

ClearOne®

COLLABORATE® LIVE 600 USER GUIDE



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COLLABORATE® Live

USER GUIDE

CLEARONE DOCUMENT

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NOTICE: This Class A device complies with Part 15 of the FCC rules and Canadian ICES-003. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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Chapter 1: Introduction

IN THIS CHAPTER

This chapter introduces the COLLABORATE® Live 600 video collaboration system and includes the following sections:

- COLLABORATE® Live 600 Overview
- Main Features
- Comparison Table
- Feature Highlights

COLLABORATE® LIVE 600 OVERVIEW

The COLLABORATE® Live (COLLABORATE® Live 600) is an all-in-one high-definition executive videoconferencing system, featuring an embedded MCU, built-in recording capability, streaming of live and recorded sessions, data sharing, and more.

COLLABORATE® Live provides an interface to videoconferencing via its plug-and-play application-in-a-box, providing on-screen operation controls and advanced call control options during conferencing. Utilizing the newest H.264 video standard and clear, crisp audio, the COLLABORATE® Live brings users face-to-face with other people and organizations.

COLLABORATE® Live enables you to record and stream video calls to multiple locations with up to 8 additional participants.

COLLABORATE® Live incorporates advanced data sharing capabilities, allowing you to turn any videoconference into a fully interactive meeting. It can display presentations or videos on large monitors, connect to an external laptop for data sharing, and open various file types from USB storage devices.

COLLABORATE® Live is ideal for users who need a powerful videoconference solution, offering point-to-point/multipoint capabilities, powered by ClearOne's COLLABORATE® Live software.

Various accessories, such as a one Unit 200 PTZ camera, ClearOne two CHATAAttach 150 Speakerphone and ClearOne DataPoint HD – can be installed and integrated as part of the COLLABORATE® Live system.

Shortly, The Main Key features of COLLABORATE® Live contains, COLLABORATE® Space web conferencing, Skype® for Business client, SIP/H.323 video conferencing, wireless presentation, interactive whiteboard, recording and streaming.



COLLABORATE Live 600
Codec Appliance



UNITE 200
PTZ Camera



CHATAttach 150 system
consisting of two CHAT 150
speakerphones daisy chained
together for crystal-clear audio
quality and excellent room
coverage



COLLABORATE Space
conferencing application
(90 days)

- COLLABORATE Live 600 codec appliance
- UNITE 200 PTZ Camera
- CHATAttach 150 speakerphone solution
- Power supplies, cables and accessories
- COLLABORATE Space application (90 days)
- Two-year support and maintenance with warranty

Note:

For more information about the COLLABORATE® Live 600 physical installation, including the connection of cables and devices to COLLABORATE® Live 600, refer to the COLLABORATE® Live 600 Quick Setup Guide.

For the complete technical specifications, refer to the COLLABORATE® Live 600 datasheet.

MAIN FEATURES

COLLABORATE® Live allows you to call a destination via LAN, and to interact via video and data-sharing during calls. Some of the primary capabilities of the system include:

- Point-to-point or multipoint connections
- Recording, streaming, and data sharing
- Recording and playback of point-to-point and multipoint (MCU based) sessions
- Streaming via a Web interface, Windows Media Player or VLC player
- Sharing files via a USB flash drive
- Sharing data via Collaborate share
- Sharing cable-connected laptop or wireless via network.
- Access files on a USB flash drive while in idle mode
- Side-by-side Picture-In-Picture (PIP) view
- Session multicast
- Embedded MCU for multipoint sessions
- Embedded multicast viewer
- Calling via Contacts or Recent calls
- Calling via online directories
- Calling Via URI
- Multipoint videoconferences support
- Configurable audio, video and displays, and automatic answering
- Display on-screen running text to all participants via Web management during a call
- Supports ClearOne CHATAttach 150 Speakerphone
- Far End mute indicator
- Telnet interface

- Communicating in standalone mode, COLLABORATE Central mode and gatekeeper mode
- Turn unit into sleep mode and wake it up using the remote control
- Web-based management
- Regulatory Compliance: UL, CSA (cUL), TUV, TUV-CB, CE-LVD, CE, FCC Class B, BSMi, VCCI, C-Tick, RoHS.

COMPARISON TABLE

The following table specifies the differences between the various models of COLLABORATE® Live.

	COLLABORATE® Live 200 Series	COLLABORATE® Live 300 Series	COLLABORATE® Live 600 Series	COLLABORATE® Live 900 Series	COLLABORATE® Live 1000 Series
Max Tx	1080/30	1080/30	1080/60	1080/60	1080/60
Max Rx	1080/60	1080/60	1080/60	1080/60	1080/60
MCU	-	-	4-way SIP/H.323 MCU license Option to upgrade to 9-way SIP/H.323 MCU License	4-way SIP/H.323 MCU license Option to upgrade to 9-way SIP/H.323 MCU License	4-way SIP/H.323 MCU license Option to upgrade to 9-way SIP/H.323 MCU License
Recording	-	-	√	√	√
Streaming	-	-	√	√	√
Data via USB	√	√	√	√	√
DataPoint (Optional)	√	√	√	√	√
Wireless Data	√	√	√	√	√
Multiple Cameras	-	-	√	√	√
Bandwidth	Up to 4 Mbps	Up to 4 Mbps	Up to 6 Mbps	Up to 6 Mbps	Up to 6 Mbps
H.239 Dual Video support	√	√	√	√	√
PTZ	ePTZ	√	√	√	√
Balanced Audio	-	-	√	√	√
Audio Device	CHAT 150C Speakerphone	CHAT 150C Speakerphone	CHATAttach 150 Speakerphone	CONVERGE Pro 2 48V mixer and ClearOne Beamforming Mic Array 2	CONVERGE Pro 2 48V mixer and BMA CT Ceiling Tile Beamforming Mic Array

Note:

The display resolution must be set to 1920x1080 when the received resolution is 1080. Otherwise you may encounter video issues.

FEATURE HIGHLIGHTS

New features incorporated in COLLABORATE® Live 600, 900 and 1000 include:

- User interface as intuitive and simple as familiar mobile or tablet devices.
- Dual HDMI input with the following modes of operation:
 1. 2 cameras
 2. 1 camera & 1 laptop
 3. 2 cameras (one at a time) and laptop via DataPoint

Balanced audio in/out

- RF Remote control – install the unit in a closet
- COLLABORATE Space application (90 days)
- SD Storage for faster operation and added resiliency

Chapter 2: Getting Started

IN THIS CHAPTER

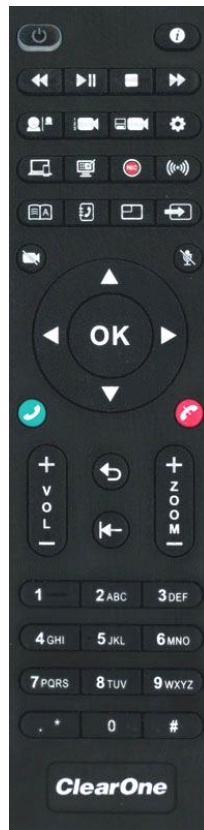
Once the COLLABORATE® Live unit is installed, connected and turned on, it is ready for use. This chapter describes the following basic operations:

- Using the Remote Control
- Using the On-Screen Menu
- System Icons
- Displaying System Information

USING THE REMOTE CONTROL

You can navigate the COLLABORATE® Live on-screen graphic user interface (GUI) using the RF remote control, bundled with the unit.

Pressing any button on the remote control activates the on-screen GUI, which appears on top of the camera / videoconference picture.



The remote control includes the following button types:

- Alphanumeric Keypad
- Command Buttons
- Navigation arrows and Additional Buttons

ALPHANUMERIC KEYPAD







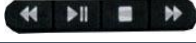











The remote control includes an alphanumeric keypad with buttons from 0 to 9. In the Dot button you can find the following signs: '.', ',', '*', '#', '^', '@', '\$', ':', '=', '-', '_', '!' etc. In addition, Clear button to erase entered characters.

In different windows, you can toggle between **numbers** and **letters**, depending on the field. Some fields accept numbers only.

- Switch between letters and numbers by pressing a few times on the corresponding key
- When DTMF dialing is requested, use the numeric keypad.

COMMAND BUTTONS

The following command buttons are available on the remote control:

Button Image	Button Name	Command
	Power	Turn system into sleep mode. Wake up system
	Status	Display the system information Display the current call status Show the on-screen online help
	Data	Open presentation menu
	Phone Book	Open the phone book
	Input	Switch between camera input Change wireless main sender
	Far End	Control the position (PTZ) of camera at near/far end
	Player Controller	Control recordings on idle mode.
	Preset: Recall	Recall a camera PTZ preset position
	Preset: Set	Set a camera PTZ preset position
	Picture-In-Picture (PIP)	Toggle the PIP position (5 positions + Side-by- Side) Change wireless layout
	Recent Calls	Display the current Recent Calls
	Mute Mic	Mute the local microphone
	Recording	Start \ Stop recording
	Streaming	Start \ Stop streaming
	Settings	Open the settings menu
	Mute Video	Temporarily disable the local video camera and its transmission
	Delete	Delete characters . Delete Recording
	White Board	Open Space white board

NAVIGATION ARROWS AND ADDITIONAL BUTTONS

Using the Navigation arrows of the **OK** button, you can navigate the GUI menus/options in four directional movements: **Up**, **Down**, **Left** and **Right**.

Navigation



In addition to the Navigation arrows, the following buttons are available around it:

- **Back** – Returns to the previous step/window without saving changes
- **Menu/OK** – Selects/activates a highlighted GUI item/function (highlighted in orange on the screen)
- **Zoom In/Out** – Zooms in or out with the camera
- **Make Call** – Start a new call
- **End Call** – End the current call or close the GUI.

Note:

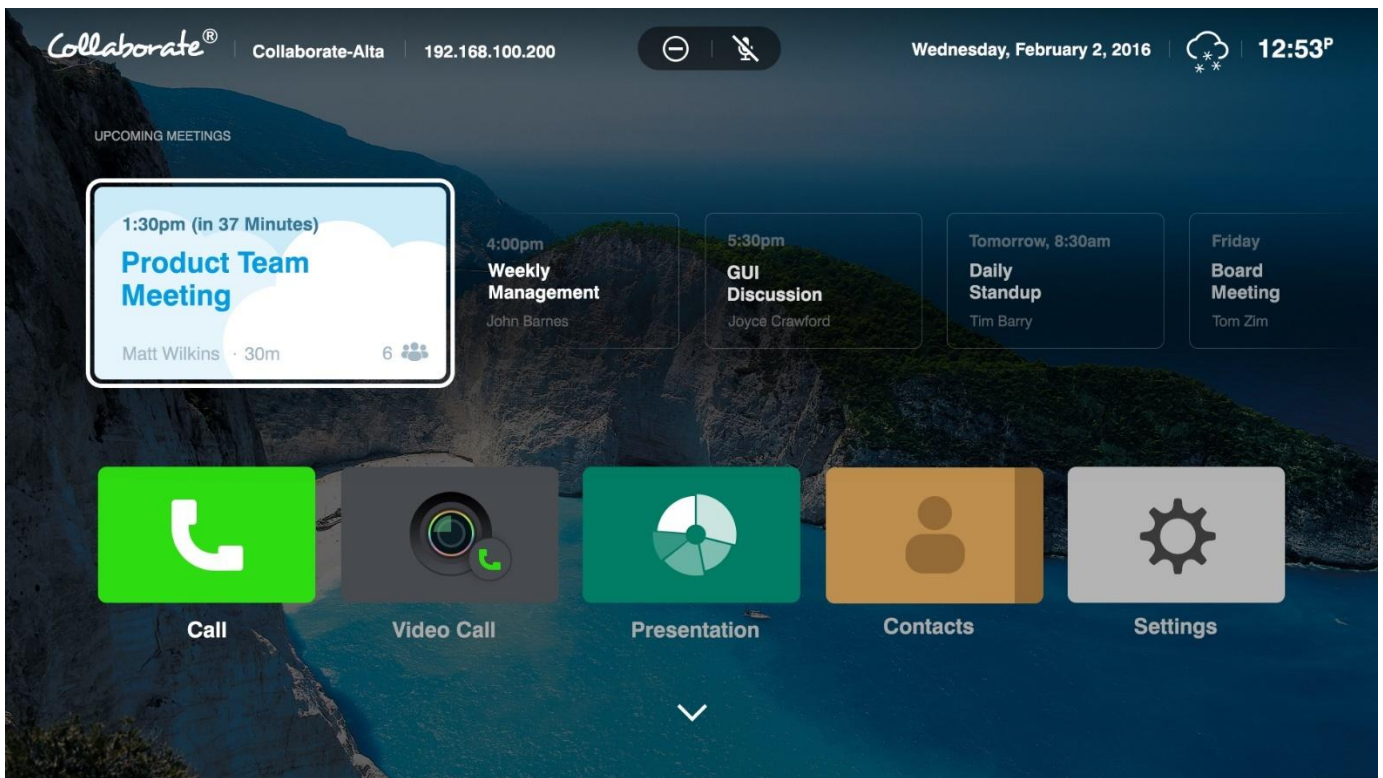
The red End Call button can also be used for turning off or restarting the unit. Press and hold the button until the power confirmation prompt appears.

USING THE ON-SCREEN MENU

The on-screen menu enables you to navigate COLLABORATE® Live options prior to and during a videoconference call. The main menu is accessed using the remote control (see using the Remote Control).

To display the COLLABORATE® Live main menu:

- Press **OK** on the remote control.













Navigate the COLLABORATE® Live menu using the remote control. To expand menu options, Press the down arrow on the Navigation arrows. To access a category/option, select the category / Option.

Press **Back** on the remote control to go back to the home menu.

SYSTEM ICONS

The following icons indicate the different behaviors of the system.


Icon Image	Meaning
	Mute Speaker
	Mute Microphone
	Far End Microphone Mute
	No Network
	Far End Camera Control (FECC)
	Do Not Disturb
	Central Registration
	Central Registration Failed

Icon Image	Meaning
	Gatekeeper Registration
	Gatekeeper Registration Failed
	MCU Voice-Switch Layout
	Multicast
	Streaming
	Recording
	Recording paused
	Far End Recording
	Encrypted Call
	Audio Only Call
	SIP Registration
	SIP Registration Failed

DISPLAYING SYSTEM INFORMATION

Whenever the COLLABORATE® Live unit is turned on, you can view the system status details. Different details are displayed when the unit is in idle state or in an ongoing videoconference session.

To display the current system status details:

- Press **Information** () on the remote control. The Information window appears.

Information	
System	
System ID	CR-C7C9
System Model	Collaborate Live 600
Software Version	4.0 (249.0.0.77 - LIVEGS13)
License Installed	1080p@60fps, Multisite(4-Way), Presentation, Recording, Streaming, Skype® for Business
Server	Not Registered
Serial Number	
MAC Address	E0:D5:5E:B0:C7:C9
IP Address	10.10.24.147
Exchange Last Update	5/28/2019 4:30:22 PM

When COLLABORATE® Live is in the idle state, the Status window displays the following information:

- **System ID** – System ID as defined in the system settings (see Preference Settings)
- **System Model** – COLLABORATE® Live model
- **Software Version** – Software version of the COLLABORATE® Live application.
- **License Installed** – COLLABORATE features that available with the installed license.
- **Server** – The current operation mode:
 1. Not registered – The unit is not connected to a COLLABORATE Central server or a gatekeeper.
 2. COLLABORATE Central – The unit is connected to a COLLABORATE Central server
 3. Gatekeeper – The unit is connected to a gatekeeper server.
 4. SIP Proxy – The unit is connected to a SIP proxy server.
- **Serial Number** – The unit unique serial number.
- **MAC Address** – MAC address of the COLLABORATE® Live unit
- **IP Address** – IP Address of the COLLABORATE® Live unit, as automatically assigned by the DHCP server or as manually configured via **Settings>Advanced>Network**. You can use this IP Address to access and manage the unit via a browser (see Accessing COLLABORATE® Live via Browser)

Note:

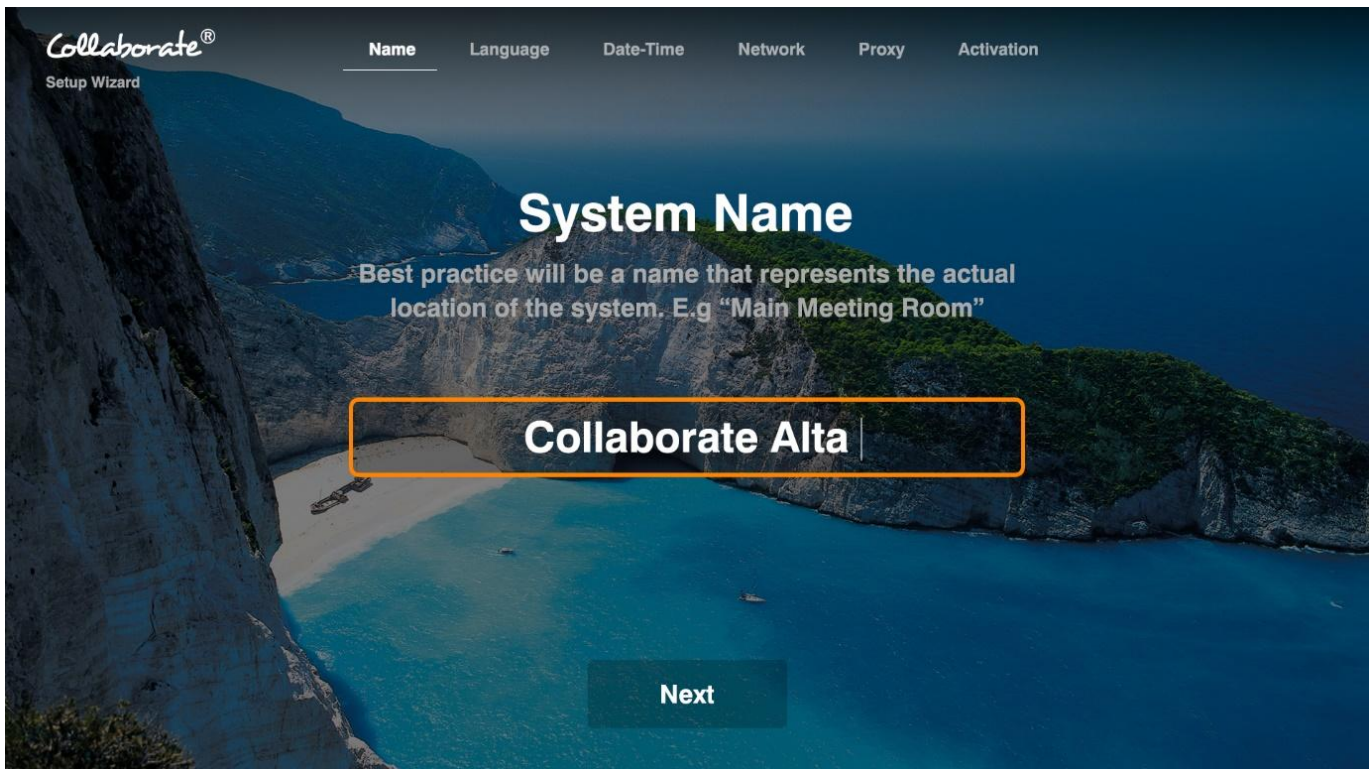
During a videoconference call, you can display additional/different relevant information by selecting Call Status / Call Statistics in the Status window.

COLLABORATE SETUP

When system is loaded for the first time (after restore defaults), the setup wizard is displayed on screen in order to configure the basic settings:

Collaborate® Live

1. **Name** – System name used to identify the system when using DNS dialing. Best Practice will be a name that represents the actual location of the system.

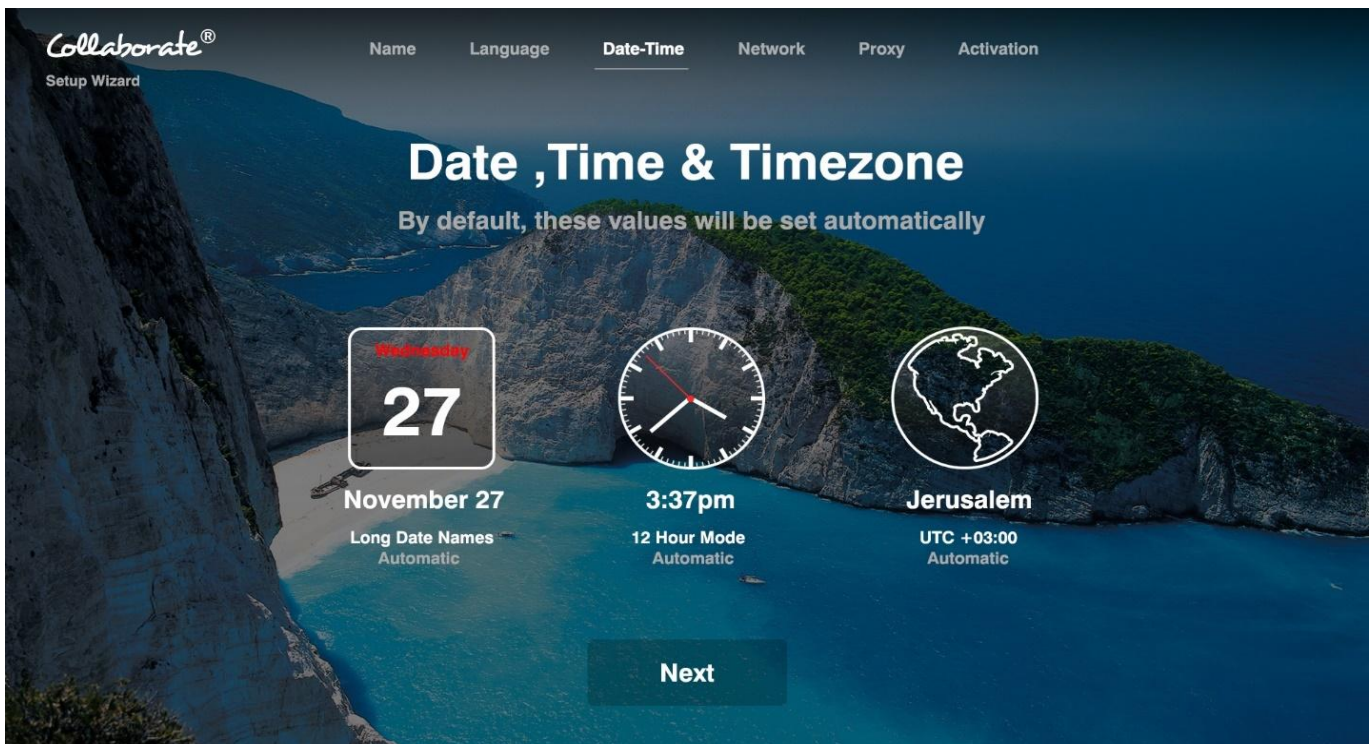


Select Next.

2. **Language Name:** Use left and right arrows to select a language for the system's User Interface and select the desired language. Click **Next**. (A system restart is required after changing the system language.)

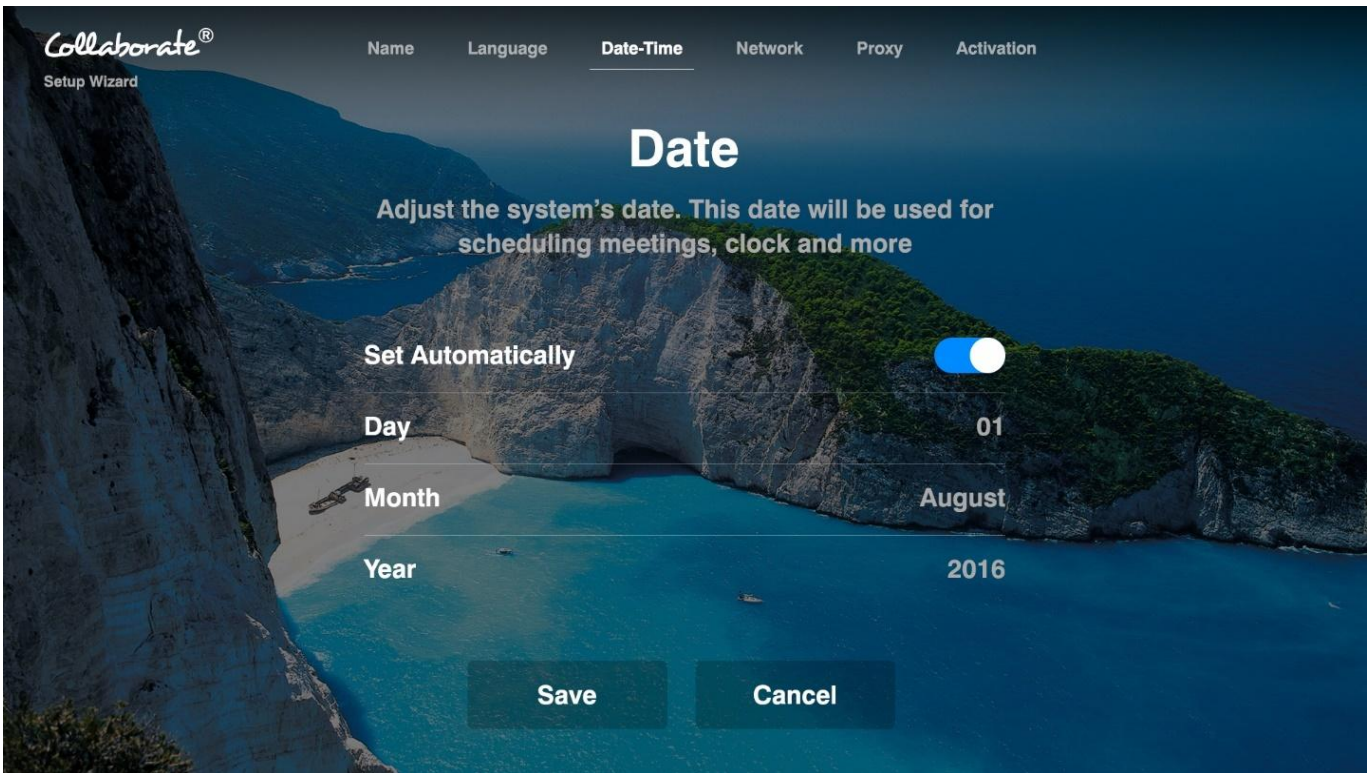


3. **Date, Time & Time Zone:** By default, Date, Time & Time Zone values will be set automatically.



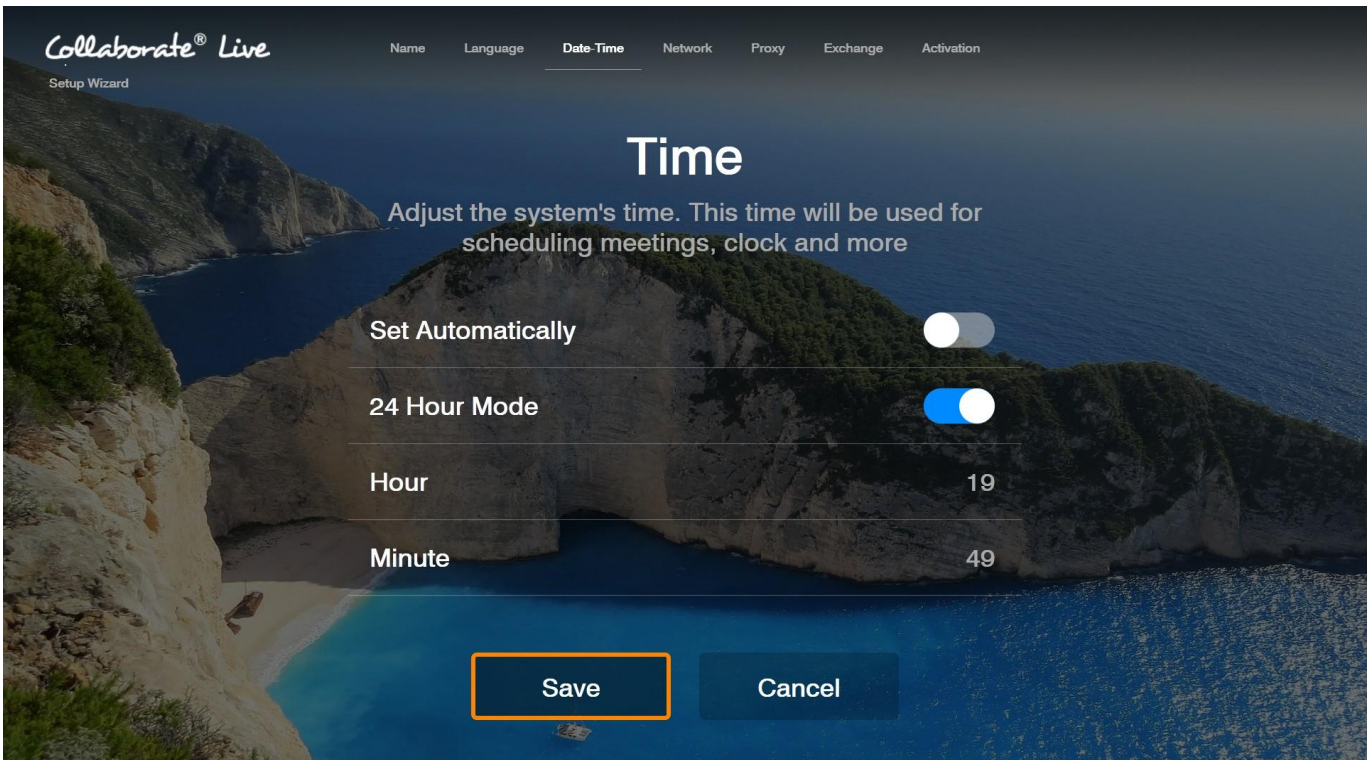
Select **Next**.

Date: This feature allows you to adjust the System's date. This date will be used for scheduling meetings, clock and more.



Click **Save**. If the date & time are disabled, then the details cannot be updated.

Time: This feature allows you to adjust the System's Time. This time will be used for scheduling meetings, clock and more.



Click **Save**.

4. Network:

IP Addresses:

The screenshot shows the 'IP Addresses' configuration screen in the Collaborate Setup Wizard. At the top, there are navigation tabs: Name, Language, Date-Time, Network (selected), Proxy, and Activation. Below the tabs, the title 'IP Addresses' is displayed in large white font. A subtitle reads: 'You can get these values set automatically if your network supports this capability'. There are three main settings: 'Obtain Automatically' with a blue toggle switch turned on; 'IP Address' with the value '192.168.1.13'; 'Subnet Mask' with the value '255.255.255.0'; and 'Default Gateway' with the value '192.168.1.1'. A 'Next' button is highlighted with an orange border at the bottom center.

- **Obtain Automatically** – Select the Toggle button to obtain an IP Address from a DHCP server automatically.
- **IP Address** – Set the IP Address for this system. If using a DHCP server, the address obtained from the DHCP server is displayed. IP address can be edited and saved.

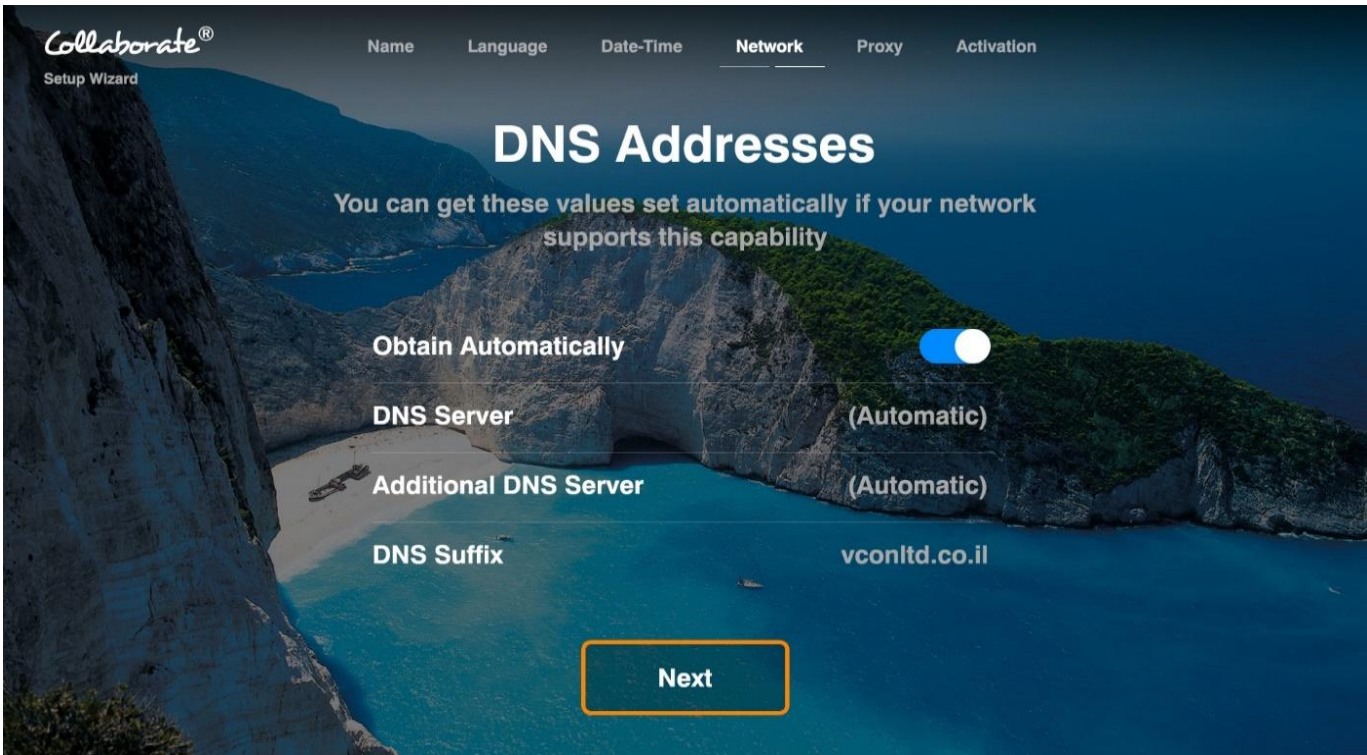
This screenshot is identical to the one above, but with an orange border highlighting the 'IP Address' field and its value '192.168.1.13'. The 'Next' button is now a solid dark blue color.

- **Subnet Mask** – Set the subnet mask number for your network. If using a DHCP server, the address obtained from the DHCP server is displayed.
- **Default Gateway** – Set the IP Address of the default gateway router. If using a DHCP server, the address obtained from the DHCP server is displayed.

You can get these values set automatically, if your network supports this capability.

Click **Next**

DNS Addresses:



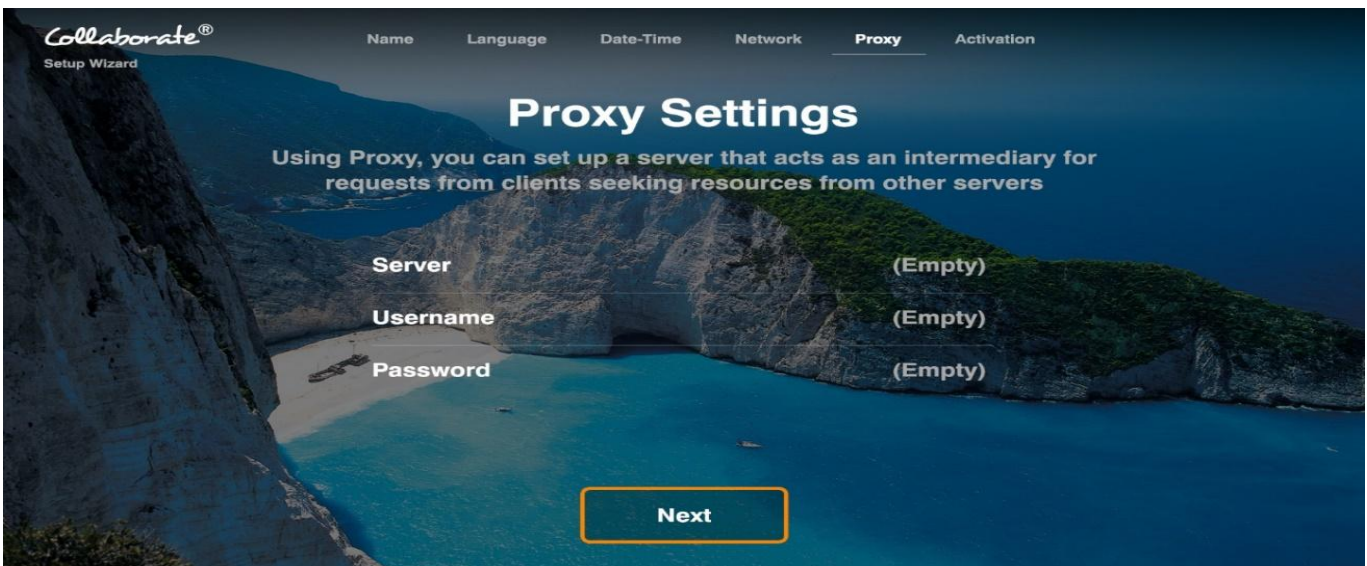
The screenshot shows the 'DNS Addresses' configuration screen in the Collaborate Setup Wizard. At the top, there are navigation tabs: Name, Language, Date-Time, Network (selected), Proxy, and Activation. The main heading is 'DNS Addresses' with a sub-heading: 'You can get these values set automatically if your network supports this capability'. Below this is a toggle switch for 'Obtain Automatically' which is turned on. There are three input fields: 'DNS Server' with '(Automatic)', 'Additional DNS Server' with '(Automatic)', and 'DNS Suffix' with 'vconltd.co.il'. A 'Next' button is at the bottom.

Obtain Automatically – Select the Toggle button to obtain your DNS server Address from a DHCP server automatically. If you do not choose to obtain the DNS address from a DHCP server, please fill in the following fields:

- **DNS Server** – Set the IP Address of the DNS server. If using a DHCP server, the address obtained from the DHCP server is displayed.
- **Additional DNS Server** – Alternative DNS server, to be used in case the first DNS server defined can't supply the needed services.
- **DNS Suffix** – Set the DNS domain suffix to be used by this system.

Select Next.

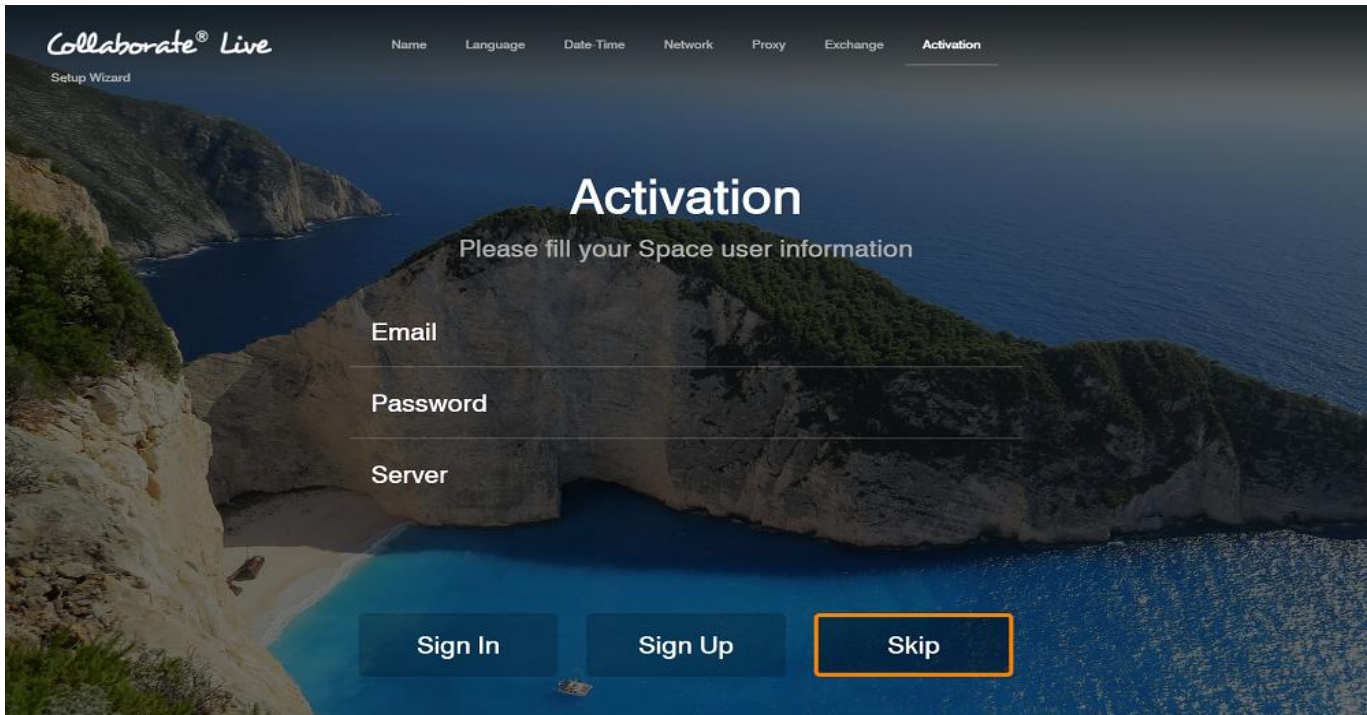
5. Proxy



The screenshot shows the 'Proxy Settings' configuration screen in the Collaborate Setup Wizard. At the top, there are navigation tabs: Name, Language, Date-Time, Network, Proxy (selected), and Activation. The main heading is 'Proxy Settings' with a sub-heading: 'Using Proxy, you can set up a server that acts as an intermediary for requests from clients seeking resources from other servers'. Below this are three input fields: 'Server' with '(Empty)', 'Username' with '(Empty)', and 'Password' with '(Empty)'. A 'Next' button is at the bottom.

Enter your organization proxy server address. For any assistance use your organization's network manager. Click **Next**.

6. Activation

The screenshot shows the 'Collaborate Live' Setup Wizard in the 'Activation' step. The background is a scenic view of a bay with a white sandy beach and blue water. The interface includes a navigation bar at the top with options: Name, Language, Date-Time, Network, Proxy, Exchange, and Activation. The main heading is 'Activation' with the instruction 'Please fill your Space user information'. Below this are three input fields labeled 'Email', 'Password', and 'Server'. At the bottom, there are three buttons: 'Sign In', 'Sign Up', and 'Skip'. The 'Skip' button is highlighted with an orange border.

You will need an authenticated login and password to connect to COLLABORATE© Space. These credentials can be created in different ways:

- If you would like to create a new Collaborate Space trial account, complete the Activation information, and then click “Sign Up” to proceed.
- If you have an existing Collaborate Space account, fill in the user information and then click “Sign In” to proceed.

Chapter 3: Configuration Basics

IN THIS CHAPTER

This chapter explains the basic configuration options and includes the following sections:

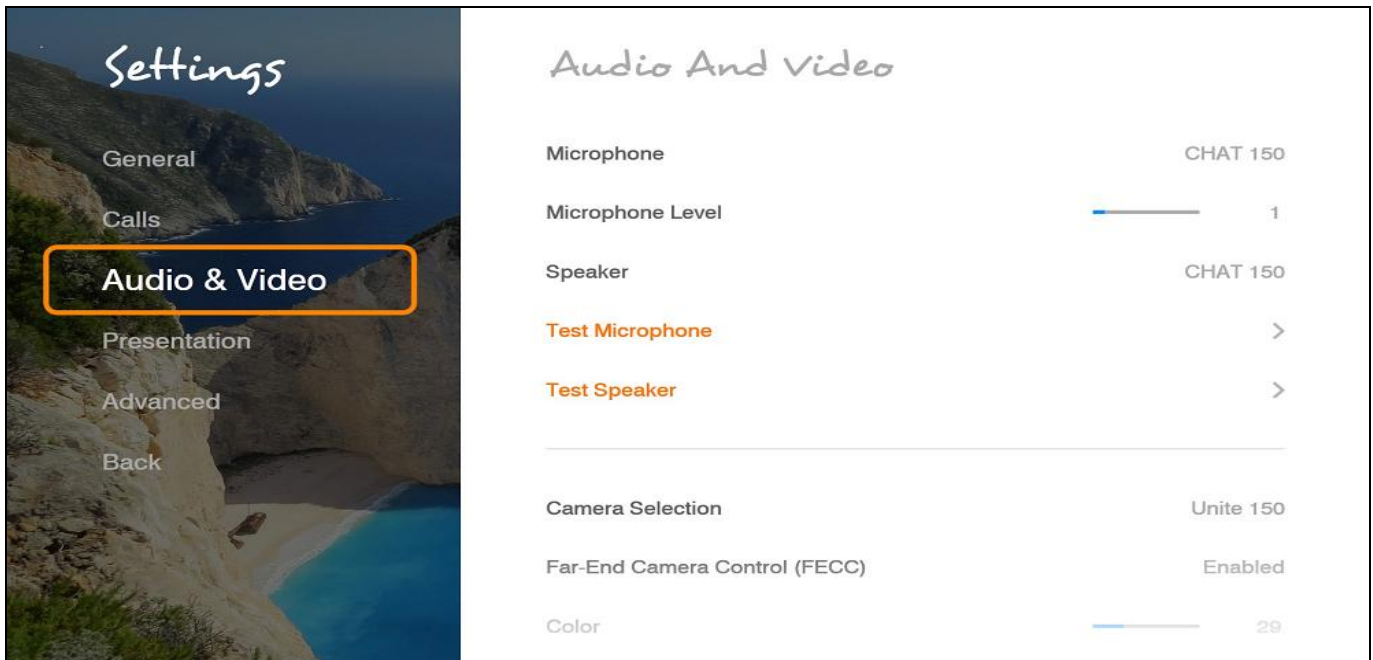
- Configuring the Audio
- Configuring the Camera
- Controlling the Camera
- Configuring the Display
- LAN settings
- Firewall Settings
- General Settings
- Calls Settings
- Presentation Settings
- MCU Settings
- Recording Settings
- Record to NAS Drive
- Streaming Settings
- Multicast Settings
- Software Updates

CONFIGURING THE AUDIO

The audio input/output must be configured so that you will be able to hear and be heard properly in videoconferences.

To access the audio settings:

1. Press OK on the remote control. The main menu appears.
2. Using the remote control's Navigation arrows, select Settings> Audio & Video. The Audio Settings window appears.



To configure the audio settings:

3. In the Audio Settings window, set the following properties of the selected audio input. USB devices can be used if the system supports external USB hardware.
 - Microphone – Select Chat Attach 150 to be your Microphone device
 - Microphone Level – Adjust the microphone sensitivity level in percentage (%)
 - Speaker – Select CHAT Attach 150 to be your Speaker device..
 - Test Microphone – Check and test the Microphone by using this option
 - Test Speaker – Check and test the Speakers by using this option

Note:

The audio of the COLLABORATE® Live 600 system must be optimized for the outputs used and the room in which it is used. For best audio performance, ClearOne recommends using Balanced Audio or Line output to a mixer or amplifier. HDMI audio to a monitor is also supported, but monitor speakers are usually lower quality.

Optimizing for Balanced and Line Audio Outputs

Connect to either a set of amplified speakers or a mixer using the Line output or Balanced Audio connections. Set the COLLABORATE® Live Volume to 50%. Play the sample audio by pressing the **Play** button. Use the external amplifier or mixer to adjust the volume within the room to a comfortable level.

Afterward, the COLLABORATE® Live audio control can be used to increase/decrease the audio to a desired level during sessions.

Volume

After attaching the HDMI output to the monitor, set the COLLABORATE® Live Volume to 50%, then play the sample audio by pressing the Play button. Use the monitor audio adjustment to set the volume within the room to a comfortable level. Afterward, the COLLABORATE® Live audio control can be used to increase/decrease the audio to a desired level during sessions.

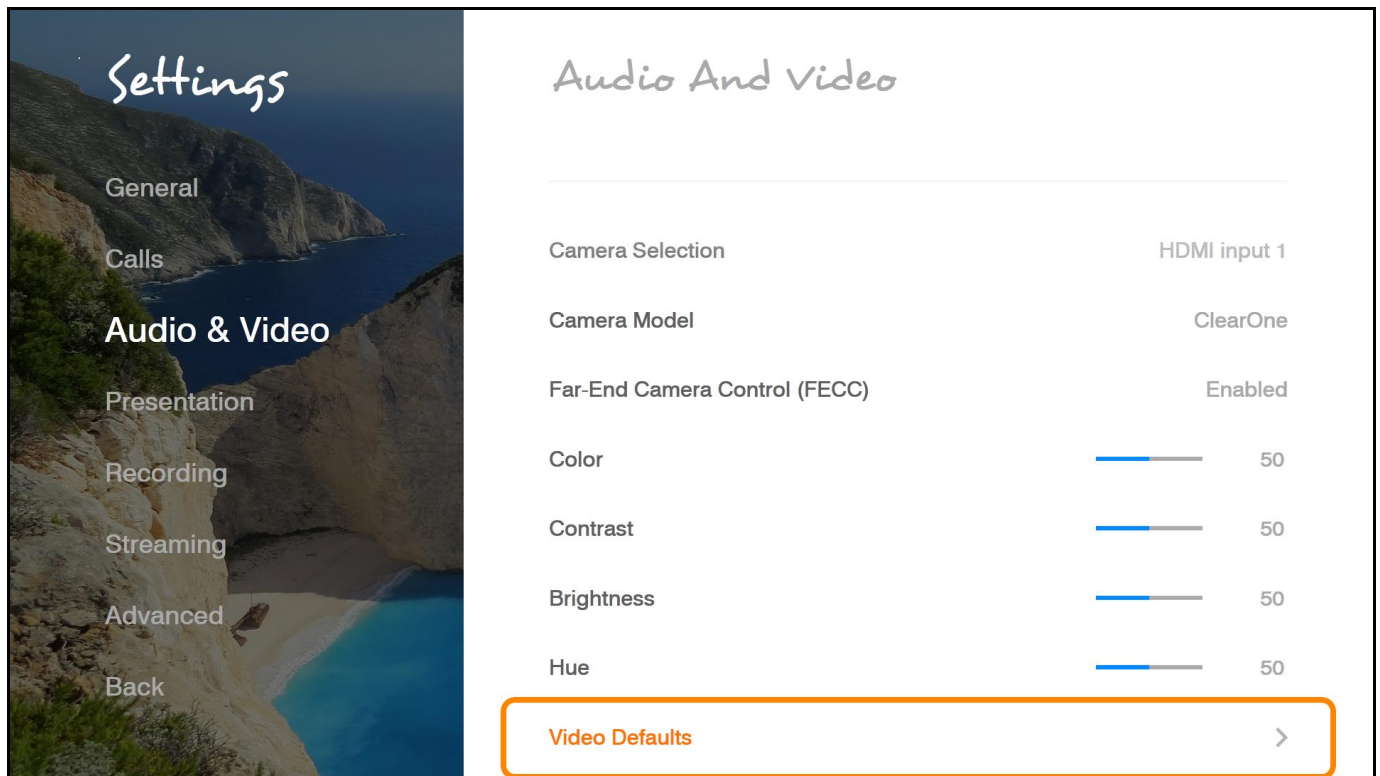
CONFIGURING THE CAMERA

Before you begin videoconferencing, you need to make sure that the cameras connected to the COLLABORATE® Live 600 are properly configured. Cameras are configured via the Camera Settings window.

To access the camera settings:

1. Press OK on the remote control. The main menu appears.
2. Using the remote control's Navigation arrows, select Settings > Audio & Video

The Camera Settings window appears.



To configure the camera settings:

1. In the Camera Settings window, select the correct options from the Source.
2. Optional: Set the percentage (%) of Color, Contrast, Brightness, and Hue. You can leave the default settings of these parameters unchanged.
3. Select the correct option from the Camera Model.
4. Select the Far End Camera Control (FECC) check box to enable the remote side to control your camera (unavailable when working with SIP).

CONTROLLING THE CAMERA

You can control the camera position using the remote control's arrow buttons in idle mode or during a videoconference. To control the camera's zoom, use the zoom-in / zoom-out button.

During a videoconference, you can control the remote side's camera by pressing on Far-End button on remote control and then using the arrows.

CONFIGURING THE DISPLAY

The display settings determine the method by which video is displayed on the screen. Adjust the display settings depending on the room you are using for videoconferencing and on your distance from the screen.

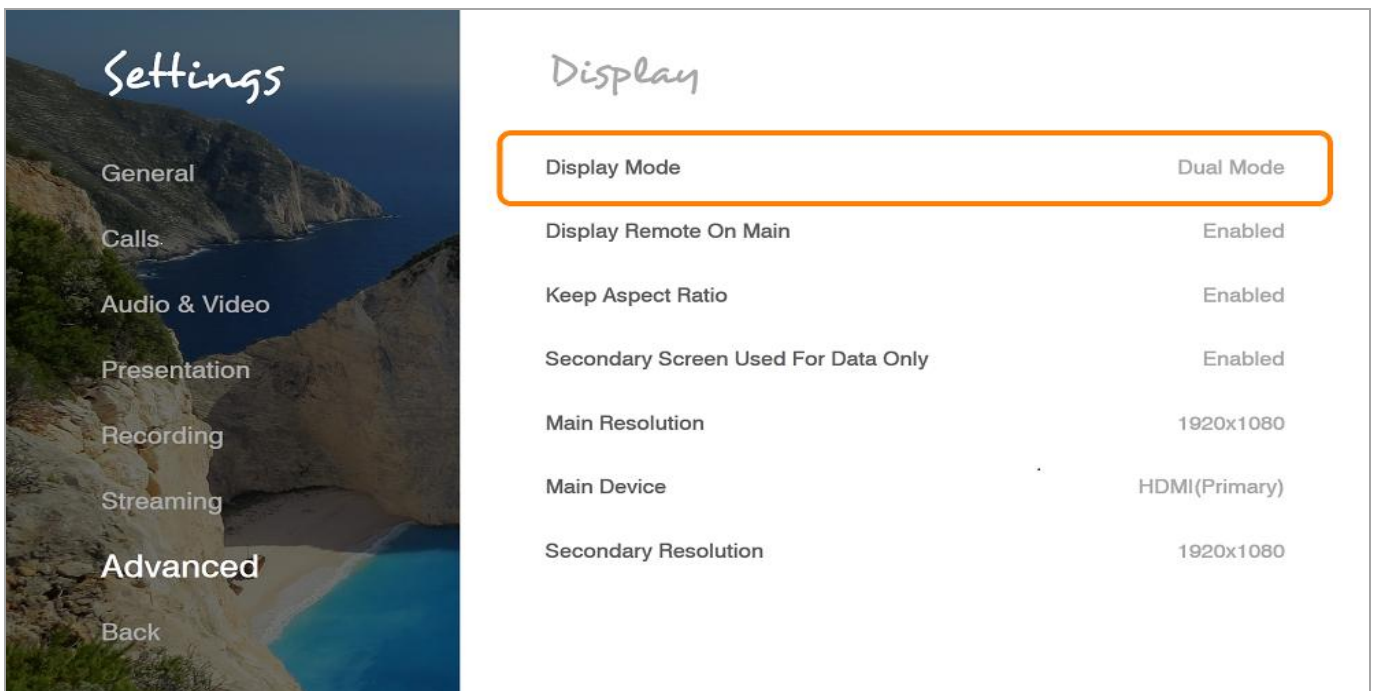
Note:

The term “screen” refers to any type of monitor you are using (LED, LCD, and so on).

To access the display settings:

1. Press **OK** on the remote control. The main menu appears.
2. Using the remote control’s Navigation arrows, select **Settings>Advanced > Display**.

The Display Settings window appears. Please note that the options shown will change when the system detects that a second display is connected and automatically switches to Dual Mode.



To configure the basic display settings:

Display Mode (Configured automatically) –

- **Single Mode** – Both videoconferencing parties are displayed on a single screen.
- **Dual Mode** – Conferences are displayed on two screens.

Note:

Incoming resolution in dual mode is limited to 1080@30.

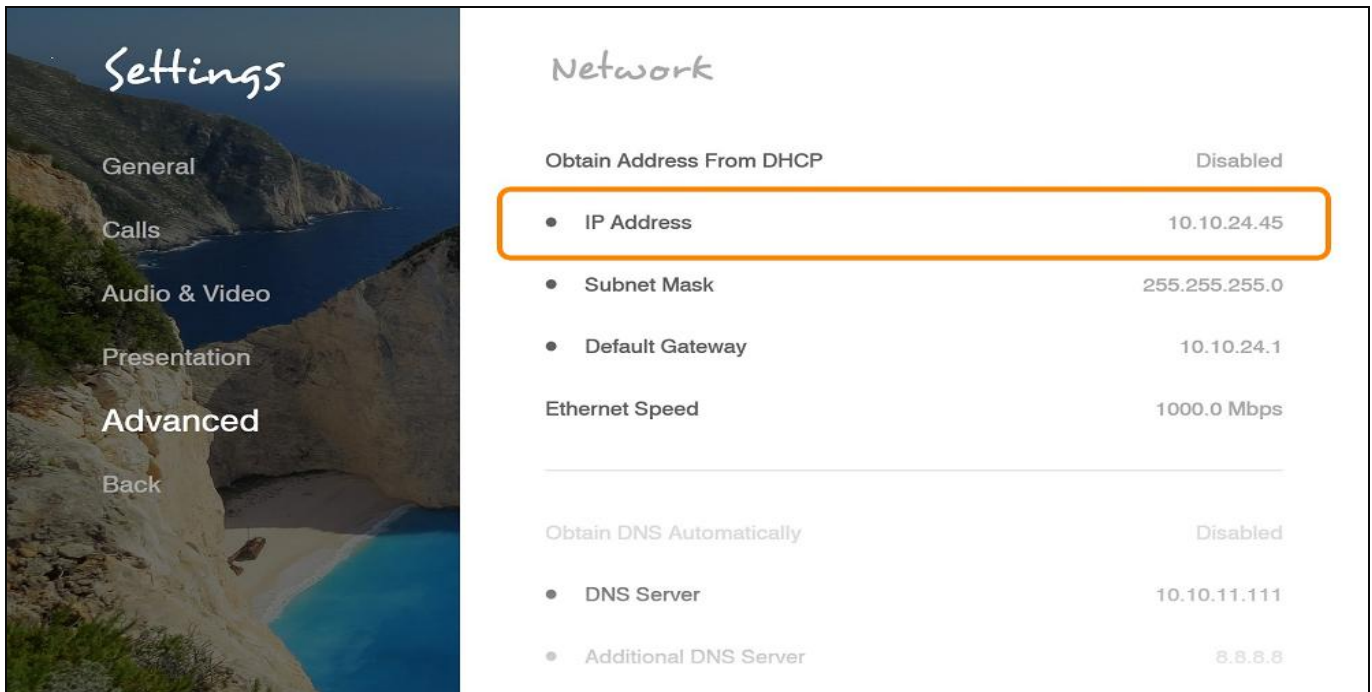
- **Display Remote on Main** – When using multiple monitors, display the remote side on the main display. Uncheck to display the remote on the secondary monitor.
- **Device and Resolution** – Select an option from the lists.
- **Keep Aspect Ratio** – Select this option to keep the original aspect ratio on screens that have a different aspect ratio.
- **Secondary Screen Used for Data Only** – Select to use secondary monitor only when data is sent / received.

LAN SETTINGS

In the IP Settings window, you can configure TCP/IP networking parameters for Collaborate

To edit system settings:

1. Select **Network**. The IP Settings window appears.



2. In the Network Settings window, set the following options and parameters
Obtain Address from DHCP Server – Select the checkbox to obtain an IP Address from a DHCP server.

- **IP Address** – Set the IP Address for this system. If using a DHCP server, the address obtained from the DHCP server is displayed.
- **Subnet Mask** – Set the subnet mask number for your network. If using a DHCP server, the address obtained from the DHCP server is displayed.
- **Default Gateway** – Set the IP Address of the default gateway router. If using a DHCP server, the address obtained from the DHCP server is displayed.
- **Obtain DNS Automatically** – Use the DHCP server to decide your DNS server address. If you do not select Obtain address from DHCP server, fill in the following fields:
 1. **DNS Server** – Set the IP Address of the DNS server. If using a DHCP server, the address obtained from the DHCP server is displayed.
 2. **Additional DNS Server** – Alternative DNS server, to be used in case the first DNS server defined can't supply the needed services.
 3. **DNS Suffix** – Set the DNS domain suffix to be used by this system.
- **Ethernet Speed** – Displays the network interface speed.

Note:

Modify these settings only if they are required in your network.

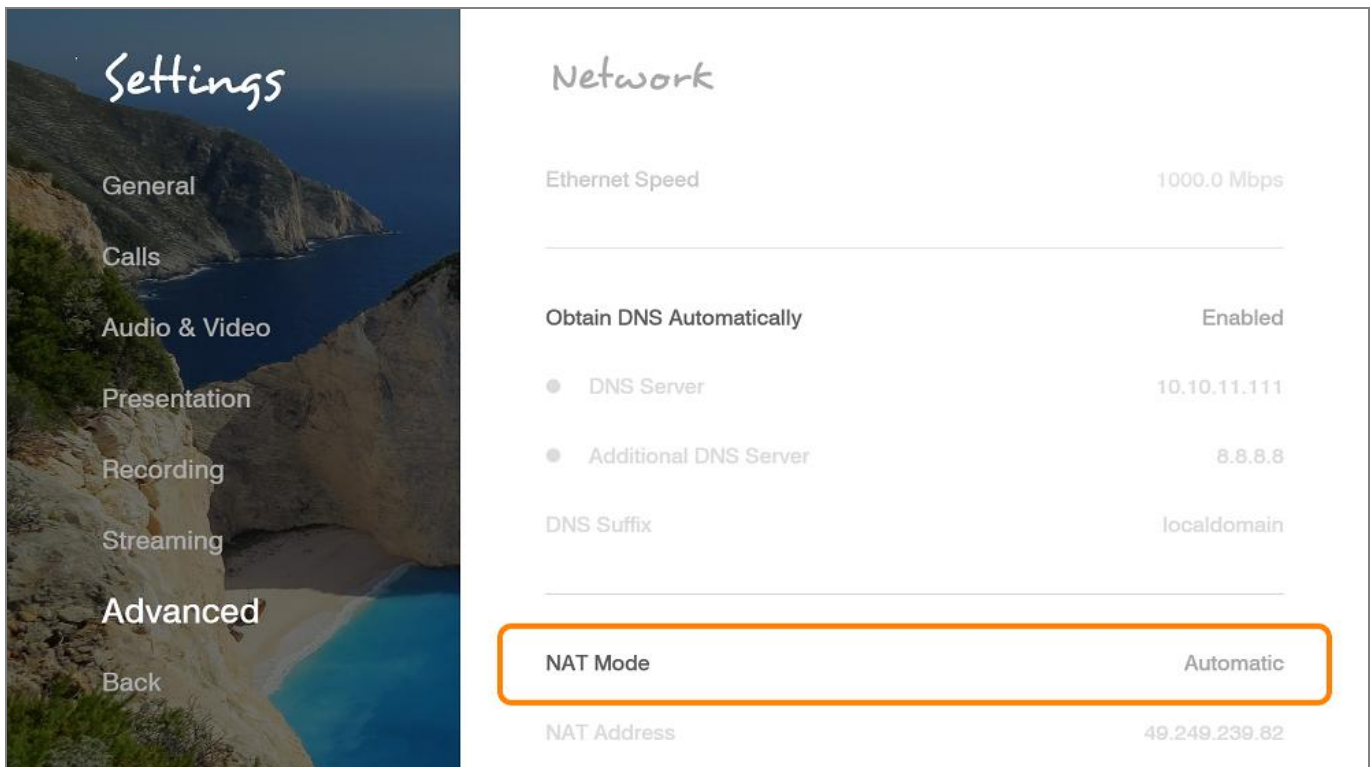
FIREWALL SETTINGS

The Firewall Network Settings contain your system's identification configuration on the local network.

NAT helps protect a LAN from exposure to unwanted traffic by providing one single external address to remote users. NAT uses a system of local and external addresses to hide a LAN's users from other networks. A NAT server translates local parties' addresses to an external address, which is then used to identify the local party to remote parties. Therefore, remote parties use this external address to call the local party, without knowing its actual local address.

To access Firewall/NAT Settings:

1. Select Settings>Advanced>Network.



2. In the Firewall window, set the following options and parameters:

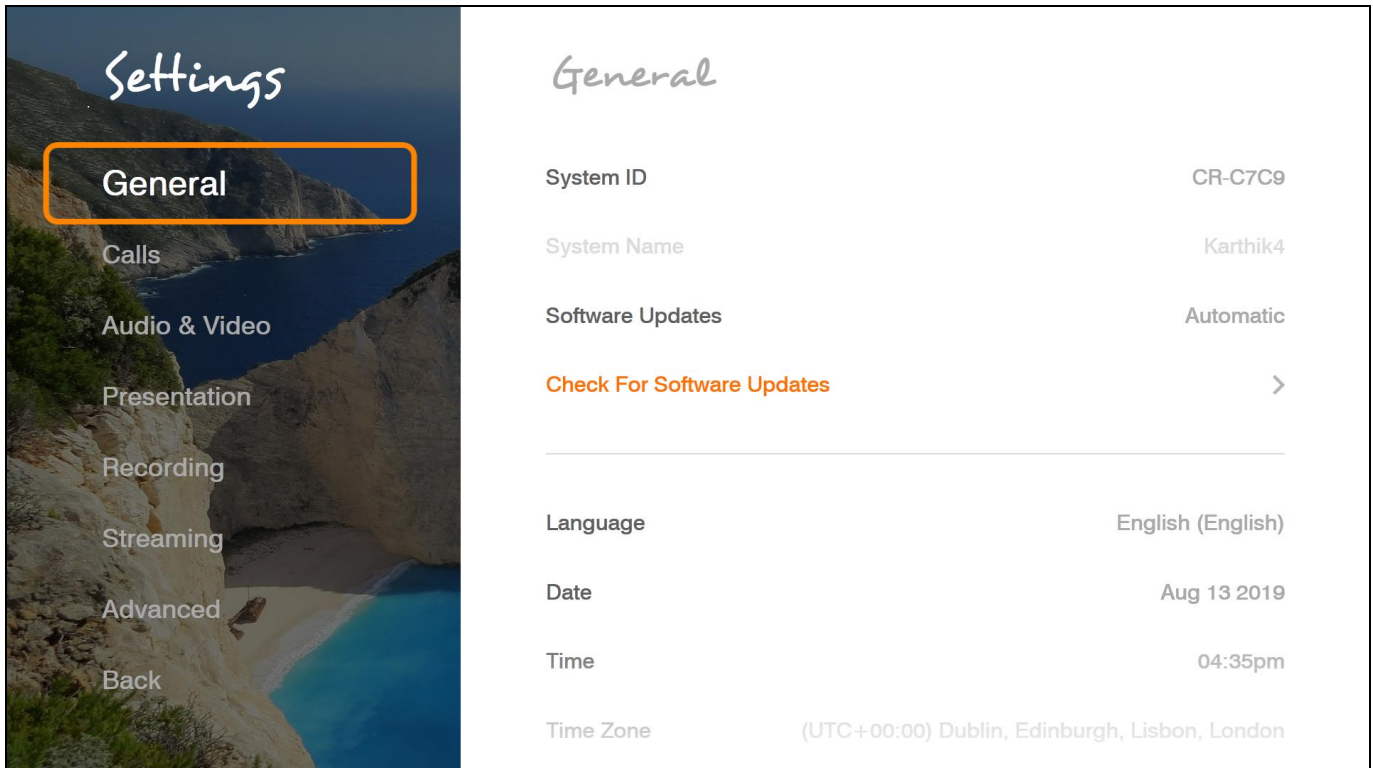
- **NAT Mode:**
 1. **Disabled** – Callers to the organization LAN are not identified.
 2. **Manual** – Enter your external IP Address. The NAT device maps this to your internal extension number.
 3. **Automatic** – The NAT device recognizes your IP Address and maps it to your internal extension number when you dial out through your organization LAN.
- **NAT Address** – If your organization uses NAT when communicating with parties in another LAN or WAN, type the external address for your videoconferencing device.

GENERAL SETTINGS

The general settings define general system properties.

To configure general settings:

1. Select Settings>General:

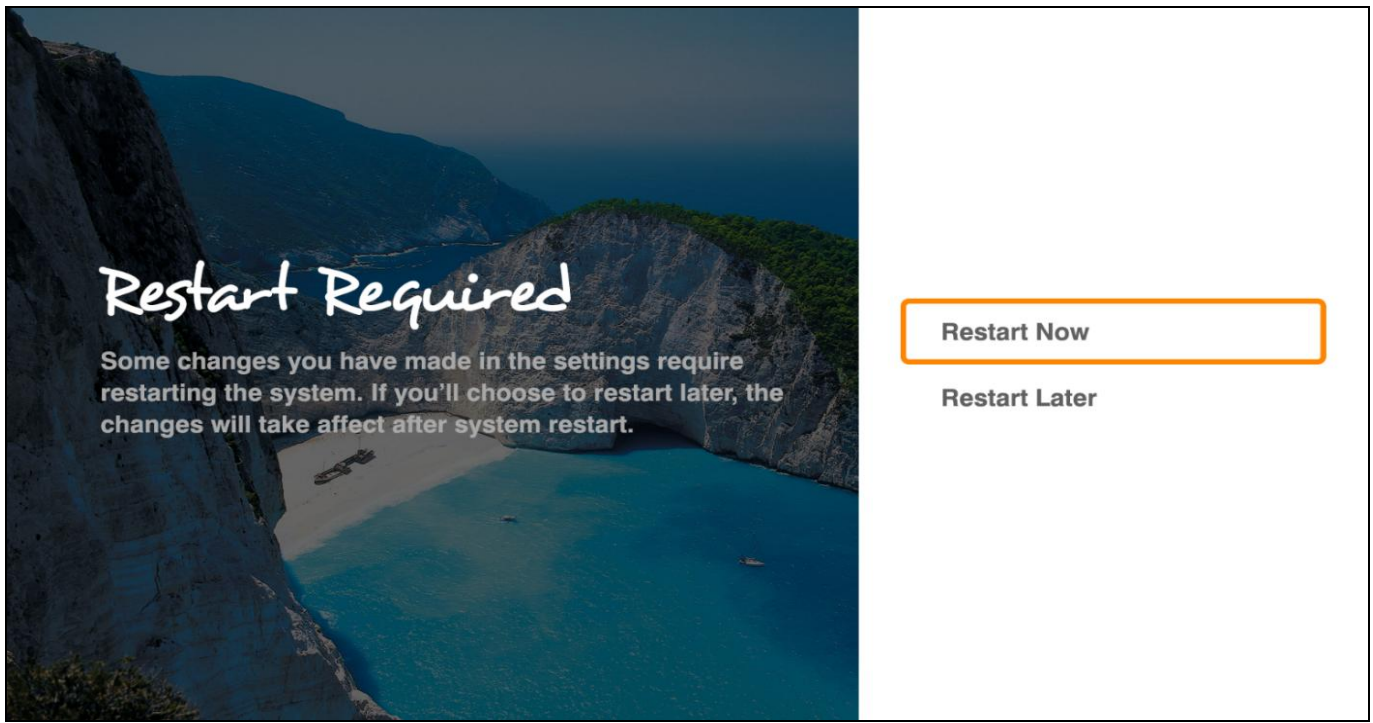


2. In the General Settings window, set the following options and parameters.

- **System Name** – Set the system title that will represent the unit during a session. Note: this will be automatically overwritten if you register to our Space service.
- **Language** – Select the desired language for the user interface. Click **Apply**. (A system restart is required after changing the system language.)
- **Date** – If not already set, enter the current date.
- **Time** – If not already set, enter the current time.
- **Time Zone** – Select your time zone.
- **World Clock** – Select the time zones for the clocks displayed on the idle screen.
- **Weather Temperature Unit** – Select Celsius or Fahrenheit for the display.
- **Wallpaper** – Select from the available images.
- **Sleep Timeout** – Duration of idle time (in minutes) before the system goes into sleep mode. If set to “0” the system will not automatically go into sleep mode.

3. Select **Apply**.

4. Changes will take effect after system restart.

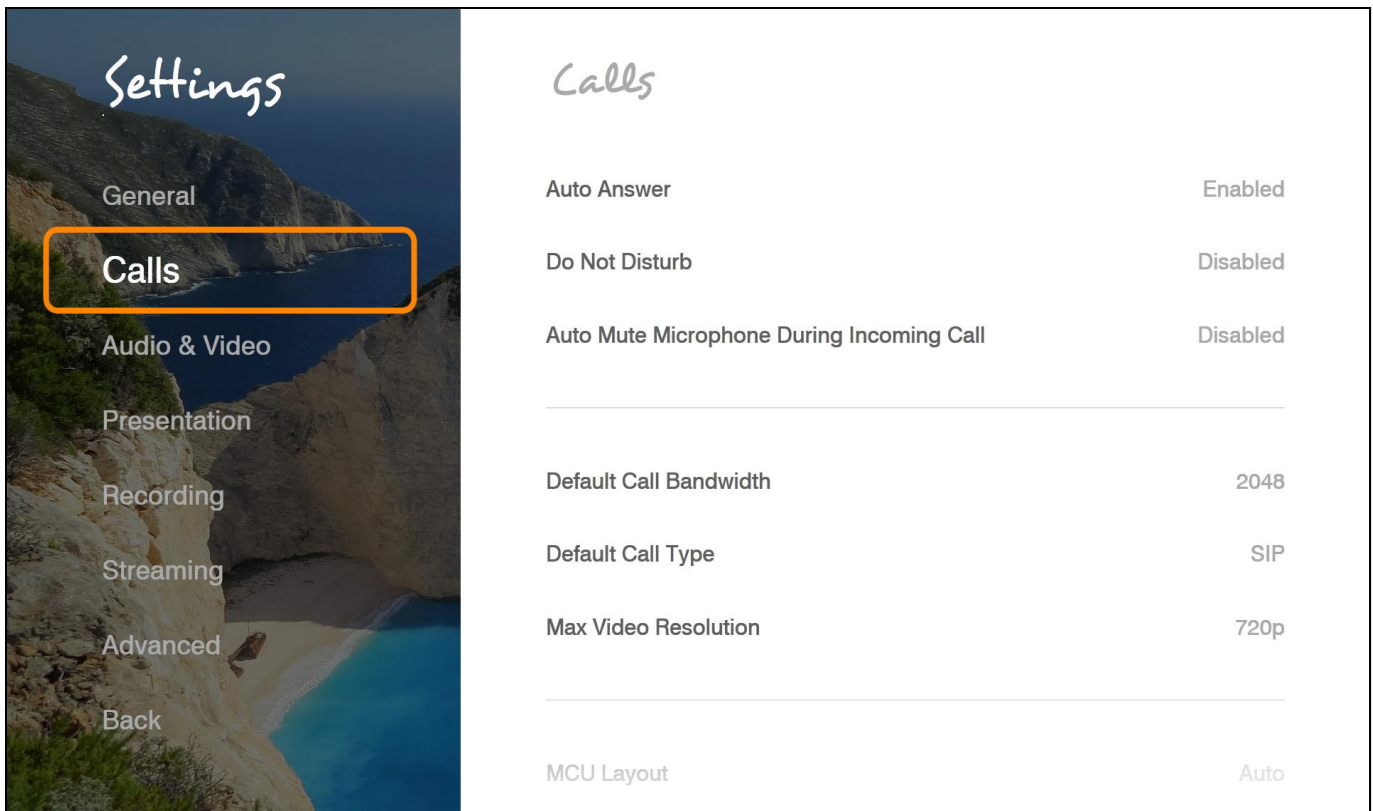


CALLS SETTINGS

In the Calls Settings window, you can define miscellaneous technical settings that affect how video collaboration calls are performed by default.

To configure call settings

1. Select **Settings>Calls**. The Call Settings window appears.



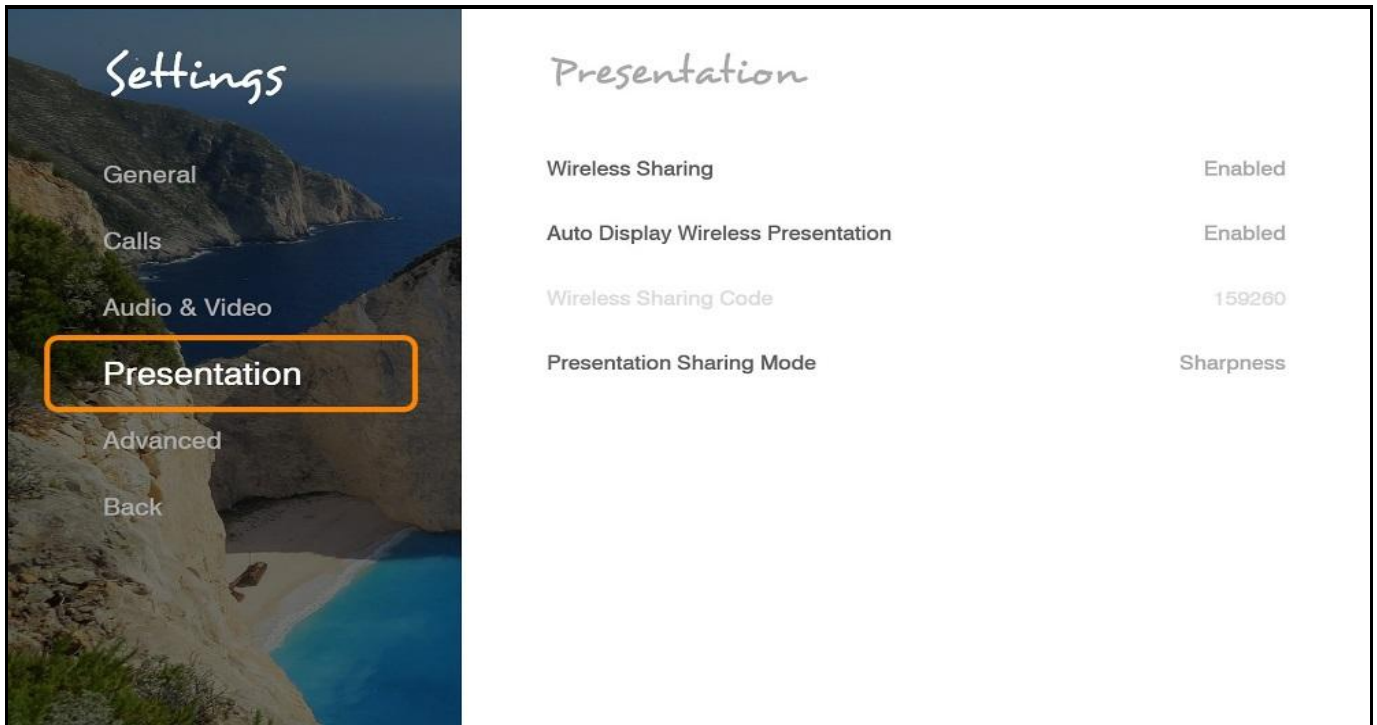
2. In the Call Settings window, set the following options and parameters

- **Auto Answer** – Enables auto answering of incoming calls.
- **Do Not Disturb** – Select to turn on auto reject of all incoming calls.
- **Auto Mute Microphone During Incoming Call** – Enables auto muting the microphone for incoming calls.
- **Default Call Bandwidth** – Select the bandwidth for calls.
- **Default Call Type** – Choose the protocol and path used. GW calls are routed through the Collaborate Space Gateway.
- **Max. Video Resolution** – Set the maximum video resolution.

PRESENTATION SETTINGS

To configure the presentation settings:

1. Select **Settings> Presentation**.



2. In the Presentation Settings window the following properties can be configured:
 - **Enable Wireless Sharing** – Allow wireless data sharing from any PC with Collaborate Share application.
 - **Auto Display Wireless Presentation** – Wireless auto-sharing once sender is connected.
 - **Wireless Sharing Code** – Wireless security code need to be entered by sender.
 - **Presentation Sharing Mode** – Depending on the type of presentation material being transmitted you can choose the data transmit mode priorities either motion or sharpness:
 1. **Motion** - provides the highest possible frame rate. Used when there is a need for higher frame rates, when there is a lot of motion in the data.
 2. **Sharpness** - provides the highest possible resolution. Used when you want the highest quality of detailed images and graphics.

MCU SETTINGS

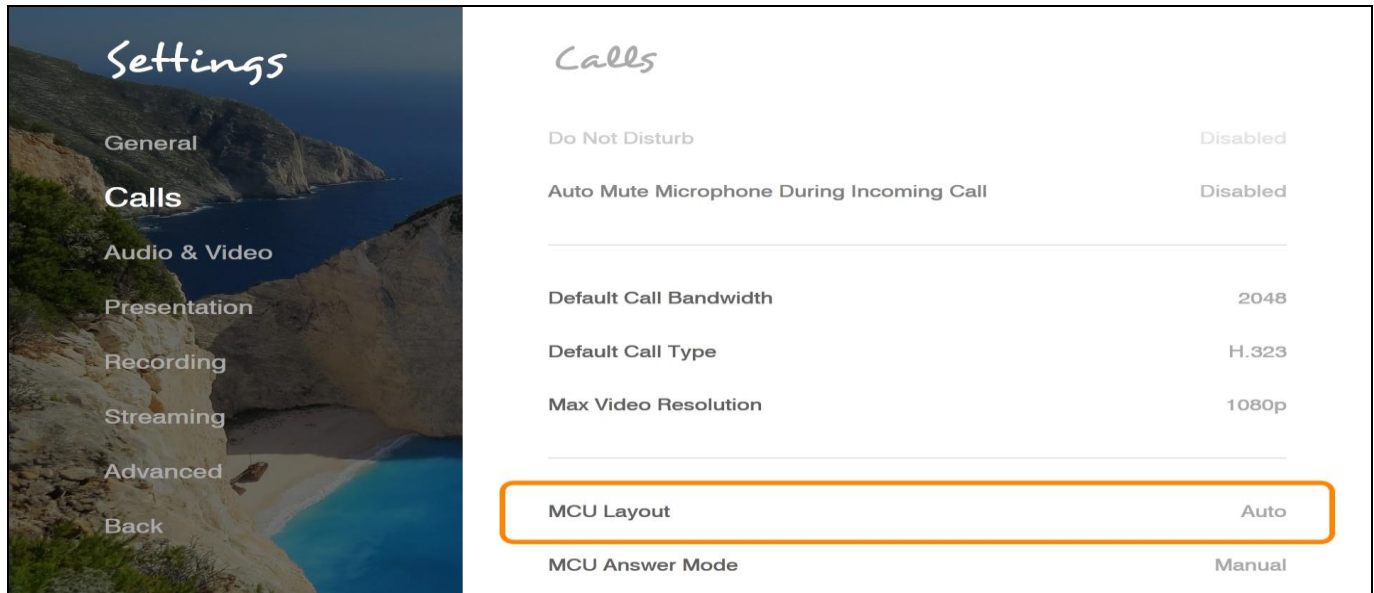
The embedded MCU (optional feature) enables connecting up to 9 endpoints simultaneously from various locations. This MCU capability includes the host system and an additional 8 endpoints.

Note:

Before using this functionality, please verify the licensing capabilities of your system. Press 'Status' on your remote control and verify that the Multisite feature is available in your license.

To configure the MCU settings:

1. Select **Settings>Calls**. The Calls window appears, the MCU settings are at the bottom.



2. In the MCU window, set the following options and parameters:

- **MCU Layout** – Set the default layout for a multipoint call:

Note:

Layout cannot be changed while recording is active during a session.

1. **Auto** – The system will change the layout automatically according to the following principle: for up to 4 participants, the 2x2 layout is used; for 5 or 6 participants, the 5+1 layout is used; for 7 and up to 9 participants, the 3x3 layout is used.
 2. **Voice Switching** – The video stream of the dominant speaker is shown.
 3. **2x2** – The screen is divided into 4 quadrants of the same size. Each quadrant contains an image. If there are more than 4 endpoints in the call using this layout, the dominant speaker appears, replacing an image of a non-dominant speaker.
 4. **3x3** – The screen is divided into 9 rectangle portions of the same size. Each quadrant contains an image.
 5. **5+1** – This layout divides the screen into six rectangle portions. One is larger than the other parts and contains the image of the dominant speaker at any given time.
- **Answer Mode** – Set the default answer mode for the second and subsequent calls:
 1. **Accept All** – Automatically accept incoming calls
 2. **Reject All** – Automatically reject all incoming calls
 3. **Manual** – Display a prompt each time a call comes in

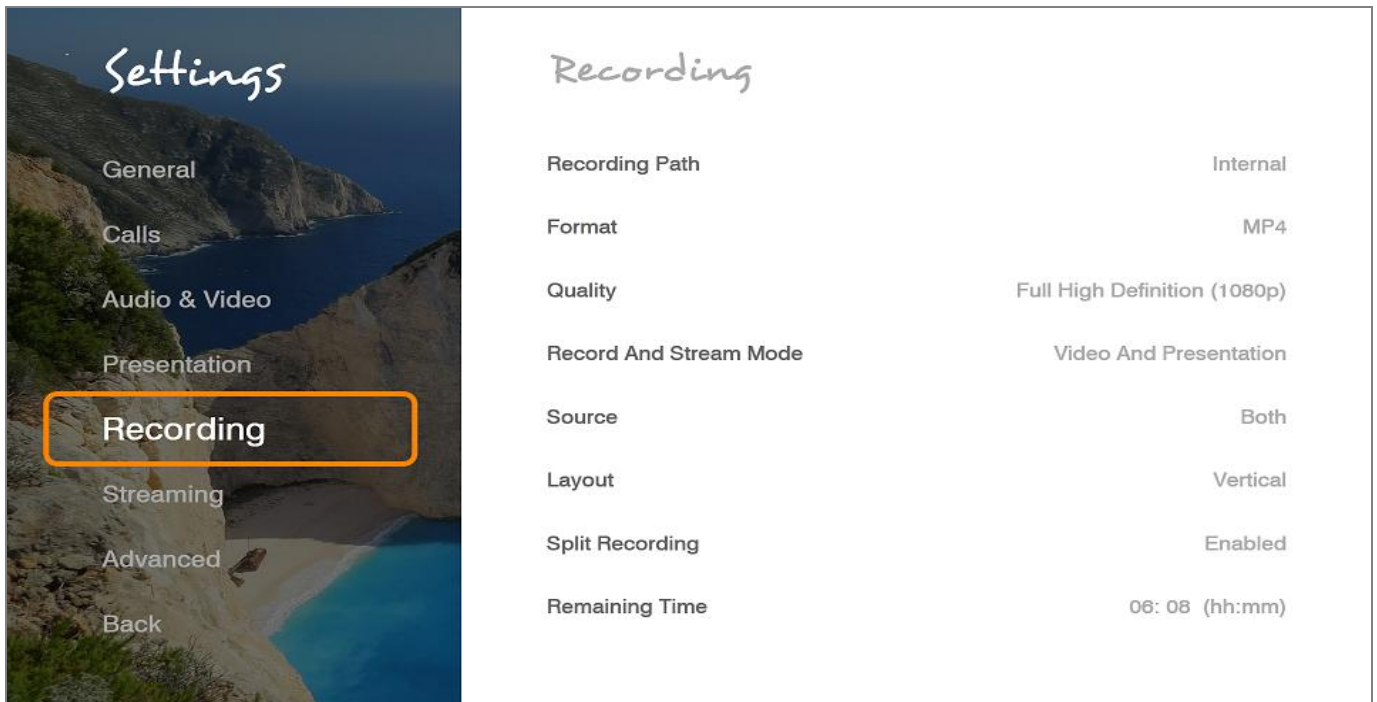
Incoming calls will be answered using the settings you configured.

RECORDING SETTINGS

You can define the local directory in which recordings should be saved.

To configure the recording settings:

1. Select Settings>Recording. The Recording Settings window appears.



2. In the Recording Settings window the following properties can be configured:

- **Recording Path** – Select to set the path of the recording directory. This option is useful when changing the recording location to a USB flash drive or to a remote computer that in the same work group.
- **Format** – Choose between WMV and MP4 formats. Please note that this also changes the streaming video format.
- **Quality** – Select the quality of the video recordings and streaming made on COLLABORATE® Live.
 - a. Full High Definition (1080p) – Record/Stream at image resolution of 1920x1080 pixels.
 - b. High Definition (720p) – Record/Stream at image resolution of 1280x720 pixels.
 - c. Standard Definition – Record/Stream at image resolution of 672x384 pixels.
- **Record and Stream Mode** – Choose if video and/or presentation will stream and record.
- **Source** – Choose if local or remote images will stream and record.
- **Layout** - Choose streaming layout:
 1. **Vertical** – Stream video in top and bottom mode.
 2. **Horizontal** – Stream video in side by side mode.

- **Split Recording** – Long recordings can be automatically split into smaller files by enabling this option recorded remaining time below
- **Remaining Time** – The remaining recording time is calculated according to the available storage memory and the current settings for recording quality.

Note:

Changing the recording quality also changes the Streaming quality.

RECORD TO NAS DRIVE (Network Hard Drive)

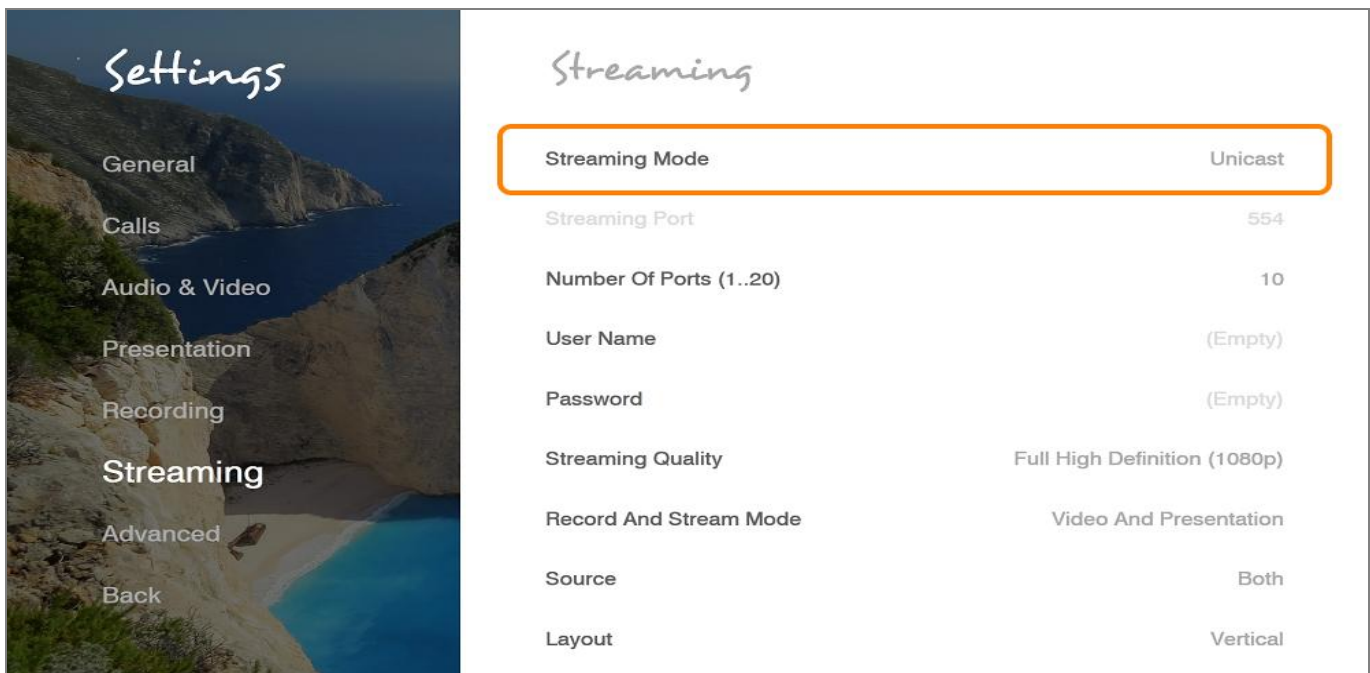
You can record from the COLLABORATE® Live 600 to a Standard Network Attached Storage (NAS).

1. Verify that the recording destination PC /server workgroup is WORKGROUP (under advanced system settings).
2. Create new folder in destination PC
3. Right-click on the folder/drive that you wish for sharing the recording and select **Properties**.
4. Select the **Sharing** tab and click on **Advanced Sharing**.
5. Select the **Share this folder** box and enter a share name for it.
6. Click on permissions, mark the group entry “Everyone” and check the **network permissions** checkbox: **Read, Change** and **Full control**. Click **OK**.
7. In the sharing tab, click on **Share**. In the text field choose everyone and click **Add**. Set the permission level of everyone to **Read/Write**.
8. Right-click on the folder and select **Properties** again.
9. Select the tab “Security” and click on **Edit..**, followed by **Add...**
10. In this window, enter “everyone” into the empty field at the bottom and click on **OK**.
11. Examine the permissions for “Everyone” and make sure they are all set correctly. If everything is in order, close all windows with **OK**.
12. Open your control panel and then open the “**Network and Sharing Center**”.
13. Click on **Change advanced sharing settings**.
14. Look for your active profile at the top, expand it (if it isn't already) and scroll down to the **Password protected sharing** option.
15. Select the **Turn off password protected sharing** option and click on **Save changes**. Be advised that this will make all the shared folders readily accessible for anyone inside your home network.
16. In COLLABORATE Web, open **recording settings** tab (Settings / General /Recording).
17. Uncheck the default check box and enter the folder path: \\destination IP \ folder name (e.g. \\172.20.1.78\Collaborate).
18. Start recording

STREAMING SETTINGS

To configure the streaming settings:

1. Select **Settings>Streaming**. The Streaming Settings window appears.



2. In the Streaming Settings window, the following properties can be configured:

- **Streaming Mode** - Choose between unicast and multicast.
- **Streaming Port** – Enter the streaming port number. The default port is 12100 for WMV video format and 554 for MP4 video format.

Note:

Port number of MP4 streaming cannot be modified.

- **Number of Ports** - Enter the number of streaming ports. The default number of streaming ports is 10.
- **Streaming Quality** – Select the quality of the video recordings and streaming made on COLLABORATE® Live:
 - a. Full High Definition (1080p) – Record/Stream at image resolution of 1920x1080 pixels.
 - b. High Definition (720p) – Record/Stream at image resolution of 1280x720 pixels.
 - c. Standard Definition – Record/Stream at image resolution of 672x384 pixels.
- **Record and Stream Mode** – Choose if video and/or presentation will stream and record.
- **Source** – Choose if local or remote images will stream and record.
- **Layout** - Choose streaming layout:
 1. **Vertical** – Stream video in top and bottom mode.
 2. **Horizontal** – Stream video in side by side mode.

Note:

Changing the recording quality also changes the Streaming quality.

MULTICAST SETTINGS

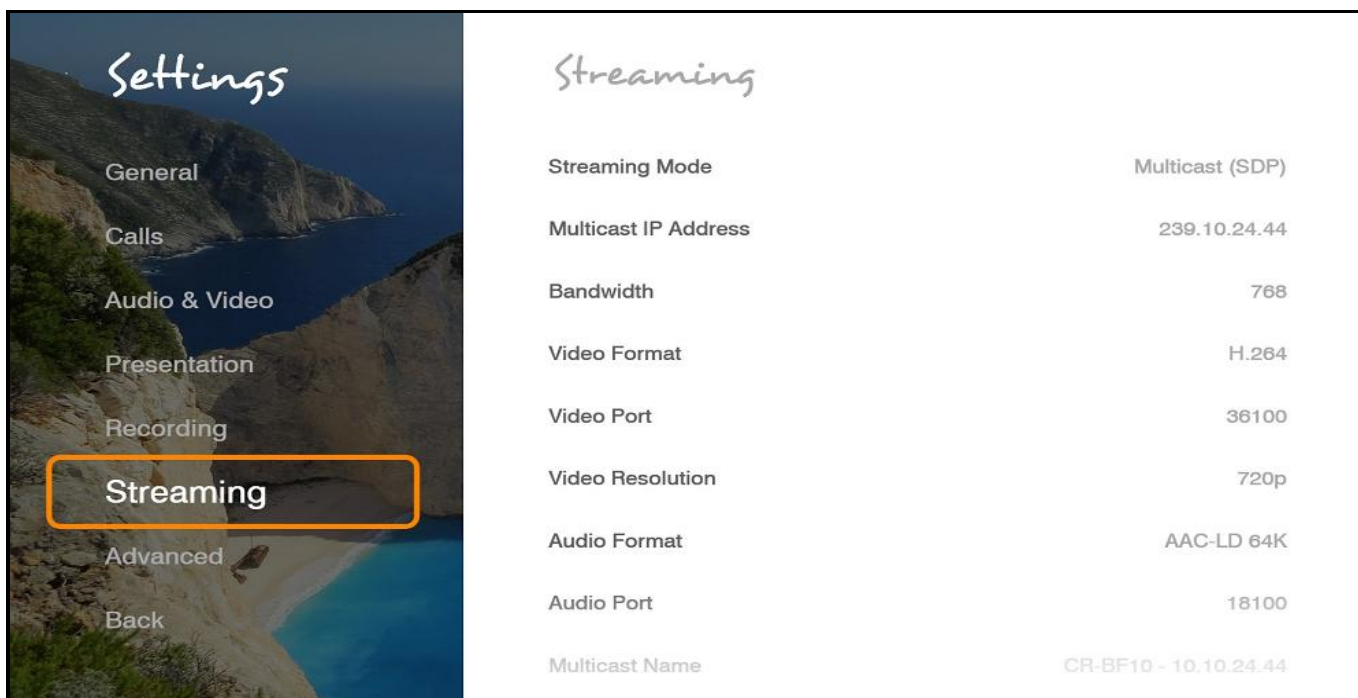
Session multicasting allows you to broadcast your session using the multicasting networking transport technology, which allows users to send a video stream that can be received by multiple recipients, all listening on a single multicast address. Multicasting a session from your COLLABORATE® Live 600 allows numerous passive viewers to view the session. This is typically used at lectures, or any session that passive viewers can benefit from. Multicast sessions can be viewed by all ClearOne endpoints and the Apple QuickTime viewer.

The Multicast Settings window allows you to define how multicast sessions are initiated by COLLABORATE® Live 600.

To access the multicast settings

1. Select Streaming.

The below screen refers to SDP streaming mode.



In the Multicast Settings window, set the following options and parameters

- **Multicast IP Address** – IP Address and gateway. The IP is dynamic according to unit's IP. The first subgroup of the IP format (AAA.BBB.CCC.DDD) is set to 239 according to the standard. You can change it to any value from 224 to 239, and you can also change the rest of the sub groups (not recommended for multicast communications).
- **Bandwidth** – Maximum bandwidth (in Kbps) allowed for outgoing multicast streams.
- **Video Format** – The digital encoding format used during the multicast transmission; by default, is set to H.264.
- **Video Port** – Number of the port through which the video multicast passes.
- **Video Resolution** – Select the required video resolution from the drop-down list.
- **Audio Format** – The Audio codec responsible during the transmission; by default, is set to AAC-LD.
- **Audio Port** – Number of the port through which the audio multicast passes.

- **Multicast Name** – The identifying name of the multicast.
- **Time to Live** – The number of router hops allowed.
- **Announcement Rate** – SDP announcement rate in seconds.
- **Refresh Video Rate** – The video image refresh rate in multicast streams; an interval of 5 seconds is set by default.
- **Source** - Choose videos to be streamed between local and remote.
- **Layout** – Choose the streaming layout:
 1. Vertical – Stream video in top and bottom mode.
 2. Horizontal – Stream video in side by side mode.

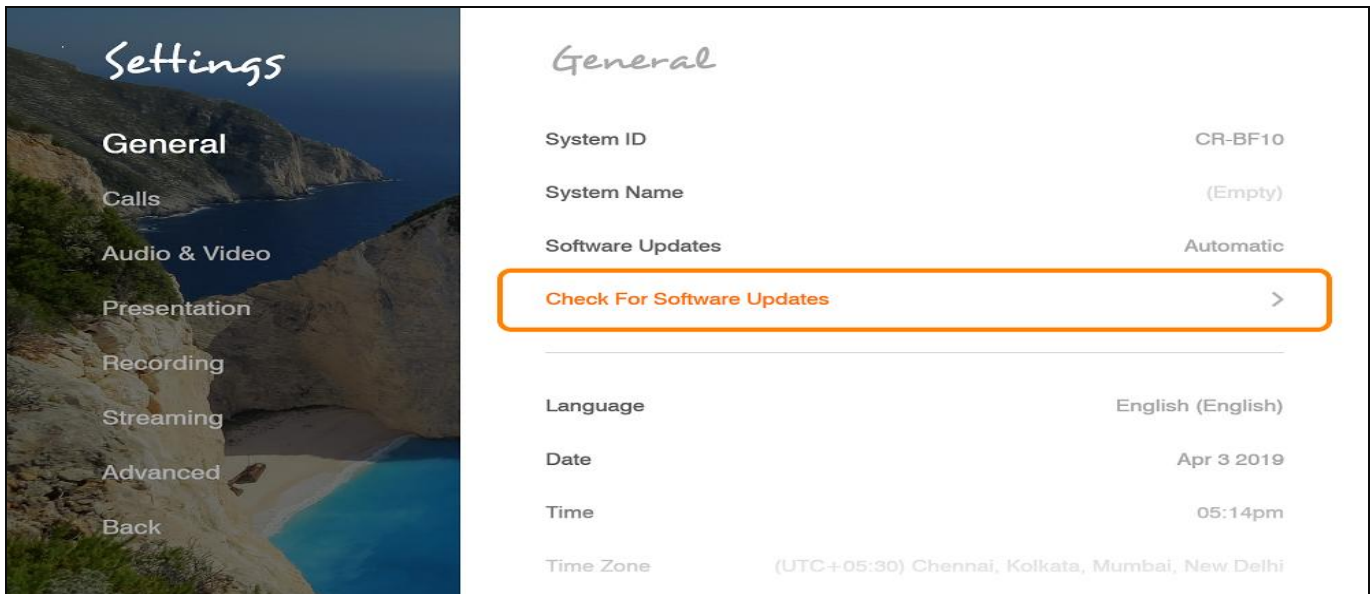
SOFTWARE UPDATES

Configure automatic software updates or check for updates.

To access the update settings:

1. Press OK on the remote control. The main menu appears.
2. Using the remote control’s Navigation arrows, select **Settings>General**

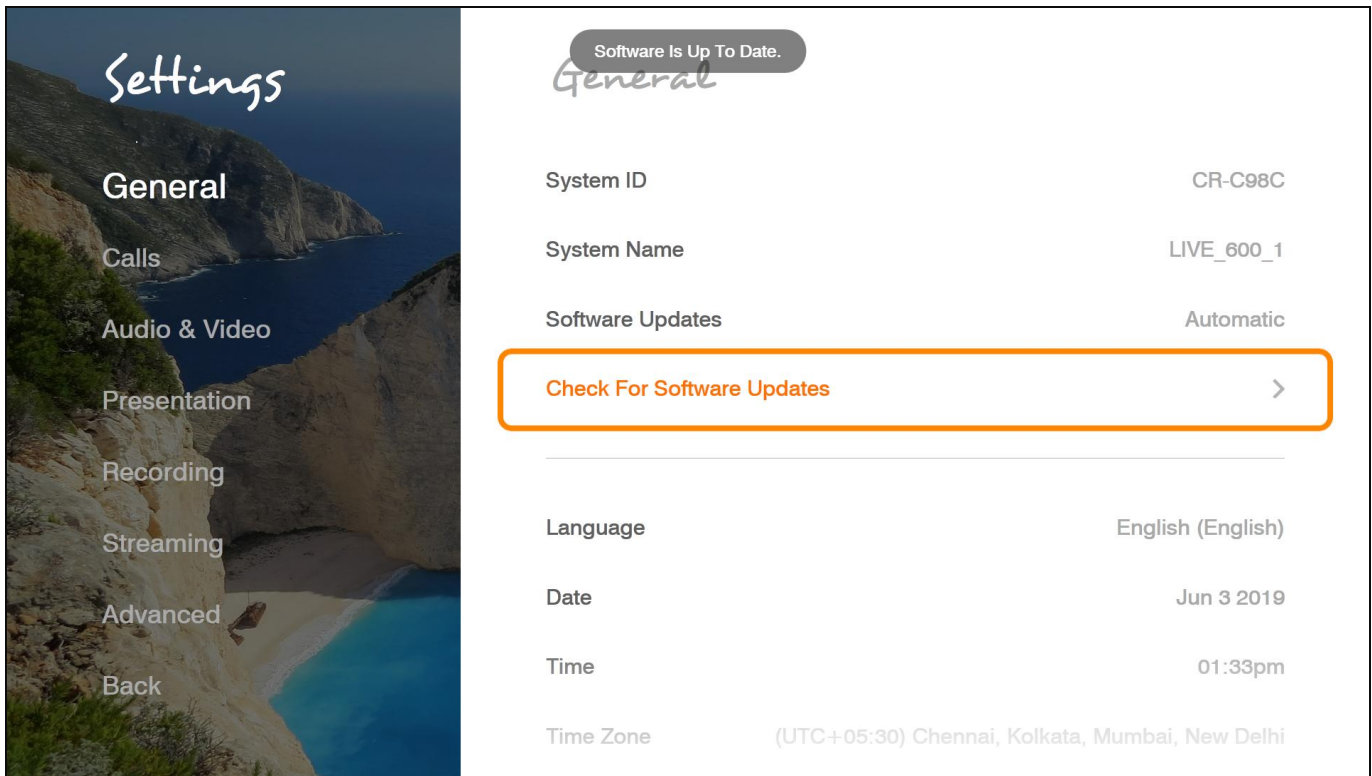
The Update Settings window appears.



To configure the updates settings:

1. **Software Updates** – Choose the “Automatic” option to have the system frequently check for updates. If an update is available, you will get an on screen notification and you can choose to update or not
2. **Check for Software Updates** – Check for updates at this moment. You will get a notification if any new updates are available.

If the system is up to date then it will show a message ” Software is up to date ” as shown below



Chapter 4: Video Collaboration

IN THIS CHAPTER

This chapter explains the video collaboration basics and options using COLLABORATE® Live, and includes the following sections:

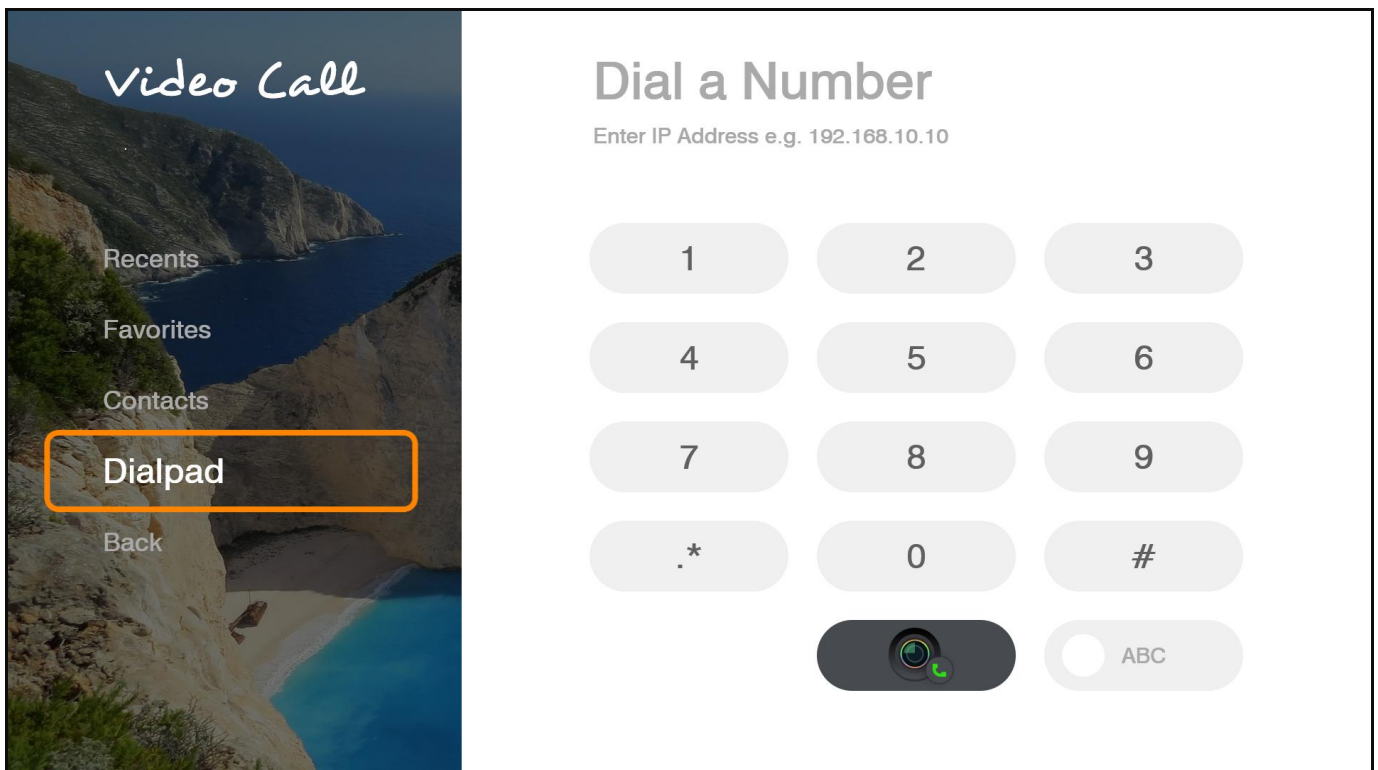
- Starting Calls
- Auto-Answering Calls
- Ending Calls
- Muting the Video
- Switching Image Modes
- Switching Call View Modes
- Using Picture-In-Picture (PIP) Modes
- Call State Indications
- Using Call Tones
- Recording and Streaming
- Data Sharing
- Using Multicasting

STARTING LAN CALLS

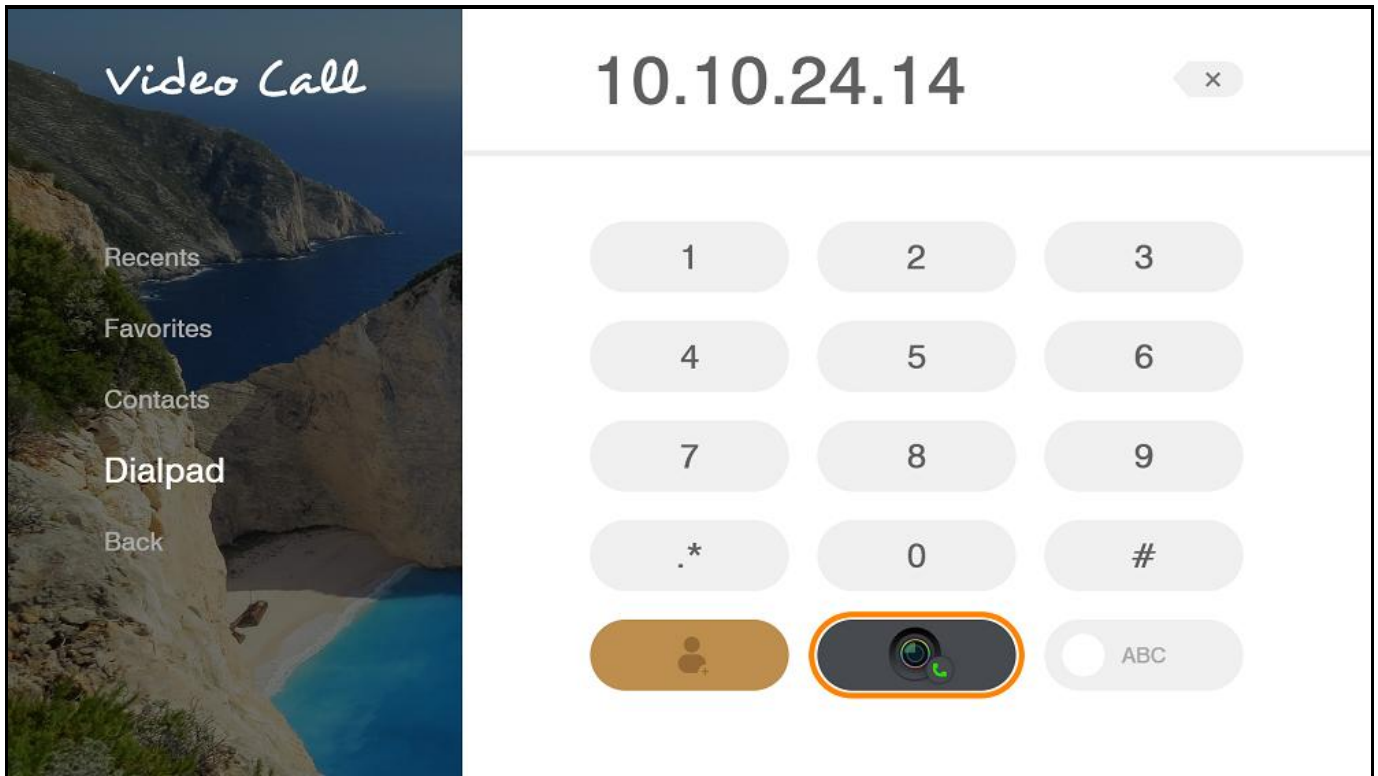
You can start a manual call to a network IP Address that you type in the New Call bar.

To start a call using the manual dialer:

1. Select Video Call > Dial Pad.

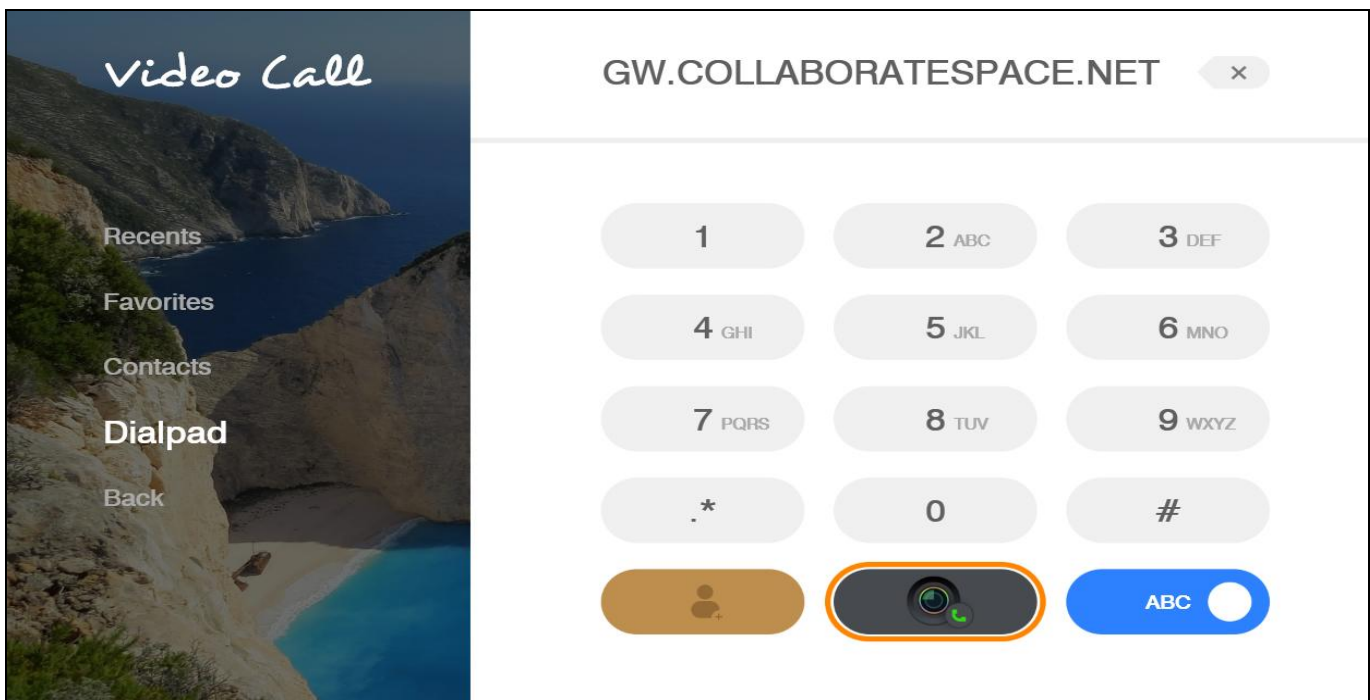


Provide the IP Address.

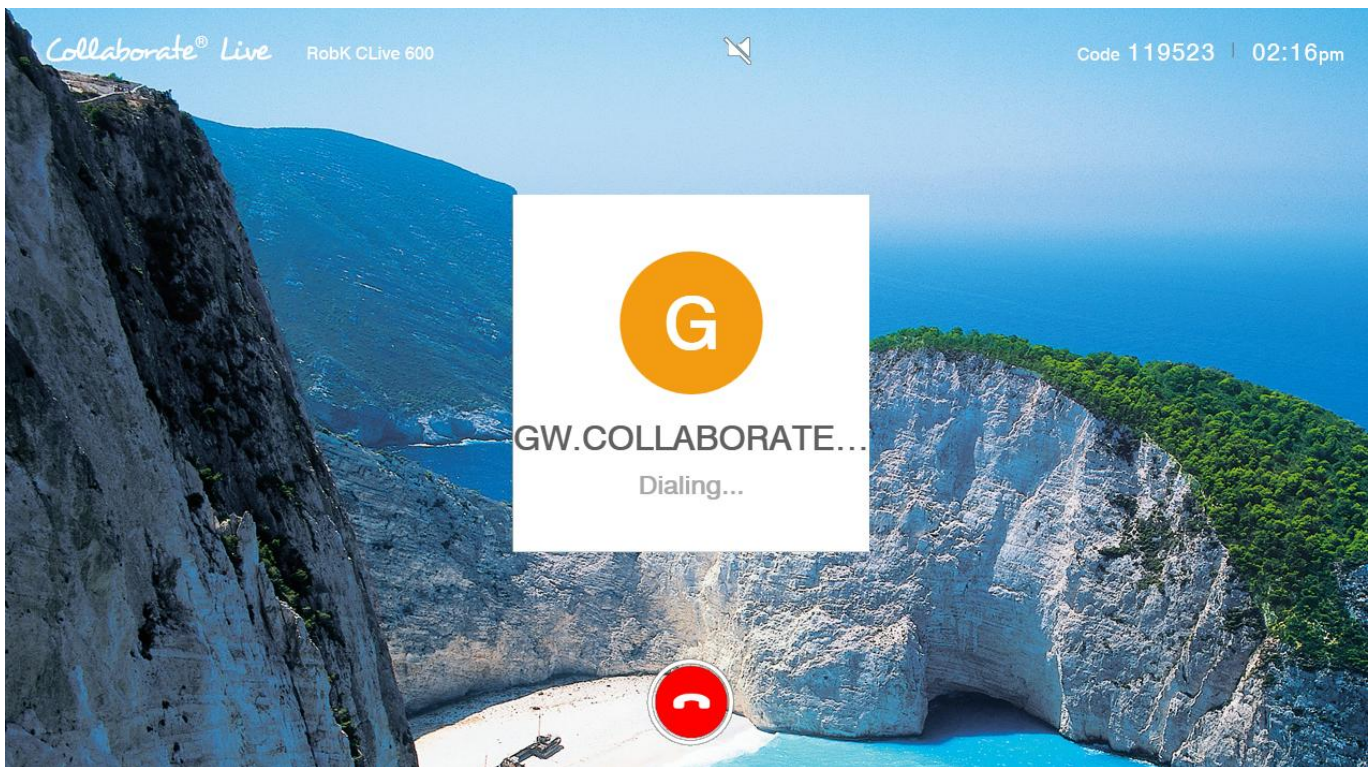


In the **Type** a **Number/Name** field, type the **IP Address** to which you want to call. Alternatively, instead of an IP Address, you can also use an Alias, E.164 number, or a DNS Address (if such are defined on your network).

- To type letters and numbers, make sure that the **ABC** option is selected.



For a video call, you can also press the **Make Call** (green button) on the remote control. The Calling screen appears.



When the call is answered on the far end, the system switches to the Call mode.

AUTO-ANSWERING CALLS

The auto-answer option is found in the **Settings>Calls** menu.

When the auto-answer option is not selected and an incoming call is received, a message is displayed on the screen. You can accept or reject the call using the buttons on the remote control or via the screen message.

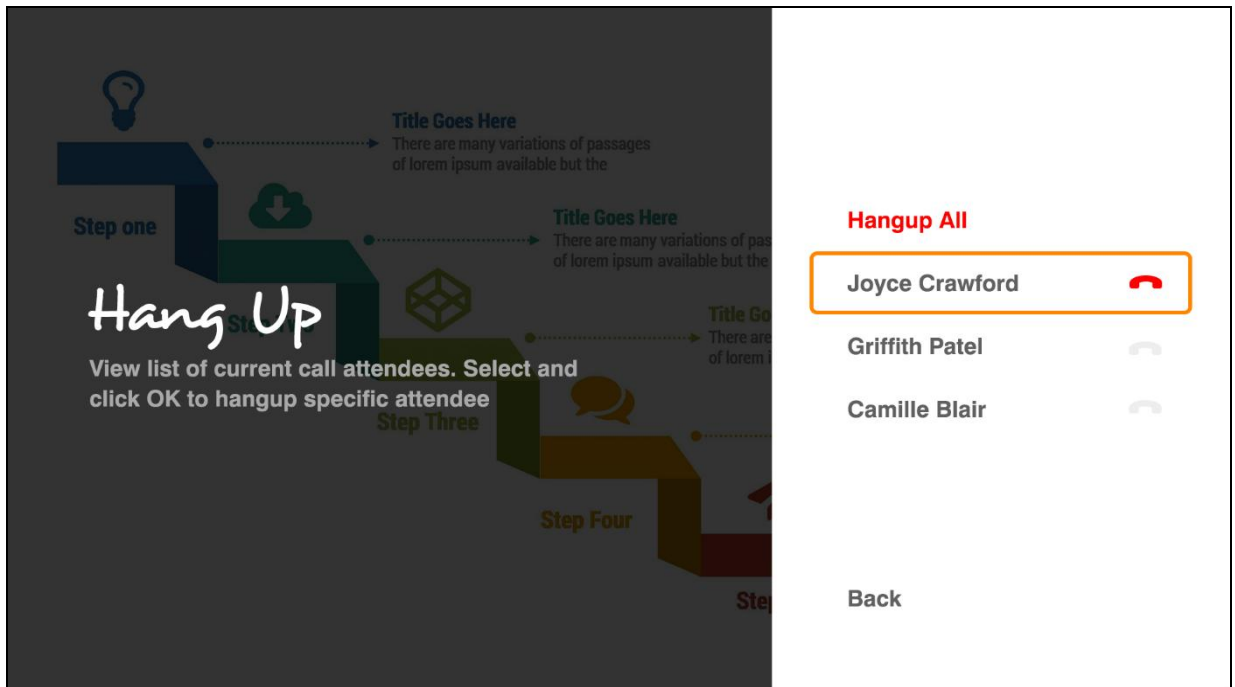
Note:

Auto-answering does not apply to MCU calls. (To configure auto-answering in MCU sessions, see MCU Answer mode also in the Settings>Calls menu.)

ENDING CALLS


You can disconnect the current videoconference call at any time. To end the current call:

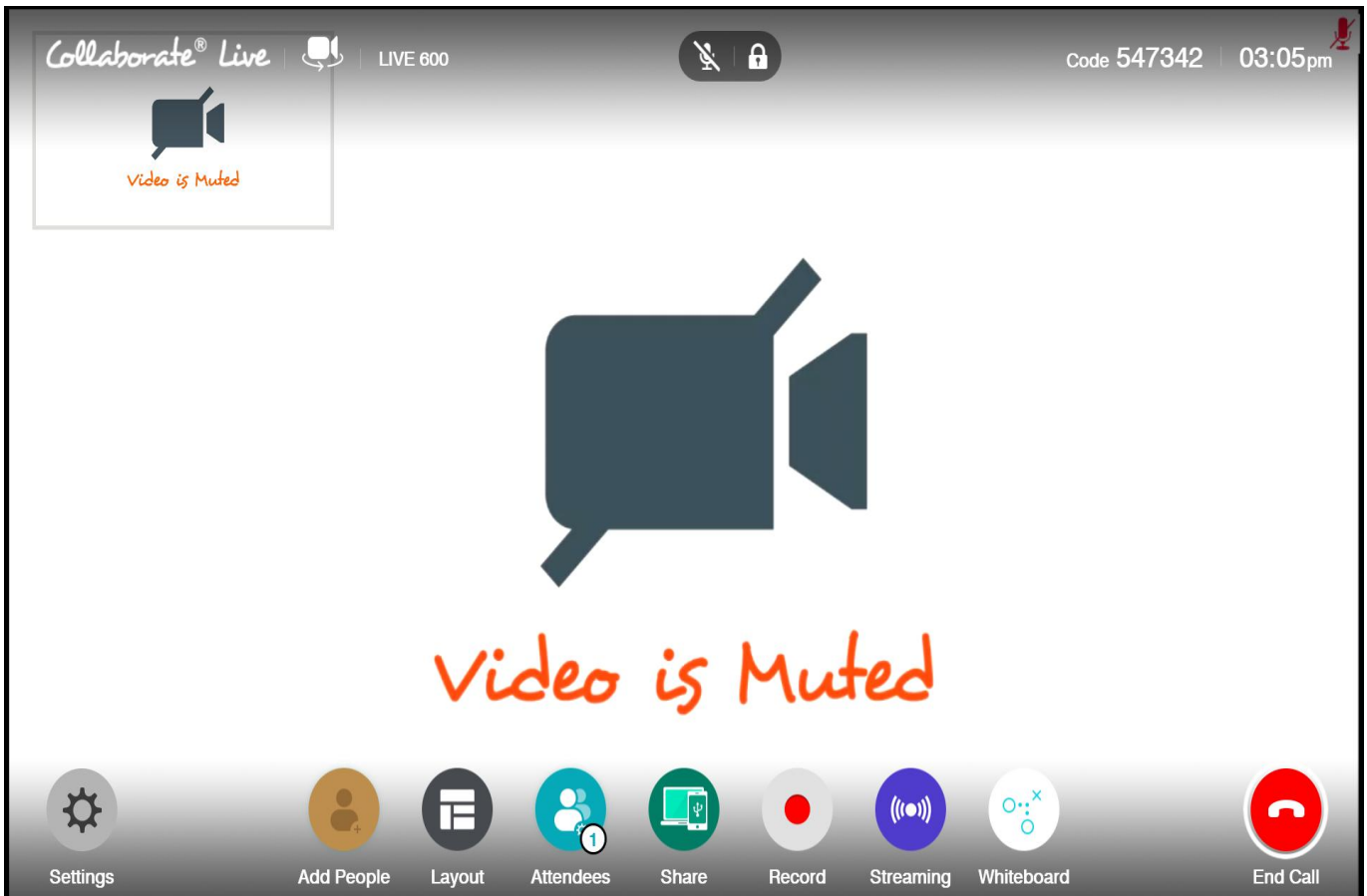
- On the remote control, press the red End Call button,
– or –
- Select **Conference>Hang Up** in the GUI and then press **OK** on the remote control.



MUTING THE VIDEO

Muting video during a videoconference is a preference which is selected via the remote control.

When you press **Mute Video** () during a call, the remote side sees the Mute Video BMP image, which indicates that your video source has been muted.



SWITCHING CALL VIEW MODES

Depending on the type of screen and video interface you are using (HDMI/Display Port); a call may be displayed in single, dual or presentation mode.

SINGLE MODE

Single mode presents a single screen showing the output of the local video camera in the Picture-In-Picture (PIP) screen area (see Using Picture-In-Picture (PIP) Modes) and the output of the remote video camera on the main screen area.

DUAL MODE

Two screens: one showing the output of the local video camera, and a second screen showing the output of the remote video camera.

Once Secondary Display Used for Data Only is checked, the conference will be in a single mode. Once data is shared, the second monitor will display the data.

Note:

Incoming resolution in dual mode is limited to 1080@30.

PRESENTATION MODE

When recordings or files are displayed in data sharing mode, the remote video is shown in a PIP area, while the recordings/files are presented on the main screen area.

USING PICTURE-IN-PICTURE (PIP) MODES

When a conference begins, the local video appears on the monitor in a small rectangular inset located in the upper left corner of the larger remote video display. This display mode is called Picture-In-Picture (PIP).

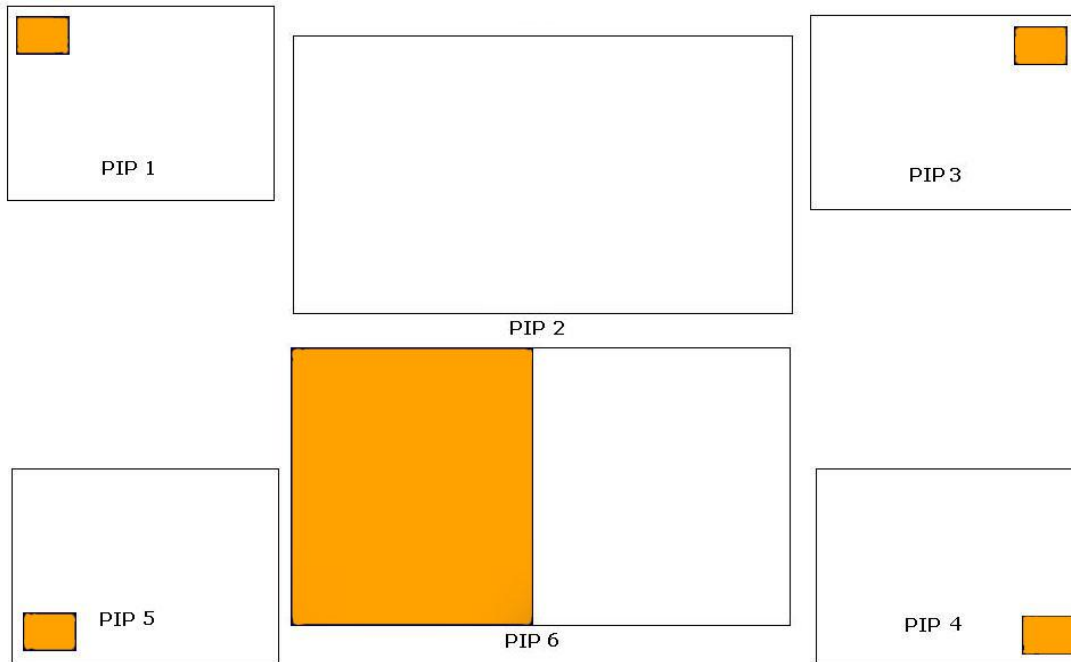
Each time you press the PIP button on the remote control, the PIP image rotates counter-clockwise to the next corner of the screen. Pressing the PIP button after the PIP completes a rotation to all corners then hides the PIP image, and starts again on a subsequent button press.

The default video mode is **PIP 1**, in which the local caller's video is displayed in the small **upper-left** corner, while the remote person is viewed in the large area of the screen. The other modes are:

- **PIP 2** – The local caller sees only the remote person.
- **PIP 3** – The local caller is viewed in the small **upper-right** corner, while the remote person is viewed in the main area of the screen.
- **PIP 4** – The local caller is viewed in the small **lower-right** corner, while remote person is viewed in the large area of the screen.
- **PIP 5** – The local caller is viewed in the small **lower-left** corner, while remote person is viewed in the large area of the screen.
- **PIP 6** – The local caller is viewed on half the screen and the remote person is viewed on the other half, also known as side-by-side view.







Note:


When data is shared, the remote video and the data are displayed side by side on the screen (This option is unavailable while sharing via Collaborate Share option).



CALL STATE INDICATIONS

Various call states are represented by icons on the screen when videoconferencing is taking place.

GUI Icon	Indication
	The current call is encrypted
	The local microphone is muted
	The local speaker is muted
 Far	Far End mode is on (You can control the remote side camera)
	Local network disconnection
 Central	Unsuccessful COLLABORATE Central registration

GUI Icon	Indication
 Central	Successful COLLABORATE Central registration
	Unsuccessful gatekeeper registration
	Successful gatekeeper registration
	Currently multicasting
	MCU VS layout mode
	Currently recording
	Currently streaming
	Currently on Audio session.
 SIP	SIP registration.
 SIP	SIP Registration failed.

VIEWING CALL STATUS

During a videoconference call, you can view and check the technical details of the call. To view the call status details:

During the video collaboration call, click the **Status** button  on the remote to view the Call View box (see Call View box).

Information		
System		
PK		
CALL STATISTICS	Transmit	Receive
Video Format	H.264	H.264
Video Resolution	720p	1080p
Video Frame Rate	30	25
Video Bandwidth	1772	1531
Audio Format	G.722.1C	G.722.1C
Audio Bandwidth	48 Kbps	48 Kbps
DATA STATISTICS	Transmit	Receive

The following information is displayed in the Call Status box for both **incoming** and **outgoing** communication:

- **Video Format** – Video codec used to display video in this call
- **Video Resolution** – Video resolution used in this call
- **Video Bandwidth** – Bandwidth used by the video in this call
- **Video Frame Rate** – Video frame rate used in this call
- **Audio Format** – Audio codec used to sound audio in this call
- **Audio Bandwidth** – Bandwidth used by the audio in this call
- **Encryption Mode** – Type of encryption used in this call (if encryption is used)
- **Call Protocol** – Protocol of the current call
- **Packet Loss** – Percentage of packets that did not arrive at their destination

USING CALL TONES

When making calls the call operator can request a Password or DTMF tone to connect.

OPERATOR REQUEST FOR PASSWORD

The Operator can request you to access a conference password to proceed with the call. To enter a conference password:

- Use the remote control, and press the numeric pad.

The screen shows DTMF message: "DTMF signal **** sent" representing the numbers pressed on the keypad.

OPERATOR REQUEST FOR TELEPHONE TONE

The Operator can request you to connect using a dial-tone to proceed with the call. To enter DTMF tone:

- Use the remote control, dial using the numeric pad.

The screen shows DTMF message: "DTMF signal **** sent" representing the numbers pressed on the keypad.

RECORDING AND STREAMING

The recording and playback functionality allow you to record while the system is in idle mode, or in a point-to-point or multipoint (MCU based) call, and view them at a later time. You can share the recorded file during a videoconference with the parties connected, through the recording sharing option.

Through the COLLABORATE® Live Web access system, remote users can view all previously recorded sessions and download them for later viewing with Media Player or VLC player. Alternatively, using streaming, remote users can view a live stream of whatever the camera and microphone are currently transmitting.


You can also view any previously recorded session when you are not in a call by selecting the file from the stored recordings list. For more information about the recording settings, see Recording and Streaming Settings.

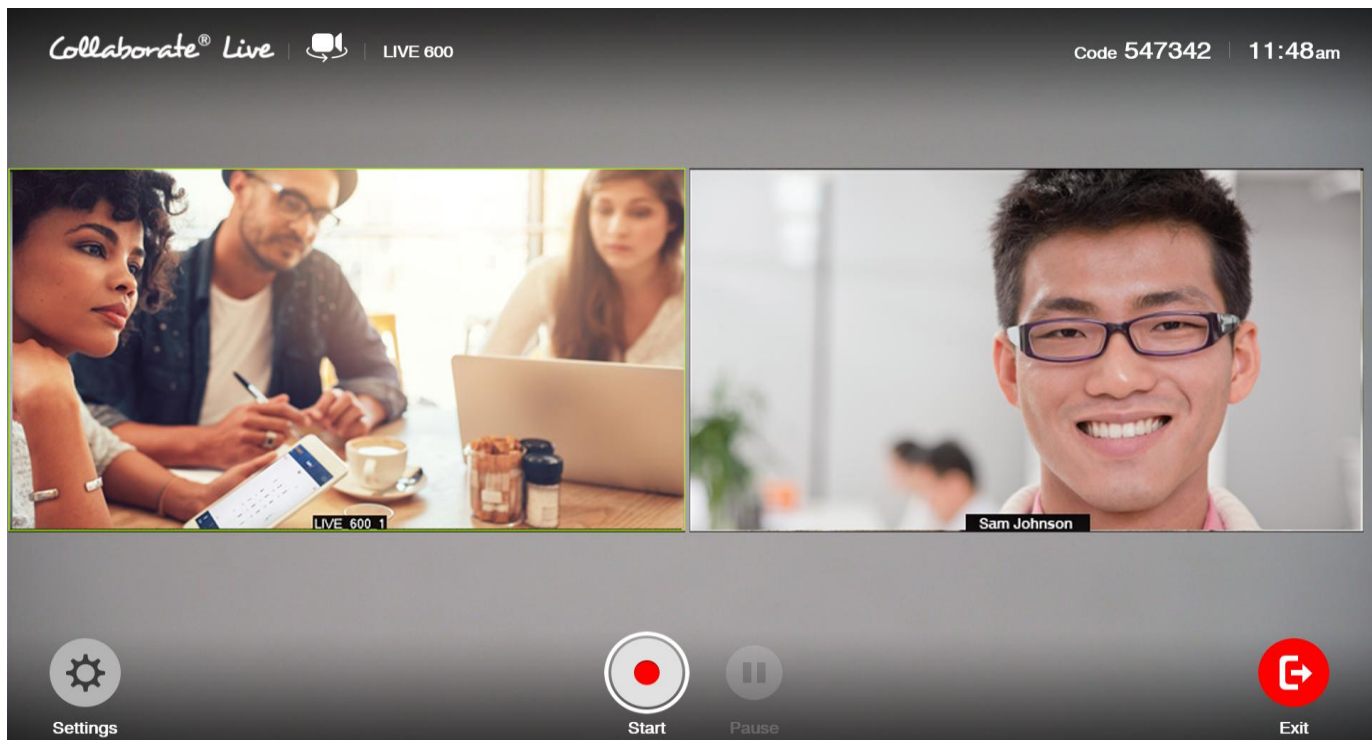
START RECORDING

You can start recording a call at any point during a call or idle session. To start recording:

- Select Recording>Start Recording. The message "Recording started" appears for a few seconds, and the Record icon appears for the duration of the recording.

Note:

The Record icon () appears on the remote participant's side to indicate that the videoconference is being recorded (legal requirement).



- Press on the recording button on the remote control ()


PAUSE RECORDING

You can pause and resume recording at any point during a call or idle session.

Pause / Resume:

- Select Recording>Pause Recording. The recording icon will be changed ()



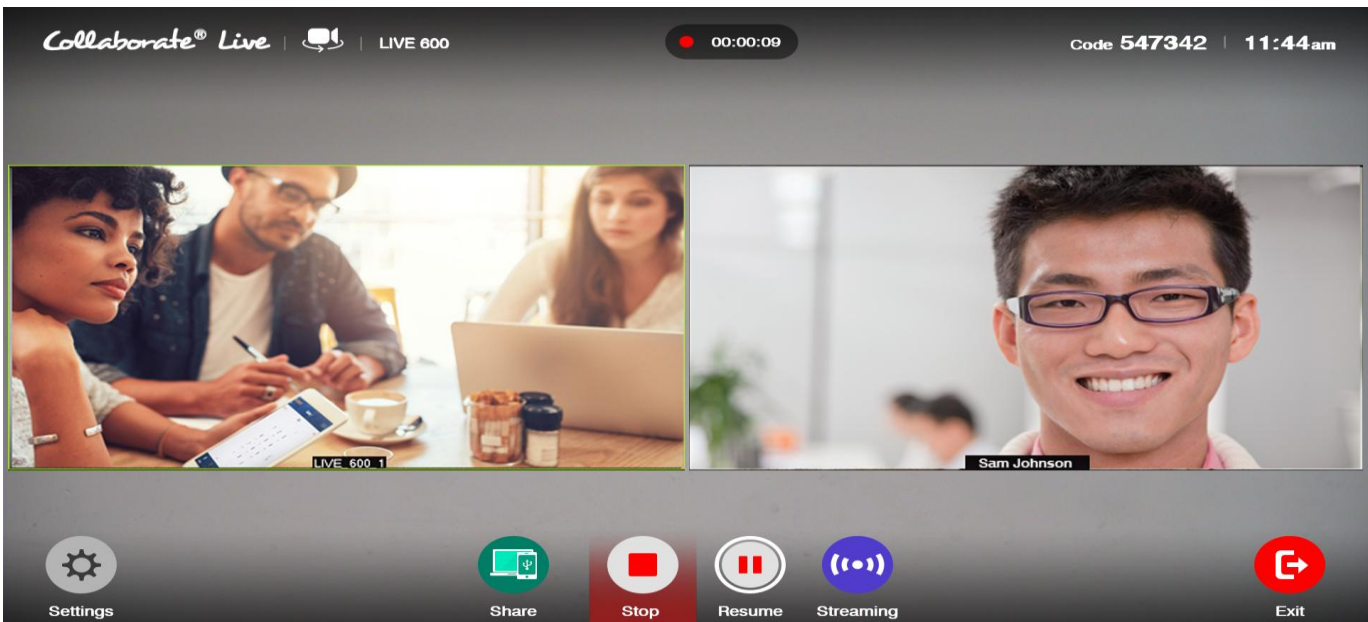
Press on the pause button on the remote control ()

To resume recording select **Recording > Resume Recording**.

STOP RECORDING

You can stop an on-going recording whenever you want. To stop recording:

- Select Recording>Stop Recording. The message "Do you want to stop recording?" appears. Press Yes.



- Press on the recording button on the remote control ()

Note:

When recording in idle mode (not during a videoconference), you can stop the recording by pressing the End Call button on the remote control. A confirmation message appears and requires you to select Yes.

VIEW RECORDING

You can view recordings in either of the following ways:

- Via the Web interface
- Browse the locally saved recordings by selecting **Presentation>Recordings**.

Note:

You can start recording in idle mode. In order to record video and shared data check 'Record and Stream Data' in recording settings.

USING THE MEDIA CONTROLLERS

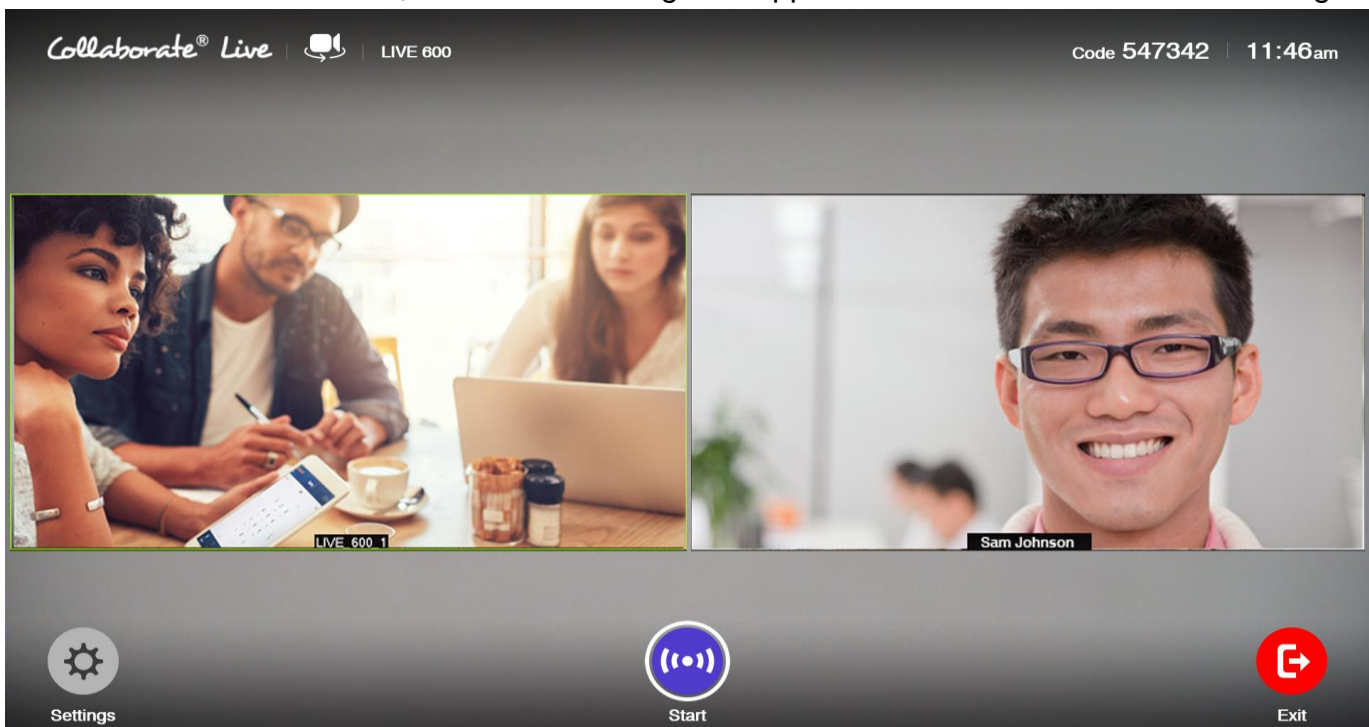
You can control the player by using remote control player controllers when watching a recording in idle mode.

START STREAMING

Session streaming allows any remote system with Media Player or VLC player applications to view streaming from the COLLABORATE® Live system.

To start streaming to remote users:

- Select **Live Streaming>Start Streaming**. The message "Streaming Started" appears for a few seconds, and the Streaming Icon appears for the duration of the streaming.



Note:

Refer to Web Access and Management for information on recording and streaming via the Internet.

You can start streaming in Idle mode. In order to stream video and shared data check 'Record and Stream Data' in Recording settings.

- Press on the streaming button on the remote control ()

STOP STREAMING

You can stop the streaming when it is no longer needed. To stop streaming:

- Select Live Streaming>Stop Streaming. The message "Do you want to stop Streaming?" Press Yes.



- Press on the streaming button on the remote control ()

Note:

When streaming in idle mode (not during a videoconference), you can stop the streaming by pressing the End Call button on the remote control. A confirmation message appears and requires you to select Yes.

VIEW STREAMING

You can view the streaming in either of the following ways:

- From the COLLABORATE® Live Web management application (see Web Access and Management) by clicking View Stream button on the left menu. This takes you to a page with the proper media player embedded in the webpage, displaying the ongoing session.
- To watch WMV streaming on your computer, open Windows Media Player and press Ctrl+U and enter the following: `http://IP_ADDRESS:PORT` where IP_ADDRESS is the unit IP and the port is the streaming port (Default value is 12100).

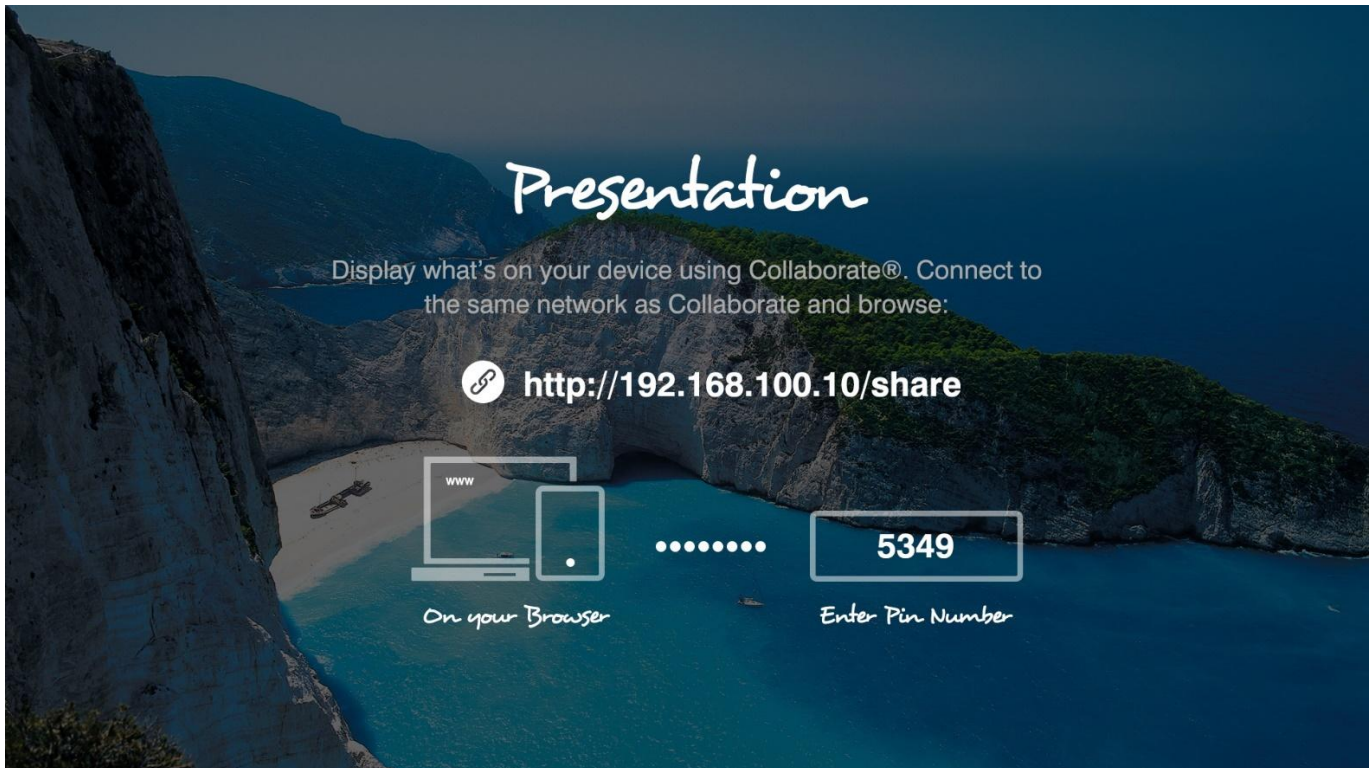
- To watch MP4 streaming on your computer open VLC player. In Media>Open URL from clipboard enter to following: `rtsp://IP_ADDRESS:PORT` where IP_ADDRESS is the unit IP and the port is the streaming port (Default value is 554).

Note:

In order to watch MP4 streaming, a VLC player should be installed on your computer

DATA SHARING

Data Sharing can be accessed via the menu or via Data on the remote control. Data Sources are selected inside the Presentation menu. Press Data a second time to stop the data sharing.

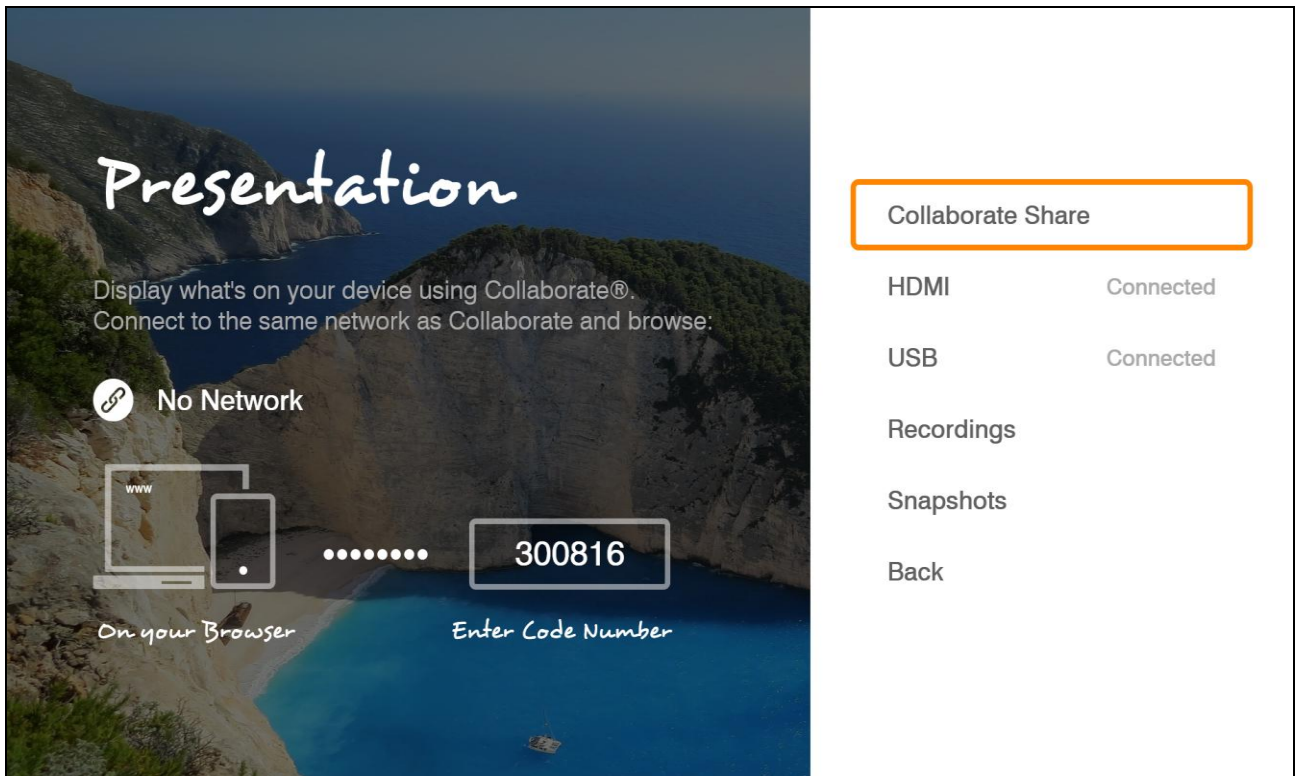


CHOOSING THE DATA SOURCE

In order for the system to recognize data sources, you need to be connected to a USB flash drive, a laptop, collaborate share running on your PC, or have recorded files saved locally in your system.

To choose a data source:

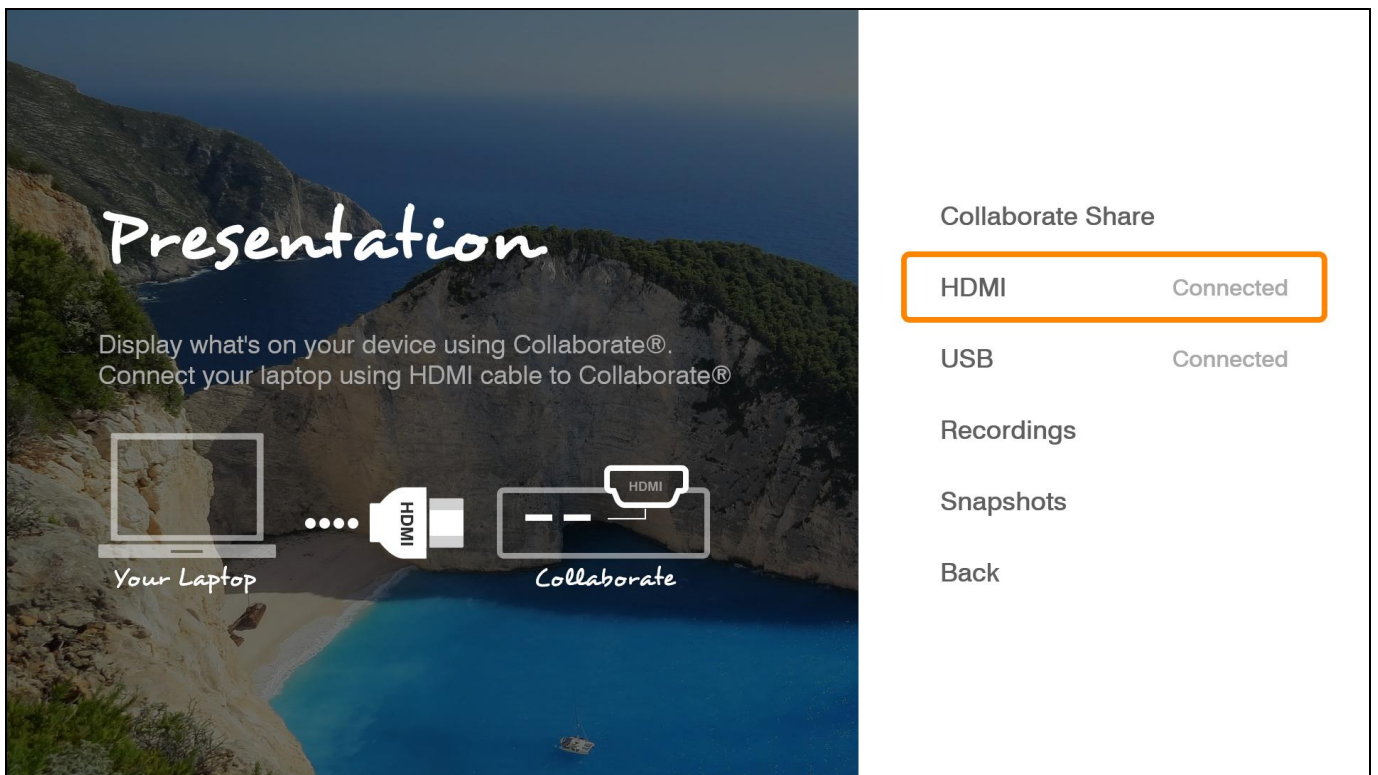
1. Select Presentation on the main menu. The Data Sharing menu opens.
2. Depending on the connected data sources, select either HDMI, USB or Collaborate Share (if available).
3. Select Share Recording, to share your recorded file.



CONNECTING TO A PC

Laptop computers can be connected to the COLLABORATE® Live 600 by connecting the laptop to HDMI input.

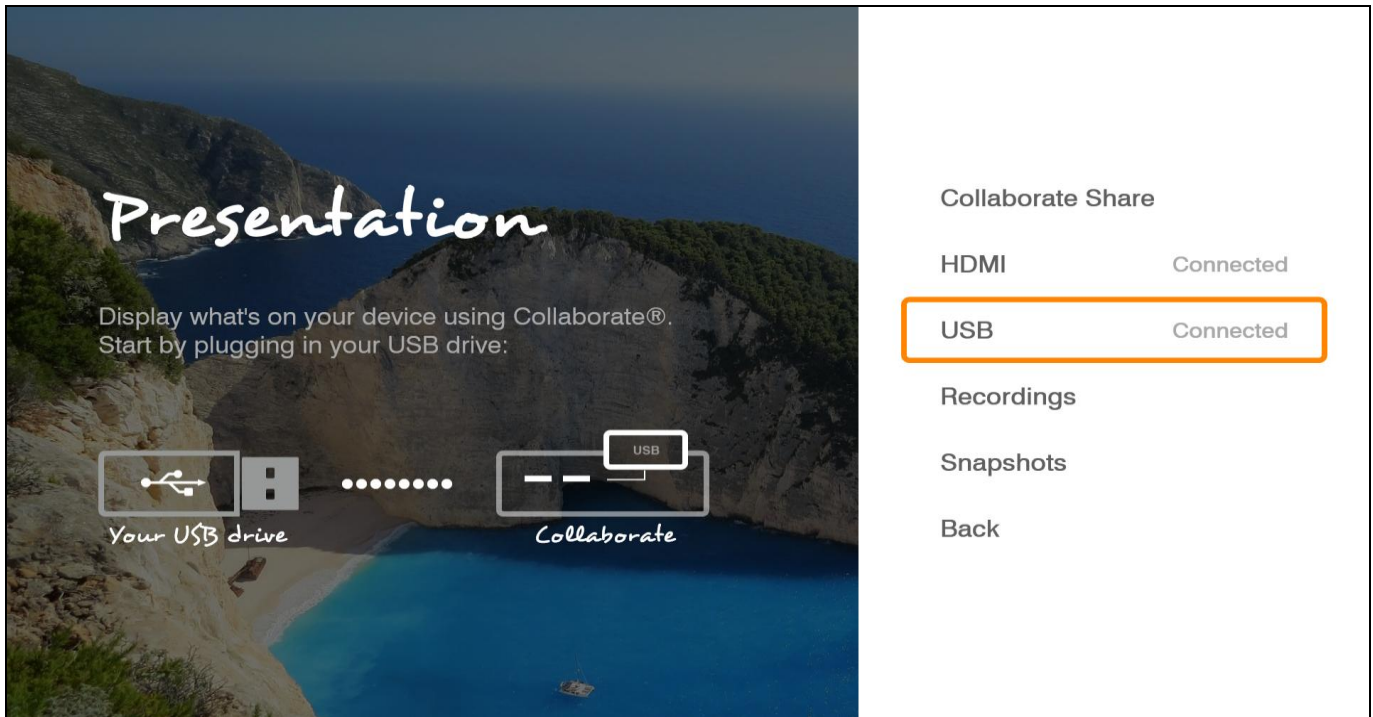
When you select HDMI as data source, the screen switches to display the data on the screen.



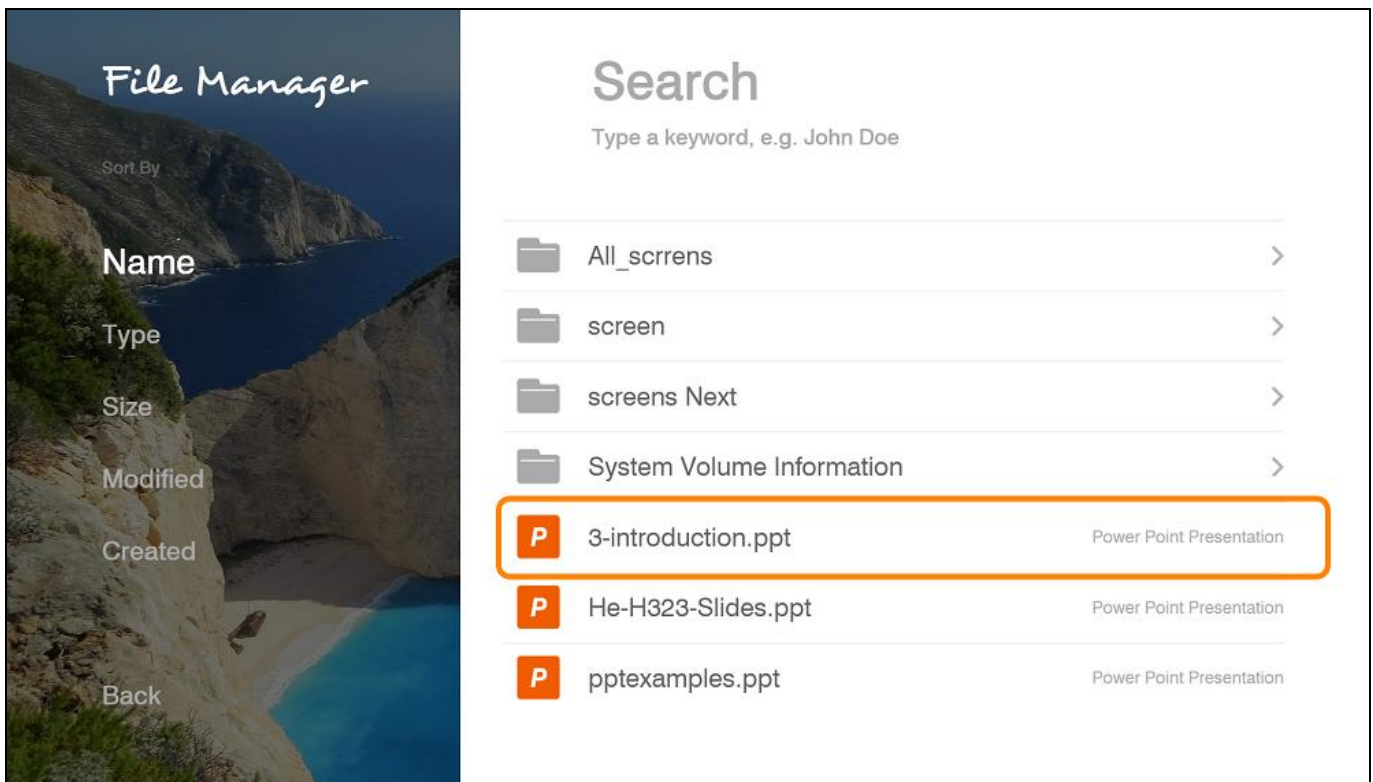
CONNECTING A USB FLASH DRIVE

You can view and share files that are stored on a portable USB flash drive. To view and share files from a USB flash drive:

1. Insert a USB flash drive to one of the COLLABORATE® Live 600 USB ports. The message "USB device inserted" is displayed.

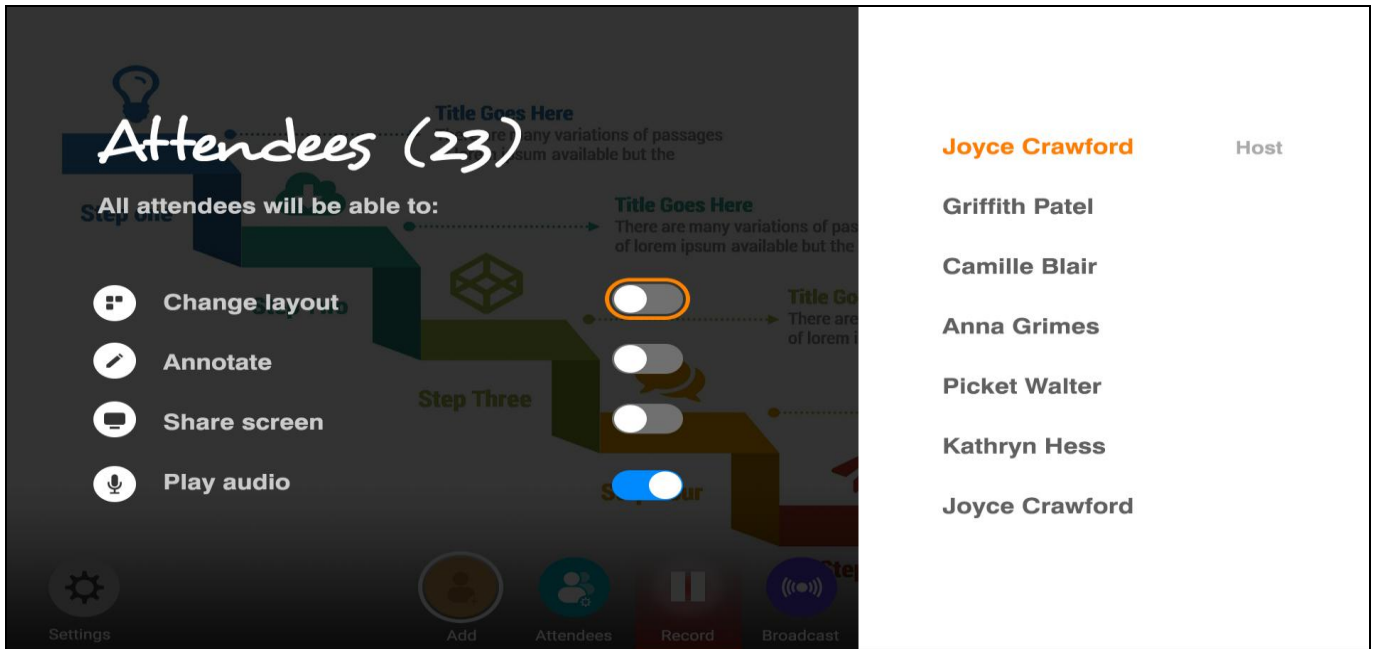


2. Select Presentation>USB. The File Selection window appears

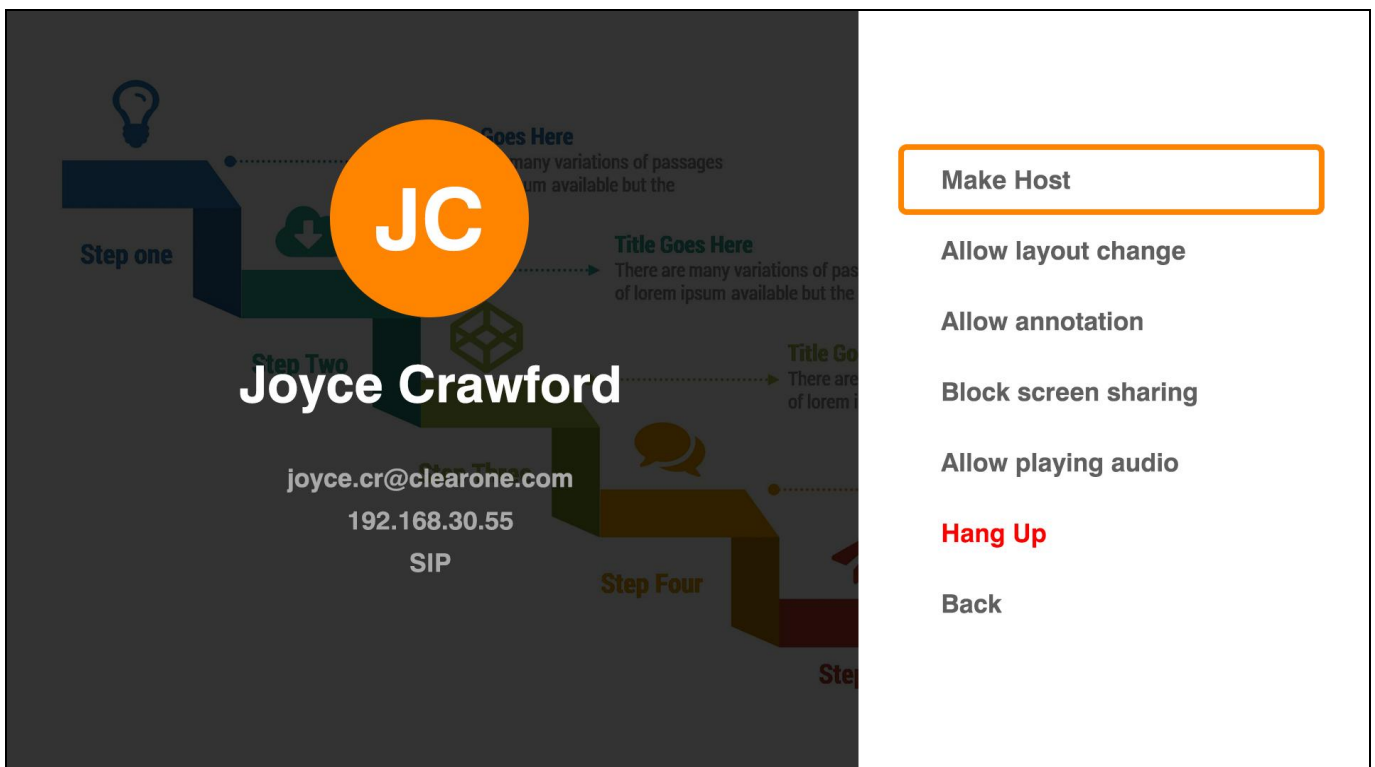


3. Select the file you want and then press **OK** on the remote control. The following files are supported: *.jpg, *.jpeg, *.gif, *.png, *.tiff, *.tif, *.bmp, *.wmf, *.mpg, *.mpeg, *.wmv, *.mp4, *.avi, *.pdf, *.pps, *.ppt, *.doc, *.rtf, *.xls, *.xlsx, *.pptx, *.ppsx and *.docx.
4. The file is displayed. If the file is opened during a videoconference, it is shared with all the viewers.

The active attendees of the Presentation will be able to change the layout, Annotate, share screen and play audio.




Anytime you can make an attendee as a host as well. Select the attendee. Click Make Host.

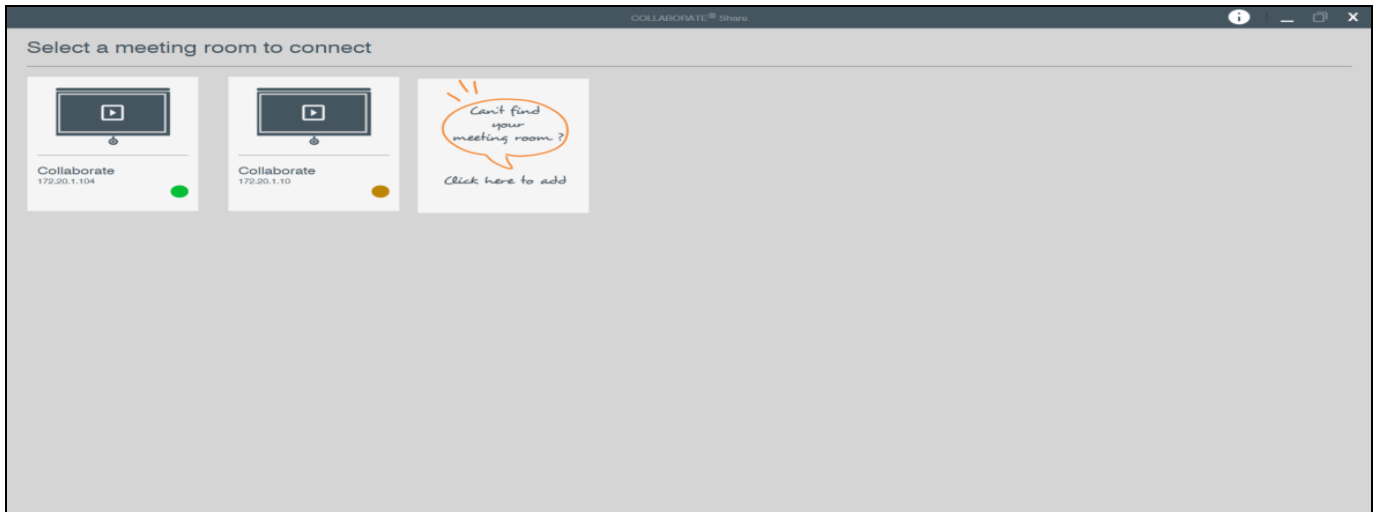


SHARING WIRELESS

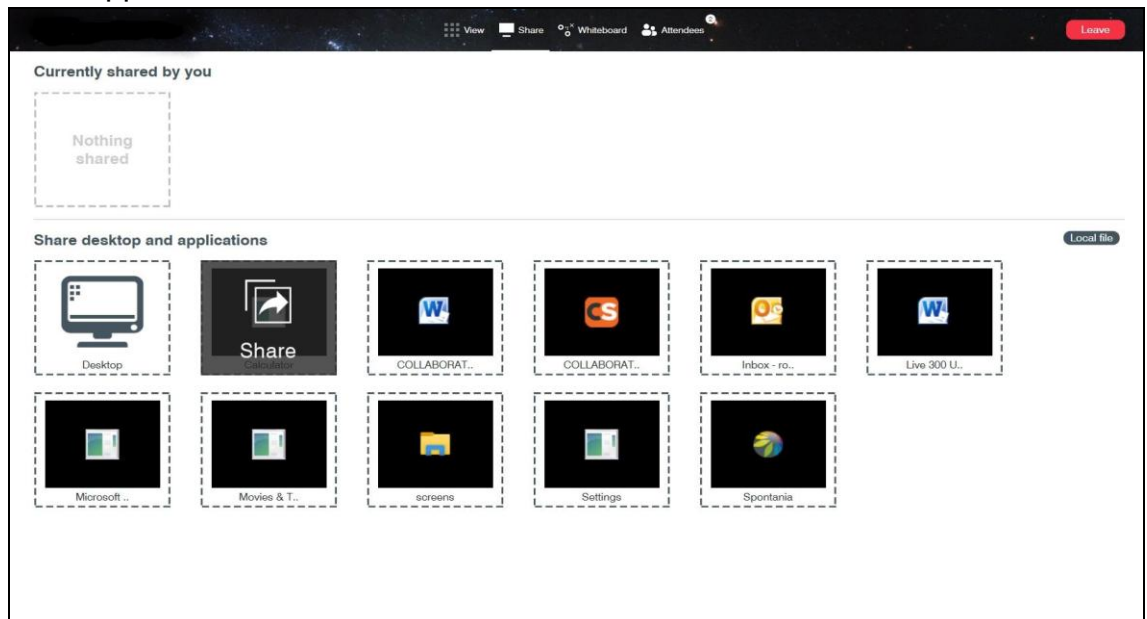
You can view and share your PC desktop or any open application via network using the Collaborate® Share feature. To define wireless settings, follow the Presentation settings.

To view and share wirelessly:

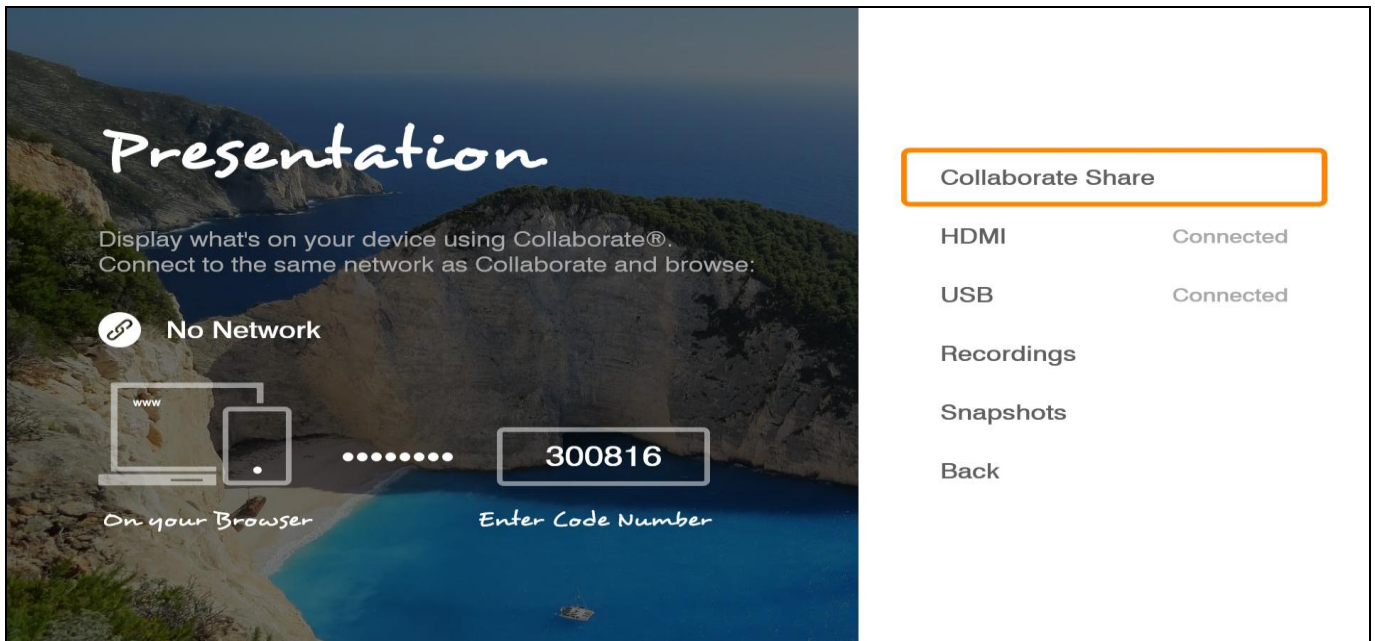
1. Download the Collaborate® Share application from the web interface
2. Ensure that the computer you are going to use is connected to the network or that your computer can connect to the company's network or to an external Wi-Fi network.
3. Double-click on the desktop Icon .
4. Select a meeting from the meeting list.



5. If necessary, enter the code number shown on the Collaborate Live screen.
6. Choose the content to be shared, select either the computer desktop or any available applications.












7. Select Presentation > Collaborate Share. Wireless data sharing is starting.



Collaborate Live Share CONTROLLERS

While wireless is shared, you can manage your sharing from “Collaborate Share” controllers.



Button Image	Button Name	Description
	Pause	Pause the current share
	Play	Resume sharing
	Full view	Switch the COLLABORATE® Share to full view
	Compact view	Switch the COLLABORATE® Share to normal view
	Spotlight	When several COLLABORATE® Share are connected to the system, use this icon to move the chosen stream into the main area
	Display	When several COLLABORATE® Share are connected, use this icon to change the displayed layout
	Layout	COLLABORATE® Share layout option: Mosaic / Full Screen / Preview
	Dual display	When two monitors are connected to the unit, you can also choose which monitor will display the data.
	Signal Strength	The Signal Strength shows the quality of the network connection between COLLABORATE® Share and the COLLABORATE® Live system

DATA SHARING IN IDLE MODE

It is possible to share data while the system is idle. Connect PC \ Camera to HDMI or USB drive or Wireless sharing, and share the desired data. You can press the 'PIP' button on the remote control in order to see your data and your main camera side-by-side.

Note:

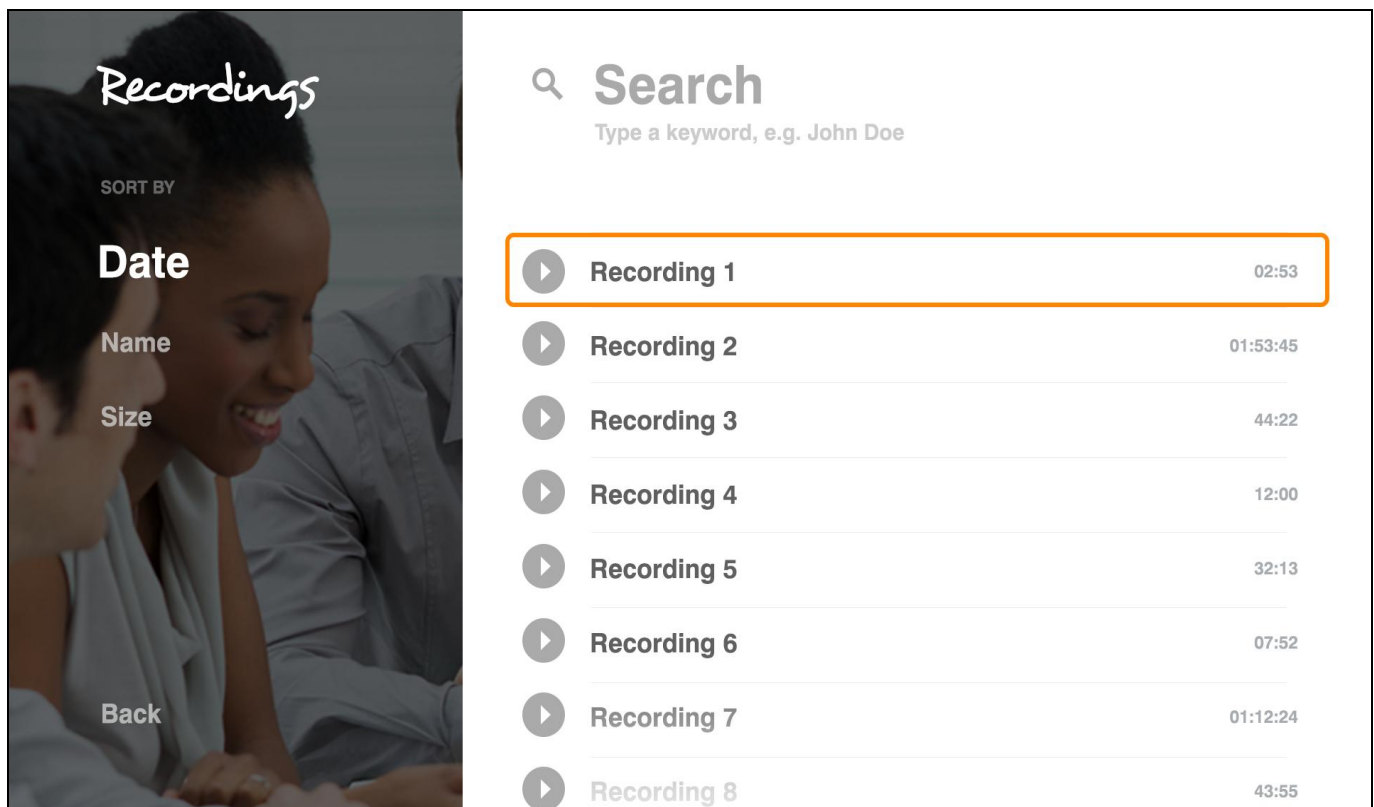
PIP will not be displayed while using Collaborate Share in idle mode.

VIEWING RECORDINGS

Recordings can be viewed when the system is idle. When opened during a videoconference, recordings are shared.

To view recorded files:

1. Select **Recording>View Recordings**. The Document Selection window appears.



2. Select the recorded file that you want and then press **OK** on the remote control.
3. Select **Open**. The file is displayed and if opened in a videoconference, it is shared with all the viewers.

Note:

To stop sharing the opened file, press **Back** on the remote control, or select **Stop Presentation** from the presentation menu.

You can control the player by using the remote control player controllers when watching a recording on idle mode.

SHARING DATA WITH AUDIO

When sharing from a PC or a video file from a USB flash drive, the COLLABORATE® Live is mixing the audio channels into one channel so the data audio as well as unit microphone could be heard. During the sharing, the volume buttons control the media volume (PC or movie) on the local side and on the remote side.



USING MULTICASTING

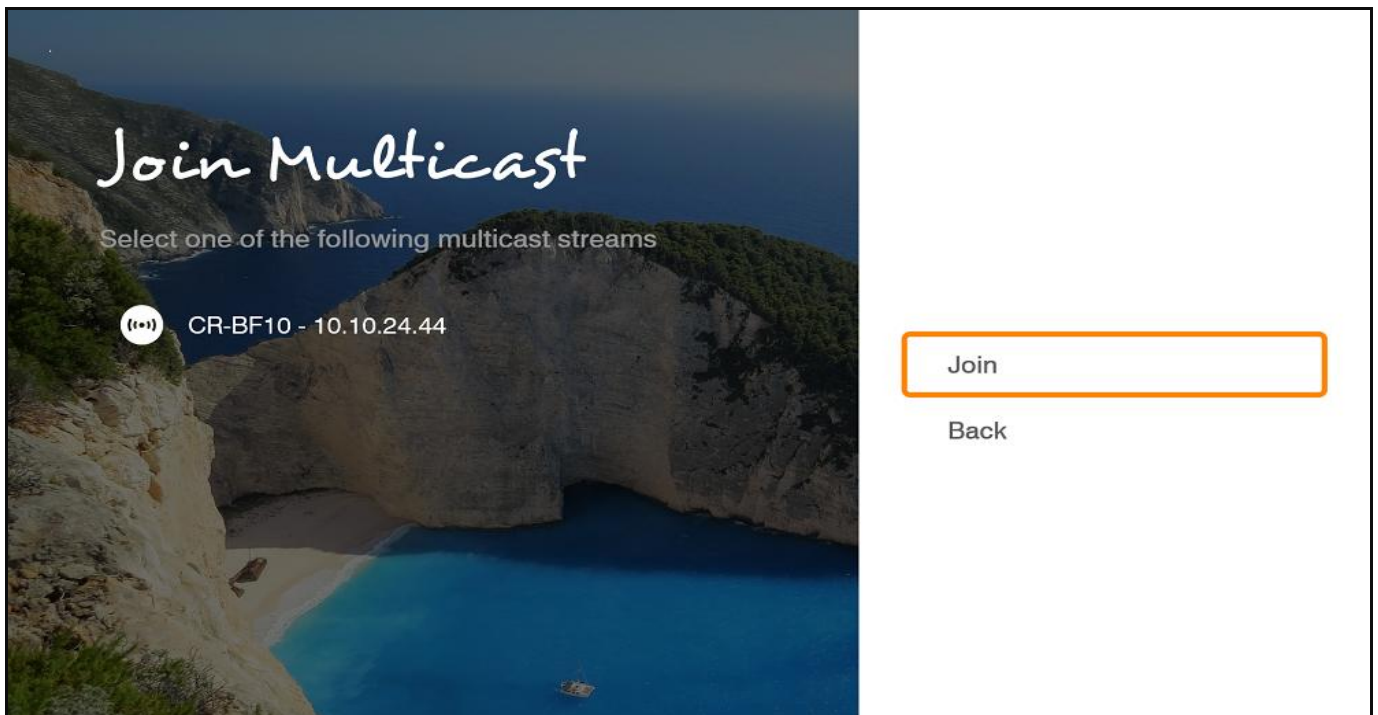
Session multicasting allows you to multicast your session using the multicasting networking transport technology, which allows users to send a video stream that can be received by multiple recipients, all listening on a single multicast address. Multicasting a session from your COLLABORATE® Live allows numerous passive viewers to view the session. This is typically used at lectures, or any session that passive viewers can benefit from. Multicast sessions can be viewed by all ClearOne endpoints, the free ClearOne multicast viewer, and the Apple QuickTime viewer.

You can join a multicast call as a passive participant. You can hear and see the call, but you cannot contribute to it.

JOINING A MULTICAST CALL AS A PASSIVE PARTICIPANT

To join a multicast:

1. Press **OK** on the remote control. The main menu appears.
2. Select **Live Streaming>Join Multicast** on the menu. The Join Multicast window appears.



3. Select a multicast from the **Ongoing** list and press **Join Multicast**.

STARTING/STOPPING A MULTICAST CALL

To stop or start a multicast: You can start multicasting on idle mode.

1. Press OK on the remote control. The main menu appears.
2. Select Live Streaming> Start (or Stop) Multicast.

Note:

You can start multicasting on Idle mode. In order to multicast video and shared data select 'Video and Presentation' in Recording settings.

Chapter 5: Quick Dialing Methods

IN THIS CHAPTER

This chapter describes the different quick dialing methods that are available in COLLABORATE® Live 600, and includes the following sections:



- Using the Contacts
- Using the Recent Calls
- Using Online Directories
- Using COLLABORATE® Space Contacts
- Using Skype For Business Contacts

USING THE CONTACTS

The Contacts enables you to make calls to addresses stored on the local system. You can add frequently used addresses to the Contacts.


USING THE CONTACTS VIA THE REMOTE CONTROL

You can select the Contacts using the remote control. To select the Contacts via the remote control:

1. On the remote control, press **Phone Book** (). The Contacts window appears (use menu on the left to choose from: Recents, Favorites, Contacts or Dialpad)
2. In the Contacts tab, select the number to dial, and then press the Make Call button () on the remote control.

USING CONTACTS VIA THE COLLABORATE® LIVE GUI

You can display the Contacts using the COLLABORATE® Live GUI menus. To select the Contacts via the COLLABORATE® Live GUI:

1. Select the Contacts, Video Call, or Audio Call icon. The call window appears (use the menu on the left to choose from: Recents, Favorites, Contacts or Dialpad).
2. In the Contacts tab, select the Contact to dial, and then press Make Call button () on the remote control.

ADDING ENTRIES TO THE CONTACTS

You can add frequently used addresses to the Contacts list from where calls can be made directly.

To add a new contact to the Contacts list:

1. In the Contacts, select Dialpad and press OK. The Dialpad opens.
2. Type in the new contact's IP Address, and then click on the new contact button below. The New Contact window appears where you can enter their First Name, Last Name, and the call Protocol, and then click on Save on the right side of the window to create the new contact.

EDITING ENTRIES IN THE CONTACTS

You can edit frequently used numbers already in the Contacts list and save them for repeated use.

To edit a contact's details in the Contacts list:

1. In the Contacts list, select the entry you want to edit and then press **OK** on the remote control
2. With the menu on the right you can Add To Favorites, Edit or Remove the contact.
3. You can edit the Name, Address and call Protocol, and then select Save.

USING THE RECENT CALLS

Recent calls are automatically logged to the Recent Calls when an outgoing call is made or when an incoming call is received.

Note:

The Recent calls list cannot be edited.

USING THE RECENT CALLS VIA, THE REMOTE CONTROL

To select the Recent Calls via the remote control:

1. On the remote control, press **Recent Calls** () – or – on the Main Menu, select the **Contacts**, **Video Call**, or **Audio Call** icons. The Recent Calls window appears.
2. Select the entry and press **Dial**.

DISPLAYING THE RECENT CALLS FROM THE CONTACTS

To display the Recent Calls via the Contacts:

- In the Contacts screen, select **Recents** in the menu on the left side of the screen.

ADDING A RECENT CALLS ENTRY TO THE CONTACTS

You can add entries for Recent Calls to the Contacts for reuse later. To add a Recent Calls entry to the Contacts:

1. In the Recent Calls, select the entry you want to add to the Contacts and then press **OK** on the remote control.
2. Select **Create New Contact**. The New Contact menu appears.
3. Edit in the contact Name, Address, and call protocol if needed, and then select **Save**. The log entry is added to the Contacts.

USING DIRECTORY

The Directory is an external directory which can be used for calling. If you are registered in the Directory, you can view the Directory in the Contacts under the Directory tab.

ACCESSING A DIRECTORY VIA THE REMOTE CONTROL

To access the Contacts via the remote control:

1. On the remote control, press the Contacts button. The Contacts opens.
2. Select the Directory tab, and on the number to dial press **Dial**.

ACCESSING THE DIRECTORY VIA THE CONTACTS

To access the Directory via the Contacts:

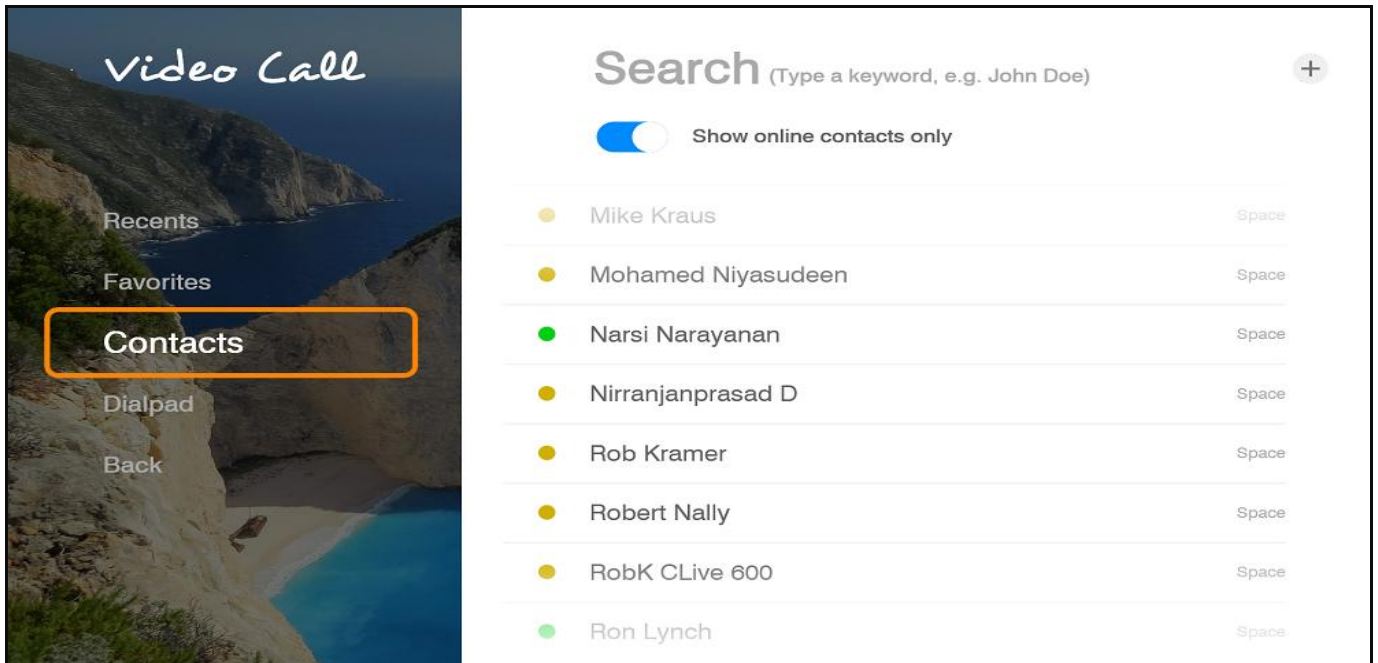
1. In the Contacts, select **Directory** by pressing down with the Navigation arrows.
2. Select the Directory tab, select the number to dial and press **Dial**.

USING COLLABORATE SPACE CONTACTS

When your system is registered to the Collaborate Space server (See settings), all users that are registered to this server will appear in Collaborate Space contacts list.

To access the Contacts via the remote control:

1. On the remote control, press the Contacts button. The Contacts opens.



Select Online / Away contact and press Dial.

Chapter 6: Skype for Business

IN THIS CHAPTER

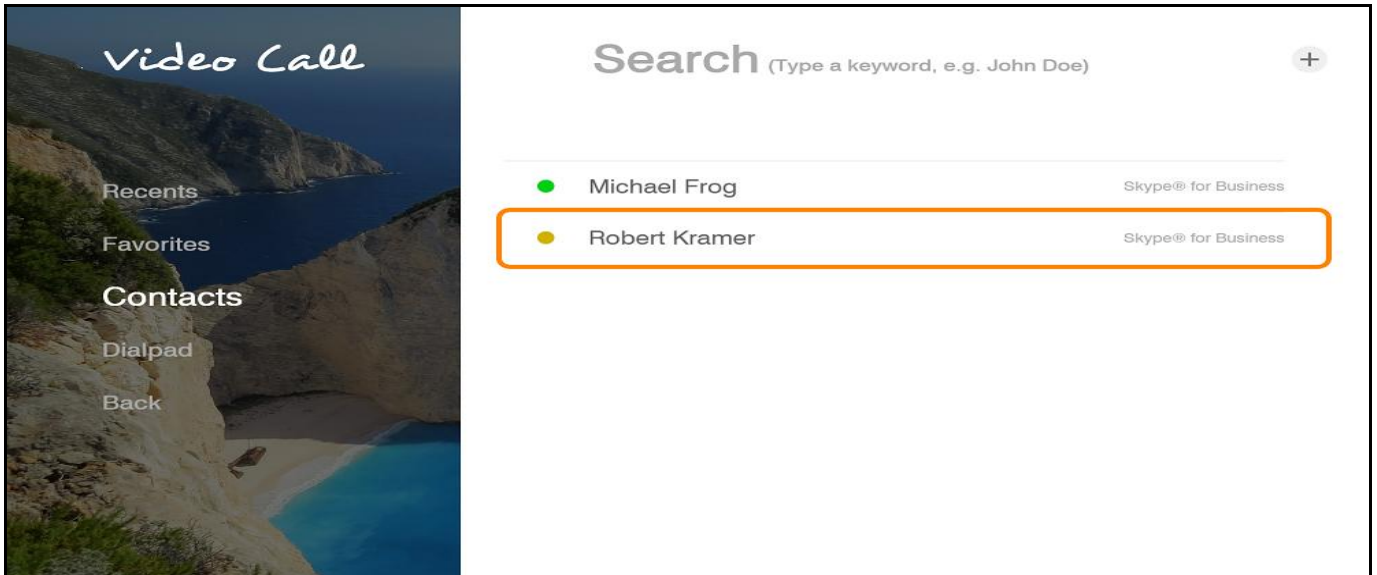
This chapter covers Skype for Business calling, and includes the following sections:

- Starting Skype for Business calls
- Starting Skype for Business Multi Conference Calls
- Presentation sharing
- Display Layouts
- Join scheduled Skype for Business Meetings

STARTING SKYPE FOR BUSINESS CALLS

In order to start a Skype for Business call follow these step-by-step instructions:

1. Make sure you're logged into the Skype for Business server (To register your system to the Skype for Business server please refer to the Skype for Business settings). To verify registration, press the info button (i) on remote control and check if you are registered to the Skype for Business server.
2. Select **Video Call > Contacts**, and select the name of the contact you want to call.



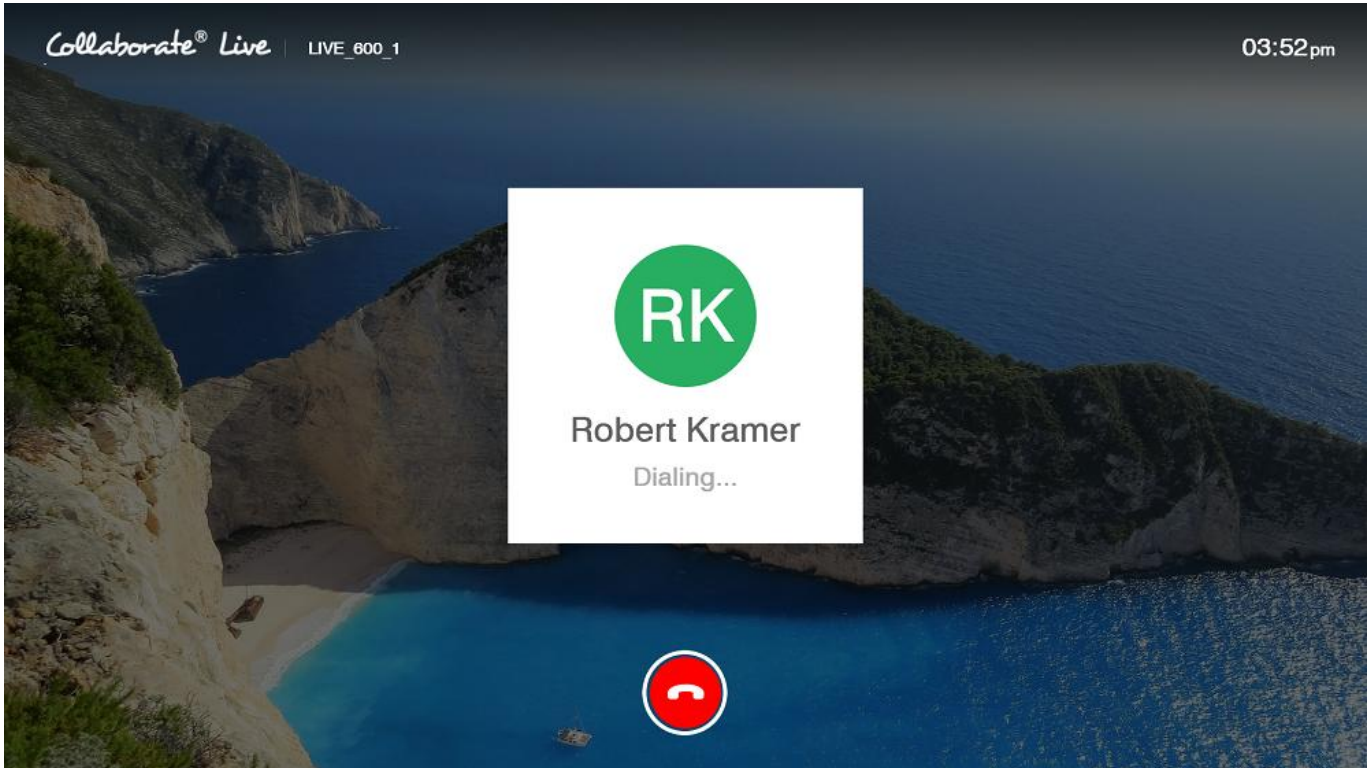
Guide to status icons:

- Available - Online and Available
- Away - Logged on but have been away from system for a period a time
- Busy – In a conference call
- Off Line – Not signed in

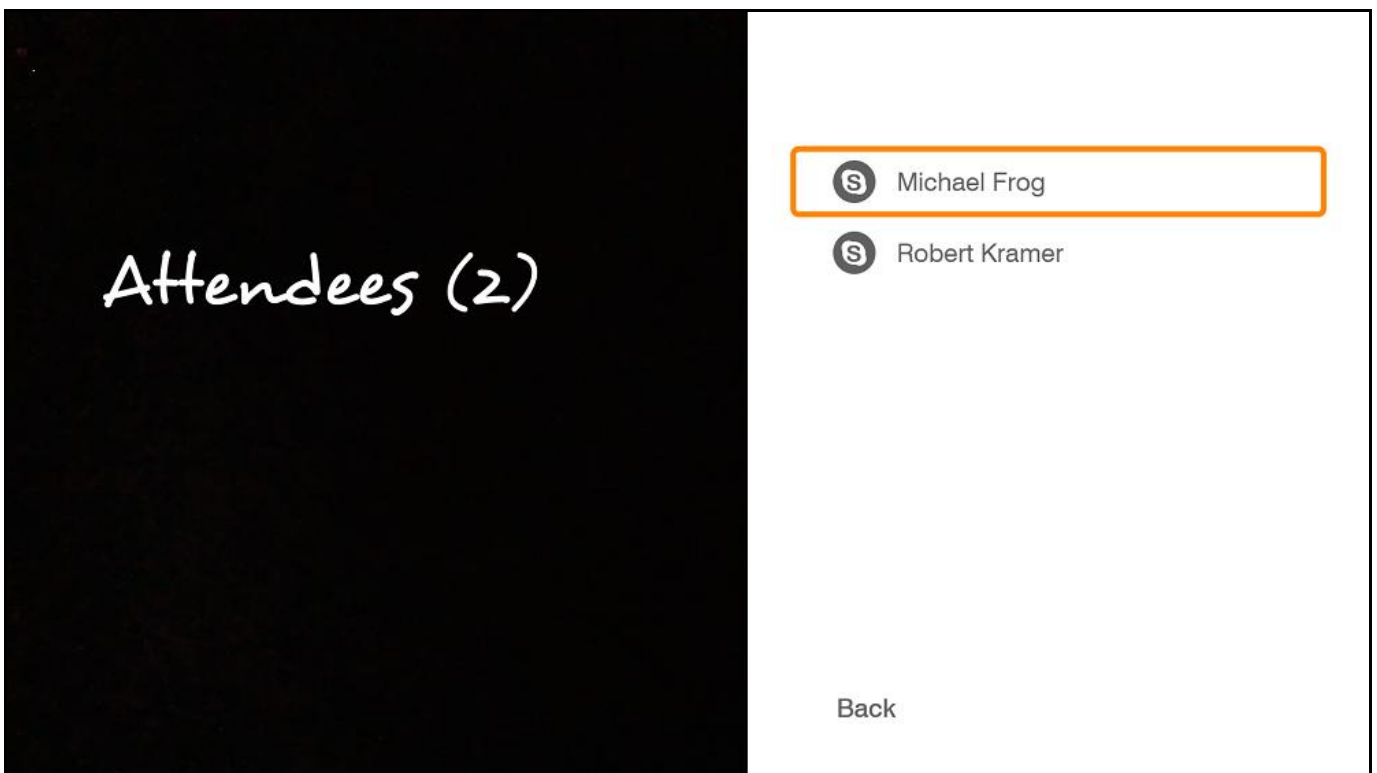
STARTING SKYPE FOR BUSINESS MULTI CONFERENCE CALLS

If you need to add more people to your conference call, you can select their names from your Contacts list:

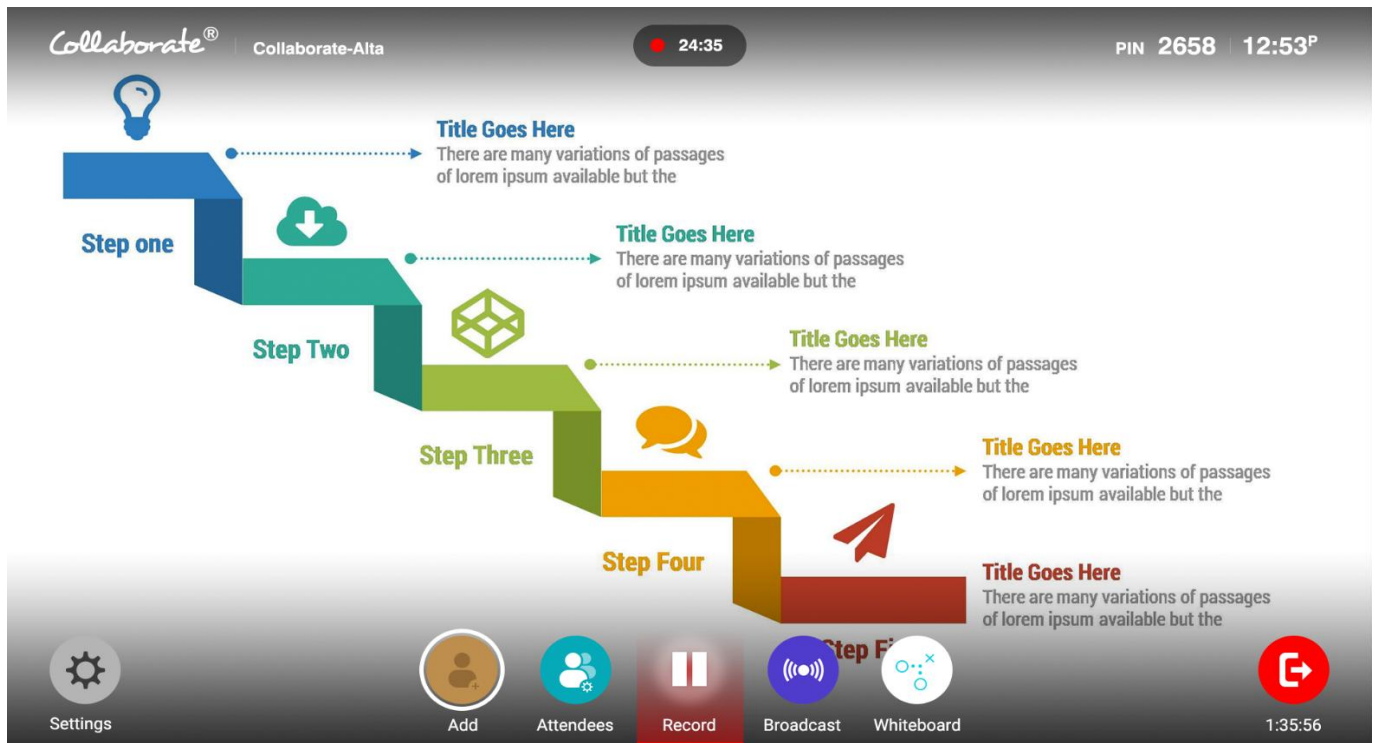
1. Make sure your contacts are available by checking their present status first.
2. Select contact from the list, and then click Dial.



Attendees - During a Skype for Business call, click on the Attendees menu to see all of the Attendees in the call



PRESENTATION SHARING



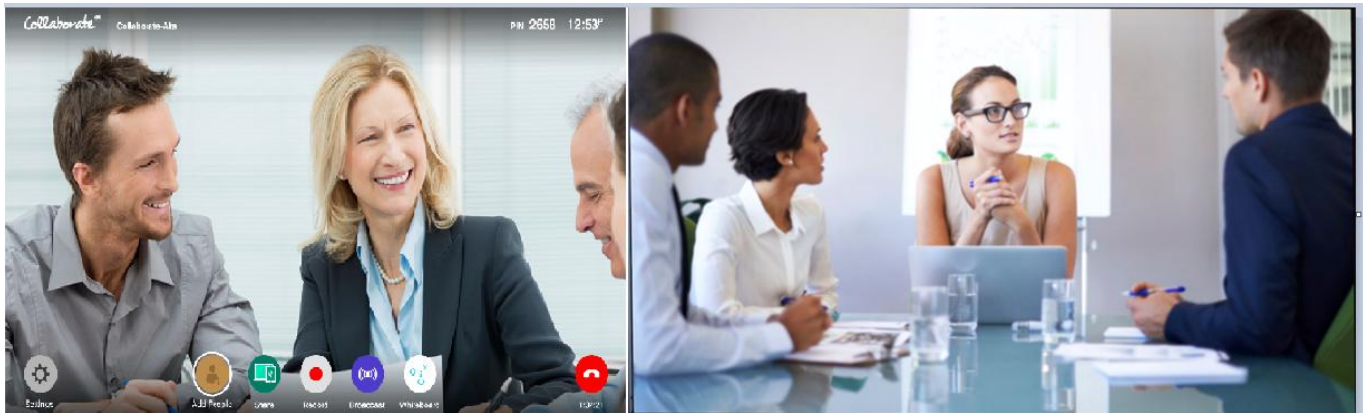
- HDMI Input
- Wireless Presentation
- USB

DISPLAY LAYOUTS

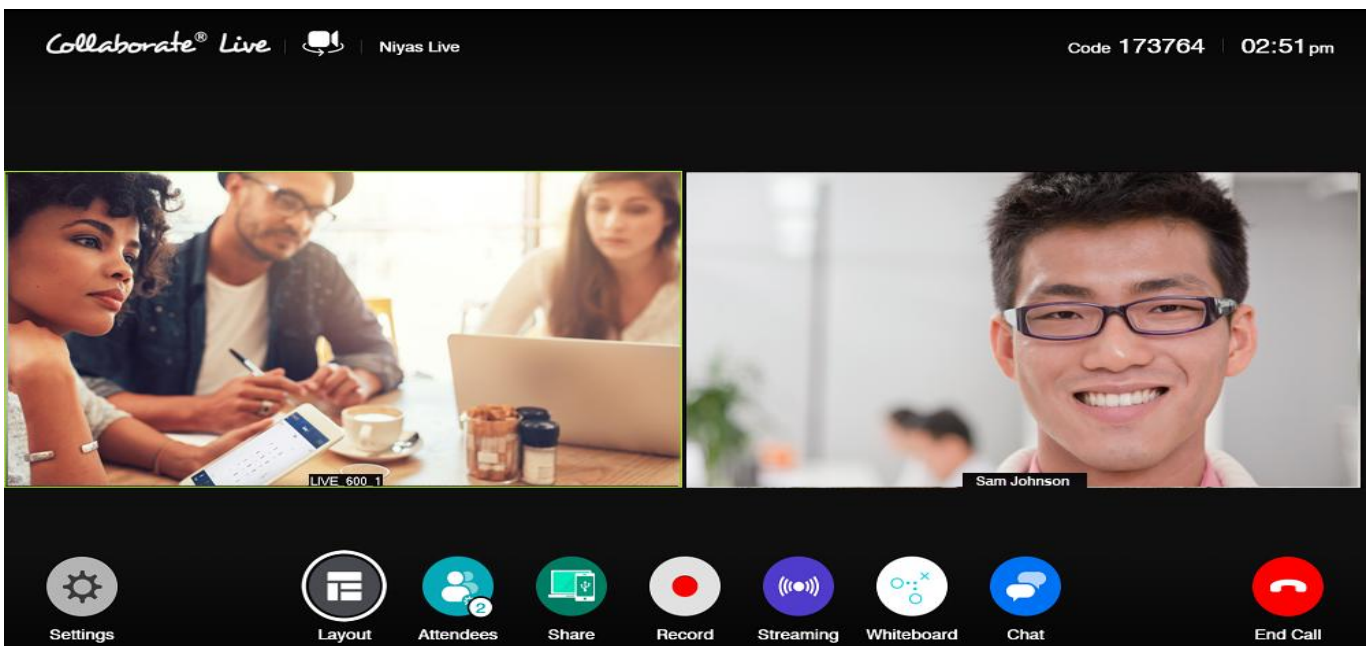
Dual Displays: One display showing the presentation, the second display showing the far-end video:



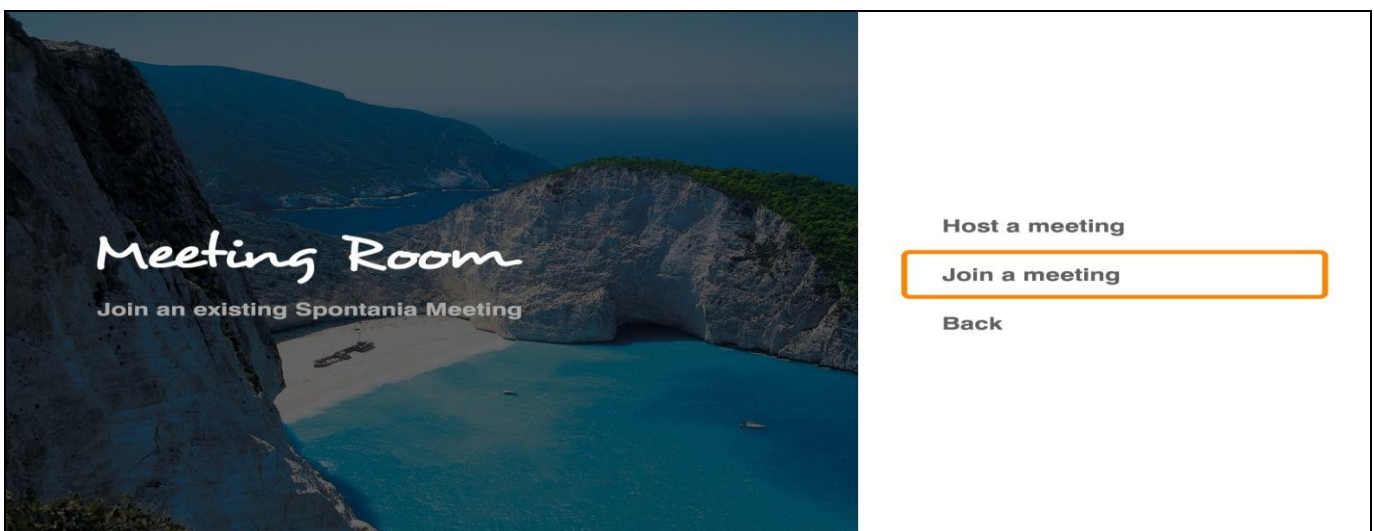
Dual Displays: One display showing the near-end video, the second display showing the far-end video



Voice Switched Mode: Displays the party that is talking in a point-to-point, or multi-party calls.



JOIN SCHEDULED SKYPE FOR BUSINESS MEETINGS



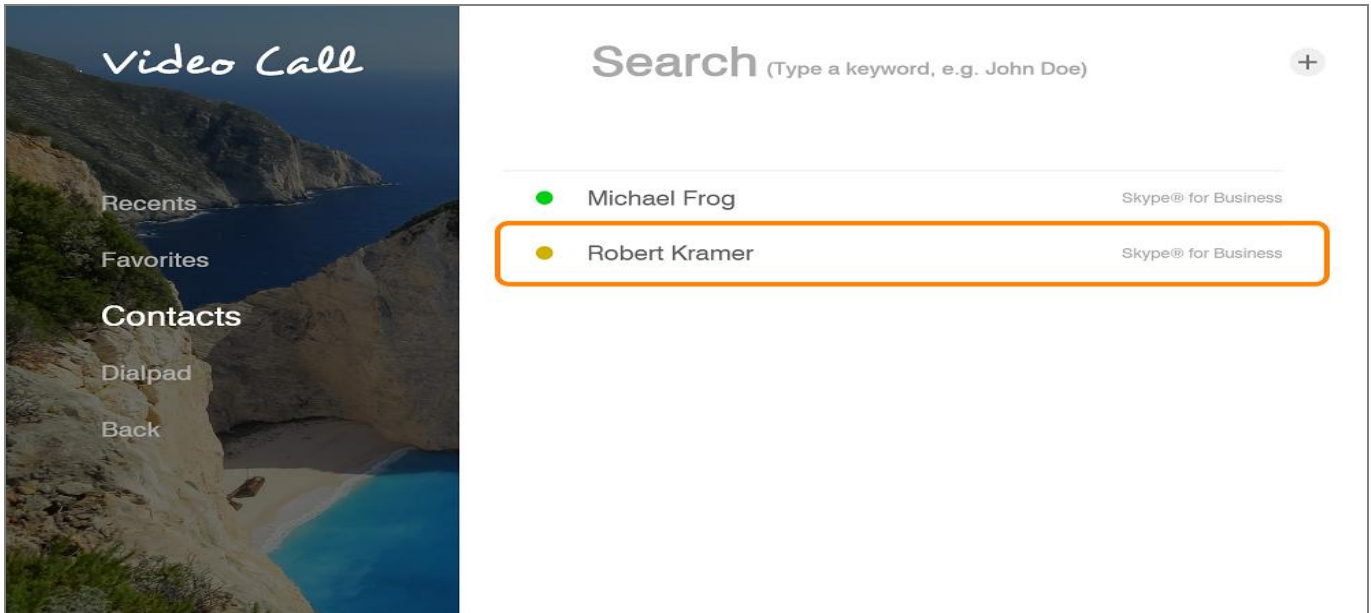
A meeting Reminder will pop up for scheduled Skype for Business meetings.

USING SKYPE FOR BUSINESS CONTACTS

When your system is registered to a Skype for Business server (See Skype for Business settings), all users that are registered to this server will appear in the combined Contacts list.

To access the Contacts via the remote control:

1. Select **Video Call** and then **Recents**, **Favorites**, or **Contacts** and select the name of the contact you want to call.
2. Select the Online / Away contact and click on Video Call.



Guide to status icons:

- Available - Online and Available
- Away - Logged on but have been away from system for a period a time
- Busy – In a conference call
- Off Line – Not signed in

Chapter 7: Advanced Settings

IN THIS CHAPTER

This chapter covers the advanced settings for COLLABORATE® Live, and includes the following sections:

- Display Settings
- Network Settings
- Serial Port
- Directory Properties
- H.323 Protocol Settings
- SIP Protocol Settings
- Space Settings
- Security Settings
- Admin Settings
- Proxy Settings
- Exchange Settings
- Skype® for Business Settings

DISPLAY SETTINGS

Please refer to chapter 3

NETWORK SETTINGS

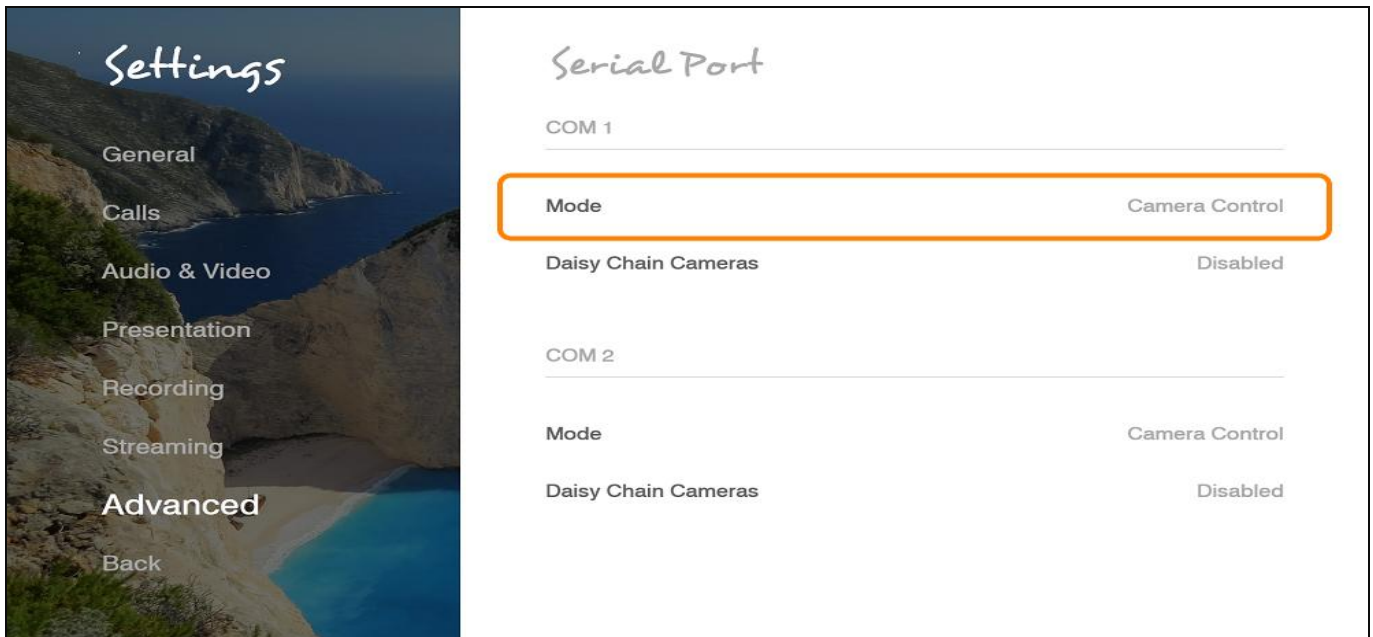
Please refer to chapter 3

SERIAL PORT

Configure the system's COM port 1 or 2. These ports can be connected to a camera and control its PTZ functions or they can be also be used to connect to an external control device.

To access the serial port settings:

1. Press **OK** on the remote control. The main menu appears.
2. Using the remote control's Navigation arrows, select **Settings>Advanced > Serial Port**. The Serial Port Settings window appears.



To configure the serial port settings:

Serial Mode:

- **Camera control** – Select this option when you wish to control your camera using COM 1 or COM 2, while it is connected to the camera PTZ control (RS-232 port).

Note:

When the camera's control cable is connected to COM 2 the camera HDMI cable should be connected to HDMI 2.

- **Serial Control** – Select this option when the COM port is connected to an external control system.

Note:

The Telnet interface should be enabled in the [Settings>Advanced>Security](#) menu before Serial Control is selected.

DIRECTORY PROPERTIES

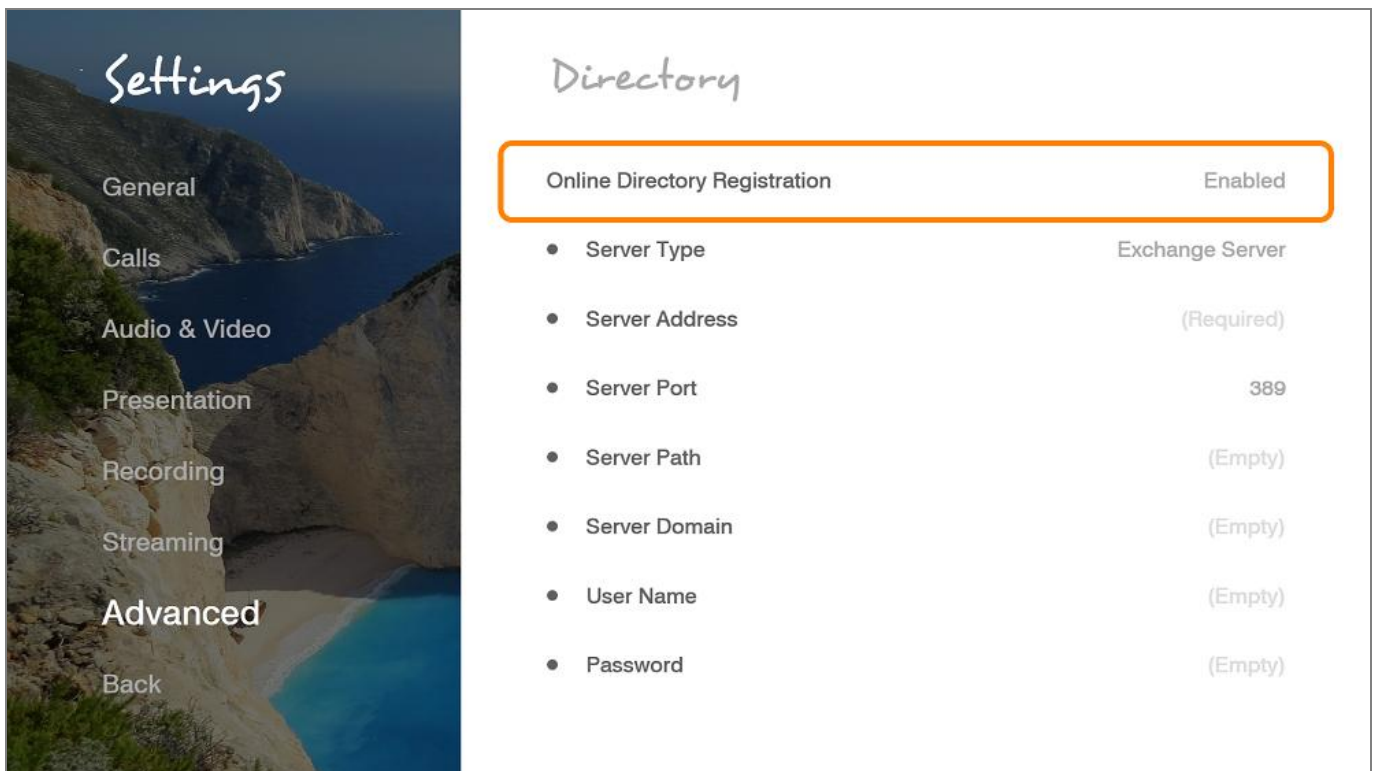
Online directories are lists of contacts (such as Internet Location Server, or ILS) whose videoconferencing systems are online and registered with that directory. If your system is not registered with a COLLABORATE Central®, the Directory Settings provide a way to register with a Directory.

Note:

Directory settings are available only in COLLABORATE® Live systems that are not managed by a ClearOne COLLABORATE Central.

To configure the Directory settings:

1. Select [Settings>Advanced>Directory](#). The Directory Settings window appears.



2. In the Directory Settings window, set the following options and parameters

- **Enable Directory Registration** – When selected, this checkbox activates the rest of the fields in this window and enables the Directory connection registration.
- **Server Type** – Select the Directory server type. If you are not sure which type to select, consult with your system administrator. An LDAP (Lightweight Directory Access Protocol) server is usually used.
- **Server Address** – The server’s IP Address. If an IP is not entered, the following message appears: "You must enter server address in order to continue."
- **Server Port** – Number of the port through which the connection to the server is established.
- **Server Path** – Folder in which your user information is stored, as created on the Online Directory.
- **Server Domain** – Server’s domain name for the Directory.
- **User Name** – Your user name as defined on the Directory server.
- **Password** – Your access password as defined on the Directory server.

Note:

In the Standalone/Gatekeeper mode, either the ILS or iPlanet servers should be installed for the directory. Consult with your system administrator regarding the installation/configuration of these servers.

Server Type	Description	Prerequisites
ILS server	Site Server ILS is a service used for publishing H.323 videoconferencing and telephony users and IP multicast conferences on the network.	System administrator configuration
iPlanet server	Contains lists of people and resources. Administrators can manage a single user-repository for their organization that can be used by multiple applications to both authenticate and retrieve stored information for users such as	System administrator configuration

H.323 PROTOCOL SETTINGS

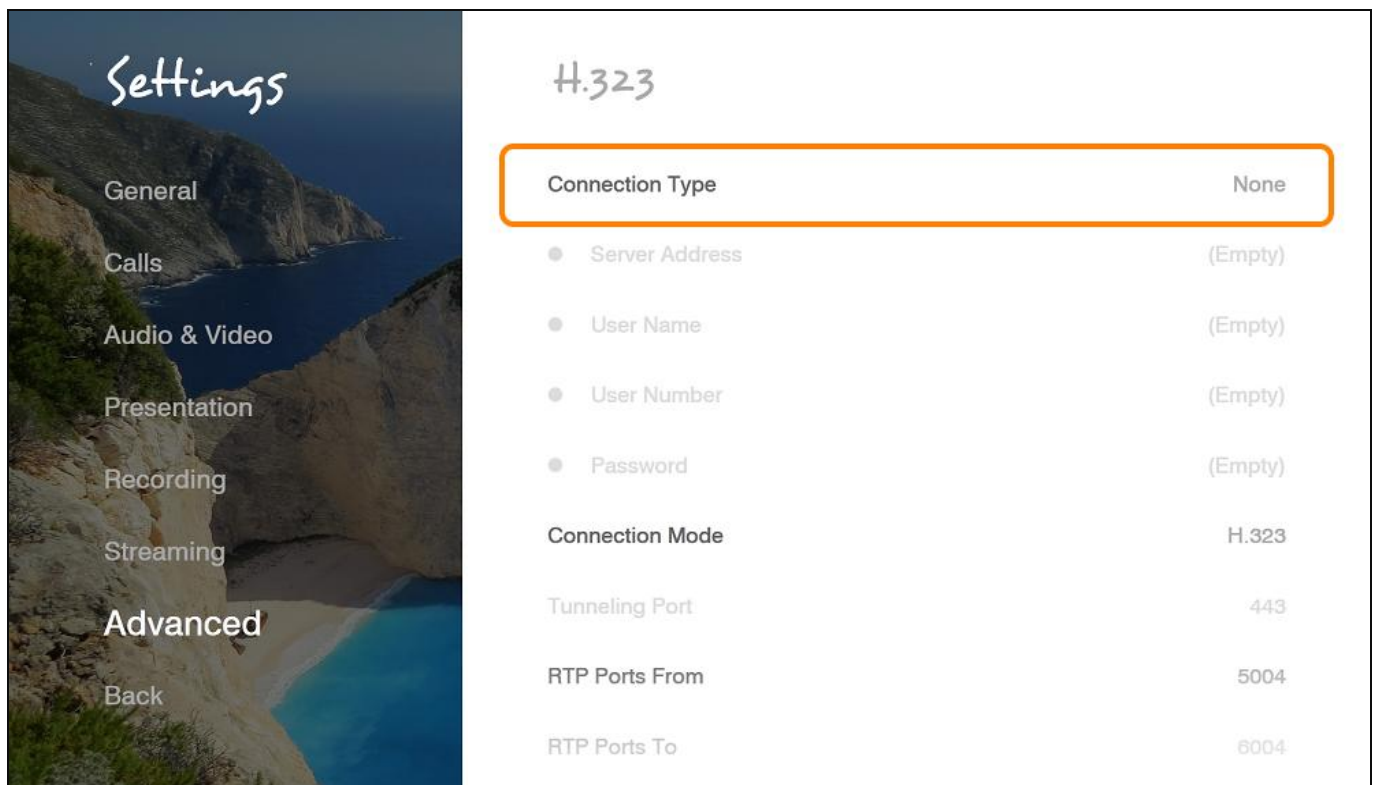
For point-to-point and multipoint videoconferences, the H.323 protocol standard is used for call signaling and control, video/audio transport and control, and bandwidth control. COLLABORATE® Live 600 utilizes H.323 to transport video/audio via DNS and NAT addressing, and to communicate/interact with either a COLLABORATE Central server or a standard gatekeeper server, one of which you can choose to work with in order to gain better performance and flexibility in point-to-point and multipoint videoconferences.

Note:

For more information about ClearOne's COLLABORATE Central server, its installation and configuration, refer to the COLLABORATE Central User Guide.

To configure a connection to a COLLABORATE Central server or to a gatekeeper server:

1. Select Settings>Advanced>H.323. The H.323 Settings window appears.



2. In the H.323 Settings window, set the following options and parameters:

Connection Type – Select this option if you want COLLABORATE® Live 600 to communicate/interact with a COLLABORATE Central server and utilize its advanced features. If selected, enter the required details in the following fields:

- **Server Address** – Enter the IP Address of the COLLABORATE Central server.
- **User Name** – Enter the user name used to log into the COLLABORATE Central server.
- **User Number** – Enter your user number used for identification on the COLLABORATE Central server. If not entered, the COLLABORATE Central server will automatically generate a number.
- **Password** – Enter the password used to log into the COLLABORATE Central server.

Connection Mode – Select the protocol you want to use to connect your call.

- **H.323** - This selection should be selected manually for LAN network connections only when the connection type is known.
- **H.460** - This selection should be selected manually for network connections over Firewall/NAT only when the connection type is known.

Tunnelling Port -This selection should be selected manually for ClearOne Proprietary Tunnelling. The default tunnelling port is configured by the System Administrator (see NetPoint/ COLLABORATE Central Administration Configuration Manager).

Note:

Changing this setting cause COLLABORATE® Live to reload.

- **From** – Enter the minimum RTP value.
- **To** – Enter the maximum RTP value.

Note:

In COLLABORATE Central mode, the system administrator should configure the LDAP settings for COLLABORATE Central on the server side.

To verify that COLLABORATE Central mode is active:

1. Press Status on the remote control and check in the displayed information that a COLLABORATE Central icon appears.
2. Select Settings>Advanced>H.323 and check the displayed information.

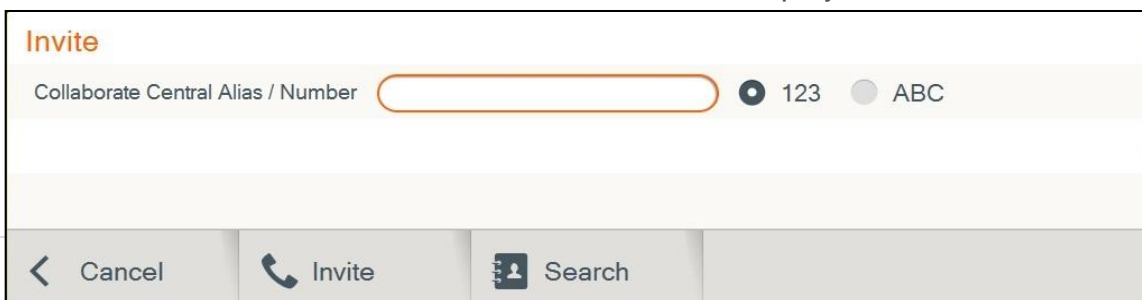
The New Call IP number shows the extension number that the system received when initiating COLLABORATE Central mode, which is the ID number.

WORKING IN COLLABORATE CENTRAL MODE

In a point-to-point call and when COLLABORATE Central mode is active, you can add another participant to the call without hanging up, i.e. – the call continues while the additional participant is being invited.

To add participants to the call in COLLABORATE Central mode:

1. Select **Conference>Invite**. The Invite call window is displayed.



Note:

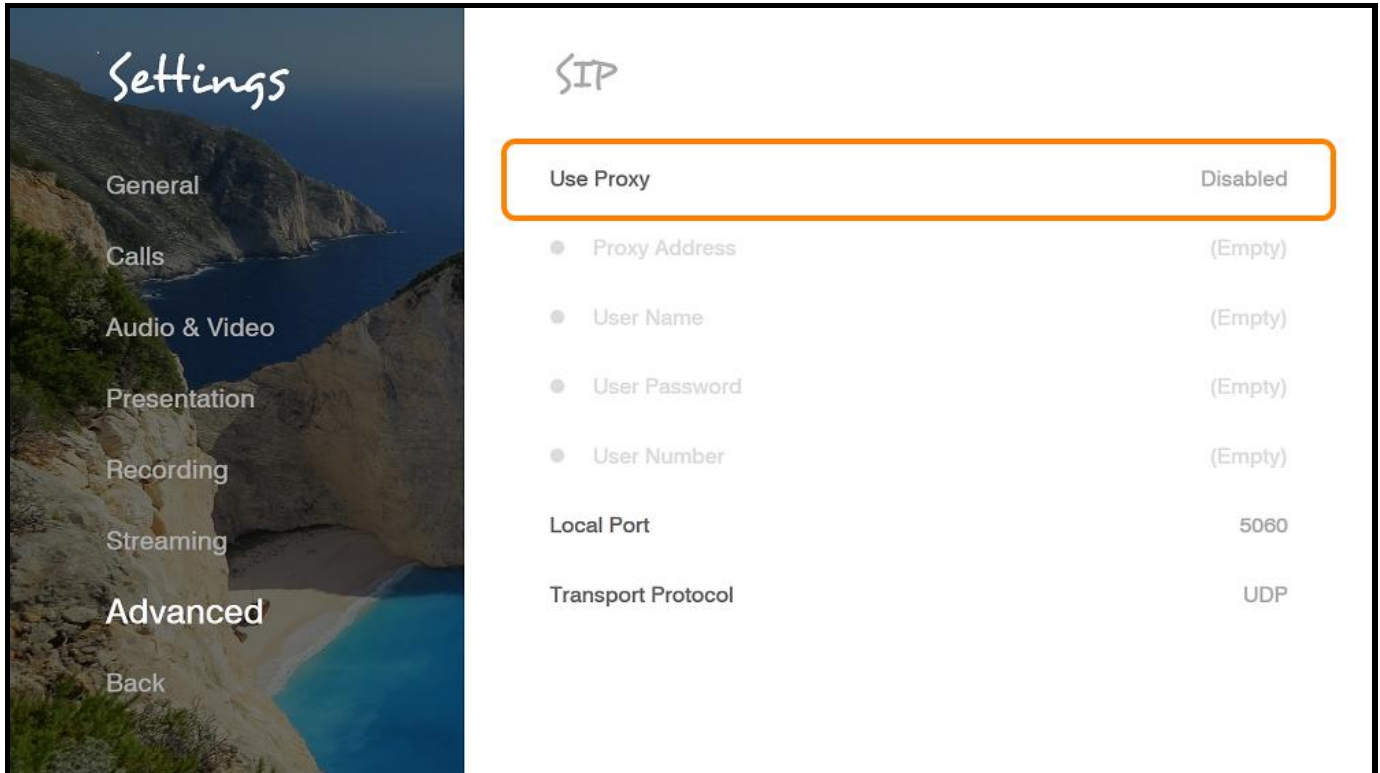
The **COLLABORATE Central >Invite** option is available on the menu only when **COLLABORATE Central** mode is active.

2. Type in the participant **COLLABORATE Central** alias/IP number, and select **Invite**. The call is connected

SIP PROTOCOL SETTINGS

SIP is a common communication signaling protocol for VoIP.

To configure SIP settings: Select **Settings > Advanced > SIP**. The SIP Settings window appears.



1. In the SIP Settings window, set the following options and parameters:

Use Proxy – Use a proxy server or as stand alone.

- **Proxy Address** – IP address of the Proxy server
- **User Name** – The user name as configured in the proxy server (proxy mode).
- **User Password** – The user password as configured in the proxy server (proxy mode).
- **User Number** – The user number used for identification in the Proxy server. If not entered, proxy server will automatically generate a number.

Local Port – The SIP port on your computer (the standard is 5060).

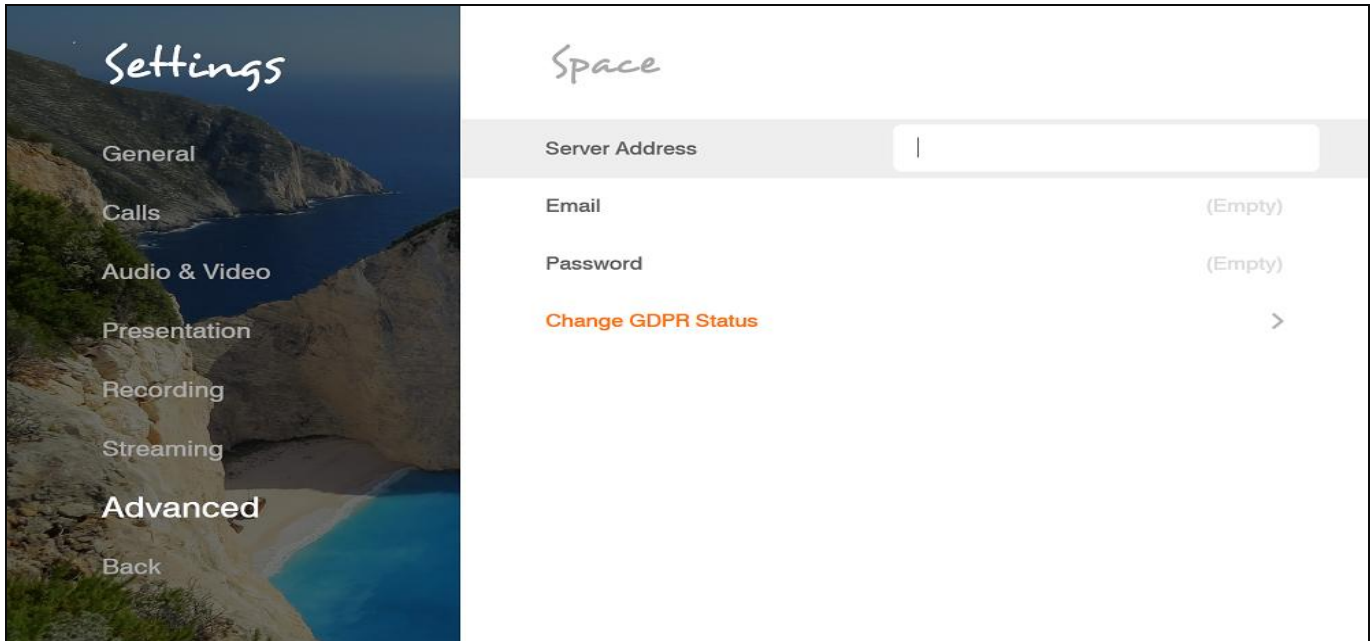
Transport Protocol – Select the desired protocol (TCP or UDP).

SPACE SETTINGS

Registering to the Collaborate Space server will allow you to join and create Collaborate Space cloud-based video conference according to your permissions.

To access Collaborate Space Settings:

1. Select **Settings>Advanced>Space**. The Space window appears.



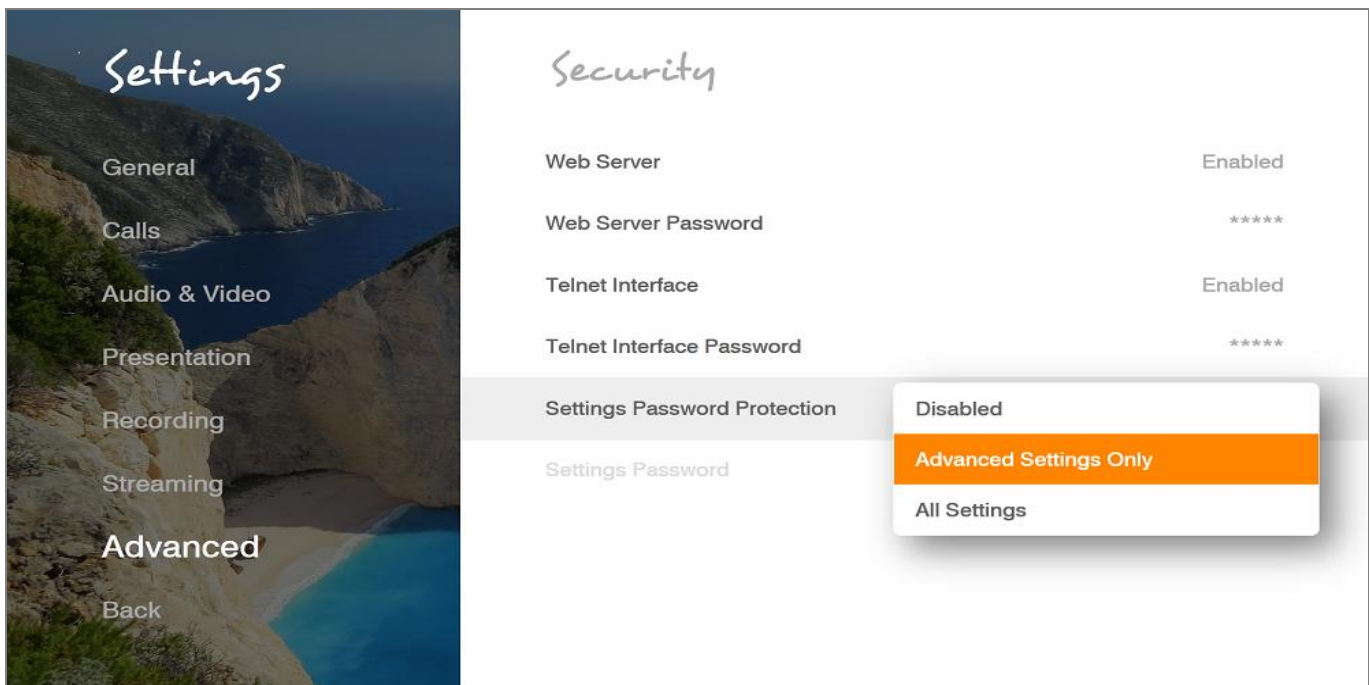
2. In the Space window, set the following options and parameters:

- **Server Address** - Enter the IP Address of the Collaborate Space server.
- **Email** – Enter the Email used to log into the Collaborate Space server.
- **Password** – Enter the password used to log into the Collaborate Space server (if required).

SECURITY SETTINGS

To configure Security settings:

1. Select **Settings>Advanced>Security**. The Security Settings window appears.



2. In the Security Settings window, set the following options and parameters

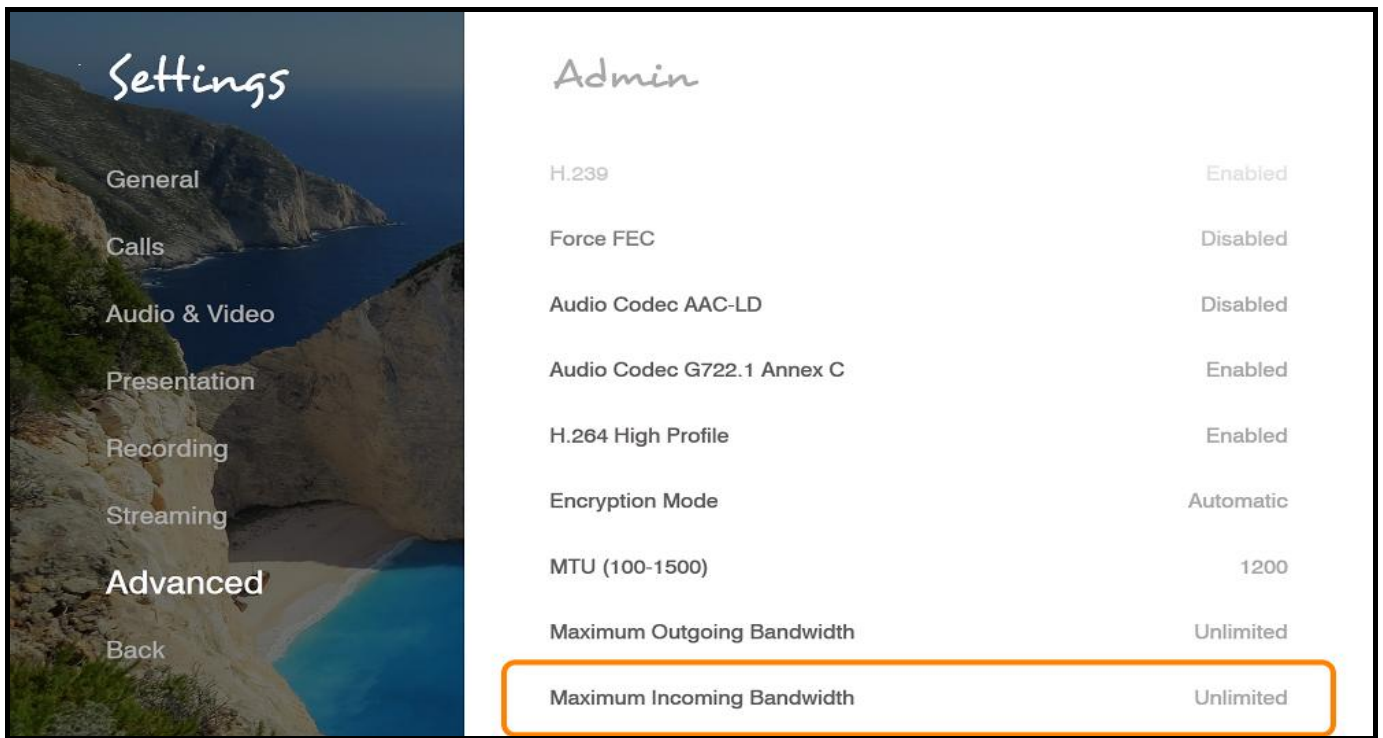
- **Web Server** – Select this option to allow Web access to the COLLABORATE® Live 600 unit via a browser. If you enter a password, Web users will be required to enter the same password when they access the unit. (For more information, see Web Access and Management).
- **Telnet Interface** – Select this option to allow access to the COLLABORATE® Live 600 unit via a Telnet-based terminal. If you enter a password, Telnet users will be required to enter the same password when they access the unit.
- **Settings Password Protection** –
 - a. Advanced Settings Only - Selecting this option restricts the access to the advanced settings of the unit, which are: Admin, IP, Directory, H.323, Firewall and Collaborate® Space.
 - b. All Settings - Selecting this option restricts the access to all settings of the unit.

ADMIN SETTINGS

To configure Admin settings:

1. Select **Settings>Advanced>Admin**. The Admin Settings window appears.

Admin	
Block Incoming SIP Calls	Enabled
Adaptive Bandwidth Adjustment	Enabled
H.239	Enabled
Force FEC	Disabled
Audio Codec AAC-LD	Disabled
Audio Codec G722.1 Annex C	Enabled
H.264 High Profile	Enabled
Encryption Mode	Automatic
MTU (100-1500)	1200



2. In the Admin Settings window, set the following options and parameters.

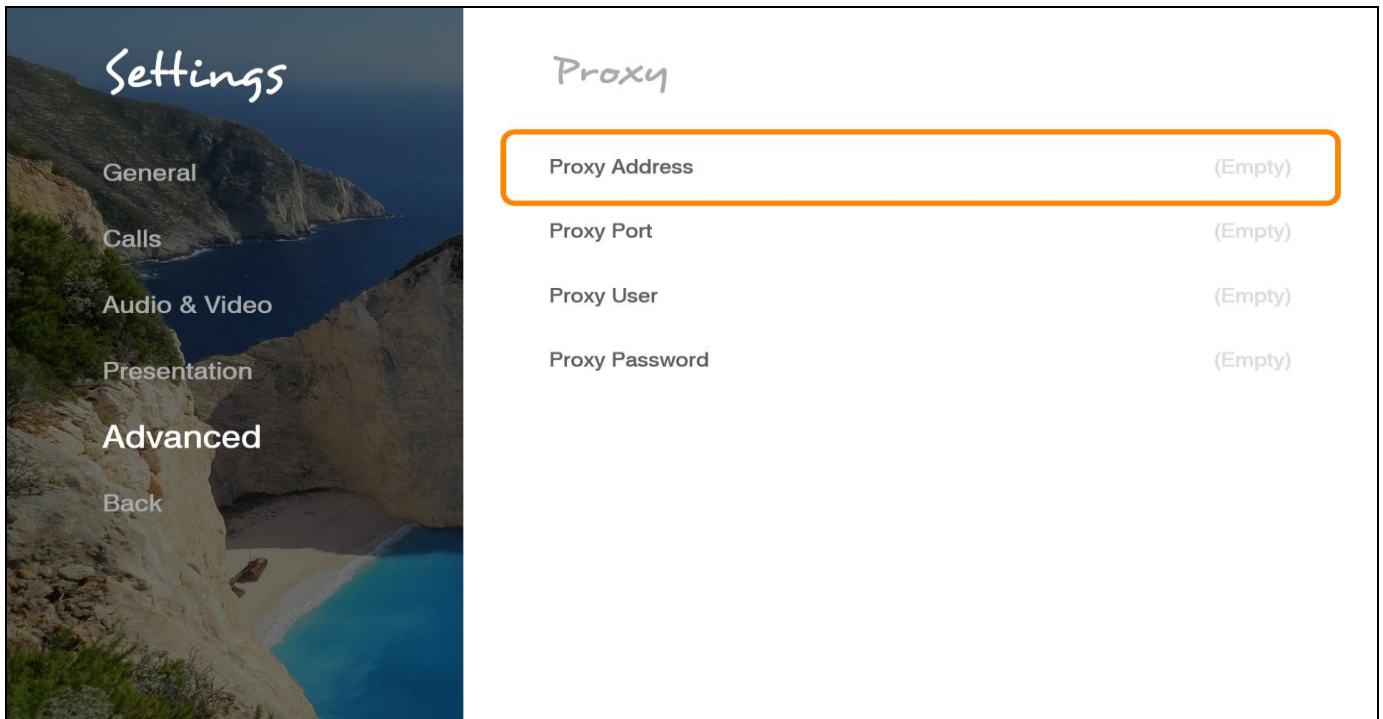
- **Block Incoming SIP Calls** – Enable to auto reject only incoming SIP calls.
- **Enable adaptive bandwidth Adjustment** – Enables videoconferences to proceed at reduced bandwidth if the network is congested. Deselecting this option maintains a constant quality to the session, but it may cause network problems.
- **Enable H.239** – Enables data sharing protocols.
- **Force FEC** – Force Forward Error Correction (FEC) – Forwards an error-correction code instead of automatically adjusting the bandwidth.
- **Enable Audio Codec AAC-LD:** – Audio Codec: audio compression format designed to combine the advantages of perceptual audio coding with the low delay necessary for two-way communication.
- **Enable Audio Codec G722.1 Annex C** – Audio Codec: wide-band compression algorithm provides higher-than-toll quality speech. The codec operates between a wide-band, 50Hz to 7kHz signal range, at the G.722.1 standard bit rate of 24kbps and 32kbps. GAO's G.722.1 algorithm is in the form of fixed-point arithmetic and is based on the Modulated Lapped Transform (MLT).
- **Enable H.264 High Profile** – When selected, enables the system to operate in high profile mode.
- **Encryption mode** – Encryption Mode - Calling securely requires setting the encryption protocol or using defaults which include automatic encryption. Alternatively, you can disable the encryption if it is not needed. Calls that are made using encryption will have a lock icon on the right-bottom corner of the screen.
 - a. **Automatic** –The default option; enables encryption automatically.
 - b. **AES** –An encryption algorithm included in the H.235 security protocol.
 - c. **No Encryption** –No encryption will be used.
- **MTU (100–1500)**– Set the designated MTU (Maximum Transfer Unit) value. The default value is 1200. Applies only to RTP streams.
- **Maximum Outgoing Bandwidth** – Maximum upload bandwidth (0 for unlimited).
- **Maximum Incoming Bandwidth** – Maximum download bandwidth (0 for unlimited).

3. Press Restore Defaults to reset system into factory settings.

PROXY SETTINGS

To configure Proxy Settings:

1. Select **Settings>Advanced>Proxy**. The Proxy Settings window appears.



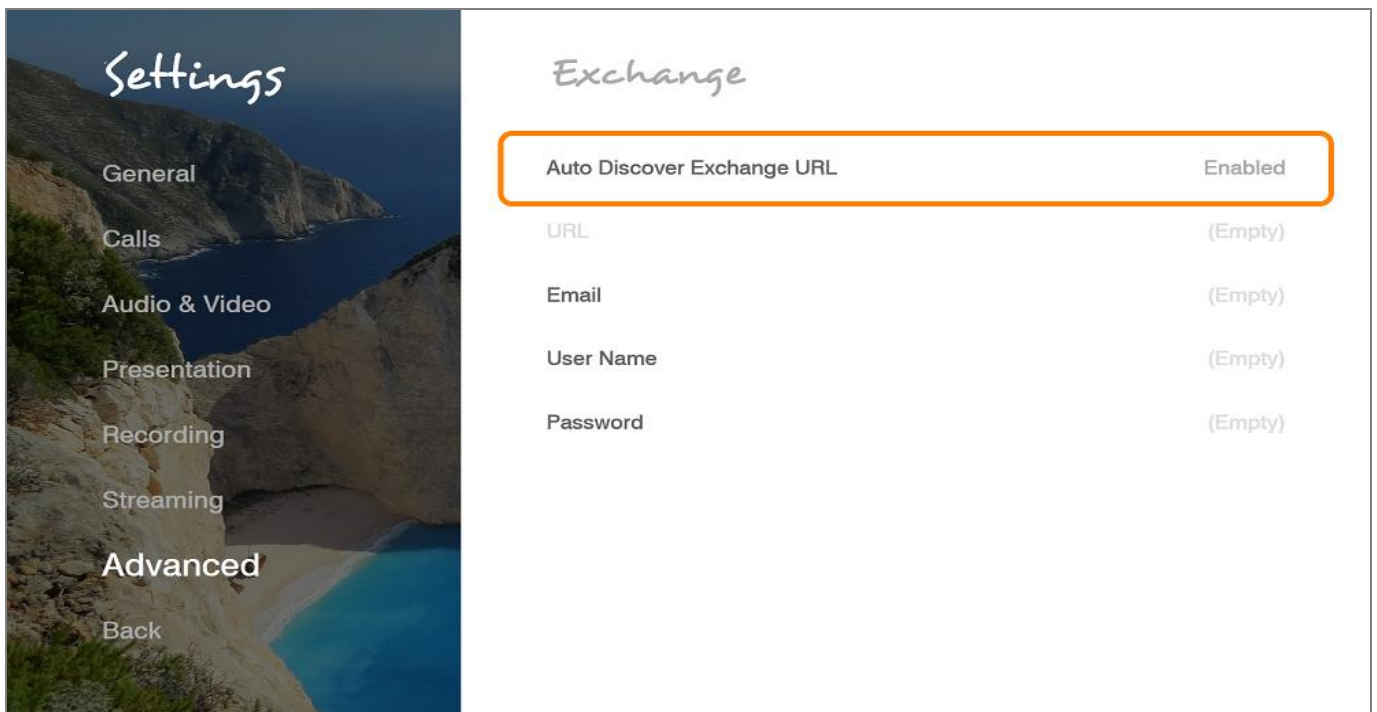
- **Proxy Address** – Proxy server IP
- **Proxy Port** – The port required for the proxy server (proxy mode).
- **Proxy User** – The User Name as configured in the proxy server (proxy mode).
- **Proxy Password** – The user password as configured in the proxy server (proxy mode).

EXCHANGE SETTINGS

This configuration allows you to integrate Exchange server with your Skype For Business

To access Exchange Settings:

1. Select Settings>Advanced>Exchange. The Exchange window appears.



2. In the Exchange window, set the following options and parameters:

- **Auto Discover Exchange URL** - Enabling this option would integrate the outlook automatically.
- **Email** - Enter the email address you use to sign in to your organization's network.
- **User Name** – Enter the user name used to log into the organization's network.
- **Password** – Enter the password used to log into the organization's network.

SKYPE FOR BUSINESS SETTINGS

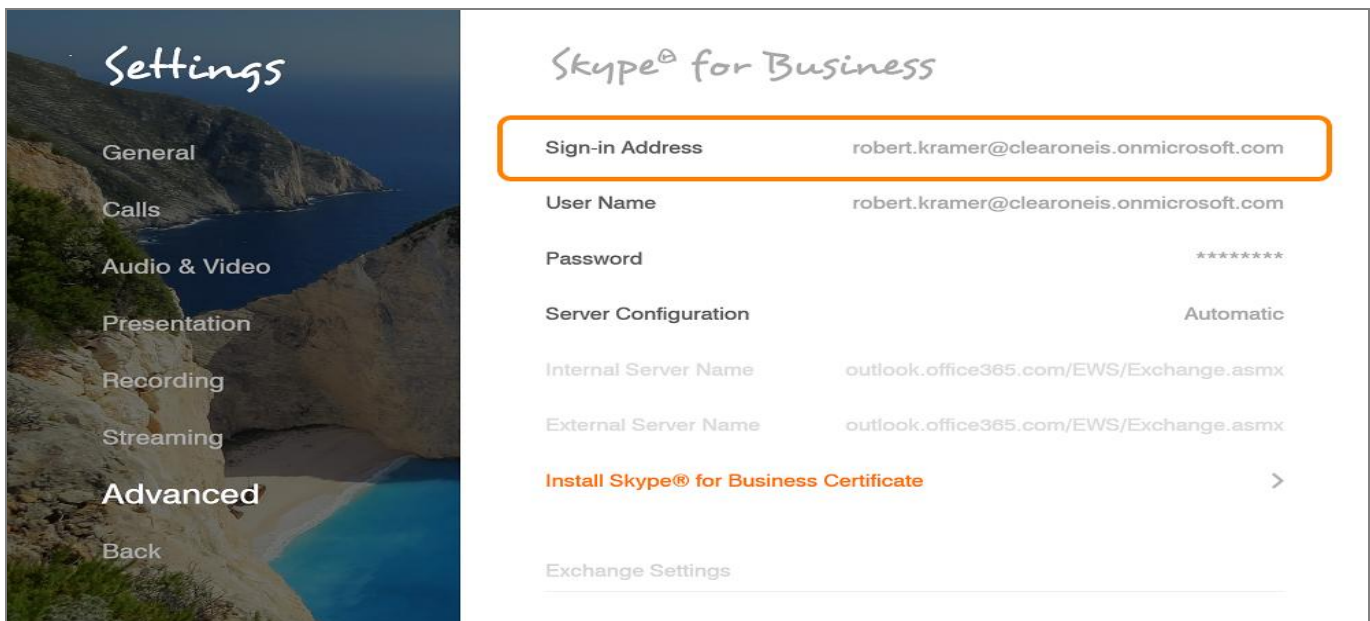
Registering to a Skype for Business server will allow you to join and create Skype for Business cloud-based video conferences according to your permissions.

Note:

Customer must purchase and install a COLLABORATE® Live Skype for Business activation license to enable the Skype for Business feature on the COLLABORATE® Live system. A Skype for Business user License will also be required.

To access the Skype for Business Settings:

1. Select **Settings>Advanced>Skype for Business**. The Skype for Business window appears.



2. In the Skype for Business window, set the following options and parameters:

- **Sign in Address** - Enter the sign in address for your Skype for Business server.
- **User Name** – Enter the user name used to log into the Skype for Business server.
- **Password** – Enter your account password used to log into the Skype for Business server
- **Automatic Server Configuration** – Chose this option to let the Skype for Business server automatically configure your connection settings
- **Internal Server Name**– Type the FQDN (fully qualified domain name) of your Skype for Business Server.
- **External Server Name**– Type the FQDN (fully qualified domain name) of your Skype for Business Server
- **Install Skype for Business Certificate:** To connect securely to your Skype for Business Server when you're using an on-premises configuration, install the intermediary certificates from your Skype for Business Edge servers. Otherwise, client cannot perform secure connections.

To install the intermediary certificates generated by your Skype for Business server:

1. Press on install button, file selection windows will be opened.
2. Browse to the folder that lists the certificate file.
3. Choose the certificate file
4. Select Install option

Chapter 8: Collaborate Space

IN THIS CHAPTER

COLLABORATE© Space is a cloud video collaboration application that connects hundreds of users joining from any device, anytime, and anywhere using messaging, calling, and meetings.

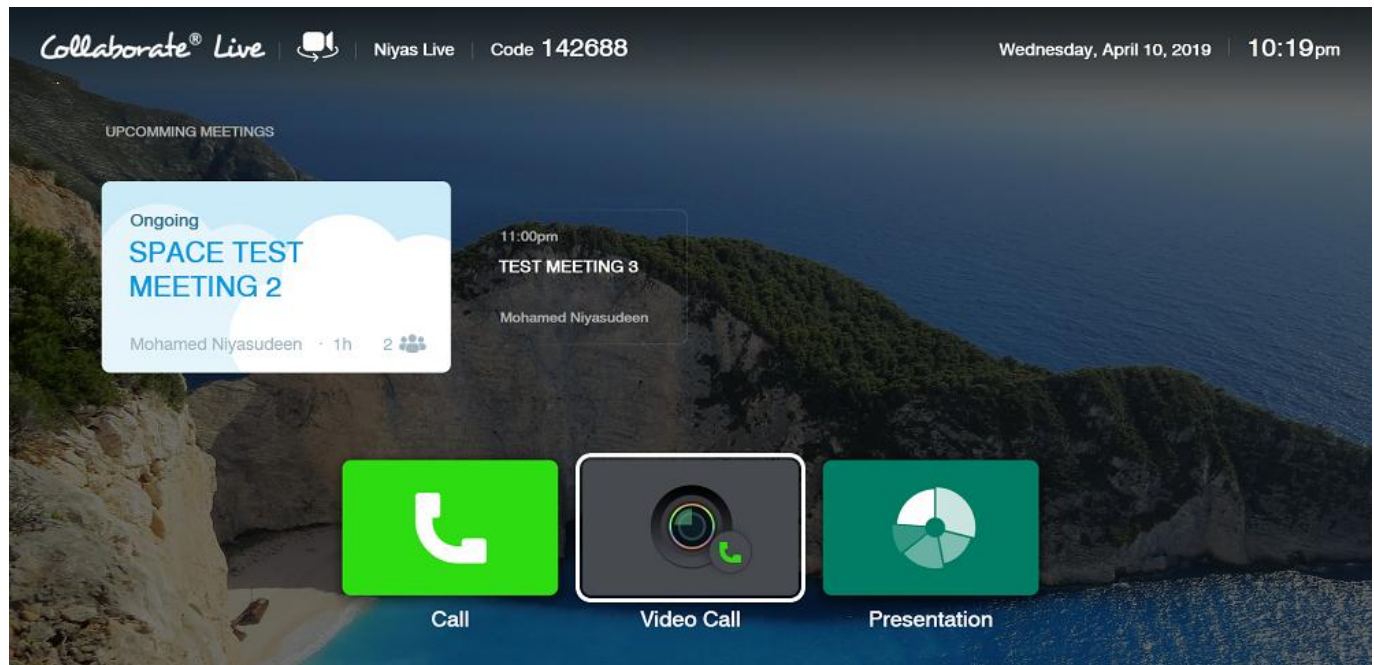
STARTING / JOINING A SPACE MEETING

You can start or join a Collaborate Space meeting:

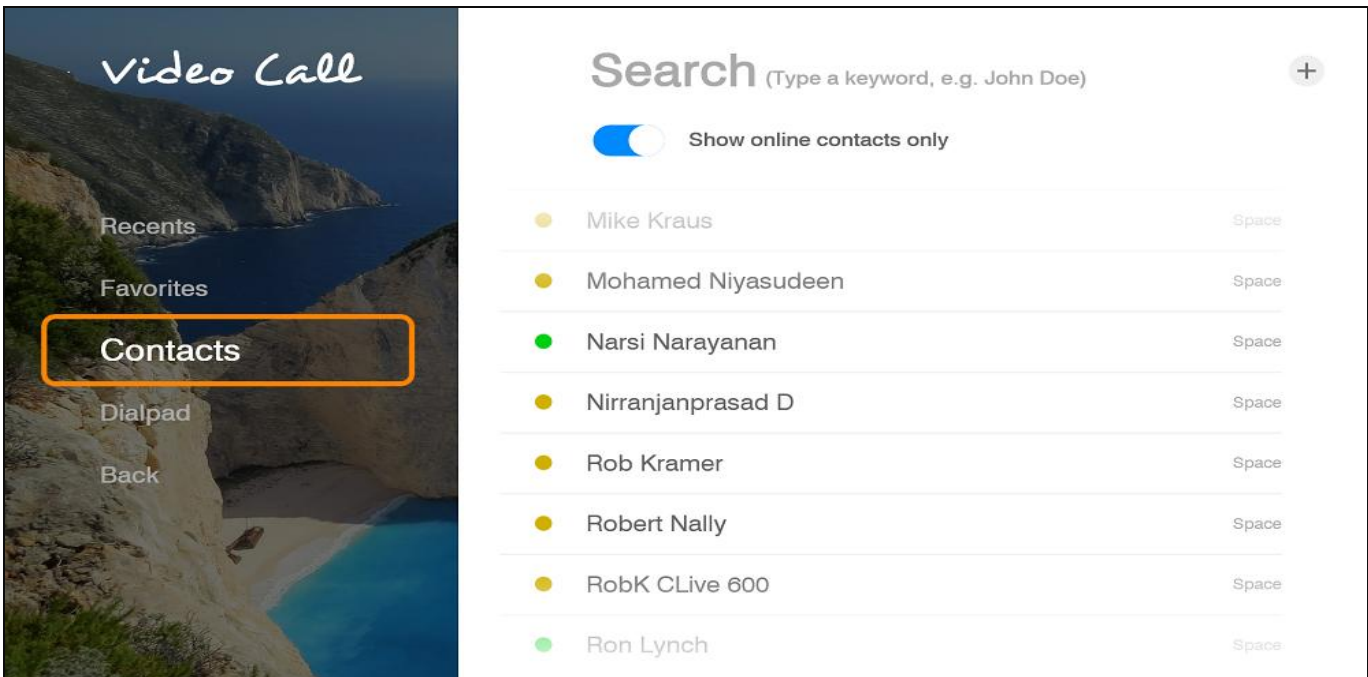
Note:

Before joining / starting a space meeting, you must enter a valid server and user details under Settings > Advanced > Space.

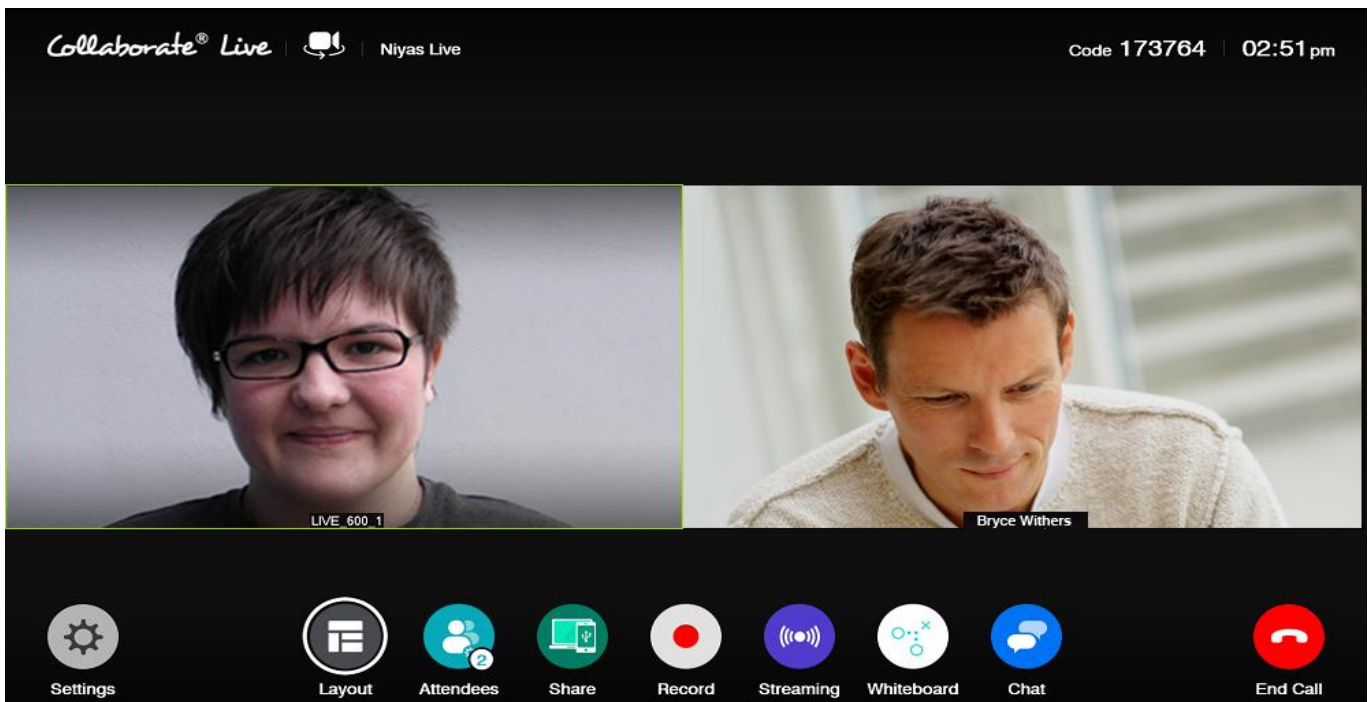
1. You can just click on the Ongoing scheduled meeting icons at the top of the screen to join that scheduled meeting. Future scheduled meetings are also displayed with their start times.



2. Space meeting starts.
3. To create a new call, you can click on the Call, Video Call or Contacts icons and the Video Call menu will open.

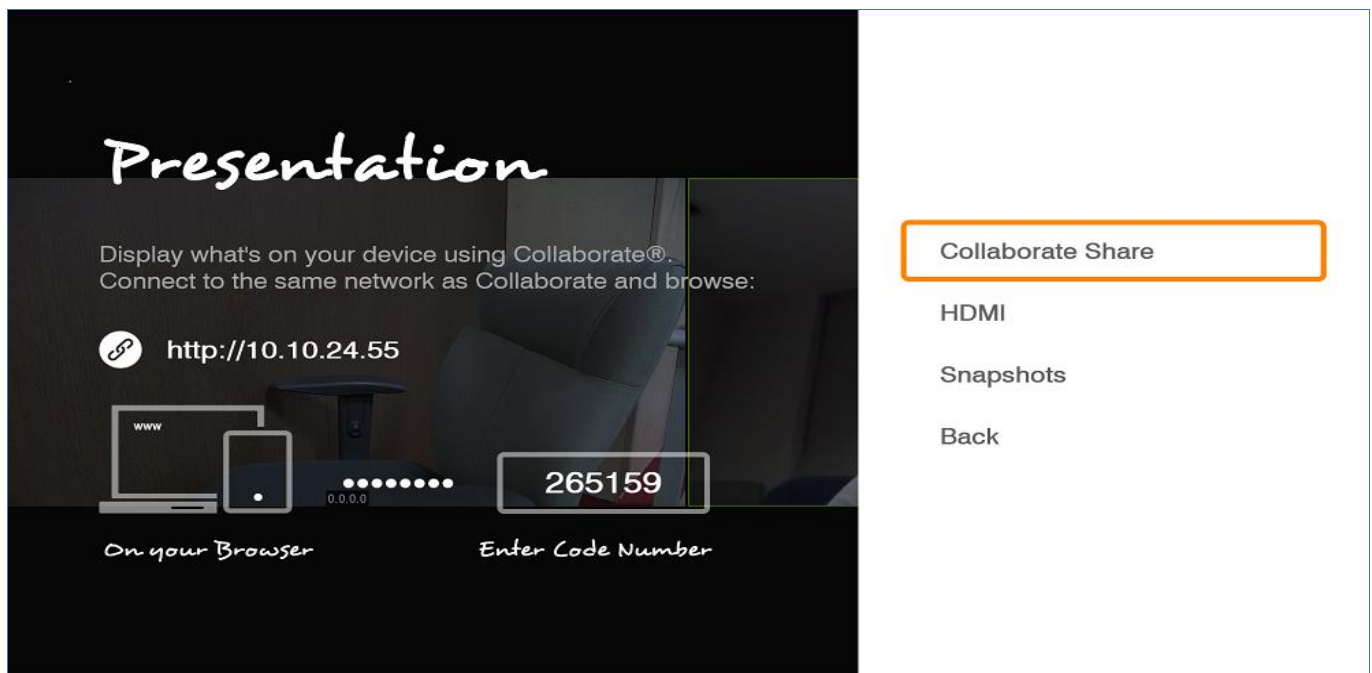


4. Select Online / Away contact and press Dial. Space call will be appearing as below.



- Add people – Add participants to the meeting / call
- Layout - Choose streaming layout:
 - a.Vertical – Stream video in top and bottom mode.
 - b.Horizontal – Stream video in side by side mode.
- Attendees – Shows the list of participants in the meeting / call
- Share - Share video file from USB storage device or share a recording.
- Record – Record a video file
- Streaming - Streaming of live and recorded sessions
- Whiteboard - Graphic space to draw or take notes on a new “canvas”.
- Chat – Chat with the attendees

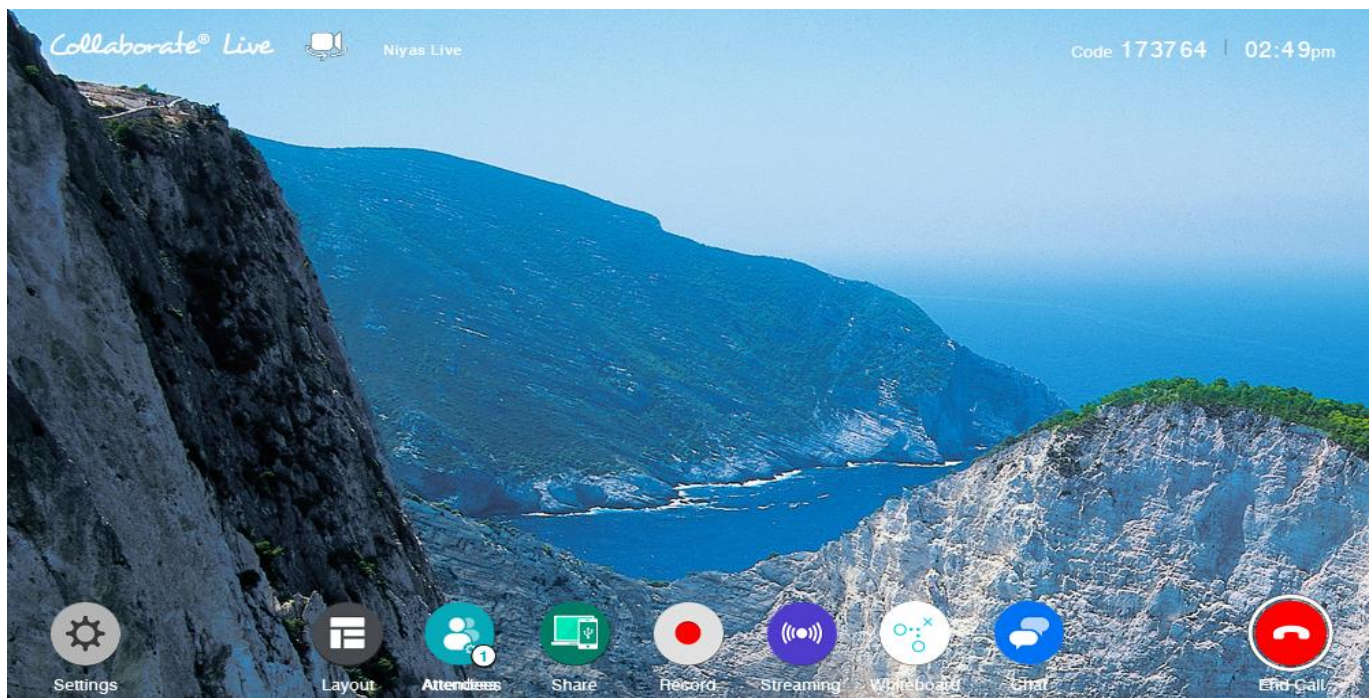
PRESENTATION



- **Collaborate Share** – Wirelessly share your PC desktop or any open application.
- **HDMI** – Depending on your camera source, if available, share second HDMI input.
- **Snapshots** – Share saved snapshots of your Whiteboard presentations.

END MEETING

- **End Meeting** – Terminate the meeting and discard all participants.
This option is available only for the call Host.
- **Leave Meeting** – Hang up and leave the meeting.



Chapter 9: Web Access and Management

IN THIS CHAPTER

This chapter explains how to access COLLABORATE® Live via a browser and use the Web-based GUI for viewing sessions/files, and configuring the unit from a remote location or via the LAN.

The Web interface includes all the options that are available via the regular on-screen GUI, as well as some additional configuration options that are not available via the regular GUI.

Since the user options shared by both GUIs are generally the same, this chapter focuses mainly on the exclusive web options, and includes the following sections:

- Accessing COLLABORATE® Live via Browser
- Viewing a Stream Session
- Download Collaborate Share for wireless sharing
- Viewing a Multicast Video Collaboration
- Importing/Exporting the License
- Viewing the Recording Archive
- Sending Running Text in a Call
- Viewing Call Status
- Performing System Upgrade
- Performing System Backup
- Performing System Restore from Backup File
- Performing System Restore from FTP

ACCESSING COLLABORATE® LIVE VIA BROWSER

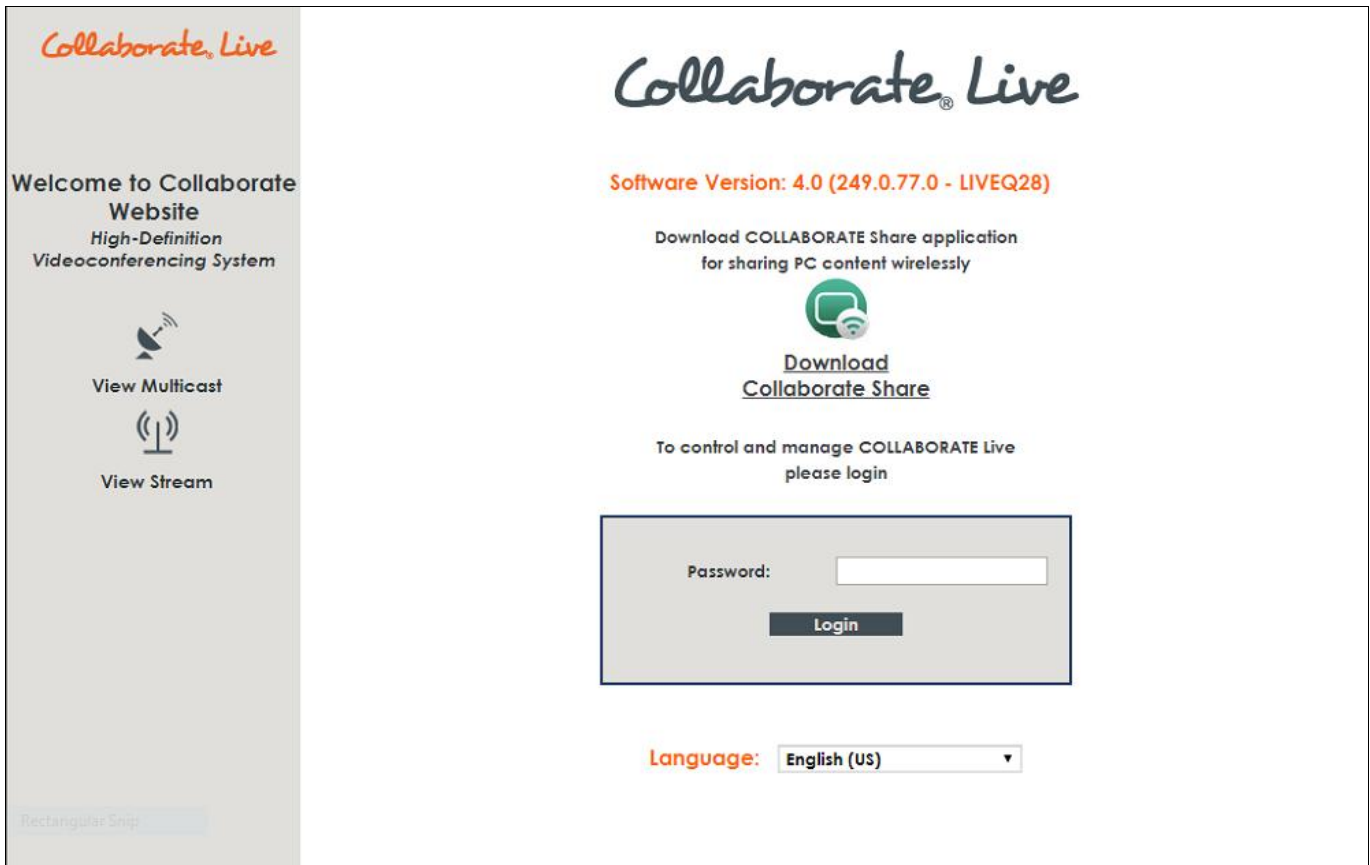
You can access COLLABORATE® Live via a standard Web browser from any remote location or from your LAN.

To access COLLABORATE® Live via a browser:

1. Open your browser.
2. In the browser's address bar, type the direct IP Address of the COLLABORATE® Live unit. The COLLABORATE® Live Web login page appears. For example:
`http://172.100.100.25`

Note:

If you do not know the IP Address of the COLLABORATE® Live unit, request help from a user close to the unit, who can check the unit's IP Address as explained in [Displaying System Information](#).



3. If a password was set for Web access (see Administration Settings): in the Password field, enter your password for accessing the management options, and then click Login.

If the password is authenticated, the management options page appears.

VIEWING A STREAMING SESSION

You can view in your browser any stream that has started on COLLABORATE® Live. The stream may be of whatever is currently being captured by the video camera and microphone that are connected to COLLABORATE® Live.

The stream is viewed in the browser using Windows Media Player for WMV stream or VLC player for MP4 stream.

Note:

Viewing a stream does not require you to enter your password and you do not have to log in.

To view a stream session:

- Open your browser.
- In the browser's address bar, type the direct IP Address of the COLLABORATE Live unit. The COLLABORATE® Live Web login page appears.
- Click **View Stream**; a new browser window opens and displays the stream on a page embedded in Windows Media Player or VLC player.

VIEWING A MULTICAST VIDEO COLLABORATION

You can view in your browser an ongoing multicast video collaboration that has started via the COLLABORATE® Live unit.

The multicast video collaboration is viewed in the browser using an embedded Apple QuickTime plug-in

Note:

Viewing a multicast video collaboration does not require you to enter your password and you do not have to log in.

To view a stream session:

1. Open your browser.
2. In the browser's address bar, type the direct IP Address of the COLLABORATE® Live unit. The COLLABORATE® Live Web login page appears.
3. Click View Multicast; a new browser window opens and displays the video collaboration on a page with QuickTime embedded to it.

Note:

In order to view the Multicast via QuickTime, multicast settings should be configured to H.261 for video codec and G.711 for audio.

DOWNLOADING COLLABORATE SHARE

You can share your PC desktop or an application via the network. To use this feature, you need to download the Collaborate Share application.

To download Collaborate Share:

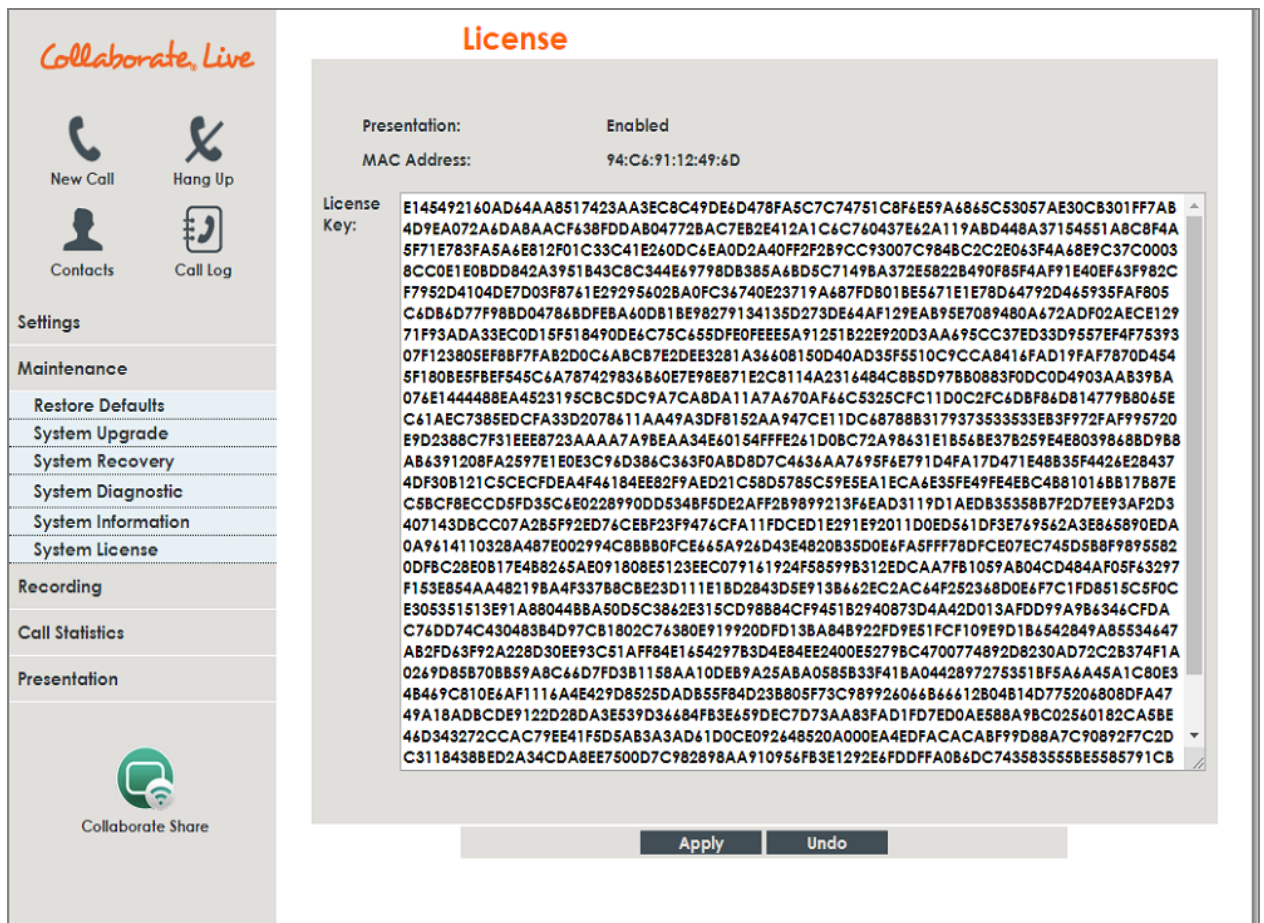
1. Open your browser.
2. In the browser's address bar, type the direct IP Address of the COLLABORATE® Live unit. The COLLABORATE® Live Web login page appears.
3. Click on Collaborate Share icon. The application download will be start automatically.

IMPORTING/EXPORTING THE LICENSE

Some features and functionalities in COLLABORATE® Live require licensing, and are activated with a license key that you must enter and save to your COLLABORATE® Live unit.

To enter and save a license to your COLLABORATE® Live unit:

1. After logging in, click Maintenance>System License. The License page appears.



2. Copy and paste the license key (a long text-based string) that you received from ClearOne into the License Key text box, and then click Apply.

Once the license key is applied, you can view which features/functionality are available:

- **Presentation** – Indicates whether the laptop sharing and USB sharing functionalities are enabled or disabled.
- **MCU** – Maximum number of endpoints that can participate in videoconferences using the embedded MCU.
- **Recording, Streaming** – Indicates whether the recording and streaming functionalities are enabled or disabled.

The unit's MAC address is also displayed.

VIEWING THE RECORDING ARCHIVE

You can view the list of recordings that are stored in the COLLABORATE® Live recording directory, and you can also delete recordings that are no longer needed.

To view the list of recordings:

1. After logging in, click **Recordings**. The Recording Archive page appears.

The screenshot shows the 'Recording' page in the Collaborate Live interface. On the left is a sidebar with navigation icons and labels: 'Collaborate Live', 'New Call', 'Hang Up', 'Contacts', 'Call Log', 'Settings', 'Maintenance', 'Recording', 'Call Statistics', 'Presentation', 'View Multicast', 'View Stream', and 'Collaborate Share'. The main area is titled 'Recording' and shows a list of recordings. Above the list, there are options to 'Select: All | None | ArchiveDelete' and 'Remaining Time [672x384 - 55: 52 hh:mm] [720p - 11: 00 hh:mm] [1080 - 05: 41 hh:mm] Free Space: 12.27 GB'. The recording list has columns for Name, Date, Time, Size, and Duration, with a 'Download' link for each. Below the list is a search filter with a 'Name' text box, 'Date Range' (From Date and To Date) text boxes with browse buttons, and a 'Search' button.

	Name	Date	Time	Size	Duration	
<input type="checkbox"/>	rename Recording_8	09/01/2020	17:00:24	27.39 MB	00:01:24	Download
<input type="checkbox"/>	rename Recording_7	16/09/2019	16:33:33	935.2 KB	00:00:03	Download
<input type="checkbox"/>	rename Recording_6	22/08/2019	14:03:40	2.02 MB	00:00:06	Download
<input type="checkbox"/>	rename Recording_5	08/08/2019	14:50:12	4.25 MB	00:00:14	Download
<input type="checkbox"/>	rename Recording_4	08/08/2019	14:49:55	589.79 KB	00:00:02	Download
<input type="checkbox"/>	rename Recording_3	08/08/2019	14:49:16	4.93 MB	00:00:16	Download
<input type="checkbox"/>	rename Recording_2	24/07/2019	14:52:34	10.5 MB	00:00:34	Download
<input type="checkbox"/>	rename Recording_1	30/05/2019	17:12:30	2.32 MB	00:00:08	Download

2. Click on recording name in order to play it. Click on the Download link on the right, to download the recording file.
3. Choose which recordings you would like to view by using the following filtering options:
 - **Today** – Click to display only the recordings that were saved in the current day.
 - **Specific day of this week** – Click any other day of the current week to display the recordings that were saved on that specific weekday.
 - **Last week** – Click to display only the recordings that were saved last week.
 - **2 Weeks Ago** – Click to display only the recordings that were saved two weeks ago.
 - **Previous Month** – Click to display only the recordings that were saved in the previous month.
 - **All** – Click to display the entire archive of recordings that are saved in the COLLABORATE® Live recording directory. The directory path is shown in the title line above the list.
 - **Name** – If you want to search for a specific recording name, enter the name in this text box and then click the **Search** button below.
 - **From Date/To Date** – Use these boxes to define a date range for the recordings that you want to display on the list. Only the recordings that were saved in the defined range will be displayed once you click the **Search** button. You can browse for specific From/To dates using the two Browse buttons available next to the text boxes.

The Recording Archive list shows the following details for each saved recording:

- a. **Name** – Name of the recording. You can click the adjacent **Rename** button if you want to change the file name.
- b. **Date** – Date on which the recording was made and saved.
- c. **Time** – Time at which the recording was made and saved.
- d. **Size** – Size of the recording file in kilobytes or megabytes.
- e. **Duration** – The recording's length.

The currently available disk space size, labeled **Free Space**, is displayed above the list.

To delete a recording:

- Select the checkbox on the row of the recording's entry, and then click Delete. You can select more than one recording.

Note:

Click **Select All** to select the checkboxes of all recordings that are currently displayed.

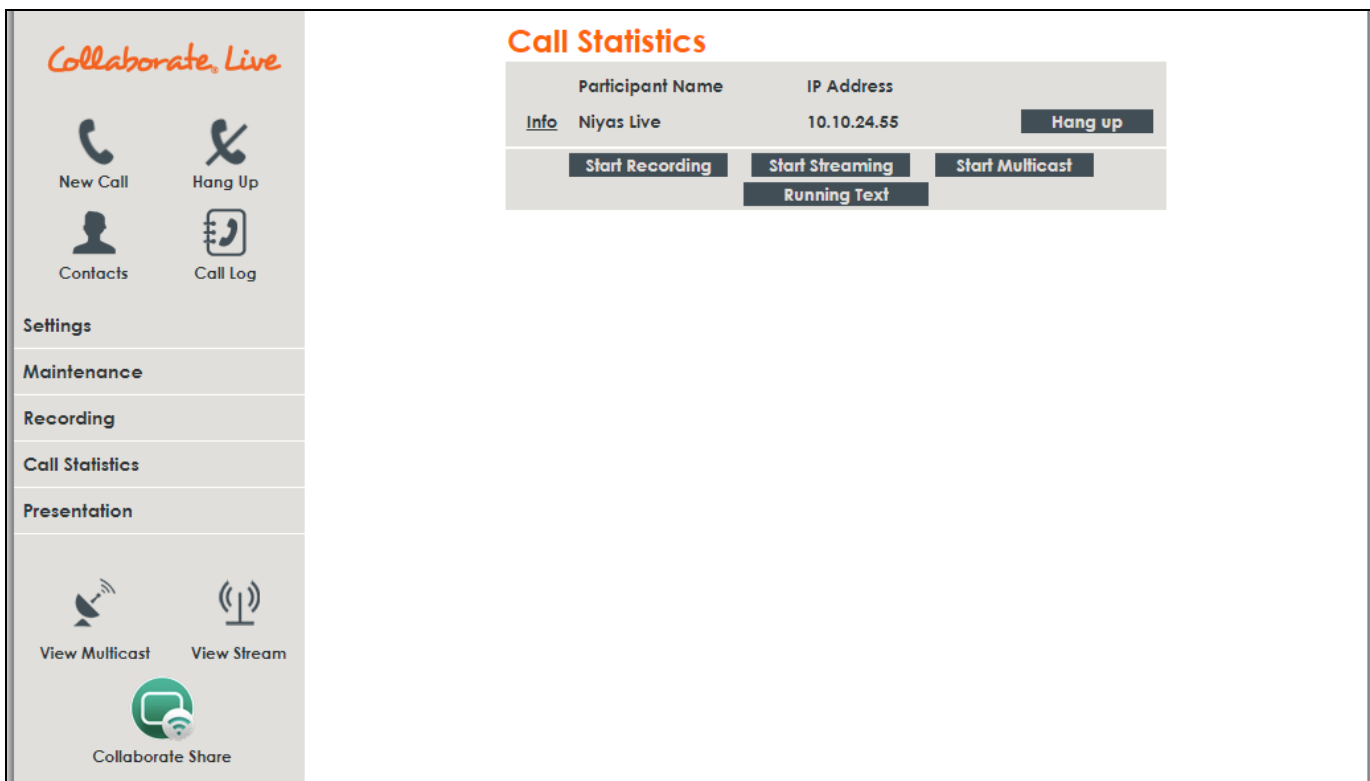
Click **None** to clear the checkboxes of all recordings that are currently displayed.

SENDING RUNNING TEXT IN A CALL

During a video collaboration call, you can type and send a text message to the person(s) with whom you are communicating. The message is displayed as running text on top of the video image on the far-end screen.

To type and send a running text message:

1. Start the call. The **Running Text** button appears in the Call Statistics box (available only in the Web interface).



2. Click the **Running Text** button. The Running Text box appears.
3. In the text box, type the message you want to send and display on the far-end screen, and then click **Start**.



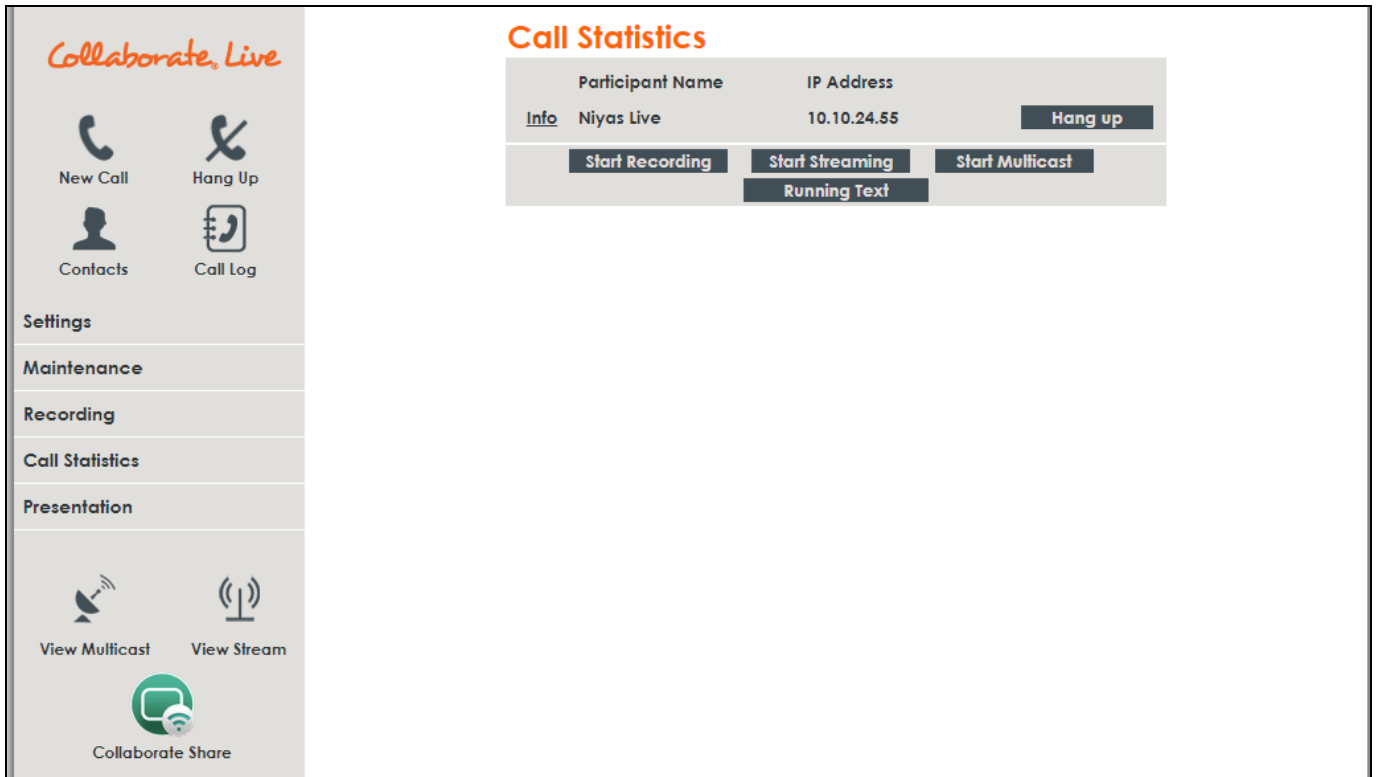
Note:

To stop the display of the running text message on the far end, click Stop.

VIEWING CALL STATUS WITH THE WEB-BASED GUI

During a call, you can view and check the technical details of the call with the Web-based GUI. To view the call status details:

- During a call, click on the Call Statistics link on the left side of the web interface to view the Call View box as shown below:



If you click on the **Info** link on the left side of the Call Statistics window, detailed call information will be displayed:

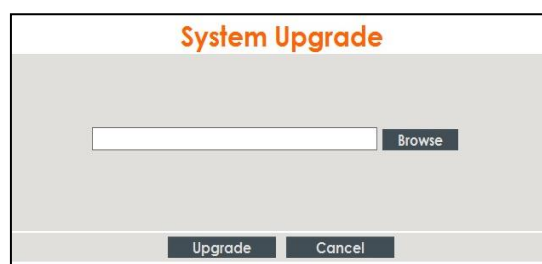
	Transmit	Receive
Video Format:	H.264	H.264
Video Resolution:	720p	720p
Video Bandwidth:	872	815
Video Frame Rate:	30	29
Audio Format:	AAC-LD	AAC-LD
Audio Bandwidth:	64	64
Encryption Mode:	AES	AES
Call Protocol	H.323	
Packet Loss(%)	1	

The image above confirms the: Call Protocol, video and audio formats, video resolution and frame rate, audio and video bandwidth, encryption mode, and packet loss details.

PERFORMING SYSTEM UPGRADE

You can upgrade the Collaborate® software to a newer version when such becomes available. To upgrade the COLLABORATE® Live software:

1. After logging in, click Maintenance>System Upgrade. The System Upgrade box appears.

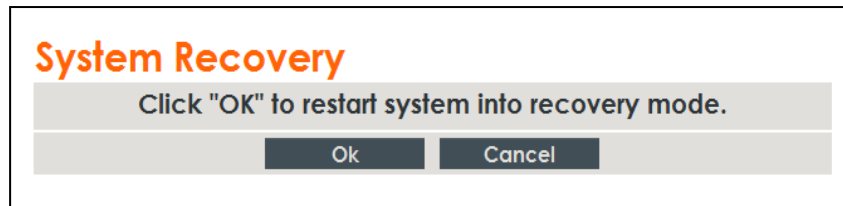


2. Click Browse and then select the ClearOne-provided file that contains the newer software version.
3. Click Upgrade. The system upgrade is performed and then the system reboots.

PERFORMING SYSTEM BACKUP

The Backup option, using the remote controller, takes a snapshot of the current COLLABORATE® Live configuration. It is recommended to take backup snapshots every time a configuration change is made.

1. After logging in, click Maintenance>System Recovery



2. The system will reboot and a Backup/Restore screen will appear



3. Select the **Backup** option. The **Backup** screen will appear.
4. Using the remote control to enter letters and numbers, enter the **Backup name** and click on the **Create** button to create the backup file of the configuration.
5. Once it is done, press the **Exit** button and reboot the system. Shutdown the system by pressing few seconds on the **power** button; then press the **power** button again in order to turn on the system.

PERFORMING SYSTEM RESTORE FROM BACKUP FILE

Whenever necessary, you can discard all manually entered configuration settings and restore the settings to a saved backup of an earlier configuration.

Note:

Before restoring the system, you must save the system License Key. This is accessed by using the menu: Maintenance>System License

Reset the COLLABORATE® Live unit to a backup snapshot file using a browser:

1. Open your browser.
2. In the browser's address bar, type the direct IP Address of the COLLABORATE® Live unit. The COLLABORATE® Live web login page appears. For example: <http://172.100.100.25>
3. After logging in, click **Maintenance>System Recovery**

Note:

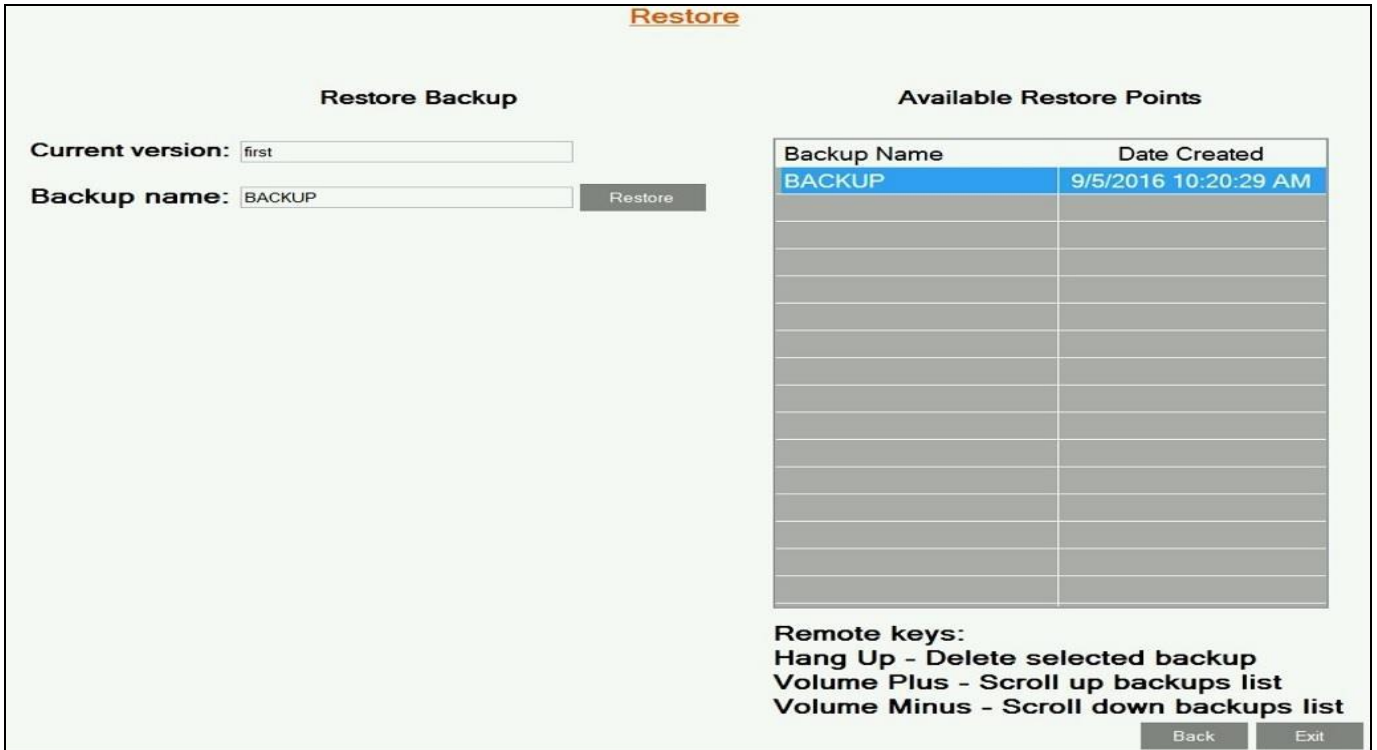
All information on the system including user information, Contacts entries, IP settings and all other user defined information will be deleted.

After restoring the system to its factory defaults, it may be necessary to perform a system upgrade.

1. The system will reboot and **Recovery** menu will appear.



2. Select the Restore button. The Restore screen will appear.



4. Select the backup configuration file you want to restore, and press the **Restore** button.

5. Once the restore process is completed, press **OK** and shutdown the system by pressing for a few seconds on the **power** button; then press the **power** button again in order to turn on the system.
6. Copy the stored License Key to the system (Configuration>Option>License)

PERFORMING SYSTEM RESTORE FROM FTP

Whenever necessary, you can discard all manually entered configuration settings and restore using settings delivered via FTP.

Note:

Before restoring the system to its factory defaults, you must save system License Key. This is accessed by using the menu:

Maintenance>System License

To set the COLLABORATE® Live unit to settings delivered via FTP:

1. After logging in, click Maintenance>System Recovery.

Note:

All information on the system including user information, Contacts entries, IP and all other user defined information will be deleted.

After restoring the system to its factory defaults, it may be necessary to perform a system upgrade.

2. The system will reboot and Recovery menu will appear.



3. Select the FTP Updates button. The FTP Updates screen will appear.

FTP Updates

Download Update

Update name:

Available Updates

Update Name	Date

FTP address:

User Name:

Password:

4. Enter the FTP server details including **FTP Address**, **User Name** and **Password**, and click the **Connect** button.
5. Select the file from the listing, and then click on the **Download** button.
6. Once the download is completed, press on the **Back** button.
7. Select the **Restore** button and follow the restore steps listed above.

ACCESS TO SYSTEM RECOVERY WITH USB DEVICE

In addition to web server, you can reach recovery mode with designated USB device.

1. Connect Recovery USB and a keyboard to the system.
2. Restart your system (Settings>Power>Restart).
3. During restart, press F10 on your keyboard.
4. In the boot manager, Choose Recovery USB device.

Note:

System recovery management via USB device is with the keyboard, while recovery management via Web Server is with the remote control.

Chapter 10: Telnet Commands

The Telnet commands allow you to communicate with a remote computer that is using the Telnet protocol.

You can run **telnet** without parameters in order to enter the telnet context, indicated by the Telnet prompt (**telnet>**). From the Telnet prompt, use the following commands to manage a computer running Telnet Client.

ENABLING THE TELNET API

To enable the Telnet API:

1. Click Settings>Advanced>Security.
2. Check that the Telnet Interface is Enabled, and create a Telnet Interface Password

STARTING AN API SESSION USING AN RS-232 INTERFACE

The COLLABORATE® Live can run API sessions from the RS-232 interface – COM 1 or 2

- Enable telnet interface in the **Advanced>Security** settings.
- In the **Advanced>Serial Port** settings, change the Com port mode to Serial control.
- Power off the computer or control system and the COLLABORATE® Live system.
- Use an RS-232 cable to connect the computer or control system RS-232 port to the correct COM port on the COLLABORATE® Live system.
- Power on the computer and the COLLABORATE® Live system.
- From the computer or control system, start a serial session using HyperTerminal or another appropriate utility.
- Set up the serial session as follows:
 - a.Connection name:
 - b.Protocol: Serial
 - c.Port: The COM Port number on your PC (Check under Device Manager)
 - d.Baud Rate: 9600
 - e.Data Bits: 8
 - f. Parity: None
 - g.Stop bits: 1

USING THE API WITH A LAN CONNECTION

If you have a computer connected to the LAN, you can send API commands to the COLLABORATE® Live system through Telnet port 23.

1. On the computer, open a command line interface.
2. Start a Telnet session using the COLLABORATE system IP address.

Note:

You cannot use Telnet to access the system if the Telnet Interface is disabled in the Advanced>Security menu.

DESCRIPTIONS OF THE TELNET API (COLLABORATE® LIVE)

Key	Description	Arguments	Example
accept	Accept incoming call	—	accept
callinfo	Request call information details use sessions command to get ID	SessionID: Valid session ID number	callinfo 1
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
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 Calltype: audio, video	dialsfbcontact 30 audio

dialspacecontact	Dial Collaborate Space contacts Use listspacecontacts command for a numbered contact list	Contact ID Calltype: audio, video	dialspacecontact 14 video
donotdisturb	Start or stop do not disturb mode.	Parameter: enable disable	donotdisturb enable
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 layout, change between main senders.	—	nextsender
recording	Start or stop media activity.	Parameter: start stop	recording start recording stop
reject	Rejecting incoming call	—	reject
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	remotecontrol 1

- 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	
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
sharehdm1 / sharehdm2	Start sharing HDMI content depending on connected devices.	Parameter: start stop	sharehdm2 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: 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

Chapter 11: Specifications

The following are the COLLABORATE® Live specifications.

Video Specifications	
Transmission Speed	<ul style="list-style-type: none"> • SIP / H.323: 96 Kbps - 6Mbps
Video Standards	<ul style="list-style-type: none"> • H.261, H.263, H.263+/++, H.264
Live Video Resolution	<ul style="list-style-type: none"> • QCIF (176 x 144 pixels) • QVGA (320 x 240 pixels) • CIF (352 x 288 pixels) • SIF (352 x 240 pixels) • VGA (640 x 480 pixels) • 4CIF (704 x 576) • 4SIF (704 x 480) • 720p (1280 x 720 pixels) • 1080p (1920 x 1080 pixels)
Video Frame Rate	<ul style="list-style-type: none"> • Up to 10 fps: 96 Kbps • Up to 20 fps: 128 to 192 Kbps • Up to 30 fps: 320 Kbps and above • Up to 60 fps (720p): 1536Kbps and above • Up to 60 fps (1080p): 2560Kbps and above
Video Inputs	<ul style="list-style-type: none"> • 2X HDMI
Video Outputs	<ul style="list-style-type: none"> • HDMI • Display Port
HD Simulcast	<ul style="list-style-type: none"> • Integrated Multicast Viewer
Audio Specifications	
Audio Features	<ul style="list-style-type: none"> • Full-duplex echo cancellation • Automatic noise suppression (ANS) • Automatic gain control (AGC)
Audio Standards	<ul style="list-style-type: none"> • 20 KHz: AAC-LD • 7 KHz: G.722, G.722.1 • 3.4 KHz: G.711, G.723.1, G.728, G.729 • AMR (3G)

Data Specifications	<ul style="list-style-type: none"> • Data Sharing Methods • Laptop plug in • HD DataPoint • USB storage key • Documents: PPT, PPS, XLS, XLSX, DOC,DOCX,PDF • Video clips (AVI, MPEG, WMV, MP4 etc.) • Graphic files (BMP, GIF, TIF, etc.)
HD Dual Stream	<ul style="list-style-type: none"> • Sharing of file, or the HDMI input • H.239 support • Sending and receiving capability • 2 live video sources + 1 data source • Resolutions supported: 1080p, 720p, XGA, 4CIF SVGA, VGA, CIF, QVGA, QCIF
Display	<ul style="list-style-type: none"> • Single – Display port or HDMI • Dual – Display port + HDMI
Networking Specifications	
Standards Supported	<ul style="list-style-type: none"> • SIP Protocol: RFC 3261 • ITU-T: H.323 v4.2 Annex Q (FECC)
Peripheral Specifications	
Pan-Tilt-Zoom Camera Unit	<ul style="list-style-type: none"> • PTZ Camera: 18x Zoom
Features Specifications	
Dialing Modes	<ul style="list-style-type: none"> • Manual • Contacts • Directory • Recent calls • Multicast viewer

<p style="text-align: center;">Security</p>	<ul style="list-style-type: none"> • Encryption using H.235 (AES) • Search and filter packet ordering • Packet duplication • AES is NIST validation • Firewall traversal using NetPoint H.460 protocol and ClearOne Tunneling proprietary protocol • NAT – Network Address Translation • Supports restricted access to users via admin
<p style="text-align: center;">Directory Services</p>	<ul style="list-style-type: none"> • 1000+ local number directory • 10,000+ global number directory • H.350 support (COLLABORATE Central mode) • LDAP Directory support <ul style="list-style-type: none"> a. Open LDAP b. Microsoft ILS, SiteServer, Active Directory and Exchange • Search and filter queries
<p style="text-align: center;">Environmental</p>	<ul style="list-style-type: none"> • 0 - 40°C temperature • 15 - 80% humidity • Universal Power Supply: <ul style="list-style-type: none"> a. Input 100~240VAC@1.8A b. Frequency 50/60 Hz • PS Output / Appliance Input: <ul style="list-style-type: none"> a. 19VDC@6.32A Max
<p style="text-align: center;">Language Support</p>	<p>English, French, German, Spanish, Italian, Russian, Chinese (traditional and simplified), Japanese and Korean</p>

Chapter 12: Network Requirements

IN THIS CHAPTER

In order to videoconference via the network, some network settings must be set by your network manager.

SYSTEM PLACED IN THE DMZ:

1. A reserved static IP address
2. Subnet Mask
3. Default Gateway address
4. DNS address

SYSTEM PLACED IN LAN:

If DHCP is available and the COLLABORATE® Live is connected behind a firewall, select one of the following 3 options to operate the system:

1. Forward the following ports to the video conferencing system in your Firewall :

Ports to open when using H.323 calls:

- 389 TCP
- 1718-1719 UDP
- 1720 TCP
- 1731 TCP
- 5004-6004 TCP and UDP
- 80 TCP and 23TCP

Ports to open when using SIP calls:

- 5060-5061 TCP and UDP
- 5004 UDP
- 10000 UDP (SIP gate service - usually 3478/9)
- 16348-32768 UDP (RTP, RTCP multimedia streaming)

Ports to open when using Space:

- 443 TCP
- 6000-6100 UDP
- 5222 TCP (Presence)

Ports to open when using Collaborate share:

- 9050 TCP
- 9051 TCP
- 56789 TCP
- 56987 TCP
- 2203
- 9052 – 9058 UDP

1. Network Address Translation (NAT):

The NAT address can be configured in the COLLABORATE® Live in the **Settings>Advanced>Network** menu. The NAT mode can be configured to Disabled, Manual, or Automatic. Configure the system IP in the Broadband Router DMZ host.

2. Firewall Traversal Server:

The COLLABORATE® Live can be registered to NetPoint firewall traversal server. The NetPoint server allows end points behind firewalls to communicate with other end points, both in WAN and behind other firewalls (NetPoint server address can be provided by ClearOne representative).

Use the **Settings>Advanced>H.323 menu** to configure a connection to a NetPoint server, enter the required details in the following fields: Server address (NetPoint IP address) and user name. Select the protocol you want to use to connect your call, H.460 or Tunnelling.