

在FDM上的气隙网络中应用永久许可证

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简介

本文档介绍如何在Firepower设备管理器(FDM)上的气隙网络中应用永久许可证。

先决条件

要求

建议了解以下主题：

- [思科安全防火墙威胁防御初始配置](#)

使用的组件

本文档中的信息基于软件版本：

- Firepower威胁防御7.4.1版。

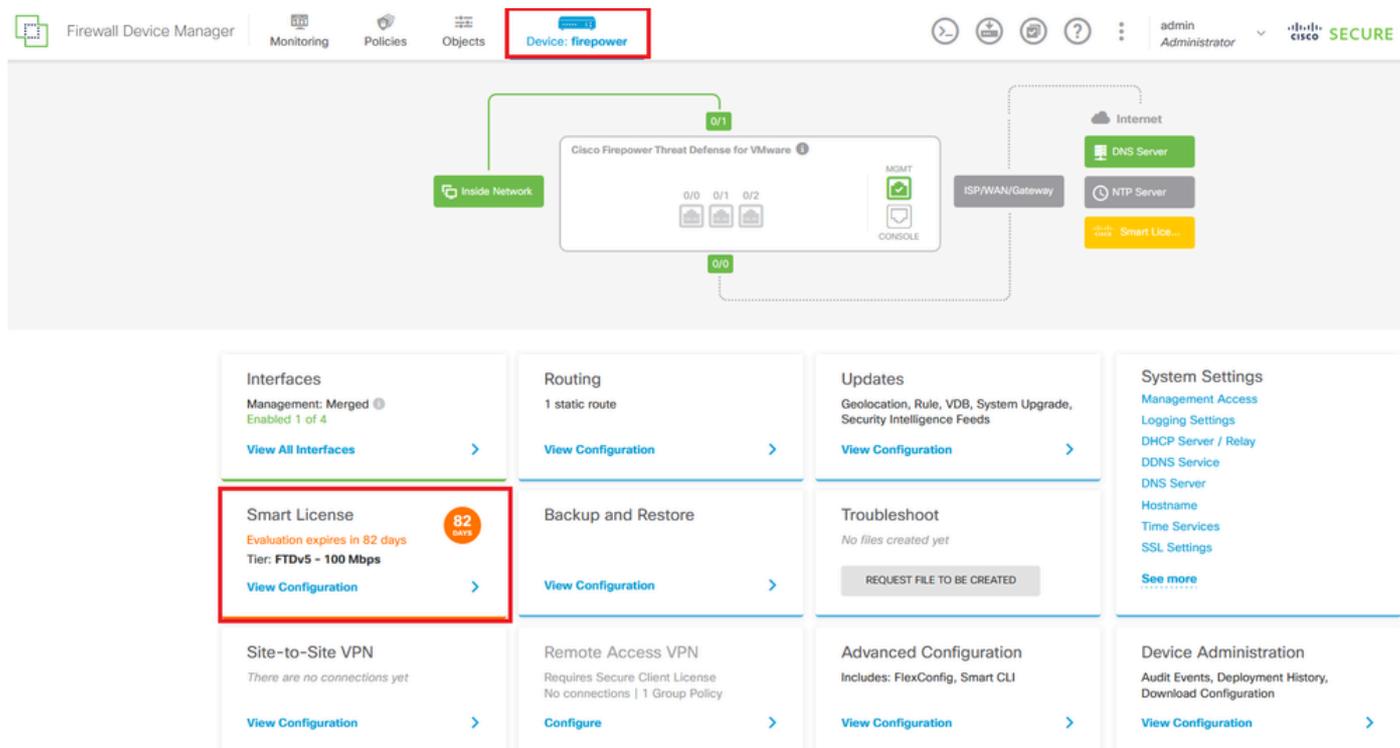
本文档中的信息都是基于特定实验室环境中的设备编写的。本文档中使用的所有设备最初均采用原始（默认）配置。如果您的网络处于活动状态，请确保您了解所有命令的潜在影响。

配置

启用PLR模式

步骤1:在您的设备中启用PLR模式。

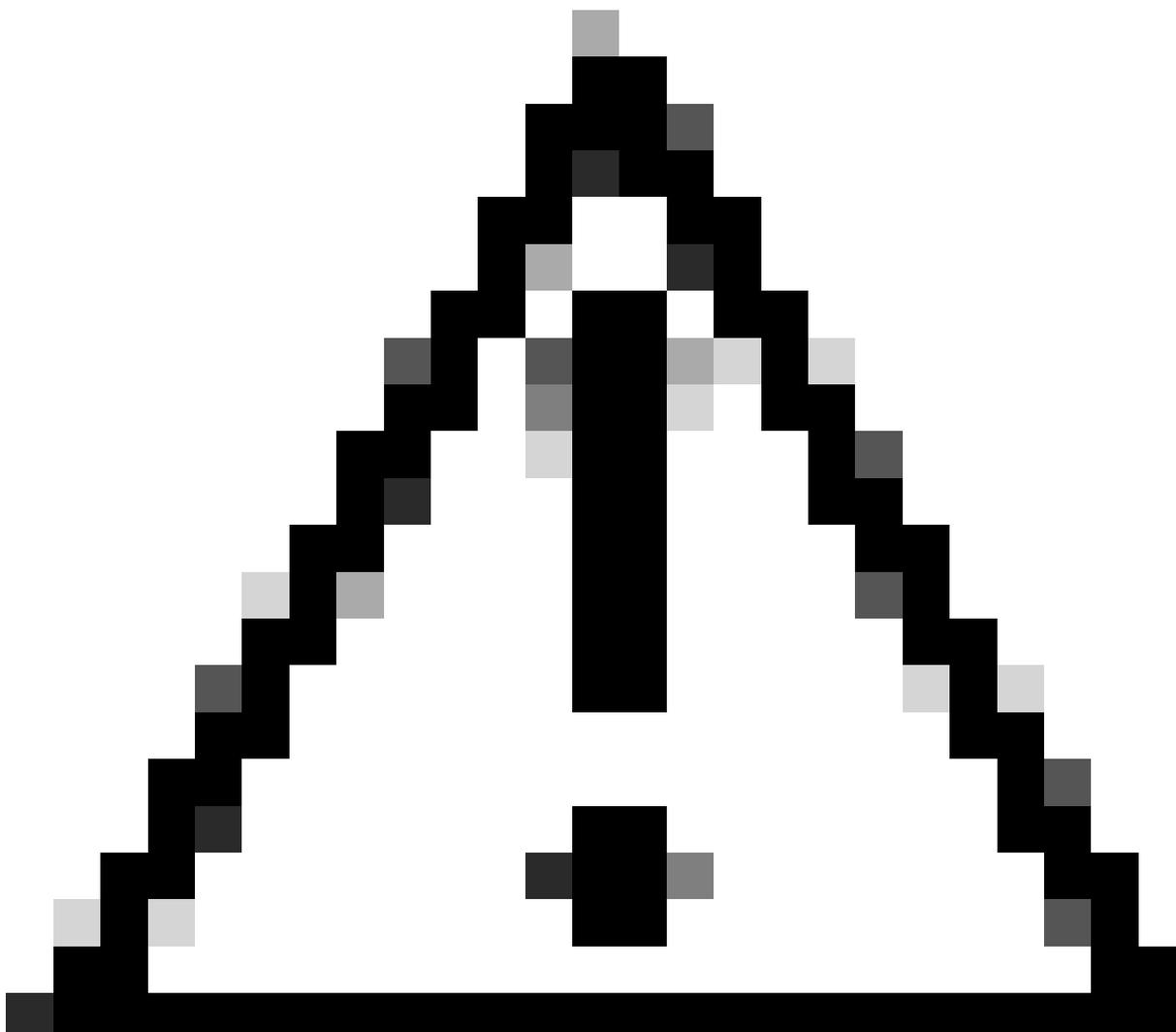
点击设备，然后导航到智能许可证。



第二步：单击齿轮并选择Switch to Universal PLR。



注意：如果您的设备使用智能许可，您必须注销设备。



注意：一旦切换到PLR模式，便无法再切换回评估模式。

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

在预览窗口中，选择Performance Tier，然后单击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

第三步：保存请求代码。

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

第四步：登录您的CSSM帐户并导航到智能软件许可 > 资产>许可证，然后单击许可证保留。

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

Available Actions ▾

Manage License Tags

License Reservation...



Show License Transactions

By Name | By Tag

Search by License



单击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

粘贴请求代码，然后单击下一步。

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

选择许可证并单击下一步。

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

单击Generate Authorization Code。

Smart License Reservation



Product Instance Details

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

Licenses to Reserve

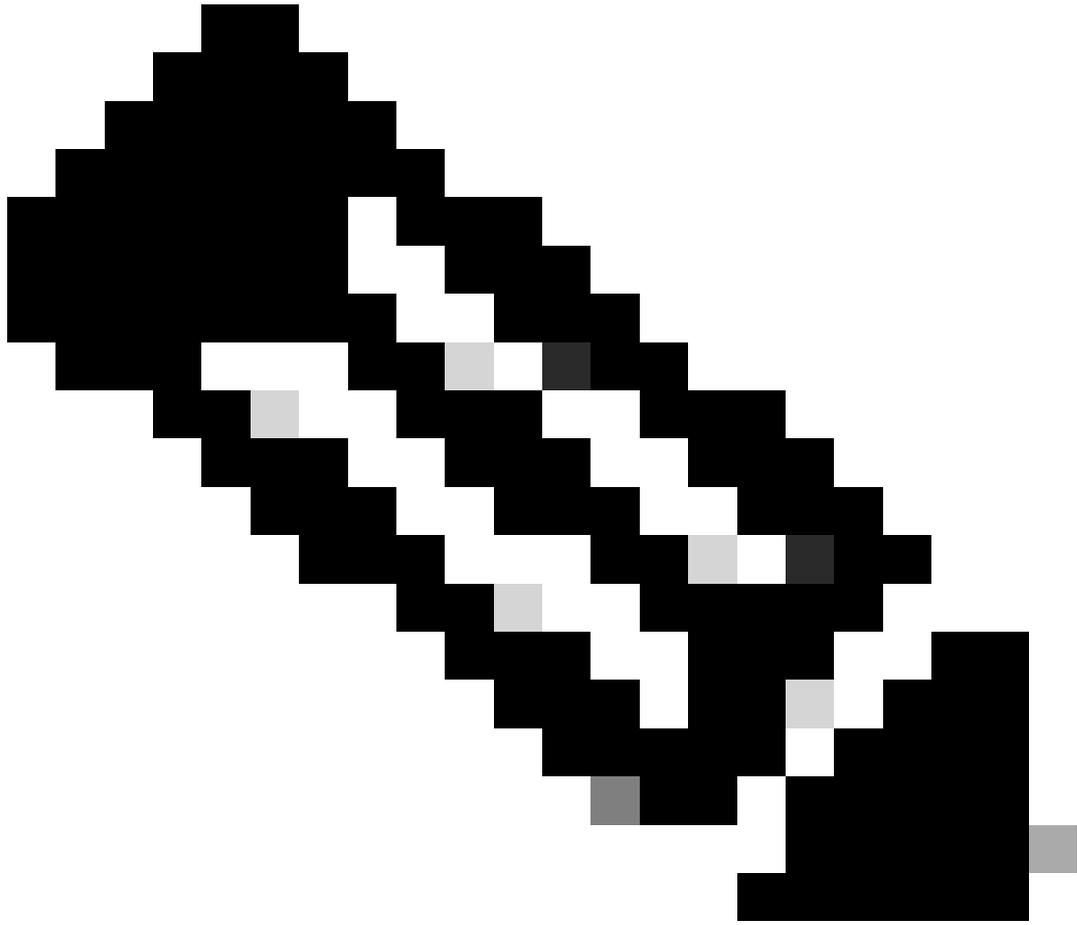
License	Expires	Quantity to Reserve
Cisco Firepower Virtual Threat Defense Universal License <small>Cisco Firepower Virtual Threat Defense Universal License</small>	-	1

Cancel

Back

Generate Authorization Code

要保存授权码，请单击Download as File或Copy to Clipboard。



注意：刷新页面以查看许可证的当前状态。

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

9ADKC86E1VU-CCRVmZyqM-BF

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

CANCEL

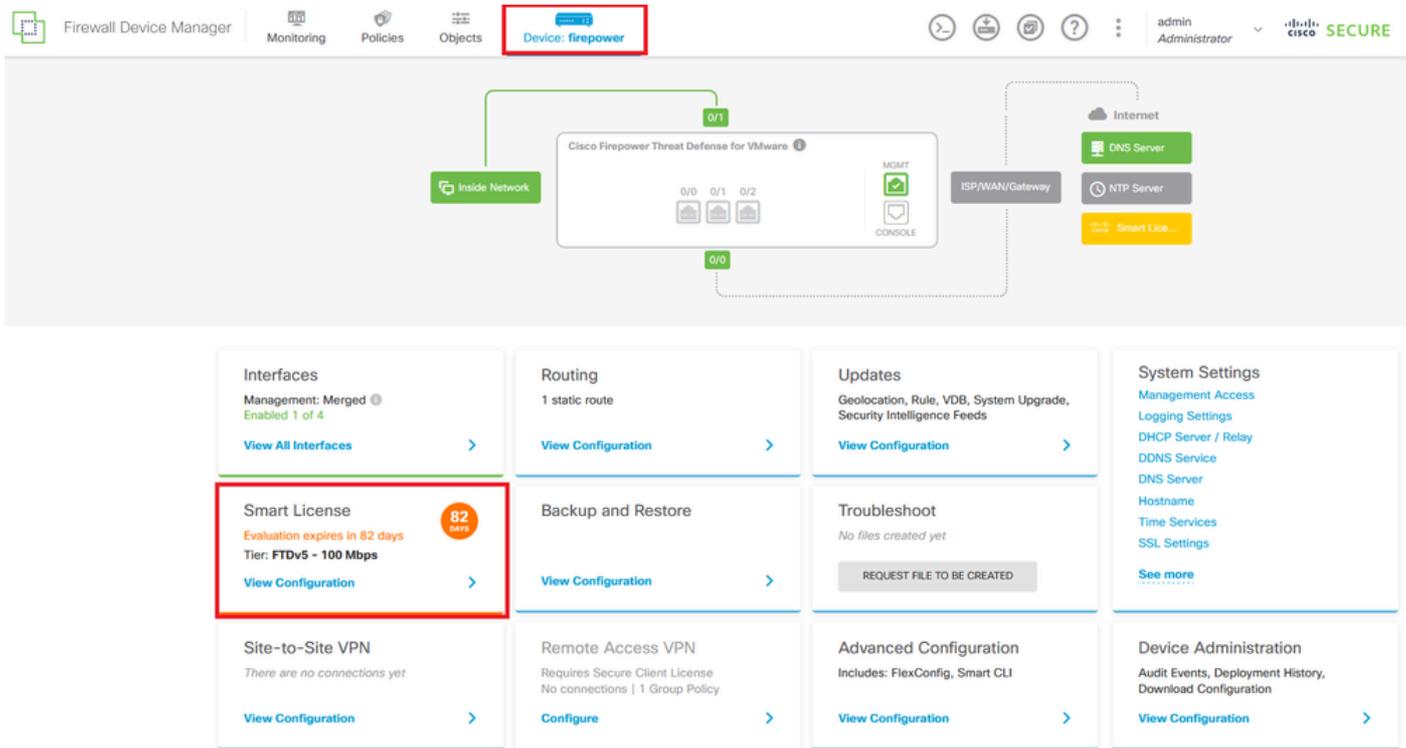
REGISTER

取消PLR注册

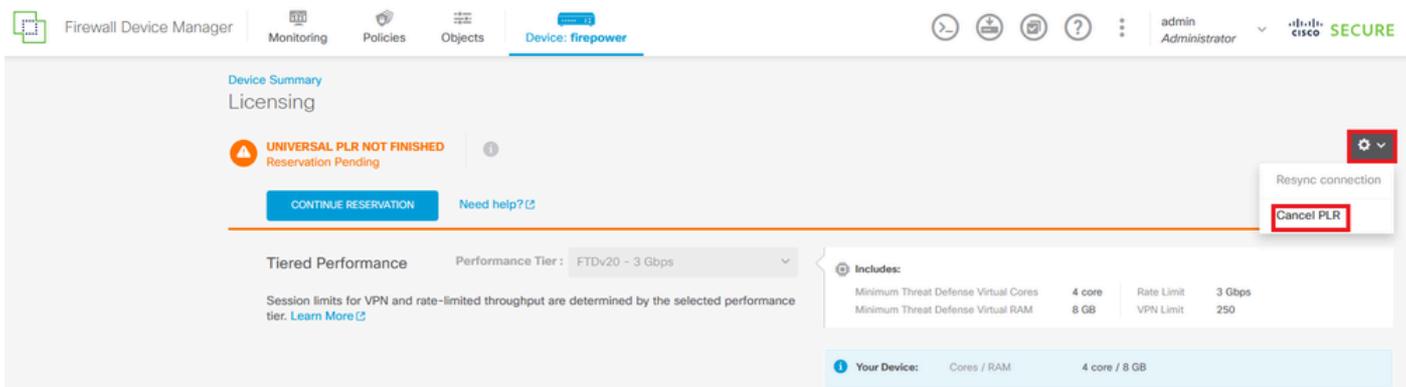
我在CSSM中拥有许可证

当您在CSSM中完成“许可证注册”(License Registration)向导并且具有授权码时，请使用此选项。例如，您在错误的FDM中启动了该流程，因此您必须在CSSM帐户中释放许可证。

步骤1: 点击设备，然后导航到智能许可证。



第二步：单击齿轮，然后选择Cancel PLR。



第三步：选择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

第四步：粘贴您的授权码并单击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

保存您的版本许可证代码。

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-QaG0t4-mQzkae-MQ-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

第五步：登录您的CSSM帐户并导航到智能软件许可 > 资产 >“产品实例”。

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 ▾

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第六步：按名称搜索设备。

注意：名称是设备序列号。

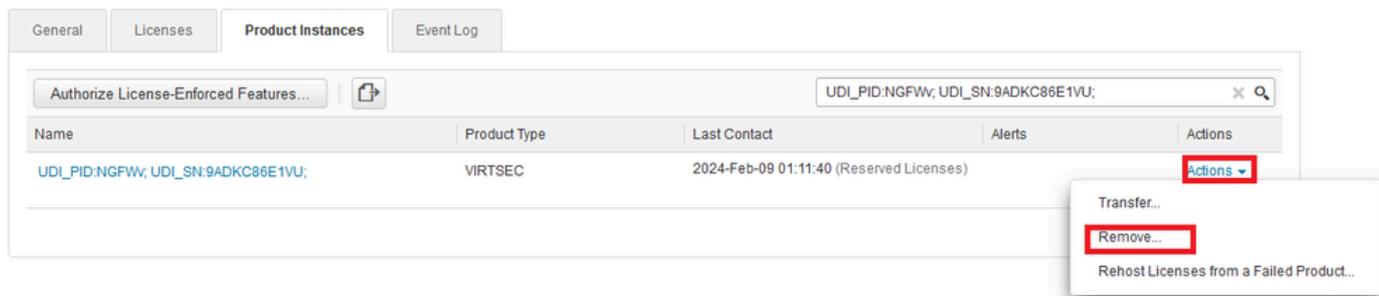
General Licenses **Product Instances** Event Log

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

步骤 7. 点击操作，然后从下拉列表中选择删除。



粘贴您的发布许可证代码，然后单击删除预留。

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:

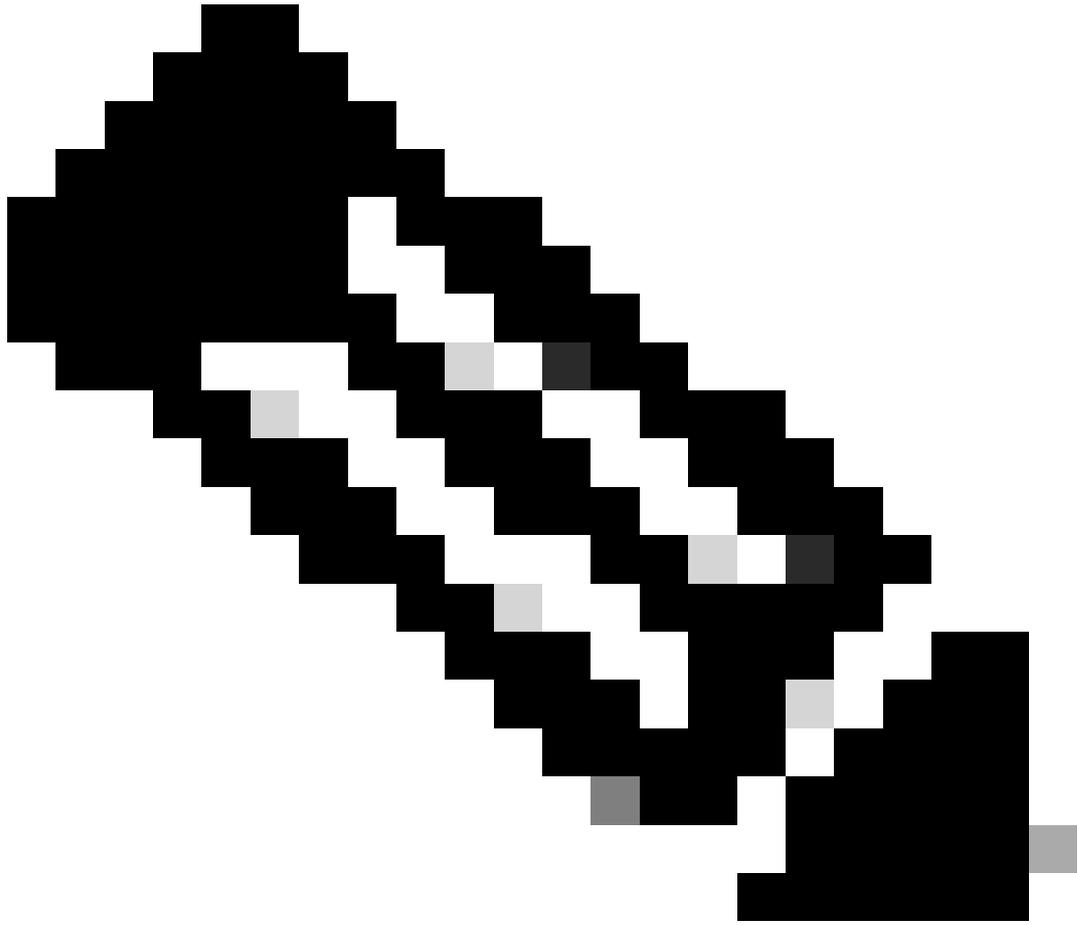
DKvxiU-zchZA5-M6ekJk-EmeitQ-85pErd-Ft7|



Remove Reservation

Cancel

步骤 8 返回设备并单击OK。



注意：刷新页面以查看许可证的当前状态。

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.

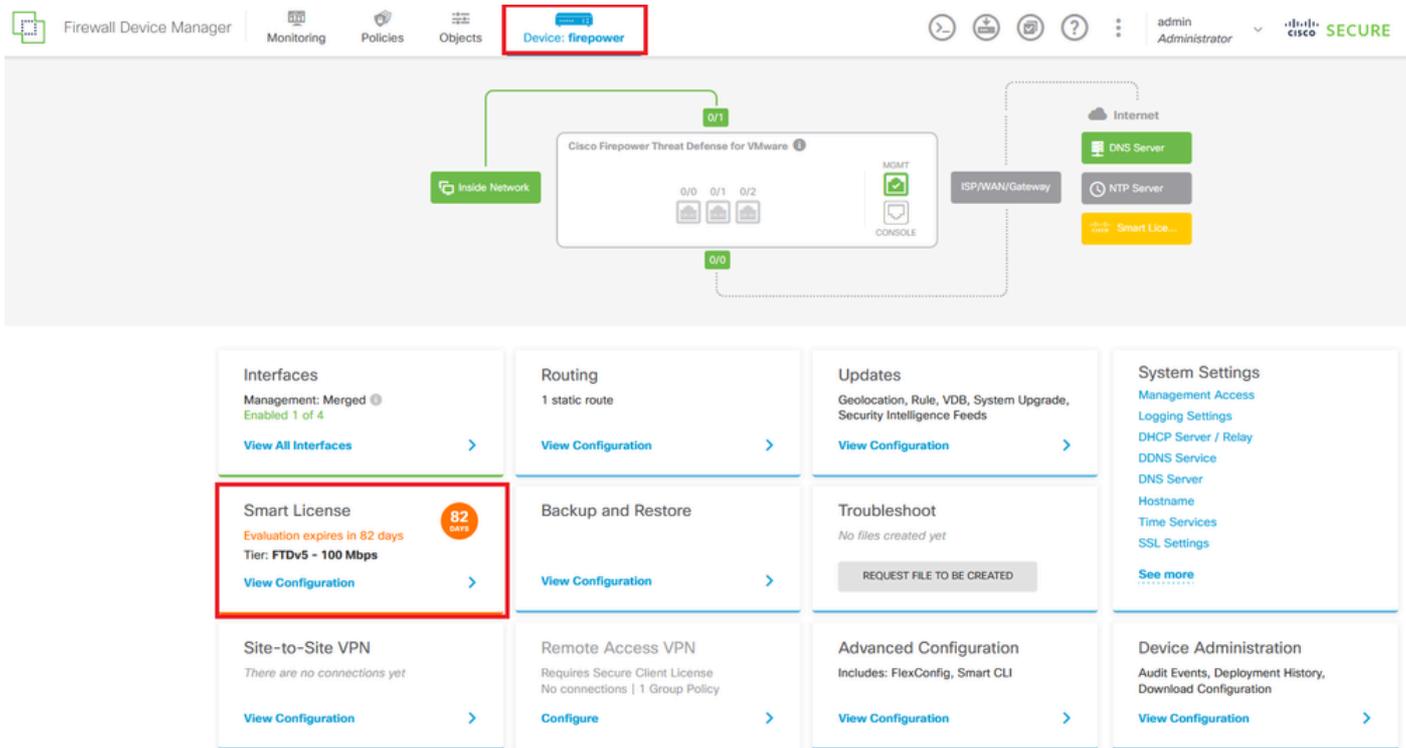
CANCEL

OK

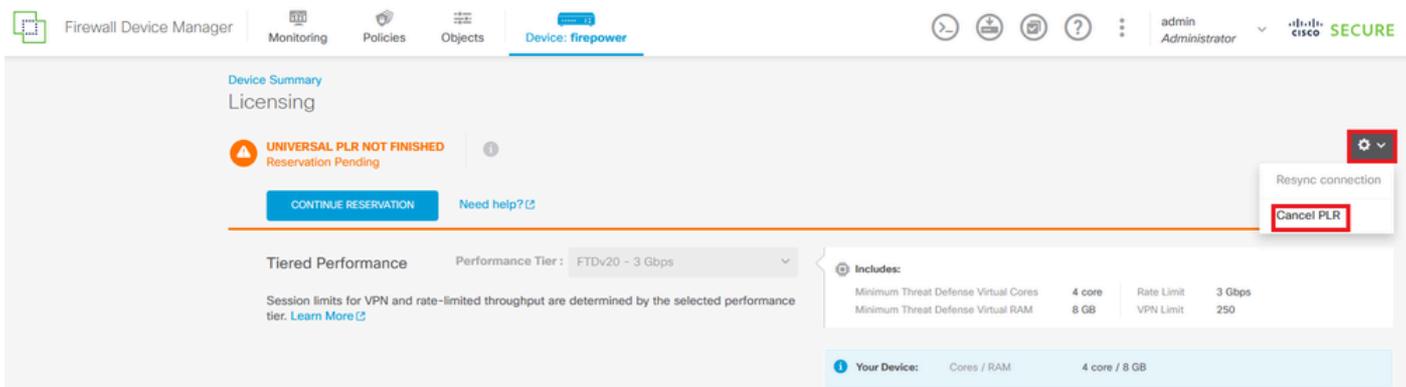
我在CSSM中没有许可证

当您未完成CSSM中的许可证注册向导时，请使用此选项。例如，您在FDM中启动了PLR进程，但CSSM中没有正确的许可证。

步骤1: 点击设备，然后导航到智能许可证。



第二步：单击齿轮，然后选择Cancel PLR。



第三步：选择I do 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

单击 OK 完成操作。

在PLR模式下注销设备

步骤1: 点击设备，然后导航到智能许可证。

The screenshot shows the Firewall Device Manager interface for a 'firepower' device. The top navigation bar includes 'Monitoring', 'Policies', 'Objects', and 'Device: firepower'. The main content area displays a network diagram and several configuration panels. The 'Smart License' panel is highlighted with a red box, showing 'Universal PLR' and 'Tier: Not selected (Threat Defense Virtual - Variable)'. Other panels include 'Interfaces', 'Routing', 'Updates', 'System Settings', 'Backup and Restore', and 'Troubleshoot'.

第二步：单击齿轮并选择Unregister Universal PLR。

The screenshot shows the 'Licensing' section of the Firewall Device Manager interface. It displays a 'UNIVERSAL PLR Sufficient License' status with a green checkmark. In the bottom right corner, a gear icon is highlighted with a red box, and a dropdown menu is open, showing the option 'Unregister Universal PLR' also highlighted with a red box.

第三步：单击Yes继续执行该过程。

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

第四步：保存版本许可证代码。

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

第五步：登录您的CSSM帐户并导航到智能软件许可 > 资产 >“产品实例”。

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) |<< >>|

第六步：按名称搜索设备。

注意：名称是设备序列号。

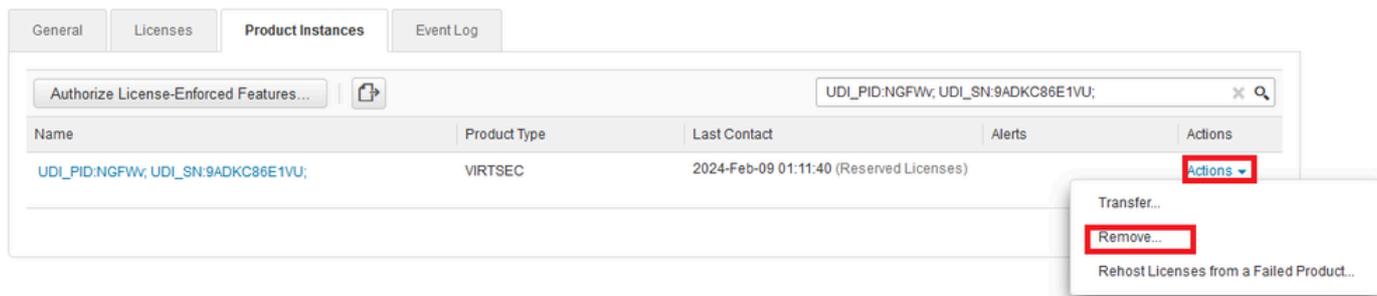
General Licenses **Product Instances** Event Log

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

步骤 7. 点击操作，然后从下拉列表中选择删除。



粘贴您的发布许可证代码，然后单击删除预留。

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

步骤 8 返回设备并单击 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

验证

导航到设备>智能许可证，您可以看到许可证是通用PLR。

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

Device Summary
Licensing

UNIVERSAL PLR
Sufficient License

故障排除

1. 查找/ngfw/var/log/cisco/smart_agent.log中的错误。

例如，在这些日志中，您可以看到注册过程成功。

```
<#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. 拖尾以请求TAC帮助，并将其附加到案例说明中。您可以向[Cisco技术支持和下载](#)请求支持帮助。

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

3. 许可证状态也会在/etc/sf/smart_agent.conf文件中报告。如果设备处于通用永久许可保留模式，则smart_agent.conf显示为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
```

常见问题

没有足够的许可证。

在许可证保留过程中，出现以下错误：

Smart License Reservation ×

STEP 1 ✓ Enter Request Code	STEP 2 Select Licenses	STEP 3 Review and Confirm	STEP 4 Authorization Code
--------------------------------	---------------------------	------------------------------	------------------------------

✘ 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.

建议操作。

验证您的CSSM帐户中是否有足够的许可证。如果您有足够的许可证，请请求TAC帮助。

您无法看到License Reservation按钮。

General **Licenses** Product Instances Event Log

Available Actions ▾ Manage License Tags  Show License Transactions By Name | By Tag Search by License

建议操作

您必须联系您的思科代表，在您的帐户中启用PLR模式。

相关信息

- [Cisco 安全防火墙设备管理器配置指南7.4版](#)

关于此翻译

思科采用人工翻译与机器翻译相结合的方式将此文档翻译成不同语言，希望全球的用户都能通过各自的语言得到支持性的内容。

请注意：即使是最好的机器翻译，其准确度也不及专业翻译人员的水平。

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