TURN
IT
UP

CISCO *Live!*

#CiscoLive

Hybrid Calling for Cisco Webex Devices (Device Connector)

Ishan Sambhi, Technical Solutions Architect

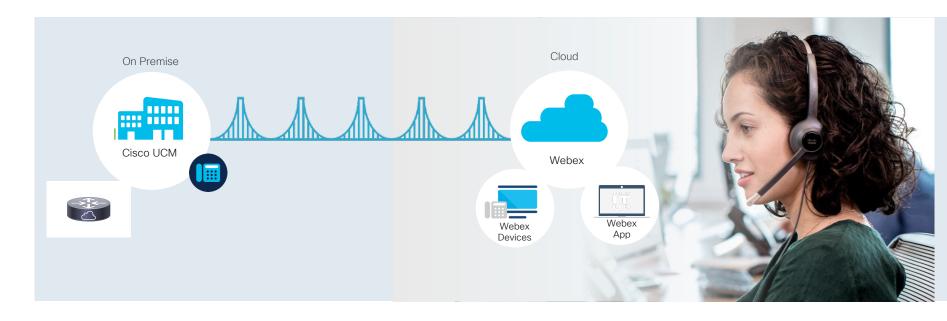Ben Ng, Engineering Architect

BRKCRT-2303

Agenda

- Introduction

- Cisco Webex Hybrid Connector

- Deployment Overview and Calling Scenarios

- Hybrid Calling for Webex Devices Configuration Overview

- Migration from Call Service Connect

Introduction

Cloud And Premises: Bridging the Gap

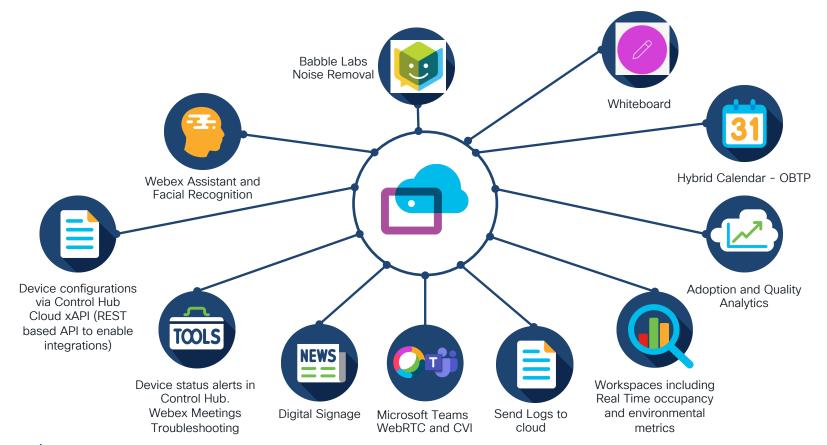Cloud innovation with on-premises calling deployment interoperability

Hybrid Calling for Webex Devices Overview

- Extend call reachability of cloud registered Webex video endpoints by leveraging on-premises UCM dial plan

- Based on call forking: Unified CM-to-Webex, Webex to Unified CM

- Uses Call Anchoring feature on Cisco Unified CM to preserve single identity

Cloud Registered Endpoints' Benefits

Babble Labs Noise Removal

Whiteboard

Hybrid Calendar – OBTP

Webex Assistant and Facial Recognition

Adoption and Quality Analytics

Device configurations via Control Hub Cloud xAPI (REST based API to enable integrations)

Device status alerts in Control Hub. Webex Meetings Troubleshooting

Digital Signage

Microsoft Teams WebRTC and CVI

Send Logs to cloud

Workspaces including Real Time occupancy and environmental metrics

Hybrid Calling for Webex Devices Benefits

- Use UCM for PSTN/DID calling
- Leverage On Prem Dial Plan

    8

What is a Cisco Webex Device Connector?

- Light-weight software to facilitate cloud linking

- Download from Webex Control Hub; supports:
  - Microsoft Windows 10
  - MacOS High Sierra (10.13) or later

- Sign into Cisco Webex Device Connector using Control Hub credentials

- Must also have reacheability to Unified CM to retrieve video device configuration to synchronize to Webex cloud registered devices in Workspace

Device Connector Service for Hybrid Calling for Webex Devices

- Device Connector Call Service is a service for cloud-registered devices

- This architecture provides call connectivity to Cisco Webex cloud-registered devices so that these devices can use the Unified CM dial plan

- Hybrid Calling enabled Webex devices can:
  - Make calls to internal extensions and PSTN numbers via UCM and company PSTN access
  - Receive calls from internal extensions and PSTN numbers via UCM and company PSTN access
  - Display their internal extension and PSTN numbers as an indication to users

- Requires an Enhanced UCL license on Cisco UCM (on top of the cloud subscription)

Deployment Overview and Calling Scenarios

Deployment Overview

- Firewall Traversal achieved through Expressway-C and Expressway-E

- Unified CM extends the call to Webex via Associated Identity (aka Remote Destination)

- Webex routes the call to the Enterprise via Expressway

- Calls hitting Expressway to and from Webex Hybrid Devices don't consume any license on Expressway
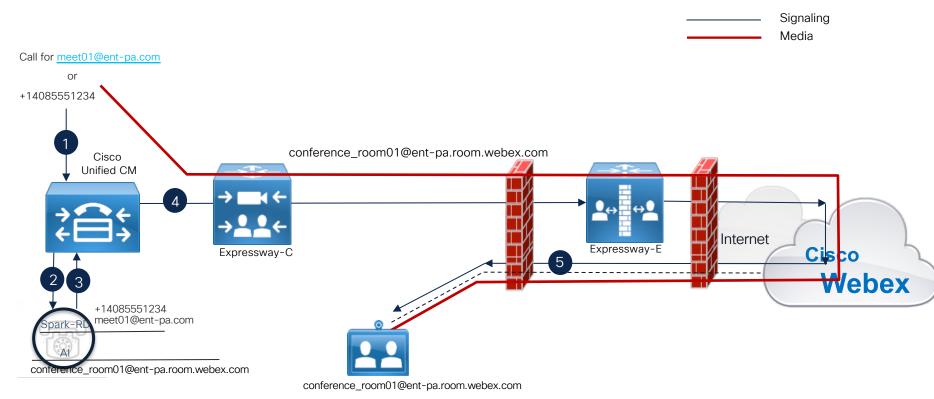
Call Flow Scenarios

- Unified CM (PSTN, locally registered room system) to Hybrid Webex Device

- Webex Hybrid Device to Unified CM (PSTN, locally registered room system)
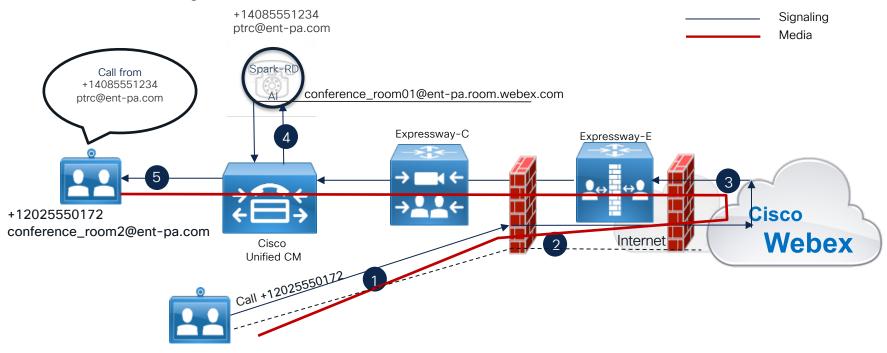
- Webex Hybrid Device to Webex Hybrid Device

- B2B Call

Unified CM To Webex Hybrid Device

Signaling
Media

Call for meet01@ent-pa.com
or
+14085551234

1

Cisco Unified CM

conference_room01@ent-pa.room.webex.com

4

Expressway-C

Internet

Expressway-E

5

Cisco Webex

2 **3**

Spark-RD
AI

+14085551234
meet01@ent-pa.com

conference_room01@ent-pa.room.webex.com

conference_room01@ent-pa.room.webex.com

Webex Hybrid Device To Unified CM

+14085551234
ptrc@ent-pa.com

Signaling

Media

Spark-RD
AI
conference_room01@ent-pa.room.webex.com

Call from
+14085551234
ptrc@ent-pa.com

Expressway-C

Expressway-E

Cisco
Webex

Internet

+12025550172
conference_room2@ent-pa.com

Cisco
Unified CM

Call +12025550172

Webex SIP Address

conference_room01@ent-pa.room.webex.com

Webex Hybrid Device to Webex Hybrid Device
Media Flow

conf2@ent-pa.room.webex.com

+14085554321
conf2@ent-pa.com

conf2@ent-pa.room.webex.com

Webex call: doesn't
traverse Expressway

Cisco
Webex

Internet

+14085551234
conf1@ent-pa.com

conf1@ent-pa.room.webex.com

conf1@ent-pa.room.webex.com

Webex Hybrid Device B2B Call

+14085551234
ptrc@ent-pa.com

Call from
ptrc@ent-pa.com

Signaling

Media

Spark-RD

AI   conference_room01@ent-pa.room.webex.com

bob@external.com

Expressway-C

Expressway-E

Cisco
Unified CM

Internet

Cisco
Webex

Call bob@external.com

Webex SIP Address

conference_room01@ent-pa.room.webex.com

Hybrid Calling for Webex Devices: Configuration Overview

Unified Communications Manager Configuration

- Create a Local User on Unified CM
  - User ID
  - Mail ID
  - Directory URI
  - Telephone Number
- Create a Spark Remote Device (Spark RD) on Unified CM
  - Telephone Number
  - Partition and Calling Search Space
  - Owner User ID
  - Rerouting Calling Search Space
- Configure a SIP Trunk to talk to Expressway-C
- Configure SIP Route Pattern, Route Group, Route List to Webex

Expressway Configuration

- Configure UCM Zone on Expressway-C

- Configure Traversal Client Zone on Expressway-C

- Configure Traversal Server Zone on Expressway-E

- Configure DNS Zone to Webex on Expressway-E

- Set up search rules for inbound and outbound calls to Webex on both Expressway clusters

https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cloudCollaboration/spark/hybridservices/callservices/cmgt_b_ciscospark-hybrid-call-service-config-guide/cmgt_b_ciscospark-hybrid-call-service-config-guide_chapter_01010.html#task_F266FABC5851CF2DD92754C9011E9263
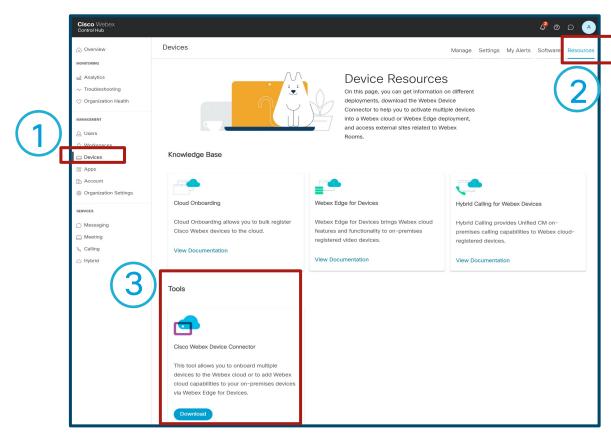
Webex Hybrid Devices Enablement

- Hybrid features enabled through Call Service Connect (CSC) in US Datacenter
  - Service running on Expressway-C
- Cisco Webex Device Connector for EU datacenter organizations instead of CSC
  - Lightware version of Call Service Connect running on a laptop (Windows and Mac)
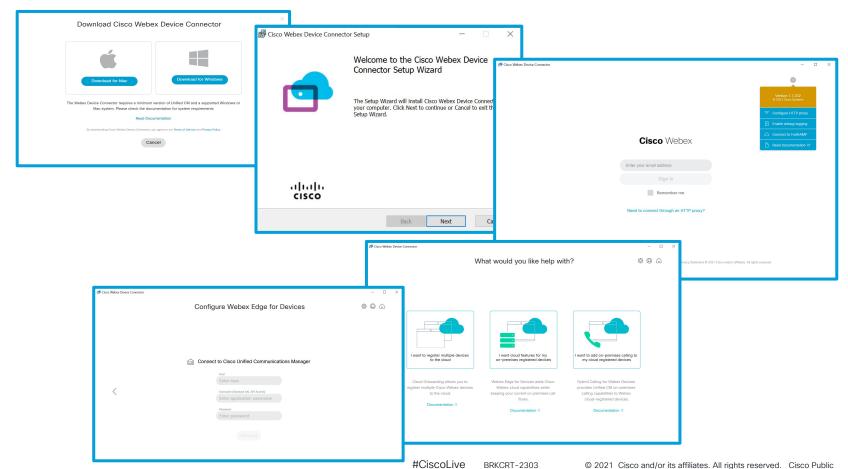 - Also used to bulk-register endpoints to the Cloud

Cisco Webex Device Connector Download

1. Devices

2. Resources
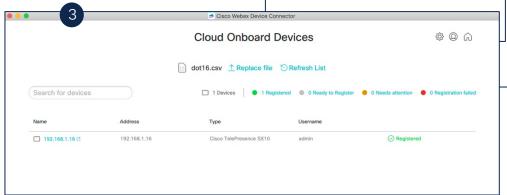
3. Tools > Cisco Webex Device Connector; click Download

Cisco Webex Device Connector Install

Register Webex Devices to Webex

- Upload .csv file with IP addresses, usernames and passwords


```
Address,Username,Password
192.168.1.16,admin,cisco
192.168.3.24,admin,cisco
10.10.1.3,admin,cisco
```
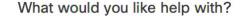

Cloud Onboard Devices

Cloud Onboarding allows you to register multiple Cisco Webex devices to the cloud.

⚠ Registering a device to the Cisco Webex cloud will overwrite any existing device configuration.

↑ Register devices using CSV or Cisco TMS Overview Export files
See how to prepare your file

Cloud Onboard Devices

📄 dot16.csv   ↑ Replace file   ⟳ Refresh List

| Search for devices | ☐ 1 Devices | ● 1 Registered | ● 0 Ready to Register | ● 0 Needs attention | ● 0 Registration failed |

Name	Address	Type	Username	
☐ 192.168.1.16 ↗	192.168.1.16	Cisco TelePresence SX10	admin	⊘ Registered

Device Connector for Hybrid Calling

What would you like help with?

A new software version is available: 1.1.94.
Current: 1.1.78

Update

I want to register multiple devices to the cloud
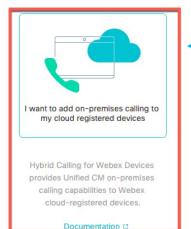
Cloud Onboarding allows you to register multiple Cisco Webex devices to the cloud.

Documentation

I want cloud features for my on-premises registered devices

Webex Edge for Devices adds Cisco Webex cloud capabilities while keeping your calling and media on-premises.

Documentation

I want to add on-premises calling to my cloud registered devices

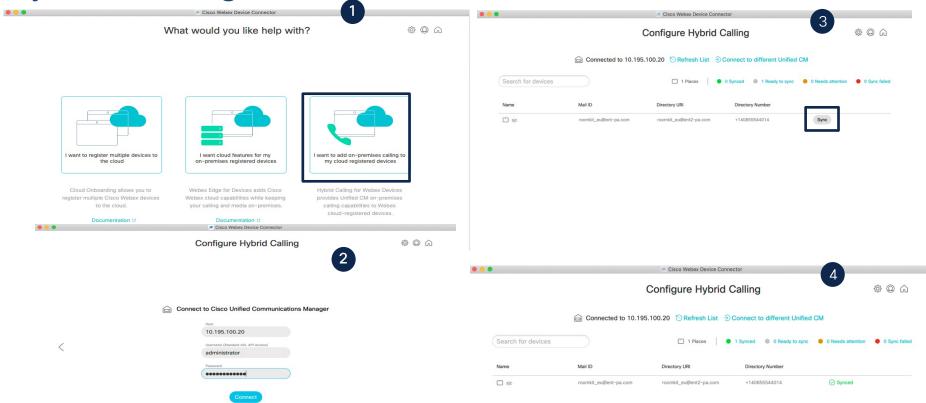Hybrid Calling for Webex Devices provides Unified CM on-premises calling capabilities to Webex cloud-registered devices.

Documentation

Hybrid Calling for Webex Devices

Hybrid Calling Workflow for Device Connector

Migration from Call Service Connect

Migration from Hybrid Call Service

Before	After	Impact	Recommendation
Spark Remote Devices (RDs) for Webex video devices	Spark Remote Devices (RDs) for Webex video devices	None	
Spark RDs for users	Jabber-type devices (desk, mobile, etc.) for users	UCM Configuration	Remove Spark RDs for users; add Jabber devices of desired types (desk, mobile, etc.) for users
One Spark RD per user for apps (desk, mobile, etc.)	One Jabber-type device per app (desk, mobile, etc.)	Licensing	Convert perpetual licensing to Flex; or upgrade perpetual UCL Enh/Enh+ to CUWL
		Capacity	Review UCM device capacity utilization; deploy additional capacity (larger OVAs or more servers) as necessary

Summary

- Webex Hybrid Devices facilitate the co-existance of Cloud and On-premises systems and solutions

- Webex Devices registered to Webex and integrated with Unified CM

Q&A

Thank you

TURN IT UP

CISCO Live!

#CiscoLive