

從Cisco DNA Center管理和調配非交換矩陣Catalyst 9800無線LAN控制器

目錄

[簡介](#)

[必要條件](#)

[需求](#)

[採用元件](#)

[設定](#)

[在Cisco DNA-C GUI上：](#)

[通過思科DNA-C調配C9800](#)

[第1步：設計](#)

[第2步：布建](#)

[疑難排解](#)

簡介

本文提供有關如何通過Cisco DNA-Center新增、管理和調配非交換矩陣Catalyst 9800無線LAN控制器的示例配置示例。

必要條件

Catalyst 9800和DNA-Center配置基礎知識

需求

有關Catalyst 9800 WLC和Cisco DNA-Center上的解決方案兼容性要求，請參閱[軟體兼容性表](#)。

採用元件

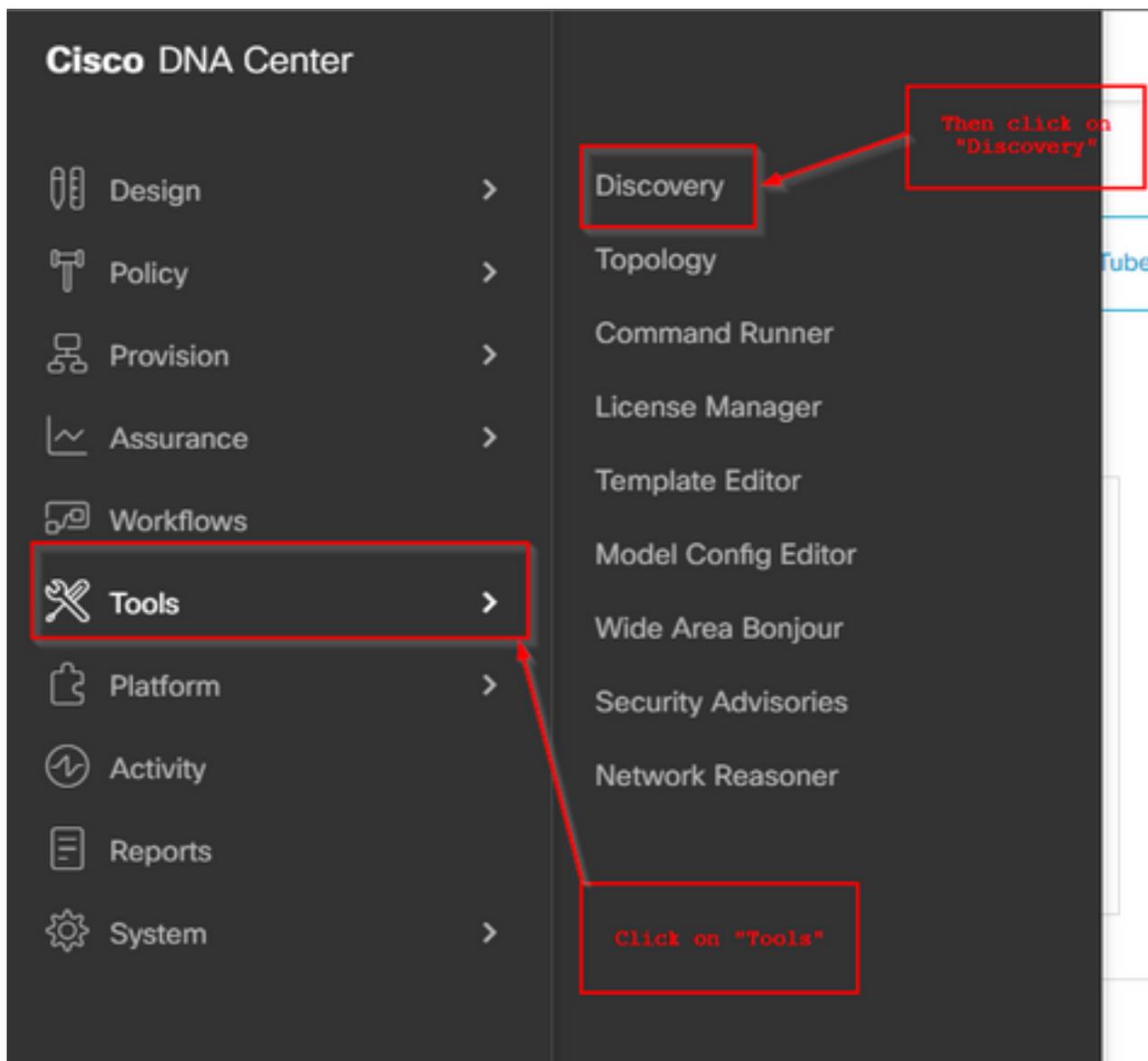
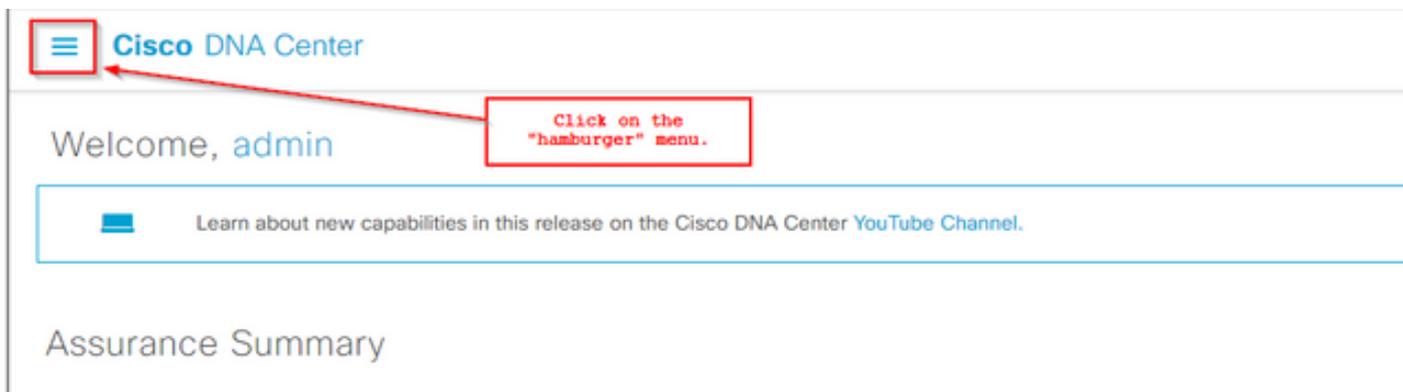
16.12.4a版上的9800-CL。

2.1.2.0版上的Cisco DNA-Center。

設定

在Cisco DNA-C GUI上：

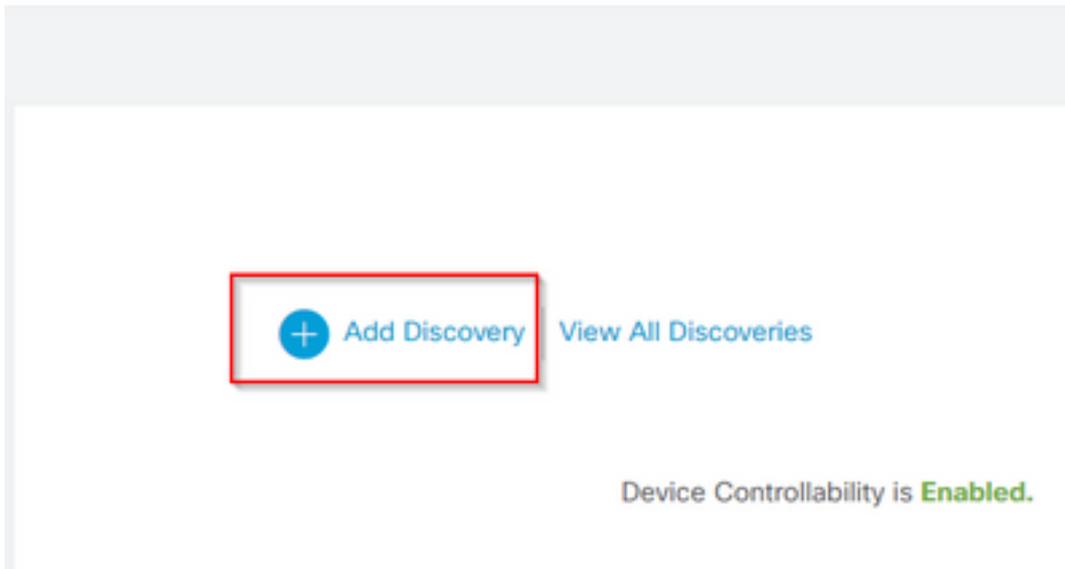
1. 登入到Cisco DNA-C GUI
2. 在網頁左上角，按一下「漢堡」選單，按一下「工具」，然後按一下「發現」：



附註：或者，您可以使用「清單」選單查詢C9800裝置。

3. 在「發現」頁面上，按一下「新增發現」：

Discovery



4. 輸入C9800 WLC詳細資訊

New Discovery

Discovery Name*

9800-WLC-Switch

^ IP ADDRESS/RANGE *

Discovery Type ⓘ

CDP IP Address/Range LLDP

From* ⓘ

1.1.1.1

To* ⓘ

1.1.1.1

+

Subnet Filters ⓘ

+

Preferred Management IP Address ⓘ

None Use Loopback

向下滾動以啟用CLI/SNMP/HTTP/HTTPS憑證：

附註：首先需要在裝置上配置使用者名稱/密碼/SSHv2。

- At least one CLI credential and one SNMP credential are required.
- Netconf is mandatory for enabling Wireless Services on Wireless capable devices such as C9800-Switches/Controllers.
- GLOBAL ■ Task-specific

CLI

SNMPv2c Read

SNMPv2c Write

SNMPv3

HTTP(S) Read

HTTP(S) Write

要在「發現」頁上啟用NETCONF，請執行以下操作：

^ CREDENTIALS*

- At least one CLI credential and one SNMP credential are required.
- Netconf is mandatory for enabling Wireless Services on Wireless capable devices such as C9800-Switches/Controllers.
- GLOBAL ■ Task-specific

Add Credentials

CLI SNMPv2c SNMPv3 SNMP PROPERTIES HTTP(S) NETCONF

Port 830

1. Click "NETCONF"

2. Type "830"

3. Press the "Save" button

Save as global settings

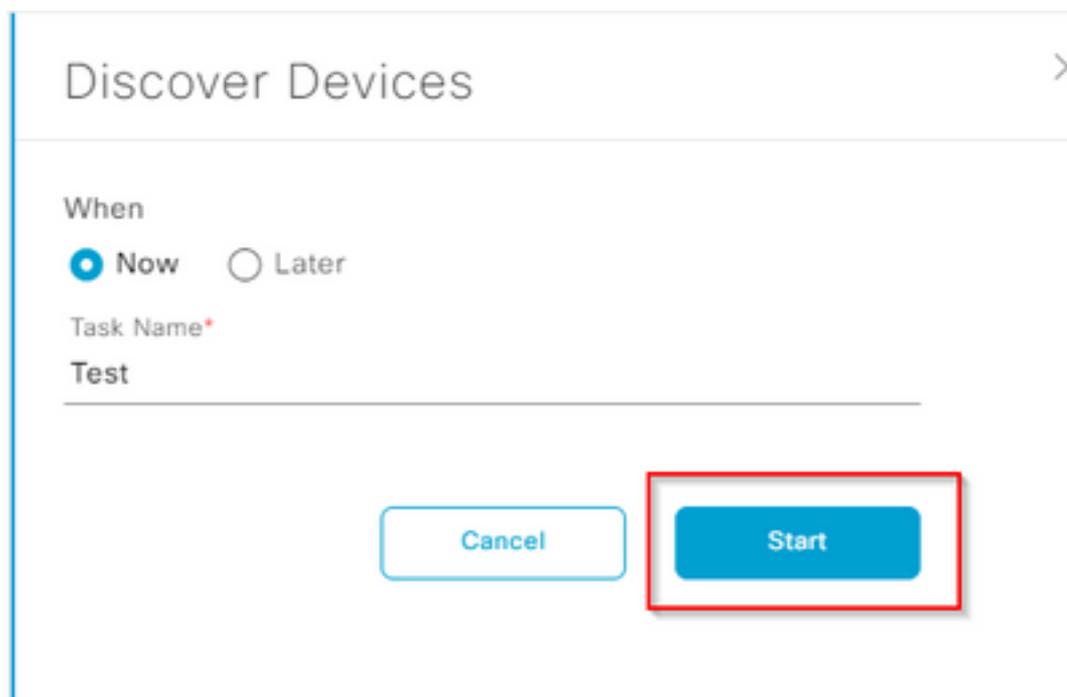
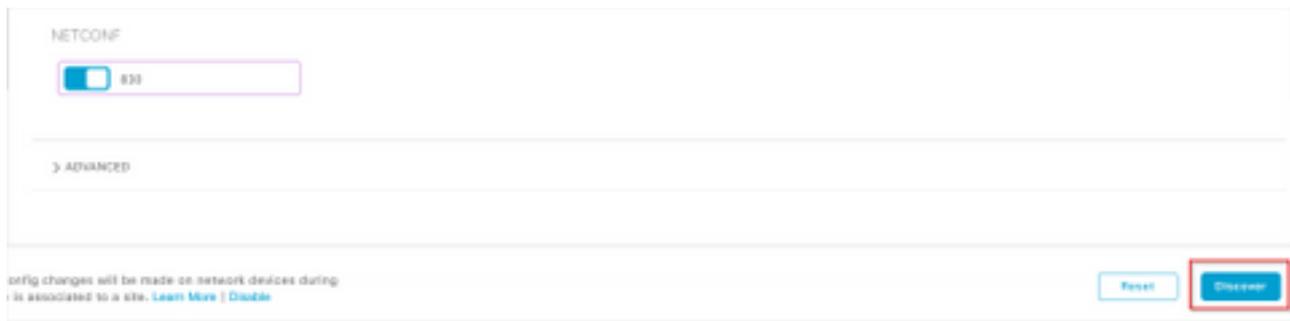
Settings will be used for this specific Discovery only

NETCONF with user privilege 15 is mandatory for enabling Wireless Services on Wireless capable devices such as C9800 Switches/Controllers. The NETCONF credentials are required to connect to eWLC devices. Majority of data collection is done using NETCONF for eWLC.

Reset Save

附註：C9800上的預設NETCONF埠是埠830。

然後按「Discover (發現)」按鈕，然後按「Start (開始)」按鈕：



註：您可以將發現流程安排在不同時間和日期。

如果在Cisco DNA Center和9800 WLC上正確配置了所有內容，則發現結果應如下所示：



確保在「清單」頁面中驗證裝置是否處於「託管」狀態：

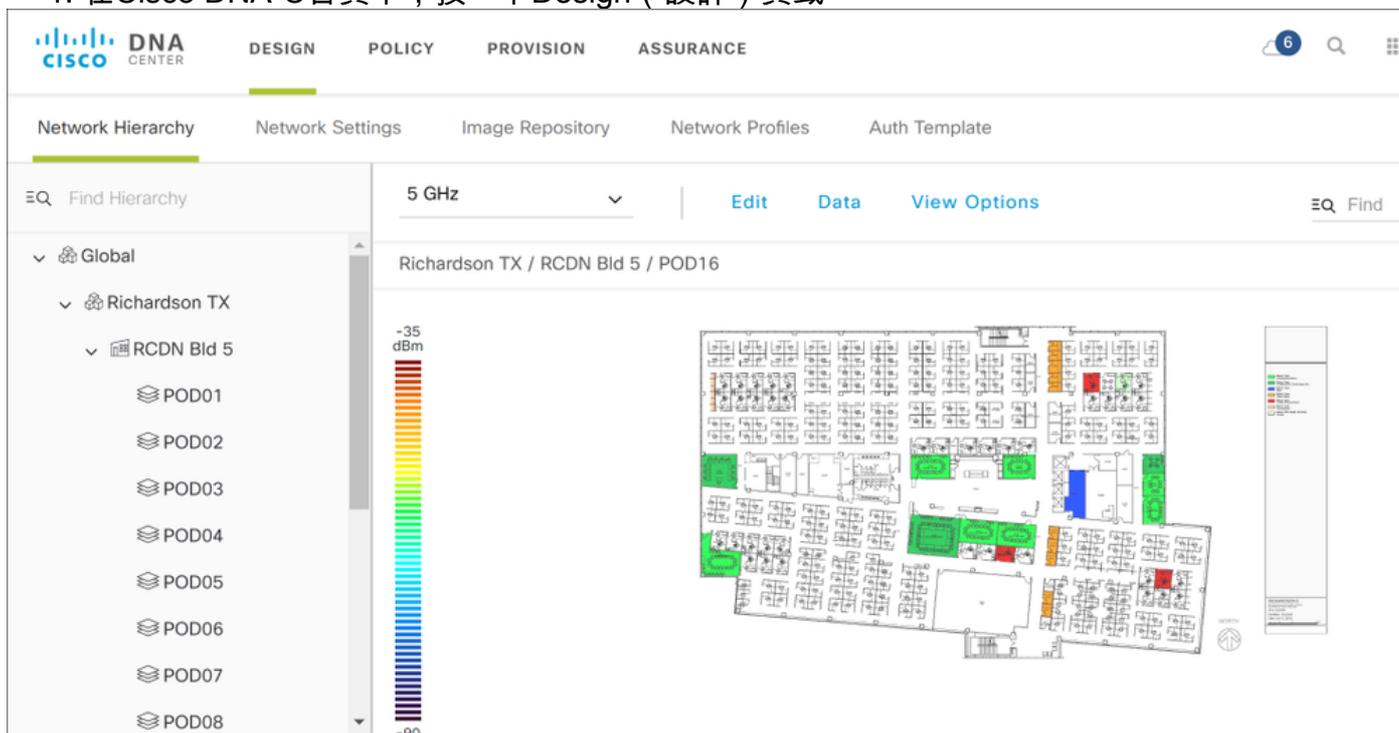


C9800現在已新增到思科DNA-C中。

通過思科DNA-C調配C9800

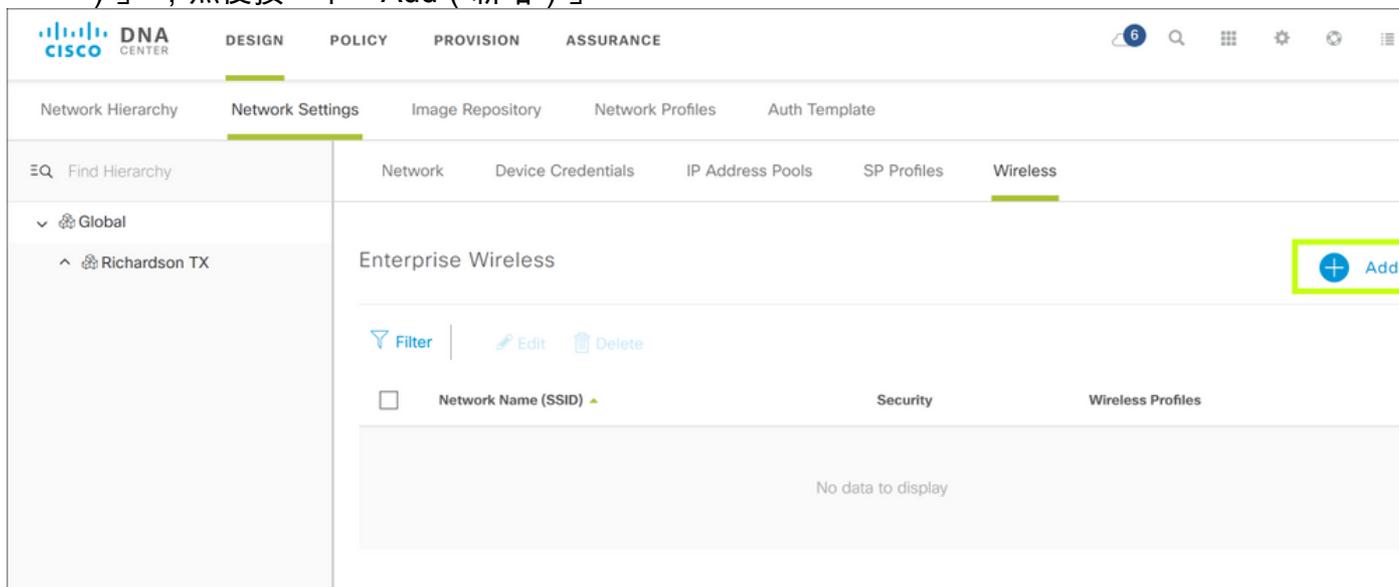
第1步：設計

1. 在Cisco DNA-C首頁中，按一下Design (設計) 頁籤



已將站點地圖和建築平面圖新增到「網路層次結構」頁籤。

2. 要新增無線SSID，按一下「Network Settings (網路設定)」頁籤，導航至「Wireless (無線)」，然後按一下「Add (新增)」



Create an Enterprise Wireless Network

1

Enterprise Wireless Network

2

Wireless Profiles

Wireless Network Name(SSID) *

POD09-DNA-C-PSK

TYPE OF ENTERPRISE NETWORK *

Voice and Data

Data only

Fast Lane

向下滾動以訪問安全設定並配置PSK密碼。

LEVEL OF SECURITY *

WPA2 Enterprise WPA2 Personal Open

More secure

A password (Pre-Shared Key PSK with WPA2 encryption) is needed to access the wireless network

Pass Phrase *

Cisco123

ADVANCED SECURITY OPTIONS

Mac Filtering

Fast Transition (802.11r)

Adaptive Enable Disable

Previous

Cancel

Next

點選「下一步」頁籤將進入「無線配置檔案」頁籤，在此您將配置要分配給特定站點的無線配置檔案。

1

Enterprise Wireless Network

2

Wireless Profiles

Wireless Profile Name *

POD09-Wireless-Profile

Select Interface

management



Flex Connect Local Switching

Sites 0 Site

Wireless Profile Name *

POD09-Wireless-Profile

Select Interface

management



Flex Connect Local Switching

Sites 0 Site

Attach Template(s)

Device Type

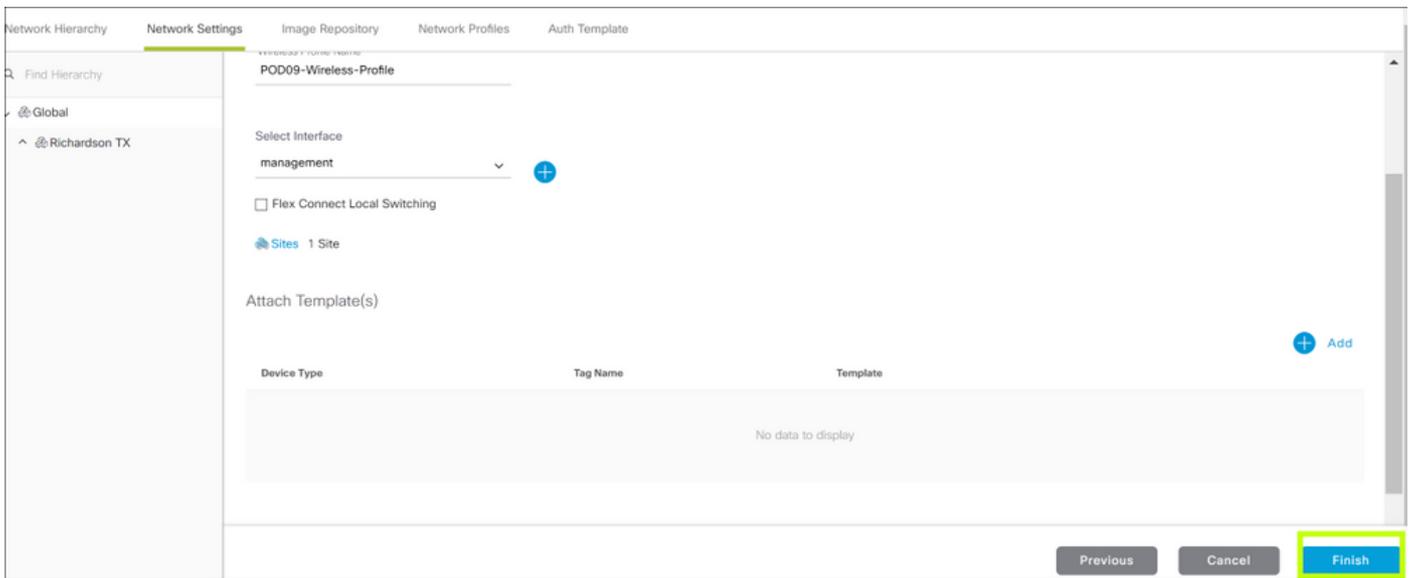
Tag Name

Sites

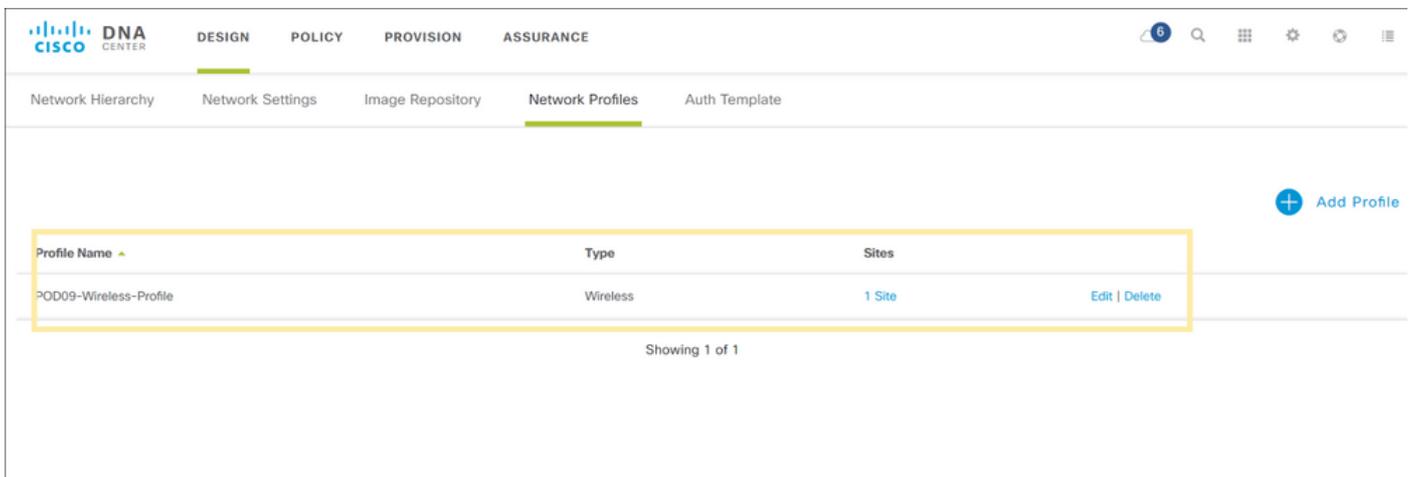
- Global (1)
- Richardson TX (1)
 - RCDN Bld 5 (16)
 - POD01
 - POD02
 - POD03
 - POD04
 - POD05
 - POD06
 - POD07
 - POD08
 - POD09**
 - POD10
 - POD11

Back

OK



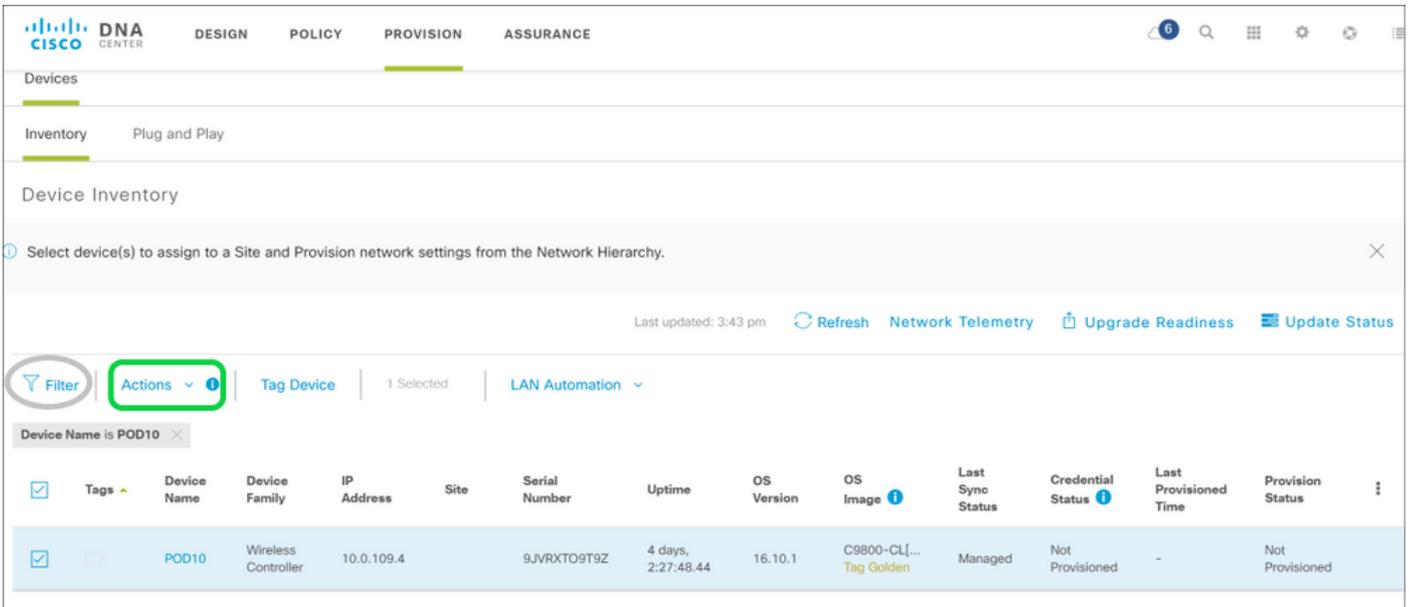
按一下「完成」按鈕應新增您剛剛建立的WLAN和無線策略配置檔案。



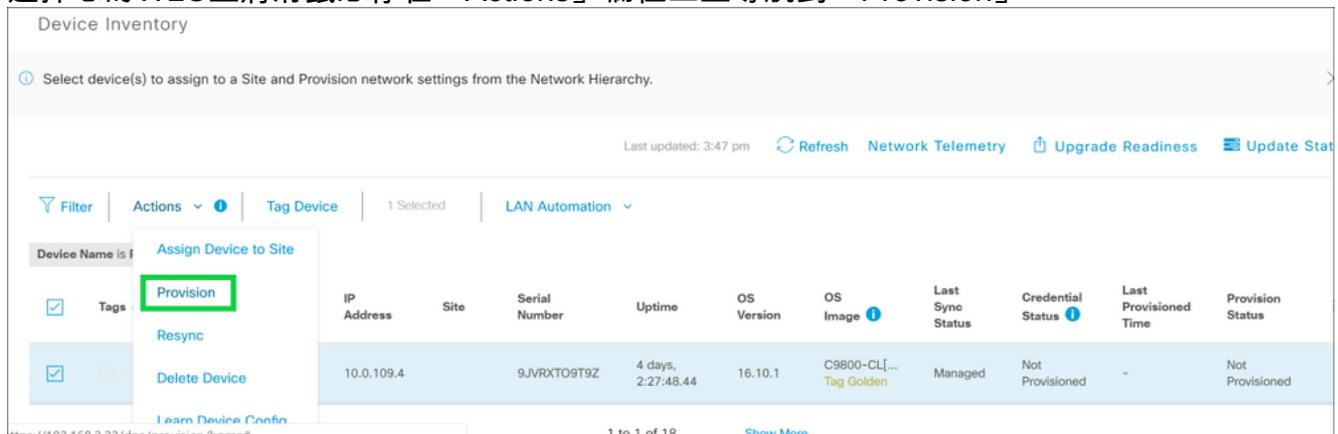
第2步：布建

現在已設計WLAN和設定檔，我們可以將其布建到各自的WLC。為此，請點選Cisco DNA-C頂部的「Provision」頁籤

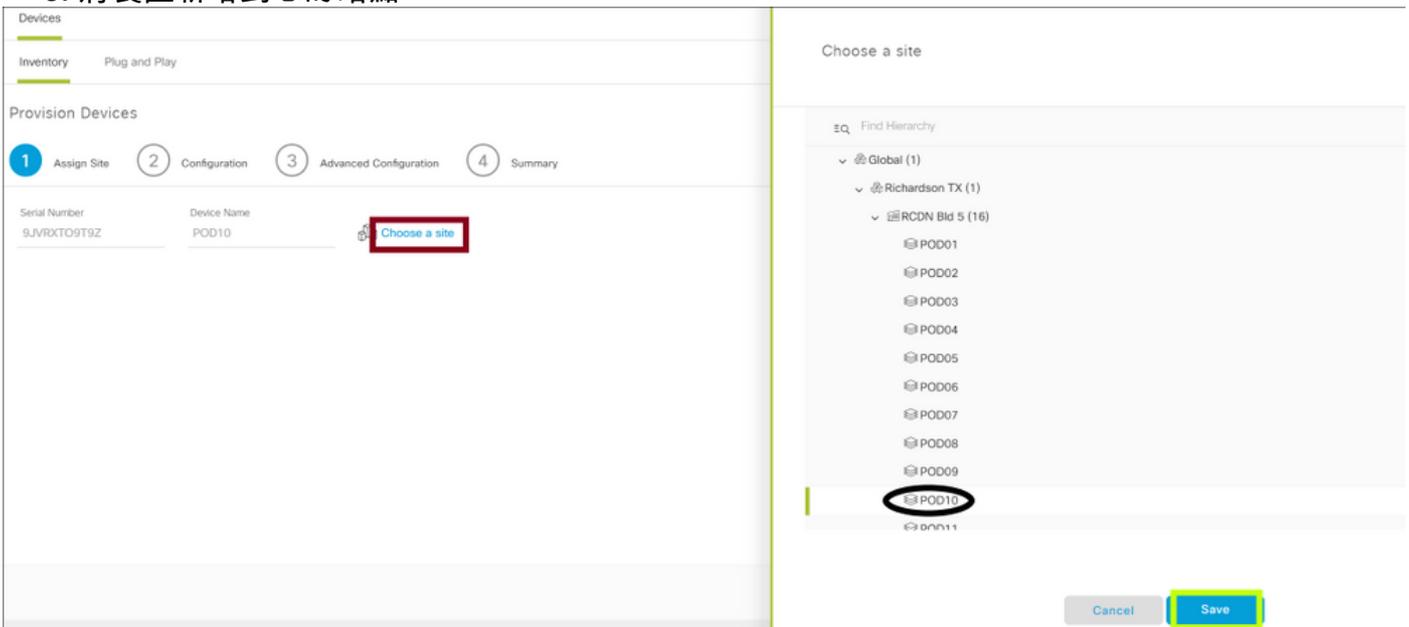
1. 在Provision選單上，您可以在device inventory「Filter」選項下過濾裝置名稱。



2. 選擇您的WLC並將滑鼠懸停在「Actions」欄位上並導航到「Provision」



3. 將裝置新增到您的站點



Devices

Inventory Plug and Play

Provision Devices

1 Assign Site 2 Configuration 3 Advanced Configuration 4 Summary

Serial Number 9JVRXT09T9Z Device Name POD10

Global/Richardson TX/RCDN Bld 5/POD10

Cancel Next

4. 在此範例中，AP和WLC位於同一位置，您可以跳過此處的組態和進階組態步驟，從摘要頁面進行部署。

Devices

Inventory Plug and Play

Provision Devices

1 Assign Site 2 Configuration 3 Advanced Configuration 4 Summary

POD10

Serial Number 9JVRXT09T9Z Devices POD10 WLC Role

Active Main WLC Guest Anchor WLC

Managing 1 location(s)

Cancel Next

Devices

Inventory Plug and Play

Provision Devices

1 Assign Site 2 Configuration 3 Advanced Configuration 4 Summary

Template is not available for the site of the selected device.

Cancel Next

Provision Devices

- 1 Assign Site
- 2 Configuration
- 3 Advanced Configuration
- 4 Summary

POD10

Device Details

Device Name:	POD10
Platform Id:	C9800-CL-K9
Device IP:	10.0.109.4
Device Location:	
Device Role:	Active Main WLC

Network Setting

DHCP Server:	10.0.111.1,
SYSLOG Server:	
SNMP Trap Server:	
DNS Domain Name:	
DNS Primary Server:	

SSID (POD09-Wireless-Profile)

Name:	POD09-DNA-C-PSK
Type:	Enterprise
Security:	wpa2_personal

Cancel Deploy

Provision Device



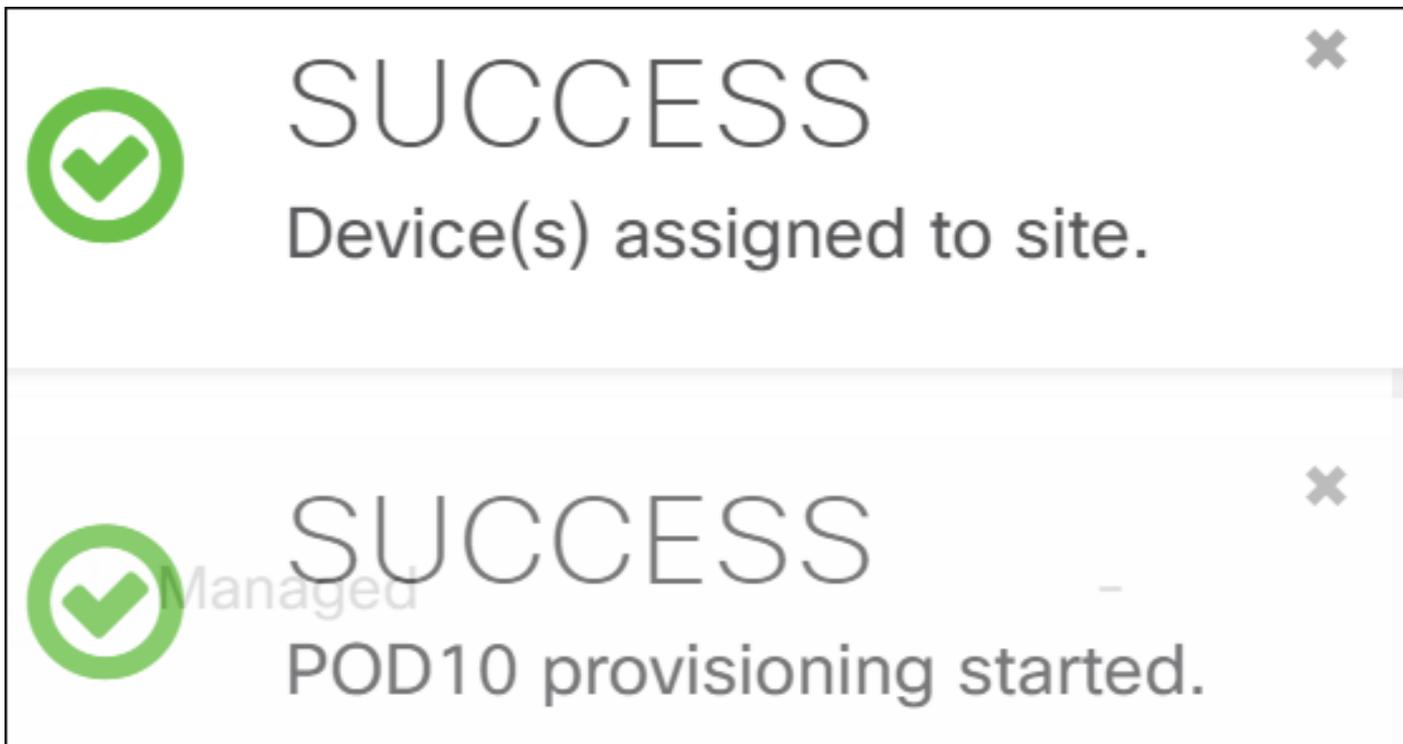
When

Now

Later

Cancel

Apply



驗證設定是否成功：

Filter	Actions	Tag Device	LAN Automation									
Device Name is pod10												
Tags	Device Name	Device Family	IP Address	Site	Serial Number	Uptime	OS Version	OS Image	Last Sync Status	Credential Status	Last Provisioned Time	Provision Status
	POD10	Wireless Controller	10.0.109.4	...N Bid 5/POD10	9JVRXT09T9Z	4 days, 3:00:47.71	16.10.1	C9800-CL[... Tag Golden	Managed	Not Provisioned	Mar 22 2019 08:55:52	Success See Details

5. 下一步是使用上述方法調配您的接入點。

Assign Device to Site

Tags	Device Name	Device Family	IP Address	Site	Serial Number	Uptime	OS Version	OS Image	Last Sync Status	Credential Status	Last Provisioned Time	Provision Status
<input checked="" type="checkbox"/>	Shankar-37021-2	Unified AP	10.0.111.90	...N Bid 5/POD10	FTX1818S0BL	-04:-33:-01,-140	16.10.1.0		Managed	Not Provisioned	-	Not Provisioned

Provision Devices

1 Assign Site 2 Configuration 3 Summary

Serial Number: FTX1818S0BL Device Name: Shankar-37021-2 Global/Richardson TX/RCDN Bid 5/POD10

Cancel Next

Devices

Inventory Plug and Play

Provision Devices

1 Assign Site 2 Configuration 3 Summary

Serial Number: FTX1818S0BL Device Name: Shankar-3702I-2 RF Profile: TYPICAL

Cancel Next

Inventory Plug and Play

Provision Devices

1 Assign Site 2 Configuration 3 Summary

Shankar-3702I-2

Device Details

Device Name: Shankar-3702I-2
 Serial Number: FTX1818S0BL
 Mac Address: 88:f0:31:ac:06:20
 Device Location: Global/Richardson TX/RCDN Bld 5/POD10
 RF Profile: TYPICAL
 Default Profile: No
 Radio Type: 2.4GHz/5GHz
 Channel Width: 20 MHz
 2.4GHz/5GHz Data Rates: 9,12,18,24,36,48,54/6,9,12,18,24,36,48,54

Cancel Deploy

Filter Actions 1 Tag Device LAN Automation

Device Name is Shankar-3702I-2

Tags	Device Name	Device Family	IP Address	Site	Serial Number	Uptime	OS Version	OS Image	Last Sync Status	Credential Status	Last Provisioned Time	Provision Status
	Shankar-3702I-2	Unified AP	10.0.111.90	...N Bld 5/POD10	FTX1818S0BL	-04:-33:-01.-140	16.10.1.0		Managed	Not Provisioned	Mar 22 2019 09:05:56	Success See Details

6. 現在您可以從C9800 GUI>>Configurations>>WLAN驗證調配狀態

Search Menu Items

- Dashboard
- Monitoring >
- Configuration >
- Administration >
- Troubleshooting

- Interface
 - Logical
 - Ethernet
 - Wireless
- Layer2
 - VLAN
 - VTP
 - Radio Configurations
 - CleanAir
 - High Throughput
 - Media Parameters
 - Network Parameters
 - RRM
- Routing Protocols
 - OSPF
- Security
 - AAA
 - ACL
 - Advanced EAP
 - PKI Management
 - Local EAP

- Services
 - AireOS Config Translator
 - Application Visibility
 - Cloud Services
 - Custom Application
 - IOx
 - Multicast
 - NetFlow
 - Python Sandbox
 - QoS
 - RA Throttle Policy
 - Tags & Profiles
 - AP Join
 - Flex
 - Policy
 - RF
 - Tags
 - WLANs
 - Wireless
 - Access Points
 - Advanced
 - Air Time Fairness
 - Fabric
 - Media Streams

WIRELESS NETWORKS

+ Add * Delete Enable WLAN Disable WLAN

Number of WLANs selected : 0

<input type="checkbox"/>	Name	ID	SSID	Status	Security
<input type="checkbox"/>	POD09-PSK	1	POD09-PSK	Enable	[WPA2][Auth(PSK)]
<input type="checkbox"/>	POD09-Dot1x	2	POD09-Dot1x	Enable	[WPA2][Auth(802.1x)]
<input type="checkbox"/>	POD09-DNA-_Global_NF_ba7ffbcc	17	POD09-DNA-C-PSK	Enable	[WPA2][Auth(PSK)]

10 items per page 1 - 3 of 3 items

您現在已成功通過Cisco DNA-C預配WLC/AP

疑難排解

來自思科DNA-C 叢集中「每個」Cisco DNAC的CLI上「*sudo rca*」；

在C9800 CLI上：

調試：

```
debug snmp requests
debug snmp packets
debug netconf-yang level debug
```

```
show platform software yang-management process
```

驗證是否所有進程都在運行。

如果netconf-yang正在運行，除gnmib之外的所有進程都應處於UP狀態