



Cisco Collaboration Meeting Rooms (CMR) Premises

Release Notes

Last Updated: November 2015

Release 5.0

Cisco TelePresence Conductor XC4.0

Cisco TelePresence Management Suite 15.0

Cisco TMS Provisioning Extensions 1.5

Cisco TelePresence Server 4.2

New in CMR Premises Release 5.0

Table 1 New features and architecture changes

Item	Description
Architecture	<p>This release defines a primary deployment architecture for the solution, with Cisco Unified Communications Manager (Unified CM) for call control.</p> <p>We also support a secondary deployment with Cisco TelePresence Video Communication Server (Cisco VCS) for call control.</p>
Licensing	<p>This release introduces centralized licensing for the solution, using our Multiparty Licensing feature for TelePresence Server conference bridges. From this release Multiparty Licensing is the preferred licensing method and is the approach that we describe in the documentation.</p> <p>Multiparty Licensing lets you administer licenses centrally on the Cisco TelePresence Conductor instead of loading screen licenses locally onto the Cisco TelePresence Servers. Compared to traditional screen licensing, Multiparty Licensing allows for greater capacity at lower cost. Two variants are available:</p> <ul style="list-style-type: none"> ■ Personal Multiparty (PMP) licenses. Each license is assigned to a specific user. PMP licenses are suitable for users who initiate conferences frequently. PMP licenses are purchased through Cisco Unified Workspace Licensing (CUWL Pro). They are available for deployments with Unified CM for call control. ■ Shared Multiparty (SMP) licenses. Each license is shared by multiple users, but only in one conference at a time. SMP licenses are suitable for users who initiate conferences infrequently. SMP licenses are available for deployments with either Unified CM or Cisco VCS for call control. <p>Each TelePresence Conductor can support either Multiparty Licensing or TelePresence Server screen licensing, but not both together. If you have a mix of TelePresence Server and Cisco TelePresence MCU Series conference bridges however, you can use Multiparty Licensing for the TelePresence Servers and port licensing for the MCUs together on the same Conductor.</p> <p>Multiparty Licensing supports the following conference types:</p> <ul style="list-style-type: none"> ■ Personal CMR ■ Scheduled ■ Ad hoc in the primary deployment ■ Multiway in the secondary deployment

Table 1 New features and architecture changes (continued)

Item	Description
Preferred Implementation	<p>From this release the preferred implementation for CMR Premises is the primary deployment architecture and its extensions, as described in Cisco Collaboration Meeting Rooms (CMR) Premises Solution Guide.</p> <p>In future the solution may provide only limited support for features for certain products, or remove support for those products altogether, including Cisco TelePresence MCU Series conference bridges and the Cisco VCS for call control.</p>
TelePresence Server	The Cisco TelePresence Server on Multiparty Media 820 blade for the Cisco TelePresence MSE 8000 chassis is now available. The new platform supports the latest technology and features and is designed to supersede the 8710 platform.
Security	<p>HTTPS and SIP over TLS are now available without the need for the encryption feature key in the TelePresence Server. Previously the encryption feature key was needed to enable TLS. From TelePresence Server Version 4.2, the encryption key is replaced by a "media encryption" key. This key is still required for media encryption in SIP calls.</p> <p>To use Multiparty Licensing, connections between TelePresence Conductor and the conference bridges must use HTTPS.</p>
SIP TCP Timeout Value in Cisco Expressway / Cisco VCS	If you use Cisco Expressway / Cisco VCS Version X8.5.3 or later, we recommend that you reduce the default SIP TCP timeout value as described in Reduce Default SIP TCP Timeout, page 16 .
Encryption in Cisco Expressway / Cisco VCS	If you want to apply media encryption to calls that egress the Expressway solution towards DNS Zone destinations, we strongly advise you to follow the approach described in Encryption in Cisco Expressway / Cisco VCS, page 16 .

Required Software Versions

To deploy the solution you need some or all of the products listed below, depending on which solution features you use. Each product that you use must be running at least the minimum version specified in the tables below:

Table 2 Required versions for infrastructure products

Product	Minimum version	Recommended version	Role
TelePresence Conductor	XC4.0	XC4.0x (latest)	Conference resource allocation
Cisco TMS	15.0	15.0	Conference management & scheduling
Cisco TMSPE	1.5	1.5	Conference provisioning
TelePresence Server	4.2	4.2x (latest)	Conference bridge resource
MCU 5300 Series, MCU 4500 Series, MCU 4501 Series, MCU MSE 8510	4.5x (latest)	4.5x (latest)	Conference bridge resource
Unified CM In networks with multiple Unified CM installations, for full solution functions each one must be at the required version.	10.5(2)	10.5(2)	Call control See the <i>Compatibility</i> section, for information about using earlier versions of Unified CM.
Cisco Expressway-C	X8.5.3	X8.5.3	Remote endpoint registration to Unified CM, business-to-business connectivity, and Microsoft Lync interworking.
Cisco Expressway-E	X8.5.3	X8.5.3	Secure firewall traversal
Cisco VCS Control In networks with multiple Cisco VCS installations, for full solution functions each one must be at the required version.	X8.5.3	X8.5.3	Call control (Cisco VCS-Centric deployments). Microsoft Lync interworking. H.323 interworking.
Cisco VCS Expressway	X8.5.3	X8.5.3	Secure firewall traversal. Registration of standards-based endpoints across the Internet.

Table 2 Required versions for infrastructure products (continued)

Product	Minimum version	Recommended version	Role
Cisco TMSXE	5.0	5.0	[Optional] Conference scheduling for Microsoft environments
Microsoft SQL Server	Microsoft SQL Server 2008 R2 64-bit	Microsoft SQL Server 2012 SP2 64-bit	Database for Cisco TMS
Cisco WebEx	WBS (T) T29.13	WBS (T) T30	Cloud conferencing with audio, video, and content sharing capabilities for WebEx clients

Microsoft Lync

For details about the recommended Microsoft Lync server and client versions, see the associated [Cisco Expressway with Microsoft Lync Deployment Guide](#), or the [Cisco TelePresence Microsoft Lync and Cisco VCS Deployment Guide](#) for VCS-based deployments.

Table 3 Required versions for endpoints and soft clients

Product	Minimum version	Recommended version
Cisco TelePresence IX5000	IX 8.0.1	IX 8.0.4
Cisco DX70, DX80	10.2.4	10.2.4
Cisco DX650	10.2.4	10.2.4
Cisco TelePresence MX200 G2, MX300 G2, MX700, MX800	TC7.1.3	TC7.3.3
Cisco TelePresence Quick Set SX10, SX20	TC7.1.3	TC7.3.3
Cisco TelePresence EX Series EX60 and EX90	TC7.1.3	TC7.3.3
Cisco TelePresence Quick Set C20		
Cisco TelePresence Codec C Series C40, C60, C90		
Cisco TelePresence Profile Series		
Cisco TelePresence MX200 and MX300		
Cisco TelePresence Systems CTS 3010, CTS 3210	CTS 1.10.5	CTS 1.10.11
Cisco TelePresence System CTS 1100, CTS 1300	CTS 1.10.5	CTS 1.10.11
Cisco TelePresence System CTS 500-32	TX6.1.2	TX6.1.9
Cisco TelePresence TX9000 and TX9200 immersive systems	TX6.1.2	TX6.1.9
Cisco Unified IP Phone 9900 Series and 8900 Series	9.4(2)	9.4(2)
Cisco Jabber for Android	10.6	10.6
Cisco Jabber for iPad		
Cisco Jabber for iPhone		
Cisco Jabber for Mac		
Cisco Jabber for Windows		
Cisco Jabber Video for TelePresence	4.8.8	4.8.8

Installing or Upgrading the Solution

Instructions for installing or upgrading the solution are provided in the [Cisco Collaboration Meeting Rooms \(CMR\) Premises Deployment Guide](#) for Release 5.0.

If you use Multiparty Licensing with PMP licenses, you do not need a separate license for Cisco TMSPE to provision Personal CMRs (or to use the Smart Scheduler booking feature in Cisco TMSPE). Just download the Cisco TMSPE software from the Cisco TMS software download page on Cisco.com. You do not need the *Cisco TMS Provisioning Extension* option key.

Caution: We recommend that you install the products for your solution deployment in the sequence specified in the deployment guide.

Resolved Issues

The following issues found in previous releases of CMR Premises are resolved in Release 5.0.

Resolved since Release 4.0

Identifier	Description
CSCun25443	Resolved the issue where the Cisco DX650 endpoint did not decode 720p60fps properly. Corrupted video was seen on the DX650 when receiving 720p60fps.
CSCuo69672	<p>This bug has been closed as we were unable to reproduce it in the solution software.</p> <p>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.</p> <p>The workaround is for the original participant to Resume at their endpoint, which will rejoin the conference.</p>

Resolved Since Release 3.0

Identifier	Description
CSCuo82382	Resolved the issue of no media in H.323 TelePresence Server ad hoc conference until after hold/resume.
CSCuo26979	Resolved the issue where in some cases the Cisco TMS might 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 was 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 have been affected.

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.

Identifier	Description
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 CMR Premises] 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.

Identifier	Description
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 CMR Premises 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 CMR Premises Release 5.0.

Identifier	Description
CSCuv88170	No warning or error message is displayed on Cisco TMS, when scheduling with Webex with exceptions.
CSCuv88160	Cisco TMS displays "Bad Request" when adding endpoints to a booking.
CSCuv85510	IP address not released when TelePresence Conductor Location type is changed.
CSCuv58318	Video on Lync very jerky when TelePresence Server tries to send it 1080p video.
CSCuv12544	Media 820 may fail to establish a cluster after an unexpected reboot by a subordinate blade.
CSCuu62416	When setting the Unified CM-to-TelePresence Conductor trunk to non-secure mode with SRTP on, and if both ends support encryption, calls to TelePresence Server have no media in either direction.
CSCus40272	Instant WebEx meeting link appears in portal even when disabled.
CSCus40116	The current WebEx-enabled CMR solution is only implemented and tested with WebEx of type 'SIP' when provisioning data to the TelePresence Conductor.
CSCus28595	Poor video quality from MCU to Microsoft Lync when three participants in a conference.
CSCus28591	B2BUA hangs up call from DX to Microsoft Lync.
CSCus26169	Cannot join PIN-enabled conference from Cisco TelePresence IX5000. Resolved in TelePresence Conductor Version XC3.0.1.
CSCup49770	Low frame rate on video between Microsoft Lync and TelePresence MCU behind TelePresence Conductor after hold/resume.
CSCuo69678	It is not possible to enable auto answer on TC7.1 endpoints registered to Unified CM. Subject to installing the latest Unified CM device packs for your Unified CM version, this issue is resolved in endpoint software version TC7.2.0.
CSCuo69663	Incoming FECC breaks after Hold/Resume in a Multiway call to TelePresence Conductor-managed MCU.
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. Resolved in endpoint software version TC7.3.
CSCun81590	MCU 5300 Series series may not decode video streams from endpoints that experience packet loss.
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.
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).

Identifier	Description
[CSCuh64828]	Reassigned to ID CSCuo82382
CSCug68727	CTS endpoint users sometimes hear audio corruption while joining as the first participant in an MCU-hosted conference.
CSCuc34385	Unified CM does not support Multiway with Cisco ad hoc call escalation (see Escalated Conferences (Ad Hoc and Multiway) , page 13).

Limitations

These limitations apply to Release 5.0.

Escalated Conferences (Ad Hoc and Multiway)

Note: Unified CM-based deployments use the ad hoc method of escalated/instant conferencing. VCS-based deployments use Multiway.

If you join a Multiway conference from an MS Lync endpoint, you join with audio only at first. You need to manually restart the video connection.

Ad hoc conferences are not supported by immersive endpoints in the solution—Cisco TelePresence System CTS 3010 and CTS 3020, Cisco TelePresence System CTS 500-32, Cisco TelePresence TX9000 and TX9200, and the Cisco TelePresence IX5000 Series. These endpoints only support audio add-in. For details, see the administration documentation for the endpoint.

Ad hoc conference calls should not be used to add participants to conferences created by another method, such as a Personal CMR / rendezvous conference. Other conference call methods should not be used to add participants to an ad hoc conference.

The solution does not support hosting mixed ad hoc escalations via Unified CM-registered endpoints and Multiway escalations via Cisco VCS-registered endpoints on the same set of conference bridges. We recommend migrating endpoint registration from Cisco VCS to Unified CM. For cases where endpoints must remain registered to Cisco VCS, separate, dedicated bridge resources should be implemented for ad hoc conferencing and for Multiway conferencing respectively.

Scheduled Conferences

Some limitations apply for scheduled conferences, as detailed in [Cisco Collaboration Meeting Rooms \(CMR\) Premises Deployment Guide](#) section "Limitations and Requirements for Scheduled Conferencing".

Audio-Only Quality Setting in Ad Hoc Conferencing (TelePresence Servers)

Primary deployment only. TelePresence Conductor 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 with ad hoc conferencing in Unified CM deployments, and system behavior may not be as you expect. See [Cisco Collaboration Meeting Rooms \(CMR\) Premises Deployment Guide](#).

Personal CMRs with WebEx Cannot be Rejoined After Original Conference

This limitation applies if you deploy CMR Hybrid with CMR Premises and support Cisco WebEx users connecting to Personal CMRs. It can occur after a CMR Hybrid conference, when all participants (WebEx and TelePresence) leave the CMR and the associated conference is deleted from the conference bridge.

If a WebEx user now reconnects to the CMR by re-clicking the existing WebEx link in the user portal, or re-clicking the link in the notification email, then a new WebEx meeting is started. However, if TelePresence users reconnect to the CMR then a new TelePresence conference is started. WebEx users cannot access the TelePresence conference, and TelePresence users cannot access the WebEx meeting.

Participants Threshold for ActiveControl

The ActiveControl feature on the TelePresence Server supports up to 500 participants.

No Priority for Conference Organizer if Maximum Participants Reached

No preference is given to participants who have organized a conference. If the maximum number of participants is reached before the participant who organized the conference has dialed in, this participant is rejected.

This applies to any conference where a maximum number of participants is defined, including Personal CMRs provisioned through Cisco TMSPE and conferences defined through the TelePresence Conductor.

Resource Allocation by TelePresence Conductor

When you provision a CMR using Cisco TMSPE on TelePresence Conductor, the Conductor reserves resources for one participant with the defined quality level. When participants dial into the CMR and resource optimization is enabled, TelePresence Conductor optimizes the resources so that only the resources that are needed are used on the conference bridge. However, the resources that were previously reserved are not freed up completely. They can be used by additional participants calling into the same CMR, but not for other conferences.

Note: The conference bridge utilization on TelePresence Conductor shows the number of resources reserved if this number is higher than the number of resources used.

IPv6

This release of CMR Premises does not support IPv6. We do however support IPv6 for interworked calls through the Cisco VCS Control.

Reduced Feature Set for TMS Conference Control Center

Because TelePresence Conductor and not Cisco TMS manages the conference bridges, the solution only supports a subset of the standard Cisco TMS **Conference Control Center** features, as listed below. **Conference Control Center** functions are not supported for cascaded conferences, except for visibility of which bridge a participant is connected to.

Table 4 Cisco TMS Conference Control Center features in the solution

On a conference	On a participant
Set the 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

Cisco TelePresence MCU Series

Cisco TelePresence MCU Series conference bridges use Port Licensing, not Multiparty Licensing.

The MCU auto attendant is not used in the solution—it is not available on conference bridges managed behind Conductor. Note that Unified CM has its own auto attendant.

Compatibility

Software Version Lists

See [Required Software Versions](#), page 4.

Cisco Unified Communications Manager - Using Software Earlier than Version 10.5 (2)

Cisco Unified Communications Manager Version 10.5(2) is recommended for use with the new Multiparty Licensing feature in CMR Premises Release 5.0, and is the version that Cisco primarily tested with. Earlier versions from Cisco Unified Communications Manager Version 8.6(2) onwards can be used, but be aware that we performed only limited testing with these versions, as time and resources allowed. Issues may arise if you use them with Multiparty Licensing.

Subject to a valid service contract, the Cisco Technical Assistance Center (TAC) will endeavor to provide support for any issues or defects that arise, and where appropriate we will document them in the solution release notes and/or in the Bug Search Tool. However, Cisco may choose not to resolve any issues or defects, depending on the version in use and the impact of the issue or defect. In this case it will be for the customer to decide whether to manage the issue, or to upgrade to the recommended version of Cisco Unified Communications Manager if the version in use is the cause.

Do not use versions earlier than Cisco Unified Communications Manager 8.6(2).

Virtualized Platforms

For details about supported virtualized platforms and VM configurations for individual products, refer to <http://www.cisco.com/go/uc-virtualized>.

Endpoints

Cisco VCS-managed H.323 endpoints with encryption switched off cannot call secure Unified CM endpoints (see identifier CSCui15439 in [Bug Search Tool](#) for details).

Conference Bridges

Only Cisco multiparty conference bridges (such as the Cisco TelePresence Server and Cisco TelePresence MCU Series) are supported by the TelePresence Conductor. We do not support other conference bridges.

Configuration Requirements

[Cisco Collaboration Meeting Rooms \(CMR\) Premises Deployment Guide](#) details the deployment best practices and feature configuration requirements for the solution. These are needed to avoid potential issues with CMR Premises elements or between CMR Premises and external systems or networks.

The following items are new for this release:

- TelePresence Server conference bridges must run in Multiparty Licensing mode. Port Licensing mode is supported for the Cisco TelePresence MCU Series conference bridges, which do not use Multiparty Licensing.
- To support Multiparty Licensing, connections between TelePresence Conductor and the conference bridges must use HTTPS. We recommend HTTPS in any case.
- Recommendation to reduce the default SIP TCP timeout value (see below).
- Recommendations about how to apply media encryption to calls that egress the Expressway solution towards DNS Zone destinations (see below).

Reduce Default SIP TCP Timeout

From Cisco Expressway / Cisco VCS Version X8.5.3 the SIP TCP timeout value is configurable. The default value is 10 seconds. We strongly recommend that you set the timeout to the lowest value that is appropriate for your deployment. A value of 1 second is likely to be suitable in most cases, unless your network has extreme amounts of latency (such as video over satellite communications).

If an outbound call is placed to an external DNS destination, and that destination has secondary/tertiary servers and the primary server is out of service, it will take N seconds (where N is the timeout value) to timeout and try the secondary server, and N seconds again to timeout and try the tertiary server, and so on. This applies to B2B point to point calls and calls into cloud-based hosted services.

To set the SIP TCP timeout value:

1. Access the command line interface (this setting cannot be configured through the web interface).
2. Type the following command, replacing "n" with the required timeout value:
`xConfiguration SIP Advanced SipTcpConnectTimeout: n`

Example: `xConfiguration SIP Advanced SipTcpConnectTimeout: 1`

Encryption in Cisco Expressway / Cisco VCS

If you want to apply media encryption to calls that egress the Expressway solution towards DNS Zone destinations, we strongly recommend that you use this approach:

1. Enable media encryption on the traversal client zone, from the Cisco Expressway-C / Cisco VCS Control towards the Cisco Expressway-E / Cisco VCS Expressway. To do this set **Media encryption mode** to *Best effort* or *Force encrypted*, depending on your security policy.
2. Disable additional, unnecessary media encryption on the DNS egress zone, from the Cisco Expressway-E / Cisco VCS Expressway towards the Internet. To do this set **Media encryption mode** on that zone to *Auto*.

Related Documentation

Title	Link
Cisco Collaboration Meeting Rooms (CMR) Premises Deployment Guide 5.x	http://www.cisco.com/c/en/us/support/conferencing/telepresence-conductor/products-installation-and-configuration-guides-list.html
Cisco Collaboration Meeting Rooms (CMR) Premises Solution Guide 5.x	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 Unified CM 10.x	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	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	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	http://www.cisco.com/c/en/us/support/conferencing/telepresence-management-suite-extensions/products-installation-guides-list.html
Cisco TelePresence Conductor Administrator Guide XC4.0x	http://www.cisco.com/c/en/us/support/conferencing/telepresence-conductor/products-maintenance-guides-list.html
Cisco Unified Communications Manager Administration Guide, Release 10.5n	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	http://www.cisco.com/c/en/us/support/unified-communications/expressway-series/products-installation-and-configuration-guides-list.html
Cisco Unified Communications Manager with Cisco VCS (SIP Trunk) Deployment Guide, Cisco VCS	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	http://www.cisco.com/c/en/us/support/conferencing/telepresence-conductor/products-installation-and-configuration-guides-list.html
Cisco Expressway Basic Configuration Deployment Guide	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	http://www.cisco.com/c/en/us/support/unified-communications/telepresence-video-communication-server-vcs/products-installation-and-configuration-guides-list.html
Cisco TelePresence Conductor with Cisco TelePresence Management Suite Deployment Guide	http://www.cisco.com/c/en/us/support/conferencing/telepresence-conductor/products-installation-and-configuration-guides-list.html
Cisco TelePresence Management Suite Administrator Guide Version 15.0x	http://www.cisco.com/c/en/us/support/conferencing/telepresence-management-suite-tms/products-maintenance-guides-list.html

Title	Link
Cisco Collaboration Meeting Rooms (CMR) Hybrid Configuration Guide	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 XC4.0x (includes Conductor Provisioning API reference)	http://www.cisco.com/c/en/us/support/conferencing/telepresence-conductor/products-programming-reference-guides-list.html
Cisco Expressway Administrator Guide X8.5.3	http://www.cisco.com/c/en/us/support/unified-communications/expressway-series/products-maintenance-guides-list.html
Cisco TelePresence Video Communication Server Administrator Guide	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
Cisco TMS	http://www.cisco.com/c/en/us/support/conferencing/telepresence-management-suite-tms/tsd-products-support-series-home.html
Cisco TMSPE and Cisco TMSXE	http://www.cisco.com/c/en/us/support/conferencing/telepresence-management-suite-extensions/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/tsd-products-support-series-home.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.

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, using the Cisco Bug Search Tool (BST), submitting a service request, and gathering additional information, see What's New in Cisco Product Documentation at: www.cisco.com/c/en/us/td/docs/general/whatsnew/whatsnew.html.

Subscribe to What's New in Cisco Product Documentation, which lists all new and revised Cisco technical documentation, as an RSS feed and deliver content directly to your desktop using a reader application. The RSS feeds are a free service.

Document Revision History

Date	Description	Changes
November 2015	Updated for Release 5.0	Removes version information for the Microsoft Lync service and instead references the <i>Cisco Expressway with Microsoft Lync Deployment Guide</i> , or the <i>Cisco TelePresence Microsoft Lync and Cisco VCS Deployment Guide</i> for VCS-based deployments.
October 2015	Updated for Release 5.0	Defines a secondary deployment architecture for Cisco VCS-based organizations.
September 2015	First issue for Release 5.0	Defines a new primary deployment architecture. Introduces centralized licensing. Adds support for the Cisco TelePresence Server on Multiparty Media 820 hardware platform. Updates the product software versions.

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