Manage Non-Fabric Catalyst 9800 Wireless LAN Controllers

Contents

Introduction

Prerequisites

- Requirements
- Components Used

Configure

- From Cisco DNAGUI:
- Provisioning C9800 via Cisco DNA
  - Step 1: Design
  - Step 2: Provisioning

Troubleshoot

Introduction

This document describes how to add, manage, and provision non-fabric Catalyst 9800 Wireless LAN Controllers via Cisco DNA.

Prerequisites

Basic knowledge of Catalyst 9800 and Cisco DNA configuration.

Requirements

Refer to software compatibility matrix for solution compatibility requirements on Catalyst 9800 WLC and Cisco DNA.

Components Used

- 9800-CL on 16.12.4a release
- Cisco DNA on 2.1.2.0 release

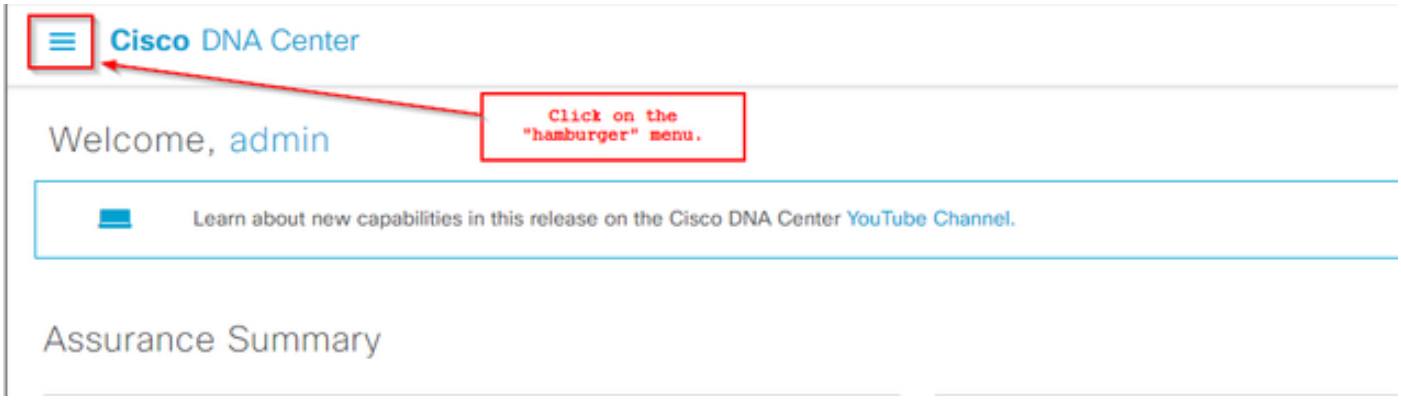
The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

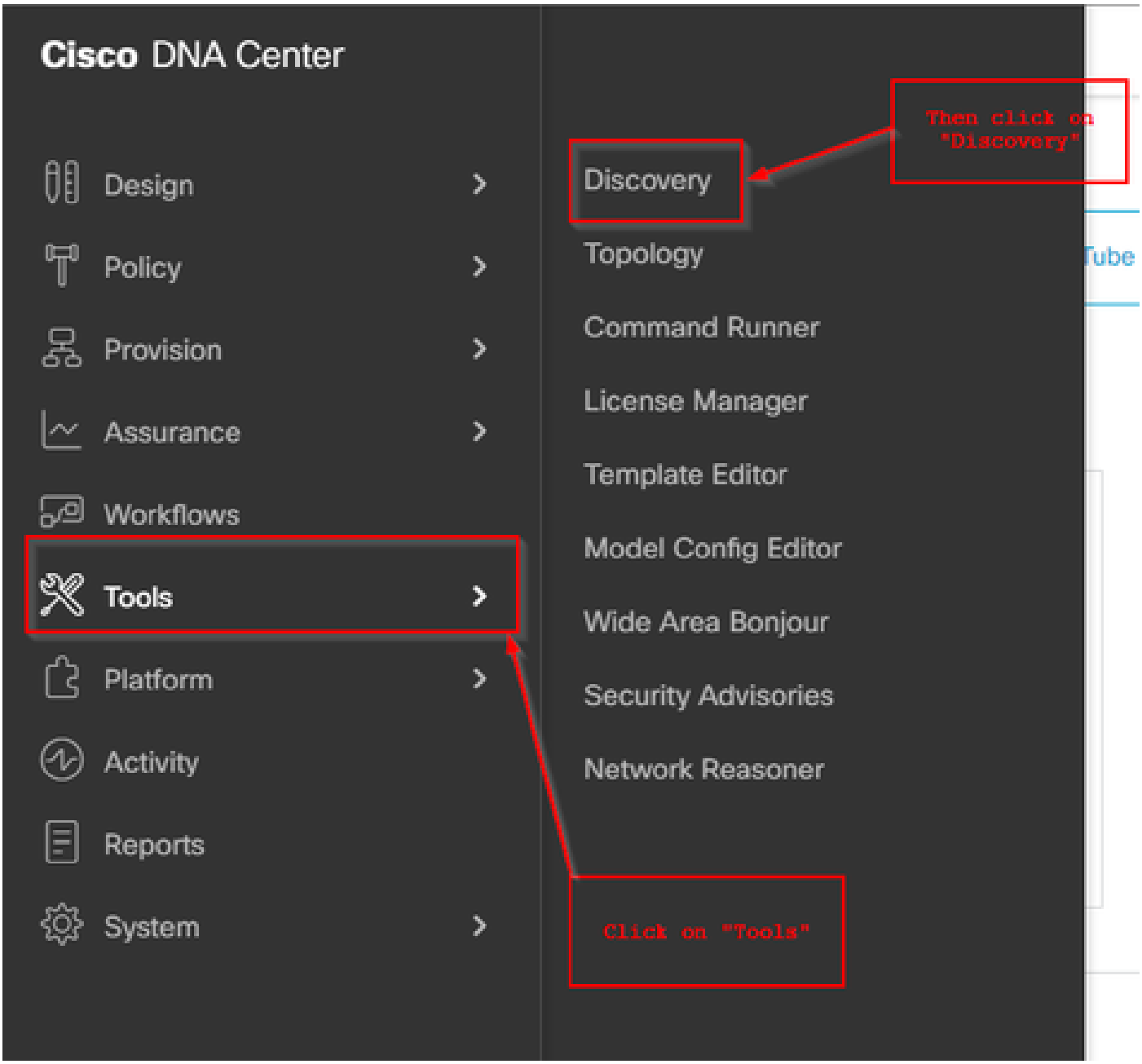
Configure

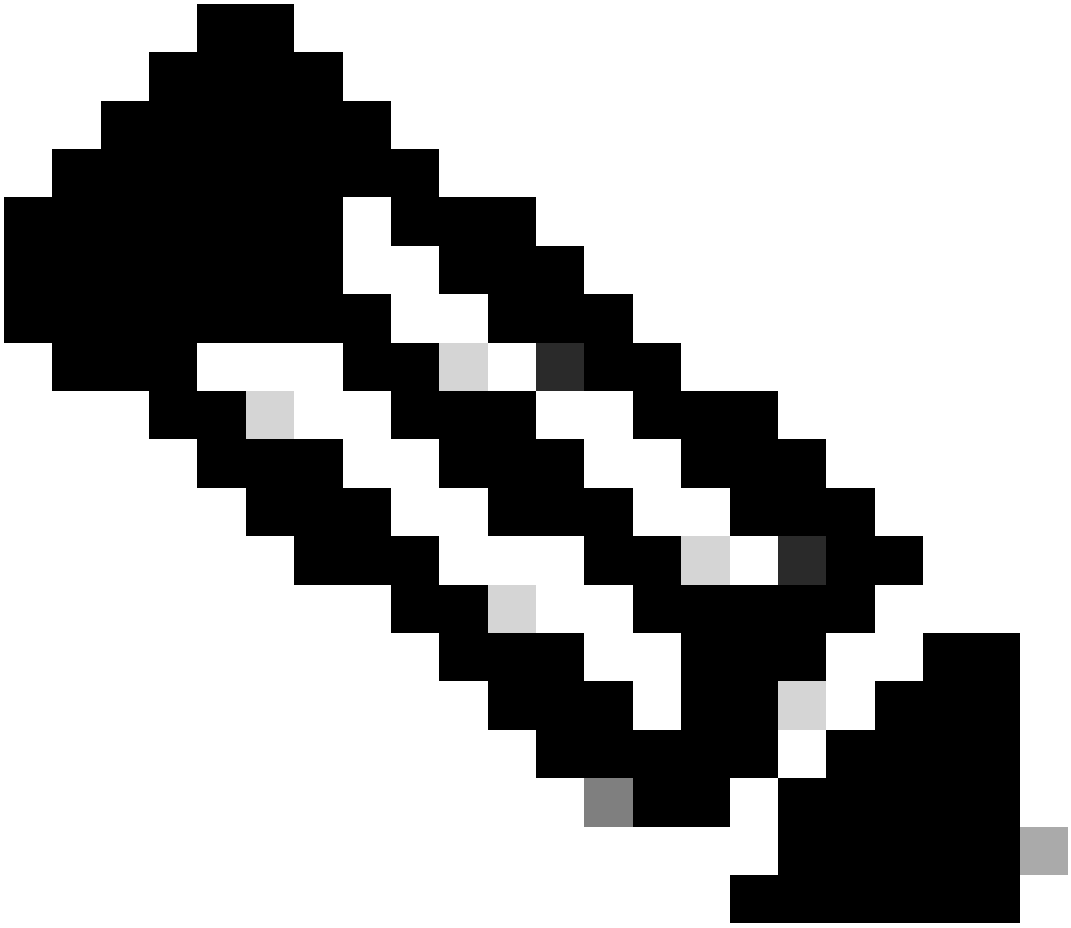
From Cisco DNA GUI:

1. Log into Cisco DNA Center GUI.
2. On the top left corner of the webpage, click the **hamburger** menu, click **Tools**, and then click

Discovery:

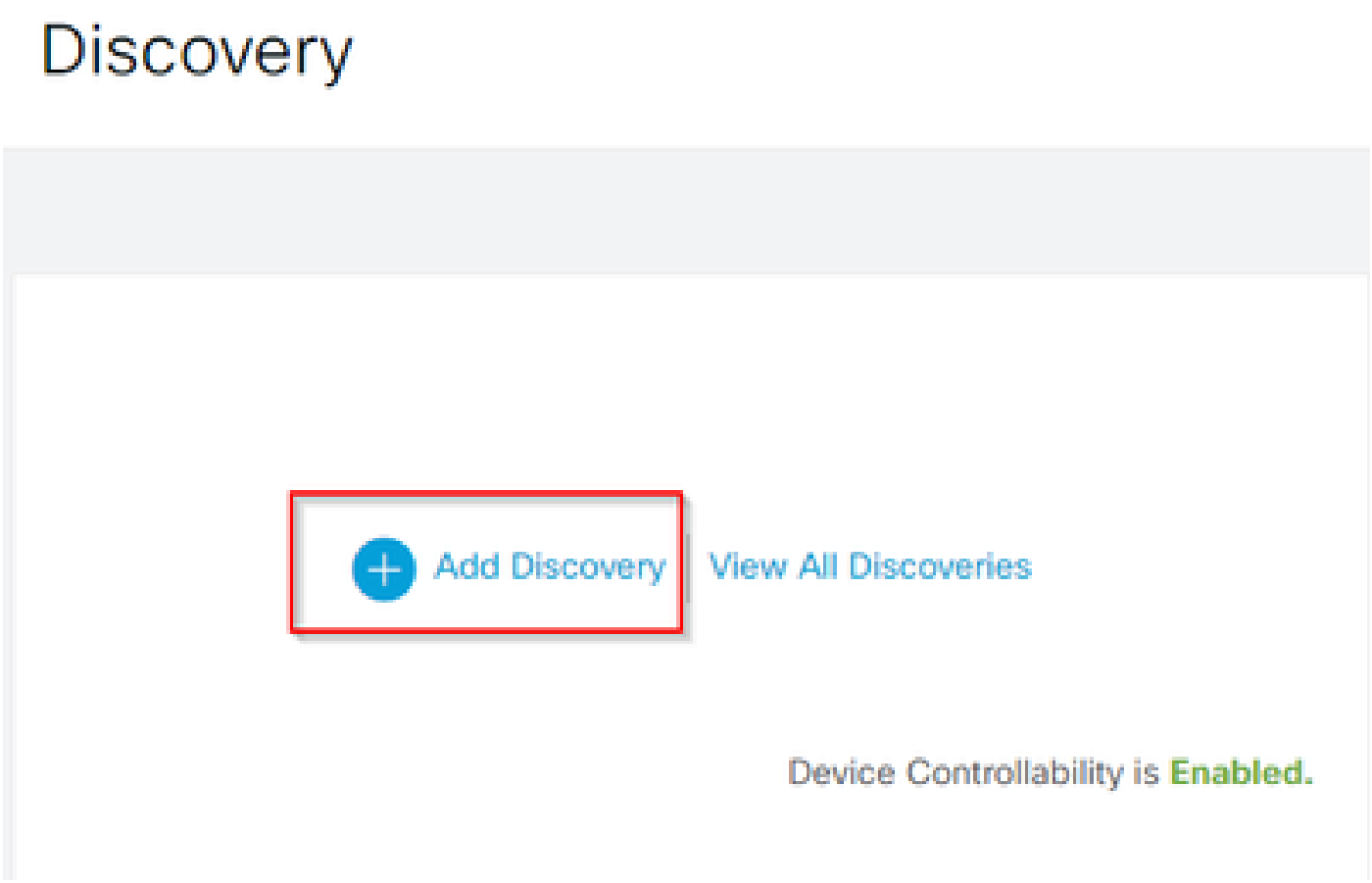

Cisco DNA Center
Click on the "hamburger" menu.
Welcome, admin
Learn about new capabilities in this release on the Cisco DNA Center YouTube Channel.
Assurance Summary


Cisco DNA Center
Design
Policy
Provision
Assurance
Workflows
Tools
Platform
Activity
Reports
System
Discovery
Topology
Command Runner
License Manager
Template Editor
Model Config Editor
Wide Area Bonjour
Security Advisories
Network Reasoner
Then click on "Discovery"
Click on "Tools"

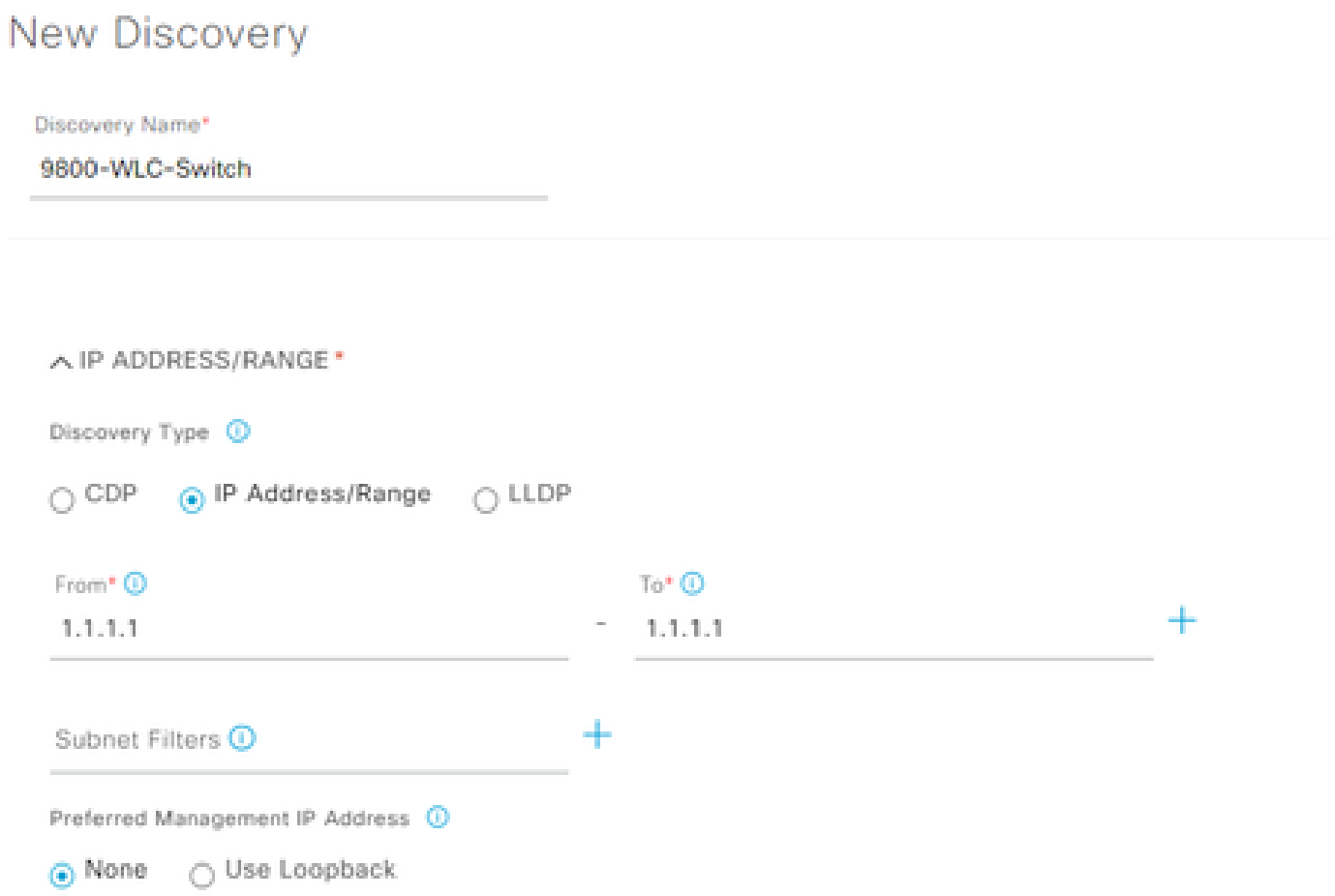


Note: You can alternatively discover your C9800 device using the Inventory menu.

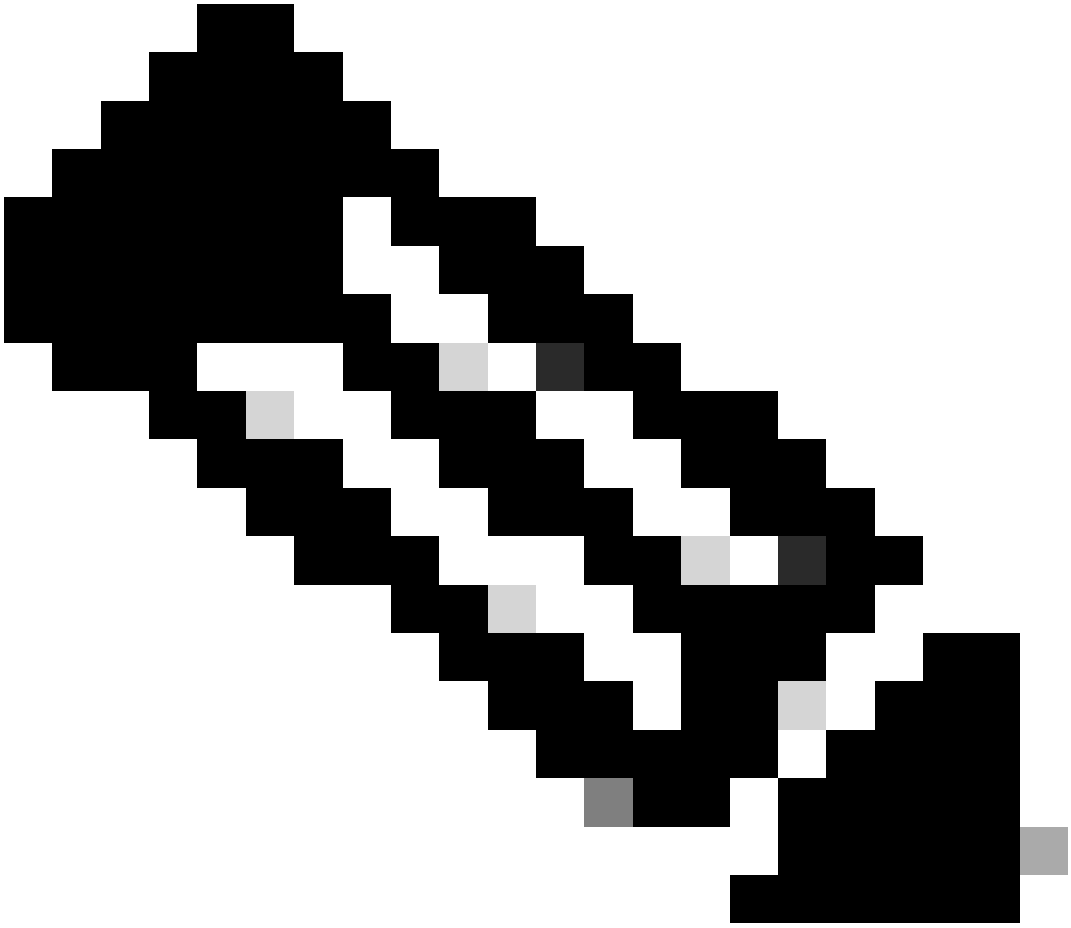
3. On the Discovery page, click **Add Discovery**:



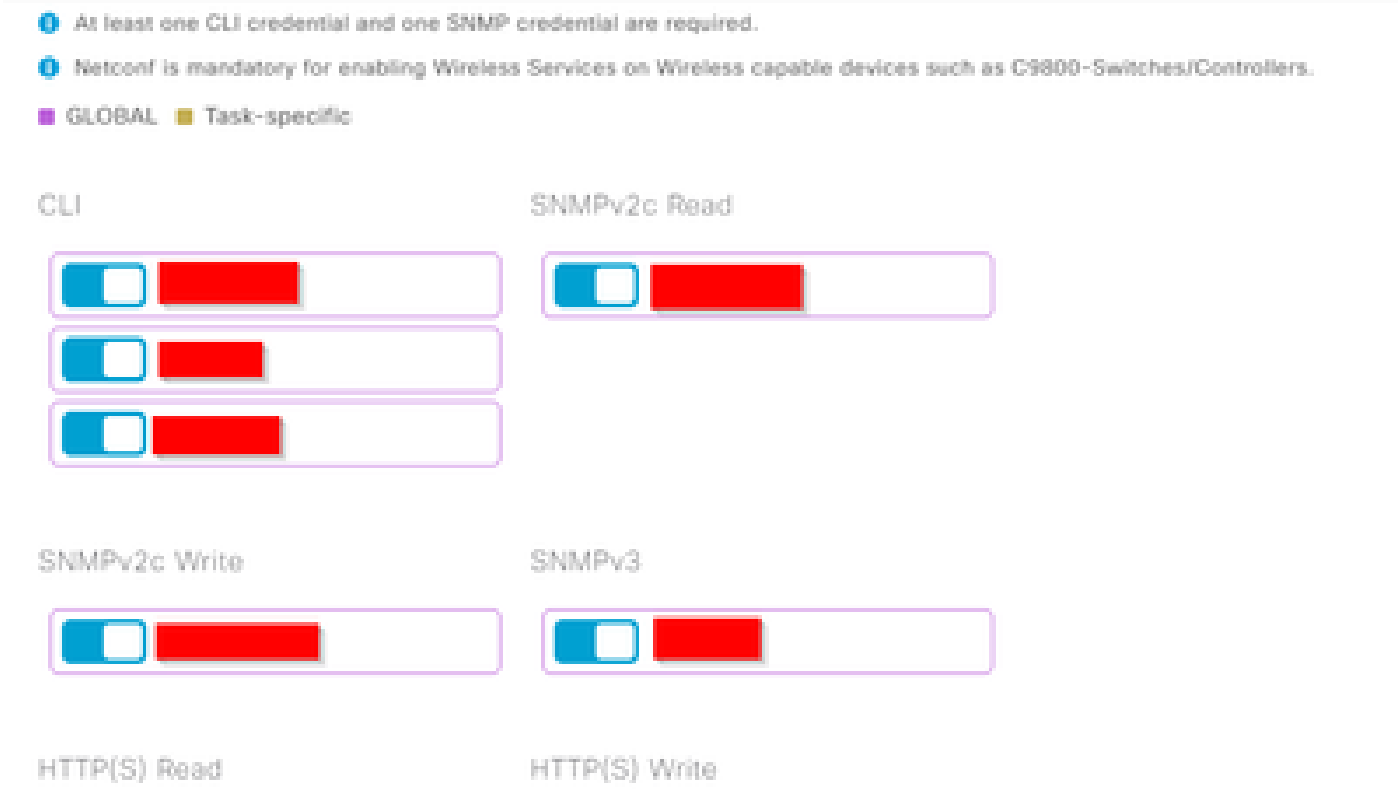
4. Enter the **C9800 WLC** details.



Scroll down to enable the CLI/SNMP/HTTP/HTTPS credentials:

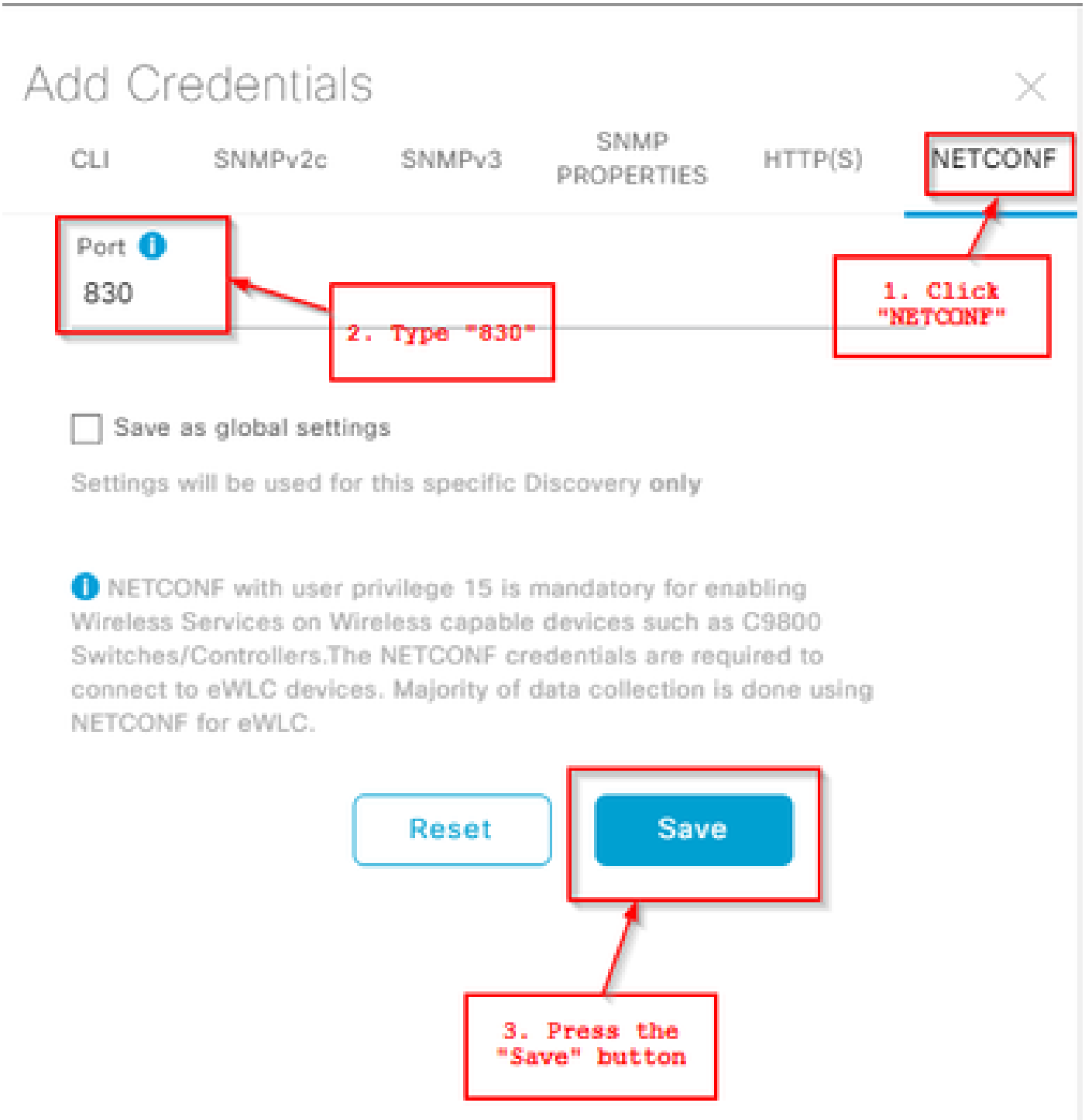


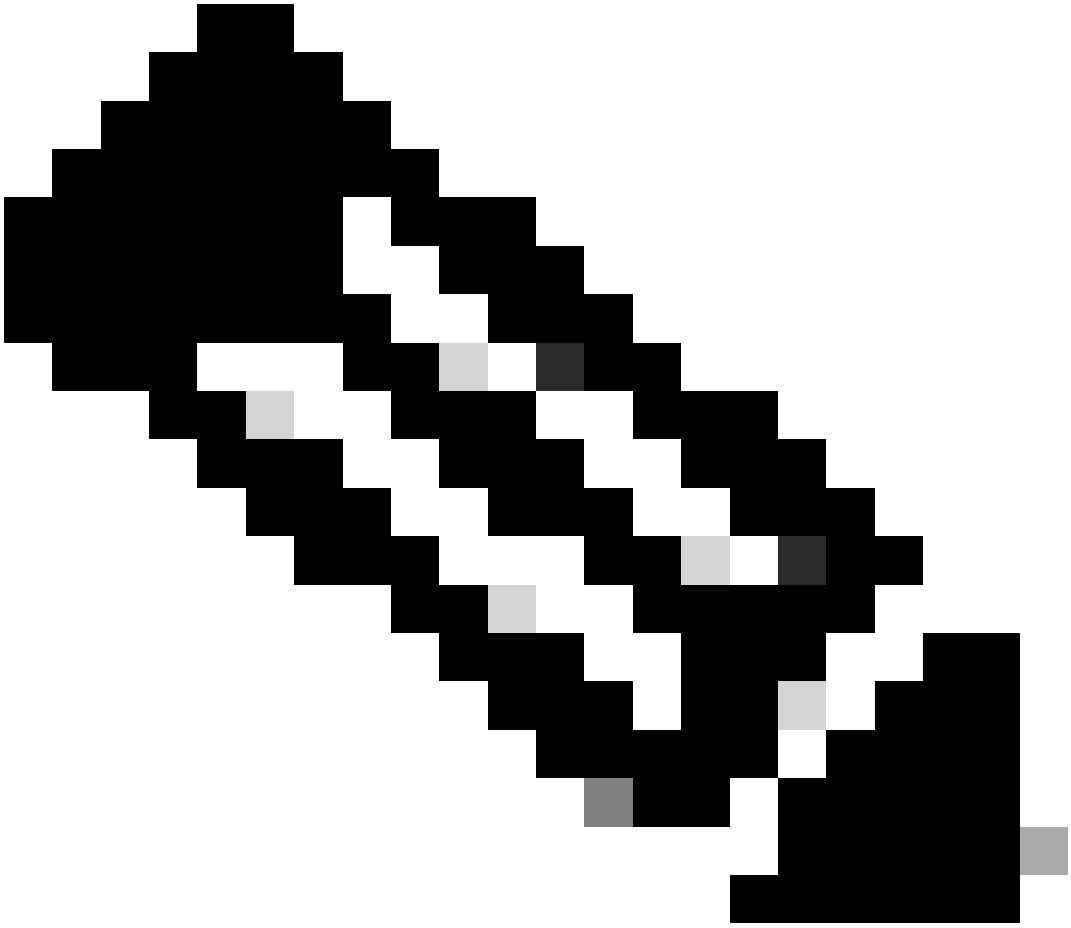
Note: The username/password/SSHv2 needs to be configured on the device first.



To enable NETCONF on the Discovery page:

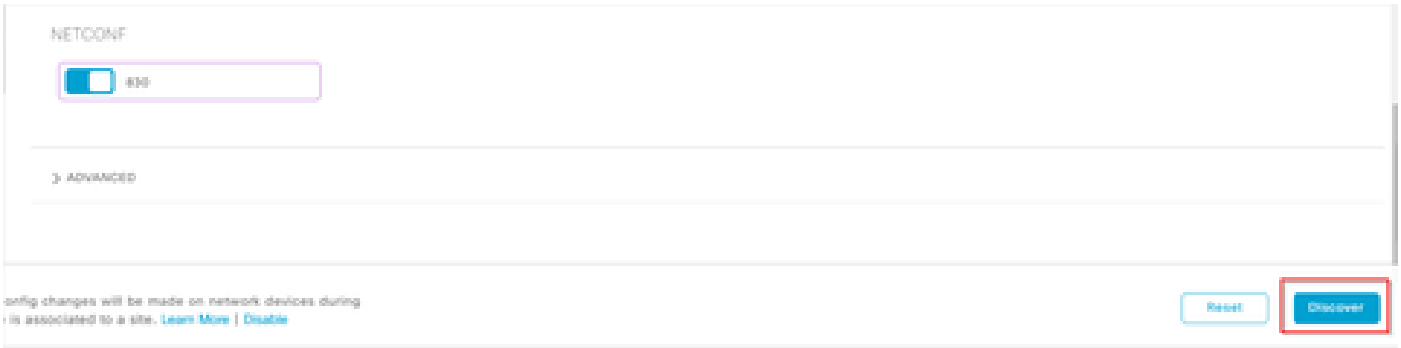


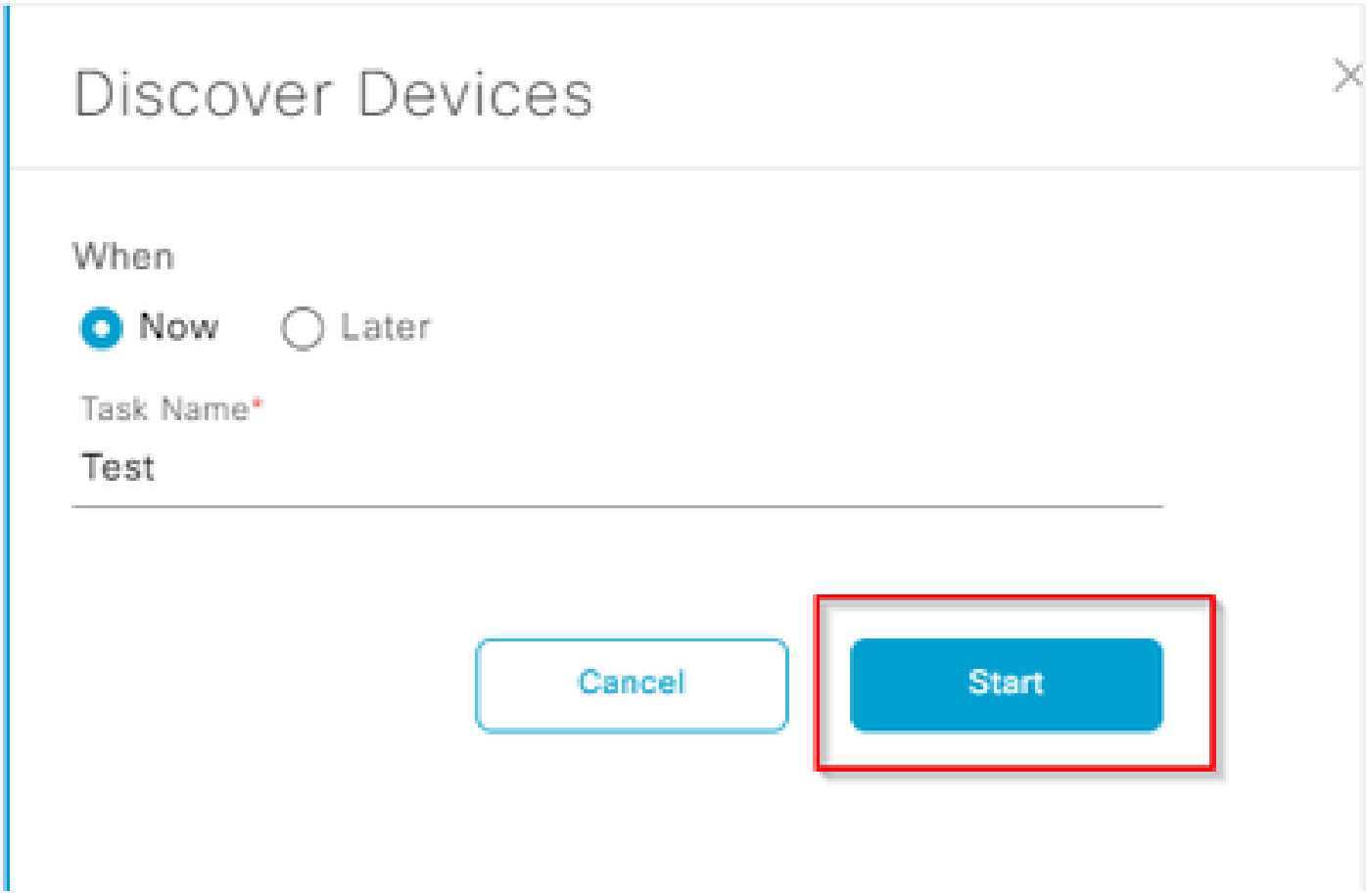

Add Credentials
CLI
SNMPv2c
SNMPv3
SNMP PROPERTIES
HTTP(S)
NETCONF
Port
830
2. Type "830"
1. Click "NETCONF"
Save as global settings
Settings will be used for this specific Discovery only
NETCONF with user privilege 15 is mandatory for enabling Wireless Services on Wireless capable devices such as C9800 Switches/Controllers.The NETCONF credentials are required to connect to eWLC devices. Majority of data collection is done using NETCONF for eWLC.
Reset
Save
3. Press the "Save" button

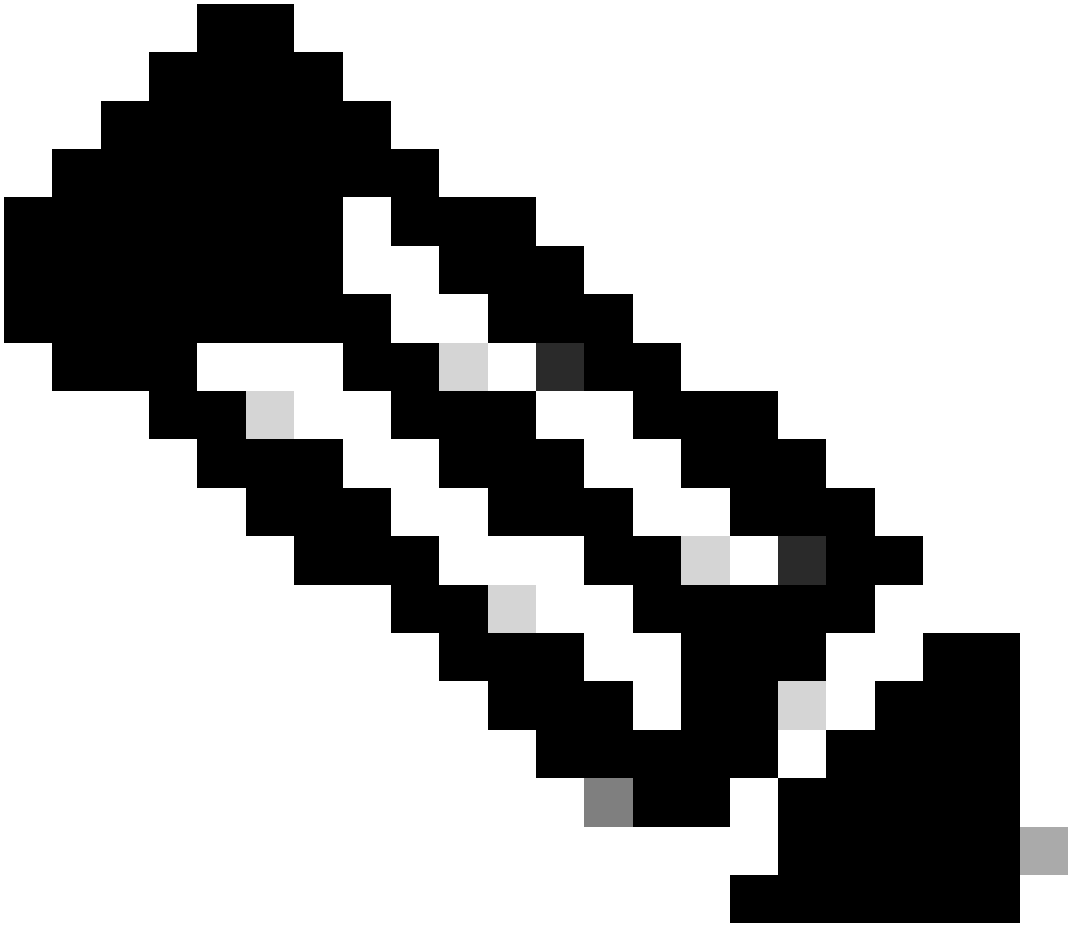


Note: The default NETCONF port on C9800 is port 830.

Then, press the **Discover** button and press the **Start** button:

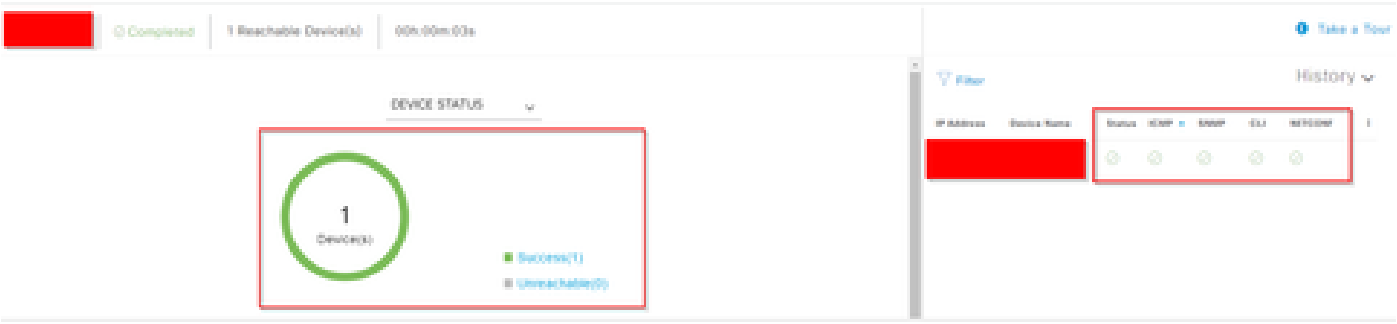



Discover Devices
When
Now
Later
Task Name*
Test
Cancel
Start

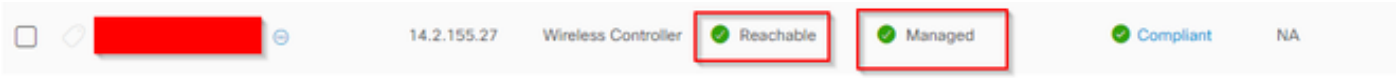


Note: You can schedule the Discovery process for a different time and date.

If everything got configured correctly on Cisco DNA and on the 9800 WLC, then the Discovery can end up looking similar to this:



Make sure to validate that the device is in a **Managed** state in the **Inventory** page:

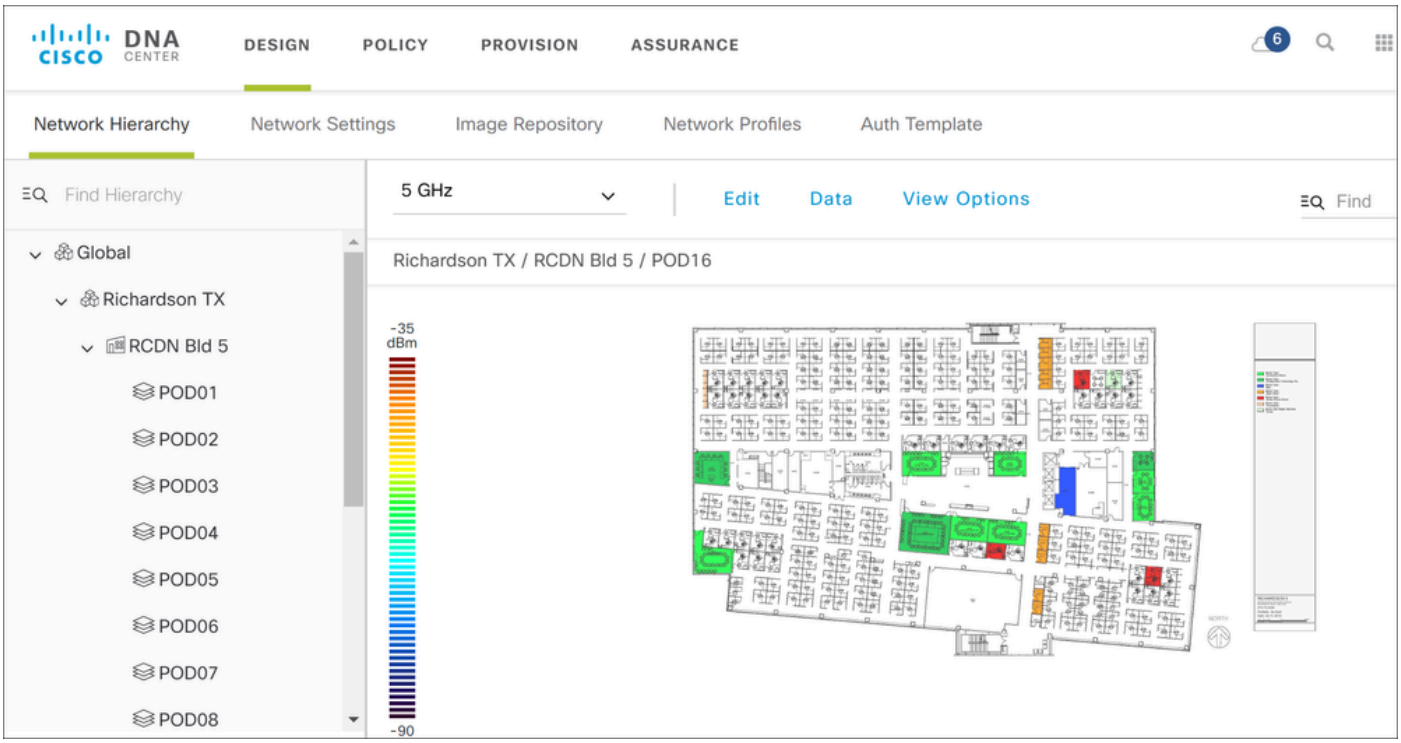


C9800 is now added to Cisco DNA.

Provisioning C9800 via Cisco DNA

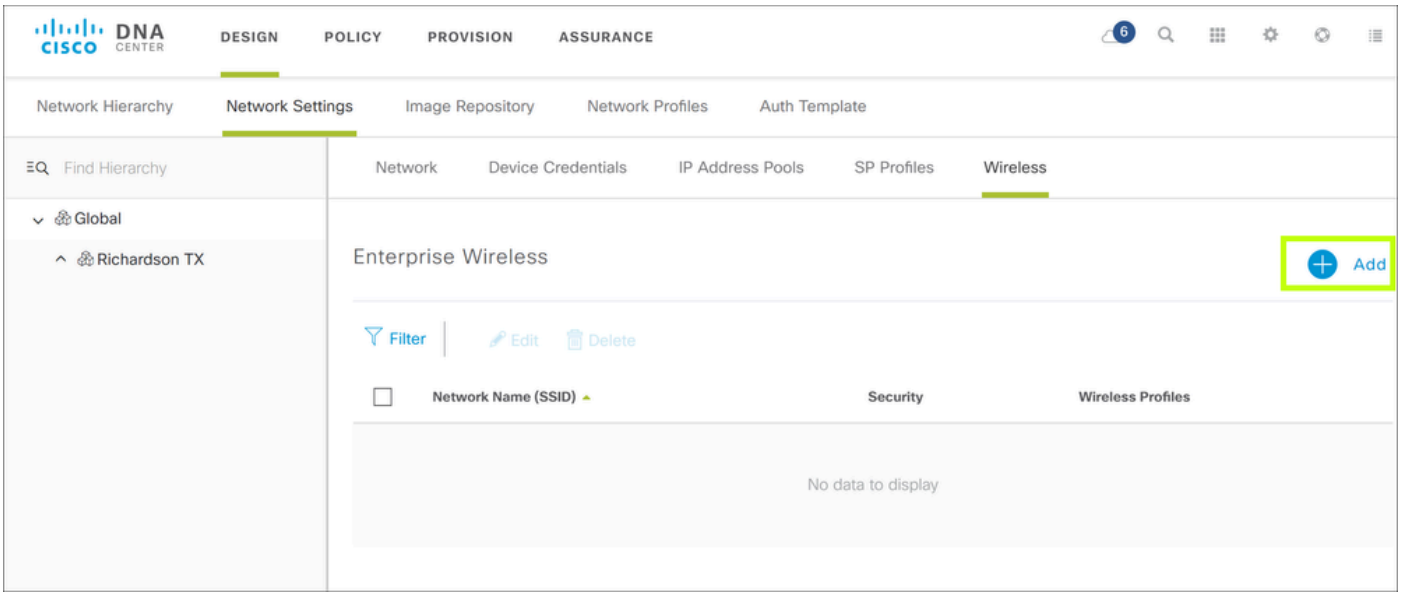
Step 1: Design

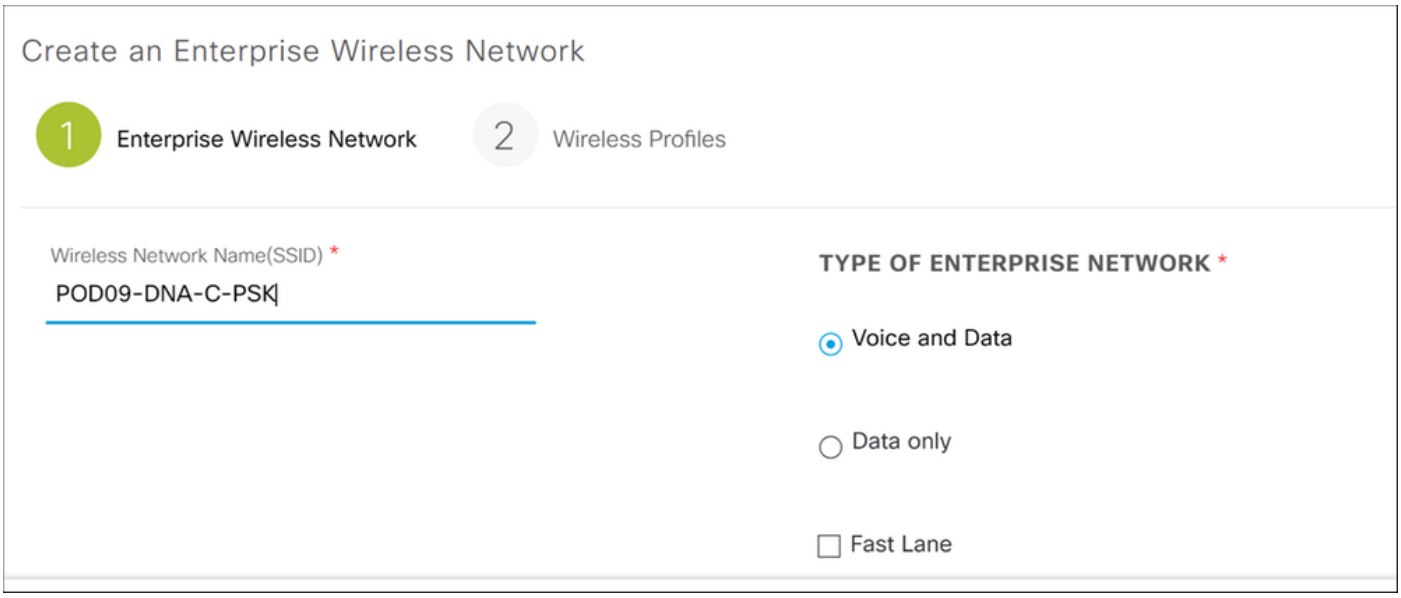
1. From the Cisco DNA Center home page, click the **Design** tab.



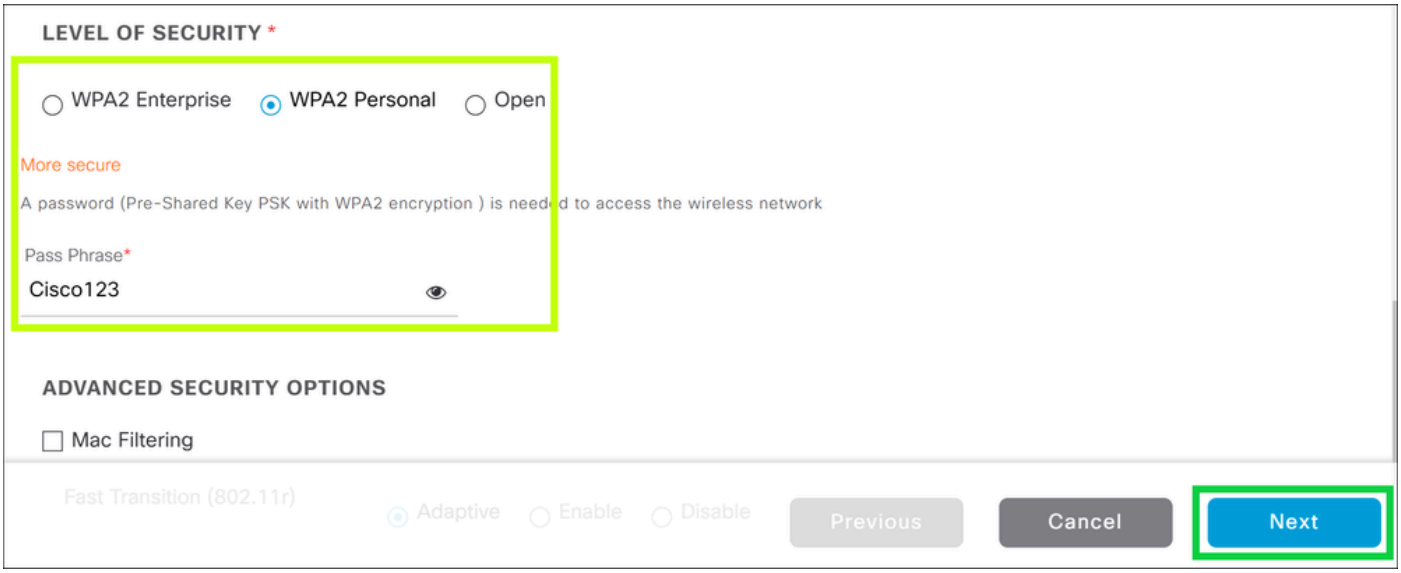
A site map and floor plan has already been added to the Network Hierarchy tab.

2. To add Wireless SSID, click the **Network Settings** tab and navigate to **Wireless** and then click **Add**.

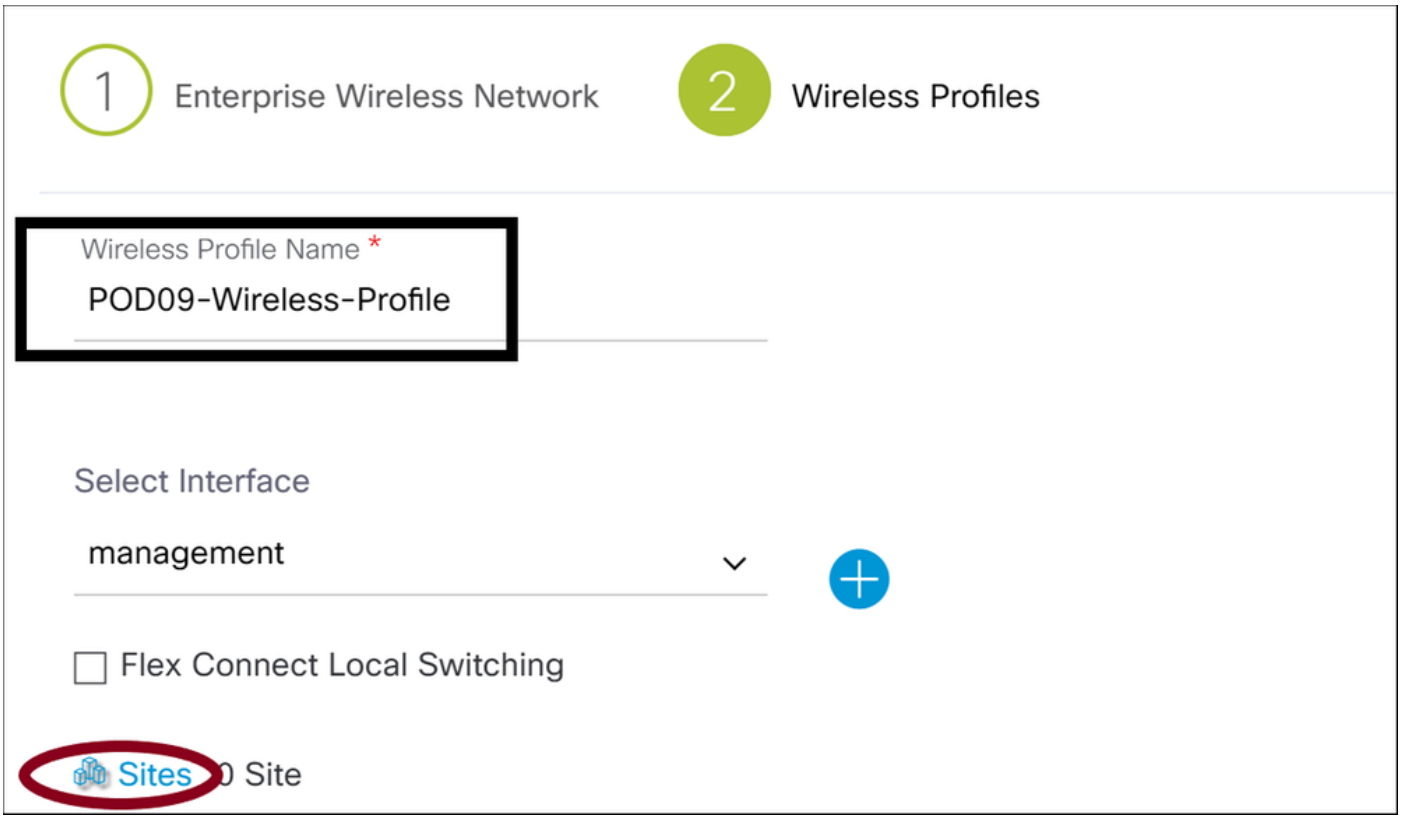




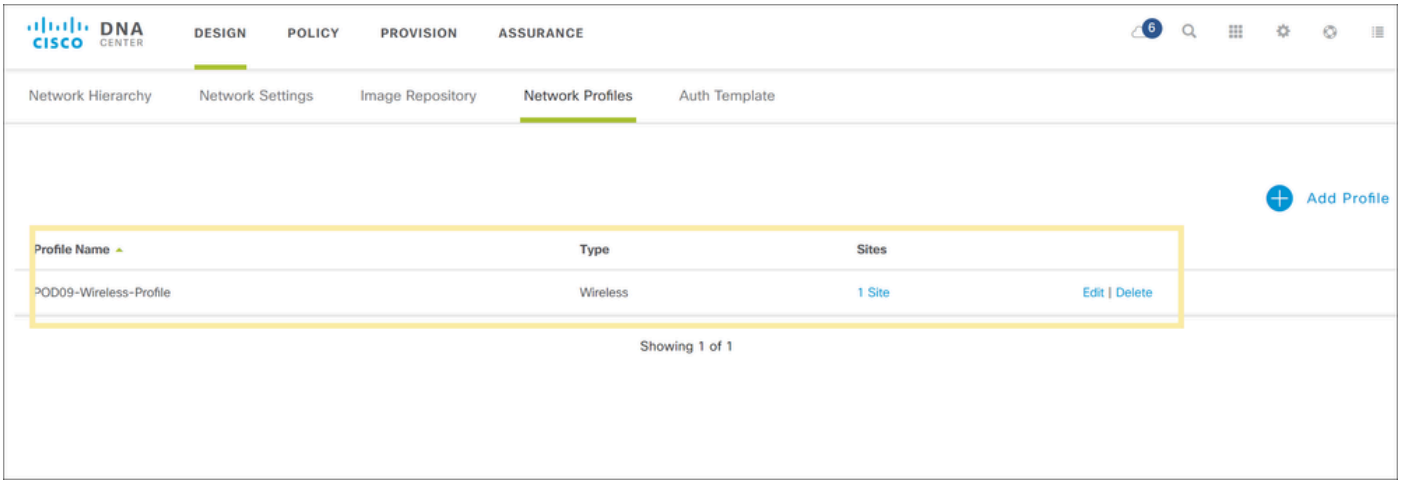
Scroll down to access security settings and configure PSK password.



Click the **Next** tab to bring you to the **Wireless Profiles** tab where you configure your wireless profile to be assigned to the specific site.



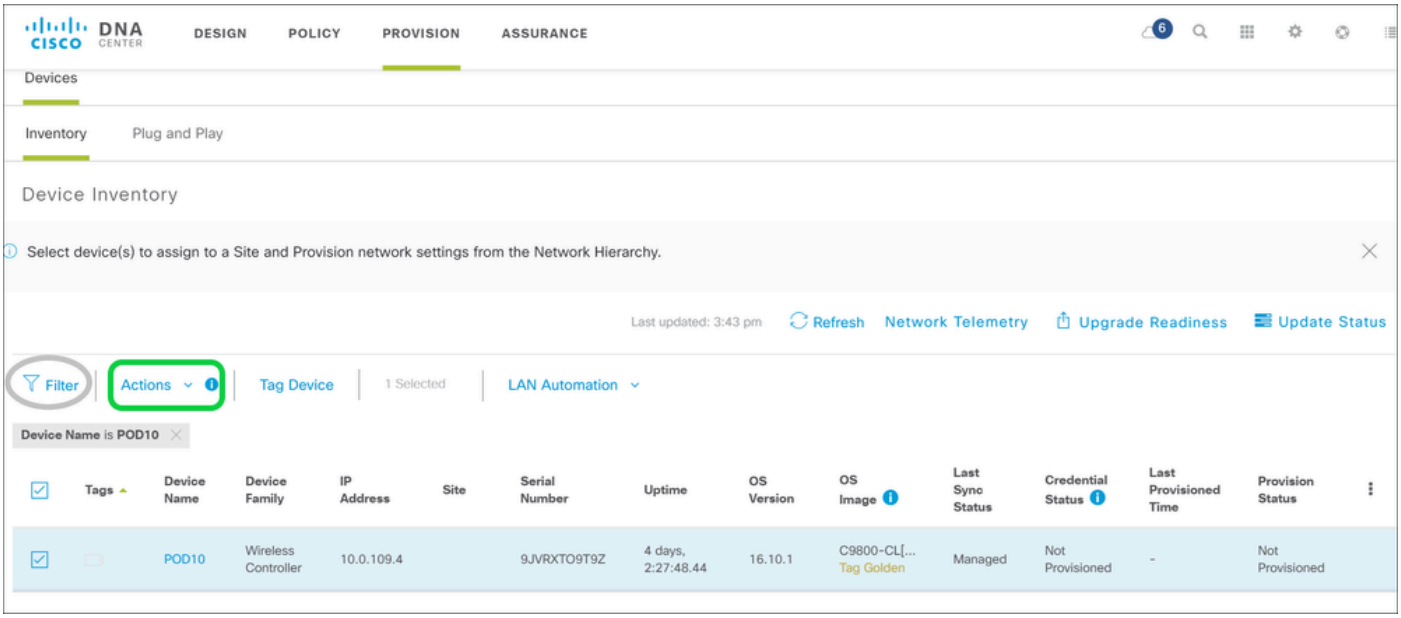
Click the **Finish** button to add both the WLAN and Wireless Policy profiles you just created.



Step 2: Provisioning

Now that the WLAN and profiles have been designed, you can provision them to the respective WLCs. For this, click the **Provision** tab on the top of Cisco DNA Center.

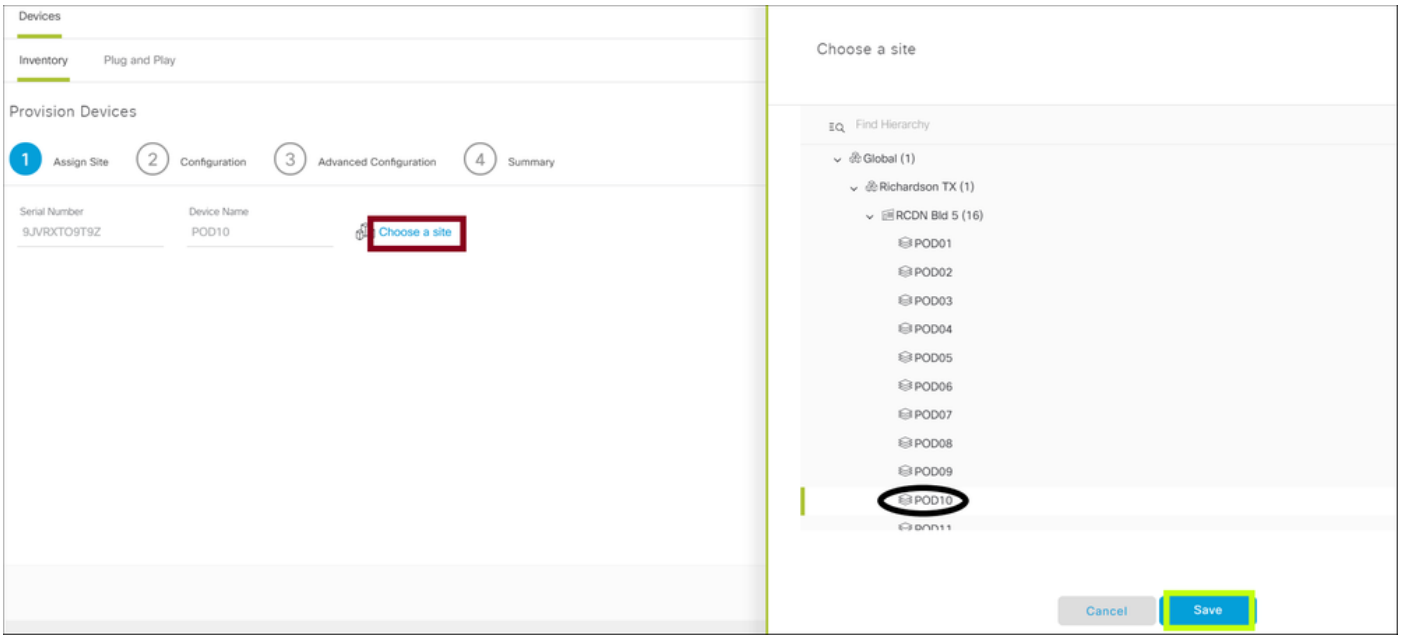
1. On the Provision menu, you can filter for your device name under device inventory **Filter** option.



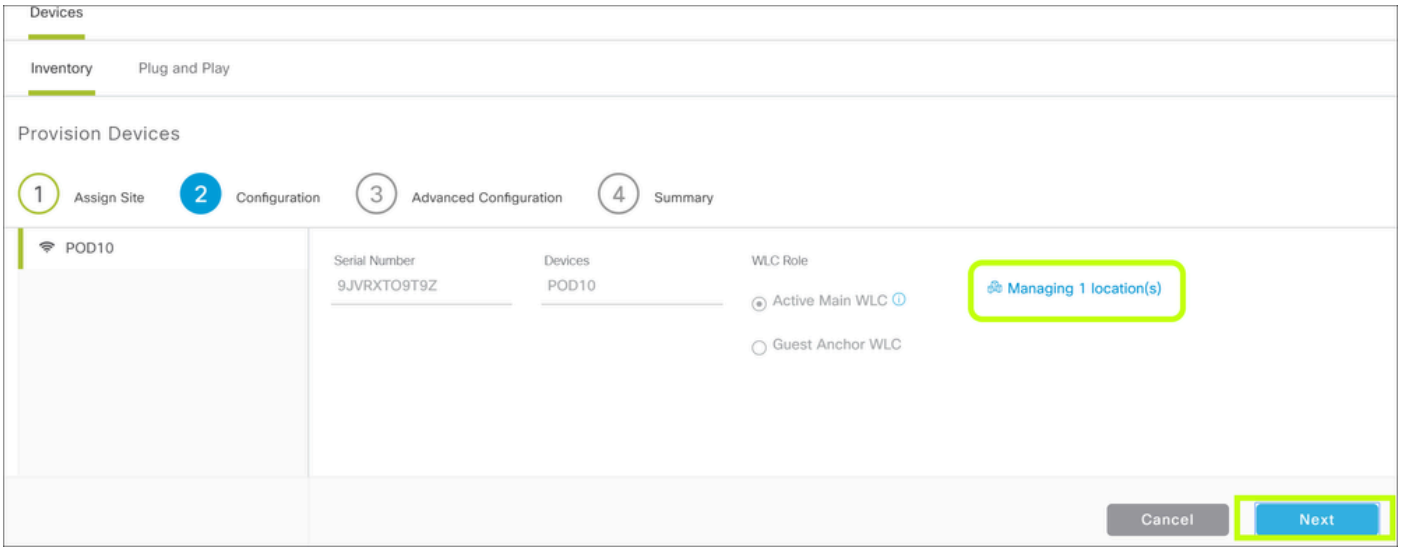
2. Select your WLC and hover over the **Actions** field and navigate to **Provision**.



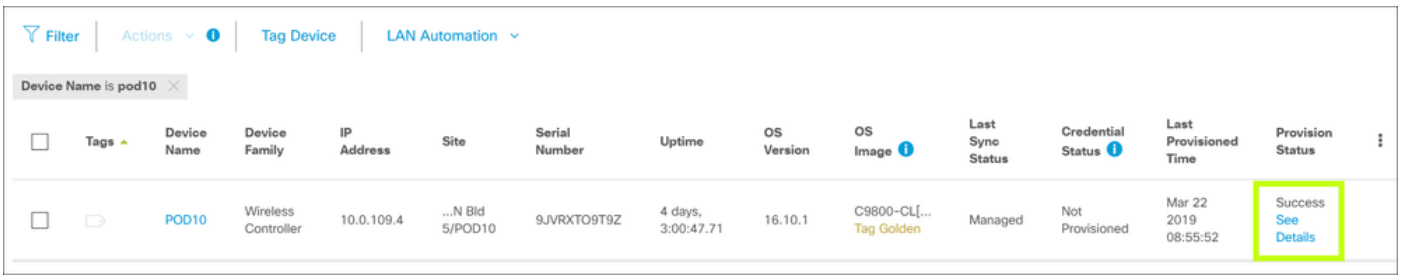
3. Add **device** to your site.



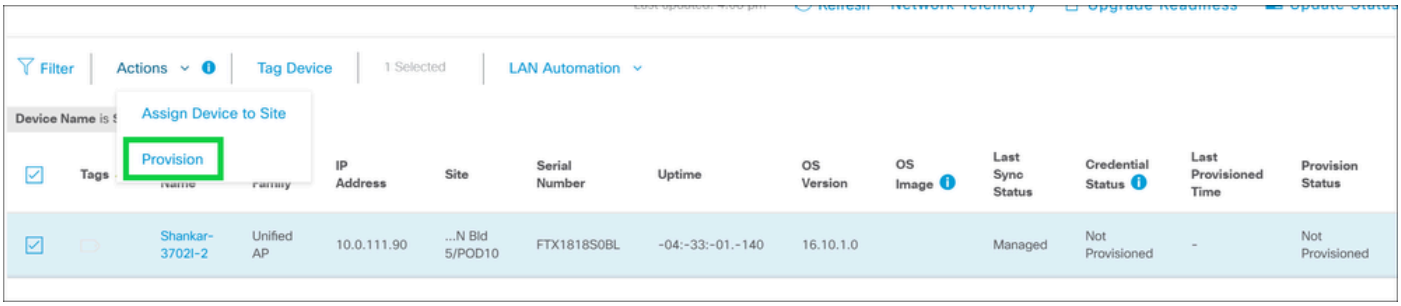
4. In this example, AP and WLC are in same location. You can skip past the configuration and advanced configuration step here and deploy from the summary page.



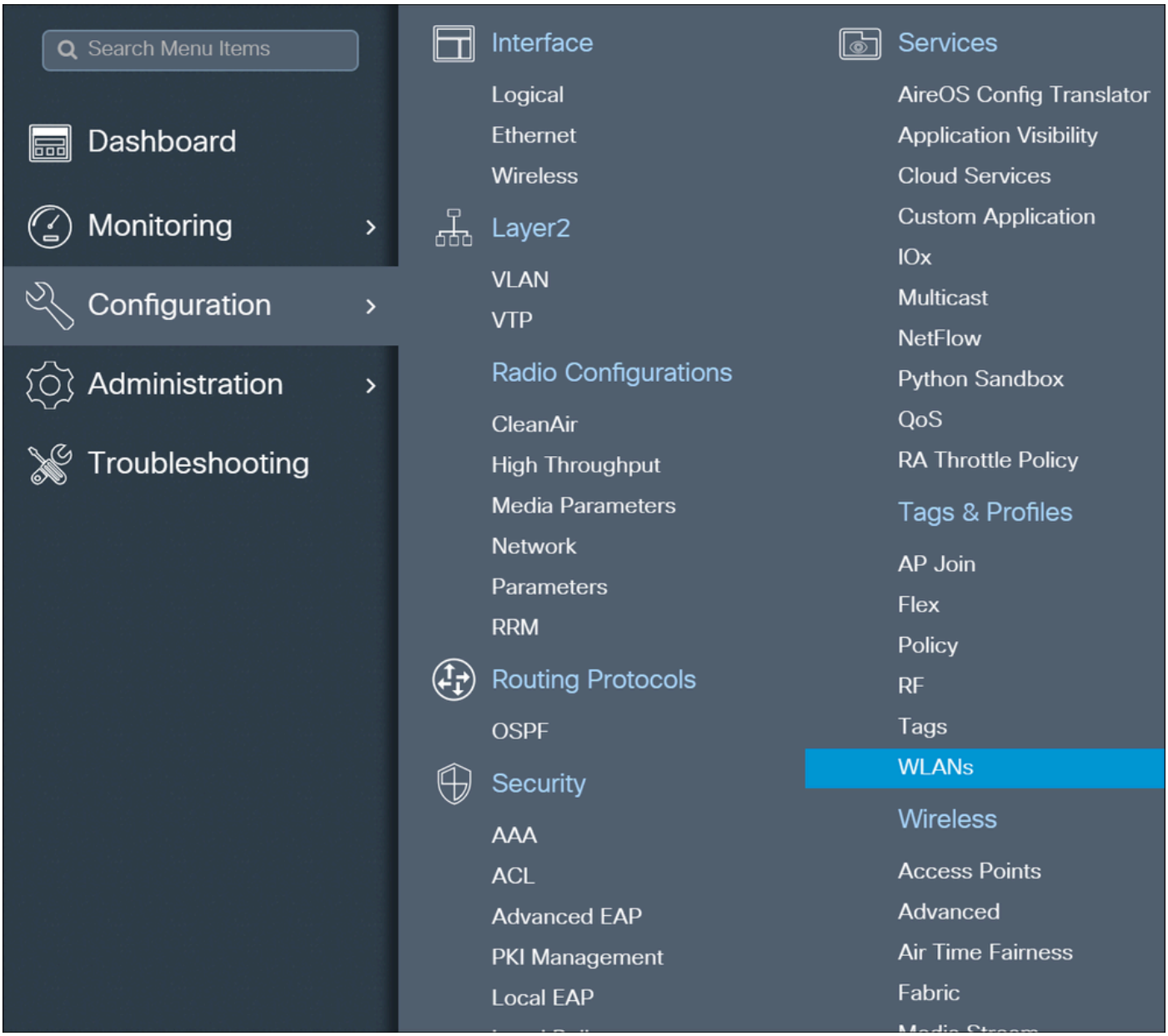
Validate if the provisioning was successful:



5. Next step is to provision your Access Point using same method as above.



6. You can now validate the provisioning status from C9800, navigate to **GUI > Configurations > WLAN**.



You have now successfully provisioned WLC/AP via Cisco DNA.

Troubleshoot

From Cisco DNA Center**sudo rca** from the CLI of each Cisco DNA Center in the cluster;

From C9800 CLI:

Debugs:

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

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

Verifies whether all the processes are running.

If netconf-yang is running, all the processes except gnmib are UP state.