Interoperability Between CTS Endpoints and Other Endpoints or Devices

Last Revised: February 14, 2014

Contents

What's New

- February 14, 2014: Added compatibility information for Cisco TelePresence Administration software releases TX 6.0 and 1.10.4.

- January 31, 2014—Added compatibility information for Cisco Unified Communications Manager (Unified CM) Release 10.0.

- April 8, 2013—Added pointers to interoperability information for systems that run Cisco TelePresence TX software release 6.0 and Cisco TelePresence Administration Software release 1.10.

- February 28, 2013—Removed compatibility with Cisco Unified Communications Manager (Unified CM) version 8.5.1

- February 27, 2013—Added compatibility for systems that are running Cisco TelePresence software release TX 6.0.

- August 15, 2012—Changed Cisco Unified Communications Manager (Unified CM) version in the compatibility tables from 8.6(2a)SU1 to 8.6(2a)SU3.

  The SU3 version allows Binary Floor Control Protocol (BFCP) to be turned on or off in Unified CM for compatability with CTS systems that are running CTS software earlier than Release 1.8.

- January 2012—Added support for CTS endpoints running 1.8 or later that are registered to the following call processing agent versions:

  - Unified CM version 8.6(2a)SU3

  - Cisco TelePresence Video Communication Server (VCS) version X7.0.2

- February 2012—Added support for CTS 1.8.1 endpoints.

- March 2012—Added support for CTS 1.9.0 endpoints.

- July 2012—Added support for CTS 1.9.1 endpoints.

TX 6.0 and CTS 1.10 Interoperability

For interoperability information about systems that run TX 6.0 software, refer to the *"TX 6.0 Interoperability"* section of the *Cisco TelePresence TX System Software Version Compatibility and Interoperability with Other Devices—6.0.x Releases* document.

For interoperatiliby information about systems that run CTS 1.10 software, refer to the *"CTS 1.10 Interoperability"* section of the *Cisco TelePresence System Software Version Compatibility - 1.10 Releases* document.

CTS 1.9.x Interoperability

This section summarizes video and audio quality; security; and presentation support between a Cisco TelePresence System (CTS) running version 1.9.*x* and another Cisco or third-party endpoint or device.

- **Cisco Unified CM Version**—The first column in each table includes the Cisco Unified Communications Manager (Cisco Unified CM) version that the CTS running 1.9.*x* is registered to.

- **With Endpoint/Device Version**—The second column includes the endpoint or device in the same TelePresence meeting with the CTS running 1.9.*x*.

  If an endpoint or device is registered to a Cisco TelePresence Video Communication Server (VCS), the supported VCS version is listed. In this type of interoperability deployment, the Cisco Unified CM and VCS are connected by a SIP trunk.

- **Maximum Video and Audio**—The third column includes the maximum video quality and the audio format in the interoperability deployment.

  - Maximum video resolution for an interop call between a CTS endpoint and another endpoint or device is 720p.

  - Video can be negotiated to a lower supported resolution that is based on the capabilities or configuration of other endpoints in the meeting.

  - Video for all interop calls is sent at 30 frames per second (fps) and received at a maximum of 30 fps.

- **Security**—The fourth column indicates whether the call is secure or non-secure.

- **Presentation**—The fifth column indicates presentation support.

  In switched presentation mode, when a meeting participant is sharing a presentation, the other meeting participant (or participants) sees the presentation instead of the main video.

  CTS endpoints can send presentation at the following resolutions:

- CTS 500-32, CTS 1300-47, CTS TX1310 65, CTS TX9000, and CTS TX9200: 1024 x 768 (XGA), 800 x 600 (SVGA), or 640 x 480 (VGA)
- All other CTS endpoints: XGA

If the remote endpoint does not support the transmitted resolution, the CTS displays a message stating that the remote endpoint does not support presentation. The main video stream continues to be displayed on the remote endpoint.

Note   The Cisco and third-party endpoint, device, and call signaling agent versions outlined in Table 1, Table 2, and Table 3 are tested and known to interoperate.
The Cisco and third-party endpoint, device, and call signaling agent versions not explicitly mentioned in these tables can interoperate successfully. If an unexpected issue occurs, the Technical Assistance Center (TAC) will help you identify the root cause. These calls must come from customers with a valid support agreement.

CTS 1.9.x Interoperability with Other Cisco Endpoints and Devices

Table 1 summarizes the other Cisco endpoints and devices tested with CTS 1.9.*x*.

Table 1   *CTS 1.9.x Interoperability with Other Cisco Endpoints and Devices*

CTS 1.9.x Registered to Cisco Unified CM Version	With Cisco Endpoint/Device Version	Maximum Video and Audio	Security	Presentation
8.5.1, 8.6(2a)SU3 and later[1]	CTS 1.9.*x* registered to Cisco Unified CM version 8.6.1, or 8.6(2a)SU3 and later	Video: Up to 1080p Audio: AAC-LD	Secure	Yes (Auto-Collaborate)
8.5.1, 8.6(2a)SU3 and later[1]	CTS 1.8.*x* registered to Cisco Unified CM version 8.6.*x* or 8.5.*x*	Video: Up to 1080p Audio: AAC-LD	Secure	Yes (Auto-Collaborate)
8.5.1, 8.6(2a)SU3 and later[1]	CTS 1.7.4 through 1.7.6 registered to Cisco Unified CM version 8.6.*x*[2] or 8.5.*x*	Video: Up to 1080p Audio: AAC-LD	Secure	Yes (Auto-Collaborate)
8.5.1, 8.6(2a)SU3 and later[1]	TC 5.*x* (EX series, MX, C series, and SX20) registered to Cisco Unified CM version 8.6.*x*	Video: 720p Audio: G.722 **Note** With 8.6(2a)SU3 and later, AAC-LD LATM is supported for audio.	Non-secure	Yes (8.6.*x*: BFCP; 8.5.*x*: switched presentation mode)
8.5.1, 8.6(2a)SU3 and later[1]	TC 5.*x* (EX series, MX, C series, and SX20) registered to VCS version X7.1[3, 4], X7.0[3, 4, 5], or X6.1[4, 5]	Video: 720p Audio: G.722 **Note** With 8.6(2a)SU3 and later, AAC-LD LATM is supported for audio.	Secure	Yes (8.6.*x*: BFCP; 8.5.*x*: switched presentation mode)

Table 1 **CTS 1.9.x Interoperability with Other Cisco Endpoints and Devices (continued)**

CTS 1.9.x Registered to Cisco Unified CM Version	With Cisco Endpoint/Device Version	Maximum Video and Audio	Security	Presentation
8.5.1, 8.6(2a)SU3 and later[1]	Cisco TE 4.1.1 (E20 endpoint) registered to VCS version X7.1[3, 4], X7.0[3, 4], or X6.1[4]	Video: CTS transmits at 360p, receives at 448p Audio: G.722	Secure	Yes (BFCP)
8.5.1, 8.6(2a)SU3 and later[1]	Cisco MXP 3000 and MXP 1700 8.2 or 9.x registered to VCS version X7.1[4], X7.0[4], or X6.1[4]	Video: CTS transmits at 360p, receives at 448p Audio: G.722	Non-secure	Yes (switched presentation mode)
8.5.1, 8.6(2a)SU3 and later[1]	Cisco MXP 1000 9.x registered to VCS version X7.1[4], X7.0[4], or X6.1[4]	Video: CTS transmits at 360p, receives CIF Audio: G.722	Non-secure	Yes (switched presentation mode; only on SIP and H.323)
8.5.1, 8.6(2a)SU3 and later[1]	Cisco TelePresence Server (TS) running 2.2 registered to VCS version X7.1[4], X7.0[4], or X6.1[4]	Video: CTS transmits and receives up to 1080p Audio: AAC-LD	Secure	Yes (using TelePresence Interoperability Protocol [TIP])
8.5.1, 8.6(2a)SU3 and later[1]	Cisco MCU 4500 series registered to VCS version X7.1[4], X7.0[4], or X6.1[4]	Video: 720p Audio: G.722	Secure	Yes (BFCP)
8.5.1, 8.6(2a)SU3 and later[1]	Cisco MCU 4200 series version 4.3(2.18) registered to VCS version X7.1[4], X7.0[4], or X6.1[4]	Video: CTS transmits at 360p, receives at 720p Audio: G.722	Non-secure	Yes (BFCP)
8.5.1, 8.6(2a)SU3 and later[1]	Cisco MCU 5300[6] version 4.3(2.20) registered to VCS version X7.1[4], X7.0[4], or X6.1[4]	Video: 720p Audio: AAC-LD LATM	Secure	Yes (BFCP)
8.5.1, 8.6(2a)SU3 and later[1]	Movi version 4.3 registered to VCS version X7.1[4], X7.0[4], or X6.1[4]	Video: CTS transmits and receives at 720p Audio: G.722	Secure	Yes (BFCP)
8.5.1, 8.6(2a)SU3 and later[1]	Cius SIP version 9-2-3-143dev registered to Unified CM 8.6.1 and 8.6(2a)SU3	Video: CTS transmits and receives at 720p Audio: G.722	Non-secure	Yes (switched presentation mode)

Table 1   *CTS 1.9.x Interoperability with Other Cisco Endpoints and Devices (continued)*

CTS 1.9.x Registered to Cisco Unified CM Version	With Cisco Endpoint/Device Version	Maximum Video and Audio	Security	Presentation
8.5.1, 8.6(2a)SU3 and later[1]	Cisco Unified IP Phone 8961, 8941, 8945, 9951, and 9971 SIP version 9.2.1 or SCCP version 9.1.2 registered to Cisco Unified CM 8.6.*x* or 8.5.*x*	Video: CTS transmits and receives at 360p Audio: G.722	Non-secure	No
8.5.1, 8.6(2a)SU3 and later[1]	Cisco Unified Video Advantage version 2.2.2 with Cisco IP phones 69xx, 79xx, 89xx, 99xx registered to Cisco Unified CM 8.6.*x* or 8.5.*x*	Video: CTS transmits and receives at CIF Audio: G.722	Non-secure	No

1. **Systems that are registered to Unified CM release 10.0 only:** A minimum of Cisco TelePresence Administration software TX 6.1.1. or 1.10.4 software is required for the directory feature (if configured) to work on your system.

2. To support CTS 1.7.4 through 1.7.6 endpoints and also endpoints that use BFCP for presentation sharing, you must run Cisco Unified CM 8.6(2a)SU3.

3. In an H.323 call between a CTS 1.9.1 endpoint and a TC 5.*x* or TE 4.*x* endpoint registered to VCS X7.1 or X7.0, an intermittent loss of audio can occur. Caveat that tracks this issue: CSCtx16122. This caveat appears in the *Release Notes for Cisco TelePresence System Software Release 1.9*.

4. We recommend that you install and assign the Cisco Unified CM "vcs-interop" SIP Normalization script to make secure calls between CTS endpoints and endpoints and devices registered to VCS.
   For more information about the conditions required for secure calls, see this document:
   http://www.cisco.com/en/US/docs/telepresence/cts_admin/1_8/release/notes/cts_1_8_release_notes.html#wp138743
   For more information about the Cisco Unified CM script, see this document:
   http://www.cisco.com/en/US/docs/voice_ip_comm/cucm/rel_notes/8_6_2/cucm-rel-notes-862.html#wp1961382
   For more information about configuring Cisco Unified CM and Cisco VCS to interoperate via a SIP trunk, see this document:
   http://www.cisco.com/en/US/docs/telepresence/infrastructure/vcs/config_guide/Cisco_VCS_Cisco_Unified_Communications_Manager_Deployment_Guide_CUCM_6-1_7_8_and_X7-0.pdf

5. In a call between a CTS 1.9.*x* endpoint and a TC 5.*x* endpoint registered to VCS X7.0.1 or X6.1, a video issue could occur after holding then resuming the call. Caveat that tracks this issue: CSCua23599. This caveat appears in the *Release Notes for Cisco TelePresence System Software Release 1.9*.

6. First-generation endpoints (CTS 500-37, CTS 1000, CTS 1100, CTS 1300, CTS 3*xxx*).that join H.323 calls through the Cisco TelePresence MCU 5300 experience low-quality video. Caveat that tracks this issue: CSCtz98039. This caveat appears in the *Release Notes for Cisco TelePresence System Software Release 1.9*:
   http://www.cisco.com/en/US/docs/telepresence/cts_admin/1_9/release/notes/cts_1_9_release_notes.html

CTS 1.9.x Interoperability with Third-Party Endpoints and Devices

Cisco TelePresence endpoints are designed to work with any standards-based (SIP and H.264) endpoint and any TelePresence Interoperability Protocol (TIP) device.

Cisco tests interoperability with TIP devices and other standards-based endpoints based on market priority. The Cisco Technical Assistance Center (TAC) accepts calls related to interoperability with third-party endpoints and devices to troubleshoot and identify the root cause of issues. These calls must come from customers with a valid support agreement. When appropriate, Cisco will engage third-party vendors to resolve interoperability issues. Also when appropriate, Cisco will document known issues in software release notes.

Table 2 summarizes the third-party endpoints and devices tested with CTS 1.9.0, while Table 3 summarizes the third-party endpoints and devices tested with CTS 1.9.1 and above.

Table 2   CTS 1.9.0 Interoperability with Third-Party Endpoints and Devices

CTS 1.9.0 Registered to Cisco Unified CM Version	With Third-Party Endpoint/Device Version	Maximum Video and Audio	Security	Presentation
8.5.1, 8.6(2a)SU3, 9.1(1), and later[1]	Polycom HDX Series version 3.0.3.1-19040 registered to VCS 7.x[2][3]	720p Audio: G.722	[4]	BFCP (H.239 interworking through VCS) Switched Presentation

1. **Systems that are registered to Unified CM release 10.0 only:** A minimum of Cisco TelePresence Administration software TX 6.1.1. or 1.10.4 software is required for the directory feature (if configured) to work on your system.

2. We recommend that you install and assign the Cisco Unified CM "vcs-interop" SIP Normalization script to make secure calls between CTS endpoints and endpoints and devices registered to VCS.
For more information about the conditions required for secure calls, see this document:
http://www.cisco.com/en/US/docs/telepresence/cts_admin/1_8/release/notes/cts_1_8_release_notes.html#wp138743
For more information about the Cisco Unified CM script, see this document:
http://www.cisco.com/en/US/docs/voice_ip_comm/cucm/rel_notes/8_6_2/cucm-rel_notes-862.html#wp1961382
For more information about configuring Cisco Unified CM and Cisco VCS to interoperate via a SIP trunk, see this document:
http://www.cisco.com/en/US/docs/telepresence/infrastructure/vcs/config_guide/Cisco_VCS_Cisco_Unified_Communications_Manager_Deployment_Guide_CUCM_6-1_7_8_and_X7-0.pdf

3. During conferences between a Cisco TelePresence System 500-32, TX1310, TX9000 or TX9200 and a Polycom HDX7001, an extraneous message can display on the Cisco TelePresence screen that the presentation cannot be shared, even if a presentation is not being shared. This message should disappear within 30 seconds of starting the conference.

4. The following open caveats impact secure and non-secure interop calls with a Polycom endpoint: CSCtx74718, CSCty52408 and CSCty68518. For more information about these caveats, see the *Release Notes for Cisco TelePresence System Software Release 1.9*:
http://www.cisco.com/en/US/docs/telepresence/cts_admin/1_9/release/notes/cts_1_9_release_notes.html

Table 3   CTS 1.9.1 and Above Interoperability with Third-Party Endpoints and Devices

CTS 1.9.1 and Above Registered to Cisco Unified CM Version	With Third-Party Endpoint/Device Version	Maximum Video and Audio	Security	Presentation
8.5.1, 8.6(2a)SU3, 9.1(1), and later[1]	Polycom HDX Series version 3.0.4-20259 registered to VCS 7.x[2][3]	720p Audio: G.722	[4]	BFCP (H.323)[5] Switched Presentation (SIP)[5]
8.5.1, 8.6(2a)SU3, 9.1(1), and later[1]	LifeSize Express 220 and Passport Room 220[6] version LS_EX2_4.10 registered to VCS 7.x[2]	720p Audio: G.722	Non-secure[7]	BFCP (H.323) Switched Presentation (SIP)

1. **Systems that are registered to Unified CM release 10.0 only:** A minimum of Cisco TelePresence Administration software TX 6.1.1. or 1.10.4 software is required for the directory feature (if configured) to work on your system.

2. We recommend that you install and assign the Cisco Unified CM "vcs-interop" SIP Normalization script to make secure calls between CTS endpoints and endpoints and devices registered to VCS.
For more information about the conditions required for secure calls, see this document:
http://www.cisco.com/en/US/docs/telepresence/cts_admin/1_8/release/notes/cts_1_8_release_notes.html#wp138743
For more information about the Cisco Unified CM script, see this document:
http://www.cisco.com/en/US/docs/voice_ip_comm/cucm/rel_notes/8_6_2/cucm-rel_notes-862.html#wp1961382
For more information about configuring Cisco Unified CM and Cisco VCS to interoperate via a SIP trunk, see this document:
http://www.cisco.com/en/US/docs/telepresence/infrastructure/vcs/config_guide/Cisco_VCS_Cisco_Unified_Communications_Manager_Deployment_Guide_CUCM_6-1_7_8_and_X7-0.pdf

3. During conferences between a Cisco TelePresence System 500-32, TX1310, TX9000 or TX9200 and a Polycom HDX7001, an extraneous message can display on the Cisco TelePresence screen that the presentation cannot be shared, even if a presentation is not being shared. This message should disappear within 30 second of starting the conference.

4. The following open caveats impact secure and non-secure interop calls with a Polycom endpoint: CSCtx74718, CSCtx90376. For more information about these caveats, see the *Release Notes for Cisco TelePresence System Software Release 1.9*

5. When a Polycom HDX endpoint shares a presentation with a CTS 1.9.1 endpoint, an issue can occur. Caveat that tracks this issue: CSCua40108. For more information about this caveat, see the *Release Notes for Cisco TelePresence System Software Release.*

6. The following open caveat impacts interop calls with a LifeSize endpoint when adding an audio-only call: CSCtz27333. The following open caveat impacts interop calls with a LifeSize endpoint if holding then resuming the call: CSCtz27129. For more information about these caveats, see the *Release Notes for Cisco TelePresence System Software Release 1.9*.

7. The following open caveats impact secure interop calls with a LifeSize endpoint: CSCty85689, CSCtz27432. For more information about these caveats, see the *Release Notes for Cisco TelePresence System Software Release 1.9*.

CTS 1.8.*x* Interoperability with Other Cisco Endpoints or Devices

Table 4 summarizes video and audio quality; security; and presentation support between a Cisco TelePresence System (CTS) running version 1.8.*x* and other Cisco endpoints or devices.

- **Cisco Unified CM Version**—The first column in the table includes the Cisco Unified Communications Manager (Cisco Unified CM) version that the CTS running 1.8.*x* is registered to.

- **With Endpoint/Device Version**—The second column includes the endpoint or device in the same TelePresence meeting with the CTS running 1.8.*x*.

  If an endpoint or device is registered to a Cisco TelePresence Video Communication Server (VCS), the supported VCS version is listed. In this type of interoperability deployment, the Cisco Unified CM and VCS are connected by a SIP trunk.

- **Maximum Video and Audio**—The third column includes the maximum video quality and the audio format in the interoperability deployment.

  - Maximum video resolution for an interop call between a CTS endpoint and another Cisco endpoint or device is 720p.

  - Video can be negotiated to a lower supported resolution that is based on the capabilities or configuration of other endpoints in the meeting.

  - Video for all interop calls is sent at 30 frames per second (fps) and received at a maximum of 30 fps.

- **Security**—The fourth column indicates whether the call is secure or non-secure.

- **Presentation**—The fifth column indicates presentation support.

  In switched presentation mode, when a meeting participant is sharing a presentation, the other meeting participant (or participants) sees the presentation instead of the main video.

  CTS endpoints support presentation only at 1024 x 768. If the remote endpoint does not support 1024 x 768, the CTS displays a message stating that the remote endpoint does not support presentation. The main video stream continues to be displayed on the remote endpoint.

Note The Cisco endpoint, device, and call signaling agent versions outlined in Table 4 are tested and known to interoperate.
Cisco endpoint, device, and call signaling agent versions not explicitly mentioned in this table can interoperate successfully. If an unexpected issue occurs, the Technical Assistance Center (TAC) will help you identify the root cause. These calls must come from customers with a valid support agreement.

Table 4   *CTS 1.8.x Interoperability*

CTS 1.8.x Registered to Cisco Unified CM Version	With Cisco Endpoint/Device Version	Maximum Video and Audio	Security	Presentation
8.6.x or 8.5.x	CTS 1.8.x registered to Cisco Unified CM version 8.6.x or 8.5.x	Video: Up to 1080p Audio: AAC-LD	Secure	Yes (Auto-Collaborate)
8.6.x or 8.5.x	CTS 1.7.4 through 1.7.6 registered to Cisco Unified CM version 8.6.x[1] or 8.5.x	Video: Up to 1080p Audio: AAC-LD	Secure	Yes (Auto-Collaborate)
8.6.x or 8.5.x	TC 5.x (EX series, MX, and C series) registered to Cisco Unified CM version 8.6.x	Video: 720p Audio: G.722	Non-secure	Yes (BFCP)
8.6.x or 8.5.x	TC 5.x (EX series, MX, and C series) registered to VCS version X7.0.2[2], X7.0.1[2], or X6.1[2]	Video: 720p Audio: G.722	Secure	Yes (8.6.x: BFCP; 8.5.x: switched presentation mode)
8.6.x or 8.5.x	Cisco TE 4.1 (E20 endpoint)[3] registered to VCS version X7.0.2[2], X7.0.1[2], or X6.1[2]	Video: CTS transmits at 360p, receives at 448p Audio: G.722	Secure	Yes (BFCP)[4]
8.6.x or 8.5.x	Cisco MXP 3000 and MXP 1700 8.2 or 9.x registered to VCS version X7.0.2[2], X7.0.1[2], or X6.1[2]	Video: CTS transmits at 360p, receives at 448p Audio: G.722	Non-secure	Yes (switched presentation mode)
8.6.x or 8.5.x	Cisco MXP 1000 9.x registered to VCS version X7.0.2[2], X7.0.1[2], or X6.1[2]	Video: CTS transmits at 360p, receives CIF Audio: G.722	Non-secure	Yes (switched presentation mode; only on SIP and H.323)
8.6.x or 8.5.x	Cisco TelePresence Server (TS) running 2.2 registered to VCS version X7.0.2[2], X7.0.1[2], or X6.1[2]	Video: CTS transmits and receives up to 1080p Audio: AAC-LD	Secure	Yes (using TelePresence Interoperability Protocol [TIP])
8.6.x or 8.5.x	Cisco MCU 4500 series registered to VCS version X7.0.2[2], X7.0.1[2], or X6.1[2]	Video: 720p Audio: G.722	Secure	Yes (BFCP)
8.6.x or 8.5.x	Cisco MCU 4200 series registered to VCS version X7.0.2[2], X7.0.1[2], or X6.1[2]	Video: CTS transmits at 360p, receives at 720p Audio: G.722	Non-secure	Yes (BFCP)
8.6.x or 8.5.x	Movi version 4.3 registered to VCS version X7.0.2[2], X7.0.1[2], or X6.1[2]	Video: CTS transmits and receives at 720p Audio: G.722	Secure	Yes (BFCP)

Table 4   CTS 1.8.x Interoperability (continued)

CTS 1.8.*x* Registered to Cisco Unified CM Version	With Cisco Endpoint/Device Version	Maximum Video and Audio	Security	Presentation
8.6.*x* or 8.5.*x*	Cius version 9.2.3.143 registered to Unified CM 8.6.1 and 8.6(2a)SU3	Video: CTS transmits and receives at 720p Audio: G.722	Non-secure	Yes (switched presentation mode)
8.6.*x* or 8.5.*x*	Cisco Unified IP Phone 8961, 8941, 8945, 9951, and 9971 SIP version 9.2.1 or SCCP version 9.1.2 registered to Cisco Unified CM 8.6.*x* or 8.5.*x*	Video: CTS transmits and receives at 360p Audio: G.722	Non-secure	No
8.6.*x* or 8.5.*x*	Cisco Unified Video Advantage version 2.2.2 with Cisco IP phones 69xx, 79xx, 89xx, 99xx registered to Cisco Unified CM 8.6.*x* or 8.5.*x*	Video: CTS transmits and receives at CIF Audio: G.722	Non-secure	No

1. To support CTS 1.7.4 through 1.7.6 endpoints and also endpoints that use BFCP for presentation sharing, you must run Cisco Unified CM 8.6(2a)SU3.

2. We recommend that you install and assign the Cisco Unified CM "vcs-interop" SIP Normalization script to make secure calls between CTS endpoints and endpoints and devices registered to VCS.
   For more information about the conditions required for secure calls, see this document:
   http://www.cisco.com/en/US/docs/telepresence/cts_admin/1_8/release/notes/cts_1_8_release_notes.html#wp138743
   For more information about the Cisco Unified CM script, see this document:
   http://www.cisco.com/en/US/docs/voice_ip_comm/cucm/rel_notes/8_6_2/cucm-rel_notes-862.html#wp1961382
   For more information about configuring Cisco Unified CM and Cisco VCS to interoperate via a SIP trunk, see this document:
   http://www.cisco.com/en/US/docs/telepresence/infrastructure/vcs/config_guide/Cisco_VCS_Cisco_Unified_Communications_Manager_Deployment_Guide_CUCM_6-1_7_8_and_X7-0.pdf

3. In a secure call between a CTS endpoint running version 1.8.*x* and a Cisco E20 endpoint running version TE 4.1, the call might become non-secure after both endpoints are put on hold and then the call is resumed. Caveat that tracks this issue: CSCtu78996.

4. Although a Cisco E20 endpoint running version TE 4.1 is capable of receiving BFCP presentation, a CTS endpoint running version 1.8.*x* might not be able to send BFCP presentation to the E20 endpoint. Caveat that tracks this issue: CSCtu75116.

CTS 1.7.4 Through 1.7.6 Interoperability with Other Cisco Endpoints or Devices

Table 5 summarizes video and audio quality; security; and presentation support between a Cisco TelePresence System (CTS) running version 1.7.4 through 1.7.6 and other Cisco endpoints or devices.

- **Cisco Unified CM Version**—The first column in the table includes the version of the Cisco Unified Communications Manager (Cisco Unified CM) to which the CTS running 1.7.4 through 1.7.6 is registered.

> **Note** CTS 1.7.4 through 1.7.6 works with Cisco Unified CM 8.0. However, Cisco Unified CM 8.5 or 8.6.1 is required for interoperability with non-CTS endpoints.

- **With Endpoint/Device Version**—The second column includes the endpoint or device in the same TelePresence meeting with the CTS running 1.7.4 through 1.7.6.

  If an endpoint or device is registered to a Cisco TelePresence Video Communication Server (VCS), the supported VCS version is listed. In this type of interoperability deployment, the Cisco Unified CM and VCS are connected by a SIP trunk.

- **Maximum Video and Audio**—The third column includes the maximum video quality and the audio format in the interoperability deployment.

  – Maximum video resolution for an interop call between a CTS endpoint and another Cisco endpoint or device is 720p.

  – Video can be negotiated to a lower supported resolution that is based on the capabilities or configuration of other endpoints in the meeting.

  – Video for all interop calls is sent at 30 frames per second (fps) and received at a maximum of 30 fps.

- **Security**—The fourth column indicates whether the call is secure or non-secure.

- **Presentation**—The fifth column indicates presentation support.

  In switched presentation mode, when a meeting participant is sharing a presentation, the other meeting participant (or participants) sees the presentation instead of the main video.

  CTS endpoints support presentation only at 1024 x 768. If the remote endpoint does not support 1024 x 768, the CTS displays a message stating that the remote endpoint does not support presentation. The main video stream continues to be displayed on the remote endpoint.

Table 5   CTS 1.7.4 Through 1.7.6 Interoperability

CTS 1.7.4 Through 1.7.6 Registered to Cisco Unified CM Version	With Cisco Endpoint/Device Version	Maximum Video and Audio	Security	Presentation
8.5 or 8.6.1	CTS 1.7.4 through 1.7.6 registered to Cisco Unified CM version 8.5 or 8.6.1	Video: CTS transmits and receives up to 1080p Audio: AAC-LD	Secure	Yes (Auto-Collaborate)
8.5 or 8.6.1	CTS 1.7.0 registered to Cisco Unified CM version 8.5 or 8.6.1	Video: CTS transmits and receives up to 1080p Audio: AAC-LD	Secure	Yes (Auto-Collaborate)
8.5 or 8.6.1	TC 4.0 (EX series and C series endpoints) registered to VCS version X6.1[1] or X5.x[1]	Video: CTS transmits and receives at 720p Audio: G.722	Non-secure	Yes (switched presentation mode)
8.5 or 8.6.1	Cisco TE 4.0 (E20 endpoint) registered to VCS version X6.1[1] or X5.x[1]	Video: CTS transmits at 360p, receives at 448p Audio: G.722	Non-secure	No
8.5 or 8.6.1[2]	Cisco MXP 3000 and MXP 1700 8.2 or 9.0 registered to VCS version X6.1[1] or X5.x[1]	Video: CTS transmits at 360p, receives at 448p[3] Audio: G.722	Non-secure	Yes (switched presentation mode)
8.5 or 8.6.1	Cisco MXP 1000 9.0 (NTSC video format) registered to VCS version X6.1[1] or X5.x[1]	Video: CTS transmits at 360p, receives CIF Audio: G.722	Non-secure	Yes (switched presentation mode; only on SIP and H.323)
8.5 or 8.6.1	Cisco TelePresence Server (TS) running 2.2 registered to VCS version X6.1[1] or X5.x[1]	Video: CTS transmits and receives at 720p/1080p Audio: AAC-LD	Secure	Yes (using TelePresence Interoperability Protocol [TIP])
8.5 or 8.6.1	Cisco MCU 4500 and 8500 series registered to VCS version X6.1[1] or X5.x[1]	Video: CTS transmits and receives at 720p Audio: G.722	Non-secure	Yes (switched presentation mode)
8.5 or 8.6.1	Cisco MCU 4200 and 8200 series registered to VCS version X6.1[1]or X5.x[1]	Video: CTS transmits and receives at 720p Audio: G.722	Non-secure	Yes (switched presentation mode)

Table 5   *CTS 1.7.4 Through 1.7.6 Interoperability (continued)*

CTS 1.7.4 Through 1.7.6 Registered to Cisco Unified CM Version	With Cisco Endpoint/Device Version	Maximum Video and Audio	Security	Presentation
8.5 or 8.6.1	Movi 4.x registered to VCS version X6.1[1] or X5.x[11]	Video: CTS transmits and receives at 720p Audio: G.722	Non-secure	Yes (switched presentation mode)
8.5 or 8.6.1	Cisco Unified IP Phone 9951 and 9971 SIP version 9.2.1 registered to Cisco Unified CM version 8.5 or 8.6.1	Video: CTS transmits and receives at 360p Audio: G.722	Non-secure	No

1. We recommend that you install and assign the Cisco Unified CM "vcs-interop" SIP Normalization script to make calls between CTS endpoints and endpoints and devices registered to VCS. Cisco Unified CM 8.5 and CTS 1.7.x do not support the Binary Flow Control Protocol (BFCP)**.** Alternatively, you can turn off BFCP. Caveat that tracks this issue: CSCtn79239.Refer to the CTS 1.7.x release notes for more information: http://www.cisco.com/en/US/products/ps8332/prod_release_notes_list.html
For more information about the Cisco Unified CM script, see this document: http://www.cisco.com/en/US/docs/voice_ip_comm/cucm/docguide/8_6_2/dg862.html
For more information about configuring Cisco Unified CM and Cisco VCS to interoperate via a SIP trunk, see this document: http://www.cisco.com/en/US/docs/telepresence/infrastructure/vcs/config_guide/Cisco_VCS_Cisco_Unified_Communications_Manager_Deployment_Guide_CUCM_6-1_7_8_and_X7-0.pdf

2. When an MXP 1700 or MXP 3000 is configured as an H.323 endpoint and calls a CTS 1.7.4 through 1.7.6 endpoint registered to CUCM 8.6.1, the call drops. Caveat that tracks this issue: CSCtr58148.

3. Although the MXP is capable of 720p resolution, we recommend that you configure the MXP for 448p. Caveat that tracks this issue: CSCtn53452. Refer to the CTS 1.7.x release notes for more information: http://www.cisco.com/en/US/products/ps8332/prod_release_notes_list.html

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