



Optimized Conferencing for Cisco Unified Communications Manager and Cisco VCS Release 3.0

Solution Release Notes
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Introduction

These release notes are for Optimized Conferencing for Cisco Unified Communications Manager and Cisco TelePresence Video Communications Server (Optimized Conferencing) Solution Release 3.0.

Required versions for Optimized Conferencing Release 3.0

For Optimized Conferencing to operate across your network, the network devices must be running the following software or firmware. Your organization may not use all these products but those that are used must be at the specified version:

Table 1: Required software for infrastructure products

Product	Required version	Role
TelePresence Conductor	XC2.3	Conference resource allocation
Cisco TMS	14.4	Conference management & scheduling
TelePresence Server 7010 and MSE 8710, TelePresence Server on Multiparty Media 310/320, TelePresence Server on Virtual Machine	4.0	Conference bridges
MCU 5300 Series, 4500 Series, 4501 Series, 4200 Series, MCU MSE Series 8420 and 8510	4.5	Conference bridges
Unified CM	9.1(2)SU2 or 10.5(1)	Call control
Cisco Expressway-C	X8.1.1 or later X8.2 recommended—required for Microsoft Lync interoperability.	Proxy registration to Unified CM for remote, secure endpoint registration. Media termination capabilities. Microsoft Lync interworking.
Cisco Expressway-E	X8.1.1 or later X8.2 recommended	Secure firewall traversal
Cisco VCS Control	X8.1.1 or later (except X7.2.3 can be used for H.323 registration). X8.2 recommended—required for Microsoft Lync interoperability.	Call control (Cisco VCS-centric deployments). H.323 interworking. Microsoft Lync interworking.
Cisco VCS Expressway	X8.1.1 or later X8.2 recommended	Secure firewall traversal. Registration of standards-based endpoints across the Internet.
Cisco TMSPE	1.2	Conference provisioning
Cisco TMSXE	4.0 or 4.0.1	[Optional] Conference management & scheduling for Microsoft environments
Cisco WebEx	T28.12 or later	Participation by WebEx users (WebEx Enabled Conferencing)

Table 2: Required software for endpoints, soft clients and peripherals

Product	Version	Supported in deployments...
Cisco TelePresence EX Series (EX60, EX90)	TC7.1.3	Unified CM-centric Cisco VCS-centric
Cisco TelePresence Quick Set C20, SX10, SX20, SX80		
Cisco TelePresence Codec C Series (C40, C60, C90)		
Cisco TelePresence Profile Series		
Cisco TelePresence MX200 and MX300		
Cisco Desktop Collaboration Experience DX650	10.1(2.33)	Unified CM-centric
Cisco TelePresence Systems CTS 3010, CTS 3210, CTS 1100 and CTS 1300	CTS 1.10.5 or later	Unified CM-centric
Cisco TelePresence System CTS 500-32	TX6.1.2 or later	Unified CM-centric
Cisco TelePresence TX9000 Series (TX9000 and TX9200 immersive systems)	TX6.1.2 or later	Unified CM-centric (although these endpoints can register to the VCS they are not supported for Optimized Conferencing Cisco VCS-centric deployments)
Cisco IP Video Phone E20	TE4.1.3 or later	Cisco VCS-centric
Cisco Unified IP Phone 9900 Series and 8900 Series	9.4(1)	Unified CM-centric
Cisco Jabber for Android	9.6	Unified CM-centric
Cisco Jabber for iPad	9.6.1	Unified CM-centric
Cisco Jabber for iPhone	9.6.1	Unified CM-centric
Cisco Jabber for Mac	9.6	Unified CM-centric
Cisco Jabber for Windows	9.7	Unified CM-centric
Cisco Jabber Video for TelePresence	4.7	Unified CM-centric
Microsoft Lync Client	Lync 2013 Client	Unified CM-centric Cisco VCS-centric

CAUTION: When upgrading devices from earlier software versions, follow the recommended upgrade / install sequence in [Optimized Conferencing for Cisco Unified Communications Manager and Cisco VCS Solution Guide, Release 3.0](#).

New in Optimized Conferencing Release 3.0

Table 3: Summary of new features and architecture changes

Item	Description
Unified CM normalization scripts	<p>The <i>vcs-interop</i> script now supports dTLS Fingerprint and Setup lines. This allows sRTP media encryption to be negotiated for TIP calls.</p> <p>The <i>telepresence-conductor-interop</i> script is unchanged.</p> <p>A new script—<i>telepresence-mcu-ts-direct-interop</i>—is now available, designed for SIP trunks that connect directly to conference bridges.</p> <p>The scripts may be downloaded from the Cisco website and installed on Unified CM.</p>
SIP Early Offer in Unified CM	<p>Early Offer messaging is strongly recommended for all Unified CM-connected SIP trunks which carry TelePresence calls.</p> <p>Early Offer is <i>required</i> for WebEx Enabled TelePresence calls and for some third-party services including Microsoft Lync. Previous Optimized Conferencing releases used Delayed Offer.</p>
Conference scheduling in Unified CM-centric deployments	<p>Scheduled conferences (including WebEx Enabled TelePresence) can now be scheduled through the Cisco TMS directly onto Unified CM-managed TelePresence Server 7010 and 8710 bridges. Scheduling to these bridges in Unified CM-centric deployments no longer needs the Cisco VCS.</p> <p>This feature requires Early Offer SIP messaging and the bridges to be configured in locally managed mode.</p>
Provisioning personal Collaboration Meeting Rooms (CMRs)	<p>A new Collaboration Meeting Room (CMR) service provides facilities for provisioning permanent conferencing numbers that other participants can dial into.</p> <p>Used in conjunction with TelePresence Conductor, Cisco TelePresence Management Suite Provisioning Extension (Cisco TMSPE) supports automated, mass provisioning of up to 100,000 personal CMRs.</p> <p>Individual users define their own personal CMRs through the Cisco TMSPE user portal, based on group templates provisioned by the administrator. Users can manage certain settings, including configuring a PIN and selecting a default conference layout.</p>
Mixed-model deployments and mixed-mode escalation methods are not recommended (support is likely to be removed in future)	<p>We no longer recommend hybrid deployments with call control provided by both Cisco VCS and Unified CM in the same enterprise. Although this scenario is technically possible, and often required during migration, it has not been tested for long-term operation in this release and it is likely that support for this scenario will be removed in future.</p> <p>It follows that we also do not recommend using ad hoc conferencing (the Unified-CM method of instant/escalated conferencing) in Cisco VCS-centric deployments, or Multiway (the Cisco VCS escalation method) in Unified CM-centric deployments.</p>
Resources for escalated conferences (ad hoc / Multiway)	<p>Previously we supported both ad hoc and Multiway conferences in either Cisco VCS-centric or Unified CM-centric deployments. In this release we have tested ad hoc only in Unified CM-centric deployments, and Multiway only in Cisco VCS-centric deployments.</p>

Table 3: Summary of new features and architecture changes (continued)

Cisco Business Edition 6000	Optimized Conferencing is now available in Cisco Business Edition 6000 deployments.
Cisco Expressway Series (Unified CM-centric deployments)	In Unified CM-centric deployments, remote conferencing (including WebEx Enabled TelePresence, business-to-business, and third-party interoperability) is now supported through the Cisco Expressway Series. The Cisco VCS is not required.
Remote access changes (Unified CM-centric deployments)	In Unified CM-centric deployments, endpoints located remotely from the enterprise Optimized Conferencing network are registered to the Unified CM through the Cisco Expressway in the enterprise network. The Cisco VCS is no longer used to register the remote endpoints but only to support legacy H.323 endpoints.
Ad hoc escalation by remote endpoints (Unified CM-centric deployments)	The ability to escalate point-to-point calls into an ad hoc conference now includes Unified CM-managed endpoints which are located remotely from the enterprise Optimized Conferencing network and registered through Cisco Expressway to the Unified CM.
Microsoft Lync 2013	Interoperability with Microsoft Lync 2013 is supported, using the Cisco Expressway-C (Unified CM-centric deployments) or Cisco VCS Control (Cisco VCS-centric deployments) for interworking.
Enhanced resource optimization	The TelePresence Server resource optimization feature now accounts for the receive bandwidth advertised by an endpoint, as well as the maximum resolution of the endpoint. The system makes two calculations of the screen license requirements and uses the lower value of the two. Currently, support for this feature in Optimized Conferencing is restricted to rendezvous (permanent) and ad hoc (instant) conferences hosted on bridges running in remotely managed mode pooled behind the TelePresence Conductor.
Increased capacity for Cisco TelePresence Server	Up to 200 calls are now supported per device/cluster for the TelePresence Server. Note that the maximum number of participants in a conference is still 104.
Conference layout and user experience improvements	This release supports new features to improve the conference experience for participants, including segment switching, active speaker indicators, and "Video announce".
ActiveControl	From Version X8.1.1 the Cisco VCS supports a filter for the iX protocol, which simplifies the ActiveControl deployment process. For endpoints running TC software, from Version TC7.1.1 by default ActiveControl is set to auto mode.
ClearPath	Cisco ClearPath technology is now supported on MCU 8510 and MCU 5300 Series conference bridges (as well as TelePresence Servers as previously).
User-based licensing	Subject to certain requirements, product licenses for some conference types can now be purchased based on user numbers rather than device capacities.
New endpoints supported	Optimized Conferencing now supports Cisco TelePresence MX300 G2, SX10 and SX80 endpoints, and Cisco Jabber for Android.


Table 3: Summary of new features and architecture changes (continued)

New customer documentation	A new deployment guide Provisioning Display Names in Optimized Conferencing for Cisco Unified Communications Manager and Cisco VCS explains how to optimize consistency of endpoint display names/labels which identify users to other conference participants.
Configuration methods	The method to configure Unified CM trunks in TelePresence Conductor has changed since Optimized Conferencing Release 2.0.
Software upgrade sequence	The recommended software upgrade sequence has changed since Optimized Conferencing Release 2.0.

Resolved issues

The following issues were found in previous releases of Optimized Conferencing and are resolved in Release 3.0.

Resolved since Release 2.0

Identifier	Description
CSCud89449	Provided that SIP messaging is configured for Early Offer (as recommended for this release) this resolved the issue where if a call between an H.323 endpoint to a Unified CM endpoint is escalated, the H.323 endpoint might receive the presentation in the main video rather than the presentation channel.
CSCug89748	Unified CM Version 9.1.2 resolved an issue in Versions 9.0, 9.1, and 9.1.1, where pressing Hold on a CTS (or TC) endpoint in a conference hosted on a TelePresence Server through TelePresence Conductor caused the call to drop.
CSCuh00285	Resolved the issue where the "conference ends in five minutes" warning message to participants was not adjusted if a conference master extended the meeting duration (the warning to the conference master was adjusted, but not to other participants).
CSCuh60040	Resolved the issue where for outdialed calls the TelePresence Conductor-generated Call Tags (UUIDs) are used in user interface displays and in event logs, instead of participant names.
CSCuh60704	Resolved the issue where in encrypted calls, Cisco DX650 endpoints do not send video to Cisco VCS-managed H.323 endpoints.
CSCuh64139	Resolved the issue where CTS endpoints in escalated conferences send content in the main video channel.
CSCuh69830, CSCuh89695	[Only applies to Cisco VCS-centric model of Optimized Conferencing] Resolved the issue where Cisco DX650 endpoints with encryption enabled stop sending audio and video after escalating to a Multiway conference on an MCU.
CSCuh78199	Resolved the issue where joining a Unified CM-registered endpoint into an existing Multiway conference on the Cisco VCS fails.
CSCuh99378	Resolved the issue where scheduled conferences that include immersive endpoints are routed direct to the conference bridge rather than via TelePresence Conductor, even though TelePresence Conductor is defined as the preferred bridge type.
CSCui01713	Resolved the issue where for an H.323 endpoint defined with an E.164 number (and no SIP URI) Cisco TMS does not correlate an active interworked H.323 to SIP call with scheduled outdialed calls to that same endpoint.
CSCui06221	Resolved the issue where the Touch controller on endpoints running TC6.2 displayed a button to change the layout of remote participants in ad hoc, Multiway, and CMR conferences. The button had no effect as it is only relevant in multisite conferences: 
CSCui15452	Resolved the issue where "Session Interval Too Small" (422) SIP messages are not proxied back to the call originator and instead the interworking function tries to send them out over H.323 as an interworked call.
CSCui40418	Resolved the issue where EX90 endpoints occasionally exhibited high latency and video corruption in low bandwidth calls.

Resolved since Release 1.0

Identifier	Description
CSCtx16122	Resolved the issue of intermittent lack of video or audio experienced by H.323 endpoints registered to a Cisco VCS when in a call with a Unified CM endpoint.
CSCud38739	Resolved the issue of no received video on H.323 endpoints if the <code>vcs-interop</code> script was enabled on TelePresence Conductor.
CSCud59961	EX60 endpoint users added to a Unified CM ad hoc conference may see the Welcome screen with a randomly generated conference name. This does not impact the conference. Instructions have now been added to the TelePresence Conductor user documentation to explain how to suppress the Welcome screen.
CSCud83749	Resolved the issue where if a participant left a 3-party ad hoc conference, the remaining two endpoints in the call might lose video or audio after the participant left the call.
CSCue04207	[Reassigned to ID CSCue58577]
CSCue21164	Resolved the issue where calls were not resumed after de-escalating from an ad hoc conference involving Jabber for Windows or EX90 (running TE6.x) endpoints and endpoints registered to another Unified CM.
CSCue58577	Resolved the issue where CTS 3000 endpoint users might experience corrupted video on calls de-escalated from MCU or TelePresence Server ad hoc conferences.
CSCug94725	[This was found during Early Field Trials of Optimized Conferencing Version 2.0 and is now resolved in TelePresence Conductor XC2.2] Previously some HTTPS clients caused high CPU loads on MCU 4500 Series and MCU 4200 Series devices when connected to the MCU. Note: High CPU loading may still occur if HTTPS traffic to the MCU does not maintain its session.

Open issues

The following issues apply to Optimized Conferencing Release 3.0.

Identifier	Description
CSCuc34385	Unified CM does not support Multiway with Cisco ad hoc call escalation (see Ad hoc escalation of other conference types [p.11]).
CSCud83776	Clustering TelePresence Conductors is currently not supported in Cisco TMS. Only add one node from the TelePresence Conductor cluster into the Cisco TMS.
CSCug68727	CTS endpoint users sometimes hear audio corruption while joining as the first participant in an MCU-hosted conference.
[CSCuh64828]	Reassigned to ID CSCuo82382
CSCui15439	Cisco VCS-managed H.323 endpoints with encryption switched off cannot call secure Unified CM endpoints.
CSCuj40302	A <i>500 internal server error</i> occurs when Microsoft Lync dials audio-only to TelePresence Server. The call connects but then disconnects immediately (TelePresence Server sends BYE to Lync on receipt of the error from Cisco VCS).
CSCum87923	The Touch 8 user interface may lag intermittently when paired with the Cisco TelePresence Codec C90 or C60 over the network.
CSCun25443	The Cisco DX650 endpoint does not decode 720p60fps properly. Corrupted video is seen on the DX650 when receiving 720p60fps. The workaround is to reduce the call settings bandwidth to 2M.
CSCun76724	When the DN range for a direct managed bridge in Cisco TMS is changed, the old values are cached for a while. Conferences booked shortly after the change are still allocated using the old DN range. The issue has been observed with the Cisco TelePresence MCU Series, but other bridge types could be affected as well.
CSCun81590	MCU 5300 Series series may not decode video streams from endpoints that experience packet loss.
CSCuo26979	In some cases the Cisco TMS may not resolve participants when scheduling Microsoft Lync participants. As a result, the Cisco TMS Live Service could instruct the conference bridge to dial the Lync participants repeatedly, even though the participants are actually connected. This issue has been seen with this call flow: <i>MCU - Conductor - CUCM - VCS - VCS(Lync GW) - Lync</i> . Other deployments where bridges dial to participants through both a Unified CM and a Cisco VCS could also be affected.
CSCuo69660	Endpoints running TC 7.1 or later send 768 x 448 resolution after de-escalating from an MCU to Unified CM ad hoc conference to a point-to-point call.
CSCuo69663	Incoming FECC breaks after Hold/Resume in a Multiway call to TelePresence Conductor-managed MCU.
CSCuo69672	Resuming a call fails when Cisco Collaboration Edge is used in the specific scenario of a participant in an existing ad hoc conference adding a new participant to the conference. The new participant is added, but the original participant is not correctly resumed back into the conference. The workaround is for the original participant to Resume at their endpoint, which will rejoin the conference.

CSCuo69678	It is not possible to enable auto answer on TC7.1 endpoints registered to Unified CM.
CSCuo82382 (formerly CSCuh64828)	Conferences escalated from an H.323 call may display a black screen when the session refreshes. The workaround is to perform a Hold/Resume; alternatively use SIP as the call protocol or disable encryption.

Limitations

The following limitations apply to Optimized Conferencing Release 3.0.

Unified CM Version 10.0 is not supported

We support Unified CM Version 9.1(2)SU2 or Version 10.5(1) with Optimized Conferencing Release 3.0. Do not use Unified CM Version 10.0, as some issues currently exist with this version in relation to Optimized Conferencing (see identifier CSCun21354 in [Bug Search Tool](#) for details).

Mixing escalated conferencing types on shared resources and between deployment models is now deprecated

Previously we supported both ad hoc escalation via Unified CM-registered endpoints and Multiway escalation via Cisco VCS-registered endpoints to be hosted on the same set of conference bridges. This approach is no longer recommended and we have not tested it in this conferencing release. We recommend migrating endpoint registration from Cisco VCS to Unified CM in order to benefit from the ad hoc mechanism in the deployment. For cases where endpoints must remain registered to Cisco VCS we recommend that separate, dedicated bridge resources are implemented for ad hoc conferencing and for Multiway conferencing respectively.

Ad hoc escalation of other conference types

Ad hoc call flows (which are managed by Unified CM) cannot be used to add participants to conferences created by any other method, such as a rendezvous conference. Other call flows cannot be used to add participants to ad hoc conferences. So the ad hoc call escalation method is only supported in an ad hoc conference that was created by it, and conferences generated by other methods cannot be extended by the ad hoc mechanism. This avoids any potential for chained conferences.

The ad hoc call escalation method is only supported in an ad hoc conference that was created by it, and conferences generated by other methods cannot be extended by the ad hoc mechanism.

Resource allocation by TelePresence Conductor

For rendezvous or personal Collaboration Meeting Room (CMR) calls on TelePresence Servers, TelePresence Conductor decides what TelePresence Server resources are required to set up the call by adding the resources required for the incoming call to the *maximum* quality/resource requirements defined by the associated conference template. The combined resource total is used to calculate whether sufficient resources exist to set up the call. TelePresence Conductor first checks the highest priority bridge pool, and if this fails then it checks in turn through other bridge pools associated with the Service Preference order defined for the template, until it can service the call.

IPv6

This release of Optimized Conferencing does not support IPv6. IPv6 is however supported for interworked calls through the Cisco VCS Control.

Reduced feature set for TMS Conference Control Center

For non-scheduled conferences, the solution supports only the following subset of the standard Cisco TMS **Conference Control Center** features. These allow administrators to control certain aspects of ongoing

conferences—see which conferences are running on conference bridge resources, add or remove participants, hand over conference controls to a participant, and end a conference:

Table 4: Cisco TMS Conference Control Center features for non-scheduled conferences

On a conference	On a participant
Set picture mode (only applied to participants who join after the setting is changed)	Mute/unmute audio
Add participant	Mute/unmute outgoing audio
End	Mute/unmute video
	Disconnect
	Change display name (the new name is not updated in the TMS interface)
	Send message
	Show snapshot (MCU bridges only)
	Set picture mode

Compatibility

We endeavor to make our Cisco TelePresence products interoperable with all relevant standards-based equipment. While it is not possible to test all scenarios within the Optimized Conferencing solution, the tables below indicate the equipment and software versions that were tested for compatibility with this release of the solution.

Table 5: Infrastructure equipment tested with Optimized Conferencing Release 3.0

Product	Hardware/platform	Software	Comments
TelePresence Conductor	<ul style="list-style-type: none"> ■ Cisco VCS appliance ■ VMware (virtual) ■ C220 M3S (SFF) TRC#3 for BE6000 	XC2.3	B2BUA mode
Cisco TMS	<ul style="list-style-type: none"> ■ VMware (virtual) ■ C220 M3S (SFF) TRC#3 for BE6000 	14.4	
TelePresence Server	<ul style="list-style-type: none"> ■ TS 7010 ■ MSE 8710 	4.0	Running in remotely managed mode
TelePresence Server	<ul style="list-style-type: none"> ■ Multiparty Media 310 ■ Multiparty Media 320 	4.0	
TelePresence Server on Virtual Machine	C220 M3S (SFF) TRC#3 for BE6000	4.0	
MCU	<ul style="list-style-type: none"> ■ 5300 Series, 4500 Series, 4200 Series ■ MSE 8510 	4.5	
Unified CM	<ul style="list-style-type: none"> ■ UCS ■ VMware (virtual) 	9.1(2)SU2 and 10.5(1)	
Cisco Expressway-C and Cisco Expressway-E	<ul style="list-style-type: none"> ■ Cisco VCS appliance ■ VMware (virtual) ■ C220 M3S (SFF) TRC#3 for BE6000 	X8.2	
Cisco VCS Control	<ul style="list-style-type: none"> ■ Cisco VCS appliance ■ VMware (virtual) 	X8.2	X7.2.3 also tested for H.323 registration only
Cisco VCS Expressway	<ul style="list-style-type: none"> ■ Cisco VCS appliance ■ VMware (virtual) 	X8.2	
Cisco TMSPE		1.2	
Cisco TMSXE		4.0	
Cisco WebEx	T28.12	T28.12	

Planned changes to future releases

Support for mixing escalated conferencing types on shared resources and between deployment models is likely to be discontinued in a future release of Optimized Conferencing.

Configuration considerations for this release

This section provides guidance on configuration best practices to avoid potential issues with Optimized Conferencing elements or between Optimized Conferencing and external systems or networks.

SIP trunk configuration - Early Offer for SIP messaging (Unified CM-centric deployments)

For Optimized Conferencing Release 3.0 we recommend that all SIP trunks which carry TelePresence calls are configured for Early Offer. Details are provided in [Optimized Conferencing for Cisco Unified Communications Manager and Cisco VCS Solution Guide](#).

SIP trunk configuration - DTMF signaling method

Calls are known to drop over inter-call manager trunks following Hold/Resume operations when CTS or TX9000 endpoints are in a TelePresence Server-hosted call (standalone or pooled behind TelePresence Conductor). To avoid this, set the **DTMF Signaling Method** parameter to *RFC 2833* for each trunk. For VCS to Unified CM trunks this requirement is described in [Cisco TelePresence Cisco Unified Communications Manager with Cisco VCS \(SIP Trunk\) Deployment Guide \(D14602\)](#) or [Cisco Unified Communications Manager with Cisco Expressway \(SIP Trunk\) Deployment Guide \(D15062\)](#), in the instructions for configuring SIP information fields for a **SIP Trunk** device.

Audio-only quality setting in ad hoc conferencing (TelePresence Servers)

TelePresence Conductor Version XC2.3 supports audio-only as a quality setting (service level) for TelePresence Server conference bridges. Some limitations and recommendations apply to the audio-only quality setting when it is used with ad hoc conferencing in Unified CM deployments, and system behavior may not be as you expect. Details are provided in [Optimized Conferencing for Cisco Unified Communications Manager and Cisco VCS Solution Guide](#).

Configuring the iX protocol (for ActiveControl)

ActiveControl uses the iX protocol, which is advertised as an application line in the SIP Session Description Protocol (SDP). Extensions to the SIP SDP are not fully supported in some older systems, which has implications for Optimized Conferencing networks that connect to external networks or to older Unified CMs (Unified CM 8.x or earlier). No issues occur with iX in Unified CM 9.1(2) or later, or with iX in Cisco VCS systems. However, if you are enabling ActiveControl in Optimized Conferencing networks which interface to older Unified CMs (8.x and earlier) or to third-party networks (business-to-business), you must be careful to follow the instructions in [ActiveControl in Optimized Conferencing for Cisco Unified Communications Manager and Cisco VCS Deployment Guide](#) to isolate the iX protocol traffic from systems that do not support it. Failure to do so may lead to unpredictable consequences, including call failures.

For ActiveControl configuration details, including the iX limitations for external connections, see *ActiveControl in Optimized Conferencing for Cisco Unified Communications Manager and Cisco VCS Deployment Guide*. We strongly advise that you review this guide before deploying ActiveControl.

Related documentation

Title	Reference	Link
Optimized Conferencing for Cisco Unified Communications Manager and Cisco VCS Solution Guide 3.0	D15027	http://www.cisco.com/c/en/us/support/conferencing/telepresence-conductor/products-installation-and-configuration-guides-list.html
Cisco TelePresence Conductor with Cisco Unified Communications Manager Deployment Guide XC2.3, CUCM 10.0 [see Appendix for 9.x]	D14998	http://www.cisco.com/c/en/us/support/conferencing/telepresence-conductor/products-installation-and-configuration-guides-list.html
Cisco TelePresence Management Suite Provisioning Extension with Cisco Unified CM Deployment Guide	D15110	http://www.cisco.com/c/en/us/support/conferencing/telepresence-management-suite-extensions/products-installation-guides-list.html
Cisco TelePresence Conductor with Cisco TelePresence VCS (B2BUA) Deployment Guide XC2.3, X8.1	D15014	http://www.cisco.com/c/en/us/support/conferencing/telepresence-conductor/products-installation-and-configuration-guides-list.html
Cisco TelePresence Management Suite Provisioning Extension with Cisco VCS Deployment Guide	D14941	http://www.cisco.com/c/en/us/support/conferencing/telepresence-management-suite-extensions/products-installation-guides-list.html
ActiveControl in Optimized Conferencing for Cisco Unified Communications Manager and Cisco VCS Deployment Guide	D15051	http://www.cisco.com/c/en/us/support/conferencing/telepresence-conductor/products-installation-and-configuration-guides-list.html
Provisioning Display Names in Optimized Conferencing for Cisco Unified Communications Manager and Cisco VCS Deployment Guide	D15127	http://www.cisco.com/c/en/us/support/conferencing/telepresence-conductor/products-installation-and-configuration-guides-list.html
Cisco TelePresence Conductor Administrator Guide XC2.3	D14826	http://www.cisco.com/c/en/us/support/conferencing/telepresence-conductor/products-maintenance-guides-list.html
Cisco Unified Communications Manager Administration Guide, Release 9.1n	OL-27945	http://www.cisco.com/c/en/us/support/unified-communications/unified-communications-manager-callmanager/products-maintenance-guides-list.html
Cisco Unified Communications Manager Administration Guide, Release 10.0(1)	OL-29000	http://www.cisco.com/c/en/us/support/unified-communications/unified-communications-manager-callmanager/products-maintenance-guides-list.html
Cisco Unified Communications Manager with Cisco Expressway (SIP Trunk) Deployment Guide, Cisco Expressway X8.2	D15062	http://www.cisco.com/c/en/us/support/unified-communications/expressway-series/products-installation-and-configuration-guides-list.html

Title	Reference	Link
Cisco Unified Communications Manager with Cisco VCS (SIP Trunk) Deployment Guide, Cisco VCS X8.2	D14602	http://www.cisco.com/c/en/us/support/unified-communications/telepresence-video-communication-server-vcs/products-installation-and-configuration-guides-list.html
Cisco TelePresence Multiway™ Deployment Guide, Cisco VCS, MCU, Conductor	D14366	http://www.cisco.com/c/en/us/support/conferencing/telepresence-conductor/products-installation-and-configuration-guides-list.html
Cisco Expressway Basic Configuration Deployment Guide X8.2	D15060	http://www.cisco.com/c/en/us/support/unified-communications/expressway-series/products-installation-and-configuration-guides-list.html
Cisco TelePresence Video Communication Server Basic Configuration (Control with Expressway) Deployment Guide Cisco VCS X8.2	D14651	http://www.cisco.com/c/en/us/support/unified-communications/telepresence-video-communication-server-vcs/products-installation-and-configuration-guides-list.html
Cisco TelePresence Management Suite Administrator Guide Version 14.4	D13741	http://www.cisco.com/c/en/us/support/conferencing/telepresence-management-suite-tms/products-maintenance-guides-list.html
Cisco WebEx Enabled TelePresence Configuration Guide	OL-21352	http://www.cisco.com/c/en/us/support/conferencing/telepresence-management-suite-tms/products-installation-and-configuration-guides-list.html
Cisco TelePresence Conductor Product Programming Reference Guide XC2.3 (includes Conductor Provisioning API reference)	D14948	http://www.cisco.com/c/en/us/support/conferencing/telepresence-conductor/products-programming-reference-guides-list.html
Cisco Expressway Administrator Guide X8.2	D15058	http://www.cisco.com/c/en/us/support/unified-communications/expressway-series/products-maintenance-guides-list.html
Cisco TelePresence Video Communication Server Administrator Guide X8.2	D14049	http://www.cisco.com/c/en/us/support/unified-communications/telepresence-video-communication-server-vcs/products-maintenance-guides-list.html

More product documentation on Cisco.com

Product	Link
TelePresence Conductor	http://www.cisco.com/c/en/us/support/conferencing/telepresence-conductor/tsd-products-support-series-home.html
Unified CM	http://www.cisco.com/c/en/us/support/unified-communications/unified-communications-manager-callmanager/tsd-products-support-series-home.html
MCU 5300 Series	http://www.cisco.com/c/en/us/support/conferencing/telepresence-mcu-5300-series/tsd-products-support-series-home.html
MCU 4500 Series	http://www.cisco.com/c/en/us/support/conferencing/telepresence-mcu-4500-series/tsd-products-support-series-home.html

MCU MSE Series	http://www.cisco.com/c/en/us/support/conferencing/telepresence-mcu-mse-series/tsd-products-support-series-home.html
TelePresence Server	http://www.cisco.com/c/en/us/support/conferencing/telepresence-server/tsd-products-support-series-home.html
Cisco Expressway	http://www.cisco.com/c/en/us/support/unified-communications/expressway-series/products-installation-and-configuration-guides-list.html
Cisco VCS	http://www.cisco.com/c/en/us/support/unified-communications/telepresence-video-communication-server-vcs/tsd-products-support-series-home.html

Using the Bug Search Tool

The Bug Search Tool contains information about open and resolved issues for this release and previous releases, including descriptions of the problems and available workarounds. The identifiers listed in these release notes will take you directly to a description of each issue.

To look for information about a specific problem mentioned in this document:

1. Using a web browser, go to the [Bug Search Tool](#).
2. Sign in with a cisco.com username and password.
3. Enter the bug identifier in the **Search** field and click **Search**.

To look for information when you do not know the identifier:

1. Type the product name in the **Search** field and click **Search**.
2. From the list of bugs that appears, use the **Filter** drop-down list to filter on either *Keyword*, *Modified Date*, *Severity*, *Status*, or *Technology*.

Use **Advanced Search** on the Bug Search Tool home page to search on a specific software version.

The Bug Search Tool help pages have further information on using the Bug Search Tool.

Technical support

If you cannot find the answer you need in the documentation, check the website at www.cisco.com/cisco/web/support/index.html where you will be able to:

- Make sure that you are running the most up-to-date software.
- Get help from the Cisco Technical Support team.

Make sure you have the following information ready before raising a case:

- Identifying information for your product, such as model number, firmware version, and software version (where applicable).
- Your contact email address or telephone number.
- A full description of the problem.

To view a list of Cisco TelePresence products that are no longer being sold and might not be supported, visit: www.cisco.com/en/US/products/prod_end_of_life.html and scroll down to the TelePresence section.

Document revision history

Date	Revision	Description
Jun 2014	03	Release of Optimized Conferencing 3.0
Oct 2013	02	Modified section on configuring iX protocol for ActiveControl. This configuration information is now available in a separate ActiveControl deployment guide .
Aug 2013	01	Release of Optimized Conferencing 2.0.

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