Cisco TelePresence System C/EX/MX-Series

Software release notes TC5

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Contents

Document revision history

Revision	Date	Description
02JITC	01/10/2012	Release of TC5.0.2, JITC minor release
02	06/01/2012	Release of TC5.0.1, minor release. Added missing resolved caveat in TC5.0.0 release note.
01	02/12/2011	Release of TC5.0.0, main release

Introduction software version TC5.0.2

This release note describes the resolved caveats in the Cisco TelePresence System C/MX/EX-Series codec software version TC5.0.2 released on 4th of October 2012.

Software version TC5.0.2 is a minor bugfix release with no changes to functionality or features. Please refer to the section "Introduction software version TC5.0.0" for a description of the new features and capabilities in the TC5.0 software.

TC 5.0.2 is a release made for JITC certification only. If JITC certification is not needed then a newer software version should be used.

WARNING – PLEASE READ IF USING PRECISION HD 4xS1

TC 5.0.2 includes camera software version 20006 for Precision HD 1080p 4xS1 (Camera bundled in the C20 quickset). This software has a critical bug: CSCua44699 that will cause the camera connection to fail and not boot up correctly.

Please see Field Notice FN63534: http://www.cisco.com/en/US/partner/ts/fn/635/fn63534.html

For customers who want to use TC5.0.2 it is mandatory to upgrade codecs which have 4xS1 cameras connected to release TC5.1.4 or TC4.2.4 first so cameras which are currently unaffected will be automatically upgraded to camera software ID 20011. This will prevent the camera from failing. After the camera software has been upgraded, the codec may be downgraded to TC5.0.2. All earlier software containing camera software lower than 200011 except TC5.0.2 is deferred due to this issue.

If a camera has already failed, software version TC5.1.5 can be used for camera recovery. In TC5, there is a systemtools camerarescue command which will recover a 4xS1 camera that has lost the connection with the codec.

Hardware compatibility

Due to replacement of hardware components there are some constraints for running older software on newly manufactured endpoints. This is due to end-of-life of some components and introduction of new components that require support in the software. Executing the API **xcommand xstat SystemUnit Hardware Module CompatibilityLevel** reveals if there are any constraints on the system. For a detailed list of compatibility levels and software constraints for the Cisco TelePresence systems please see the appendices in this document:

- HW dependencies – Compatibility Levels Cisco TelePresence Systems

- HW dependencies – Compatibility Levels Cisco TelePresence Touch 8

NAND flash

The Cisco TelePresence endpoints are using a NAND flash memory for general storage and transfer of data. The endpoints running TC software are manufactured with a new version of the flash memory. For simplicity we will call the first flash version 0 and the second flash version 1. There will be more versions. Endpoints having version 1 of the flash memory must run software TC3.1.5 and later, 4.2.0 and later or 5.0.0 and later. Please check the release note to find if the new version of the flash memory is supported. If your endpoint does not have the CompatibilityLevel command it has flash

version 0 installed which means no software constraints.

Internal camera

For units with an internal camera (EX60/EX90 and MX200/MX300) the camera software is embedded into the application software. Units shipped with the E4 sensor cannot be downgraded or upgraded to any software version lower than TC4.2.4 or TC5.1.1 unless support is specifically documented in the release notes for the software you are downgrading to.

To check which camera sensor the EX-series or MX-series product has, execute the API command

xstatus camera HardwareID

This example shows an EX60 with the E3 sensor, which means that it can be downgraded to versions earlier than TC 5.1.1:

Example:
xstatus camera HardwareID

*s Camera 1 HardwareID: "e3:0xd30a"

** end

If a system shipped with the E4 sensor is attempted to downgrade to an unsupported software version, the software downgrade fails and the unit reboots, keeping its existing software version. From TC5.1.3 there is a lock which prevents the system from downgrading to an unsupported version.

Interpreting the compatibility level

Executing the API **xcommand xstat SystemUnit Hardware Module CompatibilityLevel** reveals if there are any software constraints for the system.

The result returned when running the command is 0,1, 2, 3, v, 1v or 2v:
0 = The system does not have the new flash memory installed.
1 = The system has the new flash memory installed. If downgraded, it can only be downgraded to previous TC software versions that have support for the new version of the flash memory.

2 = For MX and EX: The system has the new flash memory and the new E4 sensor. Minimum software version is TC5.1.1. The support may be added to a TC4 release, please read the release notes to determine if the hardware is supported or not.

2 = For SX20: SX20 :The system mainboard is Revision F or later. Minimum software version TC5.1.0.

2 = For C20: A component change needed new software support. Minimum software version TC5.1.1.

3 = For C40: A future hardware revision of C40 need minimum software TC5.1.5.

V = MX300: Minimum software version TC5.1.0.

V1 = MX300: NAND flash version 1. Minimum software version TC5.1.0.

V2 = MX300: NAND flash version 1 and E4 sensor. Minimum software version TC5.1.1.

Example:
xstatus SystemUnit Hardware Module CompatibilityLevel
*s SystemUnit Hardware Module CompatibilityLevel: 0
** end

PLEASE NOTE: Due to a bug (CSCub17111.) in TC5.1.2 and TC5.1.3 the Hardware Module CompatibilityLevel is erroneously reported as 2 on EX90 with certain main board revisions when it should be 1. This makes it impossible to downgrade to software versions lower than

5.1.1. This error can be resolved by upgrading to TC5.1.4. To downgrade an EX90 running TC5.1.2 or TC5.1.3 to an earlier software version it needs to be upgraded to TC5.1.4 first to allow for the downgrade.

New hardware revisions for Cisco TelePresence Touch 8

There are as of TC5.1.5 4 hardware levels of the Touch 8. The new hardware levels 1,2 and 3 require a newer software. From TC5.1.3 there is a lock preventing a downgrade of a system to a software version that is not supported by the connected touch panel. Please refer to the tables in the appendix:

- HW dependencies – Compatibility Levels Cisco TelePresence Touch 8

This appendix contains detailed information on how to identify the Touch panel hardware version and the potential software constraints.

Resolved caveats

Resolved since version TC5.0.1

You can use the Bug Search Tool to find information about caveats (bugs) for this release, including a description of the problems and available workarounds. The Bug Search Tool lists both open and resolved caveats.

To access the Bug Search Tool, you need the following items:

- Internet connection
- Web browser
- Cisco.com user ID and password

To use the Bug Search Tool, follow these steps:

Procedure

Step 1 To access the Bug Search Tool, go to http://www.cisco.com/cisco/psn/bssprt/bss

Step 2 Log in with your Cisco.com user ID and password.

Step 3 To look for information about a specific problem, enter the bug ID number in the Search for bug ID field, then click Go.

Camera

Reference ID	Summary
CSCtz57403	Hot pixel-calibration fails due to iris motor driver instability. Camera fails to initialize.

Video

Reference ID	Summary
CSCtw64660	When TC5.0 endpoints and TC5.1 endpoints join the same CTMS conference, some endpoints end up seeing very strange video.

Introduction software version TC5.0.1

This release note describes the resolved caveats in the Cisco TelePresence System C/MX/EX-Series codec software version TC5.0.1 released on 6th of January 2012.

Software version TC5.0.1 is a minor bugfix release with no changes to functionality or features. Please refer to the section "Introduction software version TC5.0.0" for a description of the new features and capabilities in the TC5.0 software.

Resolved caveats

Resolved since version TC5.0.1

You can use the Bug Search Tool to find information about caveats (bugs) for this release, including a description of the problems and available workarounds. The Bug Search Tool lists both open and resolved caveats.

To access the Bug Search Tool, you need the following items:

- Internet connection
- Web browser
- Cisco.com user ID and password

To use the Bug Search Tool, follow these steps:

Procedure

Step 1 To access the Bug Search Tool, go to http://www.cisco.com/cisco/psn/bssprt/bss.

Step 2 Log in with your Cisco.com user ID and password.

Step 3 To look for information about a specific problem, enter the bug ID number in the Search for bug ID field, then click Go.

Cisco Touch

Reference ID	Summary
CSCtx17339	Using Touch UI, joining One Button To Push (OBTP) meeting with a too high call rate fails
CSCtu93881	When you are in a WebEx only meeting and have started to share a presentation, the sharing cannot be stopped locally using the Touch interface.

Video

Reference ID	Summary
CSCtw64660	When TC5.0 endpoints and TC5.1 endpoints join the same CTMS conference, some endpoints end up seeing very strange video.

Introduction software version TC5.0.0

This release note describes the features and capabilities included in the Cisco TelePresence System C/MX/EX-Series codec software version TC5.0.0 released on 2nd of December 2011.

Note: Please read the known limitations section if you use TMS to upgrade your system from any release prior to TC4.0.0

With TC5.0.0 the C/EX/MX-Series supports provisioning and basic call functionality with Cisco Unified Communications Manager (CUCM) version 8.6 and above. It also supports Cisco Discovery Protocol (CDP) for easy deployment in CUCM environments. When provisioning mode is set to CUCM the system will try to use Voice VLAN if available in your network. When in other provisioning modes it will try to use Data VLAN.

Please be aware that in future releases Voice VLAN will be set to 'Auto' as per Cisco best practice. If you are using Cisco switches you need to prepare your network so that network services (VCS, TMS, etc.) is reachable from your Voice VLAN.

Hardware compatibility

The Cisco TelePresence endpoints are using a NAND flash memory for general storage and transfer of data. The endpoints running TC software will be manufactured with a new version of the flash memory. Endpoints having the new version of the flash memory must run software TC4.2.1 or later. Some previous TC software versions will be updated to support the new flash memory. Please check the release note to find if the new version of the flash memory is supported. If your endpoint does not have the CompatibilityLevel command it will not have the new flash memory installed.
The result returned when running the command will be either 0 or 1:
0 = The system does not have the new flash memory installed.
1 = The system has the new flash memory installed. If downgraded, it can only be downgraded to previous TC software versions having support for the new version of the flash memory.

Example:

```
xstatus SystemUnit Hardware Module CompatibilityLevel
*s SystemUnit Hardware Module CompatibilityLevel: 0
** end
```

New features and functionality in TC5.0.0

- Support for native CUCM registration
- Cisco TelePresence Multipoint Switch (CTMS) support
- Support for One Button To Push meetings
- Support for Cisco TelePresence MX300
- Software upgrade from TMS Agent
- Web interface enhancements
- Web snapshots for EX60, EX90, MX200 and MX300
- Localization of Cisco TelePresence Touch
- Improved GUI for Cisco TelePresence Touch
- Cisco TelePresence Touch logging to paired device
- New Cisco PrecisionHD 1080p 12x camera software
- New Cisco PrecisionHD 1280p 4x camera software
- One additional telephone call for EX60 and EX90
- FIPS Mode
- New API commands
- Removed API commands
- New API configurations
- Changed API configurations
- Removed API configurations
- New API Status commands

Support for native CUCM registration

With TC5.0.0 the C/EX/MX-Series is able to register to the Cisco Unified Communications Manager (CUCM) v 8.6 as a native Cisco device. Supported features are:

- CUCM basic telephony
  - Registration
  - Basic call
  - Hold / Resume
  - Transfer
- CUCM provisioning
- CUCM phonebook
- CUCM Service Control
  - SW Upgrade

Note: When registered natively to CUCM, encrypted calls are not supported.

Cisco TelePresence Multipoint Switch (CTMS) support

In this release interoperability with CTMS version 1.8 (or later) is achieved. The following features is supported in this release:

- Unrestricted 720p/1080p conferences.
  - 1080p is not available when there are CTS endpoints in the conference as CTS only supports restricted 1080p.
- H.264 GDR (Gradual Decoder Refresh).
- Legacy Stream (CIF/360p) to WebEx and MXE.
- Informational "Black Screen Codes"
  - Will not work if endpoint is located behind a firewall.
- Presentation at XGA resolution (1024*768) at 1 or 5 frames per second.

Limitations:

- CTMS calls must be SIP only.
  - Interworking with H.323/SIP will not work (unless you use MXE).
- Minimum call rate when dialing in to a conference is 2.25Mbps.
- Encryption is not supported.
- TC5 interoperability must be enabled on CTMS

Support for One Button To Push (OBTP) meetings

Both the Cisco TelePresence Touch and the OSD (On Screen Display) menu will now display OBTP meetings, which are scheduled from either CTS-MAN (version 1.8 or later) or Cisco TMS (version 13.1 or later).

These features are supported on Cisco TelePresence Touch and OSD:

- Press one button to start the meeting.
- Meetings menu.
  - For OSD this will be graphics showing meetings on the idle screen
- WebEx indication
- Black screen codes
  - These are informational messages sent from CTMS using HTTP
- Mechanism for meeting extension
  - Only supported if meeting is booked using CTS-MAN

Support for Cisco TelePresence MX300

The TC5.0.0 release introduces support for the new Cisco TelePresence MX300.

The Cisco TelePresence MX300 is a multi-purpose, room-based TelePresence system designed to make it easier and more cost effective to enable deeper integration of TelePresence into customers businesses. The MX300 can be set up in as little as 15 minutes quickly, easily turning any small to medium-sized meeting room into a nine-person TelePresence team room The system offers 1080p, 30 frames per second, high-quality video at an affordable price. Global availability is targeted for the first quarter 2012.

Note: Cisco TelePresence MX300 requires software version TC5.0.0 or later.

Software upgrade from TMS Agent

When using large scale provisioning (supported for EX60, EX90, MX200 and MX300), the TMS Agent (requires TMS 13.1) now supports software upgrade. The upgrade is initiated from the TMS GUI, but the upgrade itself will be done by the TMS agent running on a CTS VCS.

Web interface enhancements

New look and feel of the web interface with new features such as:

- New call application with support for:
  - Call, start/stop presentation and changing source for both presentation and main source.
  - Volume control and microphone mute
  - Camera control including preset selection
  - Layout control
  - Diagnostics info
  - Web snapshot of any local source
    - Web snapshots can only be enabled by locally connected Cisco TelePresence Touch, TRC Remote Control or serial line access. This is a security measure to make sure no one can remotely enable web snapshots.
  - Automatically search in the Corporate Directory when entering characters in the 'Dial' field.

Localization of Cisco TelePresence Touch

The Cisco TelePresence Touch now supports these additional languages:

- Finnish
- French
- German
- Japanese
- Russian
- Simplified Chinese
- Swedish

Improved GUI for Cisco TelePresence Touch

The Cisco Touch user interface has been changed

- New icon for Call Rate. The call rate will be displayed underneath the button if different from default.
- A new Meetings icon/button has been introduced on the main menu.
- VLAN Configuration is now available.
- If the Touch controller is directly paired (connected directly to the system/codec) you will be able to allow/inhibit web snapshots.
- Added DNS Server 2 and 3 address and DNS Domain Name to the 'Network Settings'
- New icon for camera control. A new drop down menu will be displayed once activated and you can control the local camera.

Cisco TelePresence Touch logging to paired device

The Cisco TelePresence Touch will now forward all its internal logs to the system it is paired to. The Cisco TelePresence Touch logs will appear in the codec's eventlog.

New Cisco PrecisionHD 1080p 12x camera software

With the TC5.0 release, the PrecisionHD 1080p 12x camera will automatically be upgraded to camera software release ID40073. Included in this release is:

- Bug fixes (please look at the Resolved Caveats section)

New Cisco PrecisionHD 1080p 4x camera software

With the TC5.0 release, the PrecisionHD 1080p 4x camera will automatically be upgraded to camera software release ID20006. Included in this release is:

- Bug fixes (please look at the Resolved Caveats section)

One additional telephone call for EX60 and EX90

All systems running TC software are now able to dial one additional telephone call in addition to the number of video calls allowed. A system with MultiSite installed can dial 3 sites on video and one additional site on telephone. If MultiWay is configured this feature will not be available.

FIPS Mode

FIPS (The Federal Information Processing Standards) mode is introduced to facilitate FIPS 140-2 certification. This software version is not FIPS certified. When FIPS mode is enabled the unit will only use FIPS approved algorithms and methods and the following will apply:

- The system will restart with factory default settings.
- Encrypted calls are enforced.
  - If you dial to a system that does not support encryption, the call will be disconnected.
- Telnet is disabled.
- The system cannot be upgrade when in FIPS mode.
- To leave FIPS mode you must factory default the system, which can be done by executing the API command: 'xCommand SystemUnit FactoryReset Confirm: Yes'

New API commands

The commands in this section will be documented in the TANDBERG API Guide available for download at http://developer.tandberg.com

- xCommand Bookings
- xCommand Call
- xCommand Camera Preset
- xCommand Security FIPSMode Activate

Removed API commands

- xCommand Audio RemoteInput Update
- xCommand Video Layout ListLayoutFamily
- xCommand Video Layout ListLayoutGraphic

New API configurations

The commands in this section will be documented in the TANDBERG API Guide available for download at http://developer.tandberg.com

- xConfiguration Conference Presentation Policy
- xConfiguration Network IEEE8021X
- xConfiguration Provisioning Connectivity
- xConfiguration UserInterface TouchPanel

Changed API configurations

The commands in this section will be documented in the TANDBERG API Guide available for download at http://developer.tandberg.com

- xConfiguration Audio Input Microphone Equalizer ID
  - Extended valid input from <1..16> to <1..17>
- xConfiguration Network VLAN Voice Mode
  - Added parameter 'Auto'.
- xConfiguration Phonebook Server Type
  - Added parameter 'CUCM'
- xConfiguration Provisioning Mode
  - Added parameter 'CUCM'
- xConfiguration Video Wallpaper
  - Added parameter 'Waves'.
- xConfiguration Video Input Source Camera Control CameraID
  - Extended valid input from <1..5> to <1..7>.

Removed API configurations

- xConfiguration Network VLAN Voice Priority

New API Status command

The commands in this section will be documented in the TANDBERG API Guide available for download at http://developer.tandberg.com

- xStatus Camera Flip
- xStatus Network 1 Vlan Voice VlanId
- xStatus Security FIPS Mode
- xStatus SystemUnit Hardware
  - Added argument 'MonitoringSoftware'
  - Added arguments 'Monitoring Fan (1..4) status' (depending on product).
  - Added argument 'Temperature'

Resolved caveats

Resolved since version TC4.2.2

You can use the Bug Toolkit to find information about caveats (bugs) for this release, including a description of the problems and available workarounds. The Bug Toolkit lists both open and resolved caveats.

To access the Bug Toolkit, you need the following items:

• Internet connection

• Web browser

• Cisco.com user ID and password

To use the Bug Toolkit, follow these steps:

Procedure

Step 1 To access the Bug Toolkit, go to http://tools.cisco.com/Support/BugToolKit

Step 2 Log in with your Cisco.com user ID and password.

Step 3 To look for information about a specific problem, enter the bug ID number in the **Search for bug ID** field, then click **Go**.

Step 4 To look for information if you do not know the bug ID number:

a. Choose **Telepresence** from the Select Product Category menu.

b. Choose **Cisco Telepresence System Integrator C** Series from the Select Products menu.

c. Choose the version number from the Software Version menu.

d. Under Advanced Options, choose **Use default settings** or **Use custom settings**. The default settings search for severity 1, 2 and 3 bugs, open and fixed bugs, and only bugs containing bug details. Use the custom settings to change the severity and status parameters, or to search for keywords within the bug headline and description.

Cisco Touch

Reference ID	Summary
CSCtt14290	It is not possible to set the EX90 or EX60 into standby mode using the power button if an active source is connected to the HDMI input. So if you use the HDMI input for your PC, you cannot set the unit in standby unless you put the PC into sleep.
CSCtu42342	The URI is unreadable in the Call Status menu of the Cisco Touch if you have more then one call connected.
CSCtw51229	Unable to pair Cisco Touch with codec set up to use IPv6.
CSCtw51259	When setting transport protocol to TCP from the Cisco Touch the system looses

Reference ID	Summary
	registration on SIP.
CSCtr22629	PNG images uploaded through the Web UI as wallpaper is not available for selection through the Cisco Touch background settings menu.
CSCtw51216	When pairing a Cisco Touch with a C-Series codec, when the C-Series codec displays a menu with Soft Buttons, these Soft Buttons will remain on screen after the Cisco Touch has been paired.
CSCtu42339	If you from a paired Cisco Touch try to set the Date and Time manually, when scrolling through the options, eventually the pairing will become unstable.

Audio

Reference ID	Summary
CSCtw51233	Artifacts in audio transmitted to the other side when using local speaker re-enforcement.
CSCtu18582	When in headset mode and you get an incoming call, the ringing tone is heard in both the headset and the speakers, but in addition any connected PC source audio will be heard in the speakers (valid for EX60/EX90).

Video

Reference ID	Summary
CSCtw51213	If an MCU or TelePresence Server sends XGA H.263+ from the MCU to a unit running TC software then the video is clearly broken. The codec either displays flashing areas around the edge of the display or no video at all. This only happens with TC4 or later software versions.
CSCts98529	Cisco TelePresence C60 series codec may present a solid green bar at the far end when during a multisite call.
CSCts25429	The systems overscan feature does not survive a reboot once set. The settings survive but the system boot up with no overscan set.
CSCtu06808	The left edge of the CTS EX90 image does not look perfectly clean. There is a thin bright line that shouldn't be there.
CSCtu15882	If a call is made to an endpoint which doesn't have BFCP support or has had BFCP disabled then the wrong layout is sent from EX-series endpoints. The layout looks like the endpoint is sending content, but without the content.
CSCtr32389	The composite output will display black frames when displaying more then two windows. It will set up the black borders but you will not see any video.

Protocol

Reference ID	Summary
CSCtr28274	SIP packets are not being tagged with QoS
CSCts02738	H.323 registration is lost when the network is temporarily unavailable
CSCtw49930	Call drops when holding resuming multiple times when call protocol is SIP
CSCtw51224	New participants in MultiSite conference do not always receive presentation (H.239/BFCP) when doing interworking (H.323 to SIP conversion).
CSCtw51244	Not possible to register towards a Siemens OpenScapeVoice SIP pbx.
CSCtw51196	Presentation (dual stream/BFCP) not transmitted after call hold & resume on SIP

Reference ID	Summary
CSCts28171	C/EX-series endpoints lose audio while attending MCU conference with interworking encrypted calls.
CSCtr25756	TC based software is unable to register with a Huawei IMS system
CSCto14930	When placing C-series to C-series calls via SBC (Session Border Controller) with H.323 or SIP. The C-series uses RTCP payload specific updates for fast update request. These updates are not RFC 3550 compliant and are blocked by the SBC.
CSCtu49826	A C-Series system will report "Can not connect call" when dialing a second site before the first site has connected.
CSCtt14526	The Cisco CTS C20 looses main video from a RadVision Scoopia MCU when the C20 starts presentation (dual channel).
CSCtu13714	If the network MultiWay protocol is set to auto and the default protocol is set to SIP, MultiWay will not be initiated.
CSCtu18339	Sometimes the endpoint will report that it is registered on a H.323 gatekeeper, but you can't dial anyone. This is due to some problems with additive registrations.
CSCtu18446	- C20 in a call with any other system. - C20 gets an incoming call. - C20 accepts call by pressing the disconnect current accept new in GUI. - The new call will be audio only.
CSCtu18803	Chinese System name will not be shown in a TANDBERG MPS conference.
CSCtt14285	When configuring SRV base SIP address, the endpoint handles DNS look up with configured DNS and completes it. However EP does not initiate SIP registration even if it receives back active A-record response.

OSD (On Screen Display)

Reference ID	Summary
CSCtu18453	Trying to add another participant in a full MultiSite will not give any OSD warning, but rather nothing happens at all.
CSCtt14512	The unit will display the encryption status for the last connected call and not for the entire conference when using MultiSite.

System

Reference ID	Summary
CSCtu13243	Time will be one hour off during the winter season if Time Zone is set to Russia.
CSCtu42348	The GPIO port available on CTS C40 and CTS C60 is only checked every 5 seconds. If a push button is connected it must be held down for 5 seconds before the system will read the change of the input.
CSCtu42607	IPv6 DNS addresses are not set up and hence DNS will not work with IPv6.
CSCtu42542	You are not able to call back from the Call History due to the call back number is incorrect when no H.323ID is supplied by the caller.
CSCtu06798	802.1x is not working
CSCtu42348	The GPIO port available on CTS C40 and CTS C60 is only checked every 5 seconds. If a push button is connected it must be held down for 5 seconds before the system will read the change of the input.
CSCtr32417	Dual stack for IPv4/IPv6 does not work as intended. If you set the device to IPv6, you will not be able to reach any services by using an IPv4 address.

Camera

Reference ID	Summary
CSCtt14278	Autofocus sometimes triggered after a preset and sometimes not. The result is bad focus sometimes after a preset is triggered.

Web

Reference ID	Summary
CSCtu71686	The system gives messy messages when trying to change settings on the web interface after a long time of inactivity. This is due to the fact that the login timer has lapsed and one would have to log in once again before doing any changes.
CSCtr93652	When upgrading C Series endpoint through web interface you do not get a status of the upgrade, whether it is successful or not, or in which stage of the upgrade it currently is.

Known limitations

Cisco

Reference ID	Equipment	Summary
CSCtu99526	Any	There is a HW incompatibility between the C-Series systems and some NEC monitors. So far this is seen with: NEC LCD4020 NEC P401 This incompatibility will cause the monitor to wake up from sleep mode even if the codec is still in sleep. This happens when the monitor is connected using HDMI to HDMI. A workaround is to use the DVI input of the monitors.
CSCtw60572	TC3-TC4.1.2	The increased call log list introduced in TC4.2 will cause systems with Cisco TelePresence Touch to go into contestant reboot if downgraded to TC4.1 or less, in the event that the call log is larger then what is expected in TC4.1. **Workaround:** * Clear the call history before you downgrade. * Factory default the system after downgrade if it goes into constant reboot.
NA	TC5.x	'xConfiguration Experimental Enable1080p60' is an experimental command and using it will result in a unstable system. This command should only be available on the CTS C90, but currently it is also available on the CTS C60.
NA	TC5.x	CTS-MAN autodetection of endpoints: Autodetection require CTI monitoring to be enabled in the device information on CUCM. This is available in: UCM 8.6(1) Device Pack shipping in December UCM 8.6(2) witch is not qualified for CTS-MAN 1.8 Workaround: Manually add endpoints to CTS-MAN
CSCts99218	CTMS 1.8.0	Initial release of CTMS 1.8.0 supports 720p only with all endpoints running TC5.0 or later.
CSCtr32410	TC1-TC3.x	The Cisco TelePresence System codec C40 is unable to automatically detect a Digital Natural Audio Module (DNAM) in software versions previous to TC4. This will cause the codec to output analog audio instead of SPDIF (digital). If connected to a DNAM for software versions previous to TC4 it is recommended to set the audio output to SPDIF manually.
CSCtr32420	Any	The C-series codecs and units with such a codec inside it do not meet the Cisco password policy. It is highly recommended to set a password on the unit during install using the API command: 'systemtools passwd'
CSCtr32331	C20	A C20 participating in a MultiSite will not be able to send the following video formats in its

		main video channel: 1280*768, 1280*800 and 1440*900.
N/A	TC4.x and later	If the 'admin' user is deleted, then TMS will not be able to manage the system. At the same time the 'admin' user will be recreated with blank password during next reboot if no other user with admin access exist.
N/A	TC4.x and later	xFeedback register Event/KeyDown will mask the keys pressed on the remote control with a '*'. This is a security measurement to prevent key logging from the remote control. The '*' can be used to detect that someone has pressed a button on the remote control.
CSCtr28267	TC4.X	OCS registration is broken in TC4.x
	TC4.x	If you downgrade from TC4.x.x to any software less then TC4.0.0 and have set the IP stack to IPv6, the system will be unusable. The stack will still think it should do IPv6 even though there is no place to configure this in pre TC4.0.0 code. The workaround will be to factory reset the system. Even if the system does not report any IP address, it will still have an IPv4 address. If you can't get hold of this address, you will have use RS-232 to restore the unit or the procedure of using the power button (for C20, EX60 and EX90).
N/A	TC4.1.0	The Cisco TelePresence Touch screen does not support up loadable layout families. Hence you should not use the Cisco TC Console to upload layouts to a system with the Cisco Touch screen attached.
N/A	Cisco TelePresence Touch TC4.1.0/TT2.1.0	The Cisco TelePresence Touch must be connected to the same subnet as the codec it is pairing to.
N/A	TMS 12.6 or below when upgrading to TC4.0.0 and above	Starting with TC4.0, the security model used by the system changes which impacts compatibility with existing installations of TMS. The incompatibilities will result in: 1) Upgrading endpoints from a version less than TC4.0 to a version TC4.0 or higher using existing versions of TMS (12.x or lower) will appear to have failed in TMS. Additionally, the endpoint will not get the required release key updated, so the endpoint will not be able to make calls until a release key has been entered into the system. 2) After an endpoint is upgraded to TC4.0 or newer, the system will have an incorrect username or password error message in TMS and TMS will not be able to communicate with it properly. **A workaround to restore communication with TMS will be:** 1) Restart the TMS server, or 2) Restart the TMS services, following the below steps: * Log into the windows console of the TMS server as a user with Windows Administrative permissions

		* Open the Services Control Panel (Control Panel->Administrative Tools->Services) * For each service in the list below, select the service from the Services list, and use the restart icon or right-click->restart to restart the service - World Wide Web Publishing Service - TMSDatabaseScannerService - TMSLiveService - TMSSchedulerService - TMSSNMPService * Log into the TMS Web Interface, browse to the system and do a 'Force Refresh'. TMS should communicate to the system properly and the error message will clear. * To minimize service abruption it will be beneficial to upgrade all systems in one go, avoiding following the above procedure for every endpoints you upgrade. A future TMS version will resolve this condition negating the need to restart the services. **Workaround to restore the release keys:** * Once TMS has restored communication with the systems, upgrade the units one more time. This time TMS will be able to communicate with the systems when they boot up and set the release keys. **Note: Please read the resolved caveats section Reference ID 85930 as well.** **Note: The above issues are fixed for TMS 13.0**
CSCtr32348	TANDBERG PrecisionHD 1080p Camera all SW versions.	720p50, 720p30 and 720p25 output has no CRC included for HD-SDI. Depending on the device you connect the camera to, you may not get video using this format. The Cisco C-Series codecs will support these formats.
N/A	Ver. TC2.1.0 and above	Startup scripts will not work with Windows end of line. You must use Unix end of line to be able to run multiple commands. Most editors have the option to set which format to use. If you use Notepad ++, you can set Unix format in the Settings/Preferences menu.
N/A	Ver. Any	If you run cascaded cameras and the chained cameras are running an old camera code, we have seen that only zoom works when trying to control the chained camera. The solution is to connect the cascaded camera as the first camera in the chain so that the camera is detected and upgraded by the codec, or use the Ethernet upgrade method.
N/A	Ver. Any	HD-SDI may not work with cables shorter than

		3 meters. This is due to a jitter issue.
N/A	Ver.Any	If you turn off H.323 as the protocol but leave default protocol as H.323 you will be unable to make outgoing calls unless you edit the URI to include 'sip:' in front of the number or change the default call protocol to SIP.
CSCts05791	Any	The following HDMI output formats: "1920*1200p60, 800*600 and 1920*1080p60 (CVR960H) reduced blanking", will run in DVI compatibility mode and hence audio cannot be transmitted over HDMI when using this resolution.
CSCtr32423	Ver. TC3.x and above	If you dial a TANDBERG 150 with SW version L5.1.1 or older with encryption setting set to 'on', you may not get audio in any direction.
N/A	TC3.0.0 and above	The Cisco TelePresence System codec C40/C60 (rev. 1), will not provide proper analogue VGA output for any resolution of 1080 lines or more.
N/A	Any	The Cisco TelePresence System codec C40 will reduce its capability set when using internal MultiSite. When this is done, the mainstream will maximum be able to transmit w576p until all calls are disconnected.
N/A	Any	The Cisco TelePresence System codec C60 will reduce its capability set when using internal MultiSite. When this is done, the dual stream will maximum be able to transmit WXGA until all calls are disconnected.
N/A	Any	The Cisco TelePresence System EX60/90 does not support usage of the remote control. The Cisco TelePresence Touch Screen must be used to control these devices.
CSCtr32298	TC4	To use SIP verified, a CA list must be uploaded to the /user folder using SCP (root user must be enabled). The CA list must be named 'sipcalist.pem' and be in DER format.

Open caveats

Reference ID	Summary
CSCtw52376	The Cisco VCS Provisioning (TMS Agent) wizard is available from the Cisco Touch for the C20, C40, C60, C90 and all other systems with such a codec inside, yet only the Cisco CTS EX60/90 and Cisco CTS MX200 is supported.
CSCtu98598	If the local microphone mute icon does not appear on the screen, issue the api command: xConfiguration SystemUnit Type: shared
CSCtw51205	Banner with Cisco log and clock widget appears on display when in a call.
CSCtw53440	When upgrading a Cisco TelePresence Touch directly paired to a C-Series endpoint, the Touch sometime needs to be restarted the first time after upgrade

Interoperability

The systems below have been tested and verified with this software release.

H.323 gatekeepers/traversal servers

Equipment	Software revision	Comments
TANDBERG Gatekeeper	N6.1	
TANDBERG Border Controller	Q6.1	Both Assent and H.460.18/.19 traversal technologies are supported
Cisco TelePresence System Video Communication Server (VCS)	X6.1, X7.0.1	Both Assent and H.460.18/.19 traversal technologies are supported

SIP registrars/proxies

Equipment	Software revision	Comments
CUCM	8.6	▶ Native registration. Encrypted calls are not supported. ▶ DTMF: KPML is not supported. If you use an H.323 Gateway to access a public telephone line, DTMF will not work. To resolve this: • Convert IOS Gateway to SIP or MGCP. • Insert a Unified Border Element between the CUCM and the H.323 Gateway to do SIP to H.323 conversion (CUCM-SIP-CUBE-H.323-GW). ▶ If you experience random call drops make sure the default max size for SIP message in CUCM is set to 11000 bytes (default is 5000 bytes) ▶ If dual stream (BFCP) does not work: • Enable BFCP on SIP profile for endpoints in CUCM. • Enable BFCP for SIP trunk profile if calling to/from a Cisco VCS. ▶ NTP: Configure Unicast NTP references for endpoints in CUCM. ▶ Provisioning: Make sure the endpoint has a DNS server that can resolve the host name, or change CUCM > System > Server, to be IP address instead of hostname.
Cisco TelePresence System Video Communication	X6.1, X7.0.1	If you configure a trunk towards CUCM 8.6, you must create a custom SIP trunk that does not remove BFCP lines towards CUCM. If you choose CUCM as profile in the VCS, BFCP will be removed and dual stream (BFCP) will not be

Server (VCS)		possible between CUCM and VCS.

Gateway interoperability

Equipment	Software revision	Comments
TANDBERG MPS Gateway	J4.6	
TANDBERG Gateway	G3.2	
Cisco ISDN GW 3241	2.1	
RadVision Gateway B40	5.6.0.0.4	

MCU interoperability

Equipment	Software revision	Comments
TANDBERG MPS	J4.5	
TANDBERG MCU	D3.10	
Cisco MCU 4210	4.1, 4.2	
Cisco MCU 4520	4.1, 4.2	
Cisco CTMS	1.8	▶ 1080p is not available to any other endpoints then other C-Series endpoints. • Initial release of CTMS 1.8.0 supports 720p only with all endpoints running TC5.0 or later. ▶ Secure meetings are not supported. ▶ When dialing to the CTMS, the call cannot be interworked by a VCS (H.323 to SIP conversion). Such a conversion will make the call drop. ▶ Minimum call rate to join a CTMS conference is 2.25Mbps as CTMS requires minimum 720p resolution. ▶ TC5 interoperability must be enabled on the CTMS. ▶ Black Screen Codes is supported, but these will not work if the system is behind a firewall.
RadVision Scopia Elite	7.5.0.18.6	

Streaming servers

Equipment	Software revision	Comments
Cisco Telepresence System Content Server	S4.1, S5.1	

Endpoint interoperability

Equipment	Software revision	Protocol	Comments
Cisco CTS 500/1x00/30x0/ 32X0	1.8	SIP	CTS C20/EX60/MX200/MX300 will reduce the outgoing rate to 2Mb when the calls are encrypted. CTS EX90/C40/C60/C90 will remove encryption when entering MultiSite (internal) if configuration allows this (encryption set to auto). If encryption is enforced the incoming video from CTS will be reduced to 360p. Note: Since in MultiSite the outgoing image is composed of several incoming calls, the output will still be a 720p composed image.
Cisco TelePresence System MXP	F8.3, F9.1	H.323/SIP	
TANDBERG Personal Series	L5.1, L6.1	H.323	
Cisco IP Video Phone E20	TE4.0, TE4.1	SIP/H.323	
LifeSize Room 200	LS_RM2_4.7.18 (15)	H.323/SIP	When encryption is set to Best Effort the call will not be encrypted on SIP. Workaround is to set encryption to 'On'. SIP/H.323 transfer does not work. SIP BFCP (dual stream) does not work.
LifeSize Express	LS_EX1_4.7.18 (15)	H.323/SIP	SIP transfer/hold does not work. LifeSize is unable to start presentation (BFCP).
LifeSize Passport	LS_PP1_4.8.0 (59)	H.323/SIP	SIP/H.323 transfer does not work.
Sony PCS-1	03.41	H.323/SIP	Dual stream is limited to 1 FPS. The main video frame rate will never exceed 15 FPS.
Sony PCS-XG80	2.31.00	H.323/SIP	SIP Far End Camera Control does not work. SIP encrypted calls does not work. SIP/H.323 transfer does not work. Sony is unable to start presentation (BFCP).
Polycom VSX 7000	9.0.6.1	H.323/SIP	At low video rate and with main video set to sharpness the VSX will not display any video. SIP/H.323 transfer does not work. H.264 is only used on lower bandwidths.
Polycom HDX 8000 HD	3.0.3.14452	H.323/SIP	Far End Camera Control over H323/SIP does not work. Presentation (BFCP) does not work for SIP calls if initiated from the Cisco side. SIP/H.323 Transfer does not work.

HW dependencies – Compatibility Levels Cisco TelePresence Systems

Due to replacement of hardware components there are some constraints running older software on newly manufactured endpoints. This is due to end of life of some components and introduction of new components that require support in the software. Executing the API **xcommand xstat SystemUnit Hardware Module CompatibilityLevel** will reveal if there are any constraints on the system.

Compatibility level	Applicable systems	Minimum software version				
		TC3	TC4	TC5	TC6	TC7
0	All	All	All	All	All	All
1	All	3.1.5	4.2.0	All	All	All
2	EX/MX	None	4.2.4	5.1.1	All	All
2	SX20	None	None	5.1.0	All	All
2	C20	None	None	5.1.1	All	All
3	C40	None	4.2.4	5.1.5	All	All
V	MX300	None	None	5.0.1	All	All
1V	MX300	None	None	5.1.0	All	All
2V	MX300	None	None	5.1.1	All	All

Examples on how to detect the minimum software version:

System	Output	Minimum version
MX300	*s SystemUnit Hardware Module CompatibilityLevel: "v"	5.0.1
SX20	*s SystemUnit Hardware Module CompatibilityLevel: "2"	5.1.0
C40	*s SystemUnit Hardware Module CompatibilityLevel: "0"	No restrictions (Cisco recommends no lower than 4.2.0)

By having the TAN number on the system it is possible to determine the software restrictions without executing the API command. Find the compatibility level from the TAN number and look up in the table above.

	Sensor	Nand version	Compatibility level	TAN number
EX60				
	E3	0	0	800-33052-05
	E3	1	1	800-33052-06
	E3	0	0	800-35326-05
	E3	1	1	800-35326-06
	E3	1	1	800-35326-07
	E4	1	2	800-35326-08
	E3	1	1	800-36052-07
	E4	1	2	800-36052-08
EX90				
	E3	0	1	800-35448-05
	E3	1	2	800-35448-06
	E4	1	1	800-35448-07
MX200				
	E3	1	1	130020-09
	E3	1	1	130330-04
	E3	0	0	800-36834-04
	E3	1	1	800-36834-05
	E3	1	1	800-37182-04
	E4	1	2	800-37182-05
MX300				
	E3	0	V	800-36919-03
	E4	1	2V	800-36919-04
	E3	1	1V	800-37822-03
	E4	1	2V	800-37822-04

	NAND version	Compatibility level	TAN number
C20			
	0	0	800-35408-01
	1	1	800-35408-02
	0	0	800-36060-01
	1	1	800-36060-02
	1	2	TBD
C40			
	0	0	800-34910-01
	1	1	800-34910-02
	0	0	800-36047-01

	1	1	800-36047-02
	1	3	TBD
C60			
	0	0	800-35367-01
	1	1	800-35367-02
	0	0	800-36048-01
	1	1	800-36048-02
C90			
	0	0	800-35342-02
	1	1	800-35342-03
	0	0	800-36049-02
	1	1	800-36049-03

HW dependencies – Compatibility Levels Cisco TelePresence Touch 8

The TAN number can be found on the back of the Cisco TelePresence Touch 8 panel on the sticker positioned in the upper right corner.

Identify the compatibility level of the Touch panel by finding the TAN number in this table.

Version	Type	Compatibility level	TAN number
0	EX	A	800-35447-04
0	SX/C/Profile	A	800-35343-05
0	MX	A	74-9543-02
1	EX	C	800-35447-06
1	SX/C/Profile	C	800-35343-07
1	MX	C	74-9543-04
2	EX	B	800-38887-01
2	MX	B	800-38886-01
2	SX/C/Profile	B	800-38885-01
3	EX	C	800-38887-02
3	MX	C	800-38886-02
3	SX/C/Profile	C	800-38885-02

Identify the minimum supported software version for the different main releases in this table.

Compatibility level	**Minimum software version**				
	TC3	**TC4**	**TC5**	**TC6**	**TC7**
A	**3.1.0**	**All**	**All**	**All**	**All**
B	**None**	**4.2.4**	**5.1.3** [1)]	**All**	**All**
C	**None**	**4.2.4**	**5.1.4**	**All**	**All**

[1] Please Note: Cisco does NOT recommend using the new Touch with TC5.1.3. The software support needed improvements so Cisco strongly recommends to upgrade to TC5.1.4 if using a Touch panel with a newer hardware revision.

Version	Explanation
0	Rev1
1	OMAP rev 2
2	Touch sensor rev2
3	OMAP rev2 and Touch sensor rev2

References and related documents

The following table lists documents and web sites referenced in this document. All product documentation can be found on our web site

Name	Document reference
Cisco website	http://www.cisco.com
Cisco Software Download	http://www.cisco.com/cisco/software/navigator.html?i=!ch
Cisco TelePresence User Documentation	http://www.cisco.com/go/telepresence/docs

Software filenames

The correct software filename is listed in the following table.

TANDBERG TC system	Software	Serial number range
AES Encryption	s52000tc5_0_2.pkg	All
No Encryption	s52000tcnc5_0_2.pkg	All
AES Encryption (for CUCM)	cmterm-tc5_0_2.cop.sgn	All
No Encryption (for CUCM)	cmterm-tcnc5_0_2.cop.sgn	All