TOMORROW starts here.
Deploying Cisco Jabber on Mobile Devices
BRKUCC-2344

Seongho Hong
Technical Marketing Engineer
“We believe people in can achieve extraordinary things.”
Session Agenda

- Brief Overview
- Key Steps to Configure
  - Users, devices & contact source
  - IM/presence & voice/video
  - Additional features & capabilities
- Installing Cisco Jabber
  - Simple Configuration
- Other Considerations
  - Migrating to Jabber iPhone/Android 9.5
- Summary & Key Takeaways
Introducing Cisco Jabber for Mobile Devices
Cisco Jabber – The Power to Collaborate

Best User Experience Across Broadest Range of Platforms and Devices

All-in-One UC Application

Voice, video & voicemail
Presence & instant messaging
Conferencing & desktop sharing

Collaborate from Any Workspace

On-premises or cloud
iPhone & iPad or Android smartphones
VoIP to mobile handoff
A Single Toolset to Access Core UC Capabilities

- Instant Messaging
- Rich Presence
- Contact Search
- Enterprise Call Control
- Business Video
- Conferencing
- Visual Voicemail

User Management & Authentication
Cisco Jabber
Cisco Jabber for iPhone/Android 9.5

- Completely new **single integrated** client
- Full UC capabilities with **video**
- Support “Simple Configuration” to enhance first time user experience
- Unified CM is supported for voice/video
- Plan to FCS in **Q3CY2013**
- EAP (Early Adopter Program) started!

The UE design is subject to change. The final product may be different from the images shown on this page.
Cisco Jabber for iPad 9.3

- A complete collaboration application
  - Audio, video, presence & IM within a single client
  - Interoperate with Cisco TelePresence endpoints
  - Most flexible deployment options
  - Support “Simple Configuration”

- Key new feature in 9.3
  - iOS 6.1, iPad 4, iPad Mini support

- Upcoming release*
  - 9.6, Collaboration Edge support (Q4CY2013)

* Still in planning, not fully committed; the actual date is subject to change.
Understanding Solution Architecture
Cisco Jabber Solution Backend Components

- **Voice/Video**
  - Cisco Unified CM
  - Cisco VCS & TMS or VCS Expressway
  - Cisco Jabber Video Service

- **Presence/IM**
  - Cisco Unified CM IM & Presence
  - Cisco Jabber Messenger Service

- **Contact Search**
  - UDS* in Cisco Unified CM
  - Microsoft Active Directory or LDAP
  - Cisco Jabber Messenger Database

- **Web Meeting**
  - Cisco WebEx Meetings

- **Visual Voicemail**
  - Cisco Unity Connection

- **VPN & Firewall**
  - Cisco Adaptive Security Appliance (ASA)

- **Wireless Access**
  - Cisco Aironet or Wireless Access Point

* UDS (User Data Service)
Cisco Jabber in Hybrid Deployment

Internet
- Voice/Video
- Voice/Video, Voicemail

Private/public 802.11 Wi-Fi
- Presence/IM, Directory

Mobile Data Network

Voice/Video

Cisco Jabber

Cisco ASA

Unified CM Cluster

Unity Connection

CTS

EX90

Unified IP Phones

802.11 Wi-Fi

3/4G

Mobile Voice Network

PSTN

Directory Server

Enterprise Network

Signaling & Media over VPN

Signaling & Media without VPN

Cisco ASA

VCS-C

VCS-E (DMZ)

PSTN Gateway

Cisco Jabber

Webex Messenger

CISCO

Cisco Public
Checklist for Planning

- Which architecture/deployment model?
- Which features/capabilities?
- Software/hardware requirements?
- How much licenses?
- Users & authentication?
- Where is contact source?
- How to distribute/install?
- Additional requirements, i.e., remote access, bandwidth?

Planned Deployments = Successful Deployments
Adding Users & Devices
What is User?

User is …

- Person who carries the device
- Logical entity in:
  - WebEx Messenger service
  - Unified CM (& IM and Presence)
Adding Users in Unified CM IM & Presence

Option 1 (Recommended)

Active Directory (or supported directory)

Synchronize corporate directory with Unified CM

Key attributes: `sAMAccountName`, mail, employeeID, Telephone, UserPrincipalName

Option 2

Unified CM User Administration

Users created via Admin GUI or via Bulk Administration Tool (BAT)

User can be authenticated locally to IM and Presence or sent back to directory service
Adding Users in WebEx Messenger Service

Option 1
Import from .CVS File

Option 2
Manual Creation

Option 3
Self Registration

Option 4
SSO Account Creation

Customer Premise

Active Directory
Unified CM
Identity Management System (at customer’s premise)

User Data
SSO

User will be authenticated directly to WebEx Messenger unless SSO is enabled.

When SSO is enabled, user will authenticate via SSO process.

Customer Premise

User Data

When SSO is enabled, user will authenticate via SSO process.

User will be authenticated directly to WebEx Messenger unless SSO is enabled.

Jabber User [User@XMPP Domain]

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Cisco Public
UC Services & Service Profile in Unified CM

End Users

Service Profile

UC Services in Service Profile

- IM & Presence Profile
- CTI Profile
- Voicemail & MailStore Profile
- Conferencing Profile
- Directory Profile*

* Jabber for iPad 9.3 reads Directory Profile but Jabber for iPhone/Android 9.5 does not.
Assigning UC Services to Users in Unified CM

- Create UC Services
- Configure UC Services in Service Profile
- Assign Service Profile to Users
Assigning UC Services to Users in WebEx Messenger

- Create Cluster(s) in Unified Communications menu
  - Voicemail needs to be defined before Cluster(s) are added
- Assign the Cluster(s) to Users in Add or Edit User configuration page
What is Device?

Device is...

- What user carries
- Where Cisco Jabber runs
- A logical entity in Unified CM
  - Not required unless voice/video is needed
Adding Devices in Unified CM

Option 1 Admin GUI

Option 2 Bulk Admin (BAT)
### Device Types in Unified CM

#### Jabber for iPad 9.3
- **Product Type**: Cisco Jabber for Tablet (Client Services Framework based)
- **Device Protocol**: SIP
- **Device Name in CUCM**: TAB<userID> e.g. TABBJONES

#### Jabber for iPhone 9.5
- **Product Type**: Cisco Dual Mode for iPhone (Dual Mode Phone based)
- **Device Protocol**: SIP
- **Device Name in CUCM**: TCT<userID> e.g. TCTBJONES

#### Jabber for Android 9.5
- **Product Type**: Cisco Dual Mode for Android (Dual Mode Phone based)
- **Device Protocol**: SIP
- **Device Name in CUCM**: BOT<userID> e.g. BOTBJONES

### Device naming convention
- Free form, no correlation to username
- Any character [A-Z,0-9] up to 15 characters

### Required device parameters
- No default values (must be explicitly set)
- Device Name, Device Pool, Phone Buttons Template, Device Security Profile, SIP Profile
User & Device Association Map

- **Line (Directory Number)**
  - Line Device association: Soft Phone
  - Line Device association: Desk Phone

- **Devices**
  - User Device association: Soft Phone
  - User Device association: Desk Phone

- **Groups & Roles**
  - User Group association: Standard CCM End User Group
  - User Group association: Unified CM Web Access Role

- **Jabber User**
  - User Line association
  - User Device association

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Integrating with Contact Source
Why is Contact Source a Must?

- Person-centric communication
  - Search & call by name, not by number
  - See caller’s name, not just number

- Rich data enhances user experience
  - User full name, photo, phone numbers, office address, email
Selecting Contact Source for Cisco Jabber

- **LDAP based Contact Source (On Prem Default)**
  Active Directory by default or other directory environments

- **HTTP/REST based Contact Source (On Prem Alternative)**
  UDS built into Unified CM 8.6(2)+

- **WebEx Messenger Contact Source (Cloud Default)**
  WebEx Messenger service database
How to Tell Cisco Jabber about “Contact Source”

Default! No need to tell!

Jabber for iPad 9.3 & Jabber for iPhone/Android 9.5

WebEx Messenger Database

AD or LDAP

Service Profile

UCM IM&P via SOAP

UCM 9.1

TFTP

jabber-config.xml

AD or LDAP

UDS

Jabber for iPhone/Android 9.5

Jabber for iPad 9.3
What is “jabber-config.xml” File?

- Single file shared by all Jabber clients
- Admin to create/upload to TFTP server
- Jabber to download via TFTP (or HTTP)
- Customize or configure directory integration
  – Enhanced Directory Integration (EDI)*
  – Basic Directory Integration (BDI)
- A “must” for Jabber for iPhone/Android 9.5**

* EDI does not require jabber-config.xml.
** jabber-config.xml is not used when deployed in WebEx Messenger service.

```xml
<?xml version="1.0" encoding="UTF-8"?>
<config version="1.0">
  <!-- LDAP Directory configuration for Windows clients -->
  <Directory>
    <DirectoryServerType>EDI</DirectoryServerType>
    ...
  </Directory>
  <!-- LDAP Directory configuration for non-Windows clients -->
  <Directory>
    <DirectoryServerType>BDI</DirectoryServerType>
    ...
  </Directory>
</config>
```
Basic Directory Integration (BDI) for Contact Source

- Integration method for LDAP directories (including AD)
- For Unified CM IM & Presence deployment
- No auto directory discovery mechanism
- For Jabber on non-Windows platforms
  - Jabber for Mac 9.2
  - Jabber for iPad 9.3
  - Jabber for iPhone/Android 9.5

```xml
<?xml version="1.0" encoding="UTF-8"?>
<config version="1.0">
<!-- LDAP Directory configuration for non-Windows platform clients -->
<Directory>
  <DirectoryServerType>BDI</DirectoryServerType>
  <BDIPhotoURISubstitutionEnabled>True</BDIPhotoURISubstitutionEnabled>
  <BDIPhotoURISubstitutionToken>sAMAccountName</BDIPhotoURISubstitutionToken>
  <BDIPhotoURIWithToken>http://10.1.1.9/software/photo/sAMAccountName.jpg</BDIPhotoURIWithToken>
  <BDIOtherPhone>telephoneNumber</BDIOtherPhone>
  <BDIEmailAddress>mail</BDIEmailAddress>
  <BDIPresenceDomain>jabber.net</BDIPresenceDomain>
  <BDILDAPServerType>AD</BDILDAPServerType>
  <BDIPrimaryServerName>10.1.1.1</BDIPrimaryServerName>
  <BDIServerPort1>389</BDIServerPort1>
  <BDISearchBase1>CN=Users,DC=jabber,DC=net</BDISearchBase1>
  <BDIConnectionUserDN>CN=jabber,CN=Users,DC=jabber,DC=net</BDIConnectionUserDN>
  <BDIConnectionPassword>jabber</BDIConnectionPassword>
</Directory>
</config>
```
LDAP Attribute Mappings for BDI

In Unified CM IM & Presence 9.1, go to: Application > Legacy Clients > Settings

Important: This table is used by Jabber for iPad. Jabber for iPhone/Android 9.5 do not read this table.
User Data Service (UDS) as Contact Source

- Optimized contact lookup service in Unified CM 8.6(2) or higher
- Cross cluster up to 160,000 contacts
- Jabber for Windows 9.2, Mac 9.2, & iPhone/Android 9.5
- Specified in `jabber-config.xml`

```
<?xml version="1.0" encoding="utf-8" ?>
<config version="1.0">
  <Directory>
    <DirectoryServerType>UDS</DirectoryServerType>
    <PhotoUriWithToken>http://10.1.1.9/photo/%%uid%%.jpg</PhotoUriWithToken>
  </Directory>
</config>
```

Jabber resolves contact lookups against UDS

Sample only
In **Unified CM 9.1**, go to: Systems > LDAP > LDAP Directory
# Retrieving Photos for Contacts

<table>
<thead>
<tr>
<th>Option for Contact Photo Retrieval Method</th>
<th>Jabber for iPad 9.3</th>
<th>Jabber for iPhone/Android 9.5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Option 1: Cloud Default (no config)</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>WebEx Contact Photos</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Option 2: On Prem Default (no config)</strong></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Active Directory Binary Objects</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Binary photo from thumbnailPhoto attribute</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Option 3: On Prem</strong></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Retrieve URL from PhotoURL attribute</td>
<td></td>
<td></td>
</tr>
<tr>
<td><a href="http://photo.example.com/staff/rgonzales.jpg">http://photo.example.com/staff/rgonzales.jpg</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Option 4: On Prem (jabber-config.xml)</strong></td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>URL Substitution/Macro style</td>
<td></td>
<td></td>
</tr>
<tr>
<td><a href="http://photo.example.com/staff/%uid%25.jpg">http://photo.example.com/staff/%uid%.jpg</a></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Enabling IM & Presence
IM & Presence Service in Unified CM

Active Directory (or supported directory) → Contact Sources → Call Control Server → Unified CM 9.1 Cluster

UDS → User Data

Jabber Client → Jabber User

Contact search and resolution

Jabber will download from IM & Presence:
- User configs (Service Profile in Unified CM)
- Contact list

IM messages and presence information are routed via IM & Presence server.

Additional configuration may be downloaded from Unified CM (Jabber-config.xml)

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Enabling Users for IM & Presence in Unified CM

- Users are enabled for IM/presence in **Unified CM 9.1***
- Enabling users for IM/presence will enable/allocate users to a node in the Unified CM IM and Presence cluster

* In Unified CM 7.x or 8.x, users are enabled for IM/presence in Unified Presence server (CUP).
Enabling Users for IM & Presence in WebEx Messenger
Enabling Voice & Video
Roles of Unified CM Cluster

**Database/Services**
- User/device administration
- Device discovery
- TFTP/HTTP service
- UC service configuration
- Contact source (optional)
- Configuration database

**Unified CM 9.1 Cluster**

**Signalling/Media Control**
- SIP call control
- Voice/video routing
- Media resource control
- CTI control
CCMCIP (Cisco CM Cisco IP Phone) Services

- HTTPS based network services
- Association between user & device
- Can start/stop but cannot be deactivated
- To login to CCMCIP server, user must be a member of “Standard CCM End Users Group”
- Unified CM user credentials are used to login
Configuring & Assigning CCMCIP Service for Jabber

In **IM and Presence Service,**

- **CCMCIP Profile** to define CCMCIP servers
- Users must be associated to the profile
- Login credential matching with IM and Presence Service

In **WebEx Messenger,**

- **CCMCIP server address** in Add/Edit Cluster configuration page
- Users must be associated to the cluster
- User will have to enter login credentials
TFTP (Trivial File Transfer Protocol) Service

- Feature service in Unified CM
- Can be activated/deactivated in each Unified CM server
- Cisco Jabber downloads from TFTP:
  - Device configuration file (.cnf or .cnf.xml)
  - Custom configuration file (e.g. jabber-config.xml)
  - Application Dial rules (if configured)
  - Directory Lookup rules (if configured)
- HTTP (vs. TFTP)
  - TCP port 6970 (vs. UDP port 69)
  - Smaller & faster download
In **IM and Presence Service**, 

- TFTP server address is defined (when defined in FQDN format, it should be resolvable by DNS)

- When Unified CM address is shown as hostname in the device configuration file (`.cnf.xml`), they should be resolvable

In **WebEx Messenger**, 

- TFTP server is defined in Add or Edit Cluster configuration page

- Users must be associated to the cluster
Cisco Jabber Login Flow in Unified CM

Authenticate & get the device list from CCMCIP

Select the right device type, request & get device configuration file from TFTP server

Use SIP to register to Unified CM

User auth & get Device List

Device List

Select device for user

Request device config file (.cnf.xml)

Receive device config file (.cnf.xml)

REGISTER SIP/2.0, Contact:model.ccm.cisco.com="652", Expires: 660s

100 Trying

200 OK, Expiration: 660s
Video Engine for Cisco Jabber

- H.264 AVC standard based media engine
- Audio codecs (G.711a/u, G.722.1, G.729a)
- Optimized to provide the best quality video
  - Video Rate Adaption
  - Cisco ClearPath Media Resilience Mechanisms
- Factors which influence video frame rates
  - Camera / Light Conditions
  - Rate encoded by sender
  - Network conditions
  - Unified CM configuration
  - CPU & load on receiver
  - Rate Adaption (RTCP)

<iPhone 5>
VGA @ 30fps in / 20fps out, 512kbps

<iPhone 4S>
480x270 out / 480x360 in @20fps, 384kbps

<Android>
Varies depending on device model
Multi-Party Voice & Video Conferencing

- Ad-hoc & scheduled (rendezvous) meetings
- Ad-hoc requires media resource in Unified CM
  - Audio only
  - Audio & video
- DSP can be provided by
  - Software bridge in Unified CM
  - Multipoint Control Unit (MCU)

Video Multipoint Control Units
Cisco TelePresence MCU 4500 Series
Cisco TelePresence Server 7010
Cisco TelePresence Server 8000
Point to Point Video Desktop Sharing

Jabber for iPhone/Android 9.5 & iPad 9.3
- Do not support BFCP* yet
- Cannot share their content

* BFCP (Binary Floor Control Protocol)
Multi-Point Video Desktop Sharing

Jabber for iPhone/Android 9.5 & iPad 9.3 can **view** desktop sharing on video conference bridge

Jabber for Windows 9.2

EX90

Jabber for iPad 9.3

Jabber for iPhone/Android 9.5

MCU
Voice & Video Bandwidth Control

- **Cisco Unified CM**
  - **Regions** to specify per-call parameters for codec and video bandwidth
  - **Locations** to specify the bandwidth value used to limit voice and video calls for a particular site

- **TelePresence Video Communication Server**
  - **Links** to set the per-call bandwidth
  - **Pipes** to set the bandwidth for calls to a site

### Cisco Video Endpoint

<table>
<thead>
<tr>
<th>Cisco Video Endpoint</th>
<th>Resolution</th>
<th>Suggested Bandwidth Allocation per Call</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUVA 7985 IP Phones</td>
<td>CIF(352x288)</td>
<td>384 Kbps</td>
</tr>
<tr>
<td>CUPC7.0</td>
<td>CUVA up to VGA (640x480)</td>
<td></td>
</tr>
<tr>
<td>9900 Series IP Phones</td>
<td>Up to VGA (640x480)</td>
<td>768 Kbps</td>
</tr>
<tr>
<td>Cisco Jabber for iPad</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cisco Jabber for Windows</td>
<td>Up to 720p (1280x720)</td>
<td>1.5 Mbps</td>
</tr>
<tr>
<td>3rd Party Endpoints</td>
<td>Up to 720p (1280x720)</td>
<td>1.5 Mbps</td>
</tr>
</tbody>
</table>
Video Resolution for Cisco Jabber on iPad

- Video resolution for Jabber for iPad does not depend on camera but on processing power of iPad
- Jabber for iPad 9.3 supports iPad 4 & iPad Mini

Source: http://www.apple.com/ipad/specs/
SIP Timers for Cisco Jabber

- Change the following two service parameters in Unified CM
  - SIP Trying Timer: 1000ms (default 500ms)
  - SIP Dual Mode Alert Timer: 4500ms (default 1500ms, controlling if/when to reroute to Mobility Identity number)

- Create a new SIP Profile for each device type to set the following parameters

<table>
<thead>
<tr>
<th>SIP Profile Parameters (sec)</th>
<th>Jabber iPad SIP Profile (TAB)</th>
<th>Jabber iPhone SIP Profile (TCT)</th>
<th>Jabber Android SIP Profile (BOT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timer Register Delta</td>
<td>60</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td>Timer Register Expires</td>
<td>660</td>
<td>720</td>
<td>720</td>
</tr>
<tr>
<td>Timer Keep Alive Expires</td>
<td>660</td>
<td>720</td>
<td>720</td>
</tr>
<tr>
<td>Timer Subscribe Expires</td>
<td>660</td>
<td>21600</td>
<td>21600</td>
</tr>
<tr>
<td>Timer Subscribe Delta</td>
<td>Use Default (5)</td>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

New SIP timer values for Jabber for iPhone/Android 9.5
Additional Features & Capabilities
Configuring Visual Voicemail in Unified CM

- Requires Cisco Unity Connection 8.5 or higher
- Voicemail & MailStore profiles are required (both pointing to Unity Connection server)
- VMREST (HTTP) to get the message count & to show/display voicemail message
Configuring Visual Voicemail in WebEx Messenger Service

- Defined as part of Cisco Unified Communications Clusters configuration

Unity Connection (Voicemail & Mailstore server)
Configuring Web Conferencing in Unified CM

- Defined in Service Profile as UC Service
- Supports Cisco WebEx Meetings
- Requires WebEx Meetings app on device (if it is not installed, user will be prompted to install it)

Cisco WebEx Meetings is a cloud based conferencing solution
Configuring Web Conferencing in WebEx Messenger Service

Cisco webex Administration Tool

Meetings

Site Options
- Automatically record all sessions
- Enable Teleconference Keep-Alive
- Default setting: Enabled
- Disabled

Privileges:

<table>
<thead>
<tr>
<th>Service</th>
<th>Session Type Allowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meetings</td>
<td>PRO: Meetings Pre Meeting</td>
</tr>
<tr>
<td></td>
<td>AOU: WebEx Personal Conference</td>
</tr>
<tr>
<td>Event Center</td>
<td>ONS: Event Center Online Event</td>
</tr>
<tr>
<td>Support Center</td>
<td>SC3: Support Center Remote Support Session</td>
</tr>
<tr>
<td>Training Center</td>
<td>TRS: Training Center Training session</td>
</tr>
</tbody>
</table>

Device Options
- Allow users to join meetings from
  - iPhone WebEx application
  - BlackBerry WebEx application
  - Android WebEx application
Distributing & Installing Cisco Jabber
Where to Find the Latest FCS Software

- Cisco Jabber is a free download
- End users download/update directly from Apple App Store or Google Play* (Recommended)
- Android users can enable ‘Auto Update’
- MDM/MAM can be used to distribute the software within organization**

* Jabber for Android 9.5 will be posted on Cisco.com for customers who do not have access to Google Play. When downloaded from Cisco.com, Jabber will not prompt user for auto-update.

** Cisco cannot provide the unsigned .ipa file to customers.
What is Simple Configuration?

- Cisco Jabber self-discovers UC service & its server address
- DNS SRV lookup
- System admin defines DNS SRV records in DNS server
- End user just enters his/her email address
- Only during the initial setup (Jabber will remember the successful login)
## DNS SRV Record Examples

<table>
<thead>
<tr>
<th>Service</th>
<th>DNS SRV</th>
<th>DNS SRV Record Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>WebEx Messenger</td>
<td>xmpp-client</td>
<td>_xmpp-client._tcp.example.com SRV 0 0 5222 c2s.example.webexconnect.com</td>
</tr>
<tr>
<td>Unified CM IM and Presence</td>
<td>cuplogin</td>
<td>_cuplogin._tcp.example.com SRV 0 1 8443 cup.example.com</td>
</tr>
<tr>
<td>Unified CM</td>
<td>cisco-phone-http</td>
<td>_cisco-phone-tftp._tcp.example.com SRV 0 0 69 cucm.example.com (TFTP)</td>
</tr>
<tr>
<td>Unified CM</td>
<td>cisco-phone-tftp</td>
<td>_cisco-phone-http._tcp.example.com SRV 0 0 80 cucm.example.com (CCMCIP)</td>
</tr>
<tr>
<td>Unified CM</td>
<td>cisco-phone-tftp</td>
<td>_cisco-phone-tftp._tcp.example.com SRV 0 0 69 cucm.example.com (Centralized TFTP)</td>
</tr>
<tr>
<td>VCS* (Control &amp; Expressway)</td>
<td>sip</td>
<td>_sip._tcp.internal.example.com SRV 0 0 5060 vcsc.example.com (VCS-C)</td>
</tr>
<tr>
<td>Jabber Video for</td>
<td>ciscowtp</td>
<td>_ciscowtp._tcp.jabber.com SRV 0 0 443 boot.ciscojabbervideo.com</td>
</tr>
<tr>
<td>TelePresence* (Free service)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jabber WebEx TelePresence*</td>
<td>ciscowtp</td>
<td>_ciscowtp._tcp.webex.com SRV 0 0 443 boot.telepresence.webex.com</td>
</tr>
<tr>
<td>(Paid service)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Not supported by Jabber for iPhone/Android 9.5.
First Time Setup Screen on iPad

User just needs to enter his/her email address if **Simple Configuration** is setup

The **old manual way** to log in is also available when Simple Configuration is not setup or is failed
How does User Input Used during Setup?

1. User enters email address: aperez@example.com
2. DNS SRV Lookup: example.com
3. Target service address: example.com
4. Connection verified
5. User enters password
6. Successful sign in

User enters password: ********

Jabber for iPhone/Android 9.5

- Jabber auto-populates all UC services with UserID and password
- Server address for each UC service is downloaded from IM/Presence service (either WebEx Messenger or UCM IM & Presence)
How does User Input Used during Setup?

Jabber for iPad 9.3

1. User enters email address: shong@acme.com
2. “acme.com” DNS Server
3. DNS SRV Lookup
4. Connection verified: shong@acme.com
5. User enters password
6. Successful sign in

Server address for each UC service is downloaded from IM/Presence service (either WebEx Messenger or UCM IM & Presence)

Jabber auto-populates all UC services with User ID and password if with WebEx Messenger the user was already successfully signed in the past.

Jabber leaves blank all UC services with User ID and password if with UCM IM & Presence or if with WebEx Messenger this is the first Jabber the user is every logging in (no previous Jabber log in on any other devices including the current device).
Simple Configuration with Single Service

- Single service to multiple target servers
  - “Priority” to prioritize order and “weight” to distribute load
  - “Port” is not used but should be configured in default value

- For single cluster UCM, two records must be defined:
  - `_cisco-phone-http` (pointing to CCMCIP service)
  - `_cisco-phone-tftp` (pointing to TFTP service)

- For multi cluster UCM with “centralized” TFTP configuration:
  - `_cisco-phone-tftp` (pointing to centralized TFTP service)
  - Requires device name to be TAB<username>
  - SIP Digest Authentication can be enable

_or_

```
_cuplogin._tcp.example.com SRV 0 1 8443 cup1.example.com
_cuplogin._tcp.example.com SRV 5 1 8443 cup2.example.com
```
Login Scenarios for Single Service

_scenario_._tcp.example.com SRV 0 0 8443 _cup1.example.com
_scenario_._tcp.example.com SRV 5 0 8443 _cup2.example.com

Scenario 1

1. Connect
2. Connect
3. Authenticated
4. Authenticated

Scenario 2

1. Connect
2. Connect
3. Failed to connect
4. Disconnect
5. Authenticated

Scenario 3

1. Connect
2. Connect
3. Failed to authenticate
4. Disconnect
Will not try cup2!
Simple Configuration with Multiple Services

- Follows “default priority order” or admin-defined order (if exists) to determine the service to connect
  - Once a service is connected, the rest will be ignored

- Each service to multiple target servers
  - “Priority” to prioritize order and “weight” to distribute load
  - “Port” is not used but should be configured in default value

- Once IM/presence service is connected,
  - Configurations for other UC services will be downloaded from IM/presence service
  - DNS SRV records for UC services such as Unified CM will not be used

* Not supported by Jabber for iPhone/Android 9.5
Login Scenarios for Multiple Services

Scenario 1

1. Connect
2. Authenticate
3. Connect
4. Authenticate

Scenario 2

1. Connect
2. Authenticate
3. Failed to connect
4. Connect
5. Authenticate

Scenario 3

1. Connect
2. Authenticate
3. Failed to authenticate
4. Connect
5. Authenticate
6. Authenticate

DNS

_cuplogin._tcp.example.com SRV 0 0 8443 cup1.example.com
_cuplogin._tcp.example.com SRV 5 0 8443 cup2.example.com
_sip._tcp.internal.example.com SRV 0 0 5060 vcsc1.example.com
_sip._tcp.internal.example.com SRV 5 0 5060 vcsc2.example.com
DNS TXT for Jabber Simple Configuration Priority

- To “re-prioritize” the default service priority order
- JSCP DNS TXT record format:

  name  ttl  class  TXT "v=jscpv1 <dns-srv-name-1>; <dns-srv-name-2>; ...”

  v=jscpv1
  Mandatory parameter
  To identify that this is a service priority list

  <dns-srv-name-1>; <dns-srv-name-2>; ...
  List of DNS SRV records for UC services
  Order from left to right, the highest priority to the lowest

Example:
example.com 30 IN TXT "v=jscpv1 _cuplogin._tcp.internal.example.com; _xmpp-client._tcp.example.com; "
Decision Tree to Prioritize UC Services via DNS TXT

TXT record exists?

- No: Follow Default Priority List
- Yes: TXT record valid?
  - No: Ignore TXT record & Follow Default Priority List
  - Yes: SRV name in TXT match with any SRV record?
    - Yes: Use SRV name
    - No: Ignore SRV name

Reprioritize UC services using only matching SRV names in TXT Record (highest from left)
Example DNS SRV Entries with TXT Record

Corporate Domain: example.com

DNS SRV Records:
_xmpp-client._tcp.example.com 86400 IN SRV 0 5 5222 c2s.example.webexconnect.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 vcsserver.example.com
_cuplogin._tcp.example.com 86400 IN SRV 0 5 8443 cupserver.example.com

JSCP DNS TXT Record:
example.com 30 IN TXT "v=jscpv1 _cuplogin._tcp.internal.example.com; _xmpp-client._tcp.example.com;"

- Priority in TXT record will replace the default priority list
  - UCM IM/Presence has the 1st priority, and WebEx Messenger is the 2nd
- UCM & VCS service are ignored
Other Deployment Considerations
Migrating to Jabber for iPhone/Android 9.5

- Auto-update via App Store or Google Play
  - Only Jabber IM 9.0 clients will auto-update to Jabber 9.5
  - User should manually delete Jabber 9.1 (voice only client)

- Customer migration scenarios

<table>
<thead>
<tr>
<th>Customer Scenario (Current Situation)</th>
<th>Current Client(s) iPhone/Android</th>
<th>Migration Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voice Only (no IM service)</td>
<td>Jabber 9.1</td>
<td>Stay with Jabber 9.1 (voice-only mode is not available in Jabber 9.5)</td>
</tr>
<tr>
<td>IM Only</td>
<td>Jabber IM 9.0</td>
<td>Auto-update; use Jabber 9.5 in IM only mode</td>
</tr>
<tr>
<td>Voice &amp; IM</td>
<td>Jabber 9.1 &amp; Jabber IM 9.0</td>
<td>Auto-update Jabber IM 9.0 to Jabber 9.5 &amp; manually delete Jabber 9.1; Jabber 9.5 in fully integrated UC mode</td>
</tr>
</tbody>
</table>

IMPORTANT: Do not upgrade Cisco Jabber for iPhone/Android 9.1 if you want to continue using it without IM/presence.
Preparing for Cisco Jabber for iPhone/Android 9.5

- Upgrade Unified CM to 8.6 or above
- Download & install the latest COP files
  - Go to Cisco.com to download the latest COP file for each client
  - Schedule a downtime to reboot Unified CM cluster
- User ID & password are required
  - Still use the same device types, BOT & TCT
  - User must be associated with the device in Unified CM
- Custom configuration file, jabber-config.xml, is a must
  - Share a single custom configuration file among other Jabber clients
  - To specify contact source & location for photos
- DNS SRV records
  - Leverage Simple Configuration to auto-discover IM/presence service
  - DNS SRV records are required for Simple Configuration
Summary & Key Takeaways
Session Summary

- Define the final goal of your deployment before you install any software!
- Define which elements of Cisco Jabber you plan to deploy
- Identify IM&P requirements, contact source requirement, UC requirements
- Create the right team to deploy the solution (network, desktop, server members)
- Provide users with training & resources to get the most from Cisco Jabber
- The site survey for the existing WLAN is a must
Key Takeaways

- Cisco Jabber delivers the best collaboration experience on most of popular mobile devices such as iPhone, iPad, and Android smartphones.

- Cisco Jabber enables high quality business video on mobile devices.

- Cisco Jabber allows to simplify installation for users.

- Cisco Jabber provides flexible deployment options and multiple modes of operation.
Cisco on Cisco Jabber Case Study

How Cisco IT Introduced Cisco Jabber

Careful release planning and management promote successful adoption of unified communications clients.

Background

Cisco is a global, collaborative enterprise, and video is an important collaboration tool for Cisco teams that work together from around the world. Cisco IT supports a “video everywhere” policy, meaning all Cisco employees should have access to video tools that enable them to see and talk with each other from any location. The Cisco Jabber® clients offer the newest video-based collaboration tool for Cisco employees.

Cisco Jabber® is a family of software clients that allows a user to easily access capabilities for voice and video calls, provides a contact directory with presence information for colleagues, and includes tools for instant messaging (IM), voice messaging, desktop sharing, and conferencing. (Figure 1)

Today Cisco IT supports multiple Jabber clients for use by employees, including clients for Microsoft Windows-based and Apple Macintosh computers, Apple iPhones and Android-based smartphones, and Apple iPad tablets.

Figure 1. Cisco Jabber Features and User Interface

Want More for Cisco Jabber?

Additional Courses on Cisco Live! 365…

- BRKUCC-1600 Introduction to Cisco Mobile Collaboration
- BRKUCC-2060 Cisco Enterprise Mobile Collaboration Solutions
- BRKUCC-2345 Cisco Jabber: Deploying Cisco Jabber On Premise
- BRKUCC-2355 Cisco Jabber: Deploying Cisco Jabber with WebEx Messenger
- BRKUCC-2785 Cisco Jabber Federation
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