ClearOne

APPLICATION TECH NOTE

COLLABORATE® LIVE 900
COLLABORATE LIVE 1000

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CONTROLLING THE COLLABORATE LIVE 900 AND 1000 SYSTEMS

CONTROLLING THE COLLABORATE LIVE 900 AND 1000 SYSTEMS

This application note describes how to use ClearOne's COLLABORATE conferencing system to control, via Telnet, both video and audio.

Since the CONVERGE® DSP controls video and audio separately, this document includes 2 main sections:

- API FOR CONTROLLING VIDEO
- API FOR CONTROLLING AUDIO

API FOR CONTROLLING VIDEO

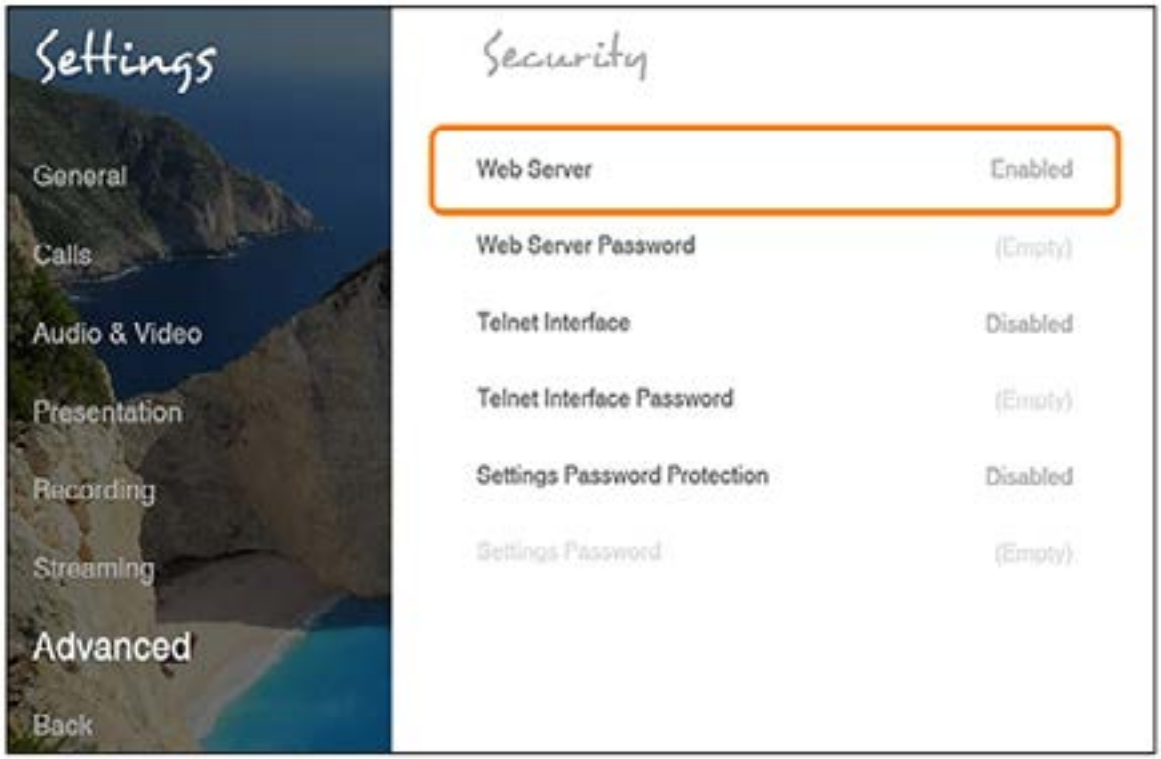
You can control video with the COLLABORATE Live system via common Telnet protocol.

This procedure is the same for RS-232 and LAN connections.

ENABLE THE TELNET API

To enable the Telnet API in the Collaborate Live system, complete the following steps:

1. Go to Settings > Advanced >Security.



2. Click **Telnet Interface** to enable Telnet.

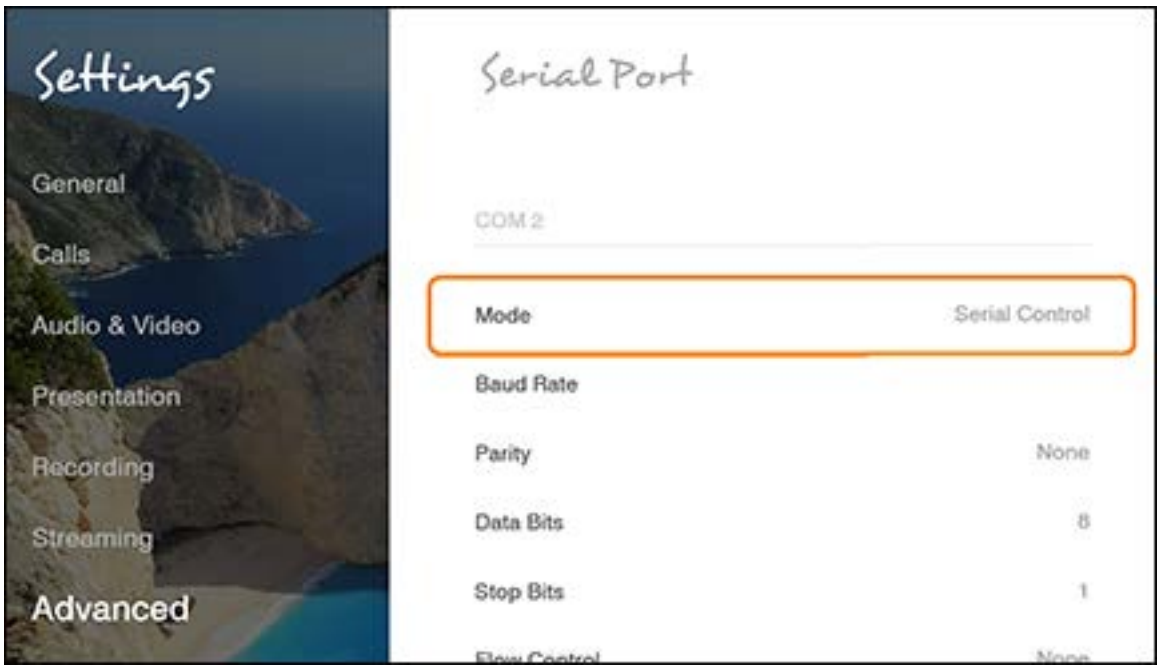
3. Click **Telnet Interface Password** to set up a password for Telnet.

START AN API SESSION VIA AN RS-232 (COM 2) INTERFACE

The COLLABORATE system can run API sessions from the RS-232 (COM 2) interface.

To start an API session with an RS-232 interface, complete the following steps:

1. In the Serial Port settings, select **Serial Control** under Mode.



2. Power off the computer or control system and the COLLABORATE system.

3. With an RS-232 cable, connect the computer or control system RS-232 port to the COLLABORATE system's COM 2.

4. Power on the computer and the COLLABORATE system.

5. From the computer or control system, use HyperTerminal or another appropriate utility to start a serial session

6. Configure the serial session as follows:

   Connection name:
   Protocol: Serial
   Port: The COM Port number on your PC (Check under Device Manager)
   Baud Rate: 9600
   Data Bits: 8
   Parity: None
   Stop bits: 1

START AN API SESSION WITH AN LAN CONNECTION

If your computer is connected to a LAN, you can send API commands to the COLLABORATE system through telnet port 23.

To start an API session with a LAN connection, complete the following steps:

1. On the computer, open a command line interface.

2. Start a Telnet session with the COLLABORATE system's IP address.

ENTER TELNET COMMANDS

The Telnet prompt (telnet>) indicates that you may now enter telnet commands.

Note: A control module for the Collaborate system is available from Crestron. The module provides most of the needed functionality, but may not be 100% current.

Telnet Command List

Key	Description	Arguments	Example
accept	Accept incoming call	—	accept
callinfo	Request call information details	SessionID: Valid session ID number	callinfo 1
	use sessions command to get ID		
camerahome	Return PTZ camera to default position	—	camerahome
cameralist	Return list of available video devices	—	cameralist
camerapos	Save or restore camera position from preset	Action: save, restore position: 1-9	camerapos save 2

Key	Description	Arguments	Example
camerastart	Start camera movement pan, tilt, zoom in different direction	Direction: u – up d – down l – left r – right ul – up+left ur – up+right dl – down+left dr – down+right zi – zoom in zo – zoom out farend: local, remote	camerastart u camerastart u remote camerastart ul
camerastop	Stop camera movement	Direction: spt – stop pan tilt sz – stop zoom farend: local, remote	camerastop sz camerastop sz remote
change_camera	Set current camera by index (call cameralist for list of available devices)	Index:1-9	change_camera 1
changewirelesslayout	Change wireless layout while wireless is being shared.	Parameter: auto single preview	changewirelesslayout single
dial	Dial specific address via LAN network	Address: Calltype: lan,sip,audio Bandwidth (optional): 64, 128, 256, 384, 512, 1024 (Bandwidth list is configurable in Commands.xml file on both sides, server and client)	dial 125.0.1.2 lan 128
dialcontact	Dial H.323 and SIP contacts Use listcontacts command for a numbered contact list	Contact ID	dialcontact 2
dialsfbcontact	Dial Skype for Business contacts Use listsfbcontacts command for a numbered contact list	Contact ID Call type: audio, video	dialsfbcontact 30 audio
dialspacecontact	Dial Collaborate Space contacts	Contact ID	dialspacecontact 14 video
	Use listspacecontacts command for a numbered contact list	Call type: audio, video	
donotdisturb	Start or stop do not disturb mode.	Parameter: enable disable	donotdisturb enable

Key	Description	Arguments	Example
dtmf	Send DTMF tone to remote endpoint identified by Participant ID (Note: Use sessions to retrieve Participant ID)	ParticipantID: any valid participant number DTMF: DTMF tone sequence	dtmf 23 35667344 dtmf 111 123433#5*
dtmf2all	Send DTMF tone to all active calls	DTMF: DTMF tone sequence	dtmf2all 35667344 dtmf2all 123433#5*
get	Get parameter value	Parameter: mic volume speaker license autoanswer	get mic get volume get autoanswer
hangup	Hanging up session	—	hangup
help	Displays all telnet commands and notifications.	—	help
listcontacts	Lists H.323 and SIP contacts	—	listcontacts
listsfbcontacts	Lists Skype for Business contacts	—	listsfbcontacts
listspacecontacts	Lists Collaborate Space contacts	—	listspacecontacts
multicast	Start or stop media activity.	Parameter: start stop	multicast start multicast stop
nextsender	When more than one sender is shared in preview or single	—	nextsender
	layout, change between main senders.		
recording	Start or stop media activity.	Parameter:	recording start
		start	recording stop
		stop	
reject	Rejecting incoming call	—	reject

Key	Description	Arguments	Example
remotecontrol	Commit a remote control command	1 Status 2 Data 3 Phone Book 4 Help 5 Near Far 6 Camera Control 7 Preset Recall 8 Preset Set 9 PIP 10 Speed Dial 11 Call Log 12 Mute Mic 13 Display 14 Settings 15 Mute Video 16 Mute Speaker 17 Enter 18 Go Right 19 Go Left 20 Go Up 21 Go Down 22 Cancel 23 Dial 24 Hang Up 25 Zoom In 26 Zoom Out 27 Volume Up 28 Volume Down 29 Num 1 30 Num 2 31 Num 3 32 Num 4 33 Num 5 34 Num 6 35 Num 7 36 Num 8 37 Num 9 38 Num 0 39 Dot (. ^ , @ #) 40 Clear / # DTMF	remotecontrol 1
restart	restarts the unit.	—	restart
rssmessage	Send RSS message to all participants	usage: rssmessage <text> <speed> <count> <start> text - speed - count - start - true,false	rssmessage message 200 1 true
sessions	Display all active sessions and their sessions ID	—	sessions
set	Set parameter value	Parameter: mic volume speaker autoanswer	set mic on set volume 5 set autoanswer on
sfbparticipants	Shows numbered participant list while in a Skype for Business call	—	sfbparticipants

sharehdmi1 / sharehdmi2	Start sharing HDMI content depending on connected devices.	Parameter: start stop	sharehdmi2 start
sharelaptop	Share DataPoint when it is connected to the unit.	Parameter: start stop	sharelaptop start
sharewireless	Start wireless sharing when there is at least 1 sender connected to the unit.	Parameter: start stop	sharewireless start
shutdown	Shutdown the system Note: If shutdown the unit can only be powered back up by pressing the power button on the unit.	—	shutdown
streaming	Start or stop media activity.	Parameter: start stop	streaming start streaming stop
whiteboard		Parameter: start stop	whiteboard start

API FOR CONTROLLING AUDIO

ClearOne Converge Audio DSP Mixers manage the audio for the Collaborate Live 900 and 1000 Systems.
You can independently control CONVERGE systems through RS-232 or Telnet. The following table lists helpful resources:

CONVERGE Pro 2 Crestron Modules v1.2	Downloads and Release Notes	Download
CONVERGE Pro 2 AMX Modules v1.2	Software & Firmware	Download
CONVERGE Pro 2 Extron Modules v1.1	Downloads and Release Notes	Download
CONVERGE Pro 2 Serial Commands Reference Manual	Manuals	Download