



CLEAR-COM CONCERT

V2.5.0

ELEMENT MANAGEMENT SYSTEM

USER MANUAL

Clear-Com Concert Element Management System User Manual
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Vitec Group Communications LLC
850 Marina Village Parkway
Alameda, CA 94501
U.S.A.

Vitec Group Communications Ltd.
7400 Beach Drive
IQ Cambridge
Cambridgeshire
United Kingdom
CB25 9TP

The Vitec Group plc
Beijing Representative Office
Room 706, Tower B
Derun Building, YongAn Dongli A No.3
Jianwai Ave., Chaoyang District
Beijing, P. R. China 100022

Clear-Com Research
1440 Hocquart Street, Suite 221
St-Bruno, Quebec
Canada
J3V 6E1

Vitec Group Communications

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CONCERT ELEMENT MANAGEMENT SYSTEM

INTRODUCTION

The Clear-Com Concert Element Management System (EMS) is installed as part of the Concert server software.

The EMS server application is managed through a web interface, which allows you to manage, configure, and monitor Concert system resources. These resources include nodes, routers, interface gateways, Eclipse frames, partitions, users, roles, conferences, and channels. Navigation has been simplified through the implementation of an expandable navigation tree. Clickable elements within the tree provide an efficient and intuitive means of locating and selecting system components.

CONNECTING TO THE SERVER

To connect to the EMS web interface:

1. In your browser's **Address** field, enter the EMS server address or hostname.

Note: If you do not know this address, contact your system administrator.

The following browsers are supported by Concert v2.5.0:

- Internet Explorer v6.0 or higher
- Mozilla Firefox v1.0.7 or higher
- Safari

If the server is running, the following dialog will appear:

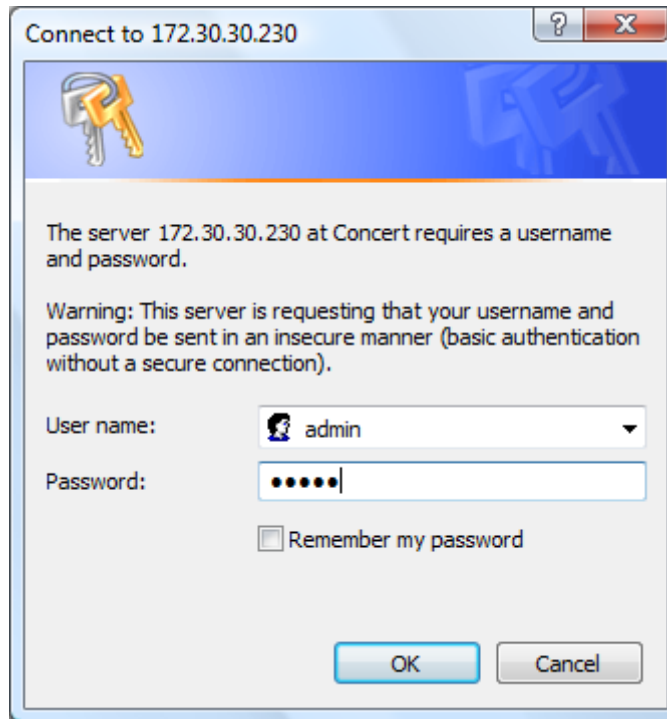


Figure 1-1: Server Login

Log in to the server using a valid account (if required, contact your system administrator for this information).

2. In the **User name** field, enter “admin” (default installation username).
3. In the **Password** field, enter “admin” (default installation password).

Normally, you should change the username and password after the installation and initial configuration (see “*Changing User Name and Password*”, on page 1-20).

Once you are logged into the server, the following page appears:

Clear-Com[®] COMMUNICATION SYSTEMS

Concert Element Management System

System

- Administration
- Node
- Partition

(Click on 'System' to refresh navigation tree)

Navigation: Version

System Information

Version	Install Date
Concert EMS v2.5.0-0.A20	Thu Dec 3 04:39:22 EST 2009
Concert IV-Router v2.5.0-0.A20	Thu Dec 3 04:39:17 EST 2009
Concert Interface Gateway v2.5.0-0.A20	Thu Dec 3 04:39:25 EST 2009

Figure 1-2: EMS Overview

Changing User Name and Password

To change the user name and password for the EMS web interface, you must execute the following command as user “root” on the server that is running the EMS application:

```
# htpasswd -bc /etc/httpd/conf/.htpasswd [username]  
[password]
```

COMPONENT HIERARCHY

Under the “System” element in the navigation tree, there are three sub-elements: “Administration”, “Node”, and “Partition”.

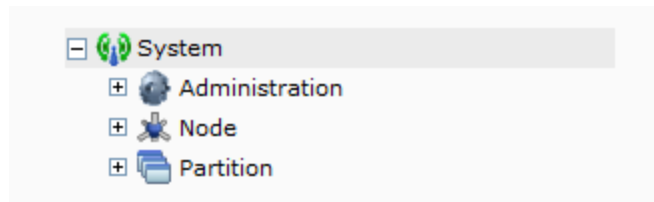


Figure 1-3: System Elements

Administration

The “Administration” element deals with codecs, licenses, and event logging. Under “Administration”, you can change the system-wide audio codec, view and update license information, and display the system event log.

Node

The “Node” element represents a physical location where Concert system servers are physically located. Each node may contain one or more IV-Routers (IV-Rs), interface gateways, or Eclipse frames. The default server installation provides one IV-R entry, which is required for system functionality. You can view statistics for users and channels connected to the IV-R through the *IV-R Statistics* page (see “*Adding an Instant Voice Router*” on page 1-20).

Partition

The “Partition” element can be thought of as a logical grouping of users, roles, and conferences to form an entity such as a corporation. Users (employees) are added and then associated to roles, which may represent a function, department, or position within the corporation. Conferences form the heart of the Concert system and may be created for various purposes such as planned, periodic meetings or some other collaboration activity involving one or more sets of users.

CREATING A PARTITION

1. To create a new partition, click on the “Partition” element in the navigation tree. The *Partitions* page displays a listing of all the existing partitions (in this example, there are four partitions in the system):

Creation Date/Time	Partition	Description	Action
	<input type="text"/>	<input type="text"/>	[add]
2009-12-07 05:46:57.20	Broadcast	Broadcast Partition	[modify] [remove]
2009-12-07 05:48:29.91	Clear-Com	Clear-Com - Vitec Group Communications Ltd	[modify] [remove]
2009-12-07 05:47:27.90	L1		[modify] [remove]
2009-12-07 05:47:38.15	L2		[modify] [remove]

Figure 1-4: Partition Display

PARTITIONS

Creation Date/Time	Partition	Description	Action
	<input type="text" value="[enter name here]"/>	<input type="text" value="[enter description here]"/>	[add]
2009-12-07 05:46:57.20	Broadcast	Broadcast Partition	[modify] [remove]
2009-12-07 05:48:29.91	Clear-Com	Clear-Com - Vitec Group Communications Ltd	[modify] [remove]
2009-12-07 05:47:27.90	L1		[modify] [remove]
2009-12-07 05:47:38.15	L2		[modify] [remove]

Figure 1-5: New Partition Details

2. In the **Partition** field, enter a name for the new partition.
3. In the **Description** field, enter a description for the new partition (optional).
4. Click on the **[add]** link to create the partition. The new partition will appear as a bold entry in the *Partitions* table as well as a clickable element within the navigation tree.

CREATING USERS, ROLES AND CONFERENCES

Adding roles, users, conferences, and channels to a partition is as easy as creating the partition itself. You can create these components at any time.

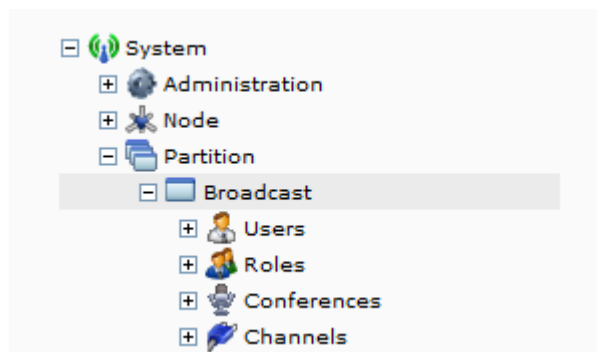


Figure 1-6: Partition Sub-elements

Creating a Role

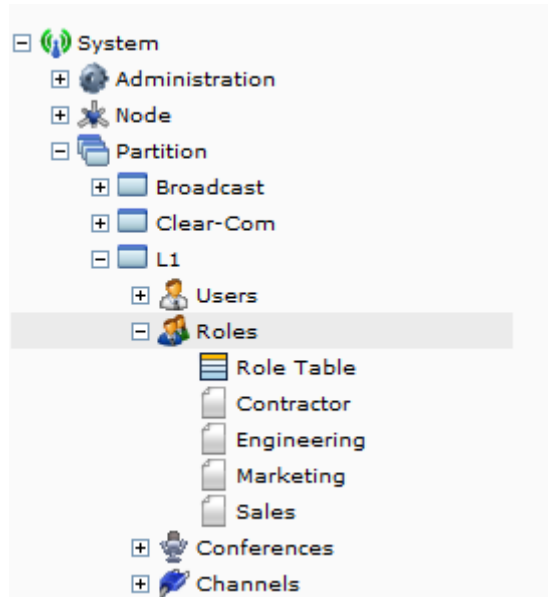


Figure 1-7: Role Structure

1. To create a new role, click on the “Roles” element in the navigation tree (under the appropriate partition). The *Role* table appears:

Navigation: Partitions > L1 > Roles

ROLES

Role	Description	Actions
<input type="text" value="Executive"/>	<input type="text" value="Corporate executive staff"/>	[add]
Contractor	Contractor personnel	[modify] [remove]
Engineering	Engineering personnel	[modify] [remove]
Marketing	Marketing personnel	[modify] [remove]
Sales	Sales personnel	[modify] [remove]

Figure 1-8: Table of Roles

2. In the **Role** field, enter a name for the new role (e.g., “Executive”). In the above example, four other roles have already been created.

3. In the **Description** field, enter a description for the new role (optional).
4. Click on the **[add]** link to submit the entry and insert the new role into both the navigation tree and the table (see below).

Role	Description	Actions
<input type="text"/>	<input type="text"/>	[add]
Contractor	Contractor personnel	[modify] [remove]
Engineering	Engineering personnel	[modify] [remove]
Executive	Corporate executive staff	[modify] [remove]
Marketing	Marketing personnel	[modify] [remove]
Sales	Sales personnel	[modify] [remove]

Figure 1-9: Roles Table

Note: Removing a role will automatically cancel the association of all users and channels associated to that role. If any of those users are currently logged in, they will be disconnected.

Creating a User

1. Click on the “Users” element in the navigation tree. The *Concert Users* table appears:

Display Name	Username	Key Name	Account Enabled	Interface Enabled	Eclipse Enabled	Action
<input type="text" value="Lisa Gonzalez"/>	<input type="text" value="LisaG"/>	<input type="text" value="Lisa Gonz"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	[add]

There are no Users associated to this Partition

Figure 1-10: User Entry Form

2. Enter a unique **Display Name** for the new user. This is the user’s name as other users will see it in their contact lists, as conference participants, etc. The user’s full name is usually the best choice.

3. Enter a unique **Username** that will be used for authentication purposes such as when logging into the Concert client. Avoid using spaces or special characters.

Note: The **Display Name** and **Username** entries are case-sensitive.

4. Enter a **Key Name** (up to ten characters), which will be used when this user is displayed on an intercom panel key.
5. **Account Enabled** is selected by default. You can uncheck this box if the user is to be disabled after creation (preventing the user from logging in to Concert).
6. To authorize the user to configure and connect Concert channels, select **Interface Enabled**.
7. Select the **Eclipse** checkbox to indicate whether the Concert user may access an Eclipse system over IP.

This function requires an Eclipse frame equipped with an Instant Voice Card (IVC-32) interface as well as Eclipse credentials created through the Eclipse Configuration System (ECS).

8. Click on the **[add]** link to proceed to the user *Details* page.

This page requires you to review the user information, specify a default password, and provide Eclipse login information (if applicable).

The screenshot displays the 'User Information Record' page. On the left is a navigation tree with 'System' expanded to show 'Administration', 'Node', 'Partition', 'Broadcast', 'Users', 'User Table', 'Roles', 'Conferences', 'Channels', 'Clear-Com', 'L1', and 'L2'. The main content area shows the breadcrumb 'Navigation: Partitions > Broadcast > Users > Lisa Gonzalez > Details'. The form contains the following fields and controls:

- Display Name:** Lisa Gonzalez
- Key Name:** Lisa Gonz (Max 10 characters)
- First:** Lisa
- Middle:** (empty)
- Last:** Gonzalez
- Username (Concert login credential):** LisaG
- Eclipse Username:** (empty)
- Password (Concert login credential):** (empty)
- Eclipse Password:** (empty)
- Account Enabled:**
- Interface Enabled:**
- Eclipse Frame:** (dropdown menu)
- Eclipse Enabled:**

Buttons for 'Submit' and 'Cancel' are located at the bottom of the form.

Figure 1-11: User Information Record

Note: The **First** and **Last** name entries are generated automatically from your **Display Name** entry. Both fields are required.

9. In the **Password** field, specify a Concert login password. Repeat this password in the space provided.

Note: Passwords are case-sensitive.

Note: The user can later change this password through the Concert client application.

Enabling Eclipse

If an Eclipse username and connection have been specified, then you must also provide an Eclipse user ID and password. These will allow the user to log in to the Eclipse system directly. Otherwise, the user will not be able to connect to the Eclipse system (refer to the “*ECS User Manual*”, part no. 810299Z).

Note: This facility requires Eclipse software v5.1 or later.

When logging into Eclipse, select the Eclipse system to which the user is assigned. Details of this system are entered in the server Hosts file (refer to the “*Concert Server Installation Manual*”, part no. 810389Z).

The **Eclipse Enabled** checkbox indicates whether the user is enabled for Eclipse access.

10. Once you have entered the required information, click **Submit** to complete the creation of the user. The new user will now appear as a bold entry within the user table as well as a clickable sub-element within the navigation tree.

Navigation: Partitions > Broadcast > **Users**

CONCERT USERS

Display Name	Username	Key Name	Account Enabled	Interface Enabled	Eclipse Enabled	Action
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	[add]
Lisa Gonzalez	LisaG	Lisa Gonz	✓	✓		[modify] [remove]

Figure 1-12: Modify User Information

11. To modify information for this user, click on the **[modify]** link to access the *User Details* page. To delete the user from the system, click on the **[remove]** link.

Note: If the user being removed is currently online, the user will be automatically forced to log off Concert and will be properly notified.

Creating a Conference

Conferences allow groups of users to share common meeting areas.

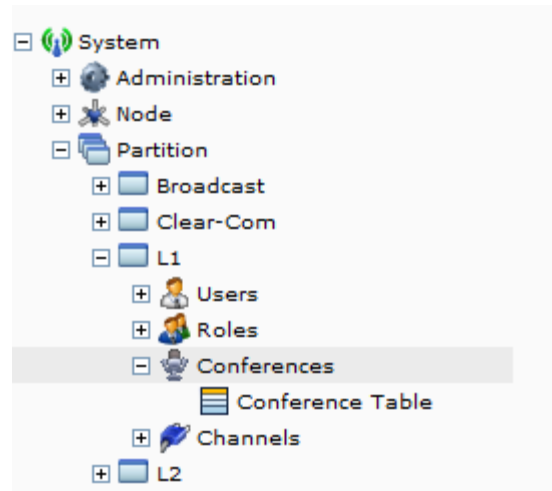


Figure 1-13: Conferences Tree

1. To create a conference, click on the “Conferences” element in the navigation tree (under the appropriate partition). The *Conference* table appears (not shown).
2. Proceed as you did for creating a new role.

Note: Any changes to a conference, (e.g., adding, modifying, or removing) will automatically propagate to all connected clients participating in that conference.

Creating a Channel

In addition to the components already described, it is also possible to add channels to a partition. A channel is a way of assigning a label to a physical port on an audio device. This label can then be used to represent a potential connection within the Concert system. Channels can be associated to other Concert components such as users, roles, and conferences.

Note: The connecting of a USB 4-wire device to any type of external USB hub or port replicator is not supported.

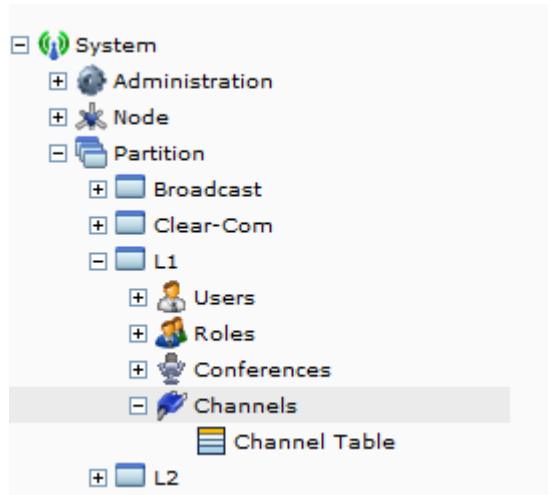


Figure 1-14: Conferences Tree

1. To create a channel, click on the “Channels” element in the navigation tree (under the appropriate partition). The *Interface Channels* table appears:

Navigation: Partitions > Broadcast > Channels

INTERFACE CHANNELS

Display Name	Description	Key Name	Action
<input type="text" value="Pubic Address (output)"/>	<input type="text" value="Stage announce"/>	<input type="text" value="Public Adr"/>	[add]
Party-Line1	Cameras	Partyline1	[modify] [remove]
Party-Line2	Production	Partyline2	[modify] [remove]
Program Feed (input)	Event feed from the main mixing board	Prgm Feed	[modify] [remove]

Figure 1-15: Add Channel

2. In the **Display Name** field, enter a unique display name (seen throughout Concert) for the new channel. In the above example, three other channels have already been created.
3. In the **Key Name** field, enter the name to be displayed when a channel is displayed on the intercom panel key (up to ten characters).
4. In the **Description** field, enter a description for the new channel (optional).
5. Click on the **[add]** link to proceed to the next entry page.

Modifying and Removing Components

1. To modify a component's information (e.g., name, description, etc.), click on the **[modify]** link next to the entry within the appropriate component table.
2. Make the necessary changes in the data modification page, then click **Submit** to save your changes.
3. To remove a component, click on the **[remove]** link next to the entry.

Note: Remember that if you remove a partition, all of the associated users, roles, conferences, and channels will be permanently deleted as well. This same behavior also applies to nodes.

Assigning Users to Roles

Once you have created at least one partition containing at least one user and one role, you can start creating user-role associations.

There are two methods for accessing the user-role association table:

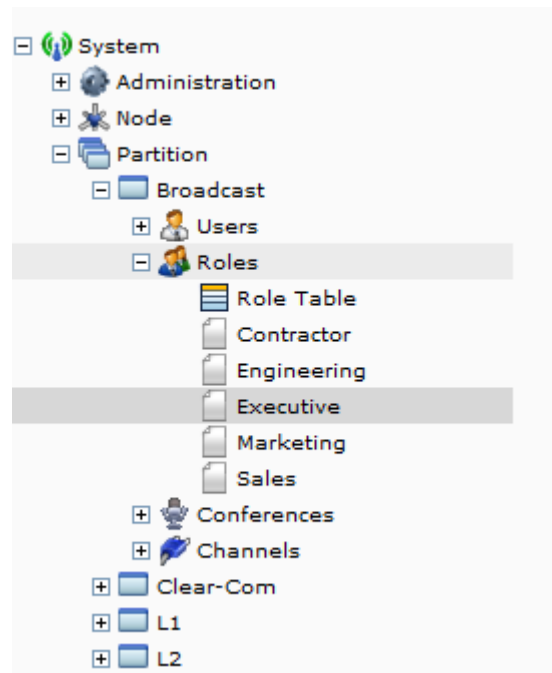


Figure 1-16: User Roles

1. The first method is to click on one of the role entries within the navigation tree (e.g., “Executive”).
2. The second method is to click on a role item within the *Role* table.

The corresponding *User Associations* page is displayed (see below). It lists all the users that belong to the parent partition, along with their current association to the selected role.

Navigation: Partitions > Broadcast > Roles > **Executive** > User Associations

User Associations Conference Associations Channel Associations Details

User	Username	Permission
Amanda Huggin	AmandaH	<input type="checkbox"/>
Bill Graham	BillG	<input checked="" type="checkbox"/>
Donald Harris	DonaldH	<input type="checkbox"/>
John Smith	JohnS	<input type="checkbox"/>
Lisa Gonzalez	LisaG	<input type="checkbox"/>

Note: A disabled checkbox indicates that the User is already associated to another role.

submit Cancel

Figure 1-17: Associate User to Role

The **Association** checkboxes indicate whether or not the user is associated to the currently selected role. In the above example, user associations are shown for the “Broadcast” partition’s “Executive” role. The “Broadcast” partition contains five roles in total, which appear as elements within the navigation tree. The navigation path, displayed above the tabs, identifies which element in the tree is currently being accessed.

3. To associate one or more users to this role, select the checkbox for each user you wish to assign.
4. To save your changes, click **Submit**. Once you submit the page, you will be notified of the actions made and the table will be updated.

Note: If the role association is disabled, this indicates that the user is already associated to another role. You must disassociate the user from the other role before a new association can be made.

Alternate Method

Instead of associating many users to one role, you may decide that it is easier to associate many roles to one user.

1. Click on the user's display name within the *User Associations* table, or click on the user element within the navigation tree. The *Role Associations* page appears:

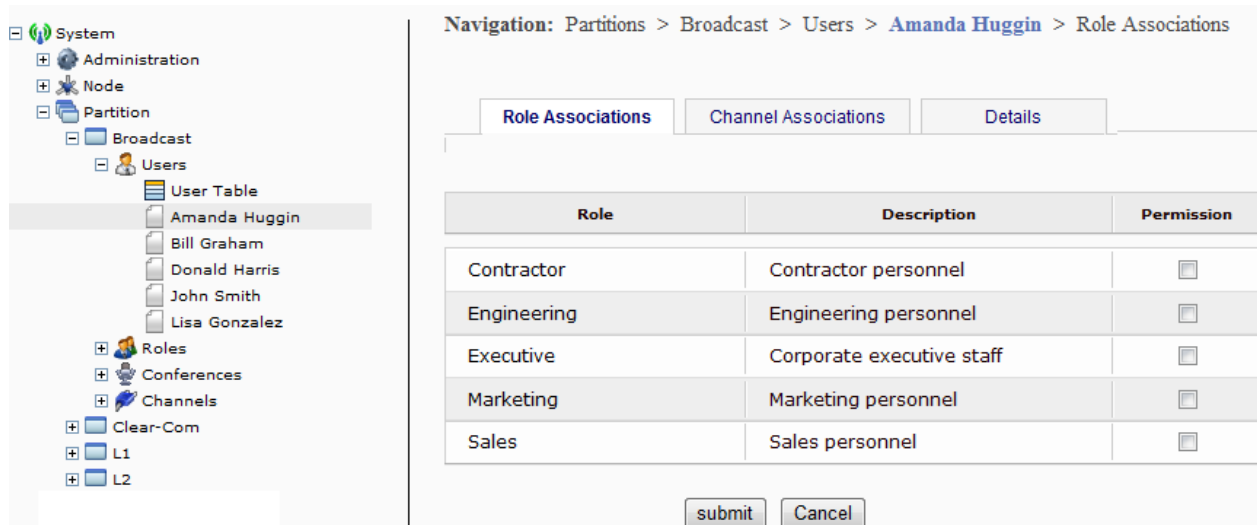


Figure 1-18: Alternate Role Interface

2. In the **Permission** column, check the role to be assigned to this user. Note that a user may only be associated to one (and only one) role. If another association is attempted, an error message will appear:

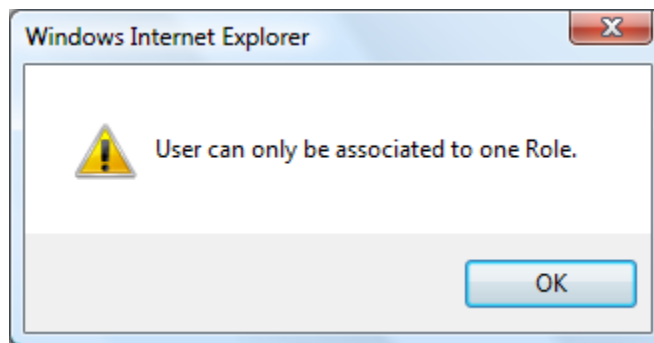


Figure 1-19: Error Message

Note: To switch a user's role association, you must first uncheck the currently selected role and then select the new role.

3. Click **Submit** to complete the association.

Note: All other association types behave in the same manner, where associations may be made through association page of either component.

Assigning Conferences to Roles

After a conference is created, it must be associated to a role in order for users to have access to it. Note that users are not directly associated to conferences but instead gain their conference permissions through their roles—once a role is granted Talk or Listen permission to a conference, the associated users will have access to that conference.

1. Click on a “Role” sub-element within the navigation tree. The *User Associations* page appears.
2. Select the *Conference Associations* tab. This tab displays a table of all the conferences created within the parent partition and their current associations to the selected role.

Note: You can also access this page by clicking on a role name within either the *Role* table or the *User-Role Associations* page.

Navigation: Partitions > Broadcast > Roles > Executive > Conference Associations

User Associations | **Conference Associations** | Channel Associations | Details

Conference	Description	Permissions
CorpX Weekly	Weekly conference call	Talk <input checked="" type="checkbox"/> Listen <input checked="" type="checkbox"/>
Meeting Room	Conference for all users	Talk <input type="checkbox"/> Listen <input checked="" type="checkbox"/>

submit Cancel

Figure 1-20: Conference Associations

3. For each conference, check the permissions you wish to assign.
4. Click **Submit** to apply the settings.

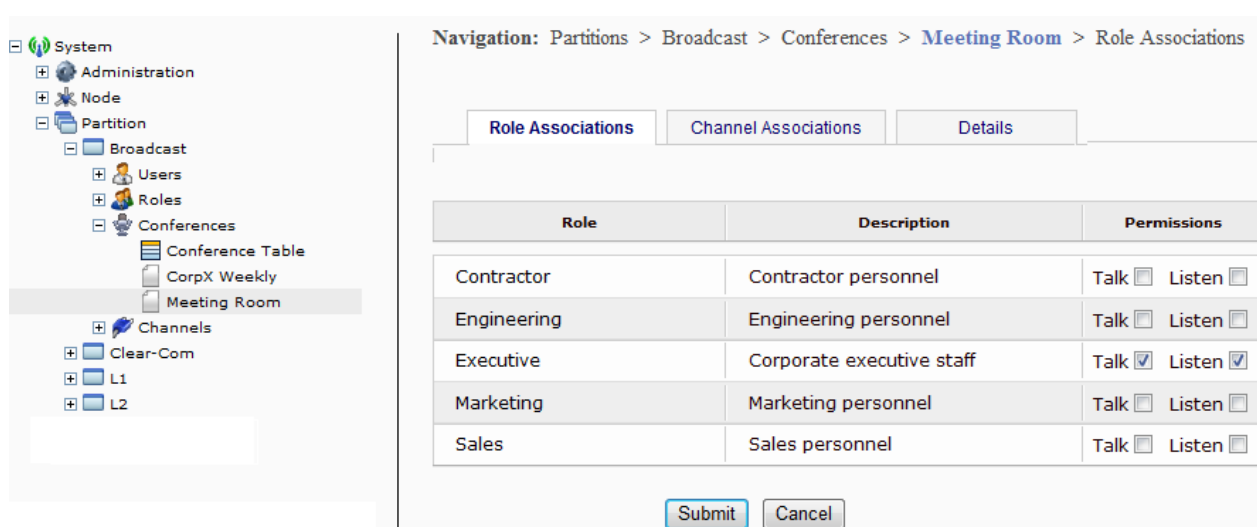
In the above example, Talk/Listen privileges were granted to the first conference and Listen-only was granted to the second conference for the “Executive” role.

Alternate Method

Instead of associating many conferences to one role, you may decide that it is easier to associate many roles to one conference.

1. Click on the conference element in the navigation tree, the *Conference* table, or the *Role-Conference* table.

The *Role Associations* page displays all the roles in the parent partition and their association to the selected conference:



The screenshot shows the Concert client interface. On the left is a navigation tree with the following structure:

- System
 - Administration
 - Node
 - Partition
 - Broadcast
 - Users
 - Roles
 - Conferences
 - Conference Table
 - CorpX Weekly
 - Meeting Room
 - Channels
 - Clear-Com
 - L1
 - L2

The main content area shows the navigation path: **Navigation:** Partitions > Broadcast > Conferences > Meeting Room > Role Associations. Below the path are three tabs: **Role Associations** (selected), **Channel Associations**, and **Details**. The main content is a table with the following data:

Role	Description	Permissions
Contractor	Contractor personnel	Talk <input type="checkbox"/> Listen <input type="checkbox"/>
Engineering	Engineering personnel	Talk <input type="checkbox"/> Listen <input type="checkbox"/>
Executive	Corporate executive staff	Talk <input checked="" type="checkbox"/> Listen <input checked="" type="checkbox"/>
Marketing	Marketing personnel	Talk <input type="checkbox"/> Listen <input type="checkbox"/>
Sales	Sales personnel	Talk <input type="checkbox"/> Listen <input type="checkbox"/>

At the bottom of the table are two buttons: **Submit** and **Cancel**.

Figure 1-21: Associate Role to Conference

2. In the **Permissions** column, grant privileges to the roles that you associated to the selected conference.
3. Click **Submit** to apply the changes.

Channel Associations

Once a channel is created, it can be associated to one or more users, roles, or conferences.

Channel - User Associations

By associating a channel directly to a user, the channel will appear in the Concert client's *Channels* tab. This provides the user special direct communication privileges to that channel, depending on the permissions granted.

1. To associate a channel to a user, click the "User" element in the navigation tree.
2. Select a user from the navigation tree or from the *Role Associations* page.

3. Click on the *Channel Associations* tab:

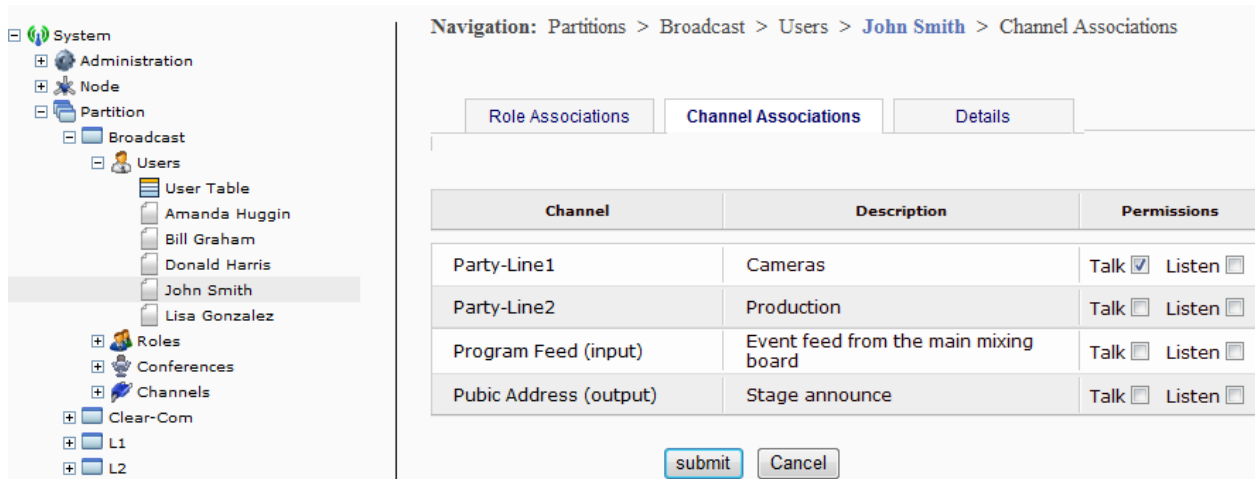


Figure 1-22: Associate User to Channel

4. For each channel in the list, use the **Permissions** checkboxes to specify the permissions for the channel.
5. Click **Submit** to apply the changes.

When a user connects to a channel, it is similar to calling another Concert user in “panel” mode (i.e., the call is answered immediately —no ringing). If the channel is in one of the “talk” states, audio from the user will be routed directly to the associated physical analog port.

Channel - Role Associations

You have the option of associating a channel to any role within the parent partition.

When you associate a channel to a role, this allows configuration of the channel by any user who belongs to that role. All channels associated to a user’s role will appear in the user’s list of available channels within the client’s interface configuration dialog.

1. Click on the “Channel” element in the navigation tree.
2. Then select a channel from the navigation tree. The *User Associations* page appears.

3. Click on the *Role Associations* tab:

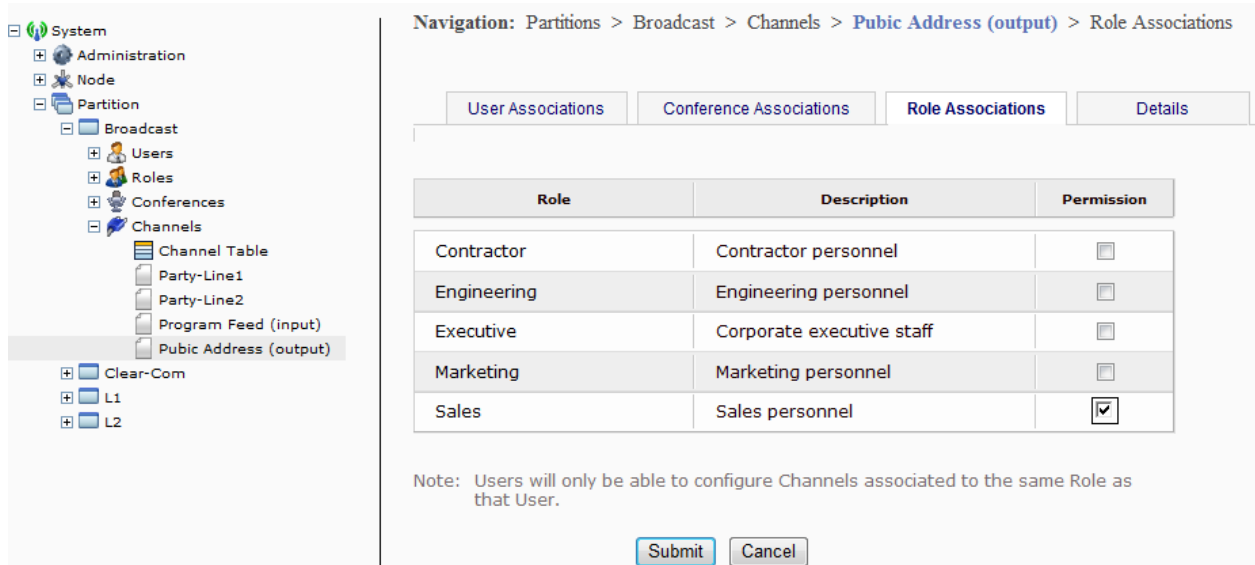


Figure 1-23: Associate Channel to Role

4. In the **Permissions** column, check the role to which this channel will be associated.
5. Click **Submit** to apply the changes.

Any user belonging to a role that has also been associated to a channel (as described above) will have the ability to configure a locally connected audio device using the Concert client.

Channel - Conference Associations

You can also associate an unlimited number of conferences to a single channel. When a channel connects to Concert, it will automatically join any associated conferences (with the assigned privileges).

1. Click on the “Channel” element in the navigation tree.
2. Then select a channel from the navigation tree. The *User Associations* page appears.

3. Click on the *Conference Associations* tab:

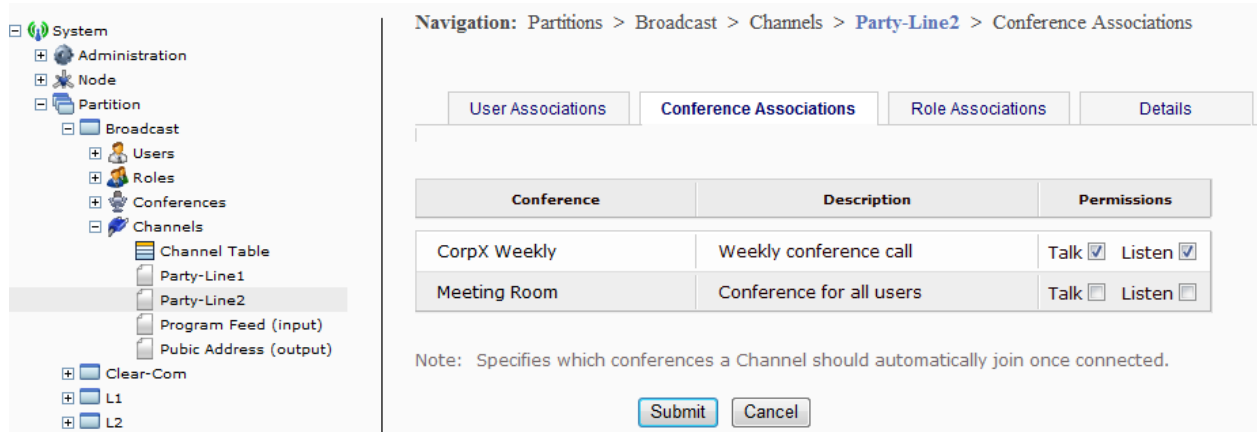


Figure 1-24: Associate Conference to Channel

4. For each conference in the list, use the **Permissions** checkboxes to specify the permissions for the conference.
5. Click **Submit** to apply the changes.

All audio received from or transmitted to the channel will also be routed to the joined conferences.

CREATING AND MONITORING NODES

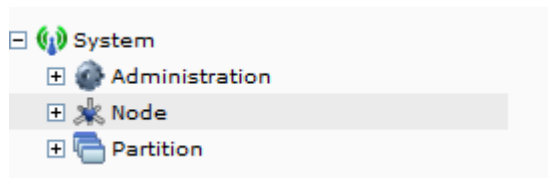


Figure 1-25: Nodes

Nodes are physical locations where Concert-related equipment resides. This currently includes IV-Routers, interface gateways, and Eclipse frames.

Creating a Node

1. To create a node, click on the “Node” element in the navigation tree. The *Node* table appears:

Navigation: Nodes

SYSTEM NODE LOCATIONS

Node	Description	Action
<input type="text" value="[enter node name here]"/>	<input type="text" value="[enter node description here]"/>	[add]
Sample Node	Physical location of Concert servers and equipment	[modify] [remove]

Figure 1-26: Add New Node

2. In the **Node** field, enter a name for the new node.
3. In the **Description** field, enter a description for the new node (optional).
4. Click on the **[add]** link to submit the entry and insert the new node into both the navigation tree and the table.

Adding an Instant Voice Router

1. Click on the newly created node (if there are multiple IV-Rs in a system, then they must all be added to the same node).
2. Click on the “IV-R” element. The *IV-Routers* table appears:

Navigation: Nodes > Sample Node > IV-Router

IV-Routers

IV-Router Hostname	Description	Actions
<input type="text" value="[enter IP address here]"/>	<input type="text" value="[enter description here]"/>	[add]
127.0.0.1	Locally running IV-Router	[modify] [remove]

Figure 1-27: Instant Voice Router

3. In the **Hostname** field, enter an IP address for the new IV-R.

- In the **Description** field, enter a description for the new IV-R (optional).
- Click on the **[add]** link to submit the entry and insert the new IV-R into both the navigation tree and the table.

Note: You do not need to precede the hostname by “http://” if it is an IP address.

- To access the new router, click on the “IV-R” navigation tree element.

The IV-R needs to be running in order to access its statistical information. If the target IV-R is running, you will see the following page:

Navigation: Nodes > Sample Node > IV-Router > 127.0.0.1 > Statistics

Statistics Info Details

Display Name	Version	Online D - H:M:S	TRANSMIT		RECEIVE		Out Of Order
			Tx Pkts	Rx Pkts	Pkts Lost	Pkts Rcvrd	
No Users Connected							

NOTE: Statistics shown are generated by the router and not the Concert Client.

Figure 1-28: No Users

Adding an Eclipse Matrix

When a new node is created, an “Eclipse” element is automatically created in addition to the “IV-R” element. This is used to specify any Eclipse frames to which the client may link.

- Click on the “Eclipse Frame” element in the navigation tree. The *Eclipse Frames* table appears:

Navigation: Nodes > Sample Node > Eclipse Frames

ECLIPSE FRAMES

Eclipse Hostname	Description	Actions
<input type="text" value="[enter hostname here]"/>	<input type="text" value="[enter description here]"/>	[add]
192.126.1.117:6001		[modify] [remove]

Figure 1-29: Eclipse Matrix Name Input

Note: You must include the port value of **6001** within the hostname in order to comply with the default port set within the Eclipse frame.

8. In the **Eclipse Hostname** field, enter the Eclipse frame IP address. It is not necessary to precede the address with “http://” (e.g., [hostname:6001]).
9. In the **Description** field, enter a description for the Eclipse frame (optional).
10. Click on the **[add]** link to add the Eclipse frame to the list of Eclipse servers in the node.

Adding an Interface Gateway

The interface gateway application, which runs on a Linux server, has the ability to interface with one of the supported 4-wire PCI devices locally installed on that server.

Note: Concert v2.5.0 will only support the creation of one interface gateway, which may (or may not) run locally to the EMS and (or) IV-R.

1. To create an interface gateway, click on the “Node” element in the navigation tree.
2. Select an existing node.
3. Click on the “Interface Gateway” element. The *Interface Gateways* table appears:

Interface Hostname	Description	Actions
<input type="text" value="[enter hostname here]"/>	<input type="text" value="[enter description here]"/>	[add]
127.0.0.1		[modify] [remove]

Figure 1-30: Add Interface Gateway

4. In the **Interface Hostname** field, enter the hostname for the interface gateway. This is the real-world IP address of the server on which the interface gateway resides.
5. In the **Description** field, enter a description for the interface gateway (optional).

6. Click on the **[add]** link to display the *Details* page:

Navigation: Nodes > Sample Node > Interface Gateways > 127.0.0.1 > Details

M Audio Delta 1010 Details

Hostname
127.0.0.1

Description
[Empty text box]

Management Port (Port value must also be modified within the Interface Gateway's configuration file)
8009

IV-Router (Choose IV-Router with shortest round-trip time to this server)
127.0.0.1

IV-Router Port (IVP Port configured within the IV-R's local configuration file 'ivr.conf')
6001

Connection Quality (Choose the audio quality level for interface connections)
LAN

Advanced Settings

Silence Suppression

AGC (Automatic Gain Control)

Submit Cancel

Figure 1-31: Interface Gateway Details

The **Management Port** is the port that the EMS will use to communicate with the interface gateway application. You should only modify the default entry if the port is unavailable within your network. If you modify the port, then you will also need to update the port value within the interface gateway's configuration file.

7. In the **IV-Router** field, choose the IV-Router that should be used for all channel connections from the interface gateway.
8. In the **Connection Quality** field, choose the appropriate quality settings (LAN, WAN, or INTERNET).
9. Use the **Silence Suppression** checkbox to turn this feature on or off.
10. Use the **AGC** (Automatic Gain Control) checkbox to turn this feature on or off.

Note: Both **Silence Suppression** and **AGC** should be disabled if your channel's audio source is music.

11. Click **Submit** to add the interface gateway to the table and to the navigation tree.

You can update the interface gateway attributes at any time by accessing the *Interface Gateway* table and clicking on the **[modify]** link.

You may also decide to remove an existing interface gateway. This can be done by navigating to the *Interface Gateway* table and clicking on the **[delete]** link. This action will delete all channel configurations relating to this interface gateway.

Port/Channel Configuration

When the interface gateway application is both online and reachable by the EMS server, the characteristics of the installed PCI device can be retrieved and displayed.

Note: If the interface gateway application is not running, a message will advise you that the interface gateway cannot be configured.

1. Navigate to the “Interface Gateway” element in the navigation tree.
2. Select an existing interface gateway. The *Port-Channel Configuration* page appears (this page contains separate tables for input and output ports):

Navigation: Nodes > Sample Node > Interface Gateways > 127.0.0.1 > M Audio Delta 1010

M Audio Delta 1010
Details

INPUT PORT-CHANNEL CONFIGURATION

Port	Partition	Channel	On Air	Connect	Status	Action
1	[unassigned]				Disconnected	[configure]
2	[unassigned]				Disconnected	[configure]
3	[unassigned]				Disconnected	[configure]
4	[unassigned]				Disconnected	[configure]
5	[unassigned]				Disconnected	[configure]
6	[unassigned]				Disconnected	[configure]
7	[unassigned]				Disconnected	[configure]
8	[unassigned]				Disconnected	[configure]

Note: A specific channel may only be applied to one input port and one output port.

Figure 1-32: Port-Channel Configuration

Note: The tab name corresponds to the installed 4-wire device (e.g., “M Audio Delta 1010 ©”). The **Port** number corresponds to a physical port on the device.

Port Configuration

You can now apply a Concert channel to a physical port on the PCI M-Audio device.

1. Click on the **[configure]** link for the input or output port to be configured. The **Partition** and **Channel** dropdown lists are now enabled.

Navigation: Sample Node > 127.0.0.1 > M Audio Delta 1010

M Audio Delta 1010 Details

INPUT PORT-CHANNEL CONFIGURATION

Port	Partition	Channel	On Air	Connect	Status	Action
1	Sample Partition	Party-Line1				[apply] [cancel]
2	[unassigned]	Party-Line1			Disconnected	[configure]
3	[unassigned]	Party-Line2			Disconnected	[configure]
4	[unassigned]	Program Feed (input)			Disconnected	[configure]
5	[unassigned]	Public Address (output)			Disconnected	[configure]
6	[unassigned]				Disconnected	[configure]
7	[unassigned]				Disconnected	[configure]
8	[unassigned]				Disconnected	[configure]

Note: A specific channel may only be applied to one input port and one output port.

Figure 1-33: Channel Selection for Port

2. In the **Partition** field, next to the port ID, select a partition from the dropdown list.
3. In the **Channel** field, select a channel from the dropdown list.
4. Click on the **[apply]** link to apply the configuration.

Once you apply the configuration, a **Connect** icon appears. The act of connecting the configuration results in the creation of an audio route from the interface gateway to the IV-R.

The connection **Status** is also displayed, along with options to modify or remove the configuration.

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Connecting a Port Configuration

1. To connect an existing port configuration, click on the **Connect** icon for the port.

Navigation: Sample Node > 127.0.0.1 > M Audio Delta 1010

M Audio Delta 1010 Details

INPUT PORT-CHANNEL CONFIGURATION

Port	Partition	Channel	On Air	Connect	Status	Action
1	Sample Partition	Program Feed (input)			Connected	
2	[unassigned]				Disconnected	[configure]
3	[unassigned]				Disconnected	[configure]
4	[unassigned]				Disconnected	[configure]
5	[unassigned]				Disconnected	[configure]
6	[unassigned]				Disconnected	[configure]
7	[unassigned]				Disconnected	[configure]
8	[unassigned]				Disconnected	[configure]

Note: A specific channel may only be applied to one input port and one output port.

Figure 1-34: Connection Status

Initially, the **On Air** icon will appear grey to indicate that the interface gateway has connected successfully with the IV-R. It will change to green once the audio routes have been established (this may take a few seconds, depending on your connection speed to the interface gateway).

2. To disconnect the port configuration for an “on air” port, click on the **Disconnect** icon for the port.

Note: A configuration must be disconnected before it can be modified or removed.

Monitoring Nodes

The following screen illustrates what a statistics page might look like, once clients are connected:

Navigation: Nodes > Sample Node > IV-Router > 127.0.0.1 > Statistics

Statistics
Info
Details

Display Name	Version	Online D - H:M:S	TRANSMIT		RECEIVE		Out Of Order
			Tx Pkts	Rx Pkts	Pkts Lost	Pkts Rcvrd	
Party-Line2	1_0alpha19	0 - 00:05:48	0	17242	0	0	0
Party-Line3	1_0alpha19	0 - 00:00:41	0	2046	0	0	0
Program Feed (input)	1_0alpha19	0 - 00:09:53	0	29293	0	0	0

NOTE: Statistics shown are generated by the router and not the Concert Client.

Figure 1-35: Node Statistics

This page displays the version of the client in use along with usage details.

- Click on the *Configuration* tab to display configuration information about the selected server.



Concert Element Management System

Navigation: Node > Clear-Com Concert - Alameda Live > IV-Rs > 127.0.0.1 > Configuration

Statistics
Configuration
Info

Installation Information:

Hostname: 172.16.0.71
Version: Concert IV-R v2.0-4 installed on Mon Dec 8 03:53:17 GMT 2008

IV-R Configuration Variables:

Trace Level: 3
EMS Server: 127.0.0.1:8002
IVP Port: 6001
GCCP-R Port: 8006

Figure 1-36: Server Configuration

4. Click on the *Info* tab to display the hostname and description for the IV-R.

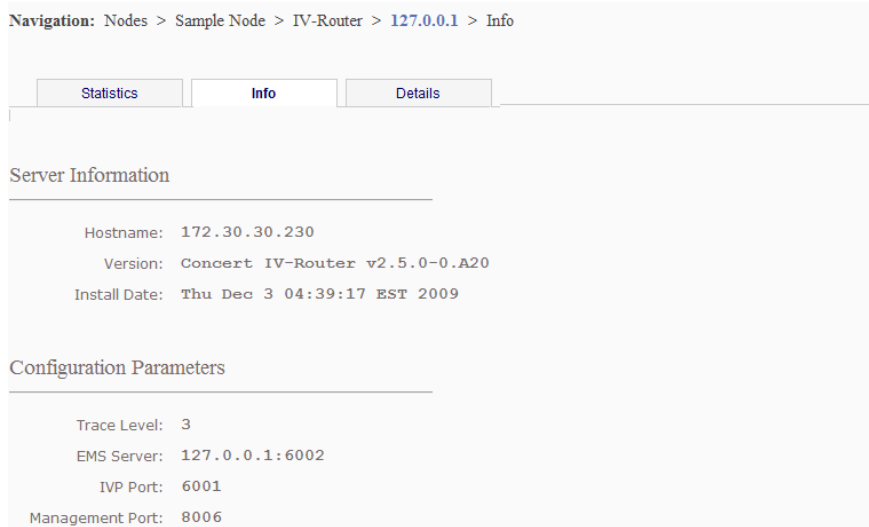


Figure 1-37: Server Information

The information fields are greyed-out to indicate that they cannot be changed in this page.

ADMINISTRATION

1. Click on the "Administration" element in the navigation tree to display its sub-elements:

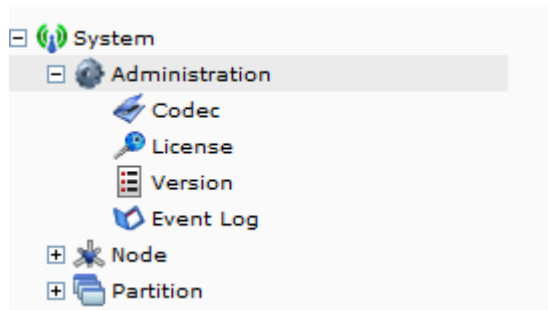


Figure 1-38: System Administration Elements

MODIFYING THE SYSTEM-WIDE CODEC

1. Click on the “Codec” element to display the *Codec Configuration* screen:

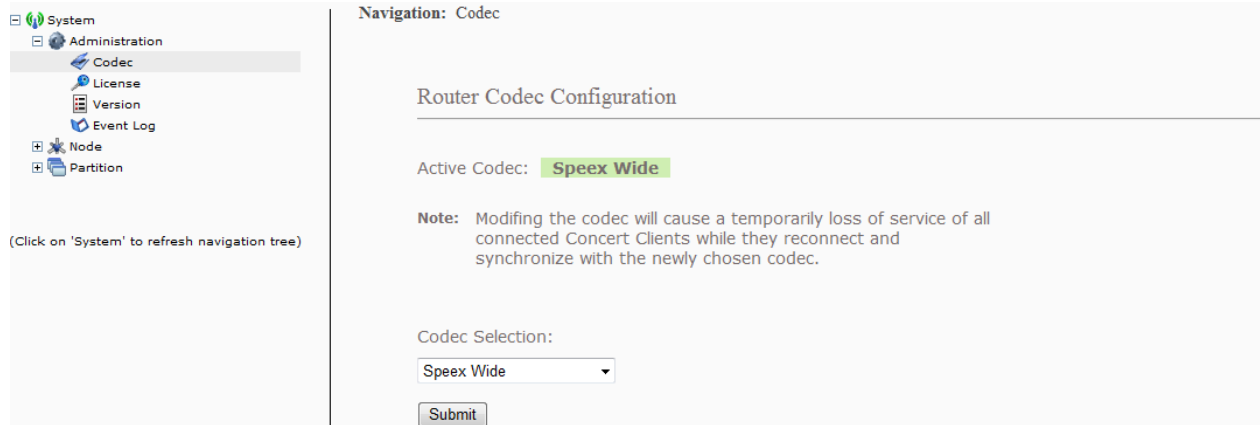


Figure 1-39: System Codec Setup

2. In the **Codec Selection** field, click on the dropdown arrow to select from the list of available codecs:
 - Speex Narrow
 - Speex Wide
 - Speex Ultra-Wide
 - G.722
 - Linear
3. Click **Apply** to use the new codec.

Important: *Modifying the codec will force all connected clients to reconnect to the system.*

MODIFYING THE LICENSE

1. Select the “License” element to display and optionally amend the server license information.

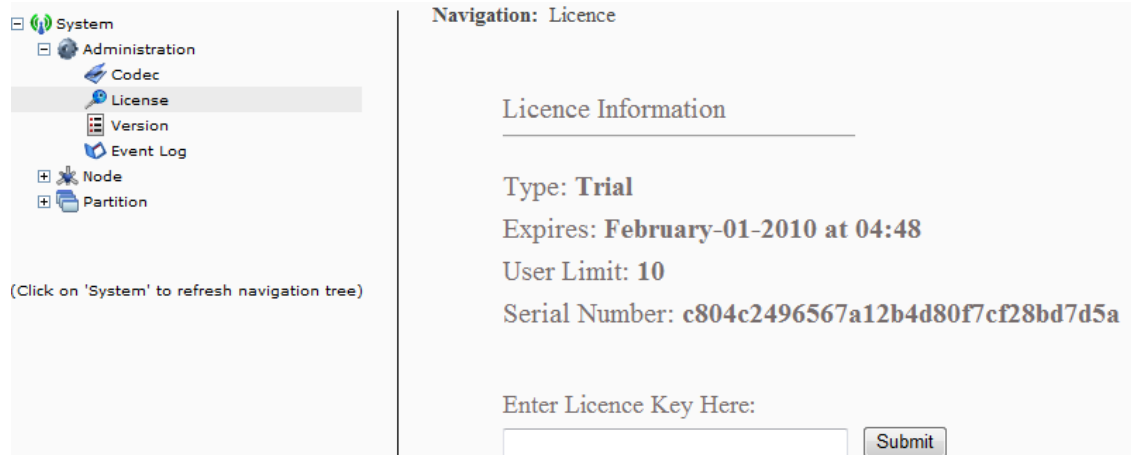


Figure 1-40: License Information

2. In the **Update License** field, enter the appropriate license information.
3. Click **Submit** to complete the update.

Note: Clear-Com will require you to provide the serial number displayed here in order to generate a new customer license key.

Note: Regardless of the license type, an administrator can only create as many users as are specified by the “user limit”.

DISPLAYING THE VERSION

1. Select the “Version” element to display the version number and installation date of the current EMS, Instant Voice Router (IV-R), and interface gateway software installed on the server:

Navigation: Version

System Information

Version	Install Date
Concert EMS v2.5.0-0.A20	Thu Dec 3 04:39:22 EST 2009
Concert IV-Router v2.5.0-0.A20	Thu Dec 3 04:39:17 EST 2009
Concert Interface Gateway v2.5.0-0.A20	Thu Dec 3 04:39:25 EST 2009

(Click on 'System' to refresh navigation tree)

Figure 1-41: Version Information

DISPLAYING THE EVENT LOG

1. Select the “Event Log” element to display the Concert system server event log. This will display user events such as logins and logouts, login failures, etc.

Navigation: Event Log

Clear All

Date/Timestamp	Application	Event-Type	Event Description
2009-12-08 05:37:42.496	EMS	Connect	CHANNEL('Party-Line3') has logged off
2009-12-08 05:37:42.472	IV-R	Connect	IVR(172.30.30.230) has released CHANNEL(chan_Partyline2_114133) connection
2009-12-08 05:23:50.395	EMS	Connect	INTERFACE(chan_Partyline2_114133) is now connected to IV-R(172.30.30.230)
2009-12-08 05:23:46.266	EMS	Connect	CHANNEL(chan_Partyline2_114133) authentication with EMS successful, Client-IVR connection authorized
2009-12-08 05:18:43.046	EMS	Connect	INTERFACE(chan_Partyline2_709338) is now connected to IV-R(172.30.30.230)
2009-12-08 05:18:38.518	EMS	Connect	CHANNEL(chan_Partyline2_709338) authentication with EMS successful, Client-IVR connection authorized
2009-12-08 05:14:38.043	EMS	Connect	INTERFACE(chan_Prgm Feed_687237) is now connected to IV-R(172.30.30.230)
2009-12-08 05:14:33.324	EMS	Connect	CHANNEL(chan_Prgm Feed_687237) authentication with EMS successful, Client-IVR connection authorized
2009-12-08 05:00:48.313	EMS	Connect	CHANNEL('Program Feed (input)') has logged off
2009-12-08 05:00:48.288	IV-R	Connect	IVR(172.30.30.230) has released CHANNEL(chan_Prgm Feed_687237) connection
2009-12-08 04:54:02.064	EMS	Connect	INTERFACE(chan_Prgm Feed_687237) is now connected to IV-R(172.30.30.230)

(Click on 'System' to refresh navigation tree)

Figure 1-42: Server Event Log

2. Click **Clear All** to clear and reset the server event log.

APPLICATION CONTROL

BACKING UP THE DATABASE

1. To back up the Concert database, first log in the Concert server as “root”.
2. Open a terminal window and then type the following command:

```
# service ems backup
```

This command will create a compressed file containing the entire contents of the Concert database. The backup file will be placed in the directory: “/var/lib/pgsql/backups”. The filename will be in the format “[Date_Time].sql.gz”.

RESTORING THE DATABASE

1. To restore the database using the backup file created in the above procedure, execute the following command:

```
# service ems backup
```

This will prompt you to enter the full path of the backup file from which to restore the database.

Note: This procedure will wipe out any information currently contained within the database and replace it with the information contained within the backup file.

LIMITED WARRANTY

This document details the Clear-Com Standard Limited Warranty for all new products for sale within all regions with the exception of Military, Aerospace, and Government (MAG).

EXCEPT AS SET FORTH HEREIN (“LIMITED WARRANTY”), CLEAR-COM MAKES NO OTHER WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, NONINFRINGEMENT OF THIRD PARTY RIGHTS, OR FITNESS FOR A PARTICULAR PURPOSE, ALL OF WHICH ARE EXPRESSLY DISCLAIMED.

1. **Standard Limited Warranty.** Clear-Com Communication Systems (“Clear-Com”) warrants its products, including supplied accessories, against defects in material or workmanship for the time periods as set forth below provided it was purchased from an authorized Clear-Com dealer or distributor.

a) Pursuant to this Limited Warranty, Clear-Com will, at its option:

- i) repair the product using new or refurbished parts, or;
- ii) replace the product with a new or refurbished product.

b) Remedies: In the event of a defect, the rights detailed in 1 (a) are your exclusive remedies. For purposes of this Limited Warranty, “refurbished” means a product or part that has been returned to its original specifications.

c) Standard Warranty Period (by Product):

- i) All Clear-Com brand systems and products, including belt packs, have a Limited Warranty of two years, with the exception of;

(1) Cables, accessories, components & consumable items have a Limited Warranty of 90 days.

(2) Any Clear-Com product that has been classified as obsolete at the time of sale has a Limited Warranty of 90 days from sales and will be replaced with the

same product or a sales credit will be issued, at the sole discretion of Clear-Com.

(3) Headsets, handsets, microphones, and associated spare parts, as well as UHF wireless IFB products, have a Limited Warranty of one year.

(4) UHF WBS Analog wireless intercom systems have a Limited Warranty of three years.

(5) All software products, including Concert (Client and Server), ECS, Production Maestro and Logic Maestro are warranted for one year and shall substantially conform to published specifications. The media on which the Software is furnished is warranted to be free of defects in material and workmanship (under normal use) for a period of one year.

(6) Any Clear-Com products that are listed within the last time buy period have the same Limited Warranty for their type 1.i.1 - 1.i.5 as above.

d) Any Clear-Com product that is repaired or supplied as a replacement under the terms of this Limited Warranty shall inherit the remaining warranty period from the original product.

e) Standard Warranty Period Start Date

i) Dealer / Distributor Sales: In view of Dealer or Distributor stocking practices, the Standard Warranty Period for products sold through Dealers or Distributors will commence from the Clear-Com invoice date and will include an automatic extension of three months. Any valid warranty claim within the Standard Warranty Period as determined by the Clear-Com invoice date will be covered without further supporting evidence. All warranty claims after this date must be supported by the Customer's proof of purchase that demonstrates the product is still within the Standard Warranty Period (as detailed in Section 1.c.i above, plus the automatic three month extension) from their purchase date.

ii) Direct Sales: The Standard Warranty Period will commence from the date the product was shipped from Clear-Com to the Customer. The Standard Warranty Period start date for contracts that include commissioning will be the date of the Site Acceptance Test (SAT) or one month from conclusion of the commissioning project, whichever is earlier.

f) Invalidation of Warranty

- i) This Limited Warranty shall be invalidated if the product's outer case has been opened and internal modifications have been made or damage has occurred, or upon the occurrence of other damage or failure not attributable to normal wear and tear. Authorized modifications with Clear-Com's express written permission will not invalidate the warranty.

g) Software Updates

- i) Software Updates are released periodically to correct discovered program bugs. During the Warranty Period, software updates are available to Customers free of charge.

h) Software Upgrades

- i) Software Upgrades include new Features and/or Functional Enhancements and are not included as part of the Standard Warranty but may be purchased at the published rates.
- ii) Note: In the absence of a Software Update containing a program correction and no available workaround to mitigate the problem, at the discretion of Service, Sales, Engineering, or Product Management, the Customer may be provided a Software Upgrade under warranty.

2. **Exclusions.** Services do not cover damage or failure caused by any occurrence beyond Clear-Com's reasonable control, including without limitation acts of God, fire, flooding, earthquake, lightning, failure of electric power or air conditioning, neglect, misuse, improper operation, war, government regulations, supply shortages, riots, sabotage, terrorism, unauthorized modifications or repair, strikes, labor disputes or any product failure that Clear-Com determines is not a result of failure in the Services provided by Clear-Com. Further Services excluded from this Agreement include: services required due to errors or omissions in Customer purchase orders; installation or maintenance of wiring, circuits, electrical conduits or devices external to the products; replacement or reconditioning of products which, in Clear-Com's opinion cannot be reliably maintained or properly serviced due to excessive wear or deterioration; Customer's failure to maintain the installation site in accordance with the environmental specifications of the products; or service on products removed from the location originally specified by Customer and/or reinstalled without the prior written approval of Clear-Com. Customer will pay Clear-Com's then current published charges to restore such Covered Products to a condition eligible for further service under this Agreement. Clear-Com shall be excused from and shall not be liable for any failure or delay in performance under this Agreement due to the foregoing or any causes beyond its reasonable control.

3. **Limitation of Liability.** IN NO EVENT WILL CLEAR-COM BE LIABLE UNDER THIS AGREEMENT FOR ANY INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING WITHOUT LIMITATION LOST PROFITS), REGARDLESS OF THE FORM OF ACTION, EVEN IF ADVISED IN ADVANCE OF THE POSSIBILITY OF SUCH DAMAGES.

4. **Assignment.** Neither party may assign this Agreement or any portion thereof without the prior written consent of the other, except in the event of a merger, sale of all or substantially all of the assets or other corporate reorganization.

5. **Ownership of replaced parts or product.** All replaced parts or products become the property of Clear-Com.

6. **Entire Agreement.** This Agreement constitutes the entire agreement between the parties with respect to the subject matter hereof, and supersedes all prior or contemporaneous proposals, oral or written, and all other communications between them relating to the subject matter of this Agreement.

TECHNICAL SUPPORT & REPAIR POLICY

NOVEMBER 1, 2008

In order to ensure that your experience with Clear-Com and our World Class products is as beneficial, effective and efficient as possible, we would like to define the policies and share some “best practices” that can accelerate any problem solving processes which we may find necessary and to enhance your customer service experience. Our Technical Support, Return Material Authorization, and Repair Policies are set forth below. These Policies are subject to revision and constantly evolve in order to address our Customers’ and the Market’s needs. Accordingly these are provided by way of guidance and for information only and may be changed at anytime with or without Notice.

TECHNICAL SUPPORT POLICY

- a) Telephone, online, and e-mail technical support will be provided by the Customer Service Center free of charge during the Warranty Period.

- b) Technical support will be provided free of charge for all software products under the following conditions:
 - i) The application, operating, and embedded software is installed on a product covered by Clear-Com’s Limited Warranty, and:
 - (1) The software is at the current release level; or,

 - (2) The software is one (1) version removed from current.

- ii) Older versions of software will receive “best-effort” support, but will not be updated to correct reported bugs or add requested functionality.

c) For Technical Support:

- i) North and South America, (inc. Canada, Mexico, and the Caribbean) & US Military:
 - Hours: 0800 - 1700 Pacific Time
 - Days: Monday - Friday
 - Tel: +1 510 337 6600
 - Email: CustomerServicesUS@vitecgroup.com

- ii) Europe, the Middle East and Africa:
 - Hours: 0800 - midnight Central European Time
 - Days: Monday - Friday
 - Tel: +49 40 853 999 700
 - Email: TechnicalSupportEMEA@vitecgroup.com

- iii) Asia-Pacific:
 - Hours: 0800 - 1700 Pacific Time
 - Days: Monday - Friday
 - Tel: +1 510 337 6600
 - Email: CustomerServicesAPAC@vitecgroup.com

- d) Email Technical Support is available for all Clear-Com branded products free of charge for the life of the product, or two years after a product has been classified as obsolete, whichever comes first.

e) Support for Distributor and Dealer Sales

- i) Distributors and Dealers may utilize the Customer Service Centers once a system has been installed and commissioned. Clear-Com Systems and Applications Engineers will provide support to the Distributor from the pre-sales stage through to satisfactory installation for new system purchases. Customers will be encouraged to contact their Dealer or Distributor with their installation and technical support enquires rather than using the Customer Service Centers directly.

f) Support for Direct Sales

- i) Customers may utilize the Customer Service Centers once a system has been installed and commissioned by Clear-Com Systems and Applications Engineers, or

in the case of project installations, once the Project Team has completed the hand-over to the Support Centers.

RETURN MATERIAL AUTHORIZATION POLICY

- a) Authorizations: All products returned to Clear-Com or a Clear-Com Authorized Service Partner must be identified by a Return Material Authorization (RMA) number.
- b) The Customer will be provided with an RMA number upon contacting Clear-Com Sales Support as instructed below.
- c) The RMA number must be obtained from Clear-Com via phone or email prior to returning product to the Service Center. Product received by the Service Center without a proper RMA number is subject to return to the Customer at the Customer's expense.
- d) Damaged equipment will be repaired at the Customer's expense.
- e) Returns are subject to a 15% restocking fee.
- f) Advance Warranty Replacements (AWRs);
 - i) *During the first 30 days of the Standard Warranty Period:* Once the equipment fault has been verified by Clear-Com or its authorized representative, Clear-Com will ship a new replacement product. The Customer will be provided with an RMA number and be required to return the faulty equipment within 14 days of receipt of the replacement or will be invoiced for the list price of a new product.
 - ii) *During days 31-90 of the Standard Warranty Period:* Once the equipment fault has been verified by Clear-Com or its authorized representative, Clear-Com will ship a like-new, fully refurbished replacement product. The Customer will be provided with an RMA number and be required to return the faulty equipment within 14 days of receipt of the replacement or will be invoiced for the list price of a new product.
 - iii) To obtain an RMA number or request an AWR:
 - (1) North and South America, Asia-Pacific, and US Military:
Hours: 0800 - 1700 Pacific Time
Days: Monday - Friday
Tel: +1 510 337 6600

Email: SalesSupportUS@vitecgroup.com

(2) Europe, the Middle East and Africa:

Hours: 0800 - 1700 GMT + 1

Days: Monday - Friday

Tel: + 44 1223 815000

Email: SalesSupportEMEA@vitecgroup.com

- iv) Note: AWRs are not available for UHF WBS Analog wireless intercom systems. UHF WBS Analog wireless intercom systems out-of-box failures must be returned to Alameda for repair.
- v) Note: Out-of-box failures returned after 90 days will be repaired and not replaced unless approved by Clear-Com Management.
- vi) Note: AWRs are not available after 90 days of receipt of product unless an AWR Warranty Extension is purchased at the time of product purchase.
- vii) Note: Shipping charges, including duties, taxes, and insurance (optional), to Clear-Com's factory is the responsibility of the Customer. Shipping AWRs from Clear-Com is at Clear-Com's expense (normal ground or international economy delivery). Requests for expedited shipping (e.g., "Next-Day Air") and insurance are the responsibility of the Customer.

REPAIR POLICY

- a) Repair Authorizations: All products sent to Clear-Com or a Clear-Com Authorized Service Partner for repair must be identified by a Repair Authorization (RA) number (see above).
- b) The Customer will be provided with an RA number upon contacting Clear-Com Customer Services as instructed below.
- c) The RA number must be obtained from Clear-Com via phone or email prior to returning product to the Service Center. Product received by the Service Center without a proper RA number is subject to return to the Customer at the Customer's expense.
- d) Return for Repair

- i) Customers are required to ship equipment at their own cost (including transportation, packing, transit, insurance, taxes and duties) to Clear-Com's designated location for repair.
 - (1) Clear-Com will pay for the equipment to be returned to the Customer when it is repaired under warranty.
 - (2) Shipping from Clear-Com is normal ground delivery or international economy. Requests for expedited shipping (e.g., "Next-Day Air") and insurance are the responsibility of the Customer.
- ii) **Clear-Com does not provide temporary replacement equipment ("loaner") during the period the product is at the factory for repair.** Customers should consider a potential prolonged outage during the repair cycle, and if required for continuous operations, purchase minimum spare equipment required or purchase an AWR Warranty Extension.
- iii) No individual parts or subassemblies will be provided under warranty, and warranty repairs will be completed only by Clear-Com or its Authorized Service Partners.
- iv) Customers requesting a non-warranty repair will be provided an estimate of the total repair cost prior to the return of the equipment. In the event that Clear-Com is unable to estimate the cost of repair, the Customer may elect to return the product to the factory for an estimate. The Customer is responsible for shipping costs both to and from the factory in the event they choose not to accept the estimate.
- v) The Customer must provide either a purchase order for the repair work, or will be required to make an advance payment (as a debit against the Dealer's line of credit, or credit card) prior to the repaired product being returned to the Customer.
- vi) For requesting a Repair Authorization number:

(1) North and South America, Asia-Pacific, and US Military:
 Hours: 0800 - 1700 Pacific Time
 Days: Monday - Friday
 Tel: +1 510 337 6600
 Email: CustomerServicesUS@vitecgroup.com

(2) Europe, the Middle East and Africa:
 Hours: 0800 - midnight Central European Time

Days: Monday - Friday
Tel: +49 40 853 999 700
Email: TechnicalSupportEMEA@vitecgroup.com

vii) Note: Clear-Com's Limited Warranty does not cover normal wear and tear. The Customer will be charged the full cost of the repair if their equipment has been tampered with by non-approved personnel, or has been subject to damage through electrical failure, liquid damage or mishandling. The Customer Service Center will provide the Customer with a cost estimate for any such repairs prior to undertaking the work.