

使用带DNA中心的策略配置Catalyst 9800 WLC智能许可

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简介

本文档介绍通过思科数字网络架构(DNA)中心在气隙Catalyst 9800无线局域网控制器(WLC)上使用策略(SLUP)的智能许可。

先决条件

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

要求

借助DNA中心，在Catalyst 9800 WLC上使用策略(SLUP)的智能许可需要WLC映像版本17.3.2a或更高版本，以及DNA中心版本2.2.1或更高版本。

使用的组件

- 9800 WLC 17.3.3。
- DNA中心2.2.2.5。

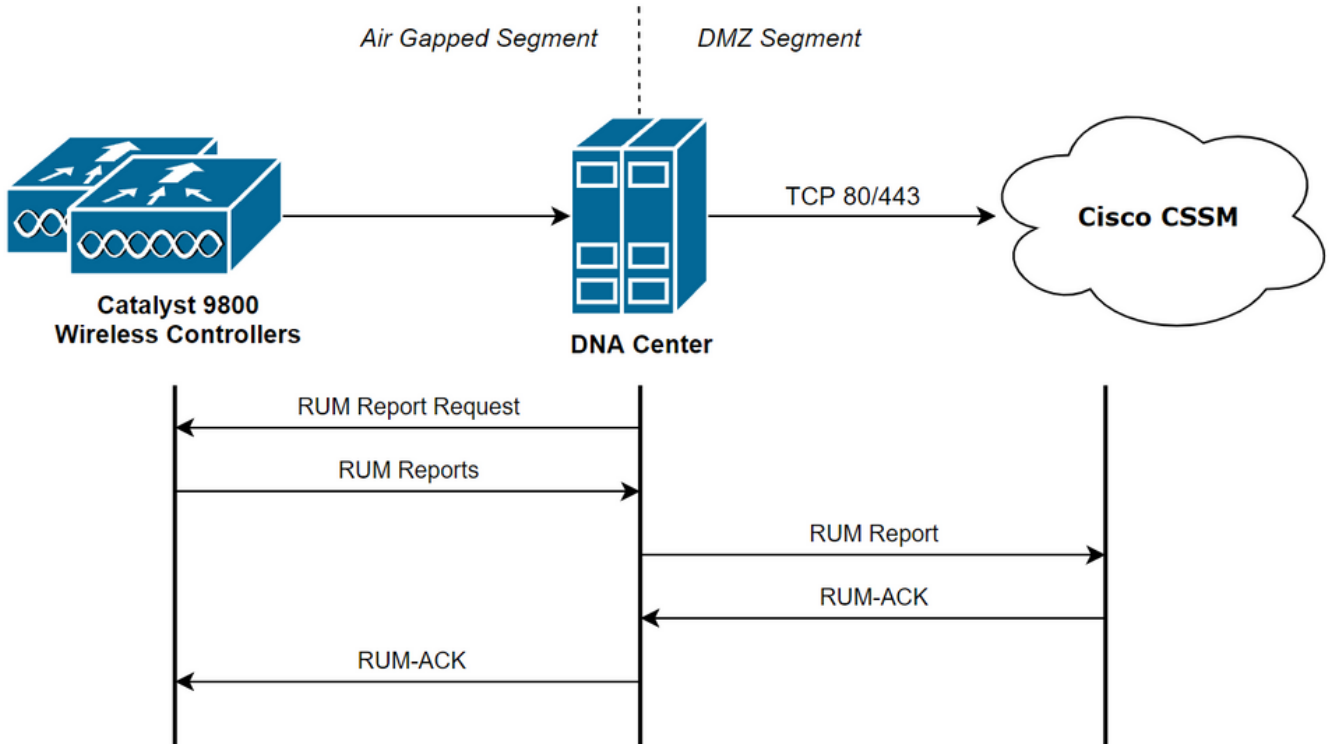
本文档中的信息都是基于特定实验室环境中的设备编写的。本文档中使用的所有设备最初均采用原始（默认）配置。如果您的网络处于活动状态，请确保您了解所有命令的潜在影响。

带DNA中心的SLUP工作流程

与基于AireOS的较旧控制器一样，9800 WLC本身也无需获得许可。您只需许可加入控制器的接入点(AP)。接入点许可证使用情况需要报告给思科的智能许可证服务器（也称为思科智能软件管理器—CSSM）。有几种方法可以实现此目标。在无线企业网络中，WLC通常在没有互联网接入的情况下被气隙隔开。这使得向CSSM报告AP许可证使用情况变得困难。本文假设WLC是气隙的，并且DNA中心可通过TCP端口80和443访问CSSM。

注意：与AireOS WLC不同，未正确许可的9800 WLC即使在评估许可证到期后仍继续运行。

AP加入WLC后，许可证消费信息以RUM/使用报告的形式存储在设备上的安全位置。思科DNA中心从WLC中提取这些报告，并按需或定期将其上传到CSSM。每次RUM报告上传到CSSM时，DNA中心都需要通知WLC。



Catalyst 9800 WLC配置

与9800端所需的许可证相关的配置最少。在WLC上配置许可证级别后，大部分工作由DNA中心处理。

唯一的要求是将WLC添加到DNA中心设备清单并分配到站点。

由于9800部署中唯一需要许可证的是加入的接入点，**确保至少有1个AP加入WLC。**

选择“更改无线许可证级别”按钮时，可以在WLC Web界面的“许可”菜单下更改许可证级别：

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 | |
| No licenses in use | | Reload | |

许可证级别可以设置为基本级别或优势级别。AIR网络许可证和AIR DNA许可证的级别必须相同。更改许可证级别需要重新加载。

Change Wireless License Level
✕

| License Type | Current Level | Next Reload Level |
|---------------------|-----------------------|---|
| AIR Network License | air-network-advantage | <div style="border: 1px solid #ccc; padding: 2px; display: flex; align-items: center;"> air-network-advantage ▼ </div> |
| AIR DNA License | air-dna-advantage | <div style="border: 1px solid #ccc; padding: 2px; display: flex; align-items: center;"> air-dna-advantage ▼ </div> |

↶ Cancel

📄 Save & Reload

📄 Save without Reload

在将WLC添加到DNA中心之前，请确保：

1. WLC必须通过其无线管理接口添加到DNA中心。其他带外管理接口（如GigabitEthernet0）不能使用
2. WLC需要配置2个aaa命令：

```
aaa authorization exec default
```

3. 需要启用NetCONF协议（默认使用端口830）
4. 需要启用简单网络管理协议(SNMP)，并且需要在WLC上配置社区/用户
5. WLC无线管理接口和DNA中心需要能够通过端口161/162(SNMP)、830(NetCONF)和20830（遥测）进行通信

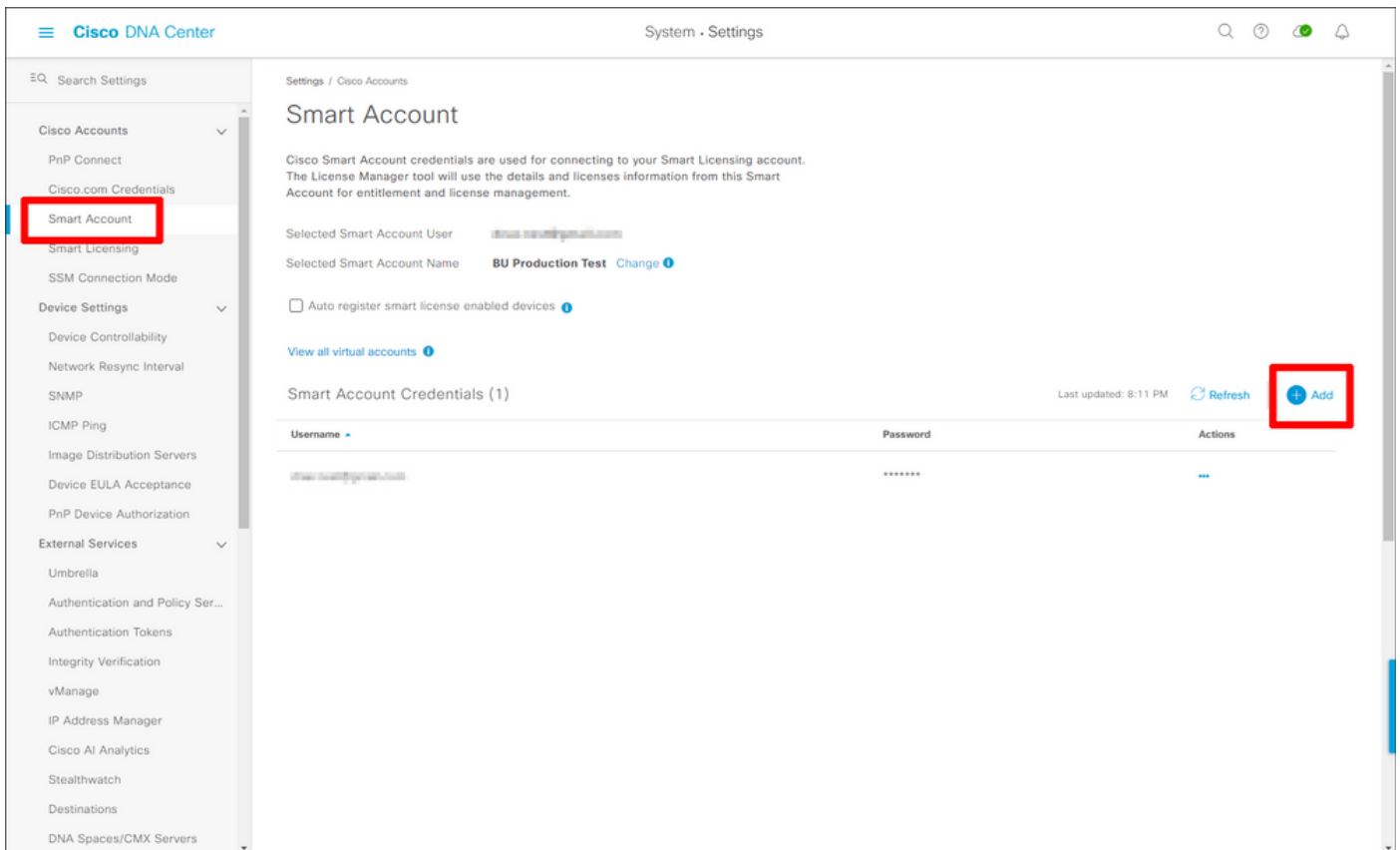
有关WLC和DNA中心集成的其他信息，请参阅本文

：<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

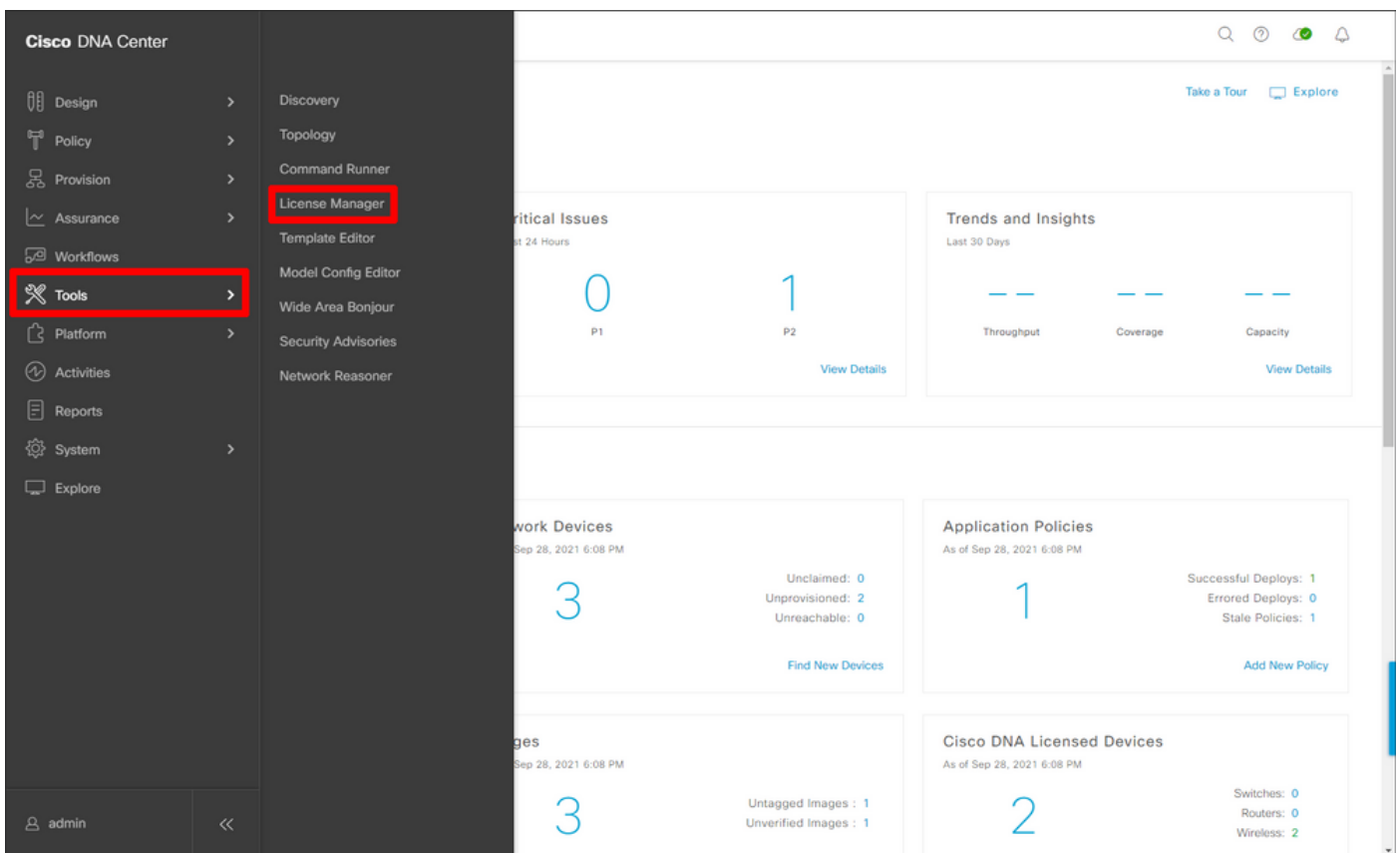
配置智能帐户详细信息

在配置许可之前，需要将智能帐户凭证添加到DNA中心。在DNA Center Web界面中，导航至 **System > Settings > Cisco Accounts > Smart Account**。添加思科智能帐户的凭证：



配置许可证管理器

在DNA Center Web界面中，导航至Tools > License Manager。



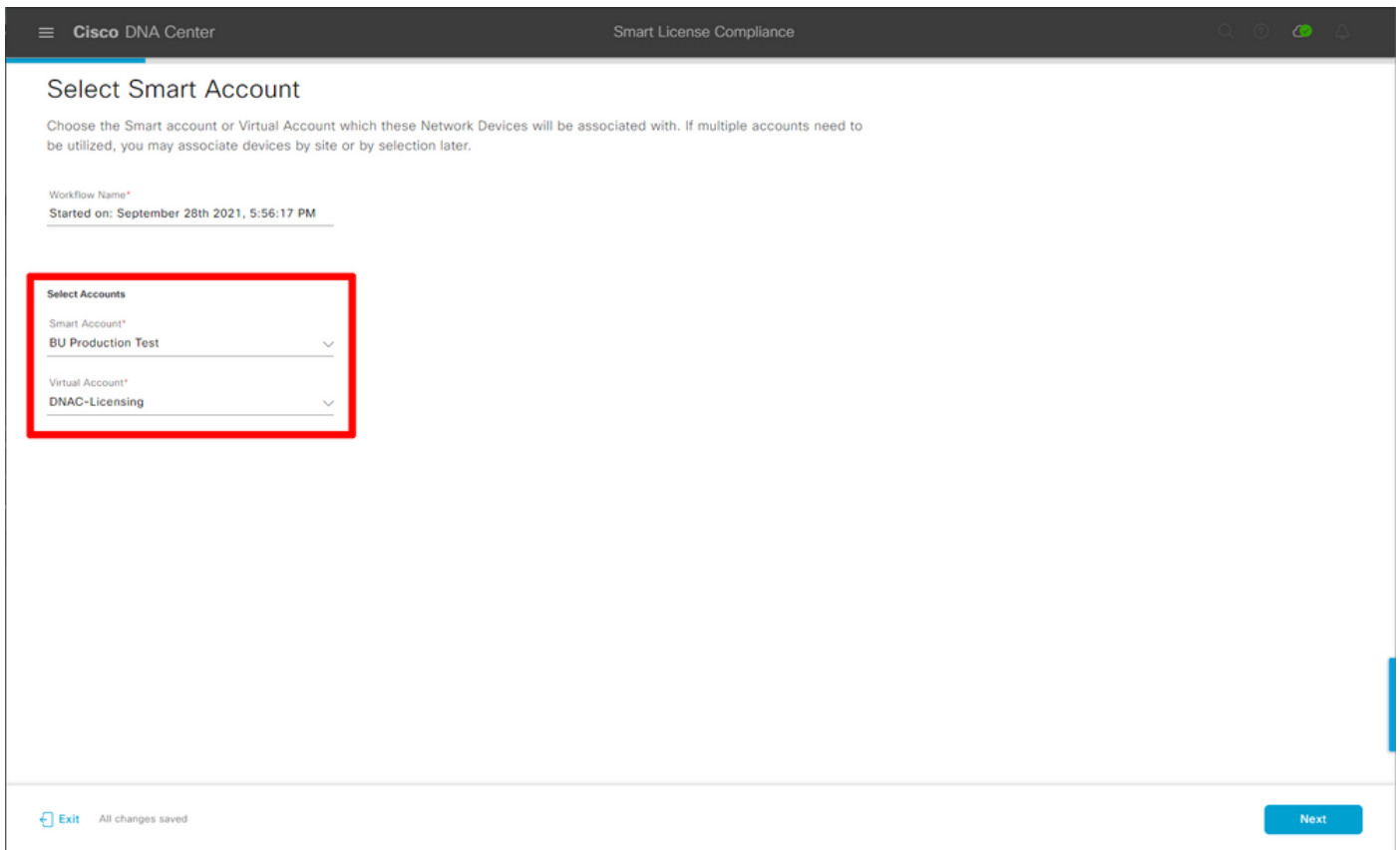
导航至“报告和合规性”选项卡，然后选择“智能许可合规性”工作流：

The screenshot shows the Cisco DNA Center interface. The top navigation bar includes 'Cisco DNA Center' and 'Tools - License Manager'. The main menu has 'Overview', 'All License', 'Reporting & Compliance' (highlighted with a red box), and 'Notifications'. The 'Reporting & Compliance' section displays a 'LICENSE SUMMARY - Total Licenses Purchased 6754' with three categories: ESSENTIALS (3429 Total Licenses, 3150 About to Expire, 914 Out of Compliance), ADVANTAGE (3325 Total Licenses, 3125 About to Expire, 12 Out of Compliance), and PREMIER (0 Total Licenses, 0 About to Expire, 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 workflow section is a table titled 'Smart License (1)' with columns for Device Name, Device Family, Device Series, IP Address, Software Version, Cisco DNA License, and Cisco DNA License Expiry. The table contains one entry: WLC 2 APs, Wireless Controller, Cisco Catalyst 9800 Wireless Controllers for Cloud, 10.48.39.133, 17.3.3, Advantage, NA.

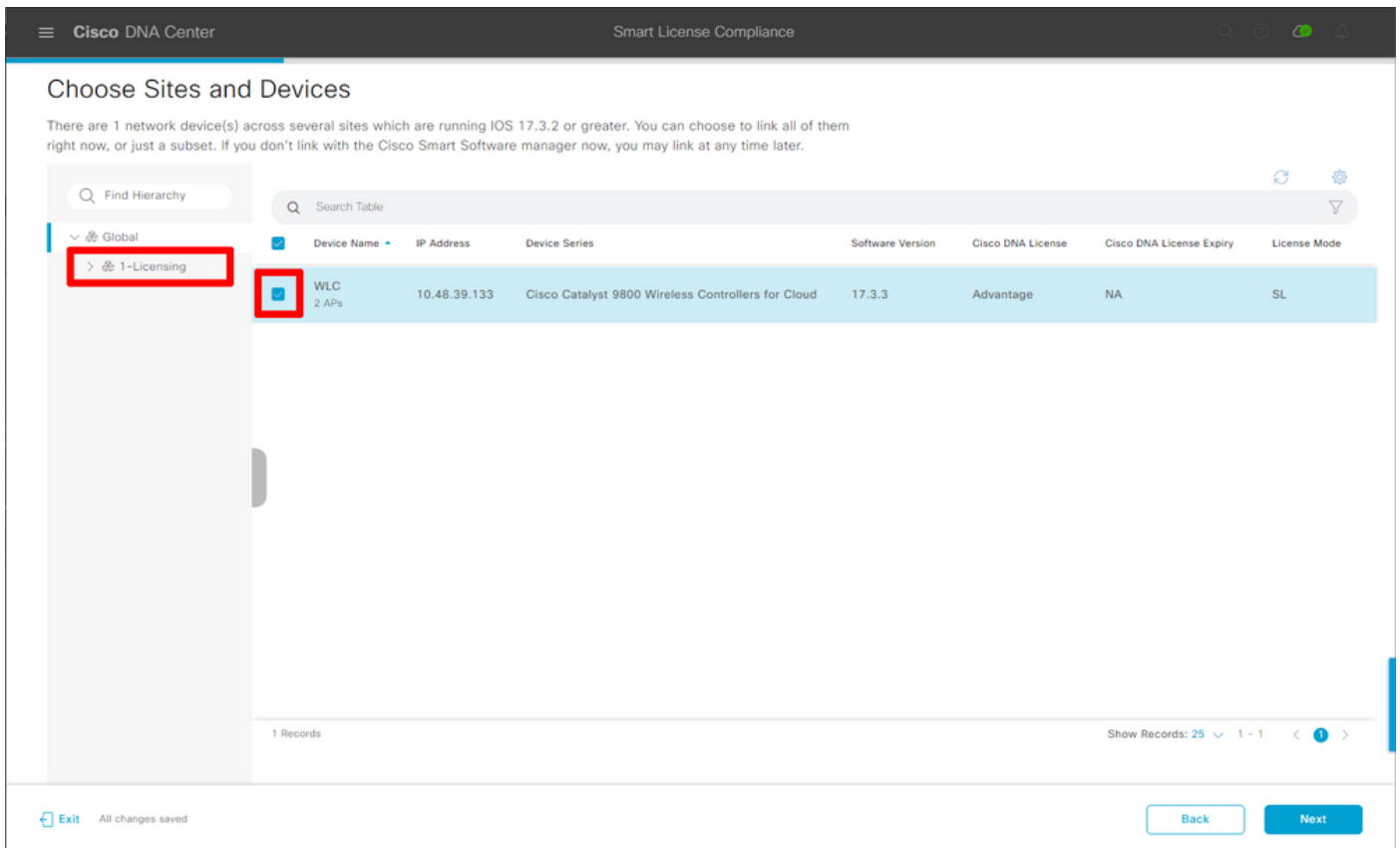
系统随即会弹出指导式工作流程向导。要开始，请选择“我们执行”。

The screenshot shows the same Cisco DNA Center interface as above, but with a 'Smart License Update' dialog box overlaid. The dialog box has a title 'Smart License Update' and a message: 'In an effort to simplify your organizations licensing structure, we have enhanced licensing capabilities across Cisco.' Below the message is a 'Let's Do It' button, which is highlighted with a red box. There are also navigation arrows and a 'Don't show this to me again' checkbox. The background interface is dimmed.

在下一步中，选择要使用的智能帐户和虚拟帐户。单击 Next (下一步) 继续。



选择站点并检查DNA中心要许可的所有WLC:



报告间隔可在此处修改。默认值为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](#)

最后一页提供许可证使用情况排入队列并报告给CSSM的所有数据和设备的摘要：

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](#)

单击Next开始同步许可证使用数据并观察实时状态。完成同步并从CSSM云获取确认至少需要4分钟

o

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

绿色表示成功。选择Finish以完成工作流：

Cisco DNA Center Smart License Compliance

Overall Sync Progress

- Fetching Usage Report

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

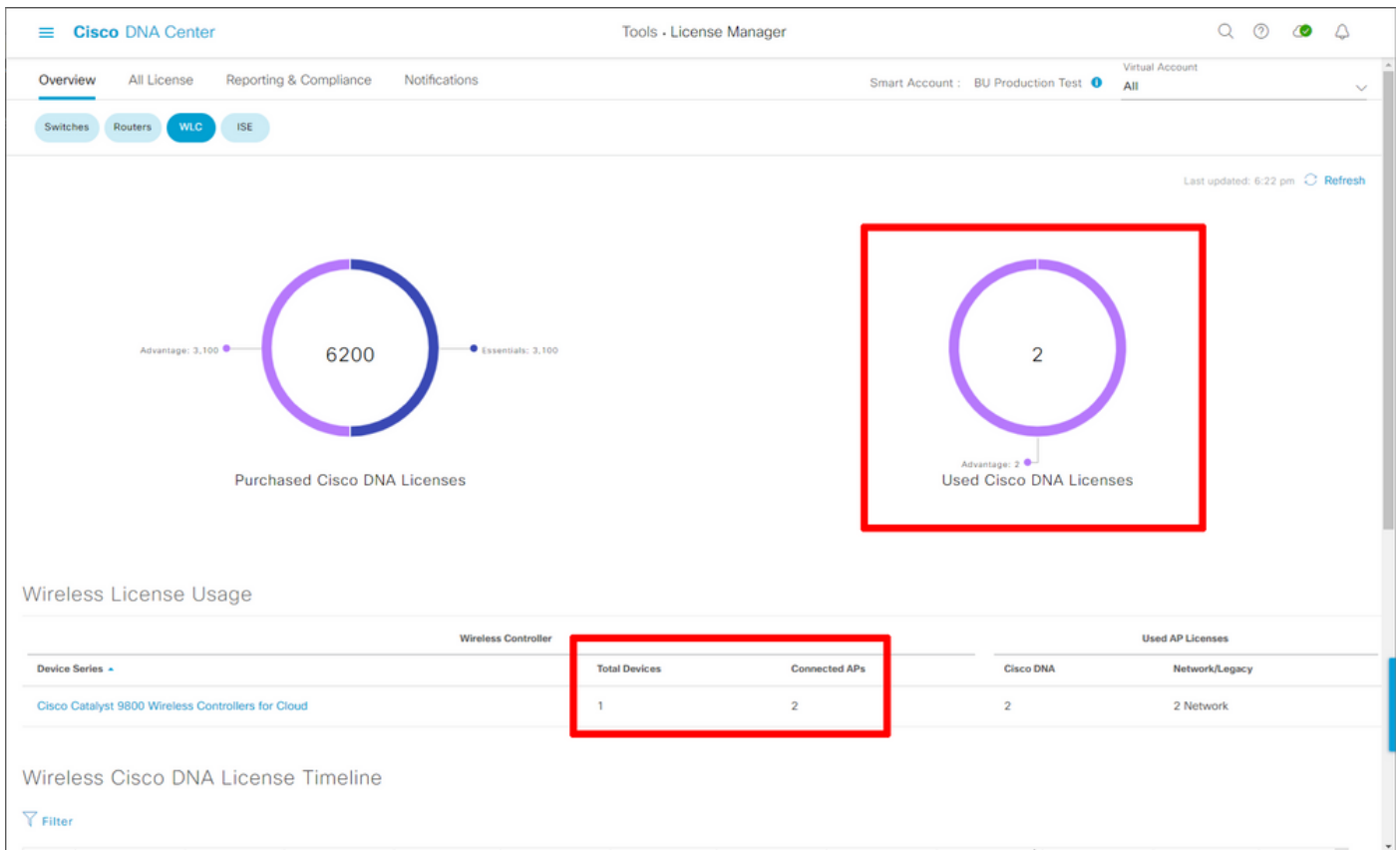
| Device | Status |
|-------------------|---|
| WLC(10.48.39.133) | Usage consumption reports uploaded to Cisco SSM Cloud and received acknowledgement from Cisco SSM Cloud |
- Provisioning Acknowledgement

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

Exit All changes saved Finish

确认

许可证管理器页面的“概述”选项卡显示当前许可证消耗：



在Catalyst 9800端，导航至Licensing > Service Settings，并验证连接模式是否设置为Air Gap:

Licensing

General **Service Settings** Policy Attributes

CSSM Connectivity

Connection Mode

Air Gap

Air Gap Feature

ENABLED