Configure CUCM Smart Licensing - Direct Model

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Introduction

This document describes the direct model configuration to synchronize your CUCM directly with your Smart accounts.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- Cisco Unified Communications Manager (CUCM) version 12.0

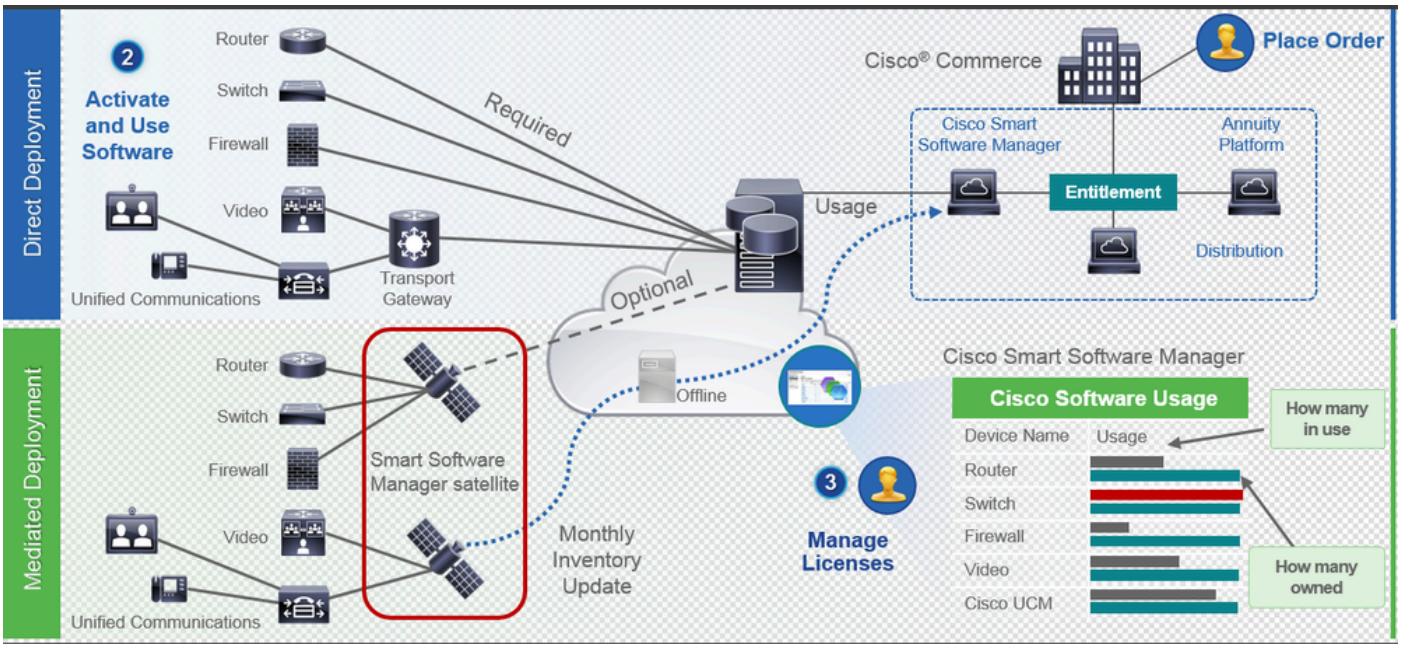
Components Used

The information in this document is based on Cisco Call Manager version 12.0

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. Now, you have a complete view on what you have ordered and purchased.

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

Direct Model

Use this model in 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 or transport gateway, all communications between devices and Cisco.com is channeled through a centralized location if additional inspection or security policies need to be applied.

Mediated Deployment Model

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

Where Do I Create Smart Accounts

- To create a Smart Account, log in to CSC with your CCO ID and initiate a request for a **Customer Smart Account**.
- To create a Partner Holding Smart Account, log in to CSC with your CCO ID and initiate a request for a Partner Holding Account.
- You can also initiate a request for either type of Smart Account when you order in CCW. Although, the recommended best practice is to proactively set up your Smart Accounts.

Note: There is no upper limit; you can create as many Virtual Accounts as your company needs.

Cisco Smart License Manager Service

Cisco Smart License Manager Service is a network service, which runs only on CUCM publisher. Since this is a network service, it runs all the time and cannot be started or stopped from UI or CLI. Since there is no service that runs on the subscriber, none of the smart licensing operations can be done from the sub. The CLI commands also do not provide any output on the sub,

Smart Licensing States in UCM

There are two main states in Smart Licensing:

Registration Status: There are three registration Statuses:

1. Unidentified / Unregistered
2. Registered
3. Unregistered-registered Expired

Authorization Status:

- No License in use

- Evaluation Mode
- Evaluation Expired
- Authorized
- Out of compliance
- Authorization Expired

Registration Status	Authorization Status	Evaluation period(90 days)	Overage period(90 days)	Enforcement? (Do not allow provisioning of users/devices)	Comments	Message on UI
Unregistered *OR* Registration Expired	Evaluation Mode	Start with 90 and will decrement if UCM is consuming licenses	.NA	No	Evaluation period is used when you consume licenses	**Smart Software Licensing: The system is currently unregistered and running in Evaluation mode with 89 days remaining. Register with Smart Software Manager or Smart Software Manager satellite to avoid losing the ability to provision users and devices.**
Unregistered *OR* Registration Expired	Evaluation Expired	0 days	NA	Yes		**Smart Software Licensing: The system is currently unregistered and the evaluation period has expired. Register with Smart Software Manager or Smart Software Manager satellite to avoid losing the ability to provision users and devices.**
Registered *OR* Unregistered *OR* Registration Expired	No Licenses in Use	NA	NA	No		
Registered	Authorized	NA	NA	No		
Registered	OOC	NA	Overage period remaining	No till overage period is applicable Yes after overage days(90 days) are over		**Smart Software Licensing: The system is operating with an insufficient number of licenses. Configure additional licenses in Smart Software Manager within 90 days to avoid losing the ability to provision users and devices.**
Registered	Authorization Expired	NA	Same as above	Same as above		**Smart Software Licensing: The system has not connected to Smart Software Manager or Smart Software Manager satellite for 90 days and the license authorization has expired. Please check the network connection and renew the license authorization within 90 days to avoid losing the ability to provision users and devices.**

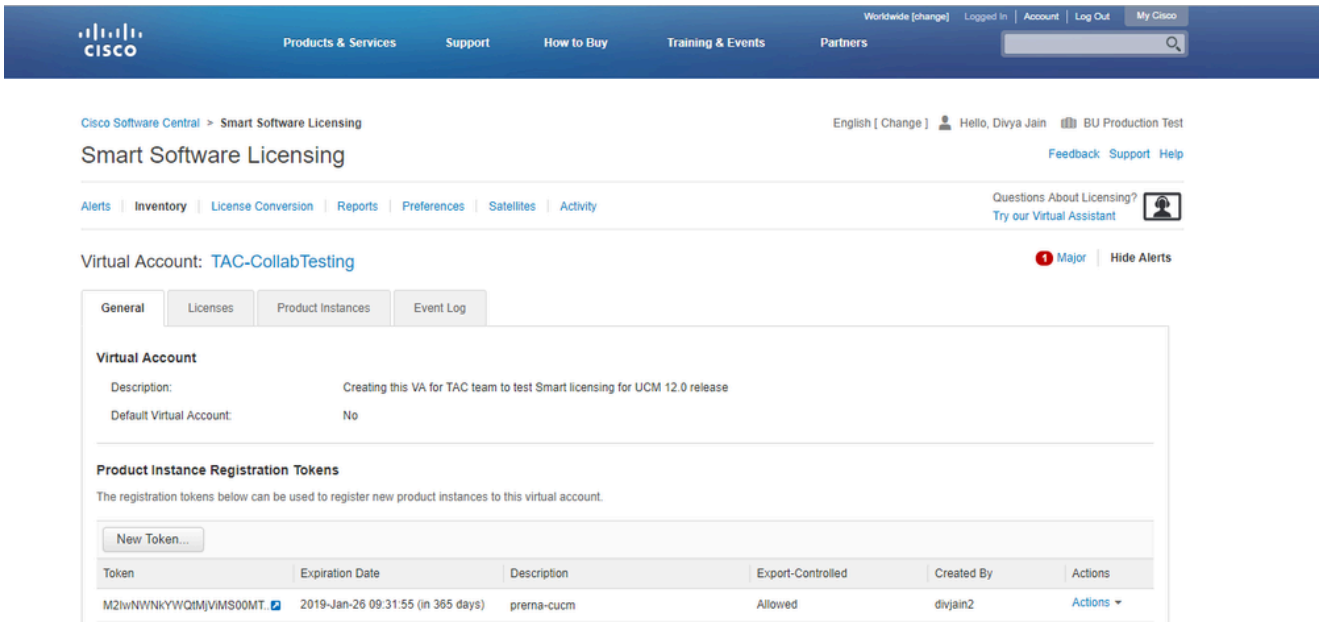
In addition to these smart licensing states, UCM provides an overage period of 90 days (This is a concept already present in pre 12.0 with classic licensing. UCM continues to provide the average period with smart licensing as well)

Configure (Direct Deployment)

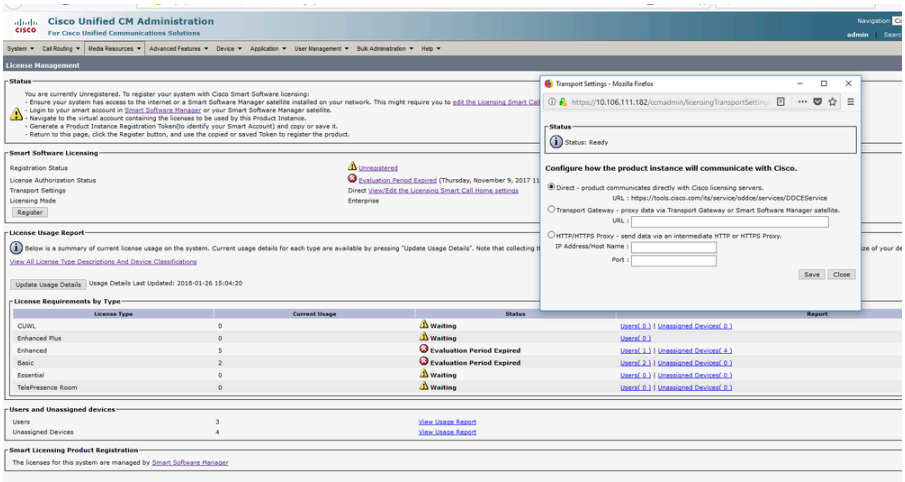
Note: For direct deployment to work, your CUCM must have connectivity to the Internet.

Configuration

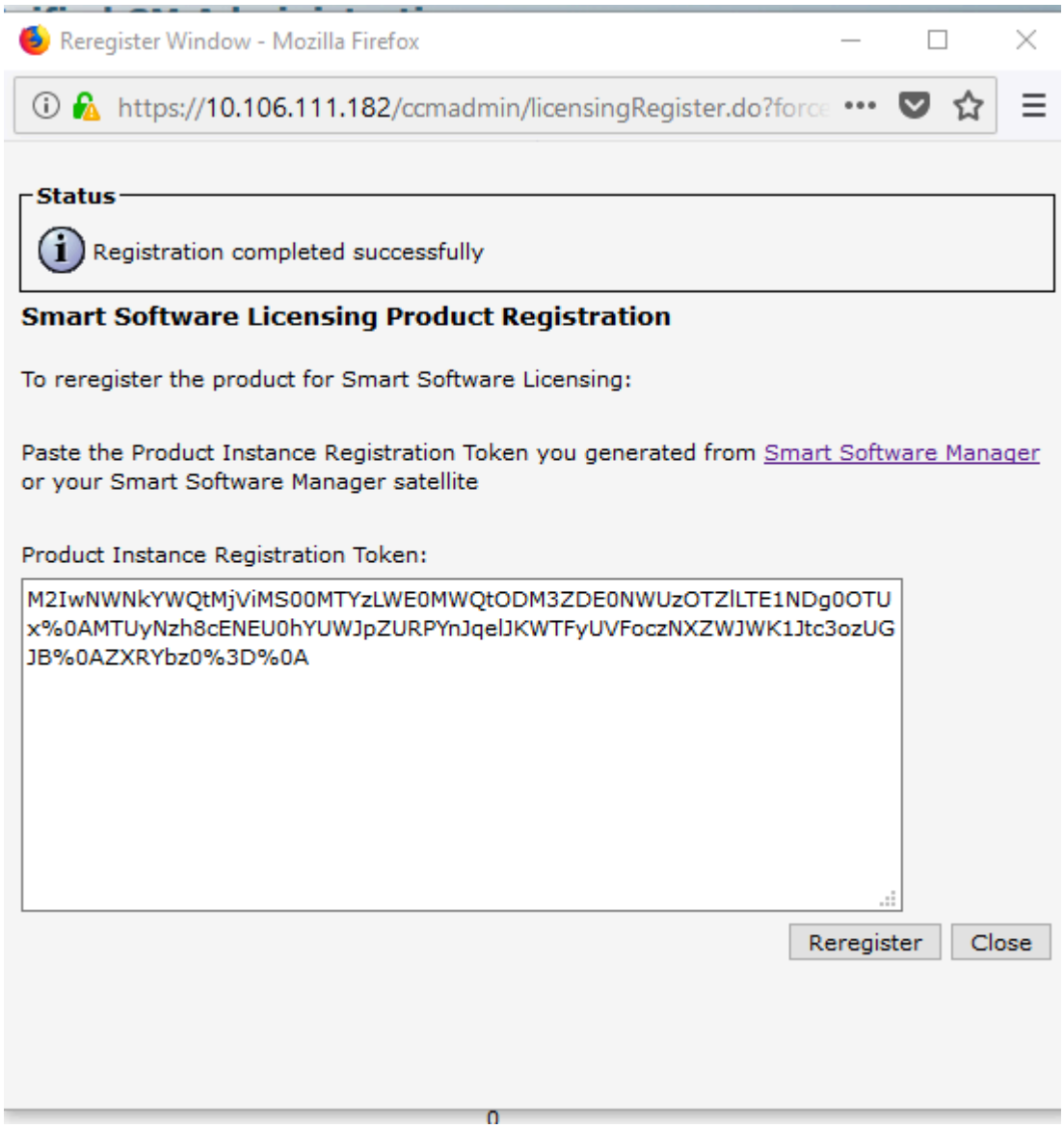
1. Log in to Cisco Software Central with your username and password.
2. Select **Inventory** under **Smart Software Licensing**.
3. Generate a new Token.



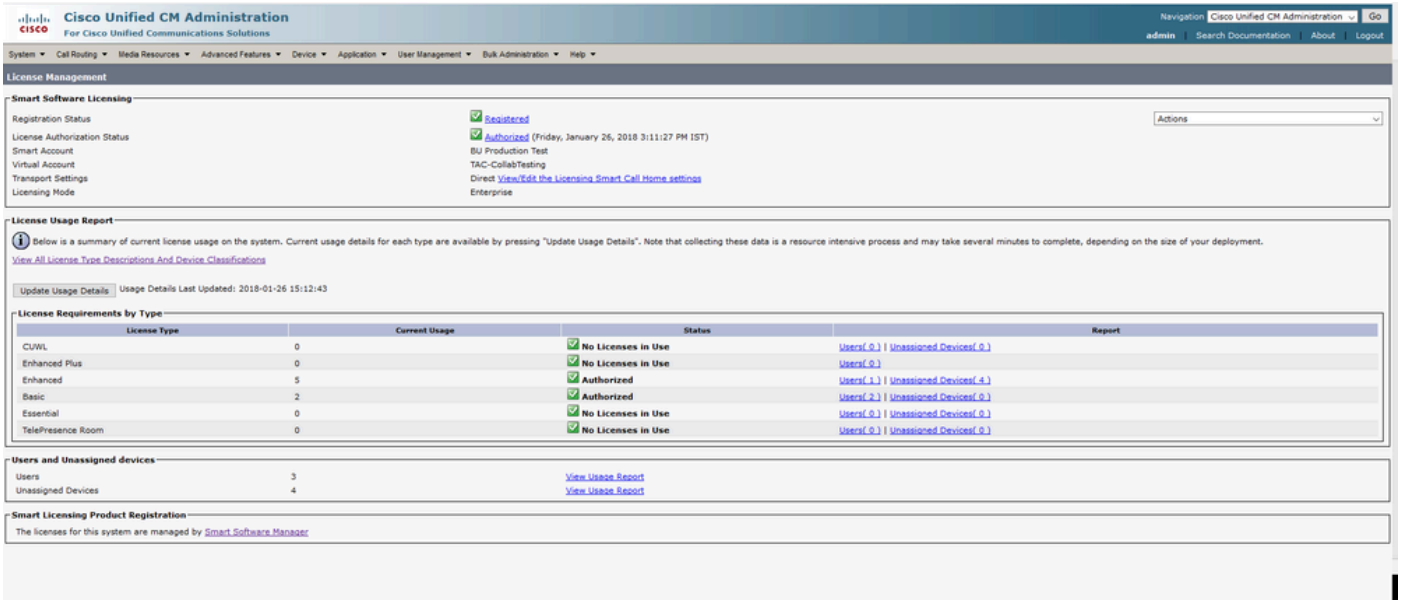
4. Under the CUCM admin page, navigate to **System > Licensing > License Management > View/Edit the Licensing Smart Call Home settings** and then Verify **Direct** is selected and **Production Cisco License Central URL** is updated.



5. Click **Register** and paste the token created in step 3, and click **Register**. This can be done from cli as well: **license smart register idtoken <token> [force]**


Reregister Window - Mozilla Firefox
https://10.106.111.182/ccmadmin/licensingRegister.do?force
Status
Registration completed successfully
Smart Software Licensing Product Registration
To reregister the product for Smart Software Licensing:
Paste the Product Instance Registration Token you generated from Smart Software Manager or your Smart Software Manager satellite
Product Instance Registration Token:
M2IwNWNkYWQtMjViMS00MTYzLWE0MWQtODM3ZDE0NWUzOTZlLTE1NDg0OTU
x%0AMTUyNzh8cENEU0hYUWJpZURPYnJqelJKWTFyUVFoczNXZWJWK1Jtc3ozUG
JB%0AZXRYbz0%3D%0A
Reregister
Close
0

Verify


Cisco Unified CM Administration
For Cisco Unified Communications Solutions
License Management
Smart Software Licensing
Registration Status
Registered
License Authorization Status
Authorized (Friday, January 26, 2018 3:11:27 PM IST)
Smart Account
BU Production Test
Virtual Account
TAC-CollabTesting
Transport Settings
Direct View/Edit the Licensing Smart Call Home settings
Licensing Mode
Enterprise
License Usage Report
Below is a summary of current license usage on the system. Current usage details for each type are available by pressing "Update Usage Details". Note that collecting these data is a resource intensive process and may take several minutes to complete, depending on the size of your deployment.
View All License Type Descriptions And Device Classifications
Update Usage Details
Usage Details Last Updated: 2018-01-26 15:12:43
License Requirements by Type
License Type
Current Usage
Status
Report
CUWL
0
No Licenses in Use
Users(0) | Unassigned Devices(0)
Enhanced Plus
0
No Licenses in Use
Users(0)
Enhanced
5
Authorized
Users(1) | Unassigned Devices(4)
Basic
2
Authorized
Users(2) | Unassigned Devices(0)
Essential
0
No Licenses in Use
Users(0) | Unassigned Devices(0)
TelePresence Room
0
No Licenses in Use
Users(0) | Unassigned Devices(0)
Users and Unassigned devices
Users
3
View Usage Report
Unassigned Devices
4
View Usage Report
Smart Licensing Product Registration
The licenses for this system are managed by Smart Software Manager

- **Show license summary**

Smart Licensing is ENABLED.

```
Registration:
  Status: REGISTERED
  Smart Account: BU Production Test
  Virtual Account: TAC-CollabTesting
  Last Renewal Attempt: None
  Next Renewal Attempt: Jul 25 15:11:23 2018 IST

License Authorization:
  Status: AUTHORIZED
  Last Communication Attempt: SUCCEEDED
  Next Communication Attempt: Feb 25 15:12:59 2018 IST

License Usage:
  License                      Entitlement Tag
  ----------------------------------------------------------------------------------------------
                               regid.2017-02.com.cisco.UCM_CUWL,12.0_cc59375a-1cd8-4b36-8366-6f4d2abba96
                               regid.2016-07.com.cisco.UCM_EnhancedPlus,12.0_d8372792-588c-4caa-b279-858
  66d0d1cf-4863-4761-91d0-d01d3eb1949aregid.2016-07.com.cisco.UCM_Enhanced,12.0_66d0d1cf-4863-4761-91d0
  ef827a2f-f4ae-4ebb-887f-052737063d3aregid.2016-07.com.cisco.UCM_Basic,12.0_ef827a2f-f4ae-4ebb-887f-05
                               regid.2016-07.com.cisco.UCM_Essential,12.0_25f9c396-c67c-4519-aa98-d4b3ad
                               regid.2016-07.com.cisco.UCM_TelePresenceRoom,12.0_d9a71418-29e9-4c9a-9d3a
```

- **Show license UDI**

UDI: PID:UCM,SN:37624,UUID:6fe83addc80240bc92dc071ac7a37624

- **Show license all**

```
Smart Licensing Status
======================
Smart Licensing is ENABLED

Registration:
  Status: REGISTERED
  Smart Account: BU Production Test
  Virtual Account: TAC-CollabTesting
  Export-Controlled Functionality: Allowed
  Initial Registration: SUCCEEDED on Jan 26 15:11:23 2018 IST
  Last Renewal Attempt: SUCCEEDED on Jan 26 15:11:23 2018 IST
  Next Renewal Attempt: Jul 25 15:11:23 2018 IST
  Registration Expires: Jan 26 15:06:21 2019 IST

License Authorization:
  Status: AUTHORIZED on Jan 26 15:12:59 2018 IST
  Last Communication Attempt: SUCCEEDED on Jan 26 15:12:59 2018 IST
  Next Communication Attempt: Feb 25 15:12:59 2018 IST
  Communication Deadline: Apr 26 15:06:59 2018 IST

Evaluation Period:
```

```
  Evaluation Mode: Not In Use
  EVALUATION PERIOD EXPIRED on Nov 9 23:46:35 2017 IST

License Usage
=============
License Authorization Status: AUTHORIZED as of Jan 26 15:12:59 2018 IST

 (regid.2017-02.com.cisco.UCM_CUWL,12.0_cc59375a-1cd8-4b36-8366-6f4d2abba965)
  Description: null
  Count: 0
  Version: 12.0
  Status: Init

 (regid.2016-07.com.cisco.UCM_EnhancedPlus,12.0_d8372792-588c-4caa-b279-8587e5ce2f82)
  Description: null
  Count: 0
  Version: 12.0
  Status: Init

UC Manager Enhanced License (12.x) (regid.2016-07.com.cisco.UCM_Enhanced,12.0_66d0d1cf-4863-4761-91d0-d
  Description: UC Manager Enhanced License
  Count: 5
  Version: 12.0
  Status: InCompliance

UC Manager Basic License  (12.x) (regid.2016-07.com.cisco.UCM_Basic,12.0_ef827a2f-f4ae-4ebb-887f-052737
  Description: UC Manager Basic License
  Count: 2
  Version: 12.0
  Status: InCompliance

 (regid.2016-07.com.cisco.UCM_Essential,12.0_25f9c396-c67c-4519-aa98-d4b3ad18f805)
  Description: null
  Count: 0
  Version: 12.0
  Status: Init

 (regid.2016-07.com.cisco.UCM_TelePresenceRoom,12.0_d9a71418-29e9-4c9a-9d3a-1366ebe38e7c)
  Description: null
  Count: 0
  Version: 12.0
  Status: Init

Product Information
===================
UDI: PID:UCM,SN:37624,UUID:6fe83addc80240bc92dc071ac7a37624

Agent Version
=============
Smart Agent for Licensing: 1.3.4
```

Troubleshoot

Please collect these logs to troubleshoot issues related to registration:

- Packet capture from CUCM CLI

- License Manager logs

Known Bugs

- Cisco bug ID CSCvh16069 : Cisco Smart licensing satellite cannot borrow a license from a higher level to make it in compliance.
- Cisco bug ID CSCvf86710 : Cisco Smart License Manager platform service does not run.
- Cisco bug ID CSCvc94366

- **:** CUCM smart license registration to Cisco License Central does not accept the proxy port 443.

Related Information

- Technical Support & Documentation - Cisco Systems