

在FDM的空隙網路中套用永久授權

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簡介

本檔案介紹如何在Firepower裝置管理員(FDM)上的Air-Gapped網路中套用永久授權。

必要條件

需求

建議您瞭解以下主題：

- [思科安全防火牆威脅防禦初始配置](#)

採用元件

本檔案中的資訊是根據軟體版本：

- Firepower威脅防禦7.4.1版。

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

啟用PLR模式

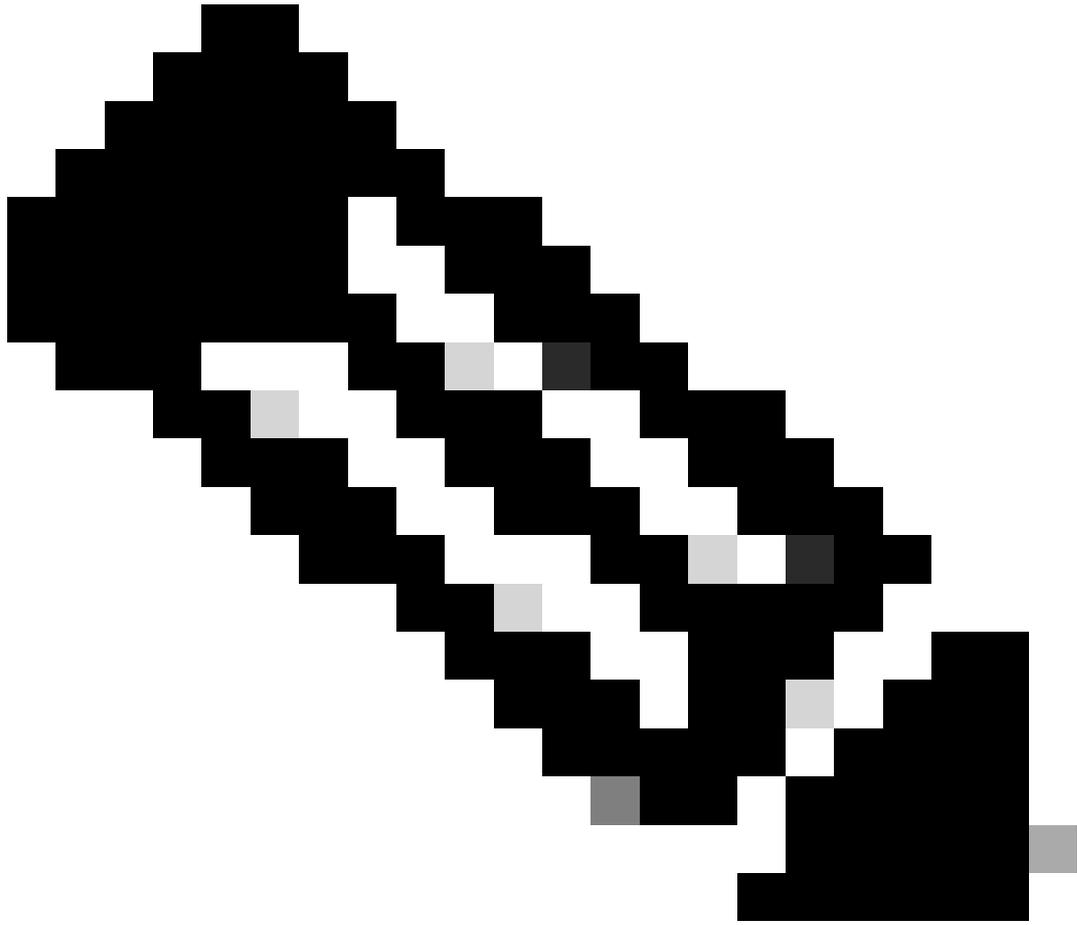
步驟 1. 在您的裝置中啟用PLR模式。

點選裝置，導航至智慧許可證。

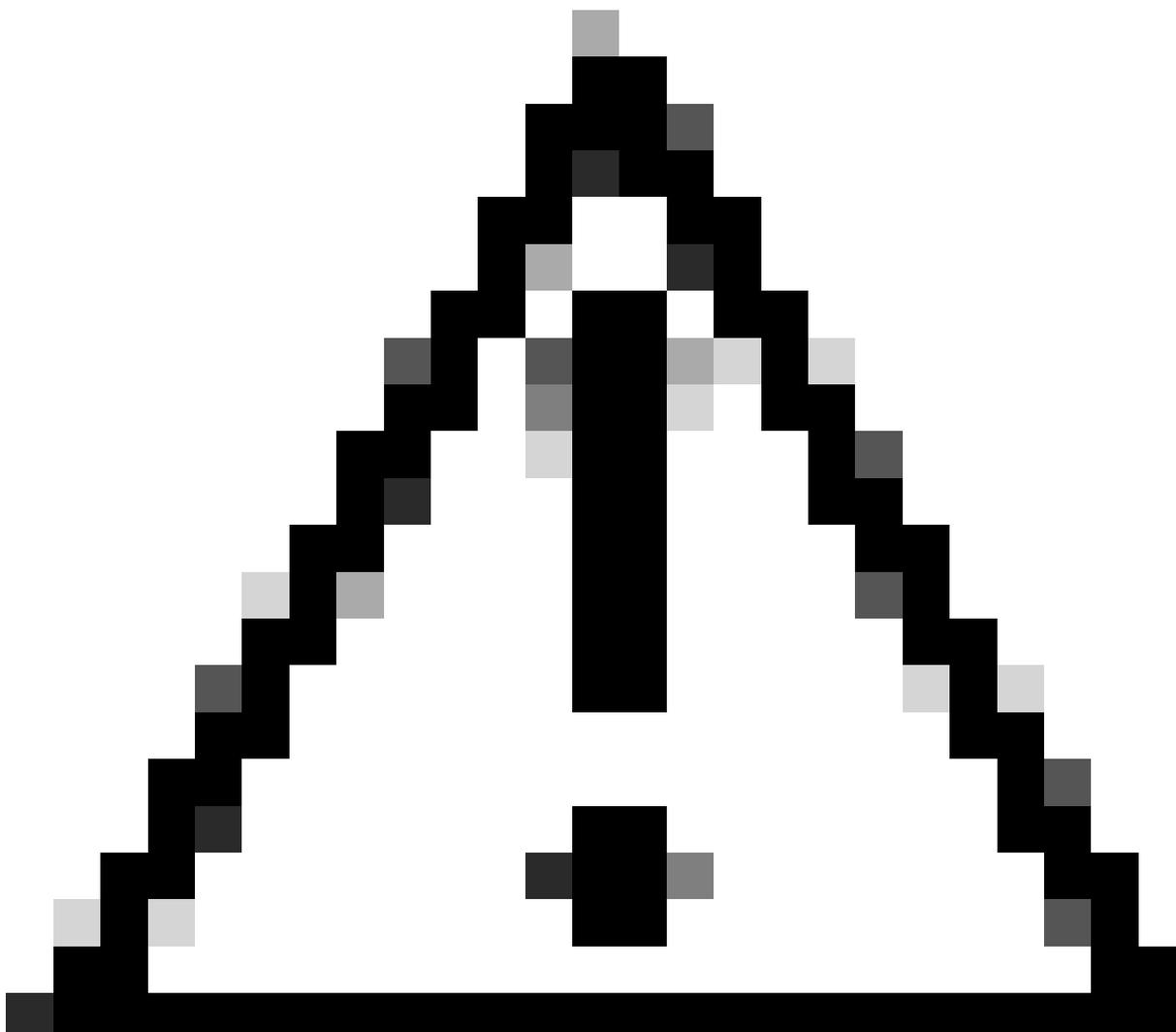
The screenshot displays the Cisco Firepower Threat Defense (FTD) configuration interface. The top navigation bar includes 'Firewall Device Manager', 'Monitoring', 'Policies', 'Objects', and 'Device: firepower' (highlighted in a red box). The main content area shows a network diagram with 'Inside Network', 'Cisco Firepower Threat Defense for VMware', and 'ISP/WAN/Gateway' components. Below the diagram is a grid of configuration tiles:

- Interfaces:** Management: Merged, Enabled 1 of 4. View All Interfaces >
- Smart License:** Evaluation expires in 82 days. Tier: FTDv5 - 100 Mbps. View Configuration >
- Routing:** 1 static route. View Configuration >
- Updates:** Geolocation, Rule, VDB, System Upgrade, Security Intelligence Feeds. View Configuration >
- System Settings:** Management Access, Logging Settings, DHCP Server / Relay, DDNS Service, DNS Server, Hostname, Time Services, SSL Settings. See more >
- Backup and Restore:** View Configuration >
- Troubleshoot:** No files created yet. REQUEST FILE TO BE CREATED
- Site-to-Site VPN:** There are no connections yet. View Configuration >
- Remote Access VPN:** Requires Secure Client License. No connections | 1 Group Policy. Configure >
- Advanced Configuration:** Includes: FlexConfig, Smart CLI. View Configuration >
- Device Administration:** Audit Events, Deployment History, Download Configuration. View Configuration >

步驟 2. 按一下齒輪並選取「切換到通用PLR」。



注意：如果您的裝置使用智慧許可，則必須註銷該裝置。



注意：一旦切換到PLR模式，就無法再切換回評估模式。

Firewall Device Manager | Monitoring | Policies | Objects | Device: firepower

admin Administrator | CISCO SECURE

Device Summary
Smart License

LICENSE ISSUE
Evaluation Period
You are in Evaluation mode now.

82/90 days left | REGISTER DEVICE | Need help?

Resync connection
Switch to Universal PLR

在預覽窗口中，選擇Performance Tier，然後按一下Yes。

⚠ Change to Permanent License



If you switch to Universal Permanent License Reservation mode, you cannot switch back to Evaluation mode.

Are you sure you want to use Universal Permanent License Reservation for this device?

Select Performance Tier

The selected performance tier determines VPN session limits and device throughput, click [here](#) to learn more.

Make sure the performance tier selected matches the license in your [Cisco Smart Software Manager](#) account.

Performance Tier

Pick a Tier



Your Device Specifications

Cores / RAM 4 core / 8 GB

NO

YES

步驟 3. 儲存請求代碼。

Universal Permanent License Reservation



i If you have **Cloud Services enabled** you might want to disable them.

1 Save Request Code for this Device.



Request Code

DE-ZNGFWv:9ADKC86E1VU-CCRVmZyqM-BF

SAVE AS TXT

PRINT

2 Log into your [Cisco Smart Software Manager](#) account, go to the Inventory > Licenses page, and start the License Reservation process. Use the request code to generate an Authorization Code. Note that you must work with your Cisco representative to enable Universal Permanent License Reservation mode in your account. If you cannot start the License Reservation process (that is, the button does not appear on the Inventory > License page), please contact your Cisco representative.

3 Paste or type in the Authorization Code:

Authorization Code

Paste code from clipboard here

? For a more detailed overview on Cisco Licensing, go to cisco.com/go/licensingguide

CANCEL

REGISTER

步驟 4. 登入您的CSSM帳戶並導航到智慧軟體許可 > 資產 > 許可證，然後點選許可證保留。

Smart Software Licensing

[SL Product Details](#) [Support](#) [Help](#)

[Alerts](#) **Inventory** [Convert to Smart Licensing](#) | [Reports](#) | [Preferences](#) | [On-Prem Accounts](#) | [Activity](#)

General **Licenses** Product Instances Event Log

By Name | By Tag

Available Actions ▾

Manage License Tags

License Reservation...



Show License Transactions

Search by License



按一下Proceed。



Use of the Software contained in this Smart Account is subject to Cisco's EULA. Cisco may restrict the availability or features of this Smart Account or the Smart Licensing capabilities in any region, or modify or discontinue features to comply with applicable laws and regulations. You may only use the Software in the country for which it is purchased and intended to be used.

Proceed

貼上請求代碼，然後按一下Next。

Smart License Reservation



STEP 1

Enter Request Code

STEP 2

Select Licenses

STEP 3

Review and Confirm

STEP 4

Authorization Code

You can reserve licenses for product instances that cannot connect to the Internet for security reasons. You will begin by generating a Reservation Request Code from the product instance. To learn how to generate this code, see the configuration guide for the product being licensed.

Once you have generated the code:

- 1) Enter the Reservation Request Code below
- 2) Select the licenses to be reserved
- 3) Generate a Reservation Authorization Code
- 4) Enter the Reservation Authorization Code on the product instance to activate the features

* Reservation Request Code:

DE-ZNGFW:9ADKC86E1VU-CCRvmZyqM-BF



Upload File

Browse

Upload

Cancel

Next

選擇許可證並按一下下一步。

Smart License Reservation



Product Instance Details

Product Type: VIRTSEC
UDI PID: NGFW
UDI Serial Number: 9ADKC86E1VU

Licenses to Reserve

In order to continue, ensure that you have a surplus of the licenses you want to reserve in the Virtual Account.

- Cisco Firepower Virtual Threat Defense Universal License

Cancel

Next

按一下Generate Authorization Code。

Smart License Reservation



Product Instance Details

Product Type: VIRTSEC
UDI PID: NGFW
UDI Serial Number: 9ADKC86E1VU

Licenses to Reserve

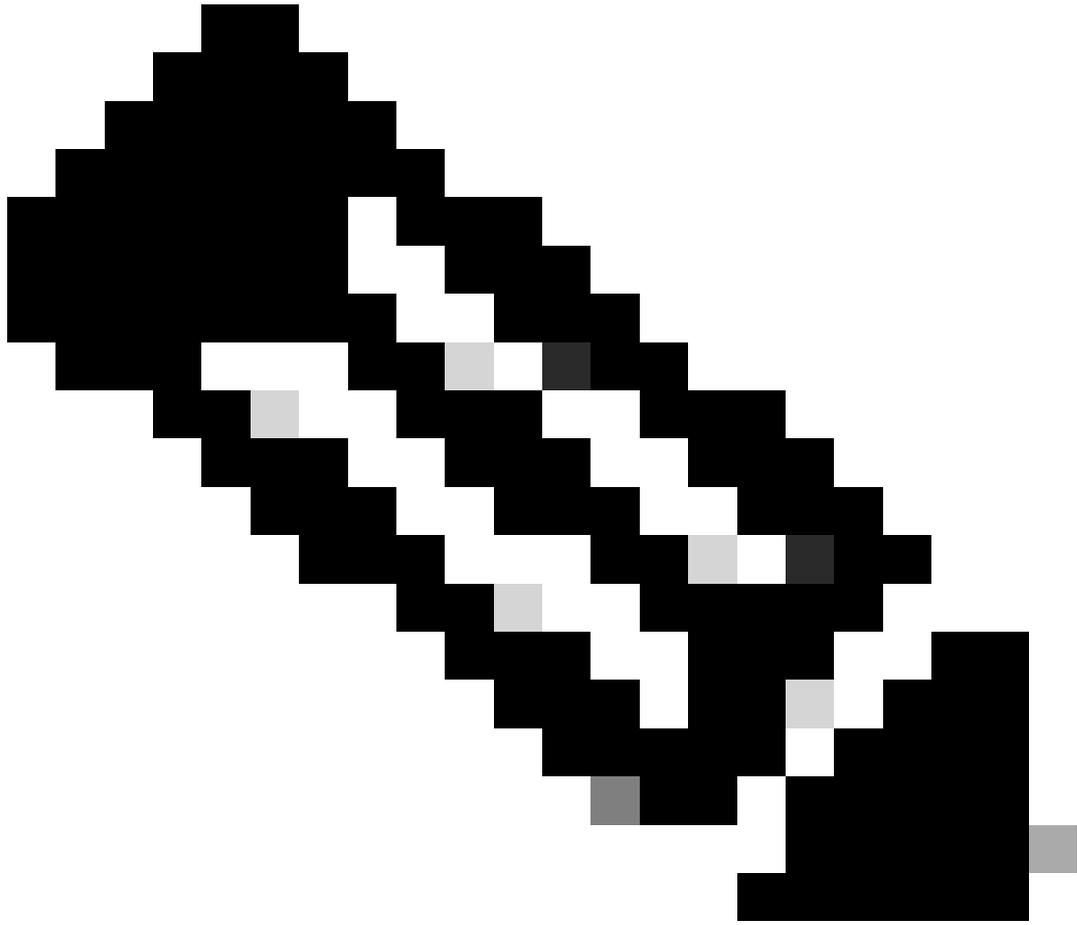
License	Expires	Quantity to Reserve
Cisco Firepower Virtual Threat Defense Universal License <small>Cisco Firepower Virtual Threat Defense Universal License</small>	-	1

Cancel

Back

Generate Authorization Code

要儲存授權代碼，請按一下Download as File或Copy to Clipboard。



附註：重新整理頁面以檢視許可證的目前狀態。

The screenshot shows the Cisco Firepower Device Manager interface. The top navigation bar includes 'Monitoring', 'Policies', 'Objects', and 'Device: firepower'. The main dashboard features a network diagram at the top and a grid of configuration tiles below. The 'Smart License' tile is highlighted with a red border, indicating that the evaluation period for the license is about to expire in 82 days. The license tier is identified as 'FTDv5 - 100 Mbps'. Other visible tiles include 'Interfaces', 'Routing', 'Updates', 'System Settings', 'Backup and Restore', 'Troubleshoot', 'Site-to-Site VPN', 'Remote Access VPN', 'Advanced Configuration', and 'Device Administration'.

步驟 2. 按一下齒輪並選取「取消PLR」。

This screenshot shows the 'Licensing' section of the FDM interface. A prominent warning message states 'UNIVERSAL PLR NOT FINISHED' with a 'Reservation Pending' status. Below this, there is a 'CONTINUE RESERVATION' button and a 'Need help?' link. The 'Tiered Performance' section shows the current 'Performance Tier' as 'FTDv20 - 3 Gbps'. A table lists the included features: 'Minimum Threat Defense Virtual Cores' (4 core), 'Minimum Threat Defense Virtual RAM' (8 GB), 'Rate Limit' (3 Gbps), and 'VPN Limit' (250). At the bottom, it shows 'Your Device' specifications: 'Cores / RAM' (4 core / 8 GB). In the top right corner, a gear icon is clicked, revealing a dropdown menu with 'Resync connection' and 'Cancel PLR' options. The 'Cancel PLR' option is highlighted with a red box.

步驟 3. 選擇I have a license in CSSM。

Cancel Permanent License Reservation



Are you sure you want to cancel the Permanent License Reservation?

License States

I have a License in CSSM

I do not have a License in ...

1 Get Authorization Code from CSSM and paste it here:



Authorization Code

Paste code from clipboard here

2 Generate a Release License Code using your Authorization Code.



GENERATE RELEASE CODE

3 In your [Cisco Smart Software Manager](#) account free up license by putting Release Code.

CANCEL

OK

步驟 4. 貼上您的授權碼並按一下Generate Release Code。

Cancel Permanent License Reservation



Are you sure you want to cancel the Permanent License Reservation?

License States

I have a License in CSSM

I do not have a License in ...

1 Get Authorization Code from CSSM and paste it here:



Authorization Code

2 Generate a Release License Code using your Authorization Code.



GENERATE RELEASE CODE

3 In your [Cisco Smart Software Manager](#) account free up license by putting Release Code.

CANCEL

OK

儲存您的版本授權碼。

Cancel Permanent License Reservation



Are you sure you want to cancel the Permanent License Reservation?

License States

I have a License in CSSM

I do not have a License in ...

1 Get Authorization Code from CSSM and paste it here:



Authorization Code

DAKwJ-KeIke2-fGtuzD-coNBoo-uMz7J8-QeG0t4-mQzkeo-MG-55-DI

2 Generate a Release License Code using your Authorization Code.



Release License Code

DKvxiU-zchZA5-M6ekJk-EmeitQ-85pErd-Ft7

SAVE AS TXT

PRINT

You will not be able to regenerate the Release Code after you unregister. Please make sure that you save this code for use in Cisco Smart Software Manager.

3 In your [Cisco Smart Software Manager](#) account free up license by putting Release Code.

CANCEL

OK

步驟 5. 登入您的CSSM帳戶並導航到智慧軟體許可 > 資產 > 產品例項。

General Licenses **Product Instances** Event Log

Authorize License-Enforced Features...  Search by Device or by Product Type 

Name	Product Type	Last Contact	Alerts	Actions
10.106.60.161	FP	2024-Feb-08 21:22:04		Actions ▾
68.com	ESA	2024-Feb-08 15:47:37		Actions ▾
724FMC	FP	2024-Jan-16 18:30:52		Actions ▾
A-TSZ-HIS-FMC01	FP	2023-Oct-03 21:05:28	✘ Failed to Renew	Actions ▾
a4115	FPRUHI	2024-Jan-27 17:05:40		Actions ▾
AAALAB	ASAHIGH	2024-Jan-18 19:07:58		Actions ▾
AAALAB	ASAHIGH	2024-Jan-18 11:25:38		Actions ▾
AAALAB	ASAHIGH	2024-Jan-18 20:14:33		Actions ▾
AAALAB	ASAHIGH	2024-Jan-18 05:30:17		Actions ▾
AAALAB	ASAHIGH	2024-Jan-18 08:00:04		Actions ▾

10 ▾ Showing Page 1 of 97 (963 Records)    

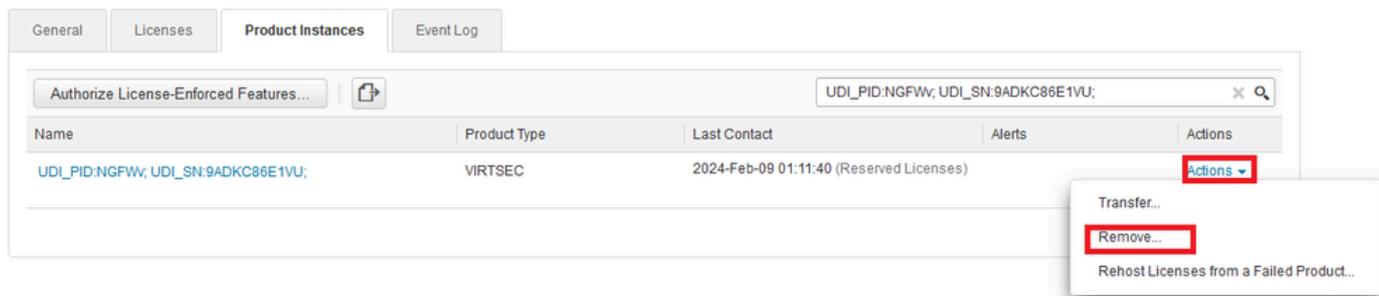
步驟 6. 按名稱搜尋裝置。

註：「Name (名稱)」是裝置序列號。

General Licenses Product Instances Event Log				
Authorize License-Enforced Features...		UDI_PID:NGFW; UDI_SN:9ADKC86E1VU;		
Name	Product Type	Last Contact	Alerts	Actions
UDI_PID:NGFW; UDI_SN:9ADKC86E1VU;	VIRTSEC	2024-Feb-09 01:11:40 (Reserved Licenses)		Actions ▾

Showing 1 Record

步驟 7. 點選操作，然後從下拉選單中選擇刪除。



貼上您的Release License Code，然後按一下Remove Reservation。

Remove Reservation ✕

To remove a Product Instance that has reserved licenses and make those licenses once again available to other Product Instances, enter in the Reservation Return Code generated by the Product Instance. If you cannot generate a Reservation Return Code, contact [Cisco Support](#)

★ Reservation Return Code:

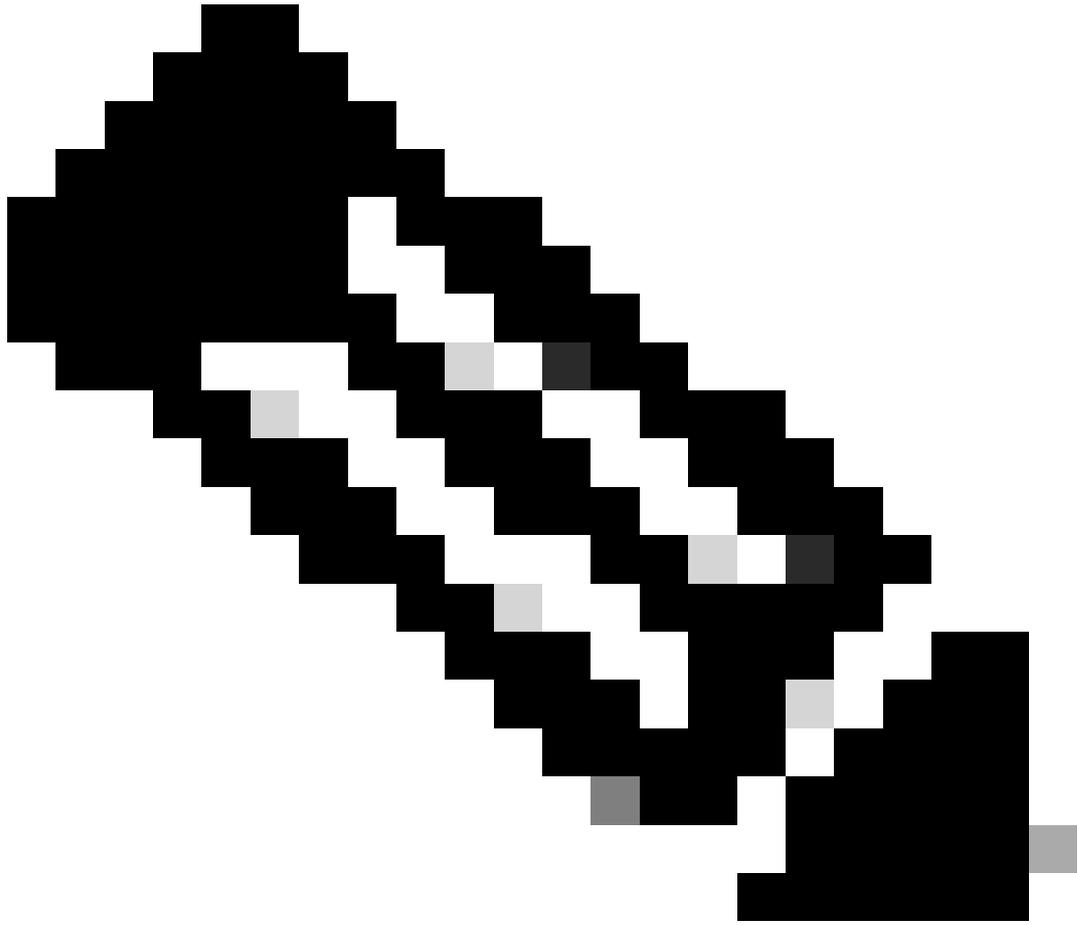
DKvxiU-zchZA5-M6ekJk-EmeitQ-85pErd-Ft7|



Remove Reservation

Cancel

步驟 8. 返回到裝置並按一下Ok。



附註：重新整理頁面以檢視許可證的目前狀態。

Cancel Permanent License Reservation



Are you sure you want to cancel the Permanent License Reservation?

License States

I have a License in CSSM

I do not have a License in ...

1 Get Authorization Code from CSSM and paste it here:



Authorization Code

DKVxiU-zchZA5-M6ekJk-EmeitQ-85pErd-Ft7

2 Generate a Release License Code using your Authorization Code.



Release License Code

DKVxiU-zchZA5-M6ekJk-EmeitQ-85pErd-Ft7

SAVE AS TXT

PRINT

You will not be able to regenerate the Release Code after you unregister. Please make sure that you save this code for use in Cisco Smart Software Manager.

3 In your [Cisco Smart Software Manager](#) account free up license by putting Release Code.

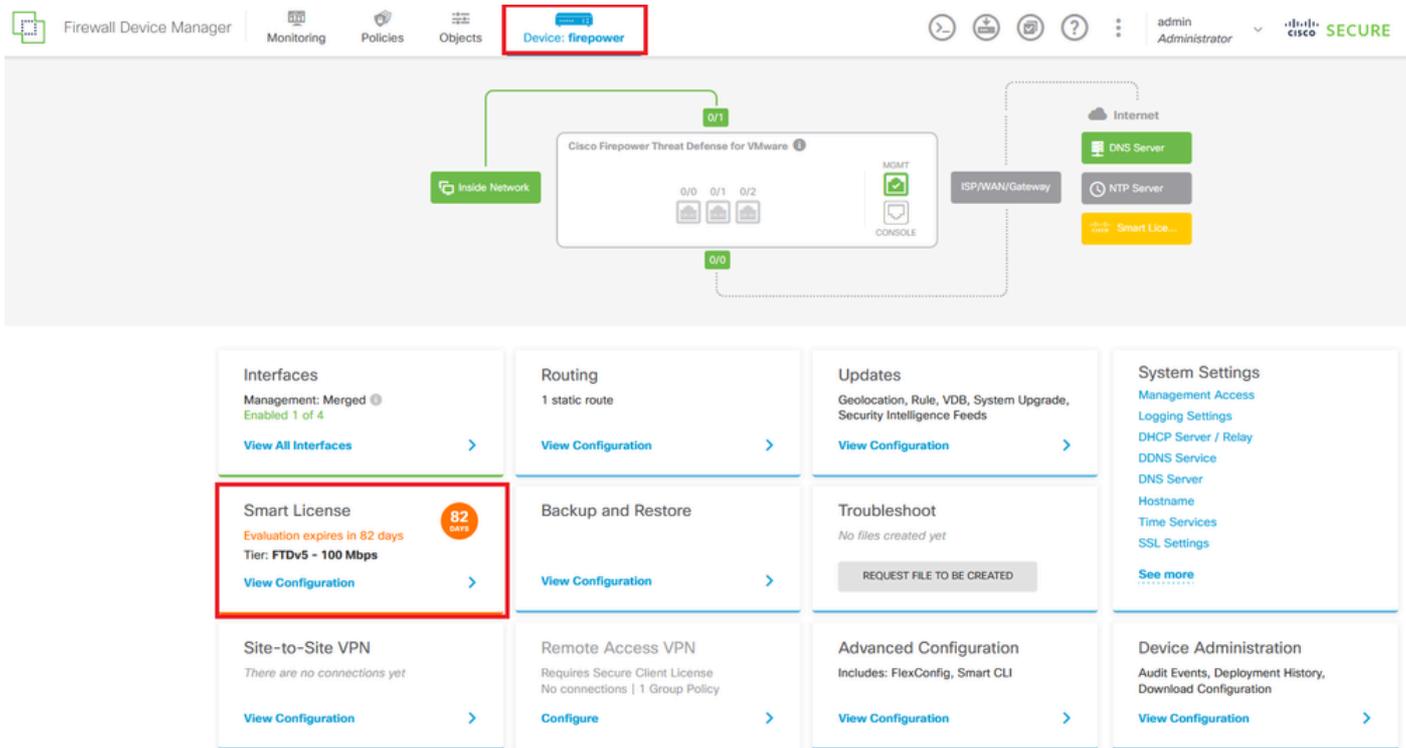
CANCEL

OK

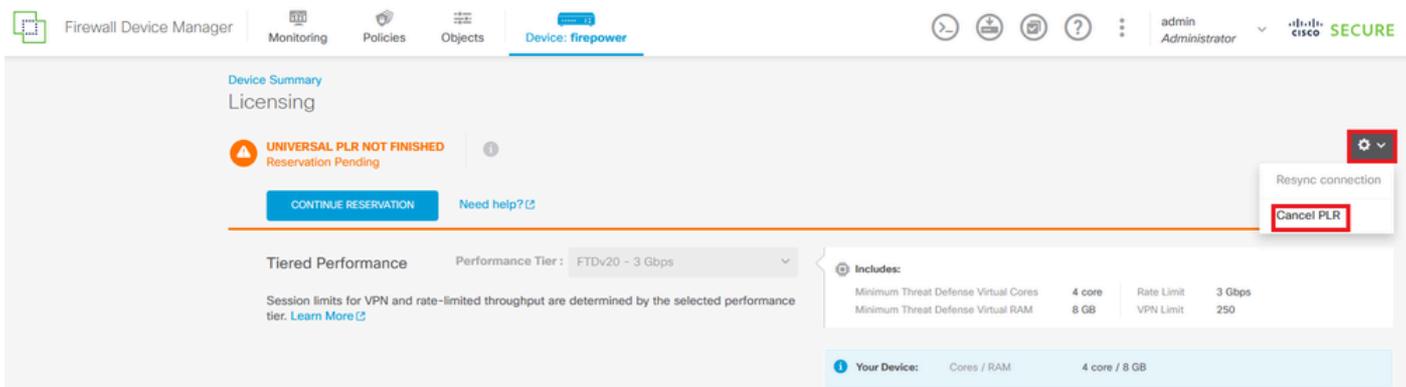
我在CSSM中沒有許可證

當您未完成CSSM中的許可證註冊嚮導時，請使用此選項。例如，您在FDM中啟動了PLR進程，但CSSM中沒有正確的許可證。

步驟 1. 點選裝置，導航至智慧許可證。



步驟 2. 按一下齒輪並選取「取消PLR」。



步驟 3. 選擇I not have a license in CSSM。

Cancel Permanent License Reservation



Are you sure you want to cancel the Permanent License Reservation?

License States

I have a License in CSSM

I do not have a License in ...

i In this case you can proceed with Cancelling Permanent License Reservation.

CANCEL

OK

按一下Ok完成操作。

在PLR模式下註銷裝置

步驟 1. 點選裝置，導航至智慧許可證。

Firewall Device Manager | Monitoring | Policies | Objects | **Device: firepower** | admin Administrator | cisco SECURE

Model: Cisco Firepower Threat Defense for VMwa... | Software: 7.4.1-172 | VDB: 376.0 | Intrusion Rule Update: 20231011-1536 | Cloud Services: Not Registered | Register | High Availability: Not Configured | CONFIGURE

Inside Network | Cisco Firepower Threat Defense for VMware | Internet | DNS Server | NTP Server | Universal P...

Interfaces: Management: Merged | Enabled 1 of 4 | View All Interfaces

Routing: 1 static route | View Configuration

Updates: Geolocation, Rule, VDB, System Upgrade, Security Intelligence Feeds | View Configuration

System Settings: Management Access, Logging Settings, DHCP Server / Relay, DDNS Service, DNS Server, Hostname, Time Services, SSL Settings | See more

Smart License: Universal PLR | Tier: Not selected (Threat Defense Virtual - Variable) | View Configuration

Backup and Restore: View Configuration

Troubleshoot: No files created yet | REQUEST FILE TO BE CREATED

步驟 2. 按一下齒輪，然後選擇Unregister Universal PLR。

Firewall Device Manager | Monitoring | Policies | Objects | **Device: firepower** | admin Administrator | cisco SECURE

Device Summary | Licensing

UNIVERSAL PLR Sufficient License

Unregister Universal PLR

步驟 3. 按一下 Yes 繼續此過程。

Warning

If you unregister the device, you cannot make any changes to the device configuration. You will have to re-register the device using either Smart Licensing or Universal Permanent License Reservation mode to make changes.

Are you sure you want to unregister the device?

NO YES

步驟 4. 儲存發行授權碼。

Unregister Universal Permanent License Reservation

- Save Release Code for this Device.
↓
Release License Code
DCsSXH-D2rBtc-UZzer8-Un5yqp-vcKF1v-EG4
SAVE AS TXT PRINT

⚠ You will not be able to regenerate the Release Code after you unregister. Please make sure that you save this code for use in Cisco Smart Software Manager.

- In your [Cisco Smart Software Manager](#) free up license by inserting Release License Code from here.

CANCEL UNREGISTER

步驟 5. 登入您的 CSSM 帳戶並導航到智慧軟體許可 > 資產 > 產品例項。

General Licenses **Product Instances** Event Log

Authorize License-Enforced Features...  Search by Device or by Product Type 

Name	Product Type	Last Contact	Alerts	Actions
10.106.60.161	FP	2024-Feb-08 21:22:04		Actions ▾
68.com	ESA	2024-Feb-08 15:47:37		Actions ▾
724FMC	FP	2024-Jan-16 18:30:52		Actions ▾
A-TSZ-HIS-FMC01	FP	2023-Oct-03 21:05:28	✘ Failed to Renew	Actions ▾
a4115	FPRUHI	2024-Jan-27 17:05:40		Actions ▾
AAALAB	ASAHIGH	2024-Jan-18 19:07:58		Actions ▾
AAALAB	ASAHIGH	2024-Jan-18 11:25:38		Actions ▾
AAALAB	ASAHIGH	2024-Jan-18 20:14:33		Actions ▾
AAALAB	ASAHIGH	2024-Jan-18 05:30:17		Actions ▾
AAALAB	ASAHIGH	2024-Jan-18 08:00:04		Actions ▾

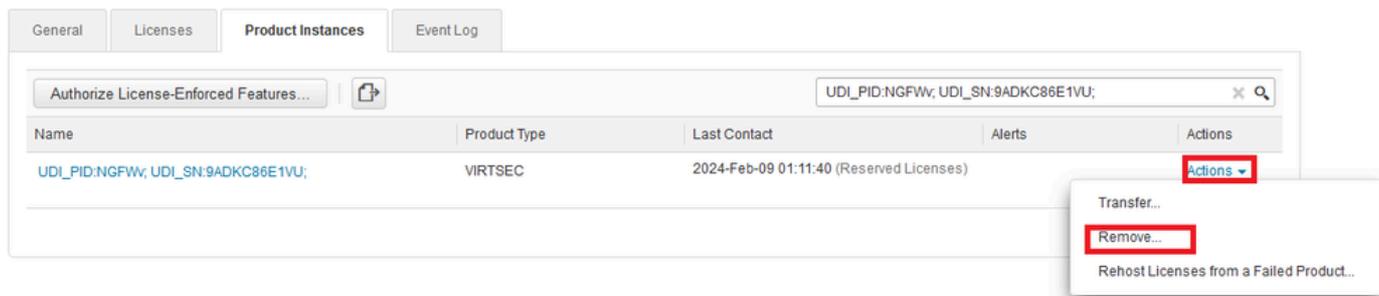
10 ▾ Showing Page 1 of 97 (963 Records)    

步驟 6. 按名稱搜尋裝置。

註：「Name (名稱)」是裝置序列號。

General		Licenses	Product Instances	Event Log
Authorize License-Enforced Features...				UDI_PID:NGFW; UDI_SN:9ADKC86E1VU; <input type="text"/>
Name	Product Type	Last Contact	Alerts	Actions
UDI_PID:NGFW; UDI_SN:9ADKC86E1VU;	VIRTSEC	2024-Feb-09 01:11:40 (Reserved Licenses)		Actions ▾
Showing 1 Record				

步驟 7. 點選操作，然後從下拉選單中選擇刪除。



貼上您的Release License Code，然後按一下Remove Reservation。

Remove Reservation ✕

To remove a Product Instance that has reserved licenses and make those licenses once again available to other Product Instances, enter in the Reservation Return Code generated by the Product Instance. If you cannot generate a Reservation Return Code, contact [Cisco Support](#)

* Reservation Return Code:

DCsSXH-D2rBtc-UZzer8-Un5yqp-vcKF1v-EG4



Remove Reservation

Cancel

步驟 8. 返回到裝置並按一下Unregister。

Unregister Universal Permanent License Reservation ? ×

1 Save Release Code for this Device.



Release License Code

DCsSXH-D2rBtc-UZzer8-Un5yqp-vcKF1v-EG4

SAVE AS TXT

PRINT

You will not be able to regenerate the Release Code after you unregister. Please make sure that you save this code for use in Cisco Smart Software Manager.

2 In your [Cisco Smart Software Manager](#) free up license by inserting Release License Code from here.

CANCEL

UNREGISTER

驗證

導航到裝置>智慧許可證，您可以看到許可證是通用PLR。



Firewall Device Manager

Monitoring

Policies

Objects

Device: firepower

Device Summary

Licensing



UNIVERSAL PLR
Sufficient License



疑難排解

1. 查詢/ngfw/var/log/cisco/smart_agent.log中的錯誤。

例如，在這些日誌中，您可以看到註冊過程成功。

```
<#root>  
> expert  
admin@firepower:~$ sudo su  
Password:  
root@firepower:/home/admin# cd /ngfw/var/log/cisco/  
root@firepower:/ngfw/var/log/cisco# tail smart_agent.log
```

```
2024-02-09 03:21:21 ajp-nio-8009-exec-8: INFO LicenseSoftwareIds:82 - Selected software ID: regid.2019-
2024-02-09 03:21:21 ajp-nio-8009-exec-8: INFO DefaultSmartAgentFactoryProvider:398 - New platform tag i
2024-02-09 03:21:21 ajp-nio-8009-exec-8: INFO PLRUnhandledNotificationHandler:31 - Handling listener cl
2024-02-09 03:21:21 ajp-nio-8009-exec-8: INFO PLRUnhandledNotificationHandler:31 - Handling listener cl

2024-02-09 03:21:21 ajp-nio-8009-exec-8: INFO SmartAgentConfFileSync:178 - RegistrationStatus : REGISTERED

2024-02-09 03:21:21 ajp-nio-8009-exec-8: INFO SmartAgentConfFileSync:192 - updated the smart Agent File
2024-02-09 03:21:21 ajp-nio-8009-exec-8: INFO PLRUnhandledNotificationHandler:31 - Handling listener cl
2024-02-09 03:21:21 ajp-nio-8009-exec-8: INFO DefaultSmartAgentManager:159 - Received notification from
```

2. 使用尾帶請求TAC幫助並將其附加到案例備註中。您可以向[Cisco技術支援和下載](#)請求支援幫助。

```
> expert
admin@firepower:~$ sudo su
root@firepower:/home/admin# pigtail all -outfile LogsRegistration.txt
```

3. 許可證狀態也會在/etc/sf/smart_agent.conf檔案中報告。如果裝置處於通用永久許可保留模式，則smart_agent.conf將顯示為REGISTERED和AUTHORIZED。

```
> expert
admin@firepower:~$ sudo su
root@firepower:/home/admin# tail /etc/sf/smart_agent.conf
#Fri Feb 09 03:21:21 UTC 2024
virtual_acct=
registration=REGISTERED,null
authorization=AUTHORIZED,1707448881842
```

常見問題

許可證不足。

在許可證保留過程中，出現以下錯誤：

Smart License Reservation



The licenses cannot be reserved because the Virtual Account does not contain a sufficient surplus of the following perpetual licenses: FTDv 3 Gbps Universal License.

建議的動作。

驗證您的CSSM帳戶中是否有足夠的許可證。如果您有足夠的許可證，請請求TAC幫助。

您無法看到License Reservation按鈕。

General Licenses Product Instances Event Log

Available Actions ▾ Manage License Tags  Show License Transactions Search by License 🔍

By Name | By Tag

建議的動作

您必須聯絡思科代表才能在您的帳戶中啟用PLR模式。

相關資訊

- [思科安全防火牆裝置管理器配置指南7.4版](#)

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）。