

通過pxGrid Cloud將雲交付的防火牆管理中心與ISE整合

目錄

[簡介](#)

[必要條件](#)

[需求](#)

[採用元件](#)

[Cisco pxGrid雲術語](#)

[背景資訊](#)

[設定](#)

[網路圖表](#)

[組態](#)

[在ISE中匯入Cisco pxGrid雲伺服器證書](#)

[流程圖](#)

[向Catalyst雲門戶註冊ISE](#)

[使用整合目錄在ISE上啟用cdFMC應用程式](#)

[建立pxGrid應用程式\(cdFMC\)例項](#)

[驗證](#)

[疑難排解](#)

[ISE註冊/註冊和應用。啟用流程](#)

[限制](#)

[參考資料](#)

簡介

本文檔介紹通過pxGrid Cloud將Cisco ISE與雲交付的防火牆管理中心(cdFMC)整合的過程。

必要條件

- 思科身份服務引擎(ISE)工作知識
- Cisco Catalyst雲門戶中的帳戶
- 思科安全雲端控制入口網站上的帳戶

需求

- 在思科ISE部署中安裝和啟用優勢許可證層。
- pxGrid雲代理建立到Cisco pxGrid雲的出站HTTPS連線。因此，如果網路使用代理訪問網際網路，請配置Cisco ISE代理設定。要在Cisco ISE中配置代理設定，請選擇管理>系統>設定>代理。

- 思科ISE受信任證書儲存必須包括驗證思科pxGrid雲提供的伺服器證書所需的根CA證書。確保為此根CA證書啟用了Trust for Authentication of Cisco Services選項。要啟用Trust for Authentication of Cisco Services，請選擇管理>系統>證書。
- 確保為從思科ISE到思科pxGrid雲門戶的出站連線開啟埠443。如果配置了防火牆或代理設定，請確保這些URL未被阻止。

<https://dna.cisco.com>

<https://dnaservices.cisco.com>

<https://ciscodnacloud.com>

採用元件

ISE軟體版本：3.4修補程式1、4節點部署（PAN、SAN和2個PSN，並啟用pxGrid服務）

cdFMC版本：20241127

適用於VMware版本的Cisco Firepower威脅防禦(FTD):7.2.5

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。

Cisco pxGrid雲術語

以下是Cisco pxGrid雲解決方案中使用的一些常用術語及其在Cisco pxGrid雲環境中的含義：

- 產品：將一組功能打包在一起並作為解決方案提供
- 訂閱：租戶使用的優惠的一個例項是訂閱
- 應用：您可以根據自己的要求為產品建立和註冊應用程式。

背景資訊

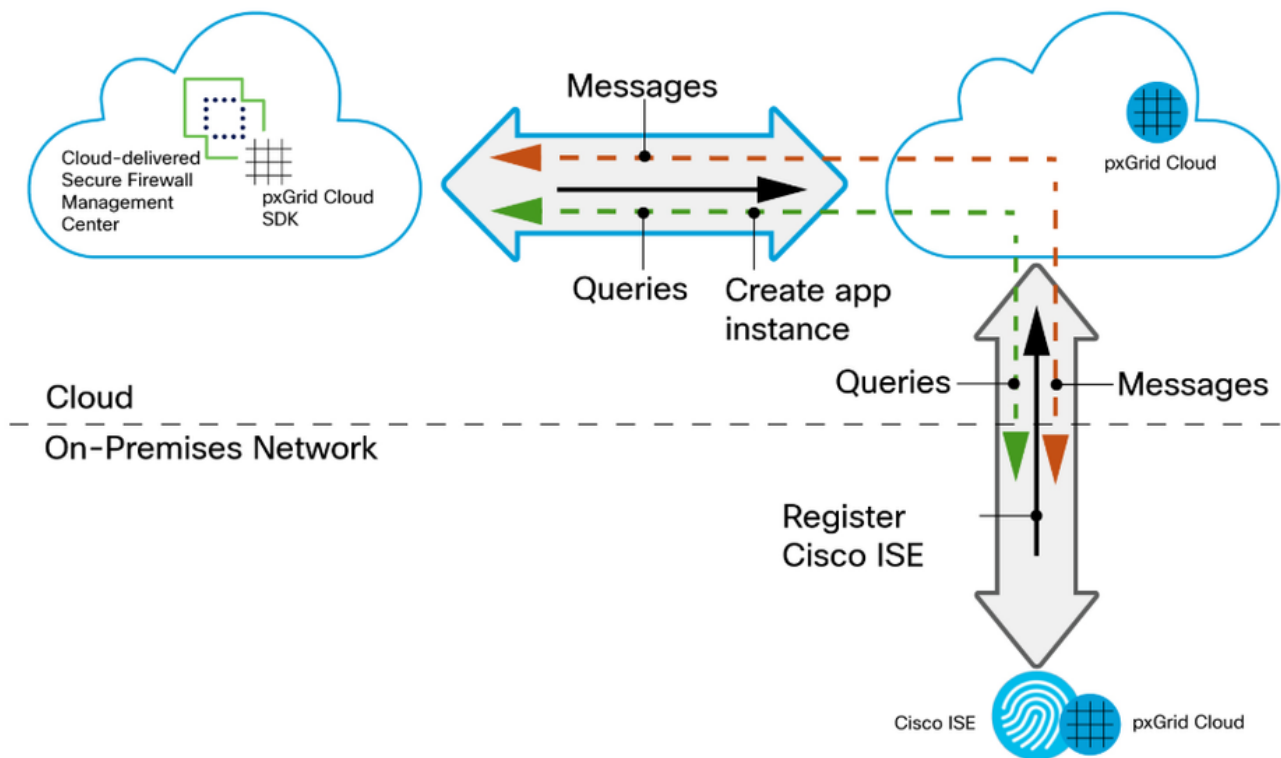
Cisco ISE提供多個安全供應商之間的情景共用；但是，當前架構不允許本地ISE和基於雲的解決方案之間通過網路邊界進行通訊，而無需在防火牆中留下某種旁路/漏洞。

思科ISE的pxCloud是基於雲的解決方案，可解決此問題，並在本地和雲之間實現情景共用，無需額外的安裝、額外開銷和影響網路安全性。它安全且可自定義，使您能夠僅共用想要共用的資料，且僅使用與您的應用程式相關的情景資料。

Cisco ISE版本3.1補丁3及更高版本支援pxGrid Cloud。思科及其合作夥伴可以開發基於pxGrid雲的應用，並使用pxGrid雲產品註冊這些應用。思科依靠cisco DNA-Cloud Portal進行載入和註冊應用，無需依賴其他內部部署基礎設施。這些應用使用外部RESTful服務(ERS)、開放式API和pxGrid（API和websocket）與思科ISE交換資訊，以使用cdFMC中ISE的訂閱和使用者資料。

設定

網路圖表



通過pxGrid Cloud整合cdFMC和ISE

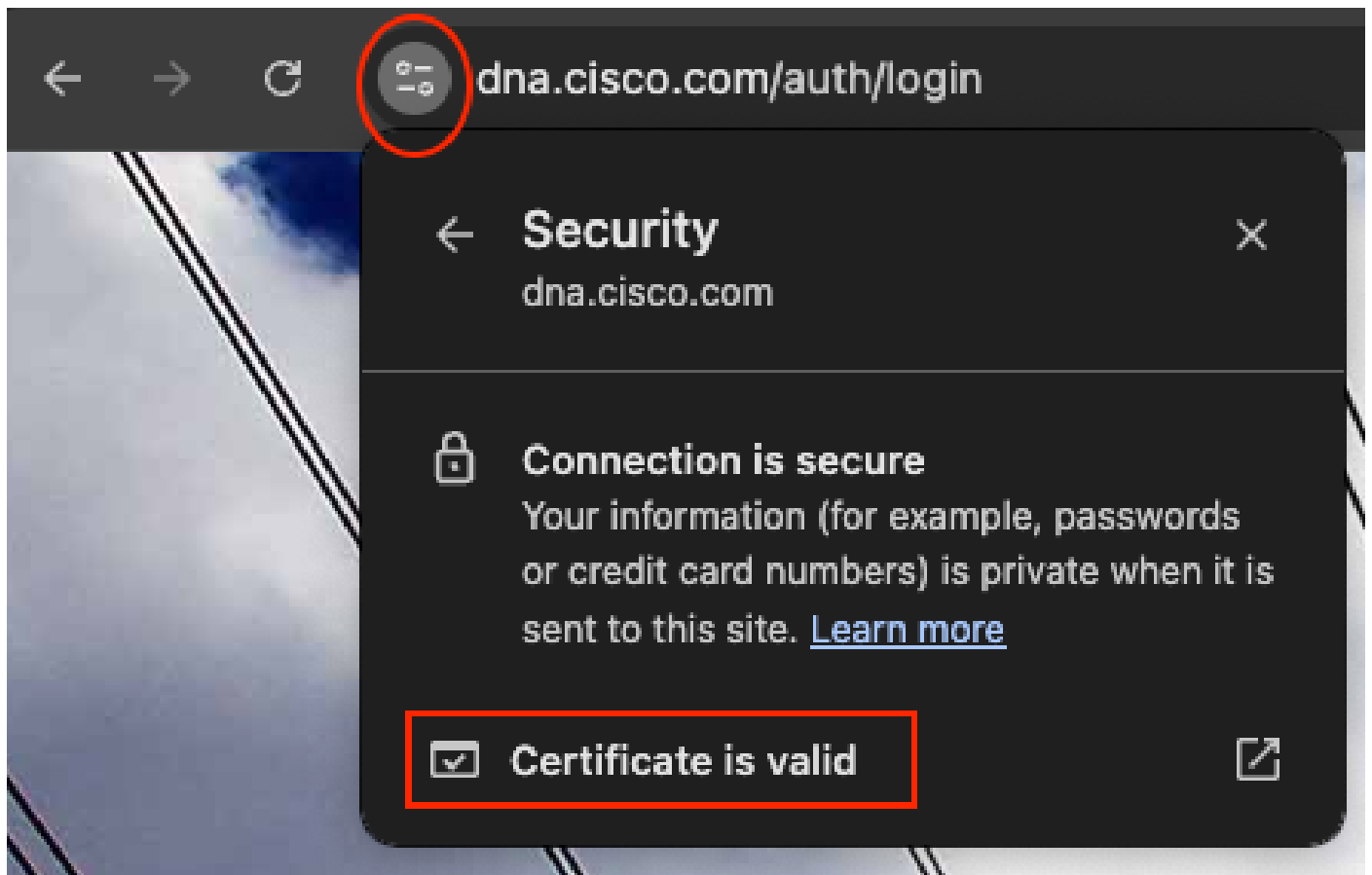
組態

涉及四個主要步驟：

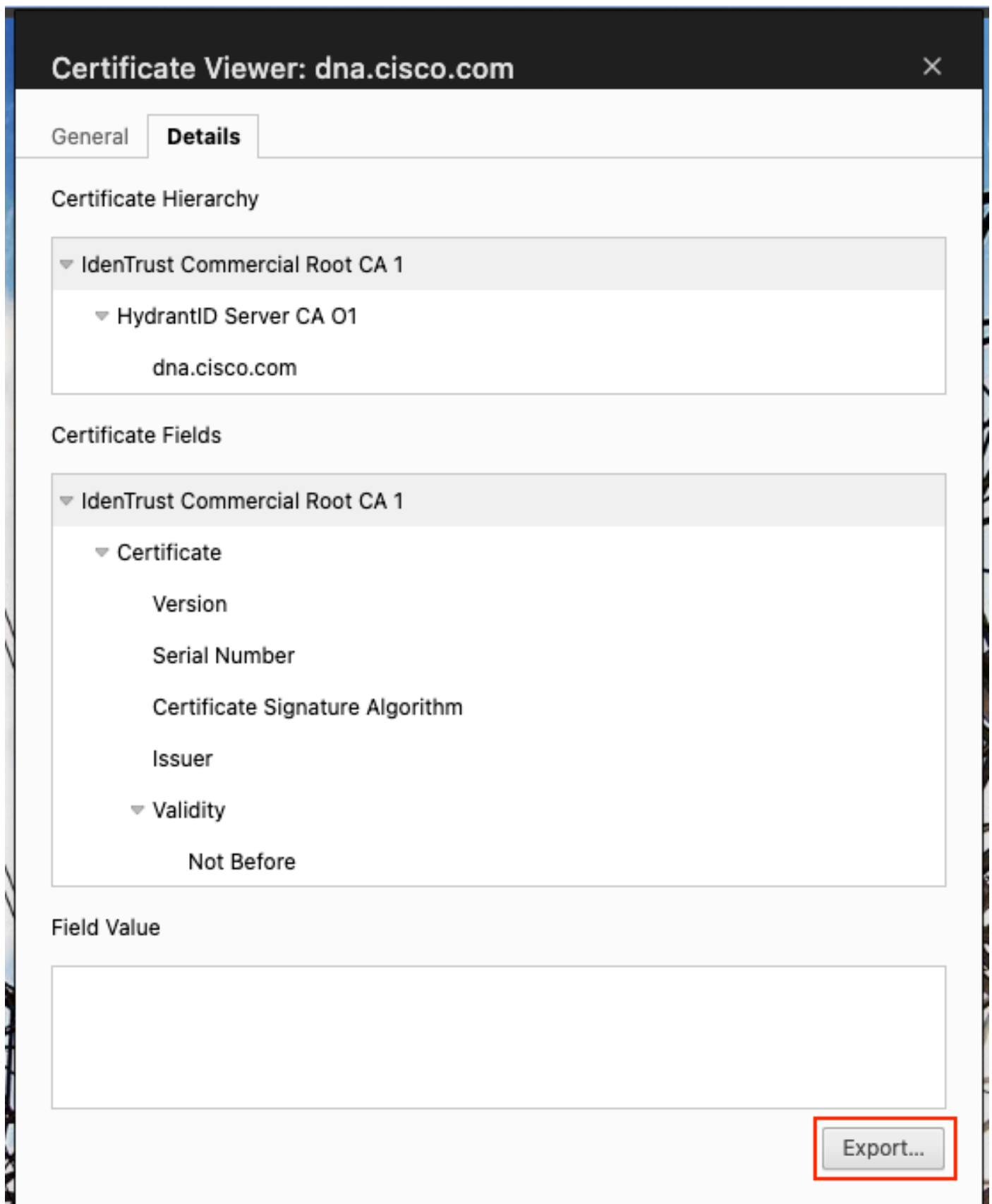
- 在ISE中匯入Cisco pxGrid雲伺服器證書。
- 向Catalyst雲門戶註冊ISE。
- 使用整合目錄在ISE上啟用cdFMC應用程式
- 建立pxGrid應用程式(cdFMC)例項

在ISE中匯入Cisco pxGrid雲伺服器證書

ISE必須與Cisco pxGrid雲建立信任。即使雲網站使用公開簽名的證書進行身份驗證，ISE也不會維護受信任的根CA的完整清單。因此管理員必須建立信任關係。通過瀏覽到Catalyst雲門戶匯出pxGrid雲根證書和[中間證書](#)。大多數瀏覽器都允許這樣做。以下是從Chrome瀏覽器獲取證書的步驟。



檢視站點資訊



匯出證書鏈

如果證書鏈缺失，請將證書匯入ISE中的「受信任證書」儲存（ISE已具有IdenTrust商業根CA 1）。

確保為此根CA證書啟用「Trust for Authentication of Cisco Services」選項。要啟用Trust for

Authentication of Cisco Services , 請選擇管理>系統>證書。

Deployment

Licensing

Certificates

Logging

Maintenance

Upgrade & Rollback

Health Checks

Certificate Management

System Certificates

Admin Certificate Node Restart

Trusted Certificates

OCSP Client Profile

Certificate Signing Requests

Certificate Periodic Check Settings

Certificate Authority

Issuer

* Friendly Name

IdenTrust Commercial Root CA 1

Status

Enabled

Description

IdenTrust Commercial Root CA 1

Subject

CN=IdenTrust Commercial Root CA 1,O=IdenTrust,C=US

Issuer

CN=IdenTrust Commercial Root CA 1,O=IdenTrust,C=US

Valid From

Thu, 16 Jan 2014 18:12:23 UTC

Valid To (Expiration)

Mon, 16 Jan 2034 18:12:23 UTC

Serial Number

0A 01 42 80 00 00 01 45 23 C8 44 B5 00 00 00 02

Signature Algorithm

SHA256withRSA

Key Length

4096

Usage

Trusted For:

☐ Trust for authentication within ISE

☐ Trust for client authentication and Syslog

☐ Trust for certificate based admin authentication

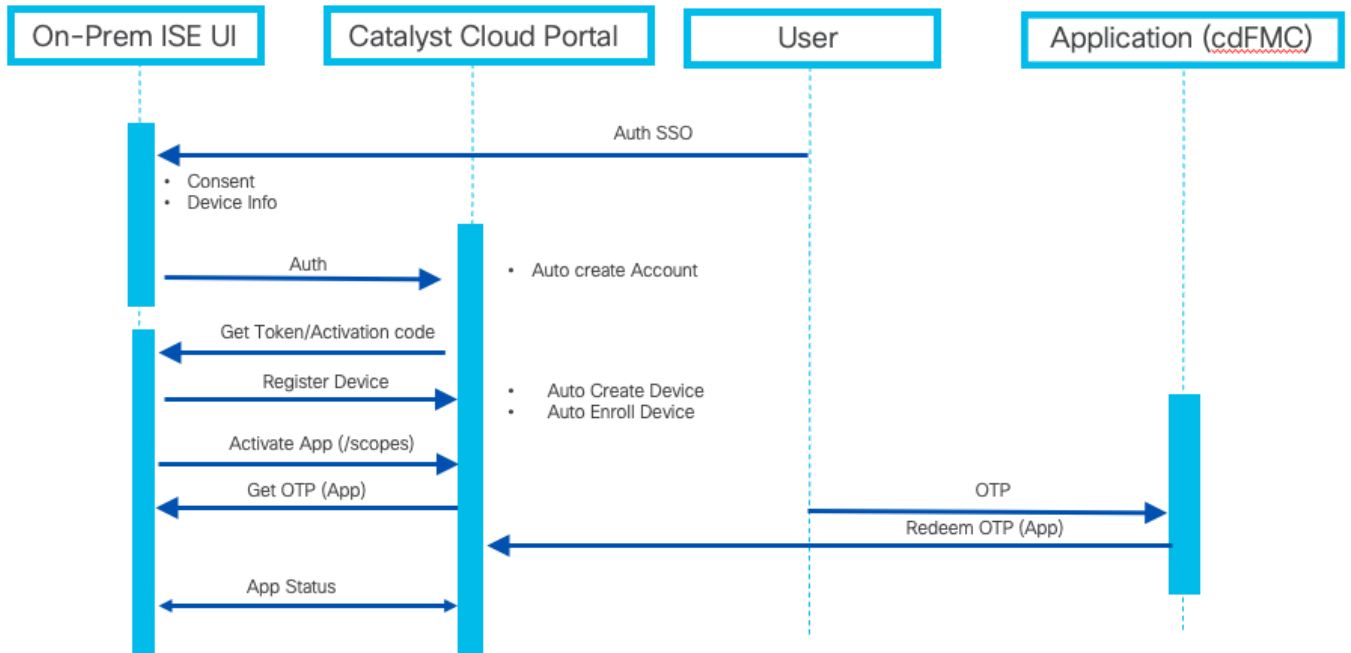
☒ Trust for authentication of Cisco Services

☐ Trust for Native IPSec certificate based authentication

為思科服務的身份驗證啟用信任

流程圖

App Activation Workflow



應用啟用工作流

在此設定中使用的ISE部署

Deployment Nodes

A Cisco ISE node can assume the Administration, Policy Service, or Monitoring personas. Data is automatically replicated from PAN to all the secondary nodes. If needed, you can manually sync a node with the PAN by using the Sync option. During Sync, Cisco ISE performs Full Sync if full database replication is required or Selective Sync if only bulk replication of selective dataset is needed. You must update the SXP device configuration with the connected PSN details in case of upgrade, node failure, or node configuration updates.

Selected 0 Total 4  

 Edit  Register  Sync  Deregister All  

☐	Hostname	Personas	Role(s)	Services	Node Status
☐	ise341-PAN	Administration, Monitoring	PRI(A), PRI(M)	NONE	
☐	ise341-SAN	Administration, Monitoring	SEC(A), SEC(M)	NONE	
☐	ise341-psn1	Policy Service, pxGrid		SESSION,PROFILER	
☐	ise341-psn2	Policy Service, pxGrid		SESSION,PROFILER	 

向Catalyst雲門戶註冊ISE

在思科ISE中啟用pxGrid雲服務並註冊您的裝置。

- 1.在Cisco ISE GUI中，選擇Administration > System > Deployment。
- 2.按一下要在其上啟用pxGrid雲服務的節點（在本例中是第一個PSN節點）。
- 3.在General Settings頁籤中，啟用pxGrid服務。
- 4.選中pxGrid Cloud覈取方塊。



附註：pxGrid雲服務只能在兩個節點上啟用，以實現高可用性。僅當在該節點上啟用pxGrid服務時，才能啟用pxGrid雲選項。

5.在ISE部署名稱欄位中，輸入有意義的名稱。此名稱顯示在Catalyst雲門戶中，可用於區分是否向雲註冊多個ISE部署。您可以使用ISE部署名稱驗證在Cisco Catalyst雲門戶上註冊的思科ISE部署。

(可選) 在Description (可選) 欄位中，輸入您的思科ISE部署的描述。

6.在Region下拉選單中，選擇一個區域以註冊您的Cisco ISE裝置。除了美國，Cisco pxGrid Cloud現在還在歐洲、亞太地區和日本得到支援。請注意，要與pxGrid Cloud一起使用的應用程式也必須在同一區域中可用。

7.按一下註冊。

Bookmarks

Dashboard

Context Visibility

Operations

Policy

Administration

Work Centers

Interactive Help

Deployment

Licensing

Certificates

Logging

Maintenance

Upgrade & Rollback

Health Checks

Backup & Restore

Admin Access

Settings

☐

Enable Passive Identity Service

pxGrid

Enable pxGrid Cloud

pxGrid Cloud can be enabled only after registering your Cisco ISE to your Cisco DNA Portal account.

ISE deployment name

ISE341-PSN1

Description (optional)

Primary pxGrid node

Select a region where you want to register your device. Application should also be available in the same region.

Region

us-west-2

Check the checkboxes below to register this ISE if you concur with the statements.

☒ I have read and acknowledge the [Cisco Privacy Statement](#).

☒ I agree that offers are governed by Cisco EULA and I am an authorized agent of my company. [Cisco's End User License Agreement](#).

Register

Reset

Save

向pxGrid雲註冊ISE PSN

8.在「啟用設備」彈出頁面中，將自動填寫裝置的啟用碼。按「Next」（下一步）。



US
EN



Activate your device

Follow the instructions on your device to get an
activation code

Activation Code

XXXX-XXXX

Next

[Contact support](#) [Privacy](#) [Terms & Conditions](#) [Cookies](#) [Trademarks](#)



Device activated

 poongarg@cisco.com

Follow the instructions on your device for next steps

[Contact support](#) [Privacy](#) [Terms & Conditions](#) [Cookies](#) [Trademarks](#)



附註：如果在第二個節點上啟用「pxGrid雲」角色，ISE不需要所有這些詳細資訊，因為ISE與pxGrid雲的註冊處於部署級別。

9. 使用您的登入憑證[登入Cisco Catalyst](#)雲門戶帳戶。如果您沒有登入憑證，請建立一個新帳戶以完成裝置註冊。如需詳細資訊，請參閱[在Cisco Catalyst雲入口上建立帳戶](#)

您的Cisco ISE裝置已啟用並註冊。

Catalyst Cloud Portal Applications and Products

Applications Products

SUMMARY

Products Type (5)

- ☐ Cisco DNA Center
- ☐ Cisco ISE
- ☐ Virtual Wireless C...
- ☐ Cisco SDWAN Co...
- ☐ Catalyst Dashboard

Registration Status (5)

- ☐ Registered
- ☐ Pending Authoriza...
- ☐ Suspended
- ☐ Deleting
- ☐ Delete Failed

Products (1/5) Focus: Show product type

Region: ALL

Select a region to register product.

Product Name	Registration Status	Region	Type
ISE341-PSN1	Registered	us-west-2	Cisco ISE

1 Record(s)

Product Details

Product Name: ISE341-PSN1

Description: Primary pxGrid node

Product Type: Cisco ISE

Region: us-west-2

Last Heartbeat Status: March 17th, 2025 - 5:01:47 PM

Registration Status: Registered

向Catalyst雲門戶註冊的ISE節點

10.您可以在pxGrid部分(管理>系統>部署> pxGrid)中查詢已註冊思科ISE的詳細信息。

pxGrid

Enable pxGrid Cloud

To enable pxGrid Cloud application, please go to the [Integration Catalog](#).

Cisco DNA Portal account: cisco

ISE deployment name: ISE341-PSN1

Description: Primary pxGrid node

Status: Connected

Registered region: us-west-2

Mode: Active

Deregister

驗證向pxGrid Cloud註冊的ISE

您可以點選Deregister取消註冊您的Cisco ISE裝置。註銷思科ISE也會自動停用已連線的應用。

使用整合目錄在ISE上啟用cdFMC應用程式

1.在ISE GUI中，選擇Administration > Integration Catalog。

2.在Available integrations下，選擇Firewall Management Center 應用程式。



附註：應用程式清單取決於帳戶。某些應用程式可能只暴露給特定帳戶。

Identity Services Engine

Administration / Integration Catalog

Integration Catalog

Available integrations



Cisco Security Cloud

NetworkSecuritypxGrid Cloud

us-west-2

Cisco Security Cloud acts as an application broker which will allow ISE to integrate with the supported Cisco's cloud Security...

[More details](#)



Firewall Management Center

Network SecuritypxGrid Cloud

us-west-2

Integrate with Firewall Management Center (FMC) to setup Identity Based Access Control in Cisco Secure Firewall.

[More details](#)



pxGrid Cloud Demo

networkingpxGrid Cloudus-west-2

eu-central-1ap-southeast-1

Welcome to Cisco pxGrid Cloud's Demo Application! The purpose of this is to guide you through the setup process for...

[More details](#)



pxGrid Cloud Demo Multi-instance

networkingdemopxGrid Cloud

us-west-2eu-central-1ap-southeast-1

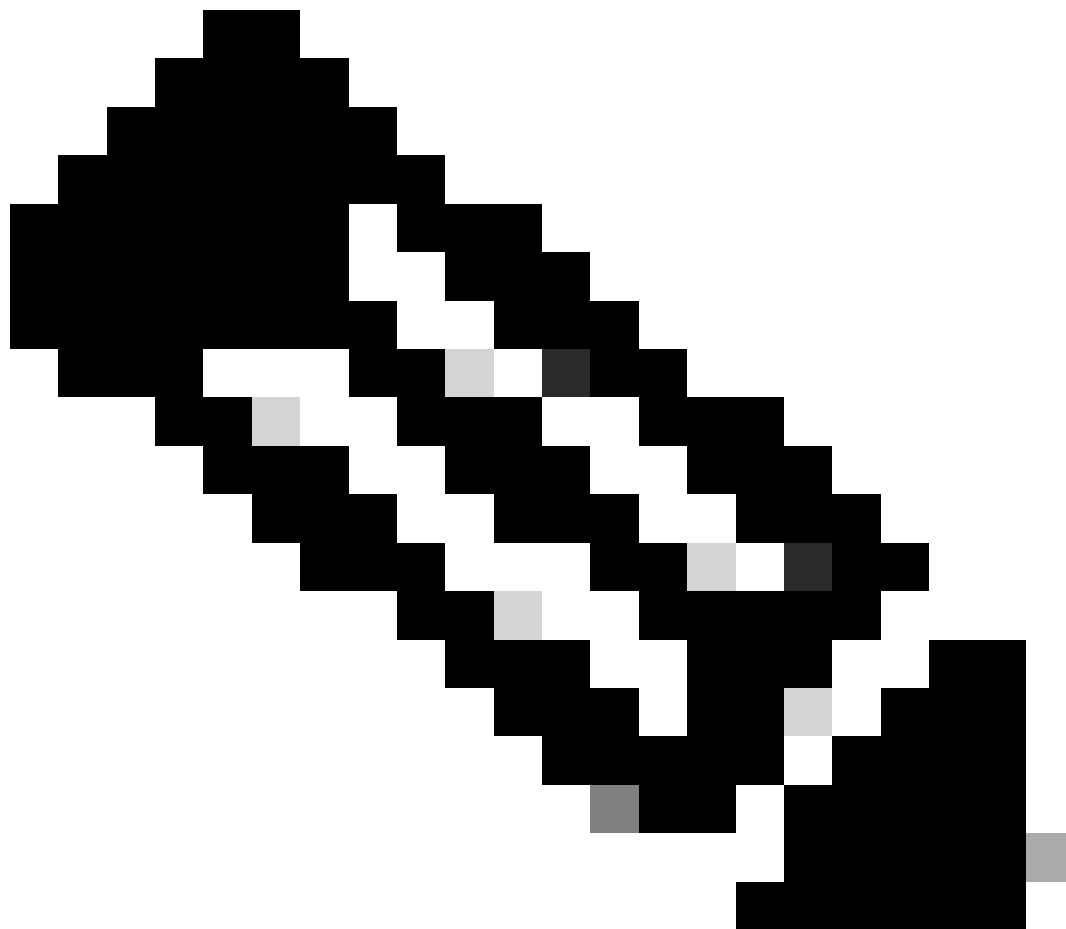
Welcome to Cisco pxGrid Cloud's Demo Application (Multi-instance)! The purpose of this is to guide you through the setup...

[More details](#)

整合目錄

3.在App configuration部分，選擇New instance，然後為你的應用程式配置選擇Data scope。至少

選擇一個資料範圍以繼續。



附註：選擇資料範圍時，它也會在系統級別pxGrid雲策略設定下啟用該範圍。

4.按一下啟用以啟用應用。

Identity Services Engine

Administration / Integration Catalog

Bookmarks

Dashboard

Context Visibility

Operations

Policy

Administration

Work Centers

Interactive Help

Integration Catalog

Firewall Management Center

Network SecuritypxGrid Cloudus-west-2

ConfigurationAbout this integration

Registration

The integration of pxGrid Cloud will take place through your Cisco DNA Portal account where this ISE is registered. [Manage your ISE registration](#)

Cisco DNA Portal account

cisco

Device name

ISE341-PSN1

Description

Primary pxGrid node

Status

Registered

Registered region

us-west-2

App configuration

Application status

Inactive

Instance

Existing instances

New instance

Data scope

Select at least 1 data scope for this application to consume.

Adaptive Network Control (ANC) Configuration

Provides ANC configuration details such as policy name, action type, status, and MAC address.

Echo Service

Provides a way for the app to check the health of the integration.

Profiler Configuration

Provides ISE profiling policy device details such as ID and name.

Session Directory

Provides details on session and user group objects which include authenticated user context, wired and wireless connection type information, posture status, endpoint profile device, Security Group Tag (SGT), and username.

TrustSec

Covers TrustSec, TrustSec Configuration, and TrustSec SXP topics which include SGACL, SGT, and SGT binding information.

If you are associating multiple ISE clusters, please ensure that your SGT IDs and names are homogenized.

When you select a data scope, it will also enable the same under system level pxGrid Cloud Policy settings.

Activate

ISE上的FMC應用配置

5.從一次性密碼(OTP)彈出視窗中，複製OTP以在建立pxGrid應用程式例項時在cdFMC上兌換它

One-time Password Generated

Log into your account on the App page and use this one-time password to add an instance.

Authenticated with App account 

One-time password

1cOzAGz9sMayHJzy4ejSsbpq8Hc...

 **Copy**

OK

適用於cdFMC應用程式的OTP

6. 導航到管理> pxgrid服務>客戶端管理> pxGrid雲策略，配置pxGrid雲策略。選擇您要與Saas應用程式共用的pxGrid服務，並啟用External RESTful Services(ERS)API和OpenAPI對Cisco pxGrid雲應用的只讀訪問。

Identity Services Engine

Administration / pxGrid Services

Bookmarks

Dashboard

Context Visibility

Operations

Policy

Administration

Work Centers

Interactive Help

Summary

Client Management

Diagnostics

Settings

Clients

Policy

Groups

Certificates

pxGrid Cloud Policy

pxGrid Cloud Policy

You can create a general pxGrid Cloud policy for what is allowed or denied between your ISE deployment and the pxGrid Cloud service. The per partner authorization policy can be setup in the cloud portal.

pxGrid Services

You can use Cisco pxGrid to share the context-sensitive information from Cisco ISE session directory with other network systems such as ISE Eco system partner systems and other Cisco platforms. The pxGrid framework can also be used to exchange policy and configuration data between nodes like sharing tags and policy objects between Cisco ISE and third party vendors, and for other information exchanges.

Echo Service

TrustSec SXP

MDM

TrustSec configuration

TrustSec

Profiler configuration

Endpoint

ANC configuration

Radius Failure

User Defined Network

Session Directory

ERS APIs

Enable External RESTful Services (ERS) APIs Policy in pxGrid Cloud Policy.

Enabled

Read Only

Read/Write

Open APIs

Enable Open APIs for pxGrid Cloud.

Enabled

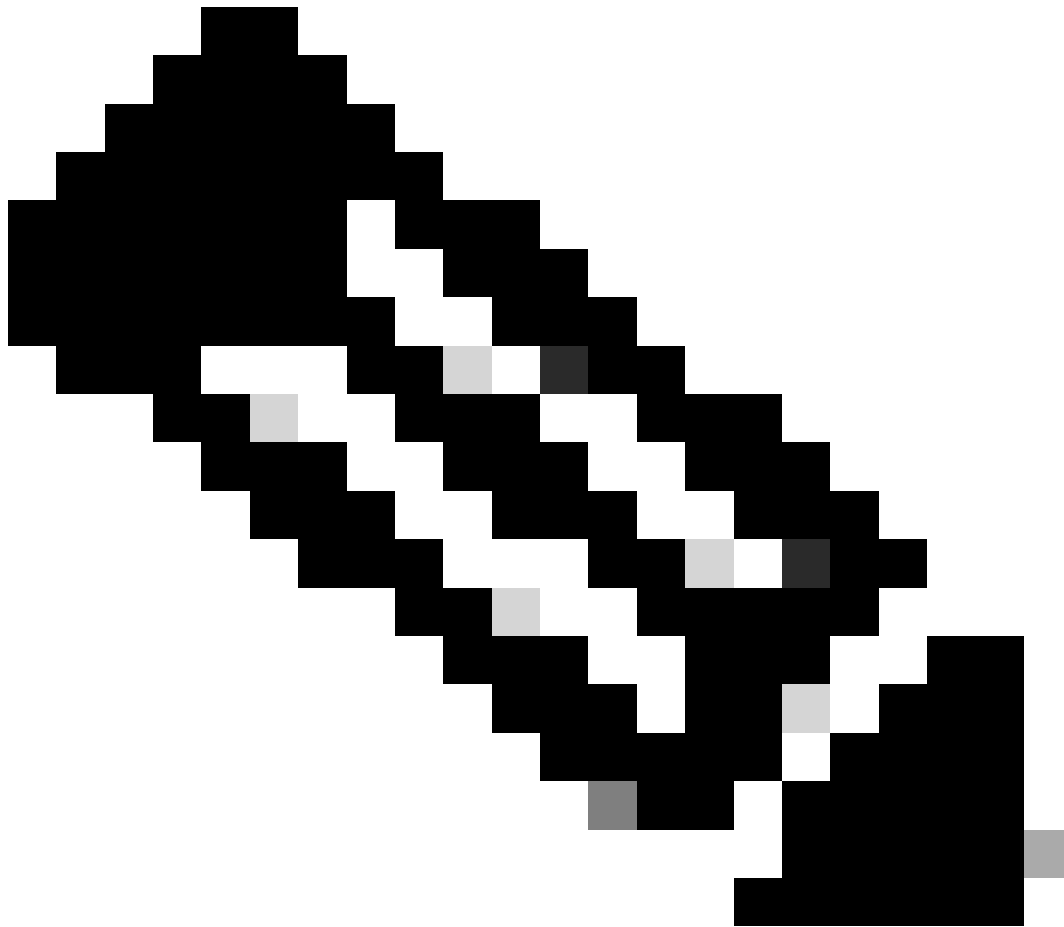
Read Only

Read/Write

Reset

Save

配置pxGrid雲策略



附註：Echo服務用於運行運行狀況檢查以確定與ISE的pub-sub和API連線。

預設情況下，Cisco pxGrid雲應用程式被授予對API的只讀訪問許可權（只能執行HTTP GET操作）。如果您還希望允許POST、PUT和DELETE操作，請在pxGrid Cloud Policy視窗中啟用Read/Write選項。

建立pxGrid應用程式(cdFMC)例項

- 1.以具有超級管理員角色的使用者身份登入安全雲控制(SCC)門戶。



CONNECTING TO SECURITY CLOUD CONTROL (APJC)

Security Cloud Sign On

Email

Continue

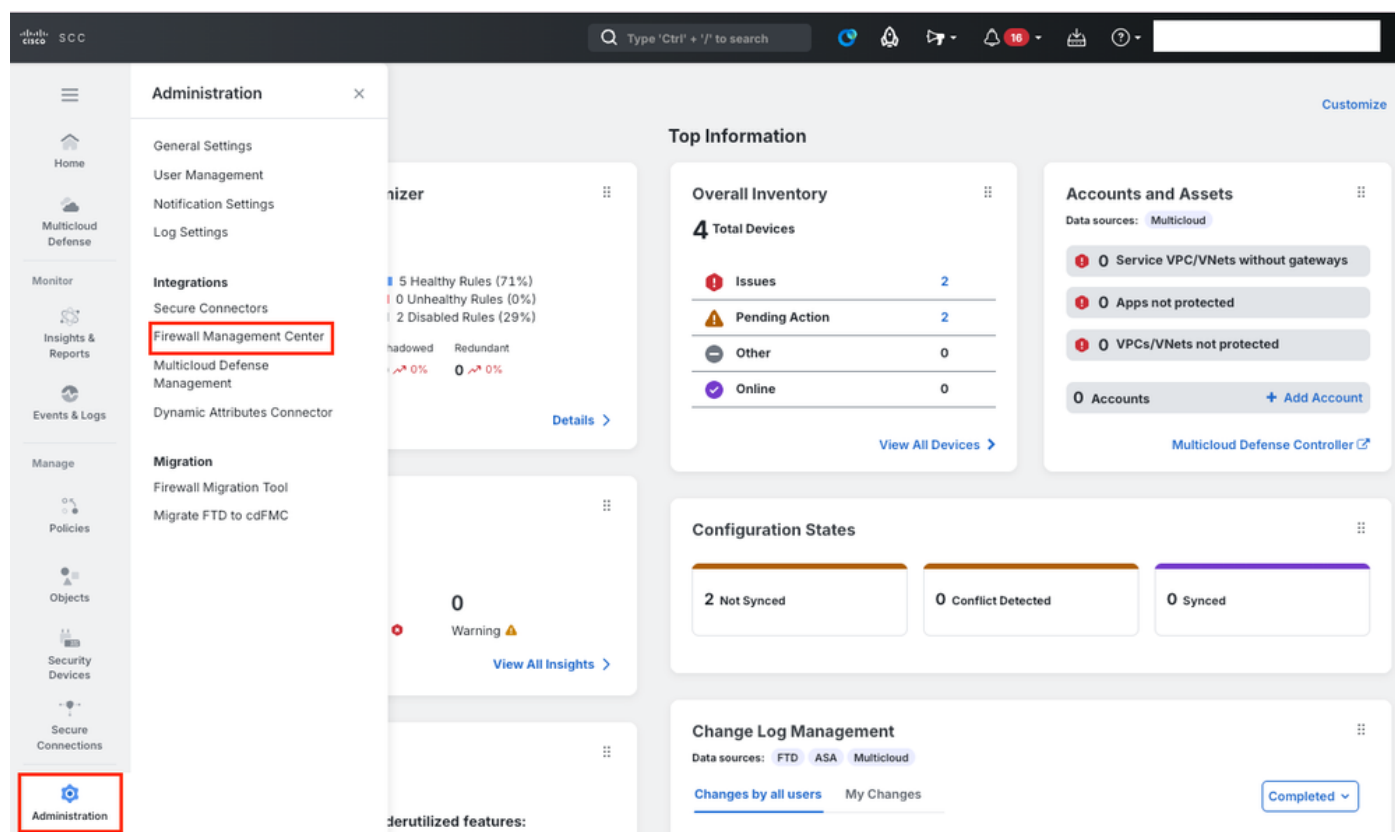
Don't have an account? [Sign up now](#)

Or

[Other login options](#)

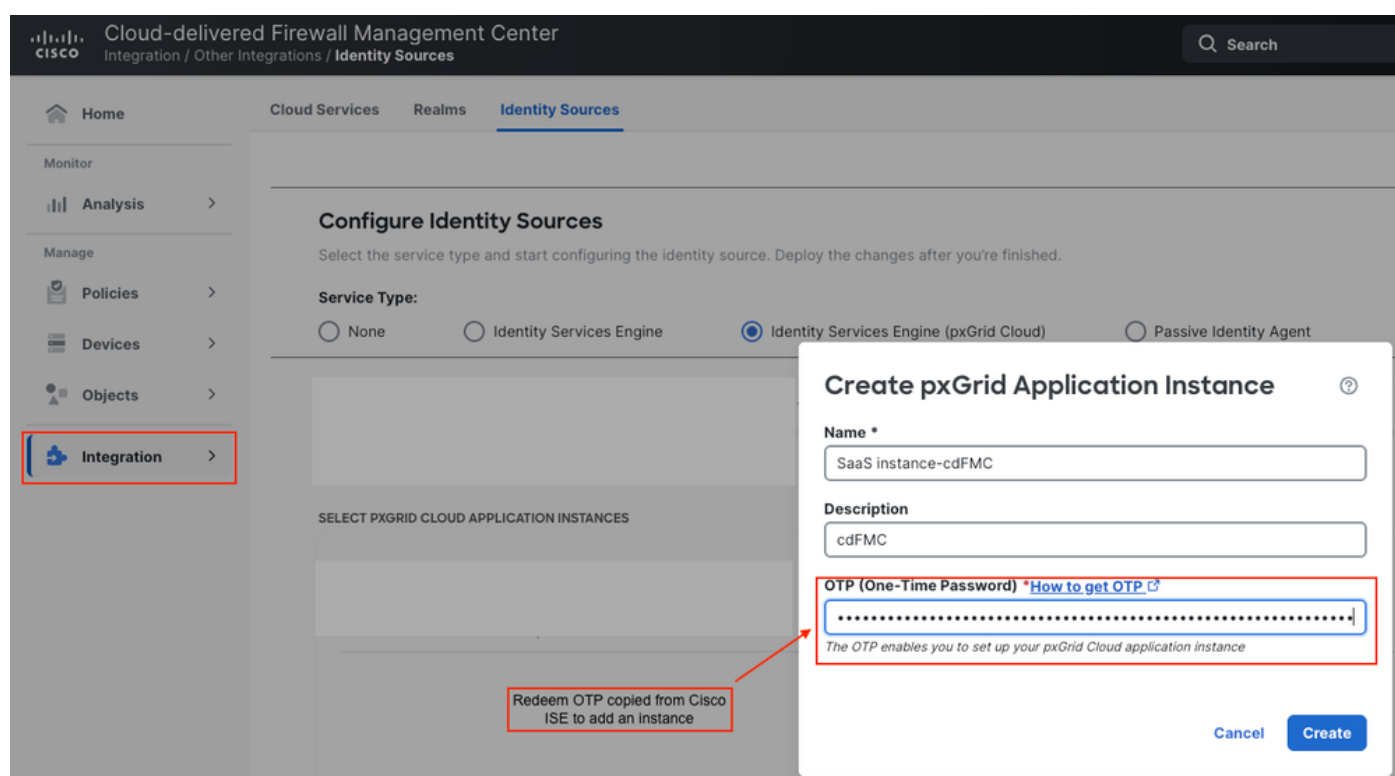
[System status](#) [Policy statement](#)

2.在「安全雲控制」選單中，按一下管理> 整合> 防火牆管理中心，然後選擇您的cdFMC例項，並在右窗格選項中選擇System > Configuration。

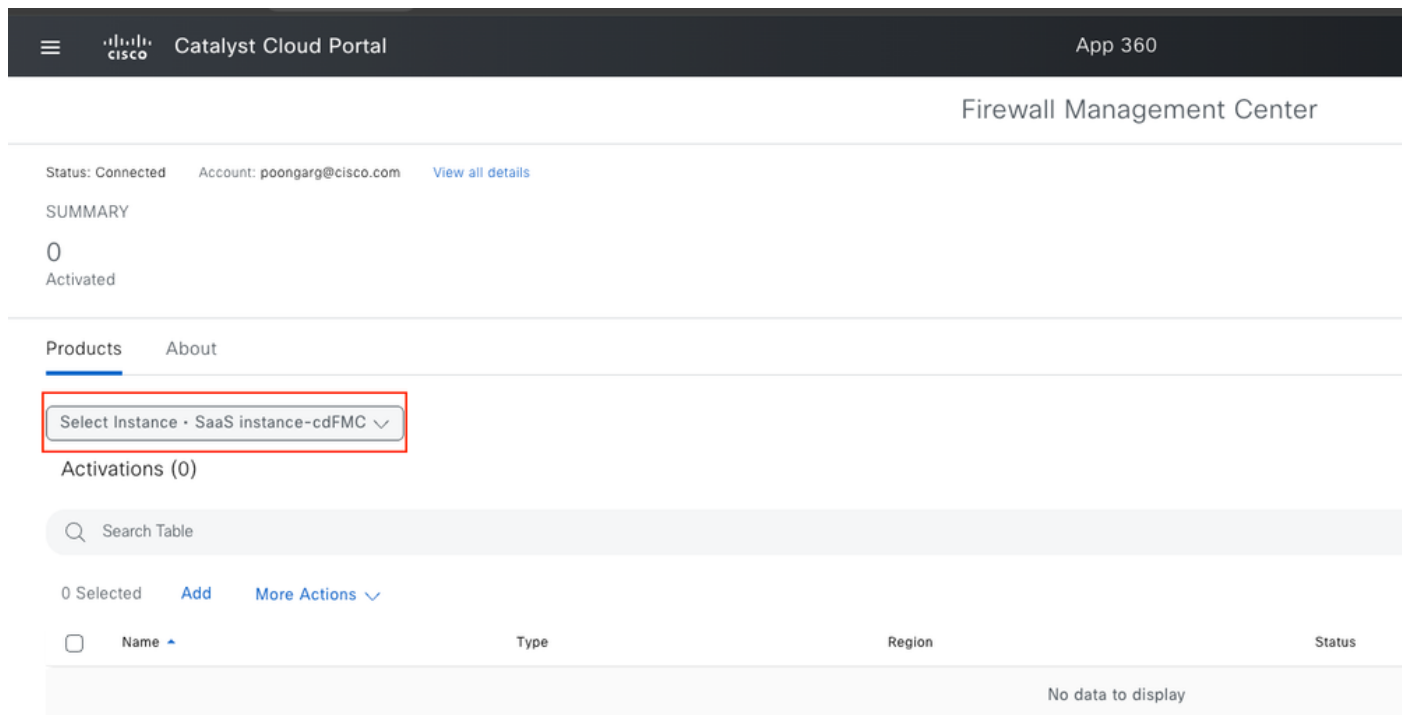


導航到防火牆管理中心

3.在「配置」頁上，選擇整合>其他整合>身份源>選擇服務型別身份服務引擎(pxGrid Cloud)。點選建立pxGrid應用例項並兌換從思科ISE複製的OTP以新增例項。

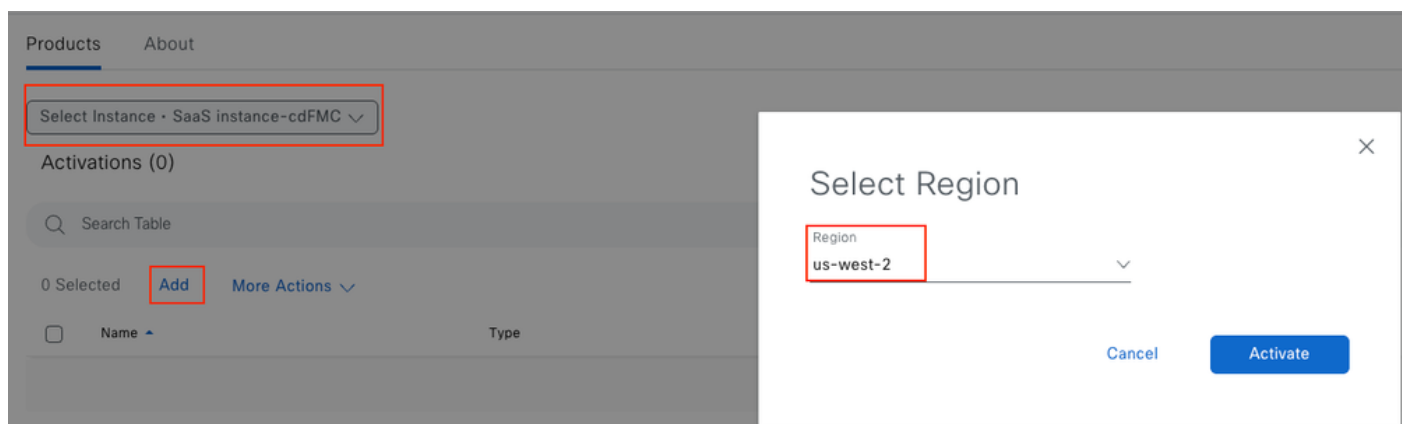


4.在Cisco Catalyst雲門戶上驗證它，位於Applications and Products > Firewall Management Center > Manage > Products > Select Instance下拉選單。



驗證Catalyst雲門戶上的cdFMC

5.選擇新建立的cdFMC應用程式，然後按一下Add。選擇Region，然後按一下Activate。



選擇區域

5.選擇應用程式例項，然後按一下下一步。選擇您的產品（ISE pxGrid節點），按一下下一步。

6. 配置訪問控制：選擇所選ISE產品上cdFMC允許的功能功能。按「Next」（下一步）。此時將顯示配置摘要。驗證並按一下Activate。

Cisco

Catalyst Cloud Portal

Poonam

Region • us-west-2

Configure Access Control

Choose the functional capabilities and API Access control to be allowed for application "Firewall Management Center" on this products "ISE341-PSN1".

CAPABILITIES

Select All

☒

Adaptive Network Control (ANC) configuration

☒

Echo service topics used for testing

☒

Identity Services Engine (ISE) Profiler configuration

☒

ISE Session directory

☒

TrustSec related topics (Configuration, SXP, etc.)

API ACCESS

There are no API groups configured for this application.

Exit

Previous

Next

為cdFMC配置訪問控制

Cisco

Catalyst Cloud Portal

Region • us-west-2

Done! Your Product is connected to Firewall Management Center

It could take up to 5-10 minutes to activate this application on your products.

Your Product is connected to Firewall Management Center

產品ISE連線到cfFMC

8.在Cisco Catalyst雲門戶上驗證該配置，其位置為Applications and Products > Firewall Management Center > Manage > Products > Select Instance下拉選單。

Catalyst Cloud Portal

Applications and Products / App 360

Personam

Firewall Management Center

Status: Connected Account: [View all details](#)

SUMMARY

1 Activated

Products About

Select Instance - SaaS Instance - cdFMC

Activations (1)

Search Table

0 Selected Add More Actions

As of: Mar 17, 2025 6:24 PM

Name	Type	Region	Status	Actions
ISE341-PSN1	Cisco ISE	us-west-2	Activated	

驗證應用是否已啟用

驗證

1. 在Catalyst雲入口上，導航至應用和產品。選擇您的ISE產品名稱並檢查產品詳細資訊。驗證「Activated Application (啟用的應用程式)」下是否顯示cdFMC。

Product Details

Product Name

ISE341-PSN1

Description

Primary pxGrid node

Product Type

Cisco ISE

Region

us-west-2

Last Heartbeat Status

✓ March 17th, 2025 - 6:28:08 PM

Registration Status

✓ Registered

Activated Applications

Search Table

Applications Id	Applications Name	Applications Activation Status
fmcmi-o1lsbr5b9	Firewall Management Center	Activated

1 Record(s) Show Records: 25 1 - 1

在Catalyst雲端控制入口上驗證

2. 在安全雲控制上，測試配置的cdFMC應用程式例項。測試顯示「成功」



在安全雲控制門戶上驗證

3.使用show application status ise命令登入到Active pxGrid節點，並驗證Hermes (pxGrid雲代理) 是否處於運行狀態。此代理在Standby pxGrid節點上處於禁用狀態。

ISE PROCESS NAME	STATE	PROCESS ID
Database Listener	running	265600
Database Server	running	168 PROCESSES
Application Server	running	4158798
Profiler Database	running	272701
ISE Elasticsearch	running	4124473
AD Connector	running	285681
M&T Session Database	running	4122983
M&T Log Processor	running	4125430
Certificate Authority Service	running	4101637
EST Service	running	47678
SXP Engine Service	disabled	
TC-NAC Service	disabled	
PassiveID WMI Service	disabled	
PassiveID Syslog Service	disabled	
PassiveID API Service	disabled	
PassiveID Agent Service	disabled	
PassiveID Endpoint Service	disabled	
PassiveID SPAN Service	disabled	
DHCP Server (dhcpd)	disabled	
DNS Server (named)	disabled	
ISE Messaging Service	running	4107029
ISE API Gateway Database Service	running	4126393
ISE API Gateway Service	running	4140593
ISE pxGrid Direct Service	running	244678
ISE pxGrid Direct Pusher	running	245743
Segmentation Policy Service	disabled	
REST Auth Service	running	23551
SSE Connector	disabled	
Hermes (pxGrid Cloud Agent)	running	250688
MFA (Duo Sync Service)	disabled	
McTrust (Meraki Sync Service)	disabled	
aciconn (ACI Connection Service)	disabled	
Workload Connector Service	disabled	
ISE Prometheus Service	running	240758
ISE Prometheus Exporter	running	250921
ISE Grafana Service	running	4143487
ISE MNT LogAnalytics Elasticsearch	disabled	
ISE Logstash Service	disabled	
ISE Kibana Service	disabled	
ISE Native IPSec Service	running	4144654
MFC Profiler	running	27017
ISE Prometheus Alertmanager Service	running	4153383
Protocols Engine	running	236265

驗證Hermes (pxGrid雲代理) 狀態

在兩個pxGrid節點上檢查pxcloud.log以確認Active和Standby Status:

On Active pxGrid node (pxcloud.log)

<#root>

2025-03-17 14:35:25,530 DEBUG [pxCloud-hermesCheck-2768][[]] cpm.pxcloud.ha.statemachine.StateMachine -:::- RUNNING (HERMES_OK) -----

2025-03-17 14:35:27,438 DEBUG [pxCloud-heartbeat-2769][[]] cpm.pxcloud.ha.statemachine.HeartBeat -:::- url -

<https://ise341-psn2.poongarg.local:8910/pxgrid/pxcloud/statusLookup>

2025-03-17 14:35:27,445 DEBUG [pxCloud-heartbeat-2769][[]] cpm.pxcloud.ha.statemachine.HeartBeat -:::-

role=STANDBY,

state=MONITORING, pxGridConnectionStatus=NOT_CONNECTED, ccloudConnectionStatus=NOT_CONNECTED, reason=]

2025-03-17 14:35:27,445 DEBUG [pxCloud-heartbeat-2769][[]] cpm.pxcloud.ha.statemachine.HeartBeat -:::-

2025-03-17 14:35:27,445 DEBUG [pxCloud-heartbeat-2769][[]] cpm.pxcloud.ha.statemachine.StateMachine -:::-

RUNNING

(PEER_MONITORING)

2025-03-17 14:35:35,548 DEBUG [pxCloud-hermesCheck-2768][[]] cpm.pxcloud.ha.statemachine.HermesCheck -

2025-03-17 14:35:35,572 DEBUG [pxCloud-hermesCheck-2768][[]] cpm.pxcloud.ha.statemachine.HermesCheck -

2025-03-17 14:35:35,572 DEBUG [pxCloud-hermesCheck-2768][[]] cpm.pxcloud.ha.statemachine.HermesCheck -

On Standby pxGrid node (pxcloud.log)

<#root>

2025-03-17 14:34:14,145 DEBUG [pxCloud-heartbeat-6441][[]] cpm.pxcloud.ha.statemachine.HeartBeat -:::- url -

<https://ise341-psn1.poongarg.local:8910/pxgrid/pxcloud/statusLookup>

2025-03-17 14:34:14,153 DEBUG [pxCloud-heartbeat-6441][[]] cpm.pxcloud.ha.statemachine.HeartBeat -:::-

peer - StatusResponse [role=ACTIVE

, state=RUNNING, pxGridConnectionStatus=CONNECTED, ccloudConnectionStatus=CONNECTED, reason=]

2025-03-17 14:34:14,154 DEBUG [pxCloud-heartbeat-6441][[]] cpm.pxcloud.ha.statemachine.HeartBeat -:::-

2025-03-17 14:34:14,154 DEBUG [pxCloud-heartbeat-6441][[]] cpm.pxcloud.ha.statemachine.StateMachine -:::-

MONITORING

(PEER_RUNNING)

此外，檢查埠8913，該埠僅在ACTIVE pxGrid節點上開啟：

<#root>

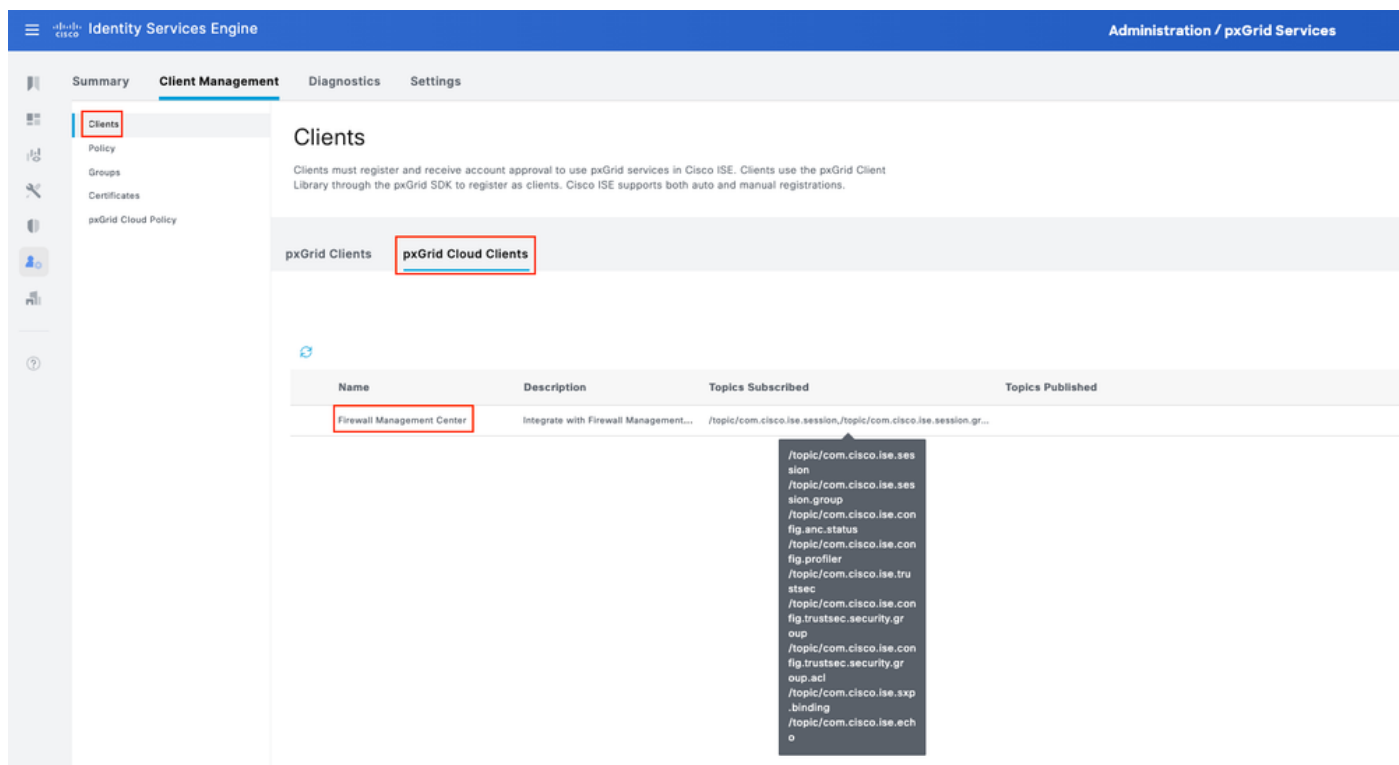
ise341-psn1/admin#show ports | include 8913

tcp:

127.0.0.1:8913

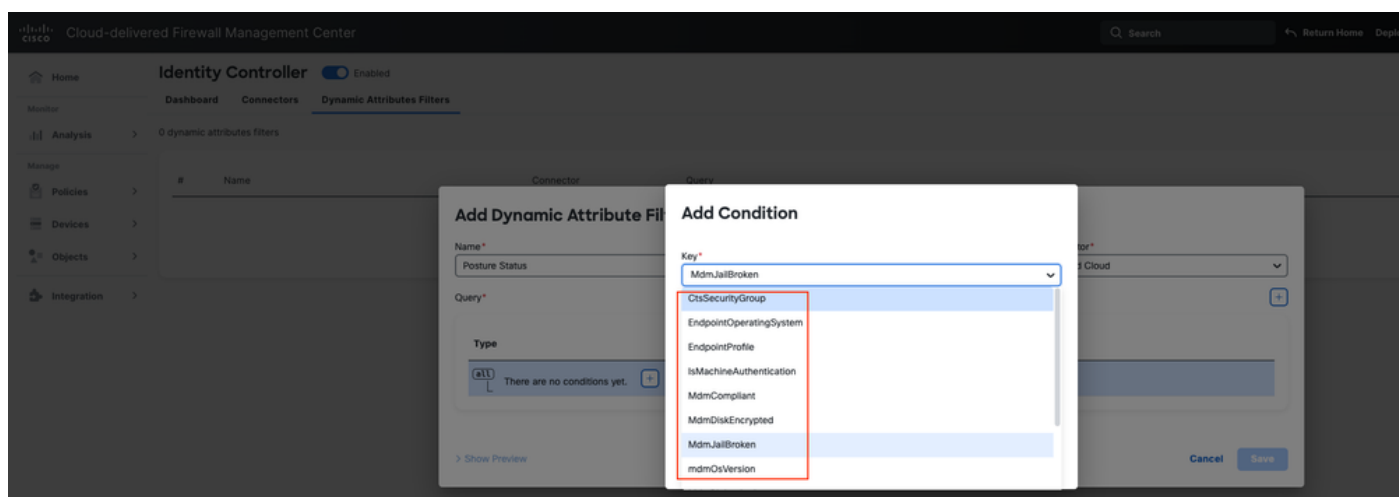
ise341-psn1/admin#

4. 導航到管理> pxGrid服務>客戶端管理>客戶端> pxGrid雲客戶端，以驗證pxGrid雲客戶端。同時檢查預訂的主題。



ise上的PXgrid雲客戶端

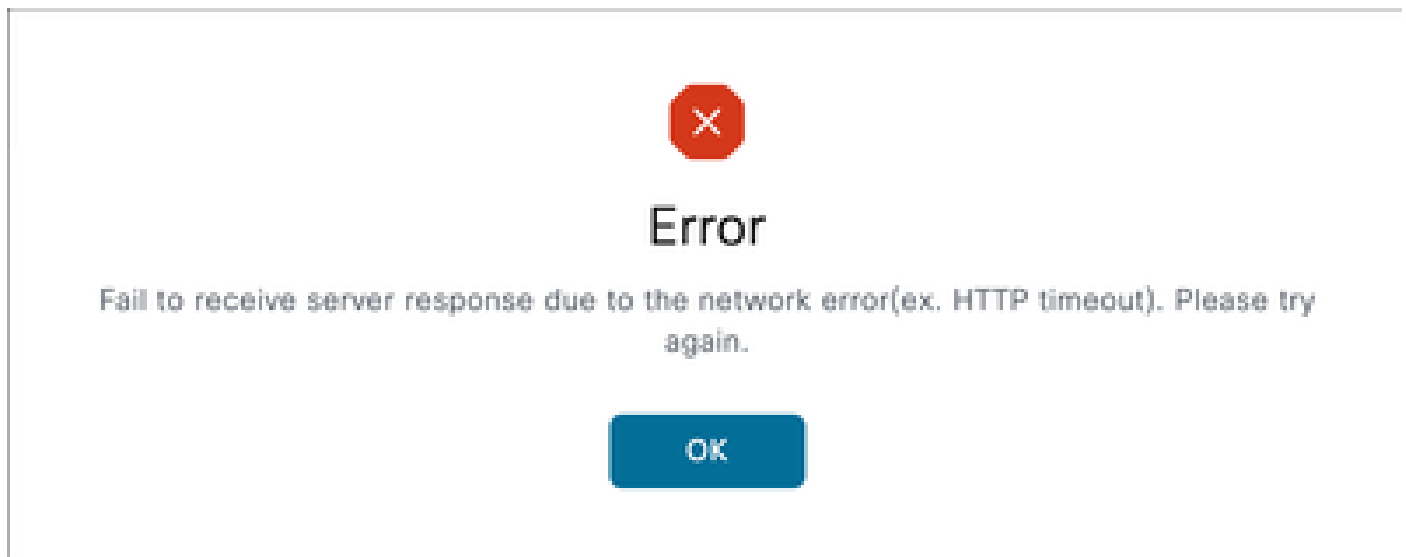
5. 驗證訂閱的主題是否在cdFMC上獲取。在安全雲控制門戶上，按一下策略> 威脅防禦> 整合> 其他整合> 身份源。按一下身份服務引擎(pxGrid Cloud)。按一下配置過濾器。在該頁上，按一下動態屬性篩選器頁籤。建立動態屬性篩選器。



從ISE獲取屬性

疑難排解

1. ISE註冊過程中失敗：



缺少代理配置

檢查Internet連線以及可能的代理配置錯誤。

2. 啟用pxGrid雲服務並配置名稱和區域引數後，pxGrid狀態在ISE編輯節點頁上顯示Not connected。

在要啟用pxGrid雲服務的節點上檢查hermes.log:

<#root>

```
ise341-psn1/admin#
```

```
show logging application hermes/hermes.log | begin 8913
```

```
2025-03-17T09:19:35.277Z | INFO | hermes/httpserver.go:57 |
```

```
Starting REST server on :8913
```

```
2025-03-17T09:19:35.285Z | INFO | hermes/httpserver.go:78 | REST server is up and running
```

```
2025-03-17T09:19:35.307Z | ERROR | hermes/pxgrid.go:194 | Failed to establish pxGrid WebSocket connection
```

```
"https://ise341-psn1.poongarg.local:8910/pxgrid/control/ServiceLookup": SSL errors: SSL routines:tls_pro
```

```
2025-03-17T09:19:35.307Z | ERROR | hermes/main.go:166 | Failed to open pxGrid WebSocket connection: Fai
```

```
2025-03-17T09:19:35.307Z | INFO | hermes/config.go:279 | Stopping monitoring of configuration file: /op
```

```
2025-03-17T09:19:35.307Z | INFO | hermes/connectionstatus.go:81 | Resetting connection status to DISCON
```

```
2025-03-17T09:19:35.308Z | ERROR | hermes/main.go:402 | Error running Hermes: Failed to establish pxGrid
```

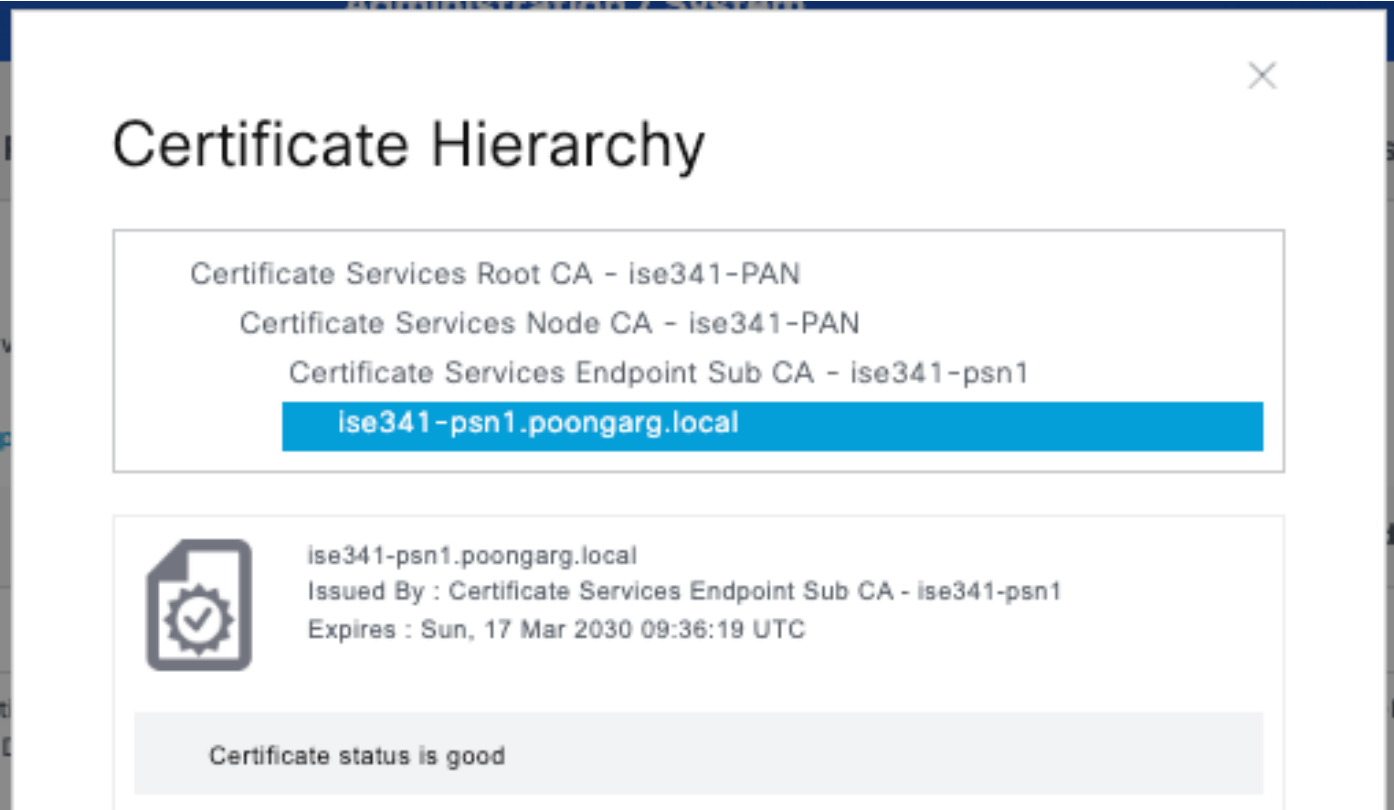
```
2025-03-17T09:19:35.308Z | INFO | hermes/httpserver.go:90 |
```

```
Stopping REST server on :8913
```

Hermes Rest伺服器偵聽埠8913。日誌清楚地顯示Hermes REST伺服器正在嘗試啟動，但由於證書驗證失敗，未能建立pxGrid WebSocket連線。

解決方案：驗證pxGrid證書是否有效，並且證書鏈是否未中斷。檢視憑證並驗證憑證狀態是否良好

。在這種情況下，向此節點頒發的pxGrid證書中的ISE主機名不正確。



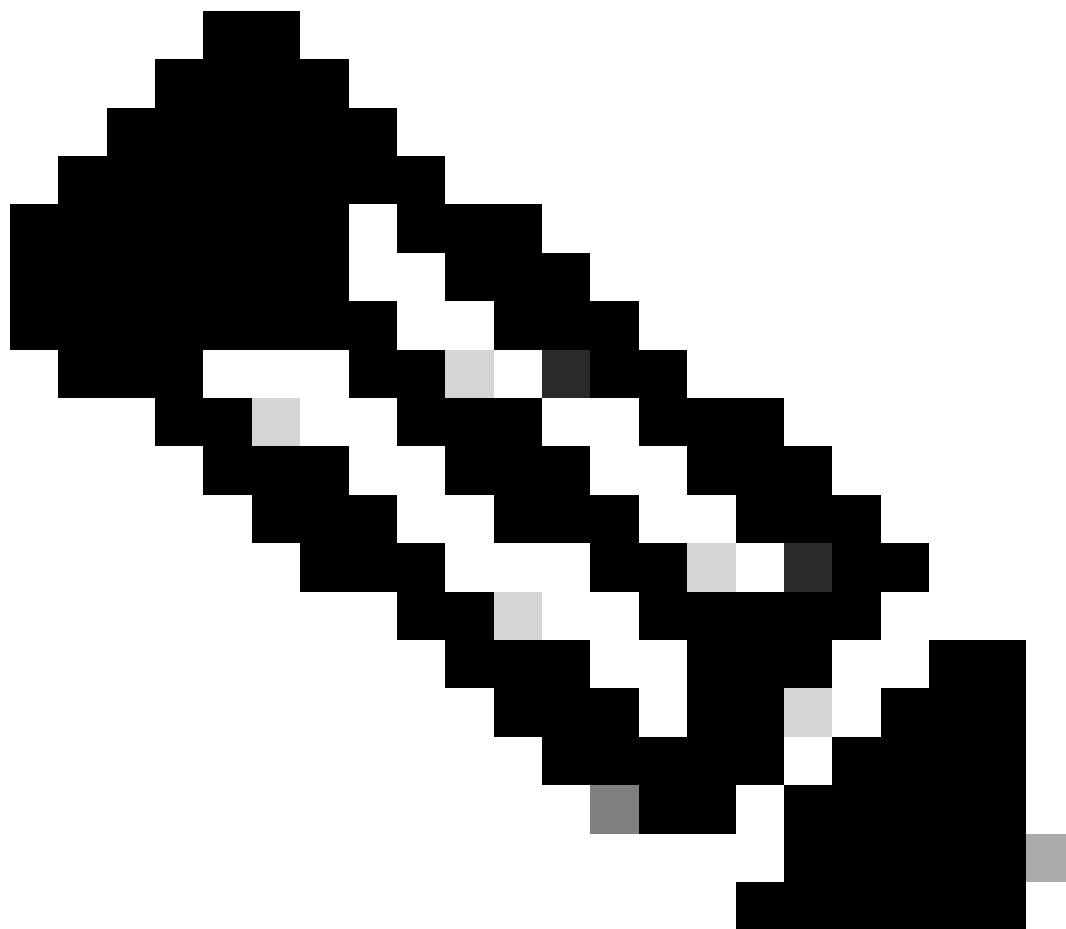
有效的pxGrid證書

3.catalyst雲門戶上的cdFMC應用程式啟用失敗。

解決方案：確保在ISE上，在pxGrid雲策略下，啟用外部RESTful服務(ERS)API和OpenAPI只讀訪問。

與pxGrid雲功能相關的日誌：

調試元件	日誌檔名稱	說明
pxGrid雲	pxcloud.log、hermes.log	pxcloud.log:它記錄pxGrid雲服務配置更改、pxGrid雲服務連線狀態和高可用性狀態
pxGrid雲端OpenAPI	pxcloud.log、hermes.log	hermes.log:記錄pxGrid主題訂閱狀態、來自pxGrid雲的ERS Rest請求、ISE上的配置更改。
遙測	sch.log	使用者使用整合目錄時生成日誌。它包括初始日誌，其中包含用於連線到pxGrid雲的令牌。



附註：無論您在哪個節點上啟用pxGrid雲角色，都需要檢查活動PAN節點上的日誌。裝置註冊後，Hermes日誌位於啟用該裝置的特定節點上。

Hermes.log僅支援Debug、Info、Warn和Error日誌級別。因此，如果選擇「Trace」，日誌級別將設定為Debug for hermes.log。如果選擇Fatal，則對於hermes.log，日誌級別設定為Error。

ISE註冊/註冊和應用。啟用流程

在註冊裝置之前，ISE使用裝置令牌從雲獲取區域清單和應用清單。此令牌由ISE的「遙測」元件提供。檢查PAN節點上的sch.log:

```
2025-03-17 09:10:23,361 INFO [openapi-http-pool17][[]] infrastructure.telemetry.sch.api.DNATelemetryClient
2025-03-17 09:10:23,361 INFO [openapi-http-pool17][[]] infrastructure.telemetry.sch.api.DNATelemetryClient
2025-03-17 09:10:23,463 INFO [openapi-http-pool17][[]] infrastructure.telemetry.sch.api.TetheringStateService
2025-03-17 09:10:23,467 INFO [openapi-http-pool17][[]] infrastructure.telemetry.sch.api.TetheringStateService
2025-03-17 09:10:23,480 INFO [openapi-http-pool17][[]] cisco.dna.tethering.client.TetheringClient -:::
```

```
2025-03-17 09:10:23,480 INFO [openapi-http-pool7][[]] infrastructure.telemetry.sch.api.DNATelemetryClient
2025-03-17 09:10:23,483 INFO [openapi-http-pool7][[]] infrastructure.telemetry.sch.api.DNATetheringClient
2025-03-17 09:10:24,492 INFO [openapi-http-pool7][[]] infrastructure.telemetry.sch.api.TetheringStateStore
2025-03-17 09:10:24,497 INFO [openapi-http-pool7][[]] infrastructure.telemetry.sch.api.TetheringStateStore
2025-03-17 09:10:24,529 INFO [openapi-http-pool7][[]] cpm.infrastructure.telemetry.api.TelemetryConfigHandler
```

pxcloud.log (PAN節點) , 一旦啟用pxGrid雲服務 , Hermes (pxGrid雲代理) 就會被啟用 , ISE獲取區域資訊並通過遙測元件接收令牌。

```
2025-03-17 08:47:00,300 INFO [main][[]] cisco.cpm.pxcloud.api.PxCloudInitializer -:::- Initializing p
2025-03-17 08:47:00,312 INFO [main][[]] cisco.cpm.pxcloud.pxgrid.PxCloudProviderRegistration -:::- Re
2025-03-17 08:47:00,314 INFO [main][[]] cisco.cpm.pxcloud.hermes.ProxyConfigNotificationHandler -:::-
2025-03-17 08:47:00,376 INFO [main][[]] cisco.cpm.pxcloud.hermes.HermesConfigManager -:::- Registerin
2025-03-17 08:47:00,376 INFO [main][[]] cisco.cpm.pxcloud.hermes.HermesConfigManager -:::- Registerin
2025-03-17 08:50:18,842 INFO [main][[]] cisco.cpm.pxcloud.hermes.HermesConfigManager -:::- Updating H
2025-03-17 08:52:46,834 INFO [pool-24-thread-1][[]] cpm.pxcloud.service.ui.IntegrationCatalogScheduler
2025-03-17 08:55:46,877 INFO [pool-24-thread-1][[]] cpm.pxcloud.service.ui.IntegrationCatalogScheduler
2025-03-17 08:58:46,781 INFO [pool-24-thread-1][[]] cpm.pxcloud.service.ui.IntegrationCatalogScheduler
2025-03-17 09:01:46,781 INFO [pool-24-thread-1][[]] cpm.pxcloud.service.ui.IntegrationCatalogScheduler
2025-03-17 09:03:37,136 INFO [pool-225-thread-1][[]] cpm.pxcloud.service.ui.IntegrationCatalogScheduler
2025-03-17 09:04:46,781 INFO [pool-24-thread-1][[]] cpm.pxcloud.service.ui.IntegrationCatalogScheduler
2025-03-17 09:06:37,136 INFO [pool-225-thread-1][[]] cpm.pxcloud.service.ui.IntegrationCatalogScheduler
2025-03-17 09:07:46,781 INFO [pool-24-thread-1][[]] cpm.pxcloud.service.ui.IntegrationCatalogScheduler
2025-03-17 09:09:11,901 DEBUG [hermes-change-monitor-0][[]] cisco.cpm.pxcloud.hermes.PxCloudNodeChangeH
2025-03-17 09:09:37,136 INFO [pool-225-thread-1][[]] cpm.pxcloud.service.ui.IntegrationCatalogScheduler
2025-03-17 09:09:37,139 DEBUG [pool-225-thread-1][[]] cpm.pxcloud.service.ui.IntegrationCatalogSchedule
2025-03-17 09:10:22,475 TRACE [openapi-http-pool4][[]] cpm.iseopenapi.pxcloud.impl.PxGridApiDelegateImp
2025-03-17 09:10:22,485 INFO [openapi-http-pool4][[]] cpm.pxcloud.service.ui.IseEnrollment -:::- Fet
2025-03-17 09:10:22,739 TRACE [openapi-http-pool7][[]] cpm.iseopenapi.pxcloud.impl.PxGridApiDelegateImp
2025-03-17 09:10:22,750 INFO [openapi-http-pool7][[]] cpm.pxcloud.api.impl.DeviceRegistrationApiImpl -
2025-03-17 09:10:22,754 DEBUG [openapi-http-pool7][[]] cpm.pxcloud.api.impl.DeviceRegistrationApiImpl -
2025-03-17 09:10:24,529 DEBUG [openapi-http-pool7][[]] cpm.pxcloud.api.impl.DeviceRegistrationApiImpl -
2025-03-17 09:10:24,537 INFO [openapi-http-pool7][[]] cisco.cpm.pxcloud.utils.PxCloudHttpClient -:::-
2025-03-17 09:10:26,938 DEBUG [openapi-http-pool7][[]] cpm.pxcloud.api.impl.DeviceRegistrationApiImpl -
2025-03-17 09:10:26,946 DEBUG [openapi-http-pool7][[]] cpm.pxcloud.api.impl.DeviceRegistrationApiImpl -
id: ap-southeast-1
name: ap-southeast-1
fqdn: neoffers-sg.cisco.com
}, class Region {
id: eu-central-1
name: eu-central-1
fqdn: neoffers-de.cisco.com
}, class Region {
id: us-west-2
name: us-west-2
fqdn: neoffers.cisco.com
}}
2025-03-17 09:10:26,968 DEBUG [openapi-http-pool7][[]] cpm.pxcloud.api.impl.PxcloudApplicationCatalogImp
2025-03-17 09:10:27,051 INFO [openapi-http-pool7][[]] cpm.pxcloud.api.impl.PxcloudApplicationCatalogImp
2025-03-17 09:10:27,055 DEBUG [openapi-http-pool7][[]] cisco.cpm.pxcloud.utils.PxCloudUtils -:::- Ano
2025-03-17 09:10:27,533 DEBUG [openapi-http-pool7][[]] cpm.pxcloud.api.impl.PxcloudApplicationCatalogImp
2025-03-17 09:10:27,533 DEBUG [openapi-http-pool7][[]] cpm.pxcloud.api.impl.PxcloudApplicationCatalogImp
2025-03-17 09:10:27,533 DEBUG [openapi-http-pool7][[]] cpm.pxcloud.api.impl.PxcloudApplicationCatalogImp
2025-03-17 09:10:27,533 DEBUG [openapi-http-pool7][[]] cpm.pxcloud.api.impl.PxcloudApplicationCatalogImp
2025-03-17 09:10:27,533 DEBUG [openapi-http-pool7][[]] cisco.cpm.pxcloud.utils.PxCloudHttpClient -:::-
!
2025-03-17 09:10:37,338 INFO [openapi-http-pool7][[]] cpm.pxcloud.api.impl.PxcloudApplicationCatalogImp
```

收到啟用連結並自動註冊和註冊。

```
2025-03-17 09:16:42,536 TRACE [openapi-http-pool2][[]] cpm.iseopenapi.pxcloud.impl.PxGridApiDelegateImp
2025-03-17 09:16:42,537 DEBUG [openapi-http-pool2][[]] cpm.pxcloud.api.impl.DeviceRegistrationApiImpl -
2025-03-17 09:16:42,569 DEBUG [openapi-http-pool2][[]] cpm.pxcloud.api.impl.DeviceRegistrationApiImpl -
2025-03-17 09:16:42,569 DEBUG [openapi-http-pool2][[]] cpm.pxcloud.api.impl.DeviceRegistrationApiImpl -
!
2025-03-17 09:16:44,729 DEBUG [openapi-http-pool2][[]] cisco.cpm.pxcloud.api.PxCloudPropertiesNotificat
2025-03-17 09:16:44,735 DEBUG [openapi-http-pool2][[]] cpm.pxcloud.api.impl.DeviceRegistrationApiImpl -
2025-03-17 09:16:45,310 TRACE [openapi-http-pool3][[]] cpm.iseopenapi.pxcloud.impl.PxGridApiDelegateImp
2025-03-17 09:16:45,345 INFO [openapi-http-pool3][[]] cpm.pxcloud.api.impl.DeviceRegistrationApiImpl - :
!
2025-03-17 09:16:45,538 INFO [openapi-http-pool3][[]] cpm.pxcloud.api.impl.DeviceRegistrationApiImpl - :
2025-03-17 09:16:45,589 DEBUG [openapi-http-pool3][[]] cisco.cpm.pxcloud.utils.PxCloudHttpClient - : : : :
2025-03-17 09:16:46,805 INFO [pool-24-thread-1][[]] cpm.pxcloud.service.ui.IntegrationCatalogScheduler
2025-03-17 09:16:46,816 DEBUG [pool-24-thread-1][[]] cpm.pxcloud.service.ui.IntegrationCatalogScheduler
2025-03-17 09:16:47,631 DEBUG [openapi-http-pool3][[]] cpm.pxcloud.api.impl.DeviceRegistrationApiImpl -
!
2025-03-17 09:19:14,196 INFO [openapi-http-pool9][[]] cpm.pxcloud.api.impl.DeviceRegistrationApiImpl - :
2025-03-17 09:19:14,196 INFO [openapi-http-pool9][[]] cpm.pxcloud.api.impl.DeviceRegistrationApiImpl - :
2025-03-17 09:19:14,199 DEBUG [openapi-http-pool9][[]] cisco.cpm.pxcloud.utils.PxCloudHttpClient - : : : :
2025-03-17 09:19:16,956 DEBUG [openapi-http-pool9][[]] cpm.pxcloud.api.impl.DeviceRegistrationApiImpl -
2025-03-17 09:19:16,964 DEBUG [openapi-http-pool9][[]] cpm.pxcloud.api.impl.DeviceRegistrationApiImpl -
2025-03-17 09:19:16,964 INFO [openapi-http-pool9][[]] cpm.pxcloud.api.impl.DeviceRegistrationApiImpl - :
2025-03-17 09:19:16,964 INFO [openapi-http-pool9][[]] cpm.pxcloud.api.impl.DeviceRegistrationApiImpl - :
2025-03-17 09:19:17,284 INFO [openapi-http-pool9][[]] cpm.pxcloud.service.ui.IseEnrollment - : : : : - ISE
2025-03-17 09:19:17,284 DEBUG [openapi-http-pool9][[]] cpm.pxcloud.service.ui.IseEnrollment - : : : : - ISE
2025-03-17 09:19:17,306 DEBUG [openapi-http-pool9][[]] cisco.cpm.pxcloud.api.PxCloudPropertiesNotificat
2025-03-17 09:19:17,325 DEBUG [openapi-http-pool9][[]] cisco.cpm.pxcloud.api.PxCloudPropertiesNotificat
2025-03-17 09:19:17,342 DEBUG [openapi-http-pool9][[]] cisco.cpm.pxcloud.api.PxCloudPropertiesNotificat
2025-03-17 09:19:17,369 DEBUG [openapi-http-pool9][[]] cisco.cpm.pxcloud.api.PxCloudPropertiesNotificat
2025-03-17 09:19:17,394 DEBUG [openapi-http-pool9][[]] cisco.cpm.pxcloud.api.PxCloudPropertiesNotificat
2025-03-17 09:19:17,418 DEBUG [openapi-http-pool9][[]] cisco.cpm.pxcloud.api.PxCloudPropertiesNotificat
2025-03-17 09:19:17,438 DEBUG [openapi-http-pool9][[]] cisco.cpm.pxcloud.api.PxCloudPropertiesNotificat
2025-03-17 09:19:17,463 DEBUG [openapi-http-pool9][[]] cisco.cpm.pxcloud.api.PxCloudPropertiesNotificat
2025-03-17 09:19:17,485 DEBUG [openapi-http-pool9][[]] cisco.cpm.pxcloud.api.PxCloudPropertiesNotificat
2025-03-17 09:19:17,489 INFO [openapi-http-pool9][[]] cpm.pxcloud.service.ui.IseEnrollment - : : : : - ISE
2025-03-17 09:19:17,495 INFO [openapi-http-pool9][[]] cpm.pxcloud.service.ui.IseEnrollment - : : : : - ISE
2025-03-17 09:19:17,500 INFO [openapi-http-pool9][[]] cpm.pxcloud.service.ui.IseEnrollment - : : : : - Init
2025-03-17 09:19:17,500 INFO [openapi-http-pool9][[]] cpm.pxcloud.api.impl.DeviceRegistrationApiImpl - :
2025-03-17 09:19:17,554 INFO [openapi-http-pool9][[]] cpm.iseopenapi.pxcloud.util.PxGridCloudUtil - : : : :
2025-03-17 09:19:17,554 DEBUG [openapi-http-pool9][[]] cpm.iseopenapi.pxcloud.util.PxGridCloudUtil - : :
2025-03-17 09:19:18,501 INFO [pxcloud-configuration-1243][[]] cpm.pxcloud.service.ui.CloudConfiguration
2025-03-17 09:19:18,505 DEBUG [pxcloud-configuration-1243][[]] cpm.pxcloud.service.ui.CloudConfiguration
```

pxGrid節點承擔了ACTIVE角色，但此處我們將pxGridConnectionStatus觀察為NOT_CONNECTED，該狀態在新增此pxGrid節點上的正確pxGrid證書（具有完整的根CA鏈）後得到修復

```
2025-03-17 09:20:12,301 TRACE [openapi-http-pool8][[]] cpm.iseopenapi.pxcloud.impl.PxGridApiDelegateImp
2025-03-17 09:20:12,301 INFO [openapi-http-pool8][[]] cpm.pxcloud.service.ui.IseEnrollment - : : : : - Fetc
2025-03-17 09:20:12,310 INFO [Thread-150][[]] cpm.pxcloud.service.ui.IseEnrollment - : : : : - Get pxCloud
2025-03-17 09:20:12,311 INFO [Thread-150][[]] cpm.pxcloud.service.ui.IseEnrollment - : : : : - pxCloud stat
```

2025-03-17 09:20:12,427 INFO [Thread-150][[]] cpm.pxccloud.service.ui.IseEnrollment -:::- Received res

現在檢查ACTIVE pxGrid節點上的Hermes.log以檢視pubsub事件：

```
2025-03-17T09:37:43.906Z | INFO | hermes/config.go:332 | configMgr created successfully: configMgr[path
2025-03-17T09:37:43.907Z | INFO | hermes/config.go:117 | Parsing configuration file: /opt/hermes/config
2025-03-17T09:37:43.907Z | INFO | hermes/config.go:338 | Config file /opt/hermes/config.yaml parsed suc
2025-03-17T09:37:43.907Z | INFO | hermes/main.go:126 | Configuration loaded successfully
2025-03-17T09:37:43.908Z | INFO | trust/trust.go:28 | Custom trust bundle has been set/updated
2025-03-17T09:37:43.908Z | INFO | hermes/pxgrid.go:187 | Creating pxGrid WebSocket connection
2025-03-17T09:37:43.908Z | INFO | hermes/httpserver.go:57 | Starting REST server on :8913
2025-03-17T09:37:43.921Z | INFO | hermes/httpserver.go:78 | REST server is up and running
2025-03-17T09:37:43.983Z | INFO | pxgrid/websocket.go:93 | Got WS URL: wss://ise341-psn1.poongarg.local
2025-03-17T09:37:44.066Z | INFO | pxgrid/websocket.go:107 | Connection to wss://ise341-psn1.poongarg.lo
2025-03-17T09:37:44.066Z | INFO | hermes/connectionstatus.go:44 | Setting pxGrid connection status to C
```

已驗證Catalyst雲門戶的根CA鏈。

```
2025-03-17T09:37:44.731Z | INFO | hermes/pxgrid.go:267 | Cloud credentials are obtained from ISE
2025-03-17T09:37:45.034Z | INFO | hermes/pxgrid.go:376 | DeviceID: 67d7e91688c5fd08d0860039, TenantID: c
2025-03-17T09:37:45.743Z | INFO | rest/ocsp.go:207 | Making OCSP request at http://commercial.ocsp.iden
2025-03-17T09:37:45.743Z | INFO | rest/ocsp.go:207 | Making OCSP request at http://commercial.ocsp.iden
2025-03-17T09:37:46.273Z | INFO | rest/ocsp.go:254 | OCSP Validation passed for CN=HydrantID Server CA
2025-03-17T09:37:46.279Z | INFO | rest/ocsp.go:254 | OCSP Validation passed for CN=dnaservices.cisco.co
2025-03-17T09:37:47.054Z | INFO | rest/ocsp.go:207 | Making OCSP request at http://commercial.ocsp.iden
2025-03-17T09:37:47.432Z | INFO | hermes/config.go:262 | File /opt/hermes/config.yaml modified. Event: V
2025-03-17T09:37:47.533Z | INFO | hermes/config.go:117 | Parsing configuration file: /opt/hermes/config
2025-03-17T09:37:47.533Z | INFO | hermes/config.go:305 | New configuration loaded
2025-03-17T09:37:47.533Z | INFO | hermes/config.go:314 | Restarting Hermes due to configuration change
```

特定主題訂閱請求建立一次，FMC應用程式在Integration Catalog下配置：

```
2025-03-17T12:54:09.975Z | INFO | pxgrid/subscriber.go:40 | Request to create new subscriber: service=c
2025-03-17T12:54:09.975Z | INFO | pxgrid/subscriber.go:55 | Subscriber[service: com.cisco.ise.session,
2025-03-17T12:54:10.263Z | INFO | device-manager@v1.1.12/control.go:240 | Completed activate sync ID [s
2025-03-17T12:54:10.263Z | INFO | device-manager@v1.1.12/control.go:227 | Processing activate sync ID [
2025-03-17T12:54:10.263Z | INFO | hermes/pxgrid.go:117 | Request to add new pxGrid subscriber [com.cisco
2025-03-17T12:54:10.263Z | INFO | pxgrid/subscriber.go:28 | Request to create new subscriber: com.cisco
2025-03-17T12:54:10.270Z | INFO | pxgrid/subscriber.go:40 | Request to create new subscriber: service=c
2025-03-17T12:54:10.270Z | INFO | pxgrid/subscriber.go:55 | Subscriber[service: com.cisco.ise.config.pr
2025-03-17T12:54:10.559Z | INFO | device-manager@v1.1.12/control.go:240 | Completed activate sync ID [p
2025-03-17T12:54:10.559Z | INFO | device-manager@v1.1.12/control.go:227 | Processing activate sync ID [
2025-03-17T12:54:10.559Z | INFO | hermes/pxgrid.go:117 | Request to add new pxGrid subscriber [com.cisco
2025-03-17T12:54:10.559Z | INFO | pxgrid/subscriber.go:28 | Request to create new subscriber: com.cisco
!
2025-03-17T16:17:30.050Z | INFO | api-proxy@v1.0.10/broker.go:114 | API-Proxy: Broker Agent start consu
2025-03-17T16:17:30.050Z | INFO | hermes/apiproxy.go:43 | API Proxy connection established
2025-03-17T16:17:30.050Z | INFO | hermes/connectionstatus.go:62 | Setting cloud connection status to CO
2025-03-17T16:17:30.057Z | INFO | hermes/dxhub.go:94 | Policies are obtained from ISE : &{Pxgrid:{Conte
```

限制

- 1.使用者無法在超過2個節點上啟用pxGrid雲角色。
- 2.支援從Catalyst雲門戶取消註冊到cdFMC，但不支援相反操作。

參考資料

[使用pxGrid雲身份源的使用者控制](#)

[Cisco pxGrid雲端](#)

[Cisco pxGrid雲解決方案指南](#)

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）。