

Configuring Smart Licensing Using Policy

This chapter provides the simplest and fastest way to implement a topology.

Note These workflows are meant for new deployments only. If you are migrating from an existing licensing model, see Migrating to Smart Licensing Using Policy.

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Supported Topologies

This section describes the various ways in which you can implement smart licensing policy. For each topology, refer to the accompanying overview to know how the setup is designed to work, and refer to the considerations and recommendations, if any.

After Topology Selection

After you have selected a topology, see Configuring Smart Licensing Using Policy. These workflows are only for new deployments. They provide the simplest and fastest way to implement a topology.

If you want to perform any additional configuration tasks, for instance, if you want to configure different license, or use add-on license, or if you want to configure a narrower reporting interval, see the Common Tasks for Configuring Smart Licensing Using Policy. Check the Supported Topologies, before you proceed.

Choosing a Topology

The following table allows you to choose a topology depending on your network deployment.

Topology	Recommendations
Topology 1 Connected to CSSM through CSLU, on page 2	Use this topology when you do not want the switches to be directly connected to CSSM. This topology will support only one SA/VA combination.
Topology 2 Connected directly to CSSM, on page 5	Use this topology when you have switches that are already registered to CSSM and need to continue in the same mode. If you need to continue using this topology after upgrading to SLP, then Smart Transport is the preferred transport method.
Topology 3 CSLU disconnected from CSSM, on page 8	Use this topology when you need to manage or view license consumption locally. You can also use multiple VA.
Topology 4 Connected to CSSM through SSM On-Prem, on page 11	Use this topology when you want to collect licensing information from each switch in the network and when there is no connectivity to CSSM.
Topology 5 SSM On-Prem disconnected from CSSM, on page 13	Use this topology when you want to manage or view licenses from a single source. You can view license consumption locally. You can also use multiple SA/VA combinations.
Topology 6 No connectivity to CSSM and no CSLU, on page 15	Use this topology when you want to collect licensing information from a single source and when there is no connectivity to CSSM. You cannot view license consumption locally. Also, only a single VA can be used.

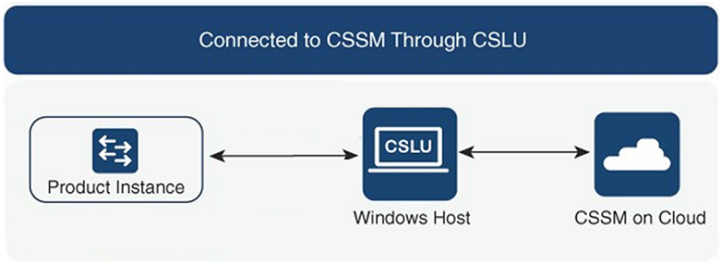
Topology 1 Connected to CSSM through CSLU

In this topology, switches in the network are connected to CSLU, and CSLU becomes the single point of interface with CSSM. A switch can be configured to push the required information to CSLU.

The communication from the Product Instance (PI, for example, a switch) to CSLU, and CSLU to CSSM occurs online through HTTPS mode. The switch service port is 8182, and the REST API port number is 8180.

Switch-initiated communication (push) - A switch initiates communication with CSLU, by connecting to a REST endpoint in CSLU. Data that is sent includes RUM reports. You can configure the switch to automatically send RUM reports to CSLU at required intervals.

Figure 1: Topology 1 - Connected to CSSM through CSLU



Considerations or recommendations

Choose the method of communication depending on your network's security policy.

SLP Configuration - Connected to CSSM Through CSLU

When implementing the product instance-initiated method of communication, complete the following tasks:

Tasks for Product Instance-Initiated Communication

CSLU Installation > **CSLU Preference Settings** > **Product Instance Configuration**

Procedure

Step 1 CSLU Installation

Where task is performed: A Windows host (laptop, desktop, or a Virtual Machine (VM) Download the file from Smart Software Manager > **Smart Licensing Utility**.

Refer to the Cisco Smart License Utility Quick Start Setup Guide for help with installation and setup.

Step 2 CSLU Preference Settings

Where tasks are performed: CSLU

a) Logging into Cisco (CSLU Interface)
b) Configuring a Smart Account and a Virtual Account (CSLU Interface)
c) Adding a Product-Initiated Product Instance in CSLU (CSLU Interface)

Step 3 Product Instance Configuration

Where tasks are performed: Product Instance

a) Ensuring Network Reachability for Product Instance-Initiated Communication.
b) Ensure that transport type is set to **cslu**.

CSLU is the default transport type. If you have configured a different option, enter the **license smart transport cslu** command in global configuration mode. Save any changes to the configuration file.

```
Device(config)# license smart transport cslu
```

```
Device(config)# exit
Device# copy running-config startup-config
```

c) Specify how you want CSLU to be discovered (choose one):

- Option 1:

  No action required. Name server configured for Zero-touch DNS discovery of **cslu-local**.

  Here, if you have configured DNS (The name server IP address is configured on the product instance), and the DNS server has an entry where hostname **cslu-local** is mapped to the CSLU IP address, then no further action is required. The product instance automatically discovers hostname **cslu-local**.

- Option 2:

  No action required. Name server and domain configured for Zero-touch DNS discovery of **cslu-local.<domain>**.

  Here if you have configured DNS, (the name server IP address and domain is configured on the product instance), and the DNS server has an entry where **cslu-local.<domain>** is mapped to the CSLU IP address, then no further action is required. The product instance automatically discovers hostname cslu-local.

- Option 3:

  Configure a specific URL for CSLU.

  Enter the **license smart url cslu** *http://<cslu_ip_or_host>:8182/cslu/v1/pi* command in global configuration mode. For **<cslu_ip_or_host>**, enter the hostname or the IP address of the Windows host where you have installed CSLU. 8182 is the port number and it is the only port number that CSLU uses.

```
Device(config)# license smart url cslu http://192.168.0.1:8182/cslu/v1/pi
Device(config)# exit
Device# copy running-config startup-config
```

As the product instance initiates communication, it automatically sends out the first RUM report at the scheduled time, per the policy. To know when the product instance will be sending this information, enter the **show license status** command in privileged EXEC mode and in the output, check the date for field `Next report push:`.

```
switch# show license  status
Utility:
    Status: DISABLED

Smart Licensing using Policy:
    Status: ENABLED

Data Privacy:
    Sending Hostname: yes
    Callhome Hostname Privacy: DISABLED
        Smart Licensing Hostname Privacy: DISABLED
    Version Privacy: DISABLED

Transport:
    Type: CSLU
    Cslu address: cslu-local
    VRF: cisco

Policy:
```

```
    Policy in use: Merged from multiple sources
    Reporting ACK required: Yes
    Unenforced/Non-Export:
        First report requirement (days): 90 (Installed)
        Ongoing reporting frequency (days): 365 (Installed)
        On change reporting (days): 120 (Installed)
    Enforced (Perpetual/Subscription):
        First report requirement (days): 30 (Installed)
        Ongoing reporting frequency (days): 90 (Installed)
        On change reporting (days): 60 (Installed)
    Export (Perpetual/Subscription):
        First report requirement (days): 30 (Installed)
        Ongoing reporting frequency (days): 30 (Installed)
        On change reporting (days): 30 (Installed)

Miscellaneous:
    Custom Id: <empty>

Usage reporting:
    Last ACK received: Nov 15 02:51:57 2022  UTC
    Next ACK deadline: Nov 15 02:51:57 2023  UTC
    Reporting push interval: 30 days
    Next ACK push check: <none>
    Next report push: Dec 15 02:46:56 2022  UTC
    Last report push: Nov 15 02:46:56 2022  UTC
    Last report file write: <none>

Trust Code installed: Nov 13 22:36:48 2022  UTC
    Active: PID: N9K-C93180YC-FX3H, SN: FDO26170Q6A
        Nov 13 22:36:48 2022  UTC
```



Note The `Last ACK received` field in the show license status output reflects the most recent acknowledgment from CSSM or On-Prem after processing a usage report. It is not a real-time connectivity indicator.

CSLU forwards the information to CSSM and the returning ACK from CSSM, to the product instance.

In case of a change in license usage, see Setting the Smart License Parameters to know how it affects reporting.

Topology 2 Connected directly to CSSM

This topology is available in the earlier version of Smart Licensing and continues to be supported with SLP.

In this topology, you establish a direct and trusted connection from a switch to CSSM. The direct connection requires network availability to CSSM. For the switch to then exchange messages and communicate with CSSM, configure one of the transport options available with this topology (described below). Lastly, the establishment of trust requires the generation of a token from the corresponding Smart Account and Virtual Account in CSSM, and installation on the switch.

You can configure a switch to communicate with CSSM in any one of the two ways:

- Use smart transport to communicate with CSSM

  Smart transport is a transport method where a Smart Licensing message (JSON) is contained within a HTTPS message, and exchanged between a switch and CSSM, to communicate. The available smart transport configuration options are:

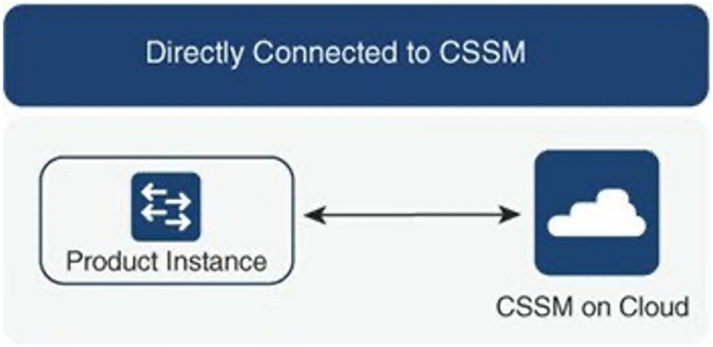
- Smart transport – In this method, a switch uses a specific smart transport licensing server URL. This must be configured exactly as shown in the workflow section.
- Smart transport through a proxy – In this method, a switch uses a proxy server to communicate with the licensing server, and eventually, CSSM.

- Use Call Home to communicate with CSSM

  Call Home provides e-mail-based and web-based notification of critical system events. This method of connecting to CSSM is available in the earlier Smart Licensing environment and remains available with SLP. The available Call Home configuration options are:

  - Direct cloud access – In this method, a switch sends usage information directly over the internet to CSSM; no additional components are needed for the connection.
  - Direct cloud access through a proxy – In this method, a switch sends usage information over the internet through a proxy server - either a Call Home Transport Gateway or an off-the-shelf proxy (such as Apache) to CSSM.

Figure 2: Topology 2 – Connected directly to CSSM



Considerations or recommendations

Smart transport is the recommended transport method when directly connecting to CSSM. This recommendation applies to:

- New deployments
- Earlier licensing models (Change configuration after migration to SLP)
- Registered licenses that currently use the Call Home transport method (Change configuration after migration to SLP)
- Evaluation or expired licenses in an earlier licensing model (Change configuration after migration to SLP)

To change configuration after migration, navigate to **Connected Directly to CSSM** > **Switch Configuration** > **Configure a connection method and transport type** > **Option 1** .

SLP Configuration - Connected Directly to CSSM

Smart Account Set-Up > **Product Instance Configuration** > **Trust Establishment with CSSM**

Procedure

Step 1 Smart Account Set-Up

Where task is performed: CSSM Web UI, Smart Software Manager.

Ensure that you have a user role with proper access rights to a Smart Account and the required Virtual Accounts.

Step 2 Product Instance Configuration

Where tasks are performed: Product Instance.

a) Set up product instance connection to CSSM: Setting Up a Connection to CSSM.
b) Configure a connection method and transport type (choose one):

- Option 1:

  Smart transport: Set transport type to **smart** using the **license smart transport smart**. Save any changes to the configuration file.

  ```
  Device(config)# license smart transport smart
  Device(config)# license smart url smart
  https://smartreceiver.cisco.com/licservice/license
  Device(config)# copy running-config startup-config
  ```

- Option 2:

  Configure Smart transport through an HTTPS proxy. See Configuring Smart Transport Through an HTTPS Proxy.

- Option 3:

  Configure Call Home service for direct cloud access. See Configure the Call Home service for direct cloud access.

- Option 4:

  Configure Call Home service for direct cloud access through an HTTPS proxy. See Configuring an HTTP Proxy Server.

Step 3 Trust Establishment with CSSM

Where task is performed: CSSM Web UI and then the product instance

a) Generate one token for each Virtual Account you have. You can use the same token for all the product instances that are part of one Virtual Account: Generating a New Token for a Trust Code from CSSM.
b) Having downloaded the token, you can now install the trust code on the product instance: Installing a Trust Code.

Result:

After establishing trust, CSSM returns a policy. The policy is automatically installed on all product instances of that Virtual Account. The policy specifies if and how often the product instance reports usage.

If you want to change your reporting interval to report more frequently: on the product instance, configure the **license smart usage interval** command in global configuration mode. For syntax details see the **license smart (privileged EXEC)** command in the Command Reference for the corresponding release.

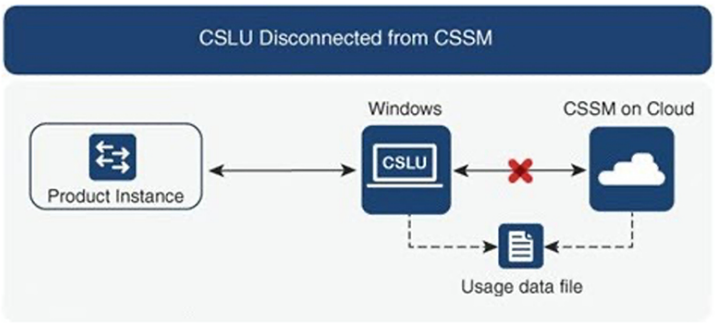
In case of a change in license usage, see Setting the Smart License Parameters to know how it affects reporting.

Topology 3 CSLU disconnected from CSSM

In this topology, a switch communicates with CSLU, and you can implement the switch-initiated communication. The other side of the communication, between CSLU and CSSM, is offline. CSLU provides you with the option of working in a move that is disconnected from CSSM.

Communication between CSLU and CSSM is sent and received in the form of signed files that are saved offline and then uploaded to or downloaded from CSLU or CSSM.

Figure 3: Topology 3 – CSLU disconnected from CSSM



Considerations or recommendations

None

SLP Configuration - CSLU Disconnected from CSSM

Depending on whether you want to implement a product instance-initiated method of communication. Complete the following tasks:

Tasks for Product Instance-Initiated Communication

CSLU Installation > **CSLU Preference Settings** > **Product Instance Configuration** > **Download All for Cisco and Upload From Cisco**

Procedure

Step 1 CSLU Installation

Where task is performed: A Windows host (laptop, desktop, or a Virtual Machine (VM) Download the file from Smart Software Manager > **Smart Licensing Utility**.

Refer to the Cisco Smart License Utility Quick Start Setup Guide for help with installation and setup.

Step 2 CSLU Preference Settings

Where tasks are performed: CSLU.

a) In the CSLU Preferences tab, click the Cisco Connectivity toggle switch to **off**. The field switches to "Cisco Is Not Available".
b) Configuring a Smart Account and a Virtual Account (CSLU Interface).
c) Adding a Product-Initiated Product Instance in CSLU (CSLU Interface).

Step 3 Product Instance Configuration

Where tasks are performed: Product Instance

a) Ensuring Network Reachability for Product Instance-Initiated Communication.
b) Ensure that transport type is set to **cslu**.

CSLU is the default transport type. If you have configured a different option, enter the **license smart transport cslu** command in global configuration mode. Save any changes to the configuration file.

```
Device(config)# license smart transport cslu
Device(config)# exit
Device# copy running-config startup-config
```

c) Specify how you want CSLU to be discovered (choose one):

- Option 1:

  No action required. Name server configured for Zero-touch DNS discovery of cslu-local.

  Here, if you have configured DNS (The name server IP address is configured on the product instance), and the DNS server has an entry where hostname **cslu-local** is mapped to the CSLU IP address, then no further action is required. The product instance automatically discovers hostname **cslu-local**.

- Option 2:

  No action required. Name server and domain that is configured for Zero-touch DNS discovery of **cslu-local.<domain>**.

  Here if you have configured DNS, (the name server IP address and domain is configured on the product instance), and the DNS server has an entry where **cslu-local.<domain>** is mapped to the CSLU IP address, then no further action is required. The product instance automatically discovers hostname **cslu-local**.

- Option 3:

  Configure a specific URL for CSLU.

  Enter the **license smart url cslu** *http://<cslu_ip_or_host>:8182/cslu/v1/pi* command in global configuration mode. For **<cslu_ip_or_host>**, enter the hostname or the IP address of the windows host where you have installed CSLU. 8182 is the port number and it is the only port number that CSLU uses.

  ```
  Device(config)# license smart url cslu http://192.168.0.1:8182/cslu/v1/pi
  Device(config)# exit
  Device# copy running-config startup-config
  ```

Step 4 Download All for Cisco and Upload From Cisco.

Where tasks are performed: CSLU and CSSM

a) Download All for Cisco (CSLU Interface).
b) Uploading Usage Data to CSSM and Downloading an ACK.
c) Upload From Cisco (CSLU Interface).

As the product instance initiates communication, it automatically sends out the first RUM report at the scheduled time, as per the policy. To know when the product instance will be sending this information, enter the **show license status** command in privileged EXEC mode and in the output, check the date for field **Next report push:**.

```
switch# show license  status
Utility:
    Status: DISABLED

Smart Licensing using Policy:
    Status: ENABLED

Data Privacy:
    Sending Hostname: yes
    Callhome Hostname Privacy: DISABLED
        Smart Licensing Hostname Privacy: DISABLED
    Version Privacy: DISABLED

Transport:
    Type: CSLU
    Cslu address: cslu-local
    VRF: cisco

Policy:
    Policy in use: Merged from multiple sources
    Reporting ACK required: Yes
    Unenforced/Non-Export:
        First report requirement (days): 90 (Installed)
        Ongoing reporting frequency (days): 365 (Installed)
        On change reporting (days): 120 (Installed)
    Enforced (Perpetual/Subscription):
        First report requirement (days): 30 (Installed)
        Ongoing reporting frequency (days): 90 (Installed)
        On change reporting (days): 60 (Installed)
    Export (Perpetual/Subscription):
        First report requirement (days): 30 (Installed)
        Ongoing reporting frequency (days): 30 (Installed)
        On change reporting (days): 30 (Installed)

Miscellaneous:
    Custom Id: <empty>

Usage reporting:
    Last ACK received: Nov 15 02:51:57 2022  UTC
    Next ACK deadline: Nov 15 02:51:57 2023  UTC
    Reporting push interval: 30 days
    Next ACK push check: <none>
    Next report push: Dec 15 02:46:56 2022  UTC
    Last report push: Nov 15 02:46:56 2022  UTC
    Last report file write: <none>

Trust Code installed: Nov 13 22:36:48 2022  UTC
```

```
Active: PID: N9K-C93180YC-FX3H, SN: FDO26170Q6A
    Nov 13 22:36:48 2022  UTC
```

As the CSLU is disconnected from CSSM, you must save usage data which CSLU has collected from the product instance to a file. Then, from a workstation that is connected to Cisco, upload it to CSSM. After this, download the ACK from CSSM. In the workstation where CSLU is installed and connected to the product instance, upload the file to CSLU.

In case of a change in license usage, see Setting the Smart License Parameters to know how it affects reporting.

Topology 4 Connected to CSSM through SSM On-Prem

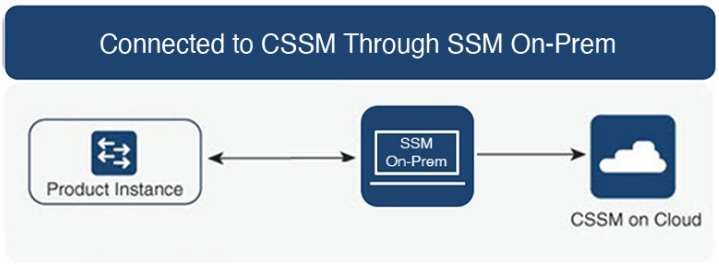
Switches in the network are connected to Smart Software Manager (SSM) On-Prem, and SSM On-Prem becomes the single point of interface with CSSM.

Switches in the network are connected to Smart Software Manager (SSM) On-Prem, and SSM On-Prem becomes the single point of interface with CSSM. A switch can be configured to push the required information to SSM On-Prem.

Switch-initiated communication (push) – A switch initiates communication with SSM On-Prem, by connecting to a REST endpoint in SSM On-Prem. Data that is sent includes RUM reports. You can configure the switch to automatically send RUM reports to SSM On-Prem at required intervals.

For more information about VRF management, see the Guidelines and limitations for Smart Licensing Using Policy and Configure the Call Home service for direct cloud access sections.

Figure 4: Topology 4 – Connected to CSSM through SSM On-Prem



Considerations or recommendations

Choose the method of communication depending on your network's security policy.

SLP Configuration - Connected to CSSM Through SSM On-Prem

When implementing the product instance-initiated method of communication, complete the corresponding sequence of tasks:

- Tasks for Product Instance-Initiated Communication, on page 12

Note If the device is registered to SSM On-Prem with pre-SLP release using callhome transport, then the transport mode changes to CSLU after the migration. Also, the url will be populated on the product instance from **OnPrem CSLU tenant ID**. Ensure that you save the configuration using the **copy running-config startup-config** command.

Tasks for Product Instance-Initiated Communication

SSM On-prem Installation > **On-prem Settings** > **Product Instance Configuration**

Procedure

Step 1 SSM On-Prem Installation

Where task is performed: Download the file from Smart Software Manager.

Refer to the Cisco Smart License Utility Quick Start Setup Guide for help with installation and setup.

Step 2 On-Prem Settings

Where tasks are performed: On-Prem.

Refer Smart Software Manager On-Prem User Guide.

Step 3 Product Instance Configuration

Where tasks are performed: Product Instance.

a) Ensuring Network Reachability for Product Instance-Initiated Communication.

b) Ensure that transport type is set to **cslu**.

If you have configured a different option, enter the **license smart transport cslu** command in global configuration mode. Save any changes to the configuration file.

```
Device(config)# license smart transport cslu
Device(config)# exit
Device# copy running-config startup-config
```

c) The SSM On-Prem url will be populated on the product instance from SSU On-Prem tenant ID.

This configuration is visible as license smart url `https://Cisco_SSM_OnPrem/cslu/v1/pi/XYZ-ON-PREM-1`.

In the above url **XYZ-ON-PREM-1** is the tenant ID.

d) To discover SSM On-Prem:

No action required. Name server configured for Zero-touch DNS discovery of **Cisco_SSM_OnPrem**.

Here, if you have configured DNS (The name server IP address is configured on the product instance), and the DNS server has an entry where hostname **Cisco_SSM_OnPrem** is mapped to the On-Prem IP address, then no further action is required. The product instance automatically discovers hostname **Cisco_SSM_OnPrem**.

Result:

Since the product instance initiates communication, it automatically sends out the first RUM report at the scheduled time, as per the policy. To know when the product instance will be sending this information, enter the **show license all** command in privileged EXEC mode and in the output, check the date for field `Next report push:`.

On-Prem forwards the information to CSSM and the returning ACK from CSSM, to the product instance.

In case of a change in license usage, see Setting the Smart License Parameters to know how it affects reporting.

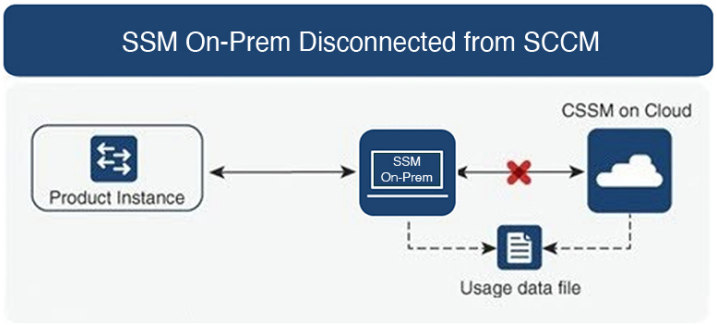
Topology 5 SSM On-Prem disconnected from CSSM

In this topology, the switch communicates with SSM On-Prem, and you can implement the switch-initiated communication. The other side of the communication, between SSM On-Prem and CSSM, is offline. SSM On-Prem provides you with the option of working in a mode that is disconnected from CSSM.

Communication between SSM On-Prem and CSSM is sent and received in the form of signed files that are saved offline and then uploaded to or downloaded from SSM On-Prem or CSSM.

For more information about VRF management, see the Guidelines and limitations for Smart Licensing Using Policy and Configure the Call Home service for direct cloud access sections.

Figure 5: Topology 5 – SSM On-Prem disconnected from CSSM



Considerations or recommendations

None

SLP Configuration - SSM On-Prem Disconnected from CSSM

Depending on whether you want to implement a product instance-initiated method of communication. Complete the following tasks:

Note If the device is registered SSM On-Prem with pre-SLP release, the transport mode will change to CSLU after the migration. Also, the url will be populated on the product instance from **OnPrem CSLU tenant ID**. Ensure that you save the configuration using the **copy running-config startup-config** command.

Tasks for Product Instance-Initiated Communication

SSM On-prem Installation > On-prem Settings > Product Instance Configuration

Procedure

Step 1 SSM On-Prem Installation

Where task is performed: Download the file from Smart Software Manager.

Refer to the Cisco Smart License Utility Quick Start Setup Guide for help with installation and setup.

Step 2 On-Prem Settings

Where tasks are performed: On-Prem

Refer Smart Software Manager On-Prem User Guide.

Step 3 Product Instance Configuration

Where tasks are performed: Product Instance

a) Ensuring Network Reachability for Product Instance-Initiated Communication.

b) Ensure that transport type is set to **cslu**.

If you have configured a different option, enter the **license smart transport cslu** command in global configuration mode. Save any changes to the configuration file.

```
Device(config)# license smart transport cslu
Device(config)# exit
Device# copy running-config startup-config
```

c) The SSM On-Prem url will be populated on the product instance from SSM On-Prem tenant ID. This configuration is visible as license smart url https://Cisco_SSM_OnPrem/cslu/v1/pi/XYZ-ON-PREM-1.

In the above url, **XYZ-ON-PREM-1** is the tenant ID.

d) To discover SSM On-Prem:

No action required. Name server configured for Zero-touch DNS discovery of **Cisco_SSM_OnPrem**.

Here, if you have configured DNS (The name server IP address is configured on the product instance), and the DNS server has an entry where hostname **Cisco_SSM_OnPrem** is mapped to the On-Prem IP address, then no further action is required. The product instance automatically discovers hostname **Cisco_SSM_OnPrem**.

Step 4 Download All for Cisco and Upload From Cisco.

Where tasks are performed: On-Prem and CSSM.

a) Log in to SSM On-Prem licensing workspace GUI.

1. Click **SL Using Policy** tab.
2. Click **Export/Import All** drop-down.
3. Select **Export Usage Cisco** to upload and save the file.

b) Uploading Usage Data to CSSM and Downloading an ACK.
c) Log in to SSM On-Prem licensing workspace GUI.

1. Click **SL Using Policy** tab.
2. Click **Export/Import All** drop-down.
3. Select **Import From Cisco** to upload the ACK that is downloaded from CSSM.

Result:

Since the product instance initiates communication, it automatically sends out the first RUM report at the scheduled time, as per the policy. To know when the product instance will be sending this information, enter the **show license all** command in privileged EXEC mode and in the output, check the date for field `Next report push:`.

Since On-Prem is disconnected from CSSM, you must save usage data which On-Prem has collected from the product instance to a file. Then, from a workstation that is connected to Cisco, upload it to CSSM. After this, download the ACK from CSSM. In the workstation where On-Prem is installed and connected to the product instance, upload the file to On-Prem.

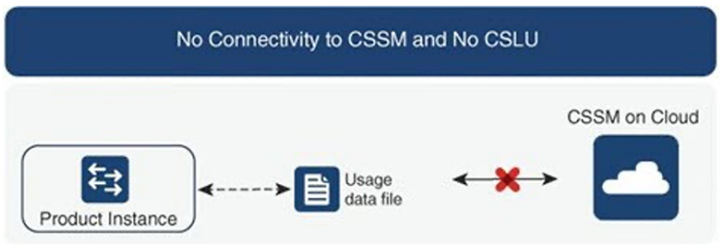
In case of a change in license usage, see Setting the Smart License Parameters to know how it affects reporting.

Topology 6 No connectivity to CSSM and no CSLU

This topology, where there is no connectivity to CSSM or CSLU, operates in the offline mode. In the offline mode, a switch and CSSM are disconnected from each other, and without any other intermediary utilities or components. All communication is in the form of uploaded and downloaded files.

Note RUM reports cannot be saved if no licensing features are active.

Figure 6: Topology 6 – No connectivity to CSSM and no CSLU (offline mode)



Considerations or recommendations

This topology is suited to a high-security deployment where a switch cannot communicate online, with anything outside its network.

SLP Configuration - No Connectivity to CSSM and No CSLU

Since you do not have to configure connectivity to any other component, the list of tasks that are required to set up the topology is a small one. See, the Results section at the end of the workflow to know how you can complete requisite usage reporting after you have implemented this topology.

Product Instance Configuration

Where task is performed: Product Instance Set transport type to **off**.

Enter the **license smart transport off** command in global configuration mode. Save any changes to the configuration file.

```
Device(config)# license smart transport off
Device(config)# exit
Device# copy running-config startup-config
```

Result:

All communication to and from the product instance is disabled. To report license usage, you must save RUM reports to a file (on your product instance) and upload it to CSSM (from a workstation that has connectivity to the internet, and Cisco):

1. Generate and save RUM reports

   Enter the **license smart save usage** command in privileged EXEC mode. In the example below, all RUM reports are saved to the flash memory of the product instance, in the all_rum.txt file. In the example, the file is first saved to the bootflash and then copied to a TFTP location:

   ```
   Device# license smart save usage all bootflash:all_rum.txt
   Device# copy bootflash:all_rum.txt tftp://10.8.0.6/all_rum.txt
   ```



Note The RUM reports capture the licensing transactions in the device for upload. On a greenfield device, there is nothing to report, so it is empty and not generated. Also, when there are no licensing transactions, and the user tries to save the report, the **"Failure: save status: The requested item was not found"** error appears. After a few licensing transactions, such as enabling a licensing feature, the report gets populated and generated for online/offline upload.

2. Upload usage data to CSSM: Uploading Usage Data to CSSM and Downloading an ACK.
3. Install the ACK on the product instance: Installing a File on the Switch.

In case of a change in license usage, see Setting the Smart License Parameters to know how it affects reporting.