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Let's go

#CiscoLive



The bridge to possible

Deploying the Webex App to your Organization

Shane Long
Technical Marketing Engineer
BRKCOL-2198

CISCO *Live!*

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Cisco Webex App

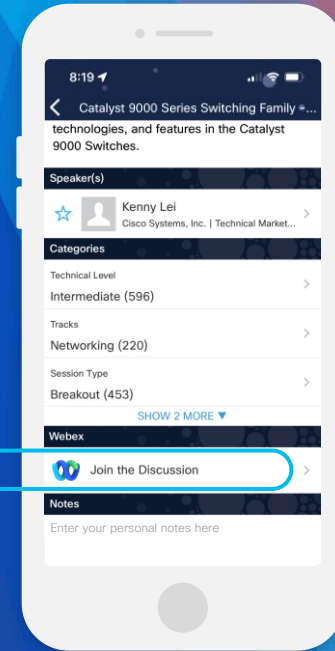
Questions?

Use Cisco Webex App to chat with the speaker after the session

How

- 1 Find this session in the Cisco Live Mobile App
- 2 Click “Join the Discussion”
- 3 Install the Webex App or go directly to the Webex space
- 4 Enter messages/questions in the Webex space

Webex spaces will be moderated by the speaker until June 9, 2023.



<https://cislive.ciscoevents.com/cislivebot/#BRKCOL-2198>

Agenda

- Webex App Overview
- Webex Org Setup
- Unified CM Calling Architecture
- Webex Meetings Update
- App Deployment
- Virtual Desktop Deployment
- Finish

Recommended Sessions

Agenda

CISCO *Live!*

START

BRKCOL-2198

Deploying the Webex App to your Organization

Shane Long

BRKCOL-2062

Best Practices for a Successful Migration from Jabber to Webex App

Steven Fly

BRKCOL-2007

Authentication, Authorization and Provision for Cisco Collaboration

Paulo Jorge Correia

BRKCOL-2067

Calling Interoperability with Microsoft Teams

Sara Macias Saleté

FINISH

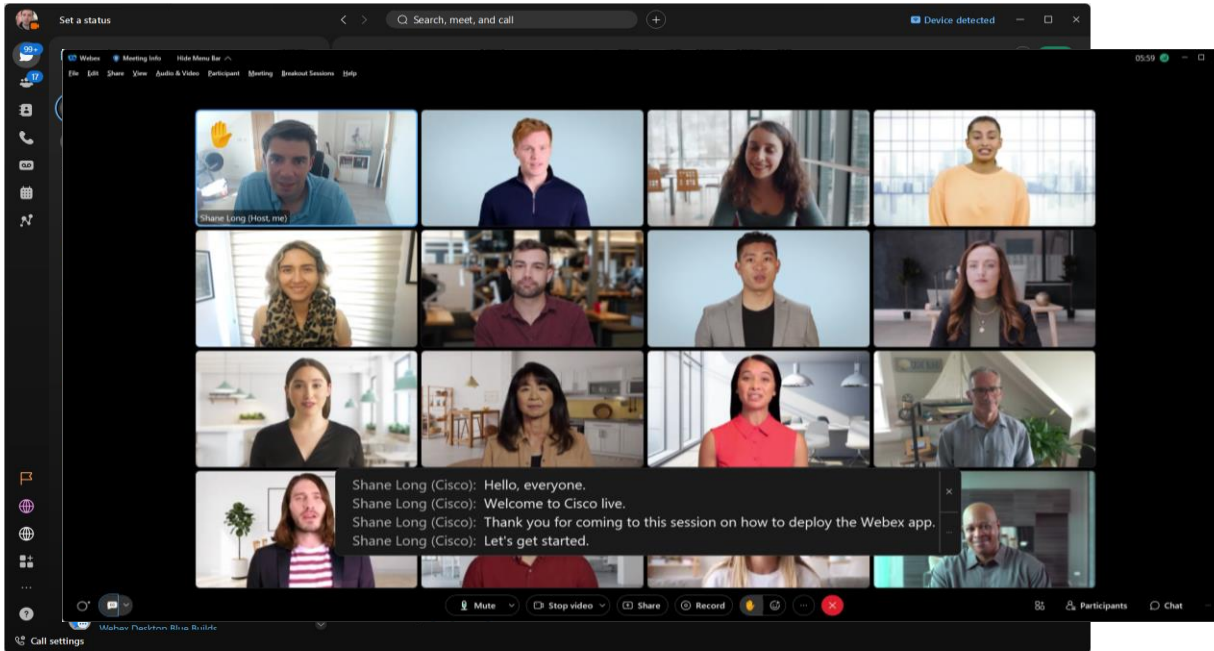
BRKCOL-2750

Understand Call Flows and New Features to successfully utilize the Video Mesh Solution

Richard Murphy

The Webex App

One easy-to-use and secure app to call, message, meet and get work done.



Full Webex meetings experience including breakout sessions, background blur/virtual backgrounds, Webex Assistant, Real-time translation etc.

Enterprise Grade Calling
Register Webex app to Unified CM or Webex Calling to enable calling capabilities from the knowledge worker to the contact center agent

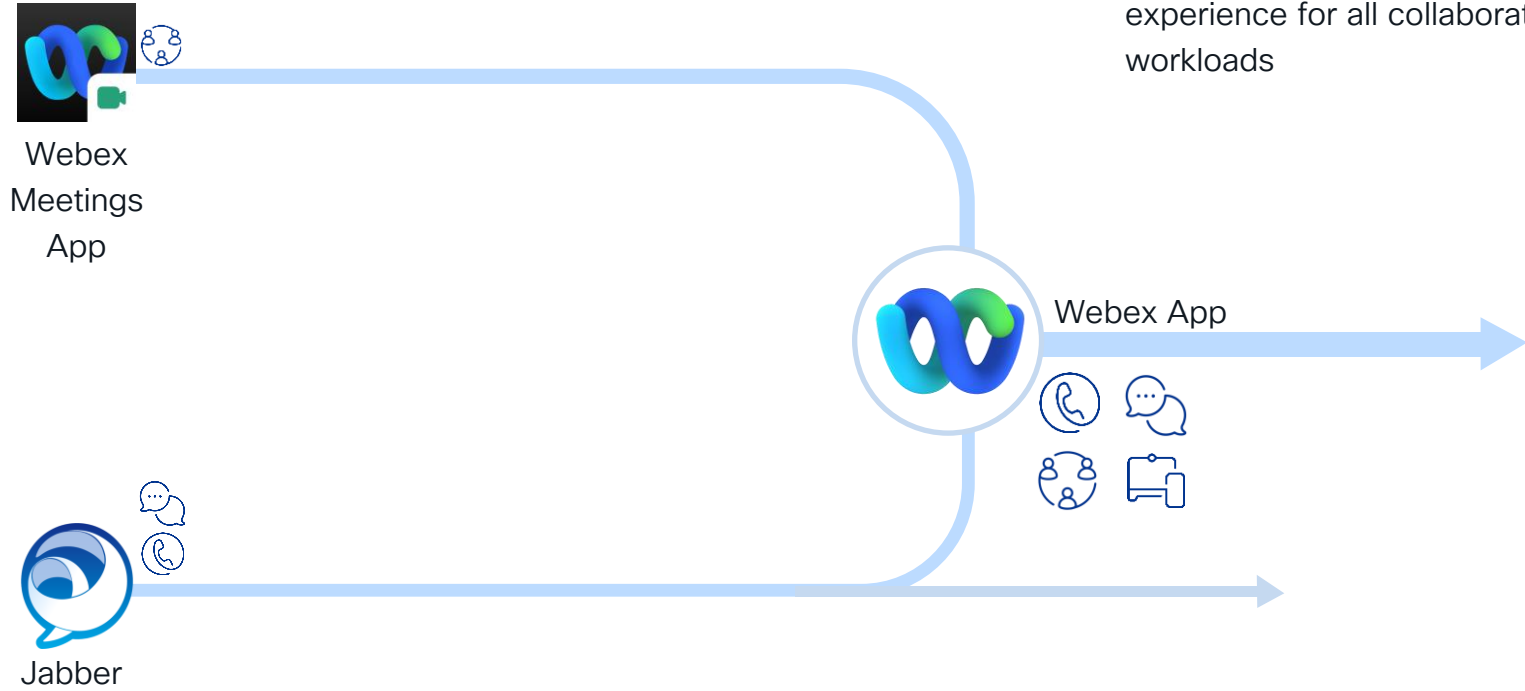
Modern messaging capabilities
1:1 and group persistent spaces for messaging, file and meeting content sharing.

Customizable app experience
Customizable appearance and themes, including dark mode

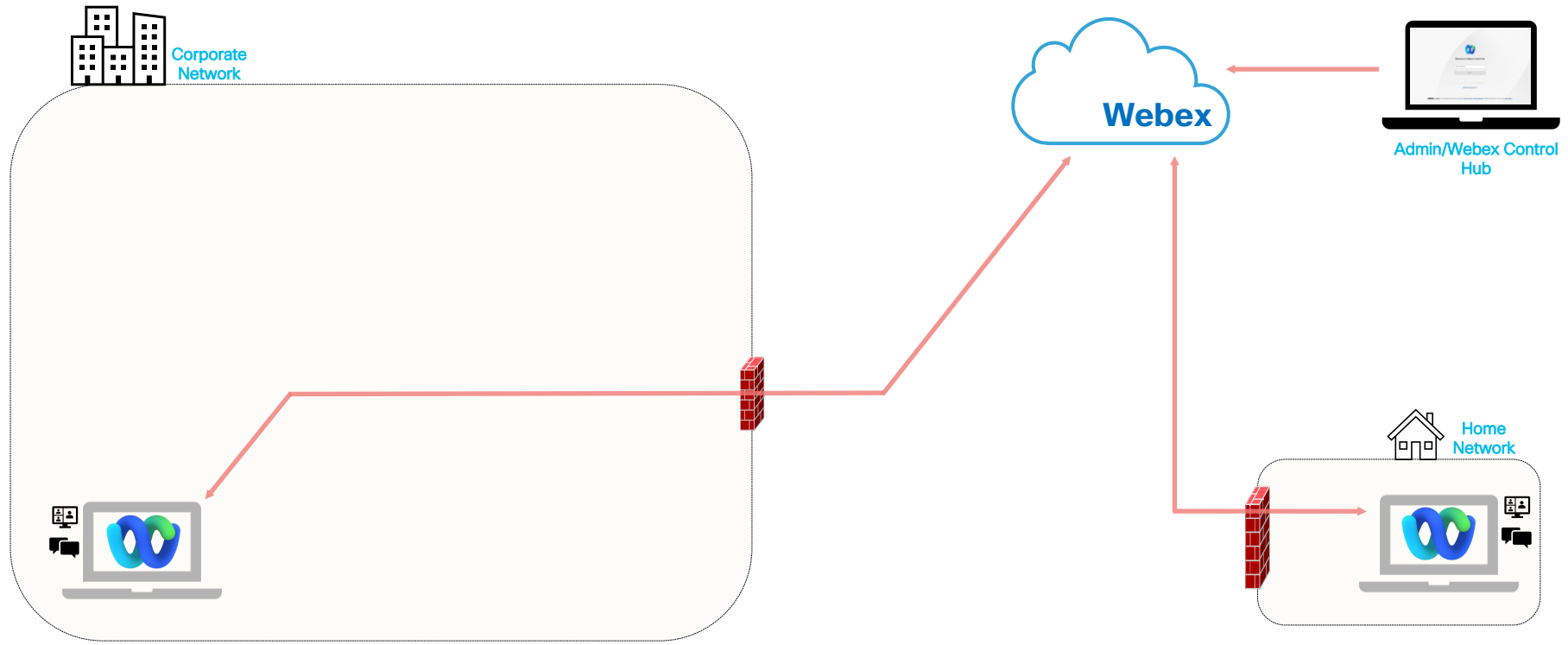
Convergence to a Single App

A single modern app

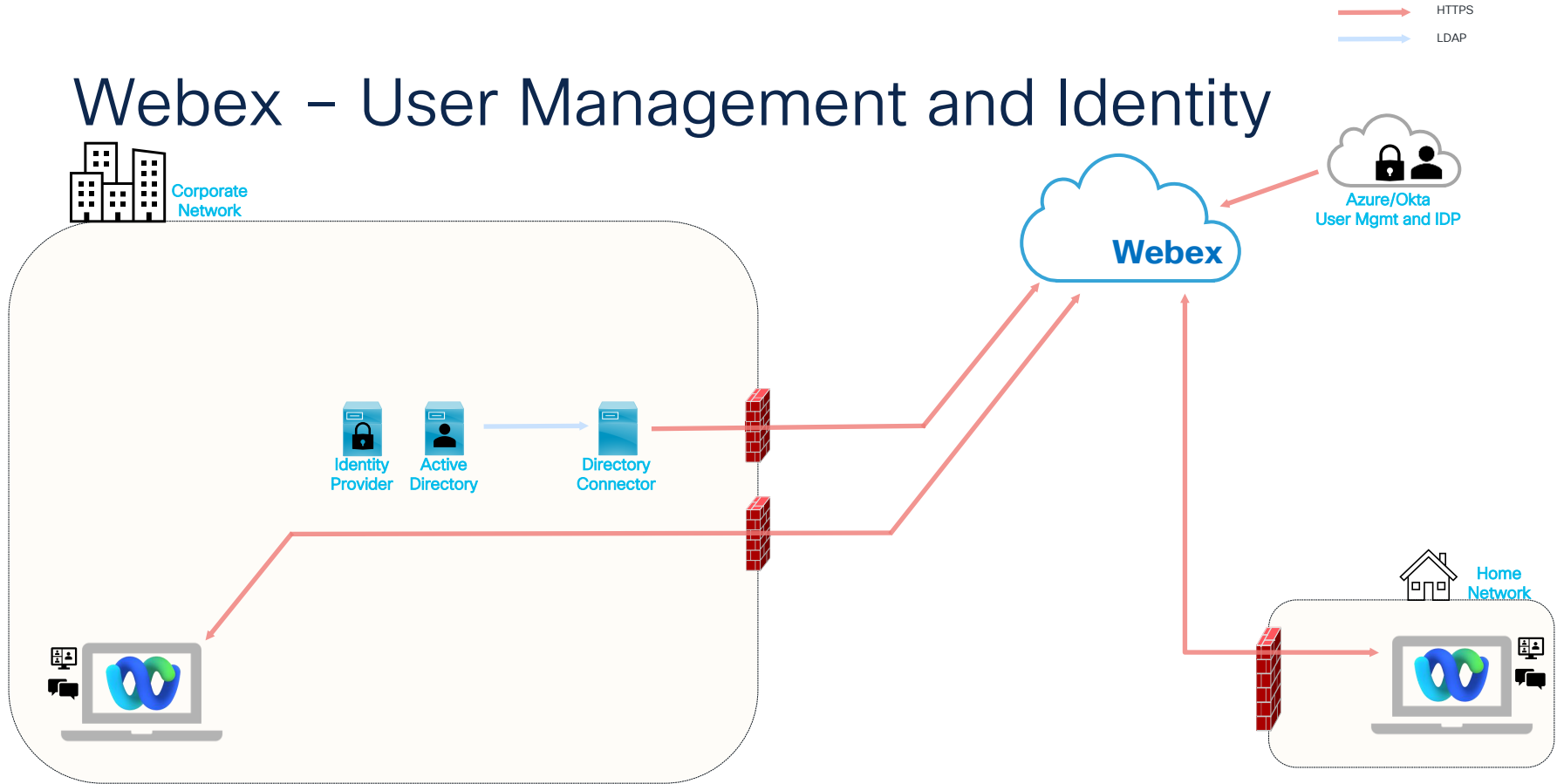
Webex App delivers the best experience for all collaboration workloads



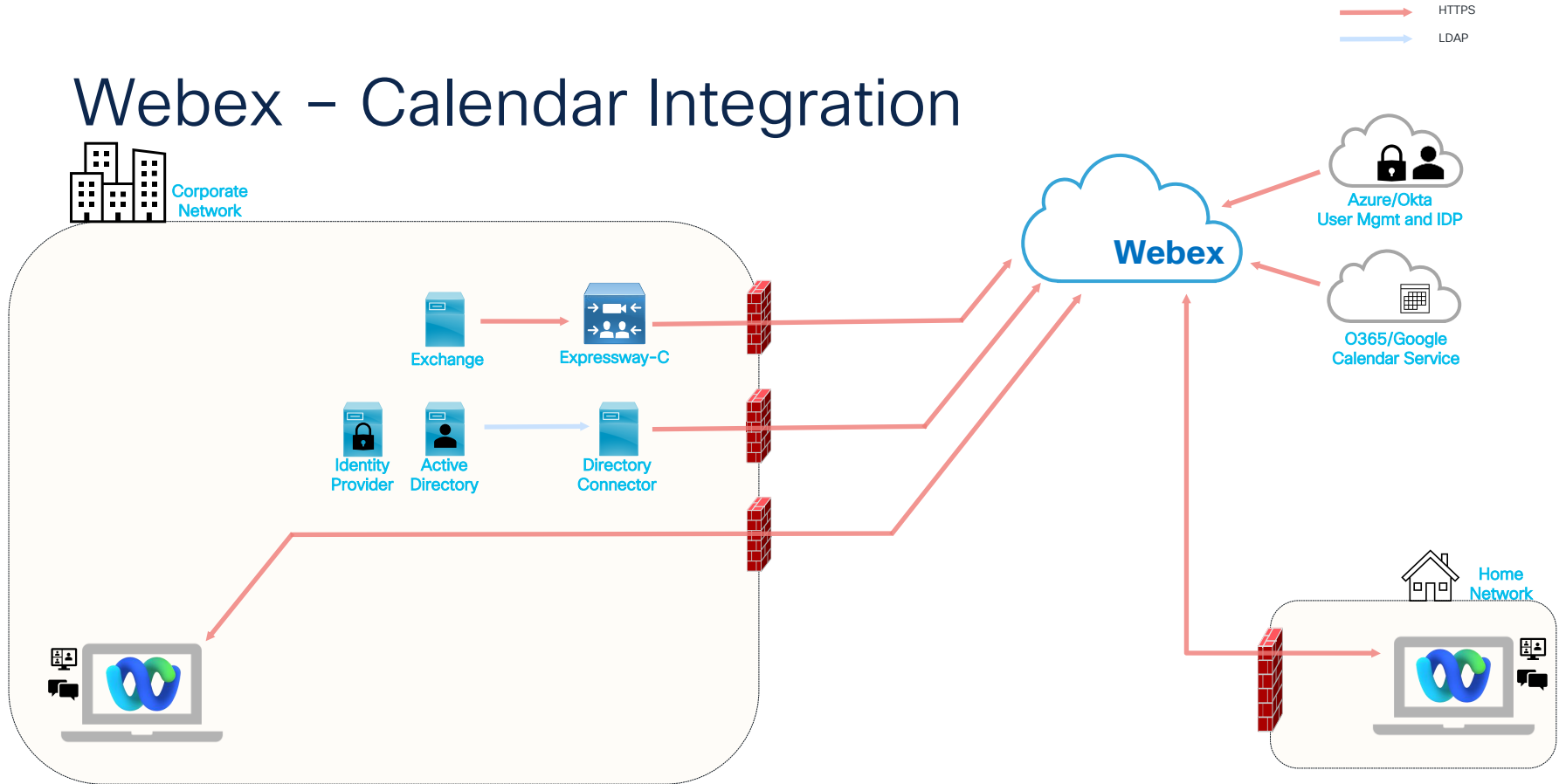
Webex – Base Architecture



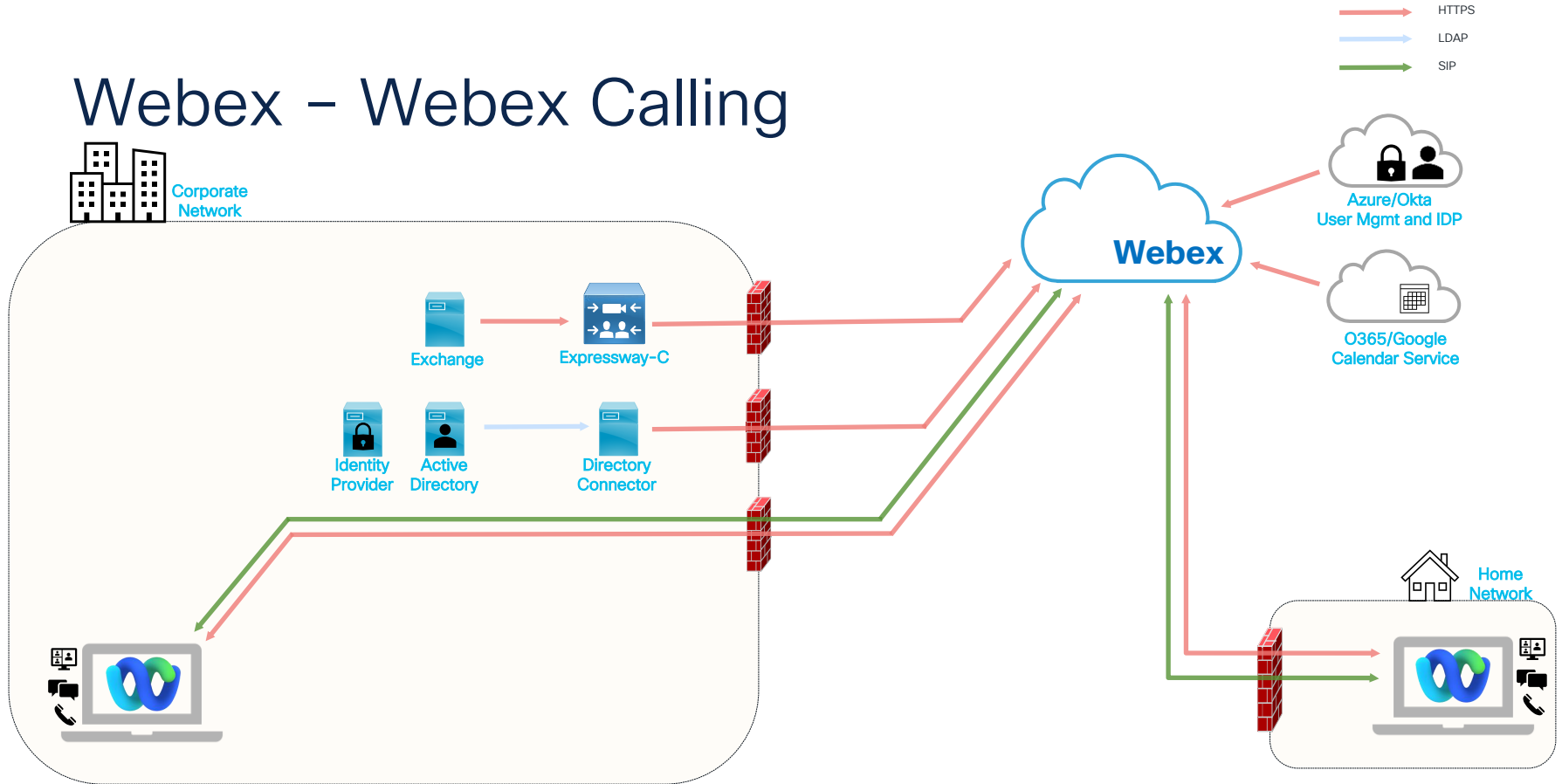
Webex – User Management and Identity



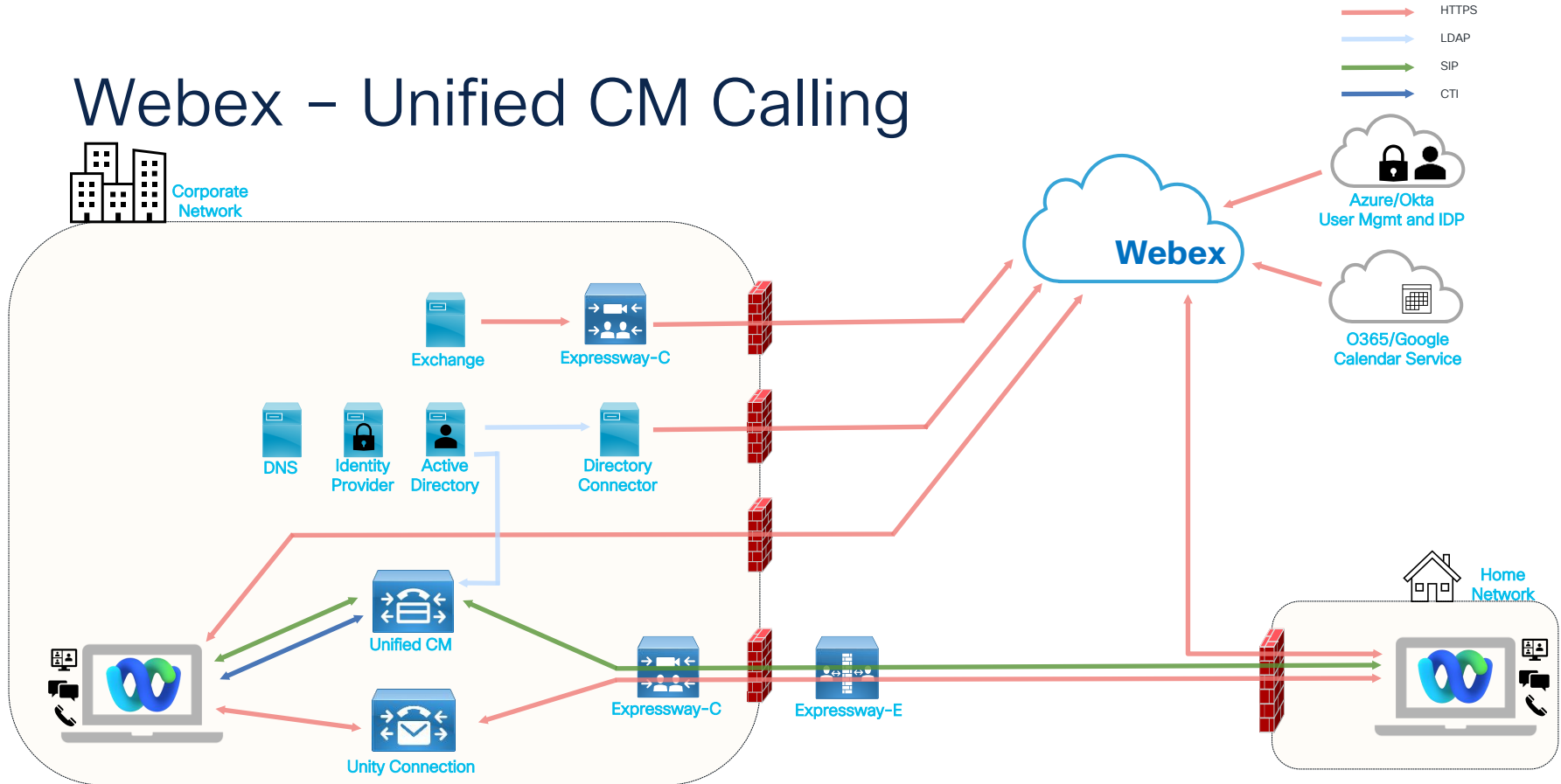
Webex – Calendar Integration



Webex – Webex Calling

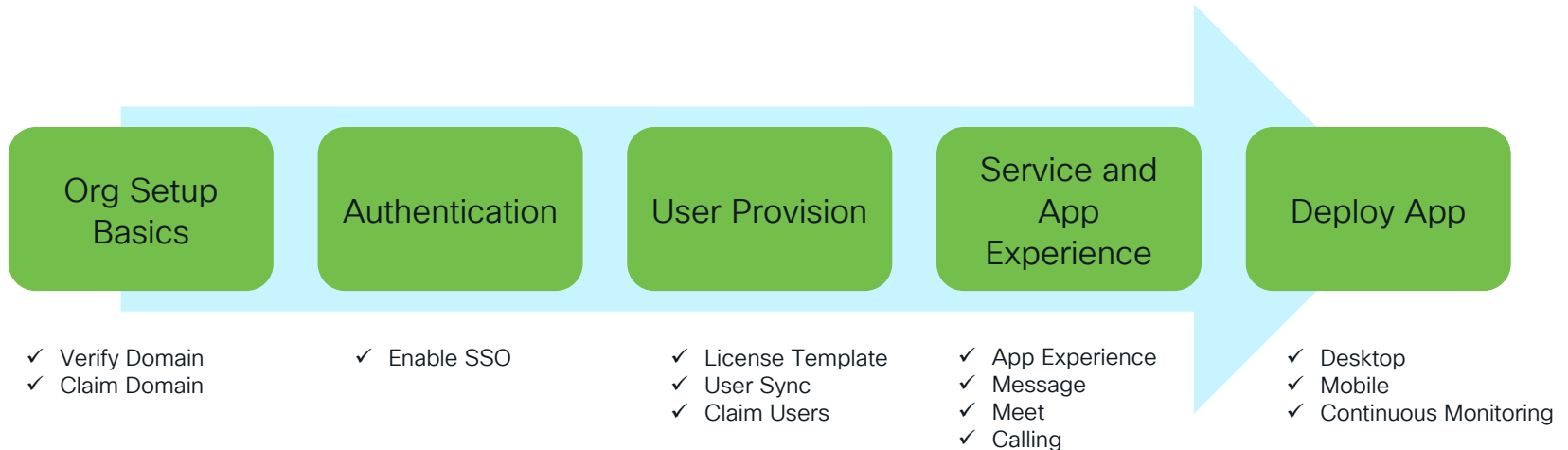


Webex – Unified CM Calling



Webex Org and User Identity

Typical Webex App Deployment



User Authentication

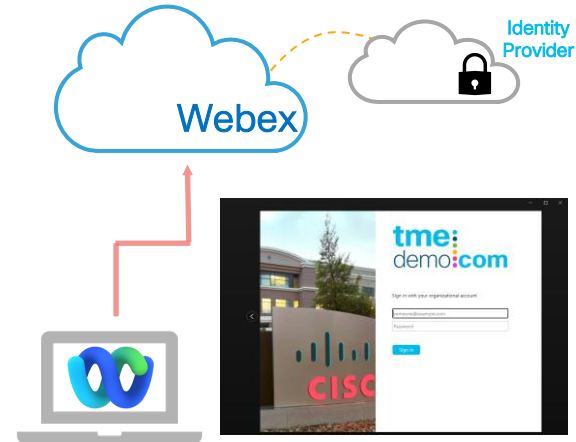
Basic Authentication

Email & Webex password
Duo Integration



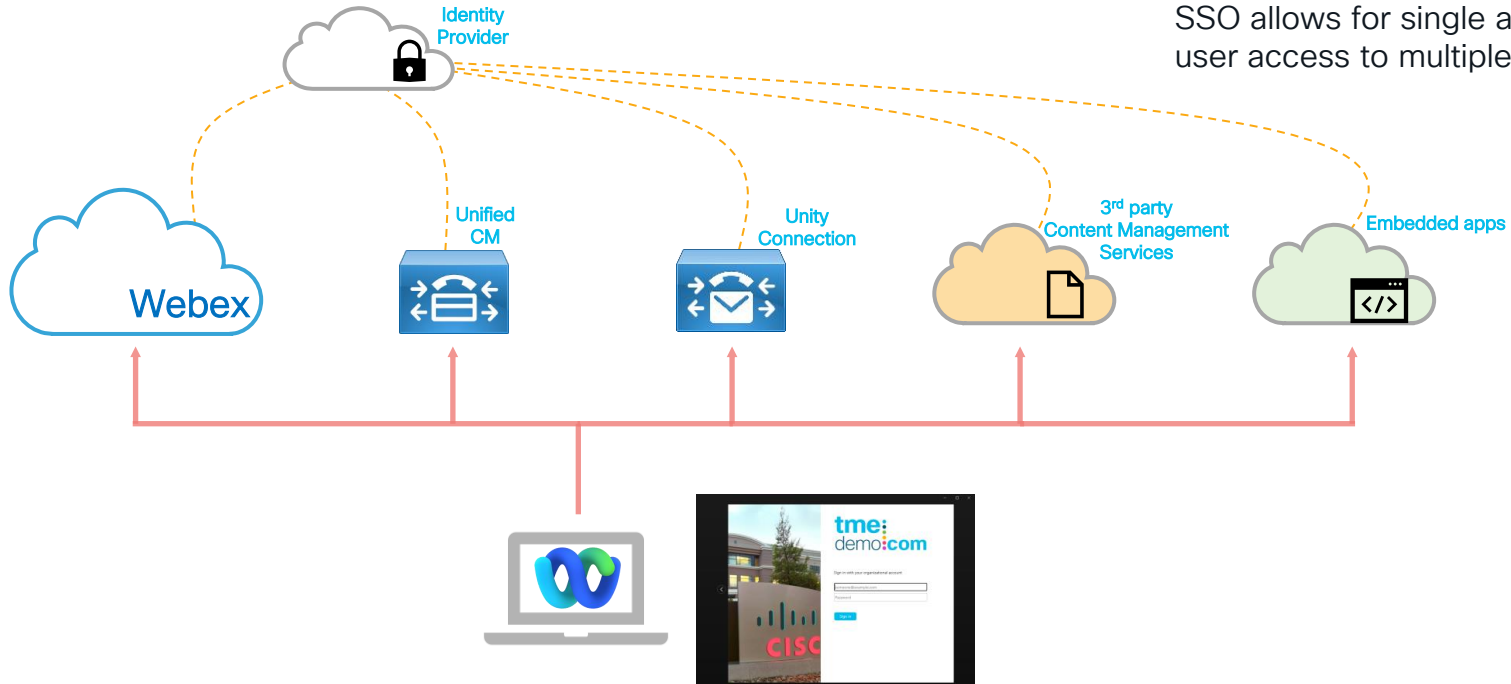
Single Sign On

Any auth type supported by the IDP
MFA
Common user identity across all services/platforms

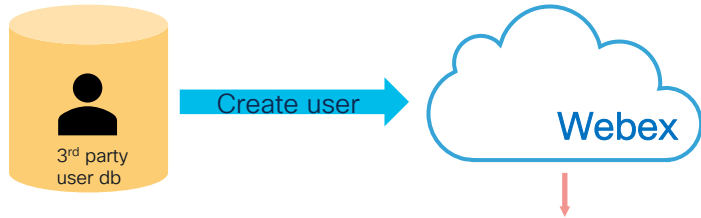


Single Sign On

Webex App can connect to multiple services and platforms
SSO allows for single authentication, granting user access to multiple platforms & services



Webex User Provisioning



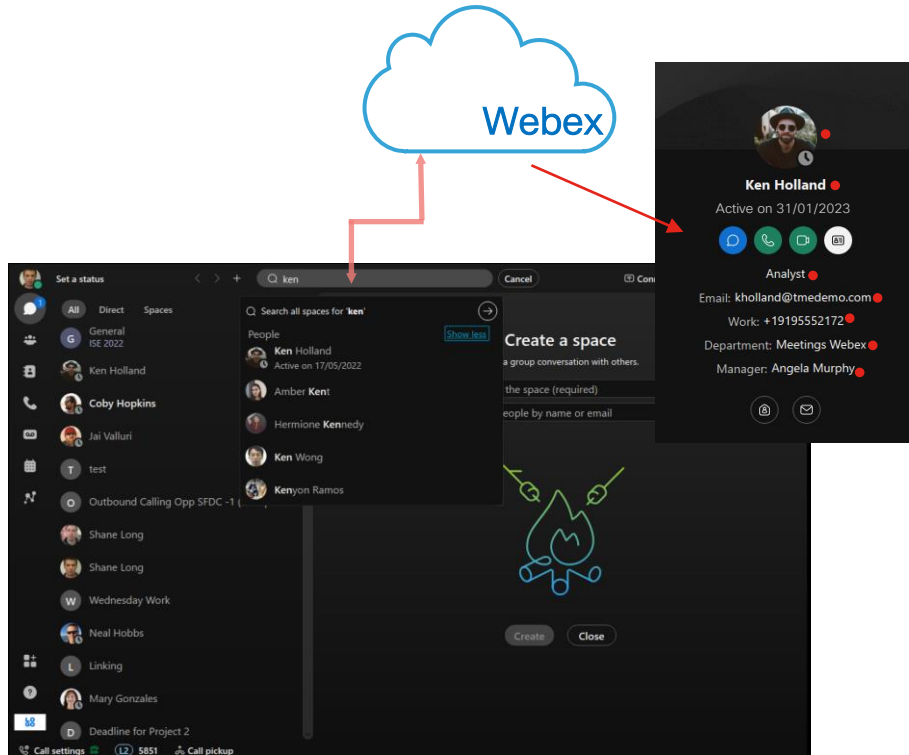
The screenshot shows the 'Users' page in the Webex Control Hub. The page title is 'webex Control Hub' and 'Users'. There are tabs for 'Users', 'Groups', 'Licenses', and 'Contacts'. A search bar contains 'Search by name or email' and a filter dropdown shows '483 users'. A 'Manage users' button is in the top right. The main content is a table of users with columns for First/Last name, Email, Status, and Admin roles.

First / Last name	Email	Status	Admin roles
Aimee Hewitt	ahewitt@tmedemo.com	Active	read-only admin
Ajay Pawar	apawar@tmedemo.com	Active	Full admin
Aladdin Gordon	agordon@tmedemo.com	Verified	Read-only admin
Alan Glowacki	aglowack@tmedemo.com	Active	Full admin
Alan Lane	alane@tmedemo.com	Active	Read-only admin
Albert Amparan	alampara@tmedemo.com	Active	Full admin
Alec Walker	alecwalk@tmedemo.com	Verified	Read-only admin
Alexa Williamson	awilliam@tmedemo.com	Verified	Read-only admin
Alexa Glover	aglover@tmedemo.com	Active	Read-only admin
Alexander Robbins	arobbins@tmedemo.com	Active	Read-only admin
Atheda Valdez	avaldez@tmedemo.com	Verified	Read-only admin
Aline Merritt	amerritt@tmedemo.com	Active	Read-only admin
Alison Cassidy	cassidy@tmedemo.com	Active	
Alegria Cameron	acameron@tmedemo.com	Active	Read-only admin
Allison Cassidy	acassidy@tmedemo.com	Active	
Allistar Santana	asantana@tmedemo.com	Active	Read-only admin

Webex User Attributes

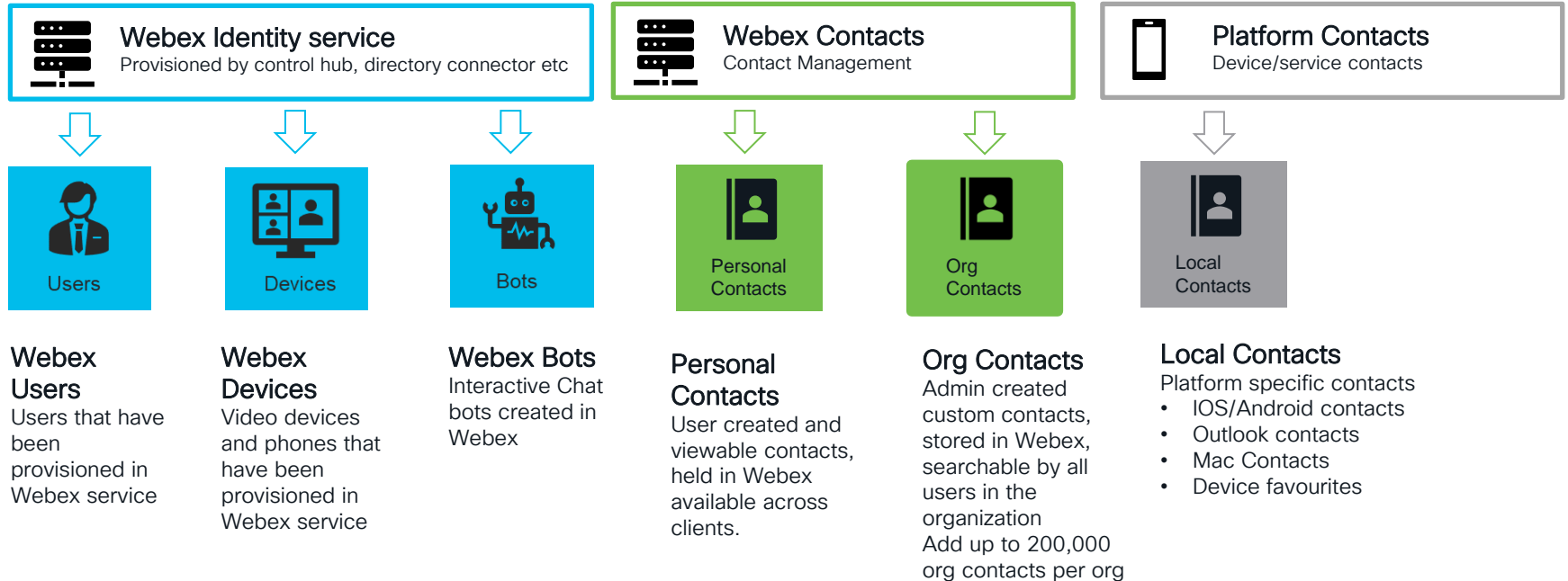
- **avatar**
- buildingName
- **c**
- departmentNumber
- **displayName**
- ds-pwp-account-disabled
- employeeNumber
- employeeType
- externalID
- facsimileTelephoneNumber
- givenName
- jabberID
- |
- locale
- **manager**
- **mobile**
- O
- ou
- phoneNumbers;type-work_extension
- physicalDeliveryOfficeName
- postalCode
- preferredLanguage
- sipAddresses;type-enterprise
- sn
- st
- Street
- **telephoneNumber**
- **title**
- **uid**

Webex User Search/Resolution



- Webex App will perform directory queries against the Webex Directory Search Service
 - User search
 - User Resolution
 - Phone Number Resolution
 - Avatar Display
- Ensure all necessary user attributes are synced to Webex via user provisioning process

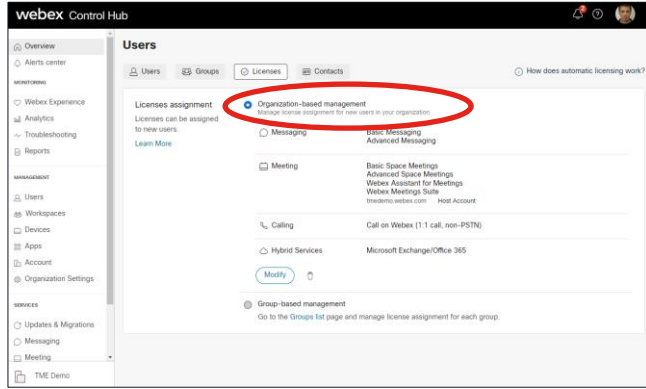
Webex App Contact Search



Webex User Account Management Solutions

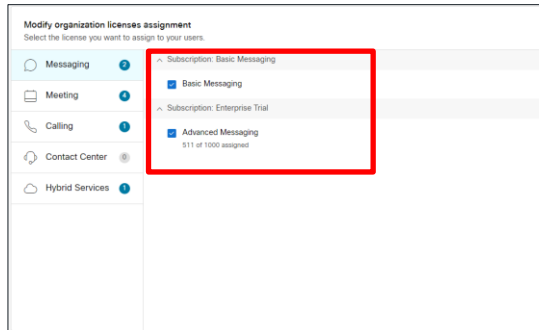
Method	Description
Meetings Site User Linking	Automatically link Site Admin user accounts to Control Hub
Directory Connector	Automatic method for creating, updating and deactivating user accounts and groups via Active Directory or AD LDS
SCIM/Azure AD Wizard	Automatic method for creating, updating and deactivating user accounts via Azure AD or Okta
SAML JIT	Automatic account creation based on SSO login
Self Registration	User can self register to create their Webex account in a claimed org
CUCM User Sync	Create Webex user accounts based on CUCM endusers (via CCUC)
Social Login	Automatic account creation via sign in to third party service for claimed domain (Apple, Google, Facebook, Microsoft)
CSV file	Admin can create and update users by importing a CSV file into Control Hub
API	Admin can create, update delete and list users by using Webex API's
Manual	Admin can use Control Hub to manage user accounts

License Template

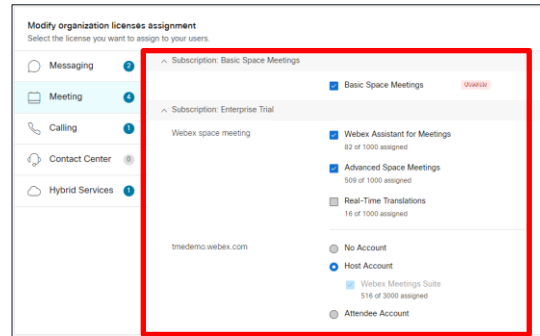


- Create an org wide License Template
- Newly created user accounts will be automatically licensed for selected services
- License changes can be made on an org wide, group or individual user basis

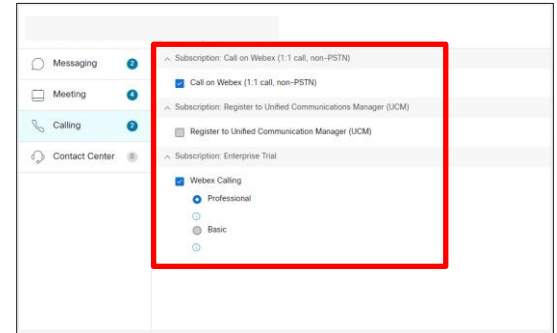
MESSAGING



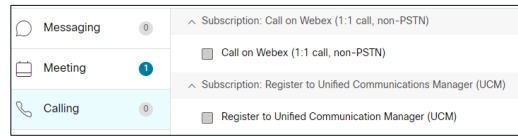
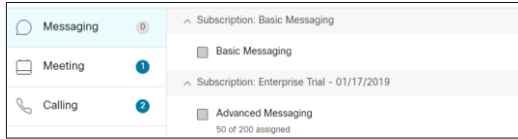
MEETINGS



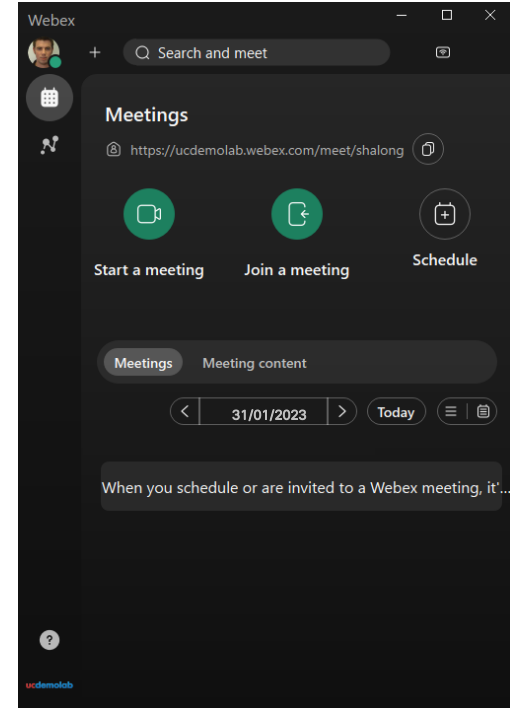
CALLING



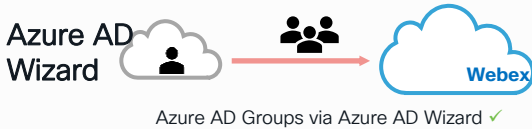
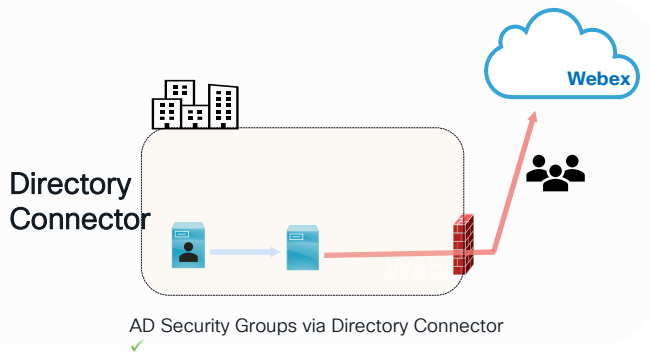
Service Entitlement



- Services can be unchecked in the license (Per org, group, user)
- e.g. To deploy a Meetings ONLY configuration, remove messaging service and calling service
- BEWARE!
 - Removing messaging will also remove space meeting functionality (e.g. scheduling)
 - Users existing messages/files will be retained as per your orgs retention policy



Groups

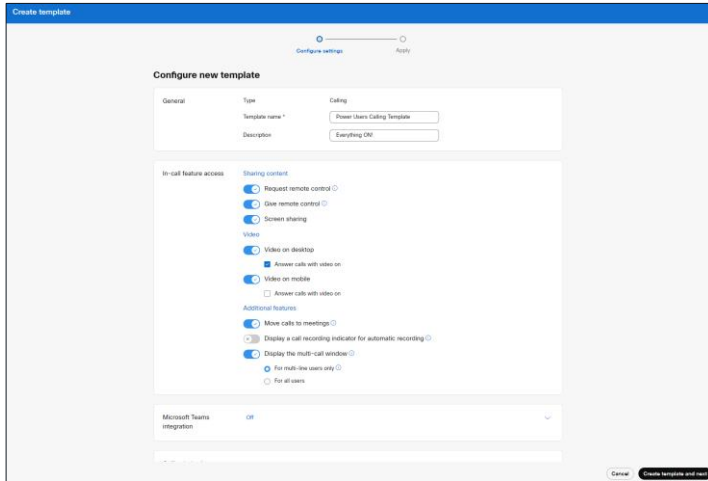


- User groups can be synced to Webex
 - Directory Connector ✓
 - Azure AD Wizard ✓
 - Via Groups API ✓
- User groups can be created manually in Control Hub
- Licensing Templates can be set on a per group basis
 - Changing a license template will apply to new and existing users

Screenshot of the Webex Control Hub interface. The "Users" page is displayed, showing license assignment options. The "Group-based management" option is highlighted with a red circle. The "Group-based management" option includes the text: "Go to the Groups list page and manage license assignment for each group."

Category	Item
Organization-based management	Messaging: Basic Messaging, Advanced Messaging
	Meeting: Basic Space Meetings, Advanced Space Meetings, Webex Assistant for Meetings, Webex Meetings Suite (tmedemo.webex.com) Host Account
	Calling: Call on Webex (1-1 call, non-PSTN)
	Hybrid Services: Microsoft Exchange/Office 365
Group-based management	Go to the Groups list page and manage license assignment for each group

Configure Settings Via Group Templates

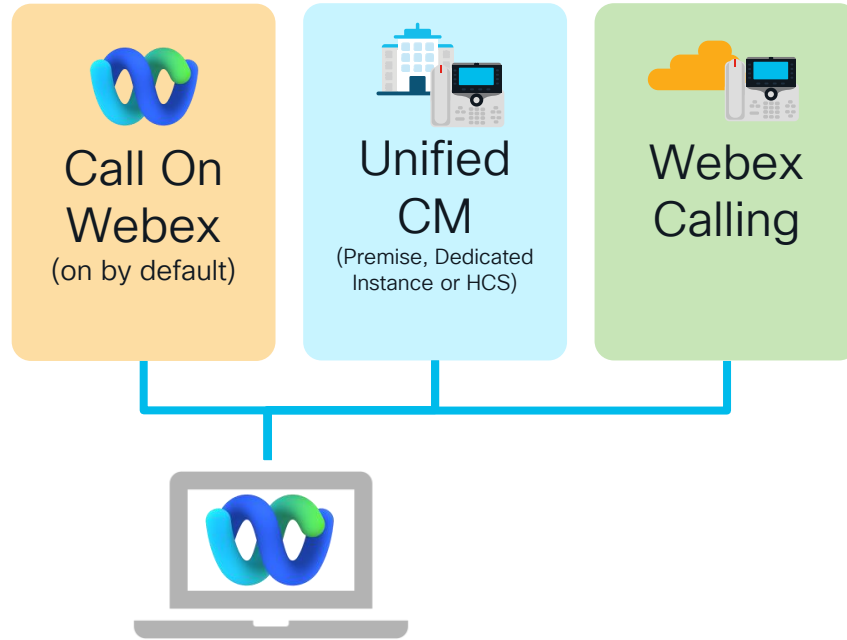


Calling Client Settings Template

- Create Templates to manage feature configurations for calling, messaging and meetings
- Apply Templates to Groups to apply common app settings based on user group

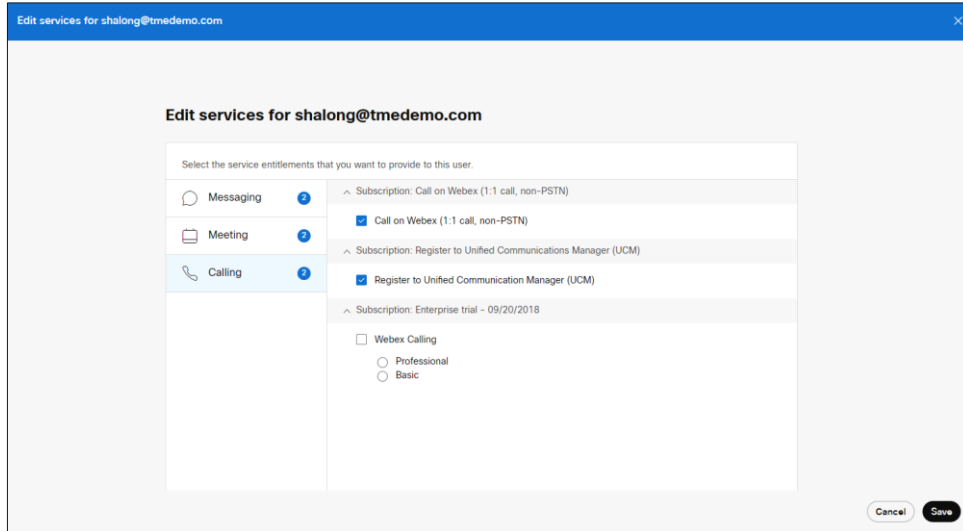
Calling

Webex App Calling



- Webex provides a number of different calling options that can be deployed to meet different customer needs.
- Calling experience is defined via user licensing
- Call on Webex
 - Basic and free 1:1 in-app calling service
 - On by default
- Add Enterprise Calling to the Webex App. Choose between
 - Unified CM Calling
 - Webex Calling

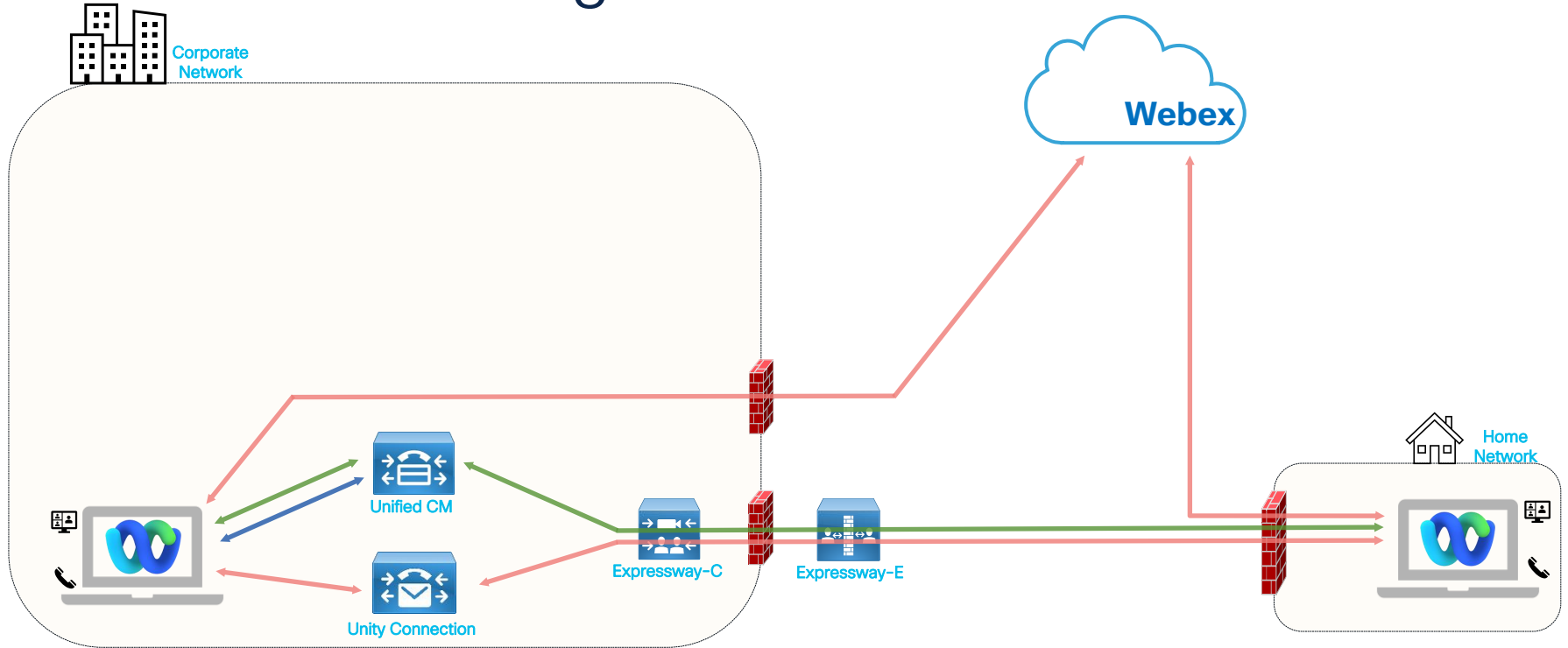
Webex App Calling



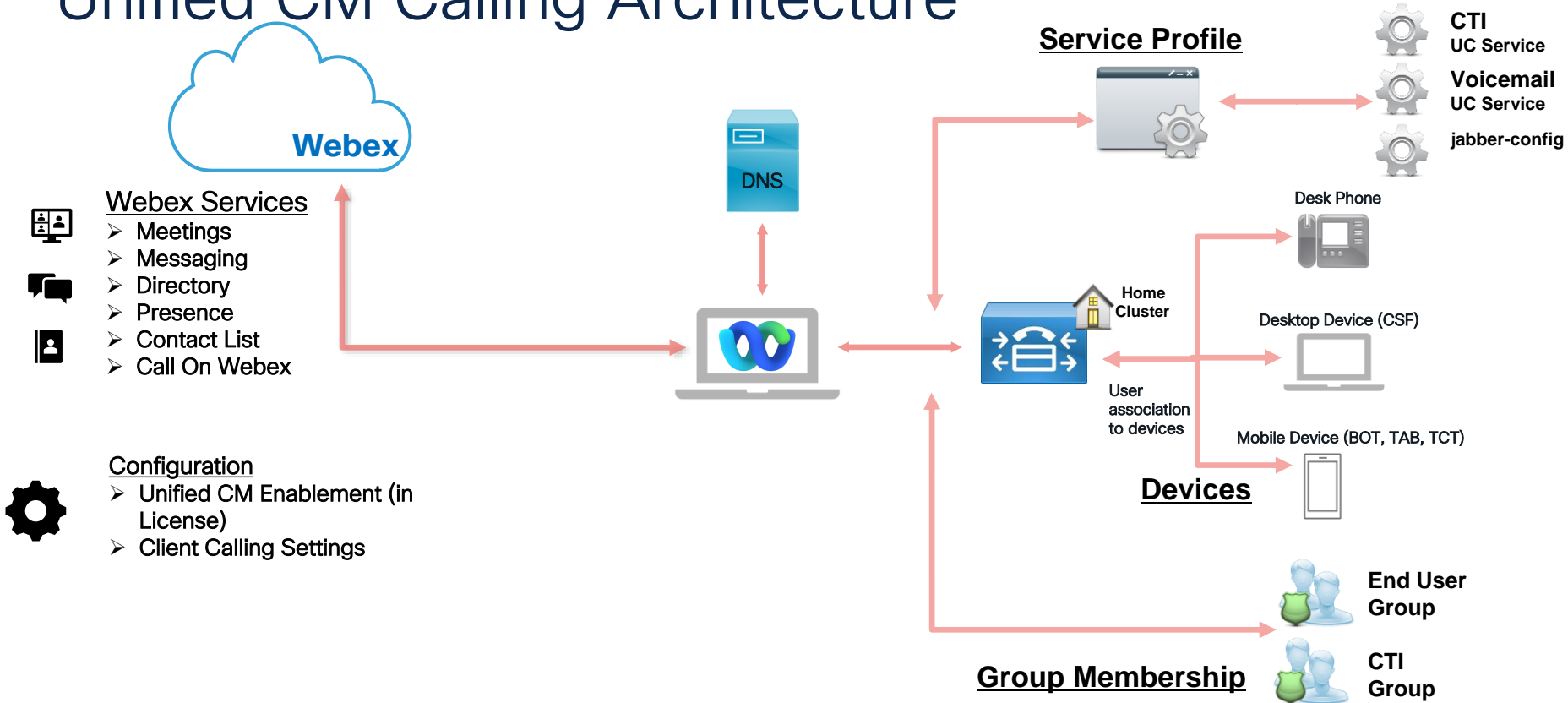
- Calling experience is defined via user licensing
- Call on Webex
 - Basic and free 1:1 in-app calling service
 - On by default
- Add Enterprise Calling to the Webex App. Choose between
 - Unified CM Calling
 - Webex Calling

Unified CM Calling Architecture

- HTTPS
- SIP
- CTI

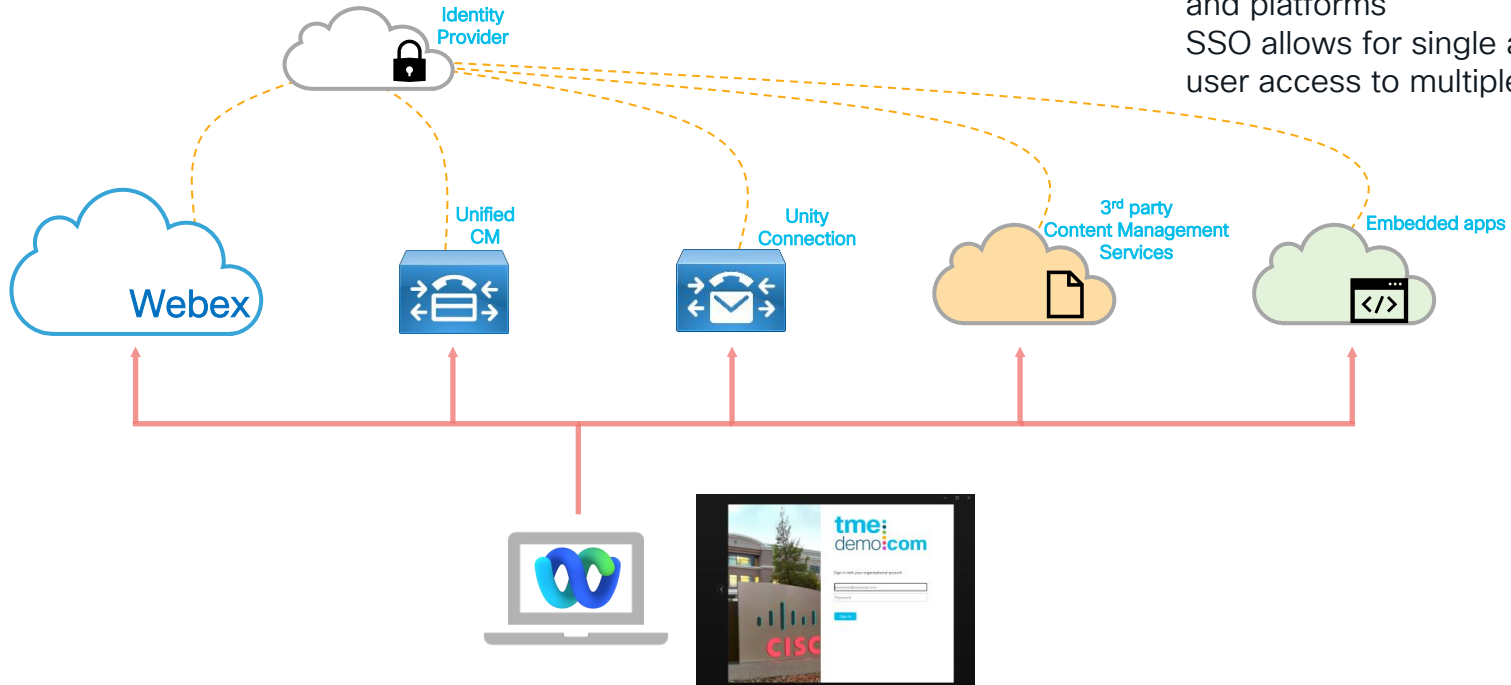


Unified CM Calling Architecture

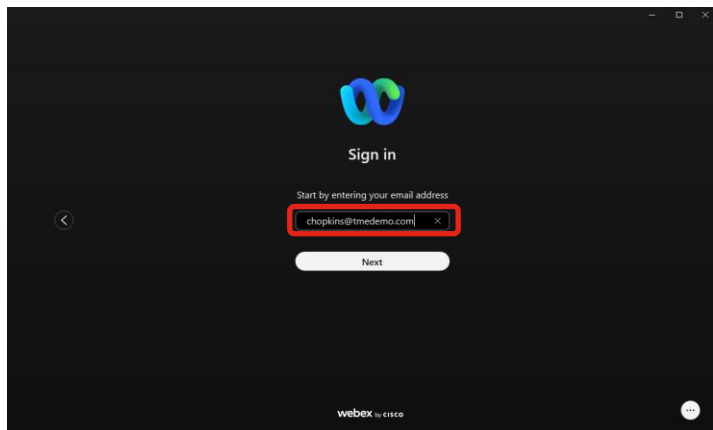


Single Sign On with Unified CM Calling

Webex App can connect to multiple services and platforms
SSO allows for single authentication, granting user access to multiple platforms services

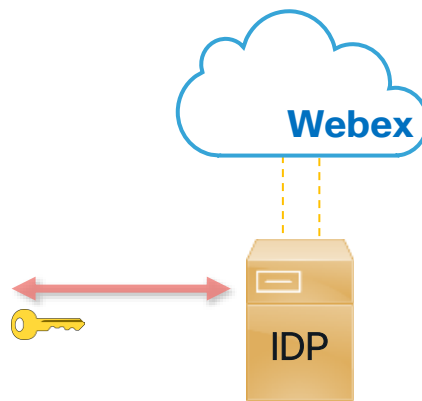
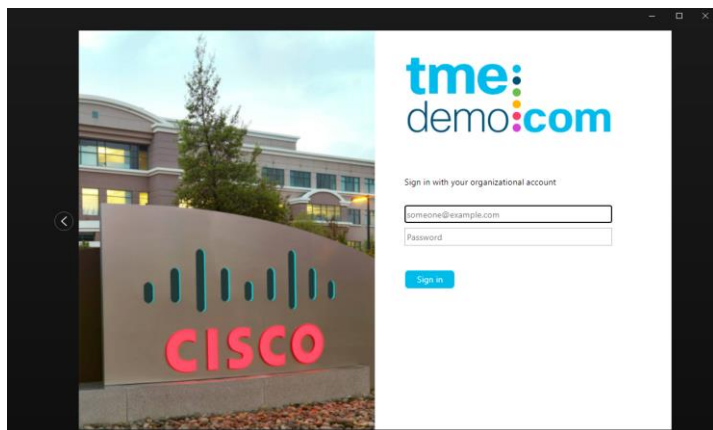


Unified CM Discovery



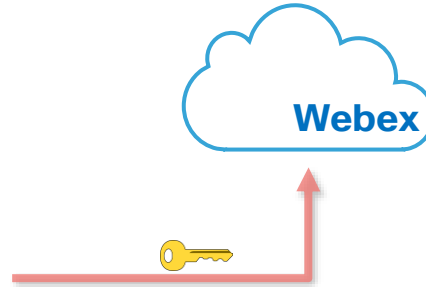
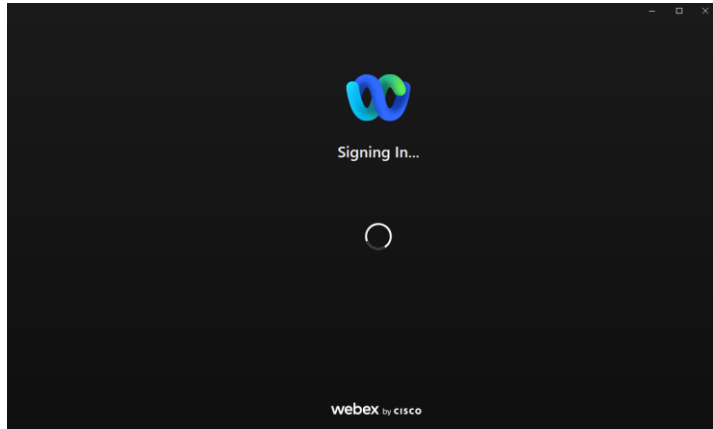
- Webex App first time start
- User enters email address
 - chopkins@tmedemo.com
- Webex App connects to Webex login service

Unified CM Discovery



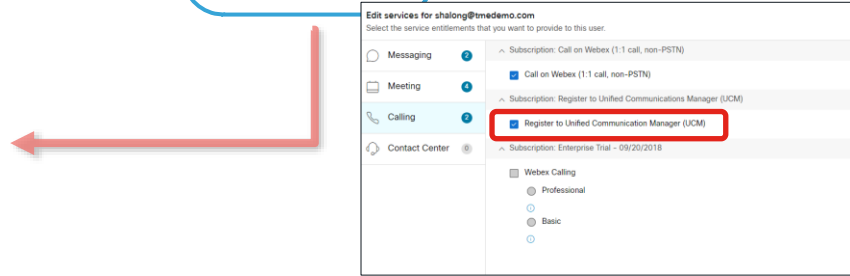
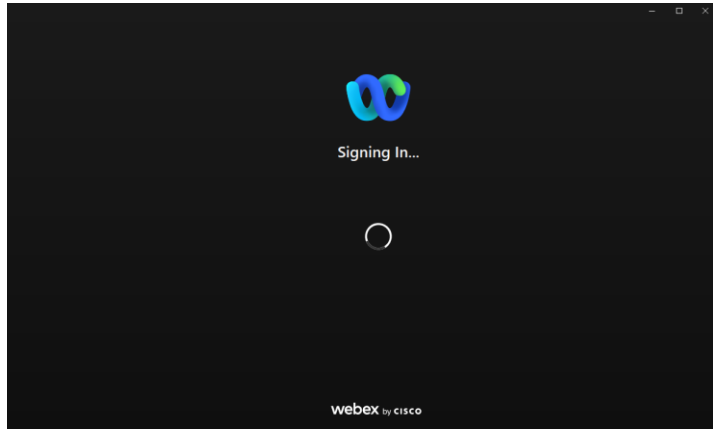
- Webex Org is SSO enabled.
- Webex app enters SSO mode
 - Embedded browser displayed
 - Embedded browser connects to the IDP
- User authenticates
- IDP issues SAML assertion

Unified CM Discovery



- Webex App uses SAML assertion to authenticate to Webex service
- Webex grants Webex app Access (issues OAuth tokens)

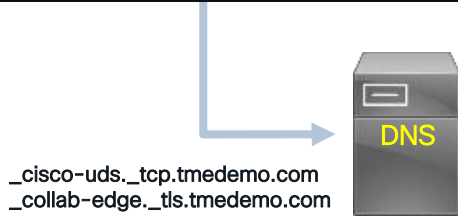
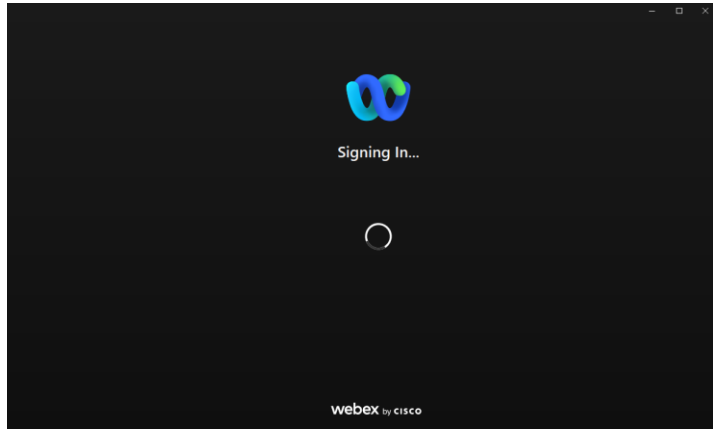
Unified CM Discovery



- Webex App retrieves user config including licensing
- Webex App connects to applicable cloud services
- Webex App retrieves calling setting “Register to Unified Communication Manager (UCM)”

Unified CM Discovery

Initial Email = chopkins@**tmedemo.com**



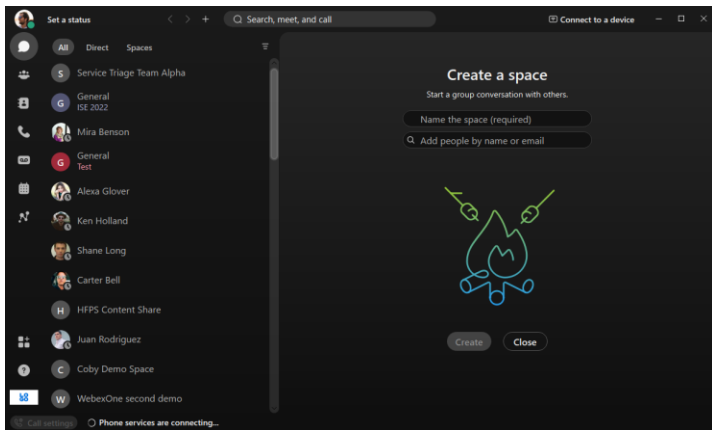
- Webex App queries DNS
 - _cisco-uds._tcp.**tmedemo.com**
 - _collab-edge._tls.**tmedemo.com**
- Internal DNS Server:
 - _cisco-uds -> UCM A record
- External DNS Server:
 - _collab-edge -> Expressway-E A record

Voice Services Domain = tmedemo.com

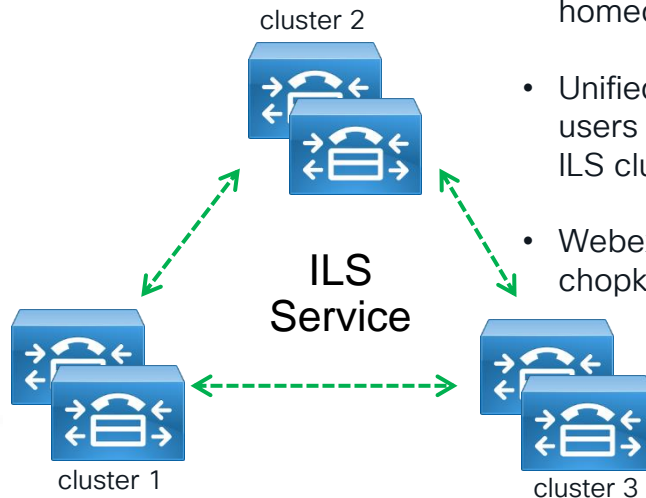
- If the Unified CM domain is different to the Webex domain, additional Voice Services Domains can be configured (per user/org) in Control Hub

Unified CM Discovery

- Webex App queries for **homecluster** against the Unified CM node returned from DNS query
- Query uses the users Webex ID to determine Unified CM homecluster
- Unified CM is aware of every users homecluster for the entire ILS cluster
- Webex App is redirected to chopkins home cluster



chopkins@tmedemo.com

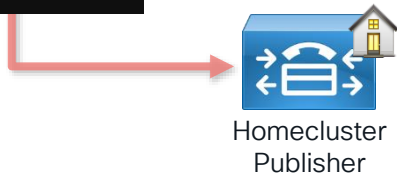
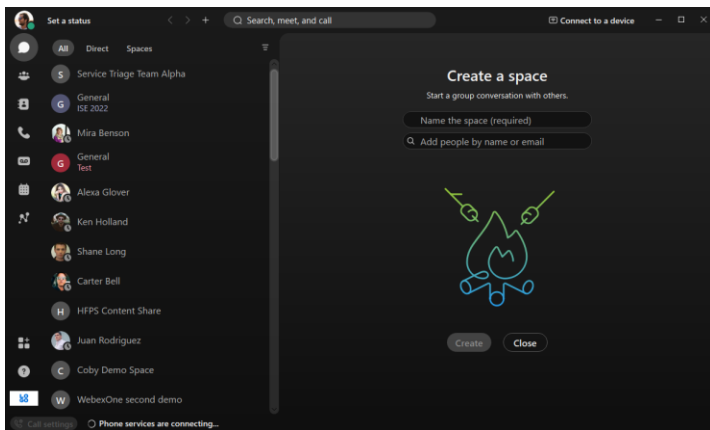


<https://ucm1-clusters1.tmedemo.com:8443/cucm-uds/clusterUser?username=chopkins>

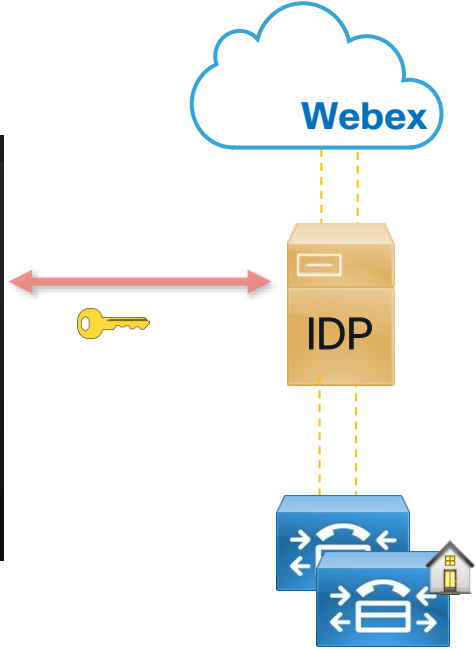
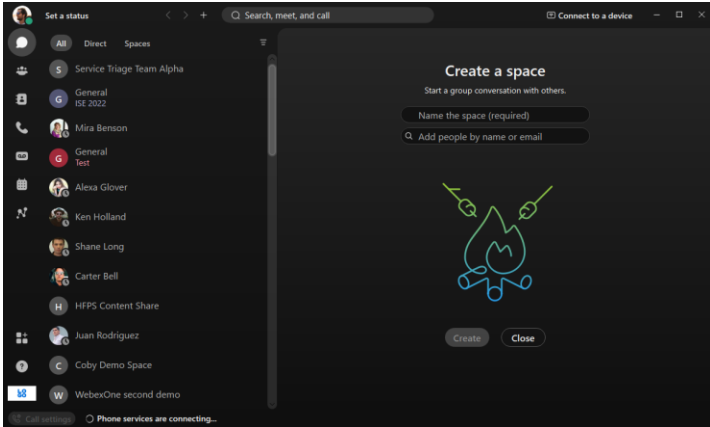
<https://ucm1-clusters1.tmedemo.com:8443/cucm-uds/clusterUser?email=chopkins@tmedemo.com>

Unified CM Discovery

- Webex App connects to homecluster publisher node
- Unified CM challenges for authentication

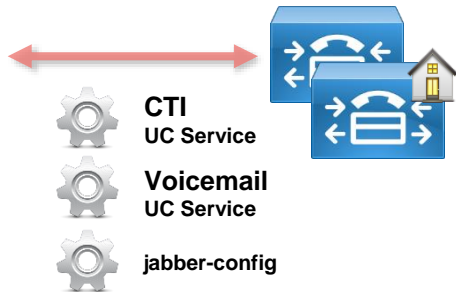
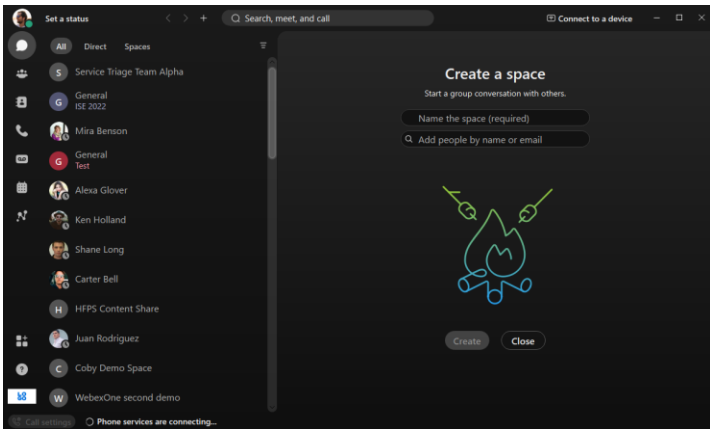


Unified CM Discovery



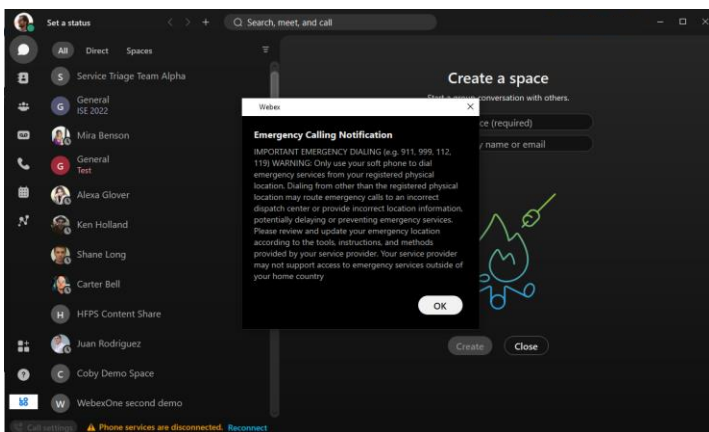
- Homecluster is SSO enabled
- Webex App uses the existing SAML token to gain access to Unified CM without the need for the user to manually authenticate
- Without SSO the user would have a secondary login requirement

Unified CM Discovery



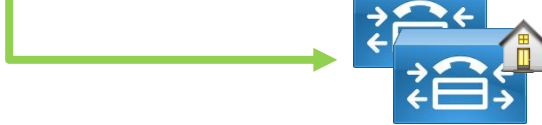
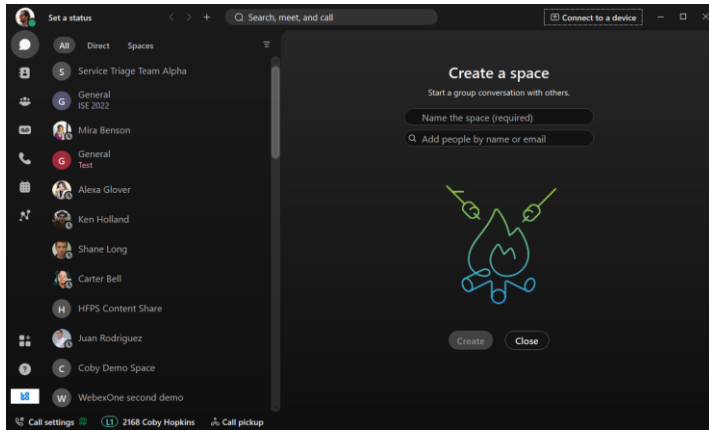
- Webex App downloads Service Profiles and jabber-config
- Webex App connects to available services
 - SIP/CTI
 - Voicemail

Unified CM Discovery



- User is prompted to accept Emergency Calling Notification Message before they can make a call
- By default the prompt is shown on first login only, but the admin can change this to never or every login
- The Emergency Notification message is customizable

Unified CM Discovery



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

Unified CM Discovery Best Practices

- **Voice Services Domain**

- Keep it simple – try to use the Webex/email domain as the Voice Services Domain. Remember, the _cisco-uds and _collab-edge SRV domains, do not need to be the same as the Unified CM/Expressway domains

- **Certificate Validation**

- Webex App will validate a TLS certificate from each Expressway/Unified CM/Unity Connection node it connects to. Ensure that the certificates installed on each of these services is trusted i.e. CA signed

- **Webex and Unified CM User Identity**

- Webex App will use the users Webex identity as the Unified user identity (userID or email). Ensure that the Unified CM email attribute is populated for each user (with the email address matching the Webex identity)

- **Authentication**

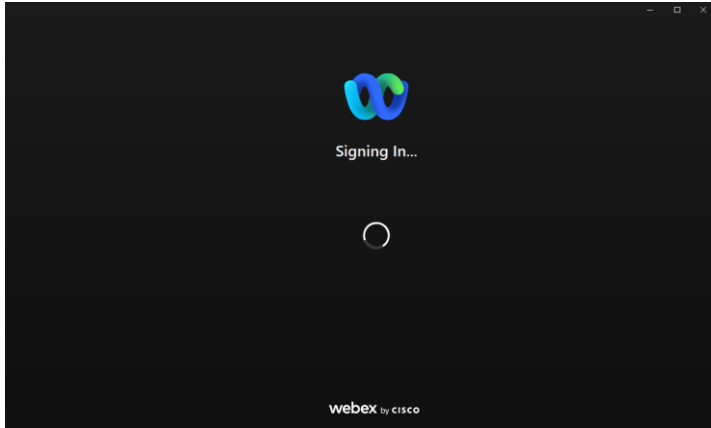
- SSO enable both the Webex Org and Expressway/Unified CM/Unity Connection (using the same IDP!). Without this, users will have multiple login prompts when signing into the app. For Webex App on mobile deployments, ensure Unified CM is 12.5(1)su4 and later, Expressway X14 and later (SSO redirect URI)

- **Unified CM OAuth Refresh Token Flow**

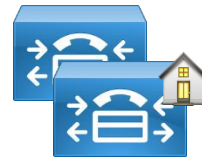
- Enable OAuth Refresh token flow on Unified CM. User will not need to reauthenticate to Unified CM for defined period of token (default = 60 days). Allows admin to enable secure SIP calling (SIP OAuth)

- See https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cloudCollaboration/wbxt/ucmcalling/unified-cm-wbx-teams-deployment-guide.pdf

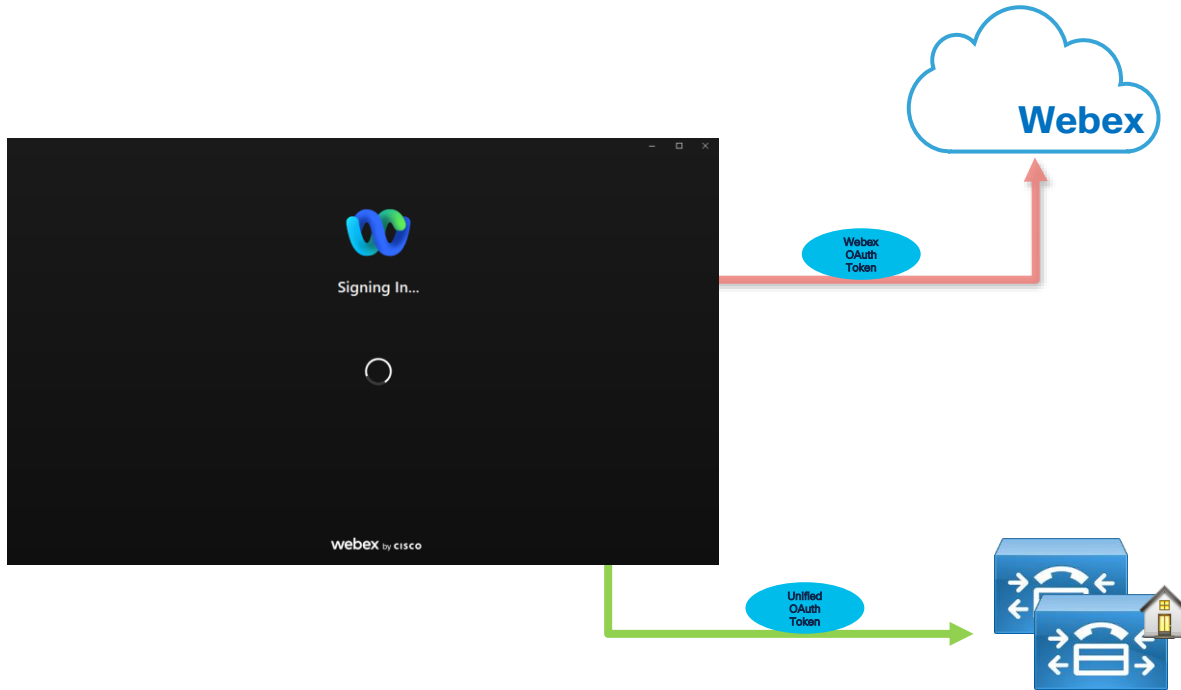
Subsequent Logins



- The first time Webex App login is a serial login
 1. Connect to Webex
 2. Connect to Unified CM
- After the first time login, Webex App connects to services in parallel (based on cached config)

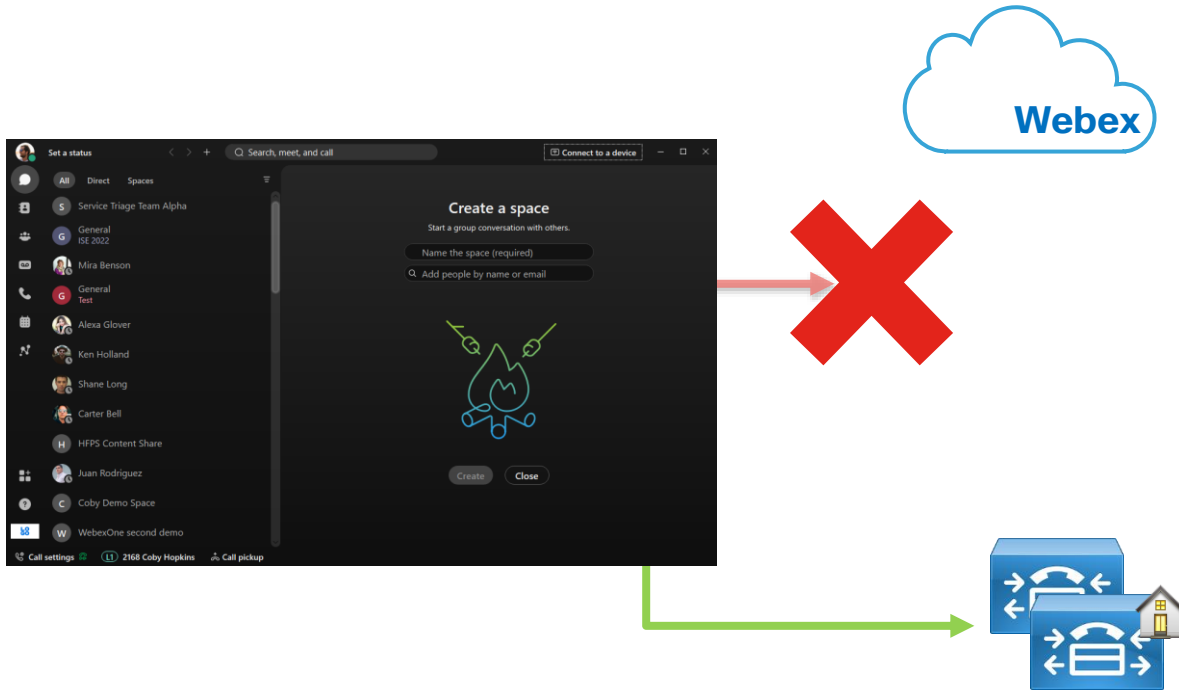


Subsequent Logins



- The first time Webex App login is a **serial** login
 1. Connect to Webex
 2. Connect to Unified CM
- After the first time login, Webex App connects to services in **parallel** (based on cached config)

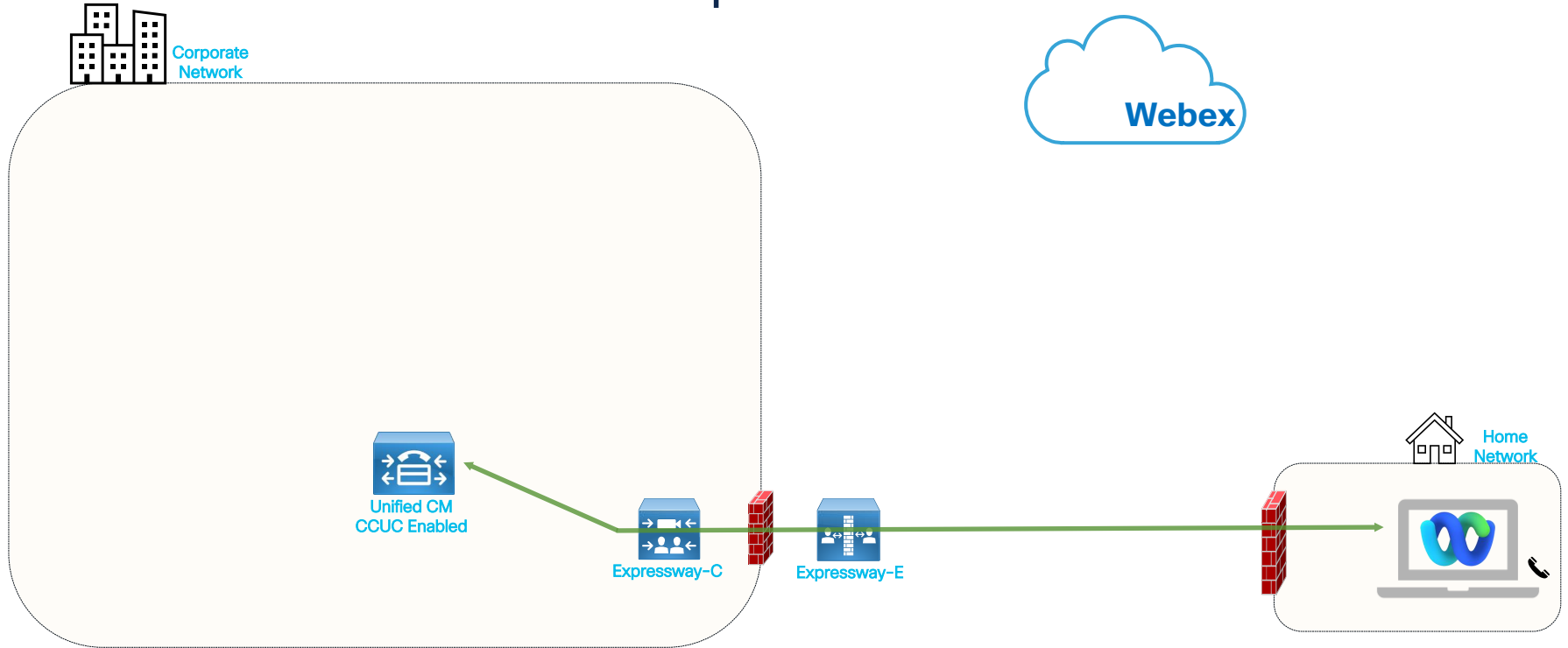
Calling Redundancy



- For **SUBSEQUENT** logins on a **device**, if Webex services are inaccessible (e.g. WAN outage, loss of internet access), Webex App will still be able to register to on premise Unified CM for calling
- **Features dependent on Webex services will be unavailable** e.g. presence, directory search (previous directory lookups will be cached locally)

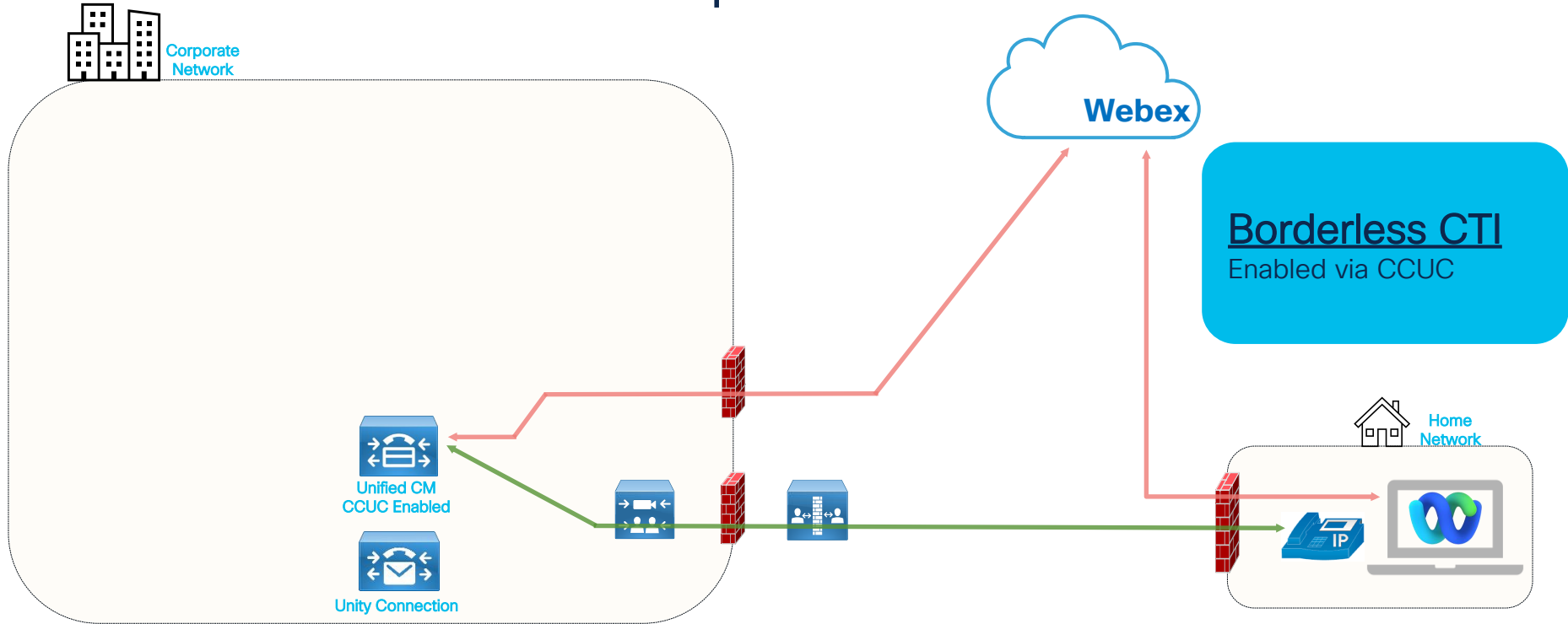
Remote Access : Softphone Mode

- HTTPS
- SIP
- CTI

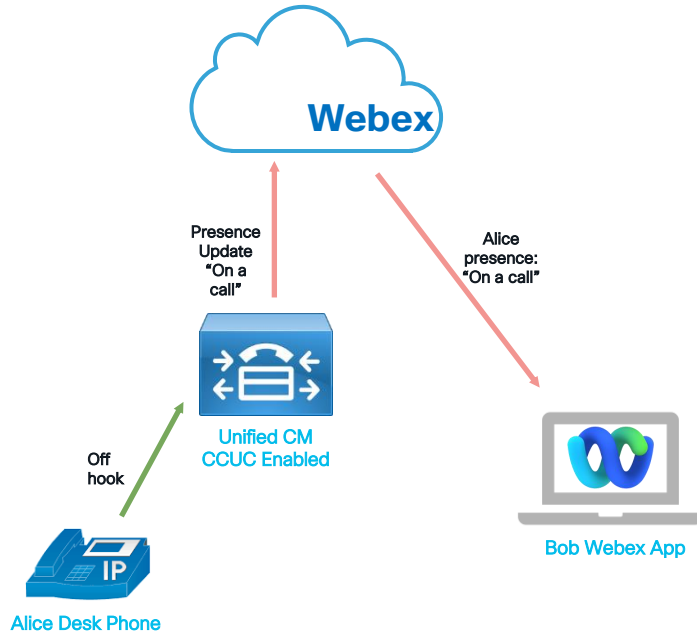


Remote Access : Deskphone Control Mode

- HTTPS
- SIP
- CTI



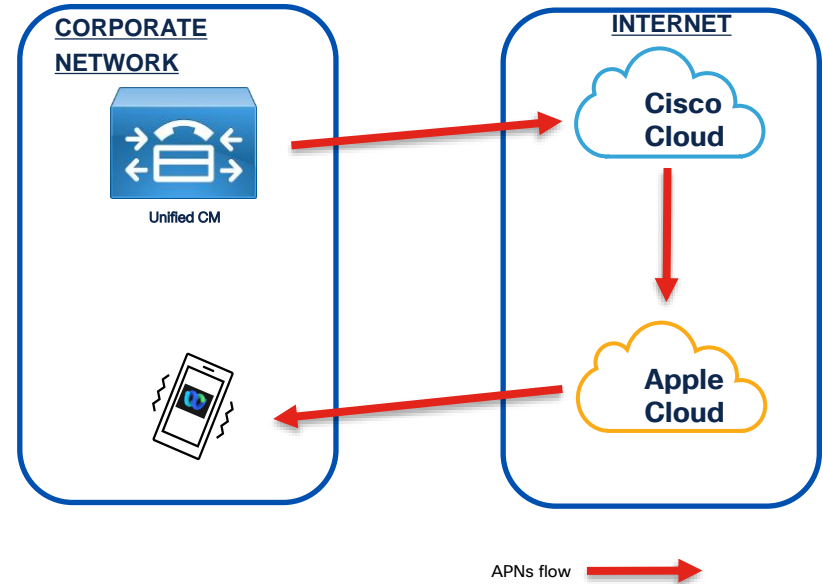
Call Presence Synchronization



- When a user goes off hook on their deskphone, their Webex presence status can be updated to “On a call”
- Enabled via CCUC/UC Management

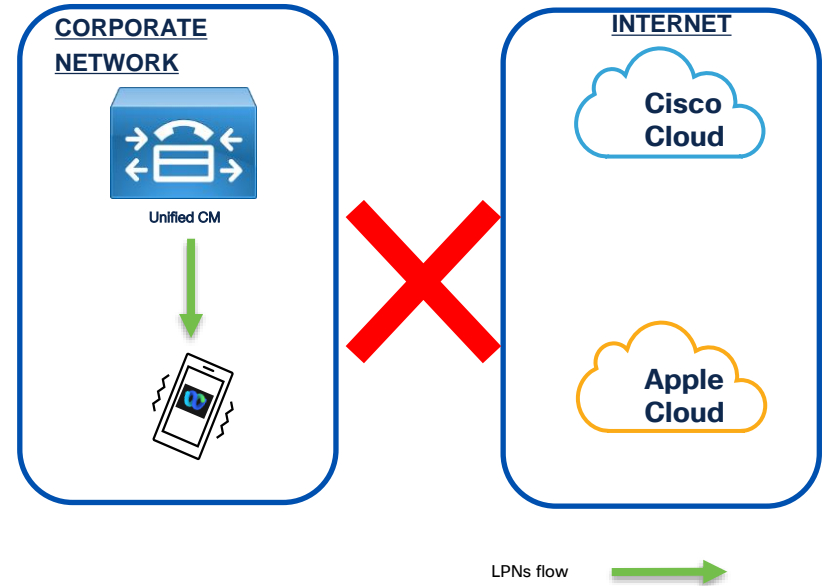
Apple Push Notification Update

- Apple Push Notification Service is used by mobile apps to receive notifications
 - E.g. Webex App relies on APNS to receive incoming call or message notifications
- For APNS to be successful, the Apple device must have an internet connection to the Apple Cloud
- In some environments this may not be possible e.g. Military, Cruise Ships etc



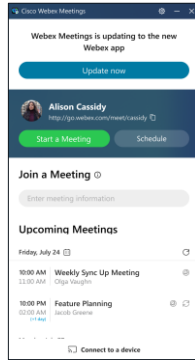
Local Push Call Notifications

- Local Push Call Notifications provide a faster and more reliable way to deliver the call notifications to mobile users on Apple devices within local corporate network, when they are on an internet constraint network
- iPhone and iPad (Webex App 43.6 +)
- Provisioning/configuration: admin needs to provision supported WiFi SSIDs into the list in jabber-config.xml file
- On-premise Unified CM calling only
 - Unified CM 14SU3+, Unified CM 15

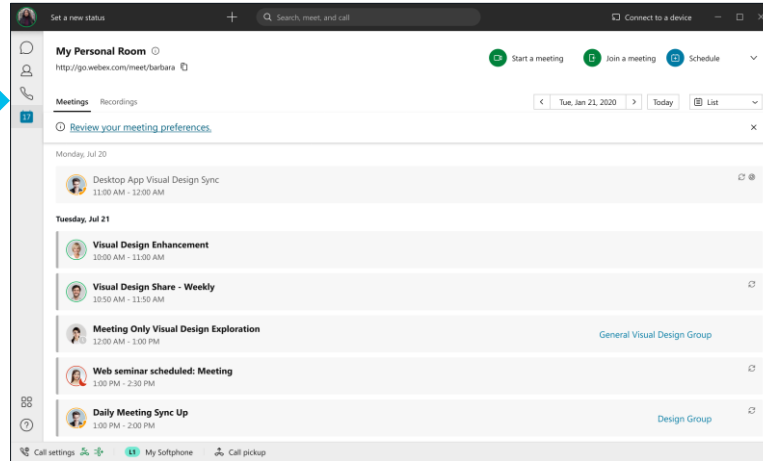


Meetings

Webex Meetings Desktop App to Webex App



Webex Meetings Desktop App

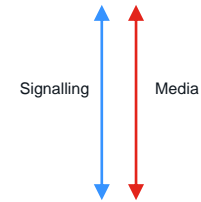


Webex App

- Users were updated to the Webex App
- Program ran throughout 2022

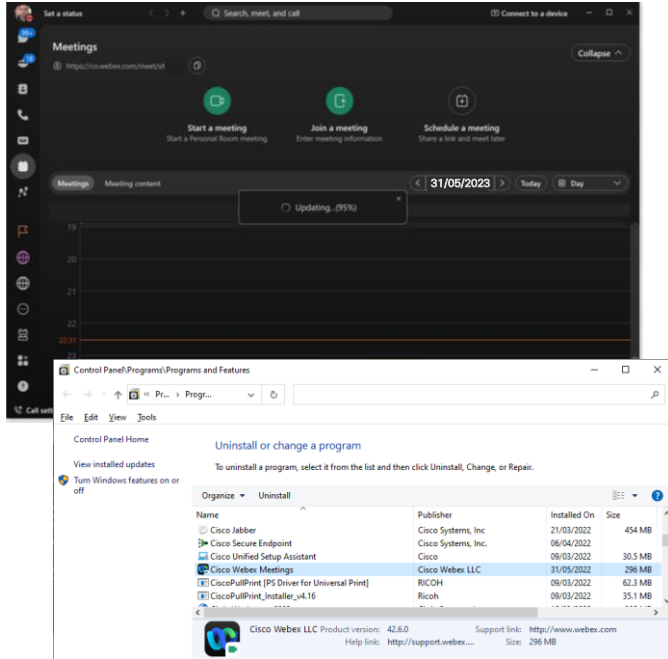
Webex App Meeting Center Meetings

- Webex MC plugin is packaged into the Webex App installer
- Same in meeting experience as Webex Meetings Desktop App
- MC plugin is launched when a user joins a Webex Meeting
- If a user joins a meeting on a different Webex Site version, a compatible version of MC plugin will be downloaded
 - Files written to `c:\users\userID\AppData\Local\Webex\`
 - Entry in Add/Remove Programs (this is not the Webex Meetings Desktop App)



xLaunch

Webex App MC Challenges



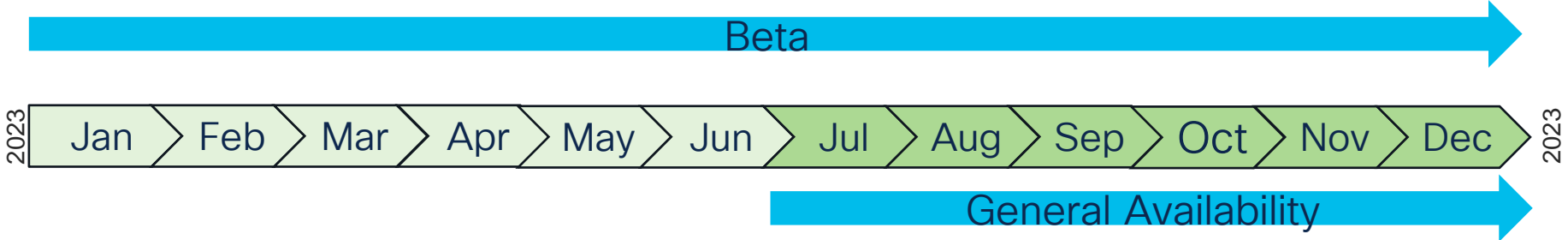
- **Desktop:** Plugin update may be different cadence to Webex App update
- **Linux:** No native meetings experience (browser only)
- **Mobile:** Webex App and Webex Meetings App required
- **VDI:** Two VDI plugins to install on thin client
- **Video Mesh:** Webex App Full Featured Meetings does not support Video Mesh

Video Mesh Ready Platform

- From July 2023, meetings sites will be updated to the Video Mesh Ready Platform
- Meeting sites will be updated on a monthly basis
- This is a meeting platform evolution, there is zero to minimal client/IT impact

FedRAMP:
Early CY24

Slow
Channel:
Q4CY23



Note: Sites must have completed the Webex Meetings Desktop App to Webex App update in advance

Video Mesh Ready Platform Benefits

Deployment

- Single app on mobile
- Single app on VDI
- No plugin on desktop
- Native in app meetings on Linux
- Faster join times

Video Mesh Support

- Support for Video Mesh for all meetings
- Keep media on the corporate network

Rich Messaging

- Chats and Recordings available post meeting to continue collaboration
- Rich in meeting messaging capabilities
- Ability to message the meeting

Video Mesh Ready Platform Firewall Considerations

	Meeting Center	Video Mesh Ready Platform (Webex App)
In Meeting Process (Windows)	atmgr.exe	CiscoCollabHost.exe
Media Source Port (with admin policy in place)	Audio: UDP 52000-52049 Video & Content Share: UDP 52100-52199	Audio: UDP 52000-52049 Video & Content Share: UDP 52100-52199
Media Destination Port	UDP 9000	UDP 5004
Media Fallback Port	TCP 5004, 443, 80	UDP 9000, TCP 5004, TCP 443

Considerations

- **Firewall:** Ensure firewall will allow outbound traffic for {*process name, source port, destination address, destination port, protocol*}
- **QoS:** Ensure any QoS Group Policies are updated to specify correct path to binary and source ports (e.g. Set DSCP value to EF for packets sent by “C:\Program Files\Cisco Spark\CiscoCollabHost.exe” from UDP 52000-52049)
- **Webex Meetings Desktop App:** If a user tries to join a meeting on a Video Mesh Ready enabled site, they will be prompted to download the Webex App
- **Webinar:** Webex Webinar will be Video Mesh Ready enabled in H1CY24

App Deployment

Webex App Platform Support



Desktop

Windows

Windows 10
Windows 11

MacOS

MacOS 10.13 and later
Intel CPU
Apple M1 CPU

Linux

Red Hat EL 8.2, 8.3
Ubuntu 18.04, 20.04, 22.04

Web App

Last 2 major releases
Chrome
Firefox
Edge
Safari



Mobile

iOS/iPadOS

iPhone7 and later
iOS 13.7 and later
Various iPad Releases

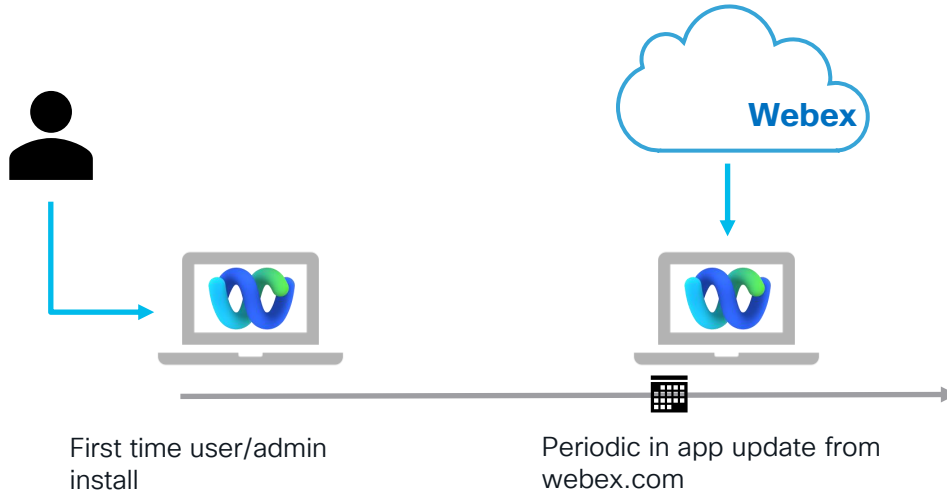
Android

8.0 and later

ChromeOS

(Android app emulated on
ChromeOS)

Webex App Release Cycle



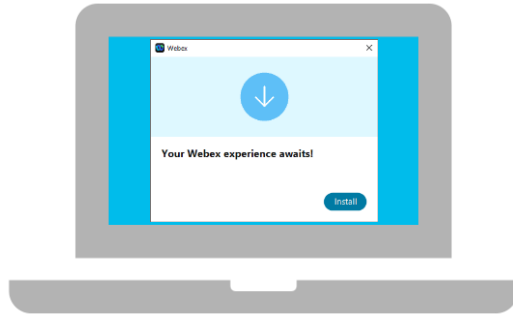
- A new major release of Webex App is delivered monthly
- App versioning is based on time e.g. May 2023 release 43.5.0.26155
 - **Year** : 43.x.x.xxxx
 - **Month** : 43.5.x.xxxxx
 - **Build** : 43.1.0.24716
- Webex App monthly release is typically delivered on the first Tuesday of the month
 - App auto update may take a number of days to occur after release

Update Management

- Desktop Update Schedule: Control Hub
- Mobile Update Schedule: App Store Setting

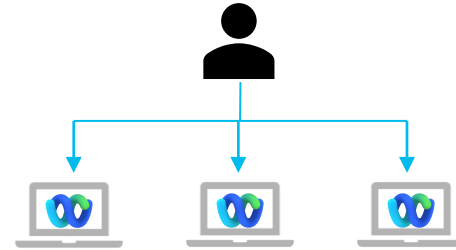
Webex App for Windows

User Install



- User downloads the .exe installer from Webex.com
- Runs the installer
- Webex App is installed to C:\users\userID\AppData\Local\CiscoSparkLauncher
- Admin permissions **NOT** required

Admin Install



- Admin installs the Webex App msi installer to Windows machines via deployment tool (e.g. SCCM)
 - `msiexec /i webex.msi ALLUSERS=1 /quiet`
- Webex App installed to C:\Program Files\Cisco Spark\
- Admin permissions required

Webex App for Windows Installation

- Installer switches can be set to configure the first time experience as well as enabling Outlook integration

Switch	Purpose
ALLUSERS=1	Admin install to C:\Program Files\Cisco Spark\
ACCEPT_EULA=true	Automatically accept EULA so user does not have to
AUTOSTART_WITH_WINDOWS=true	App auto starts on Windows login. User cannot change within the app
DEFAULT_THEME="Light"	Sets theme to light. User can set their preference in the app
DELETEUSERDATA=1	Removes all existing cache is app is already installed
INSTALLWV2=1	Installs Microsoft WebView2 embedded browser
EMAIL=\$mail	Prepopulates the Webex App with user UPN for login. Restricts access to the app current Windows user only
ENABLEOUTLOOKINTEGRATION=1	Enables Outlook integration at install time (registry key). Admin permissions required. On by default

Example Webex App for Windows Installation

Example Installation

```
msiexec /i Webex.msi ALLUSERS=1 ACCEPT_EULA=true AUTOSTART_WITH_WINDOWS=true EMAIL=$mail  
/quiet
```

Update Management Setting

- Webex App for desktop software update cadence is set in Control Hub
 - Default is automatic (monthly)
- Organizations can request that Slow channel option is enabled (Only available upon request)
- Software update cadence is an org wide setting. Individual users update cadence can be overridden

Workspaces

Software updates for Webex app

Current version: January-2023
Updated on: 10/01/2023
[Download Webex builds](#)

Recurring updates for Webex app desktop client

Update automatically with every new version or schedule updates by cadence and deferral. [Learn more](#)

Automatic software updates (Controlled by Cisco)

Update to selected cadence with deferral

Cadence Deferral

Latest
Slow

d. They're outside the scope of these settings.

The next scheduled update is on 07/03/2023 to version February-2023.

Did you know?

Webex

Webex

Version: 43.3.0.25039
Server URL: u2c-a.wbx2.com
Copyright © 2023 Cisco Systems.
All rights reserved.

[Terms of service](#)

[Privacy statement](#)

[Notices and disclaimers](#)

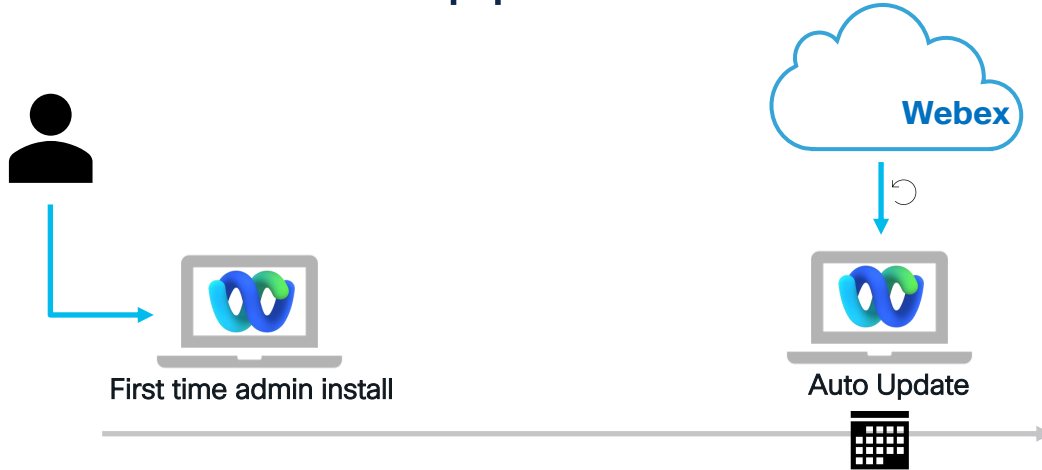
[Third-party licences and notices](#)

Selecting Send Feedback below will send Webex activity logs to us, so that we can help you and improve the product. These logs identify you, your device, other users you've communicated with and optionally, your employer. For more information see the Cisco Online Privacy Statement.

[Send feedback](#)

[Check for updates](#)

Windows App for Windows Update Process



Note

Webex App will only update the Windows registry at install time (first time install) As such, the registry key detailing the app version will not be updated upon Webex App auto update. Software inventory tools or Add/Remove Programs will report the original install version only, even though many auto updates may have occurred.

The current app version is available in Control Hub and is also written to

C:\users\userID\appdata\local\CiscoSparkLauncher\version.txt.

Software inventory tools can use this file to determine latest installed version on machine

- `msiexec /i webex.msi ALLUSERS=1 /quiet`
- Webex App installed to "C:\Program Files\Cisco Spark"
- **CiscoCollabHost.exe** is the main Webex binary

- Webex App downloads update from `webex.com`
- Update package written to `C:\users\userID\appdata\local\CiscoSparkLauncher\`
- The main Webex binary **continues to be CiscoCollabHost.exe running from C:\Program Files\Cisco Spark** (the original install)
- The auto update process does not reinstall the app – its simply an update package downloaded to `%appdata%`, that is loaded at runtime by `CiscoCollabHost.exe`
- **No admin permissions are required to autoupdate**

Admin Managed Webex App for Mobile Deployment



Webex for Intune

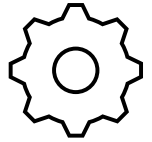
- Webex for Intune allows in app enforcement of policies pushed to a mobile device by the admin e.g.
 - VPN on demand
 - Conditional Access
 - Disable copy/paste

AppConfig



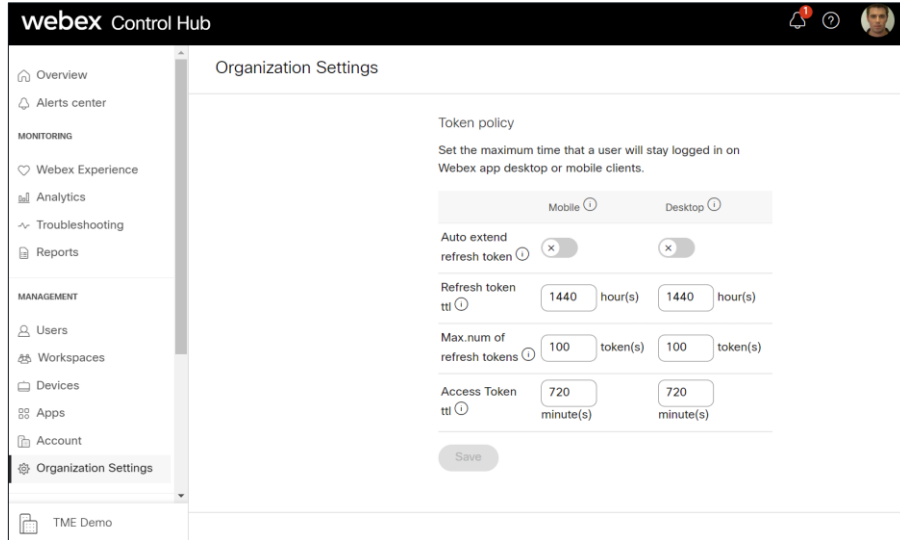
- Webex App for iOS/Android supports AppConfig derived policies
- Policy can be pushed to Webex via an AppConfig compliance EMM e.g. Cisco Meraki, MobileIron etc
- Many policies can be set which will be adhered to by Webex e.g.
 - Disable copy/paste
 - Disable screen capture
 - Login Hint

App Wrapping



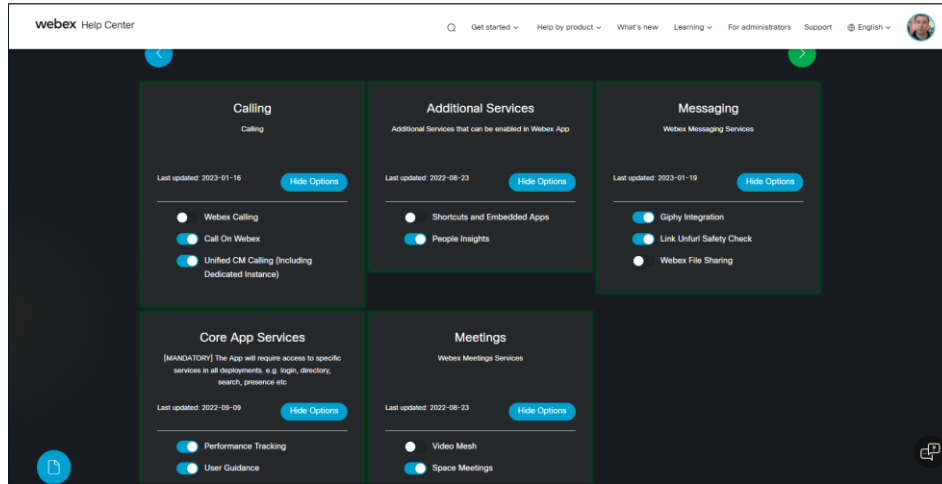
- Admins can obtain the Webex App iOS (ipa) and Android (apk) installer files from Cisco
- Admins can then wrap the Webex App installer using their own MDM process and push to mobile devices
- NOTE: Any discovered issues will need to be reproduced using an app store Webex App installer to gain support from Cisco

Webex Subsequent Logins



- Webex services will issue the Webex App an OAuth Refresh token at login
- The Refresh token is stored securely on the device and used each time the App needs to fetch a new Access token
- Once the Refresh token expires, the user will need to re-authenticate
- Consider what settings work best for your environment
 - **NOTE:** Auto extend - In the past, this was set to on.
- Default Webex Refresh token = 60 days. Consider the Unified CM default Refresh token setting (60 days)

Webex Network Requirements Tool



<https://help.webex.com/nrt>

- Define what Webex/3rd party services your Webex App users will consume
- Tool generates a report detailing the network requirements specific to your deployment

Apple Push Notifications

Function	Ip Block	Description
Apple Push Notification Service	17.0.0.0/8 TCP: 443 and TCP: 5223	Push Notifications Service for Apple Devices

Call On Webex

Webex Meetings Media

Protocol And Port	Ip Address Range	Function	Source
UDP 5004	66.114.160.0/20, 20.50.235.0/24, 66.163.32.0/19, 20.53.87.0/24, 69.26.160.0/19, 20.57.87.0/24, 114.29.192.0/19, 20.68.154.0/24, 150.253.128.0/17, 20.76.127.0/24, 170.72.0.0/16, 20.108.89.0/24, 170.133.128.0/18, 23.89.0.0/16, 173.39.224.0/19, 40.119.254.0/24, 173.243.0.0/20, 44.234.52.192/25, 207.182.160.0/19, 52.232.210.0/24, 209.197.192.0/19, 62.109.192.0/18, 210.4.192.0/20, 64.68.96.0/19, 216.151.128.0/19	Call On Webex Media	Ephemeral

Unified CM Calling (Including Dedicated Instance)

Unified Cm Model

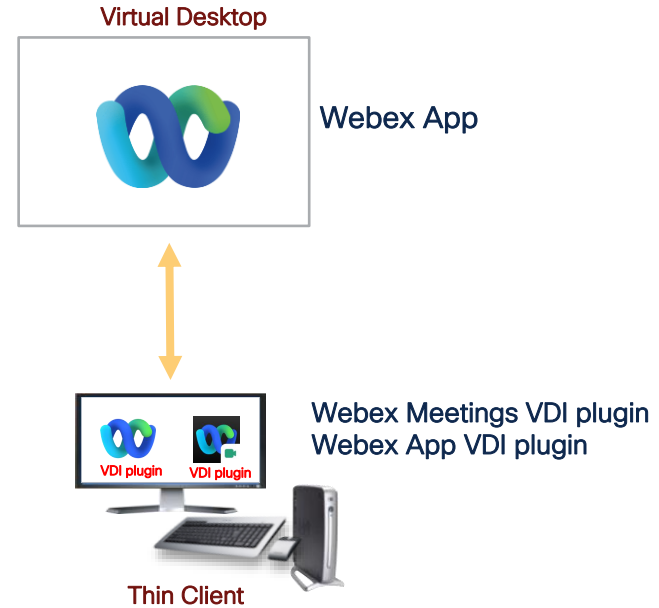
Protocol And Port	Function	Source	Destination Address	Description
TCP 8443	Discovery and Login	Ephemeral	Any Unified CM or Expressway-E	Used during service discovery and login to Unified CM or Expressway-E
TCP 6972 (Secure TFTP), TCP 6970 (Non Secure TFTP)	Config Download	Ephemeral	Any Unified CM Node	App connectivity to TFTP server to download device and user config files
TCP 5061 (Expressway-E and Unified CM), TCP 5060 (Non Secure SIP on Unified CM only)	SIP Connectivity	Ephemeral	Any Unified CM or Expressway-E Node	Webex App will connect to Unified CM or Expressway-E via SIP for softphone functionality
TCP 2748	CTI Connectivity	Ephemeral	Any Unified CM Node	Webex App will connect to the Unified CM CTI service when running in deskphone control mode
UDP 16384 to 32768	Softphone Media (Audio, Video, Screen Share)	Ephemeral	ANY (media is routed directly to the other party)	UDP media port range to send audio, video and screen share traffic to other parties (including other App users, deskphone, video endpoints and conference resources)

Deploying Webex in a VDI Environment

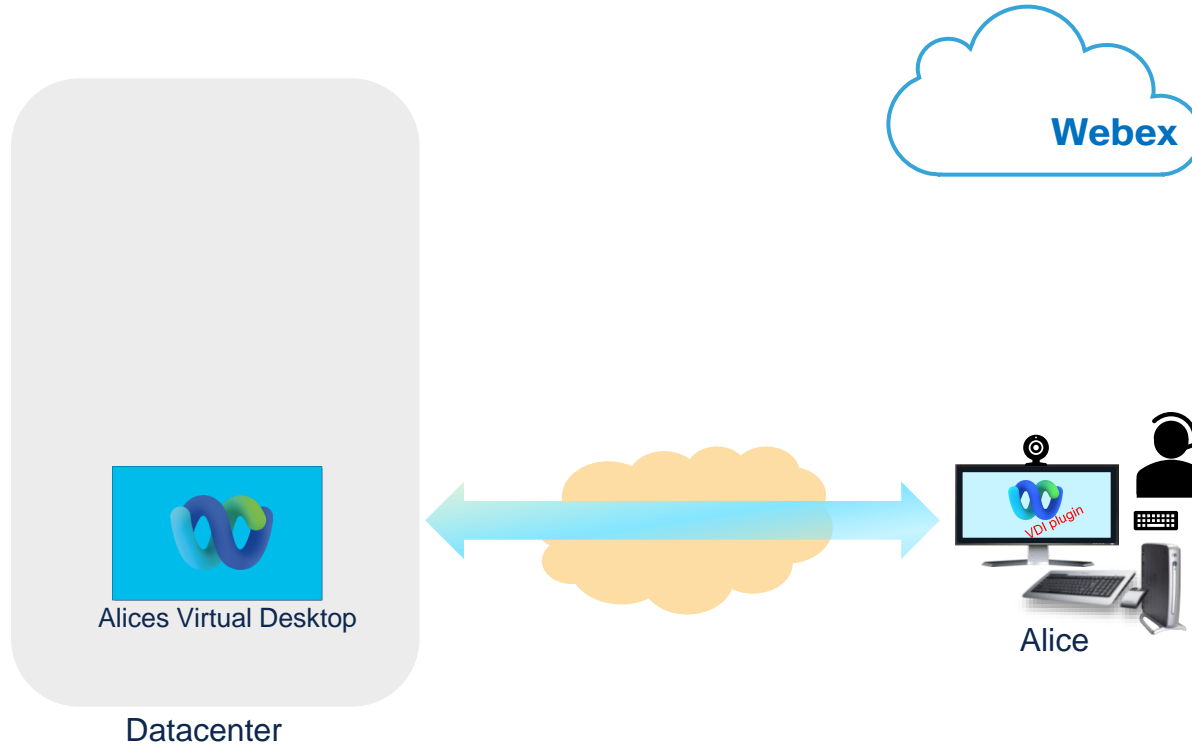
Webex App for VDI

- Webex App can be deployed in a VDI environment
- Realtime workloads require media offloading
- Webex utilizes local plugins to offload real time media termination

Webex Meetings VDI Plugin	Webex App VDI plugin
Webex Meetings (including Space Meetings and Webinar)	Webex Calling
	Unified CM Calling
	Call on Webex

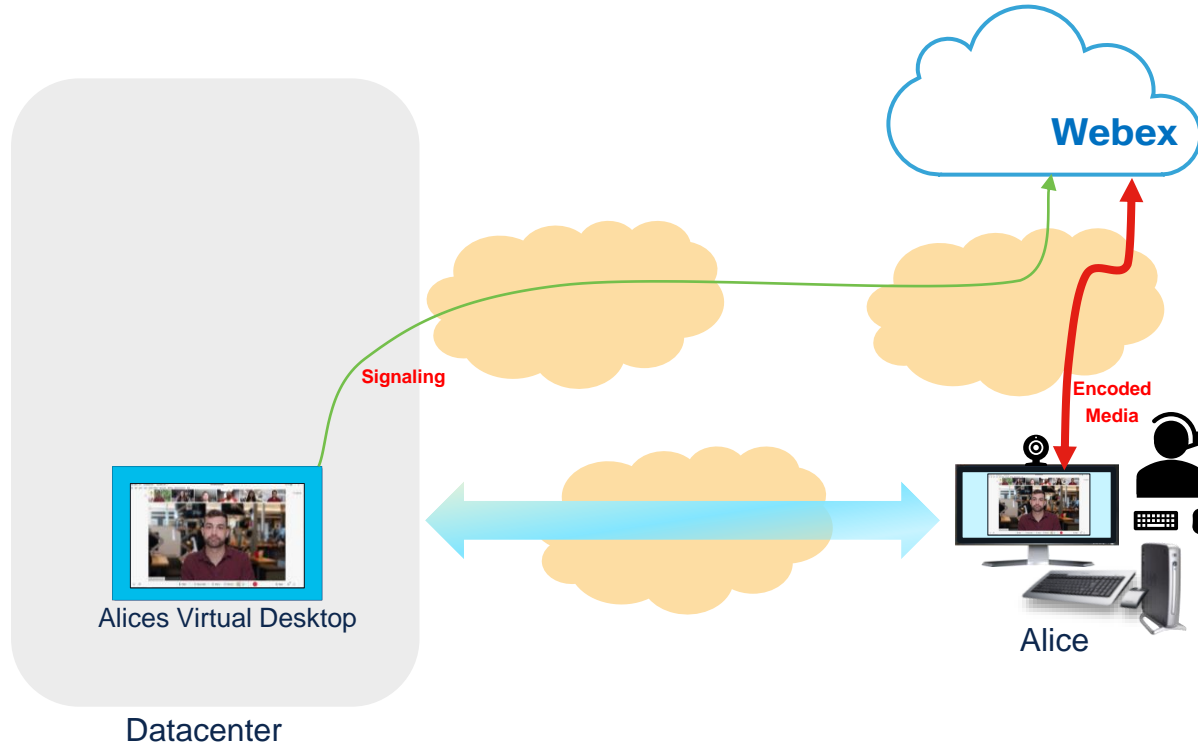


Offloading Media Termination to the Thin Client



- Webex App is installed on the VDI
- We install a media component on the thin client
 - “VDI plugin”

Offloading Media Termination to the Thin Client



- VDI plugin terminates voice and video media
- No embedding of media inside display protocol
- All media is encoded by Webex before being sent across network
- QoS can be applied
- Lower network and processing costs for VDI

Supported VDI Providers

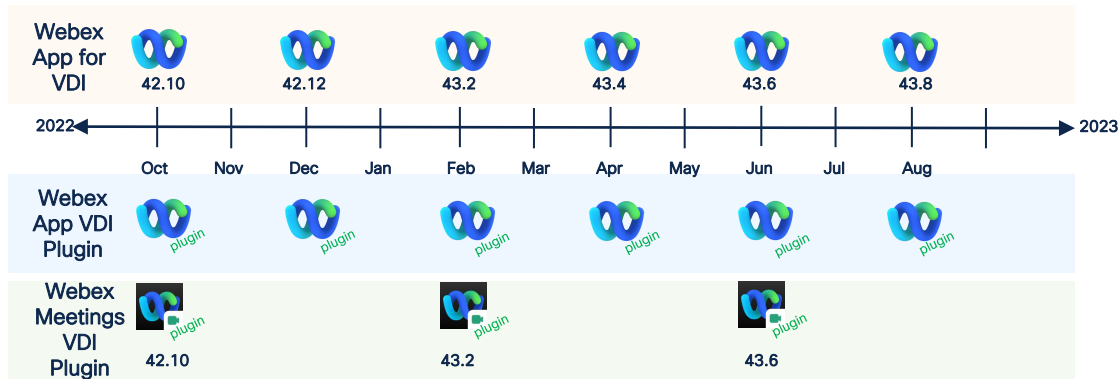
VDI Platform	Model	Model
Citrix	Citrix Virtual Apps and Desktops	Shared Desktop ✓ Published Desktop ✓ Published Application ✓
	XenApp and XenDesktop	Shared Desktop ✓ Published Desktop ✓ Published Application ✓
	Remote PC	Shared Desktop ✓
VMware	VMware Horizon	Shared Desktop ✓ Published Desktop ✓ Published Application ✓
	VMware Cloud	Shared Desktop ✓
Azure	Azure Virtual Desktop	Shared Desktop ✓ (Webex Meetings VDI plugin is not supported with AVD today)

Supported Thin Clients

Windows	macOS	Linux	Other
Windows 10 (32 and 64 bit)	Ventura (13.x)	Ubuntu (64 bit) <ul style="list-style-type: none"> • 16.04 • 18.04 • 20.04 • 22.04 	iGel OS <ul style="list-style-type: none"> • 11.04.100 and later
Windows 11 (32 and 64 bit)	Monterey (12.x)		Dell Wyse ThinOS <ul style="list-style-type: none"> • ThinOS 9.4
Windows 10 IoT Enterprise	Big Sur (11.x)	Unicon eLux (64 bit) <ul style="list-style-type: none"> • 6.5.2000 • 6.9 • RP6 2104 • RP6 2302 	10ZiG Zero Client Thin Clients
	Catalina (10.15)	Hp ThinPro <ul style="list-style-type: none"> • 7.1 • 7.2 	Stratodesk NoTouch OS

Take note of specific version requirements of VDI client in the Webex VDI documentation e.g. Citrix Receiver/Workspace, VMware Horizon Client etc

Release Plan and Support



Webex App for VDI

- Released every second month
 - Beta every other month

Webex App VDI Plugin

- Released every second month
- Backward compatible with Webex App for VDI for n-3 versions (6 months)

Webex Meetings VDI Plugin

- Released every 4 months
- Backward compatible with Webex App for VDI for n-2 versions (8 months)
- Release 43.6 will be backward compatible with all future versions of the Webex App for VDI. Webex Meetings VDI plugin functionality will be consolidated into the Webex VDI plugin

Webex App for VDI Installation

Switch	Purpose	Values
ALLUSERS=1	Admin install to "Program Files"	1
ENABLEVDI=2	Auto detect if Webex App is running in VDI	(1, 2)
AUTOUPGRADEENABLED=1	Webex App in VDI will auto update every 2 months	(0, 1)
ROAMINGENABLED=1	User config/cache is stored AppData\Roaming (for non persistent VDI session)	1
ACCEPT_EULA=true	Auto accept software license on behalf of user	n/a
EMAIL=\$mail	Retrieve the users email from LDAP at sign in time. This email will be used for the Webex App. User cannot override this without admin rights	\$mail, \$userPrincipalName, EMAIL=
AUTOSTART_WITH_WINDOWS=true	Webex App auto starts on login to Windows	true, false
DEFAULT_THEME="Dark"	Sets Webex App to run in dark theme (default)	Dark, Light
DELETEUSERDATA=0	Preserve user App database at install time	0, 1
INSTALLWV2=1	Install Microsoft Web View 2 at App install time	n/a
ENABLEOUTLOOKINTEGRATION=1	Enable Webex App presence and click2x integration with Outlook	0, 1

Webex App for VDI Example Installation

Example Installation

```
msiexec /i Webex.msi ALLUSERS=1 ENABLEVDI=2 AUTOUPGRADEENABLED=1 ROAMINGENABLED=1  
ACCEPT_EULA=true AUTOSTART_WITH_WINDOWS=true EMAIL=$mail /quiet
```

Fill out your session surveys!



Attendees who fill out a minimum of four session surveys and the overall event survey will get **Cisco Live-branded socks** (while supplies last)!



Attendees will also earn 100 points in the **Cisco Live Challenge** for every survey completed.



These points help you get on the leaderboard and increase your chances of winning daily and grand prizes

Continue your education

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- Visit the Cisco Showcase for related demos
- Book your one-on-one Meet the Engineer meeting
- Attend the interactive education with DevNet, Capture the Flag, and Walk-in Labs
- Visit the On-Demand Library for more sessions at www.CiscoLive.com/on-demand

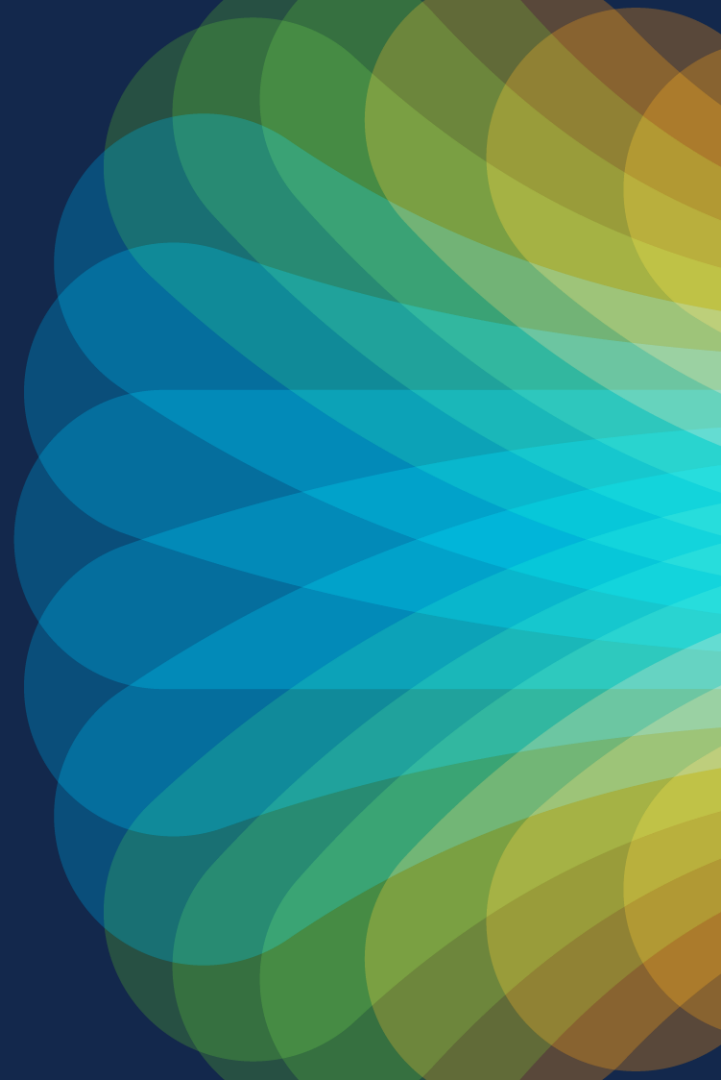


The bridge to possible

Thank you

CISCO *Live!*

#CiscoLive

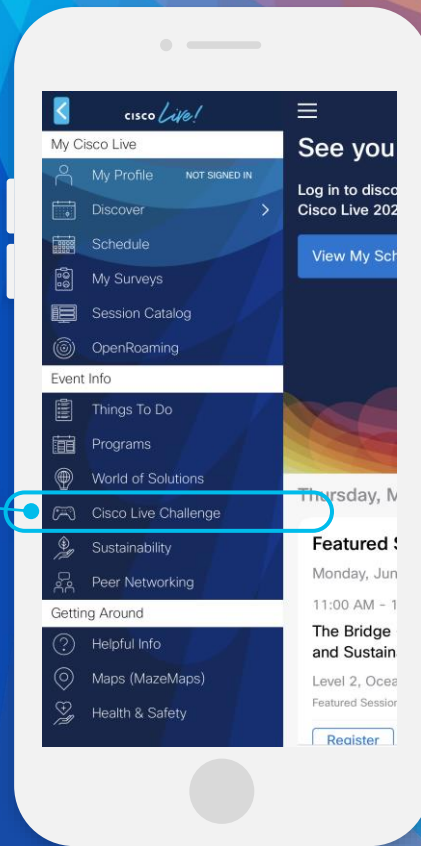
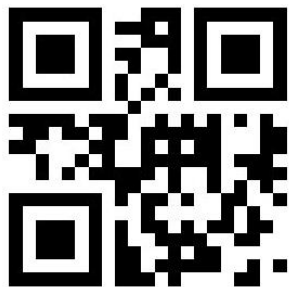


Cisco Live Challenge

Gamify your Cisco Live experience!
Get points for attending this session!

How:

- 1 Open the Cisco Events App.
- 2 Click on 'Cisco Live Challenge' in the side menu.
- 3 Click on View Your Badges at the top.
- 4 Click the + at the bottom of the screen and scan the QR code:



The Cisco Live! logo features the word "CISCO" in a bold, black, sans-serif font, followed by "Live!" in a black, cursive script font. The background of the entire image is a vibrant, multi-colored abstract pattern of overlapping, wavy bands in shades of red, orange, yellow, green, and blue, radiating from a bright white center on the right side.

CISCO *Live!*

Let's go

#CiscoLive