



Using Smart Licensing

- [Enabling Operational License, on page 1](#)
- [Cisco Smart Software Manager \(CSSM\), on page 2](#)
- [Cisco Smart Software Manager On-Prem\(Satellite\), on page 6](#)
- [Smart Accounts and Virtual Accounts, on page 8](#)
- [Smart Licensing Deployment Options, on page 8](#)
- [License Conversion and Migration to Smart Licensing, on page 9](#)
- [HCS Managed Services, on page 9](#)
- [Smart Versus Traditional Licensing, on page 11](#)

Enabling Operational License

Complete these steps to enable Operational license:

Procedure

- Step 1** The Partner must send an email to hcba-a2q@external.cisco.com requesting to enable the HCS Operational License.
- Ensure to include Cisco Account and Cisco Sales in the email for reference.
- Step 2** The Partner uses a single VA (Ordered Virtual Account) to place the order for all the customers in Cisco Commerce (CCW).
- These licenses are not used by the Unified Communication Applications
- Step 3** Using HCM-F is mandatory.
- Step 4** A single VA (Operational License Pool) is shared for both Flex Hosted (EA/NU) and HCS Perpetual Licenses. Cisco deposits operational licenses into this VA. This Virtual Account is used by UC Applications for consumption.
- Step 5** The Partner can avail auto registration features.
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Cisco Smart Software Manager (CSSM)

Cisco Smart Software Manager allows product instances to register and report license consumption.

You can use Cisco Smart Software Manager to:

- Manage and track licenses
- Move licenses across virtual account
- Remove registered product instance



Note Enable Javascript 1.5 or a later version in your browser.

We recommend using `connected` mode for the satellite connection.

For details on Cisco Smart Software Manager (CSSM), see <https://software.cisco.com/>.

Initial One Time Setup in CSSM for Smart Licensing

Use this procedure to set up the CSSM for Smart Licensing.

Procedure

- Step 1** Log in to Cisco Smart Software Manager (CSSM) portal (<https://software.cisco.com>).
- Step 2** Create a Smart Account (if you do not have a smart account) in CSSM, or get access to an existing smart account.
- Step 3** Send an email to smart-operations@cisco.com, requesting API access for your Cisco ID.
The support team provides access to your ID and responds with a confirmation email.
- Step 4** Create a CSSM client application with the CCO ID which stores the client ID and client secret.
- Note**
- The CCO ID used must have a **Smart Account User** role for the specific Smart Account for HCM-F to manage it.
 - To create the application, select the **OAuth Grant type** as **Client Credentials Grant**. HCM-F uses the Client Credentials Grant type to communicate with CSSM.
- To create a new application with client credentials, click on **Request API Access** from the [Cisco API Developer Portal](#) and select the **Client Credentials Grant** option.
- Step 5** Login to the Smart Account in CSSM, and create Virtual Accounts, as per your requirement.

Note The admin does not need to create any *product registration token* to register the product. HCM-F performs all the token management for product registration.

While assigning the clusters to VA, the export control cannot be set if HCM-F creates the product registration token. To set the export control value, you have to manually create the product registration token in CSSM and select the export control check-box. For more information about how to register the UC applications that are in mixed mode to the VA in CSSM, see [Registering the UC Applications in Mixed Mode to VA in CSSM, on page 6](#).

We recommend you to get access to the operational licenses. If you have opted for operational licenses, then add the two virtual accounts: ordered virtual account (va-hcs-ordered), and operational virtual account (va-hcs-operational). For more information about operational licenses, see [Configuring Operational Licenses](#).

Step 6 Register your product with CSSM, using HCM-F.

For more information on how to register UC applications in HCM-F, see *Add Cluster Application* in *Cisco Hosted Collaboration Mediation Fulfillment Install and Configure Guide*.

Note Until you register, your product is still in Evaluation Mode.

Step 7 Log in to CCW, select a smart account and virtual account, and order HCS licenses.

Note HCS licenses get deposited to the smart account and virtual accounts.

Step 8 Configure Smart Software Licensing alerts in CSSM.

For more information to configure the alerts, see <https://software.cisco.com>

For more information about adding the On-prem local account to CSSM, see [Smart Software Manager On-Prem User Guide](#).

Note If any of the virtual account has a cluster assigned to it and you need to delete the account, it is required to unassign the cluster from that account in HCM-F before you proceed to delete the account from CSSM server.

Generating Client Credentials in Smart Accounts and Licensing API

Use this procedure to set up the client credentials for Smart Licensing.

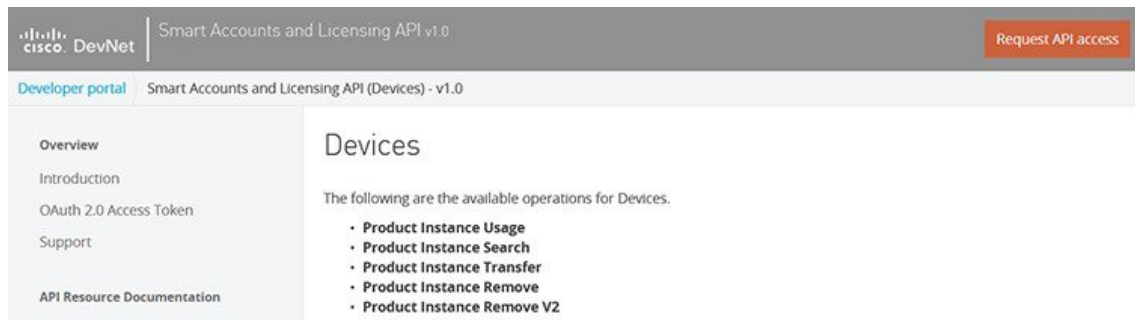
Before you begin

- To request API access for your Cisco ID, send an email to the support team at smart-operations@cisco.com. The support team takes the necessary steps to provide access to your ID and respond with a confirmation email within 24 hours.
- The CCO ID used must have a **Smart Account User** role for the specific Smart Account, for HCM-F to manage it.

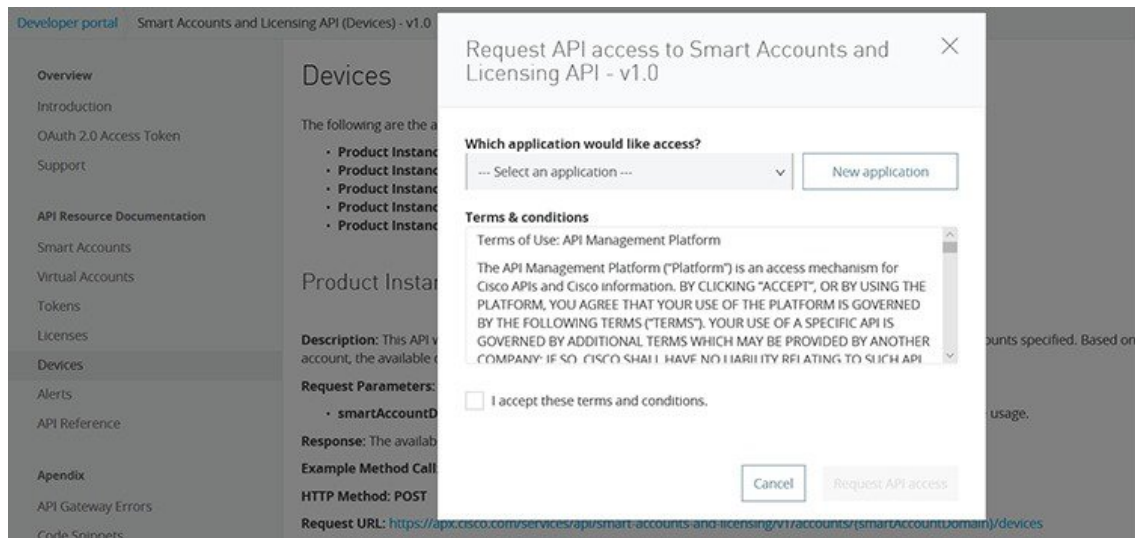
Procedure

Step 1 Log in to [Smart Accounts and Licensing API](#).

Step 2 Click **Request API Access**.



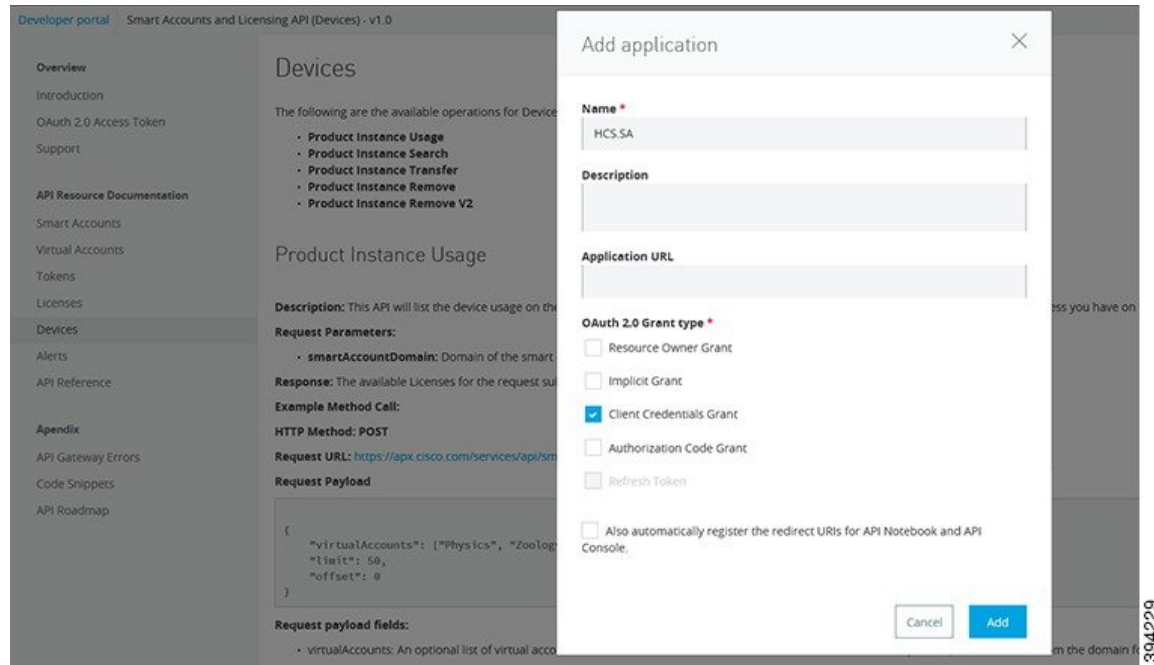
Step 3 Click **New Application**.



Step 4 Enter these details in the Add application window.

- Name: HCM-F instance
- Description: API access for HCM-F
- Select **Client Credentials Grant** from the **OAuth Grant Type** list
- Select automatically register the redirect URIs for AP Notebook and API

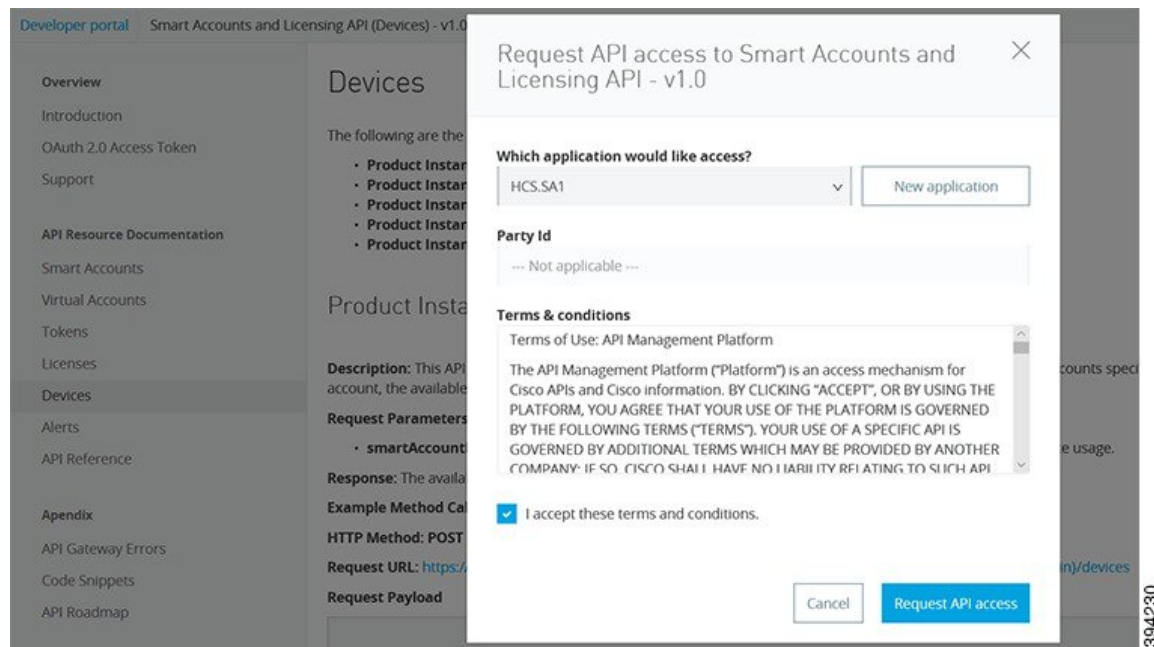
HCM-F uses the Client Credentials Grant type to communicate with CSSM.



Step 5 Click **Add**.

The application is created and it redirects to the original URL.

Step 6 Select the application from the drop-down, accept the Terms and Conditions, and click **Request API Access**. It generates the Client ID and secret.



Note To get access to the smart account APIs, you must send mail to smart-operations@cisco.com with the CCO ID, smart account domain name, and the application created. Once mail is sent, you have to wait for few days to receive a confirmation message.

What to do next

From the [Smart Accounts and Licensing API](#) website. Click **Developer Portal**.

Click **My Applications** and select the Application name that is created for the HCMF instance.

You can view the Client ID and Client Secret.

Registering the UC Applications in Mixed Mode to VA in CSSM

You can create the tokens with export control functionality for the UC applications that are in mixed mode.

Before you begin

Remove all the tokens from the specific VA in CSSM.

Procedure

- Step 1** Create a token in the VA and select export control functionality.
 - Step 2** Run a CSSM sync from HCMF.
 - Step 3** Ensure that only the manually created token is present in the VA.
 - Step 4** Perform cluster assignment.
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Cisco Smart Software Manager On-Prem(Satellite)

Cisco Smart Software Manager on-prem (satellite) is similar to Cisco Smart Software Manager (CSSM). However, instead of being hosted on cisco.com, it is available as an *on-premise* version.

Cisco Smart Software Manager on-prem (satellite) is used to:

- Manage and track licenses of the on-premise users
- Support multiple local accounts (multi-tenant)
- Scale 10,000 product instances
- Connect to Cisco either online or offline



Note Enable Javascript 1.5 or a later version in your browser. Use Cisco Smart Software Manager satellite 7.2 or later version to use all the functionalities.

For details on Cisco Smart Software Manager on-prem (satellite), see [Smart Licensing](#).

Initial One Time Setup in CSSM on-prem for Smart Licensing

Use this procedure to set up the Cisco Smart Software Manager (CSSM) on-prem server for Smart Licensing.

You can register the clusters to CSSM by using either the proxy or the on-prem server.

Pre-requisite for Registering Expressways clusters to the Cisco Smart Software Manager (CSSM) on-prem server for Smart Licensing

1. Configure the Expressway clusters with DNS and domain name of the on-prem Server to adhere to the FQDN requirements of the CSSM On-Prem Server to on-prem CSSM.
2. Expressway-E clusters are registered to CSSM via Proxy Mode, if Proxy is set at the Cluster level.
3. Expressway-E clusters are registered to CSSM via Direct Mode, if Proxy is set at Customer Level.
4. Expressway-C clusters are registered to CSSM via Proxy Mode, if Proxy is set at either Cluster level or Customer level.

Create a new or existing SSM on-prem local Account and register the account before using the Smart Licensing functions in the licensing workspace. Until you complete the registration process, all other Smart Licensing options are not available. Both network and manual registrations are supported.

For more information about CSSM on-prem configuration, see [Smart Software Manager On-Prem User Guide](#).

Procedure

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- Step 1** Log in to Smart Software Manager on-prem portal.
- Step 2** Create a Local Account or get access to an existing local account.
- For more information about CSSM on-prem configuration, and creating local account, see [Smart Software Manager On-Prem User Guide](#).
- Step 3** Approve the account using the user name and password.
- Step 4** Click **Network**, and ensure the hostname which is used in the registration URL is specified in the **SSM On-Prem Name**. Save the configuration.
- Step 5** Click **Security**, and ensure the hostname which is used in the registration URL is specified in the **Host common name**. Save the configuration.
- For CSSM On-Prem version 6, use <https://satellite-server-ip/Transportgateway/services/DeviceRequestHandler> as the registration URL.
 - For CSSM On-Prem version 7, use <https://<satellite-server-fqdn>/SmartTransport> as the hostname:8443.
 - For CSSM On-Prem version 8, use <https://<satellite-server-fqdn>/SmartTransport> as the hostname:8443.

Update the registration URL in HCMF whenever you upgrade the Satellite Servers.

For example, if the registration url is: <https://hostname/Transportgateway/services/DeviceRequestHandler>, then the **SSM On-Prem Name** is *hostname* and **Host common name** is same as the CSSM On-Prem hostname. Example of a token url is: <https://hostname:8443/backend/oauth/token>.

Step 6 Click **Synchronisation** , and do a full synchronization.

Step 7 Enable the API tool kit and create the client ID and secret for the local account.

To create a product registration token in SSM on-prem, see [Creating Product Instance Registration Tokens](#) section in the [Smart Software Manager On-Prem User Guide](#) .

Note If any of the virtual account has a cluster assigned to it and you need to delete the account, it is required to unassign the cluster from that account in HCM-F before you proceed to delete the account from the CSSM on-prem server.

Smart Accounts and Virtual Accounts

Smart Account

Cisco Smart Account is an account where all products that are enabled for Smart Licensing are deposited. Cisco Smart Account allows you to manage and activate your licenses to devices, monitor license use, and track Cisco license purchases.

Virtual Account

Smart Licensing allows you to create multiple license Pools or virtual accounts within the Smart Software Manager portal or Cisco Smart Software Manager satellite. Using the Virtual Accounts option, you can aggregate licenses into discrete bundles that are associated with a cost center so that one section of an organization cannot use the licenses of another section of the organization. For example, if you segregate your company into different geographic regions, you can create a virtual account for each region to hold the licenses and product instances for that region.

For details on Cisco Smart Accounts and Virtual Accounts, see <https://software.cisco.com/>.

Smart Licensing Deployment Options

The following options are available for connecting to CSSM and Satellite:

Proxy (Cloud access through an HTTPs proxy)

In a proxy deployment method, Cisco products send usage information through a proxy server.



Note Proxy is the recommended transport mode.

Satellite (Cisco Smart Software Manager Satellite)

In the Satellite deployment method, UC applications register with a Satellite server. Based on the Satellite Server configuration (Offline or Online), Satellite syncs with CSSM.

Direct (Direct Cloud Access)

In a direct cloud-access deployment method, Cisco products send usage information directly.

HCS 12.5 release does not support Smart Licensing APIs.

License Conversion and Migration to Smart Licensing

You can convert Classic, PAK-based licenses (PLM licenses) to a Smart Entitlement (if a Smart License equivalent is available). The license conversion can be performed in the License Registration Portal (LRP) or in Cisco Smart Software Manager (CSSM). You can initiate the process by downloading and installing the Smart Licensing version of the software and registering the device to a Smart Account using a Registration Token. The migration of any entitlements tracked by Cisco, automatically migrates to the Customers Smart Account.

License conversion can be performed either on:

- LRP ([License Registration Portal](#)), go to the **PAKs/Tokens** tab, select **Actions > Convert to Smart Entitlement**, or
- CSSM ([Cisco Smart Software Manager](#)), go to the **License Conversion** tab to convert Classic Licenses to Smart Licenses.

For more information on converting classic licenses to smart licenses, see [Migrating classic licenses to smart licenses with active SWSS](#) in *Cisco Smart Software Licensing with Cisco Unified Communications Manager 12.0 Solution Overview*

HCS Managed Services

The UC applications and Prime License Manager (PLM) are available on premise. HCM-F does not have connectivity to the on-premise applications.

The change in Cisco Smart Software Manager (CSSM) helps customers migrating from Enterprise to cloud, to use HCS licenses that are Flex Hosted. The Flex Hosted licenses in version 12.x and later work for both on-premise UC (Enterprise mode) and HCS cloud (HCS mode) so it provides an easier migration from on-premise to HCS as there is no need to migrate licenses during the migration phase.

The CSSM accepts the license request from Enterprise UC applications in Enterprise mode and allocates the mapped HCS licenses if corresponding Enterprise licenses are not available. This is called dual parenting.

CSSM follows hierarchy in allocating the licenses. The higher level licences are utilized to fulfill the request for lower level licenses and avoid a shortage of the licenses. The licences are allocated in the following priority, higher to lower-order:

- Enterprise (when both Enterprise and HCS licences are available)
- HCS Foundation (when the Enterprise licences are all allocated or when there are only HCS licences)
- HCS Standard (when the Enterprise licences are all allocated or when there are only HCS licences)

Following is the HCS license mapping for Enterprise licenses:

Table 1: License Mapping

HCS License	Enterprise Licenses		
	Cisco Unified CM	Cisco Unity Connection	Cisco Emergency Responder
HCS Cisco UCM Foundation License	<ul style="list-style-type: none"> • Basic • Essential • Enhanced 		
HCS Cisco UCM Standard License	<ul style="list-style-type: none"> • Cisco Unified Workspace Licensing (UWL) • Enhanced plus 		
HCS Cisco UCM TelePresence Room License	Telepresence Room		
HCS Unity Connection Basic License		CUC_BasicMessaging	
HCS Unity Connection Standard License		CUC_EnhancedMessaging	
HCS Emergency Responder User License			CER_USER

Migration from On Premise to HCS

Use this procedure to change the license mode for the Unified Communication applications and PLM from enterprise license mode to HCS mode for cluster versions below 12.x and for versions 12.x and later. Use the `ciscoconf.HCSMode_v4.cop.sgn` file to change the licensing from Enterprise Mode to HCS Mode. Install the cop file on the publisher node of all Cisco Unified CM, Cisco Emergency Responder, and Cisco Unity Connection clusters, and standalone PLM or co-resident PLM. The cop file is available at [License Mode Change - Enterprise Mode to HCS Mode](#).

To change the licensing from HCS Mode to Enterprise Mode, install the `ciscoconf.EnterpriseMode_v4.cop.sgn` file on the publisher node of all Cisco Unified CM, Cisco Emergency Responder, and Cisco Unity Connection clusters, and standalone PLM or co-resident PLM. The cop file is available at [License Mode Change: HCS Mode to Enterprise Mode](#).

For detailed information on the COP files, see these links:

To change from enterprise mode to HCS mode: [Readme for License Migration from On-prem to Hosted Collaboration Solution](#).

To change from HCS mode to enterprise mode: [Readme for License Migration from Hosted Collaboration Solution to On-prem](#).

Smart Versus Traditional Licensing

Traditional (node locked) licensing	Smart (dynamic) licensing
You procure the license and manually install it on the PLM.	Your device requests the licenses that it needs from CSSM.
Node-locked licenses - license is associated with a specific device.	Pooled licenses - Smart accounts are the company account specific that can be used with any compatible device in your company.
No common install base location to view the licenses that are purchased or software usage trends.	Licenses are stored securely on Cisco servers that are accessible 24x7x365.
No easy means to transfer licenses from one device to another.	Licenses can be moved between product instances without a license transfer, which greatly simplifies the reassignment of a software license as part of the Return Material Authorization (RMA) process.
Limited visibility into all software licenses being used in the network. Licenses are tracked only on per node basis.	Complete view of all Smart Software Licenses used in the network using a consolidated usage report of software licenses and devices in one easy-to-use portal.

