使用ISE 3.3配置Linux VPN安全評估

目錄

簡介

本文檔介紹如何使用身份服務引擎(ISE)和Firepower威脅防禦(FTD)配置Linux VPN狀態。

必要條件

需求

思科建議您瞭解以下主題：

- 思科安全使用者端
- Firepower威脅防禦(FTD)上的遠端訪問VPN
- 身分識別服務引擎 (ISE)

採用元件

本檔案中的資訊是根據以下軟體版本：

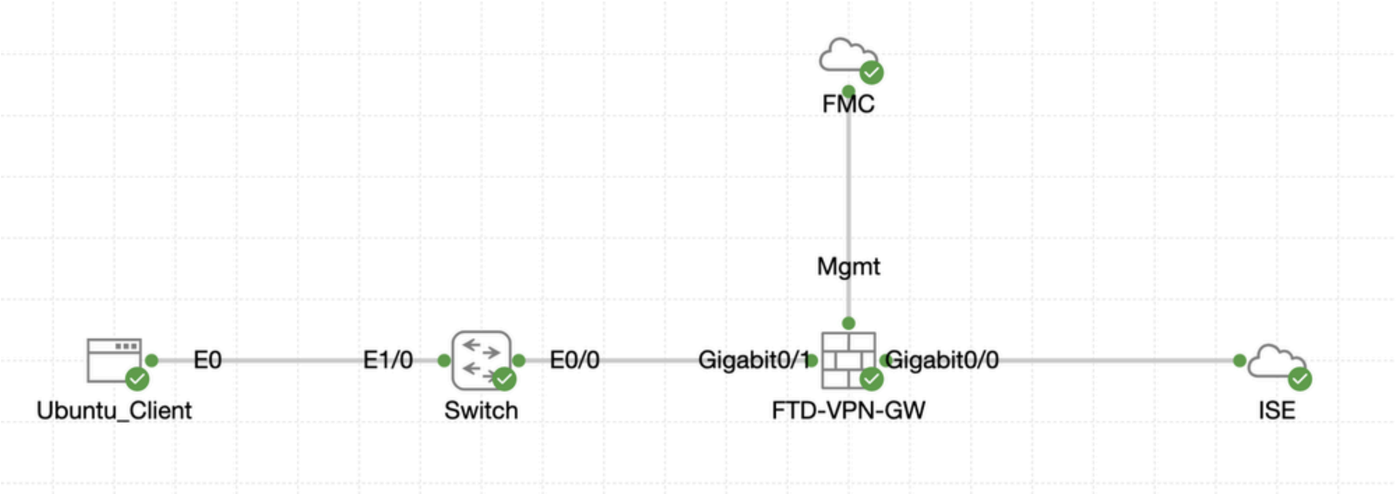
- 烏班圖22.04
- 思科安全使用者端5.1.3.62

- Cisco Firepower威脅防禦(FTD) 7.4.1
- 思科Firepower管理中心(FMC) 7.4.1
- 思科身分辨識服務引擎(ISE) 3.3

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



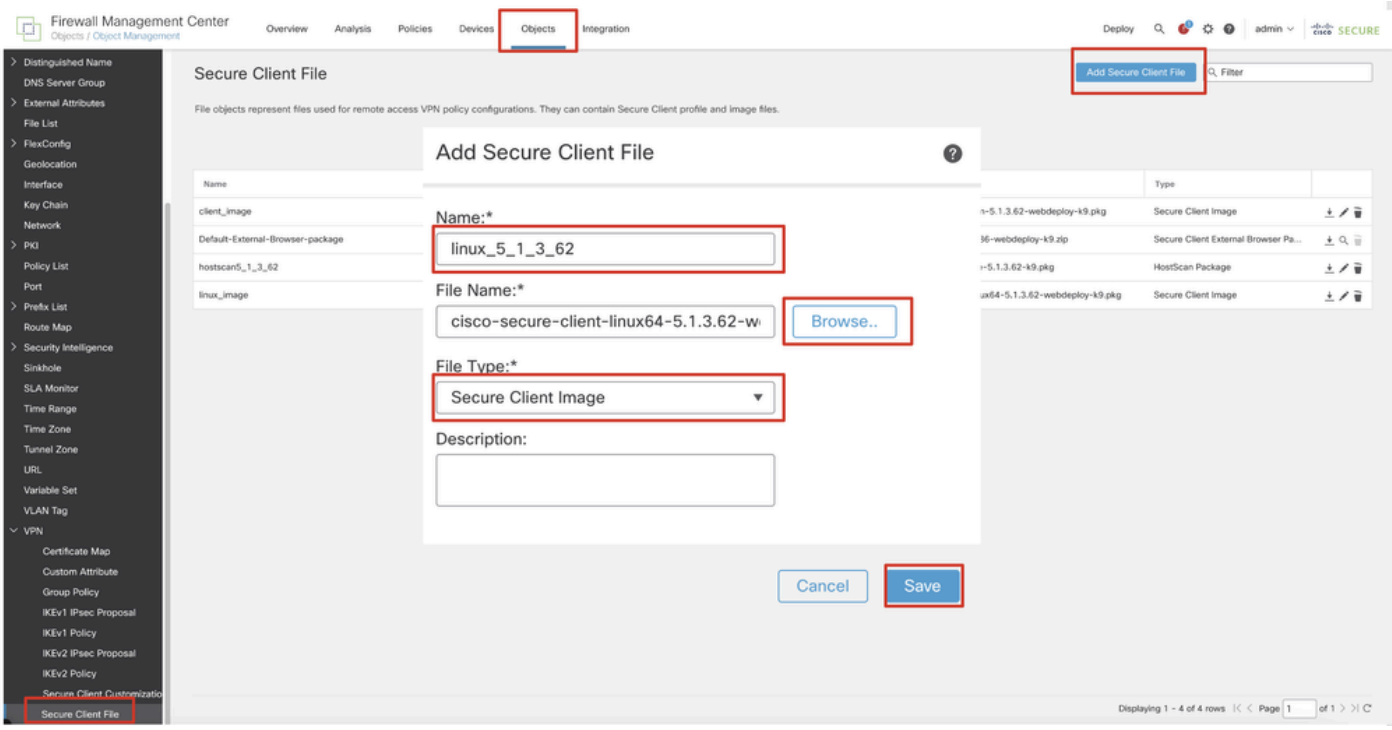
拓撲

FMC/FTD上的組態

步驟 1.已成功配置客戶端、FTD、FMC和ISE之間的連線。因為enroll.cisco.com用於進行重定向探查的終端(有關詳細資訊，請參閱終端安全評估流程CCO 文檔進階版和進階版2.2的ISE終端安全評估樣式比較)。確定已正確設定FTD上至enroll.cisco.com的流量路由。

步驟 2.從Cisco軟體下載cisco-secure-client-linux64-5.1.3.62-webdeploy-k9.pkg下載軟體套件名稱，並確認下載檔案的md5校驗和與Cisco軟體下載頁相同，以確保下載後檔案完好。

步驟 3. 導航到Objects > Object Management > VPN > Secure Client File。點選Add Secure Client File，提供名稱，瀏覽File Name以選擇cisco-secure-client-linux64-5.1.3.62-webdeploy-k9.pkg，選擇File Type下拉選單中的Secure Client Image。然後按一下Save。



Secure Client File

File objects represent files used for remote access VPN policy configurations. They can contain Secure Client profile and image files.

Name		Type
client_image	n-5.1.3.62-webdeploy-k9.pkg	Secure Client Image
Default-External-Browser-package	36-webdeploy-k9.zip	Secure Client External Browser Pa...
hostscan5_1_3_62	-5.1.3.62-k9.pkg	HostScan Package
linux_image	ux64-5.1.3.62-webdeploy-k9.pkg	Secure Client Image

Add Secure Client File

Name:* linux_5_1_3_62

File Name:* cisco-secure-client-linux64-5.1.3.62-w

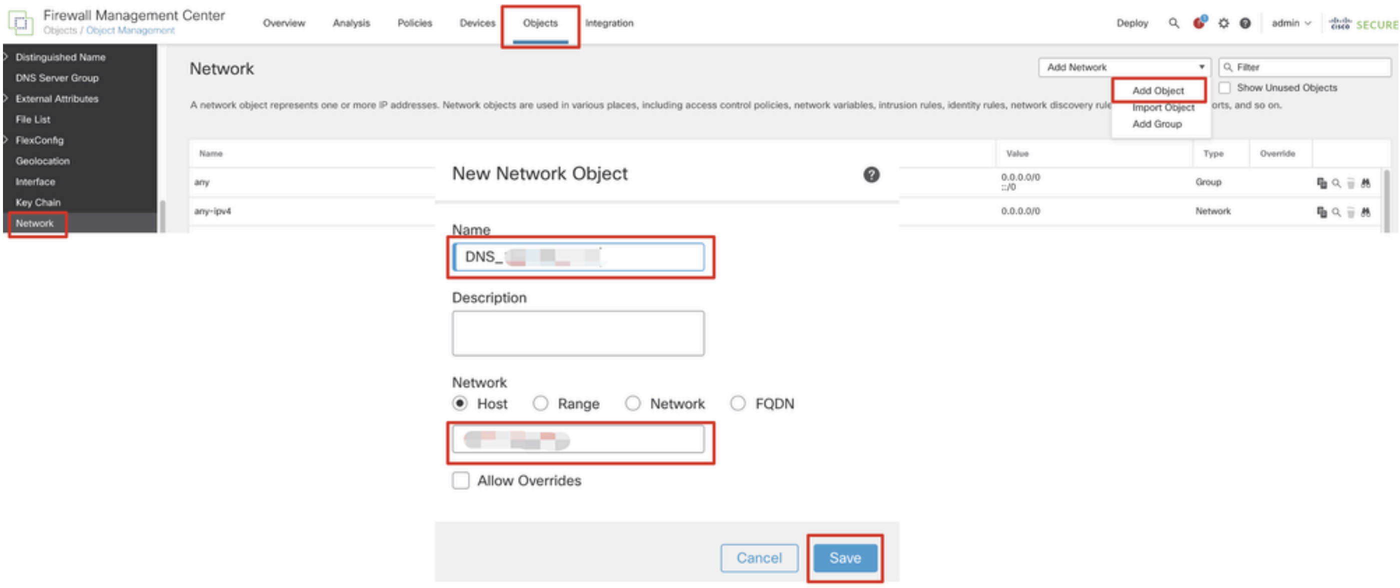
File Type:* Secure Client Image

Description:

FMC_Upload_Secure_Client_Image

步驟 4. 導航到Objects > Object Management > Network。

步驟 4.1.建立DNS伺服器的物件。按一下Add Object，提供名稱和可用的DNS IP地址。按一下Save。



Network

A network object represents one or more IP addresses. Network objects are used in various places, including access control policies, network variables, intrusion rules, identity rules, network discovery rule ... orts, and so on.

Name	Value	Type	Override
any	0.0.0.0/0 ::/0	Group	
any-ipv4	0.0.0.0/0	Network	

New Network Object

Name: DNS_[redacted]

Description:

Network: ● Host ○ Range ○ Network ○ FQDN

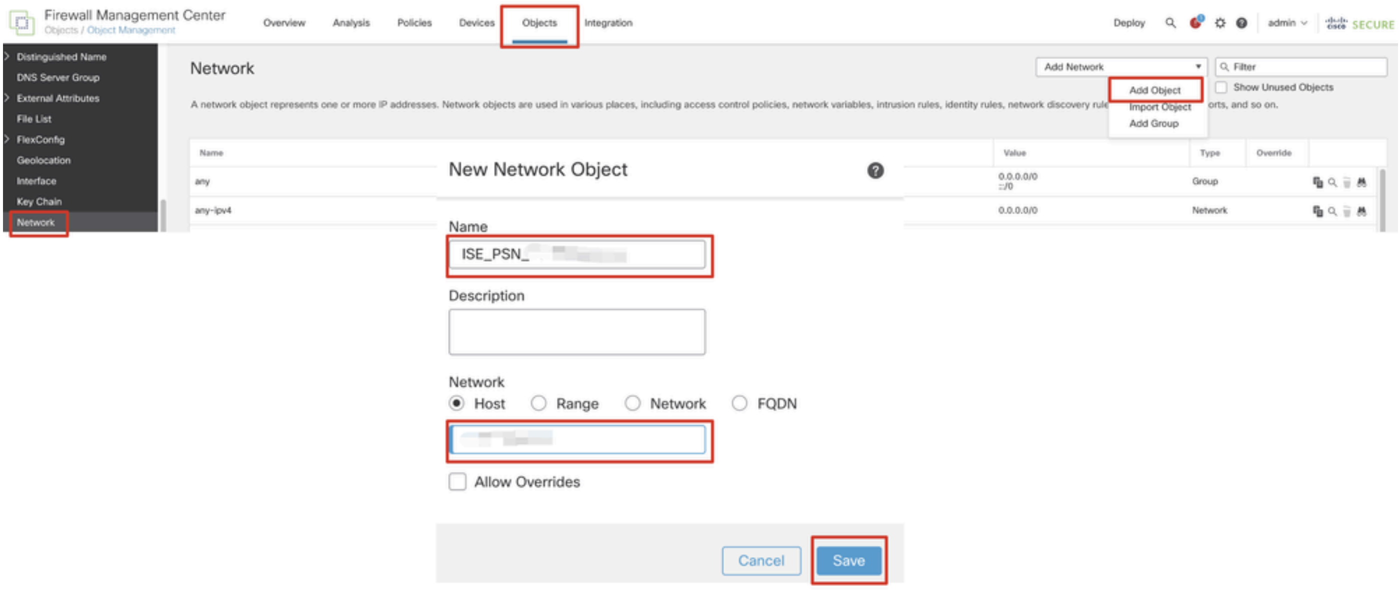
[redacted]

□ Allow Overrides

FMC_Add_Object_DNS

注意：此處配置的DNS伺服器將用於VPN使用者。

步驟 4.2.為ISE PSN建立對象。按一下Add Object，提供名稱和可用的ISE PSN IP地址。按一下Save。



Name
ISE_PSN_[redacted]

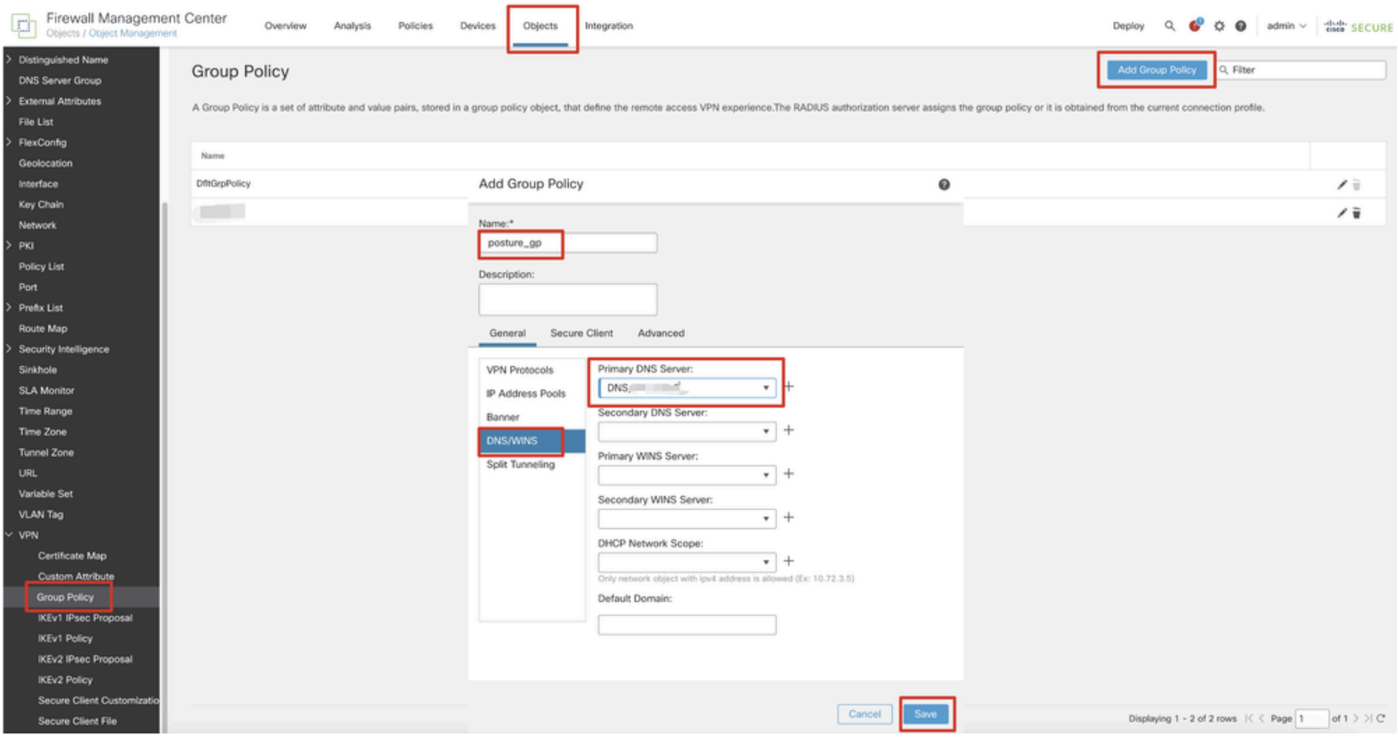
Network
● Host ○ Range ○ Network ○ FQDN

[redacted]

□ Allow Overrides

FMC_Add_Object_ISE

步驟 5.導航到Objects > Object Management > VPN > Group Policy。按一下Add Group Policy。按一下DNS/WINS，在Primary DNS Server中選擇DNS伺服器的對象。然後按一下Save。



Name:* posture_gp

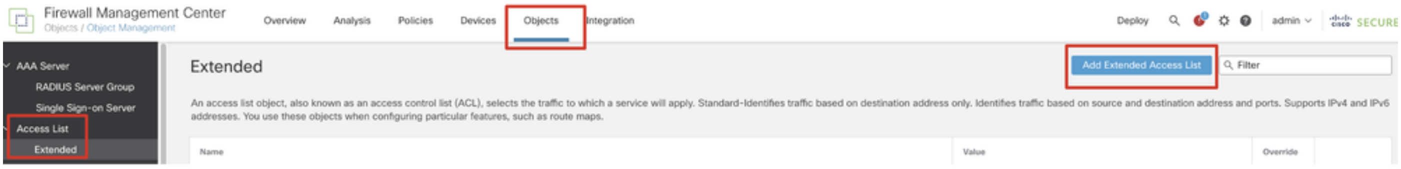
Description:

Primary DNS Server: DNS_[redacted]

FMC_Add_Group_Policy

注意：確保VPN組策略中使用的DNS伺服器可以解析ISE客戶端調配門戶FQDN和enroll.cisco.com。

步驟 6. 導航到Objects > Object Management > Access List > Extended。按一下Add Extended Access List。

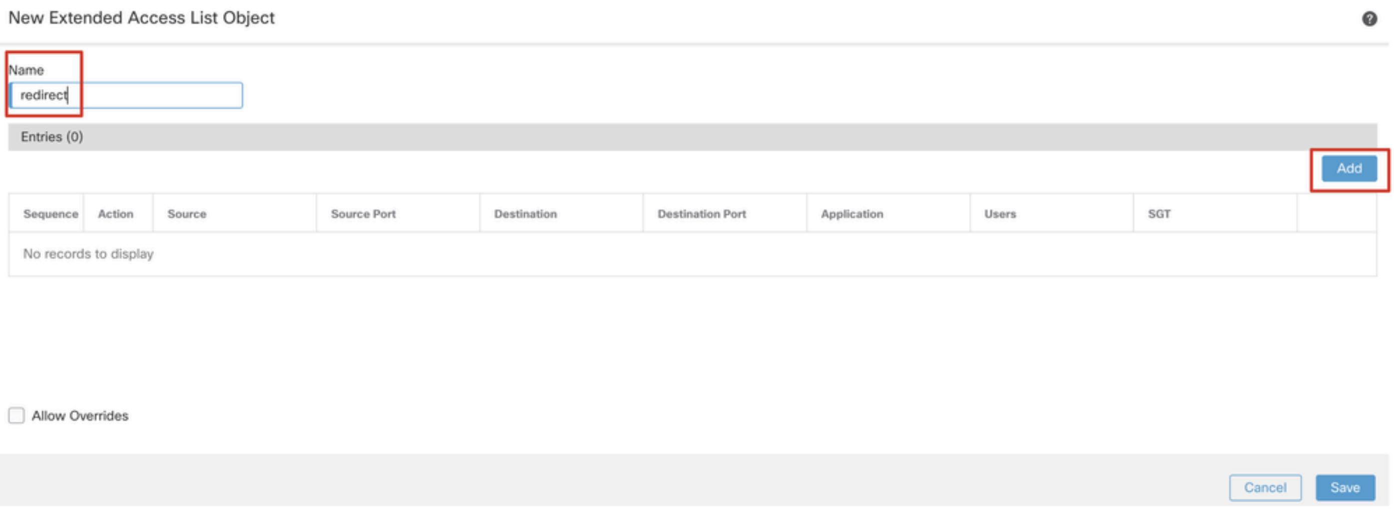


Extended

An access list object, also known as an access control list (ACL), selects the traffic to which a service will apply. Standard-Identifies traffic based on destination address only. Identifies traffic based on source and destination address and ports. Supports IPv4 and IPv6 addresses. You use these objects when configuring particular features, such as route maps.

FMC_Add_Redirect_ACL

步驟 6.1.提供重定向ACL的名稱。此名稱必須與ISE授權配置檔案中的名稱相同。按一下Add。



New Extended Access List Object

Name: redirect

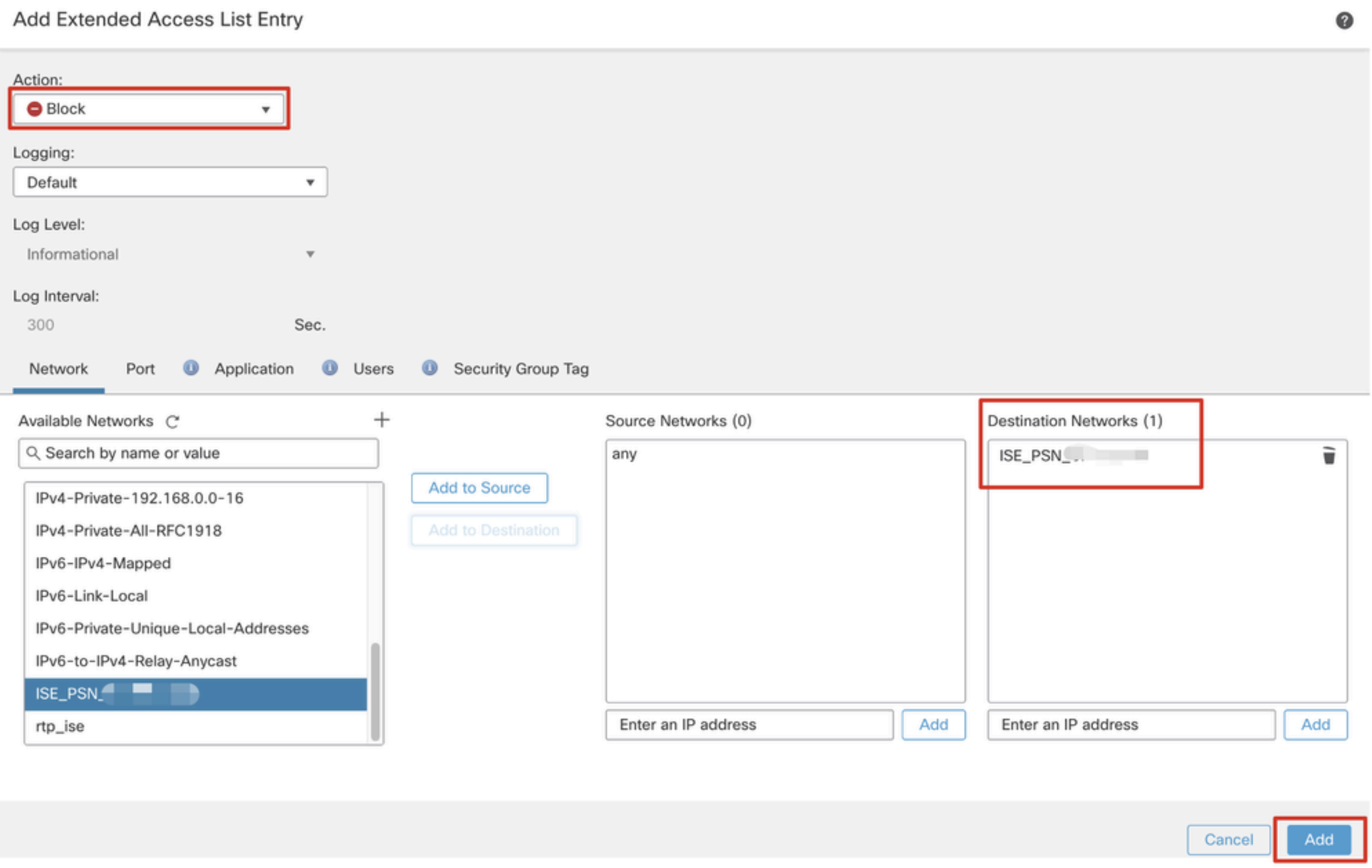
Entries (0)

Sequence	Action	Source	Source Port	Destination	Destination Port	Application	Users	SGT
No records to display								

□ Allow Overrides

FMC_Add_Redirect_ACL_Part_1

步驟 6.2. 阻止DNS流量、到ISE PSN IP地址的流量和補救伺服器將其排除在重定向之外。允許其餘的流量。這會觸發重新導向。按一下Save。



Add Extended Access List Entry

Action: Block

Logging: Default

Log Level: Informational

Log Interval: 300 Sec.

Network | Port | Application | Users | Security Group Tag

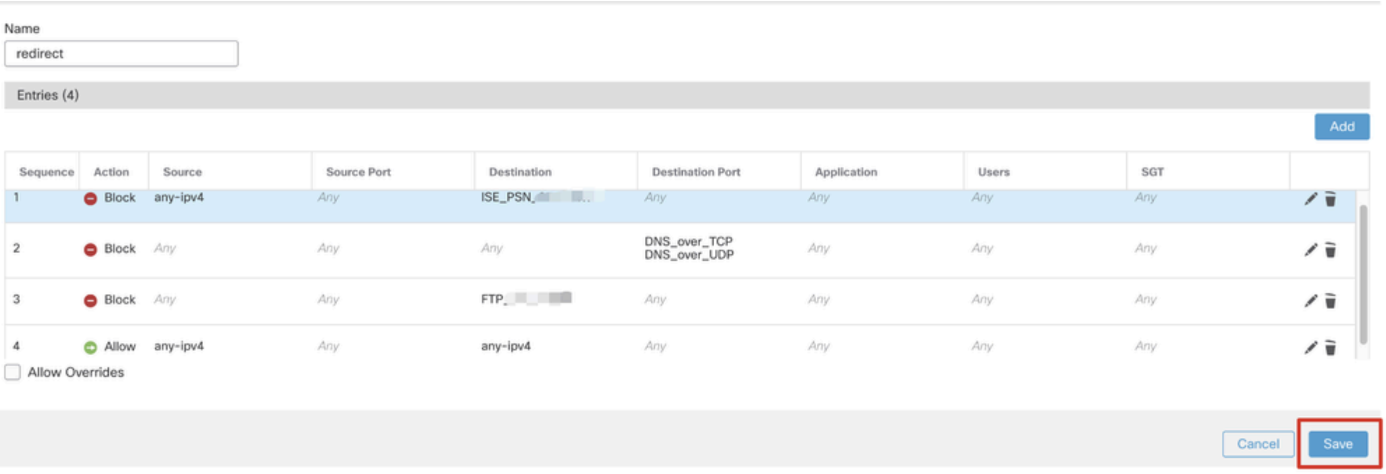
Available Networks

- IPv4-Private-192.168.0.0-16
- IPv4-Private-All-RFC1918
- IPv6-IPv4-Mapped
- IPv6-Link-Local
- IPv6-Private-Unique-Local-Addresses
- IPv6-to-IPv4-Relay-Anycast
- ISE_PSN_[redacted]
- rtp_ise

Source Networks (0): any

Destination Networks (1): ISE_PSN_[redacted]

FMC_Add_Redirect_ACL_Part_2



Name

redirect

Entries (4)

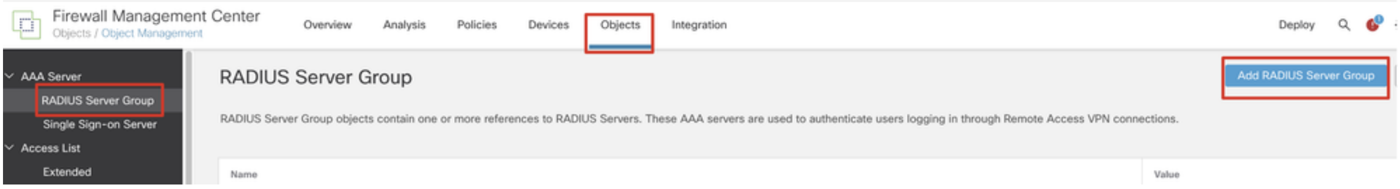
Sequence	Action	Source	Source Port	Destination	Destination Port	Application	Users	SGT
1	● Block	any-ipv4	Any	ISE_PSN_[redacted]	Any	Any	Any	Any
2	● Block	Any	Any	Any	DNS_over_TCP DNS_over_UDP	Any	Any	Any
3	● Block	Any	Any	FTP_[redacted]	Any	Any	Any	Any
4	● Allow	any-ipv4	Any	any-ipv4	Any	Any	Any	Any

☐ Allow Overrides

FMC_Add_Redirect_ACL_Part_3

注意：此重定向ACL示例中的目標FTP用作補救伺服器示例。

步驟 7. 導航到Objects > Object Management > RADIUS Server Group。按一下Add RADIUS Server Group。

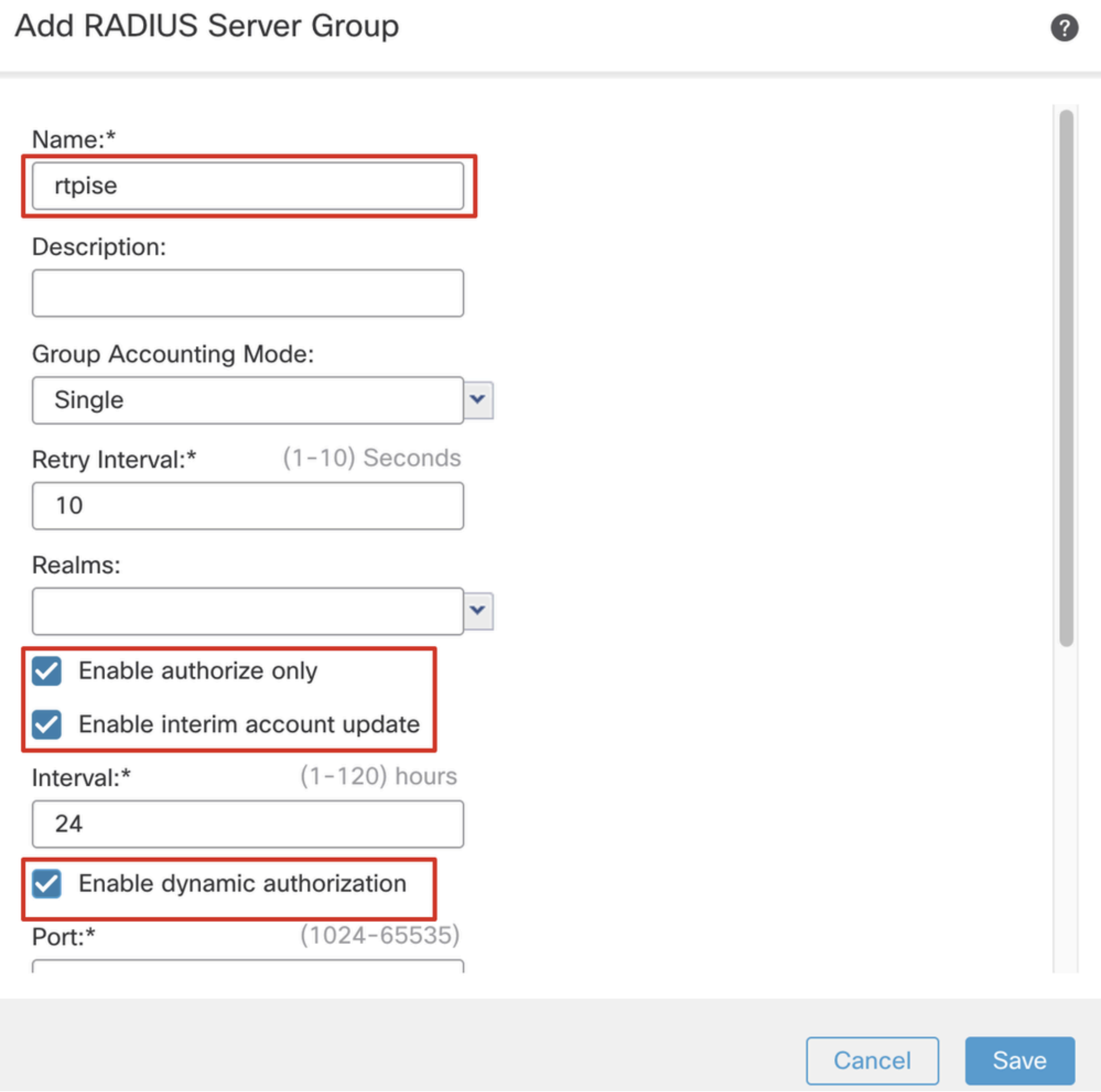


RADIUS Server Group

RADIUS Server Group objects contain one or more references to RADIUS Servers. These AAA servers are used to authenticate users logging in through Remote Access VPN connections.

FMC_Add_New_Radius_Server_Group

步驟 7.1.提供名稱、檢查Enable authorize only、檢查Enable interim account update、檢查Enable dynamic authorization。



Add RADIUS Server Group

Name:* rtpise

Description:

Group Accounting Mode: Single

Retry Interval:* (1-10) Seconds 10

Realms:

☑ Enable authorize only

☑ Enable interim account update

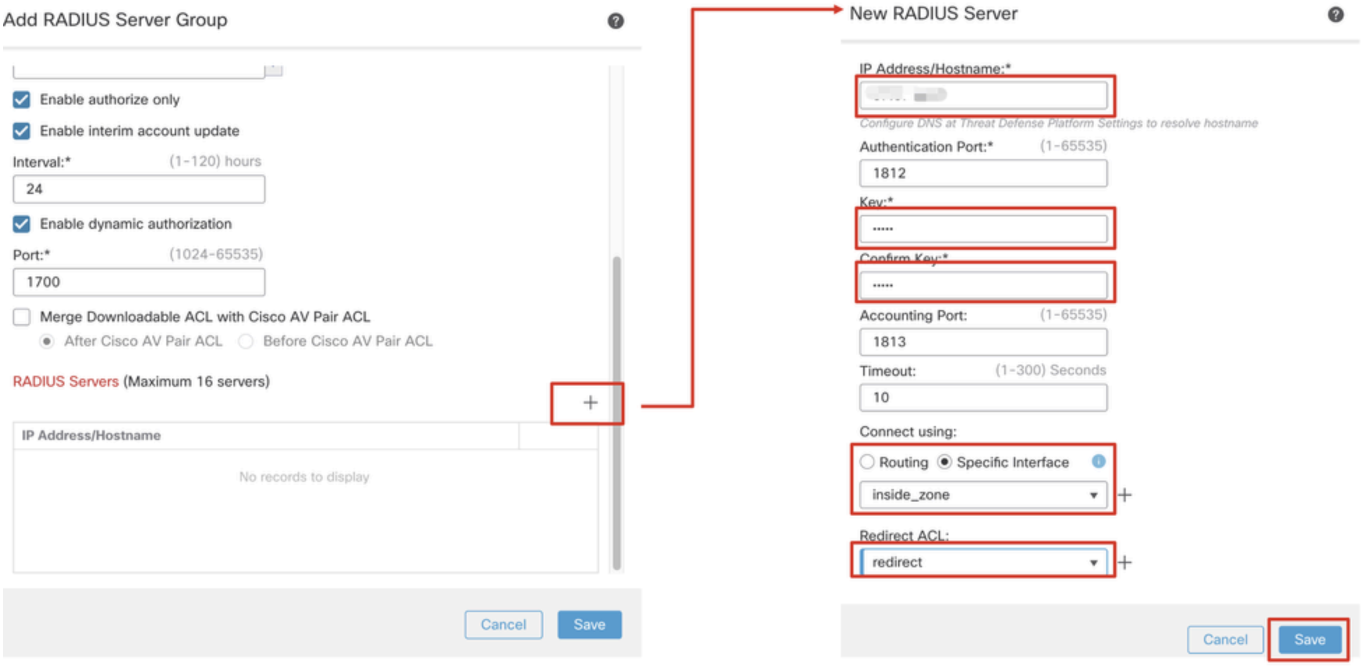
Interval:* (1-120) hours 24

☑ Enable dynamic authorization

Port:* (1024-65535)

FMC_Add_New_Radius_Server_Group_Part_1

步驟 7.2.按一下Plus 圖示增加新的RADIUS伺服器。提供ISE PSNIP Address/Hostname, Key。選擇specific interface進行連線。選擇Redirect ACL。然後按一下Save儲存新的RADIUS伺服器。然後再次按一下Save，儲存新的RADIUS伺服器組。



Add RADIUS Server Group

☑ Enable authorize only

☑ Enable interim account update

Interval:* (1-120) hours: 24

☑ Enable dynamic authorization

Port:* (1024-65535): 1700

□ Merge Downloadable ACL with Cisco AV Pair ACL

● After Cisco AV Pair ACL ○ Before Cisco AV Pair ACL

RADIUS Servers (Maximum 16 servers)

IP Address/Hostname
No records to display

New RADIUS Server

IP Address/Hostname:*: [redacted]

Configure DNS at Threat Defense Platform Settings to resolve hostname

Authentication Port:* (1-65535): 1812

Key:*: •••••

Confirm Key:*: •••••

Accounting Port: (1-65535): 1813

Timeout: (1-300) Seconds: 10

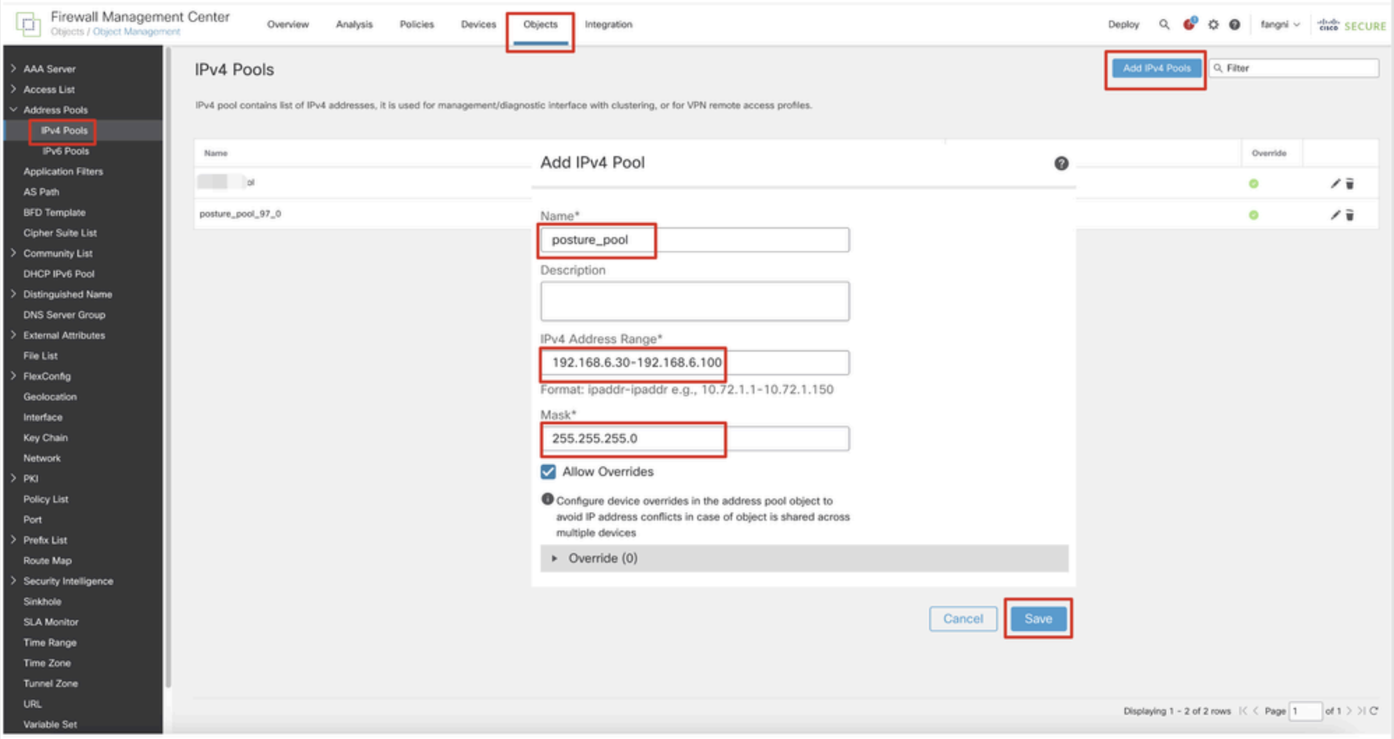
Connect using: ○ Routing ● Specific Interface

inside_zone

Redirect ACL: redirect

FMC_Add_New_Radius_Server_Group_Part_2

步驟 8. 導航到Objects > Object Management > Address Pools > IPv4 Pools。按一下Add IPv4 Pools並提供**Name, IPv4 Address Range**和Mask。然後按一下Save。



IPv4 Pools

IPv4 pool contains list of IPv4 addresses, it is used for management/diagnostic interface with clustering, or for VPN remote access profiles.

Name	Override
[redacted]ol	●
posture_pool_97_0	●

Add IPv4 Pool

Name*: posture_pool

Description:

IPv4 Address Range*: 192.168.6.30-192.168.6.100

Format: ipaddr-ipaddr e.g., 10.72.1.1-10.72.1.150

Mask*: 255.255.255.0

☑ Allow Overrides

Configure device overrides in the address pool object to avoid IP address conflicts in case of object is shared across multiple devices

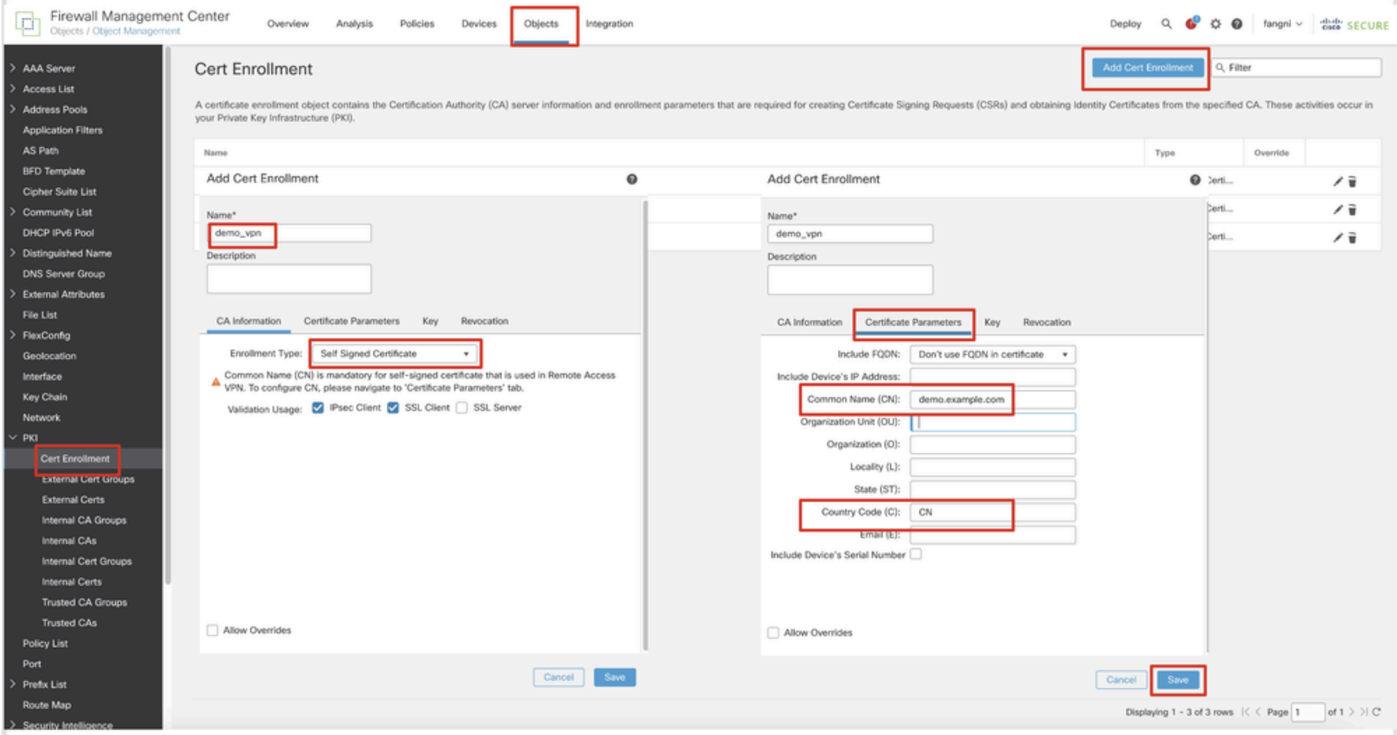
▸ Override (0)

Displaying 1 - 2 of 2 rows Page 1 of 1

FMC_Add_New_Pool

步驟 9. 導航到Certificate Objects > Object Management > PKI > Cert Enrollment。按一下Add Cert Enrollment，提供一個名稱，然後在

Enrollment Type中選擇Self Signed Certificate。按一下Certificate Parameters頁籤，然後提供Common Name和Country Code。然後按一下Save。



Firewall Management Center
Objects / Object Management

Cert Enrollment

A certificate enrollment object contains the Certification Authority (CA) server information and enrollment parameters that are required for creating Certificate Signing Requests (CSRs) and obtaining Identity Certificates from the specified CA. These activities occur in your Private Key Infrastructure (PKI).

Add Cert Enrollment

Name*: demo_vpn

Description

CA Information | Certificate Parameters | Key | Revocation

Enrollment Type: Self Signed Certificate

Common Name (CN) is mandatory for self-signed certificate that is used in Remote Access VPN. To configure CN, please navigate to 'Certificate Parameters' tab.

Validation Usage: ☑ IPsec Client ☑ SSL Client □ SSL Server

□ Allow Overrides

Add Cert Enrollment

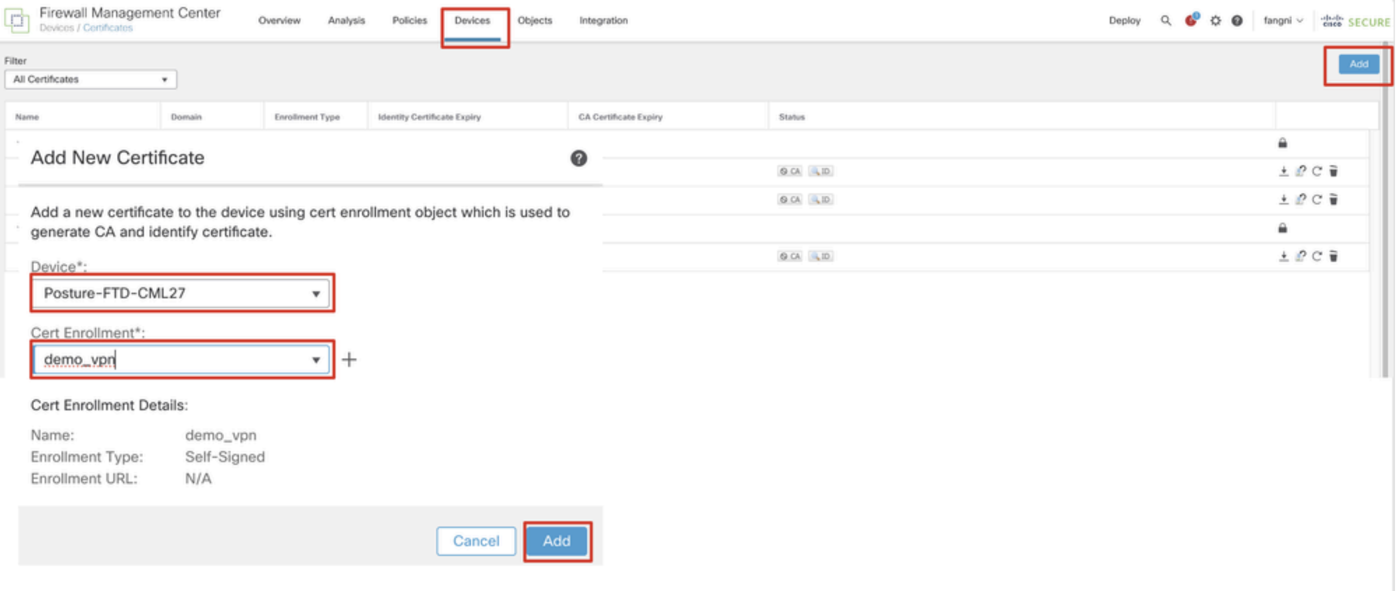
Name*: demo_vpn

Include FQDN: Don't use FQDN in certificate
Include Device's IP Address:
Common Name (CN): demo.example.com
Organization Unit (OU):
Organization (O):
Locality (L):
State (ST):
Country Code (C): CN
Email (E):
Include Device's Serial Number □

□ Allow Overrides

FMC_Add_New_Cert_Enroll

步驟 10. 導航到Devices > Certificates。點選Add，在Device下選擇FTD名稱，在Cert Enrollment下選擇以前配置的註冊。按一下Add。



Firewall Management Center
Devices / Certificates

Add New Certificate

Add a new certificate to the device using cert enrollment object which is used to generate CA and identify certificate.

Device*: Posture-FTD-CML27

Cert Enrollment*: demo_vpn

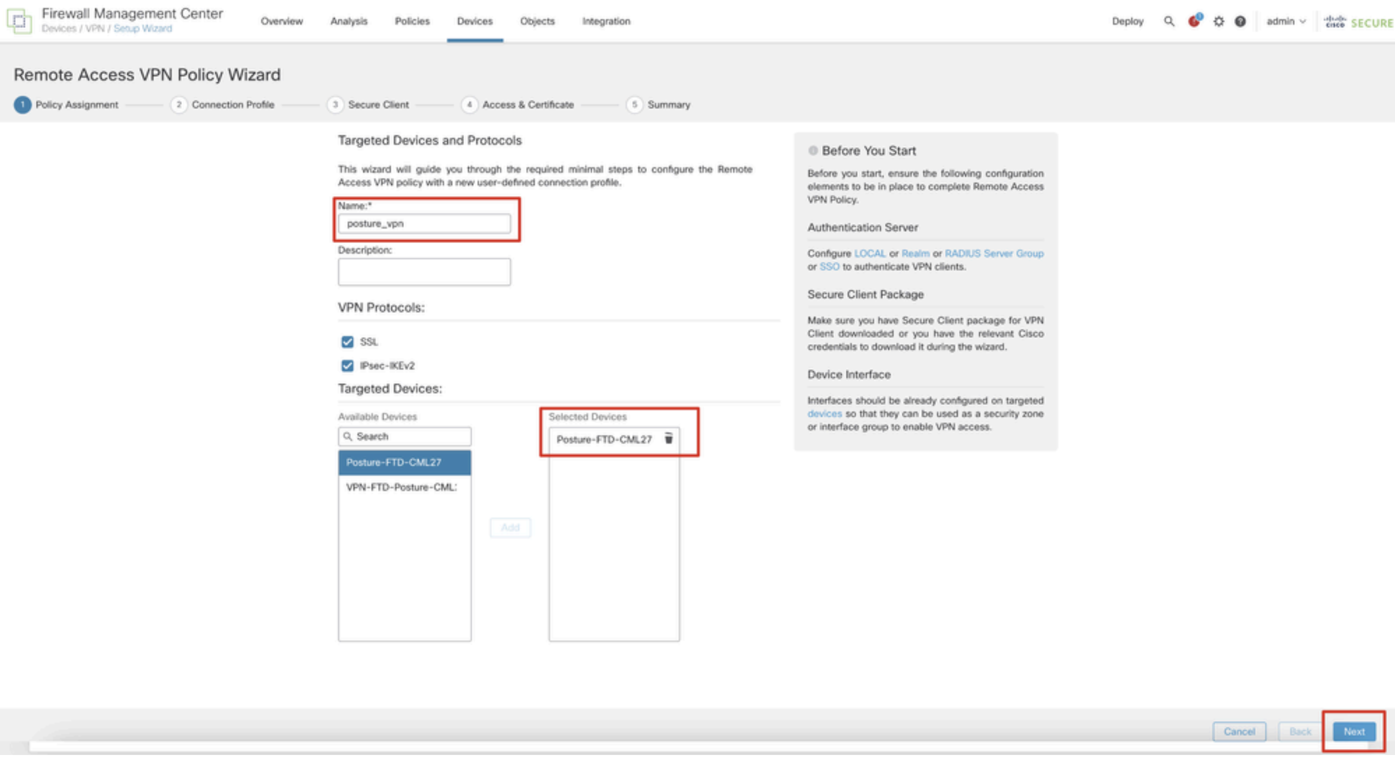
Cert Enrollment Details:

Name: demo_vpn
Enrollment Type: Self-Signed
Enrollment URL: N/A

FMC_Add_New_Cert_To_FTD

步驟 11. 導航到Devices > VPN > Remote Access。按一下Add。

步驟 11.1.提供名稱，並新增FTD至Selected Devices。按一下Next。



Firewall Management Center
Devices / VPN / Setup Wizard

Remote Access VPN Policy Wizard

1 Policy Assignment — 2 Connection Profile — 3 Secure Client — 4 Access & Certificate — 5 Summary

Targeted Devices and Protocols

This wizard will guide you through the required minimal steps to configure the Remote Access VPN policy with a new user-defined connection profile.

Name:* posture_vpn

Description:

VPN Protocols:

☑ SSL

☑ IPsec-IKEv2

Targeted Devices:

Available Devices: Posture-FTD-CML27, VPN-FTD-Posture-CML:

Selected Devices: Posture-FTD-CML27

Before You Start

Before you start, ensure the following configuration elements to be in place to complete Remote Access VPN Policy.

Authentication Server

Configure LOCAL or Realm or RADIUS Server Group or SSO to authenticate VPN clients.

Secure Client Package

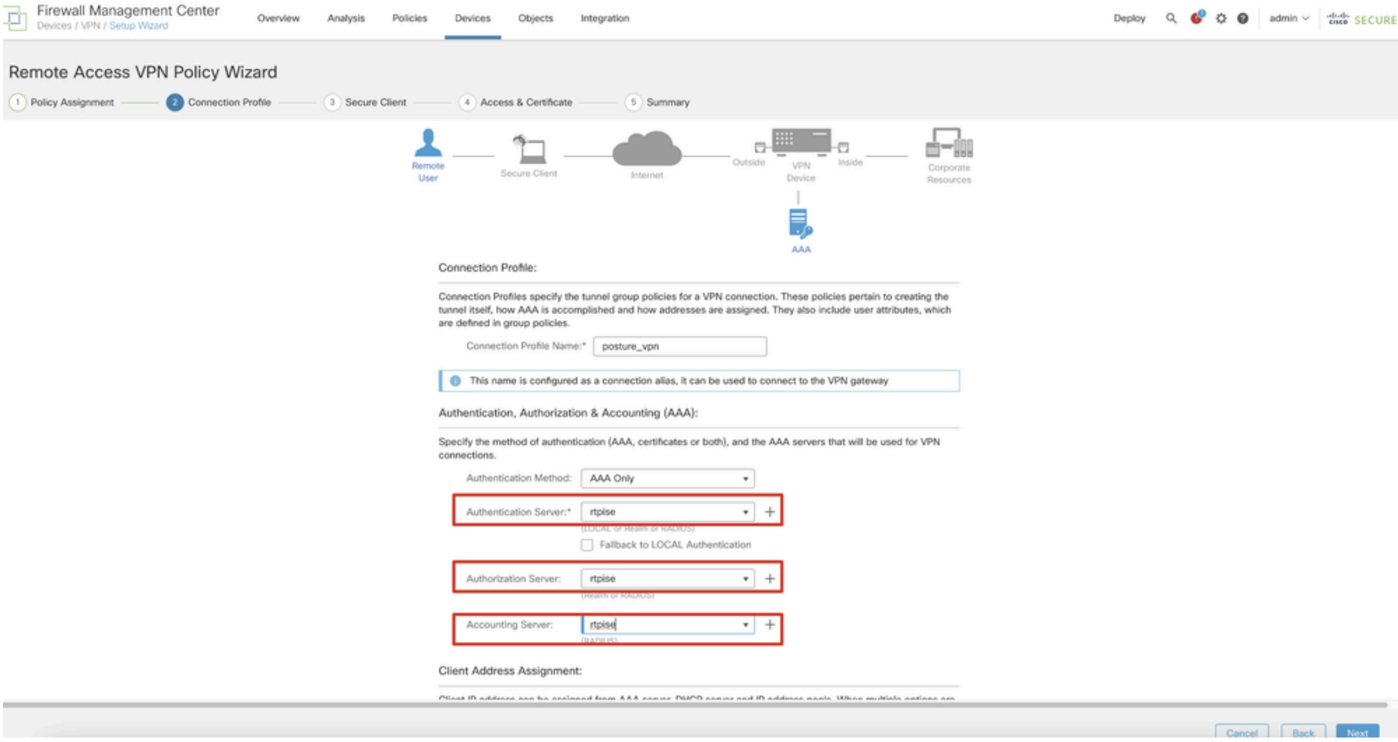
Make sure you have Secure Client package for VPN Client downloaded or you have the relevant Cisco credentials to download it during the wizard.

Device Interface

Interfaces should be already configured on targeted devices so that they can be used as a security zone or interface group to enable VPN access.

FMC_New_RAVPN_Wizard_1

步驟 11.2.在Authentication Server, Authorization Server, Accounting Server中選擇先前配置的radius伺服器組。向下捲動頁面。



Firewall Management Center
Devices / VPN / Setup Wizard

Remote Access VPN Policy Wizard

1 Policy Assignment — 2 Connection Profile — 3 Secure Client — 4 Access & Certificate — 5 Summary

Connection Profile:

Connection Profiles specify the tunnel group policies for a VPN connection. These policies pertain to creating the tunnel itself, how AAA is accomplished and how addresses are assigned. They also include user attributes, which are defined in group policies.

Connection Profile Name:* posture_vpn

This name is configured as a connection alias, it can be used to connect to the VPN gateway

Authentication, Authorization & Accounting (AAA):

Specify the method of authentication (AAA, certificates or both), and the AAA servers that will be used for VPN connections.

Authentication Method: AAA Only

Authentication Server:* rtpise (LOCAL or Realm or RADIUS)

□ Fallback to LOCAL Authentication

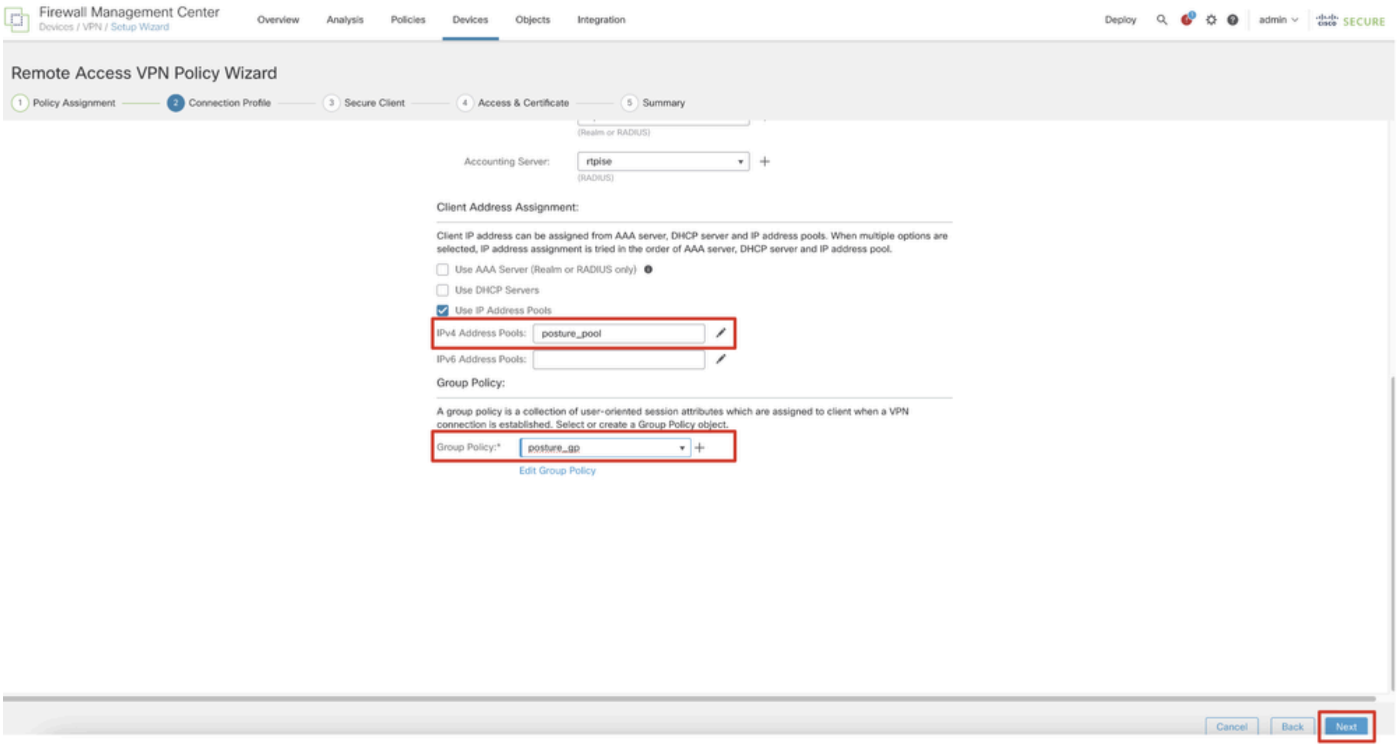
Authorization Server: rtpise (Realm or RADIUS)

Accounting Server: rtpise (RADIUS)

Client Address Assignment:

FMC_New_RAVPN_Wizard_2

步驟 11.3.在IPv4 Address Pools中選擇以前配置的池名稱。在Group Policy中選擇以前配置的組策略。按一下Next。



(Realm or RADIUS)

Accounting Server: rtpise
(RADIUS)

Client Address Assignment:

Client IP address can be assigned from AAA server, DHCP server and IP address pools. When multiple options are selected, IP address assignment is tried in the order of AAA server, DHCP server and IP address pool.

□ Use AAA Server (Realm or RADIUS only)
□ Use DHCP Servers
☑ Use IP Address Pools

IPv4 Address Pools: posture_pool
IPv6 Address Pools:

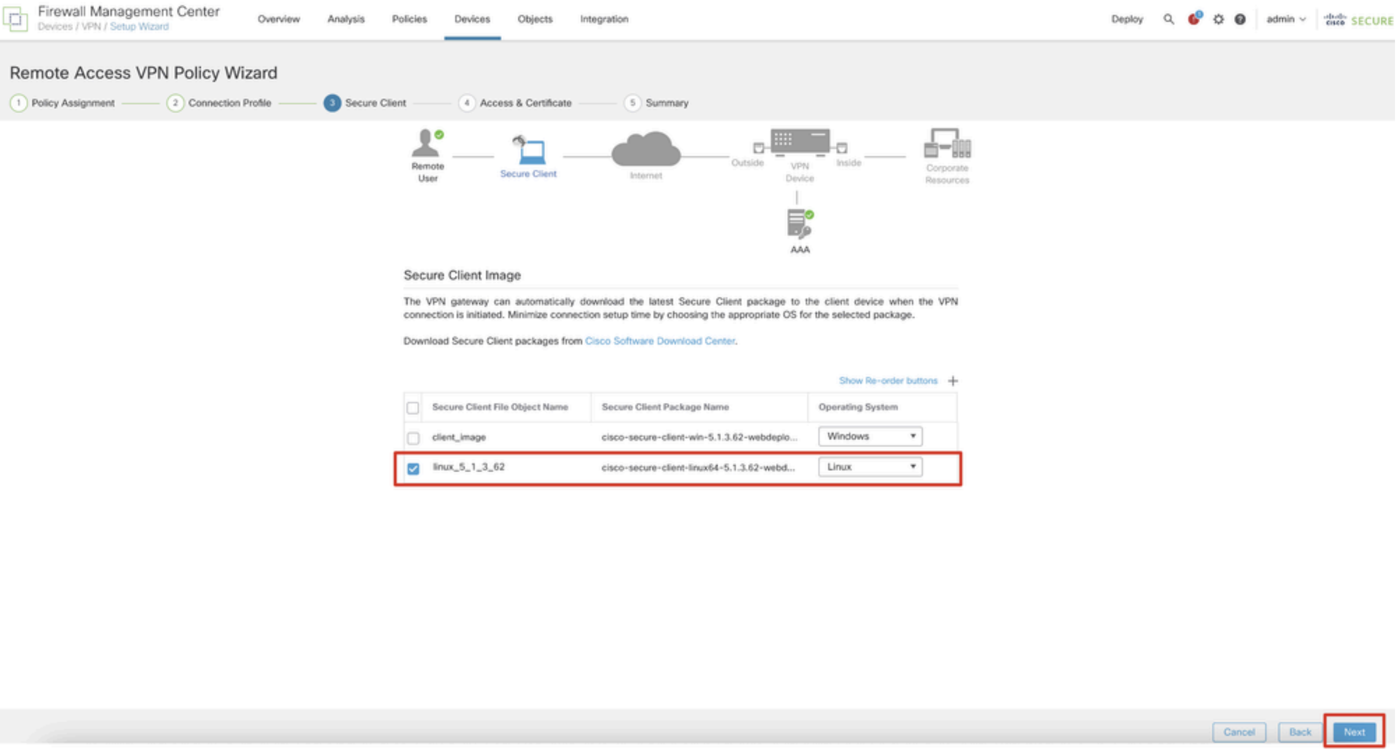
Group Policy:

A group policy is a collection of user-oriented session attributes which are assigned to client when a VPN connection is established. Select or create a Group Policy object.

Group Policy:* posture_gp
Edit Group Policy

FMC_New_RAVPN_Wizard_3

步驟 11.4.選中Linux映像的覈取方塊。按一下Next。



Secure Client Image

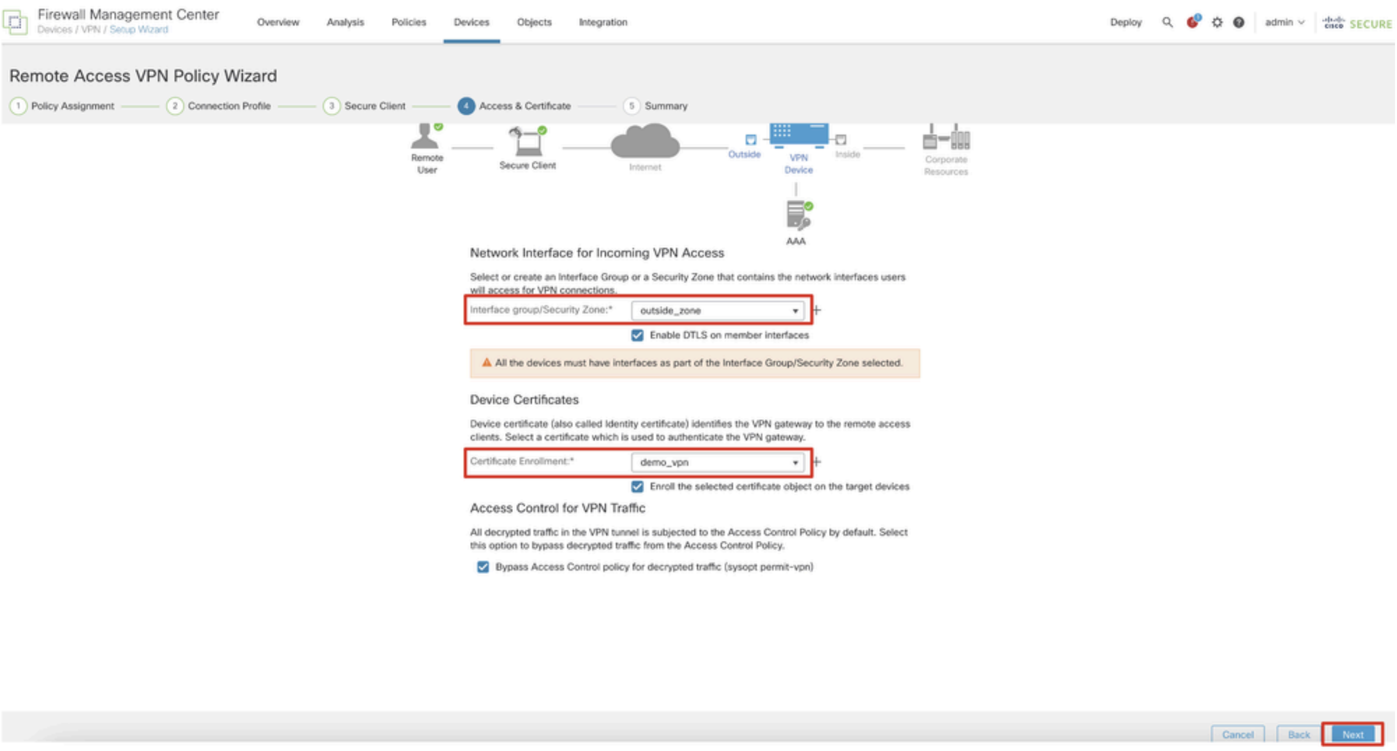
The VPN gateway can automatically download the latest Secure Client package to the client device when the VPN connection is initiated. Minimize connection setup time by choosing the appropriate OS for the selected package.

Download Secure Client packages from Cisco Software Download Center.

□	Secure Client File Object Name	Secure Client Package Name	Operating System
□	client_image	cisco-secure-client-win-5.1.3.62-webdeplo...	Windows
☑	linux_5_1_3_62	cisco-secure-client-linux64-5.1.3.62-webd...	Linux

FMC_New_RAVPN_Wizard_4

步驟 11.5.選擇VPN介面的介面。選取在步驟9中註冊FTD的憑證註冊。按一下Next。



Network Interface for Incoming VPN Access

Select or create an Interface Group or a Security Zone that contains the network interfaces users will access for VPN connections.

Interface group/Security Zone:* outside_zone

☑ Enable DTLS on member interfaces

All the devices must have interfaces as part of the Interface Group/Security Zone selected.

Device Certificates

Device certificate (also called Identity certificate) identifies the VPN gateway to the remote access clients. Select a certificate which is used to authenticate the VPN gateway.

Certificate Enrollment:* demo_vpn

☑ Enroll the selected certificate object on the target devices

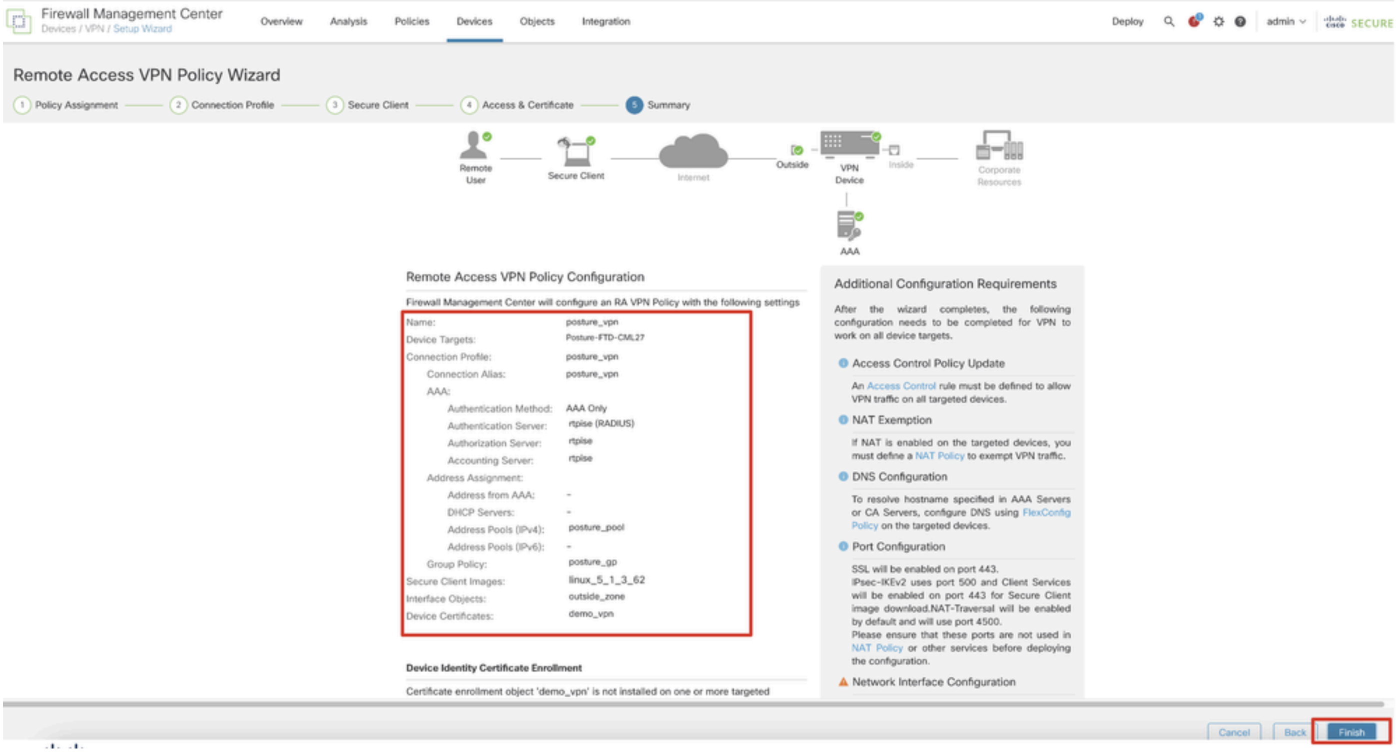
Access Control for VPN Traffic

All decrypted traffic in the VPN tunnel is subjected to the Access Control Policy by default. Select this option to bypass decrypted traffic from the Access Control Policy.

☑ Bypass Access Control policy for decrypted traffic (sysopt permit-vpn)

FMC_New_RAVPN_Wizard_5

步驟 11.6.在摘要頁面上重複確認相關資訊。如果一切正常，請按一下Finish。如果需要修改任何內容，請按一下Back。



Remote Access VPN Policy Configuration

Firewall Management Center will configure an RA VPN Policy with the following settings

Name:	posture_vpn
Device Targets:	Posture-FTD-CML27
Connection Profile:	posture_vpn
Connection Alias:	posture_vpn
AAA:	
Authentication Method:	AAA Only
Authentication Server:	rtpise (RADIUS)
Authorization Server:	rtpise
Accounting Server:	rtpise
Address Assignment:	
Address from AAA:	-
DHCP Servers:	-
Address Pools (IPv4):	posture_pool
Address Pools (IPv6):	-
Group Policy:	posture_gp
Secure Client Images:	linux_5_1_3_62
Interface Objects:	outside_zone
Device Certificates:	demo_vpn

Device Identity Certificate Enrollment

Certificate enrollment object 'demo_vpn' is not installed on one or more targeted

Additional Configuration Requirements

After the wizard completes, the following configuration needs to be completed for VPN to work on all device targets.

Access Control Policy Update

An Access Control rule must be defined to allow VPN traffic on all targeted devices.

NAT Exemption

If NAT is enabled on the targeted devices, you must define a NAT Policy to exempt VPN traffic.

DNS Configuration

To resolve hostname specified in AAA Servers or CA Servers, configure DNS using FlexConfig Policy on the targeted devices.

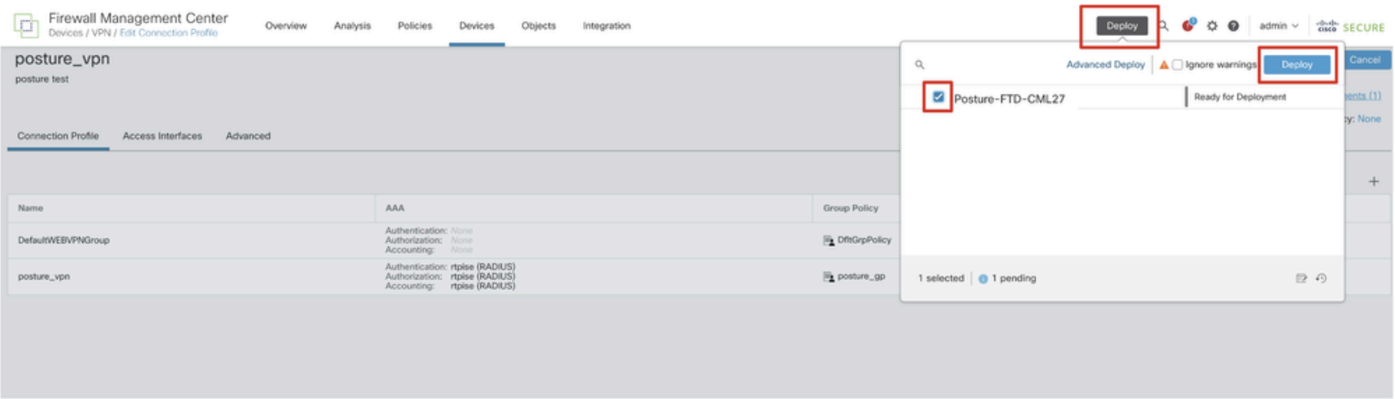
Port Configuration

SSL will be enabled on port 443.
IPsec-IKEv2 uses port 500 and Client Services will be enabled on port 443 for Secure Client image download.NAT-Traversal will be enabled by default and will use port 4500.
Please ensure that these ports are not used in NAT Policy or other services before deploying the configuration.

Network Interface Configuration

FMC_New_RAVPN_Wizard_6

步驟 12.將新組態部署到FTD以完成遠端存取VPN組態。

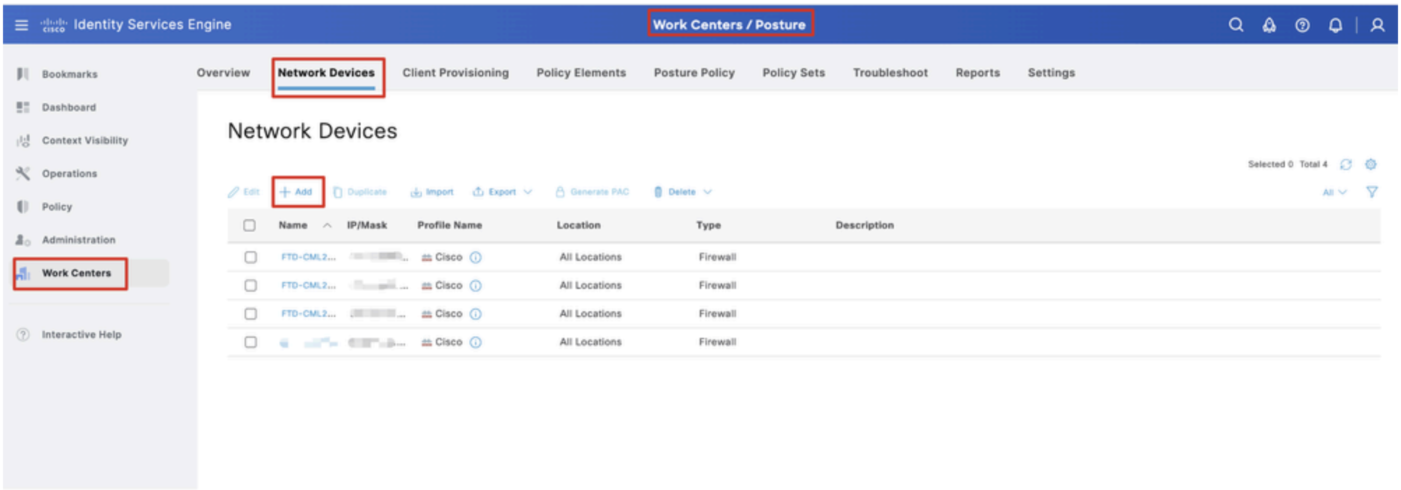


Name	AAA	Group Policy
DefaultWEBVPNGroup	Authentication: None Authorization: None Accounting: None	DfltGrpPolicy
posture_vpn	Authentication: rtpise (RADIUS) Authorization: rtpise (RADIUS) Accounting: rtpise (RADIUS)	posture_gp

FMC_Deploy_FTD

ISE上的配置

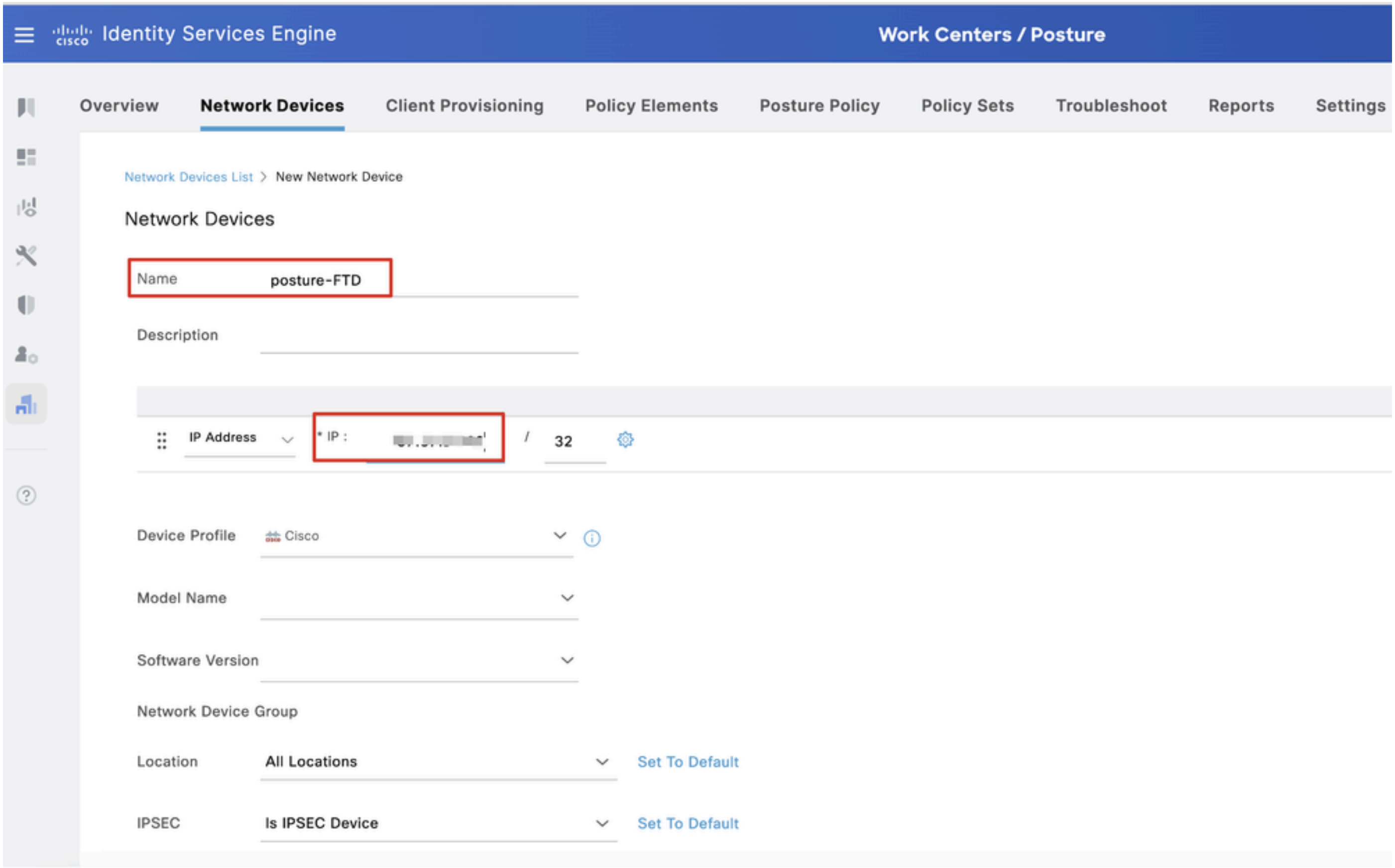
步驟 13. 導航到Work Centers > Posture > Network Devices。按一下Add。



Name	IP/Mask	Profile Name	Location	Type	Description
FTD-CML2...	[redacted]	Cisco	All Locations	Firewall	
FTD-CML2...	[redacted]	Cisco	All Locations	Firewall	
FTD-CML2...	[redacted]	Cisco	All Locations	Firewall	
[redacted]	[redacted]	Cisco	All Locations	Firewall	

ISE_增加_新裝置

步驟 13.1.提供Name, IP Address並向下滾動頁面。



Network Devices List > New Network Device

Network Devices

Name posture-FTD

Description

IP Address * IP : [redacted] / 32

Device Profile Cisco

Model Name

Software Version

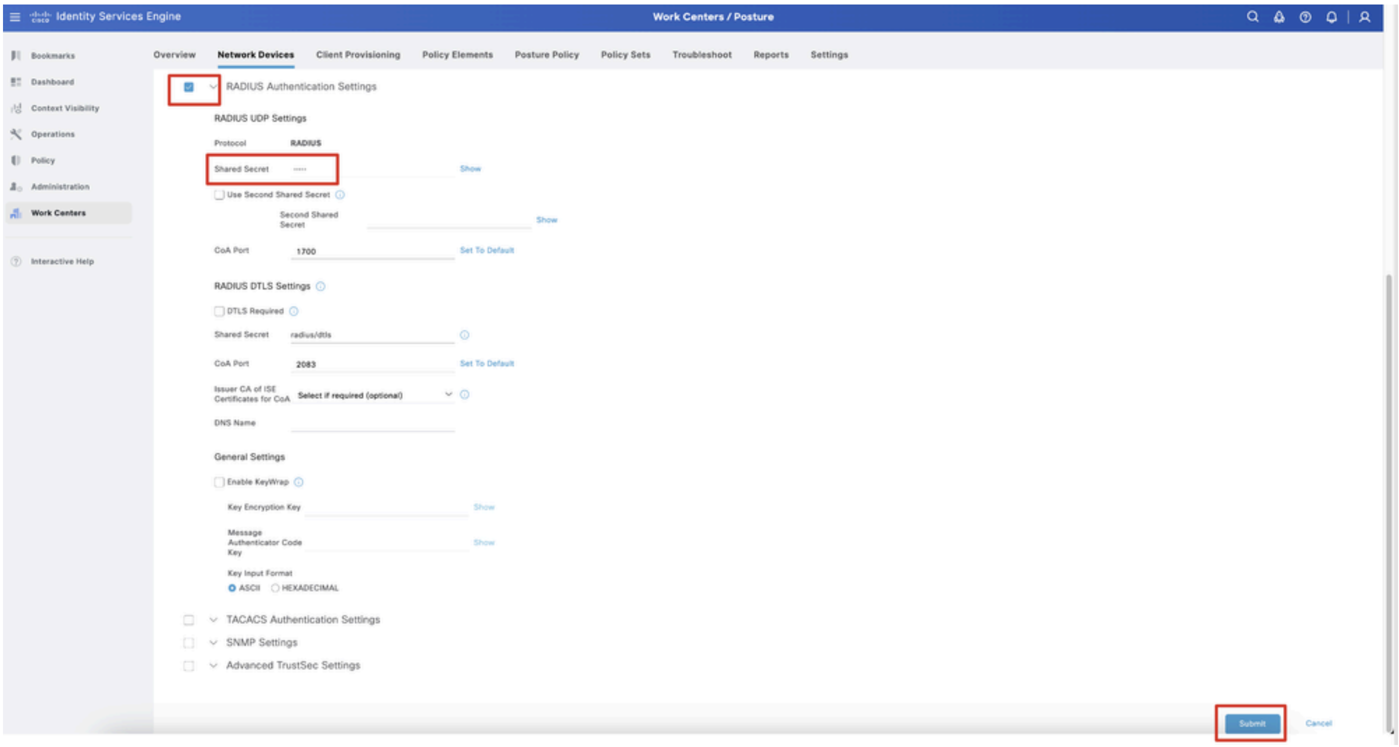
Network Device Group

Location All Locations Set To Default

IPSEC Is IPSEC Device Set To Default

ISE_增加_新裝置_1

步驟 13.2.選中RADIUS Authentication Settings覈取方塊。提供Shared Secret。按一下Submit。



☑ RADIUS Authentication Settings

RADIUS UDP Settings

Protocol RADIUS

Shared Secret ····· Show

□ Use Second Shared Secret

Second Shared Secret Show

CoA Port 1700 Set To Default

RADIUS DTLS Settings

□ DTLS Required

Shared Secret radius/dtls

CoA Port 2083 Set To Default

Issuer CA of ISE Certificates for CoA Select if required (optional)

DNS Name

General Settings

□ Enable KeyWrap

Key Encryption Key Show

Message Authenticator Code Key Show

Key Input Format

● ASCII ○ HEXADECIMAL

□ TACACS Authentication Settings

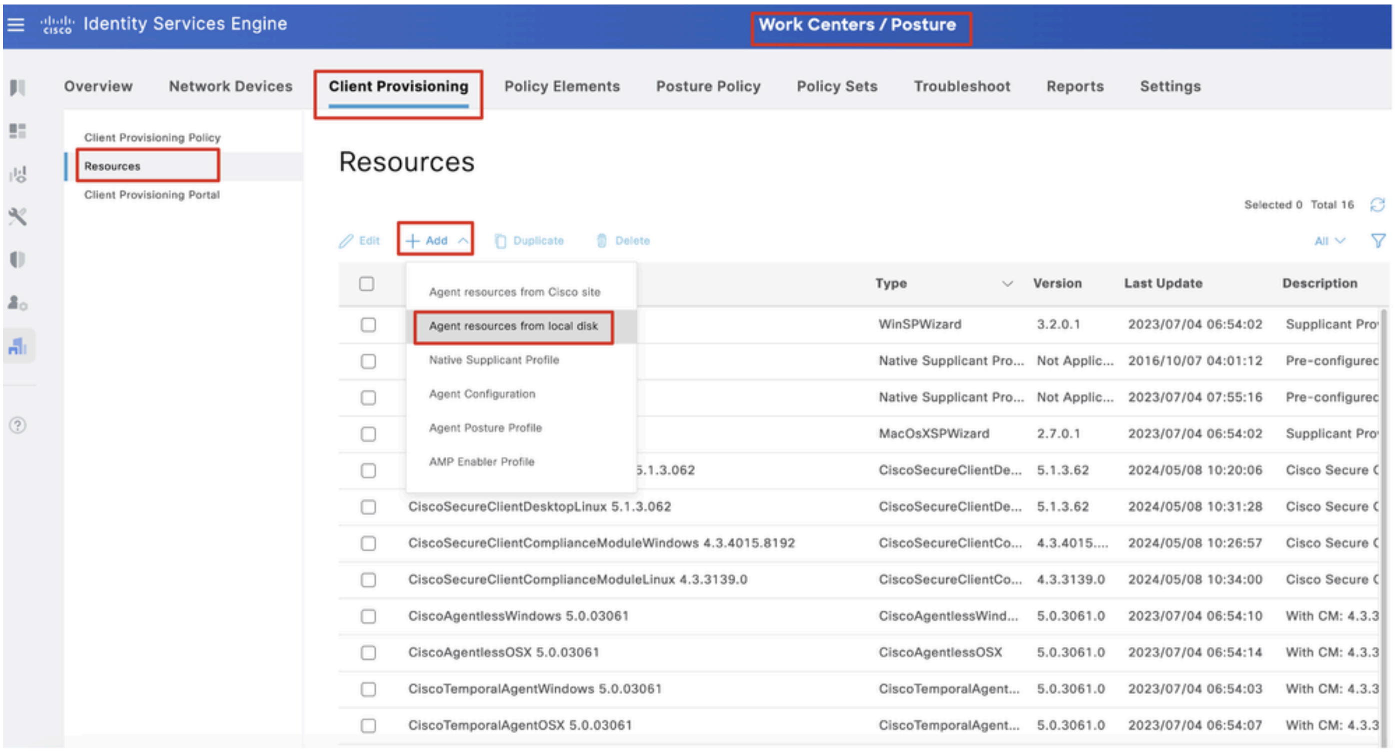
□ SNMP Settings

□ Advanced TrustSec Settings

ISE_增加_新裝置_2

步驟 14. 從[Cisco軟體下載]下載軟體套件名稱cisco-secure-client-linux64-4.3.3139.0-isecompliance-webdeploy-k9.pkg，並確認下載檔案的md5校驗和與Cisco軟體下載頁相同，從而確保檔案完好。 已在步驟1中成功下載包名稱cisco-secure-client-linux64-5.1.3.62-webdeployk9.pkg。

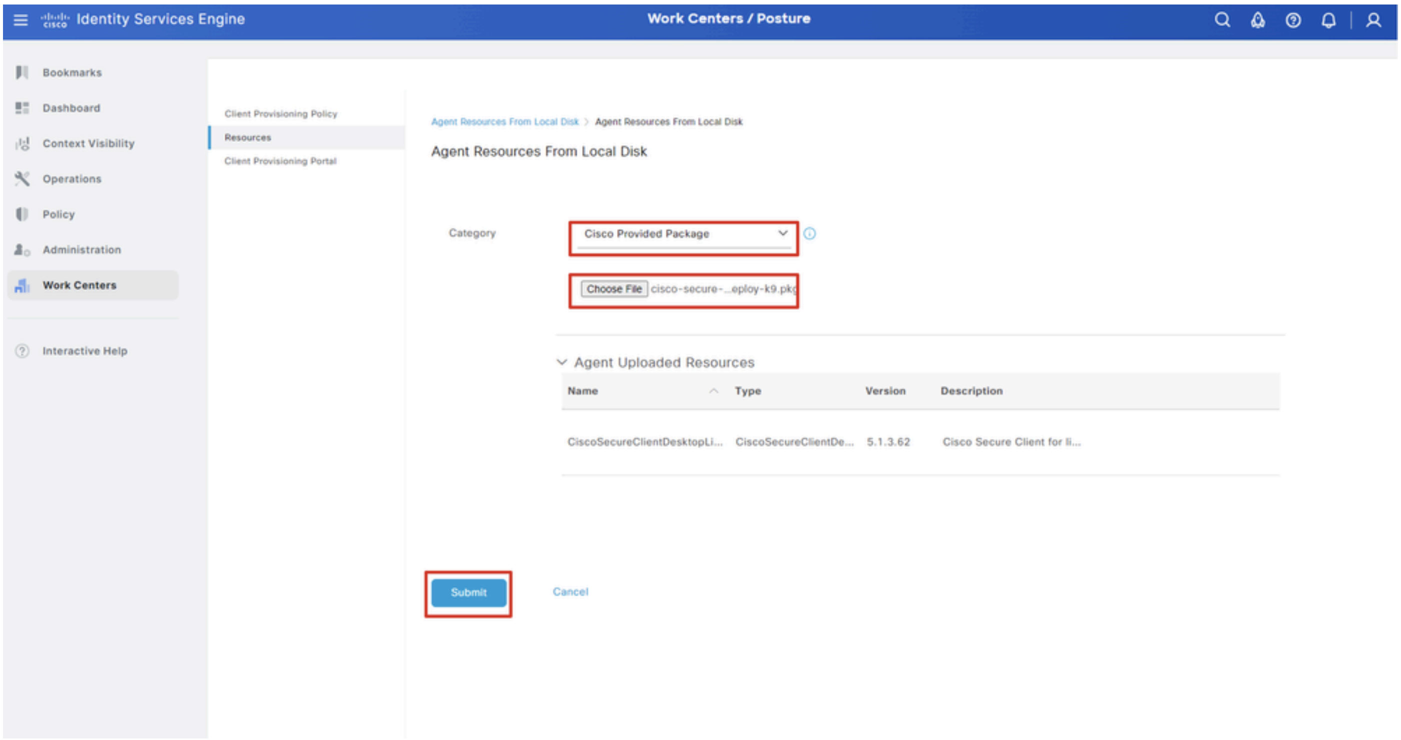
步驟 15. 導航到Work Centers > Posture > Client Provisioning > Resources。按一下Add。選擇Agent resources from local disk。



□	Name	Type	Version	Last Update	Description
□		WinSPWizard	3.2.0.1	2023/07/04 06:54:02	Supplicant Pro
□		Native Supplicant Pro...	Not Applic...	2016/10/07 04:01:12	Pre-configurec
□		Native Supplicant Pro...	Not Applic...	2023/07/04 07:55:16	Pre-configurec
□		MacOsXSPWizard	2.7.0.1	2023/07/04 06:54:02	Supplicant Pro
□	5.1.3.062	CiscoSecureClientDe...	5.1.3.62	2024/05/08 10:20:06	Cisco Secure (
□	CiscoSecureClientDesktopLinux 5.1.3.062	CiscoSecureClientDe...	5.1.3.62	2024/05/08 10:31:28	Cisco Secure (
□	CiscoSecureClientComplianceModuleWindows 4.3.4015.8192	CiscoSecureClientCo...	4.3.4015....	2024/05/08 10:26:57	Cisco Secure (
□	CiscoSecureClientComplianceModuleLinux 4.3.3139.0	CiscoSecureClientCo...	4.3.3139.0	2024/05/08 10:34:00	Cisco Secure (
□	CiscoAgentlessWindows 5.0.03061	CiscoAgentlessWind...	5.0.3061.0	2023/07/04 06:54:10	With CM: 4.3.3
□	CiscoAgentlessOSX 5.0.03061	CiscoAgentlessOSX	5.0.3061.0	2023/07/04 06:54:14	With CM: 4.3.3
□	CiscoTemporalAgentWindows 5.0.03061	CiscoTemporalAgent...	5.0.3061.0	2023/07/04 06:54:03	With CM: 4.3.3
□	CiscoTemporalAgentOSX 5.0.03061	CiscoTemporalAgent...	5.0.3061.0	2023/07/04 06:54:07	With CM: 4.3.3

ISE_Upload_Resource

步驟 15.1.選擇Cisco Provided Package。點選Choose File上傳cisco-secure-client-linux64-5.1.3.62-webdeploy-k9.pkg。按一下Submit。



Agent Resources From Local Disk

Category: Cisco Provided Package

Choose File cisco-secure-...eploy-k9.pkg

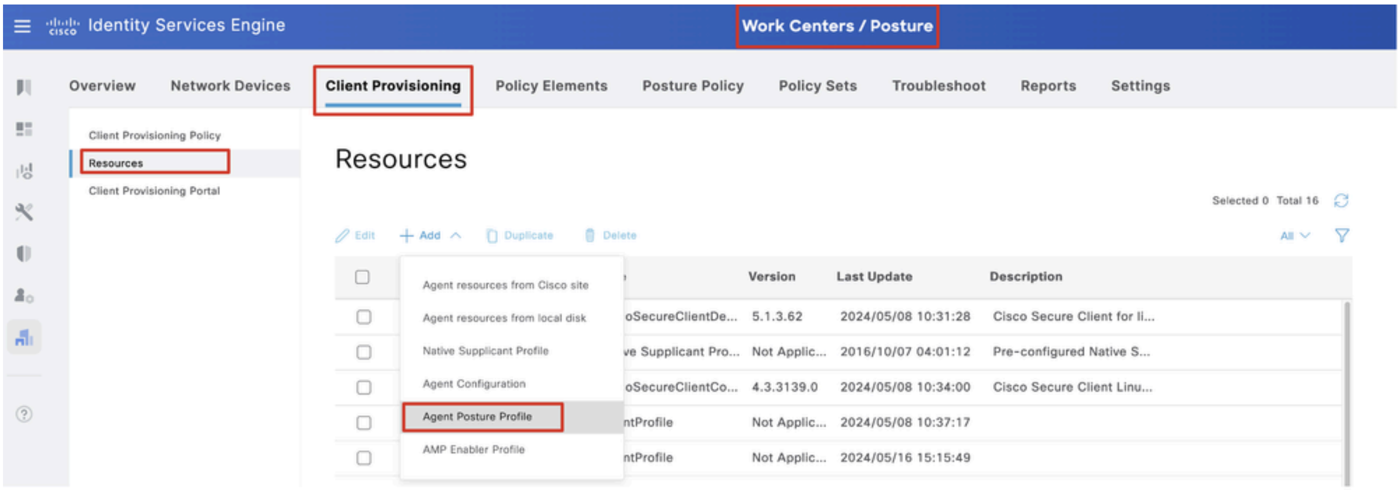
Agent Uploaded Resources

Name	Type	Version	Description
CiscoSecureClientDesktopLi...	CiscoSecureClientDe...	5.1.3.62	Cisco Secure Client for li...

ISE_Upload_Resources_1

註：重複步驟14上傳cisco-secure-client-linux64-4.3.3139.0-isecompliance-webdeploy-k9.pkg。

步驟 16. 導航到Work Centers > Posture > Client Provisioning > Resources。按一下Add。選擇Agent Posture Profile。



Resources

Selected 0 Total 16

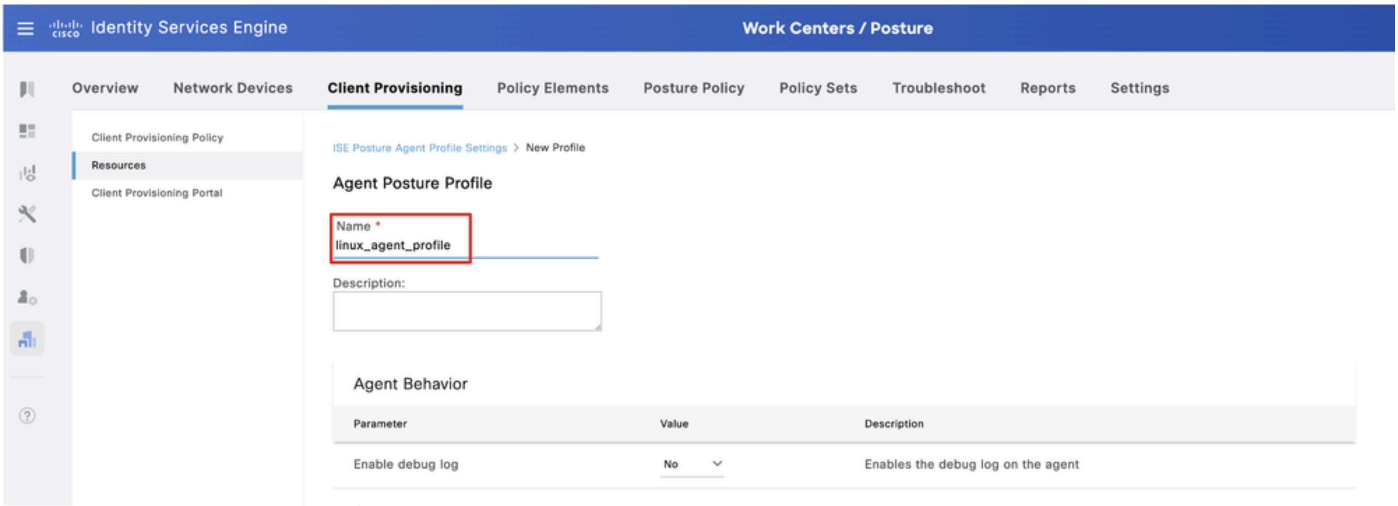
	Version	Last Update	Description
oSecureClientDe...	5.1.3.62	2024/05/08 10:31:28	Cisco Secure Client for li...
ve Supplicant Pro...	Not Applic...	2016/10/07 04:01:12	Pre-configured Native S...
oSecureClientCo...	4.3.3139.0	2024/05/08 10:34:00	Cisco Secure Client Linu...
ntProfile	Not Applic...	2024/05/08 10:37:17	
ntProfile	Not Applic...	2024/05/16 15:15:49	

ISE_Add_Agent_Posture_Profile

步驟 16.1.提供Name, Server name rules(並將其余的保留為預設值)。按一下Save。

名稱：linux_agent_profile

伺服器名稱規則：*.example.com



Agent Posture Profile

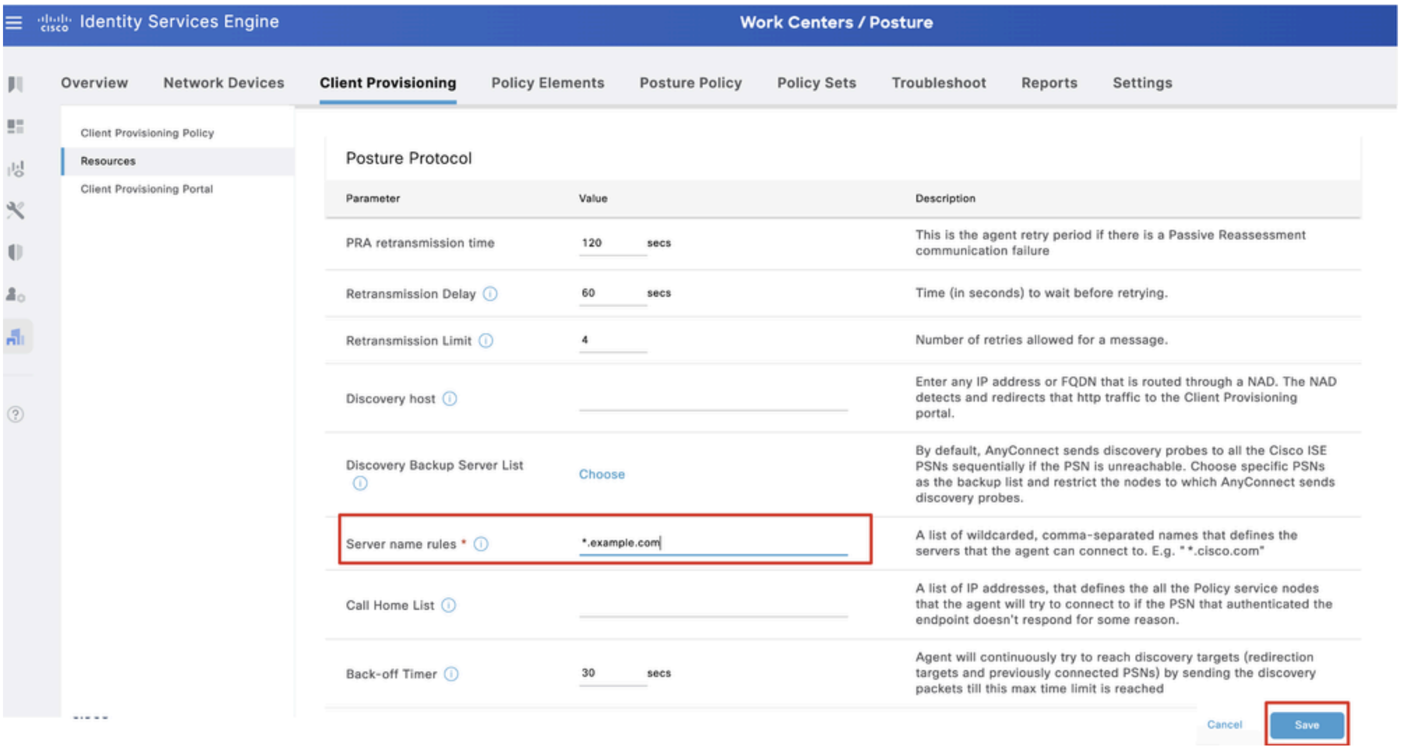
Name * linux_agent_profile

Description:

Agent Behavior

Parameter	Value	Description
Enable debug log	No	Enables the debug log on the agent

ISE_Add_Agent_Posture_Profile_1

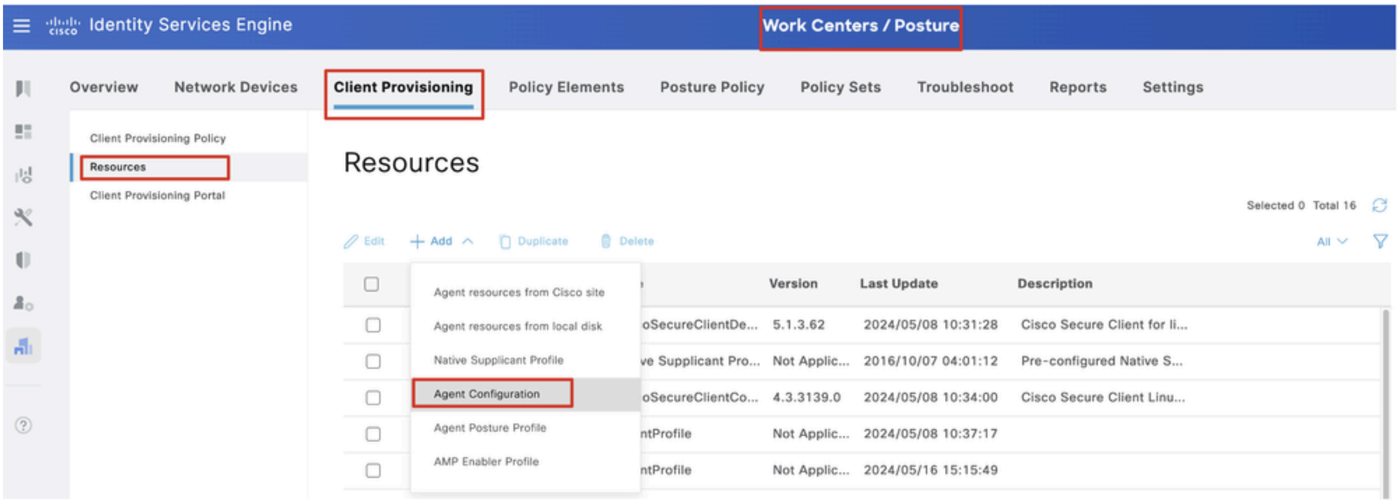


Posture Protocol

Parameter	Value	Description
PRA retransmission time	120 secs	This is the agent retry period if there is a Passive Reassessment communication failure
Retransmission Delay ⓘ	60 secs	Time (in seconds) to wait before retrying.
Retransmission Limit ⓘ	4	Number of retries allowed for a message.
Discovery host ⓘ		Enter any IP address or FQDN that is routed through a NAD. The NAD detects and redirects that http traffic to the Client Provisioning portal.
Discovery Backup Server List ⓘ	Choose	By default, AnyConnect sends discovery probes to all the Cisco ISE PSNs sequentially if the PSN is unreachable. Choose specific PSNs as the backup list and restrict the nodes to which AnyConnect sends discovery probes.
Server name rules * ⓘ	*.example.com	A list of wildcarded, comma-separated names that defines the servers that the agent can connect to. E.g. "*.cisco.com"
Call Home List ⓘ		A list of IP addresses, that defines the all the Policy service nodes that the agent will try to connect to if the PSN that authenticated the endpoint doesn't respond for some reason.
Back-off Timer ⓘ	30 secs	Agent will continuously try to reach discovery targets (redirection targets and previously connected PSNs) by sending the discovery packets till this max time limit is reached

ISE_Add_Agent_Posture_Profile_2

步驟 17. 導航到Work Centers > Posture > Client Provisioning > Resources。按一下Add。選擇Agent Configuration。



	Version	Last Update	Description
oSecureClientDe...	5.1.3.62	2024/05/08 10:31:28	Cisco Secure Client for li...
ve Supplicant Pro...	Not Applic...	2016/10/07 04:01:12	Pre-configured Native S...
oSecureClientCo...	4.3.3139.0	2024/05/08 10:34:00	Cisco Secure Client Linu...
ntProfile	Not Applic...	2024/05/08 10:37:17	
ntProfile	Not Applic...	2024/05/16 15:15:49	

ISE增加代理配置

步驟 17.2.配置詳細資訊：

選取代理程式套件：CiscoSecureClientDesktopLinux 5.1.3.062

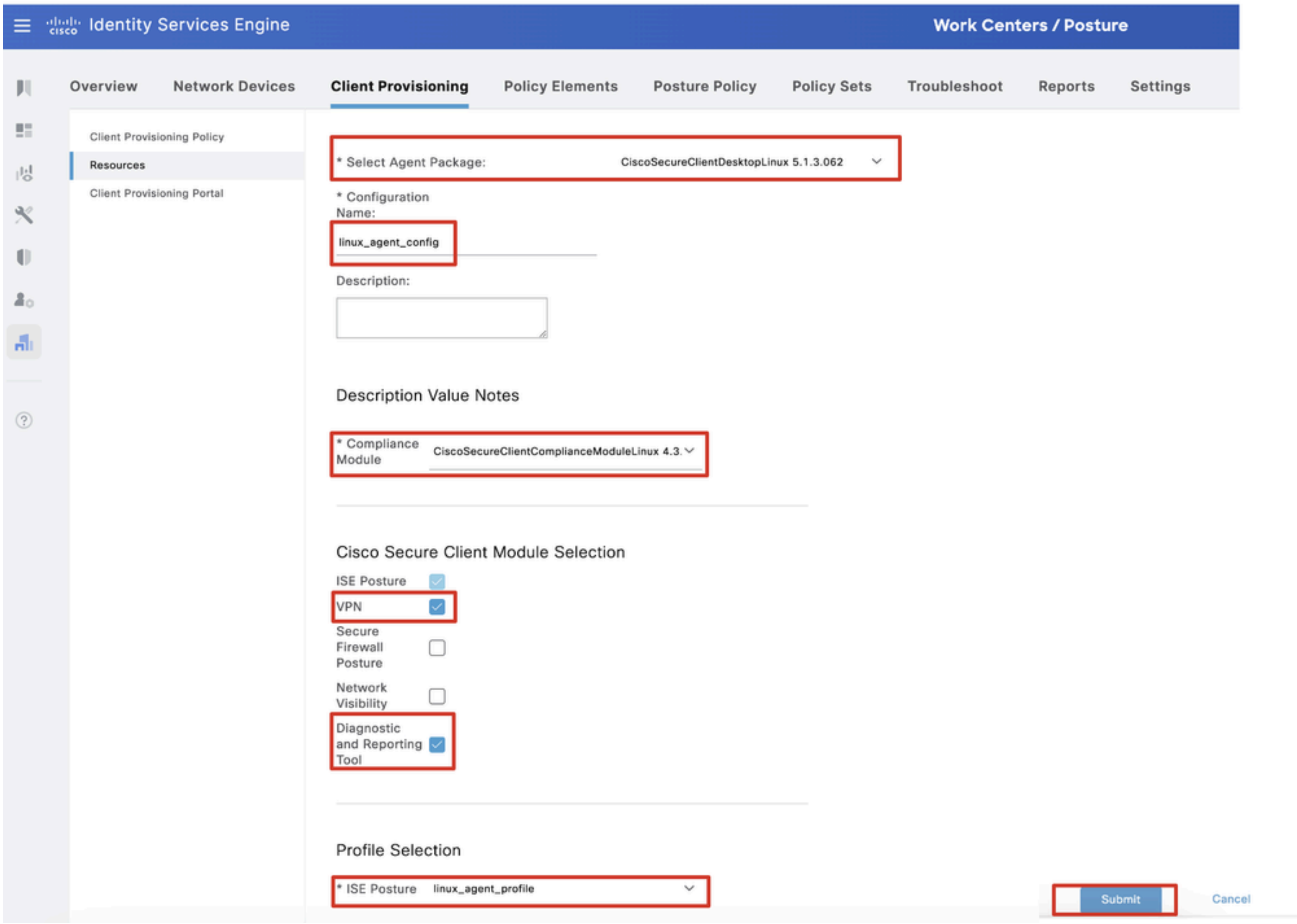
名稱：linux_agent_config

合規性模組：CiscoSecureClientComplianceModuleLinux 4.3.3139.0

核取核取方塊 VPN, Diagnostic and Reporting Tool

配置檔案選擇ISE終端安全評估：linux_agent_profile

按一下Submit。



* Select Agent Package: CiscoSecureClientDesktopLinux 5.1.3.062

* Configuration Name: linux_agent_config

Description:

Description Value Notes

* Compliance Module CiscoSecureClientComplianceModuleLinux 4.3.

Cisco Secure Client Module Selection

ISE Posture ☑

VPN ☑

Secure Firewall Posture □

Network Visibility □

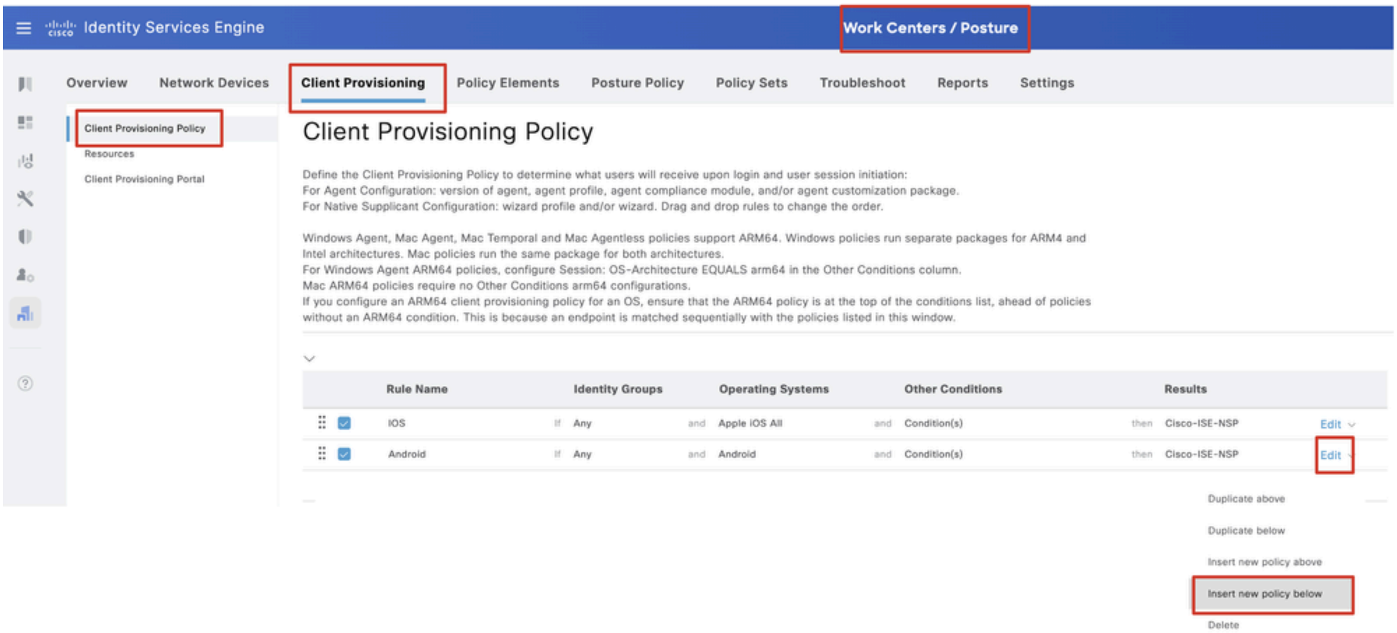
Diagnostic and Reporting Tool ☑

Profile Selection

* ISE Posture linux_agent_profile

ISE_Add_Agent_Configuration_1

步驟 18. 導航到Work Centers > Posture > Client Provisioning > Client Provisioning Policy。在任何規則名稱的末尾按一下Edit 。選擇Insert new policy below。



Client Provisioning Policy

Define the Client Provisioning Policy to determine what users will receive upon login and user session initiation:
For Agent Configuration: version of agent, agent profile, agent compliance module, and/or agent customization package.
For Native Supplicant Configuration: wizard profile and/or wizard. Drag and drop rules to change the order.

Windows Agent, Mac Agent, Mac Temporal and Mac Agentless policies support ARM64. Windows policies run separate packages for ARM4 and Intel architectures. Mac policies run the same package for both architectures.
For Windows Agent ARM64 policies, configure Session: OS-Architecture EQUALS arm64 in the Other Conditions column.
Mac ARM64 policies require no Other Conditions arm64 configurations.
If you configure an ARM64 client provisioning policy for an OS, ensure that the ARM64 policy is at the top of the conditions list, ahead of policies without an ARM64 condition. This is because an endpoint is matched sequentially with the policies listed in this window.

	Rule Name		Identity Groups		Operating Systems		Other Conditions		Results	
☑	IOS	If	Any	and	Apple iOS All	and	Condition(s)	then	Cisco-ISE-NSP	Edit
☑	Android	If	Any	and	Android	and	Condition(s)	then	Cisco-ISE-NSP	Edit

*ISE_*

增加_新建_調配_策略

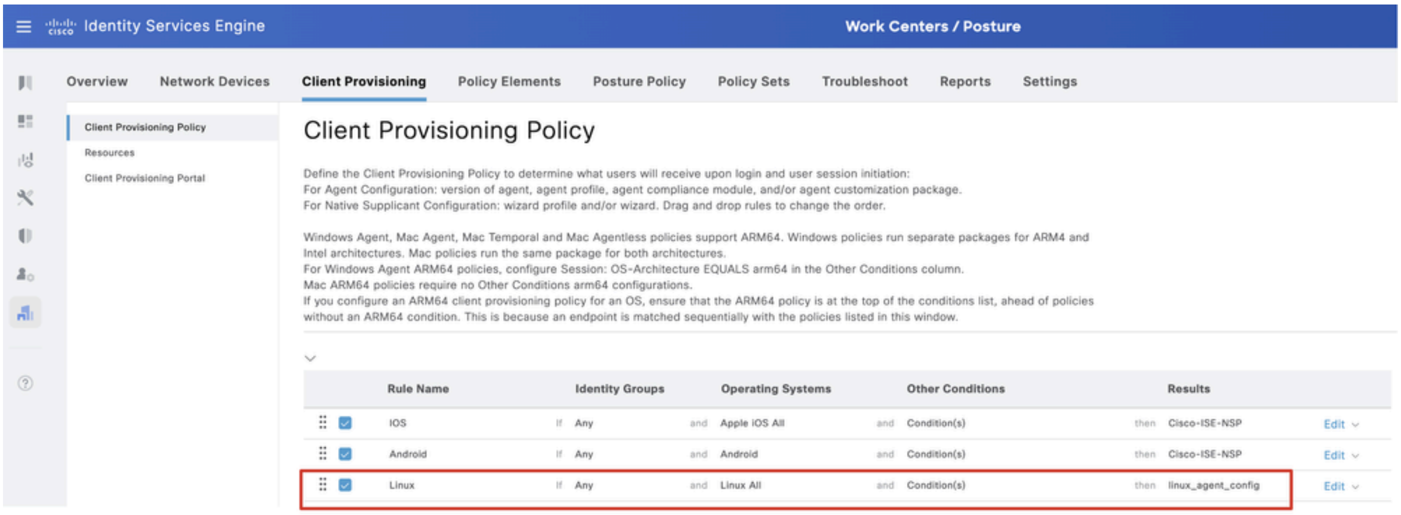
步驟 18.1. 配置詳細資訊：

規則名稱：Linux

作業系統：Linux All

結果：linux_agent_config

按一下Done 和Save。



Client Provisioning Policy

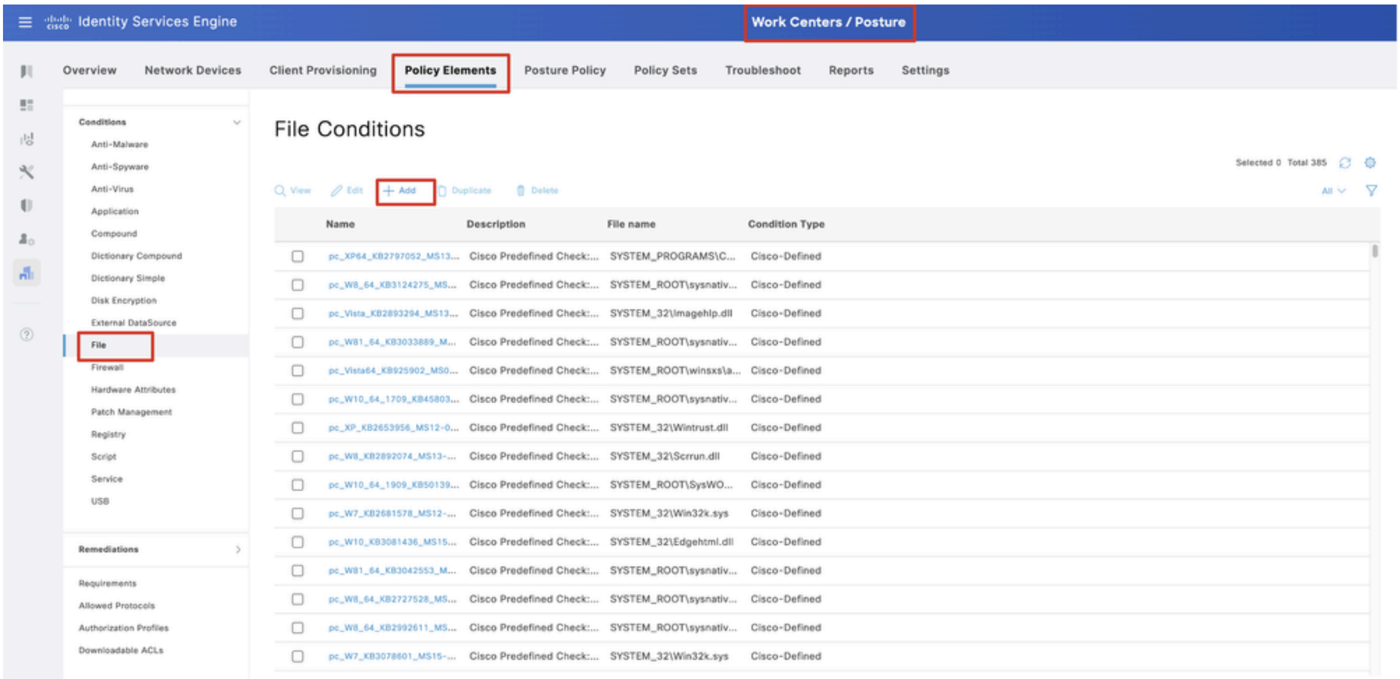
Define the Client Provisioning Policy to determine what users will receive upon login and user session initiation:
For Agent Configuration: version of agent, agent profile, agent compliance module, and/or agent customization package.
For Native Supplicant Configuration: wizard profile and/or wizard. Drag and drop rules to change the order.

Windows Agent, Mac Agent, Mac Temporal and Mac Agentless policies support ARM64. Windows policies run separate packages for ARM4 and Intel architectures. Mac policies run the same package for both architectures.
For Windows Agent ARM64 policies, configure Session: OS-Architecture EQUALS arm64 in the Other Conditions column.
Mac ARM64 policies require no Other Conditions arm64 configurations.
If you configure an ARM64 client provisioning policy for an OS, ensure that the ARM64 policy is at the top of the conditions list, ahead of policies without an ARM64 condition. This is because an endpoint is matched sequentially with the policies listed in this window.

	Rule Name		Identity Groups		Operating Systems		Other Conditions		Results	
☑	IOS	If	Any	and	Apple iOS All	and	Condition(s)	then	Cisco-ISE-NSP	Edit
☑	Android	If	Any	and	Android	and	Condition(s)	then	Cisco-ISE-NSP	Edit
☑	Linux	If	Any	and	Linux All	and	Condition(s)	then	linux_agent_config	Edit

ISE_Add_New_Provising_Policy_1

步驟 19. 導航到Work Centers > Posture > Policy Elements > Conditions > File。按一下Add。



File Conditions

	Name	Description	File name	Condition Type
□	pc_XP64_KB2797052_MS13...	Cisco Predefined Check:...	SYSTEM_PROGRAMS\C...	Cisco-Defined
□	pc_W8_64_KB3124275_MS...	Cisco Predefined Check:...	SYSTEM_ROOT\sysnativ...	Cisco-Defined
□	pc_Vista_KB2893294_MS13...	Cisco Predefined Check:...	SYSTEM_32\Imagehlp.dll	Cisco-Defined
□	pc_W81_64_KB3033889_M...	Cisco Predefined Check:...	SYSTEM_ROOT\sysnativ...	Cisco-Defined
□	pc_Vista64_KB925902_MS0...	Cisco Predefined Check:...	SYSTEM_ROOT\winsxs\a...	Cisco-Defined
□	pc_W10_64_1709_KB45803...	Cisco Predefined Check:...	SYSTEM_ROOT\sysnativ...	Cisco-Defined
□	pc_XP_KB2653956_MS12-0...	Cisco Predefined Check:...	SYSTEM_32\Wintrust.dll	Cisco-Defined
□	pc_W8_KB2892074_MS13-...	Cisco Predefined Check:...	SYSTEM_32\Scrrun.dll	Cisco-Defined
□	pc_W10_64_1909_KB50139...	Cisco Predefined Check:...	SYSTEM_ROOT\SysWO...	Cisco-Defined
□	pc_W7_KB2681578_MS12-...	Cisco Predefined Check:...	SYSTEM_32\Win32k.sys	Cisco-Defined
□	pc_W10_KB3081436_MS15...	Cisco Predefined Check:...	SYSTEM_32\Edgehtml.dll	Cisco-Defined
□	pc_W81_64_KB3042553_M...	Cisco Predefined Check:...	SYSTEM_ROOT\sysnativ...	Cisco-Defined
□	pc_W8_64_KB2727528_MS...	Cisco Predefined Check:...	SYSTEM_ROOT\sysnativ...	Cisco-Defined
□	pc_W8_64_KB2992611_MS...	Cisco Predefined Check:...	SYSTEM_ROOT\sysnativ...	Cisco-Defined
□	pc_W7_KB3078601_MS15-...	Cisco Predefined Check:...	SYSTEM_32\Win32k.sys	Cisco-Defined

ISE_Add_New_File_Condition

步驟 19.1. 配置詳細資訊：

名稱：linux_demo_file_exist

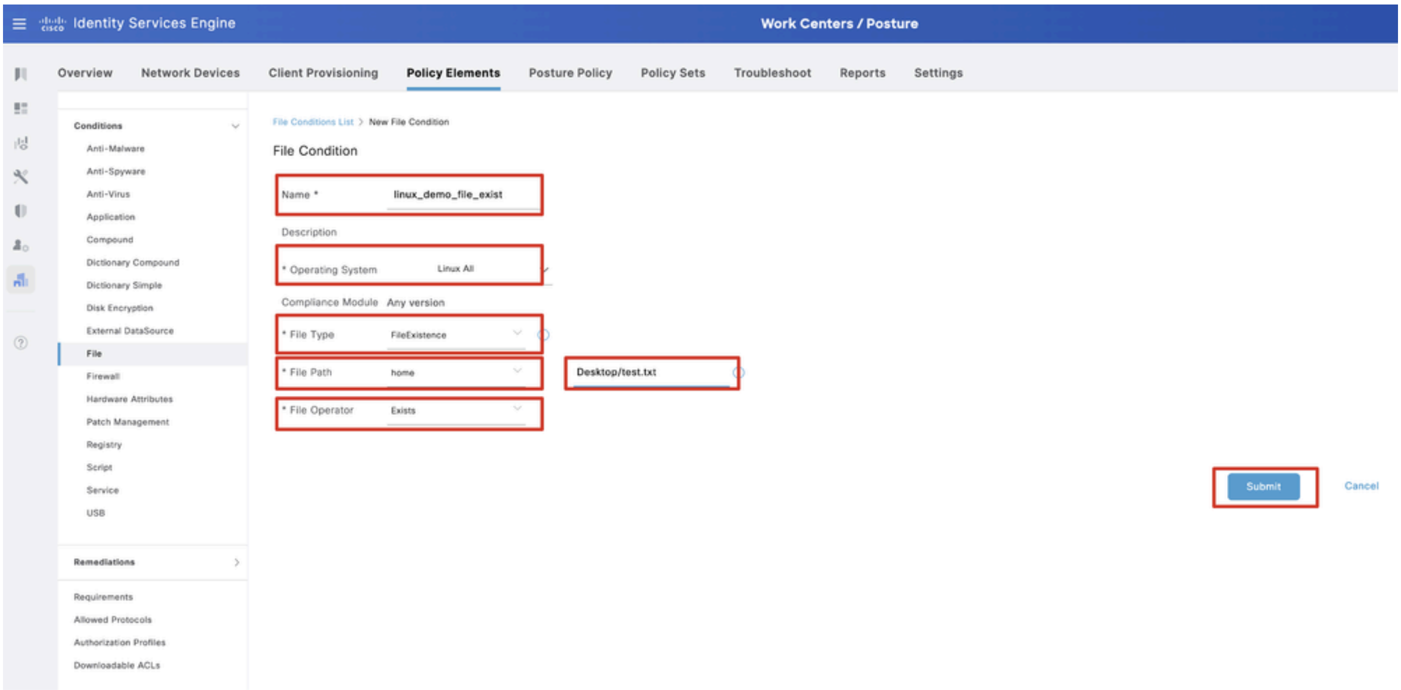
作業系統：Linux All

檔案型別：檔案存在

檔案路徑：home， Desktop/test.txt

檔案運算子：存在

按一下Submit。



File Condition

Name * linux_demo_file_exist

Description

* Operating System Linux All

Compliance Module Any version

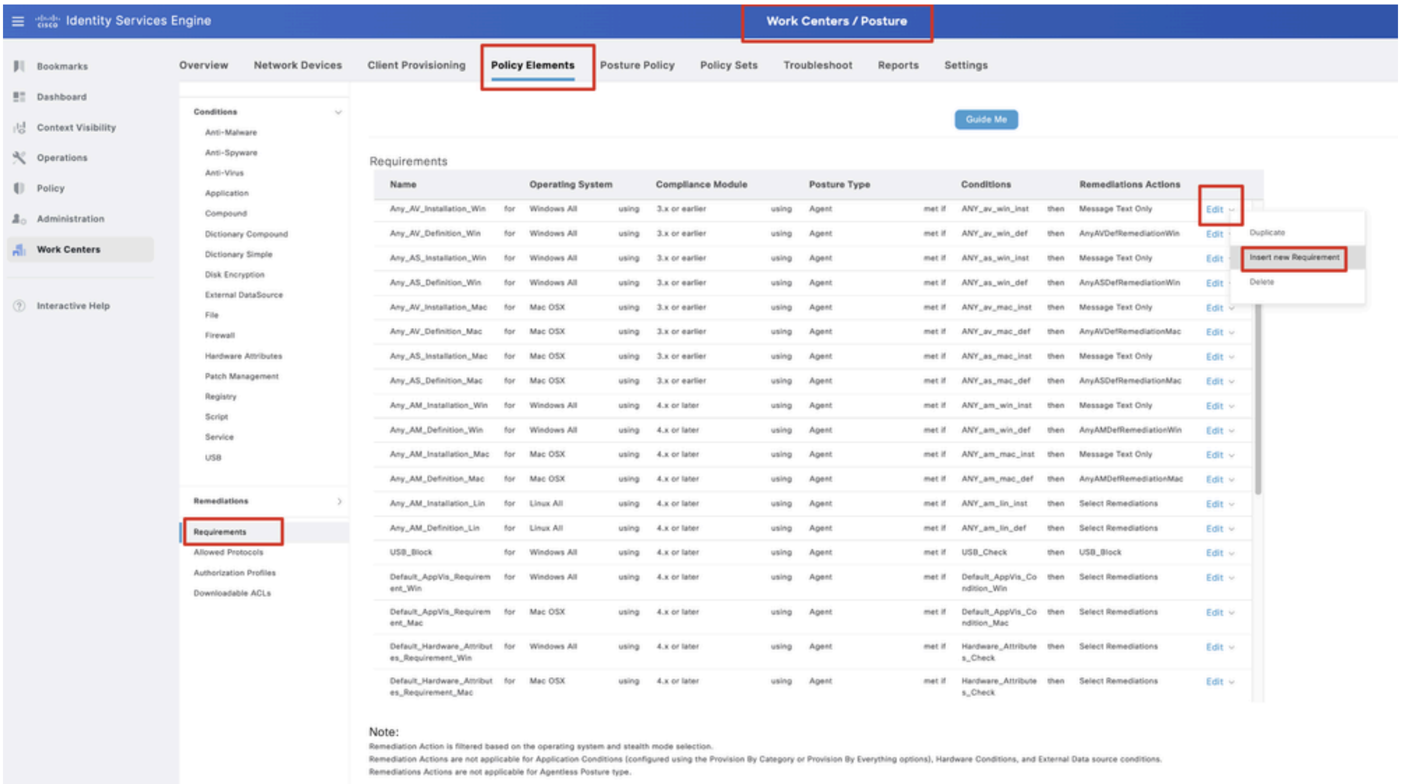
* File Type FileExistence

* File Path home Desktop/test.txt

* File Operator Exists

ISE_Add_New_File_Condition_1

步驟 20. 導航到Work Centers > Posture > Policy Elements > Requirements。在任何規則名稱的末尾按一下Edit 。選擇Insert new Requirement。



Requirements

Name		Operating System		Compliance Module		Posture Type		Conditions		Remediations Actions	
Any_AV_Installation_Win	for	Windows All	using	3.x or earlier	using	Agent	met if	ANY_av_win_inst	then	Message Text Only	Edit
Any_AV_Definition_Win	for	Windows All	using	3.x or earlier	using	Agent	met if	ANY_av_win_def	then	AnyAVDefRemediationWin	Edit
Any_AS_Installation_Win	for	Windows All	using	3.x or earlier	using	Agent	met if	ANY_as_win_inst	then	Message Text Only	Edit
Any_AS_Definition_Win	for	Windows All	using	3.x or earlier	using	Agent	met if	ANY_as_win_def	then	AnyASDefRemediationWin	Edit
Any_AV_Installation_Mac	for	Mac OSX	using	3.x or earlier	using	Agent	met if	ANY_av_mac_inst	then	Message Text Only	Edit
Any_AV_Definition_Mac	for	Mac OSX	using	3.x or earlier	using	Agent	met if	ANY_av_mac_def	then	AnyAVDefRemediationMac	Edit
Any_AS_Installation_Mac	for	Mac OSX	using	3.x or earlier	using	Agent	met if	ANY_as_mac_inst	then	Message Text Only	Edit
Any_AS_Definition_Mac	for	Mac OSX	using	3.x or earlier	using	Agent	met if	ANY_as_mac_def	then	AnyASDefRemediationMac	Edit
Any_AM_Installation_Win	for	Windows All	using	4.x or later	using	Agent	met if	ANY_am_win_inst	then	Message Text Only	Edit
Any_AM_Definition_Win	for	Windows All	using	4.x or later	using	Agent	met if	ANY_am_win_def	then	AnyAMDefRemediationWin	Edit
Any_AM_Installation_Mac	for	Mac OSX	using	4.x or later	using	Agent	met if	ANY_am_mac_inst	then	Message Text Only	Edit
Any_AM_Definition_Mac	for	Mac OSX	using	4.x or later	using	Agent	met if	ANY_am_mac_def	then	AnyAMDefRemediationMac	Edit
Any_AM_Installation_Lin	for	Linux All	using	4.x or later	using	Agent	met if	ANY_am_lin_inst	then	Select Remediations	Edit
Any_AM_Definition_Lin	for	Linux All	using	4.x or later	using	Agent	met if	ANY_am_lin_def	then	Select Remediations	Edit
USB_Block	for	Windows All	using	4.x or later	using	Agent	met if	USB_Check	then	USB_Block	Edit
Default_AppVis_Requirement_Win	for	Windows All	using	4.x or later	using	Agent	met if	Default_AppVis_Condition_Win	then	Select Remediations	Edit
Default_AppVis_Requirement_Mac	for	Mac OSX	using	4.x or later	using	Agent	met if	Default_AppVis_Condition_Mac	then	Select Remediations	Edit
Default_Hardware_Attributes_Requirement_Win	for	Windows All	using	4.x or later	using	Agent	met if	Hardware_Attributes_Check	then	Select Remediations	Edit
Default_Hardware_Attributes_Requirement_Mac	for	Mac OSX	using	4.x or later	using	Agent	met if	Hardware_Attributes_Check	then	Select Remediations	Edit

Note:
Remediation Action is filtered based on the operating system and stealth mode selection.
Remediation Actions are not applicable for Application Conditions (configured using the Provision By Category or Provision By Everything options), Hardware Conditions, and External Data source conditions.
Remediations Actions are not applicable for Agentless Posture type.

ISE_Add_New_Posture_Requirement

步驟 20.1. 配置詳細資訊：

名稱：Test_exist_linux

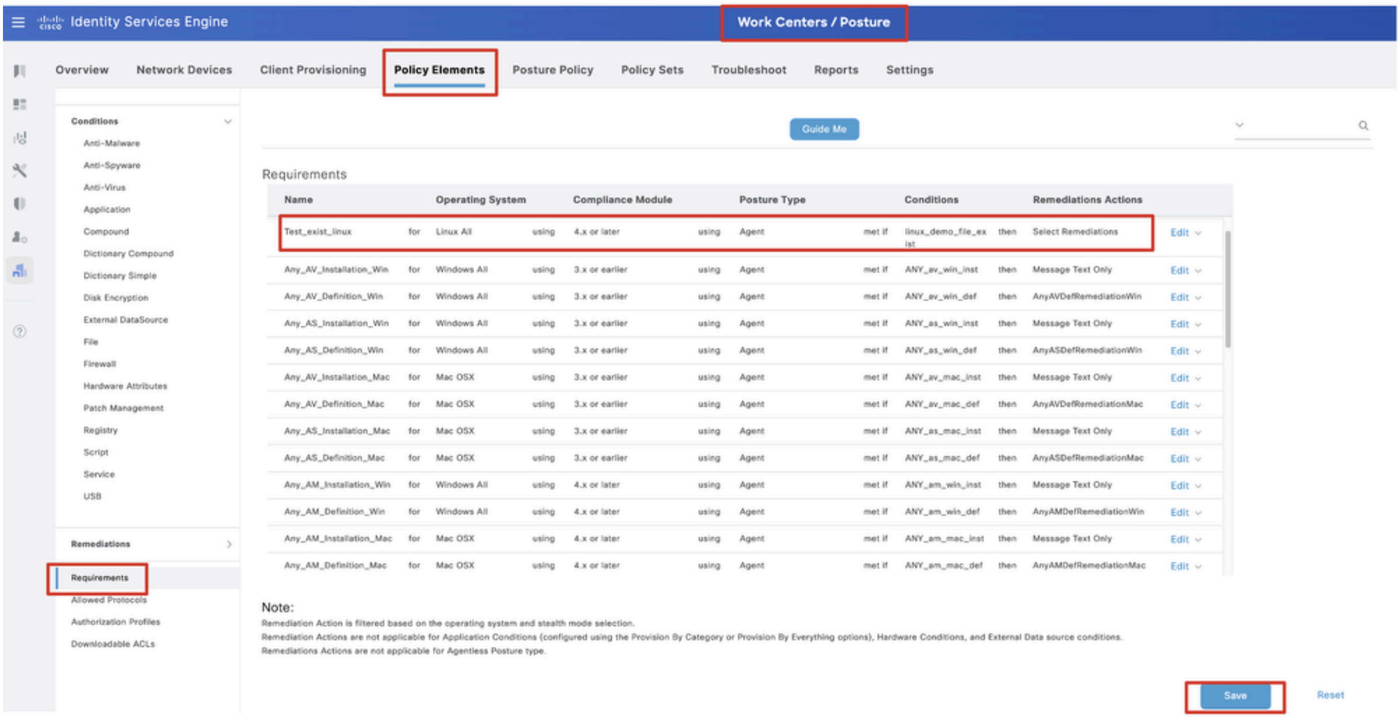
作業系統：Linux All

合規性模組：4.x或更高版本

狀態型別：代理

條件：linux_demo_file_exist

按一下Done 和Save。



Requirements

Name		Operating System		Compliance Module		Posture Type		Conditions		Remediations Actions	
Test_exist_linux	for	Linux All	using	4.x or later	using	Agent	met if	linux_demo_file_exist	then	Select Remediations	Edit
Any_AV_Installation_Win	for	Windows All	using	3.x or earlier	using	Agent	met if	ANY_av_win_inst	then	Message Text Only	Edit
Any_AV_Definition_Win	for	Windows All	using	3.x or earlier	using	Agent	met if	ANY_av_win_def	then	AnyAVDefRemediationWin	Edit
Any_AS_Installation_Win	for	Windows All	using	3.x or earlier	using	Agent	met if	ANY_as_win_inst	then	Message Text Only	Edit
Any_AS_Definition_Win	for	Windows All	using	3.x or earlier	using	Agent	met if	ANY_as_win_def	then	AnyASDefRemediationWin	Edit
Any_AV_Installation_Mac	for	Mac OSX	using	3.x or earlier	using	Agent	met if	ANY_av_mac_inst	then	Message Text Only	Edit
Any_AV_Definition_Mac	for	Mac OSX	using	3.x or earlier	using	Agent	met if	ANY_av_mac_def	then	AnyAVDefRemediationMac	Edit
Any_AS_Installation_Mac	for	Mac OSX	using	3.x or earlier	using	Agent	met if	ANY_as_mac_inst	then	Message Text Only	Edit
Any_AS_Definition_Mac	for	Mac OSX	using	3.x or earlier	using	Agent	met if	ANY_as_mac_def	then	AnyASDefRemediationMac	Edit
Any_AM_Installation_Win	for	Windows All	using	4.x or later	using	Agent	met if	ANY_am_win_inst	then	Message Text Only	Edit
Any_AM_Definition_Win	for	Windows All	using	4.x or later	using	Agent	met if	ANY_am_win_def	then	AnyAMDefRemediationWin	Edit
Any_AM_Installation_Mac	for	Mac OSX	using	4.x or later	using	Agent	met if	ANY_am_mac_inst	then	Message Text Only	Edit
Any_AM_Definition_Mac	for	Mac OSX	using	4.x or later	using	Agent	met if	ANY_am_mac_def	then	AnyAMDefRemediationMac	Edit

Note:
Remediation Action is filtered based on the operating system and stealth mode selection.
Remediation Actions are not applicable for Application Conditions (configured using the Provision By Category or Provision By Everything options), Hardware Conditions, and External Data source conditions.
Remediations Actions are not applicable for Agentless Posture type.

ISE_Add_New_Posture_Requirement_1

注意：到目前為止，Linux代理程式僅支援Shell命令檔作為修正。

步驟 21. 導航到Work Centers > Posture > Policy Elements > Authorization Profiles。按一下Add。

步驟 21.1. 配置詳細資訊：

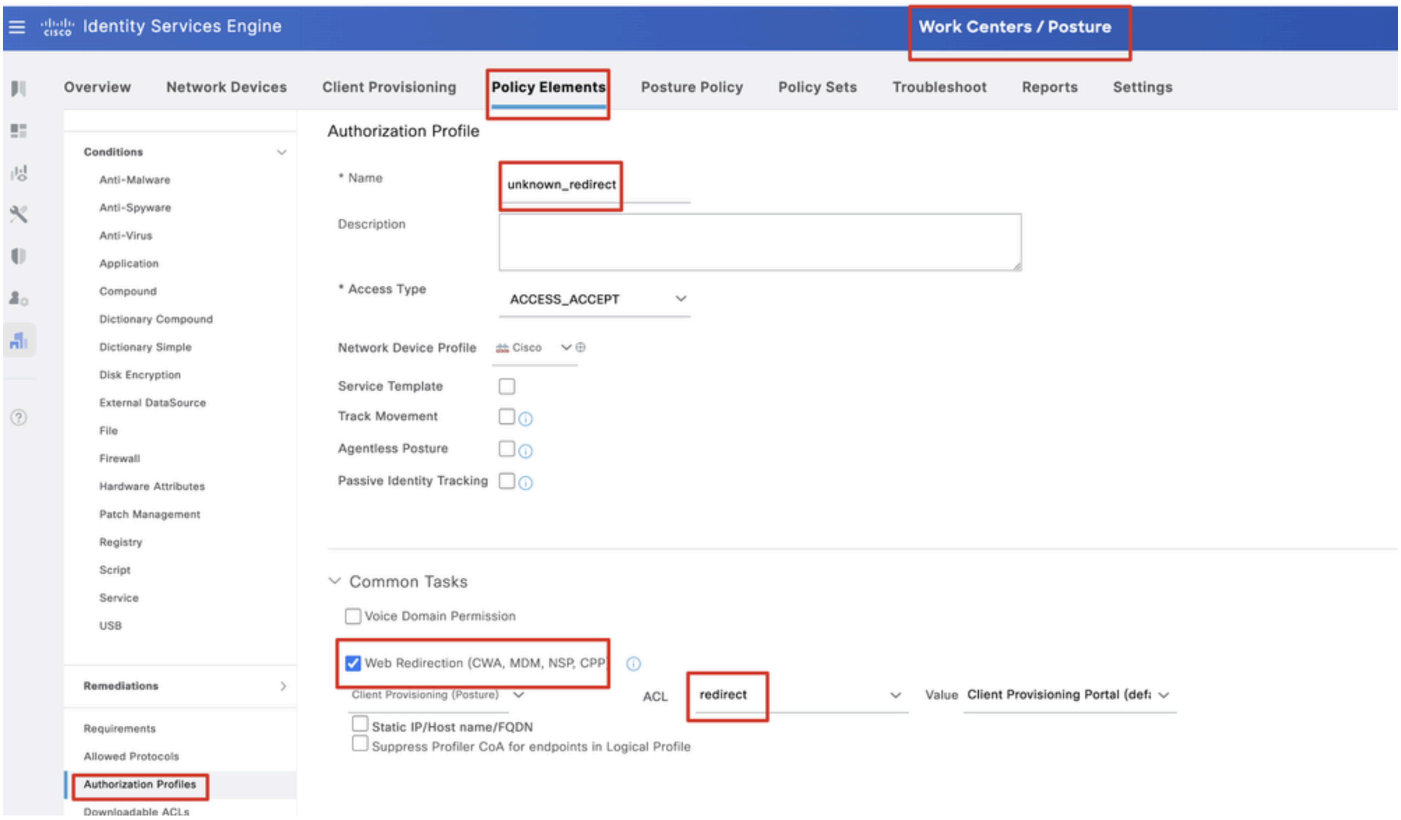
名稱：unknown_redirect

核取核取方塊 Web Redirection(CWA,MDM,NSP,CPP)

選取 Client Provisioning(Posture)

ACL：重定向

值：使用者端布建入口網站（預設）



Identity Services Engine

Work Centers / Posture

Overview | Network Devices | Client Provisioning | Policy Elements | Posture Policy | Policy Sets | Troubleshoot | Reports | Settings

Conditions
- Anti-Malware
- Anti-Spyware
- Anti-Virus
- Application
- Compound
- Dictionary Compound
- Dictionary Simple
- Disk Encryption
- External DataSource
- File
- Firewall
- Hardware Attributes
- Patch Management
- Registry
- Script
- Service
- USB

Remediations

Requirements

Allowed Protocols

Authorization Profiles

Downloadable ACLs

Authorization Profile

* Name: unknown_redirect

Description:

* Access Type: ACCESS_ACCEPT

Network Device Profile: Cisco

Service Template □

Track Movement □

Agentless Posture □

Passive Identity Tracking □

Common Tasks

□ Voice Domain Permission

☑ Web Redirection (CWA, MDM, NSP, CPP

Client Provisioning (Posture) ACL redirect Value Client Provisioning Portal (def:

□ Static IP/Host name/FQDN

□ Suppress Profiler CoA for endpoints in Logical Profile

ISE_Add_New_Authorization_Profile_Redirect_1

附註：此ACL名稱重新導向必須與FTD上設定的對應ACL名稱相符。

步驟 21.2.重複Add 以建立另兩個授權配置檔案，為不相容和相容的終端提供詳細資訊。

名稱：non_compliant_profile

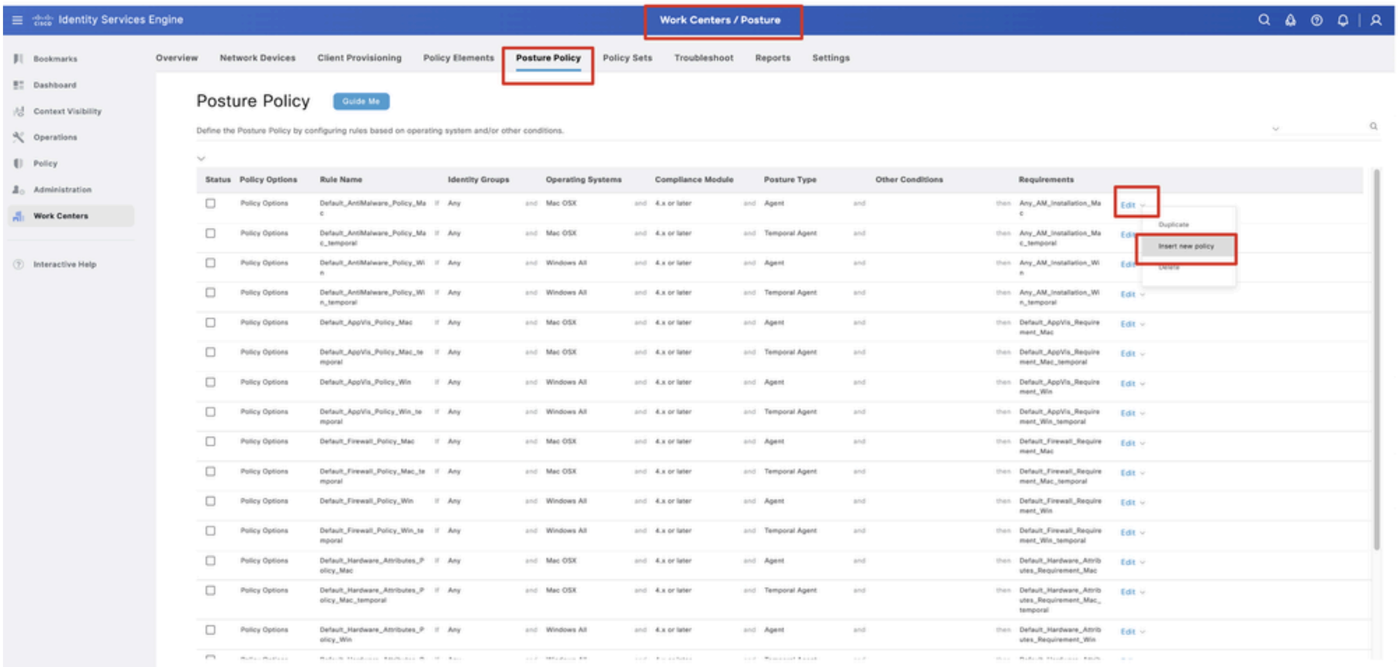
DACL名稱：DENY_ALL_IPv4_TRAFFIC

名稱：compliant_profile

DACL名稱：PERMIT_ALL_IPv4_TRAFFIC

註：需要根據實際需求配置合規端點和不合規端點的DACL。

步驟 22. 導航到Work Centers > Posture > Posture Policy。在任何規則的末尾按一下Edit 。選擇Insert new policy。



Posture Policy

Define the Posture Policy by configuring rules based on operating system and/or other conditions.

Status	Policy Options	Rule Name		Identity Groups		Operating Systems		Compliance Module		Posture Type		Other Conditions		Requirements	
□	Policy Options	Default_AntiMalware_Policy_Mac	If	Any	and	Mac OSX	and	4.x or later	and	Agent	and		then	Any_AM_Installation_Mac	Edit
□	Policy Options	Default_AntiMalware_Policy_Mac_temporal	If	Any	and	Mac OSX	and	4.x or later	and	Temporal Agent	and		then	Any_AM_Installation_Mac_temporal	Edit
□	Policy Options	Default_AntiMalware_Policy_Win	If	Any	and	Windows All	and	4.x or later	and	Agent	and		then	Any_AM_Installation_Win	Edit
□	Policy Options	Default_AntiMalware_Policy_Win_temporal	If	Any	and	Windows All	and	4.x or later	and	Temporal Agent	and		then	Any_AM_Installation_Win_temporal	Edit
□	Policy Options	Default_AppVis_Policy_Mac	If	Any	and	Mac OSX	and	4.x or later	and	Agent	and		then	Default_AppVis_Requirement_Mac	Edit
□	Policy Options	Default_AppVis_Policy_Mac_temporal	If	Any	and	Mac OSX	and	4.x or later	and	Temporal Agent	and		then	Default_AppVis_Requirement_Mac_temporal	Edit
□	Policy Options	Default_AppVis_Policy_Win	If	Any	and	Windows All	and	4.x or later	and	Agent	and		then	Default_AppVis_Requirement_Win	Edit
□	Policy Options	Default_AppVis_Policy_Win_temporal	If	Any	and	Windows All	and	4.x or later	and	Temporal Agent	and		then	Default_AppVis_Requirement_Win_temporal	Edit
□	Policy Options	Default_Firewall_Policy_Mac	If	Any	and	Mac OSX	and	4.x or later	and	Agent	and		then	Default_Firewall_Requirement_Mac	Edit
□	Policy Options	Default_Firewall_Policy_Mac_temporal	If	Any	and	Mac OSX	and	4.x or later	and	Temporal Agent	and		then	Default_Firewall_Requirement_Mac_temporal	Edit
□	Policy Options	Default_Firewall_Policy_Win	If	Any	and	Windows All	and	4.x or later	and	Agent	and		then	Default_Firewall_Requirement_Win	Edit
□	Policy Options	Default_Firewall_Policy_Win_temporal	If	Any	and	Windows All	and	4.x or later	and	Temporal Agent	and		then	Default_Firewall_Requirement_Win_temporal	Edit
□	Policy Options	Default_Hardware_Attributes_Policy_Mac	If	Any	and	Mac OSX	and	4.x or later	and	Agent	and		then	Default_Hardware_Attributes_Requirement_Mac	Edit
□	Policy Options	Default_Hardware_Attributes_Policy_Mac_temporal	If	Any	and	Mac OSX	and	4.x or later	and	Temporal Agent	and		then	Default_Hardware_Attributes_Requirement_Mac_temporal	Edit
□	Policy Options	Default_Hardware_Attributes_Policy_Win	If	Any	and	Windows All	and	4.x or later	and	Agent	and		then	Default_Hardware_Attributes_Requirement_Win	Edit

ISE_Add_New_Posture_Policy

步驟 22.1. 配置詳細資訊：

規則名稱：Demo_test_exist_linux

身份組：任意

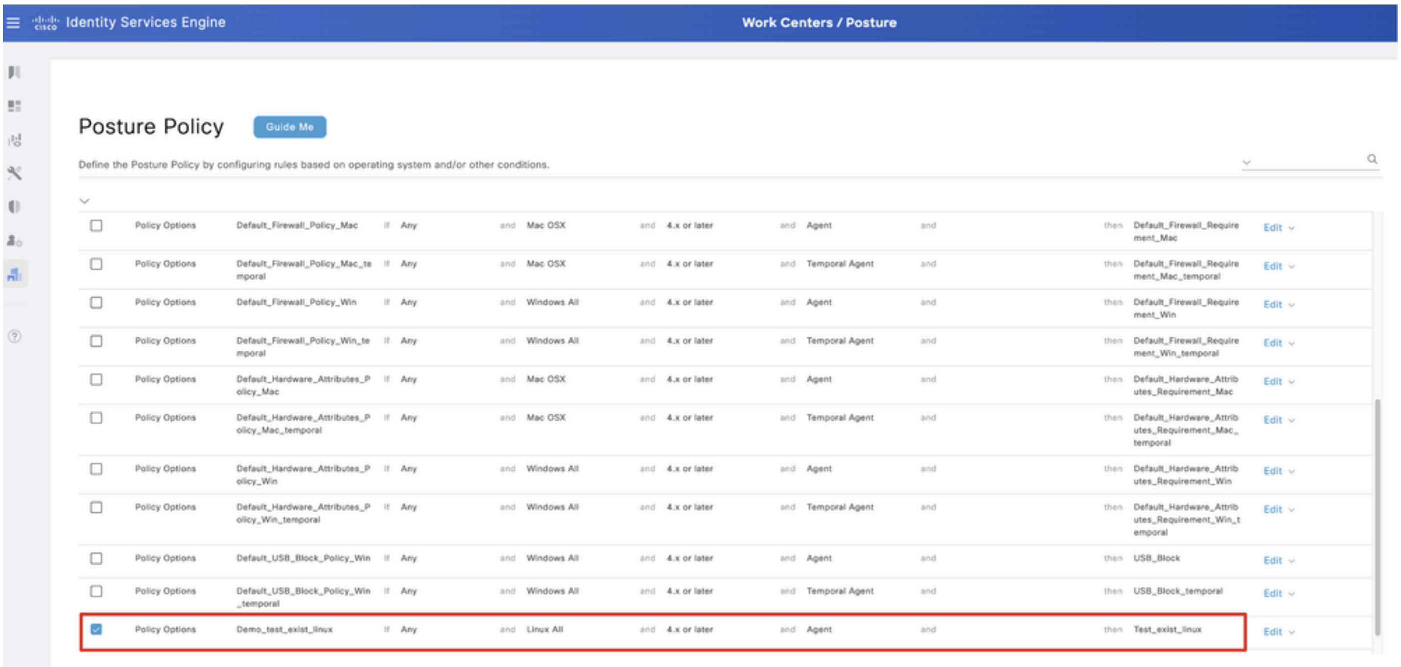
作業系統：Linux All

合規性模組：4.x或更高版本

狀態型別：代理

需求：Test_exist_linux

按一下Done 和Save。



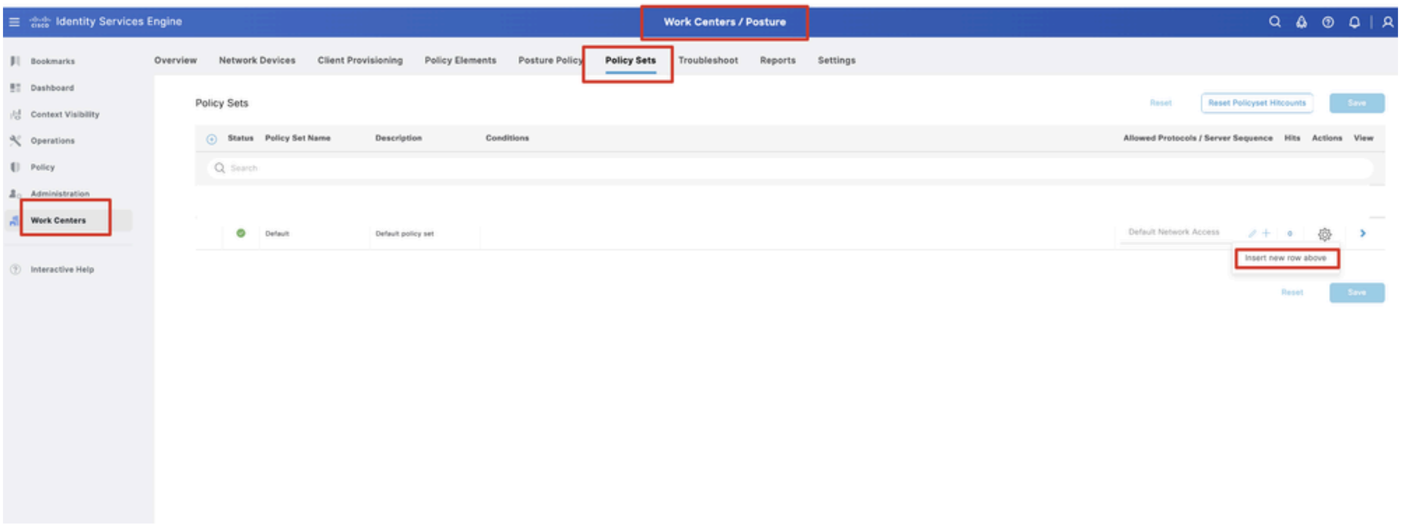
Posture Policy

Define the Posture Policy by configuring rules based on operating system and/or other conditions.

□	Policy Options	Default_Firewall_Policy_Mac	If	Any	and	Mac OSX	and	4.x or later	and	Agent	and	then	Default_Firewall_Requirement_Mac	Edit
□	Policy Options	Default_Firewall_Policy_Mac_temporal	If	Any	and	Mac OSX	and	4.x or later	and	Temporal Agent	and	then	Default_Firewall_Requirement_Mac_temporal	Edit
□	Policy Options	Default_Firewall_Policy_Win	If	Any	and	Windows All	and	4.x or later	and	Agent	and	then	Default_Firewall_Requirement_Win	Edit
□	Policy Options	Default_Firewall_Policy_Win_temporal	If	Any	and	Windows All	and	4.x or later	and	Temporal Agent	and	then	Default_Firewall_Requirement_Win_temporal	Edit
□	Policy Options	Default_Hardware_Attributes_Policy_Mac	If	Any	and	Mac OSX	and	4.x or later	and	Agent	and	then	Default_Hardware_Attributes_Requirement_Mac	Edit
□	Policy Options	Default_Hardware_Attributes_Policy_Mac_temporal	If	Any	and	Mac OSX	and	4.x or later	and	Temporal Agent	and	then	Default_Hardware_Attributes_Requirement_Mac_temporal	Edit
□	Policy Options	Default_Hardware_Attributes_Policy_Win	If	Any	and	Windows All	and	4.x or later	and	Agent	and	then	Default_Hardware_Attributes_Requirement_Win	Edit
□	Policy Options	Default_Hardware_Attributes_Policy_Win_temporal	If	Any	and	Windows All	and	4.x or later	and	Temporal Agent	and	then	Default_Hardware_Attributes_Requirement_Win_temporal	Edit
□	Policy Options	Default_USB_Block_Policy_Win	If	Any	and	Windows All	and	4.x or later	and	Agent	and	then	USB_Block	Edit
□	Policy Options	Default_USB_Block_Policy_Win_temporal	If	Any	and	Windows All	and	4.x or later	and	Temporal Agent	and	then	USB_Block_temporal	Edit
☑	Policy Options	Demo_test_exist_linux	If	Any	and	Linux All	and	4.x or later	and	Agent	and	then	Test_exist_linux	Edit

ISE_Add_New_Posture_Policy_1

步驟 23. 導航到Work Centers > Posture > Policy Sets。按一下以Insert new row above。



Policy Sets

Status	Policy Set Name	Description	Conditions	Allowed Protocols / Server Sequence	Hits	Actions	View
●	Default	Default policy set		Default Network Access	0		>

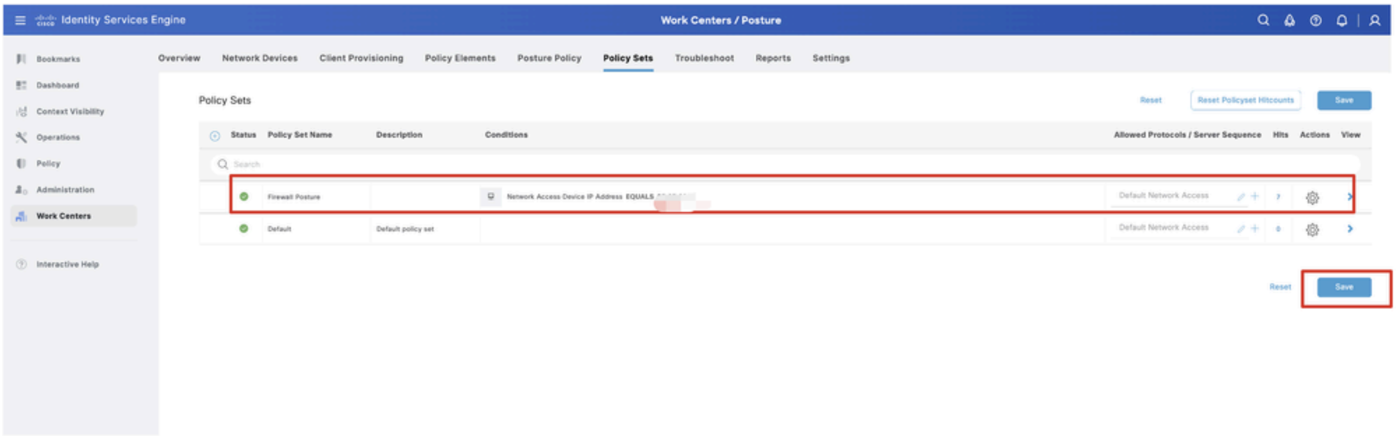
ISE_Add_New_Policy_Set

步驟 23.1. 配置詳細資訊：

策略集名稱：防火牆狀態

條件：網路訪問裝置IP地址等於[FTD IP地址]

按一下 Save 。



Policy Sets

Status	Policy Set Name	Description	Conditions	Allowed Protocols / Server Sequence	Hits	Actions	View
●	Firewall Posture		Network Access·Device IP Address EQUALS [redacted]	Default Network Access	7	⚙	>
●	Default	Default policy set		Default Network Access	0	⚙	>

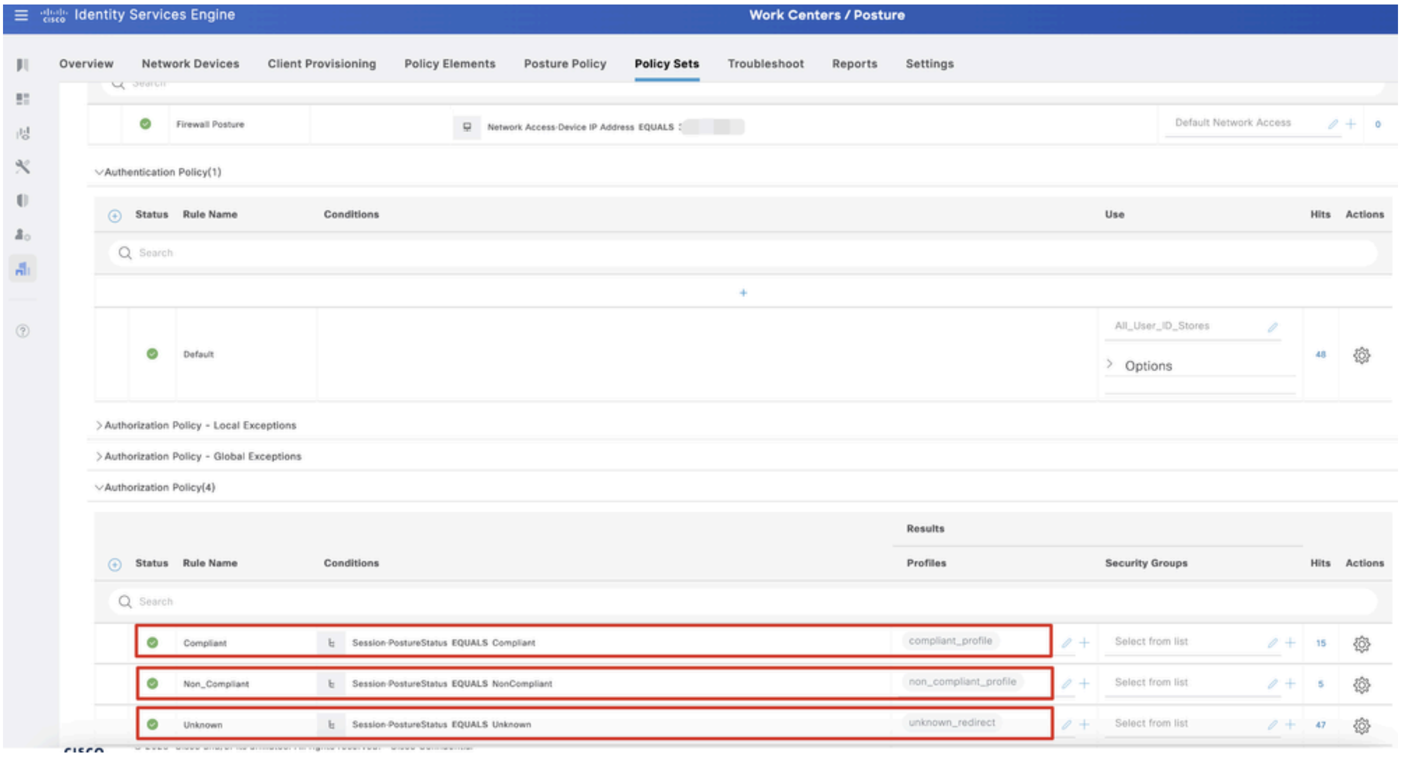
ISE_Add_New_Policy_Set_1

步驟 23.2.按一下>以輸入策略集。 為狀態相容、不相容和未知狀態建立新的授權規則。按一下Save。

與compliant_profile相容

與non_compliant_profile不相容

未知與unknown_redirect



Status	Policy Set Name	Conditions	Allowed Protocols / Server Sequence	Hits
●	Firewall Posture	Network Access·Device IP Address EQUALS [redacted]	Default Network Access	0

Authentication Policy(1)

Status	Rule Name	Conditions	Use	Hits	Actions
●	Default		All_User_ID_Stores Options	48	⚙

Authorization Policy - Local Exceptions

Authorization Policy - Global Exceptions

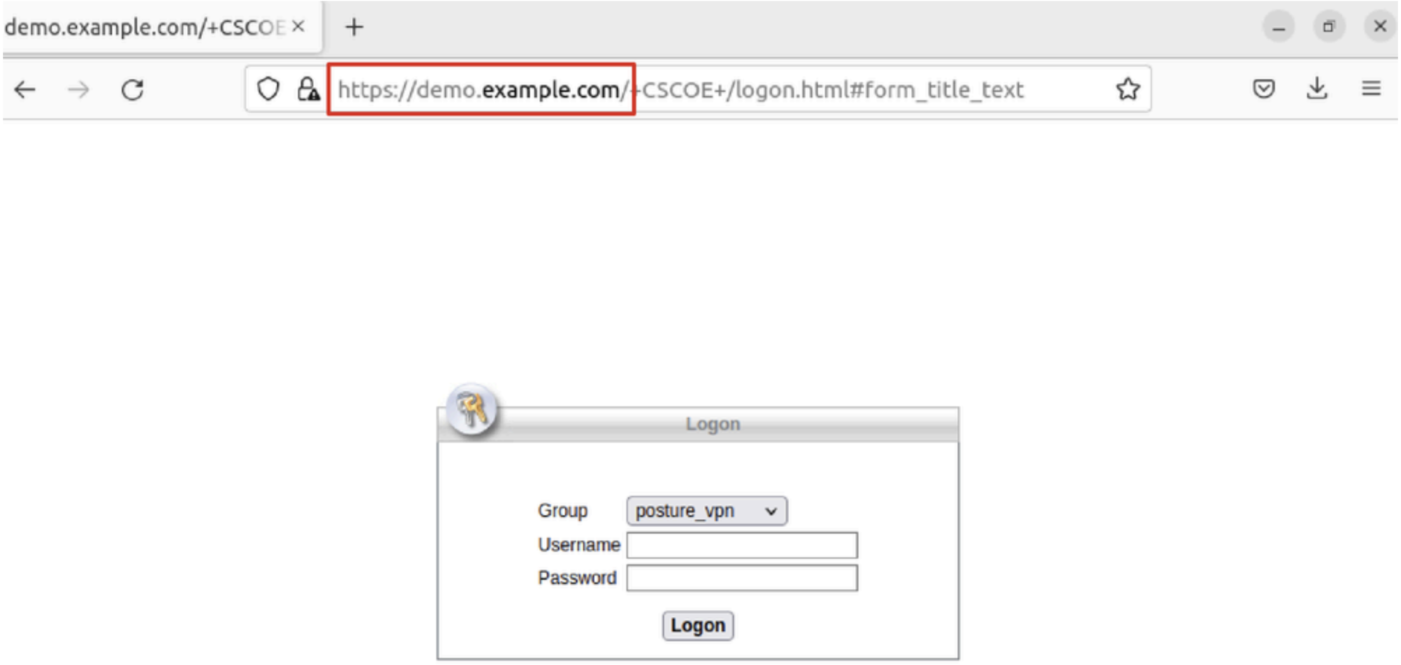
Authorization Policy(4)

			Results			
Status	Rule Name	Conditions	Profiles	Security Groups	Hits	Actions
●	Compliant	Session·PostureStatus EQUALS Compliant	compliant_profile	Select from list	15	⚙
●	Non_Compliant	Session·PostureStatus EQUALS NonCompliant	non_compliant_profile	Select from list	5	⚙
●	Unknown	Session·PostureStatus EQUALS Unknown	unknown_redirect	Select from list	47	⚙

ISE_Add_New_Policy_Set_2

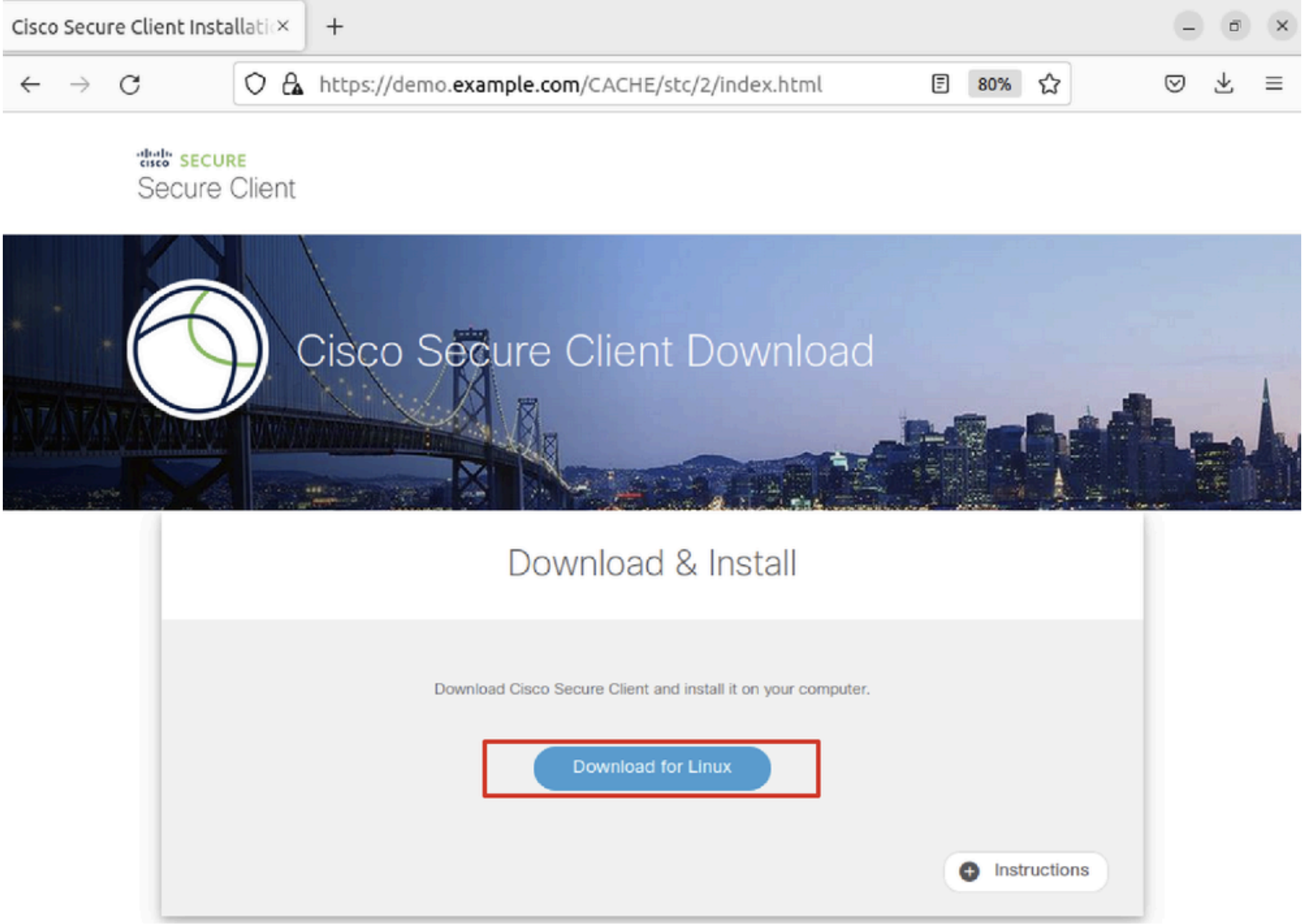
Ubuntu上的配置

步驟 24.透過GUI登入到Ubuntu客戶端。打開瀏覽器以登入VPN門戶。在本示例中，它是demo.example.com。



Ubuntu_Browser_VPN_Login

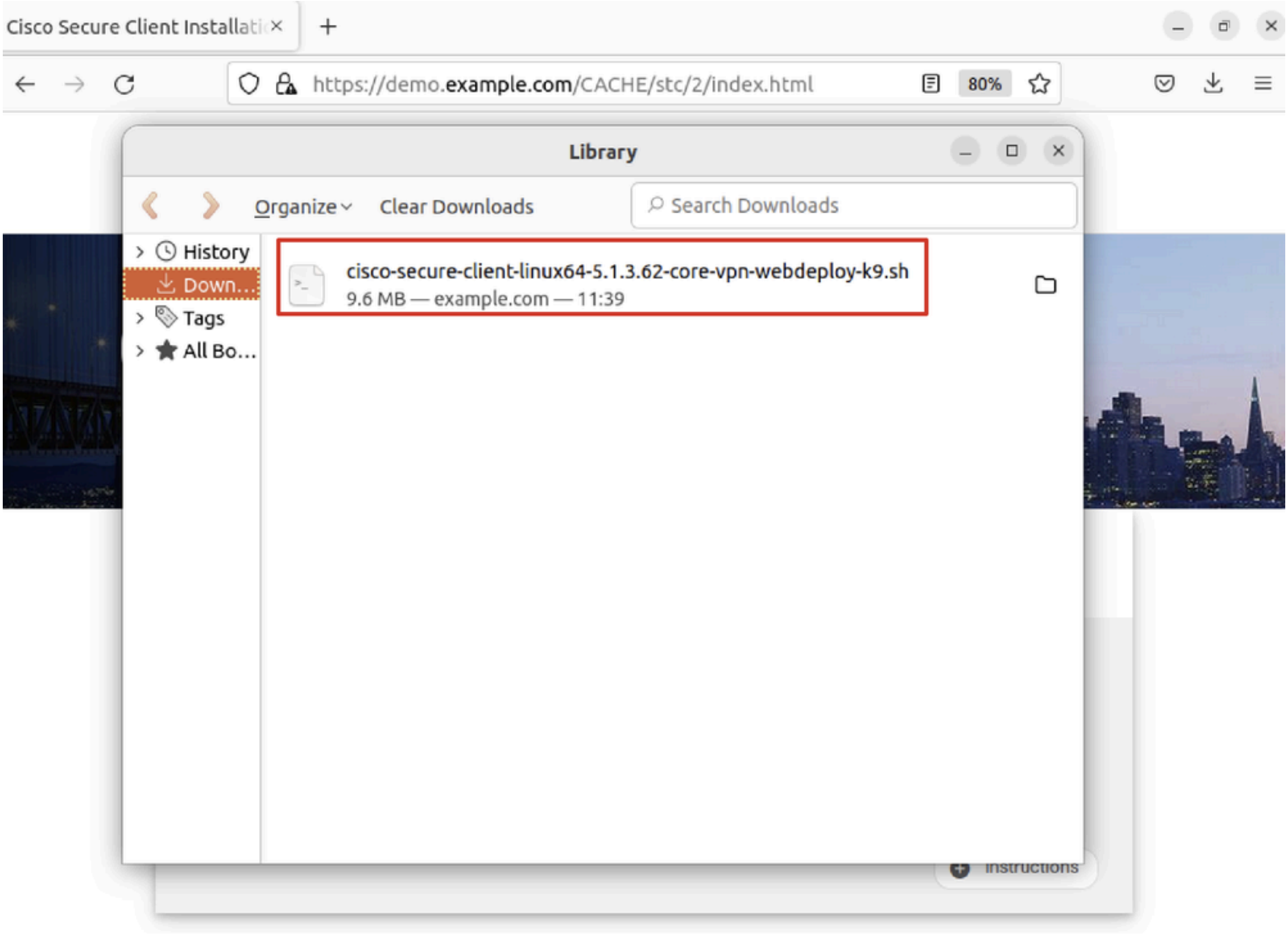
步驟 25.按一下Download for Linux。



Cisco Secure Client Installati
https://demo.example.com/CACHE/stc/2/index.html
80%
SECURE
Secure Client
Cisco Secure Client Download
Download & Install
Download Cisco Secure Client and install it on your computer.
Download for Linux
Instructions

Ubuntu_Browser_VPN_Download_1

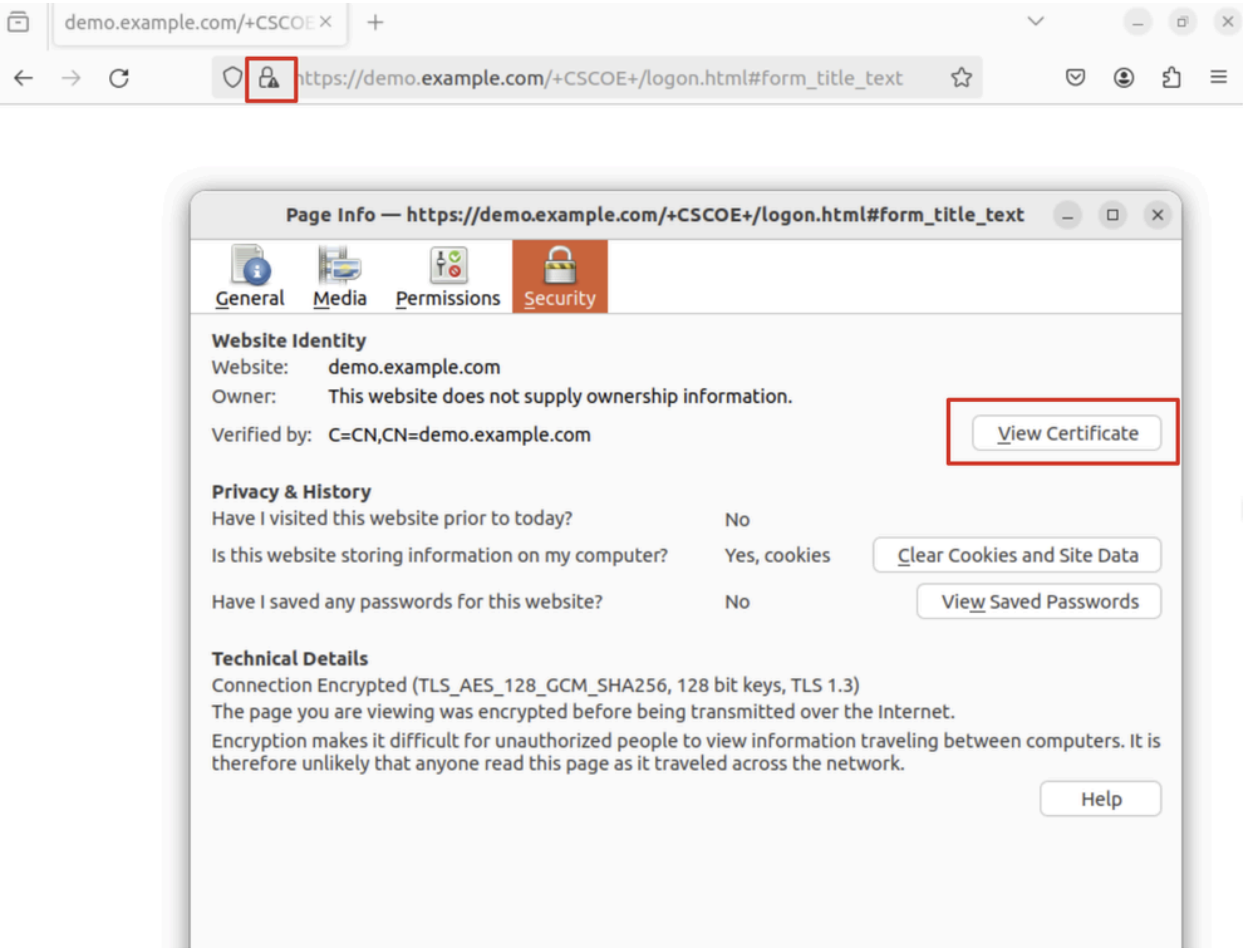
下載的檔名為cisco-secure-client-linux64-5.1.3.62-core-vpn-webdeploy-k9.sh。



cisco-secure-client-linux64-5.1.3.62-core-vpn-webdeploy-k9.sh
9.6 MB — example.com — 11:39

Ubuntu_Browser_VPN_Download_2

步驟 26.透過瀏覽器下載VPN證書並將檔案重新命名為<certificate>.crt。以下是使用firefox下載憑證的範例。



demo.example.com/+CSCOE

https://demo.example.com/+CSCOE+/logon.html#form_title_text

Page Info — https://demo.example.com/+CSCOE+/logon.html#form_title_text

Website Identity

Website: demo.example.com

Owner: This website does not supply ownership information.

Verified by: C=CN,CN=demo.example.com

Privacy & History

Have I visited this website prior to today? No

Is this website storing information on my computer? Yes, cookies

Have I saved any passwords for this website? No

Technical Details

Connection Encrypted (TLS_AES_128_GCM_SHA256, 128 bit keys, TLS 1.3)

The page you are viewing was encrypted before being transmitted over the Internet.

Encryption makes it difficult for unauthorized people to view information traveling between computers. It is therefore unlikely that anyone read this page as it traveled across the network.

Ubuntu_Browser_VPN_Cert_Download

步驟 27.打開Ubuntu客戶端上的終端。導航到path home/user/Downloads/安裝Cisco Secure Client。

<#root>

```
user@ubuntu22-desktop:~$

cd Downloads/

user@ubuntu22-desktop:~/Downloads$

ls


cisco-secure-client-linux64-5.1.3.62-core-vpn-webdeploy-k9.sh

   demo-example-com.crt

user@ubuntu22-desktop:~/Downloads$

chmod +x cisco-secure-client-linux64-5.1.3.62-core-vpn-webdeploy-k9.sh


user@ubuntu22-desktop:~/Downloads$
```

```
sudo ./cisco-secure-client-linux64-5.1.3.62-core-vpn-webdeploy-k9.sh


[sudo] password for user:
Installing Cisco Secure Client...
Migrating /opt/cisco/anyconnect directory to /opt/cisco/secureclient directory
Extracting installation files to /tmp/vpn.zaeAZd/vpninst959732303.tgz...
Unarchiving installation files to /tmp/vpn.zaeAZd...
Starting Cisco Secure Client Agent...
Done!
Exiting now.
user@ubuntu22-desktop:~/Downloads$
```

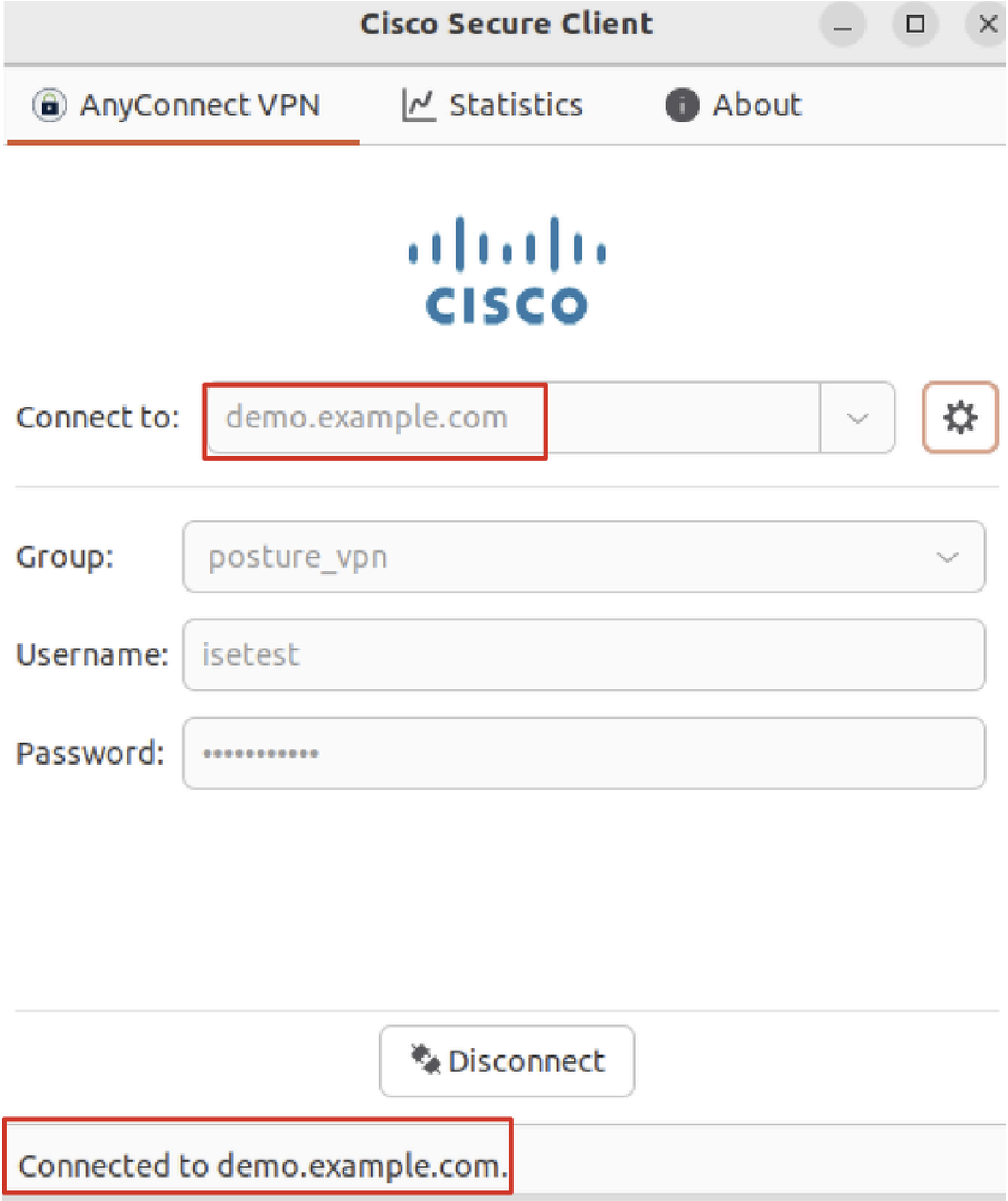
步驟 28.信任Ubuntu客戶端上的VPN門戶證書。

<#root>

```
user@ubuntu22-desktop:~$

cd Downloads/


user@ubuntu22-desktop:~/Downloads$

ls


cisco-secure-client-linux64-5.1.3.62-core-vpn-webdeploy-k9.sh

demo-example-com.crt


user@ubuntu22-desktop:~/Downloads$

 openssl verify demo-example-com.crt

CN = demo.example.com, C = CN
error 18 at 0 depth lookup: self-signed certificate
Error demo-example-com.crt:

verification failed



user@ubuntu22-desktop:~/Downloads$

sudo cp demo-example-com.crt /usr/local/share/ca-certificates/


user@ubuntu22-desktop:~/Downloads$

sudo update-ca-certificates


Updating certificates in /etc/ssl/certs...
rehash: warning: skipping ca-certificates.crt,it does not contain exactly one certificate or CRL

1 added

, 0 removed; done.
Running hooks in /etc/ca-certificates/update.d...
done.
```

```
user@ubuntu22-desktop:~/Downloads$

openssl verify demo-example-com.crt


demo-example-com.crt: OK
```

步驟 29.在Ubuntu客戶端上打開Cisco Secure Client，然後成功將VPN連線到demo.example.com。



Cisco Secure Client

Connect to: demo.example.com

Group: posture_vpn

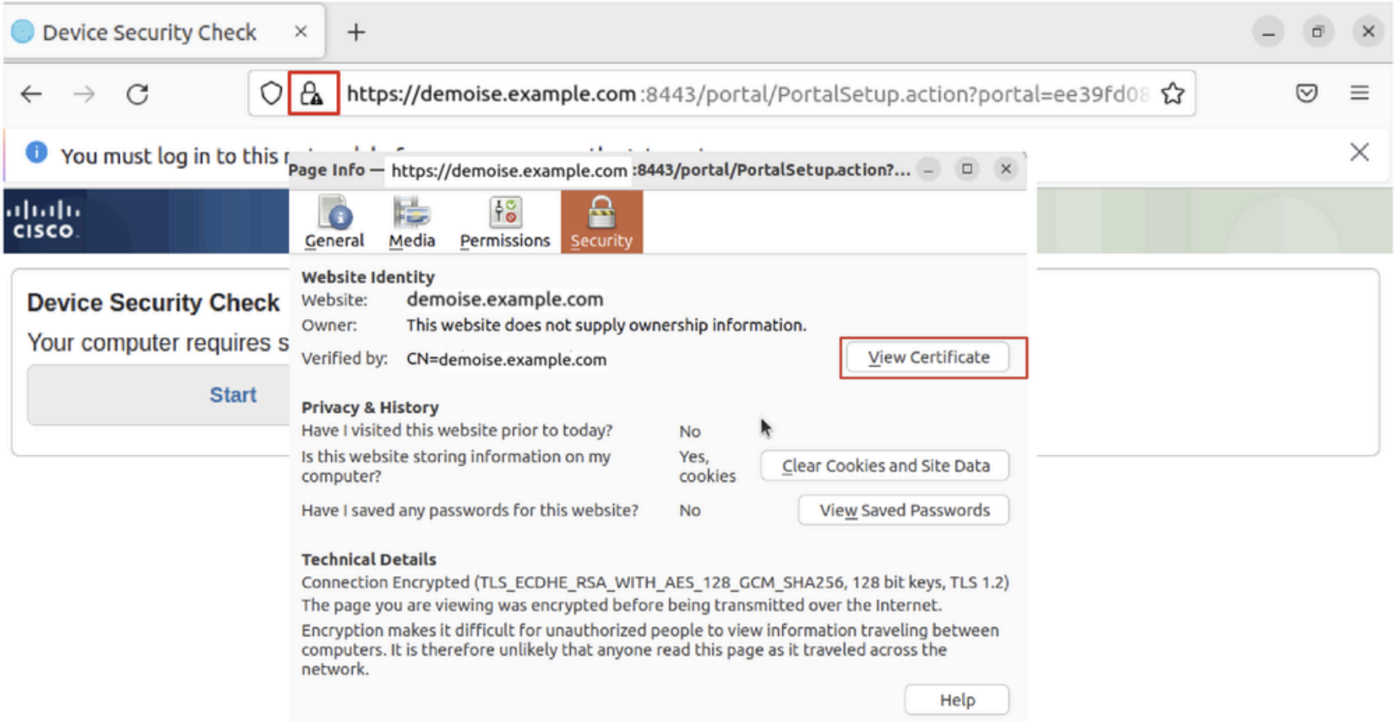
Username: isetest

Password: ••••••••••••

Connected to demo.example.com.

Ubuntu_Secure_Client_Connected

步驟 30.打開瀏覽器以訪問觸發重定向至ISE CPP門戶的任何網站。從ISE CPP門戶下載證書並將檔案重新命名為<certificate>.crt。 以下是使用Firefox進行下載的範例。



Device Security Check

https://demoise.example.com:8443/portal/PortalSetup.action?portal=ee39fd08

You must log in to this

Page Info — https://demoise.example.com:8443/portal/PortalSetup.action?...

General Media Permissions Security

Website Identity

Website: demoise.example.com

Owner: This website does not supply ownership information.

Verified by: CN=demoise.example.com

View Certificate

Privacy & History

Have I visited this website prior to today? No

Is this website storing information on my computer? Yes, cookies — Clear Cookies and Site Data

Have I saved any passwords for this website? No — View Saved Passwords

Technical Details

Connection Encrypted (TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256, 128 bit keys, TLS 1.2)

The page you are viewing was encrypted before being transmitted over the Internet.

Encryption makes it difficult for unauthorized people to view information traveling between computers. It is therefore unlikely that anyone read this page as it traveled across the network.

Help

Device Security Check

Your computer requires s

Start

Ubuntu_Browser_CPP_Cert_Download

步驟 30.1.信任Ubuntu客戶端上的ISE CPP門戶證書。

<#root>

```
user@ubuntu22-desktop:~/Downloads$ ls
cisco-secure-client-linux64-5.1.3.62-core-vpn-webdeploy-k9.sh
demo-example-com.crt
```

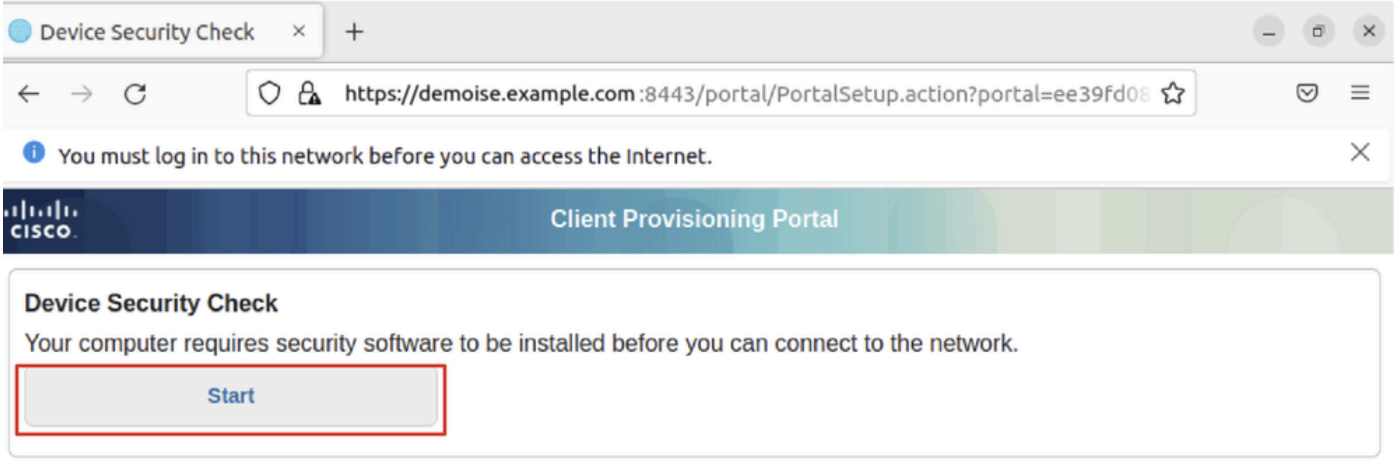
```
ise-cert.crt
```

```
user@ubuntu22-desktop:~/Downloads$

sudo cp ise-cert.crt /usr/local/share/ca-certificates/
```

```
user@ubuntu22-desktop:~/Downloads$

sudo update-ca-certificates
```

```
Updating certificates in /etc/ssl/certs...
rehash: warning: skipping ca-certificates.crt,it does not contain exactly one certificate or CRL

1 added

, 0 removed; done.
Running hooks in /etc/ca-certificates/update.d...
done.
```

步驟 31.在ISE CPP門戶上點選Start。


Device Security Check
https://demoise.example.com:8443/portal/PortalSetup.action?portal=ee39fd08
cisco
Client Provisioning Portal
Start

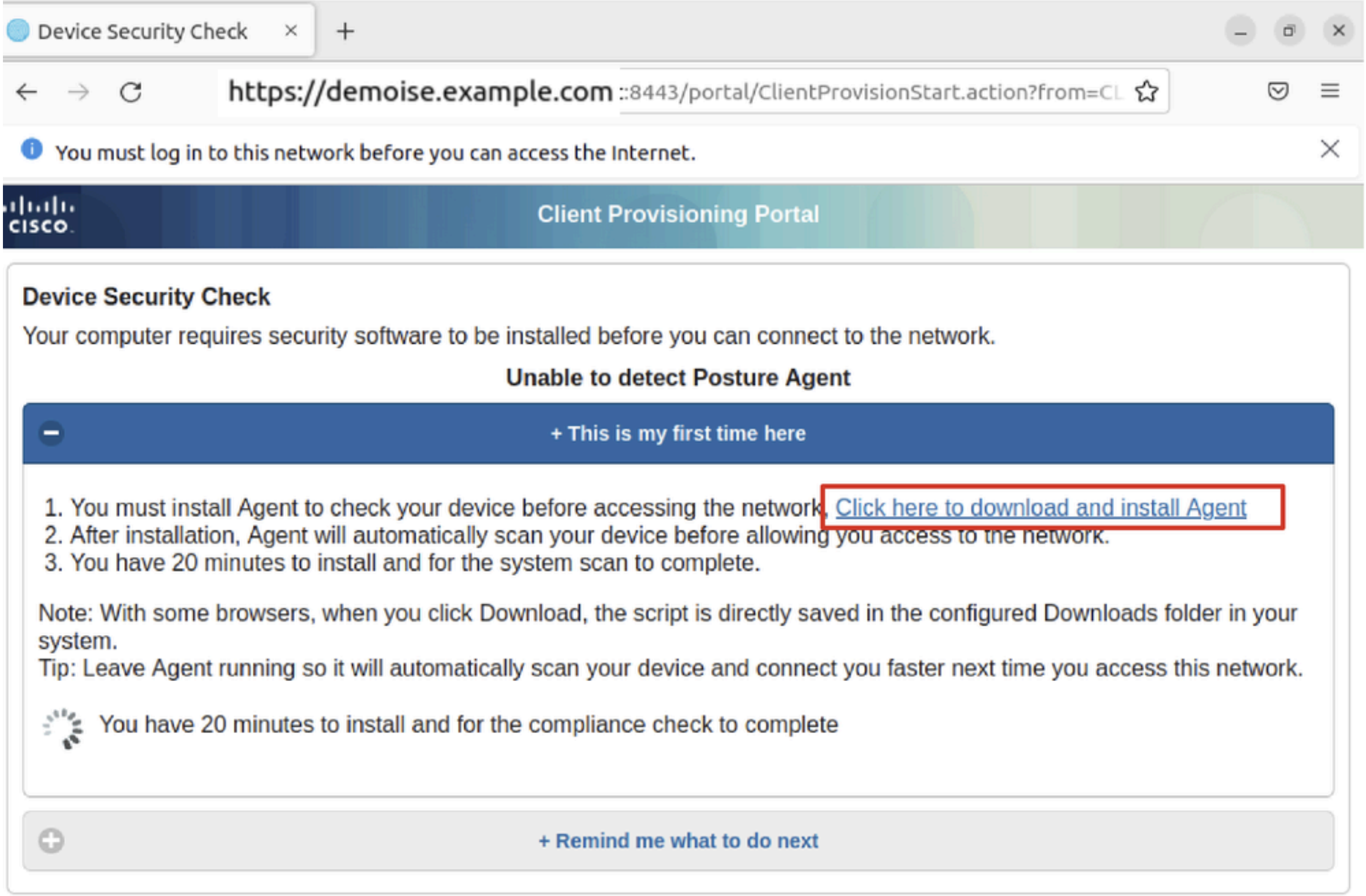
You must log in to this network before you can access the Internet.

Device Security Check

Your computer requires security software to be installed before you can connect to the network.

Ubuntu_Browser_CPP_Start

步驟32. Click here to download and install Agent。


Device Security Check
https://demoise.example.com:8443/portal/ClientProvisionStart.action?from=CL
cisco
Client Provisioning Portal
+ This is my first time here
+ Remind me what to do next

You must log in to this network before you can access the Internet.

Device Security Check

Your computer requires security software to be installed before you can connect to the network.

Unable to detect Posture Agent

1. You must install Agent to check your device before accessing the network. Click here to download and install Agent
2. After installation, Agent will automatically scan your device before allowing you access to the network.
3. You have 20 minutes to install and for the system scan to complete.

Note: With some browsers, when you click Download, the script is directly saved in the configured Downloads folder in your system.
Tip: Leave Agent running so it will automatically scan your device and connect you faster next time you access this network.

You have 20 minutes to install and for the compliance check to complete

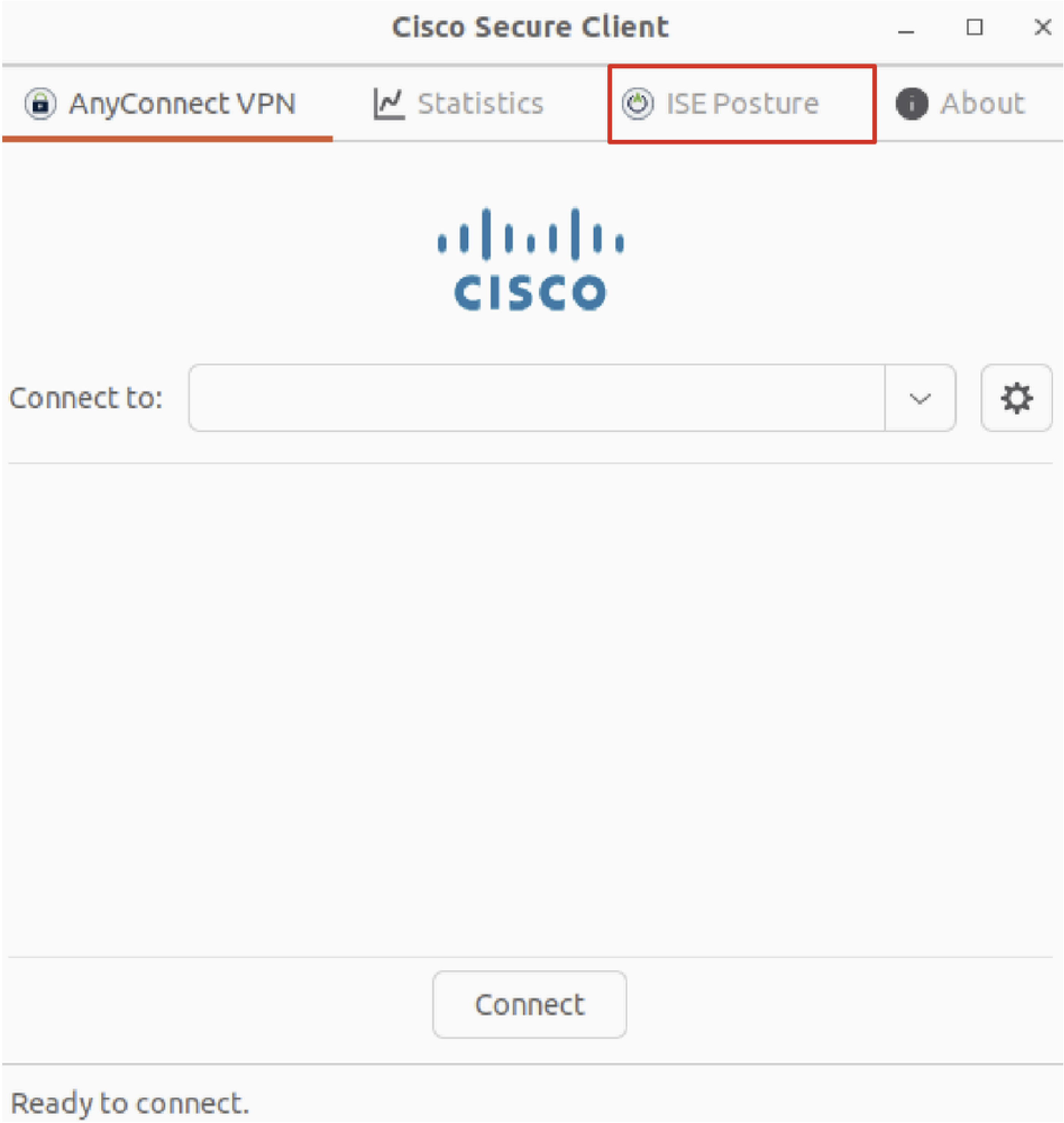
Ubuntu_Browser_CPP_Download_Posture

步驟 33.打開Ubuntu客戶端上的終端。導航到安裝終端安全評估模組的路徑home/user/Downloads/。

```
<#root>
user@ubuntu22-desktop:~/Downloads$ ls
cisco-secure-client-ise-network-assistant-linux64-5.1.3.62_demoise.example.com_8443_0NcLgcMURfyZmR6HoLmL
```

```
cisco-secure-client-linux64-5.1.3.62-core-vpn-webdeploy-k9.sh
demo-example-com.crt
ise-cert.crt

user@ubuntu22-desktop:~/Downloads$

chmod +x cisco-secure-client-ise-network-assistant-linux64-5.1.3.62_demoise.example.com_8443_0NcLgcMURfy


user@ubuntu22-desktop:~/Downloads$
user@ubuntu22-desktop:~/Downloads$
user@ubuntu22-desktop:~/Downloads$

./cisco-secure-client-ise-network-assistant-linux64-5.1.3.62_demoise.example.com_8443_0NcLgcMURfyZmR6HoL


Cisco Network Setup Assistant
(c) 2022-2024 Cisco Systems, Inc. Cisco, Cisco Systems and Cisco Systems logo are registered trademarks
Cisco ISE Network Setup Assistant started. Version - 5.1.3.62
Trusted and Secure Connection
You are connected to

demoise.example.com

whose identity has been certified. Your connection to this website is encrypted.
Downloading Cisco Secure Client...
Downloading remote package...
Running Cisco Secure Client - Downloader...
Installation is completed.
```

步驟 34.在Ubuntu客戶端UI上，退出Cisco Secure Client並重新打開它。ISE終端安全評估模組安裝並成功運行。



Ubuntu_Secure_Client_ISE_Posture_Installed

步驟 35.打開Ubuntu客戶端上的終端。導航到路徑home/user/Desktop（這是您尋找快取缺失可以使用的隱藏命令），然後建立一個test.txt檔案以滿足ISE上配置的檔案條件。

<#root>

user@ubuntu22-desktop:~$

`cd Desktop/`

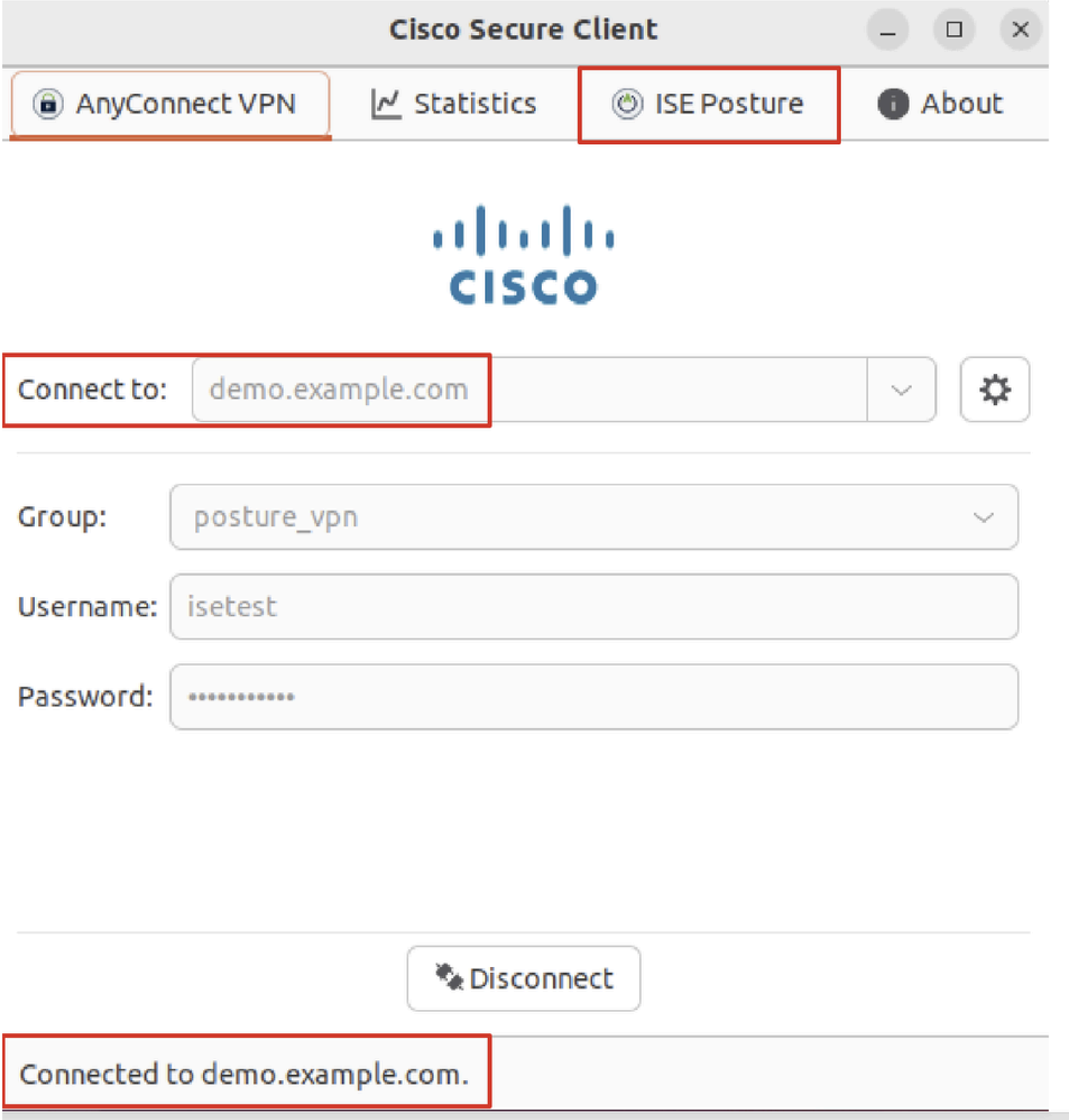
```
user@ubuntu22-desktop:~/Desktop$
```

```
echo test > test.txt
```

驗證

使用本節內容，確認您的組態是否正常運作。

步驟 1.將VPN連線到Ubuntu客戶端上的demo.example.com。



Connect to: demo.example.com

Group: posture_vpn

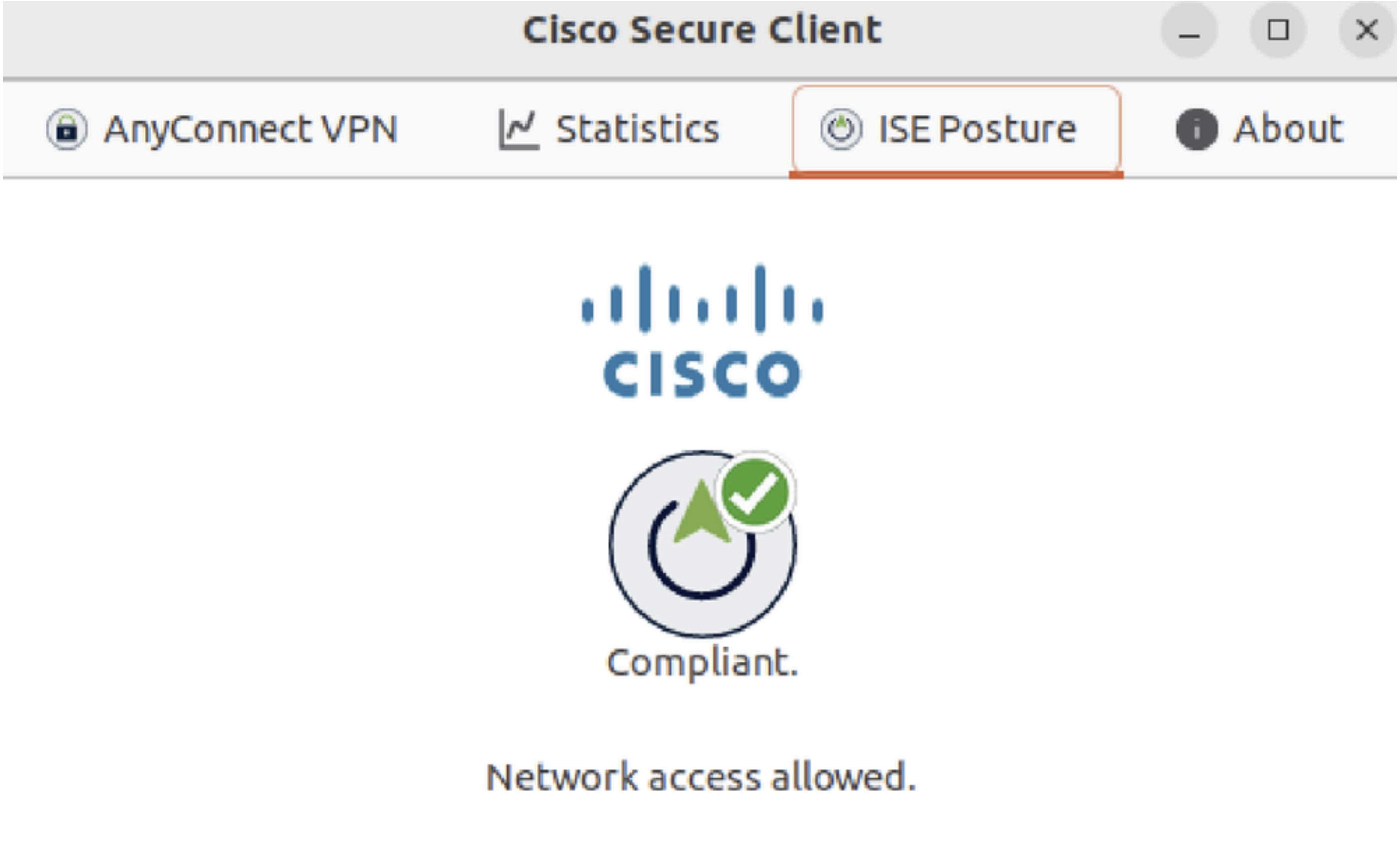
Username: isetest

Password: ••••••••••••

Connected to demo.example.com.

驗證_Ubuntu_安全_客戶端_已連線

步驟 2.檢查Ubuntu客戶端上的ISE終端安全評估狀態。

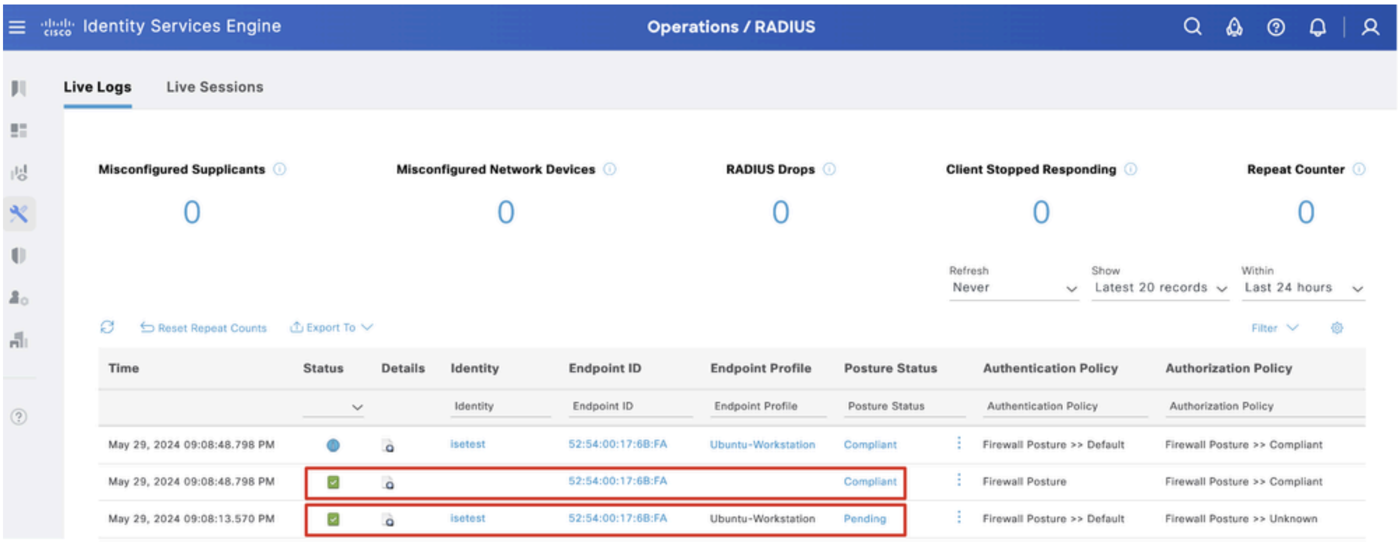


Compliant.

Network access allowed.

Verify_Ubuntu_Secure_Client_Compliance

步驟 3.檢查ISE上的Radius Live Log。導航到Operations > RADIUS Live Log。



Misconfigured Supplicants	Misconfigured Network Devices	RADIUS Drops	Client Stopped Responding	Repeat Counter
0	0	0	0	0

Refresh: Never
Show: Latest 20 records
Within: Last 24 hours

Time	Status	Details	Identity	Endpoint ID	Endpoint Profile	Posture Status	Authentication Policy	Authorization Policy
			Identity	Endpoint ID	Endpoint Profile	Posture Status	Authentication Policy	Authorization Policy
May 29, 2024 09:08:48.798 PM	●		isetest	52:54:00:17:6B:FA	Ubuntu-Workstation	Compliant	Firewall Posture >> Default	Firewall Posture >> Compliant
May 29, 2024 09:08:48.798 PM	✓			52:54:00:17:6B:FA		Compliant	Firewall Posture	Firewall Posture >> Compliant
May 29, 2024 09:08:13.570 PM	✓		isetest	52:54:00:17:6B:FA	Ubuntu-Workstation	Pending	Firewall Posture >> Default	Firewall Posture >> Unknown

驗證_*ISE_LiveLog*

步驟 4.透過SSH或主控台導覽至FTD CLI。

<#root>

```
>
>

system support diagnostic-cli


Attaching to Diagnostic CLI ... Press 'Ctrl+a then d' to detach.
Type help or '?' for a list of available commands.

ftdv741>

enable


Password:
ftdv741#
ftdv741#

show vpn-sessiondb detail anyconnect



Session Type: AnyConnect Detailed

Username : isetest Index : 33
Assigned IP : 192.168.6.30 Public IP : 192.168.10.13
Protocol : AnyConnect-Parent SSL-Tunnel DTLS-Tunnel
License : AnyConnect Premium
Encryption : AnyConnect-Parent: (1)none SSL-Tunnel: (1)AES-GCM-128 DTLS-Tunnel: (1)AES-GCM-256
Hashing : AnyConnect-Parent: (1)none SSL-Tunnel: (1)SHA256 DTLS-Tunnel: (1)SHA384
Bytes Tx : 51596 Bytes Rx : 17606
Pkts Tx : 107 Pkts Rx : 136
Pkts Tx Drop : 0 Pkts Rx Drop : 0
Group Policy : posture_gp Tunnel Group : posture_vpn
Login Time : 14:02:25 UTC Fri May 31 2024
Duration : 0h:00m:55s
Inactivity : 0h:00m:00s
VLAN Mapping : N/A VLAN : none
Audt Sess ID : cb00718200021000 6659d871
Security Grp : none Tunnel Zone : 0

AnyConnect-Parent Tunnels: 1
SSL-Tunnel Tunnels: 1
DTLS-Tunnel Tunnels: 1

AnyConnect-Parent:
Tunnel ID : 33.1
Public IP : 192.168.10.13
Encryption : none Hashing : none
TCP Src Port : 59180 TCP Dst Port : 443
Auth Mode : userPassword
Idle Time Out: 30 Minutes Idle TO Left : 29 Minutes
Client OS : linux-64

Client OS Ver: Ubuntu 22.04 LTS 22.04 (Jammy Jellyfish)
Client Type : AnyConnect
Client Ver : Cisco AnyConnect VPN Agent for Linux 5.1.3.62


Bytes Tx : 6364 Bytes Rx : 0
Pkts Tx : 1 Pkts Rx : 0
Pkts Tx Drop : 0 Pkts Rx Drop : 0

SSL-Tunnel:
Tunnel ID : 33.2
Assigned IP :192.168.6.30 Public IP : 192.168.10.13
Encryption : AES-GCM-128 Hashing : SHA256
Ciphersuite : TLS_AES_128_GCM_SHA256
Encapsulation: TLSv1.3 TCP Src Port : 59182
TCP Dst Port : 443 Auth Mode : userPassword
Idle Time Out: 30 Minutes Idle TO Left : 29 Minutes
Client OS : Linux_64
Client Type : SSL VPN Client
Client Ver : Cisco AnyConnect VPN Agent for Linux 5.1.3.62
Bytes Tx : 6364 Bytes Rx : 498
Pkts Tx : 1 Pkts Rx : 6
Pkts Tx Drop : 0 Pkts Rx Drop : 0

Filter Name : #ACSACL#-IP-PERMIT_ALL_IPV4_TRAFFIC-57f6b0d3



DTLS-Tunnel:
Tunnel ID : 33.3
Assigned IP :192.168.6.30 Public IP : 192.168.10.13
Encryption : AES-GCM-256 Hashing : SHA384
Ciphersuite : ECDHE-ECDSA-AES256-GCM-SHA384
Encapsulation: DTLSv1.2 UDP Src Port : 56078
UDP Dst Port : 443 Auth Mode : userPassword
Idle Time Out: 30 Minutes Idle TO Left : 29 Minutes
Client OS : Linux_64
Client Type : DTLS VPN Client
Client Ver : Cisco AnyConnect VPN Agent for Linux 5.1.3.62
Bytes Tx : 38868 Bytes Rx : 17108
Pkts Tx : 105 Pkts Rx : 130
Pkts Tx Drop : 0 Pkts Rx Drop : 0

Filter Name : #ACSACL#-IP-PERMIT_ALL_IPV4_TRAFFIC-57f6b0d3
```

疑難排解

本節提供的資訊可用於對組態進行疑難排解。

對於終端安全評估流程和思科安全客戶端和ISE故障排除，請檢查CCO**文檔ISE終端安全評估樣式比較2.2之前和之後的比較**以及**ISE會話管理和終端安全評估故障排除**。

相關資訊

- 思科身分辨識服務引擎網路元件相容性，版本3.3

- 思科身份服務引擎管理員指南3.3版

- **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）。