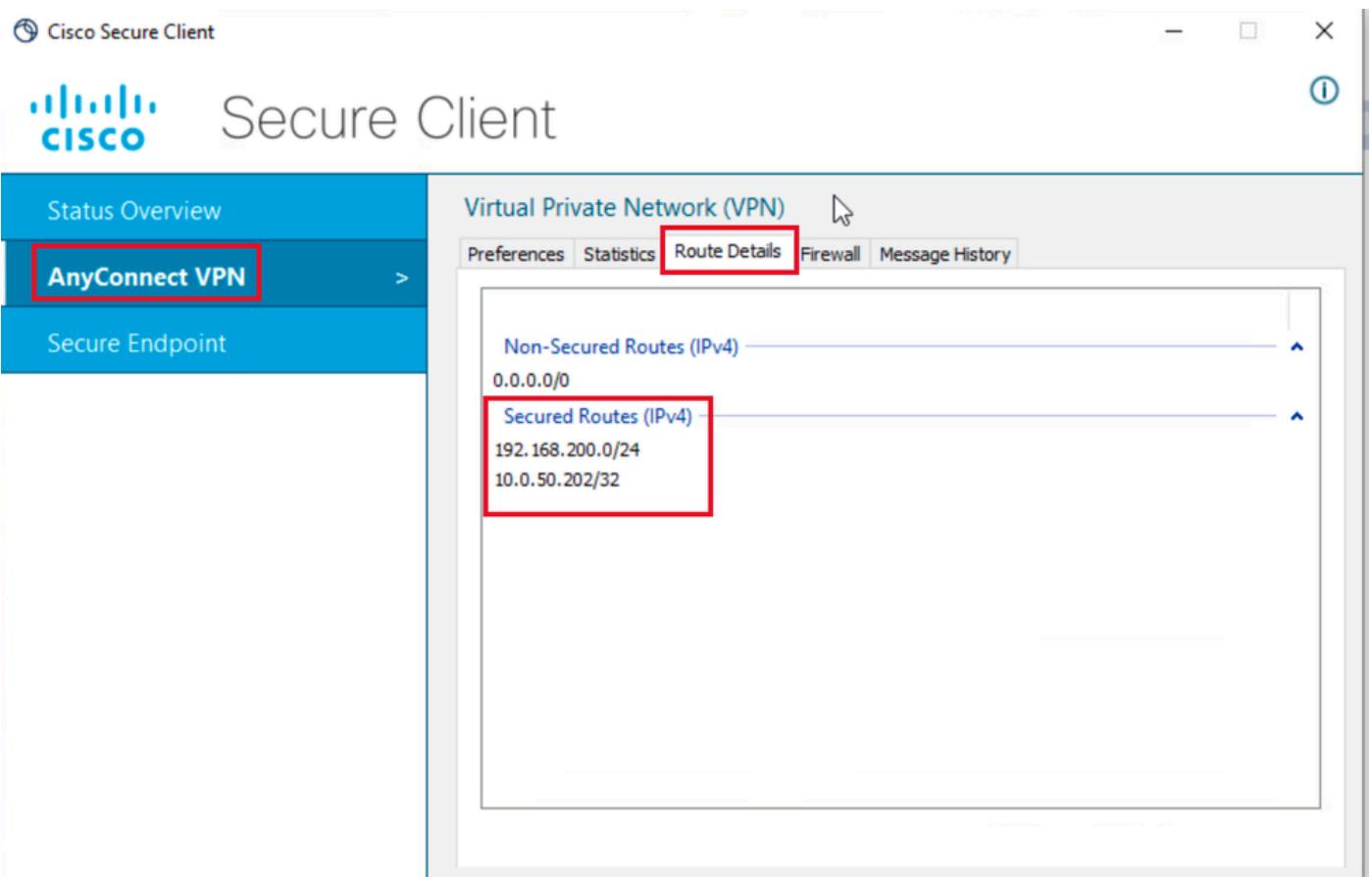
Preferences Statistics Route Details Firewall Message History

Non-Secured Routes (IPv4)

0.0.0.0/0

Secured Routes (IPv4)

192.168.200.0/24
10.0.50.202/32



使用者2路由詳細資訊

疑難排解

調試和日誌

在Cisco路由器上：

1. 使用IKEv2和IPSec調試來驗證頭端和客戶端之間的協商：

```
debug crypto ikev2
debug crypto ikev2 packet
debug crypto ikev2 error
debug crypto ikev2 internal
debug crypto ipsec
debug crypto ipsec error
```

2. 使用AAA調試驗證本地和/或遠端屬性的分配：

```
debug aaa authorization
debug aaa authentication
debug radius authentication
```

在ISE上：

- RADIUS即時日誌

工作案例

以下輸出是成功連線的示例：

- User1調試輸出：

```
<#root>
```

```
Jan 30 02:57:21.088: AAA/BIND(000000FF): Bind i/f
Jan 30 02:57:21.088: AAA/AUTHEN/LOGIN (000000FF):
```

```
Pick method list 'FlexVPN-Authentication-List'
```

```
Jan 30 02:57:21.088: RADIUS/ENCODE(000000FF):Orig. component type = VPN IPSEC
Jan 30 02:57:21.088: RADIUS/ENCODE(000000FF): dropping service type, "radius-server attribute 6 on-for-
Jan 30 02:57:21.088: RADIUS(000000FF): Config NAS IP: 0.0.0.0
Jan 30 02:57:21.088: vrfid: [65535] ipv6 tableid : [0]
Jan 30 02:57:21.088: idb is NULL
Jan 30 02:57:21.088: RADIUS(000000FF): Config NAS IPv6: :::
Jan 30 02:57:21.089: RADIUS/ENCODE(000000FF): acct_session_id: 4245
Jan 30 02:57:21.089: RADIUS(000000FF): sending
```

```
Jan 30 02:57:21.089: RADIUS/ENCODE: Best Local IP-Address 192.168.30.100 for Radius-Server 192.168.30.1
Jan 30 02:57:21.089: RADIUS: Message Authenticator encoded
Jan 30 02:57:21.089: RADIUS(000000FF):

Send Access-Request to 192.168.30.110:1645 id 1645/85, len 229

RADIUS: authenticator C9 82 15 29 AF 4B 17 61 - 27 F4 5C 27 C2 C3 50 34
Jan 30 02:57:21.089: RADIUS: Service-Type [6] 6 Login [1]
Jan 30 02:57:21.089: RADIUS: Vendor, Cisco [26] 26
Jan 30 02:57:21.089: RADIUS: Cisco AVpair [1] 20 "service-type=Login"
Jan 30 02:57:21.089: RADIUS: Vendor, Cisco [26] 36
Jan 30 02:57:21.089: RADIUS: Cisco AVpair [1] 30
```

```
"isakmp-phase1-id=cisco.example"
```

```
Jan 30 02:57:21.089: RADIUS: Calling-Station-Id [31] 13 "192.168.50.130"
Jan 30 02:57:21.089: RADIUS: Vendor, Cisco [26] 64
Jan 30 02:57:21.089: RADIUS: Cisco AVpair [1] 58 "audit-session-id=L2L42F2F0116Z02L42F2F016FZH1194CAE2Z"
Jan 30 02:57:21.089: RADIUS: User-Name [1] 7
```

```
"user1"
```

```
Jan 30 02:57:21.089: RADIUS: Vendor, Cisco [26] 21
Jan 30 02:57:21.089: RADIUS: Cisco AVpair [1] 15 "coa-push=true"
Jan 30 02:57:21.089: RADIUS: EAP-Message [79] 12
RADIUS: 02 3B 00 0A 01 75 73 65 72 31 [ ;user1]
Jan 30 02:57:21.089: RADIUS: Message-Authenticato[80] 18
RADIUS: E7 22 65 E0 DC 03 3A 49 0B 01 49 2A D5 3F AD 4F [ "e:II*?0"]
Jan 30 02:57:21.089: RADIUS: NAS-IP-Address [4] 6 192.168.30.100
Jan 30 02:57:21.089: RADIUS(000000FF): Sending a IPv4 Radius Packet
Jan 30 02:57:21.090: RADIUS(000000FF): Started 5 sec timeout
Jan 30 02:57:21.094: RADIUS:
```

```
Received from id 1645/85 192.168.30.110:1645, Access-Challenge, len 137
```

```
RADIUS: authenticator 67 2B 9D 9C 4D 1F F3 E8 - F6 EC 9B EB 8E 49 C8 A5
Jan 30 02:57:21.094: RADIUS: State [24] 91
RADIUS: 35 32 43 50 4D 53 65 73 73 69 6F 6E 49 44 3D 4C [52CPMSessionID=L]
RADIUS: 32 4C 34 32 46 32 46 30 31 31 36 5A 4F 32 4C 34 [2L42F2F0116Z02L4]
RADIUS: 32 46 32 46 30 31 36 46 5A 48 31 31 39 34 43 41 [2F2F016FZH1194CA]
RADIUS: 45 32 5A 4E 31 46 3B 33 31 53 65 73 73 69 6F 6E [E2ZN1F;31Session]
RADIUS: 49 44 3D 49 53 45 2D 44 49 41 4E 2F 34 39 33 30 [ID=ISE-SERVER/4930]
RADIUS: 38 30 30 31 38 2F 32 39 3B [ 80018/29;]
Jan 30 02:57:21.094: RADIUS: EAP-Message [79] 8
RADIUS: 01 52 00 06 0D 20 [ R ]
Jan 30 02:57:21.094: RADIUS: Message-Authenticato[80] 18
RADIUS: 38 8A B1 31 72 62 06 40 4F D4 58 48 E8 36 E7 80 [ 81rb@0XH6]
Jan 30 02:57:21.094: RADIUS(000000FF): Received from id 1645/85
RADIUS/DECODE: EAP-Message fragments, 6, total 6 bytes
Jan 30 02:57:21.097: AAA/AUTHEN/LOGIN (000000FF):
```

```
Pick method list 'FlexVPN-Authentication-List'
```

```
Jan 30 02:57:21.097: RADIUS/ENCODE(000000FF):Orig. component type = VPN IPSEC
Jan 30 02:57:21.097: RADIUS/ENCODE(000000FF): dropping service type, "radius-server attribute 6 on-for-
Jan 30 02:57:21.097: RADIUS(000000FF): Config NAS IP: 0.0.0.0
Jan 30 02:57:21.097: vrfid: [65535] ipv6 tableid : [0]
Jan 30 02:57:21.097: idb is NULL
Jan 30 02:57:21.097: RADIUS(000000FF): Config NAS IPv6: :::
Jan 30 02:57:21.097: RADIUS/ENCODE(000000FF): acct_session_id: 4245
```

```
Jan 30 02:57:21.097: RADIUS(000000FF): sending
Jan 30 02:57:21.097: RADIUS/ENCODE: Best Local IP-Address 192.168.30.100 for Radius-Server 192.168.30.1
Jan 30 02:57:21.097: RADIUS: Message Authenticator encoded
Jan 30 02:57:21.097: RADIUS(000000FF):
```

```
Send Access-Request to 192.168.30.110:1645 id 1645/86, len 316
```

```
RADIUS: authenticator 93 07 42 CC D1 90 31 68 - 56 D0 D0 5A 35 C3 67 BC
Jan 30 02:57:21.097: RADIUS: Service-Type [6] 6 Login [1]
Jan 30 02:57:21.097: RADIUS: Vendor, Cisco [26] 26
Jan 30 02:57:21.098: RADIUS: Cisco AVpair [1] 20 "service-type=Login"
Jan 30 02:57:21.098: RADIUS: Vendor, Cisco [26] 36
Jan 30 02:57:21.098: RADIUS: Cisco AVpair [1] 30
```

```
"isakmp-phase1-id=cisco.example"
```

```
Jan 30 02:57:21.098: RADIUS: Calling-Station-Id [31] 13 "192.168.50.130"
Jan 30 02:57:21.098: RADIUS: Vendor, Cisco [26] 64
Jan 30 02:57:21.098: RADIUS: Cisco AVpair [1] 58 "audit-session-id=L2L42F2F0116Z02L42F2F016FZH1194CAE2Z"
Jan 30 02:57:21.098: RADIUS: User-Name [1] 7
```

```
"user1"
```

```
Jan 30 02:57:21.098: RADIUS: Vendor, Cisco [26] 21
Jan 30 02:57:21.098: RADIUS: Cisco AVpair [1] 15 "coa-push=true"
Jan 30 02:57:21.098: RADIUS: EAP-Message [79] 8
RADIUS: 02 52 00 06 03 04 [ R ]
Jan 30 02:57:21.098: RADIUS: Message-Authenticator[80] 18
RADIUS: E0 67 24 D3 BB CF D9 E0 EE 44 98 8A 26 64 AC C9 [ g$D&d ]
Jan 30 02:57:21.098: RADIUS: State [24] 91
RADIUS: 35 32 43 50 4D 53 65 73 73 69 6F 6E 49 44 3D 4C [52CPMSessionID=L]
RADIUS: 32 4C 34 32 46 32 46 30 31 31 36 5A 4F 32 4C 34 [2L42F2F0116Z02L4]
RADIUS: 32 46 32 46 30 31 36 46 5A 48 31 31 39 34 43 41 [2F2F016FZH1194CA]
RADIUS: 45 32 5A 4E 31 46 3B 33 31 53 65 73 73 69 6F 6E [E2ZN1F;31Session]
RADIUS: 49 44 3D 49 53 45 2D 44 49 41 4E 2F 34 39 33 30 [ID=ISE-SERVER/4930]
RADIUS: 38 30 30 31 38 2F 32 39 3B [ 80018/29; ]
Jan 30 02:57:21.098: RADIUS: NAS-IP-Address [4] 6 192.168.30.100
Jan 30 02:57:21.098: RADIUS(000000FF): Sending a IPv4 Radius Packet
Jan 30 02:57:21.099: RADIUS(000000FF): Started 5 sec timeout
Jan 30 02:57:21.101: RADIUS:
```

```
Received from id 1645/86 192.168.30.110:1645, Access-Challenge, len 161
```

```
RADIUS: authenticator 42 A3 5F E0 92 13 51 13 - B2 80 56 A3 91 36 BD A1
Jan 30 02:57:21.101: RADIUS: State [24] 91
RADIUS: 35 32 43 50 4D 53 65 73 73 69 6F 6E 49 44 3D 4C [52CPMSessionID=L]
RADIUS: 32 4C 34 32 46 32 46 30 31 31 36 5A 4F 32 4C 34 [2L42F2F0116Z02L4]
RADIUS: 32 46 32 46 30 31 36 46 5A 48 31 31 39 34 43 41 [2F2F016FZH1194CA]
RADIUS: 45 32 5A 4E 31 46 3B 33 31 53 65 73 73 69 6F 6E [E2ZN1F;31Session]
RADIUS: 49 44 3D 49 53 45 2D 44 49 41 4E 2F 34 39 33 30 [ID=ISE-SERVER/4930]
RADIUS: 38 30 30 31 38 2F 32 39 3B [ 80018/29; ]
Jan 30 02:57:21.101: RADIUS: EAP-Message [79] 32
RADIUS: 01 53 00 1E 04 10 D7 61 AE 69 3B 88 A1 83 E4 EC 0F B6 EF 68 58 16 49 53 45 2D 44 49 41 4E [ Sai
Jan 30 02:57:21.101: RADIUS: Message-Authenticator[80] 18
RADIUS: 3E C9 C1 E1 F2 3B 4E 4C DF CF AC 21 AA E9 C3 F0 [ >;NL! ]
Jan 30 02:57:21.101: RADIUS(000000FF): Received from id 1645/86
RADIUS/DECODE: EAP-Message fragments, 30, total 30 bytes
Jan 30 02:57:21.103: AAA/AUTHEN/LOGIN (000000FF):
```

```
Pick method list 'FlexVPN-Authentication-List'
```

```
Jan 30 02:57:21.103: RADIUS/ENCODE(000000FF):Orig. component type = VPN IPSEC
Jan 30 02:57:21.103: RADIUS/ENCODE(000000FF): dropping service type, "radius-server attribute 6 on-for-
Jan 30 02:57:21.103: RADIUS(000000FF): Config NAS IP: 0.0.0.0
Jan 30 02:57:21.103: vrfid: [65535] ipv6 tableid : [0]
Jan 30 02:57:21.104: idb is NULL
Jan 30 02:57:21.104: RADIUS(000000FF): Config NAS IPv6: :::
Jan 30 02:57:21.104: RADIUS/ENCODE(000000FF): acct_session_id: 4245
Jan 30 02:57:21.104: RADIUS(000000FF): sending
Jan 30 02:57:21.104: RADIUS/ENCODE: Best Local IP-Address 192.168.30.100 for Radius-Server 192.168.30.1
Jan 30 02:57:21.104: RADIUS: Message Authenticator encoded
Jan 30 02:57:21.104: RADIUS(000000FF):
```

```
Send Access-Request to 192.168.30.110:1645 id 1645/87, len 332
```

```
RADIUS: authenticator 89 35 9C C5 06 FB 04 B7 - 4E A3 B2 5F 2B 15 4F 46
Jan 30 02:57:21.104: RADIUS: Service-Type [6] 6 Login [1]
Jan 30 02:57:21.104: RADIUS: Vendor, Cisco [26] 26
Jan 30 02:57:21.104: RADIUS: Cisco AVpair [1] 20 "service-type=Login"
Jan 30 02:57:21.104: RADIUS: Vendor, Cisco [26] 36
Jan 30 02:57:21.104: RADIUS: Cisco AVpair [1] 30
```

```
"isakmp-phase1-id=cisco.example"
```

```
Jan 30 02:57:21.104: RADIUS: Calling-Station-Id [31] 13 "192.168.50.130"
Jan 30 02:57:21.104: RADIUS: Vendor, Cisco [26] 64
Jan 30 02:57:21.104: RADIUS: Cisco AVpair [1] 58 "audit-session-id=L2L42F2F0116Z02L42F2F016FZH1194CAE2Z"
Jan 30 02:57:21.104: RADIUS: User-Name [1] 7
```

```
"user1"
```

```
Jan 30 02:57:21.104: RADIUS: Vendor, Cisco [26] 21
Jan 30 02:57:21.104: RADIUS: Cisco AVpair [1] 15 "coa-push=true"
Jan 30 02:57:21.104: RADIUS: EAP-Message [79] 24
RADIUS: 02 53 00 16 04 10 B0 BB 3E D5 B1 D6 01 FC 9A B7 4A DB AB F7 2F B6 [ S>J/]
Jan 30 02:57:21.104: RADIUS: Message-Authenticato[80] 18
RADIUS: 79 43 97 A7 26 17 3E 3B 54 B4 90 D4 76 0F E0 14 [ yC&>;Tv]
Jan 30 02:57:21.104: RADIUS: State [24] 91
RADIUS: 35 32 43 50 4D 53 65 73 73 69 6F 6E 49 44 3D 4C [52CPMSessionID=L]
RADIUS: 32 4C 34 32 46 32 46 30 31 31 36 5A 4F 32 4C 34 [2L42F2F0116Z02L4]
RADIUS: 32 46 32 46 30 31 36 46 5A 48 31 31 39 34 43 41 [2F2F016FZH1194CA]
RADIUS: 45 32 5A 4E 31 46 3B 33 31 53 65 73 73 69 6F 6E [E2ZN1F;31Session]
RADIUS: 49 44 3D 49 53 45 2D 44 49 41 4E 2F 34 39 33 30 [ID=ISE-SERVER/4930]
RADIUS: 38 30 30 31 38 2F 32 39 3B [ 80018/29;]
Jan 30 02:57:21.104: RADIUS: NAS-IP-Address [4] 6 192.168.30.100
Jan 30 02:57:21.105: RADIUS(000000FF): Sending a IPv4 Radius Packet
Jan 30 02:57:21.105: RADIUS(000000FF): Started 5 sec timeout
Jan 30 02:57:21.170: RADIUS:
```

```
Received from id 1645/87 192.168.30.110:1645, Access-Accept, len 233
```

```
RADIUS: authenticator 75 F6 05 85 1D A0 C3 EE - F8 81 F9 02 38 AC C1 B6
Jan 30 02:57:21.170: RADIUS: User-Name [1] 7
```

```
"user1"
```

```
Jan 30 02:57:21.170: RADIUS: Class [25] 68
RADIUS: 43 41 43 53 3A 4C 32 4C 34 32 46 32 46 30 31 31 [CACS:L2L42F2F011]
RADIUS: 36 5A 4F 32 4C 34 32 46 32 46 30 31 36 46 5A 48 [6Z02L42F2F016FZH]
RADIUS: 31 31 39 34 43 41 45 32 5A 4E 31 46 3A 49 53 45 [1194CAE2ZN1F:ISE]
```

```

RADIUS: 2D 44 49 41 4E 2F 34 39 33 30 38 30 30 31 38 2F [-DIAN/493080018/]
RADIUS: 32 39 [ 29]
Jan 30 02:57:21.170: RADIUS: EAP-Message [79] 6
RADIUS: 03 53 00 04 [ S]
Jan 30 02:57:21.170: RADIUS: Message-Authenticato[80] 18
RADIUS: 8A A9 CC 07 61 A2 6D BA E4 EB B5 B7 73 0E EC 28 [ ams()]
Jan 30 02:57:21.170: RADIUS: Vendor, Cisco [26] 37
Jan 30 02:57:21.170: RADIUS: Cisco AVpair [1] 31

"ipsec:dns-servers=10.0.50.101"

Jan 30 02:57:21.170: RADIUS: Vendor, Cisco [26] 47
Jan 30 02:57:21.170: RADIUS: Cisco AVpair [1] 41

"ipsec:route-set=prefix 192.168.100.0/24"

Jan 30 02:57:21.170: RADIUS: Vendor, Cisco [26] 30
Jan 30 02:57:21.170: RADIUS: Cisco AVpair [1] 24

"ipsec:addr-pool=group1"

Jan 30 02:57:21.171: RADIUS(000000FF): Received from id 1645/87
RADIUS/DECODE: EAP-Message fragments, 4, total 4 bytes
Jan 30 02:57:21.175: AAA/BIND(00000100): Bind i/f
Jan 30 02:57:21.175: AAA/AUTHOR (0x100):

Pick method list 'FlexVPN-Authorization-List'

Jan 30 02:57:21.176: %LINEPROTO-5-UPDOWN: Line protocol on Interface Virtual-Access1, changed state to up
Jan 30 02:57:21.192: %SYS-5-CONFIG_P: Configured programmatically by process Crypto INT from console as
Jan 30 02:57:21.376: %LINEPROTO-5-UPDOWN:

Line protocol on Interface Virtual-Access1, changed state to up

• 使用者2調試輸出：

<#root>

Jan 30 03:28:58.102: AAA/BIND(00000103): Bind i/f
Jan 30 03:28:58.102: AAA/AUTHEN/LOGIN (00000103):

Pick method list 'FlexVPN-Authentication-List'

Jan 30 03:28:58.103: RADIUS/ENCODE(00000103):Orig. component type = VPN IPSEC
Jan 30 03:28:58.103: RADIUS/ENCODE(00000103): dropping service type, "radius-server attribute 6 on-for-
Jan 30 03:28:58.103: RADIUS(00000103): Config NAS IP: 0.0.0.0
Jan 30 03:28:58.103: vrfid: [65535] ipv6 tableid : [0]
Jan 30 03:28:58.103: idb is NULL
Jan 30 03:28:58.103: RADIUS(00000103): Config NAS IPv6: :::
Jan 30 03:28:58.103: RADIUS/ENCODE(00000103): acct_session_id: 4249
Jan 30 03:28:58.103: RADIUS(00000103): sending
Jan 30 03:28:58.103: RADIUS/ENCODE: Best Local IP-Address 192.168.30.100 for Radius-Server 192.168.30.1
Jan 30 03:28:58.103: RADIUS: Message Authenticator encoded
Jan 30 03:28:58.103: RADIUS(00000103):

Send Access-Request to 192.168.30.110:1645 id 1645/88, len 229

```

```

RADIUS: authenticator 71 99 09 63 19 F7 D7 0B - 1D A9 4E 64 28 6F A5 64
Jan 30 03:28:58.103: RADIUS: Service-Type [6] 6 Login [1]
Jan 30 03:28:58.103: RADIUS: Vendor, Cisco [26] 26
Jan 30 03:28:58.103: RADIUS: Cisco AVpair [1] 20 "service-type=Login"
Jan 30 03:28:58.103: RADIUS: Vendor, Cisco [26] 36
Jan 30 03:28:58.104: RADIUS: Cisco AVpair [1] 30

"isakmp-phase1-id=cisco.example"

Jan 30 03:28:58.104: RADIUS: Calling-Station-Id [31] 13 "192.168.50.130"
Jan 30 03:28:58.104: RADIUS: Vendor, Cisco [26] 64
Jan 30 03:28:58.104: RADIUS: Cisco AVpair [1] 58 "audit-session-id=L2L42F2F0116Z02L42F2F016FZH1194E444Z"
Jan 30 03:28:58.104: RADIUS: User-Name [1] 7

"user2"

Jan 30 03:28:58.104: RADIUS: Vendor, Cisco [26] 21
Jan 30 03:28:58.104: RADIUS: Cisco AVpair [1] 15 "coa-push=true"
Jan 30 03:28:58.104: RADIUS: EAP-Message [79] 12
RADIUS: 02 3B 00 0A 01 75 73 65 72 32 [ ;user2]
Jan 30 03:28:58.104: RADIUS: Message-Authenticato[80] 18
RADIUS: 12 62 2F 51 12 FC F7 EC F0 87 E0 34 1E F1 AD E5 [ b/Q4]
Jan 30 03:28:58.104: RADIUS: NAS-IP-Address [4] 6 192.168.30.100
Jan 30 03:28:58.104: RADIUS(00000103): Sending a IPv4 Radius Packet
Jan 30 03:28:58.105: RADIUS(00000103): Started 5 sec timeout
Jan 30 03:28:58.109: RADIUS:

Received from id 1645/88 192.168.30.110:1645, Access-Challenge, len 137

RADIUS: authenticator 98 04 01 EA CD 9B 1E A9 - DC 6F 2F 17 1F 2A 5F 43
Jan 30 03:28:58.109: RADIUS: State [24] 91
RADIUS: 35 32 43 50 4D 53 65 73 73 69 6F 6E 49 44 3D 4C [52CPMSessionID=L]
RADIUS: 32 4C 34 32 46 32 46 30 31 31 36 5A 4F 32 4C 34 [2L42F2F0116Z02L4]
RADIUS: 32 46 32 46 30 31 36 46 5A 48 31 31 39 34 45 34 [2F2F016FZH1194E4]
RADIUS: 34 34 5A 4E 32 30 3B 33 31 53 65 73 73 69 6F 6E [44ZN20;31Session]
RADIUS: 49 44 3D 49 53 45 2D 44 49 41 4E 2F 34 39 33 30 [ID=ISE-SERVER/4930]
RADIUS: 38 30 30 31 38 2F 33 30 3B [ 80018/30;]
Jan 30 03:28:58.110: RADIUS: EAP-Message [79] 8
RADIUS: 01 35 00 06 0D 20 [ 5 ]
Jan 30 03:28:58.110: RADIUS: Message-Authenticato[80] 18
RADIUS: E3 A6 88 B1 B6 3D 93 1F 39 B3 AE 9E EA 1D BB 15 [ =9]
Jan 30 03:28:58.110: RADIUS(00000103): Received from id 1645/88
RADIUS/DECODE: EAP-Message fragments, 6, total 6 bytes
Jan 30 03:28:58.112: AAA/AUTHEN/LOGIN (00000103):

Pick method list 'FlexVPN-Authentication-List'

Jan 30 03:28:58.112: RADIUS/ENCODE(00000103):Orig. component type = VPN IPSEC
Jan 30 03:28:58.112: RADIUS/ENCODE(00000103): dropping service type, "radius-server attribute 6 on-for-"
Jan 30 03:28:58.112: RADIUS(00000103): Config NAS IP: 0.0.0.0
Jan 30 03:28:58.112: vrfid: [65535] ipv6 tableid : [0]
Jan 30 03:28:58.113: idb is NULL
Jan 30 03:28:58.113: RADIUS(00000103): Config NAS IPv6: :::
Jan 30 03:28:58.113: RADIUS/ENCODE(00000103): acct_session_id: 4249
Jan 30 03:28:58.113: RADIUS(00000103): sending
Jan 30 03:28:58.113: RADIUS/ENCODE: Best Local IP-Address 192.168.30.100 for Radius-Server 192.168.30.1
Jan 30 03:28:58.113: RADIUS: Message Authenticator encoded
Jan 30 03:28:58.113: RADIUS(00000103):

Send Access-Request to 192.168.30.110:1645 id 1645/89, len 316

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RADIUS: authenticator 56 BD F0 9A 4B 16 5C 6C - 4E 41 00 56 8D C0 3A 8C
Jan 30 03:28:58.113: RADIUS: Service-Type [6] 6 Login [1]
Jan 30 03:28:58.113: RADIUS: Vendor, Cisco [26] 26
Jan 30 03:28:58.113: RADIUS: Cisco AVpair [1] 20 "service-type=Login"
Jan 30 03:28:58.113: RADIUS: Vendor, Cisco [26] 36
Jan 30 03:28:58.113: RADIUS: Cisco AVpair [1] 30

"isakmp-phase1-id=cisco.example"

Jan 30 03:28:58.113: RADIUS: Calling-Station-Id [31] 13 "192.168.50.130"
Jan 30 03:28:58.113: RADIUS: Vendor, Cisco [26] 64
Jan 30 03:28:58.113: RADIUS: Cisco AVpair [1] 58 "audit-session-id=L2L42F2F0116Z02L42F2F016FZH1194E444Z"
Jan 30 03:28:58.113: RADIUS: User-Name [1] 7

"user2"

Jan 30 03:28:58.113: RADIUS: Vendor, Cisco [26] 21
Jan 30 03:28:58.113: RADIUS: Cisco AVpair [1] 15 "coa-push=true"
Jan 30 03:28:58.113: RADIUS: EAP-Message [79] 8
RADIUS: 02 35 00 06 03 04 [ 5]
Jan 30 03:28:58.113: RADIUS: Message-Authenticato[80] 18
RADIUS: 47 1F 36 A7 C3 9B 90 6E 03 2C B8 D7 FE A7 13 44 [ G6n,D]
Jan 30 03:28:58.113: RADIUS: State [24] 91
RADIUS: 35 32 43 50 4D 53 65 73 73 69 6F 6E 49 44 3D 4C [52CPMSessionID=L]
RADIUS: 32 4C 34 32 46 32 46 30 31 31 36 5A 4F 32 4C 34 [2L42F2F0116Z02L4]
RADIUS: 32 46 32 46 30 31 36 46 5A 48 31 31 39 34 45 34 [2F2F016FZH1194E4]
RADIUS: 34 34 5A 4E 32 30 3B 33 31 53 65 73 73 69 6F 6E [44ZN20;31Session]
RADIUS: 49 44 3D 49 53 45 2D 44 49 41 4E 2F 34 39 33 30 [ID=ISE-SERVER/4930]
RADIUS: 38 30 30 31 38 2F 33 30 3B [ 80018/30;]
Jan 30 03:28:58.114: RADIUS: NAS-IP-Address [4] 6 192.168.30.100
Jan 30 03:28:58.114: RADIUS(00000103): Sending a IPv4 Radius Packet
Jan 30 03:28:58.114: RADIUS(00000103): Started 5 sec timeout
Jan 30 03:28:58.116: RADIUS:

Received from id 1645/89 192.168.30.110:1645, Access-Challenge, len 161

RADIUS: authenticator 84 A3 30 3D 80 BC 71 42 - 1B 9B 49 EF 0B 1B 02 02
Jan 30 03:28:58.116: RADIUS: State [24] 91
RADIUS: 35 32 43 50 4D 53 65 73 73 69 6F 6E 49 44 3D 4C [52CPMSessionID=L]
RADIUS: 32 4C 34 32 46 32 46 30 31 31 36 5A 4F 32 4C 34 [2L42F2F0116Z02L4]
RADIUS: 32 46 32 46 30 31 36 46 5A 48 31 31 39 34 45 34 [2F2F016FZH1194E4]
RADIUS: 34 34 5A 4E 32 30 3B 33 31 53 65 73 73 69 6F 6E [44ZN20;31Session]
RADIUS: 49 44 3D 49 53 45 2D 44 49 41 4E 2F 34 39 33 30 [ID=ISE-SERVER/4930]
RADIUS: 38 30 30 31 38 2F 33 30 3B [ 80018/30;]
Jan 30 03:28:58.116: RADIUS: EAP-Message [79] 32
RADIUS: 01 36 00 1E 04 10 EB 9F A5 AC 70 1F 4D D6 48 05 9D EC 1F 29 67 AE 49 53 45 2D 44 49 41 4E [ 6pM]
Jan 30 03:28:58.116: RADIUS: Message-Authenticato[80] 18
RADIUS: 08 5E BC EF E5 38 50 CD FB 3C B3 E9 99 0A 51 B3 [ ^8P<Q]
Jan 30 03:28:58.116: RADIUS(00000103): Received from id 1645/89
RADIUS/DECODE: EAP-Message fragments, 30, total 30 bytes
Jan 30 03:28:58.118: AAA/AUTHEN/LOGIN (00000103):

Pick method list 'FlexVPN-Authentication-List'

Jan 30 03:28:58.118: RADIUS/ENCODE(00000103):Orig. component type = VPN IPSEC
Jan 30 03:28:58.118: RADIUS/ENCODE(00000103): dropping service type, "radius-server attribute 6 on-for-
Jan 30 03:28:58.118: RADIUS(00000103): Config NAS IP: 0.0.0.0
Jan 30 03:28:58.118: vrfid: [65535] ipv6 tableid : [0]
Jan 30 03:28:58.118: idb is NULL

```

```
Jan 30 03:28:58.118: RADIUS(00000103): Config NAS IPv6: ::  
Jan 30 03:28:58.118: RADIUS/ENCODE(00000103): acct_session_id: 4249  
Jan 30 03:28:58.118: RADIUS(00000103): sending  
Jan 30 03:28:58.118: RADIUS/ENCODE: Best Local IP-Address 192.168.30.100 for Radius-Server 192.168.30.110  
Jan 30 03:28:58.119: RADIUS: Message Authenticator encoded  
Jan 30 03:28:58.119: RADIUS(00000103):
```

```
Send Access-Request to 192.168.30.110:1645 id 1645/90, len 332
```

```
RADIUS: authenticator A1 62 1A FB 18 58 7B 47 - 5C 8A 64 FA B7 23 9B BE  
Jan 30 03:28:58.119: RADIUS: Service-Type [6] 6 Login [1]  
Jan 30 03:28:58.119: RADIUS: Vendor, Cisco [26] 26  
Jan 30 03:28:58.119: RADIUS: Cisco AVpair [1] 20 "service-type=Login"  
Jan 30 03:28:58.119: RADIUS: Vendor, Cisco [26] 36  
Jan 30 03:28:58.119: RADIUS: Cisco AVpair [1] 30
```

```
"isakmp-phase1-id=cisco.example"
```

```
Jan 30 03:28:58.119: RADIUS: Calling-Station-Id [31] 13 "192.168.50.130"  
Jan 30 03:28:58.119: RADIUS: Vendor, Cisco [26] 64  
Jan 30 03:28:58.119: RADIUS: Cisco AVpair [1] 58 "audit-session-id=L2L42F2F0116Z02L42F2F016FZH1194E444Z"  
Jan 30 03:28:58.119: RADIUS: User-Name [1] 7
```

```
"user2"
```

```
Jan 30 03:28:58.119: RADIUS: Vendor, Cisco [26] 21  
Jan 30 03:28:58.119: RADIUS: Cisco AVpair [1] 15 "coa-push=true"  
Jan 30 03:28:58.119: RADIUS: EAP-Message [79] 24  
RADIUS: 02 36 00 16 04 10 73 B7 F2 42 09 5B AB 21 D8 77 96 A2 F7 C7 83 AD [ 6sB[!w]  
Jan 30 03:28:58.119: RADIUS: Message-Authenticato[80] 18  
RADIUS: B1 68 3C 25 9E FE 52 13 10 69 E6 BB 17 67 6F 18 [ h<?Rigo]  
Jan 30 03:28:58.119: RADIUS: State [24] 91  
RADIUS: 35 32 43 50 4D 53 65 73 73 69 6F 6E 49 44 3D 4C [52CPMSessionID=L]  
RADIUS: 32 4C 34 32 46 32 46 30 31 31 36 5A 4F 32 4C 34 [2L42F2F0116Z02L4]  
RADIUS: 32 46 32 46 30 31 36 46 5A 48 31 31 39 34 45 34 [2F2F016FZH1194E4]  
RADIUS: 34 34 5A 4E 32 30 3B 33 31 53 65 73 73 69 6F 6E [44ZN20;31Session]  
RADIUS: 49 44 3D 49 53 45 2D 44 49 41 4E 2F 34 39 33 30 [ID=ISE-SERVER/4930]  
RADIUS: 38 30 30 31 38 2F 33 30 3B [ 80018/30;]  
Jan 30 03:28:58.119: RADIUS: NAS-IP-Address [4] 6 192.168.30.100  
Jan 30 03:28:58.119: RADIUS(00000103): Sending a IPv4 Radius Packet  
Jan 30 03:28:58.119: RADIUS(00000103): Started 5 sec timeout  
Jan 30 03:28:58.186: RADIUS: Received from id 1645/90 192.168.30.110:1645, Access-Accept, len 233  
RADIUS: authenticator 48 A5 A0 11 ED B8 C2 87 - 35 30 17 D5 6D D7 B4 FD  
Jan 30 03:28:58.186: RADIUS: User-Name [1] 7
```

```
"user2"
```

```
Jan 30 03:28:58.186: RADIUS: Class [25] 68  
RADIUS: 43 41 43 53 3A 4C 32 4C 34 32 46 32 46 30 31 31 [CACS:L2L42F2F011]  
RADIUS: 36 5A 4F 32 4C 34 32 46 32 46 30 31 36 46 5A 48 [6Z02L42F2F016FZH]  
RADIUS: 31 31 39 34 45 34 34 34 5A 4E 32 30 3A 49 53 45 [1194E444ZN20:ISE]  
RADIUS: 2D 44 49 41 4E 2F 34 39 33 30 38 30 30 31 38 2F [-DIAN/493080018/]  
RADIUS: 33 30 [ 30]  
Jan 30 03:28:58.186: RADIUS: EAP-Message [79] 6  
RADIUS: 03 36 00 04 [ 6]  
Jan 30 03:28:58.186: RADIUS: Message-Authenticato[80] 18  
RADIUS: 9E A6 D9 56 40 C8 EB 08 69 8C E1 35 35 53 18 83 [ V@i55S]  
Jan 30 03:28:58.187: RADIUS: Vendor, Cisco [26] 37  
Jan 30 03:28:58.187: RADIUS: Cisco AVpair [1] 31
```

```
"ipsec dns-servers=10.0.50.202"
```

```
Jan 30 03:28:58.187: RADIUS: Vendor, Cisco [26] 47
Jan 30 03:28:58.187: RADIUS: Cisco AVpair [1] 41
"ipsec:route-set=prefix 192.168.200.0/24"

Jan 30 03:28:58.187: RADIUS: Vendor, Cisco [26] 30
Jan 30 03:28:58.187: RADIUS: Cisco AVpair [1] 24
"ipsec:addr-pool=group2"

Jan 30 03:28:58.187: RADIUS(00000103): Received from id 1645/90
RADIUS/DECODE: EAP-Message fragments, 4, total 4 bytes
Jan 30 03:28:58.190: AAA/BIND(00000104): Bind i/f
Jan 30 03:28:58.190: AAA/AUTHOR (0x104):
Pick method list 'FlexVPN-Authorization-List'

Jan 30 03:28:58.192: %LINEPROTO-5-UPDOWN: Line protocol on Interface Virtual-Access2, changed state to up
Jan 30 03:28:58.209: %SYS-5-CONFIG_P: Configured programmatically by process Crypto INT from console as
Jan 30 03:28:58.398: %LINEPROTO-5-UPDOWN:
Line protocol on Interface Virtual-Access2, changed state to up
```

相關資訊

- [思科技術支援與下載](#)

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）。