



You make **possible**



Best Practices for Migrating From Previous Versions of Cisco Unified Communications Manager (CUCM) to Version 12.5

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BRKUCC-2011

CISCO *Live!*

Barcelona | January 27-31, 2020



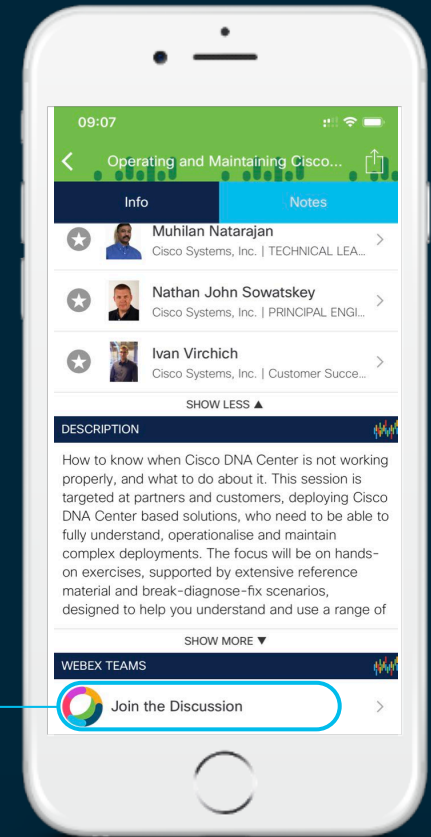
Cisco Webex Teams

Questions?

Use Cisco Webex Teams to chat with the speaker after the session

How

- 1 Find this session in the Cisco Events Mobile App
- 2 Click “Join the Discussion”
- 3 Install Webex Teams or go directly to the team space
- 4 Enter messages/questions in the team space



Required GAAP Reconciliation and Forward-Looking Statements

The Cisco products, service or features identified in this document may not yet be available or may not be available in all areas and may be subject to change without notice. Consult your local Cisco business contact for information on the products or services available in your area. You can find additional information via Cisco's World Wide Web server at <http://www.cisco.com>. Actual performance and environmental costs of Cisco products will vary depending on individual customer configurations and conditions.

Previous Sessions for various CUCM Versions

Reference

- [To CUCM 12.X](#)

Best Practices for Migrating Previous Versions of CUCM to version 12 - BRKUCC-2011 (2019 San Diego, 2018/2019 Barcelona, 2019 Melbourne, 2018 Orlando, 2017 Cancun and 2017 Las Vegas)

- [To CUCM 11.X](#)

Best Practices for Migrating Previous Versions of CUCM to version 11.0 - BRKUCC-2011 (2017 Berlin, 2016 Las Vegas *, 2016 Cancun and 2016 Berlin)

* CUCM Life Cycle Management

Cisco Live On-Demand Library
<http://www.ciscolive.com/global/>

Agenda

- 1 Objectives and Scope
- 2 Planning & Upgrade Considerations
- 3 Licensing
- 4 Upgrade/Migration Methods
- 5 Platform
- 6 Upgrade Optimization

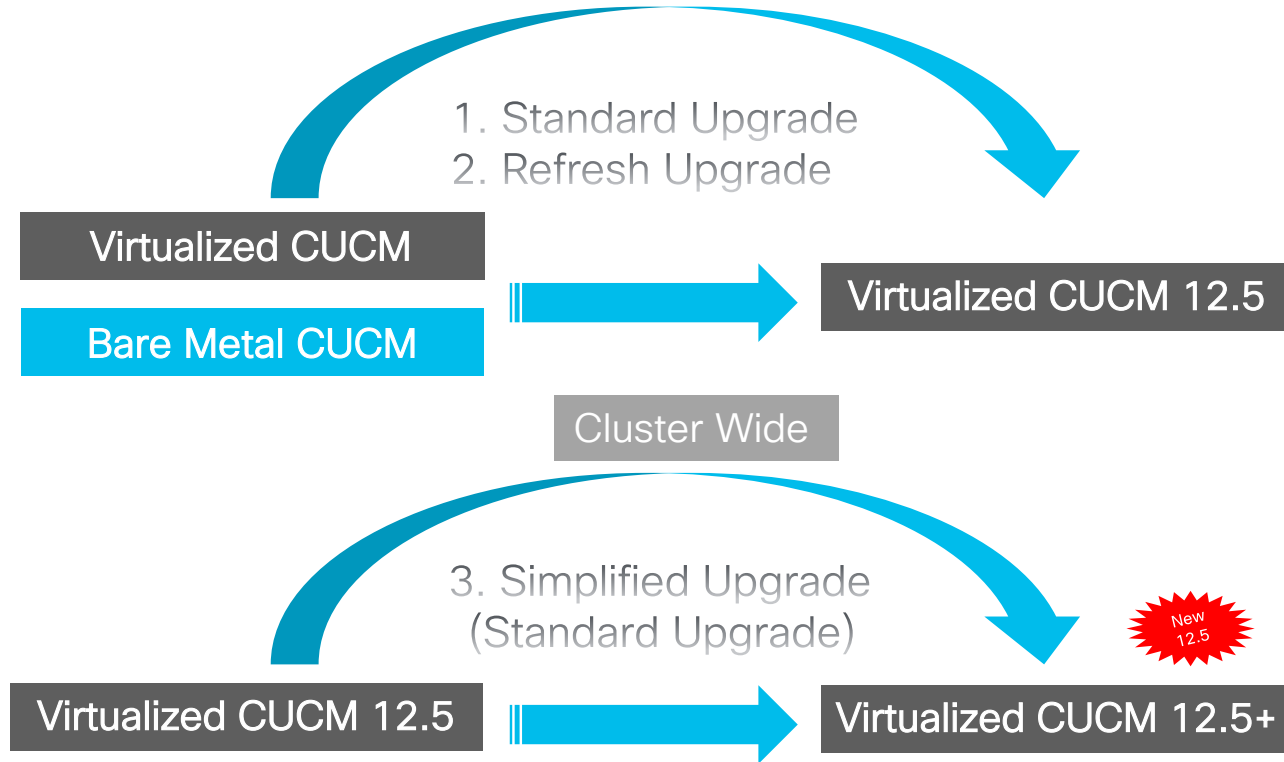


Objectives and Scope

Session Objectives

- To provide foundational knowledge for a successful upgrade or migration to CUCM 12.5
 - Planning and Execution
 - Considerations, Approaches and Tools
- To provide an overview of Smart Account and Smart Licensing to support CUCM 12.5
- To provide an overview and best practices to optimize upgrade and migration from a holistic system level

Session Scope

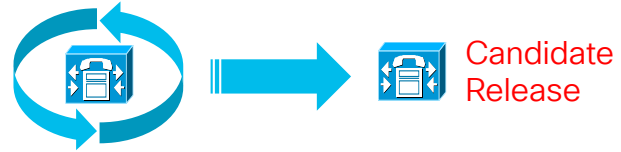


Planning & Upgrade Considerations

Life Cycle Management and Influential Factors

- Life Cycle Management

- Cisco Live On-Demand: Las Vegas 2016 CUCM 11.5
- Release (R)-2 for Direct Upgrade (e.g 10.5)



- My Notifications

- Cisco Security Advisories (PSIRTs)
- Field Notices
- End of Sale and End-of-Support Announcements
- Software Updates
- Updates to Known Bugs
- <https://cway.cisco.com/mynotifications>



The screenshot shows the 'Create Subscription' form in a web browser. The form is titled 'Create Subscription' and has a 'Enter Delivery Preferences' section with radio buttons for 'Email' (selected) and 'RSS'. Below this, there is a 'Subscription Title*' field with the value 'BRKUCC-2011', a 'Frequency' dropdown menu set to 'Daily', and an 'Email to*' field with the value 'bta@cisco.com'. The 'Select Alert Type(s)' section has checkboxes for 'End of Sale/Support Announcements' (checked), 'Field Notices' (checked), and 'Cisco Security Advisories' (unchecked). The 'Select Product(s)' section has a search box with the placeholder 'Product Name e.g. 6500 Switch' and a 'Browse all' button. At the bottom, there are two browser tabs: 'Unified Communications Manager (CallManager)' and 'Unified Communications Manager Version 10.5'.

- EOS and EOL for CUCM 10.X


- (Important: 10.X UCL/CUWL Add-On License availability about 1 year before Last Date of Support App SW)

- Deprecated Phone Models in Cisco Unified Communications Manager, Release 14

- https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/trouble/14_0_1/fieldNotices/cucm_b_deprecated-phones-14.html



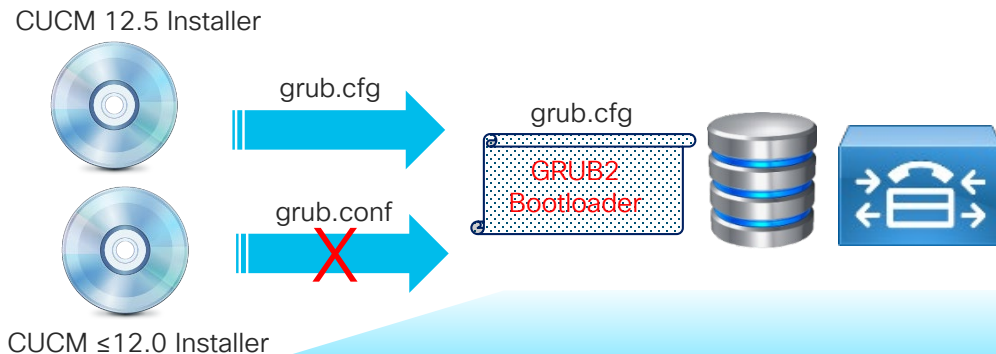
Candidate Release and Performance Assessment for CUCM 12.5

- CUCM 12.5 improved quality over previous releases (Bug Search Tool)
<https://bst.cloudapps.cisco.com/bugsearch/>
E.g. Choose acceptable release: 12.5(1), 12.5(1) SU1, 12.5(1) SU2, etc.
- Meltdown and Spectre microprocessor vulnerabilities addressed in:
 - CUCM 12.5 (OS Kernel) 
 - Minimally ESXi 6.5 U2 or 6.7 U2 (Hypervisor)
 - UCS firmware
- Collaboration Sizing Tool 12.6(2) supports CUCM 12.5
<http://tools.cisco.com/cucst>

CUCM 12.5 Upgrade/Downgrade Consideration



- CUCM 12.5 (CentOS 7) installs and configures GRUB2 (GRand Unified Bootloader)
- Downgrade and switch partition to previous version
- CUCM ≤ 12.0 installer errors out due to lack of grub.conf



E.g. Upgrade from CUCM 10.5 to 12.5, then downgrade back to CUCM 10.5. Next upgrade has to be CUCM 12.5 or later. Upgrade to CUCM earlier than version 12.5 will fail.

CUCM Release	Bootloader	Bootloader configuration file
≤ 12.0	GRUB	grub.conf
≥ 12.5	GRUB2	grub.cfg

Candidate Release Assessment & Environmental Considerations



- Federal Information Processing Standard (FIPS) support 12.5(1) SU 1:
 - Delete IPsec DH Group Key 1,2 and 5, upgrade, then add IPsec DH Group Key 14-18
 - ciscocm_ipsec_groupenhancement_fips_11_5.cop.sgn
 - ciscocm_ipsec_groupenhancement_fips_10_5.cop.sgn
- CUCM 12.0 Release and Deprecated Phones



https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/rel_notes/12_0_1/deprecated_phones/cucm_b_deprecated-phone-models-for-1201.html?referring_site=RE&pos=1&page=https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/trouble/14_0_1/fieldNotices/cucm_b_deprecated-phones-14.html

Candidate Release Assessment & Environmental Considerations

- License hierarchy and substitution available with Smart Software Manager satellite Enhance Edition 6.1 or later. Only available with CSSM previously.
- Apple Push Notification (APN)

Not supported with Specific License Reservation (SLR)

CSSM or Smart Software Manager satellite Enhance Edition 6.1 or later

https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/push_notifications/cucm_b_push-notifications-deployment-guide/cucm_b_push-notifications-deployment-guide_chapter_01.html#reference_CE836F3E3283BCF699F2AFC21426B783

Summary

Planning & Upgrade Considerations

Life Cycle
Management and
Influential Factors

Candidate Release
and Performance
Assessment for
CUCM 12.5

Upgrade/downgrade
Consideration

Candidate Release
Assessment &
Environmental
Considerations

1

Planning & Upgrade Considerations

2

System Level Planning for Upgrade/Migration

License
Management

Upgrade/Migration
Methods

Platform

Upgrade
Optimization

System Level Planning for Upgrade/Migration

2

License Management

Upgrade/Migration Methods

Platform

Upgrade Optimization

CUCM Licensing
Smart Licensing
CUCM License Migration
CUCM License Optimization
CUCM Registration with Smart Licensing

Highlight:

1. Specific License Reservation (SLR)
2. Smart Software Manager On-Prem
3. Export Registration Authorization key

CUCM Versions, Builds and Requirements
Upgrade/Migration Methods and Tools
PCD Upgrades and Migrations
CUCM Upgrade COP Files
Upgrade Path

Highlight:

1. Simplified Upgrade
2. Pre-Upgrade COP file or check list
3. Post-Upgrade COP file or check list

Servers
Virtualization
Virtualized CUCM
VMware changes

Highlight:

1. No VMware Cloud on AWS support

Deprecated phones
Disk Space Required in /common
Partition for Upgrade
Improve Performance

Disk Space
TFTP server
DB replication
Purge CDR
Phone firmware
Application dependencies
Upgrade windows


Licensing

- CUCM Licensing
- Smart Licensing
- CUCM License Conversion
- CUCM License Optimization

➤ CUCM Licensing

License Manager for CUCM by Versions

CUCM Version	5.0-8.6	9.0-11.5	12.0 and later
License Manager	Publisher	ELM/PLM	Cisco Smart Software Manager (CSSM)
			Smart Software Manager On-Prem (Satellite)



Cisco Unified CM Administration
For Cisco Unified Communications Solutions

System ▾ Call Routing ▾ Media Resources ▾ Advanced Features ▾ Device ▾ Application ▾ User Management ▾ Bulk Administration ▾ Help ▾



License Management

Status

You are currently running in Evaluation mode. To register your system with Cisco Smart Software licensing:

- Ensure your system has access to the internet or a Smart Software Manager satellite installed on your network. This might require you to [edit the Licensing Smart Call Home Transport settings](#).
- Login to your smart account in [Smart Software Manager](#) or your Smart Software Manager satellite.
- Navigate to the virtual account containing the licenses to be used by this Product Instance.
- Generate a Product Instance Registration Token(to identify your Smart Account) and copy or save it.
- Return to this page, click the Register button, and use the copied or saved Token to register the product.

Smart Software Licensing


Registration Status	 Unregistered
License Authorization Status	 Evaluation Mode (89 days remaining)
Export-Controlled Functionality	Not Allowed
Transport Settings	Direct View/Edit the Licensing Smart Call Home settings
Licensing Mode	BE6000

CUCM STATUS

SMART AGENT STATUS



CUCM 12.5 License Mode and Types

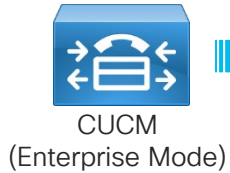
CUCM License	Licensing Mode	Description
CUWL	Enterprise	Migrated or 12.X CUCM
Enhanced Plus	Enterprise	Migrated or 12.X CUCM
Enhanced	Enterprise	Migrated or 12.X CUCM
Basic	Enterprise	Migrated or 12.X CUCM
Essential	Enterprise	Migrated or 12.X CUCM
TelePresence Room	Enterprise	Migrated or 12.X CUCM
BE6K Software License Starter Bundle (R-CBE6K-K9)	BE6000	New BE6K purchase with version 12.5 (per cluster) 

- “utils BE6000Mode enable”
 1. UCL
 2. UWL
 3. None
- “utils BE6000Mode disable”
- “utils BE6000Mode enable”
- “utils BE6000Mode status”

```
admin# utils BE6000Mode enable
Executing this command will enable BE6000 mode and must restart the "Cisco Smart
License Manager" service for changes to take effect.
Continue (y/n)?y

Please select the starter bundle from these options (1/2/3) :
1. BE6000 UCL Starter Bundle
2. BE6000 UWL Starter Bundle
3. NONE
1
Service restart is in progress, please wait...
BE6000 mode is enabled with starter bundle :BE6000 UCL Starter Bundle.
admin#
```

Example: CUCM 12.5 License Consumption



CSSM CUCM License

Essential, Basic, Enhanced, Enhanced Plus, CUWL and TelePresence Room



CSSM CUCM License

Essential, Basic, Enhanced, Enhanced Plus, CUWL and TelePresence Room



- 1
- 2

CSSM CUCM License

BE6K Starter Bundle (1 per cluster if available)
(35 UCL Enhanced or 35 CUWL)

Essential, Basic, Enhanced, Enhanced Plus, CUWL and TelePresence Room

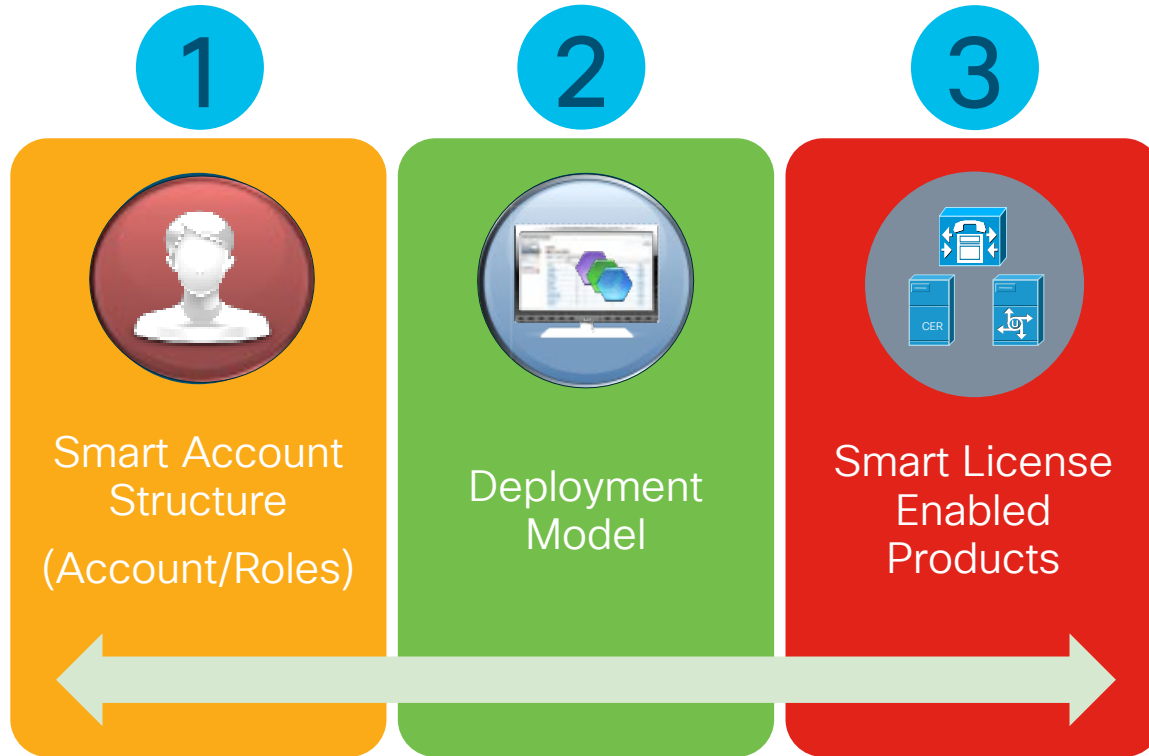
- New BE6000 License Type
- New Starter Pack entries (2)
- “Current Usage” is the type of BE6000 bundle
- Review “Report” section for BE6000 and overflow license usage

License Type	Current Usage	Status	Report
CUWL	1	⚠ Evaluation	Users(1) Unassigned Devices(0)
Enhanced Plus	1	⚠ Evaluation	Users(1)
Enhanced	0	✅ No Licenses in Use	* Users(0) Unassigned Devices(1)
Basic	0	✅ No Licenses in Use	Users(0) Unassigned Devices(0)
Essential	0	✅ No Licenses in Use	* Users(0) Unassigned Devices(1)
TelePresence Room	1	⚠ Evaluation	Users(0) Unassigned Devices(1)
BE6000 UCL Starter Bundle	1	⚠ Evaluation	
BE6000 UWL Starter Bundle	0	✅ No Licenses in Use	

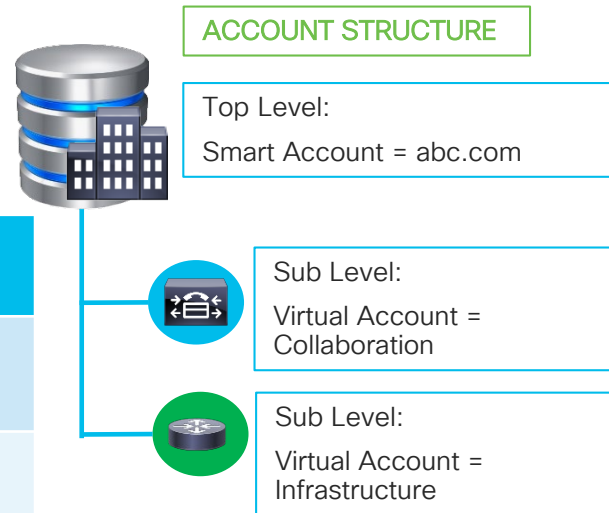
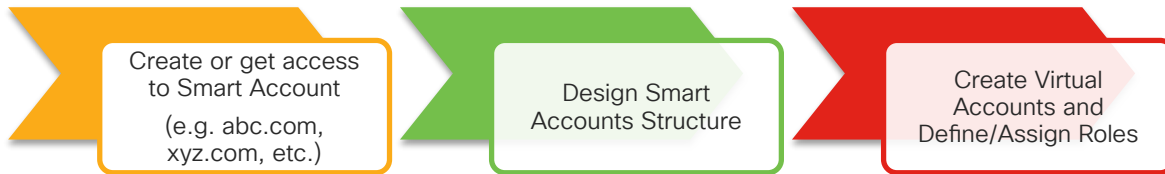


➤ Smart Licensing

Planning for Smart Licensing



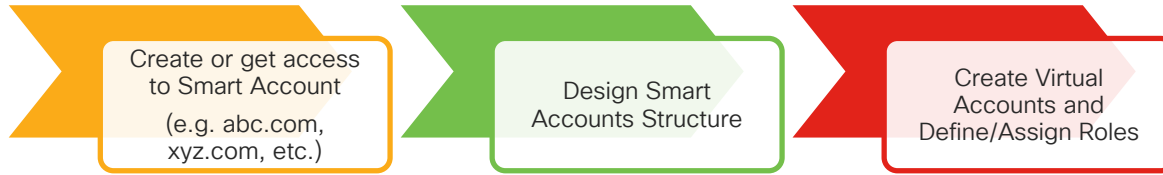
1. Smart Account Structure: Smart Account Structure



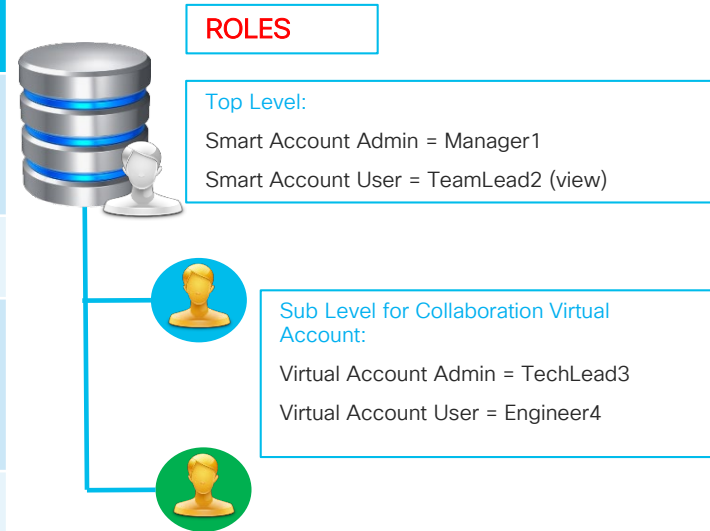
Account	Description and Usage	Examples
Smart Account	Account that represent a company (full domain name). Account Name, Domain Identifier and Account Type	abc.com, xyz.abc.com, etc.
Virtual Account	<ul style="list-style-type: none"> • Sub-Account to Smart Account • Represent different departments of the main Smart Account or organization • Where product registers to • Where license are assigned to • Equal to an instance of ELM/PLM 	Geographical locations, departments, product types, etc.

E.g. Virtual Account “**collaboration**” have X,Y, Z, etc. quantity of collaboration licenses and where all Smart Licensing enabled collaboration products will register to

1. Smart Account Structure: Roles



Roles	Privileges	Visibility/Typical Assignment
Smart Account Administrator	Highest level account that can create accounts and roles at the Smart Account level and Virtual Account level	High Level Managers and admin of the Smart Account
Smart Account User	View level access at the Smart Account level and Virtual Account level	Manager or trusted partners
Virtual Account Administrator	<ul style="list-style-type: none"> Manage properties of the assigned Virtual Account User can register and view licenses specific to the assigned Virtual Account 	Lead engineers
Virtual Account User	<ul style="list-style-type: none"> View properties of the assigned Virtual Account User can register and view licenses specific to the Virtual Account 	Deployment engineers



Customer Smart Account Roles (Detailed)

User Roles	Capabilities in CSC	Capabilities in SSM	Capabilities in ELA	Capabilities in LRP
Smart Account Approver	<ul style="list-style-type: none"> Edit/View Account Properties View Users at Smart Account & Virtual Account Level View / Accept Agreements View Event Logs 	<ul style="list-style-type: none"> No access 	<ul style="list-style-type: none"> No access 	<ul style="list-style-type: none"> No access
Smart Account Administrator	<ul style="list-style-type: none"> Edit / View Account Properties Add / Edit / Delete Virtual Accounts Add / Edit / Delete Users (at SA and VA level) View / Accept Agreements View Event Logs 	<ul style="list-style-type: none"> Can perform all activities in Smart Software Manager at Smart Account Level and Virtual Account Level 	<ul style="list-style-type: none"> Can perform all activities in ELA linked to the Smart Account they have access to 	<ul style="list-style-type: none"> Can perform all activities in LRP linked to the Smart Account they have access to
Smart Account User	<ul style="list-style-type: none"> View Account Properties View Virtual Accounts View Users (at SA and VA level) View Agreements View Event Logs 	<ul style="list-style-type: none"> Can perform all activities in Smart Software Manager at Smart Account Level and Virtual Account Level 	<ul style="list-style-type: none"> Can perform all activities in ELA linked to the Smart Account they have access to 	<ul style="list-style-type: none"> Can perform all activities in LRP linked to the Smart Account they have access to
Virtual Account Administrator	<ul style="list-style-type: none"> View Account Properties View Assigned Virtual Accounts Add / Edit / Delete Users (capability to add Virtual Account Admins or Virtual Account Users) View Agreements View Event logs (restricted to assigned VAs) 	<ul style="list-style-type: none"> Can perform all activities in SSM for the Virtual Accounts they have access to 	<ul style="list-style-type: none"> Can perform all activities in ELA linked to the Virtual Account they have access to 	<ul style="list-style-type: none"> Can perform all activities in LRP linked to the Virtual Account they have access to
Virtual Account User	<ul style="list-style-type: none"> View Account Properties View Assigned Virtual Accounts View Users (only those linked to assigned VAs) View Agreements View Event Logs (restricted to assigned VAs) 	<ul style="list-style-type: none"> Can perform all activities in SSM for Virtual Accounts they have access to 	<ul style="list-style-type: none"> Can perform all activities in ELA linked to the Virtual Account they have access to 	<ul style="list-style-type: none"> Can perform all activities in LRP linked to the Virtual Account they have access to

Smart Licensing Reference Links

- Smart Account Information
 - <http://cisco.com/go/smartaccounts>
- Smart Licensing Information
 - <http://cisco.com/go/smartlicensing>
- Smart Accounts and Smart Licensing On-Demand Training Materials
 - <https://communities.cisco.com/docs/DOC-68582>
- Request a new Sales Software Training Session at the time of your choosing
 - <https://www.ciscofeedback.vovici.com/se/7FAD612023A8BF7E>
- Smart Licensing Training:
 - <https://community.cisco.com/t5/smart-licensing-enterprise/simplifying-the-cisco-software-experience-training-schedule/ta-p/3646861>

Smart Licensing and Smart Account Recommendation

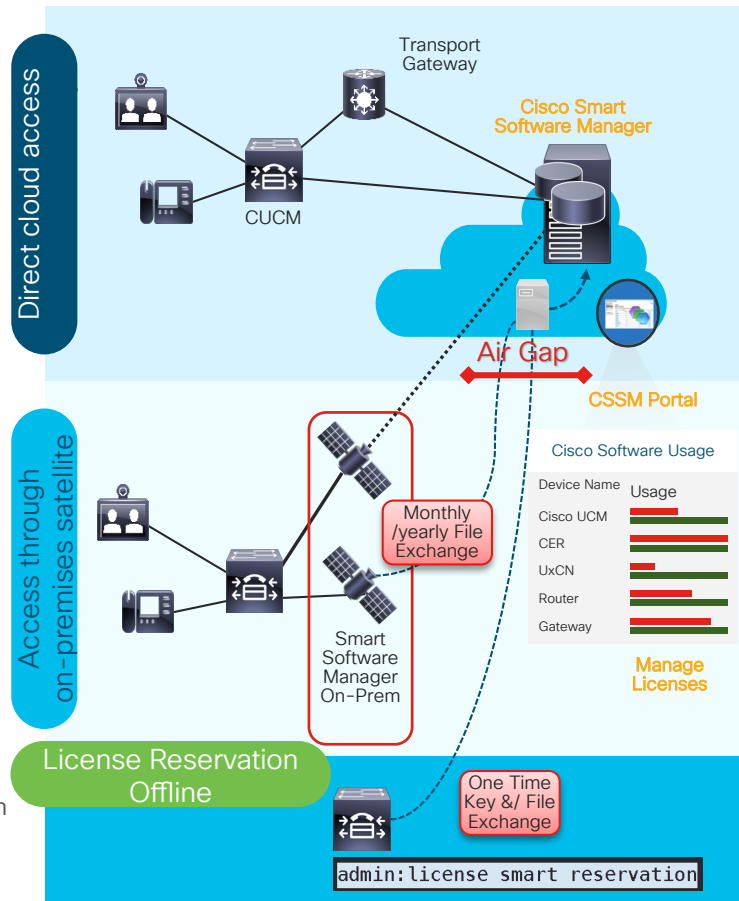
- Create a new Smart Account (SA) or get access to current Smart Account
 - Agree and establish a Smart Account structure, roles and standard naming convention for the various virtual accounts
 - Take a holistic view when creating the account structure (legal requirements, liabilities, asset management, budget alignment, policy, overhead, tax, etc.)
 - Recommend separation for production and lab virtual accounts for entitlement
 - Socialize the structure, roles and purchase process to assign licenses to the proper Smart Account and **Virtual Account(s)**
- Communicate with partner on organization SA structure and license assignment for typical orders
- Consider assigning “Smart Account User” role to trusted partner to move licenses to the correct SA and virtual account for orders that are not assigned properly
- For orders without SA and virtual account assignment, the license(s) will go into the “Default” virtual account. Keep monitoring this virtual account and track licenses back to “Order Number” by using “Transaction History”

2. Smart Licensing Deployment Models

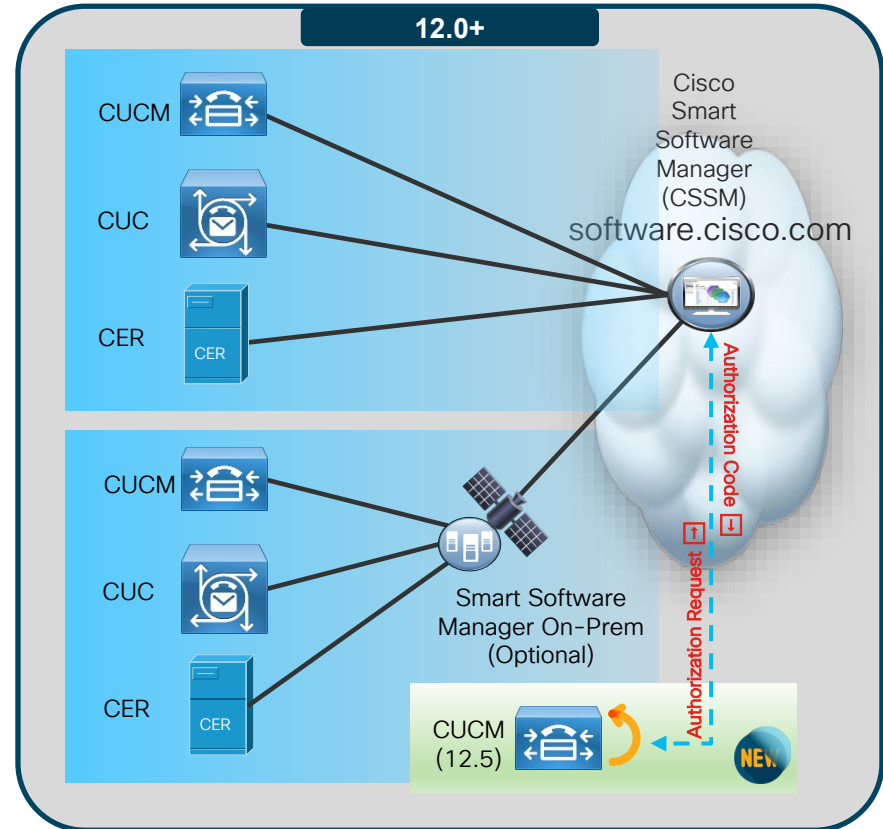
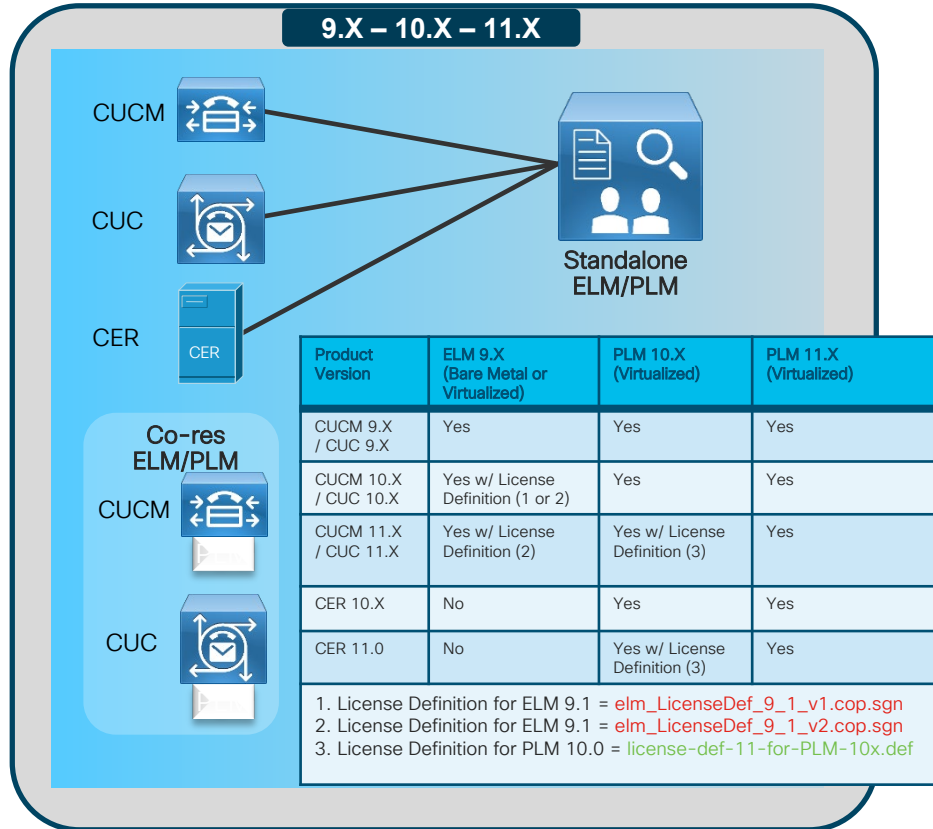
Ease of use

Security Policy

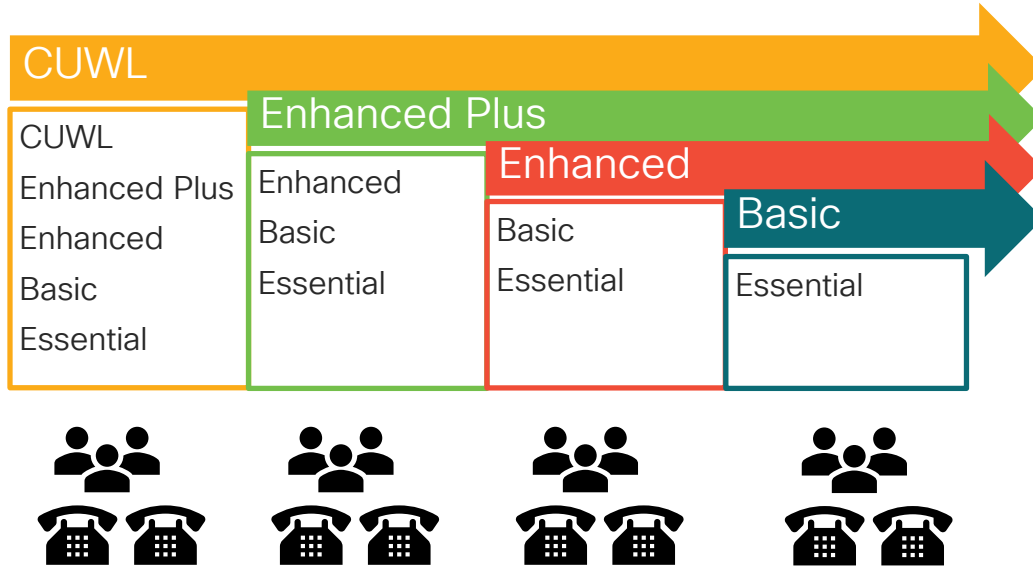
- Direct cloud access**
 Cisco product sends usage information directly over the internet. No additional components are needed.
- Direct cloud access through an HTTPs proxy**
 Cisco Products send usage information over the internet via a Proxy Server - Smart Call Home Transport Gateway (Free VM Download) or off-the-shelf Proxy (such as Apache).
- Mediated access through an on-premises collector - connected**
 Cisco Products send usage information to a local connected collector, which acts as a local license authority. Periodically, an exchange of information will be performed to keep the databases in sync.
- Mediated access through an on-premises collector - disconnected**
 Cisco Products send usage information to a local disconnected collector, which acts as a local license authority. Once a month, an exchange of human readable information will be performed to keep the databases in sync.
- Full Offline Access - License Reservation** New 12.5
 CUCM 12.5 Can Utilize Specific License Reservation (SLR). Requested from OS Admin CLI and Specific Types of Licenses are reserved on CSSM perpetual or term based.



Smart Licensing vs ELM/PLM



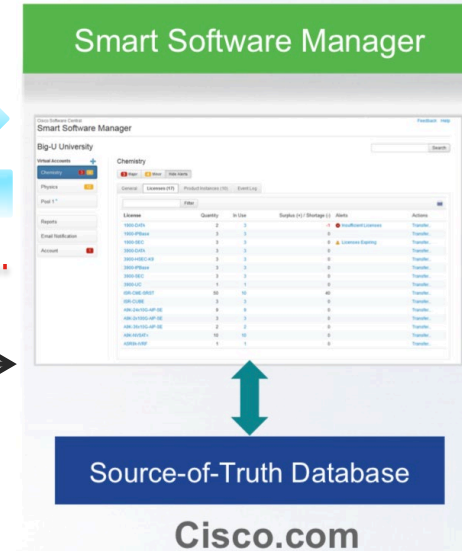
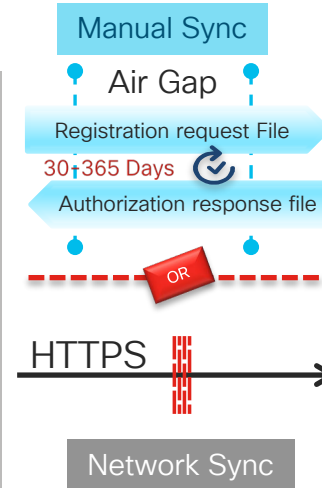
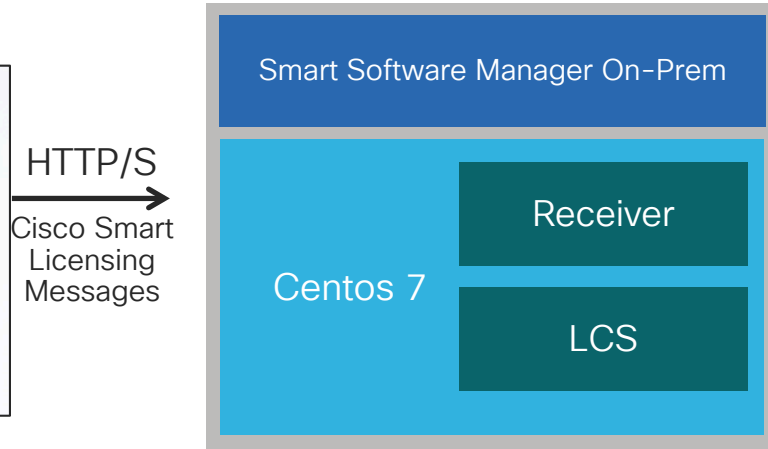
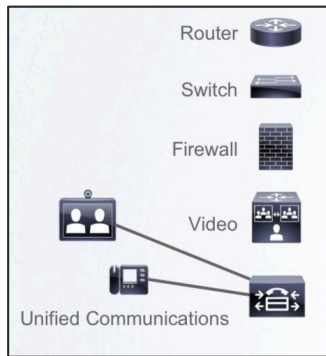
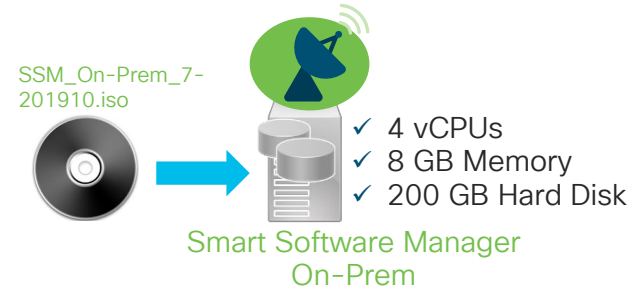
Collaboration License Substitution with Smart Licensing



Smart Software Manager satellite version	Edition/Release
≤5.1	Classic Edition
≥6.X to <7-201907	Enhance Edition
≥7-201907	On Premise

Cisco Smart Software Manager On-Prem Overview

- ✓ Bare Metal or VMware (ESXi 6.5-6.0, 5.5)
CentOS 7 64 bit or Linux Other 64 bit
- ✓ License hierarchical and substitution (6.0/6.1+)
- ✓ APNS for Jabber on IOS (6.1+)



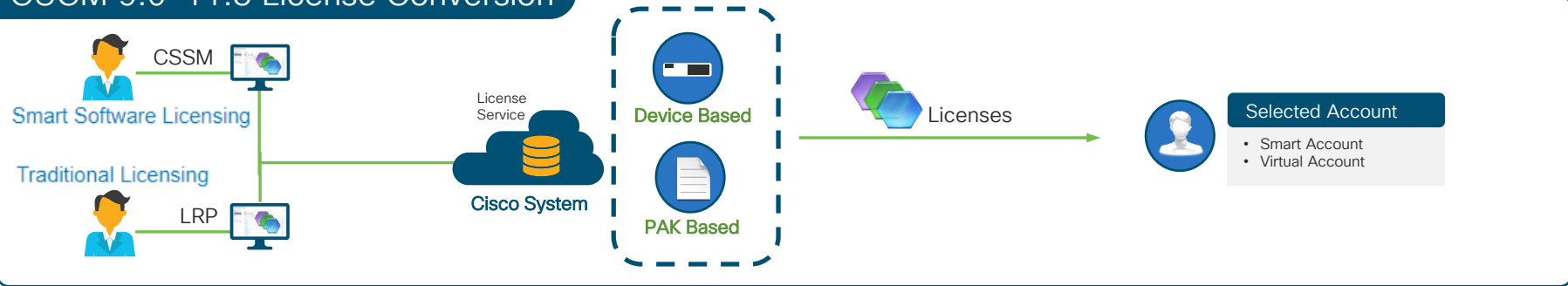
3.Smart License Enabled Collaboration Products

Collaboration Products	Version	Licensing Mode
Cisco Unified Communications Manager	12.0	Smart ONLY
Session Management Edition	12.0	Smart ONLY
Unity Connection	12.0	Smart ONLY
Cisco Emergency Responder	12.0	Smart ONLY
Cisco Unified Communications Manager Express	11.0	Hybrid
SRST	12.1	Hybrid
Cisco Unity Express Virtual	9.0.5	Smart ONLY
Prime Collaboration Provisioning	12.4	Hybrid
vCUSP	9.0	Smart ONLY
vCUBE	IOS XE16.11	Smart ONLY 

➤ CUCM License Migration

Collaboration License Migration to Smart License

CUCM 9.0-11.5 License Conversion



Types of Migration	Approach
PAK Based	Fulfilled, partial or unfulfilled PAK to Smart Licensing
Device Based	PLM based to Smart Licensing

CSSM - Cisco Smart Software Manager (<https://software.cisco.com/#SmartLicensing-LicenseConversion>)

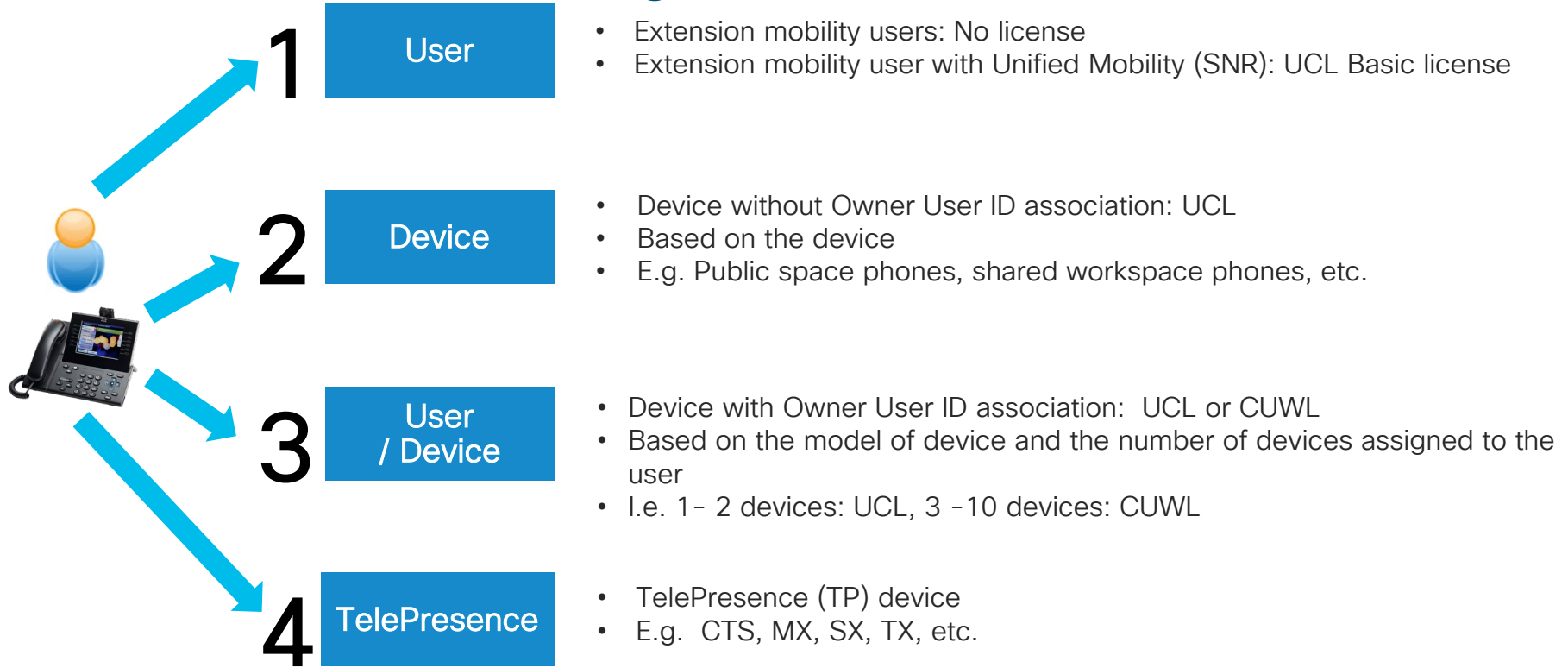
LRP - License Registration Portal (<https://slexui.cloudapps.cisco.com/SWIFT/LicensingUI/Home>)

* Steps with Screen captures are in the appendix



➤ CUCM License Optimization

CUCM License Usage



Device and Owner User ID Association

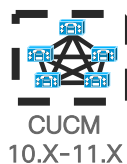
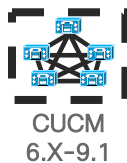
Device > Phone > Device Name

Device Information

Registration	Unknown
IP Address	Unknown
<input checked="" type="checkbox"/> Device is Active	
<input checked="" type="checkbox"/> Device is trusted	
MAC Address*	<input type="text" value="123456789012"/>
Description	<input type="text" value="SEP123456789012"/>
Device Pool*	<input type="text" value="Default"/> View Details
Common Device Configuration	<input type="text" value="< None >"/> View Details
Phone Button Template*	<input type="text" value="Standard 9971 SIP"/>
Softkey Template	<input type="text" value="Standard User"/>
Common Phone Profile*	<input type="text" value="Standard Common Phone Profile"/>
Calling Search Space	<input type="text" value="< None >"/>
AAR Calling Search Space	<input type="text" value="< None >"/>
Media Resource Group List	<input type="text" value="< None >"/>
User Hold MOH Audio Source	<input type="text" value="< None >"/>
Network Hold MOH Audio Source	<input type="text" value="< None >"/>
Location*	<input type="text" value="Hub_None"/>
AAR Group	<input type="text" value="< None >"/>
User Locale	<input type="text" value="< None >"/>
Network Locale	<input type="text" value="< None >"/>
Built In Bridge*	<input type="text" value="Default"/>
Privacy*	<input type="text" value="Default"/>
Device Mobility Mode*	<input type="text" value="Default"/> View Current
Owner	<input checked="" type="radio"/> User <input type="radio"/> Anonymous (Public/Shared Space)
Owner User ID*	<input type="text" value="bta"/>

- Device with Owner User ID field configured potentially uses less licenses
 - I.E. Extension mobility user with Unified Mobility feature and a phone uses one license
 - I.E. Multiple phones with the same Owner ID field
- Owner User ID Field:
 - CUCM 9.1(1a) or earlier: User or None
 - CUCM 9.1(2) or later: User or Anonymous

Cisco Device Assignment Tool (DAT)



Device Assignment Tool

Search for Unassigned Phones via AXL per CUCM cluster

Match Users to Unassigned Phones based on 3 defaults and 4 optional rules

Assign Owners (OwnerUserID) to Phones

- Pre-upgrade or post-upgrade of CUCM 9.0 and later releases
- Align OwnerUserID to IP Phones for User Based Licensing (CUCM 9.0 and later releases).
- Windows PC (7 and later) or Apple Mac (OSX 10.8 and later) Java application

Device Name	OwnerUserID	CUCM Version
SEP123456789012	None	9.1(1a) or earlier
SEP098765432109	Anonymous	9.1(2) or later



Device Name	OwnerUserID
SEP123456789012	UserX
SEP098765432109	UserY

Cisco Device Assignment Tool (DAT)



- Based on sequence of 7 rules or manually edited xls file

Cisco Device Assignment Tool

Host Information

Enter the host and login information for your Unified CM that is running AXL services

Unified CM Version: Before Version 10 Version 10+

Host Name/IP Address:

User Name:

Password:

Cisco Device Assignment Tool

Match Users to Unassigned Endpoints

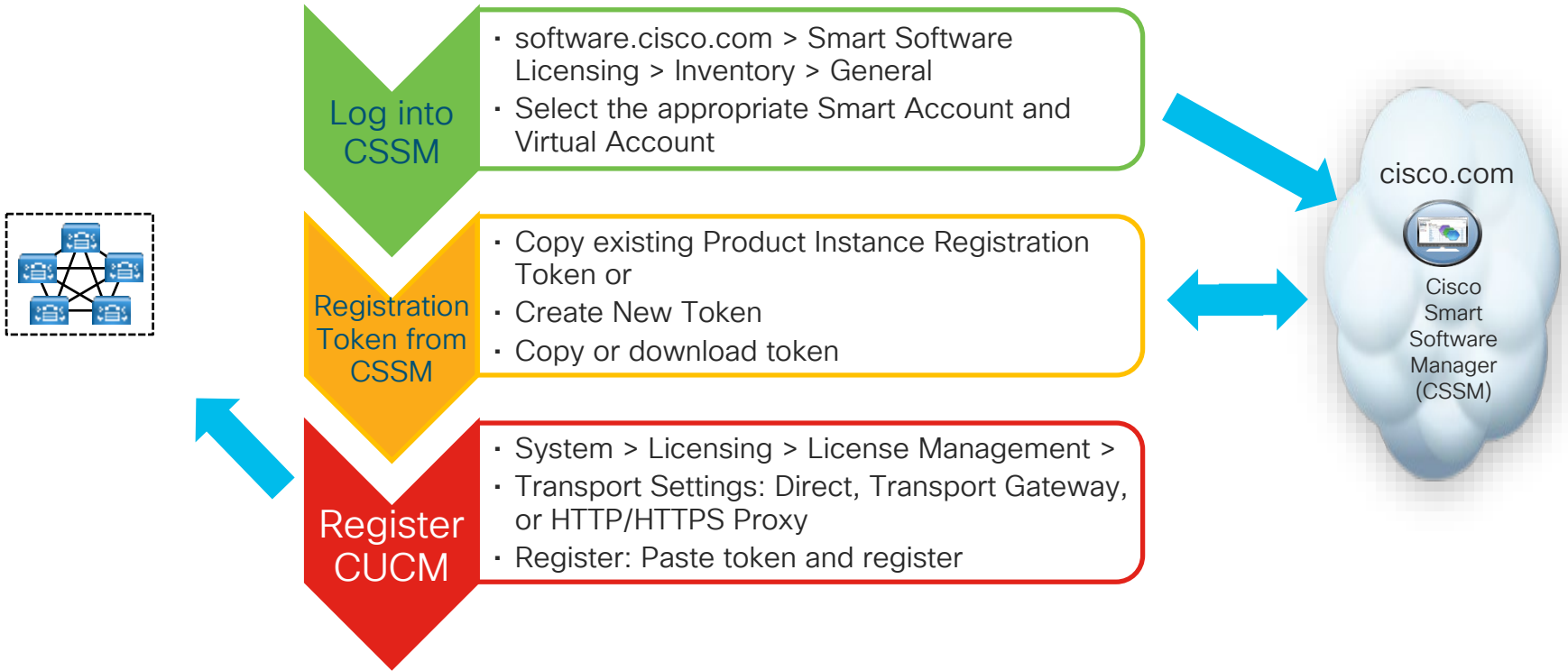
This step will attempt to match a single user to any unassigned devices based on the rules that you select and prioritize below. You can perform this step with the recommended settings or customize them to your needs.

Unassigned Devices: 3 Host Name/IP Address : 10.83.113.129 Version : Unified CM 9.1.2

Available Rules	Rules To Run
<input type="checkbox"/> Match by Telephone Number and Partition Match Last 7 digits	<input checked="" type="checkbox"/> Match by Control Device
<input type="checkbox"/> Match to Alerting Name of Line User ID Last 7 digits, First name, Last name	<input checked="" type="checkbox"/> Match by Primary Extension and Partition
<input type="checkbox"/> Match to Line Display User ID Last 7 digits, First name, Last name	<input checked="" type="checkbox"/> Match to User A associated with Line
<input type="checkbox"/> Match to Device Description User ID Last 7 digits, First name, Last name	

CUCM Registration with Smart Licensing

Direct CUCM Smart Licensing Registration



Transport Settings for CUCM for Smart Licensing (System > Licensing > License Management)



The screenshot shows the Cisco Unified CM Administration interface. The top navigation bar includes 'System', 'Call Routing', 'Media Resources', 'Advanced Features', 'Device', 'Application', 'User Management', and 'Bulk Administration'. The 'License Management' section is active, showing a 'Status' box with a warning icon and instructions for registration. Below this, the 'Smart Software Licensing' section shows 'Registration Status' as 'Unregistered' and 'License Authorization Status' as 'No Licenses in Use'. The 'Transport Settings' link is highlighted with a red box, and the 'Licensing Mode' section shows 'Direct' as the selected mode, also highlighted with a red box. A blue arrow points from this section to the right.



The screenshot shows the 'Configure how the product instance will communicate with Cisco' dialog box. The 'Status' is 'Ready'. The 'Direct' radio button is selected and highlighted with a red box. The URL is set to 'https://tools.cisco.com/its/service/oddce/services/DDCEService'. The 'Do not share my hostname or IP address with Cisco.' checkbox is also highlighted with a red box. A red starburst with the word 'New' is next to this checkbox. The 'Save' and 'Close' buttons are at the bottom right.

- Set communication between CUCM Publisher and CSSM or Smart Software Manager satellite server
- Smart License Deployment Model
 - Direct: Direct cloud access
 - Transport Gateway: Mediated access through an on premise collector (Smart Software Manager On-Prem)
 - HTTP/HTTPS Proxy: Direct cloud access through an HTTPs proxy

Registering CUCM with Smart Licensing (System > Licensing > License Management)

Smart Software Central > Smart Software Licensing > Inventory > General

Cisco Software Central > Smart Software Licensing English [Change] Hello, Brandon Ta dCloud Cisco Internal Account

Smart Software Licensing

Alerts | Inventory | License Conversion | Reports | Email Notification | Satellites | Activity

Virtual Account: dCloud_SEVT

General Licenses Product Instances Event Log

Virtual Account
Description: used for SEVT training sessions
Default Virtual Account: No

Product Instance Registration Tokens
The registration tokens below can be used to register new product instances to this virtual account.

New Token...

Token	Expiration Date	Description	Export-Controlled	Created By	Actions
VzE20TdhY2QNTM40S00V2	2017-Jun-28 20:53:21 (in 30 days)	CUCM Registration	Allowed	bta	Actions

Copy
Download...
Revoke...

System > Licensing > License Management

Smart Software Licensing Product Registration

To register 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:

```
ZWVvkZj11MjUtZWNiZS00MDI0LTkwZWMTOTYxZWZkNDJiNT  
hmLTE0OTg2NzI2%  
0ANTk0MTZ8ZEt3b3pKMjZOM3ZQUStYbRDd1d3ZDRHUVA4  
VGdKK2Vibll4eVdn%0AcnRvaz0%3D%0A
```

Reregister this product instance if it is already registered

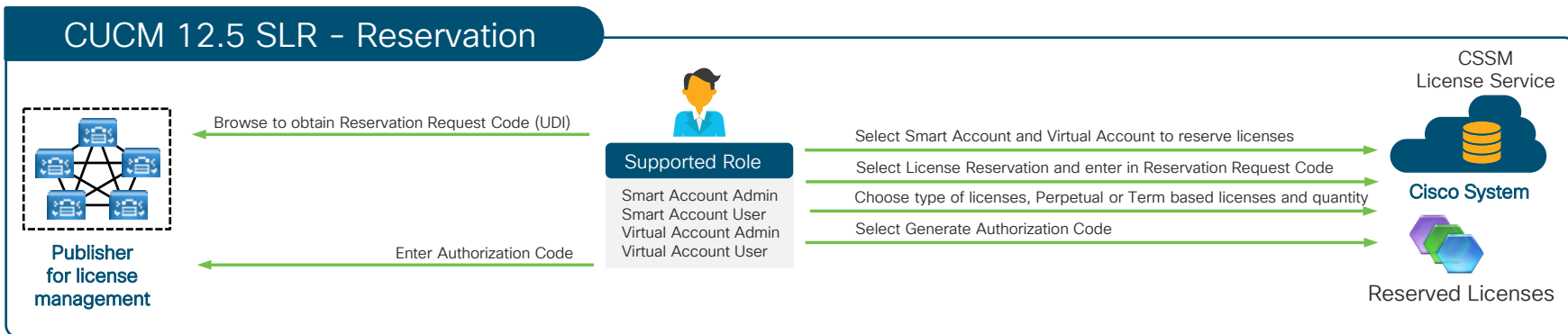
Register Close

- Create or copy existing registration token from CSSM or Smart Software Manager satellite server to CUCM
- Duration and number of uses (optional)

cisco Live!

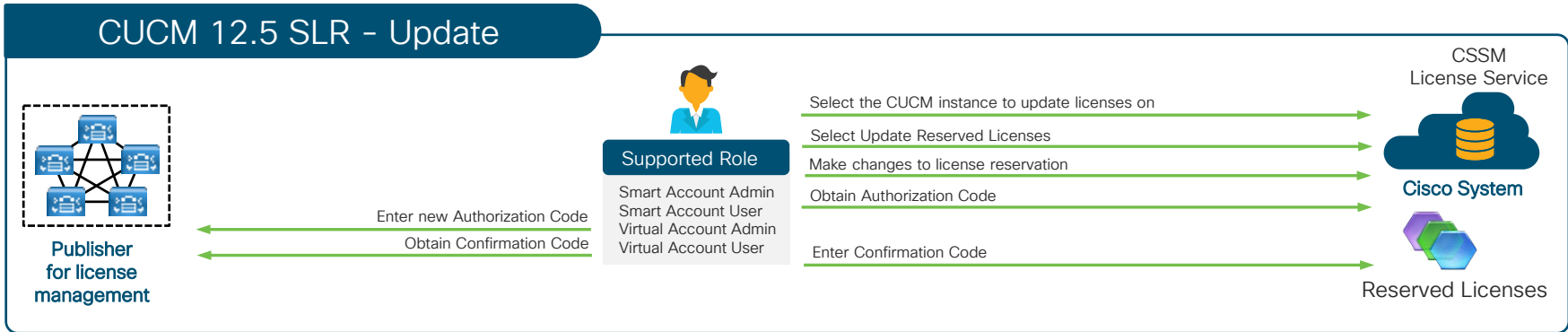
CUCM SLR (Specific License Reservation) Process with Smart Licensing

Specific License Reservation with CUCM 12.5



- Specify and reserve Perpetual or Term based licenses on CSSM for CUCM 12.5 or later
- For highly secure network which does not requires regular sync to CSSM
- Reserved Licenses remained effectively reserved in CSSM until CUCM generate a Reservation Return Code (return the SLR authorization for the product)
- Reserved Licenses in CSSM can be transferred across Virtual Account as needed
- No license substitution within a SLR CUCM cluster until CUCM 12.5(1)SU2 (ETA February 3, 2020)
- Enabled by GLO (Global Licensing Organization)

Specific License Reservation with CUCM 12.5



- Change in reserved licenses (increase or decrease) can be done on previous reserved licenses in CSSM
- The new updated license reservation is effectively reserved in CSSM as soon as Authorization Code is generated
- If new updated license reservation is a decrease in quantity, then a Confirmation Code is required to reduce

Upgrade/Migration Methods

- CUCM Versions, Builds and Requirements
- Upgrade/Migration Methods and Tools
- PCD Upgrades and Migrations
- CUCM Upgrade COP Files
- Upgrade Path

➤ CUCM Versions,
Builds and
Requirements

Sample CUCM Versions and Builds

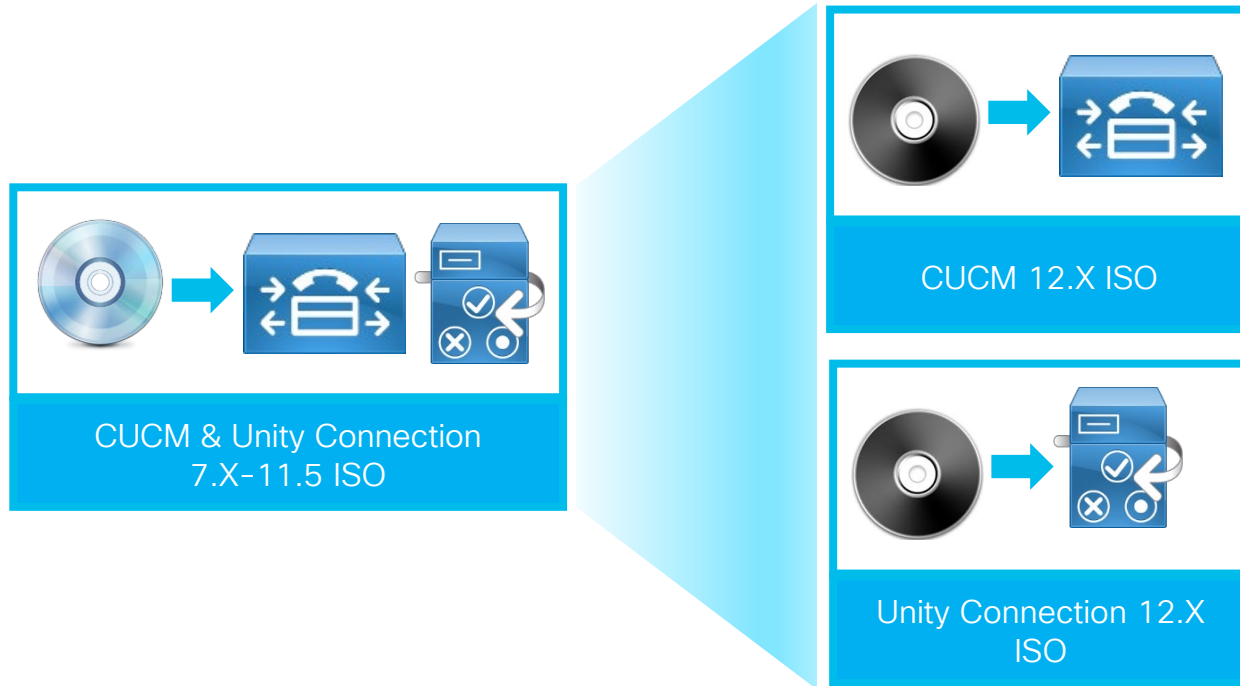
CUCM Version	CUCM Build	Numbering Convention
12.5(1)SU2	12.5.1.12900-11X	(A.B.C.XYzzz-x)
12.5(1)SU1	12.5.1.11900-146	(A) Major version (License)
12.5(1)	12.5.1.10000-22	12.5.1.10000-22
12.0(1)SU3	12.0.1.23900-9	(B) Minor version (Long Life Release)
12.0(1)SU2	12.0.1.22900-11	12. 5 .1.10000-22
12.0(1)SU1	12.0.1.21900-7	(C) Maintenance release (Patch and/or Features)
12.0(1)	12.0.1.10000-10	12.5. 1 .10000-22
11.5(1)SU7	11.5.1.17900-52	(X) Build (Patch)
11.5(1)SU6	11.5.1.16900-16	12.5.1. 1 0000-22
11.5(1)SU5	11.5.1.15900-18	12.5.1. 2 0000-5 (example)
11.5(1)SU4	11.5.1.14900-11	(Y) FCS:0, ES or SU: 1-9
11.5(1)SU3b	11.5.1.13902-2	12.5.1.1 0 000-22 (FCS)
11.5(1)SU3a	11.5.1.13901-3	12.5.1.1 1 900-128 (ES or SU look at last three digits)
		(zzz) FCS:000, ES: 001-899, SU: 900-999
		12.5.1.10 000 -22 (FCS)
		12.5.1.11 007 -1 (ES)
		12.5.1.11 900 -128 (SU)

Build Requirements

Build Matching		
Use Case	Matching	Example
Servers in CUCM Cluster	AA.B.C.Xyzzz-x	11.5.1.10000-6
Upgrade During An Installation	AA.B	11.5. to 11.5 newer
CUCM and IM&P Servers	AA.B	11.5 and 11.5
Servers in IM&P Cluster	AA.B.C.Xyzzz-x	11.5.1.10000-4
CUCM and Device Packs	AA.B.C	10.5.2 and 10.5.2

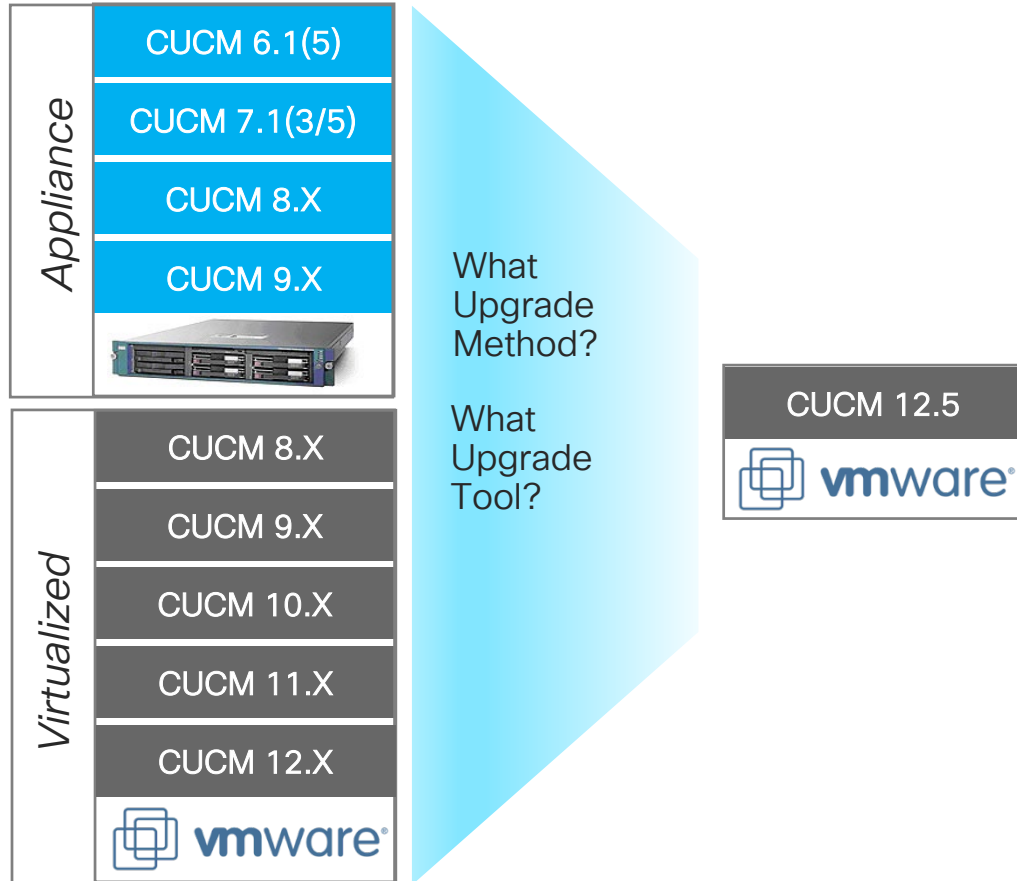
* Specific compatibility are in corresponding release notes (e.g. Cisco Unified Communications Manager 11.5.1.14900-11 is ONLY compatible with IM and Presence Service 11.5.1.14900-32)

Separate CUCM & Unity Connection 12.X

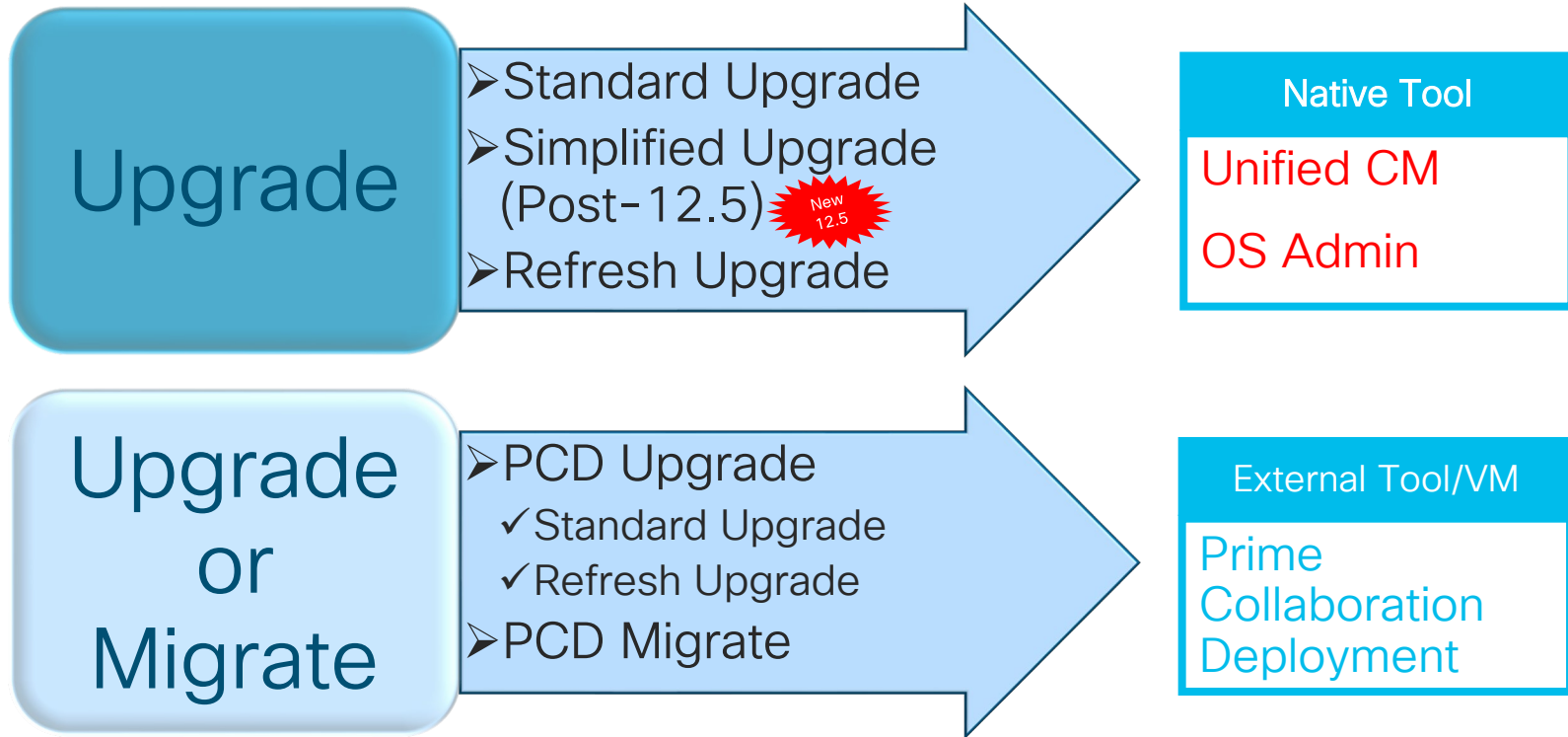


➤ Upgrade/Migration
Methods and Tools

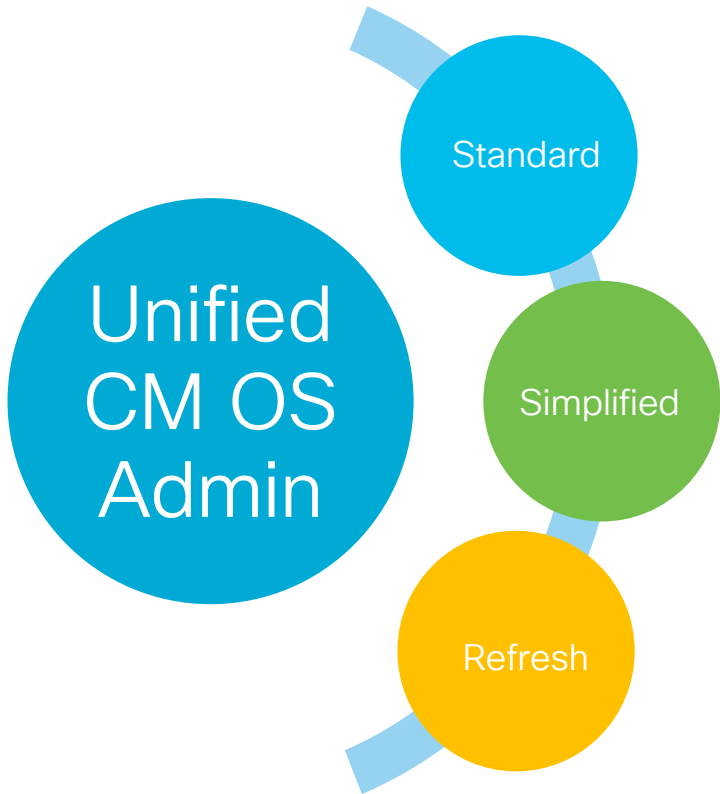
Methods and Tools for Upgrade



Upgrade/Migration Methods and Tools – Unified CM OS



Unified CM OS Admin Types of Upgrades



Standard Upgrade (formerly called L2 Upgrade):

- Active partition is running while upgrade software is being installed on inactive partition on a per **node** basis
- Low complexity with medium level of downtime
- Between CUCM versions with the same **major** Linux versions
- (e.g. CUCM 10.0 to 11.5 or 12.5(1) to 12.5(1) SU1)

Simplified Upgrade

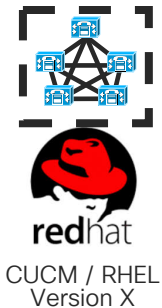
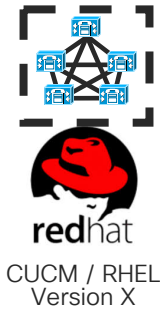


- Active partition is running while upgrade software is being installed on inactive partition **cluster wide** (orchestration)
- Low complexity with shortest possible downtime
- From CUCM versions 12.5 to a later release with the same **major** Linux versions
- (e.g. CUCM 12.5(1) to 12.5(1) SU1 or SU2)

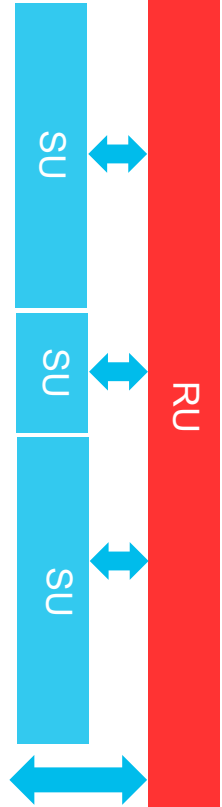
Refresh Upgrade (RU):

- Server is down while upgrade software including OS is being installed on inactive partition on a per **node** basis
- Medium complexity with longer downtime
- Between CUCM versions with the different **major** Linux versions (starting with RHEL 5 and later)
- (e.g. CUCM 8.6 to 11.5 or CUCM 9.1 to 11.5)

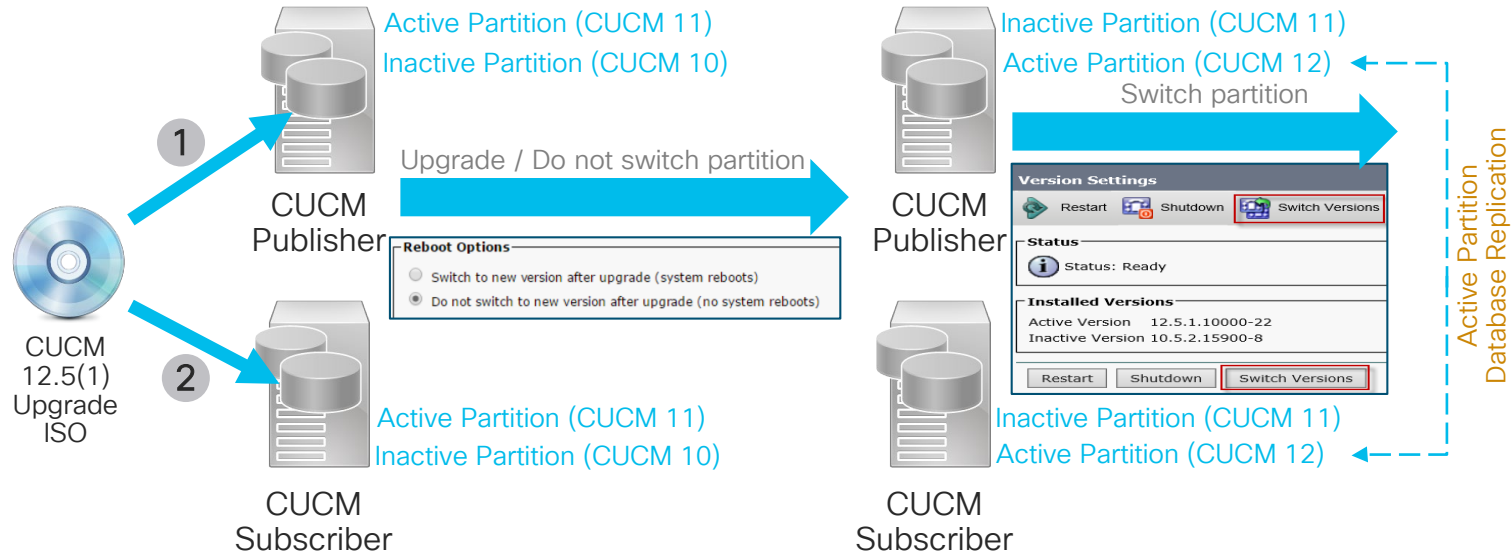
SU and RU Upgrade Table



CUCM Version	Linux Release
5.1(x) & 6.X	RHEL 3 Update 8
7.0(1)	RHEL 4 Update 4
7.1(2)	RHEL 4 Update 6
7.1(3) & 8.0(x)	RHEL 4 Update 7
8.5	RHEL 4 Update 8
8.6*	RHEL 5 Update 5
9.X	RHEL 5 Update 7
10.0(1)	RHEL 6 Update 2
10.5(1)	RHEL 6 Update 5
11.0(1)	RHEL 6 Update 6
11.5(1)	RHEL 6 Update 7
12.0(1)	CentOS 6 Update 8
12.5(1)	CentOS 7 Update 4

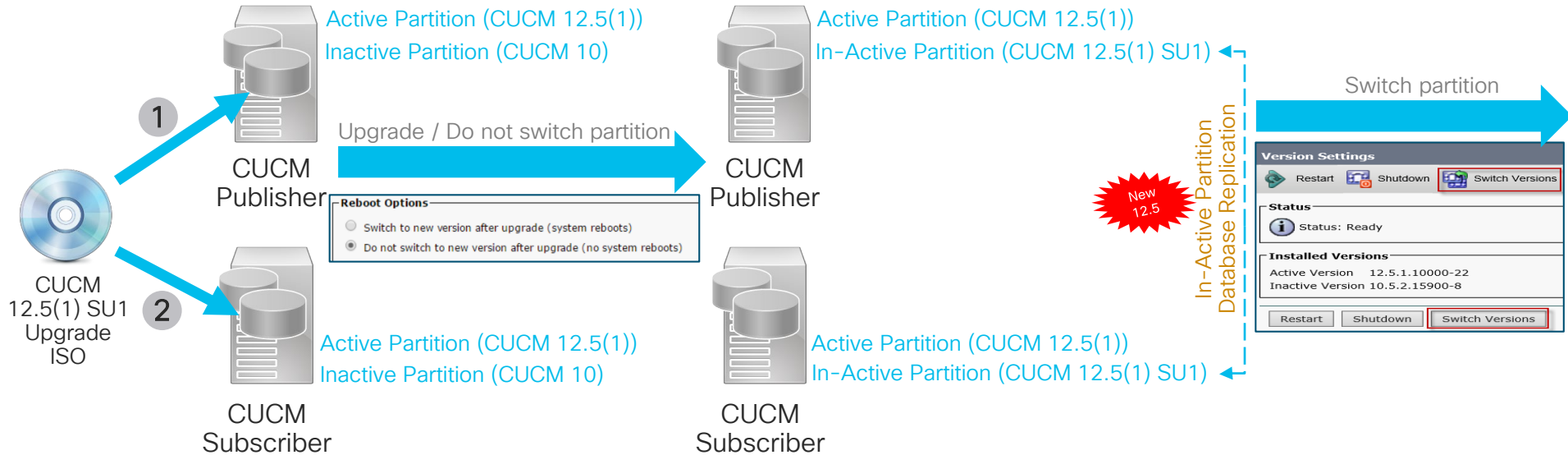


Pre-12.5 CUCM Upgrade, Switch and Active DB Replication (Standard and Refresh Upgrade)



- Upgrade Publisher first
- DRU: After CUCM DB replication completes, then IM&P publisher can switch version
- CUC: After Subscriber upgraded is completed, then Publisher can switch version

Post-12.5 CUCM Upgrade, Switch & In-Active DB Replication (Standard Upgrade)

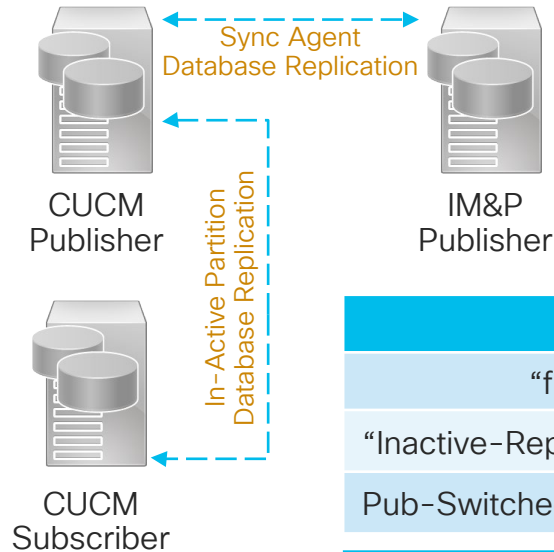


- Upgrade Publisher first
- CUC: After Subscriber upgraded is completed, then Publisher can switch version

Post-12.5 CUCM and IM&P In-Active DB Replication

Reference

(Standard Upgrade)



- CUCM: “file view inactivelog cm/trace/dbl/sdi/capture-inactive-replication.log”
- IM&P: Sync Agent for CUCM/IM&P database replication “file view inactivelog cm/trace/dbl/sdi/startrpc.log”

CUCM Publisher and Subscribers In-Active DB Replication		
“file view inactivelog cm/trace/dbl/sdi/capture-inactive-replication.log”		
“Inactive-Replication-Complete”	Inactive replication occurred and completed	
Pub-Switched	Inactive replication cannot be set up	
CUCM Publisher	IM&P Publisher	Sync Agent: CUCM to IM&P Publisher
Upgraded/not Switch	Upgraded/not Switch	In-Active to In-Active
Upgraded/Switch	Upgraded/not Switch	Active to In-Active
Not Upgraded/not Switch	Upgraded/not Switch	Active to In-Active

SU Cluster Upgrade Sequence for Least Service Impact

Sequence SU	1	2	3	4	5	6	7	8
CUCM Pub	Manual			Switch		DB Sync		DB Sync
CUCM Primary Subs		Manual			*		Switch	DB Sync
CUCM Secondary Subs		Manual			Switch	DB Sync	*	DB Sync
IM&P Pub		Manual			Switch		DB Sync	
IM&P Subs			Manual			Switch	DB Sync	
	Reboot Option							

*Phone registration using CM Groups and/or disable CM Service on the other CUCM Subs

RU Cluster Upgrade Sequence for Least Service Impact

Sequence RU	1	2	3	4	5	6	7	8	9	10	11
CUCM Pub	Manual			Switch		DB Sync		DB Sync			
CUCM Primary Subs		*	Manual **				Switch	DB Sync			
CUCM Secondary Subs		Manual	*		Switch	DB Sync	*	DB Sync			
IM&P Pub		Manual							Switch		DB Sync
IM&P Subs			Manual							Switch	DB Sync
	Reboot Option										

*Phone registration using CM Groups and/or disable CM Service on the other CUCM Subs

** Phone registration after upgrade

Cluster Upgrade Sequence for Shortest Upgrade Time

Sequence SU	1	2	3	4	5	6	7
CUCM Pub	Manual			Switch		DB Sync	
CUCM Subs		Manual			Switch	DB Sync	
IM&P Pub		Manual			Switch		DB Sync
IM&P Subs			Manual			Switch	DB Sync

Reference

Sequence RU	1	2	3	4	5	6	7	8	9
CUCM Pub	Manual			Switch		DB Sync			
CUCM Subs		Manual			Switch	DB Sync			
IM&P Pub		Manual					Switch		DB Sync
IM&P Subs			Manual					Switch	DB Sync

Reference

Post-12.5 CUCM Upgrade, Switch & In-Active DB Replication (Standard Upgrade)

Sequence SU	1	2	3	4	5	6	7	8
CUCM Pub	Manual			Switch		DB Sync		DB Sync
CUCM Primary Subs		Manual			*		Switch	DB Sync
CUCM Secondary Subs		Manual			Switch	DB Sync	*	DB Sync
IM&P Pub		Manual			Switch		DB Sync	
IM&P Subs			Manual			Switch	DB Sync	



Upgrade Inactive Partition and Database Replication Setup Enhancement

Sequence SU	1	2	3	4	5	6
CUCM Pub	Manual	DB Sync		Switch		
CUCM Primary Subs		Manual/DB Sync			*	Switch
CUCM Secondary Subs		Manual/DB Sync			Switch	*
IM&P Pub		Manual	DB Sync		Switch	
IM&P Subs			Manual/DB Sync			Switch

Example

Available after upgrading to CUCM 12.5 and for future upgrades



Sample Upgrade Schedule in Pre-12.5 CUCM

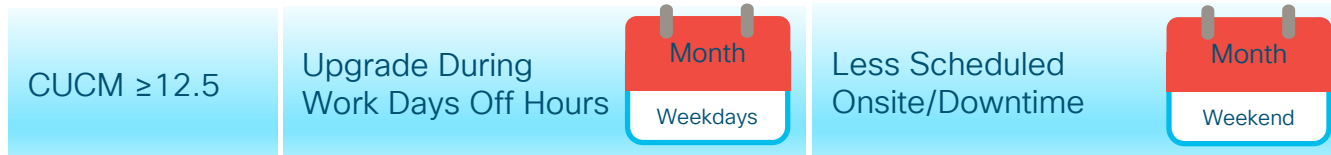
Sequence SU	1	2	3	4	5	6	7	8
CUCM Pub	Manual			Switch		DB Sync		DB Sync
CUCM Primary Subs		Manual			*		Switch	DB Sync
CUCM Secondary Subs		Manual			Switch	DB Sync	*	DB Sync
IM&P Pub		Manual			Switch		DB Sync	
IM&P Subs			Manual			Switch	DB Sync	
CUCM ≤12.0	Scheduled Onsite/Downtime for Upgrade							



Sample Upgrade Schedule in Post-12.5 CUCM



Sequence SU	1	2	3	4	5	6
CUCM Pub	Manual	DB Sync		Switch		
CUCM Primary Subs		Manual/DB Sync			*	Switch
CUCM Secondary Subs		Manual/DB Sync			Switch	*
IM&P Pub		Manual	DB Sync		Switch	
IM&P Subs			Manual/DB Sync			Switch

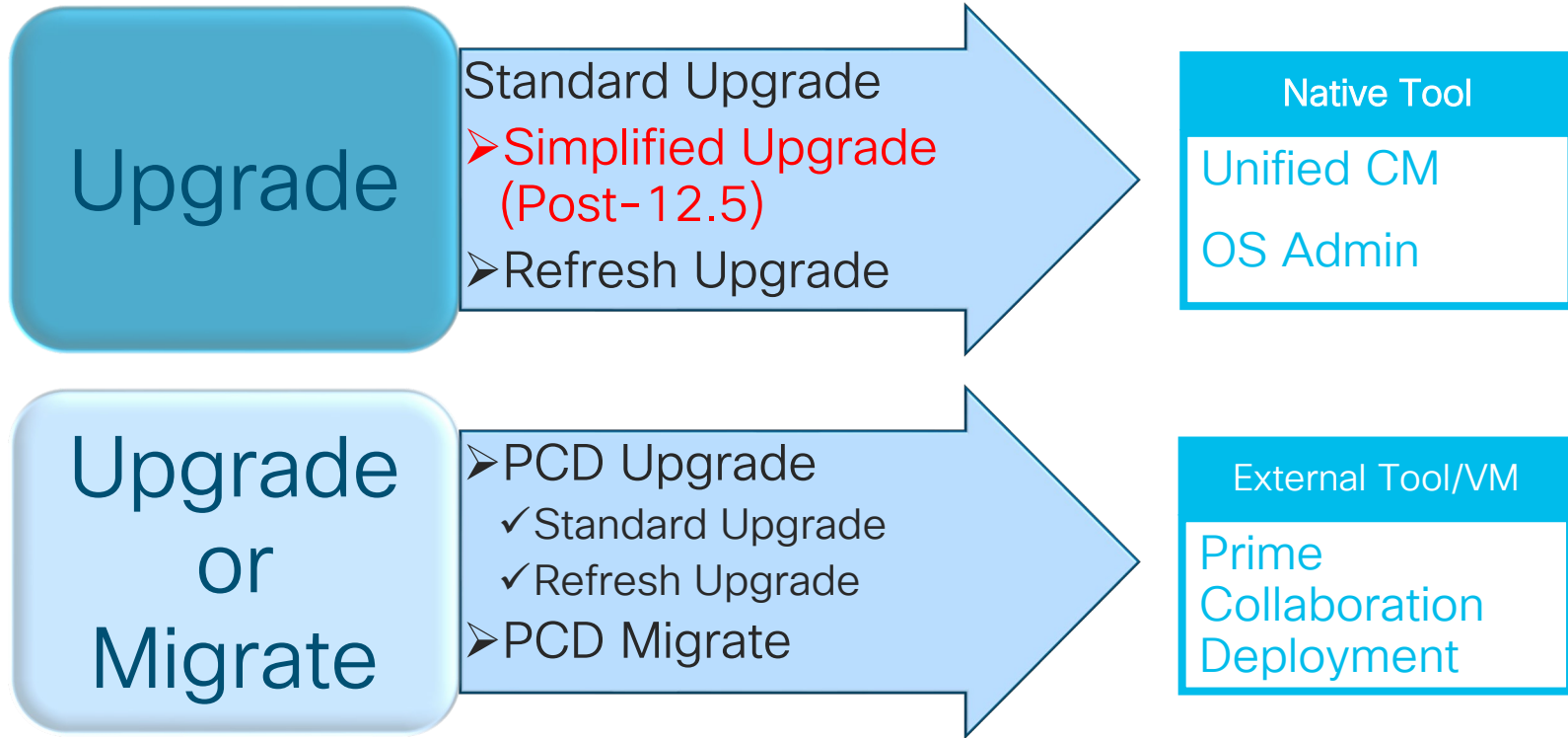


Example



- Available after upgrading to CUCM 12.5 and for future upgrades
- Freeze changes (MACD) or track changes to incorporate after the upgrade

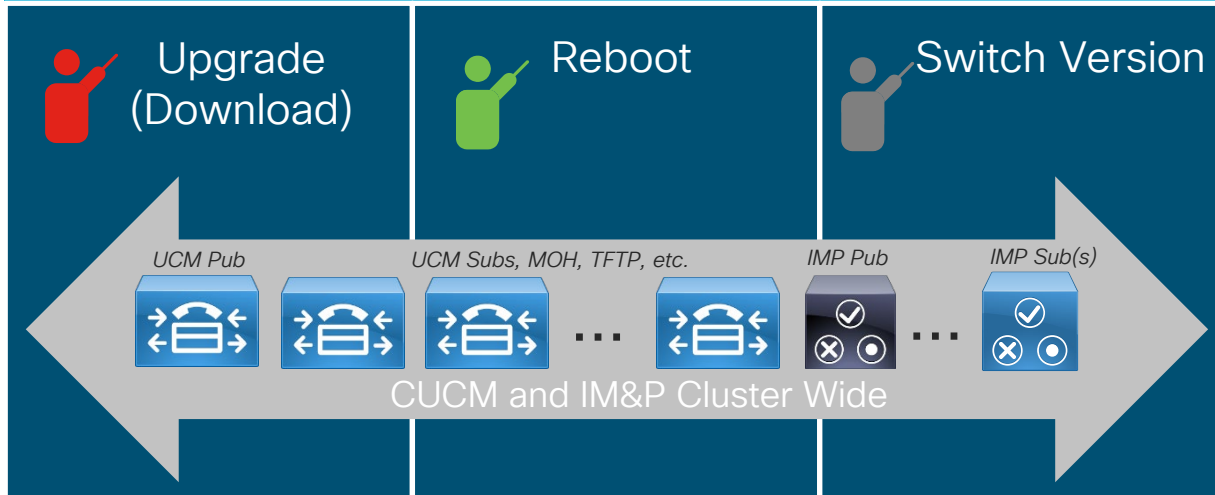
Upgrade/Migration Methods and Tools – Unified CM OS



Simplified Upgrade in CUCM and IM&P 12.5



Simplified Upgrade



- Web UI or CLI
- Cluster wide operations (upgrade, reboot and switch version)
- “Mini built-in PCD” or orchestration tool on CUCM Publisher for its own CUCM and IM&P cluster
- Orchestration: Batch and control of sequence for cluster reboot and cluster switch version

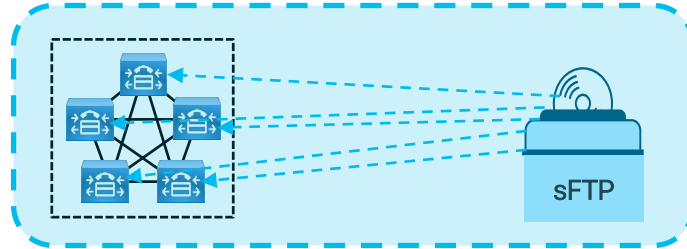
* Detailed screen shots are in the appendix

CUCM 12.5 Cluster Software Location with OS Admin (Publisher sFTP Credential)

The image shows two screenshots from the Cisco Unified Operating System Administration interface. The top screenshot is for the 'PUBLISHER' and the bottom is for a 'SUBSCRIBER'. Both screens are in the 'Software Installation/Upgrade' section. In the Publisher's 'Software Location' section, the 'Source' is set to 'Remote Filesystem' and the 'Transfer Protocol' is 'SFTP'. In the Subscriber's 'Software Location' section, the checkbox 'Use download credentials from Publisher' is checked. A red arrow points from this checkbox to a callout box on the right.

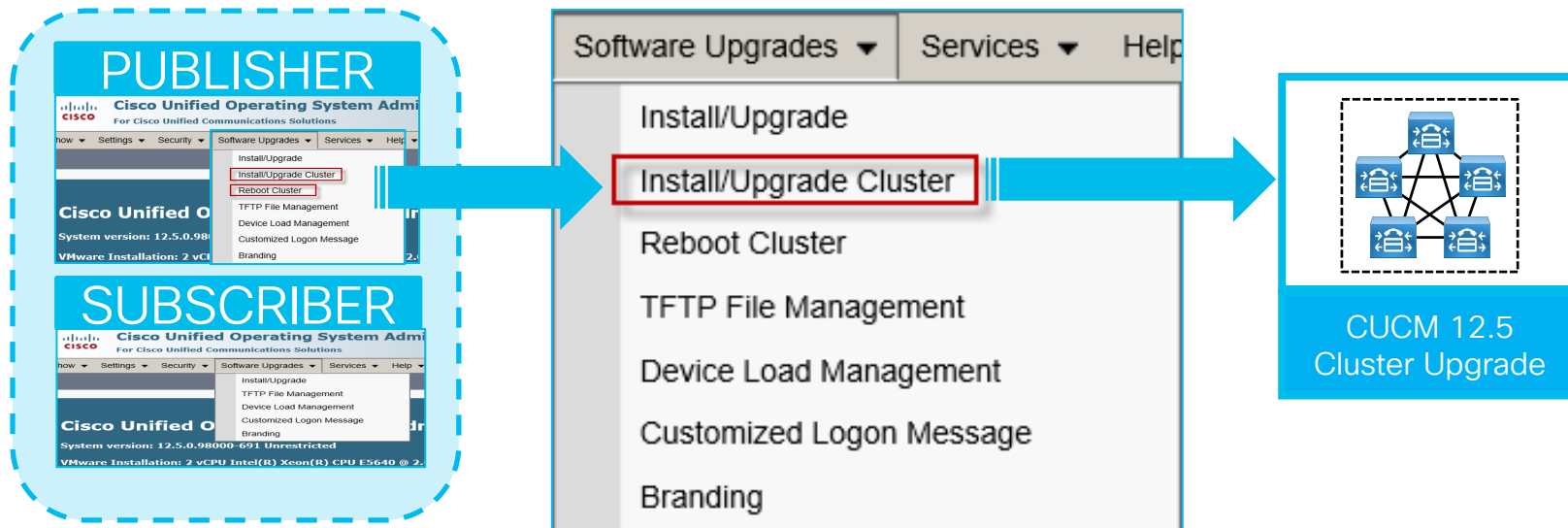
Software Location

Use download credentials from Publisher



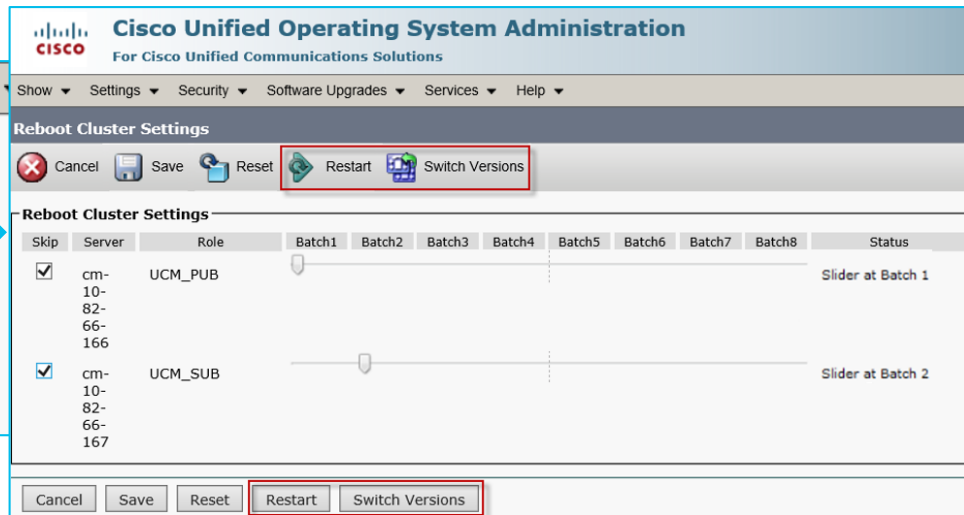
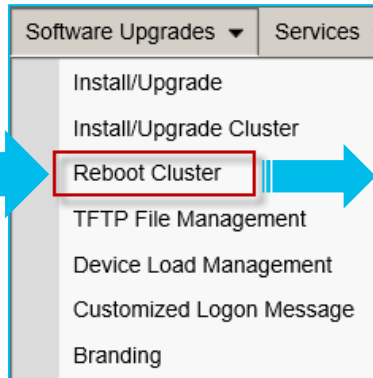
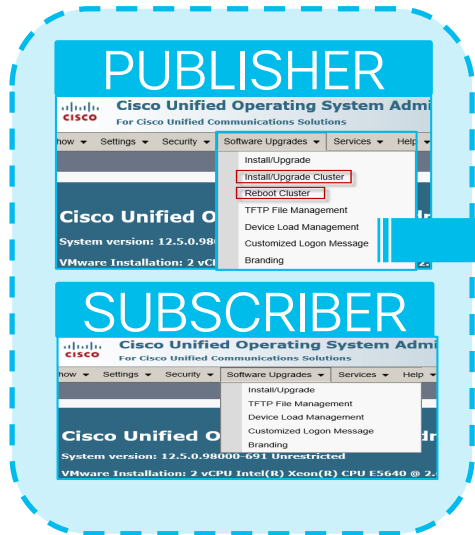
- Publisher secure ftp server and sftp credential can be use for all subscribers for upgrade
- Minimize going to all the other subscribers

CUCM 12.5 Cluster Upgrade with OS Admin (Publisher only)



- Use OS Admin on Publisher to initiate cluster upgrade
- Minimize going to all the other subscribers as previous approach

CUCM 12.5 Cluster Reboot/Switch Version with OS Admin (Publisher only)



- Use OS Admin on Publisher to initiate cluster Reboot or Switch Version
- Minimize going to all the other subscribers as previous approach

Example: CUCM 12.5 Cluster Upgrade Schedule



CUCM \geq 12.5

Upgrade During Work Days Off Hours
Month
Weekdays

Less Scheduled Onsite/Downtime
Month
Weekend



Software Upgrades ▾ Services ▾ Help

- Install/Upgrade
- Install/Upgrade Cluster**
- Reboot Cluster
- TFTP File Management
- Device Load Management
- Customized Logon Message
- Branding

Database Replicate Set Up after Upgrade

Software Upgrades ▾ Services ▾ Help

- Install/Upgrade
- Install/Upgrade Cluster
- Reboot Cluster**
- TFTP File Management
- Device Load Management
- Customized Logon Message
- Branding

Cisco Unified Operating System Administration
For Cisco Unified Communications Solutions

Reboot Cluster Settings

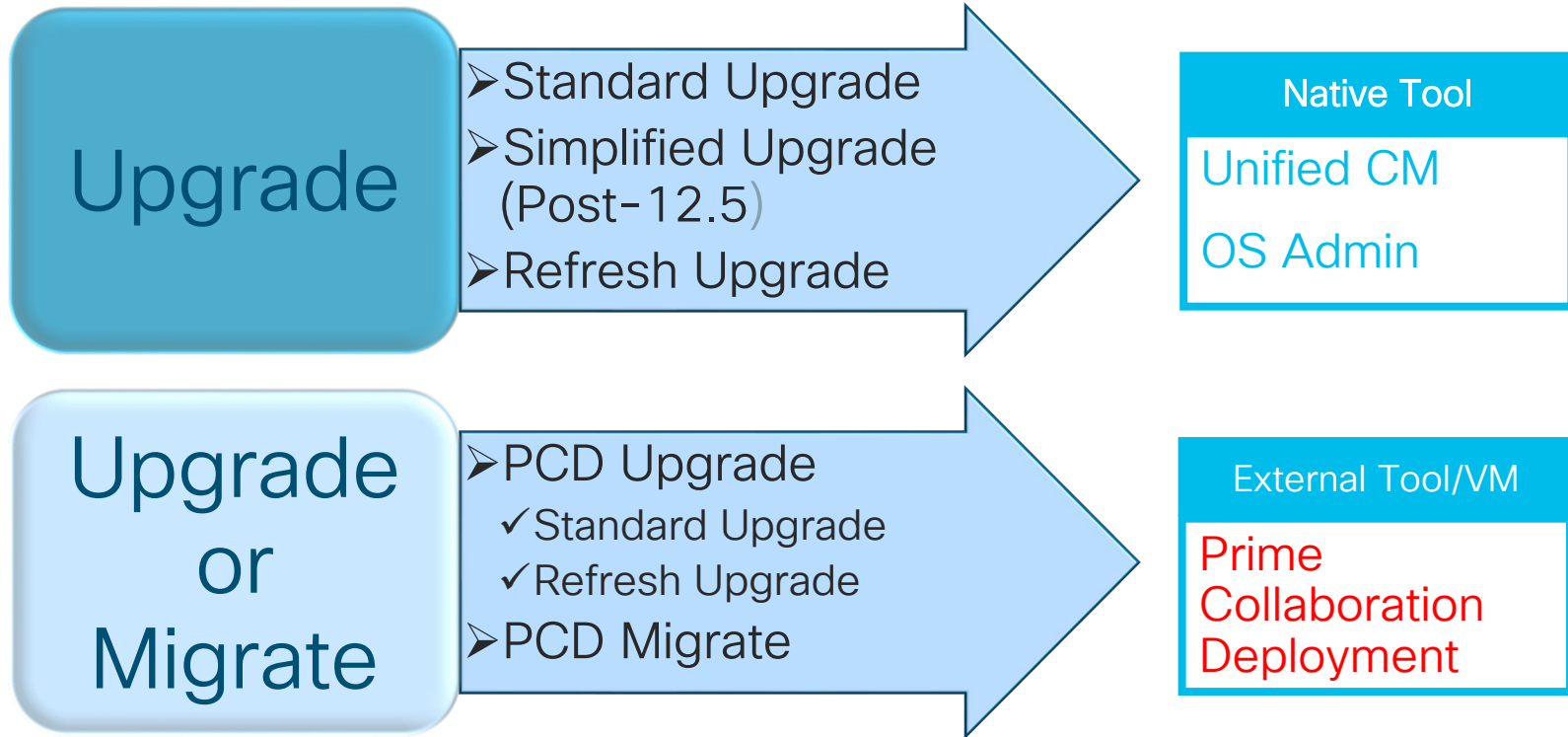
Skip	Server	Role	Batch1	Batch2	Batch3	Batch4	Batch5	Batch6	Batch7	Batch8	Status
<input checked="" type="checkbox"/>	cm-10-82-66-166	UCM_PUB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Slider at Batch 1
<input checked="" type="checkbox"/>	cm-10-82-66-167	UCM_SUB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Slider at Batch 2

- Available after upgrading to CUCM 12.5 and for future upgrades
- Freeze changes (MACD) or track changes to incorporate after the upgrade

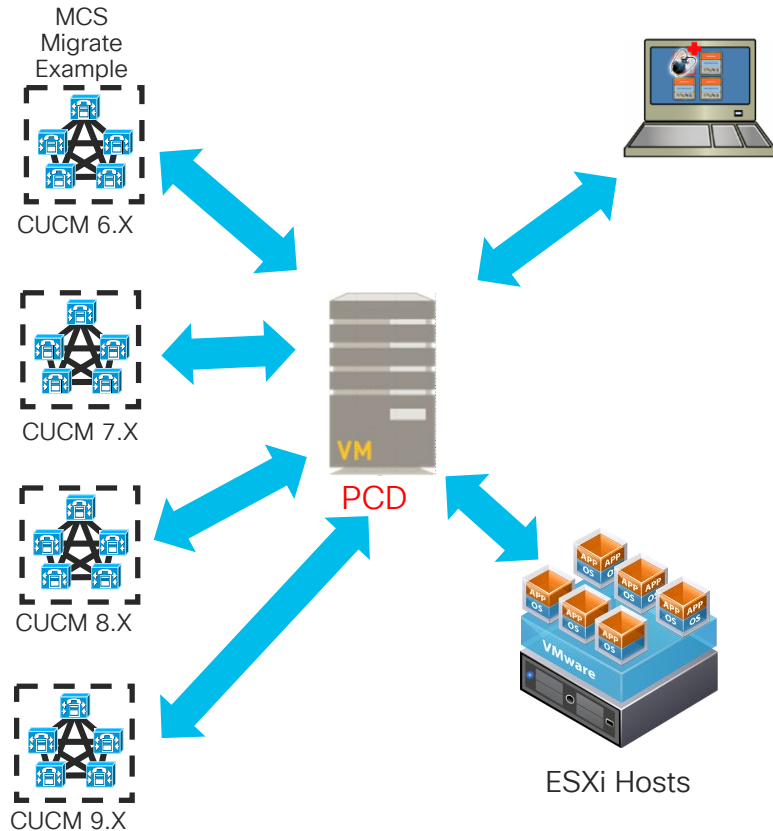


PCD Upgrades and Migrations

Upgrade/Migration Methods and Tools – PCD

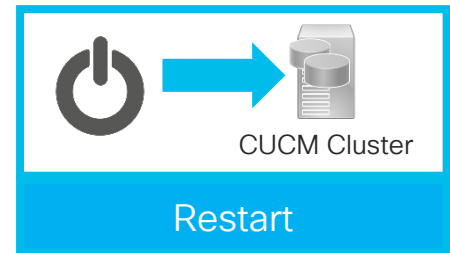
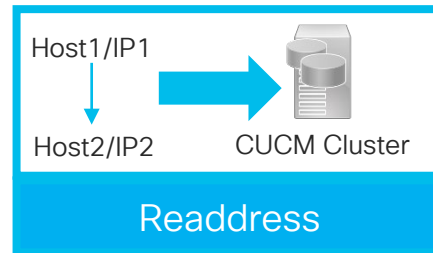
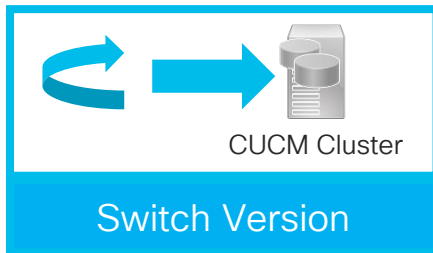
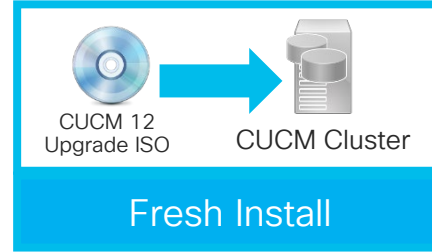
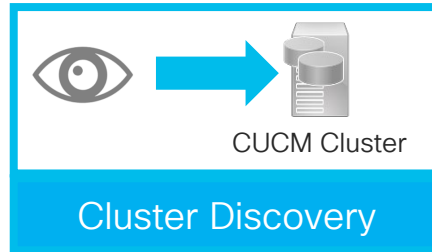
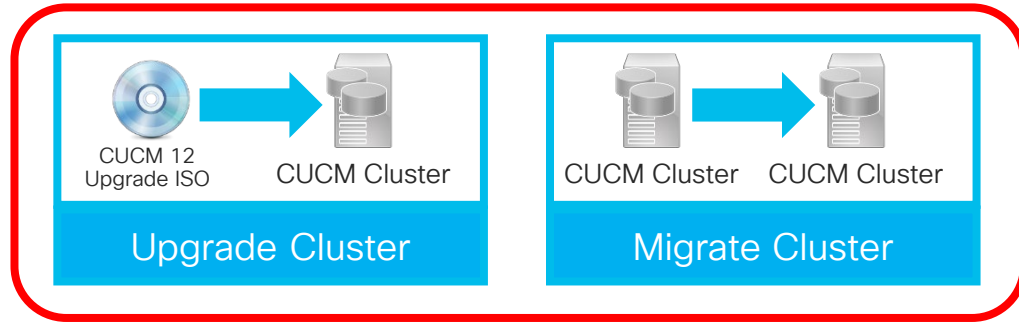


Prime Collaboration Deployment (PCD)

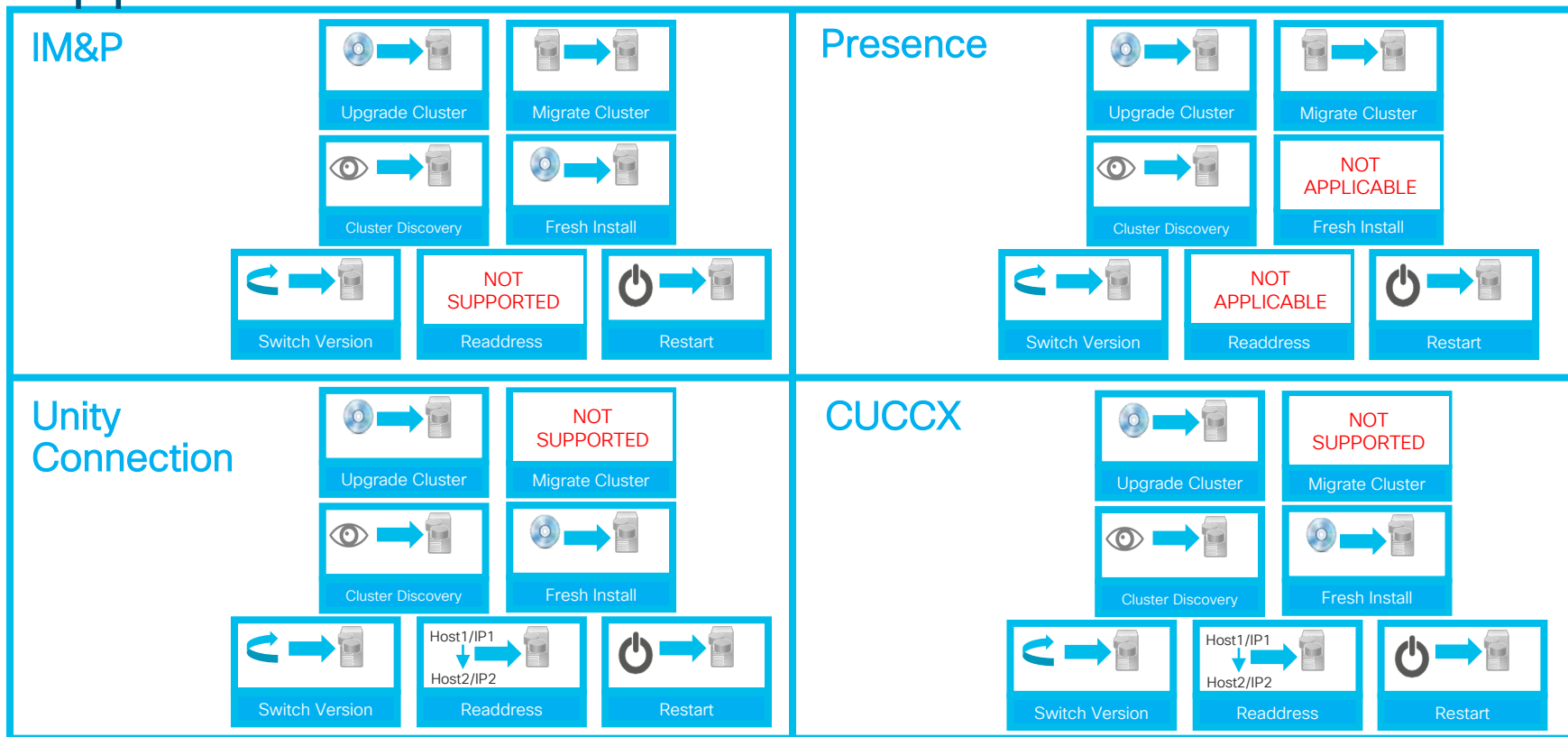


- PCD is a VMware vApp used for management of Cisco collaboration applications:
 - CUCM
 - CUC
 - CUP / IM&P
 - CUCCX
 - CER
- Management tasks (Upgrade, Switch Versions, Server Restart, Readdress, Install and Migrate) are based on collaboration application and version of the application
- VMware vApp is pre-configured virtual machine with OS and PCD application (1.5GB)
 - [pcd_vApp_UCOS_12.6.1.10000-21_vmv8_v1.2.ova](#)
 - PCD OVA containing preinstalled app ships as part of UCM media kit
- Bootable ISO Available via PUT or TAC (**NOT posted on CCO**)
- Update ISOs are Posted on CCO

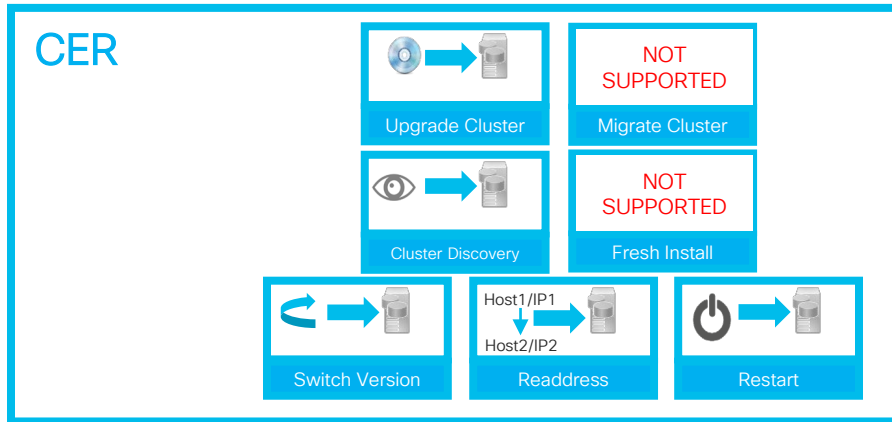
Prime Collaboration Deployment CUCM Capabilities



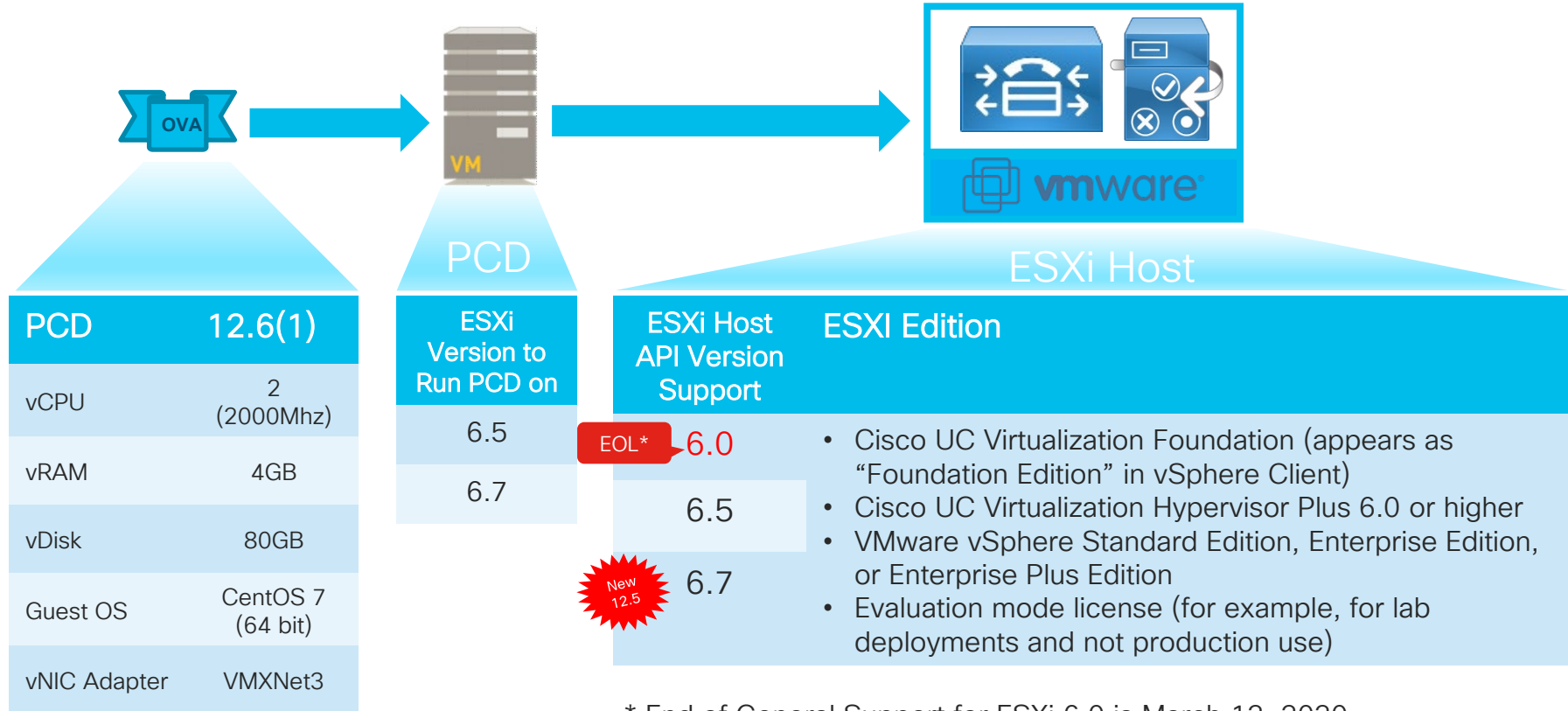
PCD Capabilities for other Collaboration Applications



PCD Capabilities for other Collaboration Applications



PCD 12.6(1) Environment Requirements



* End of General Support for ESXi 6.0 is March 12, 2020

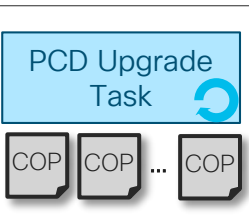
👍 Increase vCPU & vDisk as needed

👍 Upgrade PCD to latest version First 👍

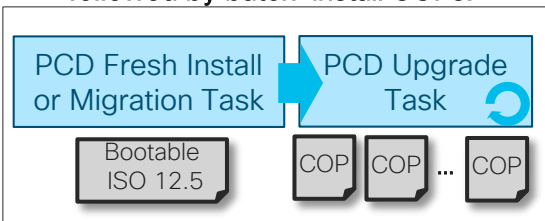
PCD 12.5 New Features Overview

- Task Naming
- Batch COP File Install
- Task Chaining
- Auto Kick-off a PCD Task based on successful completion of a prior PCD Task

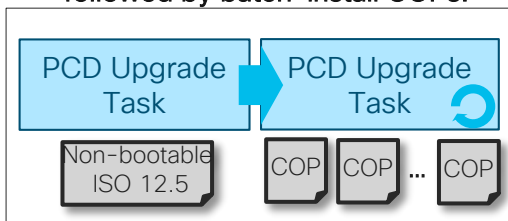
Batch COP install.



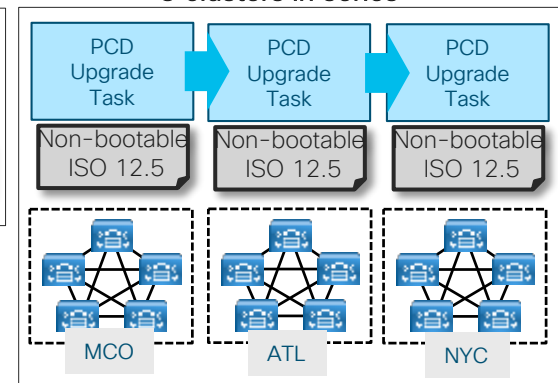
Fresh Install or P2V/V2V followed by batch-install COPs.



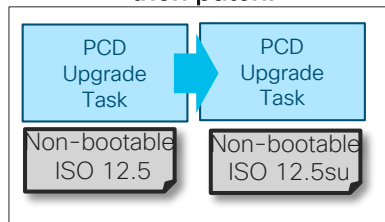
Direct Upgrade followed by batch-install COPs.



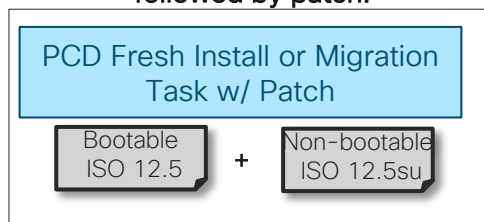
Batch-Upgrade 3 clusters in series



Direct Upgrade then patch.

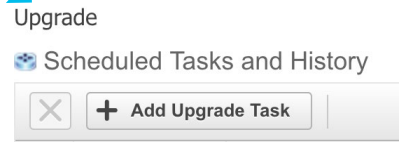
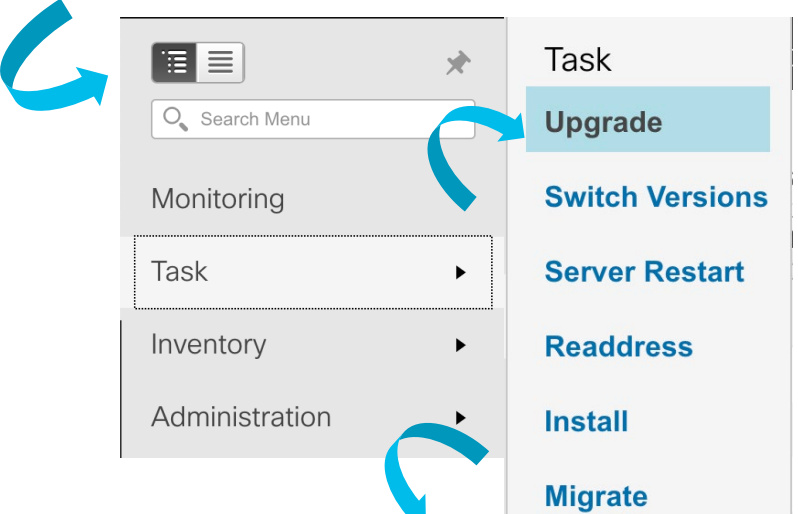


Fresh Install or P2V/V2V followed by patch.



PCD 12.5 Batch Install Multiple COP Files

- Upload COP Files to the /upgrade Folder..
- Use External SFTP Server



Add Upgrade Task

Step 1 of 6

Specify Task Name

This wizard will step you through the process of creating an Upgrade Task for the discovered cluster which you have already defined. Once you have completed this step, you can schedule an Upgrade Task.

Choose a Nickname for this Upgrade Task

Previous **Next** Finish Cancel

Choose Cluster

Choose Upgrade File

Choose Upgrade File

By default, only files that are valid for the selected nodes are displayed. To see the complete list of files, choose Show All from the menu.
File locations :
localhost:/upgrade/

Available Files

Files are retrieved from SFTP server

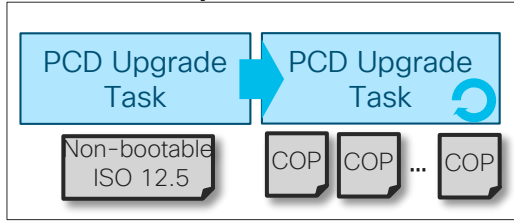
File Name	Kind	Validity
<input checked="" type="checkbox"/> ciscocm.migrate-export-v1.20.cop.sgn	cop	true
<input type="checkbox"/> ciscocm.postUpgradeCheck-00019.cop.sgn	cop	true
<input checked="" type="checkbox"/> ciscocm.preUpgradeCheck-00019.cop.sgn	cop	true

Choose File Close

PCD 12.5 Task Chaining



Direct Upgrade
followed by batch-install COPs.



1. Create a Task to Start Manually
2. Next Task Choose Dependent Task(s)...

Upgrade
Scheduled Tasks and History

Add Upgrade Task **2**

Step 2 of 6

Specify Task Name

Choose Cluster
Choose the cluster to be upgraded. The selected version will be installed over inactive version installed on the servers

Choose Upgrade Type ISO COP

Cluster: vnt-cm1

Product: CUCM

Task Dependency Scheduling

- No Dependency
- vnt-cm1_Upgrade Task **3**

View Nodes

uncheck

Select the Dependent Task(s)

Upgrade
Scheduled Tasks and History

Set Start Time & Upgrade Options

Select a start time for the task and set upgrade options

The time zone shown here corresponds to the time zone of this Cisco Prime Collaboration Deployment server and not necessarily that of the target servers or cluster.

Start Time

- Schedule for a specific time (EST)
- Start task manually
- Start task immediately upon completion of this wizard

Upgrade Options

- Automatically switch to new version after successful upgrade

Manual Start

Previous Next Finish Cancel

1

Upgrade
Scheduled Tasks and History

Add Upgrade Task

Status	Start Time	L	Cluster	Dependent Task	Task Name
<input type="checkbox"/>	Manual Start		vnt-cm1		Upgrade Task
<input type="checkbox"/>	Auto Start		vnt-cm1	vnt-cm1_Upgrade Task	COP Install Task

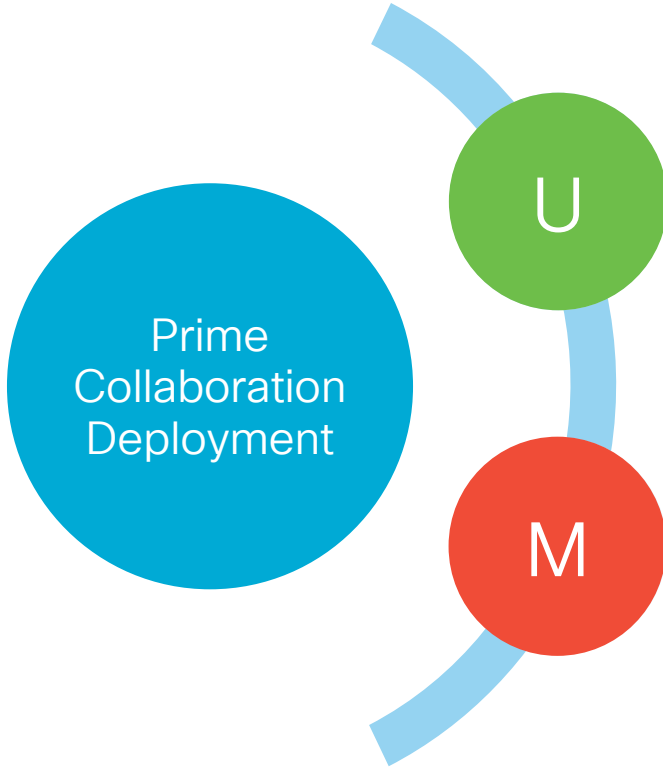
Task List

Total 10

Show All

Status	Task	Start Time
<input checked="" type="radio"/>	Upgrade vnt-cm1_Upgrade Task	Not Scheduled
<input type="radio"/>	Upgrade vnt-cm1_COP Install Task	Not Scheduled

PCD Assisted Upgrades and Migrations



PCD Upgrade (Virtual to Virtual)	
From CUCM Version	Target CUCM Version
8.6(1),8.6(2),9.0.(1),9.1(1),9.1(2),10.X, 11.X, 12.0	10.X, 11.X, 12.0
10.5(X), 11.X, 12.X	12.5

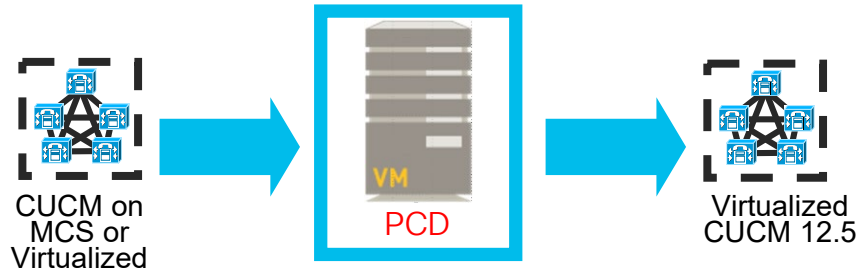
PCD Migration (Physical to Virtual or *V2V)	
From CUCM Version	Target CUCM Version
6.1(5),7.1(3),7.1(5), 8.X, 9.X, 10.X, 11.X, 12.X	10.X, 11.X or 12.X

Simple Migration: Source network settings (IP addresses and/or hostnames)

Network Migration: New network settings (IP addresses and/or hostnames)

* Same Version V2V M1 Not Supported on 11.X and 12.0(1)
Fixed as of 11.5(1)SU7 & 12.0(1)SU3
CSCvg33737

PCD Migration Task Overview

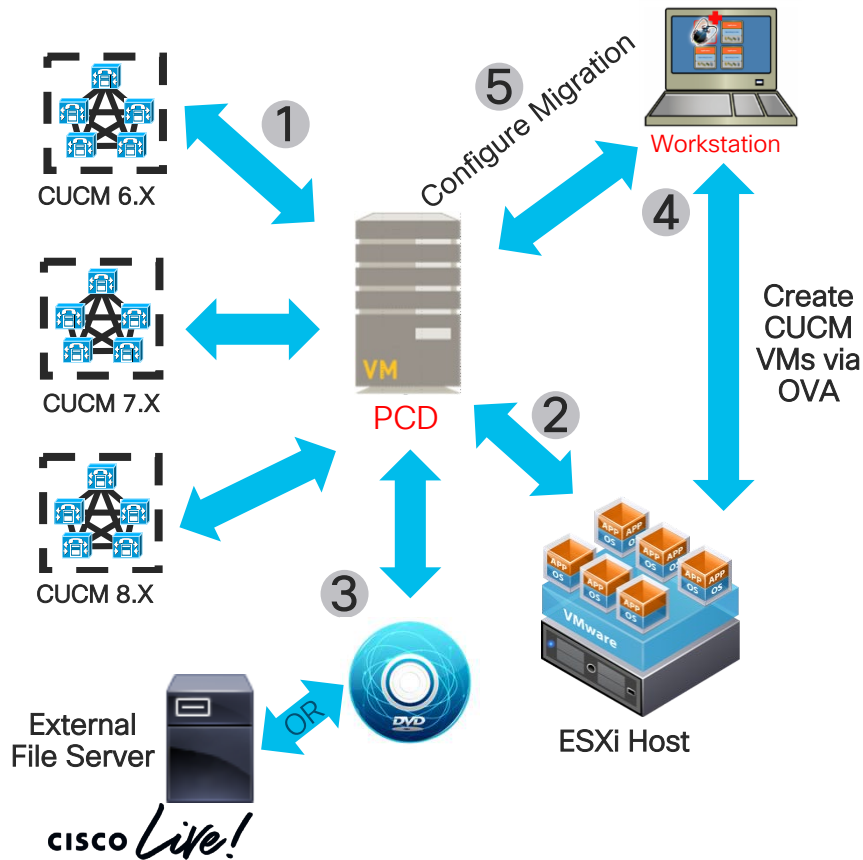


Detailed step by step with screen captures are in the appendix (25 slides)

- Bare metal CUCM to virtualized CUCM (P2V)
 - Installs `ciscocm.ucmap_platformconfig.cop` & `ciscocm.migrate-export-vX.Y.cop` file to the source servers to export data
 - Builds a new migration cluster (Manual Task Required to first deploy OVAs)
 - Exports and Imports data
- Same or different destination IP address and/or hostname
- Source or Destination Migration Cluster can be behind NAT
- Scheduled or immediate execution

Sample Powershell Script in Appendix**

PCD Migration Task Overview



1. Discover Source CUCM Clusters
2. Add Target ESXi Hosts
3. Add CUCM Bootable ISOs to PCD SFTP Server (adminsftp user, fresh_install folder) or to External NFS Server
4. Deploy Empty CUCM VMs on the Target ESXi Hosts using applicable OVA(s)
5. Define a Migration Destination Cluster
 1. Map Source Nodes to Destination Virtual VMs
 2. Choose Destination Cluster
 3. Choose Migration Files (Bootable ISOs)
 4. Schedule Start Time
6. Add Migration Task
 1. Choose Source UC Cluster
 2. Choose Destination Cluster
 3. Choose Migration Files (Bootable ISOs)
 4. Schedule Start Time

PCD Considerations and Planning

- Cisco UC Virtualization Hypervisor with older Cisco BE6K and BE7K
 - ESXi Support for VMware APIs (Fresh Install, Migration Tasks)
- Lab testing with or without NAT feature
- Remember **vSphere DRS** (Distributed Resource Scheduler) **is NOT Supported**
- Consider network traffic to and from PCD (NFS, SFTP)
- PCD does not auto install SU/RU upgrade required COP file(s)
 - ciscocm.version3-keys.cop.sgn
 - ciscocm.refresh_upgrade_v1.3.cop.sgn
- Inspect PCD logs via `activelog tomcat/logs/ucmap/log4j/ucmap*.log`

Upgrade and Migration Tools

Upgrade and Migration Tools		
Tools	OS Admin (12.5+ with Cluster Wide Upgrade)	PCD
Collaboration Applications	CUCM and IM&P ONLY	CUCM, IM&P, CUC*, CUCCX*
Size of Deployment	Small to Medium	Medium to Large
Cluster Level Task	Upgrade, Restart and Switch Version	Upgrade, Migrate, Restart, Switch Version, Fresh Installation, and Readdress
Tool Resource	Native and Built-In	External Virtual Machine

* No Migrate option

➤ CUCM Upgrade COP Files

Pre-Upgrade / Post-Upgrade COP Files

- Designed for both CUCM and IM&P from version 9.X-12.X
- Pre-Upgrade: Automate some of the pre-upgrade checks from the “*Upgrade and Migration Guide for Cisco Unified Communications Manager and IM and Presence service*” and provide results as well as recommendations
- Post-Upgrade: Perform test to verify the system is in good state and compare current system with pre-upgrade results
- Run this COP file on both Publisher and Subscribers
- Results and recommendations:
Install log – view, cut and paste (e.g Wordpad)
CLI: “file view install PreUpgradeReport.txt” (i.e log ssh session to file)
- Updated on a periodic basis based on feedback
Pre-Upgrade: ciscocm.preUpgradeCheck-00022.cop (latest version 22)
Post-Upgrade: iscocm.postUpgradeCheck-00022.cop (latest version 22)

```
admin:file dump install PreUpgradeReport.txt
```

```
=====
=====
Pre Upgrade Test                               Date:
01/18/2019 23:50:25
=====
```

```
Active Version: 11.5.1.14900-11
Server: cucm-pub , CUCM Publisher
=====
```

```
Result Test
-----
```

```
1.1 PASS PLM License Status
1.2 PASS Cluster Database Status
1.3 PASS Deprecated Phone Models
1.4 PASS Network status (NTP, DNS & Cluster node
connectivity)
1.5 PASS DRS backup status
1.6 FAIL Disk Space Check
```

```
-----
This server has 22 GB of available free space in /common.
Typically, you need at least 25 GB of common partition
space.
```

```
Your deployment may require more space if you have a lot
of TFTP data,
music-on-hold (MOH) files, or many locale files
installed.
```

```
Install the ciscocm.free_common_space_v1.4.cop.sgn to
clear some space on
the server before starting an upgrade.
```

```
1.7 PASS Test dataBase Sanity
1.8 PASS Network Adapter Type
1.9 PASS Common Security Password Length
System not in FIPS mode, Common Security Password's
Minimum length
requirement not enforced
```

```
=====
=====
System Status List
-----
```

```
2.1 Count Phone Status (PASS)
0 Registered
0 Unregistered

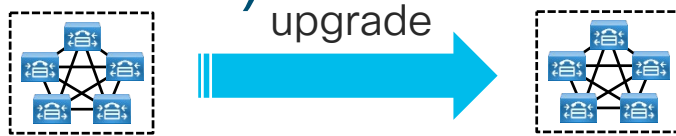
2.2 Status Service Name (PASS)
No Issues Found

2.3 Version VMTools Type (WARN)
10.1.10.63510 native vm-tools
WARNING: Update the native vmtools to latest for optimal system
performance.

2.4 Upgrade Checks (WARN)

*) Smart Licensing requires you to have a Smart Account created
and
configured before you upgrade or migrate the Cisco Unified
Communications
Manager server to 12.0 or higher releases.
-----
2.5 Cops Installed (PASS)
ciscocm.preUpgradeCheck-00019.cop
-----
```

Pre-Upgrade and Post-Upgrade Test (version 22)



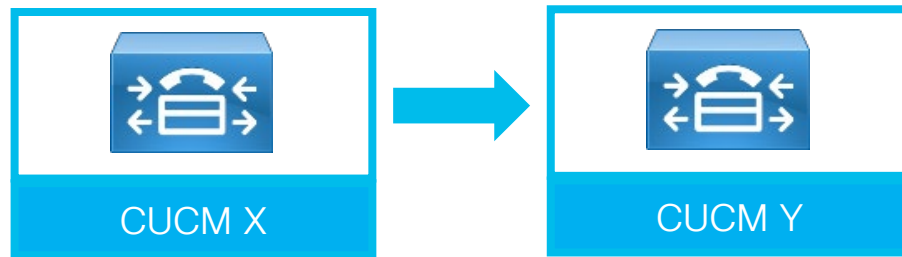
Reference

Pre-Upgrade COP		Post-Upgrade COP	
Network status	PLM/SLM License Status	Network status	Trunk Status
COPS Installed	Common Security Password Length	COPS Installed	CTI Endpoint Registration status
Service status	Phone Count	Service Status	PLM/SLM License Status
Data Base Sanity	VM Tools Type	Enterprise Parameters	Phone Count
Cluster Database Status	Upgrade Checks	Service Parameters	VM Tools Type
Last DRS backup date	Deprecated Phone Models	Cluster Database Status	Network Adapter compatibility
Filesystem Checks	Network Adapter compatibility	Data Base Sanity	

- Good COP file for any version upgrade for high level sanity check
- Deprecated phone results are based on CUCM version 12.X

 Captured in Pre-Upgrade and compare with Post-Upgrade COP file

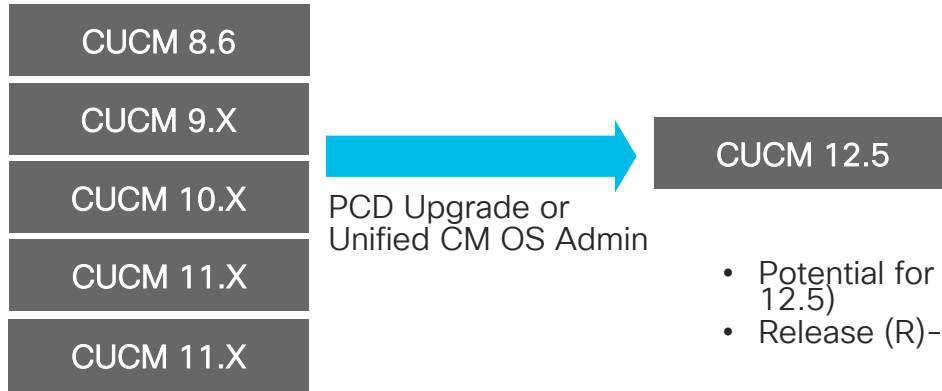
CUCM Upgrade COP Files



Current Version	Target Version	COP File Required
<8.5.1.17123-1 <8.6(2)su5 <9.1(2)su1	10.5(1) or higher	ciscocm.version3-keys.cop.sgn
8.5(x) or lower	8.6 or higher	ciscocm.refresh_upgrade_v1.5.cop.sgn

Upgrade Path

Virtualized CUCM to Virtualized CUCM 12.5

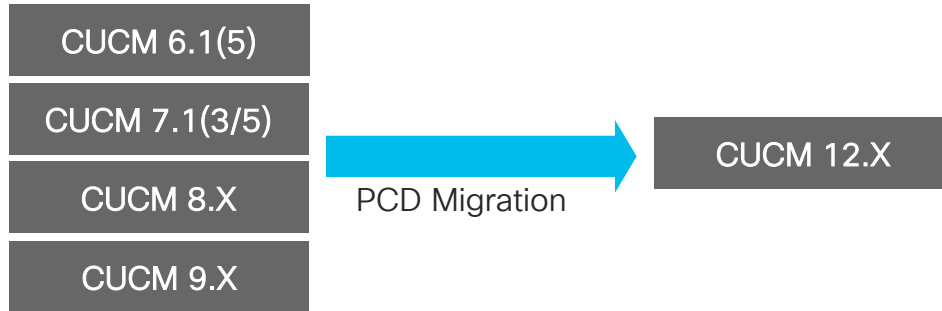


- Potential for multi-hop upgrade (e.g. 10.0 (non-tip) to 12.5)
- Release (R)-2 for Direct Upgrade (e.g. 10.5 and 11.X)

CUCM

CUCM Version	Upgrade Type	COP File(s)
8.6	RU	ciscocm.version3-keys.cop.sgn (<8.6(2)su5)
9.X	RU	ciscocm.version3-keys.cop.sgn (<9.1(2)su1)
10.X	RU	
11.X	RU	
12.0	RU	

Appliance (MCS) to Virtualized CUCM 12.X



- PCD Migration is highly recommended

CUCM Upgrade Type and Upgrade Method

MCS to CUCM 12.5		
CUCM Version	Upgrade Type	Upgrade Method
6.1(5)	NA	PCD
7.1(3/5)	NA	PCD
8.X	NA	PCD
8.6	RU	PCD
9.X	RU	PCD

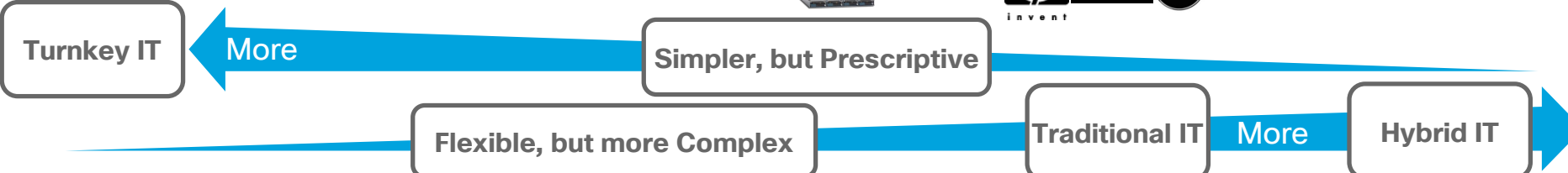
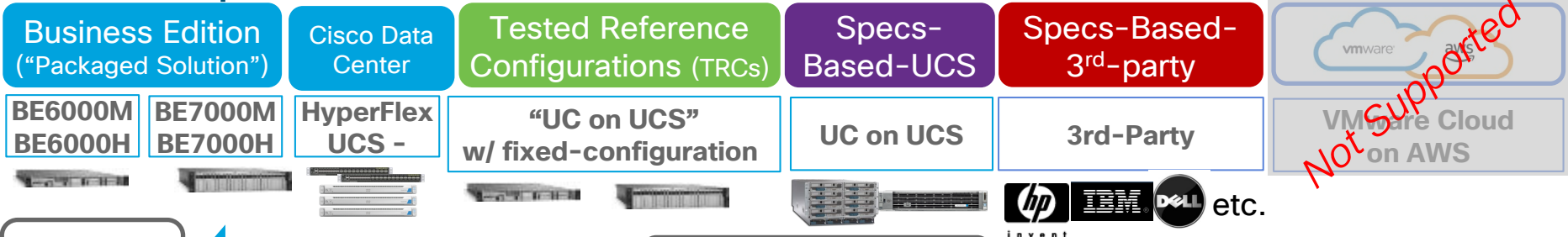
Virtualized to CUCM 12.5		
CUCM Version	Upgrade Type	Upgrade Method
8.6	RU	PCD or Unified CM OS Admin Upgrade
9.X	RU	PCD or Unified CM OS Admin Upgrade
10.X	RU	PCD or Unified CM OS Admin Upgrade
11.X	RU	PCD or Unified CM OS Admin Upgrade
12.0	RU	PCD or Unified CM OS Admin Upgrade

Platform

➤ Platform Support and Migration

Compute Platform

New in 12.5



"Do it for me..."

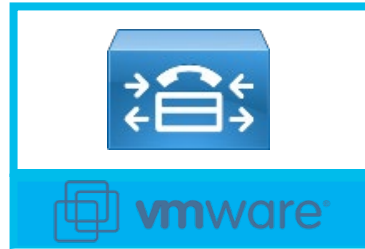
"Tell me what to do..."

"I know what I'm doing..."


Current Packaged Collaboration Solutions			
BE6000M (M5)	BE6000H (M5)	BE7000M (M5)	BE7000H (M5)
C220 M5SX TRC#1	C220 M5SX TRC#2	C240 M5SX TRC1	C240 M5SX TRC#1
Small	Small Plus	Medium	Large

CISCO Live!

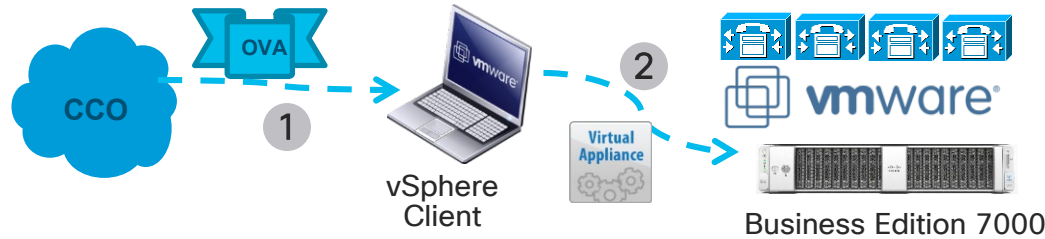
VMware Requirements (Sample for CUCM)



- Some non-overlapping version of ESXi between some CUCM versions
- Upgrade from ESXi 5.5 to 6.7 is not possible

CUCM Version	ESXi Version	ESXi Edition
12.5	6.5 U2 and 6.7 U2 (U2 - Spectre/Meltdown)	Cisco: Cisco UC Virtualization Hypervisor Cisco UC Virtualization Hypervisor Plus Cisco UC Virtualization Foundation Cisco or VMware: Standard, Enterprise or Enterprise Plus  End of Support by VMware
12.0	5.0 U1, 5.1, 5.5, 6.0, 6.5	
11.5	5.0 U1, 5.1, 5.5, 6.0, 6.5 and 6.7	
11.0	5.0 U1, 5.1, 5.5, and 6.0	
10.5	4.0 U4, 4.1 U2, 5.0 U1, 5.1, 5.5, 6.0 and 6.5	
10.0	4.0 U4, 4.1 U2, 5.0 U1, 5.1, 5.5, and 6.0	
9.1	4.0 U3, 4.1 U1, 5.0, 5.1, 5.5, and 6.0	

Cisco Virtual Machine Template (OVA) File



- Open Virtual Archive (OVA): Portable virtual appliance that defines configuration (memory, storage space, etc.) for a virtual machine and is a compressed version of OVF
- Cisco will provide OVA files with Virtual Machine Hardware Version (VMV) 7 and VMV8 on CCO for collaboration applications deployment
- Deploy the latest OVA version and the highest available VMV version that matches to ESXi version

Example of ESXi and Collaboration OVA Version

ESXi Version	VMware Virtual Machine Hardware Version (VMV)	Recommended Cisco OVA VMV Version
5.0U1	8	8
5.1	9	8
5.5	10	8
6.0	11	8
6.5	13	8
6.7	14	8
6.7 U2	15	13

Collaboration Application	Collaboration Application Version	VMV Version	Cisco OVA Version
cucm_12.5_vmv13_v1.0.ova			
cucm_12.0_vmv8_v1.0.ova			
CUCM	12.5	13	1.0



- New installation of CUCM 12.5, use the new OVA with VMV 13 that is supported with ESXi 6.5 and 6.7. Errors out with XML with previous version of ESXi.
- Change VMV to 13 once on ESXi 6.5 or 6.7
- Use matching collaboration application to OVA file especially with the new separated ISO files for CUCM and IM&P

✓ E.g. cucm_12.5_vmv13_v1.0.ova

✓ Bootable_UCSInstall_UCOS_12.5.1.10000-22.sgn.iso

VMV can be upgraded, but cannot be downgraded

Virtual Machine Compatibility

https://docs.vmware.com/en/VMware-vSphere/6.7/com.vmware.vsphere.vm_admin.doc/GUID-789C3913-1053-4850-A0F0-E29C3D32B6DA.html

Example: CUCM 12.5 Upgrade and ESXi Support



- Implications:

1. CUCM 12.5 only supported with ESXi 6.5 or 6.7
2. CUCM 10.0 only support up to ESXi 6.0
3. Older ESXi release might needs multiple ESXi upgrades
4. ESXi 5.5 cannot directly upgrade to ESXi 6.7

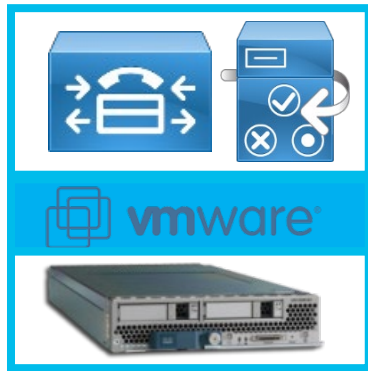
- Spare servers:

- PCD Migrate to destination ESXi 6.5 or 6.7 host
- Direct upgrade to CUCM 12.5 on existing ESXi 5.5 or 6.0 host, then move VMs (FC SAN or DAS) to the new ESXi 6.5 or 6.7 host

- No spare servers:

- Direct upgrade to CUCM 12.5 on existing ESXi 5.5 or 6.0 host, then upgrade ESXi to 6.5 or 6.7

Dependencies and Support: Applications, OVA, ESXi Version and UCS Firmware/Hardware



Collaboration application to supported version of ESXi

UCS hardware and supported version of ESXi

CUCM Version	ESXi Version
12.5	6.5 U2 and 6.7 U2
https://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/uc_system/virtualization/cisco-collaboration-virtualization.html	

ESXi Version	UCS hardware supported/ not supported
5.5	C210M2, C210M1
6.7	C240M4S2: firmware 4.0(4)
https://ucshcltool.cloudapps.cisco.com/public/	

- Upgrade of collaboration application might requires ESXi version upgrade
- Upgrade of ESXi version (application or ESXi standardization) might requires
 - UCS firmware update (e.g. firmware 3.2(3) on C240M4S2)
 - UCS hardware replacement (e.g. C210M2 and ESXi 6.5 or later)

Appliance versus Virtualization Support

Feature	Appliance	Virtual
Music on Hold (live source)	USB audio (unicast and multicast)	IOS or Barix (multicast only) *
Install and upgrade error logs	USB	Virtual serial port
Answer file (platformConfig.xml)	USB	Virtual floppy
UPS via USB	APC UPS via USB	UPS on UCS/ESXi
Back up	Tape	Secure ftp
eToken encryption key	USB on client and not server	USB on client and not server
SMDI	Serial port	NA

Take these support considerations into account when virtualizing CUCM

* Multicast to Unicast conversion with CUCM 11.5. for specific phones, SIP trunk, SBC, etc.

➤ VMware OVA Support
and Virtual Machine
Migration

CUCM 7,500 Devices OVA Changes

CUCM 7500	8.5	8.6	9	9.1	10.X	11.X	12.0	12.5
vCPU	2 (1300Mhz)	2 (3600Mhz)	2 (3600Mhz)	2 (3600Mhz)	2 (3600Mhz)	2 (3600Mhz)	2 (3600Mhz)	2 (3600Mhz)
vRAM	6GB	6GB	6GB	6GB	6GB	8GB	8GB	8GB
vDisk OVA (Supported)	2 x 80GB	2 x 80GB	2 x 80GB	optional 110GB (2 X 80GB)	110GB (2 X 80GB)	110GB (2 X 80GB)	110GB (2 X 80GB)	110GB (2 X 80GB)
Guest OS	RHEL 4 (32)	RHEL 4 (32)	RHEL 5 (32)	RHEL 5 (32)	RHEL 6 (64)	RHEL 6 (64)	CentOS 6 (64)	CentOS 7 (64)
vNIC Adapter	Flexible	Flexible	Flexible	Flexible	VMXNet3	VMXNet3	VMXNet3	VMXNet3
VMware Tool/Advance (Native/Open)	No	No	No	No	Check and upgrade Tools	Check and upgrade Tools	Check and upgrade Tools	optional (VMware or Open vm tool)
ESXi Version (unless there is a non-support ESXi version)	4.0, 4.1, 5.0, 5.1	4.0 U1, 4.1, 5.0, 5.1	4.0 U3, 4.1 U1, 5.0, 5.1, 5.5	4.0 U3, 4.1 U1, 5.0, 5.1, 5.5, and 6.0	4.0 U4, 4.1 U2, 5.0 U1, 5.1, 5.5, and 6.0 (6.5 for CUCM10.5)	5.0 U1, 5.1, 5.5, and 6.0 (6.5/6.7 for CUCM11.5)	5.0 U1, 5.1, 5.5, 6.0, and 6.5	6.5 U2 6.7 U2
VMV (Virtual Machine HW Version)	7/8	7/8	7/8	7/8	7/8	8	8	13

Change in virtual hardware ahead of upgrade (Some exceptions with CUCM 12.5)

Change ahead



Clarifications

- OVA with dual 80GB vDisk is supported with CUCM 9.X, 10.X, 11.X and 12.5
 - Secondary vDisk on OVA with dual 80GB vDisk has the /common partition and can be extended at release CUCM 10.0 and later for upgrade space
 - Primary vDisk on OVA with dual 80GB vDisk are partitioned with various disk partitions with respective sizes and cannot be resized to 110GB to match with the newer OVA
- Resize Virtual Machine
http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/uc_system/virtualization/virtualization-software-requirements.html#resize_vm
- To change OVA that from dual 80GB vDisk to single 110GB vDisk
http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/install/11_5_1/replace/cucm_b_replacing-single-server-or-cluster-1151.html

CUCM 11 to CUCM 12.X Guest OS Change

Features	CUCM 11.X	CUCM 12.0	CUCM 12.5
Guest OS	RHEL 6 (64 bit)	CentOS 6 (64 bit)	CentOS 7 (64 bit)



Hardware Options Resources

Virtual Machine Version: 8

Settings Summary

General Options Cisco Unified Com...

VMware Tools Shut Down

Power Management Standby

Advanced

General Normal

CPUID Mask Expose Nx flag to ...

Memory/CPU Hotplug Disabled/Disabled

Boot Options Normal Boot

Fibre Channel NPIV None

CPU/MMU Virtualization Automatic

Swapfile Location Use default settings

Virtual Machine Name

Cisco Unified Communications Manager (CUCM)

Virtual Machine Configuration File

[datastore1] Cisco Unified Communications Manager (CUCM)/Cisco

Virtual Machine Working Location

[datastore1] Cisco Unified Communications Manager (CUCM)

Guest Operating System

Windows

Linux

Other

Version:

Red Hat Enterprise Linux 6 (64-bit)

SUSE Linux Enterprise 11 (64-bit)

SUSE Linux Enterprise 11 (32-bit)

SUSE Linux Enterprise 10 (64-bit)

SUSE Linux Enterprise 10 (32-bit)

SUSE Linux Enterprise 8/9 (64-bit)

SUSE Linux Enterprise 8/9 (32-bit)

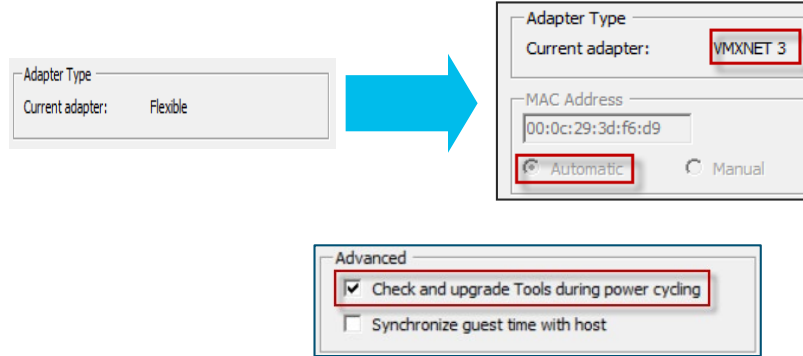
CentOS 4/5/6/7 (64-bit)

CentOS 4/5/6 (32-bit)

- Shutdown CUCM
- Change the Guest OS to the destination OS type
- Upgrade to CUCM 12.X

CUCM 9 to CUCM 10/11/12 Adapter Change

Features	CUCM 9.X	CUCM 10.X/11.X/12.X
Guest OS	5 (32bit)	RHEL 6 (64 bit)/CentOS 6/7 (64 bit)
Adapter Type	Flexible	VMXNet3



- Shutdown CUCM
- Change Network adapter type from Flexible to VMXNET3
 - Automatic MAC: Edit VMX file in the VM machine directory. Instruction in link below
 - VMware vSphere PowerCLI for both automatic and manual MAC. Instruction in link below
- Upgrade CUCM

CUCM 12.0 OVA:

https://www.cisco.com/web/software/283088407/139512/cucm.ova.README_12.0.pdf

VMware Tool

- CUCM 12.5 supports two types of VMware tools
 - Native VMware Tools (provided by VMware)
 - Open VMware Tools (provided by Cisco)
- After upgrading to CUCM 12.5, can check on current vm tool and switch to Cisco vm tool

```
admin:show version
      show version active
      show version inactive

admin:show version active
Active Master Version: 12.5.1.10000-22
Active Version Installed Software Options:
No Installed Software Options Found.
admin:utils vmtools
      utils vmtools refresh
      utils vmtools status
      utils vmtools switch*

admin:utils vmtools status


Version: 9.4.0.25793
Type: native VMware Tools
admin:utils vmtools switch
      utils vmtools switch native
      utils vmtools switch open
```

Upgrade Optimization

- CUCM 12.0 Phone Deprecation
- Disk Space Required in /common Partition for Upgrade
- Improve Performance

➤ CUCM 12.0 Phone Deprecation

CUCM Phone Deprecation


	CUCM 12.0 	CUCM 11.5
Phone Models	7921, 7970 and 7971	12 S, 12 SP, 12 SP+, 30 SP+, 30 VIP, 7902G, 7905G, 7910, 7910G, 7910+SW, 7910G+SW, 7912G, 7920 and 7935

* Phones will NOT register to CUCM

	Starting Upgrade to 11.5 or 12.X	Login After Upgrade	Add Deprecated Phone After Upgrade
Notification	Warning in "Upgrade Status" field	Warning banner in CCM Admin when these phones are in the database	Add action fails
Remediation	Upgrade phone models	Delete these phones out of the database	Only add supported models of phones



Status

 **Warning:** The following phone models are deprecated and no longer supported:


12 S, 12 SP, 12 SP+
30 SP+, 30VIP
7902, 7905, 7910(including 7910 SW)
7912, 7920, 7921, 7935, 7970, 7971

After you upgrade and switch over, these unsupported phone models can no longer register with Cisco Unified Communications Manager. Please power down and remove these phones so they do not continue registration attempts. Keeping these phones on your network creates unnecessary network traffic and load on the UCM service.

CUCM 12.0 AND 11.5 Deprecation Phone Models

- Field Notice

http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/rel_notes/12_0_1/deprecated_phones/cucm_b_deprecated-phone-models-for-1201.html?emailclick=CNSemail

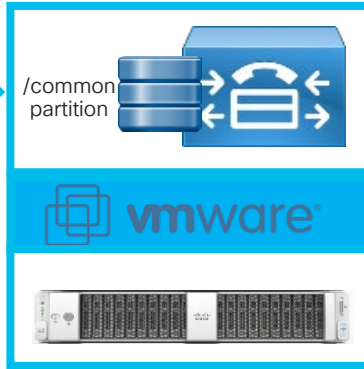
- Phones (17 models) will **not** be able to register to CUCM 12.0
- Phone Replacement or Migration Using Self-Provisioning in CUCM 12.5(1)SU2 
- Check phone models for support and migrate IP phones using Endpoint Refresh Tool - Migration FX before upgrading to CUCM 11.5
 - Free Migration FX software for 1 years with a Cisco TMP of 100 78XX/88XX IP phones (L-CP-MGFX-PROMO=)
 - Free Trial Version of MigrationFX (up to 50 phones) from UnifiedFX

➤ Disk Space Required in
/common Partition for
Upgrade

Disk Space for Upgrade

CUCM 12 Upgrade ISO

25GB or more



Extending vDisk Space

CUCM Version	ESXi Version
10.X or later	Resize vDisk (2 nd vDisk if 2 X 80GB)
8.5(1), 8.6(2), 9.1(1), 9.1(2)	ciscocm.vmware-disk-size-reallocation-1.0.cop.sgn

Deleting files

CUCM Version	ESXi Version
All CUCM Versions	Reduce log files
9.1 and earlier	ciscocm.free_common_space_v1.3.k3.cop.sgn

- Reduce log files:
 - LogPartitionLowWaterMarkExceeded 30% (default 80%)
 - LogPartitionHighWaterMarkExceeded 40% (default 85%)
 - Delete old ATS & RIS Database Aborted Transaction logs
 - file delete activelog cm/log/informix/ats/* noconfirm
 - file delete inactivelog cm/log/informix/ats/* noconfirm

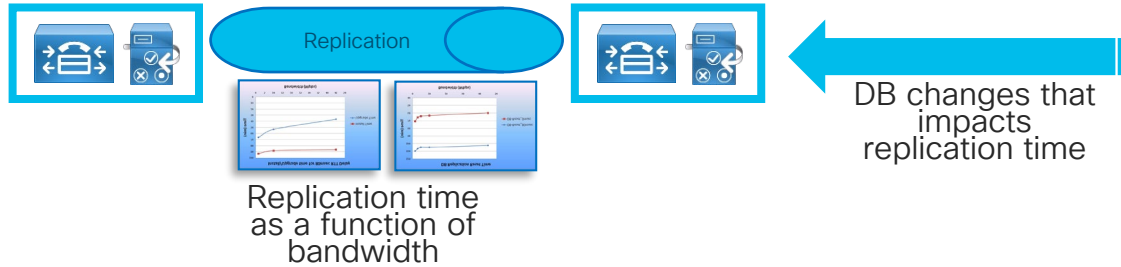


➤ Improve
Performance

Improve Upgrade Performance

- Change TFTP service parameter for dedicated TFTP server on CUCM 5.1(1c) or later:
 - System > Service Parameter > Cisco TFTP (Advance)
 - Maximum Serving Count (default is 500)
 - 1,500 for single processor dedicated TFTP server and 3,000 for dual processors dedicated TFTP server
- Increase database replication parallel processing count (Publisher)
 - `utils dbreplication setprocess 40` (default is 1)
- Increase database replication timeout for large cluster (Publisher)
 - `utils dbreplication setrepltimeout <3600>` (default is 300)
 - Range is 300 to 3600

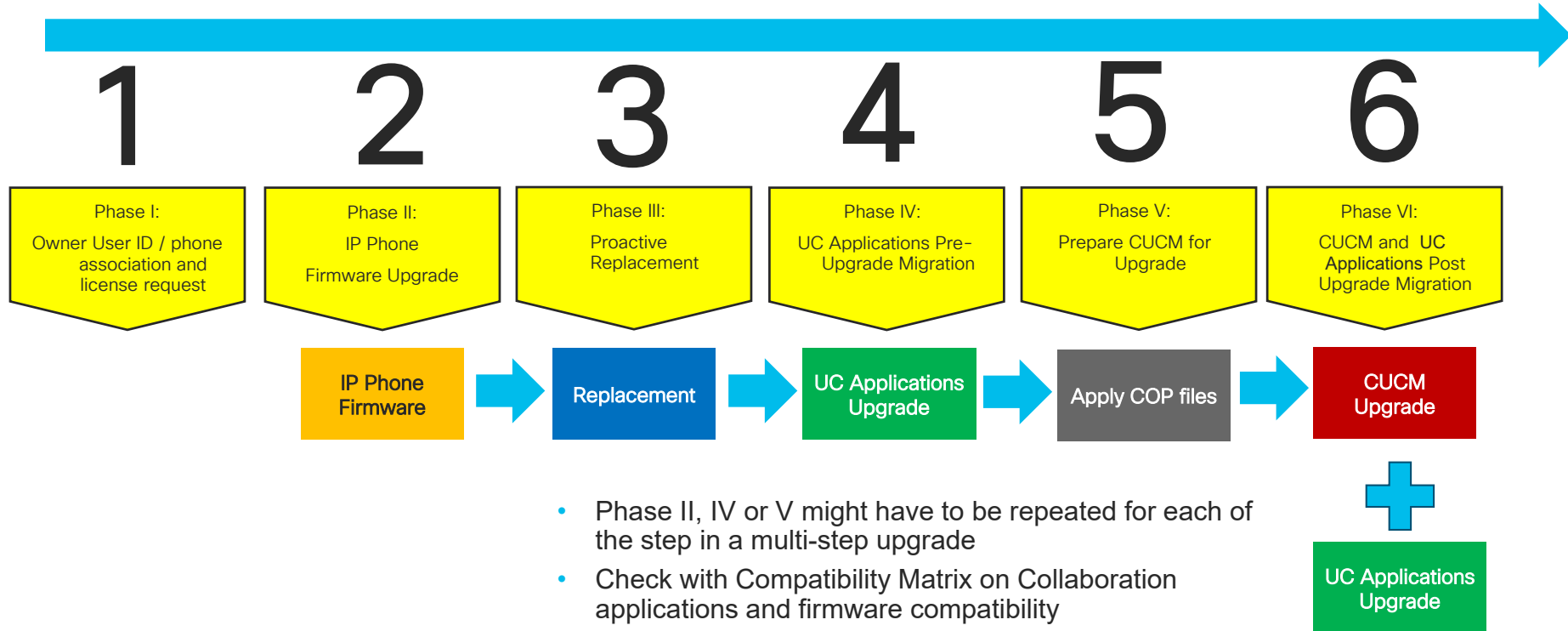
Upgrade Optimization: Replication Time Improvement – Previously Best Practices



- Disabling provisioning during upgrade. Previously are best practices for upgrade in previous version
 - Disable EM service in CUCM 9 and earlier not included
- IBM IDS new feature implementation for transmitting files in bulk
- Sync Agent sync time optimization

Blocked configuration changes	Error and Warning Messages
AXL	503 error response: "Write Operations denied because Cisco UCM or IM and Presence upgrade is in progress."
BAT	Error message "Upgrade in Progress. Job cannot be started"
LDAP Sync.	"Upgrade in progress. Cannot be synced"
Self Care Portal	WARNING: Add/Update/Delete not allow as a system upgrade is in progress
UDS	503 error response
CM Admin MACD	Banner and Status
CCM Service Activation/Trace	Update failed Add/Update/Delete not allow as a system upgrade is in progress
Phone auto-registration and Self Provisioning	Auto-registration disabled/IVR return error

Execution in Phases: Minimizing Upgrade Window



System Level Planning for Upgrade/Migration



<p>CUCM Licensing Smart Licensing CUCM License Migration CUCM License Optimization CUCM Registration with Smart Licensing</p> <p>Highlight:</p> <ol style="list-style-type: none">1. (Specific License Reservation (SLR)2. Smart Software Manager satellite Enhanced Edition3. Export Registration Authorization key	<p>CUCM Versions, Builds and Requirements Upgrade/Migration Methods and Tools PCD Upgrades and Migrations CUCM Upgrade COP Files Upgrade Path</p> <p>Highlight:</p> <ol style="list-style-type: none">1. Simplified Upgrade2. Pre-Upgrade COP file or check list3. Post-Upgrade COP file or check list	<p>Servers Virtualization Virtualized CUCM VMware changes</p> <p>Highlight:</p> <ol style="list-style-type: none">1. VMware Cloud on AWS support	<p>Deprecated phones Disk Space Required in /common Partition for Upgrade Improve Performance</p> <p>Disk Space TFTP server DB replication Purge CDR Phone firmware Application dependencies Upgrade windows</p>
--	--	--	--

Upgrade Tasks

- Pre-Upgrade Task and Post-Upgrade Task List

https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/upgrade/12_5_1/cucm_b_upgrade-migration-guide-125x.pdf

Questions ?

Complete your online session survey



- Please complete your session survey after each session. Your feedback is very important.
- Complete a minimum of 4 session surveys and the Overall Conference survey (starting on Thursday) to receive your Cisco Live t-shirt.
- All surveys can be taken in the Cisco Events Mobile App or by logging in to the Content Catalog on ciscolive.com/emea.

Cisco Live sessions will be available for viewing on demand after the event at ciscolive.com.

Continue your education



Demos in the
Cisco campus



Walk-in labs



Meet the engineer
1:1 meetings



Related sessions



Thank you





You make **possible**

Reference Links

Reference links

- Product License Registration

www.cisco.com/go/license

- Product Upgrade Tool (PUT)

www.cisco.com/upgrade

- Unified Communications in a Virtualized Environment

<http://www.cisco.com/go/uc-virtualized>

- UC Virtualization Supported Hardware:

http://docwiki.cisco.com/wiki/UC_Virtualization_Supported_Hardware#Table_1_-_UC_on_UCS_TRCs

Reference links

- Unified Communications Licensing Availability by Release

<https://communities.cisco.com/docs/DOC-57172>

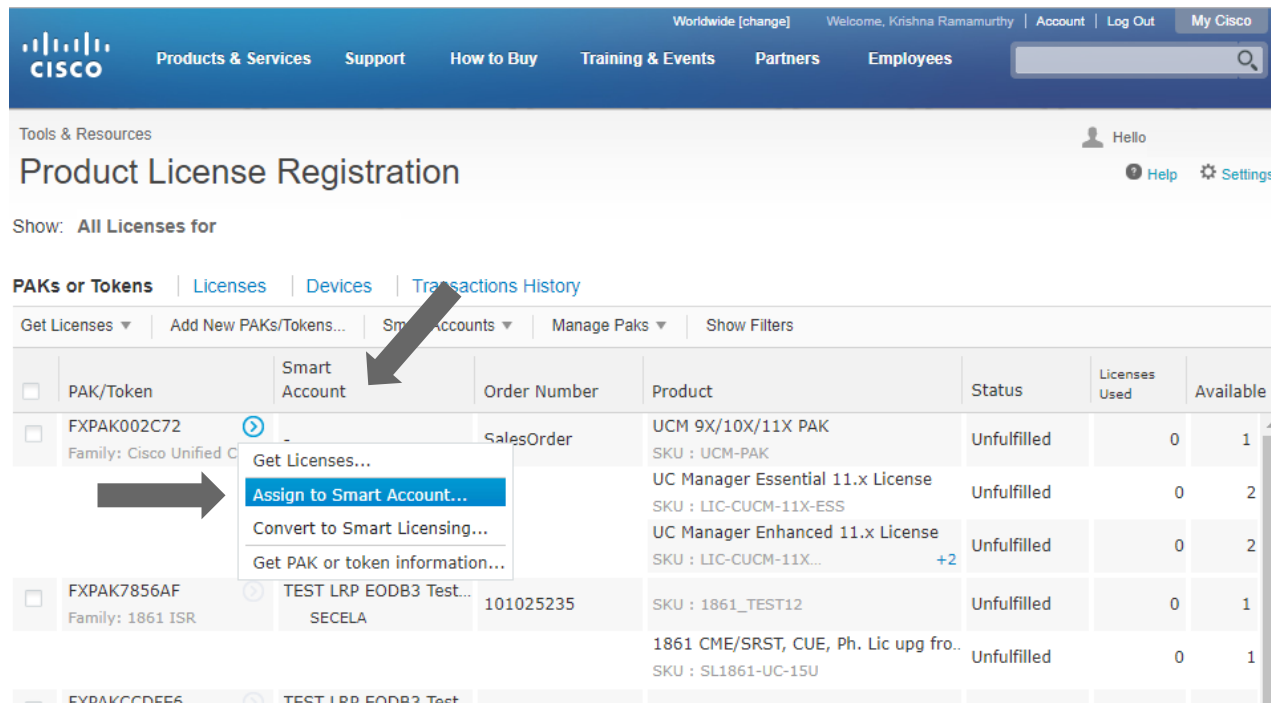
Appendix

CUCM License Conversion:

1. PAK
2. Device

PAK based Migration – Assign to a Smart Account

- Consolidate unassigned PAKs to a Smart Account and Virtual Account for visibility
- Login to the Traditional Licensing Portal at <http://tools.cisco.com/SWIFT/LicensingUI/Home>
- Locate the PAKs to be migrated. Right click and select Assign to Smart Account and Virtual Account



The screenshot displays the Cisco Product License Registration interface. At the top, there is a navigation bar with the Cisco logo and various menu items like 'Products & Services', 'Support', 'How to Buy', 'Training & Events', 'Partners', and 'Employees'. Below this, the page title is 'Product License Registration' with a user greeting 'Hello' and 'My Cisco' account options. The main content area shows a table of 'PAKs or Tokens' with columns for 'PAK/Token', 'Smart Account', 'Order Number', 'Product', 'Status', 'Licenses Used', and 'Available'. A context menu is open over the first row, with the option 'Assign to Smart Account...' highlighted. A large black arrow points from the 'Smart Account' column header to the 'Assign to Smart Account...' option in the menu.

PAK/Token	Smart Account	Order Number	Product	Status	Licenses Used	Available
<input type="checkbox"/> FXPAK002C72 Family: Cisco Unified C...	<input type="text" value="..."/>	SalesOrder	UCM 9X/10X/11X PAK SKU : UCM-PAK	Unfulfilled	0	1
			UC Manager Essential 11.x License SKU : LIC-CUCM-11X-ESS	Unfulfilled	0	2
			UC Manager Enhanced 11.x License SKU : LIC-CUCM-11X... +2	Unfulfilled	0	2
<input type="checkbox"/> FXPAK7856AF Family: 1861 ISR	<input type="text" value="TEST LRP EODB3 Test... SECELA"/>	101025235	SKU : 1861_TEST12	Unfulfilled	0	1
			1861 CME/SRST, CUE, Ph. Lic upg fro.. SKU : SL1861-UC-15U	Unfulfilled	0	1

PAK based Migration : Assign SA and VA

- Select the Smart Account and Virtual Account to which the PAK will be assigned

The screenshot displays the Cisco Product License Registration web interface. At the top, there is a navigation bar with the Cisco logo and links for Products & Services, Support, How to Buy, Training & Events, Partners, and Employees. A search bar is also present. Below the navigation bar, the page title is 'Product License Registration' and the user is logged in as 'Hello'. The main content area shows a list of licenses with columns for 'PAK/Token', 'Smart Account', 'Licenses Used', and 'Available'. A modal dialog box titled 'Assign to Smart/Virtual Accounts' is open, allowing the user to assign the selected PAK/Token to a Smart Account and a Virtual Account. The dialog shows the PAK/Token as 'FXPAK002C72' and the selected Smart Account as 'TEST LRP COMCAST' and Virtual Account as 'Steve VA 1'. The 'Assign' button is highlighted in blue.

PAK/Token	Smart Account	Licenses Used	Available
FXPAK002C72	-	0	1
FXPAK7856AF	TEST LRP COMCAST	0	2
FXPAKCCDFE6	Steve VA 1	0	1
1861 CME/SRST, CUE, Ph. Lic upg fro..	Unfulfilled	0	1

PAK based Migration : Classic PAK assigned

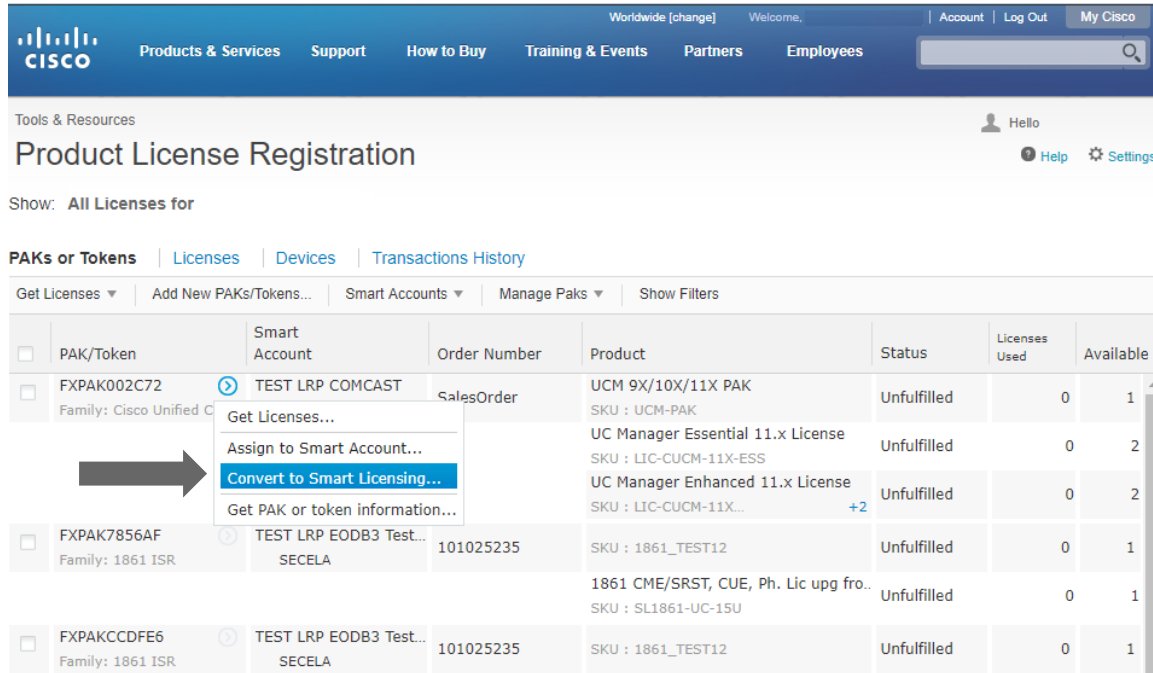
- Classic PAKs will show assigned Smart Account for full visibility

The screenshot shows the Cisco Product License Registration page. The top navigation bar includes the Cisco logo, navigation links for Products & Services, Support, How to Buy, Training & Events, Partners, and Employees, and a search bar. The user is logged in as Krishna Ramamurthy. The page title is "Product License Registration" and it shows "All Licenses for". Below the title are tabs for "PAKs or Tokens", "Licenses", "Devices", and "Transactions History". A table of licenses is displayed with columns for PAK/Token, Smart Account, Order Number, Product, Status, Licenses Used, and Available. A large arrow points to the "TEST LRP COMCAST Steve VA 1" Smart Account in the first row of the table.

<input type="checkbox"/>	PAK/Token	Smart Account	Order Number	Product	Status	Licenses Used	Available
<input type="checkbox"/>	FXPAK002C72 Family: Cisco Unified Co...	TEST LRP COMCAST Steve VA 1	SalesOrder	UCM 9X/10X/11X PAK SKU : UCM-PAK	Unfulfilled	0	1
				UC Manager Essential 11.x License SKU : LIC-CUCM-11X-ESS	Unfulfilled	0	2
				UC Manager Enhanced 11.x License SKU : LIC-CUCM-11X... +2	Unfulfilled	0	2
<input type="checkbox"/>	FXPAK7856AF Family: 1861 ISR	TEST LRP EODB3 Test... SECELA	101025235	SKU : 1861_TEST12	Unfulfilled	0	1
				1861 CME/SRST, CUE, Ph. Lic upg fro.. SKU : SL1861-UC-15U	Unfulfilled	0	1
<input type="checkbox"/>	FXPAKCCDFE6 Family: 1861 ISR	TEST LRP EODB3 Test... SECELA	101025235	SKU : 1861_TEST12	Unfulfilled	0	1
				1861 CME/SRST, CUE, Ph. Lic upg fro..			

PAK Migration to Smart License on - LRP

- Select the PAK which needs to be converted to smart entitlement.
- From the PAK context option, select “Convert to Smart Licensing”



The screenshot shows the Cisco Product License Registration interface. The top navigation bar includes the Cisco logo, navigation links (Products & Services, Support, How to Buy, Training & Events, Partners, Employees), and user options (Worldwide [change], Welcome, Account, Log Out, My Cisco). Below the navigation bar, the page title is "Product License Registration" with a "Hello" greeting and "Help" and "Settings" links. The main content area shows "Tools & Resources" and "Show: All Licenses for". There are tabs for "PAKs or Tokens", "Licenses", "Devices", and "Transactions History". Below the tabs are filters: "Get Licenses", "Add New PAKs/Tokens...", "Smart Accounts", "Manage Paks", and "Show Filters".

<input type="checkbox"/>	PAK/Token	Smart Account	Order Number	Product	Status	Licenses Used	Available
<input type="checkbox"/>	FXPAK002C72 Family: Cisco Unified C...	TEST LRP COMCAST	SalesOrder	UCM 9X/10X/11X PAK SKU : UCM-PAK	Unfulfilled	0	1
		Get Licenses...		UC Manager Essential 11.x License SKU : LIC-CUCM-11X-ESS	Unfulfilled	0	2
		Assign to Smart Account...		UC Manager Enhanced 11.x License SKU : LIC-CUCM-11X...	Unfulfilled	0	2
		Convert to Smart Licensing...					
		Get PAK or token information...					
<input type="checkbox"/>	FXPAK7856AF Family: 1861 ISR	TEST LRP EODB3 Test... SECELA	101025235	SKU : 1861_TEST12	Unfulfilled	0	1
				1861 CME/SRST, CUE, Ph. Lic upg fro.. SKU : SL1861-UC-15U	Unfulfilled	0	1
<input type="checkbox"/>	FXPAKCCDFE6 Family: 1861 ISR	TEST LRP EODB3 Test... SECELA	101025235	SKU : 1861_TEST12	Unfulfilled	0	1

PAK based Migration to Smart License on LRP – Review and Submit

- Select SKUs under PAK and quantity of Licenses to be converted and click on Submit
- PLM Licenses which are partially converted will need new PLM License file for managing the remaining Classic Licenses :
 - PLM under e-fulfillment mode will receive new License file automatically
 - PLM under manual fulfillment will need to download and manually upload new License file in PLM

Convert to Smart Entitlements

Once this PAK has been fully converted it cannot be used for future transactions.

Smart Account: TEST LRP COMCAST

Virtual Account: DEFAULT

PAK/SKU	Product Family	Quantity Available	Quantity to Convert	Smart Account
PAK:FXPAK002C72	Cisco Unified Communications			TEST LRP COMCAST
LIC-CUCM-11X-ESS		2	2	
LIC-CUCM-11X-ENH		2	2	
LIC-CUCM-11X-ENHP		2	2	
LIC-CUCM-11X-BAS		2	2	

Cancel Submit

PAK based Migration to Smart License on LRP- Confirmation message

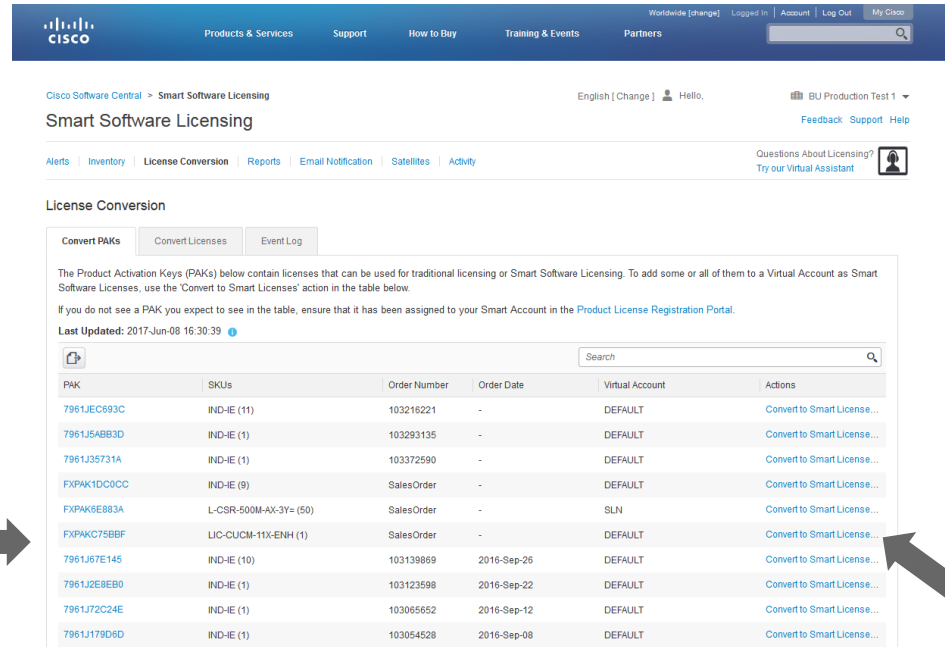
- Once the licenses are converted to smart entitlements, Success message is shown.
- The entitlements will now be available on CSSM under selected Smart and Virtual Account.

The screenshot shows a web interface for 'Product License Registration'. A modal dialog box titled 'Convert to Smart Entitlements' is displayed in the center. The dialog contains a green checkmark icon and the following text: 'The selected features have been successfully converted to Smart Entitlements. Use this transaction ID to view status on the "Manage > Transactions History". Transaction Id: TRXREQTIXEZZED'. Below this, there is a link to 'Please provide feedback... Let Cisco know how to improve this experience.' and a 'Close' button. The background interface is dimmed, showing a table with license details and a 'Submit' button at the bottom right.

PAK/SKU	Product Family	Quantity Available	Quantity to Convert	Smart Account
PAK:FXPAK002C72	Cisco Unified Communications			TEST LRP COMCAST
LIC-CUCM-11X-ESS		2	2	
LIC-CUCM-11X-ENH		2	2	
LIC-CUCM-11X-ENHP		2	2	
LIC-CUCM-11X-BAS		2	2	

PAK based Migration to Smart License on CSSM

- Convert PAKs to equivalent Smart Licenses when they are available
- Go to Convert PAKs tab .
- Assigned PAKs will show up on the CSSM portal. Click Convert to Smart License



The screenshot displays the Cisco Software Central interface for Smart Software Licensing. The main heading is "Smart Software Licensing" with navigation options for Alerts, Inventory, License Conversion, Reports, Email Notification, Satellites, and Activity. The "License Conversion" section is active, showing a table of Product Activation Keys (PAKs) that can be converted to Smart Licenses. The table includes columns for PAK, SKUs, Order Number, Order Date, Virtual Account, and Actions. A large arrow points to the "Convert PAKs" tab, and another arrow points to the "Convert to Smart License..." link in the Actions column of the table.

PAK	SKUs	Order Number	Order Date	Virtual Account	Actions
7961JEC693C	IND-IE (11)	103216221	-	DEFAULT	Convert to Smart License...
7961J5A8B3D	IND-IE (1)	103293135	-	DEFAULT	Convert to Smart License...
7961J35731A	IND-IE (1)	103372590	-	DEFAULT	Convert to Smart License...
FXPAK1D00CC	IND-IE (9)	SalesOrder	-	DEFAULT	Convert to Smart License...
FXPAK8E883A	L-CSR-500M-AX-3Y= (50)	SalesOrder	-	SLN	Convert to Smart License...
FXPAK75BBF	LIC-CUCM-11X-ENH (1)	SalesOrder	-	DEFAULT	Convert to Smart License...
7961J67E145	IND-IE (10)	103139869	2016-Sep-26	DEFAULT	Convert to Smart License...
7961J2E8EB0	IND-IE (1)	103123598	2016-Sep-22	DEFAULT	Convert to Smart License...
7961J72C24E	IND-IE (1)	103065652	2016-Sep-12	DEFAULT	Convert to Smart License...
7961J179D8D	IND-IE (1)	103054528	2016-Sep-08	DEFAULT	Convert to Smart License...

PAK based Migration to Smart Licenses on CSSM (Select License)

- Select SKUs under PAK and quantity of Licenses to be converted
- PLM Licenses which are partially converted will need new PLM License file for managing the remaining Classic Licenses :
 - PLM under e-fulfillment mode will receive new License file automatically
 - PLM under manual fulfillment will need to download and manually upload new License file in PLM

Convert to Smart Software Licenses

STEP 1 **Select Licenses** | STEP 2 Review and Confirm

Select the licenses you want to convert to Smart Software Licenses and the Destination Virtual Account to contain them. If the PAK allows partial fulfillment, you will be able to choose the number of licenses to convert, otherwise all licenses in the PAK will be converted.

PAK Details

PAK Number: FXPAK75BBF
Partial Fulfillment: Allowed
PAK Virtual Account: DEFAULT
Destination Virtual Account:

SKUs

<input checked="" type="checkbox"/>	SKU	Licenses	Type	Expiration Date	Available to Convert	Quantity to Convert
<input checked="" type="checkbox"/>	LIC-CUCM-11X-ENH	UC Manager Enhanced License (12x)	Perpetual	-	1	<input type="text" value="1"/>

Cancel Back **Next**

PAK based Migration to Smart Licenses on CSSM (Review and Confirm)

- Review and confirm.
- Once converted to Smart Entitlement, the old classic licenses will be invalidated

Convert to Smart Software Licenses

STEP 1 ✓ Select Licenses | STEP 2 Review and Confirm

⚠ Once the licenses have been fulfilled as Smart Software Licenses, they cannot be used for traditional licensing.

PAK Details

PAK Number: FXPAKC75BBF
Partial Fulfillment: Allowed
PAK Virtual Account: DEFAULT
Destination Virtual Account: DEFAULT

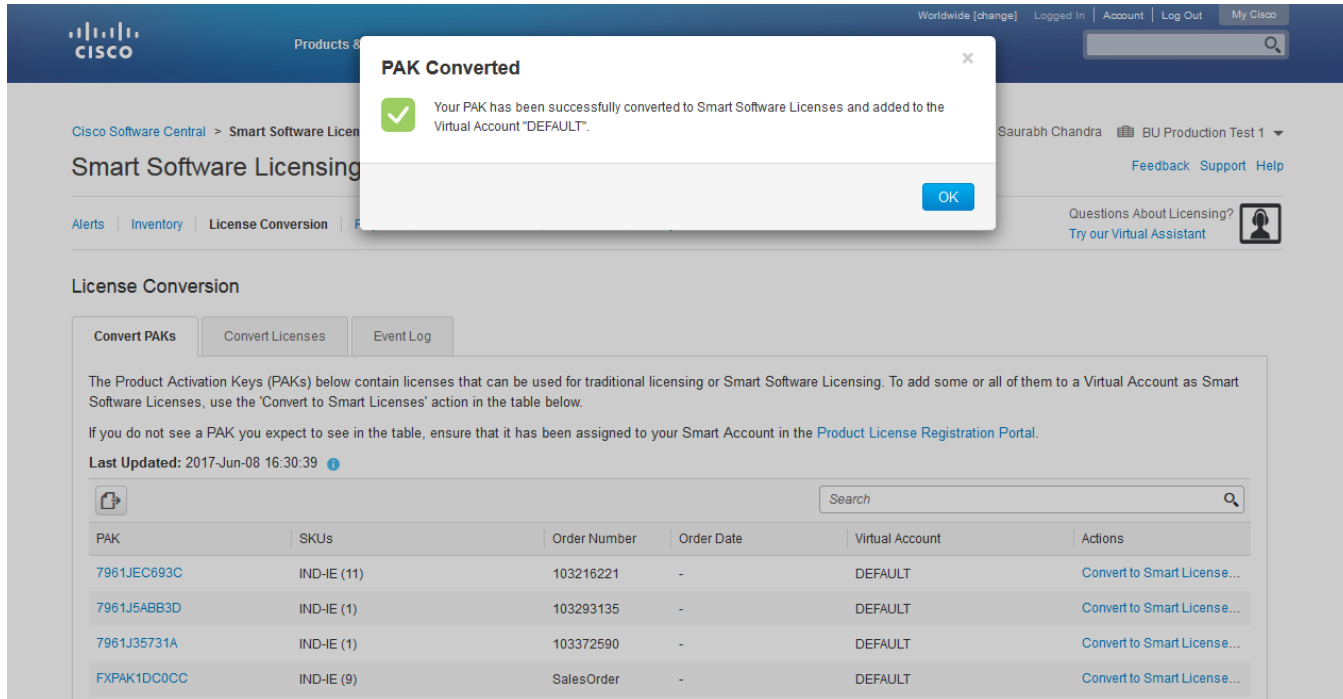
SKUs to Convert

SKU	Licenses	Type	Expiration Date	Available to Convert	Quantity to Convert
LIC-CUCM-11X-ENH	UC Manager Enhanced License (12x)	Perpetual	-	1	1

Cancel Back **Convert License**

PAK based Migration to Smart Licenses on CSSM (Smart Licenses converted)

- Converted Smart Licenses added into the Smart Account and Virtual Account



The screenshot displays the Cisco Software Central interface. A modal window titled "PAK Converted" is centered on the screen, indicating a successful conversion of Product Activation Keys (PAKs) to Smart Software Licenses. The message states: "Your PAK has been successfully converted to Smart Software Licenses and added to the Virtual Account 'DEFAULT'." Below the message is an "OK" button.

The background interface shows the "Smart Software Licensing" section. Under the "License Conversion" heading, there are tabs for "Convert PAKs", "Convert Licenses", and "Event Log". The "Convert PAKs" tab is active, showing a table of converted licenses. The table includes columns for PAK, SKUs, Order Number, Order Date, Virtual Account, and Actions. The "Last Updated" timestamp is 2017-Jun-08 16:30:39.

PAK	SKUs	Order Number	Order Date	Virtual Account	Actions
7961JEC693C	IND-IE (11)	103216221	-	DEFAULT	Convert to Smart License...
7961J5ABB3D	IND-IE (1)	103293135	-	DEFAULT	Convert to Smart License...
7961J35731A	IND-IE (1)	103372590	-	DEFAULT	Convert to Smart License...
FXPAK1DC0CC	IND-IE (9)	SalesOrder	-	DEFAULT	Convert to Smart License...

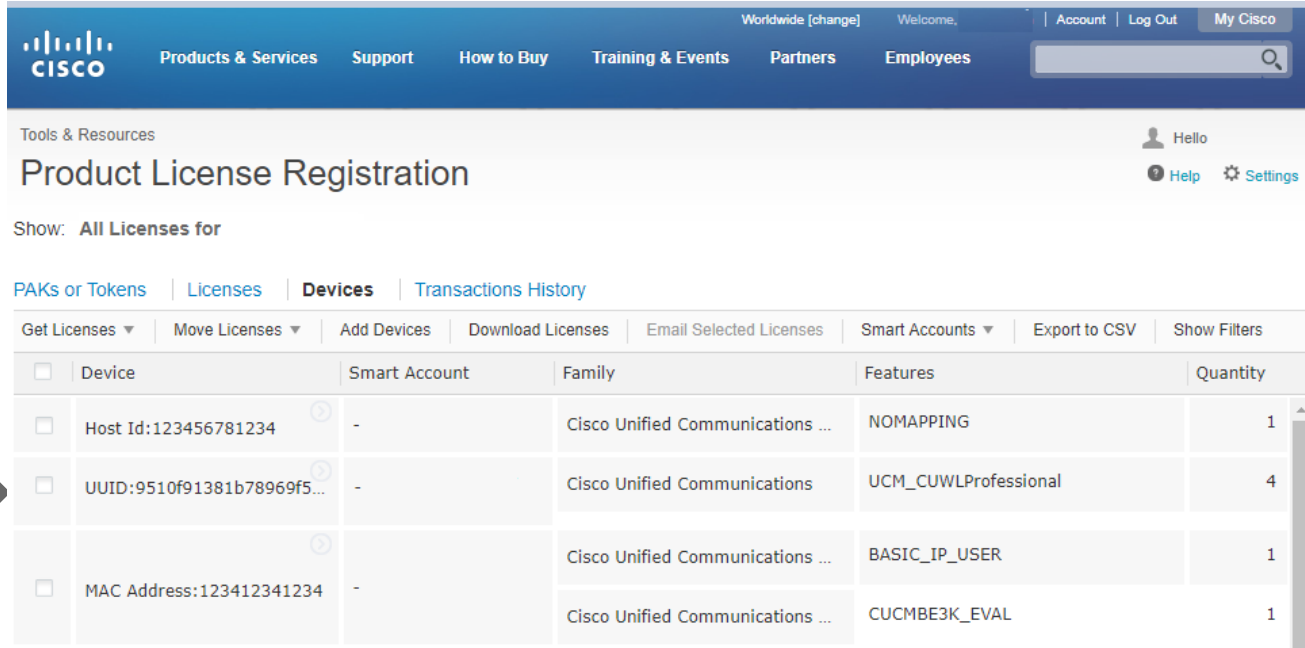
Device based migration to Smart Licenses on LRP

- Login to the Traditional Licensing Portal at <http://tools.cisco.com/SWIFT/LicensingUI/Home>
- Go to Device tab. Locate the PLM Device to be migrated (please filter using PLM UUID)
- If not available : Obtain the License request from PLM and add the PLM Device.

The screenshot shows the Cisco Licensing UI. At the top, there's a navigation bar with 'Products & Services', 'Support', 'How to Buy', 'Training & Events', 'Partners', and 'Employees'. Below that, the main heading is 'Product License Registration'. A 'Tools & Resources' section is on the left, and a user profile 'Hello' with 'Help' and 'Settings' is on the right. The main content area has tabs for 'PAKs or Tokens', 'Licenses', 'Devices', and 'Actions History'. The 'Devices' tab is active, and a modal dialog 'Add Device' is open. The dialog has a 'Product Family' dropdown (set to 'Select one'), a 'Device Identifier' dropdown (set to 'License Request'), and a 'License Request' field containing a long alphanumeric string. A table of devices is visible in the background, with columns for 'Device', 'Host ID', 'CPU ID', 'UCC Machine ID', and 'Quantity'. A large black arrow points from the 'Devices' tab to the 'Add Device' dialog, and another arrow points from the 'License Request' field to the table.

Device based migration to Smart Licenses on LRP : PLM device added

- PLM device added shows up under Device tab

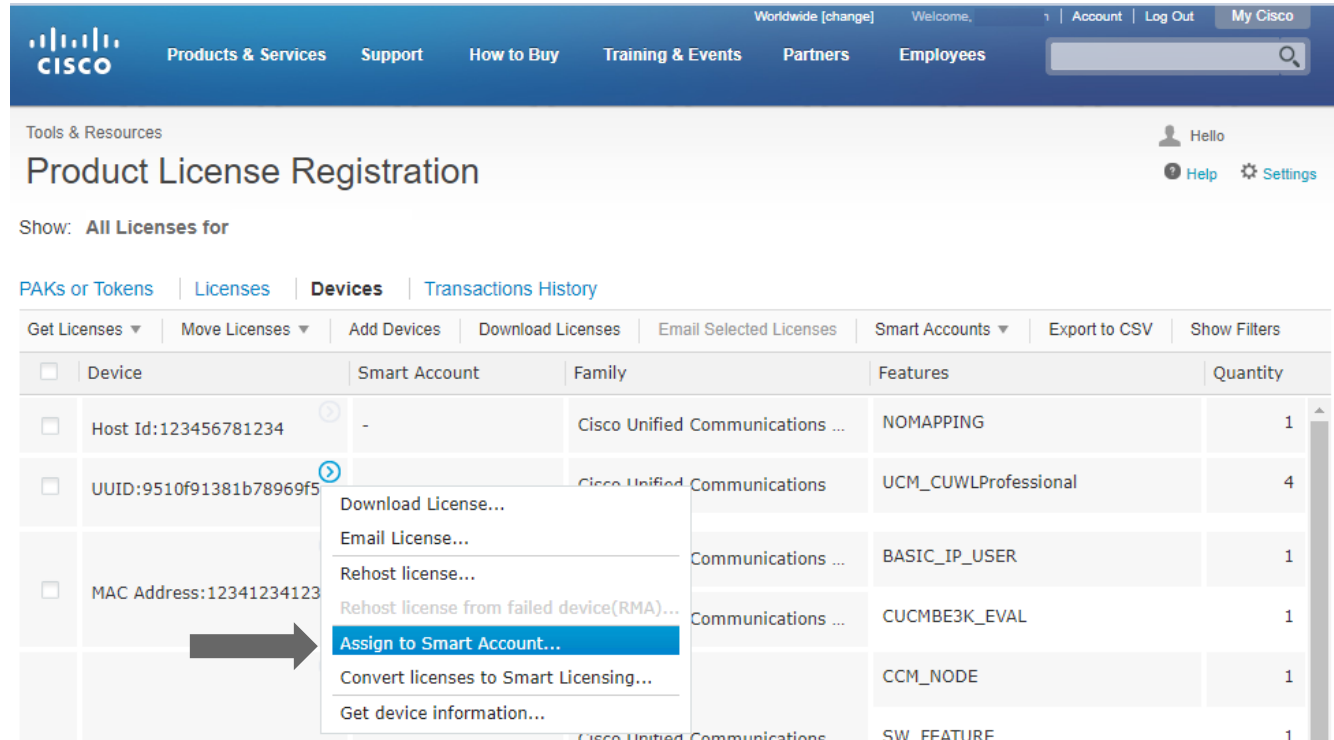


The screenshot shows the Cisco Product License Registration interface. The top navigation bar includes the Cisco logo, navigation links (Products & Services, Support, How to Buy, Training & Events, Partners, Employees), and user options (Worldwide [change], Welcome, Account, Log Out, My Cisco). The main content area is titled "Product License Registration" and shows "Tools & Resources" and "Hello" with "Help" and "Settings" links. Below this, it says "Show: All Licenses for". There are tabs for "PAKs or Tokens", "Licenses", "Devices", and "Transactions History". The "Devices" tab is active. Below the tabs are action buttons: "Get Licenses", "Move Licenses", "Add Devices", "Download Licenses", "Email Selected Licenses", "Smart Accounts", "Export to CSV", and "Show Filters". A table displays the following data:

<input type="checkbox"/>	Device	Smart Account	Family	Features	Quantity
<input type="checkbox"/>	Host Id:123456781234	-	Cisco Unified Communications ...	NOMAPPING	1
<input type="checkbox"/>	UUID:9510f91381b78969f5...	-	Cisco Unified Communications	UCM_CUWLProfessional	4
<input type="checkbox"/>	MAC Address:123412341234	-	Cisco Unified Communications ...	BASIC_IP_USER	1
<input type="checkbox"/>			Cisco Unified Communications ...	CUCMBE3K_EVAL	1

Device based migration to Smart Licenses on LRP : Assign PLM Device

- Assign PLM device to Smart Account and Virtual Account



The screenshot shows the Cisco Product License Registration interface. The top navigation bar includes the Cisco logo, navigation links (Products & Services, Support, How to Buy, Training & Events, Partners, Employees), and user information (Worldwide [change], Welcome, Account, Log Out, My Cisco). The main content area is titled "Product License Registration" and shows "Tools & Resources" and "Hello" with "Help" and "Settings" links. Below this, it says "Show: All Licenses for". There are tabs for "PAKs or Tokens", "Licenses", "Devices", and "Transactions History". A table of licenses is displayed with columns: Device, Smart Account, Family, Features, and Quantity. A context menu is open over the "MAC Address:12341234123" row, with the "Assign to Smart Account..." option highlighted. An arrow points to this option.

Device	Smart Account	Family	Features	Quantity
<input type="checkbox"/> Host Id:123456781234	-	Cisco Unified Communications ...	NOMAPPING	1
<input type="checkbox"/> UUID:9510f91381b78969f5		Cisco Unified Communications	UCM_CUWLProfessional	4
<input type="checkbox"/> MAC Address:12341234123		Communications ...	BASIC_IP_USER	1
		Communications ...	CUCMBE3K_EVAL	1
			CCM_NODE	1
		Cisco Unified Communications	SW_FEATURE	1

Device based migration to Smart Licenses on LRP : Select SA and VA

- Select Smart Account and Virtual Account to which PLM will be assigned

The screenshot displays the Cisco Product License Registration web interface. At the top, there is a navigation bar with the Cisco logo and various menu items: Products & Services, Support, How to Buy, Training & Events, Partners, and Employees. A search bar is located on the right. Below the navigation bar, the page title is "Product License Registration" and the user is logged in as "Hello".

The main content area shows a table of licenses. The table has columns for "Device", "Quantity", and "Host Id". The first row is selected, and a modal dialog titled "Assign to Smart/Virtual Accounts" is open over it. The modal contains the following information:

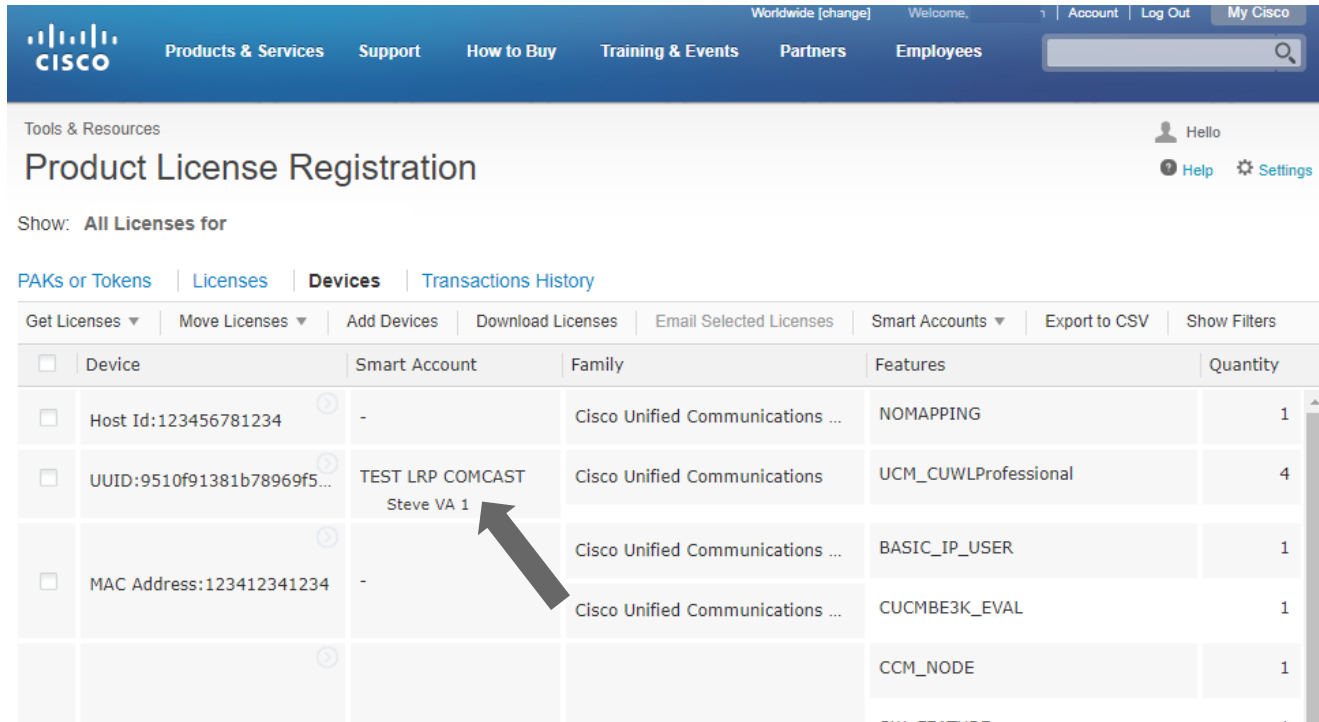
- Device Name: UUID:9510f91381b78...
- * Smart Account: TEST LRP COMCAST
- * Virtual Account: Steve VA 1

At the bottom of the modal, there are "Cancel" and "Assign" buttons. A black arrow points from the "Device" column of the table to the "Device Name" field in the modal.

Device	Quantity
Host Id:123456781234	1
UUID:9510f91381b78969f5...	4
MAC Address:123412341234...	1
	1
	1
	1
	1

Device based migration to Smart Licenses on LRP : PLM device assigned

- Shows Smart Account assigned for the PLM device

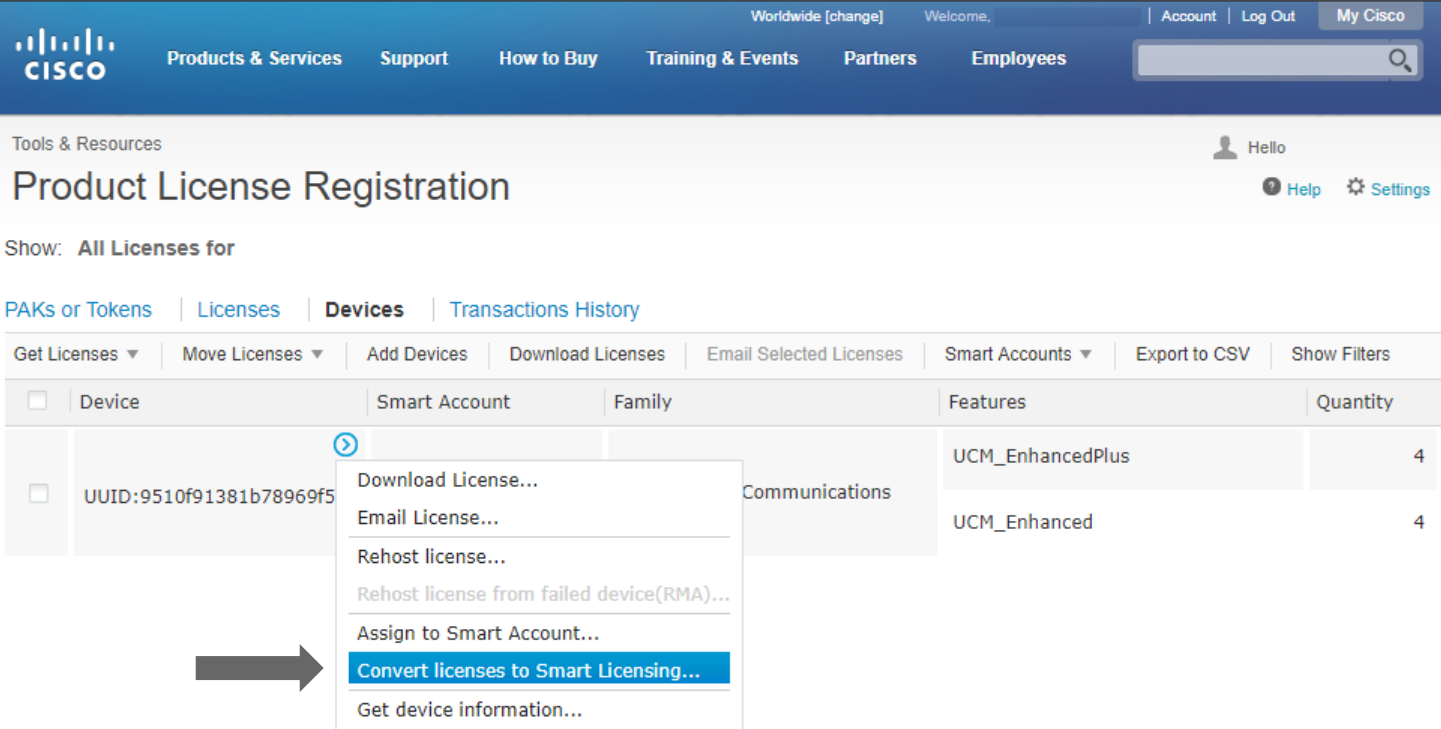


The screenshot displays the Cisco Product License Registration interface. The top navigation bar includes the Cisco logo, navigation links (Products & Services, Support, How to Buy, Training & Events, Partners, Employees), and user information (Worldwide [change], Welcome, Account, Log Out, My Cisco). The main heading is "Product License Registration" with a "Hello" greeting and "Help" and "Settings" links. Below the heading, it says "Show: All Licenses for". There are tabs for "PAKs or Tokens", "Licenses", "Devices", and "Transactions History". A toolbar contains actions like "Get Licenses", "Move Licenses", "Add Devices", "Download Licenses", "Email Selected Licenses", "Smart Accounts", "Export to CSV", and "Show Filters". The main table lists licenses with columns for Device, Smart Account, Family, Features, and Quantity. A gray arrow points to the "TEST LRP COMCAST Steve VA 1" smart account in the second row.

Device	Smart Account	Family	Features	Quantity
Host Id:123456781234	-	Cisco Unified Communications ...	NOMAPPING	1
UUID:9510f91381b78969f5...	TEST LRP COMCAST Steve VA 1	Cisco Unified Communications	UCM_CUWLProfessional	4
MAC Address:123412341234	-	Cisco Unified Communications ...	BASIC_IP_USER	1
		Cisco Unified Communications ...	CUCMBE3K_EVAL	1
			CCM_NODE	1

Device based migration to Smart Licenses on LRP

- Select the device where the classical licenses needs to be converted to Smart entitlements.
- From the context option select “Convert licenses to Smart Licensing” option.



The screenshot shows the Cisco Product License Registration interface. The top navigation bar includes the Cisco logo, navigation links (Products & Services, Support, How to Buy, Training & Events, Partners, Employees), and user information (Worldwide [change], Welcome, Account, Log Out, My Cisco). The main content area is titled "Product License Registration" and shows a table of licenses. A context menu is open over a device with UUID:9510f91381b78969f5, listing various actions. The "Convert licenses to Smart Licensing..." option is highlighted in blue, and a black arrow points to it from the bottom left.

Device	Smart Account	Family	Features	Quantity
<input type="checkbox"/>			UCM_EnhancedPlus	4
<input type="checkbox"/>		Communications	UCM_Enhanced	4

- Download License...
- Email License...
- Rehost license...
- Rehost license from failed device(RMA)...
- Assign to Smart Account...
- Convert licenses to Smart Licensing...**
- Get device information...

Device based migration to Smart Licenses on LRP (Select Licenses)

- Select SKU and quantity of Licenses to be converted
- PLM Licenses which are partially converted will need new License file for managing the remaining Classic Licenses :
- PLM under e-fulfillment mode will receive new License file automatically
- PLM under manual fulfillment will need to download and manually upload new License file

Convert to Smart Entitlements

Once these entitlements have been converted they will no longer appear in this portal.

Device ID: UUID:9510f91381b78969f57dd8e94e170cd8

Product Family: Cisco Unified Communications

Smart Account: TEST LRP COMCAST

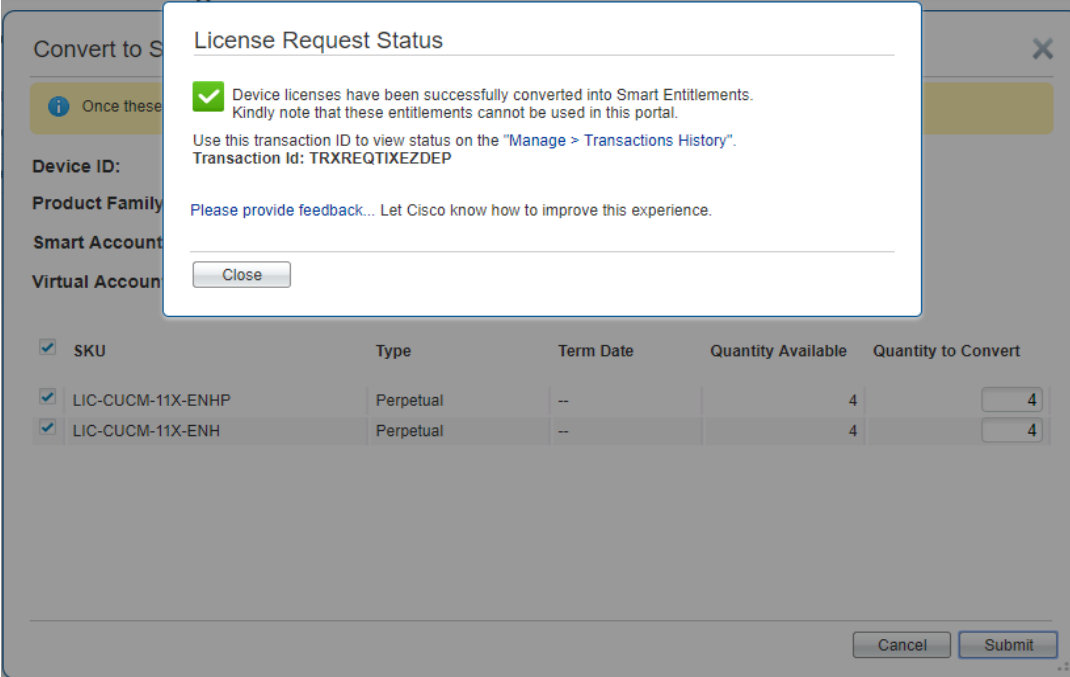
Virtual Account: DEFAULT

<input checked="" type="checkbox"/> SKU	Type	Term Date	Quantity Available	Quantity to Convert
<input checked="" type="checkbox"/> LIC-CUCM-11X-ENHP	Perpetual	--	4	<input type="text" value="4"/>
<input checked="" type="checkbox"/> LIC-CUCM-11X-ENH	Perpetual	--	4	<input type="text" value="4"/>

Cancel Submit

Device based migration to Smart Licenses on LRP (Review and Submit)

- Review , Confirm and click Submit
- Once the licenses are fully converted, the PLM UUID will be removed from LRP
- Confirmation message will be shown once the licenses are converted.
- The entitlements will now be available on CSSM under selected Smart and Virtual Account.



License Request Status

Device licenses have been successfully converted into Smart Entitlements. Kindly note that these entitlements cannot be used in this portal.

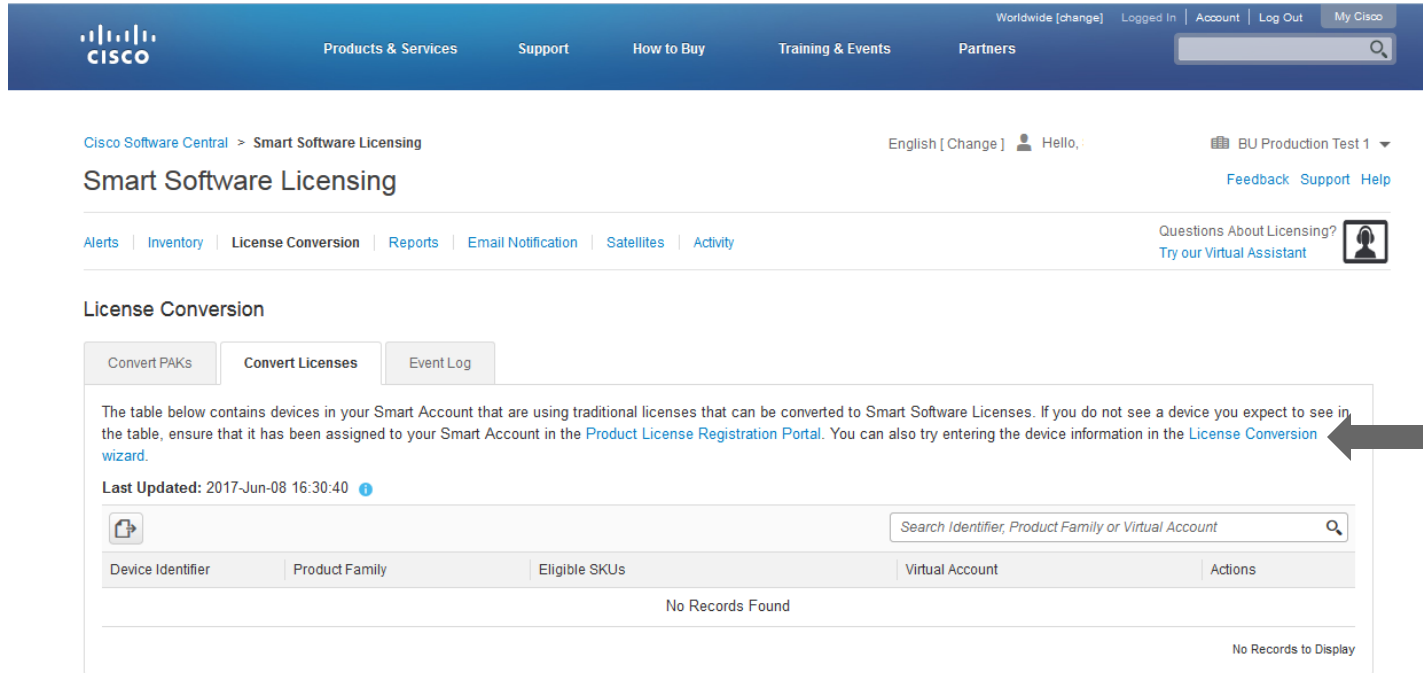
Use this transaction ID to view status on the ["Manage > Transactions History"](#).
Transaction Id: TRXREQTIXEZDEP

[Please provide feedback...](#) Let Cisco know how to improve this experience.

<input checked="" type="checkbox"/>	SKU	Type	Term Date	Quantity Available	Quantity to Convert
<input checked="" type="checkbox"/>	LIC-CUCM-11X-ENHP	Perpetual	--	4	<input type="text" value="4"/>
<input checked="" type="checkbox"/>	LIC-CUCM-11X-ENH	Perpetual	--	4	<input type="text" value="4"/>

Device based migration to Smart Licenses on CSSM

- Assigned Device will show up on the Cisco Smart Software Manager Portal. The CSSM portal will be refreshed every 1 hour. If the assigned device is not visible in CSSM, please recheck after an hour.
- Go to Convert Licenses tab and click Use License Conversion wizard



Worldwide [change] | Logged In | Account | Log Out | My Cisco

Products & Services | Support | How to Buy | Training & Events | Partners

Cisco Software Central > Smart Software Licensing

English [Change] | Hello, | BU Production Test 1

Smart Software Licensing

Feedback | Support | Help

Alerts | Inventory | **License Conversion** | Reports | Email Notification | Satellites | Activity

Questions About Licensing? | Try our Virtual Assistant

License Conversion

Convert PAKs | **Convert Licenses** | Event Log

The table below contains devices in your Smart Account that are using traditional licenses that can be converted to Smart Software Licenses. If you do not see a device you expect to see in the table, ensure that it has been assigned to your Smart Account in the [Product License Registration Portal](#). You can also try entering the device information in the [License Conversion wizard](#).

Last Updated: 2017-Jun-08 16:30:40

Search Identifier, Product Family or Virtual Account

Device Identifier	Product Family	Eligible SKUs	Virtual Account	Actions
No Records Found				

No Records to Display

Device based migration to Smart Licenses on CSSM

- Select the Product family as “Cisco Unified Communications” and provide the PLM Device UUID

Convert to Smart Software Licenses

STEP 1 Identify Device STEP 2 Select Licenses STEP 3 Review and Confirm

Convert traditional licenses installed on a device to Smart Software Licenses. Begin by selecting the product family and entering the device identifier that was used to register the licenses in the Product License Registration Portal.

* Product Family:

* UUID:

Device based migration to Smart Licenses on CSSM (Select License)

- Select SKU and quantity of Licenses to be converted
- PLM Licenses which are partially converted will need new License file for managing the remaining Classic Licenses :
 - PLM under e-fulfillment mode will receive new License file automatically
 - PLM under manual fulfillment will need to download and manually upload new License file

Convert to Smart Software Licenses

STEP 1 Identify Device STEP 2 Select Licenses STEP 3 Review and Confirm

Choose the licenses from the device that you want to convert to Smart Software Licenses.

Device Details

UUID: 9510f91381b78969f57dd8e94e170cd8
Product Family: Cisco Unified Communications
Device Virtual Account: DEFAULT

Licenses to Convert

Destination Virtual Account:

<input checked="" type="checkbox"/>	Transaction ID	SKU	Quantity	Type	Expiration Date	Converts to Smart License	Quantity to Convert
<input checked="" type="checkbox"/>	61641974	LIC-CUCM-11X-ENHP	4	Perpetual	-	UC Manager Enhanced ...	<input type="text" value="4"/>
		LIC-CUCM-11X-ENH	4	Perpetual	-	UC Manager Enhanced ...	<input type="text" value="4"/>

Device based migration to Smart Licenses on CSSM (License converted)

- Review , Confirm and click Convert Licenses
- When old Licenses are converted, they will be invalidated

Convert to Smart Software Licenses

STEP 1 ✓ | STEP 2 ✓ | STEP 3

⚠ Contract Check passed!

⚠ Once the licenses have been converted to Smart Software Licenses, they cannot be converted back to traditional licensing.

Device Details

UUID: 9510f91381b78969f57dd8e94e170cd8
Product Family: Cisco Unified Communications
Device Virtual Account: DEFAULT

Licenses to Convert

Destination Virtual Account: DEFAULT

SKU	Quantity	Type	Expiration Date	Converts to Smart License	Quantity to Convert
LIC-CUCM-11X-ENHP	4	Perpetual	-	UC Manager Enhanced Plus Li...	4

Cancel Back **Convert Licenses**

- PCD



Pre / Post Upgrade Check COP Files aka. Upgrade Readiness COP file

- “Living” COP Files Posted on CCO
 - Automate several pre/post Upgrade checklist tasks
 - Source CUCM 10.X,11.X, 12.X
 - Targeted for CUCM 12.5
- ciscocm.preUpgradeCheck-00XXX.cop.sgn
→ ciscocm.postUpgradeCheck-00XXX.cop.sgn
- Checks are executed at the time of COP Installation on each node.

```
admin:file dump install PreUpgradeReport.txt
```

```
=====
```

```
Pre Upgrade Test Date: 01/18/2019 23:50:25
```

```
=====
```

```
Active Version: 11.5.1.14900-11
```

```
Server: cucm-pub , CUCM Publisher
```

```
=====
```

Result	Test
1.1	PASS PLM License Status
1.2	PASS Cluster Database Status
1.3	PASS Deprecated Phone Models
1.4	PASS Network status (NTP, DNS & Cluster node connectivity)
1.5	PASS DRS backup status
1.6	FAIL Disk Space Check

```
This server has 22 GB of available free space in /common.  
Typically, you need at least 25 GB of common partition space.  
Your deployment may require more space if you have a lot of TFTP data,  
music-on-hold (MOH) files, or many locale files installed.  
Install the ciscocm.free_common_space_v1.4.cop.sgn to clear some space on  
the server before starting an upgrade.
```

1.7	PASS Test dataBase Sanity
1.8	PASS Network Adapter Type
1.9	PASS Common Security Password Length

```
System not in FIPS mode, Common Security Password's Minimum length  
requirement not enforced
```

Pre / Post Upgrade Check COP Files



```
=====
System Status List
-----
```

```
2.1 Count           Phone Status (PASS)
    0               Registered
    0               Unregistered

2.2 Status           Service Name (PASS)
    No Issues Found

2.3 Version           VMTools Type (WARN)
    10.1.10.63510   native vm-tools
    WARNING: Update the native vmtools to latest for optimal system
    performance.

2.4 Upgrade Checks (WARN)

    *) Smart Licensing requires you to have a Smart Account created and
    configured before you upgrade or migrate the Cisco Unified Communications
    Manager server to 12.0 or higher releases.

2.5 Cops Installed (PASS)
    ciscocm.preUpgradeCheck-00019.cop
```

```
=====
Summary:
```

```
Total Test Run : 14
Total Passed    : 11
Total Warnings  : 2
Total Failed    : 1
```

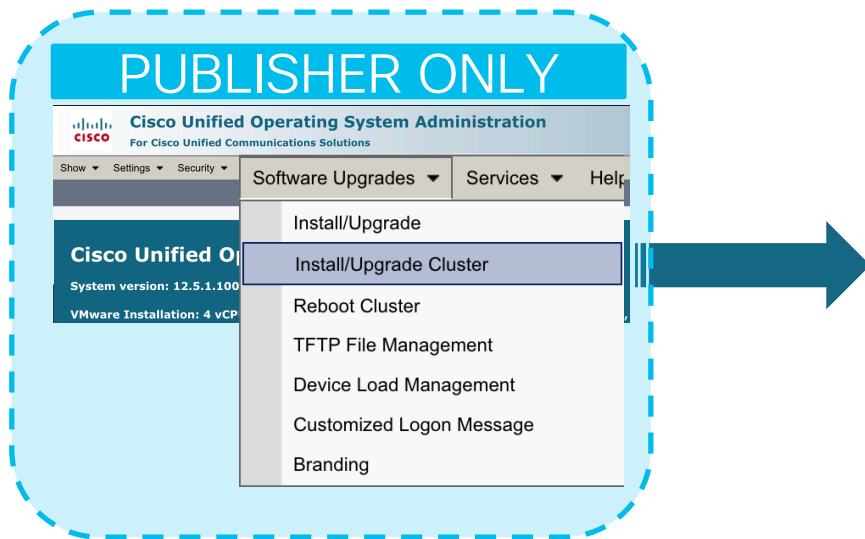
```
Note: Please refer to the readme of Pre Upgrade cop for test
details and
      pass/fail/warn/criteria
```

```
Duration for running tests: 0:03:13
=====
```


Examples of Pre-upgrade Checks (Work in Progress & subject to change)

- ✓ Check Network services/connectivity (NTP, DNS, intra-cluster)
- ✓ Check FIPS-mode password length restriction
- ✓ Check License sync vs. PLM/SLM
- ✓ Check VMware Tools version compatibility vs. destination release.
- ✓ Check enough disk space in critical locations
- ✓ Compare SIP & H.323 trunk registration status
- ✓ Check ClusterManager authentication & Database replication status of all nodes
- ✓ Check DB contains “sane” source data
- ✓ Check that DRS backup is configured, and date of last backup.
- ✓ Compare Services status
- ✓ Compare Installed COPs & Locales
- ✓ Compare Device Registration status count
- ✓ Compare CTI Endpoint registration status
- ✓ Compare Enterprise Service Parameters
- ✓ Compare TFTP Max Service Count service parameter values
- ✓ Display Active/Inactive Versions
- ✓ For destination release, suggest any COPS that should be installed or services that won't be there (e.g. deprecated endpoints)

CUCM 12.5 Simple Upgrades Install / Upgrade Cluster



- “Mini PCD lite” embedded in OS Admin
- Minimize going to all the other subscribers as previous approach

The screenshot shows the 'Software Installation/Upgrade Cluster' configuration page. At the top, there are 'Cancel' and 'Next' buttons. The 'Status' section contains a warning icon and text: 'Before upgrading the cluster Cisco recommends installing the latest Upgrade Readiness COP file. Refer to the Upgrade Guide on cisco.com for details.' Below that, it says 'Status: Ready'. The 'Software Location' section has several fields: 'Source' (Remote Filesystem), 'Directory' (/upgrade), 'Server' (ecats-uc-pcd1.cisco.com), 'User Name' (adminsftp), 'User Password' (masked), 'Transfer Protocol' (SFTP), 'SMTP Server' (outbound.cisco.com), and 'Email Destination' (makman@cisco.com). The 'Upgrade Options' section has two checkboxes: 'continue with upgrade after download' (checked) and 'switch-version cluster after upgrade(valid only for ISO)' (unchecked). The 'Local CUCM Images' and 'Local IMP Images' sections both show 'none'. At the bottom, there are 'Cancel' and 'Next' buttons.

CUCM 12.5 Simple Upgrades

One Touch Cluster wide Software Downloads

- Software Location Config is **Persistent** and **automatically shared** with all Subscriber Nodes
 - Including with IM&P Nodes
- Minimize going to all the other subscribers

PUBLISHER

Cisco Unified Operating System Administration

Software Installation/Upgrade

Status: Ready

Software Location

Source*: Remote Filesystem

Directory*: /

Server*: 10.82.66.134

User Name*: admin

User Password*: *****

Transfer Protocol*: SFTP

SMTP Server

Email Destination

SUBSCRIBER

Cisco Unified Operating System Administration

Software Installation/Upgrade

Status: Ready

Default Use download credentials from Publisher

Software Location

Use download credentials from Publisher

Source*: DVD/CD

Directory*

Server*

User Name*

User Password*

Transfer Protocol*: SFTP

SMTP Server

Email Destination

```
admin:utils system upgrade initiate
```

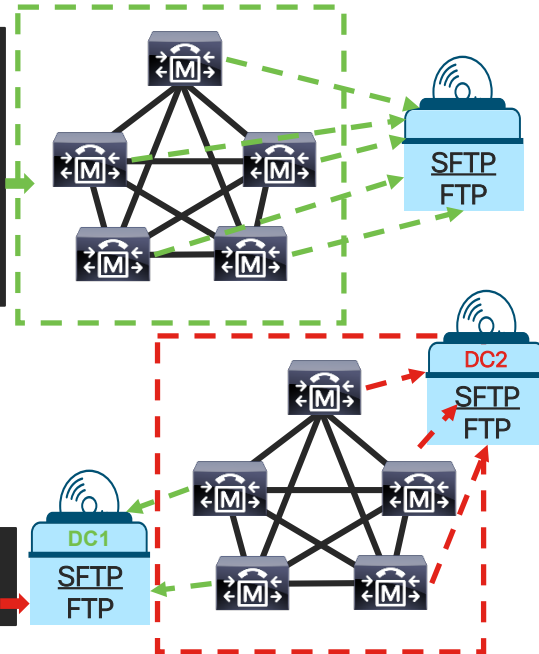
Sub ONLY

Warning: Do not close this window without first canceling the upgrade.

Warning: Before upgrading the cluster Cisco recommends installing the latest Upgrade Readiness COP file. Refer to the Upgrade Guide on cisco.com for details.

Default

Use download credentials from Publisher (yes/no) [yes]:



Pub Can NOT Overwrite

Use download credentials from Publisher (yes/no) [yes]: no

CUCM 12.5 Simple Upgrades One Touch Cluster wide Software Downloads



Cisco Unified Operating System Administration
For Cisco Unified Communications Solutions

Software Upgrades ▾ Services ▾

Install/Upgrade

Install/Upgrade Cluster

Status

⚠ A cluster upgrade is in progress. Click Assume Control to take over the installation

Assume Control

Cancel Next

Status

⚠ Before upgrading the cluster Cisco recommends installing the latest Upgrade Readiness COP file. Refer to the Upgrade Guide on cisco.com

ℹ Status: Ready

Software Location

Source* Remote Filesystem

Directory* /upgrade

Server* 10.10.52.12

User Name* adminstft

User Password*

Transfer Protocol* SFTP

SMTP Server outbound.cisco.com

Email Destination baha@cisco.com

Upgrade Options

continue with upgrade after download

switch-version cluster after upgrade(valid only for ISO)

Local CUCM Images

none

Cancel Next **1** →

Software Installation/Upgrade Cluster

Cancel Next

Status

⚠ Warning: To ensure the integrity of the installation file, please verify the MD5 hash value against the Cisco Systems web site

⚠ Warning: To ensure the integrity of the installation file, please verify the SHA512 value against the Cisco Systems web site

⚠ Warning: You may need to stop some services before you install a locale. You may then restart those services after you complete the locale installation. Refer to your product-specific online help for locale installation details.

File Checksum Details

File Name	cisocm.preUpgradeCheck-00019.cop.sgn
MD5 Hash Value	1b:d4:f7:54:19:85:bd:bf:5a:ff:84:bf:9d:6b:e5:06
SHA512 Hash Value	e9e1d673380ea1d105b81a9e9435def1b711c87c32c8ee4fc3089347232ac43138fe8e7c300d945a53667d1f4a9a560991029a6ceb2b61bae43a8fc3b01bed2

Cancel Next

⚠ DO NOT CLICK CANCEL OR NEXT

vzlit-sme-sub04.sdc.vzwcorp.com	Processing download request	Download complete
vzlit-sme-sub08.sdc.vzwcorp.com	Processing download request	Download complete
vzlit-sme-sub05.tdc.vzwcorp.com	Processing download request	Download complete
vzlit-sme-sub01.tdc.vzwcorp.com	Processing download request	Download complete
vzlit-sme-sub12.sdc.vzwcorp.com	Processing download request	Download complete
vzlit-sme-sub10.sdc.vzwcorp.com	Processing download request	Download complete
vzlit-sme-sub09.odc.vzwcorp.com	Processing download request	Download complete

Software Installation/Upgrade Cluster

Cancel

Download File

CUCM File cisocm.preUpgradeCheck-00019.cop.sgn

Directory /upgrade

Server 10.10.52.12

User Name adminstft

Download Status

Cancel

Status

ℹ Status: Ready

Software Location

CUCM Options/Upgrades* Do not upgrade UCM nodes

cisocm.preUpgradeCheck-00019.cop.sgn

Show Invalid Upgrades

Cancel Next **2**

Uncheck and Continue...

Select COP or ISO to Download

1

2

5

4

3

CUCM 12.5 Simple Upgrades One Touch Cluster wide Install / Upgrade

Cisco Unified Operating System Administration
For Cisco Unified Communications Solutions

Software Upgrades ▾ Services ▾ Help

Software Installation/Upgrade Cluster

Cancel Next

Install/Upgrade

Install/Upgrade Cluster

Status

Before upgrading the cluster Cisco recommends installing the latest Upgrade Readiness COP file. Refer to the Upgrade Guide on cisco.com for details.

Status: Ready

Software Location

Source* Remote Filesystem

Directory* /upgrade

Server* ecats-uc-pcd1.cisco.com

User Name* adminstfp

User Password*

Transfer Protocol* SFTP

SMTP Server outbound.cisco.com

Email Destination makman@cisco.com

Upgrade Options

continue with upgrade after download

switch-version cluster after upgrade(valid only for ISO)

Local CUCM Images

none

Local IMP Images

none

Cancel Next **1**

Software Installation/Upgrade Cluster

Cancel Next

Status

Status: Ready

Software Location

CUCM Options/Upgrades* UCSInstall_UCOS_12.5.1.10000-22.sgn.iso

IMP Options/Upgrades* Do not upgrade IMP nodes

Show Invalid Upgrades

Cancel Next **2**

ucs-installer@cisco.com
Upgrade (L2) UCM 12.5.1.10000-22 Success -- vnt-cm1b.cisco.com 1/16/19
11 KB
This message has no content.

You Can Choose to NOT Install /Upgrade IM&P/ CUCM Cluster

Software Installation/Upgrade Cluster

Cancel

Installation Status

CUCM File UCSInstall_UCOS_12.5.1.10000-22.sgn.iso

IMP File UCSInstall_CUP_12.5.1.10000-22.sgn.iso

Start Time Sun Jan 13 19:15:27 UTC 2019

Status Installing the file

ALL NODES execute in Parallel

Average Time To complete from Past Installs

Installation Log

Node	Role	Step	Description	Historical Time to Complete**
ecats-cups1a.cisco.com	IM&P Publisher	3/21	setup	00:00:58
ecats-cups1b.cisco.com	IM&P Subscriber	3/21	setup	00:00:58
vnt-cm1b.cisco.com	CUCM Subscriber	3/22	setup	00:01:15
vnt-cm1a.cisco.com	CUCM Publisher	3/22	setup	00:01:15
vnt-cm1c.cisco.com	CUCM Subscriber	3/22	setup	00:01:15
Cluster				Overall Upgrade Process
				04:30:22

Cancel **5**

Software Installation/Upgrade Cluster

Cancel

Status

Downloading the file

Download File

CUCM File UCSInstall_UCOS_12.5.1.10000-22.sgn.iso

IMP File UCSInstall_CUP_12.5.1.10000-22.sgn.iso

Directory /upgrade

Server ecats-uc-pcd1.cisco.com

User Name adminstfp

Download Status

Downloading..1461Mb of 2747Mb

Checksumming the file...

Checksumming the file...

Downloading..4102Mb of 4102Mb

Download complete

Node Details

Node	Download Status
ecats-cups1a.cisco.com	Processing download request
ecats-cups1b.cisco.com	Processing download request
vnt-cm1b.cisco.com	Processing download request
vnt-cm1a.cisco.com	Processing download request
vnt-cm1c.cisco.com	Processing download request

Cancel **3**

4



CUCM 12.5 Simple Upgrades One Touch Cluster wide Install / Upgrade Cont...

Software Installation/Upgrade Cluster

Cancel 5

Installation Status

CUCM File UCSInstall_UCOS_12.5.1.10000-22.sgn.iso
 IMP File UCSInstall_CUP_12.5.1.10000-22.sgn.iso
 Start Time Sun Jan 13 19:15:27 UTC 2019
 Status Installing the file

Software Installation/Upgrade Cluster

Installation Status 6

CUCM File UCSInstall_UCOS_12.5.1.10000-22.sgn.iso
 IMP File UCSInstall_CUP_12.5.1.10000-22.sgn.iso
 Start Time Wed Jan 16 12:22:45 UTC 2019
 Status Upgrade Successful

Installation Log

Node	Role	Step	Description	Historical Time to Complete**	Time Elapsed
ecats-cups1a.cisco.com	IM&P Publisher	5/21	buildRpmInventory	00:02:03	00:00:21
ecats-cups1b.cisco.com	IM&P Subscriber	6/21	installIOS	00:00:09	00:00:51
vnt-cm1b.cisco.com	CUCM Subscriber	6/22	installIOS	00:00:21	05:01:14
vnt-cm1a.cisco.com	CUCM Publisher	6/22	installIOS	00:00:21	05:00:05
vnt-cm1c.cisco.com	CUCM Subscriber	6/22	installIOS	00:00:21	05:01:30
Cluster			Overall Upgrade Process	04:30:22	05:05:12



- Upgrades are kicked off in Parallel on ALL NODES
- DB Replication is Setup on inactive
- CUCM → IM&P Sync on inactive

Cancel

Installation Log

Node	Role	Step	Description	Historical Time to Complete**	Time Elapsed
ecats-cups1a.cisco.com	IM&P Publisher	6/21	installIOS	00:00:09	00:04:06
ecats-cups1b.cisco.com	IM&P Subscriber	7/21	preparePartition	00:04:40	00:00:24
vnt-cm1b.cisco.com	CUCM Subscriber	6/22	installIOS	00:00:21	05:07:26
vnt-cm1a.cisco.com	CUCM Publisher	6/22	installIOS	00:00:21	05:06:18
vnt-cm1c.cisco.com	CUCM Subscriber	7/22	preparePartition	00:43:12	05:00:51
Cluster			Overall Upgrade Process	04:30:22	05:11:24

Cancel

Installation Log

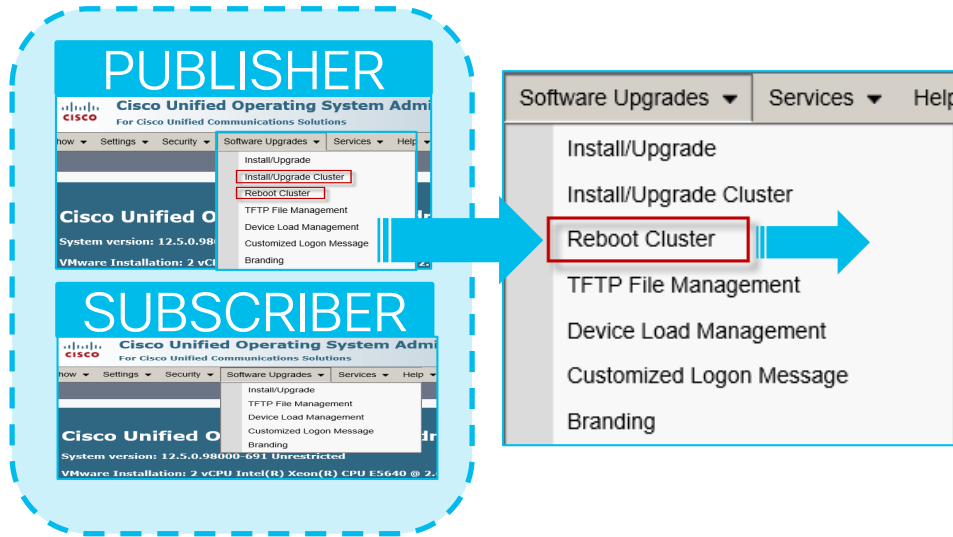
Node	Role	Step	Description	Historical Time to Complete**	Time Elapsed
ecats-cups1a.cisco.com	IM&P Publisher	15/21	Waiting on UCM_PUB/final	03:46:19	00:19:57
ecats-cups1b.cisco.com	IM&P Subscriber	15/21	Waiting on IMP_PUB/final	03:46:19	00:25:30
vnt-cm1b.cisco.com	CUCM Subscriber	15/22	Waiting on UCM_PUB/final	00:34:20	05:27:37
vnt-cm1a.cisco.com	CUCM Publisher	15/22	databaseInstall	00:34:20	05:16:10
vnt-cm1c.cisco.com	CUCM Subscriber	15/22	Waiting on UCM_PUB/final	00:34:20	05:29:24
Cluster			Overall Upgrade Process	04:30:22	05:58:37

Cancel

Installation Log

Node	Role	Step	Description	Historical Time to Complete**	Time Elapsed
ecats-cups1a.cisco.com	IM&P Publisher	-	Upgrade complete	04:26:40	03:50:13
ecats-cups1b.cisco.com	IM&P Subscriber	-	Upgrade complete	06:12:31	05:24:01
vnt-cm1b.cisco.com	CUCM Subscriber	-	Upgrade complete	04:21:59	03:50:14
vnt-cm1a.cisco.com	CUCM Publisher	-	Upgrade complete	02:44:04	07:27:18
vnt-cm1c.cisco.com	CUCM Subscriber	-	Upgrade complete	04:19:14	03:48:12
Cluster			Overall Upgrade Process	06:12:31	07:27:18

CUCM 12.5 Simple Upgrades Reboot (Restart / Switchover) Cluster



The screenshot shows the 'Reboot Cluster Settings' configuration page. At the top, there are buttons for 'Cancel', 'Save', 'Reset', 'Restart', and 'SwitchVersion'. Below this is a table with columns for 'Skip', 'Server', 'Role', and eight 'Batch' columns (Batch1 to Batch8). The table lists several servers and their roles, with progress bars indicating the status of each batch. A hand icon is shown over the Batch4 column, indicating a mouse click. Below the table, there are sections for 'CUCM Installed Versions' and 'IM&P Installed Versions', each showing 'Active Version' and 'Inactive Version'.

Skip	Server	Role	Batch1	Batch2	Batch3	Batch4	Batch5	Batch6	Batch7	Batch8
<input type="checkbox"/>	vnt-cm1a.cisco.com	CUCM Publisher	Progress bar							
<input type="checkbox"/>	ecats-cups1a.cisco.com	IM&P Publisher		Progress bar						
<input type="checkbox"/>	vnt-cm1b.cisco.com	CUCM Subscriber			Progress bar					
<input type="checkbox"/>	vnt-cm1c.cisco.com	CUCM Subscriber				Progress bar				
<input type="checkbox"/>	ecats-cups1b.cisco.com	IM&P Subscriber					Progress bar			

CUCM Installed Versions
 Active Version 12.5.1.10000-21
 Inactive Version 12.5.1.10000-22

IM&P Installed Versions
 Active Version 12.5.1.10000-19
 Inactive Version 12.5.1.10000-22

Buttons: Cancel, Save, Reset, Restart, SwitchVersion

- Use OS Admin on Publisher to initiate cluster Restart or Switch Version
- Minimize going to all the other subscribers as previous approach

CUCM 12.5 Simple Upgrades Reboot (Restart / Switchover) Cluster Cont...

Reboot Cluster Settings

Cancel Save Reset Restart SwitchVersion

Reboot Cluster Settings

Skip	Server	Role	Batch1	Batch2	Batch3	Batch4	Batch5	Batch6	Batch7	Batch8	Status
<input type="checkbox"/>	vnt-cm1a.cisco.com	CUCM Publisher									
<input type="checkbox"/>	ecats-cups1a.cisco.com	IM&P Publisher									
<input type="checkbox"/>	vnt-cm1b.cisco.com	CUCM Subscriber									
<input type="checkbox"/>	vnt-cm1c.cisco.com	CUCM Subscriber									
<input type="checkbox"/>	ecats-cups1b.cisco.com	IM&P Subscriber									

CUCM Installed Versions
Active Version 12.5.1.10000-21
Inactive Version 12.5.1.10000-22

IM&P Installed Versions
Active Version 12.5.1.10000-19
Inactive Version 12.5.1.10000-22

Cancel Save Reset Restart SwitchVersion

1

Adjust Batches To Minimize Dial-Tone Outage

Status
Switch complete
Switch complete
Switch complete
Switch complete
Switch complete
Switch complete

↑

Status
Switch complete
Switch inProgress
Switch inProgress
Switch inProgress

↑

2

You are about to switch versions.

If you are downgrading this cluster to an earlier release level, you must run the command "utils dbreplication reset all" from the publisher after all the nodes are switched over.

Continue?

Cancel OK

Reboot Cluster Settings

Cancel

Reboot Cluster Settings

Skip	Server	Role	Batch1	Batch2	Batch3	Batch4	Batch5	Batch6	Batch7	Batch8	Status
<input type="checkbox"/>	vnt-cm1a.cisco.com	CUCM Publisher									Switch started
<input type="checkbox"/>	ecats-cups1a.cisco.com	IM&P Publisher									
<input type="checkbox"/>	vnt-cm1b.cisco.com	CUCM Subscriber									
<input type="checkbox"/>	vnt-cm1c.cisco.com	CUCM Subscriber									
<input type="checkbox"/>	ecats-cups1b.cisco.com	IM&P Subscriber									

Need to Log Back After Publisher

↑

CUCM 12.5 SU1 Export Controlled Functionality

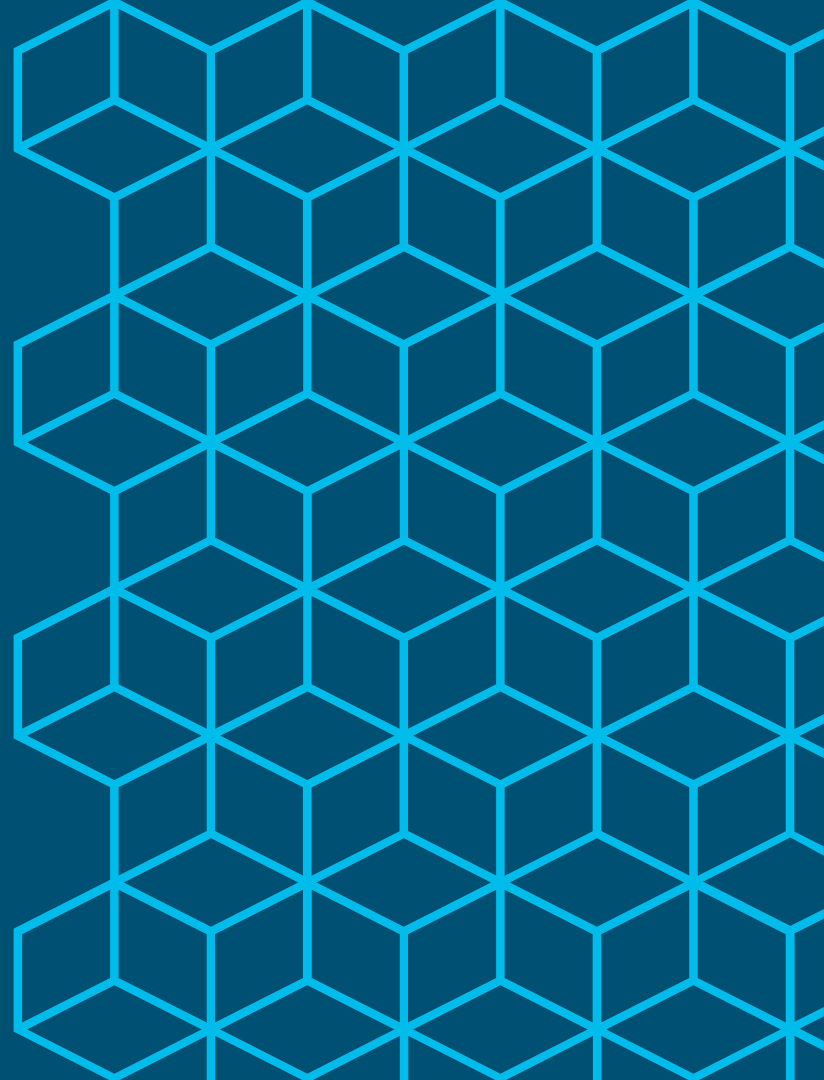


- Encryption with CUCM in Mixed Mode
- CLI only for request for Export Authorization key for CSSM, SLR and satellite deployment

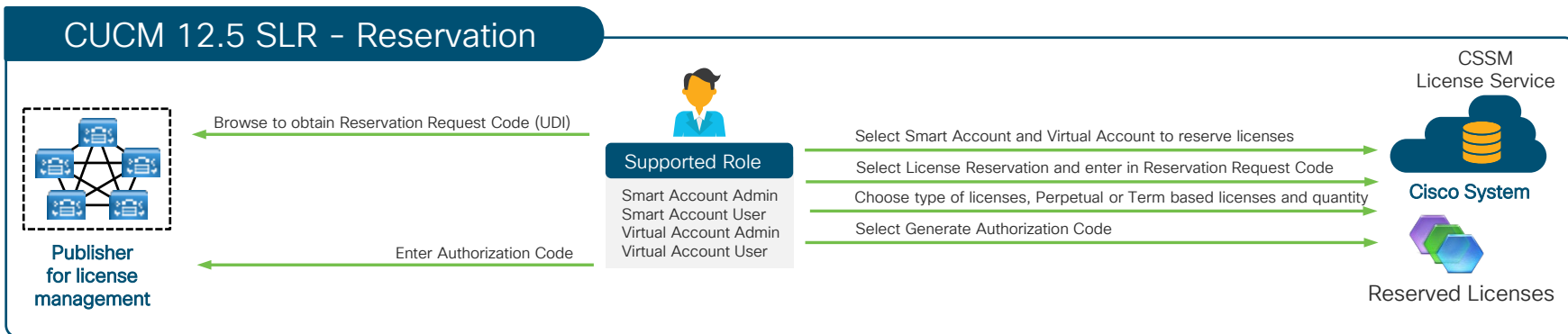
Smart Software Licensing	
Registration Status	<input checked="" type="checkbox"/> Registered
License Authorization Status	<input checked="" type="checkbox"/> No Licenses in Use
Smart Account	Cisco Export Testing
Virtual Account	DEFAULT
Product Instance Name	CUCM-99
Export-Controlled Functionality	Not Allowed
Export Restricted Authorization Key	<input checked="" type="checkbox"/>
Transport Settings	Direct View/Edit the Licensing Smart Call Home settings
Licensing Mode	Enterprise

Smart Account Export Control	CUCM Version	CUCM Release	CUCM Smart Software Licensing
Allowed	Restricted	Any	Export Controlled Functionality
Not Allowed	Unrestricted	7.1(5)-current	
Not Allowed	Restricted	≥12.5(1) SU1	Export Restricted Authorization Key

CUCM 12.5 SLR (Specific License Reservation) Process with Smart Licensing



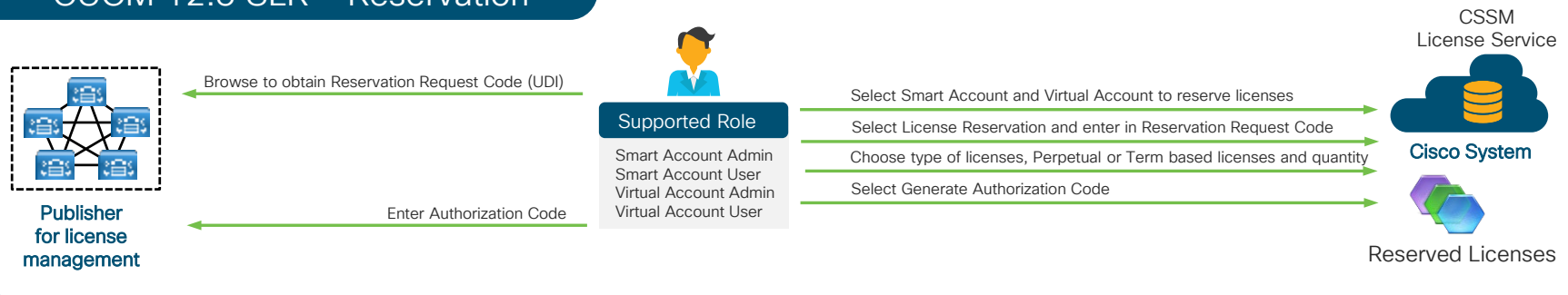
Specific License Reservation with CUCM 12.5



- Specify and reserve Perpetual or Term based licenses on CSSM for CUCM 12.5 or later
- For highly secure network which does not requires regular sync to CSSM
- Reserved Licenses remained effectively reserved in CSSM until CUCM generate a Reservation Return Code (return the SLR authorization for the product)
- Reserved Licenses in CSSM can be transferred across Virtual Account as needed
- Must not have a CSSM Satellite associated with the Virtual Account (VA)
 - Create a new VA and transfer the Reserved Licenses over

Specific License Reservation with CUCM 12.5

CUCM 12.5 SLR - Reservation



```
admin:license smart reservation
```

```
license smart reservation cancel
```

```
license smart reservation disable
```

```
license smart reservation enable
```

```
license smart reservation install
```

```
license smart reservation install-file
```

```
license smart reservation request
```

```
license smart reservation return
```

```
license smart reservation return-authorization
```

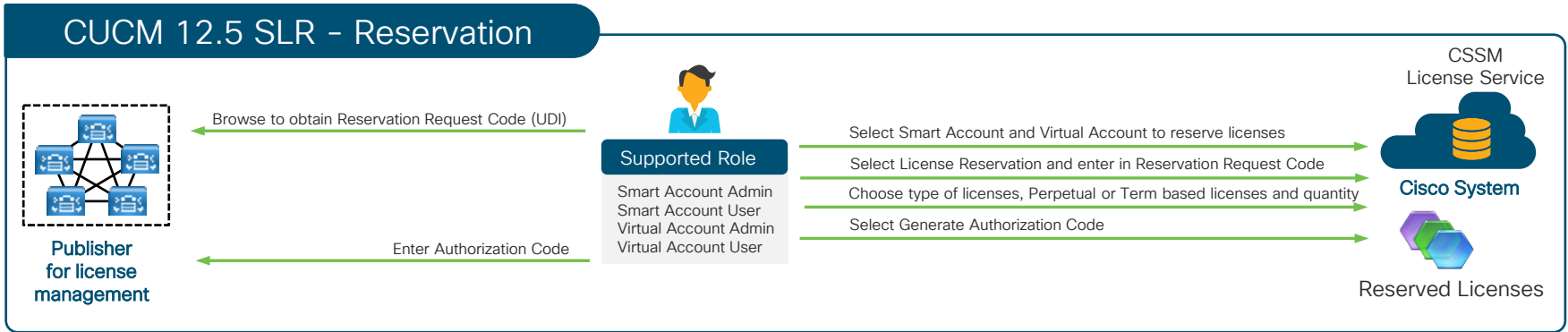
```
admin:license smart reservation request
```

Enter the following reservation request code into the CSSM:

```
CB-PUCM,Sb7ea9,U3df2a864-359b-4ace-b69e-f13bd5db7ea9-ByfcZS8rN-BA
```

```
admin:
```

Specific License Reservation with CUCM 12.5



Cisco Software Central > Smart Software Licensing

Smart Software Licensing

Alerts | Inventory | Convert to Smart Licensing | Reports | Preferences | Satellites | Activity

Virtual Account: SVS_UC

General | Licenses | Product Instances | Event Log

Available Actions | Manage License Tags | License Reservation...

Smart License Reservation

STEP 1

Enter Request Code

STEP 2

Select Licenses

STEP 3

Review and confirm

STEP 4

Authorization Code

You can reserve licenses for product instances that cannot connect to the Internet for security reasons. You will begin by generating a Reservation Request Code from the product instance. To learn how to generate this code, see the configuration guide for the product being licensed.

Once you have generated the code:

- 1) Enter the Reservation Request Code below
- 2) Select the licenses to be reserved
- 3) Generate a Reservation Authorization Code
- 4) Enter the Reservation Authorization Code on the product instance to activate the features

* Reservation Request Code:

CB-PUCM.Sb77ea9.U3df2a864-359b-4ace-b69e-113bd5db7ea9-ByfcZS8rN-BA

Browse

Upload

To learn how to enter this code, see the configuration guide for the product being licensed

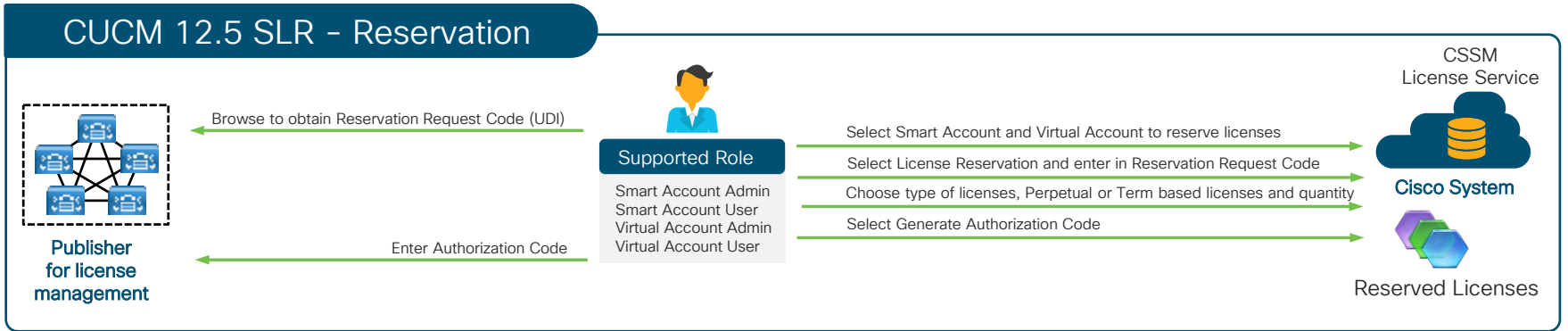
Cancel

Next

173

CISCO Live!

Specific License Reservation with CUCM 12.5



Smart License Reservation



Product Instance Details

Product Type: UCL
 UDI PID: UCM
 UDI Serial Number: b7ea9
 UUID: 3df2a864-359b-4ace-b69e-f13bd5db7ea9

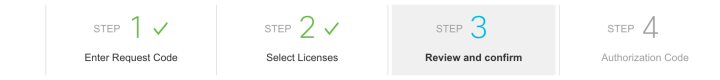
Licenses to Reserve

In order to continue, ensure that you have a surplus of the licenses you want to reserve in the Virtual Account.

Reserve a specific license

License	Description	Expires	Available	Quantity To Reserve
UC Manager Enhanced Plus License (12.x)	UC Manager Enhanced Plus License	- never -	10000	100

Smart License Reservation



Product Instance Details

Product Type: UCL
 UDI PID: UCM
 UDI Serial Number: b7ea9
 UUID: 3df2a864-359b-4ace-b69e-f13bd5db7ea9

Licenses to Reserve

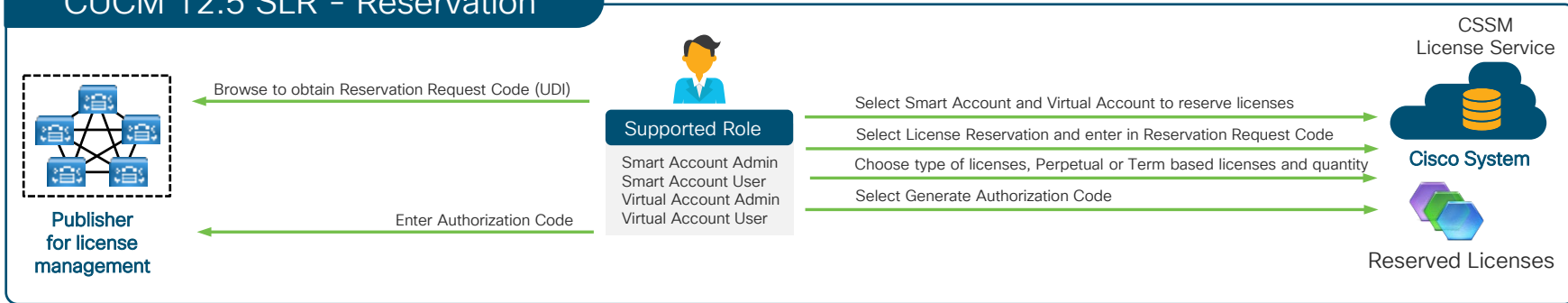
License	Description	Expires	Quantity To Reserve
UC Manager Enhanced Plus License (12.x)	UC Manager Enhanced Plus License	- never -	100

Cancel Back **Next**

Cancel Back **Generate Authorization Code**

Specific License Reservation with CUCM 12.5

CUCM 12.5 SLR - Reservation



Smart License Reservation



The Reservation Authorization Code below has been generated for this product instance. Enter this code into the Smart Licensing settings for the product, to enable the licensed features.

Product Instance Details

Product Type: UCL
 UDI PID: UCM
 UDI Serial Number: b7ea9
 UUID: 3df2a864-359b-4ace-b69e-f13bd5db7ea9

Authorization Code:

```
<specificPLR><authorizationCode><flag>A</flag><version>C</version><pii>aa7fc4e5-bf4a-4bd3-af39-4da4acb62456</pii><timestamp>1547588948244</timestamp><entitlements><entitlement><tag>regid.2016-07.com.cisco.UCM_EnhancedPlus.12.0_d8372792-588c-4caa-b279-8587e5ce2f82</tag><count>100</count><startDate></startDate><endDate></endDate><licenseType>PERPETUAL</licenseType><displayName>UC Manager Enhanced Plus License (12.x)</displayName><tagDescription>UC Manager Enhanced Plus License</tagDescription><subscriptionID></subscriptionID></entitlement></entitlements></authorizationCode><signature>MEYCIQCVID7KWRffz73RxVnHf4Z87ShF4YcTlFK5CWkCvF1ojglhANhOXGnflD6+O4orvFibslZ2GxBiRzk/Hbz5+LWQQXx</signature><udi>P:UCM,S:b7ea9,U:3df2a864-359b-4ace-b69e-f13bd5db7ea9</udi></specificPLR>
```

To learn how to enter this code, see the configuration guide for the product being licensed

admin:license smart reservation install

```
"<specificPLR><authorizationCode><flag>A</flag><version>C</version><pii>aa7fc4e5-bf4a-4bd3-af39-4da4acb62456</pii><timestamp>1547588948244</timestamp><entitlements><entitlement><tag>regid.2016-07.com.cisco.UCM_EnhancedPlus.12.0_d8372792-588c-4caa-b279-8587e5ce2f82</tag><count>100</count><startDate></startDate><endDate></endDate><licenseType>PERPETUAL</licenseType><displayName>UC Manager Enhanced Plus License (12.x)</displayName><tagDescription>UC Manager Enhanced Plus License</tagDescription><subscriptionID></subscriptionID></entitlement></entitlements></authorizationCode><signature>MEYCIQCVID7KWRffz73RxVnHf4Z87ShF4YcTlFK5CWkCvF1ojglhANhOXGnflD6+O4orvFibslZ2GxBiRzk/Hbz5+LWQQXx</signature><udi>P:UCM,S:b7ea9,U:3df2a864-359b-4ace-b69e-f13bd5db7ea9</udi></specificPLR>"
```

Authorization code installed successfully.
 admin:

Smart Software Licensing

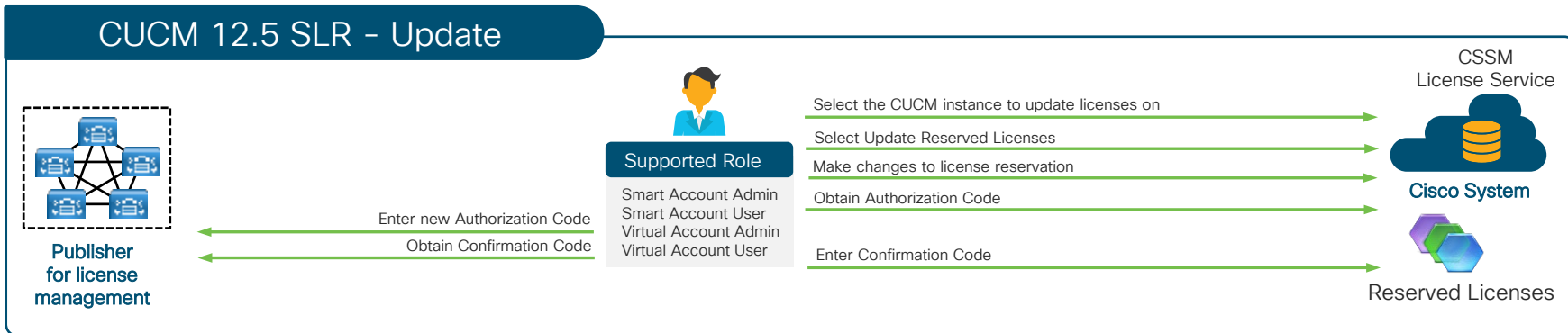
Registration Status **Registered - Specific License Reservation**
 (Tuesday, January 15, 2019 4:52:15 PM EST)

License Authorization Status **Authorized - Reserved** (Tuesday, January 15, 2019 4:52:15 PM EST)

Export-Controlled Functionality Licensing Mode Allowed Enterprise

Download as File Copy to Clipboard Close

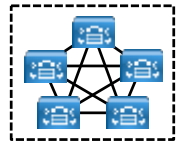
Specific License Reservation with CUCM 12.5



- Change in reserved licenses (increase or decrease) can be done on previous reserved licenses in CSSM
- The new updated license reservation is effectively reserved in CSSM as soon as Authorization Code is generated
- If new updated license reservation is a decrease in quantity, then a Confirmation Code is required to reduce

Specific License Reservation with CUCM 12.5

CUCM 12.5 SLR - Reduction



Publisher
for license
management

Enter new Authorization Code
Obtain Confirmation Code



Supported Role

Smart Account Admin
Smart Account User
Virtual Account Admin
Virtual Account User

Select the CUCM instance to update licenses on

Select Update Reserved Licenses

Make changes to license reservation

Obtain Authorization Code

Enter Confirmation Code

CSSM
License Service



Cisco System



Reserved Licenses

Cisco Software Central > Smart Software Licensing

English [Change] Hello, Mustafa Akman Cisco Demo Customer Smart Account

Smart Software Licensing

Alerts | Inventory | Convert to Smart Licensing | Reports | Preferences | Satellites | Activity

Virtual Account: SVS_UC

UC Manager Enhanced Plus License (12.x) in Virtual Account SVS_UC

Product Instance	Product Type	Licenses used
UDI_PID:UCM; UDI_SN:b7ea9;	UCL	101

Showing 1 Record

General Licenses Product Instances Event Log

Available Actions

Manage License Tags

License Reservation...

Show License Transactions

UC Manager

Advanced Search

License	Billing	Purchased	In Use	Balance	Alerts	Actions
UC Manager Enhanced Plus License (12.x)	Prepaid	10000	101 (101 Reserved)	+ 9899		Actions

Showing 1 Record

```
admin:show license UDI
```

```
UDI: PID:UCM,SN:b7ea9,UUID:3df2a864-359b-4ace-b69e-f13bd5db7ea9  
admin:
```

Specific License Reservation with CUCM 12.5

CUCM 12.5 SLR - Reduction

UDI_PID:UCM; UDI_SN:b7ea9;

Overview

Event Log

Description

Unified Communication Manager

General

Name: UDI_PID:UCM; UDI_SN:b7ea9;
Product: Unified Communication Manager (12.0)
Host Identifier: -
MAC Address: -
PID: UCM
Serial Number: b7ea9
UUID: 3df2a864-359b-4ace-b69e-f13bd5db7ea9
Virtual Account: SVS_UC
Registration Date: 2019-Jan-15 21:49:08
Last Contact: 2019-Jan-15 22:08:53 (Reserved Licenses) - [Download Reservation Authorization Code](#)

License Usage

These licenses are reserved on this product instance [Update](#)

License	Billing	Expires	Required
UC Manager Enhanced Plus License (12.x)	Prepaid	-	101

Showing all 1 Rows

Update License Reservation

STEP 1

Select Licenses

STEP 2

Review and confirm

STEP 3

Authorization Code

Product Instance Details

Product Type: UCL
UDI PID: UCM
UDI Serial Number: b7ea9
UUID: 3df2a864-359b-4ace-b69e-f13bd5db7ea9

Licenses to Reserve

Select the licenses to be reserved for this product instance.

License	Description	Expires	Available	Quantity To Reserve
UC Manager Enhanced Plus License (12.x)	UC Manager Enhanced Plus License	- never -	10000	90

If the quantity is reduced from the number currently reserved, the unreserved licenses will become available in the inventory, once the confirmation code is returned from the product instance.

Cancel Next

Transfer..

Update Reserved Licenses...

Remove..

Actions

2

4

1

Specific License Reservation with CUCM 12.5

CUCM 12.5 SLR - Reduction

Update License Reservation

STEP 1 ✓ Select Licenses

STEP 2 Review and confirm

STEP 3 Authorization Code

Product Instance Details

Product Type: UCL
UDI PID: UCM
UDI Serial Number: b7ea9
UUID: 3df2a864-359b-4ace-b69e-f13bd5db7ea9

Licenses to Reserve

Licenses to Reserve

Review the licenses to be reserved for this product instance.

License	Description	Expires	Quantity To Reserve
UC Manager Enhanced Plus License (12.x)	UC Manager Enhanced Plus License	- never -	90

1

Cancel Back **Generate Authorization Code**

Update License Reservation

STEP 1 ✓ Select Licenses

STEP 2 ✓ Review and confirm

STEP 3 Authorization Code

- ✓ The Reservation Authorization Code below has been generated for this product instance. Several steps remain:
- This code must be entered into the Product Instance's Smart Licensing settings to complete the reservation.
 - When the code has been entered, a Reservation Confirmation Code will be generated.
 - To release licenses in transition, enter confirmation code generated by device into CSSM.

Authorization Code:

```
<specificPLR><authorizationCode><flag>A</flag><version>C</version><pid>aa7fc4e5-bf4a-4bd3-af39-4da4acb62456</pid><timestamp>1547663457265</timestamp><entitlements><entitlement><tag>regid.2016-07.com.cisco.UCM_EnhancedPlus,12.0_d8372792-588c-4caa-b279-8587e5ce2f82</tag><count>90</count><startDate></startDate><endDate></endDate><licenseType>PERPETUAL</licenseType><displayName>UC Manager Enhanced Plus License (12.x)</displayName><tagDescription>UC Manager Enhanced Plus License</tagDescription><subscriptionID></subscriptionID></entitlement></entitlements></authorizationCode><signature>MEUCIQD/gdOjeGp3aEjtuXvd1hzodGkWqIDCUXr+dv3KqAL6fwlgeROJrDuf9D2Ea1ZBlginaGdaKwuKYpWS1yodqyZmPSY=</signature><udi>P:UCM,S:b7ea9,U:3df2a864-359b-4ace-b69e-f13bd5db7ea9</udi></specificPLR>
```

To learn how to enter this code, see the configuration guide for the product being licensed

2

Download as File Copy to Clipboard **Enter Confirmation Code** Close

4

Enter Confirmation Code

To complete the pending License Reservation, enter the Reservation Confirmation Code that was generated by the Product Instance after the Reservation Authorization Code was installed.

• Reservation Confirmation Code:

6a604579

Browse Upload

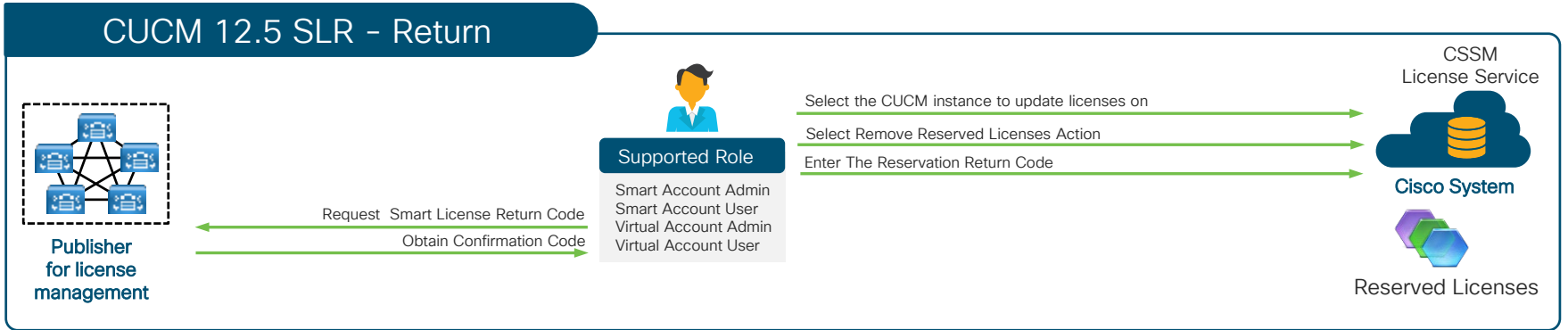
Cancel **OK**

5

```
admin:license smart reservation install  
"<specificPLR><authorizationCode><flag>A</flag><version>C</version><pid>aa7fc4e5-bf4a-4bd3-af39-4da4acb62456</pid><timestamp>1547663457265</timestamp><entitlements><entitlement><tag>regid.2016-07.com.cisco.UCM_EnhancedPlus,12.0_d8372792-588c-4caa-b279-8587e5ce2f82</tag><count>90</count><startDate></startDate><endDate></endDate><licenseType>PERPETUAL</licenseType><displayName>UC Manager Enhanced Plus License (12.x)</displayName><tagDescription>UC Manager Enhanced Plus License</tagDescription><subscriptionID></subscriptionID></entitlement></entitlements></authorizationCode><signature>MEUCIQD/gdOjeGp3aEjtuXvd1hzodGkWqIDCUXr+dv3KqAL6fwlgeROJrDuf9D2Ea1ZBlginaGdaKwuKYpWS1yodqyZmPSY=</signature><udi>P:UCM,S:b7ea9,U:3df2a864-359b-4ace-b69e-f13bd5db7ea9</udi></specificPLR>"  
Please enter the confirmation code to CSSM account: 6a604579  
admin:
```

3

Specific License Reservation with CUCM 12.5



```
admin:license smart reservation return
```

This command will remove the license reservation authorization code and the device will transition back to the unregistered state. Some features may not function properly. Are you sure you wish to continue

Continue (y/n)?y
 Enter the following reservation return code into the CSSM:
 CegDLb-mjRzWD-ft3peY-kkrexh-yPcQ7N-2ZjekX-FQ3KTz-hsTBZn-xMo
 admin:

UC Manager Enhanced Plus License (12.x) in Virtual Account SVS_UC

Product Instance	Product Type	Licenses used
UDI_PID:UCM; UDI_SN:b7ea9	UCL	90

Showing 1 Record

UDI_PID:UCM; UDI_SN:b7ea9;

Remove Product Instance

To remove a Product Instance that has reserved licenses and make those licenses once again available to other Product Instances, enter in the Reservation Return Code generated by the Product Instance. If you cannot generate a Reservation Return Code, contact [Cisco Support](#)

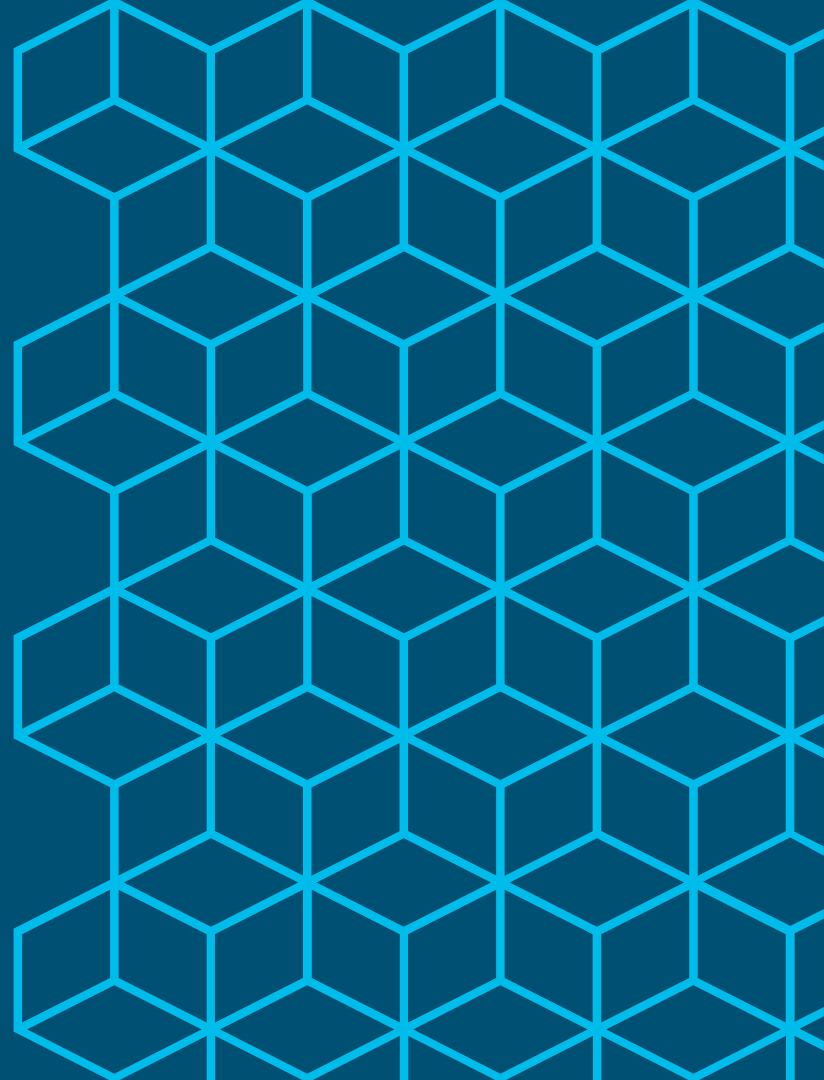
Reservation Return Code: CegDLb-mjRzWD-ft3peY-kkrexh-yPcQ7N-2ZjekX-FQ3KTz-hsTBZn-xMo

Remove Product Instance Cancel

Product Instance was successfully removed



PCD Features

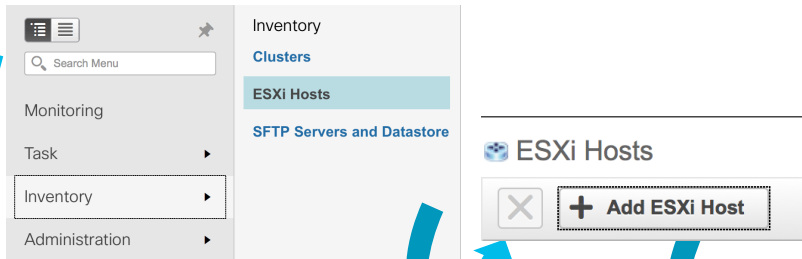
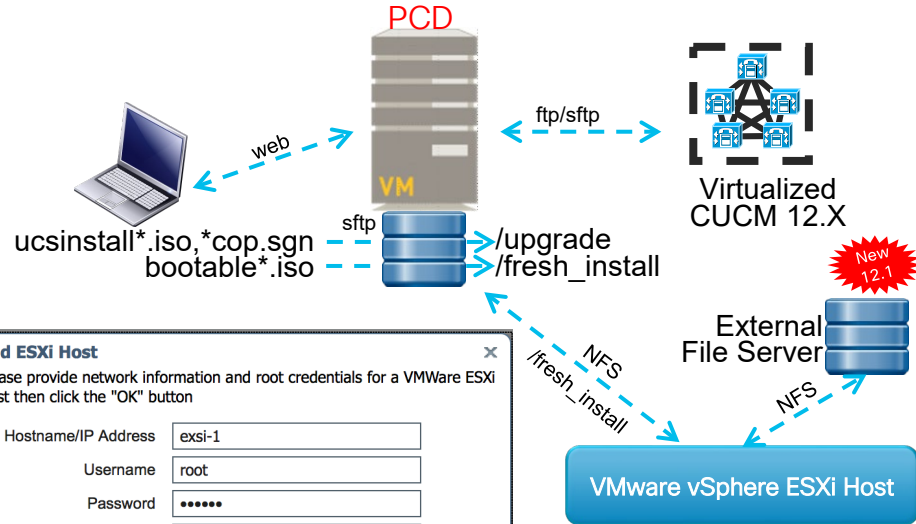


PCD Features Overview

- PCD and VMware ESXi communication
 - ESXi host **root credential no longer required**
 - w/ PCD 11.5(2) Host and Virtual Machine privileges are sufficient
 - NFS mounts PCD /fresh_install directory
 - ESXi API Support Required 5.5,6.0,6.5
 - ESXi License Requirements
 - Data center or server team coordination

View: Datasets Devices

Datasets	
Identification	Device
dataset1	Local LSI Disk (naa.60030130f09000001ae2452c...)
dataset2	Local LSI Disk (naa.60030130f09000001ae2452c...)
pcd-10-83-113-237_NFS (read only)	10.83.113.237:/common/adminsftp/fresh_install/



Add ESXi Host

Please provide network information and root credentials for a VMWare ESXi Host then click the "OK" button

Hostname/IP Address

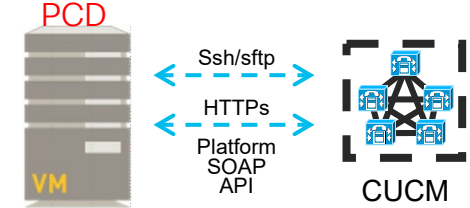
Username

Password

Description (optional)

PCD Features Overview Cont.

- PCD and CUCM communication
 - CUCM OS admin credentials required
 - PCD Installs ciscocm.ucmap_platformconfig.cop during Discovery and certain PCD Tasks such as Migration / Data Export
 - Platform SOAP API for certain PCD Tasks such as Restart, Upgrade, Switch Version
 - Requires Platform SOAP Services to be activated on CUCM 8.6 on all Nodes



CISCO Live!

Discover Cluster

Step 1 of 3

Cluster Access

Provide a unique cluster nickname and the network information for the cluster publisher. If a CUCM/IM&P cluster, use the CUCM Publisher. The node will be contacted to identify the other nodes in the cluster.

Choose a Nickname for this Cluster

Hostname/IP Address of Cluster Publisher

OS Admin Username

OS Admin Password

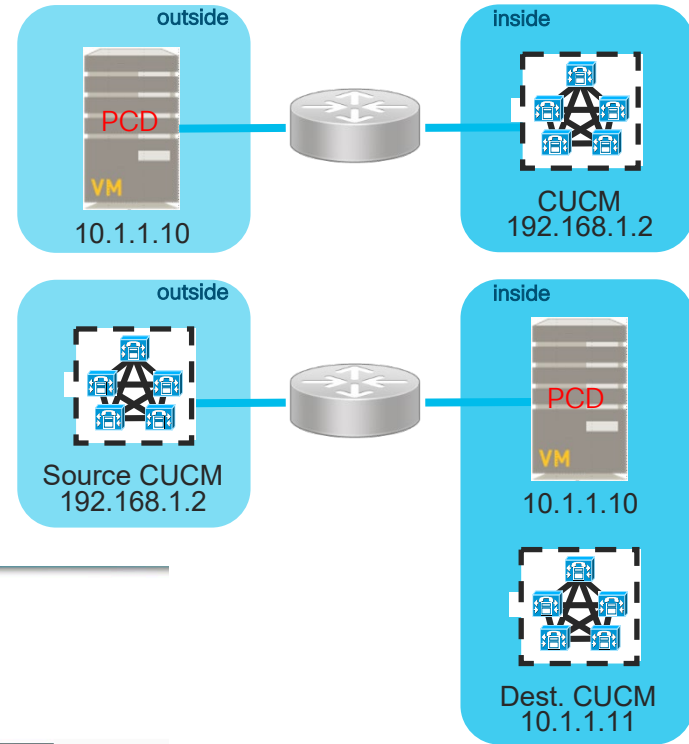
Enable NAT

Cluster Discovery Progress

Cluster Settings

PCD Features Overview Cont.

- PCD and CUCM communication
 - Static NAT support with PCD 10.5(2)+
 - PCD Behind NAT
 - CUCM Behind NAT
 - PAT not enough need 1 to 1 Static NAT



The screenshot shows the Cisco Prime Collaboration Deployment interface. The left sidebar contains a search menu and navigation options: Monitoring, Task, Inventory, and Administration. The main content area is titled 'PCD NAT Settings' and displays the following configuration:

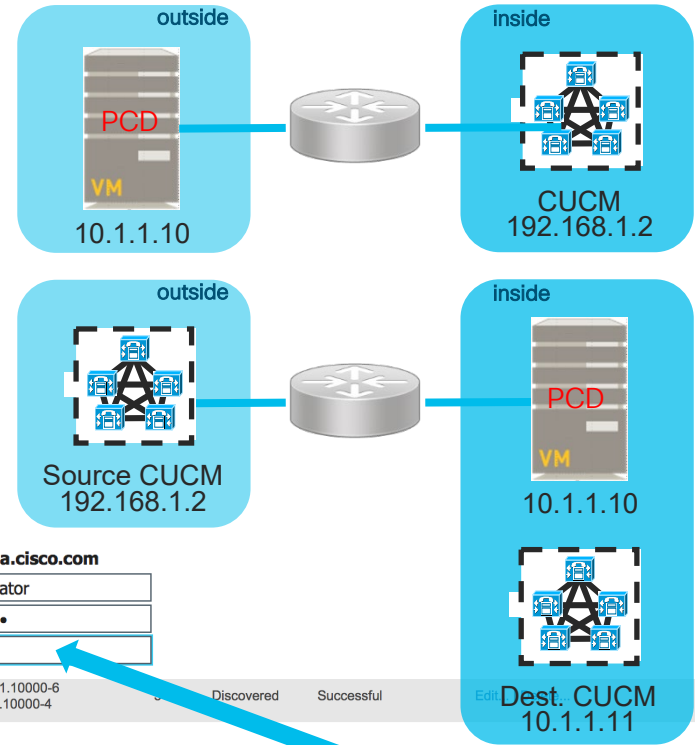
- Hostname: ecats-uc-pcd1.cisco.com
- Private IP: 172.18.106.9
- NAT IP:

A blue callout box contains the text: "Set PCD's NAT IP when it resides behind a NAT Router (Inside)". At the bottom, there are 'Save' and 'Reset' buttons.

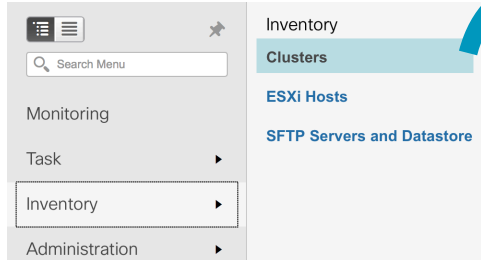
PCD Features Overview Cont.

- PCD and CUCM communication
 - Static NAT support with PCD 10.5(2)+
 - PCD Behind NAT
 - CUCM Behind NAT
 - PAT not enough need 1 to 1 Static NAT

Edit Node



Cluster **vnt-cm1**
 Host **vnt-cm1a.cisco.com**
 Admin Username
 Password
 NAT IP(optional)

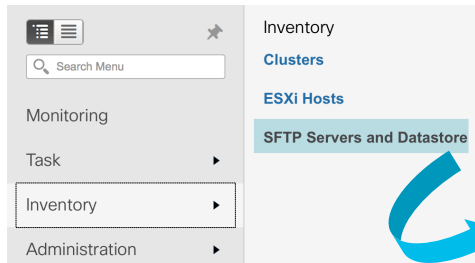
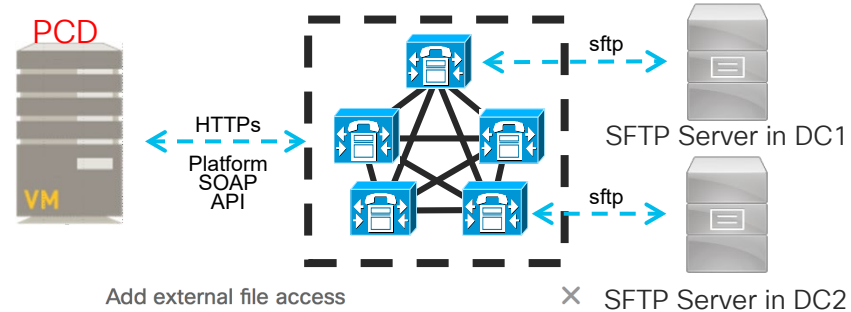


Cluster Nodes

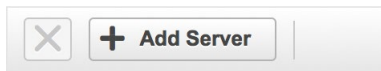
Node Name	IP Address	Type Appl...	Active Versi...	Functions	SFTP Server	Notes	Discovery Status	Actions
ecats-cups1a	172.18.107.119	IM&P	11.5.1.10000-4	Publisher	localhost		Successful	Edit... Refresh Node...
ecats-cups1b	172.18.107.120	IM&P	11.5.1.10000-4		localhost		Successful	Edit... Refresh Node...
vnt-cm1a.cisco.com	172.18.106.58	CUCM	11.5.1.10000-6	Publisher	localhost		Successful	Edit... Refresh Node...
vnt-cm1b.cisco.com	172.18.106.59	CUCM	11.5.1.10000-6		localhost		Successful	Edit... Refresh Node...
vnt-cm1c.cisco.com	172.18.106.60	CUCM	11.5.1.10000-6		localhost		Successful	Edit... Refresh Node...

PCD Features Overview Cont.

- PCD and CUCM communication
 - Remote SFTP Support for Upgrades or COP file Installs
 - Multi SFTP Server Support



SFTP Servers/Datastore



Select the task type

Install/Migration Upgrade

Address and access credentials

IP / Host Name * 172.18.106.18

Username * admin

Password *

Remote SFTP Path to Datastore Directory on Server

Directory * /CUCM-Images

Add Directory

A valid directory should contain .iso datastore files for upgrades

Additional Information

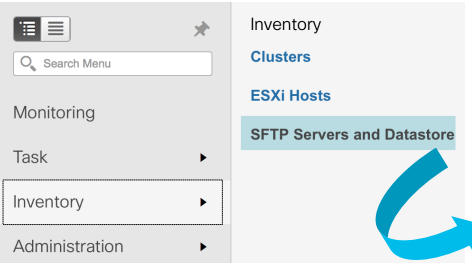
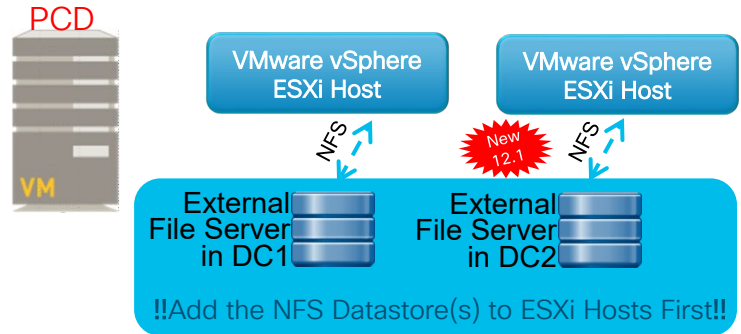
Description SFTP Server in DC1

Add

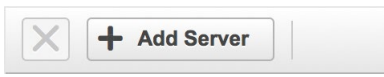
Cancel

PCD Features Overview Cont.

- PCD Remote File Support for Migration / Fresh Install
 - Remote NFS Datastore Support
 - Datastore(s) Must be pre-provisioned on ESXi host(s)
 - Edit New UC Cluster / Migration Destination Cluster Nodes
 - Change the SFTP Server Assignment



SFTP Servers/Datastore



Add external file access

Select the task type
 Install/Migration Upgrade

Address and access credentials

IP / Host Name *

Username *

Password *

Remote NFS Path to Datastore Directory on Server

Directory *

NFS Server Name *

Additional Information

Description

Configure Permissions VMs Datastores Networks Update Manager

Datastores

Name	Status	Type
ecats-uc-fs1(read only)	Normal	NFS 3
ecats-uc-pcd1_NFS(read only)	Normal	NFS 3
vzwpcd1_NFS(read only)	Normal	NFS 3
vzwnx1-nfs(read only)	Normal	NFS 3

This MUST match with the pre-provisioned ESXi NFS Datastore Name

Esxi hosts available for NFS datastore directory

Following are the list of hosts from the Inventory --> ESXi Hosts having the given Directory and NFS Server name

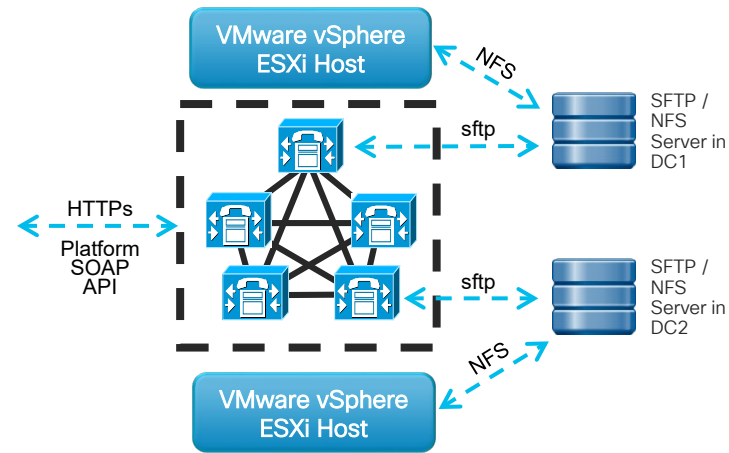
Available Esxi Hosts
10.6.14.115
10.6.14.106
10.6.14.101

PCD Features Overview Cont.

- PCD and CUCM communication



- SFTP Server Details must be assigned to each CUCM Node
- Default is localhost = PCD Local Folder
 - /upgrade
 - /fresh_install

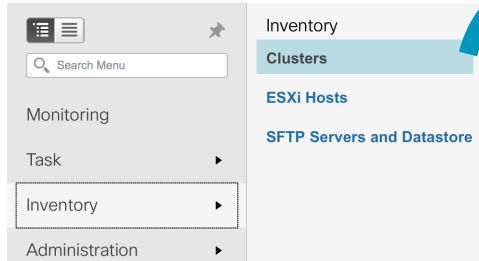


When Editing New UC Cluster / Migration Destination Cluster Nodes → NFS Datastore Options will be given



Cluster: **vnt-cm1**
 Host: **vnt-cm1a.cisco.com**
 Admin Username: administrator
 Password:
 NAT IP(optional): 10.1.1.2
 SFTP Server: 172.18.106.18-ecats-uc-1

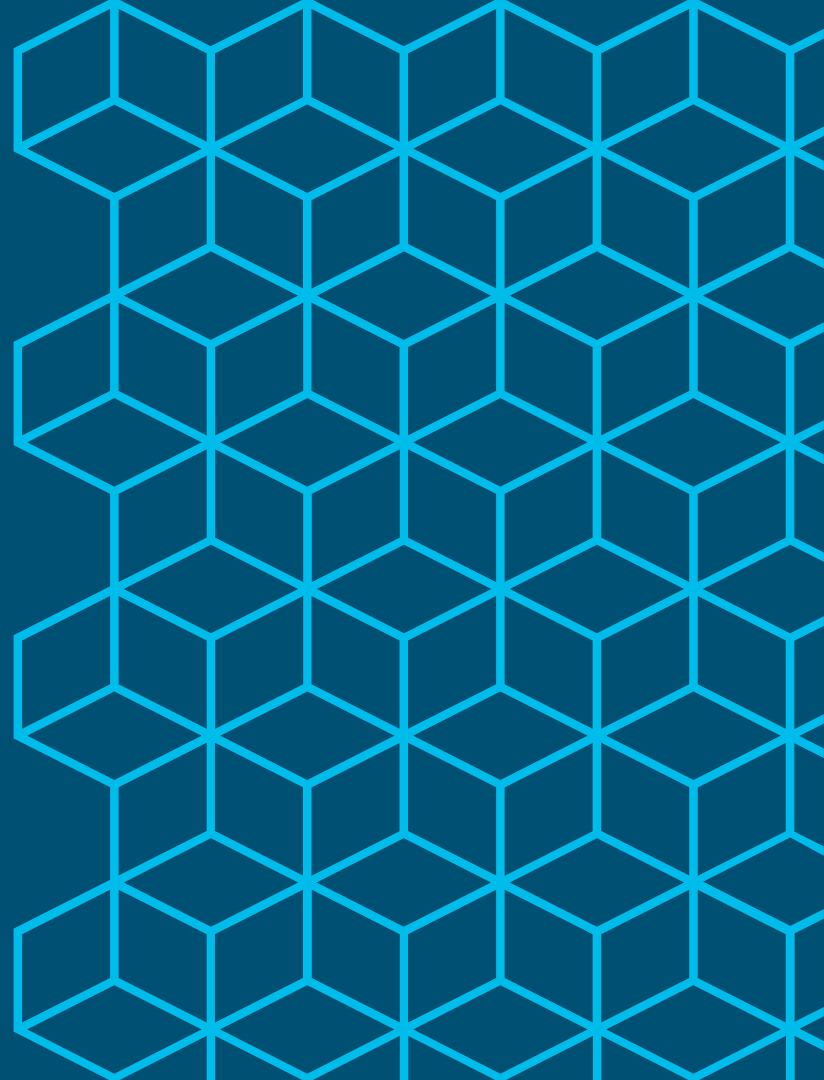
SFTP Server: 10.10.32.21-ZFS1
 localhost
 10.10.32.21-ZFSDrive/NFS



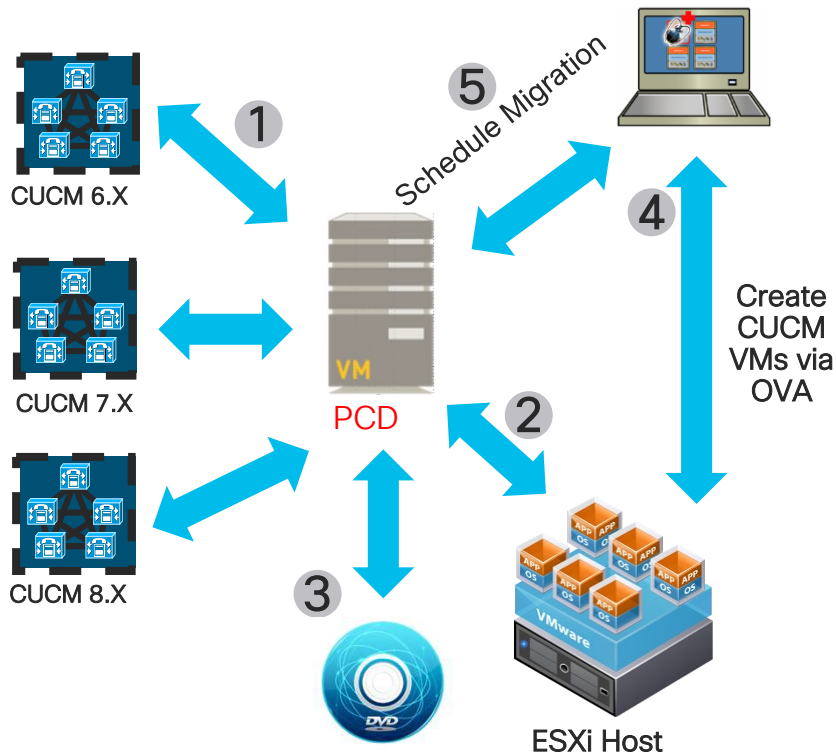
Cluster Nodes

Node Name	IP Address	Type Appl...	Active Versi...	Functions	SFTP Server	Notes	Discovery Status	Actions
ecats-cups1a	172.18.107.119	IM&P	11.5.1.10000-4	Publisher	localhost		Successful	Edit... Refresh Node...
ecats-cups1b	172.18.107.120	IM&P	11.5.1.10000-4		localhost		Successful	Edit... Refresh Node...
vnt-cm1a.cisco.com	172.18.106.58	CUCM	11.5.1.10000-6	Publisher	localhost		Successful	Edit... Refresh Node...
vnt-cm1b.cisco.com	172.18.106.59	CUCM	11.5.1.10000-6		localhost		Successful	Edit... Refresh Node...
vnt-cm1c.cisco.com	172.18.106.60	CUCM	11.5.1.10000-6		localhost		Successful	Edit... Refresh Node...

PCD Migration



Automated Platform Conversion with PCD



- CUCM Bootable ISO provided to ESXi Hosts via NFS service running on PCD
- Migration (M1) Steps
 1. Add Source CUCM Clusters to PCD Inventory
 2. Add ESXi Hosts to PCD Inventory
 3. Add CUCM Bootable ISOs to PCD SFTP Server (adminsftp user / fresh_install folder)
 4. Deploy Empty CUCM VM on ESXi Hosts via OVA
 5. Map Physical Nodes to Virtual VMs and Schedule Migration Tasks

PCD Inventory Source Cluster Discovery

The screenshot shows the Cisco Prime Collaboration Deployment interface. The top navigation bar includes "Monitoring", "Task", "Inventory", and "Administration". The "Inventory" menu is open, showing "Clusters" and "ESXi Hosts". A blue arrow points to the "Clusters" option. Below the navigation bar, there is a "Task List" section with a "Refreshing..." indicator and "Enable" and "Disable" buttons. A "Task Status" section is also visible, showing a table with columns "Step" and "Description", and the text "No data available".

The screenshot shows the Cisco Prime Collaboration Deployment interface with the "Clusters" section selected. The top navigation bar is the same as in the previous screenshot. Below the navigation bar, there is a "Clusters" section with a "Delete" button and three action buttons: "Discover Cluster", "Define Migration Destination Cluster", and "Define New UC Cluster". A blue arrow points to the "Discover Cluster" button.

PCD Inventory Source Cluster Discovery – Step 1

Discover Cluster



Step 1 of 3

Cluster Access

Provide a unique cluster nickname and the network information for the cluster publisher. If a CUCM/IM&P cluster, use the CUCM Publisher. The node will be contacted to identify the other nodes in the cluster.

Choose a Nickname for this Cluster

Hostname/IP Address of Cluster Publisher

OS Admin Username

OS Admin Password

Enable NAT

Previous

Next

Finish

Cancel

Cluster Discovery Progress



Cluster Settings




PCD Inventory Source Cluster Discovery – Step 2

Discover Cluster




Step 2 of 3

Cluster Access 

Cluster Discovery Progress

During discovery, the list of cluster nodes will be retrieved, and each of the nodes contacted.

Cluster Name **My Source CUCM Cluster on MCS**

Contacting cluster nodes and updating cluster data. The process could take several minutes to complete. 

Cluster Nodes

Hostname	Contact Status	Product	Active Version	Inactive Version	Hardware
ucm06bcmoh1.ecatsrtp.cisco.com	Successful	CUCM	7.1.5.32022-1		7845H2
ucm06bcmoh2.ecatsrtp.cisco.com	Successful	CUCM	7.1.5.32022-1		7845H2
ucm06bcpub.ecatsrtp.cisco.com	Successful	CUCM	7.1.5.32022-1		7845H2
ucm06bcsub1.ecatsrtp.cisco.com	Discovering...				
ucm06bcsub2.ecatsrtp.cisco.com	Discovering...				
ucm06bcsub3.ecatsrtp.cisco.com	Successful	CUCM	7.1.5.32022-1		7845H2
ucm06bcsub4.ecatsrtp.cisco.com	Successful	CUCM	7.1.5.32022-1		7845H2
ucm06bcsub5.ecatsrtp.cisco.com	Successful	CUCM	7.1.5.32022-1		7845H2
ucm06bcsub6.ecatsrtp.cisco.com	Discovering...				
ucm06bcsub7.ecatsrtp.cisco.com	Successful	CUCM	7.1.5.32022-1		7845H2

Previous

Next

Finish

Cancel


Installs these COP Files

- ciscocm.ucmap_platformconfig.cop
- ciscocm.migrate-export-v1.13.cop

PCD Inventory Source Cluster Discovery – Step 3

Discover Cluster

Step 3 of 3


Cluster Access 

Cluster Discovery Progress 

Cluster Settings

Optional - Assign the server role(s) to each cluster node to identify its functional role(s) in the cluster and to help determine the proper sequence of a task performed on the cluster.

Total 13

Assign Functions Show All 

Hostname	Product	Functions	Notes
ucm07bcpub.ecatsrtp.cisco.com	CUCM	Publisher	
ucm07bcsub8.ecatsrtp.cisco.com	CUCM		
ucm07bctftp1.ecatsrtp.cisco.com	CUCM		
ucm07bcmoh1.ecatsrtp.cisco.com	CUCM		
ucm07bcsub5.ecatsrtp.cisco.com	CUCM		
ucm07bcsub3.ecatsrtp.cisco.com	CUCM		
ucm07bcsub7.ecatsrtp.cisco.com	CUCM		
ucm07bcsub2.ecatsrtp.cisco.com	CUCM		
ucm07bcsub1.ecatsrtp.cisco.com	CUCM		
ucm07bcsub4.ecatsrtp.cisco.com	CUCM		

Previous Next **Finish** Cancel

- This Step can be skipped
- Not Required for Migration Job

PCD Inventory ESXi Hosts

The screenshot shows the Cisco Prime Collaboration Deployment interface. The top navigation bar includes 'Monitoring', 'Task', 'Inventory', and 'Administration'. The 'Inventory' menu is open, showing options for 'Clusters' and 'ESXi Hosts'. A blue arrow points to the 'ESXi Hosts' option. Below the navigation bar, there is a 'Task List' section with a 'Refreshing...' indicator and 'Enable | Disable' buttons. A 'Task Status' table is also visible, showing 'No data available'.

The screenshot shows the Cisco Prime Collaboration Deployment interface with the 'Inventory' menu selected. The 'ESXi Hosts' page is displayed, showing a 'Delete' button and an 'Add ESXi Host' button with a blue arrow pointing to it. Below the buttons is a table with columns for 'Hostname' and 'IP Address'.

Hostname	IP Address
<input type="checkbox"/> ecats-rtp-cc42-esxi-8.ecatsrtp.cisco.com	10.0.23.78

PCD Inventory Add ESXi Hosts

Add ESXi Host

Please provide network information and root credentials for a VMWare ESXi Host then click the "OK" button

Hostname/IP Address

Username

Password

Description (optional)

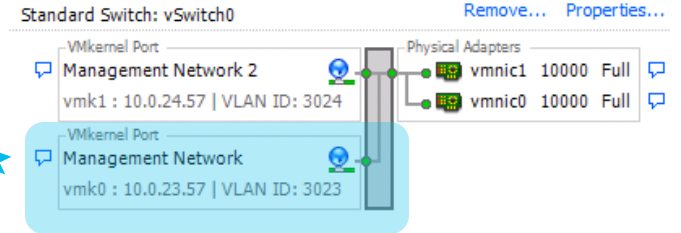


You have successfully added an ESXi host



View:

Networking

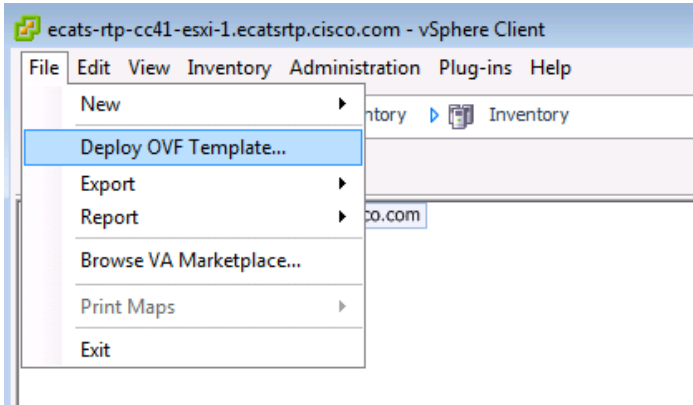


View:

Datastores

Identification	Device
datastore1	Local LSI Disk (naa.60030130f09000001ae2452c...)
datastore2	Local LSI Disk (naa.60030130f09000001ae2452c...)
pcd-10-83-113-237_NFS(read only)	10.83.113.237:/common/adminsftp/fresh_install/

Deploy Destination CUCM Virtual Machines



Configuration:

CUCM 7500 user node

Cisco Unified Communications Manager (CUCM) configuration that supports up to 7500 users per node.

Details:

Red Hat Enterprise Linux 6 (64-bit)
CPU: 2 vCPU with 3600 MHz reservation
Memory: 6 GB with 6 GB reservation
Disk: 1 - 110 GB disk

Upload CUCM Bootable ISO to PCD Datastore

The screenshot shows the vSphere interface for a VM named 'ecats-rtp-cc41-esxi-1.ecatsrtp.cisco.com VMware ESXi, 5.5.0, 2456374'. The 'Datastores' tab is active, showing a list of storage resources. A file explorer window is open, displaying the contents of the 'fresh_install' folder. A context menu is open over the file 'Bootable_UCSInstall_UCOS_10.5.2.1290...', showing its properties and permissions. A blue arrow points to the 'World: Read' permission option.

File Explorer Details:

Name	Size	Date
backup	--	4/20/15
bin	--	4/23/15
cop	--	4/23/15
export	--	5/14/15
fresh_install	--	5/7/15, 3:52 PM
license		
log		
restore		
upgrade		

File Properties:

- Name: Bootable_UCSInstall_UCO...
- Kind: ISO Disk Image
- Size: 5.16 GB (5,156,075,520 bytes)
- Where: /fresh_install
- Created: ...
- Modified: Thu, May 7, 2015 at 3:55 PM
- Permissions:
 - User: Read Write Execute
 - Group: Read Write Execute
 - World: Read Write Execute
- Octal: 644 rw-r--r--
- Owner: 666
- Group: 582

Datastores Table:

Identification	Status	Device	Drive Type	Capacity	Free	Type
dh-pcd-1_NFS (read only)	✓ Normal	10.2.13.20:/common/adminsftp/fresh_install/	Unknown	127.37 GB	25.24 GB	NFS
ecats-rtp-cc41-esxi-1-datastore1	✓ Normal	Local Cisco Disk (naa.678da6e715b49c601c8...	Non-SSD	1.08 TB	995.29 GB	VMFSS
ecats-rtp-cc41-esxi-1-datastore2	✓ Normal	Local Cisco Disk (naa.678da6e715b49c601c8...	Non-SSD	1.09 TB	1.09 TB	VMFSS
ecats-rtp-cc41-esxi-1-datastore3	✓ Normal	Local Cisco Disk (naa.678da6e715b49c601c8...	Non-SSD	1.09 TB	1.09 TB	VMFSS
ecats-rtp-cc41-esxi-1-datastore4	✓ Normal	Local Cisco Disk (naa.678da6e715b49c601c8...	Non-SSD	1.09 TB	1.09 TB	VMFSS
ecats-uc-fs1 (read only)	✓ Normal	ecats-uc-fs1-test.cisco.com:/vol/nfs2a_1/eca...	Unknown	7.45 TB	1.21 TB	NFS

PCD Inventory Define Destination Cluster

The screenshot shows the Cisco Prime Collaboration Deployment interface. The top navigation bar includes 'Monitoring', 'Task', 'Inventory', and 'Administration'. The 'Inventory' dropdown menu is open, showing 'Clusters' and 'ESXi Hosts'. A blue arrow points to 'Clusters'. Below the navigation bar, there is a 'Task List' section with a 'Show' dropdown set to 'All' and a 'Task Status' table with columns 'Step' and 'Description'. The table is currently empty with the text 'No data available'.

The screenshot shows the Cisco Prime Collaboration Deployment interface with the 'Inventory' menu selected. The 'Clusters' section is active, displaying a toolbar with four buttons: 'Delete', 'Discover Cluster', 'Define Migration Destination Cluster', and 'Define New UC Cluster'. A blue arrow points to the 'Define Migration Destination Cluster' button.

PCD Inventory Define Destination Cluster – Step 1

Define Migration Destination Cluster



Step 1 of 4

Specify Clusters

This wizard will step you through the process of configuring a Destination Cluster to be used in a migration task. Before you begin, you should have added the necessary ESXi hosts (see Inventory -> ESXi Hosts) and created the needed VMs on those hosts.

Source Cluster [View Nodes](#)

Active Versions CUCM - 7.1.5.32022-1

Destination Cluster Nickname

- Destination Network Settings
- Use the source node network settings for all destination nodes
 - Enter new network settings for one or more destination nodes

[Previous](#)[Next](#)[Finish](#)[Cancel](#)

Assign Destination Cluster Nodes



Configure NTP/SMTP Settings



Configure DNS Settings




PCD Inventory Define Destination Cluster – Step 2

Define Migration Destination Cluster

x

Step 2 of 4

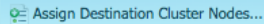
Specify Clusters 

Assign Destination Cluster Nodes

Click on the "Assign Destination Cluster Nodes" button to associate Destination VMs with nodes in the source cluster.

Source Cluster **My Source CUCM Cluster on MCS**Destination Cluster **My Destination CUCM Cluster**

Total 13



Show

All





Source Hostname	Product	Source N...	Dest. VM Name	Dest. Hostname	Dest. IP Address	Functions
▶ ucm06bcmoh1.ecatsrtp.cisco.com	CUCM			ucm06bcmoh1.ecatsrtp....	10.2.36.66	
▶ ucm06bcmoh2.ecatsrtp.cisco.com	CUCM			ucm06bcmoh2.ecatsrtp....	10.2.35.66	
▶ ucm06bcpub.ecatsrtp.cisco.com	CUCM			ucm06bcpub.ecatsrtp.ci...	10.2.35.60	
▶ ucm06bcsub1.ecatsrtp.cisco.com	CUCM			ucm06bcsub1.ecatsrtp.c...	10.2.36.61	
▶ ucm06bcsub2.ecatsrtp.cisco.com	CUCM			ucm06bcsub2.ecatsrtp.c...	10.2.35.61	
▶ ucm06bcsub3.ecatsrtp.cisco.com	CUCM			ucm06bcsub3.ecatsrtp.c...	10.2.36.62	

Previous

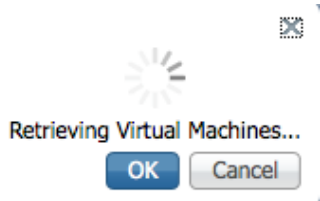
Next

Finish

Cancel

Configure NTP/SMTP Settings Configure DNS Settings 

PCD Inventory Configure Destination Cluster



Configure Destination Cluster

Source Node

Hostname **ucm06bcmoh1.ecatsrtp.cisco.com** Functions
Product **CUCM** Notes (optional)

Assign a VM by selecting one from the table below for the destination node. If you don't see the VM's you want, you might need to configure additional ESXi Hosts in Inventory > ESXi Hosts.

Destination Node

Virtual Machine **ucm06bcmoh1**
ESXi Host **ecats-rtp-cc41-esxi-5.ecatsrtp.cisco.com**
Notes (optional)

Network **Enter New Network Settings**

Hostname **ucm06bcmoh1**
IP Address **10.2.36.166**
Subnet Mask **255.255.255.0**
Gateway **10.2.36.1**
NAT IP(optional)

Virtual Machines Selected 1 | Total 13

Show **Quick Filter**

VM Name	ESXi Host	Power State	Assigned to Cluster Node
<input checked="" type="radio"/> ucm06	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input checked="" type="radio"/> ucm06bcmoh1	ecats-rtp-cc41-esxi-5.ecatsrtp.cisco.com	Off	
<input type="radio"/> ucm06bcmoh2	ecats-rtp-cc41-esxi-4.ecatsrtp.cisco.com	Off	
<input type="radio"/> ucm06bcpub	ecats-rtp-cc41-esxi-2.ecatsrtp.cisco.com	Off	
<input type="radio"/> ucm06bcsub1	ecats-rtp-cc41-esxi-6.ecatsrtp.cisco.com	Off	
<input type="radio"/> ucm06bcsub2	ecats-rtp-cc41-esxi-5.ecatsrtp.cisco.com	Off	

< Previous Node Node 1 of 13 Next Node >

Done Cancel

PCD Inventory Configure Destination Cluster

Configure Destination Cluster

Source Node

Hostname **ucm06bctftp2.ecatsrtp.cisco.com**
Product **CUCM**

Functions
Notes (optional)

Assign a VM by selecting one from the table below for the destination node. If you don't see the VM's you want, you might need to configure additional ESXi Hosts in Inventory > ESXi Hosts.

Destination Node

Network

Virtual Machine **ucm06bctftp2**
ESXi Host **ecats-rtp-cc41-esxi-3.ecatsrtp.cisco.com**
Notes (optional)

Hostname
IP Address
Subnet Mask
Gateway
NAT IP(optional)

Virtual Machines

Selected 1 | Total 13

VM Name	ESXi Host	Power State	Assigned to Cluster Node
<input type="text" value="ucm06"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="radio"/> ucm06bcsub6	ecats-rtp-cc41-esxi-2.ecatsrtp.cisco.com	Off	ucm06bcsub6.ecatsrtp.cisco.com
<input type="radio"/> ucm06bcsub7	ecats-rtp-cc41-esxi-4.ecatsrtp.cisco.com	Off	ucm06bcsub7.ecatsrtp.cisco.com
<input type="radio"/> ucm06bcsub8	ecats-rtp-cc41-esxi-3.ecatsrtp.cisco.com	Off	ucm06bcsub8.ecatsrtp.cisco.com
<input type="radio"/> ucm06bctftp1	ecats-rtp-cc41-esxi-4.ecatsrtp.cisco.com	Off	ucm06bctftp1.ecatsrtp.cisco.com
<input checked="" type="radio"/> ucm06bctftp2	ecats-rtp-cc41-esxi-3.ecatsrtp.cisco.com	Off	

< Previous Node Node 13 of 13 Next Node >




PCD Inventory Define Destination Cluster

Define Migration Destination Cluster

x

Step 2 of 4

Specify Clusters 


Assign Destination Cluster Nodes

Click on the "Assign Destination Cluster Nodes" button to associate Destination VMs with nodes in the source cluster.

Source Cluster **My Source CUCM Cluster on MCS**

Destination Cluster **My Destination CUCM Cluster**


Total 13


Assign Destination Cluster Nodes... Show All 

Source Hostname	Product	Source N...	Dest. VM Name	Dest. Hostname	Dest. IP Address	Functions
▶ ucm06bcmoh1.ecatsrtp.cisco.com	CUCM		ucm06bcmoh1	ucm06bcmoh1-ucs.ecat...	10.2.36.166	
▶ ucm06bcmoh2.ecatsrtp.cisco.com	CUCM		ucm06bcmoh2	ucm06bcmoh2-ucs.ecat...	10.2.35.166	
▶ ucm06bcpub.ecatsrtp.cisco.com	CUCM		ucm06bcpub	ucm06bcpub-ucs.ecatsr...	10.2.35.160	
▶ ucm06bcsub1.ecatsrtp.cisco.com	CUCM		ucm06bcsub1	ucm06bcsub1-ucs.ecats...	10.2.36.161	
▶ ucm06bcsub2.ecatsrtp.cisco.com	CUCM		ucm06bcsub2	ucm06bcsub2-ucs.ecats...	10.2.35.161	
▶ ucm06bcsub3.ecatsrtp.cisco.com	CUCM		ucm06bcsub3	ucm06bcsub3-ucs.ecats...	10.2.36.162	

Previous **Next** Finish Cancel



Configure NTP/SMTP Settings 



Configure DNS Settings 

PCD Inventory Define Destination Cluster – Step 3

Define Migration Destination Cluster

x

Step 3 of 4

Specify Clusters Assign Destination Cluster Nodes 

Configure NTP/SMTP Settings

Configure settings to be applied to the migration nodes when the migration task is run.

Network Time Protocol (NTP) Configuration


- * NTP Server 1
- NTP Server 2
- NTP Server 3
- NTP Server 4
- NTP Server 5

Simple Mail Transfer Protocol (SMTP) Settings

SMTP Server

* = Required

Previous **Next** Finish Cancel

Configure DNS Settings 

PCD Inventory Define Destination Cluster – Step 4

Define Migration Destination Cluster

Step 4 of 4

Specify Clusters

Assign Destination Cluster Nodes

Configure NTP/SMTP Settings

Configure DNS Settings

Must Use DNS on destination if Source Cluster is Already Enabled to Use DNS

Assign DNS Settings

Primary DNS

Secondary DNS (optional)

Domain

Optionally configure DNS for the migration cluster nodes. Select nodes from table, and enter and apply the DNS setting.

Assign DNS Settings

Show

All

<input type="checkbox"/>	Hostname	Functions	Primary DNS	Secondary DNS	Domain
<input checked="" type="checkbox"/>	ucm06bcmoh1.ecatsrtp.cisco.com		172.18.106.25		ecatsrtp.cisco.com
<input checked="" type="checkbox"/>	ucm06bcmoh2.ecatsrtp.cisco.com		172.18.106.25		ecatsrtp.cisco.com
<input checked="" type="checkbox"/>	ucm06bcpub.ecatsrtp.cisco.com		172.18.106.25		ecatsrtp.cisco.com
<input checked="" type="checkbox"/>	ucm06bcsub1.ecatsrtp.cisco.com		172.18.106.25		ecatsrtp.cisco.com
<input checked="" type="checkbox"/>	ucm06bcsub2.ecatsrtp.cisco.com		172.18.106.25		ecatsrtp.cisco.com
<input checked="" type="checkbox"/>	ucm06bcsub3.ecatsrtp.cisco.com		172.18.106.25		ecatsrtp.cisco.com
<input checked="" type="checkbox"/>	ucm06bcsub4.ecatsrtp.cisco.com		172.18.106.25		ecatsrtp.cisco.com
<input checked="" type="checkbox"/>	ucm06bcsub5.ecatsrtp.cisco.com		172.18.106.25		ecatsrtp.cisco.com
<input checked="" type="checkbox"/>	ucm06bcsub6.ecatsrtp.cisco.com		172.18.106.25		ecatsrtp.cisco.com
<input checked="" type="checkbox"/>	ucm06bcsub7.ecatsrtp.cisco.com		172.18.106.25		ecatsrtp.cisco.com

Previous

Next

Finish

Cancel

OK

Cancel



No Option to Remove DNS on Destination

PCD Inventory Define Destination Cluster – Step 4

Define Migration Destination Cluster


x

Step 4 of 4

Specify Clusters Assign Destination Cluster Nodes Configure NTP/SMTP Settings 


Configure DNS Settings

Optionally configure DNS for the migration cluster nodes. Select nodes from table, and enter and apply the DNS setting.

Assign DNS Settings Show All 

<input type="checkbox"/>	Hostname	Functions	Primary DNS	Secondary DNS	Domain
<input type="checkbox"/>	ucm06bcmoh1.ecatsrtp.cisco.com		172.18.106.25		ecatsrtp.cisco.com
<input type="checkbox"/>	ucm06bcmoh2.ecatsrtp.cisco.com		172.18.106.25		ecatsrtp.cisco.com
<input type="checkbox"/>	ucm06bcpub.ecatsrtp.cisco.com		172.18.106.25		ecatsrtp.cisco.com
<input type="checkbox"/>	ucm06bcsub1.ecatsrtp.cisco.com		172.18.106.25		ecatsrtp.cisco.com
<input type="checkbox"/>	ucm06bcsub2.ecatsrtp.cisco.com		172.18.106.25		ecatsrtp.cisco.com
<input type="checkbox"/>	ucm06bcsub3.ecatsrtp.cisco.com		172.18.106.25		ecatsrtp.cisco.com
<input type="checkbox"/>	ucm06bcsub4.ecatsrtp.cisco.com		172.18.106.25		ecatsrtp.cisco.com
<input type="checkbox"/>	ucm06bcsub5.ecatsrtp.cisco.com		172.18.106.25		ecatsrtp.cisco.com
<input type="checkbox"/>	ucm06bcsub6.ecatsrtp.cisco.com		172.18.106.25		ecatsrtp.cisco.com
<input type="checkbox"/>	ucm06bcsub7.ecatsrtp.cisco.com		172.18.106.25		ecatsrtp.cisco.com

Previous Next **Finish** Cancel



PCD Inventory Define Destination Cluster

Cisco Prime
Cisco Collaboration Deployment

Monitoring Task | Inventory | Administration |

Clusters

Delete Discover Cluster **Define Migration Destination Cluster** Define New UC Cluster

<input type="checkbox"/>	Cluster Name	Product and Version	Nodes	Cluster Type	Discovery Status	Actions
<input type="checkbox"/>	▶ My Destination CUCM Cluster	CUCM - null	13	Migration		Edit... Delete...
<input type="checkbox"/>	▶ My Source CUCM Cluster on MCS	CUCM - 7.1.5.32022-1	13	Discovered	Successful	Edit... Delete...

PCD Add Migration Task

The screenshot shows the Cisco Prime Collaboration Deployment interface. The top navigation bar includes "Monitoring", "Task", "Inventory", and "Administration". The "Task" menu is open, displaying a list of tasks: Upgrade, Switch Versions, Server Restart, Readdress, Install, and Migrate. A blue arrow points to the "Migrate" option in the menu.

Cisco Prime
Collaboration Deployment

Refreshing... Enable | Disable

Task List Total 0

Show All

Status	Task	Start Time
No data available		

Task Status

Step	Descri
No data available	

- Tasks
- Upgrade
- Switch Versions
- Server Restart
- Readdress
- Install
- Migrate

The screenshot shows the Cisco Prime Collaboration Deployment interface with the "Migrate" page selected. The top navigation bar includes "Monitoring", "Task", "Inventory", and "Administration". The "Migrate" page has a "Migrate" header and a "Migrate" sub-header. Below the sub-header, there are two buttons: "Delete" and "Add Migration Task". A blue arrow points to the "Add Migration Task" button.

Cisco Prime
Collaboration Deployment

Monitoring Task Inventory Administration

Migrate

Migrate

Delete Add Migration Task

PCD Add Migration Task – Step 1

Add Migration Task



Step 1 of 5

Choose Source and Destination Clusters

This task will allow you to simultaneously upgrade and migrate a UC cluster to new virtual machines. The configuration data will be exported from the source nodes and then imported to the new, upgraded servers.

Source UC Cluster

Destination Cluster

Node Mapping from Source to Destination Clusters

Selected 13 | Total 13

<input checked="" type="checkbox"/>	Source Hostname	Product	Destination VM Name	Destination Hostname	Destination IP Address	Functions
<input checked="" type="checkbox"/>	▶ ucm06bcmoh1.ecatsrtp.cisco.com	CUCM	ucm06bcmoh1	ucm06bcmoh1.ecatsrtp...	10.2.36.166	
<input checked="" type="checkbox"/>	▶ ucm06bcmoh2.ecatsrtp.cisco.com	CUCM	ucm06bcmoh2	ucm06bcmoh2.ecatsrtp...	10.2.35.166	
<input checked="" type="checkbox"/>	▶ ucm06bcpub.ecatsrtp.cisco.com	CUCM	ucm06bcpub	ucm06bcpub.ecatsrtp.c...	10.2.35.160	
<input checked="" type="checkbox"/>	▶ ucm06bcsub1.ecatsrtp.cisco.com	CUCM	ucm06bcsub1	ucm06bcsub1.ecatsrtp.c...	10.2.36.161	
<input checked="" type="checkbox"/>	▶ ucm06bcsub2.ecatsrtp.cisco.com	CUCM	ucm06bcsub2	ucm06bcsub2.ecatsrtp.c...	10.2.35.161	

Previous

Next

Finish

Cancel

Choose Migration Files



Set Start Time



Specify Migration Procedure



Review



PCD Add Migration Task – Step 2

Add Migration Task



Step 2 of 5

Choose Source and Destination Clusters 

Choose Migration Files

The .iso images must have been uploaded to the /fresh_install directory via the Cisco Prime Collaboration Deployment local SFTP server using the 'adminsftp' account.

CUCM Migration File



Set Start Time

Specify Migration Procedure

Review

Choose a Migration File



Select an ISO file here.

File Directory /fresh_install

Available Files

Selected 1 | Total 5 

Show

File Name	Kind	Version Validity
<input type="radio"/> Bootable_UCSInstall_UCOS_10.5.1.11900-13.sgn.iso	ISO	true
<input type="radio"/> Bootable_UCSInstall_UCOS_10.5.2.10000-5.sgn.iso	ISO	true
<input type="radio"/> Bootable_UCSInstall_UCOS_10.5.2.12900-13.sgn.iso	ISO	true
<input type="radio"/> Bootable_UCSInstall_UCOS_10.5.2.12900-14.sgn.iso	ISO	true
<input checked="" type="radio"/> Bootable_UCSInstall_UCOS_10.5.2.13900-12.sgn.iso	ISO	true

PCD Add Migration Task – Step 3

Add Migration Task



Step 3 of 5

Choose Source and Destination Clusters



Choose Migration Files



Set Start Time

Select a start time for the migration task.

The time zone shown here corresponds to the time zone of this Cisco Prime Collaboration Deployment server and not necessarily that of the target servers or cluster.

Start Time

- Schedule for a specific time
- Start task manually
- Start task immediately upon completion of this wizard

EDT

Previous

Next

Finish

Cancel

Specify Migration Procedure



Review



PCD Add Migration Task – Step 4

Add Migration Task

x

Step 4 of 5

Choose Source and Destination Clusters ✓Choose Migration Files ✓Set Start Time ✓

Specify Migration Procedure

Select the sequence in which the version switch has to be processed on the servers. If there is an error during the process, the task will be stopped. You can optionally also pause the task when a step completes.

Step	Description	Upon Completion	Actions
▶ 1	Export configuration data from cluster nodes ucm06bcpub.ecatsrtp.cisco.com, ucm06bcmoh1.ecatsrtp.cisco.com, ucm06bcmoh2.ecatsr...	Continue	
▶ 2	Install destination CUCM publisher ucm06bcpub.ecatsrtp.cisco.com	Continue	
▶ 3	Install destination nodes with new network information ucm06bcmoh1.ecatsrtp.cisco.com	Continue	
▶ 4	Install destination nodes with new network information ucm06bcmoh2.ecatsrtp.cisco.com	Continue	
▶ 5	Install destination nodes with new network information ucm06bcsub1.ecatsrtp.cisco.com	Continue	
▶	Install destination nodes with new network information		

- By Default Migration is Fully Serialized
- Delete Steps 6 - 14

Previous

Next

Finish

Cancel

Review ✓

PCD Add Migration Task – Step 4

Add Migration Task

x

Step 4 of 5

Choose Source and Destination Clusters ✔

Choose Migration Files ✔

Set Start Time ✔

Specify Migration Procedure

Select the sequence in which the version switch has to be processed on the servers. If there is an error during the process, the task will be stopped. You can optionally also pause the task when a step completes.

Step	Description	Upon Completion	Actions
▶ 1	Export configuration data from cluster nodes ucm06bcpub.ecatsrtp.cisco.com, ucm06bcmoh1.ecatsrtp.cisco.com, ucm06bcmoh2.ecatsr...	Continue	
▶ 2	Install destination CUCM publisher ucm06bcpub.ecatsrtp.cisco.com	Continue	
▶ 3	Install destination nodes with new network information ucm06bcmoh1.ecatsrtp.cisco.com	Continue	
▶ 4	Install destination nodes with new network information ucm06bcmoh2.ecatsrtp.cisco.com	Continue	
▶ 5	Forced Pause No nodes assigned	Forced Pause	
	Shut down CUCM Publisher (optional)		

Previous

Next

Finish

Cancel

Review ✔

PCD Add Migration Task – Step 4

Add Migration Task

Step 4 of 5

Choose Source and Destination Clusters ✓

Choose Migration Files ✓

Set Start Time

Specify Migration Procedure

Select the sequence in which the version switch has to be processed on the servers. If there is an error during the process, the task will be stopped. You can optionally pause the task when a step completes.

Step	Description	Upon Completion	Actions
▶ 1	Export configuration data from cluster nodes ucm06bcpub.ecatsrtp.cisco.com, ucm06bcmoh1.ecatsrtp.cisco.com, ucm06bcmoh2.ecatsrtp.cisco.com	Continue	
▶ 2	Install destination CUCM publisher ucm06bcpub.ecatsrtp.cisco.com	Continue	
▶ 3	Install destination nodes with new network information ucm06bcmoh1.ecatsrtp.cisco.com	Continue	
▶ 4	Install destination nodes with new network information ucm06bcmoh1.ecatsrtp.cisco.com	Continue	
▶ 5	Force upgrade of destination nodes	Continue	

- Click the Pencil for Step 3
- Add the half the subscribers

Edit Step : 3 - Updated Network Information

The task will be stopped if an error occurs during processing of this step. If successful, the task can optionally be paused, else the next step will begin.

Available Nodes

- ucm06bcsub2.ecatsrtp.cisco.com (unassign..)
- ucm06bcsub4.ecatsrtp.cisco.com (unassign..)
- ucm06bcsub6.ecatsrtp.cisco.com (unassign..)
- ucm06bcsub8.ecatsrtp.cisco.com (unassign..)
- ucm06bctftp2.ecatsrtp.cisco.com (unassign..)

Pause task after step completes

Nodes In Step

- ucm06bcmoh1.ecatsrtp.cisco.com
- ucm06bcsub1.ecatsrtp.cisco.com
- ucm06bcsub3.ecatsrtp.cisco.com
- ucm06bcsub5.ecatsrtp.cisco.com
- ucm06bcsub7.ecatsrtp.cisco.com

Previous **Next** Finish Cancel

OK Cancel

Review ✓

PCD Add Migration Task – Step 4

Add Migration Task

Step 4 of 5

Choose Source and Destination Clusters ✔

Choose Migration Files ✔

Set Start Time ✔

Specify Migration Procedure

Select the sequence in which the version switch has to be processed on the servers. If there is an error during the process, the task will be stopped. You can optionally pause the task when a step completes.

Step	Description	Upon Completion	Actions
▶ 1	Export configuration data from cluster nodes ucm06bcpub.ecatsrtp.cisco.com, ucm06bcmoh1.ecatsrtp.cisco.com, ucm06bcmoh2.ecatsrtp.cisco.com	Continue	
▶ 2	Install destination CUCM publisher ucm06bcpub.ecatsrtp.cisco.com	Continue	
▶ 3	Install destination nodes with new network information ucm06bcmoh1.ecatsrtp.cisco.com	Continue	
▶ 4	Install destination nodes with new network information ucm06bcmoh2.ecatsrtp.cisco.com	Continue	
▶ 5	Force restart of nodes with new network information ucm06bcmoh1.ecatsrtp.cisco.com, ucm06bcmoh2.ecatsrtp.cisco.com	Continue	

Edit Step : 4 - Updated Network Information

The task will be stopped if an error occurs during processing of this step. If successful, the task can optionally be paused, else the next step will begin.

Available Nodes	
<input type="checkbox"/>	ucm06bcsub1.ecatsrtp.cisco.com (step 3)
<input type="checkbox"/>	ucm06bcsub3.ecatsrtp.cisco.com (step 3)
<input type="checkbox"/>	ucm06bcsub5.ecatsrtp.cisco.com (step 3)
<input type="checkbox"/>	ucm06bcsub7.ecatsrtp.cisco.com (step 3)
<input type="checkbox"/>	ucm06bcftp1.ecatsrtp.cisco.com (step 3)

Pause task after step completes

Nodes In Step	
<input type="checkbox"/>	ucm06bcmoh2.ecatsrtp.cisco.com
<input type="checkbox"/>	ucm06bcsub2.ecatsrtp.cisco.com
<input type="checkbox"/>	ucm06bcsub4.ecatsrtp.cisco.com
<input type="checkbox"/>	ucm06bcsub6.ecatsrtp.cisco.com
<input type="checkbox"/>	ucm06bcsub8.ecatsrtp.cisco.com

OK Cancel

Previous Next Finish Cancel

Review ✔

- Click the Pencil for Step 4
- Add the rest of the subscribers

PCD Add Migration Task – Step 5

Add Migration Task

x

Step 5 of 5

Choose Source and Destination Clusters	✓
Choose Migration Files	✓
Set Start Time	✓
Specify Migration Procedure	✓
Review	

Review the settings summarized below, and click Finish to create the migration task.

Task Type	Migration
Source Cluster	My Source CUCM Cluster on MCS
Destination Cluster	My Destination CUCM Cluster
CUCM Migration File	Bootable_UCSInstall_UCOS_10.5.2.13900-12.sgn.iso
Cluster Nodes	<code>ucm06bcmoh1.ecatsrtp.cisco.com => ucm06bcmoh1.ecatsrtp.cisco.com ucm06bcmoh2.ecatsrtp.cisco.com => ucm06bcmoh2.ecatsrtp.cisco.com ucm06bcpub.ecatsrtp.cisco.com => ucm06bcpub.ecatsrtp.cisco.com ucm06bcsub1.ecatsrtp.cisco.com => ucm06bcsub1.ecatsrtp.cisco.com ucm06bcsub2.ecatsrtp.cisco.com => ucm06bcsub2.ecatsrtp.cisco.com ucm06bcsub3.ecatsrtp.cisco.com => ucm06bcsub3.ecatsrtp.cisco.com</code>
Start Time	Immediately
Notes (optional)	<input type="text"/>

Previous Next **Finish** Cancel



Sample PowerShell Script to update CUCM 10.0 Virtual Machines

```
### Remember to Shutdown your CUCMs first ###
```

```
$vCenter = "vcenter1.cisco.com"
```

```
$vFolder = "UCM10"
```

```
Get-vc -server $vCenter
```

```
Get-Folder $vFolder | get-vm | Set-VM -GuestID "rhel6_64Guest" -confirm:$false
```

```
Get-Folder $vFolder | get-vm | get-networkadapter | set-networkadapter -type "vmxnet3" -confirm:$false
```

```
$folder = Get-Folder $vFolder | Get-View
```

```
Get-View -SearchRoot $folder.MoRef -ViewType VirtualMachine | %{$_.reload() }
```

```
## Alternatively one CUCM VM at a time
```

```
Get-VM -Name "cucm1" | Set-VM -GuestID "rhel6_64Guest" -confirm:$false
```

```
Get-VM -Name "cucm1" | get-networkadapter | set-networkadapter -type "vmxnet3" -confirm:$false
```

```
Get-View -ViewType VirtualMachine -Filter @{"Name" = "cucm1"} | %{$_.reload() }
```

Sample PowerShell Script to Deploy CUCM VMs in Bulk to use as PCD Migration Destination

```
### Deploy a Blank CUCM choosing the Deployment Size and convert to Template First###
$VCenter = "vcenter1.cisco.com"
$VFolder = "UCMDestination-Folder"

$template = "cucm_10.5_vmv8_v1.8.ova_7.5k"
$vmNames = @{}

$vmNames["ucmdestpub"] = @("ecats-rtp-cc42-esxi-1.ecatsrtp.cisco.com","ecats-rtp-cc42-esxi-1-
datastore1","Vlan123")
$vmNames["ucmdestsub1"] = @("ecats-rtp-cc42-esxi-1.ecatsrtp.cisco.com","ecats-rtp-cc42-esxi-2-
datastore1","Vlan124")

Get-vc -server $VCenter
foreach ($vmName in $vmNames.keys)
{
$vm = New-VM -Name $vmName -Location $VFolder -Template $template -Host $vmNames[$vmName][0] -Datastore
$vmNames[$vmName][1] -Confirm:$false
##### Deploy CUCM with Local Vswitch Example
# get-NetworkAdapter -VM $vm | Set-NetworkAdapter -NetworkName $vmNames[$vmName][2] -Confirm:$false
##### Deploy CUCM with Distributed VSwitch Example
$myNetworkAdapter = Get-NetworkAdapter -VM $vm
$myVirtualPortGroup = Get-VirtualPortGroup -VirtualSwitch "uc-cseries" -name $vmNames[$vmName][2]
Set-NetworkAdapter -NetworkAdapter $myNetworkAdapter -Portgroup $myVirtualPortGroup -Confirm:$false
}

Echo Done
```



You make **possible**