Software version F9
May 2011

API Reference Guide

Cisco Telepresence System Codec 6000 MXP and Codec 3000 MXP

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/telepresence/docs

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Chapter 1

Introduction

About this guide

The purpose of this document is to introduce you to the Application Programmer Interface (API) in general and to serve as a reference guide for the command line commands for the Codec MXP Series listed below:

- Cisco TelePresence System Codec 6000 MXP
- Cisco TelePresence System Codec 3000 MXP

User documentation

The user documentation for the Cisco TelePresence systems, running the **F-software**, have several guides suitable to various user groups.

- Video conference room primer
- Video conference room acoustics guidelines
- Getting started guide for the MXP Series
- User guide for the MXP Series
- Administrator guide for the MXP Series
- API reference guides for the MXP Series Codecs
- Physical interfaces guides for the MXP Series Codecs
- Regulatory compliance and safety information guide for the MXP Series
- Licensing information for products using F-software
- Video Switch user guide

Download the user documentation

Go to: ► http://www.cisco.com/go/telepresence/docs and select your product to see the user documentation for your product.

What's new in this version

This version of the guide has been rebranded to Cisco look and feel, and some of the large user guides has been split into smaller and more accessible parts.

We have kept the overview of the new and changed API commands and new features in the F9.0 software version.

Software release notes

For a complete overview of the news and changes, we recommend reading the Software Release Notes (TC4).

Go to: ▶ http://www.cisco.com/en/US/products/ps11423/tsd_products_support_series_home.html

Software download

For software download go to: ▶ http://www.cisco.com/cisco/software/navigator.html?a=a&i=rpm

User documentation

Download the user documentation

Go to: ▶ http://www.cisco.com/go/telepresence/docs

– in the right pane, select:

- **TelePresence Peripherals** for the PrecisionHD camera, microphones, and remote control.
- **TelePresence Solutions Platform** for the Codec C Series.

Cisco Branding

All web logos and GUI logo references to TANDBERG have been replaced with Cisco logo.

New document structure

Some of the user documentation is split into smaller and more accessible parts.

System Integrator Reference Guide

The previous MXP System Integrator Reference User Guide has been split into smaller guides:

- MXP Series Codec Physical Interface Guide
- MXP Series Codec API Reference Guide
- Video Switch User Guide

Administrator Guide

The previous MXP Administrator Guide has been split into smaller guides:

- MXP Series Getting Started Guide
- MXP Series Administrator Guide
- MXP Series Regulatory Compliance and Safety Information

Installation guides

The installation guides have been updated.

Licence information

The license information guide has been updated.

New and changed API commands

Detailed descriptions of the API commands are found in this guide are found in the xConfiguration, xCommand, and xStatus sections.

New commands

xConfiguration SIP DefaultCandidate Type: <Host, Rflx, Relay>

Sets the default candidate used for SIP signalling when using ICE.

Commands that have changed

xStatus SIP

Outbound has been added as a return parameter to SIP. This is for future use.

Chapter 2

About the API

About the API

Basic Principles

The heart of the API is the API-Engine. This is where all information is stored and processed.

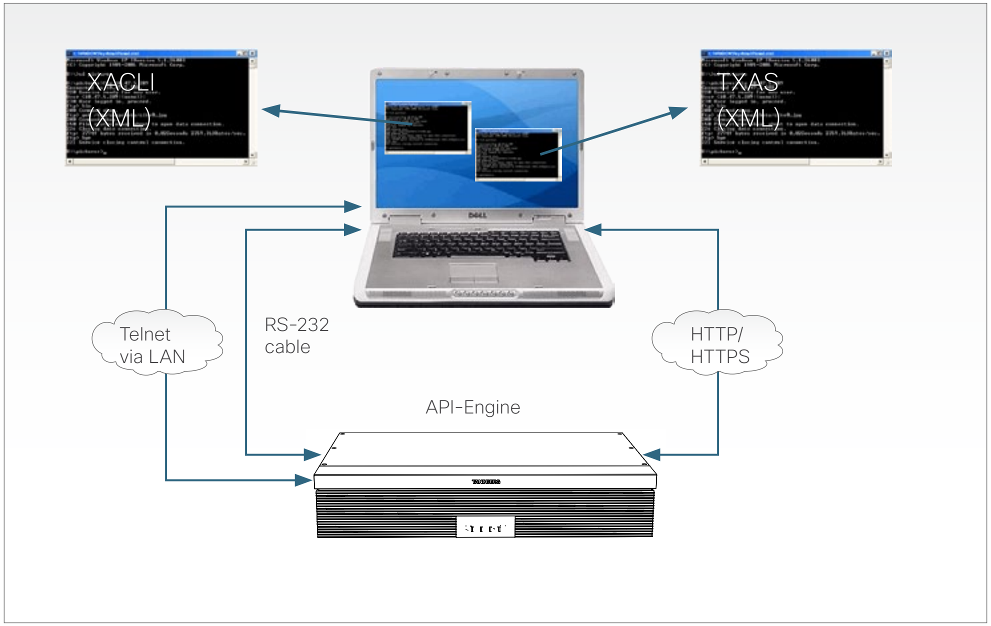
The API-engine can be accessed by an easy-to-use Command Line Interface called ***XACLI*** using RS-232, ***Telnet***, or by the XML API Service (***TXAS***) over HTTP/HTTPS.

Working with the API-engine is very similar to working with catalogues and files on a computer. All information is stored in a hierarchic tree structure which is accessible from different interfaces.

- When accessing the API-engine using XACLI (RS-232, Telnet), the information is formatted in a proprietary Command Line style or in XML formatting.
- When accessing the API-engine using the TXAS interface (HTTP/HTTPS), XML formatting is supported.

This is similar to viewing files on a computer. Accessing catalogues on a Windows computer using the Command Prompt gives a different view than using Windows Explorer, but the information is the same.

NOTE: New feature on the Cisco MXP will be supported on XACLI only.



The API-Engine

The API-Engine is optimized for easy, yet advanced, machine-machine interaction between a Cisco system and an external control application.

The main features can be summarized to:

1. Structuring of information
2. Addressing using XPath (XML Path Language) or SimplePath
3. Feedback

Structuring of Information

An application programming interface (API) can be seen as a gate where information is exchanged between two systems – a control application and a target system.

The control application transmits instructions to the target system, while the target system supplies information about how these instructions are executed, in addition to other system related information.

Consequently, the exchange of information can be divided into:

1. Information flowing from target. This we call READ information (R). The (R) should not be confused with the (r) used to indicate required parameters in the Commands tables.
2. Information flowing to target. This we call WRITE information (W).

Main types of information

- READ information (R)
- WRITE information (W)
- READ/WRITE information (RW)

(R) READ information. This is Status Information about the system and system processes, i.e. information generated by the system.

Typical examples include: status about ongoing calls, network status, conference status etc. All status information is structured in a hierarchy, making up a database constantly being updated by the system to reflect process changes.

(W) WRITE information. This is Command information the user/control application supply to initiate an action.

Typical examples include: instructing the system to place a call, adjust volume, disconnect a call etc.

A command is usually followed by a set of parameters to specify how the given action is to be executed.

(RW) READ/WRITE information. This is Configuration Information defining system settings. This information can both be supplied and read by the user/control application. Typical examples include: default call rate, baud rate of a serial port, enabling/disabling of various features etc.

All configuration information is structured in a hierarchy making up a database of system settings. But for the Configuration information, the data in the database can only be updated by the user/control application.

The RS232/Telnet dataport interface

The Cisco MXP also supports the RS-232/Telnet Dataport Interface that was also supported on the Classic systems. You may use any mixture of Classic Dataport commands and XACLI commands on the same RS232/Telnet session. A multitude of the commands overlaps, but XACLI offers more flexibillity and gives access to the latest features supported by the system.

We recommend the use of XACLI commands whenever you write new control system modules and whenever you add new features into existing control modules, but there is no need to rewrite already existing control modules based on Classic commands.

The XACLI API is described in detail later in this guide. The Classic Dataport Interface is described in the legacy MXP API Dataport User Guide, which is available separately.

NOTE: New features on the MXP codecs will be supported on XACLI only.

Examples

Set set the baudrate of serial port 1 to 9600:

Using classic dataport command:

```
sport data1 9600
```

Using XACLI:

```
xConfiguration serialport 1 baudrate: 9600
```

Example showing serial port configurations of a 6000 MXP codec, using the standard XACLI formatting for configurations:

```
xconfiguration serialport
*c xConfiguration SerialPort 1 BaudRate: 57600
*c xConfiguration SerialPort 1 Parity: None
*c xConfiguration SerialPort 1 DataBits: 8
*c xConfiguration SerialPort 1 StopBits: 1
*c xConfiguration SerialPort 1 Mode: Control
*c xConfiguration SerialPort 2 BaudRate: 9600
*c xConfiguration SerialPort 2 Parity: None
*c xConfiguration SerialPort 2 DataBits: 8
*c xConfiguration SerialPort 2 StopBits: 1
*c xConfiguration SerialPort 2 Mode: Auto
OK
```

Addressing Using XPath or SimplePath

To address information in the hierarchic structure of Status and Configuration information, the Cisco systems support abbreviated XML Path Language (XPath) and a proprietary notation called SimplePath (only available using XACLI).

This allows the user/control application to address everything from a single element of data (for example the call rate of a specific call) to larger parts of the hierarchy (for example all information available for a given call).

Using XPath

Addressing the baud rate element of serial port 2:

Each level is separated with a slash ('/'). Item numbers are added in brackets after the element name:

- SerialPort[2]/BaudRate

Example:

```
xconfiguration serialport[2]/baudrate
*c xConfiguration SerialPort 2 BaudRate: 9600
OK
```

Using SimplePath

Addressing the baud rate element of serial port 2:

Both levels and item numbers are separated with white spaces:

- SerialPort 2 BaudRate

Example:

```
xconfiguration serialport 2 baudrate
*c xConfiguration SerialPort 2 BaudRate: 9600
OK
```

Feedback

The special command xfeedback lets the user register user defined XPath expressions (with possible exposure options) to monitor changes in the XML/XACLI data. Whenever there is a change in one or more elements addressed by a registered XPath expression, the part of the element structure containing these changes will be returned.

The system supports a total of 20 registered expressions, with a total of 15 expressions for one RS 232/Telnet session.

The xfeedback is a session specific command, i.e. different RS 232/Telnet session can define feedback individually.

This also implies that the feedback expressions must be set each time the control application connects to the codec, i.e. the control application should always set the necessary feedback expressions when connecting to the system (or after system reboot when using RS 232).

Connecting to the codec

Accessing XACLI

XACLI can be accessed through Telnet via the LAN interface or through the COM port by connecting a serial cable to the serial interface connector. Eight Telnet sessions can be connected to the MXP codec simultaneously, in addition to the RS232 connection.

The COM port (RS-232) is a 9-pin, female, D-sub connector located on the back of the codec.

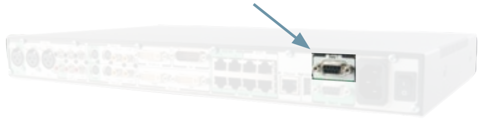
The port is configured as a DCE (Data Communications Equipment). The COM port (RS-232) is default set to 9600 baud, 8 data bits, none parity and 1 stop bit from factory. The port is referred to as the Dataport.

Connecting to XACLI using the dataport (RS-232)

The RS 232 port is a 9-pin, female, D-sub connector located on the back of the codec. The port is configured as a DCE (Data Communications Equipment). The RS 232 port is default set to 9600 baud, 8 data bits, none parity and 1 stop bit from factory. The RS- 232 port is also referred to as the Dataport.

Note that one of the RS -232 ports (Data 2) of the 6000 MXP Codec is used as a camera control socket.

Codec 6000 MXP data port (Data 1)



Codec 3000 MXP data port (Data)

Hardware & Cabling (RS-232)

The pin outs for the RS-232 are defined in the tables to the right. Observe that the DTE (Data Terminal Equipment), could be a PC or any other device capable of serial communication.

NOTE: A straight-through cable should be used between the RS-232 port and the DTE.

The lower table shows the recommended cable-wiring scheme when connecting the codec to a PC through RS-232.

DTR and RTS are ignored. DSR, CD, and CTS are always asserted, while RI is not used.

Troubleshooting (RS-232)

If communication cannot be established between the PC/terminal and the data port, the following should be checked:

1. Verify that the serial cable is a straight-through 9-pin to 9-pin cable.
2. Confirm that the configuration of the PC/terminal's serial RS-232 port is identical to the configuration of the RS-232 port.
3. Verify that the PC/terminal's serial RS-232 port is working properly by connecting it back-to-back to another PC/terminal and send characters in both directions.

COM port (RS-232)

Pin	*Signal name*	*Direction*
1	Carrier detect, CD	From DCE
2	Receive data, RXD	From DCE
3	Transmit data, TXD	To DCE
4	Data terminal ready, DTR	From DCE
5	Signal GND	
6	Data set ready, DSR	From DCE
7	Ready to send, RTS	To DCE
8	Clear to send, CTS	From DCE
9	Ring indicator, RI	From DCE

Cable wiring (RS-232) DCE <-> PC

DCE 9 pin	*Direction*	*PC DTE, 9 pin*
1 CD	–>	1 CD
2 RD	–>	2 RD
3 TD	<–	3 TD
4 DTR	<–	4 DTR
5 GND	<–>	5 GND
6 DSR	–>	6 DSR
7 RTS	<–	7 RTS
8 CTS	–>	8 CTS
9 RI	–>	9 RI

Value types and formats

The system supports the following value types:

- Integer values
- Literal values
- String values
- E164 string values (strings only containing digits, '#' and '*')
- IPv4 Address values
- IPv6 Address values
- IPv4 or IPv6 Address values

Formats for value types
Integer values:<x..y>
Defines the valid range for an integer input. x = min value, y = max value.
<1..100>
Literal values: <X/Y/../Z>
Defines the possible values for a given configuration.
<On/Off/Auto>
String values: <S: x, y>
Defines that the valid input for this configuration is a String with minimum length x and maximum length of y characters.
<S: 0, 49>
IPv4 Address values: <IPAddr>
Defines that the input must be an IPv4 address.
<IPAddr>
IPv6 Address values: <IPv6Addr: x, y>
Defines that the input must be an IPv6 address with minimum length x and maximum length y.
<IPv6Addr: 0, 43>
IPv4 or IPv6 Address values: <IPv4v6Addr: x, y>
Defines that the input must be an IPv4 or IPv6 address with minimum length x and maximum length y.
<IPv4v6Addr: 0, 43>

Root commands

By typing ? or help after connecting to the codec using RS-232/Telnet, the system will list all supported root commands.

All root commands prefixed with an x belongs to the XACLI interface. These are shown in orange colour in the table to the right. All other root commands belong to the Classic Dataport Interface (described in a separate document).

NOTE! Classic Dataport commands and XACLI commands can be used side by side. However, the use of XACLI commands is recommended whenever writing new control system modules and whenever adding new features into existing control modules, but there is no need to rewrite existing code based on the Classic commands.

NOTE: New feature on the Cisco MXP will be supported on XACLI only.

```
?
- User Commands -

about               dumph221            localdn             rinfo
access              duovideo            los-duration        rnumber
aim                 echoctrl            los-inhibit         screensaver
alrtvol             enable              los-initial         selfview
ansdelay            encmode             los-polarity        sendnum
audioagc            encrypt             los-retry           services
audiofeature        encstatus           maxcall             snmp
audiofeedback       eventlog            mcucommand          spid
audioin             extcam              mcudirectory        spkr
audiolevel          extcap              mculine             sport
audiomix            extname             mcustat             sstring
audiomodule         extswitch           menupassword        statin
audioout            fallback            mic                 statout
autoans             fecc                monstat             still
automute            feedback            msn                 streaming
autopip             feinfo              multisite           strictpassword
beep                fevidsrc            netclock            sub
bondingtimer        g703settings        netctrl             syslog
boot                globdirectory       netdtrpulse         systemname
callstatus          h239                netisdn             telephony
camcenter           h323alias           netpri              teltone
cammove             h323callmanager     netprofile          test
campos              h323gatekeeper      netstat             traceroute
camsettings         h323mtu             nettype             vgaout
camsleepmode        h323nat             optionkey           vidfeature
camtrack            h323ports           pardial             vidin
chanstat            h323prefix          ping                vidname
chat                h323qos             pip                 vidtone
custominfo          h323rate            pldownspeed         vnc
defcall             h323status          preset-activate     vol
defvalues           h331mode            preset-list         websnapshots
delbox              help                preset-store        xcommand
dial                ifconfig            pressource          xconfiguration
directory           ipaddress           pricable            xdirectory
disable             ipassignment        pricrc4             xevent
disc                ipconflictcheck     prihighch           xfeedback
dispbox             iplr                prilowch            xgetxml
dispparam           ippassword          primaxchan          xhistory
disptxt             irctrl              prinsf              xpreferences
dltxt               isdntrace           prinumber           xstatus
donotdist           key                 prinumbrange
downspeed           language            prisearch
dualmon             layout-keyboard     protect

OK
```

All root commands prefixed with an ‘x’ belong to the XACLI interface.

Main type of commands

The XACLI is divided into three main types of commands, reflecting the information types supported by the API Engine.

The main types are:

- Configuration type commands
- Status type commands
- Command type commands

Configuration type commands

Configuration type commands defines the system settings. Configuration type commands are either supplied or read by the user.

Example: Set default call rate, baud rate of a serial port and enabling/disabling of various features etc.

The configuration commands are structured in a hierarchy, making up a database of system settings.

Supported commands:

- ▶ xConfiguration

Command type commands

Command type commands instructs the system to perform an action. Command type commands are supplied by the user.

Example: instructing the system to place a call, assign floor to a specific site, disconnect a call etc.

A Command type command is usually followed by a set of parameters to specify how the given action is to be executed.

Supported commands:

- ▶ xCommand

Status type commands

Status type commands returns information about the system and system processes. Status type commands are read by the user.

Example: Information generated by the system about ongoing calls, network status, conference status etc.

All status information is structured in a hierarchy, making up a database constantly being updated by the system to reflect system and process changes.

Supported commands:

- ▶ xStatus
- ▶ xHistory

Special commands

In addition to the above sets of commands, XACLI supports the following set of special commands:

The main types are:

- Feedback type commands
- Preferences type commands
- GetXML type commands

Feedback type command

The xFeedback command is used to specify what parts of the configuration and status hierarchies to monitor. Feedback will only be issued on the RS-232/Telnet session for which it is specified. If connecting to the codec with multiple sessions, each session can define feedback individually.

Supported commands:

- ▶ xFeedback
- ▶ xEvent

Preferences type command

The xPreferences command is used to set various preferences for the RS-232/Telnet sessions. Each session can define preferences individually. IMPORTANT! This command has various settings to define the formatting of the XACLI output. It is therefore important to define settings to match the parser used on the control system. XACLI is designed to make parsing of data from the codec very simple.

Supported commands:

- ▶ xPreferences

GetXML type command

The xPreferences command gives access to the exact same information as the Main types of commands (xstatus, xhistory, xconfiguration etc.), but returns the information XML formatted.

Supported commands:

- ▶ xGetxml

About xConfiguration

The xConfiguration type commands defines the system settings and are either supplied or read by the user. The xConfigurations commands are organized in a hierarchic tree structure.

To get an overview of accessible top-level configuration elements within the xConfiguration commands, enter ? or help after the xConfiguration command:

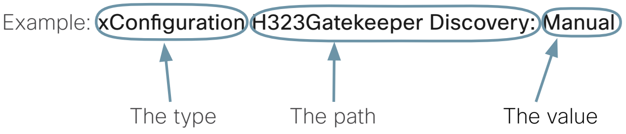
- `xConfiguration ?`
- `xConfiguration help`

To get an overview of all supported xConfiguration commands with the corresponding value space, enter ?? after the xConfiguration command:

- `xConfiguration ??`

The command structure consists of three parts:

1. The type: xConfiguration or xDirectory
2. The path: An address expression, terminated by a colon
3. The value: A value type


Example: xConfiguration H323Gatekeeper Discovery: Manual

```
xConfiguration ?

- User Configurations -

AdditionalCamera          DynamicResolution         ISDN                      Screensaver
AlertSpeaker              E1                        KeepDuoOpen               Security
AlertTone                 Ethernet                  Key                       SecurityLog
AllowLatency              ExternalManager           Keyboard                  SelfViewOnStartup
Audio                     ExternalNetwork           Kiosk                     SerialPort [1..2]
AutoAnswer                ExternalServices          LocalLayout               SIP
AutoDisplaySnapshot       FECC                      Logo                      SNMP
AutoLayout                FeedbackFilter            LoS                       SSH
AutoPIP                   FTP                       MainVideoSource           StartupVideoSource
Bonding                   G703                      MaxBandwidth              StillImageSource
CallManager               H320                      Multipoint                Streaming
CallVideoSource           H323                      NAT                       StrictPassword
Camera [1..13]            H323CallSetup             NetProfile [1..7]         Switch
CameraDVI                 H323Gatekeeper            NTP                       SystemUnit
CameraReverseControl      H323Prefix                OptionKey                 T1
CameraSleep               HTTP                      OSD                       Telnet
CameraSwUpgrade           HTTPS                     PacketlossDownSpeed       TelnetChallenge
CameraTracking            IdReport                  PictureProgram [1..4]     ThreePartyLayout
Conference                IEEE802.1x                PresentationSoftkey       Time
CorporateDirectory        IMUX                      PresentationStart         TURN
DefaultPIPPosition        Integrator                Preset [1..15]            UseAsLocalPCMonitor
Directory                 IP                        QoS                       Video
DoNotDisturb              IPMedia                   RemoteSwUpgrade           VNC
DualMonitor               IPProtocol                Robotron
DuoVideoSource            IRControl                 RTP

OK




xdirectory ?

- Directory -
GlobalEntry [1..400]
LocalEntry [1..200]
GroupEntry [1..50]

OK
```

xConfiguration operations

The xConfiguration type commands defines system settings and are either supplied or read by the user.

Return result parameters

Three operations can be performed on xConfiguration:

Configuration Help

- *h is used when returning the result of a help query

Configuration Read

- *c is used when returning the result of a xConfiguration read query
- *d is used when returning the result of a xDirectory read query

Configuration Write

- No return result parameter for configuration set (write)

xConfiguration Help

To get help on a system setting you can use a help query. Enter the path followed by ? or `help`.

Returns information about the setting defined by the path.

Example with xConfiguration Help:

To get help on xConfiguration, type ? or help after the configuration path (address expression):

xConfiguration <address expression> ?

```
xConfiguration H323Gatekeeper Discovery ?
*h xConfiguration H323Gatekeeper Discovery: <Manual/Auto>
OK
```

xConfiguration Read

When reading a value you will use the configuration read. The level of details is defined by the path.

Returns the current value of the setting defined by the path.

Example with xConfiguration Read:

To read configurations from the system just type the root command (xConfiguration) followed by the path (address expression):

xConfiguration <address expression>

```
xConfiguration H323Gatekeeper Discovery
*c xConfiguration H323Gatekeeper Discovery: Manual
OK
```

xConfiguration Write

When defining a system setting you will use the configuration write. The structure is described by the example to the right.

Writes this value to the setting defined by the path.

Example with xConfiguration Write:

To issue a command type a root command (xConfiguration) followed by a valid path (address expression). The path must be terminated with a colon before the value is added:

xConfiguration <address expression>: <value>

```
xConfiguration H323Gatekeeper Discovery: Auto
** end
```

About xCommand

The xCommand type commands instructs the system to perform an action. xCommand type commands are supplied by the user.

To get an overview of the supported xCommand type commands, type ? or help after the xCommand.

- `xCommand ?`
- `xCommand help`

To get an overview of all supported xCommand commands with the corresponding value space, enter ?? after the xCommand:

- `xCommand ??`

Required parameters

Required parameters are identified by an (r) behind the parameter name, see Example 2 to the right.

```
xCommand ?


– User Commands –

AlertToneTest                ChairTake                    FeedbackDeregister           PresetClear
AudioTestSignal              ConferenceDisconnect         FeedbackRegister             PresetStore
Boot                         ConferenceMoveToMCU          FIPSMode                     ProfileActivate
CallAccept                   ConferenceTerminate          FloorRelease                 ProfileCreate
CallHold                     CorpDirGetNext               FloorRequest                 ProfileDelete
CallJoin                     CorpDirGetPrevious           FloorToSite                  ProfileList
CallMute                     CorpDirSearch                FloorToSiteEnd               ScreensaverActivate
CallMuteOutgoing             DefaultValueSet              GroupAddEntry                ScreensaverDeactivate
CallResume                   Dial                         GroupEntryDelete             ScreensaverReset
CallSetAudioTP               DialGlobalEntry              KeyDisable                   SiteDisconnect
CallTransfer                 DialGroupEntry               KeyDown                      SiteView
CameraFocus                  DialLocalEntry               KeyEnable                    SiteViewEnd
CameraForceUpgrade           DisconnectCall               KeyPress                     SPIDAutoConfigure
CameraHalt                   DTMFSend                     KeyRelease                   SStringSend
CameraMove                   DuoVideoStart                LocalEntryAdd                StillImageSend
CameraPosition               DuoVideoStop                 LocalEntryDelete             StreamingStart
CameraReConfigure            FECCFocus                    MessageBoxDelete             StreamingStop
CameraTrackingStart          FECCMove                     MessageBoxDisplay            TextDelete
CameraTrackingStop           FECCPresetActivate           PIPHide                      TextDisplay
CameraUpgrade                FECCPresetStore              PIPShow                      VirtualMonitorReset
CameraWhitebalance           FECCRequestStill             PresenceForce                VirtualMonitorSet
ChairRelease                 FECCSelectSource             PresetActivate

OK
```

Example 1:

```
xcommand dial ?

*h xCommand Dial
  Number: <S: 0, 60>
  SecondNumber: <S: 0, 60>
  SubAddress: <S: 0, 20>
  CallRate: <Tlph/1xh221/2xh221/64/128/…/4096/Max/
  Auto>
  Restrict: <On/Off>
  NetProfile: <1..7>
  BillingCode: <S: 0, 16>

OK
```

Example 2:

```
xcommand cameramove ?

*h xCommand CameraMove
  Camera(r): <1..4>
  Direction(r): <Up/Down/Right/Left/In/Out>

OK
```

xCommand operations

The xCommand type commands are used to instruct the system to perform a given action.

Return result parameters

The following operations can be performed on xCommand:

Command Help

- *h is used when returning the result of a help query

Command Write

- *r is used when returning the result of a write command

xCommand Help

To get help on a setting you can use a help query. Enter the path followed by **?** or `help`.

- `xCommand dial ?`
  Returns a set of return values. See the example to the right.
- `xCommand dial help`
  As above.

xCommand Write

When issuing a command, the system will return a set of return values. The structure is described by the example to the right.

- `xCommand Dial Number: 12345`
  Issues the command and gives a response. See the example to the right.

The response will by default be on the same format as the standard XACLI Status format. The other supported status formats (completepath/XML) are also supported – ref. xpreferences.

You can read more about XML in the xPreferences section.

Example with xCommand Help

To get help on xCommand, type ? or help after the command path (address expression):

xCommand <address expression> ?

```
 xCommand Dial ?

*h xCommand Dial
   Number: <S: 0, 60>
   SecondNumber: <S: 0, 60>
   SubAddress: <S: 0, 20>
   CallRate: <Tlph/1xh221/2xh221/64/128/…/4096/Max/Auto>
   Restrict: <On/Off>
   NetProfile: <1..7>
   BillingCode: <S: 0, 16>

 OK
```

Example:

```
xcommand dial number:558458
*r Result (status=OK):
   CallRef: 1
   LogTag: 6
*r/end
OK
```

Example with CompletePath enabled:

If CompletePath is enabled for the RS-232/Telnet session (“xpreferences completepath on”):

```
xcom dial number:558458
   *r Result (status=OK):
   *r Result CallRef: 1
   *r Result LogTag: 4
OK
```

Issuing a xCommand

A command must start with the command-type command (xcommand), followed by a command name, followed by a set of parameters. Parameters values are identified by specifying the parameter name followed by a ':'

Syntax:

<command-type command> <command name> <parameter:value> <parameter:value>...

Example:

```
xcommand dial number:558458 restrict:on
callrate:128 subaddress:10
```

Multiple instances of a parameter

If there are multiple instances of a parameter, the item number is added after the tag separated with a dot.

Syntax:

<command-type command> <command> <parameter.item:value> <parameter.item:value>...

Example:

```
xcommand groupentryadd name:Cisco
localentryid.1:15 localentryid.2:57
```

Sequence Notation

OPTIONAL: When using this notation the parameter values must be entered in the sequence as stated in the help text:

Syntax:

<command-type root command> <command> <value> <value>...

First we check the help text:

```
*h xCommand Dial ?
  Number: <S: 0, 60>
  SecondNumber: <S: 0, 60>
  SubAddress: <S: 0, 20>
  CallRate: <Tlph/1xh221/
  2h221/64/128/192/256/320/384/H0/512/768/1152/1472/
  1920/2560/3072/4096/Max/Auto>
  Restrict: <On/Off>
  NetProfile: <1..7>
  BillingCode: <S: 0, 16>
```

Then we dial a participant with the following properties:

- Number: 234
- SecondNumber:345
- SubAddress: 8
- CallRate: 128
- Restrict: On

Example:

```
xcommand dial 234 345 8 128 on
```

Combination of Markup Notation and Sequence

OPTIONAL: A combination of markup notation and sequence is also supported. The marked parameters will be assigned the user entered values first, then the system will assign the sequence entered parameters for the parameters not yet having been assigned a value.

Example:

```
xcommand dial 234 restrict:on 345 8 128
```

NOTE: When using XACLI as a machine-machine interface we recommend that you use markup notation and always supply complete tag names.

About xStatus commands

The xStatus type commands returns information about the system and system processes. Status type commands are read by the user.

All status information is structured in a hierarchy, making up a database constantly being updated by the system to reflect system and process changes.

An element can have various attributes. Attributes are used to add meta information to an element. The sub-structure of a container-element may vary depending on the attribute values. The relationship between attribute values of a given element and its underlying sub-structure can be read from the sections documenting the various status elements.

E.g. a call that is disconnected does not contain any data (except a disconnect cause value), while an active call contains information about bandwidths, protocols, channels etc.

To get an overview of the supported xStatus type commands, type ? or help after the xStatus:

- `xStatus ?`
- `xStatus help`

Return result parameters

The following operation can be performed on xStatus commands:

xStatus Read

- *s is used when returning the result of xStatus read query

```
xStatus ?

– Status –

Audio                   FarEndInformation       SIP
BRI [1..6]              Feedback [1..3]         SoftwareUpgrade
Call [1..11]            G703                    Switch
Camera [1..13]          H323Gatekeeper          SystemUnit
CameraSwUpgrade         ICE [1..11]             Video
CameraTracking          IP                      VirtualMonitor [1..4]
Conference              NTP                     VNC
Ethernet [1..2]         PRI                     Warnings [1..10]
ExternalManager         RemoteSwUpgrade
ExternalNetwork         ScreenSaver

OK
```

Example:

Defining element names, values, attributes, and item numbers:

```
xstatus call 1
*s Call 1 (status=Synced, type=Vtlph, protocol=H323, direction=Outgoing, logTag=1):
     CallRate: 768
     RemoteNumber: "558458"
     Mute: Off
     Microphone: Off
     Duration: 20
     MuteOutgoing: Off
     Channels 1 (type=Incoming):
.
. (some lines have been removed for clarity)
.
       Video 2 (status=Inactive): /
       Data (status=Inactive): /
*s/end
OK
```

In the above example. Element names are shown in orange. Values are shown in gray. Attributes are shown in red. Item numbers are shown in blue

xStatus type commands formatting

XACLI supports three different formattings for status information:

- Default XACLI formatting, provides good human readability, compact format. However, a custom parser must be used
- Complete Path formatting. Recommended when parsing the information line by line.
- XML formatting – to be used when using an XML-parser.

Default XACLI formatting

- The root-element is prefixed with *s (for status), *e (for event), or *l (for history log)
- Root-element end is designated by a *s/end (*e/end or *l/end respectively)
- To write a parser for this format, the parser must keep track of the levels by counting white spaces. The indent is increased by two whitespaces for each level. Unless link throughput is an issue, we recommend the use of Complete Path Formatting instead of Default XACLI formatting when parsing information sent from the codec.

About the examples provided here

From the example showing status for a disconnected call (upper right), we can see that the call element now only contains one element; the value-element Cause. The sub-elements that were present when the call was active (lower right example) are no longer valid (i.e. it makes no sense to ask for outgoing video resolution for a disconnected call).

Example 1: Showing status for a disconnected call.

```
xstatus call 1
*s Call 1 (status=Disconnected, type=NA, protocol=NA, direction=NA, logTag=NA):
     Cause: 16
*s/end
OK
```

Example 2: Showing status for an active call.

xstatus call 1

```
*s Call 1 (status=Synced, type=Vtlph, protocol=H323, direction=Outgoing, logTag=2):
     CallRate: 768
     RemoteNumber: “558458”
     Mute: Off
     Microphone: Off
     Duration: 10
     MuteOutgoing: Off
     Channels 1 (type=Incoming):
       Rate: 768
       Restrict: Off
       Encryption (status=Off): /
       Audio (status=Active):
         Protocol: G722
         Rate: 64
       Video 1 (status=Active):
         Protocol: H264
         Resolution: CIF
         Rate: 704
       Video 2 (status=Inactive): /
       Data (status=Inactive): /
     Channels 2 (type=Outgoing):
       Rate: 768
       Restrict: Off
       Encryption (status=Off): /
       Audio (status=Active):
         Protocol: G722
    Rate: 64
       Video 1 (status=Active):
         Protocol: H264
         Resolution: CIF
         Rate: 704
       Video 2 (status=Inactive): /
       Data (status=Inactive): /
*s/end
OK
```

Complete path formatting

The following should be observed:

- Complete path formatting is recommended for easy parsing
- All lines are prefixed with *s (for status), *e (for event), or *l (for historylog)
- The complete path to an element is supplied on all lines
- The parser can work line by line
- Root-element end is designated by a *s/end (*e/end or *l/end respectively).

NOTE: Complete Path formatting is enabled by: “xpreferences completepath on”, described later in this section of the User Guide.

NOTE: the xpreferences is a session specific command and must be issued every time the control application connects to the codec.

Example 1: Showing call status with CompletePath enabled.

```
xpreferences completepath on

OK
xstatus call 1

*s Call 1 (status=Synced, type=Vtlph, protocol=H323, direction=Outgoing, logTag=2):
*s Call 1 CallRate: 768
*s Call 1 RemoteNumber: “558458”
*s Call 1 Mute: Off
*s Call 1 Microphone: Off
*s Call 1 Duration: 527
*s Call 1 MuteOutgoing: Off
*s Call 1 Channels 1 (type=Incoming):
*s Call 1 Channels 1 Rate: 768
*s Call 1 Channels 1 Restrict: Off
*s Call 1 Channels 1 Encryption (status=Off): /
*s Call 1 Channels 1 Audio (status=Active):
*s Call 1 Channels 1 Audio Protocol: G722
*s Call 1 Channels 1 Audio Rate: 64
*s Call 1 Channels 1 Video 1 (status=Active):
*s Call 1 Channels 1 Video 1 Protocol: H264
*s Call 1 Channels 1 Video 1 Resolution: CIF
*s Call 1 Channels 1 Video 1 Rate: 704
*s Call 1 Channels 1 Video 2 (status=Inactive): /
*s Call 1 Channels 1 Data (status=Inactive): /
*s Call 1 Channels 2 (type=Outgoing):
*s Call 1 Channels 2 Rate: 768
*s Call 1 Channels 2 Restrict: Off
*s Call 1 Channels 2 Encryption (status=Off): /
*s Call 1 Channels 2 Audio (status=Active):
*s Call 1 Channels 2 Audio Protocol: G722
*s Call 1 Channels 2 Audio Rate: 64
*s Call 1 Channels 2 Video 1 (status=Active):
*s Call 1 Channels 2 Video 1 Protocol: H264
*s Call 1 Channels 2 Video 1 Resolution: CIF
*s Call 1 Channels 2 Video 1 Rate: 704
*s Call 1 Channels 2 Video 2 (status=Inactive): /
*s Call 1 Channels 2 Data (status=Inactive): /
*s/end

OK
```

XML formatting

The following should be observed:

- To be used when the control application is using an XML parser
- XML formatting is used when polling for information using the special command xgetxml, described later in this section of the manual.
- To enable XML formatting on feedback issued from the codec, the special command xpreferences should be used.

Example 1: Showing call status with XML formatting.

```
xgetxml status/call[1]
<Status>
  <Call item=”1” status=”Synced” type=”Vtlph” protocol=”H323” direction=”Outgoing” logTag=”2”>
    <CallRate item=”1”>768</CallRate>
    <RemoteNumber item=”1”>558458</RemoteNumber>
    <Mute item=”1”>Off</Mute>
    <Microphone item=”1”>Off</Microphone>
    <Duration item=”1”>887</Duration>
    <MuteOutgoing item=”1”>Off</MuteOutgoing>
    <Channels item=”1” type=”Incoming”>
      <Rate item=”1”>768</Rate>
      <Restrict item=”1”>Off</Restrict>
      <Encryption item=”1” status=”Off”/>
      <Audio item=”1” status=”Active”>
        <Protocol item=”1”>G722</Protocol>
        <Rate item=”1”>64</Rate>
      </Audio>
      <Video item=”1” status=”Active”>
        <Protocol item=”1”>H264</Protocol>
        <Resolution item=”1”>CIF</Resolution>
        <Rate item=”1”>704</Rate>
      </Video>
      <Video item=”2” status=”Inactive”/>
      <Data item=”1” status=”Inactive”/>
    </Channels>
    <Channels item=”2” type=”Outgoing”>
      <Rate item=”1”>768</Rate>
      <Restrict item=”1”>Off</Restrict>
      <Encryption item=”1” status=”Off”/>
      <Audio item=”1” status=”Active”>
        <Protocol item=”1”>G722</Protocol>
        <Rate item=”1”>64</Rate>
      </Audio>
      <Video item=”1” status=”Active”>
        <Protocol item=”1”>H264</Protocol>
        <Resolution item=”1”>CIF</Resolution>
        <Rate item=”1”>704</Rate>
      </Video>
      <Video item=”2” status=”Inactive”/>
      <Data item=”1” status=”Inactive”/>
    </Channels>
  </Call>
</Status>
OK
```

Addressing xStatus information

You address status information by supplying a status-type command followed by an address-expression (XPath or SimplePath):

<status-type command> <address expression>

See example 1 a) for an illustration.

If complete path is enabled for the RS232/Telnet session (xpreferences completepath on), it will look like example 1 b).

As a second set of examples let us consider a situation where the user wants to know Audio status for both incoming and outgoing channels for Call 1. This is shown in examples 2 a) and 2 b).

Example 1 a) Addressing status information, user wants to know callrate of call 1:

```
xstatus call 1 callrate
*s Call 1 (status=Synced, type=Vtlph, protocol=H323, direction=Outgoing, logTag=3):
     CallRate: 768
*s/end
OK
```

Example 1 b) xpreferences completepath set to on:

```
xstatus call 1 callrate

*s Call 1 (status=Synced, type=Vtlph, protocol=H323, direction=Outgoing, logTag=3):
*s Call 1 CallRate: 768
OK
```

Example 2 a) the user wants to know Audio status for both incoming and outgoing channels for Call 1.

```
xstatus call 1 channels audio
*s Call 1 (status=Synced, type=Vtlph, protocol=H323, direction=Outgoing, logTag=3):
     Channels 1 (type=Incoming):
       Audio (status=Active):
         Protocol: G722
         Rate: 64
     Channels 2 (type=Outgoing):
       Audio (status=Active):
         Protocol: G722
         Rate: 64
```

Example 2 b) xpreferences completepath set to on:

```
xstatus call 1 channels audio
*s Call 1 (status=Synced, type=Vtlph, protocol=H323, direction=Outgoing, logTag=3):
*s Call 1 Channels 1 (type=Incoming):
*s Call 1 Channels 1 Audio (status=Active):
*s Call 1 Channels 1 Audio Protocol: G722
*s Call 1 Channels 1 Audio Rate: 64
*s Call 1 Channels 2 (type=Outgoing):
*s Call 1 Channels 2 Audio (status=Active):
*s Call 1 Channels 2 Audio Protocol: G722
*s Call 1 Channels 2 Audio Rate: 64
OK
```

The Exposure option

Exposure options should be used to limit the amount of information returned. By adding an exposure option after the address expression (XPath or SimplePath), the system can be instructed to return parts of the information within an element structure only.

<status-type command> <address expression> <exposure option>

Supported exposure options:

- hides all value elements

-- hides all sub-elements

Example 1: Request for Call 1 element using no exposure option

```
xstatus call 1

*s Call 1 (status=Synced, type=Vtlph,
protocol=H323, direction=Outgoing, logTag=3):
     CallRate: 768
     RemoteNumber: "558458"
     Mute: Off
     Microphone: Off
     Duration: 10
     MuteOutgoing: Off
     Channels 1 (type=Incoming):
       Rate: 768
       Restrict: Off
       Encryption (status=Off): /
       Audio (status=Active):
         Protocol: G722
         Rate: 64
       Video 1 (status=Active):
         Protocol: H264
         Resolution: CIF
         Rate: 704
       Video 2 (status=Inactive): /
       Data (status=Inactive): /
     Channels 2 (type=Outgoing):
       Rate: 768
       Restrict: Off
       Encryption (status=Off): /
       Audio (status=Active):
         Protocol: G722
         Rate: 64
       Video 1 (status=Active):
         Protocol: H264
         Resolution: CIF
         Rate: 704
       Video 2 (status=Inactive): /
       Data (status=Inactive): /
*s/end

OK
```

Request for Call 1 element using exposure option -:

```
xstatus call 1 -

*s Call 1 (status=Synced, type=Vtlph,
protocol=H323, direction=Outgoing, logTag=3):
     Channels 1 (type=Incoming):
       Encryption (status=Off): /
       Audio (status=Active):
       Video 1 (status=Active):
       Video 2 (status=Inactive): /
       Data (status=Inactive): /
     Channels 2 (type=Outgoing):
       Encryption (status=Off): /
       Audio (status=Active):
       Video 1 (status=Active):
       Video 2 (status=Inactive): /
       Data (status=Inactive): /
*s/end
OK
```

Request for Call 1 element with exposure option --:

```
xstatus call 1 --

*s Call 1 (status=Synced, type=Vtlph,
protocol=H323, direction=Outgoing, logTag=3):
*s/end

OK
```

About xHistory command

The xHistory type commands returns information about what has happened on the system. History type commands are read by the user.

All history information is structured in a hierarchy, making up a database constantly being updated by the system to reflect system and process changes.

To get an overview of the supported xHistory type commands, type ? or help after the xHistory:

- `xHistory ?`
- `xHistory help`

Example:

```
xhistory ?

 - History -

 Call [1..20]

OK
```

About xEvent command

The xEvent type commands returns information about what events that are available for xFeedback.

To get an overview of the supported events type ? or help after the xEvent:

- `xEvent ?`
- `xEvent help`

```
xevent ?
 - Event -
AuthenticationFailure
CallDisconnected
CallStatisticsIP [1..11]
CallSuccessful
DownspeedingFinished
MessageBoxResult
PacketlossDownSpeed
SString
SystemActivity

OK
```

About xFeedback

The special command xfeedback lets the user register user defined XPath expressions (with possible exposure options) to monitor changes in the XML/XACLI data. Whenever there is a change in one or more elements addressed by a registered XPath expression, the part of the element structure containing these changes will be returned.

The system supports a total of 20 registered expressions, with a total of 15 expressions for one RS232/Telnet session.

The xfeedback is a session specific command, i.e. different RS232/Telnet session can define feedback individually.

This also implies that the feedback expressions must be set each time the control application connects to the codec, i.e. the control application should always set the necessary feedback expressions when connecting to the system (or after system reboot when using RS232).

CAUTION: We discourage registering all status changes as this may give too much feedback information than the control systems are able to handle.

Example

To list the registered expression the sub-command list should be used:

```
xfeedback list
Registered XPath feedback expressions:
*xf 1 status/call
*xf 2 status/conference
*xf 3 configuration

OK
```

Example

User wants to deregister expression 2 in the left example:

```
xfeedback deregister 2

OK
xfeedback list
Registered XPath feedback expressions:
*xf 1 status/call
*xf 3 configuration

OK
```

Example

User only wants to monitor call state changes. This can be done by adding the double hyphen exposure option (--), after the XPath expression, status/call:

```
xfeedback register status/call--
OK
xcommand dial number:558458
*s Call 1 (status=EstablOut, type=Vtlph, protocol=H323, direction=Outgoing, logTag=6):
*s/end
*r Result (status=OK):
     CallRef: 1
     LogTag: 6
*r/end
OK
*s Call 1 (status=Syncing, type=Vtlph, protocol=H323, direction=Outgoing, logTag=6):
*s/end
CONNECT
*s Call 1 (status=Synced, type=Vtlph, protocol=H323, direction=Outgoing, logTag=6):
*s/end
```

Example

User wants to monitor all changes to the Call status elements, the Conference status element and all Configurations:

```
xfeedback register status/call
OK
xfeedback register status/conference
OK
xfeedback register configuration
OK
```

Example

```
xfeedback ?
usage: xfeedback register <XPathExpression>
or:    xfeedback deregister <index>
or:    xfeedback list
-
```

(note: deregistration with index=0 will deregister all registered expressions)

OK

xFeedback, *continued...*

In the first example the user wants to know when calls are connected and when calls are disconnected, without monitoring any call data changes when the call is active. This can be done by registering feedback on the events.

The second example shows status for a call that is beeing disconnected. The user has registered a feedback expression to monitor all call changes (xfeedback register status/call).

When the call is active the Call element contains a large sub-structure. When the call is disconnected this status tree collapses, i.e. the only information availible for a disconnected call is a Cause element. All sub-elements that are being removed in this transition are marked with a ghost=True attribute when feedback is issued, see below.

NOTE: If sub-elements are removed from a status structure between transitions, the removed elements will be notified with an attribute ghost=True when feedback is issued. This allows for an external control system to be completely synchronised with the codec.

Example 1:

```
CallSuccessful
CallDisconnected

xfeedback register event/callsuccessful
OK
xfeedback register event/calldisconnected
OK
xcommand dial number:558458
*r Result (status=OK):
     CallRef: 1
     LogTag: 8
*r/end
OK
CONNECT
*e CallSuccessful:
     CallRef: 1
     LogTag: 8
     Protocol: H323
     Direction: Outgoing
     CallRate: 768
     RemoteNumber: “558458”
     Encryption:
       Incoming: Off
       Outgoing: Off
*e/end
xcommand disconnectcall call:1
*r Result (status=OK): /
*r/end
OK
NO CARRIER

*e CallDisconnected:
     CallRef: 1
     LogTag: 8
*e/end
```

Example 2:

```
xstatus call 1
*s Call 1 (status=Synced, type=Vtlph,
protocol=H323, direction=Outgoing, logTag=30):
     CallRate: 768
     RemoteNumber: “558458”
     Mute: Off
     Microphone: Off
     Duration: 62
     MuteOutgoing: Off
     Channels 1 (type=Incoming):
       Rate: 768
       Restrict: Off
       Encryption (status=On):
         Type: AES-128
         CheckCode: “C6D478F231E09A04”
       Audio (status=Active):
         Protocol: G722
         Rate: 64
       Video 1 (status=Active):
         Protocol: H264
         Resolution: CIF
         Rate: 704
       Video 2 (status=Inactive): /
       Data (status=Inactive): /
     Channels 2 (type=Outgoing):
       Rate: 768
       Restrict: Off
       Encryption (status=On):
         Type: AES-128
         CheckCode: “C6D478F231E09A04”
       Audio (status=Active):
         Protocol: G722
         Rate: 64
       Video 1 (status=Active):
         Protocol: H264
         Resolution: CIF
         Rate: 704
       Video 2 (status=Inactive): /
       Data (status=Inactive): /
*s/end
OK
xcommand disconnect
*r Result (status=OK): /
*r/end
OK
*s Call 1 (status=ClearOut, type=Vtlph,
protocol=H323, direction=Outgoing, logTag=30):
*s/end
NO CARRIER

*s Call 1 (status=Disconnected, type=NA,
protocol=NA, direction=NA, logTag=NA):
     Cause: 16
     CallRate (ghost=True): /
     RemoteNumber (ghost=True): /
     Mute (ghost=True): /
     Microphone (ghost=True): /
     Duration (ghost=True): /
     MuteOutgoing (ghost=True): /
     Channels 1 (ghost=True): /
     Channels 2 (ghost=True): /
*s/end
xstatus call 1
*s Call 1 (status=Disconnected, type=NA,
protocol=NA, direction=NA, logTag=NA):
     Cause: 16
*s/end
OK
```

About xPreferences

A command of great importance, xpreferences lets the user/control application individually configure the Telnet/RS 232 session in use. When parsing data sent from the codec using a control system it is important to set preferences to match the parser in use.

The xpreferences is a session specific command, i.e. different RS 232/Telnet sessions can define preferences individually. This also implies that the preferences must be set each time the control application connects to the codec, i.e. the control application should always set the necessary preferences when connecting to the system (or after system reboot when using RS 232).

To get an overview of the supported xPreferences commands and their value space, type ? or help after the xPreferences:

- `xPreferences ?`
- `xPreferences help`

```
xPreferences ?


usage: xpreferences xpathwrite <on/off>
or:    xpreferences detaillevel <1..2>
or:    xpreferences xmlconfigfeedback <on/off>
or:    xpreferences xmlstatusfeedback <on/off>
or:    xpreferences xmlcommandresult <on/off>
or:    xpreferences itemnumber <on/off>
or:    xpreferences completepath <on/off>

OK
```

xPreferences, *continued...*

xpreferences xpathwrite <on/off>

Disables/enables the XPath search engine when issuing configurations. When the XPath search engine is disabled, the user/control application must supply the complete path to the configurations to be set (no “double slashes” allowed). This will improve the performance of the system when issuing many consecutive configurations.

NOTE! It is always recommended to supply the complete path for configurations to be set when issuing commands from an external control application.

xpreferences detaillevel <1..2>

Most information elements accessible by the status-type commands are defined to be level 1 information. However there are some information elements defined to be level 2 information. When reading status information, only the information elements with a detail level equal to or less than the detaillevel defined for the interface will be listed.

The detaillevel is by default set to 1 when connecting to an RS232/Telnet session.

xpreferences xmlconfigfeedback <on/off>

If xmlconfigfeedback is set to on, feedback on configurations will be returned in XML-format instead of the standard XACLI configuration format.

XACLI-format:

```
*c xConfiguration SerialPort 1 BaudRate: 2400
```

XML format

```
<Configuration>
  <SerialPort item=”1”>
    <BaudRate item=”1”>2400</BaudRate>
  </SerialPort>
</Configuration>
```

xpreferences xmlcommandresult <on/off>

If xmlcommandresult is set to on, response for commands will be returned in XML-format.

XACLI-format:

```
xcom dial 10.47.15.127
*r Result (status=OK):
     CallRef: 1
     LogTag: 8
*r/end
```

XML format

```
xcom dial 10.47.15.127
<Result item=”1” status=”OK”>
  <CallRef item=”1”>1</CallRef>
  <LogTag item=”1”>8</LogTag>
</Result>
```

xpreferences itemnumber <on/off>

All Status and Configuration elements consist of an element name and an element item number. However, XACLI hides the item number for an element if there only exist one item of the given element.

If xpreferences itemnumber is set to on, XACLI will display item numbers for all elements. This is to make it easier to parse the information sent from the codec. By setting “xpreferences itemnumber on”, the parser can always expect an item number to follow an element name.

Reading configurations of Serial Port 1 with xpreferences itemnumber is set to off:

```
xconfiguration serialport 1
*c xConfiguration SerialPort 1 BaudRate: 9600
*c xConfiguration SerialPort 1 Parity: None
*c xConfiguration SerialPort 1 DataBits: 8
*c xConfiguration SerialPort 1 StopBits: 1
*c xConfiguration SerialPort 1 Mode: Control
OK
```

Reading configurations of Serial Port 1 with xpreferences itemnumber is set to on:

```
xpreferences itemnumber on

OK
xconfiguration serialport 1
*c xConfiguration SerialPort 1 BaudRate 1: 9600
*c xConfiguration SerialPort 1 Parity 1: None
*c xConfiguration SerialPort 1 DataBits 1: 8
*c xConfiguration SerialPort 1 StopBits 1: 1
*c xConfiguration SerialPort 1 Mode 1: Control
OK
```

xpreferences xmlstatusfeedback <on/off>

If xmlstatusfeedback is set to on, all status feedback will be returned
in XML-format instead of the default XACLI status format (or complete path formatting).

XACLI-format:

```
*s Call 1 (status=Synced, type=Vtlph,
protocol=H323, direction=Outgoing, logTag=78):
     Channels 1 (type=Incoming):
       Rate: 768
       Audio (status=Active):
         Protocol: G722
         Rate: 64
*s/end
```

XML format

```
<Status>
  <Call item=”1” status=”Synced” type=”Vtlph”
protocol=”H323” direction=”Outgoing”
logtag=”78”>
    <Channels item=”1” type=”Incoming”>
      <Rate item=”1”>768</Rate>
      <Audio item=”1” status=”Active”>
        <Protocol item=”1”>G722</Protocol>
        <Rate item=”1”>64</Rate>
      </Audio>
    </Channels>
  </Call>
</Status>
```

xPreferences with CompletePath

If CompletePath is set to on, the complete path to a status element will be supplied on all lines. RECOMMENDED to be used when parsing status information sent from the codec line by line. The specified formatting will also apply all feedback sent from the codec on this RS232/Telnet session.

Example 1: Reading status for Call 1 with completepath set to on:

```
xpreferences completepath on
OK

xstatus call 1
*s Call 1 (status=Synced, type=Vtlph, protocol=H323, direction=Outgoing,
logTag=2):
*s Call 1 CallRate: 768
*s Call 1 RemoteNumber: “558458”
*s Call 1 Mute: Off
*s Call 1 Microphone: Off
*s Call 1 Duration: 527
*s Call 1 MuteOutgoing: Off
*s Call 1 Channels 1 (type=Incoming):
*s Call 1 Channels 1 Rate: 768
*s Call 1 Channels 1 Restrict: Off
*s Call 1 Channels 1 Encryption (status=Off): /
*s Call 1 Channels 1 Audio (status=Active):
*s Call 1 Channels 1 Audio Protocol: G722
*s Call 1 Channels 1 Audio Rate: 64
*s Call 1 Channels 1 Video 1 (status=Active):
*s Call 1 Channels 1 Video 1 Protocol: H264
*s Call 1 Channels 1 Video 1 Resolution: CIF
*s Call 1 Channels 1 Video 1 Rate: 704
*s Call 1 Channels 1 Video 2 (status=Inactive): /
*s Call 1 Channels 1 Data (status=Inactive): /
*s Call 1 Channels 2 (type=Outgoing):
*s Call 1 Channels 2 Rate: 768
*s Call 1 Channels 2 Restrict: Off
*s Call 1 Channels 2 Encryption (status=Off): /
*s Call 1 Channels 2 Audio (status=Active):
*s Call 1 Channels 2 Audio Protocol: G722
*s Call 1 Channels 2 Audio Rate: 64
*s Call 1 Channels 2 Video 1 (status=Active):
*s Call 1 Channels 2 Video 1 Protocol: H264
*s Call 1 Channels 2 Video 1 Resolution: CIF
*s Call 1 Channels 2 Video 1 Rate: 704
*s Call 1 Channels 2 Video 2 (status=Inactive): /
*s Call 1 Channels 2 Data (status=Inactive): /
*s/end
OK
```

Example 2: Reading status for Call 1 with completepath set to off:

```
xpreferences completepath off
OK

xstatus call 1
*s Call 1 (status=Synced, type=Vtlph, protocol=H323, direction=Outgoing,
logTag=2):
     CallRate: 768
     RemoteNumber: “558458”
     Mute: Off
     Microphone: Off
     Duration: 10
     MuteOutgoing: Off
     Channels 1 (type=Incoming):
       Rate: 768
       Restrict: Off
       Encryption (status=Off): /
       Audio (status=Active):
         Protocol: G722
         Rate: 64
       Video 1 (status=Active):
         Protocol: H264
         Resolution: CIF
         Rate: 704
       Video 2 (status=Inactive): /
       Data (status=Inactive): /
     Channels 2 (type=Outgoing):
       Rate: 768
       Restrict: Off
       Encryption (status=Off): /
       Audio (status=Active):
         Protocol: G722
         Rate: 64
       Video 1 (status=Active):
         Protocol: H264
         Resolution: CIF
         Rate: 704
       Video 2 (status=Inactive): /
       Data (status=Inactive): /
*s/end
OK
```

About xGetXML

As an alternative to the XACLI output format, XML format is supported through the root command xgetxml. The xgetxml takes an XPath expression as parameter and the elements (or complete document) matching the expression will be returned.

Example:

```
xgetxml status/ip

<Status>
  <IP item=”1”>
    <Address item=”1”>10.47.11.179</Address>
    <SubnetMask item=”1”>255.255.248.0</SubnetMask>
    <Gateway item=”1”>10.47.8.1</Gateway>
    <V6 item=”1”>
      <Address item=”1” type=”NA”></Address>
      <Address item=”2” type=”NA”></Address>
    </V6>
    <DNS item=”1”>
      <Server item=”1”>
        <Address item=”1”>10.0.0.10</Address>
      </Server>
      <Server item=”2”>
        <Address item=”1”>10.0.0.2</Address>
      </Server>
      <Server item=”3”>
        <Address item=”1”></Address>
      </Server>
      <Server item=”4”>
        <Address item=”1”></Address>
      </Server>
      <Server item=”5”>
        <Address item=”1”></Address>
      </Server>
      <Domain item=”1”>
        <Name item=”1”>eu.company.int</Name>
      </Domain>
    </DNS>
  </IP>
</Status>

OK
```

XML API service

TXAS is a service provided by the codec for transmitting and receiving (transceiving) information encoded in XML format.

The API uses HTTP(S) as the transport mechanism and connects to the normal web port (80). TXAS can be accessed in two ways; bare-bone HTTP requests where URL's uniquely identifies the request, and SOAP where a single URI is used but the request itself is encoded with XML.

Bare-bone HTTP/HTTPS Access

The bare-bone HTTP mode uses a unique URL to identify the specific request. The contents of the HTTP body will be a XML document (or part of it).

Bare-bone HTTP(S) access is accomplished by passing arguments in the query string (after '?' in URL) in a GET request, or using the "application/x-www-form-urlencoded" content-type method of POSTing form data (Each argument starts with a name '=' and a value, and every parameter separated with '&' (and opt NL).)

getxml

/getxml request returns an XML document based on the location parameter passed to the request. The elements (or complete document) matching the expression will be returned.

On Incorrect XPath expression, a <Fault> element with a <XPathError> element will be returned.

```
getxml
REQUEST:
  /getxml
PARAM:
  location = XPath expression
```

formputxml

This is most useful in a POST (to extend character limit of 255 of GET urls). It posts a Configuration or Command document to set the configurations or issue a command.

Like getxml, it has the data URL form-data encoded with one single parameter. The Content-Type of the document must be of type "application/x-www-form-urlencoded" and the body must be encoded accordingly (e.g. first line will be xmldoc=<then the document>).

```
formputxml
REQUEST:
  /formputxml
PARAM:
  xmldoc   = "an XML document of Configuration, Directory or Command"
```

putxml

Putxml is like formputxml+, put uses the complete BODY as argument (i.e. the content of the xmldoc parameter). The Content-type should be "text/xml" or "application/xml" (or "text/plain"), though no check at the moment. (Except for application/x-www-form-url encoded which will cause a failure).

```
putxml
REQUEST:
  /putxml
PARAM:
  HTTP BODY as argument
```

Chapter 3

Description of the xConfiguration commands

Description of the xConfiguration commands

In the following pages you will find a complete list of the xConfiguration commands. The examples shows 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/telepresence/docs

AdditionalCamera Type

Value space: `<0..6>`

This configuration enables improved support for some non-Cisco cameras. When using one of the cameras listed below, set the configuration accordingly. Software version F5 offers camera type auto-detection. Should, however, the camera you use fail to to be detected properly, you may use this command to select the camera type that best resembles the camera used.

0 = Cisco Wave 2 (default)
1 = Sony EVI-D30
2 = Sony BRC-300
3 = Sony EVI-D100
4 = Sony EVI-D70
5 = Sony BRC-H700
6 = Sony EVI-HD1

Example: `xconfiguration additionalcamera type: 1`

AlertSpeaker Mode

Value space: `<On/Off>`

Turns the internal alert speaker On or Off.

Example: `xconfiguration alertspeaker mode: on`

AlertTone Volume

Value space: `<0..15>`

Sets the volume of the alert tone. This volume setting also applies to the internal alert speaker if turned on.

Example: `xconfiguration alerttone volume: 10`

AlertTone VideoTelephony

Value space: `<1..10>`

Defines the alert tone to use for incoming video telephony calls.

Example: `xconfiguration alerttone videotelephony: 10`

AlertTone Telephony

Value space: `<1..10>`

Defines the alert tone to use for incoming telephony calls.

Example: `xconfiguration alerttone telephony: 8`

TIP! The system supports as many as 10 different alert tones. To help distinguish between incoming video calls and ordinary telephone calls, we recommend the use of different alert tones for video calls and telephone calls.

AllowLatency

Value space: `<On/Off>`

If set to Off (default), the IP call rate will sometimes exceed the maximum call rate specified for the call to reduce latency.
In some cases with poor network quality this might however result in increased packet loss. To avoid this, AllowLatency should be set to On.

Example: `xconfiguration AllowLatency: On`

Audio Microphones Mode

Value space: `<On/Off>`

Turns all microphones On or Off. This is the configuration that is tied to the “Mic off” key on the MXP remote control.

Example: `xconfiguration audio microphones mode: off`

Audio Microphone Mixer Mode

Value space: `<Fixed/Auto>`

When set to Auto the adjustment of each microphone signal is done automatically to obtain the best possible audio and minimize the background noise.
When set to Fixed the system will maintain a constant weighting of all microphones.

Example: `xconfiguration audio microphonemixer mode: fixed`

Audio AutoMute

Value space: `<On/Off/Unmute>`

When automute is set to On, the microphones will be turned off (muted) automatically at boot and at end of calls.
When automute is set to Unmute, the microphones will be turned on (unmuted) automatically at boot and at end of calls.

Example: `xconfiguration audio automute: on`

Audio AudioModule

Value space: `<NAMII-6000/NAMII-7000/NAMII-8000/Digital NAM/None>`

Select Audio Module according to the type of Audio Module installed, if this is not automatically detected.
The Audio Module setting will only take effect if the audio module of the system is unidentified.

Example: `xconfiguration audio audiomodule: NAMII-6000`

Audio Volume

Value space: `<0..21>`

Sets the volume level output.

Example: `xconfiguration audio volume: 10`

Audio AGC Microphones

Value space: `<On/Off>`

Turns the AGC connected to the microphone mixer On or Off. On a 6000 MXP, Line input 1
(denoted Audio input 4 on the rear panel) is also connected to this AGC.

Example: `xconfiguration audio agc microphones: on`

Audio AGC AUX

Value space: `<On/Off>`

Turns the AGC connected to the AUX input On or Off.
NOTE! The AUX input is also sometimes referred to as Line Input 2 or AUX / Audio in 5 (6000 MXP) and Line Input 1 or Audio In 3 (3000 MXP).

Example: `xconfiguration audio agc aux: on`

Audio AGC VCR

Value space: `<On/Off>`

Turns the AGC connected to the VCR input On or Off.
NOTE! On the 6000MXP, the VCR input is also sometimes referred to as Line Input 3 or Audio in 6, while on the 3000MXP the VCR input is referred to as Line Input 2 or Audio In 4. When Stereo I/O is set to On, the VCR input will be Line input 1 & 2 or Audio 5 & 6 (6000 MXP), and Line input 1 & 2 or Audio 3 & 4 (3000 MXP)

Example: `xconfiguration audio agc vcr: off`

Audio AGC Received

Value space: `<On/Off>`

Turns AGC for received audio On or Off.

Example: `xconfiguration audio agc received: on`

Audio EchoControl [1..x]

Value space: `<On/Off/NoiseReduction>`

6000 MXP: x=4 3000 MXP: x=2
Turns echo control On or Off for the various microphone inputs. Microphone 1 is connected to EchoControl 1, Microphone 2 is connected to EchoControl 2 etc.
Line input 1 (Audio input 4 on 6000 MXP) is connected to EchoControl 4 on a 6000 MXP.

Example: `xconfiguration audio echocontrol 2: On`

Audio Stereo

Value space: `<On/Off>`

Turns stereo I/O mode On or Off.

Example: `xconfiguration audio stereo: on`

Audio SteroSpeakers

Value space: `<On/Off>`

Turns stereo speakers On or Off.

Example: `xconfiguration audio stereospeakers: on`

Stereo Settings			Output Response Codec 3000 MXP		Output Response Codec 6000 MXP		
Out 1 mode	*Stereo I/O mode*	*Stereo speakers*	*Audio Out 1*	*Audio Out 2*	*Audio Out 1*	*Audio Out 2*	*Audio Out 3*
Analogue	Off	Off	Loudspeaker mono	VCR	Loudspeaker mono	Aux	VCR
Analogue	Off	On	Loudspeaker L	Loudspeaker R	Loudspeaker L	Loudspeaker R	VCR
Analogue	On	Off	Loudspeaker mono	VCR	Loudspeaker mono	VCR L	VCR R
Analogue	On	On	Loudspeaker L	Loudspeaker R	Loudspeaker L	Loudspeaker R	VCR
SPDIF	Off	Off	Loudspeaker mono	VCR	Loudspeaker mono	Aux	VCR
SPDIF	Off	On	Loudspeaker L&R	VCR	Loudspeaker L&R	Aux	VCR
SPDIF	On	Off	Loudspeaker mono	VCR	Loudspeaker mono	VCR L	VCR R
SPDIF	On	On	Loudspeaker L&R	VCR	Loudspeaker L&R	VCR L	VCR R

Out 1 mode is controlled through the `xconfiguration audio outputs line` type command (overleaf)

Audio VCRDucking

Value space: `<On/Off>`

If VCR Ducking is set to On, the VCR audio level will be attenuated if someone talks into the microphone or at the far end.

Example: `xconfiguration audio vcrducking: on`

Audio KeyTones

Value space: `<On/Off>`

If set to On there will be a sound indicator when pressing keys on the remote control.

Example: `xconfiguration audio keytones: on`

Audio Inputs Microphone [1..x] Level

6000 MXP: x=3   3000 MXP: x=2

Value space: `<1..16>`

Defines the input levels for the different microphones.

Example: `xconfiguration audio inputs microphone 2 level: 10`

Audio Inputs Microphone [1..x] Mode

6000 MXP: x=3   3000 MXP: x=2

Value space: `<On/Off>`

Turns On or Off the different microphone inputs.

Example: `xconfiguration audio inputs microphone 2 mode: off`

Audio Inputs Microphone [1..x] Mode

6000 MXP: x=3   NOTE! Applies to 6000 MXP only!

Value space: `<Line>`

The Microphone 3 Mode can be set to Line only and then it becomes a balanced line level input. The gain will be reduced accordingly.

Example: `xconfiguration audio inputs microphone 3 mode: line`

By default, all inputs are enabled. Just plug in an audio source and it is active. Audio inputs that are On will automatically be mixed. Unconnected inputs will automatically be muted. Select Off to prevent audio/noise from connected but unused inputs.

The microphone inputs are intended for electret type microphones. The microphone inputs are balanced with 24 V phantom power.

Audio Inputs Line [1..x] Level

6000 MXP: x=3   3000 MXP: x=2

Value space: `<1..16>`

Defines the input levels for the different line inputs.

Example: `xconfiguration audio inputs line 2 level: 10`

Audio Inputs Line [1..x] Mode

6000 MXP: x=3   3000 MXP: x=2
For 3000 MXP, Line 1:

Value space: `<On/Off/Microphone>`

Turns the input On or Off. If set to Microphone, the audio on this input will not be outputted locally. Microphone input 2 will be disabled and this Line input will use the Echo canceller of Mic. input 2. To be used when using an external microphone mixer.
For 3000 MXP, Line 2:

Value space: `<On/Off/Auto>`

Turns the input On or Off. If set to Auto the input will be active when VCR is selected as video input source.
For 6000 MXP, Line 1 & 2:

Value space: `<On/Off>`

Turns the input On or Off.
For 6000 MXP, Line 3:

Value space: `<On/Off/Auto>`

Turns the input On or Off. If set to Auto the input will be active when VCR is selected as video input source.

Example: `xconfiguration audio inputs line 2 mode: off`

Audio Outputs Line [1..x] Level

6000 MXP: x=3 3000 MXP: x=2

Value space: `<1..16>`

Defines the output level of the specified output line

Example: `xconfiguration audio outputs line 2 level: 10`

Audio Outputs Line [1..x] Mode

6000 MXP: x=3 3000 MXP: x=2

Value space: `<On/Off>`

Enables or disables the specified output line.

Example: `xconfiguration audio outputs line 2 mode: off`

Audio Outputs Line [1] Type

6000 MXP: x=3 3000 MXP: x=2 NOTE! Applies to Line 1 only! This configuration is also referred to as Out 1 Mode.

Value space: `<Analog/SPDIF/Auto>`

If Out 1 Mode is set to Auto, the system will select analogue or digital (SPDIF) mode depending on the detected Audio Module. If a Cisco Digital NAM is detected, SPDIF mode will be selected, otherwise analogue mode will be selected. Setting the Out 1 Mode to either Analogue or SPDIF will override the auto-detected mode.

Example: `xconfiguration audio outputs line 1 type: SPDIF`

Audio LocalDetection Mode

Value space: `<On/Off>`

The Local Detection is a feature to detect possible eavesdropping activity. If such activity is detected it will be stopped. The system will disconnect the ongoing call and start an alarm / warning signal on the internal alert speaker on the codec. This will prevent audio and video to be sent from a Cisco endpoint without the user noticing.
Local Detection is based on a detection of an acoustical connection between the loudspeaker system and the microphone(s). If there is no such connection, and the loudspeaker is disconnected or switched off, it may indicate that the system is configured with the intention of listening into a confidential conversation/meeting without the meeting participants noticing.

Example: `xconfiguration audio localdetection mode: On`

Audio Feedback Mode

Value space: `<Normal/Fast>`

This configuration alters how fast the audio feedback will react. Set to Normal to allow for some distortion before the feedback response. When set to Fast, the audio feedback response will be faster but also more nervous.

Example: `xconfiguration audio feedback mode: normal`

Audio Delay AUX

Value space: `<On/Off>`

Enables/disables the AUX delay.

Example: `xconfiguration audio delay aux: off`

Audio Delay VCR

Value space: `<On/Off>`

Enables/disables the VCR delay.

Example: `xconfiguration audio delay vcr: off`

Audio HearingImpaired Mode

Value space: `<On/Off>`

If set to On the Hearing Impaired Mode reduces the delay on audio output 3 from 100 ms to 23 ms, allowing an assisted listening device (ALD) to be installed in conjunction with this output and still maintain a high level of lip synchronization.
Set to Off when there is no assisted listening device (ALD) connected to audio output 3.

Example: `xconfiguration audio hearingimpaired mode: off`

Audio HearingImpaired NoiseReduction

Value space: `<On/Off>`

If set to On the Noise reduction will be added to the output used for hearing impaired devices installed on audio output 3.
Set to Off when there is no assisted listening device (ALD) connected to audio output 3.

Example: `xconfiguration audio hearingimpaired noisereduction: off`

Audio HearingImpaired EQ

Value space: `<On/Off>`

If set to On an equalizer is enabled on the system, adding more amplification to the higher frequencies typically found in voices. The setting is by default set to On.
Set to Off to disable the equalizer.

Example: `xconfiguration audio hearingimpaired eq: on`

AutoAnswer Mode

Value space: `<On/Off/Mute>`

Turns autoanswer On or Off. If set to Mute, incoming calls will be answered automatically, but the microphones will be muted.

Example: `xconfiguration autoanswer mode: mute`

AutoAnswer Delay

Value space: `<1..50>`

Defines how long (in seconds) an incoming call has to wait before it is answered automatically by the system (autoanswer must be enabled).

Example: `xconfiguration autoanswer delay: 10`

AutoPIP Mode

Value space: `<On/Off/Auto>`

This configuration only applies if LocalLayout Toggle is set to PIP.
If set to On, the system will display a PIP containing the far-end mainstream when dual video stream is activated.
If set to Auto, the system will display a PIP containing the far-end mainstream when dual video stream is activated. This PIP will disappear automatically after a few seconds, set byt the AutoPIP Timeout setting.
If set to Off, no PIP will be displayed when dual video stream is activated. Requires AutoLayout Mode set to Off.

Example: `xconfiguration autopip mode: on`

AutoPIP Timeout

Value space: `<1..60>`

If the AutoPIP Mode setting is set to Auto, the system will display a PIP containing the far-end mainstream when dual video stream is activated. This PIP will disappear automatically after a few seconds. The time out is set by the AutoPIP Timeout setting.

Example: `xconfiguration autopip mode: on`

AutoLayout Mode

Value space: `<On/Off>`

If set to On the system will change the local picture layout automatically depending on the number of participants in the conference and wether or not dual stream is active.
If set to Off there will be no automatic change of the local picture layout during the conference. All desired layout changes must be done manually, ref. LocalLayout Mode.

Example: `xconfiguration autolayout mode: off`

AutoDisplaySnapshot

Value space: `<On/Off>`

If set to On the system will automatically display snapshots (still images) when received from the other side.

Example: `xconfiguration autodisplaysnapshot: on`

Bonding Timer

Value space: `<Normal/Relaxed>`

Relaxed bonding timing should be used with applications where the B channels use some additional time before they become transparent, like external encryption devices etc.

Example: `xconfiguration bonding timer: relaxed`

Bonding Rebonding

Value space: `<On/Off>`

The default value is On. Rebonding is used to re-establish H.320 calls if corrupted data is received for a longer period (10 - 15s).
Some manufactures don’t support this, and by setting Rebonding to Off this functionality will be disabled.

Example: `xconfiguration bonding rebonding: off`

CallManager Address

Value space: `<S: 0, 64>`

Defines the address of the call manager to use (if any).

Example: `xconfiguration callmanager address: 10.47.9.1`

CallVideoSource

Value space: `<0/1/5/6>`

The Call Video Source is the default call video source you would prefer to use in a call..

Example: `xconfiguration callvideosource: 0`

Camera [1..13] Brightness Mode

Value space: `<Manual/Auto>`

Sets whether to control camera brightness of the different cameras manually or to have it automatically set by the system.

Example: `xconfiguration camera 1 brightness mode: manual`

Camera [1..13] Brightness Level

Value space: `<0..31>`

Defines the brightness level to use if Brightness Mode is set to Manual.

Example: `xconfiguration camera 1 brightness level: 10`

Camera [1..13] Whitebalance Mode

Value space: `<Auto/Manual/Indoor/Outdoor/Gain>`

If set to Auto the camera will continuously adjust the white balance depending on the camera view.
If set to Indoor the camera will adjust the whitebalance for in-door lighting conditions.
If set to Outdoor the camera will adjust the whitebalance for out-door lighting conditions.
When set to Manual the white balance can be calibrated manually by the instruction xcommand ca`merawhitebalance camera:<1..13>`. The whitebalance of the camera will then remain constant until a new calibration is performed.

Example: `xconfiguration camera 1 whitebalance mode: auto`

Camera [1..13] Whitebalance Level

Value space: `<0..16>`

Specifies the camera whitebalance level. Applies to the PrecisionHD camera only.

Example: `xconfiguration camera 1 whitebalance level: 10`

Camera [1..13] Whitebalance Gain Red

Value space: `<0..255>`

Adjust the red white balance gain.

Example: `xconfiguration camera 1 whitebalance gain red: 128`

Camera [1..13] Whitebalance Gain Blue

Value space: `<0..255>`

Adjust the blue white balance gain.

Example: `xconfiguration camera 1 whitebalance gain blue: 128`

If a Cisco Video Switch is connected, the camera ranges will behave as follows:

- Camera 1 will be the video switch.
- Camera range 2..7 will be cameras connected to secondary chain (the chain originating from Data port 2 of the switch).
- Camera range 8..13 will be cameras connected to the primary chain (the chain originating from Data port 1 of the switch).

See the Cisco TelePresence Video Switch User Guide to for more information.

Camera [1..13] Focus Mode

Value space: `<Manual/Auto>`

If set to Manual autofocus will never be turned on automatically.

Example: `xconfiguration camera 1 focus mode: manual`

Camera [1..13] Backlight

Value space: `<On/Off>`

Turns backlight compensation of camera On/Off. Not applicable to WAVE I cameras.

Example: `xconfiguration camera 1 backlight: on`

Camera [1..13] DualVisca

Value space: `<Off/On>`

Enables or disables dual visca mode. If enabled, visca control will be available on the RJ11 connector on the camera. If disabled, the RJ11 connector will work as a normal daisy chain port. Applies to PrecisionHD cameras only.

Example: `xconfiguration camera 1 dualvisca: on`

Camera [1..13] Mirror

Value space: `<Off/On>`

Turns mirror mode on/off. Not applicable to WAVE I cameras.

Example: `xConfiguration camera 1 mirror: on`

Camera [1..13] Gamma Mode

Value space: `<Auto/Manual>`

Auto is the default and the recommended setting. However, in severe light conditions, you may switch mode to manual and specify explicitly which gamma table to use by setting the level. Applies to PrecisionHD cameras only.

Example: `xConfiguration camera 1 gamma mode: auto`

Camera [1..13] Gamma Level

Value space: `<0..7>`

Selects which gamma correction table to use. This setting may be useful in difficult lighting conditions, where changes to the brightness setting does not provide satisfactory results. Applies to PrecisionHD cameras only.

Example: `xConfiguration camera 1 gamma level: 5`

Camera [1..13] IR

Value space: `<Off/On>`

Default is On for camera 1 and 8. Default is Off for cameras 2 - 7 and 9 - 13.
Enables or disables the IR receiver of the camera. Only supported on WAVE, WAVE II and PrecisionHD cameras

Example: `xConfiguration camera 1 ir: on`

If a Cisco Video Switch is connected, the camera ranges will behave as follows:

- Camera 1 will be the video switch.
- Camera range 2..7 will be cameras connected to secondary chain (the chain originating from Data port 2 of the switch).
- Camera range 8..13 will be cameras connected to the primary chain (the chain originating from Data port 1 of the switch).

See the Cisco TelePresence Video Switch User Guide to for more information.

CameraDVI Mode

Value space: `<On/Off/Auto>`

Lets you control cameras connected to the PC Input. Important: Changing any of these options may require a hard boot of connected PrecisionHD cameras and a soft boot of the codec. If you experience problems, like no video or get the message “unsupported video format”, make sure that all connected PrecisionHD cameras are turned off, reboot the codec, and turn cameras back on.
AUTO: The Auto mode, which is the default, will detect if you connect two PrecisionHD cameras, where one is first and the other is last in the chain. If that’s the case, control of the 2nd PrecisionHD camera is automatic when the PC Input is selected.
ON:If you have any other type of camera with a VGA/DVI/HDMI output, you must put it at the end of the chain, and manually turn on this configuration. When you select the PC Input, you will gain control of the last camera. This configuration may be useful when using the VGA output on a Sony BRC-H700 camera. Important: If you set this configuration to on with a single PrecisionHD camera connected, the system will assume that it is connected to the PC Input and avoid configuring the THSI interface. This may or may not be what you intended.
OFF: When set to Off the system assumes all cameras are connected to the normal video inputs, and/or THSI. May be useful if you connect a 2nd PrecisionHD camera to the codec via an HDMI to s-video/composite converter.

Example: `xConfiguration cameradvi mode: auto`

CameraSleep Mode

Value space: `<On/Off>`

If turned On, the main camera will go into sleep position (maximum right panning) when screensaver is activated.
In addition, video source 1 (maincam) will be selected (if not allready active).

Example: `xconfiguration camerasleep mode: on`

CameraSwUpgrade

Value space: `<Auto/Off>`

If set to Auto the Camera software will be automatically upgraded by the codec. If set to Off, camera software upgrade must be initiated manually by the command CameraForceUpgrade.
NOTE! If codec software is downgraded the camera software must be downgraded manually by the command CameraForceUpgrade. Applies to PrecisionHD camera only!

Example: `xconfiguration cameraswupgrade: Auto`

CameraReverseControl

Value space: `<On/Off>`

Set to On to enable the reverse camera control, allowing the local camera to more naturally mimic the directional arrows of the remote control. The setting does not affect the camera sleep pan.
Set to Off to disable the camera reverse control

Example: `xconfiguration camerareversecontrol: off`

CameraTracking Speed

Value space: `<Slow/Normal/Fast>`

Sets the camera tracking speed. Camera tracking is enabled/disabled by the commands CameraTrackingStart and CameraTrackingStop.

Example: `xconfiguration cameratracking speed: normal`

Conference DefaultCall CallRate

Value space: `<Tlph/1xh221/2xh221/64/128/192/256/320/384/H0/512/768/1152/1472/1920/2560/3072/4096/Max/Auto>`

Defines the default call rate to use when placing calls from the system.
NOTE! The supported call rates will depend on product type and software options.
NOTE! Auto: 384 kbps on ISDN/768 kbps on LAN

Example: `xconfiguration conference defaultcall callrate: 320`

Conference DefaultCall Restrict

Value space: `<On/Off>`

A restricted call uses 56kbps channels rather than the default unrestricted 64kbps channels. Some older networks (primarily in the USA) do not support 64kbps channels and require the use of restricted 56kbps calls. By default, the system will dial an unrestricted call and downspeed to 56kbps if necessary.
To force a restricted call, choose Restrict (56k) On.

Example: `xconfiguration conference defaultcall restrict: off`

Conference DefaultCall NetProfile

Value space: `<1..7>`

Selects default NetProfile. Please refer to the NetProfile configurations for further details on the supported NetProfiles.

Example: `xconfiguration conference defaultcall netprofile: 3`

The DefaultCall settings specify call properties to use if properties are not specified directly when placing the call.

Conference H323Alias E164

Value space: `<S: 0, 30>`

Defines the E164 alias for the system. Valid characters are 0-9, * and #.

Example: `xconfiguration conference h323alias e164: 5678910`

Conference H323Alias ID

Value space: `<S: 0, 49>`

Defines the H323Alias ID for the system. If no ID is specified the system will use the SystemUnit Name as H323Alias ID.

Example: `xconfiguration conference h323alias id: MyH323AliasId`

Conference PeriodicIntra

Value space: `<0..1000>`

Use this setting to generate a new intra frame with a configure-able interval. Use this setting with caution since it in a normal network will decrease the video quality.
The default value is set to 0 which means off. If you configure it to 10 it will send an intra every 10th second.

Example: `xconfiguration conference periodicintra: 0`

The aliases define the telephone numbers for the unit, i.e. numbers to call to reach the unit. The system can register both an E164 alias, which can only contain digits (including *, #) and an ID, which can also contain letters.

Conference SIP URI

Value space: `<S: 0, 60>`

The SIP URI is the address to use when calling the system using SIP.

Example: `xconfiguration conference sip uri: MySIP _ URI`

Conference H263

Value space: `<On/Off>`

Enables/disables H.263 for both transmit and receive.

Example: `xconfiguration conference h263: off`

Conference H264

Value space: `<On/Off>`

Enables/disables H.264 for both transmit and receive.

Example: `xconfiguration conference h264: on`

Conference H264RCDO

Value space: `<On/Off>`

Enables/disables H.264 RCDO for both transmit and receive.

Example: `xconfiguration conference h264rcdo: off`

Conference G722

Value space: `<On/Off>`

Enables/disables G.722 for both transmit and receive.

Example: `xconfiguration conference g722: on`

Conference G722.1

Value space: `<On/Off>`

Enables/disables G.722.1 for both transmit and receive.

Example: `xconfiguration conference g722.1: on`

Conference G728

Value space: `<On/Off>`

Enables/disables G.728 for both transmit and receive.

Example: `xconfiguration conference g728: on`

Conference AAC-DL

Value space: `<On/Off>`

Enables/disables AAC-LD for both transmit and receive.

Example: `xconfiguration conference aac-ld: on`

Conference H331

Value space: `<On/Off>`

Turns broadcast mode on or off. When set to on it is possible to make an outgoing call without any capability exchange.

Example: `xconfiguration conference h331: on`

Conference H239

Value space: `<On/Off>`

Enables/disables H.239 for both transmit and receive.

Example: `xconfiguration conference h239: on`

Conference AAC-LD-128-Threshold

Value space: `<384/512/768/1152/1472/1920/2560/3072/4096>`

The system will not transmit AAC-LD-128 unless the call rate is equal to or above the specified threshold.

Example: `xconfiguration conference aac-ld-128-threshold: 768`

Conference AAC-LD-128-Mono

Value space: `<On/Off>`

If set to Off and the system is transmitting mono, the system will not use AAC-LD-128 even though the call rate is above the AAC-LD-128 Threshold.

Example: `xconfiguration conference aac-ld-128-mono: off`

Conference NaturalVideo

Value space: `<Off/Auto/384/512/768/1152/1472/1920>`

Enabling Natural Video will enable 60 (50 on PAL) fields per second true interlaced picture for high motion video. The use of Natural Video requires that H.263+ or H.263++ video protocols are being used. Natural video will be disabled in H.323 MultiSite calls and in H.320 Continuous Presence MultiSite calls.
Select a callrate from the list. When you select 768, this will enable NaturalVideo for callrate 768 kbps and above.
When set to Off, Natural Video will be disabled for both transmit and receive.
When set to Auto, the system will enable transmission of Natural Video from 768 kbps and above. Reception of Natural Video is in this case always enabled. However, when set to Auto the unit will still prioritize the 448p and w448p format over Natural Video. Natural Video can also be configured to be enabled for call rates above a specified threshold value.

Example: `xconfiguration conference naturalvideo: 768`

Conference PictureMode

Value space: `<4Split/5+1Split/VS/Auto>`

Sets the picture layout to be used in a MultiSite conference. If set to Auto the system will change the picture layout depending on the number of participants in the conference.

Example: `xconfiguration conference picturemode: auto`

Conference VideoQualityCP

Value space: `<Motion/Sharpness/Auto>`

Sets the video quality to be used in continuous presence mode (4Split/5+1Split).

Example: `xconfiguration conference videoqualitycp: sharpness`

Conference VideoFormatCP

Value space: `<4:3/16:9>`

Sets the video format to be used in continuous presence mode (4Split/5+1Split).
If set to normal CP which is 4:3, the host will transmit all CP layouts using 4CIF (704x576).
If set to wide CP which is 16:9, the host will transmit all CP layouts using w576p (1024x576).

Example: `xconfiguration conference videoformatcp: 16:9`

Conference FloorToFull

Value space: `<On/Off>`

If PictureMode is set to 5+1Split, and one of the participants in a MultiSite conference is granted floor this setting determines whether to display the participant having floor in full screen or just in the main window of the 5+1Split.

Example: `xconfiguration conference floortofull: on`

Conference MaxCallLength

Value space: `<0..999>`

Sets the maximum allowed call length in minutes (0 = Disabled).

Example: `xconfiguration conference maxcalllength: 0`

Conference AllowIncomingTlphCall

Value space: `<On/Off>`

If set to Off, the system will not accept incoming telephone calls to an already active conference.

Example: `xconfiguration conference allowincomingtlphcall: off`

Conference AllowIncomingMSCall

Value space: `<On/Off>`

If set to Off, the system will not accept incoming calls to an already active multisite conference.

Example: `xconfiguration conference allowincomingmscall: off`

Conference Downspeed

Value space: `<On/Off>`

Determines whether or not to allow down speeding.

Example: `xconfiguration conference downspeed: on`

Conference FallbackToTelephony

Value space: `<On/Off>`

If set to On, the system will try to establish a telephone call if a video telephone call failed to connect.

Example: `xconfiguration conference fallbacktotelephony: on`

Conference Encryption Mode

Value space: `<On/Off/Auto>`

If set to On, the system will not allow un-encrypted calls.
If set to Auto, the system will use encryption whenever possible.
If set to Off, encryption will not be used.

Example: `xconfiguration conference encryption mode: auto`

Conference Encryption Type

Value space: `<Auto/DES/AES-128>`

Defines the encryption algorithm to use.
If set to Auto, the system will try to use the most secure encryption - AES, dependent on the capabilities of the other sites. For sites that do not support AES encryption, DES encryption will be tried.
If set to AES-128, the system will try to use AES with 128 bits encryption when setting up calls. If AES is not supported by the other site(s), no other type of encryption will be initiated.
If set to DES, the system will always try to set up the call using DES with 56 bits encryption ISDN and IP. If all other sites do not support DES, no other type of encryption will be initiated.

Example: `xconfiguration conference encryption type: AES-128`

Conference AIM

Value space: `<On/Off>`

Enables/disables Auto Indicate Mute. If disabled, the system will not signal to the other side that the microphone is turned off.

Example: `xconfiguration conference aim: on`

Conference IPLR Transmit

Value space: `<On/Off>`

Enables/disables Intelligent Packetloss Recovery

Example: `xconfiguration conference iplr transmit: on`

Conference WebSnapshots

Value space: `<On/Off>`

If set to On, snapshots of the conference can be viewed from the systems web interface and also accessed through the units file system.
NOTE! This configuration can only be set using the RS232 port.

Example: `xconfiguration conference websnapshots: on`

Conference BillingCode

Value space: `<On/Off>`

This configuration is only relevant when placing calls using the remote control and the on screen menu. If set to on, all users must enter a code to identify themselves before dialling. The billing code will be attached to the call when the call is placed in the call log after it is disconnected. When placing calls using the command Dial, a billing code can be added to identify the call in the call log regardless of this setting.

Example: `xconfiguration conference billingcode: on`

Conference IPDualstreamRate

Value space: `<25Percent/50Percent/75Percent>`

When setting up an ip call the bandwidth can be controlled by the user. The IPDualstreamRate is expressed in percent of the Call Rate and shall reflect the IP Dualstream Rate settings of the sender. The settings are 25%, 50% and 75% of the total available video stream.

Example: `xconfiguration conference ipdualstreamrate: 50percent`

Conference FarTlphEchoSupression

Value space: `<Off/Normal/High>`

Analogue telephone lines, speaker phones and telephone headsets may all cause echoes. The FarTlphEchoSupression function eliminates some – or all – of the experienced echo. Weak echoes are removed with the Normal setting enabled and strong echoes are removed with the High setting enabled.

Example: `xconfiguration conference FarTlphEchoSupression: Normal`

Conference VideoText

Value space: `<On/Off/Auto>`

In MultiSite calls you can display the names of the participants on screen. By setting the Video Text Time-out setting, the system is configured to display the names for a period of time or as long as you are connected.

Example: `xconfiguration conference videotext: on`

Conference VideoTextTimeout

Value space: `<0..30>`

Sets the timer for the On-screen name of participants in MultiSite calls. Set the timer to display the names for a period of time or as long as you are connected. Requires the VideoText setting to be set to Auto.

Example: `xconfiguration conference videotexttimeout: 0`

CorporateDirectory Mode

Value space: `<On/Off>`

Enables/disables use of a CorporateDirectory stored on a remote server.

Example: `xconfiguration corporatedirectory mode: on`

CorporateDirectory Address

Value space: `<S: 0, 64>`

Specifies the address to the server where the CorporateDirectory is located.

Example: `xconfiguration corporatedirectory address: 10.47.6.75`

CorporateDirectory Path

Value space: `<S: 0, 255>`

Specifies the path to the CorporateDirectory on the server.

Example: `xconfiguration corporatedirectory path: TMS/Public/external/phonebook/PhoneBookService.asmx`

CorporateDirectory Protocol

Value space: `<HTTP/HTTPS>`

The MXP endpoints support secure management when communicating with the TMS (Cisco TelePresence Management Suite).

Example: `xconfiguration corporatedirectory protocol:`

DefaultPIPPosition

Value space: `<BottomLeft/BottomRight/TopLeft/TopRight>`

Specifies the default positioning of the PIP (Picture In Picture).

Example: `xconfiguration defaultpipposition: bottomleft`

Directory CallLog

Value space: `<On/Off>`

Enable/disable Call Logs for Placed calls, Missed calls and Received calls in the Phone Book.

Example: `xconfiguration directory calllog: on`

Directory SmartSearch

Value space: `<On/Off>`

Enable/disable Smart Search in the Phone Book.

Example: `xconfiguration directory smartsearch: off`

DoNotDisturb Mode

Value space: `<On/Off>`

When DoNotDisturb Mode is set to On, the codec will not alert the user to incoming calls. The calling side will receive a busy signal when trying to call the codec. DoNotDisturb will be turned off if the codec receives any IR signal from the handheld remote control.

Example: `xconfiguration donotdisturb mode: off`

DualMonitor Mode

Value space: `<On/Off>`

Sets the codec's monitor mode. It allows the user to set up the codec so it can utilize two displays.

Example: `xconfiguration dualmonitor mode: on`

DuoVideoSource

Value space: `<0/1/2/3/4/5/6>`

Defines which video input to be used as the default Dual Stream source. NOTE! 0 means None

Example: `xconfiguration duovideosource: 1`

DynamicResolution Mode

Value space: `<Auto/Off>`

With Dynamic Resolution the system will use the optimal video resolution for the chosen bandwidth. This feature is only applicable to HD (high definition) calls.
If set to Auto and in a HD call: the resolution will differ between the bandwidths 720p, 576p and 448p, dependent on how much motion it is in the picture. The call will start with 720p and change to a lower resolution when there is a lot motion. It will go back to 720p with less motion.
If set to Off: Disables the Dynamic Resolution feature (the default setting).

Example: `xconfiguration dynamicresolution mode: off`

E1 Interface CRC4

Value space: `<On/Off>`

E1 CRC-4 is used for most E1-PRI configurations. You can turn it off if not supported by the E1 network equipment.

Example: `xconfiguration e1 interface crc4: on`

Ethernet [1..2] Speed

Value space: `<Auto/10half/10full/100half/100full>`

Sets the Ethernet speed. When set to Auto the codec will automatically negotiate with the network and use the best available setting.

Example: `xconfiguration ethernet 1 speed: auto`

ExternalManager Address

Value space: `<S: 0, 64>`

Specifies the address to the External Manager/Management system.

Example: `xconfiguration externalmanager address: “10.47.6.75”`

ExternalManager Path

Value space: `<S: 0, 255>`

Specifies the path to the External Manager/Management system.

Example: `xconfiguration externalmanager path: tms/public/external/management/SystemManagementService.asmx`

ExternalManager Protocol

Value space: `<HTTP/HTTPS>`

Enables/disables secure management.

Example: `xconfiguration externalmanager protocol: http`

If an External Manager address and a path is configured, the system will post an HTTP message to this address when starting up. When receiving this HTTP posting the External Manager (typically a management system) can return configurations/commands to the unit as a result.

If the DHCP Option 242 is returned in the DHCP response from the DHCP server the system will interpret this as the External Manager address to use.

ExternalNetwork Clocking

Value space: `<Dual/Single>`

Dual: (RS449/V35 Compatible) Use this setting when the external equipment provides two clock signals, one for transmit and one for receive. (The difference between RS449 and V35 lies solely in the cable).
Single: (X21 Compatible) Use this setting when the external equipment provides a common clock signal for both transmit and receive.

Example: `xconfiguration externalnetwork clocking: dual`

ExternalNetwork CallControl

Value space: `<RS366/RS366AdtranIMUX/RS366CustomIMUX/LeasedLine/DataTriggered/Manual>`

RS366: This is the only dialling protocol supported and would normally be used together with Dual network clocking when the external equipment uses RS366 ports.
RS366AdtranIMUX: This setting offers extra usability when dialing RS366 via an ADTRAN IMUX. This dialling scheme will map the call type and bandwidth selection to ADTRAN IMUX specific suffixes to the dialled number. Should only be used when connected to an ADTRAN IMUX. The Adtran IMUX uses the following suffixes <Number>#C#R

#C = Call Type #2 = audio #3 = 56kbps #4 = 64kbps #R = Channel Rate #0 = 2xh221 (2x56\64kbps) #1 to 8 = the Call Rate.

RS366CustomIMUX: Uses a custom prefix/suffix table which describes the available bandwidths. The prefixes/suffixes are set from the Web Interface or Command Line interface. The user (administrator) shall be able to specify a IMUX prefix/suffix table for the following bandwidths (kbps): 64, 64 Restrict, 128, 128 Restrict, 192, 192 Restrict, 256, 256 Restrict, 320, 320 Restrict, 384, 384 Restrict, 512, 512 Restrict, 768, 768 Restrict, 1152, 1152 Restrict, 1472, 1472 Restrict, 1920, 1920 Restrict.
LeasedLine: Leased Line is a non-dialling protocol and should be used when two codecs are connected in a point-to-point connection. Use Leased Line when the handshaking signals DTR and CD are available. DTR and CD correspond to the X.21 network's C and I signals.
DataTriggered: Data Triggered mode uses TxData (transmit data), RxData (receive data) and clock signals only. Use Data Triggered when no handshake signals are available.
Manual: Manual should be used when no handshake signals are available and the external equipment requires a constantly connected line.

Example: `xconfiguration externalnetwork callcontrol: rs366`

ExternalNetwork DTRPulse

Value space: `<On/Off>`

Configures the DTR signal on the External Network port (V.35).
On: The DTR signal will give a low pulse lasting for 5 seconds
Off: The DTR pulse will stay low.

Example: `xconfiguration externalnetwork dtrpulse: on`

ExternalServices Mode

Value space: `<On/Off>`

Enables/disables External Services

Example: `xconfiguration externalservices mode: on`

ExternalServices Address

Value space: `<S: 0, 64>`

Configures the External Services address.

Example: `xconfiguration externalservices address: 10.47.6.75`

ExternalServices Path

Value space: `<S: 0, 255>`

Configures the External Services path.

Example: `xconfiguration externalservices path: "tms/public/EndpointService/"`

ExternalServices Protocol

Value space: `<HTTP/HTTPS>`

Enables/disables secure management.

Example: `xconfiguration externalservices protocol: http`

External Services allows a third party integrator to present services on the unit using XHTML 1.0 strict and HTTP.

If turned on, a menu choice will appear in the services menu, and when entering this the unit will retrieve a default XHTML page as specified in the External Services configuration menu.

FECC Mode

Value space: `<On/Off>`

Sets whether or not to allow the remote site to control the cameras connected to the system. FECC = Far End Camera Control

Example: `xconfiguration fecc mode: on`

FeedbackFilter Conference

Value space: `<0..10>`

Defines the Feedback filter (in seconds) for the Conference status element.

Example: `xconfiguration feedbackfilter conference: 4`

FeedbackFilter Call

Value space: `<0..10>`

Defines the Feedback filter (in seconds) for the Call status element.

Example: `xconfiguration feedbackfilter call: 2`

Only relevant if using feedback (xfeedback over RS-232/Telnet or feedback over HTTP).

The feedback filter lets the user configure the maximum frequency between feedback updates. That means if data changes very rapidly, the control application will not receive feedback more frequent than every xth second. This will help reducing the load on both the link and the control system, but some transition information might be lost.

FTP Mode

Value space: `<On/Off>`

Enables or disables the systems embedded FTP server.

Example: `xconfiguration ftp mode: on`

G703 PhysicalLayer

Value space: `<E1/T1>`

Selects whether the leased line is E1 or T1.

Example: `xconfiguration g703 physicallayer: e1`

G703 Linecoding

Value space: `<b8zsRestrict/b8zsNoRestrict>`

Selects whether the Leased line is a 56kb network (restricted) or a 64kb network.

Example: `xconfiguration g703 linecoding: b8zsrestrict`

G703 Callcontrol

Value space: `<Manual/Auto>`

When Auto is selected, the system will automatically initiate a connection as soon as it detects that the far end tries to make a call. This mode is also commonly known as “data triggered” mode, because the existence of certain data patterns on the line triggers a connection.
When Manual is selected, you must explicitly issue a dial command to make the system connect to the far end system. Receiving an incoming call is not possible.

Example: `xconfiguration g703 callcontrol: auto`

G703 Interface StartChannel

Value space: `<1..31>`

Indicates the first E1/T1 channel the codec is allowed to use. This setting might be used if the E1/T1 line is shared with other equipment.

Example: `xconfiguration g703 interface startchannel: 6`

G703 Interface MaxChannels

Value space (Codec 3000NET): `<1..30/23>`

Indicates the maximum number of channels the codec is allowed to use on the E1/T1 interface.
When E1 is selected, maximum is 30 channels. When T1 is selected, maximum is 24 channels.

Example: `xconfiguration g703 interface maxchannels: 12`

H320 NetType

Value space (Codec 6000): `<BRI/PRI/External/G703/None>`

Value space (Codec 3000): `<BRI/None>`

Value space (Codec 3000NET): `<External/None>`

Defines the network type to use for H.320 calls.

Example: `xconfiguration h320 nettype: bri`

H323 Mode

Value space: `<On/Off>`

Enables/disables the possibility to place and receive H.323 calls.

Example: `xconfiguration h323 mode: on`

H323CallSetup Mode

Value space: `<Direct/Gatekeeper/CallManager>`

Defines how to establish H.323 calls.
Direct: An IP-address must be used in order to make a H.323 call. The system will not use a gatekeeper or CallManager.
Gatekeeper: The system will use a gatekeeper to make a H.323 call.
CallManager: The system will use a CallManager to make a H.323 call.
NOTE! Direct H.323calls can be made even though the H323CallSetup Mode is set to Gatekeeper or Callmanager.

Example: `xConfiguration h323callsetup mode: gatekeeper`

H323Gatekeeper Discovery

Value space: `<Manual/Auto>`

Auto: The system will automatically try to register to any available gatekeeper. If a gatekeeper responds to the request sent from the codec within 30 seconds this specific gatekeeper will be used. This requires auto discovery on the gatekeeper as well. If no gatekeeper responds, the system will not use a gatekeeper for making H.323 calls and hence an IP-address must be specified manually.
Manual: The system will use a specific gatekeeper identified by H323Gatekeeper Address.

Example: `xconfiguration h323gatekeeper discovery: manual`

H323Gatekeeper Address

Value space: `<S: 0, 64>`

Specifies the address of the gatekeeper to use if Discovery is set to Manual.

Example: `xconfiguration h323gatekeeper address: 10.47.9.1`

H323Gatekeeper MultipleAlias

Value space: `<On/Off>`

If set to On, the system will register multiple H.323-IDs on the Gatekeeper based on the values of the parameters: System Name, International Name and H.323 ID.
Up to 3 aliases are possible.
If set to Off, the system will register a single H.323-IDs on the Gatekeeper based on the following priority:

1. H.323 ID
1. International Name
1. System Name

Example: `xconfiguration h323gatekeeper multiplealias: On`

H323Gatekeeper Authentication Mode

Value space: `<Auto/Off>`

If Authentication Mode is set to Auto and the gatekeeper indicates that it requires authentication, the endpoint will automatically try to authenticate itself to the Gatekeeper.
If Authentication Mode is set to Off the system will not try to authenticate itself to a Gatekeeper, but will still try a normal registration.

Example: `xconfiguration h323gatekeeper authentication mode: auto`

H323Gatekeeper Authentication ID

Value space: `<S: 0, 49>`

The system sends the Authentication ID and Password to a Gatekeeper for authentication. The authentication is a one way authentication from the endpoint system to a Gatekeeper, i.e. the endpoint is authenticated to the Gatekeeper. If the Gatekeeper indicates that no authentication is required, the endpoint will still try to register.

Example: `xconfiguration h323gatekeeper authentication id: TANDBERG`

H323Gatekeeper Authentication Password

Value space: `<S: 0, 49>`

Please see above. NOTE! **The password will not be listed when polling.**

Example: `xconfiguration h323gatekeeper authentication password: xxx`

H323Gatekeeper Avaya Mode

Value space: `<On/Off>`

NOTE! The Mode setting is the main switch to the rest of the options. If Mode is set to Off the other Avaya options will be ignored by the system.
Set to On when the specified gatekeeper (`xconfiguration H323Gatekeeper Address`) is an Avaya gatekeeper. This enables Avaya-specific behavior. An Avaya gatekeeper is called Avaya Communication Manager - Avaya CM for short).

Example: `xconfiguration h323gatekeeper avaya mode: off`

H323Gatekeeper Avaya AnnexH

Value space: `<On/Off>`

Set AnnexH to On to enable Avaya strongest level of encryption (H.235.5 with Avaya extensions). When set to Off, the Avaya CM needs to have a “green license” installed to support non-encrypted endpoints.

Example: `xconfiguration h323gatekeeper avaya annexh: off`

H323Gatekeeper Avaya MultipointCount

Value space: `<0..9>`

The Avaya MultipointCount decides how many simultaneous calls the endpoint will be able to handle. If it is non-zero, that value will be used (there is a maximum to what the Avaya CM can handle depending on its software version. Change this value only if you know what you’re doing). If set to “0”, default safe values will be used. The default safe values are:
4 if AnnexH is turned on.
6 if AnnexH is turned off.

NOTE! The MultiPointCount setting is only used when in an Avaya environment.

Example: `xconfiguration h323gatekeeper avaya multipointcount: 0`

H323Gatekeeper Avaya Password

Value space: `<S: 0, 49>`

The Avaya password is a hidden write-only parameter that sets the PIN code to use for AnnexH encryption.

Example: `xconfiguration h323gatekeeper avaya password: 123`

H323Prefix

Value space: `<S: 0, 4>`

When dialling a number prefixed with digits specified by H.323 Prefix, and with Net: Auto, an H.323 call will be placed.

Example: `xconfiguration h323prefix: 5`

HTTP Mode

Value space: `<On/Off>`

Enables/disables HTTP.

Example: `xconfiguration http mode: on`

HTTPS Mode

Value space: `<On/Off>`

Enables/disables HTTPS.

Example: `xconfiguration https mode: on`

HTTPS VerifyServerCertificate

Value space: `<On/Off>`

The MXP endpoints support secure management when communicating with the TMS (Cisco TelePresence Management Suite). For more information see the White Paper “Implementing Secure Management” which describes how to configure secure HTTPS between the endpoints. To find the document, follow the link: http://www.tandberg.com/docs and select White Papers.

Example: `xconfiguration https verifyservercertificate: on`

IdReport H323

Value space: `<H323Id/E164Alias/IPAddress>`

Selects what identifier to present as remote number for incoming H.323 calls.

Example: `xconfiguration idreport h323: h323id`

IEEE802.1x Mode

Value space: `<On/Off>`

Enables/disables 802.1x authentication

Example: `xconfiguration ieee802.1x mode: on`

IEEE802.1x AnonymousIdentity

Value space: `<S: 0, 64>`

The 802.1x Anonymous ID string is to be used as un-encrypted identity with EAP types that support different tunneled identity, EAP-PEAP and EAP-TTLS. The anonymous ID, if set, will be used for the initial (un-encrypted) EAP Identity Request

Example: `xconfiguration ieee802.1x anonymousidentity:`

IEEE802.1x Identity

Value space: `<S: 0, 64>`

The 802.1x Identity is the user name needed for 802.1x authentication.

Example: `xconfiguration ieee802.1.x identity: MyString`

IEEE802.1x Password

Value space: `<S: 0, 64>`

The 802.1x Password is the password needed for 802.1x authentication.

Example: `xconfiguration ieee802.1x password: MyPassword`

IEEE802.1x EAP-MD5

Value space: `<On/Off>`

Enables/disables the EAP-MD5 protocol

Example: `xconfiguration ieee802.1.x eap-md5: on`

The system may be connected to an IEEE802.1x LAN network. Supported 802.1x protocols are EAP-MD5, EAP-PEAP and EAP-TTLS.

IEEE802.1x EAP-TTLS

Value space: `<On/Off>`

Enables/disables the EAP-TTLS protocol

Example: `xconfiguration ieee802.1.x eap-ttls: on`

IEEE802.1x EAP-PEAP

Value space: `<On/Off>`

Enables/disables the EAP-PEAP protocol

Example: `xconfiguration ieee802.1.x eap-peap: on`

The system may be connected to an IEEE802.1x LAN network. Supported 802.1x protocols are EAP-MD5, EAP-PEAP and EAP-TTLS.

IMUX Custom bandwidth commands

IMUX Custom BW64 Prefix	IMUX Custom BW64 Suffix	IMUX Custom BW64R Prefix	IMUX Custom BW64R Suffix
IMUX Custom BW128 Prefix	IMUX Custom BW128 Suffix	IMUX Custom BW128R Prefix	IMUX Custom BW128R Suffix
IMUX Custom BW192 Prefix	IMUX Custom BW192 Suffix	IMUX Custom BW192R Prefix	IMUX Custom BW192R Suffix
IMUX Custom BW256 Prefix	IMUX Custom BW256 Suffix	IMUX Custom BW256R Prefix	IMUX Custom BW256R Suffix
IMUX Custom BW320 Prefix	IMUX Custom BW320 Suffix	IMUX Custom BW320R Prefix	IMUX Custom BW320R Suffix
IMUX Custom BW384 Prefix	IMUX Custom BW384 Suffix	IMUX Custom BW384R Prefix	IMUX Custom BW384R Suffix
IMUX Custom BW512 Prefix	IMUX Custom BW512 Suffix	IMUX Custom BW512R Prefix	IMUX Custom BW512R Suffix
IMUX Custom BW768 Prefix	IMUX Custom BW768 Suffix	IMUX Custom BW768R Prefix	IMUX Custom BW768R Suffix
IMUX Custom BW1152 Prefix	IMUX Custom BW1152 Suffix	IMUX Custom BW1152R Prefix	IMUX Custom BW1152R Suffix
IMUX Custom BW1472 Prefix	IMUX Custom BW1472 Suffix	IMUX Custom BW1472R Prefix	IMUX Custom BW1472R Suffix
IMUX Custom BW1920 Prefix	IMUX Custom BW1920 Suffix	IMUX Custom BW1920R Prefix	IMUX Custom BW1920R Suffix

Value space: `<S: 0, 12>`

Defines the prefix or suffix to be used with the RS366 Custom IMUX at this bandwidth or at this restricted bandtwith.

Example: `xconfiguration imux custom bw64 prefix: abc12345`

Example: `xconfiguration imux custom bw64 suffix: 12345abc`

Example: `xconfiguration imux custom bw64r prefix: abc12345`

Example: `xconfiguration imux custom bw64r suffix: 12345abc`

Integrator AMXBeacon Mode

Value space: `<On/Off>`

If set to On, the system will start transmitting beacon messages to support AMX's Dynamic Device Discovery Protocol (DDDP). The beacon string is transmitted as a UDP packet to 239.255.250.250 on port 9131 at random intervals between 30 and 60 seconds. The transmission of the Beacon message is by default set to Off.

Example: `xconfiguration integrator amxbeacon mode: off`

Integrator Telepresence Mode

Value space: `<Off/Point2Point/MultiPoint/Briefer>`

Only in use with TANDBERG Experia.

Example: `xconfiguration integrator telepresence mode: off`

IPProtocol

Value space: `<IPv4/IPv6/Both>`

Defines what IP protocol to use. If set to Both the system will support both IPv4 and IPv6.

Example: `xconfiguration ipprotocol: both`

IP Assignment

Value space: `<DHCP/Static>`

Defines whether to use DHCP or Static IP assignment. NOTE! This configuration only applies to IPv4.

Example: `xconfiguration ip assignment: dhcp`

IP Address

Value space: `<IPAddr>`

Defines the IPv4 address to use. Only applicable if Static IP assignment is being used.

Example: `xconfiguration ip address:`

IP SubnetMask

Value space: `<IPAddr>`

Defines the subnet mask. Only applicable if Static IP assignment is being used.

Example: `xconfiguration ip subnetmask:`

IP Gateway

Value space: `<IPAddr>`

Defines the gateway address. Only applicable if Static IP assignment is being used.

Example: `xconfiguration ip gateway:`

IP V6 Address

Value space: `<IPv6Addr: 0, 43>`

Allows static configuration of the IP v6 Address.

Example: `xConfiguration ip v6 address:`

IP DNS Server [1..5] Address

Value space: `<IPv4v6Addr: 0, 43>`

Defines the IPv4 or IPv6 network addresses for DNS servers. Up to 5 addresses may be specified. If the network addresses are unknown, please contact your administrator or Internet Service Provider.

Example: `xconfiguration ip dns server:`

IP DNS Domain Name

Value space: `<S: 0, 64>`

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

Example: `DNS Domain Name is "example.com", and the name to lookup is "videosystem" will result in a "videosystem.example.com" DNS lookup.`

IPMedia MaxVideoTXRate

Value space: `<64..4096>`

The MaxVideoTXRate (kbps) defines the desired maximum transmitted call rate for IP calls. This is to be able to limit the outgoing bandwidth whilst keeping the maximum incoming bandwidth, especially useful for home offices with different upstream and downstream rates, typically ADSL.

Example: `xconfiguration ipmedia maxvideotxrate: 384`

IRControl Mode

Value space: `<On/Off>`

Enables/disables the IR port which is used for the remote control.

Example: `xconfiguration ircontrol mode: off`

IRControl NumberKeyMode

Value space: `<AddCall/DTMF/Presets/Manual>`

When pressing a number key on the remote control, while in a call, the user can decide what shall happen. The system can be configured to act automatically or manually. Please refer to the MXP Administrator Guide and MXP User Guide for further details.

Example: `xconfiguration ircontrol numberkeymode: DTMF`

ISDN CliNumbSpec

Value space: `<On/Off>`

Explicitely specify Calling Party Number fields Type/Plan to be used in outgoing calls in the ISDN setup message. Using default values if set to Off. When set to on, the system will use the values set by "ISDN ClinNumPlan" and "ISDN ClinNumbType".

Example: `xConfiguration isdn clinumbspec: Off`

ISDN CliNumbType

Value space: `<0..6>`

Value to be used for Calling Party Number field Type. If the value is set to 2, the number type in the setup message will be set to National. This is required in the UAE.

Example: `xConfiguration isdn clinumbtype: 5`

ISDN CliNumbPlan

Value space: `<0..14>`

Value to be used for Calling Party Number field Plan in the ISDN setup message. If the value is set to 1, the numbering plan in the setup message will signal ISDN. This is required in UAE.

Example: `xConfiguration isdn clinumbplan: 12`

ISDN SendComplete

Value space: `<On/Off>`

If set to On the system will send the ISDN message information element Sending Complete.
If set to Off The system will not send Sending Complete. Default is Off.

Example: `xconfiguration isdn sendcomplete: on`

ISDN SendNumber

Value space: `<On/Off>`

When set to On, the system will send its own numbers to the far end.
When set to Off, the system will not send its own numbers to the far end, but please note that the network may still send your numbers to the far end.

Example: `xconfiguration isdn sendnumber: on`

ISDN ParallelDial

Value space: `<On/Off>`

When set to On, channels will be dialed and connected in parallel when setting up a BONDING call.
When set to Off, channels will be dialled one by one, which may increase the dialling time.

Example: `xconfiguration isdn paralleldial: on`

ISDN HLC

Value space: `<On/Off>`

Turns sending of HLC information element in setup message on or off (video calls only). When HLC (Higher Level Capability) is set to on the system will signal, type of call i.e. video call, telephony or data.
HLC must be set to on to work with some PRIs in Italy.

Example: `xconfiguration isdn hlc: on`

ISDN SpeechTimers

Value space: `<On/Off>`

ISDN Layer 3, telephony calls. When set to Off, there will be no T310, T304, T301

Example: `xconfiguration isdn speechtimers: on`

ISDN MSN

Value space: `<On/Off>`

The use of MSN (Multiple Subscriber Number) enables you to attach different ISDN terminals, with different numbers, to the same physical ISDN telephone line.
If MSN is set to Only calls to numbers specified for the specific ISDN interfaces will be answered. This service can be ordered from your telephone company.

Example: `xconfiguration isdn msn: on`

ISDN SubAddress

Value space: `<S: 0, 20>`

Using a sub address enables you to connect up to eight ISDN terminals to the same ISDN telephone number and line. The terminals are addressed by using different sub addresses. To call a terminal with a sub address, separate the ISDN telephone number and the sub address with a *. Note that this service has limited access on some ISDN networks.

Example: `xconfiguration isdn subaddress: 15`

ISDN PRI NSFTelephony Mode

Value space: `<On/Off>`

Enables/disables use of NSF for telephony. NSF = Network Service Facility

Example: `xconfiguration isdn pri nsftelephony mode: on`

ISDN PRI NSFTelephony Number

Number: `<0..31>`

Defines what Service Facility to use for telephony if the NSFTelephony Mode is set to On.

Example: `xconfiguration isdn pri nsftelephony number: 8`

Service profiles for AT&T (ref. 1):

NSF	Service
0	Disable
1	SDN (including GSDN)
2	Toll Free Megacom (800)
3	Megacom
6	ACCUNET Switched Digital Service (including Switched Digital International)
7	Long Distance Service (including AT&T World Connect)
8	International Toll Free Service (I800)
16	AT&T MultiQuest
23	Call Redirection Service

Service profiles for Sprint (ref. 2):

NSF	Service
0	Reserved
1	Private
2	Inwatts
3	Outwatts
4	FX
5	TieTrunk

Service profiles for MCI (ref. 3):

NSF	Service
1	VNET/Vision
2	800
3	PRISM1, PRISMII, WATS
4	900
5	DAL

ISDN PRI NSFVideoTelephony Mode

Value space: `<On/Off>`

Enables/disables use of NSF for video telephony. NSF = Network Service Facility

Example: `xconfiguration isdn pri nsfvideotelephony mode: on`

ISDN PRI NSFVideoTelephony Number

Value space: `<0..31>`

Defines what Service Facility to use for video telephony if NSFVideoTelephony Mode is set to On.

Example: `xconfiguration isdn pri nsfvideotelephony number: 8`

ISDN PRI SwitchType

Value space: `<NI/ATT/Euro/Japan>`

Selects the type of PRI switch the system is connected to.

Example: `xconfiguration isdn pri switchtype: ni`

ISDN PRI InitialRestart

Value space: `<On/Off>`

When restart is set to on the PRI interfaces will be re-initialized after boot.

Example: `xconfiguration isdn pri initialrestart: on`

ISDN PRI Alert

Value space: `<On/Off>`

If set to On, the system will respond with an alert message to all incoming setup messages. If set to Off (default) the system will respond with an alert message only to the incoming setup message related to the initial channel. If, in addition, the PBX requires this signalling you will only get connected on the first incoming channel.

Example: `xconfiguration isdn pri alert: on`

ISDN PRI ChanId

Value space: `<On/Off>`

Can be used to force sending of channel id information. When set to “on”, the system will signal to the PBX which PRI channels is used for the call. Default setting is off. Note: This setting must be set to on, to work with an Ericsson MD110 PBX.

Example: `xconfiguration isdn pri chanid: on`

ISDN PRI L2WindowSize

Value space: `<1..7>`

Max. No. of outstanding Iframes (ISDN Layer 2)

Example: `xconfiguration isdn pri L2windowsize:`

ISDN PRI Interface MaxChannels

Value space: `<1..30>`

Maximum number of channels the system may use at any given time.

Example: `xconfiguration isdn pri interface maxchannels: 23`

ISDN PRI Interface HughChannel

Value space: `<1..31>`

The highest numbered B-channel that may be used by the system when selecting channels for outgoing calls.

Example: `xconfiguration isdn pri interface highchannel:31`

ISDN PRI Interface LowChannel

Value space: `<1..31>`

The lowest numbered B-channel that may be used by the system when selecting channels for outgoing calls.

Example: `xconfiguration isdn pri interface lowchannel:1`

ISDN PRI Interface Search

Value space: `<High/Low>`

Selects whether to start searching for available B-channels from the highest numbered channel or from the lowest numbered channel.

Example: `xconfiguration isdn pri interface search: high`

ISDN PRI Interface NumberRangeStart

Value space: `<S: 0, 24>`

Defines the number range start, supported by the PRI interface.

Example: `xconfiguration isdn pri interface numberrangestart: 1`

ISDN PRI Interface NumberRangeStop

Value space: `<S: 0, 24>`

Defines the number range stop, supported by the PRI interface.

Example: `xconfiguration isdn pri interface numberrangestop: 8`

ISDN BRI SwitchType

Value space: `<NI/ATT/Euro/1TR6/Japan/Australia/FETEX>`

Selects BRI network type.

Example: `xconfiguration isdn bri switchtype: att`

ISDN BRI AutoActivation

Value space: `<Off/Selected/All>`

(ISDN Layer 1) Auto activation of the BRI interface. Selected will activate those already On, All will activate all interfaces regardless of status.

Example: `xconfiguration isdn bri autoactivation: all`

ISDN BRI MaxDeactiveTime

Value space: `<1..60>`

Max duration for Layer 1 in de-active state before auto activation (re)starts

Example: `xconfiguration isdn bri maxdeactivetime:`

ISDN BRI Alert

Value space: `<On/Off>`

If set to On, the system will respond with an alert message to all incoming setup messages. If set to Off (default) the system will respond with an alert message only to the incoming setup message related to the initial channel. If, in addition, the PBX requires this signalling you will only get connected on the first incoming channel.

Example: `xconfiguration isdn bri alert: on`

ISDN BRI ChanId

Value space: `<On/Off>`

Can be used to force sending of channel id information. When set to “on”, the system will signal to the PBX which PRI channels is used for the call. Default setting is off. Note: This setting must be set to on, to work with an Ericsson MD110 PBX.

Example: `xconfiguration isdn bri chanid: on`

ISDN BRI InterfaceSearch

Value space: `<High/Low>`

Selects whether to start searching for available B-channels from the highest numbered interface or from the lowest numbered interface.

Example: `xconfiguration isdn bri interfacesearch: high`

ISDN BRI Interface [1..6] Mode

Value space: `<On/Off>`

Enables/disables the various BRI interfaces.

Example: `xconfiguration isdn bri interface 4 mode: off`

ISDN BRI Interface [1..6] DirectoryNumber [1..2]

Value space: `<S: 0, 24>`

Specifies the Directory Numbers for the various BRI interfaces.

Example: `xconfiguration isdn bri interface 4 directorynumber 2: 6623`

ISDN BRI Interface [1..6] SPID [1..2]

Value space: `<S: 0, 20>`

If the network supports automatically retrieval of SPIDs, the command SPIDAutoConfigure should be used.

Example: `xconfiguration isdn bri interface 4 spid 2: 55`

KeepDuoOpen

Value space: `<On/Off>`

Keeps the dual channel open even when there is no presentation video source connected to the endpoint. Requires the optional Natural Presenter Package to be installed.

Example: `xconfiguration keepduoopen: off`

Key Number0

Value space: `<On/Off>`

Enable or disable the given key on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key number0: on`

Key Number1

Value space: `<On/Off>`

Enable or disable the given key on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key number1: on`

Key Number2

Value space: `<On/Off>`

Enable or disable the given key on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key number2: on`

Key Number3

Value space: `<On/Off>`

Enable or disable the given key on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key number3: on`

Key Number4

Value space: `<On/Off>`

Enable or disable the given key on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key number4: on`

Key Number5

Value space: `<On/Off>`

Enable or disable the given key on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key number5: on`

Key Number6

Value space: `<On/Off>`

Enable or disable the given key on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key number6: on`

Key Number7

Value space: `<On/Off>`

Enable or disable the given key on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key number7: on`

Key Number8

Value space: `<On/Off>`

Enable or disable the given key on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key number8: on`

Key Number9

Value space: `<On/Off>`

Enable or disable the given key on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key number9: on`

Key Star

Value space: `<On/Off>`

Enable or disable the given key (*) on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key star: on`

Key Square

Value space: `<On/Off>`

Enable or disable the given key (#) on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key square: on`

Key Connect

Value space: `<On/Off>`

Enable or disable the given key (green Call key) on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key connect: on`

Key Disconnect

Value space: `<On/Off>`

Enable or disable the given key (red End Call key) on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key disconnect: on`

Key Up

Value space: `<On/Off>`

Enable or disable the given key (arrow up) on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key up: on`

Key Down

Value space: `<On/Off>`

Enable or disable the given key (arrow down) on the Cisco Remote Control 4, and using configuration instead of commands.
Example: xconfiguration key down: on

Key Right

Value space: `<On/Off>`

Enable or disable the given key (arrow right) on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key right: on`

Key Left

Value space: `<On/Off>`

Enable or disable the given key (arrow left) on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key left: on`

Key Selfview

Value space: `<On/Off>`

Enable or disable the given key (Selfview) on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key selfview: on`

Key Layout

Value space: `<On/Off>`

Enable or disable the given key (Layout) on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key layout: on`

Key Phonebook

Value space: `<On/Off>`

Enable or disable the given key (Phonebook) on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key phonebook: on`

Key Cancel

Value space: `<On/Off>`

Enable or disable the given key (x - Cancel) on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key cancel: on`

Key MicOff

Value space: `<On/Off>`

Enable or disable the given key (yellow Mic Off key) on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key micoff: on`

Key Presentation

Value space: `<On/Off>`

Enable or disable the given key (blue Presentation key) on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key presentation: on`

Key VolumeUp

Value space: `<On/Off>`

Enable or disable the given key (Volume +) on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key volumeup: on`

Key VolumeDown

Value space: `<On/Off>`

Enable or disable the given key (Volume –) on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key volumedown: on`

Key Ok

Value space: `<On/Off>`

Enable or disable the given key (OK - Menu key) on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key ok: on`

Key ZoomIn

Value space: `<On/Off>`

Enable or disable the given key (Zoom +) on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key zoomin: on`

Key ZoomOut

Value space: `<On/Off>`

Enable or disable the given key (Zoom –) on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key zoomout: on`

Key Grab

Value space: `<On/Off>`

Enables/disables the signal which is sent to the codec when grabbing and touching the rubber lines on each side of the Cisco Remote Control.

Example: `xconfiguration key grab: on`

Key Cabinet

Value space: `<On/Off>`

Enables/disables the headset key in front of the cabinet. Applies to 1000 MXP only.

Example: `xconfiguration key cabinet: on`

Key Presets

Value space: `<On/Off>`

Enable or disable the given key on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key presets: on`

Key FarEnd

Value space: `<On/Off>`

Enable or disable the given key on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key farend: on`

Key Services

Value space: `<On/Off>`

Enable or disable the given key on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key services: on`

Key Help

Value space: `<On/Off>`

Enable or disable the given key on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key help: on`

Key MainCam

Value space: `<On/Off>`

Enable or disable the given key on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key maincam: on`

Key PC

Value space: `<On/Off>`

Enable or disable the given key on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key pc: on`

Key DocCam

Value space: `<On/Off>`

Enable or disable the given key on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key doccam: on`

Key VCR

Value space: `<On/Off>`

Enable or disable the given key on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key vcr: on`

Key AUX

Value space: `<On/Off>`

Enable or disable the given key on the Cisco Remote Control 4, and using configuration instead of commands.

Example: `xconfiguration key aux: on`

Keyboard Layout

Value space: `<English/US/Norwegian/Swedish/German/French/User>`

Defines the layout of the keyboard, if connected.

Example: `xconfiguration keyboard layout: us`

Kiosk AllowIRControl

Value space: `<On/Off>`

Enables (On) or disables (Off) the use of all keys on the remote control.

Example: `xconfiguration kiosk allowircontrol: on`

Kiosk AutoDial

Value space: `<On/Off>`

Enables (On) or disables (Off) auto dial. The system will automatically dial to the first contact in the Phone Book when the handset is lifted. If this contact is busy, the system will call the second number in the Phone Book and so on. If the user places the handset in the cradle, the system will switch to Speaker Mode. Only the Far End system can end the call.

Example: `xconfiguration kiosk autodial: on`

Kiosk LanguageMenu Mode

Value space: `<On/Off>`

Enables (On) or disables (Off) language menu in Kiosk mode.

Example: `xconfiguration kiosk languagemenu mode: on`

Kiosk LanguageMenu English

Value space: `<On/Off>`

Enables (On) or disables (Off) language menu in English.

Example: `xconfiguration kiosk languagemenu english: on`

Kiosk LanguageMenu German

Value space: `<On/Off>`

Enables (On) or disables (Off) language menu in German

Example: `xconfiguration kiosk languagemenu german: on`

Kiosk LanguageMenu French

Value space: `<On/Off>`

Enables (On) or disables (Off) language menu in French

Example: `xconfiguration kiosk languagemenu french: on`

Kiosk LanguageMenu Italian

Value space: `<On/Off>`

Enables (On) or disables (Off) language menu in Italian

Example: `xconfiguration kiosk languagemenu italian: on`

Kiosk LanguageMenu Norwegian

Value space: `<On/Off>`

Enables (On) or disables (Off) language menu in Norwegian

Example: `xconfiguration kiosk languagemenu norwegian: on`

Kiosk LanguageMenu Swedish

Value space: `<On/Off>`

Enables (On) or disables (Off) language menu in Swedish

Example: `xconfiguration kiosk languagemenu swedish: on`

Kiosk LanguageMenu Spanish

Value space: `<On/Off>`

Enables (On) or disables (Off) language menu in Spanish

Example: `xconfiguration kiosk languagemenu spanish: on`

Kiosk Menu

Value space: `<On/Off>`

Enables (On) or disables (Off) Kiosk menu to appear on screen.

Example: `xconfiguration kiosk menu: on`

Kiosk Mode

Value space: `<On/Off>`

Enables (On) or disables (Off) Kiosk mode.

Example: `xconfiguration kiosk mode: on`

Kiosk OneClickConnect

Value space: `<On/Off>`

If turned On, you can make a call with a single click on the green call button the remote control. The system will call the first entry in “My Contacts” in the Phone Book. NOTE! The one-click-connect functionality will only work in Kiosk Mode. If set to Off: Does not allow for one click connect in Kiosk mode.

Example: `xconfiguration kiosk oneclickconnect: off`

Kiosk Phonebook

Value space: `<Local/CorporateDirectory>`

Local: The system will use the Local Phone Book in Kiosk Mode. CorporateDirectory: The system will use the Corporate Directory in Kiosk Mode.

Example: `xconfiguration kiosk phonebook: local`

LocalLayout Mode

Value space: `<Full/2Split/POP/POPwide>`

Defines the picture layout to use on the local main monitor. POP and POPWide should only be used on wide screen monitors.

Example: `xconfiguration locallayout mode: full`

LocalLayout Toggle

Value space: `<PIP/POP>`

Defines the behaviour of the Layout button the remote control.
If set to POP the system will toggle through the different LocalLayout modes when pressing the Layout button.
If set to PIP, the system will display a PIP when pressing the Layout button.

Example: `xconfiguration locallayout toggle: pip`

Logo

Value space: `<On/Off>`

If set to On the system will display a company logo will appear in the background of the welcome menu. NOTE! The Cisco logo will be displayed if no other company logo is uploaded.

Example: `xconfiguration logo: on`

LoS Duration Exponent

Value space: `<10..30>`

Example: `xconfiguration los duration exponent: 15`

LoS Duration Offset

Value space: `<0..65534>`

Offset is specified in milliseconds

Example: `xconfiguration los duration offset: 100`

The duration of the LoS-pulse can be calculated from:

$$\text{Duration} = \frac{\text{Offset} + 2^{\text{Exponent}}}{\text{bit rate}}$$

LoS Inhibit

Value space: `<0..65534>`

Specifies the number of seconds to wait before issuing a new LOS pulse if the codec regains and subsequently loses H.221 frame alignment.

Example: `xconfiguration los inhibit: 15`

LoS Initial

Value space: `<0..65534>`

Specifies the maximum number of seconds to wait for H.221 frame alignment during call setup before asserting the LOS signal.

Example: `xconfiguration los initial: 5`

LoS Polarity

Value space: `<Positive/Negative>`

Set LOS pulse polarity.

Example: `xconfiguration los polarity: positive`

LoS Retry

Value space: `<0..65534>`

Specifies the number of seconds to wait before issuing a new LOS pulse in case the codec does not regain H.221 frame alignment.

Example: `xconfiguration los retry: 25`

LoS configurations are relevant for systems with NET interface (External Network) only.

MainVideoSource

Value space: `<1/2/3/4/5/6>`

Defines which video input to be used as the main video source.

Example: `xconfiguration mainvideosource: 2`

MaxBandwidth

Value space: `<128..6144>`

Limit max bandwidth usage for the system. Related to IPMedia MaxVideoTXRate, which only controls upstream bandwidth.

Example: `xconfiguration maxbandwidth: 6144`

Multipoint Mode

Value space: `<Off/Multisite/Multiway>`

Set to MultiSite if you have the optional feature MultiSite installed.
Set to Multiway to enable this feature. MultiwayTF will extend point to point calls to conferences on MCU's hosted on the network over H.323 and SIP. The new participant will be consulted before he is added to the conference. The Multiway feature requires the uses of the Cisco TelePresence Video Communications Server (VCS) software Ver. X4.1 or higher, and the uses of the Cisco TelePresence MCU software Ver. 3.0 or higher.
Set to Off if none of the above features are being used.

Example: `xconfiguration multipoint mode: off`

Multipoint

MultiwayURI: `<S: 0, 60>`

Specify the Multiway URI. When calling Multiway on SIP the SIP prefix must be added to the URI for the endpoint who initiates the Multiway call

Example: `xconfiguration multipoint multiwayuri: "firstname.lastname@company.com"`

Example with SIP prefix: `xconfiguration multipoint multiwayuri: "sip:firstname.lastname@company.com"`

Multipoint

MultiwayMultiprotocol: `<On/Off>`

Enable/disable the Multiway multi-protocol.

Example: `xconfiguration multipoint multiwaymultiprotocol: off`

Multipoint MultiwayStartupPeriod

Value space: `<0..21>`

Specify the startup period (in seconds) for the Multiway call.

Example: `xconfiguration multipoint multiwaystartupperiod: 10`

Configuration of NAT (Network Address Translation) router.

NAT Mode

Value space: `<On/Off/Auto>`

When set to On the system will signal the configured "NAT Address" in place of its own IP-address within Q.931 and H.245. When set to Off the system will signal the real IP Address. When set to Auto the system will try to determine if the "NAT Address" or the real IP-address should be used within signalling. This is done to make it possible to place calls to endpoints on the LAN as well as endpoints on the WAN.

Example: `xconfiguration nat mode: on`

NAT Address

Value space: `<IPAddr>`

This must be the external/global IP-address to the router with NAT support. Packets sent to the router will then be routed to the system. In the router, the following ports must be routed to the system's IP-address: Port 1720, Port 5555-5574, Port 2326-2373.

Example: `xconfiguration nat address: 127.0.0.1`

NetProfile [1..7] Name

Value space: `<S: 0, 8>`

Defines the name of the NetProfile.

Example: `xconfiguration netprofile 4 name: MyProfile`

NetProfile [1..7] CallPrefix

Value space: `<S: 0, 9>`

A call prefix can be added to each NetProfile. If a call prefix is added, this prefix will automatically be added in front of the number being dialled. This is useful if you have a fixed prefix for a specific service provider.

Example: `xconfiguration netprofile 4 callprefix: 50`

NetProfile [1..7] CallSuffix

Value space: `<S: 0, 30>`

A call suffix can be added to each NetProfile. If a call suffix is added, the suffix will automatically be appended to the number being dialled.

Example: `xconfiguration netprofile 2 CallSuffix: 24`

NetProfile [1..7] Network

Value space: `<H320/H323/SIP/Auto>`

Defines what type of Network the NetProfile will use. The NetProfile 4, 5 and 6 can be configured, the other ones are predefined and cannot be changed by the user.
NetProfile 1 is Auto; NetProfile 2 is H320; NetProfile 3 is H323; NetProfile 7 is SIP;
If set to Auto the system will parse the number to dial and decide what network to use based on this.

Example: `xconfiguration netprofile 4 network: h323`

NTP Mode

Value space: `<Manual/Auto>`

If set to Auto, the system will use the NTP server, by which address is supplied from the DHCP server in the network. If no DHCP server is used, or the DHCP server does not provide the system with a NTP server address, the system will use the static defined NTP server address specified by the user.
If set to Manual the system will always use the static defined NTP server address specified by the user.

Example: `xconfiguration ntp mode: manual`

NTP Address

Value space: `<S: 0, 64>`

Defines the NTP server address. Will be used if NTP Mode is set to Manual or if set to Auto and no address is supplied by a DHCP server.

Example: `xconfiguration ntp address:`

The Network Time Protocol (NTP) is used to synchronize the time of the system to a reference time server. The time server will subsequently be queried every 24th hour for time updates.

The system will use the time to timestamp messages transmitted to Gatekeepers or Border Controllers requiring H.235 authentication.

OptionKey Features

Value space: `<S: 0, 16>`

The system requires a valid option key to activate MultiSite and/or Presenter functionality.

Example: `xconfiguration optionkey features: 5952754234583129`

OptionKey Bandwidth

Value space: `<S: 0, 16>`

The system requires a valid option key to define the maximum bandwidth to use.

Example: `xconfiguration optionkey bandwidth: 9952754234483329`

OSD CallDuration Mode

Value space: `<On/Off>`

The call duration can be displayed on screen. The timer showing the duration of the call is displayed in the bottom right corner of the screen.

Example: `xconfiguration osd callduration mode: on`

OSD Mode

Value space: `<On/Off>`

Enables/disables the On Screen Display (OSD). If set to Off there will be no graphics displayed on the monitors.

Example: `xconfiguration osd mode: on`

OSD Menu Mode

Value space: `<On/Off>`

Enabled/disables the navigation menu on the system. If set to Off no system menus may be entered, but the system will still display icons, call progress information boxes etc. We recommend that you to set this to Off when controlling the system from an external control system.

Example: `xconfiguration osd menu mode: off`

OSD Menu Password

Value space: `<S: 0, 5>`

If a Menu Password is defined, the user has to enter this password when accessing the Administrator Settings page in the menu.

Example: `xconfiguration osd menu password: 123`

OSD Menu Language

Value space: `<English/German/Norwegian/French/Swedish/Italian/Portuguese/Japanese/Chinese/TraditionalChinese/Russian/Spanish/Korean/Finnish/Thai/Arabic/Polish/Czech/Hungarian/Turkish/Danish/Romanian/Welsh>`

Defines the menu language.

Example: `xconfiguration osd menu language: english`

OSD Menu WelcomeMenu

Value space: `<On/Off>`

The Welcome Menu contains the Main Menu, System Status, System Name and Dial in numbers.
If set to On, the Welcome Menu is shown when the system wakes up from standby mode.
If set to Off, the Welcome Menu is not shown when the system wakes up from standby mode.
However, pressing the OK button the remote control will display the Welcome Menu.

Example: `xconfiguration osd menu welcomemenu: on`

OSD Menu DisplayWelcomeTime

Value space: <On/Off>

If set to On the welcome date and time is displayed on the welcome menu. Requires the NTP IP settings to be configured to synchronize with the NTP time server.
If set to Off the welcome date and time is hidden from the welcome menu.

Example: `xconfiguration osd menu displaywelcometime: on`

OSD Menu DisplayWelcomeText

Value space: `<On/Off>`

If set to Off, the system will use the system name and dial in numbers as default Welcome Text.
If set to On the system will display the Welcome Text defined by the user.

Example: `xconfiguration osd menu displaywelcometext: on`

OSD Menu WelcomeText

Value space: `<S: 0, 30>`

Defines the welcome text to be displayed if DisplayWelcomeText is set to On.

Example: `xconfiguration osd menu welcometext: “Welcome to MyTANDBERG”`

OSD Menu DisableTimeout

Value space: `<On/Off>`

If set to On, the menu will not time out automatically. Press ✕ on the remote control to hide the main menu manually.
If set to Off, the menu will time out automatically after 15 seconds if there is no activity on the remote control. The time-out applies when the system is in a call only. Outside a call, the menu will not time out.

Example: `xconfiguration osd menu disabletimeout: off`

OSD Menu BalloonHelp

Value space: `<On/Off>`

Enables/Disables the Balloon Help window.

Example: `xconfiguration osd menu balloonhelp: on`

OSD Menu InputEditor Language

Value space: `<Off/Japanese/Chinese/Korean/Russian>`

When the Input Editor Language is set to Chinese, Korean, Japanese or Russian the user will be able to enter Chinese/Korean/Japanese/Russian characters into an input field like the System Name or Phone Book, using the remote control.
When set to Off the user will only be able to enter ASCII characters into an input field like the System Name or Phone Book, using the remote control.

Example: `xconfiguration osd menu inputeditor language: off`

OSD Menu Simple

Value space: `<On/Off>`

Set to On to enable the Simple Menu mode with some of the buttons hidden. The menus affected and the visible buttons are:
- Make a Call - Make a Call (green), Standby (red), Presentation, Control Panel and Back.
- Presentation - PC and Back.
- Control Panel - Diagnostics, Restart, Administrator Settings and Back.
- Control Panel (Administrator Settings) - Diagnostics, Restart and Back

Set to Off to enable normal menu mode.

Example: `xconfiguration osd menu simple: off`

OSD Menu IconPlacement

Value space: <Left/Right>

Applies to the following icon indicators: Microphone Off, Volume Off, On Air, Encryption, Bad Network, Telephone, Duo Video and Camera Tracking. Places the icons in the top left corner or the top right corner of the screen.

Example: `xconfiguration osd menu iconplacement: right`

OSD Menu CodecLabel

Value space: `<S: 0, 48>`

Specify the text of the codec label.

Example: `xconfiguration osd menu codeclabel:`

OSD Menu DisplayLogo

Value space: `<On/Off>`

Enables/disables the Display Logo on screen.

Example: `xconfiguration osd menu displaylogo: on`

OSD Icon MicOff

Value space: `<On/Off>`

Enables/Disables the Microphone Off icon.

Example: `xconfiguration osd icon micoff: on`

OSD Icon VolumeOff

Value space: `<On/Off>`

Enables/Disables the Volume Off icon.

Example: `xconfiguration osd icon volumeoff: on`

OSD Icon OnAir

Value space: `<On/Off>`

Enables/Disables the On Air icon.

Example: `xconfiguration osd iconair: on`

OSD Icon Encryption

Value space: `<On/Off>`

Enables/Disables the Encryption icon.

Example: `xconfiguration osd icon encryption: on`

OSD Icon BadNetwork

Value space: `<On/Off>`

Enables/Disables the Bad Network icon.

Example: `xconfiguration osd icon warning: on`

OSD Icon Telephone

Value space: `<On/Off>`

Enables/Disables the Telephone icon.

Example: `xconfiguration osd icon telephone: on`

OSD Icon DuoVideo

Value space: `<On/Off>`

Enables/Disables the DuoVideo icon.

Example: `xconfiguration osd icon duovideo: on`

OSD Icon CameraTracking

Value space: `<On/Off>`

Enables/Disables the Camera Tracking icon.

Example: `xconfiguration osd icon cameratracking: on`

OSD Icon Headset

Value space: `<On/Off>`

Enables/Disables the Headset icon. Applies to systems with headset.

Example: `xconfiguration osd icon headset: on`

OSD MCUStatusLine Mode

Value space: `<On/Off/Auto>`

If set to On the MultiSite/MCU/DuoVideo indicators will be displayed and provide information about the conference.
If set to Off the MultiSite/MCU/DuoVideo indicators will not be displayed.
If set to Auto the MultiSite/MCU/DuoVideo indicators will be displayed for a few seconds and then timed out. When grabbing the remote control, the indicators will be shown again.

Example: `xconfiguration osd mcustatusline mode: on`

OSD Offset Mode

Value space: `<On/Off>`

Set Offset Mode to On to add extra margins for the on screen menu. If you experience problems viewing all text or buttons on the screen you can try to set Offset Mode to Off. This problem can occur on some 720p screens.

Example: `xconfiguration osd offset mode: off`

OSD CallDuration Mode

Value space: `<On/Off>`

Set to On to display the call duration on screen while in a call. Set to Off to not display the call duration.

Example: `xconfiguration osd callduration mode: off`

OSD PasswordViewAdminSettings

Value space: `<On/Off>`

When set to On, you will need to enter the menu password to view the administrator settings.

Example: `xconfiguration osd passwordviewadminsettings: off`

PacketlossDownSpeed Mode

Value space: `<Auto/Off>`

If set to Auto, the system will attempt to down speed the video channel from the sender by sending flow control messages if packet loss is encountered.
If set to Off, the system will not request down speeding based on packet loss.

Example: `xconfiguration packetlossdownspeed mode: auto`

PictureProgram [1..4] Layout

Layout: `<Full/2Split/4Split/2+1Split/3+1Split/5+1Split>`

Example: `xconfiguration pictureprogram 1 layout: full`

PictureProgram [1..4] Window [1..6] Picture

Value space: `<LocalMain/LocalDuo/Current/Previous/Duo/RemoteMain/RemoteDuo/JPEG/TandbergMonitor1/TandbergMonitor2/None>`

Example: `xconfiguration pictureprogram 1 window 2 picture: localmain`

PictureProgram [1..4] Window [1..6] Call

Value space: `<1..11>`

Example: `xconfiguration pictureprogram 1 window 2 call: 4`

The Picture Programs are used to define custom picture layouts to be displayed locally.

PresentationStart

Value space: `<Manual/Auto>`

If set to Auto, the Dual Stream is started automatically when a presentation is initiated from the menu or directly from the remote control (requires that the system has Presenter option installed and the far end side also supports Dual Stream).
If set to Manual, the Dual Stream must be started manually.

Example: `xconfiguration presentationstart: auto`

PresentationSoftkey

Value space: `<DuoScr/MainScr>`

You can configure the Presentation key on the remote control to either select dual source or main source when in a call, Default is DuoSrc (dual source).

Example: `xconfiguration presentationsoftkey: mainscr`

Preset [1..15] Name

Value space: `<S: 0, 20>`

Defines the Preset Name.

Example: `xconfiguration preset 1 name: AnyName`

Preset [1..15] Audio Inputs Microphone [1..3] Mode

Value space: `<On/Off>`

Example: `xconfiguration preset 1 audio inputs microphone 2: on`

Preset [1..15] Audio Inputs Line [1..3] Mode

Value space: `<On/Off>`

Example: `xconfiguration preset 1 audio inputs line 2: on`

Preset [1..15] MainVideoSource

Value space: `<1/2/3/4/5/6>`

Example: `xconfiguration preset 1 mainvideosource: 1`

Preset [1..15] DuoVideoSource

Value space: `<0/1/2/3/4/5/6>`

Example: `xconfiguration preset 1 duovideosource: 1`

Preset [1..15] SwitchVideoSource

Value space: `<0/1/2/3/4/5/6>`

Will switch the Cisco TelePresence Video Switch to the given input when the preset is activated.

Example: `xconfiguration preset 1 switchvideosource: 1`

Preset [1..15] Camera Brightness Mode

Value space: `<Manual/Auto>`

Interpretation of the settings chosen will depend on the camera type you use. If in doubt, consult your camera's user documentation.

Example: `xconfiguration preset 1 camera brightness mode: auto`

Preset [1..15] Camera Brightness Level

Value space: `<0..31>`

Interpretation of the settings chosen will depend on the camera type you use. If in doubt, consult your camera's user documentation.

Example: `xconfiguration preset 1 camera brightness level: 12`

Presets should never be modified manually, except for the Preset Name.
Please refer to the commands:
- xCommand PresetStore
- xCommand PresetClear

NOTE! The preset configurations are numbered from 1 to 15, whilst the PresetStore/ PresetClear commands are referring presets from 0 to 14, i.e. the configurations are offset by 1.

Preset [1..15] Camera AutoFocus

Value space: `<On/Off>`

Enables or disables auto focus when activating a preset. If enabled, auto focus will be turned on for 5 seconds. If disabled, the preset's focus value will be used. Default is Off.

Example: `xconfiguration preset 1 camera autofocus: off`

Preset [1..15] Camera Focus

Value space: `<0..65534>`

Interpretation of the settings chosen will depend on the camera type you use. If in doubt, consult your camera's user documentation.

Example: `xconfiguration preset 1 camera focus: 32768`

Preset [1..15] Camera Pan

Value space: `<-32768..32766 >`

Interpretation of the settings chosen will depend on the camera type you use. If in doubt, consult your camera's user documentation.

Example: `xconfiguration preset 1 camera pan: 0`

Preset [1..15] Camera Tilt

Value space: `<-32768..32766>`

Interpretation of the settings chosen will depend on the camera type you use. If in doubt, consult your camera's user documentation.

Example: `xconfiguration preset 1 camera tilt: 0`

Preset [1..15] Camera Zoom

Value space: `<0..65534>`

Interpretation of the settings chosen will depend on the camera type you use. If in doubt, consult your camera's user documentation.

Example: `xconfiguration preset 1 camera zoom: 32768`

Presets should never be modified manually, except for the Preset Name.
Please refer to the commands:
- xCommand PresetStore
- xCommand PresetClear

NOTE! The preset configurations are numbered from 1 to 15, whilst the PresetStore/PresetClear commands are referring presets from 0 to 14, i.e. the configurations are offset by 1.

QoS Precedence Telephony Audio

Value space: `<0/1/2/3/4/5/6/7/Auto/Off>`

Example: `xconfiguration qos precedence telephony audio: auto`

QoS Precedence Telephony Signalling

Value space: `<0/1/2/3/4/5/6/7/Auto/Off>`

Example: `xconfiguration qos precedence telephony signalling: auto`

QoS Precedence VideoTelephony Audio

Value space: `<0/1/2/3/4/5/6/7/Auto/Off>`

Example: `xconfiguration qos precedence videotelephony audio: auto`

QoS Precedence VideoTelephony Signalling

Value space: `<0/1/2/3/4/5/6/7/Auto/Off>`

Example: `xconfiguration qos precedence videotelephony signalling: auto`

QoS Precedence VideoTelephony Video

Value space: `<0/1/2/3/4/5/6/7/Auto/Off>`

Example: `xconfiguration qos precedence videotelephony video: auto`

QoS Precedence VideoTelephony Data

Value space: `<0/1/2/3/4/5/6/7/Auto/Off>`

Example: `xconfiguration qos precedence videotelephony data: auto`

QoS Diffserv Telephony Audio

Value space: `<0..63>`

Example: `xconfiguration qos diffserv telephony audio: 15`

QoS DiffServ Telephony Signalling

Value space: `<0..63>`

Example: `xconfiguration qos diffserv telephony signalling: 25`

QoS DiffServ VideoTelephony Audio

Value space: `<0..63>`

Example: `xconfiguration qos diffserv videotelephony audio: 15`

Configures the different Quality of Service (QoS) algorithms supported by the system. QoS are used to set priority on QoS enabled IP networks.

QoS DiffServ VideoTelephony Signalling

Value space: `<0..63>`

Example: `xconfiguration qos diffserv videotelephony signalling: 15`

QoS DiffServ VideoTelephony Video

Value space: `<0..63>`

Example: `xconfiguration qos diffserv videotelephony video: 15`

QoS DiffServ VideoTelephony Data

Value space: `<0..63>`

Example: `xconfiguration qos diffserv videotelephony data: 15`

QoS Mode

Value space: `<Precedence/Diffserv/Off>`

Example: `xconfiguration qos mode: precedence`

QoS ToS

Value space: `<MinDelay/MaxThrough/MaxReliable/MinCost/Off>`

Example: `xconfiguration qos tos: mindelay`

QoS RSVP

Value space: `<Auto/Off>`

Example: `xconfiguration qos rsvp: auto`

Configures the different Quality of Service (QoS) algorithms supported by the system. QoS are used to set priority on QoS enabled IP networks

RemoteSwUpgrade Mode

Value space: `<On/Off>`

If set to On, software can be upgraded from a far end system.

Example: `xconfiguration remoteswupgrade mode: on`

RemoteSwUpgrade Password

Value space: `<S: 0, 16>`

If RemoteSwUpgrade Mode is set to On and a Password is defined, the remote system must supply this Password in order to upload new software to the unit.

Example: `xconfiguration remoteswupgrade password: 123`

RTP Ports

Value space: `<Static/Dynamic>`

Affects the port numbers used for H.323 call signalling. Dynamic will give random ports. Static will give ports within a static predefined range [5555–5574]. Dynamic should be used during firewall traversal.

Example: `xconfiguration rtp ports: dynamic`

RTP MTU

Value space: `<400..1400>`

Maximum Transfer Unit is the number of bytes of video payload per packet.

Example: `xconfiguration rtp mtu: 1200`

Screensaver Mode

Value space: `<On/Off>`

Enables/disables if screen saver is to be activated if there is no system activity.

Example: `xconfiguration screensaver mode: on`

Screensaver Delay

Value space: `<1..480>`

Specifies how long (in minutes) the system shall wait before activating screen saver when there is now system activity.

Example: `xconfiguration screensaver delay: 15`

SecurityLog Mode

Value space: `<On/Off>`

When enabled, the security log feature will now log all security related events and configuration changes within the eventlog file on the endpoint, allowing an administrator to ensure all access to the system is properly logged and can be reviewed at a later point. When enabled, the security log will maintain a record of the following events:

Failed password attempts

- Successful logins
- Software upgrades
- System restarts

The following configuration changes will also be logged:

- System Unit name
- International Name Display Name
- Option Keys, Feature Keys, Bandwidth
- IP Protocol
- Telnet Challenge Port
- Auto Answer Mode
- Far End Camera Control Mode
- Strict Password
- Corporate Directory Protocol
- External Services Mode and Protocol
- External Manager Protocol
- SNMP Community Name, System Contact, System Location, Host IP Address
- H.323 Call Setup Mode
- H.323 Gatekeeper Discovery, Address, Authentication Mode
- IP Assignment, IP Address, Subnet Mask, Default Gateway, DNS Domain Name
- IPv6 Address
- DNS Server [1..5] Address
- VNC Password
- Streaming Password
- Remote Software Upgrade Password
- IEEE 802.1x Password
- On Screen Display Menu Password
- Serial Port Mode
- Security Level
- Security Log

Enabling/Disabling the following services:

- Telnet, SSH, HTTP, H.323, Remote Software Upgrade, SNMP, FTP, Remote Parameter, Telnet Challenge, HTTPS, SIP, HTTPSVerify.

Example: `xconfiguration securitylog mode: on`

Security Level

Value space: `<0..2>`

The Security level parameter restricts the access to the system:
When configured for level 0, the system will have a similar security regime as F7.x. Password storage, encryption, logging etc. will not be influenced by setting this to 0.
When configured for level 1, the system password can only be changed once every 24 hours and three failed attempts to log into the system will lock the interface for 30 minutes. If a password is set, the system will ask for password confirmation from all web sessions every 15 minutes to ensure the session is still active.
When set to level 2, the system will include all security parameters within level 1 and will also prevent normal access to the web server. If a password is set, level 2 will time out all active management sessions every 15 minutes, prompting for password input.

Example: `xconfiguration security level: 0`

SelfViewOnStartup

Value space: `<On/Off>`

If set to On the system will display the local main video source on the main monitor when the system is started.

Example: `xconfiguration selfviewonstartup: on`

SerialPort [1] Mode

Value space: `<Control/Transparent/Direct/Off>` NOTE! Port 1 Only

Control: Gives access to the Command Line Interface.
Transparent: Enables transmission of text during call on a line by line basis.
Direct: Enables transmission binary data during call.
Off: Disables any of the options above.

Example: `xconfiguration serialport 1 mode: control`

SerialPort [2] Mode

Value space: `<VISCA/Auto/Off>` NOTE! Port 2 Only

Defines Camera control mode.

Example: `xconfiguration serialport 2 mode: auto`

SerialPort [1] Direct Buffer

Value space: `<0..16384>` NOTE! Port 1 Only

Specifies the size of the buffer used in direct mode. Try setting this value higher if you need a continuous stream of data on the receiving end. Higher values introduces more delay.

Example: `xconfiguration serialport 1 direct buffer: 5120`

SerialPort [1..2] BaudRate

Value space: `<1200/2400/4800/9600/19200/38400/57600/115200>`

Specify the baud rate on a serial port.

Example: `xconfiguration serialport 1 baudrate: 9600`

SerialPort [1..2] Parity

Value space: `<None/Odd/Even>`

Specify the Parity on a Serial Port

Example: `xconfiguration serialport 1 parity: odd`

SerialPort [1..2] DataBits

Value space: `<7/8>`

Specify the number of databits on a Serial Port

Example: `txconfiguration serialport 1 databits: 7`

SerialPort [1..2] StopBits

Value space: `<1/2>`

Specify the number of stopbits on a Serial Port

Example: `xconfiguration serialport 1 stopbits: 2`

SIP Mode

Value space: `<On/Off>`

On: Setting the SIP mode to on will enable the system for incoming and outgoing SIP calls.
Off: Setting the SIP mode to off will disable incoming and outgoing SIP calls from the system.

Example: `xconfiguration sip mode: on`

SIP Server Discovery

Value space: `<Manual/Auto>`

Manual: When Manual is selected, the manually configured SIP Server address will be used
Auto: When Auto is selected, the SIP Server address is obtained using Dynamic Host Configuration Protocol (DHCP).

Example: `xconfiguration sip server discovery: manual`

SIP Server Address

Value space: `<S: 0, 255>`

The Server Address is the manually configured address for the outbound proxy and registrar. 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

Example: `xconfiguration sip server address:`

SIP Server Type

Value space: `<Auto/Nortel/Microsoft/Cisco/Siemens/Alcatel/Experimental>`

Enables SIP extensions and special behavior for a SIP Server vendor.
Auto: Should be used when registering to standard SIP servers like OpenSer.
Nortel: Must be used when registering to a Nortel MCS 5100 or MCS 5200 PBX.
Microsoft: Must be used when registering to a Microsoft LCS or OCS server.
Cisco: Must be used when registering to a Cisco CallManager version 5 or later.
Alcatel: Must be used when registering to a Alcatel-Lucent OmniPCX Enterprise R7 or later.
Siemens: Must be used when registering to a Siemens HiPath 8000.
Telio: Must be used in combination with a Telio subscription (www.telio.no).
Experimental: Can be used if auto is not working. NOTE! This mode is for testing purposes only.

Example: `xconfiguration sip server type: microsoft`

SIP Authentication UserName

Value space: `<S: 0, 80>`

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

Example: `xconfiguration sip authentication username:`

SIP Authentication Password

Value space: `<S: 0, 60>`

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

Example: `xconfiguration sip authentication password:`

SIP DefaultCandidate Type

Value space: `<Host/Rflx/Relay>`

Sets the default candidate used for SIP signalling when using ICE.
Host: The local ip address will be used as the default fall-back address.
Rflx: The address of any NAT between the endpoint and the TURN server will be used.
Relay: The TURN server address will be used.

Example: `xconfiguration sip DefaultCandidate Type: Host`

SIP Transport Default

Value space: `<Auto/TCP/UDP/TLS>`

Select the default transport type to be used for SIP signalling.

Example: `xconfiguration sip transport default: tcp`

SIP TLS Verify

Value space: `<On/Off>`

For TLS connections a CA-list can be uploaded from the web interface.
Set to On to verify TLS connections. Only TLS connections to servers, whom x.509 certificate is validated against the CA-list, will be allowed.
Set to Off to allow TLS connections without verifying them. The TLS connections are allowed to be set up without verifying the x.509 certificate received from the server against the local CA-list. This should typically be selected if no SIP CA-list has been uploaded.

Example: `xconfiguration sip tls verify: off`

SIP ICE Mode

Value space: `<On/Off>`

The system support ICE (“Interactive Connectivity Establishment”) NAT traversal, and TURN (“Traversal Using Relays around NAT”) media relays.
When set to On, the system will choose between the available servers in the following order:
1. Local
2. STUN / public IP
3. TURN / Media redirection
Off : Set to Off to disable ICE.

Example: `xconfiguration sip ice mode: off`

SIP MNS Mode

Value space: `<On/Off>`

The MNS (”Media Network Services”) mode operates similarly to the ICE mode, but the system will prioritize use of the TURN server:
1. Local
2. TURN / Media redirection
Media packets will be sent directly only to endpoints determined to be on the local LAN. Media packets to all other destinations will be sent through the TURN server. The MNS mode is typically used to improve the network transport quality. There are commercial services available providing dedicated wide-area video networks, see e.g. ”http://www.medianetworkservices.com”
On: Setting the MNS mode to On will enable and prioritize media redirection through the dedicated network identified by the TURN server.
Off : Normal operation mode (standard ICE)

Example: `xconfiguration sip mns mode: off`

SIP ForceTurn Mode

Value space: `<On/Off>`

In this mode media is always sent using the TURN relay. One usage for this mode is media relaying from installations on a public IP network.
On: Setting the Force TURN mode to On will force media redirection through the dedicated network identified by the TURN server.
Off : Normal operation mode (standard ICE or MNS).

Example: `xconfiguration sip forceturn mode: off`

SIP TURN Server

Value space: `<S: 0, 60>`

Address of the TURN server for data redirection. A fully qualified domain name or an IP address can be used. Default port 3478 is assumed. Optional port can be provided using ":nnnnn" notation. Examples: "93.93.102.102:7000", "turn.mnsbone.net".

Example: `xconfiguration sip turn address:`

SIP ReplyTo URI

Value space: `<S: 0, 60>`

If configured it is this URI that will be displayed in the call lists.

Example: `xconfiguration sip replyto uri:`

SNMP Mode

Value space: `<On/Off/ReadOnly/TrapsOnly>`

If set to On, both Read and sending of Traps will be enabled, and if set to Off, all SNMP functionality will be disabled.
ReadOnly: The system will not send SNMP traps, but it will be possible to read data from the SNMP MIB.
TrapsOnly: The system will send SNMP traps, but it will not be possible to read data from the SNMP MIB.

Example: `xconfiguration snmp mode: readonly`

SNMP CommunityName

Value space: `<S: 0, 16>`

Defines the SNMP community name.

Example: `xconfiguration snmp communityname:`

SNMP SystemContact

Value space: `<S: 0, 70>`

Defines the SNMP system contact.

Example: `xconfiguration snmp systemcontact:`

SNMP SystemLocation

Value space: `<S: 0, 70>`

Defines the SNMP system location.

Example: `xconfiguration snmp systemlocation:`

SNMP HostIPAddr [1..3]

Value space: `<IPAddr>`

Defines SNMP host addresses.

Example: `xconfiguration snmp hostipaddr:`

StartupVideoSource

Value space: `<0/1/2/3/4/5/6>`

Defines the video source the system will use as default after a reboot, and after the system goes out from screen saver mode. If set to 0, the system will use the video source that was selected before reboot.

Example: `xconfiguration startupvideosource: 1`

StillImageSource

Value space: `<0/1/2/3/4/5/6>`

Defines the default still image source. If set to 0, the system will use the current main video source as still image source.

Example: `xconfiguration stillimagesource: 4`

SSH Mode

Value space: `<On/Off>`

If set to Off, it will not be possible to connect to the system using SSH. The Command Line Interface can be accessed using SSH (Secure Shell), which allows for secure control of the MXP endpoint.

Example: `xconfiguration SSH Mode: On`

Streaming Port

Value space: `<0..65534>`

Specifies the port, which the codec shall stream to. If several codec’s are streaming to the same IP-address, different ports have to be used in order for the client to know which stream to receive. If the first codec streams on port 2240 and the second codec on port 2250, the client has to specify which port to listen to. Video is transmitted on the specified port; audio is transmitted on the port number 4 greater than the specified video port, in this case 2244 and 2254.

Example: `xconfiguration streaming port: 2240`

Streaming Hops

Value space: `<0..255>`

Number of router hops you want the codec to stream to. The default value 1 will normally allow the streaming data to pass one router.

Example: `xconfiguration streaming hops: 1`

Streaming Address

Value space: `<S: 0, 64>`

The address, which you want the codec to stream to. This address could be a multicast address, broadcast address or a uni-cast address.

Example: `xconfiguration streaming address:`

You can stream in a MCU call for systems with MS installed. Streaming will count as 1 site. However, you cannot stream when Dual Stream/H.239 is activated.

Dual Stream is a method of sending Dual Images.

H.239 = ITU ratified way of sending Dual Images.

Streaming VideoRate

Value space: `<16/32/64/128/192/256/320>`

Selects the video rate in kbps to stream out on the network.

Example: `xconfiguration streaming videorate: 128`

Streaming Announcements

Value space: `<On/Off>`

Turn On or Off Streaming Announcement Protocol.

Example: `xconfiguration streaming announcements: on`

Streaming Source

Value space: `<Local/Remote/Auto>`

Select streaming source as Local, Remote or Auto. If set to Auto the streaming will be voice switched. The site currently speaking will be streamed.

Example: `xconfiguration streaming source: auto`

Streaming Password

Value space: `<S: 0, 16>`

Streaming password. This password and the ip password will give access to the streaming page in he internal web browser. By using this password the more sensitive ip password can be reserved to the administrator.

Example: `xconfiguration streaming password: xxx`

Streaming Quality

Value space: `<Motion/Sharpness>`

When set to Motion the video is optimized for smooth motion video.
When set to Sharpness the video is optimized for sharp video.

Example: `xconfiguration streaming quality: motion`

Streaming AllowRemoteStart

Value space: `<On/Off>`

If set to Off, streaming can only be started locally from the menu interface or from the dataport (RS-232). If set to On, streaming can also be started from the Web interface, the XML interface and from Telnet.

Example: `xconfiguration streaming allowremotestart: off`

You can stream in a MCU call for systems with MS installed. Streaming will count as 1 site. However, you cannot stream when Dual Stream/H.239 is activated.

Dual Stream is a method of sending Dual Images.

H.239 = ITU ratified way of sending Dual Images.

StrictPassword

Value space: `<On/Off>`

When enabled, strict password now requires the following restrictions to be met for all newly configured passwords on the system:

- Password cannot be the same as any of the previous 10 passwords used.
- Password must be 15 characters or more.
- Password must have at least 2 lower case letters, 2 upper case letters, 2 numeric characters and 2 special characters (e.g. #, *, &, %, etc).
- Three (3) consecutive characters cannot be the same..

Example: `xconfiguration strictpassword: on`

Switch Source

Value space: `<1..6>`

Select a physical input on the Cisco TelePresence Video Switch.

Example: `xconfiguration switch source: 1`

Switch Configuration Primary

Value space: `<On/Off>`

Default is on. If off, the codec will only do a basic setup of the primary chain and report what kind of cameras are connected. The codec will not set up brightness, white balance, gamma etc. for each camera. Turn it off if an external control system handles all the configuration.

Example: `xconfiguration switch configuration primary: on`

Switch Configuration Secondary

Value space: `<On/Off>`

Default is on. If off, the codec will only do a basic setup of the secondary chain and report what kind of cameras are connected. The codec will not set up brightness, white balance, gamma etc. for each camera. Turn it off if an external control system handles all the configuration.

Example: `xconfiguration switch configuration secondary: on`

Switch LogicalInput [1..5] Mode

1 MainCam
2 AUX
3 Doc Cam
4 VCR
5 PC

Value space: `<On/Off>`

Logical inputs are used when accessing inputs from the menu, remote control and FECC. There are five input buttons on the top of the TRC4 remote control, and these can be remapped to any switch input you wish. The same five buttons are visible in the Presentation/Main Video menu, and these will be remapped in the same manner. If the switch is connected with no special configuration, selecting “main cam” in the menu will give the current input on the switch. Default value is Off.
Will set the logical input on the Cisco TelePresence Video Switch to the given mode.

Example: `xconfiguration switch logicalinput 1 mode: On`

Switch LogicalInput [1..5] Map

1 MainCam
2 AUX
3 Doc Cam
4 VCR
5 PC

Value space: `<1..6>`

The Map [1..6] represents the switch inputs.
Remaps the five source buttons on top of the extended remote control to any switch input you wish. Will also remap inputs selected from the menu, and change FECC accordingly. If mode for a key is on, the table entry will be used to specify which input on the switch to activate.

Example: `xconfiguration switch logicalinput 1 map: 1`

SystemUnit Name

Value space: `<S: 0, 49>`

Defines the name of the system unit.

Example: `xconfiguration systemunit name: MySystem`

SystemUnit InternationalName

Value space: `<S: 0, 49>`

Defines the international name of the system unit – ASCII characters only!

Example: `xconfiguration systemunit internationalname: MySystem`

SystemUnit DisplayName

Value space: `<S: 0, 50>`

The Display Name part of the SIP Address (URI)

Example: `xconfiguration systemunit displayname: MyDisplayNmae`

SystemUnit Password

Value space: `<S: 0, 16>`

Defines the system unit password.

Example: `xconfiguration systemunit password: xxx`

T1 Interface CableLength

Value space: `<Range1/Range2/Range3/Range4/Range5>`

Specifies the length of the cable connected to the T1 interface.
Range1: 0–133 ft (0–40 m)
Range2: 133–266 ft (40–81 m)
Range3: 266–399 ft (81–122 m)
Range4: 399–533 ft (122–162 m)
Range5: 533–655 ft (162–200 m)

Example: `xconfiguration t1 interface cablelength: range4`

Telnet Mode

Value space: `<On/Off>`

If set to Off, it will not be possible to connect to the system using Telnet.

Example: `xconfiguration telnet mode: on`

TelnetChallenge Mode

Value space: `<On/Off>`

Enables/disables TelnetChallenge.

Example: `xconfiguration telnetchallenge mode: on`

TelnetChallenge Port

Value space: `<23/57>`

Specifies whether to port 23 or port 57 for TelnetChallenge.

Example: `xconfiguration telnetchallenge port: 57`

TelnetChallenge can be enabled on either ip port 23 or ip port 57.
When connecting to an ip port that has telnetChallenge set to On, an MD5 encryption challenge string are being issued instead of a password prompt. An encrypted password based on the challenge string must then be generated by an MD5 encryptor and sent back to the system as a response in order to get access to the system.
NOTE! Regular Telnet are using ip port 23. When TelnetChallenge is set to ip port 23, this will override regular Telnet.

Time Zone

Value space: `<GMT-1200/GMT-1100/GMT-1000/GMT-0930/GMT-0900/GMT-0800/GMT-0700/GMT-0600/GMT-0500/GMT-0400/GMT-0330/GMT-0300/GMT-0200/GMT-0100/GMT/GMT+0100/GMT+0200/GMT+0300/GMT+0330/GMT+0400/GMT+0430/GMT+0500/GMT+0530/GMT+0545/GMT+0600/GMT+0630/GMT+0700/GMT+0800/GMT+0845/GMT+0900/GMT+0930/GMT+1000/GMT+1030/GMT+1100/GMT+1130/GMT+1200/GMT+1245/GMT+1300/GMT+1400>`

Specifies the time zone where the system is located.

Example: `xconfiguration time zone: GMT+0100`

Time DateFormat

Value space: `<DD_MM_YY/MM_DD_YY/YY_MM_DD>`

Species the date format to use when presenting dates on the system.

Example: `xconfiguration time dateformat: dd_mm_yy`

Time TimeFormat

Value space: `<24H/12H>`

Specifies the time format to use.

Example: `xconfiguration time timeformat: 24h`

Time DaylightSavings

Value space: `<On/Off>`

Enables/Disables Daylight Savings.

Example: `xconfiguration time daylightsavings: on`

ThreePartyLayout

Value space: `<On/Off>`

3 party layout on the multisite host utilizes the dual monitor setting of the system to display the two far-end sites on individual monitors. This feature is supported when the MultiSite Picture mode is set to Auto split or 4Split, and the Dual Monitor setting is enabled. When a dual stream is started during the conference, the screen will return to a standard 4-split in order to display the dual stream on the second monitor. Upon termination of the dual stream, the layout will return to the 3 party layout. NOTE! 3 Party Mode will not function if the MultiSite Picture mode is set to 5+1Split or VoiceSwitched.

Example: `xconfiguration threepartylayout: on`

UseAsLocalPCMonitor

Value space: `<On/Off>`

If the main monitor is used as a local PC display, UseAsLocalPCMonitor should be set to On. This will avoid transmitting the local PC image while the system is in a video conference.

Example: `xconfiguration useaslocalpcmonitor: on`

Video Inputs Source [1..6] Name

Value space: `<S: 0, 16>`

Defines the name of the video source.

Example: `xconfiguration video inputs source 5 name: MyPCInput`

Video Inputs Source [1..6] ForceAnalog

Value space: `<On/Off>`

This setting corresponds to the Presentation > Force Mac Input setting in the menu (GUI).
On: If set to On, the system will only provide analog EDID information, and thus will only work with analog devices.
Off : If set to Off, the system will provide both analog and digital EDID information.

Example: `xconfiguration video inputs source 5 forceanalog: off`

Video Inputs Source 5 HorizAdjust

Value space: `<0..255>` NOTE: `Only Video Input Source 5`

Gives you the possibility to adjust the placement of the PC image on screen. Much like the setting you find on a regular PC screen.

Example: `xconfiguration video inputs source 5 horizadjust: 0`

Video Inputs Source [1..6] Quality

Value space: `<Motion/Sharpness>`

When encoding and transmitting video there will be 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. The Quality setting specifies whether to give priority to high frame rate or to high resolution for a given source.
Motion: 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.
At low bit rate the following resolution will be transmitted:

- CIF will be used from a PAL video input
- SIF from NTSC
- w288p from wide format (HD720p) input
- VGA/SVGA/XGA from PC, Digital Clarity

At high bit rate the following resolution will be transmitted:

- 448p will be used from a PAL video input if Natural Video is 'Off' or 'Auto' or if Natural Video is 'x kbps' and the bit rate is lower than x kbps
- 400p from NTSC if Natural Video is 'Off' or 'Auto' or if Natural Video is 'x kbps' and the bit rate is lower than x kbps
- iCIF will be used from a PAL video input, if Natural Video is 'x kbps' and the bit rate is higher than or equal to x kbps
- iSIF from NTSC, if Natural Video is 'x kbps' and the bit rate is higher than or equal to x kbps
- w448p will be used from a wide format (HD720p) input
- VGA/SVGA/XGA from PC, Digital Clarity

Sharpness: Improved quality of detailed images and graphics:

- 4xCIF will be used from a PAL video input, Digital Clarity
- 4xSIF will be used from a NTSC video input, Digital Clarity
- w720p will be used from a wide format (HD720p) input
- VGA/SVGA/XGA will be used from a PC input, Digital Clarity

Example: `xconfiguration video inputs source 5 quality: sharpness`

Video Outputs Animation

Value space: `<On/Off>`

The new PiP/PoP animation makes the windows fade or slide into position when changing the picture layout. PiP means Picture in Picture layout and PoP means Picture outside Picture layout.

Example: `xconfiguration video outputs animation: on`

Video Outputs ScreenFormatTV

Value space: `<4:3/16:9>`

Specifies whether the monitors connected to the TV (S-video/Composite) outputs are 4:3 or 16:9 monitors. If this configuration is not set according to the monitors in use, the images will either be over-stretch or compressed.

Example: `xconfiguration video outputs screenformattv: 4:3`

Video Outputs ScreenFormatPC

Value space: `<4:3/16:9>`

Specifies whether the monitors connected to the PC (DVI) outputs are 4:3 or 16:9 monitors. If this configuration is not set according to the monitors in use, the images will either be stretched or compressed. See FormatPCWideScreen for more on this.

Example: `xconfiguration video outputs screenformatpc: 16:9`

Video Outputs DVIResolution

Value space [1..x]: `<Auto/SVGA/XGA/w720p/WXGA>`

x = 2 on 6000 MXP x = 1 on 3000 MXP

Defines resolution for the supported DVI outputs.

Auto: VGA output format will be optimized depending on the video source format, refresh rate and of the EDID information available.

Example: `xconfiguration video outputs dviresolution 1: auto`

Supported formats:

- SVGA (800x600) 75Hz
- XGA (1024x768) 60Hz / 75Hz
- WXGA (1280x768) 60Hz
- SVGA: VGA output format is forced to SVGA format (800x600) 75Hz
- XGA: VGA output format is forced to XGA format (1024x768) 60Hz
- VGA Out Quality for Wide XGA: If ScreenFormatPC is set to Wide, FormatPCWideScreen is set to Normal, VGA Out Quality is set to Auto, the layout on the monitor is either fullscreen or POP, and the input source to the largest window is PC with resolution 1024x768, the system will use WideXGA (1280x768) instead of XGA, when the monitor supports this.

Video Outputs Letterbox

Value space: `<On/Off>`

This setting will only take effect on video displayed in full screen. When set to On, the system will use horizontal black bars to compensate for aspect ratio mismatch between a wide output and a narrow input. When set to Off, the system will crop vertically to compensate.

Example: `xconfiguration video outputs letterbox: on`

Video Outputs TestPatterns

Value space: `<0..10>`

The system has a selection of test patterns on the displays. TestPattern = 0 is normal operation without any pattern. TestPattern = <1..10> will turn on the given pattern.

Example: `xconfiguration video outputs testpattern: 0`

Video Outputs TV [1..2] VirtualMonitor

Value space: `<1..4>`

The Codec 3000 MXP system supports 3 (three) Virtual Monitors and the Codec 6000 MXP system supports 4 (four) Virtual Monitors. To see pictures displayed on Virtual Monitors on physical monitors connected to video outputs, the different video outputs must make connections to the Virtual Monitors.

Virtual Monitor 1 displays by default the Main Monitor picture, while Virtual Monitor 2 displays by default the Second Monitor picture (Virtual Monitor 3 and 4 are not in use by default).

TV output 1 shows by default Virtual Monitor 1 (Main Monitor), while TV output 2 shows by default Virtual Monitor 2 (Second Monitor). To make TV output 2 also show Virtual Monitor 1:

Example: `xconfiguration video outputs tv 1 virtualmonitor: 1`

Video Outputs TV [1..2] OSD

Value space: `<On/Off>`

Specifies whether or not to display On Screen Display on the supported TV outputs.

Example: `xconfiguration video outputs tv 1 osd: on`

Video Outputs TV [1..2] Mode

Value space: `<On/Off>`

Turns On/Off the TV (Composite/S-Video) outputs. On 6000MXP, the TV 1 and TV 2 Mode are default set to to Off.

NOTE! We recommend that you turn off video on all unused video outputs.

Example: `xconfiguration video outputs tv 1 mode: on`

Video Outputs TV [1..2] AspectChoice

Value space: `<Auto/Clip/Letterbox/Fill>`

You can adjust the aspect ratio for the TV and DVI-I outputs to customize the aspect ratio of the monitor to the preferred configuration.
Auto: The endpoint determines the best aspect ratio to display by combining Clip, Fill, and Letter Box.
Clip: Adjusts the source by clipping, to match the aspect ratio of the display window.
Letterbox: Adjusts the source by adding black bars, to match the aspect ratio of the display window.
Fill: Stretch or shrink the source to fill the display window. The aspect ratio of the source does not match the display.

Example: `xconfiguration video outputs tv 1 aspectchoice: auto`

Video Outputs DVI [1..x] VirtualMonitor

x = 2 on 6000 MXP x = 1 on 3000 MXP

Value space: `<1..4>`

Defines the connections between the DVI outputs and the Virtual Monitors (see above).
6000 MXP: DVI output 1 shows by default Virtual Monitor 1 (Main Monitor), while DVI output 2 shows by default Virtual Monitor 2 (Second Monitor).
3000 MXP: DVI output 1 shows by default Virtual Monitor 2 (Second Monitor).
To have DVI output 2 to also show Virtual Monitor 1:

Example: `xconfiguration video outputs dvi 1 virtualmonitor: 1`

Video Outputs DVI [1..x] OSD

x = 2 on 6000 MXP x = 1 on 3000 MXP

Value space: `<On/Off>`

Specifies whether or not to display On Screen Display on the supported TV outputs.

Example: `xconfiguration video outputs dvi 1 osd: on`

Video Outputs DVI [1..x] Mode

x = 2 on 6000 MXP x = 1 on 3000 MXP

Value space: `<On/Off>`

Turns On/Off the DVI outputs.
NOTE! We recommend that you turn off video all unused video outputs.

Example: `xconfiguration video outputs dvi 1 mode: On`

Video Outputs DVI [1..x] AspectChoice

x = 2 on 6000 MXP x = 1 on 3000 MXP

Value space: `<Auto/Clip/Letterbox/Fill>`

You can adjust the aspect ratio for the TV and DVI-I outputs to customize the aspect ratio of the monitor to the preferred configuration.
Auto: The endpoint determines the best aspect ratio to display by combining Clip, Fill, and Letter Box.
Clip: Adjusts the source by clipping, to match the aspect ratio of the display window.
Letterbox: Adjusts the source by adding black bars, to match the aspect ratio of the display window.
Fill: Stretch or shrink the source to fill the display window. The aspect ratio of the source does not match the display.

Example: `xconfiguration video outputs dvi 1 aspectchoice: auto`

VNC IPAddress

Value space: `<S: 0, 64>`

Defines the IP address of the VNC server.

Example: `xconfiguration vnc ipaddress: 10.47.15.49`

VNC DisplayNumber

Value space: `<S: 0, 5>`

The display number of the VNC service must match the display number of the VNC server.

Example: `xconfiguration vnc displaynumber: 2`

VNC Password

Value space: `<S: 0, 8>`

Defines the password to use when connecting to the VNC service.

Example: `xconfiguration vnc password: xxx`

Description of the xDirectory commands

In the following pages you will find a complete list of the xDirectory commands. The examples shows either the default value or an example of a value.

Defines entries stored on the codec.
NOTE! To add new entries and remove existing entries, the xCommand LocalEntryAdd / xCommand LocalEntryDelete should be used.

LocalEntry [1..200] Name

Value space: `<S: 0, 48>`

The local entry's name.

Example: `xdirectory localentry 26 name: john doe`

LocalEntry [1..200] Number

Value space: `<S: 0, 60>`

The local entry's number.

Example: `xdirectory localentry 26 number: 5566`

LocalEntry [1..200] SecondNumber

Value space: `<S: 0, 60>`

2Xh221 second number.

Example: `xdirectory localentry 26 secondnumber: 5566`

LocalEntry [1..200] SubAddress

Value space: `<S: 0, 20>`

Example: `xdirectory localentry 26 subaddress: 5436`

LocalEntry [1..200] CallRate

Value space: `<Tlph/1xh221/2xh221/64/128/192/256/320/384/512/768/1152/1472/1920/2560/3072/4096/Max/Auto>`

Specifies the callrate to use when calling this entry.

Example: `xdirectory localentry 26 callrate: 64`

LocalEntry [1..200] Restrict

Value space: `<On/Off>`

Specifies wether or not to use Restrict when calling this entry.
A restricted call uses 56kbps channels rather than the default unrestricted 64kbps channels. Some older networks (primarily in the USA) do not support 64kbps channels and require the use of restricted 56kbps calls. By default the system will dial an unrestricted call and downspeed to 56kbps if necessary.

Example: `xdirectory localentry 26 restrict: on`

LocalEntry [1..200] NetProfile

Value space: `<1..7>`

Defines the NetProfile to use when calling this entry. A NetProfile defines network type and a possible prefix, ref. configuration Netprofile.

Example: `xdirectory localentry 26 netprofile: 5`

xDirectory commands, *continued...*

GlobalEntry [1..400] Name

Value space: `<S: 0, 48>`

The global entry's name.

Example: `xdirectory globalentry 26 name: john doe`

GlobalEntry [1..400] Number

Value space: `<S: 0, 60>`

The global entry's number.

Example: `xdirectory globalentry 26 number: 5566`

GlobalEntry [1..400] SecondNumber

Value space: `<S: 0, 60>`

2Xh221 second number.

Example: `xdirectory globalentry 26 secondnumber: 4563`

GlobalEntry [1..400] SubAddress

Value space: `<S: 0, 20>`

Example: `xdirectory globalentry 26 subaddress: 2233`

GlobalEntry [1..400] CallRate

Value space: `<Tlph/1xh221/2xh221/64/128/192/256/320/384/512/768/1152/1472/1920/2560/3072/4096/Max/Auto>`

Specifies the callrate to use when calling this entry.

Example: `xdirectory globalentry 26 callrate: 1xh221`

GlobalEntry [1..400] Restrict

Value space: `<On/Off>`

Specifies wether or not to use Restrict when calling this entry. A restricted call uses 56kbps channels rather than the default unrestricted 64kbps channels. Some older networks (primarily in the USA) do not support 64kbps channels and require the use of restricted 56kbps calls. By default the system will dial an unrestricted call and down speed to 56kbps if necessary.

Example: `xdirectory globalentry 26 restrict: off`

GlobalEntry [1..400] NetProfile

Value space: `<1..7>`

Defines the NetProfile to use when calling this entry.
A NetProfile defines network type and a possible prefix, ref. configuration Netprofile.

Example: `xdirectory globalentry 26 netprofile: 3`

Defines global entries to be stored on the codec. Global entries should be used by an centralized directory server to update the systems phone book.

xDirectory commands, *continued...*

GroupEntry [1..50] Name

Value space: `<S: 0, 48>`

The Group entry's name.

Example: `xdirectory groupentry 22 number: 5566`

GroupEntry [1..50] LocalEntry [1..10]

Value space: `<0..200>`

References to the local entries to be included in the group entry.

Example: `directory groupentry 45 localentryid 7 number: 167`

Defines group entries (MultiSite entries) stored on the codec. NOTE! To add new entries and remove existing entries, the xCommand GroupEntryAdd / xCommand GroupEntryDelete should be used.

Chapter 4

Description of the xCommand commands

xCommands with parameters

In the following pages you will 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/telepresence/docs

Command	Parameters	Result when OK	Result on Error	Example

AlertToneTest
Command used to test the supported alert tones. When the command is issued the system will playback the specified alert tone.
	Tone(r): `<1..10>`
	The tone to test.
		None	Cause: <1...>
			Cause code specifying why the command was not accepted by the system
			Description:
			Textual description of the cause code.
				`xcommand alerttonetest tone:5`
				`*r Result (status=OK):`
				`*r/end`
				`OK`

AudioTestSignal
Command used to test an audio channel with a specific test signal; sine, white noise or pink noise. When the command is issued the system will send out the specified test signal to the specified output channel.
	Type(r): `<None/Sine/White/Pink>`
	The test signal.
	Level: `<-60..0>`
	Level in dB. The level is dependent on the output level settings on the system. When the output levels are set to default level settings, 0 dB will correspond to 1 Vrms.
	If not specified, 0 dB will be selected.
	Output: `<FarEnd/Speaker/AUX/VCR>`
	The output channel where the audio test signal will be activated. If not specified, the FarEnd output will be selected
	Frq: <100..20000>
	The frequency, in Hz, of the sine-tone. If not specified, 1 kHz will be selected. This setting does only apply to the sine test signal.
		None	As above	`Example #1:`
				`Sine wave of 3kHz with level -20dB on local speakers:`
				`xcommand audiotestsignal type:sine level:-20 output:speaker frq:3000`
				`*r Result (status=OK): /`
				`*r/end`
				`OK`
				`Example #2:`
				`White noise with level -10 dB to FarEnd:`
				`xcommand audiotestsignal white -10`
				`*r Result (status=OK): /`
				`*r/end`
				`OK`

Boot
Command used to reboot the system.
	ParameterRestore: `<On/Off>`
	When rebooting the system after software upgrade, all configurations will be restored.
	By setting **ParameterRestore** to **Off**, the system configurations prior to software upgrade will be lost.
		None	As above.	`xcommand boot parameterrestore: on`
				`*r Result (status=OK):`
				`*r/end`
				`OK`

Command	Parameters	Result when OK	Result on Error	Example

CallAccept
Command used to answer an incoming call if autoanswer is disabled.
	None	None	As above	`xcommand callaccept`
				`*r Result (status=OK): /`
				`*r/end`
				OK

CallMute
Command used to mute incoming audio from a specific call in a MultiSite conference.
	Call(r): `<1..11>`
	Reference to the call to be muted or unmuted.
	Mode(r): `<On/Off>`
	Denotes whether the call is to be muted or unmuted.
		None	As above	`xcommand callmute call:2 mode:on`
				`*r Result (status=OK):`
				`*r/end`
				OK

CallMuteOutgoing
Command used to mute outgoing audio to a specific call in a MultiSite conference.
Typical user scenario for this command is a three-part conference where two of the participants are from the same company discussing an issue with a sub-contractor.
During the conference the participants from the same company want to share some thoughts in private before making the final decision.
	Call(r): `<1..11>`
	Reference to the call to be muted or unmuted.
	Mode(r): `<On/Off>`
	Denotes whether the call is to be muted or unmuted.
		None	As above	`xcommand callmuteoutgoing call:2 mode:on`
				`*r Result (status=OK):`
				`*r/end`
				OK

CallSetAudioTP
Command used with TANDBERG Experia.
	Call(r): `<1..11>`
	Mode(r): `<On/Off>`
		None	As above	`xcommand callsetaudiotp call:2 mode:on`
				`*r Result (status=OK):`
				`*r/end`
				OK

CameraFocus
Command used to change focus of a specific camera.
	Camera(r): `<1..13>`
	Addresses which camera to have its focus changed.
	Value(r): `<Auto/Manual/+/->`
	Specifies the wanted operation.
		None	As above	`xcommand camerafocus camera:1 value:+`
				`*r Result (status=OK):`
				`*r/end`
				OK

CameraForceUpgrade
Command used to initiate software upgarde of the PrecisionHD Camera. Should only be used after downgrade of the MXP Codec software or if the configuration CameraSwUpgrade is set to Off. When the MXP Codec software is upgraded, the PrecisionHD Camera will be upgraded automatically if the configuration CameraSwUpgrade is set to Auto.
	Camera(r): `<1..13>`	None	As above	`xcommand cameraforceupgrade camera:1`
				`*r Result (status=OK):`
				`*r/end`
				OK

Command	Parameters	Result when OK	Result on Error	Example

CameraHalt
Command used to stop moving a specific camera.
	None	None	As above	`xcommand camerahalt`
				`*r Result (status=OK):`
				`*r/end`
				OK

CameraMove
Command used to instruct the camera to move in a specified direction. The camera will continue moving until the **CameraHalt** command is issued.
	Camera(r): `<1..13>`
	Addresses the camera to move.
	Direction(r): `<Up/Down/Right/Left/In/Out/FocusIn/FocusOut >`
	Specifies the direction to move.
		None	As above	`xcommand cameramove camera:1 direction:right`
				`*r Result (status=OK):`
				`*r/end`
				OK

CameraPosition
Command used to instruct the camera to move to a specific position.
	Camera(r): `<1..13>`
	Addresses the camera to position.
	Pan: `<-32768..32767>`
	Pan value.
	Tilt: `<-32768..32767>`
	Tilt value.
	Zoom: `<0..65534>`
	Zoom value.
	Focus: `<0..65534>`
	Focus value.
	NOTE: The supported values for pan, tilt, zoom, focus will depend on the type of camera in use. For example: Sony cameras have value ranges different from Cisco cameras.
		None	As above	`xcommand cameraposition camera:1 pan:1700 tilt:1700`
				`*r Result (status=OK):`
				`*r/end`
				OK

CameraReconfigure
Re-configures all cameras connected to the switch or codec. This may be useful if you connect new cameras without turning the power off, since the switch does not auto detect such changes.
	None	None	As above	`xcommand camerareconfigure`
				`*r Result (status=OK):`
				`*r/end`
				OK

CameraTrackingStart
Command used to turn camera tracking on.
	None	None	As above	`xcommand cameratrackingstart`
				`*r Result (status=OK):`
				`*r/end`
				OK

CameraTrackingStop
Command used to turn cameratracking off.
	None	None	As above	`xcommand cameratrackingstop`
				`*r Result (status=OK):`
				`*r/end`
				OK

Command	Parameters	Result when OK	Result on Error	Example

CameraUpgrade
Upgrade camera or video switch with new software. The software must be put on a folder named either /tmp or /user.
Currently only upgrading of the first camera or video switch is supported.
	(r): `<1..13> <filename>`
	Addresses the specific camera or Video Switch.
	Camera software files are named s01692.pkg.
	Video Switch software files are named s51200.pkg.
		None	As above	`xcommand cameraupgrade:1 s01692.pkg`
				`*r Result (status=OK):`
				`*r/end`
				OK

CameraWhiteBalance
Command used to initiate calibration of the whitebalance of the camera. The command is valid only when the Camera Whitebalance Mode is configured to Manual.
	Camera(r): `<1..13>`
	Addresses the specific camera.
		None	As above	`xcommand camerawhitebalance camera:1`
				`*r Result (status=OK):`
				`*r/end`
				OK

ChairRelease
Command used to release chair in a conference supporting chair control.
	None	None	As above	`xcommand chairrelease`
				`*r Result (status=OK):`
				`*r/end`
				OK

ChairTake
Command used to take chair in a conference supporting chair control.
	None	None	As above	`xcommand chairtake`
				`*r Result (status=OK):`
				`*r/end`
				OK

ConferenceDisconnect
Command used to disconnect all calls connected to the system.
	None	None	As above	`xcommand ConferenceDisconnect`
				`*r Result (status=OK):`
				`*r/end`
				OK

ConferenceTerminate
ConferenceTerminate is only valid if the system is participant in a MultiSite conference supporting Chair Control, and for the system granted chair. The command will disconnect all participants in the conference (not only the calls connected locally to the system).
	None	None	As above	`xcommand ConferenceTerminate`
				`*r Result (status=OK):`
				`*r/end`
				OK

Command	Parameters	Result when OK	Result on Error	Example
CorpDirSearch Command to search for contacts in the corporate directory phone book. Use the **CorpDirGetNext** and the ID of the last entity to search for the next contacts. Use the **CorpDirGetPrevious** and the ID of the first entity to search for the previous contacts.	With no parameters specified the result will show the first 40 catalogs. **Path:** `<S: 0, 256>` Enter the path, which is the ID of the folder or subfolder, to search in. The result will show the first 40 entries in the given catalog. If no catalog specified by Path, then the root catalog is used. **Query:** `<S: 0, 81>` Enter the query to search for. **StartsWith:** `<S: 0, 81>` The search string should start with. **Hits:** `<1..40>` Specify the number of hits to show. **SubFolders:** `<On/Off>` Define if the search should also include subfolders. **IsFirst:** `<True/False>` **True** indicates that this is the first hit matching the search criteria. **False** indicates that this is not the first hit matching the search criteria. CorpDirGetPrevious can be used to search for more contacts. **IsLast:** `<True/False>` **True** indicates that this is the last hit matching the search criteria. **False** indicates that this is not the last hit matching the search criteria. CorpDirGetNext can be used to search for more contacts.	None	As above	

CorpDirSearch

```
xcommand corpdirsearch
*r Result (status=OK):
Entity 1 <type:Catalog>:
Name: "0.1 - Personal Systems"
Path: ""
ID: "138"
IsFirst: True
IsLast: False
Entity 2 <type:Catalog>:
Name: "0.2 - Meeting Rooms"
Path: ""
ID: "140"
IsFirst: False
IsLast: True
*r/end
OK

xcommand corpdirsearch query:charlie
hits:1
*r Result (status=OK):
Entity 1 <type:Entry>:
Name: "charlie.brown"
Path: ""
ID: "29"
IsFirst: True
IsLast: False
ContactInfo 1:
Protocol: H323
CallRate: 384
Restrict: Off
DialString: "123@company.net"
Description: "123@company.net <H323>"
ContactInfo 2:
Protocol: H320
CallRate: 384
Restrict: Off
DialString: "791"
Description: "791 <ISDN>"
*r/end
OK
```

Command	Parameters	Result when OK	Result on Error	Example

CorpDirGetNext
After having used the CorpDirSearch, this command is used when you want to search for the next contacts in the corporate directory phone book.
The ID is found in the **CorpDirSearch** result.
	With no parameters specified the result will show first 40 catalogs.
	Path: `<S: 0, 256>`
	Enter the path, which is the ID of the folder or subfolder, to search in.
	The result will show the first 40 entries in the given catalog. If no catalog specified by Path, then the root catalog is used.
	Query: `<S: 0, 81>`
	Enter the query to search for.
	StartsWith: `<S: 0, 81>`
	The search string should start with.
	Hits: `<1..40>`
	Specify the number of hits to show.
	ID: `<S: 0, 21>`
	Define the ID of an entity.
	The ID is relative to a specific search. When using the CorpDirGetNext command you need to specify the same Query and StartsWith strings as in the CorpDirSearch command.
	SubFolders: `<On/Off>`
	Define if the search should also include subfolders
		None	As above	`xcommand corpdirgetnext path:138 query:charlie id:29 hits:5`
				`*r Result (status=OK):`
				`...`
				`<The next 5 entries, from id 29 for the given search will show>`
				`...`
				`*r/end`
				`OK`
				
				`xcommand corpdirgetnext path:138 query:charlie id:34 hits:5`
				`*r Result (status=OK):`
				`...`
				`<The next 5 entries, from id 34 for the given search will show>`
				`...`
				`*r/end`
				`OK`

Command	Parameters	Result when OK	Result on Error	Example

CorpDirGetPrevious
After having used the CorpDirSearch, this command is used when you want to search for the previous contacts in the corporate directory phone book.
The ID is found in the **CorpDirSearch** result.
	With no parameters specified the result will show first 40 catalogs.
	Path: `<S: 0, 256>`
	Enter the path, which is the ID of the folder or subfolder, to search in.
	The result will show the first 40 entries in the given catalog. If no catalog specified by Path, then the root catalog is used.
	Query: `<S: 0, 81>`
	Enter the query to search for.
	StartsWith: `<S: 0, 81>`
	The search string should start with.
	Hits: `<1..40>`
	Specify the number of hits to show.
	ID: `<S: 0, 21>`
	Define the ID of an entity.
	The ID is relative to a specific search. When using the CorpDirGetPrevious command you need to specify the same Query and StartsWith strings as in the CorpDirSearch command
	SubFolders: `<On/Off>`
	Define if the search should also include subfolders
		None	As above	`xcommand corpdirgetprevious path:138 query:charlie id:29 hits:5`
				`*r Result (status=OK):`
				`...`
				`<The previous 5 entries, from id 29 for the given search will show>`
				`...`
				`*r/end`
				`OK`
				
				`xcommand corpdirgetprevious path:138 query:charlie id:34 hits:5`
				`*r Result (status=OK):`
				`...`
				`<The previous 5 entries, from id 34 for the given search will show>`
				`...`
				`*r/end`
				`OK`

DefaultValuesSet
Command used to reset configurations to factory default values.
	Level: `<1..3>`
	Configurations are divided into three different storage levels. The level parameter denotes that configurations on this level and all levels below (lower value) are to be reset.
	The complete list of Storage Levels can be found in the Configuration Storage Levels table.
		None	As above	`xcommand defaultvaluesset level:2`
				`*r Result (status=OK):`
				`*r/end`
				`OK`

Command	Parameters	Result when OK	Result on Error	Example
Dial Command used to dial out from the system.	**Number:** `<S: 0, 60>` Number to dial. **SecondNumber:** `<S: 0, 60>` 2Xh221 second number. **SubAddress:** `<S: 0, 20>` Sub address. **CallRate:** `<Tlph/1xh221/xh221/64/128/192/256/320/384/512/768/1152/1472/1920/2560/3072/4096/H0/Max/Auto>` Specifies the callrate to use. The CallRates supported for a system will depend on model and software options. **Restrict:** `<On/Off>` A restricted call uses 56kbps channels rather than the default unrestricted 64kbps channels. Some older networks (primarily in the USA) do not support 64kbps channels and require the use of restricted 56kbps calls. By default the system will dial an unrestricted call and downspeed to 56kbps if necessary. **NetProfile:** `<1..7>` Defines the NetProfile to use. A NetProfile defines network type and a possible prefix, ref. configuration Netprofile. **BillingCode:** `<S: 0, 16>` By adding a Billing Code when placing a call, the call can be identified in the call log (xhistory/history.xml) after it is disconnected.	CallRef: <1..11> Reference to the call. To be used as reference when monitoring the call. LogTag: <1...> Unique reference to call. Identifies the call in the call log.	As above	
DialGlobalEntry Command used to dial a number from the global directory (the Global Directory is downloaded to the system by an external application).	**GlobalEntryId(r):** `<1..400>` Reference to the directory entry to be dialed.	CallRef: <1..11> Reference to the call. To be used as reference when monitoring the call. LogTag: <1...> Unique reference to call. Identifies the call in the call log.	As above	

Dial

```
xcommand dial number:123 callrate:256
netprofile:3
*r Result (status=OK):
     CallRef: 1
     LogTag: 312
*r/end
OK
```

DialGlobalEntry

```
xcommand dialglobalentry globalentryid:19
*r Result (status=OK):
     CallRef: 1
     LogTag: 312
*r/end
OK
```

Command	Parameters	Result when OK	Result on Error	Example
DialGroupEntry Command used to dial an entry from the Group Directory. Dialling from the Group Directory makes it possible to set up a MultiSite conference in one operation.	**GroupEntryId(r):** `<1..50 >` Reference to the directory entry to be dialed.	The system will return the following elements for each call initiated. CallRef: <1..11> Reference to the call. To be used as reference when monitoring the call. LogTag: <1...> Unique reference to call. Identifies the call in the call log.	As above	
DialLocalEntry Command used to dial a number from the locally stored directory.	**LocalEntryId(r):** `<1..200>` Reference to the directory entry to be dialed.	CallRef: <1..11> Reference to the call. To be used as reference when monitoring the call. LogTag: <1...> Unique reference to call. Identifies the call in the call log.	As above	
DisconnectCall Command used to disconnect a call.	**Call:** `<1..11>` Reference to the call to be disconnected. If this parameter is omitted, all active calls in the system will be disconnected.	None	As above	
DuoVideoStart Command used to initiate DuoVideo/H.239 from the system.	**VideoSource:** `<1..6>` Specifies which video source to be used for the additional video stream. If this parameter is omitted, the system will use the default DuoVideo source configured for the system, ref. configuration DuoVideoSource	None	As above	
DuoVideoStop Command used to stop DuoVideo/H.239.	None	None	As above	

DialGroupEntry

```
xcommand dialgroupentry groupentryid:19
*r Result (status=OK):
     CallRef: 2
     LogTag: 313
     CallRef: 1
     LogTag: 312
     CallRef:
*r/end
OK
```

DialLocalEntry

```
xcommand diallocalentry localentryid:15
*r Result (status=OK):
     CallRef: 1
     LogTag: 312
*r/end
OK
```

DisconnectCall

```
xcommand disconnectcall call:9
*r Result (status=OK):
*r/end
OK
```

DuoVideoStart

```
xcommand duovideostart videosource:5
*r Result (status=OK):
*r/end
OK
```

DuoVideoStop

```
xcommand duovideostop
*r Result (status=OK):
*r/end
OK
```

Command	Parameters	Result when OK	Result on Error	Example

DTMFSend
Command used to send DTMF tones to the far end.
NOTE! The DTMF tones are also played back locally.
NOTE! This command is also supported when the system is not in a call (the tones will only be played back locally).
	Value(r): `<E164: 1, 1>`
	The DTMF tone to send.
		None	As above	`xcommand dtmfsend value:5`
				`*r Result (status=OK):`
				`*r/end`
				OK

FECCFocus
Command used to change focus of a far end camera.
	Value(r): `<+/->`
	Specifies whether to increase or decrease focus.
		None	As above	`xcommand feccfocus value:+`
				`*r Result (status=OK):`
				`*r/end`
				OK

FECCMove
Command used to issue a Far End Camera Control – Move command.
	Direction(r): `<Up/Down/Right/Left/In/Out/FocusIn/FocusOut>`
	Specifies the direction to move.
		None	As above	`xcommand feccmove direction:right`
				`*r Result (status=OK):`
				`*r/end`
				OK

FECCPresetActivate
Command used to activate a far end preset.
	Number(r): `<0..15>`
	The preset number to activate.
		None	As above	`xcommand feccpresetactivate number:4`
				`*r Result (status=OK):`
				`*r/end`
				OK

FECCPresetStore
Command used to store a far end preset.
	Number(r): `<0..15>`
	The preset number to store.
		None	As above	`xcommand feccpresetstore number:4`
				`*r Result (status=OK):`
				`*r/end`
				OK

FECCRequestStill
Command used to request a still image from a specific source on the far end side.
	Source(r): `<0..15>`
	The far end source to select.
		None	As above	`xcommand requeststill source:4`
				`*r Result (status=OK):`
				`*r/end`
				OK

FECCSelectSource
Command used to select a far end source.
	Source(r): `<0..15>`
	The far end source to select.
		None	As above	`xcommand feccselectsource source:4`
				`*r Result (status=OK):`
				`*r/end`
				OK

FeedbackDeregister
Command used to deregister XML feedback over HTTP(S).
	ID: `<1..3>`
	ID for the registration to deregister.
		None	As above	`xcommand feedbackderegister id:1`
				`*r Result (status=OK):`
				`ID: 2`
				`*r/end`
				OK

<table>
<tr><th>Command</th><th>Parameters</th><th>Result when OK</th><th>Result on Error</th><th>Example</th></tr>
<tr><td>FeedbackRegister
Command used to instruct the system to return XML feedback over HTTP(S) to specific URLs. What parts of the Status and Configuration XML documents to monitor are specified by XPath expressions.
The system supports issuing feedback to 3 different URLs.
The system allows a total of 20 XPath expressions to be registered, with a maximum of 15 for a single URL.</td><td>ID: <1..3>
ID for the registration. If this parameter is omitted the system uses the first vacant ID.
URL(r): <code><S: 0, 256></code>
The URL to post feedback to.
Expression.1..15: <code><S: 0, 256></code>
XPath expression</td><td>ID: <1..3></td><td>As above</td><td><pre>xcommand feedbackregister
url:http://10.47.14.185:8000
        expression.1:status/call
        expression.2:status/conference
*r Result (status=OK):
  ID: 2
*r/end
OK</pre></td></tr>
<tr><td>FIPSMode
Command to activate and deactivate FIPS mode.</td><td>Mode(r): <code><On/Off></code>
Denotes whether the video system is to be in FIPS mode or not.</td><td>On: “Entering FIPS mode, restart required.”
Off: “Exiting FIPS mode, restart required.”
The codec wil restart.</td><td>As above</td><td><pre>xcommand fipsmode mode:off
*r Result (status=OK):
*r/end
OK</pre></td></tr>
<tr><td>FloorRelease
Command used to release floor in a MultiSite conference.</td><td>None</td><td>None</td><td>As above</td><td><pre>xcommand floorrelease
*r Result (status=OK):
*r/end
OK</pre></td></tr>
<tr><td>FloorRequest
Command used to request floor in a MultiSite conference.</td><td>None</td><td>None</td><td>As above</td><td><pre>xcommand floorrequest
*r Result (status=OK):
*r/end
OK</pre></td></tr>
<tr><td>FloorToSite
Command used to assign floor to a specific site in a MultiSite conference supporting H.243.</td><td>MCUID(r): <code><1..191></code>
MCUID to the MultiSite the site is connected to.
TerminalID(r): <code><1..191></code>
The site’s terimnal id, referenced to the MultiSite it is connected to.</td><td>None</td><td>As above</td><td><pre>xcommand floortosite mcuid:85 terminalid:2
*r Result (status=OK):
*r/end
OK</pre></td></tr>
<tr><td>FloorToSiteEnd
Command used to end the assignment of floor to a specific site in a MultiSite conference supporting H.243. Requires that the command FloorToSite has been issued in advance</td><td>None</td><td>None</td><td>As above</td><td><pre>xcommand floortositeend
*r Result (status=OK):
*r/end
OK</pre></td></tr>
</table>

Command	Parameters	Result when OK	Result on Error	Example

GroupEntryAdd
Command used to add a new Group entry to the locally stored Group Directory (or MultiSite Directory). The entry is stored in the first vacant position in the Group Directory.
	Name: `<S: 0, 48>`
	The entry's name.
	LocalEntryId.1..10: `<1..200>`
	References to local entry ids to be included in this Group entry.
		GroupEntryId: <1..50>
		Reference to the Group Directory position the entry is stored.
			As above	`xcommand groupentryadd name:"My Group Entry" localentryid.1:1 localentryid.2:7 localentryid.3:9`
				`*r Result (status=OK):`
				`    GroupEntryId: 17`
				`*r/end`
				OK

GroupEntryDelete
Command used to delete an entry in the locally stored Group Directory.
	GroupEntryId(r): `<1..50>`
	Reference to the entry to delete.
		None	As above	`xcommand groupentrydelete groupentryid:30`
				`*r Result (status=OK):`
				`*r/end`
				OK

KeyDown
Command used to emulate pressing a key on the MXP remote control without releasing it. The KeyDown command should be followed by a KeyRelease command to emulate releasing the key.
	Key(r): `<0/1/2/3/4/5/6/7/8/9/*/#/Connect/Disconnect/Up/Down/Right/Left/Selfview/Layout/Phonebook/Cancel/MicOff/Presentation/VolumeUp/VolumeDown/OK/ZoomIn/ZoomOut/Grab>`	None	As above	`xcommand keydown key: phonebook`
				`*r Result (status=OK):`
				`*r/end`
				OK

KeyRelease
Command used to emulate release an already pressed key on the MXP remote control. The KeyRelease command should be preceded by a KeyDown command to emulate pressing the key.
	Key(r): `<0/1/2/3/4/5/6/7/8/9/*/#/Connect/Disconnect/Up/Down/Right/Left/Selfview/Layout/Phonebook/Cancel/MicOff/Presentation/VolumeUp/VolumeDown/OK/ZoomIn/ZoomOut/Grab>`	None	As above	`xcommand keyrelease key: phonebook`
				`*r Result (status=OK):`
				`*r/end`
				OK

KeyPress
Command used to emulate pressing a key on the MXP remote control for a short while. This command needs no release command.
	Key(r): `<0/1/2/3/4/5/6/7/8/9/*/#/Connect/Disconnect/Up/Down/Right/Left/Selfview/Layout/Phonebook/Cancel/MicOff/Presentation/VolumeUp/VolumeDown/OK/ZoomIn/ZoomOut/Grab>`	None	As above	`xcommand keypress key: phonebook`
				`*r Result (status=OK):`
				`*r/end`
				OK

KeyDisable
Command used to disable a key on the MXP remote control.
	Key(r): `<0/1/2/3/4/5/6/7/8/9/*/#/Connect/Disconnect/Up/Down/Right/Left/Selfview/Layout/Phonebook/Cancel/MicOff/Presentation/VolumeUp/VolumeDown/OK/ZoomIn/ZoomOut/Grab>`	None	As above	`xcommand keydisable key: micoff`
				`*r Result (status=OK):`
				`*r/end`
				OK

KeyEnable
Command used to enable a key on the MXP remote control.
	Key(r): `<0/1/2/3/4/5/6/7/8/9/*/#/Connect/Disconnect/Up/Down/Right/Left/Selfview/Layout/Phonebook/Cancel/MicOff/Presentation/VolumeUp/VolumeDown/OK/ZoomIn/ZoomOut/Grab>`	None	As above	`xcommand keyenable key: micoff`
				`*r Result (status=OK):`
				`*r/end`
				OK

Command	Parameters	Result when OK	Result on Error	Example

LocalEntryAdd
Command used to add a new entry to the Directory stored locally. The entry is stored in the first vacant position in the Directory.
	Name: `<S: 0, 48>`
	The entry's name.
	Number: `<S: 0, 60>`
	The entry's number.
	SecondNumber: `<S: 0, 60>`
	The entry's second number (2XH221 number).
	SubAddress: `<S: 0, 10>`
	The entry's sub address.
	CallRate: `<Tlph/1xh221/2xh221/64/128/192/256/320/384/512/768/1152/1472/1920/2560/3072/4096/H0/Max/Auto>`
	The callrate to use when calling this entry.
	Restrict: `<On/Off>`
	Whether to use restrict or not when calling this entry.
	NetProfile: `<1..7>`
	The Net Profile to use when calling this entry.
		LocalEntryId:
		<1..200>
		Reference to the Directory position the entry is stored.
			As above	`xcommand localentryadd name:"John Galt" number:123`
				`*r Result (status=OK):`
				`    LocalEntryId: 17`
				`*r/end`
				`OK`

LocalEntryDelete
Command used to delete an entry in the locally stored Directory.
	LocalEntryId(r): `<1..200>`
	Reference to the entry to delete.
		None	As above	`xcommand localentrydelete localentryid:66`
				`*r Result (status=OK):`
				`*r/end`
				`OK`

MessageBoxDelete
Command used to delete a message box on the screen.
	None	None	As above	`xcommand messageboxdelete`
				`*r Result (status=OK):`
				`*r/end`
				`OK`

MessageBoxDisplay
Command used to add a graphical message box on the screen.
	Title(r): `<S: 0, 40>`
	Message box title.
	Line.1..3: `<S: 0, 40>`
	Text to be displayed on the lines within the box.
	Key.1..3: `<S: 0, 15>`
	Text to be displayed on the keys
		None	As above	`xcommand messageboxdisplay title:Welcome`
				`                line.1:"How are you?"`
				`                key.1:Good`
				`                key.2:Bad`
				`*r Result (status=OK):`
				`*r/end`
				`OK`

PIPHide
Command used to hide a PIP on a specific VirtualMonitor.
	VirtualMonitor(r): `<1..4>`
	Addresses which VirtualMonitor to apply the command.
		None	As above	`xcommand piphide virtualmonitor:1`
				`*r Result (status=OK):`
				`*r/end`
				`OK`

Command	Parameters	Result when OK	Result on Error	Example

PIPShow
Command used to display a specific picture in a PIP on a selected VirtualMonitor
	VirtualMonitor(r): `<1..4>`
	Addresses which VirtualMonitor to apply the command.
	Picture(r): `<LocalMain/LocalDuo/RemoteMain/RemoteDuo/JPEG/TandbergMonitor1/TandbergMonitor2/None>`
	Specifies which of the supported pictures to display in the PIP on the addressed VirtualMonitor.
	Call: `<1..11>`
	If RemoteMain or RemoteDuo is selected, this parameter must be supplied to select the correct remote call.
	Position: `<BottomLeft/BottomRight/TopLeft/TopRight>`
	Specifies where to postion the PIP.
		None	As above	`xcommand pipshow virtualmonitor:1 picture:remoteduo call:5 postion:topright`
				`*r Result (status=OK):`
				`*r/end`
				OK

PresetActivate
Command used to activate a stored preset.
	Number(r): `<0..14>`
	The preset to activate.
		None	As above	`xcommand presetactivate number:4`
				`*r Result (status=OK):`
				`*r/end`
				OK

PresetClear
Command used to clear a preset previously stored.
	Number(r): `<0..14>`
	The preset to clear.
		None	As above	`xcommand presetclear number:4`
				`*r Result (status=OK):`
				`*r/end`
				OK

PresetStore
Command used to store a preset.
	Number(r): `<0..14>`
	The number where to store the preset.
		None	As above	`xcommand presetstore number:4`
				`*r Result (status=OK):`
				`*r/end`
				OK

ProfileActivate
Command to activate an existing user profile.
	Name(r): `<S: 0, 16>`
	The name of the user profile to activate.
		None	As above	`xcommand profileactivate:profilename`
				`*r Result (status=OK):`
				`*r/end`
				OK

ProfileCreate
Configure the video system and use this command to create a new user profile.
	Name(r): `<S: 0, 16>`
	The name of the user profile to create.
		None	As above	`xcommand profilecreate:profilename`
				`*r Result (status=OK):`
				`*r/end`
				OK

Command	Parameters	Result when OK	Result on Error	Example

ProfileDelete
Command to delete an user profile.
	Name(r): `<S: 0, 16>`
	The name of the user profile to delete.
		None	As above	`xcommand profiledelete:profilename`
				`*r Result (status=OK):`
				`*r/end`
				OK

ProfileList
Command to list user profiles.
	None	None	As above	`xcommand profilelist`
				`*r Result (status=OK):`
				`     Available 1: "Office"`
				`     Available 2: "Home"`
				`*r/end`
				OK

ScreensaverActivate
Command used to activate screensaver.
	None	None	As above	`xcommand screensaveractivate`
				`*r Result (status=OK):`
				`*r/end`
				OK

ScreensaverDeactivate
Command used to deactivate screensaver. CAUTION: Warranty will be void if used with TANDBERG systems shipped with Plasma monitors.
	None	None	As above	`xcommand screensaverdeactivate`
				`*r Result (status=OK):`
				`*r/end`
				OK

ScreensaverReset
Command used to reset the screensaver timer.
	Delay(r): `<1..480>`
	Specifies the screensaver delay in minutes.
		None	As above	`xcommand screensaverreset delay:90`
				`*r Result (status=OK):`
				`*r/end`
				OK

SiteDisconnect
Command used to disconnect a specific site from a MultiSite conference supporting H.243.
	MCUID(r): `<1..191>`
	MCUID to the MultiSite the site is connected to.
	TerminalID(r): `<1..191>`
	The site's terimnal id, referenced to the MultiSite it is connected to.
		None	As above	`xcommand sitedisconnect mcuid:85 terminalid:2`
				`*r Result (status=OK):`
				`*r/end`
				OK

SiteView
Command used to request view of a specific site in a MultiSite conference supporting H.243.
	MCUID(r): `<1..191>`
	MCUID to the MultiSite the site is connected to.
	TerminalID(r): `<1..191>`
	The site's terimnal id, referenced to the MultiSite it is connected to.
		None	As above	`xcommand siteview mcuid:85 terminalid:2`
				`*r Result (status=OK):`
				`*r/end`
				OK

Command	Parameters	Result when OK	Result on Error	Example

SiteViewEnd
Command used to end viewing of a specific site in a MultiSite conference supporting H.243. Requires that the SiteView command has been issued in advance.
	None	None	As above	`xcommand siteviewend`
				`*r Result (status=OK):`
				`*r/end`
				`OK`

SPIDAutoConfigure
Command used to initiate automatic configuration of SPIDs.
	None	None	As above	`xcommand spidautoconfigure`
				`*r Result (status=OK):`
				`*r/end`
				`OK`

StillImageSend
Command used to send a still image.
	VideoSource: `<1..6>`
	Specifies from which video source to send a still image. If this parameter is omitted, the system will use the default still image source configured for the system.
		None	As above	`xcommand stillimagesend videosource:5`
				`*r Result (status=OK):`
				`*r/end`
				`OK`

StreamingStart
Command used to start streaming from the system.
	None	None	As above	`xcommand streamingstart`
				`*r Result (status=OK):`
				`*r/end`
				`OK`

StreamingStop
Command used to stop streaming from the system.
	None	None	As above	`xcommand streamingstop`
				`*r Result (status=OK):`
				`*r/end`
				`OK`

TextDelete
Command used to delete a text line added by the TextDisplay command.
	Layer(r): `<1..3>`
	The layer to delete.
		None	As above	`xcommand textdelete layer:1`
				`*r Result (status=OK):`
				`*r/end`
				`OK`

TextDisplay
Command used add a text line on screen.
	Layer(r): `<1..3>`
	Defines the lines position.
	Text: `<S: 0, 38>`
	The text to display.
	TimeOut: `<0..999>`
	Sets the timeout value for the text line.
		None	As above	`xcommand textdisplay layer:1 text:anytext timeout:100`
				`*r Result (status=OK):`
				`*r/end`
				`OK`

VirtualMonitorReset
Command used to reset a VirtualMonitor. By resetting a VirtualMonitor the system itself retakes control over what to be displayed on the VirtualMonitor.
	VirtualMonitor(r): `<1..4>`
	Addresses which VirtualMonitor to apply the command.
		None	As above	`xcommand virtualmonitorreset virtualmonitor:2`
				`*r Result (status=OK):`
				`*r/end`
				`OK`

Command	Parameters	Result when OK	Result on Error	Example

VirtualMonitorSet
Command used to instruct the system to display a specific picture on a specific VirtualMonitor. A VirtualMonitor can be displayed on one or more of the local video outputs (which VirtualMonitor a specific video output is to display is configurable).
When this command is issued for a specific VirtualMonitor the picture displayed on this monitor will not change until the VirtualMonitor is reset or set to display another picture.
	VirtualMonitor(r): `<1..4>`
	Addresses the VirtualMonitor to which the command is to be applied.
	Picture(r): `<LocalMain/LocalDuo/Still/RemoteMain/RemoteDuo/JPEG/TandbergMonitor1/TandbergMonitor2/PictureProgram1/PictureProgram2/PictureProgram3/PictureProgram4/None>`
	Specifies which of the supported pictures to display on the addressed VirtualMonitor.
	Call: `<1..11>`
	If **RemoteMain** or **RemoteDuo** is selected, this parameter must be supplied to select the correct remote call.
		None	As above	`xcommand virtualmonitorset virtualmonitor:2 picture:still`
				`*r Result (status=OK):`
				`*r/end`
				`OK`

Chapter 5

Description of the xStatus commands

xStatus commands

The following pages will list an example of the xStatus commands and the response. Status type commands returns 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/telepresence/docs

Audio command

Audio

Audio

- **AudioModule:** None / NAMI / NAMII / Digital NAM / mDNAM
- Inputs
  - Microphone [1..3]:
    - **Active:** True / False
  - Line [1..3]:
    - **Active:** True / False

Example:

```
*s Audio:
     AudioModule: None
     Inputs:
       Microphone 1:
         Active: True
       Microphone 2:
         Active: False
       Microphone 3:
         Active: False
       Line 1:
         Active: False
       Line 2:
         Active: False
       Line 3:
         Active: False
*s/end
```

BRI command

BRI

BRI [1..6] (ready= Unknown / True / False)

If ready = Unknown / True, the following will be included:

Channel [1..2] (type = BChannel , status=Idle / Calling / Answering / Proceeding / Connect / Disconnecting / Disconnected)

If type = Bchannel and status=Idle, the following will be included:

<Nothing>

If type = Bchannel and status = Calling / Answering / Proceeding / Connect the following will be included:

CallingNumber:

ConnectionTime:

If type = Bchannel and status = Disconnecting / Disconnected the following will be included:

CallingNumber:

CauseLocation:

ChannelCause:

ConnectionTime:

If ready = False the following will be included:

Layer1Alarm: <NA>

Layer2Alarm: <NA>

Example – see overleaf.

BRI command, *continued...*

Example:

```
*s BRI 1 (ready=True):
     Channel 1 (type=BChannel, status=Idle): /
     Channel 2 (type=BChannel, status=Disconnected):
       CallingNumber: "8770"
       CauseLocation: 0
       ChannelCause: 41
       ConnectionTime: 258
*s/end

*s BRI 2 (ready=True):
     Channel 1 (type=BChannel, status=Connect):
       CallingNumber: "8770"
       ConnectionTime: 346
     Channel 2 (type=BChannel, status=Connect):
       CallingNumber: "8770"
       ConnectionTime: 346
*s/end

*s BRI 3 (ready=True):
     Channel 1 (type=BChannel, status=Connect):
       CallingNumber: "8770"
       ConnectionTime: 345
     Channel 2 (type=BChannel, status=Connect):
       CallingNumber: "8770"
       ConnectionTime: 345
*s/end
```

Call command

Call

Call [1..10] (status=Disconnected / CallIDLE / Dialing / Alerting / Proceeding / EstablOut / EstablIn / AwaitInCnf / Connected / Disconnecting / Await2ndnr / ClearOut / ClearIn / Syncing / Capex / Synced / Unframed,
type = NA / Tlph / Vtlph,
protocol = NA / ISDN / H320 / H323 / SIP,
direction = NA / Incoming / Outgoing,
logTag = 1..x)

If status = Disconnected
and type = NA
and protocol = NA
and direction = NA
and logtag = x
the following will be included:

Cause:

If status = Dialing / Alerting / Proceeding / EstablOut / EstablIn / AwaitInCnf / Connected / Disconnecting / Await2ndnr / ClearOut / ClearIn / Syncing / Capex / Synced / Unframed
and type = Tlph
and protocol = ISDN
and direction = Incoming / Outgoing
and logTag = x
the following will be included:

CallRate: 64

RemoteNumber [1..2]:

RemoteSubAddress:

IncomingNumber:	Appears for incoming calls only
IncomingSubAddress:	

Mute: On/Off

Microphone: On/Off

Duration: 0...

MuteOutgoing: On/Off

Channels [1..2] (type = Incoming / Outgoing):

If type = incoming / outgoing the following will be included:

Rate: 64

Call command, *continued...*

Restrict: On/Off

Audio (status = Active / Inactive):

If status = Inactive the following will be included

<Nothing>

If status = Active the following will be included

Protocol: G711 / G722 / G722.1 / G728 / AAC-LD

Rate: 16...

Example:

```
*s Call 1 (status=Synced, type=Tlph, protocol=ISDN, direction=Incoming, logTag=5944):
     CallRate: 64
     RemoteNumber 1: “8733”
     RemoteNumber 2: “”
     RemoteSubAddress: “”
     IncomingNumber: “8770”
     IncomingSubAddress: “”
     Mute: Off
     Microphone: On
     Duration: 127
     MuteOutgoing: Off
     Channels 1 (type=Incoming):
       Rate: 64
       Restrict: Off
       Audio (status=Active):
         Protocol: G711
         Rate: 64
     Channels 2 (type=Outgoing):
       Rate: 64
       Restrict: Off
       Audio (status=Active):
         Protocol: G711
         Rate: 64
*s/end
```

If status = Dialing / Alerting / Proceeding / EstablOut / EstablIn / AwaitInCnf / Connected / Disconnecting / Await2ndnr / ClearOut / ClearIn / Syncing / Capex / Synced / Unframed
and type = Vtlph
and protocol = H320
and direction = Incoming / Outgoing
and logTag = x
the following will be included:

Call command, *continued...*

- **CallRate:** 64/128/../4096
- **RemoteNumber [1..2]:**
- **RemoteSubAddress:**
- **IncomingNumber:**
- **IncomingSubAddress:**

  Appears for incoming calls only
- **Mute:** On / Off
- **Microphone:** On / Off
- **Duration:** 0...
- **MuteOutgoing:** On / Off
- Channels [1..2] **(type =** Incoming / Outgoing**):**
  - If type = Incoming / Outgoing the following will be included:
    - **Rate:** 64 / .. / 4096
    - **Restrict:** On / Off
    - Encryption **(status =** Off / Negotiate / On**):**
    - If status = Off / Negotiate the following will be included:
      - <Nothing>
    - If status = On the following will be included:
      - **Type:** DES / AES-128
      - **CheckCode:**
    - **Audio (status =** Active / Inactive**):**
    - If status = Inactive the following will be included:
      - <Nothing>
    - If status = Active the following will be included:
      - **Protocol:** G711 / G722 / G722.1 / G728 /AAC-LD
      - **Rate:**
    - **Video [1..2] (status =** Active / Inactive**):**

Call command, *continued...*

If status = Inactive the following will be included:

- <Nothing>

If status = Active the following will be included:

- **Protocol:** H261 / H263 / H263+ / H264
- **Resolution:** QCIF / SQCIF / CIF / 2CIF / 4CIF / ICIF / SIF / 4SIF /ISIF /VGA / SVGA / XGA / QVGA / 448p / 400p / w288p / w448p / w576p / w720p
- **Rate:**

Data (status = Active / Inactive**):**

If status = Inactive the following will be included:

- <Nothing>

If status = Active the following will be included:

- **Type:** LSD / MLP
- **Protocol:** FECC
- **Rate:**

Call command, *continued...*

Example (see previous pages for the status information applicable):

```
*s Call 1 (status=Synced, type=Vtlph, protocol=H320, direction=Outgoing, logTag=3):
     CallRate: 384
     Bonding: On
     RemoteNumber 1: "8776"
     RemoteNumber 2: ""
     RemoteSubAddress: ""
     Mute: Off
     Microphone: On
     Duration: 32
     MuteOutgoing: Off
     Channels 1 (type=Incoming):
       Rate: 384
       Restrict: Off
       Encryption (status=On):
         Type: AES-128
         CheckCode: "BA8C78DAD933C3DD"
       Audio (status=Active):
         Protocol: AAC-LD
         Rate: 64
       Video 1 (status=Active):
         Protocol: H264
         Resolution: 2.5SIF
         Rate: 317
       Video 2 (status=Inactive): /
       Data (status=Inactive): /
     Channels 2 (type=Outgoing):
       Rate: 384
       Restrict: Off
       Encryption (status=On):
         Type: AES-128
         CheckCode: "BA8C78DAD933C3DD"
       Audio (status=Active):
         Protocol: AAC-LD
         Rate: 64
       Video 1 (status=Active):
         Protocol: H264
         Resolution: 4CIF
         Rate: 317
       Video 2 (status=Inactive): /
       Data (status=Inactive): /
*s/end
```

Call command, *continued...*

If status = Dialing / Alerting / Proceeding / EstablOut / EstablIn / AwaitInCnf / Connected / Disconnecting / Await2ndnr / ClearOut / ClearIn / Syncing / Capex / Synced / Unframed
and type = Tlph
and protocol = H323 / SIP
and direction = Incoming / Outgoing
and logTag = x
the following will be included:

- **CallRate:** 64
- **RemoteNumber:**
- **RemoteSubAddress:**
- **IncomingNumber:**
- **IncomingSubAddress:**

  Appears for incoming calls only

- **Mute:** On / Off
- **Microphone:** On / Off
- **Duration:** 0...
- **MuteOutgoing:** On / Off
- Channels [1..2] **(type =** Incoming / Outgoing**):**

  If type = Incoming / Outgoing the following will be included:

  - **Rate:** 64 / .. / 4096
  - **Restrict:** On / Off
  - Encryption **(status =** Off / Negotiate / On**):**

    If status = Off / Negotiate the following will be included:

    - <Nothing>

    If status = On the following will be included:

    - **Type:** DES / AES-128
  - **RSVP*:** On/Off
  - **RSVPRate*:**
  - **DynamicRate*:**
  - **TotalPackets*:**

Call command, *continued...*

		PacketLoss*:	
		Jitter*:	
		PacketsDropped*:	Appears with incoming calls only
Example: see overleaf.			

Call command, *continued...*

Example:

```
*s Call 1 (status=Synced, type=Tlph, protocol=H323, direction=Incoming, logTag=5):
     CallRate: 64
     RemoteNumber: “5020019”
     IncomingNumber: “5020059”
     IncomingSubAddress: “”
     Mute: Off
     Microphone: On
     Duration: 16
     MuteOutgoing: Off
     Channels 1 (type=Incoming):
       Rate: 64
       Restrict: Off
       Encryption (status=On):
         Type: AES-128
         CheckCode: “E2957C90C5DF0649”
       Audio (status=Active):
         Protocol: G711
         Rate: 64
         RemoteIPAddress: “”
         LocalIPAddress: “10.47.20.59:2334”
         Encryption (status=On):
           Type: AES-128
         RSVP: Off
         RSVPRate: 0
         DynamicRate: 64
         TotalPackets: 725
         PacketLoss: 0
         Jitter: 0
         PacketsDropped: 0
       Data (status=Inactive): /
     Channels 2 (type=Outgoing):
       Rate: 64
       Restrict: Off
       Encryption (status=On):
         Type: AES-128
         CheckCode: “E2957C90C5DF0649”
       Audio (status=Active):
         Protocol: G711
         Rate: 64
         RemoteIPAddress: “10.47.20.19:2334”
         LocalIPAddress: “10.47.20.59:2334”
         Encryption (status=On):
           Type: AES-128
         RSVP: Off
         RSVPRate: 0
         DynamicRate: 64
         TotalPackets: 725
         PacketLoss: 0
         Jitter: 0
       Data (status=Inactive): /
*s/end
```

Call command, *continued...*

If status = Dialing / Alerting / Proceeding / EstablOut / EstablIn / AwaitInCnf / Connected / Disconnecting / Await2ndnr / ClearOut / ClearIn / Syncing / Capex / Synced / Unframed
and type = Vtlph
and protocol = H323 / SIP
and direction = Incoming / Outgoing
and logTag = x
the following will be included:

- **CallRate:** 64 / 128 / .. / 4096
- **RemoteNumber:**
- **RemoteSubAddress:**
- **IncomingNumber:** — Appears for incoming calls only
- **IncomingSubAddress:** — Appears for incoming calls only
- **Mute:** On / Off
- **Microphone:** On / Off
- **Duration:** 0...
- **MuteOutgoing:** On / Off
- Channels [1..2] **(type =** Incoming / Outgoing**):**

  If type = Incoming / Outgoing the following will be included:

  - **Rate:** 64 / .. / 4096
  - **Restrict:** On / Off
  - Encryption **(status =** Off / Negotiate / On**):**

    If status = Off / Negotiate the following will be included:

    - <Nothing>

    If status = On the following will be included:

    - **Type:** DES / AES-128
    - **CheckCode:**
  - **Audio (status =** Active / Inactive**):**

    If status = Inactive the following will be included:

    - <Nothing>

    If status = Active the following will be included:

Call command, *continued...*

    - **Protocol:** G711 / G722 / G722.1 / G728 / AAC-LD
    - **Rate:**
    - **RemoteIPAddress*:**
    - **LocalIPAddress*:**
    - **Encryption* (status =** On / Off**)**
    - If status = Off the following will be included:
        - <Nothing>
    - If status = On the following will be included:
        - **Type:** DES / AES-128
    - **RSVP*:** On / Off
    - **DynamicRate*:**
    - **TotalPackets*:**
    - **PacketLoss*:**
    - **Jitter*:**
    - **PacketsDropped*:** — Appears for incoming calls only
- **Video [1..2] (status =** Active / Inactive**):**
- If status = Inactive the following will be included:
    - <Nothing>
- If status = Active the following will be included:
    - **Protocol:** H261 / H263 /H263+ / H264
    - **Resolution:** QCIF / SQCIF / CIF / 2CIF / 4CIF / ICIF / SIF / 4SIF /ISIF /VGA / SVGA / XGA / QVGA / 448p / 400p / w288p / w448p / w576p / w720p
    - **Rate:**
    - **RemoteIPAddress*:**
    - **LocalIPAddress*:**
    - **Encryption* (status =** On / Off**)**
    - If status = Off the following will be included:
        - <Nothing>

Call command, *continued...*

- If status = On the following will be included:
  - **Type:** DES / AES-128
- **RSVP*:** On / Off
- **DynamicRate*:**
- **TotalPackets*:**
- **PacketLoss*:**
- **Jitter*:**
- **PacketsDropped*:** Appears for incoming calls only
- **Data (status =** Active / Inactive**):**
- If status = Inactive the following will be included:
  - <Nothing>
- If status = Active the following will be included:
  - **Type:** LSD/MLP
  - **Protocol:** FECC
  - **Rate:**
  - **RemoteIPAddress*:**
  - **LocalIPAddress*:**
  - **Encryption* (status =** On / Off)
  - If status = Off the following will be included:
    - <Nothing>
  - If status = On the following will be included:
    - **Type:** DES / AES-128
  - **RSVP*:** On / Off
  - **DynamicRate*:**
  - **TotalPackets*:**
  - **PacketLoss*:**
  - **Jitter*:**

Call command, *continued...*

			PacketsDropped*:	Appears for incoming calls only

Example:

```
*s Call 1 (status=Synced, type=Vtlph, protocol=H323, direction=Incoming, logTag=6):
     CallRate: 768
     RemoteNumber: "5020019"
     IncomingNumber: "5020059"
     IncomingSubAddress: ""
     Mute: Off
     Microphone: On
     Duration: 10
     MuteOutgoing: Off
     Channels 1 (type=Incoming):
       Rate: 768
       Restrict: Off
       Encryption (status=On):
         Type: AES-128
         CheckCode: "C442803A9A470B7F"
       Audio (status=Active):
         Protocol: AAC-LD
         Rate: 64
         RemoteIPAddress: ""
         LocalIPAddress: "10.47.20.59:2334"
         Encryption (status=On):
           Type: AES-128
         RSVP: Off
         RSVPRate: 0
         DynamicRate: 64
         TotalPackets: 474
         PacketLoss: 0
         Jitter: 1
         PacketsDropped: 0
       Video 1 (status=Active):
         Protocol: H264
         Resolution: Off
         Rate: 704
         RemoteIPAddress: ""
         LocalIPAddress: "10.47.20.59:2336"
         Encryption (status=On):
           Type: AES-128
         RSVP: Off
         RSVPRate: 0
         DynamicRate: 677

- continues overleaf..
```

Call command, *continued...*

```
         TotalPackets: 817
         PacketLoss: 0
         Jitter: 0
         PacketsDropped: 0
       Video 2 (status=Inactive): /
       Data (status=Inactive): /
     Channels 2 (type=Outgoing):
       Rate: 768
       Restrict: Off
       Encryption (status=On):
         Type: AES-128
         CheckCode: “C442803A9A470B7F”
       Audio (status=Active):
         Protocol: AAC-LD
         Rate: 64
         RemoteIPAddress: “10.47.20.19:2334”
         LocalIPAddress: “10.47.20.59:2334”
         Encryption (status=On):
           Type: AES-128
         RSVP: Off
         RSVPRate: 0
         DynamicRate: 63
         TotalPackets: 475
         PacketLoss: 0
         Jitter: 2
             Video 1 (status=Active):
         Protocol: H264
         Resolution: 2.5SIF
         Rate: 704
         RemoteIPAddress: “10.47.20.19:2336”
         LocalIPAddress: “10.47.20.59:2336”
         Encryption (status=On):
           Type: AES-128
         RSVP: Off
         RSVPRate: 0
         DynamicRate: 701
         TotalPackets: 936
         PacketLoss: 0
         Jitter: 6
       Video 2 (status=Inactive): /
       Data (status=Inactive): /
*s/end
```

Camera command

Camera [1..13] (connected = True / False):

Type:

ID:

Pan:

Tilt:

Zoom:

Focus:

Example:

```
*s Camera 1 (connected=True):
     Type: WaveII
     ID: "0c0e0006"
     SoftwareID: ""
     Pan: 647
     Tilt: 172
     Zoom: 0
     Focus: 27501
*s/end
```

CameraSWUpgrade command

CameraSWUpgrade (status = N/A):

Example:

```
*s CameraSwUpgrade (status=NA): /
*s/end
```

CameraTracking command

CameraTracking (status = On / Off):

If status = On / Off the following will be included:

<Nothing>

Example:

```
*s CameraTracking (status=Off): /
*s/end

*s CameraTracking (status=On): /
*s/end
```

Conference command

Conference (type = Idle / PointToPoint / PointToMultiSite / MultiSite):

If type = Idle the following will be included:

<Nothing>

Example:

```
*s Conference (type=Idle): /
*s/end
```

If type = PointToPoint the following will be included:

Calls:

CallRef [1..11]: 1..11

DuoVideo (status = None / Ready / On**):**

If status = None / Ready the following will be included:

<Nothing>

If status = On the following will be included:

CallRef [1..11]: 0..11

LoudestParticipant:

CallRef: 0..11

Example:

```
*s Conference (type=PointToPoint):
     Calls:
       CallRef 1: 1
     DuoVideo (status=Ready): /
     LoudestParticipant:
       CallRef: 1
*s/end
```

If type = PointToMultiSite the following will be included:

Calls:

CallRef [1..11]: 1..11

DuoVideo (status = None / Ready / On**):**

If status = None / Ready the following will be included:

<Nothing>

Conference command, *continued...*

If status = On the following will be included:

- **CallRef [1..11]:** 0..11

LoudestParticipant:

- **CallRef:** 0..11

NumberOfSites: 1..191

MCUSiteList:

- **Site [1..191]:**
  - **MCUID:**
  - **TerminalID:**
  - **Name:**
  - **CallRef:**
- **LocalSite:**
  - **Self:**
    - **MCUID:**
    - **TerminalID:**
  - **OnAir:** On / Off
  - **Floor:** On / Off
  - **Chair:** UnSupported
  - **View:**
    - **MCUID:**
    - **TerminalID:**

Conference command, *continued...*

Example:

```
*s Conference (type=PointToMultisite):
     Calls:
       CallRef 1: 1
     DuoVideo (status=None): /
     LoudestParticipant:
       CallRef: 1
     NumberOfSites: 3
MCUSiteList:
       Site 1:
         MCUID: 85
         TerminalID: 3
         Name: "Boardroom1"
         CallRef: 1
       Site 2:
         MCUID: 85
         TerminalID: 1
         Name: "Boardroom2"
         CallRef: None
       Site 3:
         MCUID: 85
         TerminalID: 2
         Name: "Boardroom3"
         CallRef: None
     LocalSite:
       Self:
         MCUID: 85
         TerminalID: 3
       OnAir: On
       Floor: Off
       Chair: UnSupported
       View:
         MCUID: 0
         TerminalID: 0
*s/end
```

If type = MultiSite the following will be included:

Calls:

CallRef [1..11]: 1..11

DuoVideo (status = None / Ready / On**):**

If status = None / Ready the following will be included:

<Nothing>

If status = On the following will be included:

CallRef [1..11]: 0..11

Conference command, *continued...*

- **LoudestParticipant:**
  - **CallRef:** 0..11
- **Floor:** None / FloorRequest / FloorAssign
- **Current:**
  - **CallRef:** 0..11
- **Previous:**
  - **CallRef:** 0..11
- **OutgoingPicture [1..3] (name =** Current / Previous / Duo**):**
- If name = Current / Previous / Duo the following will be included:
  - **Layout (type = Full / 4Split / 5+1Split):**
    - **Window [1..6]:**
      - **Picture:** LocalMain / RemoteMain
      - **CallRef:** 0..11
- **MCUID:** 1..
- **CascadingMode:** StandAlone / Master / Slave
- **NumberOfSites:** 1..191
- **MCUSiteList:**
  - **Site [1..191]:**
    - **MCUID:**
    - **TerminalID:**
    - **Name:**
    - **CallRef:**
- **LocalSite:**
  - **Self:**
    - **MCUID:**
    - **TerminalID:**

Conference command, *continued...*

- **OnAir:** On/Off
- **Floor:** On/Off
- **Chair:** UnSupported
- **View:**
  - **MCUID:** 1..
  - **TerminalID:** 1..

Example

```
*s Conference (type=Multisite):
     Calls:
       CallRef 1: 1
       CallRef 2: 2
     DuoVideo (status=Ready): /
     LoudestParticipant:
       CallRef: 2
     Floor: None
     Current:
       CallRef: 2
     Previous:
       CallRef: 1
     OutgoingPicture 1 (name=Current):
       Layout (type=Full):
         Window 1:
           Picture: RemoteMain
           CallRef: 2
     OutgoingPicture 2 (name=Previous):
       Layout (type=Full):
         Window 1:
           Picture: RemoteMain
           CallRef: 1
     OutgoingPicture 3 (name=Duo):
       Layout (type=NA): /
     MCUID: 1
     CascadingMode: StandAlone
     NumberOfSites: 3
     MCUSiteList:
       Site 1:
         MCUID: 1
         TerminalID: 2
         Name: “john.doe”
         CallRef: 1
       Site 2:
         MCUID: 1
         TerminalID: 3
```

Continues overleaf...

Conference command, *continued...*

Continued from the previous page:

```
          Name: "john.doe.150"
          CallRef: 2
        Site 3:
          MCUID: 1
          TerminalID: 4
          Name: "john.doe.mxp"
          CallRef: 0
      LocalSite:
        Self:
          MCUID: 1
          TerminalID: 4
        OnAir: Off
        Floor: Off
        Chair: UnSupported
        View:
          MCUID: 1
          TerminalID: 3
*s/end
```

Ethernet command

Ethernet:

MacAddress:

Speed: 10half / 10full / 100half / 100full

Example:

```
*s Ethernet:
     MacAddress: “00:50:60:01:85:F1”
     Speed: 100full
*s/end
```

ExternalManager command

ExternalManager:

Address:

Protocol: HTTP / HTTPS

URL:

Example:

```
*s ExternalManager:
     Address: "10.47.6.75"
     Protocol: HTTP
     URL: "tms/public/external/management/SystemManagementService.asmx"
*s/end
```

ExternalNetwork command

ExternalNetwork (ready = True / False):

If ready = False the following will be included:

- <Nothing>

If ready = True the following will be included:

- **ExternalClockRate:**
- **Channel (status =** Idle / Calling / Answering / Proceeding / Connect / Disconnecting / Disconnected**)**
- If status = Idle the following will be included:
  - <Nothing>
- If status = Calling / Answering / Proceeding / Connect the following will be included:
  - **CallingNumber:**
  - **ConnectionTime:**
- If status = Disconnecting / Disconnected the following will be included:
  - **CallingNumber:**
  - **CauseLocation:**
  - **ChannelCause:**
  - **ConnectionTime:**

FarEndInformation command, *continued...*

FarEndInformation:

FECC (status = On / Off**)**

If status = Off the following will be included:

<Nothing>

T140: Off

SString: Off

Example:

```
*s FarEndInformation:
     FECC (status=Off): /
     T140: Off
     SString: Off
*s/end
```

If status = On the following will be included:

NumberOfPresets: x

NumberOfSources: x

Source [1..x]:

Name:

Capabilities: “ptzfms”

CurrentSource:

BroadcastSwitch: On / Off

T140: On/Off

Sstring: On/Off

FarEndInformation command, *continued...*

Example:

```
*s FarEndInformation:
     FECC (status=On):
       NumberOfPresets: 15
       NumberOfSources: 5
       Source 1:
         Name: “main cam”
         Capabilities: “ptzfms”
       Source 2:
         Name: “aux”
         Capabilities: “ms”
       Source 3:
         Name: “doc cam”
         Capabilities: “ms”
       Source 4:
         Name: “vcr”
         Capabilities: “ms”
       Source 5:
         Name: “pc”
         Capabilities: “ms”
       CurrentSource: 1
       BroadcastSwitch: On
     T140: On
     SString: On
*s/end
```

Feedback [1..3] (status = On / Off):

If status = Off the following will be included:

<Nothing>

Example:

```
*s Feedback 1 (status=Off): /
*s/end
```

If status = On the following will be included:

URL:

Expression [1..15]:

Example:

```
*s Feedback 2 (status=On):
     URL: "http://10.47.6.75/tms/public/feedback/code.aspx"
     Expression 1: "/History/Call"
     Expression 2: "/Status/Call[@status='Synced']"
     Expression 3: "/Status/SoftwareUpgrade"
     Expression 4: "/Status/BRI"
     Expression 5: "/Configuration/Conference/PictureMode"
*s/end
```

G703 command

G703 (ready = True / False)

If ready = False the following will be included:

Layer1Alarm: RedAlarm / YellowAlarm / BlueAlarm

If ready = True the following will be included:

Channel [1..24 / 31] (status = NA / Idle / Calling / Answering / Proceeding / Connect / Disconnecting / Disconnected)

If status = NA / Idle the following will be included:

<Nothing>

If status = Calling / Answering / Proceeding / Connect the following will be included:

CallingNumber:

ConnectionTime:

If status = Disconnecting/Disconnected the following will be included:

CallingNumber:

CauseLocation:

ChannelCause:

ConnectionTime:

Example:

H323Gatekeeper command

H323Gatekeeper (status = Required / Discovering / Discovered / Authenticating / Authenticated / Registering / Registered / Rejected / Inactive)

If status = Inactive the following will be included:

<Nothing>

Example:

```
*s H323Gatekeeper (status=Inactive): /
*s/end
```

If status = Required / Discovering / Discovered / Authenticating/ Authenticated / Registering / Registered the following will be included:

Alias:

Address:

Port:

Alternates:

Example:

```
*s H323Gatekeeper (status=Registered):
     Alias: "5584582"
     Address: "10.47.9.1"
     Port: 1719
     Alternates:
       Server 1:
         Address: "10.1.214.87"
         Port: 1719
       Server 2:
         Address: "10.1.214.88"
         Port: 1719
*s/end
```

If status = Rejected the following will be included:

Address:

Port:

Cause:

Alternates:

Example:

```
*s H323Gatekeeper (status=Rejected):
     Address: "10.47.9.1"
     Port: 0
     Cause: "Duplicate alias"
     Alternates: /
*s/end
```

IP command

IP

- Address:
- SubnetMask:
- Gateway:
- V6:
  - Adress [1..2] (type = NA / IPv4 / IPv6):
- DNS:
  - Server [1..5]:
    - Address:
  - Domain:
    - Name:

Example:

```
*s IP
     Address: “10.47.11.179”
     SubnetMask: “255.255.248.0”
     Gateway: “10.47.8.1”
     V6:
       Address 1 (type=NA): “”
       Address 2 (type=NA): “”
     DNS:
       Server 1:
         Address: “10.0.0.10”
       Server 2:
         Address: “10.0.0.2”
       Server 3:
         Address: “”
       Server 4:
         Address: “”
       Server 5:
         Address: “”
       Domain:
         Name: “eu.tandberg.int”
*s/end
```

NTP command

NTP:

Address:

Example:

```
*s NTP:
     Address: “10.0.0.2”
*s/end
```

PRI command

PRI (ready = True / False)

If ready = False the following will be included:

Layer1Alarm: RedAlarm / YellowAlarm / BlueAlarm

Example:

```
*s PRI (ready=False):
     Layer1Alarm: RedAlarm
*s/end
```

If ready = True the following will be included:

Channel [1..24/31]	(type = BChannel / DChannel status = NA / Idle / Calling / Answering / Proceeding / Connect / Disconnecting / Disconnected)

If type = DChannel and status = NA the following will be included:

<Nothing>

If type = BChannel / DChannel and status = Idle the following will be included:

<Nothing>

If type = BChannel and status = Calling / Answering / Proceeding / Connect the following will be included:

CallingNumber:

ConnectionTime:

If type = BChannel and status = Disconnecting / Disconnected the following will be included:

CallingNumber

CauseLocation

ChannelCause

ConnectionTime

PRI command, *continued...*

Example:

```
*s PRI (ready=True):
     BChannelsTotal: 8
     BChannelsFree: 8
     H0ChannelsFree: 1
     Channel 1 (type=BChannel, status=Connect):
       CallingNumber: "6700"
       ConnectionTime: 18
     Channel 2 (type=BChannel, status=Idle): /
     Channel 3 (type=BChannel, status=Disconnected):
       CallingNumber: "6700"
       CauseLocation: 1
       ChannelCause: 1
       ConnectionTime: 0
     Channel 4 (type=BChannel, status=Disconnected):
       CallingNumber: "08733"
       CauseLocation: 0
       ChannelCause: 16
       ConnectionTime: 120
     Channel 5 (type=BChannel, status=Disconnected):
       CallingNumber: "08733"
       CauseLocation: 0
       ChannelCause: 16
       ConnectionTime: 120
     Channel 6 (type=BChannel, status=Disconnected):
       CallingNumber: "08733"
       CauseLocation: 0
       ChannelCause: 16
       ConnectionTime: 120
     Channel 7 (type=BChannel, status=Disconnected):
       CallingNumber: "08733"
       CauseLocation: 0
       ChannelCause: 16
       ConnectionTime: 120
     Channel 8 (type=BChannel, status=Disconnected):
       CallingNumber: "08733"
       CauseLocation: 0
       ChannelCause: 16
       ConnectionTime: 120
     Channel 9 (type=BChannel, status=Disconnected):
       CallingNumber: "08733"
       CauseLocation: 0
       ChannelCause: 16
       ConnectionTime: 120
```

Continues overleaf

PRI command, *continued...*

```
     Channel 10 (type=BChannel, status=Disconnected):
       CallingNumber: “08733”
       CauseLocation: 0
       ChannelCause: 16
       ConnectionTime: 120
     Channel 11 (type=BChannel, status=Disconnected):
       CallingNumber: “08733”
       CauseLocation: 0
       ChannelCause: 16
       ConnectionTime: 56
     Channel 12 (type=BChannel, status=Disconnected):
       CallingNumber: “08733”
       CauseLocation: 0
       ChannelCause: 16
       ConnectionTime: 56
     Channel 13 (type=BChannel, status=Disconnected):
       CallingNumber: “08733”
       CauseLocation: 0
       ChannelCause: 16
       ConnectionTime: 56
     Channel 14 (type=BChannel, status=Disconnected):
       CallingNumber: “08733”
       CauseLocation: 0
       ChannelCause: 16
       ConnectionTime: 56
     Channel 15 (type=BChannel, status=Disconnected):
       CallingNumber: “08733”
       CauseLocation: 0
       ChannelCause: 16
       ConnectionTime: 113
     Channel 16 (type=BChannel, status=Idle): /
     Channel 17 (type=BChannel, status=Idle): /
     Channel 18 (type=BChannel, status=Idle): /
     Channel 19 (type=BChannel, status=Connect):
       CallingNumber: “6700”
       ConnectionTime: 21
     Channel 20 (type=BChannel, status=Connect):
       CallingNumber: “6700”
       ConnectionTime: 20
     Channel 21 (type=BChannel, status=Connect):
       CallingNumber: “6700”
       ConnectionTime: 19
     Channel 22 (type=BChannel, status=Connect):
       CallingNumber: “6700”
       ConnectionTime: 19
     Channel 23 (type=BChannel, status=Connect):
       CallingNumber: “6700”
       ConnectionTime: 18
     Channel 24 (type=DChannel, status=NA): /
*s/end
```

RemoteSWUpgrade command

RemoteSwUpgrade (status = NA / Started / Checking / Completed / Aborted / NotValid / RestoringSettings / Failed/WrongPassword / Granted / NoDataLink / WrongFormat / ErrorWrite / WrongReleaseKey / Incompatible / FileTooLarge / Requesting)

If status = Started the following will be included:

Progress:

Example:

```
*s RemoteSwUpgrade (status=Started):
     Progress: 12
*s/end
```

If status = NA / Checking / Completed / Aborted / NotValid / RestoringSettings / Failed/WrongPassword / Granted / NoDataLink / WrongFormat / ErrorWrite / WrongReleaseKey / Incompatible / FileTooLarge / Requesting) the following will be included:

<Nothing>

Example:

```
*s RemoteSwUpgrade (status=NA): /
*s/end
```

ScreenSaver command

Screensaver (status = On / Off)

If status = On the following will be included:

<Nothing>

Example:

```
*s Screensaver (status=On): /
*s/end
```

If status = Off the following will be included:

Timer:

Example:

```
*s Screensaver (status=Off):
    Timer: 37
*s/end
```

SIP command

SIP

Server: (status = Inactive / DNSFailed / Timeout / NoConnectionTCP / NoConnectionTLS / Active / Unknown)

If status = Inactive the following will be included:

<Nothing>

If status = DNSFailed / Timeout / NoConnectionTCP / NoConnectionTLS / Active / Unknown
the following will be included:

Address:

Secure: True/False

Verified: True/False

Outbound: True/False (for future use)

Authentication: On/Off

Registration (status = Inactive / Registering / Registered / Deregister / Failed**)**

If status = Inactive/Registering/Registered/Deregister the following will be included:

URI:

If status = Failed the following will be included:

URI:

Cause:

Example:

```
*s SIP:
     Server (status=Active):
       Address: "192.168.1.10"
       Secure: True
       Verified: False
       Authentication: Off
       Outbound: False
     Registration (status=Registered):
       URI: "codec3000@company.com"
*s/end
```

SoftwareUpgrade command

SoftwareUpgrade (status = NA / Started / Checking / Completed / Aborted / NotValid / RestoringSettings / Failed)

If status = Started the following will be included:

Progress:

Example:

```
*s SoftwareUpgrade (status=Started):
    Progress: 12
*s/end
```

If status = NA / Checking / Completed / Aborted / NotValid / RestoringSettings / Failed the following will be included:

<Nothing>

Example:

```
*s SoftwareUpgrade (status=NA): /
*s/end
```

Switch command

Switch (connected = True / False):

Input:

Format:

Sync:

Sync 1:

Sync 2:

Sync 3:

Sync 4:

Example:

```
*s Switch (connected=True):
    Input: 1
    Format: 1280X720p60
    Sync: True
    Sync 1: True
    Sync 2: True
    Sync 3: False
    Sync 4: False
*s/end
```

INFO: xstatus switch will give information about sync status for the active input, the format, and sync status for all DVI-D inputs. Active input may differ from what is given in the xconfiguration Switch Source setting. This is because an external control system may also change the input. Information about software version and ID will be given by xstatus camera 1.

SystemUnit command

SystemUnit:

- ProductType:
- ProductId:
- Uptime:
- Software:
  - Version:
  - Name:
  - ReleaseDate:
  - Configuration:
    - Telephony:
    - VideoTelephony:
    - TotalBandwidth
    - ISDNBandwidth:
    - LANBandwidth:
    - PresenterOption: True/False
    - MultisiteOption: True/False
    - StreamingSupport: True/False
    - Encryption: True/False
  - Hardware:
    - SerialNumber:
    - MainBoard:
    - AdditionalBoard:
    - BootSoftware:
    - Configuration:
      - PRI:
      - BRI:

SystemUnit command, *continued...*

-
  -
    -
      - **ExternalNetwork:**
      - **VGA:**
      - **DataPorts:**
      - **AudioInputs:**
      - **Settop:** True/False
      - **TV-Standard:** PAL/NTSC
    - **TemperatureCelcius:**
    - **TemperatureFahrenheit:**

SystemUnit command, *continued...*

Example:

```
*s SystemUnit:
     ProductType: “TANDBERG Codec”
     ProductId: “TANDBERG 6000MXP PORTABLE”
     Uptime: 10136
     Software:
       Version: “F4.0Beta2 NTSC”
       Name: “s50000”
       ReleaseDate: “2005-11-17”
       Configuration:
         Telephony: 5
         VideoTelephony: 5
         TotalBandwidth: 6144
         ISDNBandwidth: 1920
         LANBandwidth: 4096
         PresenterOption: True
         MultisiteOption: True
         StreamingSupport: True
         Encryption: True
     Hardware:
       SerialNumber: “25A00309”
       MainBoard: “100670 rev. 05”
       AdditionalBoard: “”
       BootSoftware: “Rev. 1.12, 2005-10-13”
       Configuration:
         PRI: 1
         BRI: 6
         ExternalNetwork: 1
         VGA: 2
         DataPorts: 2
         AudioInputs: 6
         Settop: False
         TV-Standard: NTSC
     TemperatureCelcius: 55
     TemperatureFahrenheit: 131
*s/end
```

VirtualMonitor command

VirtualMonitor [1..4]:

Layout (type = Full / 2Split / 2+1Split / 3+1Split / 4Split / 5+1Split, persistent = On/Off**):**

Window [1..6]:

Picture: LocalMain / LocalDuo / Current /Previous / Duo / RemoteMain / RemoteDuo / JPEG / Still / None

CallRef: 1..11

Example:

```
*s VirtualMonitor 1:
     Layout (type=3+1Split, persistent=Off):
       Window 1:
         Picture: RemoteMain
         CallRef: 1
       Window 2:
         Picture: Local Main
         CallRef: 0
       Window 3:
         Picture: NA
         CallRef: 0
       Window 4:
         Picture: NA
         CallRef: 0
     PIP (status=Off): /
*s/end

*s VirtualMonitor 2:
     Layout (type=Full, persistent=Off):
       Window 1:
         Picture: RemoteDuo
         CallRef: 1
     PIP (status=Off): /
*s/end
```

Warning command

Warning [1..10] (status = NA / Active)

If status = NA the following will be included:

<Nothing>

Example:

```
*s Warning 7 (status=NA): /
*s/end
```

If status = Active the following will be included:

ID: 101 / 102 / 131 / 132 / 133 / 134 / 161 / 191 / 192 / 193 / 201 / 202 / 203 / 204 / 205 / 206 / 207 / 208 / 301 / 1001 / 1002 / 1003 (see the descriptions overleaf)

Value: 1

Example:

```
*s Warning 1 (status=Active):
     ID: 101
     Value: 1
*s/end
```

ID	Warning description
101	Warning BRI 1 Layer 1 Alarm: Line is disconnected
102	Warning BRI 2 Layer 1 Alarm: Line is disconnected
131	Warning PRI Layer 1 Red Alarm: Red alarm or Loss of signal (LOS) means that there is no signal and thus no framing information received (this has the same effect as pulling out the PRI cable)
132	Warning PRI Layer 1 Blue Alarm: Blue alarm indicates that the network on the far side of the CSU is unavailable
133	Warning PRI Layer 1 Yellow Alarm: Yellow alarm or Remote Alarm Indicator (RAI) may indicate a weak or noisy signal or a broken connector in the TX part of the system PRI cable
134	Warning PRI Layer 2 Not Active
161	Warning External Network, No Clock: If no clock is detected you will not be able to place calls
191	Warning G.703 Layer 1 Red Alarm: Red alarm or Loss of signal (LOS) means that there is no signal and thus no framing information received (this has the same effect as pulling out the PRI cable)
192	Warning G.703 Layer 1 Blue Alarm: Blue alarm indicates that the network on the far side of the CSU is unavailable
193	Warning G.703 Layer 1 Yellow Alarm: Yellow alarm or Remote Alarm Indicator (RAI) may indicate a weak or noisy signal or a broken connector in the TX part of the system PRI cable
201	Warning H.323 GateKeeper Rejected: Registration to the GateKeeper has been rejected. Please check GateKeeper setting
202	Warning H.323 GateKeeper Rejected, duplicate alias: GateKeeper registration is rejected because you try to register with an Alias, which is already registered on the GateKeeper
203	Warning H.323 GateKeeper Resources Unavailable
204	Warning H.323 GateKeeper Rejected, invalid alias: The alias you try to register with is not accepted by the GateKeeper
205	Warning H.323 GateKeeper Rejected Security Denial: The GateKeeper rejects registration because the user name and/or password is incorrect
206	Warning H.323 GateKeeper Rejected, Not Reachable
207	Warning H.323 GateKeeper Rejected, No Authenitcation Configuration
208	Warning H.323 GateKeeper Rejected, No Authenitcation Time
301	Warning IP No Net: The system does not detect any IP connection
1001	Warning High Packet Loss
1002	Warning High Jitter
1003	Warning High Packet Drop

xHistory - Call command

Call [1..20]

type = NA / Tlph / Vtlph
protocol = NA / ISDN / H320 / H323 / SIP
direction = NA / Incoming / Outgoing

If type = NA
and protocol = NA; and and direction = NA; the following will be included:

<Nothing>

If type = Tlph / Vtlph
and protocol = ISDN / H320 /H323 / SIP; and direction = Incoming / Outgoing; the following will be included:

LogTag: 1

RemoteNumber:

EncryptionIn: Off/DES/AES-128

EncryptionOut: Off/DES/AES-128

CallRate:

DisconnectCauseValue*:

DisconnectCause*:

Duration:

UptimeAtEndOfCall:

BillingCode:

Audio:** PacketsReceived, PacketsLost, PacketsDropped, DurationLossLevel1, DurationJitterLevel1, NumberOfLevel1Bursts, DurationLossLevel2, DurationJitterLevel2, NumberOfLevel2Bursts

Video:** PacketsReceived, PacketsLost, PacketsDropped, DurationLossLevel1, DurationJitterLevel1, NumberOfLevel1Bursts, DurationLossLevel2, DurationJitterLevel2, NumberOfLevel2Bursts

* Disconnect Cause Overview
The DisconnectCause indicates the reason why the call was disconnected. See DisconnectCause for an overview of the disconnect causes.
The DisconnectCauseValue contains additional information to the DisconnectCause. See DisconnectCauseValue for an overview of the disconnect cause values.
** Packet Loss Levels
Level 1: Packet loss > 5% and Jitter > 100ms
Level 2: Packet loss > 10% and Jitter > 200ms

xHistory - Call > DisconnectCause

The DisconnectCause may show as a result of the xhistory Call command and indicates the reason why the call was disconnected. See the xHistory Call command for an overview.

- AdaptiveBusy
- AddativeRegNotSupported
- AliasInconsisten
- BadFormatAddress
- CalledPartyNotRegistered
- CallerNotRegistered
- CallInProgress
- CapExchangeFailed
- CollectDestination
- CollectPin
- DestinationRej
- DiscoveryRequired
- DuplicateAlias
- ExceedsCallCapacity
- FacilityCallDeflection
- ForcedDrop
- FullRegistrtionRequired
- GatekeeperResources
- GatewayResources
- GenericDataReason
- IncompleteAddress
- InConf
- InsufficientResources
- InvalidAlias
- InvalidCallSignalAdr
- InvalidConferenceID
- InvalidDestinationURL
- InvalidEndpointID
- InvalidPermission
- InvalidRASAdr
- InvalidRevision
- InvalidSDP
- InvalidTerminalAlias
- InvalidTerminalName
- MasterSlaveFailed
- NeededFeatureNotSupported
- NewConnectionNeeded
- NoBandwidth
- NonStandardReason
- NoPermission
- NormalDrop
- NotAccepted
- NotBound
- NotCurrentlyRegistered
- NoUserResponding
- OutOfLocalResources
- PeerNotResponding
- PermissionDenied
- ProxyNeeded
- QoSControlNotSupported
- QoSNotSupported
- ReasonUndefined
- ReasonUnknown
- RejectedByRemote
- ReplaceWithConfInvite
- RequestDenied
- ResourceUnavaliable
- RouteCallToGk
- RouteCallToSCN
- ScurityDenied
- SecurityDenial
- SecurityError
- SystemNotReady
- TerminalExcluded
- TransportNotSupported
- TunnelledSignalingRej
- Unautorized
- UndefinedDrop
- UndefinedReason
- UnreachableDestination
- UnreachableGatekeeper

xHistory - Call > DisconnectCauseValue

The DisconnectCauseValue may show as a result of the xhistory Call command and contains additional information to the DisconnectCause result.

See xHistory Call command for an overview.

See DisconnectCause for an overview of the disconnect causes.

Disconnect Cause Codes

You can also find the list of disconnect causes by opening a web browser and enter the IP address of the MXP followed by the filename:
causecd.htm.

Example:

```
http://<ip-address>/causecd.htm
http://192.168.10.2/causecd.htm
```

Cause Codes

Cause No. 1 - Unallocated (Unassigned) Number

This cause indicates that the destination requested by the calling user cannot be reached because, although the number is in a valid format, it is not currently assigned.

Cause No. 2 - No Route To Specified Transit Network

This cause indicates that the equipment sending this cause has received a request to route the call through a particular transit network which it does not recognize. The equipment sending this cause does not recognize the transit network either because the transit network does not exist or because that particular transit network, while it does exist, does not serve the equipment which is sending this cause.

Cause No. 3 - No Route To Destination

This cause indicates that the called party cannot be reached because the network through which the call has been routed does not serve the destination desired. This cause is supported on a network dependent basis.

Cause No. 4 - Send Special Information Tone (Five One Zero NT)

This cause indicates that the called party cannot be reached for reasons that are of a long term nature and that the special information tone should be returned to the calling party.

Cause No. 5 - Misdialed Trunk Prefix

This cause indicates the erroneous inclusion of a trunk prefix in the called party number. This number is supposed to be stripped from the dialed number being sent to the network by the customer premises equipment.

Cause No. 6 - Channel Unacceptable

This cause indicates that the channel most recently identified is not acceptable to the sending party for use in this call.

Cause No. 7 - call awarded, being delivered in an established channel

This cause indicates that the user has been awarded the incoming call, and that the incoming call is being connected to a channel already established to that user for similar calls (e.g. packet-mode x.25 virtual calls).

Cause No. 8 - Preemption

This cause indicates the call is being preempted.

Cause No. 9 - Preemption - Circuit Reserved For Reuse

This cause indicates that the call is being preempted and the circuit is reserved for reuse by the preempting exchange.

Cause No. 16 - Normal Call Clearing

This cause indicates that the call is being cleared because one of the users involved in the call has requested that the call be cleared.

Cause No. 16/4 or 17 - User Busy

This cause is used when the called user has indicated the inability to accept another call. This cause code may be generated by the called user or by the network. Please note that the use equipment is compatible with the call.

Cause No. 16/3 or 18 - No User Responding

This cause is used when a called party does not respond to a call establishment message with either an alerting or connect indication within the prescribed period of time allocated (in Q.931 by the expiry of either time T303 or T310).

Cause No. 19 - No Answer From User (User Alerted)

This cause is used when a user has provided an alerting indication but has not provided a connect indication within a prescribed period of time. Note: This cause is not necessarily generated by the customer premise equipment, but may be generated by internal network timers.

Cause No. 20 - Subscriber Absent

This cause value is used when a mobile station has logged off, radio contact is not obtained with a mobile station or if a personal telecommunication user is temporarily not addressable at any user-network interface.

Cause No. 21 - Call Rejected

This cause indicates that the equipment sending this cause does not wish to accept this call, although it could have accepted the call because the equipment sending this cause is neither busy nor incompatible. This cause may also be generated by the network, indicating that the call was cleared due to a supplementary service constraint. The diagnostic field may contain additional information about the supplementary service and reason for rejection.

Cause No. 22 - Number Changed

This cause is returned to a calling party when the called party number indicated by the calling party is no longer assigned. The new called party number may optionally be included in the diagnostic field. If the network does not support this cause, cause no: 1, unallocated (unassigned) will be used instead.

Cause No. 26 - Non-Selected User Clearing

This cause indicates that the user has not been awarded the incoming call.

Cause No. 27 - Destination Out Of Order

This cause indicates that the destination cannot be reached because the interface to the destination is not functioning correctly. The signaling message was unable to be delivered due to a hardware failure.

Cause No. 28 - Invalid Number Format (Address Incomplete)

This cause indicates that the called party cannot be reached because the called party number is not in a valid format or is not complete.

Cause No. 29 - Facilities Rejected

This cause is returned when a facility requested by the user cannot be provide by the network.

Cause No. 30 - Response To Status Inquiry

This cause is included in the STATUS message when the reason for generating the STATUS message was the prior receipt of a STATUS ENQUIRY.

xHistory - Call > DisconnectCauseValue, *continued...*

Cause No. 31 - Normal, Unspecified

This cause is used to report a normal event only when no other cause in the normal class applies.

Cause No. 34 - No Circuit/Channel Available

This cause indicates that there is no appropriate circuit/channel presently available to handle the call. Note: If you receive this call, try another data-service, such as dropping from a 64K to 56K data rate.

Cause No. 35 - Call Queued

This cause indicates that the call has been queued for service by the next available device.

Cause No. 38 - Network Out Of Order

This cause indicates that the network is not functioning correctly and that the conditions are likely to last a relatively long period of time. A call that is attempted soon afterwards will most likely not connect successfully.

Cause No. 39 - Permanent Frame Mode Connection Out-Of-Service

This cause is included in a STATUS message to indicate that a permanently established frame mode connection is out-of-service (e.g. due to equipment or section failure) [see Annex A/Q.933].

Cause No. 40 - Permanent Frame Mode Connection Operational

This cause is included in a STATUS message to indicate that a permanently established frame mode connection is operational and capable of carrying user information. [see Annex A/Q.933].

Cause No. 41 - Temporary Failure

This cause indicates that the network is not functioning correctly and that the condition is not likely to last a very long period of time. A call that is attempted almost immediately afterwards will most likely connect successfully.

Cause No. 42 - Switching Equipment Congestion

This cause indicates that the switching equipment generating this cause is experiencing a period of high traffic.

Cause No. 43 - Access Information Discarded

This cause indicates that the network could not deliver access information, low layer compatibility, high layer compatibility, or sub-address as indicated in the diagnostic.

Cause No. 44 - Requested Circuit/Channel Not Available

This cause is returned when the circuit or channel indicated by the requesting entity cannot be provided by the other side of the interface.

Cause No. 46 - Precedence Call Blocked

This cause indicates that there are no pre-emptable circuits or that the called user is busy with a call of equal or higher pre-emptable level.

Cause No. 47 - Resource Unavailable, Unspecified

This cause is used to report a resource unavailable event only when no other cause in the resource unavailable class applies.

Cause No. 49 - Quality Of Service Not Available

This cause is used to report that the requested Quality of Service cannot be provided (delay cannot be supported).

Cause No. 50 - Requested facility not subscribed

This cause indicates that the requested supplementary service could not be provided due to user oversight. This cause code is often caused by the CPE being configured for the wrong switch type.

Cause No. 52 - Outgoing calls barred

This cause indicates that because of call screening provided by the network, the calling user is not permitted to make a call.

Cause No. 53 - Outgoing Calls Barred Within CUG

This cause indicates that although the calling party is a member of the CUG for the outgoing CUG call, outgoing calls are not allowed for this member of the CUG.

Cause No. 54 - Incoming calls barred

This cause indicates that the called user will not accept the call delivered in the SETUP message.

Cause No. 55 - Incoming Calls Barred Within CUG

This cause indicates that although the calling party is a member of the CUG for the incoming CUG call, incoming calls are not allowed for this member of the CUG.

Cause No. 57 - Bearer Capability Not Authorized

This cause indicates that the user has requested a bearer capability which is implemented by their equipment but the user is not authorized to use.

Cause No. 58 - Bearer Capability Not Presently Available

This cause indicates that the user has requested a bearer capability which is implemented by the equipment which generated this cause but which is not available at this time.

Cause No. 62 - Inconsistency In Outgoing Information Element

This cause indicates an inconsistency in the designated outgoing access information and subscriber class.

Cause No. 63 - Service Or Option Not Available, Unspecified

This cause is used to report a service or option not available event only when no other cause in the service or option not available class applies.

Cause No. 65 - Bearer Capability Not Implemented

This cause indicates that the equipment sending this cause does not support the bearer capability requested.

Cause No. 66 - Channel Type Not Implemented

This cause indicates that the equipment sending this cause does not support the channel type requested.

Cause No. 69 - Requested Facility Not Implemented

This cause indicates that the equipment sending this cause does not support the requested supplemental service.

Cause No. 70 - Only Restricted Digital Information Bearer Capability Is Available

This cause indicates that on equipment has requested an unrestricted bearer service but that the equipment sending the cause only supports the restricted version of the requested bearer capability.

Cause No. 79 - Service Or Option Not Implemented, Unspecified

This cause is used to report a service r option not implemented but only when no other cause in this class applies.

Cause No. 81 - Invalid Call Reference Value

This cause indicates that the equipment sending this cause has received a message with a call reference which is not currently in use on the user-network interface.

Cause No. 82 - Identified Channel Does Not Exist

This cause indicates that the equipment sending this cause has received a request to use a channel not activated on the interface for a call. For example, if the user only subscribed to channels 1 to 12 and channel 13 through 23 is requested by either side, this cause is generated.

xHistory - Call > DisconnectCauseValue, *continued...*

Cause No. 83 - A Suspended Call Exists, But This Call Identify Does Not

This cause indicates that a call resume has been attempted with a call identity which differs from that in use for any presently suspended call(s).

Cause No. 84 - Call Identity In Use

This cause indicates that the network has received a call resume request. The call resume request contained a call identity information element which presently does not indicate any suspended call within the domain of interfaces over which calls may be resumed.

Cause No. 85 - No Call Suspended

This cause indicates that the network has received a call resume request containing a Call identity information element which presently does not indicate any suspended call within the domain of interfaces over which calls may be resumed.

Cause No. 86 - Call Having The Requested Call Identity Has Been Cleared

This cause indicates that the network has received a call resume request. The request contained a call identity information element which once indicated a suspended call, however, that the call was cleared while suspended (either a network time-out or remote user).

Cause No. 87 - User Not A Member Of CUG

This cause indicates that the called user for the incoming CUG call is not a member of the specified CUG or that the calling user is an ordinary subscriber calling a CUG subscriber.

Cause No. 88 - Incompatible Destination

This cause indicates that the equipment sending this cause has received a request to establish a call which has low layer compatibility, high layer compatibility, or other compatibility attributes (e.g. data rate) which cannot be accommodated.

Cause No. 90 - Non-Existent CUG

This cause indicates that the specified CUG does not exist.

Cause No. 91 - Invalid Transit Network Selection

This cause indicates that a transit network identification was received which is of an incorrect format as defined in Annex C/Q.931

Cause No. 95 - Invalid Message, Unspecified

This cause is used to report an invalid message event only when no other cause in the invalid class applies.

Cause No, 96 - Mandatory Information Element Is Missing

This cause indicates that the equipment sending this cause has received a message which is missing an information element which must be present in the message before that message can be processed.

Cause No. 97 - Message Type Non-Existent Or Not Implemented

This cause indicates that the equipment sending this cause has received a message with a message type it does not recognize either because this is a message not defined of defined but not implemented by the equipment sending this cause.

Cause No. 98 - Message Not Compatible With Call State Or Message Type Non-Existent Or Not Implemented

This cause indicates that the equipment sending this cause has received a message such that the procedures do not indicate that this is a permissible message to receive while in the call state, or a STATUS message was received indicating an incompatible call state.

Cause No. 99 - Information Element / Parameter Non-Existent Or Not Implemented

This cause indicates that the equipment sending this cause has received a message which includes information element(s)/parameter(s) not recognized because the information element(s)/parameter name(s) are not defined or are defined but not implemented by the equipment sending the cause. This cause indicates that the information element(s)/parameter(s) were discarded. However, the information element is not required to be present in the message in order for the equipment sending the cause to process the message.

Cause No. 100 - Invalid Information Element Contents

This cause indicates that the equipment sending this cause has received and information element which it has implemented; however, one or more fields in the information elements are coded in such a way which has not been implemented by the equipment sending this cause.

Cause No. 101 - Message Not Compatible With Call State

This cause indicates that a message has been received which is incompatible with the call state.

Cause No. 102 - Recovery On Timer Expiry

This cause indicates that a procedure has been initiated by the expiry of a timer in association with Q.931 error handling procedures.

Cause No. 103 - Parameter Non-Existent Or Not Implemented - Passed On

This cause indicates that the equipment sending this cause has received a message which includes parameters not recognized because the parameters are not defined or are defined but not implemented by the equipment sending this cause.

Cause No. 110 - Message With Unrecognized Parameter Discarded

This cause indicates that the equipment sending this cause has discarded a received message which includes a parameter that is not recognized.

Cause No. 111 - Protocol Error, Unspecified

This cause is used to report a protocol error event only when no other cause in the protocol error class applies.

Cause No. 127 - Interworking, Unspecified

This cause indicates that there has been interworking which does not provide causes for actions. The precise cause for a message being sent is not known.

Cause No. 128 - Remote Busy

This cause is used when the called user has indicated the inability to accept another call.

Cause No. 129 - Rejected By Remote

This cause indicates that the equipment sending this cause does not wish to accept this call, although it could have accepted the call because the equipment sending this cause is neither busy nor incompatible.

Cause No. 130 - Destination Unreachable

This cause indicates that the destination requested by the calling user cannot be reached because, although the number is in a valid format, it is not currently assigned.

Cause No. 131 - Unknown Reason

This cause indicates that the destination can not be reached caused by an unknown reason.

Cause No. 132 - Generic Error

This cause indicates that the destination can not be reached caused by an generic error.

Cause No. 133 - Gatekeeper Rejected Call

This cause indicates that the gatekeeper rejected the call.

xHistory - Call > DisconnectCauseValue, *continued...*

Cause No. 134 - Gatekeeper Could Not Find Number

This cause indicates that the gatekeeper could not find the number.

Cause No. 135 - Gatekeeper Timed Out Call

This cause indicates that the gatekeeper timed out the call.

Cause No. 136 - Gatekeeper Not Active

This cause indicates that the gatekeeper is not active.

xEvent - AuthenticationFailure

AuthenticationFailure

Service:

RemoteIPAddress:

Uptime:

Example:

Polling:

```
*e AuthenticationFailure:
     Service: /
     RemoteIPAddress: /
     Uptime: /
*e/end
```

Feedback:

```
*e AuthenticationFailure:
     Service: FTP
     RemoteIPAddress: "10.47.11.82:1459"
     Uptime: 417490
*e/end
```

xEvent - CallDisconnected

CallDisconnected:

CallRef:

LogTag:

Example:

Polling:

```
*e CallDisconnected:
     CallRef: /
     LogTag: /
*e/end
```

Feedback:

```
*e CallDisconnected:
     CallRef: 2
     LogTag: 11
*e/end
```

xEvent - CallSuccessful

CallSuccessful:

- CallRef:
- LogTag:
- Protocol:
- Direction:
- CallRate:
- RemoteNumber:
- Encryption:
  - Incoming:
  - Outgoing:

Example:

Polling:

```
*e CallSuccessful:
     CallRef: /
     LogTag: /
     Protocol: /
     Direction: /
     CallRate: /
     RemoteNumber: /
     Encryption:
       Incoming: /
       Outgoing: /
*e/end
```

Feedback:

```
*e CallSuccessful:
     CallRef: 1
     LogTag: 12
     Protocol: H323
     Direction: Outgoing
     CallRate: 768
     RemoteNumber: "558458"
     Encryption:
       Incoming: Off
       Outgoing: Off
*e/end
```

xEvent - DownspeedingFinished

DownspeedingFinished:

CallRef:

LogTag:

Rate:

Example:

Polling:

```
*e DownspeedingFinished:
     CallRef: /
     LogTag: /
     Rate: /
*e/end
```

Feedback:

```
*e DownspeedingFinished:
     CallRef: 3
     LogTag: 7
     Rate: 384
*e/end
```

xEvent - MessageBoxResult

MessageBoxResult:

Button:

Example:

Polling:

```
*e MessageBoxResult:
     Button: /
*e/end
```

Feedback:

```
*e MessageBoxResult:
     Button: 1
*e/end
```

xEvent - PacketlossDownSpeed

PacketlossDownSpeed:

CallRef:

LogTag:

Example:

Polling:

```
*e PacketlossDownSpeed:
     CallRef: /
     LogTag: /
*e/end
```

xEvent - SString

SString:

Example:

Polling:

```
*e SString: /
*e/end
```

Feedback:

```
*e SString: "Testing SString"
*e/end
```

xEvent - SystemActivity

SystemActivity:

Service:

RemoteIPAddress:

Uptime:

Description:

Example:

Polling:

```
*e SystemActivity:
     Service: /
     RemoteIPAddress: /
     Uptime: /
     Description: /
*e/end
```

Feedback:

```
*e SystemActivity:
     Service: FTP
     RemoteIPAddress: "Unknown"
     Uptime: 417995
     Description: "get all.prm"
*e/end
```

Chapter 6

Appendices

Startup script

You can add a startup script on the codec to execute certain commands from the API during boot up.

Adding a startup script

The startup script can be used to execute certain commands from the API during boot up. To enable this feature one must log in to the codec as root and follow the below points.

Login to the codec

1. Connect to the codec through the network, using a command line interface (telnet or scp) and login as `root`
2. Make a user directory using the following command: "`mkdir /user/scripts.d`"
3. Put an executable file (permission must be changed to executable) in this directory.

Example of the text in such a file:

```
#!/usr/bin/env tsh
xCommand Audio LocalInput Update InputId: 1 MixerMode:Fixed
```

About the startup script file

- The file must start with the following sequence:
  `#!/usr/bin/env tsh`
- The file can contain any xCommand or xConfiguration command
- The system will execute the commands/configurations in sequence.
- The file can have any name as long as it is placed in this directory.
- For multiple commands you must use Unix end of line (LF). Windows end of line will not work.

Factory reset

You may reset the xConfiguration settings to their default values. Whether a specific configuration command will be affected by the reset command depends on two things; which class(es) of configuration commands you want to reset and which class the specific configuration command belongs to.

Storage levels

By use of the xCommand DefaultValuesSet command, you may reset the xConfigurations to their default settings. To be able to discriminate between the different configuration commands (without having to specify each one of them), the configuration commands have been grouped into **3 different storage levels**, denoted 1, 2 and 3.

Storage level 1

If you specify the use of level parameter 1:

- Level 1 of the xConfiguration commands will be reset.

Storage level 2

If you specify the use of level parameter 2:

- Level 1 and 2 of the xConfiguration commands will be reset.

Storage level 3

If you specify the use of level parameter 3:

- Level 1, 2 and 3 of the xConfiguration commands will be reset.

Configuration storage levels table

The complete list of Storage Levels can be found in the Configuration Storage Levels table overleaf.

Example:

xCommand DefaultValuesSet Level <1..3>

Configurations are divided into three different storage levels. The level parameter denotes that configurations on this level and all levels below (lower value) are to be reset.

```
xcommand defaultvaluesset level:2
*r Result (status=OK):
*r/end
OK
```

Configuration storage level table

Storage level	Configuration
3	AdditionalCamera Type: <0..4>
1	AlertSpeaker Mode: <On/Off>
1	AlertTone Telephony: <1..10>
1	AlertTone VideoTelephony: <1..10>
1	AlertTone Volume: <0..15>
1	AllowLatency: <On/Off>
1	Audio AGC AUX: <On/Off>
1	Audio AGC Microphones: <On/Off>
1	Audio AGC Received: <On/Off>
1	Audio AGC VCR: <On/Off>
1	Audio AudioModule: <NAMII-6000/NAMII-7000/NAMII-8000/Digital NAM/None>
1	Audio AutoMute: <On/Off/Unmute>
1	Audio EchoControl [1..4]: <On/Off/NoiseReduction>
1	Audio Feedback Mode: <Normal/Fast>
1	Audio Inputs Line [1..3] Level: <1..16>
1	Audio Inputs Line 1 Mode: <On/Off/Microphone> (3000 MXP)
1	Audio Inputs Line 2 Mode: <On/Off/Auto> (3000 MXP)
1	Audio Inputs Line [1..2] Mode: <On/Off> (6000 MXP)
1	Audio Inputs Line 3 Mode: <On/Off/Auto> (6000 MXP)
1	Audio Inputs Microphone [1..3] Level: <1..16>
1	Audio Inputs Microphone 1 Mode: <On/Off>
1	Audio Inputs Microphone 2 Mode: <On/Off>
1	Audio Inputs Microphone 3 Mode: <On/Off/Line>
1	Audio KeyTones: <On/Off>

Configuration storage level table, *continued...*

Storage level	Configuration
1	Audio LocalDetection Mode: <On/Off>
1	Audio MicrophoneMixer Mode: <Fixed/Auto>
1	Audio Microphones Mode: <On/Off>
1	Audio Outputs Line [1..3] Level: <1..16>
1	Audio Outputs Line [1..3] Mode: <On/Off>
1	Audio Outputs Line 1 Type: <Analog/SPDIF/Auto>
1	Audio Stereo: <On/Off>
1	Audio StereoSpeakers: <On/Off>
1	Audio VCRDucking: <On/Off>
1	Audio Volume: <0..21>
1	AutoAnswer Delay: <1..50>
1	AutoAnswer Mode: <On/Off/Mute>
1	AutoDisplaySnapshot: <On/Off>
1	AutoLayout Mode: <On/Off>
1	AutoPIP Mode: <On/Off/Auto>
3	Bonding Timer: <Normal/Relaxed>
3	CallManager Address: <S: 0, 64>
1	Camera [1..13] Backlight: <On/Off>
1	Camera [1..13] Brightness Level: <0..16>
1	Camera [1..13] Brightness Mode: <Manual/Auto>
1	Camera [1..13] DualVisca <Off/On>
1	Camera [1..13] Focus Mode: <Manual/Auto>
1	Camera [1..13] Gamma Level <0..7>
1	Camera [1..13] Gamma Mode <Auto/Manual>

Configuration storage level table, *continued...*

Storage level	Configuration
1	Camera [1..13] IR <Off/On>
1	Camera [1..13] Mirror <Off/On>
1	Camera [1..13] Whitebalance Level: <0..16>
1	Camera [1..13] Whitebalance Mode: <Manual/Auto>
1	CameraDVI Mode: <On/Off/Auto>
1	CameraSleep Mode: <On/Off>
1	CameraSwUpgrade: <Auto/Off>
1	CameraTracking Speed: <Slow/Normal/Fast>
2	Conference AAC-LD: <On/Off>
2	Conference AAC-LD-128-Mono: <On/Off>
2	Conference AAC-LD-128-Threshold: <384/512/768/1152/1472/1920/2560/3072/4096>
3	Conference AIM: <On/Off>
1	Conference AllowIncomingMSCall: <On/Off>
1	Conference AllowIncomingTlphCall: <On/Off>
1	Conference BillingCode: <On/Off>
1	Conference DefaultCall CallRate: <Tlph/1xh221/2xh221/64/128/192/256/320/384/H0/512/768/1152/1472/1920/2560/3072/4096/Max/Auto>
1	Conference DefaultCall NetProfile: <1..7>
1	Conference DefaultCall Restrict: <On/Off>
2	Conference Downspeed: <On/Off>
3	Conference Encryption Mode: <On/Off/Auto>
3	Conference Encryption Type: <Auto/DES/AES-128>
2	Conference FallbackToTelephony: <On/Off>
1	Conference FarTlphEchoSupression: <Off/Normal/High>
1	Conference FloorToFull: <On/Off>

Configuration storage level table, *continued...*

Storage level	Configuration
2	Conference G722.1: <On/Off>
2	Conference G722: <On/Off>
2	Conference G728: <On/Off>
2	Conference H239: <On/Off>
2	Conference H263: <On/Off>
2	Conference H264: <On/Off>
2	Conference H264RCDO: <On/Off>
3	Conference H323Alias E164: <E164: 0, 30>
3	Conference H323Alias ID: <S: 0, 49>
1	Conference H331: <On/Off>
2	Conference IPDualstreamRate <25percent/50percent/75percent>
1	Conference IPLR Transmit: <On/Off>
1	Conference MaxCallLength: <0..999>
2	Conference NaturalVideo: <Off/Auto/384/512/768/1152/1472/1920>
1	Conference PictureMode: <4Split/5+1Split/VS/Auto>
3	Conference SIP URI: <S: 0, 60>
2	Conference VideoQualityCP: <Motion/Sharpness/Auto>
1	Conference WebSnapshots: <On/Off>
3	CorporateDirectory Address: <S: 0, 64>
3	CorporateDirectory Mode: <On/Off>
3	CorporateDirectory Path: <S: 0, 255>
1	DefaultPIPPosition: <BottomLeft/BottomRight/TopLeft/TopRight>
1	DoNotDisturb Mode: <On/Off>
3	DualMonitor Mode: <On/Off>

Configuration storage level table, *continued...*

Storage level	Configuration
1	DuoVideoSource: <0/1/2/3/4/5/6>
3	E1 Interface CRC4: <On/Off>
3	Ethernet [1..2] Speed: <Auto/10half/10full/100half/100full>
3	ExternalManager Address: <S: 0, 64>
3	ExternalManager Path: <S: 0, 255>
3	ExternalNetwork Callcontrol: <RS366/RS366AdtranIMUX/ RS366CustomIMUX/LeasedLine/DataTriggered/Manual>
3	ExternalNetwork Clocking: <Dual/Single>
3	ExternalNetwork DTRPulse: <On/Off>
3	ExternalServices Address: <S: 0, 64>
3	ExternalServices Mode: <On/Off>
3	ExternalServices Path: <S: 0, 255>
1	FECC Mode: <On/Off>
1	FeedbackFilter Call: <0..10>
1	FeedbackFilter Conference: <0..10>
1	FTP Mode: <On/Off>
3	G703 Callcontrol: <Manual/Auto>
3	G703 Interface MaxChannels: <1..30>
3	G703 Interface StartChannel: <1..31>
3	G703 Linecoding: <b8zsRestrict/b8zsNoRestrict>
3	G703 PhysicalLayer: <E1/T1>
3	H320 NetType: <BRI/PRI/External/G703/None>
3	H323 Mode: <On/Off>
3	H323CallSetup Mode: <Direct/Gatekeeper/CallManager>
3	H323Gatekeeper Address: <S: 0, 64>

Configuration storage level table, *continued...*

Storage level	Configuration
3	H323Gatekeeper Authentication ID: <S: 0, 49>
3	H323Gatekeeper Authentication Mode: <Auto/Off>
3	H323Gatekeeper Authentication Password: <S: 0, 49>
3	H323Gatekeeper Avaya AnnexH: <On/Off>
3	H323Gatekeeper Avaya Mode: <On/Off>
3	H323Gatekeeper Avaya MultipointCount: <0..9>
3	H323Gatekeeper Discovery: <Manual/Auto>
3	H323Gatekeeper MultipleAlias: <On/Off>
3	H323Prefix: <S: 0, 4>
1	HTTP Mode: <On/Off>
1	HTTPS Mode: <On/Off>
1	IdReport H323: <H323Id/E164Alias/IPAddress>
3	IEEE802.1x AnonymousIdentity: <S: 0, 64>
3	IEEE802.1x EAP-MD5: <On/Off>
3	IEEE802.1x EAP-PEAP: <On/Off>
3	IEEE802.1x EAP-TTLS: <On/Off>
3	IEEE802.1x Identity: <S: 0, 64>
3	IEEE802.1x Mode: <On/Off>
3	IEEE802.1x Password: <S: 0, 64>
3	Integrator AMXBeacon Mode: <On/Off>
3	Integrator Telepresence Mode: <Off/Point2Point/MultiPoint/Briefer>
3	IMUX Custom [BW64/BW128/BW192/BW256/BW320/BW384/BW512/BW768/BW1152/BW1472/BW1920] Prefix <S: 0, 12>
3	IMUX Custom [BW64/BW128/BW192/BW256/BW320/BW384/BW512/BW768/BW1152/BW1472/BW1920] Suffix <S: 0, 12>
3	IMUX Custom [BW64R/BW128R/BW192R/BW256R/BW320R/BW384R/BW512R/BW768R/BW1152R/BW1472R/BW1920R] Prefix <S: 0, 12>

Configuration storage level table, *continued...*

Storage level	Configuration
3	IMUX Custom [BW64R/BW128R/BW192R/BW256R/BW320R/BW384R/BW512R/BW768R/BW1152R/BW1472R/BW1920R] Suffix <S: 0, 12>
3	IP Address: <IPAddr>
3	IP Assignment: <DHCP/Static>
3	IP DNS Domain Name: <S: 0, 64>
3	IP DNS Server [1..5] Address: <IPv4v6Addr: 0, 43>
2	IPDualstreamRate: <25Percent/50Percent/75Percent>
3	IP Gateway: <IPAddr>
3	IP SubnetMask: <IPAddr>
3	IP V6 Address: <IPv6Addr: 0, 43>
1	IPMedia MaxVideoTXRate: <64..4096>
3	IPProtocol: <IPv4/IPv6/Both>
1	IRControl NumberKeyMode: <AddCall/DTMF/Presets/Manual>
1	IRControl Mode: <On/Off>
3	ISDN BRI Alert: <On/Off>
3	ISDN BRI AutoActivation: <Off/Selected/All>
3	ISDN BRI ChanId: <On/Off>
3	ISDN BRI Interface [1..6] DirectoryNumber [1..2]: <S: 0, 24>
3	ISDN BRI Interface [1..6] Mode: <On/Off>
3	ISDN BRI Interface [1..6] SPID [1..2]: <S: 0, 20>
1	ISDN BRI InterfaceSearch: <High/Low>
3	ISDN BRI MaxDeactiveTime: <1..60>
3	ISDN BRI SwitchType: <NI/ATT/Euro/1TR6/Japan/Australia/FETEX>
1	ISDN CliNumbPlan: <0..14>
1	ISDN CliNumbSpec: <On/Off>

Configuration storage level table, *continued...*

Storage level	Configuration
1	ISDN CliNumbType: <0..6>
3	ISDN HLC: <On/Off>
3	ISDN MSN: <On/Off>
3	ISDN ParallelDial: <On/Off>
3	ISDN PRI Alert: <On/Off>
3	ISDN PRI ChanId: <On/Off>
3	ISDN PRI InitialRestart: <On/Off>
3	ISDN PRI Interface HighChannel: <1..31>
3	ISDN PRI Interface LowChannel: <1..31>
3	ISDN PRI Interface MaxChannels: <1..30>
3	ISDN PRI Interface NumberRangeStart: <S: 0, 24>
3	ISDN PRI Interface NumberRangeStop: <S: 0, 24>
3	ISDN PRI Interface Search: <High/Low>
3	ISDN PRI L2WindowSize: <1..7>
3	ISDN PRI NSFTelephony Mode: <On/Off>
3	ISDN PRI NSFTelephony Number: <0..31>
3	ISDN PRI NSFVideoTelephony Mode: <On/Off>
3	ISDN PRI NSFVideoTelephony Number: <0..31>
3	ISDN PRI SwitchType: <NI/ATT/Euro/Japan>
3	ISDN SendComplete: <On/Off>
3	ISDN SendNumber: <On/Off>
3	ISDN SpeechTimers: <On/Off>
3	ISDN SubAddress: <S: 0, 20>
1	Keyboard Layout: <English/US/Norwegian/Swedish/German/French/User>

Configuration storage level table, *continued...*

Storage level	Configuration
1	Kiosk AllowIRControl: <On/Off>
1	Kiosk AutoDial: <On/Off>
1	Kiosk LanguageMenu English: <On/Off>
1	Kiosk LanguageMenu French: <On/Off>
1	Kiosk LanguageMenu German: <On/Off>
1	Kiosk LanguageMenu Italian: <On/Off>
1	Kiosk LanguageMenu Mode: <On/Off>
1	Kiosk LanguageMenu Norwegian: <On/Off>
1	Kiosk LanguageMenu Spanish: <On/Off>
1	Kiosk LanguageMenu Swedish: <On/Off>
1	Kiosk Menu: <On/Off>
1	Kiosk Mode: <On/Off>
1	Kiosk Phonebook: <Local/CorporateDirectory>
1	LocalLayout Mode: <Full/2Split/POP/POPwide>
1	LocalLayout Toggle: <PIP/POP>
1	Logo: <On/Off>
1	LoS Duration Exponent: <10..30>
1	LoS Duration Offset: <0..65534>
1	LoS Inhibit: <0..65534>
1	LoS Initial: <0..65534>
1	LoS Polarity: <Positive/Negative>
1	LoS Retry: <0..65534>
1	MainVideoSource: <1/2/3/4/5/6>
3	MCU MultiSite <On/Off>

Configuration storage level table, *continued...*

Storage level	Configuration
3	MCU MultiWay <On/Off>
3	NAT Address: <IPAddr>
3	NAT Mode: <On/Off/Auto>
3	NetProfile [1..7] CallPrefix: <S: 0, 9>
3	NetProfile [1..7] CallSuffix: <S: 0, 30>
3	NetProfile [1..7] Name: <S: 0, 8>
3	NetProfile 1 Network: <Auto>
3	NetProfile 2 Network: <H320>
3	NetProfile 3 Network: <H323>
3	NetProfile 4 Network: <H320/H323/SIP/Auto>
3	NetProfile 5 Network: <H320/H323/SIP/Auto>
3	NetProfile 6 Network: <H320/H323/SIP/Auto>
3	NetProfile 7 Network: <SIP>
3	NTP Address: <S: 0, 64>
3	NTP Mode: <Manual/Auto>
3	OptionKey Bandwidth: <S: 0, 16>
3	OptionKey Features: <S: 0, 16>
1	OSD Icon BadNetwork: <On/Off>
1	OSD Icon Encryption: <On/Off>
1	OSD Icon MicOff: <On/Off>
1	OSD Icon OnAir: <On/Off>
1	OSD Icon Telephone: <On/Off>
1	OSD Icon VolumeOff: <On/Off>
2	OSD MCUStatusLine Mode: <On/Off/Auto>

Configuration storage level table, *continued...*

Storage level	Configuration
1	OSD Menu BallonHelp: <On/Off>
2	OSD Menu DisableTimeout: <On/Off>
2	OSD Menu DisplayWelcomeText: <On/Off>
3	OSD Menu InputEditor Language: <Off/Chinese/Korean/Japanese>
3	OSD Menu Language: <English/German/Norwegian/French/Swedish/Italian/Portuguese/Japanese/ Chinese/TraditionalChinese/Russian/Spanish/Korean/Finnish/Thai/Arabic>
3	OSD Menu Mode: <On/Off>
3	OSD Menu Password: <S: 0, 5>
3	OSD Menu WelcomeMenu: <On/Off>
2	OSD Menu WelcomeText: <S: 0, 30>
3	OSD Mode: <On/Off>
1	OSD Offset Mode: <On/Off>
3	PacketlossDownSpeed Mode: <Auto/Off>
1	PictureProgram [1..4] Layout: <Full/2Split/4Split/2+1Split/3+1Split/5+1Split>
1	PictureProgram [1..4] Window [1..6] Call: <1..11>
1	PictureProgram [1..4] Window [1..6] Picture: <LocalMain/LocalDuo/Current/Previous/Duo/RemoteMain/RemoteDuo/JPEG/ TandbergMonitor1/TandbergMonitor2/None>
1	PresentationStart: <Manual/Auto>
1	Preset [1..15] Audio Inputs Line [1..3] Mode: <On/Off>
1	Preset [1..15] Audio Inputs Microphone [1..3] Mode: <On/Off>
1	Preset [1..15] Camera Autofocus: <On/Off>
1	Preset [1..15] Camera Brightness Level: <0..16>
1	Preset [1..15] Camera Brightness Mode: <Manual/Auto>
1	Preset [1..15] Camera Focus: <0..65534>
1	Preset [1..15] Camera Pan: <-32768..32767>
1	Preset [1..15] Camera Tilt: <-32768..32767>

Configuration storage level table, *continued...*

Storage level	Configuration
1	Preset [1..15] Camera Zoom: <0..65534>
1	Preset [1..15] DuoVideoSource: <0/1/2/3/4/5/6>
1	Preset [1..15] MainVideoSource: <1/2/3/4/5/6>
1	Preset [1..15] Name: <S: 0, 20>
3	QoS Diffserv Telephony Audio: <0..63>
3	QoS Diffserv Telephony Signalling: <0..63>
3	QoS Diffserv VideoTelephony Audio: <0..63>
3	QoS Diffserv VideoTelephony Data: <0..63>
3	QoS Diffserv VideoTelephony Signalling: <0..63>
3	QoS Diffserv VideoTelephony Video: <0..63>
3	QoS Mode: <Precedence/Diffserv/Off>
3	QoS Precedence Telephony Audio: <0/1/2/3/4/5/6/7/Auto/Off>
3	QoS Precedence Telephony Signalling: <0/1/2/3/4/5/6/7/Auto/Off>
3	QoS Precedence VideoTelephony Audio: <0/1/2/3/4/5/6/7/Auto/Off>
3	QoS Precedence VideoTelephony Data: <0/1/2/3/4/5/6/7/Auto/Off>
3	QoS Precedence VideoTelephony Signalling: <0/1/2/3/4/5/6/7/Auto/Off>
3	QoS Precedence VideoTelephony Video: <0/1/2/3/4/5/6/7/Auto/Off>
3	QoS RSVP: <Auto/Off>
3	QoS ToS: <MinDelay/MaxThrough/MaxReliable/MinCost/Off>
1	RemoteSwUpgrade Mode: <On/Off>
1	RemoteSwUpgrade Password: <S: 0, 16>
1	RTP MTU: <400..1400>
1	RTP Ports: <Static/Dynamic>
1	Screensaver Delay: <1..480>

Configuration storage level table, *continued...*

Storage level	Configuration
1	Screensaver Mode: <On/Off>
1	SelfViewOnStartup: <On/Off>
3	SerialPort [1..2] BaudRate: <1200/2400/4800/9600/19200/38400/57600/115200>
3	SerialPort [1..2] DataBits: <7/8>
3	SerialPort [1..2] Parity: <None/Odd/Even>
3	SerialPort [1..2] StopBits: <1/2>
3	SerialPort 1 Mode: <Control/Transparent>
3	SerialPort 2 Mode: <VISCA/Auto>
3	SIP Authentication Password: <S: 0, 60>
3	SIP Authentication UserName: <S: 0, 80>
3	SIP Mode: <On/Off>
3	SIP Server Address: <S: 0, 255>
3	SIP Server Discovery: <Manual/Auto>
3	SIP Server Type: <Auto/Nortel/Microsoft/Cisco/Alcatel/Experimental>
3	SIP TLS Verify <On/Off>
3	SIP Transport Default: <Auto/TCP/UDP/TLS>
3	SNMP CommunityName: <S: 0, 16>
3	SNMP HostIPAddr [1..3]: <S: 0, 64>
3	SNMP Mode: <On/Off/ReadOnly/TrapsOnly>
3	SNMP SystemContact: <S: 0, 70>
3	SNMP SystemLocation: <S: 0, 70>
1	SSH Mode: <On/Off>
1	StartupVideoSource: <0/1/2/3/4/5/6>
1	StillImageSource: <0/1/2/3/4/5/6>

Configuration storage level table, *continued...*

Storage level	Configuration
3	Streaming Address: <S: 0, 64>
3	Streaming AllowRemoteStart: <On/Off>
3	Streaming Announcements: <On/Off>
3	Streaming Hops: <0..255>
3	Streaming Password: <S: 0, 16>
3	Streaming Port: <0..65534>
3	Streaming Quality <Motion/Sharpness>
3	Streaming Source: <Local/Remote/Auto>
3	Streaming VideoRate: <16/32/64/128/192/256/320>
1	StrictPassword: <On/Off>
3	SystemUnit DisplayName: <S: 0, 50>
3	SystemUnit InternationalName: <S: 0, 49>
3	SystemUnit Name: <S: 0, 49>
3	SystemUnit Password: <S: 0, 16>
3	T1 Interface CableLength: <Range1/Range2/Range3/Range4/Range5>
1	Telnet Mode: <On/Off>
1	TelnetChallenge Mode: <On/Off>
1	TelnetChallenge Port: <23/57>
1	Time DateFormat: <DD_MM_YY/MM_DD_YY/YY_MM_DD>
1	Time DaylightSavings: <On/Off>
1	Time TimeFormat: <24H/12H>
1	Time Zone: <GMT-1200/.../GMT+1400>
1	UseAsLocalPCMonitor: <On/Off>
1	Video Inputs Source [1..6] Name: <S: 0, 16>

Configuration storage level table, *continued...*

Storage level	Configuration
2	Video Inputs Source [1..6] Quality: <Motion/Sharpness>
1	Video Outputs AllowHD720p: <On/Off>
1	Video Outputs AllowWXGA: <On/Off>
1	Video Outputs DVI [1..2] Mode: <On/Off>
1	Video Outputs DVI [1..2] OSD: <On/Off>
1	Video Outputs DVI [1..2] VirtualMonitor: <1..4>
1	Video Outputs DVIResolution [1..2]: <Auto/SVGA/XGA>
3	Video Outputs FormatPCWideScreen: <Normal/Wide>
3	Video Outputs Letterbox <On/Off>
1	Video Outputs TestPattern <0..10>
1	Video Outputs TV [1..2] Mode: <On/Off>
1	Video Outputs TV [1..2] OSD: <On/Off>
1	Video Outputs TV [1..2] VirtualMonitor: <1..4>
3	Video Outputs ScreenFormatPC: <4:3/16:9>
3	Video Outputs ScreenFormatTV: <4:3/16:9>
3	VNC DisplayNumber: <S: 0, 5>
3	VNC IPAddress: <S: 0, 64>
3	VNC Password: <S: 0, 8>

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