ClearOne®

COLLABORATE VCB
USER GUIDE

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Collaborate VCB

USER GUIDE

WARNING: This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

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Table of Contents

Chapter 1: Welcome to Collaborate VCB

IN THIS CHAPTER

This chapter introduces Collaborate VCB and includes the following sections:

- Introduction
- Package Contents

INTRODUCTION

Collaborate VCB, ClearOne's premier Multipoint Conferencing Unit (VCB), offers the following features:

- Initiation and management of multipoint conferences, including both scheduled and ad-hoc conferences, which are multipoint sessions that were expanded from point-to-point calls.
- High definition video resolution.
- Recording and streaming live conferences.
- Wide range of rich, dynamic layouts for the simultaneous viewing of several participants. Up to 25 users may be displayed at the same time.
- Web-based management/configuration, videoconference scheduling/moderating and reporting applications.
- Simultaneous multicast streaming of active conferences and multimedia, to multiple passive participants.

Collaborate VCB includes advanced features, such as video and audio transcoding, support of high definition video resolutions, conference recording and streaming, advanced cascading, as well as basic features such as continuous presence, presenter mode, password-protected conferences and voice-activated switching.

Collaborate VCB includes the Conference Moderator, which provides administrators and users with the ability to schedule conferences in advance, also from within MS Outlook, and to manage them remotely. At the appointed time, the Conference Moderator initiates the conference and connects the conference participants. Conference hosts can also control when participants join or exit sessions, and transmit video and data streams to the participants. For more details, see the *Conference Moderator Help*.

Collaborate VCB's robust Chair Control provides several options for displaying conference participants. A rich selection of predefined layouts expands on the traditional methods of Continuous Presence and Voice-activated Switching. Additionally, conference organizers can choose among the following view switching modes for each session:

- **Lecture** – Showing the Lecturer in full screen mode for all participants. Lecturer sees a pre-defined, Continuous Presence layout of all participants.

- **Dominant Speaker** – Showing the most recent speakers in the conference or from within predefined groups.

- **Fixed Image** – Showing specific views throughout the conference's duration.

- **Timer Image** – Showing a rotation of Continuous Presence views, changing at timed intervals.

- **Per User Image** – Allowing participants to define their own preferred chair control mode and views.

Collaborate VCB supports the following:

- H.261/H.263/H.263+/H.263++/H.264 video transcoding in Voice-activated Switching, and in Continuous Presence.

- High Definition (1080p) resolution.

- Conference recording and streaming and archive management.

- G.711, G.722, G.722.1 Annex C, G.723.1, G.728, G.729 and AAC-LD audio algorithms with audio transcoding, allowing users to participate in a multipoint conference using different audio standards.

- Up to 6 Mbps data rate per participant in Voice-activated Switching and in Continuous Presence.

- Dial-in conference initiation.

- Password protected conferences.

- Voice notifications in different languages.

- Handles calls connecting of up to 36 concurrent users.

- Advanced cascading of multiple Collaborate VCBs for large conferences.

- Support for sessions including H.323 end points/devices and SIP User Agents (through the Collaborate Central's embedded SIP proxy server).

- Data (H.239) transcoding.

- Mode switching, allowing participants to choose the type of viewing mode (Dominant Speaker, Fixed Image or Timer Mode) during a conference.

- Protection of calls using H.235 (AES) encryption.

- Optional deployment of ClearOne Collaborate Desktop videoconferencing clients.

PACKAGE CONTENTS

When you open the Collaborate VCB shipping package for the first time, check that the following items are included. If any of the items (according to your Customer Order) is missing or damaged, contact your ClearOne representative immediately.

- Collaborate VCB Server unit
- Power cables (2)
- Network cable
- Crossover cable
- User Guide and Utilities CD-ROM
- Getting Started Guide

Chapter 2: Defining the Collaborate VCB IP Configuration

IN THIS CHAPTER

This chapter provides instructions for configuring the Collaborate VCB IP address and includes the following sections:

- Collaborate VCB IP Configuration
- Retrieving Collaborate VCB initial IP configuration
- Assigning a Static IP Address to Collaborate VCB with DHCP address
- Assigning a Static IP Address to Collaborate VCB through interface GbE0

COLLABORATE VCB IP CONFIGURATION

Before you can use Collaborate VCB for the first time, you have to define a unique IP for it. This task consists of the following procedures:

- Retrieving the Collaborate VCB's initial IP configuration
- Changing the IP configuration to unique settings, such as a static IP address
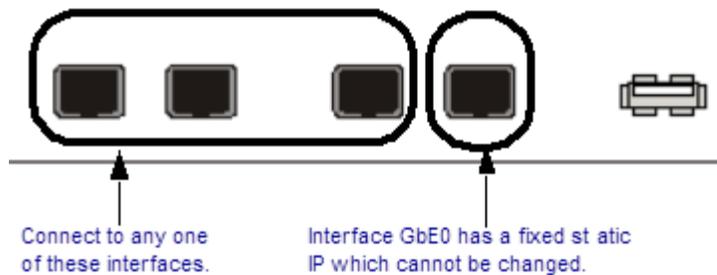
    NOTE: For standard operation, we recommend that you connect one NIC/one interface. However, if you require connection through more than one NIC, each NIC must belong to a different subnet.

    Connect a network cable to the interface you configured, only after completing the configuration.

  - For server with 2 LAN ports

Connect to GbE1.

- For server with 4 LAN ports

Connect to any one of these interfaces.

Interface GbE0 has a fixed static IP which cannot be changed.

NOTE: For standard operation, we recommend that you connect one NIC/one interface. If nevertheless, you require connection through more than one NIC, each NIC must belong to a different subnet.

Connect a network cable to the interface you configured only after completing the configuration.

RETRIEVING COLLABORATE VCB INITIAL IP CONFIGURATION

The following procedure describes how to get the IP address from the Collaborate VCB unit's front panel.

To retrieve the initial IP configuration:

1. Connect a network cable to any of the interfaces GbE1 to GbE3.

2. Turn the Collaborate VCB unit on. A welcome message appears on the LCD display.

3. In the LCD display, press an arrow button until the GET IP command appears. Press the Enter button.

4. Press an arrow button again until the connected network card and interface appears (NIC 1 to NIC 3 = GbE1 to GbE3) and press the Enter button. The Collaborate VCB unit receives an IP address from the DHCP server.

- Select NIC:1

- 172.20.21.22

5. Leave the cable connected to the chosen interface.

ASSIGNING A STATIC IP ADDRESS TO COLLABORATE VCB WITH DHCP ADDRESS

This procedure describes how to set a static IP Address when Collaborate VCB is connected to the network, and has acquired a DHCP address.

From a remote computer connected to the network, connect to the Collaborate VCB configuration application, EVCAdmin, using an IE web browser.

To assign a static IP address to Collaborate VCB with a DHCP address:

1. Open the web browser and enter the EVCAdmin URL in the address field:
    <IP Address>/EVCAdmin.

2. Enter a login name and a password. The default name is "su" and the default password is **1234**.

3. Under the Collaborate VCB tab, click on **Network**. A list of all network interfaces is displayed.
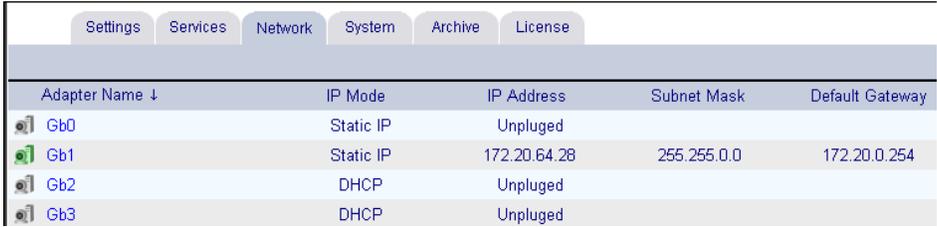
Settings	Services	Network	System	Archive	License		
Adapter Name ↓			IP Mode	IP Address	Subnet Mask	Default Gateway	
Gb0			Static IP	Unpluged			
Gb1			Static IP	172.20.64.28	255.255.0.0	172.20.0.254	
Gb2			DHCP	Unpluged			
Gb3			DHCP	Unpluged			

4. Select a different NIC than the one you are currently connected to. Click its name to open the configuration page.
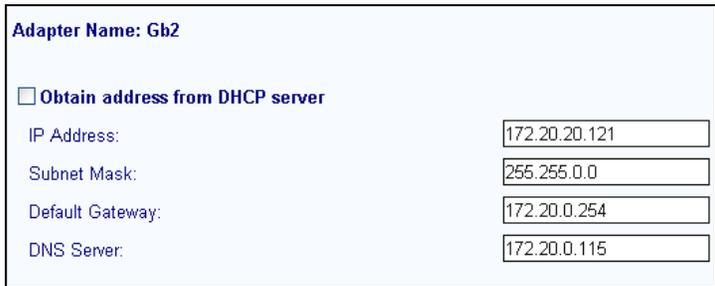
Adapter Name: Gb2

☐ **Obtain address from DHCP server**

IP Address:	172.20.20.121
Subnet Mask:	255.255.0.0
Default Gateway:	172.20.0.254
DNS Server:	172.20.0.115

5. Assign static IP by entering IP Address, Subnet Mask and Default Gateway. DNS Server is optional, however, if configured it will allow you to switch between EVC web applications with no need to login each time.

6. Click **Apply**.

7. Connect a network cable to the configured NIC. Check the correct IP Address has been set through the LCD display.

ASSIGNING A STATIC IP ADDRESS TO COLLABORATE VCB THROUGH INTERFACE GBE0

This procedure describes how to set static IP Address while connecting to Factory Default GbE0.

To assign a static IP address to Collaborate VCB through a GbE0 interface:

1. Connect a crossover cable between interface GbE0 and a computer.
   This interface's IP configuration is:

   IP address – 10.0.10.10
   Subnet mask – 255.255.0.0
   Gateway IP address – 0.0.0.0

   • For server with 2 LAN ports

Connect to GbE0.

   • For server with 4 LAN ports

Connect to GbE0.

2. To access the Collaborate VCB unit from another computer initially, the two systems must, belong to the same network segment, at least temporarily. That means that the first three fields of the address and the subnet mask must be identical.

3. Write down the computer's current IP address and subnet mask so that you can restore them later.

4. Change the remote computer's IP configuration temporarily to the same IP address segment (10.0.10.x) and subnet mask listed in step 1.

5. On the computer, open a web browser and in the address field, and enter the Collaborate VCB's IP address followed by/EVCAdmin: `<Collaborate VCB's IP address>/EVCAdmin`.

6. Enter a login name and a password. The default name is "su" and the default password is **1234**.

7. Under the Collaborate VCB tab, click on **Network**.

8. A list of all network interfaces is displayed.

9. Select the NIC interface. Click on its name to open the configuration page.

10. Assign a static IP by entering an IP Address, Subnet Mask and Default Gateway. DNS Server is optional, however, if configured it will allow you to switch between the EVC web applications with no need to login each time.

11. Click **Apply**.

12. Connect a network cable to the configured NIC. Check the correct IP Address has been set through the LCD display.

Chapter 3: Logging into Collaborate VCB

IN THIS CHAPTER

This chapter provides Collaborate VCB log in information and includes the following section:

• Logging in

## LOGGING IN

When you start the Collaborate VCB program, you must first log in.

ClearOne's Collaborate Central provides gatekeeper functions for Collaborate VCB. Collaborate Central manages the videoconferencing environment among end points registered in it, including multipoint conferencing managed by Collaborate VCB.

To log into Collaborate VCB:

1. In your Internet Explorer web browser, enter the URL of your Collaborate VCB/EVCadmin. The Login page appears.
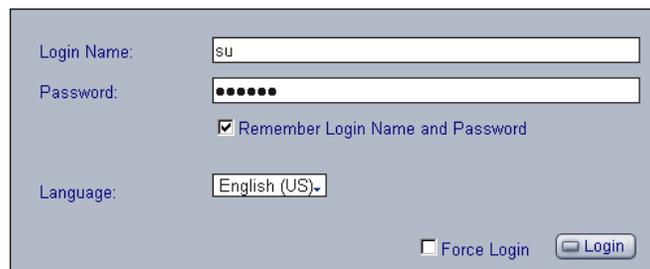
2. Enter your login name and password. The default login configuration is:

   User Name – su
   Password – 1234

3. If necessary, define the following:

   • **Remember Login Name and Password** – Select to allow the system to use the same login values in the future.

   • **Language** – Language of the management program.

   • **Force Login** – If a user with the same Login Name is already connected from a different location, this login attempt will succeed, disconnecting the other user.

4. Click **Login**.

5. Click the **Collaborate VCB** tab to enter the Collaborate VCB Configuration pages.

    Collaborate VCB Configuration is divided into Settings, Services, Network, System and Archive.

Chapter 4: Setting Up Collaborate VCB

IN THIS CHAPTER

This chapter provides instructions for configuring Collaborate VCB, and describes the properties most suitable for your installation and includes the following sections:

- Collaborate VCB Settings
- Collaborate VCB Services Configuration
- Collaborate VCB System
- Collaborate VCB registration to Remote Collaborate Central
- License

COLLABORATE VCB SETTINGS

The Settings tab contains general device configuration. These appear under the VCB Settings and Administrators categories.

VCB SETTINGS

To display VCB Settings:

1. After logging in, click the **Settings** tab and then **VCB Details**.
2. On this page, you can edit the ports parameters, and the general description and location. The other parameters are read-only and cannot be edited in the Collaborate VCB configuration program.

General

Description	Identity of Collaborate VCB. This name will appear in the Collaborate Central Administrator after the login process is finished.
Location	Physical location of Collaborate VCB.
Network Address	IP address of Collaborate VCB.

Product info

Vendor ID	Identity of the manufacturer.
Product ID	Manufacturer's identity of the product.

Version ID   Manufacturer's version identification of the product.

Build Number   Version information for Collaborate VCB.

Licensing

Licensed Ports   Maximum number of concurrent participants that may be serviced by this Collaborate VCB.

Status

Last Log On   Most recent date that Collaborate VCB logged into Collaborate Central or H.323 gatekeeper.

Last Log Out   Most recent date that Collaborate VCB logged out of Collaborate Central or H.323 gatekeeper.

> **NOTE: If the Last Log On date is later than the Last Log Out date, the selected node is currently logged into Collaborate Central.**

Port configuration

Defaults   Click to restore the default port configuration.

RTP Ports Start At   The lowest port number allocated for video and audio during videoconferences.

This allocation meets the Real-Time Protocol (RTP) and Real-Time Control Protocol (RTCP) specifications, which enable applications to synchronize and spool audio and video information.

H.245 Port Range   The lowest port number allowed for end-to-end signaling of multimedia during videoconferences

This allocation provides for H.245 functions, such as capability exchange, signaling of commands and indications, and messages to open and fully describe the content of logical channels.

|	
Streaming ports start at:	The lowest port number allocated for streaming during videoconferences.
	This allocation meets the Real-Time Protocol (RTP) and Real-Time Control Protocol (RTCP) specifications, which enable applications to synchronize and spool audio and video information.

3. To implement the changes, click **Apply**.

ADMINISTRATORS LIST

The Administrator tab lists administrators with permission to work with Collaborate VCB.

To display the list of Administrators:

* In the upper bar, click the **Administrators** tab.
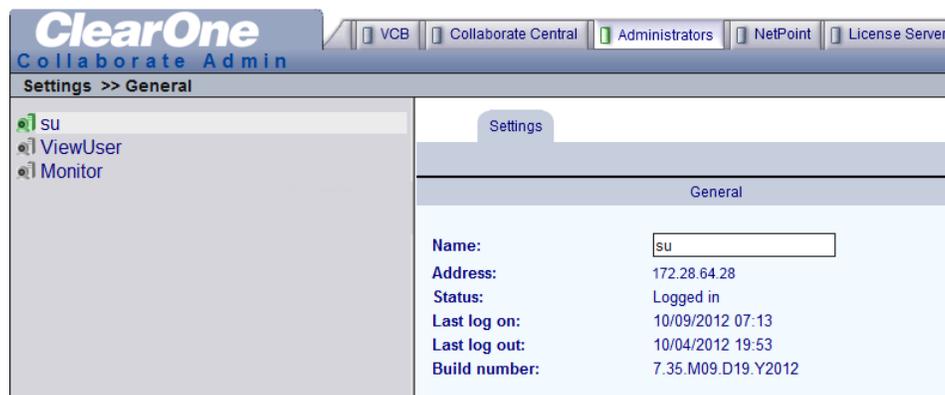
To add a new Administrator:

1. Click on the **Add** button at the bottom of the page. A new administrator is created with a default name and a default password of 1234.
2. Select the new administrator and change its name.
3. Click **Apply**.
4. Go to the **Security** tab and set administrative level and change the password.
5. Click **Apply**.

To change an Administrator password:

1. In the left pane, click the name of the desired Administrator.

2. Click the **Security** tab.
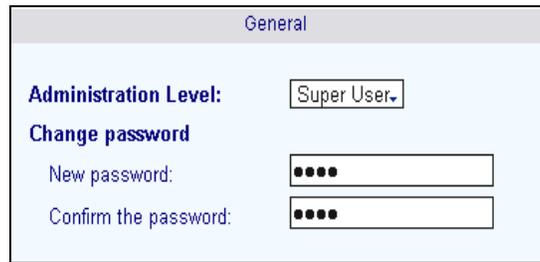
3. In the **Security** tab, do the following:

    > **NOTE: To keep the same password, leave the Password boxes blank.**

    -   **New Password** – Type a new password for the administrator.
    -   **Confirm the Password** – Type the new password again.

4. Click **Apply**.

COLLABORATE VCB SERVICES CONFIGURATION

Collaborate VCB Services define the usage of resources used during a multipoint videoconference managed by Collaborate VCB.

After Collaborate VCB's installation, you can add or edit service entries. One directory number (E.164) is created for each service type.

> **NOTE: To handle situations, in which additional participants require additional resources, set up several Collaborate VCB Services with incremental increases in bandwidth, number of ports, or multicast capabilities.**

Explanation of the column titles of the list in the figure above can be found under *General* on page 26.

Status:

- **Green** – Connected
- **Red** – In call
- **Grey** – Not connected

To add a Collaborate VCB Service

- At the bottom of the services list , click Add. A new Collaborate VCB Service entry appears in the list with the default configuration.

To edit a Collaborate VCB Service:

1. Click the name of the Collaborate VCB Service in the Description column. The Service Configuration page opens. The Configuration includes the following categories (each in its own tab on the page).
   - General
   - Layouts
   - Media
   - QoS
   - Advanced

2. Change properties according to your service specifications, or keep the default settings. When you finish each page, click **Apply** to implement the changes. For explanations about the various properties, see the following subsections.

3. When you finish editing the configuration, click **List** to return to the Services list.

To delete a Collaborate VCB Service:

1. Click the checkbox to the left of the Collaborate VCB Service entry.
2. Click **Delete**.
3. Click **OK** to confirm.

The following subsections describe the Collaborate VCB Service properties.

GENERAL

In the **General** tab, enter the identity information of the Collaborate VCB Service.

General tab properties:

| Number	Number to be dialed for using this service.
Description	Name of the service. This name identifies the service in the Collaborate VCB Services List.
Max number of participants	The maximum number of concurrent calls allowed in this session, according to your Collaborate VCB's license terms.
Reserve Ports	If selected, Collaborate VCB reserves an equal number of ports as the number of maximum users in this session, in accordance with your Collaborate VCB license terms. For example, if the session is limited to a maximum of 8 participants, Collaborate VCB will reserve 8 ports. None of those ports will be available for other sessions.

Optimize for [number of] participants	The number of participants that Collaborate VCB will optimize resources for. For example, If there are going to be only 5 participants in a conference, Collaborate VCB will divide its resources so that each one of these 5 participants receives the best video quality his VC system can handle.
Conference Bandwidth	Maximum bandwidth available for each participant.
Ad-hoc	Select to enable expansion of this service to an Ad-Hoc conference.
Enable Voice Notifications	Enable voice notifications to be played when participants join the conference, participants leave the conference and when dialing a password protected conference.
Notification Language	Select the language in which notifications will be played.
Service Password / Confirm Password	A conference can be password-protected to ensure that only authorized participants can connect to it. The password has to contain 4 to 8 numeric characters. Confirm password to validate it.
Multicast	Select to enable multicast sessions.
Session NAME	Type a name to identify this service's multicast streaming session.
Session Description	Type a name or description of the multicast session.
Multicast Media Formats	Enter the video and audio codecs and the video resolution in which the multicast session will be transmitted.
Audio	Enter the audio codec for the multicast session.
Video	Enter the video codec for the multicast session.
Video Size	Enter the resolution in which the multicast video will be transmitted.
Bandwidth	Enter the bandwidth on which the multicast will be transmitted.

Broadcast to address	The destination IP address for the multicast session. All participants in the session transmit and receive from this common IP address. This address must be a class D address in the range of 224.0.0.0 to 239.255.255.255.
Video refresh RATE	Define the interval at which the endpoint broadcasting the multicast synchronizes the video display at the receiving ends.
Media Packets TTL	The maximum number of routers (hops) that the multicast session's packets may pass through.
SDP rate	Session Description Protocol Rate - The interval at which announcements and descriptions of the multicast session are sent out on the Internet Multicast backbone (Mbone), for Participants and passive third-party viewers.
SDP TTL	The maximum number of routers (hops) that the SDP announcement for this session may pass through.

LAYOUTS

In the Layouts tab, define the layout for displaying multiple users on the screen at the same time.
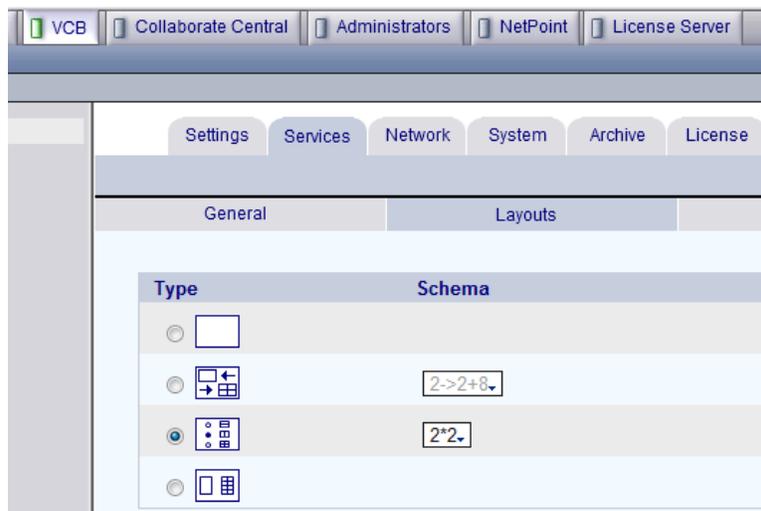
Choose the type and if necessary, scheme for the layout:

Display one user at a time.

Display changes automatically depending on the number of users in the conference.

1->2->3->2*2->3*3->4*4
1 = 1 user
2 = 2 users
3 = 3 users
2*2 = 4 users in 2 rows
3*3 = 5-9 users in 3 rows
4*4 = 10-16 users in 4 rows.

5*5 = 16-25 users in 5 rows.

2->2+8
When more than 2 users participate, one row of 2 users and another row of 8 windows open; each additional user appears in a window and unused windows remain empty.

1->1+5->1+7
1=1 user
1+5=2-6 users
1+7=7-8 users.

Display users in the same layout scheme regardless of the number of the users in the call.

In the **Schema** list, choose the layout.

Voice Activated Switching Layout - Non Transcoded, connects all participants at one video codec and will show the speaker in full screen. Recording and chair control are not available for these conferences.

MEDIA

The Media tab contains the settings for audio formats, video formats and dual-video streaming.

Audio

In the Audio list, select the codecs that are available for conferences using this specific Collaborate VCB Service.

Participants can use any audio codec. Checking all or specific audio codecs will make Collaborate VCB mix (transcode) these codecs.

Video\Data

Video Codecs   The video codecs (**H.261**, **H.263, H.264**) used in the conference. Checking 2 or all video codecs will make Collaborate VCB mix (transcode) these codecs and will enable participants to join the conference at their system's best capabilities.

Max Resolution Out (video only)	The size of the transmitted video images in outgoing direction:

- **1080p** – High definition resolution (1920 x 1080 pixels).

- **720p -** is a short name for a category of High Definition video modes. The number 720 stands for 720 lines of vertical display resolution, while the letter p stands for progressive scan or non-interlaced.

- **4CIF -** uses 704 x 576 pixels resolution.

- **CIF -** (Common Interchange Format), or normal size. CIF uses 352 X 288 pixels resolution.

Keep aspect ratio	Check this option to keep the original aspect ratio of connected sites. Otherwise, Collaborate VCB will stretch the video image to fit the layout window.

Dual video

Method	Select the dual video method. Currently the only options available are **None** or **H.239**.

Recording Options

Recording and/or streaming can be configured to start automatically when the first participant connects to the Collaborate VCB service. If not configured as part of the service properties, recording and/or streaming can be started/stopped also during an on-going conference, as part of conference management in ClearOne Moderator.

Recording State	Set recording options for the service:

- **None -** No recording.

- **Recording** - Recording will only start as the first participant connects to the service.

- **Recording and Streaming -** Recording and streaming will start as the first participant connects to the service.

- **Streaming -** Streaming will start as the first participant connects to the service. The streaming port is 12100 + Service Index. For example, if the service index is 2, the streaming port will be 12102.

Recording Quality	Set Recording quality. Higher quality will result in bigger files and require more free disk space:

- **CIF -** 352 x 288 pixels
- **4CIF -** 704 x 576 pixels
- **720p -** 1280 x 720 pixels
- **1080p** – 1920 x 1080 pixels

On Screen Notification	During a conference, a recording icon will be displayed on all participants' screens, to indicate that the conference is being recorded.

QoS

The **QoS** tab contains properties for controlling the type of Quality of Service that will be used for transmitting packets during a multipoint conference that's initiated using the current Collaborate VCB Service.

Priority Type (QoS)

Select the type of QoS used for transmitting packets during heavy network congestion conditions.

None	Network transfers packets using normal Best-effort (or Routine) packet transmission.

IP Precedence	Network gives priority to certain types of bits (video, audio, control) according to the eight levels of IP precedence.

Diffserv Network transfers packets according to specific needs of the sending application.

Priority Values

Video Priority For each packet type, select an appropriate priority level. The item
Audio Priority with the highest priority number will be sent first, the item with the
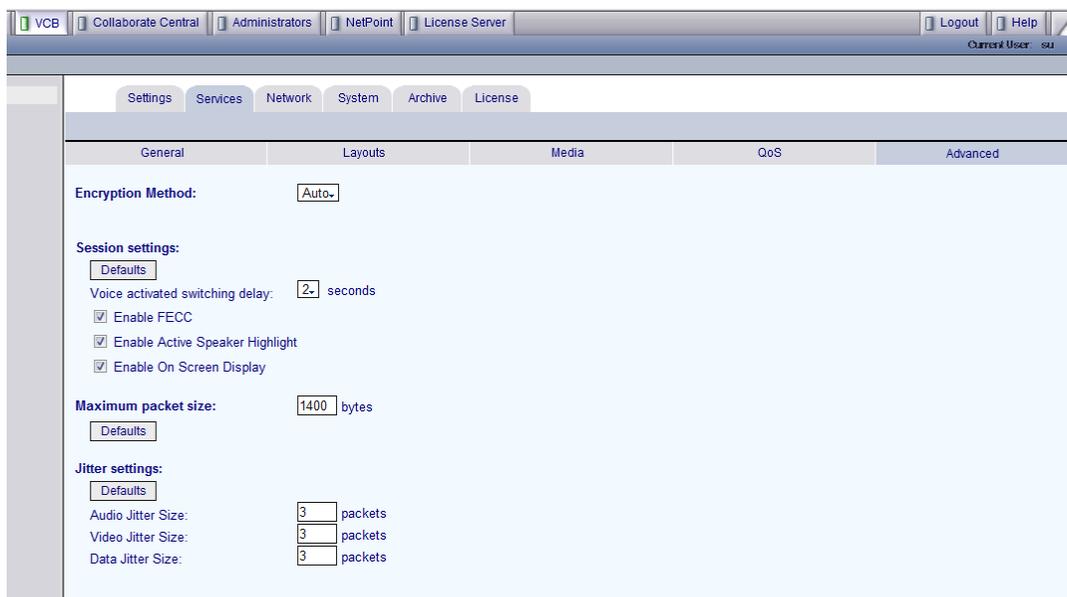**RTCP Priority** next highest number will be sent second, and so on.

The priority levels vary, depending on whether the selected Priority Type is IP Precedence or Diffserv.

Defaults Click to restore the default QoS configuration.

ADVANCED

In the **Advanced** page, define additional parameters required by Collaborate VCB for managing multipoint conferences.

Defaults Click to restore the default configuration for the associated set of parameters.

Encryption Method	Choose the mode of encryption for conferences using this service.

- Choose **None** to allow unsecured calls.

- **Auto** enables the transmitting end point to encrypt a call if the remote sides have also enabled encryption. If they have not enabled encryption, an outgoing call will be unsecured.

- **AES** (Advanced Encryption Standard) is a common encoding method for encrypting data transmissions. Select this option to encrypt all calls using this Collaborate VCB Service. If the remote sides have not also enabled encryption, the call attempt will be unsuccessful.

Voice activated switching delay	Delay period before changing the displayed video during a voice-activated switching multipoint conference. The displayed video changes only after the source of the new sound or voice is steady for the defined period. A delay period is necessary to prevent quick incoherent display changes, which may be caused by sudden noises (such as a sneeze) rather than a steady speaker.
Enable FECC	Select to enable Far End Camera Control (FECC) to all participants in a conference using this service. Applicable only to Voice-activated Switching mode.
Enable Active Speaker Highlight	Select to display a frame surrounding the active speaker in Continuous Presence layouts.
Enable On Screen Display	Select to display the names of the displayed users in Continuous Presence layouts.
Maximum packet size	Set this parameter either equal to, or lower than your network's MTU.
Audio/Video/Data Jitter Size	Smooth playback of transmitted media continues even if the packets arrive out of order at the receiving end, up to the number of packets defined here for each packet type.

COLLABORATE VCB SYSTEM

The Collaborate VCB System tab defines system upgrade, backup & restore, restart, and registering local Collaborate VCB to a remote Collaborate Central.

UPGRADING COLLABORATE VCB
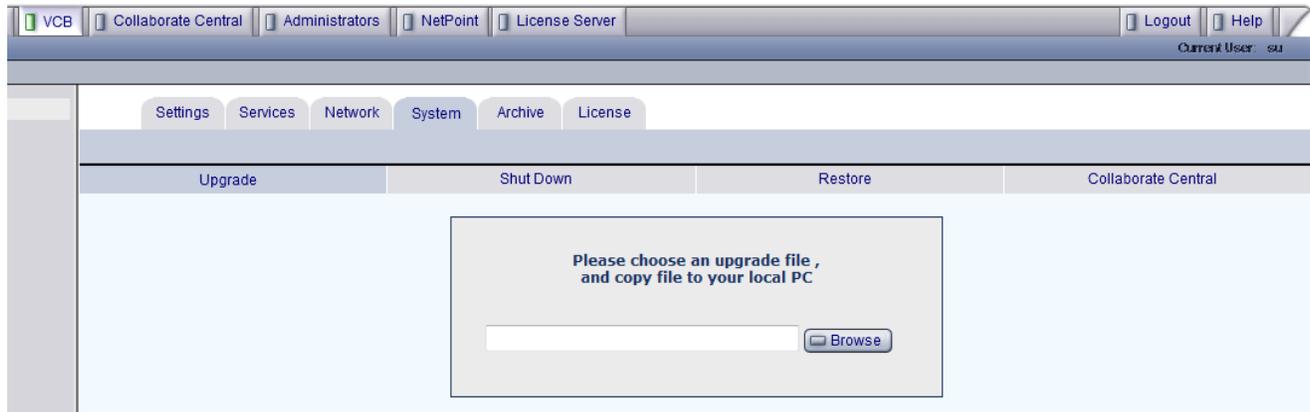
To upgrade Collaborate VCB:

1. Save the upgrade package (xxxxx.evc) you received from ClearOne to the local hard drive or network resource.

2. Click the **System** tab and open the **Upgrade** page.

3. Click the **Browse** button and browse to the upgrade package location.

4. Click the **Apply** button. At the end of the upgrade process, Collaborate VCB will restart.

> **NOTE: Collaborate VCB Version number can be verified under the Settings tab > VCB Details screen. The Collaborate Central Version number can be verified under the Collaborate Central tab.**

Collaborate VCB Restart / Shutdown
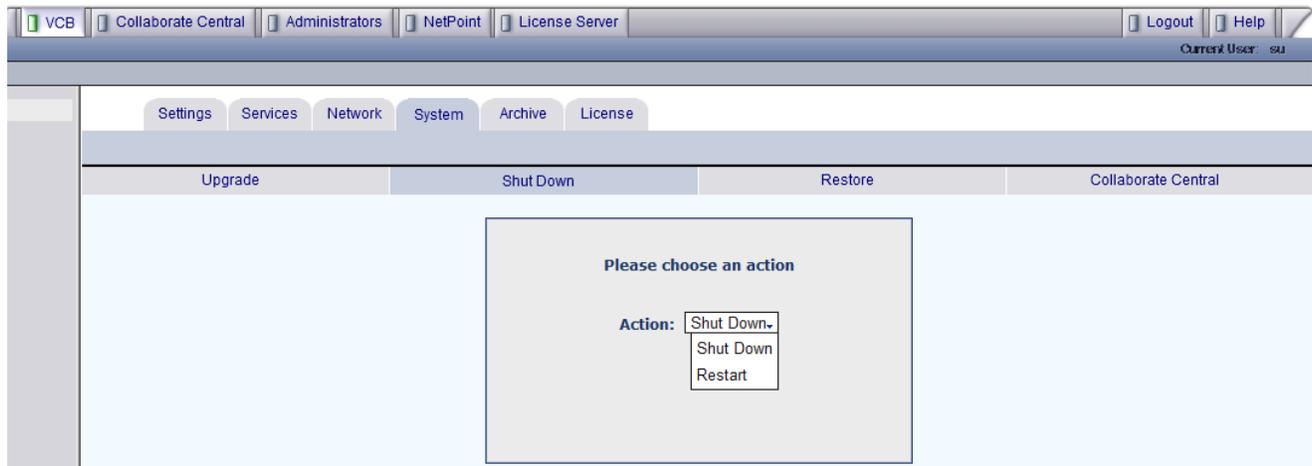
To restart or shutdown Collaborate VCB:

1. Click the **System** tab and open the **Shut Down** page.

2. Select the Action from the drop down list.

Restart Restart Collaborate VCB server. The EVCAdmin application will be unavailable and you will have to login again.

Shutdown Shutdown Collaborate VCB server. Turn it on again from the power button on the front panel.

COLLABORATE VCB BACKUP/RESTORE

Collaborate VCB supports a system backup and restore functionality to help recover the system immediately in cases of disaster.

The Backup and Restore functionality saves the baseline (Factory Default) configuration, creates a new snapshot of Collaborate VCB configuration once a week for 10 weeks, and allows you to manually create snapshots according to configuration changes.

At any time, you can easily restore the default Collaborate VCB configuration (as was set at ClearOne) or return to a specific configuration state.

To backup or restore Collaborate VCB:

1. Click the **System** tab and open the **Restore** page.

2. Select the Action from the drop down list.

System Restore	Restore system configuration to previously saved snapshot. Snapshot can be a baseline (Factory defaults), periodic snapshots that are created automatically by Collaborate VCB, or a snapshot that was previously created by system administrator.
Take Snapshot	Take a snapshot of current Collaborate VCB configuration. It is recommended to take snapshots every time a configuration change is made e.g., adding new services, scheduling new meetings etc.

SYSTEM RESTORE

This tab allows you to set up backup and restore settings.

Setting up the restore options: Choose the **Restore** option and click the **Apply** button.

Restore To Base Line	Restore system configuration to factory default snapshot (baseline), or a newly created baseline. Baseline is the basic snapshot to which the system can be restored at any time.
Restore To Current Snapshot	Restore system configuration to the latest snapshot.
Restore To Date Snapshot	Restore system configuration to a snapshot that was taken on a specific date. For example, if configuration changes were made and you want to restore the Collaborate VCB configuration to the state before these changes.
Restore To Snapshot From List	Restore system configuration to a specific snapshot that was created previously. Each snapshot represents a different configuration state.
Password	Enter the password for the Collaborate VCB backup and restore actions to ensure that only authorized administrators can restore the Collaborate VCB configuration. Default password is 1234.

DELETE SNAPSHOT

Allows you to delete a snapshot from the list.

Select the desired snapshot and click **Delete**.

> **NOTE: Some snapshots (i.e., Baseline, and snapshots that are automatically created by the upgrade process) are locked, and cannot be deleted.**

TAKE SNAPSHOT

After making configuration changes to Collaborate VCB (e.g., changing network settings, updating license, or a periodic backup) it is recommended to take a snapshot of the Collaborate VCB configuration.

To take a snapshot:

1. Enter a name for the snapshot. This name will be listed later in the **Snapshot From List** box for restore.

2. Enter a snapshot description. The description will describe the configuration state of Collaborate VCB.

3. Enter a password in order to ensure that only authorized administrators can backup and restore Collaborate VCB. The default password is 1234.

COLLABORATE VCB REGISTRATION TO REMOTE COLLABORATE CENTRAL

You can register and manage multiple Collaborate VCBs from one central Collaborate Central.

To register Collaborate VCB to a remote Collaborate Central:

1. Open the Collaborate VCB EVCAdmin application by typing the Collaborate VCB's IP address in an IE browser address bar.

2. Log in using the Administrator's user name and password.

3. Click the **System** tab and then **Collaborate Central**.

4. Enter the IP address of the Collaborate Central to which you wish to connect.

> **NOTE: Collaborate Central and Collaborate VCB must be located in the same network. You cannot register Collaborate VCB located in a to Collaborate Central located in a LAN.**

MANAGING COLLABORATE VCB ON A REMOTE COLLABORATE CENTRAL

After registering a Collaborate VCB to a remote Collaborate Central, managing this Collaborate VCB is done from the remote Collaborate Central interface. Once you log into the remote Collaborate Central, you will see the new Collaborate VCB listed on the left (the list may display more Collaborate VCBs).

To manage the Collaborate VCB, select the desired Collaborate VCB from the list.

Once you register a Collaborate VCB to a different Collaborate Central, you can manage this Collaborate VCB from the new Collaborate Central interface in the same way as from the local Collaborate Central, including the following: Deleting snapshots, restoring snapshots, taking snapshots, restart and shutdown.

REGISTERING BACK TO THE LOCAL COLLABORATE CENTRAL

To register back to the local Collaborate Central:

- Enter "localhost" or the local host address in the Collaborate Central address field.

    -or-

- Go to the **Collaborate Central tab>System** tab, and click **Apply**.

LICENSE

Your system is delivered with a pre-configured license. You can view the license details under the **Collaborate VCB>License** tab. This license is valid only if the Collaborate Central license is valid. The Collaborate Central license is found under the **Collaborate Central>License** tab.

Note: Each registered Collaborate VCB has its own license.

The license information includes the Collaborate VCB's license key code, number of licensed ports, expiration date, max resolution, recording, and streaming. When ordering an upgrade, please provide this information to your ClearOne representative.

To update your Collaborate VCB license

1. After logging in, select the **Collaborate VCB** tab and then **License**.
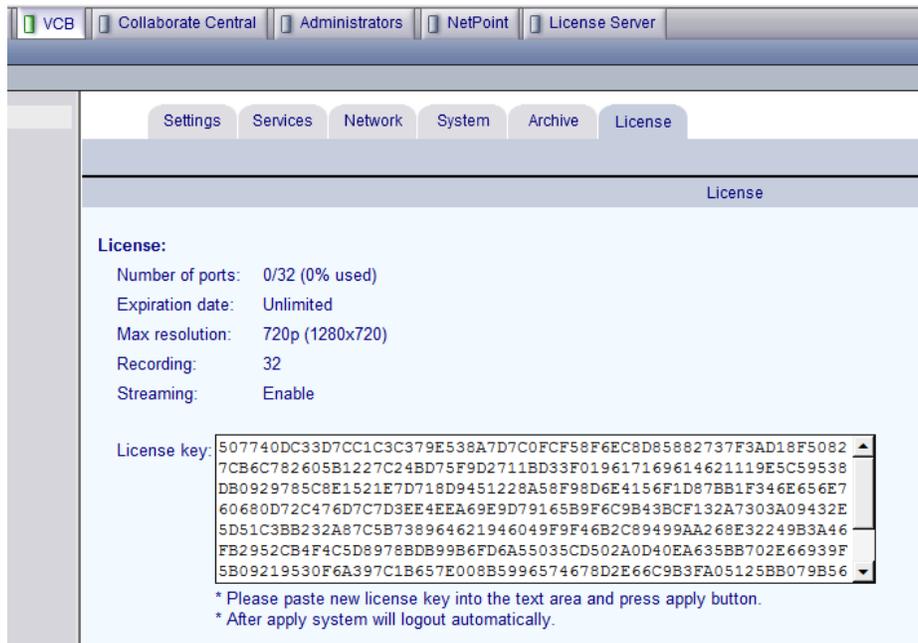
2. Select and copy the license key on the page.

3. Contact your local ClearOne representative and send the license file according to the instructions you receive.

4. After processing your order, the ClearOne representative will send you a new license key by e-mail.

5. Copy the new key. Click the **VCB** tab, select the **License** tab, delete the previous key, and paste the new one.

6. Click **Apply**. You will be logged off from EVCAdmin and will have to log in again.

> **NOTE: It is recommended you back up the previous license key before pasting the new one.**

Chapter 5: Setting Up a Dedicated Collaborate VCB Service

IN THIS CHAPTER

This chapter describes how to set up a dedicated Collaborate VCB service and includes the following sections:

- Dedicated Service for End Points
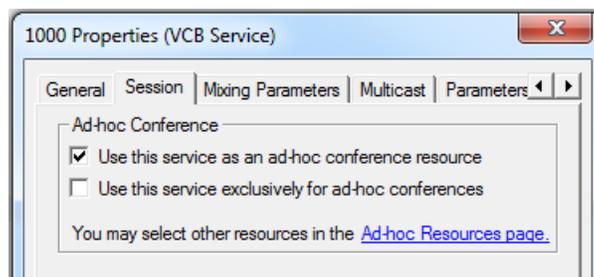- Dedicated Service for a Zone

> **NOTE: The tasks described in this chapter are advanced procedures which you perform in ClearOne's Collaborate Central Administrator application.**

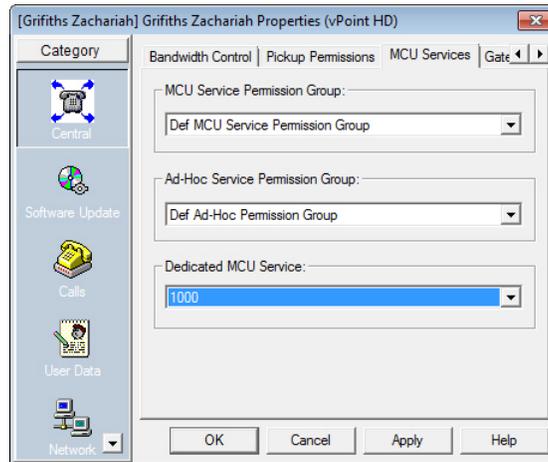## DEDICATED SERVICE FOR END POINTS

A dedicated Collaborate VCB service is set up only for expansion to an ad-hoc conference that includes a specific end point. That is, the service is "dedicated" to that end point. That specific end point must be either one of the original two end points of a point-to-point conference or the invited end point.

To dedicate a service to a specific end point:

1. In the Collaborate Central Administrator, double-click the Collaborate VCB Service and then click the **Session** tab.

2. Select **Use this service as an ad-hoc conference resource** and then click **OK** (in addition, you may also set the service to be exclusive for ad-hoc conferences only).

3. Double-click the end point, click **Central**, and then click the **MCU Services** tab.

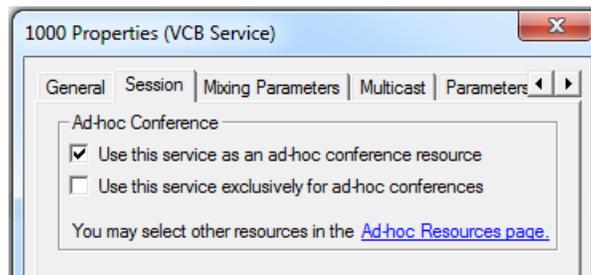4. In the **Dedicated MCU Service** list, select the service.

5. Click **OK**.

DEDICATED SERVICE FOR A ZONE

A dedicated ad-hoc service for a neighboring zone may be used only if any of that zone's end-points are in the resulting ad-hoc conference (either one of the original two end points of the conference or the invited end point).

To dedicate a service to a specific end point:

1. In the Collaborate Central Administrator, double-click the Collaborate VCB Service and then click the **Session** tab.

2. Select **Use this service as an ad-hoc conference resource** and then click **OK** (in addition, you may also set the service to be exclusive for ad-hoc conferences only).

3. Double-click the neighboring zone and then click the **MCU Services** tab.

4. In the **Dedicated MCU Service** list, select the service.
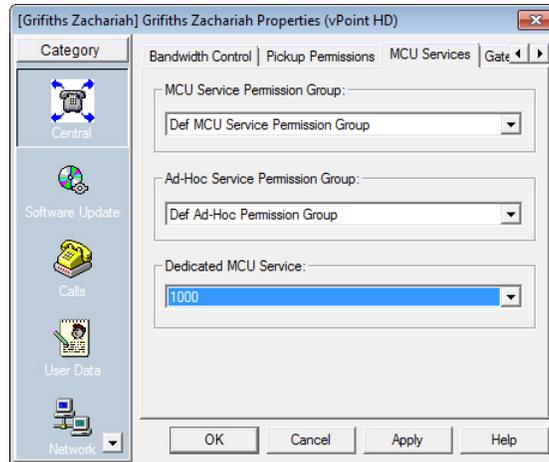
5. Click **OK**.

Chapter 6: Adding the Collaborate VCB to an Ad-hoc Permission Group

IN THIS CHAPTER

This chapter provides instructions for adding the Collaborate VCB to an ad-hoc permission group and includes the following sections:

- Adding an Ad-hoc Permission Group
- Ad-hoc Permission Group Properties

> NOTE: The procedures described in this chapter are performed in the ClearOne's Collaborate Central Administrator application.

ADDING AN AD-HOC PERMISSION GROUP

Ad-hoc Permission group is a set of Collaborate VCB services that are defined for use in ad-hoc conferences. It helps you control the use of resources for expanding to ad-hoc conferences.

An Ad-hoc Permission group may consist of one service or multiple services. It may also include combinations of services from more than one registered Collaborate VCB unit. The order in which services are requested is important and controllable by Super-User's level administrators.

During expansion to an ad-hoc conference, Collaborate Central only uses those services listed in the inviting end point's assigned permission group. After an invitation is initiated, Collaborate Central first tries to use the first service defined in the permission group. If the first service is not available, it tries to use the second defined service, and so on. If all enabled services are unavailable, Collaborate Central does not complete the "invitation" to the additional end point.

By default, every registered end point is assigned to the default Ad-hoc Permission Group. This may be changed when manually adding a new end point, or by editing the end point's properties.

To add an Ad-hoc Permission Group:

1. In the Collaborate Central Administrator application's toolbar, click the New Ad-hoc Permission Group button. The New Ad-hoc Permission Group dialog box appears.

2. Change properties according to your permission group requirements. To move to the next properties page, click **Next**. For explanations of the various properties, see the following pages. Repeat this step for as many services as necessary.

3. Click **Finish**. In the Main View, the new group appears under the Ad-hoc Permission Group object.

AD-HOC PERMISSION GROUP PROPERTIES

In the Ad-hoc Permission Group dialog box, you can view and change the following configuration information:

- General
- Permission Group

GENERAL

In the **Description** box, type a name for the Ad-hoc Permission Group. This name will appear on the system tree and in the Collaborate VCB's Properties dialog boxes' **Product Info** tab.

PERMISSION GROUP

The **Permission Group** Properties page includes all registered services that are defined for use as an ad-hoc resource, which is a service set up to connect ad-hoc conferences.

Select any number of Collaborate VCB services from the list, to include in the Ad-hoc Permission Group. The group may also include combinations of services from more than one registered Collaborate VCB unit.

- To place all services in the permission group, click **Select All**.
- To clear all the selections, click **Clear All**.
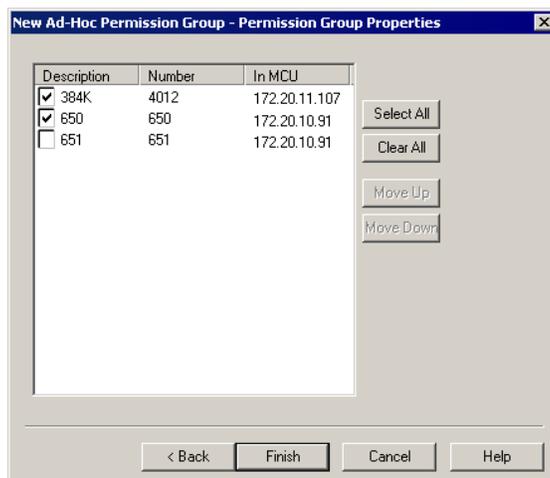
SETTING THE USAGE ORDER

The location of the services in the list determines the order in which Collaborate Central tries to use them. After an end point invites another end point, Collaborate Central first tries to use the first service defined in the permission group. If the first service is not available, it tries to use the second defined service, and so on. If all enabled services are unavailable, Collaborate Central does not complete the "invitation" to the additional end point.

In the Permission Group page, you can move the services to different places in the usage order.

To set the usage order of the selected services:

1. Click the name (*not* the checkbox) of a selected service. To move the service up and down the list to its designated place, click **Move Up** or **Move Down** as many times as necessary.
2. Repeat this step for as many services as necessary.

> **NOTE: Ad-hoc can be also configured from the General tab of a specific service.**

Chapter 7: Cascading VCBs

IN THIS CHAPTER

The cascading option enables you to extended the number of VCB ports. By registering another VCB server to a Management gatekeeper (Collaborate Central) you add more ports to a Collaborate Central server. This allows your Collaborate Central to support large conferences.

This chapter the following section:

- Registering VCBs to Another Collaborate Central
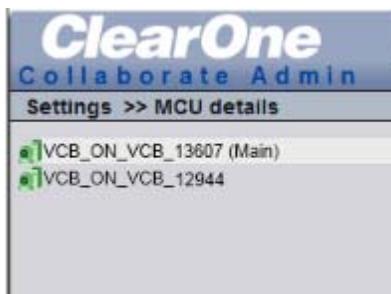
REGISTERING VCBS TO ANOTHER COLLABORATE CENTRAL

To register VCBs to another Collaborate Central:

1. Click **EVCAdmin >VCB > System> Collaborate Central** tab.
2. In the Collaborate Central address field, enter the main Collaborate Central IP address.

3. Click **Apply**.

After you register the VCB, you will see another VCB listed in the EVC admin.

Chapter 8: Ad-Hoc Conferencing

IN THIS CHAPTER

To "invite and join" additional parties into an ad-hoc videoconference, users must initiate the Invite function from their videoconferencing application during an open session. This chapter instructs how to invite from ClearOne applications and includes the following sections:

- Inviting from Collaborate Desktop
- Inviting from Collaborate Room SD/HD/FHD/PHD

INVITING FROM COLLABORATE DESKTOP

To invite and join other contacts into an ad-hoc conference

1. Enter an additional contact's user number (E.164) or address into the Manual Dialer's address box.

2. Click **Invite**.
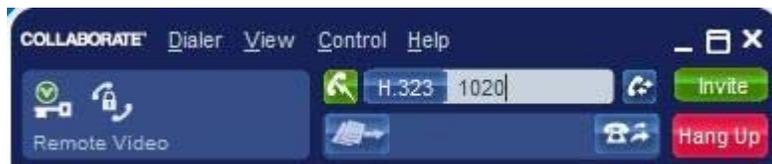
-or-

1. Open the Dialer and locate the contact that you want to invite.

2. Right-click the contact and then click **Invite**.

The session is now a multipoint conference. The parties' video is displayed in *Continuous Presence* (multiple users' video on screen at all times) or *Voice-Activated Switching* (speaker's video only on screen), in accordance with the VCB/Collaborate VCB Service configuration.

INVITING FROM COLLABORATE ROOM SD/HD/FHD/PHD

To invite from Collaborate Room SD/HD/FHD/PHD:

1. Register the system to Collaborate Central.

2. Establish a session.

3. Open the Collaborate Room main menu and click **Collaborate Central** > **Invite.**

4. In Collaborate Room, enter the directory number of the party that you want to invite. To browse entries from the directory list, click **Search**.

5. Click **Invite**.

   The Collaborate Room device dials the number.

   After several seconds, the additional party is added to the session, which is now a multipoint conference with Collaborate VCB management. The parties' video is displayed in Voice-Activated Switching or continuous presence mode.

Chapter 9: Recording Management

IN THIS CHAPTER

This chapter describes recording management and includes the following section:

- Managing Recordings

MANAGING RECORDINGS

Recoding and the recording files are managed from the Archive tab under the Collaborate VCB tab. The Administrator can rename, play and delete one or all the files. The recorded files are shown in the list only when the recording has ended. The default file name represents the service number and the service index in brackets.

You can enable/disable recording as follows:

1. Go to **VCB>Services>Media>Recording Options**.
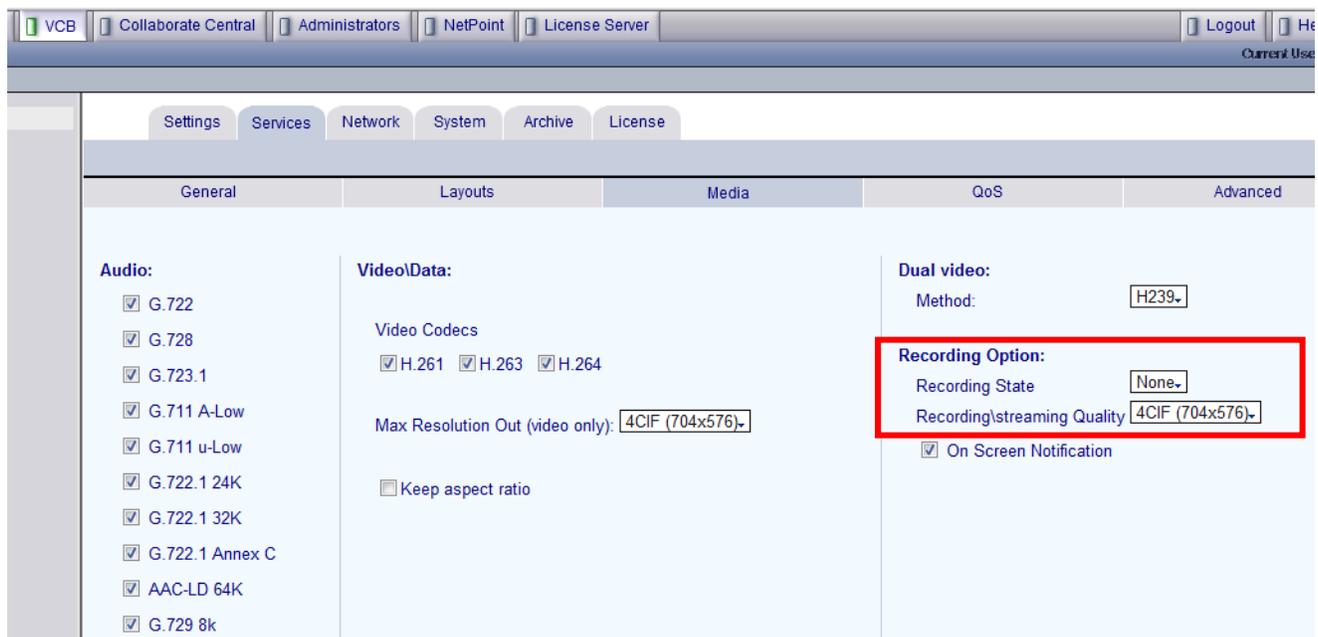
2. Use the Conference Moderator application.

   A list of all recorded files appears in the Archive list. The file list is sorted according to dates, starting with Today and backwards according to the days in the previous week, and then 2 Weeks Ago, Previous Month or All.

   A specific file can be searched also by its file name, or by date range.

All   Mark all files

Rename   Create a unique name for a recorded conference

Delete   Delete files to free disk space

Search   Search for file in the archive according to file name or in a date range

Remaining Time   Displays the time remaining on the HDD per resolution

To play a recorded conference, click the file name. The recording will be played in the Media Player. From the Media Player, you can also save the file to a local or shared file server.

Chapter 10: Public Conference

IN THIS CHAPTER

This chapter describes how to stream a live conference and includes the following section:
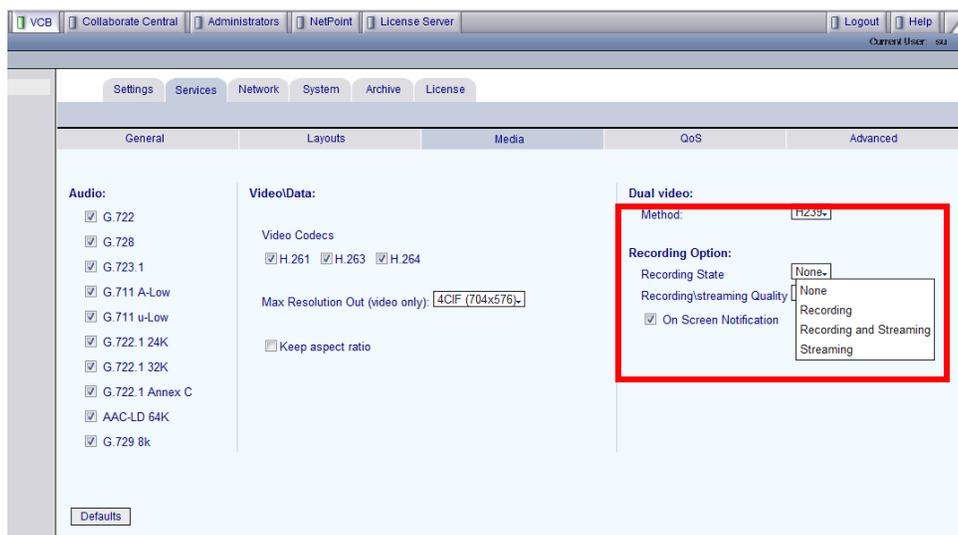
- Streaming a Live Conference

STREAMING A LIVE CONFERENCE

A live conference can be recorded and streamed or streamed only, in WMV format. If a conference is streamed, users who wish to view the conference have to connect to the Collaborate VCB Home page, open the Stream List, and click on the Show command. A Media Player window will open and will play a live stream of the conference.

To stream a live conference:

1. Set up the Collaborate VCB service before starting the conference (this option is not available while a conference is in progress).

2. Start streaming from the conference control in ClearOne Moderator. This option can be used while a conference is in progress.

3. Configuring the Collaborate VCB service:

    a. Go to the **VCB** tab>**Services**.

    b. Select the desired service.

    c. Select the **Media** tab.

    d. Under the **Recording Options**, click the **Recording State** dropdown list and select **Streaming**.

4. Streaming from the conference control in ClearOne Moderator:

   a. Select **Schedule** / **Manage Conference** from ClearOne Home Page.

   b. Select the **In Progress** tab.

   c. In the VCB pane, click **Stream**.

Chapter 11: SSH Commands

IN THIS CHAPTER

This chapter defines the commands available when you access the Collaborate VCB unit through a Secure Shell (SSH), Hyperterminal, or similar application connected to the Console port and includes the following sections:

* Running PuTTY

* Connecting to Collaborate VCB

* Descriptions of SSH Commands

RUNNING PUTTY

To run the PuTTY program:

1. Insert the Collaborate VCB CD to your computer's CD drive.

2. Browse to the Utilities folder's putty.exe program.

3. Copy the putty.exe file to your desktop or another location.

4. Double-click the file's icon to run the program.

CONNECTING TO COLLABORATE VCB

To connect to the Collaborate VCB:

1. In the Host Name box, type the Collaborate VCB host computer's IP address.

2. Click **Open**.

3. Log in using the following parameters:

   User Name – VCBAdmin
   Password – evc123$

DESCRIPTIONS OF SSH COMMANDS

Command	`changeservicestartmode`
Syntax	`changeservicestartmode <Service Name><Mode>`
Description	`Change the specified service's starting mode.`
Parameters	• `Automatic` • `Manual` • `Disbled`

For example:

remotedesktopservice, a service allowing remote desktop connection, is disabled by default. To enable it, set the service start mode to Manual, and then start the service using the "startservice" command.

`changeservicestartmode remotedesktopservice Manual`

Command	`clearevents`
Description	Delete all entries from the application, security, and system event log.

Command	`getevents`
Syntax	`getevents <substring>`
Description	Display application, security, and system event log. If a substring is specified, only events related to the substring will be listed.

Command	`getparam`
Syntax	`getparam <param>`
Description	Retrieve the specified parameter.

Parameters	• `appver` – Display the Collaborate VCB/Collaborate Central application version.
	• `dhcp <0-3>` – Display DHCP-defined IP configuration of the specified NIC, and if it's enabled or disabled.
	• `hwserial` – The first NIC's MAC address.
	• `machinename` – The name of the node.
	• `sshver` – Display the SSH Server version.
	• `time` – Display the current system date and time.

Command	**healthcheck**
Description	Displays system information about the Collaborate VCB's host computer, such as CPU usage, virtual memory usage.

Command	**help**
Description	Lists all SSH commands and their possible syntaxes.

Command	**listip**
Syntax	`listip <0-3>`
Description	Displays the IP address of the specified NIC.

Command	**ping**
Syntax	`ping <hostname or IP address>`
Description	Check if a connection to the specified computer is online.

Command	**processes**
Syntax	`processes <substring>`
Description	Display a list of processes. If a substring is specified, only processes containing the substring will be listed.

Command	**restart**
Description	Restart the Collaborate VCB unit.

Command	**restartservice**
Syntax	restartservice *<Service Name>*
Description	Restarts the specified service.

Command	**services**
Syntax	services *<service substring>*
Description	Lists the services that start with the substring and displays their status. services clearone will list only ClearOne services. For example: CLEARONE EVCS_{LT} AGENT_1

Command	**startservice**
Syntax	startservice *<Service Name>*
Description	Starts the specified service.

Command	**stopservice**
Syntax	stopservice *<Service Name>*
Description	Stops the specified service.

Command	**upgrade**
Description	Upgrade to a new version of the SSH Server.