Configure CUCM Smart Licensing - Direct Model

Contents

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:

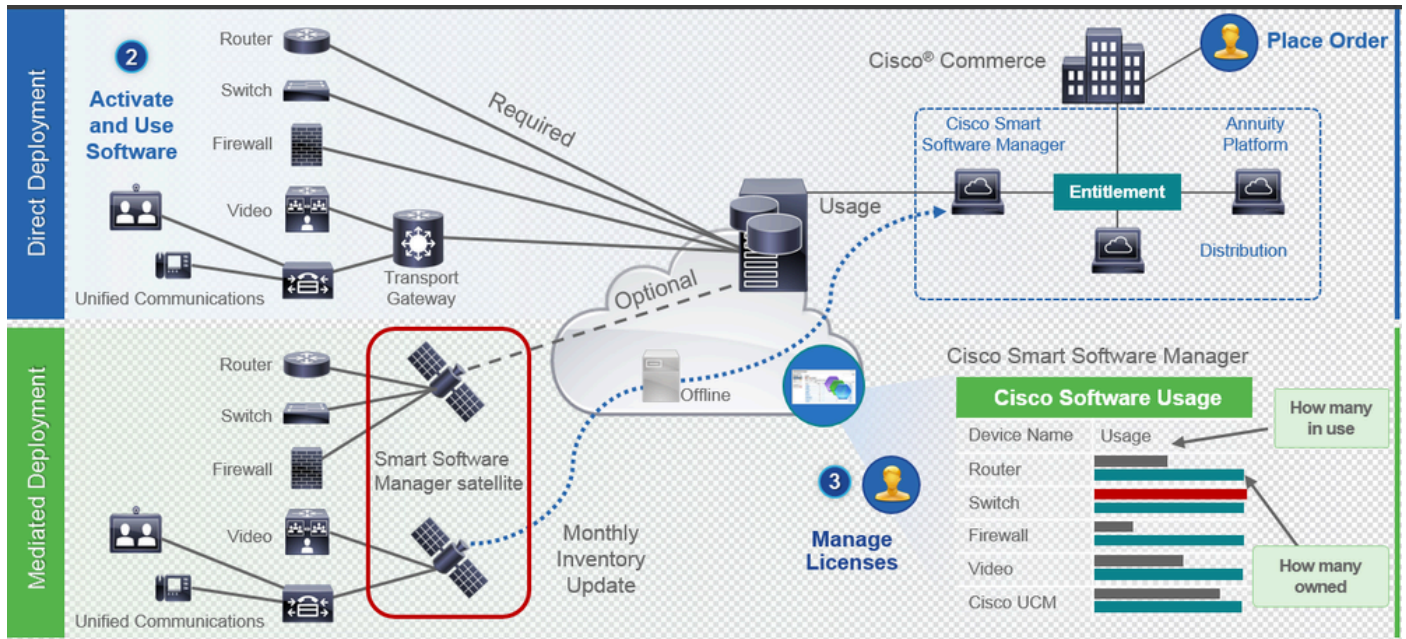- Cisco Unified Communications Manager (CUCM) version 12.0

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.

Direct Deployment

② Activate and Use Software

Router
Switch
Firewall
Video
Unified Communications
Transport Gateway

Required

Cisco® Commerce

Place Order

Cisco Smart Software Manager
Entitlement
Annuity Platform

Usage

Distribution

Mediated Deployment

Router
Switch
Firewall
Video
Unified Communications

Smart Software Manager satellite

Optional

Offline

Monthly Inventory Update

③ Manage Licenses

Cisco Smart Software Manager

Cisco Software Usage

Device Name	Usage
Router	
Switch	
Firewall	
Video	
Cisco UCM	

How many in use

How many owned

You place an order on Cisco Commerce and the order is associated with the smart account. This information is populated on Smart Software Manager, which resides on cisco.com. 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 CSSM, and report license consumption to CSSM. Two models exist to report the usage:

Direct Model

Use this model in customer 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 CSSM satellite virtual machine on the customer premises which is then reachable by all internal hosts. The on-premise satellite can be deployed in a connected mode that synchronizes with CSSM on cisco.com 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 Customer 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

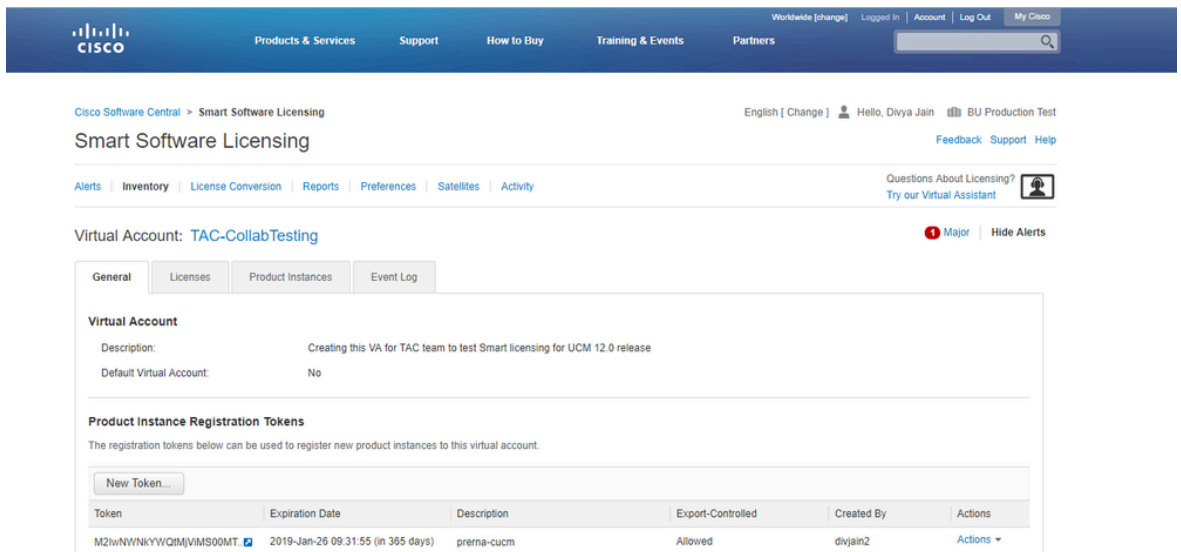| Registration Status	Authorization Status	Evaluation period(90 days)	Overage period(90 days)	Enforcement? (Do not allow provisioning of users/devices)	Comments	Message on UI
Unregistered OR Registration Expired	Evaluation Mode	Start with 90 and will decrement if UCM is consuming licenses	.NA	No	Evaluation 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 to customers with smart licensing as well)

Configure (Direct Deployment)

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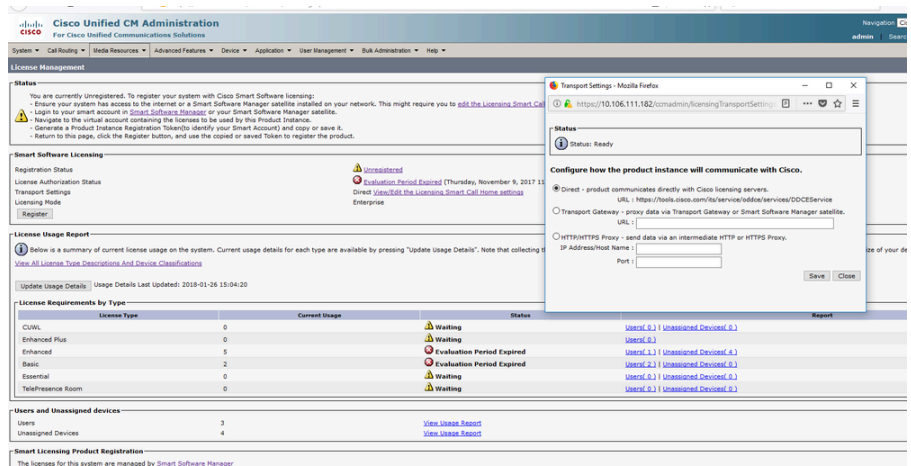
Configuration

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 CSSM 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]**

Verify

- **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
```
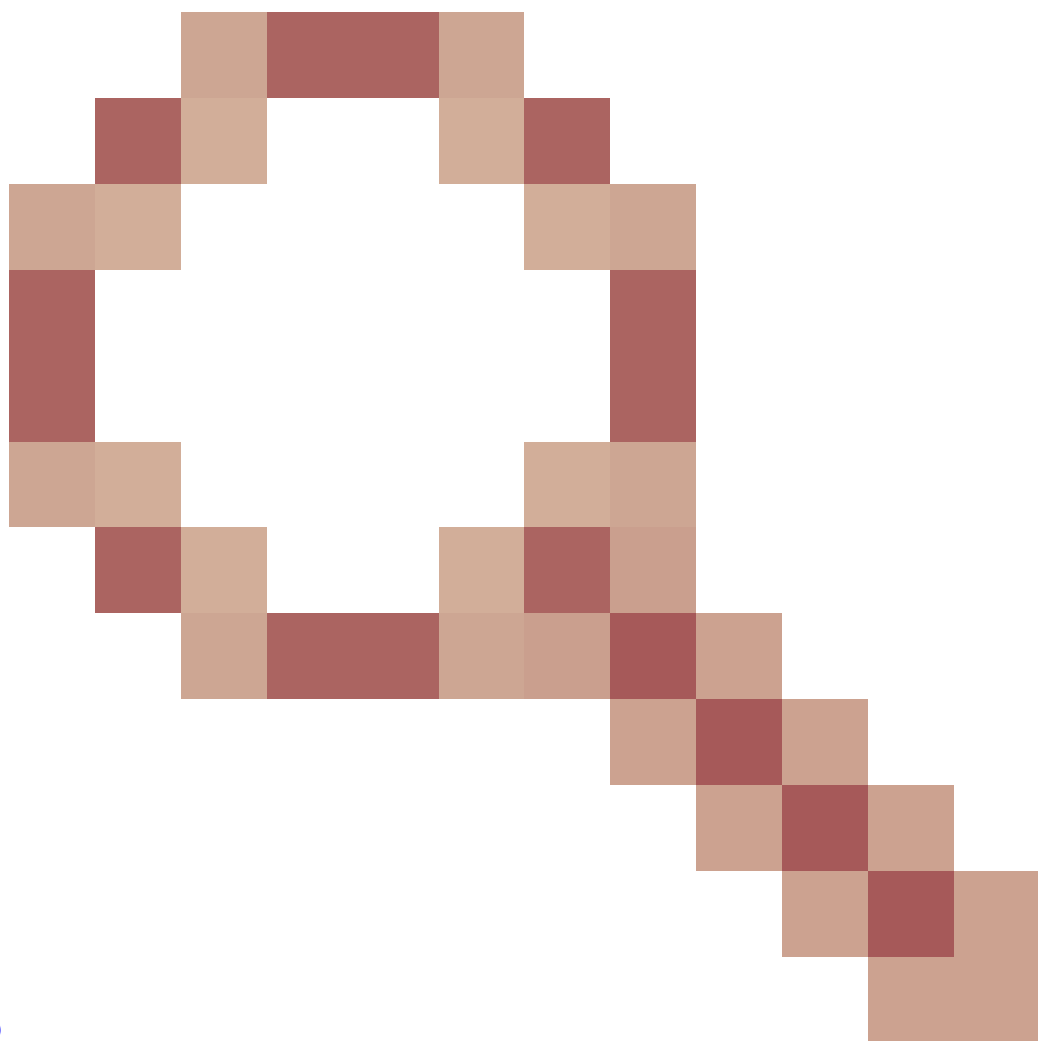
Troubleshoot

Please collect these logs to troubleshoot issues related to registration:
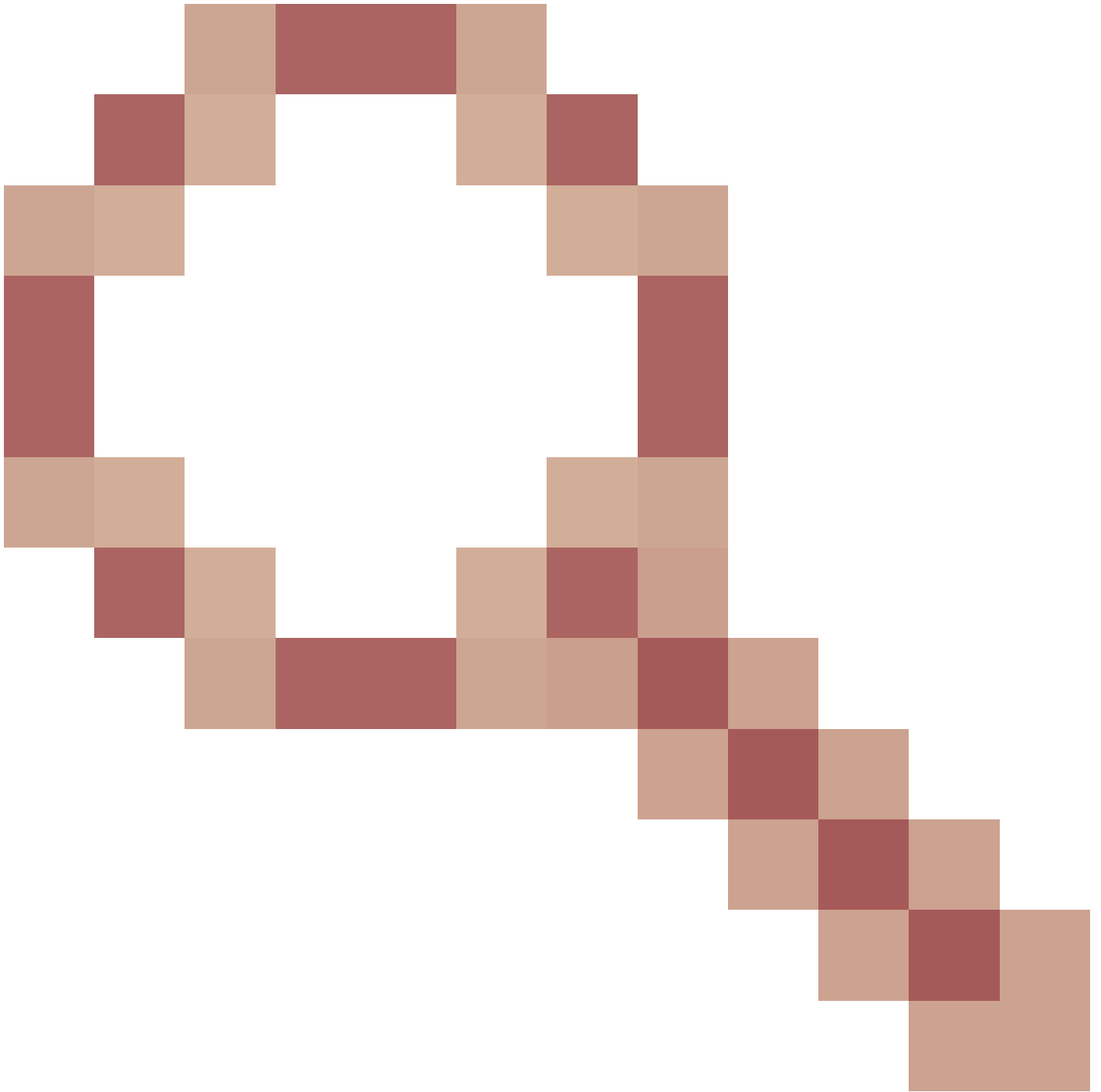
- Packet capture from CUCM CLI
- License Manager logs

Known Bugs

Cisco bug ID **CSCvh16069**
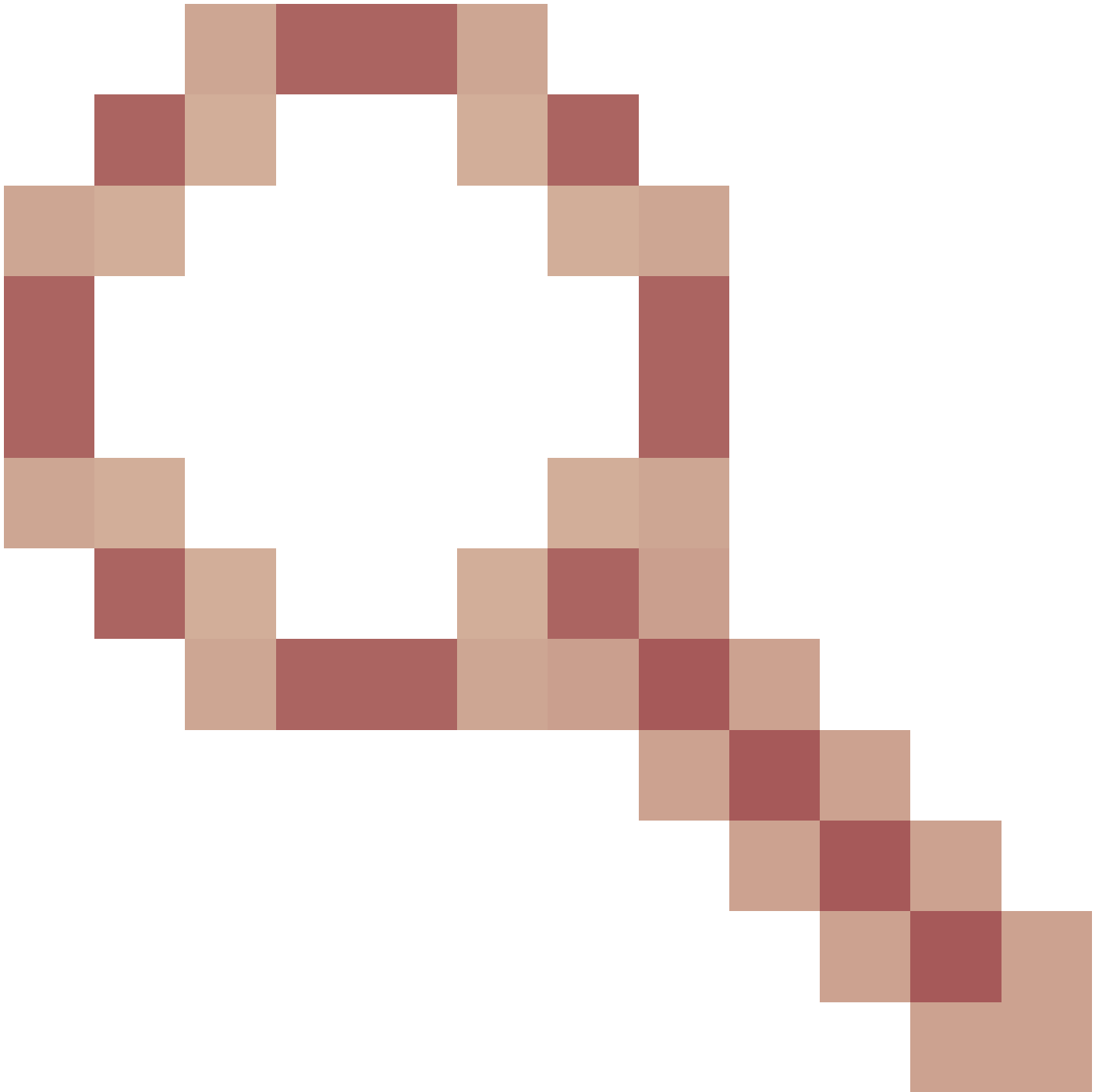: Cisco Smart licensing satellite cannot borrow a license from a higher level to make it in compliance.

Cisco bug ID **CSCvf86710**

: Cisco Smart License Manager platform service does not run.

Cisco bug ID **CSCvc94366**

: CUCM smart license registration to CSSM does not accept the proxy port 443.

Related Information

- [Technical Support & Documentation - Cisco Systems](#)