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The bridge to possible

Migrating from Jabber to the Webex App

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Technical Marketing Engineer
BRKCOL-2034

Agenda

- Introduction
- The Journey Map
- Webex app Calling
- Webex app Messaging
- Webex app Meeting
- Control Hub Fundamentals

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Webex app

Meetings

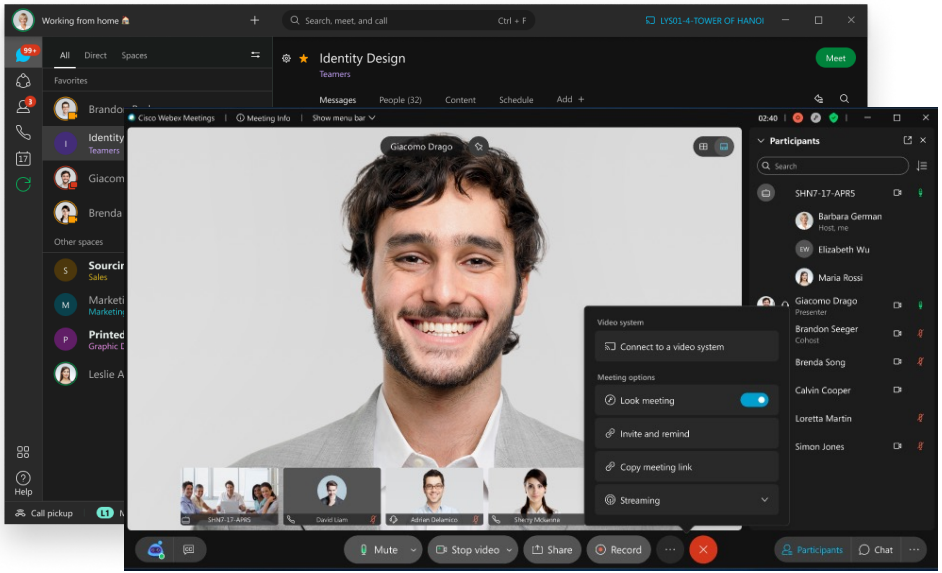
Full-feature Webex Meetings UX

Calling

New calling capabilities such as hold / retrieve, 2nd line, IP Phone control. Supports CUCM or Webex cloud calling

Messaging

Persistent chat with new capabilities such as reactions, threading, ECM 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 the Unified app

Centralized Management

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

Enterprise-grade Security and Compliance

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

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The Journey

Journey to the new Webex

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Webex app Calling Migration

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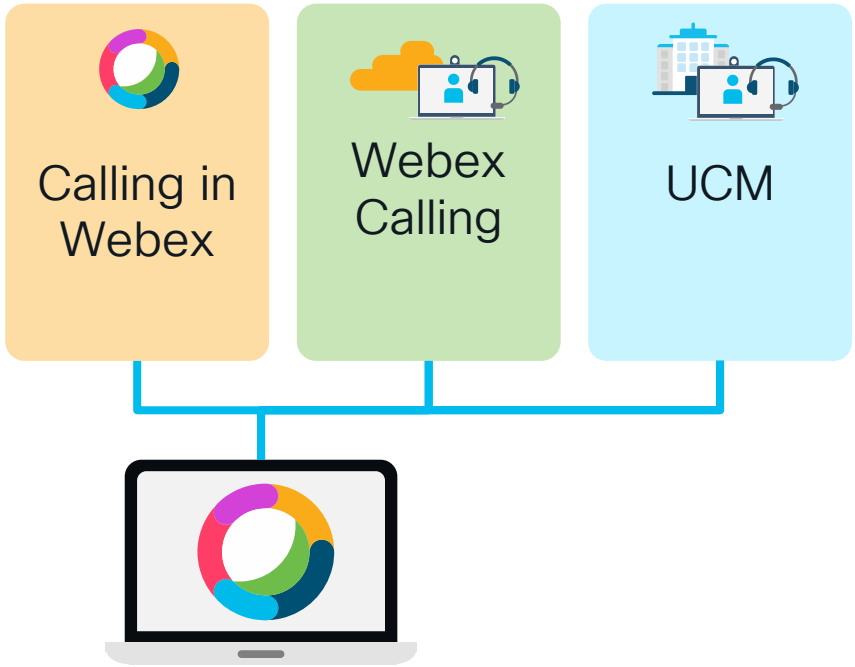
Webex app calling deployment options



- Webex provides a number of different calling options that can be deployed to meet difference requirements.

- Calling in Webex
  - Native service allowing users call other Webex users using the app.
  - Basic call control
  - No PSTN integration
- UCM
  - Webex app can register to UCM for softphone or desk phone control mode services
  - Calling support for the knowledge worker up to the Contact Center agent
- Webex Calling
  - Webex app can register to the Webex Calling service for softphone or desk phone control mode services

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High Level Jabber to Webex app comparison

	Webex app UCM Calling	Jabber
Meeting		
Pre-During-Post Meeting with Cognitive Collab in Single App	✅	❌
Simple Join with paired Webex Device or desk phone	✅	❌
Active Control with CMS Meeting	☑ CY21	✅
Messaging		
Advanced Persistent Chat with Teams/reaction/threading	✅	❌
ECM & Embedded 3rd–party workflows	✅	❌
IM-only Share	✅	✅
Remote Desktop Control (Mouse & Keyboard)	✅	✅
Device		
Wireless Share & Whiteboard with Cloud Device	✅	❌ Prem only
Proximity pair with Joining Meeting & 1:1 Calling	✅	❌
Seamless Move between Device & App	✅	❌
Calling		
HD Video & Audio softphone & Desk Phone Control mode	✅	✅
Secure & Encrypted media	✅	✅
In-a-call presence, DND	✅	✅
B2B2C App-to-App calling with Annotation/Whiteboard	✅	❌
Call Features : Hold/Resume, Transfer, Conference, Call Fwd, SNR (Mobility)	✅	✅
Voicemail (Visual & MWI & Call VM)	✅	✅
App Share with Desk-phone Control	✅	❌
VDI	✅	✅
Hunt Group, Call Pickup	✅	✅
Contact (Corporate, Personal, Local Search)	✅	✅
CTI control by another application (CTI Servitude)	✅	✅
Call Recording (BIB)	✅	✅
Multi-Line	✅	✅
Call-back/Dial-via-office/Extend & Connect	✅	✅
Call Park	✅	✅
ICE Media Optimization	✅	✅
Seamless Calls Escalation to Meeting	✅	❌
Blur, virtual & custom background	✅	❌
Noise Cancelation	✅	❌
Other advanced Contact Center features (Agent greeting…)	☑ CY21	✅

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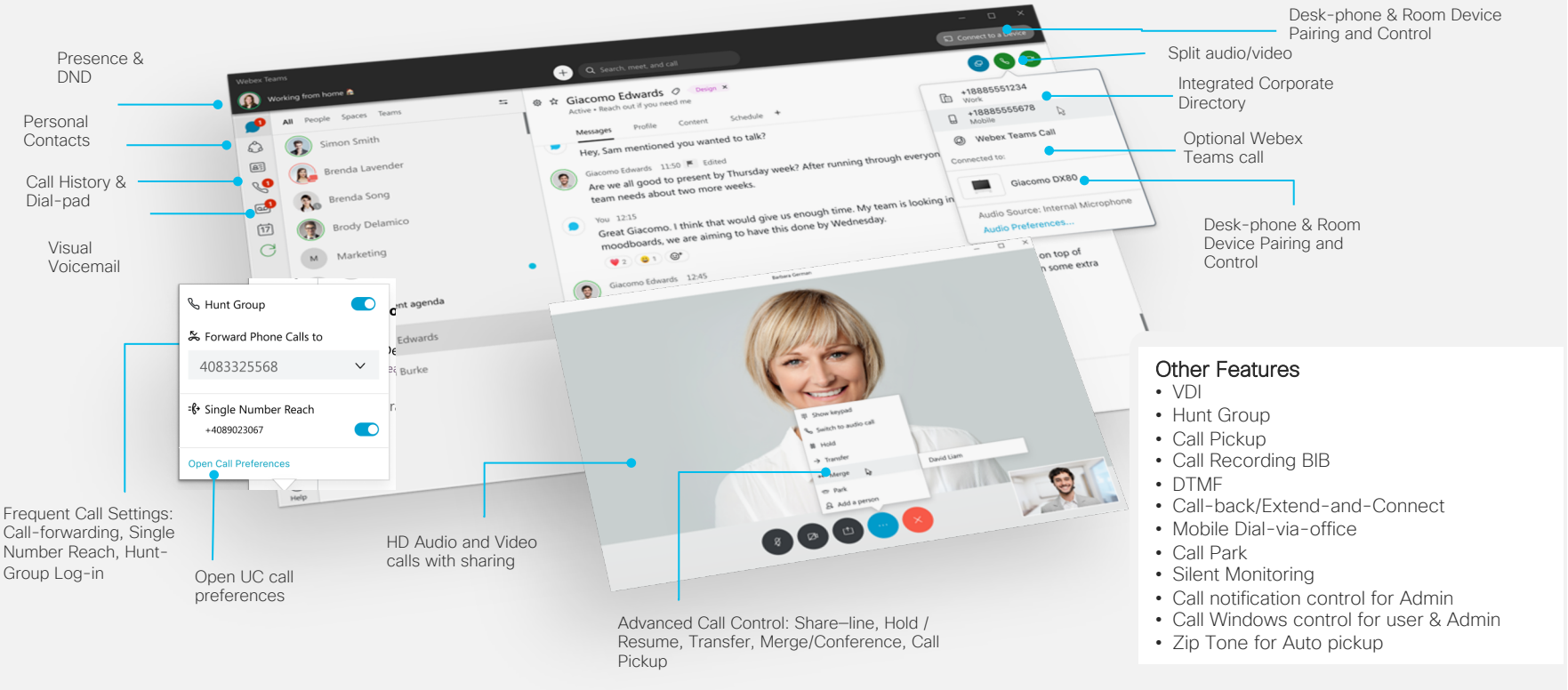
Supported Calling Features



Other Features

- VDI
- Hunt Group
- Call Pickup
- Call Recording BIB
- DTMF
- Call-back/Extend-and-Connect
- Mobile Dial-via-office
- Call Park
- Silent Monitoring
- Call notification control for Admin
- Call Windows control for user & Admin
- Zip Tone for Auto pickup

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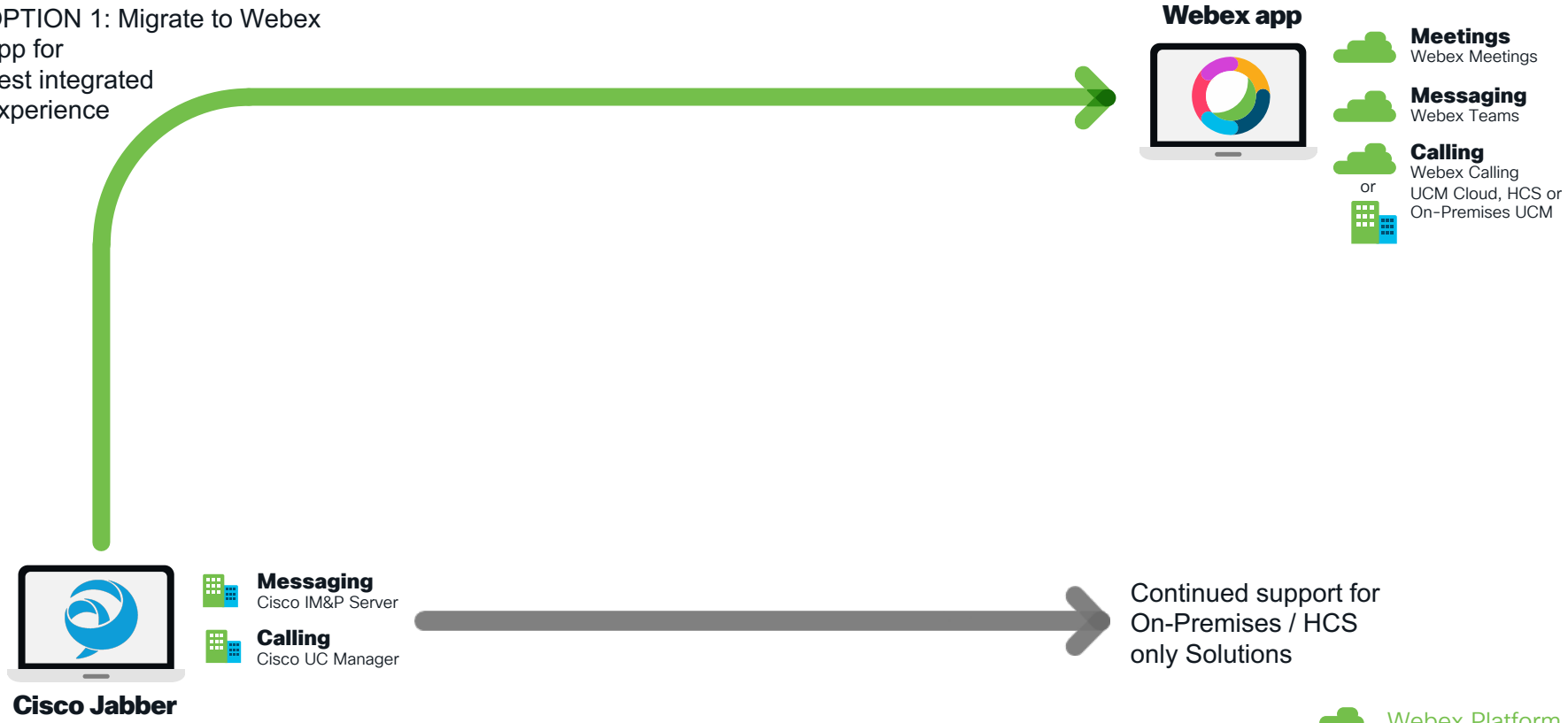
The Journey from Jabber to Webex app

OPTION 1: Migrate to Webex app for best integrated experience



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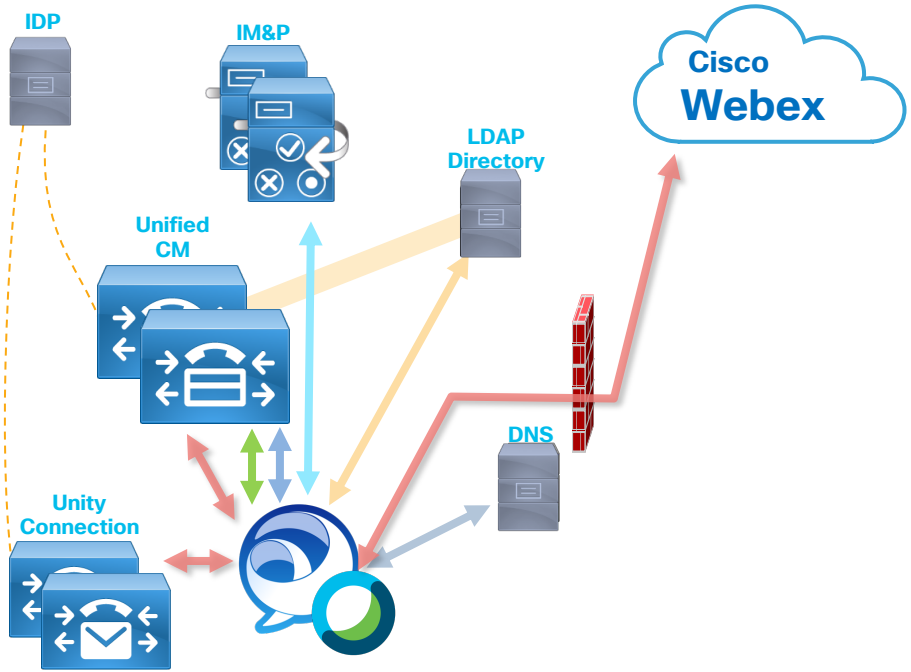
Jabber Architecture (On Network)



Legend	Protocol	Purpose
	HTTPS	UDS/Visual Voicemail
	SIP	Softphone Mode
	CTI/QBE	Deskphone Control
	XMPP	Message & Presence
	LDAP	Directory
	DNS	Service Discovery
	SP Agreement	SSO Agreement

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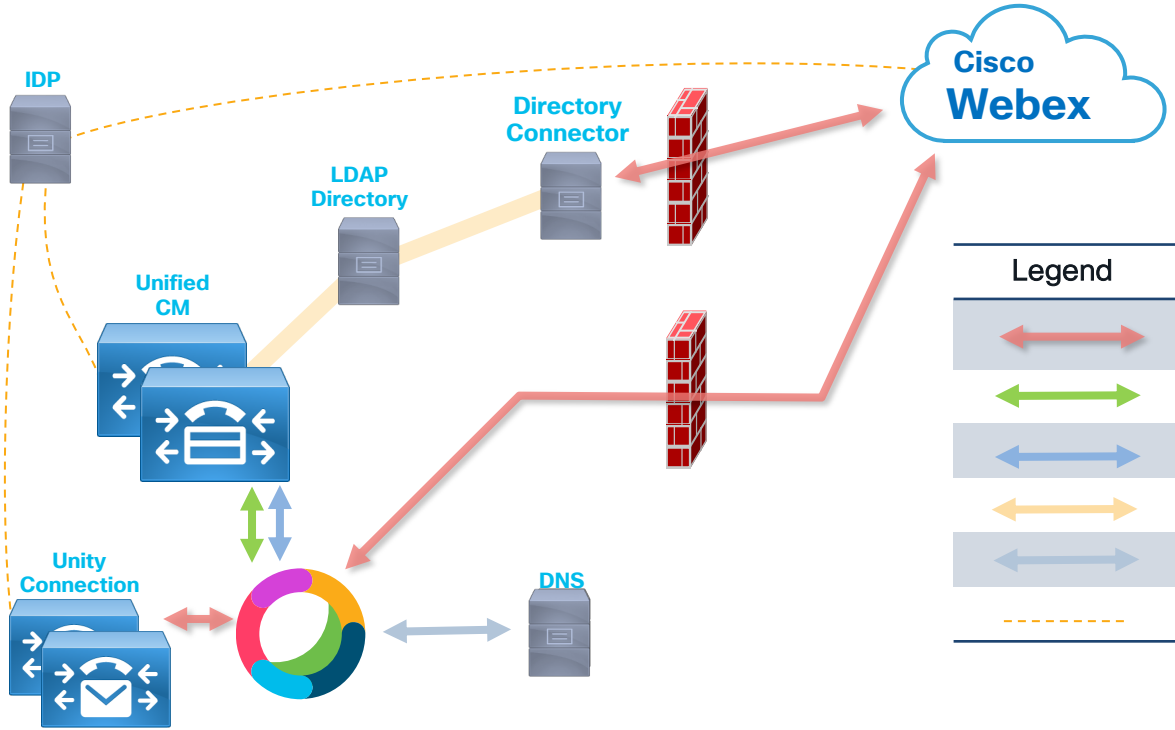
Webex Unified CM Architecture (On Network)



Legend	Protocol	Purpose
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	SIP	Softphone Mode
	CTI/QBE	Deskphone Control
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	SP Agreement	SSO Agreement

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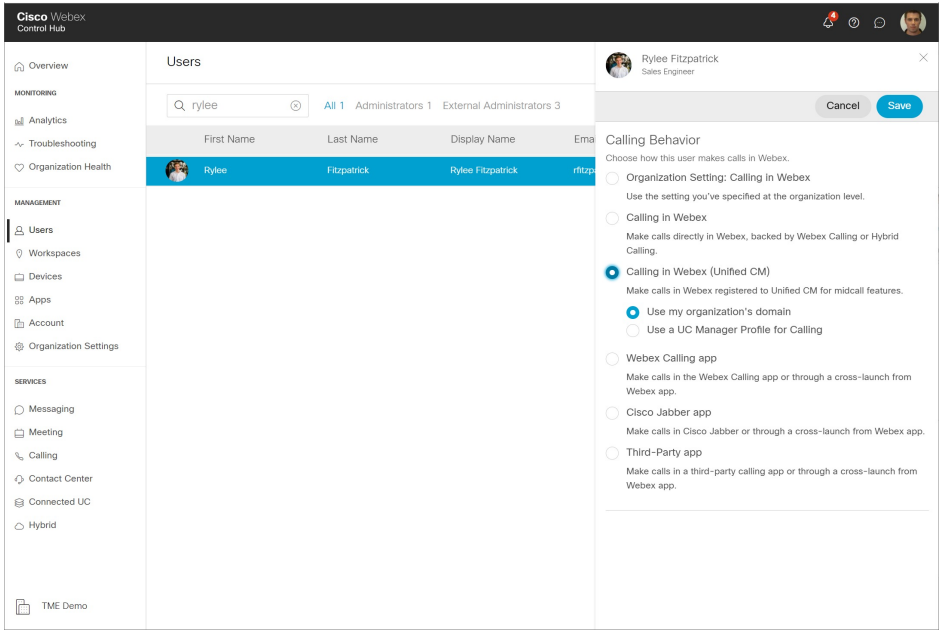
Configuration – Webex Control Hub

- Webex app ALWAYS makes its initial connection to the Webex Service
- UCM Calling enablement via Control Hub
- SSO enablement of Webex Org is highly recommended!
- Bulk enablement via CSV – Enablement based on attribute coming soon



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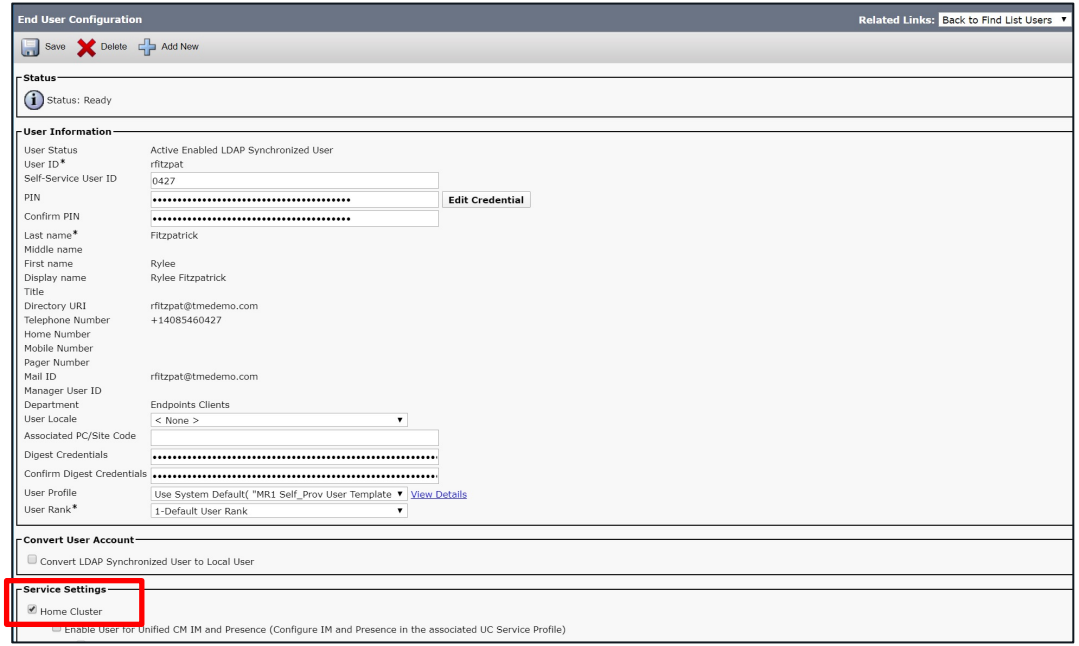
Configuration – UCM

- UCM configuration is based on Jabber UCM configuration
  - User Account
  - Home Cluster Setting
  - Device Config
- jabber-config.xml file used for hunt group and pickup
- CTI/Voicemail Profile is obtained from UCM Service Profile
- SSO enablement of UCM is highly recommended – via the same IDP!



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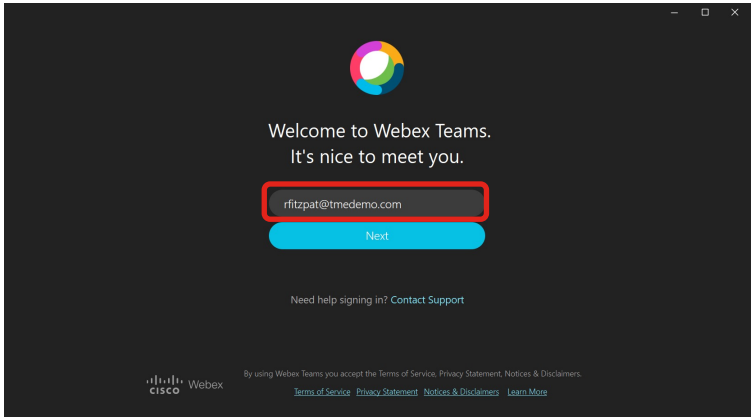
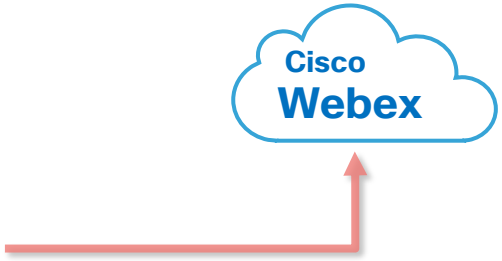
Service Discovery





- Primary Connection is always to Webex Service
- rfitzpat@tmedemo.com used to find Webex app org

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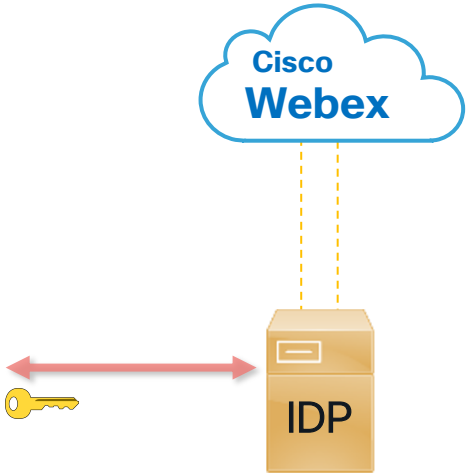
Service Discovery



- Webex Org is SSO enabled.
- Webex app displays embedded browser redirected to the IDP
- User authenticates
- IDP provides SAML assertion

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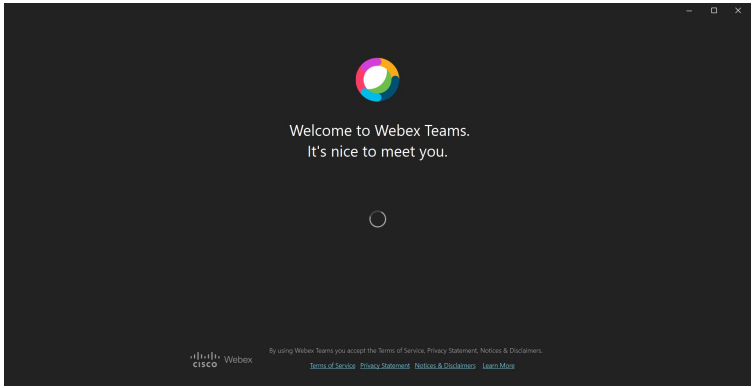
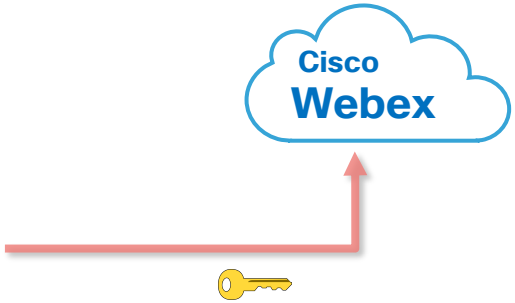
Service Discovery





- Webex app sends SAML assertion to Webex Service. Webex grants Webex app Access

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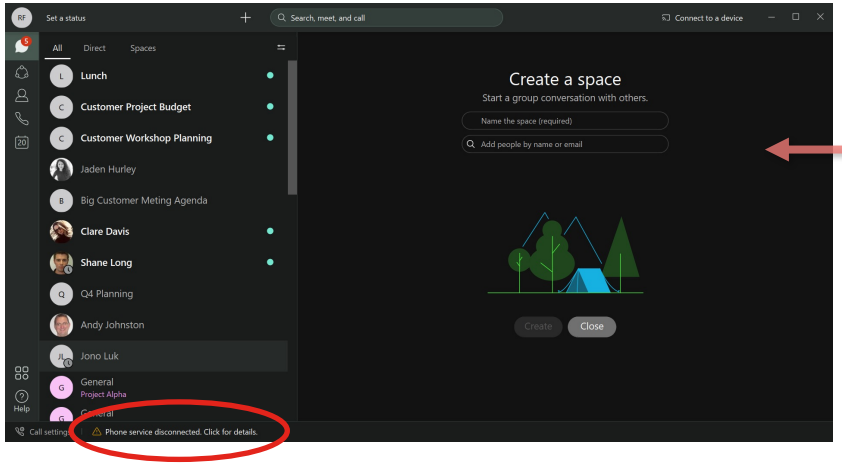
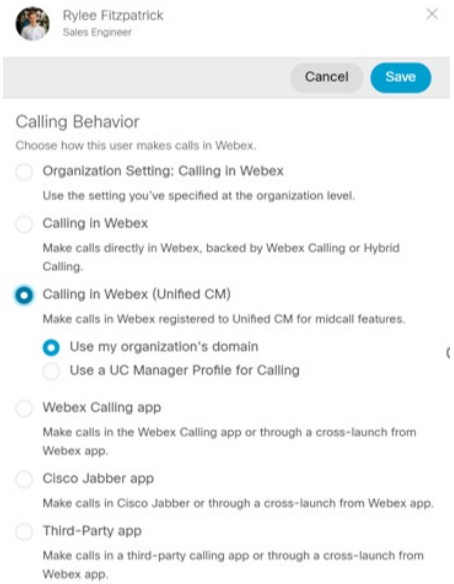
Service Discovery





- Webex app connects to conversation service and downloads configuration (including “Calling Behaviour” setting)

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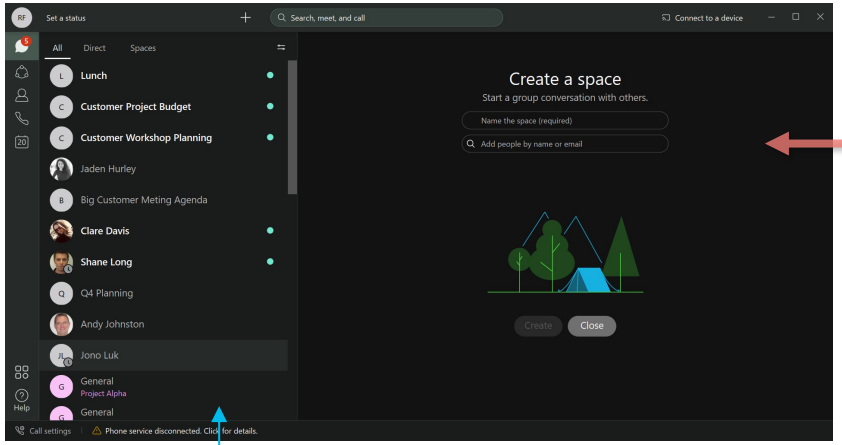
Service Discovery



_cisco-uds._tcp.tmedemo.com
_collab-edge._tls.tmedemo.com

- Webex app initiates UCM discovery
- 2 DNS SRV queries are sent
  - Edge Detection
  - Service Address
- Internal DNS Server:

_cisco-uds -> UCM A record

- External DNS Server:

_collab-edge -> Expressway-E A record

- Domain used for DNS discovery is tmedemo.com (rfitzpat@tmedemo.com)

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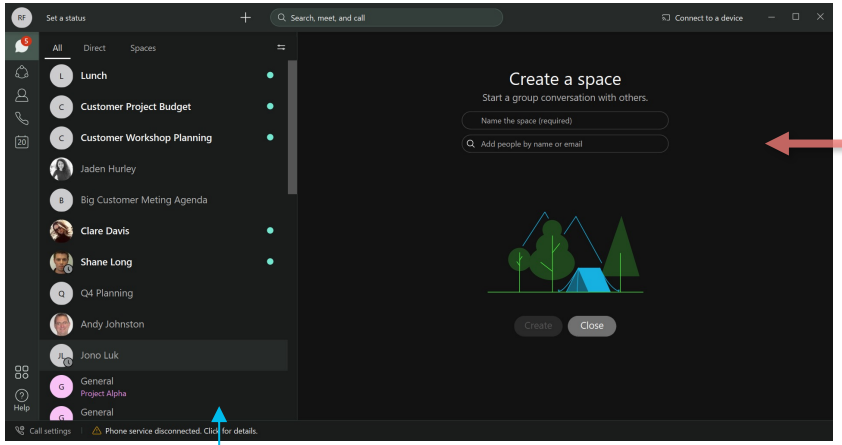
Service Discovery



Cisco Webex

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- Internal DNS Server:

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DNS

_cisco-uds._tcp.tmedemo.com
_collab-edge._tls.tmedemo.com

Voice *Services* Domain

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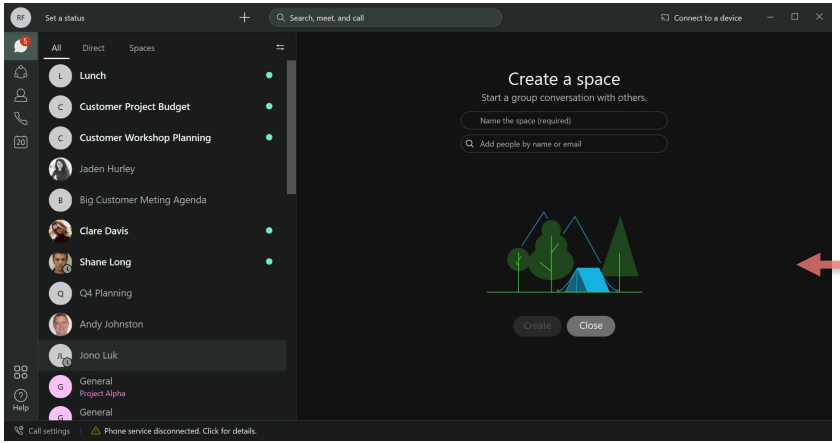
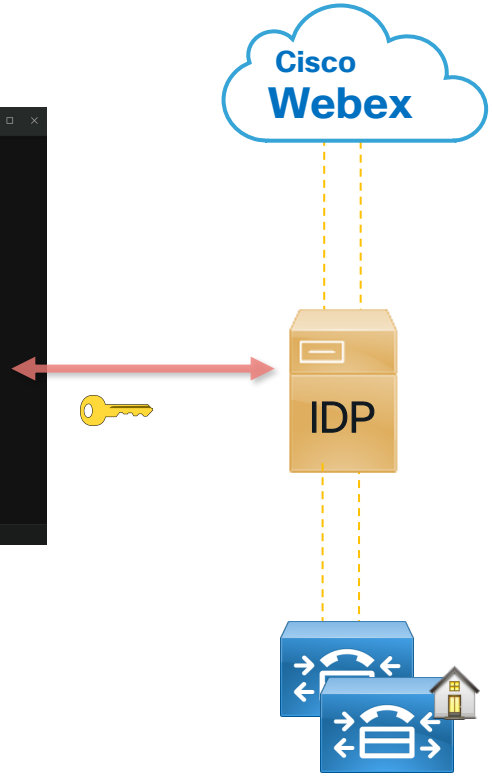
Service Discovery





- Webex app connects to the UCM homecluster
- Webex app uses existing SAML assertion to gain access to UCM – without SSO the user would have a secondary login

- *Webex app for mobile will require a secondary login for UCM even if SSO is enabled – this will be addressed in UCM/Expressway 14.0

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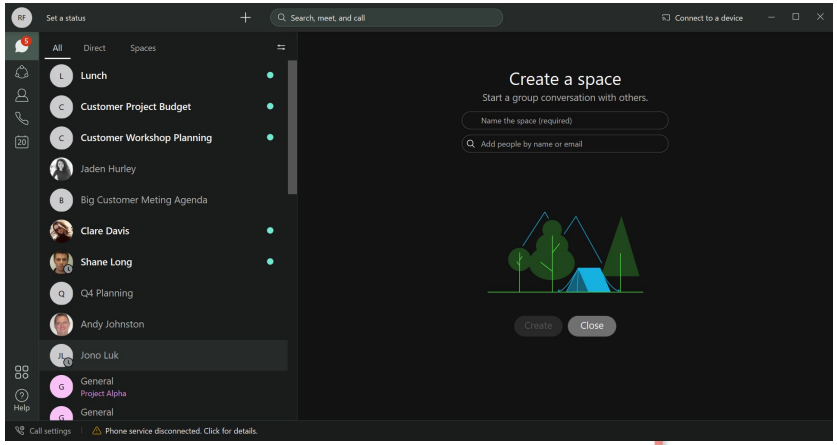
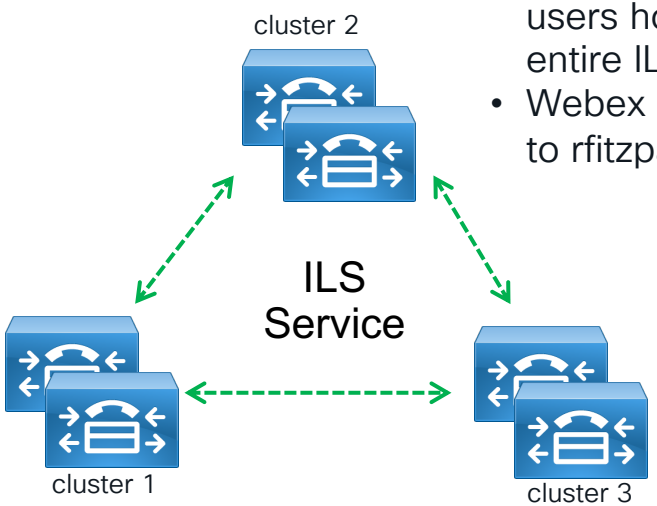
Service Discovery



- Webex app queries for homecluster against the UCM node returned from DNS
  - username or email
- UCM is aware of every users homecluster for the entire ILS cluster
- Webex app is redirected to rfitzpat's home cluster




```
https://ucm1-clusters1.tmedemo.com:8443/cucm-uds/clusterUser?username=rfitzpat
https://ucm1-clusters1.tmedemo.com:8443/cucm-uds/clusterUser?email=rfitzpat@tmedemo.com
```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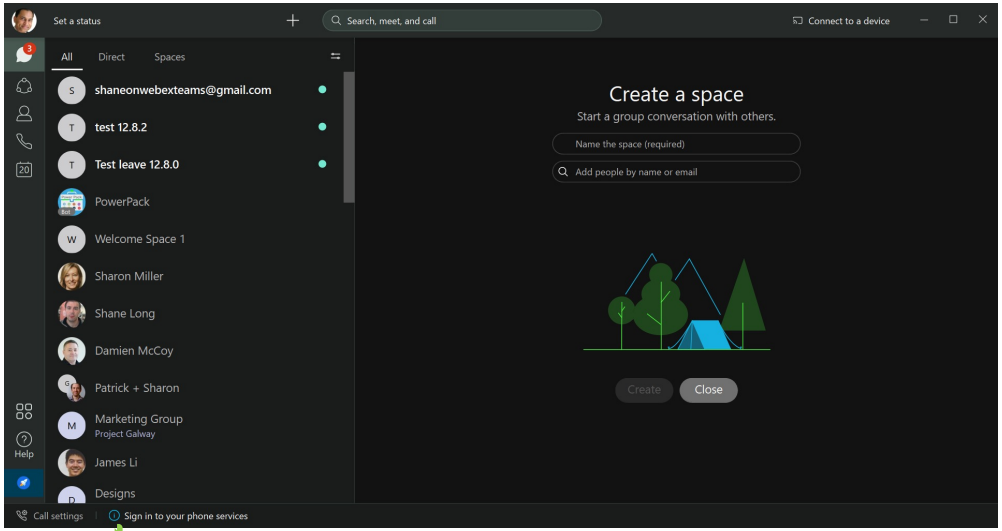
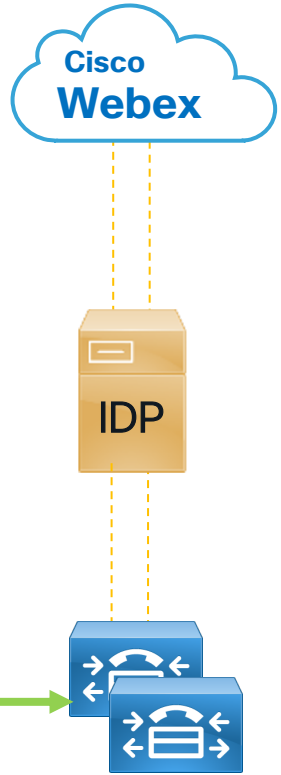
Service Discovery





- Webex app performs SIP registration against node as per UC Manager Group preferences
- Appropriate device type must be configured
  - Desktop: CSF
  - Tablet: TAB
  - iPhone: TCT
  - Android Phone: BOT

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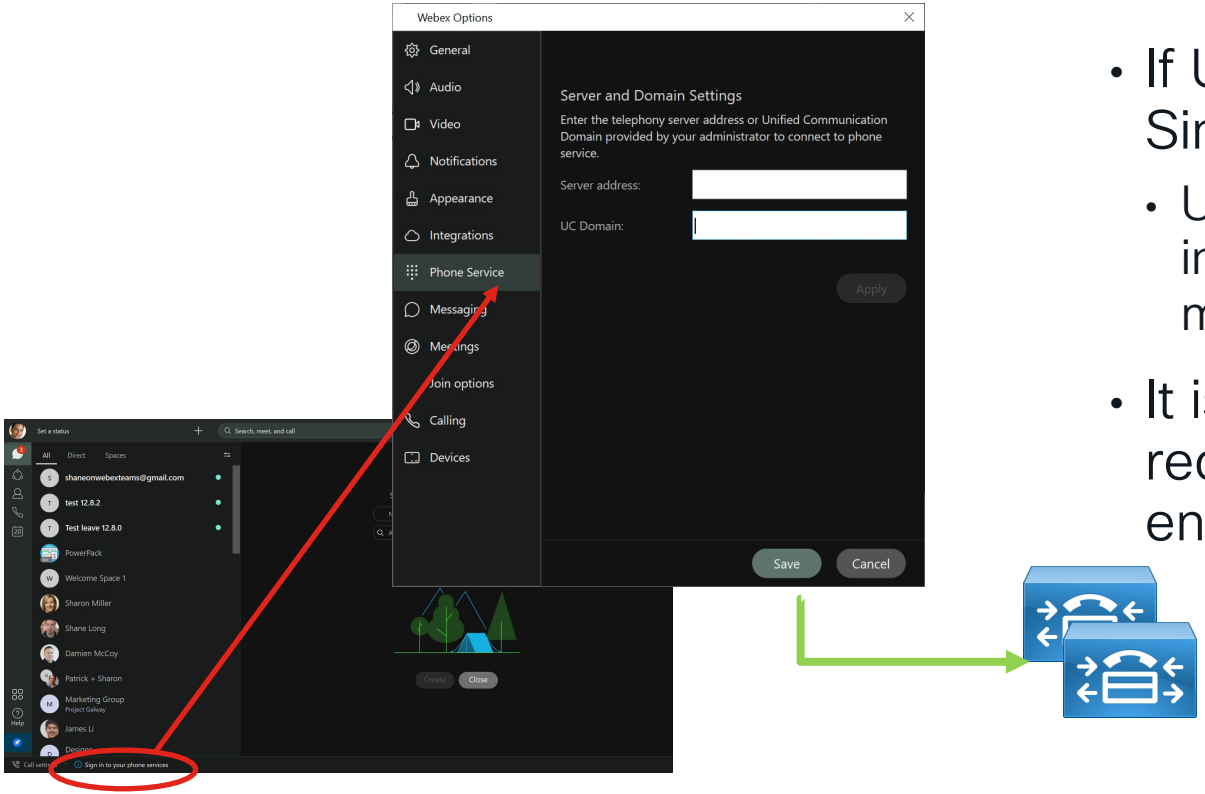
Authentication



- If UCM is not enabled for Single Sign On
  - User must manually sign in via Phone Service menu
- It is highly recommended to SSO enable UCM

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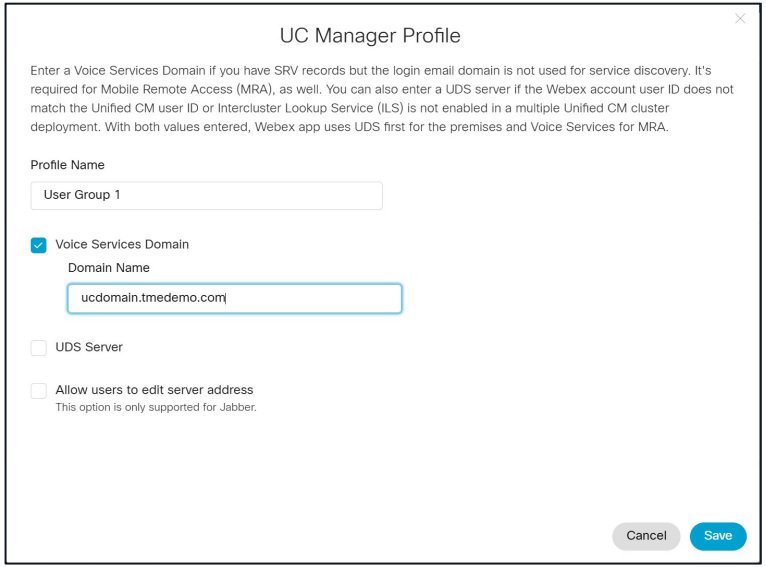
Voice Services Domain

- By default, Webex app will send DNS SRV queries based on the Webex domain (e.g. rfitzpat@tmedemo.com)
- If the Webex domain does not match the existing Voice Services Domain, a Voice Services Domain can be set via Control Hub, and associated with specific users
- Example
  - rfitzpat@tmedemo.com signs into Webex
  - Voice Services Domain = ucdomain.example.com
  - DNS Discovery

    _cisco-uds._tcp.ucdomain.tmedemo.com

    _collab-edge._tls.ucdomain.tmedemo.com



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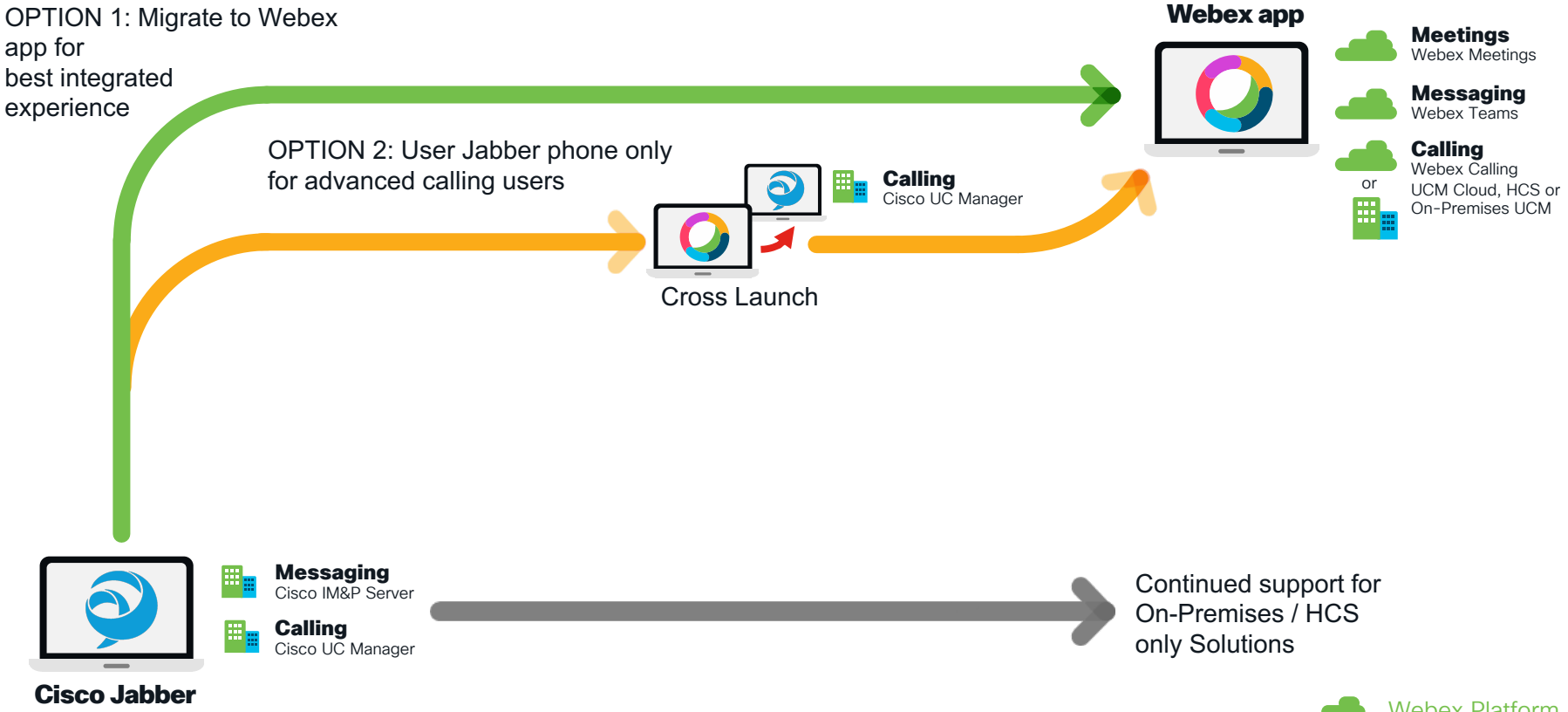
The Journey from Jabber to Webex app



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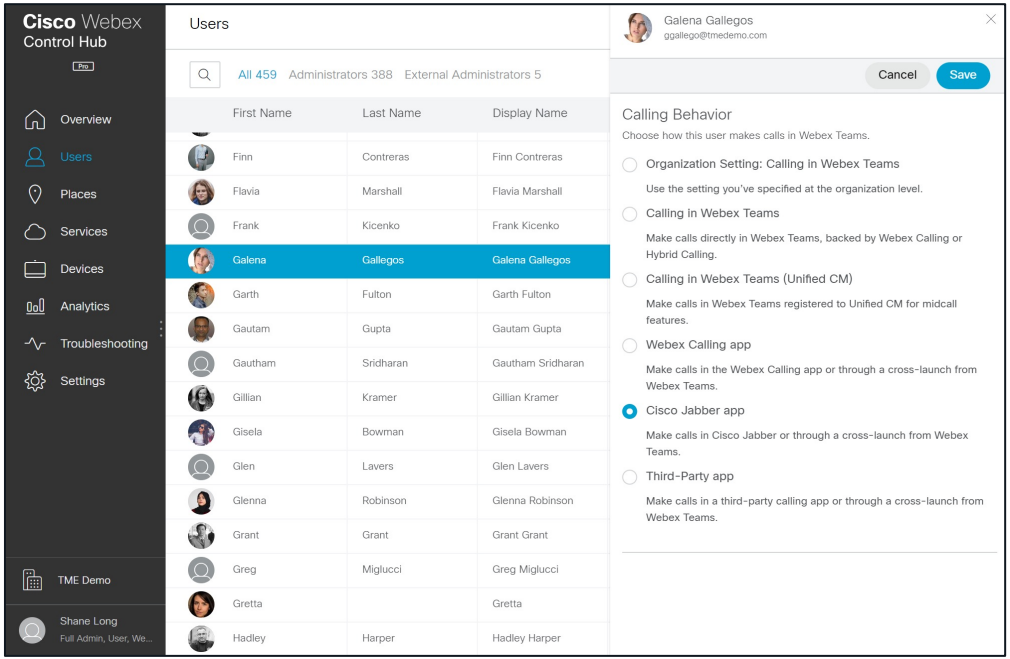
Cisco Jabber Calling

- Optional configuration for organisations who want to maintain calling in another application (e.g. Cisco Jabber running in Phone Only Mode)
  - Recommended for Contact Center users until all CC features delivered natively in Webex app
- Ability to cross launch Jabber from Webex app when making a call



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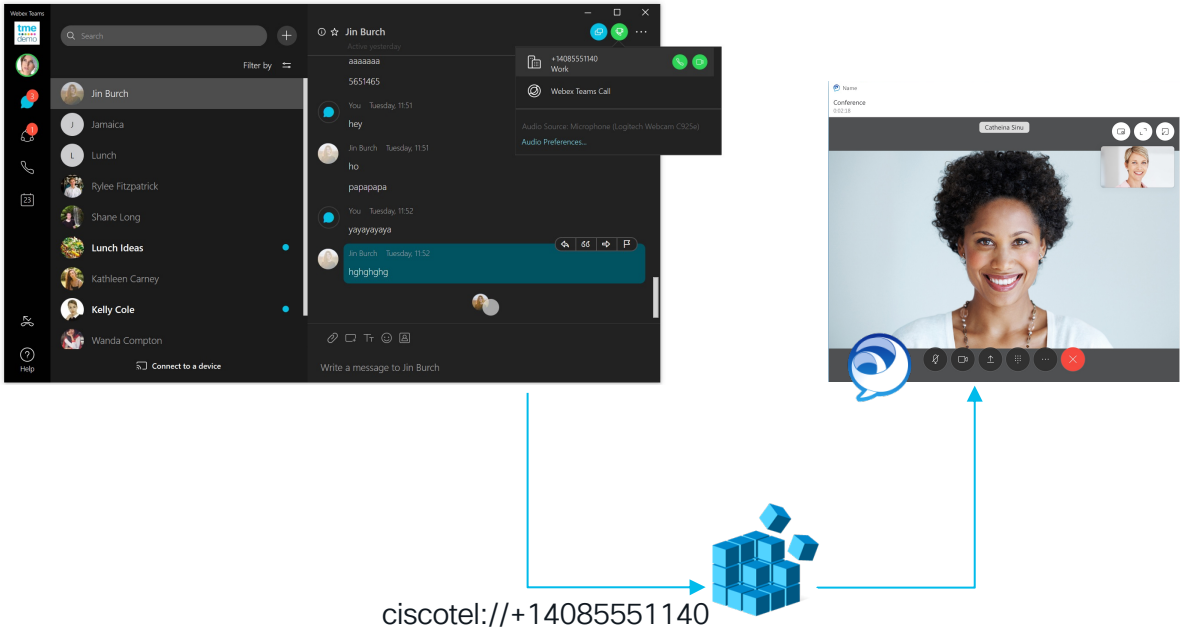
Cisco Jabber Calling



- Jabber registers to “ciscotel” protocol handler at installation time
- Webex app will call “ciscotel” protocol handler and pass the telephone number
- The OS will pass the number to Jabber. Jabber makes the call (via UCM)

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Cisco Jabber Calling

The following configuration steps are recommended when enabling Cross Launch of Jabber

Jabber Recommendation	Jabber Config
Disable Proximity	<EnableProximity>false</EnableProximity>
Disable Calendar Integration	<CalendarIntegrationType>0</CalendarIntegrationType> <MacCalendarIntegrationType>0</MacCalendarIntegrationType> <EnableCalendarIntegration>false</EnableCalendarIntegration>
Disable Meetings Integration	<Meetings_Enabled>false</Meetings_Enabled>
Disable Cisco Headset Integration	<BlockAccessoriesManagerPlugins>CiscoHIDPlugin.dll</BlockAccessoriesManagerPlugins>
Set Do Not show Docked window	<DockedWindowVisible>false</DockedWindowVisible>
Set Start client when OS boot up	<Start_Client_On_Start_OS>true</Start_Client_On_Start_OS>
Enable SIP URI Dialing	<EnableSIPURIDialling>true</EnableSIPURIDialling>

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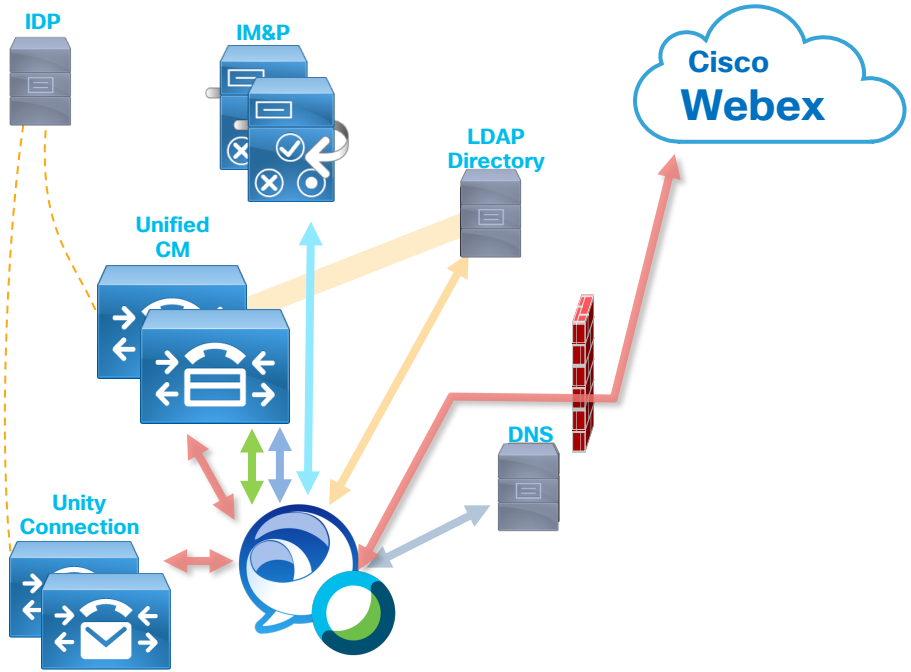
Messaging

Jabber Architecture (On Network)



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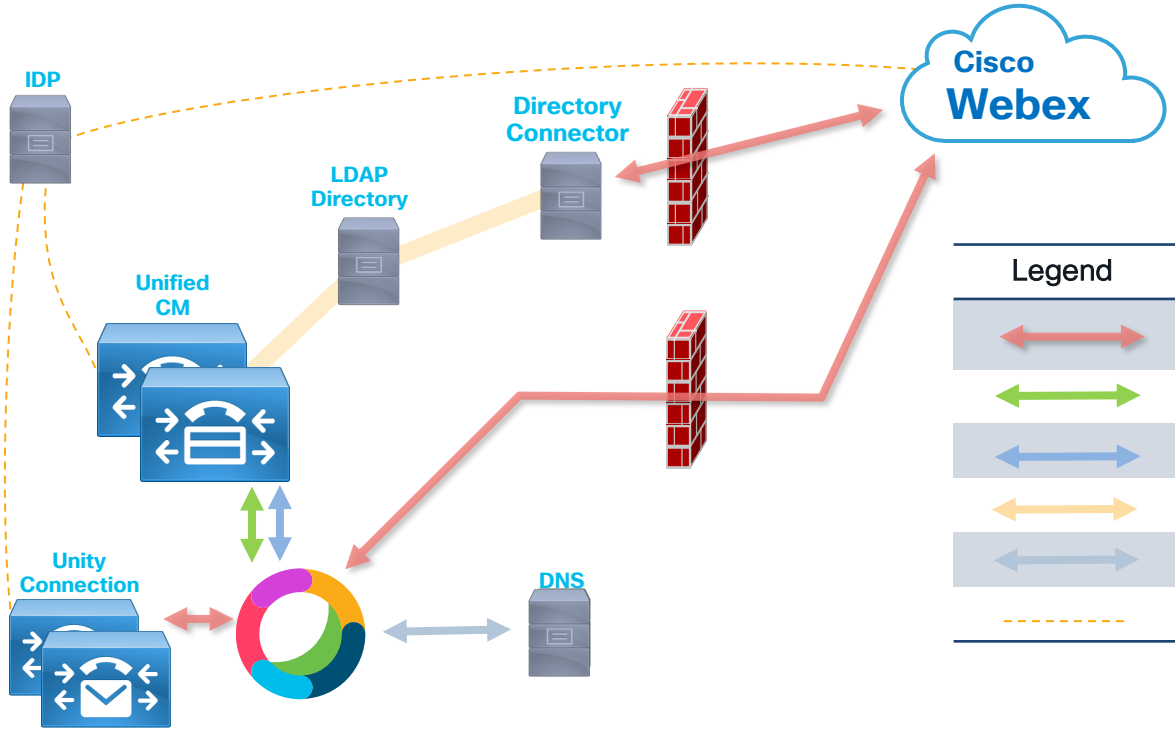
Webex Unified CM Architecture (On Network)



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Message Retention Policy

What is it?

- This means that messages and files sent using the Webex app are written to storage in a Webex datacenter and will be available within 1:1 and groups spaces within the Webex app for a defined period of time. This period of time is known as the retention period.
- Things affected by this policy.
  - 1:1 Messages
  - Group Spaces
  - Content on spaces
  - whiteboards
- The Webex Administrator defines this period in Control Hub.

Why leave it?

- Message deletion at the end of a retention period is permanent. Messages cannot be retrieved once they are deleted.
- One of the benefits of Webex messaging is the fact that messages and files are persistent
- Setting a short retention period will diminish this benefit and will result in a less than ideal user experience.

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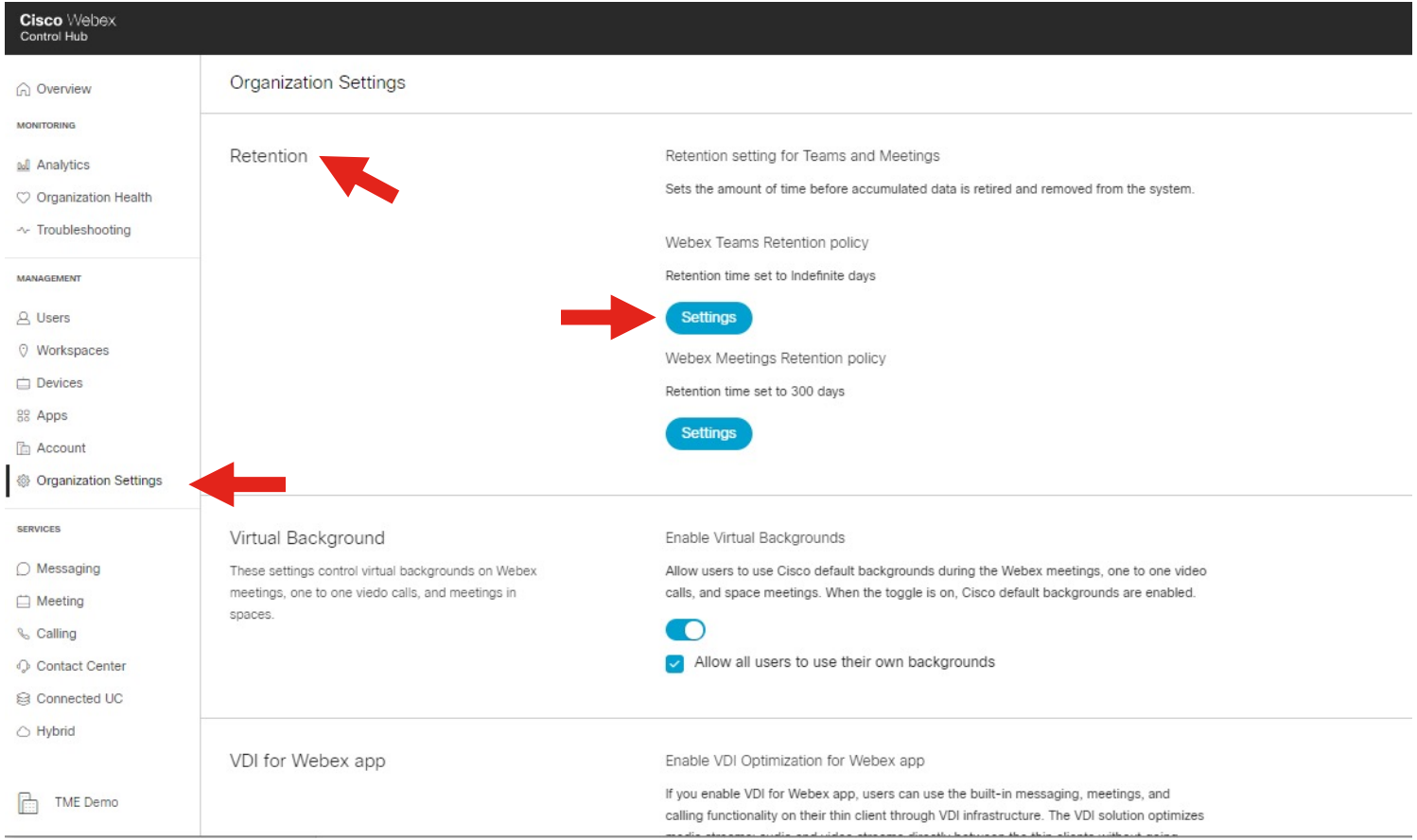
Admin Setup Webex Control Hub



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Enterprise Content Management

- Allows organisations to replace Webex app File storage with their own content management system, through an optimised integration
- Files never leave your corporate file management service

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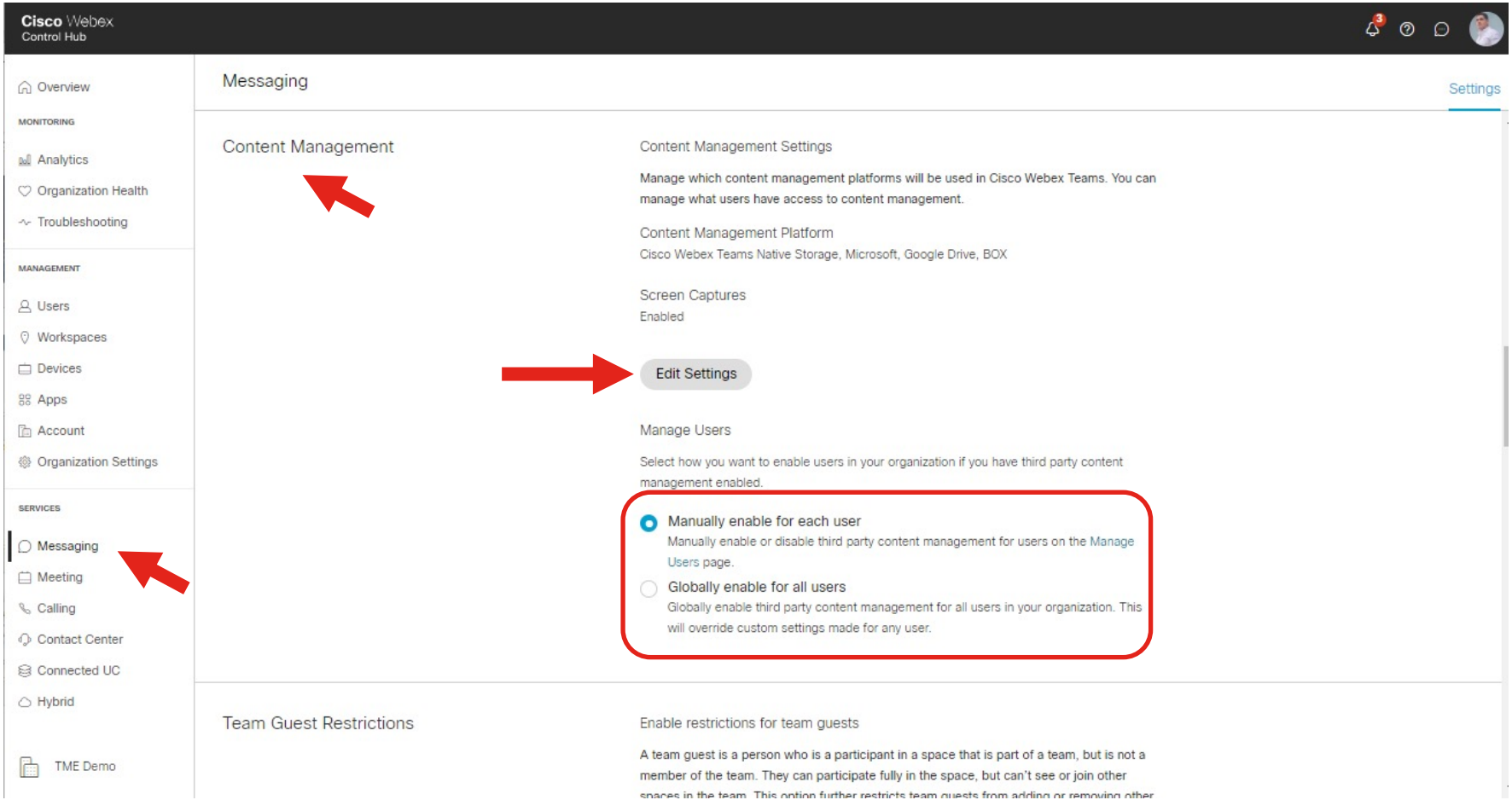
Admin Setup (Webex Control Hub)



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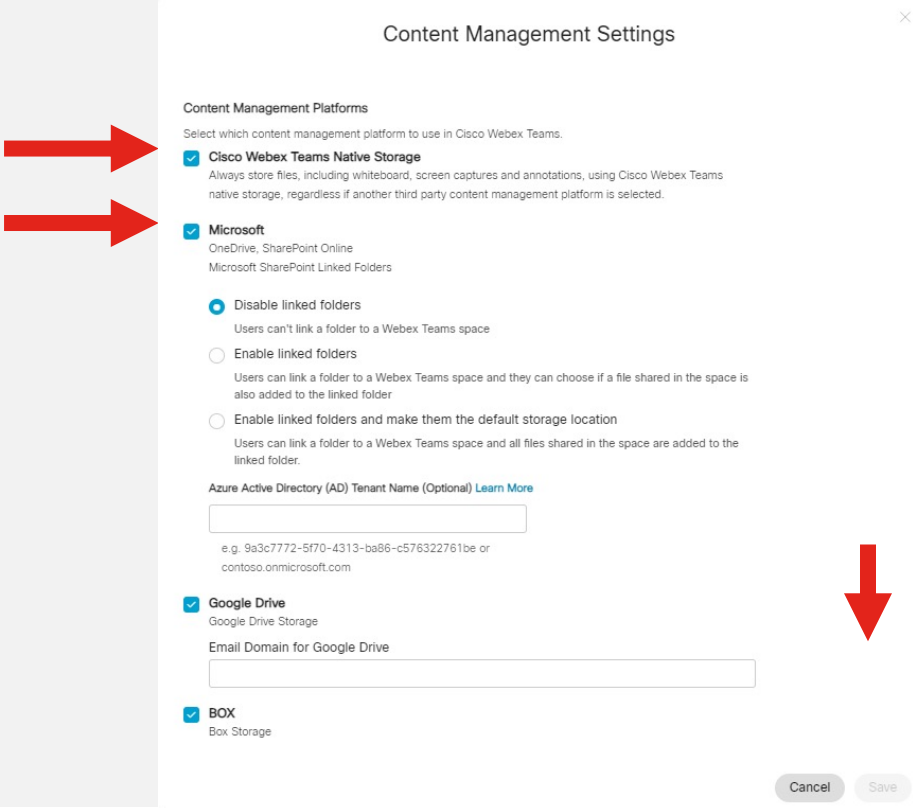
Admin Setup (Webex Control Hub)



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External Messaging

- By default, Webex allows for native external messaging such that Webex app users in Webex Organization example.com can message Webex app users from other Webex Organizations.
- Webex app supports Allow Listing of domains for external messaging (Webex app to other Webex app orgs **AND** Webex app to XMPP Federated partner)
- External messaging can be restricted by the administrator in Webex Control Hub in one of the following ways:
  - Block external messaging
  - Restrict external messaging to administrator specified allow list
- The administrator can add domains to the allow list directly in Webex Control Hub.

NOTE: Allow List will apply to both inter domain native messaging and your XMPP Federations messaging

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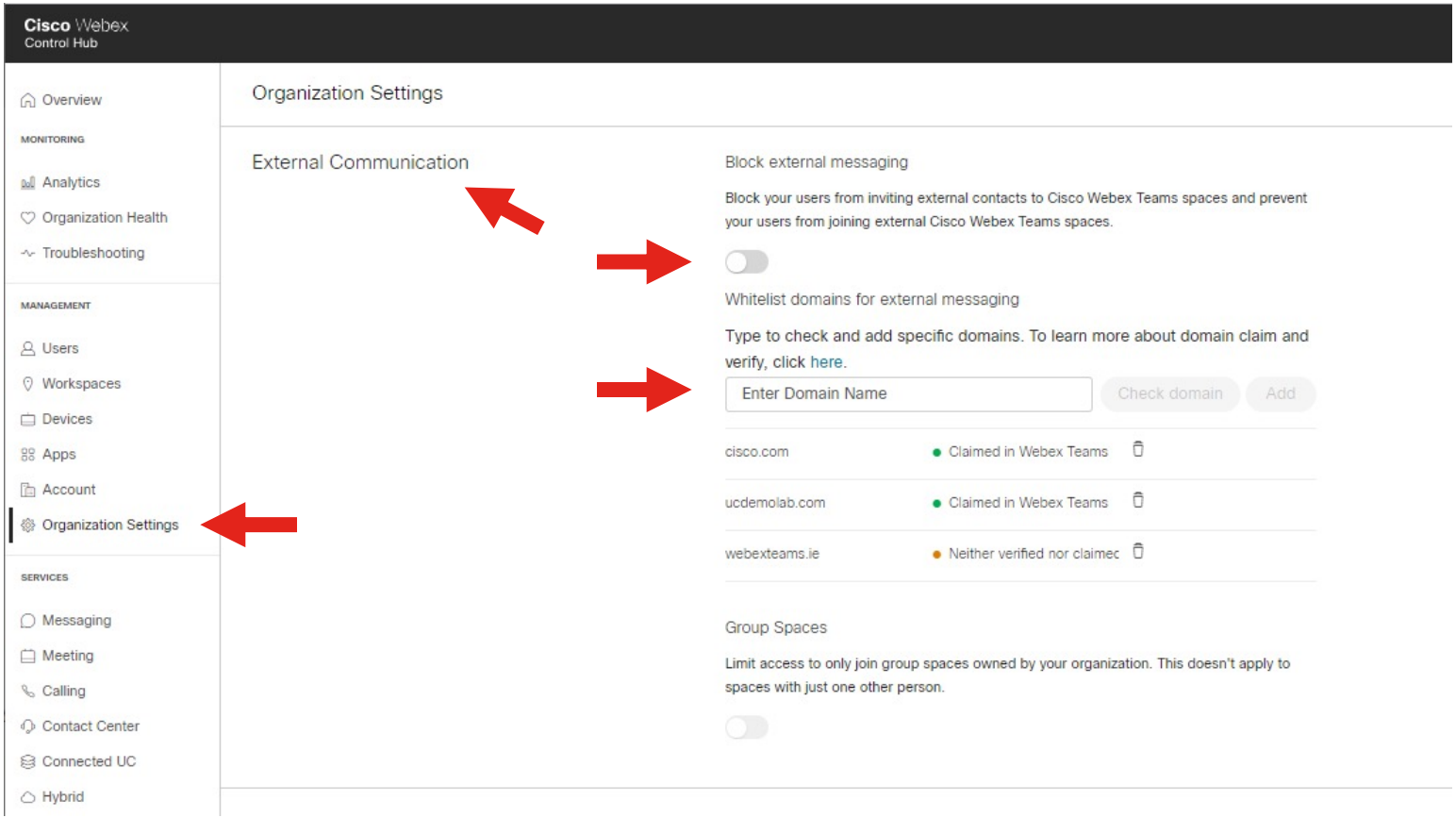
Admin Setup Webex Control Hub



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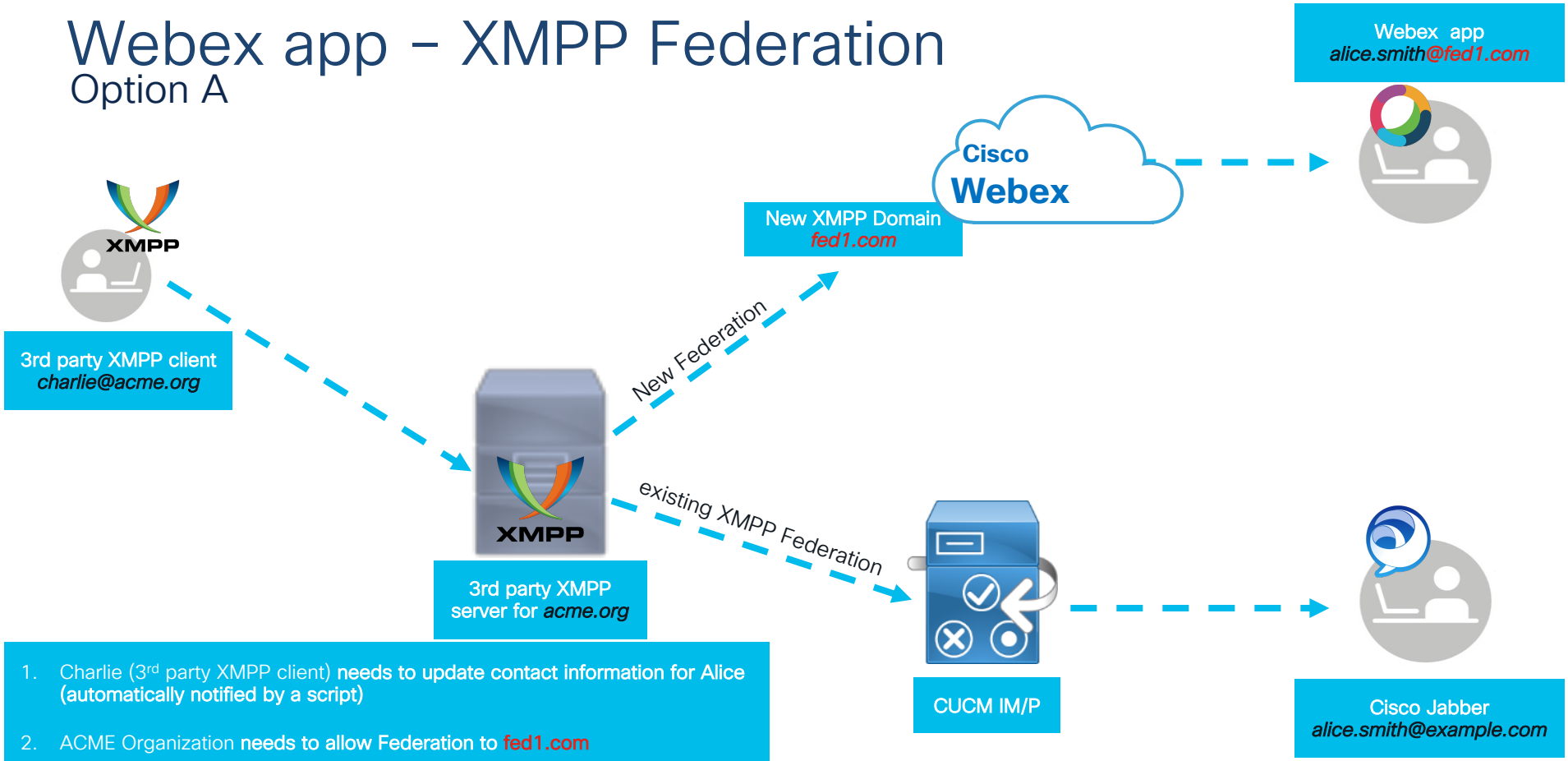
Webex app – XMPP Federation
Option A



1. Charlie (3rd party XMPP client) **needs to update contact information for Alice (automatically notified by a script)**
2. ACME Organization **needs to allow Federation to fed1.com**

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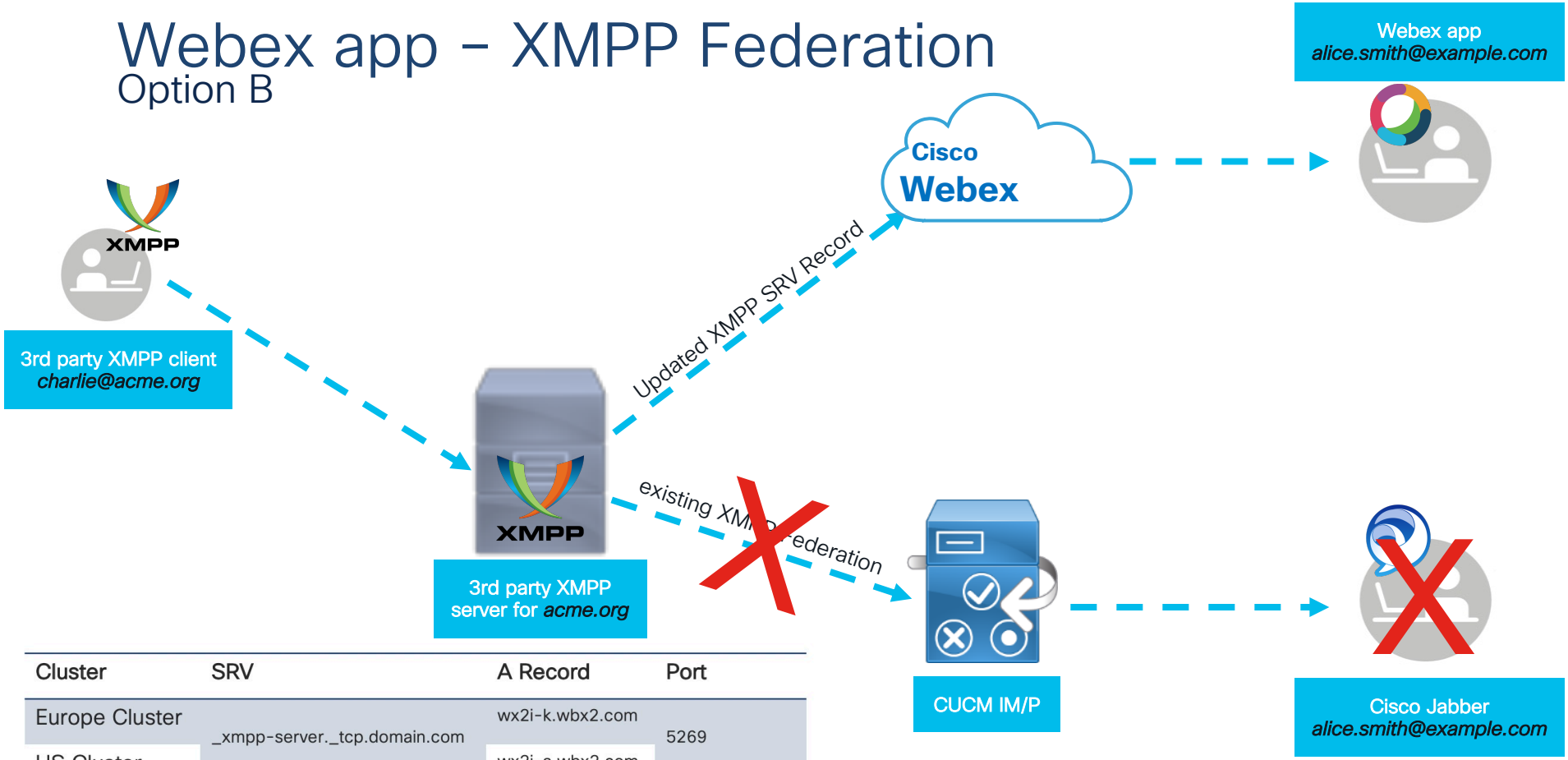
Webex app – XMPP Federation
Option B



Cluster	SRV	A Record	Port
Europe Cluster	_xmpp-server._tcp.domain.com	wx2i-k.wbx2.com	5269
US Cluster		wx2i-a.wbx2.com	

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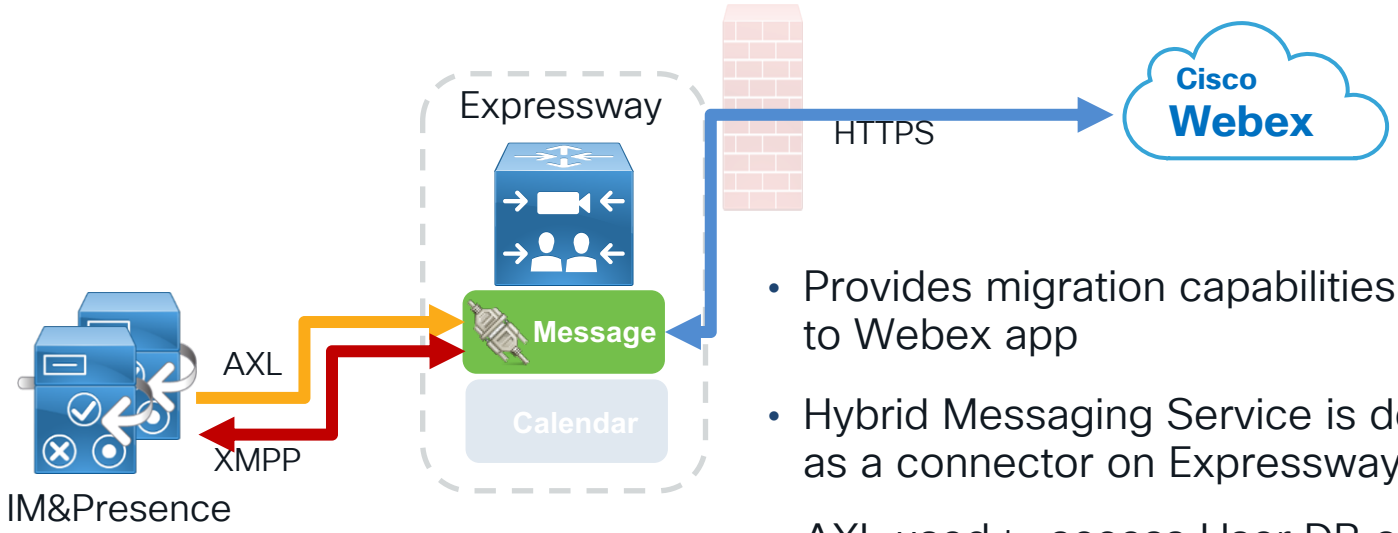
Hybrid Messaging Service –OPTIONAL



- Provides migration capabilities for IM&P to Webex app
- Hybrid Messaging Service is deployed as a connector on Expressway C
- AXL used to access User DB on IM&P

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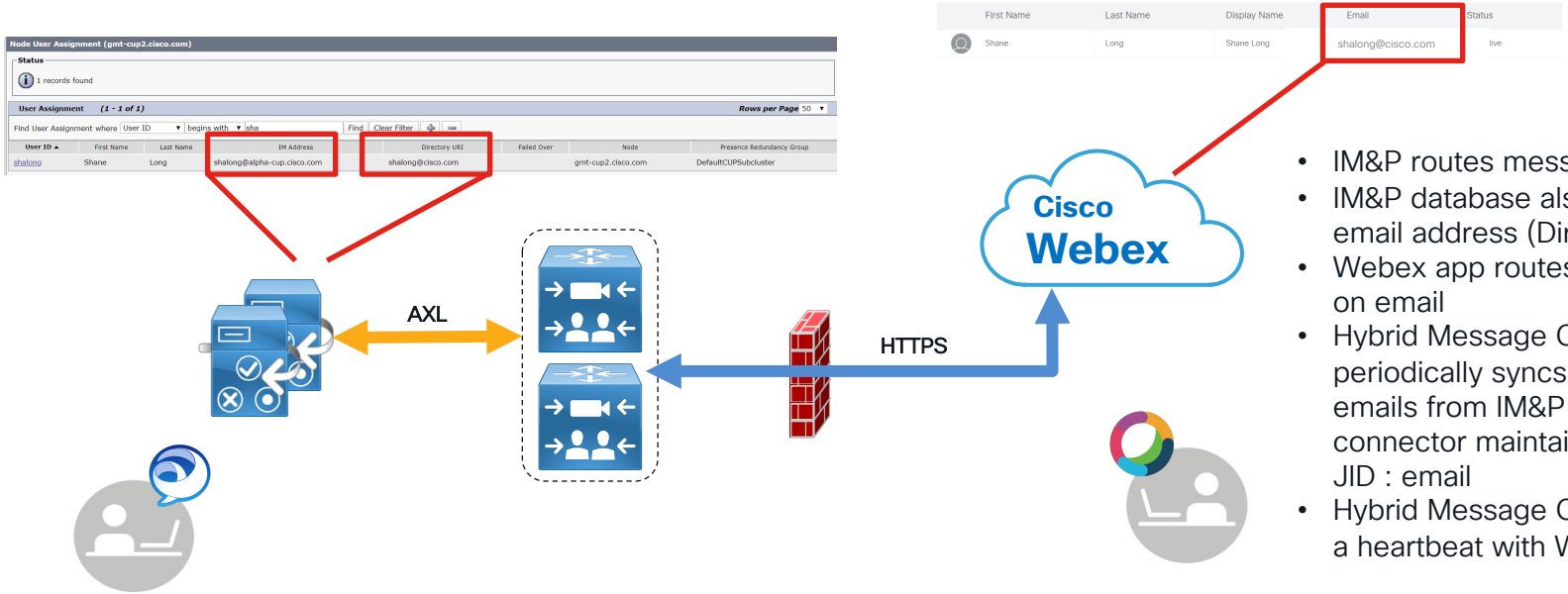
Hybrid Messaging Architecture



- IM&P routes messages based on JID
- IM&P database also stores a users email address (Directory URI)
- Webex app routes messages based on email
- Hybrid Message Connector periodically syncs users JIDs and emails from IM&P via AXL. The connector maintains a mapping of JID : email
- Hybrid Message Connector maintains a heartbeat with Webex app (HTTPS)

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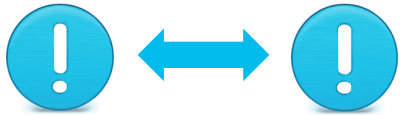
Hybrid Messaging Capabilities

1:1 Messaging between Jabber and Webex app

Presence Mapping: Webex app Presence will be mapped into Jabber presence



Notifications: Message, Message Read, “is Typing”, Missed Messages (in Webex app), Message deleted

File transfer: Not supported. (Webex app user can post file, Jabber will receive notification to get file in Webex app web client)

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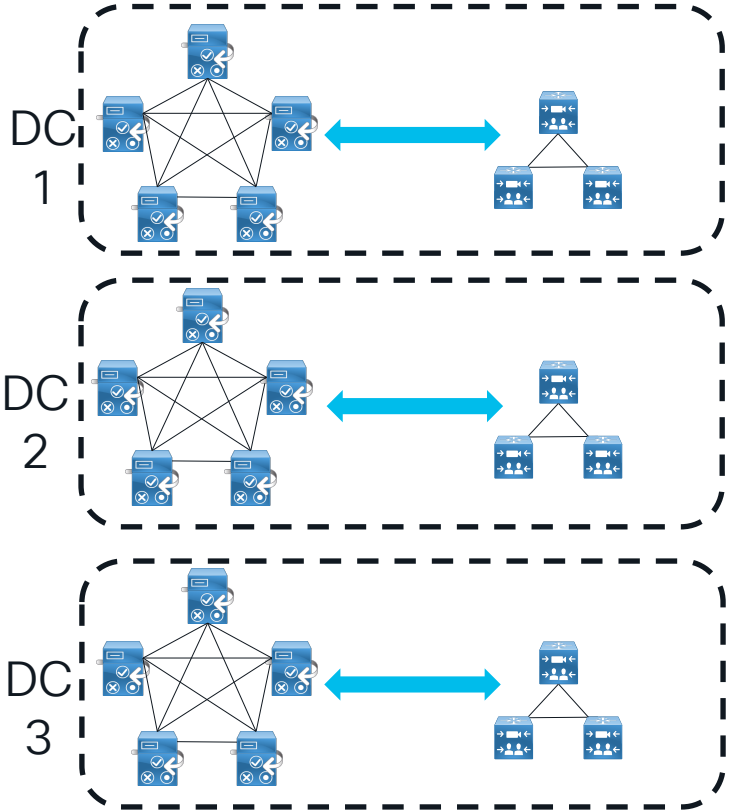
Multi Cluster Deployment Scenario



- Centralize IM&P clusters as much as possible!
- For multiple IM&P cluster based deployments, it is recommended to deploy an Expressway cluster running Hybrid Messaging Connector for each IM&P cluster
- Failover will be within the cluster

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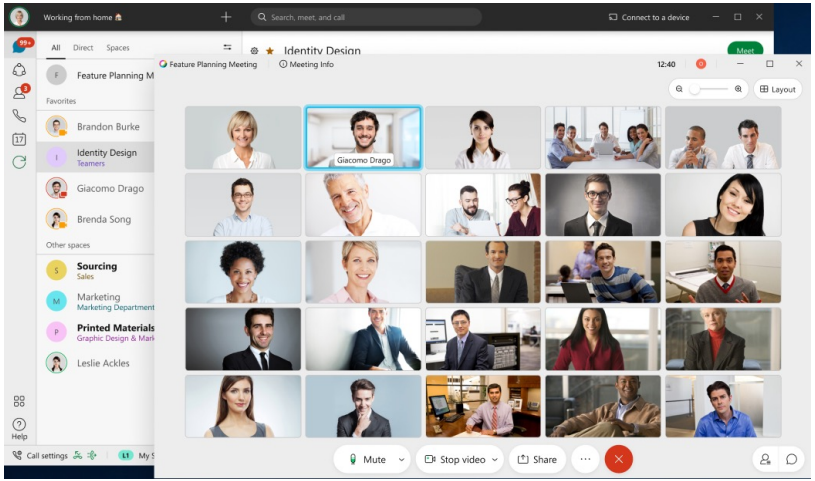
Meetings

Webex meetings in the Webex app

- Webex app has seamless meeting experience for users. They can go from messaging to calling to meeting fluently in one single solidify flexible app

  - Schedule ✓
  - Start ✓
  - Join ✓
  - Space meetings✓
  - Full feature meetings✓



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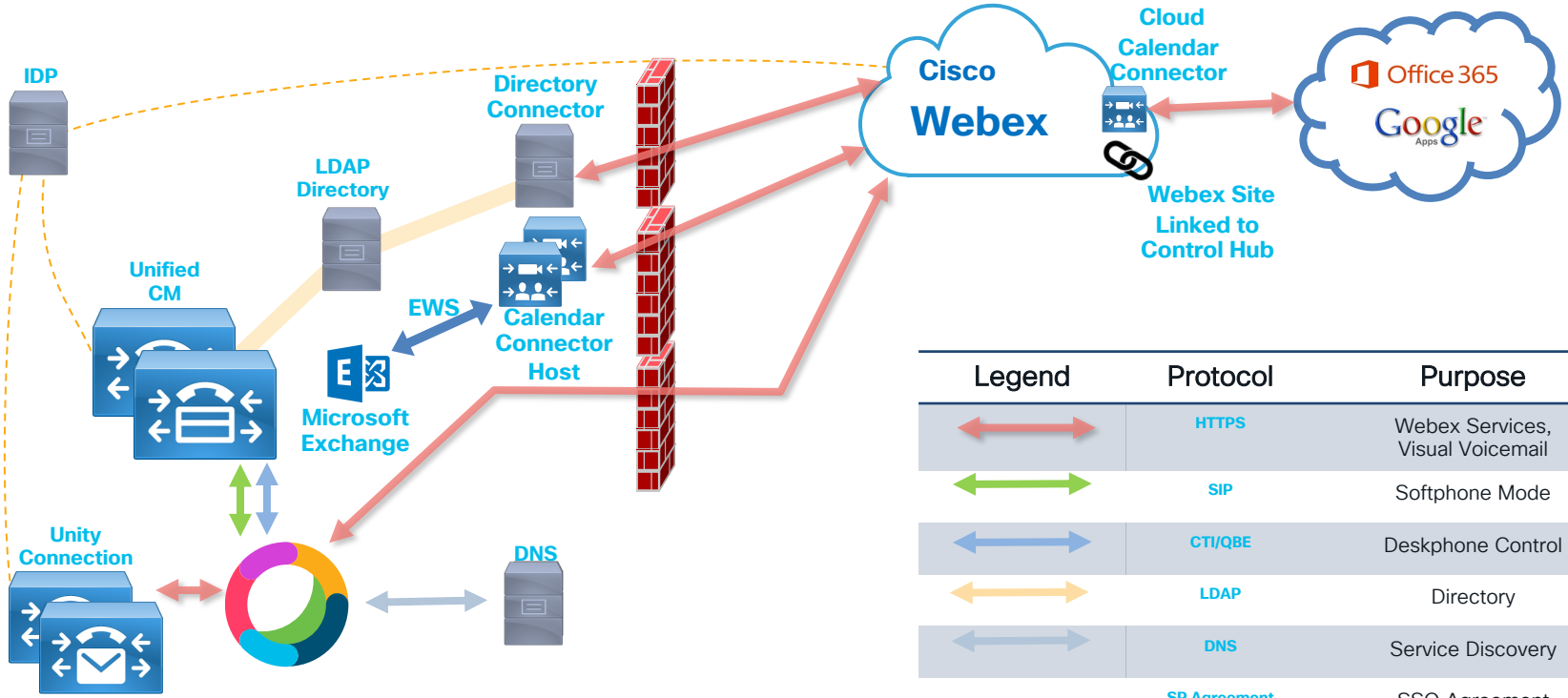
Webex Unified CM Architecture (On Network)



Legend	Protocol	Purpose
	HTTPS	Webex Services, Visual Voicemail
	SIP	Softphone Mode
	CTI/QBE	Deskphone Control
	LDAP	Directory
	DNS	Service Discovery
	SP Agreement	SSO Agreement

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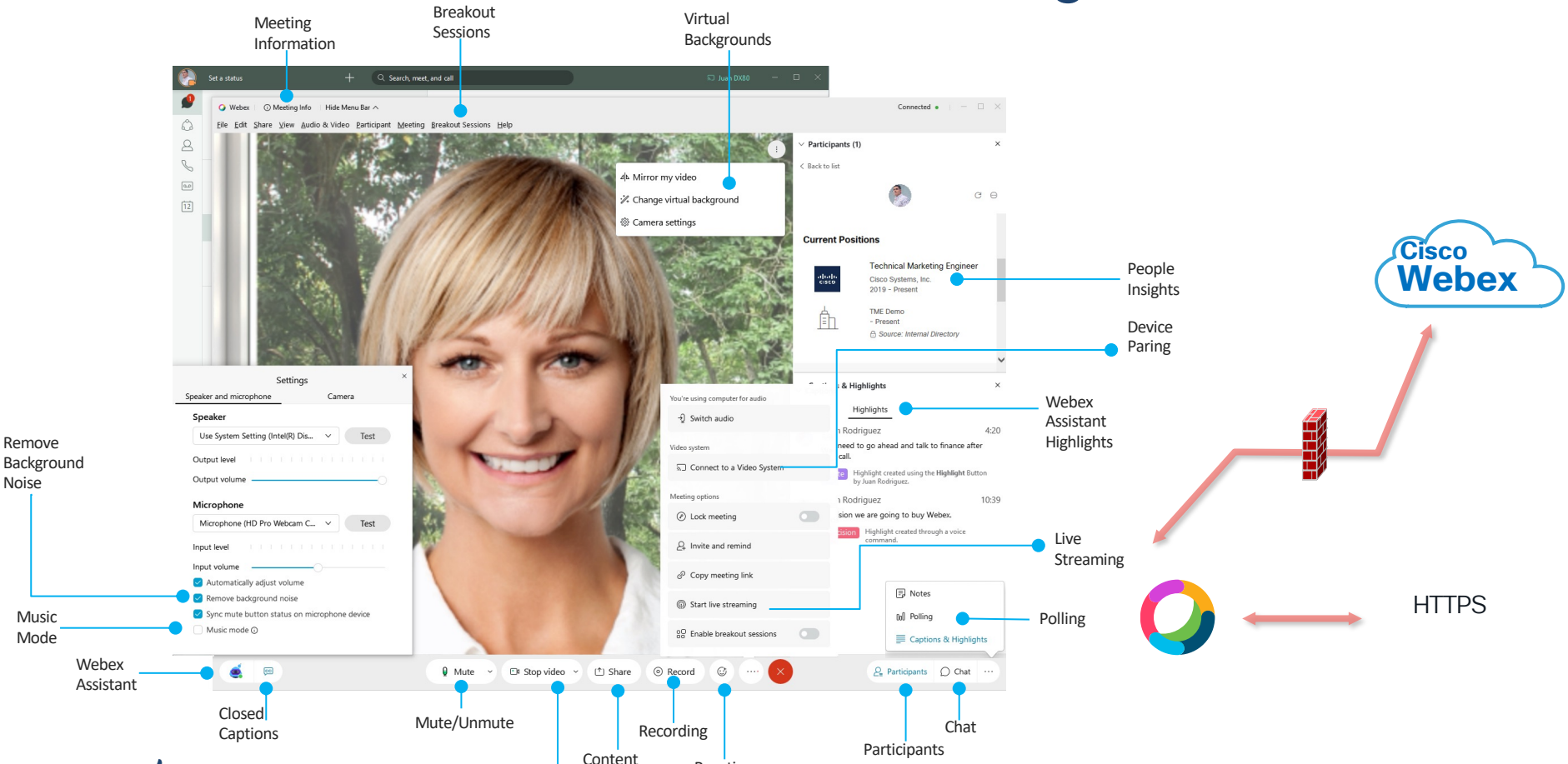
Webex Schedule and PMR Meetings



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Prerequisites to enable Webex Meetings in Webex app

- Verify Domains in Control Hub
- Setup Auto License Template
- Meeting site must be on 40.12 or higher (doesn't support Slow Channel or FedRAMP sites)
- Meeting site and users must be linked to Control Hub
- Contact your CSM to enable the meeting experience for your organization
- Optional – Enable Hybrid Calendar

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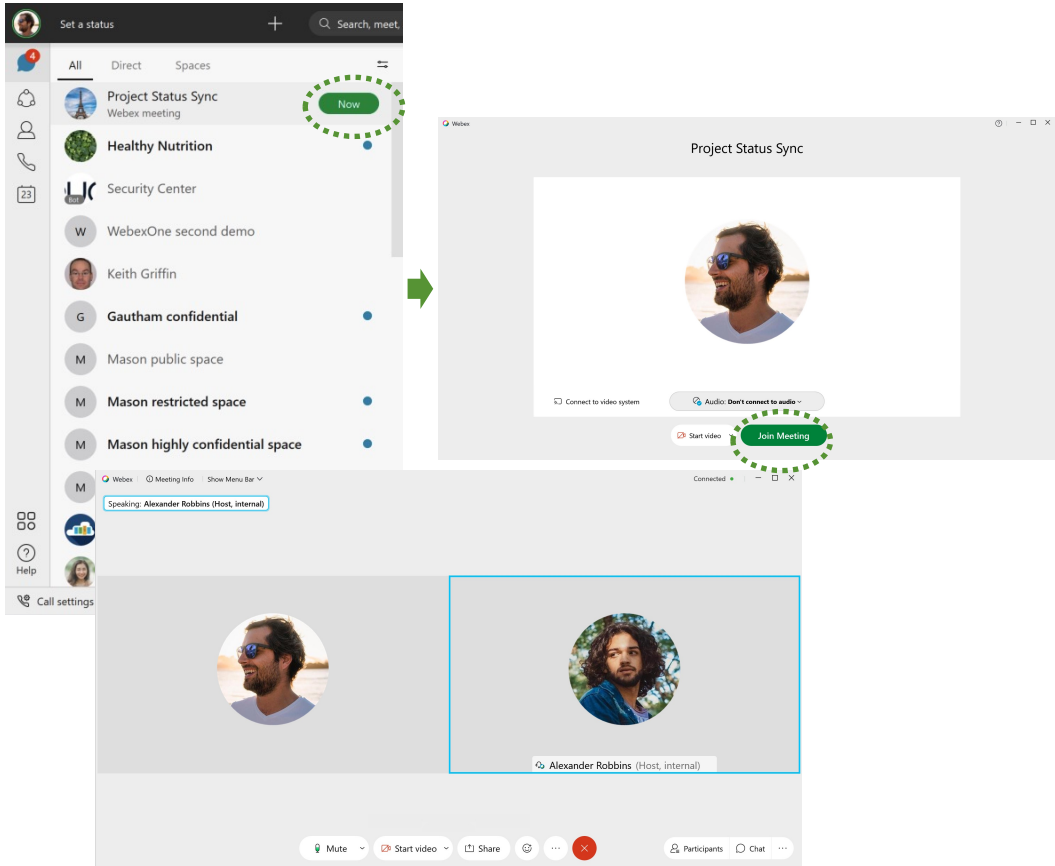
Caveats – Webex app Full Featured Meeting Experience

- Proximity features that are not available when joining Webex Meetings:
  - Moving meeting from video device to app or vice versa
  - CTI call control support
- Webex app does not support Video Mesh for Schedule and PMR meeting. It works properly for Space Meetings.
- If installing on VDI there are a few caveats you have to check before installing
- Webex app doesn't support custom background for full featured meeting experience



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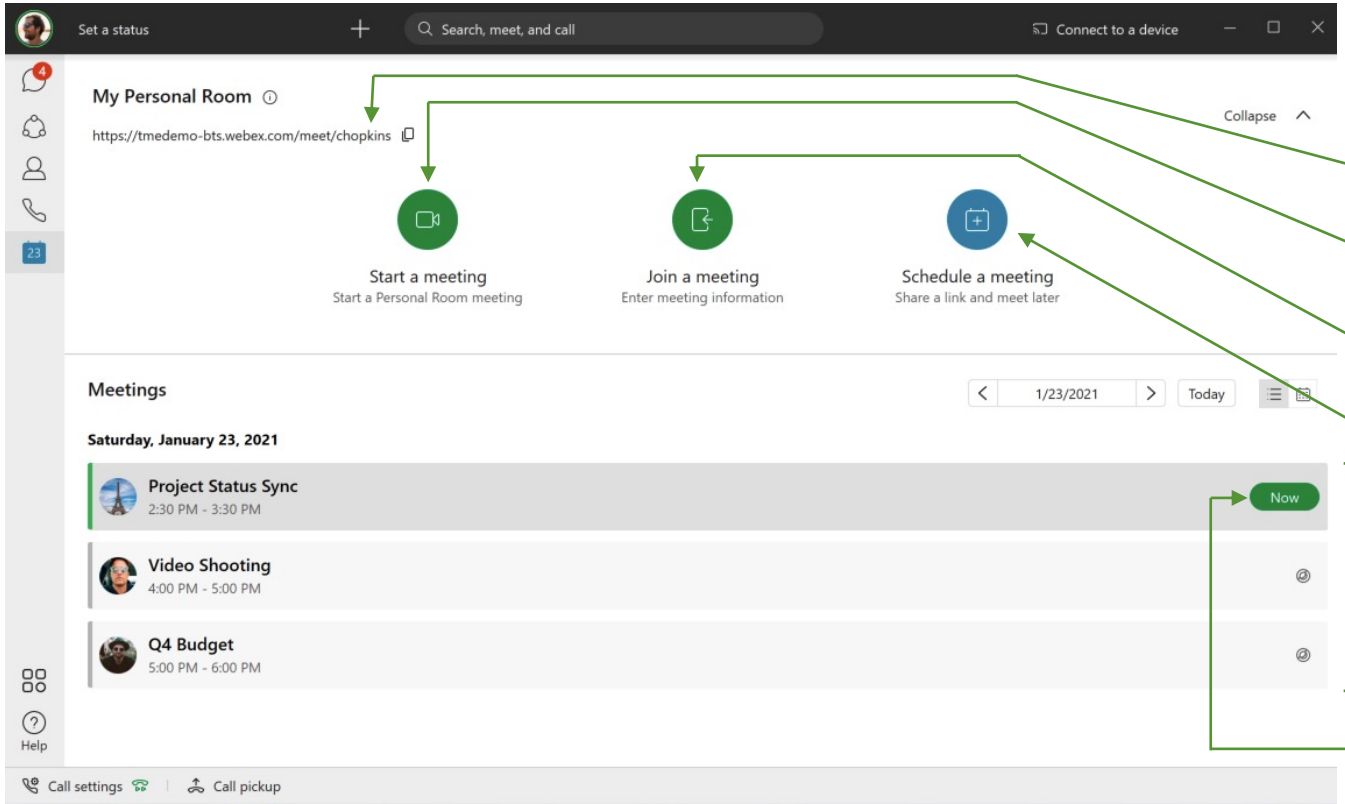
Webex app Calendar Schedule



Preferred site set by users. Calendar service creates scheduled meeting on this site

Start user's personal room

Join meeting by entering meeting number, SIP URI or URL

Launch Outlook to schedule a Personal Room meeting

Meetings on user's calendar and can be seen only if user has Calendar Service enabled

Join button pops up 5 mins before meeting start. User clicks on it to join meeting

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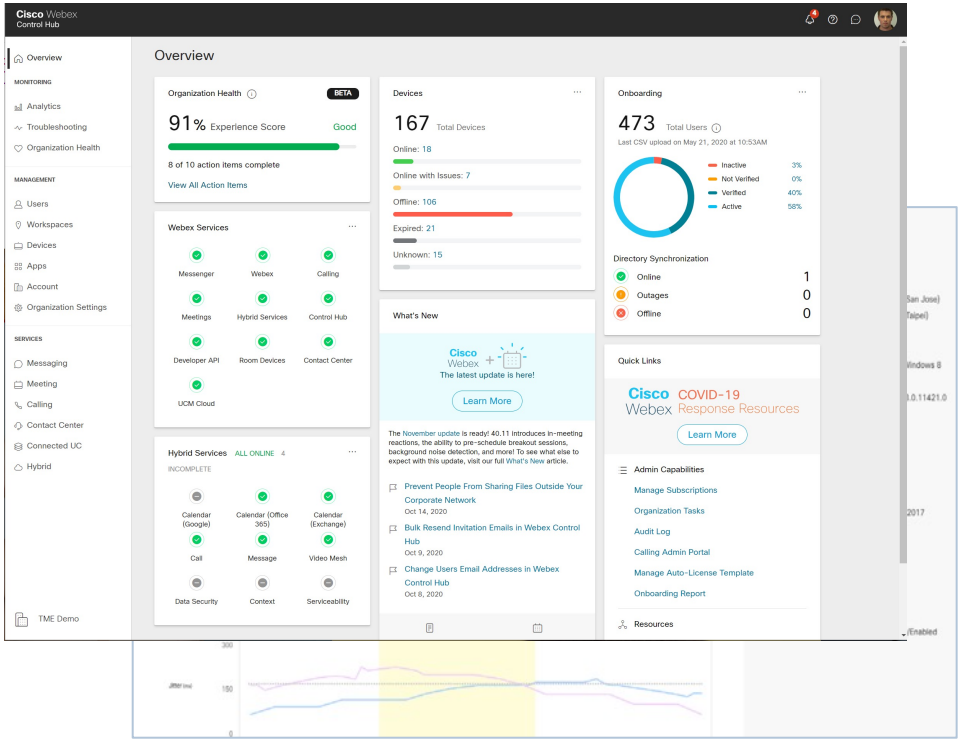
Control Hub

Webex Control Hub

- Single pane of glass for organization and user management
- Manage user accounts
- Configure user services for message, call and meet
- Advanced Analytics and Diagnostics to see detailed information for each meeting, device and participant for faster diagnostics
- Understand usage and adoption, and optimize resource usage
- https://admin.webex.com

[Control Hub Getting Started]



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Data Residency

- Before creating your Webex organization (Control Hub), choose where you want your organization to be hosted
  - USA or EMEAR
- Organization hosting defines where data is stored
  - User Data
  - Message data
- *Note this diagram does not include globally deployed Webex meetings services

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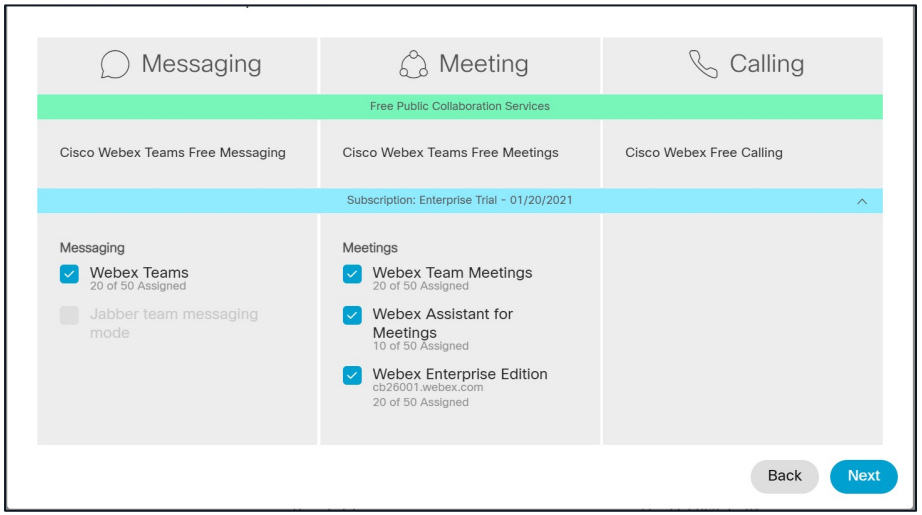
License Assignment Template



- Create License Assignment Template before syncing users to Control Hub
- New users will be automatically licensed as per the template
- Existing users will not be impacted

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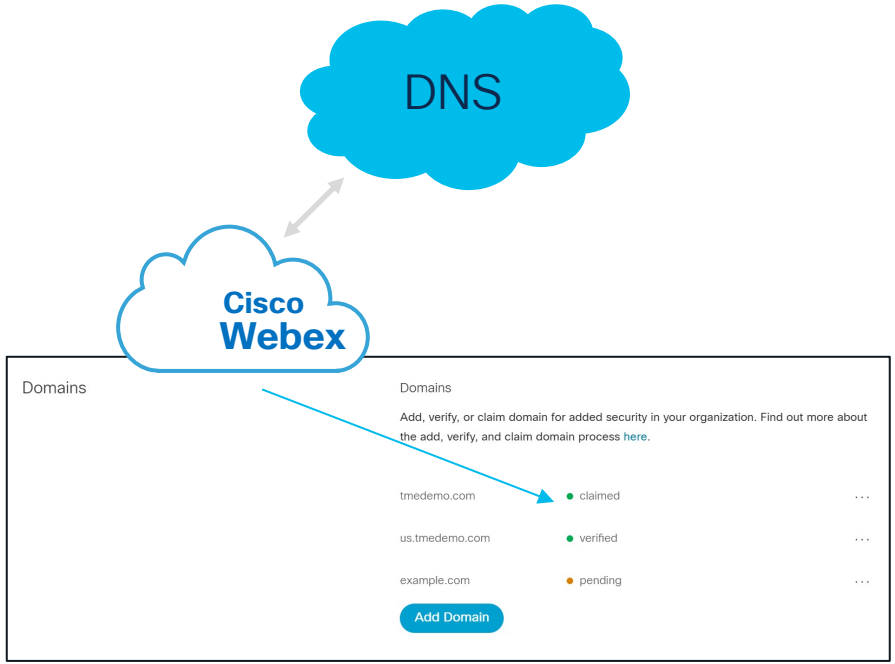
Verify and Claim Domain

- Verify Domain using DNS TXT record
  - Proves domain ownership
- Claim a verified domain
  - Prevents your domain users from signing up to consumer organization using domain email
  - Allows you to turn off activation emails
  - Existing users with free Webex accounts can be claimed to your managed organization
- See the helpdesk article for details

  [Verify and Claim Domains]



Flexible JID enabled?

Consider each IM&P presence domain as a domain that should be verified and claimed

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Single Sign On

- Webex supports SAML SSO
  - As does UCM/Expressway etc
- What IDPs are supported with Webex?
  - Any SAML compliant IDP should work
  - Cisco tests integration with
    - Active Directory Federation Services (ADFS)
    - Duo
    - F5 Big-IP
    - Google Apps
    - Microsoft Azure
    - OKTA
    - PingFederate
    - Shibboleth
    - SimpleSAML

UPDATE

Cisco has recently added support for UCM SSO with Azure IDP

See UCM SSO Azure IDP Guide

For more detail on Webex and SSO see Cisco Live Webex SSO Session

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User Provisioning – Creating users in Control Hub

Method	Description	Solutions
Directory Connector	Automatic method for creating, updating and deactivating user accounts and groups.	Active Directory, AD LDS
SCIM	Automatic method for creating, updating and deactivating user accounts	Azure, Okta
CSV file	Admin can create and update users by importing a CSV file into Control Hub	3rd party/manual
API	Admin can create, update delete and list users by using Webex API's	Developer/Integration
Manual	Admin can use Control Hub to manage user accounts	Admin one by one

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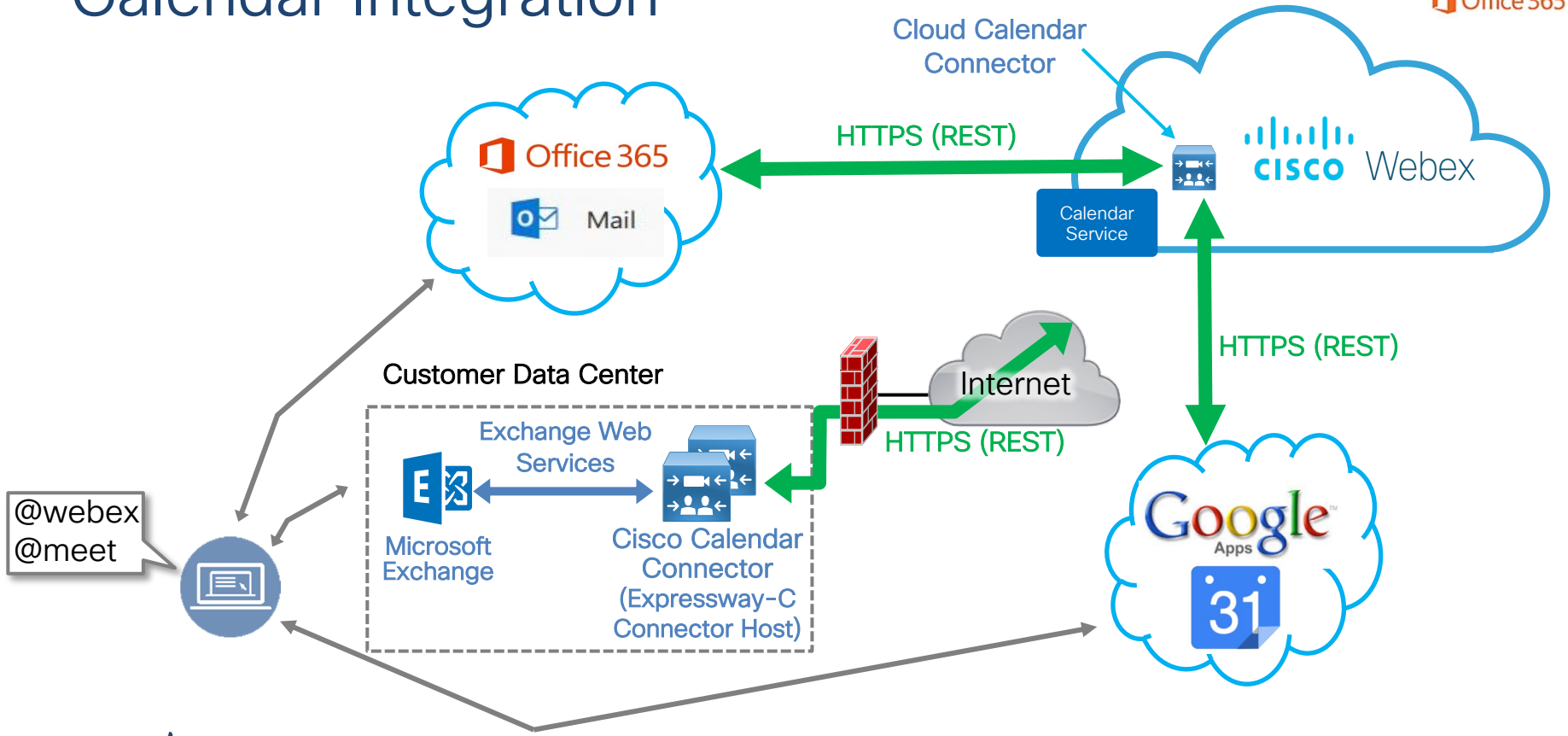
Calendar Integration



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Reference for Messaging

- Centralized IM&Presence services
  https://www.cisco.com/c/dam/en/us/td/docs/solutions/PA/mcp/DEPLOYMENT_MESSAGING-UnifiedCM_IMP_Distributed_to_Centralized.pdf
- Deploying hybrid Messaging Services
  https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cloudCollaboration/spark/hybridservices/messageservice/cmgt_b_spark-hybrid-message-deployment-guide/cmgt_b_spark-hybrid-message-deployment-guide_chapter_00.html
- Transition from Jabber to Webex Deployment guide
  https://www.cisco.com/c/dam/en/us/td/docs/solutions/PA/mcp/DEPLOYMENT_CLIENTS_Jabber_to_Webex.pdf

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Reference for Other Calendar Connectors

- For Hybrid Calendar Service with Microsoft Exchange (Expressway-based Calendar Connector), see https://help.webex.com/en-us/mwka5l
- For Hybrid Calendar Service with Google Calendar, see https://help.webex.com/en-us/m2az0i
- For latest Calendar Service feature and deployment information, see https://www.cisco.com/go/hybrid-services-calendar

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Reference for Other Calling

- Deployment guide for Calling in Webex (UCM calling)
  https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cloudCollaboration/wbxt/ucmcalling/unified-cm-wbx-teams-deployment-guide.pdf
- 2 day migration workshop – from IMP & UCM in Jabber to the Webex app
  https://webexpartners.cisco.com/learn/course/1379/play/5492/1-introduction-patrick-eustace
- Deployment guide for Jabber to Webex app
  https://www.cisco.com/c/dam/en/us/td/docs/solutions/PA/mcp/DEPLOYMENT_CLIENTS_Jabber_to_Webex.pdf

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The bridge to possible

Thank you

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