VIDEO ENDPOINTS

Transitioning from Unified CM / Expressway to Cisco Webex

Deployment Guide

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Contents

INTRODUCTION ........................................................................................................................................ 3

TARGET AUDIENCE ............................................................................................................................ 3
OVERVIEW ............................................................................................................................................. 3

TRANSITION ........................................................................................................................................ 4

PRE-TRANSITION ACTIVITIES ................................................................................................................ 5
1. VERIFY WEBEX LICENSES ............................................................................................................. 5
2. REMOVE DEVICES TO BE FULLY TRANSITIONED FROM ON-PREMISES CALL CONTROL ............ 6
3. REMOVE DEVICES TO BE FULLY TRANSITIONED FROM ON-PREMISES MANAGEMENT ............ 8
4. FACTORY RESET DEVICES TO BE FULLY TRANSITIONED ........................................................... 9

TRANSITION STEPS AND CONSIDERATIONS .................................................................................... 9
1. ADD DEVICES TO WEBEX CONTROL HUB ................................................................................. 10
2. ALTERNATIVELY, USE CISCO WEBEX DEVICE CONNECTOR FOR BULK TRANSITION .......... 15
3. HYBRID REGISTRATION: LINK ON-PREMISES DEVICES TO WEBEX CLOUD ....................... 21

POST-TRANSITION STEPS AND CONSIDERATIONS ....................................................................... 27
1. MANAGING DEVICES AND VIEWING ANALYTICS ON WEBEX CONTROL HUB ................. 27

REFERENCES ....................................................................................................................................... 28


**Introduction**

**Target Audience**

With a multi-phased approach to transitioning an on-premises deployment to the Cisco cloud, the most logical and recommended approach is to move the meetings workflow first, and then move the endpoints.

**Note:** The endpoint transition documented here assumes the meeting workload has already been transitioned to the cloud. For more information on the meeting transition refer to the Meetings: Transitioning from TelePresence Server / CMR-H Bridging to Cisco Webex transition map.

This transition document should be used by individuals with administrator access and knowledge of both the current on-premises endpoint environment, and the new Webex Control Hub administration portal for registration and management.

**Overview**

As shown in Figure 1, this transition explores moving video endpoints from registering with on-premises Unified CM (or Expressway/VCS) (before) to registering with Webex (after).

*Figure 1. Video Endpoints Transition from On-Premises to Cloud*
Transition

This section covers the pre-transition preparation steps, the transition implementation steps, and the post-transition steps to be considered for this workflow transition.

This document describes a phased transition in two parts. As shown in Figure 2, the initial transition phase (Phase 1) results in a hybrid deployment with dual call control where some devices are transitioned fully to cloud calling and other devices are hybrid registered. With hybrid registration, an endpoint maintains connectivity to on-premises call control for device registration and call routing, but also connects to the Webex cloud. This connection to Webex allow on-premises registered devices to leverage a select set of cloud features and enables cloud analytics and reporting for the devices in Webex Control Hub. The final transition phase (Phase 2) results in a pure cloud calling environment where all devices have been fully transitioned to cloud call control.

Figure 2. Phased Transition from On-Premises/Hybrid to Cloud

How long an organization takes to fully transition all devices to the cloud will vary based on the deployment in question. In some cases, organization may initially fully transition only a sub-set of devices while hybrid registering other devices. The organization may remain in this hybrid dual call control phase (Phase 1) for an extended period of time (months or even years). In other cases, an organization may fully transition all devices to Webex (Phase 2) in a very short period of time (days or weeks). This document is intended to cover both hybrid (Phase 1) and full transitions (Phase 2).
Pre-Transition Activities

Below is a summary of pre-transition items/steps to consider when performing the transition from Unified CM/Expressway (VCS) on-premises video endpoint registration to Webex device registration.

1. Verify Webex licenses

   Before you begin to enable devices with service from the Webex cloud or fully transition devices from on-premises to the Webex cloud, you must verify that sufficient Webex Device licenses are available to support your devices in the cloud.

   - Perform an inventory of all devices you intend to fully transition or simply enable for Webex cloud services and verify that they meet the minimum requirements:


   Additional requirements for cloud service enablement include:

   - Unified CM or Expressway device registration.

   - Unified CM, version 12.5(1) SU1, or 11.5(x) with the latest device pack or .cop file.

   - With Expressway registration, HTTPS connectivity to devices for the Device Connector tool is required.

   - Webex Control Hub administrative access.

   - Cisco Collaboration Flex Plan.

   - Installation of Cisco Webex Device Connector.
Limitations with Webex cloud service enablement for devices to be aware of include:

i. Web proxy is not supported for on-premises registered devices connecting to Webex services.

ii. Enabling Hybrid Calendar disables TMS calendar. Only one calendaring source is supported at a time.

- Navigate to the subscriptions page on Webex Control Hub (https://admin.webex.com/my-company/subscriptions) and login to verify the quantity of available licenses (see Figure 3). The example shown in Figure 3 indicates the Webex organization has 80 available room device licenses, which would be the maximum number of devices that could be transitioned to this Webex organization. If you do not have enough licenses to support all your devices, you need to contact your account representative.

**Figure 3. Webex Room Device License Availability**

![Webex Devices](image)

2. **Remove devices to be fully transitioned from on-premises call control**

For fully transitioned video devices, there are several methods to remove these devices from the call control: One-by-one, bulk, and automated. Because this is a permanent action, please exercise caution when using bulk and automated processes, and if available test in a sandbox environment before proceeding in production. This document specifically covers Cisco Unified Communications Manager (Unified CM) and Video Communications Server (VCS)/ Expressway.

- Remove devices registered to Unified CM
  
  i. Login to the Cisco Unified CM Administration Portal
  
  ii. Navigate to **Device > Phone**
  
  iii. Use the **Find Phone Where** filter boxes to find the device you want to remove
  
  iv. Place a check mark in the selection box to the left of the device
v. Click **Delete Selected** (see Figure 4)

**Figure 4.** *Video Endpoint: Removing Device from Unified CM*

![Image of phone list with option to delete selected device]

vi. Next, click **OK** to acknowledge that this is a permanent deletion (see Figure 5)

**Figure 5.** *Video Endpoint: Confirming Permanent Removal of Device*

![Image of confirmation dialog box]

You are about to permanently delete one or more Phones. This action cannot be undone. Continue?

[OK] [Cancel]
3. Remove devices to be fully Transitioned from on-premises management

At this point an administrator will want to check if the video devices being fully transitioned are part of any future on-premises scheduled meetings. If this is the case, an administrator will need to manually transition those meeting invites to your Webex Meeting environment immediately after transitioning the registration point of the video endpoint from the on-premises call control to Webex. There is no automatic transition of meeting information from Cisco Telepresence Management Suite (TMS) to Webex Meetings.

- Remove devices managed by Cisco Telepresence Management Suite (TMS)
  
  i. Login to TMS portal
  ii. Navigate to **System > Navigator**
  iii. Sort the columns to find the device you are looking for
  iv. Place a check mark in the selection box to the left of the device
  v. Click **Delete** (see Figure 7)
vi. Select **Purge** to completely remove the device from TMS and remove any residual communications (see Figure 8).

![Figure 7. Video Endpoint: Removing Device from TMS](image)

vii. Click **Purge** to complete the process (see Figure 9)

![Figure 8. Video Endpoint: Acknowledge Purging Device from TMS](image)

![Figure 9. Video Endpoint: Purging Device from TMS](image)

4. **Factory reset devices to be fully transitioned**

   At this point the video device has been deregistered from the call control, removed from the on-premises infrastructure, and can be safely factory reset. Please follow the factory reset instructions for your video device found in the Administrator Guide for each device type. For example, the Cisco Webex Room Series administrator guides are available at [https://www.cisco.com/c/en/us/support/collaboration-endpoints/spark-room-kit-series/products-maintenance-guides-list.html](https://www.cisco.com/c/en/us/support/collaboration-endpoints/spark-room-kit-series/products-maintenance-guides-list.html).

**Transition Steps and Considerations**

Below is a summary of transition steps required for the transition from Unified CM/Expressway (VCS) on-premises video endpoint registration to Webex cloud
Transition registration in the cloud. Transition to hybrid registering devices that will continue to leverage on-premises call control is also covered.

You should only perform these steps during a planned maintenance window for your organization. Before proceeding you should back up all collaboration and infrastructure systems if you must back out or abandon the transition.

1. Add Devices to Webex Control Hub
   You are now ready to begin adding your devices to Webex Control Hub using the following procedure:
   
   i. Login to Webex Control Hub ([https://admin.webex.com/login](https://admin.webex.com/login)) using an Administrator account with device management rights (see Figure 10).

   Figure 10. **Webex Control Hub: Administrator Login**

   ![Webex Control Hub: Administrator Login](image)

   ii. Select **Devices** from left hand menu (see Figure 11).
iii. Select the green **Add Device** button (see Figure 12)

**Figure 12. Webex Control Hub: Add a New Device**

iv. Select the type of device assignment: **Existing User – Personal Usage** (devices assigned to users for personal use) or **Place – Shared Usage** (represents a location and device not owned by a specific user). Then, select **Next** (see Figure 13).
v. If assigning the device to a user for personal use, select **Existing User - Personal** and after clicking next, search for and select a specific user (see Figure 14).

**Figure 14. Webex Control Hub: Existing User Search**
vi. On the other hand, if assigning the device to a location, select **Place - Shared Usage** and after clicking next, select **Existing Place** or **New Place**. Specify the location of the device (existing or new) as shown in Figure 15.

**Figure 15. Webex Control Hub: Assigning Location to New Device**

vii. Next, select the type of device to be activated: Cisco Webex Rooms device or IP Phone and then click **Next** (see Figure 16).
viii. Optional at time of registration: Select services associated with your Webex Account. You can enable Calling and Calendar services (see Figure 17).

**Figure 16. Webex Control Hub: New Device Type Selection**

**Figure 17. Webex Control Hub: Enabling Additional Services**
It is recommended to configure One Button to Push (OBTP) for ease of joining meetings from your cloud endpoints. For more information about using OBTP and the Calendar Service refer to [https://help.webex.com/en-us/nvibg1k/Make-it-Easier-for-Video-Devices-to-Join-Meetings-with-OBTP](https://help.webex.com/en-us/nvibg1k/Make-it-Easier-for-Video-Devices-to-Join-Meetings-with-OBTP).

ix. When presented with **Activation Code**, follow prompts on touch panel or touchscreen to input the activation code and complete video device registration to the cloud (see Figure 18).

**Figure 18. Video Endpoint: Activation Code Prompt**

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2. **Alternatively, use Cisco Webex Device Connector for bulk transition**

   Instead of adding devices to Webex Control Hub directly, you can bulk transition your devices to cloud registration using the Cisco Webex Device Connector tool.

   Before proceeding with this option, ensure the following minimum requirements are met:
   - Endpoints to be transitioned are running CE 9.8 or later.
   - Login account for Webex Control Hub available with either Device Administrator or Full Administrator capabilities.
- Sufficient number of device licenses are available in Webex Control Hub (i.e. through Cisco Collaboration Flex Plan).
- HTTPS connectivity to access your devices must be available as this is how the Device Connector tool communicates with the endpoints.
- For all devices to be transitioned, ensure you have IP addresses/host names as well as device usernames and passwords. These should be collected either in a comma-separated values (CSV) file or in a Cisco TMS Overview Export file.

Transition devices to Webex with the Device Connector using the following procedure:

1. Login to Webex Control Hub at https://admin.webex.com and navigate to Devices. Select Resources and click the Cisco Webex Device Connector Download button under Tools as shown in Figure 19.
Figure 19. *Cisco Webex Device Connector Tool Download*

[Image: Diagram showing Cisco Webex Device Connector Tool Download]

*Device Resources*

On this page, you can get information on different deployments, download the Webex Device Connector to help you to activate multiple devices into a Webex cloud or Webex Edge deployment, and access external sites related to Webex Rooms.

*Knowledge Base*

- **Cloud Onboarding**
  - Cloud Onboarding allows you to bulk register Cisco Webex devices to the cloud.
  - [View Documentation]

- **Webex Edge for Devices**
  - Webex Edge for Devices brings Webex cloud features and functionality to on-premises registered video devices.
  - [View Documentation]

*Tools*

- **Cisco Webex Device Connector**
  - This tool allows you to onboard multiple devices to the Webex cloud or to add Webex cloud capabilities to your on-premises devices via Webex Edge for Devices.
  - [Download]
To read more about the tool, see the Cisco Webex Device Connector article available at https://help.webex.com/en-us/383qbd/Cisco-Webex-Device-Connector.

ii. Prepare file containing information on devices to be onboarded or transitioned to Webex.

As shown in Figure 20, there are two device file options:

- Option 1: Export a System Overview report from Cisco TMS and then manually add columns for Username and Password information to the file

- Option 2: Manually create a CSV file with columns for device Address, Username, and Password.

Figure 20. Prepare Device Information File for Onboarding
iii. After you have installed the Device Connector tool and prepared the required files, start tool and select the **I want to register multiple devices to the cloud** option as shown in Figure 21.

**Figure 21. Device Connector: Register Devices to the Cloud**

![Device Connector: Register Devices to the Cloud](image)

iv. Next, as shown in Figure 22, you will be presented with an information screen and dialog box allowing you to upload the device information file you prepared previously.
Figure 22. *Device Connector: Register Devices Using CSV or TMS Export Files*

Note: As shown in Figure 22, any devices you are onboarding will overwrite any existing Webex device configuration you already have for those devices.

v. The tool uses the System Unit name for the Place Name in Webex Control Hub. If the System Unit name has not been populated, the MAC address of the device will be used.

vi. It is possible to change system name for each device via the Device Connector tool prior to onboarding using the edit button next to the value in the Name column (see Figure 23)
3. Hybrid Registration: Link On-Premises Devices to Webex Cloud

To enable cloud features and cloud-based device analytics and reporting for on-premises registered devices, use the Webex Device Connector tool to hybrid register these devices to Webex.

Just as with fully transitioning devices to Webex as described in the previous step, if you have not already done so, download, install, and launch the Webex Device Connector tool to begin the process of linking on-premises devices to Webex features and analytics (refer back to Figure 19). For more details about Webex Device Connector see the Cisco Webex Device Connector article available at https://help.webex.com/en-us/383gbd/Cisco-Webex-Device-Connector.

Unified CM Call Control
To link on-premises devices leveraging Unified CM call control do the following:

i. After you have installed Webex Device Connector, start tool and select the I want cloud features for my on-premises registered devices option as shown in Figure 24.
ii. On the subsequent screen click **Link devices registered with Cisco Unified Communications Manager** as shown in Figure 25.
iii. As shown in Figure 26 enter the Host (ucm1.example.com in this example), Username corresponding to a standard Unified CM application user with AXL API access (ucm_axl in this example), and Password information for your Unified CM and click **Connect**. If you have Unified CM with public signed certificates, make sure those are valid or click **Proceed without certificate validation** when prompted.
iv. As shown in Figure 27, the Device Connector retrieves the name and description of the Unified CM configured devices. The Contact Info Name becomes the name for the Place the device is connected to. If there is no Contact Info Name set, the System Unit Name or MAC address is used.

Figure 27. Device Connector: Link Devices to the Cloud for Cloud Features

- If you want to change the device name, you should do that within Unified CM before proceeding.

- Click **Link All** to link all the listed devices. To link an individual device, click the **Link** button next to it (see Figure 27).

- Device Connector sends the device information to your Webex organization, and the Webex Identity Service creates activation codes for
all devices. Unified CM applies the activation code to the devices and the devices link to your Webex organization.

- When the device is linked to Cisco Webex cloud services, you can click the device name to open the device page directly in Control Hub.

- If the device status shows Link Pending, it is not linked yet. The activation code is provisioned from Unified CM. The system attempts to link to the device for 7 days until the activation code expires. If the device is available during that time, it gets linked.

**Expressway Call Control**

To link on-premises devices leveraging Expressway/VCS call control do the following:

i. Prepare file containing information on on-premises devices to be linked to Webex.

There are two device file options:

- Option 1: Export a System Overview report from Cisco TMS and only select the **Network Settings > Hostname** system parameter. Then, manually add columns for **Username** and **Password** information to the file.

- Option 2: Manually create a CSV file with columns for device **Address**, **Username**, and **Password**.

ii. After you have installed Webex Device Connector, start tool and select the **I want cloud features for my on-premises registered devices** option as shown previously in **Figure 24**.

iii. Next, click **Link devices using CSV or Cisco TMS Overview Export files** as shown in Figure 28.
iv. Browse to the previously prepared CSV or TMS Overview Export file on your computer and open it.

- The tool uses Contact Info Name for the Place name. If one isn’t available, the System Unit Name or MAC address is used. If no name is found for the device, click the name field to enter one.

v. Click **Link All** to link all the listed devices. To link an individual device, click the **Link** button next to it (refer back to Figure 27).

- Device Connector sends the device information to your Webex organization, and the Webex Identity Service creates activation codes for all devices. The activation codes are sent to the devices through the API. HTTPS must be enabled for this to work.
Post-Transition Steps and Considerations

After on-premises devices registered to Unified CM/Expressway (VCS) are hybrid registered and/or fully transitioned to cloud registration, device visibility and management is available in Webex Control Hub.

1. Managing Devices and Viewing Analytics on Webex Control Hub

Once video devices are fully transitioned or hybrid registered to Webex and active in the Webex Control Hub, management of these devices can be done in two places: Webex Control Hub and the video device’s graphical web interface. To access the device in the Webex Control Hub, go to Devices and search for the video device as shown in Figure 29.

Figure 29. Webex Control Hub: Device Management Functions

When performing management functions, the Webex Control Hub can be used for high level settings and analytics, while the device’s web interface may be used for more granular settings and log file gathering. Local LAN access and administrative rights are required for access to the device’s web interface.
References

Getting Started with Cisco Webex Control Hub

Advanced Settings for Room and Desk Devices

Ways to Add & Manage Users in Cisco Webex Control Hub

Webex Control Hub Calendar Service and One Button to Push (OBTP)

Network Requirements

Release Notes Collaboration Endpoint Software 8

Release Notes Collaboration Endpoint Software 9

Webex Device Connector
References

Webex Edge for Devices
https://help.webex.com/en-us/cy2l2z/Webex-Edge-for-Devices#id_127572

Release Notes RoomOS Software

What’s New in RoomOS