

Collaboration Endpoint Software 9.2
NOVEMBER 2017



Application Programming Interface (API) Reference Guide

Cisco Spark Room Kit

What's in this guide?

The top menu bar and the entries in the table of contents are all hyperlinks, just click on them to go to the topic.

We recommend you visit our web site regularly for updated versions of the user documentation.

Go to: <http://www.cisco.com/go/roomkit-docs>

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Chapter 1

Introduction

About this guide

This guide introduces you to the Application Programmer Interface (API) for the Collaboration Endpoint software, and serves as a reference guide for the command line commands for the following product:

- Cisco Spark Room Kit

The guide describes the API for on-premise registered video systems (CUCM, VCS) as well as video systems registered to Cisco's cloud service (Cisco Spark). For Cisco Spark registered systems only a subset of the API is available, and the user role (integrator and roomcontrol) of the local user determines which commands are available.

Downloading the user documentation

You can download the user documentation from the Cisco web site, go to: [▶ http://www.cisco.com/go/roomkit-docs](http://www.cisco.com/go/roomkit-docs)

For Spark registred systems, go to:
[▶ https://support.ciscospark.com](https://support.ciscospark.com)

Guidelines for how to find the documentation on the Cisco web site are included in the [▶ User documentation on the Cisco web site](#) appendix.

What's new in CE9.2

This section provides an overview of the new and changed system settings, and the new features and improvements in the Cisco Collaboration Endpoint software version 9.2 (CE9.2) compared to CE9.1.

For more details, we recommend reading the Software release notes:

► <http://www.cisco.com/c/en/us/support/collaboration-endpoints/telepresence-quick-set-series/products-release-notes-list.html>

New features and improvements

Macro framework

The macro framework allows users and integrators to write JavaScript macros in order to automate scenarios and customize endpoint behavior so that it suites an individual customer's requirements.

The combination of macros and powerful features such as listening for events/status changes, automating execution of commands and configurations, and providing local control functionality for the In-Room control feature, provides many possibilities for custom setups.

Minor behavioral changes, such as having the video system in Do Not Disturb for an infinite amount of time, can be easily realized by macros. Some other examples are: Reset configurations automatically, make a call at a certain time of the day, and issue alert or help messages depending on status changes.

The macro editor, which also provides several example macros, is available from the video system's web interface.

Branding and halfwake customization

You can upload your own text and images to customize the appearance of the screen and user interface in both the halfwake state and the awake state.

In the *Halfwake* state you can:

- Add a background brand image to the screen and user interface.
- Add a small logo in the bottom right corner of the screen and user interface.

In the *Awake* state you can:

- Add a small logo in the bottom right corner of the screen and user interface.
- Add a label or message in the bottom left corner of the screen (not the user interface).

Source composition

You can compose up to four input sources (depending on how many input sources are available on the codec) into one image. This is the image that will be sent in the main video stream to the far end in a call. Source composition can only be enabled via the API, so we recommend creating a user interface extension combined with a macro to control the compositions on demand.

This feature replaces some of the functionality that was provided by the TC Console application for TC software.

HTTP Proxy support

You can set up the video system to go through a HTTP Proxy when registering it to Cisco's cloud service, Cisco Spark.

User interface features

- The Settings panel is restructured.
- The Settings panel in the user interface (Touch 10) can be protected by the video system's admin password. If the password is blank, anyone can access the Settings and factory reset the system.
- If you select the Russian language on the user interface, you can choose between a Russian keyboard and a keyboard with a Latin character set.
- Arabic and Hebrew languages are added to the user interface. Also localized keyboards are included.
- Basic IEEE 802.1x settings are added to the Settings panel in the user interface.

Support for the Snap to Whiteboard feature

The Snap to Whiteboard feature is now available for all products that have a camera with speaker track functionality: SX80 with Cisco TelePresence Speaker Track 60 camera or Cisco Spark Quad camera, MX700/MX800 with dual camera, Room Kit, Room Kit Plus, Room 55 and Room 70.

When the video system detects a person that is speaking close to the whiteboard, the camera view will switch to the whiteboard area. The wizard in the Settings panel on the Touch 10 user interface helps you to set up the feature and define where the whiteboard area is.

USB to Serial port support

You can connect a USB (Type A) to serial (D-sub 9) adapter to access the video systems API. Cisco recommends the UC232R-10 USB to RS232 (FTDI) adapter.

Mute and unmute remote participants in a CMS hosted conference (Active Control)

When a video system is enabled for Active Control in a CMS (2.1 or later) conference you can mute and unmute remote participants from the participant list on the user interface (the feature must also be enabled on the CMS).

A video system that is running software version CE9.2 will not be unmuted directly. When you try to unmute such a video system remotely, a message will show up on its screen requesting the user to unmute the audio locally.

API commands for Custom input prompt

API commands are introduced to allow for an input prompt in the user interface: `xCommand UserInterface Message TextInput *`. When issuing the display command a prompt with your custom text, a text input field for the user, and a submit button, shows up on the user interface. For example, you can prompt a user to leave feedback after an ended call. You can specify what type of input you want from the user: single line text, numeric, password, or PIN code.

The prompt can only be enabled via the API, so it is recommended to combine it with macros and either a custom user interface panel or an auto-triggered event.

Certificate upload via API

ASCII PEM formatted certificates can be installed directly using multiline API commands (`xCommand Security Certificates CA Add`, or `xCommand Security Certificates Services Add`). You can also upload certificates to a video system from its web interface, as before.

API commands for user management

You can create and manage user accounts directly using API commands (`xCommand UserManagement User *`). As before, you can also do this from the video system's user interface.

Preview mode for In-Room Controls

The In-Room Control editor has a new preview mode. A virtual Touch 10 user interface shows how the design looks on the user interface. The user interface is interactive so that you can test the functionality. It produces real events on the video system, which can trigger any functionality you have created with a third-party control system or with a macro. A console in the right pane displays both the widget values when interacted with, and control system feedback messages.

Intelligent Proximity changes

A Proximity indicator is displayed on the screen (middle right) to inform that one or more clients are paired to the system with Cisco Proximity. The old indicator (top left), which was always shown when Proximity was enabled, has been removed.

You can no longer disable the Proximity services from the user interface.

The ultrasound settings have moved from Peripherals Pairing Ultrasound to Audio Ultrasound.

Automatic factory reset when changing the call service (device activation)

The video system will automatically factory reset and restart when using the user interface to change the device activation method, for example from VCS to Cisco UCM. This will prevent conflicting configurations when provisioning the video system to a new service.

Changing the provisioning from the API will not automatically factory reset the video system.

Support for separate RTP port ranges for audio and other media

You can configure the video system so that audio uses a different RTP port range than other media. The two ranges cannot overlap. As default, all media use the same RTP port range.

Configuration changes in CE9.2

New configurations

Audio Input HDMI[n] VideoAssociation MuteOnInactiveVideo
Audio Ultrasound MaxVolume
Cameras SpeakerTrack Whiteboard Mode
Macros AutoStart
Macros Mode
NetworkServices HTTP Proxy Allowed
NetworkServices HTTP Proxy LoginName
NetworkServices HTTP Proxy Mode
NetworkServices HTTP Proxy Password
NetworkServices HTTP Proxy Url
Standby WakeupOnMotionDetection
UserInterface CustomMessage
UserInterface OSD HalfwakeMessage
UserInterface SettingsMenu Mode
Video Input Connector[n] CEC Mode

Configurations that are removed

None

Configurations that are modified

Audio Input Microphone[n] Level
OLD: Value space: 0..36
NEW: Value space: 0..26
Cameras SpeakerTrack Closeup
OLD: User role: ADMIN, INTEGRATOR
NEW: User role: ADMIN, INTEGRATOR, USER
UserInterface Language

NEW: Arabic and Hebrew added to valuespace

UserInterface OSD Output

OLD: Default value: 1

NEW: Default value: Auto

Video Selfview OnCall Mode

OLD: Default value: Off

NEW: Default value: On

Command changes in CE9.2

New commands

Cameras SpeakerTrack Whiteboard ActivatePosition
Cameras SpeakerTrack Whiteboard AlignPosition
Cameras SpeakerTrack Whiteboard SetDistance
Cameras SpeakerTrack Whiteboard StorePosition
Macros Log Clear
Macros Log Get
Macros Macro Activate
Macros Macro Deactivate
Macros Macro Get
Macros Macro Remove
Macros Macro Rename
Macros Macro Roles Set
Macros Macro Save
Macros Runtime Restart
Macros Runtime Start
Macros Runtime Status
Macros Runtime Stop
Message Send
Security Certificates CA Add
Security Certificates CA Delete
Security Certificates CA Show
Security Certificates Services Activate
Security Certificates Services Add
Security Certificates Services Deactivate
Security Certificates Services Delete
Security Certificates Services Show

Standby Halfwake
UserInterface Branding Delete
UserInterface Branding Get
UserInterface Branding Updated
UserInterface Branding Upload
UserInterface Extensions Widget Action
UserInterface Message TextInput Clear
UserInterface Message TextInput Display
UserManagement User Add
UserManagement User Delete
UserManagement User Get
UserManagement User List
UserManagement User Modify
Video CEC Input KeyClick
Video CEC Output KeyClick

Commands that are removed

UserInterface OSD Key Click
UserInterface OSD Key Press
UserInterface OSD Key Release

Commands that are modified

Audio Microphones Mute
OLD: User role: INTEGRATOR, USER
NEW: User role: ADMIN, INTEGRATOR, USER

Audio Microphones ToggleMute

OLD: User role: INTEGRATOR, USER

NEW: User role: ADMIN, INTEGRATOR, USER

Audio Microphones Unmute

OLD: User role: INTEGRATOR, USER

NEW: User role: ADMIN, INTEGRATOR, USER

Audio Sound Play

OLD: Sound: Alert / Bump / Busy / CallDisconnect / CallInitiate / CallWaiting / Dial / KeyInput / KeyInputDelete / KeyTone / Nav / NavBack / Notification / OK / PresentationConnect / Ringing / SignIn / SpecialInfo / TelephoneCall / VideoCall / VolumeAdjust / WakeUp

NEW: Sound: Alert / Bump / Busy / CallDisconnect / CallInitiate / CallWaiting / Dial / KeyInput / KeyInputDelete / KeyTone / Nav / NavBack / Notification / OK / Pairing / PresentationConnect / Ringing / SignIn / SpecialInfo / TelephoneCall / VideoCall / VolumeAdjust / WakeUp

OLD: User role: INTEGRATOR, USER

NEW: User role: ADMIN, INTEGRATOR, USER

Audio Sound Stop

OLD: User role: INTEGRATOR, USER

NEW: User role: ADMIN, INTEGRATOR, USER

Audio SoundsAndAlerts Ringtone List

OLD: User role: INTEGRATOR, USER

NEW: User role: ADMIN, INTEGRATOR, USER

Audio SoundsAndAlerts Ringtone Play

OLD: User role: INTEGRATOR, USER

NEW: User role: ADMIN, INTEGRATOR, USER

Call Disconnect

OLD: User role: ADMIN, USER

NEW: User role: ADMIN, INTEGRATOR, USER

Camera PositionSet

OLD: User role: ADMIN, USER

NEW: User role: ADMIN, INTEGRATOR, USER

Added: Lens: Wide / Center / Left / Right

Camera Ramp

OLD: User role: ADMIN, USER

NEW: User role: ADMIN, INTEGRATOR, USER

Cameras SpeakerTrack Diagnostics Start

OLD: User role: ADMIN, USER

NEW: User role: ADMIN, INTEGRATOR, USER

Cameras SpeakerTrack Diagnostics Stop

OLD: User role: ADMIN, USER

NEW: User role: ADMIN, INTEGRATOR, USER

Dial

OLD: User role: ADMIN, USER

NEW: User role: ADMIN, INTEGRATOR, USER

Peripherals HeartBeat

OLD: User role: ADMIN, ROOMCONTROL, USER

NEW: User role: ADMIN, INTEGRATOR, ROOMCONTROL, USER

SystemUnit Boot

OLD: User role: INTEGRATOR, USER

NEW: User role: ADMIN, INTEGRATOR, USER

SystemUnit FirstTimeWizard Stop

OLD: User role: INTEGRATOR, USER

NEW: User role: ADMIN, INTEGRATOR, USER

UserInterface Extensions List

OLD: User role: INTEGRATOR, ROOMCONTROL, USER

NEW: User role: ADMIN, INTEGRATOR, ROOMCONTROL, USER

UserInterface Message Prompt Display

Added: Duration: Integer(0..3600)

Video Input SetMainVideoSource

Added: Layout: Equal / PIP

OLD: User role: INTEGRATOR, USER

NEW: User role: ADMIN, INTEGRATOR, USER

Status changes in CE9.2

New statuses

Audio Input Connectors Microphone[n] EcReferenceDelay
Cameras SpeakerTrack ActiveConnector
Video Input Connector[n] ConnectedDevice CEC[n] LogicalAddress
Video Output Connector[n] ConnectedDevice CEC[n] LogicalAddress
Video Output Connector[n] ConnectedDevice ScreenSize

Statuses that are removed

Video Input Connector[n] ConnectedDevice CEC[n] PowerControl

Statuses that are modified

Diagnostics Message[n] Type

Removed from valuespace: CamerasDetectedNolr / UdpPortRangeViolation
Added to valuespace: CameraDetected / CertificateExpiry / MacrosRuntimeStatus /
MediaPortRangeNegative / MediaPortRangeOdd / MediaPortRangeOverlap /
MediaPortRangeTooSmall / MediaPortRangeValueSpace / MicrophonesConnected
/ SparkActivationRequired / VideoPortRangeNegative / VideoPortRangeOdd /
VideoPortRangeTooSmall / VideoPortRangeValueSpace / UltrasoundConfigSettings

Video Input MainVideoSource

OLD: Value space: Integer
NEW: Value space: 1 / 2 / 3 / 4 / Composed

What's new in CE9.1

This section provides an overview of the new and changed system settings, and the new features and improvements in the Cisco Collaboration Endpoint software version 9.1 (CE9.1) compared to CE9.0.

For more details, we recommend reading the Software release notes:

▶ <http://www.cisco.com/c/en/us/support/collaboration-endpoints/spark-room-kit-series/products-release-notes-list.html>

New features and improvements

Dual Screen experience and Active Control for CMS based meetings

Dual screen video systems can utilize both screens for video in a CMS based meeting. The video system receives two transcoded video streams and one content stream from the CMS, and utilizes both screens to render the streams.

With Active Control enabled, you get a participant list that shows all meeting participants and their current activity status, such as mute, sharing and active speaker indication. You can change the layout seamlessly from the touch interface by using the layout selection panels.

New wake-up experience

The new wake-up experience introduces a *Halfwake* state, which leads to a calmer wake-up of the system, and gives users better guidance on how to get started.

When wake-up on motion detection is enabled the system will automatically wake to the *Halfwake* state when people enter the room. It will also wake to this state when a user pairs a Cisco Proximity client to the system.

Support for the EAP authentication framework for wireless networks

In addition to WPA-PSK and WPA2-PSK, the video system now supports the WPA-EAP authentication framework for Wi-Fi connections. In total the following methods are supported:

- Open
- WPA-PSK (AES)
- WPA2-PSK (AES)
- EAP-TLS
- EAP-TTLS
- EAP-FAST
- PEAP
- EAP-MSCHAPv2
- EAP-GTC

Additions for Room Analytics

Detect people presence in the room: The video system has the capability to find whether there are people present in the room. The feature is based on ultrasound, and it does not keep record of who was in the room, only whether or not the room is in use.

People count: The video system counts the number of people in the room when in a call, and when displaying the self-view picture. You can configure the video system to also count the number of people outside of call, but the video system cannot count the number of people when it is in standby. It does not keep record of who was in the room, only the number of faces that were detected.

System configuration changes in CE9.1

New configurations

Cameras Camera Framerate

RoomAnalytics PeopleCountOutOfCall

RoomAnalytics PeoplePresenceDetector

Configurations that are removed

None.

Configurations that are modified

Conference DefaultCal Rate

OLD: Default value: 3072

NEW: Default value: 6000

Conference MultiStream Mode

OLD: Valuespace: Off; Default value: Off

NEW: Valuespace: Auto/Off; Default value: Auto

Network[1] IEEE8021X Password

OLD: Valuespace: String(0, 32)

NEW: Valuespace: String(0, 50)

Peripherals Profile TouchPanels

OLD: Default value: NotSet

NEW: Default value: Minimum1

Video Input Connector [n] PresentationSelection

OLD: Valuespace: AutoShare/Manual/OnConnect

NEW: Valuespace: AutoShare/Desktop/Manual/OnConnect

Video Output Connector [1..2] MonitorRole

OLD: Default value: Connector [1]: First; Connector [2]: Second

NEW: Default value: Auto

System command changes in CE9.1

New commands

SystemUnit FirstTimeWizard Stop

UserInterface Extensions Set

Commands that are removed

Camera PositionReset)

Camera TriggerAutofocus

Commands that are modified

Cameras SpeakerTrack Diagnostics Start

OLD: User role: ADMIN, INTEGRATOR

NEW: User role: ADMIN, USER

Cameras SpeakerTrack Diagnostics Stop

OLD: User role: ADMIN, INTEGRATOR

NEW: User role: ADMIN, USER

Presentation Start

OLD: ConnectorID: Integer (0..65534)

NEW: ConnectorID: Integer (1..2)

OLD: PresentationSource: Integer (0..65534)

NEW: PresentationSource: Integer (1..2)

Presentation Stop

OLD: PresentationSource: Integer (0..65534)

NEW: PresentationSource: Integer (1..2)

SystemUnit FactoryReset (All products)

OLD: Keep: LocalSetup/Network/Spark/Provisioning

NEW: Keep: LocalSetup/Network/Spark/Provisioning/SerialPort/Certificates (not in use)

System status changes in CE9.1

New statuses

Audio Output Connectors Line ConnectionStatus

RoomAnalytics PeopleCount Current

RoomAnalytics PeoplePresence

SystemUnit Software OptionKeys Encryption

Video Input Connector [n] ConnectedDevice CEC [n] DeviceType

Video Input Connector [n] ConnectedDevice CEC [n] Name

Video Input Connector [n] ConnectedDevice CEC [n] PowerStatus

Video Input Connector [n] ConnectedDevice CEC [n] VendorId

Statuses that are removed

Cameras Camera [n] Flip

Cameras Camera [n] HardwareID

Cameras Camera [n] MacAddress

Cameras Camera [n] Position Focus

Cameras Camera [n] SerialNumber

Cameras Camera [n] SoftwareID

Video Input Source [n] TmdsClockPresent

Statuses that are modified

Diagnostics Message Type

OLD: Value space: CAPFOperationState / CTLInstallation / CUCMVendorConfigurationFile / CallProtocolDualStackConfig / CallProtocolIPStackPlatformCompatibility / CallProtocolVcsProvisioningCompatibility / Camerald / CameraPairing / CameraSerial / CameraSoftwareVersion / CameraStatus / CamerasDetected / ConfigurationFile / DefaultCallProtocolRegistered / EthernetDuplexMatches / FanStatus / PresenterTrack / H320GatewayStatus / H323GatekeeperStatus / HasValidReleaseKey / IpCameraStatus / IPv4Assignment / IPv6Assignment / IPv6Mtu / ISDNLinkCompatibility / ISDNLinkIpStack / ITLInstallation / InvalidSIPTransportConfig / LockDown / RoomControl / MediaBlockingDetected / NetLinkStatus / NetSpeedAutoNegotiated / NetworkQuality / NTPStatus / OSDVideoOutput / OutputConnectorLocations / ProvisioningDeveloperOptions

/ ProvisioningStatus / SIPEncryption / SIPListenPortAndOutboundMode / SIPProfileRegistration / SIPProfileType / SelectedVideoInputSourceConnected / SiplceAndAnatConflict / SIPListenPortAndRegistration / TCPMediaFallback / TemperatureCheck / TLSVerifyRequiredCerts / TouchPanelConnection / ControlSystemConnection / TurnBandwidth / UdpPortRangeViolation / UltrasoundSpeakerAvailability / ValidPasswords / VideoFromInternalCamera / VideoInputStability / VideoInputSignalQuality / SparkConnectivity / SpeakerTrackFrontPanelMountedCorrectly / SpeakerTrackMicrophoneConnection / SpeakerTrackVideoInputs / SpeakerTrackEthernetConnection / ANATOnVCS / ECRferenceDelay / AudioECRefDelay / AudioPairingNoise / AudioPairingRate / AudioPairingSNR / AudioPairingInterference / AudioPairingTokenDecode / AudiInternalSpeakerDisabled / AbnormalCallTermination / HasActiveCallProtocol / SipOrH323ButNotBothEnabled / PresentationSourceSelection / SoftwareUpgrade / PlatformSanity / ContactInfoMismatch / MicrophoneReinforcement / FirstTimeWizardNotCompleted / CaptivePortalDetected / MonitorDelay

NEW: Value space: : CAPFOperationState / CTLInstallation / CUCMVendorConfigurationFile / CallProtocolDualStackConfig / CallProtocolIPStackPlatformCompatibility / CallProtocolVcsProvisioningCompatibility / Camerald / CameraPairing / CameraSerial / CameraSoftwareVersion / CameraStatus / CamerasDetected / CamerasDetectedNoIr / ConfigurationFile / DefaultCallProtocolRegistered / EthernetDuplexMatches / FanStatus / PresenterTrack / H320GatewayStatus / H323GatekeeperStatus / HasValidReleaseKey / IpCameraStatus / IPv4Assignment / IPv6Assignment / IPv6Mtu / ISDNLinkCompatibility / ISDNLinkIpStack / ITLInstallation / InvalidSIPTransportConfig / LockDown / RoomControl / MediaBlockingDetected / NetLinkStatus / NetSpeedAutoNegotiated / NetworkQuality / NTPStatus / OSDVideoOutput / OutputConnectorLocations / ProvisioningDeveloperOptions / ProvisioningStatus / SIPEncryption / SIPListenPortAndOutboundMode / SIPProfileRegistration / SIPProfileType / SelectedVideoInputSourceConnected / SiplceAndAnatConflict / SIPListenPortAndRegistration / TCPMediaFallback / TemperatureCheck / TLSVerifyRequiredCerts / TouchPanelConnection / ControlSystemConnection / TurnBandwidth / UdpPortRangeViolation / UltrasoundSpeakerAvailability / ValidPasswords / VideoFromInternalCamera / VideoInputStability / VideoInputSignalQuality / SparkConnectivity / SpeakerTrackFrontPanelMountedCorrectly / SpeakerTrackMicrophoneConnection / SpeakerTrackVideoInputs / SpeakerTrackEthernetConnection / ANATOnVCS / ECRferenceDelay / AudioECRefDelay / AudioPairingNoise / AudioPairingRate / AudioPairingSNR / AudioPairingInterference / AudioPairingTokenDecode / AudiInternalSpeakerDisabled / AbnormalCallTermination / HasActiveCallProtocol / SipOrH323ButNotBothEnabled / PresentationSourceSelection / SoftwareUpgrade / PlatformSanity / ContactInfoMismatch / MicrophoneReinforcement / FirstTimeWizardNotCompleted / CaptivePortalDetected / MonitorDelay / WifiCARequired

Standby State

OLD: Value space: Standby/EnteringStandby/Off

NEW: Value space: Standby/EnteringStandby/Halfwake/Off

What's new in CE9.0

This section provides an overview of the new and changed system settings, and the new features and improvements in the Cisco Collaboration Endpoint software version 9.0 (CE9.0) compared to CE8.3.

For more details, we recommend reading the Software release notes:

► <http://www.cisco.com/c/en/us/support/collaboration-endpoints/spark-room-kit-series/products-release-notes-list.html>

New features and improvements

Updated user interface

The user interfaces on the Touch 10, on screen, and on the integrated touch screen have been updated. The main menu items on the home screen have been replaced with more prominent activities.

Some of the settings have been removed from the Touch 10 advanced settings menu to align with the on-screen display menu.

Wakeup on motion detection

Wakeup on motion detection senses when a person walks into the conference room and the system wakes up automatically. You need to enable the following setting for this feature to work:

```
xConfiguration Standby WakeupOnMotionDetection
```

You can't manually place the system in standby when this feature is enabled.

Updated In-Room Control Editor

The In-Room Control editor is updated with a new look, improved logic and usability for producing a control interface more efficiently. In addition, a new directional pad widget and an In-Room Control simulator is added.

Added language support

We have added support for Portuguese (Portugal) to the on-screen display and Touch controller menus.

Other changes

- Support for HTTPS client certificates has been added.
- Unplugging the presentation cable instantly stops the presentation sharing.

System configuration changes in CE9.0

New configurations

NetworkServices HTTPS Server MinimumTLSVersion
NetworkServices HTTPS StrictTransportSecurity

Configurations that are removed

None

Configurations that are modified

UserInterface Language
NEW: Portuguese added to value space

xConfigurations with INTEGRATOR user role

A new user role - INTEGRATOR - is introduced in CE9.0. It has been added to the following configurations:

Audio DefaultVolume
Audio Microphones Mute Enabled
Audio SoundsAndAlerts *
Conference DefaultCall Rate
Conference DoNotDisturb DefaultTimeout
SerialPort Mode
SystemUnit Name
Time Zone
UserInterface OSD Output
Video Input Connector [n] CameraControl Cameramd
Video Input Connector [n] CameraControl Mode
Video Input Connector [n] InputSourceType
Video Input Connector [n] Name
Video Input Connector [n] PresentationSelection
Video Input Connector [n] Quality

Video Input Connector [n] Visibility
Video Monitors
Video Output Connector [n] CEC Mode
Video Output Connector [n] Resolution
Video Presentation DefaultPIPPosition
Video Selfview Default *
Video Selfview OnCall *

<path> * means that the change applies to all configurations starting with *<path>*.

System command changes in CE9.0

New commands

Audio Microphones ToggleMute
Audio Volume ToggleMute
Audio Sound Play
Audio Sound Stop
SystemUnit SignInBanner Clear
SystemUnit SignInBanner Get
SystemUnit SignInBanner Set

Commands that are modified

SystemUnit FactoryReset
NEW: Keep: LocalSetup, Network, Spark, Provisioning

xCommand with INTEGRATOR user role

Audio Microphones Mute
Audio Microphones ToggleMute
Audio Microphones Unmute
Audio Sound Play
Audio SoundsAndAlerts Ringtone List
Audio SoundsAndAlerts Ringtone Play
Audio Sound Stop
Cameras AutoFocus Diagnostics Start
Cameras AutoFocus Diagnostics Stop
Cameras SpeakerTrack Diagnostics Start
Peripherals Connect
Peripherals List
Standby Activate
Standby Deactivate

SystemUnit Boot
UserInterface Extensions Clear
UserInterface Extensions List
UserInterface Extensions Widget SetValue
UserInterface Extensions Widget UnsetValue
UserInterface Message Alert Clear
UserInterface Message Alert Display
UserInterface Message Prompt Clear
UserInterface Message Prompt Display
UserInterface Message Prompt Response
UserInterface Message TextLine Clear
UserInterface Message TextLine Display
UserInterface Presentation ExternalSource Add
UserInterface Presentation ExternalSource List
UserInterface Presentation ExternalSource Remove
UserInterface Presentation ExternalSource RemoveAll
UserInterface Presentation ExternalSource Select
UserInterface Presentation ExternalSource State Set
UserManagement User Passphrase Change
Video Input SetMainVideoSource

System status changes in CE9.0

New statuses

Video Output Connector [n] ConnectedDevice CEC [n] Name

Video Output Connector [n] ConnectedDevice CEC [n] VendorId

Statuses that are modified

Diagnostics Message [n] Type

OLD: CAPFOperationState, CTLInstallation, CUCMVendorConfigurationFile, CallProtocolDualStackConfig, CallProtocolIPStackPlatformCompatibility, CallProtocolVcsProvisioningCompatibility, Camerald, CameraPairing, CameraSerial, CameraSoftwareVersion, CameraStatus, CamerasDetected, ConfigurationFile, DefaultCallProtocolRegistered, EthernetDuplexMatches, FanStatus, PresenterTrack, H320GatewayStatus, H323GatekeeperStatus, HasValidReleaseKey, IpCameraStatus, IPv4Assignment, IPv6Assignment, IPv6Mtu, ISDNLinkCompatibility, ISDNLinkIpStack, ITLInstallation, InvalidSIPTransportConfig, LockDown, RoomControl, MediaBlockingDetected, NetLinkStatus, NetSpeedAutoNegotiated, NetworkQuality, NTPStatus, OSDVideoOutput, OutputConnectorLocations, ProvisioningStatus, SIPEncryption, SIPListenPortAndOutboundMode, SIPProfileRegistration, SIPProfileType, SelectedVideoInputSourceConnected, SiplceAndAnatConflict, TCPMediaFallback, TemperatureCheck, TLSVerifyRequiredCerts, TouchPanelConnection, ControlSystemConnection, TurnBandwidth, UdpPortRangeViolation, UltrasoundSpeakerAvailability, ValidPasswords, VideoFromInternalCamera, VideoInputStability, SparkConnectivity, SpeakerTrackFrontPanelMountedCorrectly, SpeakerTrackMicrophoneConnection, SpeakerTrackEthernetConnection, ANATOnVCS, ECRreferenceDelay, AudioECRefDelay, AudioPairingNoise, AudioPairingRate, AudioPairingSNR, AudioPairingInterference, AudioPairingTokenDecode, AudiInternalSpeakerDisabled, AbnormalCallTermination, HasActiveCallProtocol, SipOrH323ButNotBothEnabled, PresentationSourceSelection, SoftwareUpgrade, PlatformSanity, ContactInfoMismatch, MicrophoneReinforcement

NEW: CAPFOperationState, CTLInstallation, CUCMVendorConfigurationFile, CallProtocolDualStackConfig, CallProtocolIPStackPlatformCompatibility, CallProtocolVcsProvisioningCompatibility, Camerald, CameraPairing, CameraSerial, CameraSoftwareVersion, CameraStatus, CamerasDetected, ConfigurationFile, DefaultCallProtocolRegistered, EthernetDuplexMatches, FanStatus, PresenterTrack, H320GatewayStatus, H323GatekeeperStatus, HasValidReleaseKey, IpCameraStatus, IPv4Assignment, IPv6Assignment, IPv6Mtu, ISDNLinkCompatibility, ISDNLinkIpStack, ITLInstallation, InvalidSIPTransportConfig, LockDown, RoomControl, MediaBlockingDetected, NetLinkStatus, NetSpeedAutoNegotiated, NetworkQuality, NTPStatus, OSDVideoOutput, OutputConnectorLocations, ProvisioningDeveloperOptions, ProvisioningStatus, SIPEncryption, SIPListenPortAndOutboundMode, SIPProfileRegistration, SIPProfileType, SelectedVideoInputSourceConnected, SiplceAndAnatConflict,

SIPListenPortAndRegistration, TCPMediaFallback, TemperatureCheck, TLSVerifyRequiredCerts, TouchPanelConnection, ControlSystemConnection, TurnBandwidth, UdpPortRangeViolation, UltrasoundSpeakerAvailability, ValidPasswords, VideoFromInternalCamera, VideoInputStability, VideoInputSignalQuality, SparkConnectivity, SpeakerTrackFrontPanelMountedCorrectly, SpeakerTrackMicrophoneConnection, SpeakerTrackEthernetConnection, ANATOnVCS, ECRreferenceDelay, AudioECRefDelay, AudioPairingNoise, AudioPairingRate, AudioPairingSNR, AudioPairingInterference, AudioPairingTokenDecode, AudiInternalSpeakerDisabled, AbnormalCallTermination, HasActiveCallProtocol, SipOrH323ButNotBothEnabled, PresentationSourceSelection, SoftwareUpgrade, PlatformSanity, ContactInfoMismatch, MicrophoneReinforcement, FirstTimeWizardNotCompleted, CaptivePortalDetected, MonitorDelay

xStatus with INTEGRATOR user role

Audio Input Connectors Microphone[n] ConnectionStatus

Audio Microphones Mute

Audio Output Connectors Line[n] DelayMs

Audio Volume

Call[n] FacilityServiceId

Call[n] ReceiveCallRate

Call[n] TransmitCallRate

Cameras Camera[n] Capabilities Options

Cameras Camera[n] Connected

Cameras Camera[n] Flip

Cameras Camera[n] HardwareId

Cameras Camera[n] MacAddress

Cameras Camera[n] Manufacturer

Cameras Camera[n] Model

Cameras Camera[n] Position Focus

Cameras Camera[n] Position Pan

Cameras Camera[n] Position Tilt

Cameras Camera[n] Position Zoom

Cameras Camera[n] SerialNumber

Cameras Camera[n] SoftwareID
Cameras SpeakerTrack Availability
Cameras SpeakerTrack Status
Conference DoNotDisturb
Conference Presentation CallId
Conference Presentation LocalInstance[n] SendingMode
Conference Presentation LocalInstance[n] Source
Conference Presentation Mode
Peripherals ConnectedDevice[n] HardwareInfo
Peripherals ConnectedDevice[n] ID
Peripherals ConnectedDevice[n] Name
Peripherals ConnectedDevice[n] SoftwareInfo
Peripherals ConnectedDevice[n] Status
Peripherals ConnectedDevice[n] Type
Peripherals ConnectedDevice[n] UpgradeStatus
Standby State
SystemUnit State NumberOfActiveCalls
SystemUnit State NumberOfInProgressCalls
Time SystemTime
UserInterface Extensions Widget[n] Value
UserInterface Extensions Widget[n] WidgetId
Video ActiveSpeaker PIPPosition
Video Input Connector[n] Connected
Video Input Connector[n] SignalState
Video Input Connector[n] SourceId
Video Input Connector[n] Type
Video Input Source[n] ConnectorId
Video Input Source[n] FormatStatus
Video Input Source[n] FormatType
Video Input Source[n] Resolution Height
Video Input Source[n] Resolution RefreshRate
Video Input Source[n] Resolution Width
Video Output Connector[n] Connected
Video Output Connector[n] ConnectedDevice CEC[n] DeviceType
Video Output Connector[n] ConnectedDevice CEC[n] Name
Video Output Connector[n] ConnectedDevice CEC[n] PowerControl
Video Output Connector[n] ConnectedDevice CEC[n] PowerStatus
Video Output Connector[n] ConnectedDevice CEC[n] VendorId
Video Output Connector[n] ConnectedDevice Name
Video Output Connector[n] ConnectedDevice PreferredFormat
Video Selfview FullscreenMode
Video Selfview Mode
Video Selfview OnMonitorRole
Video Selfview PIPPosition

Chapter 2

About the API

API fundamentals

This chapter contains a top-level view of the mechanisms supported by the codec API.

Here you can read about how to access the API, how to use the command line and what the different parts of the API can be used for. This chapter also describes how to use the feedback functions that are available for the codec.

The API consists of four major groups:

- Commands
- Configurations
- Status
- Events

These four groups are hierarchically organized, which makes it easier to find related functionality. You can find the complete lists of all commands, configurations and statuses in the following chapters.

Connecting to the API

There are several ways to access the codec API. Regardless of which method you choose, the structure of the API stays the same. Choose the connection method that suits your application best. Before you start, please read this section about the different methods, as some of those may require additional configuration changes before being enabled.

The following configurations, apart from password, can be set from the System configuration menu on the web interface or from the command line interface. All of the examples are for the command line interface.

Password

The video system is delivered with a default user account with full credentials. The user name is admin, and initially, no password is set for the default user.

It is mandatory to set a password for the admin user in order to restrict access to system configuration. You should in addition set a password for any other user with similar credentials.

You can set the password on the codec's web interface. Open a web browser and enter the IP address of the video system in the address bar and log in. Click your user name in the upper right corner and choose *Change password* in the drop down menu.

SSH

SSH is a secure TCP/IP connection and it is enabled by default on the codec. It can be disabled. You need a SSH client, such as PuTTY, to access the API over SSH.

```
xConfiguration NetworkServices SSH Mode:
<Off,0n>
```

HTTP/HTTPS

As HTTP/HTTPS are connectionless protocols, there is no persistent connection. There are several ways of communicating with the API over HTTP.

In order to enable or disable the HTTP and HTTPS services, configure the following setting on the codec.

```
xConfiguration NetworkServices HTTP Mode:
<HTTP+HTTPS, HTTPS, Off>
```

Connecting

You can inspect the API by entering the IP address or host name of the codec in your favorite web browser. In the web interface, you can find the API documents under the menu section [Integration > Developer API](#). The HTTP POST and GET methods are used to execute commands and get feedback from the codec. This is described in [▶"Using HTTP" on page 33](#) in this document.

RS-232 / serial connection

The serial connection can be used without an IP address, DNS or a network. Serial connection is allowed by default.

```
xConfiguration SerialPort Mode: <Off/On>
```

Baud-rate and other serial port parameters

The serial port uses 8 data bits, no parity and 1 stop bit.

Login and password

You can choose whether login is required or not for serial connections. For security reasons the password prompting is turned on by default, but it can be turned off if preferred.

```
xConfiguration SerialPort LoginRequired: <Off/On>
```

User roles

A user account may hold one or a combination of user roles. A user account with full access rights, like the default admin user, should possess the ADMIN, USER and AUDIT roles.

These are the user roles:

ADMIN: A user with this role can create new users, change most settings, make calls, and search the contact lists. The user cannot upload audit certificates and change the security audit settings.

USER: A user with this role can make calls and search the contact lists. The user can modify a few settings, for example adjust the ringtone volume and set the time and date format.

AUDIT: A user with this role can change the security audit settings and upload audit certificates.

ROOMCONTROL: A user with this role can create in-room controls. The user has access to the In-room control editor and corresponding development tools.

INTEGRATOR: A user with this role has access to settings, commands and status that are required to set up advanced AV scenarios, and to integrate our video systems with 3rd party equipment. Such a user can also create in-room controls.

Cisco Spark registered systems

If a video system is registered to Cisco's cloud service (Cisco Spark), only local users with the INTEGRATOR and ROOMCONTROL user roles are available.

API output

The xPreferences is used to set preferences for the RS-232, Telnet and SSH sessions.

The output modes

- **Terminal**: Line based output for use with line based control systems
- **XML**: XML output for use with control systems that understand XML.
- **JSON**: JSON format is convenient when integrating with web based systems.

The default output mode is **terminal**. To change this you have to define your preferences for each session individually. Examples in this guide are in terminal mode.

To set output mode to XML, issue the command:

```
xPreferences outputmode xml
```

To revert to terminal mode, issue the command:

```
xPreferences outputmode terminal
```

Example: Layout command in terminal mode

```
xCommand Audio Volume Set Level: 50
```

Example: Layout command in XML mode

```
<Command>  
<Audio>  
<Volume>  
<Set command="True">  
<Level>50</Level>  
</Set>  
</Volume>  
</Audio>  
</Command>
```


Using the command line

Help

To get a list of all supported top level commands you can type `?` or `help` after connecting to the device using RS-232 or SSH (Example 1).

Bye

Typing the `bye` command closes the command line interface.

```

Example 1:
?
- User Commands -

help          xcommand      xconfiguration xdocument      xevent
xfeedback     xgetxml       xpreferences  xstatus        xtransaction
bye           echo          log           systemtools
OK
    
```

API commands

xConfiguration

Configurations are system settings, such as system name and network settings. These are persistent across boots. Refer to ["Configurations" on page 27](#).

xCommand

Commands instruct the codec to execute actions, such as to dial a number or to search the phone book. Refer to ["Commands" on page 27](#).

xStatus

A status contains the current state of the codec, such as connected calls, the status of the gatekeeper registration, connected inputs and output sources. Refer to ["Status" on page 27](#).

xFeedback

The Feedback commands are used to specify what parts of the configuration and status hierarchies to monitor. Feedback is only issued on the RS-232 or SSH session for which it is specified. If you are connecting to the codec with multiple sessions, you have to define feedback individually for each session. Refer to ["Feedback mechanism" on page 31](#).

xPreferences

The xPreferences command is used to set preferences for the RS-232 and SSH sessions. Refer to ["API output" on page 24](#).

Echo <on/off>

If echo is set to `On` the key inputs are displayed when entering text in a command line interface.

If echo is set to `Off` user input is not displayed when entering text in a command line interface.

xEvent

The xEvent command returns information on which events are available for feedback. Refer to ["Events" on page 30](#).

xGetxml

The xGetxml request returns an XML document based on the location parameter attached to the request. The elements (or a complete document) matching the expression will be returned. Refer to ["Feedback mechanism" on page 31](#).

Other commands

Systemtools

The systemtools commands are a set of command line tools for administrative control and diagnostics. The commands can be used for advanced troubleshooting together with Cisco technical support. Systemtools are not a part of the programming API. Refer to ["The SystemTools commands" on page 212](#).

Log

The log command is used to enable advanced logs. It is only used for debugging the system.

Command line shortcuts

If your client supports it, there are some timesaving shortcuts you can use:

- Tab-completion to complete the commands and arguments.
- Arrow up and arrow down keys to navigate your command history.
- **<CTRL-a>**: Jump to the beginning of the line.
- **<CTRL-e>**: Jump to the end of the line.
- **<CTRL-r>**: Incremental command history search.
- **<CTRL-w>**: Erase the current line.

Searching

You can use `//` to search for elements anywhere in the status or configuration hierarchy (Example 1).

You can also combine multiple `//`'s (Example 2).

NOTE: The search shortcuts work well for inspecting the API, but should not be used in applications. We recommend that you always use the complete paths to avoid command ambiguity when upgrading to newer firmware releases.

Example 1:

List all configurations that include words that starts with OUT and AUDIO:

```
xconfiguration //audio//out
*c xConfiguration Audio Output InternalSpeaker
Mode: On
*c xConfiguration Audio Output Line 1 Mode: On
*c xConfiguration Audio Output Line 1 OutputType:
LineOut
** end
```

Example 2:

Get the resolution width of all connected sources for both inputs and outputs:

```
xStatus //vid//res//wid
*s Video Input Source 1 Resolution Width: 1920
*s Video Input Source 2 Resolution Width: 0
*s Video Output Connector 1 Resolution Width: 1920
*s Video Output Connector 2 Resolution Width: 1920
** end
```

Value types and formats

The system supports the following value types:

- **Integer values:** `<x..y>`
Defines the valid range for an integer input. x = min value, y = max value.
- **Literal values:** `<X/Y/./Z>`
Defines the possible values for a given configuration.
- **String values:** `<S: x, y>`
Defines that the valid input for this configuration is a string with minimum length of x and maximum length of y characters. Strings can have rules that further specify their format and length.

Input values that contain spaces need to be quoted

Any values for configurations and commands containing spaces must be enclosed in quotes. Quotes are not necessary for values without spaces.

Example:

```
Correct: xCommand dial number: "my number
contains spaces"
Correct: xCommand dial number: 12345
Incorrect: xCommand dial number: my number
contains spaces
```

Case sensitivity

All commands are case-insensitive. All of the following commands will work.

```
XCOMMAND DIAL NUMBER: foo@bar.org
xcommand dial number: foo@bar.org
xCommand Dial Number: foo@bar.org
```

Commands

Commands instruct the codec to execute actions, such as to dial a number or to search the phone book. All commands start with the prefix `xCommand` followed by a command path.

Writing `xCommand ?` on the command line will list all the top level commands.

To view the complete list of commands and their parameters, write `xCommand ??` on the command line.

Command arguments are key-value pairs.

When issuing a `xCommand`, the command consists of one argument and one required parameter. In this document the command usage is described for all `xCommands`, with both required and optional parameters. The optional parameters are in brackets.

Example: `xCommand Dial Number: 123`

- `xCommand` is the command prefix. The command to be executed is `Dial`.
- The example contains one argument, `Number: 123`. `Number` is the key and `123` is its value. The key/value pair is separated with `:`.

Configurations

Configurations are system settings that are persistent across boots. Like commands, also configurations are structured in a hierarchy.

Writing `xConfiguration ?` on the command line lists all the top level configurations.

Writing `xConfiguration ??` lists all configurations and their value spaces.

Writing `xConfiguration` lists all configurations and their current values. To list out only some of the configurations, write `xConfiguration` followed by one or more parts of the configuration paths.

Example: Set the H323 Authentication Password

Write in:

```
xConfiguration H323 Authentication
Password:ThisIsThePassword1234
```

Example: Get the H323 Alias ID

Write in:

```
xConfiguration H323 Authentication Password
```

Result:

```
xConfiguration H323 Authentication Password
*c xConfiguration H323 Authentication Password:
"*****"
** end
```

Status

A status contains the current state of the codec, such as connected calls, the status of the gatekeeper registration, connected inputs and output sources.

Writing `xStatus ?` on the command line lists all top level statuses.

Writing `xStatus` lists all statuses and their current values.

To list out only some of the statuses, write `xstatus` followed by the relevant part of the status path (address expression):

```
xStatus <address expression>
```

Multiline commands

Multiline commands are commands that support larger amounts of data as input than the single line commands. Typical use for these commands is to allow for provisioning of in-room control definitions, branding images (base64 encoded), macros, welcome banners, and security certificates.

To issue a multiline command, you start issuing it like any other XAPI command. However, once you enter the command, you have set the API into an input mode where anything you issue on the API after this is treated as input to that command, including line breaks. You now enter the payload for this command in accordance to the input format expected by this command

When done, finish with a line break (“\n”) and a separate line containing just a period ending with a line break (“.\n”). The command will now be executed, and you will get a command result with an OK or ERROR depending on the command being executed successfully or not.

The commands that require multiline input format are marked as such in the command descriptions in this guide.

The multiline commands are marked as multiline in xCommand overview section in this guide.

Example: Set up welcome banner text

```
xCommand SystemUnit SignInBanner Set
Hello!
This is the second line of text.
This is the third.
Thank you!
.

OK
*r SignInBannerSetResult (status=OK):
** end
```

Synchronous API calls

The API works asynchronously. This means that there is no guarantee that command responses arrive in the same order as the commands were issued. The codec may also respond with feedback between your request and the response, in form of status changes or events, due to changes on the system.

For some applications it might be crucial to match requests with responses. The API therefore supports a response-tagging mechanism.

This mechanism works with all command types: `xcommand`, `xconfiguration`, and `xstatus`. A typical use of this would be to create a command queue in your application and assign unique IDs to every command sent to the codec. A listener then listens to all feedback from the codec and matches the ID on the response with the corresponding ID in the command queue. This enables matching the original request with the specific response.

Example:

```
xcommand Video Layout Add | resultId="mytag_1"
OK
*r VideoLayoutAddResult (status=OK):
LayoutId: 1
** resultId: "mytag_1"
** end
```

In XML mode the `resultId` is added as an attribute to the top-level `XmlDoc` tag:

```
xgetxml /Configuration/Video/Layout/Scaling | resultId="mytag_2"
<XmlDoc resultId="mytag_2">
<Configuration item="1">
  <Video item="1">
    <Layout item="1">
      <Scaling item="1" valueSpaceRef="...">0ff</Scaling>
    </Layout>
  </Video>
</Configuration>
</XmlDoc>
```

Events

Event returns information about the events that are available for feedback. This overview presents examples of some the events that are available on the API.

To get an overview of the supported events type [?](#), [??](#) or [help](#) after xEvent:

- [xEvent ?](#) Lists the top level events
- [xEvent ??](#) List all of the available events
- [xEvent help](#) Lists the top level events

The result for events depends on the state of the codec.

Example 1: Outgoing Call Indication

Outgoing Call Indication is an event reported when an outgoing call is about to be dialed. Returns the CallId the call has been assigned.

```
*e OutgoingCallIndication CallId: x
** end
```

Example 2: Call Disconnect

Call Disconnect is an event reported when a call is disconnected. Returns the CallId of the disconnected call and reason for the call's disconnection.

```
*e CallDisconnect CallId: x CauseValue: 0
CauseString: "" CauseType: LocalDisconnect
OrigCallDirection: "outgoing"
** end
```

Example 3: Call Successful

Call Successful is an event reported when a call is connected successfully, that is when all channels are up and established.

```
*e CallSuccessful CallId: 132 Protocol: "h223"
Direction: "outgoing" CallRate: 768 RemoteURI:
"h223:integratorHQ@company.com" EncryptionIn:
"Off" EncryptionOut: "Off"
** end
```

Example 4: FECC Action request

FECC Action request is an event reported when far end is sending FECC commands.

```
*e FeccActionInd Id: 132 Req: 1 Pan: 1 PanRight:
1 Tilt: 0 TiltUp: 0 Zoom: 0 ZoomIn: 0 Focus: 0
FocusIn: 0 Timeout: 300 VideoSrc: 0 m: 0
** end
```

Example 5: TString message received

TString message received is an event reported when far end has sent a TString message.

```
*e TString CallId: 132 Message: "ee"
** end
```

Example 6: SString message received

SString message received is an event reported when far end has sent a SString message.

```
*e SString String: "ee" Id: 132
** end
```

Feedback mechanism

To build solutions that can reliably keep the state between the application and the codec synchronized, you need to set up a notification system to report the changes in the state of the codec.

The API supports notifications on the following:

- Configuration changes
- Status changes
- Event notifications

These notifications will not be sent unless the user has explicitly told the codec to do so. The user is required to subscribe to all the feedback the application needs. This is done by registering feedback expressions. The way of registering feedback expressions varies according to the connection method used.

When using HTTP, the method of handling feedback differs slightly from what is presented in this section. See the [“Feedback from codec over HTTP” on page 35](#) for more information.

WARNING: A codec may give very much feedback, especially when calls are connected and disconnected. Therefore, you should only subscribe to the feedback that you need.

Never register for all status feedback by issuing `xFeedback register /Status`. This may give the control application too much data to handle, which may lead to sluggish or unpredictable behavior.

Feedback expressions

The expression used when registering for feedback is a variant of the XPath language. This language describes a way to select nodes from an XML document. CE software contains three main feedback documents:

Document	API command	Path
Status	<code>xStatus</code>	<code>/Status</code>
Configuration	<code>xConfiguration</code>	<code>/Configuration</code>
Event	<code>xEvent</code>	<code>/Event</code>

The syntax for feedback registering is:

```
xFeedback register <path>
```

Never register for all status feedback by issuing `xFeedback register /Status`.

It is safe to register for all configuration changes using `xFeedback register /Configuration`, as configuration changes will most likely not occur that often.

By going through some examples, we can see how this information can be used to build feedback expressions. A good way to verify the expressions is to point your browser to <http://<ip-address>/getxml?location=path> or to execute `xgetxml <path>` from the terminal, and check that the output matches the nodes you want feedback on.

Example 1: Microphones Mute status.

Terminal query

```
xStatus Audio Microphones Mute
*s Audio Microphones Mute: Off
** end
```

Equivalent feedback expression

```
xFeedback register /Status/Audio/Microphones/Mute
```

Example 2: Name of all video input connectors.

Terminal query

```
xConfiguration Video Input Connector Name
*c xConfiguration Video Input Connector 1 Name:
"Camera"
*c xConfiguration Video Input Connector 2 Name:
"PC"
** end
```

Equivalent feedback expression

```
xFeedback register /Configuration/Video/Input/
Connector/Name
```

Example 3: Name of video input connector 2.

Terminal query

```
xConfiguration Video Input Connector 2 Name
*c xConfiguration Video Input Connector 2 Name:
"PC"
** end
```

Equivalent feedback expression

```
xFeedback register /Configuration/Video/Input/
Connector[@item='2']/Name
```

Terminal connections

Managing feedback subscriptions

To register, list and deregister feedback expressions you use the command `xFeedback` and its corresponding sub commands.

The registered expressions are only valid for the currently active connection. If you open two Telnet sessions and register to get feedback in one session, you do not receive feedback in the other session. This also means that if you disconnect from a session, you have to re-register all expressions after reconnecting.

You can register up to 38 expressions.

Feedback output

The feedback output is exactly the same as you get when querying the system using the `xConfiguration` and `xStatus` commands. E.g., if you issue the command `xStatus Standby Active` on the command line the result is:

```
*s Standby Active: On
** end
```

If you have registered for feedback on status changes the feedback you get when the system goes to standby-mode will be exactly the same:

```
*s Standby Active: On
** end
```

This means that when you are programming against the device you only need to handle one format.

Example: Managing feedback subscriptions

A: Register feedback expressions.

```
Write in: xFeedback register /Status/Audio
```

```
Result: ** end
        OK
```

```
Write in: xFeedback register /Event/CallDisconnect
```

```
Result: ** end
        OK
```

```
Write in: xFeedback register /Configuration/Video/
MainVideoSource
```

```
Result: ** end
        OK
```

B: List out currently registered expressions.

```
Write in: xFeedback list
```

```
Result: /Configuration/Video/MainVideoSource
        /Event/CallDisconnect
        /Status/Audio
        ** end
        OK
```

C: Deregister feedback expressions.

```
Write in: xFeedback deregister /Event/CallDisconnect
```

```
Result: ** end
        OK
```

```
Write in: xFeedback deregister /Status/Audio
```

```
Result: ** end
        OK
```

D: List the new feedback expressions.

```
Write in: xFeedback list
```

```
Result: /Configuration/Video/MainVideoSource
        ** end
        OK
```


Using HTTP

The codec supports sending commands and configurations over HTTP and HTTPS. It is also possible to retrieve configurations and statuses this way. This interface exposes the same API as the command line, but in XML format.

HTTP XMLAPI Authentication

Access to the XMLAPI requires the user to authenticate using HTTP Basic Access Authentication as a user with 'ADMIN' role. Unauthenticated requests prompt a 401 HTTP response containing a Basic Access Authentication challenge. How to use HTTP Basic Access Authentication varies according to the HTTP library or tool that you are using.

If your application will be issuing multiple commands through the API, we highly recommend that you use Session Authentication (see below). The standard basic authentication does a full re-authentication per request, which may affect the performance of your application.

HTTP XMLAPI Session Authentication

Authenticating with your username and password combination for each API request might introduce too much latency for some use-cases. To mitigate this, the API supports a session-based authentication mechanism.

To open a session, issue a POST to <http://<ip-address>/xmlapi/session/begin> with Basic Access Authentication. The response sets a SessionId-cookie that can be used with subsequent requests.

Note that when using API Session Authentication, it is important to explicitly close the session when you are done. Failing to do so may cause the device to run out of sessions, as there are a limited number of concurrent sessions available, and they do not time out automatically.

URL cheat sheet

The following table contains the main URLs used when accessing the API over HTTP.

Method	URL	Description
GET	http://<ip-address>/status.xml	Complete status document
GET	http://<ip-address>/configuration.xml	Complete configuration document
GET	http://<ip-address>/command.xml	Complete command document
GET	http://<ip-address>/valuespace.xml	Complete valuespace document
GET	http://<ip-address>/getxml?location=<path>	Retrieve document based on a path
POST	http://<ip-address>/putxml	Configurations and commands in HTTP body

Example: Starting a HTTP XMLAPI session

Request:

```
POST /xmlapi/session/begin HTTP/1.1
Authorization: Basic <Base64 encoded authentication string>
```

Response:

```
HTTP/1.1 204 No Content
Server: nginx/1.8.0
Connection: keep-alive
Set-Cookie: SessionId=f08102c8ce5aaf8fba23a7238cc2ef464b990e18bfb7fb048820c0e28955c54; Path=/; HttpOnly
```

This session counts toward the systems concurrent sessions limit.

With an open session, provide the SessionId cookie to following requests. Your tool/library may do this automatically.

Example: Using a HTTP XMLAPI session

Request:

```
GET /configuration.xml HTTP/1.1
Cookie: SessionId=f08102c8ce5aaf8fba23a7238cc2ef464b990e18bfb7fb048820c0e28955c54
```

Response:

```
HTTP/1.1 200 OK
Server: nginx/1.8.0
Content-Type: text/xml; charset=UTF-8
Content-Length: 43549
Connection: keep-alive
<?xml version="1.0"?>
<Configuration product="Cisco Codec"
version="ce8.2.0" apiVersion="4"> ...
</Configuration>
```

To close a session after use, issue a POST to <http://<ip-address>/xmlapi/session/end> with the provided cookie.

Example: Closing a HTTP XMLAPI session

Request:

```
POST /xmlapi/session/end HTTP/1.1
Cookie: SessionId=f08102c8ce5aaf8fba23a7238cc2ef464b990e18bfb7fb048820c0e28955c54
```

Response:

```
HTTP/1.1 204 No Content
Server: nginx/1.8.0
Connection: keep-alive
Set-Cookie: SessionId=; Max-Age=0; Path=/; HttpOnly
```

Getting status and configurations

Example 1: Get all status entries on the codec.

```
http://<ip-address>/getxml?location=/Status
```

Example 2: Get just the audio statuses of the codec.

```
http://<ip-address>/getxml?location=/Status/Audio
```

Example 3: Get all configurations of the codec.

```
http://<ip-address>/getxml?location=/Configuration
```

Example 4: Get all video configurations of the codec.

```
http://<ip-address>/getxml?location=/Configuration/Video
```

Sending commands and configurations

Using HTTP POST

When sending configurations and commands to the codec, it is important that the HTTP header Content-Type is set to text/xml, i.e. [Content-Type: text/xml](#). The body of the POST should contain the XML content.

Example 1: Changing the system name.

Request

```
POST /putxml HTTP/1.1
Content-Type: text/xml
```

```
<Configuration>
  <SystemUnit>
    <Name>newName</Name>
  </SystemUnit>
</Configuration>
```

Example 2: Setting the camera position.

Request

```
POST /putxml HTTP/1.1
Content-Type: text/xml
```

```
<Command>
  <Camera>
    <PositionSet command="True">
      <CameraId>1</CameraId>
      <Pan>200</Pan>
      <Tilt>200</Tilt>
    </PositionSet>
  </Camera>
</Command>
```

Response

```
HTTP/1.1 200 OK
Content-Type: text/xml
Content-Length: 91
```

```
<?xml version="1.0"?>
<Command>
  <CameraPositionSetResult item="1" status="OK"/>
</Command>
```

Feedback from codec over HTTP

You can get the device to post http feedback messages (also known as webhooks) on changes to the API state, e.g. statuses, events and configuration updates. The HTTP Post feedback messages will be sent to the specified ServerURL. You can choose between events being posted in either XML or JSON format. You can subscribe to changes on multiple parts of the API by register up to 15 different feedback expressions.

Registering for feedback

The command for registering is `xCommand HttpFeedback Register`. The syntax for this command and its arguments are described in this section.

HttpFeedback Register syntax:

```
xCommand HttpFeedback Register
  Expression: <S: 1, 255>
  Expression: <S: 1, 255>
  Expression: <S: 1, 255>
  Expression: <S: 1, 255>
  Expression: <S: 1, 255>
  Expression: <S: 1, 255>
  Expression: <S: 1, 255>
  Expression: <S: 1, 255>
  Expression: <S: 1, 255>
  Expression: <S: 1, 255>
  Expression: <S: 1, 255>
  Expression: <S: 1, 255>
  Expression: <S: 1, 255>
  Expression: <S: 1, 255>
  Expression: <S: 1, 255>
  Expression: <S: 1, 255>
  Expression: <S: 1, 255>
  Expression: <S: 1, 255>
  Expression: <S: 1, 255>
  Expression: <S: 1, 255>
  FeedbackSlot(r): <1..4>
  Format: <XML, JSON>
  ServerUrl(r): <S: 1, 2048>
```

HttpFeedback Register arguments:

FeedbackSlot: The codec can register up to 4 slots of servers requesting HTTP feedback. Set the registering to one of them.

NOTE: Avoid using FeedbackSlot 3 in an environment where Cisco TelePresence Management Suite (TMS) is used as TMS uses this feedback slot to register its expressions.

ServerUrl: The URL to the HTTP server where you want the codec to post the HTTP feedback messages to.

Format: Set the format for the feedback from the HTTP server to XML or JSON.

Expression 1-15: The XPath expression specifies which parts of the Status, Configuration or Event documents are monitored. You can have from 1 to 15 XPath expressions

Register the expressions you want to receive feedback on. See the [“Feedback mechanism” on page 31](#) section for more information about the expression formats.

Example: Registering feedback on configuration changes, disconnect events and call status changes.

```
POST /putxml HTTP/1.1
Content-Type: text/xml

<Command>
  <HttpFeedback>
    <Register command="True">
      <FeedbackSlot>1</FeedbackSlot>
      <ServerUrl>http://127.0.0.1/
        myhttppostscripturl</ServerUrl>
      <Format>XML</Format>
      <Expression item="1">/Configuration</
        Expression>
      <Expression item="2">/Event/
        CallDisconnect</Expression>
      <Expression item="3">/Status/Call</
        Expression>
    </Register>
  </HttpFeedback>
</Command>
```

Feedback output

When the codec notifies the registered HTTP server about changes, the body contains the same XML as when polling. There is however one small difference. The root-node contains an [Identification](#) node with children that specify the codec from which the notification originated. This means that you can handle multiple codecs with a single HTTP server URI.

Example: Audio volume changed.

```
<Configuration xmlns="http://www.company.com/XML/
  CUIL/2.0">
  <Identification>
    <SystemName>My System Name</SystemName>
    <MACAddress>00:00:de:ad:be:ef</MACAddress>
    <IPAddress>192.168.1.100</IPAddress>
    <ProductType>Cisco Codec</ProductType>
    <ProductID>Cisco Codec SX10</ProductID>
    <SWVersion>CE8.3.0.199465</SWVersion>
    <HWBoard>101401-5 [08]</HWBoard>
    <SerialNumber>PH0000000</SerialNumber>
  </Identification>
  <Audio item="1">
    <Volume item="1">60</Volume>
  </Audio>
</Configuration>
```

Translating from terminal mode to XML

Translating commands

The XML commands maintain the same structure as the terminal commands, but they use a parent-child relationship to describe the hierarchy. You can see this structure in the examples below.

Example 1: Setting up a call.

Terminal

```
xCommand Dial Number: "12345" Protocol: H323
```

XML

```
<Command>
  <Dial command="True">
    <Number>12345</Number>
    <Protocol>H323</Protocol>
  </Dial>
</Command>
```

Example 2: Assigning volume level

Terminal

```
xCommand Audio Volume Set Level: 50
```

XML

```
<Command>
  <Audio>
    <Volume>
      <Set command="True">
        <Level>50</Level>
      </Set>
    </Volume>
  </Audio>
</Command>
```

Translating configurations

Translating from xConfiguration to XML is similar to commands, but with the addition of a special attribute item="NN" for specifying the index in arrays.

Example: Configuring the input source type for video input connector 2.

Terminal

```
xConfiguration Video Input Connector 2
InputSourceType: camera
```

XML

```
<Configuration>
  <Video>
    <Input>
      <Connector item="2">
        <InputSourceType>camera</InputSourceType>
      </Connector>
    </Input>
  </Video>
</Configuration>
```

Dos and don'ts

Here are some best practices when programming the Cisco series API.

DO use complete commands

You should always use complete commands when programming, i.e. always use xConfiguration Video instead of xconf vid. The shortcuts can be used for searches in the API on the command line, but not for programming. The reason for this is that you might end up with ambiguous code when additional commands are added to the API.

DO NOT subscribe to unnecessary feedback

Subscribing to too much feedback may congest the control application. Although the amount of feedback may seem fine in the current version, the amount of feedback may grow in future releases.

Chapter 3

xConfiguration commands

Description of the xConfiguration commands

In this chapter, you can find a complete list of the xConfiguration commands. The examples show either the default value or an example of a value.

We recommend you visit our web site regularly for updated versions of the manual.

Go to: <http://www.cisco.com/go/roomkit-docs>

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Audio configuration

xConfiguration Audio DefaultVolume

Define the default volume for the speakers. The volume is set to this value when you switch on or restart the video system. Use the Touch controller or remote control to change the volume while the video system is running. You may also use API commands (xCommand Audio Volume) to change the volume while the video system is running, and to reset to default value.

Requires user role: ADMIN, INTEGRATOR, USER

Default value: 50

USAGE:

xConfiguration Audio DefaultVolume: DefaultVolume

where

DefaultVolume: Integer (0..100)

Select a value between 1 and 100. This corresponds to the dB range from -34.5 dB to 15 dB, in steps of 0.5 dB. If set to 0 the audio is switched off.

xConfiguration Audio Microphones Mute Enabled

Define the microphone mute behaviour on the video system.

Requires user role: ADMIN, INTEGRATOR

Default value: True

USAGE:

xConfiguration Audio Microphones Mute Enabled: Enabled

where

Enabled: True/InCallOnly

True: Muting of audio is always available.

InCallOnly: Muting of audio is only available when the device is in a call. When Idle it is not possible to mute the microphone. This is useful when an external telephone service/ audio system is connected via the codec and is to be available when the codec is not in a call. When set to InCallOnly this will prevent the audio-system from being muted by mistake.

xConfiguration Audio SoundsAndAlerts RingTone

Define which ringtone to use for incoming calls.

Requires user role: ADMIN, INTEGRATOR, USER

Default value: Sunrise

USAGE:

xConfiguration Audio SoundsAndAlerts RingTone: RingTone

where

RingTone: Sunrise/Mischief/Ripples/Reflections/Vibes/Delight/Evolve/Playful/Ascent/Calculation/Mellow/Ringer

Select a ringtone from the list.

xConfiguration Audio SoundsAndAlerts RingVolume

Define the ring volume for incoming calls.

Requires user role: ADMIN, INTEGRATOR, USER

Default value: 50

USAGE:

xConfiguration Audio SoundsAndAlerts RingVolume: RingVolume

where

RingVolume: Integer (0..100)

The value goes in steps of 5 from 0 to 100 (from -34.5 dB to 15 dB). Volume 0 = Off.

xConfiguration Audio Input Microphone [2..3] EchoControl Mode

The echo canceller continuously adjusts itself to the audio characteristics of the room, and compensates for any changes it detects in the audio environment. If the changes in the audio conditions are significant, the echo canceller may take a second or two to re-adjust.

Requires user role: ADMIN, INTEGRATOR

Default value: On

USAGE:

xConfiguration Audio Input Microphone n EchoControl Mode: Mode

where

n: Unique ID that identifies the microphone input. Range: 2..3

Mode: Off/On

Off: Turn off the echo control. Recommended if external echo cancellation or playback equipment is used.

On: Turn on the echo control. Recommended, in general, to prevent the far end from hearing their own audio. Once selected, echo cancellation is active at all times.

xConfiguration Audio Input Microphone [2..3] EchoControl NoiseReduction

The system has built-in noise reduction, which reduces stationary background noise, for example noise from air-conditioning systems, cooling fans etc. In addition, a high pass filter (Humfilter) reduces very low frequency noise. Noise reduction requires that Audio Input Microphone [n] EchoControl Mode is enabled.

Requires user role: ADMIN, INTEGRATOR

Default value: On

USAGE:

xConfiguration Audio Input Microphone n EchoControl NoiseReduction: NoiseReduction

where

n: Unique ID that identifies the microphone input. Range: 2..3

NoiseReduction: Off/On

Off: Turn off the noise reduction.

On: Turn on the noise reduction. Recommended in the presence of low frequency noise.

xConfiguration Audio Input Microphone [2..3] EchoControl Dereverberation

The system has built-in signal processing to reduce the effect of room reverberation. Dereverberation requires that Audio Input Microphone [n] EchoControl Mode is enabled.

Requires user role: ADMIN, INTEGRATOR

Default value: Off

USAGE:

xConfiguration Audio Input Microphone n EchoControl Dereverberation: Dereverberation

where

n: Unique ID that identifies the microphone input. Range: 2..3

Dereverberation: Off/On

Off: Turn off the dereverberation.

On: Turn on the dereverberation.

xConfiguration Audio Input Microphone [2..3] Level

Define the audio level of the Microphone input connector.

Requires user role: ADMIN, INTEGRATOR

Default value: 14

USAGE:

xConfiguration Audio Input Microphone n Level: Level

where

n: Unique ID that identifies the microphone input. Range: 2..3

Level: Integer (0..26)

Select a value between 0 and 24, in steps of 1 dB.

xConfiguration Audio Input Microphone [1..3] Mode

Disable or enable audio on the microphone connector. Note that Microphone [1] is the video system's internal microphone.

Requires user role: ADMIN, INTEGRATOR

Default value: On

USAGE:

xConfiguration Audio Input Microphone *n* Mode: *Mode*

where

n: Unique ID that identifies the microphone input. Range: 1..3

Mode: Off/On

Off: Disable the audio input microphone connector.

On: Enable the audio input microphone connector.

xConfiguration Audio Output InternalSpeaker Mode

Define whether or not to use the video system's integrated speakers.

Requires user role: ADMIN

Default value: On

USAGE:

xConfiguration Audio Output InternalSpeaker Mode: *Mode*

where

Mode: Off/On

Off: Disable the video system's integrated speakers.

On: Enable the video system's integrated speakers.

xConfiguration Audio Output Line [1] Mode

Define the mode for the audio line output.

Requires user role: ADMIN, INTEGRATOR

Default value: On

USAGE:

xConfiguration Audio Output Line *n* Mode: *Mode*

where

n: Unique ID that identifies the audio line output. Range: 1..1

Mode: Off/On

Off: Disable the audio line output.

On: Enable the audio line output.

xConfiguration Audio Output Line [1] OutputType

The output type should be set to match the connected device.

Requires user role: ADMIN, INTEGRATOR

Default value: On

USAGE:

xConfiguration Audio Output Line *n* OutputType: *OutputType*

where

n: Unique ID that identifies the audio line output. Range: 1..1

OutputType: LineOut/Subwoofer

LineOut: Use LineOut if the device connected to the line out is not a subwoofer. In this mode the internal speaker will play full range audio.

Subwoofer: Use Subwoofer if a subwoofer is connected to the line output. In this mode the bass is sent to LineOut and the rest of the audio range is played on the internal speaker.

xConfiguration Audio Ultrasound MaxVolume

This setting applies to the Intelligent Proximity feature. Set the maximum volume of the ultrasound pairing message.

Requires user role: ADMIN, INTEGRATOR

Default value: 70

USAGE:

xConfiguration Audio Ultrasound MaxVolume: MaxVolume

where

MaxVolume: Integer (0..70)

Select a value in the specified range. If set to 0, the ultrasound is switched off.

Cameras configuration

xConfiguration Cameras Camera Framerate

As default, the camera outputs 30 frames per second. This allows for good quality both in close-ups and overview pictures for normal bandwidths and lighting conditions. If the conditions are better, a 60 frames per second output from the camera may give a better overall quality.

Requires user role: ADMIN

Default value: 30

USAGE:

xConfiguration Cameras Camera Framerate: Framerate

where

Framerate: 30/60

30: The camera outputs 30 frames per second.

60: The camera outputs 60 frames per second.

xConfiguration Cameras SpeakerTrack Mode

Speaker tracking uses automatic camera framing to select the best camera view based on how many people are in the room. The camera uses an audio tracking technique that finds and captures a close-up of the active speaker.

Requires user role: ADMIN, INTEGRATOR

Default value: Auto

USAGE:

xConfiguration Cameras SpeakerTrack Mode: Mode

where

Mode: Auto/Off

Auto: Speaker tracking is switched on. The system will detect people in the room and automatically select the best camera framing. Users can switch speaker track on or off instantly in the camera control panel on the Touch controller.

Off: Speaker tracking is switched off.

xConfiguration Cameras SpeakerTrack Closeup

This setting applies only when the Cameras SpeakerTrack Mode is set to Auto.

When a person in the room speaks the system will find the person and select the best camera framing. This is called a closeup and may not include all the persons in the room. If you want all the persons in the room to be in the picture at all times you can turn off the closeup functionality.

Requires user role: ADMIN, INTEGRATOR, USER

Default value: Auto

USAGE:

xConfiguration Cameras SpeakerTrack Closeup: Closeup

where

Closeup: Auto/Off

Auto: The system will zoom in on the person speaking.

Off: The system will keep all the persons in the room in the camera framing at all times.

xConfiguration Cameras SpeakerTrack Whiteboard Mode

The Snap to Whiteboard feature extends the speaker tracking functionality, thus you need a camera that supports speaker tracking. When a presenter is standing next to the whiteboard, the camera will capture both the presenter and the whiteboard if the Snap to Whiteboard feature is enabled. If the feature is disabled, only the presenter will be captured. The Snap to Whiteboard feature is set up from the Touch controller or web interface.

Requires user role: ADMIN, INTEGRATOR, USER

Default value: Off

USAGE:

xConfiguration Cameras SpeakerTrack Whiteboard Mode: Mode

where

Mode: Off/On

Off: The Snap to Whiteboard feature is disabled.

On: The Snap to Whiteboard feature is enabled.

Conference configuration

xConfiguration Conference AutoAnswer Mode

Define the auto answer mode. Use the Conference AutoAnswer Delay setting if you want the system to wait a number of seconds before answering the call, and use the Conference AutoAnswer Mute setting if you want your microphone to be muted when the call is answered.

Requires user role: ADMIN

Default value: Off

USAGE:

xConfiguration Conference AutoAnswer Mode: Mode

where

Mode: Off/On

Off: You must answer incoming calls manually by pressing the OK key or the green Call key on the remote control, or by tapping Answer on the Touch controller.

On: The system automatically answers incoming calls, except if you are already in a call. You must always answer or decline incoming calls manually when you are already engaged in a call.

xConfiguration Conference AutoAnswer Mute

Define if the microphone shall be muted when an incoming call is automatically answered. Requires that AutoAnswer Mode is switched on.

Requires user role: ADMIN

Default value: Off

USAGE:

xConfiguration Conference AutoAnswer Mute: Mute

where

Mute: Off/On

Off: The incoming call will not be muted.

On: The incoming call will be muted when automatically answered.

xConfiguration Conference AutoAnswer Delay

Define how long (in seconds) an incoming call has to wait before it is answered automatically by the system. Requires that AutoAnswer Mode is switched on.

Requires user role: ADMIN

Default value: 0

USAGE:

xConfiguration Conference AutoAnswer Delay: Delay

where

Delay: Integer (0..50)

The auto answer delay (seconds).

xConfiguration Conference DefaultCall Protocol

Define the Default Call Protocol to be used when placing calls from the system.

Requires user role: ADMIN

Default value: Auto

USAGE:

xConfiguration Conference DefaultCall Protocol: Protocol

where

Protocol: Auto/H320/H323/Sip/Spark

Auto: Enables auto-selection of the call protocol based on which protocols are available. If multiple protocols are available, the order of priority is: 1) SIP; 2) H323. If the system cannot register, the auto-selection chooses H323.

H320: Not supported.

H323: All calls are set up as H.323 calls.

Sip: All calls are set up as SIP calls.

Spark: Reserved for Spark registered systems. Do not use.

xConfiguration Conference DefaultCall Rate

Define the Default Call Rate to be used when placing calls from the system.

Requires user role: ADMIN, INTEGRATOR

Default value: 6000

USAGE:

xConfiguration Conference DefaultCall Rate: Rate

where

Rate: Integer (64..6000)

The default call rate (kbps).

xConfiguration Conference DoNotDisturb DefaultTimeout

This setting determines the default duration of a Do Not Disturb session, i.e. the period when incoming calls are rejected and registered as missed calls. The session can be terminated earlier by using the user interface. The default value is 60 minutes.

Requires user role: ADMIN, INTEGRATOR

Default value: 60

USAGE:

xConfiguration Conference DoNotDisturb DefaultTimeout: DefaultTimeout

where

DefaultTimeout: Integer (1..1440)

The number of minutes (maximum 1440 minutes = 24 hours) before the Do Not Disturb session times out automatically.

xConfiguration Conference Encryption Mode

Define the conference encryption mode. A padlock with the text "Encryption On" or "Encryption Off" displays on screen for a few seconds when the conference starts.

NOTE: If the Encryption Option Key is not installed on the video system, the encryption mode is always Off.

Requires user role: ADMIN

Default value: BestEffort

USAGE:

xConfiguration Conference Encryption Mode: Mode

where

Mode: Off/On/BestEffort

Off: The system will not use encryption.

On: The system will only allow calls that are encrypted.

BestEffort: The system will use encryption whenever possible.

> In Point to point calls: If the far end system supports encryption (AES-128), the call will be encrypted. If not, the call will proceed without encryption.

> In MultiSite calls: In order to have encrypted MultiSite conferences, all sites must support encryption. If not, the conference will be unencrypted.

xConfiguration Conference FarEndControl Mode

Lets you decide if the remote side (far end) should be allowed to select your video sources and control your local camera (pan, tilt, zoom).

Requires user role: ADMIN

Default value: On

USAGE:

xConfiguration Conference FarEndControl Mode: Mode

where

Mode: Off/On

Off: The far end is not allowed to select your video sources or to control your local camera (pan, tilt, zoom).

On: Allows the far end to be able to select your video sources and control your local camera (pan, tilt, zoom). You will still be able to control your camera and select your video sources as normal.

xConfiguration Conference MaxReceiveCallRate

Define the maximum receive bit rate to be used when placing or receiving calls. Note that this is the maximum bit rate for each individual call; use the Conference MaxTotalReceiveCallRate setting to set the aggregated maximum for all simultaneous active calls.

Requires user role: ADMIN

Default value: 6000

USAGE:

xConfiguration Conference MaxReceiveCallRate: MaxReceiveCallRate

where

MaxReceiveCallRate: Integer (64..6000)

The maximum receive call rate (kbps).

xConfiguration Conference MaxTransmitCallRate

Define the maximum transmit bit rate to be used when placing or receiving calls. Note that this is the maximum bit rate for each individual call; use the Conference MaxTotalTransmitCallRate setting to set the aggregated maximum for all simultaneous active calls.

Requires user role: ADMIN

Default value: 6000

USAGE:

xConfiguration Conference MaxTransmitCallRate: MaxTransmitCallRate

where

MaxTransmitCallRate: Integer (64..6000)

The maximum transmitt call rate (kbps).

xConfiguration Conference MaxTotalReceiveCallRate

This configuration applies when using a video system's built-in MultiSite feature (optional) to host a multipoint video conference.

Define the maximum overall receive bit rate allowed. The bit rate will be divided fairly among all active calls at any time. This means that the individual calls will be up-speeded or down-speeded as appropriate when someone leaves or enters a multipoint conference, or when a call is put on hold (suspended) or resumed.

The maximum receive bit rate for each individual call is defined in the Conference MaxReceiveCallRate setting.

Requires user role: ADMIN

Default value: 6000

USAGE:

xConfiguration Conference MaxTotalReceiveCallRate: MaxTotalReceiveCallRate

where

MaxTotalReceiveCallRate: Integer (64..6000)

The maximum receive call rate (kbps).

xConfiguration Conference MaxTotalTransmitCallRate

This configuration applies when using a video system's built-in MultiSite feature (optional) to host a multipoint video conference.

Define the maximum overall transmit bit rate allowed. The bit rate will be divided fairly among all active calls at any time. This means that the individual calls will be up-speeded or down-speeded as appropriate when someone leaves or enters a multipoint conference, or when a call is put on hold (suspended) or resumed.

The maximum transmit bit rate for each individual call is defined in the Conference MaxTransmitCallRate setting.

Requires user role: ADMIN

Default value: 6000

USAGE:

xConfiguration Conference MaxTotalTransmitCallRate: MaxTotalTransmitCallRate

where

MaxTotalTransmitCallRate: Integer (64..6000)

The maximum transmit call rate (kbps).

xConfiguration Conference MultiStream Mode

The video system supports multistream video for conferences.

Requires user role: ADMIN

Default value: Auto

USAGE:

xConfiguration Conference MultiStream Mode: Mode

where

Mode: Auto/Off

Auto: Multistream will be used when the conference infrastructure supports the feature.

Minimum versions required: CMS 2.2, CUCM 11.5, VCS X8.7.

Off: Multistream is disabled.

H323 configuration

xConfiguration H323 Authentication Mode

Define the authentication mode for the H.323 profile.

Requires user role: ADMIN

Default value: Off

USAGE:

xConfiguration H323 Authentication Mode: Mode

where

Mode: Off/On

Off: The system will not try to authenticate itself to a H.323 Gatekeeper, but will still try a normal registration.

On: If an H.323 Gatekeeper indicates that it requires authentication, the system will try to authenticate itself to the gatekeeper. Requires the H323 Authentication LoginName and H323 Authentication Password settings to be defined on both the codec and the Gatekeeper.

xConfiguration H323 Authentication LoginName

The system sends the H323 Authentication Login Name and the H323 Authentication Password to an H.323 Gatekeeper for authentication. The authentication is a one way authentication from the codec to the H.323 Gatekeeper, i.e. the system is authenticated to the gatekeeper. If the H.323 Gatekeeper indicates that no authentication is required, the system will still try to register. Requires the H.323 Authentication Mode to be enabled.

Requires user role: ADMIN

Default value: ""

USAGE:

xConfiguration H323 Authentication LoginName: "LoginName"

where

LoginName: String (0, 50)

The authentication login name.

xConfiguration H323 Authentication Password

The system sends the H323 Authentication Login Name and the H323 Authentication Password to an H.323 Gatekeeper for authentication. The authentication is a one way authentication from the codec to the H.323 Gatekeeper, i.e. the system is authenticated to the gatekeeper. If the H.323 Gatekeeper indicates that no authentication is required, the system will still try to register. Requires the H.323 Authentication Mode to be enabled.

Requires user role: ADMIN

Default value: ""

USAGE:

xConfiguration H323 Authentication Password: "Password"

where

Password: String (0, 50)

The authentication password.

xConfiguration H323 CallSetup Mode

Defines whether to use a Gatekeeper or Direct calling when establishing H.323 calls. Direct H.323 calls can be made also when H323 CallSetup Mode is set to Gatekeeper.

Requires user role: ADMIN

Default value: Gatekeeper

USAGE:

xConfiguration H323 CallSetup Mode: Mode

where

Mode: Direct/Gatekeeper

Direct: You can only make an H.323 call by dialing an IP address directly.

Gatekeeper: The system uses a Gatekeeper to make an H.323 call. When choosing this option, the H323 Gatekeeper Address must also be configured.

xConfiguration H323 Encryption KeySize

Define the minimum or maximum key size for the Diffie–Hellman key exchange method, which is used when establishing the Advanced Encryption Standard (AES) encryption key.

Requires user role: ADMIN

Default value: Min1024bit

USAGE:

xConfiguration H323 Encryption KeySize: KeySize

where

KeySize: Min1024bit/Max1024bit/Min2048bit

Min1024bit: The minimum size is 1024 bit.

Max1024bit: The maximum size is 1024 bit.

Min2048bit: The minimum size is 2048 bit.

xConfiguration H323 Gatekeeper Address

Define the IP address of the Gatekeeper. Requires H323 CallSetup Mode to be set to Gatekeeper.

Requires user role: ADMIN

Default value: ""

USAGE:

xConfiguration H323 Gatekeeper Address: "Address"

where

Address: String (0, 255)

A valid IPv4 address, IPv6 address or DNS name.

xConfiguration H323 H323Alias E164

The H.323 Alias E.164 defines the address of the system, according to the numbering plan implemented in the H.323 Gatekeeper. The E.164 alias is equivalent to a telephone number, sometimes combined with access codes.

Requires user role: ADMIN

Default value: ""

USAGE:

xConfiguration H323 H323Alias E164: "E164"

where

E164: String (0, 30)

The H.323 Alias E.164 address. Valid characters are 0-9, * and #.

xConfiguration H323 H323Alias ID

Define the H.323 Alias ID, which is used to address the system on a H.323 Gatekeeper and will be displayed in the call lists.

Requires user role: ADMIN

Default value: ""

USAGE:

xConfiguration H323 H323Alias ID: "ID"

where

ID: String (0, 49)

The H.323 Alias ID. Example: "firstname.lastname@company.com", "My H.323 Alias ID"

xConfiguration H323 NAT Mode

The firewall traversal technology creates a secure path through the firewall barrier, and enables proper exchange of audio/video data when connected to an external video conferencing system (when the IP traffic goes through a NAT router). NOTE: NAT does not work in conjunction with gatekeepers.

Requires user role: ADMIN

Default value: Off

USAGE:

xConfiguration H323 NAT Mode: Mode

where

Mode: Auto/Off/On

Auto: The system will determine if the H323 NAT Address or the real IP address should be used in signaling. This makes it possible to place calls to endpoints on the LAN as well as endpoints on the WAN. If the H323 NAT Address is wrong or not set, the real IP address will be used.

Off: The system will signal the real IP address.

On: The system will signal the configured H323 NAT Address instead of its real IP address in Q.931 and H.245. The NAT server address will be shown in the startup-menu as: "My IP Address: 10.0.2.1". If the H323 NAT Address is wrong or not set, H.323 calls cannot be set up.

xConfiguration H323 NAT Address

Define the external/global IP address to the router with NAT support. Packets sent to the router will then be routed to the system. Note that NAT cannot be used when registered to a gatekeeper.

In the router, the following ports must be routed to the system's IP address:

* Port 1720

* Port 5555-6555

* Port 2326-2487

Requires user role: ADMIN

Default value: ""

USAGE:

xConfiguration H323 NAT Address: "Address"

where

Address: String (0, 64)

A valid IPv4 address or IPv6 address.

Macros configuration

xConfiguration Macros Mode

Macros allow you to write snippets of JavaScript code that can automate parts of your video endpoint, thus creating custom behavior. Use of macros is disabled by default, but the first time you open the Macro Editor you will be asked whether to enable use of macros on the codec. Use this setting when you want to manually enable, or to permanently disable the use of macros on the codec. You can disable the use of macros within the Macro Editor. But this will not permanently disable macros from running, because every time the codec is reset the macros will be re-enabled automatically.

Requires user role: ADMIN

Default value: Off

USAGE:

xConfiguration Macros Mode: Mode

where

Mode: Off/On

Off: Permanently disable the use of macros on this video system.

On: Enable the use of macros on this video system.

xConfiguration Macros AutoStart

All the macros run in a single process on the video endpoint, called the macro runtime. It should be running by default, but you can choose to stop and start it manually. If you restart the video system, the runtime will automatically start again if auto start is enabled.

Requires user role: ADMIN

Default value: Off

USAGE:

xConfiguration Macros AutoStart: AutoStart

where

AutoStart: Off/On

Off: The macro runtime will not start automatically after a restart of the video system.

On: The macro runtime will start automatically after a restart of the video system.

Network configuration

xConfiguration Network [1] DNS Domain Name

The DNS Domain Name is the default domain name suffix which is added to unqualified names.

Example: If the DNS Domain Name is "company.com" and the name to lookup is "MyVideoSystem", this will result in the DNS lookup "MyVideoSystem.company.com".

Requires user role: ADMIN, USER

Default value: ""

USAGE:

xConfiguration Network n DNS Domain Name: "Name"

where

n: Index that identifies the network. Range: 1..1

Name: String (0, 64)

The DNS domain name.

xConfiguration Network [1] DNS Server [1..3] Address

Define the network addresses for DNS servers. Up to three addresses may be specified. If the network addresses are unknown, contact your administrator or Internet Service Provider.

Requires user role: ADMIN, USER

Default value: ""

USAGE:

xConfiguration Network n DNS Server m Address: "Address"

where

n: Index that identifies the network. Range: 1..1

m: Index that identifies the DNS server. Maximum three DNS servers are allowed. Range: 1..3

Address: String (0, 64)

A valid IPv4 address or IPv6 address.

xConfiguration Network [1] IEEE8021X Mode

The system can be connected to an IEEE 802.1X LAN network, with a port-based network access control that is used to provide authenticated network access for Ethernet networks.

Requires user role: ADMIN, USER

Default value: Off

USAGE:

xConfiguration Network *n* IEEE8021X Mode: *Mode*

where

n: Index that identifies the network. Range: 1..1

Mode: Off/On

Off: The 802.1X authentication is disabled (default).

On: The 802.1X authentication is enabled.

xConfiguration Network [1] IEEE8021X TlsVerify

Verification of the server-side certificate of an IEEE802.1x connection against the certificates in the local CA-list when TLS is used. The CA-list must be uploaded to the video system. This can be done from the web interface.

This setting takes effect only when Network [1] IEEE8021X Eap Tls is enabled (On).

Requires user role: ADMIN, USER

Default value: Off

USAGE:

xConfiguration Network *n* IEEE8021X TlsVerify: *TlsVerify*

where

n: Index that identifies the network. Range: 1..1

TlsVerify: Off/On

Off: When set to Off, TLS connections are allowed without verifying the server-side X.509 certificate against the local CA-list. This should typically be selected if no CA-list has been uploaded to the codec.

On: When set to On, the server-side X.509 certificate will be validated against the local CA-list for all TLS connections. Only servers with a valid certificate will be allowed.

xConfiguration Network [1] IEEE8021X UseClientCertificate

Authentication using a private key/certificate pair during an IEEE802.1x connection. The authentication X.509 certificate must be uploaded to the video system. This can be done from the web interface.

Requires user role: ADMIN, USER

Default value: Off

USAGE:

xConfiguration Network *n* IEEE8021X UseClientCertificate: *UseClientCertificate*

where

n: Index that identifies the network. Range: 1..1

UseClientCertificate: Off/On

Off: When set to Off client-side authentication is not used (only server-side).

On: When set to On the client (video system) will perform a mutual authentication TLS handshake with the server.

xConfiguration Network [1] IEEE8021X Identity

Define the user name for 802.1X authentication.

Requires user role: ADMIN, USER

Default value: ""

USAGE:

xConfiguration Network *n* IEEE8021X Identity: *Identity*

where

n: Index that identifies the network. Range: 1..1

Identity: String (0, 64)

The user name for 802.1X authentication.

xConfiguration Network [1] IEEE8021X Password

Define the password for 802.1X authentication.

Requires user role: ADMIN, USER

Default value: ""

USAGE:

xConfiguration Network *n* IEEE8021X Password: "*Password*"

where

n: Index that identifies the network. Range: 1..1

Password: String (0, 50)

The password for 802.1X authentication.

xConfiguration Network [1] IEEE8021X AnonymousIdentity

The 802.1X Anonymous ID string is to be used as unencrypted identity with EAP (Extensible Authentication Protocol) types that support different tunneled identity, like EAP-PEAP and EAP-TTLS. If set, the anonymous ID will be used for the initial (unencrypted) EAP Identity Request.

Requires user role: ADMIN, USER

Default value: ""

USAGE:

xConfiguration Network *n* IEEE8021X AnonymousIdentity: "*AnonymousIdentity*"

where

n: Index that identifies the network. Range: 1..1

AnonymousIdentity: String (0, 64)

The 802.1X Anonymous ID string.

xConfiguration Network [1] IEEE8021X Eap Md5

Define the Md5 (Message-Digest Algorithm 5) mode. This is a Challenge Handshake Authentication Protocol that relies on a shared secret. Md5 is a Weak security.

Requires user role: ADMIN, USER

Default value: On

USAGE:

xConfiguration Network *n* IEEE8021X Eap Md5: *Md5*

where

n: Index that identifies the network. Range: 1..1

Md5: Off/On

Off: The EAP-MD5 protocol is disabled.

On: The EAP-MD5 protocol is enabled (default).

xConfiguration Network [1] IEEE8021X Eap Ttls

Define the TTLS (Tunneled Transport Layer Security) mode. Authenticates LAN clients without the need for client certificates. Developed by Funk Software and Certicom. Usually supported by Agere Systems, Proxim and Avaya.

Requires user role: ADMIN, USER

Default value: On

USAGE:

xConfiguration Network *n* IEEE8021X Eap Ttls: *Ttls*

where

n: Index that identifies the network. Range: 1..1

Ttls: Off/On

Off: The EAP-TTLS protocol is disabled.

On: The EAP-TTLS protocol is enabled (default).

xConfiguration Network [1] IEEE8021X Eap Tls

Enable or disable the use of EAP-TLS (Transport Layer Security) for IEEE802.1x connections. The EAP-TLS protocol, defined in RFC 5216, is considered one of the most secure EAP standards. LAN clients are authenticated using client certificates.

Requires user role: ADMIN, USER

Default value: On

USAGE:

xConfiguration Network *n* IEEE8021X Eap Tls: *Tls*

where

n: Index that identifies the network. Range: 1..1

Tls: Off/On

Off: The EAP-TLS protocol is disabled.

On: The EAP-TLS protocol is enabled (default).

xConfiguration Network [1] IEEE8021X Eap Peap

Define the Peap (Protected Extensible Authentication Protocol) mode. Authenticates LAN clients without the need for client certificates. Developed by Microsoft, Cisco and RSA Security.

Requires user role: ADMIN, USER

Default value: On

USAGE:

xConfiguration Network *n* IEEE8021X Eap Peap: *Peap*

where

n: Index that identifies the network. Range: 1..1

Peap: Off/On

Off: The EAP-PEAP protocol is disabled.

On: The EAP-PEAP protocol is enabled (default).

xConfiguration Network [1] IPStack

Select if the system should use IPv4, IPv6, or dual IP stack, on the network interface. NOTE: After changing this setting you may have to wait up to 30 seconds before it takes effect.

Requires user role: ADMIN, USER

Default value: Dual

USAGE:

xConfiguration Network *n* IPStack: *IPStack*

where

n: Index that identifies the network. Range: 1..1

IPStack: Dual/IPv4/IPv6

Dual: When set to Dual, the network interface can operate on both IP versions at the same time, and can have both an IPv4 and an IPv6 address at the same time.

IPv4: When set to IPv4, the system will use IPv4 on the network interface.

IPv6: When set to IPv6, the system will use IPv6 on the network interface.

xConfiguration Network [1] IPv4 Assignment

Define how the system will obtain its IPv4 address, subnet mask and gateway address. This setting applies only to systems on IPv4 networks.

Requires user role: ADMIN, USER

Default value: DHCP

USAGE:

xConfiguration Network *n* IPv4 Assignment: *Assignment*

where

n: Index that identifies the network. Range: 1..1

Assignment: Static/DHCP

Static: The addresses must be configured manually using the Network IPv4 Address, Network IPv4 Gateway and Network IPv4 SubnetMask settings (static addresses).

DHCP: The system addresses are automatically assigned by the DHCP server.

xConfiguration Network [1] IPv4 Address

Define the static IPv4 network address for the system. Applicable only when Network IPv4 Assignment is set to Static.

Requires user role: ADMIN, USER

Default value: ""

USAGE:

xConfiguration Network *n* IPv4 Address: "*Address*"

where

n: Index that identifies the network. Range: 1..1

Address: String (0, 64)

A valid IPv4 address.

xConfiguration Network [1] IPv4 Gateway

Define the IPv4 network gateway address. Applicable only when the Network IPv4 Assignment is set to Static.

Requires user role: ADMIN, USER

Default value: ""

USAGE:

xConfiguration Network *n* IPv4 Gateway: "*Gateway*"

where

n: Index that identifies the network. Range: 1..1

Gateway: String (0, 64)

A valid IPv4 address.

xConfiguration Network [1] IPv4 SubnetMask

Define the IPv4 network subnet mask. Applicable only when the Network IPv4 Assignment is set to Static.

Requires user role: ADMIN, USER

Default value: ""

USAGE:

xConfiguration Network *n* IPv4 SubnetMask: "*SubnetMask*"

where

n: Index that identifies the network. Range: 1..1

SubnetMask: String (0, 64)

A valid IPv4 address.

xConfiguration Network [1] IPv6 Assignment

Define how the system will obtain its IPv6 address and the default gateway address. This setting applies only to systems on IPv6 networks.

Requires user role: ADMIN, USER

Default value: Autoconf

USAGE:

xConfiguration Network *n* IPv6 Assignment: *Assignment*

where

n: Index that identifies the network. Range: 1..1

Assignment: Static/DHCPv6/Autoconf

Static: The codec and gateway IP addresses must be configured manually using the Network IPv6 Address and Network IPv6 Gateway settings. The options, for example NTP and DNS server addresses, must either be set manually or obtained from a DHCPv6 server. The Network IPv6 DHCPOptions setting determines which method to use.

DHCPv6: All IPv6 addresses, including options, will be obtained from a DHCPv6 server. See RFC 3315 for a detailed description. The Network IPv6 DHCPOptions setting will be ignored.

Autoconf: Enable IPv6 stateless autoconfiguration of the IPv6 network interface. See RFC 4862 for a detailed description. The options, for example NTP and DNS server addresses, must either be set manually or obtained from a DHCPv6 server. The Network IPv6 DHCPOptions setting determines which method to use.

xConfiguration Network [1] IPv6 Address

Define the static IPv6 network address for the system. Applicable only when the Network IPv6 Assignment is set to Static.

Requires user role: ADMIN, USER

Default value: ""

USAGE:

xConfiguration Network *n* IPv6 Address: "*Address*"

where

n: Index that identifies the network. Range: 1..1

Address: String (0, 64)

A valid IPv6 address including a network mask. Example: 2001:DB8::/48

xConfiguration Network [1] IPv6 Gateway

Define the IPv6 network gateway address. This setting is only applicable when the Network IPv6 Assignment is set to Static.

Requires user role: ADMIN, USER

Default value: ""

USAGE:

xConfiguration Network *n* IPv6 Gateway: "*Gateway*"

where

n: Index that identifies the network. Range: 1..1

Gateway: String (0, 64)

A valid IPv6 address.

xConfiguration Network [1] IPv6 DHCPOptions

Retrieve a set of DHCP options, for example NTP and DNS server addresses, from a DHCPv6 server.

Requires user role: ADMIN, USER

Default value: On

USAGE:

xConfiguration Network *n* IPv6 DHCPOptions: *DHCPOptions*

where

n: Index that identifies the network. Range: 1..1

DHCPOptions: Off/On

Off: Disable the retrieval of DHCP options from a DHCPv6 server.

On: Enable the retrieval of a selected set of DHCP options from a DHCPv6 server.

xConfiguration Network [1] MTU

Define the Ethernet MTU (Maximum Transmission Unit) size. The MTU size must be supported by your network infrastructure. The minimum size is 576 for IPv4 and 1280 for IPv6.

Requires user role: ADMIN, USER

Default value: 1500

USAGE:

xConfiguration Network *n* MTU: *MTU*

where

n: Index that identifies the network. Range: 1..1

MTU: Integer (576..1500)

Set a value for the MTU (bytes).

xConfiguration Network [1] QoS Mode

The QoS (Quality of Service) is a method which handles the priority of audio, video and data in the network. The QoS settings must be supported by the infrastructure. Diffserv (Differentiated Services) is a computer networking architecture that specifies a simple, scalable and coarse-grained mechanism for classifying, managing network traffic and providing QoS priorities on modern IP networks.

Requires user role: ADMIN, USER

Default value: Diffserv

USAGE:

xConfiguration Network *n* QoS Mode: *Mode*

where

n: Index that identifies the network. Range: 1..1

Mode: Off/Diffserv

Off: No QoS method is used.

Diffserv: When you set the QoS Mode to DiffServ, the Network QoS DiffServ Audio, Network QoS DiffServ Video, Network QoS DiffServ Data, Network QoS DiffServ Signalling, Network QoS DiffServ ICMPv6 and Network QoS DiffServ NTP settings are used to prioritize packets.

xConfiguration Network [1] QoS Diffserv Audio

This setting will only take effect if Network QoS Mode is set to DiffServ.

Define which priority Audio packets should have in the IP network.

The priority for the packets ranges from 0 to 63 - the higher the number, the higher the priority. The recommended class for Audio is CS4, which equals the decimal value 32. If in doubt, contact your network administrator.

The priority set here might be overridden when packets are leaving the network controlled by the local network administrator.

Requires user role: ADMIN, USER

Default value: 0

USAGE:

xConfiguration Network *n* QoS Diffserv Audio: *Audio*

where

n: Index that identifies the network. Range: 1..1

Audio: Integer (0..63)

Set the priority of the audio packets in the IP network - the higher the number, the higher the priority. The default value is 0 (best effort).

xConfiguration Network [1] QoS Diffserv Video

This setting will only take effect if Network QoS Mode is set to Diffserv.

Define which priority Video packets should have in the IP network. The packets on the presentation channel (shared content) are also in the Video packet category. The priority for the packets ranges from 0 to 63 - the higher the number, the higher the priority. The recommended class for Video is CS4, which equals the decimal value 32. If in doubt, contact your network administrator.

The priority set here might be overridden when packets are leaving the network controlled by the local network administrator.

Requires user role: ADMIN, USER

Default value: 0

USAGE:

xConfiguration Network *n* QoS Diffserv Video: *Video*

where

n: Index that identifies the network. Range: 1..1

Video: Integer (0..63)

Set the priority of the video packets in the IP network - the higher the number, the higher the priority. The default value is 0 (best effort).

xConfiguration Network [1] QoS Diffserv Data

This setting will only take effect if Network QoS Mode is set to Diffserv.

Define which priority Data packets should have in the IP network.

The priority for the packets ranges from 0 to 63 - the higher the number, the higher the priority. The recommended value for Data is 0, which means best effort. If in doubt, contact your network administrator.

The priority set here might be overridden when packets are leaving the network controlled by the local network administrator.

Requires user role: ADMIN, USER

Default value: 0

USAGE:

xConfiguration Network *n* QoS Diffserv Data: *Data*

where

n: Index that identifies the network. Range: 1..1

Data: Integer (0..63)

Set the priority of the data packets in the IP network - the higher the number, the higher the priority. The default value is 0 (best effort).

xConfiguration Network [1] QoS Diffserv Signalling

This setting will only take effect if Network QoS Mode is set to Diffserv.

Define which priority Signalling packets that are deemed critical (time-sensitive) for the real-time operation should have in the IP network.

The priority for the packets ranges from 0 to 63 - the higher the number, the higher the priority. The recommended class for Signalling is CS3, which equals the decimal value 24. If in doubt, contact your network administrator.

The priority set here might be overridden when packets are leaving the network controlled by the local network administrator.

Requires user role: ADMIN, USER

Default value: 0

USAGE:

xConfiguration Network *n* QoS Diffserv Signalling: *Signalling*

where

n: Index that identifies the network. Range: 1..1

Signalling: Integer (0..63)

Set the priority of the signalling packets in the IP network - the higher the number, the higher the priority. The default value is 0 (best effort).

xConfiguration Network [1] QoS Diffserv ICMPv6

This setting will only take effect if Network QoS Mode is set to Diffserv.

Define which priority ICMPv6 packets should have in the IP network.

The priority for the packets ranges from 0 to 63 - the higher the number, the higher the priority. The recommended value for ICMPv6 is 0, which means best effort. If in doubt, contact your network administrator.

The priority set here might be overridden when packets are leaving the network controlled by the local network administrator.

Requires user role: ADMIN, USER

Default value: 0

USAGE:

xConfiguration Network *n* QoS Diffserv ICMPv6: *ICMPv6*

where

n: Index that identifies the network. Range: 1..1

ICMPv6: Integer (0..63)

Set the priority of the ICMPv6 packets in the IP network - the higher the number, the higher the priority. The default value is 0 (best effort).

xConfiguration Network [1] QoS Diffserv NTP

This setting will only take effect if Network QoS Mode is set to Diffserv.

Define which priority NTP packets should have in the IP network.

The priority for the packets ranges from 0 to 63 - the higher the number, the higher the priority. The recommended value for NTP is 0, which means best effort. If in doubt, contact your network administrator.

The priority set here might be overridden when packets are leaving the network controlled by the local network administrator.

Requires user role: ADMIN, USER

Default value: 0

USAGE:

xConfiguration Network *n* QoS Diffserv NTP: *NTP*

where

n: Index that identifies the network. Range: 1..1

NTP: Integer (0..63)

Set the priority of the NTP packets in the IP network - the higher the number, the higher the priority. The default value is 0 (best effort).

xConfiguration Network [1] RemoteAccess Allow

Define which IP addresses (IPv4/IPv6) are allowed for remote access to the codec from SSH/HTTP/HTTPS. Multiple IP addresses are separated by a white space.

A network mask (IP range) is specified by <ip address>/N, where N is 1-32 for IPv4, and N is 1-128 for IPv6. The /N is a common indication of a network mask where the first N bits are set. Thus 192.168.0.0/24 would match any address starting with 192.168.0, since these are the first 24 bits in the address.

Requires user role: ADMIN, USER

Default value: ""

USAGE:

xConfiguration Network *n* RemoteAccess Allow: "*Allow*"

where

n: Index that identifies the network. Range: 1..1

Allow: String (0, 255)

A valid IPv4 address or IPv6 address.

xConfiguration Network [1] Speed

Define the Ethernet link speed. We recommend not to change from the default value, which negotiates with the network to set the speed automatically. If you do not use autonegotiation, make sure that the speed you choose is supported by the closest switch in your network infrastructure.

Requires user role: ADMIN, USER

Default value: Auto

USAGE:

xConfiguration Network *n* Speed: *Speed*

where

n: Index that identifies the network. Range: 1..1

Speed: Auto/10half/10full/100half/100full/1000full

Auto: Autonegotiate link speed.

10half: Force link to 10 Mbps half-duplex.

10full: Force link to 10 Mbps full-duplex.

100half: Force link to 100 Mbps half-duplex.

100full: Force link to 100 Mbps full-duplex.

1000full: Force link to 1 Gbps full-duplex.

xConfiguration Network [1] VLAN Voice Mode

Define the VLAN voice mode. The VLAN Voice Mode will be set to Auto automatically if you have Cisco UCM (Cisco Unified Communications Manager) as provisioning infrastructure. Note that Auto mode will NOT work if the NetworkServices CDP Mode setting is Off.

Requires user role: ADMIN, USER

Default value: Auto

USAGE:

xConfiguration Network *n* VLAN Voice Mode: *Mode*

where

n: Index that identifies the network. Range: 1..1

Mode: Auto/Manual/Off

Auto: The Cisco Discovery Protocol (CDP), if available, assigns an id to the voice VLAN. If CDP is not available, VLAN is not enabled.

Manual: The VLAN ID is set manually using the Network VLAN Voice VlanId setting. If CDP is available, the manually set value will be overruled by the value assigned by CDP.

Off: VLAN is not enabled.

xConfiguration Network [1] VLAN Voice VlanId

Define the VLAN voice ID. This setting will only take effect if Network VLAN Voice Mode is set to Manual.

Requires user role: ADMIN, USER

Default value: 1

USAGE:

xConfiguration Network *n* VLAN Voice VlanId: *VlanId*

where

n: Index that identifies the network. Range: 1..1

VlanId: Integer (1..4094)

Set the VLAN voice ID.

NetworkServices configuration

xConfiguration NetworkServices CDP Mode

Enable or disable the CDP (Cisco Discovery Protocol) daemon. Enabling CDP will make the endpoint report certain statistics and device identifiers to a CDP-enabled switch. If CDP is disabled, the Network VLAN Voice Mode: Auto setting will not work.

Requires user role: ADMIN

Default value: On

USAGE:

xConfiguration NetworkServices CDP Mode: *Mode*

where

Mode: Off/On

Off: The CDP daemon is disabled.

On: The CDP daemon is enabled.

xConfiguration NetworkServices H323 Mode

Define whether the system should be able to place and receive H.323 calls or not.

Requires user role: ADMIN

Default value: Off

USAGE:

xConfiguration NetworkServices H323 Mode: *Mode*

where

Mode: Off/On

Off: Disable the possibility to place and receive H.323 calls.

On: Enable the possibility to place and receive H.323 calls (default).

xConfiguration NetworkServices HTTP Mode

Define whether or not to allow access to the video system using the HTTP or HTTPS (HTTP Secure) protocols. Note that the video system's web interface use HTTP or HTTPS. If this setting is switched Off, you cannot use the web interface.

If you need extra security (encryption and decryption of requests, and pages that are returned by the web server), allow only HTTPS.

Requires user role: ADMIN

Default value: HTTP+HTTPS

USAGE:

xConfiguration NetworkServices HTTP Mode: Mode

where

Mode: Off/HTTP+HTTPS/HTTPS

Off: Access to the video system not allowed via HTTP or HTTPS.

HTTP+HTTPS: Access to the video system allowed via both HTTP and HTTPS.

HTTPS: Access to the video system allowed via HTTPS, but not via HTTP.

xConfiguration NetworkServices HTTP Proxy Allowed

The HTTP Proxy Settings are available from the user interface when the system is provisioned to Cisco Spark. The HTTP proxy settings makes it possible to onboard a video system behind a HTTP proxy to Spark.

Requires user role: ADMIN, USER

Default value: True

USAGE:

xConfiguration NetworkServices HTTP Proxy Allowed: Allowed

where

Allowed: False/True

False: The HTTP proxy settings are not available from the Cisco Spark setup wizard.

True: The HTTP proxy settings are available from the Cisco Spark setup wizard.

xConfiguration NetworkServices HTTP Proxy LoginName

This is the user name part of the credentials for authentication towards the HTTP proxy. Requires that the NetworkServices HTTP Proxy Mode is set to Manual.

Requires user role: ADMIN, USER

Default value: ""

USAGE:

xConfiguration NetworkServices HTTP Proxy LoginName: "LoginName"

where

LoginName: String (0, 80)

The authentication login name.

xConfiguration NetworkServices HTTP Proxy Password

This is the password part of the credentials for authentication towards the HTTP proxy. Requires that the NetworkServices HTTP Proxy Mode is set to Manual.

Requires user role: ADMIN, USER

Default value: ""

USAGE:

xConfiguration NetworkServices HTTP Proxy Password: "Password"

where

Password: String (0, 64)

The authentication password.

xConfiguration NetworkServices HTTP Proxy Mode

The HTTP proxy for Cisco Spark can be set up manually or turned off.

Requires user role: ADMIN, USER

Default value: Off

USAGE:

xConfiguration NetworkServices HTTP Proxy Mode: Mode

where

Mode: Manual/Off

Manual: Add the address of the proxy server in the NetworkServices HTTP Proxy URL setting. Optionally, you can add the login name HTTP proxy login name and password in the NetworkServices HTTP Proxy LoginName/Password settings.

Off: The HTTP proxy mode is turned off.

xConfiguration NetworkServices HTTP Proxy Url

Set the URL of the HTTP proxy server. Requires that the NetworkServices HTTP Proxy Mode is set to Manual.

Requires user role: ADMIN, USER

Default value: ""

USAGE:

xConfiguration NetworkServices HTTP Proxy Url: "Url"

where

Url: String (0, 255)

The URL for the HTTP proxy server.

xConfiguration NetworkServices HTTPS Server MinimumTLSVersion

Set the lowest version of the TLS (Transport Layer Security) protocol that is allowed.

Requires user role: ADMIN

Default value: TLSv1.1

USAGE:

xConfiguration NetworkServices HTTPS Server MinimumTLSVersion: MinimumTLSVersion

where

MinimumTLSVersion: TLSv1.1/TLSv1.2

TLSv1.1: Support of TLS version 1.1 or higher.

TLSv1.2: Support of TLS version 1.2 or higher.

xConfiguration NetworkServices HTTPS StrictTransportSecurity

The HTTP Strict Transport Security header lets a web site inform the browser that it should never load the site using HTTP and should automatically convert all attempts to access the site using HTTP to HTTPS requests instead.

Requires user role: ADMIN

Default value: Off

USAGE:

xConfiguration NetworkServices HTTPS StrictTransportSecurity:

StrictTransportSecurity

where

StrictTransportSecurity: Off/On

Off: The HTTP strict transport security feature is disabled.

On: The HTTP strict transport security feature is enabled.

xConfiguration NetworkServices HTTPS VerifyServerCertificate

When the video system connects to an external HTTPS server (like a phone book server or an external manager), this server will present a certificate to the video system to identify itself.

Requires user role: ADMIN

Default value: Off

USAGE:

xConfiguration NetworkServices HTTPS VerifyServerCertificate:

VerifyServerCertificate

where

VerifyServerCertificate: Off/On

Off: Do not verify server certificates.

On: Requires the system to verify that the server certificate is signed by a trusted Certificate Authority (CA). This requires that a list of trusted CAs are uploaded to the system in advance.

xConfiguration NetworkServices HTTPS VerifyClientCertificate

When the video system connects to a HTTPS client (like a web browser), the client can be asked to present a certificate to the video system to identify itself.

Requires user role: ADMIN

Default value: Off

USAGE:

xConfiguration NetworkServices HTTPS VerifyClientCertificate:

VerifyClientCertificate

where

VerifyClientCertificate: Off/On

Off: Do not verify client certificates.

On: Requires the client to present a certificate that is signed by a trusted Certificate Authority (CA). This requires that a list of trusted CAs are uploaded to the system in advance.

xConfiguration NetworkServices NTP Mode

The Network Time Protocol (NTP) is used to synchronize the system's time and date to a reference time server. The time server will be queried regularly for time updates.

Requires user role: ADMIN

Default value: Auto

USAGE:

xConfiguration NetworkServices NTP Mode: Mode

where

Mode: Auto/Manual/Off

Auto: The system will use an NTP server for time reference. As default, the server address will be obtained from the network's DHCP server. If a DHCP server is not used, or if the DHCP server does not provide an NTP server address, the NTP server address that is specified in the NetworkServices NTP Server [n] Address setting will be used.

Manual: The system will use the NTP server that is specified in the NetworkServices NTP Server [n] Address setting for time reference.

Off: The system will not use an NTP server. The NetworkServices NTP Server [n] Address setting will be ignored.

xConfiguration NetworkServices NTP Server [1..3] Address

The address of the NTP server that will be used when NetworkServices NTP Mode is set to Manual, and when NetworkServices NTP Mode is set to Auto and no address is supplied by a DHCP server.

Requires user role: ADMIN

Default value: 0.tandberg.pool.ntp.org

USAGE:

xConfiguration NetworkServices NTP Server n Address: "Address"

where

n: Unique ID that identifies the NTP server. Range: 1..3

Address: String (0, 255)

A valid IPv4 address, IPv6 address or DNS name.

xConfiguration NetworkServices SIP Mode

Define whether the system should be able to place and receive SIP calls or not.

Requires user role: ADMIN

Default value: On

USAGE:

xConfiguration NetworkServices SIP Mode: Mode

where

Mode: Off/On

Off: Disable the possibility to place and receive SIP calls.

On: Enable the possibility to place and receive SIP calls (default).

xConfiguration NetworkServices SNMP Mode

SNMP (Simple Network Management Protocol) is used in network management systems to monitor network-attached devices (routers, servers, switches, projectors, etc) for conditions that warrant administrative attention. SNMP exposes management data in the form of variables on the managed systems, which describe the system configuration. These variables can then be queried (set to ReadOnly) and sometimes set (set to ReadWrite) by managing applications.

Requires user role: ADMIN

Default value: ReadOnly

USAGE:

xConfiguration NetworkServices SNMP Mode: Mode

where

Mode: Off/ReadOnly/ReadWrite

Off: Disable the SNMP network service.

ReadOnly: Enable the SNMP network service for queries only.

ReadWrite: Enable the SNMP network service for both queries and commands.

xConfiguration NetworkServices SNMP Host [1..3] Address

Define the address of up to three SNMP Managers.

The system's SNMP Agent (in the codec) responds to requests from SNMP Managers (a PC program etc.), for example about system location and system contact. SNMP traps are not supported.

Requires user role: ADMIN

Default value: ""

USAGE:

xConfiguration NetworkServices SNMP Host n Address: "Address"

where

n: Identifies the SNMP host. Maximum three SNMP hosts are allowed. Range: 1..3

Address: String (0, 255)

A valid IPv4 address, IPv6 address or DNS name.

xConfiguration NetworkServices SNMP CommunityName

Define the name of the Network Services SNMP Community. SNMP Community names are used to authenticate SNMP requests. SNMP requests must have a password (case sensitive) in order to receive a response from the SNMP Agent in the codec. The default password is "public". If you have the Cisco TelePresence Management Suite (TMS) you must make sure the same SNMP Community is configured there too. NOTE: The SNMP Community password is case sensitive.

Requires user role: ADMIN

Default value: ""

USAGE:

xConfiguration NetworkServices SNMP CommunityName: "CommunityName"

where

CommunityName: String (0, 50)

The SNMP community name.

xConfiguration NetworkServices SNMP SystemContact

Define the name of the Network Services SNMP System Contact.

Requires user role: ADMIN

Default value: ""

USAGE:

xConfiguration NetworkServices SNMP SystemContact: "SystemContact"

where

SystemContact: String (0, 50)

The name of the SNMP system contact.

xConfiguration NetworkServices SNMP SystemLocation

Define the name of the Network Services SNMP System Location.

Requires user role: ADMIN

Default value: ""

USAGE:

xConfiguration NetworkServices SNMP SystemLocation: "SystemLocation"

where

SystemLocation: String (0, 50)

The name of the SNMP system location.

xConfiguration NetworkServices SSH Mode

SSH (or Secure Shell) protocol can provide secure encrypted communication between the codec and your local computer.

Requires user role: ADMIN

Default value: On

USAGE:

xConfiguration NetworkServices SSH Mode: Mode

where

Mode: Off/On

Off: The SSH protocol is disabled.

On: The SSH protocol is enabled.

xConfiguration NetworkServices UPnP Mode

Fully disable UPnP (Universal Plug and Play), or enable UPnP for a short time period after the video system has been switched on or restarted.

The default operation is that UPnP is enabled when you switch on or restart the video system. Then UPnP is automatically disabled after the timeout period that is defined in the NetworkServices UPnP Timeout setting. Use the video system's web interface to set the timeout.

When UPnP is enabled, the video system advertises its presence on the network. The advertisement permits a Touch controller to discover video systems automatically, and you do not need to manually enter the video system's IP address in order to pair the Touch controller.

Requires user role: ADMIN

Default value: On

USAGE:

xConfiguration NetworkServices UPnP Mode: Mode

where

Mode: <Off/On>

Off: UPnP is disabled. The video system does not advertise its presence, and you have to enter the video system's IP address manually in order to pair a Touch controller to the video system.

On: UPnP is enabled. The video system advertises its presence until the timeout period expires.

xConfiguration NetworkServices WelcomeText

Choose which information the user should see when logging on to the codec through SSH.

Requires user role: ADMIN

Default value: On

USAGE:

xConfiguration NetworkServices WelcomeText: WelcomeText

where

WelcomeText: Off/On

Off: The welcome text is: Login successful

On: The welcome text is: Welcome to <system name>; Software version; Software release date; Login successful.

Peripherals configuration

xConfiguration Peripherals Profile Cameras

Define the number of cameras that are expected to be connected to the video system. This information is used by the video system's diagnostics service. If the number of connected cameras does not match this setting, the diagnostics service will report it as an inconsistency.

Requires user role: ADMIN, INTEGRATOR

Default value: Minimum1

USAGE:

xConfiguration Peripherals Profile Cameras: Cameras

where

Cameras: NotSet/Minimum1/0/1/2/3/4/5/6/7

NotSet: No camera check is performed.

Minimum1: At least one camera should be connected to the video system.

0-7: Select the number of cameras that are expected to be connected to the video system.

xConfiguration Peripherals Profile ControlSystems

Define if a third-party control system, for example Crestron or AMX, is expected to be connected to the video system. This information is used by the video system's diagnostics service. If the number of connected control systems does not match this setting, the diagnostics service will report it as an inconsistency. Note that only one third-party control system is supported.

If set to 1, the control system must send heart beats to the video system using xCommand Peripherals Pair and HeartBeat commands. Failing to do so will cause the in-room control extensions to show a warning that the video system has lost connectivity to the control system.

Requires user role: ADMIN, INTEGRATOR

Default value: NotSet

USAGE:

xConfiguration Peripherals Profile ControlSystems: ControlSystems

where

ControlSystems: 1/NotSet

1: One third-party control system should be connected to the video system.

NotSet: No check for a third-party control system is performed.

xConfiguration Peripherals Profile TouchPanels

Define the number of Cisco Touch controllers that are expected to be connected to the video system. This information is used by the video system's diagnostics service. If the number of connected Touch controllers does not match this setting, the diagnostics service will report it as an inconsistency.

Requires user role: ADMIN, INTEGRATOR

Default value: Minimum1

USAGE:

xConfiguration Peripherals Profile TouchPanels: TouchPanels

where

TouchPanels: NotSet/Minimum1/0/1/2/3/4/5

NotSet: No touch panel check is performed.

Minimum1: At least one Cisco Touch controller should be connected to the video system.

0-5: Select the number of Touch controllers that are expected to be connected to the video system. Note that only one Cisco Touch controller is officially supported.

Phonebook configuration

xConfiguration Phonebook Server [1] ID

Define a name for the external phone book.

Requires user role: ADMIN

Default value: ""

USAGE:

xConfiguration Phonebook Server *n* ID: "*ID*"

where

n: Unique ID that identifies the phonebook server. Range: 1..1

ID: String (0, 64)

The name for the external phone book.

xConfiguration Phonebook Server [1] Type

Select the phonebook server type.

Requires user role: ADMIN

Default value: Off

USAGE:

xConfiguration Phonebook Server *n* Type: *Type*

where

n: Unique ID that identifies the phonebook server. Range: 1..1

Type: Off/CUCM/Spark/TMS/VCS

Off: Do not use a phonebook.

CUCM: The phonebook is located on the Cisco Unified Communications Manager.

Spark: The phonebook is located on Spark.

TMS: The phonebook is located on the Cisco TelePresence Management Suite server.

VCS: The phonebook is located on the Cisco TelePresence Video Communication Server.

xConfiguration Phonebook Server [1] URL

Define the address (URL) to the external phone book server.

Requires user role: ADMIN

Default value: ""

USAGE:

xConfiguration Phonebook Server *n* URL: "*URL*"

where

n: Unique ID that identifies the phonebook server. Range: 1..1

URL: String (0, 255)

A valid address (URL) to the phone book server.

Provisioning configuration

xConfiguration Provisioning Connectivity

This setting controls how the device discovers whether it should request an internal or external configuration from the provisioning server.

Requires user role: ADMIN, USER

Default value: Auto

USAGE:

xConfiguration Provisioning Connectivity: Connectivity

where

Connectivity: Internal/External/Auto

Internal: Request internal configuration.

External: Request external configuration.

Auto: Automatically discover using NAPTR queries whether internal or external configurations should be requested. If the NAPTR responses have the "e" flag, external configurations will be requested. Otherwise internal configurations will be requested.

xConfiguration Provisioning Mode

It is possible to configure a video system using a provisioning system (external manager). This allows video conferencing network administrators to manage many video systems simultaneously. With this setting you choose which type of provisioning system to use. Provisioning can also be switched off. Contact your provisioning system provider/representative for more information.

Requires user role: ADMIN, USER

Default value: Auto

USAGE:

xConfiguration Provisioning Mode: Mode

where

Mode: Off/Auto/CUCM/Edge/Spark/TMS/VCS

Off: The video system is not configured by a provisioning system.

Auto: The provisioning server is automatically selected as set up in the DHCP server.

CUCM: Push configurations to the video system from CUCM (Cisco Unified Communications Manager).

Edge: Push configurations to the video system from CUCM (Cisco Unified Communications Manager). The system connects to CUCM via the Collaboration Edge infrastructure. In order to register over Edge the encryption option key must be installed on the video system.

Spark: Push configurations to the video system from Spark.

TMS: Push configurations to the video system from TMS (Cisco TelePresence Management System).

VCS: Push configurations to the video system from VCS (Cisco TelePresence Video Communication Server).

xConfiguration Provisioning LoginName

This is the username part of the credentials used to authenticate the video system with the provisioning server. This setting must be used when required by the provisioning server.

Requires user role: ADMIN, USER

Default value: ""

USAGE:

xConfiguration Provisioning LoginName: "LoginName"

where

LoginName: String (0, 80)

A valid username.

xConfiguration Provisioning Password

This is the password part of the credentials used to authenticate the video system with the provisioning server. This setting must be used when required by the provisioning server.

Requires user role: ADMIN, USER

Default value: ""

USAGE:

xConfiguration Provisioning Password: "Password"

where

Password: String (0, 64)

A valid password.

xConfiguration Provisioning HttpMethod

Select the HTTP method to be used for the provisioning.

Requires user role: ADMIN, USER

Default value: POST

USAGE:

xConfiguration Provisioning HttpMethod: HttpMethod

where

HttpMethod: GET/POST

GET: Select GET when the provisioning server supports GET.

POST: Select POST when the provisioning server supports POST.

xConfiguration Provisioning ExternalManager Address

Define the IP Address or DNS name of the external manager / provisioning system.

If an External Manager Address (and Path) is configured, the system will send a message to this address when starting up. When receiving this message the external manager / provisioning system can return configurations/commands to the unit as a result.

When using CUCM or TMS provisioning, the DHCP server can be set up to provide the external manager address automatically (DHCP Option 242 for TMS, and DHCP Option 150 for CUCM). An address set in the Provisioning ExternalManager Address setting will override the address provided by DHCP.

Requires user role: ADMIN, USER

Default value: ""

USAGE:

xConfiguration Provisioning ExternalManager Address: "Address"

where

Address: String (0, 64)

A valid IPv4 address, IPv6 address or DNS name.

xConfiguration Provisioning ExternalManager AlternateAddress

Only applicable when the endpoint is provisioned by Cisco Unified Communication Manager (CUCM) and an alternate CUCM is available for redundancy. Define the address of the alternate CUCM. If the main CUCM is not available, the endpoint will be provisioned by the alternate CUCM. When the main CUCM is available again, the endpoint will be provisioned by this CUCM.

Requires user role: ADMIN, USER

Default value: ""

USAGE:

xConfiguration Provisioning ExternalManager AlternateAddress: "AlternateAddress"

where

AlternateAddress: String (0, 64)

A valid IPv4 address, IPv6 address or DNS name.

xConfiguration Provisioning ExternalManager Protocol

Define whether to use the HTTP (unsecure communication) or HTTPS (secure communication) protocol when sending requests to the external manager / provisioning system.

The selected protocol must be enabled in the NetworkServices HTTP Mode setting.

Requires user role: ADMIN, USER

Default value: HTTP

USAGE:

xConfiguration Provisioning ExternalManager Protocol: "Protocol"

where

Protocol: HTTPS/HTTP

HTTPS: Send requests via HTTPS.

HTTP: Send requests via HTTP.

xConfiguration Provisioning ExternalManager Path

Define the Path to the external manager / provisioning system. This setting is required when several management services reside on the same server, i.e. share the same External Manager address.

Requires user role: ADMIN, USER

Default value: ""

USAGE:

xConfiguration Provisioning ExternalManager Path: "Path"

where

Path: String (0, 255)

A valid path to the external manager or provisioning system.

xConfiguration Provisioning ExternalManager Domain

Define the SIP domain for the VCS provisioning server.

Requires user role: ADMIN, USER

Default value: ""

USAGE:

xConfiguration Provisioning ExternalManager Domain: "Domain"

where

Domain: String (0, 64)

A valid domain name.

Proximity configuration

xConfiguration Proximity Mode

Determine whether the video system will emit ultrasound pairing messages or not.

When the video system emits ultrasound, Proximity clients can detect that they are close to the video system. In order to use a client, at least one of the Proximity services must be enabled (refer to the Proximity Services settings). In general, Cisco recommends enabling all the Proximity services.

Requires user role: ADMIN, USER

Default value: On

USAGE:

xConfiguration Proximity Mode: Mode

where

Mode: Off/On

Off: The video system does not emit ultrasound, and Proximity services cannot be used.

On: The video system emits ultrasound, and Proximity clients can detect that they are close to the video system. Enabled Proximity services can be used.

xConfiguration Proximity Services CallControl

Enable or disable basic call control features on Proximity clients. When this setting is enabled, you are able to control a call using a Proximity client (for example dial, mute, adjust volume and hang up). This service is supported by mobile devices (iOS and Android). Proximity Mode must be On for this setting to take any effect.

Requires user role: ADMIN, USER

Default value: Disabled

USAGE:

xConfiguration Proximity Services CallControl: CallControl

where

CallControl: Enabled/Disabled

Enabled: Call control from a Proximity client is enabled.

Disabled: Call control from a Proximity client is disabled.

xConfiguration Proximity Services ContentShare FromClients

Enable or disable content sharing from Proximity clients. When this setting is enabled, you can share content from a Proximity client wirelessly on the video system, e.g. share your laptop screen. This service is supported by laptops (OS X and Windows). Proximity Mode must be On for this setting to take any effect.

Requires user role: ADMIN, USER

Default value: Enabled

USAGE:

xConfiguration Proximity Services ContentShare FromClients: FromClients

where

FromClients: Enabled/Disabled

Enabled: Content sharing from a Proximity client is enabled.

Disabled: Content sharing from a Proximity client is disabled.

xConfiguration Proximity Services ContentShare ToClients

Enable or disable content sharing to Proximity clients. When enabled, Proximity clients will receive the presentation from the video system. You can zoom in on details, view previous content and take snapshots. This service is supported by mobile devices (iOS and Android). Proximity Mode must be On for this setting to take any effect.

Requires user role: ADMIN, USER

Default value: Disabled

USAGE:

xConfiguration Proximity Services ContentShare ToClients: ToClients

where

ToClients: Enabled/Disabled

Enabled: Content sharing to a Proximity client is enabled.

Disabled: Content sharing to a Proximity client is disabled.

RoomAnalytics configuration

xConfiguration RoomAnalytics PeopleCountOutOfCall

By using face detection, the video system has the capability to find how many persons are in the room. By default, the system only counts people when in a call, or when displaying the self-view picture.

Requires user role: ADMIN, INTEGRATOR, USER

Default value: Off

USAGE:

xConfiguration RoomAnalytics PeopleCountOutOfCall: PeopleCountOutOfCall

where

PeopleCountOutOfCall: Off/On

Off: The video system counts people only when the system is in a call, or when self-view is on.

On: The video system counts people as long as the video system is not in standby mode. This includes outside of call, even if self-view is off.

xConfiguration RoomAnalytics PeoplePresenceDetector

The video system has the capability to find whether or not people are present in the room, and report the result in the RoomAnalytics PeoplePresence status. This feature is based on ultrasound. It takes a minimum of 2 minutes to detect whether people are present or not in the room, and it may take up to 2 minutes for the status to change after the room becomes vacant.

Requires user role: ADMIN, INTEGRATOR, USER

Default value: Off

USAGE:

xConfiguration RoomAnalytics PeoplePresenceDetector: PeoplePresenceDetector

where

PeoplePresenceDetector: Off/On

Off: The video system's status does not show whether or not there are people present in the room.

On: The video system's status shows whether or not there are people present in the room.

SerialPort configuration

xConfiguration SerialPort Mode

Enable/disable the serial port (connection via Micro USB to USB cable). The serial port uses 115200 bps, 8 data bits, no parity and 1 stop bit.

Requires user role: ADMIN, INTEGRATOR

Default value: On

USAGE:

xConfiguration SerialPort Mode: Mode

where

Mode: Off/On

Off: Disable the serial port.

On: Enable the serial port.

xConfiguration SerialPort BaudRate

Define the baud rate (data transmission rate, bits per second) for the serial port.

Other connection parameters for the serial port are: Data bits: 8; Parity: None; Stop bits: 1; Flow control: None.

Requires user role: ADMIN, INTEGRATOR

Default value: 115200

USAGE:

xConfiguration SerialPort BaudRate: BaudRate

where

BaudRate: 115200

Set a baud rate from the baud rates listed (bps).

xConfiguration SerialPort LoginRequired

Define if login shall be required when connecting to the serial port.

Requires user role: ADMIN

Default value: On

USAGE:

xConfiguration SerialPort LoginRequired: LoginRequired

where

LoginRequired: Off/On

Off: The user can access the codec via the serial port without any login.

On: Login is required when connecting to the codec via the serial port.

SIP configuration

xConfiguration SIP Authentication UserName

This is the user name part of the credentials used to authenticate towards the SIP proxy.

Requires user role: ADMIN

Default value: ""

USAGE:

xConfiguration SIP Authentication UserName: "UserName"

where

UserName: String (0, 128)

A valid username.

xConfiguration SIP Authentication Password

This is the password part of the credentials used to authenticate towards the SIP proxy.

Requires user role: ADMIN

Default value: ""

USAGE:

xConfiguration SIP Authentication Password: "Password"

where

Password: String (0, 128)

A valid password.

xConfiguration SIP DefaultTransport

Select the transport protocol to be used over the LAN.

Requires user role: ADMIN

Default value: Auto

USAGE:

xConfiguration SIP DefaultTransport: DefaultTransport
where

DefaultTransport: TCP/UDP/Tls/Auto

TCP: The system will always use TCP as the default transport method.

UDP: The system will always use UDP as the default transport method.

Tls: The system will always use TLS as the default transport method. For TLS connections a SIP CA-list can be uploaded to the video system. If no such CA-list is available on the system then anonymous Diffie Hellman will be used.

Auto: The system will try to connect using transport protocols in the following order: TLS, TCP, UDP.

xConfiguration SIP DisplayName

When configured the incoming call will report the display name instead of the SIP URI.

Requires user role: ADMIN

Default value: ""

USAGE:

xConfiguration SIP DisplayName: "DisplayName"
where

DisplayName: String (0, 550)

The name to be displayed instead of the SIP URI.

xConfiguration SIP Ice Mode

ICE (Interactive Connectivity Establishment, RFC 5245) is a NAT traversal solution that the video systems can use to discover the optimized media path. Thus the shortest route for audio and video is always secured between the video systems.

Requires user role: ADMIN

Default value: Auto

USAGE:

xConfiguration SIP Ice Mode: Mode
where

Mode: Auto/Off/On

Auto: ICE is enabled if a TURN server is provided, otherwise ICE is disabled.

Off: ICE is disabled.

On: ICE is enabled.

xConfiguration SIP Ice DefaultCandidate

The ICE protocol needs some time to reach a conclusion about which media route to use (up to the first 5 seconds of a call). During this period media for the video system will be sent to the Default Candidate as defined in this setting.

Requires user role: ADMIN

Default value: Host

USAGE:

xConfiguration SIP Ice DefaultCandidate: DefaultCandidate
where

DefaultCandidate: Host/Rflx/Relay

Host: Send media to the video system's private IP address.

Rflx: Send media to the video system's public IP address, as seen by the TURN server.

Relay: Send media to the IP address and port allocated on the TURN server.

xConfiguration SIP ListenPort

Turn on or off the listening for incoming connections on the SIP TCP/UDP ports. If turned off, the endpoint will only be reachable through the SIP registrar (CUCM or VCS).

Requires user role: ADMIN

Default value: On

USAGE:

xConfiguration SIP ListenPort: ListenPort

where

ListenPort: Off/On

Off: Listening for incoming connections on the SIP TCP/UDP ports is turned off.

On: Listening for incoming connections on the SIP TCP/UDP ports is turned on.

xConfiguration SIP Proxy [1..4] Address

The Proxy Address is the manually configured address for the outbound proxy. It is possible to use a fully qualified domain name, or an IP address. The default port is 5060 for TCP and UDP but another one can be provided.

Requires user role: ADMIN

Default value: ""

USAGE:

xConfiguration SIP Proxy n Address: "Address"

where

n: Index that identifies the proxy (maximum 4 proxys can be defined). Range: 1..4

Address: String (0, 255)

A valid IPv4 address, IPv6 address or DNS name.

xConfiguration SIP Turn Server

Define the address of the TURN (Traversal Using Relay NAT) server. It is used as a media relay fallback and it is also used to discover the endpoint's own public IP address.

Requires user role: ADMIN

Default value: ""

USAGE:

xConfiguration SIP Turn Server: "Server"

where

Server: String (0, 255)

The preferred format is DNS SRV record (e.g. _turn._udp.<domain>), or it can be a valid IPv4 or IPv6 address.

xConfiguration SIP Turn UserName

Define the user name needed for accessing the TURN server.

Requires user role: ADMIN

Default value: ""

USAGE:

xConfiguration SIP Turn UserName: "UserName"

where

UserName: String (0, 128)

A valid user name.

xConfiguration SIP Turn Password

Define the password needed for accessing the TURN server.

Requires user role: ADMIN

Default value: ""

USAGE:

xConfiguration SIP Turn Password: "Password"

where

Password: String (0, 128)

A valid password.

xConfiguration SIP URI

The SIP URI (Uniform Resource Identifier) is the address that is used to identify the video system. The URI is registered and used by the SIP services to route inbound calls to the system. The SIP URI syntax is defined in RFC 3261.

Requires user role: ADMIN

Default value: ""

USAGE:

xConfiguration SIP URI: "URI"

where

URI: String (0, 255)

An address (URI) that is compliant with the SIP URI syntax.

Standby configuration

xConfiguration Standby Control

Define whether the system should go into standby mode or not.

Requires user role: ADMIN, INTEGRATOR

Default value: On

USAGE:

xConfiguration Standby Control: Control

where

Control: Off/On

Off: The system will not enter standby mode.

On: The system will enter standby mode when the Standby Delay has timed out.

Requires the Standby Delay to be set to an appropriate value.

xConfiguration Standby Delay

Define how long (in minutes) the system shall be in idle mode before it goes into standby mode.

Requires the Standby Control to be enabled.

Requires user role: ADMIN, INTEGRATOR

Default value: 10

USAGE:

xConfiguration Standby Delay: Delay

where

Delay: Integer (1..480)

Set the standby delay (minutes).

xConfiguration Standby BootAction

Define the camera position after a restart of the codec.

Requires user role: ADMIN, INTEGRATOR, USER

Default value: DefaultCameraPosition

USAGE:

xConfiguration Standby BootAction: BootAction

where

BootAction: None/DefaultCameraPosition/RestoreCameraPosition

None: No action.

RestoreCameraPosition: When the video system restarts, the camera returns to the position that it had before the restart.

DefaultCameraPosition: When the video system restarts, the camera moves to the factory default position.

xConfiguration Standby StandbyAction

Define the camera position when going into standby mode.

Requires user role: ADMIN, INTEGRATOR

Default value: PrivacyPosition

USAGE:

xConfiguration Standby StandbyAction: StandbyAction

where

StandbyAction: None/PrivacyPosition

None: No action.

PrivacyPosition: When the video system enters standby, the camera turns to a sideways position for privacy.

xConfiguration Standby WakeupAction

Define the camera position when leaving standby mode.

Requires user role: ADMIN, INTEGRATOR, USER

Default value: RestoreCameraPosition

USAGE:

xConfiguration Standby WakeupAction: WakeupAction

where

WakeupAction: None/RestoreCameraPosition/DefaultCameraPosition

None: No action.

RestoreCameraPosition: When the video system leaves standby, the camera returns to the position that it had before entering standby.

DefaultCameraPosition: When the video system leaves standby, the camera moves to the factory default position.

xConfiguration Standby WakeupOnMotionDetection

Automatic wake up on motion detection is a feature that will sense when a person walks into the room. The feature is based on ultrasound detection, and the Proximity Mode setting must be On to make the feature work.

Requires user role: ADMIN, INTEGRATOR

Default value: On

USAGE:

xConfiguration Standby WakeupOnMotionDetection: WakeupOnMotionDetection

where

WakeupOnMotionDetection: Off/On

Off: The wake up on motion detection is disabled.

On: When people walk into the room the system will automatically wake up from standby.

SystemUnit configuration

xConfiguration SystemUnit Name

Define the system name. The system name will be sent as the hostname in a DHCP request and when the codec is acting as an SNMP Agent.

Requires user role: ADMIN

Default value: ""

USAGE:

xConfiguration SystemUnit Name: "Name"

where

Name: String (0, 50)

Define the system name.

Time configuration

xConfiguration Time TimeFormat

Define the time format.

Requires user role: ADMIN, USER

Default value: 24H

USAGE:

xConfiguration Time TimeFormat: TimeFormat

where

TimeFormat: 24H/12H

24H: Set the time format to 24 hours.

12H: Set the time format to 12 hours (AM/PM).

xConfiguration Time DateFormat

Define the date format.

Requires user role: ADMIN, USER

Default value: DD_MM_YY

USAGE:

xConfiguration Time DateFormat: DateFormat

where

DateFormat: DD_MM_YY/MM_DD_YY/YY_MM_DD

DD_MM_YY: The date January 30th 2010 will be displayed: 30.01.10

MM_DD_YY: The date January 30th 2010 will be displayed: 01.30.10

YY_MM_DD: The date January 30th 2010 will be displayed: 10.01.30

xConfiguration Time Zone

Define the time zone for the geographical location of the video system. The information in the value space is from the tz database, also called the IANA Time Zone Database.

Requires user role: ADMIN, INTEGRATOR, USER

Default value: Etc/UTC

USAGE:

xConfiguration Time Zone: Zone

where

Zone: Africa/Abidjan, Africa/Accra, Africa/Addis_Ababa, Africa/Algiers, Africa/Asmara, Africa/Asmera, Africa/Bamako, Africa/Bangui, Africa/Banjul, Africa/Bissau, Africa/Blantyre, Africa/Brazzaville, Africa/Bujumbura, Africa/Cairo, Africa/Casablanca, Africa/Ceuta, Africa/Conakry, Africa/Dakar, Africa/Dar_es_Salaam, Africa/Djibouti, Africa/Douala, Africa/El_Aaiun, Africa/Freetown, Africa/Gaborone, Africa/Harare, Africa/Johannesburg, Africa/Juba, Africa/Kampala, Africa/Khartoum, Africa/Kigali, Africa/Kinshasa, Africa/Lagos, Africa/Libreville, Africa/Lome, Africa/Luanda, Africa/Lubumbashi, Africa/Lusaka, Africa/Malabo, Africa/Maputo, Africa/Maseru, Africa/Mbabane, Africa/Mogadishu, Africa/Monrovia, Africa/Nairobi, Africa/Ndjamena, Africa/Niamey, Africa/Nouakchott, Africa/Ouagadougou, Africa/Porto-Novo, Africa/Sao_Tome, Africa/Timbuktu, Africa/Tripoli, Africa/Tunis, Africa/Windhoek, America/Adak, America/Anchorage, America/Anguilla, America/Antigua, America/Araguaina, America/Argentina/Buenos_Aires, America/Argentina/Catamarca, America/Argentina/ComodRivadavia, America/Argentina/Cordoba, America/Argentina/Jujuy, America/Argentina/La_Rioja, America/Argentina/Mendoza, America/Argentina/Rio_Gallegos, America/Argentina/Salta, America/Argentina/San_Juan, America/Argentina/San_Luis, America/Argentina/Tucuman, America/Argentina/Ushuaia, America/Aruba, America/Asuncion, America/Atikokan, America/Atka, America/Bahia, America/Bahia_Banderas, America/Barbados, America/Belem, America/Belize, America/Blanc-Sablon, America/Boa_Vista, America/Bogota, America/Boise, America/Buenos_Aires, America/Cambridge_Bay, America/Campo_Grande, America/Cancun, America/Caracas, America/Catamarca, America/Cayenne, America/Cayman, America/Chicago, America/Chihuahua, America/Coral_Harbour, America/Cordoba, America/Costa_Rica, America/Creston, America/Cuiaba, America/Curacao, America/Danmarkshavn, America/Dawson, America/Dawson_Creek, America/Denver, America/Detroit, America/Dominica, America/Edmonton, America/Eirunepe, America/El_Salvador, America/Ensenada, America/Fort_Nelson, America/Fort_Wayne, America/Fortaleza, America/Glace_Bay, America/Godthab, America/Goose_Bay, America/Grand_Turk, America/Grenada, America/Guadeloupe, America/Guatemala, America/Guayaquil, America/Guyana, America/Halifax, America/Havana, America/Hermosillo, America/Indiana/Indianapolis, America/Indiana/Knox, America/Indiana/Marengo, America/Indiana/Petersburg, America/Indiana/Tell_City, America/Indiana/Vevay, America/Indiana/Vincennes, America/Indiana/Winamac, America/Indianapolis, America/Inuvik, America/Iqaluit, America/Jamaica, America/Jujuy, America/Juneau, America/Kentucky/Louisville, America/Kentucky/Monticello, America/Knox_IN, America/Kralendijk, America/La_Paz, America/Lima,

America/Los_Angeles, America/Louisville, America/Lower_Princes, America/Maceio, America/Managua, America/Manaus, America/Marigot, America/Martinique, America/Matamoros, America/Mazatlan, America/Mendoza, America/Menominee, America/Merida, America/Metlakatla, America/Mexico_City, America/Miquelon, America/Moncton, America/Monterrey, America/Montevideo, America/Montreal, America/Montserrat, America/Nassau, America/New_York, America/Nipigon, America/Nome, America/Noronha, America/North_Dakota/Beulah, America/North_Dakota/Center, America/North_Dakota/New_Salem, America/Ojinaga, America/Panama, America/Pangnirtung, America/Paramaribo, America/Phoenix, America/Port-au-Prince, America/Port_of_Spain, America/Porto_Acre, America/Porto_Velho, America/Puerto_Rico, America/Rainy_River, America/Rankin_Inlet, America/Recife, America/Regina, America/Resolute, America/Rio_Branco, America/Rosario, America/Santa_Isabel, America/Santarem, America/Santiago, America/Santo_Domingo, America/Sao_Paulo, America/Scoresbysund, America/Shiprock, America/Sitka, America/St_Barthelemy, America/St_Johns, America/St_Kitts, America/St_Lucia, America/St_Thomas, America/St_Vincent, America/Swift_Current, America/Tegucigalpa, America/Thule, America/Thunder_Bay, America/Tijuana, America/Toronto, America/Tortola, America/Vancouver, America/Virgin, America/Whitehorse, America/Winnipeg, America/Yakutat, America/Yellowknife, Antarctica/Casey, Antarctica/Davis, Antarctica/DumontDUrville, Antarctica/Macquarie, Antarctica/Mawson, Antarctica/McMurdo, Antarctica/Palmer, Antarctica/Rothera, Antarctica/South_Pole, Antarctica/Syowa, Antarctica/Troll, Antarctica/Vostok, Arctic/Longyearbyen, Asia/Aden, Asia/Almaty, Asia/Amman, Asia/Anadyr, Asia/Aqtou, Asia/Aqtobe, Asia/Ashgabat, Asia/Ashkhabad, Asia/Baghdad, Asia/Bahrain, Asia/Baku, Asia/Bangkok, Asia/Barnaul, Asia/Beirut, Asia/Bishkek, Asia/Brunei, Asia/Calcutta, Asia/Chita, Asia/Choibalsan, Asia/Chongqing, Asia/Chungking, Asia/Colombo, Asia/Dacca, Asia/Damascus, Asia/Dhaka, Asia/Dili, Asia/Dubai, Asia/Dushanbe, Asia/Gaza, Asia/Harbin, Asia/Hebron, Asia/Ho_Chi_Minh, Asia/Hong_Kong, Asia/Hovd, Asia/Irkutsk, Asia/Istanbul, Asia/Jakarta, Asia/Jayapura, Asia/Jerusalem, Asia/Kabul, Asia/Kamchatka, Asia/Karachi, Asia/Kashgar, Asia/Kathmandu, Asia/Katmandu, Asia/Khandyga, Asia/Kolkata, Asia/Krasnoyarsk, Asia/Kuala_Lumpur, Asia/Kuching, Asia/Kuwait, Asia/Macao, Asia/Macau, Asia/Magadan, Asia/Makassar, Asia/Manila, Asia/Muscat, Asia/Nicosia, Asia/Novokuznetsk, Asia/Novosibirsk, Asia/Omsk, Asia/Oral, Asia/Phnom_Penh, Asia/Pontianak, Asia/Pyongyang, Asia/Qatar, Asia/Qyzylorda, Asia/Rangoon, Asia/Riyadh, Asia/Saigon, Asia/Sakhalin, Asia/Samarkand, Asia/Seoul, Asia/Shanghai, Asia/Singapore, Asia/Srednekolymsk, Asia/Taipei, Asia/Tashkent, Asia/Tbilisi, Asia/Tehran, Asia/Tel_Aviv, Asia/Thimbu, Asia/Thimphu, Asia/Tokyo, Asia/Tomsk, Asia/Ujung_Pandang, Asia/Ulaanbaatar, Asia/Ulan_Bator, Asia/Urumqi, Asia/Ust-Nera, Asia/Vientiane, Asia/Vladivostok, Asia/Yakutsk, Asia/Yekaterinburg, Asia/Yerevan, Atlantic/Azores, Atlantic/Bermuda, Atlantic/Canary, Atlantic/Cape_Verde, Atlantic/Faeroe, Atlantic/Faroe, Atlantic/Jan_Mayen, Atlantic/Madeira, Atlantic/Reykjavik, Atlantic/South_Georgia, Atlantic/St_Helena, Atlantic/Stanley, Australia/ACT, Australia/Adelaide, Australia/Brisbane, Australia/Broken_Hill, Australia/Canberra, Australia/Currie, Australia/Darwin, Australia/Eucla, Australia/Hobart, Australia/LHI, Australia/Lindeman, Australia/Lord_Howe, Australia/Melbourne, Australia/NSW, Australia/North, Australia/Perth, Australia/Queensland, Australia/South, Australia/Sydney, Australia/Tasmania, Australia/Victoria, Australia/West, Australia/Yancowinna, Brazil/Acre, Brazil/DeNoronha, Brazil/East, Brazil/West, CET, CST6CDT, Canada/

Atlantic, Canada/Central, Canada/East-Saskatchewan, Canada/Eastern, Canada/Mountain, Canada/Newfoundland, Canada/Pacific, Canada/Saskatchewan, Canada/Yukon, Chile/Continental, Chile/EasterIsland, Cuba, EET, EST, EST5EDT, Egypt, Eire, Etc/GMT, Etc/GMT+0, Etc/GMT+1, Etc/GMT+10, Etc/GMT+11, Etc/GMT+12, Etc/GMT+2, Etc/GMT+3, Etc/GMT+4, Etc/GMT+5, Etc/GMT+6, Etc/GMT+7, Etc/GMT+8, Etc/GMT+9, Etc/GMT-0, Etc/GMT-1, Etc/GMT-10, Etc/GMT-11, Etc/GMT-12, Etc/GMT-13, Etc/GMT-14, Etc/GMT-2, Etc/GMT-3, Etc/GMT-4, Etc/GMT-5, Etc/GMT-6, Etc/GMT-7, Etc/GMT-8, Etc/GMT-9, Etc/GMT0, Etc/Greenwich, Etc/UCT, Etc/UTC, Etc/Universal, Etc/Zulu, Europe/Amsterdam, Europe/Andorra, Europe/Astrakhan, Europe/Athens, Europe/Belfast, Europe/Belgrade, Europe/Berlin, Europe/Bratislava, Europe/Brussels, Europe/Bucharest, Europe/Budapest, Europe/Busingen, Europe/Chisinau, Europe/Copenhagen, Europe/Dublin, Europe/Gibraltar, Europe/Guernsey, Europe/Helsinki, Europe/Isle_of_Man, Europe/Istanbul, Europe/Jersey, Europe/Kaliningrad, Europe/Kiev, Europe/Kirov, Europe/Lisbon, Europe/Ljubljana, Europe/London, Europe/Luxembourg, Europe/Madrid, Europe/Malta, Europe/Mariehamn, Europe/Minsk, Europe/Monaco, Europe/Moscow, Europe/Nicosia, Europe/Oslo, Europe/Paris, Europe/Podgorica, Europe/Prague, Europe/Riga, Europe/Rome, Europe/Samara, Europe/San_Marino, Europe/Sarajevo, Europe/Simferopol, Europe/Skopje, Europe/Sofia, Europe/Stockholm, Europe/Tallinn, Europe/Tirane, Europe/Tiraspol, Europe/Ulyanovsk, Europe/Uzhgorod, Europe/Vaduz, Europe/Vatican, Europe/Vienna, Europe/Vilnius, Europe/Volgograd, Europe/Warsaw, Europe/Zagreb, Europe/Zaporozhye, Europe/Zurich, GB, GB-Eire, GMT, GMT+0, GMT-0, GMT0, Greenwich, HST, Hongkong, Iceland, Indian/Antananarivo, Indian/Chagos, Indian/Christmas, Indian/Cocos, Indian/Comoro, Indian/Kerguelen, Indian/Mahe, Indian/Maldives, Indian/Mauritius, Indian/Mayotte, Indian/Reunion, Iran, Israel, Jamaica, Japan, Kwajalein, Libya, MET, MST, MST7MDT, Mexico/BajaNorte, Mexico/BajaSur, Mexico/General, NZ, NZ-CHAT, Navajo, PRC, PST8PDT, Pacific/Apia, Pacific/Auckland, Pacific/Bougainville, Pacific/Chatham, Pacific/Chuuk, Pacific/Easter, Pacific/Efate, Pacific/Enderbury, Pacific/Fakaofu, Pacific/Fiji, Pacific/Funafuti, Pacific/Galapagos, Pacific/Gambier, Pacific/Guadalcanal, Pacific/Guam, Pacific/Honolulu, Pacific/Johnston, Pacific/Kiritimati, Pacific/Kosrae, Pacific/Kwajalein, Pacific/Majuro, Pacific/Marquesas, Pacific/Midway, Pacific/Nauru, Pacific/Niue, Pacific/Norfolk, Pacific/Noumea, Pacific/Pago_Pago, Pacific/Palau, Pacific/Pitcairn, Pacific/Pohnpei, Pacific/Ponape, Pacific/Port_Moresby, Pacific/Rarotonga, Pacific/Saipan, Pacific/Samoa, Pacific/Tahiti, Pacific/Tarawa, Pacific/Tongatapu, Pacific/Truk, Pacific/Wake, Pacific/Wallis, Pacific/Yap, Poland, Portugal, ROC, ROK, Singapore, Turkey, UCT, US/Alaska, US/Aleutian, US/Arizona, US/Central, US/East-Indiana, US/Eastern, US/Hawaii, US/Indiana-Starke, US/Michigan, US/Mountain, US/Pacific, US/Pacific-New, US/Samoa, UTC, Universal, W-SU, WET, Zulu

Select a time zone from the list.

UserInterface configuration

xConfiguration UserInterface ContactInfo Type

Choose which type of contact information to show in the status field in the upper left corner of the display and Touch controller.

Requires user role: ADMIN

Default value: Auto

USAGE:

xConfiguration UserInterface ContactInfo Type: Type

where

Type: Auto/DisplayName/E164Alias/H320Number/H323Id/IPv4/IPv6/None/SipUri/SystemName

Auto: Show the address which another system should dial to reach this video system. The address depends on the default call protocol and system registration.

None: Do not show any contact information.

IPv4: Show the system's IPv4 address.

IPv6: Show the system's IPv6 address.

H323Id: Show the system's H.323 ID (refer to the H323 H323Alias ID setting).

H320Number: Not applicable in this software version.

E164Alias: Show the system's H.323 E164 Alias as contact information (refer to the H323 H323Alias E164 setting).

SipUri: Show the system's SIP URI (refer to the SIP URI setting).

SystemName: Show the system's name (refer to the SystemUnit Name setting).

DisplayName: Show the system's display name (refer to the SIP DisplayName setting).

xConfiguration UserInterface CustomMessage

A custom message can be displayed, in the lower left side of the screen, in awake mode.

Requires user role: ADMIN, INTEGRATOR

Default value: ""

USAGE:

xConfiguration UserInterface CustomMessage: "CustomMessage"

where

CustomMessage: String (0..128)

Add a custom message. Add an empty string to remove a custom message.

xConfiguration UserInterface KeyTones Mode

You can configure the system to make a keyboard click sound effect (key tone) when typing text or numbers.

Requires user role: ADMIN, USER

Default value: On

USAGE:

xConfiguration UserInterface KeyTones Mode: Mode

where

Mode: Off/On

Off: There is no key tone sound effect.

On: The key tone sound effect is turned on.

xConfiguration UserInterface Language

Select the language to be used in menus and messages on the screen and Touch controller.

Requires user role: ADMIN, USER

Default value: English

USAGE:

xConfiguration UserInterface Language: Language

where

Language: Arabic/Catalan/ChineseSimplified/ChineseTraditional/Czech/Danish/Dutch/English/EnglishUK/Finnish/French/FrenchCanadian/German/Hebrew/Hungarian/Italian/Japanese/Korean/Norwegian/Polish/Portuguese/PortugueseBrazilian/Russian/Spanish/SpanishLatin/Swedish/Turkish

Select a language from the list.

xConfiguration UserInterface OSD HalfwakeMessage

A custom message can be displayed in the middle of the main screen when the system is in the half wake state. This will replace the default message "Tap the touch panel to get started" together with an illustration of a Touch panel. You can also choose not to have a message.

Requires user role: ADMIN

Default value: ""

USAGE:

xConfiguration UserInterface OSD HalfwakeMessage: "HalfwakeMessage"

where

HalfwakeMessage: String (0..128)

Add a custom message. If you add a space, there will be no visible message. Add an empty string to remove a custom message.

xConfiguration UserInterface OSD Output

Define on which monitor the on-screen information and indicators (OSD) should be displayed.

Requires user role: ADMIN, INTEGRATOR

Default value: Auto

USAGE:

xConfiguration UserInterface OSD Output: Output

where

Output: Auto/1/2

Auto: The system detects when a monitor is connected to a video output, and sends the on-screen information and indicators to the first monitor you connect. If you have a multi-monitor setup, and all monitors are connected before switching on the system, the on-screen information and indicators are sent to the video output with the lowest number, starting with Output Connector 1 (HDMI 1).

Range 1-2: The system sends the on-screen information and indicators to the specified output. Choose n to send the on-screen information and indicators to the system's Output Connector n.

xConfiguration UserInterface OSD SettingsMenu Mode

The Settings panel in the user interface (Touch 10 or on-screen) can be protected by the video system's admin password. If this password is blank, anyone can access the settings in the Settings menu, and for example factory reset the system. If authentication is enabled, all settings that require authentication have a padlock icon. You will be prompted to enter the administrator's user name and passphrase when you select the setting. Some settings do not require authentication, they do not have a padlock icon.

Requires user role: ADMIN

Default value: Unlocked

USAGE:

xConfiguration UserInterface OSD SettingsMenu Mode: Mode

where

Mode: Locked/Unlocked

Locked: Authentication with administrator's username and passphrase is required.

Unlocked: No authentication is required.

UserManagement configuration

xConfiguration UserManagement LDAP Mode

The video system supports the use of an LDAP (Lightweight Directory Access Protocol) server as a central place to store and validate user names and passwords. Use this setting to configure whether or not to use LDAP authentication. Our implementation is tested for the Microsoft Active Directory (AD) service.

Requires user role: ADMIN

Default value: Off

USAGE:

xConfiguration UserManagement LDAP Mode: Mode

where

Mode: Off/On

Off: LDAP authentication is not allowed.

On: For client certificate verification to work when LDAP authentication is enabled, the codec requires a CA (Certificate Authority) certificate, and the user must have a Client Certificate that matches their user distinguishing name (DN) in the active directory (AD).

xConfiguration UserManagement LDAP Server Address

Set the IP address or hostname of the LDAP server.

Requires user role: ADMIN

Default value: ""

USAGE:

xConfiguration UserManagement LDAP Server Address: "Address"

where

Address: String (0, 255)

A valid IPv4 address, IPv6 address or hostname.

xConfiguration UserManagement LDAP Server Port

Set the port to connect to the LDAP server on. If set to 0, use the default for the selected protocol (see the UserManagement LDAP Encryption setting).

Requires user role: ADMIN

Default value: 0

USAGE:

xConfiguration UserManagement LDAP Server Port: Port

where

Port: Integer (0..65535)

The LDAP server port number.

xConfiguration UserManagement LDAP Encryption

Define how to secure the communication between the video system and the LDAP server. You can override the port number by using the UserManagement LDAP Server Port setting.

Requires user role: ADMIN

Default value: LDAPS

USAGE:

xConfiguration UserManagement LDAP Encryption: Encryption

where

Encryption: LDAPS/None/STARTTLS

LDAPS: Connect to the LDAP server on port 636 over TLS (Transport Layer Security).

None: Connect to LDAP server on port 389 with no encryption.

STARTTLS: Connect to LDAP server on port 389, then send STARTTLS to enable TLS encryption.

xConfiguration UserManagement LDAP MinimumTLSVersion

Set the lowest version of the TLS (Transport Layer Security) protocol that is allowed.

Requires user role: ADMIN

Default value: TLSv1.2

USAGE:

xConfiguration UserManagement LDAP MinimumTLSVersion: MinimumTLSVersion

where

MinimumTLSVersion: TLSv1.0/TLSv1.1/TLSv1.2

TLSv1.0: Support TLS version 1.0 or higher.

TLSv1.1: Support TLS version 1.1 or higher.

TLSv1.2: Support TLS version 1.2 or higher.

xConfiguration UserManagement LDAP VerifyServerCertificate

When the video system connects to an LDAP server, the server will identify itself to the video system by presenting its certificate. Use this setting to determine whether or not the video system will verify the server certificate.

Requires user role: ADMIN

Default value: On

USAGE:

xConfiguration UserManagement LDAP VerifyServerCertificate: VerifyServerCertificate

where

VerifyServerCertificate: Off/On

Off: The video system will not verify the LDAP server's certificate.

On: The video system must verify that the LDAP server's certificate is signed by a trusted Certificate Authority (CA). The CA must be on the list of trusted CAs that are uploaded to the system in advance. Use the video system's web interface to manage the list of trusted CAs (see more details in the administrator guide).

xConfiguration UserManagement LDAP Admin Filter

The LDAP filter is used to determine which users should be granted administrator privileges. If set, this setting takes precedence over the UserManagement LDAP Admin Group setting.

Requires user role: ADMIN

Default value: ""

USAGE:

xConfiguration UserManagement LDAP Admin Filter: "Filter"

where

Filter: String (0, 1024)

Refer to the LDAP specification for the syntax of this string. Example: "(CN=adminuser)"

xConfiguration UserManagement LDAP Admin Group

Members of this AD (Active Directory) group will be given administrator access. This setting is a shorthand for saying (memberOf:1.2.840.113556.1.4.1941:=<group name>). If UserManagement LDAP Admin Filter is set, this setting is ignored.

Requires user role: ADMIN

Default value: ""

USAGE:

xConfiguration UserManagement LDAP Admin Group: "Group"

where

Group: String (0, 255)

The distinguishing name of the AD group. Example: "CN=admin_group, OU=company groups, DC=company, DC=com"

xConfiguration UserManagement LDAP Attribute

The attribute used to map to the provided username. If not set, sAMAccountName is used.

Requires user role: ADMIN

Default value: ""

USAGE:

xConfiguration UserManagement LDAP Attribute: "Attribute"

where

Attribute: String (0, 255)

The attribute name.

Video configuration

xConfiguration Video DefaultMainSource

Define which video input source to be used as the default main video source when you start a call.

Requires user role: ADMIN, USER

Default value: 1

USAGE:

xConfiguration Video DefaultMainSource: DefaultMainSource

where

DefaultMainSource: 1/2/3

Set the source to be used as the default main video source.

xConfiguration Video Input Connector [1..2] CameraControl Mode

Define whether the camera that is connected to this video input connector can be controlled or not.

Note that camera control is not available for Connector 2 (HDMI).

Requires user role: ADMIN, INTEGRATOR

Default value: Connector 1: On Connector 2: Off

USAGE:

xConfiguration Video Input Connector n CameraControl Mode: Mode

where

n: Unique ID that identifies the video input connector. Range: 1..2

Mode: Connector 1: Off/On Connector 2: Off

Off: Disable camera control.

On: Enable camera control.

xConfiguration Video Input Connector [1..2] CameraControl CameraId

The camera ID is a unique identifier of the cameras that are connected to the video input.

Requires user role: ADMIN, INTEGRATOR

Default value: 1

USAGE:

xConfiguration Video Input Connector n CameraControl CameraId: CameraId

where

n: Unique ID that identifies the video input connector. Range: 1..2

CameraId: 1

The camera ID is fixed and cannot be changed.

xConfiguration Video Input Connector [2] CEC Mode

The video input (HDMI) supports Consumer Electronics Control (CEC). When this setting is On, information about the connected device (for example device type and device name) is available in the video system status (Video Input Connector[n] ConnectedDevice CEC [n]), provided that the connected device also supports CEC.

Requires user role: ADMIN, INTEGRATOR

Default value: On

USAGE:

xConfiguration Video Input Connector n CEC Mode: Mode

where

n: Unique ID that identifies the video input connector. Range: 2..2

Mode: Off/On

Off: CEC is disabled.

On: CEC is enabled.

xConfiguration Video Input Connector [1..2] InputSourceType

Select which type of input source is connected to the video input.
Note that Connector 1 is the system's integrated camera.

Requires user role: ADMIN, INTEGRATOR

Default value: Connector 1: camera Connector 2: PC

USAGE:

xConfiguration Video Input Connector *n* InputSourceType: *InputSourceType*
where

n: Unique ID that identifies the video input connector. Range: 1..2

InputSourceType: Connector 1: camera Connector 2: PC/camera/document_camera/
mediaplayer/whiteboard/other

Camera: Use this when a camera is connected to the video input.

Document_camera: Use this when a document camera is connected to the video input.

Mediaplayer: Use this when a media player is connected to the video input.

PC: Use this when a computer is connected to the video input.

Whiteboard: Use this when a whiteboard camera is connected to the video input.

Other: Use this when the other options do not match.

xConfiguration Video Input Connector [1..2] Name

Define a name for the video input connector.

Requires user role: ADMIN, INTEGRATOR

Default value: Connector 1: "Camera" Connector 2: "PC"

USAGE:

xConfiguration Video Input Connector *n* Name: "*Name*"
where

n: Unique ID that identifies the video input connector. Range: 1..2

Name: String (0, 50)

Name for the video input connector.

xConfiguration Video Input Connector [2] PreferredResolution

Define the screen resolution and refresh rate that the video system advertises as its preferred resolution to the source devices that connect to the system via HDMI (for example a laptop). The logic for selection of the resolution on the source side will choose this resolution and refresh rate automatically, unless it is overridden manually by the source device (for example the laptop's display configuration software).

Note that the formats 2560_1440_60 and 3840_2160_30 use about twice the amount of data compared to the 1920_1080_60 format, and requires a presentation cable (or adapter) that is qualified for at least HDMI 1.4b data rates.

Requires user role: ADMIN, INTEGRATOR

Default value: 1920_1080_60

USAGE:

xConfiguration Video Input Connector *n* PreferredResolution: *PreferredResolution*
where

n: Unique ID that identifies the video input connector. Range: 2..2

PreferredResolution: 1920_1080_60/2560_1440_60/3840_2160_30

1920_1080_60: The resolution is 1920 x 1080, and the refresh rate is 60 Hz.

2560_1440_60: The resolution is 2560 x 1440, and the refresh rate is 60 Hz.

3840_2160_30: The resolution is 3840 x 2160, and the refresh rate is 30 Hz.

xConfiguration Video Input Connector [2] PresentationSelection

Define how the video system will behave when you connect a presentation source to the video input.

If the video system is in standby mode, it will wake up when you connect a presentation source. Sharing the presentation with the far end requires additional action (select Share on the user interface) except when this setting is set to AutoShare.

Requires user role: ADMIN, INTEGRATOR

Default value: OnConnect

USAGE:

xConfiguration Video Input Connector *n* PresentationSelection:
PresentationSelection

where

n: Unique ID that identifies the video input connector. Range: 2..2

PresentationSelection: AutoShare/Desktop/Manual/OnConnect

AutoShare: While in a call, the content on the video input will automatically be presented to the far end as well as on the local screen when you connect the cable, or when the source is activated otherwise (for example when a connected computer wakes up from sleep mode). You do not have to select Share on the user interface. If a presentation source is already connected when you make or answer a call, you have to manually select Share on the user interface.

Desktop: The content on the video input will be presented on the screen when you connect the cable, or when the source is activated otherwise (for example when a connected computer wakes up from sleep mode). This applies both when idle and in a call. Also, the content on the video input will stay on the screen when you leave the call, provided that it was the active input at the time of leaving.

Manual: The content on the video input will not be presented on the screen until you select Share from the user interface.

OnConnect: The content on the video input will be presented on screen when you connect the cable, or when the source is activated otherwise (for example when a connected computer wakes up from sleep mode). Otherwise, the behavior is the same as in manual mode.

xConfiguration Video Input Connector [2] Quality

When encoding and transmitting video there is a trade-off between high resolution and high frame rate. For some video sources it is more important to transmit high frame rate than high resolution and vice versa. This setting specifies whether to give priority to high frame rate or to high resolution.

Requires user role: ADMIN, INTEGRATOR

Default value: Sharpness

USAGE:

xConfiguration Video Input Connector *n* Quality: Quality

where

n: Unique ID that identifies the video input connector. Range: 2..2

Quality: Motion/Sharpness

Motion: Gives the highest possible frame rate. Used when there is a need for higher frame rates, typically when a large number of participants are present or when there is a lot of motion in the picture.

Sharpness: Gives the highest possible resolution. Used when you want the highest quality of detailed images and graphics.

xConfiguration Video Input Connector [1..2] Visibility

Define the visibility of the video input connector in the menus on the user interface.

Note that Connector 1 is the system's integrated camera, which is not available as a presentation source.

Requires user role: ADMIN, INTEGRATOR

Default value: Connector 1: Never Connector 2: Always

USAGE:

xConfiguration Video Input Connector *n* Visibility: Visibility

where

n: Unique ID that identifies the video input connector. Range: 1..2

Visibility: Connector 1: Never Connector 2: Always/IfSignal/Never

Always: The menu selection for the video input connector will always be visible on the user interface.

IfSignal: The menu selection for the video input connector will only be visible when something is connected to the video input.

Never: The input source is not expected to be used as a presentation source, and will not show up on the user interface.

xConfiguration Video Monitors

A role is assigned to each monitor using the Video Output Connector [n] MonitorRole setting. The monitor role decides which layout (call participants and presentation) will appear on the monitor that is connected to this output. Monitors with the same monitor role will get the same layout; monitors with different monitor roles will have different layouts.

The monitor layout mode that is set in the Video Monitors setting should reflect the number of different layouts you want in your room setup. Note that some monitors can be reserved for presentations.

Requires user role: ADMIN, INTEGRATOR

Default value: Auto

USAGE:

xConfiguration Video Monitors: Monitors

where

Monitors: Auto/Single/Dual/DualPresentationOnly

Auto: The number of monitors connected to the codec is automatically detected, and the layout is distributed on the monitors according to the MonitorRole settings.

Single: The layout is shown on one monitor. If two monitors are connected to the codec, one of them will be disabled.

Dual: The layout is distributed on monitors with monitor role First and Second. If a presentation is part of the layout, all participants in the call are shown on the monitor with monitor role First, and the presentation is shown on the monitor with monitor role Second.

DualPresentationOnly: All participants in the call are shown on the monitor with monitor role First. If a presentation is part of the layout, the presentation is shown on the monitor with monitor role Second.

xConfiguration Video Output Connector [1..2] CEC Mode

This video output (HDMI) supports Consumer Electronics Control (CEC). When this setting is On, the system will use CEC to set the monitor in standby when the system itself enters standby. Likewise the system will wake up the monitor when the system itself wakes up from standby.

The active video input on a monitor is sometimes changed by a user. When a call is started the video system detects if the active video input has been switched to another input on the monitor. The video system then switches the input back so the video system is the active video input source. If the video system is not the active input source when it goes into standby the monitor will not be set to standby.

The monitor that is connected to the output must be CEC compatible and CEC must be configured on the monitor.

Note that the different manufacturers uses different marketing names for CEC, for example Anynet+ (Samsung); Aquos Link (Sharp); BRAVIA Sync (Sony); HDMI-CEC (Hitachi); Kuro Link (Pioneer); CE-Link and Regza Link (Toshiba); RIHD (Onkyo); HDAVI Control, EZ-Sync, VIERA Link (Panasonic); EasyLink (Philips); and NetCommand for HDMI (Mitsubishi).

Requires user role: ADMIN, INTEGRATOR

Default value: On

USAGE:

xConfiguration Video Output Connector *n* CEC Mode: *Mode*
where

n: Unique ID that identifies the video output connector. Range: 1..2

Mode: Off/On

Off: CEC is disabled.

On: CEC is enabled.

xConfiguration Video Output Connector [1..2] MonitorRole

The monitor role describes which video streams will be shown on the monitor connected to this video output connector. Together the Video Monitors setting and the MonitorRole settings for all outputs define which layout (video streams) will be shown on each monitor.

Requires user role: ADMIN, INTEGRATOR

Default value: Auto

USAGE:

xConfiguration Video Output Connector *n* MonitorRole: *MonitorRole*
where

n: Unique ID that identifies the video output connector. Range: 1..2

MonitorRole: Auto/First/Second/PresentationOnly

Auto: The system will detect when a monitor is connected, and a monitor role (First, Second) that corresponds with the Video Monitors setting will be assigned automatically.

First/Second: Define the role of the monitor in a multi-monitor setup. In a single-monitor setup, there is no difference between First and Second.

PresentationOnly: Show presentation video stream if active, and nothing else. Monitors/ outputs with this monitor role are disregarded by the Video Monitors setting.

xConfiguration Video Output Connector [1..2] Resolution

Define the resolution and refresh rate for the connected screen.

The formats larger than 1920_1200_60 requires use of high quality display cables. For guaranteed operation, use display cables that are pre-qualified from Cisco for use at 3840_2160_60, or use a cable that has passed the "Premium HDMI certification" program.

Some UHD TVs/displays only enable 3840_2160_30 (30 Hz) and not 3840_2160_60 (60 Hz) as their default configuration. In such cases the corresponding setting on the TV/display has to be located in the menus of the TV/display and be reconfigured to allow 3840_2160_60 for the HDMI input where the video system is connected.

Requires user role: ADMIN, INTEGRATOR, USER

Default value: Auto

USAGE:

xConfiguration Video Output Connector *n* Resolution: Resolution

where

n: Unique ID that identifies the video output connector. Range: 1..2

Resolution: Auto/1920_1080_50/1920_1080_60/1920_1200_50/1920_1200_60/2560_1440_60/3840_2160_30/3840_2160_60

Auto: The system will automatically try to set the optimal resolution based on negotiation with the connected monitor.

1920_1080_50: The resolution is 1920 x 1080, and the refresh rate is 50 Hz.

1920_1080_60: The resolution is 1920 x 1080, and the refresh rate is 60 Hz.

1920_1200_50: The resolution is 1920 x 1200, and the refresh rate is 50 Hz.

1920_1200_60: The resolution is 1920 x 1200, and the refresh rate is 60 Hz.

2560_1440_60: The resolution is 2560 x 1440, and the refresh rate is 60 Hz.

3840_2160_30: The resolution is 3840 x 2160, and the refresh rate is 30 Hz.

3840_2160_60: The resolution is 3840 x 2160, and the refresh rate is 60 Hz.

xConfiguration Video Presentation DefaultSource

Define which video input source to use as a default presentation source. This setting may be used by the API and 3rd party user interfaces. It is not relevant when using the user interfaces provided by Cisco.

Requires user role: ADMIN, USER

Default value: 2

USAGE:

xConfiguration Video Presentation DefaultSource: DefaultSource

where

DefaultSource: 1/2

The video input source to use as default presentation source.

xConfiguration Video Selfview Default Mode

Define if the main video source (self-view) shall be displayed on screen after a call. The position and size of the self-view window is determined by the Video Selfview Default PIPPosition and the Video Selfview Default FullscreenMode settings respectively.

Requires user role: ADMIN, INTEGRATOR

Default value: Current

USAGE:

xConfiguration Video Selfview Default Mode: Mode

where

Mode: Off/Current/On

Off: self-view is switched off when leaving a call.

Current: self-view is left as is, i.e. if it was on during the call, it remains on after the call; if it was off during the call, it remains off after the call.

On: self-view is switched on when leaving a call.

xConfiguration Video Selfview Default FullscreenMode

Define if the main video source (self-view) shall be shown in full screen or as a small picture-in-picture (PiP) after a call. The setting only takes effect when self-view is switched on (see the Video Selfview Default Mode setting).

Requires user role: ADMIN, INTEGRATOR

Default value: Current

USAGE:

xConfiguration Video Selfview Default FullscreenMode: FullscreenMode

where

FullscreenMode: Off/Current/On

Off: self-view will be shown as a PiP.

Current: The size of the self-view picture will be kept unchanged when leaving a call, i.e. if it was a PiP during the call, it remains a PiP after the call; if it was fullscreen during the call, it remains fullscreen after the call.

On: The self-view picture will be shown in fullscreen.

xConfiguration Video Selfview Default OnMonitorRole

Define which monitor/output to display the main video source (self-view) on after a call. The value reflects the monitor roles set for the different outputs in the Video Output Connector [n] MonitorRole settings.

The setting applies both when self-view is displayed in full screen, and when it is displayed as picture-in-picture (PiP), but only if the Video Monitors setting is set to Dual.

Requires user role: ADMIN, INTEGRATOR

Default value: Current

USAGE:

xConfiguration Video Selfview Default OnMonitorRole: OnMonitorRole

where

OnMonitorRole: Current/First/Second

Current: When leaving a call, the self-view picture will be kept on the same output as it was during the call.

First: The self-view picture will be shown on outputs with the Video Output HDMI MonitorRole set to First.

Second: The self-view picture will be shown on outputs with the Video Output HDMI MonitorRole set to Second.

xConfiguration Video Selfview Default PIPPosition

Define the position on screen of the small self-view picture-in-picture (PiP) after a call. The setting only takes effect when self-view is switched on (see the Video Selfview Default Mode setting) and fullscreen view is switched off (see the Video Selfview Default FullscreenMode setting).

Requires user role: ADMIN, INTEGRATOR

Default value: Current

USAGE:

xConfiguration Video Selfview Default PIPPosition: PIPPosition

where

PIPPosition: Current/UpperLeft/UpperCenter/UpperRight/CenterLeft/CenterRight/LowerLeft/LowerRight

Current: The position of the self-view PiP will be kept unchanged when leaving a call.

UpperLeft: The self-view PiP will appear in the upper left corner of the screen.

UpperCenter: The self-view PiP will appear in the upper center position.

UpperRight: The self-view PiP will appear in the upper right corner of the screen.

CenterLeft: The self-view PiP will appear in the center left position.

CentreRight: The self-view PiP will appear in the center right position.

LowerLeft: The self-view PiP will appear in the lower left corner of the screen.

LowerRight: The self-view PiP will appear in the lower right corner of the screen.

xConfiguration Video Selfview OnCall Mode

This setting is used to switch on self-view for a short while when setting up a call. The Video Selfview OnCall Duration setting determines for how long it remains on. This applies when self-view in general is switched off.

Requires user role: ADMIN, INTEGRATOR

Default value: On

USAGE:

xConfiguration Video Selfview OnCall Mode: Mode

where

Mode: Off/On

Off: Self-view is not shown automatically during call setup.

On: Self-view is shown automatically during call setup.

xConfiguration Video Selfview OnCall Duration

This setting only has an effect when the Video Selfview OnCall Mode setting is switched On. In this case, the number of seconds set here determines for how long self-view is shown before it is automatically switched off.

Requires user role: ADMIN, INTEGRATOR

Default value: 10

USAGE:

xConfiguration Video Selfview OnCall Duration: Duration

where

Duration: Integer (1..60)

Range: Choose for how long self-view remains on. The valid range is between 1 and 60 seconds.

Chapter 4

xCommand commands

Description of the xCommand commands

In this chapter, you can find a complete list of all xCommand type commands with parameters.

We recommend you visit our web site regularly for updated versions of the manual.

Go to: <http://www.cisco.com/go/roomkit-docs>

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Audio commands

xCommand Audio Diagnostics MeasureDelay

This command will measure the audio delay/latency in a device connected to the video system. A typical use case it to measure the delay in a TV connected to the video system via the HDMI connector. If the delay in a TV is too high, the real-time experience of a video call will be substantially degraded. If the delay is more than 50 ms we recommend the user to find a TV setting that has shorter delay. Typical TV settings that can reduce the delay are: Gaming Mode and PC Mode.

This command will measure the delay between output and input (microphone). This means that if you are using an external acoustic echo canceller or audio mixer, this command will also measure the delay of these devices.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Audio Diagnostics MeasureDelay [MeasurementLength: MeasurementLength]
[Output: Output] [Volume: Volume]
```

where

MeasurementLength: Integer (1..100)

The length of the measurement in number of seconds. In a noisy environment a longer measurement time will give a more reliable and robust result. The default is set to 6.

Output: HDMI/Line/Internal/All

HDMI: Measure the delay of the device connected to the HDMI output.

Line: Measure the delay of the device connected to the Line output (only available on video systems that have a Line output).

Internal: Measure the delay of the internal loudspeaker (only available on video systems that have an internal loudspeaker).

All: Will measure the maximum delay of all outputs.

The default is set to HDMI.

Volume: Integer (1..50)

The volume for the test signal. In a noisy environment a higher volume gives more reliable and robust results. The default is set to 20.

xCommand Audio Microphones Mute

Mute all microphones.

Requires user role: ADMIN, INTEGRATOR, USER

USAGE:

```
xCommand Audio Microphones Mute
```

xCommand Audio Microphones ToggleMute

Toggle the microphone between muted and unmuted.

Requires user role: ADMIN, INTEGRATOR, USER

USAGE:

```
xCommand Audio Microphones ToggleMute
```

xCommand Audio Microphones Unmute

Unmute all microphones.

Requires user role: ADMIN, INTEGRATOR, USER

USAGE:

```
xCommand Audio Microphones Unmute
```

xCommand Audio Sound Play

Play a specified audio sound.

Requires user role: ADMIN, INTEGRATOR, USER

USAGE:

xCommand Audio Sound Play [Loop: Loop] Sound: Sound
where

Loop: Off/On

Determines whether or not to loop the playout of the audio sound. The sound is looped by default. Irrespective of how this parameter is set, some of the sounds (Busy, CallWaiting, Dial, Ringing, and SpecialInfo) will play until the Audio Sound Stop command is issued. The default is set to Off.

Sound: Alert/Bump/Busy/CallDisconnect/CallInitiate/CallWaiting/Dial/KeyInput/KeyInputDelete/KeyTone/Nav/NavBack/Notification/OK/Pairing/PresentationConnect/Ringing/SignIn/SpecialInfo/TelephoneCall/VideoCall/VolumeAdjust/WakeUp

Choose which ringtone to play.

xCommand Audio Sound Stop

Stop playing audio sound.

Requires user role: ADMIN, INTEGRATOR, USER

USAGE:

xCommand Audio Sound Stop

xCommand Audio SoundsAndAlerts Ringtone List

List all available ringtones. Use the xConfiguration Audio SoundsAndAlerts RingTone setting to choose a ringtone.

Requires user role: ADMIN, INTEGRATOR, USER

USAGE:

xCommand Audio SoundsAndAlerts Ringtone List

xCommand Audio SoundsAndAlerts Ringtone Play

Play one of the available ringtones. Use the xCommand Audio SoundsAndAlerts Ringtone List command to get a list of the available ringtones.

Requires user role: ADMIN, INTEGRATOR, USER

USAGE:

xCommand Audio SoundsAndAlerts Ringtone Play RingTone: "RingTone"
where

RingTone: String (1, 100)

The name of the ringtone.

xCommand Audio Volume Decrease

Decrease the volume on the endpoint. By default, the volume is increased by 5 steps (each step is 0.5 dB). Use the Steps parameter if you want to override the default behavior.

Requires user role: ADMIN, USER

USAGE:

xCommand Audio Volume Decrease [Steps: Steps]
where

Steps: Integer (1..10)

Choose the number of steps to decrease the volume with. One step is 0.5 dB. The default is set to 5.

xCommand Audio Volume Increase

Increase the volume on the endpoint. By default, the volume is increased by 5 steps (each step is 0.5 dB). Use the Steps parameter if you want to override the default behavior.

Requires user role: ADMIN, USER

USAGE:

xCommand Audio Volume Increase [Steps: Steps]
where

Steps: Integer (1..10)

Choose the number of steps to increase the volume with. One step is 0.5 dB. The default is set to 5.

xCommand Audio Volume Mute

Mute the volume on the endpoint.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Audio Volume Mute
```

xCommand Audio Volume Set

Set the volume on the endpoint to a specified level.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Audio Volume Set Level: Level
where
```

Level: Integer (0..100)

Select the gain level. 70 equals 0 dB gain, and 100 equals 15 dB gain.

xCommand Audio Volume SetToDefault

Set the volume to the default level that is defined in the xConfiguration Audio DefaultVolume setting.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Audio Volume SetToDefault
```

xCommand Audio Volume ToggleMute

Toggle the loudspeaker between muted and unmuted.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Audio Volume ToggleMute
```

xCommand Audio Volume Unmute

Set the volume on the endpoint back on after muting.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Audio Volume Unmute
```

xCommand Audio VuMeter Start

Start a VU meter to show the audio signal level on the specified connector. You have to specify both the connector's type and number (ConnectorType, ConnectorId) to uniquely identify the connector. The VU meter measures the input level for frequencies below 20 kHz.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Audio VuMeter Start ConnectorID: ConnectorID ConnectorType:
ConnectorType [IncludePairingQuality: IncludePairingQuality]
where
```

ConnectorID: Integer (1..2) for Microphone; Integer (1..1) for HDMI

Select a connector number. Together with the ConnectorType it uniquely identifies the connector. Microphone [1] is the built-in microphone, and Microphone [2] is a microphone connected to the mini-jack input connector.

ConnectorType: HDMI/Microphone

Select the connector type.

IncludePairingQuality: Literal (Off / On)

The default is set to Off

xCommand Audio VuMeter Stop

Stop the VU meter on the specified connector. You have to specify both the connector's type and number (ConnectorType, ConnectorId) to uniquely identify the connector.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Audio VuMeter Stop ConnectorID: ConnectorID ConnectorType:
ConnectorType
where
```

ConnectorID: Integer (1..2) for Microphone; Integer (1..1) for HDMI

Select a connector number. Together with the ConnectorType it uniquely identifies the connector. Microphone [1] is the built-in microphone, and Microphone [2] is a microphone connected to the mini-jack input connector.

ConnectorType: HDMI/Microphone

Select the connector type.

xCommand Audio VuMeter StopAll

Stop all VU meters.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Audio VuMeter StopAll
```

Bookings commands

xCommand Bookings Clear

Clear the current stored list of bookings.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Bookings Clear
```

xCommand Bookings Get

Get the booking information for a specific ID.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Bookings Get Id: "Id"
where
```

Id: String (0, 128)

The booking ID of a call or conference.

xCommand Bookings List

List the stored bookings for the system. The list of booking details is received from the management system. All parameters are optional, and can be used to limit the search result. If no parameters are set, past, present and future bookings are all listed. To avoid listing bookings from yesterday and before, use DayOffset = 0.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Bookings List [Days: Days] [DayOffset: DayOffset] [Limit: Limit]
[Offset: Offset]
```

where

Days: Integer (1..365)

Number of days to retrieve bookings from.

DayOffset: Integer (0..365)

Which day to start the search from (today: 0, tomorrow: 1...). The default is set to 0.

Limit: Integer (1..65534)

Max number of bookings to list.

Offset: Integer (0..65534)

Offset number of bookings for this search. The default is set to 0.

Call commands

xCommand Call Accept

Accept an incoming call. If no CallId is specified, all incoming calls are accepted.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Call Accept [CallId: CallId]
```

where

CallId: Integer (0..65534)

The CallId is returned when the xCommand Dial command is run. During the call you can run the xStatus Call command to see the CallId. The default is set to 0.

xCommand Call Disconnect

Disconnect a call.

Requires user role: ADMIN, INTEGRATOR, USER

USAGE:

```
xCommand Call Disconnect [CallId: CallId]
```

where

CallId: Integer (0..65534)

The CallId is returned when the xCommand Dial command is run. During the call you can run the xStatus Call command to see the CallId. The default is set to 0.

xCommand Call DTMFSend

Send DTMF tones to the far end.

Requires user role: ADMIN, USER

USAGE:

xCommand Call DTMFSend [CallId: CallId] DTMFString: "DTMFString"
where

CallId: Integer (0..65534)

The CallID is returned when the xCommand Dial command is run. During the call you can run the xStatus Call command to see the CallId. The default is set to -1.

DTMFString: String (0, 32)

Enter the DTMF string.

xCommand Call FarEndControl Camera Move

Move the far end camera (the remote camera).

NOTE: The far end camera moves in the specified direction until the stop command (ref: xCommand FarEndControl Camera Stop) is issued.

Requires user role: ADMIN, USER

USAGE:

xCommand Call FarEndControl Camera Move [CallId: CallId] Value: Value
where

CallId: Integer (0..65534)

The CallID is returned when the xCommand Dial command is run. During the call you can run the xStatus Call command to see the CallId. The default is set to -1.

Value: Left/Right/Up/Down/ZoomIn/ZoomOut

Select the action for how to move the camera.

xCommand Call FarEndControl Camera Stop

Stop the far end camera after the xCommand FarEndControl Camera Move has been issued.

Requires user role: ADMIN, USER

USAGE:

xCommand Call FarEndControl Camera Stop [CallId: CallId]
where

CallId: Integer (0..65534)

The CallID is returned when the xCommand Dial command is run. During a call you can run the xStatus Call command to see the CallId. The default is set to -1.

xCommand Call FarEndControl RoomPreset Activate

While in a call, this command is used to activate a preset on the far end codec. The preset covers the far end codec's camera positions and input video switcher settings.

The preset must be stored on the far end codec beforehand, either by using the xCommand Preset Store command locally on the far end codec, or by using the xCommand FarEndControl Preset Store command from a remote codec.

Note: The far end codec's xConfiguration Conference FarEndControl Mode setting must be switched On for the FarEndControl commands to work.

Requires user role: ADMIN, USER

USAGE:

xCommand Call FarEndControl RoomPreset Activate [CallId: CallId] PresetId: PresetId
where

CallId: Integer (0..65534)

The CallId is required to identify the far end codec only when in a Multipoint call. The CallId is returned when issuing the xCommand Dial command. During a call you can run the xStatus Call command to see the CallId. The default is set to -1.

PresetId: Integer (1..15)

The ID of the preset that is stored on the far end codec.

xCommand Call FarEndControl Source Select

Select which video input source to use as the main source on the far end system.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Call FarEndControl Source Select [CallId: CallId] SourceId: SourceId
where
```

CallId: Integer (0..65534)

The CallID is returned when the xCommand Dial command is run. During a call you can run the xStatus Call command to see the CallId. The default is set to -1.

SourceId: Integer (0..15)

Select a video input source on the far end.

xCommand Call Forward

Specifies what number or URI you want to forward your incoming calls to. The display name is a local reference for the forwarded destination. A message, together with the local reference, is shown on screen when you have configured the system to forward all calls.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Call Forward DisplayName: "DisplayName" Number: "Number"
where
```

DisplayName: String (0, 255)

The local reference for the forwarded destination.

Number: String (0, 255)

The directory number or URI which you want to forward the incoming calls to.

xCommand Call Hold

Put a call on hold.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Call Hold [CallId: CallId] [Reason: Reason]
where
```

CallId: Integer (0..65534)

The CallID is returned when the xCommand Dial command is run. During a call you can run the xStatus Call command to see the CallId. The default is set to 0.

Reason: Conference/Transfer/Other

Internal usage only. The default is set to Other.

xCommand Call Ignore

Turns off the ringtone for the incoming call. The call can still be answered.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Call Ignore CallId: CallId
where
```

CallId: Integer (0..65534)

The CallID is returned when the xCommand Dial command is run. During a call you can run the xStatus Call command to see the CallId.

xCommand Call Join

Internal usage only.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Call Join CallId: CallId
where
```

CallId: Integer (0..65534)

You can have from 1 to 10 CallId parameters in the same command.

xCommand Call Reject

Reject incoming call. If no call id is specified, all incoming calls are rejected.

Requires user role: ADMIN, USER

USAGE:

xCommand Call Reject [CallId: CallId]
where

CallId: Integer (0..65534)

The CallID is returned when the xCommand Dial command is run. During a call you can run the xStatus Call command to see the CallId. The default is set to 0.

xCommand Call Resume

Resume a call that have been put on hold.

Requires user role: ADMIN, USER

USAGE:

xCommand Call Resume [CallId: CallId]
where

CallId: Integer (0..65534)

The CallID is returned when the xCommand Dial command is run. During a call you can run the xStatus Call command to see the CallId. The default is set to 0.

xCommand Call UnattendedTransfer

Transfers an ongoing call to another participant. Fully supported for SIP calls only.

Requires user role: ADMIN, USER

USAGE:

xCommand Call UnattendedTransfer CallId: CallId Number: "Number"
where

CallId: Integer (0..65534)

The CallID is returned when the xCommand Dial command is run. During a call you can run the xStatus Call command to see the CallId.

Number: String (0, 255)

The number the call is transferred to.

CallHistory commands

xCommand CallHistory AcknowledgeAllMissedCalls

Turns off the missed calls indicator on the touch controller for all missed calls.

Requires user role: ADMIN, USER

USAGE:

```
xCommand CallHistory AcknowledgeAllMissedCalls
```

xCommand CallHistory AcknowledgeMissedCall

Turns off the missed calls indicator on the touch controller for the specified call.

Requires user role: ADMIN, USER

USAGE:

```
xCommand CallHistory AcknowledgeMissedCall CallHistoryId: CallHistoryId
[AcknowledgeConsecutiveDuplicates: AcknowledgeConsecutiveDuplicates]
where
```

CallHistoryId: Integer (1..2147483647)

CallHistoryId for the call in question. Run xCommand CallHistory Get to get the id number.

AcknowledgeConsecutiveDuplicates: False/True

You can include or exclude all surrounding calls with duplicate information. The default is set to False.

xCommand CallHistory DeleteAll

Deletes all information on previous calls.

Requires user role: ADMIN, USER

USAGE:

```
xCommand CallHistory DeleteAll [Filter: Filter]
where
```

Filter: All/Missed/Placed/Received

You can filter which calls to delete. The default is set to All.

xCommand CallHistory DeleteEntry

Deletes all information on the specified call.

Requires user role: ADMIN, USER

USAGE:

```
xCommand CallHistory DeleteEntry CallHistoryId: CallHistoryId
[AcknowledgeConsecutiveDuplicates: AcknowledgeConsecutiveDuplicates]
[DeleteConsecutiveDuplicates: DeleteConsecutiveDuplicates]
where
```

CallHistoryId: Integer (1..2147483647)

CallHistoryId for the call in question. Run xCommand CallHistory Get to get the id number.

AcknowledgeConsecutiveDuplicates: False/True

You can include or exclude all surrounding calls with duplicate information.

DeleteConsecutiveDuplicates: False/True

You can delete the surrounding calls with duplicate information or not. The default is set to False.

xCommand CallHistory Get

Retrieve all information on previous calls made on the video system.

Requires user role: ADMIN, USER

USAGE:

```
xCommand CallHistory Get [Filter: Filter] [Offset: Offset] [Limit: Limit]  
[DetailLevel: DetailLevel] [SearchString: "SearchString"] [CallHistoryId:  
CallHistoryId]
```

where

Filter: All/Missed/AnsweredElsewhere/Forwarded/Placed/NoAnswer/Received/Rejected/UnacknowledgedMissed

You can filter which calls to retrieve. The default is set to All.

Offset: Integer (0..65534)

Sets the call from which to start. The default is set to 0.

Limit: Integer (0..65534)

Defines the amount of calls in the output. The default is set to 65534.

DetailLevel: Basic/Full

Sets the level of detail for the information on these calls. The default is set to Basic.

SearchString: String (0, 255)

Allows you to set the command to apply to a specified display name or call back number.

CallHistoryId: Integer (0..65534)

CallHistoryId for the call in question.

xCommand CallHistory Recents

Retrieve aggregated information on previous calls made on the video system.

Requires user role: ADMIN, USER

USAGE:

```
xCommand CallHistory Recents [Filter: Filter] [Offset: Offset] [Limit: Limit]  
[DetailLevel: DetailLevel] [SearchString: "SearchString"] [CallHistoryId:  
CallHistoryId] [Order: Order]
```

where

Filter: All/Missed/AnsweredElsewhere/Forwarded/Placed/NoAnswer/Received/Rejected/UnacknowledgedMissed

You can filter which calls to retrieve. The default is set to All.

Offset: Integer (0..65534)

Sets the call from which to start. The default is set to 0.

Limit: Integer (0..65534)

Defines the amount of calls in the output. The default is set to 65534.

DetailLevel: Basic/Full

Sets the level of detail for the information on these calls. The default is set to Basic.

SearchString: String (0, 255)

Allows you to set the command to apply to a specified display name or call back number.

CallHistoryId: Integer (0..65534)

CallHistoryId for the call in question.

Order: OccurrenceTime/OccurrenceFrequency

Define the order in which the previous calls are presented. The default is set to OccurrenceTime.

Camera commands

xCommand Camera PositionSet

Set the camera position.

Requires user role: ADMIN, USER

USAGE:

xCommand Camera PositionSet CameraId: CameraId [Focus: Focus] [Lens: Lens] [Pan: Pan] [Tilt: Tilt] [Zoom: Zoom]
where

CameraId: Integer (1..1)
The ID of the camera preset you want to reset.

Focus: Integer (0..65535)
Focus the camera near or far.

Lens: Literal (Wide / Center / Left / Right)
Sets the camera's lens position.

Pan: Integer (-10000..10000)
Move the camera to the left or right.

Tilt: Integer (-2500..2500)
Move the camera up or down.

Zoom: Integer (0..8500)
Zoom in or out.

xCommand Camera Preset Activate

Activate one of the stored camera presets.

Note that the xCommand Camera Preset commands applies to an individual camera. This is in contrast to the xCommand Preset commands where a single preset covers ALL connected cameras plus the Video Input switcher settings.

Requires user role: ADMIN, USER

USAGE:

xCommand Camera Preset Activate PresetId: PresetId
where

PresetId: Integer (1..35)
The ID of the camera preset you want to activate.

xCommand Camera Preset ActivateDefaultPosition

Sets the cameras to their default position, if one is defined. The default position is defined by xCommand Camera Preset Store or by xCommand Camera Preset Edit. Only one default position can be defined per camera.

Requires user role: ADMIN, USER

USAGE:

xCommand Camera Preset ActivateDefaultPosition [CameraId: CameraId]
where

CameraId: Integer (1..1)
The ID of the camera preset you want to activate. If CameraId is not specified, all cameras will be set in their respective default position, if one is defined.

xCommand Camera Preset Edit

Edit a stored camera preset. You can change the name of the camera preset and its position in the list that is returned by the xCommand Camera Preset List command. You can also change whether or not this preset is the default position for the associated camera.

Note that the xCommand Camera Preset commands applies to an individual camera. This is in contrast to the xCommand Preset commands where a single preset covers ALL connected cameras and the Video Input switcher settings.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Camera Preset Edit PresetId: PresetId [ListPosition: ListPosition]
[Name: "Name"] [DefaultPosition: DefaultPosition]
where
```

PresetId: Integer (1..35)

The ID of the camera preset you want to edit.

ListPosition: Integer (1..35)

The position in the list returned by the xCommand Camera Preset List command.

Name: String (0, 255)

The name of the camera preset. It will be used in the list returned by the xCommand Camera Preset List command.

DefaultPosition: False/True

Defines whether or not this preset is the default position for the associated camera. Note that each camera can only have one default position, so if set, the old default preset will automatically be marked as not default.

xCommand Camera Preset List

List information about available camera presets.

Note that the xCommand Camera Preset commands applies to an individual camera. This is in contrast to the xCommand Preset commands where a single preset covers ALL connected cameras plus the Video Input switcher settings.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Camera Preset List CameraId: CameraId [DefaultPosition:
DefaultPosition]
where
```

CameraId: Integer (1..1)

Only list presets for the specified camera.

DefaultPosition: False/True

List default positions only, or only those that are not default positions.

xCommand Camera Preset Remove

Remove a camera preset.

Note that the xCommand Camera Preset commands applies to an individual camera. This is in contrast to the xCommand Preset commands where a single preset covers ALL connected cameras plus the Video Input switcher settings.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Camera Preset Remove PresetId: PresetId
where
```

PresetId: Integer (1..35)

The ID of the camera preset you want to remove.

xCommand Camera Preset Show

Shows the preset details for the requested PresetId.

Requires user role: ADMIN, USER

USAGE:

xCommand Camera Preset Show PresetId: PresetId
where

PresetId: Integer (1..35)

The ID of the camera preset you wish to see.

xCommand Camera Preset Store

Store the current position (pan and tilt), zoom and focus of the chosen camera. The camera is identified by the CameraId parameter.

Note that the xCommand Camera Preset commands applies to an individual camera. This is in contrast to the xCommand Preset commands where a single preset covers ALL connected cameras plus the Video Input switcher settings. The xCommand Camera Preset commands are useful when you want to handle multiple camera positions individually per camera, rather than working with complete sets of camera positions. The individual camera presets are not available for far end control.

Requires user role: ADMIN, USER

USAGE:

xCommand Camera Preset Store [PresetId: PresetId] CameraId: CameraId
[ListPosition: ListPosition] [Name: "Name"] [TakeSnapshot: TakeSnapshot]
[DefaultPosition: DefaultPosition]
where

PresetId: Integer (1..35)

The ID of this camera preset. If not set explicitly, the codec will assign a preset ID automatically.

CameraId: Integer (1..1)

Select the camera for which to store the preset position.

ListPosition: Integer (1..35)

The new camera preset's position in the list returned by the xCommand Camera Preset List command.

Name: String (0, 255)

The name of the new camera preset. It will be used in the list returned by the xCommand Camera Preset List command.

TakeSnapshot: False/True

Allow or disallow snapshot of the preview.

DefaultPosition: False/True

Defines whether or not this preset shall be the default position of the associated camera. Note that each camera can hold only one default position, so if set, the old default preset will automatically be marked as not default.

xCommand Camera Ramp

Move the camera in a specified direction. The camera moves at specified speed until a stop command is issued. In a daisy chain, you need to know the Camerald for the camera you want to address. Be aware that pan and tilt can be operated simultaneously, but no other combinations. In the latter case only the first operation specified is executed. For example, if you try to run both zoom and pan at the same time, only zoom is executed.

NOTE: You must run a stop command to stop the camera, see the example below.

Requires user role: ADMIN, INTEGRATOR, USER

USAGE:

```
xCommand Camera Ramp CameraId: CameraId [Pan: Pan] [PanSpeed: PanSpeed] [Tilt: Tilt] [TiltSpeed: TiltSpeed] [Zoom: Zoom] [ZoomSpeed: ZoomSpeed] [Focus: Focus]
where
```

Camerald: Integer (1..1)

Select the camera.

Pan: Left/Right/Stop

Move the camera to the Left or Right, followed by Stop.

PanSpeed: Integer (1..15)

Set the pan speed.

Tilt: Down/Up/Stop

Move the camera Up or Down, followed by Stop.

TiltSpeed: Integer (1..15)

Set the tilt speed.

Zoom: In/Out/Stop

Zoom the camera In or Out, followed by Stop.

ZoomSpeed: Integer (1..15)

Set the zoom speed.

Focus: Far/Near/Stop

Focus the camera Far or Near, followed by Stop.

Cameras commands

xCommand Cameras AutoFocus Diagnostics Start

Start diagnostics on auto focus.

Requires user role: ADMIN, INTEGRATOR

USAGE:

```
xCommand Cameras AutoFocus Diagnostics Start CameraId: CameraId
where
```

Camerald: 1..1

Select which camera to diagnose.

xCommand Cameras AutoFocus Diagnostics Stop

Stop diagnostics on auto focus.

Requires user role: ADMIN, INTEGRATOR

USAGE:

```
xCommand Cameras AutoFocus Diagnostics Stop CameraId: CameraId
where
```

Camerald: 1..1

Select which camera to diagnose.

xCommand Cameras SpeakerTrack Activate

Activate SpeakerTrack mode. Requires that xConfiguration Cameras SpeakerTrack Mode is set to Auto (default).

This setting applies only when using a Cisco TelePresence SpeakerTrack 60 camera.

The SpeakerTrack 60 camera assembly consists of two cameras and uses an audio tracking technique that finds and captures a close-up of the active speaker. When a change of speaker is detected, the system can switch automatically between the two cameras to always show the best camera view.

Requires user role: ADMIN, USER

USAGE:

xCommand Cameras SpeakerTrack Activate

xCommand Cameras SpeakerTrack Deactivate

Deactivate SpeakerTrack mode.

This setting applies only when using a Cisco TelePresence SpeakerTrack 60 camera.

The SpeakerTrack 60 camera assembly consists of two cameras and uses an audio tracking technique that finds and captures a close-up of the active speaker. When a change of speaker is detected, the system can switch automatically between the two cameras to always show the best camera view.

Requires user role: ADMIN, USER

USAGE:

xCommand Cameras SpeakerTrack Deactivate

xCommand Cameras SpeakerTrack Diagnostics Start

Starts diagnostics on the SpeakerTrack cameras' tracking.

Requires user role: ADMIN, INTEGRATOR, USER

USAGE:

xCommand Cameras SpeakerTrack Diagnostics Start Tracking: Tracking
where

Tracking: On/Off

On: Displays diagnostics from both cameras simultaneously. In this mode the tracking is determined by who is talking in the room identical to SpeakerTrack's standard behaviour.

Off: Displays diagnostics from one camera at a time. Diagnostics is switched from one camera to the other in 15 seconds intervals, and camera related diagnostics are shown for the active camera. Both cameras stay in full wide position. Use Tracking: Off when you wish to see the tracking diagnostics from one camera at a time.

The default is set to On.

xCommand Cameras SpeakerTrack Diagnostics Stop

Stops diagnostics on the SpeakerTrack cameras.

Requires user role: ADMIN, INTEGRATOR, USER

USAGE:

xCommand Cameras SpeakerTrack Diagnostics Stop

xCommand Cameras SpeakerTrack Whiteboard ActivatePosition

Moves the specified camera to the position stored with xCommand Cameras SpeakerTrack Whiteboard StorePosition.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Cameras SpeakerTrack Whiteboard ActivatePosition CameraId: CameraId  
[WhiteboardId: WhiteboardId]
```

where

CameraId: Integer(1..1)

The ID of the camera that is being positioned.

WhiteboardId: Integer (1..8)

The id set for the camera position used for the snap-to-whiteboard feature. Currently only id 1 can be used.

xCommand Cameras SpeakerTrack Whiteboard AlignPosition

Not applicable.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Cameras SpeakerTrack Whiteboard AlignPosition
```

xCommand Cameras SpeakerTrack Whiteboard SetDistance

Set the cameras distance to the whiteboard. This information is needed by the camera to frame the whiteboard automatically.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Cameras SpeakerTrack Whiteboard SetDistance Distance: Distance  
[WhiteboardId: WhiteboardId]
```

where

Distance: Integer (0..65534)

Set distance to whiteboard in centimeters. Use an accurate measurement for the feature to work seamlessly.

WhiteboardId: Integer (1..8)

The id set for the camera position used for the snap-to-whiteboard feature. Currently only id 1 can be used.

xCommand Cameras SpeakerTrack Whiteboard StorePosition

Store the position of the specified camera as the Snap to Whiteboard position. Frame the image so that there is room around the whiteboard for the speaker. To use the Snap to Whiteboard feature it must be enabled with xConfiguration Cameras SpeakerTrack Whiteboard Mode and tracking must be enabled with xConfiguration Cameras SpeakerTrack Mode.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Cameras SpeakerTrack Whiteboard StorePosition CameraId: CameraId  
[WhiteboardId: WhiteboardId]
```

where

CameraId: Integer(1..1)

The ID of the camera that is being positioned.

WhiteboardId: Integer (1..8)

You can give the position an id number. Currently the only id that can be used is 1.

Conference commands

xCommand Conference DoNotDisturb Activate

This command switches on the Do Not Disturb mode, and the Timeout parameter allows you to control when it is switched off again. When Do Not Disturb is switched on, all incoming calls are rejected and registered as missed calls. The calling side receives a busy signal.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Conference DoNotDisturb Activate [Timeout: Timeout]  
where
```

Timeout: Integer (1..1440)

Set the number of minutes before Do Not Disturb is switched off. If not set, Do Not Disturb times out after 1440 minutes (24 hours).

xCommand Conference DoNotDisturb Deactivate

Switch off the Do Not Disturb mode. When Do Not Disturb is switched off incoming calls come through as normal.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Conference DoNotDisturb Deactivate
```

xCommand Conference SpeakerLock Release

Releases locked speaker set by xCommand Conference SpeakerLock Set. Default voice switching is switched back on.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Conference SpeakerLock Release
```

xCommand Conference SpeakerLock Set

For manually locking one of the speakers to the prominent speaker position. This overrides the default voice switching.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Conference SpeakerLock Set Target: Target [CallId: CallId]  
where
```

Target: local/remote

Identifies local or remote participant.

CallId: Integer (0..65534)

Identify CallID for the remote participant. Only relevant if Target is set to "remote". The default is set to 0.

Diagnostics commands

xCommand Diagnostics Run

This command runs self-diagnostics commands on the system.

Requires user role: ADMIN

USAGE:

```
xCommand Diagnostics Run [ResultSet: ResultSet]
```

where

ResultSet: Alerts/All/None

You can filter the diagnostics results to alerts, all or none. If not set, the result will show all results. The default is set to Alerts.

Dial commands

xCommand Dial

Dial out from the system. Returns information about the CallId and Conferenceld, which are required for some of the other commands.

Requires user role: ADMIN, INTEGRATOR, USER

USAGE:

```
xCommand Dial Number: "Number" [Protocol: Protocol] [CallRate: CallRate]  
[CallType: CallType] [BookingId: "BookingId"] [Appearance: Appearance]  
[DisplayName: "DisplayName"]
```

where

Number: String (0, 255)

Enter the number or address.

Protocol: H320/H323/Sip/Spark

Select the call protocol.

CallRate: Integer (64..6000)

Set the call rate.

CallType: Audio/Video

Select the call type.

BookingId: String (0, 255)

Any identifier that an external booking system (e.g. TMS, CTS-MAN) can use for its own references to match placed calls with the booking systems internal identifier for a meeting. This can be any string, e.g. a GUID. The booking Id is supplied in call logs, call events etc for the call.

Appearance: Integer (1..999999999)

Internal usage only.

DisplayName: String (0, 255)

The display name of the remote participant.

HttpFeedback commands

xCommand HttpFeedback Deregister

Deregister the HTTP feedback over HTTP(S).

Requires user role: ADMIN

USAGE:

xCommand HttpFeedback Deregister FeedbackSlot: FeedbackSlot

where

FeedbackSlot: Integer (1..4)

Deregister the feedback slot that was registered using the xCommand HttpFeedback Register command.

xCommand HttpFeedback Register

Register the system to a HTTP(S) server to return XML feedback over HTTP(S) to specific URLs.

Requires user role: ADMIN

USAGE:

xCommand HttpFeedback Register FeedbackSlot: FeedbackSlot [Format: Format]

ServerUrl: "ServerUrl" [Expression: "Expression"]

where

FeedbackSlot: Integer (1..4)

The codec can register up to 4 slots of servers requesting HTTP feedback. Set the registering to one of them.

Note: Avoid using FeedbackSlot 3 in an environment where Cisco TelePresence Management Suite (TMS) is used as TMS uses this feedbackslot to register its expressions.

Format: XML/JSON

Set the format for the feedback from the HTTP server to XML or JSON. The default is set to XML.

ServerUrl: String (1, 2048)

The URL to the HTTP server where you want the codec to post the HTTP feedback messages to.

Expression: String (1, 255)

The XPath expression specifies which parts of the Status, Configuration or Event XML documents are monitored. You can have from 0 to 15 XPath expressions in the same command.

Macros commands

xCommand Macros Log Clear

Clears the Macros Logs.

Requires user role: ADMIN

USAGE:

xCommand Macros Log Clear

xCommand Macros Log Get

Shows the logs for all running macros and for the runtime itself.

Requires user role: ADMIN

USAGE:

xCommand Macros Log Get [Offset: "Offset"]
where

Offset: String (0..65534)

Shows lines with the same or higher Offset than the one provided. The default is set to 0.

xCommand Macros Macro Activate

Activates a macro created on this video system.

Requires user role: ADMIN

USAGE:

xCommand Macros Macro Activate Name: "Name"
where

Name: String (0..255)

Specifies the name of the macro to activate.

xCommand Macros Macro Deactivate

Deactivates a macro currently running on this video system.

Requires user role: ADMIN

USAGE:

xCommand Macros Macro Deactivate Name: "Name"
where

Name: String (0..255)

The name of the macro to deactivate.

xCommand Macros Macro Get

Shows the details of a macro created on this video system.

Requires user role: ADMIN

USAGE:

xCommand Macros Macro Get [Content: Content] [Name: "Name"]
where

Content: Literal (False / True)

Shows the content for the specified Macro or not. The default is set to false

Name: String (0..255)

The name of the macro.

xCommand Macros Macro Remove

Removes a macro created on this video system.

Requires user role: ADMIN

USAGE:

xCommand Macros Macro Remove Name: "Name"
where

Name: String (0..255)

The name of the macro that is removed.

xCommand Macros Macro Rename

Renames a macro created on this video system.

Requires user role: ADMIN

USAGE:

```
xCommand Macros Macro Rename Name: "Name" NewName: "NewName" [Overwrite: Overwrite]  
where
```

Name: String (0..255)

The name of the macro that is renamed.

NewName: String (0..255)

The new name of the macro.

Overwrite: Literal (False / True)

Overwrites the existing content or not. The default is set to false.

xCommand Macros Macro Roles Set

Sets the role for a macro.

Requires user role: ADMIN

USAGE:

```
xCommand Macros Macro Roles Set Name: "Name" [Role: "Role"]  
where
```

Name: String (0..255)

The name of the macro that is set.

Role: String (0..255)

The name of the role that is set.

xCommand Macros Macro Save

Saves the details of a macro. This is a multiline command.

Requires user role: ADMIN

USAGE:

```
xCommand Macros Macro Save Name: "Name" [Overwrite: Overwrite]  
where
```

Name: String (0..255)

The name of the macro that is saved.

Overwrite: Literal (False / True)

Overwrites the existing content or not. The default is set to true.

xCommand Macros Runtime Restart

Restarts all of the macros set up on this device.

Requires user role: ADMIN

USAGE:

```
xCommand Macros Runtime Restart
```

xCommand Macros Runtime Start

Starts all of the macros set up on this device.

Requires user role: ADMIN

USAGE:

```
xCommand Macros Runtime Start
```

xCommand Macros Runtime Status

Shows the current status of the macros runtime on this device.

Requires user role: ADMIN

USAGE:

```
xCommand Macros Runtime Status
```

xCommand Macros Runtime Stop

Stops all of the macros set up on this device.

Requires user role: ADMIN

USAGE:

xCommand Macros Runtime Stop

Message commands

xCommand Message Send

Triggers a Message Send event which sends text to any listening clients.

Requires user role: ADMIN, INTEGRATOR

USAGE:

xCommand Message Send Text: "Text"

where

Text: String (0..255)

The text that the message contains.

Peripherals commands

xCommand Peripherals Connect

Register peripherals that are connected to the codec, such as control systems and touch panels. The registered peripherals are displayed on the web interface under Configuration > Peripherals.

This command should be used when the peripheral connects to the codec for the first time or when the software version on the peripheral has changed. The list of connected devices is available with the command xStatus Peripherals ConnectedDevice [n] Status.

Requires user role: ADMIN, INTEGRATOR, ROOMCONTROL, USER

USAGE:

```
xCommand Peripherals Connect [HardwareInfo: "HardwareInfo"] ID: "ID" [Name: "Name"] [NetworkAddress: "NetworkAddress"] [SerialNumber: "SerialNumber"] [SoftwareInfo: "SoftwareInfo"] Type: Type
where
```

HardwareInfo: String (0, 100)

The device's hardware number.

ID: String (1, 100)

A unique ID for the device you are connecting to, typically a MAC address.

Name: String (0, 100)

Define a name for the device.

NetworkAddress: String (0, 100)

Network address for the device you are connecting to.

SerialNumber: String (0, 100)

The device's serial number.

SoftwareInfo: String (0, 100)

Software version the device is running.

Type: Byod/ControlSystem/Other/TouchPanel

Define the type of device you are connecting to.

xCommand Peripherals HeartBeat

When a peripheral is registered as a connected device, you can set it to send a heartbeat to the codec to let the codec know that it is still connected.

This will keep the device on the xStatus Peripherals ConnectedDevice list. If the peripheral is not set to send a heartbeat, the device will disappear from the list after a while.

Note: Does not apply to cameras.

Requires user role: ADMIN, INTEGRATOR, ROOMCONTROL, USER

USAGE:

```
xCommand Peripherals HeartBeat ID: "ID" [Timeout: Timeout]
where
```

ID: String (1, 100)

A unique ID for the device you are connecting to, typically a MAC address.

Timeout: Integer (1..65535)

Set how long the device will send heartbeat. The default is set to 60.

xCommand Peripherals List

Lists all currently and previously connected peripherals.

Requires user role: ADMIN, INTEGRATOR, ROOMCONTROL

USAGE:

```
xCommand Peripherals List [Connected: Connected] [Type: Type]
where
```

Connected: False/True

Limit the search to currently connected devices.

Type: All/ControlSystem/ISDNLink/Other/TouchPanel

Limit the search by device type.

xCommand Peripherals Pairing DeviceDiscovery Start

Start device discovery to detect ISDN Links in the same network.

Requires user role: ADMIN

USAGE:

```
xCommand Peripherals Pairing DeviceDiscovery Start [AutoPairing: AutoPairing]  
[DeviceType: DeviceType] [Timeout: Timeout]  
where
```

AutoPairing: On/Off

You can select to automatically pair the detected device to the endpoint. The default is set to Off.

DeviceType: ISDNLink

Only look for ISDN Link.

Timeout: Integer (3..60)

Set a maximum time for the search from 3 to 60 seconds. The default is set to 10.

xCommand Peripherals Pairing Pair

Pair an ISDN Link to an endpoint.

Requires user role: ADMIN

USAGE:

```
xCommand Peripherals Pairing Pair MacAddress: "MacAddress"  
where
```

MacAddress: String (1, 1450)

Enter the MAC address for the ISDN Link you wish to pair to the endpoint.

xCommand Peripherals Pairing Unpair

Unpair endpoint from an ISDN Link, when the two have contact.

Requires user role: ADMIN

USAGE:

```
xCommand Peripherals Pairing Unpair MacAddress: "MacAddress"  
where
```

MacAddress: String (1, 100)

MacAddress: Enter the MAC address for the ISDN Link you wish to unpair from the endpoint.

xCommand Peripherals Purge

Force unpair an endpoint from an ISDN Link when a connection has been lost. Note: You must also unpair the ISDN Link to be able to pair it to another endpoint.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Peripherals Purge ID: "ID"  
where
```

ID: String (1, 100)

Mac address of the ISDN Link in the format "xx:xx:xx:xx:xx:xx".

Phonebook commands

xCommand Phonebook Contact Add

Requires user role: ADMIN, USER

USAGE:

```
xCommand Phonebook Contact Add Name: "Name" [FolderId: "FolderId"] [ImageURL: "ImageURL"] [Title: "Title"] [Number: "Number"] [Protocol: "Protocol"] [CallRate: "CallRate"] [CallType: "CallType"] [Device: Device] [Tag: Tag]
```

where

Name: String (0, 255)

The name of the contact.

FolderId: String (0, 255)

The unique identifier for the folder that you want to store the contact in. The identifier will be returned by an xCommand Phonebook Search command. It was also returned when the xCommand Phonebook Folder Add command was issued to make the folder.

ImageURL: String (0, 255)

Currently not in use.

Title: String (0, 255)

The title of the contact.

Number: String (0, 255)

The phone number or address of the contact.

Protocol: Auto/H320/H323/SIP/Spark

Select the Auto, Spark, SIP, H323 or H320 protocol.

CallRate: Integer (0..6000)

Set a call rate. The default is set to 0.

CallType: Audio/Video

Select a call type (audio or video).

Device: Mobile/Other/Telephone/Video

Select the device type.

Tag: Untagged/Favorite

Tag the contact as a Favorite, or untag an already tagged contact.

xCommand Phonebook Contact Delete

Delete an existing contact from the local phonebook.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Phonebook Contact Delete ContactId: "ContactId"
```

where

ContactId: String (0, 255)

The unique identifier for the contact. The identifier will be returned by an xCommand Phonebook Search command. It was also returned when the xCommand Phonebook Contact Add command was issued to make the contact.

xCommand Phonebook Contact Modify

Modify contact details of an existing contact in the local phonebook. The following parameters can be changed using this command: Name, FolderId, ImageURL and Title. You must use the xCommand Phonebook ContactMethod Modify command to change the other parameters: Number, Protocol, CallRate, CallType and Device.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Phonebook Contact Modify ContactId: "ContactId" [Name: "Name"]
[FolderId: "FolderId"] [ImageURL: "ImageURL"] [Title: "Title"] [Tag: Tag]
where
```

ContactId: String (0, 255)

The unique identifier for the contact you want to modify. The identifier will be returned by an xCommand Phonebook Search command. It was also returned when the xCommand Phonebook Contact Add command was issued to make the contact.

Name: String (0, 255)

The name of the contact.

FolderId: String (0, 255)

A unique identifier for the folder. The identifier will be returned by an xCommand Phonebook Search command. It was also returned when the xCommand Phonebook Folder Add command was issued.

ImageURL: String (0, 255)

Currently not in use.

Title: String (0, 255)

The title of the contact.

Tag: Untagged/Favorite

Tag the contact as a Favorite, or untag an already tagged contact.

xCommand Phonebook ContactMethod Add

Add contact details for an existing contact in the local phonebook. The command returns the ContactMethodId, which is a unique string that identifies the contact method; typically the format is "n".

You can add several contact methods to a contact. Note that only the first contact method will appear in the Favorites list on the Cisco TelePresence Touch controller. The first contact method may have been created when issuing the xCommand Phonebook Contact Add command to make the contact. All contact methods are available in the API, on the web interface and when using the remote control.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Phonebook ContactMethod Add ContactId: "ContactId" [Device: Device]
Number: "Number" [Protocol: Protocol] [CallRate: CallRate] [CallType: CallType]
where
```

ContactId: String (0, 255)

The unique identifier for the contact that you want to add a contact method to. The identifier will be returned by an xCommand Phonebook Search command. It was also returned when the xCommand Phonebook Contact Add command was issued to make the contact.

Device: Mobile/Other/Telephone/Video

Set which type of device to call to.

Number: String (0, 255)

The phone number or address of the contact.

Protocol: Auto/H320/H323/SIP/Spark

Select protocol.

CallRate: Integer (0..6000)

Set a call rate. The default is set to 0.

CallType: Audio/Video

Select a call type (audio or video).

xCommand Phonebook ContactMethod Delete

Delete a contact method from an existing contact in the local phonebook.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Phonebook ContactMethod Delete ContactId: "ContactId" ContactMethodId: "ContactMethodId"  
where
```

ContactId: String (0, 255)

The unique identifier for the contact you want to change. The identifier will be returned by an xCommand Phonebook Search command. It was also returned when the xCommand Phonebook Contact Add command was issued to make the contact.

ContactMethodId: String (0, 255)

The unique identifier for the contact method you want to delete. The identifier will be returned by an xCommand Phonebook Search command. It was also returned when the xCommand Phonebook ContactMethod Add command was issued to make the contact method.

xCommand Phonebook ContactMethod Modify

Modify details about the contact method for an existing contact in the local phonebook.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Phonebook ContactMethod Modify ContactId: "ContactId" ContactMethodId: "ContactMethodId" [Device: Device] [Number: "Number"] [Protocol: Protocol] [CallRate: CallRate] [CallType: CallType]  
where
```

ContactId: String (0, 255)

The unique identifier for the contact. The identifier will be returned by an xCommand Phonebook Search command. It was also returned when the xCommand Phonebook Contact Add command was issued to make the contact.

ContactMethodId: String (0, 255)

The unique identifier for the contact method you want to modify. The identifier will be returned by an xCommand Phonebook Search command. It was also returned when the xCommand Phonebook ContactMethod Add or xCommand Phonebook Contact Add commands were issued to make the contact method.

Device: Mobile/Other/Telephone/Video

Set which type of device to call to.

Number: String (0, 255)

The phone number or address of the contact.

Protocol: Auto/H320/H323/SIP/Spark

Select protocol.

CallRate: Integer (0..6000)

Set a call rate. The default is set to 0.

CallType: Audio/Video

Select a call type (audio or video).

xCommand Phonebook Folder Add

Phonebook entries can be stored in folders. Use this command to add a folder to the local phonebook. The command returns the FolderId, which is a unique string that identifies the folder; typically the format is "localGroupId-n".

Requires user role: ADMIN, USER

USAGE:

```
xCommand Phonebook Folder Add Name: "Name" [ParentFolderId: "ParentFolderId"]  
where
```

Name: String (0, 255)

The name of the folder.

ParentFolderId: String (0, 255)

The unique identifier for the parent folder. The identifier will be returned by an xCommand Phonebook Search command. It was also returned when the xCommand Phonebook Folder Add command was issued to make the parent folder.

xCommand Phonebook Folder Delete

Delete an existing folder from the local phonebook.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Phonebook Folder Delete FolderId: "FolderId"  
where
```

FolderId: String (0, 255)

The unique identifier for the folder. The identifier will be returned by an xCommand Phonebook Search command. It was also returned when the xCommand Phonebook Folder Add command was issued to make the folder.

xCommand Phonebook Folder Modify

Modify an existing phonebook folder.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Phonebook Folder Modify FolderId: "FolderId" [Name: "Name"]  
[ParentFolderId: "ParentFolderId"]  
where
```

FolderId: String (0, 255)

The unique identifier for the folder. The identifier will be returned by an xCommand Phonebook Search command. It was also returned when the xCommand Phonebook Folder Add command was issued to make the folder.

Name: String (0, 255)

The name of the contact.

ParentFolderId: String (0, 255)

The unique identifier for the parent folder. The identifier will be returned by an xCommand Phonebook Search command. It was also returned when the xCommand Phonebook Folder Add command was issued to make the parent folder.

xCommand Phonebook Search

The search command lets you search in both the local and corporate phone books. A search gives a ResultSet.

The total number of folders and contacts (TotalRows) is always included in the result set when searching the local phone book. When searching a corporate phonebook the total number of folders and contacts may not be included. Whether it is included or not depends on the backend corporate phonebook service (e.g. CUCM, VCS, TMS) and its version.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Phonebook Search [PhonebookId: "PhonebookId"] [PhonebookType:
PhonebookType] [SearchString: "SearchString"] [SearchField: SearchField] [Offset:
Offset] [FolderId: "FolderId"] [Limit: Limit] [Recursive: Recursive] [ContactType:
ContactType] [Tag: Tag]
```

where

PhonebookId: String (0, 255)

The identifier of the phonebook server that will be searched. See the xConfiguration Phonebook Server ID setting.

PhonebookType: Corporate/Local

Define whether to search the local phone book or the corporate phonebook. The default is set to Local.

SearchString: String (0, 255)

Search for entries containing this string (note that the entry does not have to begin with the string). If no FolderId is specified, all folders / phonebook directories will be searched.

SearchField: Name/Number

Currently not in use.

Offset: Integer (0..65534)

Get records starting with this offset in a search. The default value is 0. Offset is used together with Limit to support paging. The default is set to 0.

FolderId: String (0, 255)

Search only in the specified folder. The FolderId (string) is listed in the ResultSet of a search result containing folders.

Limit: Integer (0..65534)

Limit the number of records in the result set to this number. For example, if the limit is set to 10, the ResultSet will contain only 10 entries (Contacts and Folders) even if the total number of hits is larger. The maximum limit is 1000. The default is set to 50.

Recursive: False/True

This parameter will only have effect when searching the local phone book. The setting determines whether a local phone book search should be limited to the given FolderId, or also recursively search in its subfolders. If not specified, the search will be recursive.

When issuing the command without specifying any parameters, all folders, contacts and contact methods in the local phone book will be returned. The default is set to True.

ContactType: Any/Folder/Contact

Search all contact types, or limit the search to folders or individual contacts. The default is set to Any.

Tag: Untagged/Favorite

Limits the search to either contacts that have been tagged as favorite or the untagged contacts.

Presentation commands

xCommand Presentation Start

Open a media stream from the selected presentation source.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Presentation Start [PresentationSource: PresentationSource]  
[SendingMode: SendingMode] [ConnectorId: ConnectorId] [Instance: Instance]  
where
```

PresentationSource: Integer (1..2)

Select the video input source to be used for presentation, identified by source number.

SendingMode: LocalRemote/LocalOnly

Select whether the presentation is shown locally or locally and remotely. The default value is LocalRemote.

ConnectorId: Integer (1..2)

Select the video input source to be used for presentation, identified by connectorId.

Instance: New/1/2/3/4/5/6

Select which local presentation instance you wish to start.

xCommand Presentation Stop

Stop the media stream from the presentation source.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Presentation Stop [Instance: Instance] [PresentationSource:  
PresentationSource]  
where
```

Instance: 1/2/3/4/5/6

Select which local presentation you wish to stop, identified by presentation instance.

PresentationSource: Integer (1..2)

Select which local presentation you wish to stop, identified by source number.

Provisioning commands

xCommand Provisioning CompleteUpgrade

Starts installing the software upgrade if you wish to install it before it is set to do so.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Provisioning CompleteUpgrade
```

xCommand Provisioning PostponeUpgrade

Postpones the installing of the software upgrade.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Provisioning PostponeUpgrade SecondsToPostpone: SecondsToPostpone  
where
```

SecondsToPostpone: Integer (0..65534)

Set how long to postpone the upgrade. The value is in seconds.

xCommand Provisioning StartUpgrade

The codec software can be upgraded from the provisioning server. When starting the upgrade the software is automatically downloaded and installed. The codec reboots to complete the software upgrade.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Provisioning StartUpgrade
```

xCommand Provisioning ExtensionMobility Login

Login command for the Extension Mobility service. You log in to the Extension Mobility service with a user name (UserId) and pin code (Pin). The user name and pin code are set up in CUCM. CUCM also supports multiple profiles for a user.

If you, for a user that has multiple profiles, submit a login command with only user name and pin code, CUCM will send a list of available profiles back to the video system. Then the video system will create corresponding ExtensionMobilityProfileSelection Profile events, so that a new login command, which contains the Profile parameter in addition to the user name and pin code, can be submitted.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Provisioning ExtensionMobility Login UserId: "UserId" Pin: "Pin"  
[Profile: "Profile"]
```

where

UserId: String (1, 255)

A valid user name, as set up in CUCM.

Pin: String (1, 255)

A valid pin code for the user, as set up in CUCM.

Profile: String (1, 255)

A valid profile for the user, as set up in CUCM. This parameter applies only if the user has multiple profiles.

xCommand Provisioning ExtensionMobility Logout

This command will log you out of your Extension Mobility profile.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Provisioning ExtensionMobility Logout
```

Proximity commands

xCommand Proximity Services Activate

Reactivate the Proximity services that were deactivated with xCommand Proximity Services Deactivate.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Proximity Services Activate
```

xCommand Proximity Services Deactivate

This command deactivates all proximity services on the endpoint. To reactivate proximity services use the command xCommand Proximity Services Activate.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Proximity Services Deactivate
```

RoomPreset commands

xCommand RoomPreset Activate

Activate one of the locally stored presets.

Note that information about all video input sources, and pan, tilt, zoom and focus values for all cameras are included in the same preset. In contrast, the xCommand Camera Preset commands applies to individual cameras only.

Requires user role: ADMIN, USER

USAGE:

```
xCommand RoomPreset Activate PresetId: PresetId
where
```

PresetId: Integer (1..15)

The ID of the preset you want to activate.

xCommand RoomPreset Clear

Delete a preset.

Note that information about all video input sources, and pan, tilt, zoom and focus values for all cameras are included in the same preset. In contrast, the xCommand Camera Preset commands applies to individual cameras only.

Requires user role: ADMIN, USER

USAGE:

```
xCommand RoomPreset Clear PresetId: PresetId
where
```

PresetId: Integer (1..15)

The ID of the preset you want to delete.

xCommand RoomPreset Store

Store the connector selections for all video input sources and the current position (pan and tilt), zoom and focus values for all cameras.

Note that information about all video input sources, and pan, tilt, zoom and focus values for all cameras are included in the same preset. The system may hold 15 such predefined video input presets. These presets are available for far end control, i.e. they are referred in the PresetId parameter of the xCommand FarEndControl Preset Activate command. In contrast, the xCommand Camera Preset commands applies to individual cameras only. Those presets are not available for far end control.

Requires user role: ADMIN, USER

USAGE:

```
xCommand RoomPreset Store [Description: "Description"] PresetId: PresetId Type:
Type
where
```

Description: String (0, 255)

Enter a description of the camera preset.

PresetId: Integer (1..15)

The ID of this preset.

Type: All/Camera

Not applicable. If you want to ensure that a preset only affects camera positions we recommend that you select Camera.

Security commands

xCommand Security Certificates CA Add

Uploads CA security certificates to this device. This is a multiline command.

Requires user role: ADMIN

USAGE:

```
xCommand Security Certificates CA Add
```

xCommand Security Certificates CA Delete

Deletes a CA security certificate from this device.

Requires user role: ADMIN

USAGE:

```
xCommand Security Certificates CA Delete Fingerprint: "Fingerprint"  
where
```

Fingerprint: String (0..128)

The unique Identifier for the certificate that is deleted. You can get the fingerprint ID by running xCommand Security Certificates CA Show.

xCommand Security Certificates CA Show

Shows the details for the CA security certificates on this device.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Security Certificates CA Show [Format: Format]  
where
```

Format: Literal (PEM / Text)

Specifies the format of the results. The default is set to Text.

xCommand Security Certificates Services Activate

Activates a security certificate on this device.

Requires user role: ADMIN

USAGE:

```
xCommand Security Certificates Services Activate Fingerprint: "Fingerprint"  
Purpose: Purpose  
where
```

Fingerprint: String (0..128)

The unique Identifier for the certificate that is activated. You can get the fingerprint ID by running xCommand Security Certificates Services Show.

Purpose: Literal (802.1X / HTTPS / Audit / SIP)

The type of service which applies to this certificate.

xCommand Security Certificates Services Add

Uploads security certificates to this device. This is a multiline command.

Requires user role: ADMIN

USAGE:

```
xCommand Security Certificates Services Add [PrivateKeyPassword: "PrivateKeyPassword"]  
where
```

PrivateKeyPassword: String (0..128)

Stores the details of the private key for the password.

xCommand Security Certificates Services Deactivate

Deactivates security certificates on this device.

Requires user role: ADMIN

USAGE:

xCommand Security Certificates Services Deactivate Fingerprint: "Fingerprint"
Purpose: Purpose
where

Fingerprint: String (0..128)

The unique Identifier for the certificate that is deactivated. You can get the fingerprint ID by running xCommand Security Certificates Services Show.

Purpose: Literal (802.1X / HTTPS / Audit / SIP)

The type of service which applies to this certificate.

xCommand Security Certificates Services Delete

Deletes security certificates from this device.

Requires user role: ADMIN

USAGE:

xCommand Security Certificates Services Delete Fingerprint: "Fingerprint"
where

Fingerprint: String (0..128)

The unique Identifier for the certificate that is deleted. You can get the fingerprint ID by running xCommand Security Certificates Services Show.

xCommand Security Certificates Services Show

Shows details for security certificates on this device.

Requires user role: ADMIN, USER

USAGE:

xCommand Security Certificates Services Show [Filter: Filter] [Format: Format]
where

Filter: Literal (802.1X / HTTPS / Audit / SIP)

Filters the results according to the chosen service.

Format: Literal (PEM / Text)

Specifies the format of the results. The default is set to text.

xCommand Security Persistency

Set the following features to persistent or non-persistent mode. In non-persistent mode the information gathered by the specified feature does not persist a reboot of the system. Persistent mode is the default. This command reboots the system.

Requires user role: ADMIN

USAGE:

xCommand Security Persistency Configurations: Configurations CallHistory: CallHistory InternalLogging: InternalLogging LocalPhonebook: LocalPhonebook DHCP: DHCP ConfirmAndReboot: ConfirmAndReboot
where

Configurations: NonPersistent/Persistent

In non-persistent mode, all configurations are set back to default when the system reboots.

CallHistory: NonPersistent/Persistent

In non-persistent mode call history is deleted when the system reboots.

InternalLogging: NonPersistent/Persistent

In non-persistent mode eventlog is deleted when the system reboots.

LocalPhonebook: NonPersistent/Persistent

In non-persistent mode local phone book is deleted when the system reboots.

DHCP: NonPersistent/Persistent

In non-persistent mode all IP related information is deleted when the system reboots.

ConfirmAndReboot: Yes

Reboots the system.

xCommand Security Session List

List active sessions.

Requires user role: ADMIN, USER

USAGE:

xCommand Security Session List

xCommand Security Session Terminate

Terminate a session.

Requires user role: ADMIN, USER

USAGE:

xCommand Security Session Terminate SessionId: "SessionId"
where

SessionId: String (0, 32)

The session ID number.

Standby commands

xCommand Standby Activate

Set the system in standby mode, which turns off the video outputs and put the camera into sleep mode.

Requires user role: ADMIN, INTEGRATOR, USER

USAGE:

xCommand Standby Activate

xCommand Standby Deactivate

Bring the system out of standby mode.

Requires user role: ADMIN, INTEGRATOR, USER

USAGE:

xCommand Standby Deactivate

xCommand Standby Halfwake

Sets the system to "Halfwake" state. This state informs the user from the UI, to pick up a remote or to tap the touch device to get started.

Requires user role: ADMIN, INTEGRATOR

USAGE:

xCommand Standby Halfwake

xCommand Standby ResetTimer

Set a temporary standby delay. If the system is in standby mode when the reset timer is set, the system is brought out of standby mode. When left idle for the given delay the system goes into standby mode. Setting the reset timer does not affect the Standby Delay in the Advanced configuration menu (or by xConfiguration Standby Delay). Next time this delay is the valid standby delay.

Requires user role: ADMIN, USER

USAGE:

xCommand Standby ResetTimer Delay: Delay

where

Delay: Integer (1..480)

Set the delay in minutes.

SystemUnit commands

xCommand SystemUnit Boot

Reboot the system.

Requires user role: ADMIN, INTEGRATOR, USER

USAGE:

xCommand SystemUnit Boot [Action: Action]

where

Action: Restart/Shutdown

As a default the system restarts after a reboot. By selecting Shutdown, the system will not restart. The default value is Restart.

xCommand SystemUnit FactoryReset

Reset the codec to factory default settings. The call logs are deleted and all system parameters are reset to default values. All files that have been uploaded to the codec are deleted. Option key(s) are not affected.

As a default the system restarts after the factory reset, but other behaviour can be forced by selecting a different TrailingAction.

Requires user role: ADMIN, USER

USAGE:

xCommand SystemUnit FactoryReset Confirm: Confirm [Keep: Keep] [TrailingAction: TrailingAction]

where

Confirm: Yes

Include to confirm your choice.

Keep: Certificates/LocalSetup/Network/Provisioning/SerialPort/Spark

Select which configurations to keep when you factory reset the system. You can have up to 6 CallId parameters in the same command.

LocalSetup:

xConfiguration Audio DefaultVolume

xConfiguration Audio SoundsAndAlerts RingVolume

xConfiguration Time Zone

xConfiguration UserInterface Language

xConfiguration Video Output Connector OverscanLevel

xCommand Camera Preset Store

Network:

xConfiguration Network 1

xConfiguration NetworkServices Wifi Allowed

xConfiguration NetworkServices Wifi Enabled

Spark:

xConfiguration Spark ServiceOverrides GdsBaseUrl

xConfiguration Spark ServiceOverrides U2CBaseUrl

xConfiguration Spark ServiceOverrides WdmBaseUrl

Provisioning:

xConfiguration Provisioning Mode

SerialPort:

xConfiguration SerialPort Mode

xConfiguration SerialPort BaudRate

xConfiguration SerialPort LoginRequired

Certificates:

Not supported in this software version.

TrailingAction: NoAction/Restart/Shutdown

Select Shutdown or NoAction to override the default behaviour (Restart). The default is set to Restart

xCommand SystemUnit FirstTimeWizard Stop

Stops the wizard which appears the first time you start the system, so the system can be set up without it. The wizard only appears again if the system is reset to its factory default settings.

Requires user role: ADMIN, INTEGRATOR, USER

USAGE:

```
xCommand SystemUnit FirstTimeWizard Stop
```

xCommand SystemUnit Notifications RemoveAll

Clears the list of system notifications that are reported by xStatus SystemUnit Notifications Text/Type.

Requires user role: ADMIN

USAGE:

```
xCommand SystemUnit Notifications RemoveAll
```

xCommand SystemUnit OptionKey Add

Add an option key to support additional features.

Requires user role: ADMIN

USAGE:

```
xCommand SystemUnit OptionKey Add Key: "Key"  
where
```

Key: String (16, 24)

The key you have received for the option you wish to switch on.

xCommand SystemUnit OptionKey List

List all option keys.

Requires user role: ADMIN

USAGE:

```
xCommand SystemUnit OptionKey List
```

xCommand SystemUnit OptionKey Remove

Remove a specified option key.

Requires user role: ADMIN

USAGE:

```
xCommand SystemUnit OptionKey Remove Type: Type  
where
```

Type: RemoteMonitoring

xCommand SystemUnit OptionKey RemoveAll

Remove all option keys.

Requires user role: ADMIN

USAGE:

```
xCommand SystemUnit OptionKey RemoveAll Confirm: Confirm
where
```

Confirm: Yes

xCommand SystemUnit SignInBanner Clear

Clear the sign in banner set with xCommand SystemUnit SignInBanner Set.

Requires user role: ADMIN

USAGE:

```
xCommand SystemUnit SignInBanner Clear
```

xCommand SystemUnit SignInBanner Get

Get the custom message set with xCommand SystemUnit SignInBanner Set.

Requires user role: ADMIN

USAGE:

```
xCommand SystemUnit SignInBanner Get
```

xCommand SystemUnit SignInBanner Set

Set a sign in banner with a custom message on the system's user interface.

Use:

```
xCommand SystemUnit SignInBanner Set <enter>
```

```
Banner text <enter>
```

```
. <enter>
```

Requires user role: ADMIN

USAGE:

```
xCommand SystemUnit SignInBanner Set
```

xCommand SystemUnit SoftReset

Reset most parameters to their default values. This does not include parameters associated with room setup, such as camera position, language, and volume.

Requires user role: ADMIN, USER

USAGE:

```
xCommand SystemUnit SoftReset Confirm: Confirm
```

```
where
```

Confirm: Yes

xCommand SystemUnit SoftwareUpgrade

Initiate a software upgrade by fetching the software from a given URL. If the server requires username and password these parameters must be included.

Requires user role: ADMIN

USAGE:

```
xCommand SystemUnit SoftwareUpgrade URL: "URL" [UserName: "UserName"] [Password: "Password"] [Forced: Forced]
```

where

URL: String (0, 255)

The software package location

UserName: String (0, 255)

User name to access the server location, if needed.

Password: String (0, 255)

Password to access the server location, if needed.

Forced: False/True

You can force a system to accept a software upgrade immediately, without giving users a chance to acknowledge or postpone the update. The default value is True.

Time commands

xCommand Time DateTime Get

Read the time and date from the system.

Requires user role: ADMIN, USER

USAGE:

```
xCommand Time DateTime Get
```

xCommand Time DateTime Set

Set the date and time for the system, if not available from NTP (Network Time Protocol).

Requires user role: ADMIN, USER

USAGE:

```
xCommand Time DateTime Set [Year: Year] [Month: Month] [Day: Day] [Hour: Hour] [Minute: Minute] [Second: Second]
```

where

Year: Integer (2015..2037)

Month: Integer (1..12)

Day: Integer (1..31)

Hour: Integer (0..23)

Minute: Integer (0..59)

Second: Integer (0..59)

UserInterface commands

xCommand UserInterface Branding Delete

Deletes the chosen image from this device.

Requires user role: ADMIN, INTEGRATOR, USER

USAGE:

```
xCommand UserInterface Branding Delete Type: Type
where
```

Type: Literal (Background / Branding / HalfwakeBackground / HalfwakeBranding)
Specifies which image to delete from this device.

xCommand UserInterface Branding Get

Shows the chosen image in base64/encoded format in the requested size, if available.

Requires user role: ADMIN, INTEGRATOR, USER

USAGE:

```
xCommand UserInterface Branding Get [Size: Size] Type: Type
where
```

Size: Literal (Large / Small / Thumbnail)
Specifies the size in which to show the image. Default is set to Large.

Type: Literal (Background / Branding / HalfwakeBackground / HalfwakeBranding)
Specifies which image to show.

xCommand UserInterface Branding Updated

Updates the chosen branding image.

Requires user role: ADMIN, INTEGRATOR, USER

USAGE:

```
xCommand UserInterface Branding Updated Type: Type
where
```

Type: Literal (Background / Branding / HalfwakeBackground / HalfwakeBranding)
Specifies which image to update.

xCommand UserInterface Branding Upload

Uploads a branding image to this device, which displays in the chosen area. This is a multiline command.

Requires user role: ADMIN, INTEGRATOR, USER

USAGE:

```
xCommand UserInterface Branding Upload Type: Type
where
```

Type: Literal (Background / Branding / HalfwakeBackground / HalfwakeBranding)
Specifies the area in which the uploaded image is to display.

xCommand UserInterface Extensions Clear

Delete all user interface extensions (widgets) from the video system.

Requires user role: ADMIN

USAGE:

```
xCommand UserInterface Extensions Clear
```

xCommand UserInterface Extensions List

List all user interface extensions (widgets) that exist on the video system.

Requires user role: INTEGRATOR, ROOMCONTROL, USER

USAGE:

```
xCommand UserInterface Extensions List
```

xCommand UserInterface Extensions Set

Set the configuration scheme you have chosen in the user interface extensions (widgets) for your room system. Updates the UserInterface Extensions status tree. This is a multiline command.

Requires user role: ADMIN, INTEGRATOR, ROOMCONTROL

USAGE:

```
xCommand UserInterface Extensions Set ConfigId: "ConfigId"
where
```

ConfigId: String (0, 40)

The unique identifier for the configuration.

xCommand UserInterface Extensions Widget Action

Sets the action of the given widget. Updates the UserInterface Extensions status tree.

Requires user role: ADMIN, INTEGRATOR, ROOMCONTROL, USER

USAGE:

```
xCommand UserInterface Extensions Widget Action [Type: "Type"] [Value: "Value"]
WidgetId: "WidgetId"
where
```

Type: String (0..255)

The type of widget that is set.

Value: String (0..255)

The value of the widget. The range of values depends on the widget type.

WidgetId: String (0..40)

The unique identifier for the widget.

xCommand UserInterface Extensions Widget SetValue

Set the value of the given widget. Updates the UserInterface Extensions status tree. Returns an error if the value is out of range.

Requires user role: ADMIN, INTEGRATOR, ROOMCONTROL

USAGE:

```
xCommand UserInterface Extensions Widget SetValue Value: "Value" WidgetId:
"WidgetId"
where
```

Value: String (0, 255)

The value of the widget. The range of values depends on the widget type.

WidgetId: String (0, 40)

The unique identifier for the widget.

xCommand UserInterface Extensions Widget UnsetValue

Empties the value of the given widget. Updates the UserInterface Extensions status tree and notifies the user interface that this widget is no longer selected.

Requires user role: ADMIN, INTEGRATOR, ROOMCONTROL

USAGE:

```
xCommand UserInterface Extensions Widget UnsetValue WidgetId: "WidgetId"
where
```

WidgetId: String (0, 40)

The unique identifier for the widget.

xCommand UserInterface Message Alert Clear

Remove the message which was displayed using the xCommand Message Alert Display command. This is required when the Duration parameter is not set.

Requires user role: ADMIN, INTEGRATOR, ROOMCONTROL, USER

USAGE:

```
xCommand UserInterface Message Alert Clear
```

xCommand UserInterface Message Alert Display

Display a message on screen, for a specified duration of time (in seconds).

NOTE: If Duration is not set, the command must be followed by xCommand Message Alert Clear.

Use the xFeedback commands to monitor the feedback from the user. Read more about the xFeedback commands in the API introduction section in this guide.

Requires user role: ADMIN, INTEGRATOR, ROOMCONTROL

USAGE:

xCommand UserInterface Message Alert Display [Title: "Title"] Text: "Text" [Duration: Duration]

where

Title: String (0, 255)

Enter a message title.

Text: String (0, 255)

Enter the message to be displayed. The <p> and
 HTML tags will result in line breaks as normal; any other tags will appear as plain text.

Duration: Integer (0..3600)

Set how long (in seconds) the message is to be displayed on the screen. If set to 0 (zero) the message does not disappear until a xCommand Message Alert Clear message has been sent. The default value is set to 0.

xCommand UserInterface Message Prompt Clear

Remove the window displayed using the xCommand Message Alert Display command.

Use the xFeedback commands to monitor the feedback from the user. Read more about the xFeedback commands in the API introduction section in this guide.

Requires user role: ADMIN, INTEGRATOR, ROOMCONTROL, USER

USAGE:

xCommand UserInterface Message Prompt Clear [FeedbackId: "FeedbackId"]

where

FeedbackId: String (0, 255)

The FeedbackId corresponds to the FeedbackId given by the xCommand Message Prompt Display command.

xCommand UserInterface Message Prompt Display

Display a small window on screen with a title, text and up to five options for response from the user. The message is displayed on screen until the user gives a response, or until the system receives the following command xCommand Message Prompt Clear.

Use the xFeedback commands to monitor the feedback from the user. Read more about the xFeedback commands in the API introduction section in this guide.

Title:

Text:

FeedbackId:

Option.1 to Option.5:

Requires user role: ADMIN, INTEGRATOR, ROOMCONTROL

USAGE:

xCommand UserInterface Message Prompt Display [Title: "Title"] Text: "Text" [FeedbackId: "FeedbackId"] [Duration: Duration] [Option.1: "Option.1"] [Option.2: "Option.2"] [Option.3: "Option.3"] [Option.4: "Option.4"] [Option.5: "Option.5"]

where

Title: String (0, 255)

Enter the message title.

Text: String (0, 255)

Enter the text line to be displayed. The <p> and
 HTML tags will result in line breaks as normal; any other tags will appear as plain text.

FeedbackId: String (0, 255)

To identify the feedback enter a FeedbackId.

Duration: Integer (0, 3600)

Set how long (in seconds) the message window is to be displayed on the screen. If set to 0 (zero) the message window is displayed until a xCommand UserInterface Message Prompt Clear command has been sent. The default is set to 0.

Option.1: String (0, 255)

Enter the text to appear on the feedback options.

Option.2: String (0, 255)

Enter the text to appear on the feedback options.

Option.3: String (0, 255)

Enter the text to appear on the feedback options.

Option.4: String (0, 255)

Enter the text to appear on the feedback options.

Option.5: String (0, 255)

Enter the text to appear on the feedback options.

xCommand UserInterface Message Prompt Response

Give a response to the xCommand Message Prompt Display.

Use the xFeedback commands to monitor the feedback from the user. Read more about the xFeedback commands in the API introduction section in this guide.

Requires user role: ADMIN, INTEGRATOR, ROOMCONTROL, USER

USAGE:

```
xCommand UserInterface Message Prompt Response [FeedbackId: "FeedbackId"]
OptionId: OptionId
where
```

FeedbackId: String (0, 255)

The FeedbackId corresponds to the FeedbackId given by the xCommand Message Prompt Display command.

OptionId: Integer (1..5)

The OptionId corresponds to the OptionIds given as possible responses in the xCommand Message Prompt Display command.

xCommand UserInterface Message TextInput Clear

Removes the text input message.

Requires user role: ADMIN, INTEGRATOR, ROOMCONTROL, USER

USAGE:

```
xCommand UserInterface Message TextInput Clear
```

xCommand UserInterface Message TextInput Display

Displays an input dialog box to which a user can respond, on the Cisco Telepresence Touch 10 and on the main screen of the Cisco DX80.

Requires user role: ADMIN, INTEGRATOR, ROOMCONTROL, USER

USAGE:

```
xCommand UserInterface Message TextInput Display [Duration: Duration]
FeedbackId: "FeedbackId" [InputType: InputType] [KeyboardState: KeyboardState]
[Placeholder: "Placeholder"] [SubmitText: "SubmitText"] Text: "Text" [Title:
"Title"]
```

where

Duration: Integer (0..3600)

Set how long (in seconds) the message is to be displayed on the screen. If set to 0 (zero) the message does not disappear until the xCommand UserInterface Message TextInput Clear message has been sent. The default is set to 0.

FeedbackId: String (0..255)

To identify the feedback enter a FeedbackId.

InputType: Literal (SingleLine / Numeric / Password / PIN)

Sets the type of text input dialog box that is displayed. This also determines the keyboard layout that it displayed. The default is set to SingleLine.

KeyboardState: Literal (Open / Closed)

Specifies if the device's keyboard should open when the text input message displays. The default is set to Open.

Placeholder: String (0..255)

Contains the placeholder text displayed in the input dialog box before it is focused.

SubmitText: String (0..32)

The text that is shown on the green Submit button on the keyboard. The default is set to OK.

Text: String (0..128)

The message that is to be displayed to the user.

Title: String (0..40)

The title of the input dialog box.

xCommand UserInterface Message TextLine Clear

Clears the text line which was defined by the xCommand Message TextLine Display command.

Requires user role: ADMIN, INTEGRATOR, ROOMCONTROL, USER

USAGE:

```
xCommand UserInterface Message TextLine Clear
```

xCommand UserInterface Message TextLine Display

Display a text line on screen. Optionally you can place the text line at a specified location and for a specified duration of time (in seconds).

NOTE: If Duration is not set, the command must be followed by xCommand Message TextLine Clear.

Requires user role: ADMIN, INTEGRATOR, ROOMCONTROL

USAGE:

```
xCommand UserInterface Message TextLine Display Text: "Text" [X: X] [Y: Y]
[Duration: Duration]
where
```

Text: String (0, 140)

Enter the text line to be displayed. The <p> and
 HTML tags will result in line breaks as normal; any other tags will appear as plain text.

X: Integer (1..10000)

Enter the X-coordinate (horizontal) on screen. X=0 is in the upper left corner. The default is set to 0.

Y: Integer (1..10000)

Enter the Y-coordinate (vertical) on screen. Y=0 is in the upper left corner. The default is set to 0.

Duration: Integer (0..3600)

Set how long (in seconds) the text line is to be displayed on the screen. If set to 0 (zero) the text line is displayed until a xCommand Message TextLine Clear command has been sent. The default is set to 0.

xCommand UserInterface Presentation ExternalSource Add

Establish and set up an input source that is connected to the video system via an external switch.

Requires user role: ADMIN, INTEGRATOR, ROOMCONTROL

USAGE:

```
xCommand UserInterface Presentation ExternalSource Add ConnectorId: ConnectorId
SourceIdentifier: "SourceIdentifier" Name: "Name" Type: Type
where
```

ConnectorId: Integer (0..5)

The ID of the video system connector that the external switch is connected to.

SourceIdentifier: String (0, 40)

A unique string that identifies the input source. The identifier is used by other commands and events when addressing this specific input source.

Name: String (0, 40)

The name of the input source. This name will be displayed on the user interface.

Type: camera/desktop/document_camera/mediaplayer/PC/whiteboard/other

The type of input source. The type determines which icon to display on the user interface.

xCommand UserInterface Presentation ExternalSource List

Returns the current list of external input sources.

Requires user role: ADMIN, INTEGRATOR, ROOMCONTROL

USAGE:

```
xCommand UserInterface Presentation ExternalSource List
```

xCommand UserInterface Presentation ExternalSource Remove

Remove the input source (specified by the SourceIdentifier) from the list of external input sources.

Requires user role: ADMIN, INTEGRATOR, ROOMCONTROL

USAGE:

```
xCommand UserInterface Presentation ExternalSource Remove SourceIdentifier:
"SourceIdentifier"
```

where

SourceIdentifier: String (0, 40)

The unique string that identifies this input source. It was defined when the source was created with the UserInterface Presentation ExternalSource Add command.

xCommand UserInterface Presentation ExternalSource RemoveAll

Remove all input sources from the list of external input sources.

Requires user role: ADMIN, INTEGRATOR, ROOMCONTROL

USAGE:

```
xCommand UserInterface Presentation ExternalSource RemoveAll
```

xCommand UserInterface Presentation ExternalSource Select

Starts to present the input source (specified by the SourceIdentifier) if it is in Ready state (see the UserInterface Presentation ExternalSource State Set command). The input source will be shown in the user interface sharetray as "Presenting".

Requires user role: ADMIN, INTEGRATOR, ROOMCONTROL, USER

USAGE:

```
xCommand UserInterface Presentation ExternalSource Select SourceIdentifier:
"SourceIdentifier"
```

where

SourceIdentifier: String (0, 40)

The unique string that identifies this input source. It was defined when the source was created with the UserInterface Presentation ExternalSource Add command.

xCommand UserInterface Presentation ExternalSource State Set

Set or change the state of the input source (specified by the SourceIdentifier).

Requires user role: ADMIN, INTEGRATOR, ROOMCONTROL

USAGE:

```
xCommand UserInterface Presentation ExternalSource State Set SourceIdentifier:
"SourceIdentifier" State: State [ErrorReason: "ErrorReason"]
```

where

SourceIdentifier: String (0, 40)

The unique string that identifies this input source. It was defined when the source was created with the UserInterface Presentation ExternalSource Add command.

State: Hidden/Ready/NotReady/Error

Ready: The input source will be presented when someone selects it (taps it on the user interface, or when the UserInterface Presentation ExternalSource Select command is issued).

NotReady: The input source is not ready, and cannot be selected.

Error: The input source is in an erroneous state. The ErrorReason parameter may be used to inform the user about the reason for failure.

Hidden: The input source will not be displayed in the user interface sharetray.

ErrorReason: String (0, 80)

This string is displayed in the user interface sharetray, given that the State parameter is set to Error.

UserManagement commands

xCommand UserManagement RemoteSupportUser Create

Create a remote support user passphrase that Technical Assistance Center (TAC) can use to access the system for troubleshooting.

Requires user role: ADMIN

USAGE:

```
xCommand UserManagement RemoteSupportUser Create [ExpiryDays: ExpiryDays]  
where
```

ExpiryDays: Integer (1..31)

Define the duration for the passphrase validity. Default is 7 days.

xCommand UserManagement RemoteSupportUser Delete

Delete the remote support user created with the command xCommand UserManagement RemoteSupportUser Create.

Requires user role: ADMIN

USAGE:

```
xCommand UserManagement RemoteSupportUser Delete
```

xCommand UserManagement RemoteSupportUser DisablePermanently

Disable the creation of new remote support users. To enable the remote support user again you must factory reset your system.

Requires user role: ADMIN

USAGE:

```
xCommand UserManagement RemoteSupportUser DisablePermanently Confirm: Confirm  
where
```

Confirm: Yes

xCommand UserManagement RemoteSupportUser GetState

Retrieves the state of the generated remote support user, if one exists.

Requires user role: ADMIN

USAGE:

```
xCommand UserManagement RemoteSupportUser GetState
```

xCommand UserManagement User Add

Adds a new user to this device.

Requires user role: ADMIN

USAGE:

```
xCommand UserManagement User Add [Active: Active] [ClientCertificateDN:
"ClientCertificateDN"] [Passphrase: "Passphrase"] [PassphraseChangeRequired:
PassphraseChangeRequired] [PinChangeRequired: PinChangeRequired] [Role: Role]
[ShellLogin: ShellLogin] Username: "Username" [YourPassphrase: "YourPassphrase"]
```

where

Active: Literal (False / True)

Specifies whether this is an active user or not.

ClientCertificateDN: String (0..255)

Identifies a user who logs in with a client certificate instead of a username and password.

Passphrase: String (0..255)

Specifies a Passphrase for the user.

PassphraseChangeRequired: Literal (False / True)

Specifies whether the user's passphrase requires changing or not.

PinChangeRequired: Literal (False / True)

Specifies whether a user's PIN requires changing or not.

Role: Literal (Admin / Audit / Integrator / RoomControl / User)

Sets the user's role.

ShellLogin: Literal (False / True)

Specifies whether the user should have a shell login or not.

Username: String (0..127)

Specifies the user's username.

YourPassphrase: String (0..255)

The user's passphrase.

xCommand UserManagement User Delete

Deletes a user from this device.

Requires user role: ADMIN

USAGE:

```
xCommand UserManagement User Delete Username: "Username" [YourPassphrase:
"YourPassphrase"]
```

where

Username: String (0..127)

Specifies the username of the user that is deleted.

YourPassphrase: String (0..255)

The passphrase of the user that is deleted.

xCommand UserManagement User Get

Shows the details of users on this device.

Requires user role: ADMIN

USAGE:

```
xCommand UserManagement User Get [ClientCertificateDN: "ClientCertificateDN"]
[Username: "Username"]
```

where

ClientCertificateDN: String (0..255)

Identifies a user who logs in with a client certificate instead of a username and password.

Username: String (0..127)

Specify a username to show the details of a particular user.

xCommand UserManagement User List

Shows the list of users on this device.

Requires user role: ADMIN

USAGE:

```
xCommand UserManagement User List [Limit: Limit] [Offset: Offset]  
where
```

Limit: Integer (0..65536)

Limits the number of results that are shown. The default is set to 0.

Offset: Integer (0..65536)

Shows lines with the same or higher Offset than the one provided. The default is set to 0.

xCommand UserManagement User Modify

Modifies the details of a particular user.

Requires user role: ADMIN

USAGE:

```
xCommand UserManagement User Modify [Active: Active] [AddRole: AddRole]  
[ClientCertificateDN: "ClientCertificateDN"] [PassphraseChangeRequired:  
PassphraseChangeRequired] [PinChangeRequired: PinChangeRequired] [RemoveRole:  
RemoveRole] [ShellLogin: ShellLogin] Username: "Username" [YourPassphrase:  
"YourPassphrase"]  
where
```

Active: Literal (False / True)

Specifies whether this is an active user or not.

AddRole: Literal (Admin / Audit / Integrator / RoomControl / User)

Adds a new role for the specified user.

ClientCertificateDN: String (0..255)

Identifies a user who logs in with a client certificate instead of a username and password.

PassphraseChangeRequired: Literal (False / True)

Specifies whether the user's passphrase requires changing or not.

PinChangeRequired: Literal (False / True)

Specifies whether a user's PIN requires changing or not.

RemoveRole: Literal (Admin / Audit / Integrator / RoomControl / User)

Removes a role from the specified user.

ShellLogin: Literal (False / True)

Specifies whether the user should have a shell login or not.

Username: String (0..127)

Specifies the user's username.

YourPassphrase: String (0..255)

The user's passphrase.

xCommand UserManagement User Passphrase Change

Change the passphrase for the user you logged in as. If you are logged in as the administrator, this will change the administrator passphrase.

Requires user role: ADMIN, AUDIT, INTEGRATOR, ROOMCONTROL, USER

USAGE:

```
xCommand UserManagement User Passphrase Change NewPassphrase: "NewPassphrase"
OldPassphrase: "OldPassphrase"
```

where

NewPassphrase: String (0, 255)

OldPassphrase: String (0, 255)

xCommand UserManagement User Passphrase Set

Set a user passphrase for the specified user. You must be logged in as an administrator to set a user passphrase.

Requires user role: ADMIN

USAGE:

```
xCommand UserManagement User Passphrase Set NewPassphrase: "NewPassphrase"
Username: "Username" YourPassphrase: "YourPassphrase"
```

where

NewPassphrase: String (0, 255)

Username: String (0, 127)

YourPassphrase: String (0, 255)

Video commands

xCommand Video ActiveSpeakerPIP Set

Sets position for the active speakers PiP (picture in picture).

Requires user role: ADMIN, USER

USAGE:

```
xCommand Video ActiveSpeakerPIP Set Position: Position
```

where

Position: CenterLeft/CenterRight/LowerLeft/LowerRight/UpperCenter/UpperLeft/UpperRight

Select one of the predefined positions.

xCommand Video CEC Input KeyClick

Mimics a remote control key click event from the input device.

Requires user role: ADMIN, INTEGRATOR

USAGE:

```
xCommand Video CEC Input KeyClick ConnectorId: ConnectorId [Key: Key]
[LogicalAddress: LogicalAddress] NamedKey: NamedKey
```

where

ConnectorId: Integer (1 – 3)

The unique identifier of the connector.

Key: Integer (0..255)

The CEC specified key code for the key that is sent to the logical address of the device as if it was pushed on a remote control.

LogicalAddress: Integer (0..15)

The logical address of the connected device.

NamedKey: Literal (Up / Down / Right / Left / Ok / Back / Stop / Play)

The name of the key that is sent to the logical address of the device as if it was pushed on a remote control.

xCommand Video CEC Output KeyClick

Mimics a remote control key click event from this device.

Requires user role: ADMIN, INTEGRATOR

USAGE:

xCommand Video CEC Output KeyClick ConnectorId: ConnectorId Key: Key
LogicalAddress: LogicalAddress [NamedKey: NamedKey]
where

ConnectorId: Integer (1 – 3)

The unique identifier of the connector.

Key: Integer (0..255)

The CEC specified key code for the key that is sent to the logical address of the device as if it was pushed on a remote control.

LogicalAddress: Integer (0..15)

The logical address of the connected device.

NamedKey: Literal (Up / Down / Right / Left / Ok / Back / Stop / Play)

The name of the key that is sent to the logical address of the device as if it was pushed on a remote control.

xCommand Video Input SetMainVideoSource

Set which input source is the main video source. You can identify the input source by either the physical connector that it is connected to (ConnectorId) or the logical source identifier (SourceId).

You can combine up to four input sources in a single main video stream (the maximum number of different input sources depend on the type of video system) by adding multiple ConnectorIds or SourceIds in the same command. There cannot be a mix of identifier types in the same command; use either ConnectorId or SourceId.

Requires user role: ADMIN, INTEGRATOR, USER

USAGE:

xCommand Video Input SetMainVideoSource [ConnectorId: ConnectorId] [Layout: Layout] [SourceId: SourceId]
where

ConnectorId: Integer (1..5)

The identifier (ID) of the connector. Connector [n] has ID n. Run the following API command to find the ID: xStatus Video Input Connector.

Layout: Literal (Equal / PIP)

Sets the layout of the main video source if the main video source is composed of multiple input sources.

SourceId: Integer (1..4)

The identifier (ID) of the input source. Input Source [n] has ID n. Run the following API command to find the ID: xStatus Video Input Source.

xCommand Video Layout LayoutFamily Set

Select the screen layout mode.

Requires user role: ADMIN, USER

USAGE:

xCommand Video Layout LayoutFamily Set [Target: Target] [CallId: CallId]
LayoutFamily: LayoutFamily [CustomLayoutName: "CustomLayoutName"]
where

Target: local/remote

Select if the target is the local layout or the remote layout.

CallId: Integer (0..65534)

The CallID is returned when the xCommand Dial command is run. During the call you can run the xStatus Call command to see the CallID.

LayoutFamily: auto/custom/equal/overlay/prominent/single

Select a layout family.

CustomLayoutName: String (1, 128)

Enter a name for the layout.

xCommand Video PresentationPIP Set

Sets position for the presentation PiP (picture in picture).

Requires user role: ADMIN, USER

USAGE:

xCommand Video PresentationPIP Set Position: Position
where

Position: CenterLeft/CenterRight/LowerLeft/LowerRight/UpperCenter/UpperLeft/UpperRight

Select one of the predefined positions.

xCommand Video PresentationView Set

Set the presentation view mode

Requires user role: ADMIN, USER

USAGE:

xCommand Video PresentationView Set View: View
where

View: Default/Maximized/Minimized

Select Default when you want the presentation to be viewed with the default settings for the codec. Select Maximized when you want the presentation to be displayed in full screen. Select

Minimized when you want the presentation to be displayed in a small picture on screen.

xCommand Video Selfview Set

Sets self-view on/off and specifies its size and position. If the parameter is not specified, current value is used.

Requires user role: ADMIN, USER

USAGE:

xCommand Video Selfview Set [Mode: Mode] [FullscreenMode: FullscreenMode]
[PIPPosition: PIPPosition] [OnMonitorRole: OnMonitorRole]
where

Mode: On/Off

Selfview is set to on or off.

FullscreenMode: On/Off

Choose between displaying the self-view in full screen or as picture-in-picture.

PIPPosition: CenterLeft/CenterRight/LowerLeft/LowerRight/UpperCenter/UpperLeft/UpperRight

Select the position for the self-view image.

OnMonitorRole: First/Fourth/Second/Third

Displays self-view on monitors with this role.

Chapter 5

xStatus commands

Description of the xStatus commands

In this chapter, you can find all of the xStatus commands and the responses. Status type commands return information about the system and system processes. You can query all information or just some of it.

We recommend you visit our web site regularly for updated versions of the manual.

Go to: <http://www.cisco.com/go/roomkit-docs>

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Audio status

xStatus Audio Input Connectors HDMI [n] EcReferenceDelay

Returns the detected latency for each loudspeaker to microphone path for systems supporting HDMI input used as microphone input. The result is in milliseconds.

Requires user role: ADMIN, USER

Value space of the result returned:

Integer

Example:

```
xStatus Audio Input Connectors HDMI 1 EcReferenceDelay
*s Audio Connectors HDMI 1 EcReferenceDelay: 0
** end
```

xStatus Audio Input Connectors Microphone [n] ConnectionStatus

Indicates whether a microphone is detected on the microphone input connector.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

Connected/NotConnected/Unknown

Example:

```
xStatus Audio Input Connectors Microphone ConnectionStatus
*s Audio Input Connectors Microphone 1 ConnectionStatus: NotConnected
*s Audio Input Connectors Microphone 2 ConnectionStatus: Connected
** end
```

xStatus Audio Input Connectors Microphone [n] EcReferenceDelay

Returns the detected latency for each loudspeaker to microphone path. The result is in milliseconds.

Requires user role: ADMIN, USER

Value space of the result returned:

Integer

Example:

```
xStatus Audio Input Connectors Microphone 1 EcReferenceDelay
*s Audio Connectors Microphone 1 EcReferenceDelay: 120
** end
```

xStatus Audio Input RemoteInput [n] CallId

Shows the CallId for the remote audio input.

You can run the command xStatus Audio Input RemoteInput to find the identity [n] of the input.

Requires user role: ADMIN, USER

Value space of the result returned:

0..65534

Example:

```
xStatus Audio Input RemoteInput 8 CallId
*s Audio Input RemoteInput 8 CallId: 28
** end
```

xStatus Audio Microphones Mute

Shows whether the microphones are muted.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

On/Off

Example:

```
xStatus Audio Microphones Mute
*s Audio Microphones Mute: Off
** end
```


xStatus Audio Output Connectors Line [n] DelayMs

Shows the delay in milliseconds.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

Integer (0..290)

Example:

```
xStatus Audio Output Connectors Line 1 DelayMs
*s Audio Output Connectors Line 1 DelayMs: 60
** end
```

xStatus Audio Output Connectors Line [n] ConnectionStatus

Shows whether the audio output line is connected.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

Connected / NotConnected / Unknown

Example:

```
xStatus Audio Output Connectors Line 1 ConnectionStatus
*s Audio Output Connectors Line 1 ConnectionStatus: Connected
** end
```

xStatus Audio Volume

Shows the volume level (dB) of the loudspeaker output.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

0..100

Example:

```
xStatus Audio Volume
*s Audio Volume: 70
** end
```

xStatus Audio VolumeMute

Shows whether the endpoint volume is set to mute.

Requires user role: ADMIN, USER

Value space of the result returned:

Off/On

Example:

```
xStatus Audio VolumeMute
*s Audio VolumeMute: Off
** end
```

Bookings status

xStatus Bookings Current Id

The ID of the on going booking event, if any.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Bookings Current Id
*s Bookings Current Id: "123"
** end
```

Call status

xStatus Call [n] AnswerState

Indicates if a call is answered, ignored or has been automatically answered by a system.

Requires user role: ADMIN, USER

Value space of the result returned:

Unanswered/Ignored/Autoanswered/Answered

Example:

```
xStatus Call AnswerState
*s Call 5 AnswerState: Answered
** end
```

xStatus Call [n] AttendedTransferFrom

Shows the CallId for the call the current call was transferred from.

Requires user role: ADMIN, USER

Value space of the result returned:

Integer

Example:

```
xStatus Call 1 AttendedTransferFrom
*s Call 1 AttendedTransferFrom: 1234
** end
```

xStatus Call [n] CallbackNumber

Shows the remote (far end) number or URI of an incoming or outgoing call, including the call protocol, for call back. You can run the command xStatus Call to find the call identity.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Call 27 CallbackNumber
*s Call 27 CallbackNumber: "h323:firstname.lastname@company.com"
** end
```

xStatus Call [n] CallType

Shows the call type of the incoming or outgoing call. You can run the command xStatus Call to find the call identity.

Requires user role: ADMIN, USER

Value space of the result returned:

Video/Audio/AudioCanEscalate/ForwardAllCall/Unknown

Example:

```
xStatus Call 27 CallType
*s Call 27 CallType: Video
** end
```

xStatus Call [n] DeviceType

Shows if the remote (far end) system is an endpoint (point-to-point call) or a multipoint conferencing unit (MCU) in the network. A MultiSite call hosted on an endpoint will also show as MCU.

Requires user role: ADMIN, USER

Value space of the result returned:

Endpoint/MCU

Example:

```
xStatus Call DeviceType
*s Call 4 DeviceType: Endpoint
** end
```

xStatus Call [n] Direction

States the direction of the call initiation. You can run the command xStatus Call to find the call identity.

Requires user role: ADMIN, USER

Value space of the result returned:

Incoming/Outgoing

Example:

```
xStatus Call 27 Direction
*s Call 27 Direction: Outgoing
** end
```

xStatus Call [n] DisplayName

Shows the name of the remote (far end) participant in an incoming or outgoing call. You can run the command xStatus Call to find the call identity.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Call 27 DisplayName
*s Call 27 DisplayName: "firstname.lastname@company.com"
** end
```

xStatus Call [n] Duration

Shows the duration of a call (in seconds). You can run the command xStatus Call to find the call identity.

Requires user role: ADMIN, USER

Value space of the result returned:

Integer

Example:

```
xStatus Call 27 Duration
*s Call 27 Duration: 2354
** end
```

xStatus Call [n] Encryption Type

Shows the encryption type of the call. You can run the command xStatus Call to find the call identity.

Requires user role: ADMIN, USER

Value space of the result returned:

None/Aes-128

Example:

```
xStatus Call 27 Encryption Type
*s Call 27 Encryption Type: "None"
** end
```

xStatus Call [n] FacilityServiceId

When calling a facility service, the facility service id is shown. Otherwise the value 0 is returned.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

0..5

Example:

```
xStatus Call FacilityServiceId
*s Call 3 FacilityServiceId: 1
** end
```

xStatus Call [n] HoldReason

Shows the reason the current outgoing call was put on hold.

Conference: On hold while the call is being merged into a conference.

Transfer: On hold while the call is being transferred.

None: All other instances.

Requires user role: ADMIN, USER

Value space of the result returned:

Conference/Transfer/None

Example:

```
xStatus Call 2 HoldReason
*s Call 2 HoldReason: None
** end
```

xStatus Call [n] PlacedOnHold

Shows the placed on hold status of the call. You can run the command xStatus Call to find the call identity.

Requires user role: ADMIN, USER

Value space of the result returned:

True/False

Example:

```
xStatus Call 27 PlacedOnHold
*s Call 27 PlacedOnHold: False
** end
```

xStatus Call [n] Protocol

Shows the call protocol of the incoming or outgoing call. You can run the command xStatus Call to find the call identity.

Requires user role: ADMIN, USER

Value space of the result returned:

H320/H323/SIP/Spark/Unknown

Example:

```
xStatus Call 27 Protocol
*s Call 27 Protocol: "h323"
** end
```

xStatus Call [n] ReceiveCallRate

Shows the receive bandwidth in the call in kilobits per second (kbps). You can run the command xStatus Call to find the call identity.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

Integer

Example:

```
xStatus Call 27 ReceiveCallRate
*s Call 27 ReceiveCallRate: 4000
** end
```

xStatus Call [n] RemoteNumber

Shows the remote (far end) number or URI of an incoming or outgoing call. You can run the command xStatus Call to find the call identity.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Call 27 RemoteNumber
*s Call 27 RemoteNumber: "5585232"
** end
```

xStatus Call [n] Status

Shows the status of a call. You can run the command xStatus Call to find the call identity.

Requires user role: ADMIN, USER

Value space of the result returned:

Idle/Dialling/Ringing/Connecting/Connected/Disconnecting/OnHold/EarlyMedia/Preserved/RemotePreserved

Example:

```
xStatus Call 27 Status
*s Call 27 Status: Connected
** end
```

xStatus Call [n] TransmitCallRate

Shows the transmit bandwidth in the call in kilobits per second (kbps). You can run the command xStatus Call to find the call identity.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

Integer

Example:

```
xStatus Call 27 TransmitCallRate
*s Call 27 TransmitCallRate: 768
** end
```

Cameras status

xStatus Cameras Camera [n] Capabilities Options

Shows the camera capabilities (ptzf = pan, tilt, zoom, focus).

Requires user role: ADMIN, INTEGRATOR, USER, ROOMCONTROL

Value space of the result returned:

String

Example:

```
xStatus Cameras Camera 1 Capabilities Options
*s Camera 1 Capabilities Options: "ptzf"
** end
```

xStatus Cameras Camera [n] Connected

Shows if the camera is connected or not.

Requires user role: ADMIN, INTEGRATOR, USER, ROOMCONTROL

Value space of the result returned:

True/False

Example:

```
xStatus Cameras Camera 1 Connected
*s Camera 1 Connected: True
** end
```

xStatus Cameras Camera [n] Framerate

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

Integer

xStatus Cameras Camera [n] Manufacturer

Shows the manufacturer of the camera.

Requires user role: ADMIN, INTEGRATOR, USER, ROOMCONTROL

Value space of the result returned:

String

Example:

```
xStatus Cameras Camera 1 Manufacturer
*s Camera 1 Manufacturer: "Cisco"
** end
```

xStatus Cameras Camera [n] Model

Shows the camera model.

Requires user role: ADMIN, INTEGRATOR, USER, ROOMCONTROL

Value space of the result returned:

String

Example:

```
xStatus Cameras Camera 1 Model
*s Camera 1 Model: "Precision 40"
** end
```

xStatus Cameras Camera [n] Position Pan

Shows the current pan (move left and right) position of the camera. The value range depends on camera type.

Requires user role: ADMIN, INTEGRATOR, USER, ROOMCONTROL

Value space of the result returned:

-65535..65535

Example:

```
xStatus Cameras Camera 1 Position Pan
*s Camera 1 Position Pan: 412
** end
```

xStatus Cameras Camera [n] Position Tilt

Shows the current tilt (move up and down) position of the camera. The value range depends on camera type.

Requires user role: ADMIN, INTEGRATOR, USER, ROOMCONTROL

Value space of the result returned:

-65535..65535

Example:

```
xStatus Cameras Camera 1 Position Tilt
*s Camera 1 Position Tilt: 106
** end
```

xStatus Cameras Camera [n] Position Zoom

Shows the current zoom (zoom in and out) position of the camera. The value range depends on camera type.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

0..65535

Example:

```
xStatus Cameras Camera 1 Position Zoom
*s Camera 1 Position Zoom: 828
** end
```

xStatus Cameras SpeakerTrack ActiveConnector

Shows the connector number currently chosen by SpeakerTrack.

Requires user role: ADMIN, INTEGRATOR, USER, ROOMCONTROL

Value space of the result returned:

Integer

Example:

```
xStatus Cameras SpeakerTrack
*s Cameras SpeakerTrack Availability: Available
*s Cameras SpeakerTrack Status: Active
** end
```

xStatus Cameras SpeakerTrack Availability

Shows whether speaker tracking is available.

Off: Speaker tracking is turned off with the command xConfiguration Cameras SpeakerTrack Mode: Off

Unavailable: Speaker tracking hardware is not found.

Available: Speaker tracking hardware and the two cameras are found, and it is possible to turn speaker tracking on or off.

Requires user role: ADMIN, INTEGRATOR, USER, ROOMCONTROL

Value space of the result returned:

Off/Unavailable/Available

Example:

```
xStatus Cameras SpeakerTrack Availability
*s Cameras SpeakerTrack Availability: Unavailable
** end
```

xStatus Cameras SpeakerTrack Status

Shows whether speaker tracking is set to active or inactive.

Requires user role: ADMIN, INTEGRATOR, USER, ROOMCONTROL

Value space of the result returned:

Active/Inactive

Example:

```
xStatus Cameras SpeakerTrack Status
*s Cameras SpeakerTrack Status: Active
** end
```

Capabilities status

xStatus Capabilities Conference MaxActiveCalls

Shows the the maximum number of simultaneous active calls. Calls that are set on hold/transfer are not counted as active.

Requires user role: ADMIN, USER

Value space of the result returned:

0..5

Example:

```
xStatus Capabilities Conference MaxNumberOfActiveCalls
*s Capabilities Conference MaxNumberOfActiveCalls: 3
** end
```

xStatus Capabilities Conference MaxAudioCalls

Shows the the maximum number of simultaneous audio calls that is supported.

Requires user role: ADMIN, USER

Value space of the result returned:

Integer

Example:

```
xStatus Capabilities Conference MaxAudioCalls
*s Capabilities Conference MaxAudioCalls: 3
** end
```

xStatus Capabilities Conference MaxCalls

Shows the the maximum number of simultaneous calls.

Requires user role: ADMIN, USER

Value space of the result returned:

0..5

Example:

```
xStatus Capabilities Conference MaxCalls
*s Capabilities Conference MaxCalls: 3
** end
```

xStatus Capabilities Conference MaxVideoCalls

Shows the the maximum number of simultaneous video calls that is supported.

Requires user role: ADMIN, USER

Value space of the result returned:

Integer

Example:

```
xStatus Capabilities Conference MaxVideoCalls
*s Capabilities Conference MaxVideoCalls: 3
** end
```

Conference status

xStatus Conference ActiveSpeaker CallId

Shows the CallId of the current active speaker.

Requires user role: ADMIN, USER

Value space of the result returned:

Integer

Example:

```
xStatus Conference ActiveSpeaker CallId
*s Conference ActiveSpeaker CallId: 3
** end
```

xStatus Conference Call [n] BookingId

Shows the booking ID of a conference (if assigned). The booking ID can be used for easy identification of a call or conference.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Conference Call 2 BookingId
*s Conference Call 2 BookingId: "MyConference"
** end
```

xStatus Conference Call [n] Capabilities FarendMessage Mode

Not applicable in this release.

Requires user role: ADMIN, USER

Value space of the result returned:

On/Off

Example:

```
xStatus Conference Call Capabilities FarendMessage Mode
*s Conference Call 4 Capabilities FarendMessage Mode: Off
** end
```


xStatus Conference Call [n] Capabilities FECC Mode

Shows whether or not you have permission to control the input sources at a far end site.

On: Far end input source control is permitted.

Off: Far end input source control is not permitted.

Requires user role: ADMIN, USER

Value space of the result returned:

On/Off

Example:

```
xStatus Conference Call 2 Capabilities FECC Mode
*s Conference Call 2 Capabilities FECC Mode: On
** end
```

xStatus Conference Call [n] Capabilities FECC NumberOfPresets

Shows the number of presets available for the input sources at a far end site.

Requires user role: ADMIN, USER

Value space of the result returned:

1..15

Example:

```
xStatus Conference Call 2 Capabilities FECC NumberOfPresets
*s Conference Call 2 Capabilities FECC NumberOfPresets: 15
** end
```

xStatus Conference Call [n] Capabilities FECC NumberOfSources

Shows the number of input sources that can be connected at a far end site.

Requires user role: ADMIN, USER

Value space of the result returned:

1..5

Example:

```
xStatus Conference Call 2 Capabilities FECC NumberOfSources
*s Conference Call 2 Capabilities FECC NumberOfSources: 5
** end
```

xStatus Conference Call [n] Capabilities FECC Source [n] Name

Shows the name of an input source that can be connected at a far end site.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Conference Call 2 Capabilities FECC Source 1 Name
*s Conference Call 2 Capabilities FECC Source 1 Name: "Main camera"
** end
```

xStatus Conference Call [n] Capabilities FECC Source [n] Options

Shows available options for an input source that can be connected at a far end site (for a camera: p=pan; t=tilt; z=zoom; f=focus).

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Conference Call 2 Capabilities FECC Source 1 Options
*s Conference Call 2 Capabilities FECC Source 1 Options: "ptzf"
** end
```

xStatus Conference Call [n] Capabilities FECC Source [n] SourceId

Shows the ID of an input source that can be connected at a far end site.

Requires user role: ADMIN, USER

Value space of the result returned:

Integer

Example:

```
xStatus Conference Call 2 Capabilities FECC Source 1 SourceId
*s Conference Call 2 Capabilities FECC Source 1 SourceId: 6
** end
```

xStatus Conference Call [n] Capabilities Hold

Indicates whether the far-end site can be placed on hold or not.

Requires user role: ADMIN, USER

Value space of the result returned:

True/False

Example:

```
xStatus Conference Call Capabilities Hold
*s Conference Call 2 Capabilities Hold: True
** end
```

xStatus Conference Call [n] Capabilities IxChannel Status

Not applicable in this release.

Requires user role: ADMIN, USER

Value space of the result returned:

Active/Failed/Off

Example:

```
xStatus Conference Call 4 Capabilities IxChannel Status
*s Conference Call 4 Capabilities IxChannel Status: Active
** end
```

xStatus Conference Call [n] Capabilities Presentation

Lists the presentation capabilities for other participants in the conference.

Requires user role: ADMIN, USER

Value space of the result returned:

True/False

Example:

```
xStatus Conference Call 2 Capabilities Presentation
*s Conference Call 2 Capabilities Presentation: True
** end
```

xStatus Conference Call [n] Manufacturer

Shows the manufacturer of the video system at a far end site.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Conference Call 2 Manufacturer
*s Conference Call 2 Manufacturer: "Cisco"
** end
```

xStatus Conference Call [n] MicrophonesMuted

Lists the audio mute status for other participants in the conference.

Requires user role: ADMIN, USER

Value space of the result returned:

True/False

Example:

```
xStatus Conference Call 2 MicrophonesMuted
*s Conference Call 2 MicrophonesMuted: True
** end
```

xStatus Conference Call [n] SoftwareID

Shows the ID of the software running of the video system at a far end site.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Conference Call 2 SoftwareID
*s Conference Call 2 SoftwareID: "CE8"
** end
```

xStatus Conference DoNotDisturb

Shows whether DoNotDisturb mode is switched on or not.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

Active/Inactive

Example:

```
xStatus Conference DoNotDisturb
*s Conference DoNotDisturb: Inactive
** end
```

xStatus Conference Line [n] Mode

Indicates whether the system is configured as private or shared line on CUCM.

Requires user role: ADMIN, USER

Value space of the result returned:

Shared/Private

Example:

```
xStatus Conference Line Mode
*s Conference Line 1 Mode: Private
** end
```

xStatus Conference Multipoint Mode

Shows how the Multipoint video conferences are handled.

Auto: The multipoint method available will be chosen automatically; if none are available the Multipoint Mode will automatically be set to Off. If both MultiWay and MultiSite are available, the MultiWay service takes priority over the built-in MultiSite.

Off: Multiparty conferences are not allowed.

MultiSite: Multiparty conferences are set up using the built-in MultiSite feature. If MultiSite is chosen when the MultiSite feature is not available, the Multipoint Mode will automatically be set to Off.

CUCMMediaResourceGroupList: Multiparty conferences (ad hoc conferences) are hosted by the CUCM configured conference bridge. This setting is provisioned by CUCM in a CUCM environment and should never be set manually by the user.

Requires user role: ADMIN, USER

Value space of the result returned:

Auto/CUCMMediaResourceGroupList/MultiSite/Off

Example:

```
xStatus Conference Multipoint Mode
*s Conference Multipoint Mode: "Auto"
** end
```

xStatus Conference Presentation CallId

Shows the identity of the system that sends the presentation.

Requires user role: ADMIN, INTEGRATOR, USER, ROOMCONTROL

Value space of the result returned:

Integer

Example:

```
xStatus Conference Presentation CallId
*s Conference Presentation CallId: 0
** end
```

xStatus Conference Presentation LocalInstance [n] SendingMode

Shows whether a presentation source is shared locally or with a remote participant. There can be multiple local presentations which all have their own instance.

Requires user role: ADMIN, INTEGRATOR, USER, ROOMCONTROL

Value space of the result returned:

LocalOnly/LocalRemote/Off

Example:

```
xStatus Conference Presentation LocalInstance 1 SendingMode
*s Conference Presentation LocalInstance 1 SendingMode: LocalOnly
** end
```

xStatus Conference Presentation LocalInstance [n] Source

Shows the SourceId for a current presentation. There can be multiple local presentations which all have their own instance.

Requires user role: ADMIN, INTEGRATOR, USER, ROOMCONTROL

Value space of the result returned:

Integer

Example:

```
xStatus Conference Presentation LocalInstance 1 Source
*s Conference Presentation LocalInstance 1 Source: 1
** end
```

xStatus Conference Presentation Mode

Shows the status of the secondary video stream.

Requires user role: ADMIN, INTEGRATOR, USER, ROOMCONTROL

Value space of the result returned:

On/Off

Example:

```
xStatus Conference Presentation Mode
*s Conference Presentation Mode: Off
** end
```

xStatus Conference SpeakerLock CallId

Shows the CallId for the participant locked as the prominent speaker in the conference.

Requires user role: ADMIN, USER

Value space of the result returned:

Integer

Example:

```
xStatus Conference SpeakerLock CallId
*s Conference SpeakerLock CallId: 0
** end
```

xStatus Conference SpeakerLock Mode

Shows whether the speaker lock is enabled or not.

Requires user role: ADMIN, USER

Value space of the result returned:

On/Off

Example:

```
xStatus Conference SpeakerLock Mode
*s Conference SpeakerLock Mode: Off
** end
```

Diagnostics status

xStatus Diagnostics Message [n] Description

Shows a description of the current diagnostics alerts.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Diagnostics Message Description
*s DiagnosticsResult Message 1 Description: "IP configuration incomplete"
** end
```

xStatus Diagnostics Message [n] Level

Shows the level of importance of the diagnostics message.

Error: There is an error in the system. The system can still be used, but there can be some restrictions.

Warning: A problem is detected and a more specific report follows indicating the exact problem.

Critical: The warning level is critical. The system cannot be used.

Requires user role: ADMIN, USER

Value space of the result returned:

Error/Warning/Critical

Example:

```
xStatus Diagnostics Message 4 Level
*s Diagnostics Message 4 Level: Warning
** end
```

xStatus Diagnostics Message [n] References

Additional information on the diagnostics alert, if available.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Diagnostics Message 10 References
*s Diagnostics Message 10 References: "delay=190"
** end
```

xStatus Diagnostics Message [n] Type

Shows information on the results of the latest diagnostics on the system.

Requires user role: ADMIN, USER

Value space of the result returned:

CAPFOperationState / CTLInstallation / CUCMVendorConfigurationFile / CallProtocolDualStackConfig / CallProtocolIPStackPlatformCompatibility / CallProtocolVcsProvisioningCompatibility / CameraId / CameraPairing / CameraSerial / CameraSoftwareVersion / CameraStatus / CameraDetected / CamerasDetected / CertificateExpiry / ConfigurationFile / DefaultCallProtocolRegistered / EthernetDuplexMatches / FanStatus / PresenterTrack / H320GatewayStatus / H323GatekeeperStatus / HasValidReleaseKey / IpCameraStatus / IPv4Assignment / IPv6Assignment / IPv6Mtu / ISDNLinkCompatibility / ISDNLinkIpStack / ITLInstallation / InvalidSIPTransportConfig / LockDown / RoomControl / MediaBlockingDetected / MacrosRuntimeStatus / NetLinkStatus / NetSpeedAutoNegotiated / NetworkQuality / NTPStatus / OSDVideoOutput / OutputConnectorLocations / ProvisioningDeveloperOptions / ProvisioningStatus / SIPEncryption / SIPListenPortAndOutboundMode / SIPProfileRegistration / SIPProfileType / SelectedVideoInputSourceConnected / SiplceAndAnatConflict / SIPListenPortAndRegistration / TCPMediaFallback / TemperatureCheck / TLSVerifyRequiredCerts / TouchPanelConnection / ControlSystemConnection / TurnBandwidth / MediaPortRangeNegative / MediaPortRangeTooSmall / MediaPortRangeOdd / MediaPortRangeValueSpace / MediaPortRangeOverlap / VideoPortRangeNegative / VideoPortRangeTooSmall / VideoPortRangeOdd / VideoPortRangeValueSpace / UltrasoundConfigSettings / UltrasoundSpeakerAvailability / ValidPasswords / VideoFromInternalCamera / VideoInputStability / VideoInputSignalQuality / SparkConnectivity / SparkActivationRequired / SpeakerTrackFrontPanelMountedCorrectly / SpeakerTrackMicrophoneConnection / SpeakerTrackVideoInputs / SpeakerTrackEthernetConnection / ANATOnVCS / ECRferenceDelay / AudioECRefDelay / AudioPairingNoise / AudioPairingRate / AudioPairingSNR / AudioPairingInterference / AudioPairingTokenDecode / AudioInternalSpeakerDisabled / AbnormalCallTermination / HasActiveCallProtocol / SipOrH323ButNotBothEnabled / PresentationSourceSelection / SoftwareUpgrade / PlatformSanity / ContactInfoMismatch / MicrophoneReinforcement / FirstTimeWizardNotCompleted / CaptivePortalDetected / MonitorDelay / WifiCARequired / MicrophonesConnected

Example:

```
xStatus Diagnostics Message Type
*s Diagnostics Message 1 Type: CamerasDetected
** end
```

H323 status

xStatus H323 Gatekeeper Address

Displays the IP address of the gatekeeper where the system is registered.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus H323 Gatekeeper Address
*s H323 Gatekeeper Address: "192.0.1.20"
** end
```

xStatus H323 Gatekeeper Port

Shows the port which is used when connecting to on the gatekeeper.

Requires user role: ADMIN, USER

Value space of the result returned:

Integer

Example:

```
xStatus H323 Gatekeeper Port
*s H323 Gatekeeper Port: 1719
** end
```

xStatus H323 Gatekeeper Reason

Shows the reason for rejected registration.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus H323 Gatekeeper Reason
*s H323 Gatekeeper Reason: ""
** end
```

xStatus H323 Gatekeeper Status

Shows the gatekeeper registration status.

Requires user role: ADMIN, USER

Value space of the result returned:

Required/Discovering/Discovered/Authenticating/Authenticated/Registering/Registered/
Inactive/Rejected

Example:

```
xStatus H323 Gatekeeper Status
*s H323 Gatekeeper Status: Registered
** end
```

xStatus H323 Mode Reason

Shows whether there is a conflict between H.323 settings and xStatus H323 Mode Status.

“”: When H.323 is set to On and there is no conflict between H.323 Mode configuration and the rest of the system settings.

“SIP is enabled”: When H.323 Mode is set to On and SIP is enabled on a system that does not support the two simultaneously.

“Not available”: When a system does not support H.323.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus H323 Mode Reason
*s H323 Mode Reason: ""
** end
```

xStatus H323 Mode Status

Shows the status for H.323 registration.

Enabled: Registration is enabled.

Disabled: Registration is disable, because SIP is enabled.

Requires user role: ADMIN, USER

Value space of the result returned:

Enabled/Disabled

Example:

```
xStatus H323 Mode Status
*s H323 Mode Status: "Disabled"
** end
```

HttpFeedback status

xStatus HttpFeedback [1..4] Expression [1..15]

Shows the feedback from the HTTP server. There can be up to 15 expressions for each URL. See the xCommand HttpFeedback commands for more information.

Requires user role: ADMIN, USER

Value space of the result returned:

String

xStatus HttpFeedback [1..4] Format

Shows the format of the HTTP Feedback feedback from the HTTP server.

Requires user role: ADMIN, USER

Value space of the result returned:

XML/JSON

Example:

```
xStatus HttpFeedback 1 Format
*s HttpFeedback 1 Format: XML
** end
```

xStatus HttpFeedback [1..4] URL

Shows the URL (Uniform Resource Locator) of the HTTP server. There can be up to three HTTP servers, specified by the URL.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus HttpFeedback 1 URL
*s HttpFeedback 1 URL: "http://tms.company.com/tms/public/feedback/code.aspx"
** end
```

MediaChannels status

xStatus MediaChannels Call [n] Channel [n] Audio Channels

Shows the number of incoming or outgoing audio channels.

Requires user role: ADMIN, USER

Value space of the result returned:

Integer

Example:

```
xStatus MediaChannels Call 27 Channel 327 Audio Channels
*s MediaChannels Call 27 Channel 327 Audio Channels: 1
** end
```

xStatus MediaChannels Call [n] Channel [n] Audio Mute

Audio mute status of the incoming audio.

Requires user role: ADMIN, USER

Value space of the result returned:

True/False

Example:

```
xStatus MediaChannels Call 27 Channel 327 Audio Mute
*s MediaChannels Call 27 Channel 327 Audio Mute: False
** end
```


xStatus MediaChannels Call [n] Channel [n] Audio Protocol

Shows the audio algorithm of the incoming or outgoing audio.

AACLD: The AAC-LD is an MPEG-4 Low Delay Audio Coder audio compression format.

G711A: The G.711 A-law algorithm is an ITU-T standard for audio compression.

G711Mu: The G.711 Mu-law algorithm is an ITU-T standard for audio compression.

G722: The G.722 algorithm is an ITU-T standard for audio compression.

G7221: The G.722.1 algorithm is an ITU-T standard for audio compression.

G7221C: The G.722.1 annex C algorithm is an ITU-T standard for audio compression.

G723_1: The G.723.1 algorithm is an ITU-T standard for audio compression.

G728: The G.728 algorithm is an ITU-T standard for audio compression.

G729: The G.729 algorithm is an ITU-T standard for audio compression.

G729A: The G.729 annex A algorithm is an ITU-T standard for audio compression.

G729AB: The G.729 annex A and B algorithm is an ITU-T standard for audio compression.

Off: No audio.

Opus: Opus is a royalty-free IETF standard for audio compression.

Requires user role: ADMIN, USER

Value space of the result returned:

AACLD/G711A/G711Mu/G722/G7221/G7221C/G723_1/G728/G729/G729A/G729AB/Off/Opus

Example:

```
xStatus MediaChannels Call 27 Channel 327 Audio Protocol
*s MediaChannels Call 27 Channel 327 Audio Protocol: AACLD
** end
```

xStatus MediaChannels Call [n] Channel [n] Direction

Shows the direction of the call.

Incoming: The call is an incoming call.

Outgoing: The call is an outgoing call.

Requires user role: ADMIN, USER

Value space of the result returned:

Incoming/Outgoing

Example:

```
xStatus MediaChannels Call 27 Channel 327 Direction
*s MediaChannels Call 27 Channel 327 Direction: Incoming
** end
```

xStatus MediaChannels Call [n] Channel [n] Encryption

Shows the encryption status for audio or video on the incoming or outgoing call.

Requires user role: ADMIN, USER

Value space of the result returned:

On/Off

Example:

```
xStatus MediaChannels Call 27 Channel 327 Encryption
*s MediaChannels Call 27 Channel 327 Encryption: On
** end
```

xStatus MediaChannels Call [n] Channel [n] NetStat Bytes

Shows the number of bytes for audio, video or data on the incoming or outgoing channel.

Requires user role: ADMIN, USER

Value space of the result returned:

Integer

Example:

```
xStatus MediaChannels Call 27 Channel 327 NetStat Bytes
*s MediaChannels Call 27 Channel 327 NetStat Bytes: 496640
** end
```

xStatus MediaChannels Call [n] Channel [n] NetStat ChannelRate

Shows the bandwidth for audio, video or data on the incoming or outgoing channel.

Requires user role: ADMIN, USER

Value space of the result returned:

Integer

Example:

```
xStatus MediaChannels Call 27 Channel 327 NetStat ChannelRate
*s MediaChannels Call 27 Channel 327 NetStat ChannelRate: 128000
** end
```

xStatus MediaChannels Call [n] Channel [n] NetStat Jitter

Shows the jitter for audio, video or data at the present moment on the incoming or outgoing channel, as specified by RFC 3550.

Requires user role: ADMIN, USER

Value space of the result returned:

Integer

Example:

```
xStatus MediaChannels Call 27 Channel 327 NetStat Jitter
*s MediaChannels Call 27 Channel 327 NetStat Jitter: 2
** end
```

xStatus MediaChannels Call [n] Channel [n] NetStat LastIntervalLost

Shows the number of packets lost for audio, video or data during the last interval on the incoming or outgoing channels.

Requires user role: ADMIN, USER

Value space of the result returned:

Integer

Example:

```
xStatus MediaChannels Call 27 Channel 327 NetStat LastIntervalLost
*s MediaChannels Call 27 Channel 327 NetStat LastIntervalLost: 0
** end
```

xStatus MediaChannels Call [n] Channel [n] NetStat LastIntervalReceived

Shows the number of packets received for audio, video or data during the last interval on the incoming or outgoing channels.

Requires user role: ADMIN, USER

Value space of the result returned:

Integer

Example:

```
xStatus MediaChannels Call 27 Channel 327 NetStat LastIntervalReceived
*s MediaChannels Call 27 Channel 327 NetStat LastIntervalReceived: 289
** end
```

xStatus MediaChannels Call [n] Channel [n] NetStat Loss

Shows the number of packets lost for audio, video or data on the incoming or outgoing channels.

Requires user role: ADMIN, USER

Value space of the result returned:

Integer

Example:

```
xStatus MediaChannels Call 27 Channel 327 NetStat Loss
*s MediaChannels Call 27 Channel 327 NetStat Loss: 0
** end
```

xStatus MediaChannels Call [n] Channel [n] NetStat MaxJitter

Shows the maximum jitter for audio, video or data that has been measured during last interval (about 5 seconds).

Requires user role: ADMIN, USER

Value space of the result returned:

Integer

Example:

```
xStatus MediaChannels Call 27 Channel 327 NetStat MaxJitter
*s MediaChannels Call 27 Channel 327 NetStat MaxJitter: 2
** end
```

xStatus MediaChannels Call [n] Channel [n] NetStat Packets

Shows the number of packets that was received or sent for audio, video or data on the incoming or outgoing channels.

Requires user role: ADMIN, USER

Value space of the result returned:

Integer

Example:

```
xStatus MediaChannels Call 27 Channel 327 NetStat Packets
*s MediaChannels Call 27 Channel 327 NetStat Packets: 1551
** end
```

xStatus MediaChannels Call [n] Channel [n] ParticipantId

Shows the ID of the Active Control participant on the incoming audio or video channel.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus MediaChannels Call 27 Channel 327 ParticipantId
*s MediaChannels Call 27 Channel 327 ParticipantId: ""
** end
```

xStatus MediaChannels Call [n] Channel [n] Type

Shows the media type on the incoming or outgoing channel.

Audio: The media type on the incoming or outgoing channel is audio.

Video: The media type on the incoming or outgoing channel is video.

Data: The media type on the incoming or outgoing channel is data.

Requires user role: ADMIN, USER

Value space of the result returned:

Audio/Video/Data

Example:

```
xStatus MediaChannels Call 27 Channel 327 Type
*s MediaChannels Call 27 Channel 327 Type: Audio
** end
```

xStatus MediaChannels Call [n] Channel [n] Video ChannelRole

Shows the role of the incoming or outgoing video channel.

Main: The main video is on the incoming or outgoing video channel.

Presentation: The presentation is on the incoming or outgoing video channel.

Requires user role: ADMIN, USER

Value space of the result returned:

Main/Presentation

Example:

```
xStatus MediaChannels Call 27 Channel 327 Video ChannelRole
*s MediaChannels Call 27 Channel 327 Video ChannelRole: Main
** end
```

`xStatus MediaChannels Call [n] Channel [n] Video FrameRate`

Shows the frame rate of the incoming or outgoing video channel.

Requires user role: ADMIN, USER

Value space of the result returned:

Integer

Example:

```
xStatus MediaChannels Call 27 Channel 327 Video FrameRate
*s MediaChannels Call 27 Channel 327 Video FrameRate: 30
** end
```

`xStatus MediaChannels Call [n] Channel [n] Video Protocol`

Shows the video algorithm of the incoming or outgoing video channel.

Shows the video algorithm on the incoming/outgoing video channel.

H261: The H.261 algorithm is an ITU-T standard for video compression.

H263: The H.263 algorithm is an ITU-T standard for video compression.

H263p: The H.263p (H.263+) algorithm is an ITU-T standard for video compression.

H263pp: The H.263pp (H.263++) algorithm is an ITU-T standard for video compression.

H264: The H.264 algorithm (MPEG-4 AVC) is an ITU-T and ISE/IEC standard for video compression.

HEVC: The HEVC (H.265) algorithm (MPEG-H part 2) is an ITU-T and ISE/IEC standard for video compression.

JPEG: The JPEG algorithm is an ISO/IEC standard for video compression.

MP4V: The MP4V format is an ISO/IEC file format for video compression.

Off: No video.

Requires user role: ADMIN, USER

Value space of the result returned:

H261/H263/H263p/H263pp/H264/HEVC/JPEG/MP4V/Off

Example:

```
xStatus MediaChannels Call 27 Channel 327 Video Protocol
*s MediaChannels Call 27 Channel 327 Video Protocol: H264
** end
```

`xStatus MediaChannels Call [n] Channel [n] Video ResolutionX`

Shows the width (resolution in direction X) of the incoming or outgoing video.

Requires user role: ADMIN, USER

Value space of the result returned:

Integer

Example:

```
xStatus MediaChannels Call 27 Channel 327 Video ResolutionX
*s MediaChannels Call 27 Channel 327 Video ResolutionX: 1920
** end
```

`xStatus MediaChannels Call [n] Channel [n] Video ResolutionY`

Shows the width (resolution in direction Y) of the incoming or outgoing video.

Requires user role: ADMIN, USER

Value space of the result returned:

Integer

Example:

```
xStatus MediaChannels Call 27 Channel 327 Video ResolutionY
*s MediaChannels Call 27 Channel 327 Video ResolutionY: 1080
** end
```

Network status

xStatus Network 1 CDP Address

Returns the first network address of both receiving and sending devices.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Network CDP Address
*s Network 1 CDP Address: "192.0.1.20"
** end
```

xStatus Network 1 CDP Capabilities

Describes the functional capability for the switch in form of a device type. See documentation for CDP protocol for more information.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Network CDP Capabilities
*s Network 1 CDP Capabilities: "0x0029"
** end
```

xStatus Network 1 CDP DeviceId

Identifies the name of the switch in form of a character string.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Network CDP DeviceId
*s Network 1 CDP DeviceId: "123456.company.com"
** end
```

xStatus Network 1 CDP Duplex

Indicates the status (duplex configuration) of the CDP broadcast interface. Used by network operators to diagnose connectivity problems between adjacent network elements.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Network CDP Duplex
*s Network 1 CDP Duplex: "Full"
** end
```

xStatus Network 1 CDP Platform

Returns the hardware platform name of the switch connected to the endpoint.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Network CDP Platform
*s Network 1 CDP Platform: "cisco WS-C3750X-48P"
** end
```

xStatus Network 1 CDP PortID

Returns the identification the switch uses of the port the endpoint is connected to.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Network CDP PortID
*s Network 1 CDP PortID: "GigabitEthernet1/0/23"
** end
```

xStatus Network 1 CDP PrimaryMgmtAddress

Returns the management address used to configure and monitor the switch the endpoint is connected to.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Network CDP PrimaryMgmtAddress
*s Network 1 CDP PrimaryMgmtAddress: "10.1.1.2"
** end
```

xStatus Network 1 CDP SysName

Returns the SysName as configured in the switch the endpoint is connected to.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Network CDP SysName
*s Network 1 CDP SysName: ""
** end
```

xStatus Network 1 CDP SysObjectID

Returns the SysObjectID as configured in the switch the endpoint is connected to.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Network CDP SysObjectID
*s Network 1 CDP SysObjectID: ""
** end
```

xStatus Network 1 CDP Version

Returns information about the software release version the switch is running.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Network 1 CDP Version
*s Network 1 CDP Version: "Cisco IOS Software, C3560CX Software (C3560CX-
UNIVERSALK9-M), Version 15.2(3)E, RELEASE SOFTWARE (fc4)*Technical Support:
http://www.cisco.com/techsupport*Copyright (c) 1986-2014 by Cisco Systems,
Inc.*Compiled Sun 07-Dec-14 13:15 by prod_rel_team"
** end
```

xStatus Network 1 CDP VoIPApplianceVlanID

Identifies the VLAN used for VoIP traffic from the endpoint to the switch. For more information see documentation of the IEEE 802.1Q protocol.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Network CDP VoIPApplianceVlanID
*s Network 1 CDP VoIPApplianceVlanID: "300"
** end
```

xStatus Network 1 CDP VTPMgmtDomain

Returns the switch's configured VTP management domain name-string.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Network CDP VTPMgmtDomain
*s Network 1 CDP VTPMgmtDomain: "anyplace"
** end
```

xStatus Network 1 DNS Domain Name

Shows the domain name.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Network 1 DNS Domain Name
*s Network 1 DNS Domain Name: "www.example.com www.example.int"
** end
```

xStatus Network 1 DNS Server [1..5] Address

Shows the IP address of the DNS server.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Network 1 DNS Server 1. Address
*s Network 1 DNS Server 1 Address: "192.0.2.60"
** end
```

xStatus Network 1 Ethernet MacAddress

Shows the MAC (Media Access Control) address for the Ethernet interface.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Network 1 Ethernet MacAddress
*s Network 1 Ethernet MacAddress: "00:50:60:02:FD:C7"
** end
```

xStatus Network 1 Ethernet Speed

Shows the Ethernet speed in Mbps. The speed can be in full-duplex or half-duplex.

Requires user role: ADMIN, USER

Value space of the result returned:

10half/10full/100half/100full/1000full

Example:

```
xStatus Network 1 Ethernet Speed
*s Network 1 Ethernet Speed: "100full"
** end
```

xStatus Network 1 IPv4 Address

Shows the IPv4 address that uniquely identifies this system.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Network 1 IPv4 Address
*s Network 1 IPv4 Address: "192.0.2.149"
** end
```

xStatus Network 1 IPv4 Gateway

Shows the address of the IPv4 gateway.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Network 1 IPv4 Gateway
*s Network 1 IPv4 Gateway: "192.0.2.10"
** end
```

xStatus Network 1 IPv4 SubnetMask

Shows the subnet mask which determines which subnet an IPv4 address belongs to.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Network 1 IPv4 SubnetMask
*s Network 1 IPv4 SubnetMask: "255.255.255.0"
** end
```

xStatus Network 1 IPv6 Address

Shows the IPv6 address that uniquely identifies this system.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Network 1 IPv6 Address
*s Network 1 IPv6 Address: ""
** end
```

xStatus Network 1 IPv6 Gateway

Shows the address of the IPv6 gateway.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Network 1 IPv6 Gateway
*s Network 1 IPv6 Gateway: ""
** end
```

xStatus Network 1 VLAN Voice VlanId

The feedback shows the VLAN Voice ID; or Off if the VLAN Voice Mode is not enabled.

Requires user role: ADMIN, USER

Value space of the result returned:

Off/1..4094

Example:

```
xStatus Network 1 VLAN Voice VlanId
*s Network 1 VLAN Voice VlanId: "Off"
** end
```


NetworkServices status

xStatus NetworkServices NTP CurrentAddress

Returns the address of the NTP server that is currently in use.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus NetworkServices NTP CurrentAddress
*s NetworkServices NTP CurrentAddress: "123.254.15.121"
** end
```

xStatus NetworkServices NTP Server [n] Address

Returns the address of the NTP server(s) the codec is using.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus NetworkServices NTP Address
*s NetworkServices NTP Address: "12.104.193.12 64.104.222.16 144.254.15.121"
** end
```

xStatus NetworkServices NTP Status

Returns the status of the endpoints synchronizing with the NTP server.

Discarded: The NTP result has been discarded.

Synced: The system is in sync with the NTP server.

NotSynced: The system is not in sync with the NTP server.

Unknown: The state of the synchronization is unknown.

Off: No synchronization with the NTP server.

Requires user role: ADMIN, USER

Value space of the result returned:

Discarded/Synced/NotSynced/Unknown/Off

Example:

```
xStatus NetworkServices NTP Status
*s NetworkServices NTP Status: Synced
** end
```

Peripherals status

xStatus Peripherals ConnectedDevice [n] HardwareInfo

Shows hardware information about connected device.

Requires user role: ADMIN, INTEGRATOR, USER, ROOMCONTROL

Value space of the result returned:

String

Example:

```
xStatus Peripherals ConnectedDevice 1007 HardwareInfo
*s Peripherals ConnectedDevice 1007 HardwareInfo: "1122330-0"
** end
```

xStatus Peripherals ConnectedDevice [n] ID

Shows the MAC-address of the connected device.

Requires user role: ADMIN, INTEGRATOR, USER, ROOMCONTROL

Value space of the result returned:

String

Example:

```
xStatus Peripherals ConnectedDevice 1007 ID
*s Peripherals ConnectedDevice 1007 ID: "00:10:20:20:be:21"
** end
```

xStatus Peripherals ConnectedDevice [n] Name

Shows the product name of connected device.

Requires user role: ADMIN, INTEGRATOR, USER, ROOMCONTROL

Value space of the result returned:

String

Example:

```
xStatus Peripherals ConnectedDevice 1007 Name
*s Peripherals ConnectedDevice 1007 Name: "Cisco TelePresence Touch"
** end
```

xStatus Peripherals ConnectedDevice [n] SoftwareInfo

Shows information of the software version running on the connected device.

Requires user role: ADMIN, INTEGRATOR, USER, ROOMCONTROL

Value space of the result returned:

String

Example:

```
xStatus Peripherals ConnectedDevice 1007 SoftwareInfo
*s Peripherals ConnectedDevice 1007 SoftwareInfo: "TI7.2.0"
** end
```

xStatus Peripherals ConnectedDevice [n] Status

Shows peripheral devices that are currently connected to the endpoint.

Requires user role: ADMIN, INTEGRATOR, USER, ROOMCONTROL

Value space of the result returned:

Connected/ResponseTimedOut

Example:

```
xStatus Peripherals ConnectedDevice 1001 Status
*s Peripherals ConnectedDevice 1001 Status: Connected
** end
```

xStatus Peripherals ConnectedDevice [n] Type

Shows the peripheral types that are connected to the endpoint.

Note: The value space Camera only shows Precision 60 cameras.

Requires user role: ADMIN, INTEGRATOR, USER, ROOMCONTROL

Value space of the result returned:

Byod/Camera/ControlSystem/ISDNLink/Other/SpeakerTrack/TouchPanel

Example:

```
xStatus Peripherals ConnectedDevice 1001 Type
*s Peripherals ConnectedDevice 1001 Type: TouchPanel
** end
```

xStatus Peripherals ConnectedDevice [n] UpgradeStatus

Shows the status of the previous software upgrade on the currently connected peripherals.

Requires user role: ADMIN, INTEGRATOR, USER, ROOMCONTROL

Value space of the result returned:

Downloading/Failed/Installing/InstallationReady/None/Succeeded/Rebooting/Retrying/Aborted/Paused

Example:

```
xStatus Peripherals ConnectedDevice 1001 UpgradeStatus
*s Peripherals ConnectedDevice 1001 UpgradeStatus: None
** end
```

Provisioning status

xStatus Provisioning CUCM ExtensionMobility Enabled

Shows if Extension Mobility is enabled for a CUCM registered device.

Requires user role: ADMIN, USER

Value space of the result returned:

True/False

Example:

```
xStatus Provisioning CUCM ExtensionMobility Enabled
*s Provisioning CUCM ExtensionMobility Enabled: False
** end
```

xStatus Provisioning CUCM ExtensionMobility LastLoggedInUserId

Returns the user id that was last logged in to the system. Only in use if CUCM Extension Mobility is enabled, and CUCM is configured to remember the last logged in user on an endpoint.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Provisioning CUCM ExtensionMobility LastLoggedInUserId
*s Provisioning CUCM ExtensionMobility LastLoggedInUserId: "User 1"
** end
```

xStatus Provisioning CUCM ExtensionMobility LoggedIn

Shows if someone is logged in to Extension Mobility or not.

Requires user role: ADMIN, USER

Value space of the result returned:

True/False

Example:

```
xStatus Provisioning CUCM ExtensionMobility LoggedIn
*s Provisioning CUCM ExtensionMobility LoggedIn: False
** end
```

xStatus Provisioning Software Current CompletedAt

Shows date and time for when the current software upgrade was completed.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Provisioning Software Current CompletedAt
*s Provisioning Software Current CompletedAt: "2011-06-07T07:20:03Z"
** end
```

xStatus Provisioning Software Current URL

Shows the URL that the current software was uploaded from.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Provisioning Software Current URL
*s Provisioning Software Current URL: "http://.../s52020ce8_0_0.pkg"
** end
```

xStatus Provisioning Software Current VersionId

Shows the version ID of the current software.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Provisioning Software Current VersionId
*s Provisioning Software Current VersionId: "s52020ce8_0_0.pkg"
** end
```

xStatus Provisioning Software UpgradeStatus LastChange

Shows the date and time for the latest software upgrade.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Provisioning Software UpgradeStatus LastChange
*s Provisioning Software UpgradeStatus LastChange: "2011-06-07T07:20:03Z"
** end
```

xStatus Provisioning Software UpgradeStatus Message

Shows the system message for the software upgrade.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Provisioning Software UpgradeStatus Message
*s Provisioning Software UpgradeStatus Message: ""
** end
```

xStatus Provisioning Software UpgradeStatus Phase

Shows the phase of the software upgrade.

Requires user role: ADMIN, USER

Value space of the result returned:

None/DownloadPending/FormingHierarchy/Downloading/DownloadPaused/DownloadDone/Seeding/AboutToInstallUpgrade/Postponed/PeripheralsReady/UpgradingPeripherals/Installing/InstallingPeripherals

Example:

```
xStatus Provisioning Software UpgradeStatus Phase
*s Provisioning Software UpgradeStatus Phase: None
** end
```

xStatus Provisioning Software UpgradeStatus SessionId

Shows the ID of the session for the software upgrade.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Provisioning Software UpgradeStatus SessionId
*s Provisioning Software UpgradeStatus SessionId: ""
** end
```

xStatus Provisioning Software UpgradeStatus Status

Shows the status of the software upgrade.

Requires user role: ADMIN, USER

Value space of the result returned:

None/InProgress/Failed/InstallationFailed/Succeeded

Example:

```
xStatus Provisioning Software UpgradeStatus Status
*s Provisioning Software UpgradeStatus Status: None
** end
```

xStatus Provisioning Software UpgradeStatus URL

Shows the URL that the new software currently is being uploaded and installed from.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Provisioning Software UpgradeStatus URL
*s Provisioning Software UpgradeStatus URL: "http://.../s52020ce8_0_0.pkg"
** end
```

xStatus Provisioning Software UpgradeStatus VersionId

Shows the version ID of the software currently being uploaded and installed.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Provisioning Software UpgradeStatus VersionId
*s Provisioning Software UpgradeStatus VersionId: "s52010ce8_0_0.pkg"
** end
```

xStatus Provisioning Status

Shows the status of the provisioning.

Failed: The provisioning failed.

AuthenticationFailed: The authentication failed.

Provisioned: The endpoint is provisioned.

Idle: The provisioning is not active.

NeedConfig: The endpoint needs to be configured.

ConfigError: An error occurred during configuration.

Requires user role: ADMIN, USER

Value space of the result returned:

Failed/AuthenticationFailed/Provisioned/Idle/NeedConfig/ConfigError

Example:

```
xStatus Provisioning Status
*s Provisioning Status: Provisioned
** end
```

Proximity status

xStatus Proximity Services Availability

Shows whether proximity services are available on the endpoint.

Available: Proximity mode has been enabled with the command xConfiguration Proximity Mode and one or more of the proximity services have been enabled with xConfiguration Proximity Services commands.

Disabled: Proximity mode has been disabled with xConfiguration Proximity Mode, or none of the services have been enabled with the xConfiguration Proximity Services commands.

Deactivated: Proximity services have been deactivated with the command xCommand Proximity Services Deactivate.

Requires user role: ADMIN, USER

Example:

```
xStatus Proximity Services Availability
*s Proximity Services Availability: Disabled
** end
```

RoomAnalytics status

xStatus RoomAnalytics PeopleCount Current

Shows the amount of people who are in the room by use of face detection. The call must have a duration of minimum two minutes in order to get a reliable average. Persons that have not faced the camera will not be counted. If there are objects or pictures in the room that can be detected as faces, these might be counted. The video system will not keep record of who was in the room, only the average number of faces that were detected. When the system is in standby, or if the feature is turned off, the number returned is -1.

Requires user role: ADMIN, USER

Value space of the result returned:

Integer

Example:

```
xStatus RoomAnalytics PeopleCount Current
*s RoomAnalytics PeopleCount Current: 2
** end
```

xStatus RoomAnalytics PeoplePresence

Shows if there are people present in the room or not. It takes a minimum of two minutes to detect whether people are present or not in the room. After the room gets vacant, it may take up to two minutes for the status to change. This feature is based on ultrasound. The video system will not keep record of who was in the room, only whether or not there are people present in the room.

Requires user role: ADMIN, USER

Value space of the result returned:

Yes/No/Unknown

Example:

```
xStatus RoomAnalytics PeoplePresence
*s RoomAnalytics PeoplePresence: No
** end
```

Security status

xStatus Security FIPS Mode

Shows the FIPS mode status.

Requires user role: ADMIN, USER

Value space of the result returned:

On/Off

Example:

```
xStatus Security FIPS Mode
*s Security FIPS Mode: Off
** end
```

xStatus Security Persistency CallHistory

Shows whether call history logging is set to persistent or non-persistent mode. Persistent is the default mode.

Requires user role: ADMIN, USER

Value space of the result returned:

NonPersistent/Persistent

Example:

```
xStatus Security Persistency CallHistory
*s Security Persistency CallHistory: Persistent
** end
```

xStatus Security Persistency Configurations

Shows whether the systems all configurations are set to persistent or non-persistent mode. Persistent is the default mode.

Requires user role: ADMIN, USER

Value space of the result returned:

NonPersistent/Persistent

Example:

```
xStatus Security Persistency Configurations
*s Security Persistency Configurations: Persistent
** end
```

xStatus Security Persistency DHCP

Shows whether DHCP logging is set to persistent or non-persistent mode. Persistent is the default mode.

Requires user role: ADMIN, USER

Value space of the result returned:

NonPersistent/Persistent

Example:

```
xStatus Security Persistency DHCP
*s Security Persistency DHCP: Persistent
** end
```

xStatus Security Persistency InternalLogging

Shows whether internal logging is set to persistent or non-persistent mode. Persistent is the default mode.

Requires user role: ADMIN, USER

Value space of the result returned:

NonPersistent/Persistent

Example:

```
xStatus Security Persistency InternalLogging
*s Security Persistency InternalLogging: Persistent
** end
```

xStatus Security Persistency LocalPhonebook

Shows whether local phone book is set to persistent or non-persistent mode. Persistent is the default mode.

Requires user role: ADMIN, USER

Value space of the result returned:

NonPersistent/Persistent

Example:

```
xStatus Security Persistency LocalPhonebook
*s Security Persistency LocalPhonebook: Persistent
** end
```


SIP status

xStatus SIP AlternateURI Alias [n] URI

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus SIP AlternateURI Alias
*s SIP AlternateURI Alias URI: ""
** end
```

xStatus SIP AlternateURI Primary [n] URI

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus SIP AlternateURI Primary
*s SIP AlternateURI Primary URI: ""
** end
```

xStatus SIP Authentication

Shows which authentication mechanism is used when registering to the SIP Proxy Server.

Digest: Uses the Digest access authentication method, as specified by RFC 2069.

NTLM: Uses the NTLM authentication method, which is a Microsoft authentication protocol.

Off: No authentication mechanism is used.

Requires user role: ADMIN, USER

Value space of the result returned:

Digest/Off

Example:

```
xStatus SIP Authentication
*s SIP Authentication: Off
** end
```

xStatus SIP CallForward DisplayName

Returns the URI that is displayed on the user interface for the forwarded call.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus SIP CallForward DisplayName
*s SIP CallForward DisplayName: ""
** end
```

xStatus SIP CallForward Mode

Indicates whether the call forward mode for SIP is set to on or off.

Requires user role: ADMIN, USER

Value space of the result returned:

On/Off

Example:

```
xStatus SIP CallForward Mode
*s SIP CallForward Mode: Off
** end
```

xStatus SIP CallForward URI

Indicates the address the incoming calls are directed to when call forward mode is set on.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus SIP CallForward URI
*s SIP CallForward URI: ""
** end
```

xStatus SIP Mailbox MessagesWaiting

Indicates how many new messages are in the mailbox.

Requires user role: ADMIN, USER

Value space of the result returned:

Integer

Example:

```
xStatus SIP Mailbox MessagesWaiting
*s SIP Mailbox MessagesWaiting: 0
** end
```

xStatus SIP Mailbox URI

Returns the URI for your SIP mailbox.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus SIP Mailbox URI
*s SIP Mailbox URI: "12345678"
** end
```

xStatus SIP Proxy [n] Address

Shows the address of the SIP Proxy that the system communicates with.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus SIP Proxy 1 Address
*s SIP Proxy 1 Address: "192.0.2.50"
** end
```

xStatus SIP Proxy [n] Status

Shows the status of the communication between the endpoint and the SIP Proxy server.

Active: The communication between the endpoint and the SIP Proxy is active.

DNSFailed: The attempt to establish communication to the DNS server failed.

Off: There is no communication between the endpoint and the SIP Proxy.

Timeout: The attempt to establish communication to the SIP Proxy timed out.

UnableTCP: The system is unable to use TCP as the transport method.

UnableTLS: The system is unable to use TLS as the transport method.

Unknown: The status of the communication is not known.

AuthenticationFailed: Wrong user name or password.

Requires user role: ADMIN, USER

Value space of the result returned:

Active/DNSFailed/Off/Timeout/UnableTCP/UnableTLS/Unknown/AuthenticationFailed

Example:

```
xStatus SIP Proxy 1 Status
*s SIP Proxy 1 Status: Active
** end
```

xStatus SIP Registration [n] Authentication

Shows which authentication mechanism is used when registering to the SIP Proxy Server.

Digest: Uses the Digest access authentication method, as specified by RFC 2069.

NTLM: Uses the NTLM authentication method, which is a Microsoft authentication protocol.

Off: No authentication mechanism is used.

Requires user role: ADMIN, USER

Value space of the result returned:

Digest/Off

Example:

```
xStatus SIP Registration 1 Authentication
*s SIP Registration 1 Authentication: Off
** end
```

xStatus SIP Registration [n] Reason

Shows a message to explain the reason why the SIP registration failed.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus SIP Registration 1 Reason
*s SIP Registration 1 Reason: "404 Not Found"
** end
```

xStatus SIP Registration [n] Status

Shows the status of the registration to the SIP Proxy Server.

Deregister: The system is in the process of de-registering to the SIP Proxy.

Failed: The system failed to register to the SIP Proxy.

Inactive: The system is not registered to any SIP Proxy.

Registered: The system is registered to the SIP Proxy.

Registering: The system is in the process of registering to the SIP Proxy.

Requires user role: ADMIN, USER

Value space of the result returned:

Deregister/Failed/Inactive/Registered/Registering

Example:

```
xStatus SIP Registration 1 Status
*s SIP Registration 1 Status: Registered
** end
```

xStatus SIP Registration [n] URI

Shows the URI used for registration to the SIP Proxy server.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus SIP Registration 1 URI
*s SIP Registration 1 URI: "firstname.lastname@company.com"
** end
```

xStatus SIP Secure

Shows the encryption status of the signaling with the SIP Proxy server.

Requires user role: ADMIN, USER

Value space of the result returned:

True/False

Example:

```
xStatus SIP Secure
*s SIP Secure: True
** end
```

xStatus SIP Verified

Shows whether or not the SSL certificate of the server that the video system / codec tries to register to is included in the codec's trusted CA-list. The server is typically a Cisco VCS or CUCM.

True: The server's SIP certificate is checked against the trusted CA-list on the codec and found valid. Additionally, the fully qualified domain name of the server matches the valid certificate.

False: A TLS connection is not set up because the SIP certificate verification failed or the domain name did not match. Note that the status also returns False when TLS is not used (xConfiguration SIP DefaultTransport not set to TLS) or certificate verification is switched off (SIP TlsVerify: Off. This setting is accessible through your products web interface).

Requires user role: ADMIN, USER

Value space of the result returned:

True/False

Example:

```
xStatus SIP Verified
*s SIP Verified: False
** end
```

Standby status

xStatus Standby State

Shows whether the system is in standby mode or not.

Standby: The system is in standby state.

EnteringStandby: The system is entering the standby state.

Halfwake: The system is in standby, but greets the user when presence is detected by motion or the Proximity pairing app.

Off: The system is not in standby.

Requires user role: ADMIN, INTEGRATOR, USER, ROOMCONTROL

Value space of the result returned:

Standby/EnteringStandby/Halfwake/Off

Example:

```
xStatus Standby State
*s Standby State: Off
** end
```

SystemUnit status

xStatus SystemUnit Hardware Module CompatibilityLevel

The Cisco TelePresence endpoints are using a NAND flash memory for general storage. The endpoints running TC software are manufactured with a new version of the flash memory. Endpoints having the new version of the flash memory must run software TC4.2.1 or later. Some previous TC software versions are updated to support the new flash memory. Please check the release note to find if the new version of the flash memory is supported. If your endpoint does not have the CompatibilityLevel command it does not have the new flash memory installed.

The result returned when running the command is either 0 or 1:

0 = The system does not have the new flash memory installed.

1 = The system has the new flash memory installed. If downgraded, it can only be downgraded to previous TC software versions having support for the new version of the flash memory.

Requires user role: ADMIN, USER

Value space of the result returned:

1/0

Example:

```
xStatus SystemUnit Hardware Module CompatibilityLevel
*s SystemUnit Hardware Module CompatibilityLevel: 1
** end
```

xStatus SystemUnit Hardware Module SerialNumber

Shows the serial number of the hardware module in the codec.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus SystemUnit Hardware MainBoard SerialNumber
*s SystemUnit Hardware MainBoard SerialNumber: "FOC99999999"
** end
```

xStatus SystemUnit Hardware Monitoring Fan [n] Status

The feedback shows the speed (rpm) for the specified fan.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus SystemUnit Hardware Monitoring Fan 1 Status
*s SystemUnit Hardware Monitoring Fan 1 Status: "locked on 1096 rpm"
** end
```

xStatus SystemUnit Notifications Notification [n] Text

Lists text related to important system notifications. Notifications are issued e.g. when a system was rebooted because of a software upgrade, or when a factory reset has been performed.

All the notifications can be removed from the list by issuing the xCommand SystemUnit Notifications RemoveAll command.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus SystemUnit Notifications Notification 1 Text
*s SystemUnit Notifications Notification 1 Text: "OK"
** end
```

xStatus SystemUnit Notifications Notification [n] Type

Lists the system notification types. Notifications are issued e.g. when a system is rebooted because of a software upgrade, or when a factory reset is performed.

FactoryResetOK: This value is returned after a successful factory reset.

FactoryResetFailed: This value is returned after a failed factory reset attempt.

SoftwareUpgradeOK: This value is returned after a successful software upgrade.

SoftwareUpgradeFailed: This value is returned after a failed software upgrade attempt.

RebootRequired: This value is returned when a reboot is required.

Other: This value is returned for any other notifications.

All the notifications can be removed from the list by issuing the xCommand SystemUnit Notifications RemoveAll command.

Requires user role: ADMIN, USER

Value space of the result returned:

FactoryResetOK, FactoryResetFailed, SoftwareUpgradeOK, SoftwareUpgradeFailed, RebootRequired, Other

Example:

```
xStatus SystemUnit Notifications Notification 1 Type
*s SystemUnit Notifications Notification 1 Type: SoftwareUpgradeOK
** end
```

xStatus SystemUnit ProductId

Shows the product identity.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus SystemUnit ProductId
*s SystemUnit ProductId: "Cisco TelePresence Codec SX80"
** end
```

xStatus SystemUnit ProductPlatform

Shows the product platform.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus SystemUnit ProductPlatform
*s SystemUnit ProductPlatform: "SX80"
** end
```

xStatus SystemUnit ProductType

Shows the product type.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus SystemUnit ProductType
*s SystemUnit ProductType: "Cisco Codec"
** end
```

xStatus SystemUnit Software DisplayName

Shows the name of the software that is installed on the codec, as it is displayed in the UI.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus SystemUnit Software DisplayName
*s SystemUnit Software DisplayName: "Display Name"
** end
```

xStatus SystemUnit Software Name

Shows the name of the software that is installed on the codec.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus SystemUnit Software Name
*s SystemUnit Software Name: "s53200"
** end
```

xStatus SystemUnit Software OptionKeys Encryption

Shows if the software on the system have support for encryption.

Requires user role: ADMIN, USER

Value space of the result returned:

False/True

Example:

```
xStatus SystemUnit Software OptionKeys Encryption
*s SystemUnit Software OptionKeys Encryption: "true"
** end
```

xStatus SystemUnit Software OptionKeys MultiSite

Shows if the system has the option key installed that supports the MultiSite functionality.

Requires user role: ADMIN, USER

Value space of the result returned:

False/True

Example:

```
xStatus SystemUnit Software OptionKeys MultiSite
*s SystemUnit Software OptionKeys MultiSite: "true"
** end
```

xStatus SystemUnit Software OptionKeys RemoteMonitoring

Shows whether the system has the remote monitoring option key installed. Remote monitoring option key enables snapshots from the web interface, and from a remote paired Touch 10.

Requires user role: ADMIN, USER

Value space of the result returned:

False/True

Example:

```
xStatus SystemUnit Software OptionKeys RemoteMonitoring
*s SystemUnit Software OptionKeys RemoteMonitoring: "true"
** end
```

xStatus SystemUnit Software ReleaseDate

Shows the release date of the software installed on the codec.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus SystemUnit Software ReleaseDate
*s SystemUnit Software ReleaseDate: "2015-05-05"
** end
```

xStatus SystemUnit Software Version

Shows the software version installed on the codec.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus SystemUnit Software Version
*s SystemUnit Software Version: "CE8.0.0"
** end
```

xStatus SystemUnit State NumberOfActiveCalls

Shows the number of active calls.

Requires user role: ADMIN, INTEGRATOR, USER, ROOMCONTROL

Value space of the result returned:

0..5

Example:

```
xStatus SystemUnit State NumberOfActiveCalls
*s SystemUnit State NumberOfActiveCalls: 0
** end
```

xStatus SystemUnit State NumberOfInProgressCalls

Shows the number of calls in progress.

Requires user role: ADMIN, INTEGRATOR, USER, ROOMCONTROL

Value space of the result returned:

0..5

Example:

```
xStatus SystemUnit State NumberOfInProgressCalls
*s SystemUnit State NumberOfInProgressCalls: 0
** end
```

xStatus SystemUnit State NumberOfSuspendedCalls

Shows the number of suspended calls.

Requires user role: ADMIN, USER

Value space of the result returned:

0..5

Example:

```
xStatus SystemUnit State NumberOfSuspendedCalls
*s SystemUnit State NumberOfSuspendedCalls: 0
** end
```

xStatus SystemUnit Uptime

Shows the number of seconds since the last restart of the codec.

Requires user role: ADMIN, USER

Value space of the result returned:

Integer

Example:

```
xStatus SystemUnit Uptime
*s SystemUnit Uptime: 597095
** end
```


Time status

xStatus Time SystemTime

Returns the date and time set on the system.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

String

Example:

```
xStatus Time SystemTime
*s Time SystemTime: "2014-04-25T10:04:03Z"
** end
```

UserInterface status

xStatus UserInterface ContactInfo ContactMethod [n] Number

Returns the system's active contact information. This address is used to reach this endpoint.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus UserInterface ContactInfo ContactMethod Number
*s UserInterface ContactInfo ContactMethod 1 Number: "12345678"
** end
```

xStatus UserInterface ContactInfo Name

Returns the system's active contact name. The result depends on which protocol, if any, the system is registered on. The automatically set contact name may have been overridden with the command xConfiguration UserInterface ContactInfo Type. This results in a diagnostics warning about contact mismatch.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus UserInterface ContactInfo Name
*s UserInterface ContactInfo Name: "MySystem"
** end
```

xStatus UserInterface Extensions Widget [n] Value

Returns the value for a widget. Widgets are used in custom panels, for example in-room controls, that are added to the user interface. The value space depends on the widget type. The value is an empty string until a value is set with the UserInterface Extensions Widget SetValue command.

Requires user role: ADMIN, INTEGRATOR, USER, ROOMCONTROL

Value space of the result returned:

String

xStatus UserInterface Extensions Widget [n] WidgetId

Returns the unique identifier for a widget. Widgets are used in custom panels, for example in-room controls, that are added to the user interface.

Requires user role: ADMIN, INTEGRATOR, USER, ROOMCONTROL

Value space of the result returned:

String

Video status

xStatus Video ActiveSpeaker PIPPosition

Shows the position of the active speaker's image on the screen.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

UpperLeft/UpperCenter/UpperRight/CenterLeft/CenterRight/LowerLeft/LowerRight

Example:

```
xStatus Video ActiveSpeaker PIPPosition
*s Video PIP ActiveSpeaker Position: UpperCenter
** end
```

xStatus Video Input Connector [n] Connected

Shows whether is something is connected to the specified connector. Not all connections can be detected.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

False/True/Unknown

Example:

```
xStatus Video Input Connector 1 Connected
*s Video Input Connector 1 Connected: True
** end
```

xStatus Video Input Connector [n] ConnectedDevice CEC [n] DeviceType

Shows what type of input device is connected.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

String

Example:

```
xStatus Video Input Connector 2 ConnectedDevice CEC 5 DeviceType
*s Video Input Connector 2 ConnectedDevice CEC 5 DeviceType: "Playback"
** end
```

xStatus Video Input Connector [n] ConnectedDevice CEC [n] LogicalAddress

Shows the CEC logical address of the connected input device. The address is fixed at 0.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

Integer

Example:

```
xStatus Video Input Connector 1 ConnectedDevice CEC 1 LogicalAddress
*s Video Input Connector 1 ConnectedDevice CEC 1 LogicalAddress: 0
** end
```

xStatus Video Input Connector [n] ConnectedDevice CEC [n] Name

Shows the name of the connected input device.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

String

Example:

```
xStatus Video Input Connector 2 ConnectedDevice CEC 5 Name
*s Video Input Connector 2 ConnectedDevice CEC 5 Name: "Device-2"
** end
```

xStatus Video Input Connector [n] ConnectedDevice CEC [n] PowerStatus

Shows the state of the CEC enabled device connected to the HDMI input.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

String

Example:

```
xStatus Video Input Connector 2 ConnectedDevice CEC 5 PowerStatus
*s Video Input Connector 2 ConnectedDevice CEC 5 PowerStatus: "Standby"
** end
```

xStatus Video Input Connector [n] ConnectedDevice CEC [n] VendorId

Shows the vendor ID for the connected input device.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

String

Example:

```
xStatus Video Input Connector 2 ConnectedDevice CEC 5 VendorId
*s Video Input Connector 2 ConnectedDevice CEC 5 VendorId: "20576"
** end
```

xStatus Video Input Connector [n] SignalState

Shows the signal state for the specified input.

Unknown: The signal format is unknown.

OK: A signal is detected and the signal format is supported.

Unsupported: A signal is detected, but the signal format is not supported.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

OK/Unknown/Unsupported

Example:

```
xStatus Video Input Connector 1 SignalState
*s Video Input Connector 1 SignalState: OK
** end
```

xStatus Video Input Connector [n] SourceId

Shows the identifier of the input source that the connector is associated with.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

Integer

Example:

```
xStatus Video Input Connector 1 SourceId
*s Video Input Connector 1 SourceId: 1
** end
```

xStatus Video Input Connector [n] Type

Shows which connector type it is.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

Composite/DVI/HDMI/Unknown/YC

Example:

```
xStatus Video Input Connector 1 Type
*s Video Input Connector 1 Type: HDMI
** end
```

xStatus Video Input MainVideoSource

Returns the local video input currently used as the main source. The value Composed is returned if the main source is composed of more than one local input. The default main video source is set with the xConfiguration Video DefaultMainSource command. It can be changed using xCommand Video Input SetMainVideoSource.

Requires user role: ADMIN, USER

Value space of the result returned:

Literal (1 / 2 / 3 / 4 / Composed)

Example:

```
xStatus Video Input MainVideoSource
*s Video Input MainVideoSource: 1
** end
```

xStatus Video Input Source [n] ConnectorId

Shows the identifier of the connector that is associated with the input source.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

Integer

Example:

```
xStatus Video Input Source 1 ConnectorId
*s Video Input Source 1 ConnectorId: 1
** end
```

xStatus Video Input Source [n] FormatStatus

Shows the resolution format status for the video input source.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

Ok/OutOfRange/NotFound/Interlaced/Error/Unknown

Example:

```
xStatus Video Input Source 1 FormatStatus
*s Video Input Source 1 Resolution FormatStatus: Ok
** end
```

xStatus Video Input Source [n] FormatType

Shows the resolution format type for the video input source.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

Unknown/AnalogCVTBlanking/AnalogCVTReducedBlanking/AnalogGTFDefault/
AnalogGTFSecondary/AnalogDiscreteTiming/AnalogDMTBlanking/AnalogCEABlanking/Digital

Example:

```
xStatus Video Input Source 1 FormatType
*s Video Input Source 1 Resolution FormatType: Digital
** end
```

xStatus Video Input Source [n] MediaChannelId

For internal use only.

Requires user role: ADMIN, USER

Value space of the result returned:

Integer

Example:

```
xStatus Video Input Source MediaChannelId
*s Video Input Source 1 MediaChannelId: 2
*s Video Input Source 2 MediaChannelId: 3
** end
```

xStatus Video Input Source [n] Resolution Height

Shows the resolution height (in pixels) for the video input source.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

0..3000

Example:

```
xStatus Video Input Source 1 Resolution Height
*s Video Input Source 1 Resolution Height: 1080
** end
```

xStatus Video Input Source [n] Resolution RefreshRate

Shows the resolution refresh rate (Hz) for the video input source.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

0..300

Example:

```
xStatus Video Input Source 1 Resolution RefreshRate
*s Video Input Source 1 Resolution RefreshRate: 50
** end
```

xStatus Video Input Source [n] Resolution Width

Shows the resolution width (in pixels) for the video input source.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

0..4000

Example:

```
xStatus Video Input Source 1 Resolution Width
*s Video Input Source 1 Resolution Width: 1920
** end
```

xStatus Video Layout LayoutFamily Local

Shows the local screen layout family.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Video Layout LayoutFamily Local
*s Video Layout LayoutFamily Local: "equal"
** end
```

xStatus Video Layout LayoutFamily Remote

Shows the remote screen layout family.

Requires user role: ADMIN, USER

Value space of the result returned:

String

Example:

```
xStatus Video Layout LayoutFamily Remote
*s Video Layout LayoutFamily Remote: "equal"
** end
```

xStatus Video Monitors

Returns the monitor layout mode.

Single: The same layout is shown on all monitors.

Dual: The layout is distributed on two monitors.

DualPresentationOnly: All participants in the call will be shown on the first monitor, while the presentation (if any) will be shown on the second monitor.

Quadruple: The layout is distributed on four monitors, so that each remote participant and the presentation will be shown on separate monitors.

Requires user role: ADMIN, USER

Value space of the result returned:

Single/Dual/DualPresentationOnly/Triple/TriplePresentationOnly/Quadruple

Example:

```
xStatus Video Monitors
*s Video Monitors: Single
** end
```

xStatus Video Output Connector [n] Connected

Describes whether a device (for example a display) is connected to the output connector or not. When a display enters standby mode, the endpoint may not be able to detect it. The connector status will then return False/Unknown even if the display is physically connected.

True: A device is connected to the video output connector.

False: Nothing is connected to the video output connector.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

True/False

Example:

```
xStatus Video Output Connector 1 Connected
*s Video Output Connector 1 Connected: True
** end
```

xStatus Video Output Connector [n] ConnectedDevice CEC DeviceType

Shows the type of CEC enabled device connected to the HDMI output the codec has detected.

This information is only available when the device connected to the HDMI output has the CEC feature configured on and the codec has the configuration xConfiguration Video Output Connector [n] CEC Mode set to on.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

Unknown/TV/Reserved/Recorder/Tuner/Playback/Audio

Example:

```
xStatus Video Output Connector 1 ConnectedDevice CEC DeviceType
*s Video Output Connector 1 ConnectedDevice CEC DeviceType: TV
** end
```

xStatus Video Output Connector [n] ConnectedDevice CEC [n] LogicalAddress

Shows the CEC logical address of the device.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

Integer (0..15)

Example:

```
xStatus Video Output Connector 1 ConnectedDevice CEC 1 LogicalAddress
*s Video Output Connector 1 ConnectedDevice CEC 1 LogicalAddress: 4
** end
```

xStatus Video Output Connector [n] ConnectedDevice CEC Name

Returns the name of the connected device.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

String

Example:

```
xStatus Video Output Connector 1 ConnectedDevice CEC Name
*s Video Output Connector 1 ConnectedDevice CEC 1 Name: "LG SIGNAGE TV"
** end
```

xStatus Video Output Connector [n] ConnectedDevice CEC PowerControl

Shows whether the codec is controlling the CEC enabled device connected to the HDMI output. This information is only available when the device connected to the HDMI output has the CEC feature configured on and the codec has the configuration xConfiguration Video Output Connector CEC Mode set to on.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

Unknown/Ok/In progress/Failed to power on/Failed to standby

Example:

```
xStatus Video Output Connector 1 ConnectedDevice CEC PowerControl
*s Video Output Connector 1 ConnectedDevice CEC PowerControl: Ok
** end
```

xStatus Video Output Connector [n] ConnectedDevice CEC PowerStatus

Shows the state of the CEC enabled device connected to the HDMI output. This information is only available when the device connected to the HDMI output has the CEC feature configured on and the codec has the configuration xConfiguration Video Output Connector CEC Mode set to on.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

Unknown/Ok/In progress/Failed to power on/Failed to standby

Example:

```
xStatus Video Output Connector 1 ConnectedDevice CEC PowerStatus
*s Video Output Connector 1 ConnectedDevice CEC PowerStatus: Ok
** end
```

xStatus Video Output Connector [n] ConnectedDevice CEC VendorId

Returns the vendor ID for the connected device.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

String

Example:

```
xStatus Video Output Connector 1 ConnectedDevice CEC VendorId
*s Video Output Connector 1 ConnectedDevice CEC 1 VendorId: "57489"
** end
```

xStatus Video Output Connector [n] ConnectedDevice Name

Shows the name of the monitor connected to the HDMI port as defined in the monitors EDID.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

String

Example:

```
xStatus Video Output Connector 1 ConnectedDevice Name
*s Video Output Connector 1 ConnectedDevice Name: "G2420HDBL"
** end
```

xStatus Video Output Connector [n] ConnectedDevice PreferredFormat

Shows the preferred input format of the monitor connected to the HDMI port as defined in the monitors EDID. This is not necessarily the format the codec is sending out.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

String

Example:

```
xStatus Video Output Connector 1 ConnectedDevice PreferredFormat
*s Video Output Connector 1 ConnectedDevice PreferredFormat: "1920x1080@60Hz"
** end
```

xStatus Video Output Connector [n] ConnectedDevice ScreenSize

Shows the screen size of the connected device in inches. If this information is not available, the default value is set to 0.

Requires user role: ADMIN, USER

Value space of the result returned:

Integer

Example:

```
xStatus Video Output Connector 1 ConnectedDevice ScreenSize
*s Video Output Connector 1 ConnectedDevice ScreenSize: 55
** end
```

xStatus Video Output Connector [n] MonitorRole

Describes which video stream is shown on the device that is connected to the video output connector.

First/Second/Third: The role of the monitor in a multimonitor setup. In a singlemonitor setup, there is no difference between First, Second and Third.

PresentationOnly: Shows presentation video stream if active.

Recorder: Shows all participants, including the local main video. If active, shows also the presentation.

Requires user role: ADMIN, USER

Value space of the result returned:

First/Second/Third/PresentationOnly/Recorder

Example:

```
xStatus Video Output Connector 1 MonitorRole
*s Video Output Connector 1 MonitorRole: First
** end
```

xStatus Video Output Connector [n] Resolution Height

Shows the resolution height (in pixels) for the video output connector.

Requires user role: ADMIN, USER

Value space of the result returned:

120..3000

Example:

```
xStatus Video Output Connector 1 Resolution Height
*s Video Output Connector 1 Resolution Height: 1080
** en
```

xStatus Video Output Connector [n] Resolution RefreshRate

Shows the resolution refresh rate (Hz) for the video output connector.

Requires user role: ADMIN, USER

Value space of the result returned:

1..300

Example:

```
xStatus Video Output Connector 1 Resolution RefreshRate
*s Video Output Connector 1 Resolution RefreshRate: 60
** end
```

xStatus Video Output Connector [n] Resolution Width

Shows the resolution width (in pixels) for the video output connector.

Requires user role: ADMIN, USER

Value space of the result returned:

176..4000

Example:

```
xStatus Video Output Connector 1 Resolution Width
*s Video Output Connector 1 Resolution Width: 1920
** end
```


xStatus Video Output Connector [n] Type

Shows the type of connector.
 HDMI: It is an HDMI connector.
 DVI: It is an DVI connector.

Requires user role: ADMIN, USER

Value space of the result returned:

HDMI/DVI

Example:

```
xStatus Video Output Connector 1 Type
*s Video Output Connector 1 Type: HDMI
** end
```

xStatus Video Presentation PIPPosition

Shows the position of the presentation image on the screen.

Requires user role: ADMIN, USER

Value space of the result returned:

UpperLeft/UpperCenter/UpperRight/CenterLeft/CenterRight/LowerLeft/LowerRight

Example:

```
xStatus Video Presentation PIPPosition
*s Video PIP Presentation Position: CenterLeft
** end
```

xStatus Video Selfview FullscreenMode

Shows whether selfview is set on full screen mode or not.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

On/Off

Example:

```
xStatus Video Selfview FullscreenMode
*s Video Selfview FullscreenMode: Off
** end
```

xStatus Video Selfview Mode

Shows whether selfview mode is set on or not.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

On/Off

Example:

```
xStatus Video Selfview Mode
*s Video Selfview Mode: Off
** end
```

xStatus Video Selfview OnMonitorRole

Identifies which monitor(s) contains the selfview, if present.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

First/Second/Third/Fourth

Example:

```
xStatus Video Selfview OnMonitorRole
*s Video Selfview OnMonitorRole: First
** end
```

xStatus Video Selfview PIPPosition

Shows the position of the selfview image on the screen.

Requires user role: ADMIN, INTEGRATOR, USER

Value space of the result returned:

UpperLeft/UpperCenter/UpperRight/CenterLeft/CenterRight/LowerLeft/LowerRight

Example:

```
xStatus Video Selfview PIPPosition
*s Video Selfview PIPPosition: LowerRight
** end
```

Chapter 6

Appendices

About startup scripts

You can add one or more startup scripts to the codec. A startup script contains commands (xCommand) and configurations (xConfiguration) that will be executed as part of the start up procedure every time the codec boots. A few commands and configurations cannot be placed in a startup script, e.g. xCommand SystemUnit Boot.

Use the codec's web interface to create and manage startup scripts.

Read more about the web interface and startup scripts in the Administrator guide for your product.

The SystemTools commands

NOTE: The systemtools commands are used for administrative control of the codec and are only available from a command line interface. Systemtools should not be used to program the codec.

Required parameters in angle brackets: <text>

Optional parameters in square brackets: [text]

To get an overview of the supported commands type “systemtools ?”.

Example:

```
systemtools ?
rootsettings
selectsw
whoami
license
network
ntp
passwd
pki
securitysettings
securitystatus
sudo
idefixversion
```

To see the usage of the commands add a question mark after the command.

Example:

```
systemtools network ?
usage: network ping <hostname> | traceroute
<hostname> | netstat | addr | ifconfig | ifstats
<ifname>
```

systemtools idefixversion

Returns the software version of a Touch controller that is connected to the codec.

systemtools license list

Lists all the licenses for the codec.

systemtools license show <name>

Shows the content of a license file, defined by the name.

<name>: The name of the license file.

systemtools network ping <hostname>

Network debug command.

<hostname>: The IP address or URL of the host.

systemtools network traceroute <hostname>

Network debug command.

<hostname>: The IP address or URL of the host.

systemtools network netstat

Network debug command.

systemtools network addr

Check the systems IP address.

systemtools network ifconfig

Network debug command.

systemtools passwd

Change the password for the logged in user.

systemtools pki list

Lists the codec certificate and CA list if they exist.

systemtools pki delete <cert-name>

Delete the codec certificate and CA list if they exist.

<cert-name>: The name of the certificate.

systemtools securitysettings jitc

Set up security requirements so they meet JITC.

Set password and PIN polices enforced on the codec.

systemtools securitysettings isjitc

Check if the current settings are JTIC compliant.

systemtools securitysettings default

Revert to default security settings.

systemtools securitysettings ask

Query for the separate configurations. When issuing this command you can see each policy separately.

- Press enter to keep the current value.
- Enter a number and press enter to change the given policy.
- The default value “0” indicates no restrictions.

Max failed login attempts [0]?

- Number of failed logins until a user is set inactive.

Suspend-time after max failed login attempts (minutes) [0]?

- Number of minutes the user is set inactive after maximum failed login attempts have been exceeded.

Max simultaneous sessions total [0]?

- Maximum number of users that can be logged in simultaneous to web and maximum number of users that can be logged in simultaneous to ssh/Telnet.

Max simultaneous sessions per user [0]?

- Maximum number of simultaneous sessions per user.

Number of passwords to remember [0]?

- Number of previous passwords that the new password

must differ from.

Number of PINs to remember [0]?

- Number of previous PINs that the new PIN must differ from.

Maximum time between password renewals (days) [0]?

- If the user has not changed the password within the renewal time the user will be set inactive.

Minimum time between password renewals (hours) [0]?

- The user can only change password once within this limit.

Maximum time between PIN renewals (days) [0]?

- If the user has not changed the PIN within the renewal time the user will be set inactive.

Minimum time between PIN renewals (hours) [0]?

- The user can only change PIN once within this limit.

Maximum time between logins (days) [0]?

- If the user has not logged in within this limit the user will be set inactive.

Max consecutive equal digits in PINs [0]?

- Maximum consecutive equal digits in PINs.

Minimum number of digits in PINs [0]?

- Minimum number of digits in PINs.

Maximum number of digits in PINs [0]?

- Maximum number of digits in PINs.

Max consecutive identical characters in passwords [0]?

- Maximum consecutive identical characters in passwords.

Minimum number of characters in passwords [0]?

- Minimum number of characters in passwords.

Maximum number of characters in passwords [0]?

- Maximum number of characters in passwords.

Minimum number of lower-case letters in passwords [0]?

- Minimum number of lower-case letters in passwords.

Minimum number of upper-case letters in passwords [0]?

- Minimum number of upper-case letters in passwords.

Minimum number of numerical characters in passwords [0]?

- Minimum number of numerical characters in passwords.

Minimum number of special characters in passwords [0]?

- Minimum number of special characters in passwords.

Minimum number of character groups in passwords [0]?

- Minimum number of character groups in passwords.

Minimum number of character changed from previous password [0]?

- Minimum number of character changed from previous password.

systemtools securitystatus

Shows the security status for the codec.

systemtools selectsw

Select which of the available software images to use.

Changing the software image will restart the codec.

No argument given: Lists the version of the available software images, and shows which one is active.

image name: Swap to the software with this name.

systemtools sudo on

Changes the user role of the current session to the role of the specified user

<username>: The name of the sudo user.

<password>: The password for the sudo user.

systemtools sudo off

Reverts back to the user role of the signed in user.

systemtools whoami

Lists the name and id of the signed in user, and the user roles held by this user.

About disconnect cause types

The following parameters are logged when a call is disconnected. The disconnect cause types are used in disconnect events (xEvent).

CauseValue	Proprietary. We recomend the use of CauseType and CauseCode.
CauseType	Describes why the call was disconnected. The value space is { OtherLocal, LocalDisconnect, UnknownRemoteSite, LocalBusy, LocalReject, InsufficientSecurity, OtherRemote, RemoteDisconnect, RemoteBusy, RemoteRejected, RemoteNoAnswer, CallForwarded, NetworkRejected }
CauseString	Describes the Cause Code.
CauseCode	The disconnect Cause Codes are defined in SIP and Q.850.
CauseOrigin	SIP, Q.850, internal.

Example:

```
xEvent DisconnectEvent

*e CallDisconnect CauseValue: 1
  CauseType: "LocalDisconnect"
  CauseString: ""
  OrigCallDirection: "outgoing"
  RemoteURI: "firstname.lastname@company.com"
  CallId: 89
  CauseCode: 0
  CauseOrigin: SIP
** end
```

User documentation on the Cisco web site

User documentation for the Cisco Collaboration Endpoint products is available at

▶ <http://www.cisco.com/go/telepresence/docs>

Choose a product category in the right pane until you find the correct product. This is the path you have to follow:

Collaboration Endpoints >

Collaboration Room Endpoints >

Cisco Spark Room Kit Series

Alternatively, use the following short-link to find the documentation:

▶ <http://www.cisco.com/go/roomkit-docs>

The documents are organized in the following categories:

Install and Upgrade > Install and Upgrade Guides

- *Installation guides:* How to install the product
- *Getting started guide:* Initial configurations required to get the system up and running
- *RCSI guide:* Regulatory compliance and safety information

Maintain and Operate > Maintain and Operate Guides

- *Getting started guide:* Initial configurations required to get the system up and running
- *Administrator guide:* Information required to administer your product
- *Administering CE Endpoints on CUCM:* Tasks to perform to start using the product with the Cisco Unified Communications Manager (CUCM)

Maintain and Operate > End-User Guides

- *User guides:* How to use the product
- *Quick reference guides:* How to use the product

Reference Guides | Command references

- *API reference guides:* Reference guide for the Application Programmer Interface (API)

Reference Guides > Technical References

- *CAD drawings:* 2D CAD drawings with measurements

Design > Design Guides

- *Video conferencing room guidelines:* General guidelines for room design and best practice
- *Video conferencing room guidelines:* Things to do to improve the perceived audio quality

Software Downloads, Release and General Information > Licensing Information

- *Open source documentation:* Licenses and notices for open source software used in this product

Software Downloads, Release and General Information > Release Notes

- *Software release notes*

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