Configure Smart License on Expressway

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Introduction

This document describes how to configure Smart Licensing on Cisco Expressway.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- Cisco License Central access
- Smart Account (SA)
- Virtual Account (VA)

Components Used

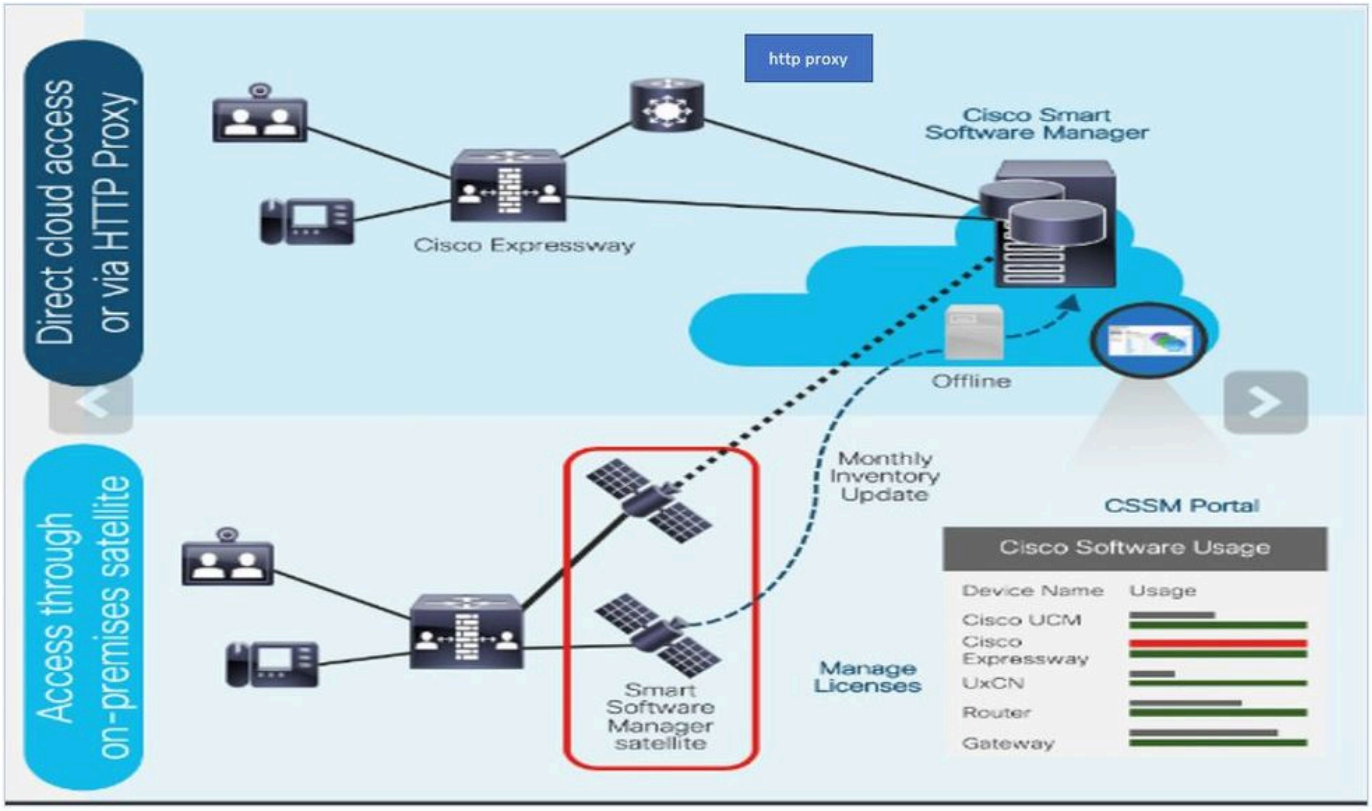
The information in this document is based on these software and hardware versions:

- Cisco Expressway Version 12.6 and later

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

Cisco Smart Software Licensing is a new way to think about licensing. It simplifies the licensing experience across the enterprise and makes it easier to purchase, deploy, track, and renew Cisco Software. It provides visibility into license ownership and consumption through a single, simple user interface.



You place an order on Cisco Commerce and the order is associated with the smart account. This information is populated on Cisco License Central which resides on Cisco.com. Now, you have a complete view on what you ordered and purchased.

The product that has Smart Licensing enabled (via CLI or GUI), is registered to Cisco License Central and it reports license consumption to Cisco License Central. Two models exist to report the usage:

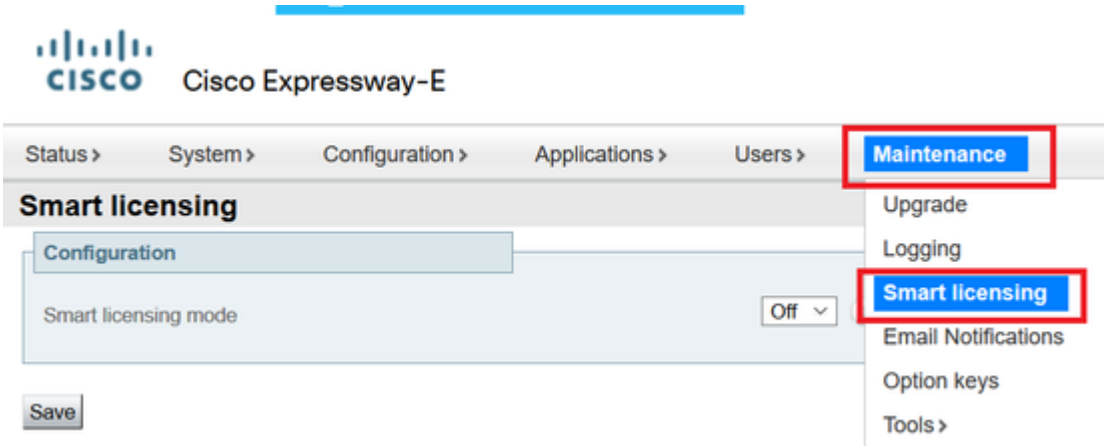
Direct Model: Use this model in your environments where devices can communicate directly to the internet

or can connect to the internet via an HTTPS proxy. Communication to Cisco.com is via HTTPS, therefore, all traffic is encrypted in transport. If traffic is sent through an HTTPS proxy, all communications between devices and Cisco.com are channeled through a centralized location if additional inspection or security policies must be applied.

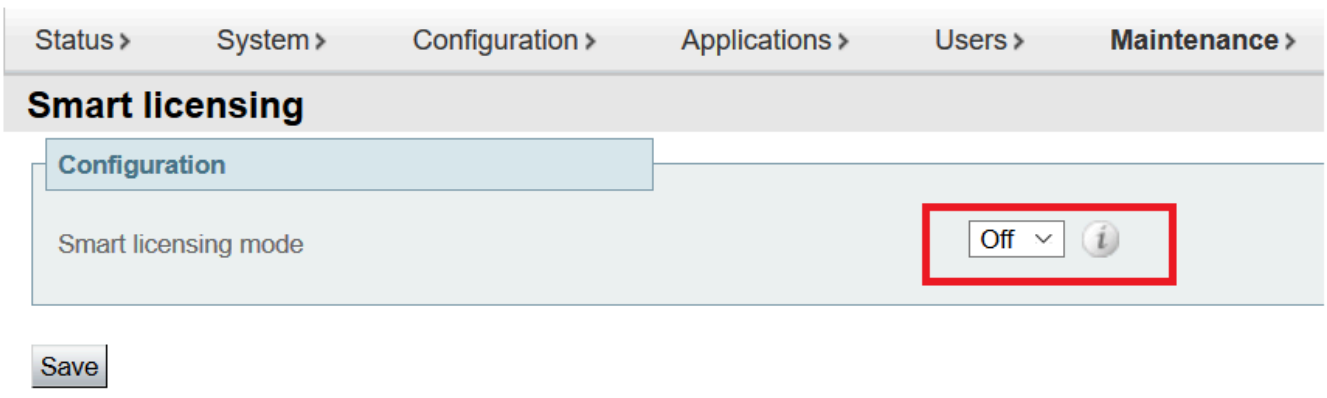
Mediated Deployment Model: Use this model in networks where devices do not have any form to connect to the internet and cannot reach Cisco.com. This deployment model requires you to install a Cisco License Central satellite virtual machine on your premises, which are reachable by all internal hosts. The on-premise satellite can be deployed in a connected mode that synchronizes with Cisco License Central on Cisco.com monthly, weekly, or can be deployed in a totally disconnected configuration that requires manual file uploads and downloads to keep the satellite in sync. The recommendation is to sync at least every 30 days.

Configure

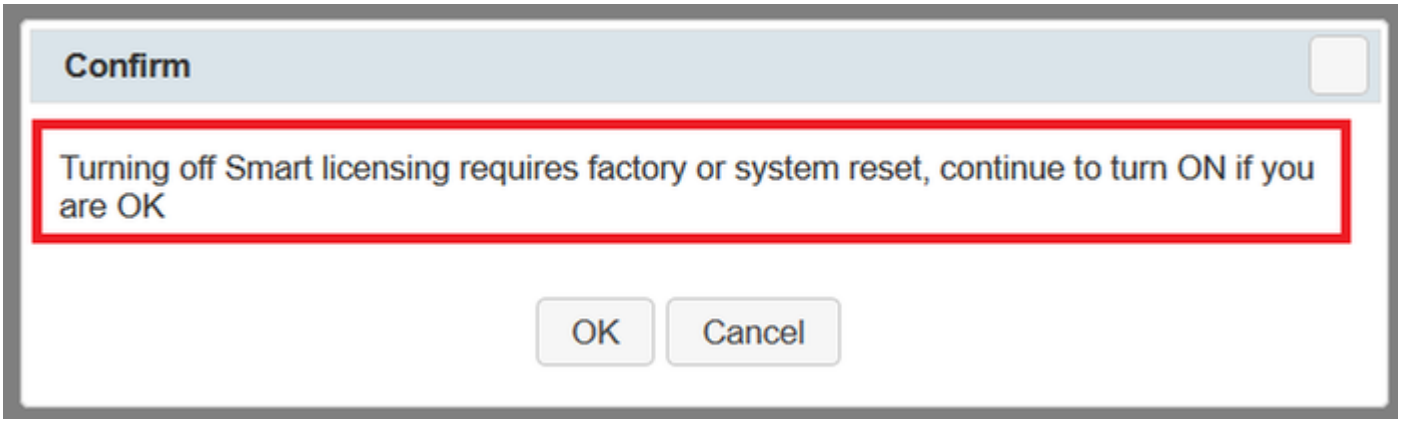
Step 1. Navigate to **Maintenance> Smart licensing** tab.



Step 2. Turn Smart Licensing **On**. Click **Save**.

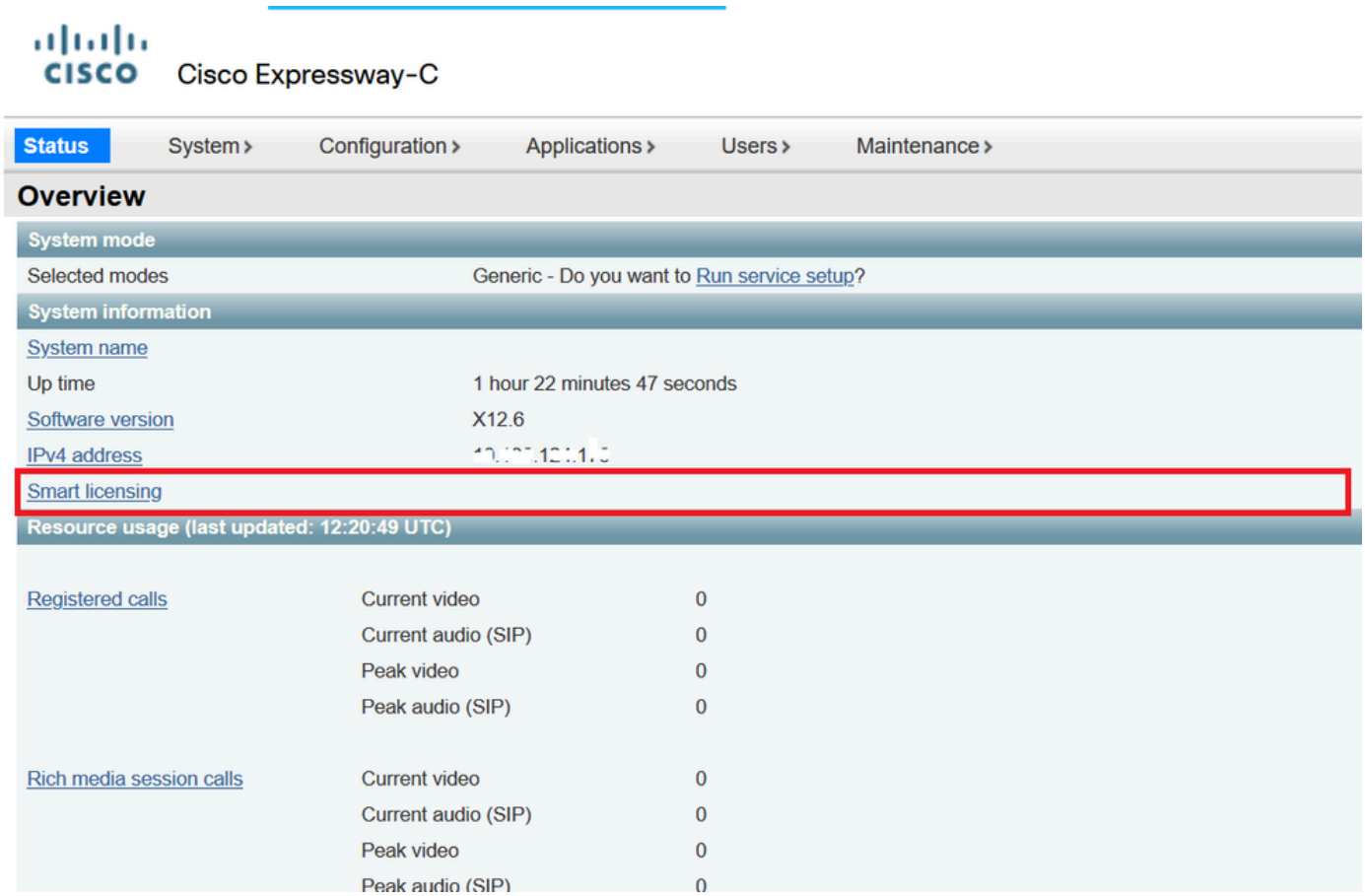


Caution: Smart Licensing is exclusive and cannot work concurrently with Product Authorization Key (PAK) licensing mode. If a switch between Smart Licensing to PAK must happen, then a factory reset of the device must be performed.

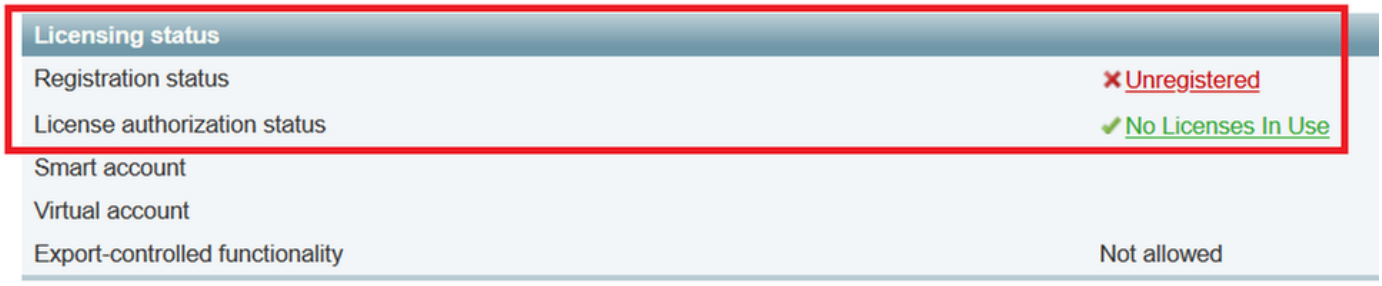


Note: It is always recommended to take a configuration backup to avoid any partial or complete configuration lost scenario.

Note: No feature options are represented under Overview tab.

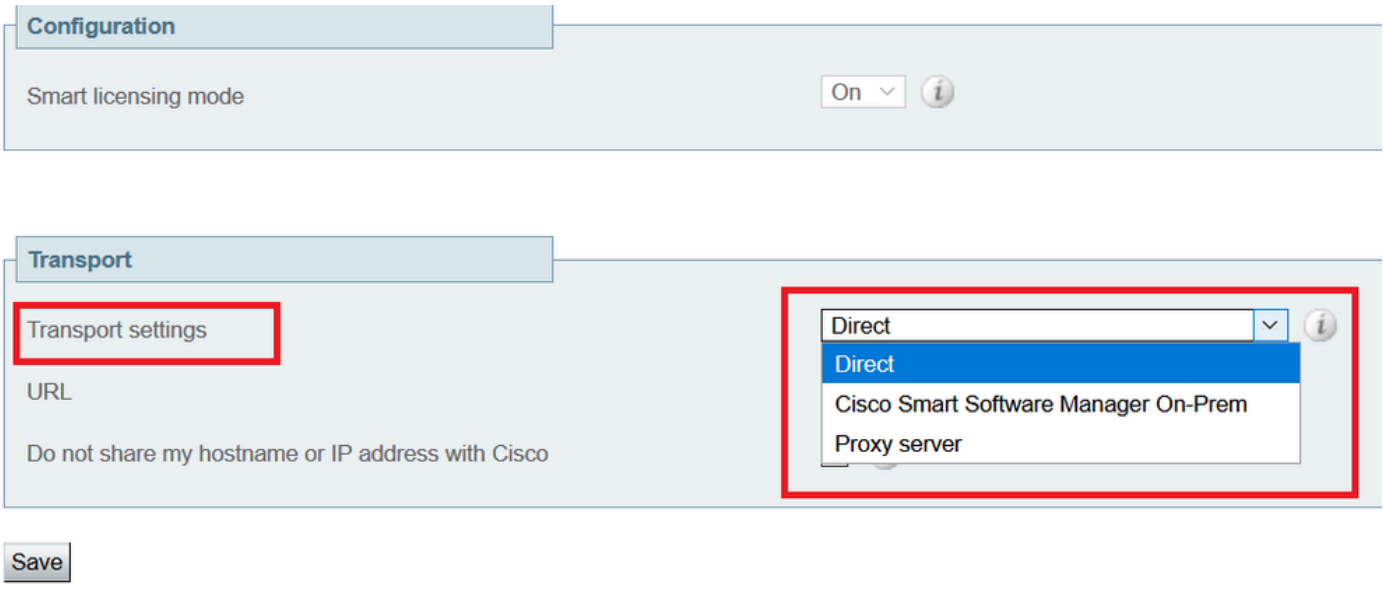


Step 3. Verify the device shows Unregistered to Cisco License Central or Satellite.



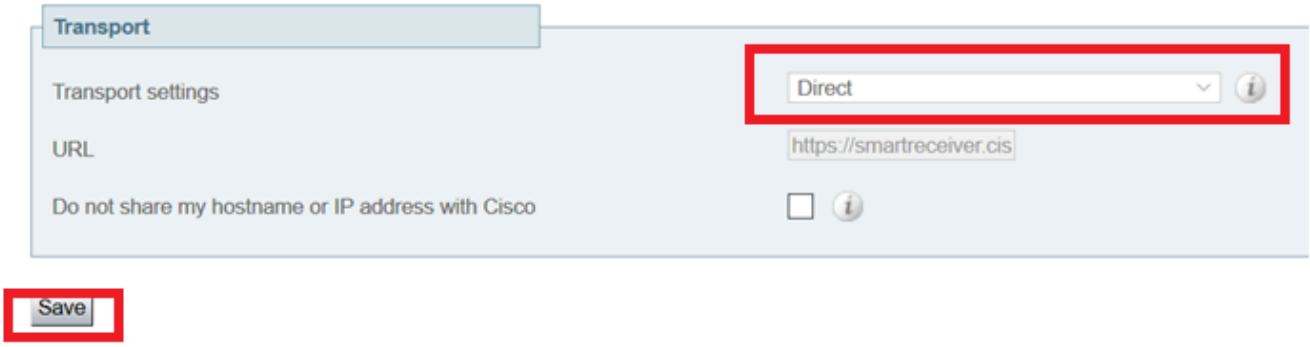
Step 4. Choose **Transport** settings under the **licensing** page per your Smart Licensing deployment model.

- **Direct**: Connects to the cloud directly.
- **Satellite**: On-Premise solution which talks directly to Cisco License Central.
- **Proxy**: HTTPS Proxy.

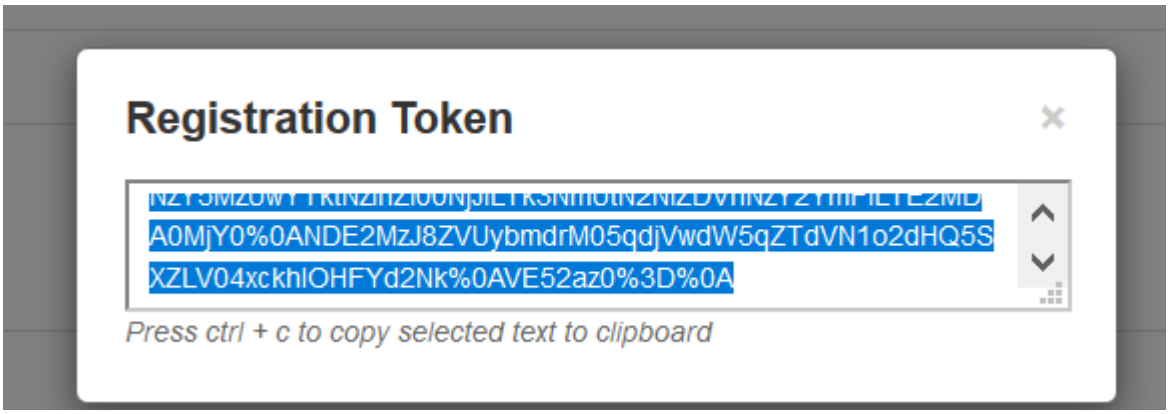


Direct Model

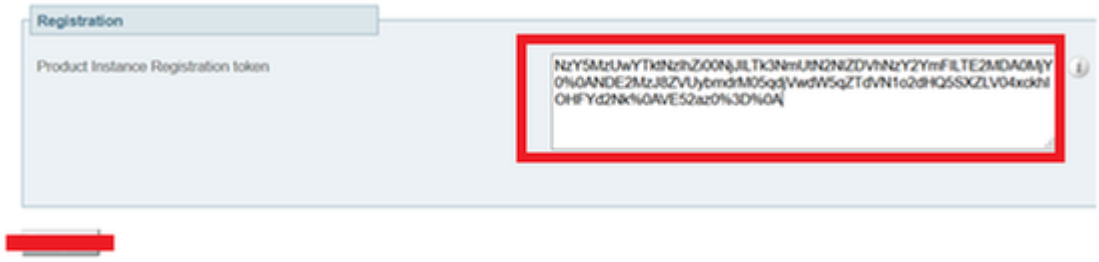
For Direct Model, choose **Direct** and **Save**. Check. Do not share my hostname or IP address with Cisco if your security policy does not allow you to share information in the cloud.



Step 5. Create a **token** on Cisco License Central.



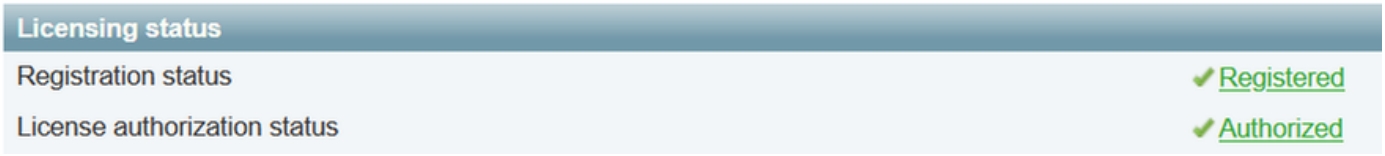
Step 6. Paste the **token** and click **Register**.



Note: Ensure Cisco Expressway has a connection that is open towards the cloud as highlighted in the next image.

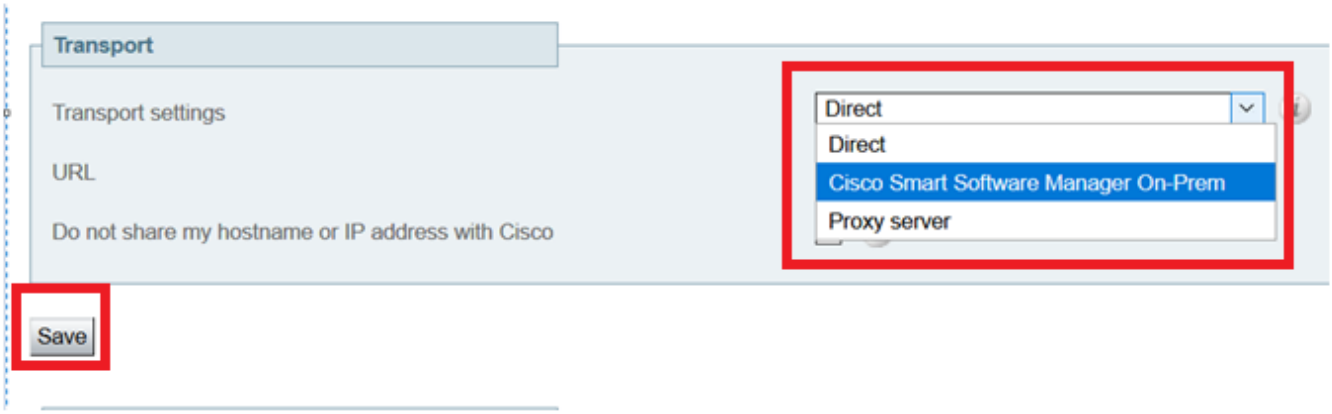
Smart Licensing requests originating from Expressway-E	Expressway-E	Ephemeral (30000-35999)	TLS	https://smartreceiver.cisco.com/licservice/license	443

Step 7. Verify the instance registered successfully.

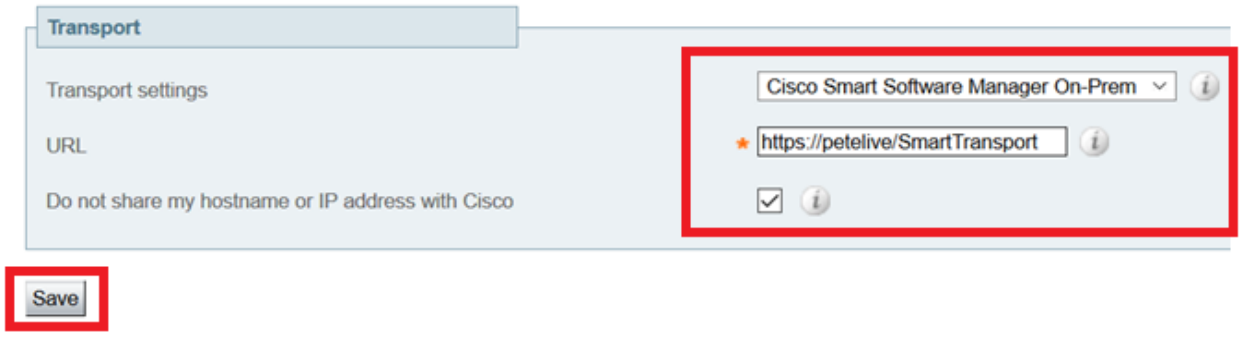


Mediated Deployment Model

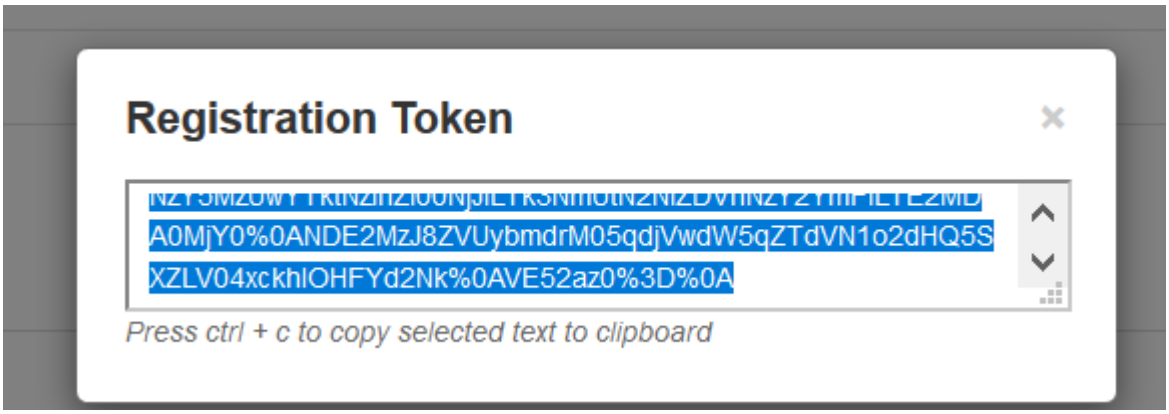
Step 1. Choose **On-Prem** and **Save**.



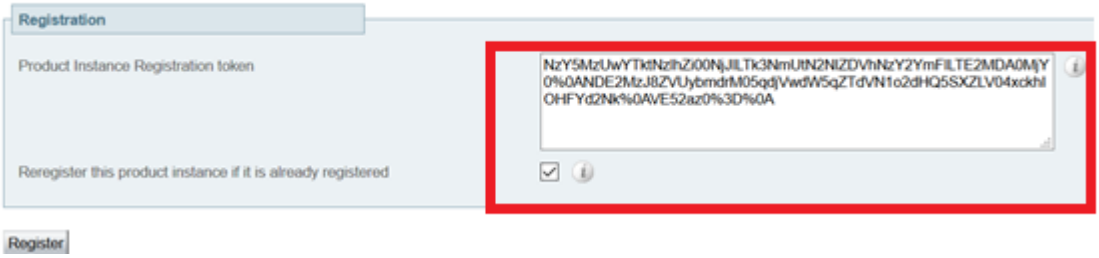
Step 2. Update the **onprem URL**. Enter the correct **URL**.



Step 3. Access **onprem** and generate a **token**.



Step 4. Paste the **token**. Click **Register**.



The instance is in process of registering.

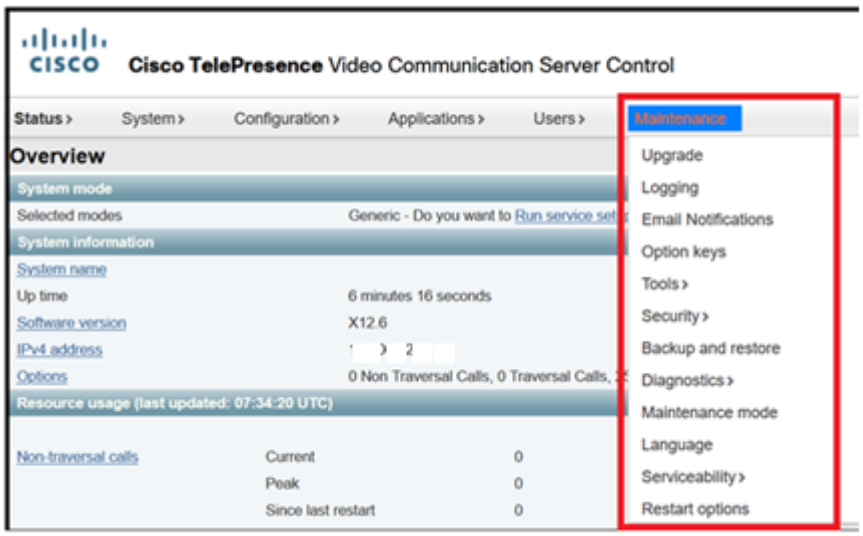
Licensing status	
Registration status	✖ Register In Progress
License authorization status	✔ No Licenses In Use
Smart account	
Virtual account	
Export-controlled functionality	Not allowed

The status shows registered.

Licensing status	
Registration status	✔ Registered
License authorization status	✔ Authorized

Troubleshoot

Note: If the Smart Licensing option is not present, it is because of the Old VCS flavor on 12.6.



Verify

You can verify the Smart Licensing status by running the **xstatus // license** command on the CLI:

```
xstatus // license
*s Show: /
License:
All:
Smart Licensing Status
======================

Smart Licensing is ENABLED

Registration:
Status: REGISTERED
Smart Account: petelive.cisco.com
Virtual Account: Default
Export-Controlled Functionality: ALLOWED
Initial Registration: SUCCEEDED on Jun 10 2020 07:57:22 UTC
Last Renewal Attempt: None
Next Renewal Attempt: Jul 11 2020 09:08:38 UTC
Registration Expires: Sep 11 2020 11:31:12 UTC

License Authorization:
Status: AUTHORIZED on Jun 10 2020 08:02:32 UTC
Last Communication Attempt: SUCCEEDED on Jun 10 2020 08:02:32 UTC
Next Communication Attempt: Jul 10 2020 08:02:31 UTC
Communication Deadline: Sep 08 2020 07:33:04 UTC

Data Privacy:
Sending Hostname: yes
Callhome hostname privacy: DISABLED
```

```
Smart Licensing hostname privacy: DISABLED
Version privacy: DISABLED

Transport:
Type: Smart
URL: https://petelive/SmartTransport
Proxy:
Not Configured
```

How do Specific Licenses Apply to my Expressways

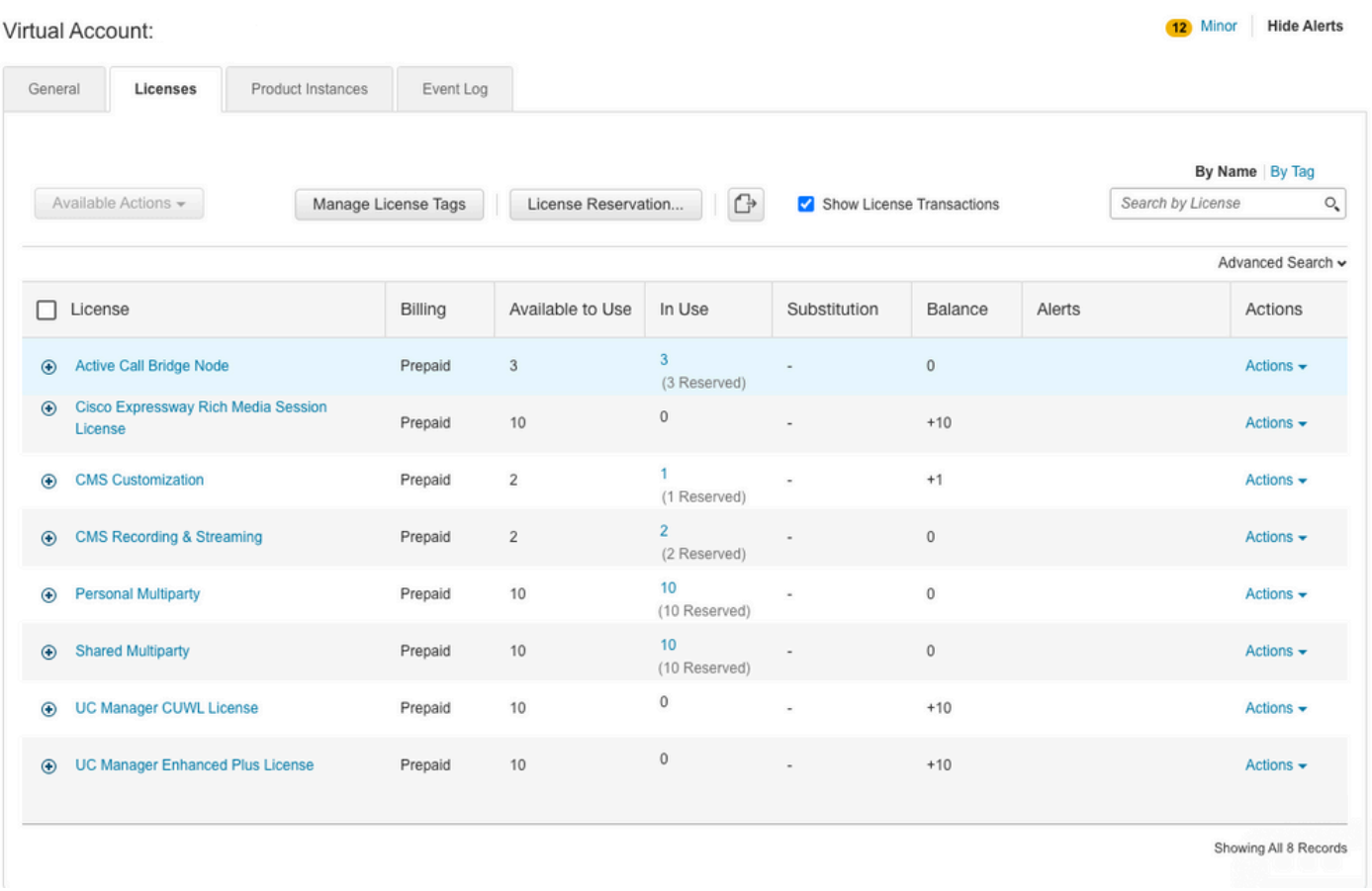
All licenses are pooled together and each individual node pulls only the licenses it needs. You do not assign a number of licenses to a specific node. If you have, for example, ten UC Manager Enhanced Plus licenses, this allows you to register 10 endpoints.

Q: What if you have 4 Expressways all registered to your Virtual Smart License Account?

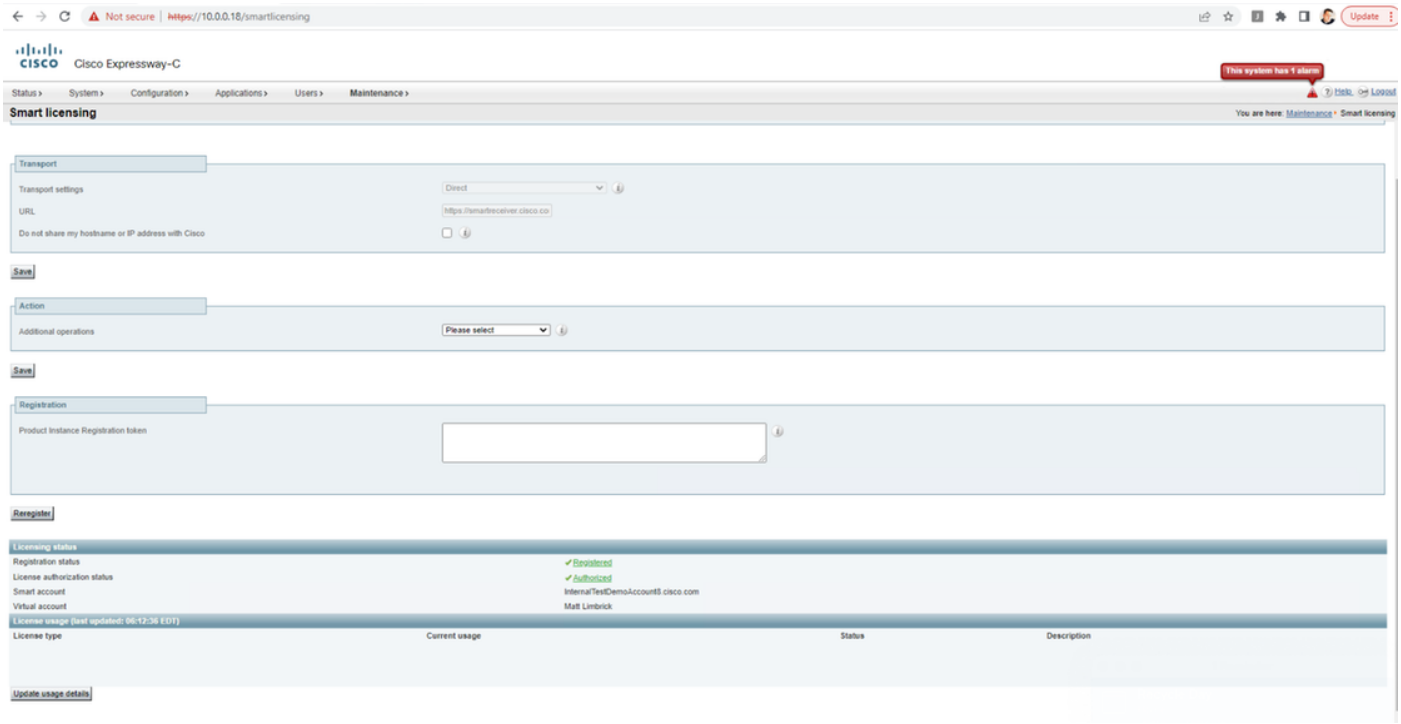
A: Whichever node you point the first endpoint to, that node allows the registration. That Expressway connects to the cloud with the token registered from your Virtual Account and reports that one UC Manager Enhanced Plus license is used. On the Cisco License Central portal for your Virtual Account, you can now see you have nine UC Manager Enhanced Plus licenses. If you register another endpoint to a different Expressway node that is registered to the same Virtual License Account, it uses the same process, and reports one UC Manager Enhanced Plus license is used. Look back at the Cisco License Central portal, and you see that you have eight UC Manager Enhanced Plus licenses.

Example

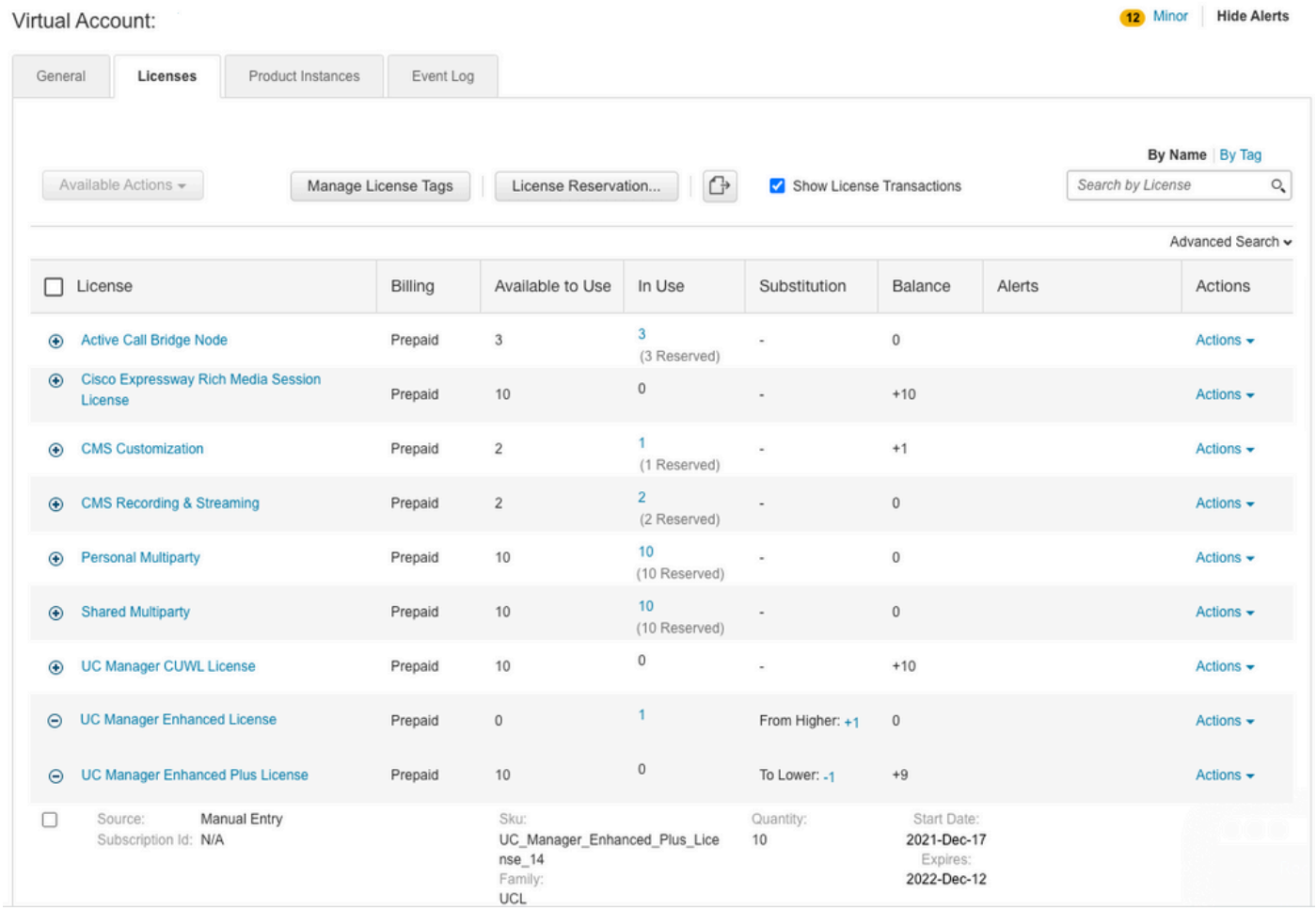
In this example, you can see there are ten UC Manager Enhanced Plus licenses in the virtual account:



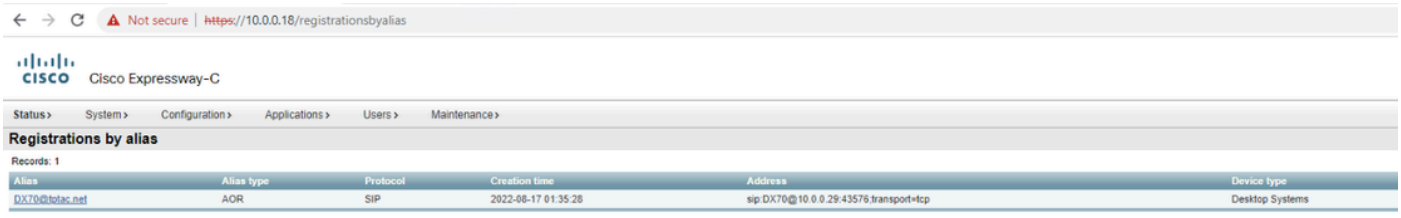
On this Expressway, you do not see any smart licenses under **Expressway > Maintenance > Smart Licenses: License Usage** used.



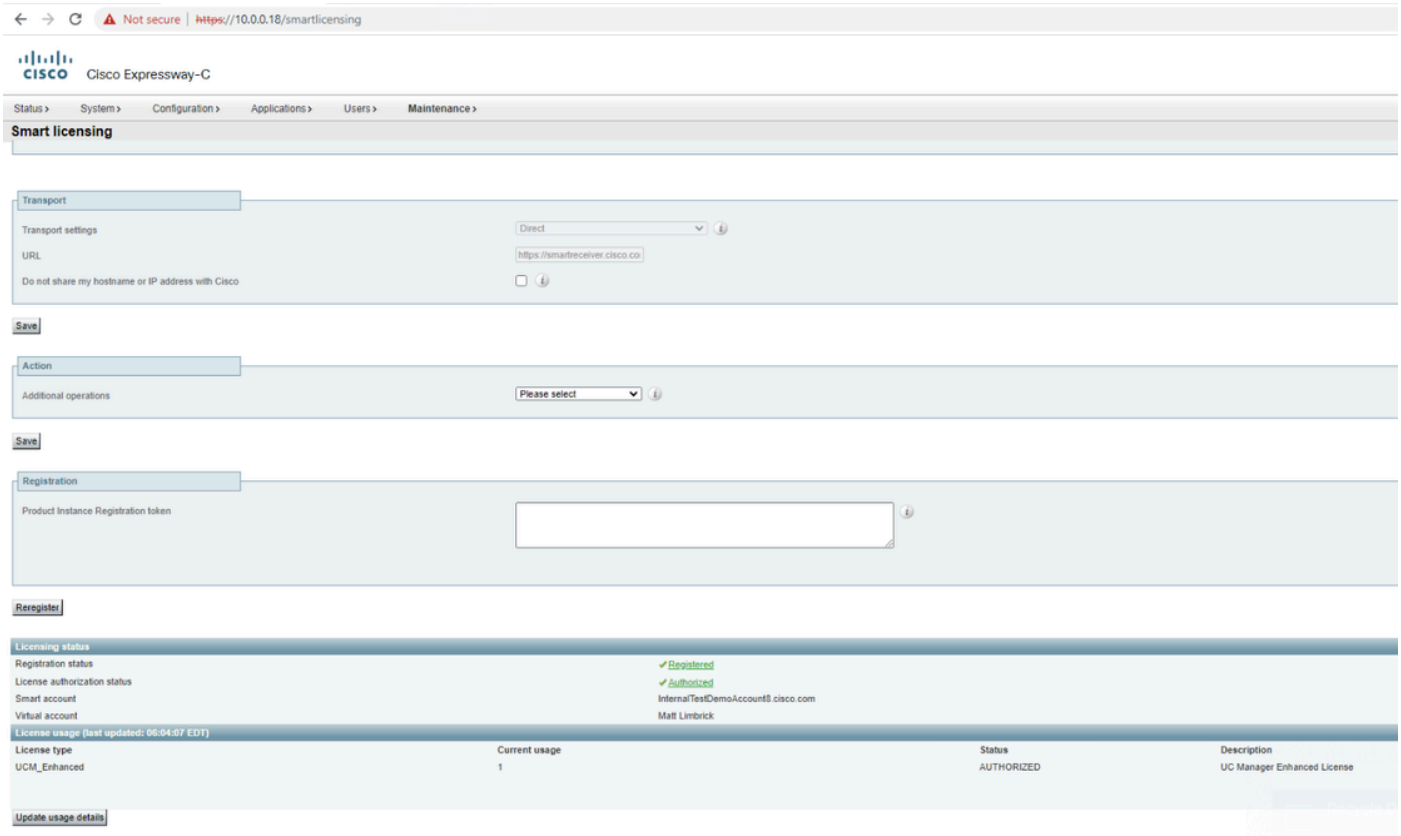
Once you register an endpoint to an Expressway registered to your Virtual account, you must see the UC Manager Enhanced Plus licenses count decrease to nine and the UC Manager Enhanced license now shows one In Use.



You can verify the Expressway registered to this Virtual Account has one endpoint registered under **Expressway > Status > Registrations > By alias**.



Then navigate to **Expressway > Maintenance > Smart Licensing** and confirm the registered endpoint utilizes one UC Manager Enhanced license.



If you unregister this endpoint from the Expressway registered to your Virtual Account, the count goes back to ten UC Manager Enhanced Plus licenses and the Expressway entry under **Expressway > Maintenance > Smart Licenses: License Usage** disappears.

Note: It can take a couple minutes for your Virtual Account and the Expressway to reflect the license consumption. License consumption is not constantly updated as it would generate a lot of network messages. License usage is updated approximately every six hours or can be manually updated when you click **Update usage details**.

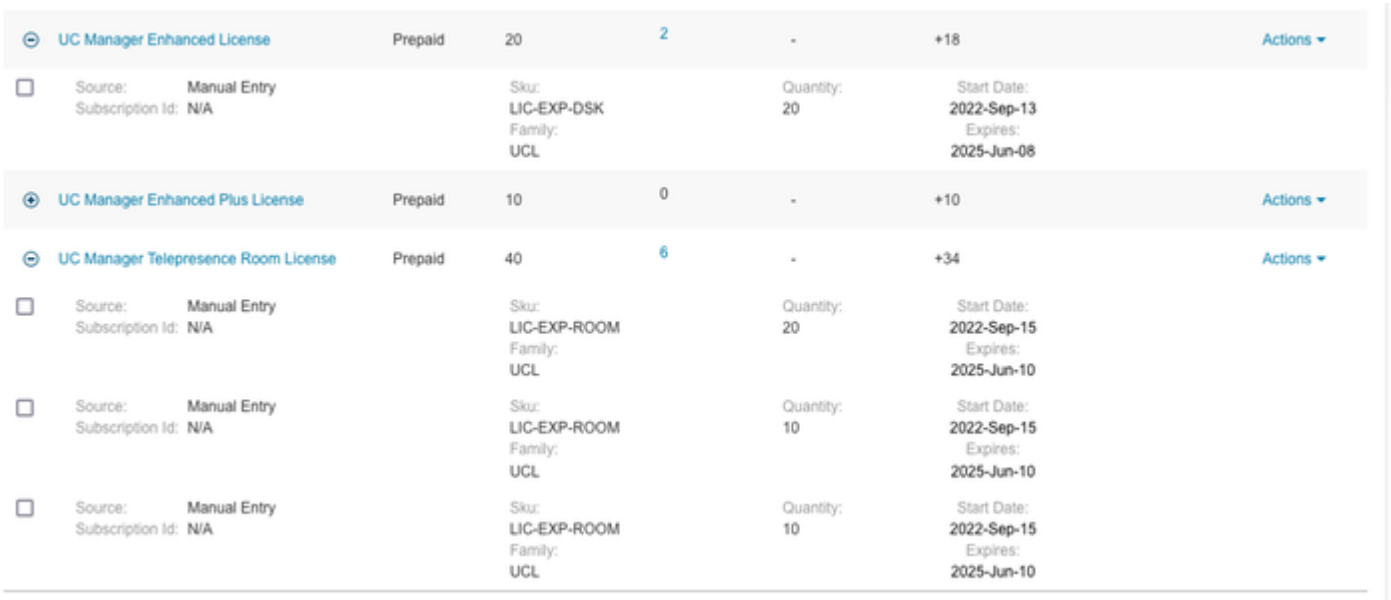
Types of Smart Licenses

- LIC-EXP-DSK
- LIC-EXP-Room
- LIC-EXP-RMS

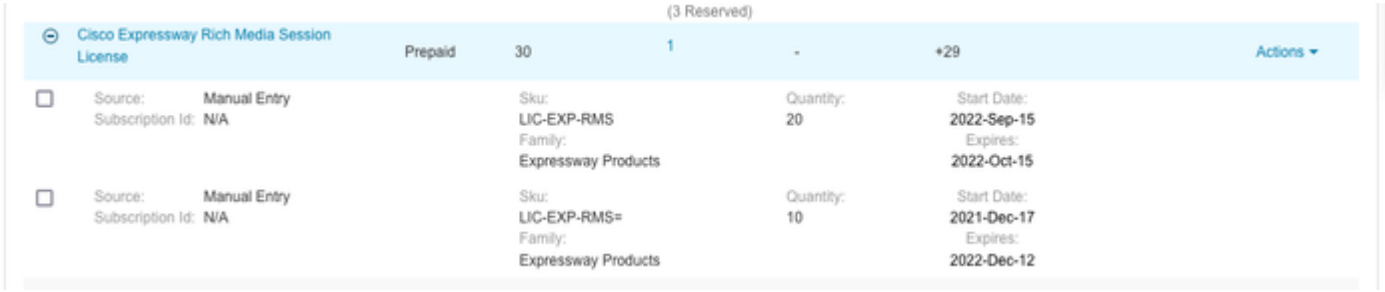
LIC-EXP-DSK is represented as UC Manager Enhanced License on Cisco License Central. These are only for desktop SIP devices such as EX60, EX90, DX70 and DX80. H323 registrations for these devices are consumed as Room Licenses.

LIC-EXP-Room is represented as UC Manager Telepresence Room License on Cisco License Central.

These are for all other SIP registrations that are not SIP desktop devices as listed above, as well as all H323 registrations.



LIC-EXP-RMS is represented as Cisco Expressway Rich Media Session License. These are licenses for Traversal calls/non-Unified Communication calls.



License Usage

Room and Desktop Registrations on Expressway

If Expressway is configured as a SIP registrar or H.323 Gatekeeper, it needs to be licensed for concurrent systems (the Unified CM model) and not for concurrent calls.

For SIP deployments, you do this by adding either or both of the following license types to the Cisco Expressway-C or Cisco Expressway-E:

- TelePresence Room System License
- Desktop System License

The following SIP devices register as desktop systems; all other devices are considered room systems:

- Cisco TelePresence EX60
- Cisco TelePresence EX90
- Cisco Webex DX70
- Cisco Webex DX80
- If you use Cisco Jabber Video for TelePresence (Movi) soft clients (now end-of-sale), they also register to Expressway as desktop systems.



Note To register as desktop systems (for SIP), DX systems must be running version CE8.2 or later, and EX systems must be running TC7.3.6 or later. DX and EX systems running earlier versions still register for SIP, but will consume a room system license.

For H.323 deployments, all endpoints consume a TelePresence Room System License. This is due to a limitation in H.323, which does not determine the difference between desktop and room type endpoints. We therefore recommend SIP as the preferred signaling protocol, although H.323 is available as a fall back for endpoints that do not support SIP.