

COLLABORATION TRANSITIONS

Video Endpoints:

Transitioning On-Premises Registered Video Endpoints to Webex Cloud Registered

CTG Technical Marketing Engineering Team

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- Why Move Video Endpoints to Cloud
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Collaboration Transitions

Video Endpoints: Transitioning from On-Premises to Webex

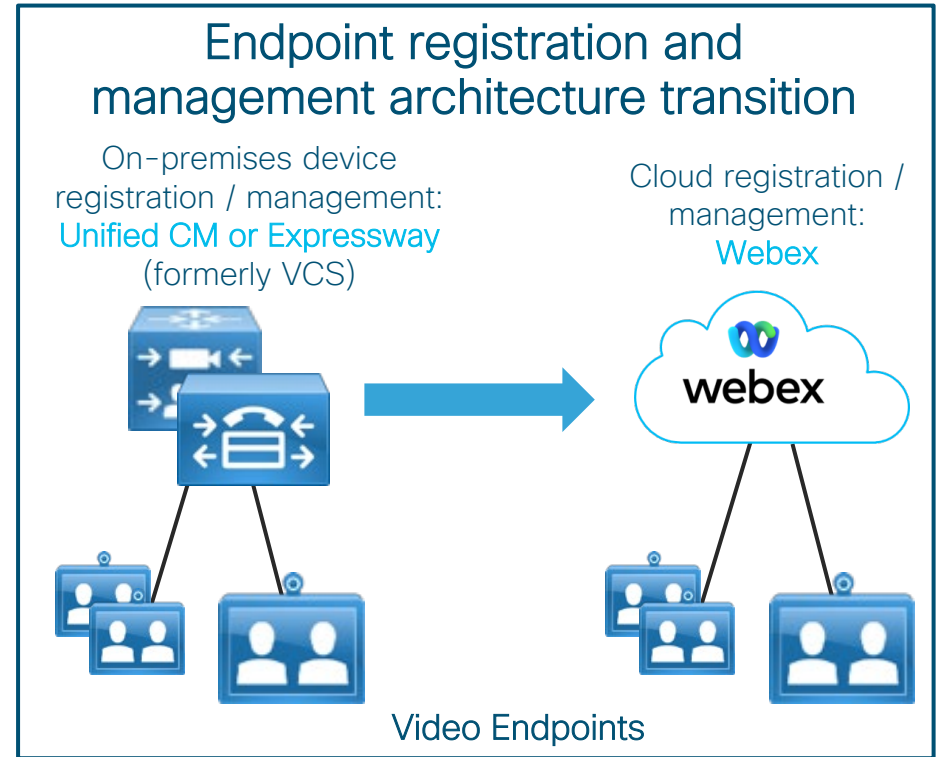
Scenario Introduction

Video Endpoints: Transitioning from On-Premises to Webex

Scenario Introduction: Base Architecture

Architecture based on cloud meetings deployment:

- » Video deployment with **Webex** cloud-based meetings including optional **Webex Edge Video Mesh**
- » On-premises to cloud meeting transition covered by the **Meetings: Transitioning from TS / CMR-H Bridging to Webex** documentation:
 - ✓ [Transition Map](#)
(TDM_MEETINGS_TS_CMR-H_Bridging_to_Webex.pdf)
 - ✓ [Deployment Guide](#)
(DEPLOYMENT_MEETINGS-TS_CMR-H_to_Webex.pdf)



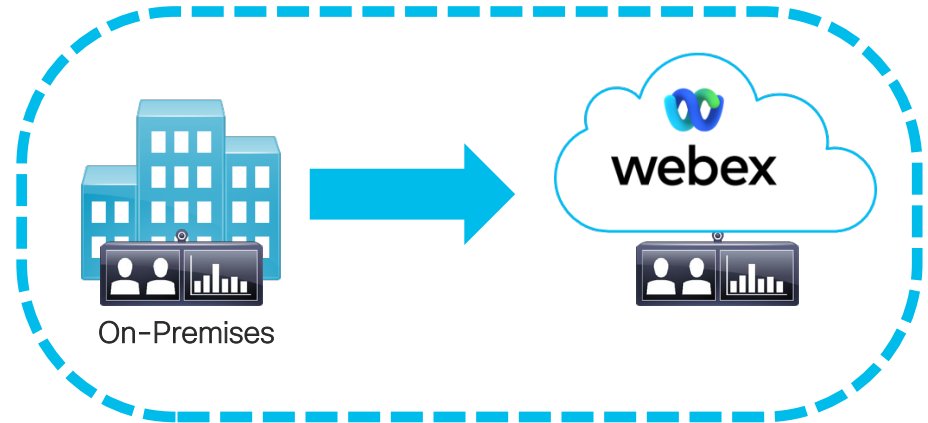
Video Endpoints: Transitioning from On-Premises to Webex

Scenario Introduction: Decision

This scenario applies specifically to **customers transitioning to Webex cloud registered endpoints**.

If any of the following are critical for your deployment, carefully review all material, before making this transition¹:

- » Active call troubleshooting
- » Auto registration / self-provisioning
- » WAN bandwidth optimization (CAC/ICE²)
- » Far end camera control (FECC)



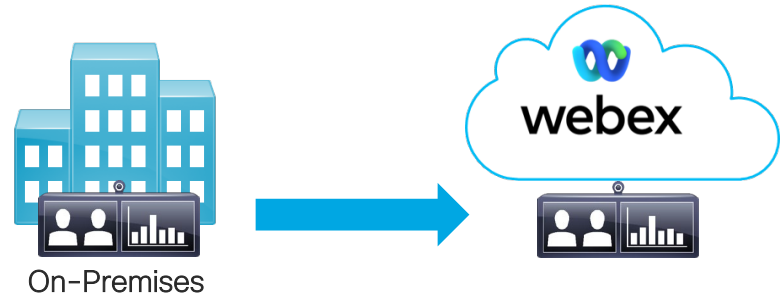
¹ These items are under consideration for future releases but have not yet been committed.

² Call Admission Control (CAC), Interactive Connectivity Establishment (ICE).

Video Endpoints: Transitioning from On-Premises to Webex

Scenario Introduction: Overview

Endpoints transition scenario covering the transition from on-premises registered devices to Webex registered devices.



Scenario Objective

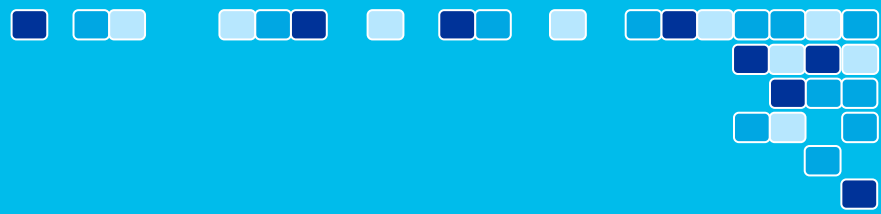
To evaluate the transition **FROM** Unified CM and/or VCS/Expressway-C (traditional on-premises registration and management solution) **TO** Webex and Webex Control Hub (cloud registration and management solution)



Video Endpoints: Transitioning from On-Premises to Webex

Scenario Introduction: Scope

- Only features and functions for hybrid and cloud registered video endpoints were evaluated when compared to same video endpoint registered on-premises.
 - » 80/20 Rule: It is expected this scenario will be applicable to ~80% of traditional on-premises customers, understanding that ~20% of customers may have additional considerations or requirements not covered. However, even in those cases, this transition map may still be used as a potential future path of transition.
- Hybrid registered video endpoints enable a phased migration where devices maintain on-premises registration and calling for some period.
 - » Hybrid registration enables cloud analytics and cloud features for on-premises registered endpoints.
 - » The [Webex Device Connector](#) enables hybrid endpoint registration and facilitates endpoint migrations to the cloud.



Collaboration Transitions

Video Endpoints: Transitioning from On-Premises to Webex

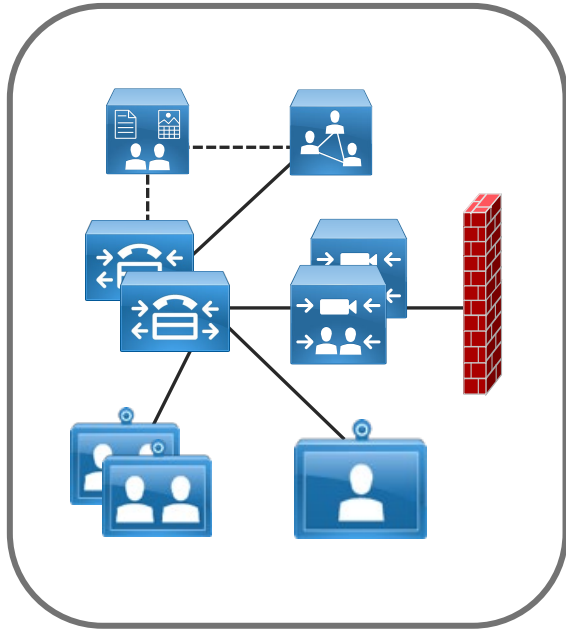
Mapping the Transition

Video Endpoints: Transitioning from On-Premises to Webex

Mapping the Transition: High-Level Transition Map

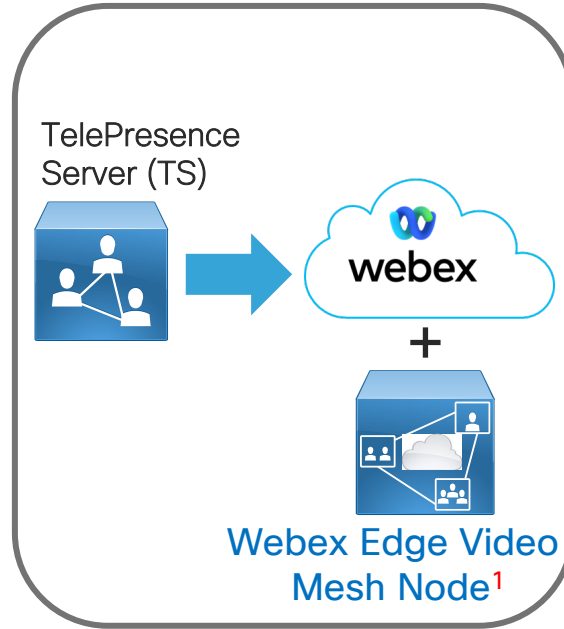
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Cisco Video Deployment



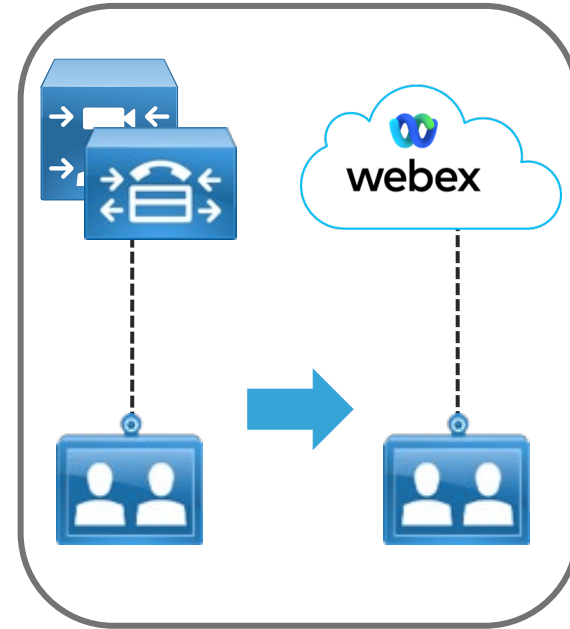
1

Webex Cloud Meetings



2

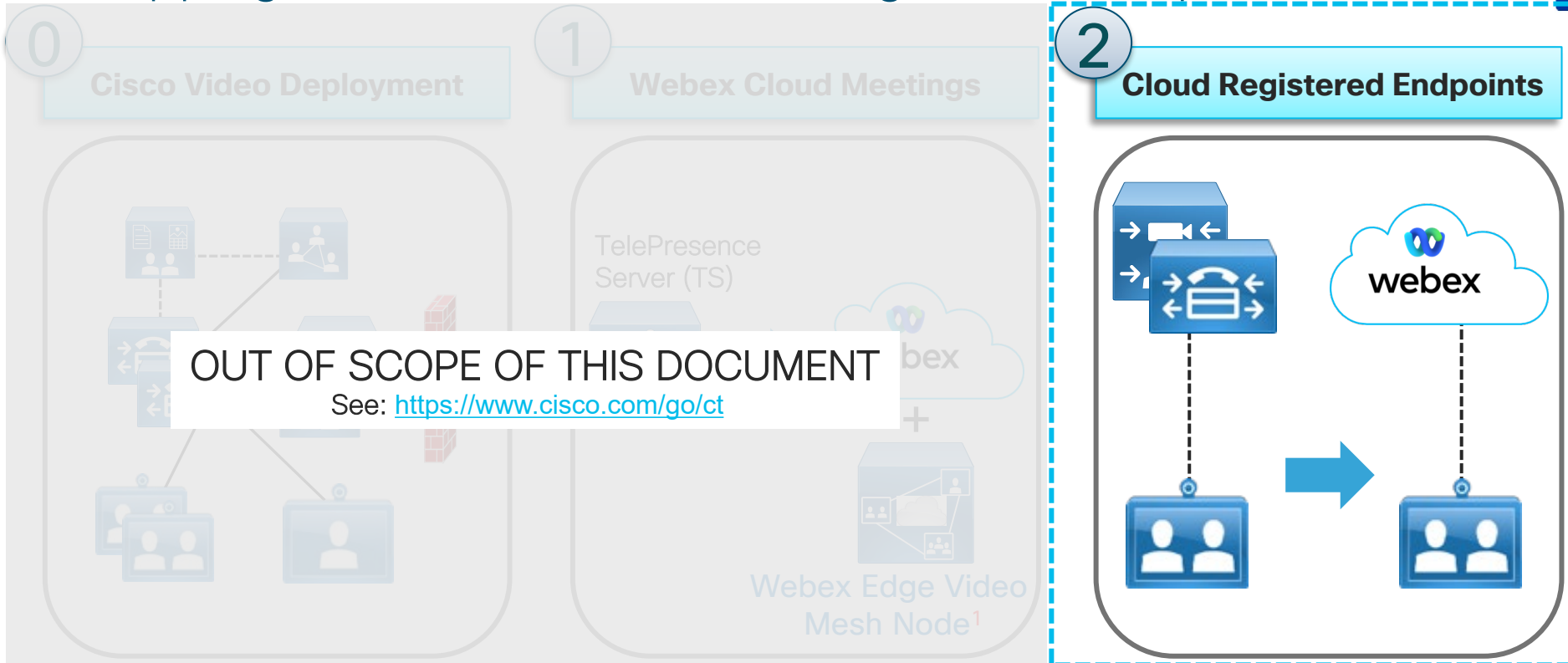
Cloud Registered Endpoints



Note: This map is a visual representation of the workload transition(s), highlighting the primary architectural changes during the deployment.

Video Endpoints: Transitioning from On-Premises to Webex

Mapping the Transition: Cloud Registered Endpoints



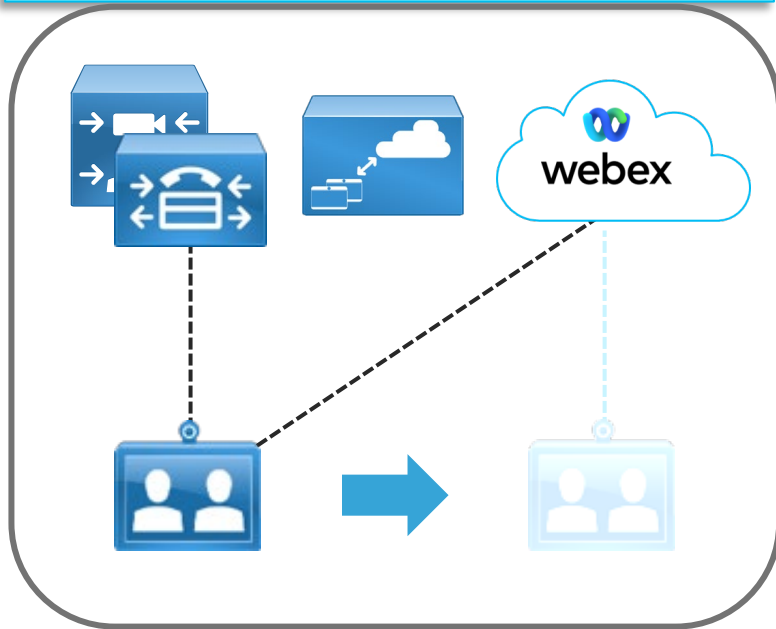
Note: This map is a visual representation of the workload transition(s), highlighting the primary architectural changes during the deployment.

Video Endpoints: Transitioning from On-Premises to Webex

Mapping the Transition: Endpoint Registration

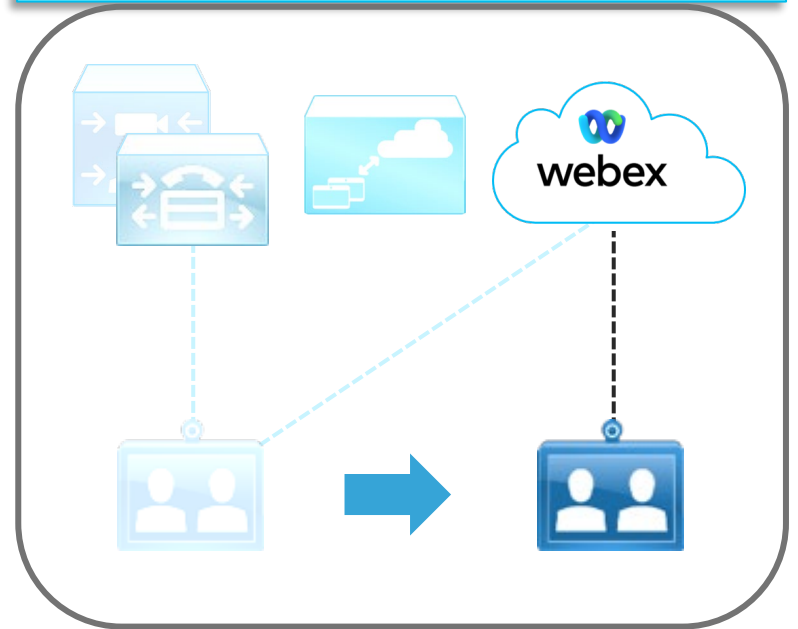
2A

Hybrid and Cloud Registered Endpoints



2B

Cloud Registered Endpoints



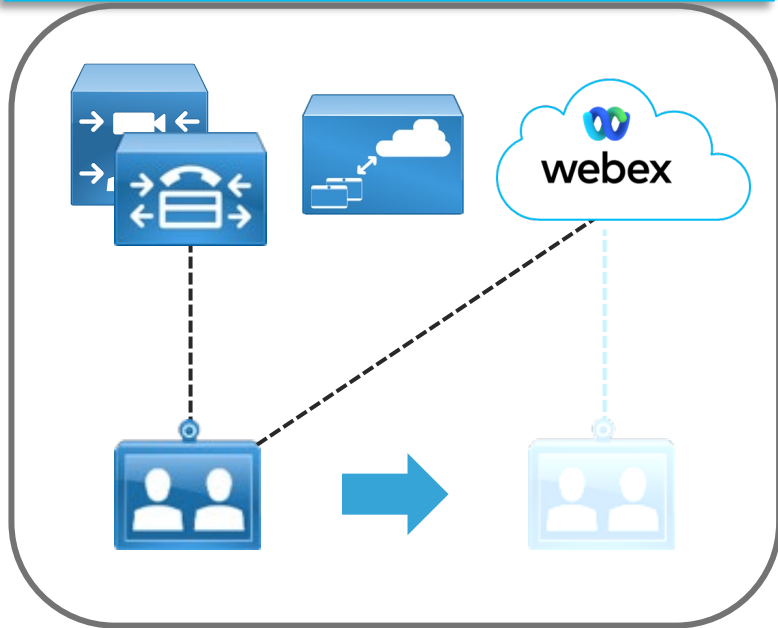
Note: This map is a visual representation of the workload transition(s), highlighting the primary architectural changes during the deployment.

Video Endpoints: Transitioning from On-Premises to Webex

Mapping the Transition: Step 2A – Hybrid Registration

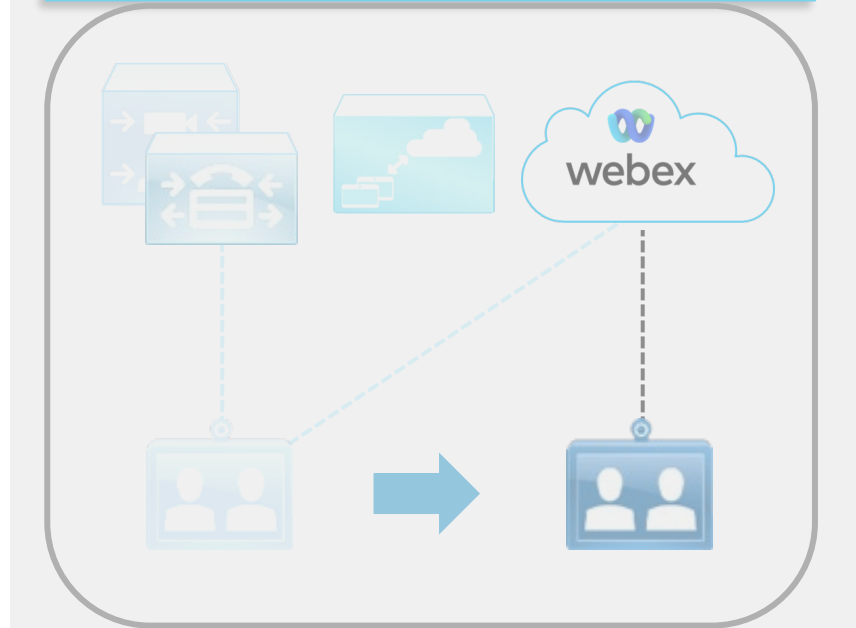
2A

Hybrid and Cloud Registered Endpoints



2B

Cloud Registered Endpoints



Note: This map is a visual representation of the workload transition(s), highlighting the primary architectural changes during the deployment.

2A

Video Endpoints: Transitioning from On-Premises to Webex What Changes with Hybrid Registered Endpoints?

- **Licensing:** Move to Flex licensing for Webex device registration and management.
 - » Cloud device licenses must be available for on-prem devices that are hybrid registered through Webex Edge for Devices
- **Endpoint Migration, Registration, and Management:**
 - » Hybrid registered endpoints: **Webex Device Connector** enables hybrid registration for devices maintaining on-premises registration and calling while leveraging cloud features and analytics. Also facilitates endpoint migration to the cloud.
 - » Cloud registered endpoints: On-premises Unified CM and/or Expressway-C (VCS)¹ replaced with Webex cloud device services
- **Firewall Traversal:** Expressway is not required for firewall traversal with cloud registered devices. Media & signaling sent directly to the cloud (or to Webex Edge Video Mesh Node if deployed).



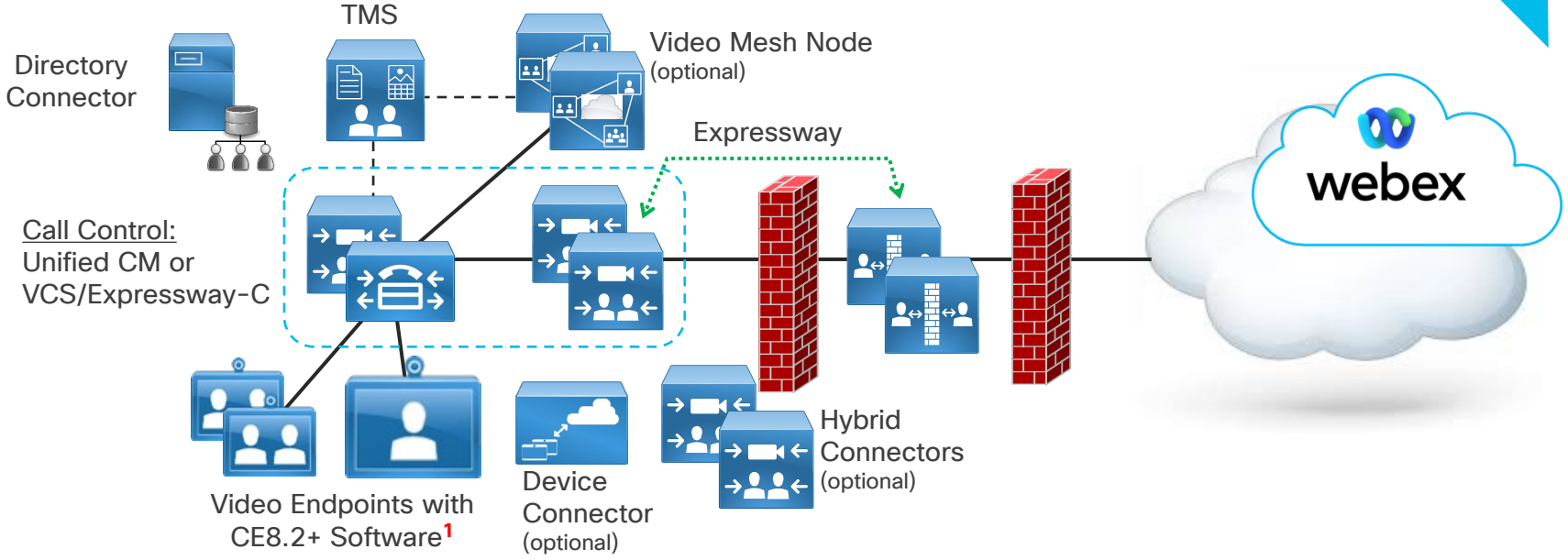
Webex Device Connector

¹ Unified CM/Expressway-C maintained for hybrid video endpoints and other on-premises devices (analog, audio-only, and non-Webex supported video endpoints).

1

Video Endpoints: Transitioning from On-Premises to Webex Before - On-Premises Video Endpoint Registration

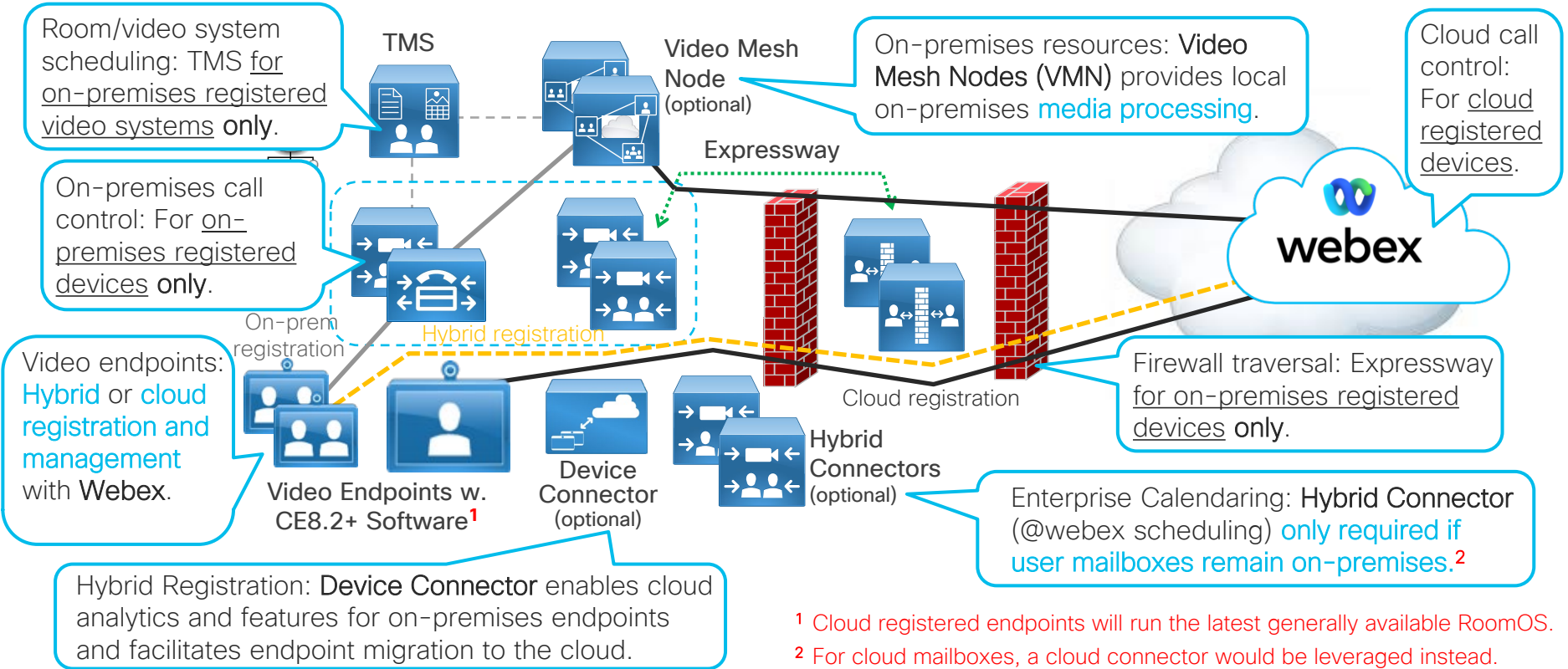
REVIEW



¹ Cisco always recommends running the latest build available on <https://www.cisco.com/>

2A

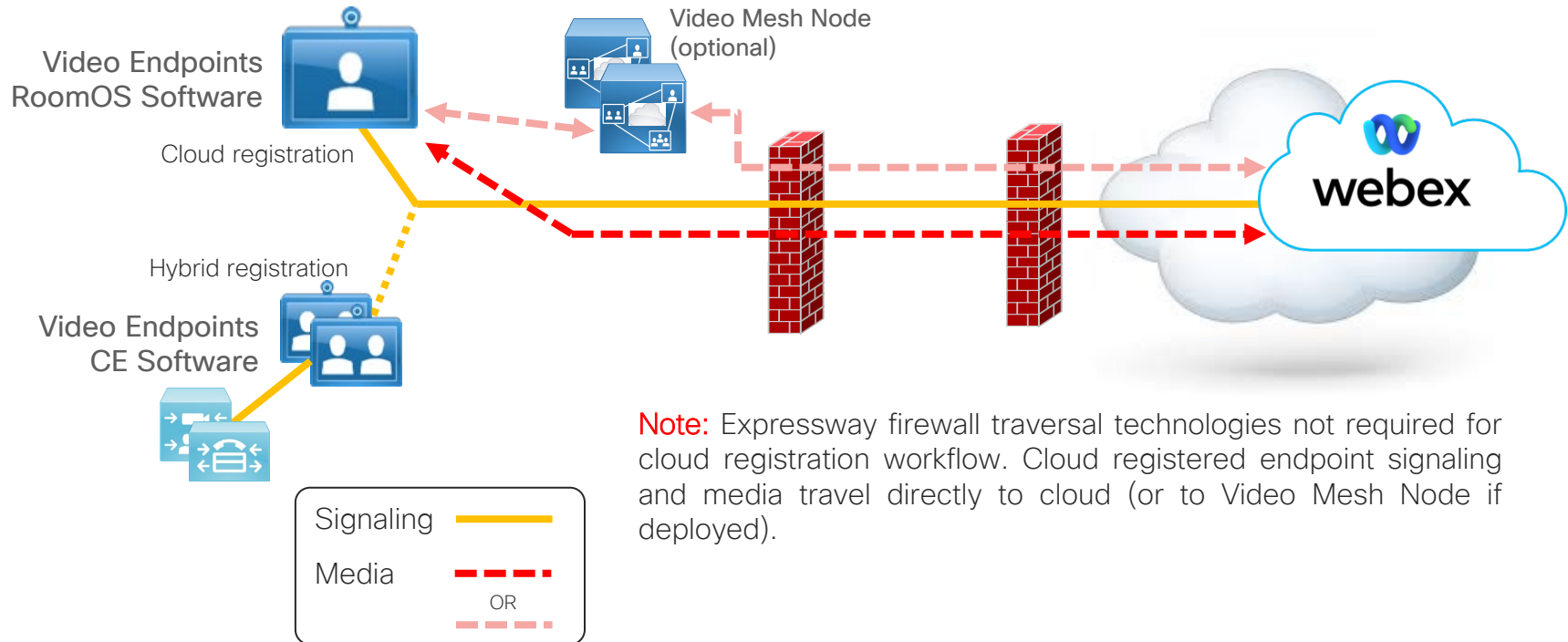
Video Endpoints: Transitioning from On-Premises to Webex After – Webex Hybrid & Cloud Registered Video Endpoints



1 Cloud registered endpoints will run the latest generally available RoomOS.
 2 For cloud mailboxes, a cloud connector would be leveraged instead.

2A

Video Endpoints: Transitioning from On-Premises to Webex Webex Hybrid & Cloud Endpoint Registration Call Flow



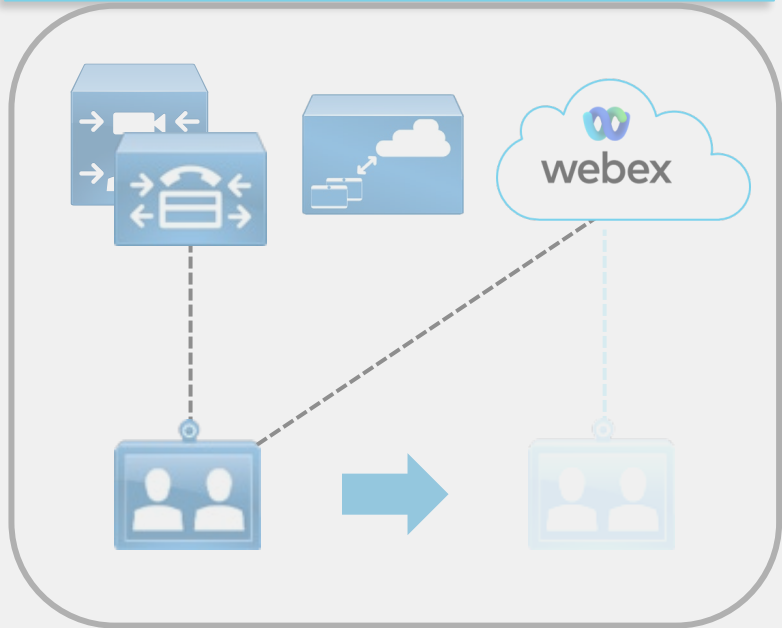
Note: Expressway firewall traversal technologies not required for cloud registration workflow. Cloud registered endpoint signaling and media travel directly to cloud (or to Video Mesh Node if deployed).

Video Endpoints: Transitioning from On-Premises to Webex

Mapping the Transition: Step 2B – Cloud Registration

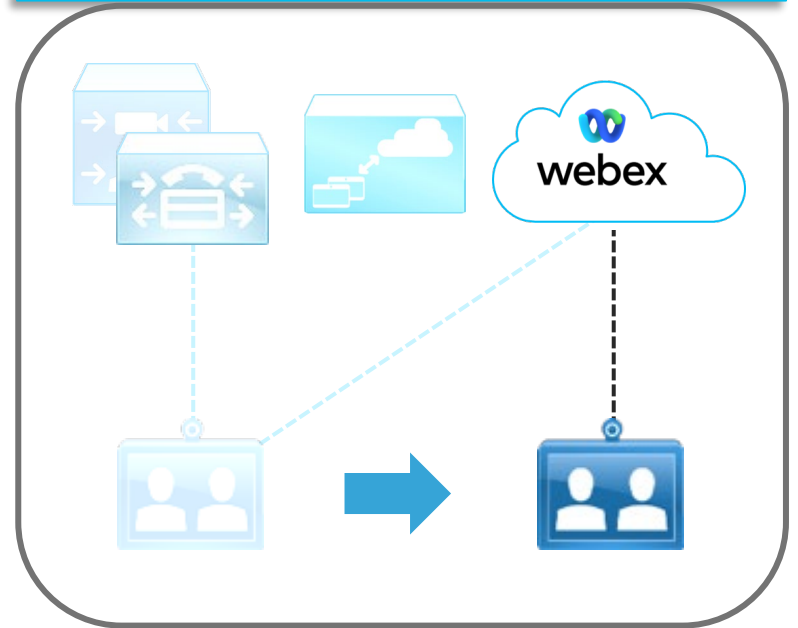
2A

Hybrid and Cloud Registered Endpoints



2B

Cloud Registered Endpoints



Note: This map is a visual representation of the workload transition(s), highlighting the primary architectural changes during the deployment.

2B

Video Endpoints: Transitioning from On-Premises to Webex What Changes with Cloud Registered Endpoints?

- **Licensing:** Move to Flex licensing for Webex device registration and management.
- **Endpoint Migration, Registration and Management:**
 - » On-premises endpoint migration: **Webex Device Connector** facilitates device migration to Webex
 - » Cloud registered endpoints: On-premises Unified CM and/or Expressway-C (VCS)¹ replaced with Webex cloud device services.
- **Firewall Traversal:** Expressway is no longer required for firewall traversal with cloud registered devices.² Media & signaling sent directly to the cloud (or to Webex Edge Video Mesh Node if deployed).

¹ Maintain Unified CM/Expressway-C if device services are required for other on-premises video endpoints (analog, audio-only, non-Webex supported video endpoints, and any endpoints not transitioning to cloud service).

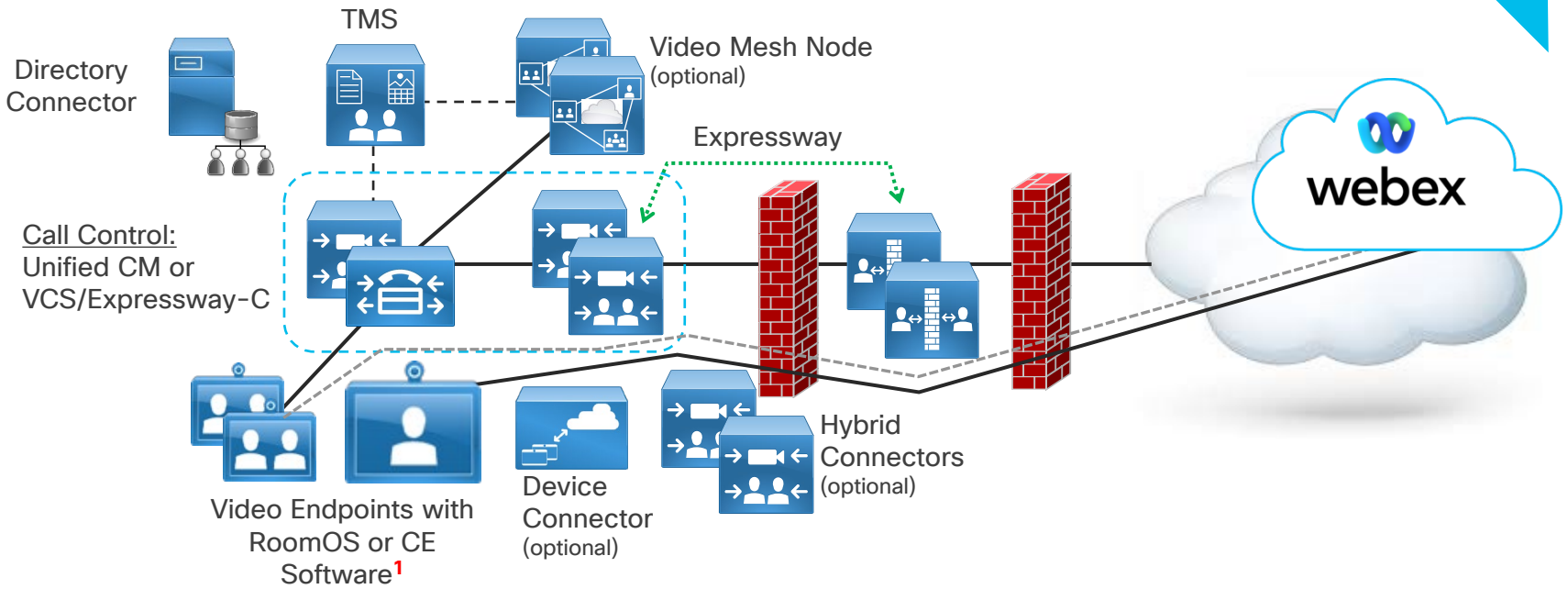
² Maintain Expressway for firewall traversal if any endpoints are still leveraging on-premises device registration/management.



Webex Device
Connector

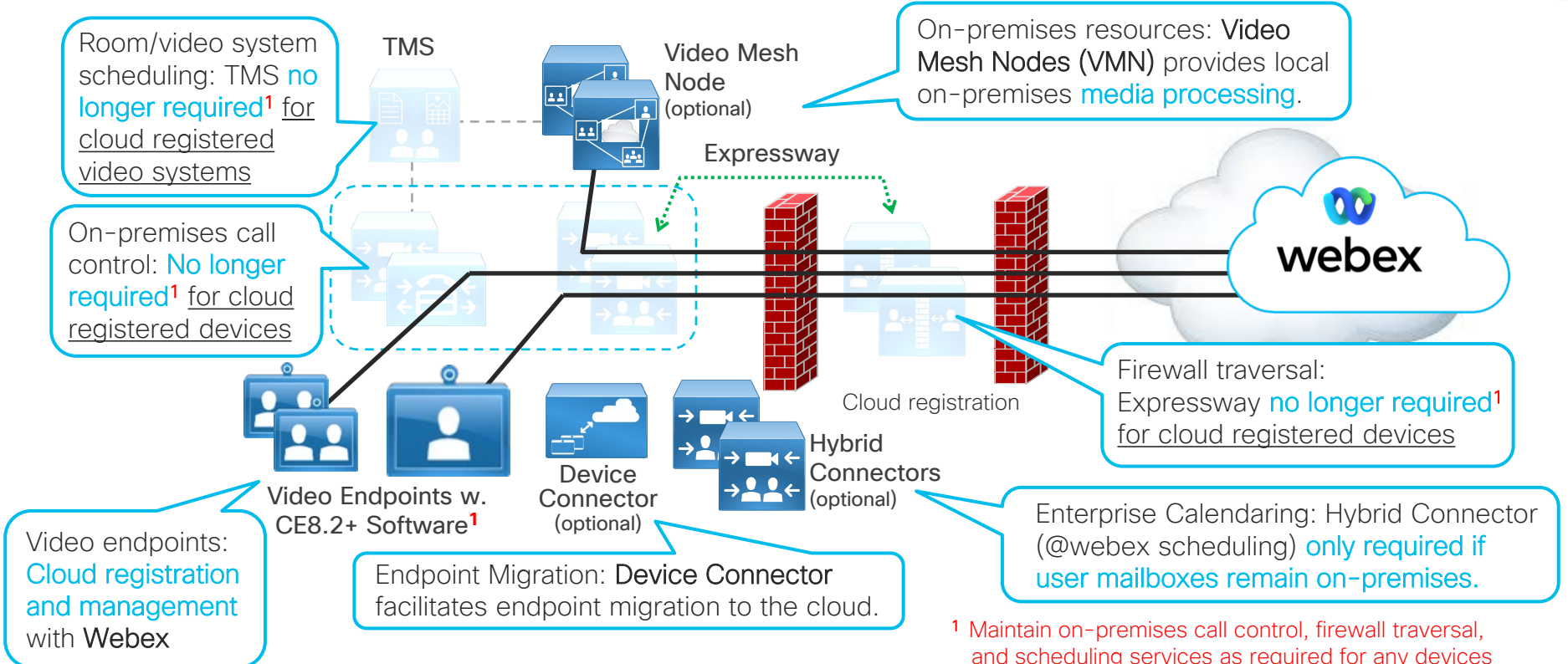
2A

Video Endpoints: Transitioning from On-Premises to Webex Before – Hybrid & Cloud Video Endpoint Registration



¹ Cisco always recommends running the latest build available on <https://www.cisco.com/>

2B Video Endpoints: Transitioning from On-Premises to Webex After – Webex Cloud Registered Video Endpoints



Room/video system scheduling: TMS **no longer required¹** for cloud registered video systems

On-premises resources: **Video Mesh Nodes (VMN)** provides local on-premises **media processing**.

On-premises call control: **No longer required¹** for cloud registered devices

Firewall traversal: Expressway **no longer required¹** for cloud registered devices

Video endpoints: **Cloud registration and management with Webex**

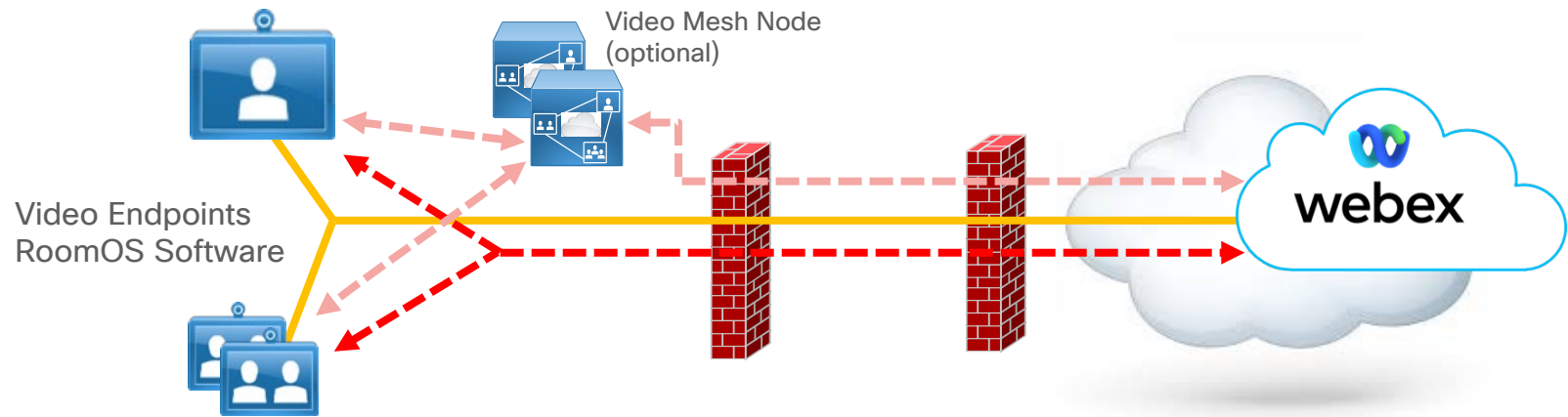
Endpoint Migration: **Device Connector** facilitates endpoint migration to the cloud.

Enterprise Calendaring: Hybrid Connector (@webex scheduling) **only required if user mailboxes remain on-premises**.

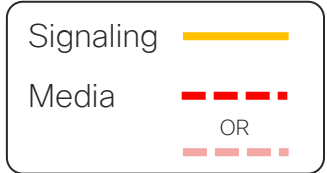
¹ Maintain on-premises call control, firewall traversal, and scheduling services as required for any devices continuing to consume on-premises services.

2B

Video Endpoints: Transitioning from On-Premises to Webex Webex Cloud Video Endpoint Registration Call Flow



Note: Expressway firewall traversal technologies not required for this workflow. Endpoint signaling and media travel directly to cloud (or to Video Mesh Node if deployed).





Video Endpoints: Transitioning from On-Premises to Webex

Why Move Endpoints to Cloud?

There are many compelling reasons for transitioning video endpoints from on-premises to Webex hybrid or cloud registration:

- **Access to Webex Cloud-only features**
 - » Whiteboarding in a Webex Meeting
 - » Webex Assistant – Proactive join meeting
 - » Facial detection / recognition
 - » Name labels
- **Automatic Firmware Management**
 - » Latest features and security fixes
- **Hybrid Cloud Features**
 - » Historical analytics
 - » Online / offline connection status
 - » Device diagnostics
 - » Cloud xAPI access
- **Additional Configurable Features**
 - » Hybrid calendar services
 - » Webex Assistant – Proactive join meeting



Video Endpoints: Transitioning from On-Premises to Webex

Webex Registration Reduces Costs and Simplifies Support

IT administrators struggle with deciding between deploying and managing an on-premises endpoint they are familiar with and having to learn a new technology or workflow for cloud-based endpoints.

- Webex cloud-based endpoints reduce installation time and operational costs. Savings could be used to further train IT staff, or for future Cisco purchases.
- Automatic software updates simplify the operational process and minimize time required to perform software upgrades for features and security enhancements.
- Registering to the Webex Cloud eases the complexities of technologies that many small and medium-sized businesses may not be familiar with (e.g., H.264, OPUS, SIP).
- With the ability to reach and deploy devices remotely, IT staff can manage Video Endpoints from anywhere.¹

¹ Local endpoint web GUI interface access requires being on same subnet.



Video Endpoints: Transitioning from On-Premises to Webex

What is Different When Moving Endpoints to Webex?

The following tables highlight key technical considerations to be aware of when transitioning **FROM** on-premises endpoint registration **TO** Webex endpoint registration.

The considerations have been divided into the following categories:

- » Licensing
- » Management
- » Bandwidth
- » Firewall Configuration

Video Endpoints: Transitioning from On-Premises to Webex Hybrid Licensing and Management Considerations

Considerations for hybrid licensing and management

Category	Considerations
Licensing	<ul style="list-style-type: none">• Make sure you have enough device licenses in Control Hub to support your migration.• Please refer to the Ordering Guide for important info on obtaining the necessary licenses.• Contact your Cisco Account team for more information.
Management	<ul style="list-style-type: none">• Video endpoints can still be managed by TMS, some functions available in Cloud.• Historical analytics, device connection status On / Off, device diagnostics• TMS managed custom phone books are still in use

Video Endpoints: Transitioning from On-Premises to Webex Cloud Licensing and Management Considerations

Considerations for cloud licensing and management

Category	Considerations
Licensing	<ul style="list-style-type: none">• Check if your current on-premises licensing is transferrable to Control Hub.• Make sure you have enough device licenses in Control Hub to support your migration.• Please refer to the Ordering Guide for important info on obtaining the necessary licenses.• Contact your Cisco Account team for more information.
Management	<ul style="list-style-type: none">• Video endpoints will now be managed from Control Hub.• Endpoint Analytics in Control Hub include, Total Online Devices, Total Usage, Average Usage Per Device, Device Utilization, Activities (In Call, Local Sharing Cable, Local sharing Wireless, Signage, Whiteboarding), Device Details (Belongs To, Usage, Device Type, Tags, IP Address, MAC Address, Status, Device ID).• TMS managed custom phone books will not be available on cloud registered endpoints, however, all cloud registered endpoints in the organization will be available in the local directory on each device. Users are also able to create a custom favorites phonebook on the device using the Mark as Favorite button.



Video Endpoints: Transitioning from On-Premises to Webex Hybrid Bandwidth & Firewall Configuration Considerations

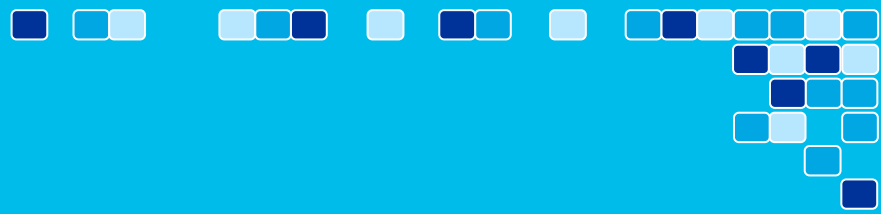
Considerations for hybrid bandwidth and firewall configuration

Category	Considerations
Bandwidth	<ul style="list-style-type: none">• Bandwidth still managed by Unified CM• On-premises QoS configurations not affected by cloud linking
Firewall/Proxy	<ul style="list-style-type: none">• Username and password for the proxy if it requires basic authentication will also be needed.• Webex Device Connector tool cannot use other methods to authenticate with the proxy• Proxy is <u>not</u> supported for on-premises registered devices

Video Endpoints: Transitioning from On-Premises to Webex Cloud Bandwidth & Firewall Configuration Considerations

Considerations for cloud bandwidth and firewall configuration

Category	Considerations
Bandwidth	<ul style="list-style-type: none">• Video endpoints may utilize up to 6Mbps per call with 1080p. With video rate adaptation this bandwidth utilization may fluctuate to account for less than perfect networks. Cisco recommends use of the Webex Video Mesh to help reduce the impact of increased bandwidth utilization inherent with moving to the cloud.• Check QoS settings to minimize network jitter and latency to the internet gateway to get the best quality video.• Consider Webex Edge Connect for a direct peering link to a Webex Data Center for a roundtrip secure, QoS enabled path.
Firewall Configuration	<ul style="list-style-type: none">• Visit Webex media test site to verify basic connectivity.• Check Network Requirements Guide for required configurations to allow registration, proper signaling, and media transport to support calling.• When Proxy Authentication is being used, valid credentials must be configured and stored in the OS of the Webex Device (see <i>Proxy Features</i> section of Network Requirements Guide)



Collaboration Transitions

Video Endpoints: Transitioning from On-Premises to Webex

References

Video Endpoints: Transitioning from On-Premises to Webex

References

Licensing

- Cisco Collaboration Flex Plan:
<https://www.cisco.com/c/en/us/products/unified-communications/collaboration-flex-plan/index.html>
- Ordering guide
https://www.cisco.com/c/en/us/products/collateral/conferencing/webex-meetings/ordering_guide_c07-687399.html?cachemode=refresh

Users

- Get Started with Cisco Webex Control Hub
<https://help.webex.com/en-us/nkhozs6/Get-Started-with-Cisco-Webex-Control-Hub>
- Ways to Add & Manage Users in Cisco Webex Control Hub
<https://help.webex.com/en-us/nj34yk2/Ways-to-Add-and-Manage-Users-in-Cisco-Webex-Control-Hub>

Network Requirements

- Webex Apps and Devices
<https://help.webex.com/en-us/WBX000028782/Network-Requirements-for-Webex-Services>

RoomOS Software

- RoomOS Release Notes and Known and Resolved Issues
<https://help.webex.com/en-us/llygcp/Known-and-Resolved-Issues-in-RoomOS>
- What's New in Room OS
<https://help.webex.com/en-us/6ger7db/What-s-new-in-RoomOS>

Hybrid Deployment

- Webex Edge for Devices
<https://help.webex.com/en-us/cy2l2z/Webex-Edge-for-Devices>

Video Endpoint Transition

- Transitioning On-Premises Video Endpoints to Webex Deployment Guide:
https://www.cisco.com/c/dam/en/us/td/docs/solutions/PA/mcp/DEPLOYMENT_ENDPOINTS-UnifiedCM_Expressway_to_Webex.pdf



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