

What You Make Possible



Deploying Cisco Jabber Mobility Solutions

BRKUCC-2661

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Abstract

- This session explores how to plan and deploy Cisco Jabber mobility solution.
- This session will start with a brief overview of the solution and then cover the various core feature categories that Cisco Jabber mobility clients support followed with how to deploy and configure each of the feature category and then move on to the mobile clients provisioning. We will cover the following jabber mobile clients:
 - Cisco Jabber IM for iPhone;
 - Cisco Jabber for iPhone
 - Cisco Jabber for iPad
 - Cisco Jabber IM for Android
 - Cisco Jabber for Android

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Session Objectives

At the end of the session, attendees should be able to:

- ✓ Understand how Cisco Jabber mobility fits into the Cisco collaboration architecture
- ✓ Understand core feature functionalities of Cisco Jabber mobility solution
- ✓ Understand the considerations for a successful deployment of Cisco Jabber mobility solution
- ✓ Where Cisco Jabber mobility evolves going forward

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Session Logistics

Please consult the latest applicable product documentation for specific feature, software version, and hardware version support requirements

- While we will have an brief overview of the Cisco Jabber mobility solution, to gain a better understanding of the material presented, attendees should have some familiarity with Cisco Jabber mobile client applications. Attendees is also expected to have a good understanding of IP Telephony and familiarity with Cisco Unified Communications features and functions.
- Session time: 90 mins
- Please ask questions as we go – 3 types of questions:
 - ✓ Questions I'll answer
 - ✓ Questions I'll defer to later in the session
 - ✓ Questions I don't know the answer to, outside the scope of our session, or those that consume too much time



Come talk to me after session to chat and/or leave your name, email and question(s) so I can get back to you.

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Agenda

- Jabber Mobile Solution Architecture
- Jabber Mobile Clients
- Deployment Considerations & Guidance
- The future of Jabber Mobility

Jabber Mobile Solution Architecture



Jabber Mobile Solution Architecture

Section Agenda

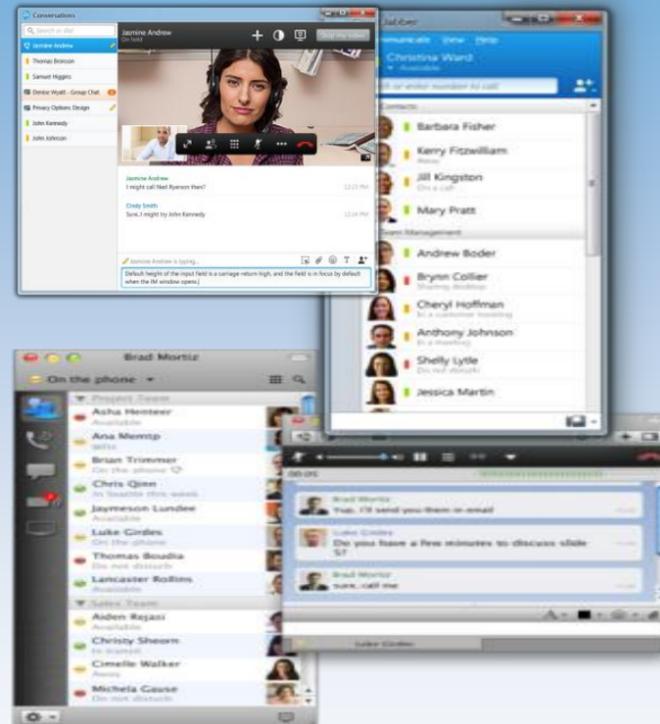
- Jabber Mobile Portfolio Introduction
- Jabber Mobile Solution Overview
- Core Feature Functionalities

Jabber Mobile Solution Architecture

Jabber Mobile Portfolio Introduction



Win, Mac



Tablet



Smartphone

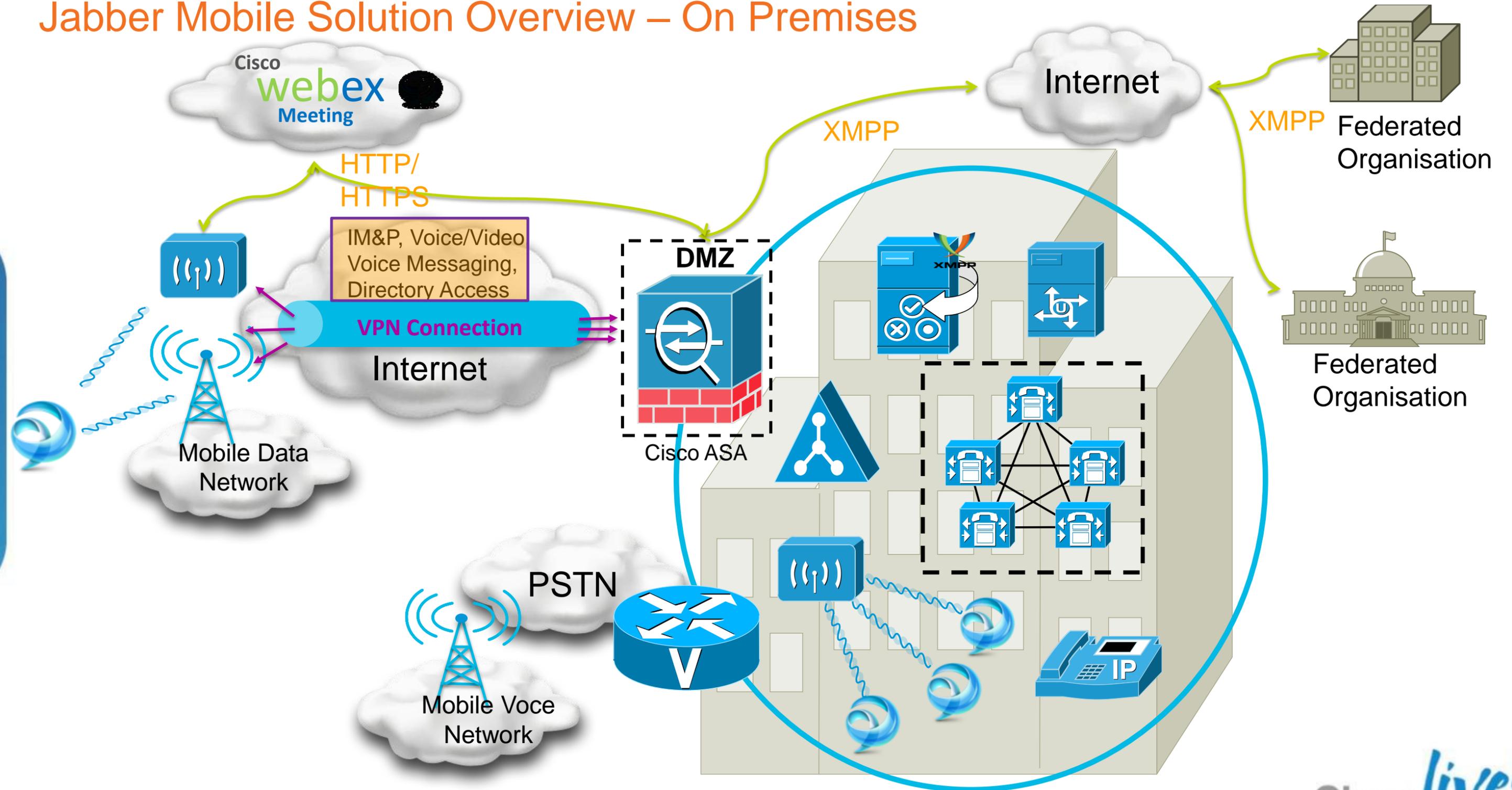


Web SDK



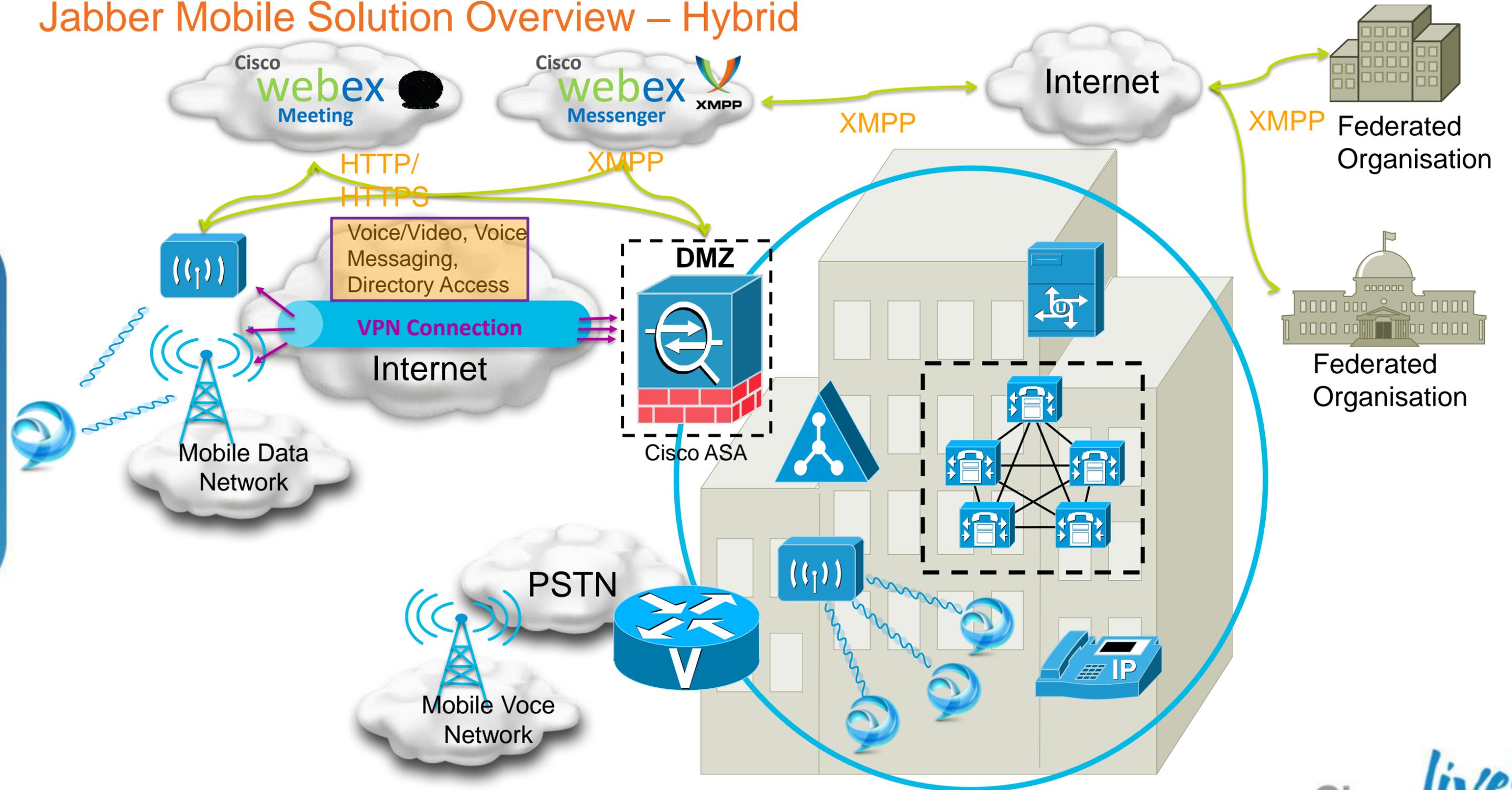
Jabber Mobile Solution Architecture

Jabber Mobile Solution Overview – On Premises



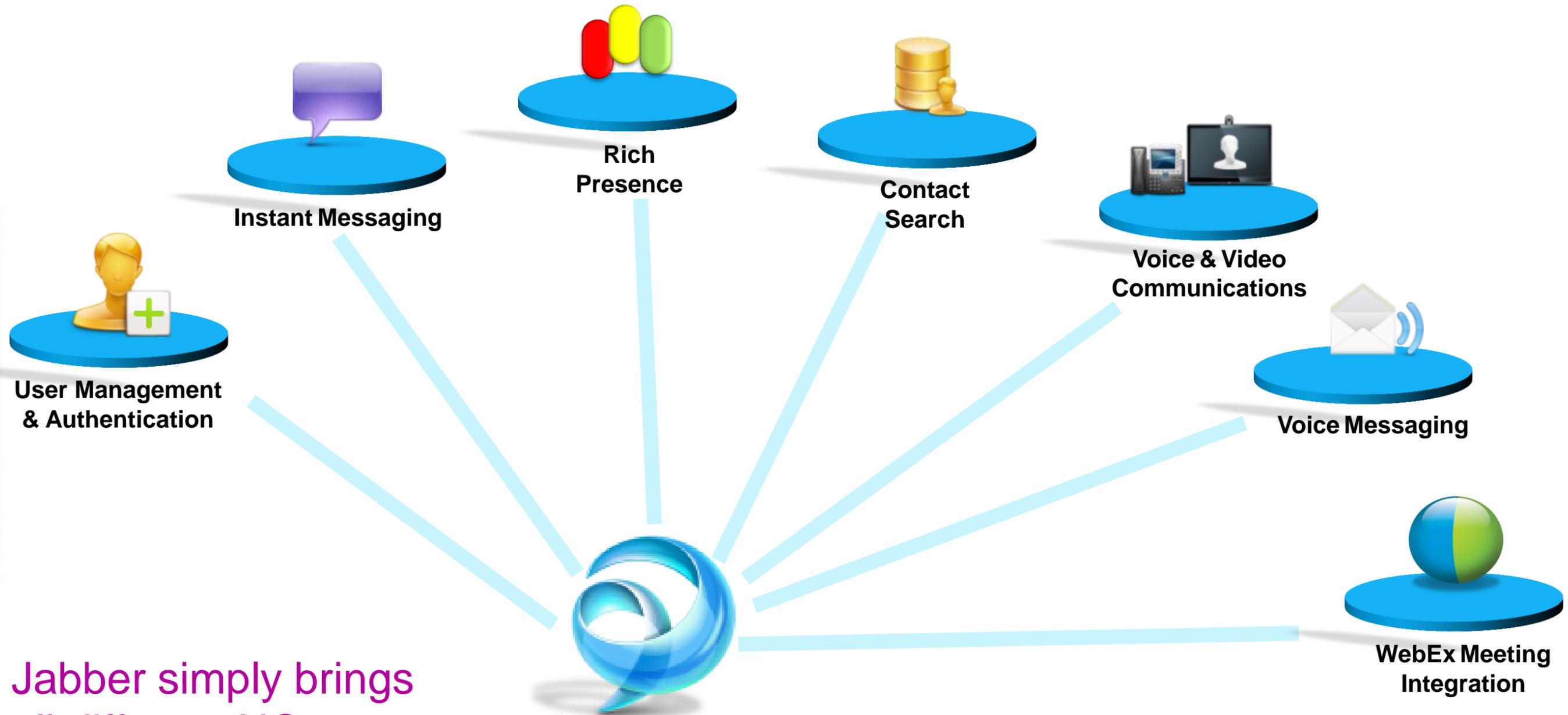
Jabber Mobile Solution Architecture

Jabber Mobile Solution Overview – Hybrid



Jabber Mobile Solution Architecture

Core Feature Functionalities

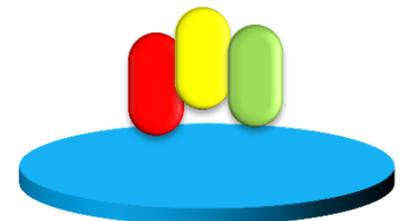


Jabber simply brings
all different UC
functionalities together

Jabber Mobile Solution Architecture

Core Feature Functionalities – Presence & Contact Management

- User Authentication
- Presence States
 - Available/Busy/DND
 - Automated States (On the Phone/Calendar/WebEx)
 - Custom States
- Search/Add Contacts from Corporate Directory
- Add Federated Contacts

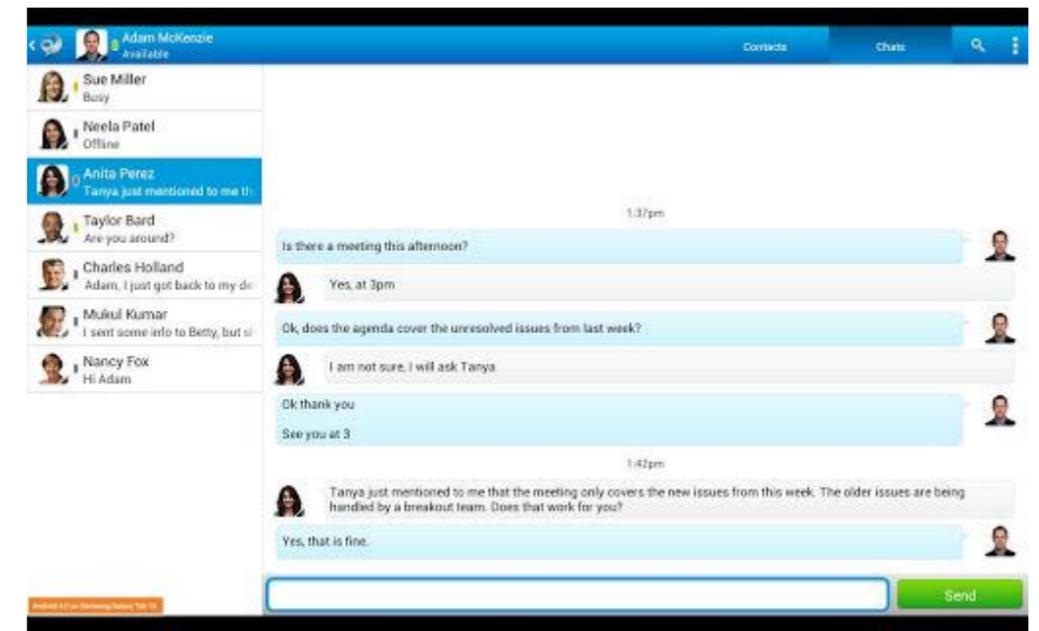
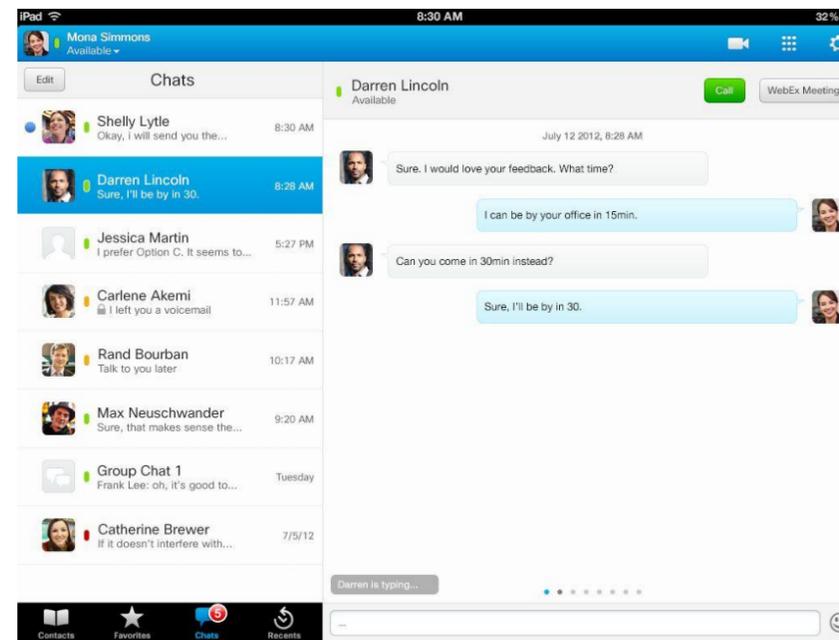
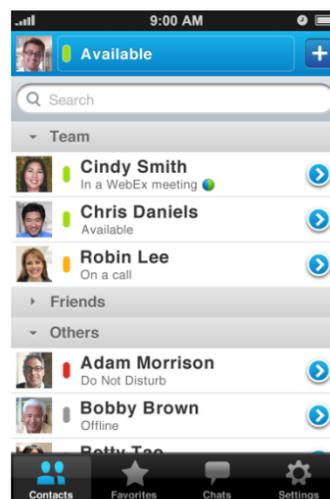


Jabber Mobile Solution Architecture

Core Feature Functionalities – Instant Messaging



- 1:1 Rich Chat
- Emoticon
- Participating Group Chat
- IM Logging ¹



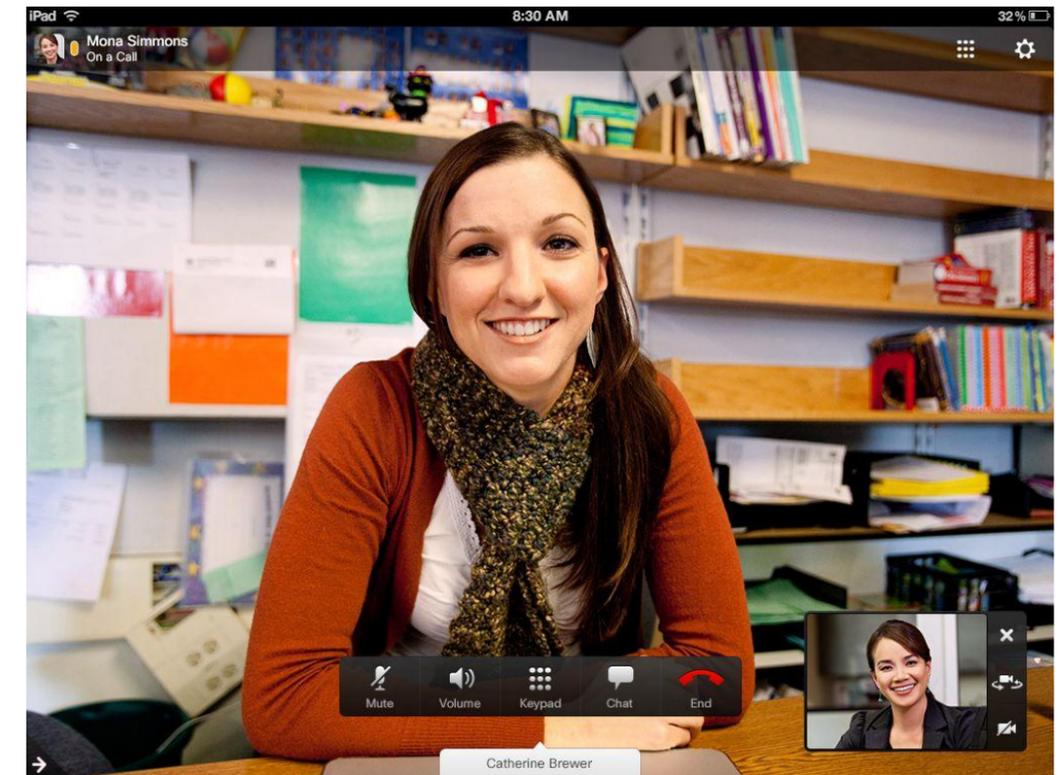
¹ Server IM logging. Mobile Clients doesn't support client side chat history

Jabber Mobile Solution Architecture

Core Feature Functionalities – Voice & Video Communication



- Standards based Voice/Video Calling with mid-call features (Hold, Transfer, Conference)
- Video Conferencing through MCU
- Dial via Office Calling
- WebEx Peer to Peer (P2P) Calling



Jabber Mobile Solution Architecture

Core Feature Functionalities – Visual Voicemail



- Display Voicemails
- Listen to Voicemails
- Call Back Voicemail Sender
- Display Voicemail Transcript ¹



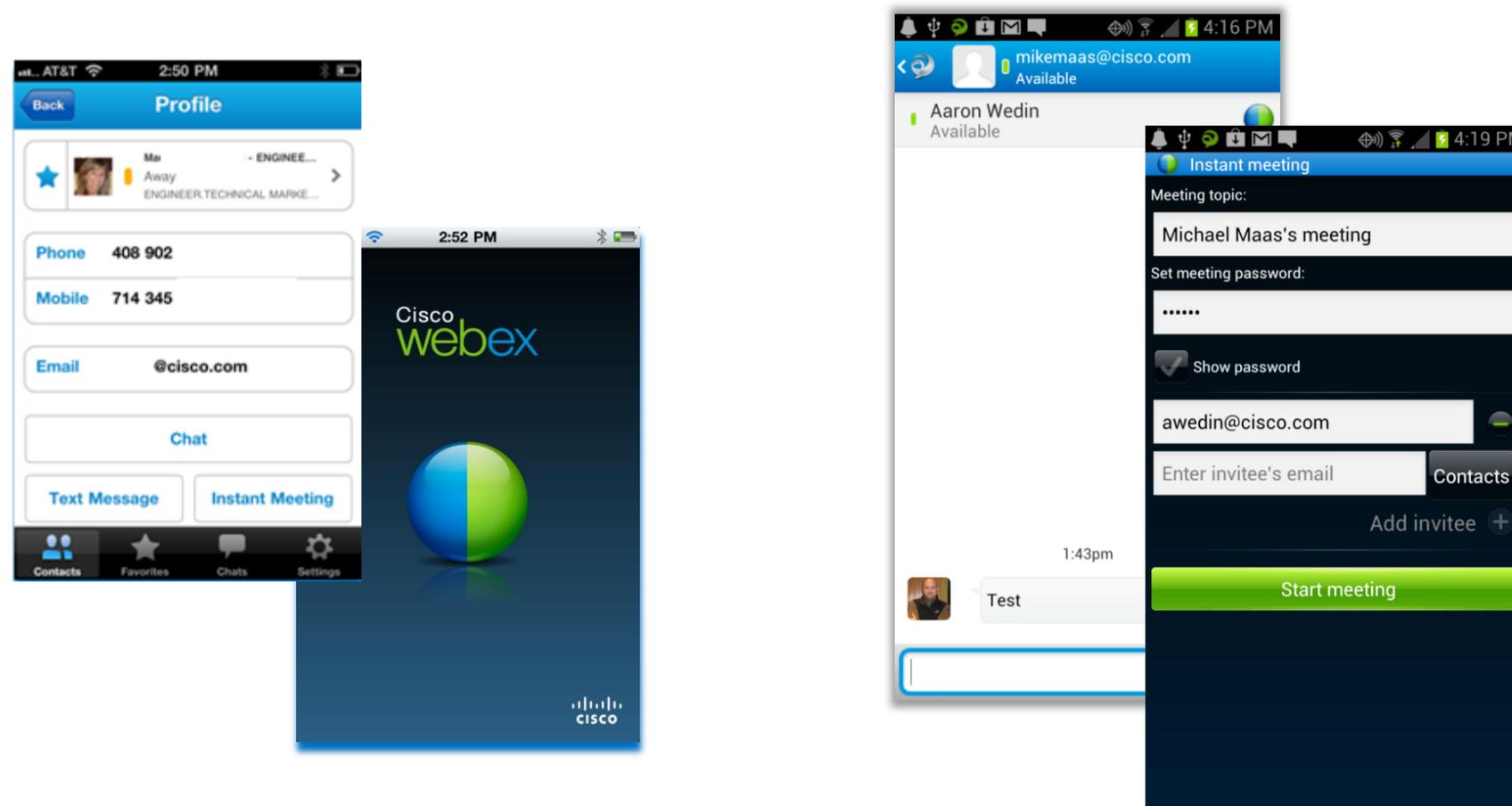
¹ Currently only available on Cisco Jabber for Android client

Jabber Mobile Solution Architecture

Core Feature Functionalities – Instant WebEx Meeting Escalation



- Start instant WebEx Meeting from within Jabber
- Join WebEx Meeting from within Jabber

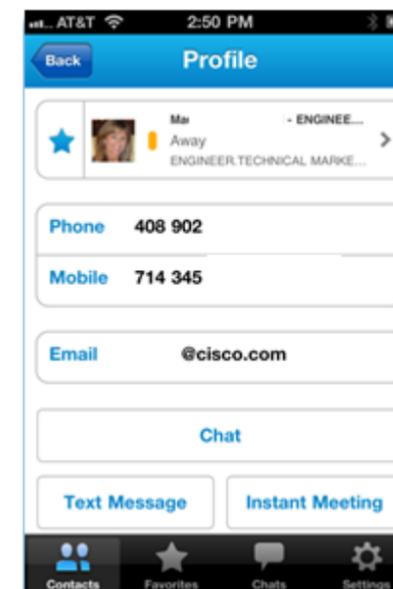


Jabber Mobile Solution Architecture

Core Feature Functionalities – Application Integration



- Click to Chat
- Click to Call
- Click to SMS
- Click to Email
- Click to Instant Meeting



Jabber Mobile Clients



Jabber Mobile Clients



Jabber
for iPhone



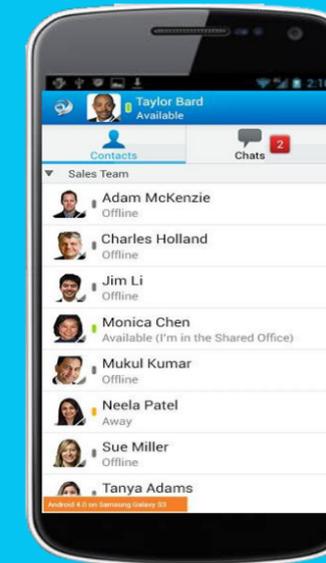
Jabber
for Android



Jabber
for iPad



Jabber IM
for iPhone



Jabber IM
for Android

Jabber Mobile Clients

Section Agenda

- Cisco Jabber for iPad
- Cisco Jabber IM for iPhone
- Cisco Jabber for iPhone
- Cisco Jabber IM for Android
- Cisco Jabber for Android

Jabber Mobile Clients

Cisco Jabber for iPad



- Integrated IM & presence, voice, video and voice messaging client
- Presence & Contact Management
- Instant Messaging
- Voice/Video Communication
- Visual Voicemail
- Application integration
 - Enable 3rd party clients to cross-launch jabber

Jabber Mobile Clients

Cisco Jabber IM for iPhone & Cisco Jabber for iPhone



- Cisco Jabber IM for iPhone
 - Search / Add Contacts from Corporate Directory
 - Presence Status
 - 1:1 Chat / Participating Group Chat
 - View Contact Profile
 - Click to IM, SMS, Email or Call
 - Start / Join instant WebEx Meeting
 - Multiple Resource Login
- Cisco Jabber for iPhone
 - VoIP over Wi-Fi / Mobile Data Network
 - Mid-call features
 - Move from / to Cisco IP Phone
 - Handoff call to mobile voice network
 - Corporate Directory Search
 - Visual Voicemail
 - Application integration: Enable 3rd party clients to cross-launch jabber

Jabber Mobile Clients

Cisco Jabber IM for Android & Cisco Jabber for Android



- Cisco Jabber IM for Android
 - Search / Add Contacts from Corporate Directory
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 - View Contact Profile
 - Click to IM, SMS, Email or Call
 - Start / Join instant WebEx Meeting
 - Multiple Resource Login
- Cisco Jabber for Android
 - VoIP over Wi-Fi / Mobile Data Network
 - Mid-call Features
 - Handoff Call to Mobile Voice Network
 - Corporate Directory Access
 - Visual Voicemail

Deployment Considerations & Guidance



Deployment Considerations & Guidance

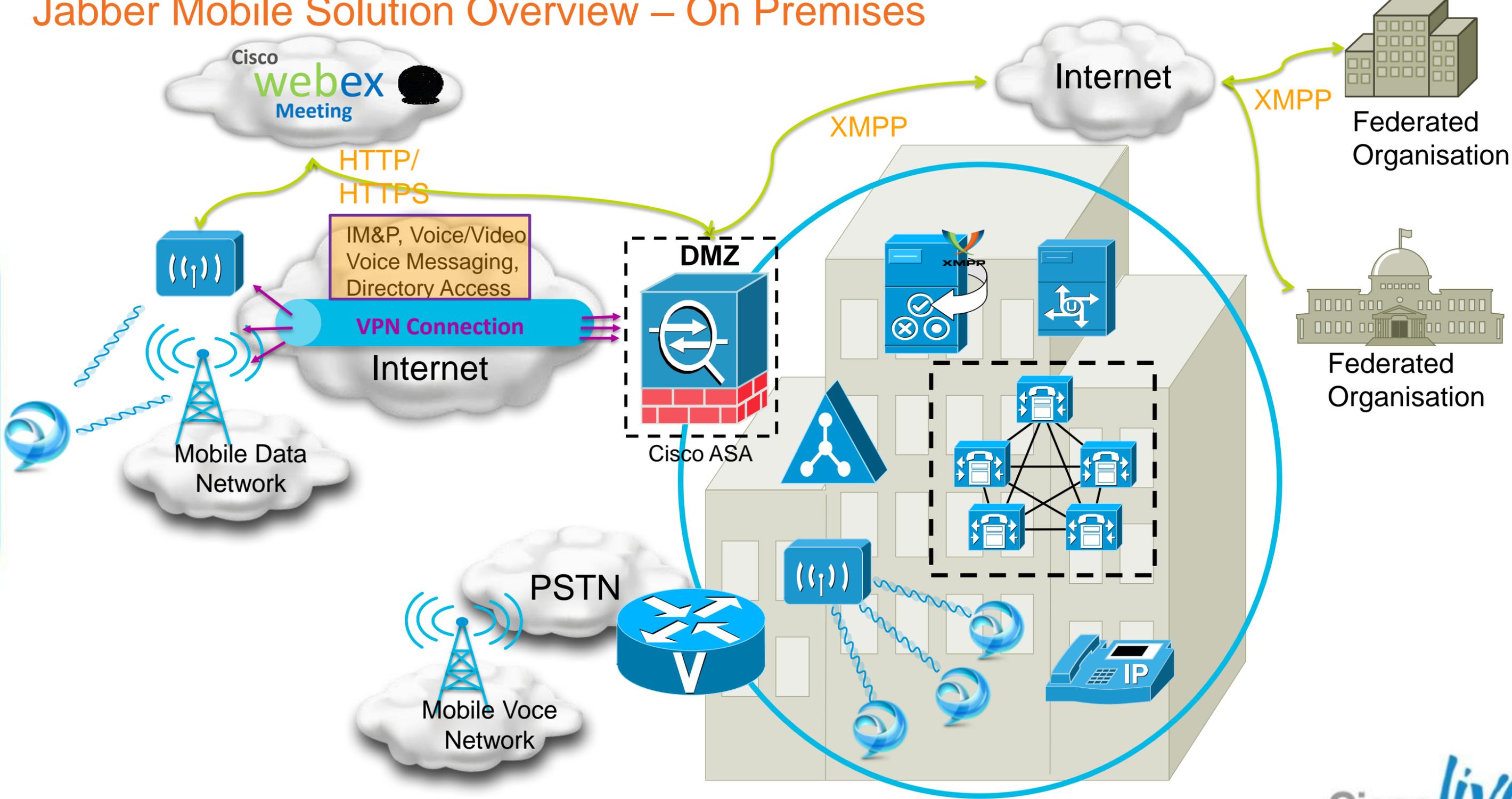
Section Agenda

- Architecture Recap
- Prerequisites
 - Wireless network connectivity
 - Secure remote access
 - System and Network Requirements
- Deployment: the Right Approach
 - Backend Environment Configuration
 - ✓ IM & presence, contact management
 - ✓ Voice/video communications
 - ✓ Voice messaging
 - ✓ WebEx meeting integration
 - ✓ Simple Configuration
 - Client Provisioning



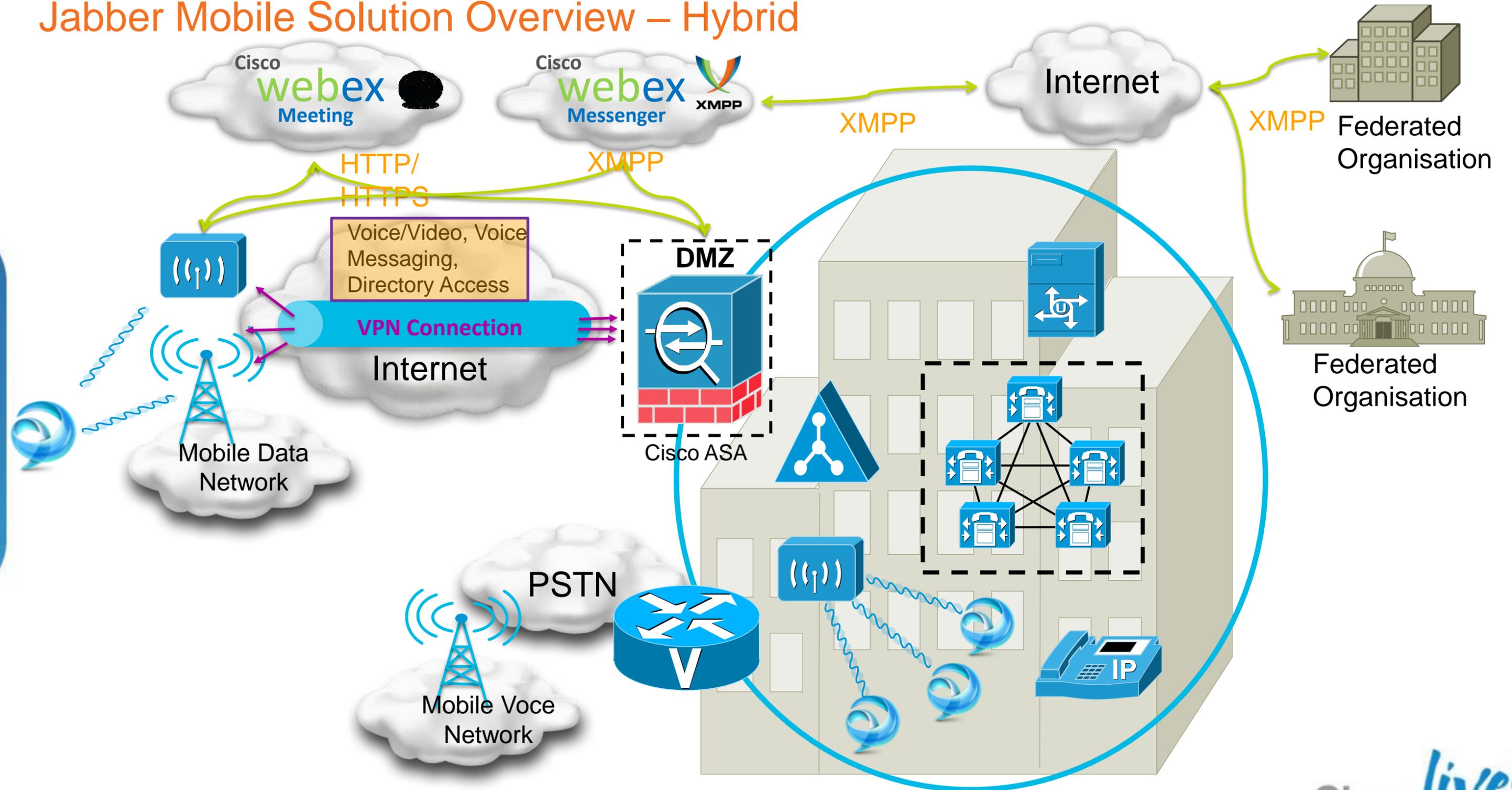
Jabber Mobile Solution Architecture

Jabber Mobile Solution Overview – On Premises

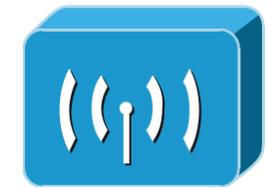


Jabber Mobile Solution Architecture

Jabber Mobile Solution Overview – Hybrid

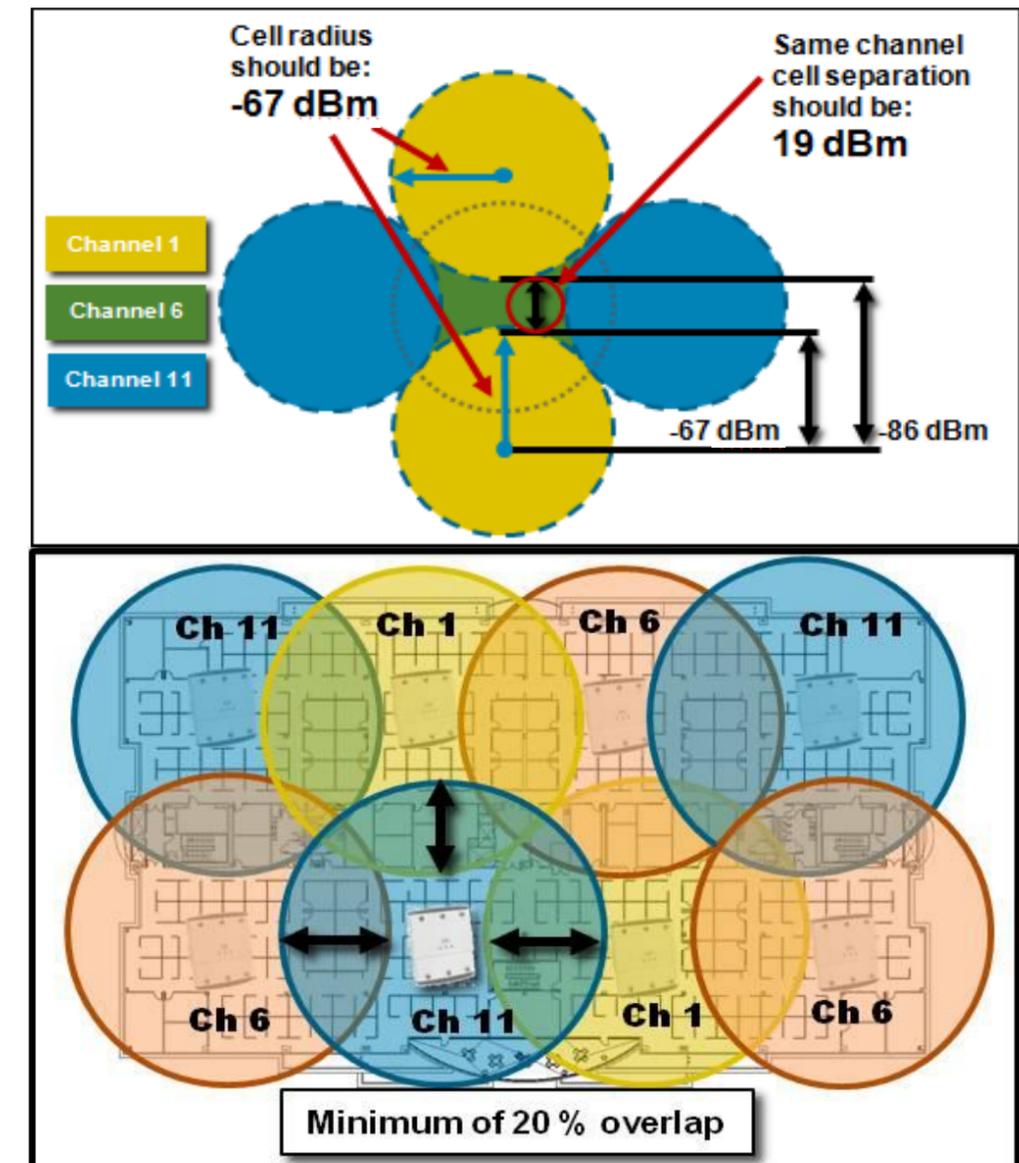


Wireless Network Connectivity



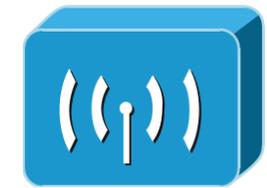
Design Considerations: Voice over WLAN

- Basic VoWLAN network design requirements:
 - ✓ Cell radius or power-level boundary of approximately -67 dBm (or less) is recommended in order to minimise packet loss.
 - ✓ Same channel cell separation of 19 dBm is recommended to minimise co-channel interference
 - ✓ Channel cell overlap (on non-adjacent channels) should be minimum of 20% to ensure seamless roaming between APs.
- Bluetooth headsets are not recommended with mobile client handsets due to potential interference on the 2.4 GHz band. Consider using 5 GHz band for wireless attachment.



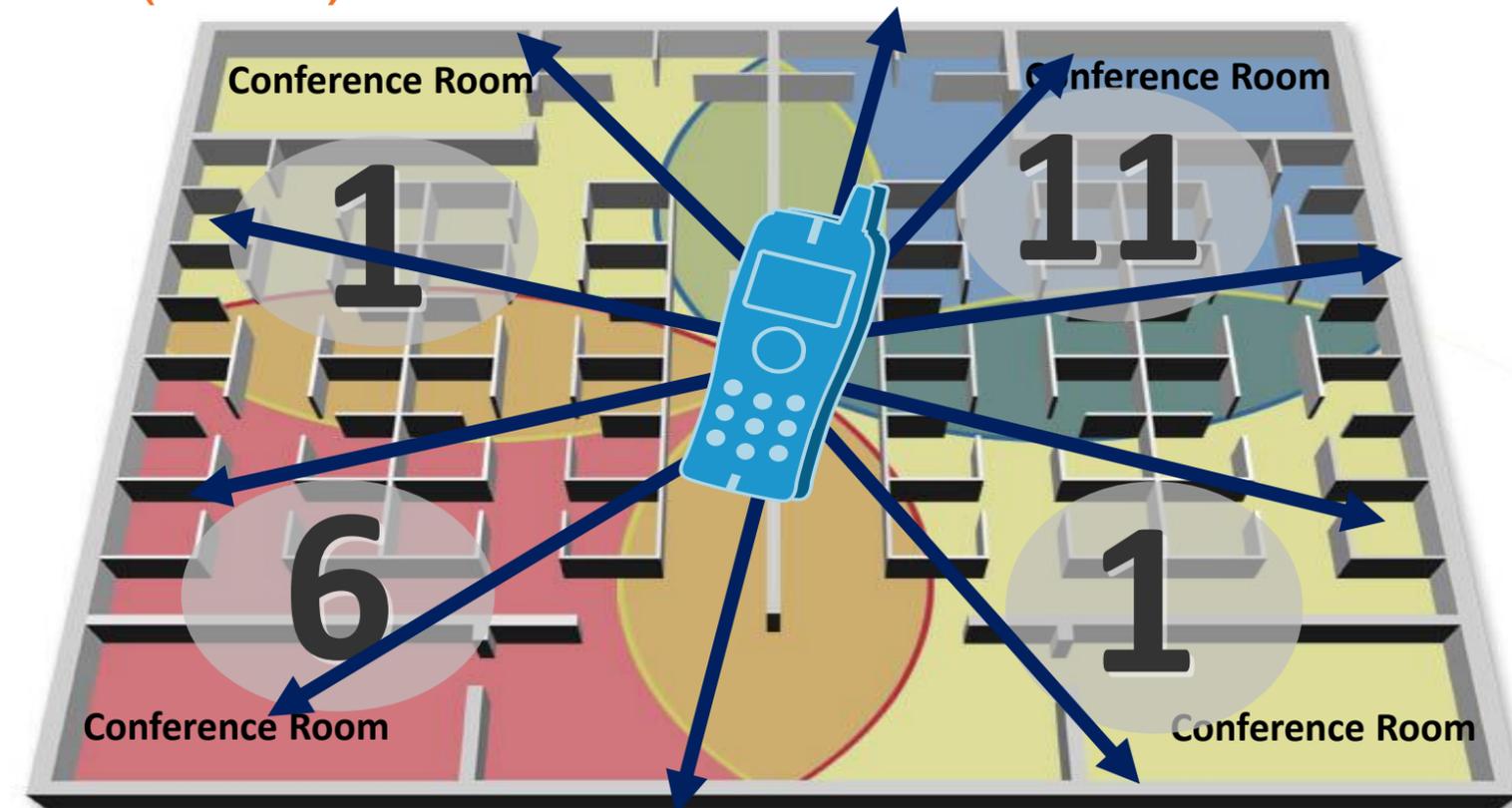
For more information on VoWLAN Design, see the *Voice over Wireless LAN 4.1 Design Guide* at: <http://www.cisco.com/en/US/docs/solutions/Enterprise/Mobility/vowlan/41dg/vowlan41dg-book.html>

Wireless Network Connectivity



Design Considerations: Voice over WLAN (cont.)

- WLAN Infrastructure must be deployed or already in place.
- Site-survey required prior to adding voice over WLAN devices.
- Even if existing voice over WLAN devices are already deployed, **new device/client types must be tested** prior to production rollout.



WLAN Roaming with Cisco Jabber:

- ✓ Ensure Cisco Jabber clients **only roam at layer 2** such that the same IP address can be used on the WLAN interface of the mobile device. Roaming at layer 3 will result in dropped calls due to change in IP address.
- ✓ Deploy mobile client devices on a WLAN network where the **same SSID is used across APs**. Roaming between APs is much slower if SSIDs are different.
- ✓ Ensure **all APs in the WLAN broadcast their SSID(s)**. If SSID is not broadcast by AP, user may be prompted by device to join other WiFi networks which will interrupt the call

Wireless Network Connectivity

Design Considerations: Quality of Service (QoS)



- Cisco Jabber mobile clients appropriately provide layer 3 QoS marking:
 - ✓ Voice media (RTP) – **DSCP 0x46 / PHB EF**
 - ✓ Voice signaling (SIP) – **DSCP 0x24 / PHB CS3**
- While Cisco Jabber on mobile devices that are WMM capable will mark layer 2 802.11 QoS User Priorities (UP) on call media and signaling packets, mobile devices with Wi-Fi drivers not supporting WMM will transmit and receive all packets at best effort:
 - ✓ Consider use of **SIP Media Snooping** on the WLAN infrastructure to detect SIP call setup and termination and to provide improved throughput including wireless call admission control
- In all cases ensure that layer 3 DSCP mapping (wireless to wired QoS) on the first hop switch port is configured such that traffic is given priority queuing for voice media and dedicated bandwidth for call signaling on the wired network

Wireless Network Connectivity



Design Considerations: Public and Private Wi-Fi Hotspots

- Enterprise-class WLAN connectivity is recommended to ensure acceptable voice quality and reliability for voice over WLAN calls.
- WLAN is everywhere, but...not all WLANs are equal
- Public and private Wi-Fi hotspots (home, hotel, airport, coffee shop, etc.) – **Calls are traversing the Internet!!**
 - X Not enterprise-class WLAN
 - X Not optimised for voice including no end-to-end QoS
 - X Best-effort traffic based on network capacity
 - X Usually unmanaged
 - X Poor throughput, jitter, delay, and packet-loss can occur before traffic even leaves Wi-Fi hotspot



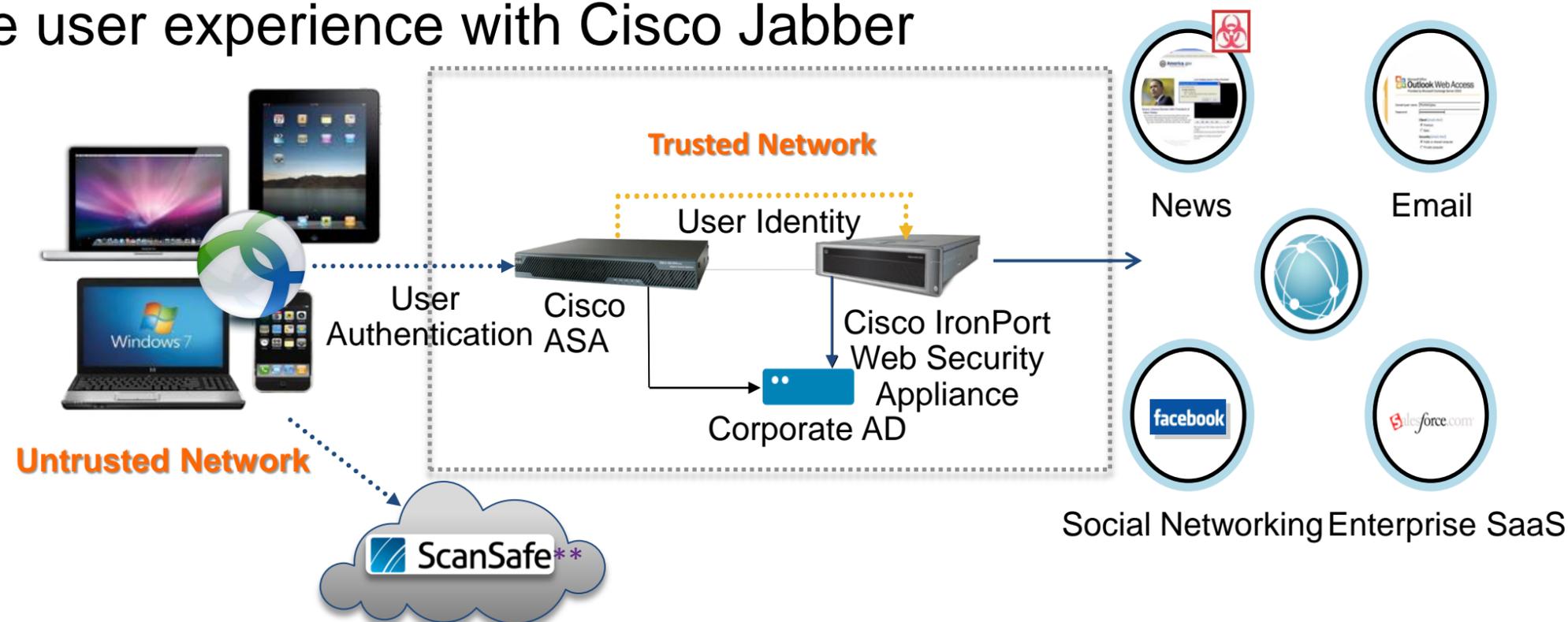
Cisco cannot guarantee acceptable voice quality or troubleshoot connectivity issues for calls traversing public or private WLANs.

Secure Remote Access

AnyConnect comes to help



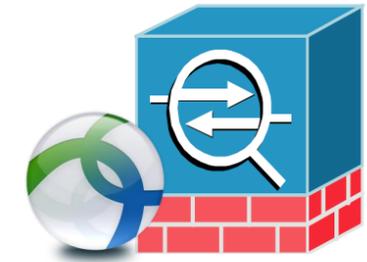
- Secure remote access with **Cisco AnyConnect Secure Mobility Client**
- Aligns with Cisco's BYOD strategy
- Provides consistent security experience across broad platforms
- Enterprise-grade encryption and authentication
- Simple user experience with Cisco Jabber



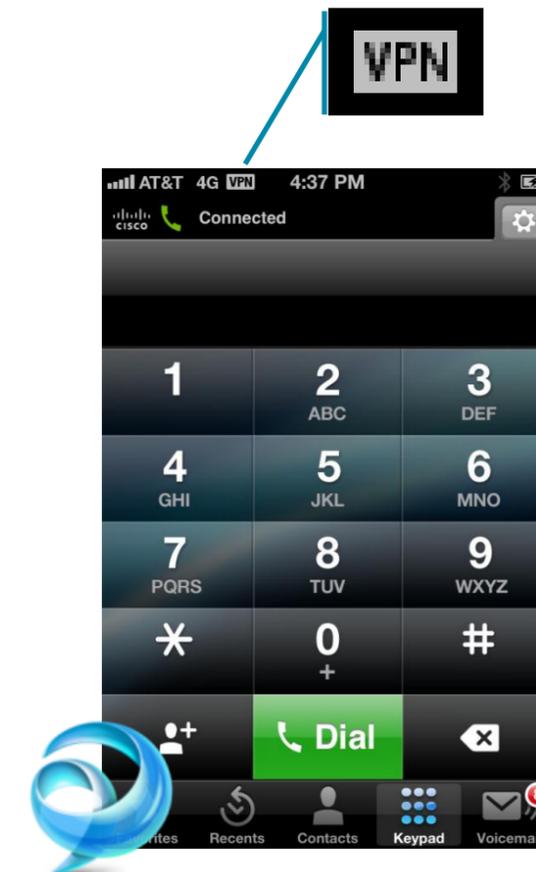
** Currently supported only on desktops

Secure Remote Access

Cisco Jabber & Cisco AnyConnect



- Interworking behind the scene
 - Manual user intervention is not required after initial setup
- Automatic VPN establishment/reconnect
 - Certificate based authentication for Cisco AnyConnect
 - Utilises Connect On Demand feature in Apple iOS
 - VPN session persistence – auto reconnect
- Control VPN tunnel access
 - Using Split Tunnel policy & ACL on ASA
 - Only the traffic Cisco Jabber generates



Secure Remote Access

Connect On-Demand Feature in iOS



- **Certificate-based** authentication only
- Based on domain name (no IP address support)
 - performs a 'pseudo' DNS query using 'VPN On-demand URL' field in the Unified CM Phone Configuration page
- **Actions (wild-card match support)**
 - Always Connect
 - Never Connect
 - Connect if Needed (only when the DNS query returns a failure)
- **Two ways to enable Connect On-Demand on iOS**
 - Automatically pushed to AnyConnect as part of Client Profile
 - End user to configure in his AnyConnect Connection Profile

iPhone Network Connection	Configuration in Unified CM (Phone Configuration Page)			
	Nothing Configured	Preset Wi-Fi Networks Only	On-Demand VPN URL Only	On-demand VPN URL & Preset Wi-Fi Networks
Mobile Data(3/4G)	No auto launch	No auto launch	Auto launch*	Auto launch*
Corporate Wi-Fi	No auto launch	No auto launch	Auto launch*	No auto launch
Non-corporate Wi-Fi	No auto launch	No auto launch	Auto launch*	Auto launch*

* Exact behaviour depends on how Connect On Demand is configured in Cisco AnyConnect.

The screenshot shows a configuration form with the following fields:

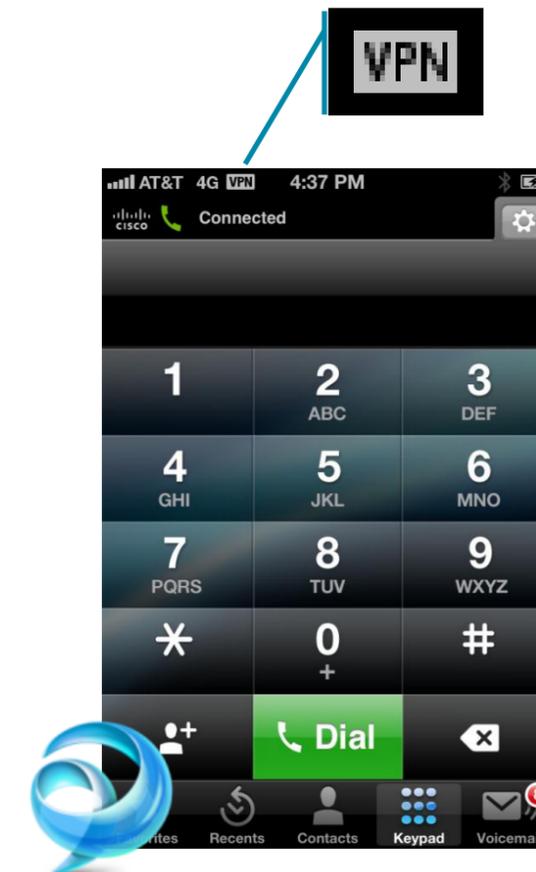
- On-Demand VPN URL:** ios-ondemand.cisco.com
- XML Options:** (empty)
- Reserved:** domain=cisco.com
- Preset Wi-fi Networks:** hqwifi/sjwifi/engwifi/jabberwifi

Secure Remote Access

Set Up Cisco AnyConnect



- Install and configure the Cisco Adaptive Security Appliance (ASA)
- Set up the ASA to support Cisco AnyConnect
 - Provision Application Profiles
 - Automate VPN Connection * (Optional)
 - Set up Certificated-Based Authentication * (Optional)
 - Set ASA Session Parameters
 - Set up Tunnel Policies
- Set up Automatic VPN Access on Unified CM * (Optional)
 - On-Demand VPN URL
 - Preset Wi-fi Networks



* Only required when using with the VPN on demand feature

System and Network Requirements

Cisco Jabber IM for iPhone

		Supported Product	Version
Cloud IM & Presence		Cisco WebEx Messenger service	7.5 or higher
On-Prem IM & Presence		Cisco Unified Presence	8.0 or higher
		Cisco Unified CM	8.0 or higher
		Directory service	Active Directory 2003, 2008 OpenLDAP v3
Port	Protocol	Network Protocol	Description
Inbound			
1024 - 65535	RTP	UDP	Peer to Peer audio & video when connecting to WebEx Messenger service. It is configurable on OrgAdmin
Outbound			
389 / 636	LDAP / LDAPs	TCP	Connects to an LDAP directory service
5222 / 5269	XMPP	TCP	Connects to Cisco Unified Presence for IM & Presence / XMPP Federation
80 / 443	HTTP / HTTPS	TCP	Connects to WebEx Messenger service for IM & Presence
1024 - 65535	N/A	UDP / TCP	Peer to Peer audio & video when connecting to WebEx Messenger service. It is configurable on OrgAdmin
80 / 443 / 5101	N/A	TCP / TCP / UDP	Used if Peer to Peer direct connection is not possible due to firewall

System and Network Requirements

Cisco Jabber for iPhone

	Supported Product	Version
Call Control	Cisco Unified CM	7.1(5), 8.0(3), 8.5(1), 8.6(2) and 9.0(1)
	Cisco Unified CME	8.6 and 8.8
	Cisco Unified CMBE	5000 and 6000
Voicemail	Cisco Unity Connection	7.x, 8.0, 8.5, 8.6, and 9.0
	Cisco Unity Express	8.6
Unified CM Failover	Cisco SRST	8.6 and 8.8
Directory	Active Directory	2003, 2008
	OpenLDAP	v3
VPN	Cisco ASA 5500	8.4(1) or later
	Cisco ASDM	6.4 or later

- **Required codec for calls**

- ✓ G.711u

- ✓ G.729a

- **Required codec for voicemail**

- ✓ G.711u

- ✓ G.729a

Port	Protocol	Network Protocol	Description
Inbound			
16384 - 32766	RTP	UDP	Receive RTP media streams for audio.
Outbound			
389 / 636	LDAP / LDAPs	TCP	Connects to an LDAP directory service
69	TFTP	UDP	Connects to TFTP server
5060 / 5061	SIP	(UDP/TCP) / TCP	Provides SIP call signaling
2748	QBE	TCP	Deskphone Integration
143 / 993 / 7993	IMAP / IMAP SSL / IMAP TLS	TCP	Connects to Unity Connection to access, download, and play voicemail
16384 - 32766	RTP	UDP	Send RTP media streams for audio

System and Network Requirements

Cisco Jabber for iPad

	Supported Product	Version
IM & Presence	Cisco WebEx Messenger service	7.5 and higher
	Cisco Unified Presence	8.0, 8.5, 8.6 and 9.0
Call Control	Cisco Unified CM	7.1.5, 8.0.3, 8.5.1, 8.6.2
	Cisco VCS	6.0 and later
	Cisco TMS	13.1 and later
	Cisco Jabber Video service	Latest service available
Voicemail	Cisco Unity Connection	8.5, 8.6, 9.0
Directory	Active Directory	2003, 2008
	OpenLDAP	v3
Cisco Unified CM Failover	Cisco SRST	8.6
VPN	Cisco ASA	

- **Required codec for calls**

- ✓ G.711u, G.711a

- ✓ G.722.1

- ✓ H.264 VAG encoding

- **Required codec for voicemail**

- ✓ G.711u, G.711a

- ✓ Linear PCM

- ✓ GSM 6.10

System and Network Requirements

Cisco Jabber for iPad (Cont.)

Port	Protocol	Network Protocol	Description
Inbound			
16384 - 32766	RTP	TCP	Receive RTP media streams for Unified CM audio & video.
1024 - 65535	N/A	UDP / TCP	Peer to Peer audio & video when connecting to WebEx Messenger service. It is configurable on OrgAdmin
Outbound			
389 / 636	LDAP / LDAPs	TCP	Connects to an LDAP directory service
5222 / 5269	XMPP	TCP	Allow third party XMPP client connection / XMPP federation
69	TFTP	UDP	Connects to TFTP server
8443	N/A	TCP	Connects to CCMCIP server
5060 / 5061	SIP	(UDP/TCP) / TCP	Provides SIP call signaling
143 / 993 / 7993	IMAP / IMAP SSL / IMAP TLS	TCP	Connects to Unity Connection to access, download, and play voicemail
16384 - 32766	RTP	UDP	Send RTX media streams for Unified CM audio & video
1024 - 65535	N/A	UDP / TCP	Peer to Peer audio & video when connecting to WebEx Messenger service. It is configurable on OrgAdmin
80 / 443 / 5101	N/A	TCP / TCP / UDP	Used if Peer to Peer direct connection is not possible due to firewall

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On-Prem IM & Presence	Cisco Unified Presence	8.0, 8.5, 8.6, 9.0
	Cisco Unified CM	8.0 or higher
	Directory service	Active Directory 2003, 2008 OpenLDAP v3

Port	Protocol	Network Protocol	Description
Outbound			
389 / 636	LDAP / LDAPs	TCP	Connects to an LDAP directory service
5222 / 5269	XMPP	TCP	Connects to Cisco Unified Presence for IM & Presence / XMPP Federation
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System and Network Requirements

Cisco Jabber for Android

	Supported Product	Version
Call Control	Cisco Unified CM	7.1.5, 8.0.3, 8.5.1, 8.6.2 and 9.0.1
Voicemail	Cisco Unity Connection	7.x, 8.0, 8.5, 8.6, and 9.0
	Cisco Unity Express	8.6
Unified CM Failover	Cisco SRST	8.6 and 8.8
Directory	Active Directory	2003, 2008
	OpenLDAP	v3
VPN	Cisco ASA 5500	8.4(1) or later
	Cisco ASDM	6.4 or later

- **Required codec for calls**

- ✓ G.711u

- ✓ G.729a or G.729b

- **Required codec for voicemail**

- ✓ G.711u

Port	Protocol	Network Protocol	Description
Inbound			
16384 - 32766	RTP	UDP	Receive RTP media streams for audio.
Outbound			
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5060 / 5061	SIP	(UDP/TCP) / TCP	Provides SIP call signaling
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16384 - 32766	RTP	UDP	Send RTP media streams for audio

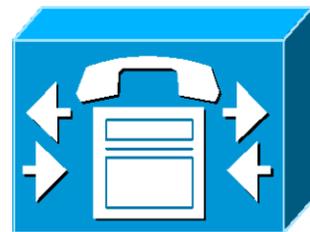
Deployment: the Right Approach

From a user's perspective

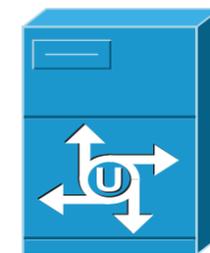
-  I want to **find** and **add** contacts to my contact list and be able to see their **status**
-  I want to have **IM** conversation with my contact to quickly confirm yes/no questions
-  I want to make **voice call** with my contact to discuss an project
-  I want to make **video call** to my colleagues and deliver a training program
-  I want to check my **voice messages**
-  I want to have a **WebEx session** with my contacts



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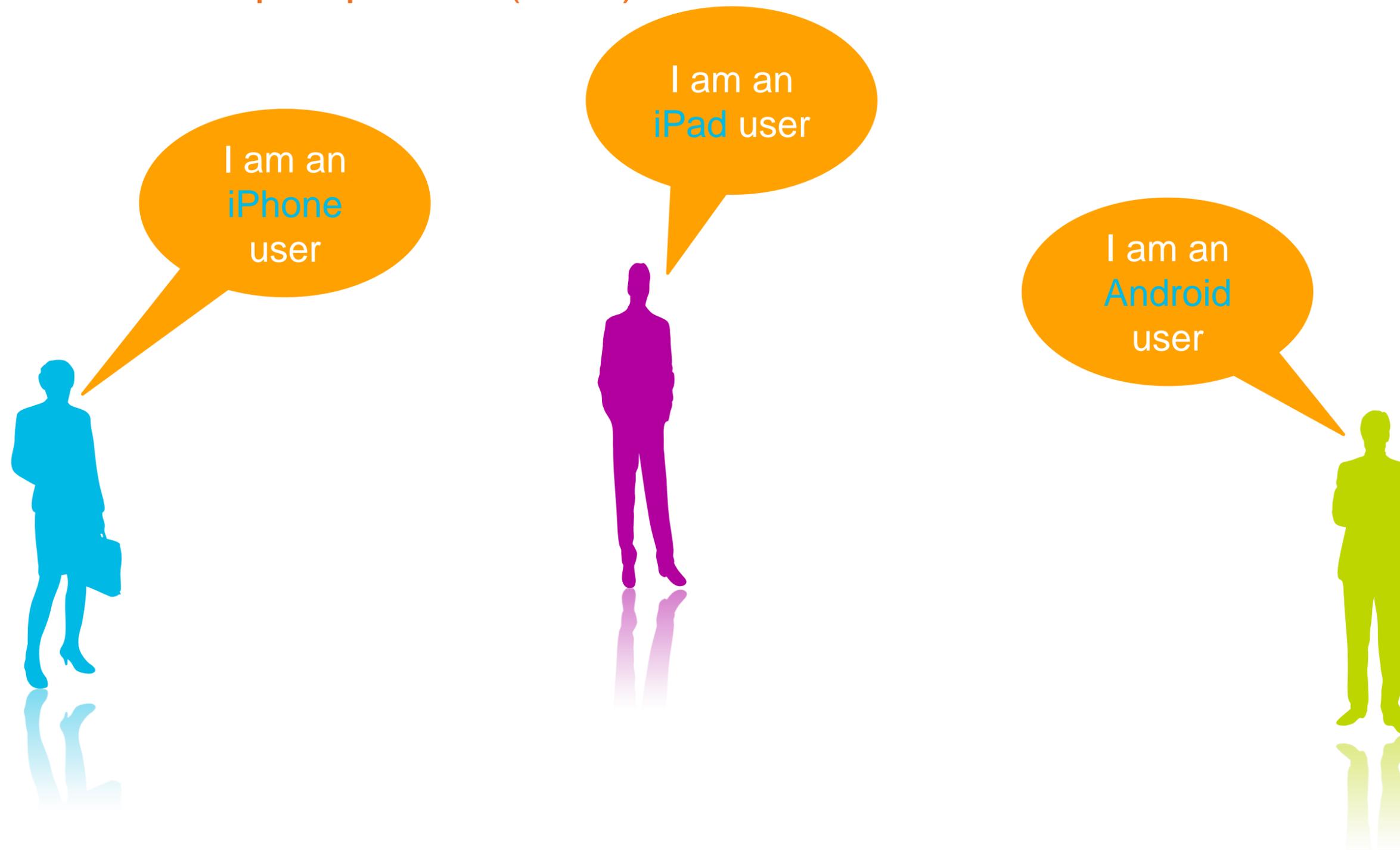
Cisco Public



Cisco *live!*

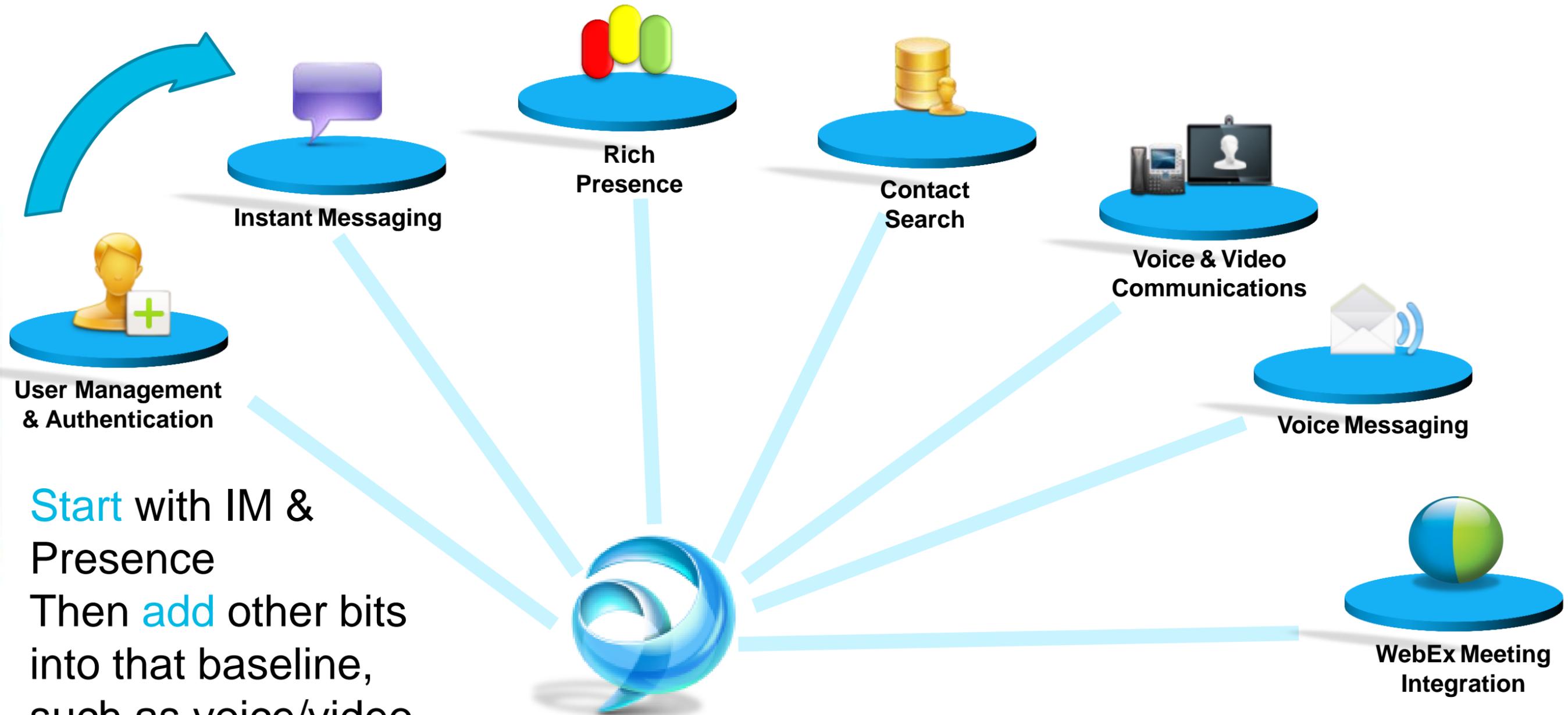
Deployment: the Right Approach

From a user's perspective (cont.)



Deployment: the Right Approach

Backend Environment Configuration



Start with IM & Presence

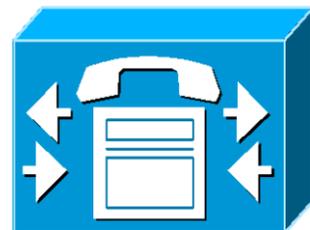
Then **add** other bits into that baseline, such as voice/video, voice messaging, etc.

IM & presence, contact management

On-Premises

Pre CUCM 9.x

- Client connects to CUP
- Client configuration on Unified CM & CUP
- IM and presence provided by CUP
- Contact source on LDAP (AD)



CUCM 9.x+

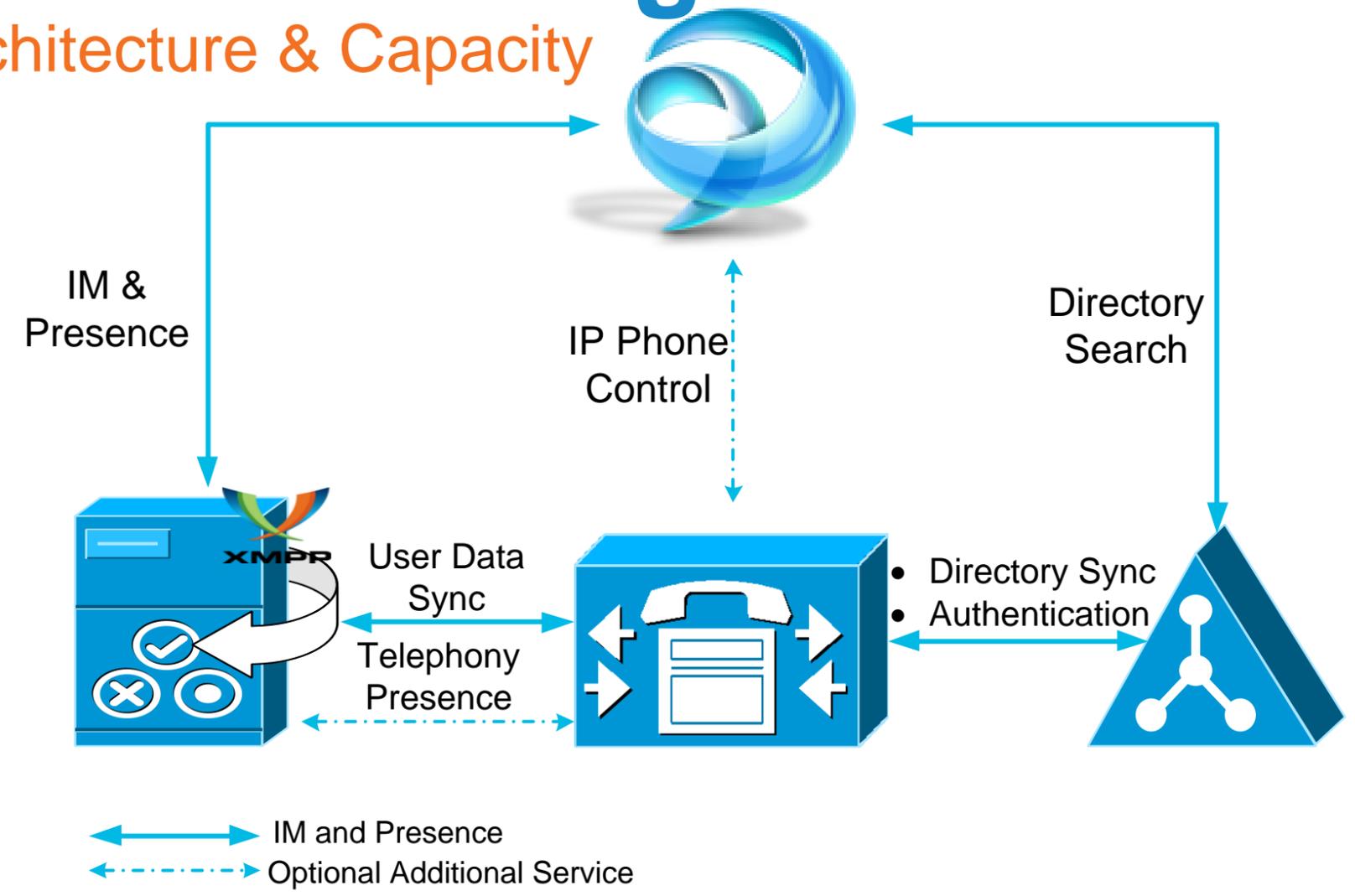
- Client connects to Unified CM IM & Presence
- Client configuration on Unified CM
- IM and presence provided by Unified CM IM & Presence
- Contact source on LDAP (AD)



IM & presence, contact management

On-Premises – IM & Presence Architecture & Capacity

- Unified CM
Provide user configuration, device configuration, licensing and directory integration services.
- Cisco Unified Presence
Provides instant messaging and presence capabilities.
- LDAP Directory
Provides contact search and retrieval services.



Mode Of Operation	Maximum of Users Supported
Cisco Unified CM mode ¹	45,000 *
IM-only-user mode ²	75,000 *

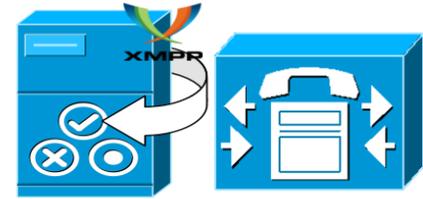
¹ CUP integrates into a full Cisco UC environment to provide IM, presence and suite of unified communications services.

² CUP provides IM, presence solution for users who are not using Unified CM for call control.

* No administrative limit. The number of users is based on validation of CUP service on an expected user profile



IM & presence, contact management

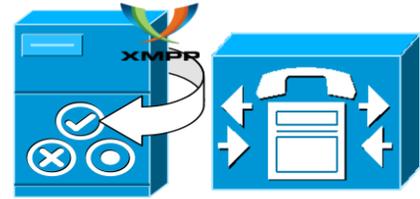


On-Premises – Pre CUCM 9.x Deployment

1. Install and configure Unified CM and LDAP Directory
2. Set up users on Unified CM
 - I. Sync users from LDAP Directory
 - II. Assign users to the following user group: **Standard CCM End Users.**
3. Install and configure CUP
4. Verify essential services on Unified CM and CUP
 - ✓ Unified CM: **Cisco AXL Web Service**
 - ✓ CUP feature services: **Cisco UP SIP Proxy; Cisco UP Presence Engine; Cisco UP Sync Agent; Cisco UP XCP Connection Manager; Cisco UP XCP Authentication Service;**
 - ✓ CUP network services: **Cisco UP XCP Router**
5. Specify capabilities assignment for end users on Unified CM
 - ✓ **Enable CUP (Cisco Unified Presence)**
 - ✓ **Enable CUPC (Cisco Unified Personal Communicator)**
6. Create LDAP profile on CUP
 - ✓ Create LDAP profile; Verify LDAP attribute mappings

IM & presence, contact management

On-Premises – Pre CUCM 9.x Deployment (Cont.)



Capabilities Assignment

The screenshot shows the Cisco Unified CM Administration interface. The left-hand navigation menu is expanded to 'Application Server', and the 'Capabilities Assignment' option is highlighted. Other options in the 'Application Server' menu include License Unit Report, License Unit Calculator, and License File Upload.

LDAP Profile

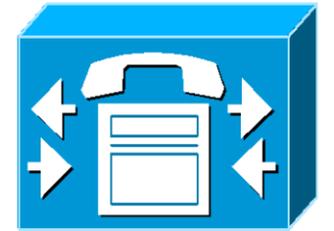
The screenshot displays the Cisco Unified Presence Administration interface for LDAP Profile Configuration. The 'Name' field is set to 'cupLDAPprofile'. The 'Bind Distinguished Name (DN)' is 'cn=cupsLDAPAdmin, ou=jabberpoc, dc=jabberpoc, dc=com'. The 'Primary LDAP Server' is 'AD_sync'. A checkbox 'Make this the default LDAP Profile for the system.' is checked. The 'Users in Profile' section is visible at the bottom.

Attributes Mapping

The screenshot shows the Cisco Jabber LDAP Attribute Mapping configuration page. It includes a table for mapping UPIC User Fields to LDAP User Fields:

UPIC User Fields	LDAP User Fields	LDAP User Fields
UserID	sAMAccountName	givenname
LastName	sn	middleName
Nickname	nickname	Photo
		http://10.74.29.15/photo/%s&AllAccount

IM & presence, contact management

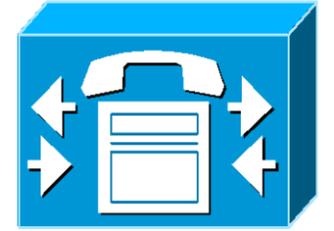


On-Premises – CUCM 9.x+ Deployment

1. Install and configure Unified CM and LDAP Directory
2. Set up users on Unified CM
 - I. Sync users from LDAP Directory
 - II. Assign the users to the following user group: **Standard CCM End Users.**
3. Install and configure Unified CM IM & Presence
4. Verify essential service on Unified CM and Unified CM IM & Presence
 - ✓ Unified CM: **Cisco AXL Web Service**
 - ✓ Unified CM IM & Presence:
 - Feature services: **Cisco SIP Proxy; Cisco Presence Engine; Cisco Sync Agent; Cisco XCP Connection Manager; Cisco XCP Authentication Service;**
 - Network services: **Cisco XCP Router**
5. Create UC services and associate them with a service profile on Unified CM
 - ✓ Required UC Services: **Directory; IM and Presence;**
6. Enable IM and Presence and add your service profile to users on Unified CM
 - ✓ Enable individual user / Enable multiple users (Bulk configuration)

IM & presence, contact management

On-Premises – CUCM 9.x+ Deployment (Cont.)



■ UC Services

Name	UC Service Type	Product Type
AD79	Directory	Directory
CUCM90	CTI	CTI
Mailstore	MailStore	Exchange
Voicemail	Voicemail	Unity Connection
WebEx Meeting	Conferencing	WebEx (Conferencing)
imp90	IM and Presence	Unified CM (IM and Presence)

■ Service Profile

Directory Profile

Primary: AD79

Secondary: <None>

Tertiary: <None>

Username: administrator@jabberpoc.com

Search Base 1: ou=jabberpoc,dc=jabberpoc,dc=com

IM and Presence Profile

Primary: imp90

■ Enable IM & Presence and add service profile

Service Settings

Home Cluster

Enable User for Unified CM IM and Presence (Configure IM and Presence in the associated UC Service Profile)

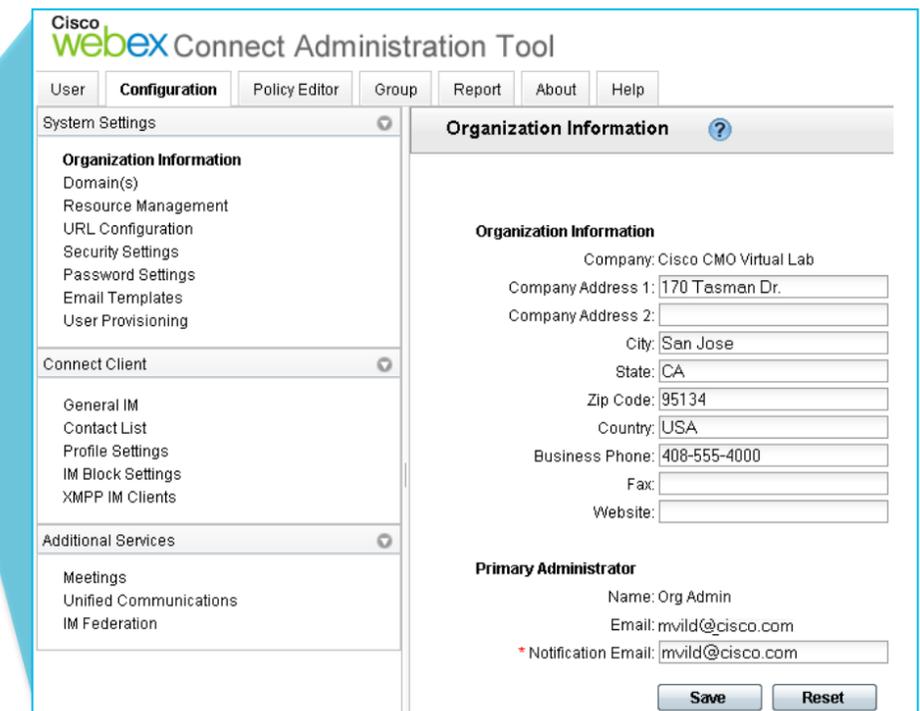
UC Service Profile: UC

IM & presence, contact management

On-Cloud

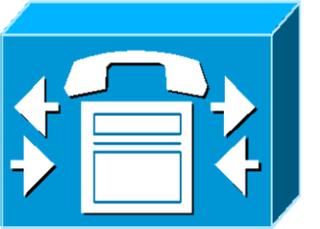


- Client connects to WebEx messenger service
- Configuration information provided from OrgAdmin tool
 - User Management
 - Group Management
 - Configuration
 - Policy
 - Reporting
- IM and presence service cloud based
- Contact source is cloud based



Voice/Video Communications

Voice/video calling with Unified CM – Recommended Procedure



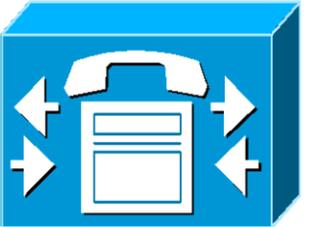
1. Installing COP File for Application Dial Rules ¹ and Devices ²
2. Setting up System SIP Parameters
3. Setting up Dedicated SIP Profile
4. Setting up the Devices
5. Setting up User Association

¹ For Unified CM release 8.5 and earlier

² New COP files are required for Jabber mobile clients

Voice/Video Communications

Voice/video calling with Unified CM – Installing COP



Place the COP file on an FTP or SFTP server that is accessible from your Unified CM servers

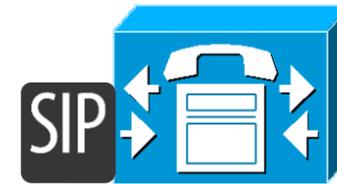
Install the COP file on the Publisher server in your Unified CM cluster by following these steps:

1. Select **Cisco Unified OS Administration** in the Navigation drop-down list and then select **Go**
2. Select **Software Upgrades > Install/Upgrade**
3. Specify the location of the COP file and provide the required information, Select **Next**
4. Select the device COP file, Select **Next**
6. Follow the instructions on the screen, Select **Next**
7. Reboot Unified CM at a time of low usage
8. Let the system fully return to service

Important - To avoid interruptions in service, ensure that each server has returned to active service before you perform this procedure on another server

Install the COP file on each Subscriber server in the cluster. Use the same process you use for the Publisher, including rebooting the server.

Voice/Video Communications



Voice/video calling with Unified CM – Setting up System SIP Parameters

- SIP Trying Timer: 1000ms
 - It specifies the maximum time that Unified CM will wait to receive a 100 response to an INVITE request
- SIP Dual Mode Alert Timer: 4500ms
 - It controls if and when to reroute the call via the configured mobility Identity.

Voice/Video Communications

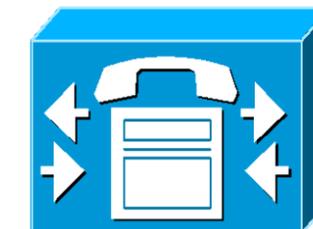


Voice/video calling with Unified CM – Setting up a Dedicated SIP Profile

SIP Profile Parameters	Jabber for iPad SIP Profile	Jabber for iPhone SIP Profile	Jabber for Android SIP Profile
Timer Register Delta (seconds)	60	Use Default	120
Timer Register Expires (seconds)	660	660	720
Timer Keep Alive Expires (seconds)	660	660	720
Timer Subscribe Expires (seconds)	660	660	720
Timer Subscribe Delta (seconds)	Use Default	Use Default	15

Voice/Video Communications

Voice/video calling with Unified CM – Setting up the Devices

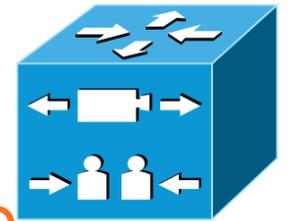


		Jabber for iPad	Jabber for iPhone	Jabber for Android
Phone Type	Product Type	Cisco Jabber for Tablet	Cisco Dual Mode for iPhone	Cisco Dual Mode for Android
	Device Protocol	SIP	SIP	SIP
Device Name		TAB<UserID> e.g. TABJLI	TCT<UserID> e.g. TCTJLI	BOT<UserID> e.g. BOTJLI
SIP Profile (created by admin)		iPad SIP Profile	iPhone SIP Profile	Android SIP Profile
Enable LDAP User Authentication ¹		Enable	Enable	Enable
LDAP Username ¹		Common user with read-only Permission	Common user with read-only Permission	Common user with read-only Permission
LDAP Password ¹				
LDAP Server ¹		LDAP server IP Address	LDAP server IP Address	LDAP server IP Address
LDAP Search Base ¹		LDAP search base	LDAP search base	LDAP search base
Directory Number		Extension	Extension	Extension

¹ Keep it blank when deploying together with IM & Presence

Voice/Video Communications

Voice/video calling with TelePresence VCS – Recommended Procedure

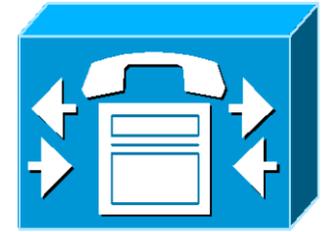


	Jabber for iPad	Jabber for iPhone	Jabber for Android
TelePresence VCS	jabbertablet provisioning template	N/A	N/A

1. Admin creates new users importing, or syncing from AD
2. Upload [jabbertablet](#) provisioning template
3. Configure policies and assign device template
4. Users receive automated email that includes username and password
5. Users switch on new endpoints
6. Users enter username and password and are ready to make video calls

Voice/Video Communications

Dial via Office ¹ – Cisco Jabber for iPhone/Android



- Set up Unified CM to support DVO
 - ✓ Set up Enterprise Feature Access Number
 - ✓ Set up Mobility Profile
 - ✓ Verify device COP file version
 - ✓ Create Application Dial Rule to allow correctly route calls
- Set up DVO for each device
 - ✓ Add a Mobility Identity for each user
 - ✓ Enable DVO on each device
 - ✓ Verify Mobile Connect works

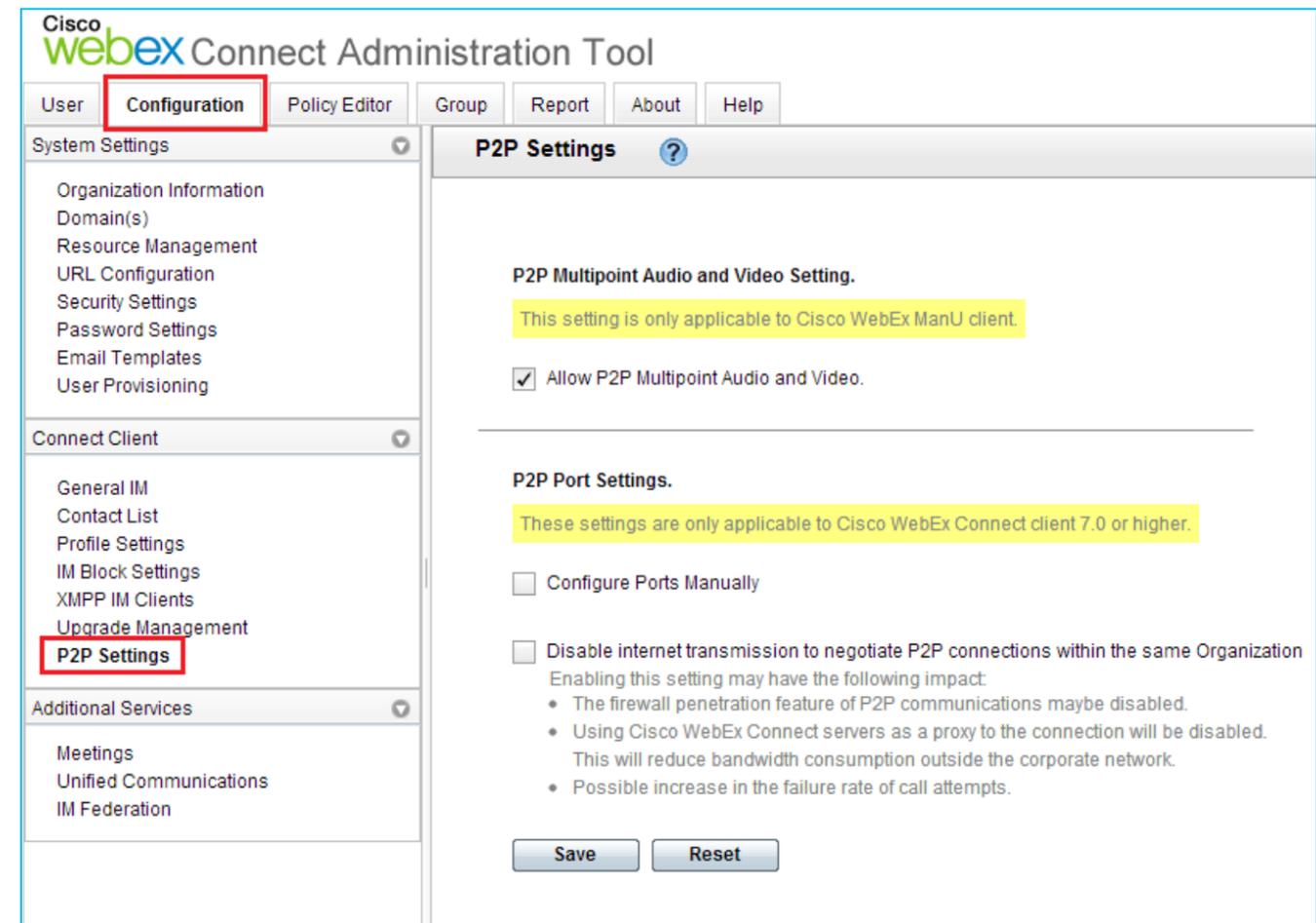
¹ The Dial via Office feature is available on Unified CM Release 8.6 and later. Only DVO-R is supported by jabber at the moment

Voice/Video Communications

WebEx Peer to Peer Calling with voice/video ¹



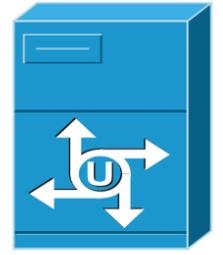
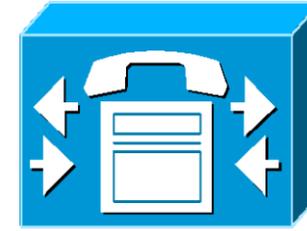
- Available when connecting to WebEx messenger service
- Configuration is done on the OrgAdmin tool.
 - Enabling P2P multipoint voice/video
 - Manual configuration of TCP/UDP ports (Optional)



¹ Only Jabber for iPad & Jabber IM for iPhone Clients support Peer to Peer calling. Jabber iPad support both voice and video while iPhone IM only support voice calling.

Voice Messaging

Visual Voicemail



- Install and configure Unity Connection
- Import users from Unified CM
- Provide users with IMAP access (**Class of Service**) on Unity Connection
 - ✓ Allow Users to Access Voice Mail Using an IMAP Client and/or Single Inbox
 - ✓ Allow IMAP Users to Access Message Bodies
- Create a voicemail profile on CUP / Add a voicemail and mail store service on Unified CM
- Configure Retrieval and Redirection
 - I. Create Voice Mail Pilot
 - II. Add Voice mail Pilot to the voicemail profile
 - III. Specify the voicemail profile in the directory number configuration
- Configure the device on Unified CM
 - ✓ Voicemail Username
 - ✓ Voicemail Server

WebEx Meeting Integration

Start/Join a instant WebEx meeting



- Join WebEx meeting
 - Install WebEx iPad/iPhone/Android mobile client
- Start WebEx meeting
 - Available only when connecting to WebEx messenger service
 - Install and log on as host to WebEx mobile iPad/iPhone/Android client



Simple Configuration

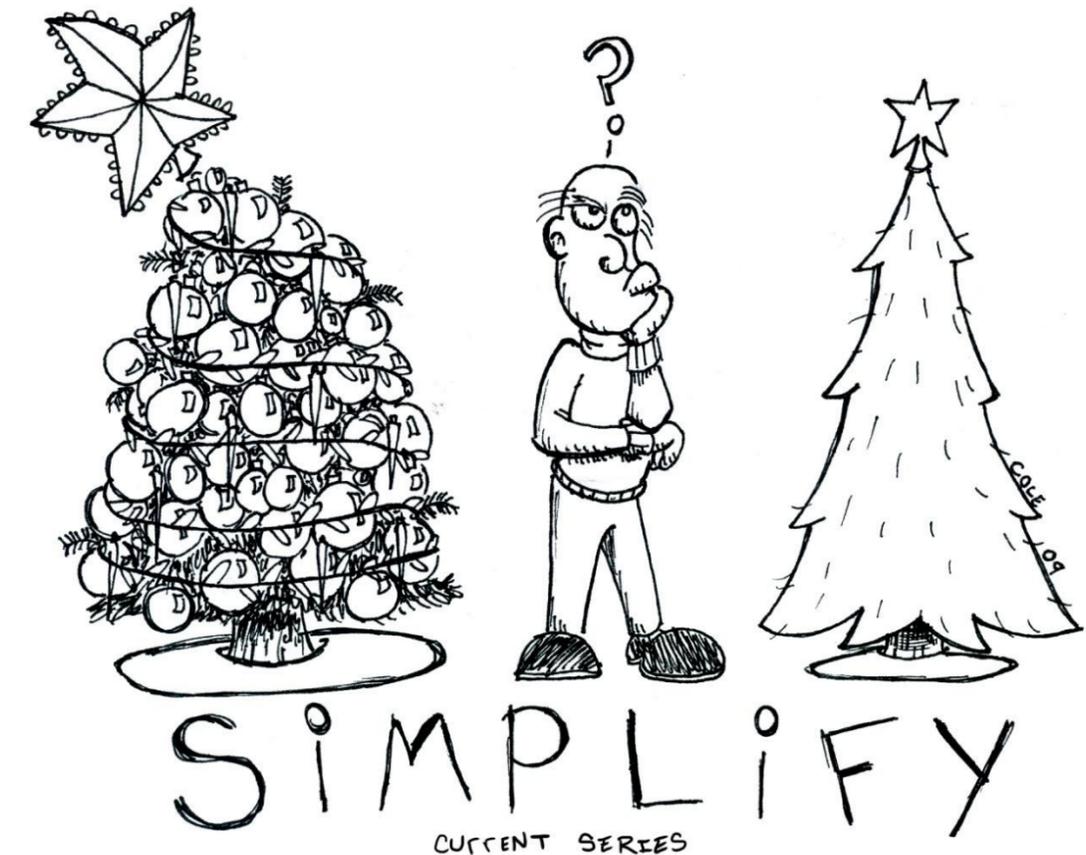
Simplify the User Experience of Client Login



Auto service discovery using DNS SRV lookup for "CompanyDomain" from account name:

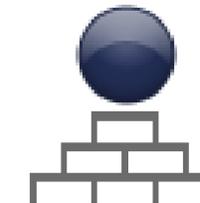
[username@CompanyDomain](#)

- Single service
 - IM & Presence only
 - Voice & Video only
- Multiple services
 - WebEx Messenger + Unified CM + VCS
 - CUP + Unified CM + VCS



Simple Configuration

Single Service Discovery

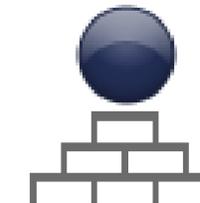


- Adding DNS SRV records for each server with priority and weight, based on which Jabber will generate a server list.
- Jabber always tries to login with the next available server. If the authentication fails, it will stop trying and display an error message.
- Unified CM example

	SRV Record	P	W	Port	A Record
Single Unified CM cluster	_cisco-phone-tftp._tcp.example.com	0	0	69	cucm2.example.com
	_cisco-phone-http._tcp.example.com	0	0	80	cucm1.example.com
Multi Unified CM cluster	_cisco-phone-tftp._tcp.example.com	0	0	69	ctftp.example.com

Simple Configuration

Multiple Service Discovery



- Adding DNS SRV records for each server with priority and weight, based on which Jabber will generate a server list.
- Jabber always tries to login with the next available server. If the authentication fails, it will stop trying with this service category and start trying the first server in the next service category. If jabber fails all, an error message will be displayed.
- When deployed in full UC mode, such as WebEx + Unified CM and CUP + Unified CM, Jabber will try to login with the UC server (e.g. Unified CM, Unity Connection) specified in either OrgAdmin or Unified Presence instead of using auto discovery.
- Jabber contains a default service priority list. System admin can customised the service priority list through DNS TXT record.

Default Priority List: **WebEx Messenger service > CUP > CUCM > VCS > Jabber Video for TelePresence**

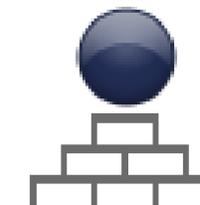
JSCP TXT Record format: **name ttl class TXT "v=jscpv1 <dns-srv-name>; <dns-srv-name>; ..."**

v=jscpv1 Mandatory. Jabber use this to identify it's a Service Priority list

<dns-srv-name>; <dns-srv-name>; Highest priority is leftmost, lower priority to right

Simple Configuration

Multiple Service Discovery (Cont.)



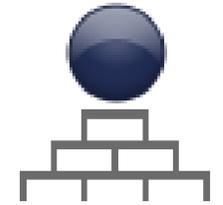
Service	DNS SRV	Example	
WebEx Messenger	xmpp-client	<code>_xmpp-client._tcp.example.com</code>	¹
Cisco Unified Presence	cuplogin	<code>_cuplogin._tcp.example.com</code>	
Unified CM cluster	cisco-phone-http cisco-phone-tftp	<code>_cisco-phone-tftp._tcp.example.com</code> <code>_cisco-phone-http._tcp.example.com</code>	(TFTP) (CCMCIP)
Unified CM clusters	cisco-phone-tftp	<code>_cisco-phone-tftp._tcp.example.com</code>	(Centralised TFTP ²)
VCS	sip	<code>_sip._tcp.internal.example.com</code> <code>_sip._tcp.external.example.com</code>	(VCS-C) (VCS-E)
Jabber Video for TelePresence	ciscowtp	<code>_ciscowtp._tcp.example.com</code> <code>_ciscowtp._tcp.jabber.com</code> <code>_ciscowtp._tcp.webex.com</code>	(free) (paid)

¹ `_xmpp-client` SRV record must point to a hostname like **c2s.CompanyDomain.webexconnect.com**

² Centralised TFTP is used with Unified CM multi-cluster deployment model and need SIP Authentication enabled for Tablet Device

Simple Configuration

Multiple Service Discovery (Cont.)



- Example:

CompanyDomain: example.com

UC DNS SRV records:

_xmpp-client._tcp.example.com	86400 IN SRV 0 5 5222	xmppserver.example.com
_cisco-phone-tftp._tcp.example.com	86400 IN SRV 0 5 6970	cucmserver.example.com
_sip._tcp.internal.example.com	86400 IN SRV 0 5 5060	vcserver.example.com

JSCP TXT Record example:

```
example.com 30 IN TXT "v=jscpv1 \_sip.\_tcp.internal.example.com; \_cisco-phone-tftp.\_tcp.example.com;"
```

In this example, VCS service comes with the top priority and followed by the single cluster Unified CUCM service.

Deployment: the Right Approach

Jabber Mobile Client Provisioning

- Client Requirements
- Preparing user instructions
 - Directions to download
 - Credentials for users' accounts
 - Client Setup



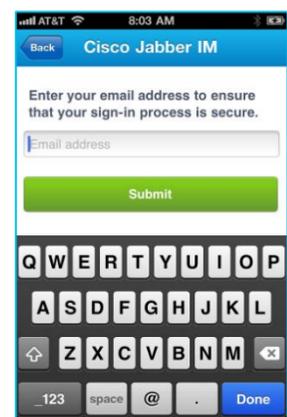
Jabber Mobile Client Provisioning

Cisco Jabber IM for iPhone

Product	Models Supported
iPhone	3GS, 4 and 4S
iPod Touch	3 rd , 4 th Generation
iPad	iPad 1, iPad 2
Software	Apple iOS 6.0

Download from Apple App Store

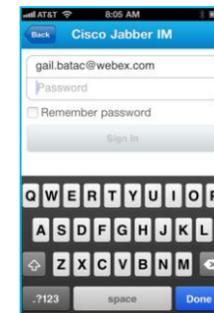
1. Launch
2. Chose Account Type



3. Enter email address to determine if SSO enabled

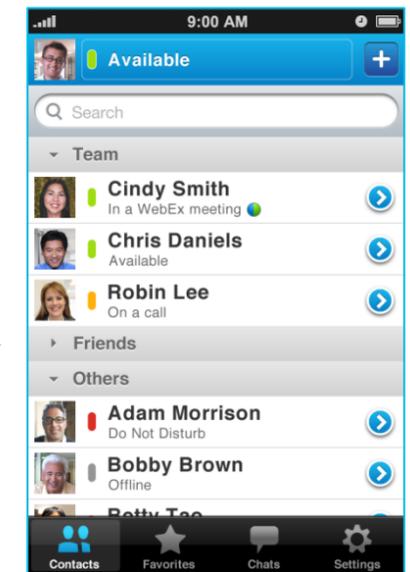
Non-SSO

SSO



3. Login with CUP credentials: "username@domain"; "password"; "CUP server address"

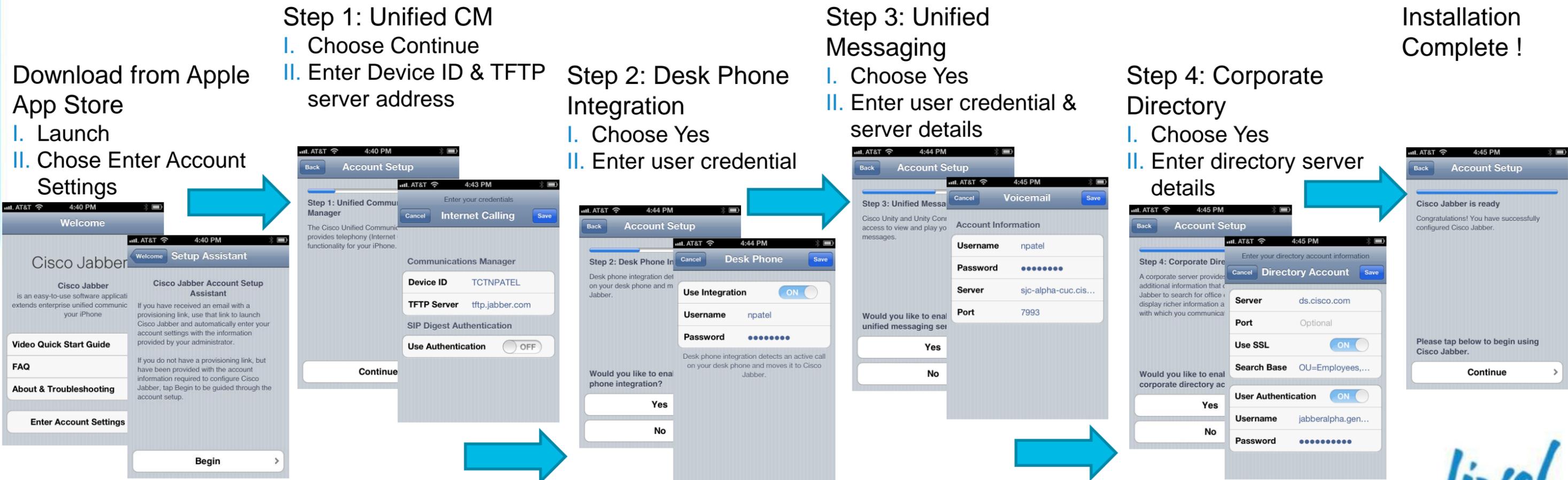
Successful Login



Jabber Mobile Client Provisioning

Cisco Jabber for iPhone

Product	Models Supported
iPhone	3GS, 4 and 4S
iPod Touch	3 rd , 4 th Generation
iPad	iPad 1, iPad 2
Software	Apple iOS 6.0



Jabber Mobile Client Provisioning

Cisco Jabber for iPad

Product	Models Supported
iPad	iPad 2 and iPad 3 (third-generation iPad)
Software	Apple iOS 6.0

Supported Deployment Model

Single Service		Multiple Service
IM & Presence	Voice & Video	
Cisco Unified Presence	Unified CM	Cisco Unified CM + Unified Presence
WebEx Messenger service	Cisco VCS	Cisco Unified CM + WebEx Messenger service
	Jabber Video	Cisco VCS + WebEx Messenger service
		Jabber Video + WebEx Messenger service

Jabber Mobile Client Provisioning

Cisco Jabber for iPad (Cont.)

Download from App Store

- I. Launch
- II. Input user@CompanyDomain



Successfully service discovery

No service discovered

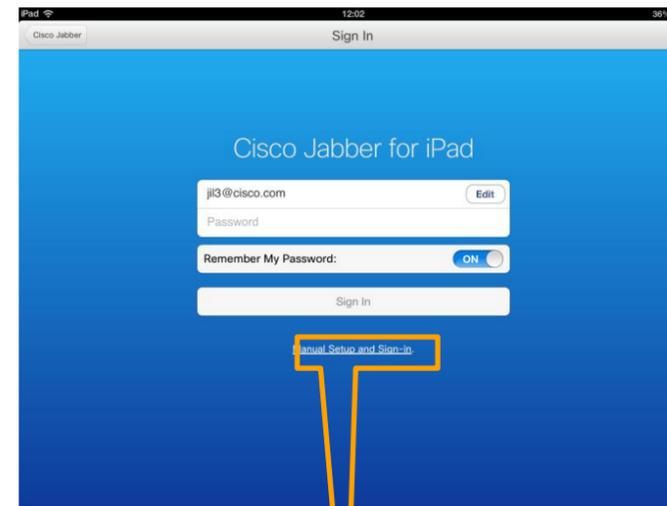
Email format:

“username@CompanyDomain”

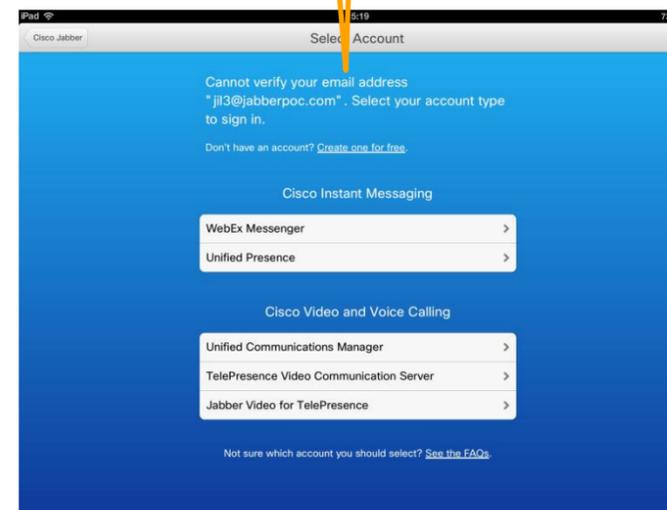
Jabber Video for TelePresence free / paid:

[username@jabber.com](#) /
[username@webex.com](#)

- III. Input password
- IV. Click Sign In

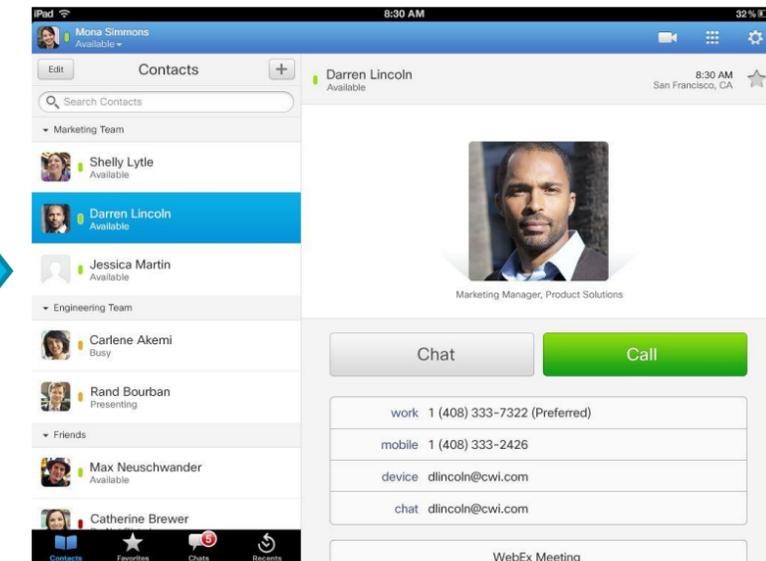


Select “Manual Setup and Sign-in”



- III. Select service type
- IV. Follow the wizard

Successful Login

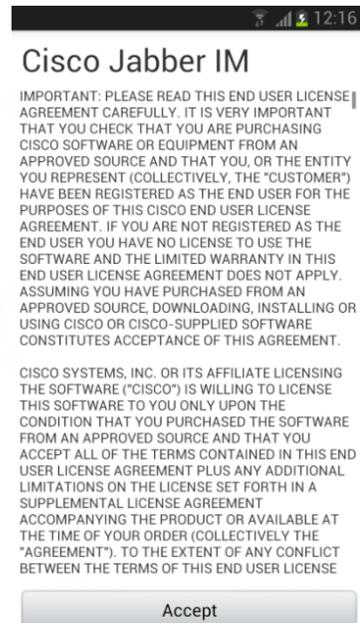


Jabber Mobile Client Provisioning

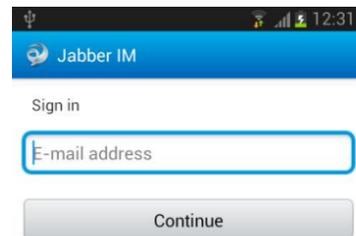
Cisco Jabber IM for Android

Product	Models Supported
Android Phone	All Android Phones
Android Tablet	All Android Tablets
Software	Android OS 2.6, 4.0 and 4.1

Download from Google Play
1. Launch



2. Enter email address to auto discover



WebEx Messenger service discovered



No DNS SRV record found



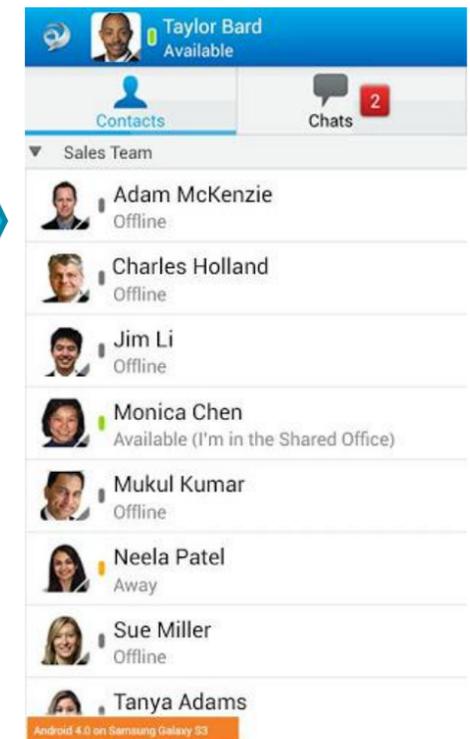
Option for Manual login



Select Unified Presence



Successfully Login



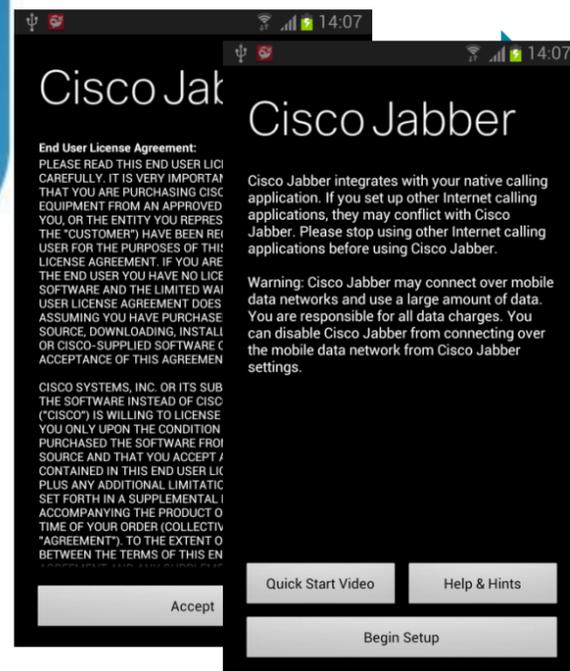
Jabber Mobile Client Provisioning

Cisco Jabber for Android

Product	Android OS
Samsung Galaxy Nexus	4.0.4
Samsung Galaxy SII (AT&T)	2.3
Samsung Galaxy SII SC-02C (NTT Docomo)	2.3
Samsung Galaxy S i9000 (GT-I9000)	2.3
Samsung Galaxy Ace (GT-S5830L)	2.3
Samsung Galaxy Tab International (GT-P1000)	2.3

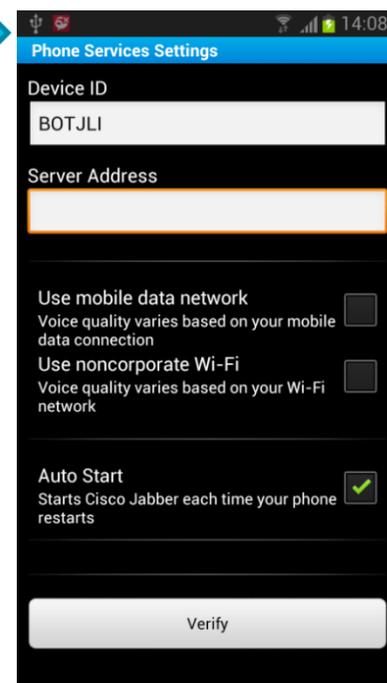
Download from Google Play

1. Launch
2. Accept & Begin Setup



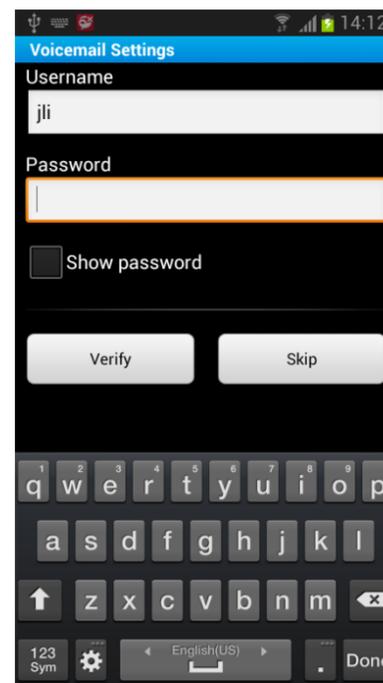
BRKUCC-2661

Step 1: Phone Services
Enter Device ID & TFTP server address

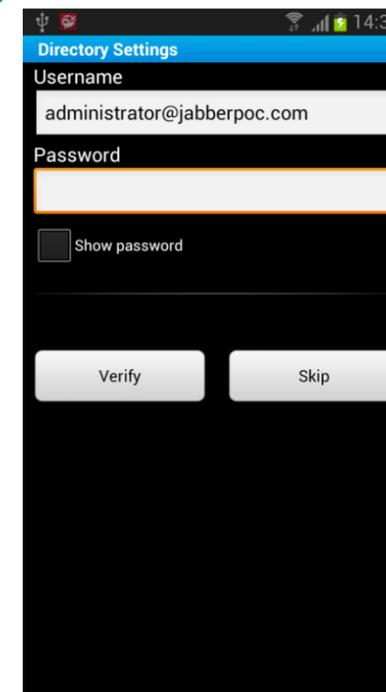


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Step 2: Voicemail
Enter user credential

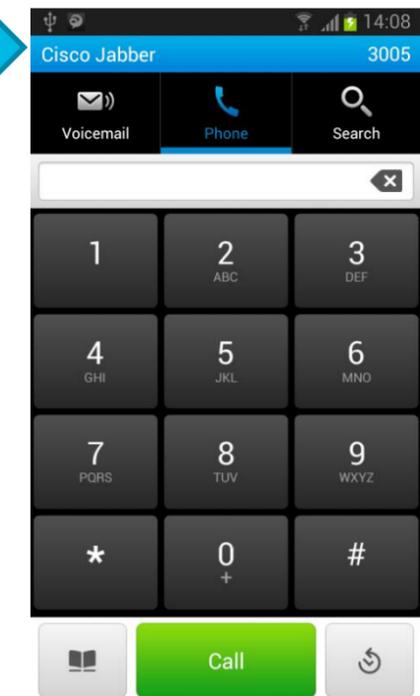


Step 3: Directory
Enter user credential



Cisco Public

Login successfully !



The Future of Jabber Mobility



Look into the Future Release...

Subject to change

Cisco Jabber Mobile Clients

- Short term (1H CY2013)
 - Integrated clients on iPhone and Android with full UC functionalities
 - IM & Presence, Voice and Video, Voice messaging
 - URI dialing
 - Medianet support
 - Analytics
- Long term (Beyond 1H CY2013)
 - VPN-less remote access experience
 - Mobile SDK

Q & A



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communities, and on-demand and live activities throughout the year. Log into your Cisco Live portal and click the "Enter Cisco Live 365" button.

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