Troubleshoot Catalyst Center Licensing Use Cases and Workflows

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Related Information

Introduction

This document describes different Cisco DNA licensing scenarios that are frequently encountered.

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

This document is not restricted to specific software and hardware versions.

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.

Background Information

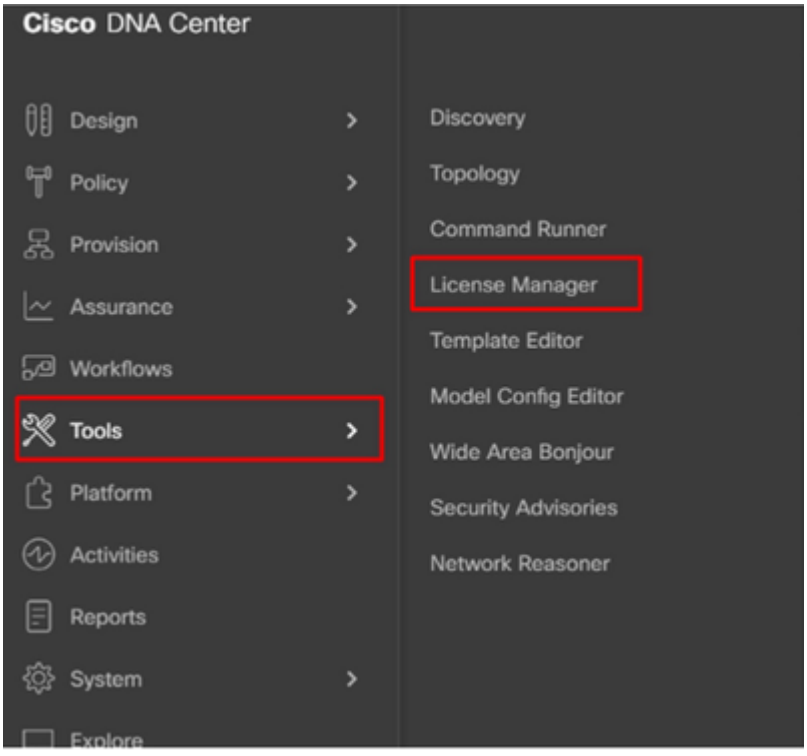
This document provides the step-by-step details of how to use the License Manager workflow of Cisco DNA for device license registration, license migration between Virtual Accounts via CSSM, and so on.

Scenarios

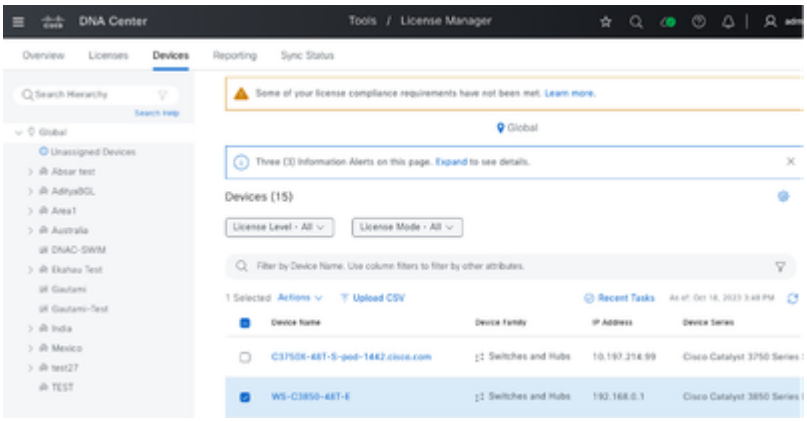
Scenario 1: Device License Registration via Cisco DNA License Manager: Legacy Method

Step 1. Log into **Cisco DNA** via admin credentials or via a custom role with super-admin privileges.

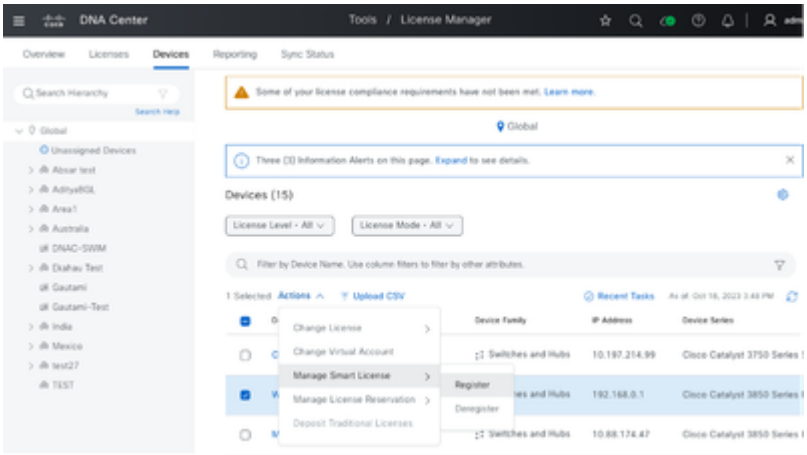
Step 2. Navigate to **Hamburger** and select **Tools > License Manager**.



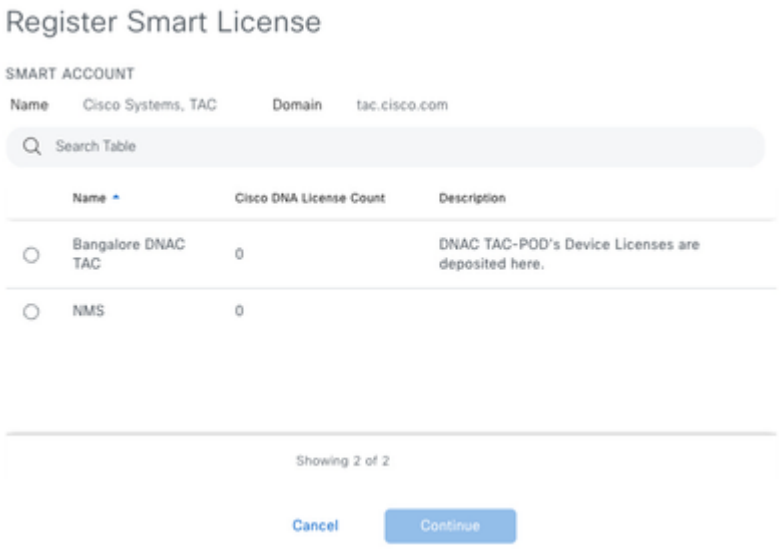
Step 3. Select **Devices** tab and use the **Filter** option or scroll through the table to find the devices whose licenses you want to register.



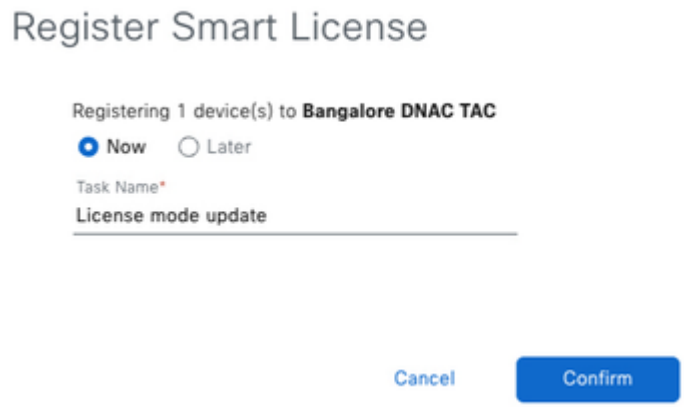
Step 4. Select the **check box** next to each device whose license you want to register, then choose **Actions > Manage Smart License > Register**.



Step 5. Choose the **Virtual Account** where the respective license is deposited and click **Continue**.

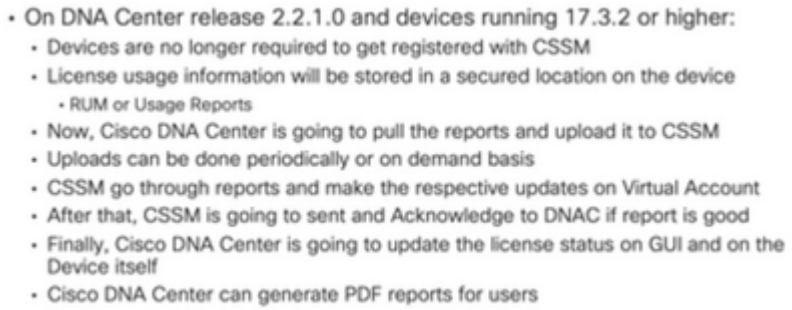


Step 6. Cisco DNA prompts whether the change is to be applied immediately or later. Choose the **desired option** and click **Confirm**.



Scenario 2: Device License Registration via Cisco DNA License Manager: CSLU Reporting Workflow

Starting from Cisco DNA release 2.2.1.x and Devices running 17.3.2 or higher, devices are no longer required to get registered with CSSM. Instead, a new workflow shall be used called Smart License Compliance Reporting. Please refer to the snippet listed for more details.



Prerequisites

Cisco DNA

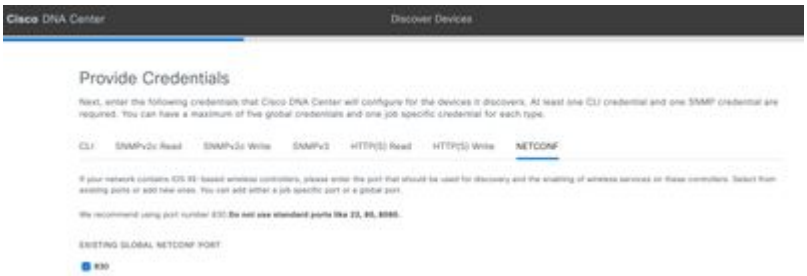
- Cisco DNA must be running on release 2.2.1.0 and later.
- Catalyst Center Appliance must be registered with Cisco Smart Software Manager (CSSM) via **Settings > Smart Licensing**.(Recommended)
- Catalyst Center Appliance must be integrated with Cisco Smart Software Manager (CSSM) via **Settings > Smart Account.**
- Cisco DNA must be able to communicate with CSSM portal and be able to reach **tools.cisco.com.**
- Devices must be Reachable and Managed on Cisco DNA Inventory dashboard.
- Appropriate SSM Connection mode must be chosen on Catalyst Center. CSLU workflow is not applicable for On-Prem CSSM (Satellite Server) as of Catalyst Center release 2.3.7.x
- CSLU workflow is not applicable for AireOS Wireless Controllers (Models: 3504, 5520, 8540).

Network Device

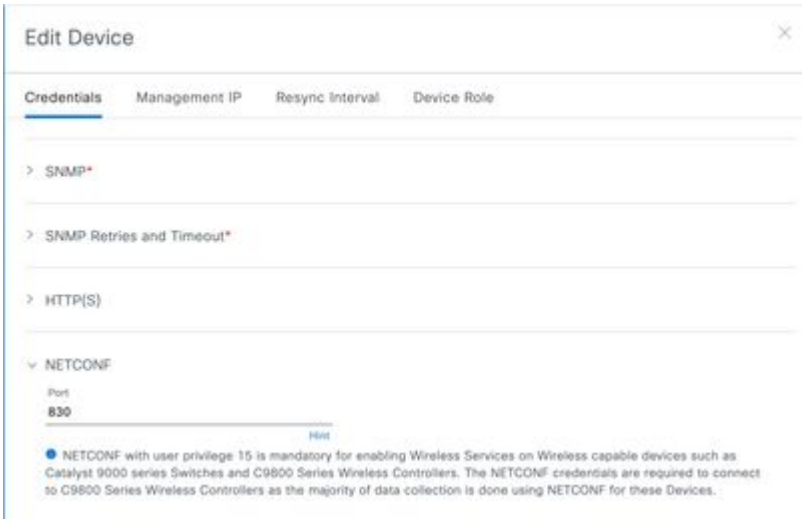
- Device must be running on Cisco IOS® XE 17.3.2 or later and must have enough space in flash for the RUM report.
- For the release 2.3.7.x and later: NetConf configuration (netconf-yang) is no longer mandatory.
- For the release 2.3.5.x and before: Device must have netconf-yang model configured and Cisco DNA must be able to communicate with the device over Netconf port 830.
- To validate the NetConf configuration on device:

show run | sec netconf-yang

i. During Device discovery on Cisco DNA , the **Netconf** parameter under **credentials** section must be enabled.



ii. If the Netconf parameter was not enabled at the time of Device Discovery, use the **Edit Device** option on the Cisco DNA Inventory to enable it.



- Device must have the sdn-network-infra-iwan trustpoint installed; this is done by the Cisco DNA .

To validate:

show crypto pki trustpoint sdn-network-infra-iwan (To check the trustpoint)

show crypto pki certificates verbose sdn-network-infra-iwan (To check the trustpoint in detail)

- If the sdn-network-infra-iwan trustpoint is not installed, do these steps:

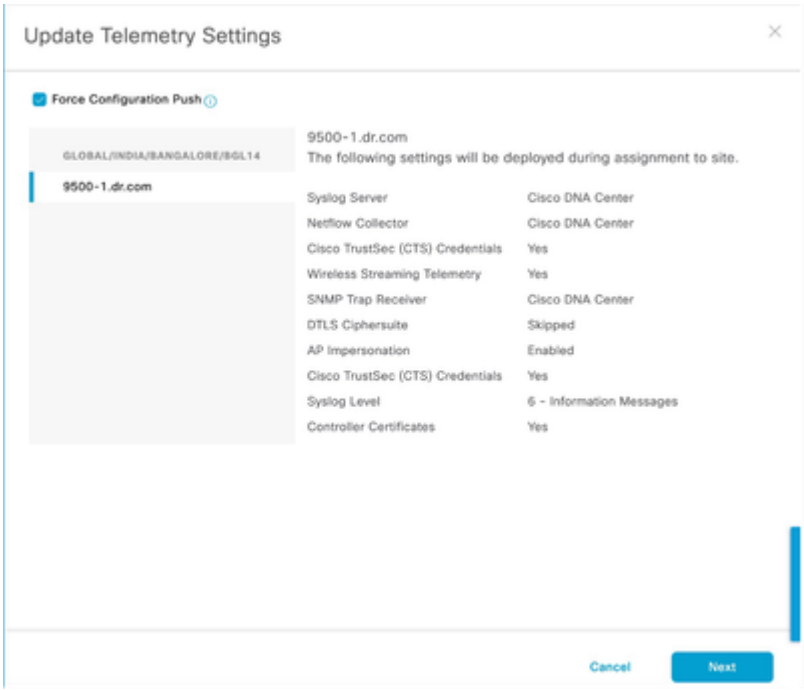
Step 1. Log into **Cisco DNA** via admin credentials or via a custom role with super-admin privileges.

Step 2. Navigate to **Hamburger** and select **Provision > Inventory**.

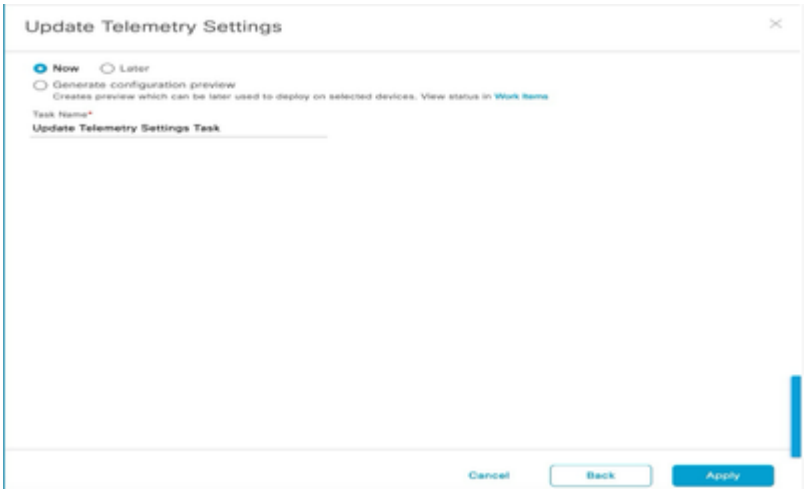
Step 3. Select the **device** you want to install the trustpoint on, click **Actions > Telemetry > Update Telemetry Settings**.



Step 4. Select **Force Configuration Push** and click **Next**

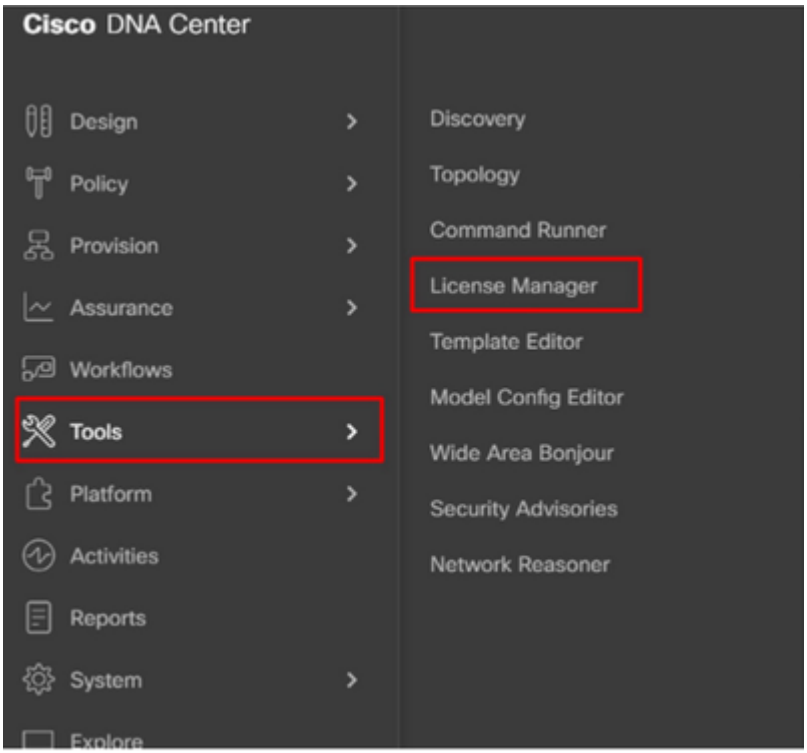


Step 5. Select **Now** and click **Apply**. This has no effect on production.



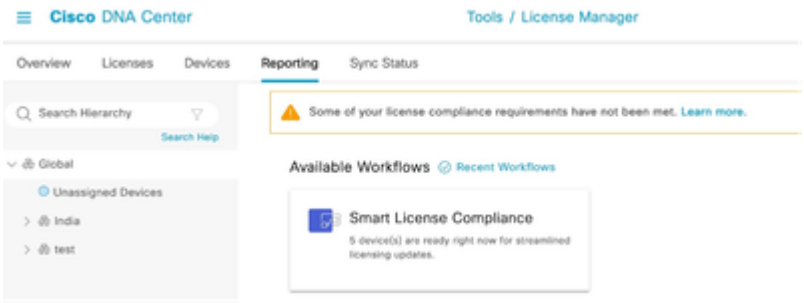
If all prerequisites are met, then refer to next steps mentioned to execute the Reporting Workflow:

Step 1. Log into **Cisco DNA** via admin credentials or via a custom role with super-admin privileges.



Step 2. Navigate to **Hamburger** and select **Tools > License Manager**.

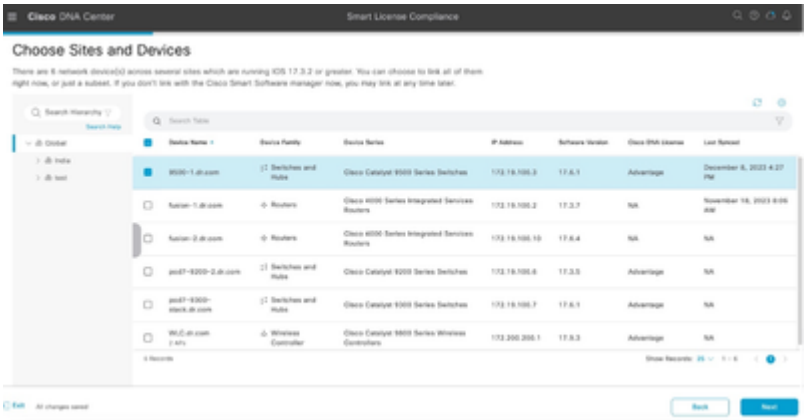
Step 3. Select the **Reporting** tab and locate the **Smart License Compliance** dashlet; click the **dashlet** to launch the workflow.



Step 4. Select the **Smart Account** and **Virtual Account** where the device licenses are stored and click **Next**.



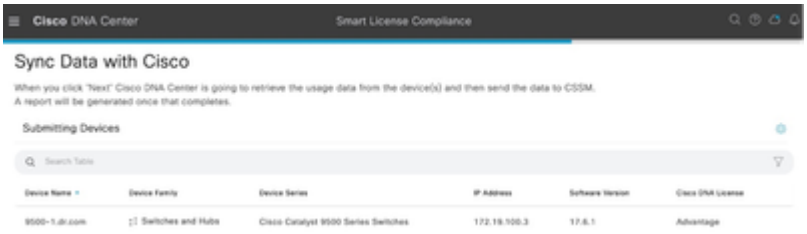
Step 5. Choose the **device** whose license utilization you want to report.

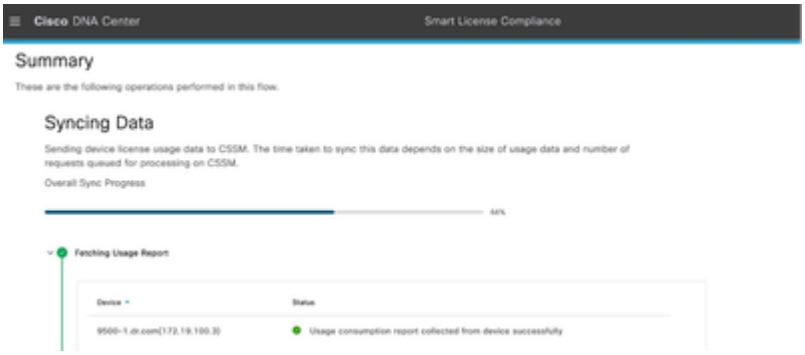


Step 6. Modify the **Reporting** interval, if required.

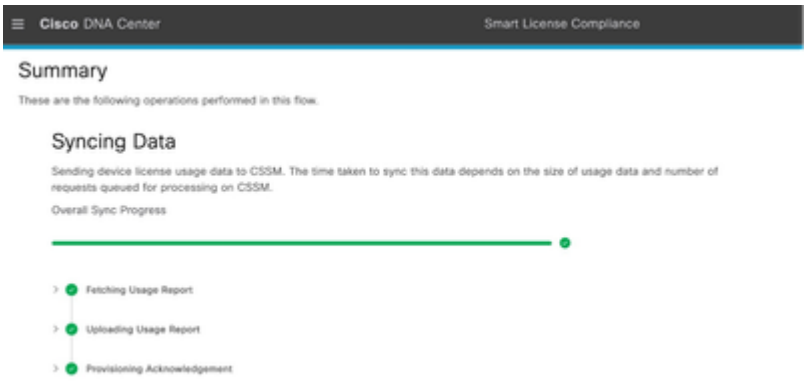


Step 7. Review the **summary of devices** and click **Next** to trigger Reporting.



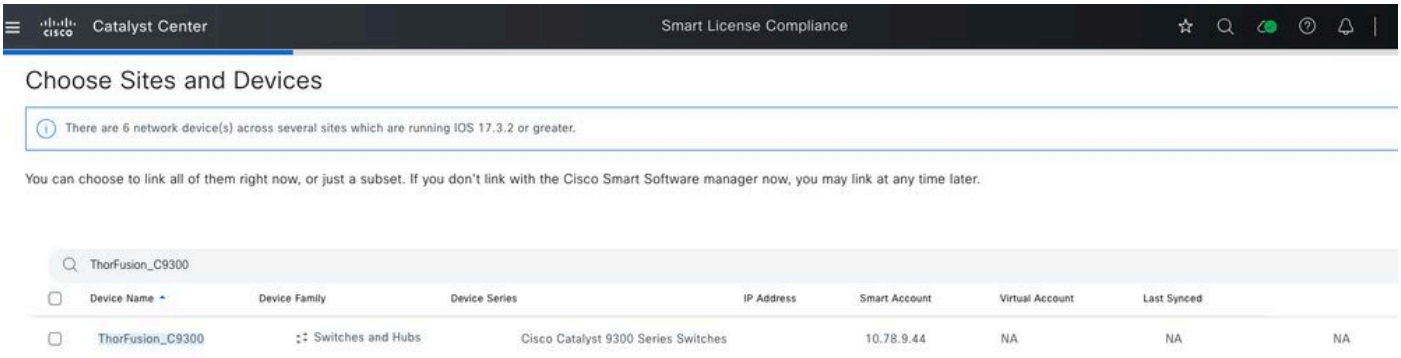






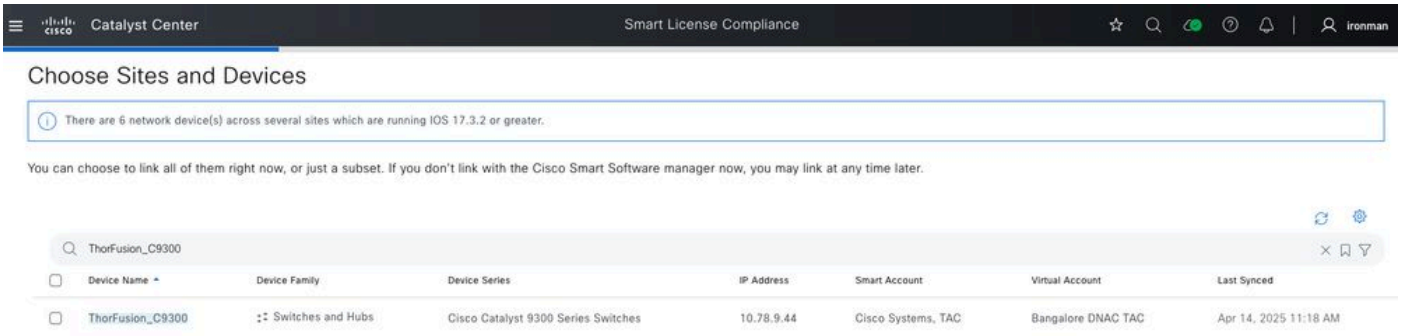
- If a device has not been onboarded on Catalyst Center but has already been registered with a Virtual Account, then Catalyst Center would run the SLUP reporting for that device automatically once it is onboarded on Catalyst Center without the need to explicitly execute the Smart License Compliance workflow.
- If a device has not been linked or registered to a Virtual Account/Smart Account, then Smart License Compliance workflow is not executed automatically. Refer to this screenshot wherein Last Synced

status is NA:



- To report the License utilization, customer needs to execute the **Smart License Compliance** workflow via Catalyst Center's License Manager. From this point onwards Catalyst Center would execute the Smart License Compliance workflow automatically at interval scheduled by the customer during the first time execution of SLC workflow.

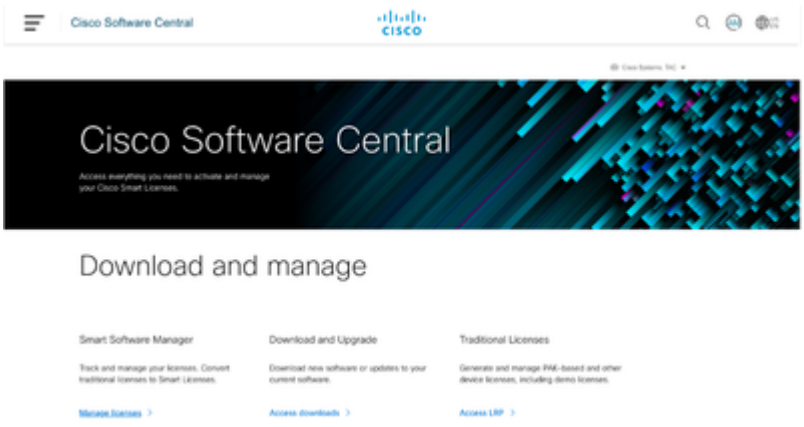
Refer to this screenshot wherein Last Synced status is shown:



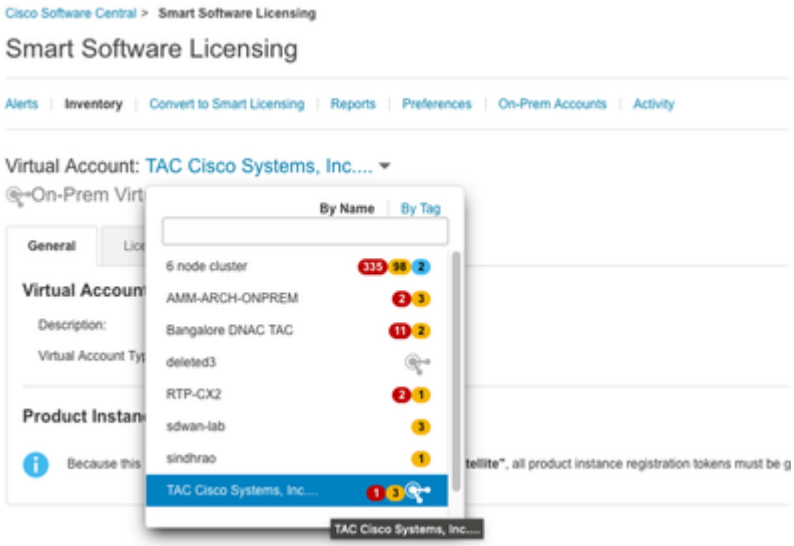
Scenario 3: License Migration between Virtual Accounts

Step 1. Log into **Cisco DNA** via admin credentials or via a custom role with super-admin privileges.

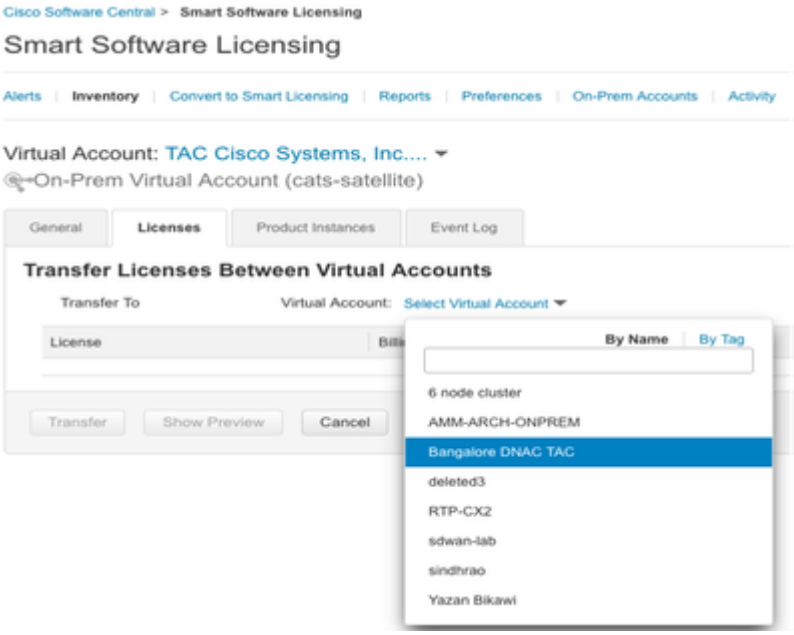
Step 2. Log into **software.cisco.com** and select **Manage Licenses**.



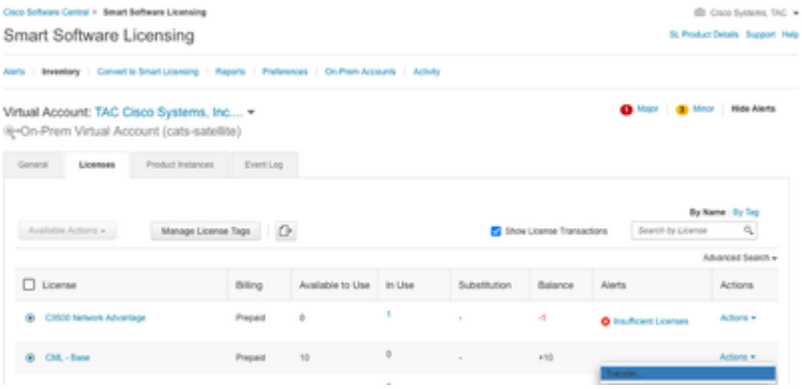
Step 3. Navigate to **Inventory** and select the source **Virtual Account**.



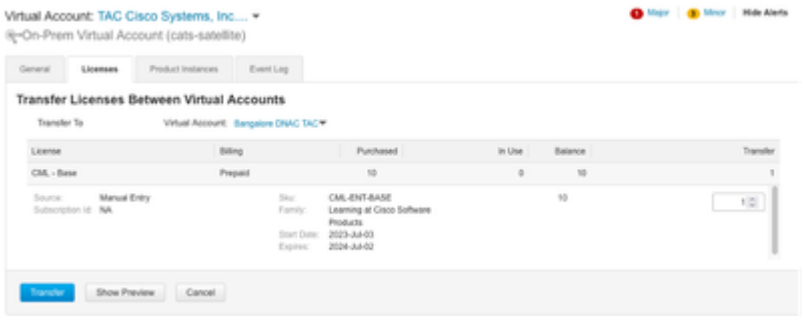
Step 4. Select the **License** tab and choose the **Target Virtual Account**.



Step 5. Select the **license** you want to transfer and click **Actions & Select Transfer**.



Step 6. Choose the **quantity of licenses** you want to transfer and click **Transfer**.

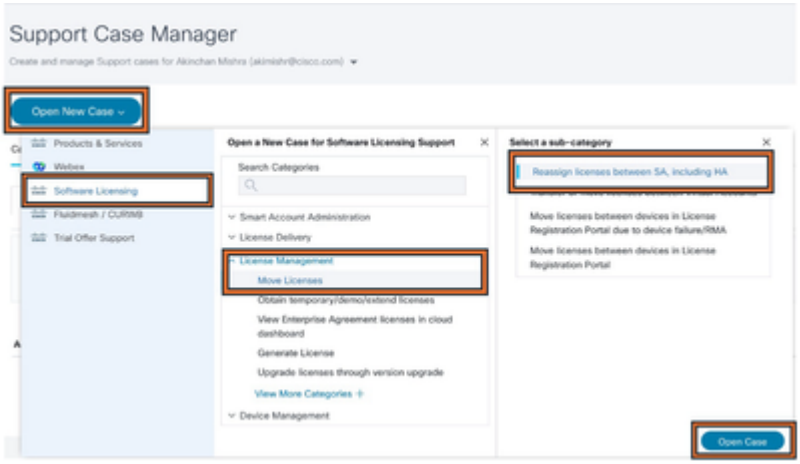


Scenario 4: License Migration between Smart Accounts

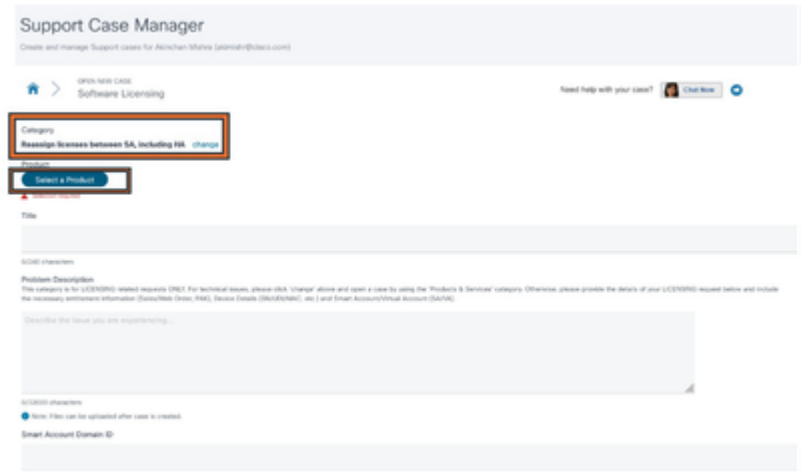
Migration of Licenses between different Smart Accounts can be done by the Cisco Licensing team. Please refer to these next steps to raise the case with the respective team.

Step 1. Log into Support Case Manager with Cisco credentials.

Step 2. Click **Open New Case** and select **Software Licensing > Expand License Management > Select Move Licenses**. Then select **Reassign licenses between SA** and click **Open Case**.



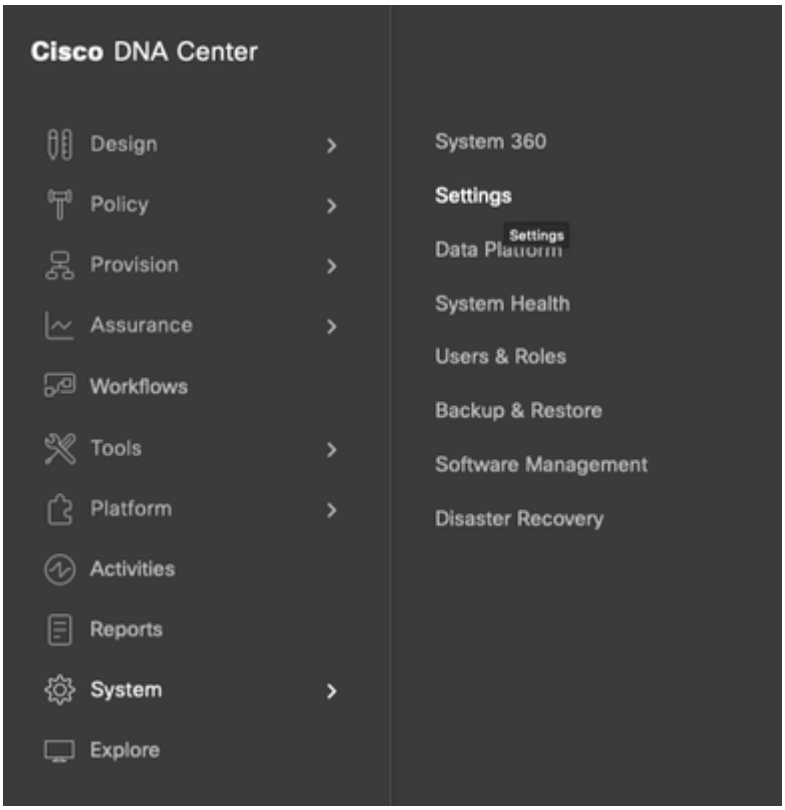
Step 3. Select the **relevant product** (for example, wireless, switching, and so), fill in the **form**, and submit the **request**.



Scenario 5: Change of SSM Connection Mode

Step 1. Log into **Cisco DNA** via admin credentials or custom role with super-admin privileges.

Step 2. Navigate to **Hamburger** and select **System > Settings**.



Step 3. Select **SSM Connection Mode** and choose the **desired option** (Direct/Smart Proxy/On-Prem). Click **Save**.

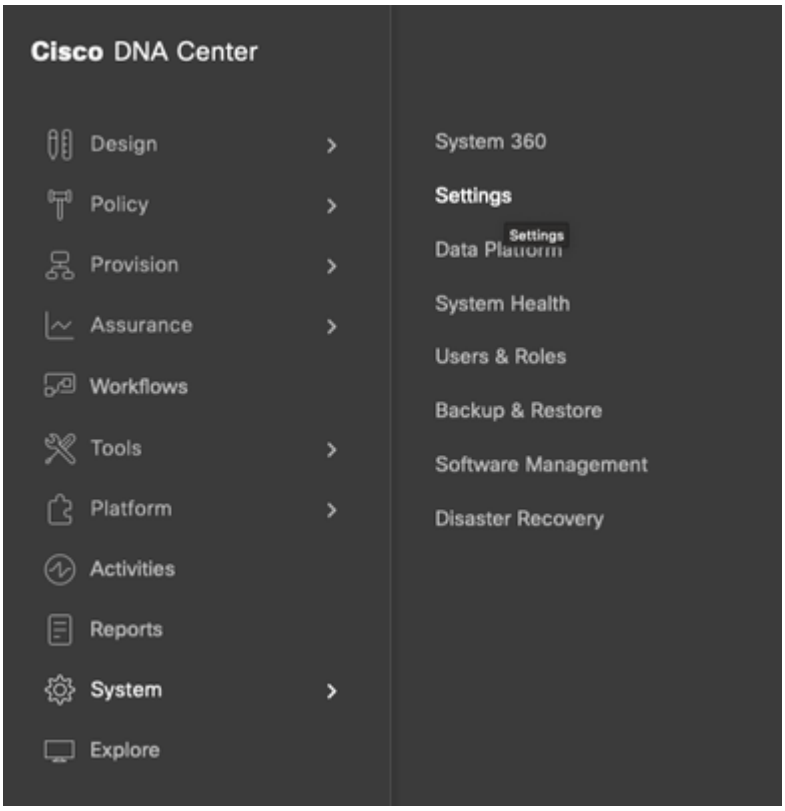


- Direct SSM Mode: In Direct Mode, Catalyst Center still acts as the proxy for the SLUP workflow wherein Catalyst Center collects the RUM report from the network devices and uploads it to the Cisco Smart Software Manager (CSSM) cloud.
- On-Prem CSSM SSM Mode: Run Reports are sent to the On-Prem CSSM and then it is sent to the Cisco Smart Software Manager (CSSM) cloud.

Scenario 6: Integration of Smart Account with Cisco DNA

Step 1. Log into **Cisco DNA** via admin credentials or via a custom role with super-admin privileges.

Step 2. Navigate to **Hamburger** and select **System > Settings**.



Step 3. Under **Smart Account**, click **Add**.



Step 4. Enter the **Smart Account username** and **password**, and click **Save**.



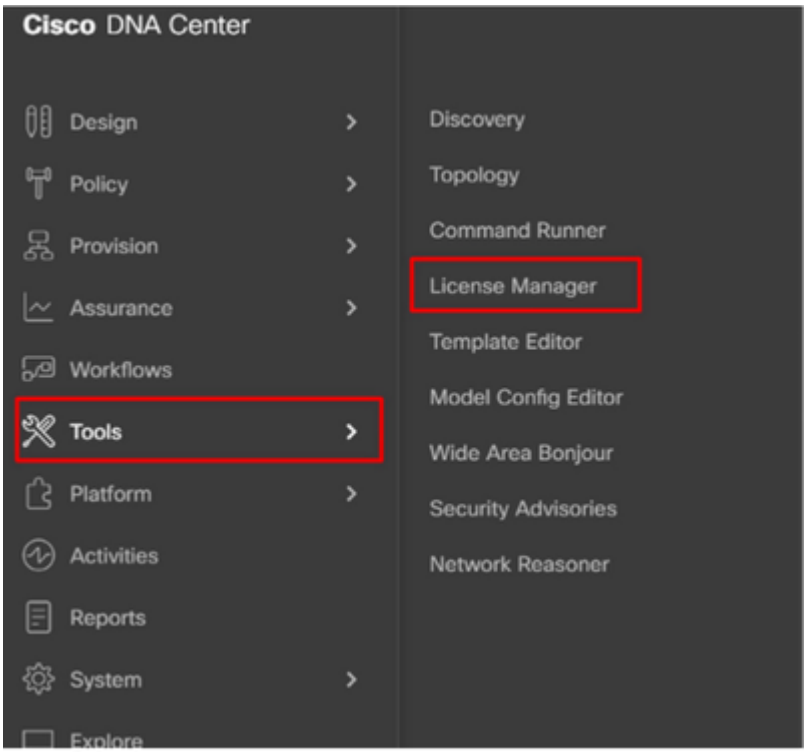
Step 5. If you have multiple Smart Accounts, repeat steps 3 and 4.

Note: If you have multiple Smart Accounts, choose one account to be the default. The License Manager uses the default account for visualization and licensing operations.

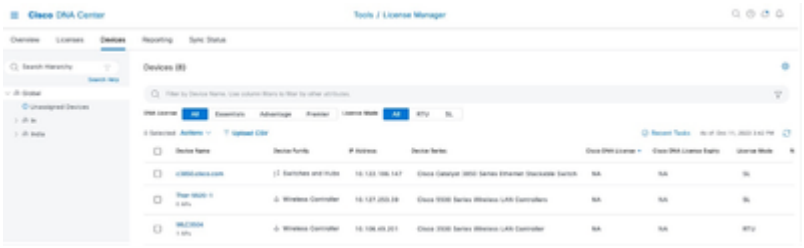
Scenario 7: Change of License Level

Step 1. Log into **Cisco DNA** via admin credentials or via a custom role with super-admin privileges.

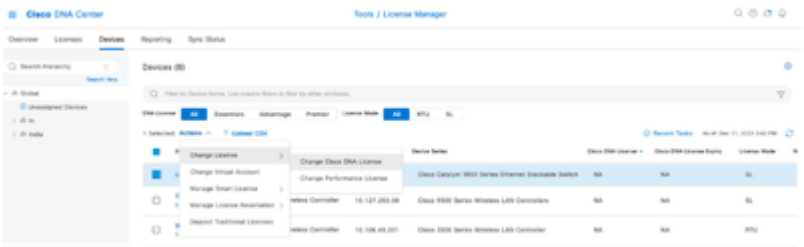
Step 2. Navigate to **Hamburger** and select **Tools > License Manager**.



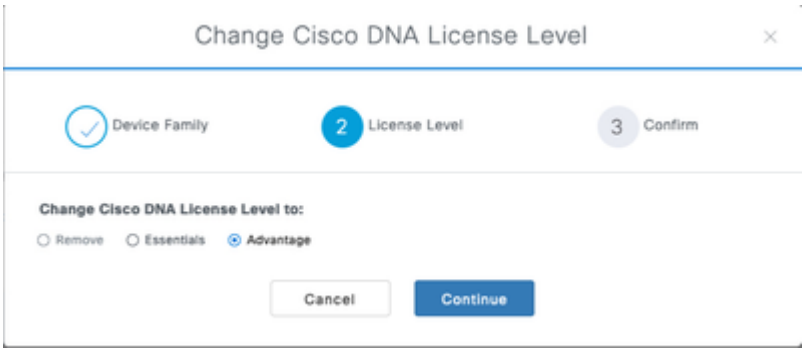
Step 3. Select **Devices** tab and use **Find** or scroll through the table to find the devices whose license level you want to change.



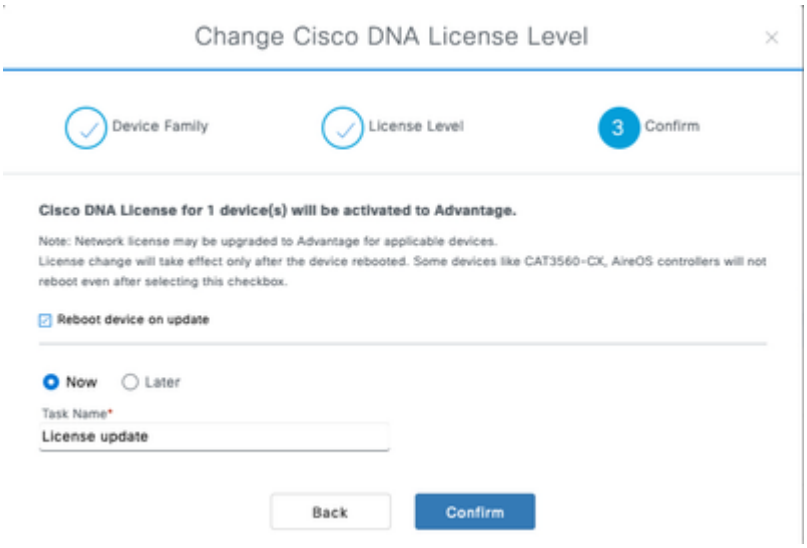
Step 4. Check the **check box** next to each device whose license level you want to change, then choose **Actions > Change Cisco DNA License**.



Step 5. Click the **license level** for either the **Essentials** or **Advantage** devices. Then click **Continue**.



Step 6. Cisco DNA prompts whether the change is to be applied immediately or later. Choose the **desired option** and click **Confirm**.



Note: You must also choose the option **Reboot device on update** for changes to take effect. Also, this activity needs to be performed in downtime.

Related Information

- Cisco Technical Support & Downloads