

为ASA v配置灵活的PLR许可

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简介

本文档介绍专为高度安全环境设计的灵活永久许可证保留(PLR)。

先决条件

要求

- 自适应安全虚拟设备(ASA v)。
- 必须为永久许可证保留(PLR)启用智能帐户。
- 虚拟帐户需要具有您要使用的永久许可证保留(PLR)许可证。

使用的组件

本文档中的信息基于以下软件和硬件版本：

- 运行版本9.23.1或更高版本的自适应安全虚拟设备(ASA v)。
- 思科智能软件管理器版本9-202502。

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。

背景信息

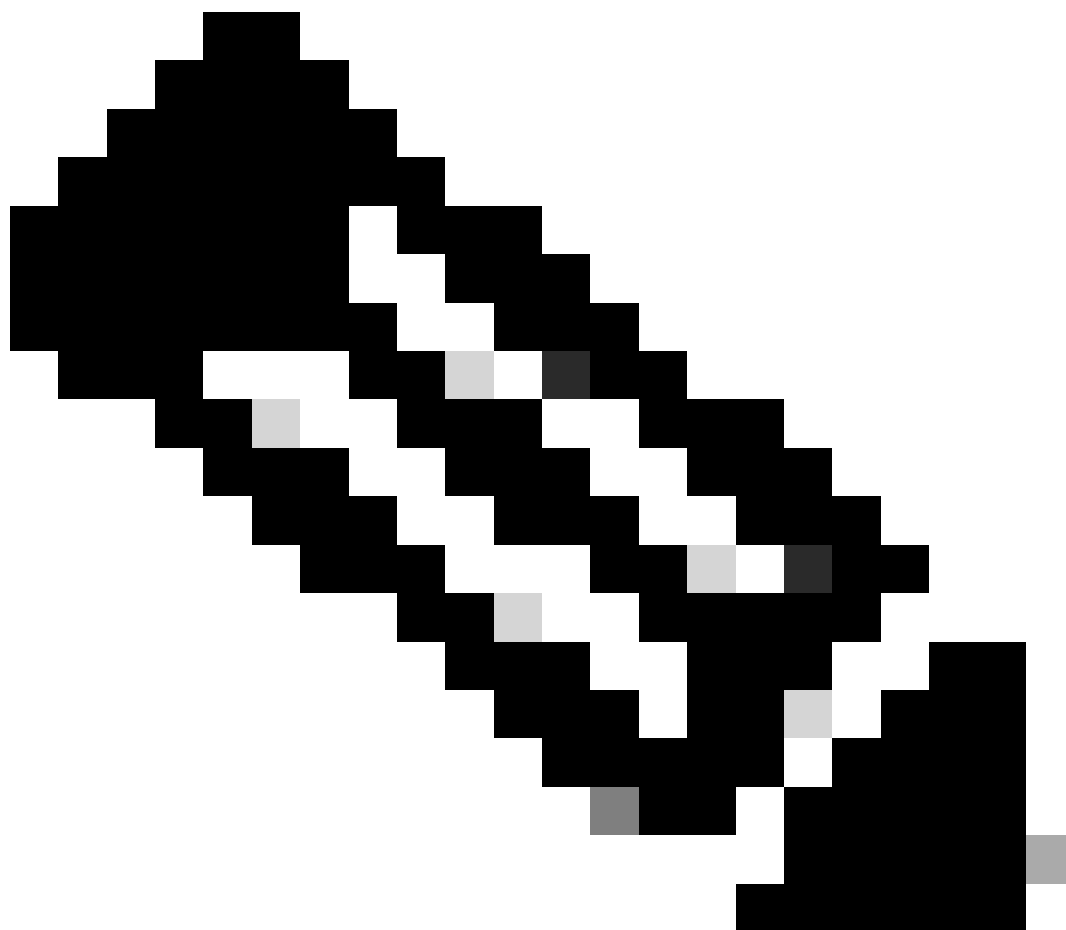
- 目前，PLR授权取决于设备启动时使用的RAM。
- 灵活的PLR许可模式功能使用户能够从ASA版本9.23.1开始，根据自己的要求选择任何授权。
- 在ASA版本9.22及更早版本中，PLR授权取决于分配的内存。从ASA版本9.23.1开始，用户可

以选择PLR授权，而不考虑内存。

配置

所有虚拟支持的公共云平台（包括Azure、AWS、GCP和OCI）上的ASAv均支持PLR功能。

在私有云平台（包括VMware、KVM、Hyper-V、Nutanix和OpenStack）上也支持此功能。



注意:建议在执行任何许可证修改之前进行配置备份。

注册灵活永久许可证保留(PLR)的步骤：

1.打开ASAv上的命令行接口，键入`configure terminal`，进入配置模式。

2.在ASAv CLI上，输入灵活的PLR命令以选择您选择的授权。在本示例中，选择asav50_plr。
license smart flex-model asav50_plr

在之前的命令asav50_plr中，是具有10GB RAM的设备的授权。

此字符串因所需授权而异，所有可用授权都列在CSSM上的智能帐户中。

对于ASA硬件的其他型号，许可信息写入此链接。

[CLI手册1:思科安全防火墙ASA系列常规操作CLI配置指南，9.23](#)

3.要进入PLR模式，请键入command 许可证智能预留。

```
[ciscoasav(config)# license smart flex-model asav50_plr  
[ciscoasav(config)# license smart reservation  
[ciscoasav(config)#
```

4.通过输入命令license smart reservation request universal从ASAv CLI获取请求代码。复制预留请求代码以将其输入到思科智能软件管理器门户(CSSM)中。

```
ciscoasa(config)# license smart reservation request universal  
Enter this request code in the Cisco Smart Software Manager portal:  
UDI: PID:ASAv,SN:9B6ST9ACC24  
Request code: DB-ZASAv:9A6ST9ABC24-Bk2XuYYa9-90
```

5.登录到CSSM，单击Licenses选项卡，然后单击License Reservation，系统将弹出警报。单击Proceed。

[思科智能软件管理器](#)

General

Licenses

Product Instances

Event Log

Available Actions ▾

Manage License Tags

License Reservation...

☒ Show License Transactions

Search by License

By Name | By Tag

Advanced Search ▾

☐ License	Billing	Available to Use	In Use	Substitution	Balance	Alerts	Actions
Cisco ASAv10 Universal License	Prepaid	5	0	-	+5		Actions ▾
Cisco ASAv100 Universal License	Prepaid	5	0	-	+5		Actions ▾
Cisco ASAv30 Universal License	Prepaid	5	1 (1 Reserved)	-	+4		Actions ▾
Cisco ASAv5 Universal License	Prepaid	10	0	-	+10		Actions ▾
Cisco ASAv50 Universal License	Prepaid	5	0	-	+5		Actions ▾
Cisco ASAvJ Universal License	Prepaid	50	0	-	+50		Actions ▾

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Proceed

6.将请求代码粘贴到对话框中，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:

DD-ZASAv:9AF8UGL8V58-A8vZRMf9p-FB

Upload File

Browse

Upload

Cancel

Next

7.验证显示的PLR授权。在本示例中，它是ASAv50。选择License并单击Next。

Smart License Reservation

STEP 1 ✓

Enter Request Code

STEP 2

Select Licenses

STEP 3

Review and Confirm

STEP 4

Authorization Code

Product Instance Details

Product Type:

ASAHIGH

UDI PID:

ASAv

UDI Serial Number:

9AF8UGL8V58

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 ASAv50

Cancel

Next

8.查看详细信息，然后单击生成授权码。

STEP 1 ✓

Enter Request Code

STEP 2 ✓

Select Licenses

STEP 3

Review and Confirm

STEP 4

Authorization Code

Product Instance Details

Product Type: ASAHIGH
 UDI PID: ASAv
 UDI Serial Number: 9AF8UGL8V58

Licenses to Reserve

License	Expires	Quantity to Reserve
Cisco ASAv50 ASAv50 (10Gbps) with Standard tier features and PLR enabled	-	1

Cancel

Back

Generate Authorization Code

9.复制显示的授权码，然后单击关闭。

STEP 1 ✓

Enter Request Code

STEP 2 ✓

Select Licenses

STEP 3 ✓

Review and Confirm

STEP 4

Authorization Code

✓ The Reservation Authorization Code below has been generated for this product instance. Enter this code into the Smart Licensing settings for the product, to enable the licensed features.

Product Instance Details

Product Type: ASAHIGH
 UDI PID: ASAv
 UDI Serial Number: 9AF8UGL8V58

Authorization Code:

DAGstm-WxY6M-cuGgEd-bUuGQJ-NAgqFq-hSRmRm-XgWetq-sHLJrm-gS

To learn how to enter this code, see the configuration guide for the product being licensed

Download as File

Copy to Clipboard

Close

10.在ASAv中安装授权代码。

```
ciscoasa(config)# license smart reservation install DAGabc-
ABCD6E-fgHiJk-lMnOPQ-RStuVr-sTUVWx-YzAbcd-eFGhij-kL
INFO: ASAv platform license state is Licensed.
```

11.使用show license features命令验证许可证注册，然后检查活动授权。它必须显示我们选定的授权。

```
[ciscoasav(config)# sh lic features
Serial Number: 9AEJMLUP4D4
Export Compliant: YES

License mode: Smart Licensing
License reservation: Enabled
ASAv Platform License State: Licensed
Active entitlement: ASAv50_PLR, enforce mode: Authorized
Firewall throughput limited to 10 Gbps

Licensed features for this platform:
Maximum VLANs : 1024
Inside Hosts : Unlimited
Failover : Active/Standby
Encryption-DES : Enabled
Encryption-3DES-AES : Enabled
Security Contexts : 0
Carrier : Enabled
AnyConnect Premium Peers : 10000
AnyConnect Essentials : Disabled
Other VPN Peers : 10000
Total VPN Peers : 10000
AnyConnect for Mobile : Enabled
AnyConnect for Cisco VPN Phone : Enabled
Advanced Endpoint Assessment : Enabled
Shared License : Disabled
Total TLS Proxy Sessions : 10000
Botnet Traffic Filter : Enabled
Cluster : Enabled

ciscoasav(config)#
```

12.检验运行配置中保存的许可证命令。

show run license

```
[ciscoasav(config)# sh run license
!
license smart flex-model asav50_plr
license smart reservation
ciscoasav(config)#
```

13.将config保存到startup config，以免在重新启动期间丢失任何配置。

写存储器

```
ciscoasav#write memory
Building configuration...
[OK]
ciscoasav#
```



警告：修改或删除PLR时，请确保在维护时段内完成。修改或删除PLR可能会影响设备吞吐量、并发会话以及更多内容。

在ASAv集群和高可用性设置中，建议使用许可服务器对每台设备授予许可 您可以启用集群。当在多情景模式下配置ASA时，许可证仍可在系统（管理）情景级别管理，而不是按单个情景管理。

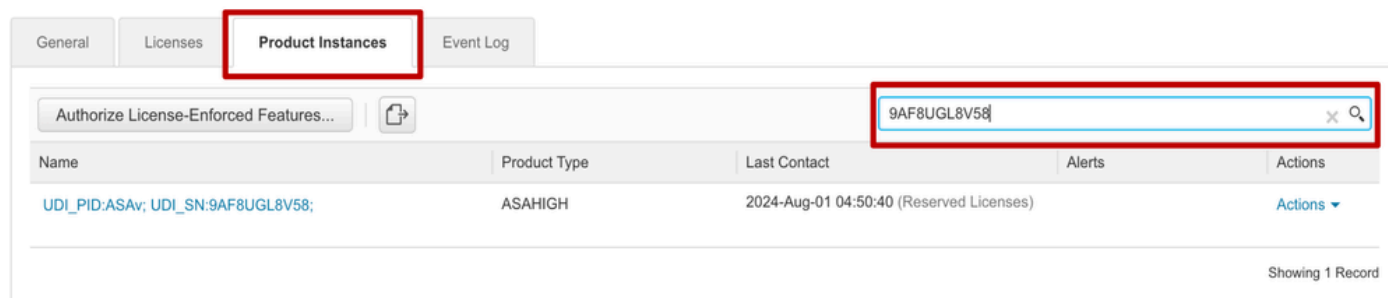
注销PLR

1. 打开ASAv上的命令行接口，键入configure terminal进入配置模式。
2. 输入命令license smart reservation return获取预留退货代码并复制序列号。

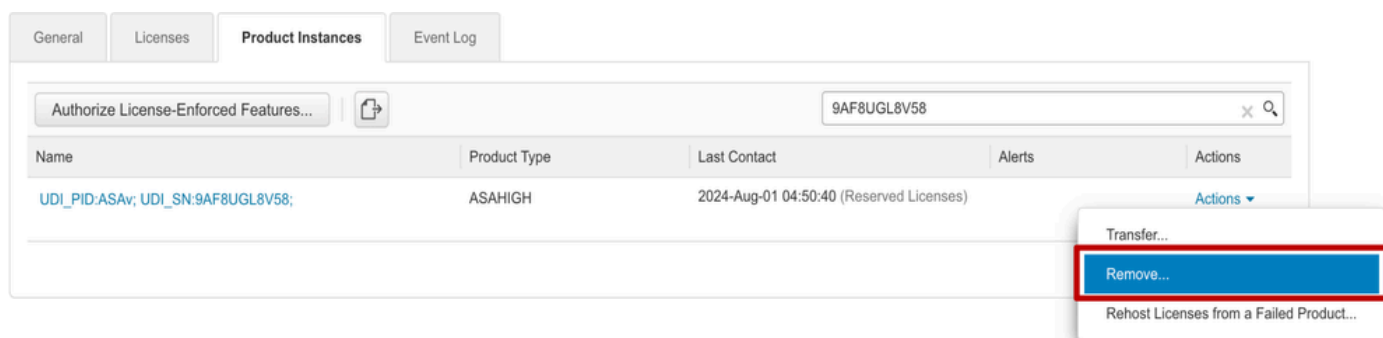
```
ciscoasa(config)# license smart reservation return
WARNING: ASAv platform license state is Limited functionality.
Enter this return code in Cisco Smart Software Manager portal:
UDI: PID:ASAv,SN:9A6ST9AXQ24
Return code: DrT1pZ-8cRT2N-jhC8fj-64ABCD-xXYZeM-qD1
```

有限的功能意味着ASAv当前使用试用许可证运行。

3. 登录到CSSM，然后点击Product Instances选项卡。



4. 单击Actions下拉列表，然后选择Remove。



5. 将保留请求代码粘贴到对话框中，然后单击删除保留。

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:**

DGstme-U8VuhQ-wK27M1-v4aNa2-X7WE6G-NSw

Remove Reservation

Cancel

6. 可以从CSSM和ASAv中删除许可证。

GeneralLicensesProduct InstancesEvent Log

Authorize License-Enforced Features... 9AF8UGL8V58

Name	Product Type	Last Contact	Alerts	Actions
No Records Found				

No Records to Display

```
ciscoasa(config)#  
Warning: ASAv platform license state is Unlicensed.  
Install ASAv platform license for full functionality.
```

7. 在ASAv CLI中键入此命令退出PLR模式。
无许可证智能预留

8. 禁用Flexible PLR命令。
无许可证智能灵活型号asav50_plr

9. 检验许可证命令是否已从运行配置中删除：
Show running-config license

```
[ciscoasav(config)# no license smart reservation
[ciscoasav(config)# no license smart flex-model asav50_plr
[ciscoasav(config)# show running-config license
[ciscoasav(config)#
```

10.验证show license features的输出以确认许可证已注销。

```
ciscoasa(config)# show license features
Serial Number: 9AF8UGL8V58
Export Compliant: NO

License mode: Smart Licensing
ASAv Platform License State: Limited Functionality
No active entitlement: no feature tier and no throughput level configured
Firewall throughput limited to 10 Gbps

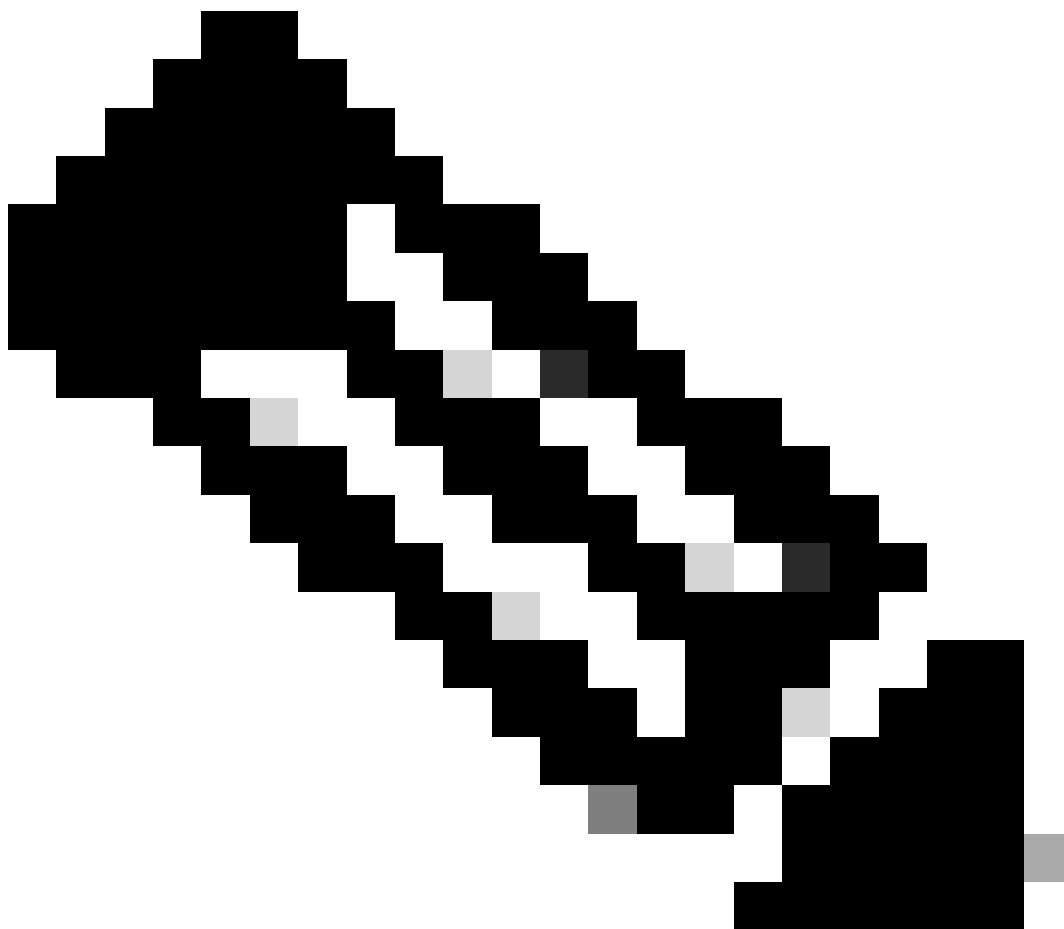
Licensed features for this platform:
Maximum VLANs                : 1024
Inside Hosts                  : Unlimited
Failover                      : Active/Active
Encryption-DES                : Enabled
Encryption-3DES-AES          : Enabled
Security Contexts             : 2
Carrier                       : Disabled
AnyConnect Premium Peers      : 2
AnyConnect Essentials         : Disabled
Other VPN Peers               : 20000
Total VPN Peers               : 20000
AnyConnect for Mobile         : Disabled
AnyConnect for Cisco VPN Phone : Disabled
Advanced Endpoint Assessment  : Disabled
Shared License                 : Disabled
Total TLS Proxy Sessions      : 2
Botnet Traffic Filter          : Enabled
Cluster                       : Enabled

ciscoasa(config)#
```

11.将配置保存到启动配置，以免在重新启动期间丢失任何配置。

写存储器

```
ciscoasav#write memory
Building configuration...
[OK]
ciscoasav#
```



注意：可以重复使用授权，也可以在注销后转移许可证。

验证

1. Show License all命令可以将状态显示为Registered和Authorized for successful Registration。

```
[ciscoasa(config)# show license all

Smart Licensing Status
=====

Smart Licensing is ENABLED
License Reservation is ENABLED

Registration:
  Status: REGISTERED – UNIVERSAL LICENSE RESERVATION
  Export-Controlled Functionality: ALLOWED
  Initial Registration: SUCCEEDED on Aug 06 2024 05:56:07 UTC

License Authorization:
  Status: AUTHORIZED – RESERVED on Aug 06 2024 05:56:07 UTC
```

2. 智能代理日志位于 disk0:/smart-log/agentlog

在agentlog中查找License Registration Successful消息，以验证许可证是否已成功注册。

<#root>

```
more disk0:/smart-log/agentlog
2024-09-17 05:28:27.658: Received reservation install message type 19
2024-09-17 05:28:27.658: Received auth_code = DArT1p-f7dLoA-gx4RLa-mHiWEf-3cJAaa-kJe5Ji-EzfdSP-rC6hp5-v
2024-09-17 05:28:27.658: >> PLError: Tue Sep 17 05:28:27.658 UTC-SAResInstall_v2-OPLR Parse Error: Inco
OPLR auth length
2024-09-17 05:28:27.658: >> PLError: Tue Sep 17 05:28:27.658 UTC-SAResInstall_v2-OPLR Parse Error: Inco
OPLR auth length
2024-09-17 05:28:27.671: >> PISyslog: Info - %SMART_LIC-6-AGENT_REG_SUCCESS:Smart Agent for Licensing
Registration successful. udi PID:ASAv,SN9A9ABC24
2024-09-17 05:28:27.671: >> PISyslog: Notice - %SMART_LIC-5-IN_COMPLIANCE:All entitlements and licenses
on this device are authorized
2024-09-17 05:28:27.671: >> PISyslog: Info - %SMART_LIC-6-AUTH_RENEW_SUCCESS:Authorization renewal succ
State=authorized for udi PID:ASAv,SN9A9ABC24

2024-09-17 05:28:27.671: >> PISyslog: Info - %SMART_LIC-6-RESERVED_INSTALLED:Universal License Reservati

Authorization code installed for udi PID:ASAv,SN9A9ABC24

2024-09-17 05:28:27.671: >> PISyslog: Info - %SMART_LIC-6-EXPORT_CONTROLLED:Usage of export controlled f

is allowed
```

2024-09-17 05:28:27.671: >> PISyslog: Info - %SMART_LIC-6-RESERVED_INSTALLED:Universal License Reservation Authorization code installed for udi P:ASAv,S:9A6ST9SMQ24

2024-09-17 05:28:27.673: Received SmartAgentNotifyRegisterSuccess

2024-09-17 05:28:27.673: Processing registration result 1

[FXOS Firepower 设备上的 ASA 智能许可证故障排除](#)

相关信息

[CLI手册1:Cisco ASA系列常规操作CLI配置指南 , 9.8](#)

[思科安全防火墙ASA系列功能许可证](#)

[思科安全防火墙ASA 9.23\(x\)版本说明](#)

[本地智能软件管理器用户指南](#)

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