



Cisco TelePresence System C/EX/SX/MX Series

Software release notes TC5

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Contents

Contents.....	2
Document revision history	10
Introduction software version TC5.1.9.....	11
Hardware compatibility	11
Camera firmware versions in TC5.1.9.....	12
New features and functionality in TC5.1.9	13
Resolved caveats	14
Using the Bug Search Tool.....	14
Resolved caveats since TC 5.1.8.....	14
Known limitations	15
Cisco.....	15
Open caveats.....	19
Introduction software version TC5.1.8.....	21
Hardware compatibility	21
Camera firmware versions in TC5.1.8.....	22
New features and functionality in TC5.1.8	23
Resolved caveats	24
Using the Bug Search Tool.....	24
Resolved caveats since TC 5.1.7	24
Camera	24
OSD	24
System.....	24
Touch 8.....	24
Video.....	25
Known limitations	26
Cisco.....	26
Open caveats.....	30
Interoperability	31
H.323 gatekeepers/traversal servers	31
SIP registrars/proxies	31
Gateway interoperability	32
MCU interoperability	32
Streaming servers	33
Endpoint Interoperability.....	33
Introduction software version TC5.1.7.....	35
Hardware compatibility	35

Camera firmware versions in TC5.1.7	36
Resolved caveats	37
Using the Bug Search Tool.....	37
Resolved caveats since TC 5.1.6.....	37
Camera.....	37
Protocol.....	37
System.....	37
Known limitations	38
Cisco.....	38
Open caveats.....	42
Interoperability	43
H.323 gatekeepers/traversal servers	43
SIP registrars/proxies	43
Gateway interoperability	44
MCU interoperability	44
Streaming servers	45
Endpoint Interoperability.....	45
Introduction software version TC5.1.6.....	47
Hardware compatibility	47
New features and functionality in TC5.1.6	48
Camera firmware versions in TC5.1.6.....	48
New feature descriptions.....	49
Changed behavior for SX20 power button	49
Support for a new hardware revision of the SX20 CPU	49
Improved fan control for SX20.....	49
New software release for Cisco TelePresence PrecisionHD 12x Camera	49
Resolved caveats	50
Using the Bug Search Tool.....	50
Resolved caveats since TC 5.1.5.....	50
Application	50
Camera.....	50
System.....	50
Web	51
Known limitations	52
Cisco.....	52
Open caveats.....	57
Interoperability	58
H.323 gatekeepers/traversal servers	58
SIP registrars/proxies	58
Gateway interoperability	59
MCU interoperability	59

Streaming servers	59
Endpoint Interoperability	60
Introduction software version TC5.1.5.....	62
Hardware compatibility	62
New features and functionality in TC5.1.5	63
New feature descriptions	64
Support for Cyrillic text input on Cisco TelePresence Touch 8	64
New software release for Cisco TelePresence PrecisionHD 4xS1 Camera	64
New software release for Cisco TelePresence PrecisionHD 12x Camera	64
New API command “systemtools camerarescue” that will recover 4x cameras that are stuck in the bootloader	64
Resolved caveats	65
Using the Bug Search Tool	65
Resolved caveats since TC 5.1.4	65
Protocol	65
System	65
Camera	66
Video	66
Touch 8	66
Web	67
Known limitations	68
Cisco	68
Open caveats	73
Introduction software version TC5.1.4.....	74
Hardware compatibility	74
New features and functionality in TC5.1.4	75
New feature descriptions	76
New software release for Cisco TelePresence PrecisionHD 4xS2 Camera	76
Touch 8 shows unit information during boot	76
Improved support for new hardware revision of Cisco TelePresence Touch 8	76
Resolved caveats	77
Using the Bug Search Tool	77
Resolved caveats since TC 5.1.3	78
Protocol	78
System	78
Touch 8	78
Web	78
Known limitations	79
Cisco	79
Open caveats	82

Interoperability	83
H.323 gatekeepers/traversal servers	83
SIP registrars/proxies	83
Gateway interoperability	84
MCU interoperability	84
Streaming servers	85
Endpoint Interoperability	85
Introduction software version TC5.1.3.....	87
Hardware compatibility	87
New features and functionality in TC5.1.3	88
New feature descriptions	89
New software release for Cisco TelePresence PrecisionHD 4x Camera	89
Support for new hardware revision of Cisco TelePresence Touch 8	89
Resolved caveats	90
Using the Bug Search Tool.....	90
Resolved caveats since TC 5.1.2	91
Camera	91
Web	91
Touch 8	91
Known limitations	92
Cisco	92
Open caveats	96
Interoperability	97
H.323 gatekeepers/traversal servers	97
SIP registrars/proxies	97
Gateway interoperability	98
MCU interoperability	98
Streaming servers	98
Endpoint Interoperability	99
Introduction software version TC5.1.2.....	101
Hardware compatibility	101
New features and functionality in TC5.1.2	102
New feature descriptions	103
New software release for Cisco TelePresence PrecisionHD 4x Camera	103
New software release for Cisco TelePresence PrecisionHD 12x Camera	103
New language support on Cisco TelePresence Touch 8	103
Resolved caveats	104
Using the Bug Search Tool.....	104
Resolved caveats since TC 5.1.1	105
Camera	105

Known limitations	106
Cisco	106
Open caveats	110
Interoperability	111
H.323 gatekeepers/traversal servers	111
SIP registrars/proxies	111
Gateway interoperability	112
MCU interoperability	112
Streaming servers	112
Endpoint Interoperability	113
Introduction software version TC5.1.1	115
Hardware compatibility	115
New features and functionality in TC5.1.1	116
New feature descriptions	117
New fan control for the Codec C90	117
New software release for Cisco TelePresence PrecisionHD4x S2 Camera	117
Resolved caveats	118
Using the Bug Search Tool	118
Resolved caveats since TC 5.1.0	119
System	119
Cisco Touch	119
Protocol	119
Web	119
Known limitations	120
Cisco	120
Open caveats	124
Interoperability	125
H.323 gatekeepers/traversal servers	125
SIP registrars/proxies	125
Gateway interoperability	126
MCU interoperability	126
Streaming servers	126
Endpoint Interoperability	127
Introduction software version TC5.1.0	129
Hardware compatibility	129
New features and functionality in TC5.1.0	130
Support for the Cisco TelePresence SX20 Quick Set	131
Facility Service button on Cisco Touch	131
Localization of the Cisco Touch	131
Improved GUI	132
WebSnapshots for remote sites	132

Web interface enhancements	132
Serviceability enhancements	132
Maintenance shell	132
Harmonized factory reset	132
Controlling additional cameras from Touch	133
Performance optimization	133
New power LED behavior on EX systems	133
New Cisco PrecisionHD 1080p12x camera software	133
New Cisco PrecisionHD 1080p4x camera software	133
New API commands	133
Changed API commands	133
Removed API commands	134
New API configurations	134
Changed API configurations	134
New API Status commands	134
Removed API Status commands	134
Resolved caveats	136
Resolved since version TC5.0.1	136
Cisco Touch	136
Audio	137
Video	137
Protocol	137
OSD (On Screen Display)	137
System	137
Camera	138
Web	138
Known limitations	139
Cisco	139
Open caveats	143
Interoperability	144
H.323 gatekeepers/traversal servers	144
SIP registrars/proxies	144
Gateway interoperability	145
MCU interoperability	145
Streaming servers	145
Endpoint Interoperability	146
Introduction software version TC5.0.2	148
Hardware compatibility	148
Resolved caveats	149
Resolved since version TC5.0.1	149
Camera	149
Video	149
Introduction software version TC5.0.1	150
Resolved caveats	151
Resolved since version TC5.0.1	151

Cisco Touch.....	151
Video.....	151
Introduction software version TC5.0.0.....	152
Hardware compatibility	152
New features and functionality in TC5.0.0	153
Support for native CUCM registration	154
Cisco TelePresence Multipoint Switch (CTMS) support	154
Support for One Button To Push (OBTP) meetings	155
Support for Cisco TelePresence MX300	156
Software upgrade from TMS Agent	157
Web interface enhancements.....	157
Localization of Cisco TelePresence Touch	157
Improved GUI for Cisco TelePresence Touch.....	157
Cisco TelePresence Touch logging to paired device	158
New Cisco PrecisionHD 1080p12x camera software.....	158
New Cisco PrecisionHD 1080p4x camera software.....	158
One additional telephone call for EX60 and EX90	158
FIPS Mode.....	158
New API commands	158
Removed API commands.....	158
New API configurations	159
Changed API configurations.....	159
Removed API configurations.....	159
New API Status command.....	159
Resolved caveats	160
Resolved since version TC4.2.2.....	160
Cisco Touch.....	160
Audio.....	161
Video.....	161
Protocol.....	161
OSD (On Screen Display)	162
System.....	162
Camera	163
Web	163
Known limitations	164
Cisco.....	164
Open caveats.....	168
Interoperability	169
H.323 gatekeepers/traversal servers	169
SIP registrars/proxies	169
Gateway interoperability	170
MCU interoperability	170
Streaming servers	170
Endpoint Interoperability.....	171
Cisco TelePresence systems hardware dependencies	172
Introduction	172

NAND Flash.....	172
Integrated camera	172
Using the xAPI / tshell to identify software limitations	173
Using the TAN Number to identify software limitations	174
EX series and MX series	175
C series and Quickset Series	176
Cisco TelePresence Touch 8 hardware dependencies.....	177
New hardware revisions for Cisco TelePresence Touch 8	177
References and related documents	178
Software filenames	178

Document revision history

Revision	Date	Description
14	21/01/2014	Release of TC5.1.9, minor release. Updated information on hardware compatibility.
13	24/06/2013	Release of TC5.1.8, minor release.
12	26/02/2013	Release of TC5.1.7, minor release.
11	16/01/2013	Release of TC5.1.6, minor release. Updated information on hardware compatibility.
10	23/11/2012	Release of TC5.1.5, minor release. Updated information on hardware compatibility.
09	17/08/2012	Release of TC5.1.4, minor release. Added information regarding supported and not supported scenarios for H323 when call setup mode is direct: CSCtr32399.
08	28/06/2012	Release of TC5.1.3, minor release.
07	05/06/2012	Added information on new language support on the Cisco TelePresence Touch 8.
06	01/06/2012	Release of TC5.1.2, minor release.
05	22/05/2012	Wrong information related to camera software for Precision HD 4x.
04	16/05/2012	Release of TC5.1.1, minor release.
03	22/02/2012	Release of TC5.1.0, 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 TC5.1.9

This release note describes the features and capabilities included in the Cisco TelePresence System C/MX/SX/EX series codec software version TC5.1.9 released on January 21st 2014.

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



From 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. With 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.) are reachable from your Voice VLAN.



Replacing a directly connected (EX series or MX series) or a Touch panel connected to Ethernet port 2 (C40, C60 and C90) without restarting the system will leave the Touch panel in an unusable state. A spinning "Connecting" wheel will be displayed, and after approximately 2 minutes a manual pairing dialog will appear.

To replace the Touch panel successfully: Power off the system. Swap the Touch panels. Power on the system. The Touch panel will come up, and if necessary, download software from the system it is connected to. CDETS id: CSCud33527

Hardware compatibility

Due to replacement of hardware components, there are some constraints on 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. For a detailed list of compatibility levels and software constraints for the Cisco TelePresence systems, please see the two appendices in the end of this document:

- HW dependencies – Compatibility Levels Cisco TelePresence Systems

- HW dependencies – Compatibility Levels Cisco TelePresence Touch 8

From TC5.1.3 onward, a lock prevents the system or Touch 8 from downgrading to an unsupported version.

Camera firmware versions in TC5.1.9

Precision HD 1080p 4x S2 is only supported with the SX20. The camera will work as a third party camera, but the C series codec software will not be able to upgrade the camera, and it is therefore not recommended for use with C series codecs. When upgrading from TC5.1.6 and older versions, the PrecisionHD 1080p 4X S2 will upgrade twice because of a change in the placement of the camera software. The new firmware file used for upgrade is a7camera.pkg, whereas the old package was nandi.pkg. Each upgrade will take approximately 8 minutes, and it is very important that the codec and camera are not disconnected from power during the upgrades.

Camera type	Hardware ID	Firmware	First released in
PrecisionHD 1080p 4x	52000000	S01752-2.0 FINAL ID: 20012 Sangam.pkg	TC 5.1.5
PrecisionHD 1080p 4X S2	53000000	S01777-2-0 FINAL ID: 20012 A7camera.pkg	TC5.1.8/TC6.0.1
PrecisionHD 1080p 12X	50000002/ 50000003	S01718-4.0 FINAL ID: 40083 Rover.pkg	TC5.1.6

New features and functionality in TC5.1.9

- ▶ Support for new version of the NAND flash

Support for new version of the NAND flash

The new version of the NAND flash (compatibility level 4) is supported in TC5.1.9. See details around Hardware compatibility in the end of this document.

Resolved caveats

Using the Bug Search Tool

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 use the Bug Search Tool, follow these steps:

Step 1 Access the Bug Search Tool by navigating 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.

Resolved caveats since TC 5.1.8

No caveats have been fixed in this release.

Known limitations

Cisco

Reference ID	Equipment	Summary
CSCud33527	Cisco TelePresence Touch 8	When switching/replacing a Touch panel on an MX or EX series system, the main unit needs to be restarted for the new Touch panel to pair. Factory resetting the Touch panel does not help.
CSCts86782	EX90	Touch panel may not come up when upgrading from TC3.1.x to TC5.x on EX90. Solution: Upgrade to TC4.x, then upgrade to TC5.x
CSCtw52376	C20, C40, C60, C90	The Cisco VCS Provisioning (TMS Agent) wizard is available from the CT Touch 8 for the C20, C40, C60, C90 and all other systems with such a codec inside, yet only CTS EX60/90 and CTS MX200/300 are supported.
CSCtu98598	C20	If the local microphone mute icon does not appear on the screen, issue the API command: xConfiguration SystemUnit Type: shared.
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 a HDMI to HDMI cable. A workaround is to use the DVI input on the monitors.
CSCtw60572	TC3-TC4.1.2	The increased call log list introduced in TC4.2 will cause systems with Touch 8 to go into constant reboot if downgraded to TC4.1 or less, if the call log is larger than 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	CTS-MAN autodetection of endpoints: Autodetection requires CTI monitoring to be enabled in the device information on CUCM. This is available in: <ul style="list-style-type: none"> UCM 8.6(1) Device Pack shipping in December UCM 8.6(2) which 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 when all endpoints are running TC5.0 or later.
CSCtr32420	Any	The C series codecs, and units with such a codec inside, 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 is not 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, the TMS will not be able to manage the system. At the same time the 'admin' user with a blank password will be recreated during next reboot if no other user with admin access exists.
N/A	TC4.x and later	xFeedback register Event/KeyDown masks 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 if someone has pressed a button on the remote control.
	TC4.x	If you downgrade from TC4.x.x to any software less than TC4.0.0 and have set the IP stack to IPv6, the system will be unusable. The stack will still think it should use IPv6 even though there is no place to configure this in pre TC4.0.0 code. The workaround is to factory reset the system. Even if the system does not report any IP address, it will still have an IPv4 address. If you cannot 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 8 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 8 screen attached.
N/A	Cisco TelePresence Touch TC4.1.0/TT2.1.0	The Cisco TelePresence Touch 8 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	<p>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:</p> <p>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.</p> <p>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.</p> <p>A workaround to restore communication with TMS:</p> <p>1) Restart the TMS server, or</p> <p>2) Restart the TMS services, following the below steps:</p> <p>a) Log into the windows console of the TMS server as a user with Windows Administrative permissions.</p> <p>b) Open the Services Control Panel (Control Panel->Administrative Tools->Services).</p> <p>c) 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.</p> <ul style="list-style-type: none"> - World Wide Web Publishing Service - TMSDatabaseScannerService - TMSLiveService

		<p>- TMSSchedulerService</p> <p>- TMSSNMPService</p> <p>* 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.</p> <p>* 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.</p> <p>Workaround to restore the release keys:</p> <p>* 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.</p> <p>Note: Please read the resolved caveats section Reference ID 85930 as well.</p> <p>Note: The above issues are fixed for TMS 13.0</p>
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 zoom only 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. You can also 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 is at maximum 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 is at maximum 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 8 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.
CSCud43145	TC5.x.x and TC6.x.x	It is not possible to take a websnapshot of a presentation when OSD mode is disabled on C20.
CSCty15655	TC5.1.0-TC5.1.2	Internet Explorer 7 is not fully compatible with TC5.1.0-TC5.1.2 due to a missing 'type="submit" ' on login button which is required for IE7.
CSCtr32399	All versions	<p>Some scenarios with H.323 direct call setup mode are not supported:</p> <ol style="list-style-type: none"> 1) Dial h323:0374@vcs.domain.com from unregistered EP, where EP B is registered at GK with h323id: 0374@IPADDRESS. IPADDRESS is resolvable to vcs.domain.com. 2) Dial h323:0374@IPADDRESS from unregistered EP, where EP B is registered at GK with h323id: 0374@ vcs.domain.com, the call fail. vcs.domain.com is resolving to the VCS IP address. 3) Dial h323:0374@ IPADDRESS from unregistered EP, where EP B is registered at GK with h323id : 0374, the call fail. IPADDRESS is the VCS ip address. <p>Two supported scenarios are fixed in TC5.1.0 (see Resolved since TC5.0.1).</p>

Open caveats

Reference ID	Summary
CSCtz08306*	If non-standard rate is set for default call rate, different rate is used instead of the rate set when dialing via web or remote.
CSCua08205	Cisco TelePresence Touch 8 may not respond properly to interaction on the bottom row. NOTE: Some Touch 8 devices will still exhibit this behaviour after upgrading TC 5.1.3. These panels are defective. NOTE: This issue was resolved in TC5.1.3 but is reverted in TC5.1.4 and later due to higher probability of false touch registrations in TC5.1.3 (CSCub65256).
CSCty11069**	Dual screen connected to an EX90 is black until you have shared presentation in a call.
CSCtz87452*	MX, EX, E20, C and SX series endpoints cannot use CUCM phone books with numbers including white spaces.
CSCtz77758*	SX20: 1680x1050 VGA input detected as 1400x1050.
CSCtz78809*	In some call scenarios, dual stream will not work in a C series multisite call involving MXP (VCS registered) and CUCM registered endpoints such as CTS C series.

Issues marked with * are resolved in TC6.0.0

Issues marked with ** are resolved in TC6.1.0

Introduction software version TC5.1.8

This release note describes the features and capabilities included in the Cisco TelePresence System C/MX/SX/EX series codec software version TC5.1.8 released on June 24th 2013.

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



From 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. With 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.) are reachable from your Voice VLAN.



Replacing a directly connected (EX series or MX series) or a Touch panel connected to Ethernet port 2 (C40, C60 and C90) without restarting the system will leave the Touch panel in an unusable state. A spinning "Connecting" wheel will be displayed, and after approximately 2 minutes a manual pairing dialog will appear.

To replace the Touch panel successfully: Power off the system. Swap the Touch panels. Power on the system. The Touch panel will come up, and if necessary, download software from the system it is connected to. CDETS id: CSCud33527

Hardware compatibility

Due to replacement of hardware components, there are some constraints on 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. For a detailed list of compatibility levels and software constraints for the Cisco TelePresence systems, please see the two appendices in the end of this document:

- HW dependencies – Compatibility Levels Cisco TelePresence Systems

- HW dependencies – Compatibility Levels Cisco TelePresence Touch 8

From TC5.1.3 onward, a lock prevents the system or Touch 8 from downgrading to an unsupported version.

Camera firmware versions in TC5.1.8

Precision HD 1080p 4x S2 is only supported with the SX20. The camera will work as a third party camera, but the C series codec software will not be able to upgrade the camera, and it is therefore not recommended for use with C series codecs. When upgrading from TC5.1.6 and older versions, the PrecisionHD 1080p 4X S2 will upgrade twice because of a change in the placement of the camera software. The new firmware file used for upgrade is a7camera.pkg, whereas the old package was nandi.pkg. Each upgrade will take approximately 8 minutes, and it is very important that the codec and camera are not disconnected from power during the upgrades.

Camera type	Hardware ID	Firmware	First released in
PrecisionHD 1080p 4x	52000000	S01752-2.0 FINAL ID: 20012 Sangam.pkg	TC 5.1.5
PrecisionHD 1080p 4X S2	53000000	S01777-2-0 FINAL ID: 20012 A7camera.pkg	TC5.1.8/TC6.0.1
PrecisionHD 1080p 12X	50000002/ 50000003	S01718-4.0 FINAL ID: 40083 Rover.pkg	TC5.1.6

New features and functionality in TC5.1.8

- ▶ Reduced support for HTML tags in message alert and message prompts on screen

Reduced support for HTML tags in message alert and message prompts on screen

For security reasons only <p> and
 HTML tags are supported in messages on screen (cf. Message Alert and Message Prompt commands). These tags will result in line breaks as normal. No other HTML tags will be interpreted; they will appear as text on the screen.

Resolved caveats

Using the Bug Search Tool

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 use the Bug Search Tool, follow these steps:

Step 1 Access the Bug Search Tool by navigating 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.

Resolved caveats since TC 5.1.7

Camera

Reference ID	Summary
CSCue50474	EX60 camera image is black upon return from standby. Toggling camera brightness from auto to manual resolves the issue.

OSD

Reference ID	Summary
CSCuh57474	HTML tags displayed in some OSD messages.
CSCuf89568	It is possible that another party changes the font/color of some element during a call. This is due to the fact that some HTML tag are interpreted by the functions that display information. This defect is open to harden the product and prevented this situation. No script injection is possible as only few HTML tags are allowed to be interpreted.

System

Reference ID	Summary
CSCue70846	C20 reports "fan test failed" on both fans although fans run fine. The fan test is run upon start-up, and reboot may remediate issue.

Touch 8

Reference ID	Summary
CSCuh57517	When pairing succeeds with a Touch, a dialog is eventually shown. This dialog now has HTML displayed in it.

Video

Reference ID	Summary
CSCue91786	No incoming video after starting/stopping a presentation multiple times in a call to an EX60.
CSCue45963	Cisco TelePresence TC software based codec may crash while presenting when 1600x1200 resolution is in use.
CSCuf17354	Ghosting is experienced on a SX20 running TC5.1.5. It generally happens 45 minutes into peer-to-peer calls.

Known limitations

Cisco

Reference ID	Equipment	Summary
CSCud33527	Cisco TelePresence Touch 8	When switching/replacing a Touch panel on an MX or EX series system, the main unit needs to be restarted for the new Touch panel to pair. Factory resetting the Touch panel does not help.
CSCts86782	EX90	Touch panel may not come up when upgrading from TC3.1.x to TC5.x on EX90. Solution: Upgrade to TC4.x, then upgrade to TC5.x
CSCtw52376	C20, C40, C60, C90	The Cisco VCS Provisioning (TMS Agent) wizard is available from the CT Touch 8 for the C20, C40, C60, C90 and all other systems with such a codec inside, yet only CTS EX60/90 and CTS MX200/300 are supported.
CSCtu98598	C20	If the local microphone mute icon does not appear on the screen, issue the API command: xConfiguration SystemUnit Type: shared.
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 a HDMI to HDMI cable. A workaround is to use the DVI input on the monitors.
CSCtw60572	TC3-TC4.1.2	The increased call log list introduced in TC4.2 will cause systems with Touch 8 to go into constant reboot if downgraded to TC4.1 or less, if the call log is larger than 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	CTS-MAN autodetection of endpoints: Autodetection requires CTI monitoring to be enabled in the device information on CUCM. This is available in: <ul style="list-style-type: none"> • UCM 8.6(1) Device Pack shipping in December • UCM 8.6(2) which 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 when all endpoints are running TC5.0 or later.
CSCtr32420	Any	The C series codecs, and units with such a codec inside, 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 is not 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, the TMS will not be able to manage the system. At the same time the 'admin' user with a blank password will be recreated during next reboot if no other user with admin access exists.
N/A	TC4.x and later	xFeedback register Event/KeyDown masks 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 if someone has pressed a button on the remote control.
	TC4.x	If you downgrade from TC4.x.x to any software less than TC4.0.0 and have set the IP stack to IPv6, the system will be unusable. The stack will still think it should use IPv6 even though there is no place to configure this in pre TC4.0.0 code. The workaround is to factory reset the system. Even if the system does not report any IP address, it will still have an IPv4 address. If you cannot 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 8 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 8 screen attached.
N/A	Cisco TelePresence Touch TC4.1.0/TT2.1.0	The Cisco TelePresence Touch 8 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	<p>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:</p> <p>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.</p> <p>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.</p> <p>A workaround to restore communication with TMS:</p> <p>1) Restart the TMS server, or</p> <p>2) Restart the TMS services, following the below steps:</p> <p>a) Log into the windows console of the TMS server as a user with Windows Administrative permissions.</p> <p>b) Open the Services Control Panel (Control Panel->Administrative Tools->Services).</p> <p>c) 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.</p> <ul style="list-style-type: none"> - World Wide Web Publishing Service - TMSDatabaseScannerService - TMSLiveService

		<p>- TMSSchedulerService</p> <p>- TMSSNMPService</p> <p>* 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.</p> <p>* 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.</p> <p>Workaround to restore the release keys:</p> <p>* 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.</p> <p>Note: Please read the resolved caveats section Reference ID 85930 as well.</p> <p>Note: The above issues are fixed for TMS 13.0</p>
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 zoom only 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. You can also 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 is at maximum 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 is at maximum 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 8 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.
CSCud43145	TC5.x.x and TC6.x.x	It is not possible to take a websnapshot of a presentation when OSD mode is disabled on C20.
CSCty15655	TC5.1.0-TC5.1.2	Internet Explorer 7 is not fully compatible with TC5.1.0-TC5.1.2 due to a missing 'type="submit" ' on login button which is required for IE7.
CSCtr32399	All versions	<p>Some scenarios with H.323 direct call setup mode are not supported:</p> <ul style="list-style-type: none"> 4) Dial h323:0374@vcs.domain.com from unregistered EP, where EP B is registered at GK with h323id: 0374@IPADDRESS. IPADDRESS is resolvable to vcs.domain.com. 5) Dial h323:0374@IPADDRESS from unregistered EP, where EP B is registered at GK with h323id: 0374@ vcs.domain.com, the call fail. vcs.domain.com is resolving to the VCS IP address. 6) Dial h323:0374@ IPADDRESS from unregistered EP, where EP B is registered at GK with h323id : 0374, the call fail. IPADDRESS is the VCS ip address. <p>Two supported scenarios are fixed in TC5.1.0 (see Resolved since TC5.0.1).</p>

Open caveats

Reference ID	Summary
CSCtz08306*	If non-standard rate is set for default call rate, different rate is used instead of the rate set when dialing via web or remote.
CSCua08205	Cisco TelePresence Touch 8 may not respond properly to interaction on the bottom row. NOTE: Some Touch 8 devices will still exhibit this behaviour after upgrading TC 5.1.3. These panels are defective. NOTE: This issue was resolved in TC5.1.3 but is reverted in TC5.1.4 and later due to higher probability of false touch registrations in TC5.1.3 (CSCub65256).
CSCty11069**	Dual screen connected to an EX90 is black until you have shared presentation in a call.
CSCtz87452*	MX, EX, E20, C and SX series endpoints cannot use CUCM phone books with numbers including white spaces.
CSCtz77758*	SX20: 1680x1050 VGA input detected as 1400x1050.
CSCtz78809*	In some call scenarios, dual stream will not work in a C series multisite call involving MXP (VCS registered) and CUCM registered endpoints such as CTS C series.

Issues marked with * are resolved in TC6.0.0

Issues marked with ** are resolved in TC6.1.0

Interoperability

The interoperability section describes the equipment and software revisions that were tested for interoperability with this release. The absence of a device or revision from this section does not imply a lack of interoperability.

The systems below have been tested and verified with this software release. (TC5.1)

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, X7.1.x, X7.2.x	Both Assent and H.460.18/.19 traversal technologies are supported

SIP registrars/proxies

Equipment	Software revision	Comments
CUCM	8.6, 9.0	<ul style="list-style-type: none"> ▶ 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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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	X6.1, X7.1.x, X7.2.x	If you configure a trunk towards CUCM and VCS, you must create a custom SIP trunk that does not remove BFCP lines towards CUCM. If

Communication Server (VCS)		you choose CUCM as profile in the VCS, BFCP will be removed and dual stream (BFCP) will not be possible between CUCM and VCS.
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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 42xx	4.3	
Cisco MCU 45xx	4.3	
Cisco MCU 53xx	4.3	Tested with TC5.1.4
Cisco MCU MSE 8510	4.1, 4.2, 4.3	
Cisco CTMS	1.8, 1.9	<ul style="list-style-type: none"> ▶ 1080p is not available to any other endpoints than C series endpoints. <ul style="list-style-type: none"> • 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, TX9000	1.8, 1.9	SIP	<p>CTS C20/EX60/MX200/MX300 will reduce the outgoing rate to 2Mb when the calls are encrypted.</p> <p>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.</p> <p>Note: Since in MultiSite the outgoing image is composed of several incoming calls, the output will still be a 720p composed image.</p> <p>CSCtx91600: The CTS sends GDR instead of IDR in a CTMS conference, this will result in no video on the SX20.</p> <p>CSCtt32132: The CTS does not handle mid-call capability set changes. This will give no video on the CTS if the C series endpoint must do a capset reduction. This is typically done when going from point-to-point to a MultiPoint call (C40), or when starting presentation (C20).</p>
Cisco TelePresence System MXP	F8.3, F9.1, F9.2, F9.3	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	<p>When encryption is set to 'Best Effort', the call will not be encrypted on SIP.</p> <p>Workaround is to set encryption to 'On'.</p> <p>SIP/H.323 transfer does not work.</p> <p>SIP BFCP (dual stream) does not work.</p>
LifeSize Express	LS_EX1_4.7.18 (15)	H.323/SIP	<p>SIP transfer/hold does not work.</p> <p>LifeSize is unable to start presentation (BFCP).</p>
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	<p>Dual stream is limited to 1 FPS.</p> <p>The main video frame rate will never exceed 15 FPS.</p>

Sony PCS-XG80	2.31.00	H.323/SIP	SIP Far End Camera Control does not work. SIP encrypted calls do 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 / 3.0.4 / 3.0.5	H.323/SIP	Presentation (BFCP/TCP) does not work for SIP calls if HDX calls to a Cisco Multisite capable endpoint. From Polycom 3.0.5 BFCP/TCP will not be used, so BFCP(UDP) will work. SIP Transfer does not work.

Introduction software version TC5.1.7

This release note describes the features and capabilities included in the Cisco TelePresence System C/MX/SX/EX-Series codec software version TC5.1.7 released on February 26th 2013.

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



From 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.



Replacing a directly connected (EX-series or MX-series) or a Touch panel connected to Ethernet port 2 (C40, C60 and C90) without restarting the system will leave the Touch panel in an unusable state. A spinning "Connecting" wheel will be displayed and after approximately 2 minutes a manual pairing dialog will appear.

To replace the Touch panel successfully: Power off the system. Swap the Touch panels. Power on the system. The Touch panel will come up, and if necessary download software from the system it is connected to. CDETS id: CSCud33527

Hardware compatibility

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. For a detailed list of compatibility levels and software constraints for the Cisco TelePresence systems please see the two appendices in the end of this document:

- HW dependencies – Compatibility Levels Cisco TelePresence Systems

- HW dependencies – Compatibility Levels Cisco TelePresence Touch 8

From TC5.1.3 there is a lock which prevents the system or Touch 8 from downgrading to an unsupported version.

Camera firmware versions in TC5.1.7

Precision HD 1080p 4xS2 is only supported with the SX20. The camera will work as a third party camera, but C-series codec software will not be able to upgrade the camera and it is therefore not recommended for use with C-series codecs. When upgrading from TC5.1.6 older, the PrecisionHD 1080p 4X S2 will upgrade twice because of a change in the placement of the camera software. The new firmware file used for upgrade is a7camera.pkg whereas the old package was nandi.pkg.

Camera type	Hardware ID	Firmware	First released in
PrecisionHD 1080p 4x	52000000	S01752-2.0 FINAL ID: 20012 Sangam.pkg	TC 5.1.5
PrecisionHD 1080p 4X S2	53000000	S01777-2-0 FINAL ID: 20011 A7camera.pkg	TC5.1.7/TC6.0.1
PrecisionHD 1080p 12X	50000002/ 50000003	S01718-4.0 FINAL ID: 40083 Rover.pkg	TC5.1.6

Resolved caveats

Using the Bug Search Tool

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 use the Bug Search Tool, follow these steps:

Step 1 Access the Bug Search Tool by navigating 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.

Resolved caveats since TC 5.1.6

Camera

Reference ID	Summary
CSCud95689	Cisco TelePresence 4x CTS-PHD1080P4XS2 camera may fail after upgrade. The power LED is up but no remote control and no video is coming from the camera.
CSCud95583	Not able to control the 6th camera connected in a Visca Daisy Chain.
CSCud99638	When recalling preset, focus value may drift a lot

Protocol

Reference ID	Summary
CSCue00022	One way Video, cause C60 not offering Video protocol on capability table.
CSCud96538	SIP inter-op issue with Panasonic Endpoint KX-VC600 with version TC5.1.4 and above

System

Reference ID	Summary
CSCud24213	Attaching a console cable showed unit did have 2 images present, but none of the images was marked ACTIVE. I.e. the symbolic link in /mnt/base named active was missing.
CSCue30179	Custom wallpaper is used and the file is damaged causing it to be 0kb.
CSCud96920	Codecs crashes due to using incorrect "PNG" file in wallpaper
CSCud96080	There are improper strstr() comparisons in sipevnotifyfunc.c similar to a previously filed defect, CSCud29564.
CSCue70613	Upgrade from SSL 1.0.1c to 1.0.1d. Includes several security fixes.
CSCue19318	PSIRT-1677458585 - US-CERT announcing several buffer overflows in libupnp

Known limitations

Cisco

Reference ID	Equipment	Summary
CSCud33527	Cisco TelePresence Touch 8	When switching/replacing a Touch panel on an MX or EX series system, the main unit needs to be restarted for the new Touch panel to pair. Factory resetting the Touch panel does not help.
CSCts86782	EX90	Touch panel may not come up when upgrading from TC3.1.x to TC5.x on EX90. Solution: Upgrade to TC4.x, then upgrade to TC5.x
CSCtw52376	C20, C40, C60, C90	The Cisco VCS Provisioning (TMS Agent) wizard is available from the CT Touch 8 for the C20, C40, C60, C90 and all other systems with such a codec inside, yet only the Cisco CTS EX 60/90 and Cisco CTS MX 200/300 is supported.
CSCtu98598	C20	If the local microphone mute icon does not appear on the screen, issue the API command: xConfiguration SystemUnit Type: shared.
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 8 to go into constant reboot if downgraded to TC4.1 or less, in the event that the call log is larger than 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	CTS-MAN autodetection of endpoints: Autodetection requires 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) which 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.
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, the TMS will not be able to manage the system. At the same time the 'admin' user with a blank password will be recreated during next reboot if no other user with admin access exists.
N/A	TC4.x and later	xFeedback register Event/KeyDown masks 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 if someone has pressed a button on the remote control.
	TC4.x	If you downgrade from TC4.x.x to any software less than 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 not 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 8 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 8 screen attached.
N/A	Cisco TelePresence Touch TC4.1.0/TT2.1.0	The Cisco TelePresence Touch 8 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	<p>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:</p> <p>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.</p> <p>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.</p> <p>A workaround to restore communication with TMS will be:</p> <p>1) Restart the TMS server, or</p> <p>2) Restart the TMS services, following the below steps:</p> <p>a) Log into the windows console of the TMS server as a user with Windows Administrative permissions.</p> <p>b) Open the Services Control Panel (Control Panel->Administrative Tools->Services).</p> <p>c) 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.</p> <ul style="list-style-type: none"> - World Wide Web Publishing Service - TMSDatabaseScannerService

		<ul style="list-style-type: none"> - TMSLiveService - TMSSchedulerService - TMSSNMPSERVICE <p>* 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.</p> <p>* 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.</p> <p>Workaround to restore the release keys:</p> <p>* 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.</p> <p>Note: Please read the resolved caveats section Reference ID 85930 as well.</p> <p>Note: The above issues are fixed for TMS 13.0</p>
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 zoom only 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 is at maximum 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 is at maximum 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 8 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.
CSCud43145	TC5.x.x and TC6.x.x	It is not possible to take a websnapshot of a presentation when OSD mode is disabled on C20.
CSCty15655	TC5.1.0-TC5.1.2	Internet Explorer 7 is not fully compatible with TC5.1.0-TC5.1.2 due to a missing 'type="submit" ' on login button which is required for IE7.
CSCtr32399	All versions	<p>Some scenarios with H323 direct call setup mode are not supported:</p> <ul style="list-style-type: none"> 7) Dial h323:0374@vcs.domain.com from unregistered EP, where EP B is registered at GK with h323id: 0374@IPADDRESS. IPADDRESS is resolvable to vcs.domain.com. 8) Dial h323:0374@IPADDRESS from unregistered EP, where EP B is registered at GK with h323id: 0374@ vcs.domain.com, the call fail. vcs.domain.com is resolving to the VCS IP address. 9) Dial h323:0374@ IPADDRESS from unregistered EP, where EP B is registered at GK with h323id : 0374, the call fail. IPADDRESS is the VCS ip address. <p>Two supported scenarios are fixed in TC5.1.0 (see Resolved since TC5.0.1).</p>

Open caveats

Reference ID	Summary
CSCtz08306*	If non-standard rate is set for default call rate, different rate is used instead of the rate set when dialing via web or remote.
CSCua08205	Cisco TelePresence Touch 8 may not respond properly to interaction on the bottom row. NOTE: Some Touch 8 devices will still exhibit this behaviour after upgrading TC 5.1.3. These panels are defective. NOTE: This issue was resolved in TC5.1.3 but is reverted in TC5.1.4 and later due to higher probability of false touch registrations in TC5.1.3 (CSCub65256).
CSCty11069	Dual screen connected to an EX90 is black until you have shared presentation in a call.
CSCtz87452*	MX, EX, E20, C and SX series endpoints cannot use CUCM phone books with numbers including white spaces.
CSCtz77758*	SX20: 1680x1050 VGA input detected as 1400x1050.
CSCtz78809*	In some call scenarios, dual stream will not work in a C-series multisite call involving MXP (VCS registered) and CUCM registered endpoints such as CTS/C-series.
CSCtz93712	SIP Presentation will fail when Polycom HDX calls a Cisco multisite endpoint. Cisco endpoint becomes BFCP server and Polycom changes BFCP/TCP port in re-invite without sending a new BFCP HELLO. Issue will be fixed by upgrading Polycom to 3.0.5 which uses BFCP over UDP.

Issues marked with * are resolved in TC6.0.0.

Interoperability

The interoperability section describes the equipment and software revisions that were tested for interoperability with this release. The absence of a device or revision from this section does not imply a lack of interoperability.

The systems below have been tested and verified with this software release. (TC5.1)

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, X7.1.x, X7.2.x	Both Assent and H.460.18/.19 traversal technologies are supported

SIP registrars/proxies

Equipment	Software revision	Comments
CUCM	8.6, 9.0	<ul style="list-style-type: none"> ▶ 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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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	X6.1, X7.1.x, X7.2.x	If you configure a trunk towards CUCM and VCS, you must create a custom SIP trunk that does not remove BFCP lines towards CUCM. If

Communication Server (VCS)		you choose CUCM as profile in the VCS, BFCP will be removed and dual stream (BFCP) will not be possible between CUCM and VCS.
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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 42xx	4.3	
Cisco MCU 45xx	4.3	
Cisco MCU 53xx	4.3	Tested with TC5.1.4
Cisco MCU MSE 8510	4.1, 4.2, 4.3	
Cisco CTMS	1.8, 1.9	<ul style="list-style-type: none"> ▶ 1080p is not available to any other endpoints than C-Series endpoints. <ul style="list-style-type: none"> • 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, TX9000	1.8, 1.9	SIP	<p>CTS C20/EX60/MX200/MX300 will reduce the outgoing rate to 2Mb when the calls are encrypted.</p> <p>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.</p> <p>Note: Since in MultiSite the outgoing image is composed of several incoming calls, the output will still be a 720p composed image.</p> <p>CSCtx91600: The CTS sends GDR instead of IDR in a CTMS conference, this will result in no video on the SX20.</p> <p>CSCtt32132: The CTS does not handle mid-call capability set changes. This will give no video on the CTS if the C-Series endpoint must do a capset reduction. This is typically done when going from point to point to a MultiPoint call (C40), or when starting presentation (C20).</p>
Cisco TelePresence System MXP	F8.3, F9.1, F9.2, F9.3	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	<p>When encryption is set to Best Effort the call will not be encrypted on SIP. Workaround is to set encryption to 'On'.</p> <p>SIP/H.323 transfer does not work.</p> <p>SIP BFCP (dual stream) does not work.</p>
LifeSize Express	LS_EX1_4.7.18 (15)	H.323/SIP	<p>SIP transfer/hold does not work.</p> <p>LifeSize is unable to start presentation (BFCP).</p>
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	<p>Dual stream is limited to 1 FPS.</p> <p>The main video frame rate will never exceed 15 FPS.</p>

Sony PCS-XG80	2.31.00	H.323/SIP	SIP Far End Camera Control does not work. SIP encrypted calls do 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 / 3.0.4 / 3.0.5	H.323/SIP	Presentation (BFCP/TCP) does not work for SIP calls if HDX calls to a Cisco Multisite capable endpoint. From Polycom 3.0.5 BFCP/TCP will not be used, so BFCP(UDP) will work. SIP Transfer does not work.

Introduction software version TC5.1.6

This release note describes the features and capabilities included in the Cisco TelePresence System C/MX/SX/EX-Series codec software version TC5.1.6 released on January 16th 2013.

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



From 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.



Replacing a directly connected (EX-series or MX-series) or a Touch panel connected to Ethernet port 2 (C40, C60 and C90) without restarting the system will leave the Touch panel in an unusable state. A spinning "Connecting" wheel will be displayed and after approximately 2 minutes a manual pairing dialog will appear.

To replace the Touch panel successfully: Power off the system. Swap the Touch panels. Power on the system. The Touch panel will come up, and if necessary download software from the system it is connected to. CDETS id: CSCud33527

Hardware compatibility

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. For a detailed list of compatibility levels and software constraints for the Cisco TelePresence systems please see the two appendices in the end of this document:

- HW dependencies – Compatibility Levels Cisco TelePresence Systems

- HW dependencies – Compatibility Levels Cisco TelePresence Touch 8

From TC5.1.3 there is a lock which prevents the system or Touch 8 from downgrading to an unsupported version.

New features and functionality in TC5.1.6

- ▶ Changed behavior for SX20 power button
- ▶ Support for a new hardware revision of the SX20 CPU
- ▶ Improved fan control for SX20
- ▶ New Camera firmware for Cisco TelePresence Precision HD 1080p 12x cameras

Camera firmware versions in TC5.1.6

Camera type	Hardware ID	Software	First released in
PrecisionHD 1080p 4x S1	52000000	S01752-2.0 FINAL ID: 20012	TC 5.1.5
PrecisionHD 1080p 4X S2	53000003	S01777-2-0 BETA1 ID: 10027	TC5.1.4
PrecisionHD 1080p 12X	50000002	S01718-4.0 FINAL ID: 40083	TC5.1.6

New feature descriptions

Changed behavior for SX20 power button

In TC5.1.6 and later and TC6.0.0 and later, the SX20 will automatically start up when the power supply is connected. Before TC5.1.6, the power button had to be pushed to initiate startup.

Support for a new hardware revision of the SX20 CPU

Support for new hardware revision of the SX20 CPU. There are no differences in functionality between the two revisions. The new hardware revision will not be able to use software earlier than TC5.1.6. Units equipped with the new hardware revision will have the TAN number 800-36554-02 printed on the back of the unit and the API command "xstat SystemUnit Hardware Module CompatibilityLevel" will return "3".

Improved fan control for SX20

TC5.1.6 will reduce fan noise on SX20 by changing the fan control behavior:

- ▶ New minimum fan speed is 1500rpm versus 2000rpm in TC5.1.5.
- ▶ The fan will stay at 0rpm, and not start until temperature is 50 degrees Celsius versus 45 degrees Celsius in TC5.1.5.

New software release for Cisco TelePresence PrecisionHD 12x Camera

With the TC5.1.6 release, the PrecisionHD 1080p 12x camera will automatically be upgraded to camera software release ID40083. Included in this release is:

- ▶ Bug fixes. See Resolved Caveats for details.

Resolved caveats

Using the Bug Search Tool

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 use the Bug Search Tool, follow these steps:

Step 1 Access the Bug Search Tool by navigating 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.

Resolved caveats since TC 5.1.5

Application

Reference ID	Summary
CSCud16471	When sending this string to EX90 on TC5.1.4, and the unit is currently in a ringing state, the Message appear ON TOP of the Accept or Decline message.
CSCua92105	A Cisco TC based TelePresence codec may get into a state where phone queries fail.
CSCud17921	While running TC5.1.4, the system alerts for a split second and then the message is received from TMS indicating "Scheduled Call is Being Connected" and it stops the system from actively ringing while in a ringing state.

Camera

Reference ID	Summary
CSCud58556	Pan motor slippage when invoking a new preset before the location of the previous preset has been reached.

System

Reference ID	Summary
CSCub82639	The fan on one of SX20 Codec sometimes kicks up speed and makes loud noise.
CSCuc64359	When a corrupt config.db is loaded onto a TC5 or TC6 system, the codec will not fully boot and system will not load to a fully operational state.
CSCub85220	EX90 reboots randomly due to an overflow of vsource interrupts when a PC is connected via HDMI/DVI. This causes VPE1 to stop responding and system will boot on heartbeat failure.

Reference ID	Summary
CSCua02850	SX20 date set to 2038 causes restart when placing a call.

Web

Reference ID	Summary
CSCud30041	Web interface does not have the possibility of selecting call type: Audio.

Known limitations

Cisco

Reference ID	Equipment	Summary
CSCud33527	Cisco TelePresence Touch 8	When switching/replacing a Touch panel on an MX or EX series system, the main unit needs to be restarted for the new Touch panel to pair. Factory resetting the Touch panel does not help.
CSCts86782	EX90	Touch panel may not come up when upgrading from TC3.1.x to TC5.x on EX90. Solution: Upgrade to TC4.x, then upgrade to TC5.x
CSCtw52376	C20, C40, C60, C90	The Cisco VCS Provisioning (TMS Agent) wizard is available from the CT Touch 8 for the C20, C40, C60, C90 and all other systems with such a codec inside, yet only the Cisco CTS EX 60/90 and Cisco CTS MX 200/300 is supported.
CSCtu98598	C20	If the local microphone mute icon does not appear on the screen, issue the API command: xConfiguration SystemUnit Type: shared.
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 8 to go into constant reboot if downgraded to TC4.1 or less, in the event that the call log is larger than 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	CTS-MAN autodetection of endpoints: Autodetection requires 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) which 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.
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, the TMS will not be able to manage the system. At the same time the 'admin' user with a blank password will be recreated during next reboot if no other user with admin access exists.
N/A	TC4.x and later	xFeedback register Event/KeyDown masks 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 if someone has pressed a button on the remote control.
	TC4.x	If you downgrade from TC4.x.x to any software less than 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 not 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 8 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 8 screen attached.
N/A	Cisco TelePresence Touch TC4.1.0/TT2.1.0	The Cisco TelePresence Touch 8 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	<p>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:</p> <ol style="list-style-type: none"> 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. <p>A workaround to restore communication with TMS will be:</p> <ol style="list-style-type: none"> 1) Restart the TMS server, or

		<p>2) Restart the TMS services, following the below steps:</p> <p>a) Log into the windows console of the TMS server as a user with Windows Administrative permissions.</p> <p>b) Open the Services Control Panel (Control Panel->Administrative Tools->Services).</p> <p>c) 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.</p> <ul style="list-style-type: none"> - World Wide Web Publishing Service - TMSDatabaseScannerService - TMSLiveService - TMSSchedulerService - TMSNMPSERVICE <p>* 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.</p> <p>* 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.</p> <p>Workaround to restore the release keys:</p> <p>* 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.</p> <p>Note: Please read the resolved caveats section Reference ID 85930 as well.</p> <p>Note: The above issues are fixed for TMS 13.0</p>
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 zoom only 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 is at maximum 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 is at maximum 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 8 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.
CSCud43145	TC5.x.x and TC6.x.x	It is not possible to take a websnapshot of a presentation when OSD mode is disabled on C20.
CSCty15655	TC5.1.0-TC5.1.2	Internet Explorer 7 is not fully compatible with TC5.1.0-TC5.1.2 due to a missing 'type="submit" ' on login button which is required for IE7.
CSCtr32399	All versions	Some scenarios with H323 direct call setup mode are not supported: 10) Dial h323:0374@vcs.domain.com from unregistered EP, where EP B is registered at GK with h323id: 0374@IPADDRESS. IPADDRESS is resolvable to vcs.domain.com. 11) Dial h323:0374@IPADDRESS from unregistered EP, where EP B is registered at GK with h323id: 0374@

		<p>vcs.domain.com, the call fail. vcs.domain.com is resolving to the VCS IP address.</p> <p>12) Dial h323:0374@ IPADDRESS from unregistered EP, where EP B is registered at GK with h323id : 0374, the call fail. IPADDRESS is the VCS ip address.</p> <p>Two supported scenarios are fixed in TC5.1.0 (see Resolved since TC5.0.1).</p>
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Open caveats

Reference ID	Summary
CSCtz08306*	If non-standard rate is set for default call rate, different rate is used instead of the rate set when dialing via web or remote.
CSCua08205	Cisco TelePresence Touch 8 may not respond properly to interaction on the bottom row. NOTE: Some Touch 8 devices will still exhibit this behaviour after upgrading TC 5.1.3. These panels are defective. NOTE: This issue was resolved in TC5.1.3 but is reverted in TC5.1.4 and later due to higher probability of false touch registrations in TC5.1.3 (CSCub65256).
CSCty11069	Dual screen connected to an EX90 is black until you have shared presentation in a call.
CSCtz87452*	MX, EX, E20, C and SX series endpoints cannot use CUCM phone books with numbers including white spaces.
CSCtz77758*	SX20: 1680x1050 VGA input detected as 1400x1050.
CSCtz78809*	In some call scenarios, dual stream will not work in a C-series multisite call involving MXP (VCS registered) and CUCM registered endpoints such as CTS/C-series.
CSCtz93712	SIP Presentation will fail when Polycom HDX calls a Cisco multisite endpoint. Cisco endpoint becomes BFCP server and Polycom changes BFCP/TCP port in re-invite without sending a new BFCP HELLO. Issue will be fixed by upgrading Polycom to 3.0.5 which uses BFCP over UDP.

Issues marked with * are resolved in TC6.0.0.

Interoperability

The interoperability section describes the equipment and software revisions that were tested for interoperability with this release. The absence of a device or revision from this section does not imply a lack of interoperability.

The systems below have been tested and verified with this software release. (TC5.1)

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, X7.1.x, X7.2.x	Both Assent and H.460.18/.19 traversal technologies are supported

SIP registrars/proxies

Equipment	Software revision	Comments
CUCM	8.6, 9.0	<ul style="list-style-type: none"> ▶ 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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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	X6.1, X7.1.x, X7.2.x	If you configure a trunk towards CUCM and VCS, you must create a custom SIP trunk that does not remove BFCP lines towards CUCM. If

Communication Server (VCS)		you choose CUCM as profile in the VCS, BFCP will be removed and dual stream (BFCP) will not be possible between CUCM and VCS.
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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, 4.3	
Cisco MCU 4520	4.1, 4.2, 4.3	
Cisco MCU MSE 8510	4.1, 4.2, 4.3	
Cisco CTMS	1.8, 1.9	<ul style="list-style-type: none"> ▶ 1080p is not available to any other endpoints than C-Series endpoints. <ul style="list-style-type: none"> • 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
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Cisco TelePresence System Content Server	S4.1, S5.1	
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Endpoint Interoperability

Equipment	Software revision	Protocol	Comments
Cisco CTS 500/1x00/30x0/32X0, TX9000	1.8, 1.9	SIP	<p>CTS C20/EX60/MX200/MX300 will reduce the outgoing rate to 2Mb when the calls are encrypted.</p> <p>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.</p> <p>Note: Since in MultiSite the outgoing image is composed of several incoming calls, the output will still be a 720p composed image.</p> <p>CSCtx91600: The CTS sends GDR instead of IDR in a CTMS conference, this will result in no video on the SX20.</p> <p>CSCtt32132: The CTS does not handle mid-call capability set changes. This will give no video on the CTS if the C-Series endpoint must do a capset reduction. This is typically done when going from point to point to a MultiPoint call (C40), or when starting presentation (C20).</p>
Cisco TelePresence System MXP	F8.3, F9.1, F9.2, F9.3	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	<p>When encryption is set to Best Effort the call will not be encrypted on SIP. Workaround is to set encryption to 'On'.</p> <p>SIP/H.323 transfer does not work.</p> <p>SIP BFCP (dual stream) does not work.</p>
LifeSize Express	LS_EX1_4.7.18 (15)	H.323/SIP	<p>SIP transfer/hold does not work.</p> <p>LifeSize is unable to start presentation (BFCP).</p>
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	<p>Dual stream is limited to 1 FPS.</p> <p>The main video frame rate will never exceed 15 FPS.</p>
Sony PCS-XG80	2.31.00	H.323/SIP	<p>SIP Far End Camera Control does not work.</p> <p>SIP encrypted calls do not work.</p> <p>SIP/H.323 transfer does not work.</p> <p>Sony is unable to start presentation (BFCP).</p>
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 / 3.0.4 / 3.0.5	H.323/SIP	Presentation (BFCP/TCP) does not work for SIP calls if HDX calls to a Cisco Multisite capable endpoint. From Polycom 3.0.5 BFCP/TCP will not be used, so BFCP(UDP) will work. SIP Transfer does not work.

Introduction software version TC5.1.5

This release note describes the features and capabilities included in the Cisco TelePresence System C/MX/SX/EX-Series codec software version TC5.1.5 released on November 23rd 2012.

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



From 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.



Replacing a directly connected (EX-series or MX-series) or a Touch panel connected to Ethernet port 2 (C40, C60 and C90) without restarting the system will leave the Touch panel in an unusable state. A spinning "Connecting" wheel will be displayed and after approximately 2 minutes a manual pairing dialog will appear.

To replace the Touch panel successfully: Power off the system. Swap the Touch panels. Power on the system. The Touch panel will come up, and if necessary download software from the system it is connected to. CSCud33527

Hardware compatibility

Please see section in the latest release notes for updated information (top of document).

New features and functionality in TC5.1.5

- ▶ Support for Cyrillic text input on Cisco TelePresence Touch 8
- ▶ New Camera software for Cisco TelePresence Precision HD 1080p 4x cameras
- ▶ New Camera software for Cisco TelePresence Precision HD 1080p 12x cameras
- ▶ New API command “systemtools camerarescue” that will recover 4x cameras that are stuck in the bootloader

Camera type	Hardware ID	Software	First released in
PrecisionHD 1080p 4x S1	52000000	S01752-2.0 FINAL ID:20012	TC 5.1.5
PrecisionHD 1080p 4X S2	53000003	S01777-2-0 BETA1 ID:10027	TC5.1.4
PrecisionHD 1080p 12X	50000002	S01718-4.0 FINAL ID:40082	TC5.1.5

New feature descriptions

Support for Cyrillic text input on Cisco TelePresence Touch 8

The Touch panel now supports Cyrillic text input.

New software release for Cisco TelePresence PrecisionHD 4xS1 Camera

With the TC5.1.5 release, the PrecisionHD 1080p 4xS1 camera will automatically be upgraded to camera software release ID20012. Included in this release is:

- ▶ Improved upgrade from codec
- ▶ Boot loader improvement
- ▶ Support for camera recovery script

New software release for Cisco TelePresence PrecisionHD 12x Camera

With the TC5.1.5 release, the PrecisionHD 1080p 12x camera will automatically be upgraded to camera software release ID40082. Included in this release is:

- ▶ Bug fixes. See Resolved Caveats for details.

New API command “systemtools camerarescue” that will recover 4x cameras that are stuck in the bootloader

The API command will shut down the main application, connect to the camera over serial and if the Precision HD 1080p 4xS1 is detected it will upload a new camera image to recover the camera. The system will be rebooted and the camera will be detected. CSCuc21521.

Resolved caveats

Using the Bug Search Tool

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 use the Bug Search Tool, follow these steps:

Step 1 Access the Bug Search Tool by navigating 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.

Resolved caveats since TC 5.1.4

Protocol

Reference ID	Summary
CSCuc17311	CTS 10bears calling SX-20 in H323 mode, both side cannot see video due to security key exchange failure.
CSCua84373	C-series codecs receive dual channel as part of main video when MCU H.239 minimum bitrate set as 512kbps
CSCua80341	TC 5.x software is sending wrong information for the call in "xfeedback register status/call" issue with incoming and outgoing call.
CSCua87679	Alternative GK support in RRJ messages and URQ messages is not supported.
CSCtx11633	Cisco TC software devices do not display some information via CDP found in other Cisco TelePresence devices. For example, IP and management address information

System

Reference ID	Summary
CSCuc09826	The maintenance shell does not always kick in when the unit gets into a cyclic reboot.
CSCuc87800	A C-Series codec is going into cyclic reboot. Main exits due to audio assertion.
CSCub67656	The pkgextract utility used on the Endeavour and TC Software Endpoints verifies package signatures only at the end of package processing.
CSCub70111	EX90 running TC5.1.3. Traceroute gets response only from the first hop and then response from the localhost itself.
CSCub41046	The shell, tsh, was found to provide an easy means of enumerating the underlying filesystem through manipulating the command line tab completion mechanism.

Camera

Reference ID	Summary
CSCua73240	When closing the privacy cover on EX60 and EX90, the unit does not stop sending video.
CSCuc56856	The Extron FOXBOX DVI plus extender cannot accept HDMI output from camera when using firmware ID 40075 and onwards. (Camera in HDMI mode when it should be in DVI mode)
CSCuc72982	Maximum speed of the zoom motor is too high. This may cause lost steps when recalling presets, which again may result in wrong zoom and focus issues when recalling presets or waking up from standby.
CSCuc72947	The maximum speed of the tilt motor is too high, resulting in step loss and occasional motor reset as the motor hits the end stops after having lost enough many steps.
CSCty15993	If the PrecisionHD 1080p60 4x Camera (1080p4xS2) is plugged in multiple times using the combined HDMI and Control proprietary cable to the SX20 codec, sometimes no video is sent to the codec.
CSCuc21521	Automatic camera recovery script. Checksum validation has failed during boot due to a driver issue. Camera running version ID20010 or earlier. Manual upgrade not possible due to lack of equipment and/or technical assistance.
CSCua09608	Purple output from Rover camera in C90 call.

Video

Reference ID	Summary
CSCud31649	Improved color calibration for MX200 and MX300 with E4 sensor. These units have mainboard revision G or later.
CSCud26674	SX20 may in some situations, typically when sending 720p60 to Movi/JabberVideo stop encoding video.
CSCuc68613	Loss of presentation (H264 or H263++) in H323 call.
CSCub31872	If a C, EX, MX or E series product received an H.263 stream where a single frame was sufficiently large, the product would crash. The crash could be one of several variants, the most typical ending in a lonely SYS_abort output with no other valuable info.
CSCuc40011	Image concealment is using the wrong frames as a reference thus may show parts of an image that has been captured previously in the call.

Touch 8

Reference ID	Summary
CSCuc68224	Touch loses connection and does not retry when network is restored after repowering when using static IP.
CSCtz18015	On codecs running TC 5.1.0, only the default presentation source may be presented via the touch panel.
CSCuc41657	Volume and mic control on the touch freezes while touch screen still working due to termination of SSH connection because of InactivityTimeout setting.

Web

Reference ID	Summary
CSCub41041	The cookies generated for users on the web interface do not have the Secure flag enabled.
CSCub41031	Upon clicking dial button (id=dial) under wsgi/call, the user supplied data in the textbox (id=dialUri) is temporarily added to the <head> block unescaped and thus creates an HTML injection point.

Known limitations

Cisco

Reference ID	Equipment	Summary
CSCud33527	Cisco TelePresence Touch 8	When switching/replacing a Touch panel on an MX or EX series system, the main unit needs to be restarted for the new Touch panel to pair. Factory resetting the Touch panel does not help.
CSCts86782	EX90	Touch panel may not come up when upgrading from TC3.1.x to TC5.x on EX90. Solution: Upgrade to TC4.x, then upgrade to TC5.x
CSCtw52376	C20, C40, C60, C90	The Cisco VCS Provisioning (TMS Agent) wizard is available from the CT Touch 8 for the C20, C40, C60, C90 and all other systems with such a codec inside, yet only the Cisco CTS EX 60/90 and Cisco CTS MX 200/300 is supported.
CSCtu98598	C20	If the local microphone mute icon does not appear on the screen, issue the API command: xConfiguration SystemUnit Type: shared.
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 8 to go into constant reboot if downgraded to TC4.1 or less, in the event that the call log is larger than 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	CTS-MAN autodetection of endpoints: Autodetection requires 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) which 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.
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, the TMS will not be able to manage the system. At the same time the 'admin' user with a blank password will be recreated during next reboot if no other user with admin access exists.
N/A	TC4.x and later	xFeedback register Event/KeyDown masks 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 if someone has pressed a button on the remote control.
	TC4.x	If you downgrade from TC4.x.x to any software less than 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 8 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 8 screen attached.
N/A	Cisco TelePresence Touch TC4.1.0/TT2.1.0	The Cisco TelePresence Touch 8 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	<p>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:</p> <ol style="list-style-type: none"> 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. <p>A workaround to restore communication with TMS will be:</p> <ol style="list-style-type: none"> 1) Restart the TMS server, or

		<p>2) Restart the TMS services, following the below steps:</p> <p>a) Log into the windows console of the TMS server as a user with Windows Administrative permissions.</p> <p>b) Open the Services Control Panel (Control Panel->Administrative Tools->Services).</p> <p>c) 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.</p> <ul style="list-style-type: none"> - World Wide Web Publishing Service - TMSDatabaseScannerService - TMSLiveService - TMSSchedulerService - TMSNMPSERVICE <p>* 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.</p> <p>* 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.</p> <p>Workaround to restore the release keys:</p> <p>* 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.</p> <p>Note: Please read the resolved caveats section Reference ID 85930 as well.</p> <p>Note: The above issues are fixed for TMS 13.0</p>
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 zoom only 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 is at maximum 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 is at maximum 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 8 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.
CSCud43145	TC5.x.x and TC6.x.x	It is not possible to take a websnapshot of a presentation when OSD mode is disabled on C20.
CSCty15655	TC5.1.0-TC5.1.2	Internet Explorer 7 is not fully compatible with TC5.1.0-TC5.1.2 due to a missing 'type="submit" ' on login button which is required for IE7.
CSCtr32399	All versions	Some scenarios with H323 direct call setup mode are not supported: 13) Dial h323:0374@vcs.domain.com from unregistered EP, where EP B is registered at GK with h323id: 0374@IPADDRESS. IPADDRESS is resolvable to vcs.domain.com. 14) Dial h323:0374@IPADDRESS from unregistered EP, where EP B is registered at GK with h323id: 0374@

		<p>vcs.domain.com, the call fail. vcs.domain.com is resolving to the VCS IP address.</p> <p>15) Dial h323:0374@ IPADDRESS from unregistered EP, where EP B is registered at GK with h323id : 0374, the call fail. IPADDRESS is the VCS ip address.</p> <p>Two supported scenarios are fixed in TC5.1.0 (see Resolved since TC5.0.1).</p>
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Open caveats

Reference ID	Summary
CSCtz08306*	If non-standard rate is set for default call rate, different rate is used instead of the rate set when dialing via web or remote.
CSCub54863*	SX20 reboots when making or receiving a SIP call when the system clock is set to 1936.
CSCua08205	Cisco TelePresence Touch 8 may not respond properly to interaction on the bottom row. NOTE: Some Touch 8 devices will still exhibit this behaviour after upgrading TC 5.1.3. These panels are defective. NOTE: This issue was resolved in TC5.1.3 but is reverted in TC5.1.4 and later due to higher probability of false touch registrations in TC5.1.3 (CSCub65256).
CSCty11069	Dual screen connected to an EX90 is black until you have shared presentation in a call.
CSCtz87452*	MX, EX, E20, C and SX series endpoints cannot use CUCM phone books with numbers including white spaces.
CSCtz77758*	SX20: 1680x1050 VGA input detected as 1400x1050.
CSCtz78809*	In some call scenarios, dual stream will not work in a C-series multisite call involving MXP (VCS registered) and CUCM registered endpoints such as CTS/C-series.
CSCtz93712	SIP Presentation will fail when Polycom HDX calls a Cisco multisite endpoint. Cisco endpoint becomes BFCP server and Polycom changes BFCP/TCP port in re-invite without sending a new BFCP HELLO. Issue will be fixed by upgrading Polycom to 3.0.5 which uses BFCP over UDP.

Issues marked with * are resolved in TC6.0.0.

Introduction software version TC5.1.4

This release note describes the features and capabilities included in the Cisco TelePresence System C/MX/SX/EX-Series codec software version TC5.1.4 released on August 17th 2012.

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



From 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

Please see section in the latest release notes for updated information (top of document).

New features and functionality in TC5.1.4

- ▶ New software release for Cisco TelePresence PrecisionHD 1080p 4xS2 Camera.
- ▶ Touch 8 shows unit information during boot
- ▶ Improved support for new hardware revision of Cisco TelePresence Touch 8

New feature descriptions

New software release for Cisco TelePresence PrecisionHD 4xS2 Camera

With the TC5.1.4 release, the PrecisionHD 1080p 4xS2 camera will automatically be upgraded to camera software release ID10027. Included in this release is:

- ▶ Improved upgrade from codec
- ▶ Boot loader improvement

Touch 8 shows unit information during boot

With the TC5.1.4 release, the Touch 8 will display its software version and hardware revision in the lower right corner. This information can be used to determine which software the Touch 8 supports. Specifically if hardware revision is 101654-x or higher it is the new Touch 8 hardware revision which only supports TC5.1.4 and later. CDETS ID: CSCub20808.

Improved support for new hardware revision of Cisco TelePresence Touch 8

With TC 5.1.3 a new hardware revision of the Cisco Touch was supported. The new hardware revision of the Cisco TelePresence Touch 8 is not backward compatible with releases before TC 5.1.3 or TC 4.2.4. There will be a lock preventing a downgrade of a system to a software version that is not supported by the connected touch panel.

Cisco does not recommend using the new Touch with TC5.1.3 due to a weakness in the software supporting the touch panel. Cisco strongly recommends to upgrade to TC5.1.4 if using the new hardware revision of Touch 8.

Resolved caveats

Using the Bug Search Tool

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.

Resolved caveats since TC 5.1.3

Protocol

Reference ID	Summary
CSCub08026	EX90 registered to CUCM, dials in to meeting on TS8710. Call connects and everything looks fine, but after the endpoint does a Hold/Resume, the EX90 stops sending audio (but still receives audio).
CSCua84477	If encryption is set to ON for both the MXP and C-series endpoints then oneway video is experienced on nearly all calls.

System

Reference ID	Summary
CSCua98644	When using TC5.1.0 - TC5.1.3 and setting the systems System Name to exactly 50 characters this will result in the system going into a continuous reboot cycle.
CSCua80341	TC 5.x software is sending wrong information for the call in "xfeedback register status/call" issue with incoming and outgoing call. This causes issues with AMX control panels.
CSCua52818	Usage of GPIO ports on C90/C60 make the codec reboot

Touch 8

Reference ID	Summary
CSCua67474	Calling a H323 contact from touch panel, always dials out using SIP if H323 callsetup mode is Direct.
CSCub65256	Introduction of a new Touch sensor driver in TC5.1.3 may cause false touch registrations.
CSCua38340	When entering Dial Tones quickly on the CT Touch 8, some tones may not be played back locally even though the DTMF tones are sent and the Dial Tones are highlighted in the GUI. This may lead to the user entering too many DTMF tones. NOTE: This issue was not fixed in TC5.1.3 as written in the release notes but is fixed in TC5.1.4

Web

Reference ID	Summary
CSCub20774	Downloading current logs will not include the files in the log folder, only the files in the eventlog subfolder

Known limitations

Cisco

Reference ID	Equipment	Summary
CSCtw52376	C20, C40, C60, C90	The Cisco VCS Provisioning (TMS Agent) wizard is available from the CT Touch 8 for the C20, C40, C60, C90 and all other systems with such a codec inside, yet only the Cisco CTS EX 60/90 and Cisco CTS MX 200/300 is supported.
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 8 to go into constant reboot if downgraded to TC4.1 or less, in the event that the call log is larger than 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 an 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 requires 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) which 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.
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 running TC4.x.x – TC5.1.0 Fixed in TC5.1.1 and later	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, the TMS will not be able to manage the system. At the same time the 'admin' user with a blank password will be recreated during next reboot if no other user with admin access exists.
N/A	TC4.x and later	xFeedback register Event/KeyDown masks 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.
N/A	Cisco TelePresence Touch 8 Any version	The Cisco TelePresence Touch 8 must be connected to the same subnet as the codec it is pairing to for Upnp discovery to work
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	Any	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	Any	If you run cascaded cameras and the chained cameras are running an old camera code, we have seen that zoom only 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	Any	HD-SDI may not work with cables shorter than 3 meters. This is due to a jitter issue.
N/A	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	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.
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.
CSCub63134	TC5.1.0-TC5.1.2	Internet Explorer 7 is not fully compatible with TC5.1.0-TC5.1.2 due to a missing

		'type="submit" ' on login button which is required for IE7.
CSCtr32399	All versions	<p>Some scenarios with H323 direct call setup mode are not supported:</p> <ul style="list-style-type: none"> 16) Dial h323:0374@vcs.domain.com from unregistered EP, where EP B is registered at GK with h323id : 0374@IPADDRESS. IPADDRESS is resolvable to vcs.domain.com 17) Dial h323:0374@IPADDRESS from unregistered EP, where EP B is registered at GK with h323id: 0374@vcs.domain.com, the call fail. vcs.domain.com is resolving to the VCS ip address. 18) Dial h323:0374@ IPADDRESS from unregistered EP, where EP B is registered at GK with h323id : 0374, the call fail. IPADDRESS is the VCS ip address. <p>Two supported scenarios are fixed in TC5.1.0 (see Resolved since TC5.0.1)</p>

Open caveats

Reference ID	Summary
CSCtz08306	If non-standard rate is set for default call rate, different rate is used instead of the rate set when dialing via web or remote
CSCua59516	Endpoint reflects wrong bandwidth info when connected to MCU 4200
CSCua84373	C-series receive dual channel as part of main video when MCU H.239 minimum bitrate set as 512kbps
CSCub54863	SX20 Reboots when making or receiving a SIP call when system clock set to 1936.
CSCua08205	Cisco TelePresence Touch 8 may not respond properly to interaction on the bottom row. NOTE: Some Touch 8 devices will still exhibit this behaviour after upgrading TC 5.1.3. These panels are defective. NOTE: This issue was resolved in TC5.1.3 but is reverted in TC5.1.4 due to higher probability of false touch registrations in TC5.1.3 (CSCub65256)
CSCty11069	Dual screen connected to an EX90 is black until you have shared presentation in a call.
CSCtz87452	MX, EX, E20, C and SX series endpoints can not use CUCM phone books with numbers including white spaces.
CSCtz77758	SX20: 1680x1050 VGA input detected as 1400x1050
CSCtz78809	In some call scenarios, dual stream will not work in a C-series multisite call involving MXP (VCS registered) and CUCM registered endpoints such as CTS/C-series
CSCtz93712	SIP Presentation will fail when Polycom HDX calls a Cisco multisite endpoint. Cisco endpoint becomes BFCP server and Polycom changes BFCP/TCP port in re-invite without sending a new BFCP HELLO. Issue will be fixed by upgrading Polycom to 3.0.5 which uses BFCP over UDP.

Interoperability

The interoperability section describes the equipment and software revisions that were tested for interoperability with this release. The absence of a device or revision from this section does not imply a lack of interoperability.

The systems below have been tested and verified with this software release. (TC5.1)

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, X7.1.x, X7.2.x	Both Assent and H.460.18/.19 traversal technologies are supported

SIP registrars/proxies

Equipment	Software revision	Comments
CUCM	8.6, 9.0	<ul style="list-style-type: none"> ▶ 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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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	X6.1, X7.1.x, X7.2.x	If you configure a trunk towards CUCM and

TelePresence System Video Communication Server (VCS)		VCS, 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 possible between CUCM and VCS.
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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, 4.3	
Cisco MCU 4520	4.1, 4.2, 4.3	
Cisco MCU MSE 8510	4.1, 4.2, 4.3	
Cisco CTMS	1.8, 1.9	<ul style="list-style-type: none"> ▶ 1080p is not available to any other endpoints than C-Series endpoints. <ul style="list-style-type: none"> • 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, TX9000	1.8, 1.9	SIP	<p>CTS C20/EX60/MX200/MX300 will reduce the outgoing rate to 2Mb when the calls are encrypted.</p> <p>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.</p> <p>CSCtx91600: The CTS sends GDR instead of IDR in a CTMS conference, this will result in no video on the SX20.</p> <p>CSCtt32132: The CTS does not handle mid-call capability set changes. This will give no video on the CTS if the C-Series endpoint must do a capset reduction. This is typically done when going from point to point to a MultiPoint call (C40), or when starting presentation (C20).</p>
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	<p>When encryption is set to Best Effort the call will not be encrypted on SIP. Workaround is to set encryption to 'On'.</p> <p>SIP/H.323 transfer does not work.</p> <p>SIP BFCP (dual stream) does not work.</p>
LifeSize Express	LS_EX1_4.7.18 (15)	H.323/SIP	<p>SIP transfer/hold does not work.</p> <p>LifeSize is unable to start presentation (BFCP).</p>
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	<p>Dual stream is limited to 1 FPS.</p> <p>The main video frame rate will never exceed 15 FPS.</p>
Sony PCS-XG80	2.31.00	H.323/SIP	<p>SIP Far End Camera Control does not work.</p> <p>SIP encrypted calls does not work.</p> <p>SIP/H.323 transfer does not work.</p>

			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 / 3.0.4	H.323/SIP	Presentation (BFCP/TCP) does not work for SIP calls if HDX calls to a Cisco Multisite capable endpoint. From Polycom 3.0.5 BFCP/TCP will not be used, so BFCP(UDP) will work. SIP Transfer does not work.

Introduction software version TC5.1.3

This release note describes the features and capabilities included in the Cisco TelePresence System C/MX/SX/EX-Series codec software version TC5.1.3 released on June 28th 2012.

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



From 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

Please see section in the latest release notes for updated information (top of document).

New features and functionality in TC5.1.3

- ▶ New software release for Cisco TelePresence PrecisionHD 1080p 4x Camera.
- ▶ Support for a new hardware revision of Cisco TelePresence Touch 8.
- ▶ Lock that prevents downgrading of EX-series and MX-series systems to versions not supporting the new E4 sensor.

New feature descriptions

New software release for Cisco TelePresence PrecisionHD 4x Camera

With the TC5.1.3 release, the PrecisionHD 1080p 4x camera will automatically be upgraded to camera software release ID20011. Included in this release is:

- Bugfixes (see section Resolved Caveats for details).

Support for new hardware revision of Cisco TelePresence Touch 8

With TC 5.1.3 a new hardware revision of the Cisco Touch is supported. The new hardware revision of the Cisco TelePresence Touch 8 is not backward compatible with releases before TC 5.1.3 or TC 4.2.4. There will be a lock preventing a downgrade of a system to a software version that is not supported by the connected touch panel.

UPDATE: Cisco does NOT recommend using the new Touch with this TC5.1.3. The software support needed improvements so Cisco strongly recommends to upgrade to TC5.1.4 if using the new hardware revision.

The new hardware revision of the CT Touch 8 has the following TAN numbers:

Cisco TelePresence EX60 and EX90	800-38887-01
Cisco TelePresence MX200 and MX300	800-38886-01
Cisco TelePresence SX20/C-series/Profile series	800-38885-01

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.



Resolved caveats

Using the Bug Search Tool

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.

Resolved caveats since TC 5.1.2

Camera

Reference ID	Summary
CSCty15655	The PrecisionHD 1080p 4X camera is not showing the camera serial number when executing the API command: xStatus Camera
CSCua44699	The PrecisionHD 1080p 4x (CTS-PHD-1080P4XS1) Camera fails to boot due to checksum validation failure.

Web

Reference ID	Summary
CSCty15655	Internet Explorer 7 is not fully compatible with TC5.1.0-TC5.1.2 due to a missing 'type="submit" ' on login button which is required for IE7.

Touch 8

Reference ID	Summary
CSCua08205	Cisco TelePresence Touch 8 may not respond properly to interaction on the bottom row. NOTE: Some Touch 8 devices will still exhibit this behaviour after upgrading TC 5.1.3. These panels are defective.
CSCua38340	When entering Dial Tones quickly on the CT Touch 8, some tones may not be played back locally even though the DTMF tones are sent and the Dial Tones are highlighted in the GUI. This may lead to the user entering too many DTMF tones. NOTE: THIS WAS NOT FIXED IN TC5.1.3 but is fixed in TC5.1.4

Known limitations

Cisco

Reference ID	Equipment	Summary
CSCtw52376	C20, C40, C60, C90	The Cisco VCS Provisioning (TMS Agent) wizard is available from the CT Touch 8 for the C20, C40, C60, C90 and all other systems with such a codec inside, yet only the Cisco CTS EX 60/90 and Cisco CTS MX 200/300 is supported.
CSCtu98598	C20	If the local microphone mute icon does not appear on the screen, issue the API command: xConfiguration SystemUnit Type: shared
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 8 to go into constant reboot if downgraded to TC4.1 or less, in the event that the call log is larger than 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 an 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 requires 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) which 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.
<i>CSCtr32420</i>	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'
<i>CSCtr32331</i>	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, the TMS will not be able to manage the system. At the same time the 'admin' user with a blank password will be recreated during next reboot if no other user with admin access exists.
N/A	TC4.x and later	xFeedback register Event/KeyDown masks 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.
	TC4.x	If you downgrade from TC4.x.x to any software less than 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 8 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 8 screen attached.
N/A	Cisco TelePresence Touch TC4.1.0/TT2.1.0	The Cisco TelePresence Touch 8 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	<p>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:</p> <ol style="list-style-type: none"> 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.

		<p>A workaround to restore communication with TMS will be:</p> <ol style="list-style-type: none"> 1) Restart the TMS server, or 2) Restart the TMS services, following the below steps: <ul style="list-style-type: none"> * 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 <ul style="list-style-type: none"> - World Wide Web Publishing Service - TMSDatabaseScannerService - TMSLiveService - TMSSchedulerService - TMSNMPSERVICE <ul style="list-style-type: none"> * 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. <p>Workaround to restore the release keys:</p> <ul style="list-style-type: none"> * 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. <p>Note: Please read the resolved caveats section Reference ID 85930 as well.</p> <p>Note: The above issues are fixed for TMS 13.0</p>
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 zoom only 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 is at maximum 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 is at maximum 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 8 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
<i>CSCty11069</i>	Dual screen connected to an EX90 is black until you have shared presentation in a call.
<i>CSCtz87452</i>	MX, EX, E20, C and SX series endpoints can not use CUCM phone books with numbers including white spaces.
<i>CSCtz77758</i>	SX20: 1680x1050 VGA input detected as 1400x1050
<i>CSCtz78809</i>	In some call scenarios, dual stream will not work in a C-series multisite call involving MXP (VCS registered) and CUCM registered endpoints such as CTS/C-series
<i>CSCtz93712</i>	SIP Presentation will fail when Polycom HDX calls a Cisco multisite endpoint. Cisco endpoint becomes BFCP server and Polycom changes BFCP/TCP port in re-invite without sending a new BFCP HELLO. Issue will be fixed by upgrading Polycom to 3.0.5 which uses BFCP over UDP.

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	<ul style="list-style-type: none"> ▶ 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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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.
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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	<ul style="list-style-type: none"> ▶ 1080p is not available to any other endpoints than C-Series endpoints. <ul style="list-style-type: none"> • 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	<p>CTS C20/EX60/MX200/MX300 will reduce the outgoing rate to 2Mb when the calls are encrypted.</p> <p>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.</p> <p>CSCtx91600: The CTS sends GDR instead of IDR in a CTMS conference, this will result in no video on the SX20.</p> <p>CSCtt32132: The CTS does not handle mid-call capability set changes. This will give no video on the CTS if the C-Series endpoint must do a capset reduction. This is typically done when going from point to point to a MultiPoint call (C40), or when starting presentation (C20).</p>
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	<p>When encryption is set to Best Effort the call will not be encrypted on SIP. Workaround is to set encryption to 'On'.</p> <p>SIP/H.323 transfer does not work.</p> <p>SIP BFCP (dual stream) does not work.</p>
LifeSize Express	LS_EX1_4.7.18 (15)	H.323/SIP	<p>SIP transfer/hold does not work.</p> <p>LifeSize is unable to start presentation (BFCP).</p>
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	<p>Dual stream is limited to 1 FPS.</p> <p>The main video frame rate will never exceed 15 FPS.</p>
Sony PCS- XG80	2.31.00	H.323/SIP	<p>SIP Far End Camera Control does not work.</p> <p>SIP encrypted calls does not work.</p> <p>SIP/H.323 transfer does not work.</p> <p>Sony is unable to start presentation (BFCP).</p>
Polycom VSX 7000	9.0.6.1	H.323/SIP	<p>At low video rate and with main video set to sharpness the VSX will not display any video.</p> <p>SIP/H.323 transfer does not work.</p> <p>H.264 is only used on lower bandwidths.</p>
Polycom HDX 8000 HD	3.0.3.14452 / 3.0.4	H.323/SIP	Presentation (BFCP/TCP) does not work for SIP calls if HDX calls to a Cisco Multisite capable endpoint. From Polycom 3.0.5

			BFCP/TCP will not be used, so BFCP(UDP) will work. SIP Transfer does not work.
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Introduction software version TC5.1.2

This release note describes the features and capabilities included in the Cisco TelePresence System C/MX/SX/EX-Series codec software version TC5.1.2 released on June 1st 2012.

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



From 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

Please see section in the latest release notes for updated information (top of document).

New features and functionality in TC5.1.2

- ▶ New software release for Cisco TelePresence PrecisionHD 1080p 4x Camera.
- ▶ New software release for Cisco TelePresence PrecisionHD 1080p 12x Camera.
- ▶ New languages on Cisco TelePresence Touch 8: Italian, Korean and Dutch.

New feature descriptions

New software release for Cisco TelePresence PrecisionHD 4x Camera

With the TC5.1.2 release, the PrecisionHD 1080p 4x camera will automatically be upgraded to camera software release ID20010. Included in this release is:

- Bugfixes (see section Resolved Caveats for details).

New software release for Cisco TelePresence PrecisionHD 12x Camera

With the TC5.1.2 release, the PrecisionHD 1080p 12x camera will automatically be upgraded to camera software release ID40076. Included in this release is:

- Minor production improvements

New language support on Cisco TelePresence Touch 8

With TC 5.1.2 the Cisco TelePresence Touch 8 now supports Italian, Korean and Dutch in addition to the previously supported languages.

Resolved caveats

Using the Bug Search Tool

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.

Resolved caveats since TC 5.1.1

Camera

Reference ID	Summary
<i>CSCts05788</i>	The Cisco PrecisionHD 1080p 4X camera sometimes will lose video output and connection with the codec when coming out of standby, and in rare occasions when booting up.

Known limitations

Cisco

Reference ID	Equipment	Summary
CSCtw52376	C20, C40, C60, C90	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 EX 60/90 and Cisco CTS MX 200/300 is supported.
CSCtu98598	C20	If the local microphone mute icon does not appear on the screen, issue the API command: <code>xConfiguration SystemUnit Type: shared</code>
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 constant reboot if downgraded to TC4.1 or less, in the event that the call log is larger than 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 an 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 requires 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) which 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.
<i>CSCtr32420</i>	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'
<i>CSCtr32331</i>	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, the TMS will not be able to manage the system. At the same time the 'admin' user with a blank password will be recreated during next reboot if no other user with admin access exists.
N/A	TC4.x and later	xFeedback register Event/KeyDown masks 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.
	TC4.x	If you downgrade from TC4.x.x to any software less than 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	<p>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:</p> <p>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.</p> <p>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.</p>

		<p>A workaround to restore communication with TMS will be:</p> <ol style="list-style-type: none"> 1) Restart the TMS server, or 2) Restart the TMS services, following the below steps: <ul style="list-style-type: none"> * 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 <ul style="list-style-type: none"> - World Wide Web Publishing Service - TMSDatabaseScannerService - TMSLiveService - TMSSchedulerService - TMSNMPSERVICE <ul style="list-style-type: none"> * 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. <p>Workaround to restore the release keys:</p> <ul style="list-style-type: none"> * 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. <p>Note: Please read the resolved caveats section Reference ID 85930 as well.</p> <p>Note: The above issues are fixed for TMS 13.0</p>
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 zoom only 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 is at maximum 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 is at maximum 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
CSCty11069	Dual screen connected to an EX90 is black until you have shared presentation in a call.
CSCty15655	The PrecisionHD 1080p 4X camera is not showing the camera serial number when executing the API command: xStatus Camera
CSCtz87452	MX, EX, E20, C and SX series endpoints cannot use CUCM phone books with numbers including white spaces.
CSCtz77758	SX20: 1680x1050 VGA input detected as 1400x1050
CSCtz93712	SIP Presentation will fail when Polycom HDX calls a Cisco multisite endpoint. Cisco endpoint becomes BFCP server and Polycom changes BFCP/TCP port in re-invite without sending a new BFCP HELLO.

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	<ul style="list-style-type: none"> ▶ 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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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.
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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	<ul style="list-style-type: none"> ▶ 1080p is not available to any other endpoints than C-Series endpoints. <ul style="list-style-type: none"> • 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	<p>CTS C20/EX60/MX200/MX300 will reduce the outgoing rate to 2Mb when the calls are encrypted.</p> <p>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.</p> <p>CSCtx91600: The CTS sends GDR instead of IDR in a CTMS conference, this will result in no video on the SX20.</p> <p>CSCtt32132: The CTS does not handle mid-call capability set changes. This will give no video on the CTS if the C-Series endpoint must do a capset reduction. This is typically done when going from point to point to a MultiPoint call (C40), or when starting presentation (C20).</p>
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	<p>When encryption is set to Best Effort the call will not be encrypted on SIP. Workaround is to set encryption to 'On'.</p> <p>SIP/H.323 transfer does not work.</p> <p>SIP BFCP (dual stream) does not work.</p>
LifeSize Express	LS_EX1_4.7.18 (15)	H.323/SIP	<p>SIP transfer/hold does not work.</p> <p>LifeSize is unable to start presentation (BFCP).</p>
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	<p>Dual stream is limited to 1 FPS.</p> <p>The main video frame rate will never exceed 15 FPS.</p>
Sony PCS-XG80	2.31.00	H.323/SIP	<p>SIP Far End Camera Control does not work.</p> <p>SIP encrypted calls does not work.</p> <p>SIP/H.323 transfer does not work.</p> <p>Sony is unable to start presentation (BFCP).</p>
Polycom VSX 7000	9.0.6.1	H.323/SIP	<p>At low video rate and with main video set to sharpness the VSX will not display any video.</p> <p>SIP/H.323 transfer does not work.</p> <p>H.264 is only used on lower bandwidths.</p>
Polycom HDX 8000 HD	3.0.3.14452 / 3.0.4	H.323/SIP	<p>Far End Camera Control over H323/SIP does not work.</p> <p>Presentation (BFCP) does not work for SIP</p>

			calls if HDX calls to a Cisco Multisite capable endpoint. SIP/H.323 Transfer does not work.
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Introduction software version TC5.1.1

This release note describes the features and capabilities included in the Cisco TelePresence System C/MX/SX/EX-Series codec software version TC5.1.1 released on 16th of May 2012.

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



From 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

Please see section in the latest release notes for updated information (top of document).

New features and functionality in TC5.1.1

- ▶ Support for new E4 camera sensor that will soon ship for the EX60, EX90, MX200 and MX300.
- ▶ New fan control for the Codec C90.
- ▶ New software release for Cisco TelePresence PrecisionHD 1080p4x S2 (SX20) Camera.

New feature descriptions

New fan control for the Codec C90

The fan control has changed to allow the Codec C90 to run cooler. The fans will now run all the time and with a higher RPM than before.

New software release for Cisco TelePresence PrecisionHD4x S2 Camera

With the TC5.1.1 release, the PrecisionHD 1080p 4x S2 (SX20) camera will automatically be upgraded to camera software release ID10026. Included in this release is:

- ▶ Minor production improvements

Resolved caveats

Using the Bug Search Tool

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.

Resolved caveats since TC 5.1.0

System

Reference ID	Summary
<i>CSCty16792</i>	For some EX90 units produced in week 4 2012 and later, the Cisco logo splash screen will not display during the boot up process.
<i>CSCtx57646</i>	If a codec running TC software is configured with three or more DNS servers and is set to use static IP, it will not boot up if all three DNS servers are unreachable.
<i>CSCtz61535</i>	The Cisco Touch will not display any codecs in the codecs to pair with list.
<i>CSCtz35103</i>	A new SX20 might crash when making its first SIP call. The crash is related to an incorrect hwclock, which shows up with the year set to 1936.
<i>CSCtx93044</i>	When 5 DNS servers are configured, only the first 3 are queried

Cisco Touch

Reference ID	Summary
<i>CSCtx57456</i>	Touch panel freezes and/or does not boot up after upgrade.

Protocol

Reference ID	Summary
<i>CSCtr32399</i>	Dialing on the format system@domain does not work when you are NOT registered to a GateKeeper. Note: this bug was partly fixed in TC5.1.0 for the following scenarios: <ol style="list-style-type: none"> 1) Dial h323:0374@vcs.domain.com from unregistered EP, where EP B is registered at GK with h323id : 0374@vcs.domain.com 2) Dial h323:0374@vcs.domain.com from unregistered EP, where EP B is registered at GK with h323id : 0374@vcs.domain.com For a list of the unsupported scenarios see open caveats for TC5.1.4.
<i>CSCtw66129</i>	TC5.1.0 H323: In the call setup the E20 Signals the callingPartyNumber as its IP address not it's E164 address.
<i>CSCtx33081</i>	After upgrading a C20 codec to release TC4.2.2 one is no longer able to retrieve the phonebook from a Polycom CMA
<i>CSCty15649</i>	BFCP does not work between Polycom HDX and TC 5.1.0 for non-multisite endpoints when Polycom initiates the call. Polycom HDX 3.0.3.1 and 3.0.4. NOTE: Due to CSCtz93712 BFCP will fail between a multisite Cisco endpoint and HDX when HDX initiates the call.

Web

Reference ID	Summary
<i>CSCty35957</i>	It is not possible to search the phonebook through the systems web page.

Known limitations

Cisco

Reference ID	Equipment	Summary
CSCtw52376	C20, C40, C60, C90	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 EX 60/90 and Cisco CTS MX 200/300 is supported.
CSCtu98598	C20	If the local microphone mute icon does not appear on the screen, issue the API command: xConfiguration SystemUnit Type: shared
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 constant reboot if downgraded to TC4.1 or less, in the event that the call log is larger than 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 an 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 requires 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) which 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.
<i>CSCtr32420</i>	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'
<i>CSCtr32331</i>	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, the TMS will not be able to manage the system. At the same time the 'admin' user with a blank password will be recreated during next reboot if no other user with admin access exists.
N/A	TC4.x and later	xFeedback register Event/KeyDown masks 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.
	TC4.x	If you downgrade from TC4.x.x to any software less than 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	<p>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:</p> <p>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.</p> <p>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.</p>

		<p>A workaround to restore communication with TMS will be:</p> <ol style="list-style-type: none"> 1) Restart the TMS server, or 2) Restart the TMS services, following the below steps: <ul style="list-style-type: none"> * 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 <ul style="list-style-type: none"> - World Wide Web Publishing Service - TMSDatabaseScannerService - TMSLiveService - TMSSchedulerService - TMSNMPSERVICE <ul style="list-style-type: none"> * 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. <p>Workaround to restore the release keys:</p> <ul style="list-style-type: none"> * 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. <p>Note: Please read the resolved caveats section Reference ID 85930 as well.</p> <p>Note: The above issues are fixed for TMS 13.0</p>
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 zoom only 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 is at maximum 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 is at maximum 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
CSCty11069	Dual screen connected to an EX90 is black until you have shared presentation in a call.
CSCty15655	The PrecisionHD 1080p 4X camera is not showing the camera serial number when executing the API command: xStatus Camera
CSCtz87452	MX, EX, E20, C and SX series endpoints cannot use CUCM phone books with numbers including white spaces.
CSCtz77758	SX20: 1680x1050 VGA input detected as 1400x1050
CSCtz93712	SIP Presentation will fail when Polycom HDX calls a Cisco multisite endpoint. Cisco endpoint becomes BFCP server and Polycom changes BFCP/TCP port in re-invite without sending a new BFCP HELLO.

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, X7.1	Both Assent and H.460.18/.19 traversal technologies are supported

SIP registrars/proxies

Equipment	Software revision	Comments
CUCM	8.6	<ul style="list-style-type: none"> ▶ 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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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, X7.1	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.
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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	<ul style="list-style-type: none"> ▶ 1080p is not available to any other endpoints than C-Series endpoints. <ul style="list-style-type: none"> • 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	<p>CTS C20/EX60/MX200/MX300 will reduce the outgoing rate to 2Mb when the calls are encrypted.</p> <p>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.</p> <p>CSCtx91600: The CTS sends GDR instead of IDR in a CTMS conference, this will result in no video on the SX20.</p> <p>CSCtt32132: The CTS does not handle mid-call capability set changes. This will give no video on the CTS if the C-Series endpoint must do a capset reduction. This is typically done when going from point to point to a MultiPoint call (C40), or when starting presentation (C20).</p>
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	<p>When encryption is set to Best Effort the call will not be encrypted on SIP. Workaround is to set encryption to 'On'.</p> <p>SIP/H.323 transfer does not work.</p> <p>SIP BFCP (dual stream) does not work.</p>
LifeSize Express	LS_EX1_4.7.18 (15)	H.323/SIP	<p>SIP transfer/hold does not work.</p> <p>LifeSize is unable to start presentation (BFCP).</p>
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	<p>Dual stream is limited to 1 FPS.</p> <p>The main video frame rate will never exceed 15 FPS.</p>
Sony PCS-XG80	2.31.00	H.323/SIP	<p>SIP Far End Camera Control does not work.</p> <p>SIP encrypted calls does not work.</p> <p>SIP/H.323 transfer does not work.</p> <p>Sony is unable to start presentation (BFCP).</p>
Polycom VSX 7000	9.0.6.1	H.323/SIP	<p>At low video rate and with main video set to sharpness the VSX will not display any video.</p> <p>SIP/H.323 transfer does not work.</p> <p>H.264 is only used on lower bandwidths.</p>
Polycom HDX 8000 HD	3.0.3.14452 / 3.0.4	H.323/SIP	<p>Far End Camera Control over H323/SIP does not work.</p> <p>Presentation (BFCP) does not work for SIP</p>

			calls if HDX calls to a Cisco Multisite capable endpoint. SIP/H.323 Transfer does not work.
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Introduction software version TC5.1.0

This release note describes the features and capabilities included in the Cisco TelePresence System C/MX/SX/EX-Series codec software version TC5.1.0 released on 22nd of February 2012.

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



From 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

Please see section in the latest release notes for updated information (top of document).

New features and functionality in TC5.1.0

- ▶ Support for the Cisco TelePresence SX20 QuickSet
- ▶ Facility Service button on Cisco Touch
- ▶ Localization of the Cisco Touch
- ▶ Improved GUI
- ▶ Websnapshots for remote sites
- ▶ Web interface enhancements
- ▶ Serviceability enhancements
- ▶ Controlling additional cameras from Touch
- ▶ Performance optimization
- ▶ New Cisco PrecisionHD 1080p12x camera software
- ▶ New Cisco PrecisionHD 1080p4x camera software.
- ▶ New power LED behavior on EX systems
- ▶ New API commands
- ▶ Changed API commands
- ▶ Removed API commands
- ▶ New API configurations
- ▶ Removed API configurations
- ▶ New API Status commands
- ▶ Removed API Status commands

Support for the Cisco TelePresence SX20 Quick Set

The TC5.1.0 release introduces support for the new Cisco TelePresence SX20 Quick Set.

The Cisco TelePresence SX20 Quick Set is a flexible solution that helps you easily turn any flat panel display into a powerful TelePresence system for small to medium-size meeting rooms. The SX20 Quick Set delivers high-definition video quality, multiparty conferencing, and three different camera options to accommodate room size and configurations-all at a value price. The SX20 Quick Set provides the performance expected of more expensive systems, in a sleek, compact, multi-featured package. This powerful quick set is ideal for small businesses just starting out with TelePresence or large enterprises looking to broaden the benefits of TelePresence throughout their organizations.



Note: The Cisco TelePresence SX20 Quick Set requires software version TC5.1.0 or later.

Facility Service button on Cisco Touch

When configured a “?” sign will be shown in the upper left side of the Cisco Touch. This will give quick access to a preconfigured number that can be used for:

- ▶ Support
- ▶ Reception
- ▶ Taxi
- ▶ Etc

This service is configured with the API command: ‘xConfiguration FacilityService Service’

Localization of the Cisco Touch

The Cisco Touch now supports these additional languages:

- ▶ Danish
- ▶ Norwegian
- ▶ Spanish

Improved GUI

An 'Extend Meeting' message will now be displayed on the OSD as well as on the Cisco Touch, when the system has been scheduled using TMS or CTSman, and the system is paired with a Cisco Touch. Previously the message would only appear on the Cisco Touch.

An informational message will now be displayed on the OSD (On Screen Display) after a successful software upgrade or factory reset to indicate success or failure.

WebSnapshots for remote sites

When WebSnapshots is enabled and encryption is not active (in a call) you will now in addition to get local snapshots, also be able to see snapshots of the remote incoming video.

Web interface enhancements

The information in the Maintenance tab has been updated to include:

- What software versions the system currently has valid release keys for.
- Informational text explaining the Upgrade Software, Add Release Key and Add Option Key options.

The system can now be reset to factory default settings from the Maintenance tab.

Serviceability enhancements

The following serviceability enhancements have been included in this release:

Maintenance shell

If the system detects a situation where it is not possible to run the main application it will reboot, if the reboot is unsuccessful the system will go into a 'maintenance mode'. In this mode the following will apply:

- ▶ The system will boot up without starting the main application, hence there will be no video output or GUI on the screen.
- ▶ In this mode it will be possible to connect to the system over a serial connection or SSH (IP) to access a reduced API, which can be used for faultfinding. In this mode the following commands are available: 'factoryreset', 'selectsw', 'reboot', 'version', 'pkgverify', 'help' and 'log'.

Harmonized factory reset

In TC5.1 the following method will be used to factory default the systems:

- ▶ EX60/EX90/SX20/C20:
 - When the unit is off, press and hold the power button
 - Wait until the power LED goes dark and then light up again (approximately 10 seconds).
 - Release the power button and press it twice.
 - The system will boot up and display a confirmation message on the video screen if the process was successful.
- ▶ MX200/MX300
 - Press the small reset button for approximately 5 seconds after switching power on, and then release it.
 - The system will boot up and display a confirmation message on the video screen if the process was successful.

Controlling additional cameras from Touch

A drop-down menu allows selecting one of the connected cameras as main video source. The camera control will operate the camera that is selected as main video source (not available for EX and MX series).

Performance optimization

This release includes performance optimizations that will significantly reduce the CPU load during encrypted conferences.

New power LED behavior on EX systems

The power LED will now be turned off when the system is shutdown/powered off. Previously the LED was blinking in this state.

New Cisco PrecisionHD 1080p12x camera software

With the TC5.1 release, the PrecisionHD 1080p12x camera will automatically be upgraded to camera software release ID40075. Included in this release are:

- ▶ Bug fixes (please look at the Resolved Caveats section)
- ▶ The HDMI output will now actually transmit in HDMI format. Previously it was transmitting using DVI-D format.

New Cisco PrecisionHD 1080p4x camera software

With the TC5.1 release, the PrecisionHD 1080p4x camera will automatically be upgraded to camera software release ID20009. Included in this release are:

- ▶ Bug fixes (please look at the Resolved Caveats section)
- ▶ The camera will no longer apply current when it is standing still. This will avoid breakage that can occur if you try to move the camera by hand.

New API commands

The commands in this section are documented in the API Guides available for download at <http://www.cisco.com/go/TelePresence/docs> and <http://developer.tandberg.com>

- ▶ xCommand Audio Vumeter StopAll
- ▶ xCommand DoNotDisturb Activate
- ▶ xCommand DoNotDisturb Deactivate
- ▶ xCommand FacilityService Dial
- ▶ xCommand Phonebook ContactMethod Modify
- ▶ xCommand SystemUnit Notifications RemoveAll
- ▶ xCommand SystemUnit ReleaseKey List

Changed API commands

- ▶ xCommand Boot
 - Added: Action: <Restart/Shutdown>
- ▶ xCommand Phonebook Contact Add
 - Added: CallType: <Audio/Video>

- ▶ xCommand Phonebook ContactMethod Add
 - Added: Calltype: <Audio/Video>
- ▶ xCommand Provisioning StartUpgrade
 - Removed: AutoComplete
- ▶ xCommand SystemUnit FactoryReset
 - Added: TrailingAction: <NoAction/Restart/Shutdown>

Removed API commands

- ▶ xCommand Camera ReconfigureCameraChain (only C20)
- ▶ xCommand Provisioning CancelUpgrade
- ▶ xCommand Provisioning CompleteUpgrade

New API configurations

The commands in this section are documented in the API Guides available for download at <http://www.cisco.com/go/TelePresence/docs> and <http://developer.tandberg.com>

- ▶ xCommand Audio Vumeter StopAll
- ▶ xConfiguration Conference [1..1] Multipoint Mode
- ▶ xConfiguration Conference [1..1] IncomingMultisiteCall Mode
- ▶ xConfiguration FacilityServices Service [1..5]

Changed API configurations

The commands in this section are documented in the API Guides available for download at <http://www.cisco.com/go/TelePresence/docs> and <http://developer.tandberg.com>

- ▶ xCommand Audio Vumeter StopAll
- ▶ xConfiguration Conference DoNotDisturb Mode
 - Extended valid input from <On/Off> to <On/Off/Timed>
- ▶ xConfiguration Video Output HDMI resolution
 - Added parameter '1680_1050_60'
- ▶ xConfiguration Video Output DVI Resolution
 - Added parameter '1680_1050_60'.

New API Status commands

The commands in this section are documented in the API Guides available for download at <http://www.cisco.com/go/TelePresence/docs> and <http://developer.tandberg.com>

- ▶ xStatus Conference MultiPoint Mode
- ▶ xStatus Conference DoNotDisturb
- ▶ xStatus Notifications

Removed API Status commands

- ▶ xStatus SystemUnitHardware AudioBoard Identifier (only C60/C40)
- ▶ xStatus SystemUnitHardware AudioBoard SerialNumer (only C60/C40)

- ▶ xStatus SystemUnitHardware AudioBoard (Only C20)
- ▶ xStatus SystemUnitHardware VideoBoard (Only C20)

Resolved caveats

Resolved since version TC5.0.1

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:

- Choose **TelePresence** from the Select Product Category menu.
- Choose **Cisco TelePresence System Integrator C Series** from the Select Products menu.
- Choose the version number from the Software Version menu.
- 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
CSCtx89890	The IPv6 address listed in the system information for the Cisco Touch is wrong.
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

Audio

Reference ID	Summary
<i>CSCtw83699</i>	The unit may reboot when you hang up the call due to an audio crash.

Video

Reference ID	Summary
<i>CSCtx91622</i>	The PC input (DVI-I) on the EX90 shows black image.
<i>CSCtx68307</i>	No far-end video in CP layout from MGC at 128k

Protocol

Reference ID	Summary
<i>CSCtx91297</i>	The disconnect cause code values need improvements. Today it is really hard to understand what they mean.
<i>CSCtr32386</i>	Presentation channel does not work properly in a packet loss environment for H.323 where ClearPath is used. The problem is that the downspeeding is not turned off for the presentation channel when ClearPath is used. Eventually the presentation rate will become very low and thus the quality will not be any good.
<i>CSCtw77958</i>	Intermittent no-way audio is experienced on an H.323 enabled EX90 when communicating with an SCCP endpoint on CUCM via a VCS doing H.235 to SRTP media interworking.
<i>CSCtu21642</i>	If a Polycom HDX or a CTS C20 calls one another at call rate 1472 or less, the C20 will lose the far end video when a presentation is started from one of the sides.
<i>CSCtw70091</i>	If a Cisco C-Series endpoint calls Polycom (HDX) on SIP and starts presentation - the presentation will not work.
<i>CSCtx90146</i>	Far End Camera Control does not work from an MXP system toward a CTS MX200 or MX300.

OSD (On Screen Display)

Reference ID	Summary
<i>CSCtx80829</i>	When resolution is set to auto and monitor is waking up from standby we sometimes see that the font size for advanced configuration and phonebook has the wrong font size. This is dependent on the monitor. However, if resolution is set to auto and I unplug the monitor (or turn it off), and then reboot the codec. The font size is wrong when plugging in the monitor again.

System

Reference ID	Summary
<i>CSCtx90151</i>	The endpoint seems to only try looking up the NAPTR records once after system boot or provisioning mode set to VCS. If that lookup fails for some reason, the system will never retry looking up the NAPTR and provisioning will never succeed.
<i>CSCts05976</i>	Implementing remote access restrictions may lock out access from the system. 'xConfiguration Network 1 RemoteAccess Allow: 1.2.3.4'
<i>CSCtq42908</i>	Cisco TelePresence C/EX series codec may not deny incoming call when a call is present.
<i>CSCtx68314</i>	When the system is in standby it will not wake up if a message box is sent to it.

Reference ID	Summary
	This message box will appear on the screen and will be present when you wake up the system.

Camera

Reference ID	Summary
<i>CSCtx14471</i>	PrecisionHD 1080p 12x camera: Abnormal Camera Behavior Upon recalling Presets.
<i>CSCts68965</i>	When selecting presets that affects a camera and its associated video source in a daisy chain, it will not select the video source before the cameras ahead of it in the chain has set their positions stored on the same preset.
<i>CSCtr25427</i>	PrecisionHD 1080p 12x camera: The system does not detect cameras connected in a daisy chain.
<i>CSCty10745</i>	The PrecisionHD 1080p 4X camera displays an overexposed image when pointed towards a window when running at 1080p resolution.
<i>CSCty10743</i>	Autofocus fails when going from brighter far distance to darker area in close distance to the camera.
<i>CSCtx68303</i>	The command 'xstatus camera' returns empty values for the parameters 'Manufacturer, Model and SoftwareID'.

Web

Reference ID	Summary
<i>CSCtx89900</i>	When system name contain local language character, I am not able to web into the codec anymore. It hit http500 internal server error.
<i>CSCty11412</i>	Sometimes upgrading via HTTPS fails.
<i>CSCtx90257</i>	Sometimes after upgrading to TC5.0 or TC5.0.1, HTTPS is not working.

Known limitations

Cisco

Reference ID	Equipment	Summary
CSCtw52376	C20, C40, C60, C90	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	C20	If the local microphone mute icon does not appear on the screen, issue the api command: xConfiguration SystemUnit Type: shared
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 constant reboot if downgraded to TC4.1 or less, in the event that the call log is larger than 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 an 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 requires 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) which 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.
<i>CSCtr32420</i>	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'
<i>CSCtr32331</i>	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, TMS will not be able to manage the system. At the same time the 'admin' user with a blank password will be recreated during next reboot if no other user with admin access exists.
N/A	TC4.x and later	xFeedback register Event/KeyDown masks 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.
	TC4.x	If you downgrade from TC4.x.x to any software less than 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	<p>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:</p> <ol style="list-style-type: none"> 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.

		<p>A workaround to restore communication with TMS will be:</p> <ol style="list-style-type: none"> 1) Restart the TMS server, or 2) Restart the TMS services, following the below steps: <ul style="list-style-type: none"> * 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 <ul style="list-style-type: none"> - World Wide Web Publishing Service - TMSDatabaseScannerService - TMSLiveService - TMSSchedulerService - TMSNMPSERVICE <ul style="list-style-type: none"> * 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. <p>Workaround to restore the release keys:</p> <ul style="list-style-type: none"> * 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. <p>Note: Please read the resolved caveats section Reference ID 85930 as well.</p> <p>Note: The above issues are fixed for TMS 13.0</p>
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 is at maximum 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 is at maximum 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
<i>CSCty11069</i>	Dual screen connected to an EX90 is black until you have shared presentation in a call.
<i>CSCty15655</i>	The PrecisionHD 1080p 4X camera is not showing the camera serial number when executing the API command: xStatus Camera
<i>CSCtr32399</i>	Dialing on the format system@domain does not work when you are NOT registered to a GateKeeper. This issue has partly been fixed.
<i>CSCty15649</i>	SIP presentation sharing (BFCP) does not work between Polycom HDX and TC 5.1 when Polycom initiates the call. Polycom HDX 3.0.3.1
<i>CSCtx57646</i>	If a codec running TC software is configured with three or more DNS servers and is set to use static IP, it will not boot up if all three DNS servers are unreachable.

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	<ul style="list-style-type: none"> ▶ 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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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.
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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	<ul style="list-style-type: none"> ▶ 1080p is not available to any other endpoints than C-Series endpoints. <ul style="list-style-type: none"> • 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	<p>CTS C20/EX60/MX200/MX300 will reduce the outgoing rate to 2Mb when the calls are encrypted.</p> <p>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.</p> <p><i>CSCtx91600</i>: The CTS sends GDR instead of IDR in a CTMS conference, this will result in no video on the SX20.</p> <p><i>CSCtt32132</i>: The CTS does not handle mid-call capability set changes. This will give no video on the CTS if the C-Series endpoint must do a capset reduction. This is typically done when going from point to point to a MultiPoint call (C40), or when starting presentation (C20).</p>
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	<p>When encryption is set to Best Effort the call will not be encrypted on SIP. Workaround is to set encryption to 'On'.</p> <p>SIP/H.323 transfer does not work.</p> <p>SIP BFCP (dual stream) does not work.</p>
LifeSize Express	LS_EX1_4.7.18 (15)	H.323/SIP	<p>SIP transfer/hold does not work.</p> <p>LifeSize is unable to start presentation (BFCP).</p>
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	<p>Dual stream is limited to 1 FPS.</p> <p>The main video frame rate will never exceed 15 FPS.</p>
Sony PCS-XG80	2.31.00	H.323/SIP	<p>SIP Far End Camera Control does not work.</p> <p>SIP encrypted calls does not work.</p> <p>SIP/H.323 transfer does not work.</p> <p>Sony is unable to start presentation (BFCP).</p>
Polycom VSX 7000	9.0.6.1	H.323/SIP	<p>At low video rate and with main video set to sharpness the VSX will not display any video.</p> <p>SIP/H.323 transfer does not work.</p> <p>H.264 is only used on lower bandwidths.</p>
Polycom HDX 8000 HD	3.0.3.14452	H.323/SIP	<p>Far End Camera Control over H323/SIP does not work.</p> <p>Presentation (BFCP) does not work for SIP</p>

			calls if initiated from the Cisco side. SIP/H.323 Transfer does not work.
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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.

Hardware compatibility

Please see section in the latest release notes for updated information (top of document).

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 fail 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
<i>CSCtx17339</i>	Using Touch UI, joining One Button To Push (OBTP) meeting with illegally high call rate fails
<i>CSCtu93881</i>	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
<i>CSCtw64660</i>	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

Please see section in the latest release notes for updated information (top of document).

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 1080p12x camera software
- ▶ New Cisco PrecisionHD 1280p4x 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 appear in the codec's eventlog.

New Cisco PrecisionHD 1080p12x camera software

With the TC5.0 release, the PrecisionHD 1080p12x 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 1080p4x camera software

With the TC5.0 release, the PrecisionHD 1080p4x 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 are 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 are 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 are 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 are 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
<i>CSCtt14290</i>	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.
<i>CSCtu42342</i>	The URI is unreadable in the Call Status menu of the Cisco Touch if you have more than one call connected.
<i>CSCtw51229</i>	Unable to pair Cisco Touch with codec set up to use IPv6.
<i>CSCtw51259</i>	When setting transport protocol to TCP from the Cisco Touch the system loses

Reference ID	Summary
	registration on SIP.
<i>CSCtr22629</i>	PNG images uploaded through the Web UI as wallpaper is not available for selection through the Cisco Touch background settings menu.
<i>CSCtw51216</i>	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.
<i>CSCtu42339</i>	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
<i>CSCtw51233</i>	Artifacts in audio transmitted to the other side when using local speaker re-enforcement.
<i>CSCtu18582</i>	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
<i>CSCtw51213</i>	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.
<i>CSCts98529</i>	Cisco TelePresence C60 series codec may present a solid green bar at the far end when during a multisite call.
<i>CSCts25429</i>	The systems overscan feature does not survive a reboot once set. The settings survive but the system boot up with no overscan set.
<i>CSCtu06808</i>	The left edge of the CTS EX90 image does not look perfectly clean. There is a thin bright line that shouldn't be there.
<i>CSCtu15882</i>	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.
<i>CSCtr32389</i>	The composite output will display black frames when displaying more than two windows. It will set up the black borders but you will not see any video.

Protocol

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

Reference ID	Summary
<i>CSCts28171</i>	C/EX-series endpoints lose audio while attending MCU conference with interworking encrypted calls.
<i>CSCtr25756</i>	TC based software is unable to register with a Huawei IMS system
<i>CSCto14930</i>	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.
<i>CSCtu49826</i>	A C-Series system will report "Cannot connect call" when dialing a second site before the first site has connected.
<i>CSCtt14526</i>	The Cisco CTS C20 loses main video from a RadVision Scoopia MCU when the C20 starts presentation (dual channel).
<i>CSCtu13714</i>	If the network MultiWay protocol is set to auto and the default protocol is set to SIP, MultiWay will not be initiated.
<i>CSCtu18339</i>	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.
<i>CSCtu18446</i>	<ul style="list-style-type: none"> - 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.
<i>CSCtu18803</i>	Chinese System name will not be shown in a TANDBERG MPS conference.
<i>CSCtt14285</i>	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
<i>CSCtu18453</i>	Trying to add another participant in a full MultiSite will not give any OSD warning, but rather nothing happens at all.
<i>CSCtt14512</i>	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
<i>CSCtu13243</i>	Time will be one hour off during the winter season if Time Zone is set to Russia.
<i>CSCtu42348</i>	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.
<i>CSCtu42607</i>	IPv6 DNS addresses are not set up and hence DNS will not work with IPv6.
<i>CSCtu42542</i>	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.
<i>CSCtu06798</i>	802.1x is not working
<i>CSCtu42348</i>	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.
<i>CSCtr32417</i>	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
<i>CSCtt14278</i>	Autofocus sometimes triggered after a preset and sometimes not. The result is bad focus sometimes after a preset is triggered.

Web

Reference ID	Summary
<i>CSCtu71686</i>	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.
<i>CSCtr93652</i>	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	<p>There is a HW incompatibility between the C-Series systems and some NEC monitors. So far this is seen with:</p> <p>NEC LCD4020</p> <p>NEC P401</p> <p>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.</p>
CSCtw60572	TC3-TC4.1.2	<p>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 than what is expected in TC4.1.</p> <p>Workaround:</p> <ul style="list-style-type: none"> * Clear the call history before you downgrade. * Factory default the system after downgrade if it goes into constant reboot.
NA	TC5.x	<p>'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.</p>
NA	TC5.x	<p>CTS-MAN autodetection of endpoints: Autodetection requires CTI monitoring to be enabled in the device information on CUCM. This is available in:</p> <p>UCM 8.6(1) Device Pack shipping in December</p> <p>UCM 8.6(2) which is not qualified for CTS-MAN 1.8</p> <p>Workaround: Manually add endpoints to CTS-MAN</p>
CSCts99218	CTMS 1.8.0	<p>Initial release of CTMS 1.8.0 supports 720p only with all endpoints running TC5.0 or later.</p>
CSCtr32410	TC1-TC3.x	<p>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.</p>
CSCtr32420	Any	<p>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'</p>
CSCtr32331	C20	<p>A C20 participating in a MultiSite will not be able to send the following video formats in its</p>

		main video channel: 1280*768, 1280*800 and 1440*900.
N/A	TC4.x and later	If the 'admin' user is deleted, TMS will not be able to manage the system. At the same time the 'admin' user with a blank password will be recreated during next reboot if no other user with admin access exists.
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. This issue will not be fixed. The recommended usage is to utilize a SIP trunk between VCS and OCS. Direct registration is not supported.
	TC4.x	If you downgrade from TC4.x.x to any software less than 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	<p>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:</p> <ol style="list-style-type: none"> 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. <p>A workaround to restore communication with TMS will be:</p> <ol style="list-style-type: none"> 1) Restart the TMS server, or 2) Restart the TMS services, following the below steps:

		<p>* Log into the windows console of the TMS server as a user with Windows Administrative permissions</p> <p>* Open the Services Control Panel (Control Panel->Administrative Tools->Services)</p> <p>* 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</p> <ul style="list-style-type: none"> - World Wide Web Publishing Service - TMSDatabaseScannerService - TMSLiveService - TMSSchedulerService - TMSNMPSERVICE <p>* 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.</p> <p>* 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.</p> <p>Workaround to restore the release keys:</p> <p>* 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.</p> <p>Note: Please read the resolved caveats section Reference ID 85930 as well.</p> <p>Note: The above issues are fixed for TMS 13.0</p>
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 zoom only 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 is at maximum 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 is at maximum 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
<i>CSCtw52376</i>	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.
<i>CSCtu98598</i>	If the local microphone mute icon does not appear on the screen, issue the API command: xConfiguration SystemUnit Type: shared
<i>CSCtw51205</i>	Banner with Cisco log and clock widget appears on display when in a call.
<i>CSCtw53440</i>	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	<ul style="list-style-type: none"> ▶ 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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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, X7.1	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.
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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	
Cisco MCU 4210	4.1, 4.2	
Cisco MCU 4520	4.1, 4.2	
Cisco CTMS	1.8	<ul style="list-style-type: none"> ▶ 1080p is not available to any other endpoints than C-Series endpoints. <ul style="list-style-type: none"> • 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- 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.

Cisco TelePresence systems hardware dependencies

Introduction

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. There are two ways to identify the minimum software version of a system, using the xAPI/tshell or by looking at the TAN number. These methods are presented in the following. Downgrading to an unsupported software version will fail. **The latest software releases are always backward compatible with all hardware versions.**

NAND Flash

The Cisco TelePresence endpoints except SX20 and MX300G2 are using a NAND flash memory for general storage and transfer of data. Several versions of this NAND flash have been used in production. For simplicity in this document we will call the first flash version 0, the second flash version 1 and the third flash (expected Summer 2014) version 2. Endpoints that have 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. Endpoints that have version 2 of the flash memory must run software TC5.1.9 and later, TC6.1.2 and later or TC7 and later.

If your endpoint does not have the CompatibilityLevel command or it returns compatibility level 0 it has the flash version 0 installed. This means that any software version can be installed on the system. When the compatibility level is higher than 0, a newer software release is needed. Version 2 of the flash memory will be identified by software compatibility level 4. **Please refer to the compatibility level table for further details.**

Integrated camera

For units with an integrated 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. Although 5.1.1 can be installed, Cisco recommends TC5.1.6 due to major color calibration improvements for MX series with the E4 sensor. CSCud31649.

To check which camera sensor the EX series or MX series product has, execute the API command "xStatus camera HardwareID".

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 will fail and the unit will reboot, keeping its existing software version. This example showed an EX60 with the E3 sensor, which means it can be downgraded to versions prior to TC 5.1.1.

Using the xAPI / tshell to identify software limitations

Executing the API command **xStatus SystemUnit Hardware Module CompatibilityLevel** will reveal if there are any software constraints for the system.

The result returned when running the command will be 0, 1, 2, 3, 4, v, 1v, 2v or 4v:

Compatibility level	Applicable systems	Description	Minimum software version			
			TC4 ¹⁾	TC5 ³⁾	TC6	TC7
0	All except MX200 G2	No restrictions	All	All	All	All
0	MX300 G2	Product was introduced with TC7.0.0	None	None	None	7.0.0
1	All	The system has the new flash memory installed	4.2.0	All	All	All
2	EX/MX	The system has the new flash memory and the new E4 sensor	4.2.4	5.1.6 ²⁾	All	All
2	SX20	Product was introduced with TC5.1.0	None	5.1.0	All	All
2	C20	A new hardware revision, minor change	4.2.3	5.1.1	All	All
3	SX20	A new hardware revision, minor change	None	5.1.6	All	All
3	C40	A new hardware revision, minor change	4.2.4	5.1.5	All	All
V	MX300	Product was introduced with TC5.0.1	None	5.0.1	All	All
1V	MX300	NAND flash version 1. Minimum software version TC5.1.0.	None	5.1.0	All	All
2V	MX300	NAND flash version 1 and E4 sensor.	None	5.1.6 ²⁾	All	All
4	All TC EPs except SX20/MX300G2	NAND flash version 2	None	5.1.9	6.2.2 / 6.3.0	All

¹⁾ Although listed in this table **TC4 is no longer supported** and should not be used by any customer.

²⁾ Although TC5.1.1 can be installed, Cisco recommends TC5.1.6 due to major color calibration improvements for MX series with the E4 sensor. CSCud31649.

³⁾ TC5 will shortly be end of support; customers should migrate to TC6 or TC7.

Examples of executing the API command:`xStatus SystemUnit Hardware Module CompatibilityLevel`

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 4.2.4)

Using the TAN Number to identify software limitations

By finding the TAN number of the system, it is possible to determine the software restrictions without executing the API command. Find the compatibility level from the TAN number in the tables below and look up the software constraints in the above table.

EX series and MX series

System	TAN number	Camera Sensor	NAND version	Compatibility level
EX60				
	800-35326-05	E3	0	0
	800-35326-06	E3	1	1
	800-35326-07	E3	1	1
	800-35326-08	E4	1	2
(new LCD)	800-35326-09	E4	1	2
(new LCD)	800-35326-10	E4	2	4
Non-crypto	800-36052-05	E3	0	0
Non-crypto	800-36052-06	E3	1	1
Non-crypto	800-36052-07	E3	1	1
Non-crypto	800-36052-08	E4	1	2
Non-crypto (new LCD)	800-36052-09	E4	1	2
Non-crypto (new LCD)	800-36052-10	E4	2	4
EX90				
	800-35448-05	E3	0	0
	800-35448-06	E3	1	1
	800-35448-(07-10)	E4	1	2
	800-35448-11	E4	2	4
(New LCD)	800-35448-12	E4	2	4
Non-crypto	800-36051-05	E3	0	0
Non-crypto	800-36051-06	E3	1	1
Non-crypto	800-36051-(07-10)	E4	1	2
Non-crypto	800-35448-11	E4	2	2
Non-crypto (New LCD)	800-35448-12	E4	2	4
MX200				
	800-36834-02	E3	0	0
	800-36834-03	E3	1	1
	800-36834-05	E4	1	2
	800-36834-06	E4	2	4
Non-crypto	800-37182-02	E3	0	0
Non-crypto	800-37182-03	E3	1	1
Non-crypto	800-37182-05	E4	1	2
Non-crypto	800-37182-06	E4	2	4
MX300				
	800-36919-03	E3	1	V
	800-36919-04	E4	1	2V
	800-36919-05	E4	2	4V
Non-crypto	800-37822-03	E3	1	V
Non-crypto	800-37822-04	E4	1	2V
Non-crypto	800-37822-05	E4	2	4V

C series and Quickset Series

System	TAN number	NAND version	Compatibility level
C20			
	800-35408-01	0	0
	800-35408-02	1	1
New USB chip	800-35408-02 D0	1	2
Non-crypto	800-36060-01	0	0
Non-crypto	800-36060-02	1	1
Non-crypto New USB chip	800-36060-02 D0	1	2
C40			
	800-34910-01	0	0
	800-34910-02	1	1
	800-34910-04	1	3
	800-34910-05	2	4
Non-crypto	800-36047-01	0	0
Non-crypto	800-36047-02	1	1
Non-crypto	800-36047-04	1	3
Non-crypto	800-36047-05	2	4
C60			
	800-35367-01	0	0
	800-35367-02	1	1
	800-35367-04	2	4
Non-crypto	800-36048-01	0	0
Non-crypto	800-36048-02	1	1
Non-crypto	800-36048-04	2	4
C90			
	800-35342-02	0	0
	800-35342-03	1	1
	800-35342-04	2	4
Non-crypto	800-36049-02	0	0
Non-crypto	800-36049-03	1	1
Non-crypto	800-36049-04	2	4
SX20	TAN number	CPU revision	Compatibility level
	800-36554-01	0	2
	800-36554-02	1	3
MX300 G2	TAN number	CPU revision	Compatibility level
	800-100474-01	0	0

Cisco TelePresence Touch 8 hardware dependencies

New hardware revisions for Cisco TelePresence Touch 8

There are as of TC7 four hardware levels of the Touch 8. The new hardware levels 1, 2 and 3 require 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.

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 minimum software supported by using the TAN number with this table.

TAN number	Description	HW level	System type	Minimum release			
				TC4 ¹⁾	TC5 ²⁾	TC6	TC7
800-35447-04	Touch sensor rev 1	0	EX	All	All	All	All
800-35343-05	Touch sensor rev 1	0	SX/C/Profile	All	All	All	All
74-9543-02	Touch sensor rev 1	0	MX	All	All	All	All
800-35447-06	OMAP rev 2	1	EX	4.2.4	5.1.4	All	All
800-35343-07	OMAP rev 2	1	SX/C/Profile	4.2.4	5.1.4	All	All
74-9543-04	OMAP rev 2	1	MX	4.2.4	5.1.4	All	All
800-38887-01	Touch sensor rev 2	2	EX	4.2.4	5.1.4	All	All
800-38886-01	Touch sensor rev 2	2	MX	4.2.4	5.1.4	All	All
800-38885-01	Touch sensor rev 2	2	SX/C/Profile	4.2.4	5.1.4	All	All
800-38887-02	OMAP rev 2 and Touch sensor rev 2	3	EX	4.2.4	5.1.4	All	All
800-38886-02	OMAP rev 2 and Touch sensor rev 2	3	MX	4.2.4	5.1.4	All	All
800-38885-02	OMAP rev 2 and Touch sensor rev 2	3	SX/C/Profile	4.2.4	5.1.4	All	All

¹⁾ Although listed in this table **TC4 is no longer supported** and should not be used by any customer.

²⁾ TC5 will shortly be end of support; customers should migrate to TC6 or TC7.

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 for EX/MX/C-Series	Software for SX series	Serial number range
AES Encryption	s52000tc5_1_9.pkg	s52010tc5_1_9.pkg	All
No Encryption	s52001tcnc5_1_9.pkg	s52011tcnc5_1_9.pkg	All
AES Encryption (for CUCM)	cmterm-s52000tc5_1_9.cop.sgn	cmterm-s52010tc5_1_9.cop.sgn	All
No Encryption (for CUCM)	cmterm-s52001tcnc5_1_9.cop.sgn	cmterm-s52011tcnc5_1_9.cop.sgn	All

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