

排除Catalyst Center许可使用案例和工作流程故障

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简介

本文档介绍经常遇到的各种Cisco Catalyst Center许可方案。

先决条件

要求

本文档没有任何特定的要求。

使用的组件

本文档不限于特定的软件和硬件版本。

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。

背景信息

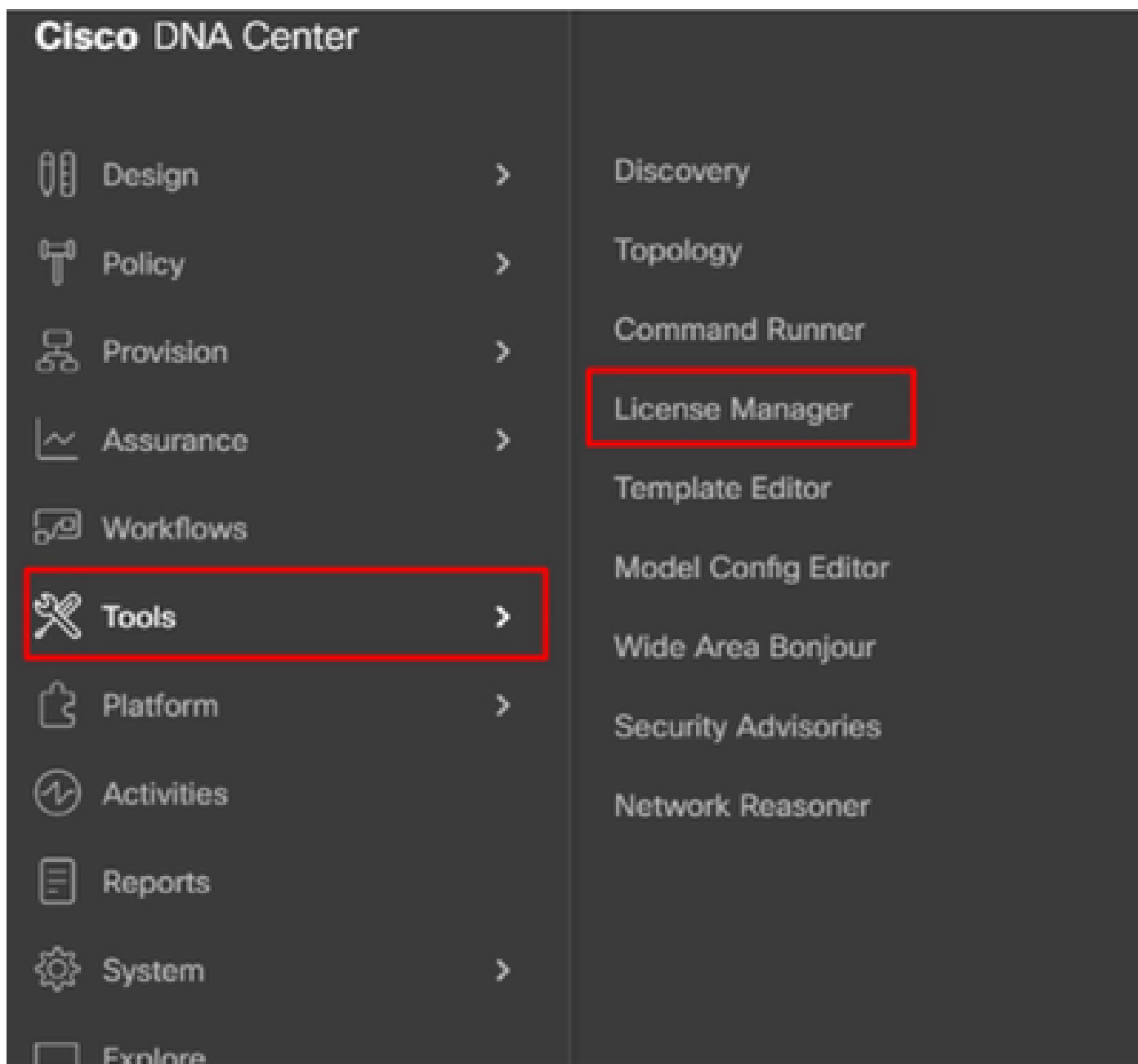
本文档提供有关如何使用Cisco Catalyst Center (以前称为DNA Center) 的许可证管理器工作流程进行设备许可证注册、通过CSSM在虚拟帐户之间迁移许可证等的分步详细信息。

场景

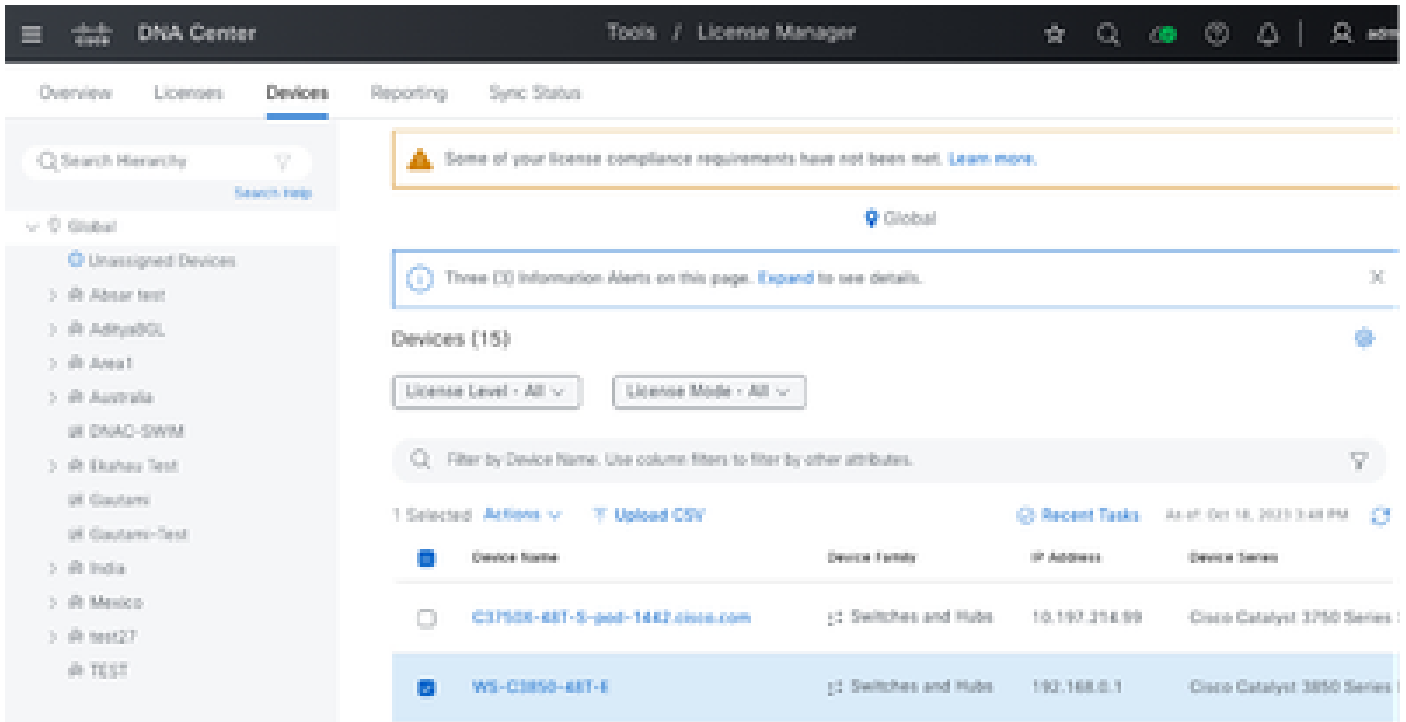
场景1：通过Cisco Catalyst Center License Manager注册设备许可证：传统方法

步骤1:通过管理员凭证或具有超级管理员权限的自定义角色登录到Cisco Catalyst Center。

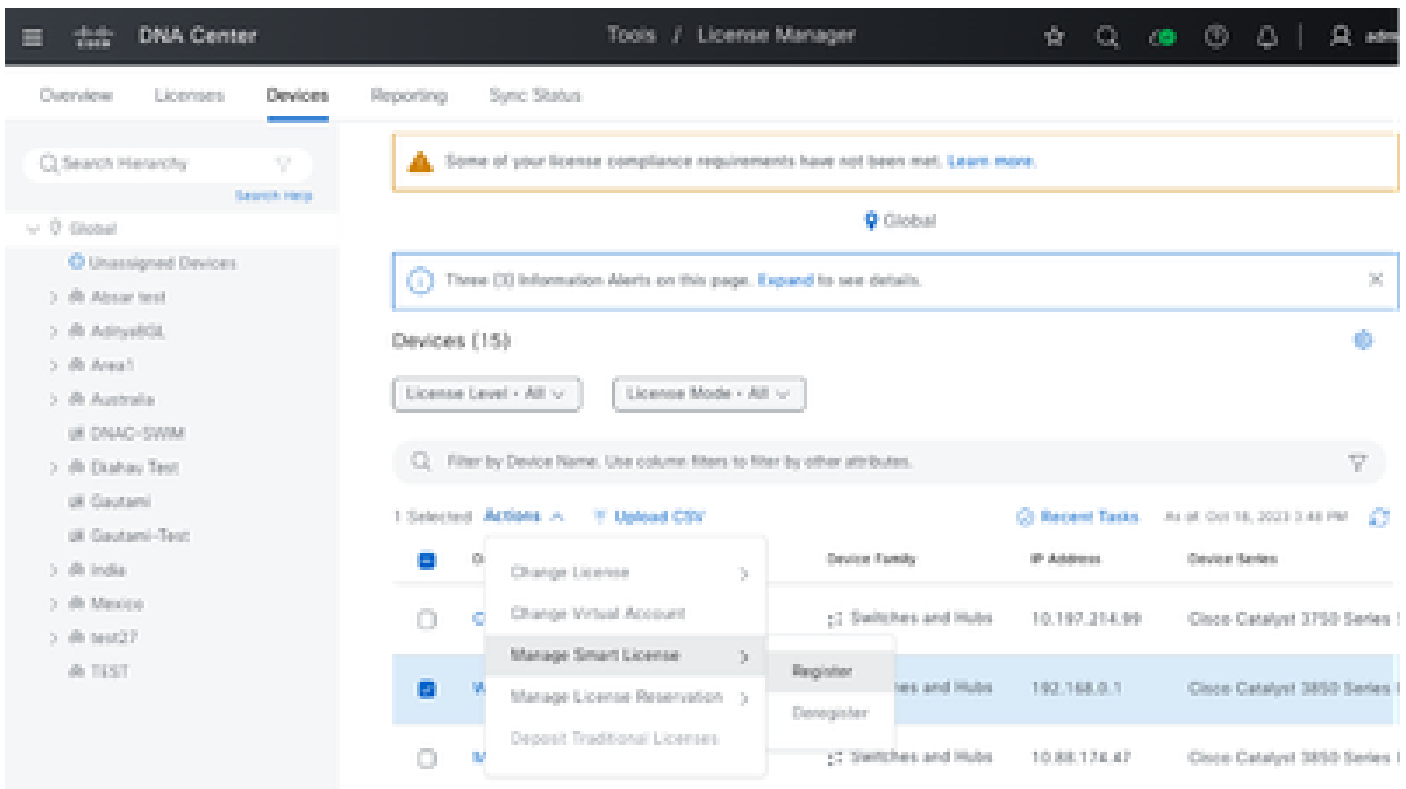
第二步：导航到汉堡，然后选择工具 > License Manager。



第三步：选择Devices选项卡并使用Filter选项或滚动浏览表以查找要注册其许可证的设备。



第四步：选中要注册其许可证的每个设备旁边的复选框，然后选择操作>管理智能许可证>注册。



第五步：选择存放相应许可证的虚拟帐户，然后单击继续。

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

第六步：Cisco Catalyst Center会提示是立即应用更改还是稍后应用更改。选择所需的选项并单击Confirm。

Register Smart License

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

Now Later

Task Name*

License mode update

Cancel

Confirm

场景2：通过Cisco Catalyst Center许可证管理器注册设备许可证：CSLU报告工作流程

- 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

先决条件

思科Catalyst中心

- Cisco Catalyst Center必须在版本2.2.1.0及更高版本上运行。
- Cisco Catalyst Center必须能够与CSSM门户通信，并且能够访问tools.cisco.com。
- 必须在Catalyst Center上选择正确的SSM连接模式。自Catalyst Center 2.3.5.5版起，CSLU工作流程不适用于本地CSSM（卫星服务器）。
- CSLU工作流程不适用于AireOS无线控制器（型号：3504、5520、8540）。

网络设备

- 设备必须运行在Cisco IOS® XE 17.3.2或更高版本上，并且闪存中必须有足够的空间来提供Rum报告。
- 设备必须已配置netconf-yang型号，并且Cisco Catalyst Center必须能够通过Netconf端口830与设备通信。

要验证，请执行以下操作：

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

i.在Cisco Catalyst Center上发现设备期间，必须启用凭据部分下的Netconf参数。

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 add enter a job-specific port or a global port.

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

EXISTING GLOBAL NETCONF PORT

830

ii.如果在设备发现时未启用Netconf参数，请使用Cisco Catalyst Center资产清单中的编辑设备选项启用该参数。

Edit Device ✕

Credentials	Management IP	Resync Interval	Device Role
<div style="margin-bottom: 10px;"> > SNMP* </div> <hr/> <div style="margin-bottom: 10px;"> > SNMP Retries and Timeout* </div> <hr/> <div style="margin-bottom: 10px;"> > HTTP(S) </div> <hr/> <div style="margin-bottom: 10px;"> v NETCONF </div> <div style="margin-bottom: 10px;"> Port <input style="width: 100%;" type="text" value="830"/> </div> <div style="margin-bottom: 10px;"> Hint </div> <div style="font-size: 0.9em;"> <p>● 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>			

- 设备必须安装sdn-network-infra-iwan信任点；此操作由Cisco Catalyst Center完成。

要验证，请执行以下操作：

show crypto pki trustpoint sdn-network-infra-iwan (用于检查信任点)

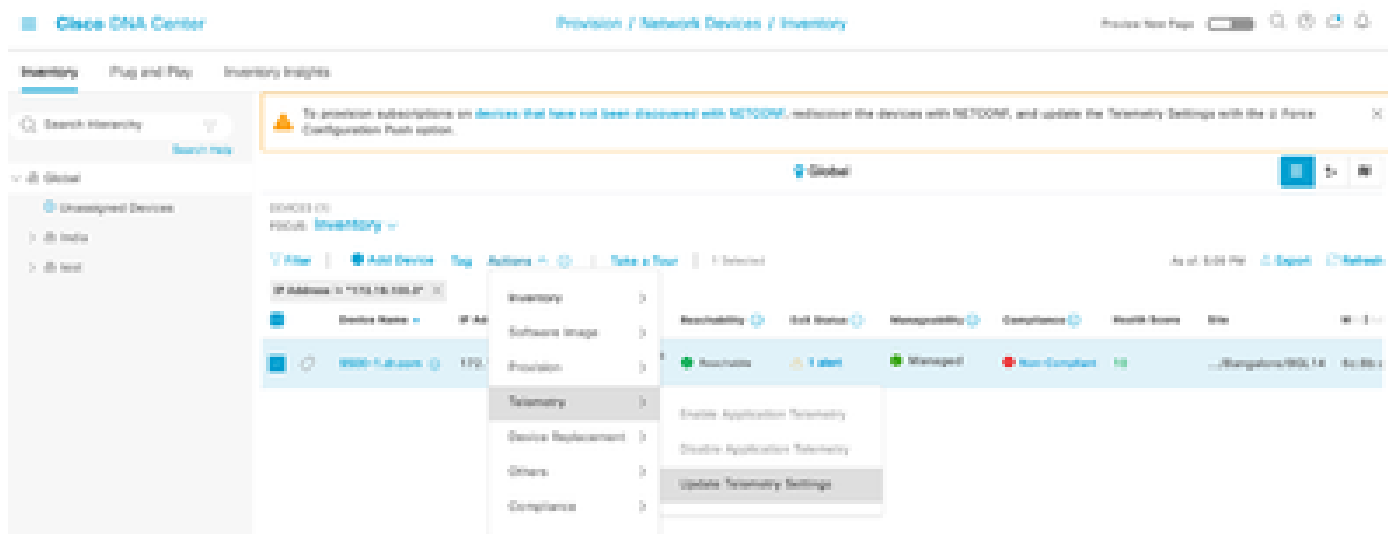
show crypto pki certificates verbose sdn-network-infra-iwan (用于详细检查信任点)

- 如果未安装sdn-network-infra-iwan信任点，请执行以下步骤：

步骤1:通过管理员凭证或具有超级管理员权限的自定义角色登录到Cisco Catalyst Center。

第二步：导航到汉堡，然后选择调配>库存。

第三步：选择要安装信任点的设备，点击操作>遥测>更新遥测设置。



第四步：选择Force Configuration Push并单击Next

Update Telemetry Settings



Force Configuration Push

GLOBAL/INDIA/BANGALORE/BSL14

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

第五步：选择Now，然后单击Apply。这对生产没有影响。

Update Telemetry Settings ✕

Now Later

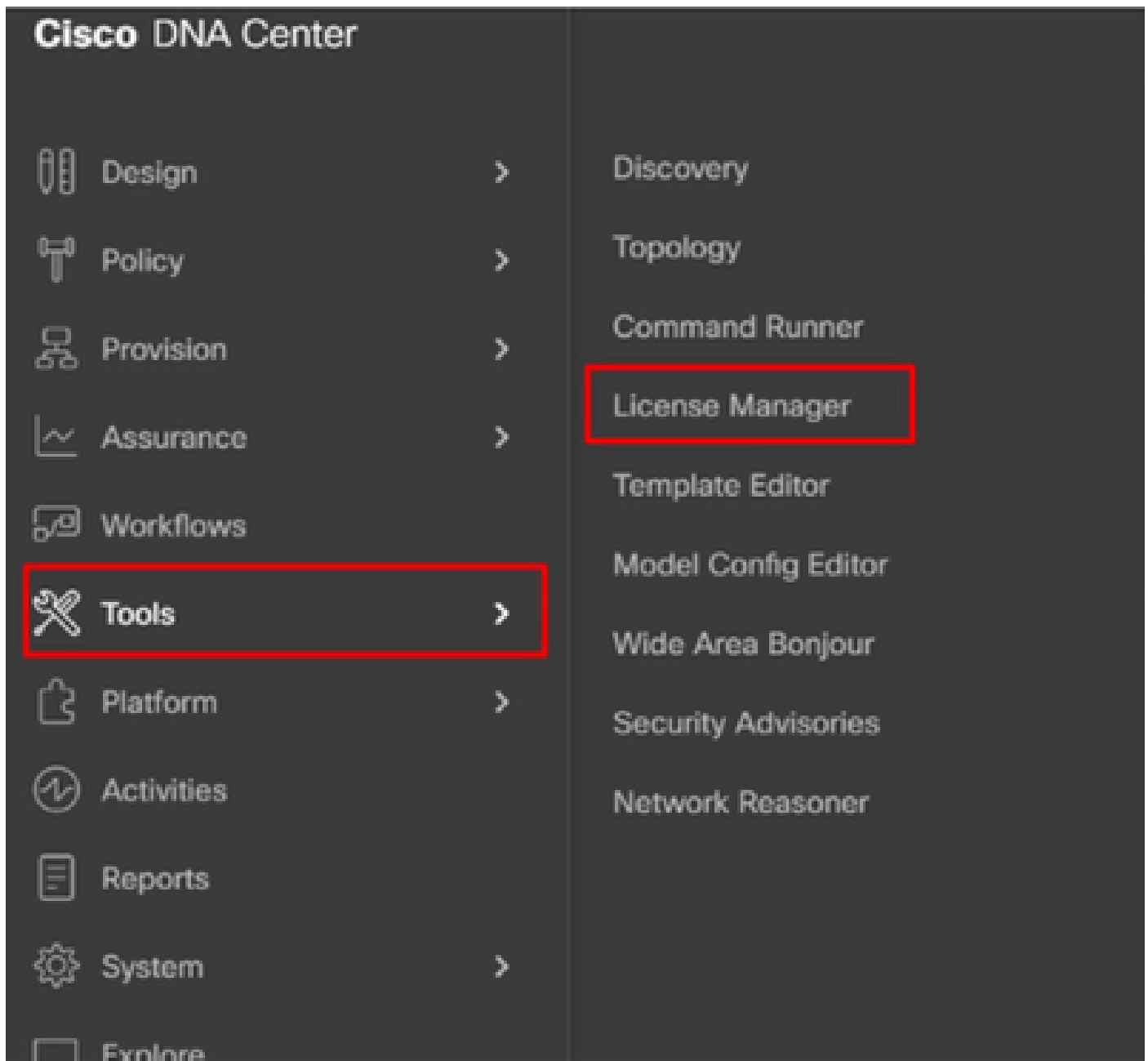
Generate configuration preview
Creates preview which can be later used to deploy on selected devices. View status in [Work Items](#)

Task Name*
Update Telemetry Settings Task

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

如果满足所有前提条件，则执行以下后续步骤以执行报告工作流程：

步骤1:通过管理员凭证或具有超级管理员权限的自定义角色登录到Cisco Catalyst Center。



第二步：导航到汉堡，然后选择工具>许可证管理器。

第三步：选择报告选项卡并找到智能许可证合规性Dashlet；点击Dashlet以启动 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.

第四步：选择存储设备许可证的智能帐户和虚拟帐户，然后单击下一步。

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)	>

[Edit](#) All changes saved [Save](#)

第五步：选择要报告其许可证利用率的设备。

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 Help

Search Sites

Device Name	Device Family	Device Series	IP Address	Software Version	Cisco PAK License	Last Report
9500-1.dh.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.dh.com	Routers	Cisco 9500 Series Integrated Services Routers	172.16.100.2	17.3.2	NA	November 16, 2023 6:06 AM
9500-2.dh.com	Routers	Cisco 9500 Series Integrated Services Routers	172.16.100.10	17.6.4	NA	NA
9500-1000-2.dh.com	Switches and Hubs	Cisco Catalyst 9500 Series Switches	172.16.100.6	17.3.0	Advantage	NA
9500-1000-2000.dh.com	Switches and Hubs	Cisco Catalyst 9500 Series Switches	172.16.100.7	17.6.1	Advantage	NA
9500-1000-2000.dh.com	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

第六步：如果需要，请修改报告间隔。

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](#)

COSM POLICY

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

步骤 7.查看设备摘要并点击下一步以触发报告。

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 COSM. 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.dh.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(172.19.180.3)	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(172.19.180.3)	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

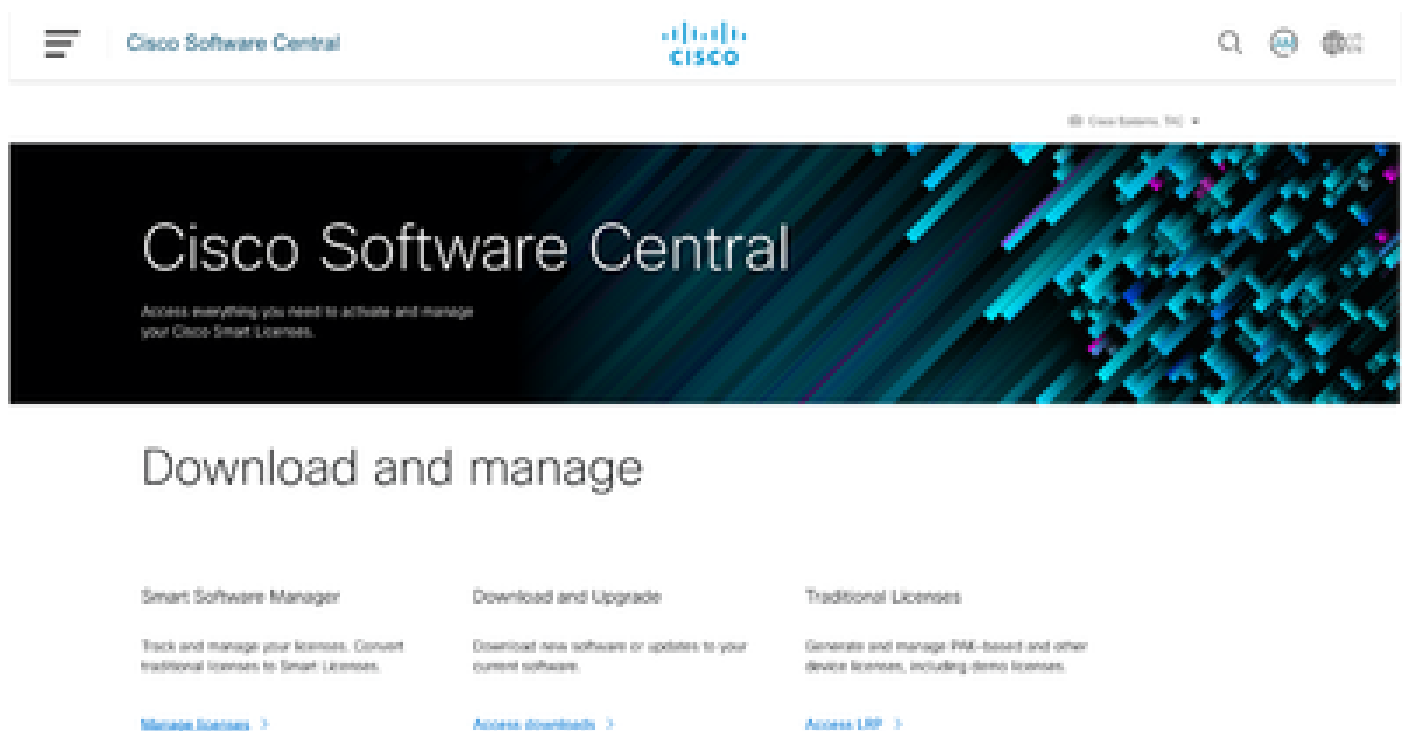


- 1. Fetching Usage Report
- 2. Uploading Usage Report
- 3. Provisioning Acknowledgement

场景3：虚拟帐户之间的许可证迁移

步骤1:通过管理员凭证或具有超级管理员权限的自定义角色登录到Cisco Catalyst Center。

第二步：登录software.cisco.com并选择Manage Licenses。

The screenshot shows the Cisco Software Central website. The header includes the Cisco logo and navigation icons. The main content area features a large banner with the text "Cisco Software Central" and a sub-headline "Download and manage". Below the banner, there are three columns of information: "Smart Software Manager" (with a "Manage Licenses" link), "Download and Upgrade" (with an "Access downloads" link), and "Traditional Licenses" (with an "Access LRP" link).

第三步：导航到资产并选择源虚拟帐户。

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

General | License

Virtual Accounts

Description:

Virtual Account Type:

Product Instances

Because this account is a "satellite", 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
TAC Cisco Systems, Inc....	1	3

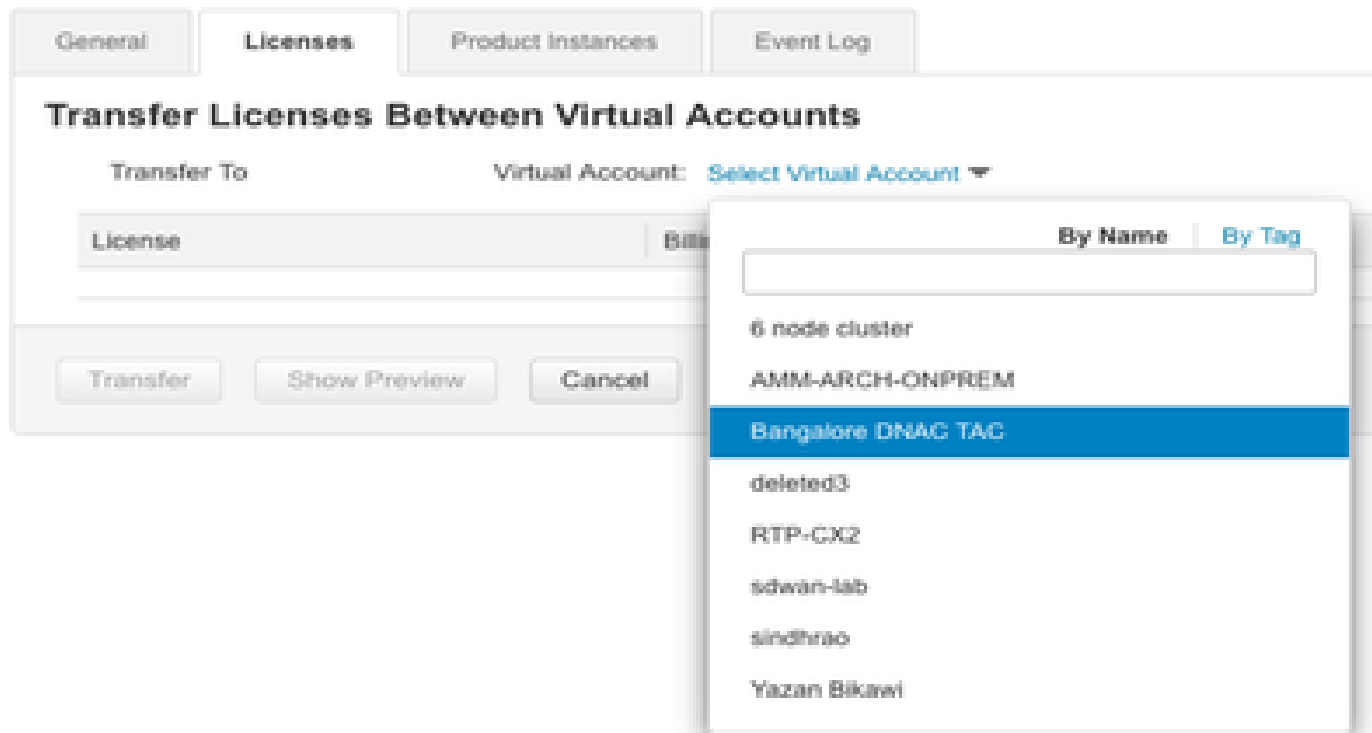
TAC Cisco Systems, Inc....

第四步：选择License选项卡，然后选择Target Virtual Account。

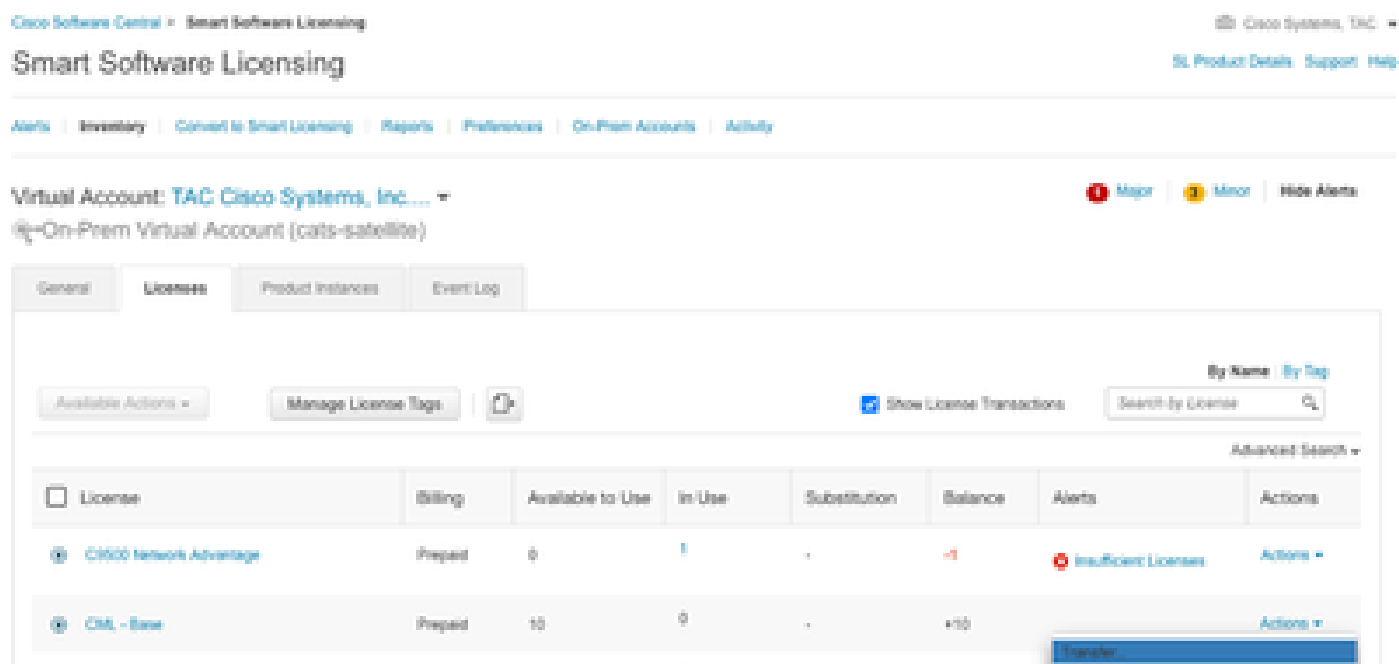
Smart Software Licensing

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

🔍 On-Prem Virtual Account (cats-satellite)



第五步：选择要转移的许可证，然后点击操作和选择转移。



第六步：选择要转移的许可证数量，然后单击转移。

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

场景4：智能帐户之间的许可证迁移

许可证在不同智能帐户之间迁移可由思科许可团队完成。请参阅以下这些后续步骤，向相关团队提出问题。

步骤1:使用思科凭证登录<https://mycase.cloudapps.cisco.com/case?swl>。

第二步：点击新案例，选择软件许可>扩展许可证管理>选择移动许可证。然后选择Reassign licenses between SA并点击Open Case。

Support Case Manager

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

Open New Case

Products & Services

Wireless

Software Licensing

Fieldwork / CUMM

Trial Offer Support

Open a New Case for Software Licensing Support

Search Categories

Smart Account Administration

License Delivery

License Management

Move Licenses

Obtain temporary/demo/extend licenses

View Enterprise Agreement licenses in cloud dashboard

Generate License

Upgrade licenses through version upgrade

View More Categories

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

第三步：选择相关产品（例如无线、交换等），填写表格，然后提交请求。

Support Case Manager

Create and manage Support cases for Arnochen-Mohre (admin@ccscs.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 Parameters

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 (new) (LML), License Details (SR/LM/SLM) (ex) and Smart Account/Virtual Account (SA/VA))

Describe the issue you are experiencing...

SOLO Parameters

Note: Files can be uploaded after case is created.

Smart Account Domain ID:

场景5：SSM连接模式更改

步骤1:通过admin凭证或具有超级管理员权限的自定义角色登录到Cisco Catalyst Center。

第二步：导航到汉堡，然后选择系统>设置。

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

第三步：选择SSM Connection Mode并选择所需的选项(Direct/Smart Proxy/On-Prem)。Click Save.

Search Settings

- Cisco Accounts
 - POP Connect
 - Cisco.com Credentials
 - Smart Account
 - Smart Licensing
 - SSM Connection Mode
- Device Settings
 - Device Controllability
 - Network Resync Interval
 - SNMP
 - iCATP Ping
 - Image Distribution Servers

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

场景6：智能帐户与Cisco Catalyst Center的集成

步骤1:通过管理员凭证或具有超级管理员权限的自定义角色登录到Cisco Catalyst Center。

第二步：导航到汉堡，然后选择系统>设置。

Cisco DNA Center

 Design >

 Policy >

 Provision >

 Assurance >

 Workflows

 Tools >

 Platform >

 Activities

 Reports

 System >

 Explore

System 360

Settings

Settings
Data Platform

System Health

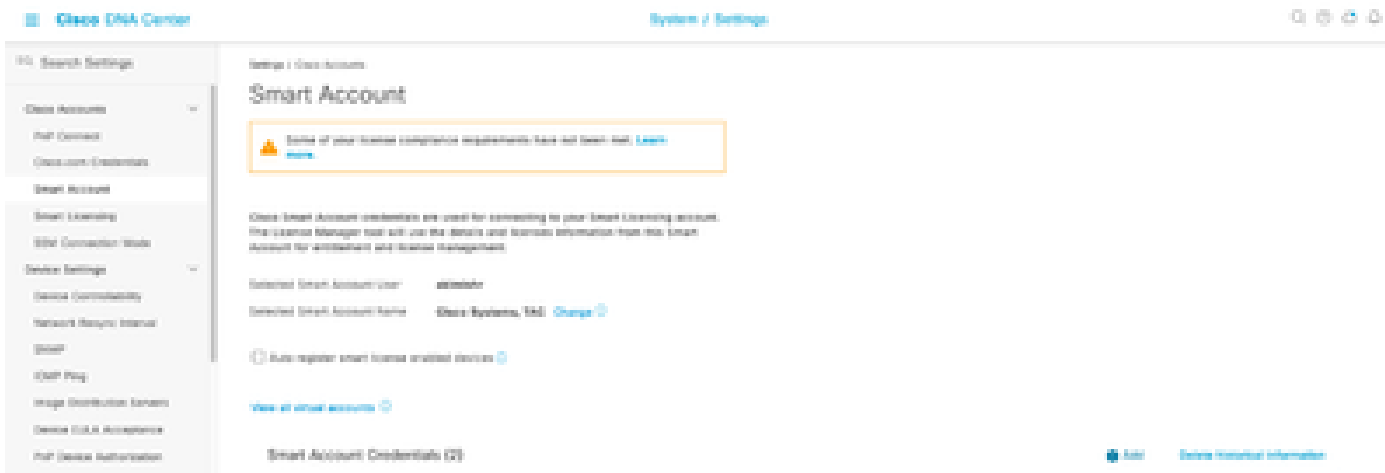
Users & Roles

Backup & Restore

Software Management

Disaster Recovery

第三步：在智能帐户下，单击添加。



第四步：输入智能帐户用户名和密码，然后单击保存。

Add Smart Account Credentials



Username

akimishr



Info

Password

Show

Cancel

Save

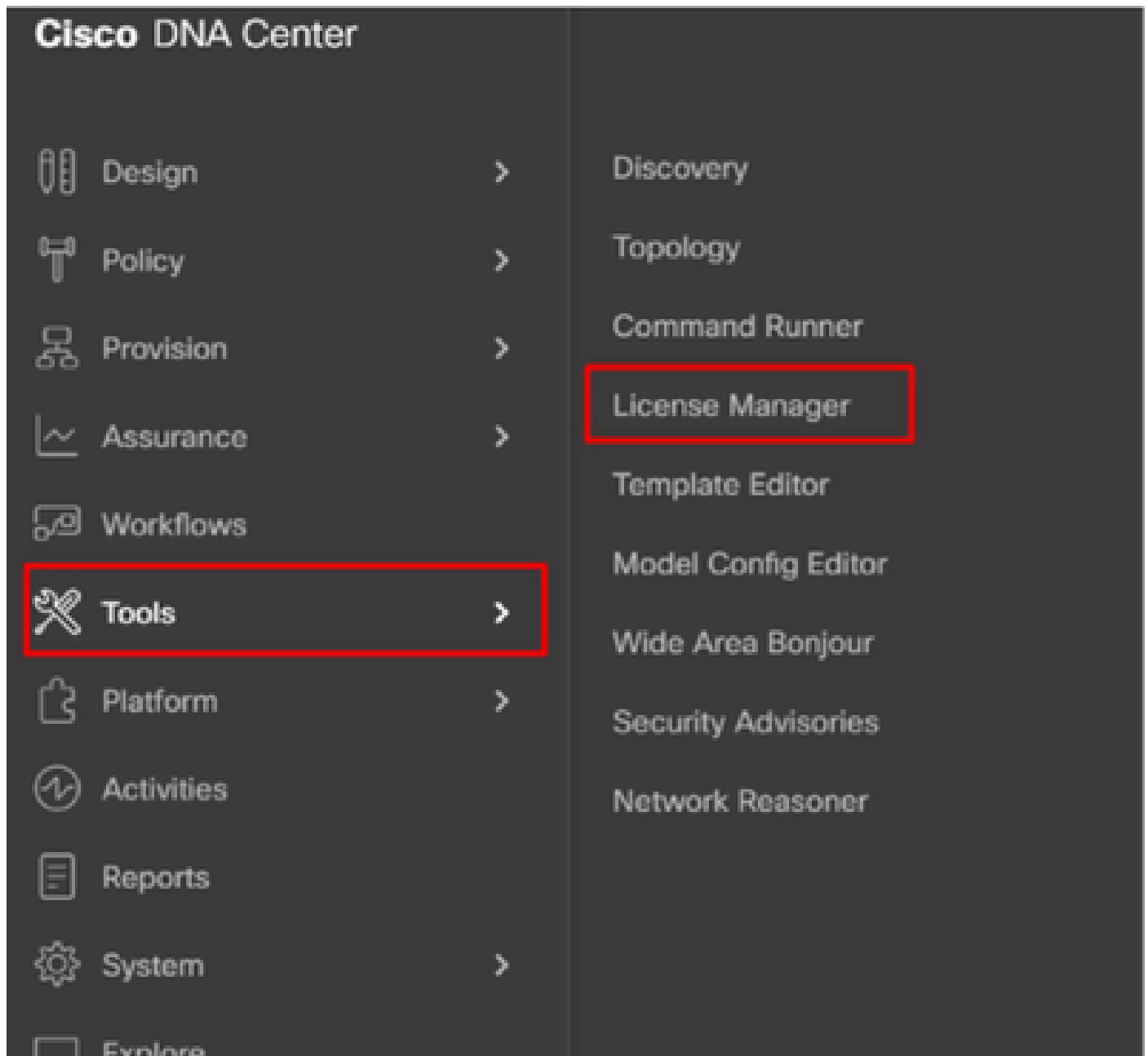
第五步：如果您有多个智能帐户，请重复步骤3和4。

：如果您有多个智能帐户，请选择一个帐户作为默认值。许可证管理器使用默认帐户进行可视化和许可操作。

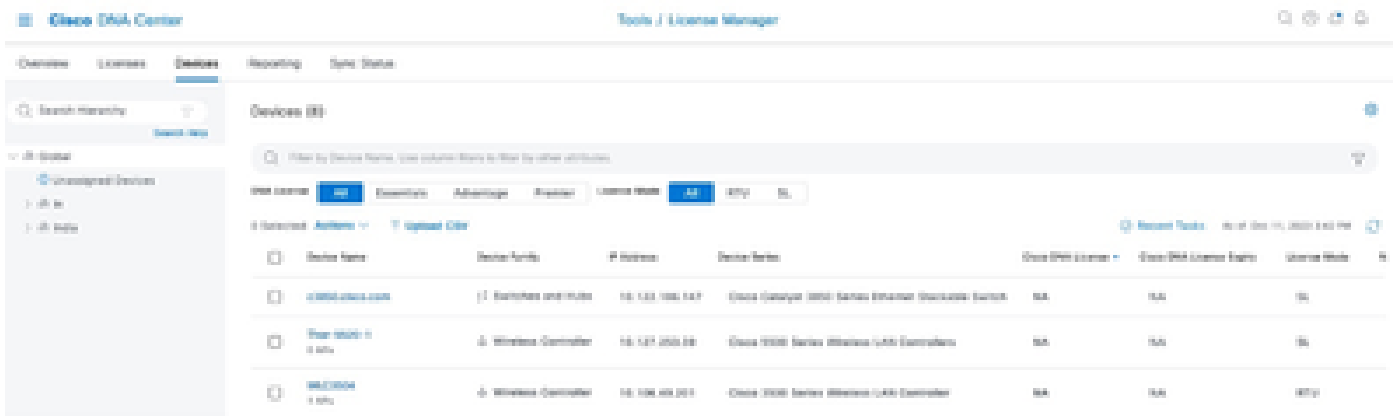
场景7：许可证级别更改

步骤1:通过管理员凭证或具有超级管理员权限的自定义角色登录到Cisco Catalyst Center。

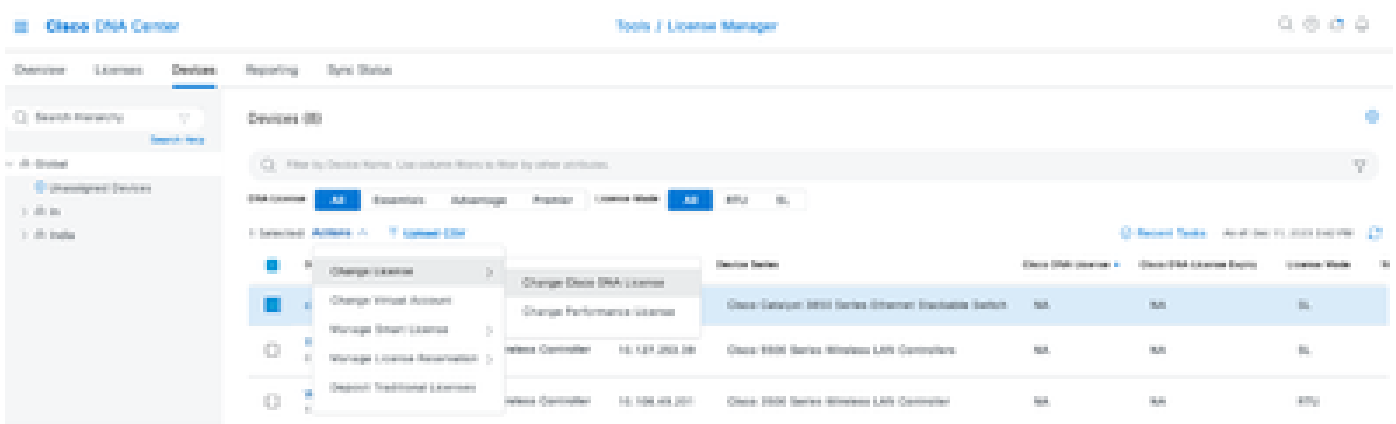
第二步：导航到汉堡，然后选择工具>许可证管理器。



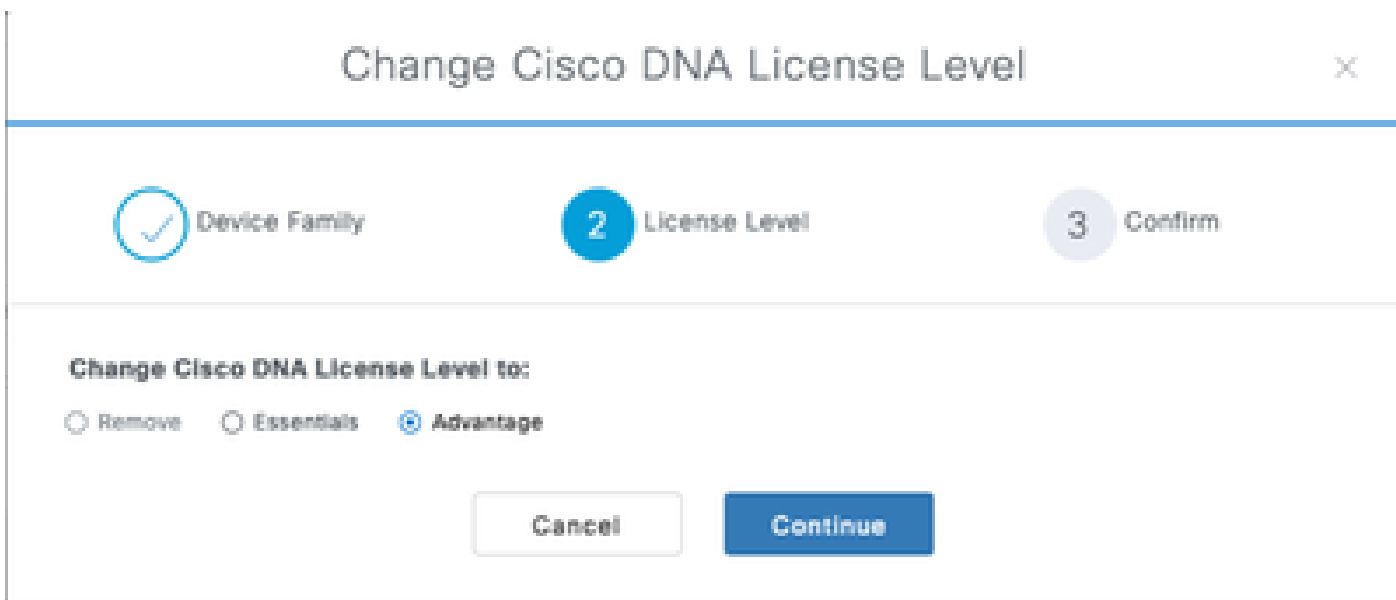
第三步：选择Devices选项卡，使用Find或滚动表以查找要更改其许可证级别的设备。



第四步：选中要更改其许可证级别的每个设备旁边的复选框，然后选择操作>更改思科DNA许可证



第五步：点击Essentials或Advantage设备的许可证级别。然后单击Continue。



第六步：Cisco Catalyst Center会提示是立即应用更改还是稍后应用更改。选择所需的选项并单击Confirm。

Change Cisco DNA License Level



Device Family



License Level



Confirm

Cisco DNA License for 1 device(s) will be activated to Advantage.

Note: Network license may be upgraded to Advantage for applicable devices.

License change will take effect only after the device rebooted. Some devices like CAT3560-CX, AireOS controllers will not reboot even after selecting this checkbox.

Reboot device on update

Now Later

Task Name*

License update

Back

Confirm



注意：还必须选择Reboot device on update选项，以使更改生效。此外，本练习需要在停机时间内执行。

相关信息

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关于此翻译

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