

Solución de problemas de casos prácticos y flujos de trabajo de licencias de Catalyst Center

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Introducción

Este documento describe diferentes situaciones de licencia de Cisco Catalyst Center que se encuentran con frecuencia.

Prerequisites

Requirements

No hay requisitos específicos para este documento.

Componentes Utilizados

Este documento no tiene restricciones específicas en cuanto a versiones de software y de hardware.

La información que contiene este documento se creó a partir de los dispositivos en un ambiente de laboratorio específico. Todos los dispositivos que se utilizan en este documento se pusieron en

funcionamiento con una configuración verificada (predeterminada). Si tiene una red en vivo, asegúrese de entender el posible impacto de cualquier comando.

Antecedentes

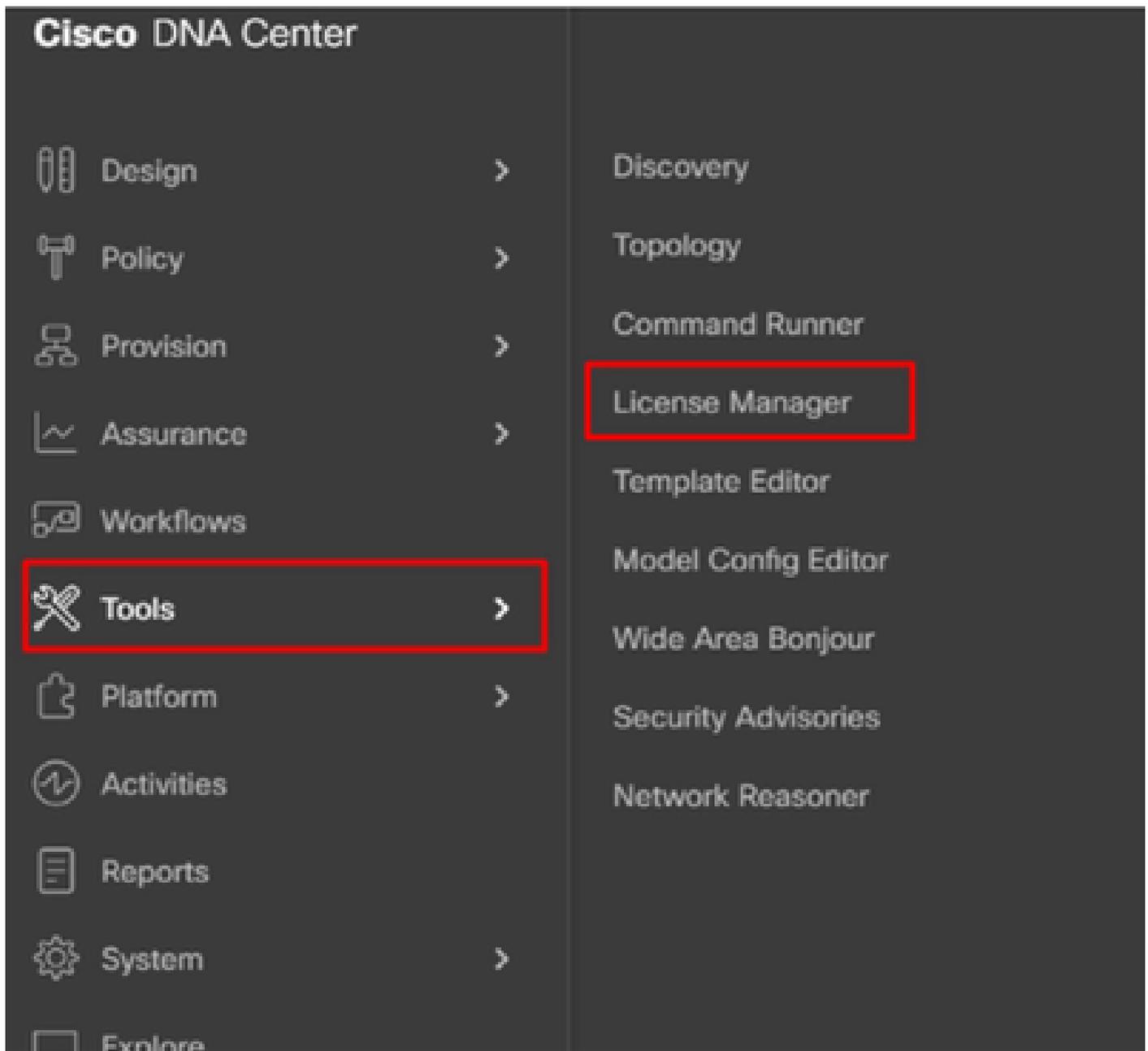
Este documento proporciona los detalles paso a paso de cómo utilizar el flujo de trabajo del administrador de licencias de Cisco Catalyst Center (anteriormente conocido como DNA Center) para el registro de licencias de dispositivos, la migración de licencias entre cuentas virtuales a través de CSSM, etc.

Escenarios

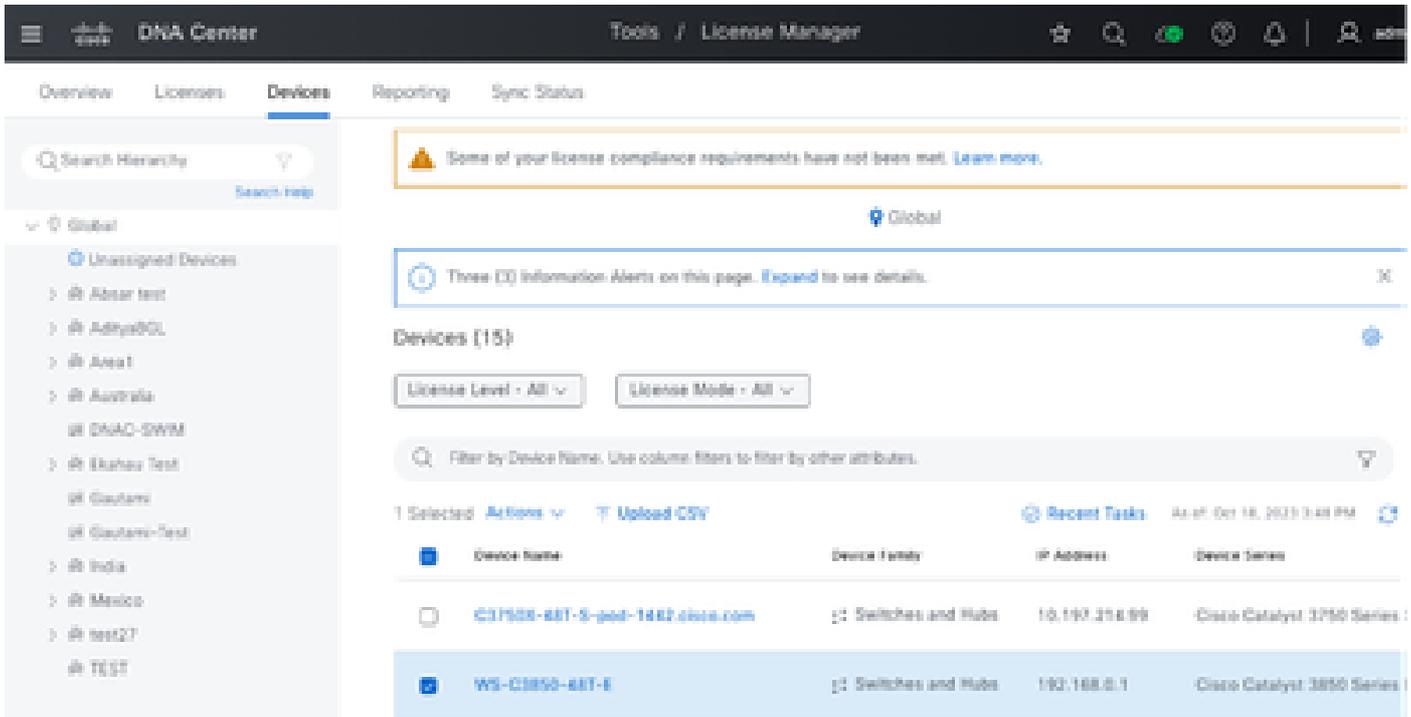
Situación 1: Registro de licencias de dispositivos mediante Cisco Catalyst Center License Manager: método heredado

Paso 1. Inicie sesión en Cisco Catalyst Center mediante credenciales de administrador o mediante un rol personalizado con privilegios de superadministrador.

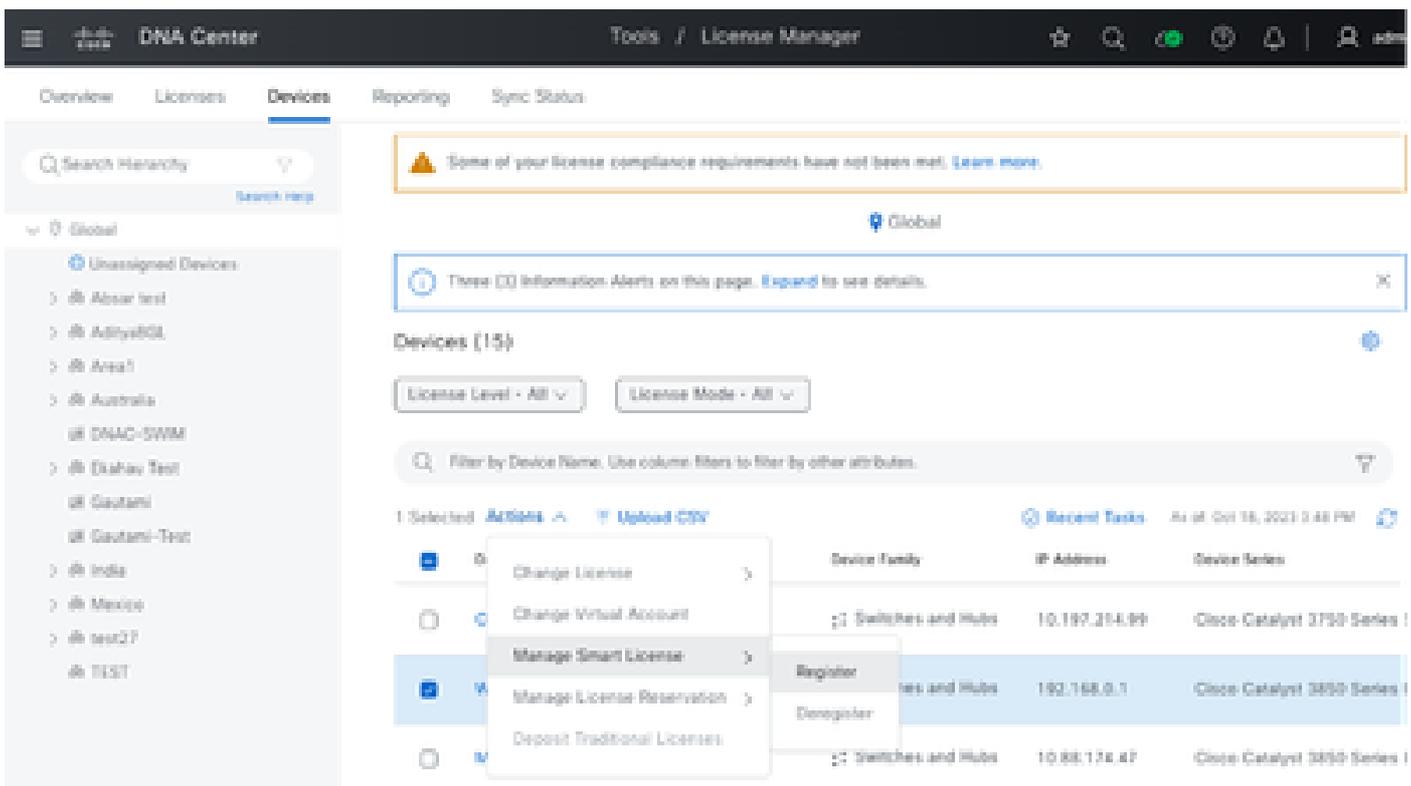
Paso 2. Navegue hasta Hamburger y seleccione Tools > License Manager.



Paso 3. Seleccione la ficha Devices y utilice la opción Filter o desplácese por la tabla para buscar los dispositivos cuyas licencias desea registrar.



Paso 4. Seleccione la casilla de verificación junto a cada dispositivo cuya licencia desee registrar y, a continuación, elija Acciones > Administrar licencia inteligente > Registrar.



Paso 5. Elija la cuenta virtual donde se deposita la licencia respectiva y haga clic en Continue.

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

Paso 6. Cisco Catalyst Center pregunta si el cambio debe aplicarse inmediatamente o más tarde. Elija la opción que desee y haga clic en Confirmar.

Register Smart License

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

Now Later

Task Name*

License mode update

Cancel

Confirm

Situación 2: Registro de licencias de dispositivos mediante Cisco Catalyst Center License Manager: flujo de trabajo de informes de CSLU

- 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 send 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

Prerequisites

Cisco Catalyst Center

- Cisco Catalyst Center debe ejecutarse en la versión 2.2.1.0 y posteriores.
- Cisco Catalyst Center debe poder comunicarse con el portal CSSM y ponerse en contacto con tools.cisco.com.
- Se debe elegir el modo de conexión SSM correcto en Catalyst Center. El flujo de trabajo de la CSLU no se aplica al CSSM in situ (servidor satélite) a partir de la versión 2.3.5.5 de Catalyst Center.
- El flujo de trabajo de CSLU no se aplica a los controladores inalámbricos AireOS (modelos: 3504, 5520, 8540).

Dispositivo de red

- El dispositivo debe ejecutarse en Cisco IOS® XE 17.3.2 o posterior y debe tener suficiente espacio en flash para el informe Rum.
- El dispositivo debe tener configurado el modelo netconf-yang y Cisco Catalyst Center debe poder comunicarse con el dispositivo a través del puerto Netconf 830.

Para validar:

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

i. Durante la detección de dispositivos en Cisco Catalyst Center, se debe habilitar el parámetro Netconf en la sección de credenciales.

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 also 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. Si el parámetro Netconf no estaba habilitado en el momento de Device Discovery, utilice la opción Edit Device en Cisco Catalyst Center Inventory para habilitarlo.

Edit Device ✕

Credentials	Management IP	Resync Interval	Device Role
<div style="margin-bottom: 10px;"> > SNMP* </div>			
<div style="margin-bottom: 10px;"> > SNMP Retries and Timeout* </div>			
<div style="margin-bottom: 10px;"> > HTTP(S) </div>			
<div style="margin-bottom: 10px;"> v NETCONF </div> <div style="margin-bottom: 10px;"> Port 830 </div> <div style="text-align: right; font-size: 0.8em; color: #0070c0;"> Hint </div>			
<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>			

- El dispositivo debe tener el punto de confianza sdn-network-infra-iwan instalado; esto lo hace Cisco Catalyst Center.

Para validar:

show crypto pki trustpoint sdn-network-infra-iwan (Para verificar el trustpoint)

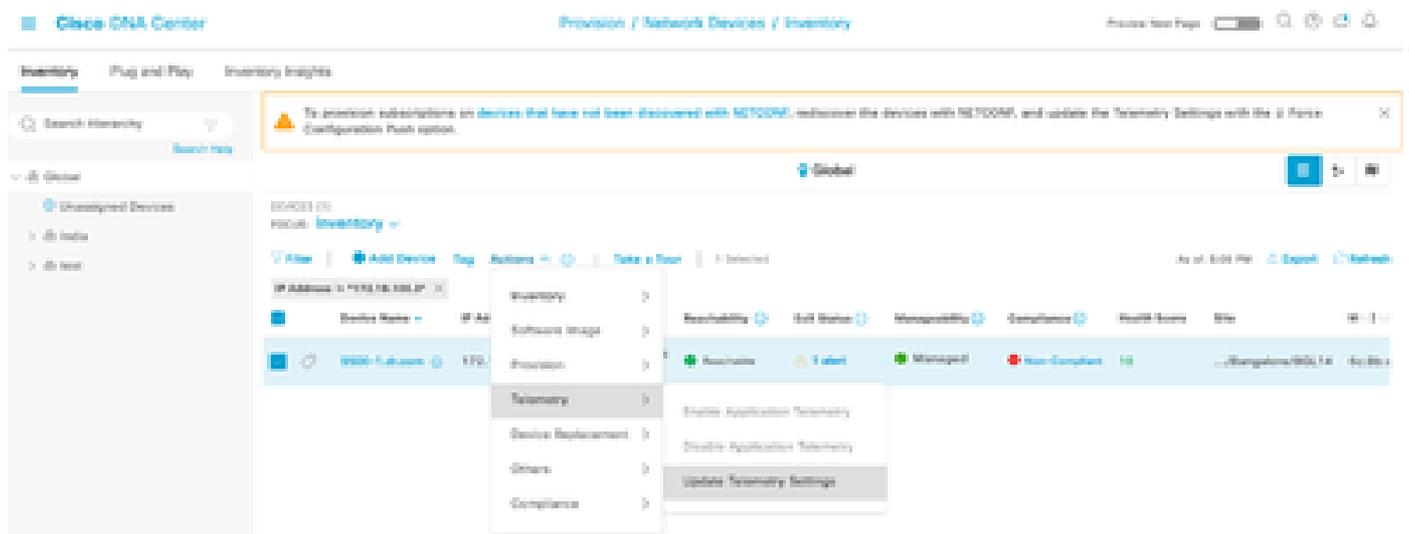
show crypto pki certificates verbose sdn-network-infra-iwan (Para verificar el punto de confianza en detalle)

- Si el punto de confianza sdn-network-infra-iwan no está instalado, siga estos pasos:

Paso 1. Inicie sesión en Cisco Catalyst Center mediante credenciales de administrador o mediante un rol personalizado con privilegios de superadministrador.

Paso 2. Vaya a Hamburger y seleccione Provisioning > Inventory.

Paso 3. Seleccione el dispositivo en el que desea instalar el punto de confianza y haga clic en Acciones > Telemetría > Actualizar configuración de telemetría.



Paso 4. Seleccione Force Configuration Push y haga clic en Next

Update Telemetry Settings



Force Configuration Push ⓘ

GLOBAL/INDIA/BANGALORE/ISGL14

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

Paso 5. Seleccione Now y haga clic en Apply. Esto no tiene ningún efecto en la producción.

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](#)

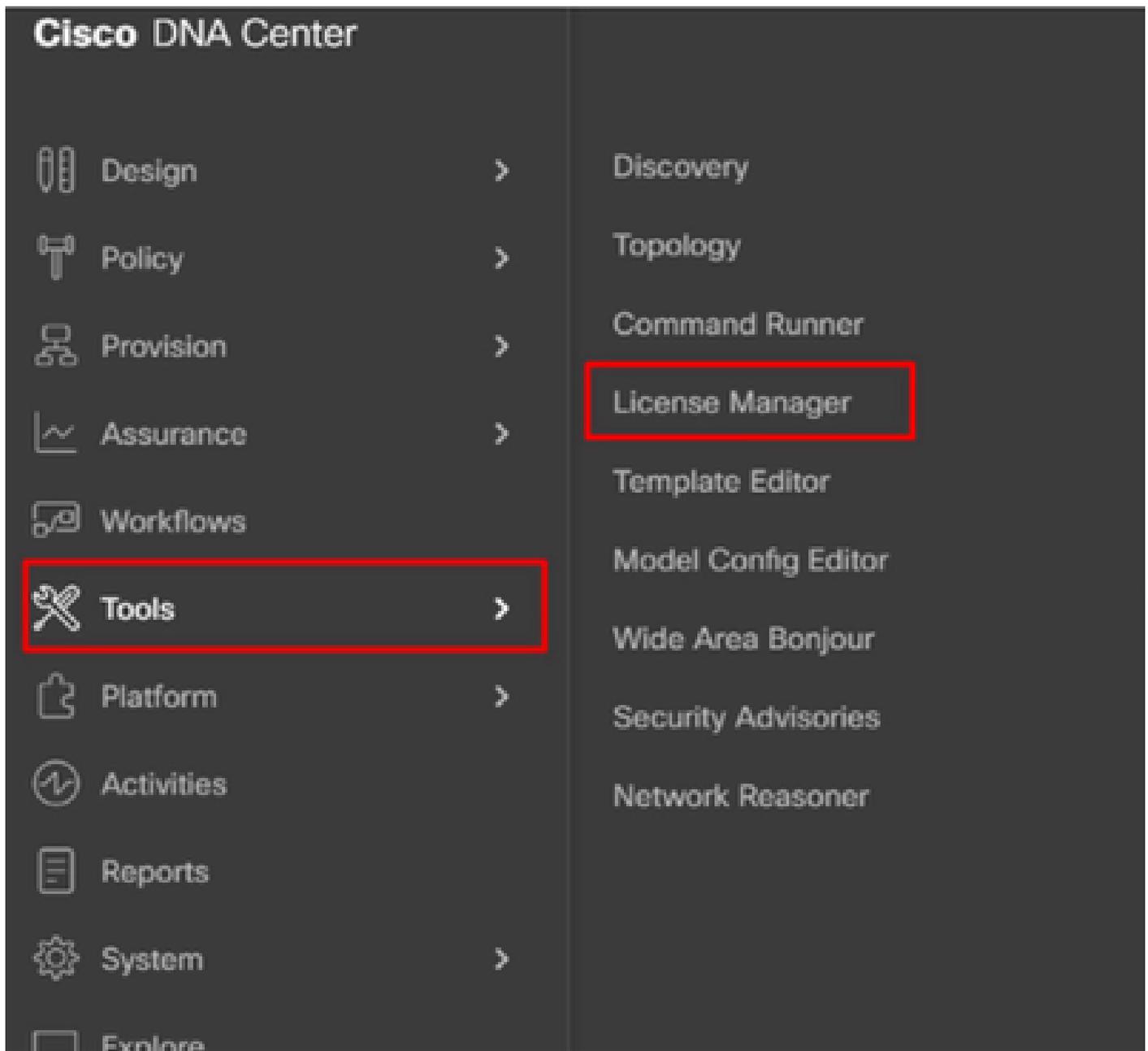
Task Name*

Update Telemetry Settings Task

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

Si se cumplen todos los requisitos previos, siga estos pasos para ejecutar el flujo de trabajo de informes:

Paso 1. Inicie sesión en Cisco Catalyst Center mediante credenciales de administrador o mediante un rol personalizado con privilegios de superadministrador.



Paso 2. Vaya a Hamburger y seleccione Tools > License Manager.

Paso 3. Seleccione la pestaña Reporting y localice el dashlet Smart License Compliance; haga clic en el dashlet para iniciar el flujo de trabajo.

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.

Paso 4. Seleccione la cuenta inteligente y la cuenta virtual donde se almacenan las licencias de dispositivos y haga clic en Next.

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, 4:10:51 PM

Select Account

Smart Account	
Cloud Systems, TAC	✔
Virtual Account	
Bangalore (PRAC) TAC	✔

Save All changes saved Next

Paso 5. Elija el dispositivo sobre cuya utilización de licencias desea informar.

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 Sites

Device Name	Device Family	Device Series	IP Address	Software Version	Cisco PAK License	Last Report
9500-1-lab.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-lab.com	Routers	Cisco 4000 Series Integrated Services Routers	172.16.100.2	17.3.2	NA	November 16, 2023 6:06 AM
9500-2-lab.com	Routers	Cisco 4000 Series Integrated Services Routers	172.16.100.10	17.6.4	NA	NA
9507-9500-2-lab.com	Switches and Hubs	Cisco Catalyst 9500 Series Switches	172.16.100.8	17.3.0	Advantage	NA
9507-9500-2-lab.com	Switches and Hubs	Cisco Catalyst 9500 Series Switches	172.16.100.7	17.6.1	Advantage	NA
9500-lab.com (2 sites)	Wireless Controller	Cisco Catalyst 9500 Series Wireless Controllers	172.160.200.1	17.6.2	Advantage	NA

1 Results Show Results 1-1 of 1

Exit All changes saved Back Next

Paso 6. Modifique el intervalo de informes, si es necesario.

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](#)

COSSM POLICY

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

Paso 7. Revise el resumen de dispositivos y haga clic en Siguiente para activar Informes.

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 COSSM. 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-lab.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(172.19.100.3)	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(172.19.100.3)	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

Situación 3: migración de licencias entre cuentas virtuales

Paso 1. Inicie sesión en Cisco Catalyst Center mediante credenciales de administrador o mediante un rol personalizado con privilegios de superadministrador.

Paso 2. Inicie sesión en software.cisco.com y seleccione Manage Licenses.

The screenshot shows the Cisco Software Central website. At the top, there is a navigation bar with the Cisco logo and the text "Cisco Software Central". Below the navigation bar is a large banner with the text "Cisco Software Central" and "Access everything you need to activate and manage your Cisco Smart Licenses." Below the banner is a section titled "Download and manage" with three columns of content:

Smart Software Manager	Download and Upgrade	Traditional Licenses
Track and manage your licenses. Convert traditional licenses to Smart Licenses.	Download new software or updates to your current software.	Generate and manage PAK-based and other device licenses, including demo licenses.
Manage licenses >	Access downloads >	Access LRP >

Paso 3. Navegue hasta Inventario y seleccione la cuenta virtual de origen.

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 Account

Description:

Virtual Account Type:

Product Instances

Because this account is a "Target" account, all product instance registration tokens must be generated from this account.

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....

Paso 4. Seleccione la pestaña License y elija la Target Virtual Account.

Smart Software Licensing

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

🔍 On-Prem Virtual Account (cats-satellite)

General Licenses Product Instances Event Log

Transfer Licenses Between Virtual Accounts

Transfer To Virtual Account: **Select Virtual Account** ▼

License Balance

By Name | By Tag

- 6 node cluster
- AMM-ARCH-ONPREM
- Bangalore DNAC TAC**
- deleted3
- RTP-CX2
- sdwan-lab
- sindhrao
- Yazan Bikawi

Transfer Show Preview Cancel

Paso 5. Seleccione la licencia que desea transferir y haga clic en Actions & Select Transfer.

Cisco Software Central > Smart Software Licensing 🏠 Cisco Systems, Inc. ▼
🔗 Product Details Support Help

Alerts | Inventory | Convert to Smart Licensing | Reports | Preferences | On-Prem Accounts | Activity

Virtual Account: **TAC Cisco Systems, Inc....** ▼ 🔴 Major 🟡 Minor 🚫 Hide Alerts

🔍 On-Prem Virtual Account (cats-satellite)

General Licenses Product Instances Event Log

Available Actions - Manage License Tags Show License Transactions Search by License 🔍

Advanced Search ▼

<input type="checkbox"/> License	Billing	Available to Use	In Use	Substitution	Balance	Alerts	Actions
🔍 CR50 Network Advantage	Prepaid	0	1	-	-1	🔴 Insufficient Licenses	Actions ▼
🔍 CM, - Base	Prepaid	10	0	-	+10		Actions ▼

Transfer

Paso 6. Elija la cantidad de licencias que desea transferir y haga clic en Transfer.

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: 2023-Jul-03
Expires: 2024-Jul-03

Transfer Show Preview Cancel

Situación 4: migración de licencias entre cuentas inteligentes

El equipo de licencias de Cisco puede realizar la migración de licencias entre diferentes cuentas inteligentes. Consulte los siguientes pasos para plantear el caso al equipo correspondiente.

Paso 1. Inicie sesión en <https://mycase.cloudapps.cisco.com/case?swl> con las credenciales de Cisco.

Paso 2. Haga clic en Open New Case y seleccione Software Licensing > Expand License Management > Select Move Licenses. A continuación, seleccione Reasignar licencias entre SA y haga clic en Abrir caso.

Support Case Manager
Create and manage Support cases for Akirshan Mehra (akimishn@cisco.com)

Open New Case

Products & Services
Wireless
Software Licensing
Fundament / 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

Paso 3. Seleccione el producto correspondiente (por ejemplo, tecnología inalámbrica, switching,

etc.), rellene el formulario y envíe la solicitud.

Support Case Manager
Create and manage Support cases for Cisco/Avaya/Mobis (adminstr@csccs.com)

Open new CASE
Software Licensing

Need help with your case? [Chat Now](#)

Category
Reassign licenses between SA, including FSA [change](#)

Product
[Select a Product](#)

Title

Problem Description
This category is for LICENSING related requests ONLY. For technical issues, please click 'change' above and open a case by using the 'Product & Services' category. Otherwise please provide the details of your LICENSING request below and include the necessary information (Smart/Hub Order, PAK, Order Details (SKU/MSNO), etc.) and Smart Account/Virtual Account (SA/VA).

Smart Account Domain ID

Situación 5: cambio del modo de conexión SSM

Paso 1. Inicie sesión en Cisco Catalyst Center mediante las credenciales de administrador o el rol personalizado con privilegios de superadministrador.

Paso 2. Vaya a Hamburger y seleccione System > Settings.

Cisco DNA Center

 Design >

 Policy >

 Provision >

 Assurance >

 Workflows

 Tools >

 Platform >

 Activities

 Reports

 System >

 Explore

System 360

Settings

 Data Platform

System Health

Users & Roles

Backup & Restore

Software Management

Disaster Recovery

Paso 3. Seleccione SSM Connection Mode y elija la opción deseada (Direct/Smart Proxy/On-Prem). Click Save.

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 CSIM Smart proxy

[Save](#)

Situación 6: integración de Smart Account con Cisco Catalyst Center

Paso 1. Inicie sesión en Cisco Catalyst Center mediante credenciales de administrador o mediante un rol personalizado con privilegios de superadministrador.

Paso 2. Vaya a Hamburger y seleccione System > Settings.

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

Paso 3. En Smart Account, haga clic en Add.

Class DNA Center System / Settings

Search Settings

- Class Accounts
- IPM Console
- Classroom Credentials
- Smart Account
- Smart Learning
- WiFi Connection Mode
- Device Settings
- Device Connectivity
- Network Monitor Interface
- Smart
- Smart Plug
- Usage Distribution System
- Device OLA Acceptance
- IPM Device Authentication

Smart Account

Some of your device compliance requirements have not been met. [Learn more.](#)

Class Smart Account credentials are used for connecting to your Smart Learning product. The License Manager tool will use the device and license information from the Smart Account for activation and license management.

Selected Smart Account user: **admin@dc**

Selected Smart Account name: **Class Systems, SMI** [Change](#)

[Auto-register smart license enabled devices](#)

[View all smart accounts](#)

Smart Account Credentials (2) [Add](#) [Delete historical information](#)

Paso 4. Ingrese el nombre de usuario y la contraseña de Smart Account y haga clic en Guardar.

Add Smart Account Credentials



Username

akimishr



Info

Password

Show

Cancel

Save

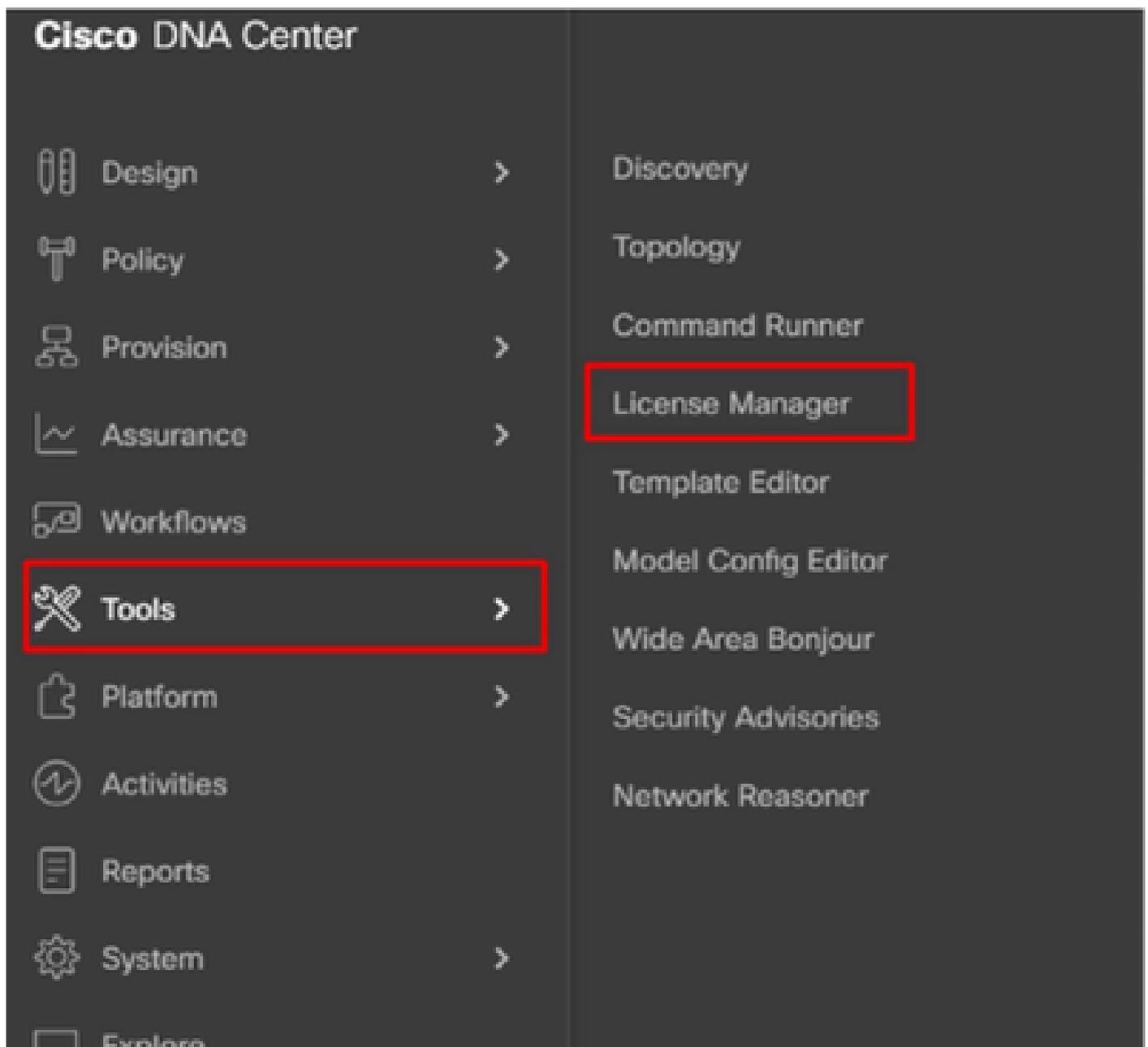
Paso 5. Si tiene varias cuentas inteligentes, repita los pasos 3 y 4.

: Si tiene varias cuentas inteligentes, elija una cuenta como predeterminada. El administrador de licencias utiliza la cuenta predeterminada para las operaciones de visualización y licencias.

Situación 7: cambio de nivel de licencia

Paso 1. Inicie sesión en Cisco Catalyst Center mediante credenciales de administrador o mediante un rol personalizado con privilegios de superadministrador.

Paso 2. Vaya a Hamburger y seleccione Tools > License Manager.



Paso 3. Seleccione la ficha Devices y utilice Find o desplácese por la tabla para buscar los dispositivos cuyo nivel de licencia desea cambiar.

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

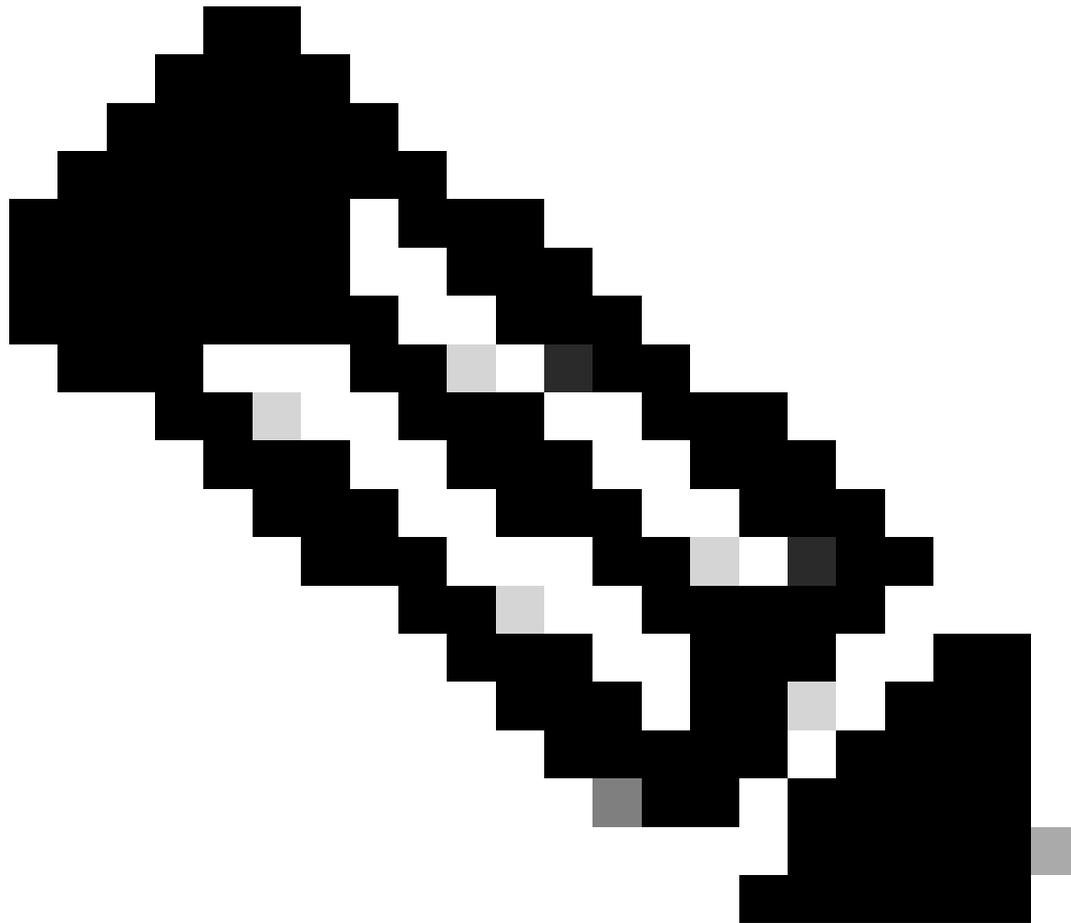
Now Later

Task Name*

License update

Back

Confirm



Nota: También debe seleccionar la opción Reiniciar dispositivo al actualizar para que los cambios surtan efecto. Además, esta actividad debe realizarse durante el tiempo de inactividad.

Información Relacionada

- [Soporte técnico y descargas de Cisco](#)

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