使用PEAP、ISE 2.1和WLC 8.3配置802.1X身份驗證

目錄

簡介

本檔案介紹如何設定具有802.1x安全性和虛擬區域網路(VLAN)覆寫的無線區域網路(WLAN)。

必要條件

需求

思科建議您瞭解以下主題：

- 802.1x
- 受保護的可擴充驗證通訊協定(PEAP)
- 證書頒發機構(CA)
- 憑證

採用元件

本文中的資訊係根據以下軟體和硬體版本：

- WLC v8.3.102.0
- 身分識別服務引擎(ISE)v2.1
- Windows 10筆記型電腦

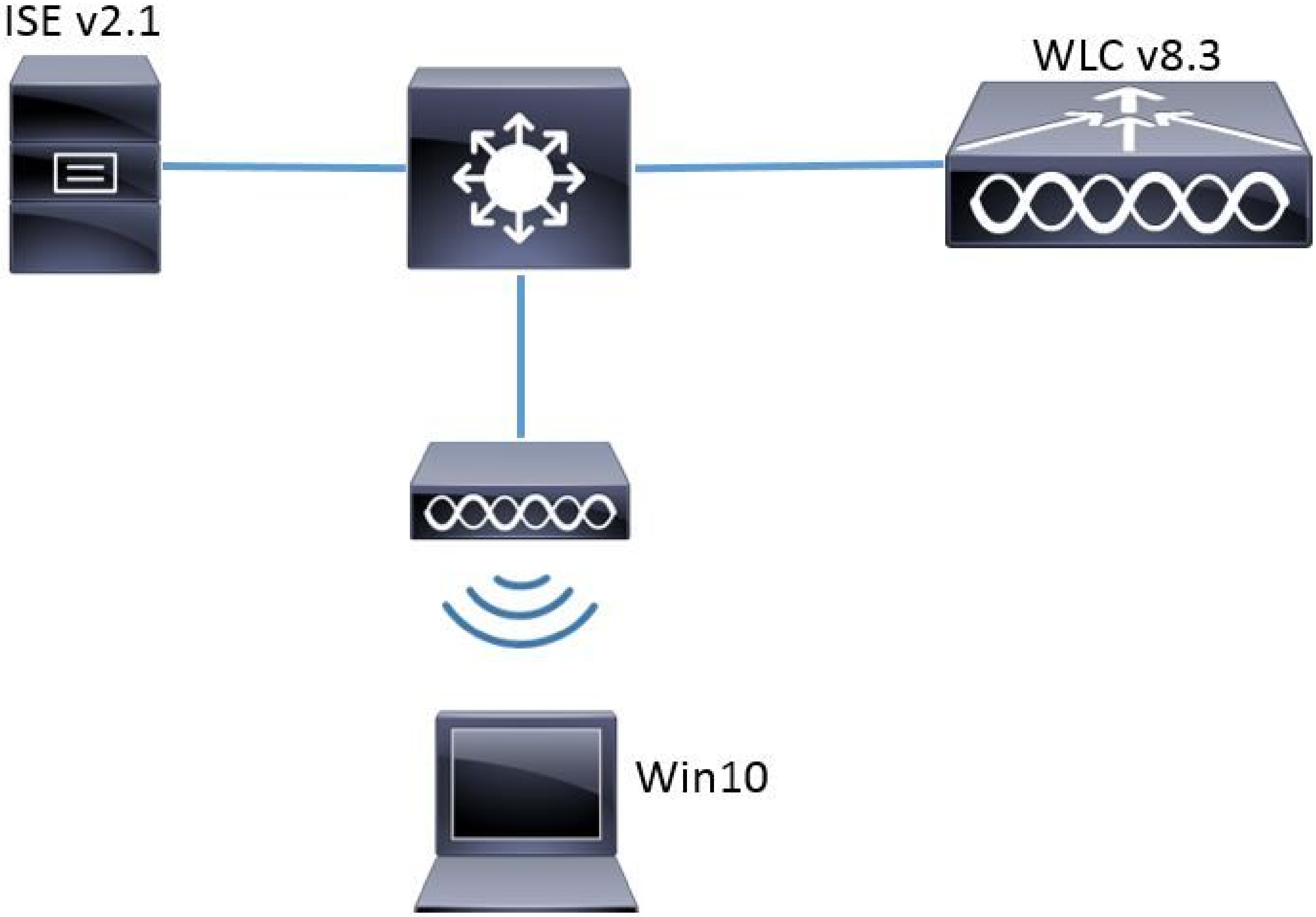
本文中的資訊是根據特定實驗室環境內的裝置所建立。文中使用到的所有裝置皆從已清除（預設）的組態來啟動。如果您的網路運作中，請確保您瞭解任何指令可能造成的影響。

背景資訊

當您設定具有802.1x安全性和VLAN的WLAN時，可以將受保護的可擴展身份驗證協定作為可擴展身份驗證協定(EAP)進行覆蓋。

設定

網路圖表



組態

一般步驟如下：

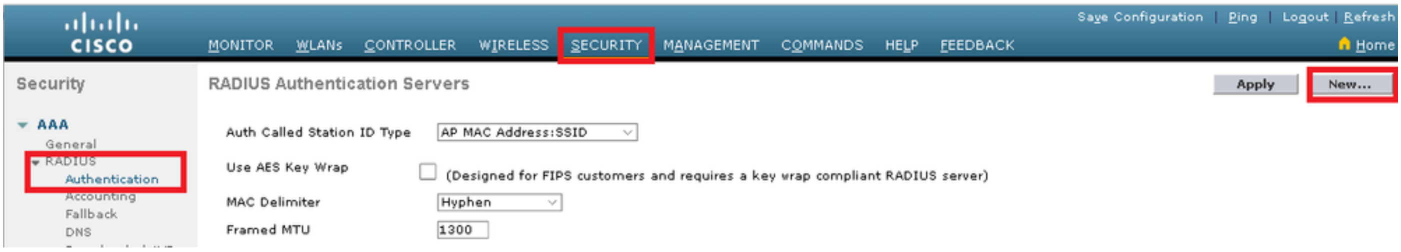
1. 宣告WLC上的RADIUS伺服器，反之亦然，允許彼此通訊。
2. 在WLC中建立服務組識別碼(SSID)。
3. 在ISE上建立身份驗證規則。
4. 在ISE上建立授權配置檔案。
5. 在ISE上建立授權規則。
6. 配置終結點。

宣告WLC上的RADIUS伺服器

若要允許RADIUS伺服器和WLC之間的通訊，您需要在WLC上註冊RADIUS伺服器，反之亦然。

GUI:

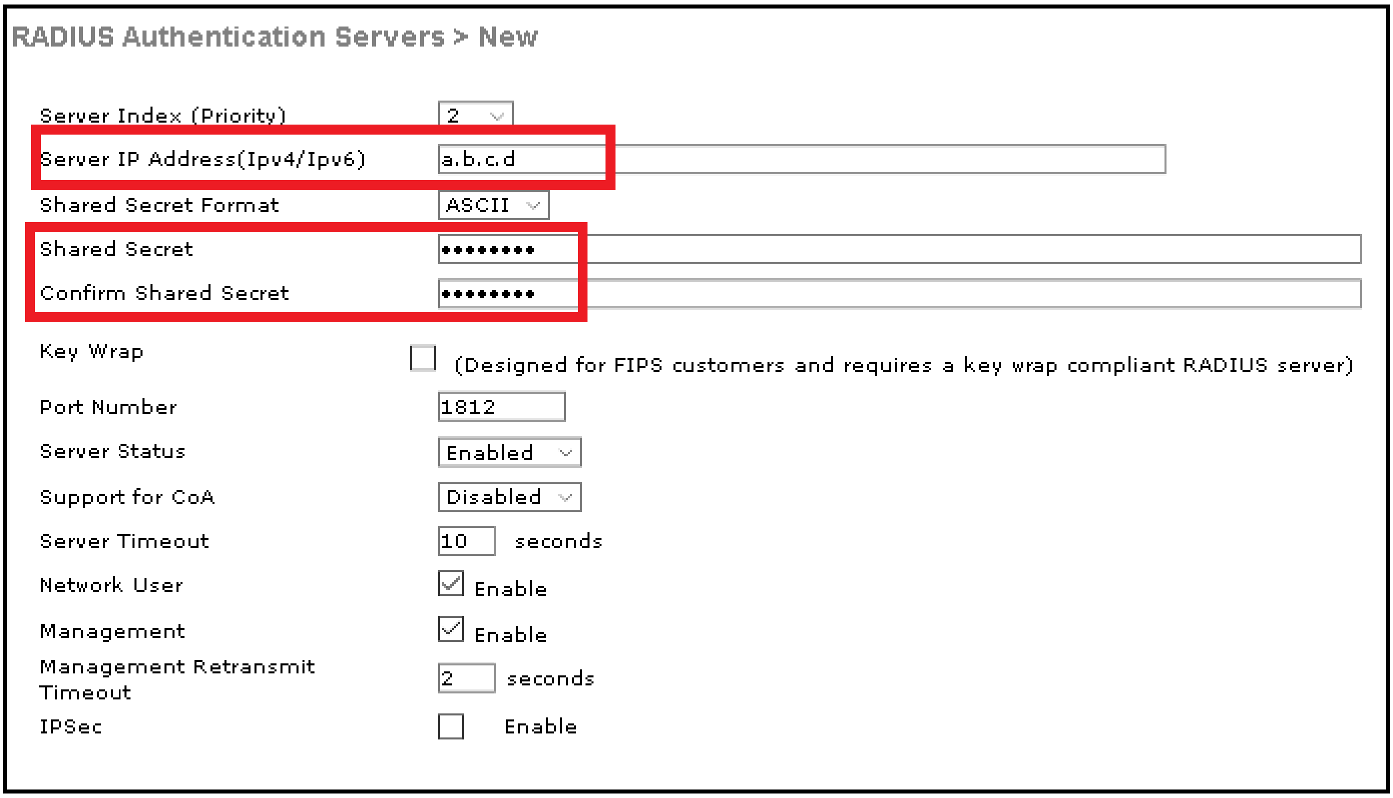
步驟 1.開啟WLC的GUI，然後導覽至SECURITY > RADIUS > Authentication > New，如下圖所示。


cisco
Save Configuration | Ping | Logout | Refresh
MONITOR WLANs CONTROLLER WIRELESS SECURITY MANAGEMENT COMMANDS HELP FEEDBACK
Home
Security
AAA
General
RADIUS
Authentication
Accounting
Fallback
DNS
Apply
New...

RADIUS Authentication Servers

Auth Called Station ID Type	AP MAC Address:SSID
Use AES Key Wrap	□ (Designed for FIPS customers and requires a key wrap compliant RADIUS server)
MAC Delimiter	Hyphen
Framed MTU	1300

步驟 2.輸入RADIUS伺服器資訊，如圖所示。



RADIUS Authentication Servers > New

Server Index (Priority)	2
Server IP Address(Ipv4/Ipv6)	a.b.c.d
Shared Secret Format	ASCII
Shared Secret	••••••••
Confirm Shared Secret	••••••••
Key Wrap	□ (Designed for FIPS customers and requires a key wrap compliant RADIUS server)
Port Number	1812
Server Status	Enabled
Support for CoA	Disabled
Server Timeout	10 seconds
Network User	☑ Enable
Management	☑ Enable
Management Retransmit Timeout	2 seconds
IPSec	□ Enable

CLI:

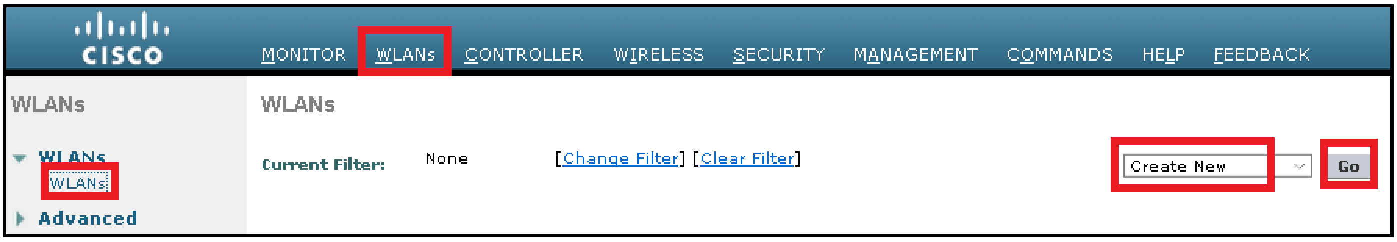
```
> config radius auth add <index> <a.b.c.d> 1812 ascii <shared-key>
> config radius auth disable <index>
> config radius auth retransmit-timeout <index> <timeout-seconds>
> config radius auth enable <index>
```

<a.b.c.d>對應於RADIUS伺服器。

建立SSID

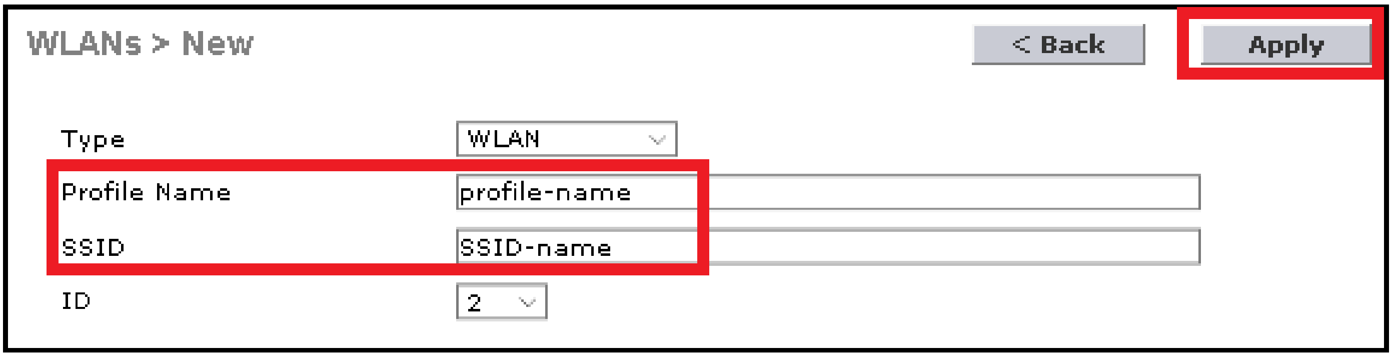
GUI:

步驟 1.開啟WLC的GUI，然後導覽至WLANs > Create New > Go，如下圖所示。



Current Filter: None

步驟 2.選擇SSID和配置檔案的名稱，然後按一下Apply，如下圖所示。



Type: WLAN

Profile Name: profile-name

SSID: SSID-name

ID: 2

CLI:

```
> config wlan create <id> <profile-name> <ssid-name>
```

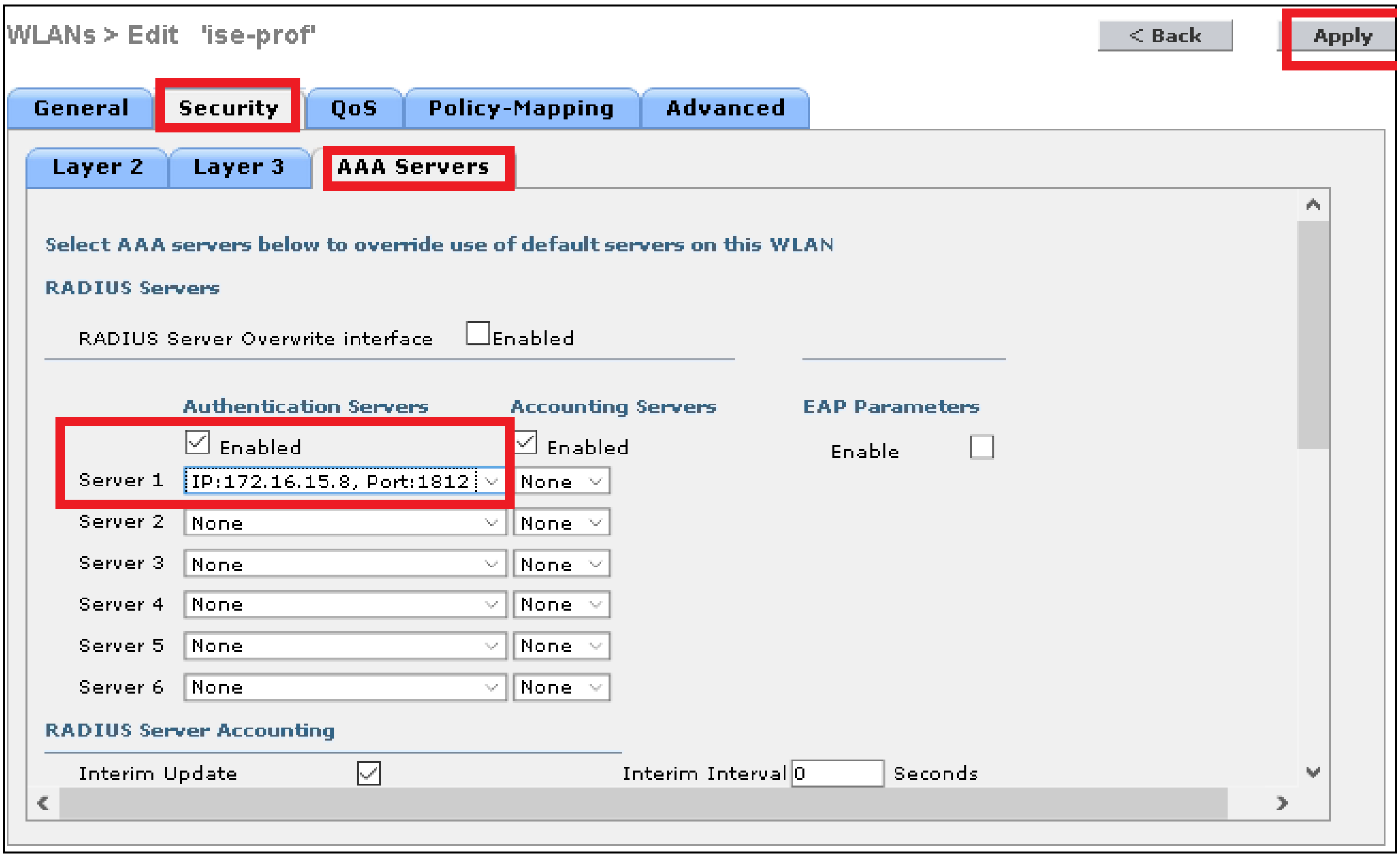
步驟 3.將RADIUS伺服器指定給WLAN。

CLI:

```
> config wlan radius_server auth add <wlan-id> <radius-index>
```

GUI:

導覽至Security > AAA Servers，然後選擇所需的RADIUS伺服器，然後按圖中所示的Apply。



Select AAA servers below to override use of default servers on this WLAN

RADIUS Servers

RADIUS Server Overwrite interface □Enabled

	Authentication Servers	Accounting Servers	EAP Parameters	
	☑ Enabled	☑ Enabled	Enable	□
Server 1	IP:172.16.15.8, Port:1812	None		
Server 2	None	None		
Server 3	None	None		
Server 4	None	None		
Server 5	None	None		
Server 6	None	None		

RADIUS Server Accounting

Interim Update ☑ Interim Interval 0 Seconds

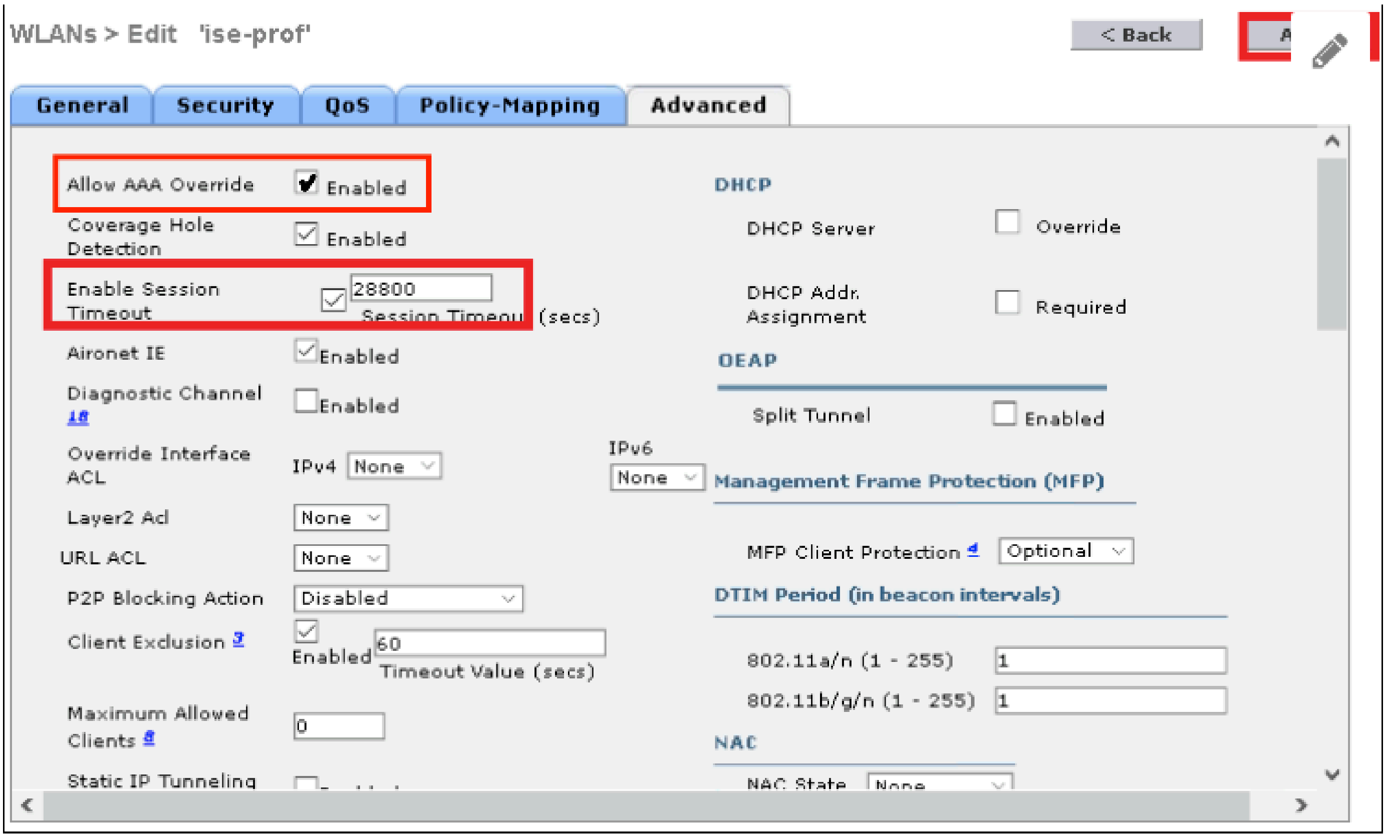
步驟 4.啟用Allow AAA Override，並選擇性地增加會話超時

CLI:

```
> config wlan aaa-override enable <wlan-id>
> config wlan session-timeout <wlan-id> <session-timeout-seconds>
```

GUI:

導覽至WLANs > WLAN ID > Advanced，然後啟用Allow AAA Override。 或者指定會話超時，如下圖所示。


WLANs > Edit 'ise-prof'

Allow AAA Override ☑ Enabled

Coverage Hole Detection ☑ Enabled

Enable Session Timeout ☑ 28800 Session Timeout (secs)

Aironet IE ☑ Enabled

Diagnostic Channel 18 □ Enabled

Override Interface ACL IPv4 None IPv6 None

Layer2 Acl None

URL ACL None

P2P Blocking Action Disabled

Client Exclusion 2 ☑ Enabled 60 Timeout Value (secs)

Maximum Allowed Clients 8 0

Static IP Tunneling □ Enabled

DHCP

DHCP Server □ Override

DHCP Addr. Assignment □ Required

OEAP

Split Tunnel □ Enabled

Management Frame Protection (MFP)

MFP Client Protection 4 Optional

DTIM Period (in beacon intervals)

802.11a/n (1 - 255) 1

802.11b/g/n (1 - 255) 1

NAC

NAC State None

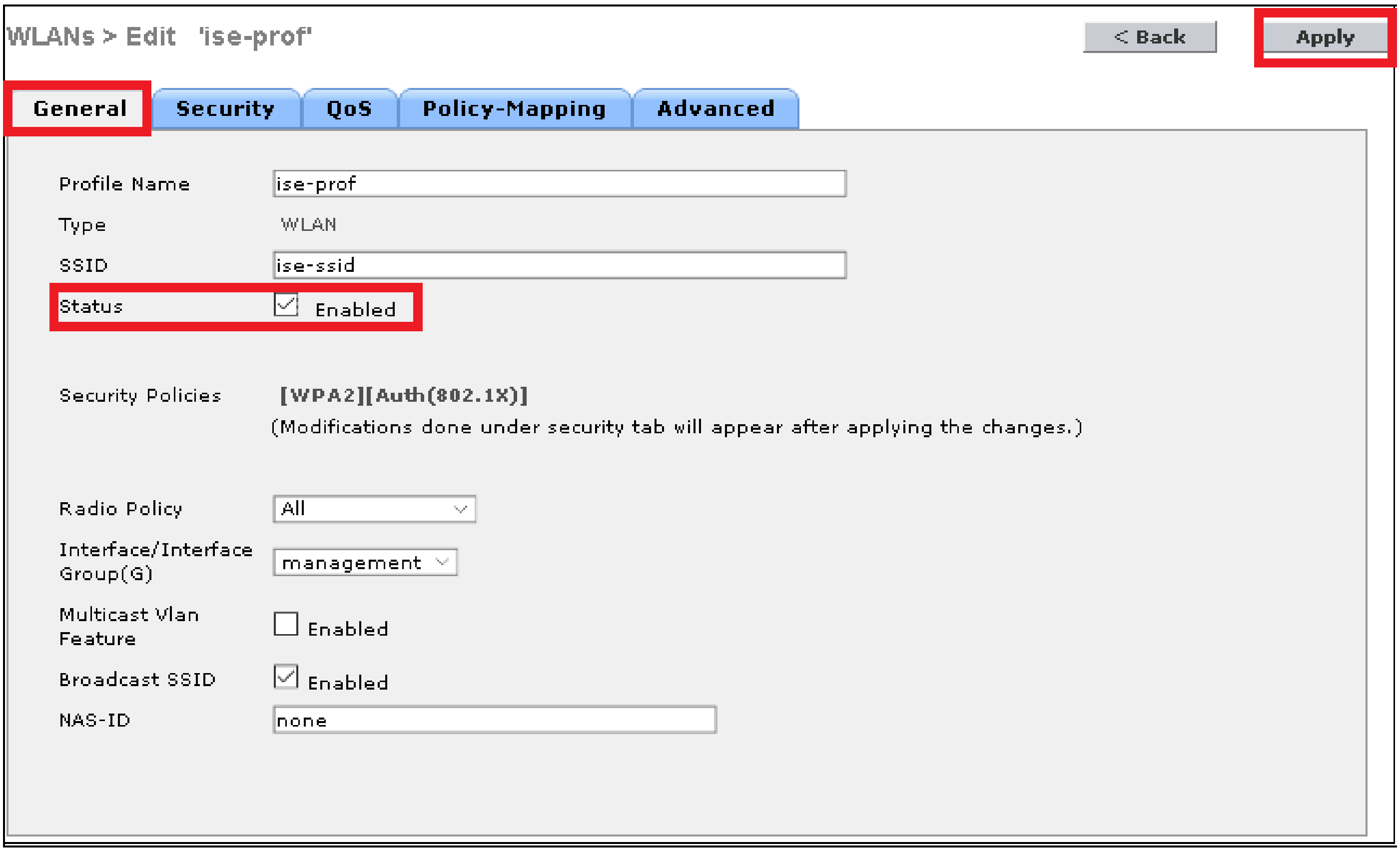
步驟 5.啟用WLAN。

CLI:

```
> config wlan enable <wlan-id>
```

GUI:

導覽至WLANs > WLAN ID > General，然後啟用SSID，如下圖所示。



Profile Name: ise-prof

Type: WLAN

SSID: ise-ssid

Status: ☑ Enabled

Security Policies: [WPA2][Auth(802.1X)]
(Modifications done under security tab will appear after applying the changes.)

Radio Policy: All

Interface/Interface Group(G): management

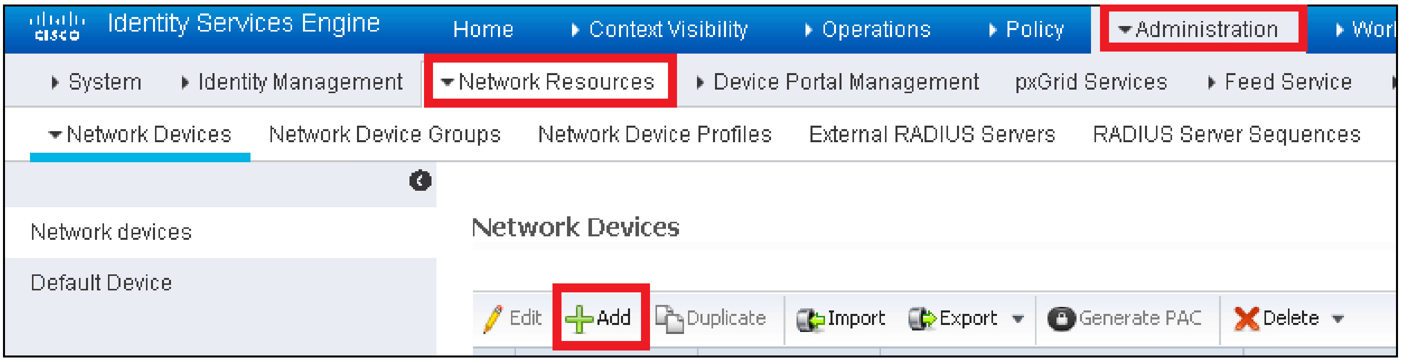
Multicast Vlan Feature: □ Enabled

Broadcast SSID: ☑ Enabled

NAS-ID: none

在ISE上宣告WLC

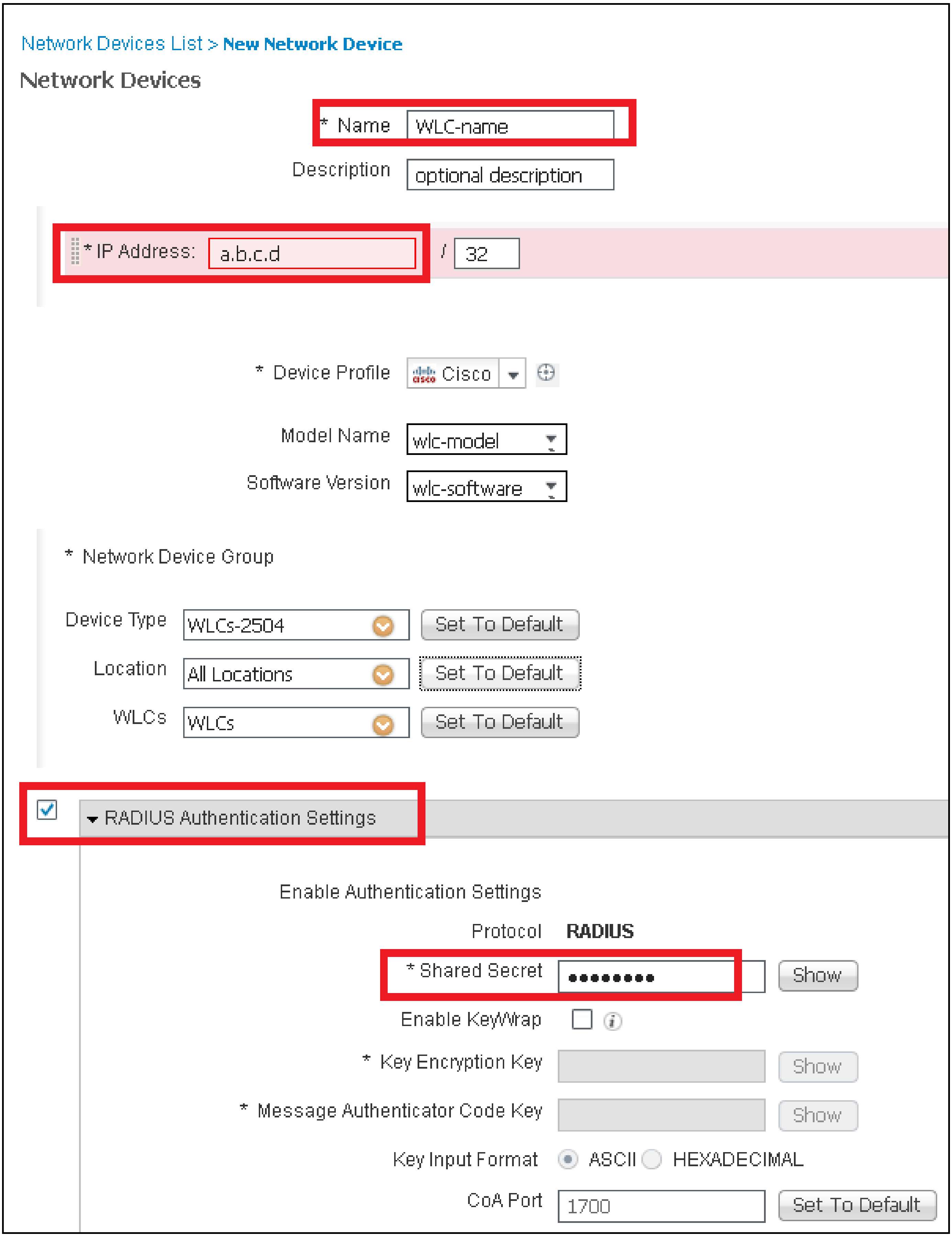
步驟 1.開啟ISE控制檯並導航到管理>網路資源>網路裝置>新增，如下圖所示。



步驟 2.輸入值。

或者，它可以是指定的型號名稱、軟體版本、說明，並根據裝置型別、位置或WLC分配網路裝置組。

a.b.c.d對應傳送所要求驗證的WLC介面。預設情況下，它是管理介面，如下圖所示。



Network Devices List > **New Network Device**

Network Devices

* Name: WLC-name

Description: optional description

* IP Address: a.b.c.d / 32

* Device Profile: Cisco

Model Name: wlc-model

Software Version: wlc-software

* Network Device Group

Device Type: WLCs-2504

Location: All Locations

WLCs: WLCs

☑ RADIUS Authentication Settings

Enable Authentication Settings

Protocol: **RADIUS**

* Shared Secret: ●●●●●●●●●

Enable KeyWrap: □

* Key Encryption Key:

* Message Authenticator Code Key:

Key Input Format: ● ASCII ○ HEXADECIMAL

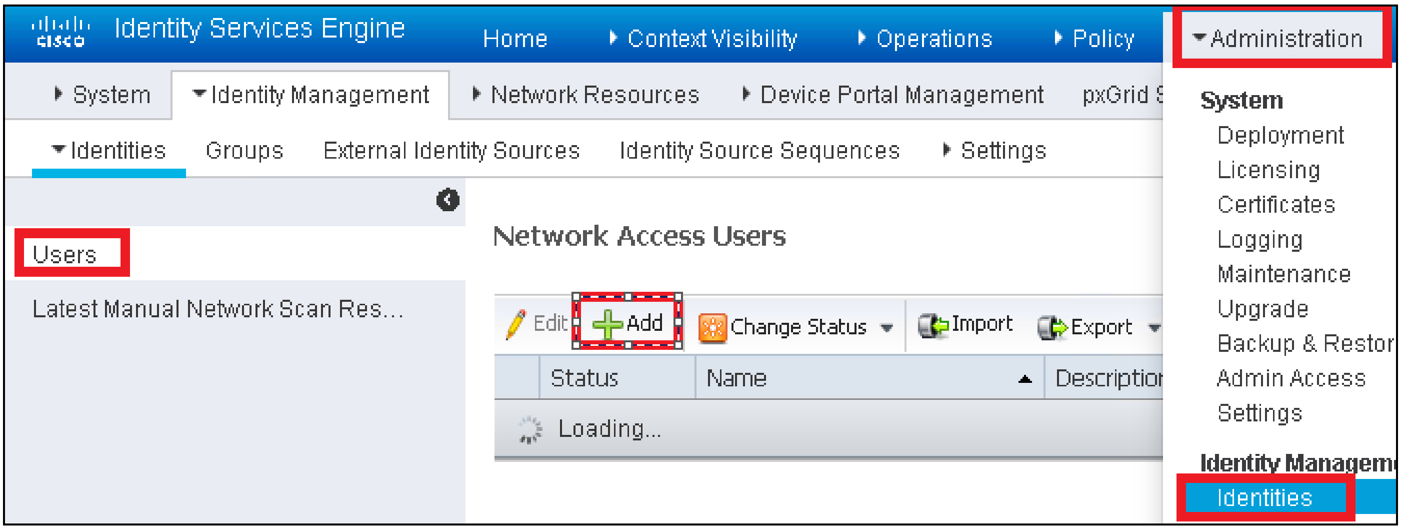
CoA Port: 1700

有關網路裝置組的詳細資訊：

ISE – 網路裝置群組

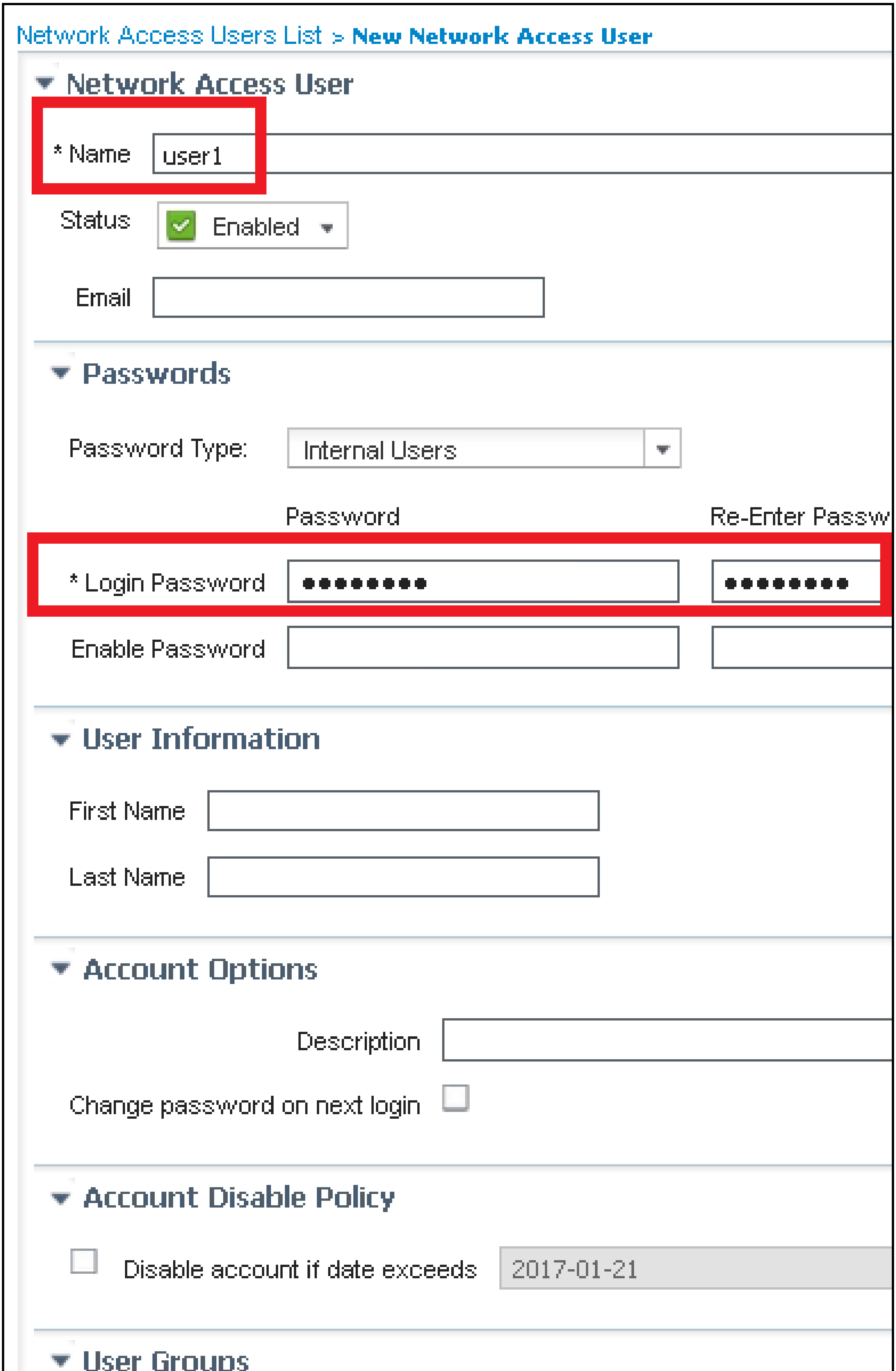
在 ISE 上建立新使用者

步驟 1.導覽至Administration > Identity Management > Identities > Users > Add，如下圖所示。



步驟 2.輸入資訊。

在此示例中，此使用者屬於名為ALL_ACCOUNTS的組，但可以根據需要對其進行調整，如圖所示
。



Network Access Users List > **New Network Access User**

Network Access User

* Name user1

Status ☑ Enabled

Email

Passwords

Password Type: Internal Users

	Password	Re-Enter Passw
* Login Password	●●●●●●●●●	●●●●●●●●●
Enable Password		

User Information

First Name

Last Name

Account Options

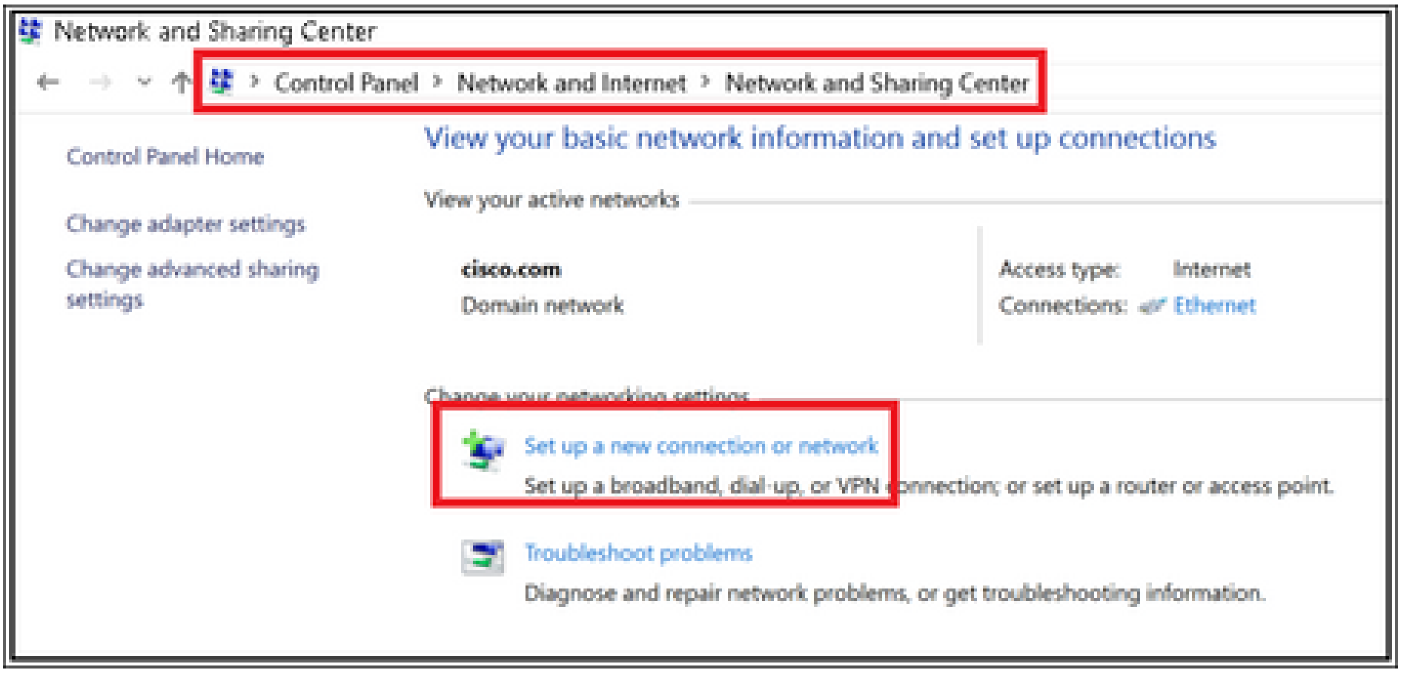
Description

Change password on next login □

Account Disable Policy

□ Disable account if date exceeds 2017-01-21

User Groups



Network and Sharing Center
Control Panel > Network and Internet > Network and Sharing Center
Control Panel Home
Change adapter settings
Change advanced sharing settings

View your basic network information and set up connections

View your active networks

cisco.com
Domain network

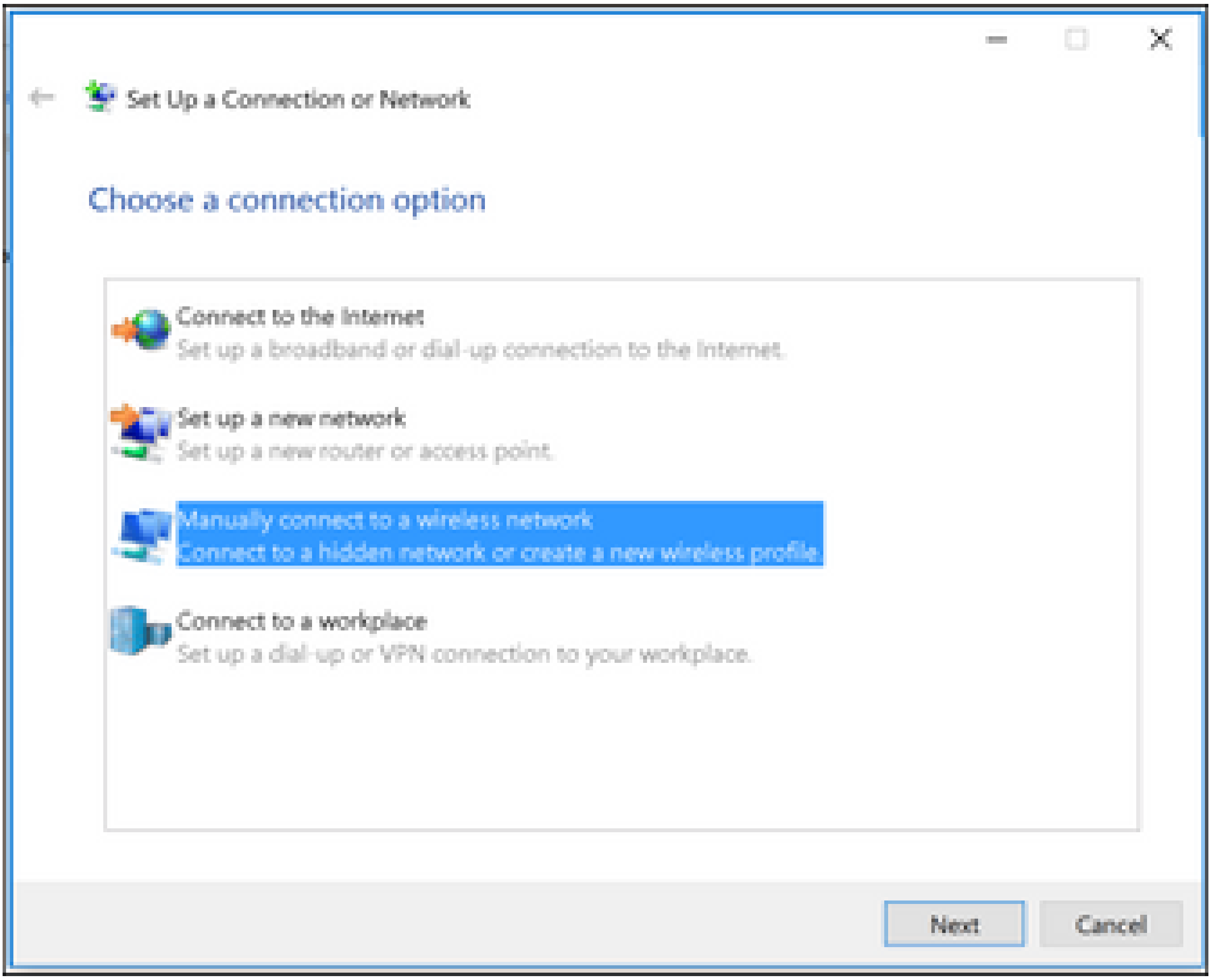
Access type: Internet
Connections: Ethernet

Change your networking settings

Set up a new connection or network
Set up a broadband, dial-up, or VPN connection; or set up a router or access point.

Troubleshoot problems
Diagnose and repair network problems, or get troubleshooting information.

步驟 3.選擇Manually connect to a wireless network，然後按一下Next，如下圖所示。



Choose a connection option

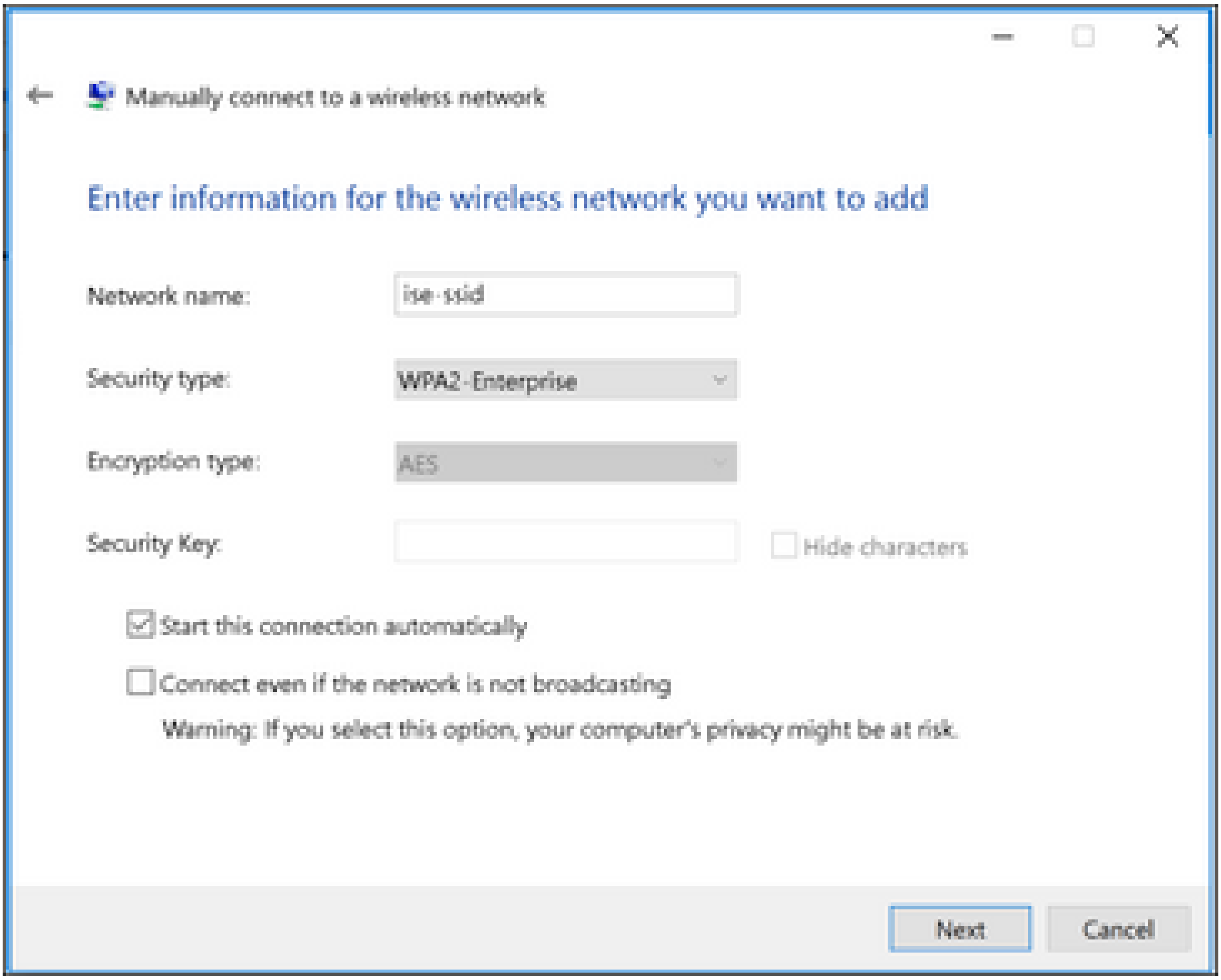
Connect to the Internet
Set up a broadband or dial-up connection to the Internet.

Set up a new network
Set up a new router or access point.

Manually connect to a wireless network
Connect to a hidden network or create a new wireless profile.

Connect to a workplace
Set up a dial-up or VPN connection to your workplace.

步驟 4.輸入SSID名稱和安全型別WPA2-Enterprise的資訊，然後按一下Next（如圖所示）。



Manually connect to a wireless network

Enter information for the wireless network you want to add

Network name: ise-ssid

Security type: WPA2-Enterprise

Encryption type: AES

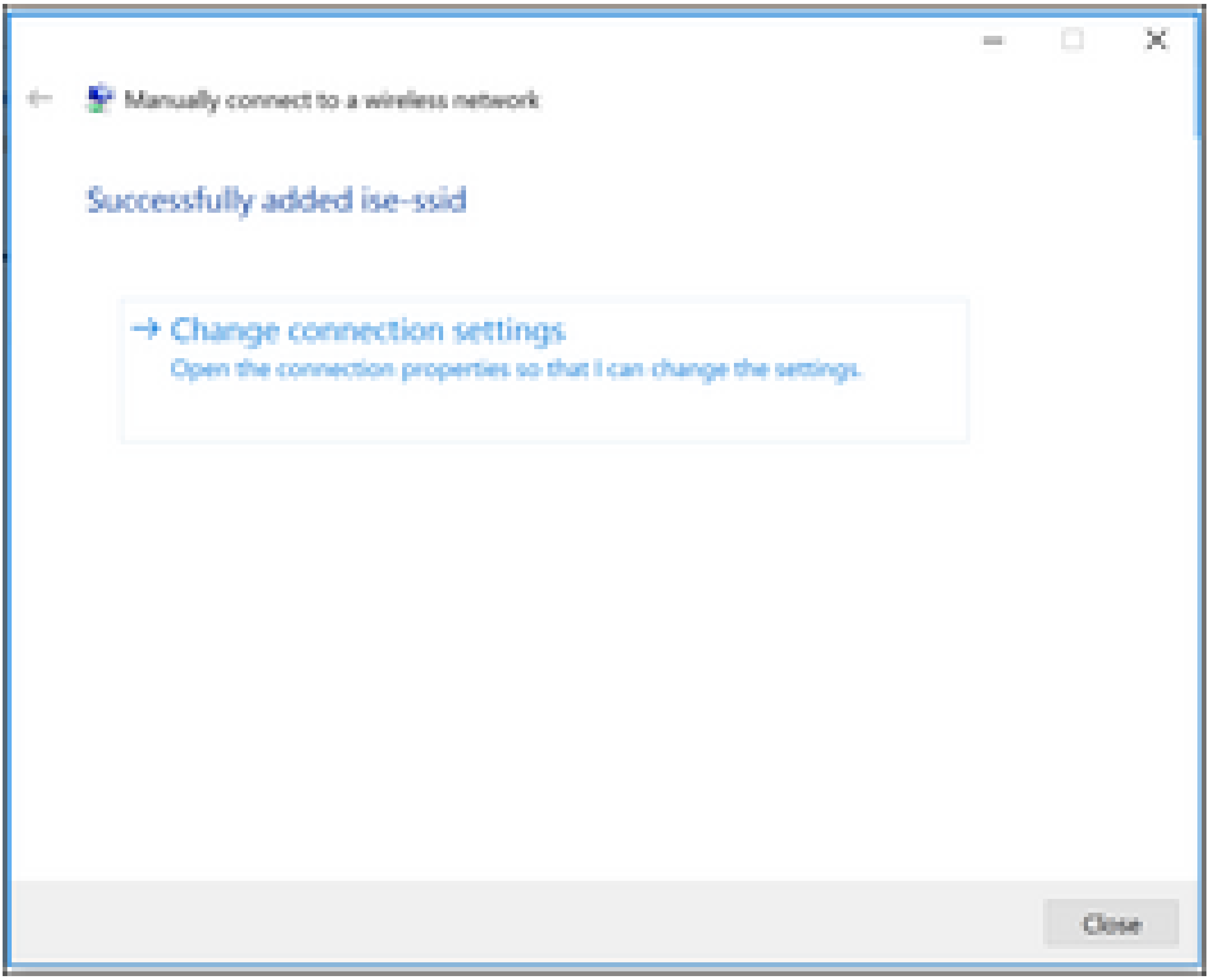
Security Key:

☑ Start this connection automatically

□ Connect even if the network is not broadcasting

Warning: If you select this option, your computer's privacy might be at risk.

步驟 5.選擇Change connection settings以自訂WLAN設定檔的組態，如下圖所示。

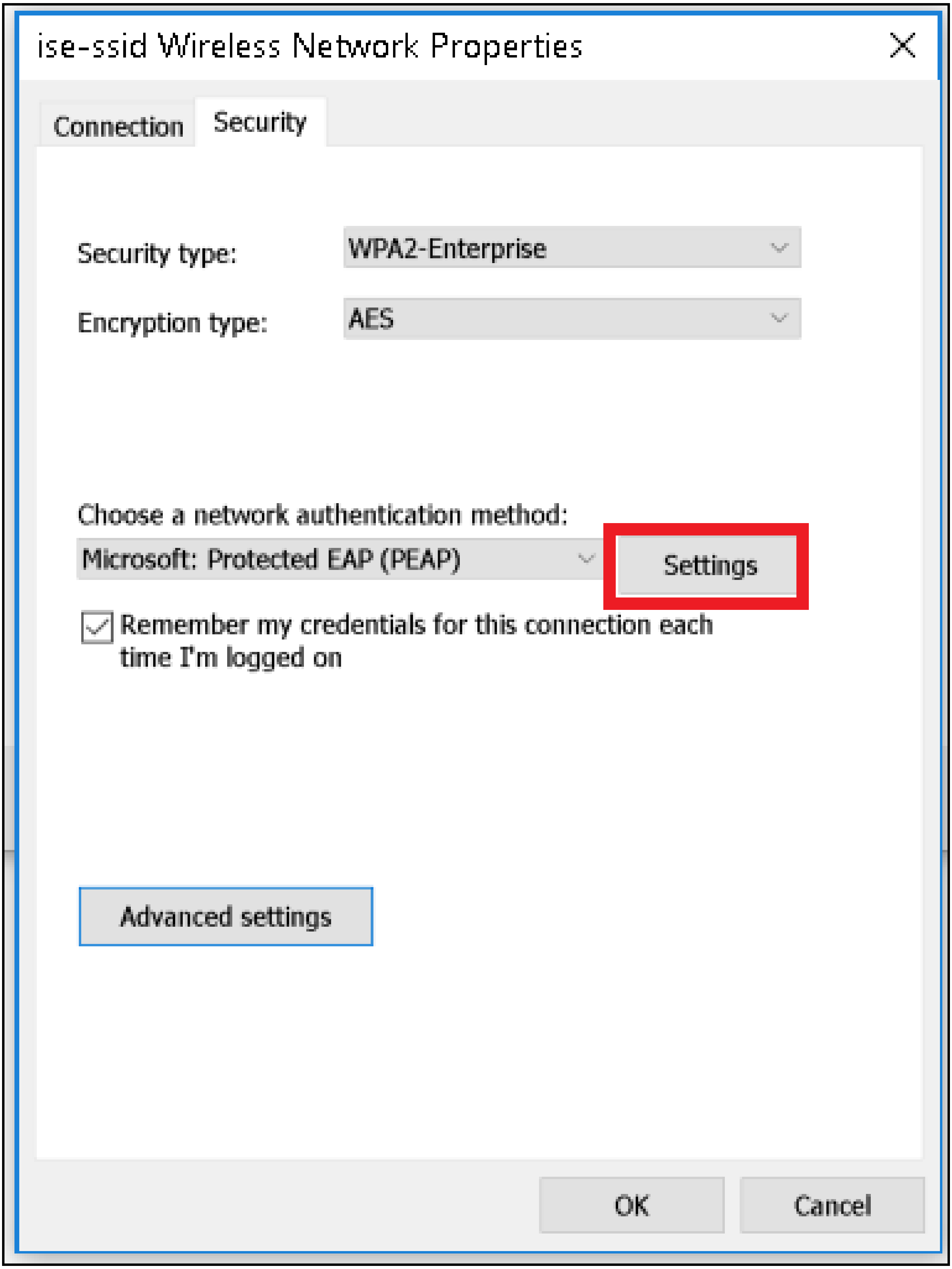


Manually connect to a wireless network

Successfully added ise-ssid

→ Change connection settings
Open the connection properties so that I can change the settings.

步驟 6.導覽至Security索引標籤，然後按一下Settings，如下圖所示。



ise-ssid Wireless Network Properties

Security type: WPA2-Enterprise

Encryption type: AES

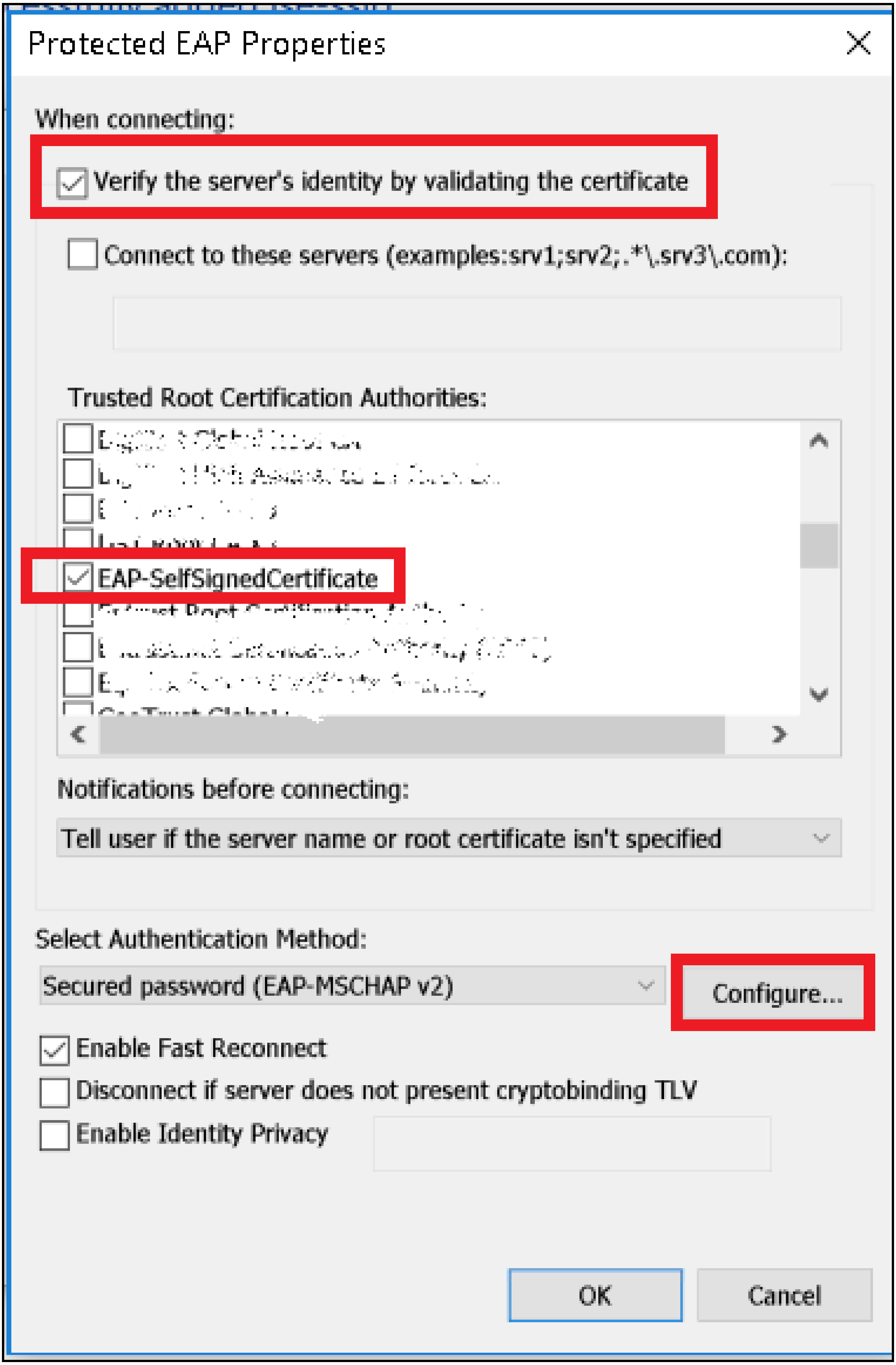
Choose a network authentication method: Microsoft: Protected EAP (PEAP)

☑ Remember my credentials for this connection each time I'm logged on

步驟 7. 選擇是否驗證了RADIUS伺服器。

如果是，請啟用驗證伺服器身份，方法是驗證證書，並從受信任的根證書頒發機構：清單選擇ISE的自簽名證書。

選擇Configure並禁用Automatically use my Windows logon name and password...後，按一下OK，如下圖所示。



Protected EAP Properties

When connecting:

☑ Verify the server's identity by validating the certificate

□ Connect to these servers (examples:srv1;srv2;.*\.srv3\.com):

Trusted Root Certification Authorities:

□ [redacted]
□
□
□

☑ EAP-SelfSignedCertificate

□ [redacted]
□
□
□

Notifications before connecting:

Tell user if the server name or root certificate isn't specified

Select Authentication Method:

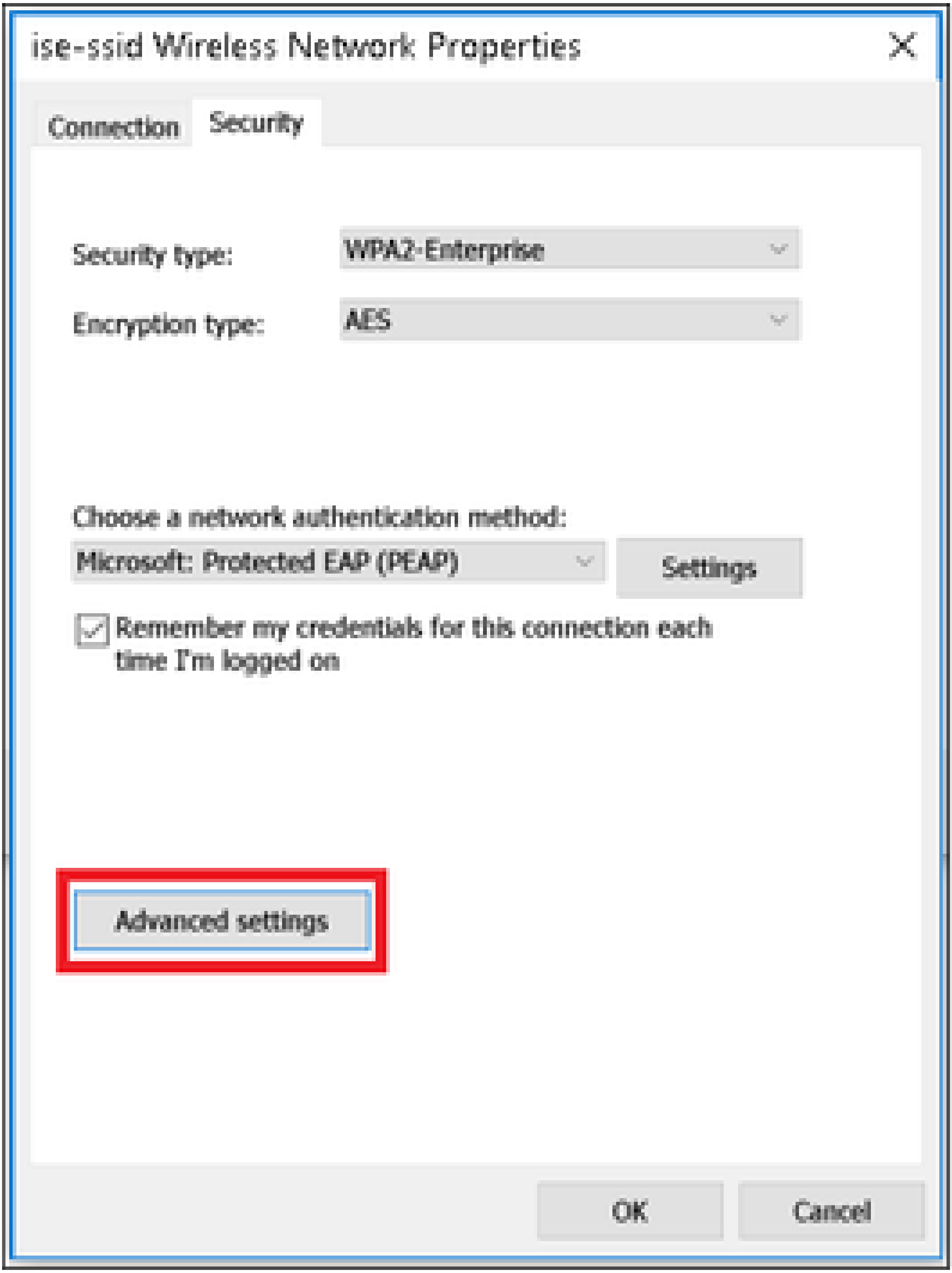
Secured password (EAP-MSCHAP v2)

☑ Enable Fast Reconnect

□ Disconnect if server does not present cryptobinding TLV

□ Enable Identity Privacy

返回Security頁籤後，選擇Advanced settings，將身份驗證模式指定為使用者身份驗證，並儲存ISE上配置的憑據，以便驗證使用者，如圖所示。



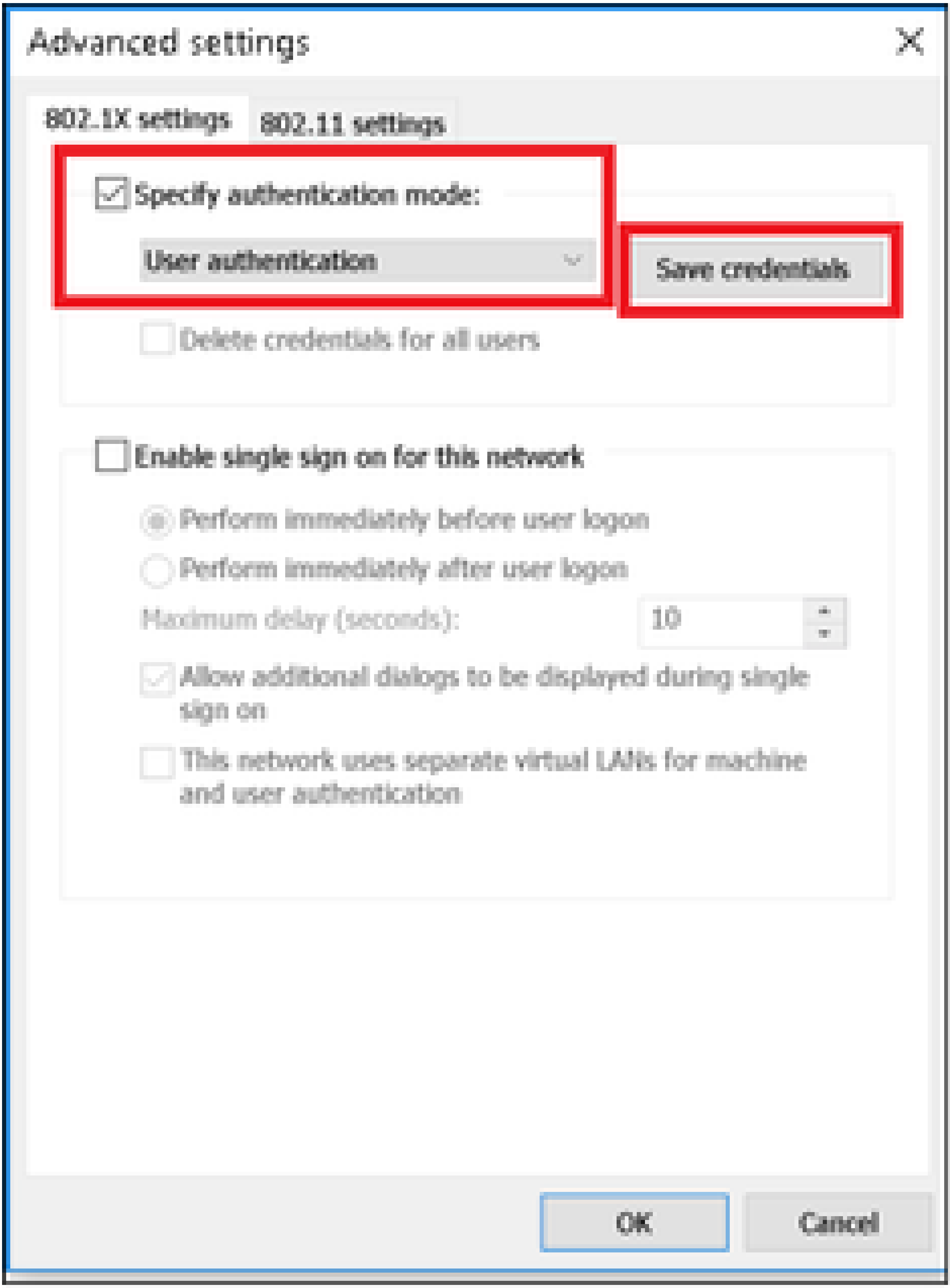
ise-ssid Wireless Network Properties

Security type: WPA2-Enterprise

Encryption type: AES

Choose a network authentication method:
Microsoft: Protected EAP (PEAP)

☑ Remember my credentials for this connection each time I'm logged on



Advanced settings

802.1X settings | 802.11 settings

☑ Specify authentication mode:

User authentication

Save credentials

□ Delete credentials for all users

□ Enable single sign on for this network

● Perform immediately before user logon

○ Perform immediately after user logon

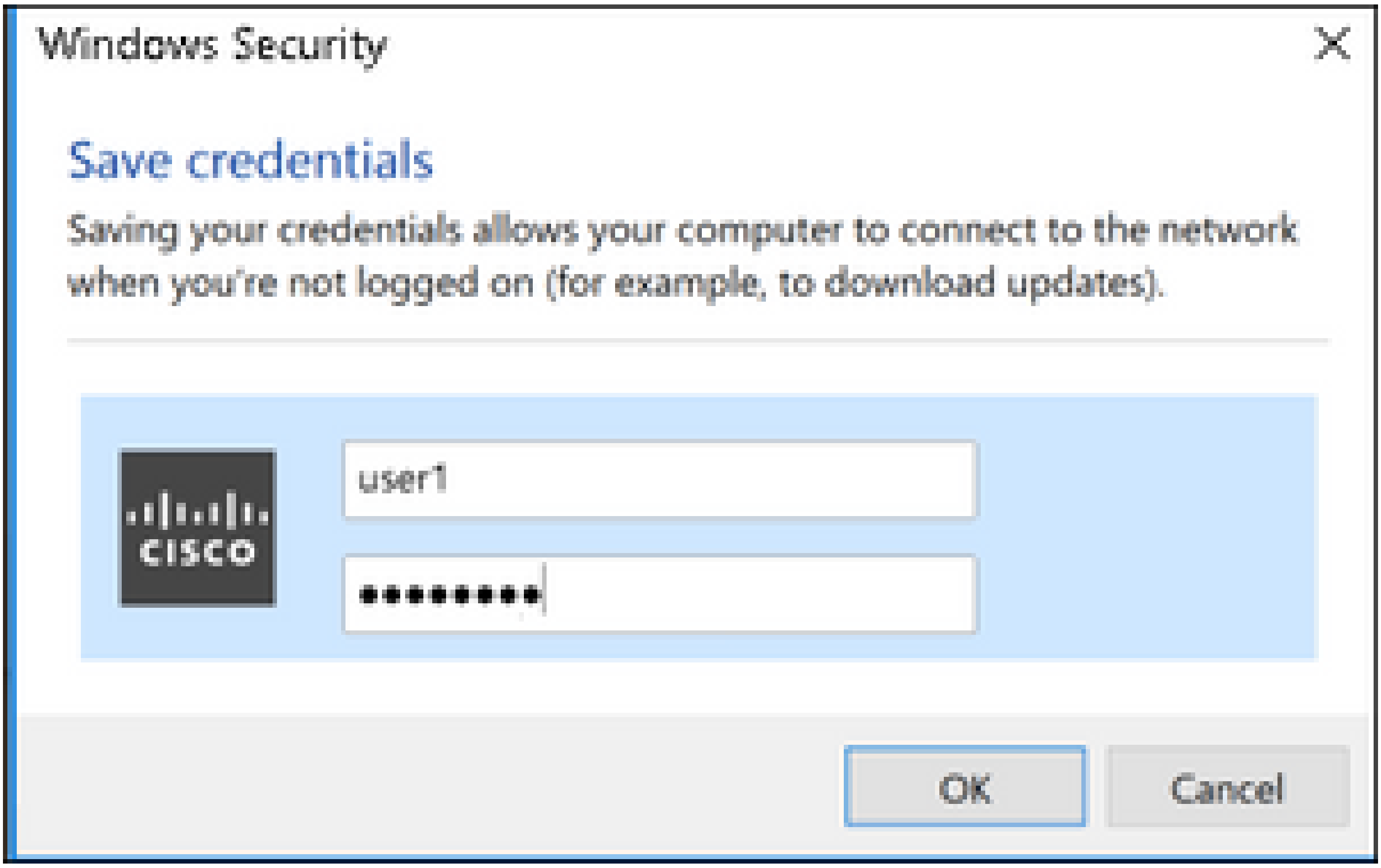
Maximum delay (seconds): 10

☑ Allow additional dialogs to be displayed during single sign on

□ This network uses separate virtual LANs for machine and user authentication

OK

Cancel


Windows Security

Save credentials

Saving your credentials allows your computer to connect to the network when you're not logged on (for example, to download updates).

user1

••••••••

驗證

使用本節內容，確認您的組態是否正常運作。

驗證流程可以從WLC或ISE角度驗證。

WLC上的驗證程式

運行以下命令以監控特定使用者的身份驗證過程：

```
> debug client <mac-add-client>
> debug dot1x event enable
> debug dot1x aaa enable
```

身份驗證成功的示例（某些輸出被省略）：

<#root>

```
*apfMsConnTask_1: Nov 24 04:30:44.317:

e4:b3:18:7c:30:58 Processing assoc-req station:e4:b3:18:7c:30:58 AP:00:c8:8b:26:2c:d0-00

 thread:1a5cc288
*apfMsConnTask_1: Nov 24 04:30:44.317: e4:b3:18:7c:30:58 Reassociation received from mobile on BSSID 00
*apfMsConnTask_1: Nov 24 04:30:44.318: e4:b3:18:7c:30:58 Applying Interface(management) policy on Mobil
```

```
*apfMsConnTask_1: Nov 24 04:30:44.318: e4:b3:18:7c:30:58 Applying site-specific Local Bridging override
*apfMsConnTask_1: Nov 24 04:30:44.318: e4:b3:18:7c:30:58 Applying Local Bridging Interface Policy for s
*apfMsConnTask_1: Nov 24 04:30:44.318: e4:b3:18:7c:30:58 RSN Capabilities:  60
*apfMsConnTask_1: Nov 24 04:30:44.318: e4:b3:18:7c:30:58 Marking Mobile as non-
```

e4:b3:18:7c:30:58 Received 802.11i 802.1X key management suite, enabling dot1x Authentication

```
11w Capable
*apfMsConnTask_1: Nov 24 04:30:44.318: e4:b3:18:7c:30:58 Received RSN IE with 1 PMKIDs from mobile e4:b
*apfMsConnTask_1: Nov 24 04:30:44.319: Received PMKID:  (16)
*apfMsConnTask_1: Nov 24 04:30:44.319: e4:b3:18:7c:30:58 Searching for PMKID in MSCB PMKID cache for mob
*apfMsConnTask_1: Nov 24 04:30:44.319: e4:b3:18:7c:30:58 No valid PMKID found in the MSCB PMKID cache fo
*apfMsConnTask_1: Nov 24 04:30:44.319: e4:b3:18:7c:30:58 0.0.0.0 START (0) Initializing policy
*apfMsConnTask_1: Nov 24 04:30:44.319:
```

e4:b3:18:7c:30:58 0.0.0.0 START (0) Change state to AUTHCHECK (2) last state START (0)

```
*apfMsConnTask_1: Nov 24 04:30:44.319:
```

e4:b3:18:7c:30:58 0.0.0.0 AUTHCHECK (2) Change state to 8021X_REQD (3) last state AUTHCHECK (2)

```
*apfMsConnTask_1: Nov 24 04:30:44.319: e4:b3:18:7c:30:58 0.0.0.0 8021X_REQD (3) Plumbed mobile LWAPP ru
*apfMsConnTask_1: Nov 24 04:30:44.319: e4:b3:18:7c:30:58 apfMsAssoStateInc
*apfMsConnTask_1: Nov 24 04:30:44.319: e4:b3:18:7c:30:58 apfPemAddUser2 (apf_policy.c:437) Changing sta
*apfMsConnTask_1: Nov 24 04:30:44.319: e4:b3:18:7c:30:58 apfPemAddUser2:session timeout forstation e4:b
*apfMsConnTask_1: Nov 24 04:30:44.319: e4:b3:18:7c:30:58 Stopping deletion of Mobile Station: (callerId
*apfMsConnTask_1: Nov 24 04:30:44.319: e4:b3:18:7c:30:58 Func: apfPemAddUser2, Ms Timeout = 0, Session
*apfMsConnTask_1: Nov 24 04:30:44.320: e4:b3:18:7c:30:58 Sending Assoc Response to station on BSSID 00:
*spamApTask2: Nov 24 04:30:44.323: e4:b3:18:7c:30:58 Successful transmission of LWAPP Add-Mobile to AP
*spamApTask2: Nov 24 04:30:44.325: e4:b3:18:7c:30:58 Received ADD_MOBILE ack - Initiating 1x to STA e4:
*spamApTask2: Nov 24 04:30:44.325: e4:b3:18:7c:30:58
```

Sent dot1x auth initiate message for mobile e4:b3:18:7c:30:58

```
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.326: e4:b3:18:7c:30:58 reauth_sm state transition 0 ---> 1 for mob
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.326: e4:b3:18:7c:30:58 EAP-PARAM Debug - eap-params for Wlan-Id :2
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.326: e4:b3:18:7c:30:58 Disable re-auth, use PMK lifetime.
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.326: e4:b3:18:7c:30:58 Station e4:b3:18:7c:30:58 setting dot1x rea
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.326: e4:b3:18:7c:30:58 Stopping reauth timeout for e4:b3:18:7c:30:
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.326: e4:b3:18:7c:30:58 dot1x - moving mobile e4:b3:18:7c:30:58 int
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.326:
```

e4:b3:18:7c:30:58 Sending EAP-Request/Identity to mobile e4:b3:18:7c:30:58 (EAP Id 1)

```
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.380: e4:b3:18:7c:30:58 Received EAPOL EAPPKT from mobile e4:b3:18:
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.380: e4:b3:18:7c:30:58 Received Identity Response (count=1) from m
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.380: e4:b3:18:7c:30:58 Resetting reauth count 1 to 0 for mobile e4
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.380: e4:b3:18:7c:30:58 EAP State update from Connecting to Authent
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.380: e4:b3:18:7c:30:58 dot1x - moving mobile e4:b3:18:7c:30:58 int
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.380: e4:b3:18:7c:30:58 Entering Backend Auth Response state for mo
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.380: e4:b3:18:7c:30:58 Created Acct-Session-ID (58366cf4/e4:b3:18:
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.386: e4:b3:18:7c:30:58 Processing Access-Challenge for mobile e4:b
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.387: e4:b3:18:7c:30:58 Entering Backend Auth Req state (id=215) fo
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.387: e4:b3:18:7c:30:58 WARNING: updated EAP-Identifier 1 ===> 215
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.387: e4:b3:18:7c:30:58 Sending EAP Request from AAA to mobile e4:b
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.387: e4:b3:18:7c:30:58 Allocating EAP Pkt for retransmission to mo
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.390: e4:b3:18:7c:30:58 Received EAPOL EAPPKT from mobile e4:b3:18:
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.390: e4:b3:18:7c:30:58 Received EAP Response from mobile e4:b3:18:
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.390: e4:b3:18:7c:30:58 Resetting reauth count 0 to 0 for mobile e4
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.390: e4:b3:18:7c:30:58 Entering Backend Auth Response state for mo
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.393: e4:b3:18:7c:30:58 Processing Access-Challenge for mobile e4:b
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.393: e4:b3:18:7c:30:58 Entering Backend Auth Req state (id=216) fo
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.393: e4:b3:18:7c:30:58 Sending EAP Request from AAA to mobile e4:b
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.393: e4:b3:18:7c:30:58 Reusing allocated memory for  EAP Pkt for r
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```

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.
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.530:

e4:b3:18:7c:30:58 Processing Access-Accept for mobile e4:b3:18:7c:30:58

*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.530: e4:b3:18:7c:30:58 Resetting web IPv4 acl from 255 to 255
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.530: e4:b3:18:7c:30:58 Resetting web IPv4 Flex acl from 65535 to 6
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.530:

e4:b3:18:7c:30:58 Username entry (user1) created for mobile, length = 253

*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.530:

e4:b3:18:7c:30:58 Found an interface name:'vlan2404' corresponds to interface name received: vlan2404

*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.530: e4:b3:18:7c:30:58 override for default ap group, marking intg
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.530: e4:b3:18:7c:30:58 Applying Interface(management) policy on Mo
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.530: e4:b3:18:7c:30:58 Re-applying interface policy for client
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.531: e4:b3:18:7c:30:58 apfApplyWlanPolicy: Apply WLAN Policy over
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.531:

e4:b3:18:7c:30:58 Inserting AAA Override struct for mobile

        MAC: e4:b3:18:7c:30:58, source 4
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.531: e4:b3:18:7c:30:58 Applying override policy from source Overri
*Dot1x_NW_MsgTask_0: Nov 24

04:30:44.531: e4:b3:18:7c:30:58 Found an interface name:'vlan2404' corresponds to interface name receiv

*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.531: e4:b3:18:7c:30:58 Applying Interface(vlan2404) policy on Mobi
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.531: e4:b3:18:7c:30:58 Re-applying interface policy for client
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.531: e4:b3:18:7c:30:58 Setting re-auth timeout to 0 seconds, got f
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.531: e4:b3:18:7c:30:58 Station e4:b3:18:7c:30:58 setting dot1x rea
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.531: e4:b3:18:7c:30:58 Stopping reauth timeout for e4:b3:18:7c:30:
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.531: e4:b3:18:7c:30:58 Creating a PKC PMKID Cache entry for statio
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.531: e4:b3:18:7c:30:58 Resetting MSCB PMK Cache Entry 0 for statio
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.531: e4:b3:18:7c:30:58 Adding BSSID 00:c8:8b:26:2c:d1 to PMKID cac
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.531: New PMKID: (16)
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.531:      [0000] cc 3a 3d 26 80 17 8b f1 2d c5 cd fd a0 8a c4 39
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.531: e4:b3:18:7c:30:58 unsetting PmkIdValidatedByAp
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.531: e4:b3:18:7c:30:58 Updating AAA Overrides from local for stati
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.531: e4:b3:18:7c:30:58 Adding Audit session ID payload in Mobility
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.531: e4:b3:18:7c:30:58 0 PMK-update groupcast messages sent
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.531: e4:b3:18:7c:30:58 PMK sent to mobility group
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.531: e4:b3:18:7c:30:58 Disabling re-auth since PMK lifetime can ta
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.531: e4:b3:18:7c:30:58 Sending EAP-Success to mobile e4:b3:18:7c:3
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.532: e4:b3:18:7c:30:58 Freeing AAACB from Dot1xCB as AAA auth is d
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.532: e4:b3:18:7c:30:58 key Desc Version FT - 0
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.532: e4:b3:18:7c:30:58 Found an cache entry for BSSID 00:c8:8b:26:
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.532: Including PMKID in M1  (16)
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.532:      [0000] cc 3a 3d 26 80 17 8b f1 2d c5 cd fd a0 8a c4 39
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.532: M1 - Key Data: (22)
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.532:      [0000] dd 14 00 0f ac 04 cc 3a 3d 26 80 17 8b f1 2d c5
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.532:      [0016] cd fd a0 8a c4 39
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.532:

e4:b3:18:7c:30:58 Starting key exchange to mobile e4:b3:18:7c:30:58, data packets will be dropped

*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.532:

e4:b3:18:7c:30:58 Sending EAPOL-Key Message to mobile e4:b3:18:7c:30:58

state INITPMK (message 1), replay counter 00.00.00.00.00.00.00.00
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.532: e4:b3:18:7c:30:58 Reusing allocated memory for  EAP Pkt for r
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.532: e4:b3:18:7c:30:58 Entering Backend Auth Success state (id=223
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.532: e4:b3:18:7c:30:58 Received Auth Success while in Authenticati
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.532: e4:b3:18:7c:30:58 dot1x - moving mobile e4:b3:18:7c:30:58 int
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.547: e4:b3:18:7c:30:58 Received EAPOL-Key from mobile e4:b3:18:7c:
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.547: e4:b3:18:7c:30:58 Ignoring invalid EAPOL version (1) in EAPOL
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.547: e4:b3:18:7c:30:58 key Desc Version FT - 0
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.547:
```

e4:b3:18:7c:30:58 Received EAPOL-key in PTK_START state (message 2) from mobile

```
 e4:b3:18:7c:30:58
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.548: e4:b3:18:7c:30:58 Successfully computed PTK from PMK!!!
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.548: e4:b3:18:7c:30:58 Received valid MIC in EAPOL Key Message M2!
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.548: e4:b3:18:7c:30:58 Not Flex client. Do not distribute PMK Key
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.548: e4:b3:18:7c:30:58 Stopping retransmission timer for mobile e4
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.548: e4:b3:18:7c:30:58 key Desc Version FT - 0
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.548: e4:b3:18:7c:30:58 Sending EAPOL-Key Message to mobile e4:b3:1
state PTKINITNEGOTIATING (message 3), replay counter 00.00.00.00.00.00.00.01
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.548: e4:b3:18:7c:30:58 Reusing allocated memory for  EAP Pkt for r
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.555: e4:b3:18:7c:30:58 Received EAPOL-Key from mobile e4:b3:18:7c:
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.555: e4:b3:18:7c:30:58 Ignoring invalid EAPOL version (1) in EAPOL
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.555: e4:b3:18:7c:30:58 key Desc Version FT - 0
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.555:
```

e4:b3:18:7c:30:58 Received EAPOL-key in PTKINITNEGOTIATING state (message 4)

```
 from mobile e4:b3:18:7c:30:58
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.555: e4:b3:18:7c:30:58 Stopping retransmission timer for mobile e4
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.555: e4:b3:18:7c:30:58 Freeing EAP Retransmit Bufer for mobile e4:
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.555: e4:b3:18:7c:30:58 apfMs1xStateInc
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.555: e4:b3:18:7c:30:58 apfMsPeapSimReqCntInc
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.555: e4:b3:18:7c:30:58 apfMsPeapSimReqSuccessCntInc
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.555:
```

e4:b3:18:7c:30:58 0.0.0.0 8021X_REQD (3) Change state to L2AUTHCOMPLETE (4) last state 8021X_REQD (3)

```
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.555: e4:b3:18:7c:30:58 Mobility query, PEM State: L2AUTHCOMPLETE
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.555: e4:b3:18:7c:30:58 Building Mobile Announce :
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.556: e4:b3:18:7c:30:58   Building Client Payload:
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.556: e4:b3:18:7c:30:58     Client Ip: 0.0.0.0
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.556: e4:b3:18:7c:30:58     Client Vlan Ip: 172.16.0.134, Vlan mask
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.556: e4:b3:18:7c:30:58     Client Vap Security: 16384
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.556: e4:b3:18:7c:30:58     Virtual Ip: 10.10.10.10
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.556: e4:b3:18:7c:30:58     ssid: ise-ssid
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.556: e4:b3:18:7c:30:58   Building VlanIpPayload.
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.556: e4:b3:18:7c:30:58 Not Using WMM Compliance code qosCap 00
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.556: e4:b3:18:7c:30:58 0.0.0.0 L2AUTHCOMPLETE (4) Plumbed mobile L
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.556:
```

e4:b3:18:7c:30:58 0.0.0.0 L2AUTHCOMPLETE (4) Change state to DHCP_REQD (7) last state L2AUTHCOMPLETE (4

```
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.556: e4:b3:18:7c:30:58 0.0.0.0 DHCP_REQD (7) pemAdvanceState2 6677
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.556: e4:b3:18:7c:30:58 0.0.0.0 DHCP_REQD (7) Adding Fast Path rule
  type = Airespace AP - Learn IP address
  on AP 00:c8:8b:26:2c:d0, slot 0, interface = 1, QOS = 0
  IPv4 ACL ID = 255, IPv
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.556: e4:b3:18:7c:30:58 0.0.0.0 DHCP_REQD (7) Fast Path rule (contd
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.556: e4:b3:18:7c:30:58 0.0.0.0 DHCP_REQD (7) Fast Path rule (contd
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.556: e4:b3:18:7c:30:58 0.0.0.0 DHCP_REQD (7) Successfully plumbed
*Dot1x_NW_MsgTask_0: Nov 24 04:30:44.556: e4:b3:18:7c:30:58 Successfully Plumbed PTK session Keysfor mo
*spamApTask2: Nov 24 04:30:44.556: e4:b3:18:7c:30:58 Successful transmission of LWAPP Add-Mobile to AP
*pemReceiveTask: Nov 24 04:30:44.557: e4:b3:18:7c:30:58 0.0.0.0 Added NPU entry of type 9, dtlFlags 0x0
*apfReceiveTask: Nov 24 04:30:44.557: e4:b3:18:7c:30:58 0.0.0.0 DHCP_REQD (7) mobility role update requ
  Peer = 0.0.0.0, Old Anchor = 0.0.0.0, New Anchor = 172.16.0.3
*apfReceiveTask: Nov 24 04:30:44.557: e4:b3:18:7c:30:58 0.0.0.0 DHCP_REQD (7) State Update from Mobilit
```

```
*apfReceiveTask: Nov 24 04:30:44.557: e4:b3:18:7c:30:58 0.0.0.0 DHCP_REQD (7) pemAdvanceState2 6315, Ad
*apfReceiveTask: Nov 24 04:30:44.557: e4:b3:18:7c:30:58 0.0.0.0 DHCP_REQD (7) Replacing Fast Path rule
  IPv4 ACL ID = 255,
*apfReceiveTask: Nov 24 04:30:44.557: e4:b3:18:7c:30:58 0.0.0.0 DHCP_REQD (7) Fast Path rule (contd...)
*apfReceiveTask: Nov 24 04:30:44.557: e4:b3:18:7c:30:58 0.0.0.0 DHCP_REQD (7) Fast Path rule (contd...)
*apfReceiveTask: Nov 24 04:30:44.557: e4:b3:18:7c:30:58 0.0.0.0 DHCP_REQD (7) Successfully plumbed mobi
*pemReceiveTask: Nov 24 04:30:44.557: e4:b3:18:7c:30:58 Sent an XID frame
*dtlArpTask: Nov 24 04:30:47.932: e4:b3:18:7c:30:58 Static IP client associated to interface vlan2404 w
*dtlArpTask: Nov 24 04:30:47.933: e4:b3:18:7c:30:58 apfMsRunStateInc
*dtlArpTask: Nov 24 04:30:47.933:
```

e4:b3:18:7c:30:58 172.16.0.151 DHCP_REQD (7) Change state to RUN (20)

```
 last state DHCP_REQD (7)
```

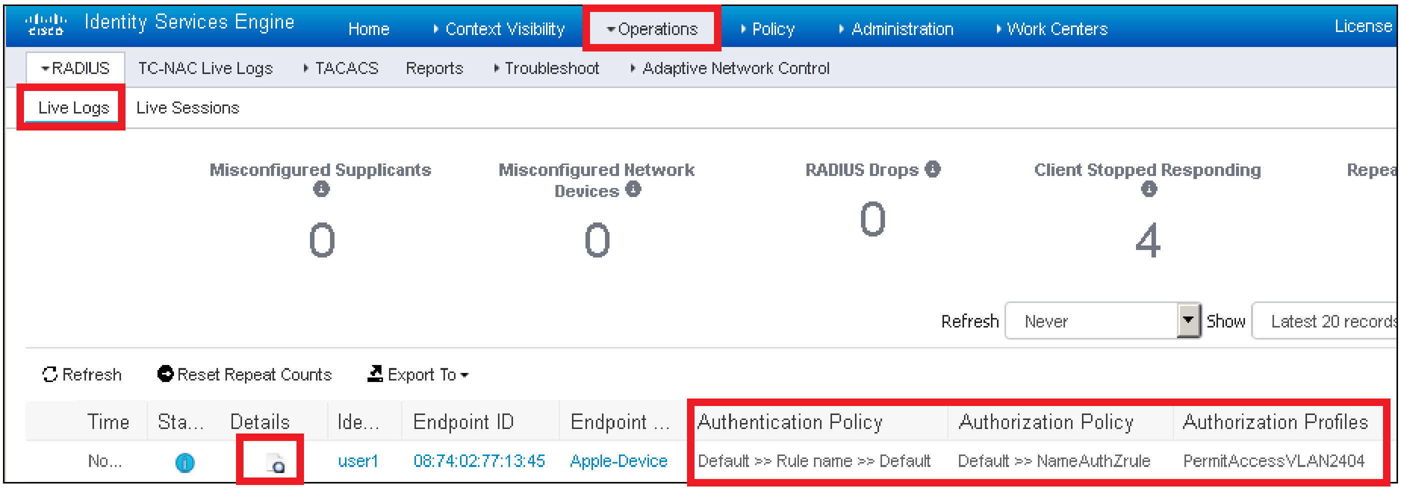
若要輕鬆讀取調試客戶端輸出，請使用無線調試分析器工具：

[無線偵錯分析器]

ISE上的身份驗證過程

導覽至Operations > RADIUS > Live Logs，以檢視分配給使用者的身份驗證策略、授權策略和授權配置檔案。

有關詳細資訊，請按一下Details以檢視更詳細的身份驗證過程，如圖所示。



Time	Sta...	Details	Ide...	Endpoint ID	Endpoint ...	Authentication Policy	Authorization Policy	Authorization Profiles
No...	●	🔍	user1	08:74:02:77:13:45	Apple-Device	Default >> Rule name >> Default	Default >> NameAuthZrule	PermitAccessVLAN2404

疑難排解

目前尚無特定資訊可用於排解此組態的疑難問題。

關於此翻譯