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Technical introduction to cloud-aware video endpoints

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BRKCOL-2241

Barcelona | January 27-31, 2020

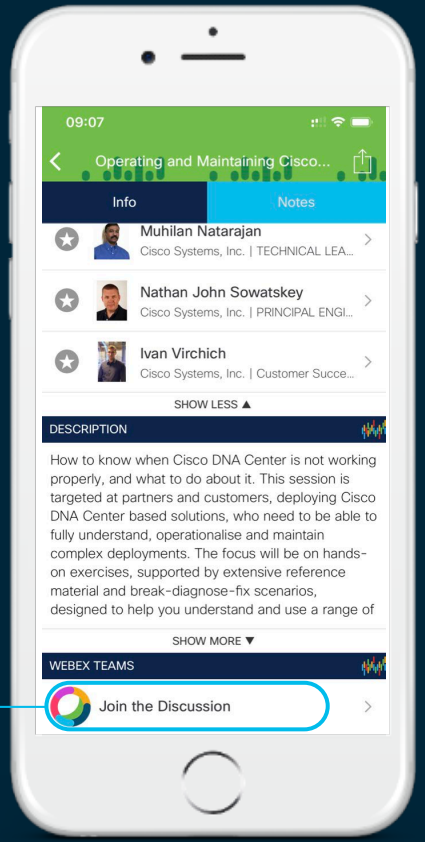
Cisco Webex Teams

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



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Agenda

- Introduction to Webex Edge for Devices
- Features of linked Webex devices
- Cisco Webex Device Connector
- Demo
- Licensing requirements
- Additional functionality of the Device Connector
- Conclusion

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Introduction

Introduction to Cloud Aware/Edge for Devices

Cloud registration of video endpoints is great but what if...

- I want to keep call-control signaling and media for my endpoints on premises...
- I want to keep full control on the critical calling capabilities of video endpoints on my premises...
- still, I wish I could enhance the user experience for my users with new and smart cloud capabilities
- but, at the same time, I want to simplify the architecture
- also, I'd like to converge to a single pane of glass (Control Hub) to manage all my video devices?

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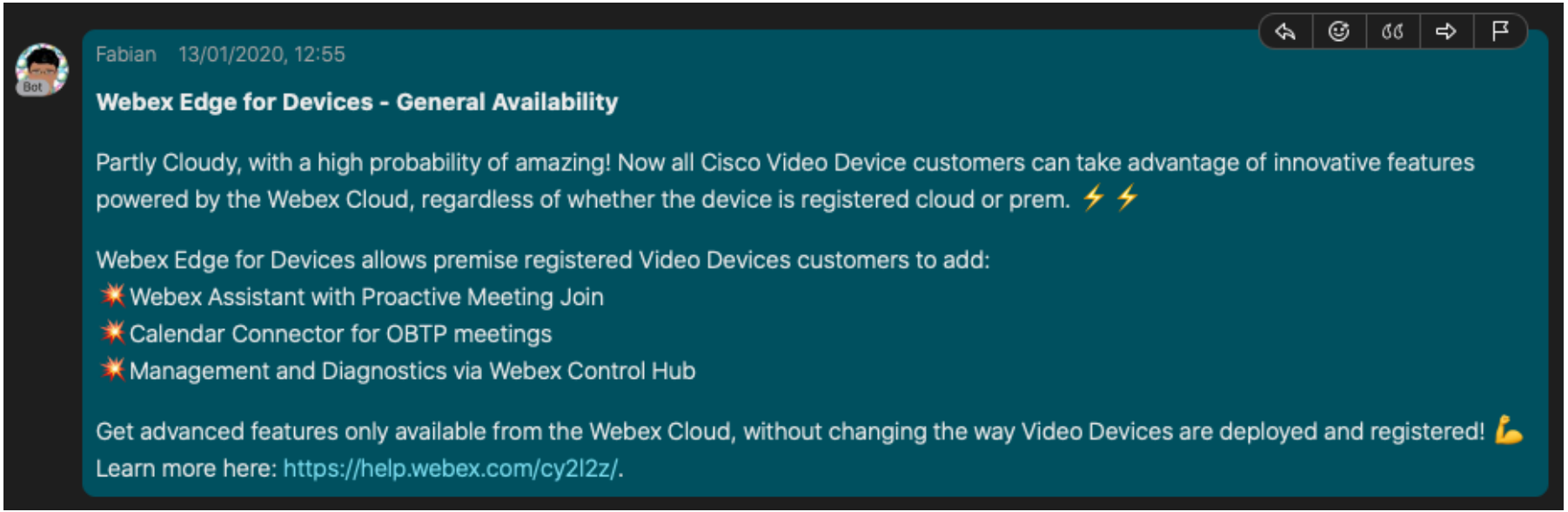
Webex Edge for Devices Launch (January 2020)



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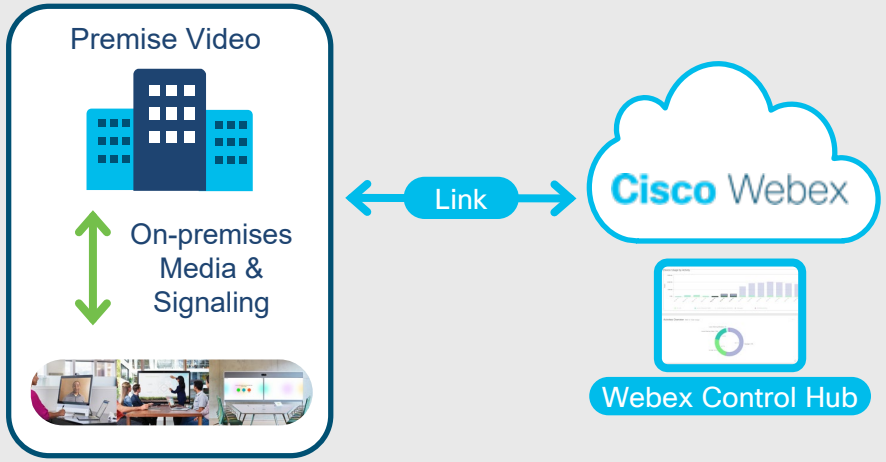
Webex Edge for on-premises Webex Devices
High Level Overview

Link on-premises Webex Devices to the Webex cloud platform: **best of both!**



- Business-critical calling and media stays on-premises
- Access to cloud services (in phases)
- Hybrid deployment and customer migration at your own pace
- Simplified single pane of glass with insights through Control Hub
- “One-click migration” – one button to Cloud Link – it's also EASY!

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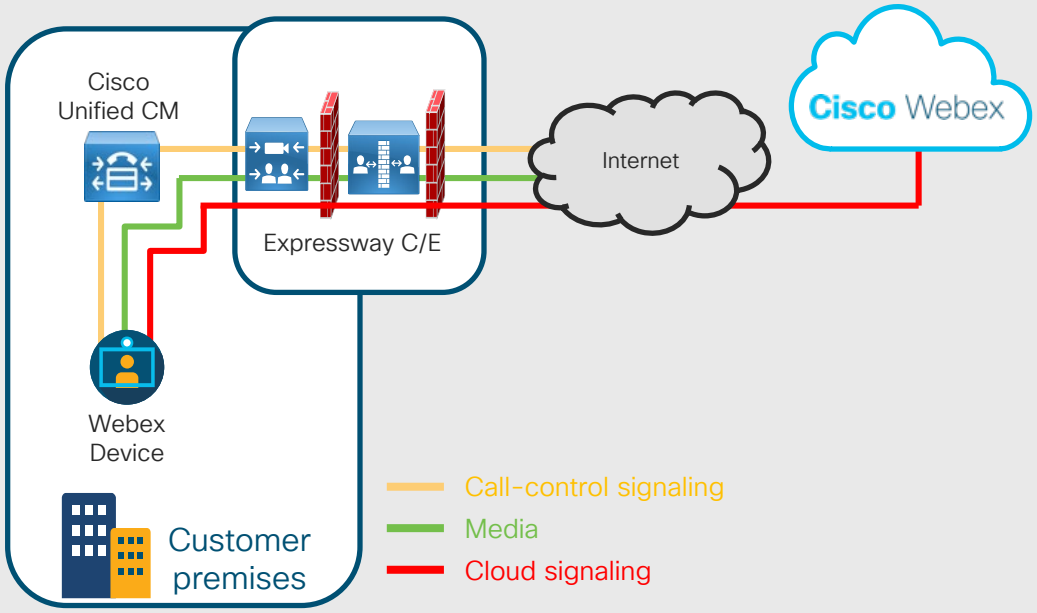
How does it work?

Direct connection from the Webex video endpoints to the Webex Cloud



- Webex devices running CE 9.10 or later
- Outbound Secure Web Socket (WSS) on port 443
- Proxy not supported (yet)
- Done via the Cisco Webex Device Connector
- CUCM 12.5.X or 11.5.X*
- Expressway call-control also supported (any release) – requires HTTPS on devices

* with latest device packs

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Webex devices that can be cloud linked

Webex CE Devices running CE9.10+

Webex Share

DX70

DX80

Desk Pro

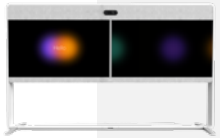
MX200 G2

MX300 G2

Room 55

MX700

Room 55 Dual



Webex Boards:
55, 55S, 70, 70S, and 85

MX800 Single

MX800 Dual

Room 70
Single G2

Room 70 Dual G2

SX10N

SX20

SX80

Room Kit Mini

Room Kit

Room Kit Plus

Room Kit Pro

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What are the Cloud features?

On-premises registration retained plus selected cloud features

Phase 1 features:

- Online/offline connection status and alerts
- Historical Analytics
- Device Diagnostics (troubleshooting utilization data, phase 1)
- Cloud xAPI access
- Hybrid Calendar service
- Webex Assistant (pro-active join meeting)

More to come in the next phases (three months release cycle)

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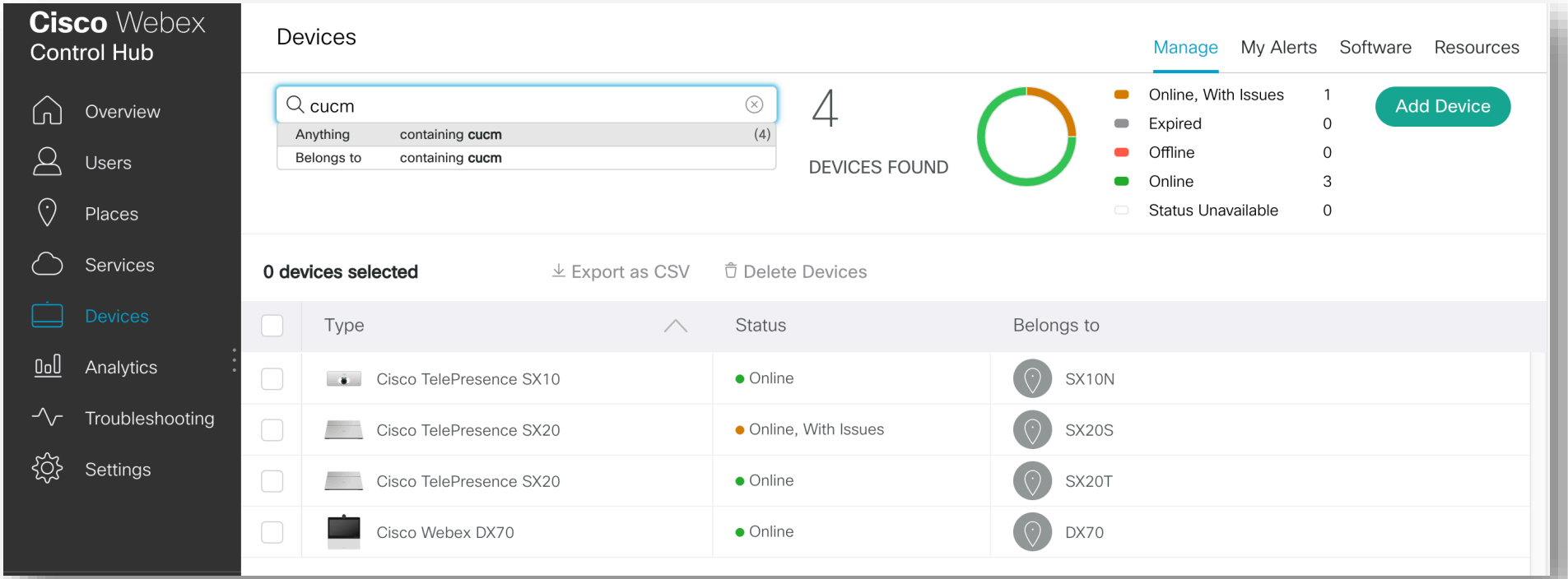
Connection status in Control Hub



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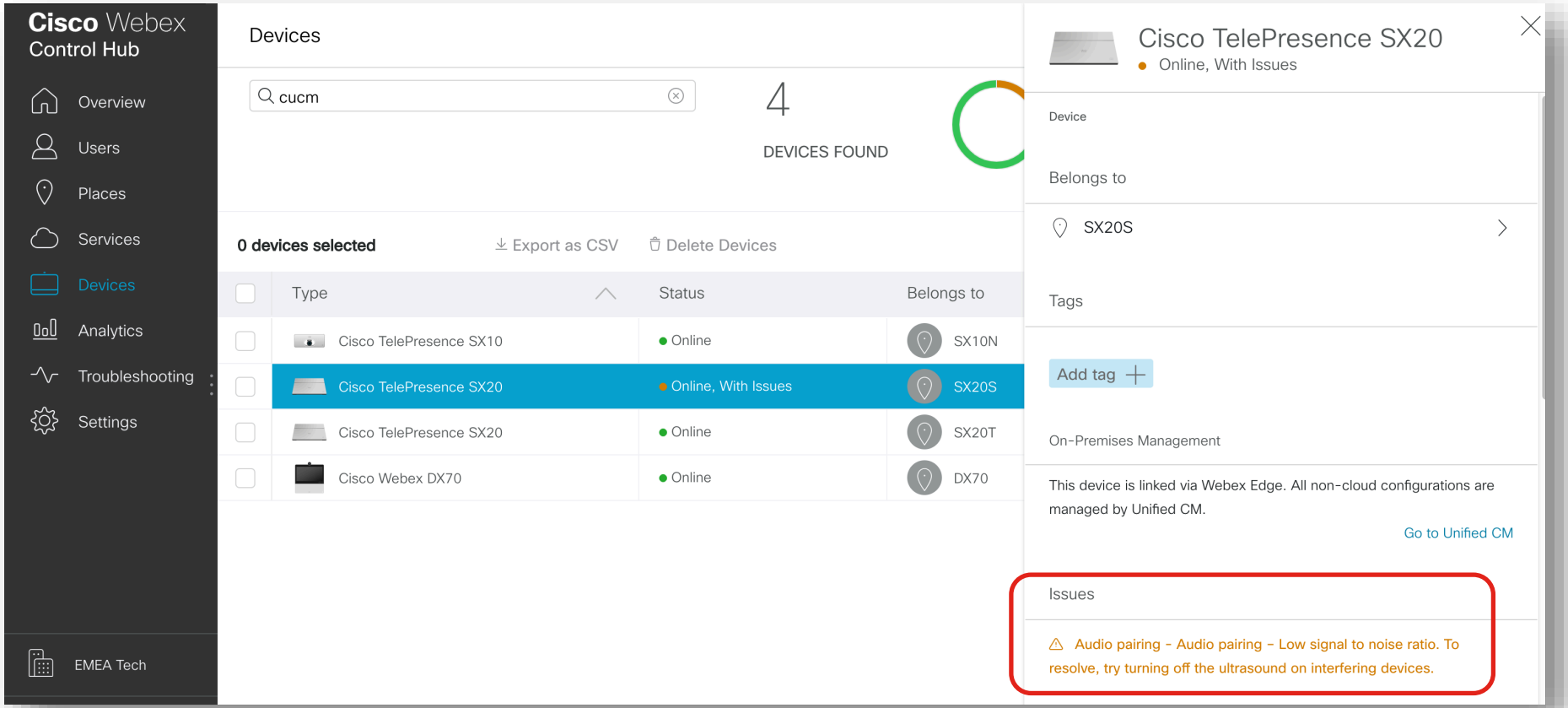
Connection status in Control Hub



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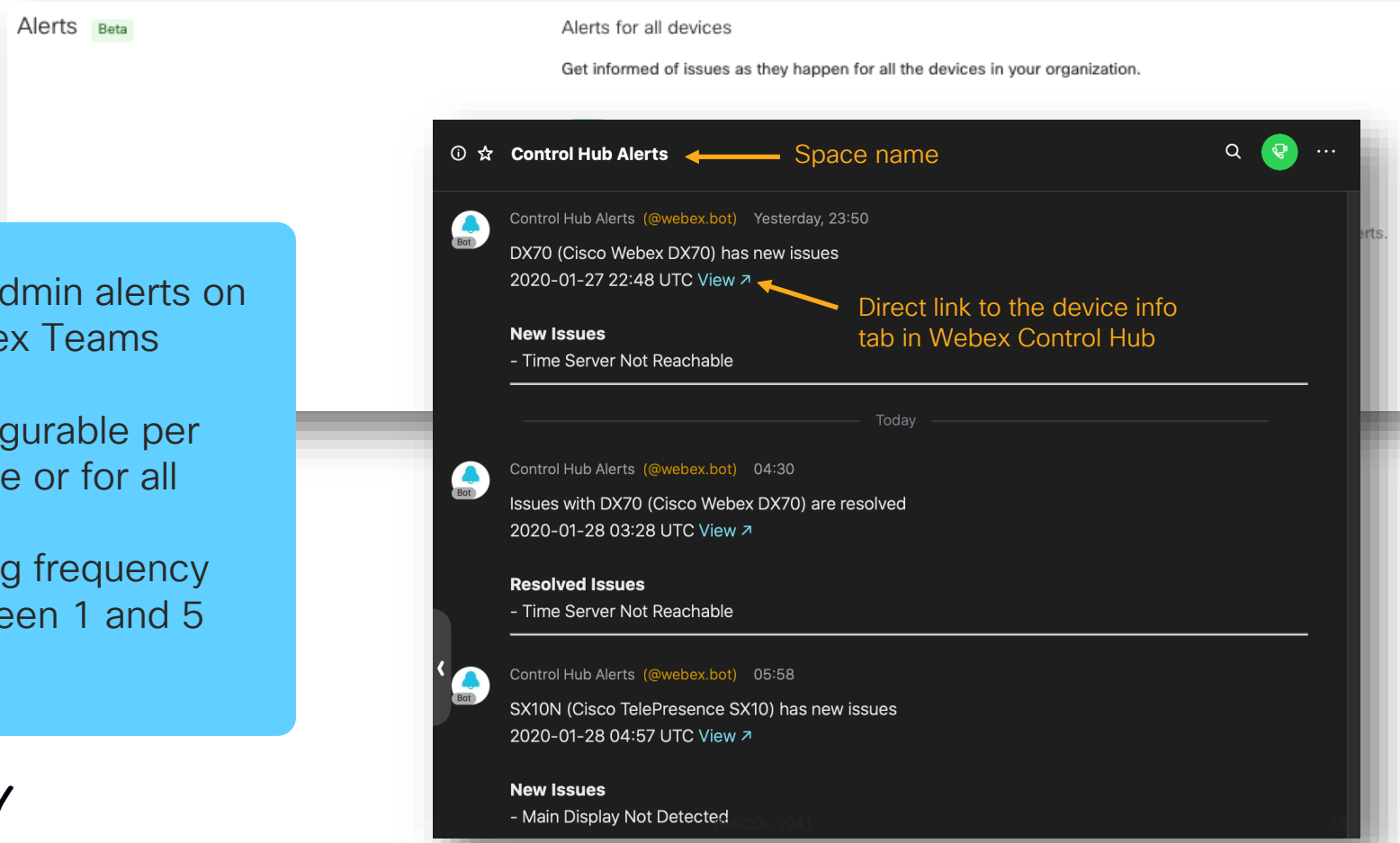
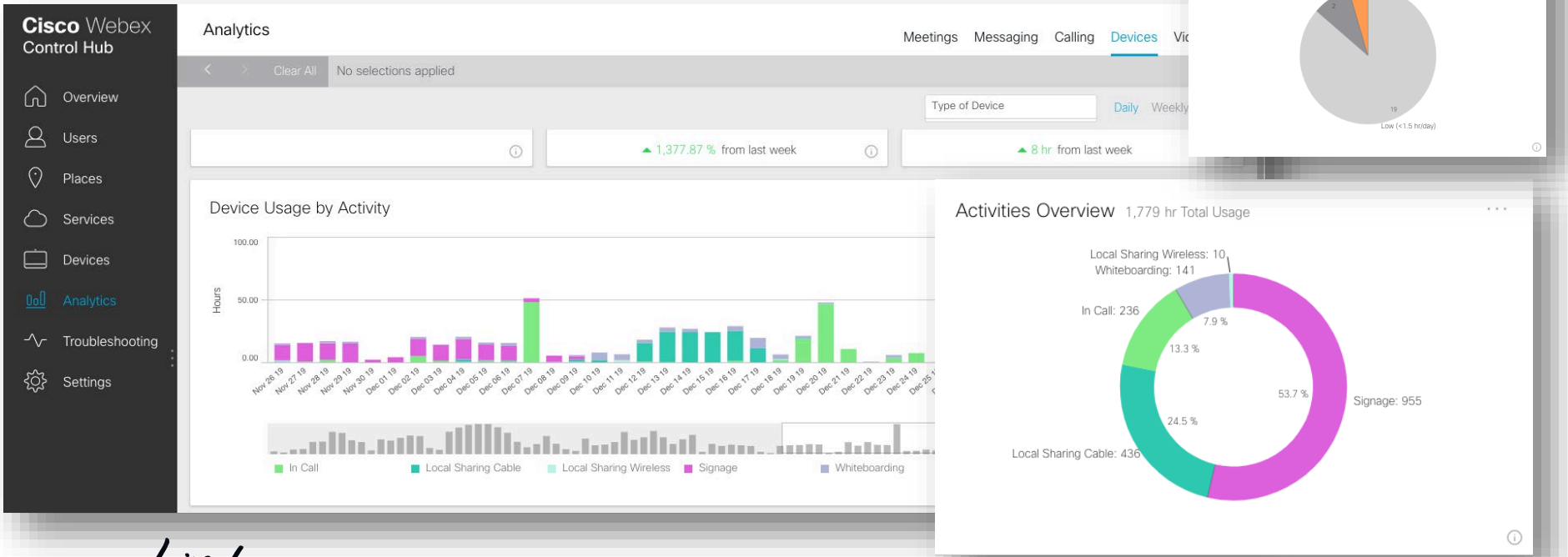
Device alerts in Control Hub

- Per admin alerts on Webex Teams
- Configurable per device or for all
- Polling frequency between 1 and 5 mins



Analytics

- Includes all types of utilization: in call, local sharing, whiteboarding
- Shows complete list of devices and key details with drill down and interactivity
- Grouping of low, medium and high utilized devices to facilitate decisions to add or move devices or train end users to leverage



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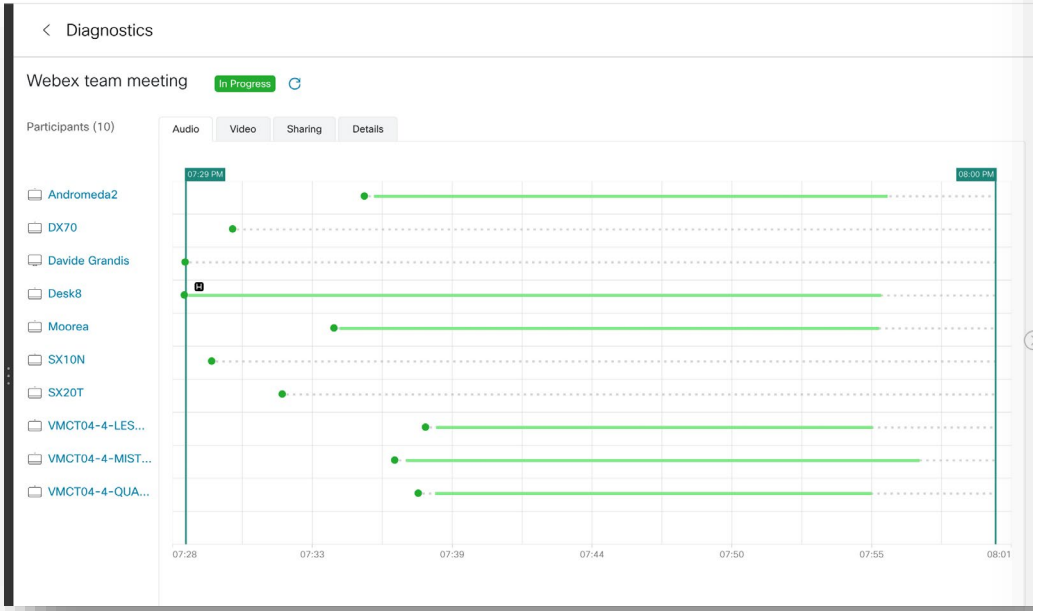
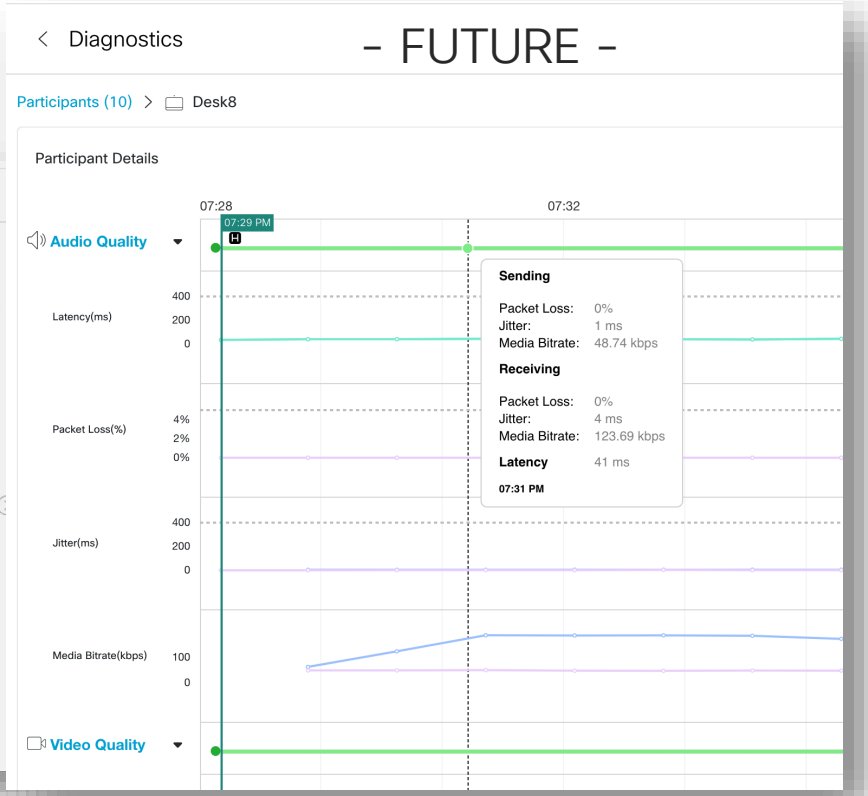
Diagnostics

Provides a detailed view of what's happening in the meeting:

- participants/quality of service indicators (G/Y/R)
- Advanced Diagnostics drill down per user (future)





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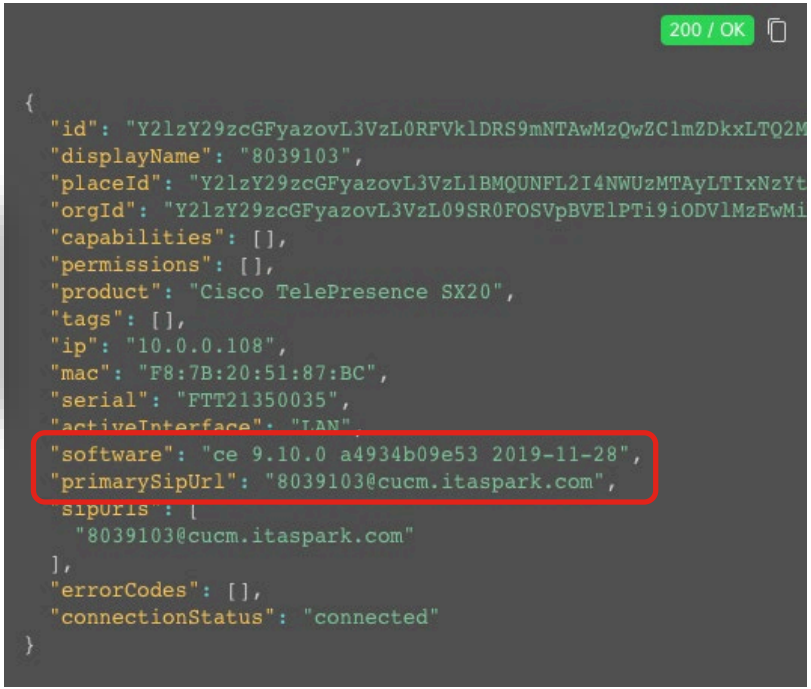
Cloud API access

Same as with Webex registered devices, linked devices are exposed via APIs:

- Devices API (device details)
- xAPI (status and command)

Method		Description
GET	https://api.ciscospark.com/v1/xapi/status	Query Status
POST	https://api.ciscospark.com/v1/xapi/command/{commandName}	Execute Command

Benefit: access to the device APIs via the Webex cloud; direct access to the device is not required



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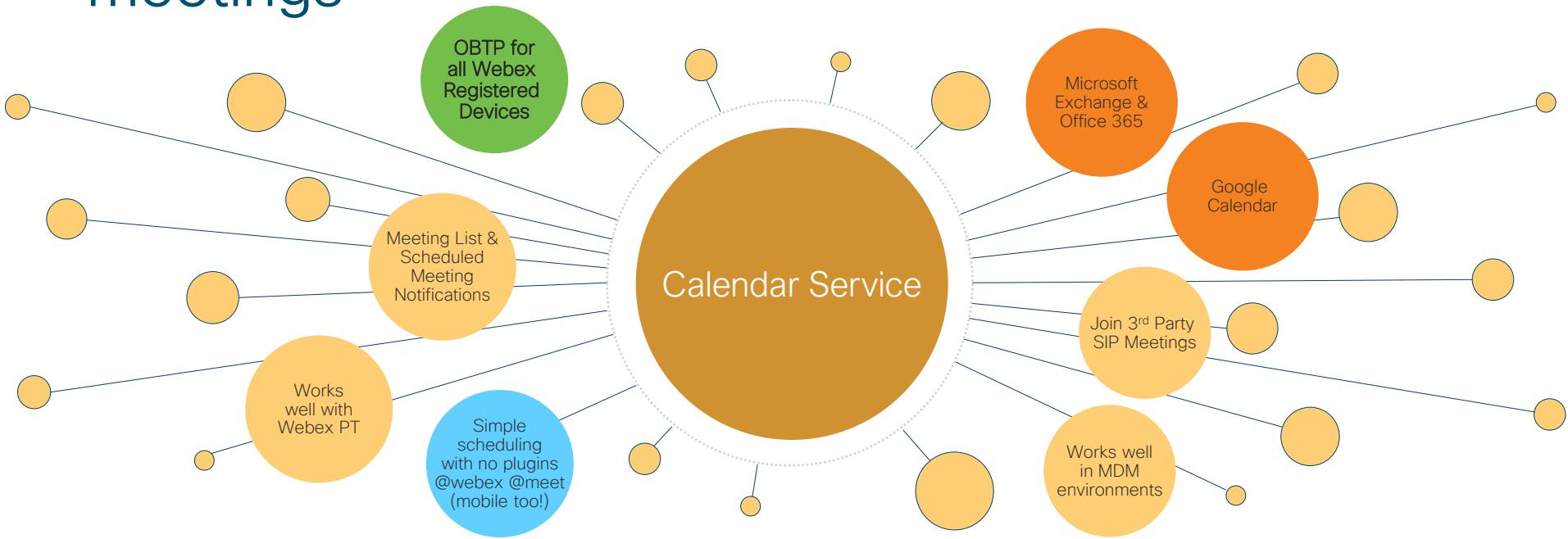
Calendar Service: powering intuitive, intelligent meetings



Easy to Deploy, Schedule, and Join Securely from Webex Teams App and Devices

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Calendar Service for Webex Edge for Devices

- OBTP for on-premises linked Webex devices without TMS and TMS-XE
  - external devices (MRA): no need to VPN to reach TMS for OBTP
- Support of Microsoft Office 365 and Google Calendar (cloud Connector)
- Support of Microsoft Exchange (cloud-managed on-prem Calendar Connector)
- Support of Hybrid Exchange (both cloud and on-prem Calendar Connectors)
- Currently no migration of previously scheduled meetings (roadmap)

For more details on the Calendar Service see:
BRKCOL-2607 "Understanding Cloud and Hybrid Collaboration Integrations"

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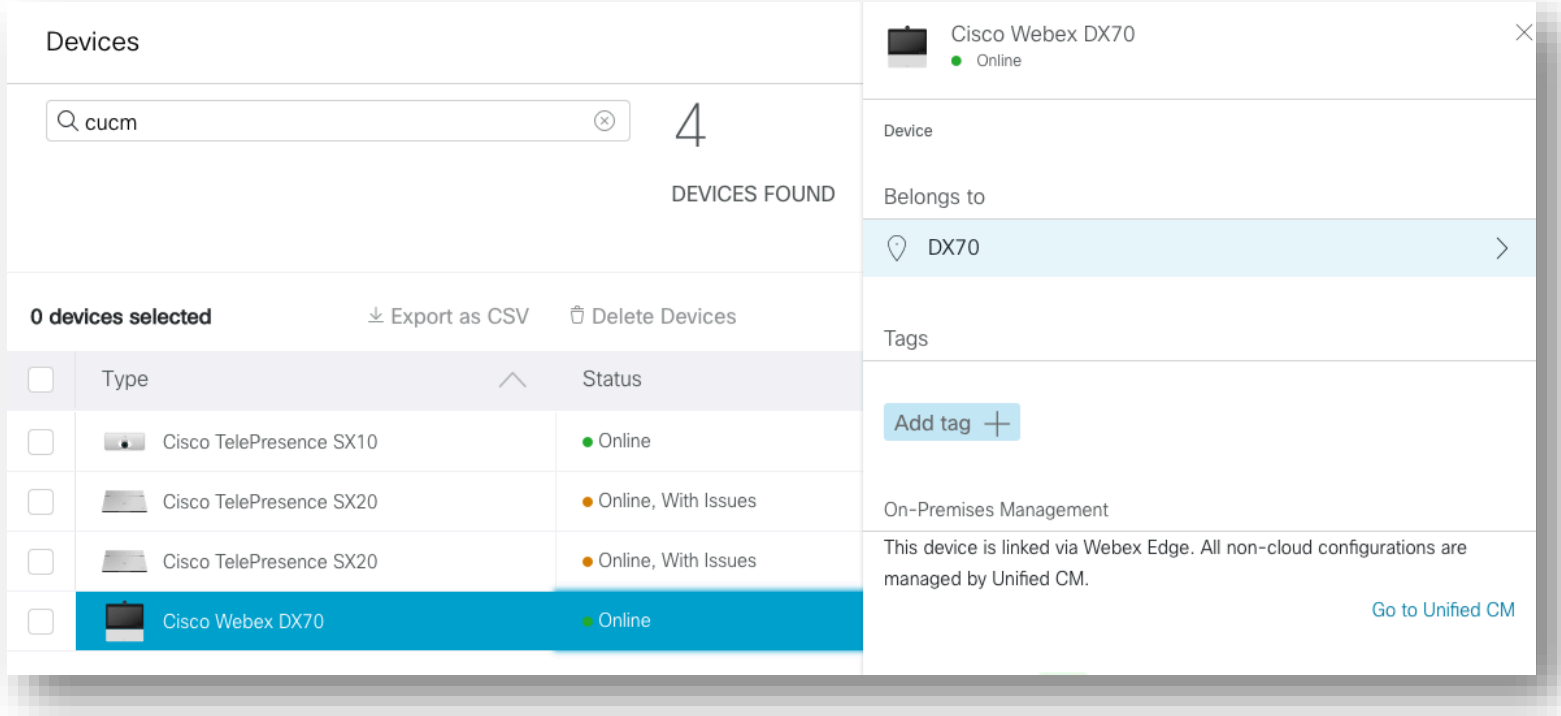
How to enable the Calendar Service

From the Device select the Place where it belongs to



Prerequisite: Hybrid Calendar must be enabled in Cisco Webex Control Hub.

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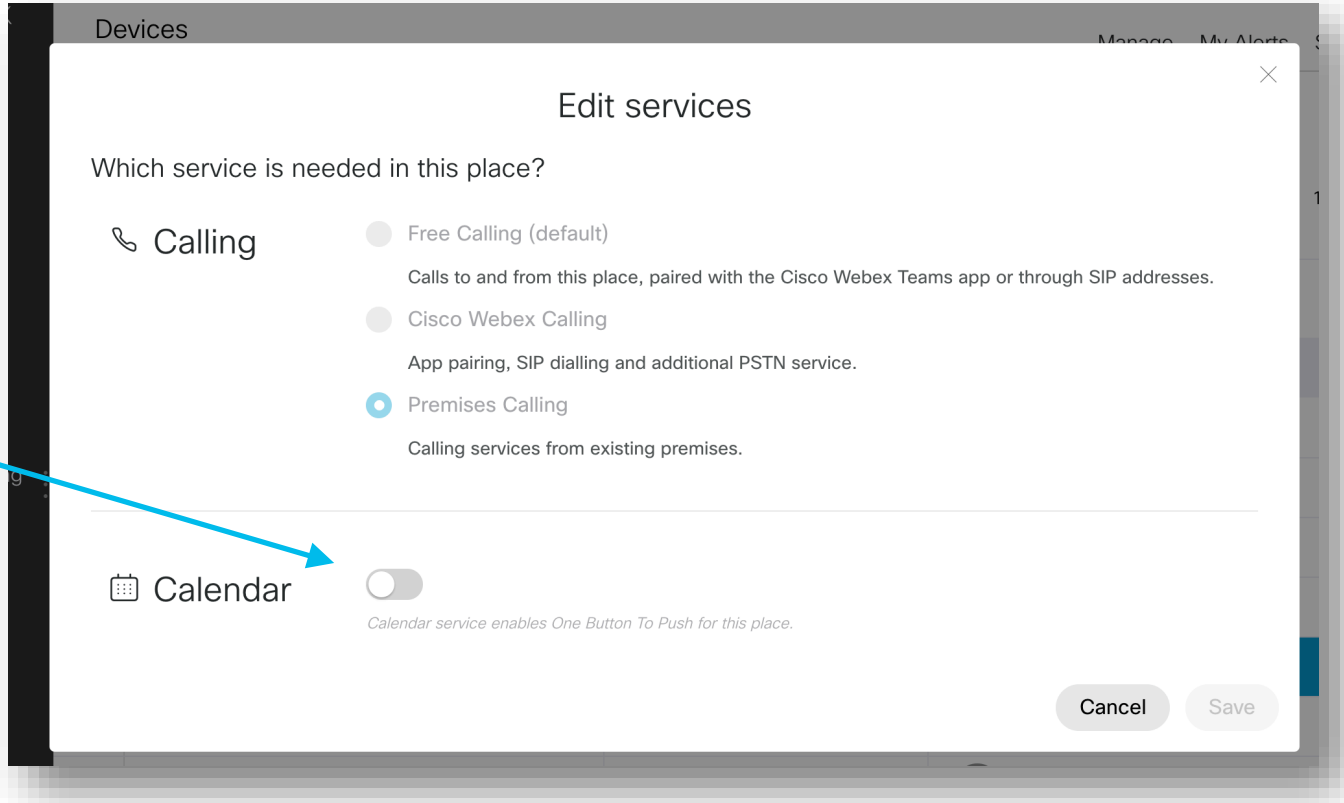
How to enable the Calendar Service

- Click on the Place's name and then on Services/Edit
- Enable the Calendar Service



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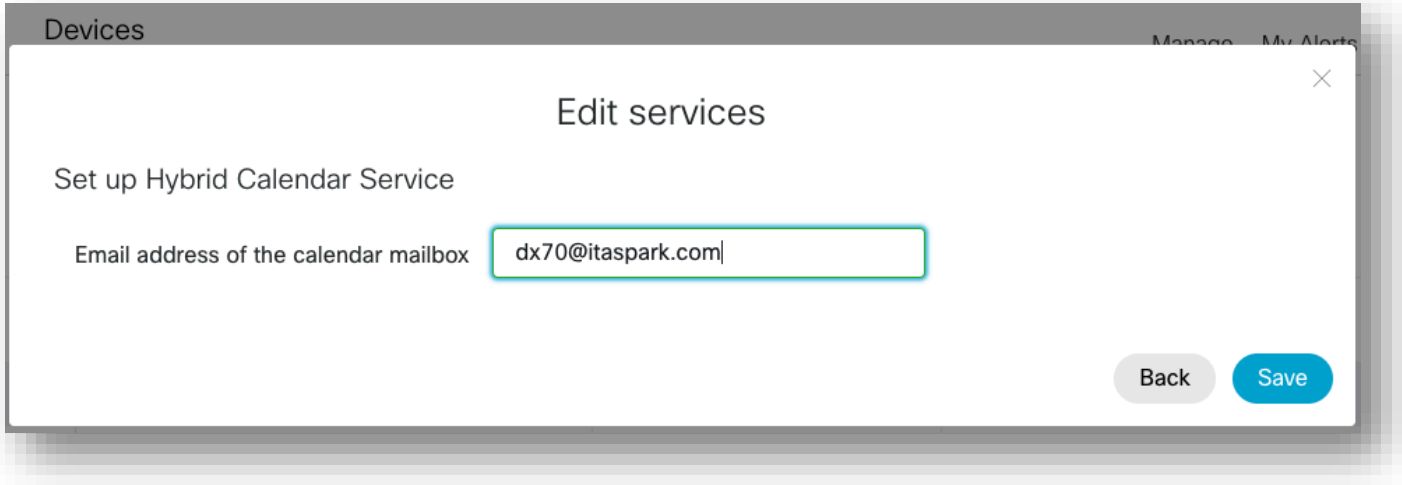
How to enable the Calendar Service

Input the device's mailbox and save



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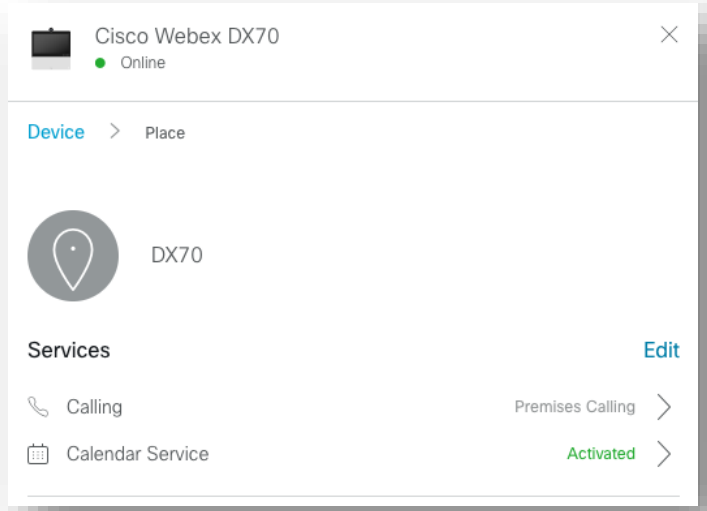
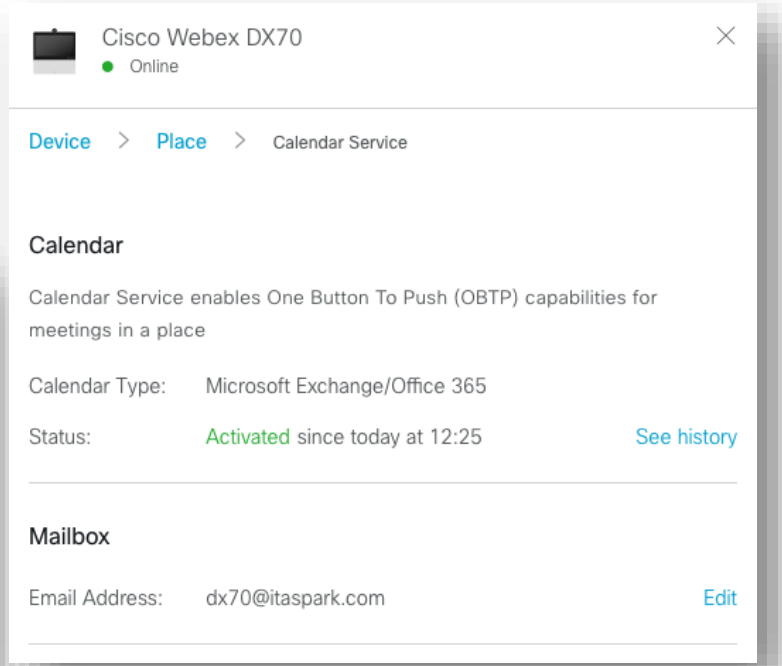
How to enable the Calendar Service

- After a little while the status will show "Activated"
- Can check the history and change the mailbox
- At this stage the admin should delete the device from TMS/TMS-XE





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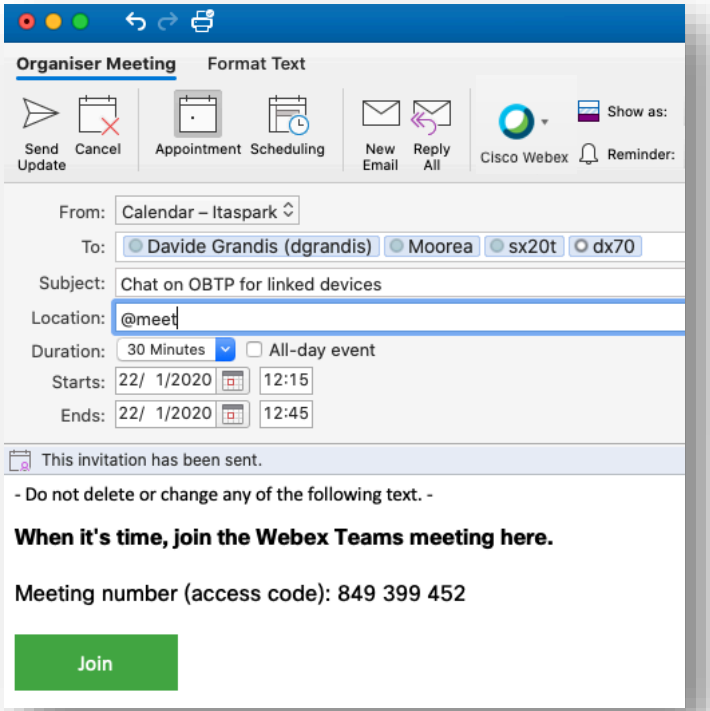
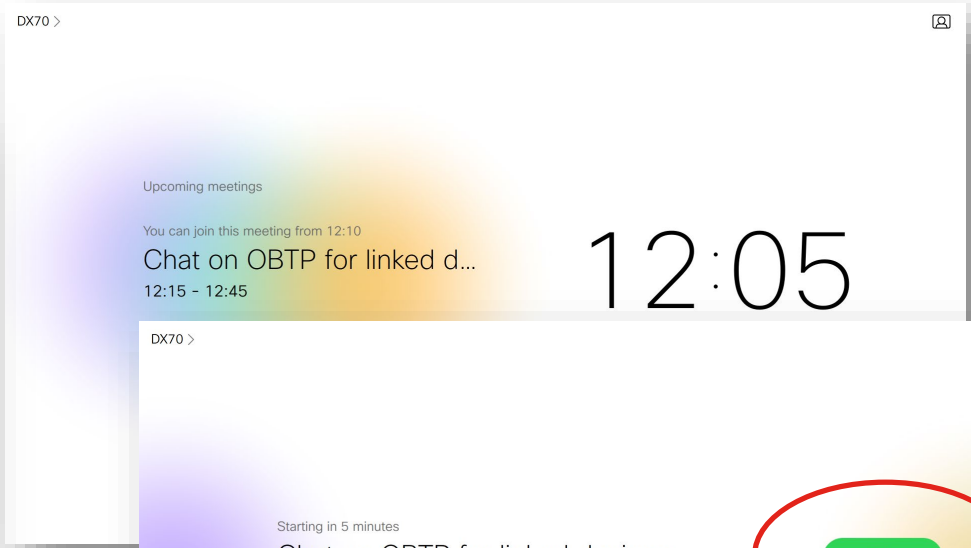
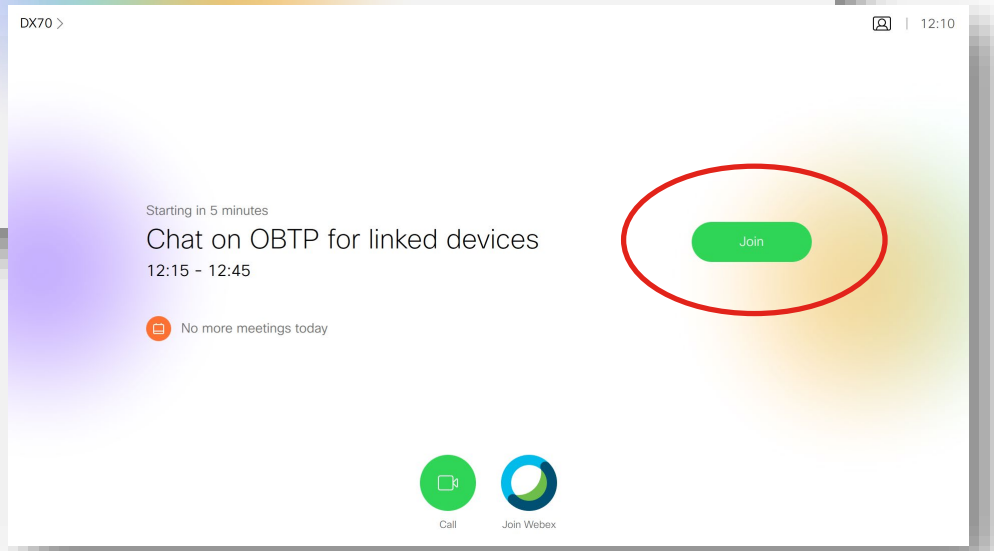
One Button to Push on Linked Devices







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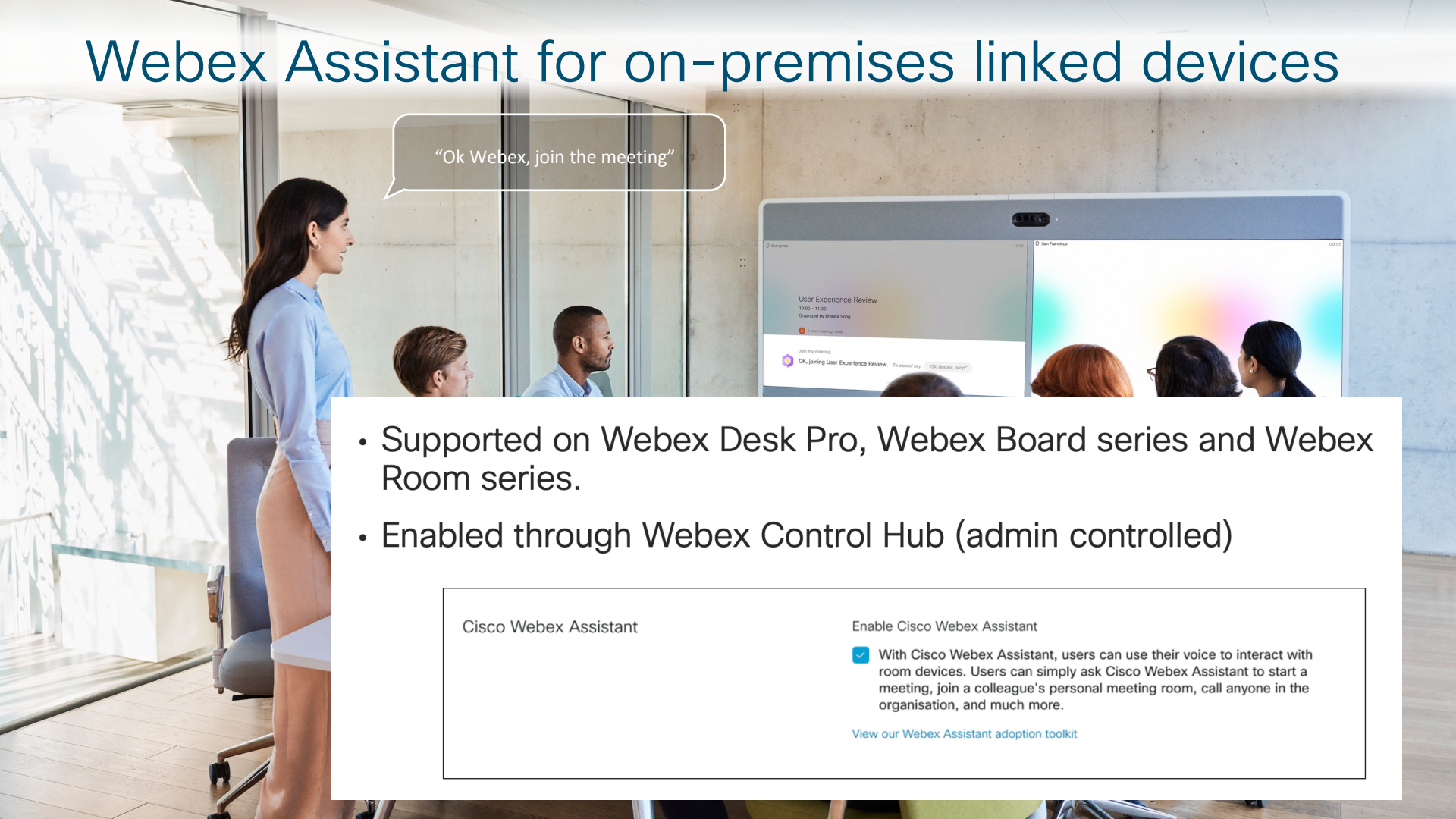
Webex Assistant for on-premises linked devices



- Supported on Webex Desk Pro, Webex Board series and Webex Room series.
- Enabled through Webex Control Hub (admin controlled)

Direction of development (future)

- Proxy support for endpoints (planned for CE9.12)
- Real-time Advanced Analytics of Meetings in Webex Control Hub
- On-premises software management
  - Ability to push software to the devices from the cloud
- Device configuration management in Webex Control Hub

- Shared directory across premises linked & cloud devices
- Name labels in calls (Face Recognition)
- People Insights

BACKLOG

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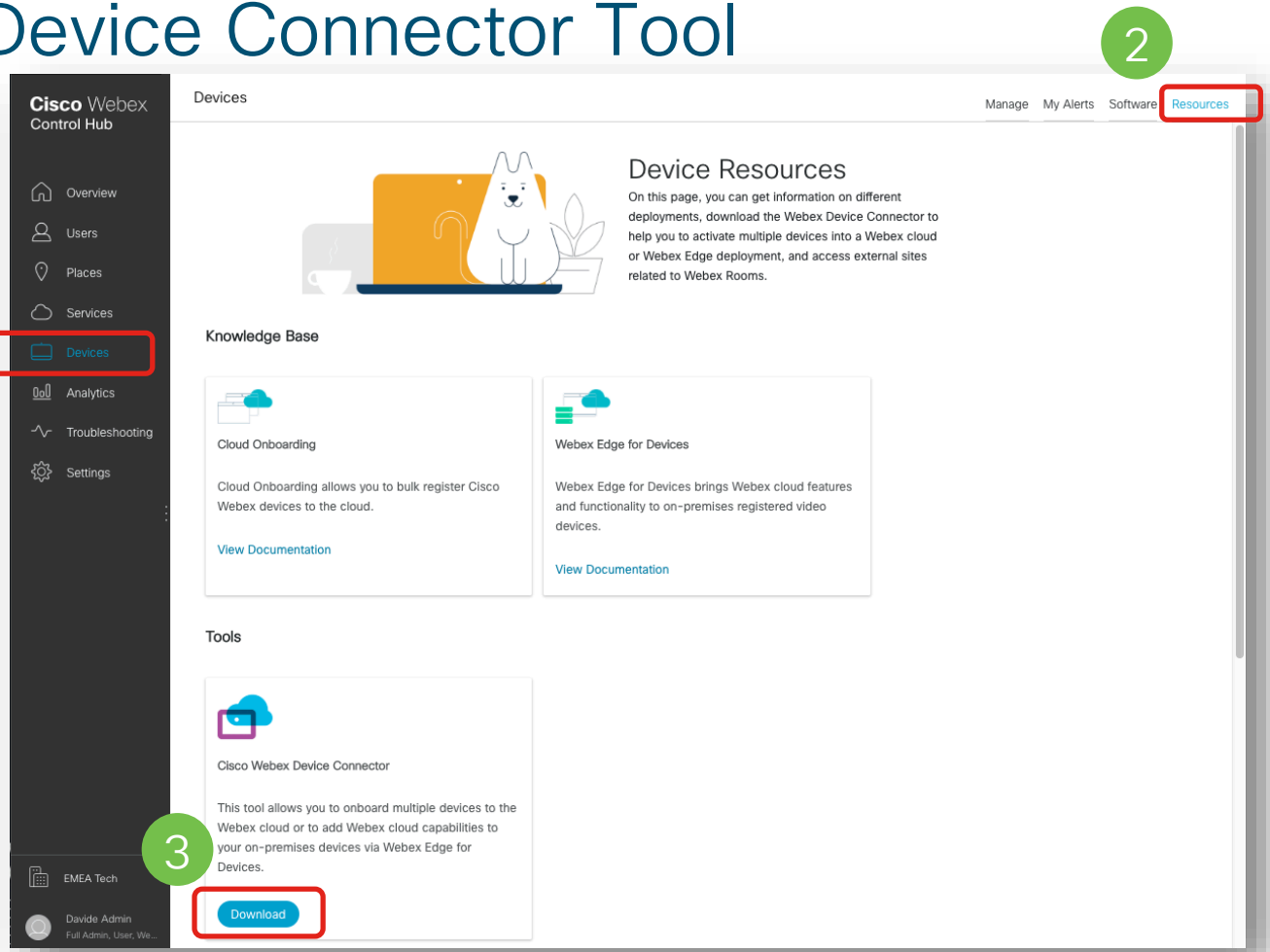
Cisco Webex Device Connector

Cisco Webex Device Connector Tool

Overview

The Cisco Webex Device Connector tool is available for download from Control Hub under Devices → Resources



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Cisco Webex Device Connector Tool

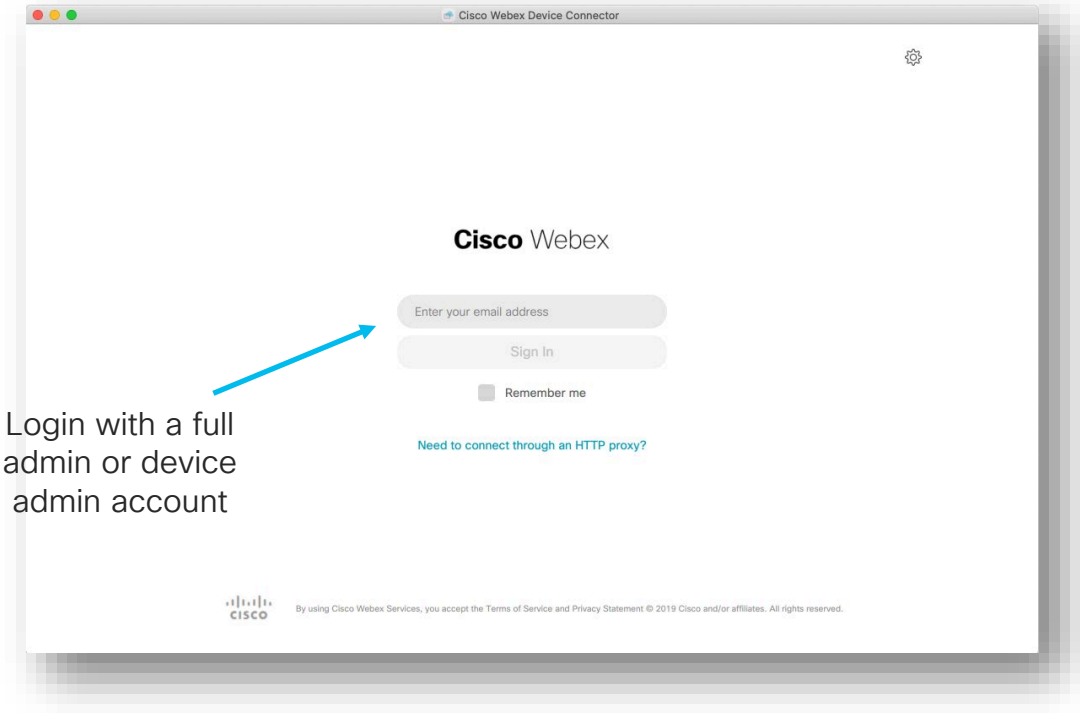
Overview

Must run on the enterprise network where it can reach the Collaboration infrastructure and the video endpoints and the Webex Cloud

Supported on:

- Microsoft Windows 10
- MacOS High Sierra (10.13) and above

Basic HTTP Proxy supported (username and password)



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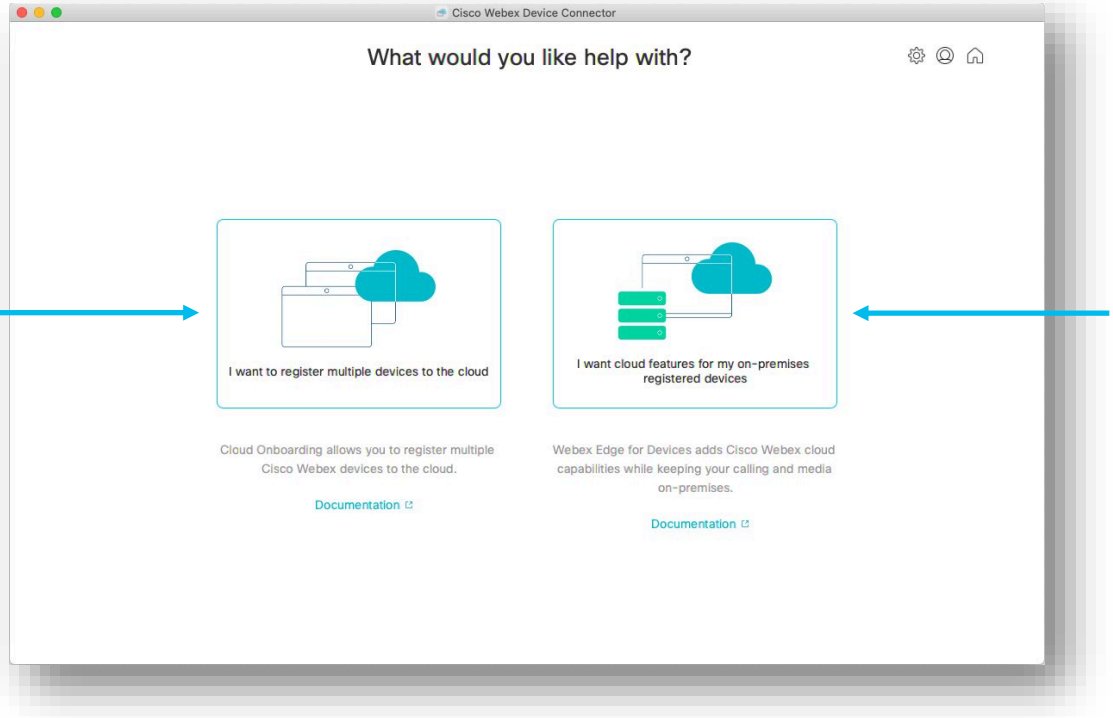
Cisco Webex Device Connector Tool

Overview

Bulk register Webex devices to the Cloud (Cloud registration)



Enables cloud features to on-premise registered Webex devices

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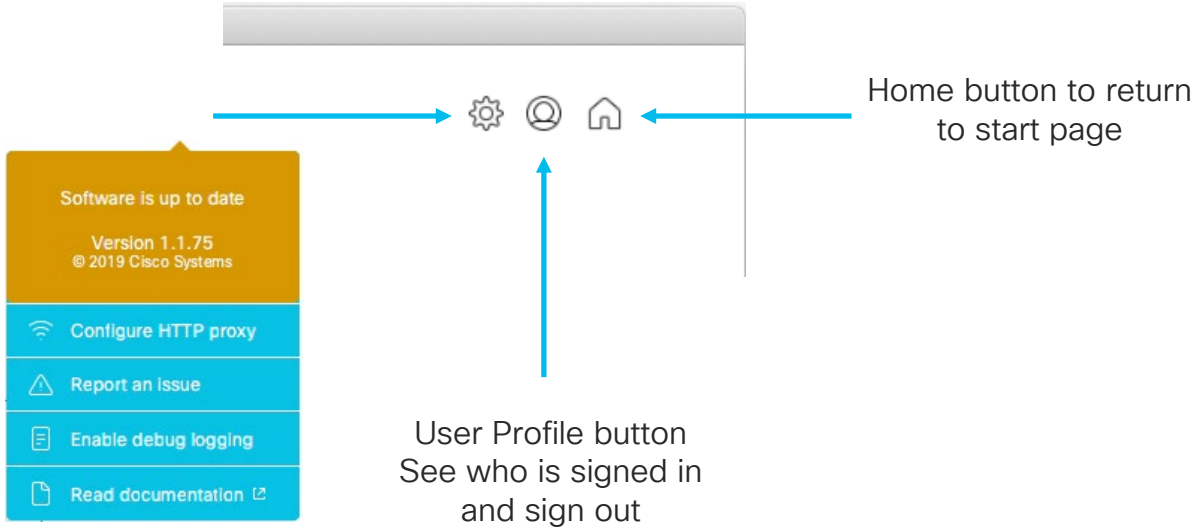
Cisco Webex Device Connector Tool

Overview

From the landing page you can also access:

Configure button

- Check tool is up to date (or be notified of an update)
- Configure for proxy support (basic auth supported)
- Report issues with tool
- Quick access to documentation



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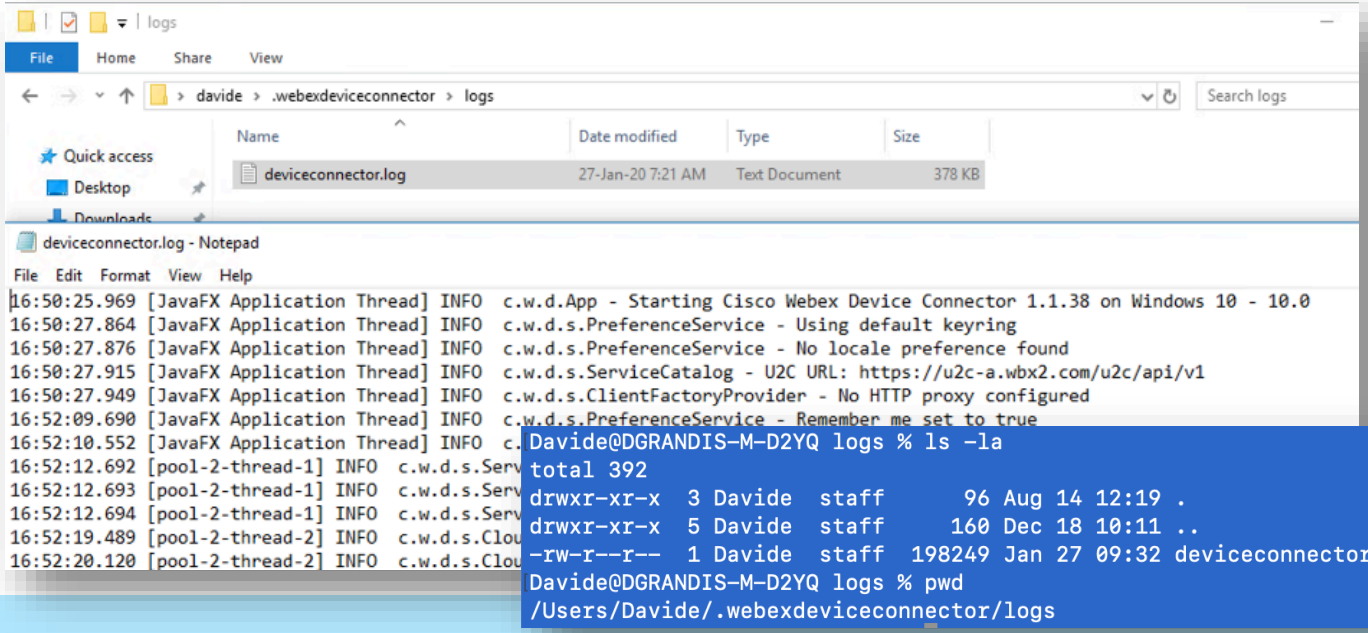
Cisco Webex Device Connector Tool

Overview

Logs:



Windows: [UserDir].webexdeviceconnector\logs

MacOS: /Users/[username]/.webexdeviceconnector/logs

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DEMO

Enabling cloud features for on-premises Webex devices

Caveats

Moving registration of the Webex linked device to MRA:

- Unified CM > to Unified CM over MRA
  - If the user tries to move this via the UI on the device, upon the soft reset, the device will lose its Webex registration details.
  - Device Connector tool will state linked
  - Webex Control Hub will show ‘Status Unavailable’

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Device Linking Flow – Unified CM

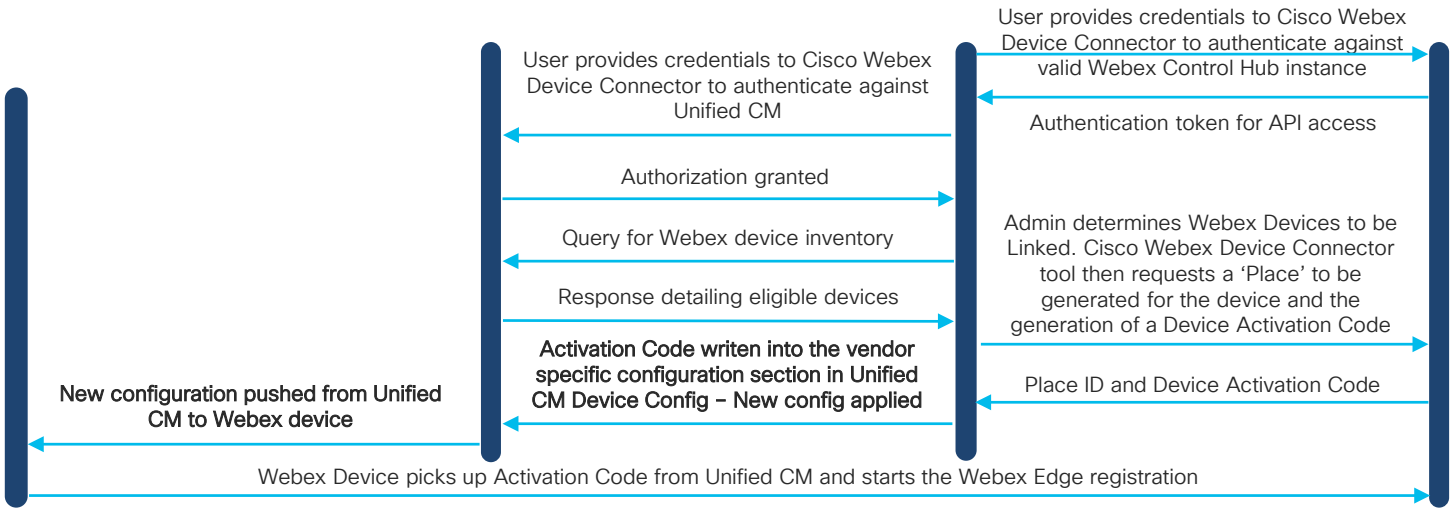
For your Reference

On-premise Webex device

Unified CM

Cisco Webex Device Connector tool

Cisco Webex Cloud



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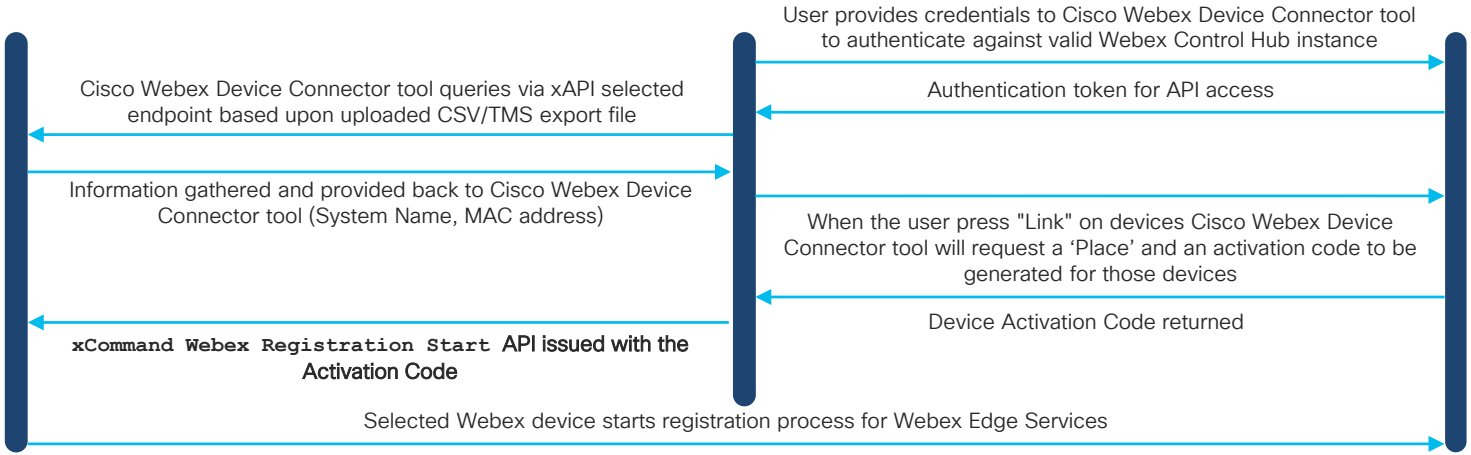
Device Linking Flow – CSV/TMS Export

For your Reference

On-premise Webex device

Cisco Webex Device Connector tool

Cisco Webex Cloud



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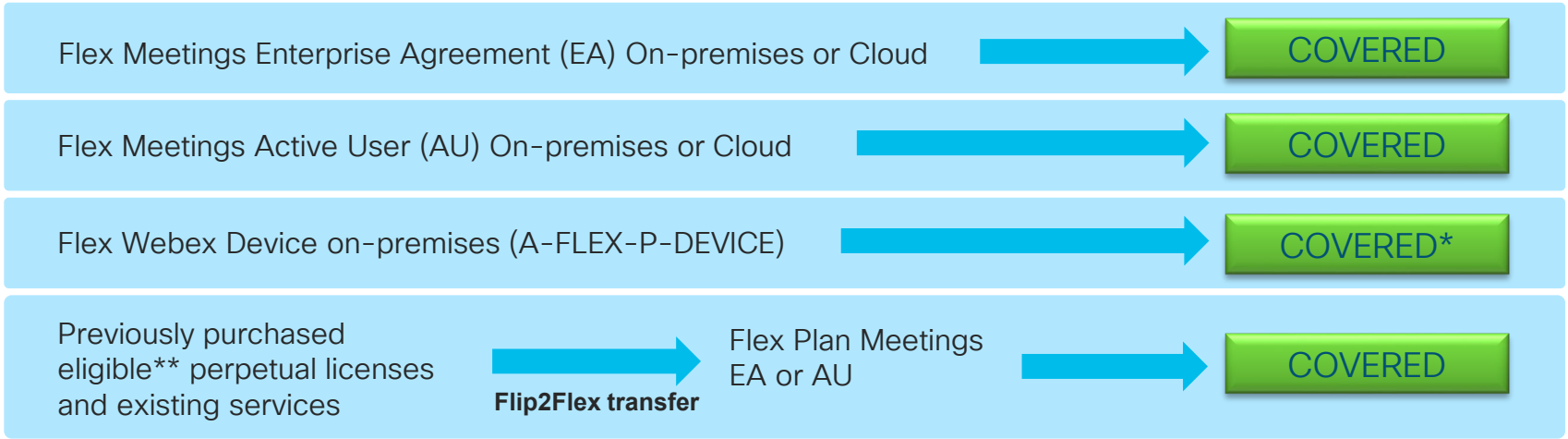
Licensing

Licensing requirements

Webex Edge for Devices requirements:

- Webex Control Hub instance;
- Device subscription for each linked device (A-FLEX-C-DEVICE for new licenses)

...but Flex Plan gets you covered, as follows:



* coming soon ** conditions apply

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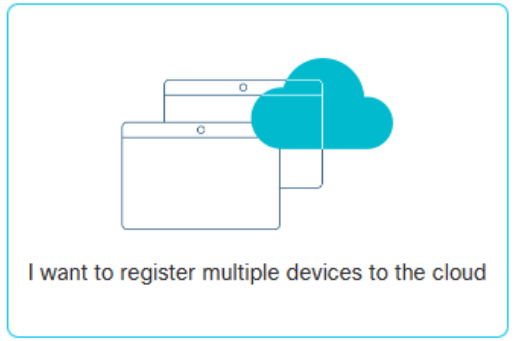
Additional functionality of the Device Connector

Registration of multiple devices to the cloud



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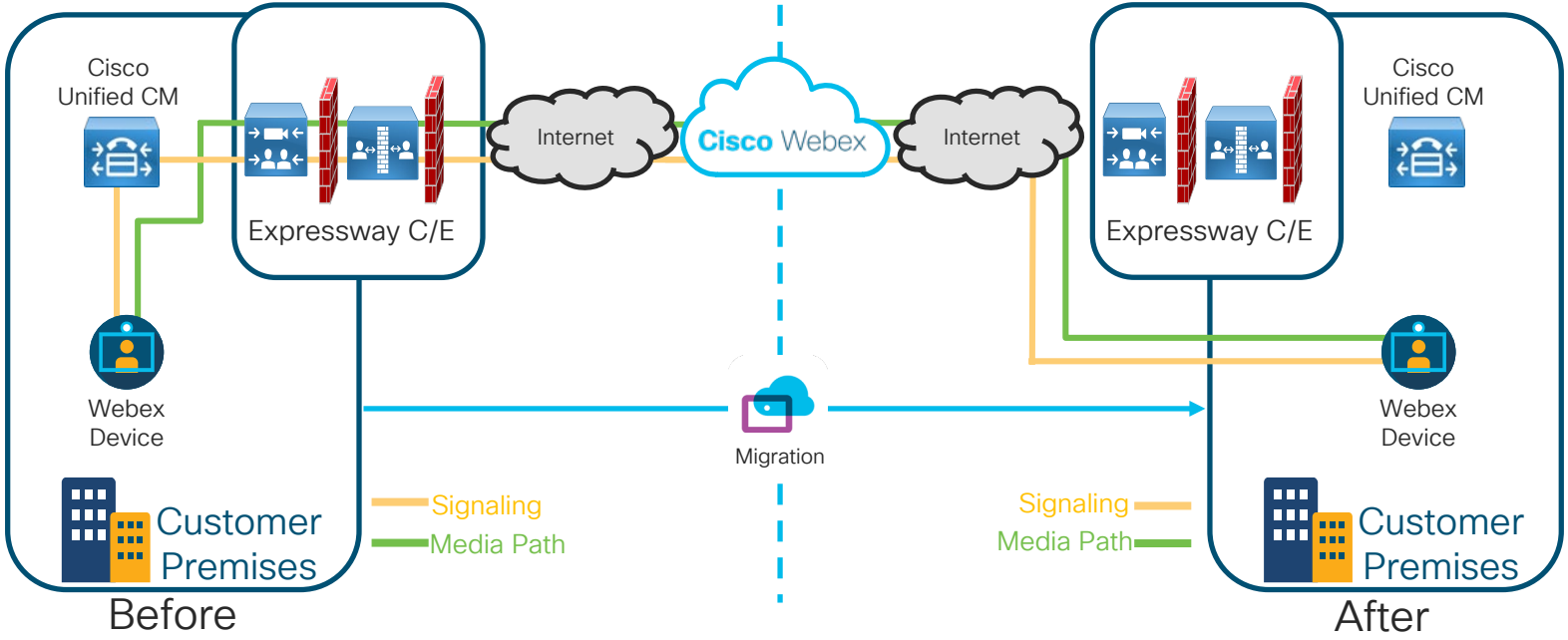
Registration of multiple devices to the cloud

Provides for the option of moving the registration point of a Cisco Webex device from on-premise to the cloud.



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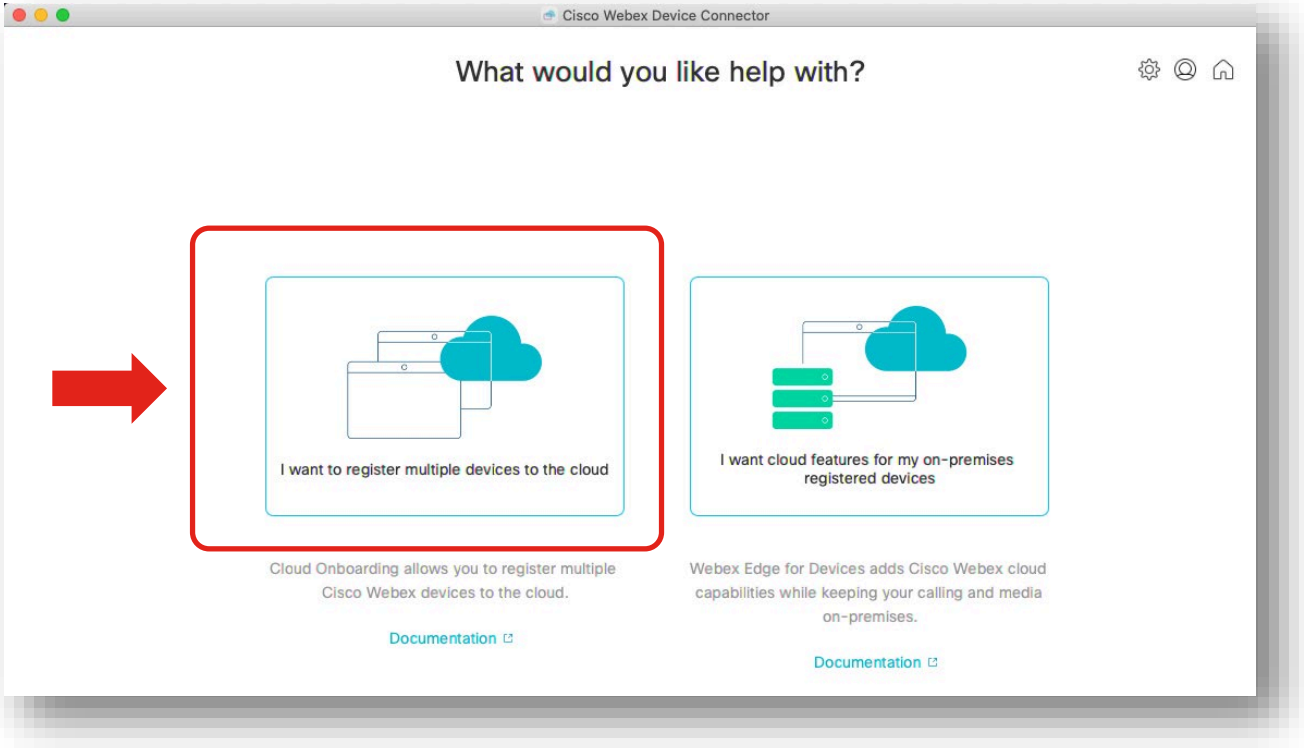
Registration of multiple devices to the cloud



Requirements

- Endpoints to be onboarded must be running CE9.8 or later
- HTTPS connectivity to your devices for the Device Connector
- Webex Control Hub access with either Device Administrator or Full Administrator capabilities
- Device Licenses available in Webex Control Hub

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Registration of multiple devices to the cloud

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Registration of multiple devices to the cloud

Prepare your files for onboarding

Devices can be onboarded using two different file formats

Cisco TMS Export

1. Export a System Overview report from Cisco TMS, selecting only the Network Settings > Hostname system parameter.
2. Manually add a 'Username' and 'Password' column.

1

System ID	System Name	IP Address	Status	Hostname	Username	Password
1234	System 1	10.47.1.1	Idle	system1.example.com	Username1	Password1
5678	System 2	10.47.1.2	Idle	system2.example.com	Username2	Password2

2

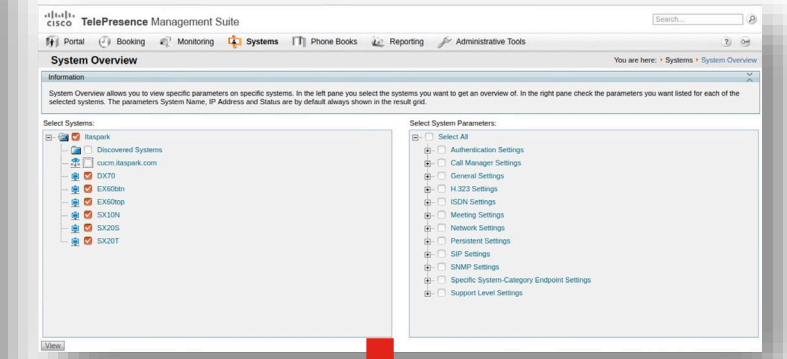
CSV File

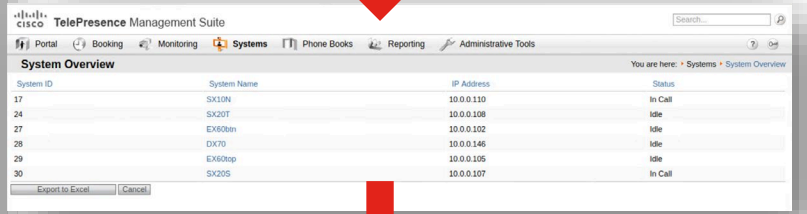
Use a simple comma-separated-value (CSV) file, with device 'Address', 'Username', and 'Password' columns.

Address	Username	Password
system1.example.com	Username1	Password1
system2.example.com	Username2	Password2

Close

TMS: Systems → System Overview





Add username & password and save as .CSV

Upload in the Device Connector

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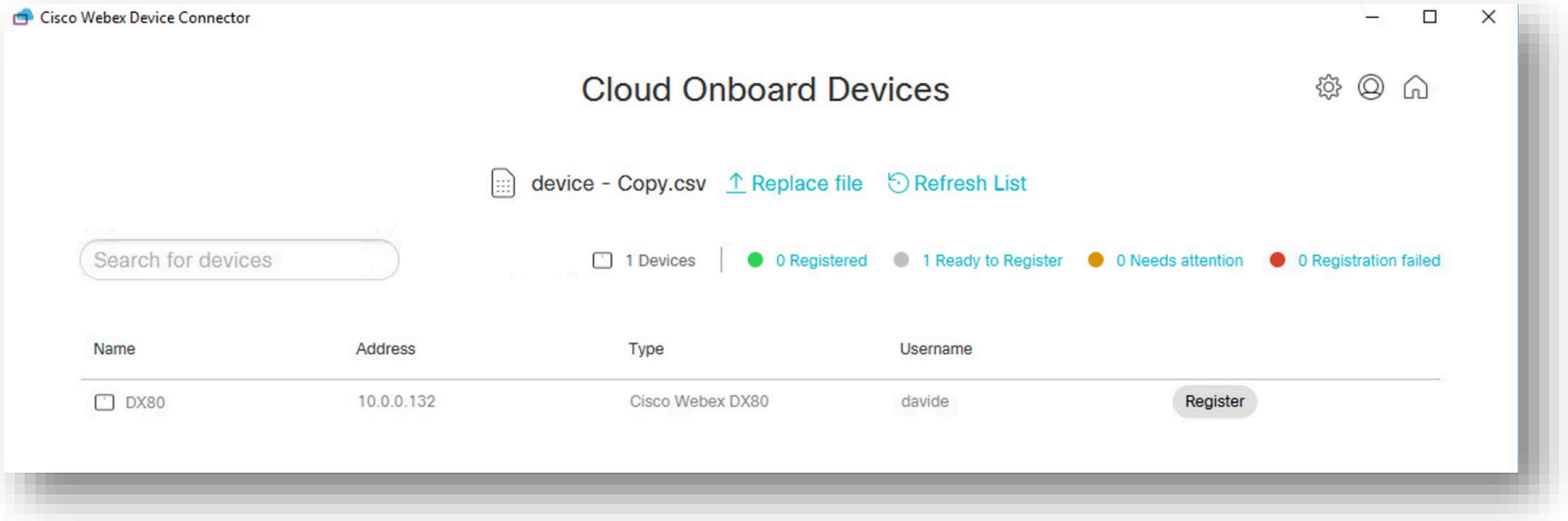
Registration of multiple devices to the cloud



- The Device Connector performs certification validation. In case of failure the admin can continue anyway or add the certificate in the \certs directory (.CER format)
- The tool uses the System Unit name, if set, from the endpoint for the name of the Place in Webex Control Hub. If not set the Place will be named after the MAC address and can be changed in the tool clicking on the name field.

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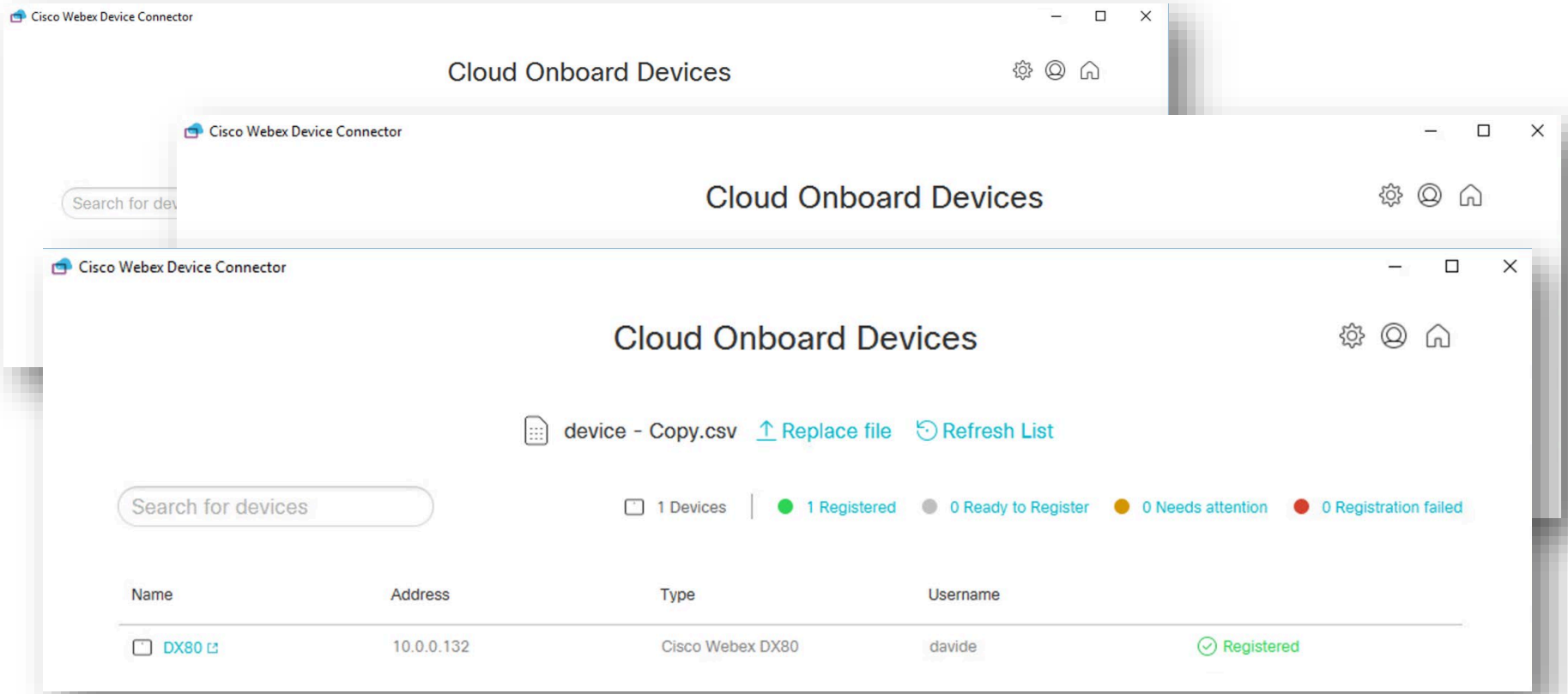
Registration of multiple devices to the cloud



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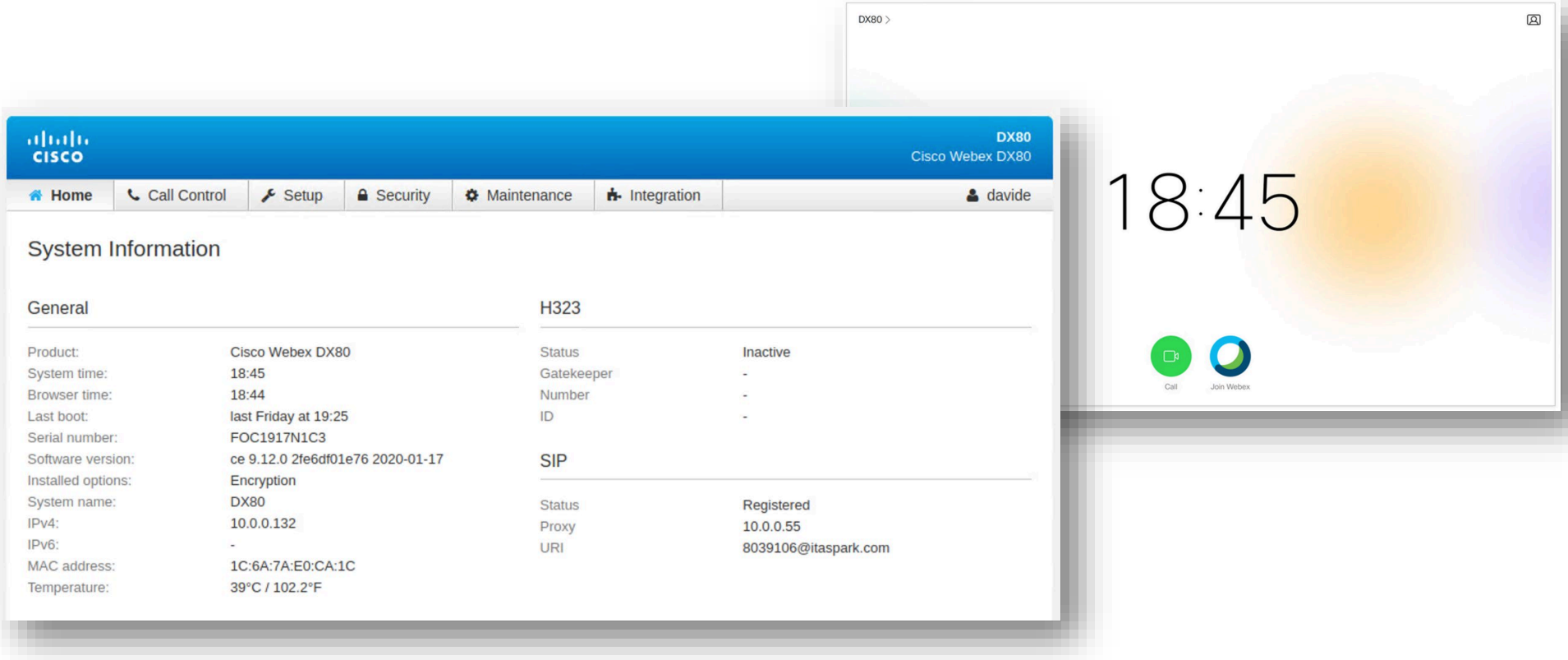
Registration of multiple devices to the cloud

Before



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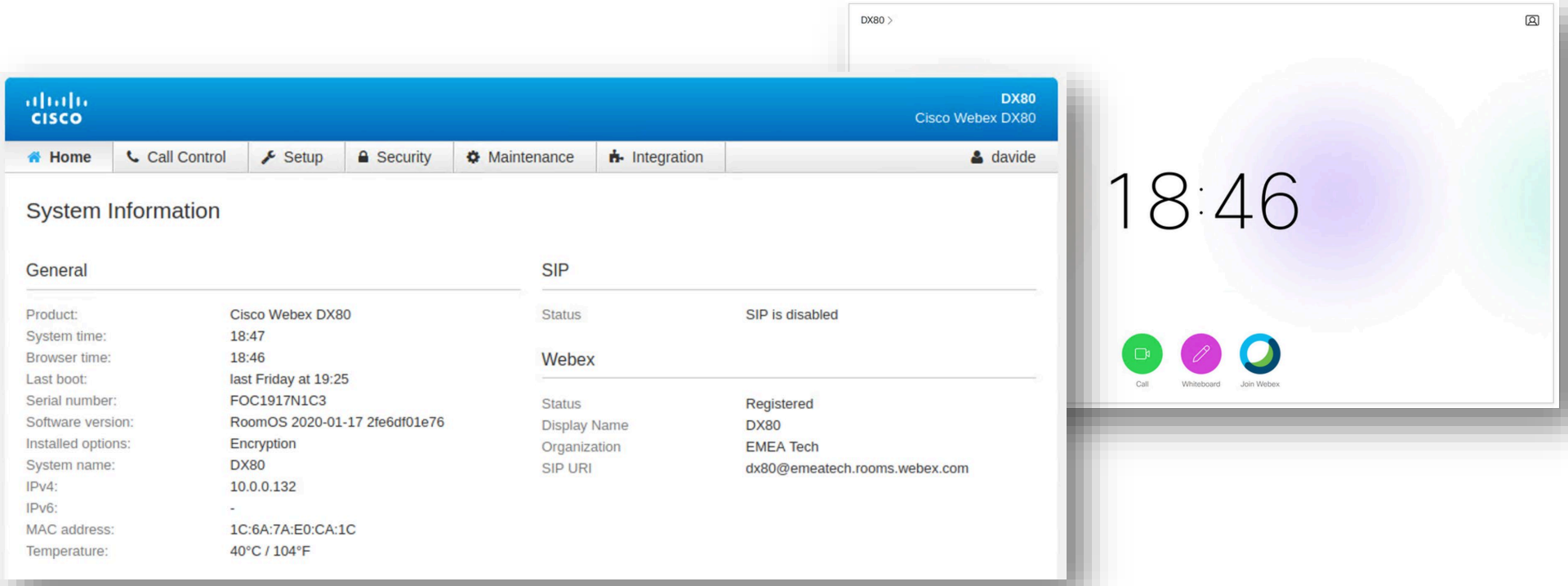
Registration of multiple devices to the cloud

After



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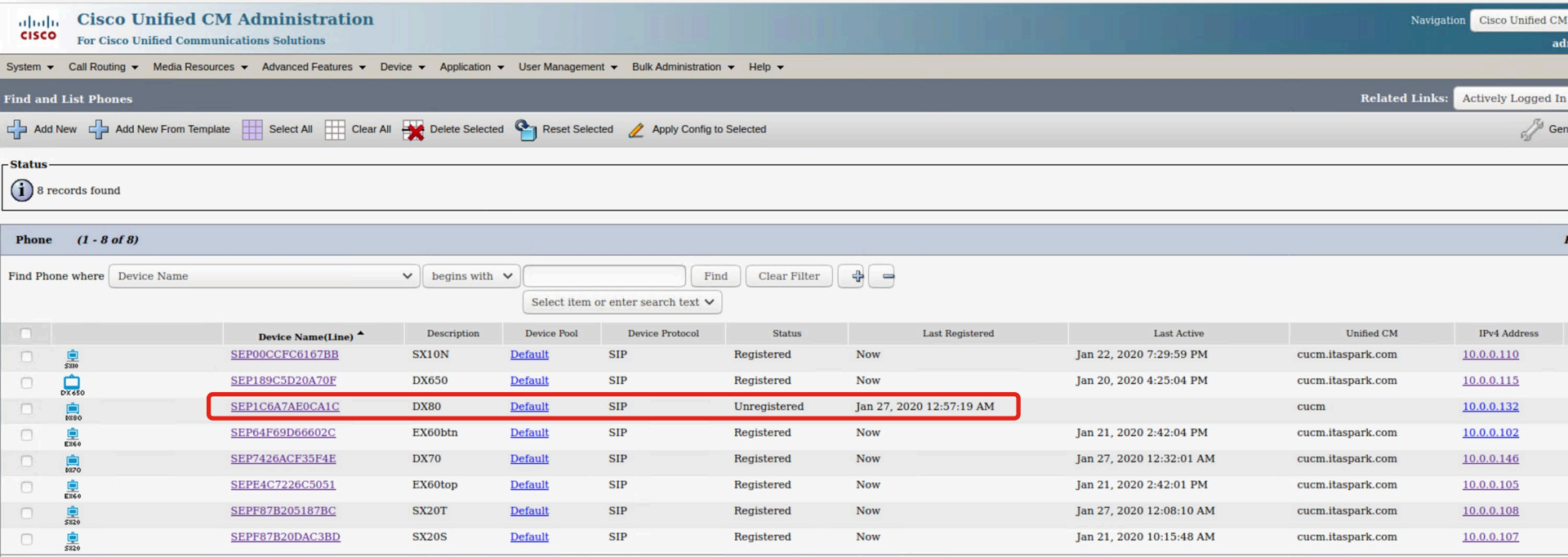
Registration of multiple devices to the cloud

After



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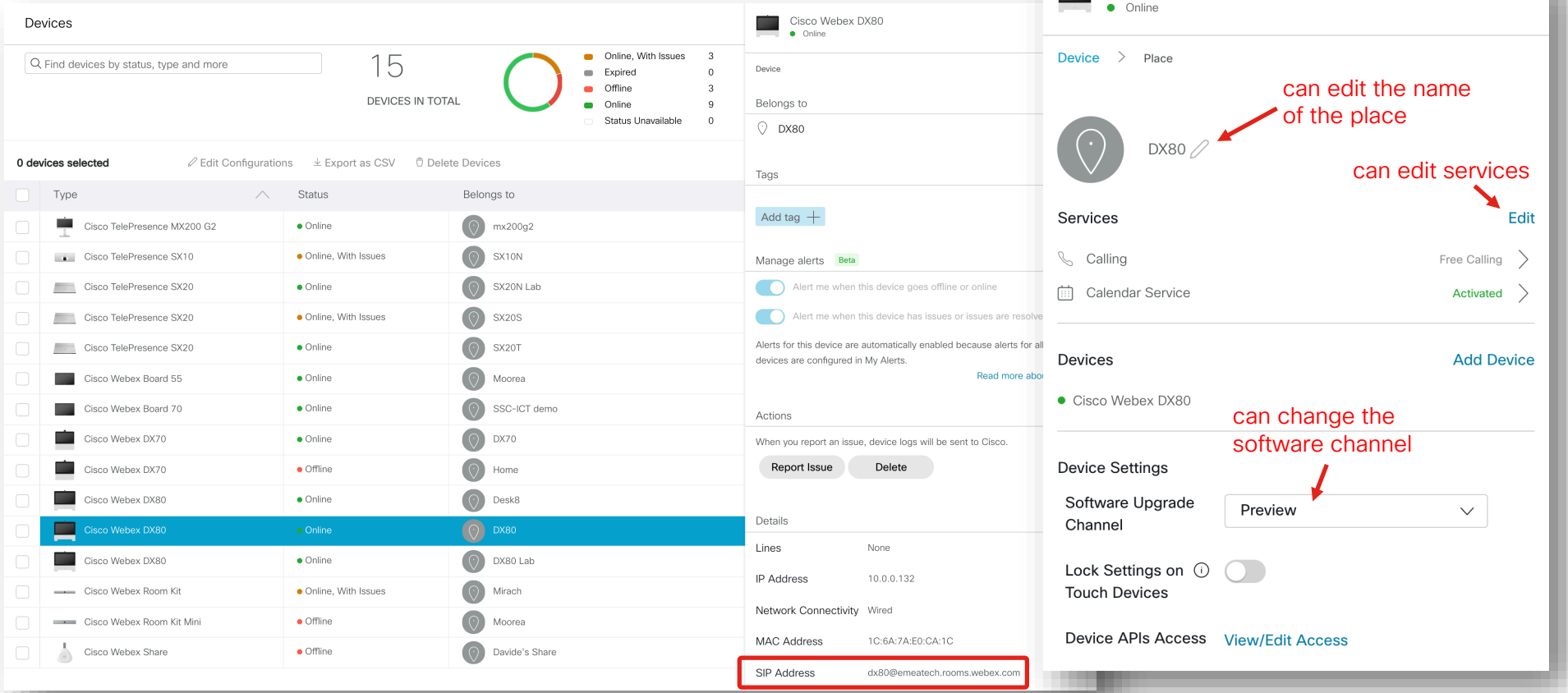
Registration of multiple devices to the cloud

After: full cloud features



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Onboarding Flow

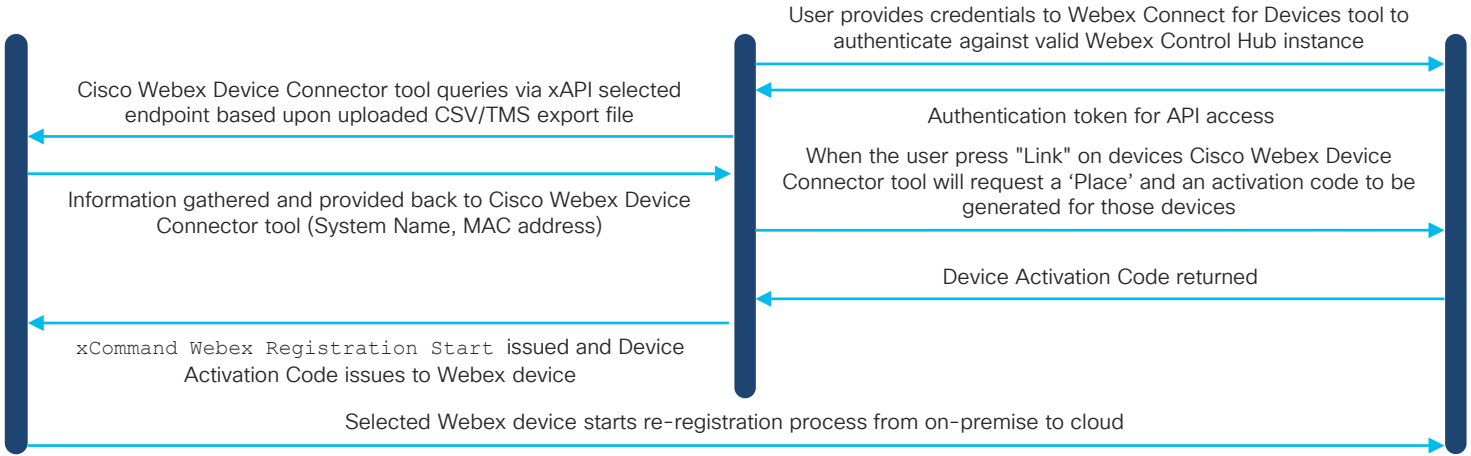
Migration from on-premise registration to cloud

For your Reference

On-premise Webex device

Cisco Webex Device Connector tool

Cisco Webex Cloud



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Conclusion

Take aways

- Webex Edge for Devices combines the best of both deployment models
  - On-premise call control for media and signaling while enhancing the user experience with advanced cloud-based capabilities
- Architecture simplification
  - Enables cloud-based Calendar Service without needing the TMS/TMS-XE for scheduling anymore
- Enables the smooth migration of video endpoints to the Cloud
  - Same scheduling experience for users
- Single pane of glass for managing video endpoints (Webex Control Hub)

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Resources

Webex Edge for Devices on help.webex.com:

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

CE 9.10 Release Notes:

https://www.cisco.com/c/dam/en/us/td/docs/telepresence/endpoint/software/ce9/release-notes/ce-software-release-notes-ce9.pdf

Webex Edge for Devices Security White Paper:

https://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/cloudCollaboration/wbxt/whitepapers/webex-edge-devices-white-paper.pdf

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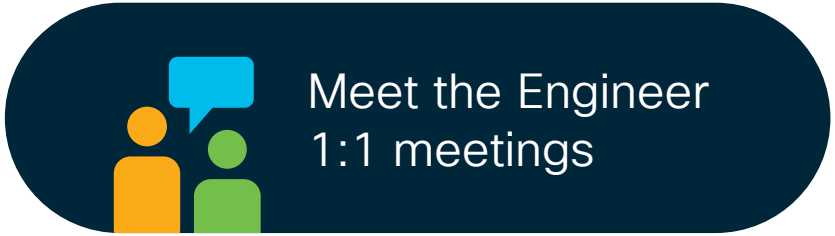

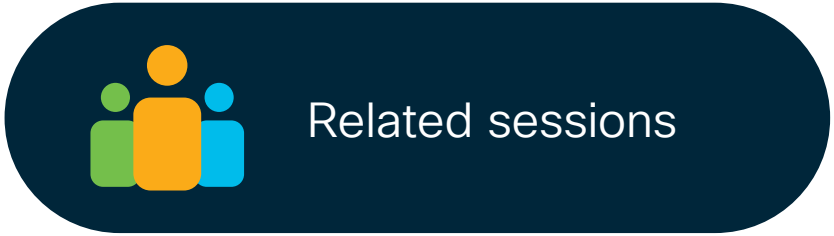

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