



komunikační produkty a služby ve vlastní infrastruktuře

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Agenda

- On-premise
 - CallManager (CUCM)
 - Meeting Server Server, Meeting Management
- Hybrid Webex Edge / Cloud Connected
 - Cloud Connected Meeting Server
 - Cloud Connected UC
 - Audio
 - Devices

Cisco collaboration portfolio

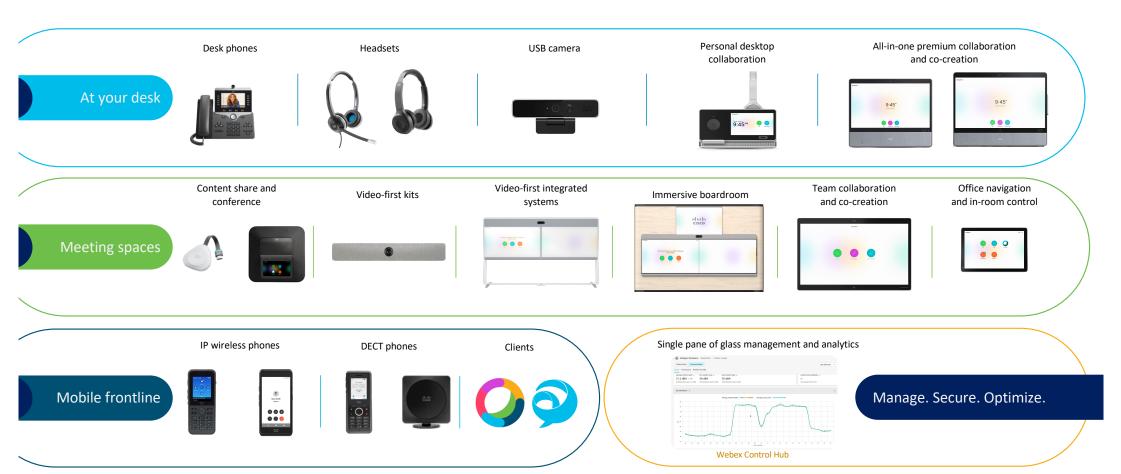
Designed to enable the more intuitive way to work today & tomorrow



Empower teams, delight customers, accelerate innovation

CallManager (CUCM)

Integrated devices enable the flexible workplace



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Meet your workforce productivity needs with one app - Webex (with UCM calling)



Meetings

Rich, innovative meetings experience with Webex

Calling

New calling capabilities such as hold / retrieve, 2nd line, IP Phone control. Supports CUCM, UCM Cloud, HCS

Messaging

Persistent chat with new capabilities such as reactions, threading, ECM integration

Enterprise-grade security and compliance

Integration with DLP; Cisco® CloudLock-ready or 3rd-party CASB integration



Wireless pair and share

Pair/share wirelessly with your Cisco video devices to join your meetings or share content on screen and in-meeting

Integrations

Simplify and accelerate workflows by integrating business applications directly into Webex®

Centralized management

Webex Control Hub: single pane of glass to deploy, manage and support the Webex app

CUCM solution 14

User Experience



Unified App Integration

- · MRA registration failover
- LTE to WIFI failover (Preview)
- AV1 codec support
- Phone presence in Webex app**
- · Jabber zero downtime for IM&P
- Shared line presence with centralized IM&P cluster
- iOS13 APNS support, incl. China regulatory ask*
- Android Push Notification*
- UDS performance improvements (bulk search, cluster HA)*

Headset Integration

- Headset based EM login*
- Headset CC integration* (preview)

Admin Simplicity



Phone Refresh

- Phone replacement self provisioning*
- Simple phone security (OAuth)

Admin Experience

- Simplified certificate mgmt. (CCUC)
- Web RTMT (CCUC)
- Webserver restructure
- Cluster scale with memory tuning
- EMCC scale validation
- Flexible hardware support
- · Fresh install w/ data import
- Switch refresh, tooling (CER)
- CER / CUC config APIs

Security & Compliance



Security & Compliance

- E911 regulatory
 - -Kari's law*
 - -RAY BAUM'S Act
- · SRC, PSB compliance
- Certificate revocation (OCSP)
- Secure VM notifications
- Federal certification
- · Accessibility improvements

Key Customer Asks

- · Share for audio only call*
- · Secure AXL port, DB access
- Rank based control enhancement

Business Continuity

- 3rd party library updates
- TPSD, GIT migration
- Release validations
- Shift left automation

Bridges to the Cloud



Webex Cloud-Connected UC

- Analytics
- · Upgrade as a Service
- Operations (certificates, upgrades, troubleshooting)

Customer Ecosystem

- O365 OAuth & scale (CUC)
- Google Workspace support for Unified messaging CUC
- SIP Open Federation (IM&P)*



Cisco Phone Deprecation Notice – Retracted ""We heard you!"

What – Deprecation of IP Phones in CSR 14 is cancelled

When – Effective immediately

Why – Support our customers in difficult times and ease transition to new devices, experience and platform

Impact:

- Phones will continue to work on CUCM CSR 14 and can be managed
- As individual IP phone models go Last Day of Support (LDOS) meaning Cisco will stop supporting individual phones at this point BUT the phone will still register and work on CUCM
- Customers can then continue to use these devices at their own risk



Simple phone refresh

- Easy, intuitive Cisco IP phone migration
- Facilitates faulty or deprecated phone refresh
- Minimize the complexity, cost, and time for professional services
- Native solution in CUCM. No external server to deploy and manage
- Phone replacement via phone or IVR



Simple phone refresh – End user experience

Unplug a deprecated or faulty phone from the network













New phone with all the settings from the old phone is provisioned

Simple phone refresh options

	Phone migration service (non-IVR)	Self-provisioning IVR	CM administration interface
End user or administrator driven phone migration	End user driven (Self-service)	End user driven (Self-service)	Administrator driven
Auto-registration required	No	Yes	No
Migration steps	 Plug-in new phone to the network Key in primary extension and PIN 	 Auto register a new phone Dial self-provisioning IVR number and follow voice prompts 	 Sign in to CM Administration interface Choose "Migrate Phone" option in Phone Configuration page of old phone Enter phone type (model & protocol) and MAC address of the new phone
Administrator involvement	Low	Medium	High

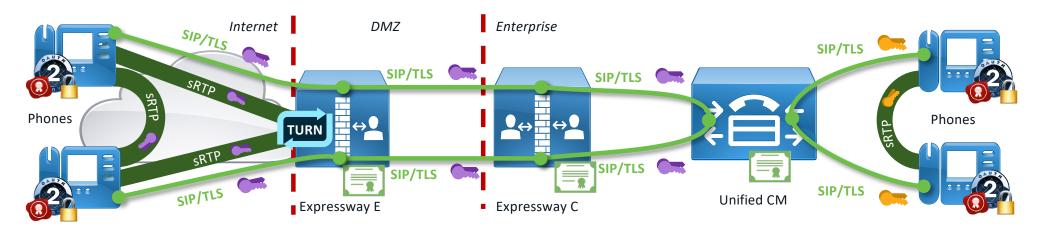
Oauth device/client/API Authentication CUCM 14

	HTTP (CUCM)	SIP	XMPP	HTTP (Unity Cxn)
On-premises Phones	OAuth token	OAuth token	(N/A)	(N/A)
On-premises Clients (Local or LDAP AuthN)	OAuth token	OAuth token	OAuth token	OAuth token
MRA Phones	OAuth token	OAuth token	(N/A)	(N/A)
MRA Clients (Local or LDAP AuthN)	OAuth token	OAuth token	OAuth token	OAuth token
On-premises Clients (SAML SSO)	OAuth token	OAuth token	OAuth token	OAuth token
MRA Clients (SAML SSO)	OAuth token	OAuth token	OAuth token	OAuth token

No need for CAPF enrollment or "mixed mode"

OAuth for Phones

SIP and Media Security - CSR 14



Phones over MRA:

- SIP signalling is authenticated (TLS + OAuth token) and encrypted
 - Expwy-C uses mTLS with Unified CM
- Media is encrypted <u>end-to-end</u>
 - ICE media path optimisation is possible

Phones on-premises:

- SIP signalling is authenticated (TLS + OAuth token) and encrypted
- Media is encrypted (no need for CAPF enrollment or mixed-mode)

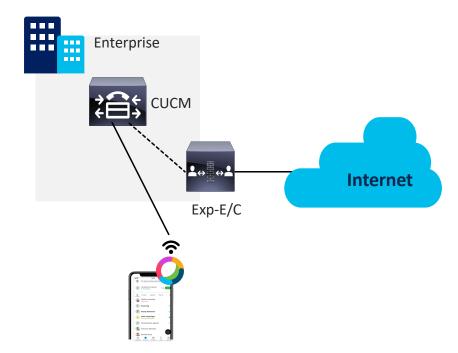
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Webex app call persistency - LTE to WiFi and vice versa

- Client can reconnect to an existing call over a different network or LTE
- On client reconnect, UCM media is resumed with client's updated IP and port information (up to 12 seconds)

- Feature requires following Cisco® UCM, Webex® app releases
 - Cisco UCM 14 (preview)
 - Webex app Mobile Release TBD
 - Expressway X14







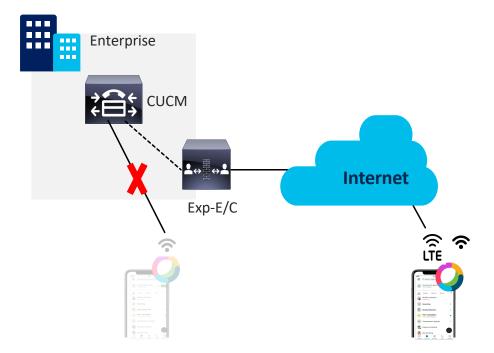
Flexibility for end users on Webex app to switch between networks without getting disconnected from active calls

Webex app call persistency - LTE to WiFi and vice versa

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Flexibility for end users on Webex app to switch between networks without getting disconnected from active calls

Certificate Management Simplification

Certificate Count Reduction

Multi-server (SAN) option for self-signed certificates

Tomcat certificates can be reused for CallManager

Remove unnecessary certificates

Centralized Certificate Management

Single pane of glass to manage certificates across multiple clusters and UC Apps



Developer Certificate Management API



APIs for Dev

Simplification with SIP OAuth

Extend SIP OAuth support to the 7800/8800 phones

No need to install LSC on Jabber

No need to enable mixedmode, no CTL file generated:

- No CTL file to manually update, no outdated CTL file
- No need to reset phones after updating the CTL file

Simpler Certificate Renewal

ITL mismatch report

Reduce the need to restart services when renewing the CallManager and Tomcat certificates

New enterprise parameter to control automatic/manual phone resets when renewing the TVS/CAPF/CallManager certificates

CAPF service restarted automatically when renewing the CAPF certificate



Certificate Count Reduction - Example

Common scenario with 9-node cluster

Certificate	Pre 14	14+
Tomcat (CA-signed/MS)	1	1
Tomcat-ECDSA	9	1
CallManager (CA-signed/MS)	1	0
CallManager-ECDSA	9	0
TVS	9	1
CAPF	9	1
IPsec	9	9*
ITLRecovery	1	1
TOTAL COUNT	48	14**

Certificate reuse	
Certificate reuse	

Multi-SAN for self-signed cert

Multi-SAN for self-signed cert

Remove unnecessary certificates

Remove unnecessary certificates



^{* 0} in a future release (plans to remove IPsec certificates if not in use)

^{** 5} in a future release (plans to remove IPsec certificates if not in use)

Cloud-Connected UC Centralized certificate management

- Single place to view and manage certificates across multiple clusters and multiple UC applications
- Ability to distribute certificates across the UC app's trust store
- Quick dashboard to view expired or about to expire certificates and take actions directly from centralized UI
- Insights for certificate consolidation and out of compliance
- ✓ Part of the Webex® Cloud-Connected UC (CCUC) offering





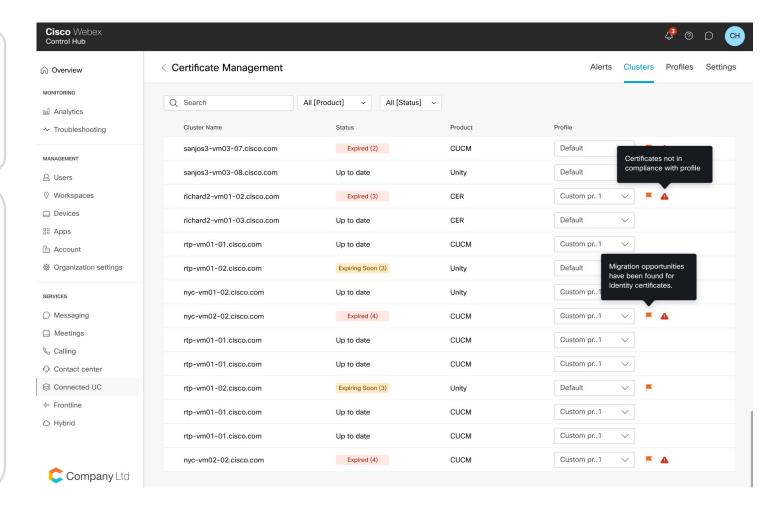
Centralized certificate management Single Pane of Glass

Monitoring

- Dashboard (multi-cluster and individual cluster)
- Alerts
- Notification

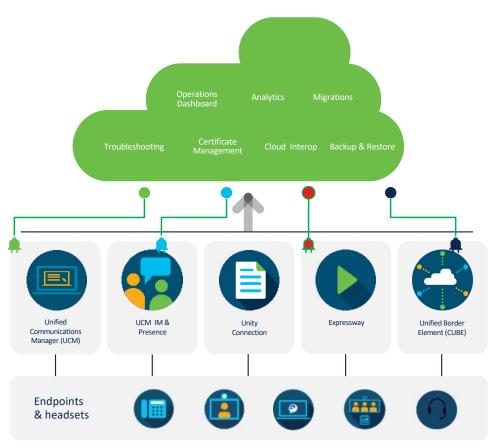
Management

- Certificate view, download, delete
- Certificate renewal and CSR generation
- Trust store certificate operations (upload/replace/remove/ copy to)
- Profile and insights
- Bulk certificate exchange



Webex Cloud-Connected UC

UCM administration through Webex Control Hub, built-in with UCM Cloud



A suite of Cisco® Webex cloud services, including analytics, operations, troubleshooting, management workflows & migration support for all Cisco UCM deployments

For customers who:

- Want a centralized administrative experience for cloudbased and on-premises UC services
- Desire a single global view to manage onpremises UC, along with any Cisco Webex[®] cloud, or hybrid services they use
- Desire efficient, cloud-based managed services (delivered by partner) for an on-premises or cloud-based UCM deployment





Quality of experience

- · Call success & failures
- · Call quality metrics

System performance

 CPU, disk & memory utilization

Feature adoption

 Heat map for call / mid-call features & UC features

Actionable insights

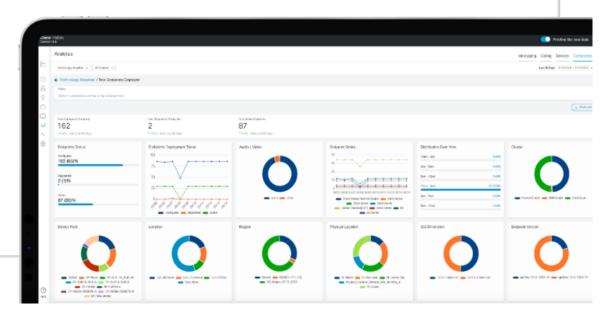
 Intelligent insights with support for workflow action

Asset usage and inventory

- · Number of calls, talk time & messages
- · Endpoints & headset usage

Capacity analysis

· Trunk & route utilization



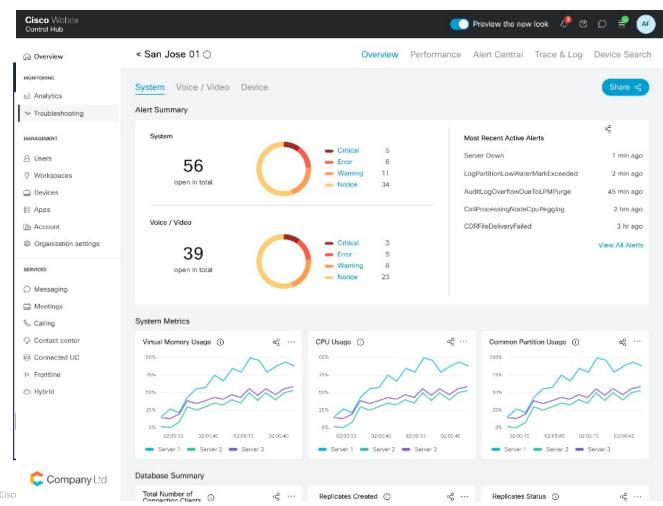
* Available & Phased Updates





Web RTMT

- Deployment level health
- Across the UC portfolio
- Aggregated views
- Drill downs (Ex: Web RTMT)





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PLAN migration

Migration Insights

- Reports and insights to plan the transition - Webex app or cloud calling
- Guidance on which users/sites are cloud-ready, based on current deployment and feature usage

DO migration

Migration Assistant

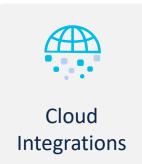
- Automates your migration steps migrate users, migrate configs
- Supports multiple migration journeys

 Jabber®/IM&P to Webex® app with
 UCM calling, BE6K to Webex Calling,
 etc.



Potential plan subject to change without notice







- Centralized certificate management
- Azure AD integration
- Centralized call history
- Call presence and information
- User and device management
- Robo spam call avoidance
- Business and operational insights
- Troubleshooting failure analysis & actionable insights
- Push infrastructure updates
- ...

Onboard to Webex CCUC today!

Reimagine UCM experience through Control Hub, drive cloud transformation

- Generally available (all GEOs excl. China and any US federally embargoed countries)
- **EU data center** in addition to US data center
- Included with your Flex & as a standalone entitlement
- Easy Secure Onboarding Create Webex Control Hub Org, and simple workflow for cluster onboarding

For details see **BDM**





Simplify User & Device Mgmt.

- Touchless provisioning for Webex app
- CUCC Updates
- ٠..

Security – Table stakes

- TLS 1.3
- Multi factor authentication for CLI
- Higher security baseline

Value through Cloud (Webex CCUC)

- New analytics, insights
- Migration tooling
- Workflows: Web RTMT, Troubleshooting, Infrastructure Upgrades
- Cloud Integrations: Azure AD, Duo etc.

Richer Calling (with Webex app and devices integrations)

- Spam / Robo Call Avoidance
- Centralized call history
- Opus transcoding
- Desk phone control over MRA
- Ad-hoc to Webex meeting escalation
- Guest user calling

Modernize platform

- Higher scale w/ 64 Bit App
- Automated Install, Upgrade and Backup restore
- Platform modularization
- REST APIs

Business Continuity

- Federal certification
- Regulatory Compliance
- PLR Support

Quality

- Stability improvements
- Higher Automation
- Agile Delivery / Rapid Prototyping

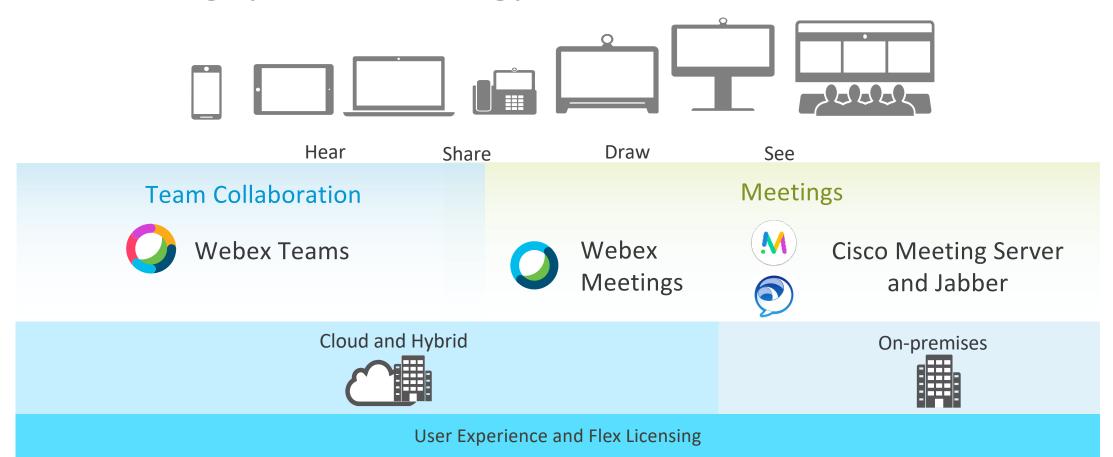
Enable Migrations

- To: WebEx Calling, UCM Cloud, WebEx App
- UCM Cloud optimizations

On-premise Conferencing

Cisco Meeting Server

Meetings product strategy



Cisco Meeting Server Core Capabilities



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Video, audio and web conferencing in one platform

Video conferencing



- Feel as though you are really there with high quality video experiences
- Make meetings more enjoyable with consistent experience on room, desktop, and mobile devices
- Make the experience work for you with flexible layouts and controls

Audio conferencing



- Reduce complexity with a solution that integrates with your existing dial plan
- Give your users more flexibility with:
 - Multiple ways to join
 - Customizable DTMF controls
 - Interactive Voice Response (IVR) for Autoattendant join meeting via DTMF

Web conferencing



- Attend meetings on the move; join from your browser as user or guest
- Fully participate with audio, video, content sharing, and controls
- No plug-in with WebRTC compatible browsers
- Maintain security with guest access PIN or user login

Interoperability: Include everyone in your meeting

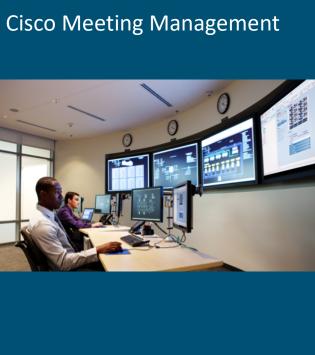
One consistent meeting experience from

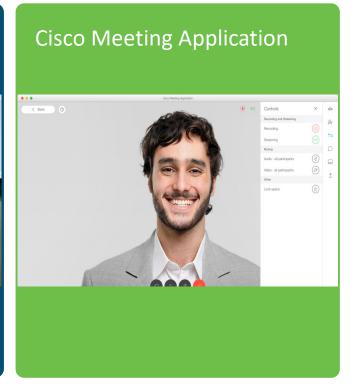
- Cisco Video Endpoints or any standards-based video endpoints
- H.264 Constrained High Profile
- Smartphone or laptop with Cisco Jabber
- Cisco Meeting App (native or with WebRTC compatible browser)
- Skype for Business (including O365)
 - Audio, video, and bidirectional content sharing (RDP)
 - Maintain the familiar Microsoft SfB experience when scheduling meetings using the Skype O365 plug-in
 - Skype for Business contact list integration



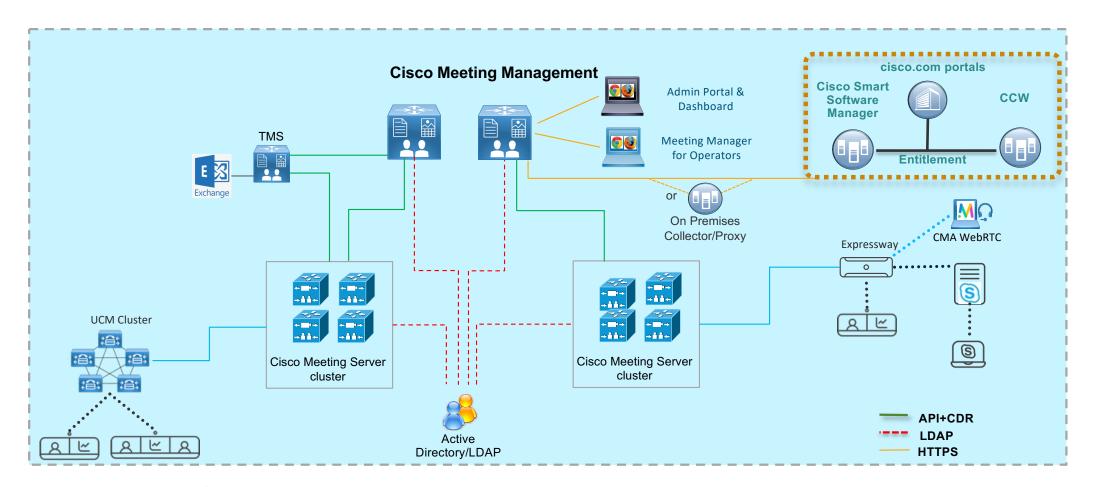
Premises conferencing solution





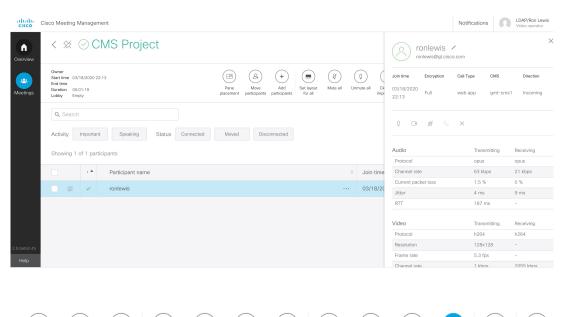


Cisco Meeting Server Solution



Cisco Meeting Management (CMM)

List Participants Mute Control Audio (all or some) or video (Individual) Add or drop participant Layout change (except WebRTC) show conference Stats End conference/disconnect all Conference event log stream & recording meeting start/stop show connection status for participant show active speaker Make user important Scheduled meetings shown (start and end times) Mute on join Meeting end time Event logs historical available weeks worth Scheduled Meeting Participant check list Local login or LDAP for operators & admin Skype recording notification label Move participant(s) from one meeting to another Pane placement Directory (phonebook) services from TMS for add participant Lock / Un-Lock Space



participants participants

•

(1)

Q.

Change display name

CMS/CMM Release Schedule Highlights

CMS 2.9 April-2020

- New web app (WebRTC) with simplify portal for space creation and set host/guest pins
- Space creation templates (API control)
- Content share 4K 7fps
- CMM set CMS LDAP import users to database
- CMM set template options for web app created spaces
- 4K7fps content share
- Pano UX
- API config tool
- SIP Recording

CMS 3.0 Aug-2020

- Increased scale for web app with Webbridge 3
- Branding and new controls for web app
- CMM required for license usage reporting
- Smart Licensing
- ESXi 7.0
- CMA, WB2, & XMPP depreciated

CMS 3.1 Nov-2020

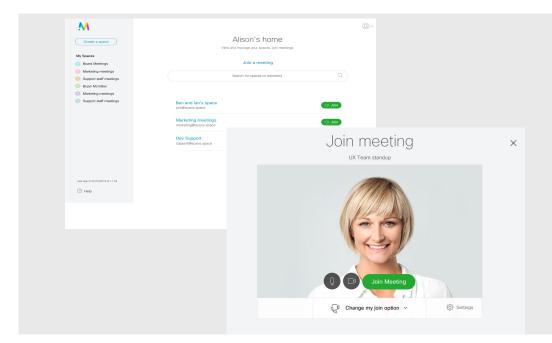
- New CMS Edge Solution for additional web app scale
- Provisioning Spaces for users
- New audio and video mute mode
- RTMPS support for streaming
- Support for web app SSO
- Web app localization



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Introducing Cisco Meeting Server 3.0 web app

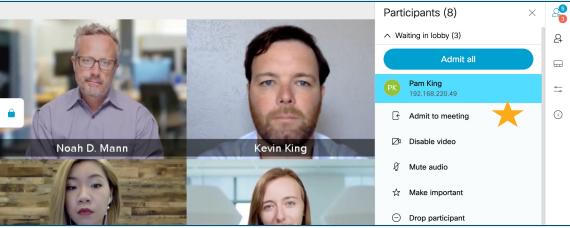
Meeting Server web app making it easier to manage and join your meetings



- New web app with same Webex joining user experience
- Join meeting using WebRTC on Chrome, Firefox, Safari, Edge, or Yandex from Windows, Mac or Mobile
- Meeting controls and participant list
- User portal for managing spaces with join button
- Create and edit space options including host & guest PINs
- Legacy CMA clients and WebRTC 2.x not available in 3.x

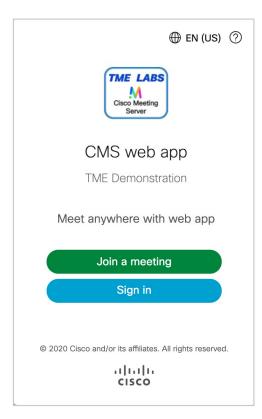
Admitting participants from lobby





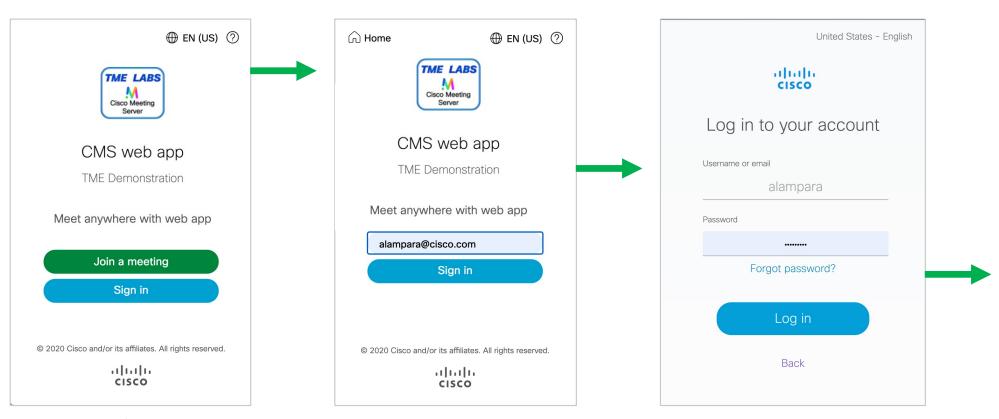
- The meeting must be locked to enable the lobby.
- Individual participants or all in the lobby may be admitted.
- Unless unlocked, participants joining a meeting after others have been admitted will be placed in the lobby

Single Sign On (SSO) Support Sign on with a single login through an Identity Provider

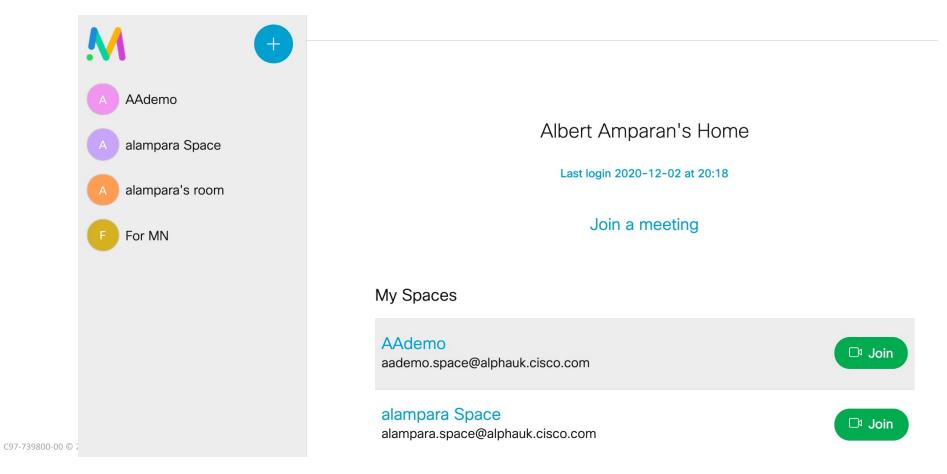


- Supports SAML 2.0 and Oauth
 - Supports only HTTP-POST
- Once SSO is enabled for login LDAP login is no longer used.
- Participants using that callLegProfile have the ability to admit participants from the lobby.

Single Sign On (SSO) Support Sign on user experience

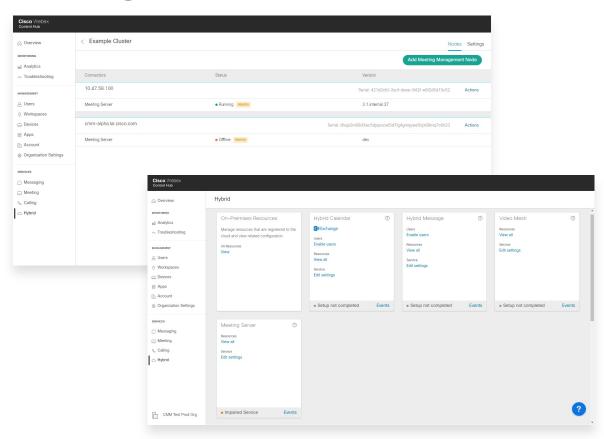


Single Sign On (SSO) Support Sign on user experience



Cloud Connect Cisco Meeting Server

Customers can visualize their solution from the Control Hub through Webex Edge for CMS





















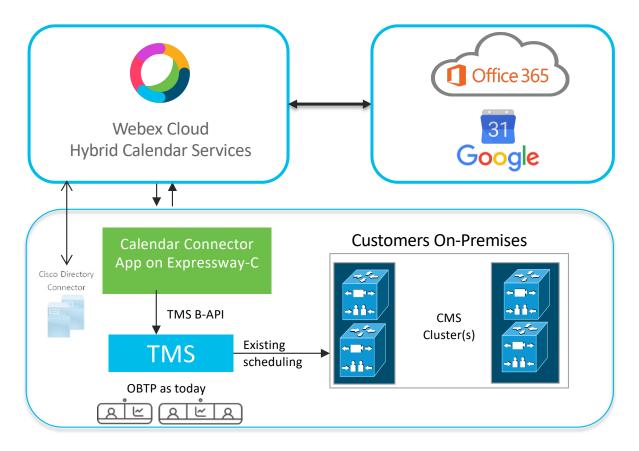






CMS with "@Meet" Scheduling O365 Exchange and Google Calendar

- Requires TMS15.7 and Expressway-C with Webex Calendar Connector
- Room systems get big green join button
- Conference service type "TMS" for CMS scheduled meetings
- Users are imported to Common Identity and have calendar service enabled
- Coexists with existing TMS scheduling

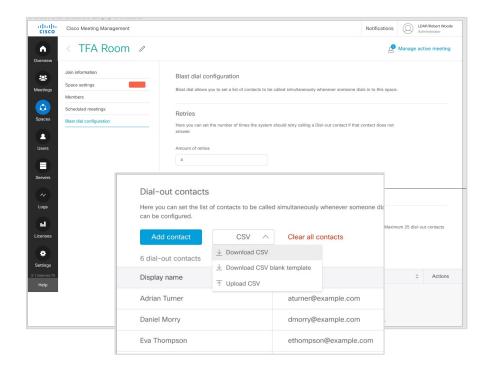


Get everyone into the Cisco Meeting Server-based meeting right away

Typical use cases include military base incident-to-operations team and leaders; and network operations war room notification.

Blast dial application in CMS/CMM* 3.2

- Blast dial activated when host starts meeting
- Admin pre-define list of participants to call; video or audio/phone number
- Participants get audio prompt to join meeting with press 1 to join
- Cisco Meeting Management offers status to operators

























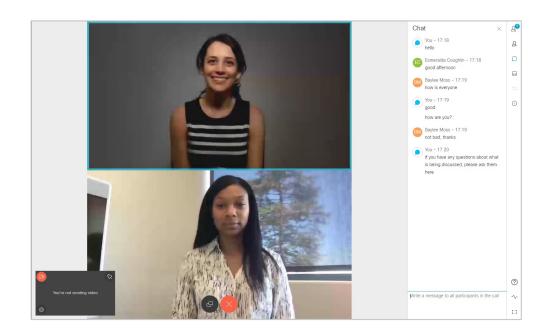
^{*} Cisco Meeting Server and Cisco Meetings Management (CMS/CMM)

Improving the web app user experience in CMS

Better in-meeting experiences with in-meeting chat and raise hand. Flexibility to modify status or move participants.

CMS 3.2 enhancements

- In-meeting chat (shared to all, no 1:1)
- Raise hand and host notify
- CMS web app (WebRTC) media resilience enhancements with packet loss
- CMM* or API can move web app participant to another space
- Users can modify member status in spaces
- Default dial-out access method























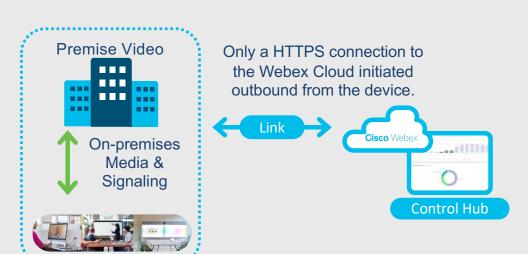


Webex Edge for Devices

Webex Edge for on-premises Webex devices

High Level Overview

Deliver insights and diagnostics for on-premises Webex devices by linking them to the Webex cloud platform.



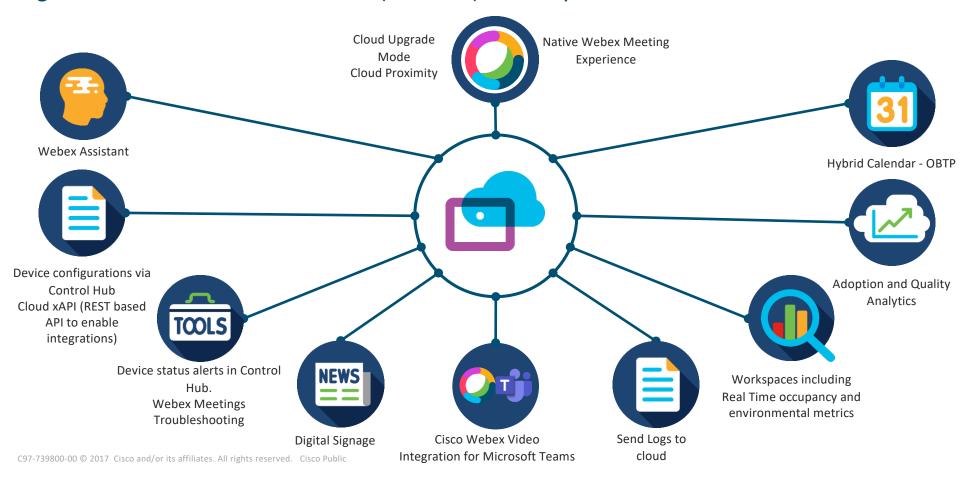
- Business-critical calling and media stays onpremises.
- Hybrid deployment and customer migration at their pace.
- "One-click migration" one button to Cloud Link.



- Simplified single pane of glass with insights through Control Hub.
- This feature will enable more cloud services with time in phases.

Webex Edge for Devices

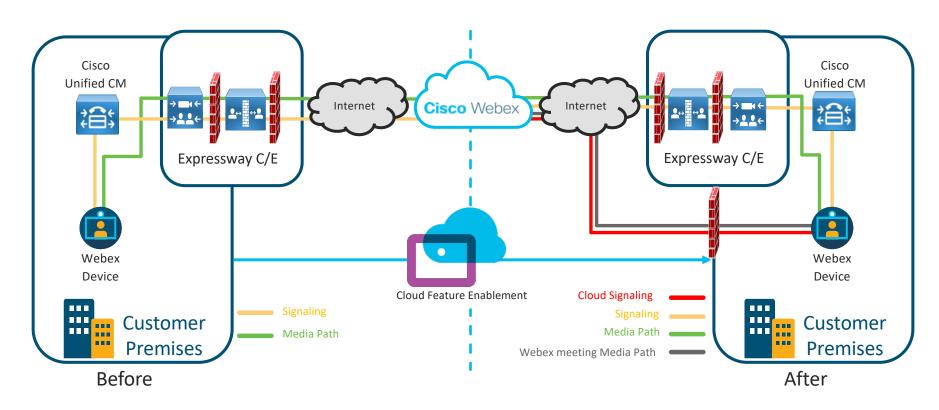
High level feature overview – CE9.15 (CE9.15.0) February 2021



Cloud Feature Enablement

Native Webex Meeting experience





Native Webex Meeting experience

Webex Edge for Devices – supported features



- Mute All.
- Unmute All (Webex device still needs to manually unmute).
- Mute on entry.
- Allow participants to unmute themselves.

Host features

- Host or Co-Host can lock.
- Transfer Host and leave.

Visual features

- Active Speaker indication.
- Far End Camera Control (FECC).

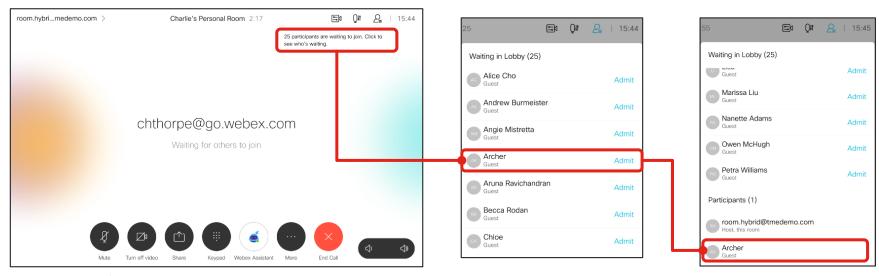




Native Webex Meeting experience

Native Webex experience – Admit attendees from roster list.

- Webex device below is Webex Edge for Devices linked and has native Webex experience enabled.
- Webex device is host/co-host of Personal Room meeting in this example.



Native Webex Meeting experience

Advanced Mute capabilities

room.hybrid@tmedemo.com

Participants (1)

Host, this room

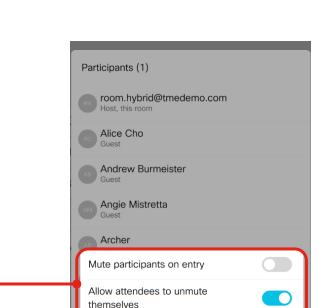
Alice Cho

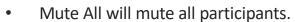
Andrew Burmeister

Aruna Ravichandran

Angie Mistretta

Archer Guest





Becca Rodan

Unmute All will request attendees to unmute.

Unmute All

Mute on entry will mute attendee on join.

Mute All

 Allow attendee to unmute if turned off will show padlock icon on mute notification and will not allow them to unmute.

Unmute All



Cloud Upgrade Mode

(CE9.14 and above)



Webex Cloud Upgrades can also be enabled via xAPI.

- Webex device will receive monthly (RoomOS/CE9.15.x) software updates inline with full cloud devices.
 - Software delivered at start of month.
 - Features enabled mid-month.
 - Release channel will still be managed via Webex Control Hub (as per previous slide)

xConfiguration Webex CloudUpgrades Mode: Mode

Where

Mode:

Off/On

Off: The device software is not upgraded from the Cloud.

On: The device software is automatically upgraded when a new software version is available in the cloud

Default Value: Off

Cloud Proximity Mode

(CE9.14 and above)



Webex Control Hub configuration:

• Devices>[devicename]>Device Configurations>Webex>Mode: *Mode*

Where

Mode

Off: The linked device uses on-premises proximity mode.

On: The linked device uses cloud proximity mode.

Default value:

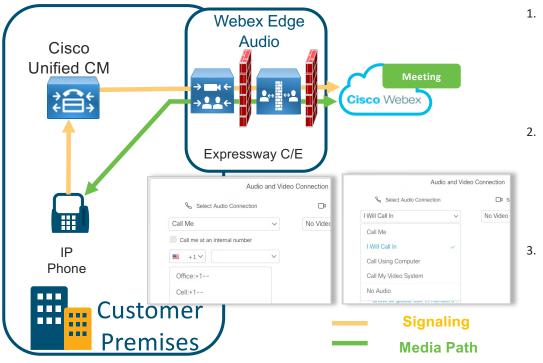
Off



Webex Edge Audio

Cisco Webex Edge Audio

High level overview



- On-premises telephone dials the Webex meeting number or gets a call back from the Webex meeting to get connected by audio into the meeting.
 - Signaling is routed via the on-premises call control device (Unified CM) through the Expressway C and E to Webex Meetings audio service.
 - Audio media (the sound) is routed from the Webex meeting to the Expressway E and C and then to the on-premises phone for callback and the reverse for call in.

Agenda

- On-premise
 - CUCM
 - Meeting Server Server, Meeting Management
- Hybrid Webex Edge / Cloud Connected
 - Cloud Connected Meeting Server
 - Cloud Connected UC
 - Audio
 - Devices

Join the Conversation

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