

使用帶有DNA Center的策略配置Catalyst 9800 WLC智慧許可

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簡介

本檔案介紹透過Cisco Digital Network Architecture(DNA)中心對Catalyst 9800無線LAN控制器(WLC)空運的智慧授權使用原則(SLUP)。

必要條件

Cisco Catalyst 9800 WLC和Cisco DNA Center的基本知識。

需求

在DNA Center的幫助下，Catalyst 9800 WLC上的智慧許可使用策略(SLUP)要求WLC映像版本17.3.2a或更高版本，以及DNA Center版本2.2.1或更高版本。

採用元件

- 9800 WLC17.3.3.
- DNA中心2.2.2.5。

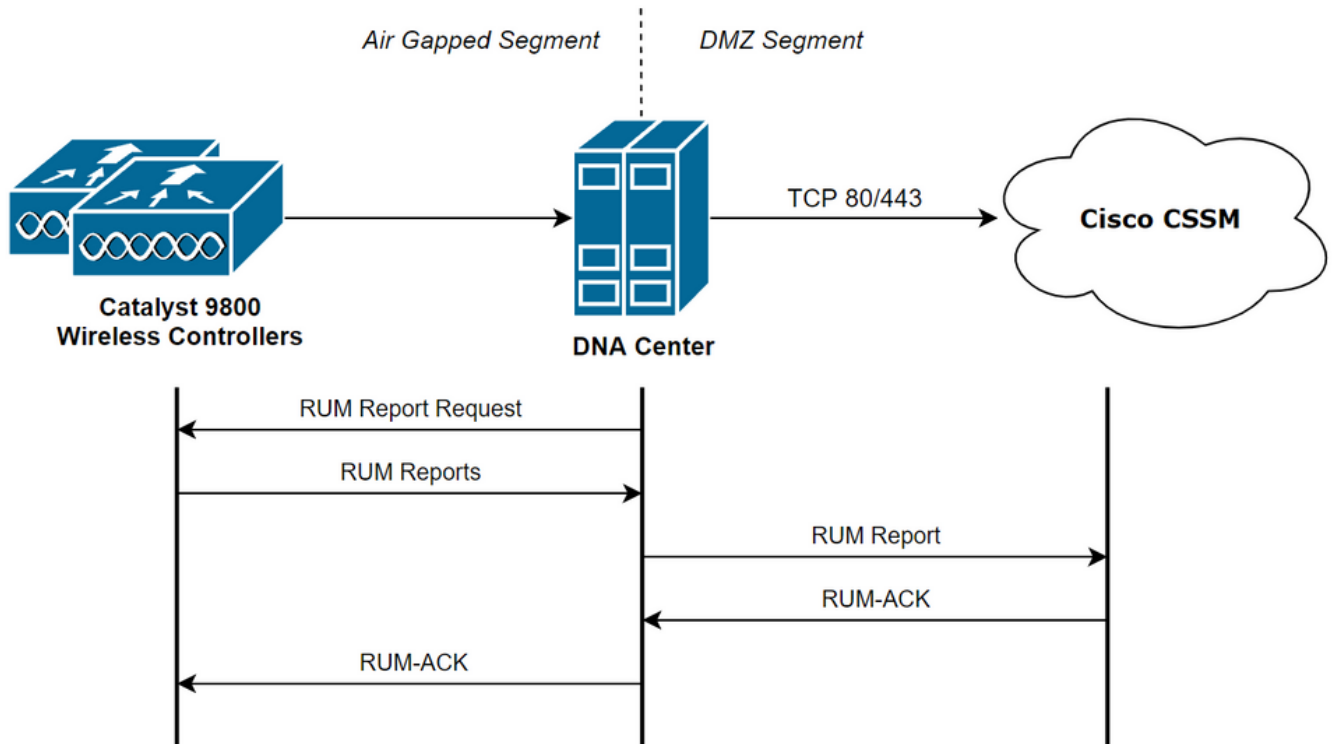
本文中的資訊是根據特定實驗室環境內的裝置所建立。文中使用到的所有裝置皆從已清除（預設）的組態來啟動。如果您的網路運作中，請確保您瞭解任何指令可能造成的影響。

使用DNA Center的SLUP工作流程

與基於AireOS的舊控制器一樣，9800 WLC本身不需要獲得許可。您只需許可加入控制器的存取點(AP)。需要將接入點許可證使用情況報告給思科的智慧許可證伺服器（也稱為思科智慧軟體管理器—CSSM）。有幾種方法可以實現這一點。在無線企業網路中，WLC通常是在沒有網際網路存取的情況下進行空中對接。這導致難以向CSSM報告AP許可證使用情況。本文假設WLC是氣隙且DNA中心透過TCP連線埠80和443存取CSSM。

附註：與AireOS WLC不同，未正確授權的9800 WLC甚至在評估許可證到期後仍繼續運行。

AP加入WLC後，許可證消費資訊以RUM/Usage報告的形式儲存在裝置上的安全位置。Cisco DNA Center會從WLC提取這些報告，然後按需或定期將其上傳到CSSM。每次將RUM報告上傳到CSSM時，DNA中心需要通知WLC。



Catalyst 9800 WLC組態

9800端需要有與許可證相關的最低配置。在WLC上設定授權層級後，大部分工作都由DNA中心處理。

唯一的要求是，將WLC新增到DNA Center裝置清單並分配到站點。

由於9800部署中唯一需要許可證的是接入點，確保至少有一個接入點連線到WLC。

當您選擇**Change Wireless License Level**按鈕時，可在**Licensing**選單下的WLC Web介面中更改許可證級別：

Licensing

General Service Settings Policy Attributes

Smart Licensing Status	ENABLED	Smart Licensing Using Policy	ENABLED
Unique Product ID	C9800-CL-K9	Unique Serial Number	9493HVIECSG
LICENSES IN USE		Change Wireless License Level	Reload
No licenses in use			

許可證級別可以設定為基本級別或優勢級別。空中網路許可證和空中DNA許可證需要同一級別。更

改許可證級別需要重新載入。

License Type	Current Level	Next Reload Level
AIR Network License	air-network-advantage	air-network-advantage
AIR DNA License	air-dna-advantage	air-dna-advantage

Buttons: Cancel, Save & Reload, Save without Reload

將WLC新增到DNA中心之前，請確保：

1. 必須通過其無線管理介面將WLC新增到DNA中心。不能使用其他帶外管理介面，如 GigabitEthernet0
2. WLC需要設定2個aaa命令：

```
aaa authorization exec default
```
3. 需要啟用NetCONF通訊協定（預設情況下使用連線埠830）
4. 需要啟用簡易網路管理通訊協定(SNMP)，且需要在WLC上設定社群/使用者
5. WLC無線管理介面和DNA中心需要能夠通過埠161/162(SNMP)、830(NetCONF)和20830（遙測）通訊

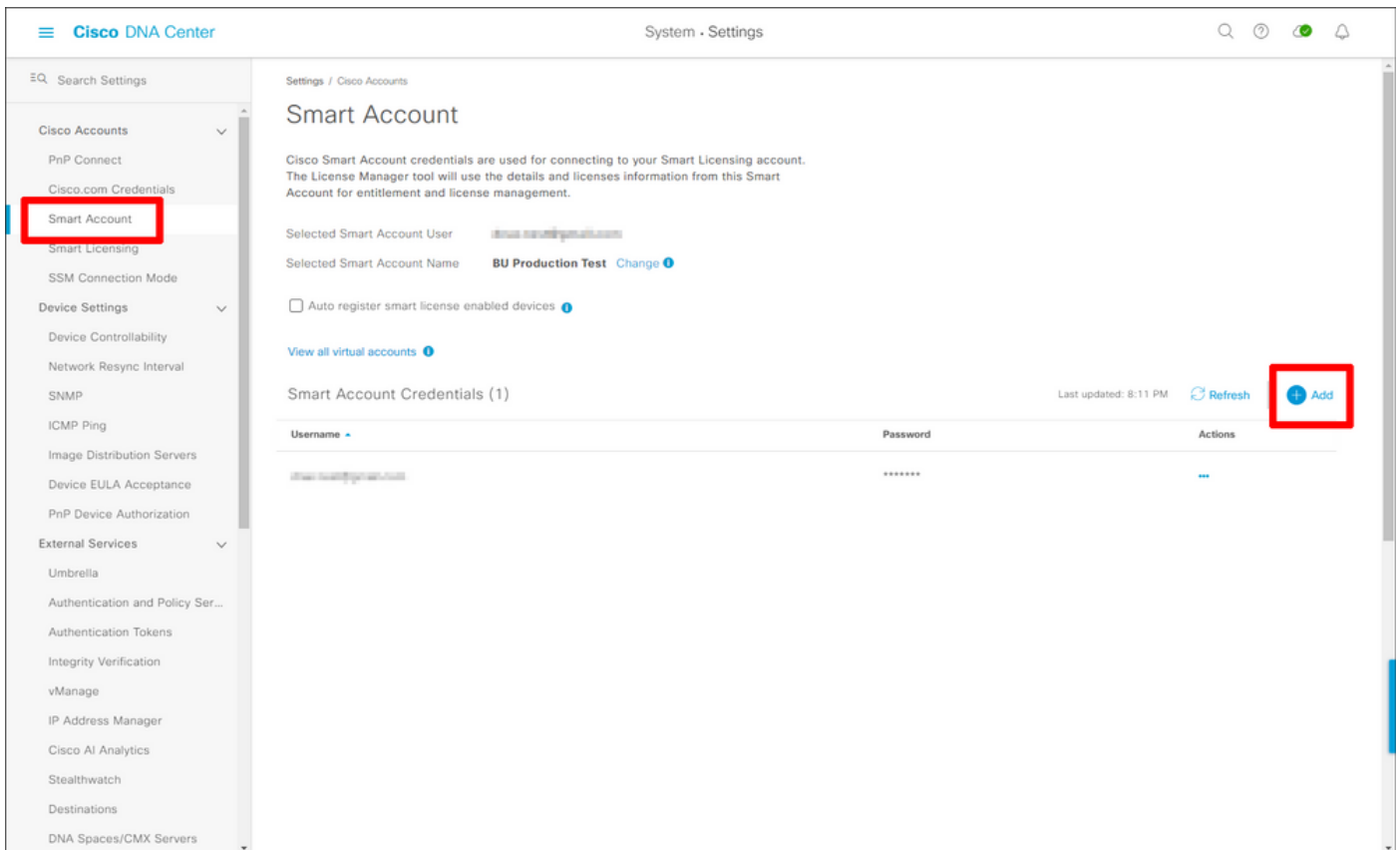
請參閱本文以瞭解其他有關WLC和DNA Center整合的資訊

：<https://www.cisco.com/c/en/us/support/docs/wireless/wireless-lan-controller-software/214587-managing-and-provisioning-non-fabric-cat.html>

DNA中心配置

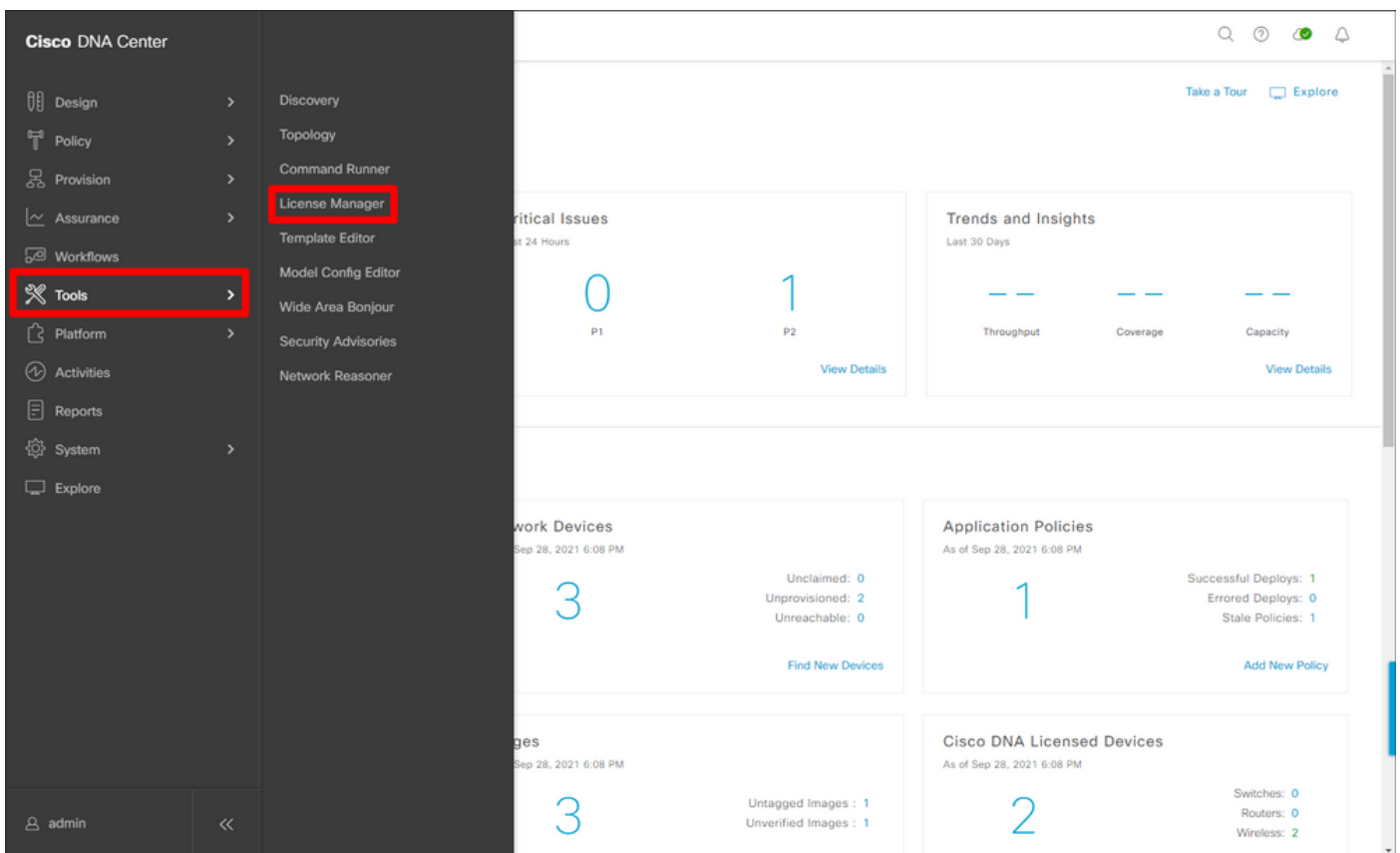
配置智慧帳戶詳細資訊

在配置許可之前，需要將智慧帳戶憑據新增到DNA中心。在DNA Center Web介面中，導航到 **System > Settings > Cisco Accounts > Smart Account**。新增思科智慧帳戶的憑據：



配置許可證管理器

在DNA Center Web介面中，導航到Tools > License Manager。



導航到Reporting & Compliance頁籤，然後選擇Smart Licensing Compliance workflow：

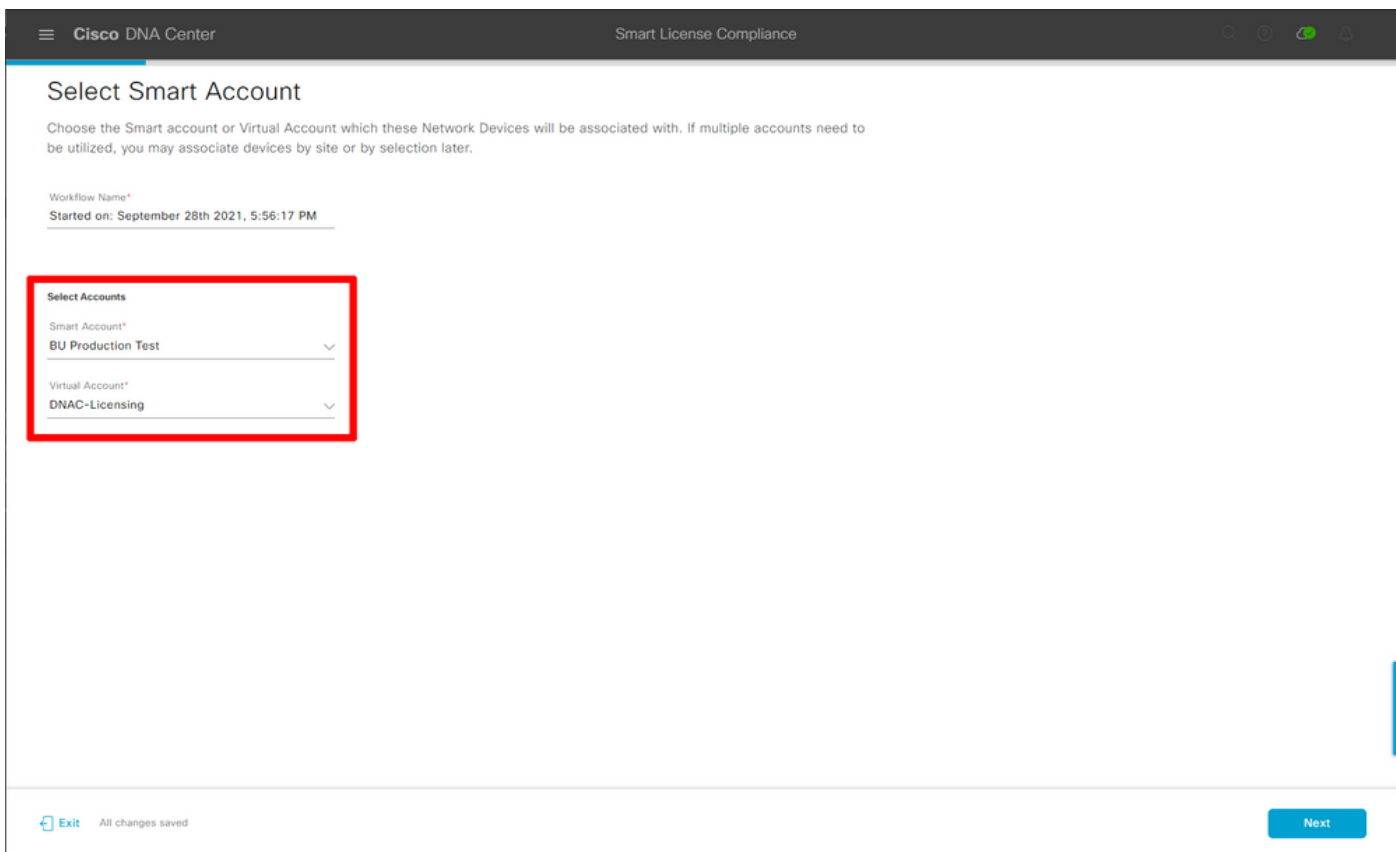
The screenshot shows the Cisco DNA Center interface. The top navigation bar includes 'Overview', 'All License', 'Reporting & Compliance' (highlighted with a red box), and 'Notifications'. The main content area is titled 'LICENSE SUMMARY - Total Licenses Purchased 6754'. It features three columns: 'ESSENTIALS' with 3429 Total Licenses, 3150 About to Expire, and 914 Out of Compliance; 'ADVANTAGE' with 3325 Total Licenses, 3125 About to Expire, and 12 Out of Compliance; and 'PREMIER' with 0 Total Licenses, 0 About to Expire, and 0 Out of Compliance. Below this, there are sections for 'Smart License Readiness' and 'Available Workflows'. The 'Available Workflows' section is highlighted with a red box and shows a workflow named 'Smart License Compliance' with a sub-message: '1 device(s) are ready right now for streamlined licensing updates.' Below the workflows is a table with one row of data:

Device Name	Device Family	Device Series	IP Address	Software Version	Cisco DNA License	Cisco DNA License Expiry
WLC 2 APs	Wireless Controller	Cisco Catalyst 9800 Wireless Controllers for Cloud	10.48.39.133	17.3.3	Advantage	NA

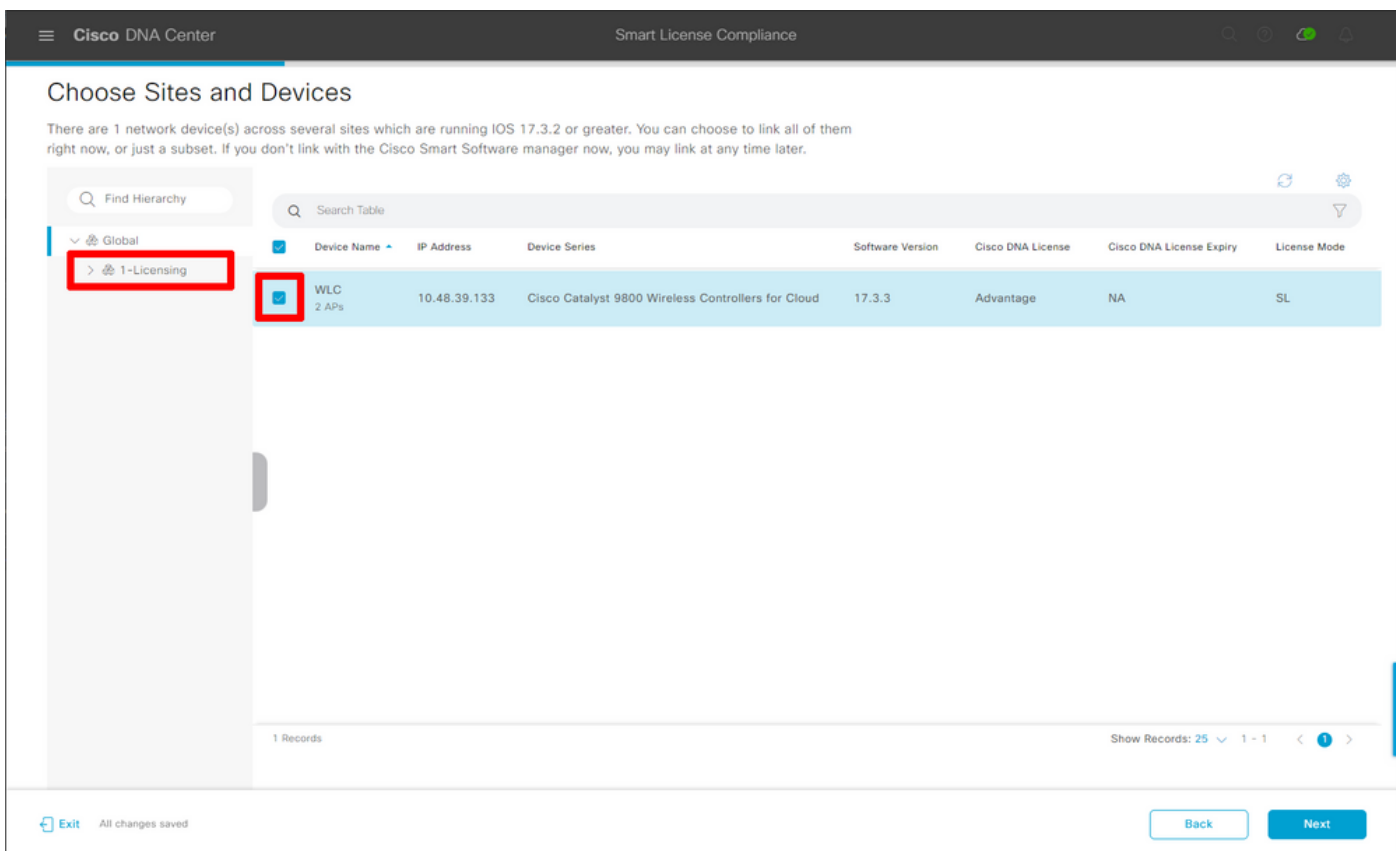
系統將彈出引導式 workflow 嚮導。若要開始，請選擇「開始執行」。

The screenshot shows the same Cisco DNA Center interface, but with a modal dialog box titled 'Smart License Update' overlaid. The dialog contains the text: 'In an effort to simplify your organizations licensing structure, we have enhanced licensing capabilities across Cisco.' Below the text is a 'Let's Do It' button, which is highlighted with a red box. At the bottom of the dialog, there is a checkbox labeled 'Don't show this to me again'. The background interface is dimmed.

在此下一步中，選擇要使用的智慧帳戶和虛擬帳戶。按一下下一步繼續。



選擇站點並檢查DNA Center要許可的所有WLC:



可以在此處修改報告間隔。預設值為30天：

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: SLE Policy
 Policy Description: NA
 Policy Version: 4
 Smart Account: BU Production Test
 Reporting Interval: 30 Days [Modify](#)

CSSM POLICY

Licenses	First Report Within	Report Usage Every	Report After Usage Change
Perpetual	30 Days	60 Days	60 Days
Enforced	0 Days	90 Days	60 Days
Subscription	120 Days	150 Days	120 Days
Export	0 Days	30 Days	30 Days

[Exit](#) All changes saved [Back](#) [Next](#)

最後一頁提供其許可證使用情況已排隊以向CSSM報告的所有資料和裝置的摘要：

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 CSSM. A report will be generated once that completes.

Submitting Devices

Search Table

Device Name	Device Family	Device Series	IP Address	Software Version	Cisco DNA License	Cisco DNA License Expiry
WLC 2 APs	Wireless Controller	Cisco Catalyst 9800 Wireless Controllers for Cloud	10.48.39.133	17.3.3	Advantage	NA

1 Records Show Records: 25 1 - 1

[Exit](#) All changes saved [Back](#) [Next](#)

按一下下一步開始許可證使用資料的同步並觀察即時狀態。完成同步並從CSSM雲獲取確認至少需要4分鐘。

Cisco DNA Center Smart License Compliance

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 33%

- Fetching Usage Report

Device	Status
WLC(10.48.39.133)	● Usage reports collection is in progress
- Uploading Usage Report
- Provisioning Acknowledgement

Exit All changes saved Finish

綠色表示成功。選擇完成以完成工作流：

Cisco DNA Center Smart License Compliance

Overall Sync Progress 100%

- Fetching Usage Report

Device	Status
WLC(10.48.39.133)	● Usage consumption report collected from device successfully
- Uploading Usage Report

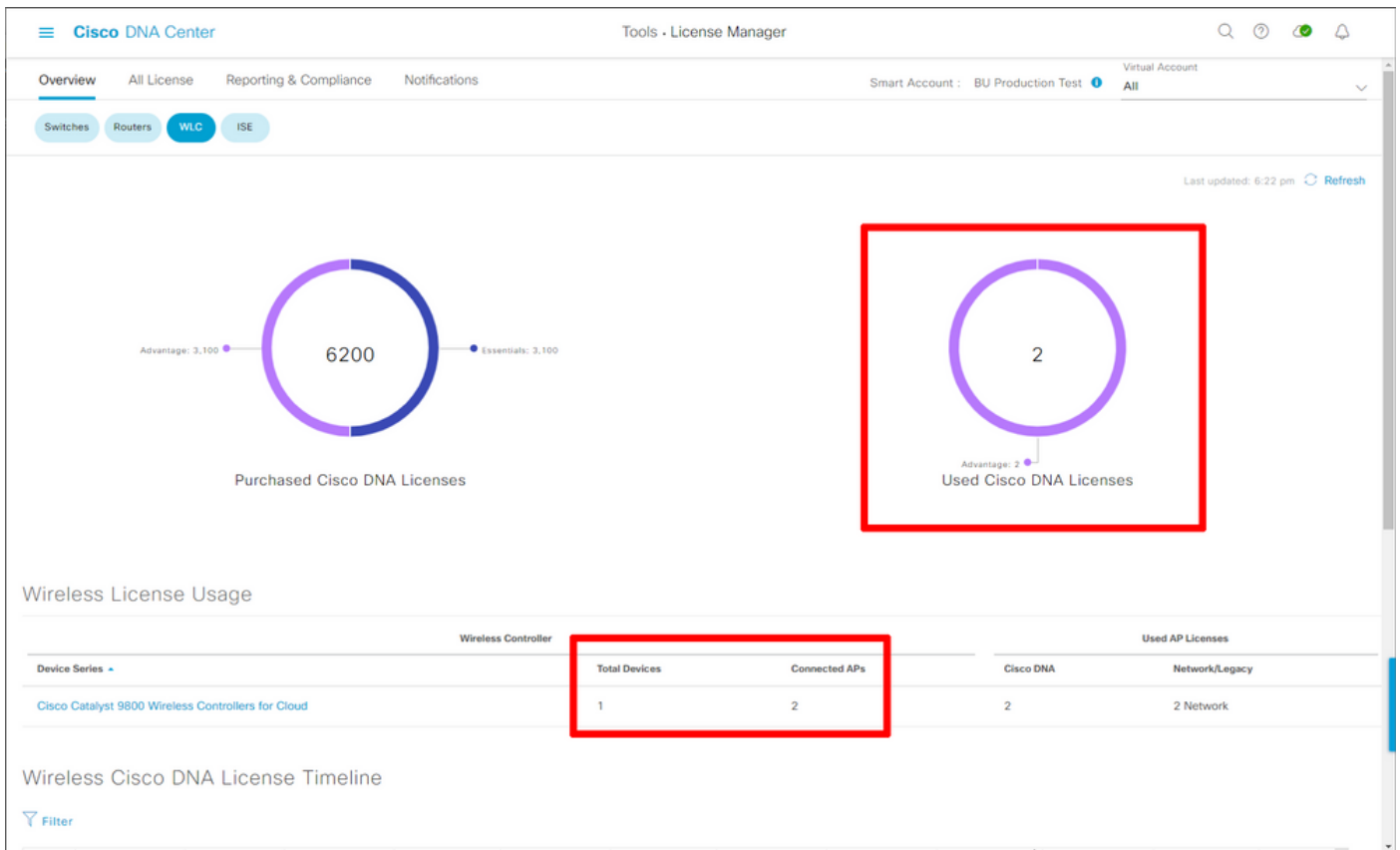
Device	Status
WLC(10.48.39.133)	● Usage consumption reports uploaded to Cisco SSM Cloud and received acknowledgement from Cisco SSM Cloud
- Provisioning Acknowledgement

Device	Status
WLC(10.48.39.133)	● Provisioned usage consumption report's acknowledgement to device

Exit All changes saved Finish

驗證

License manager頁面的Overview頁籤顯示當前的許可證消耗：



在Catalyst 9800端，導覽至Licensing > Service Settings，並驗證連線模式是否設定為Air Gap:

Licensing

General **Service Settings** Policy Attributes

CSSM Connectivity

Connection Mode

Air Gap

Air Gap Feature

ENABLED