

為ASAv配置靈活的PLR許可

目錄

[簡介](#)

[必要條件](#)

[需求](#)

[採用元件](#)

[背景資訊](#)

[設定](#)

[註銷PLR](#)

[驗證](#)

[相關資訊](#)

簡介

本檔案介紹專為高度安全環境設計的彈性永久許可證保留(PLR)。

必要條件

需求

- 自適應安全虛擬裝置(ASAv)。
- 必須為永久許可證保留(PLR)啟用智慧帳戶。
- 虛擬帳戶需要具有您要使用的永久許可證保留(PLR)許可證。

採用元件

本文中的資訊係根據以下軟體和硬體版本：

- 運行版本9.23.1或更高版本的自適應安全虛擬裝置(ASAv)。
- 思科智慧軟體管理員版本9-202502。

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。

背景資訊

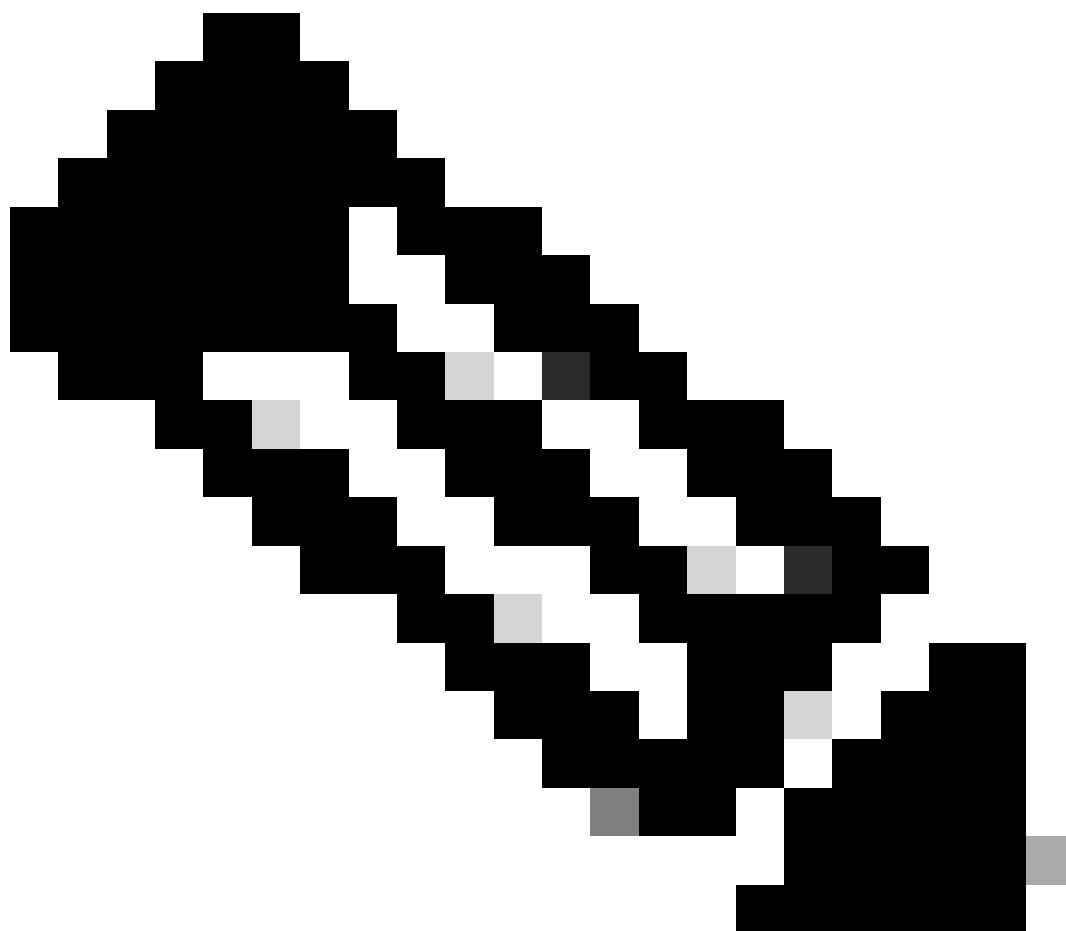
- 目前，PLR權利取決於裝置啟動時使用的RAM。
- Flexible PLR Licensing Model（靈活PLR許可模式）功能使使用者能夠從ASA 9.23.1版開始，根據自己的要求選擇任何權利。

- 在ASA 9.22及更低版本中，PLR權利取決於分配的記憶體。從ASA 9.23.1版開始，使用者可以選擇PLR權利，而不管記憶體如何。

設定

所有虛擬支援的公共雲平台 (包括Azure、AWS、GCP和OCI) 上的ASAv均支援PLR功能。

專用雲平台支援，包括VMware、KVM、Hyper-V、Nutanix和OpenStack。



注意:建議在執行任何許可證修改之前進行配置備份。

註冊靈活永久許可證保留(PLR)的步驟：

1.開啟ASAv上的命令行介面，鍵入configure terminal，進入配置模式。

2.在ASAv CLI上，輸入靈活的PLR命令以選擇您選擇的授權。在此範例中，選擇asav50_plr。
許可證智慧靈活型號asav50_plr

在上面的命令asav50_plr中，是具有10GB RAM的裝置的權利檔案。

此字串因所需的權利而異，所有可用的權利都列在CSSM上的智慧帳戶中。

對於ASA硬體的其他型號，許可資訊寫入此連結。

[CLI手冊1:Cisco安全防火牆ASA系列常規操作CLI配置指南，9.23](#)

3.要進入PLR模式，請鍵入command 許可證智慧預留。

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

4.通過輸入命令license smart reservation request universal從ASAv CLI獲取請求代碼。複製預留請求代碼，將其輸入思科智慧軟體管理員入口網站(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.登入到CSSM，按一下Licenses頁籤，然後按一下License Reservation，系統彈出警報。按一下「Proceed」。

[思科智慧軟體管理員](#)

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.將Request code貼上到對話方塊中，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:

DD-ZASAv:9AF8UGL8V58-A8vZRMf9p-FB

Upload File

Browse

Upload

Cancel

Next

7.驗證顯示的PLR權利。在本例中，它是ASAv50。選擇License，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

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.檢視詳細資訊，然後按一下生成授權碼。

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.複製顯示的Authorization Code，然後按一下Close。

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中安裝授權代碼。

```
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命令驗證許可證註冊，然後檢查Active entitlement。它必須顯示我們選定的權利。

```
[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.檢驗運行配置中儲存的許可證命令。

show run license

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

13.將config儲存到startup config，以免在重新開機時遺失任何組態。

寫記憶體

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



警告：修改或刪除PLR時，請確保在維護時段內完成。修改或刪除PLR可能會影響裝置吞吐量、併發會話等。

在ASAv集群和高可用性設定中，建議先使用許可伺服器為每台裝置授予許可證，您可以啟用集群。
當在多情景模式下配置ASA時，許可證仍以系統（管理）情景級別管理，而不是按單個情景管理。

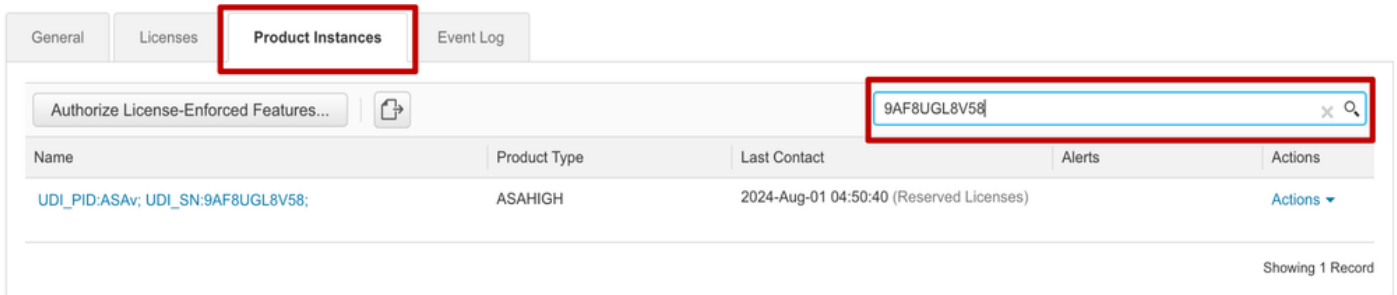
註銷PLR

- 1.在ASAv上開啟命令行介面，鍵入configure terminal，進入配置模式。
- 2.輸入命令license smart reservation return獲取保留返回代碼並複製序列號。

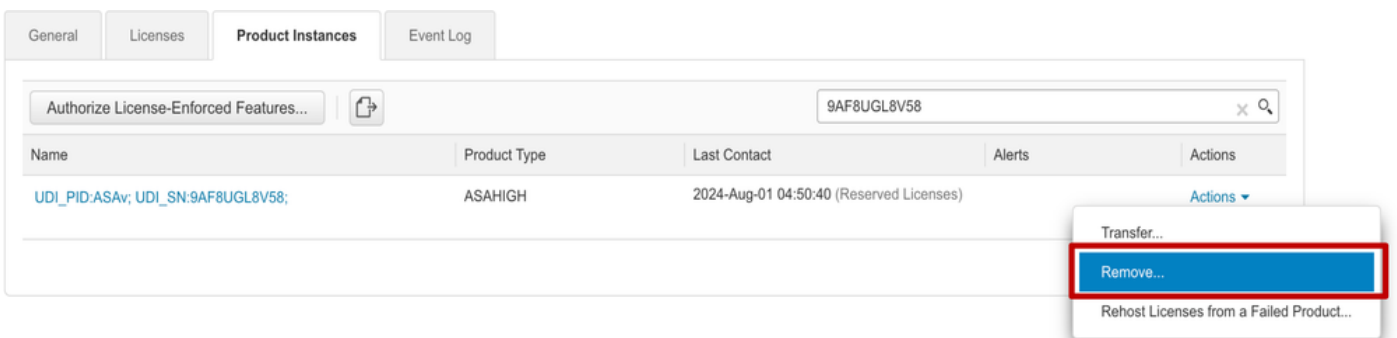
```
ciscoasa(config)# license smart reservation return
WARNING: ASAv platform license state is Limited functionality.
Enter this return code in Cisco Smart Software Manager portal:
UDI: PID:ASAv,SN:9A6ST9AXQ24
Return code: DrT1pZ-8cRT2N-jhC8fj-64ABCD-xXYZeM-qD1
```

功能有限意味著ASAv當前正在使用試用版許可證運行。

- 3.登入到CSSM，然後點選Product Instances頁籤。



- 4.按一下Actions下拉選單，然後選擇Remove。



- 5.將保留請求代碼貼上到對話方塊中，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:**

6. 可以從CSSM和ASAv中刪除許可證。

GeneralLicensesProduct InstancesEvent Log

Authorize License-Enforced Features...

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中鍵入此命令以退出PLR模式。
無許可證智慧預留

8. 禁用Flexible PLR命令。
無許可證智慧靈活型號asav50_plr

9. 驗證許可證命令是否已從運行配置中刪除：
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.驗證show license features的輸出，以確認許可證已註銷。

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

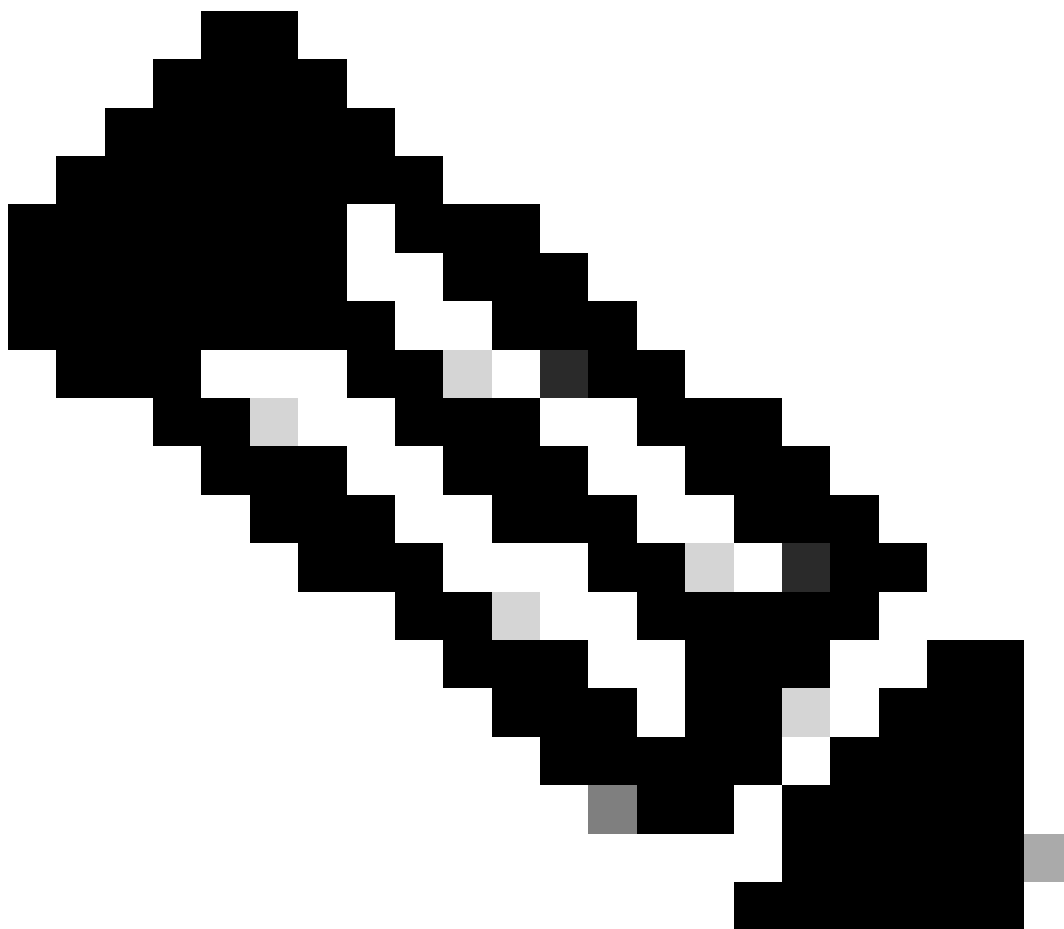
License mode: Smart Licensing
ASAv Platform License State: Limited Functionality
No active entitlement: no feature tier and no throughput level configured
Firewall throughput limited to 10 Gbps

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.將組態儲存到啟動組態，以免在重新開機期間遺失任何組態。
寫記憶體

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



附註：可以重複使用權利，也可以在取消註冊後轉移許可證。

驗證

1. Show License all 命令可將狀態顯示為「已註冊」和「已授權成功註冊」。

```
[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. 智慧代理日誌位於 disk0:/smart-log/agentlog

在agentlog中查詢「License Registration Successful」消息，以驗證許可證是否已成功註冊。

<#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

[排除FXOS Firepower裝置上的ASA智慧許可證故障](#)

相關資訊

[CLI手冊1:Cisco ASA系列常規操作CLI配置指南9.8](#)

[Cisco安全防火牆ASA系列功能許可證](#)

[思科安全防火牆ASA 9.23\(x\)版本說明](#)

[智慧軟體管理器本地使用手冊](#)

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）。