

# 排除Catalyst Center許可使用案例和工作流程故障

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## 簡介

本文檔介紹經常遇到的不同Cisco Catalyst Center許可使用方案。

## 必要條件

### 需求

本文件沒有特定需求。

### 採用元件

本文件所述內容不限於特定軟體和硬體版本。

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

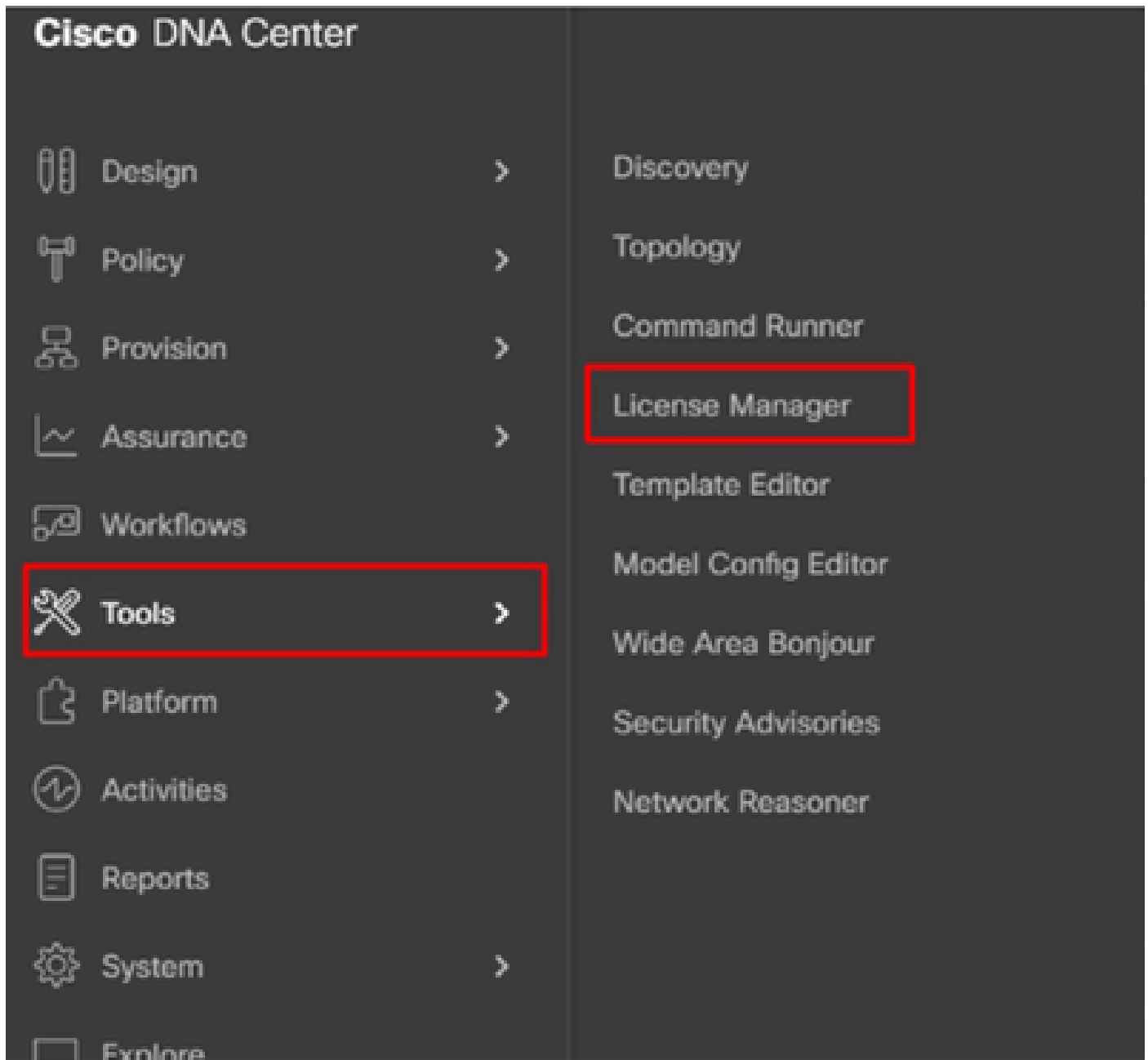
本文檔提供有關如何使用Cisco Catalyst Center ( 以前稱為DNA Center ) 的許可證管理器工作流程進行裝置許可證註冊、透過CSSM在虛擬帳戶之間遷移許可證等的分步詳細資訊。

## 案例

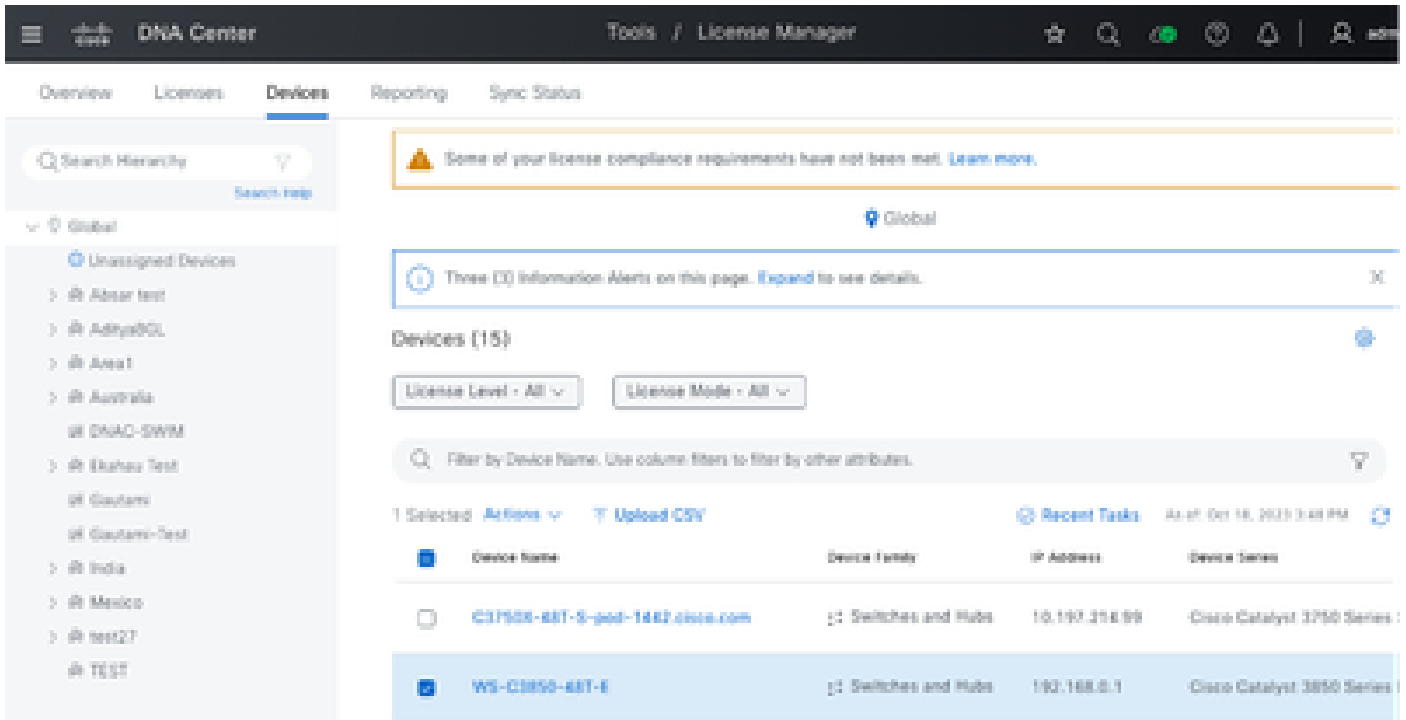
場景1：透過Cisco Catalyst Center License Manager註冊裝置許可證：傳統方法

步驟 1. 透過管理員憑證或具有超級管理員許可權的自定義角色登入到Cisco Catalyst Center。

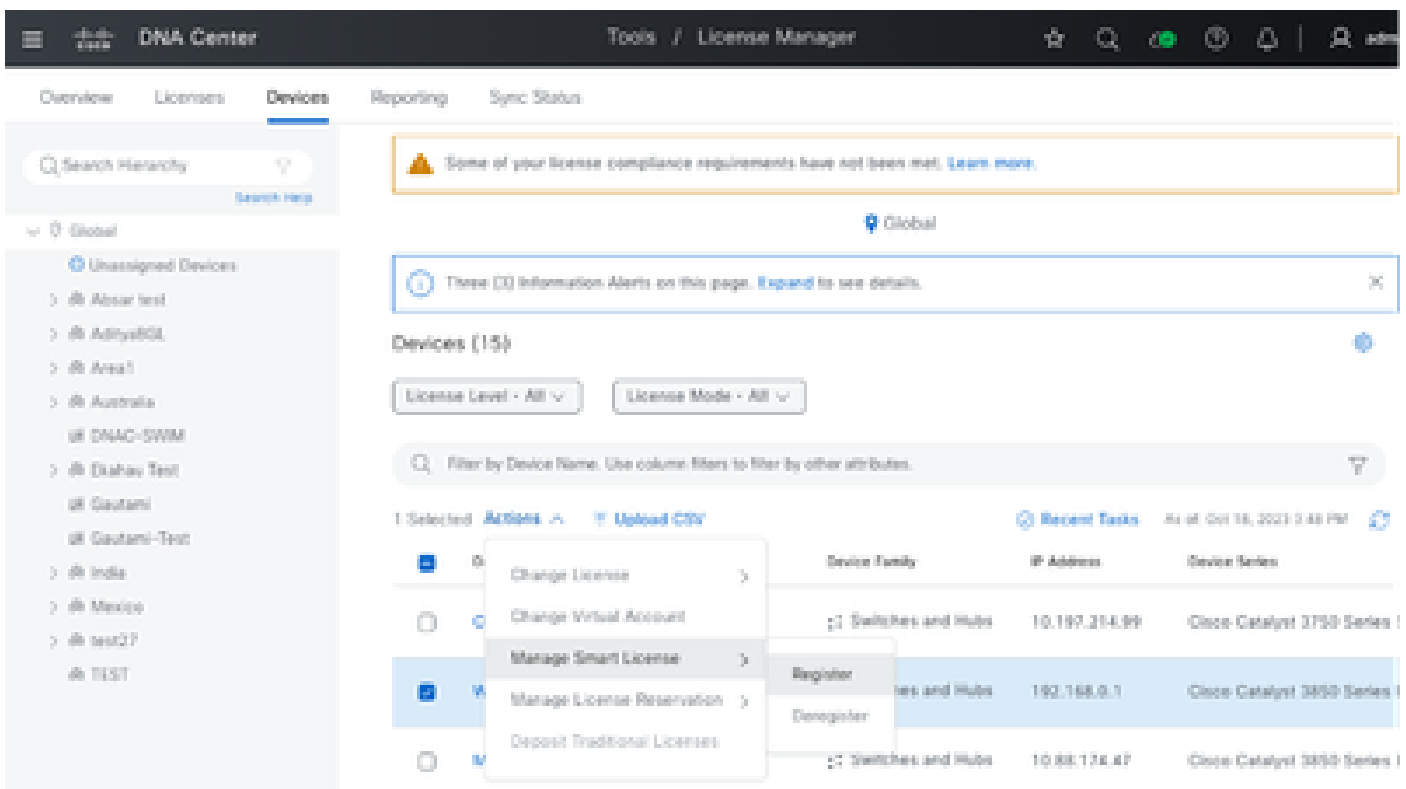
步驟 2. 導航到漢堡，選擇工具 > License Manager。



步驟 3. 選擇Devices頁籤並使用Filter選項或滾動到表以查詢要註冊其許可證的裝置。



步驟 4. 選中要註冊其許可證的每個裝置旁邊的覈取方塊，然後選擇 Actions > Manage Smart License > Register。



步驟 5. 選擇存放相應許可證的虛擬帳戶，然後按一下繼續。

# Register Smart License

## SMART ACCOUNT

Name Cisco Systems, TAC Domain tac.cisco.com

Search Table

	Name	Cisco DNA License Count	Description
<input type="radio"/>	Bangalore DNAC TAC	0	DNAC TAC-POD's Device Licenses are deposited here.
<input type="radio"/>	NMS	0	

Showing 2 of 2

Cancel

Continue

步驟 6.Cisco Catalyst Center會提示是立即應用更改還是稍後應用更改。選擇所需的選項並按一下 Confirm。

# Register Smart License

Registering 1 device(s) to **Bangalore DNAC TAC**

Now  Later

Task Name\*

License mode update

Cancel

Confirm

## 場景2：透過Cisco Catalyst Center License Manager註冊裝置許可證：CSLU報告工作流程

- On DNA Center release 2.2.1.0 and devices running 17.3.2 or higher:
  - Devices are no longer required to get registered with CSSM
  - License usage information will be stored in a secured location on the device
    - RUM or Usage Reports
  - Now, Cisco DNA Center is going to pull the reports and upload it to CSSM
  - Uploads can be done periodically or on demand basis
  - CSSM go through reports and make the respective updates on Virtual Account
  - After that, CSSM is going to sent and Acknowledge to DNAC if report is good
  - Finally, Cisco DNA Center is going to update the license status on GUI and on the Device itself
  - Cisco DNA Center can generate PDF reports for users

### 必要條件

#### Cisco Catalyst Center

- Cisco Catalyst Center必須在版本2.2.1.0及更高版本上運行。
- Cisco Catalyst Center必須能夠與CSSM門戶通訊，並且能夠訪問tools.cisco.com。
- 必須在Catalyst Center上選擇正確的SSM連線模式。自Catalyst Center版本2.3.5.5起，CSLU工作流程不適用於內建CSSM（衛星伺服器）。
- CSLU工作流程不適用於AireOS無線控制器（型號：3504、5520、8540）。

### 網路裝置

- 裝置必須運行在Cisco IOS® XE 17.3.2或更高版本上，並且快閃記憶體中必須有足夠的空間來顯示Rum報告。
- 裝置必須已配置netconf-yang模型，並且Cisco Catalyst Center必須能夠透過Netconf埠830與裝置通訊。

若要驗證：

```
show run | sec netconf-yang
```

i.在Cisco Catalyst Center上的裝置發現期間，必須啟用憑據部分下的Netconf引數。

### Provide Credentials

Next, enter the following credentials that Cisco DNA Center will configure for the devices it discovers. At least one CLI credential and one SNMP credential are required. You can have a maximum of five global credentials and one job-specific credential for each type.

CLI    SNMPv2c Read    SNMPv2c Write    SNMPv3    HTTP(S) Read    HTTP(S) Write    **NETCONF**

If your network contains IOS XE-based wireless controllers, please enter the port that should be used for discovery and the enabling of wireless services on these controllers. Select from existing ports or add new ones. You can also enter a job-specific port of a global port.

We recommend using port number 830. See also standard ports like 22, 80, 8080.

EXISTING GLOBAL NETCONF PORT

830

ii. 如果在執行裝置發現時未啟用Netconf引數，請使用Cisco Catalyst中心資產清單中的編輯裝置選項啟用該引數。

### Edit Device ✕

Credentials	Management IP	Resync Interval	Device Role
> SNMP*			
> SNMP Retries and Timeout*			
> HTTP(S)			
<div style="border: 1px solid #ccc; padding: 5px;"> <p>NETCONF</p> <p>Port</p> <p><b>830</b></p> <p style="text-align: right; font-size: small;">Hint</p> <p><span style="color: blue;">●</span> NETCONF with user privilege 15 is mandatory for enabling Wireless Services on Wireless capable devices such as Catalyst 9000 series Switches and C9800 Series Wireless Controllers. The NETCONF credentials are required to connect to C9800 Series Wireless Controllers as the majority of data collection is done using NETCONF for these Devices.</p> </div>			

- 裝置必須安裝sdn-network-infra-iwan信任點；此操作由Cisco Catalyst Center完成。

若要驗證：

show crypto pki trustpoint sdn-network-infra-iwan ( 檢查信任點 )

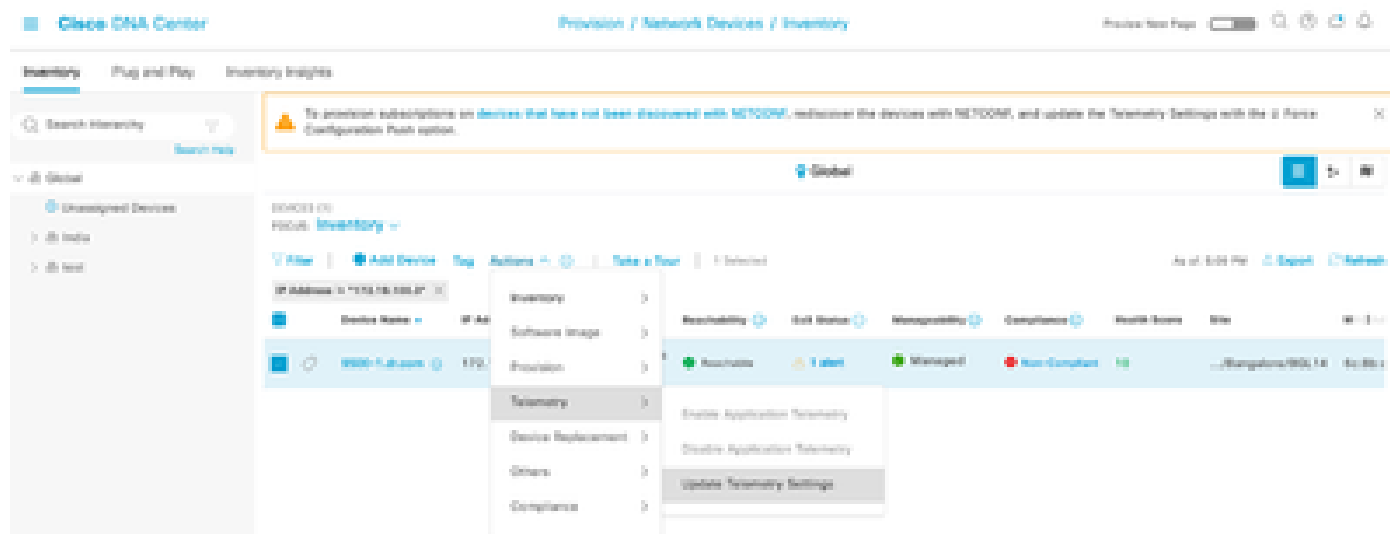
show crypto pki certificates verbose sdn-network-infra-iwan ( 詳細檢查信任點 )

- 如果未安裝sdn-network-infra-iwan信任點，請執行以下步驟：

步驟 1. 透過管理員憑證或具有超級管理員許可權的自定義角色登入到Cisco Catalyst Center。

步驟 2. 導航到漢堡，選擇調配>庫存。

步驟 3. 選擇要安裝信任點的裝置，點選操作>遙測>更新遙測設定。



步驟 4. 選擇Force Configuration Push並按一下Next

## Update Telemetry Settings



Force Configuration Push ⓘ

GLOBAL/INDIA/BANGALORE/ISGL14

9500-1.dr.com

9500-1.dr.com

The following settings will be deployed during assignment to site.

Syslog Server	Cisco DNA Center
Netflow Collector	Cisco DNA Center
Cisco TrustSec (CTS) Credentials	Yes
Wireless Streaming Telemetry	Yes
SNMP Trap Receiver	Cisco DNA Center
DTLS Ciphersuite	Skipped
AP Impersonation	Enabled
Cisco TrustSec (CTS) Credentials	Yes
Syslog Level	6 - Information Messages
Controller Certificates	Yes

Cancel

Next

步驟 5.選擇Now，然後按一下Apply。這對生產沒有影響。



## Update Telemetry Settings ✕

Now  Later

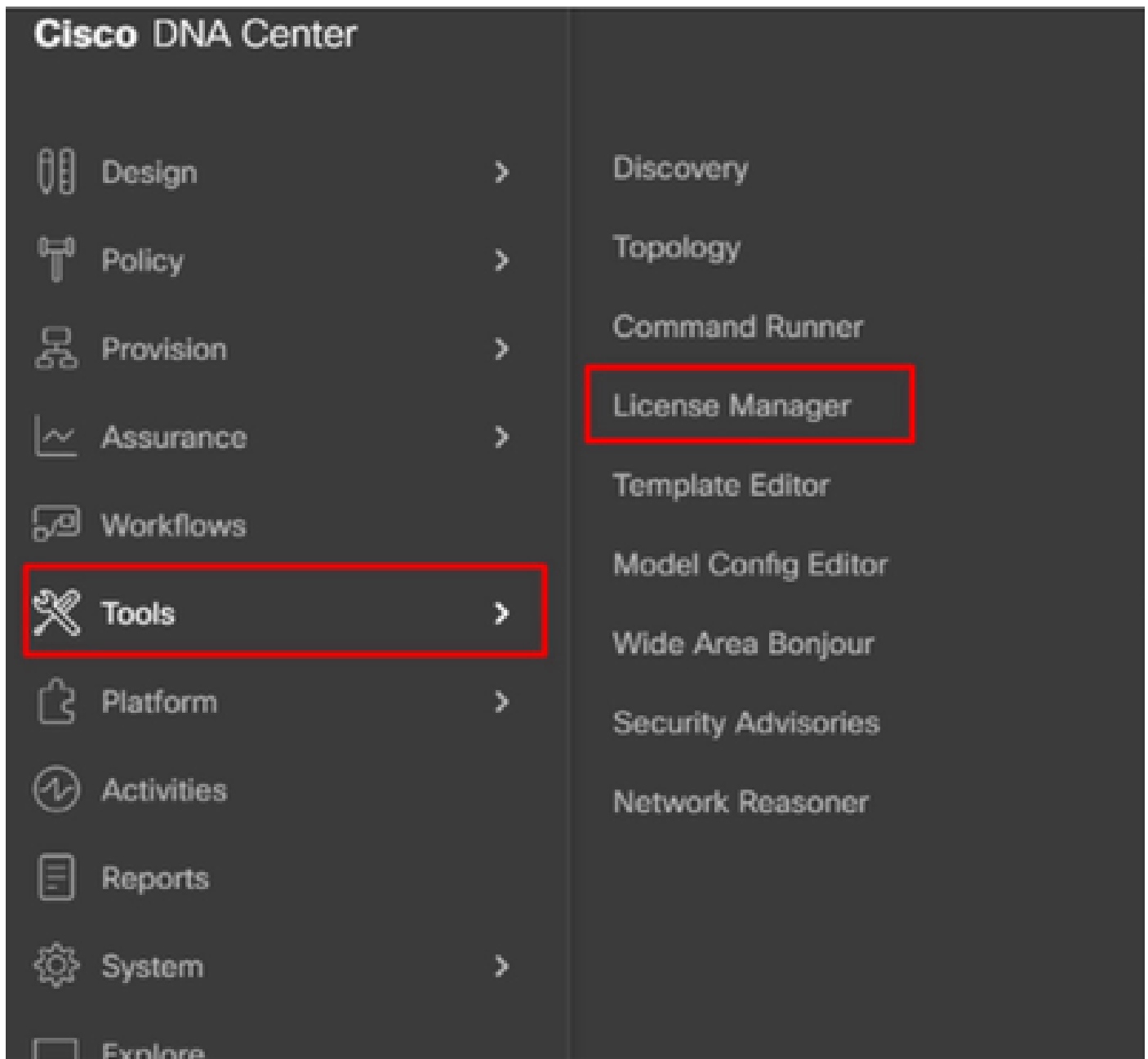
Generate configuration preview  
Creates preview which can be later used to deploy on selected devices. View status in [Work Items](#)

Task Name\*  
Update Telemetry Settings Task

[Cancel](#) [Back](#) [Apply](#)

如果滿足所有先決條件，請執行下列步驟以執行「報告工作流程」：

步驟 1. 透過管理員憑證或具有超級管理員許可權的自定義角色登入到Cisco Catalyst Center。



步驟 2. 導航到Hamburger，然後選擇Tools > License Manager。

步驟 3. 選擇報告頁籤並找到智慧許可證合規性 Dashlet；點選Dashlet啟動 workflow。

Overview Licenses Devices **Reporting** Sync Status

Search Hierarchy

Search Help

Global

Unassigned Devices

India

test

Some of your license compliance requirements have not been met. [Learn more.](#)

Available Workflows **Recent Workflows**



### Smart License Compliance

5 device(s) are ready right now for streamlined licensing updates.

步驟 4. 選擇儲存裝置許可證的智慧帳戶和虛擬帳戶，然後按一下下一步。

Cisco DNA Center Smart License Compliance

### Select Smart Account

Choose the Smart account or Virtual Account which these Network Devices will be associated with. If multiple accounts need to be utilized, you may associate devices by site or by selection later.

Workflow Name  
Started on: December 12th 2020, 4:16:57 PM

Select Account

Smart Account Cisco Systems, LLC	▼
Virtual Account Bangalore DRAC (DC)	▼

Save All changes saved

Save

步驟 5. 選擇要報告其許可證使用率的裝置。

Cisco DNA Center Smart License Compliance

## Choose Sites and Devices

There are 6 network device(s) across several sites which are running IOS 17.3.2 or greater. You can choose to list all of them right now, or just a subset. If you don't list with the Cisco Smart Software Manager role, you may list at any time later.

Search Recently Search Sites

Device Name	Device Family	Device Series	IP Address	Software Version	Cisco PAK License	Last Report
9500-1.dn.com	Switches and Hubs	Cisco Catalyst 9500 Series Switches	172.16.100.3	17.6.1	Advantage	December 8, 2023 4:27 PM
9500-1.dn.com	Routers	Cisco 9500 Series Integrated Services Routers	172.16.100.2	17.3.2	NA	November 16, 2023 6:06 AM
9500-2.dn.com	Routers	Cisco 9500 Series Integrated Services Routers	172.16.100.10	17.6.4	NA	NA
9507-9500-2.dn.com	Switches and Hubs	Cisco Catalyst 9500 Series Switches	172.16.100.6	17.3.0	Advantage	NA
9507-9500-2.dn.com	Switches and Hubs	Cisco Catalyst 9500 Series Switches	172.16.100.7	17.6.1	Advantage	NA
9500-1.dn.com (1 site)	Wireless Controller	Cisco Catalyst 9500 Series Wireless Controllers	172.160.200.1	17.6.2	Advantage	NA

1 Record Show Records 25 1 - 1

Back Next

步驟 6. 如果需要，修改報告間隔。

Cisco DNA Center Smart License Compliance

## Modify Policy

The policy defines how often the network device(s) will report their feature usage. It overrides the default policy which enables only the core functionality on each device.

POLICY SETTINGS

Policy Name  
 Policy Description NA  
 Policy Version  
 Smart Account Cisco Systems, TAC  
 Reporting Interval 30 Days [Modify](#)

CSLM POLICY

Licenses	First Report Within	Report Usage Every	Report After Usage Change
No data to display			

步驟 7. 檢視裝置摘要，然後按一下Next觸發Reporting。

Cisco DNA Center Smart License Compliance

## Sync Data with Cisco

When you click "Next" Cisco DNA Center is going to retrieve the usage data from the device(s) and then send the data to CSLM. A report will be generated once that completes.

Submitting Devices

Search Sites

Device Name	Device Family	Device Series	IP Address	Software Version	Cisco PAK License
9500-1.dn.com	Switches and Hubs	Cisco Catalyst 9500 Series Switches	172.16.100.3	17.6.1	Advantage

## Summary

These are the following operations performed in this flow.

### Syncing Data

Sending device license usage data to CSSM. The time taken to sync this data depends on the size of usage data and number of requests queued for processing on CSSM.

Overall Sync Progress



#### Fetching Usage Report

Device	Status
9500-1.dn.com(172.19.100.3)	Usage consumption report collected from device successfully

## Summary

These are the following operations performed in this flow.

### Syncing Data

Sending device license usage data to CSSM. The time taken to sync this data depends on the size of usage data and number of requests queued for processing on CSSM.

Overall Sync Progress



#### Fetching Usage Report

#### Uploading Usage Report

Device	Status
9500-1.dn.com(172.19.100.3)	Usage consumption report uploaded to Cisco SSM cloud, waiting for acknowledgement

## Summary

These are the following operations performed in this flow.

### Syncing Data

Sending device license usage data to CSSM. The time taken to sync this data depends on the size of usage data and number of requests queued for processing on CSSM.

Overall Sync Progress

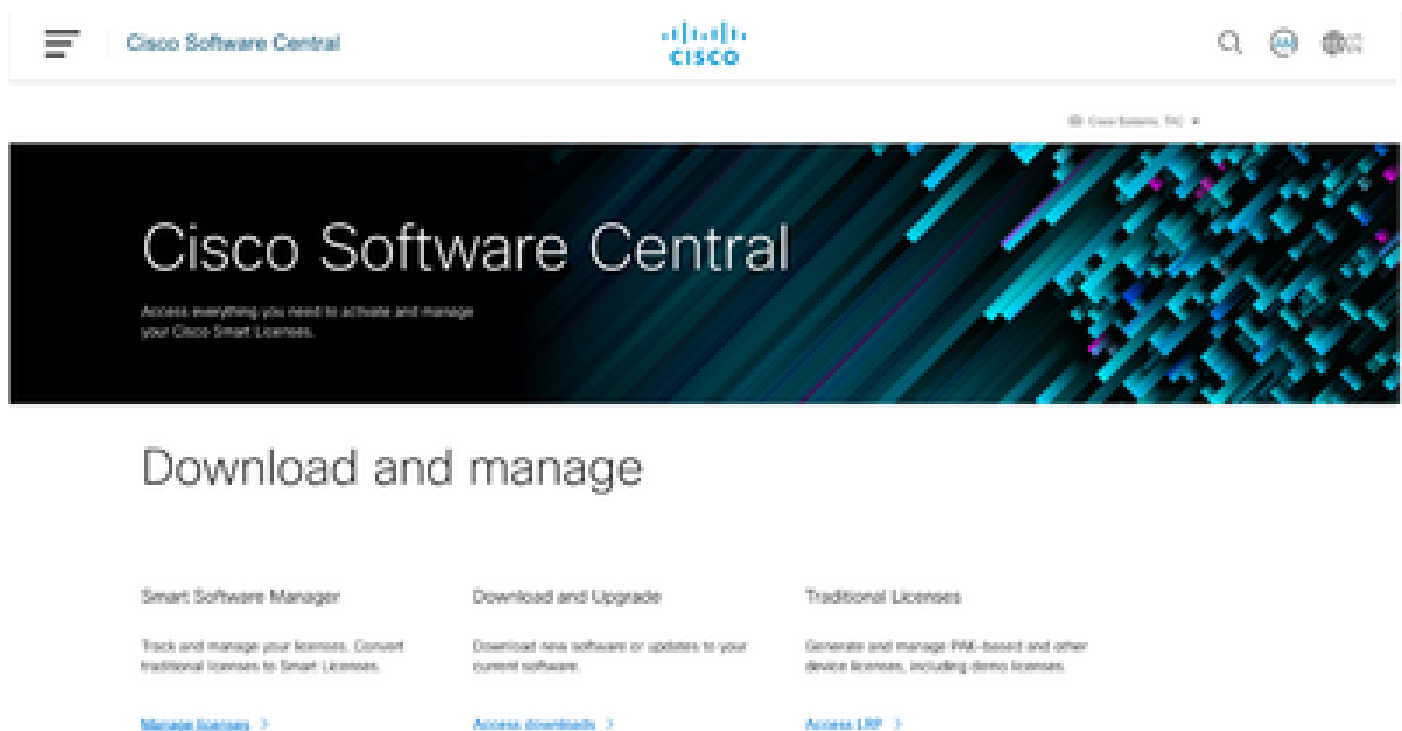


- 1. Fetching Usage Report
- 2. Uploading Usage Report
- 3. Provisioning Acknowledgement

## 場景3：虛擬帳戶之間的許可證遷移

步驟 1. 透過管理員憑證或具有超級管理員許可權的自定義角色登入到Cisco Catalyst Center。

步驟 2. 登入software.cisco.com並選擇Manage Licenses。

The screenshot shows the Cisco Software Central web application. At the top, there is a navigation bar with the Cisco logo and search, user, and help icons. Below the navigation bar is a large banner with the text "Cisco Software Central" and a sub-headline "Access everything you need to activate and manage your Cisco Smart Licenses." Underneath the banner, there is a section titled "Download and manage" which contains three columns of information:

- Smart Software Manager:** Track and manage your licenses. Convert traditional licenses to Smart Licenses. A link "Manage Licenses" is provided.
- Download and Upgrade:** Download new software or updates to your current software. A link "Access downloads" is provided.
- Traditional Licenses:** Generate and manage PKA-based and other device licenses, including demo licenses. A link "Access LRP" is provided.

步驟 3. 導航到資產，然後選擇源虛擬帳戶。

# Smart Software Licensing

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

Virtual Account: **TAC Cisco Systems, Inc....** ▾

On-Prem Virt

General License

**Virtual Account**

Description:

Virtual Account Type

**Product Instance**

Because this

teelite", all product instance registration tokens must be g

	By Name	By Tag
6 node cluster	335	38 2
AMM-ARCH-ONPREM	2	3
Bangalore DNAC TAC	11	2
deleted3		
RTP-CX2	2	1
sdwan-lab		3
sindhrao		1
<b>TAC Cisco Systems, Inc....</b>	<b>1</b>	<b>3</b>

TAC Cisco Systems, Inc....

步驟 4.選擇License 頁籤並選擇Target Virtual Account。

# Smart Software Licensing

Virtual Account: TAC Cisco Systems, Inc... ▾

🔍 On-Prem Virtual Account (cats-satellite)

General Licenses Product Instances Event Log

### Transfer Licenses Between Virtual Accounts

Transfer To Virtual Account: Select Virtual Account ▾

License Billing

By Name By Tag

- 6 node cluster
- AMM-ARCH-ONPREM
- Bangalore DNAC TAC**
- deleted3
- RTP-CX2
- sdwan-lab
- sindhrao
- Yazan Bikawi

Transfer Show Preview Cancel

步驟 5.選擇要轉移的許可證，然後按一下Actions & Select Transfer。

Cisco Software Central > Smart Software Licensing

Smart Software Licensing

Alerts | Inventory | Convert to Smart Licensing | Reports | Preferences | On-Prem Accounts | Activity

Virtual Account: TAC Cisco Systems, Inc... ▾

🔍 On-Prem Virtual Account (cats-satellite)

General Licenses Product Instances Event Log

Available Actions Manage License Tags Show License Transactions Search by License

License	Billing	Available to Use	In Use	Substitution	Balance	Alerts	Actions
🔍 C950 Network Advantage	Prepaid	0	1	-	-1	🔴 Insufficient Licenses	Actions ▾
🔍 CML - Base	Prepaid	10	0	-	+10		Actions ▾

Transfer

步驟 6.選擇要轉移的許可證數量，然後按一下Transfer。



General Licenses Product Instances Event Log

### Transfer Licenses Between Virtual Accounts

Transfer To Virtual Account: Bangalore DRAC TAC

License	Billing	Purchased	In Use	Balance	Transfer
CML - Base	Prepaid	10	0	10	1

Source: Manual Entry  
Subscription Id: NA

SKU: CML-ENT-BASE  
Family: Learning at Cisco Software Products  
Start Date: 2020-Jul-03  
Expires: 2024-Jul-03

Transfer Show Preview Cancel

## 場景4：智慧帳戶之間的許可證遷移

許可證在不同智慧帳戶之間遷移可由思科許可團隊完成。請參閱以下步驟，向相關團隊提出問題。

步驟 1. 使用思科憑證登入 <https://mycase.cloudapps.cisco.com/case?swl>。

步驟 2. 點選新建案例，選擇軟體許可>擴展許可證管理>選擇移動許可證。然後選擇Reassign licenses between SA並按一下Open Case。

### Support Case Manager

Create and manage Support cases for Akirshan Mishra (akimishr@cisco.com)

Open New Case

- Products & Services
- Wires
- Software Licensing
- Fieldwork / CURMS
- Trial Offer Support

#### Open a New Case for Software Licensing Support

Search Categories

- Smart Account Administration
- License Delivery
- License Management
  - Move Licenses
- Device Management

#### Select a sub-category

- Reassign licenses between SA, including HA
- Move licenses between devices in License Registration Portal due to device failure/RMA
- Move licenses between devices in License Registration Portal

Open Case

步驟 3. 選擇相關產品（例如，無線、交換等），填寫表格，然後提交請求。

# Support Case Manager

Create and manage Support cases for Arnochen-Mohr (admin@ccaa.com)



OPEN NEW CASE  
Software Licensing

Need help with your case? [Chat Now](#)

Category

Baseline/Issues between SA, including HA [change](#)

Product

Select a Product

Title

SOLO characters

Problem Description

This category is for LICENSING related requests (PRL). For technical issues, please click 'change' above and open a case by using the 'Products & Services' category. Otherwise please provide the details of your LICENSING request below and include the necessary entitlement information (LicenseFile (name: FLA), Serial (code: (S)(A)(B)(C)(D)), etc.) and Smart Account/Virtual Account (SA/VA).

Describe the issue you are experiencing...

SOLO characters

Note: Files can be uploaded after case is created.

Smart Account Domain ID:

## 方案5：更改SSM連線模式

步驟 1. 透過admin憑證或具有超級管理員許可權的自定義角色登入到Cisco Catalyst Center。

步驟 2. 導航到漢堡，選擇系統>設定。

## Cisco DNA Center

 Design >

 Policy >

 Provision >

 Assurance >

 Workflows

 Tools >

 Platform >

 Activities

 Reports

 System >

 Explore

System 360

**Settings**

**Settings**  
Data Platform

System Health

Users & Roles

Backup & Restore

Software Management

Disaster Recovery

步驟 3.選擇SSM Connection Mode並選擇所需的選項(Direct/Smart Proxy/On-Prem)。按一下 Save。

Search Settings

SSM Connection Mode

Settings / Cisco Accounts

## SSM Connection Mode

Direct connection mode requires all smart-enabled devices in your network to have direct internet access to the Cisco SSM cloud.

On-Prem Cisco Smart Software Manager (formerly known as Cisco Smart Software Manager satellite) connection mode offers near real-time visibility and reporting of the Cisco licenses you purchase and consume. If your organization is security-sensitive, you can access a subset of Cisco SSM functionality without using a direct internet connection to manage your licenses with the Cisco SSM cloud.

With smart proxy connection mode, smart-enabled devices in your network don't need direct internet access; only the product instance requires direct internet access to the Cisco SSM cloud. This option is not applicable for registering Cisco DNA Center.

Direct  On-Prem CSRM  Smart proxy

Save

## 場景6：將智慧帳戶與Cisco Catalyst Center整合

步驟 1. 透過管理員憑證或具有超級管理員許可權的自定義角色登入到Cisco Catalyst Center。

步驟 2. 導航到漢堡，選擇系統>設定。

## Cisco DNA Center

 Design >

 Policy >

 Provision >

 Assurance >

 Workflows

 Tools >

 Platform >

 Activities

 Reports

 System >

 Explore

System 360

**Settings**

**Settings**  
Data Platform

System Health

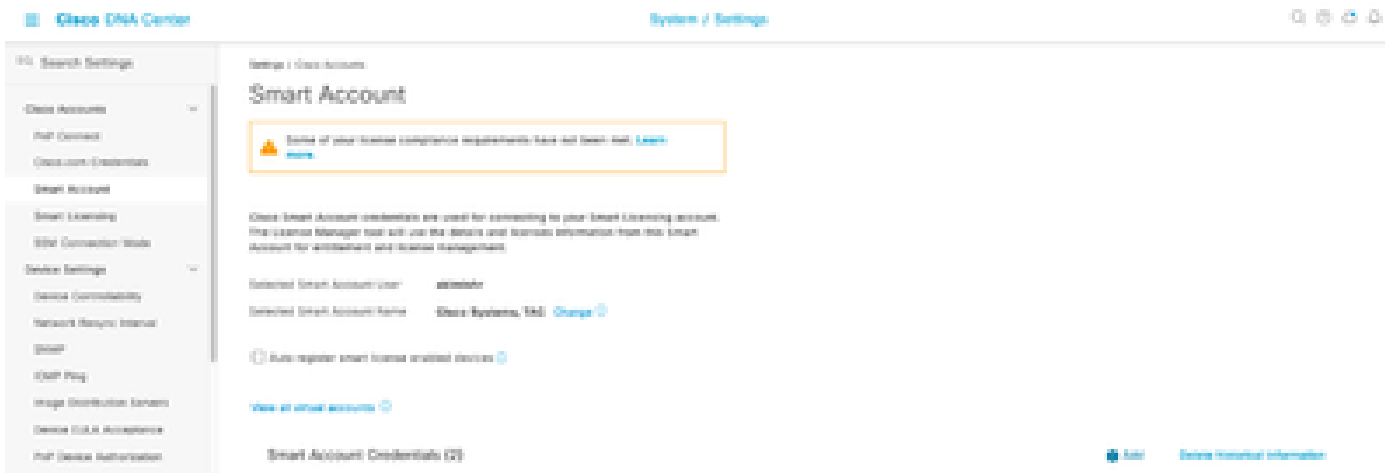
Users & Roles

Backup & Restore

Software Management

Disaster Recovery

步驟 3.在智慧帳戶下，按一下增加。



步驟 4. 輸入智慧帳戶使用者名稱和密碼，然後點選儲存。

## Add Smart Account Credentials



Username

akimishr



Info

Password

\*\*\*\*\*

Show

Cancel

Save

步驟 5.如果您有多個智慧帳戶，請重複步驟3和4。

## 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）。