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## *New Features in CUCM 9.0*

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### **Pause in Speed Dial**

Users can configure speed dials with FAC, CMC and post connect DTMF  
Comma accepted in speed dial as delimiter and pause

Feature allows two methods of configuration:

- Method 1: Using comma as a pause and also as a delimiter
- Method 2: Dialstring/FAC/CMC/Post connect digits with no commas

#### **Method 1: Command Delimiter for Pause**

- Comma used to delineate dial string, FAC, CMC, and post connect digits
- For post connect digits, commas insert a 2 second delay
- Commas may be duplicated to create longer delays
- Preferred method for non-CUPC devices

#### **Method 2: No Comma**

- All digits to be used for dial string, FAC, CMC and post call digits entered as one string
- Once a digit string has been matched, CUCM moves on to next digit string
- Can be used on SCCP and SIP phones, but required for CUPC

#### **Pause in Speed Dial Examples**

- **914085551212,,,123456**  
Will dial 914085551212, after connect, wait 8 seconds to dial 123456
- **90114455612323#,2244**  
FAC for International Calls. Will dial 90114455612323# with FAC of 2244
- **914085551212,6534,5656,,,9933**  
Will dial 91408551212, with a FAC of 6534 and CMC of 5656, wait 6 seconds, then dial the DTMF digits 9933
- **914085551212653456569933**  
Will dial 914085551212 with a FAC of 6534 and CMC of 5656, then immediately after connect, dial 9933

New Service Parameter allows configuration of interdigit delay

#### **If the speed dial FAC or CMC is wrong**

- Method 1: Call disconnects and an error is displayed
- Method 2: phone displays an error and allows user to manually enter information

#### **Pause in Speed Dial Caveats**

- Dial string is truncated in the calls history list (only dialed number)
- Feature may not work with CUPC client and variable length/overlapping dialplans (no comma delineation)
- This feature is not supported SRST

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## Codec Preference

### Pre CUCM 9.0

- Administrator could only eliminate codecs (based on Maximum Audio Bit Rate)
- Could not prioritize G.711alaw over G.711ulaw, or G.729 codecs

### With CUCM 9.0

- System default codec preference same as earlier versions
- Allow administrator to deterministically specify codec order
- Allow codec selection based on received offer
- Custom Codec list applied globally or on a GW/Trunk Level
- Can be applied to: SIP, MGCP, SCCP, H323 and EMCC

### Codecs preference still choose by Regions

For SIP Devices/Trunk, can specify “Accept Codec Preference in received Offer”

Can change codec selection for EMCC logged in devices

### Codec Preference Caveats

A common Codec Preference List must be the same on all clusters when using the following features:

- Extension Mobility Cross Cluster
- H323 Inter Cluster Trunks

Biggest challenge will be unexpected codec

- Check “Accept Audio Codec Preferences in Received Offer” settings
- Check at Device level and system level

When using non-pass through MTP, codec negotiated hop-by-hop

## Native Call Queuing

### Enables Hunt Pilot to queue callers

- Allow for redirection of calls based on different queue criteria
- Allow agents to participate in multiple queues
- Auto logout and call re-queue if agent does not answer
- Longest waiting call in all queues will be delivered first
- No ‘post call’ time or agent greeting options
- On phone ‘Queue Status’ display



## Cisco Extend and Connect

### What is the existing limitation?

- Using CTI (webex connect or CUCILync), user can monitor a calls, but not control the call
- No enterprise features for non-CUCM registered devices
- Cannot hold/resume, transfer, conference or park
- Remote devices ring and can be answered, but not mid-call features

### What is Cisco Extend and Connect?

- A new device type, CTI Remote Device that represents all remote destinations for a user
- Anchors enterprise calls on the CTI Remote Device
- Allows a CTI application (like Jabber) 3rd party control of the remote connection to enable enterprise call features

### Examples of a deployment scenario

#### Contact Center agent working from home

- Low bandwidth at house, VOIP not an option (hard phone or soft client) and cell phone is not an option
- Extend connect sends call to home phone and CAD agent allows enterprise features needed for contact center agents

#### Use Cisco Unified Communications with legacy PBX

- Customer has PBX under contract and not ready to move phones
- Customer wants UC for IM, Chat and messaging, but phones on PBX
- Extend Connect enables Jabber deployment for UC, but enterprise control of PBX phone (as remote device for Jabber)

## New End User Webpages

### CUCM 9.0 now has two types of end-user's webpages

- One type of page is for core Users with one phone and one line
- The other page will be for users with multiple phones with one or more lines on each device

### New User Page UI targeted towards core users

## Cisco Mobility Updates

### Simultaneous Ring in previous versions of CUCM

- CUCM 7.0 introduced the parameter "Reroute Remote Destination Calls to Enterprise Number"
- Calls direct to cell would ignore time of day settings and call the cell
- Calls would be anchor on the enterprise phone...but the line would not ring

### New features in CUCM 9.0:

- Added "Ring All Shared Lines" service parameter
- Uses Boolean Setting
- True – all lines (including other remote destinations) ring
- False – only the dialed number (remote destination) rings
- Default and existing behavior is False

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## Single Number Reach Voicemail

### The Problem:

- When a call is extended to a SNR destination, CUCM cannot determine if the call was answered by the user or VM
- Based on “Answer Too Soon”
- Time based mechanism is unreliable and requires tweaking for each service provider

### New Solution

- CUCM 9.0 introduces a new parameter called “Single Number Reach Voicemail Policy”
- Can be either Timer Controlled or User Controlled
- Timer Controlled uses existing “Answer Too Soon” timer
- User Controlled requires the user to send a signal (DTMF) to accept the call

## Hunt Pilot Connected Number Display

### Hunt pilot DN display in previous versions

- Calls to a hunt pilot display the DN of the hunt pilot as the connected party ID
- Applies to both MGCP and SIP trunks

### Hunt pilot DN display in CUCM 9.0

- This feature allows the connection to be updated with the answering party’s DN as the Called Party ID
- Applied on the Hunt Pilot Configuration page
- SIP: PAI and Remote PartyID are updated
- MGCP/H323: Connected Number sent to update the Called Party ID

## RTCP Support

### RTCP

- RTCP provides out-of-band statistics and control info for RTP
- RTP sent on even port and RTCP is sent over next higher odd port
- RTCP is supported between phones directly

### RTCP not supported by:

- Trusted Relay Point (TRP)
- RSVP Agent
- DTMF Translator
- Passthru MTP

### CUCM 9.0 RTCP New features:

- CUCM 9.0 supports RTCP through MTP in pass thru mode
- In non-pass thru mode, RTCP will still be blocked
- Only valid for SIP to SIP calls



### **BRI G.Clear**

- CUCM v7.0 (1) first introduced G.Clear support for MGCP PRI
- G.Clear required for tandem ISDN bearer circuits in VOIP network

### **New features:**

- CUCM 9.0 expands support for G.Clear to BRI interfaces
- Supported on MGCP BRI interface
- Supports G.Clear over SIP trunk with Early Offer and G.Clear

## **Security and OS Updates**

- Red Hat Enterprise Linux 5.0 v7.0.2
- Host rename/reIP simplified (3 less steps to complete)

### **Optimized CLI commands:**

- Utils dbreplication stop/dropadmin/db/reset
- Utils dbreplication forcedatasyncsub
- Utils dbreplication status replicate
- Utils dbreplication runtimestate

### **Upgrade paths**

- L2 upgrade from 8.6(1) and later to 9.0(1)
- Refresh Upgrade for 8.x (prior to 8.5), 7.1(5) and 6.1(5)

## **Security Feature Update**

### **CTL Client Update**

- Single installer for all Windows versions
- Supports Windows 7 (32 and 64 bit), Windows XP and Windows Vista

### **Updates to AXIS 2.0 (support .NET clients)**

### **Assured Services for SIP Line side devices**

- MLPP support for 99xx/89xx SIP phones and 3rd party SIP Phone
- TLS connections for 3rd party SIP phones

## **LDAP Enhancements**

### **Custom User Fields**

- Existing LDAP agreements sync 13 default attributes
- LDAP agreements will allow 5 Custom User fields
- Custom User Fields are common across all sync agreements
- Custom User Fields updated on 1 agreement are synced across all agreements
- Attribute will be validated at save time
- Error message thrown when saving and the attribute does not exist



## LDAP and Manual User Support

### Prior to CUCM 9.0

- Enabling LDAP sync would prohibit adding local users
- End user to be used by CUCM must be defined on AD and synced
- Extra users could trigger extra CAL's on the MS AD

### With CUCM 9.0

- Administrator can have both LDAP sync users and locally defined users
- Ability to modify local users and roles assigned to LDAP users
- Deleting LDAP sync will mark users synced for deletion (garbage collection)
- Administrator can convert an LDAP user to a local user
- User status field is used to differentiate between the Local user and LDAP Synchronized users

### To convert LDAP synchronized user to the local user account:

- Check the box Convert User Account and Save changes
- After a user is converted to local CUCM user all the fields become editable

## CUCM IM and Presence

### Beginning with release 9.0, CUCM and CUP will start integration to be one product

- Includes common release and upgrade process
- Centralize administration
- Simplify licensing, now included as part of CUCM user licensing
- Deprecating IP Phone Messenger (IPPM) and CUPC 7.0

### Through CUCM IM and Presence administration screens, configure UC Services for clients

#### UC Services that can be defined:

- Voice Mail
- Visual Voice Mail
- Conferencing
- Directory
- IM
- Presence
- CTI

#### UC Services are used to build a UC Service Profile

#### UC Service Profiles assigned to users:

- Licensing for the feature handled at the user level
- Home cluster specified in the user page

### When migrating to CUCM 9.0, existing service profiles and configuration in CUP will be migrated

- CUCM IM and Presence uses Templates and Layouts to speed up user creation
- BAT/AXL have been updated for CUCM/CUCM IM and Presence