

What You Make Possible



Deploying Cisco Jabber Desktop Clients

BRKUCC-2480

Deploying Cisco Jabber Desktop Clients

Session Agenda

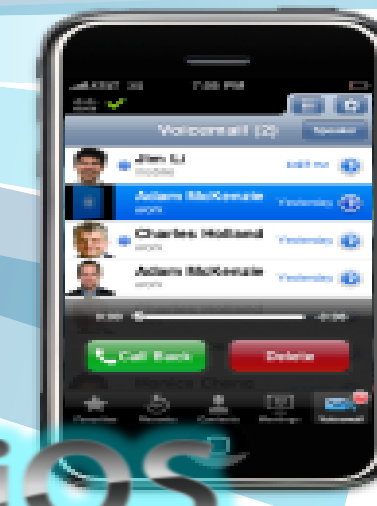
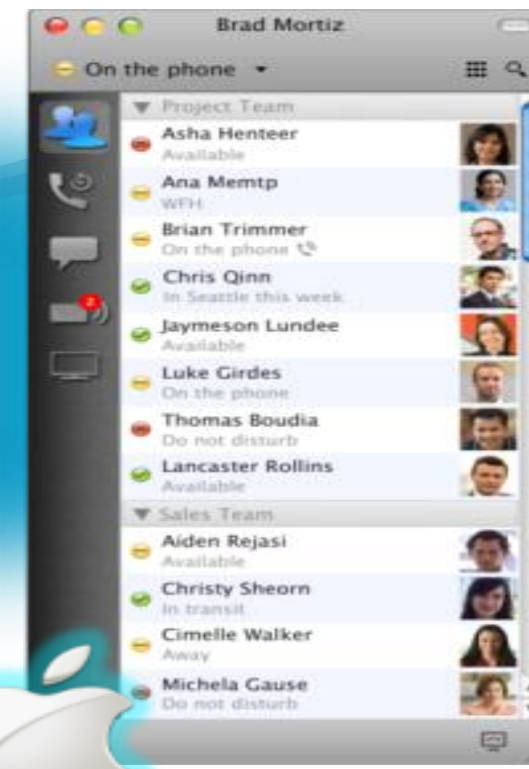
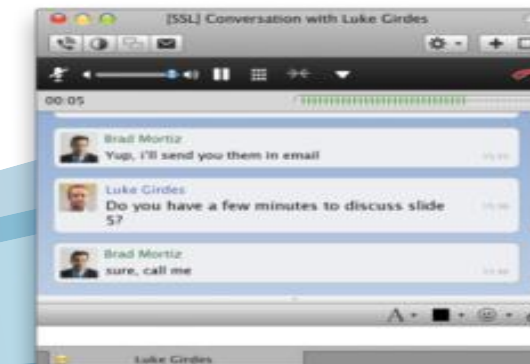
- Cisco Jabber Product Set
- WebEx Messenger baseline
- Cisco UC Manager IM&P baseline
- Cisco Jabber Unified Communication
- WebEx Meetings
- Integration with Microsoft Office
- Extending Cisco Jabber
- Summary



Cisco Jabber

Deploying Cisco Jabber Desktop Clients

Cisco Jabber Product Portfolio



All-in-one UC Application

Presence & IM

Voice, Video, voice messaging

Desktop sharing, conferencing

Collaborate from Any Workspace

PC, Mac, tablet, smart phone

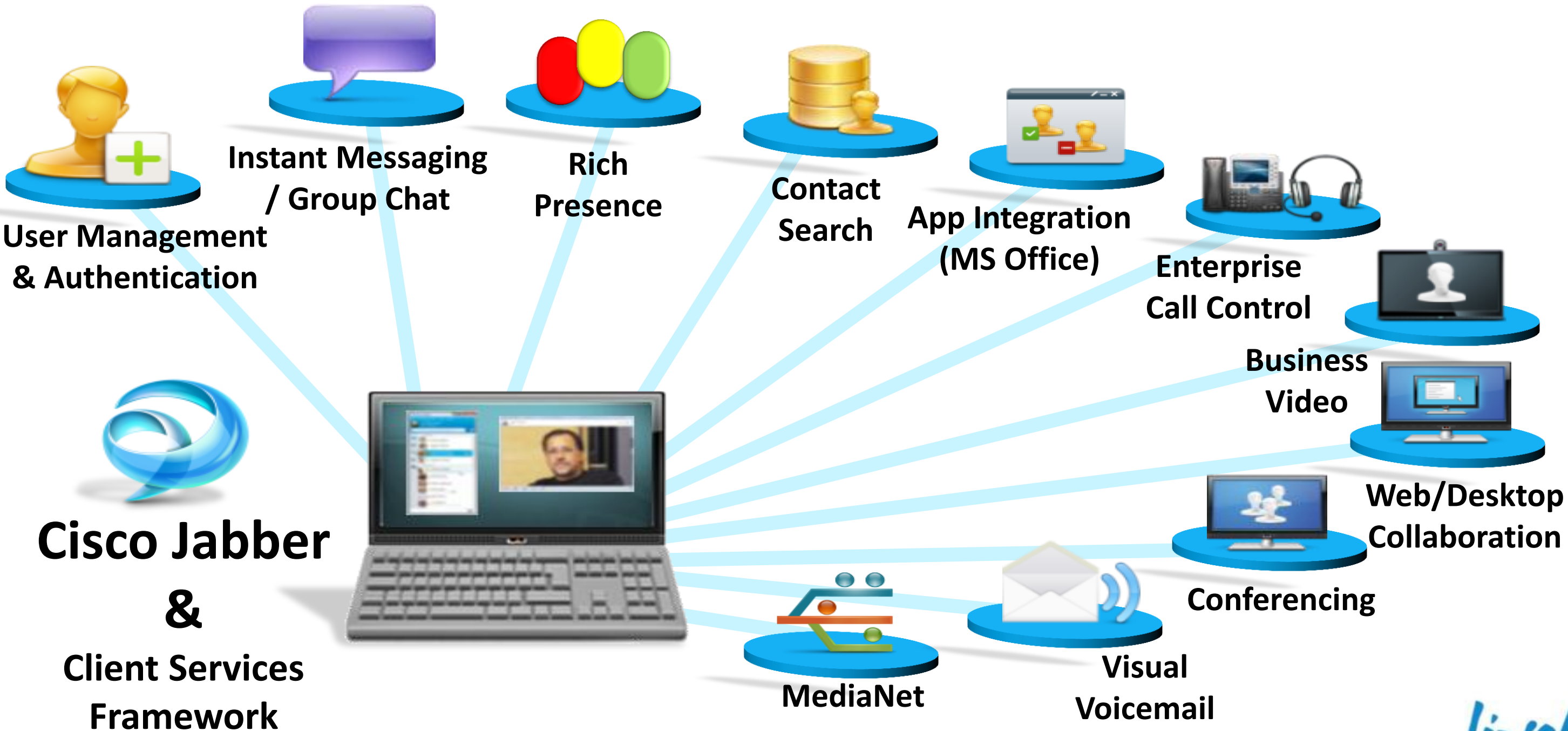
On-premises and Cloud

Integration with Microsoft Office



Cisco Jabber

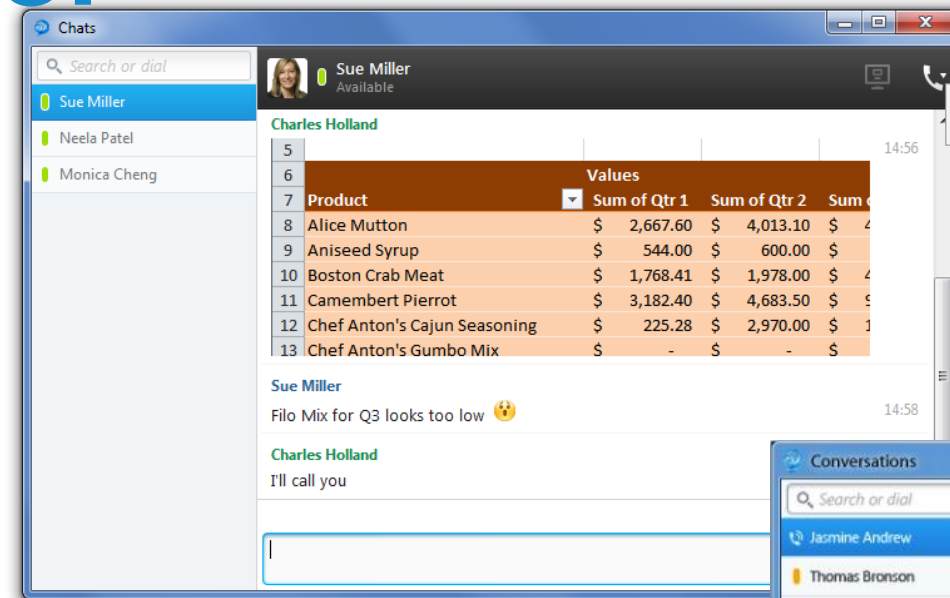
Workflows available in Cisco Jabber



A Brief tour of Jabber

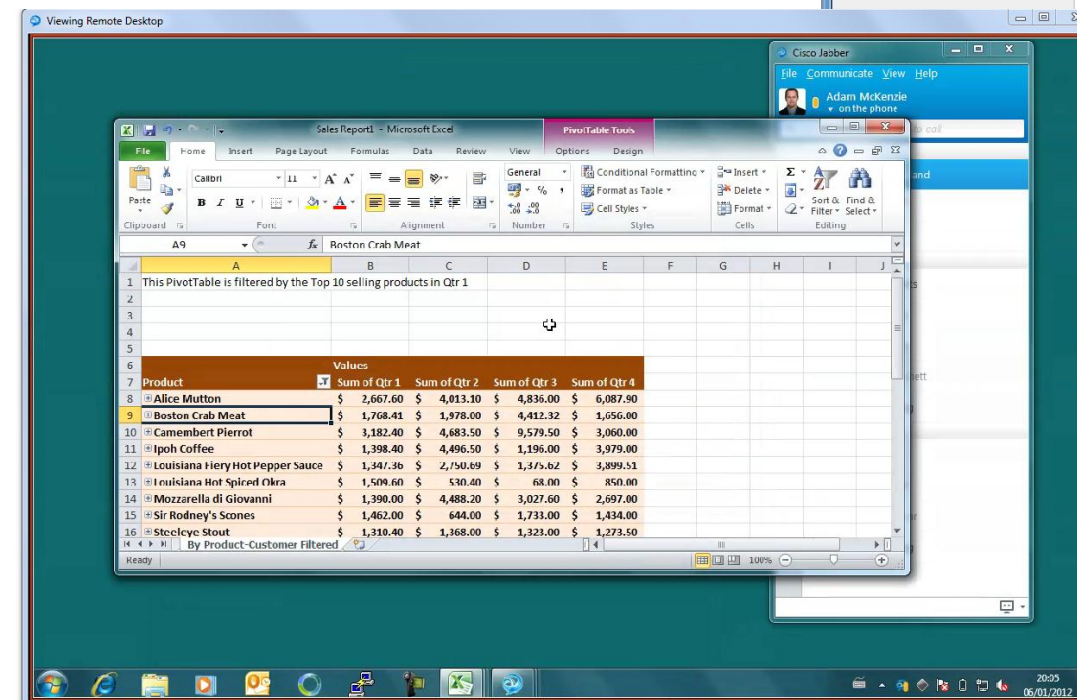
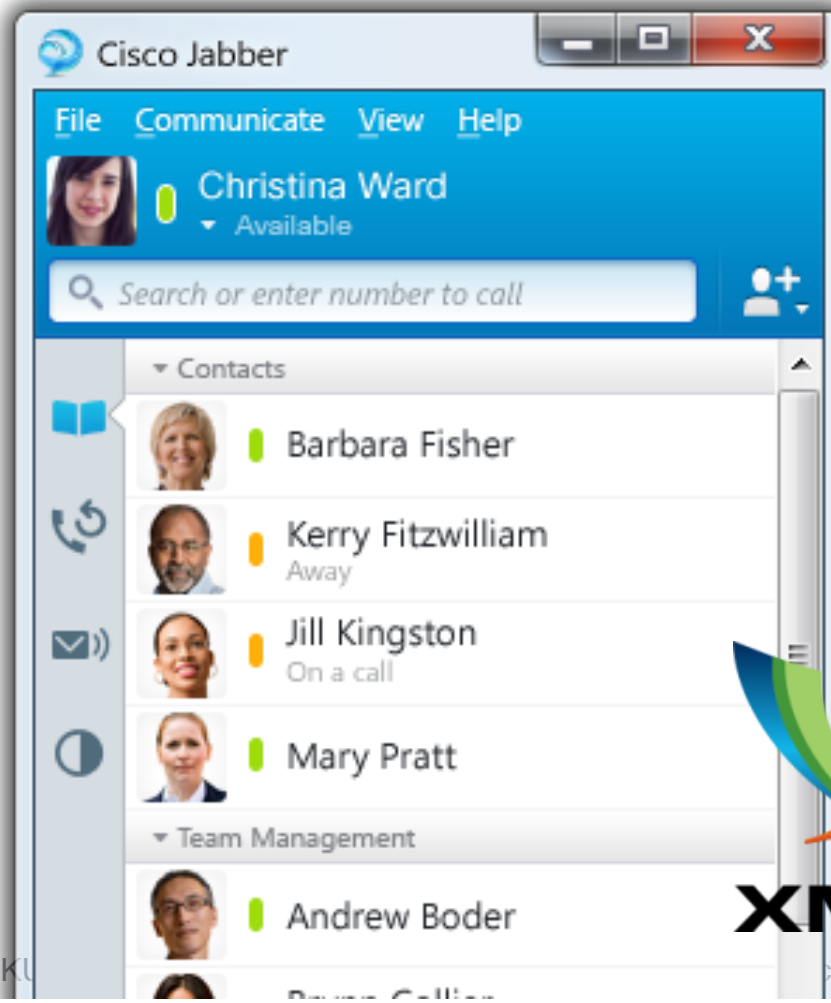
Jabber for Windows

Cisco Jabber provides you a hub view. The hub view displays **contacts with presence** and provides **search capabilities**



Chat, Group Chat, Federated Chat, Chat history, File Transfer, Screen Capture and Emoticons

Standards based **Voice** and high definition **video** calling



Collaboration using **Desktop sharing** and **Web Conferencing**



Planning your Jabber Deployment

Chat/IM & Presence



Jabber On Premise Solution Architecture

Baseline Architecture

Feature Configuration



Unified Communications



Voice Messaging



WebEx Meetings



Application Integration

Baseline Configuration (IM Only deployment)



IM & Presence Service



User Authentication and Policy

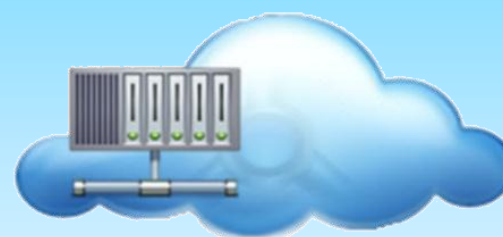


Contact Information



User Creation

Baseline Architecture



Cloud / SAAS Deployment



On Premise Deployment

Jabber with WebEx Messenger Solution Architecture

Feature Configuration



Unified Communications



Voice Messaging



WebEx Meetings



Application Integration

Baseline Configuration
(IM Only deployment)



IM & Presence Service



User Authentication and Policy



Contact Information

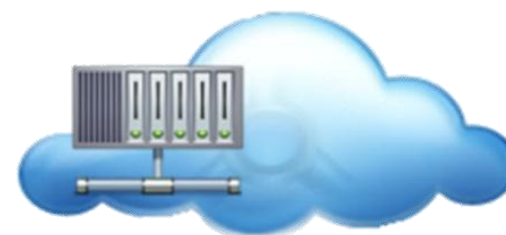


User Creation



Jabber for Everyone
(on Premise)

Baseline Architecture




Cloud / SAAS Deployment



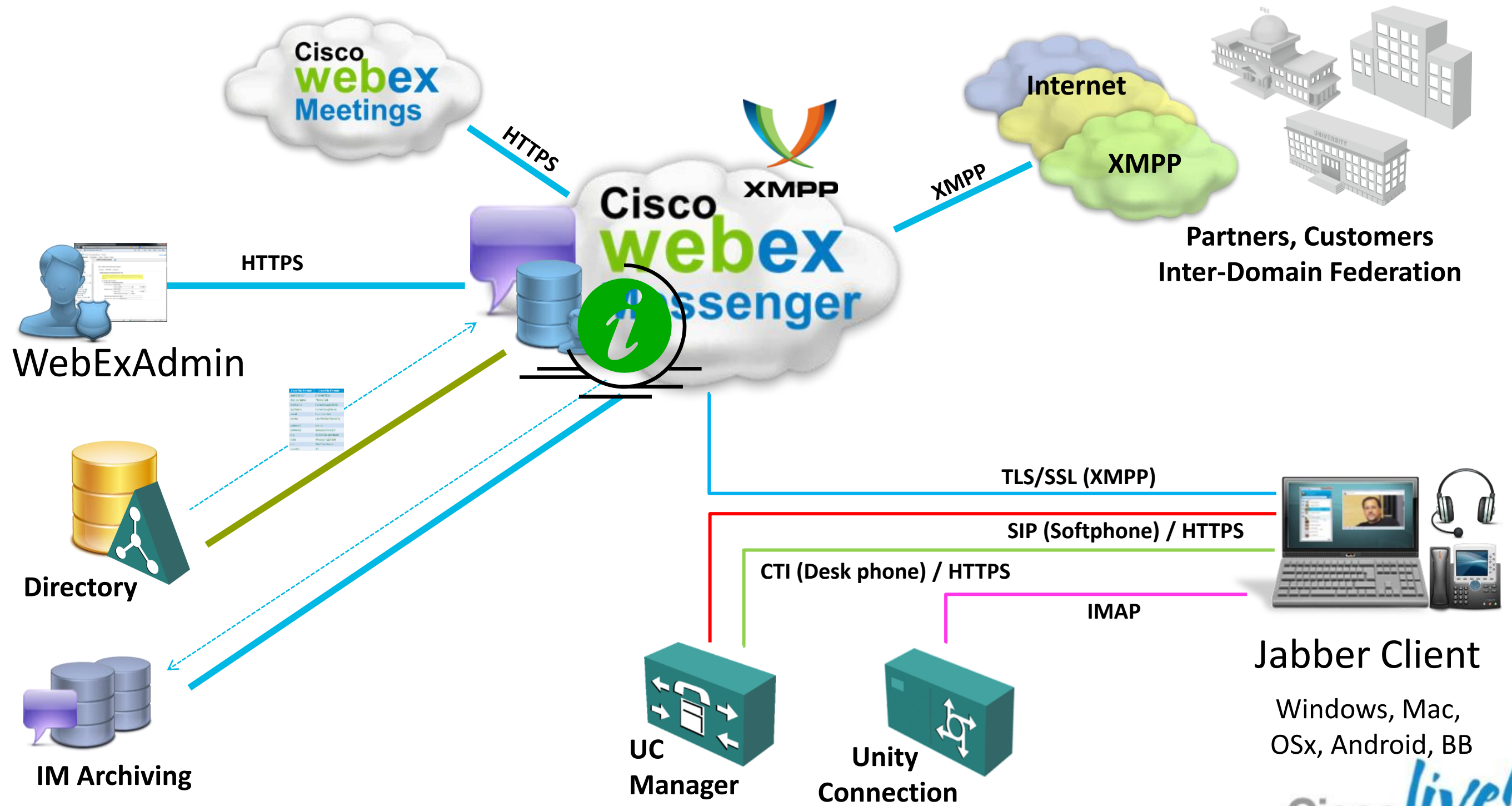
On Premise Deployment

Jabber Cloud Solution Architecture

WebEx Messenger IM, UC, Meeting Center, Auto-import, Archiving, Federation

 Cloud or On Premise key

 Cloud / SAAS Deployment





WebEx 11 Administration Tool

Organisation Configuration

Domain
Settings

Organization Information

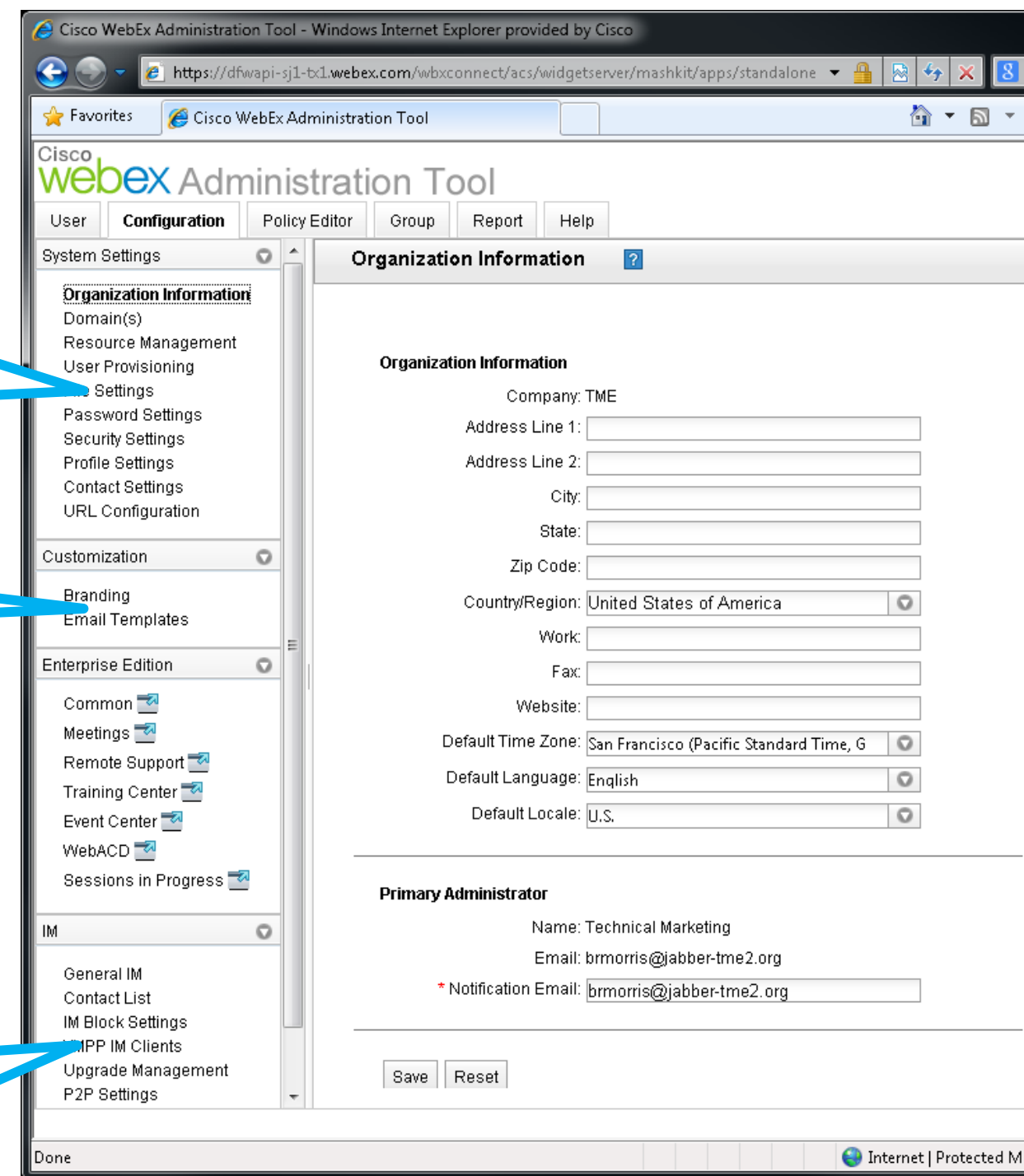
- Domain(s)
- Resource Management
- User Provisioning
- File Settings
- Password Settings
- Security Settings

Email
Template

- Branding
- Email Templates

IM Service

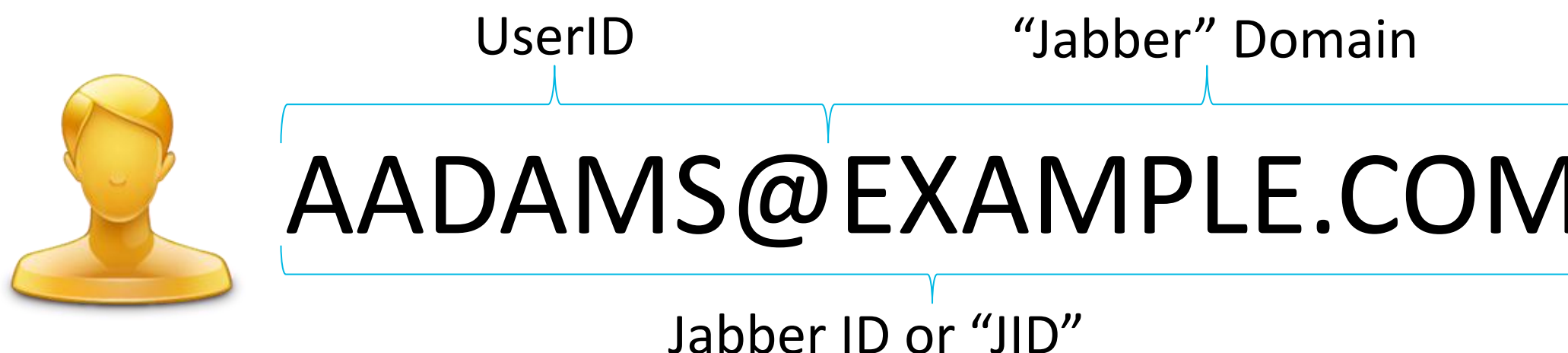
- General IM
- Contact List
- IM Block Settings
- XMPP IM Clients
- Upgrade Management
- P2P Settings





Configuring User Accounts

Defining User JID, Jabber User ID



- Consider your Jabber domain carefully, **you'll live with it for a while!**
- Multi-modal communications address (Email, IM, Voice, Video & Federation)

Cisco **webex** Administration Tool

The screenshot shows the Cisco webex Administration Tool interface. The "Configuration" tab is selected. The left sidebar lists various settings categories, with "Domain(s)" highlighted. The main content area shows a table for "Domain(s)" with the following data:

Domain	Type
jabber-tme2.org	Email & JID

Domain Whitelist: Separate multiple domains with a semicolon

Save Reset



Configuring User Accounts

Understanding User Policy and Groups

- Messenger can use default settings which doesn't apply policy restrictions
- If Policies used then Policies are assigned to ALL users
OR
- Users are assigned to Policy Groups which link to Policy lists/items



Example Policy Items



Configuring User Accounts

Options for Creating Users



Manual Provisioning via WebEx Administration Tool

Manually create and manage users via the Admin web interface

User File Import via WebEx Administration Tool

Import a CSV file of users and groups into the Connect database

- Self Registration

Accounts are created when users log in for the first time to Connect

- Single Sign-On

NOTE: Clicking here  opens that specific section of the WebEx online guide for more detailed information



Configuring User Accounts

Manual User Creation



User sets a
password
for WebEx
Account....



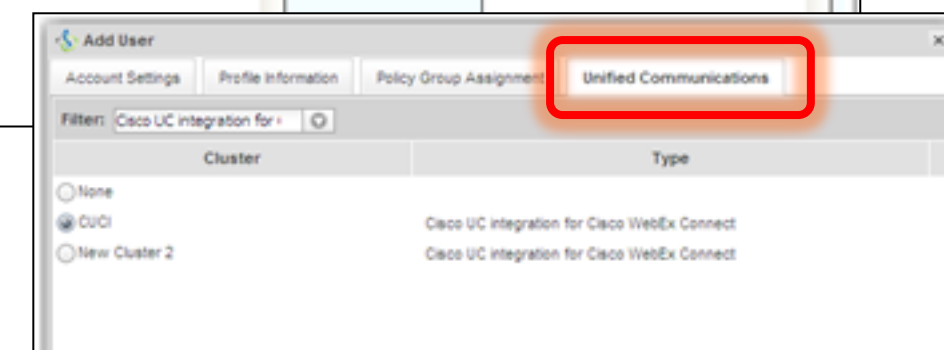
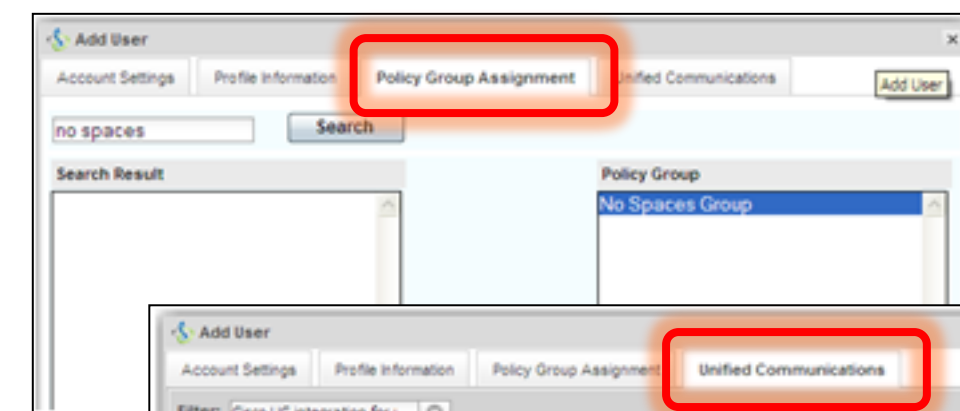
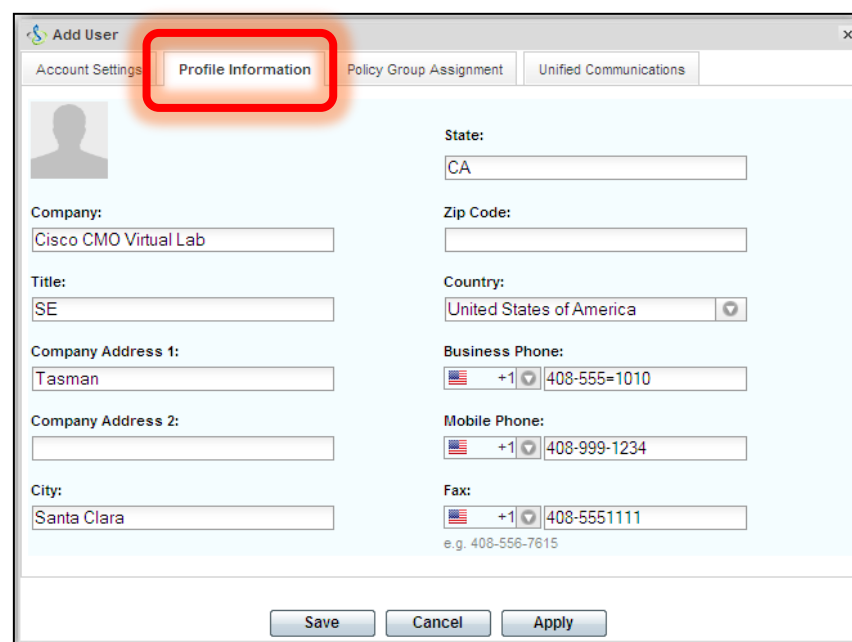
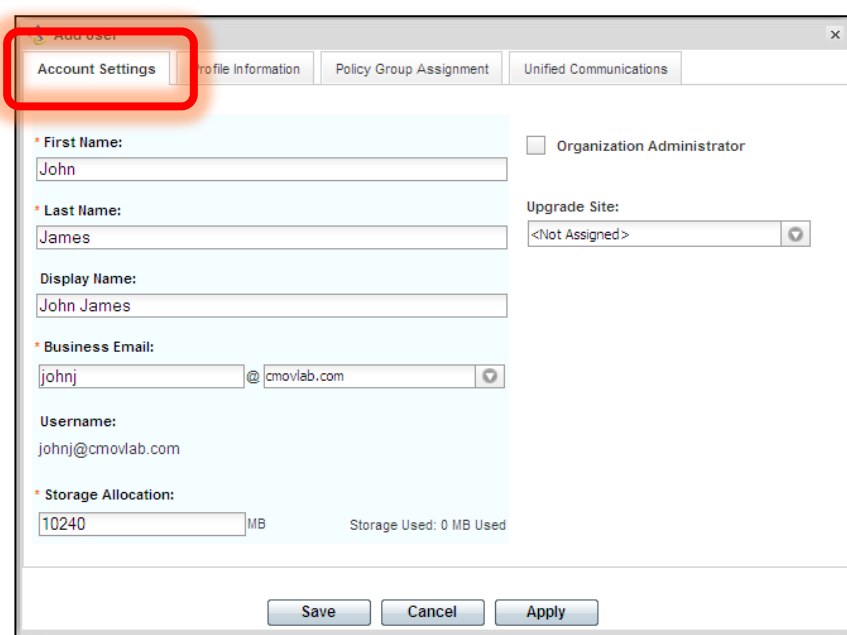
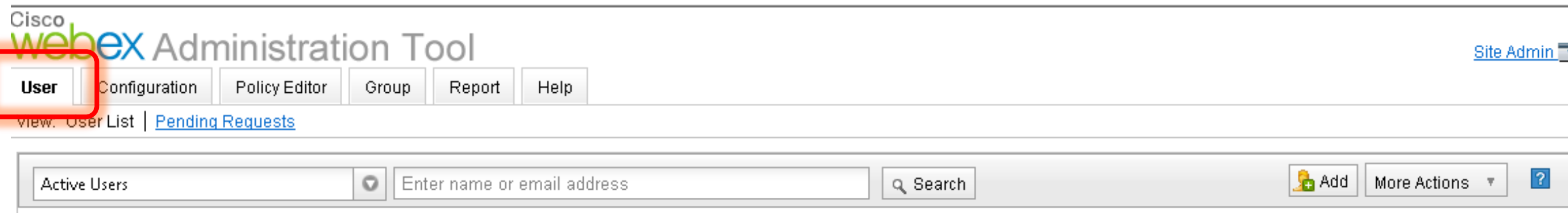
Configuring User Accounts

Manual User Creation

-Admin Tool: User tab > Add

Tabs: Account settings, Profile information, Policy Group Assignment, Unified Communications

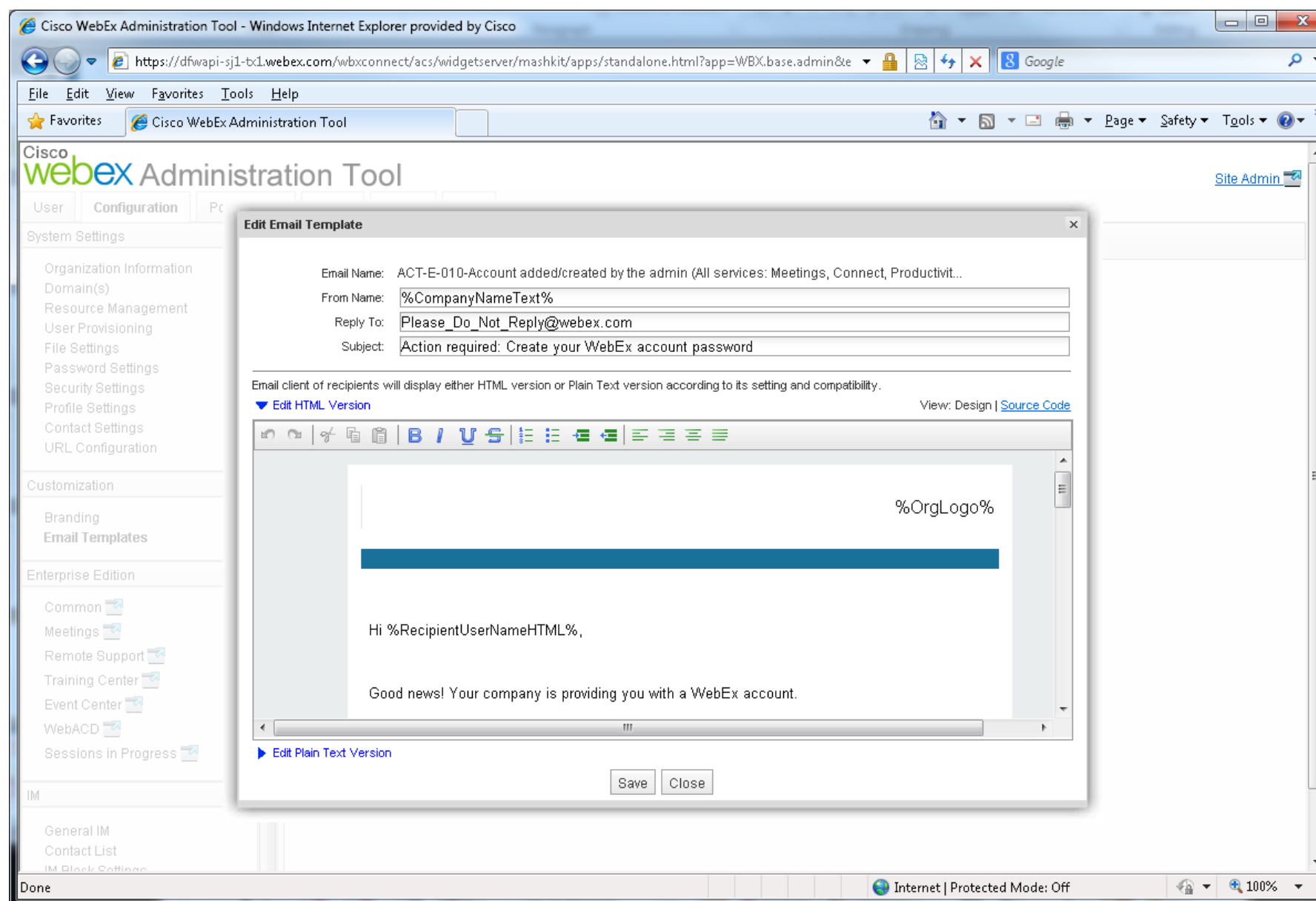
Simple method for a small number of users or pilot scenario





Configuring User Accounts

Email Templates and Branding



- WebEx administration tool provides access to library of email templates
- Administrator can create organisation specific email templates based on different service requirements
- Administrator can also add company branding to site.



Configuring User Accounts

Admin Tool: User tab > More Actions > Import/Export

Create a CSV file with user information – full list of headers and mappings are in the Admin tool guide

Simple method, saves admin time by adding and making changes in bulk

If Directory Integration and/or SSO is enabled, manual user import is not an option

The screenshot shows the Cisco Webex Administration Tool interface. The 'User' tab is selected in the top navigation bar. Below the navigation bar, there is a search bar with the text 'All Users' and a search button. To the right of the search bar are buttons for 'Add', 'Edit', and 'Reset Password'. A 'More Actions' dropdown menu is open, showing options: 'Activate', 'Deactivate', 'Assign Space', 'Import/Export', and 'Customize View'. The 'Import/Export User' dialog box is open, showing the 'Import User' section. It contains a text box with 'ImportUsers.csv', a 'Browse' button, and an 'Import' button. Below this, there is a 'Delimiter' section with radio buttons for 'Comma' (selected) and 'Tab'. The 'Export User' section is also visible, with an 'Export' button and a status message: 'Last export: 2010-09-18 04:44:55' and 'Last user export succeeded.'

	A	B	C	D	E
1	displayName	firstName	lastName	email	userName
2	Alice Adams	Alice	Adams	aadams@cmovlab.com	aadams@cmovlab.com
3	Allison Akers	Allison	Akers	aakers@cmovlab.com	aakers@cmovlab.com
4	Andy Atlanta	Andy	Atlanta	aatlanta@cmovlab.com	aatlanta@cmovlab.com



Configuring User Accounts

Self Registration


Enable Self-Registration as a last option

User's email address must match customer (site) domain

Security based upon user's domain details and email account

Account creation notification can be sent to Site Contact

WebEx Admin



User Provisioning ?

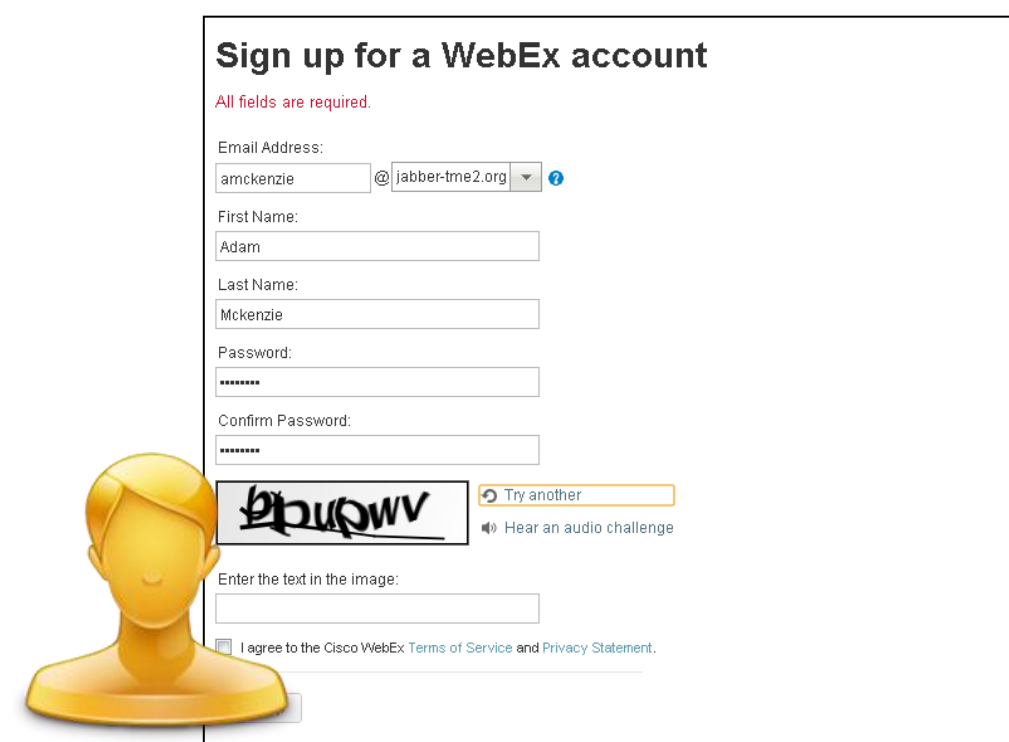
Enable user self-registration using Cisco WebEx registration page

Send notification to Administrator when users self register using Cisco WebEx registration page

Set mandatory fields for user profile

<input checked="" type="checkbox"/> First Name	<input type="checkbox"/> State
<input checked="" type="checkbox"/> Last Name	<input type="checkbox"/> Zip
<input checked="" type="checkbox"/> Email Address	<input type="checkbox"/> Country
<input type="checkbox"/> Address 1	<input type="checkbox"/> Business Phone
<input type="checkbox"/> Address 2	<input type="checkbox"/> Mobile Phone
<input type="checkbox"/> City	





Sign up for a WebEx account

All fields are required.

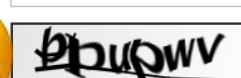
Email Address:
amckenzie @ jabber-tme2.org ?

First Name:
Adam

Last Name:
Mckenzie


Password:

Confirm Password:



Enter the text in the image:

I agree to the Cisco WebEx Terms of Service and Privacy Statement.





Configuring User Accounts

SSO Account Creation / Update

Admin Tool: Configuration tab > Security Settings

- For auto-account creation, check the appropriate boxes

Must be enabled when the organisation is provisioned and configured (AS engagement)

Federated Web SSO Configuration

Federation Protocol: SAML 2.0

SAML Metadata

Import SAML Metadata

* Issuer For SAML (IdP ID):

* Customer SSO Service Login URL:

AuthnRequest Signed

Destination:

* WebEx SAML Issuer (SP ID): http://www.webex.com

You can only export when SP ID is provided. Export

Default WebEx Target page URL:

Customer SSO Error URL:

NamedID Format: Unspecified

* AuthnContextClassRef: urn:oasis:names:tc:SAM

SSO Profile: SP Initiated IdP Initiated

Target page URL Parameter: TARGET

Single Logout for Web Client

Auto Account Creation

Auto Account Update

Save Close

Cisco webex Connect Administration Tool

User Configuration Policy Editor Group Report About Help

System Settings

Organization Information

Domain(s)

Resource Management

URL Configuration

Security Settings

Password Settings

Email Templates

User Provisioning

Connect Client

Security Settings ?

SSO Related Options

[Federated Web SSO Configuration](#)

[Organization Certificate Management](#)

[WebEx Certificate Management](#)

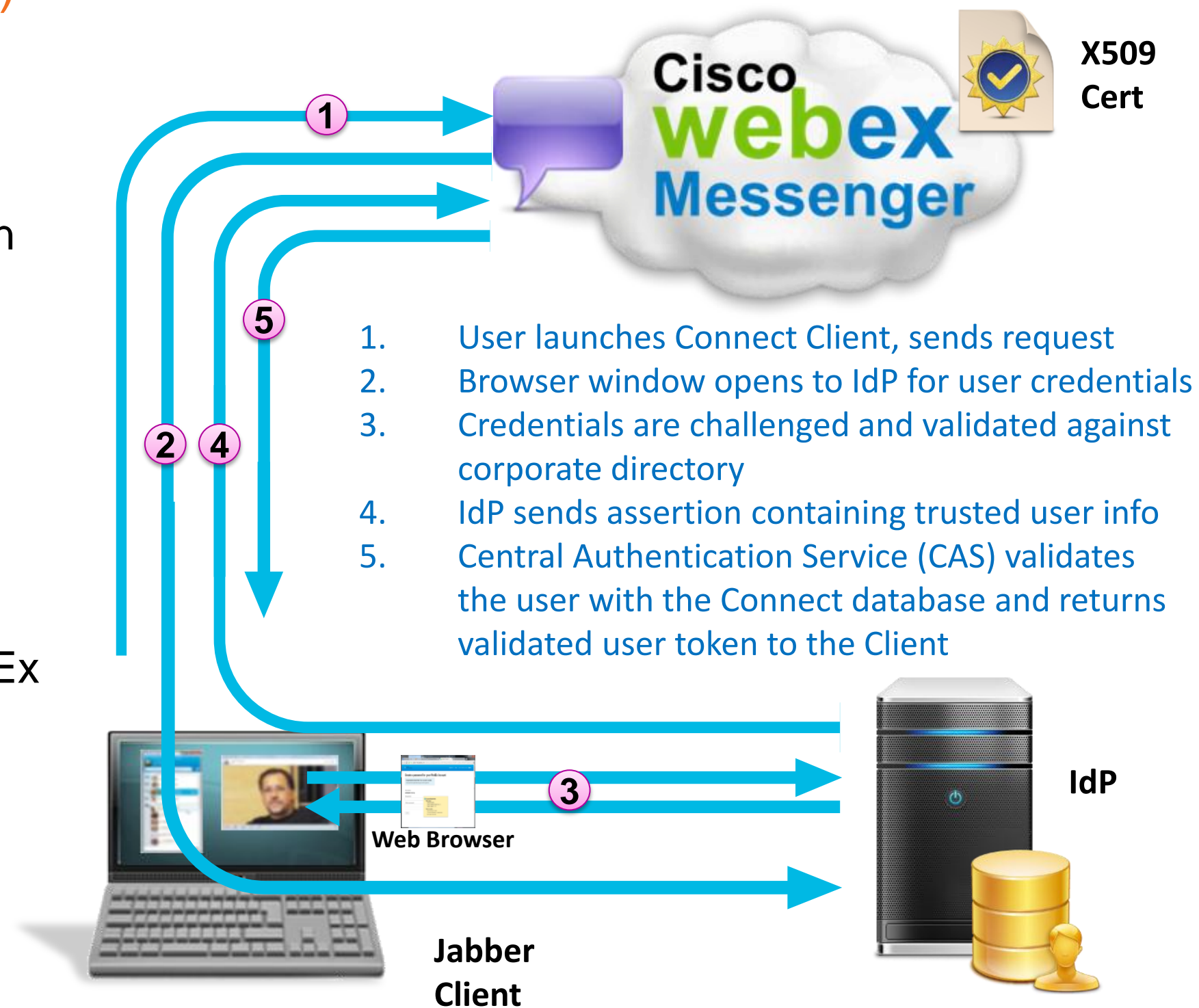
[Partner Authentication Access](#)



Configuring User Accounts



Federated Single Sign On (SSO)

- SAML 2.0 compliant or meets WS Federation 1.0 standard
- IdP – Identity Management System (on customer premise)
- Ping Identity, CA SiteMinder , ADFS, Oracle Access Manager (OpenSSO) and other SAML conformant systems
- WebEx Connect site must be enabled by WebEx provisioning
- X.509 certificate uploaded to the WebEx Cloud
- URL for the corporate single sign-on service
- Client to be setup with a command line for SSO

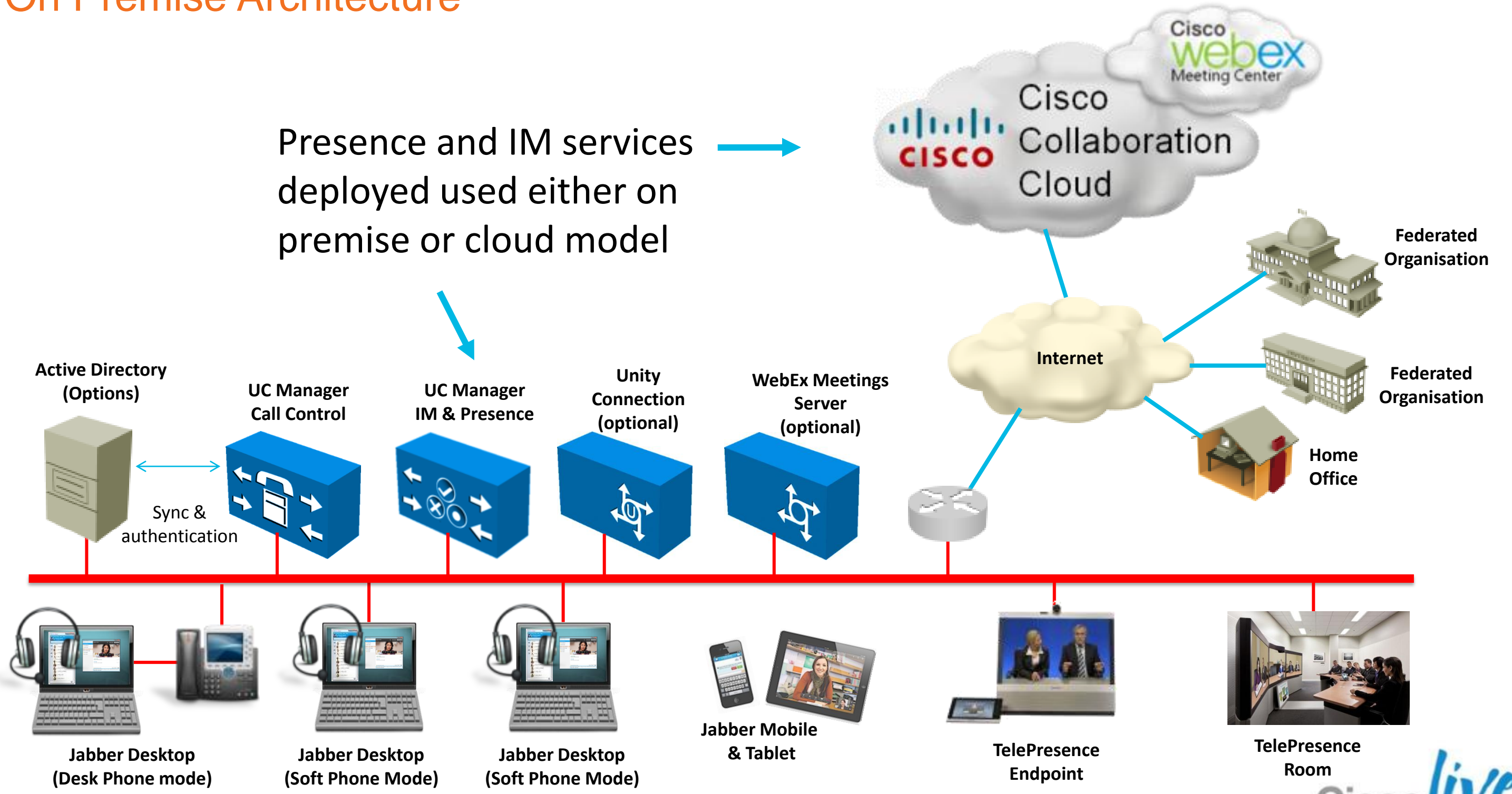


Jabber On Premise Solution

On Premise Architecture

 We just went On Premise  On Premise Deployment

Presence and IM services deployed used either on premise or cloud model

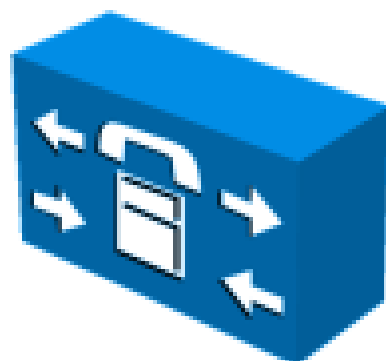




Jabber On Premise Solution Architecture

Solution Components 9.0

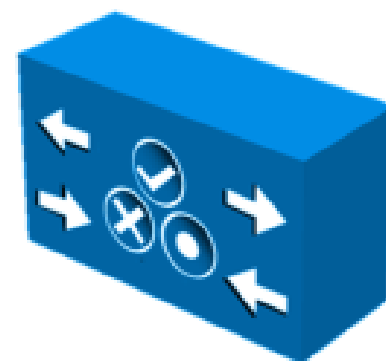
Unified Communications Manager Cluster



UC Manager
7.1(3) – 9.x

Call Control Server

- User/Device Administration
- Device Discovery
- TFTP/HTTP Config Service
- Client Service Configuration
- SIP Call Control
- CTI Device Control
- Voice/Video Routing
- Media Resource Control
- Contact Search (Optional)
- Database



Presence
8.6 or 9.x

IM & Presence Server

- XMPP/SIP Instant Messaging
- XMPP/SIP Presence Service
- XMPP/SIP Routing
- XMPP/SIP Federation
- Contact List Storage
- Configuration Gateway*
- Database Sync (from CUCM)
- IM Logging routing

**Unified presence 8.x provided
Client profiles pre 9.x*

Contact Source



Directory

- UC Manager UDS
- Active Directory 2003
- Active Directory 2008
- Microsoft ADAM
- Microsoft AD LDS
- OpenLDAP

- Contact Search
- Contact Resolution
- Telephone Resolution
- Authentication (Optional)
- Contact Photo*

* Contact Photos may be provided by
Contact source or HTTP service.



Jabber On Premise Solution Architecture

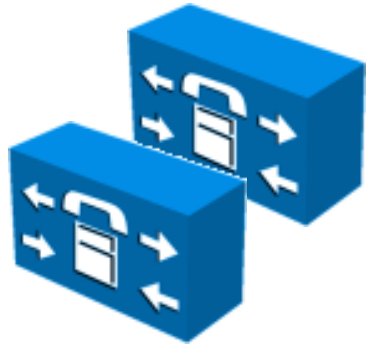
Scaling Solution to Customer Requirements

JABBER Domain – Example.com

Enterprise License Manager

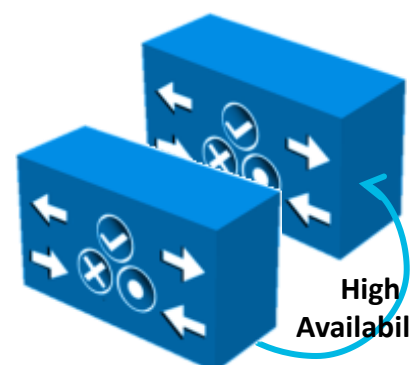
UC Manager Cluster

UC Manager



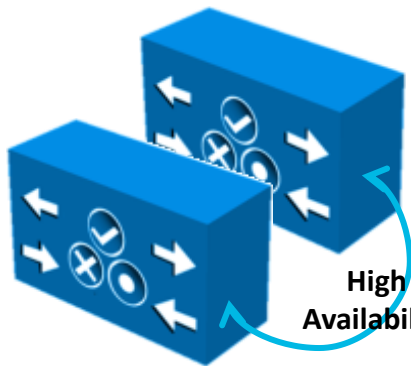
Host Cluster
(User Management)

IM&P Server



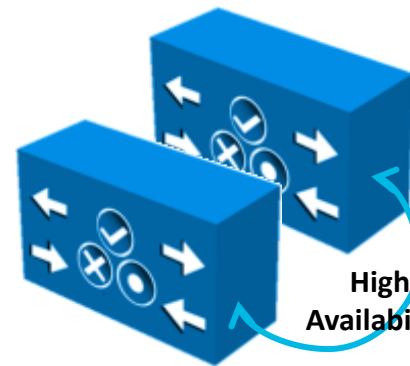
25,000 IM users
15,000 UC users

Sub-Custer




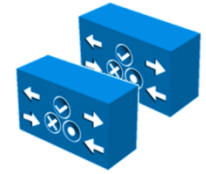
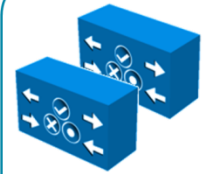
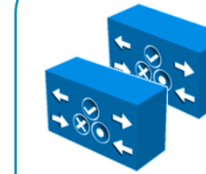
=50,000 IM users
=30,000 UC users

Sub Cluster


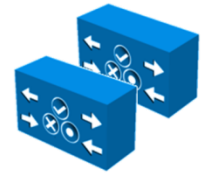

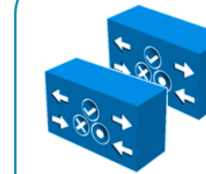


=75,000 IM users
=45,000 UC users

UC Manager Cluster

UC Manager	IM&P Server	IM&P Server	IM&P Server
			
Cluster Host (User Management)	25,000 IM users 15,000 UC users	50,000 IM users 30,000 UC users	75,000 IM users 45,000 UC users

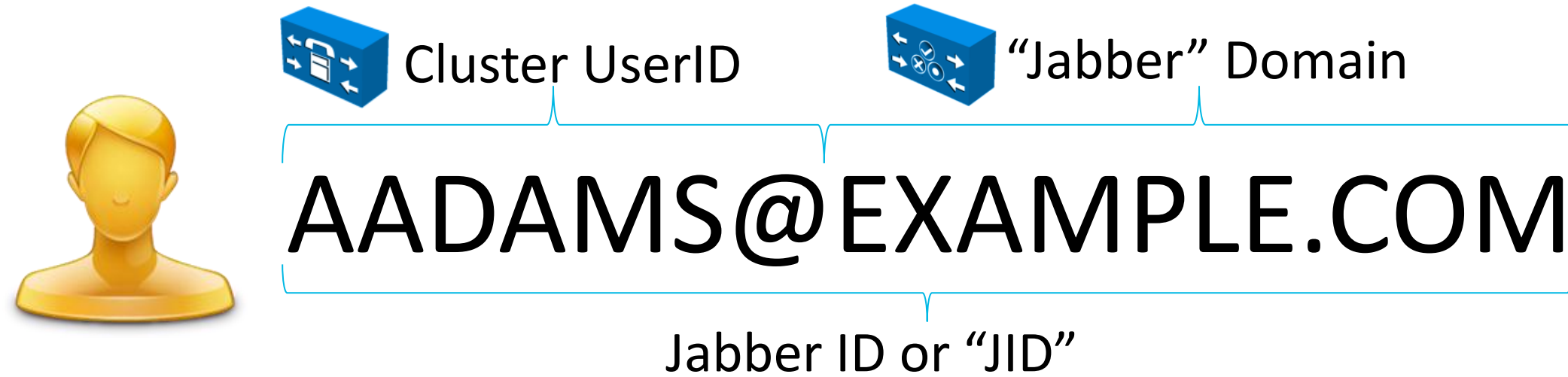
UC Manager Cluster

UC Manager	IM&P Server	IM&P Server	IM&P Server
			
Cluster Host (User Management)	25,000 IM users 15,000 UC users	50,000 IM users 30,000 UC users	75,000 IM users 45,000 UC users



Creating Jabber Users

What's your JID? (Jabber ID)



- Consider your Jabber domain carefully, **you'll live with it for a while!**
- Multi-modal communications address (Email, IM, Voice, Video & Federation)
- User created on UC Manager (can be synced from LDAP, AD Server)
- User is authenticated (can be authenticated from LDAP/AD or *SSO) (H1 CY13)
- Presence domain is configured on Presence server





Creating Jabber Users

Adding Users as UC Manager Users

Option 1 (recommended)

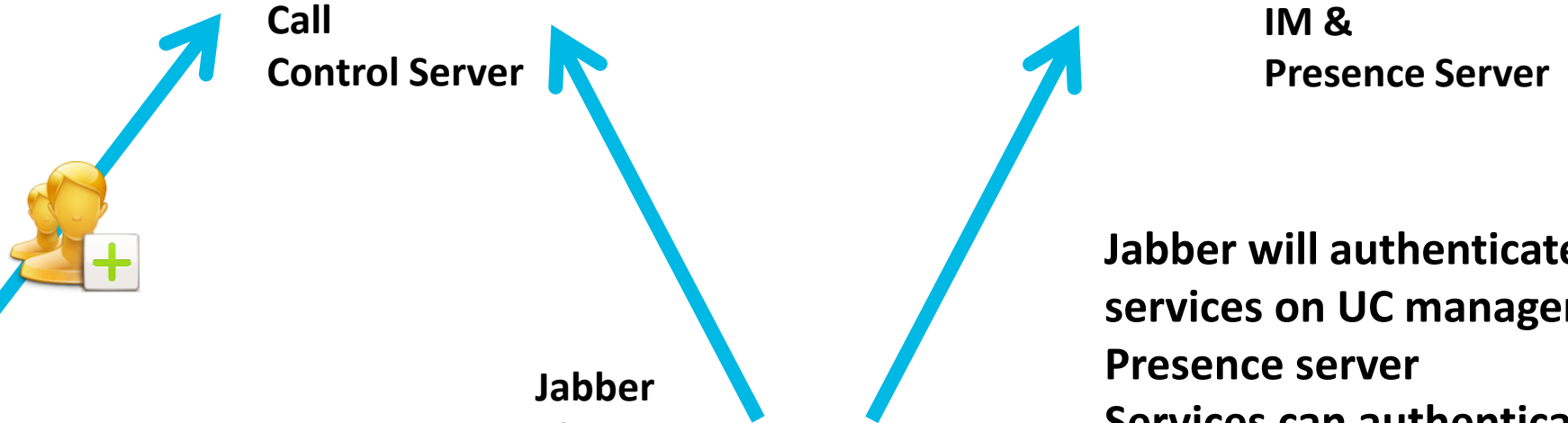


Recommended Configuration is to synchronise Corporate directory with UC Manager.
 Key **sAMAccountName**, mail, employeeID, Telephone, UserPrinciplename

Option 2

UC manager User Administration

Users created via Web admin or via Bulk Administration Tool (BAT)



Jabber will authenticate to services on UC manager and Presence server
 Services can authenticate user locally or back to directory service

Jabber Client
 Jabber User
 [User@XMPP Domain]

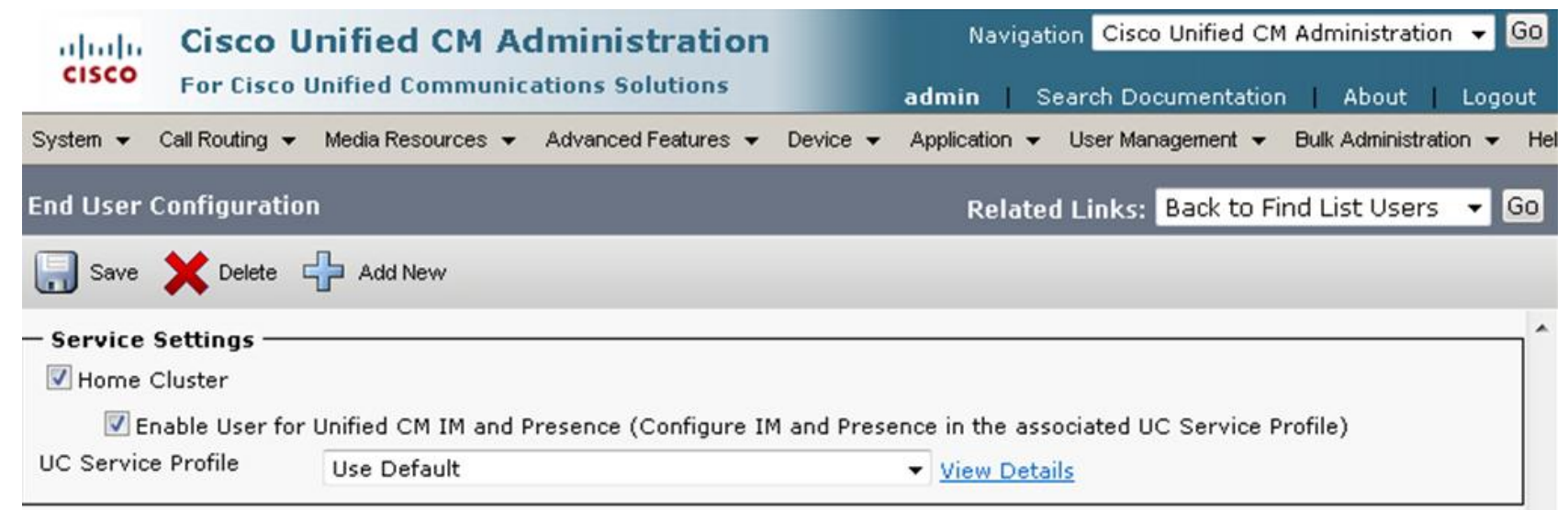
Jabber on premise deployment will introduce single sign on (SSO) in H1 CY13



Creating Jabber Users

Enabling Users for IM & Presence

- Users are enabled for IM and Presence in UC manager 9.0
- Enabling the User for IM&P will enable them and allocate them to a node in the IM&P nodes
- If using 7.x or 8.x UC manager then users are enabled on 8.X presence server.

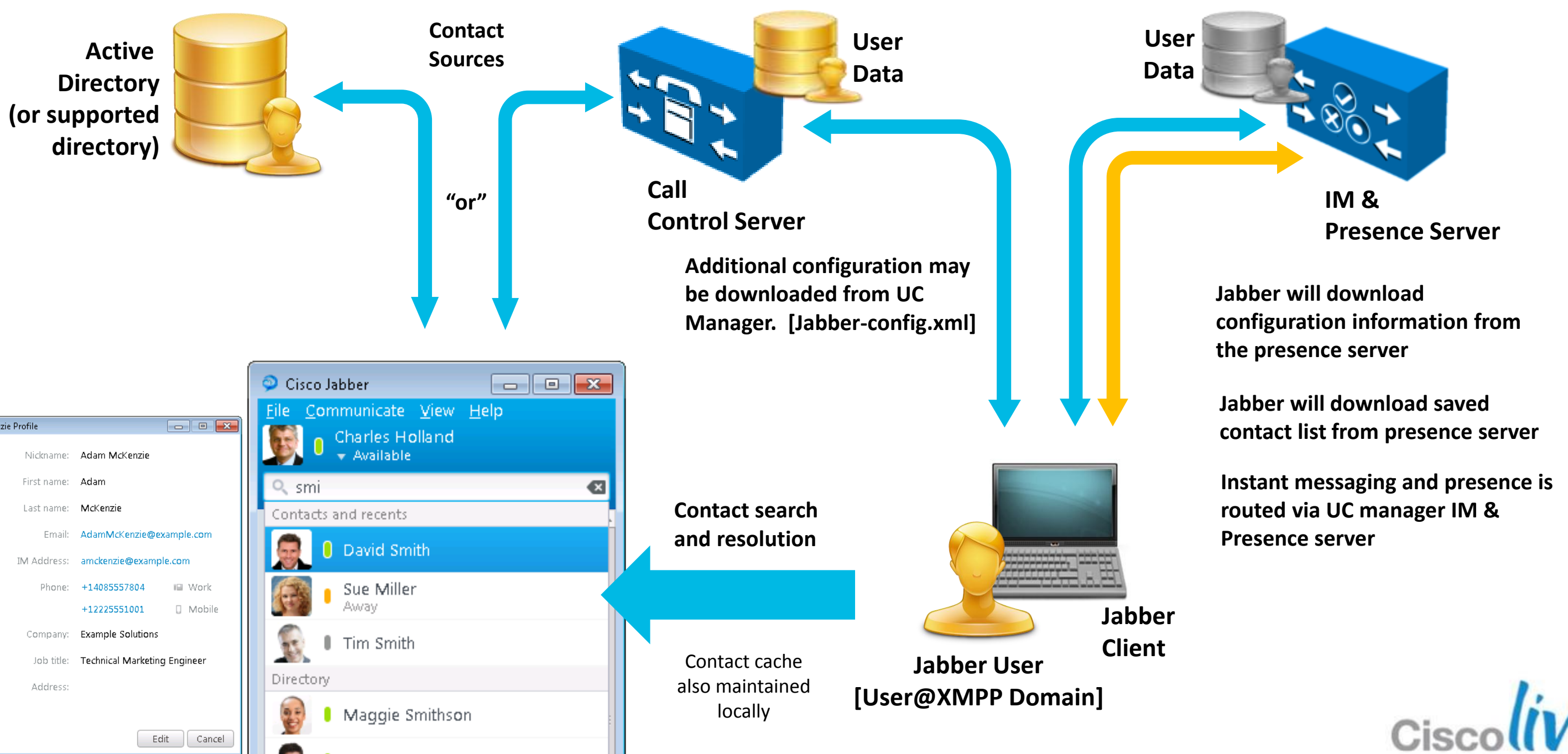




Creating Jabber Users

IM and Presence Architecture

Unified Communication Manager



Adam McKenzie Profile

Nickname: Adam McKenzie

First name: Adam

Last name: McKenzie

Email: AdamMcKenzie@example.com

IM Address: amckenzie@example.com

Phone: +14085557804 (Work), +12225551001 (Mobile)

Company: Example Solutions

Job title: Technical Marketing Engineer

Address:

Edit Cancel

Cisco Jabber

File Communicate View Help

Charles Holland Available

Search: smi

Contacts and recents

- David Smith
- Sue Miller (Away)
- Tim Smith

Directory

- Maggie Smithson
- Sam Smith

BRKUCC-2480

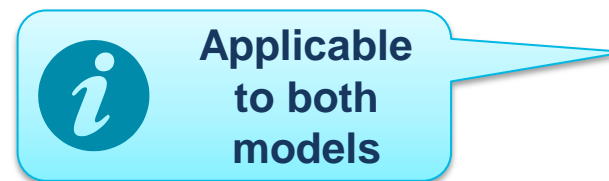
All rights reserved.

Cisco Public



Jabber Contact Sources

Information/Access to Directory Service

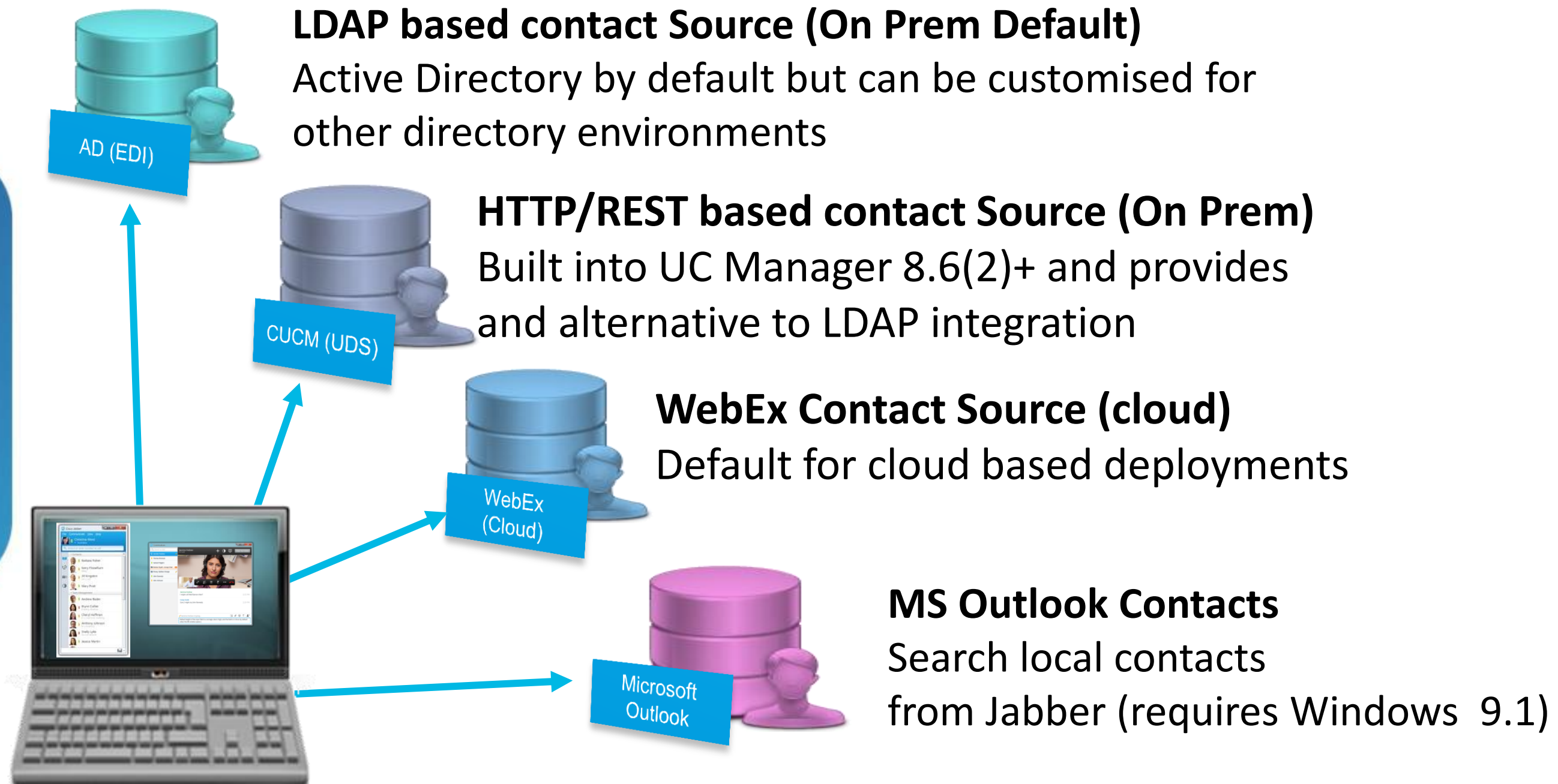


- Clients search the directory to add contacts, resolve contacts and phone numbers.
- What directory does the organisation use?, Do they use more than one
- Which Jabber Contact Source are we going to deploy
- You need to understand the directory infrastructure
 - Directory Architecture (AD?, Domain?, Forest)
 - Attribute Usage / Mapping (custom attributes)
 - Connection Parameters (LDAP / LDAPS, DC / GC, Ports)
 - Data completeness / Data quality (Phone Formats?)

Phone numbers should not include space, dash or bracket etc.

Jabber Contact Sources

Selecting a Contact Source





Jabber Contact Sources

EDI : Enhanced Directory Integration (LDAP)

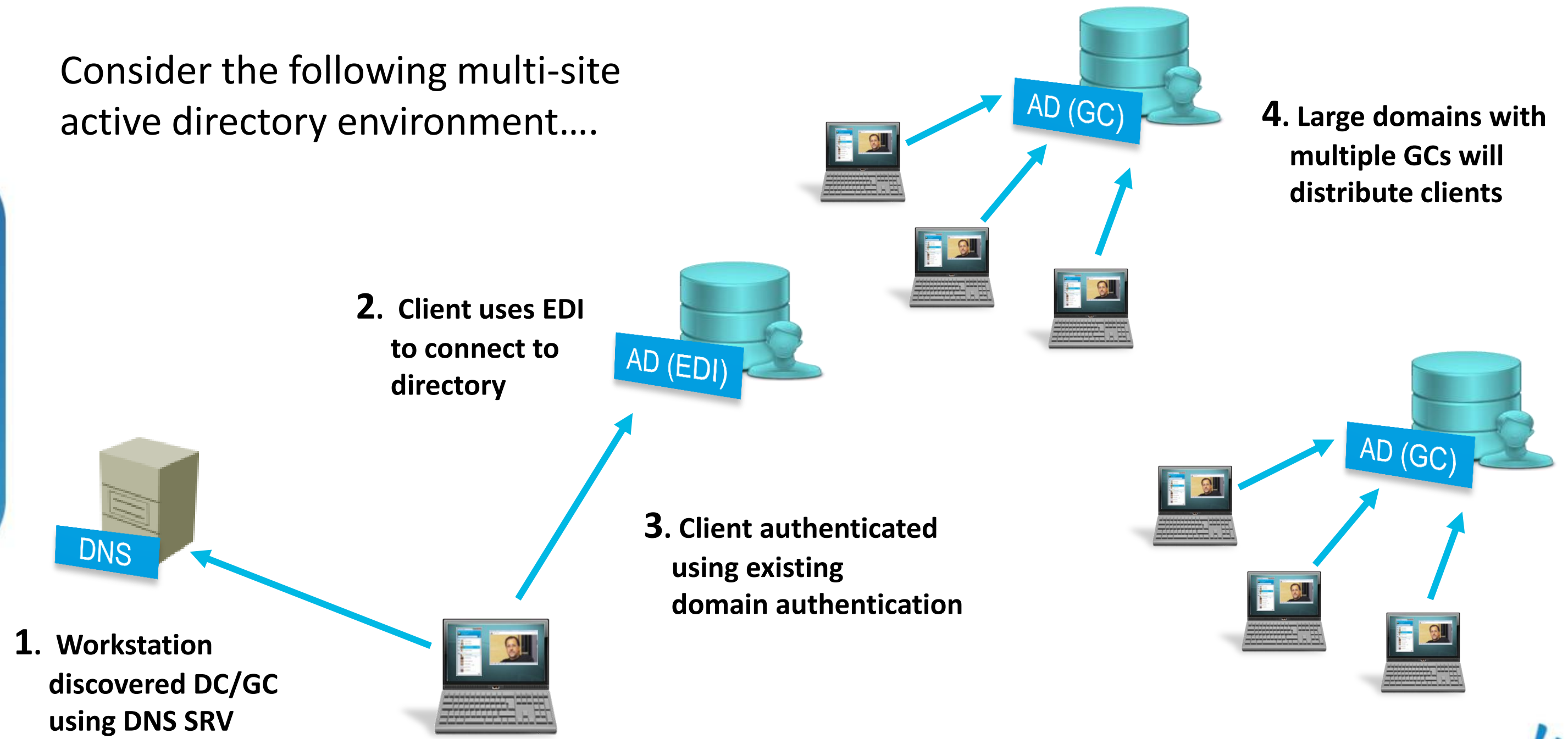
- **On Premise Jabber for Windows by default uses auto-discovery for LDAP directory access (EDI Mode)**
- **Workstation MUST be a member of a domain for auto discovery to work**
- Clients connect to a Global Catalog server in the current domain (windows selects exact GC, so distributes load)
- Client uses encrypted authentication to directory based on current logged on user (workstation)
- Ambiguous name resolution (ANR) is used for search, ANR is more efficient and uses less server resources than other search methods.



Jabber Contact Sources

EDI : Enhanced Directory Integration (LDAP)

Consider the following multi-site active directory environment....





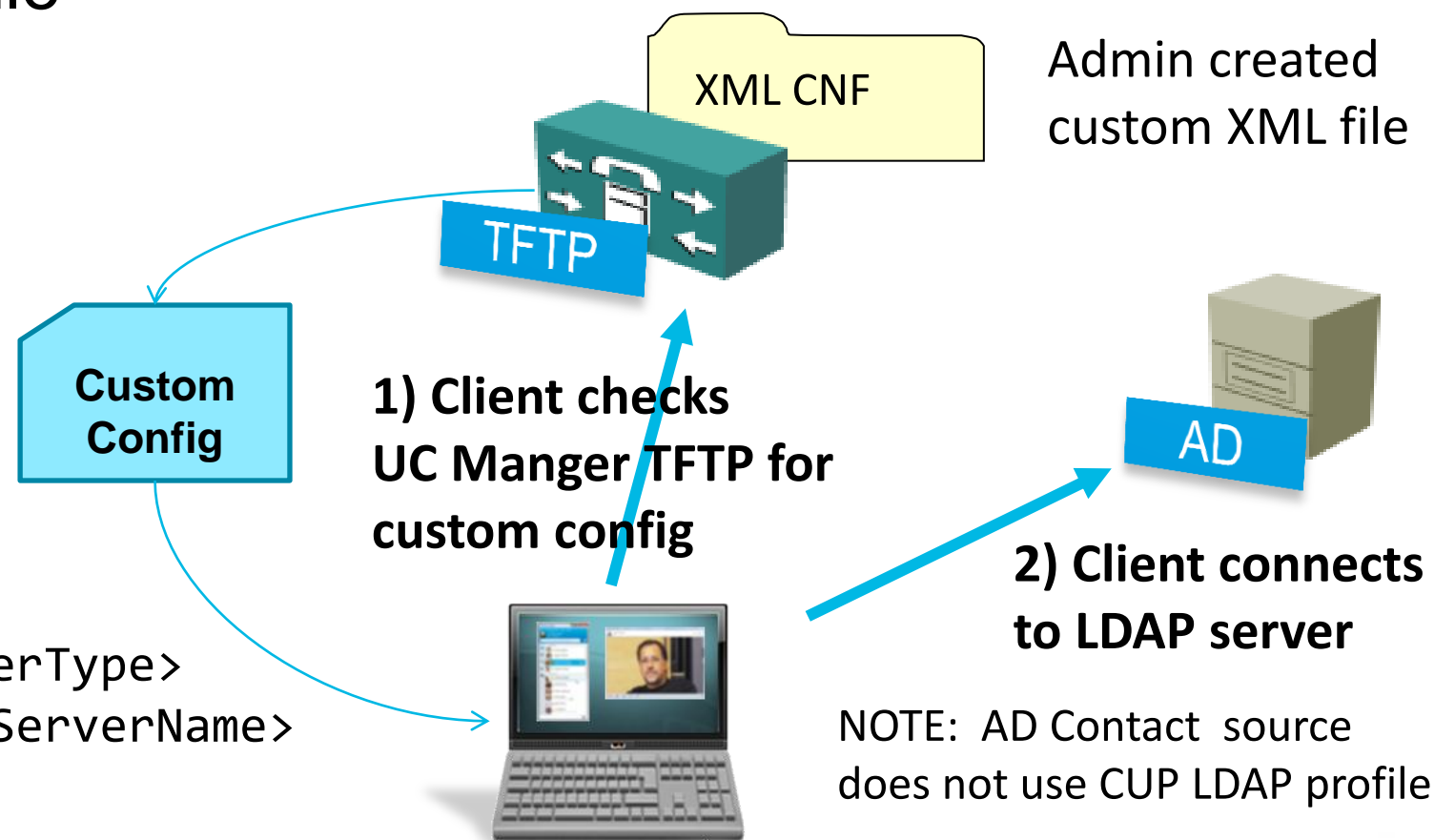
Jabber Contact Sources

EDI : Customisation - One Model doesn't fit all....

- Administrator can customise many elements of EDI operation for different deployment environments.
- The Administrator creates a custom XML configuration file for directory access.
- TFTP or HTTP is used to download file
- Filename: Jabber-config.xml
- Only define non default items.

```
<?xml version="1.0" encoding="utf-8"?>
<config version="1.0">
  <Directory>
    <DirectoryServerType>EDI</DirectoryServerType>
    <PrimaryServerName>D1.test.lab</PrimaryServerName>
    <ServerPort1>1234</ServerPort1>
  </Directory>
</config>
```

(example only)



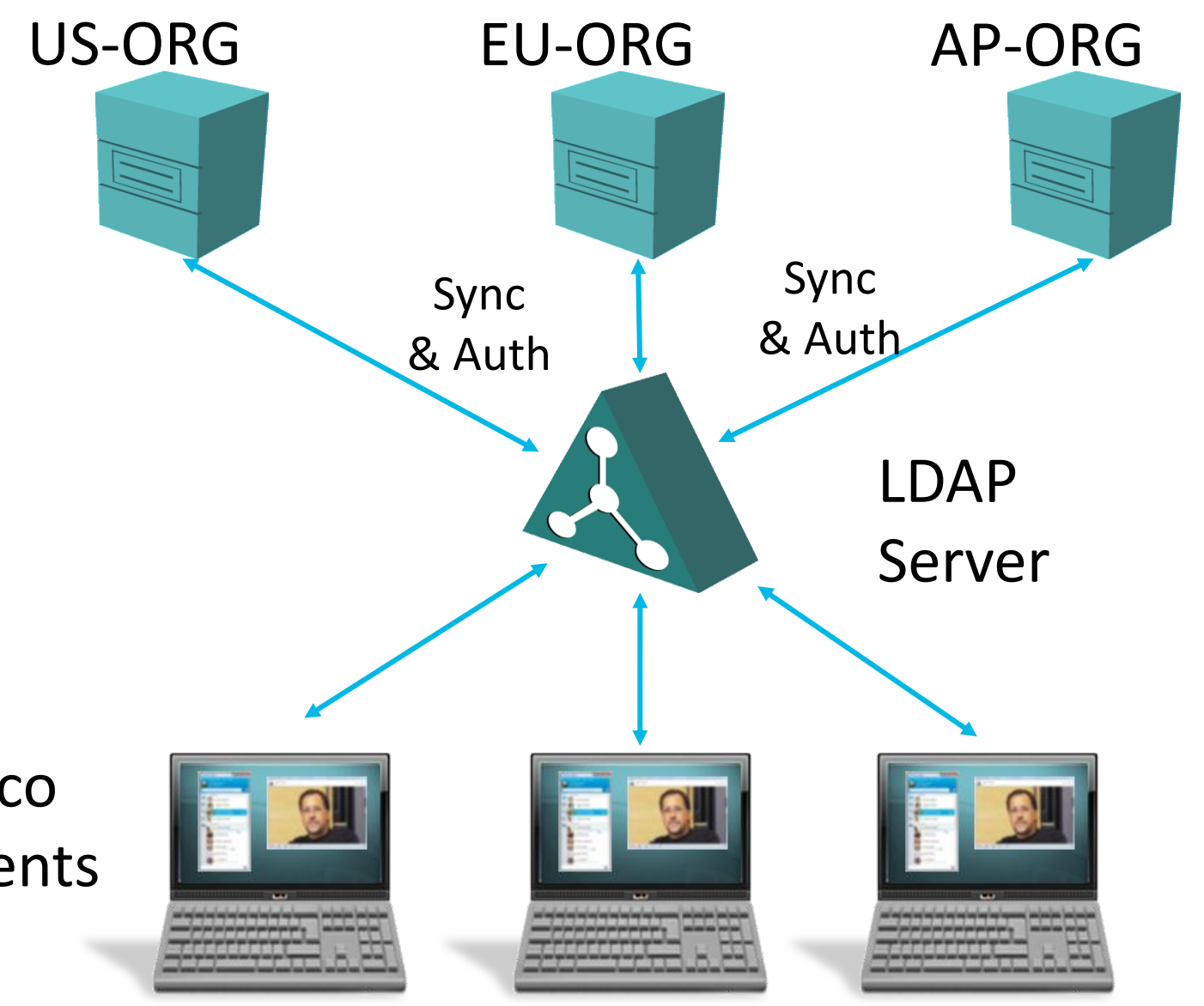
NOTE: AD Contact source does not use CUP LDAP profile



Jabber Contact Sources

EDI : Alternative Directory Access

- EDI can connect to a single AD forest. If you need to connect to multiple forests you can use Microsoft AD Application mode / lightweight directory services.
- ADAM/LDS is commonly used to build to an aggregated directory from multiple AD forests
- EDI also supports ADAM/LDS using proxy authentication.
- Connection to other LDAP application servers (i.e. non Microsoft)





Jabber Contact Sources

EDI : Custom Directory Access Parameters

Connection Settings

Connection Type

UseSecureConnection

UseSSL

PrimaryServerName

Port1

SecondaryServerName

Port2

Search

SearchBase1

SearchBase2

SearchBase3

BaseFilter

Attribute Map

CommonName

Nickname

FirstName

PostalCode

LastName

State

EmailAddress

StreetAddress

SipUri

PhotoURI

BusinessPhone

CompanyName

HomePhone

UserAccount

OtherPhone

Domain

PreferredNumber

Location

Title

Authentication

UseWindowsCredentials

ConnectionUsername

ConnectionPassword



Jabber Contact Sources

EDI: Example Configurations

- Connect to DC not GC

```
<?xml version="1.0" encoding="utf-8"?>
<config version="1.0">
  <Directory>
    <DirectoryServerType>EDI</DirectoryServerType>
    <ConnectionType>1</ConnectionType>
  </Directory>
</config>
```

- Manual Server selection

```
<?xml version="1.0" encoding="utf-8"?>
<config version="1.0">
  <Directory>
    <DirectoryServerType>EDI</DirectoryServerType>
    <PrimaryServerName>primary_server_name.domain.com</PrimaryServerName>
    <ServerPort1>1234</ServerPort1>
    <SecondaryServerName>secondary_server_name.domain.com</SecondaryServerName>
    <ServerPort2>5678</ServerPort2>
  </Directory>
</config>
```



Jabber Contact Sources

EDI : Example Configurations

- Common access account

```
<UseWindowsCredentials>0</UseWindowsCredentials>  
<ConnectionUsername>ldap_user</ConnectionUsername>  
<ConnectionPassword>ldap_password</ConnectionPassword>
```

- Search specified OU

```
<SearchBase1>ou=employee,dc=example,dc=com</SearchBase1>
```

- Exclude defined entry based on attribute

```
<BaseFilter>(&!(objectCategory=person)(UserAccountControl:1.2.840.113556.1.4.803:=2)</BaseFilter>
```

- Use alternative attribute for phone

```
<BusinessPhone>aNonDefaultTelephoneNumberAttribute</BusinessPhone>  
<MobilePhone>aNonDefaultMobileAttribute</MobilePhone>  
<HomePhone>aNonDefaultHomePhoneAttribute</HomePhone>  
<OtherPhone>aNonDefaultOtherTelephoneAttribute</OtherPhone>
```

- Note: Jabber-config.xml file also holds a number of other configuration parameters, alternative files can also be defined by administrator.

Jabber Contact Sources

Retrieving Photos for Contacts

- Jabber provides a number of methods to retrieve contact photos to support many different customer environments

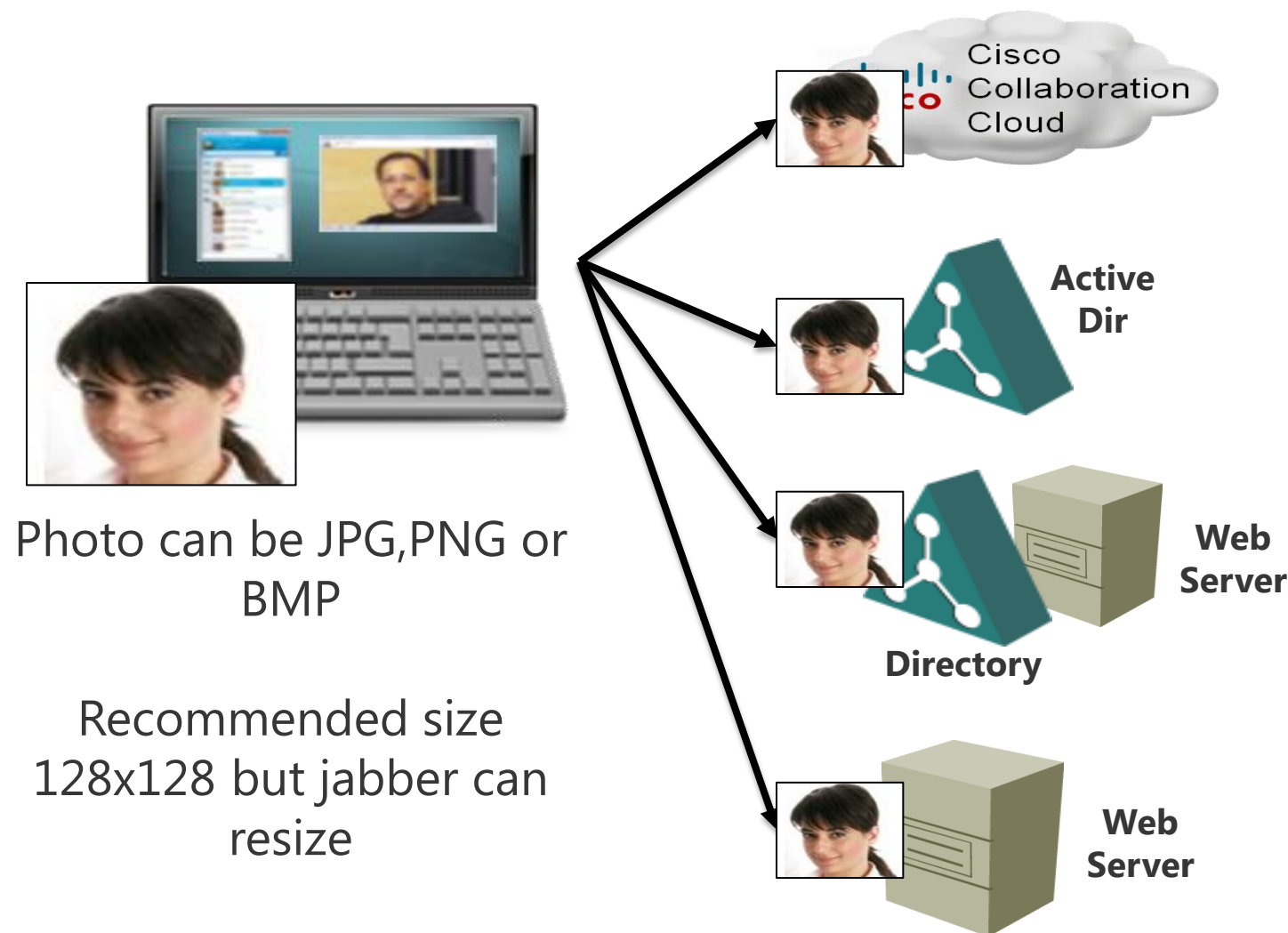


Photo can be JPG,PNG or BMP

Recommended size 128x128 but jabber can resize

Note: Option 2 & 3 phase object to detect binary object or URL

Option 1: Cloud Default (no config) WebEx Contact Photos

Option 2: On Prem Default (no config) Active Directory Binary Objects

Retrieve binary photo from thumbnailPhoto attribute load with Powershell

Option 3: On Prem PhotoURL Attribute/ Retrieve URL

<http://photo.example.com/staff/msmith.jpg>

Option 4: On Prem (XML config) URL Substitution/Macro style

<http://photo.example.com/staff/%uid%.jpg>

Jabber will also retrieve thumbnail photos from MS Outlook for personal contacts if photo available



Jabber Contact Sources

Retrieving Photos for Contacts

- EDI Photo Service Configuration – XML file settings
 - Number / Name resolution should be configured/operational
 - Use custom configuration settings to configure photos
 - Directory method

Photo Parameters	Example Value
PhotoSource	Client will parse attribute to binary object or URI

Substitution method

Photo Parameters	Example Value
PhotoUriSubstitutionEnabled	True
PhotoUriWithToken	http://photosvr/dir/sAMAccountName.jpg
PhotoUriSubstitutionToken	sAMAccountName

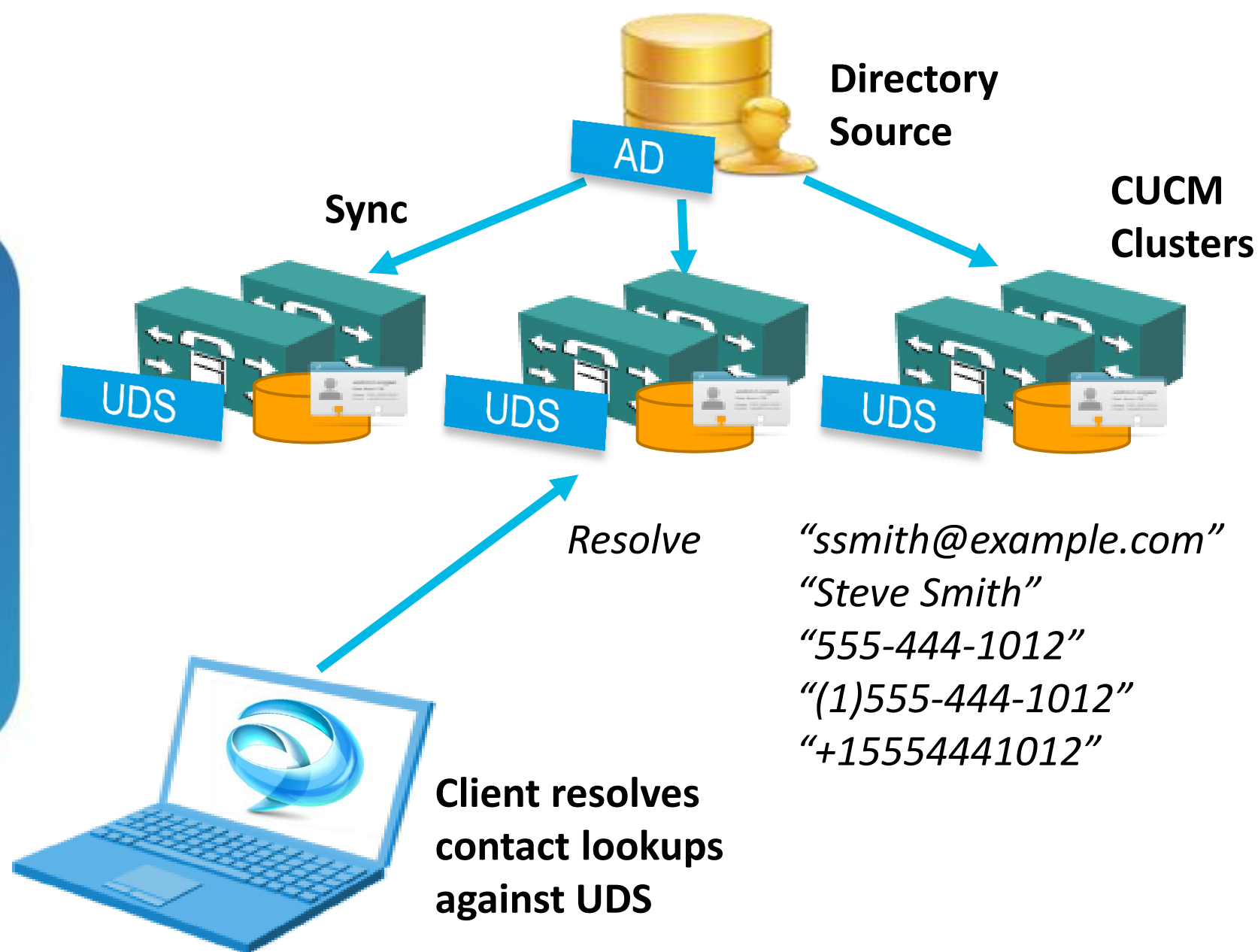
Define in
XML Config
File





Jabber Contact Sources

UDS – User Data Services (Contact Service)



- When using the UDS Contact Record Source the client performs contact resolution against communication manager.
- The communications manager Universal Data Service provides an optimised contact lookup service from CUCM 8.6(2)
- UDS provides a cross cluster contact service supporting up to 160,000 contacts.
- UDS support being added to all Jabber clients.



Jabber Contact Sources

UDS – Configuration

- UDS Record source is configured in UC manager 8.x via jabber-config.xml file

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<config version="1.0">
```

```
<Directory>
```

```
<DirectoryServerType>UDS</DirectoryServerType>
```

```
<PhotoURISubstitutionEnabled>True</PhotoURISubstitutionEnabled>
```

```
<PhotoURISubstitutionToken>uid</PhotoURISubstitutionToken>
```

```
<PhotoURIWithToken>http://10.53.54.240/staff/%%uid%%.jpg</PhotoURIWithToken>
```

```
</Directory>
```

```
</config>
```

Software Deployment

Client Deployment

- Jabber for Windows is shipped as an MSI Installer
 - Windows XP 32bit, Vista 32/64 bit, Windows 7 32/64 bit and Apple OS X
- Jabber doesn't need to prompt users for server addresses.
 - Package the client for your organisation
 - Use SRV service discovery
 - Use Installer command line options
 - Use Installer properties file
- Client can check for updates on start-up



Software Deployment

Manual Service Configuration

- Server and server type can also be manually configured in Jabber client.
- Settings can also be configured during installer
- Admin can specify installer parameters to select presence server



Software Deployment

Windows Client Install/Packaging

- MSI Installer
- Command line switches
- Default configuration Cloud mode
- Install with switches

`Msiexec.exe /i CiscoJabberSetup.msi`

`TYPE=CUP/Webex`

`ADDRESS=x.x.x.x`

`DOMAIN=example.com`

`LANGUAGE=xxxx`

`TFTP_FILE_NAME=myfile.xml`

`FORGOT_PASSWORD_URL=`

`SSO_ORG_DOMAIN=`

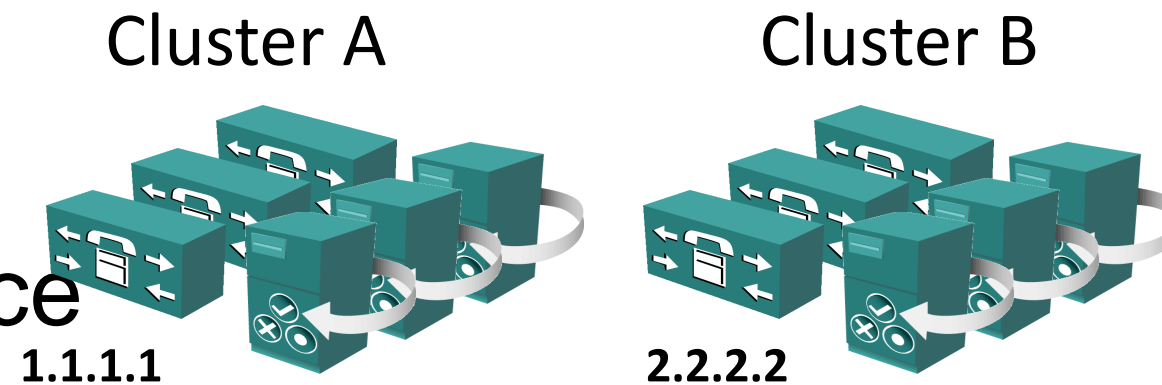
- Repacking with Microsoft ORCA

Property	Value
RADIO_LOCATION	1
RADIO_LOCATION1	1
REGISTER_JABB_TYPE_SZ	1
INSTALLLEVEL	100
ProductLanguage	1033
PIDTemplate	12345<###-%%%>@@@
REGISTER_JABB_HK_LM	2
DWUSINTERVAL	30
ProductVersion	9.0.0.5692
ADDRESS	<IPAddress/Hostname/FQDN>
DOMAIN	<Presence Domain>
LANGUAGE	<The language code e.g. EN-US>
PASSWORD	<URL to organizations change password>
TYPE	<typename>
IS_PREVENT_DOWNGRADE_EXIT	A newer version of this application is already installed.
InstallChoice	AR
ARPPRODUCTICON	ARPPRODUCTICON.exe
ApplicationUsers	AllUsers
DWUSLINK	CEBC10EFAE8C97F8B9AC17FF998B978FC9
_IsMaintenance	Change
ProductName	Cisco Jabber
REGISTER_JABB_FRIENDLYNAME_VALUE	Cisco Jabber
Manufacturer	Cisco Systems, Inc
CiscoJabberFileName	CiscoJabber.exe
REGISTER_JABB_PROCESSNAME_VALUE	CiscoJabber.exe
RestartManagerOption	CloseRestart
IS_COMPLUS_PROGRESSTEXT_COST	Costing COM+ application: [1]

Software Deployment

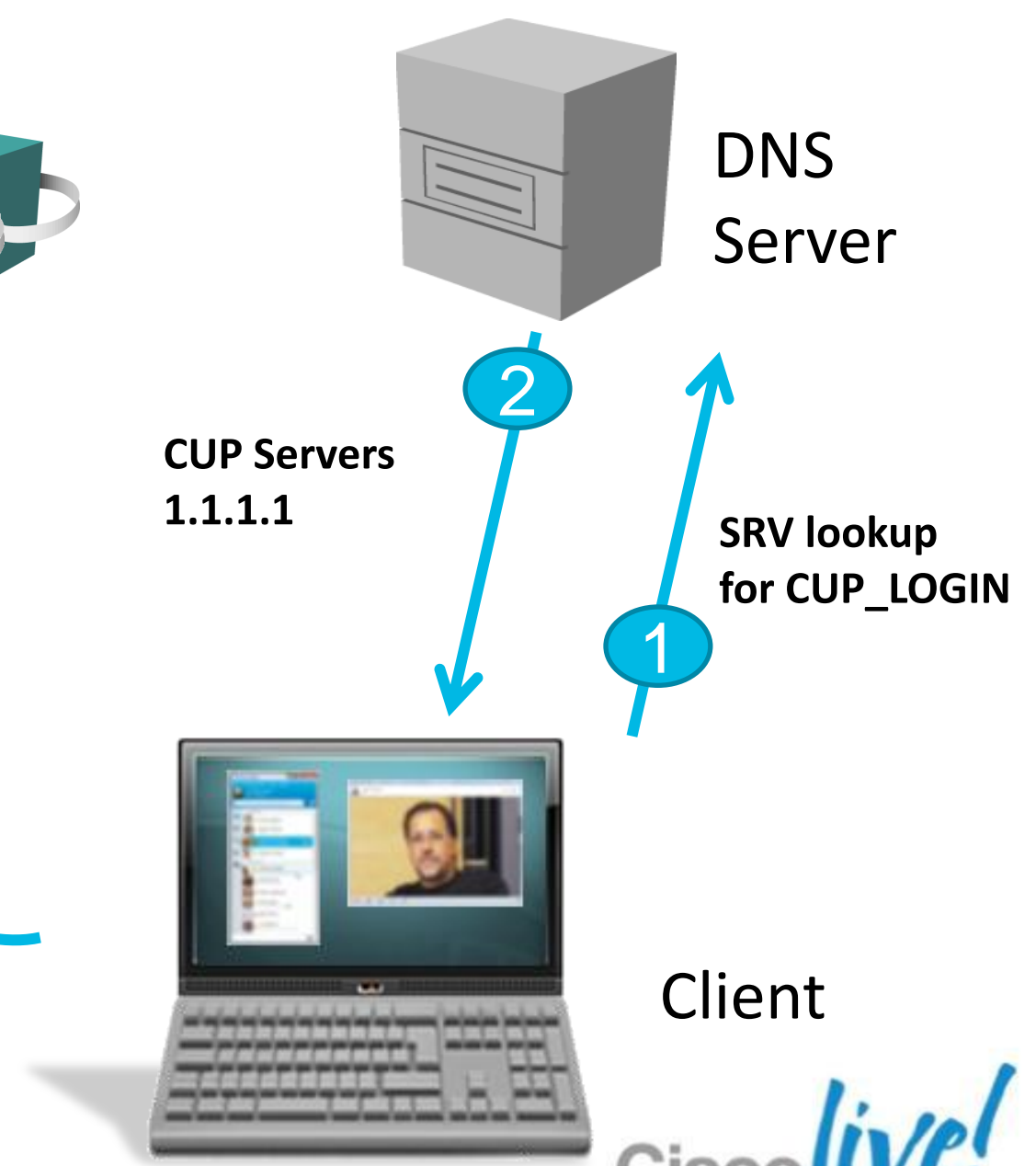
DNS SRV Service Discovery

- Jabber windows can use DNS SRV records for IM & P service discovery



Optional Redirection

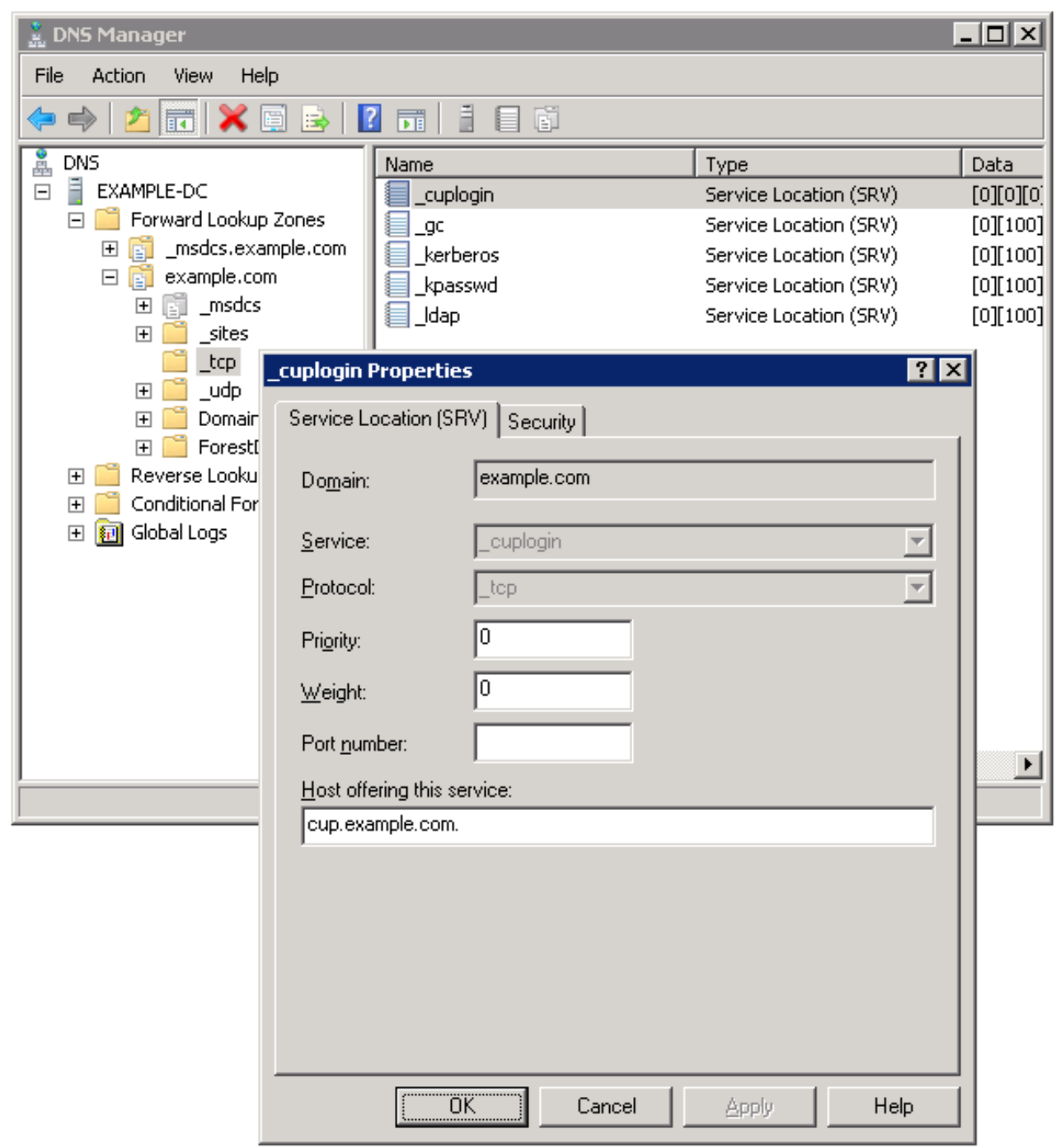
- Admin defines SRV record in DNS server
- IM&P cluster can perform client redirection in multi cluster deployment





Software Deployment

Creating DNS SRV Record



- SRV record is created in DNS server
- In DNS Manager create SRV record with:
 - Server: _cuplogin
 - Protocol: _tcp

Jabber On Premise Solution Architecture

Unified Communications

Feature Configuration



Unified Communications



Voice Messaging



WebEx Meetings



Application Integration

Baseline Configuration (IM Only deployment)



IM & Presence Service



User Authentication and Policy



Contact Information



User Creation

Baseline Architecture



Cloud / SAAS Deployment



On Premise Deployment

Unified Communications

Modes of Operation



Soft Phone Mode

Audio uses sound devices on workstation. Video is displayed on workstation, audio is via headset (recommended) or PC Speakers.



Desk Phone Mode

Jabber client controls Cisco Phone to make and receive calls.
Includes Video for Cisco Voice handsets



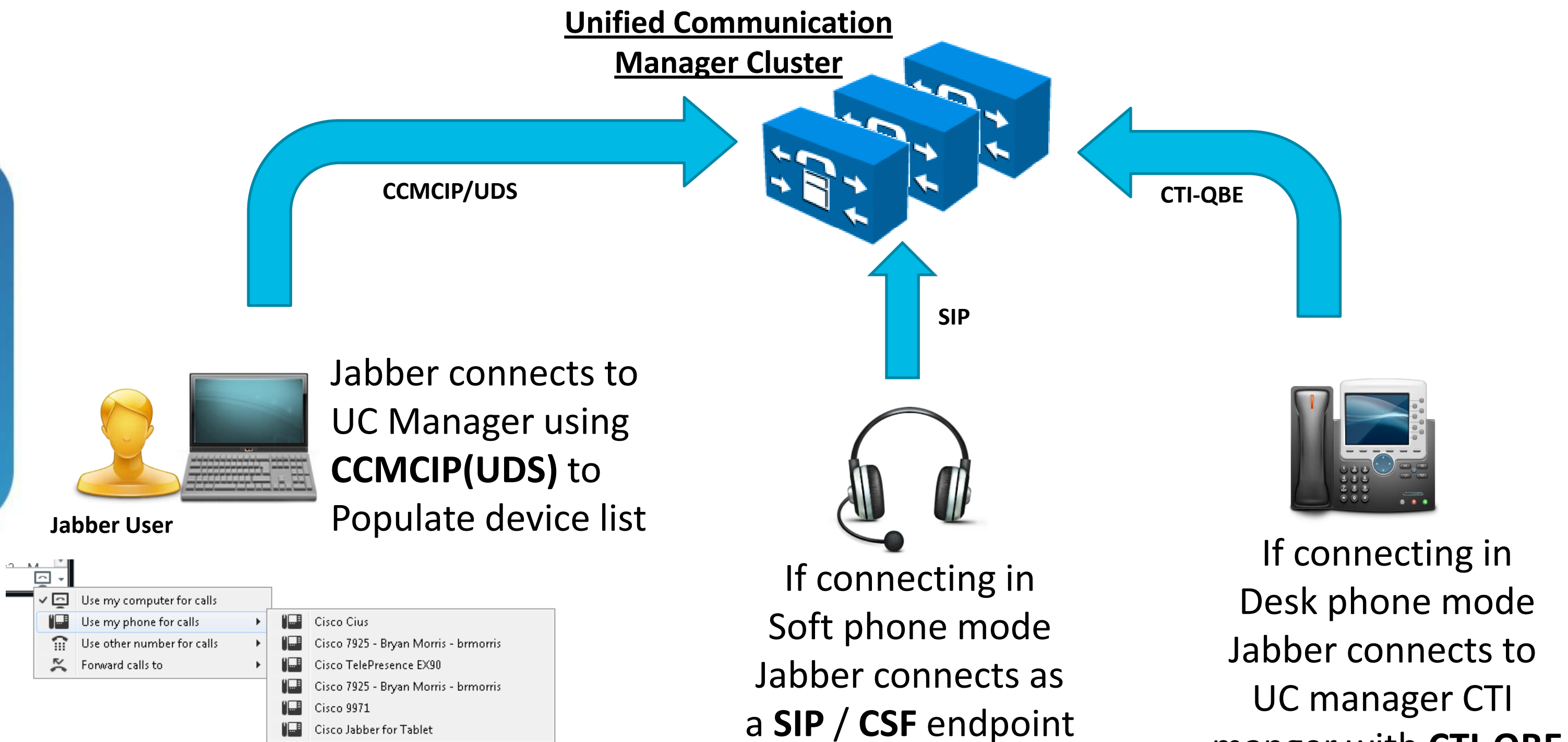
Extend & Connect Mode

Control PBX/PSTN Phone from Jabber
(Requires UC Manager 9.1 which must be connected to PBX via SIP/Telco trunk)

- Clients can be configured for all modes of operation

Unified Communication

UC Manager Interactions





Unified Communications

User Configuration

Jabber / UC Manager
User



Cluster Profile



Profile for UC Manager & VM

Devices



Device Types – eg CSF, TAB, BOT, TCT

User Rights



User Roles, Rights and Associations

Note

Jabber desktop clients don't support Connect Click2Call/Web dialler configuration.

New Cluster

Cluster Name:

Enable Cisco WebEx Connect Click-to-Call

Allow Cisco UC Manager integration with Cisco WebEx Connect

Allow user to enter manual settings

Cisco Unified Communications Manager Server Settings

Basic Server Settings

Primary Server: (TFTP, CTI, and CCMICP)

Backup Server: (TFTP, CTI, and CCMICP)

Advanced Server Settings

Cisco UC Integration for Cisco WebEx Connect Settings

Voicemail Pilot Number:

LDAP Server Settings

This setting is only applicable to Cisco WebEx Connect client versions 6.x or earlier.

LDAP Server: Maximum Return Results:

Search Base DN: Schedule Interval:

Maximum Cache:

Visual Voicemail Settings

Enable Visual Voicemail

Specific voicemail server for this cluster

Configure Profiles

Phone Type

Product Type: **Cisco Unified Client Services Framework**

Device Protocol: **SIP**

Device Information

Active Remote Destination:

Device is trusted

Device Name*:

Description:

Device Pool*: [View Details](#)

Common Device Configuration: [View Details](#)

Phone Button Template*:

Common Phone Profile*:

Add Devices

Permissions Information

Groups

- Standard CTI Allow Control of Phones supporting C
- Standard CCM End Users
- Standard CTI Enabled**

[View Details](#)

Roles

- Standard CCMUSER Administration
- Standard CCM End Users
- Standard CTI Allow Control of Phones supporting C
- Standard CTI Enabled**

[View Details](#)

Assign Rights



Cisco Unified Communications Clusters

General Voicemail **Clusters**

Filter: All Add Delete

Cluster	Type	View Users
<input type="checkbox"/> Cisco Live Cluster	Cisco UC Manager integration with Cisco WebEx Connect	
<input type="checkbox"/> Example Cluster	Cisco UC Manager integration with Cisco WebEx Connect	

Administrator can define multiple "cluster" profiles

Cisco webex Administration Tool

User Configuration Policy Editor Group Report Help

- Domain(s)
- Resource Management
- User Provisioning
- File Settings
- Password Settings
- Security Settings
- Profile Settings
- Contact Settings
- URL Configuration

Customization

- Branding
- Email Templates

Enterprise Edition

- Common
- Meetings
- Remote Support
- Training Center
- Event Center
- WebACD
- Sessions in Progress

IM

- General IM
- Contact List

New Cluster

* Cluster Name:

Enable Cisco WebEx Connect Click-to-Call

Allow Cisco UC Manager integration with Cisco WebEx Connect

Allow user to enter manual settings

Cisco Unified Communications Manager Server Settings

Basic Server Settings

* Primary Server: (TFTP, CTI, and CCMCIP)

Backup Server: (TFTP, CTI, and CCMCIP)

Advanced Server Settings

Cisco UC Integration for Cisco WebEx Connect Settings

* Voicemail Pilot Number:

LDAP Server Settings

This setting is only applicable to Cisco WebEx Connect client versions 6.x or earlier.

LDAP Server: Maximum Return Results:

Search Base DN: Schedule Interval:

Maximum Cache:

Visual Voicemail Settings

Enable Visual Voicemail

Specific voicemail server for this cluster

Cluster profile contains UC manager and Voicemail settings

Allow Cisco UC Manager integration with Cisco WebEx Connect

Allow user to enter manual settings

Cisco Unified Communications Manager Server Settings

Basic Server Settings

Advanced Server Settings

* TFTP Server: Backup Server #1:

Backup Server #2:

* CTI Server: Backup Server:

* CCMCIP Server: Backup Server:

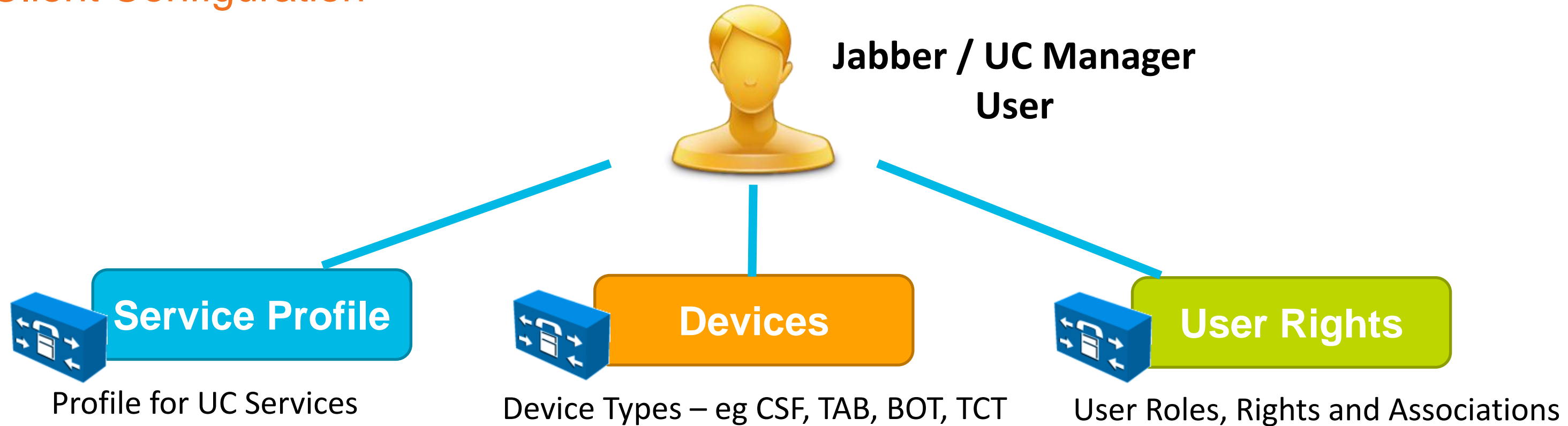
For advanced clusters individual server nodes can be defined for TFTP, CTI and CCMCIP





Unified Communications

Client Configuration



UC Service Configuration Related Link

Next

Status

Status: Ready

Add a UC Service

UC Service Type: Voicemail

- Voicemail
- MailStore
- Conferencing
- Directory
- IM and Presence
- CTI

*- indicates

Configure Profiles

Phone Type

Product Type: Cisco Unified Client Services Framework
Device Protocol: SIP

Device Information

Active Remote Destination

Device is trusted

Device Name*: CSFVSULIKOW

Description: Vanessa Jabber Softphone

Device Pool*: -- Not Selected -- [View Details](#)

Common Device Configuration: < None > [View Details](#)

Phone Button Template*: Standard Client Services Framework

Common Phone Profile*: Standard Common Phone Profile

Add Devices

Permissions Information

Groups

- Standard CTI Allow Control of Phones supporting C
- Standard CCM End Users
- Standard CTI Enabled

[View Details](#)

Roles

- Standard CCMUSER Administration
- Standard CCM End Users
- Standard CTI Allow Control of Phones supporting C
- Standard CTI Enabled

[View Details](#)

Assign Rights



Legacy Client Settings

Save

Legacy Client Security Settings

The Proxy Listener is applicable to CUPC 7.x or other SIP Clients, it does not apply to Cisco Jabber 8.x. The TFTP Servers apply to Cisco Jabber 8.x and previous clients.

Proxy Listener* Default Cisco SIP Proxy TCP Listener

Primary TFTP Server

Backup TFTP Server

Backup TFTP Server



On the UC Manager IM& Presence Server set the TFTP address for the CUCM

CCMCIP Profile Settings

NOTE: CCMCIP Profiles only apply to Cisco Jabber 8.x.

Name*

Description

Primary CCMCIP Host*

Backup CCMCIP Host*

Server Certificate Verification*

Make this the default CCMCIP Profile for the system.



On the UC Manager IM& Presence Server create the CCMCIP profile

Add a UC Service

UC Service Type: CTI

Product Type: CTI

Name*

Description

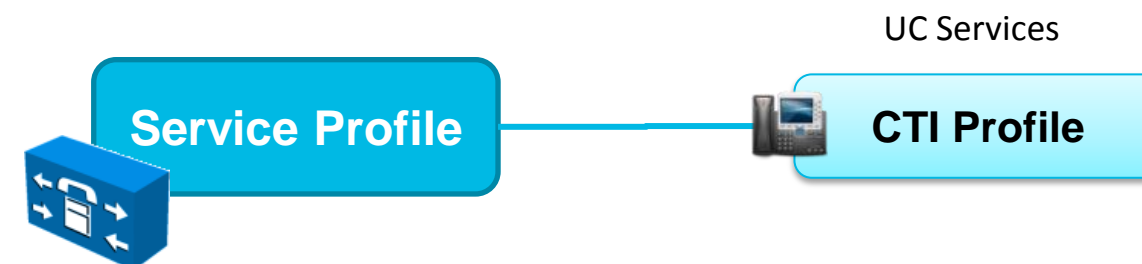
Host Name/IP Address*

Port

Protocol: TCP



On the UC Manager Server create and associate a CTI profile to the user



Unified Communications

CSF Device (Soft Phone Only)

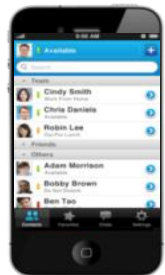
Jabber Device Types



CSF



CSF



TCT



BOT



TAB



CTIRD

■ Device Naming Convention

- Free form, no correlation to username required
- Any character [A-Z,0-9] up to 15 characters

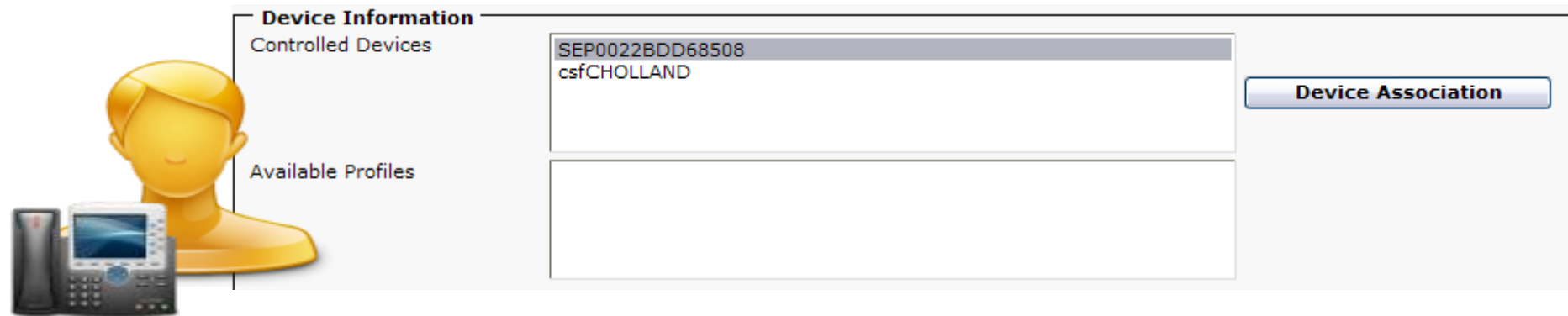
■ Required Device Parameters

- Parameters without default values (must be explicitly set)
- Device Name
- Device Pool, Phone Buttons Template, Device Security Profile, SIP Profile

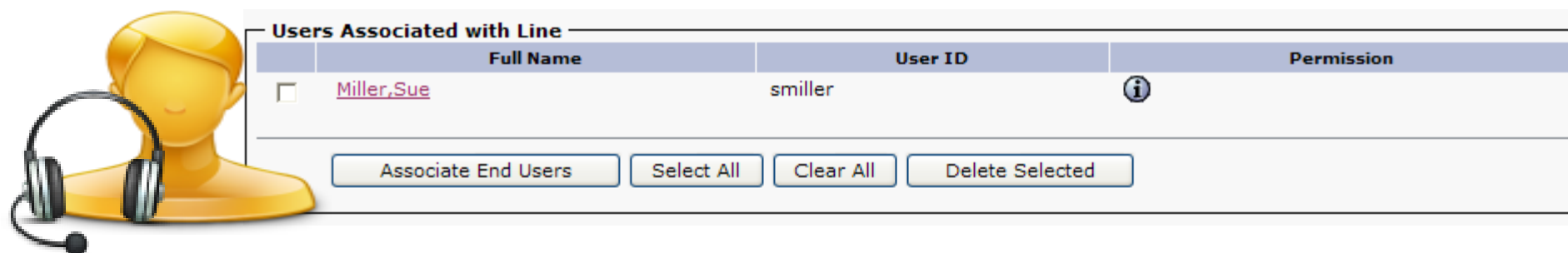
Unified Communications

Device / Line Association (Soft & Deskphone Modes)

- **Device must be associated to user**
 - Standard CCM User required for CCMCIP access



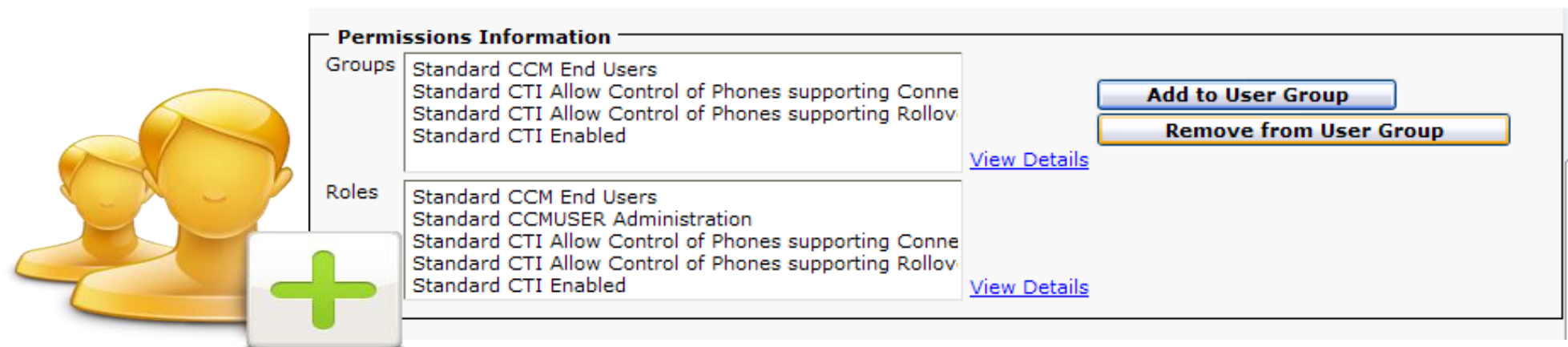
- **Line needs to be associated to user**
 - Line Presence (this is configured on device)



Unified Communications

Group/Role Membership (Soft & Deskphone Mode)

- User be given required permissions on UC Manager



- **Soft Phone required permissions**
 - Standard CCM End Users – Allows access to CCMCIP Service
- **Desk Phone Control required permissions**
 - Standard CCM End Users – Allows access to CCMCIP Service
 - Standard CTI Enabled
 - Standard CTI allow control of Phones supporting connected xfer/conf
 - Standard CTI Allow control of phones supporting Rollover mode

Unified Communications

Desk Phone Control Configuration Summary



- Voice
- Video*

- Client must be configured with CCMCIP, TFTP and CTI Server name/addresses
- Client will use CCMCIP Service to discover device information (Authenticated)
 - User must have Standard End user right to connect to CCMCIP Server)
- Client will connect to CTI server to control device (CTI authenticated)
 - Device must have CTI control enabled
 - User must be associated to device
 - User must have CTI group/role membership
- On Premise phone presence requires user to be associated to line
 - Publish trunk must be configured between CUCM and CUP
- Devices must be enabled for video operation.

Unified Communications

Soft Phone Configuration Summary



- Voice
- Video
- Desktop Share

- Client must be configured with CCMCIP, TFTP Server name/addresses
- Client will use CCMCIP Service to discover device information (Authenticated)
 - User must have Standard End user right to connect to CCMCIP Server)
- Client will download CSF device config from TFTP server
- Client will register using SIP to UC manager call control agent
- On Premise phone presence requires user to be associated to line
 - Publish trunk must be configured between CUCM and CUP

Unified Communications

Configuring Publish Trunk



On Premise deployments use Network based presence updates for call state

- Create SIP Trunk to CUP server host/address
- Update Service Parameter

Service Parameter

Cisco Call Manager

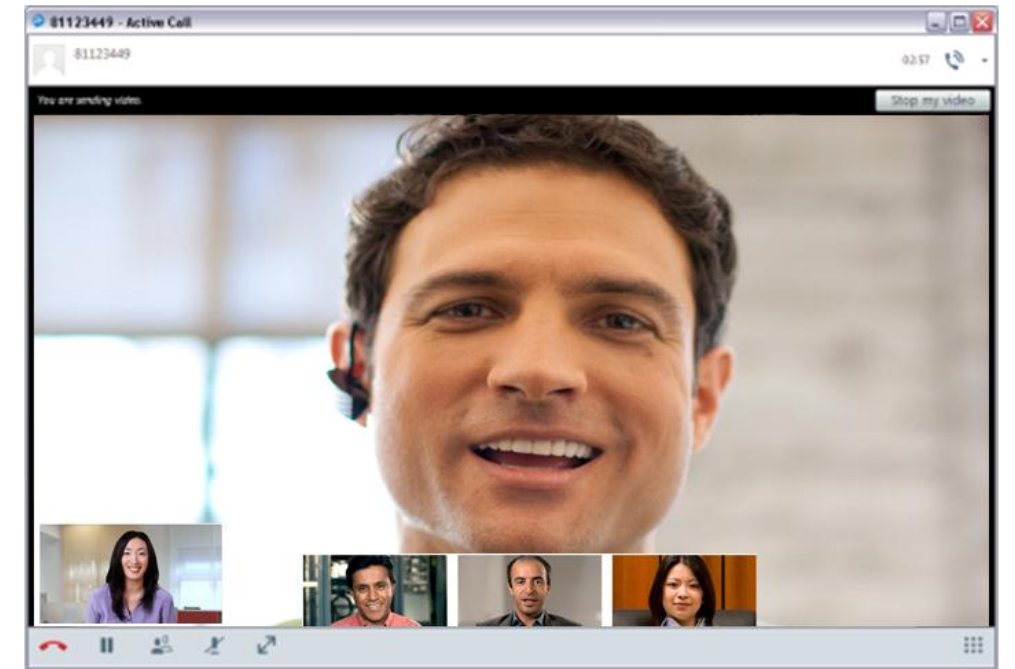
CUP PUBLISH Trunk
(set to Trunk Name)

- CUP Tasks
 - Create Presence Gateway
- Type: CUCM
- Gateway: CUCM Host/address

Unified Communications

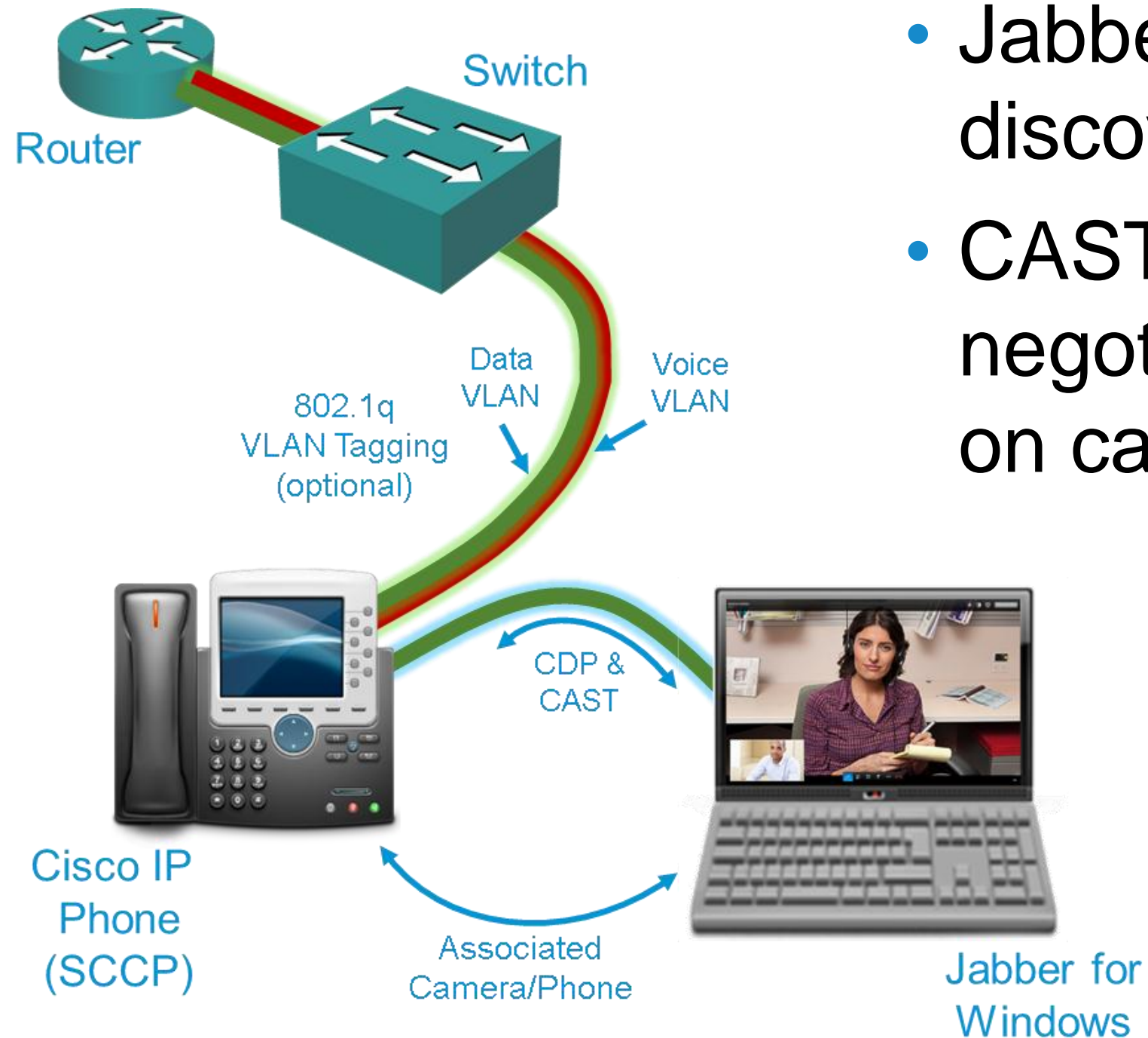
Cisco Jabber Video Engine

- Cisco Jabber Video Engine is a **H.264 AVC standard based media engine** using in Cisco Jabber clients.
- The Engine provides **full HD interoperability** between Jabber desktop clients and TelePresence solutions.
- Provides **standard based audio** (G.711a/u, G.722.1, G.729a)
- Provides **Video rate adaption** and support for **Cisco ClearPath** Media Resilience Mechanisms.
(Rate adaption required RTCP with must be enabled on some devices)
Supports frame sizes from **QCIF to 720p HD** at up to **30 frames per second**.



Unified Communications

Desk Phone Video



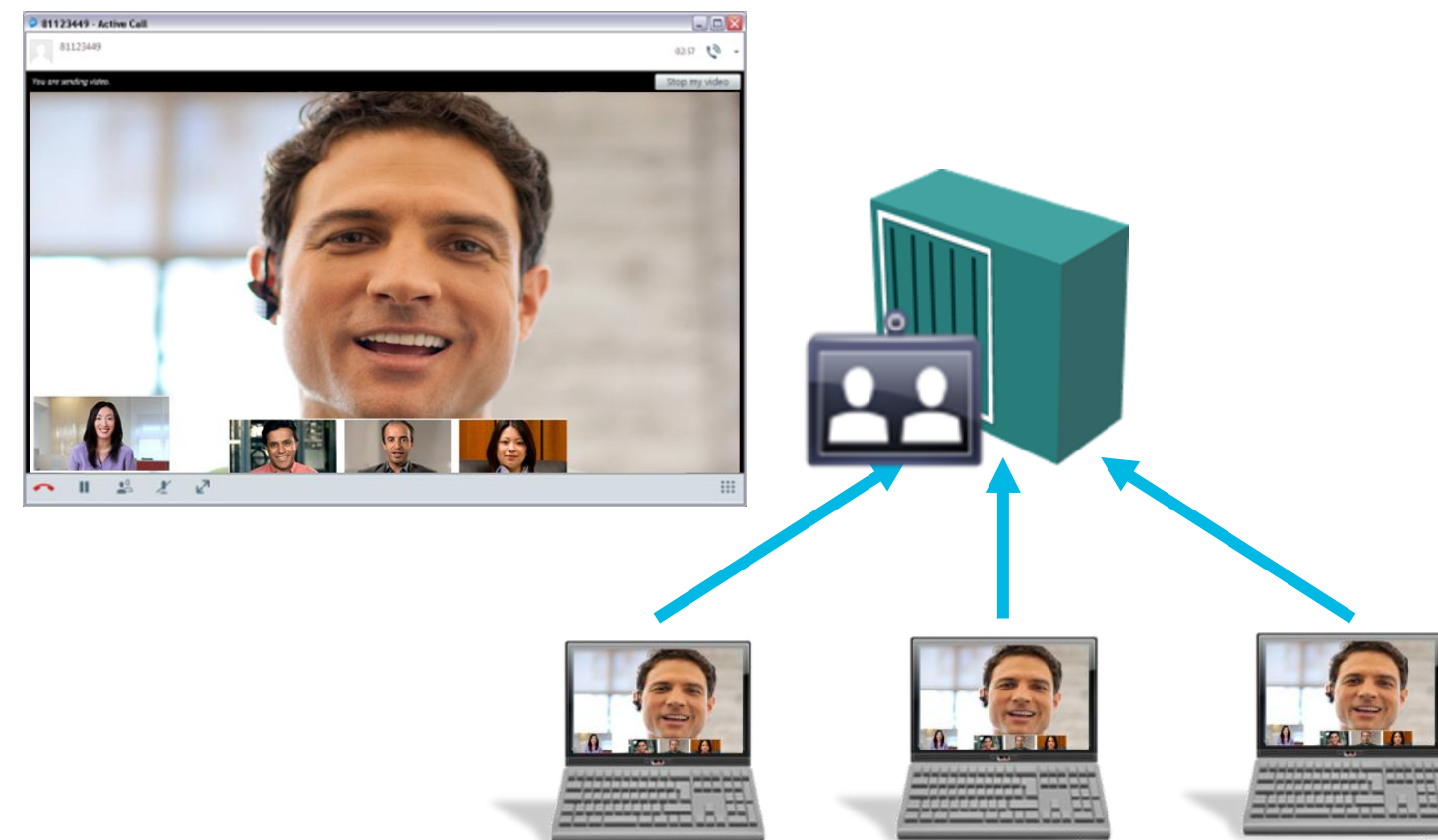
- Jabber uses CDP protocol to discover tethered Cisco Phone.
- CAST protocol is used to negotiate video sessions based on call setup (lip sync)

- Jabber controls the phone using CTI protocol in desk phone mode
- CDP/CAST support is provided by Cisco Medianet MSI installer. (must be present)

Unified Communications

Multi-Party Voice & Video Calling

- Jabber clients support multi-party conferences
- Ad-hoc conference uses Media groups in UC Manager
- Conference capability will depend on DSP architecture available in media resource group
 - Audio only
 - Audio and video
- DSP provided by
 - Software bridge only
 - Router DSP Farm
 - Multi-point conference unit
- Scheduled video conferences call also supported



Video Multipoint Conferencing Units

Cisco TelePresence MCU 4500 Series
Cisco TelePresence Server 7010
Cisco TelePresence Server 8000
Cisco Integrated Services Router (with PVDm3)

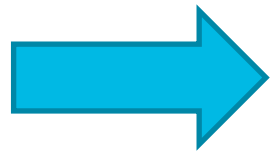

Unified Communications

Dial Plan Considerations

Directory Number
+1408525**3777**



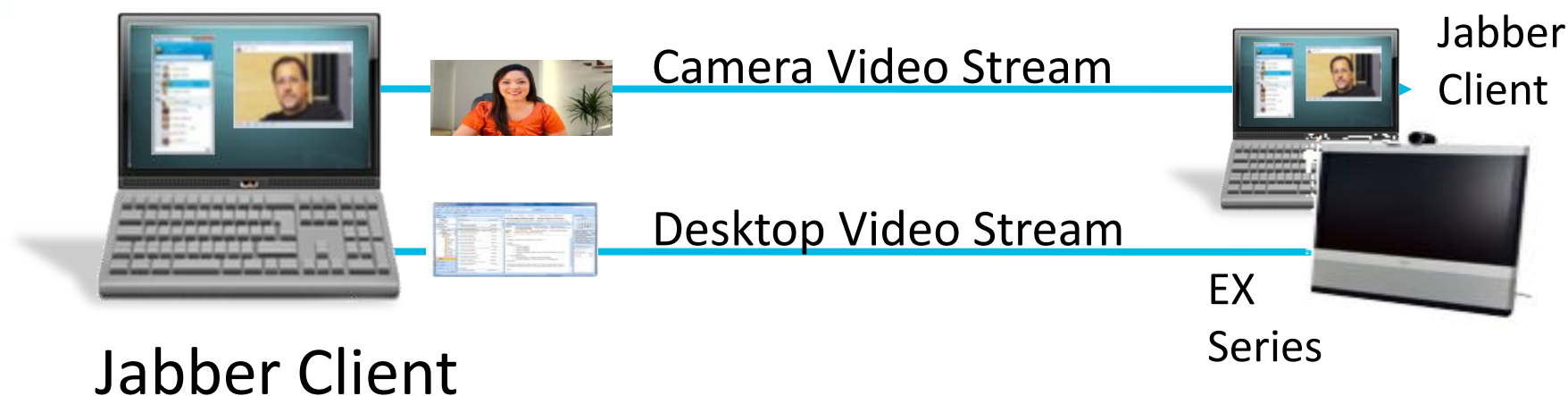
Destination Number
88**3777**

- If UC Manager dial plan does not match the LDAP dial plan you may need to use rules or translation patterns.
- When initiating calls we need convert E.164 numbers to the UC manager dial plan  Application Dial Rules
Translation Patterns
- When receiving calls we need to extend internal numbers to E.164  Directory Lookup Rules
PhoneLookupMasks
- Rules are created on CUCM and downloaded using TFTP
- A COP file must be applied to update dial rules prior to UC manager 8.6

Unified Communications

Configuring Video Desktop Share

- Jabber for Windows supports Binary Floor Control Protocol (BFCP) for desktop sharing (RFC 4582).
- BFCP will encode a video stream of the senders desktop, this can be in addition to a camera video stream.
- Video desktop sharing can be between Jabber client and Cisco Video endpoints
- **Requires UC Manager 8.6** and based on version may require COP file



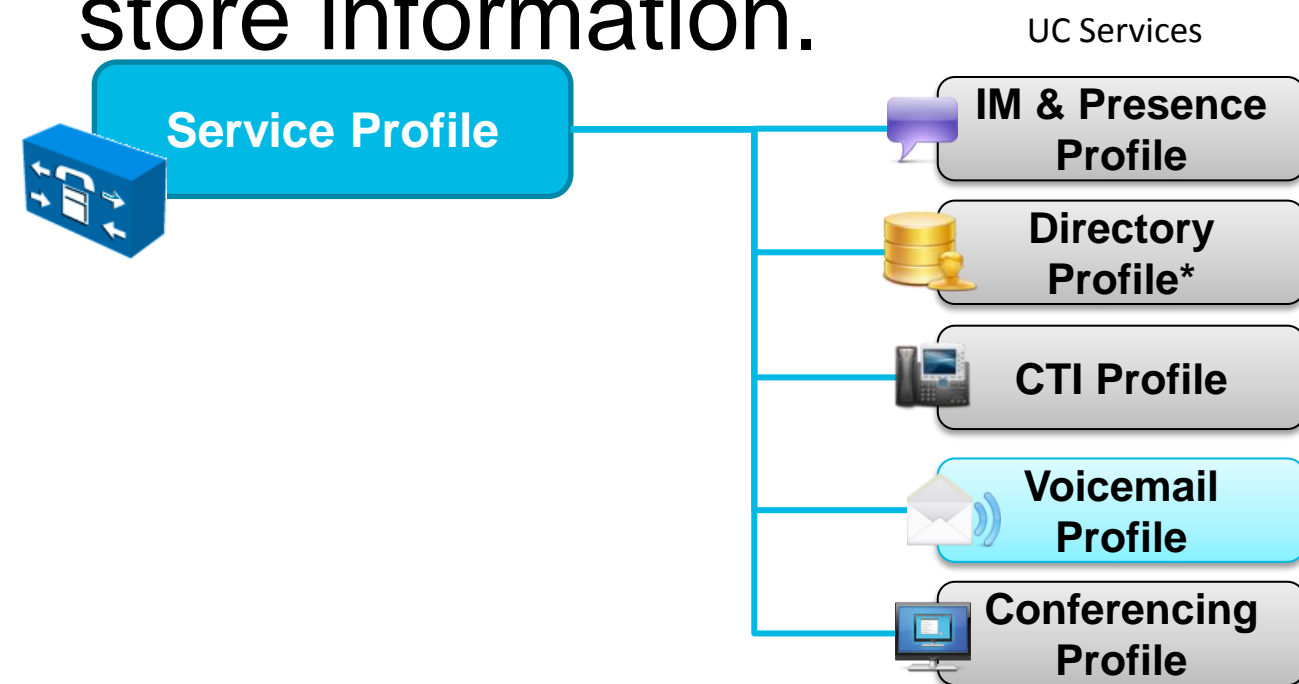
Device Configuration
or SIP profile

Allow Presentation Sharing using BFCP

Unified Communications

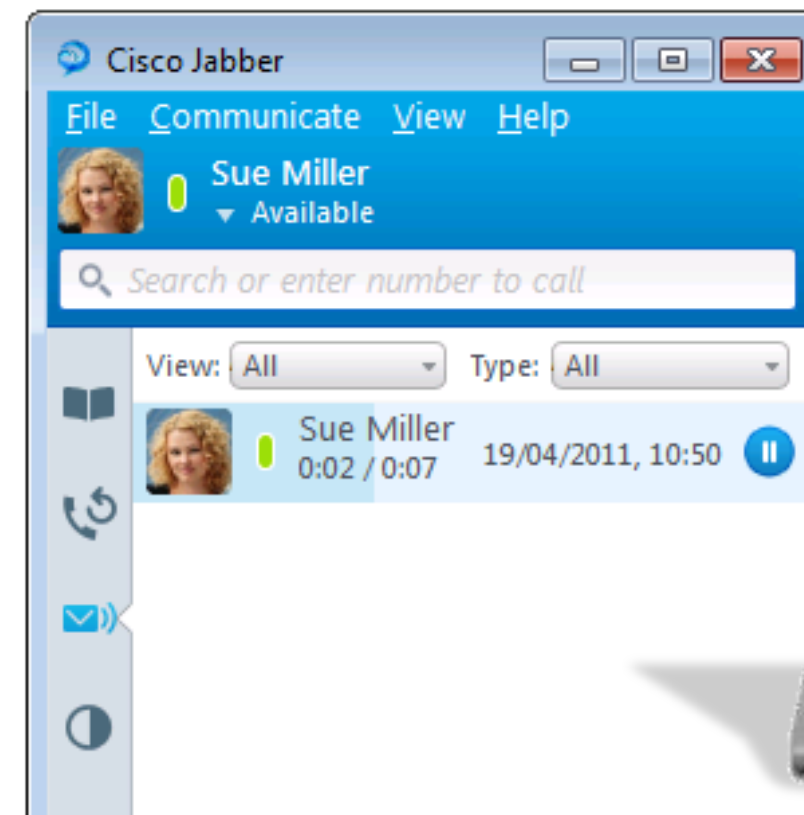
Voicemail Access/Visual Voicemail

- Jabber can visually display voice messages from Cisco Unity Connection.
- A voicemail Service profile defines Unity Connection a mail store information.



**Cisco Unity
Connection
Messaging**

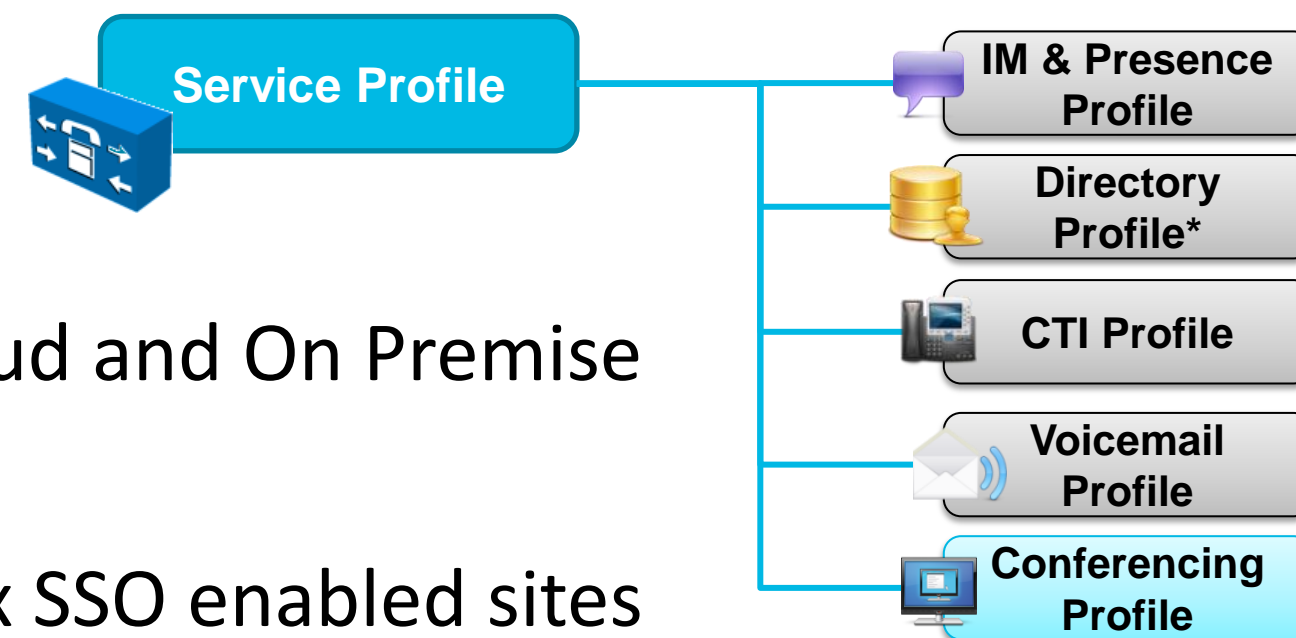
IMAP



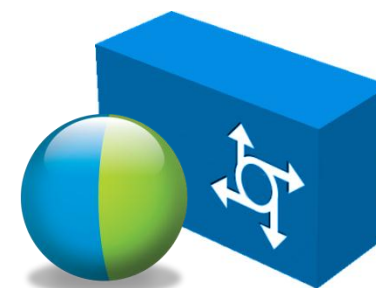
Cisco WebEx Meetings

Escalate to a Web Conference

- Cisco Webex provides a web based conferencing service
- Administrator can create profiles for Cloud and On Premise WebEx services
- Jabber can support integration to WebEx SSO enabled sites
- Jabber can support 3rd Party TSP services with Webex Meetings



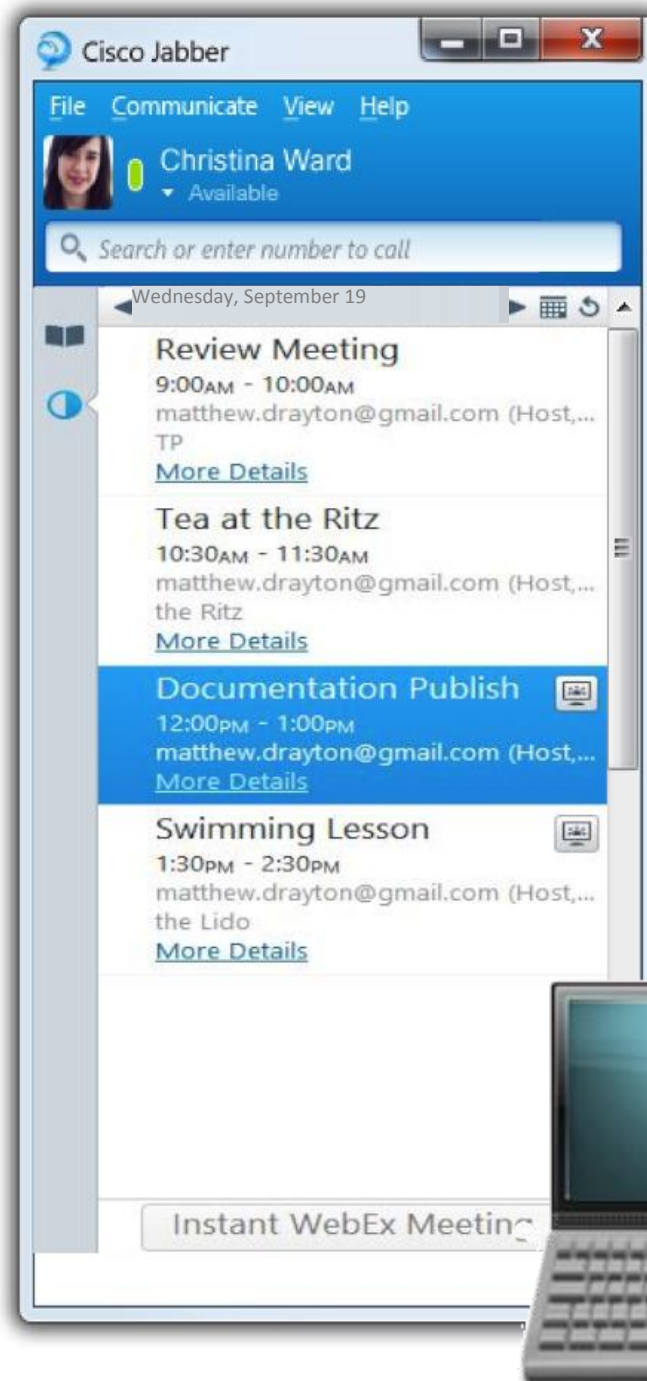
Cisco WebEx Meetings is a cloud based conferencing solution



Cisco WebEx Meetings Server is an on premise , highly secure, fully virtualised, conferencing solution

Cisco WebEx Meetings

Calendar Integration



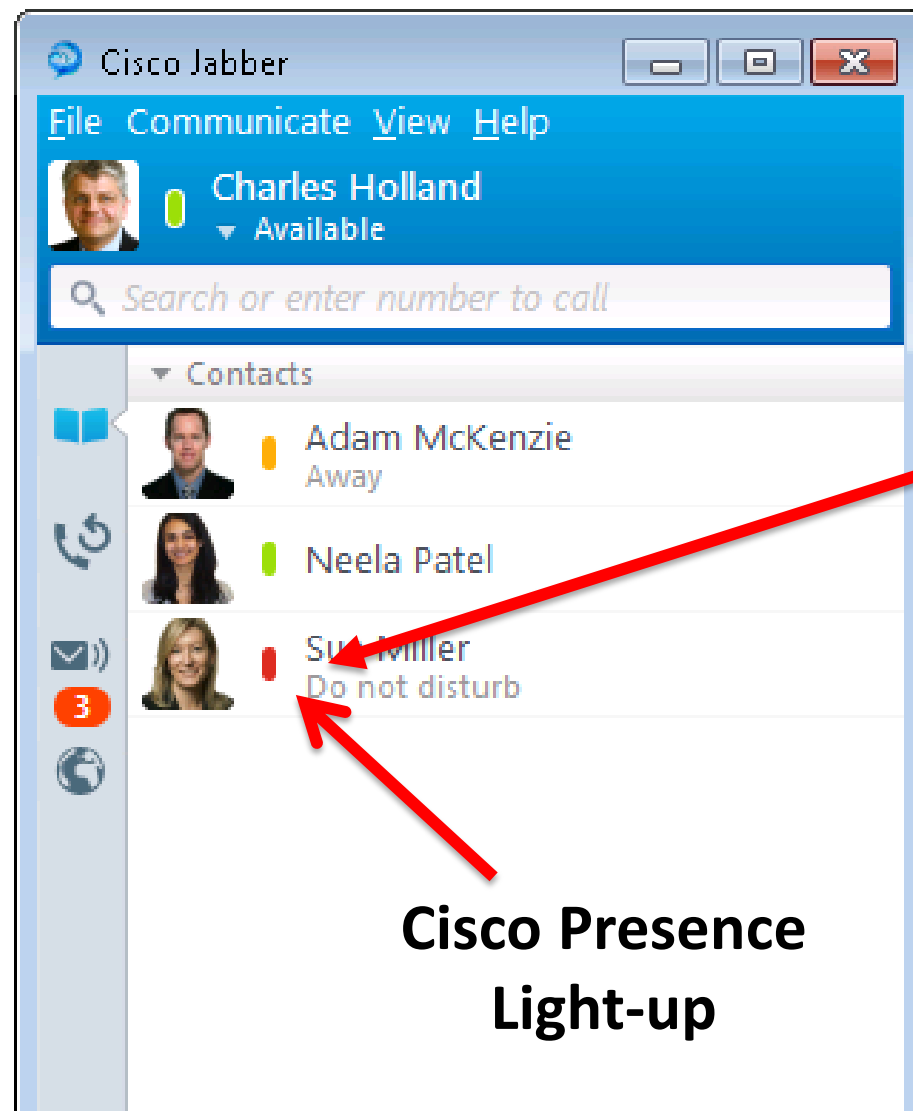
- Jabber will show a schedule of WebEx meetings and other appointments in a Jabber Tab.
- Meetings information is retrieved from WebEx Meetings services as well as a choice between Microsoft Outlook, Lotus Notes or Google calendar.



Microsoft Office Integration

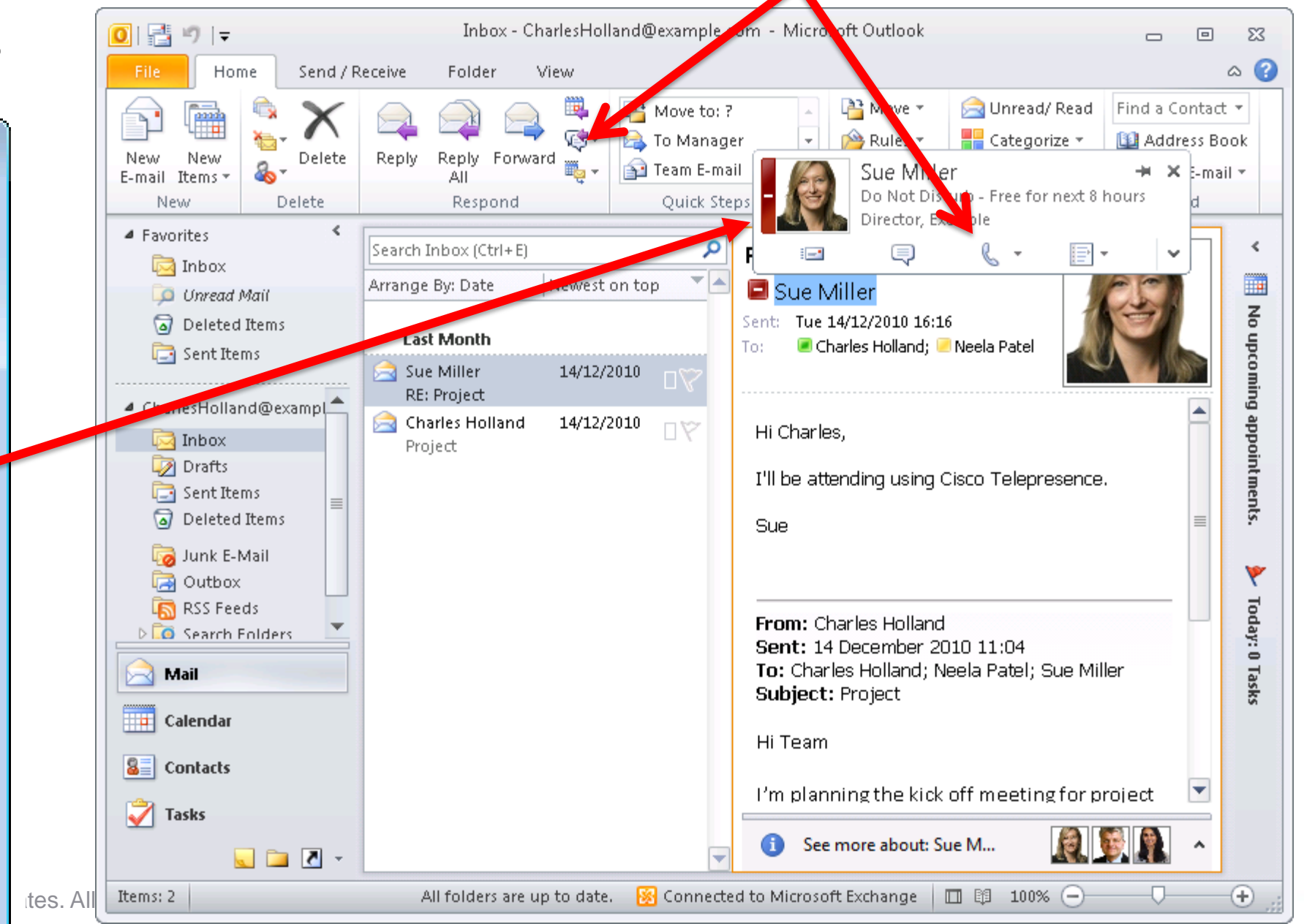
Microsoft Office 2007 and 2010 Integration

- Office 2010 integration allows conversations to be initiated directly inside Office and SharePoint applications



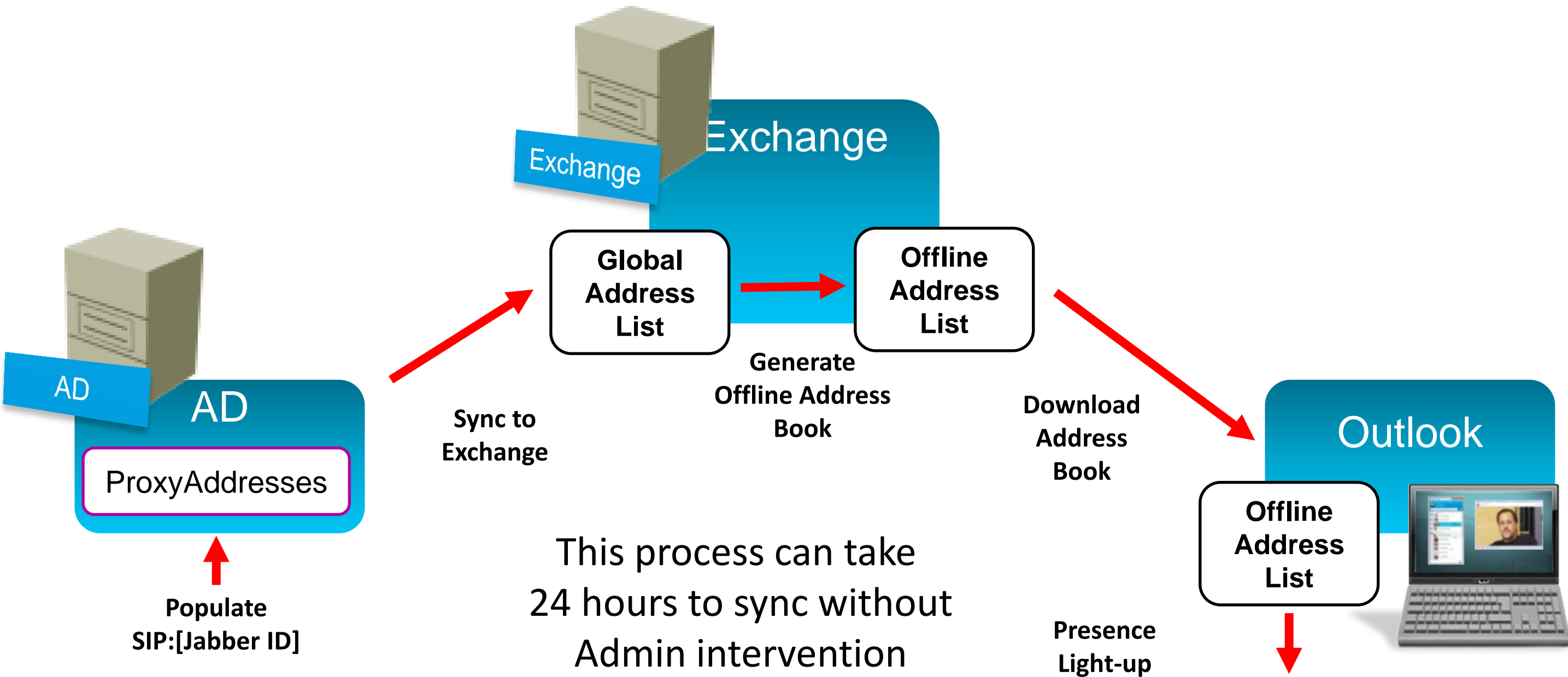
Cisco Presence Light-up

Cisco Click to IM/Call



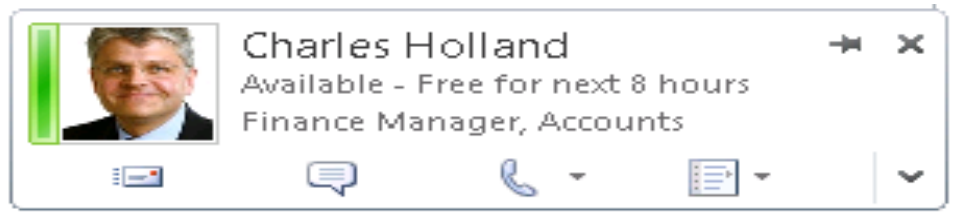
Microsoft Office Integration

Understanding ProxyAddress Update process



This process can take 24 hours to sync without Admin intervention

Jabber admin file download contains tool to updated AD with Proxyaddress attribute



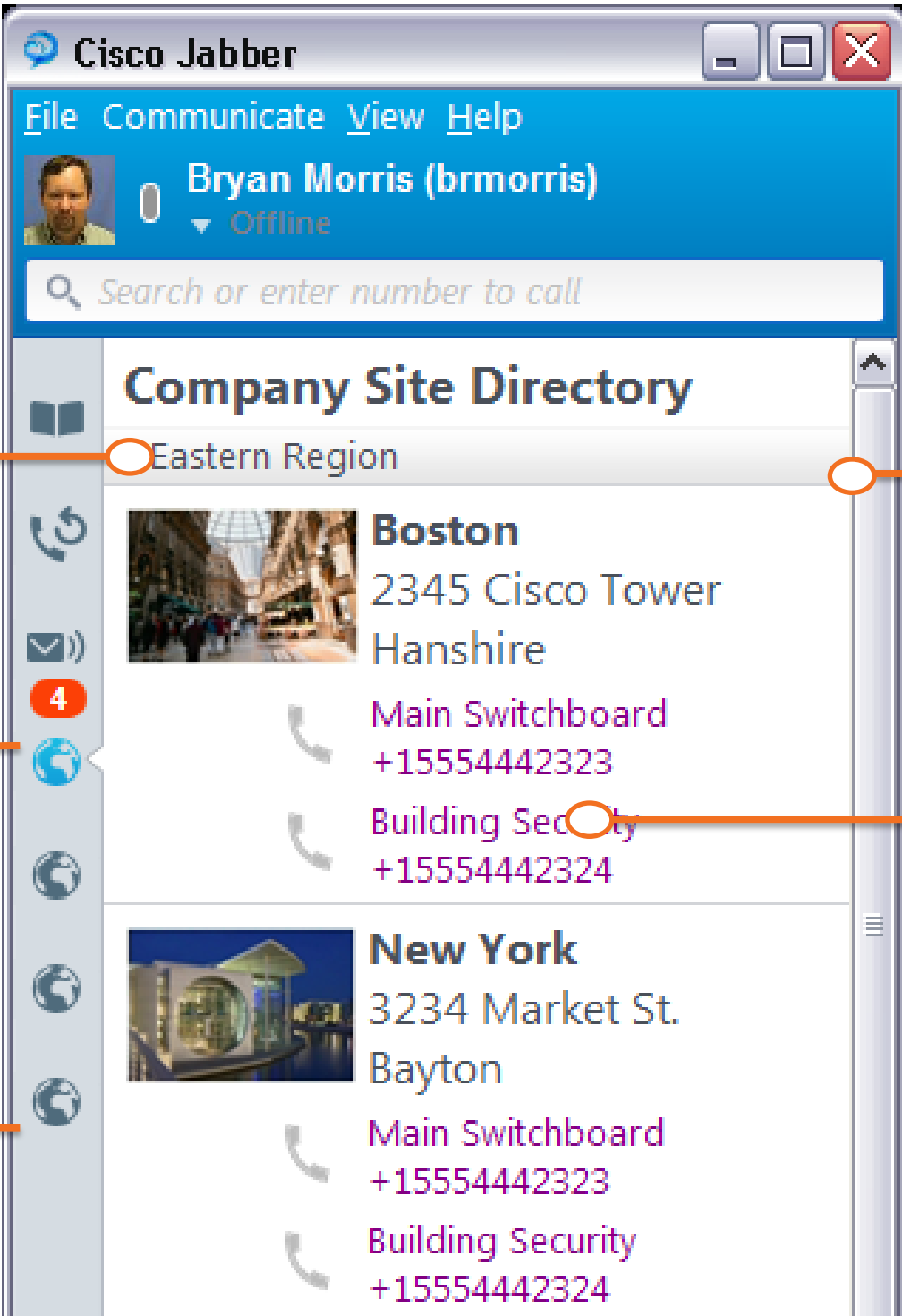
Extending Cisco Jabber

Extensible Tab / HTML Apps

Jabber uses the Segoe UI font which can be applied using CSS for common UE styling

Up to 4 user defined tabs can be created

If no icon is created default globe icon is displayed



HTML window instance running in client

HTML apps can leverage IM and Call URI for click to X

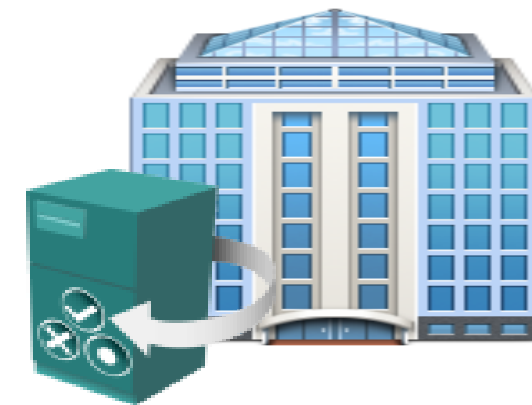
Jabber SDK could be used to provide further functions.

Summary

- Plan your deployment!!!
- Decide on Cloud or On Premise Model
- Think about your Jabber UserID
- Think about the data in the Contact Source
- Integrate with UC Manager and WebEx Meetings
- Use Office integration and tabs to integrate into the desktop.



Cloud based Deployment



On Premise Deployment

Summary

- Cisco Jabber is a flexible architecture which provides a cross platform, intuitive user experience with rich productive multi-modal communications



Thank you for your attention

Q & A



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