Cisco Unified CME Features Roadmap

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This roadmap lists the features documented in the *Cisco Unified Communications Manager Express System Administrator Guide* and maps them to the modules in which they appear.

Feature and Release Support

Table 1 lists feature support for Cisco Unified CME versions. Only features that were introduced or modified in Cisco Unified CME .4.0 or a later version appear in the table. *Not all features may be supported in your Cisco Unified CME software version.*

To determine the correct Cisco IOS release to support a specific Cisco Unified CME version, see the *Cisco Unified CME and Cisco IOS Software Version Compatibility Matrix* at http://www.cisco.com/en/US/products/sw/voicesw/ps4625/products_documentation_roadmap09186a0 080189132.html.

Use Cisco Feature Navigator to find information about platform support and software image support. Cisco Feature Navigator enables you to determine which Cisco IOS software images support a specific software release, feature set, or platform. To access Cisco Feature Navigator, go to http://www.cisco.com/go/cfn. An account on Cisco.com is not required.

Note   Table 1 lists the Cisco Unified CME version that introduced support for a given feature. Unless noted otherwise, subsequent versions of Cisco Unified CME software also support that feature.

Table 1   Supported Cisco Unified CME Features

Release	Feature Name	Feature Description	Where Documented
Cisco Unified CME 4.2			
4.2	Extension Mobility	Provides the benefit of phone mobility for end users by enabling the user to log into any local Cisco Unified IP phone that is enabled for extension mobility.	Configuring Extension Mobility
	Interoperability with Cisco Unified Contact Center Express (Cisco UCCX)	Enables interoperability between Cisco Unified CME and Cisco Customer Response Solutions (CRS) 5.0 and later versions with Cisco Unified Contact Center Express (Unified CCX), including Cisco Unified IP IVR, enhanced call processing, device and call monitoring, and unattended call transfers to multiple call center agents and basic extension mobility.	Configuring Interoperability with External Services

Table 1   Supported Cisco Unified CME Features (continued)

Release	Feature Name	Feature Description	Where Documented
	Media Encryption (SRTP) on Cisco Unified Communications Manager Express	Provides the following secure voice call capabilities: • Secure call control signaling and media streams in Cisco Unified CME networks using Secure Real-Time Transport Protocol (SRTP) and H.323 protocols. • Secure supplementary services for Cisco Unified CME networks using H.323 trunks. • Secure Cisco VG224 Analog Phone Gateway endpoints.	Configuring Security
Cisco Unified CME 4.1			
4.1	Call Forward All Synchronization	When a user enables Call Forward All on a SIP phone using the CfwdAll soft key, the uniform resource identifier (URI) for the service is sent to Cisco Unified CME. When Call Forward All is configured in Cisco Unified CME, the configuration is sent to the SIP phone which updates the CfwdAll soft key to indicate that Call forward All is enabled.	Configuring Call Transfer and Forwarding
	Cisco Unified IP Phones	SCCP support was added for the following phone: • Cisco Unified IP Phone 7921G SIP support was added for the following phones: • Cisco Unified IP Phone 3951 • Cisco Unified IP Phone 7911G • Cisco Unified IP Phone 7941G and 7941G-GE • Cisco Unified IP Phone 7961G and 7961G-GE • Cisco Unified IP Phone 7970G and 7971G-GE No additional configuration is required for these phones. They are supported in the appropriate Cisco IOS commands.	Cisco Unified Communications Manager Express 4.1 Supported Firmware, Platforms, Memory, and Voice Products
	Directory Services	Local directory and local speed dial features are supported for SIP phones.	Configuring Directory Services
	Disabling SIP Supplementary Services for Call Forward and Call Transfer	You can disable REFER messages for call transfers and redirect responses for call forwarding from being sent by Cisco Unified CME if a destination gateway does not support supplementary services. Disabling supplementary services is supported if all endpoints use SCCP or all endpoints use SIP.	Configuring Call Transfer and Forwarding
	KPML	Key Press Markup Language (KPML) reports SIP phone users input digit by digit to Cisco Unified CME, which performs pattern recognition by matching a destination pattern to a dial peer as it collects the dialed digits.	Configuring Phones to Make Basic Calls
	Multi-Party Conferencing Enhancements	• Enhanced ad-hoc conferences are hardware-based and allow more than three parties. • Meet-me conferences consist of at least three parties dialing a meet-me conference number.	Configuring Conferencing

Table 1   Supported Cisco Unified CME Features (continued)

Release	Feature Name	Feature Description	Where Documented
	Network Time Protocol	SIP phones registered to a Cisco Unified CME router can synchronize to a Network Time Protocol (NTP) server, known as the clock master.	Defining Network Parameters
	Out-of-Dialog REFER	Out-of-dialog REFER (OOD-R) allows remote applications to establish calls by sending a REFER message to Cisco Unified CME without an initial INVITE. After the REFER is sent, the remainder of the call setup is independent of the application and the media stream does not flow through the application.	Defining Network Parameters
	Presence with BLF Status	Presence supports BLF notification features for speed-dial buttons and directory call lists for missed calls, placed calls, and received calls. SIP and SCCP phones that support the BLF speed-dial and BLF call-list features can subscribe to status change notification for internal and external directory numbers.	Configuring Presence Service
	Restarting Phones	SIP phones can be quickly reset by using the **restart** command. Phones contact the TFTP server for updated configuration information and reregister without contacting the DHCP server.	Resetting and Restarting Phones
	Session Transport	TCP can be used as the transport protocol for supported SIP phones connected to Cisco Unified CME. Previously only UDP was supported.	Configuring Phones to Make Basic Calls
	SIP Dial Plans	Dial plans enable SIP phones to perform local digit collection and recognize dial patterns as user input is collected. After a pattern is recognized, the SIP phone sends an INVITE message to Cisco Unified CME to initiate the call.	Configuring Phones to Make Basic Calls
	Soft Keys	You can customize the display and order of soft keys that appear on individual SIP phones during the connected, hold, idle, and seized call states.	Customizing Soft Keys
	Translation Rules	SIP phones in a Cisco Unified CME system support translation rules with functionality similar to phones running SCCP. Translation rules can be applied to incoming calls for directory numbers on a SIP phone.	Configuring Dialing Plans
Cisco Unified CME 4.0(3)			
4.0(3)	AMWI	Cisco Unified IP Phone 7911 and Cisco Unified IP Phone 7931G can be configured to receive AMWI (Audible Message Line Indicator) and visual MWI notification from an external voice-messaging system.	Integrating Voice Mail
	Cisco Unified IP Phones	Support was added for the following phones: • Cisco Unified IP Phone 7906G • Cisco IP Unified IP Phone 7931G	Cisco Unified Communications Manager Express 4.0(3) Supported Firmware, Platforms, Memory, and Voice Products

Table 1   Supported Cisco Unified CME Features (continued)

Release	Feature Name	Feature Description	Where Documented
	DSS	DSS (Direct Station Select) feature allows the phone user to press a single speed-dial line button to transfer an incoming call when the call is in the connected state. This feature is supported on all phones on which monitor line buttons for speed dial or speed-dial line buttons are configured.	Configuring Speed Dial
	Extension Assigner	Allows installation technicians to assign extension numbers to phones without administrative access to Cisco Unified CME, typically during the installation of new phones or the replacement of broken phones.	Creating Phone Configurations Using Extension Assigner
	Fax Relay	SCCP-enhanced features add support for Cisco Fax Relay and Super Group 3 (SG3) to G3 fax relay. This feature allows the fax stream between two SG3 fax machines to negotiate down to G3 speeds (less than 14.4 kbps) allowing SG3 fax machines to interoperate over fax relay with G3 fax machines.	Configuring Fax Relay
Cisco Unified CME 4.0(1)			
4.0(1)	Call Forwarding	**Automatic call forwarding during night service**—Ephone-dns (extensions) can be designated to automatically forward their calls to a specified number during the time that night service is in effect. **Blocking call forwarding of local calls**—Forwarding of local (internal) calls from other Cisco Unified CME ephones can be blocked. External calls will continue to be forwarded as specified by the configuration for the ephone-dns. **Selective call forwarding**—Call forwarding for busy and no-answer ephone-dns can be applied selectively based on the number that a caller dials for a particular ephone-dn: the primary number, the secondary number, or either of those numbers expanded through the use of a dial-plan pattern.	Configuring Call Transfer and Forwarding
	Call Park	**Call park blocked per ephone**—Individual ephones can be blocked from parking calls at call-park slots. If a blocked ephone has a dedicated park slot, it can park calls at the dedicated park slot, but not at any other park slot. **Call park redirect**—You can specify that calls use the H.450 or SIP Refer method of call forwarding or transfer to park calls and to pick up calls from park. The default is that hairpin call forwarding or transfer is used to park calls and to pick up calls from park. **Dedicated call-park slots**—A private call-park slot can be configured for each ephone. Optional parameters include timeout intervals, after which the parked call can be automatically recalled to the parking phone or transferred to another number. **Direct pickup of parked call on monitored park slot** —A call that is parked on a monitored call-park slot can be picked up by pressing the assigned monitor button.	Configuring Call Park

Table 1   Supported Cisco Unified CME Features (continued)

Release	Feature Name	Feature Description	Where Documented
	Call Pickup	**Directed call pickup disable**—The **no service directed-pickup** command globally disables directed call pickup and changes the action of the PickUp soft key to invoke local group pickup rather than directed call pickup.	Configuring Call-Coverage Features
	Call Transfer	**Call transfer blocking**—When call transfers to phones outside the Cisco Unified CME system have been globally enabled, you can block them for individual ephones. **Call transfer destination digits limited**—When call transfers to phones outside the Cisco Unified CME system have been globally enabled, you can limit the number of digits that can be dialed when transferring a call. **transfer-system command**—The command default has been changed from the **blind** keyword to the **full-consult** keyword, making H.450.2 consultative transfer the default method. **QSIG supplementary services support**—H.450 supplementary services features allow Cisco Unified CME phones to use QSIG to interwork with PBX phones. IP phones can use a PBX message center with proper MWI notifications.	Configuring Call Transfer and Forwarding
	Cisco Unified IP Phones	Support was added for the following phones: • Cisco Unified IP Phone 7911G • Cisco Unified IP Phone 7941G and 7941G-GE • Cisco Unified IP Phone 7961G and 7961G-GE No additional configuration is required for these phones. They are supported in the appropriate Cisco IOS commands.	Cisco Unified Communications Manager Express 4.0 Supported Firmware, Platforms, Memory, and Voice Products
	Conferencing	**Drop last party or keep parties connected**—New options specify whether the last party that joined a conference can be dropped from the conference and whether the remaining two parties should be allowed to continue their connection after the conference initiator has left the conference. **Improved conference display**—A Cisco Unified IP phone that is connected to a three-way conference displays "Conference." No special configuration is required.	Configuring Conferencing
	Feature Access Codes	**Feature Access Code (FAC) support**—The same FACs that are used by analog phones can be enabled for IP phones. In addition, standard FACs can be customized and aliases can be created to simplify the dialing of a FAC and any additional digits that are required to activate the feature.	Configuring Feature Access Codes
	Headset Auto-Answer	**Headset auto-answer**—When the headset key on a phone is activated, lines on the phone that are specified for headset auto-answer will automatically connect to incoming calls after playing an alerting tone to notify the phone user of the incoming call. This feature is available on Cisco Unified IP Phones 7940G, 7960G, 7970G, and 7971G-GE.	Configuring Headset Auto-Answer

Table 1   Supported Cisco Unified CME Features (continued)

Release	Feature Name	Feature Description	Where Documented
	Hunt Groups	**Agent status control**—Hunt group agents can put their phones in a not-ready state to temporarily suspend the receiving of hunt group calls by using the HLog soft key. A new FAC can toggle ready and not-ready state.	Configuring Call-Coverage Features
		Automatic agent not-ready status—The criterion for placing a hunt group agent into not-ready status (previously called automatic logout) was changed. If an agent does not answer the number of consecutive hunt-group calls that you specify in the **auto logout** command, the agent's ephone-dn is put into not-ready status (logged out) and will not receive further hunt group calls.	
		Call hold statistics—New fields describing the length of time that calls spend in the hold state are in the statistical reports for Cisco Unified CME B-ACD applications. See the **show ephone-hunt statistics** command and the **hunt-group report url** command in *Cisco Unified CME B-ACD and Tcl Call-Handling Applications.*	
		Dynamic hunt group membership—Agents can join or leave a hunt group using standard or custom FACs when wildcard slots are configured for hunt groups and the agents' ephone-dns are authorized to join hunt groups. An agent joining a hunt group uses a wildcard slot, and an agent leaving a group relinquishes the slot so that another agent can use it.	
		Change in **hops** command default—The maximum number of hops allowed by a hunt group is automatically adjusted to reflect the dynamically changing number of members. No special configuration is required.	
		Enhanced display of ephone hunt-group information—A text string can be added to provide information in configuration output and to display on IP phones when a hunt-group call is ringing or answered. This text string can be used to indicate the name or purpose of the hunt group.	
		A text string can be displayed on IP phones when all hunt-group members are logged out. This text string can be used to indicate where calls are being sent at that time; for example, to night service or voice mail.	
		Local call forwarding restriction in sequential ephone hunt groups—In sequential ephone-hunt groups, local (internal) calls to the hunt group can be prevented from being forwarded beyond the first ephone-dn in the hunt group.	
		Longest-idle hunt group improvement—A new command, the **from-ring** command, specifies that on-hook time stamps should be updated when a call rings an agent as well as when a call is answered by an agent.	

Table 1   *Supported Cisco Unified CME Features (continued)*

Release	Feature Name	Feature Description	Where Documented
	Hunt Groups	**Maximum number of agents** per hunt group has increased from 10 to 20. No special configuration is required.	Configuring Call-Coverage Features
		Maximum number of hunt groups per Cisco Unified CME system has increased from 10 to 100. No special configuration is required.	
		No-answer timeout enhancements—No-answer timeouts in ephone hunt groups can be set individually for each ephone-dn in the list. A maximum cumulative no-answer timeout can be also be set.	
		Restricting presentation of calls to idle or on-hook phones—The presentation of hunt group calls can be restricted to hunt-group members on phones that are idle or on-hook. This enhancement considers all lines on the phone, both members of the hunt group and nonmembers, when restricting presentation of hunt group calls.	
		Return to a secondary destination in an ephone hunt group after call park—Calls parked by hunt group agents can be returned to a different entry point in the hunt group.	
		Return to transferring party on no answer in an ephone hunt group—A call that was transferred into a hunt group and was not answered can be returned to the party that transferred it to the hunt group instead of being sent to voice mail or another final destination.	
	Localization	**Multiple user locales and network locales**—Up to five user and network locales are supported.	Configuring Localization Support
		User-defined user locales and network locales—User-defined locales can be added for supported phones.	
	Music on Hold	**Music on hold (MOH) for internal calls**—Internal callers (those making calls between extensions in the same Cisco Unified CME system) hear music when they are on hold or are being transferred. The **mulitcast moh** command must be used to enable the flow of packets to the subnet on which the phones are located.	Configuring Music on Hold
		Internal extensions that are connected through an analog voice gateway or through a WAN (remote extensions) do not hear MOH on internal calls.	
		The ability to disable multicast MOH per phone was introduced, using the **no multicast-moh** command in ephone or ephone-template configuration mode.	

Table 1   Supported Cisco Unified CME Features (continued)

Release	Feature Name	Feature Description	Where Documented
	Overlaid Ephone-dns	**Overlaid ephone-dns**—The maximum number of overlaid ephone-dns per ephone button has increased from 10 to 25. No special configuration is required. **Overlaid ephone-dn call-waiting display**—The number of waiting calls that can be displayed for overlaid ephone-dns that have call waiting configured has been increased to six for the Cisco IP Phone 7940G, 7941G, 7941G-GE, 7960G, 7961G, 7961G-GE, 7970G, and 7971G-GE. The overlaid ephone-dns must be configured on the phone using the **button** command and the **c** keyword. **Overlaid ephone-dn call overflow to other buttons**—One or more buttons can be dedicated to serve as expansion, or overflow, buttons for another button on the same Cisco Unified IP phone that has overlaid ephone-dns. A call to an overlay button that is busy with an active call will roll over to the next available expansion button.	Configuring Call-Coverage Features
	Phone Support	**Cisco IP Communicator** is a software-based application that appears on a user's computer monitor as a graphical, display-based IP phone with a color screen, a key pad, feature buttons, and soft keys. Cisco Unified CME supports Cisco IP Communicator 2.0 and later versions. **Remote teleworker phone**—Teleworkers can connect remote phones over a WAN and be directly supported by Cisco Unified CME.	Configuring Phones to Make Basic Calls
	Ring Tones	**Distinctive ringing**—An extension's ring patterns can be set to distinguish among internal, external, and feature calls.	Configuring Ring Tones
	Security	**Cisco Unified CME phone authentication** is a security infrastructure for providing secure Skinny Client Control Protocol (SCCP) signaling between Cisco Unified CME and IP phones.	Configuring Security
	Soft keys	**Feature blocking**—The features associated with the following soft keys can be individually blocked per ephone: CFwdAll, Confrn, GpickUp, Park, PickUp, and Trnsfer. The soft key is not removed, but it does not function. **Soft-key control for hold state**—The soft keys that are available while a call is on hold can be modified. The NewCall and Resume soft keys are normally available when a phone has a call on hold, but a template can be applied to the phone to remove these soft keys.	Customizing Soft Keys
	Speed Dial	**Bulk-loading of speed-dial numbers**—Text files with lists of speed-dial numbers can be loaded into system flash or a URL. The files can hold up to 10,000 numbers and can be applied to all ephones or to specific ephones.	Configuring Speed Dial

Table 1   Supported Cisco Unified CME Features (continued)

Release	Feature Name	Feature Description	Where Documented
	System-Level Parameters	**Disabling automatic phone registration**—Normally, Cisco Unified CME allocates an ephone slot to any ephone that connects to the system. To prevent unauthorized registrations, the **no auto-reg-ephone** command prevents any ephone from registering with Cisco Unified CME if its MAC address is not explicitly listed in the configuration.	Configuring System-Level Parameters
		External storage of configuration files and per-phone configuration files—Phone configuration files can be stored on an external TFTP server to offload the TFTP server function of the Cisco Unified CME router. This additional storage space permits the use of per-phone configuration files, which can be used to specify different user locales and network locales for phones.	
		Failover to Redundant Router—Sites can be set up with a primary and secondary Cisco Unified CME router to provide redundant Cisco Unified CME capability. Phones automatically register at the secondary router if the primary router fails and later rehome to the primary router when it is operational again.	
	Templates	**Maximum number of ephone templates** that can be defined has increased from 5 to 20. No special configuration is required.	Creating Templates
		New commands available for ephone templates—Ephone templates were previously introduced to allow system administrators to control the display of soft keys in various call states on individual ephones. Their role has been expanded to allow you to define a set of ephone parameter values that can be assigned to one or more phones in a single step.	
		Ephone-dn templates are introduced to allow administrators to easily apply sets of configured parameters to individual ephone-dns. Up to 15 ephone-dn templates can be defined.	
	Video Support	**Video support for SCCP-based endpoints**—This feature adds video support to allow you to pass a video stream with a voice call, between video-capable SCCP endpoints and between SCCP and H.323 endpoints. Through the Cisco Unified CME router, the video-capable endpoints can communicate with each other locally, to a remote H.323 endpoint through a gateway, or through an H.323 network.	Configuring Video Support for SCCP-Based Endpoints

Table 1   *Supported Cisco Unified CME Features (continued)*

Release	Feature Name	Feature Description	Where Documented
	Voice Mail	**Line-selectable MWI**—Previously, the message-waiting indication (MWI) lamp on a phone could only indicate when messages were waiting for the primary number on a phone. Now any phone line can be designated during configuration. **Mailbox selection policy for voice-mail servers**—A policy can be set for selecting the mailbox to use for calls that are diverted one or more times within a Cisco Unified CME system before being sent to a Cisco Unity Express, Cisco Unity, or PBX voice-mail pilot number. **Prefix option for SIP unsolicited MWI Notify messages**—Central voice-message servers that provide mailboxes for multiple Cisco Unified CME sites may use site codes or prefixes to distinguish among similarly numbered ranges of extensions at different sites. You can specify the prefix for your site so that central mailbox numbers are correctly converted to your extension numbers.	Integrating Voice Mail
	XML Interface	**XML interface enhancements**—An eXtensible Markup Language (XML) application program interface (API) is provided to supply data from Cisco Unified CME to management software. In Cisco Unified CME 4.0 and later versions, all Cisco Unified CME features have XML support.	Configuring the XML API