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Step-by-step guide to install and configure QuadroCS basically

Manual-II: see Administrator's Guide

Describes detailed the menus available for administrators only

Manual-III: Extension User's Guide

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About this Moderator's Guide

The QuadroCS Manual is divided into three parts:

- **Manual-I: Installation Guide**
gives step-by-step instructions to provision the Quadro Conference Server and configure the conferences with the Epygi SIP Server. After successfully configuring the Quadro, a user will be able to automatically or manually initiate the conferences between several IP peers, manipulate with the active conferences and record them if needed.
- **Manual-II: Administrator's Guide** that explains all Quadro Conference Server management menus available for administrators only. Further, it includes a list of all System Default Values.
- **Manual-III: Moderator's Guide**
that explains all menus that can be accessed and configured by the conference users within the QuadroCS. Further, a list of all available conference codes can be found there.

In detail the Moderator's Guide includes the following chapters:

[QuadroCS' Graphical Interface](#) introduces to the Quadro's graphical user interface and explains all recurrent buttons.

[Moderator's Menus](#) explains the input options available for extension users (and administrators, of course) that may be selected from the extension user's main page Extension Settings.

[QuadroCS' Auto Attendant Services](#) lists all call codes available for conferences

[Appendix: Glossary](#) explains some technical terms.

This guide contains many example screen illustrations. Since Quadro devices offer a wide variety of features and functionality, the example screens shown may not appear exactly the same for your particular Quadro as they appear in this manual. The example screens are for illustrative and explanatory purposes, and should not be construed to represent your own unique environment.

QuadroCS' Graphical Interface

Login

The QuadroCS configuration management may be accessed on three different levels: Administrators, Moderators and Participants. Moderators and Participants have to login with the conference ID for **Username** and the particular passwords specified by the Administrator for each conference. Moderators are able to modify the login password from the Conference Properties page. Participants have merely a read-only access to the Conference Server GUI.



Fig. III-1: Quadro Extension User's page

Recurrent Buttons

Button	Description
	This button leads back to the previous page of a fixed sequence of pages (used mainly in wizards).
	This button leads onward to the next page of a fixed sequence of pages (used mainly in wizards).
	This button discards the latest, not yet confirmed entries.
	This is the last button of a fixed sequence of pages that completes and saves the entries of the whole sequence.
	This button has the same function like the "?" in the left button bar. It opens the help page belonging to the currently active QuadroCS management page.
	This button saves the settings modified on the currently active management page.

Button	Description
	This button leads back to the page you have been on before.
	This button confirms an operation you started before.
	This button confirms an operation you chose before.
	This button discards an operation you chose before.
	This button opens a window where the last inserted IP addresses are listed. It is a clipboard that helps the user to make quick selection of an IP address in case it has been already used in the past, thus to avoid typing it again. The clipboard can hold up to 10 IP addresses, a new IP address will replace the oldest one from the list.

Recurrent Functional Buttons of the GUI

In connection with tables, the following buttons - among others - usually occur:

Functional Button	Description
Add	Allows adding a new record to the displayed table. A new page will be displayed to enter the new settings.
Edit	Allows modifying the settings of the record selected by its checkbox. Normally only one record may be selected. A new page will be displayed to enter the modified settings.
Delete	Deletes the selected entry(s) of a table. A warning message will demand a confirmation before deleting an existing entry.
Select All	Selects all table entry(s) for example for further deletion.
Inverse Selection	Inverts an existing selection of table entry(s). If no entries are selected, clicking the button will select all records.
Refresh in...	May occur in the lower right corner of a page. It displays the number of seconds remaining until the next refresh of the page and may be used to reload the page manually.

Most of the tables offer the option to sort the entries in ascending or descending order by clicking the headings of the columns. A small arrow beside the column heading will show the direction of sorting – upward or downward.

The entries of the table can be selected by the assigned checkboxes - one at a time, for the most part - in order to edit or delete them.

Entering a SIP Addresses correctly

Calls over IP are implemented based on Session Initiation Protocol (SIP) on the QuadroCS. When making a call to a destination that is somewhere on the Internet, SIP address must be given.

SIP addresses have to be specified in one of the following formats:

```
"display name" <username@ipaddress:port>
"display name" <username@ipaddress>
username@ipaddress:port
username@ipaddress
username
```

The display name and the port number are optional parameters in the SIP address. If the port is not specified, 5060 will be set up as the default one. The range of valid ports is between 1024 and 65536.

A flexible structure of wildcards is allowed. In comparison with a wildcard, the "?" character stands for only one unknown digit and the "*" character stands for any number of any digits.

Particularly the following combinations can be used for your convenience:

- ***@ipaddress** - any user from the specified SIP server.
- **username@*** - a specified user from any SIP server.
- ***@*** - any user from any SIP server.

Please Note: Wildcards are available for caller addresses only. No wildcard characters are allowed for called party addresses. To use "*" and "?" themselves (as non wildcard characters), use "*" and "\?" correspondingly

Moderator's Menus

Conference Moderator's Main Page

After logging in as a moderator, the page **Moderator Settings** is displayed. Here you may access the settings to operate and perform actions that are available only to the moderator of each conference:

1. **Conference Menu**
 - [Conference Progress Page](#)
 - [Activate Conference](#)
 - [Recorded Conferences](#)
 - [Conference Statistics](#)

2. **Conference Properties Menu**
 - [General Settings](#)
 - [Conference SIP Registration Settings](#)
 - [Recording Settings](#)
 - [Participants](#)
 - [Schedule](#)
 - [Codecs](#)

3. **Logout**



Fig. III-2: QuadroCS Moderator's page

Conference Menu



Fig. III-3: Moderator Settings Dynamo Menu

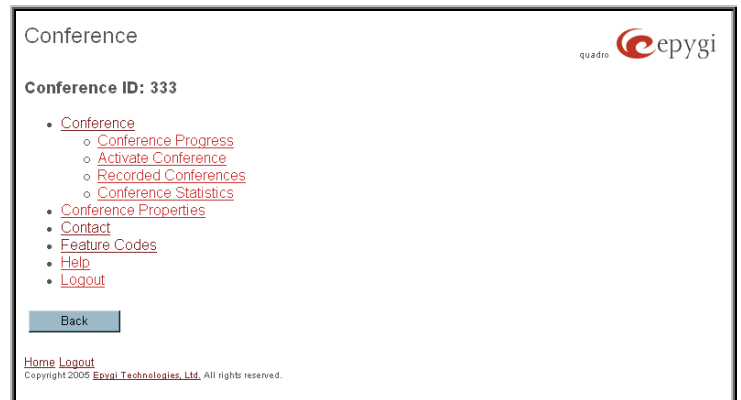


Fig. III-4: Moderator's Settings Tree Menu

Conference Progress Page

The **Conference Progress Page** displays a list of the conference participants and gives a moderator the ability to remove a participant or to invite a new one, to start/stop/resume/pause the conference recording, to lock/unlock (when conference is locked, no users can connect it) and to terminate the conference.

Please Note: **Pausing** and **Resuming** the conference recording can be used to edit the recorded conference audio file. When pause/resume operations are used, conference is recorded in a single file, leaving out the conversation during which conference recording was paused. When using stop/start operations, new files are created each time conference recording is started. All recorded conferences are listed in the [Recorded Conferences](#) page only after conference recording termination.

In case of **pause/resume**, the recorded file is not terminated. In case of **stop/start** recording starts in new file.

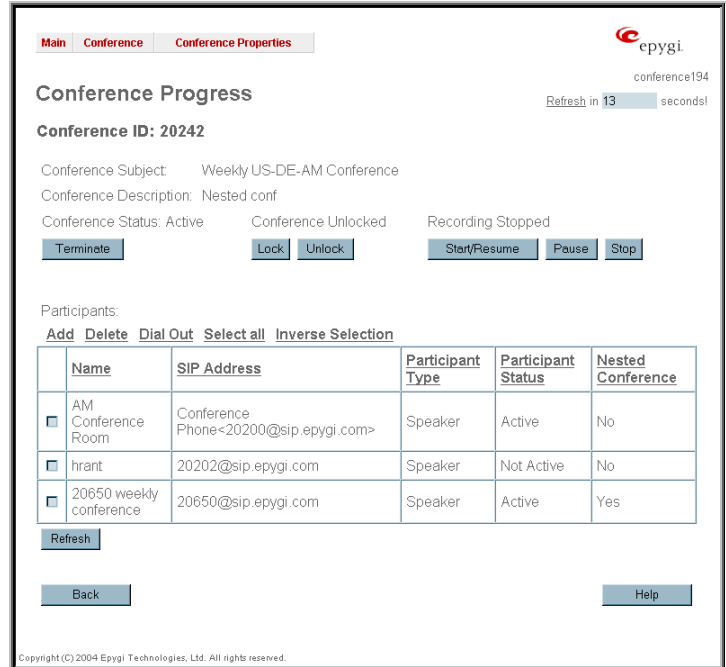


Fig. III-5: Conference Progress Page

Activate Conference

This link is used to activate a conference.

Recorded Conferences

Conference Recording allows to record conferences and save them on the QuadroCS. The conference participants may hear a special beep sound when the conference recording starts (depending on the conference settings). The maximum duration of the recorded conference is defined in Conference Properties.

Recorded conferences are stored and are accessible in the Recorded Conferences section of the GUI that can be accessed only from QuadroCS Server Web Management. They can be played, deleted and saved.

The **Recorded Conferences** page displays a box where recorded conferences are listed, and may be played and deleted.

Recording free space shows the free space allocated for the corresponding conference.

The **Recorded Conferences** table displays all the recorded conferences with the following parameters:

Date & Time shows the initiation date and time of the recorded conference.

Duration shows the duration of the recorded conference (in minutes/seconds).

Play - by clicking on the speaker sign beside every record in the table, the recorded conference will be played (using the available media player supported by your Operation System).

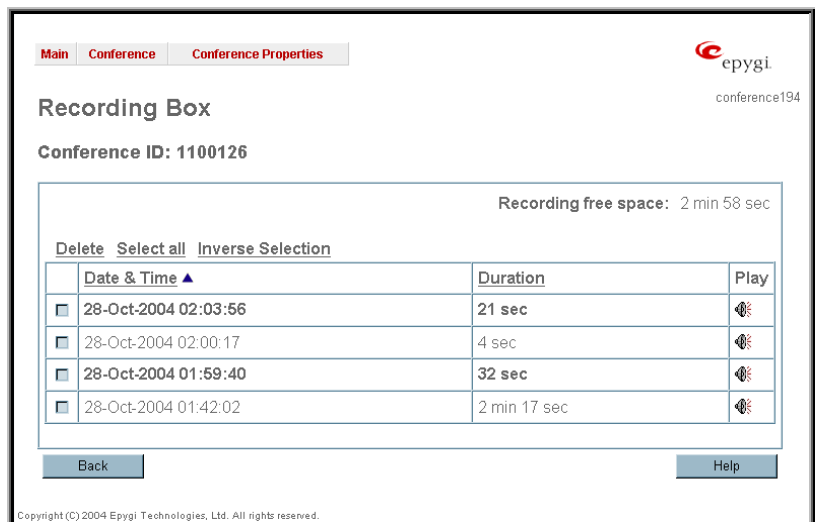


Fig. III-6: Conference Recording Box

The column headings of the **Recorded Conferences** table are links. By clicking on the column heading, the table will be sorted by the selected column. Upon sorting (ascending or descending), arrows will be displayed beside the column heading. Each row in the Recorded Conferences' table can be selected by the checkbox for deletion.

To Play a Conference

1. Click on the speaker sign of the corresponding recorded conference.
2. Depending on your browser settings, the .wav file will be played directly or an application will ask you to save the .wav file on the local PC. If you need to save the file, please specify the path then run the media file from the specified location.

To Delete a Recorded Conference

1. Select the checkbox of the corresponding record(s) in the **Recorded Conferences** table that will be deleted. Click on **Select all** if all records should be deleted.
2. Select the **Delete** button.
3. Confirm the deletion clicking **Yes**. The selected conference then will be deleted. To abort the deletion and keep the conference on the QuadroCS, select **No**.

Conference Statistics

Statistics contains two pages with conference statistics on the first page and successful call statistics on the second page. **Statistics** allows conference call events to be collected on the QuadroCS with their corresponding parameters. This information is searchable by various criteria.

The **Conferences** page displays a table with detailed information (**Activation Time, Conference Duration, Participants Count, Activation Reason** and **Activation Details**) about the established conferences and allows viewing the individual conference calls.

To use this feature, click on the corresponding conference ID. To view all calls directed into or dialed out of the QuadroCS, move to the **Successful Calls** page where a table shows the call details (**Activation Time, Conference Duration, Participant, Call Start Time** and **Call Duration**).

Each column heading in the table is a link. By clicking on the column heading, the table will be sorted by the selected column. Upon sorting (ascending or descending), arrows will be displayed beside the column heading.

For both **Conferences** and **Successful Calls** pages, a statistics summary and an option to search components are available.

The statistics summary contains the **Number or (Call) Records**, which displays the total number of conference entries or successful calls in the corresponding tables. Additionally, **Conf Total Duration, Conf Maximum Duration, Conf Average Duration** and **Conf Minimum Duration** columns provide information about the total, maximum, average and minimum durations of the conferences.

Search components allow the user to filter the **Conferences** or **Successful Calls** tables:

The **ConfID** text field requires the ID of the conference call. Only numeric values are allowed in this field.

The **From** and **To** text fields above the **Activation Time** column are used to search the conferences by the conference activation date and time. The data must be entered in the following format: dd-mm-yyyy hh:mm:ss. The time criterion is optional. The **From** field requires an earlier date and time than the **To** field.

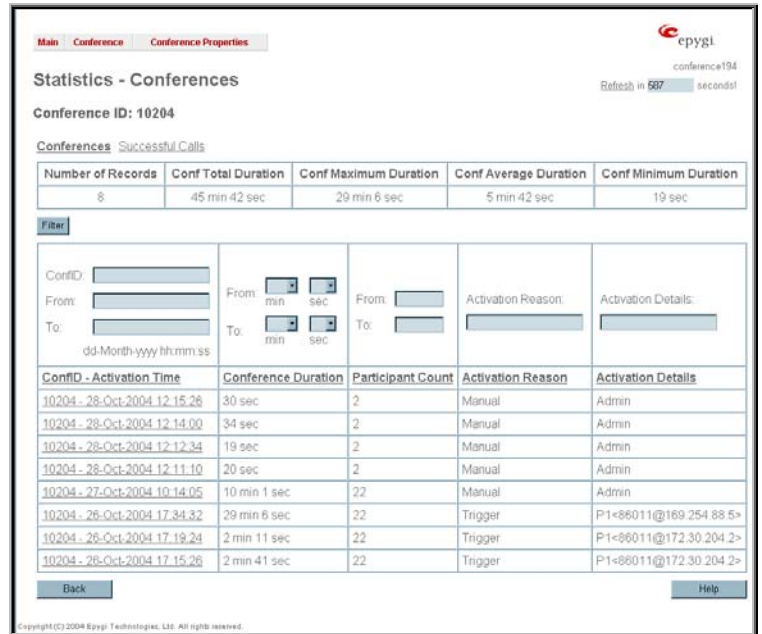


Fig. II-7: Call Statistics Page

The **From** and **To** drop down lists above the **Conference Duration** column are used to search by conference duration. The duration must be selected from the lists' values. The **From** field must indicate a shorter time duration than the **To** field.

The **From** and **To** text fields above the **Participant Count** column in the **Conferences** table are used to search based on the number of participants in the conference.

You can perform manual, trigger or scheduled searches of conferences by using the **Activation Reason** text field in the **Conferences** table.

Conferences can be searched by their activation details by using the **Activation Details** text field in the Conference table. For **Manual**, the options **Admin** or **Moderator** are available, for **Trigger**, you may use the callers' address; and for **Schedule** the option **Date** and **Time**.

Call participants can be searched by their SIP addresses by using the **Participant** text field located in the **Successful Calls** table.

The **From** and **To** text fields above the **Call Start Time** column in the **Successful Calls** table are used to search incoming or outgoing calls by the call start date and time. This data has to be entered in the following format: dd-mm-yyyy hh:mm:ss. The time criteria is optional. The **From** field requires an earlier date and time than the **To** field.

The **From** and **To** drop down lists above the **Call Duration** column in the **Successful Calls** table are used to search by the calls' duration. The duration must be selected from the lists' values. The **From** field must indicate a shorter time duration than the **To** field.

Filter performs a search procedure by the selected criteria. The search may be done with several criteria at once.

To Filter the Statistics

1. Enter the desired criteria in the required fields.
 2. Press the **Filter** button to search the call records within the **Statistics** table.
- Please Note:** To return to the complete **Statistics Table**, clear all search criteria and press **Filter**.

Conference Properties Menu



Fig. III-8: Moderator Settings Dynamo Menu

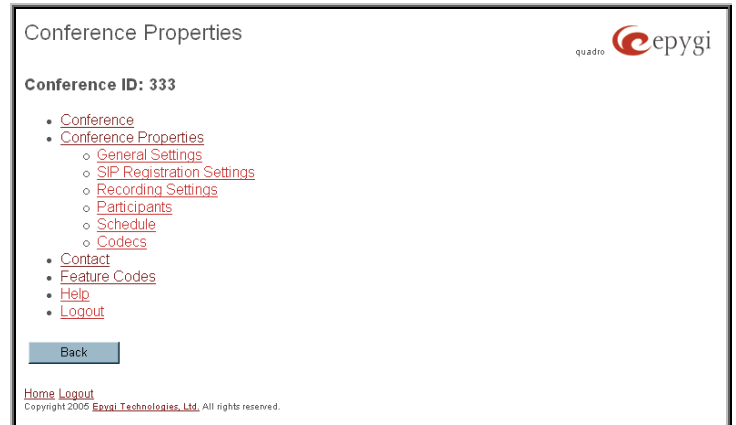


Fig. III-9: Moderator's Settings Tree Menu

General Settings

Please Note: This page is read-only and the **Password** fields are hidden for the users authenticated as participants.

The **Conference General Settings** page is used to configure the basic conference settings: subject and description, moderator and participant passwords, maximum duration, new participant settings, and others. The **Conference General Settings** page contains the following components:

Subject is an optional parameter used to insert a brief conference topic.

Description is an optional parameter used to insert additional information about the conference.

Moderator Password requires a password for the moderator to access the conference. The password inserted here should be used by the moderator to join the conference. The Moderator may use all conference codes during the active conference and access conference specific GUI pages to coordinate the conference (view or change conference properties, activate, deactivate, lock or unlock it, start/stop/resume recording and view conference statistics). The **Confirm** text field requires the confirmation of the Moderator Password.

Participant Password requires a password for the participant to access the conference. The participants will need this password to join the conference. The participant is only able to participate in the conference according to their permissions (speaker or listener). Participants also can access the conference GUI to view conference properties and participants. **Confirm** requires the confirmation of the Participant Password.

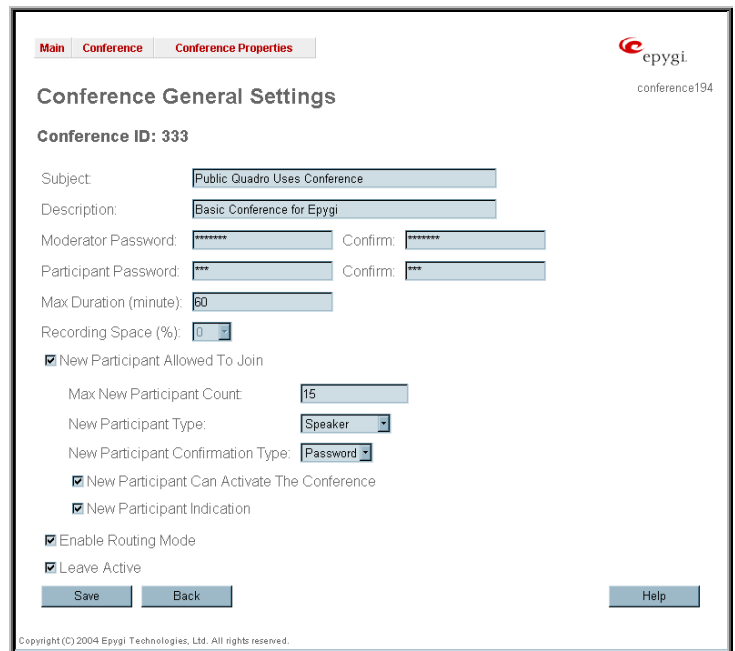


Fig. II-10: Conference General Settings Page

Max Duration allows limiting the maximum duration (in minutes) of the conference. Leave the field empty for unlimited conference duration.

Recording Space drop down list is available on this page for the administrator's access only and is disabled for the moderator. The list is used to select the QuadroCS's memory space in percent total memory for the corresponding conference.

Selected **New Participant Allowed to Join** allows new users (not included in the list of participants) to connect to the conference. If this checkbox is enabled, the following settings should be provided:

Max New Participant Count configures the maximum number of new users allowed to connect to the conference.

New Participant Media Status configures the state (speakers or listeners only) of the new participants connected to the conference.

New Participant Confirmation Type sets password protection for new participants that join an active conference.

New Participant Can Activate Conference allows new participants to activate a conference.

New Participant Indication checkbox enables a beep indication during the active conference when a participant joins or leaves the conference.

Enable Routing Mode enables dialing according to the dial plan configured in the Quadro CS call routing tables when dialing out a participant during a conference. When this checkbox is selected, any dialed number will be parsed through the Call Routing Table (see Manual-II: Administrator's Guide).

Leave Active allows the conference to remain active during whole period of call conference even if all participants have left.

Conference SIP Registration Settings

This page is used to manage the SIP registration settings of the conference. SIP Registration Server and SIP Outbound Proxy Server settings may be configured here.

Please Note: This page is read-only for the users authenticated as participants.

This page offers the following components:

Registration Password indicates the password for the extension registration on a SIP server.

Confirm Registration Password is for password confirmation. If the entered password does not correspond to the one given in the **Registration Password** field, an error will appear.

Registration SIP Server indicates the host address of the SIP server. The field is not limited regarding symbol usage and length as it can be either an IP address, for example, 192.168.0.26 or a host address, e.g., sip.epygi.com.

Registration SIP Port indicates the host port number to connect to the SIP server. The SIP server port may contain only numeric values. If the SIP server port is not specified, QuadroCS will access the SIP server through the default port 5060.

Registration on SIP Server enables conference registration on the SIP server registration.

The screenshot shows a web interface for configuring SIP registration settings. At the top, there are navigation tabs: 'Main', 'Conference', and 'Conference Properties'. The 'Conference Properties' tab is active. The page title is 'Conference SIP Registration Settings'. Below the title, it says 'Conference ID: 333'. The settings are as follows:

- Registration Password: [masked]
- Confirm Registration Password: [masked]
- Registration SIP Server: sip.epygi.com
- Registration SIP Port: 5060
- Registration on SIP Server:
- SIP Outbound Proxy Address: 156.25.21.20
- SIP Outbound Proxy Port: 5941
- SIP User ID: sips1239asj8aodn

At the bottom, there are three buttons: 'Save', 'Back', and 'Help'. The footer of the page reads 'Copyright (C) 2004 Epygi Technologies, Ltd. All rights reserved.'

Fig. II-11: Conference SIP Registration Settings Page

SIP Outbound Proxy Settings are used to ensure QuadroCS's connection to the SIP server. SIP Outbound Proxy is a SIP server where all the SIP requests and other SIP messages are transferred. Some SIP servers use an outbound proxy server to escape restrictions of NAT. **SIP Outbound Settings** are provided by the SIP service provider and are used by the QuadroCS to reach the selected SIP server. If an Outbound Proxy is specified for a conference, all outbound SIP calls from that conference are made through that outbound proxy.

SIP Outbound Proxy address requires the IP address or the host name of the outbound proxy.

SIP Outbound Proxy Port requires the port number on which QuadroCS may reach the outbound proxy.

SIP UserID requires an identification parameter to reach the SIP server. The UserID may be requested by some SIP servers. If not requested, the field should be left blank.

Recording Settings

The settings on this page are for conference call recording configuration, enabling conference recording, defining the recording memory allocation (internal storage or the external USB flash), selecting a recording indication type, etc.

Please Note: This page is read-only for the users authenticated as participants.

The **Conference Recording Settings** page offers the following components:

Enable Recording enables the recording of the corresponding conference. With this checkbox selected, a group of radio buttons is activated to select the storage for the recorded conference audio files.

Use Internal Storage switches the location that is used to store the recorded conference audio files to the QuadroCS's internal memory.

- **Recording Codec** requires selecting the audio codec that will be used to record the conference. The recording codec selection will affect recording quality and file size.
- **Max Recording Time** requires the maximum duration (in minutes) that will be recorded. If the conference recording has been paused and resumed, Max Recording Time value will indicate the actual recorded time. Leave this field empty so as to not limit the duration of the conference recording.

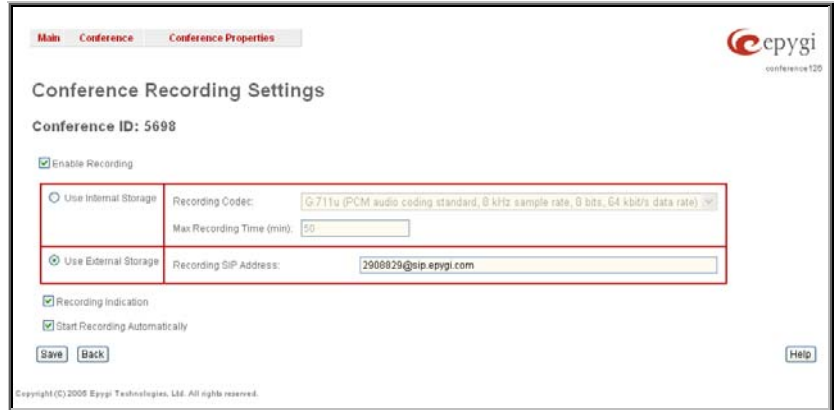


Fig. II-12: Conference Recording Settings Page

Use External Storage switches the location used to store the recorded conference audio files to an external destination, which can be any device or application that has audio recording capabilities. **SIP Address** requires the SIP address of the destination where the recorded conference will be stored.

Recording Indication selection enables voice indication in the conference when conference recording starts.

Start Recording Automatically checkbox selection will start the recording of the corresponding conference as soon as the conference is activated.

Participants

Users required to participate in the conference are configured on this page. This page is used to configure the participants of the corresponding conference and consists of a **Participants**' table that lists all existing participants in the conference.

Please Note: The table on this page is read-only for the users authenticated as participants.

Conference Participants table includes a list of configured participants that can participate in the corresponding conference.

Add opens an **Add Participant** page where new participants can be added to the conference call. The following parameters are needed to configure participant settings:

Participant Name requires optional information (first name, last name, nickname, etc.) about the participant.

SIP Address/Tel. number requires the contact phone number (SIP address or Routing Number) of the participant. This number automatically will be dialed by the QuadroCS when the participant is configured to be a Dial Out (see below) or when a corresponding Conference Code is used (see Conference Codes).

The participant's SIP address should be a combination of username@hostaddress:port (where hostaddress can be an IP address, for example, 192.168.90.10, or a host name, e.g., sip.epygi.com). The port number is optional for the SIP address. If no port is specified, 5060 will be used. The range of valid ports is between 1024 and 65536.

The value will be implied as a Routing Number when either digits starting with zero (0) are inserted in this field or Routing Mode is enabled for the conference. In these cases, the Routing Number will be parsed through the Local Routing Table when placing a call to the corresponding participant. Otherwise, when Routing Mode is disabled, any numerical value starting with a non-zero digit will be treated as a SIP username and will be applied with the host name of the SIP server the conference is currently registered on.

Please Note: A direct call will be placed toward a participant's SIP address if the corresponding conference is registered on a different SIP server than the participant is registered on, or if the participant is not registered on the SIP server at all.

Email Address requires the email address of the participant. Conference related notifications (configured from the [Schedule](#) page) will be sent automatically to this address.

Participant Type list is used to select the type (speaker or listener) of participant in the corresponding conference.

Confirmation Type list is used to set the password protection for the participant joining the active conference. **Star (*)** selection allows the participant to accept the conference invitation by pressing the * button. Only participants connected to the conference with the moderator password will be provided with permissions to manipulate the conference.

Name	SIP Address	Participant Type	Dial Out	Trigger	Participant Indication	Confirmation Type	Nested Conference	Duplication	Email Address
Michael Johnson	52100@sip.epygi.com	Speaker	Yes	Yes	Yes	Password	Yes	Yes	michael.johnson@epygi.com
Anne	5665410@sip.sipcenter.com	Listener Only	Yes	No	Yes	None	No	Yes	anne@yahoo.com
Epygi Tech Support	5556410@sip.epygi.com	Speaker	No	Yes	No	Star(*)	Yes	No	support@epygi.com

Fig. II-13: Conference Participants Page

Participant Name: Michael Johnson

SIP Address / Tel. number: 52100@sip.epygi.com

Email Address: michael.johnson@epygi.com

Participant Type: Speaker

Confirmation Type: Password

Dial Out

Activate On Dial In

Participant Indication

Nested Conference

Allow Duplicated Participation

Fig. II-14: Conference Participants - Add Entry Page

A group of checkboxes on this page allow configuration of participant specific settings related to the corresponding conference:

- **Dial Out** enables automatic calling to the participant when the conference is activated.
- **Activate On Dial In** automatically activates the corresponding conference when this participant joins the conference call.
- **Participant Indication** enables the beep indication during the conference when this participant joins or leaves the conference.
- **Nested Conference** must be selected if the participant is a Conference itself and enables the correct behavior of conference termination.
- **Allow Duplicated Participation** checkbox allows multiple participants with the selected Caller ID (calling address) to join the corresponding conference. This is applicable when different participants are using the same shared number to place a call.

Schedule

The **Conference Schedule** page is used to configure and manage the conference scheduling rules, so that a conference can be initiated automatically based on the date and time configured by the QuadroCS's administrator or moderator. Conference Scheduling also supports inviting participants.

Please Note: The table on this page is read-only for the users authenticated as participants.

The **Conference Schedule** page offers a table that lists all the schedules configured for the corresponding conference. When scheduling a conference, all participants will be automatically called on the scheduled date and time.

Clicking the **Add** button takes you to the **Add Schedule** page where new conference schedules can be configured. This page offers the following components:

A group of radio buttons that are used for selecting the frequency of the scheduled conference:

- **Once** – the calendar date (month, day, year) should be specified for this option.
- **Daily**
- **Weekly** – **Select All** and **Select None** to select or deselect all weekdays.
- **Monthly** – the calendar day should be selected for this option.
- **Annually** – the calendar day and month should be selected for this option.

In the **Time** text fields, the time of the scheduled conference activation should be defined. Any time selected in this field will be considered corresponding to the QuadroCS's Time/Date Settings.

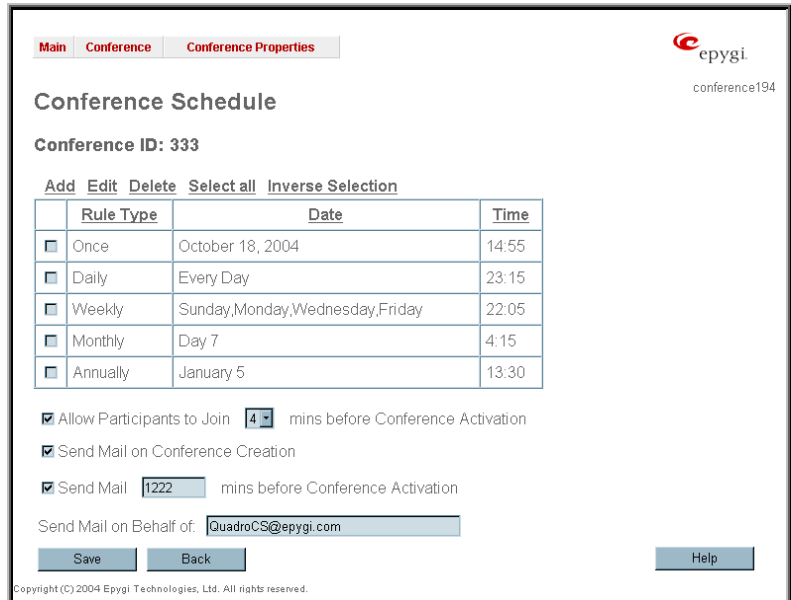


Fig. II-15: Conference Schedule Page

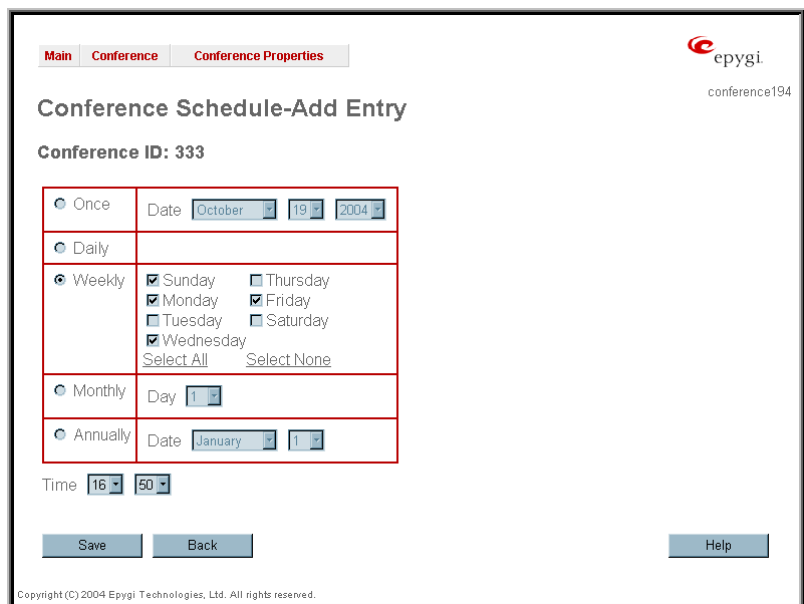


Fig. II-16: Conference Schedule – Add Entry page

Allow Participants to join conference before Conference Activation selection allows participants to dial into the conference before conference activation. During this period, participants will be able to communicate with each other, but no dial out will take place, recording initiation (if configured) will start and conferences maximum duration will be counted, starting from the scheduled time.

Send Mail on Conference Creation on the **Conference Scheduling** page enables email notification when the scheduled conference is made or modified. The address defined in the Participant Properties' page (see above), will be used for the email notifications on conference creation.

Send Mail before Conference Activation enables email notification before conference activation. A text field requires the timeout (in minutes) before conference activation, when email notification should be sent to the participants.

Send Mail on behalf of requires an email address or a conditional name related to the conference to be transmitted in the **From** field of the email notifications.

Codecs

The **Conference Codecs** page is used to define a list of voice codecs used to initiate the conference.

Please Note: The table on this page is read-only for the users authenticated as participants.

The **Conference Codecs** page lists the **Active Codecs** for the selected line that are supported by Quadro Conference Server.

Each record in the table has its checkbox assigned to the row. The checkbox is used to delete and to move up or down in the corresponding record. At least one codec must be attached to the line.

The order of records in the **Active Codecs** table is important for voice transmission. The codec placed at the top of this table will be used as the preferred codec. If the remote party does not support the preferred codec, the following codecs will be tried out strictly in the order given in the **Active Codecs** table.

The **Move Up/Move Down** functional buttons are used to move the selected codec one level up or down in the table.

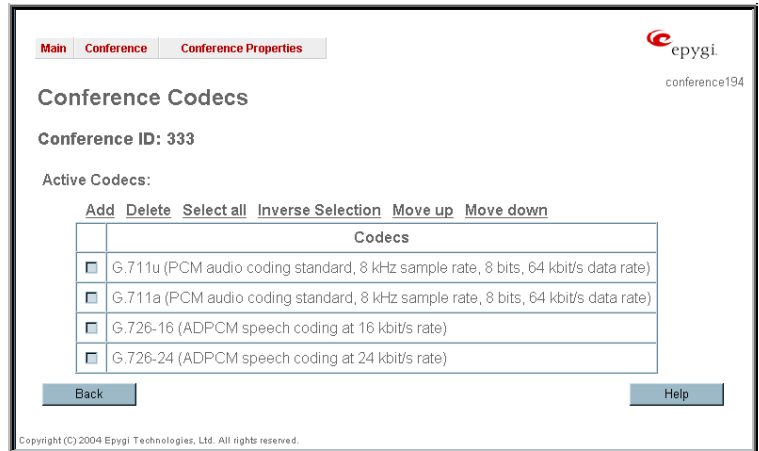


Fig. II-17: Conference Codecs Page

Logout

This option is used to close the session between the user PC and QuadroCS and to leave web management or to re-enter web management with another login. By selecting the **Logout** button, the startup page will be displayed and the user will need to login again.

Feature Codes

This chapter describes how the Quadro Conference Server codes allow the moderator and participants to modify the conference environment with the handset.

Conference Services accessible during the conference:

<p>Invite Participant</p> <p>To invite a participant dial * 1 + Participant's SIP address (or * 1 + Routing Number if the Routing Mode is enabled). This service is available for moderators only.</p>	* 1
<p>Get the conference status</p> <p>Plays information about the total number of already joined registered and non registered participants and those registered participants that are still joining to the call conference.</p>	* 2
<p>Lock the conference</p> <p>Locks the conference. When the conference is locked, nobody can dial in during lockout. This service is available for moderators only.</p>	* 3 1
<p>Unlock the conference</p> <p>Unlocks the conference. Now participants are allowed to dial in to the conference. This service is available for moderators only.</p>	* 3 2
<p>Dial out to all users with dial out settings enabled</p> <p>Initiates the dial-out to all participants currently inactive in the conference but configured to be dialed out (also those added manually from the handset by moderator). This service is available for moderators only.</p>	* 4 1
<p>Dial out to all users participant to the conference</p> <p>Initiates the dial-out to all participants currently inactive in the conference. This service is available for moderators only.</p>	* 4 2
<p>Start or Resume Conference Recording</p> <p>This service is available for moderators only.</p>	* 8 1
<p>Pause Conference Recording</p> <p>This service is available for moderators only.</p>	* 8 2
<p>Stop Conference Recording</p> <p>This service is available for moderators only.</p>	* 8 3

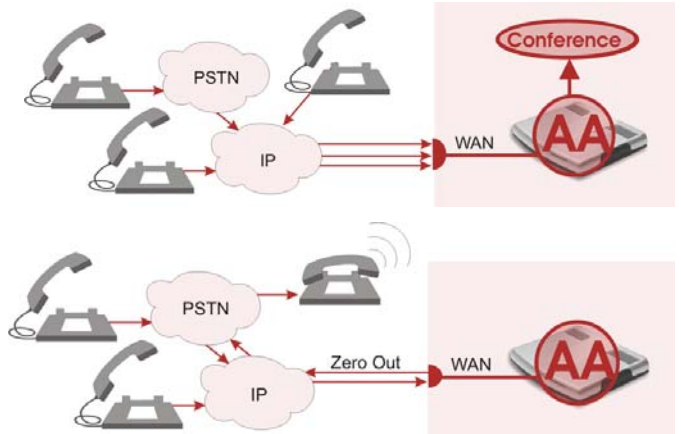
Please Note: You may accelerate dial out by a pound (#) sign at the end of your dialed number.

QuadroCS' Auto Attendant Services

Conference Server's Auto Attendant provides remote access to the QuadroCS conferences. Specifically it allows to join the conference and to use the Zero Out service (if configured). **Conference Server's Auto Attendant** can be accessed remotely from the IP network by dialing Auto Attendant's SIP address. The Auto Attendant has its own entry in the Conference Management table. In order to receive IP calls, the entry dedicated to Auto Attendant needs to be registered at a SIP server.

The automated attendant services are divided into two feature groups: **Conferences** menu and **Zero Out** menu. Voice messages help the caller to navigate within those areas using handset buttons.

The **Conferences Menu** is used to locally access the conferences on the Quadro Conference Server. Depending on conference configuration, password may be asked to access the conference.



The **Zero Out Service** provides call redirection to the configured destination (can be reception, operator, management, etc.).

Call Codes available in the Auto Attendant:

For external IP calls addressed to the Auto Attendant following key combinations are available to access and manipulate within Auto Attendant services:

Entering the Auto Attendant Services	Key Combination
Conferences Menu - used to access conferences. Conference ID should be dialed here.	already in
Zero Out - provides automatic call redirection (if enabled from Auto Attendant Settings page)	0

Appendix: Glossary

A

Asymmetric Digital Subscriber Line (ADSL) - is a method for moving data over regular phone lines. An ADSL circuit is much faster than a regular phone connection, and the wires coming into the subscriber's premises are the same (copper) wires used for regular phone service. An ADSL circuit must be configured to connect two specific locations, similar to a leased line. A commonly discussed configuration of ADSL would allow a subscriber to receive data (download) at speeds of up to 1.544 Megabits per second, and to send (upload) data at speeds of 128 kilobits per second. Thus the 'Asymmetric' part of the acronym. Another commonly discussed configuration would be symmetrical: 384 kilobits per second in both directions. In theory ADSL allows download speeds of up to 9 megabits per second and upload speeds of up to 640 kilobits per second. ADSL is often discussed as an alternative to ISDN, allowing higher speeds in cases where the connection is always to the same place.

Asynchronous Transfer Mode (ATM) - a 53-byte cell-switching technology well suited for carrying voice, data, and video traffic on the same infrastructure. It is inherently scalable in throughput and was designed to provide Quality of Service (QoS).

Auto Attendant (AA) - a feature providing remote access to Quadro voice connectivity services. Specifically, it supports remote connection to Quadro extensions, to their mailboxes and for making calls to other destinations. Remote access to Quadro AA is possible through IP and PSTN calls.

Auto Redial - a service that allows automatically recalling the destination that was busy.

C

Call - establishment of (or attempt to establish) a voice or data connection between two endpoints, or between two points that provide a partial link (e.g., a trunk) between two endpoints.

Call Blocking - a Quadro service that allows blocking unwanted incoming or outgoing calls over Quadro.

Call Forwarding - a Quadro service that allows transferring a call to another destination in case the Quadro user is busy, not answering or unconditional.

Call Hold - a Quadro service that allows holding the call in order to make another one, or to answer the second incoming call. The first call partner will listen to music while being on hold.

Call Waiting - a Quadro service that allows receiving a second call while being busy with the first one. The waiting party will hear a beeping during the conversation.

Caller ID - caller information is displayed on the called party's phone.

Central Office (CO) - a local switching system that connects lines to lines and lines to trunks. Sometimes used to refer to the building in which a switching system is located and the associated equipment. It is also the physical point where calls enter the long distance network.

CODEC - COmpression/DECompression that transforms analog voice into a digital bit stream and vice-versa. It is now an overall term for the technology used in digital audio and video.

D

D-channel - In ISDN, the 16-kb/s segment of a 144-kb/s, full-duplex subscriber service channel that is subdivided into 2B+D channels, i.e., into two 64-kb/s clear channels and one 16-kb/s channel for the ISDN basic rate. **Note 1:** The D channel is usually used for out-of-band signaling. The two 64-kb/s clear channels are used for subscriber voice and data services. **Note 2:** The D-channel specifications are addressed in the CCITT Recommendation for the Integrated Services Digital Network (ISDN). **Note 3:** The D-channel may be 64 kb/s for the primary rate ISDN service.

Data Encryption Standard (DES) - a block cipher algorithm for encrypting (coding) data so it is nearly impossible for anyone without the decryption key to get the data back in unscrambled form. The DES standard enciphers and decipheres data using a 64-bit key.

Dial peer - an addressable call endpoint. In Voice over IP (VoIP), there are two types of dial peers: POTS and VoIP.

Dial plan - a description of the dialing arrangements for customer use on a network.

Digital Signal Processor (DSP) - A specialized microprocessor that performs calculations on digitized signals that were originally analog, and then forwards the results. The big advantage of DSPs lies in their programmability. DSPs can be used to compress voice signals to as little as 4,800 bps. DSPs are an integral part of all voice processing systems and fax machines.

Digital Subscriber Line (DSL) - public network technology that delivers high bandwidth over conventional copper wiring at limited distances. There are four types of DSL: ADSL, HDSL, SDSL, and VDSL. All are provisioned via modem pairs, with one modem located at a central office and the other at the customer site. Since most DSL technologies do not use the entire bandwidth of the twisted pair, there remains room for a voice channel.

Distinctive Ringing - Quadro service that allows a specific ringing pattern assignment for particular callers over Quadro.

Domain - a place on the Internet you can visit with your browser, i.e., a www site. It also might be a single computer or computers masqueraded as a single computer. On the Internet, the domain is the address that gets you there.

Domain name - in a network using the TCP/IP, the full domain name consists of a sequence of names (labels) separated by periods (dots), for example, Quadro.epygi.com.

Domain Name System (DNS) - a system used on the Internet for translating names of network nodes into their addresses.

Downstream - in communications, there are two circuits. One coming toward you and the other going away from you. Downstream is another term for the transmission coming toward you.

Dual-Tone Multifrequency (DTMF) - a method of signaling consisting of a push-button or touch tone dial that sends out a sound consisting of two discrete tones that are picked up and interpreted by telephone switches (either PBXs or central offices).

Dynamic Host Configuration Protocol (DHCP) - a network standard regulating the IP address and other information assigned to the clients by the server.

Dynamic Host Control Protocol (DHCP) - a protocol that is used to dynamically allocate and assign IP addresses. DHCP allows you to move network devices from one subnet to another without administrative attention.

E

E1 - wide area network digital transmission scheme. E1 is the European equivalent of a T1 line. The E1's higher clock rate (2.048 MHz) allows for 32 separate 64Kbps channels, which include one channel for framing and one channel for D-channel information.

Ethernet - a local area network used for connecting computers, printers, workstations, terminals, servers, etc., within the same building or campus. Ethernet operates over twisted pair and/or over coaxial cable at speed up to 10Mbps.

Ethernet Controller - the unit that connects a device to the Ethernet cable.

Ethernet Switch - the device that connects local area networks.

Extensions - users over Quadro.

External User - users connecting Quadro by IP or PSTN calls.

F

Firewall - a combination of hardware and software that limits the exposure of a computer or group of computers to an attack from outside. A firewall is a system or combination of systems that enforce a boundary between two or more networks. One purpose of an Internet firewall is to provide a single point of entry where a defense can be implemented, allowing access to the Internet resources from within the organization, and providing controlled access from the internet to hosts inside the organization's internal networks.

Firmware - is computer or OS required software that resides on ROM

Foreign Exchange (FX) - a Central Office trunk that has access to a distant Central Office. A dial tone is returned from that distant Central Office and a location can be reached in the area of the foreign Central Office by dialing a local number.

Foreign Exchange Office (FXO) - a service that can be ordered from the telephone company that provides local telephone service from a central office that is outside (foreign to) the subscriber's exchange area. To generate a call from the computer telephony system to the POTS set, you will need a FXS connection configured. See also FXS.

Foreign Exchange Station (FXS) - Interface that connects directly to a standard telephone, fax machine, or similar device over a standard RJ-11 modular telephone cable, and supplies ringing voltage, dial tone, and similar signals to it. see FXO

Framing - A procedure for controlling errors. Consists of inserting bits so the receiver can identify the time slots allocated to each subchannel

G

Gatekeeper - is the central control entity that performs management functions in a Voice and Fax over IP network and for multimedia applications such as video conferencing. Gatekeepers provide intelligence for the network, including address resolution, authorization, and authentication services, the logging of call detail records, and communications with network management systems. Gatekeepers also monitor the network for engineering purposes as well as real-time network management and load balancing, controlling bandwidth, and providing interfaces to existing legacy systems.

Gateway - an entrance into and out from a communications network. Technically, a gateway is an electronic repeater that intercepts and steers electrical signals from one network to another.

Greeting - voice messages that are played to the Quadro users or users calling to the Quadro activating specific services.

H

Hold Music - music played to the party that is on hold.

Host - an intelligent device attached to the network; can be also a mainframe computer.

Host Name - the name given to a mainframe computer or device.

Hunt Grouping - the Quadro service that allows configuring several users over Quadro to ring in series when a specific call arrives.

Hypertext Transfer Protocol (HTTP) - the protocol used by Web browsers and Web servers to transfer files, such as text and graphics files.

I

Integrated Services Digital Network (ISDN) - is a system of digital phone connections which allows voice and data to be transmitted simultaneously across the world using end-to-end digital connectivity. There are two basic types of ISDN service: Basic Rate Interface (BRI) and Primary Rate Interface (PRI). BRI is a basic service is intended to meet the needs of most individual users. PRI is intended for users with greater capacity requirements

Internet Control Message Protocol (ICMP) - a network-layer Internet protocol that reports errors and provides other information relevant to IP packet processing.

Internet Protocol (IP) - a unique, 32-bit number for a specific TCP/IP host on the Internet, normally printed in decimal form (for example, 128.122.40.227). Part of the TCP/IP family of protocols, it describes the software that tracks the Internet address of nodes, routes outgoing messages, and recognizes incoming messages.

Internet Service Provider (ISP) - a vendor who provides direct access to the Internet or a company that provides Internet access to other companies and individuals.

Intrusion Detection System (IDS) - is a firewall, but together with deleting the dangerous packets or packets including intrusion attacks, IDS also keeps information about dropped packets and the senders responsible for them.

IP address - also known as the Internet Address, is a unique 32-bit identifier for a specific TCP/IP host computer on a network. IP addresses are in dotted decimal form, such as 192.168.10.26, with each of the four address fields assigned as many as 255 values.

IP address Mask - A range of IP addresses defined so that only machines with IP addresses within the range are allowed access to an internet service. To mask a portion of the IP address, replace it with the asterisk wild card character (*). For example, 192.44.*.* represents every computer on the internet with an IP address beginning with 192.44

IP Gatekeeper - defines the policies that govern a multimedia system such as dialing plans, user privileges, bandwidth consumption, and others. The gatekeeper also provides the means to extract information from such a system for various purposes, e.g., billing information, users that are logged in, etc. The gatekeeper is also a focal point for the introduction of supplementary services.

IP Gateway - most commonly, a network device that converts voice and fax calls, in real time, between the public switched telephone network (PSTN) and an IP network. The main IP gateway functions include voice, fax, compression/decompression, packetization, call routing, and control signaling. Additional features may include interfaces to external controllers, such as gatekeepers or soft-switches, billing systems, and network management systems.

IP PBX - an enterprise-based IP data network device that switches VoIP telephone traffic.

IP Telephony - a technology that allows voice phone calls to be made over the Internet or other packet networks using a PC via gateways and standard telephones.

IPSec - is used to provide security for transmission of sensitive information over unprotected networks such as the Internet. IPSec acts at the network layer, protecting and authenticating IP packets between participating IPSec devices ("peers"), such as Cisco routers.

J

Jitter Buffer - the buffer that collects incoming packets to place them in the right order. If the network has a high delay variation, increasing the Jitter Buffer can improve the audio quality, but this also increases the delay.

L

LED - Light-Emitting Diode, A semiconductor device that emits visible light when conducting current. Has replaced incandescent lamps as indicators in most electronic equipment.

Lifeline POTS - a voice telephone line that works even if electricity is cut off at the customer premises, since the line is powered from emergency backup at the central office. Multiple lifeline POTS lines can be delivered on one copper pair with the use of a digital line powered pair gain system. A basic telephone service supplying standard single line telephones, telephone lines, and access to the PSTN.

Local Area Network (LAN) - a short distance data communications network (typically within a building or campus) used to link computers and peripheral devices under some form of standard control.

Login -the procedure of identifying a user with a username and a password to enter into the protected field.

M

Many Extensions Ringing - a Quadro service that allows configuring several users over Quadro to ring simultaneously when a specific call arrives.

Media Access Control (MAC) Address - the address for a device as it is identified at the Media Access Control layer in the network architecture.

Media Access Control (MAC) Layer - is one of two sublayers that make up the Data Link Layer of the OSI model. The MAC layer is responsible for moving data packets to and from one Network Interface Card (NIC) to another across a shared channel.

Media Gateway - a generic class of products grouped under the Media Gateway Control Protocol (MGCP). A major function of the media gateway is simple IP/TDM conversion under the control of a softswitch.

N

Name server - a directory service that provides a mapping between a resource's global name and its physical location in the network.

Network Address Translation (NAT) - is used to allow LAN devices that do not have their own static IP addresses to connect to the Internet sharing an IP address. NAT will assume control of assigning their IP address. Furthermore, the NAT takes care that packets will reach the LAN PC that originated the traffic. This mechanism is absolutely transparent for the users (or the PCs in the LAN).

Network Time Protocol (NTP) - a protocol that is used for time counting in the Internet, based on the atomic clocks with the precision in milliseconds. This is the recommended protocol for synchronizing the time of hosts in the network.

P

Packetization Interval - the time interval between two RTP packets of the same stream. If the interval is increased, the overhead is decreased but the voice quality might deteriorate. If the interval is decreased, the network load is increased and the delay is reduced.

Password - a secret alphanumeric string used to identify and to allow the user to have access to a system.

PCM - a form of modulation in which the information signals are sampled at regular intervals and a series of pulses in coded form are transmitted representing the amplitude of the information signal at that time.

Point-to-Point Protocol (PPP) - allows a computer to connect to the Internet with a standard dial-up telephone line and a high-speed modem and to enjoy most of the benefits of the direct connection.

Point-to-Point Tunneling Protocol (PPTP) - enables virtual private networking - enabling secure remote access to corporate networks over the Internet.

POTS (Plain Old Telephone Service) - is the standard telephone service that most homes use. It is also referred to as the PSTN, or the Public Switched Telephone Network

Private Branch Exchange (PBX) - a telephone switch owned privately, usually by a large company. If it owns a PBX, a company does not need to lease a telephone line for each telephone set at a site.

Proxy server - an intermediate device that receives SIP requests from a client and then initiates requests on the client's behalf.

Public Switched Telephone Network (PSTN) - refers to the local telephone company.

R

Real-Time Transport Protocol (RTP) - the Internet-standard protocol for the transport of real-time data, including audio and video, allows applications to synchronize audio and video information. RTP connections are established between servers across the Internet after voice has been converted to IP format. RTP is used in virtually all Voice-over-IP architectures, for videoconferencing, media-on-demand, and other applications.

Real-Time Transport Control Protocol (RTCP) - is the control protocol that works in conjunction with RTP. RTCP control packets are periodically transmitted by each participant in an RTP session to all other participants. Feedback of information to the application can be used to control performance and for diagnostic purposes.

Registration - procedure of user subscribing to a server. Usually some personal parameters such as username, password, etc., are required upon registration.

Remote Testing - remote connection from the Epygi Support office to the customer's Quadro for testing and/or for troubleshooting.

Router - A device that determines the next network point to which a data packet should be forwarded enroute toward its destination. The router is connected to at least two networks and determines which way to send each data packet based on its current understanding of the state of the networks it is connected to. Routers create or maintain a table of the available routes and use this information to determine the best route for a given data packet

RSA - is an asymmetric key system. It must be available on both sides of the VPN and generates on each side a different pair of keys, a private and a public key.

S

Security Parameter Index (SPI) - is an index to keep VPN tunnels distinct. A security association is defined by destination, protocol and SPI. Without the SPI, connections to the same gateway using the same protocol would not be distinguishable.

Session Initiation Protocol (SIP) - is an application-layer control protocol that can establish, modify and terminate multimedia sessions or calls. SIP is increasingly used for Internet telephony signaling, in gateways, PC phones, softswitches, and softphones, but it is not limited to Internet telephony, and can be used to initiate and manage any type of session, including video, interactive games, and text chat.

Signaling - a process of sending a transmission signal over a physical medium for communication.

Silence Suppression - a method that allows disabling RTP packet transmission when there is no voice activity. This feature helps to avoid extra traffic when the RTP stream doesn't contains voice data.

Simple Network Management Protocol (SNMP) - the Internet standard protocol developed to manage nodes on an IP network.

SIP address - unique address of the users registered on the SIP server. The address can be used to connect the user. The full SIP address has the following format: "display name" <username@ipaddress:port>.

SIP server - this server is used for registering users. It gives a possibility to make IP connections between users registered on the same SIP server.

Software - PC programs.

Software PBX - a telephone system that converges voice and data on an industry-standard computing platform and uses computer telephony components that conform to industry standards. Since they conform to industry standards, software PBXs are interoperable with third-party systems and CT components. Conformance also allows software PBXs to run third-party enhanced applications such as desktop call control, graphical voice mail, automatic call distribution (ACD), IP gateways, follow-me call forwarding, unified messaging, and CRM integration.

Speed Calling - a service that allows making a personal address book for every Quadro user. A simple digit combination can be assigned to any destination phone number.

T

Transfer - a service giving a possibility to readdress incoming calls. Call Transfer can be conditional (with consultation) and unconditional (without consultation).

Transmission Control Protocol (TCP) - a connection-oriented transport layer protocol that provides reliable full-duplex data transmission. TCP is part of the TCP/IP protocol stack.

Transmission Control Protocol/Internet Protocol (TCP/IP) - is a networking protocol that provides communication across interconnected networks, between computers with diverse hardware architectures and various operating systems.

Trunk - is a communications channel between two points, typically referring to large-bandwidth telephone channels between switching centers that handle many simultaneous voice and data signals.

Trunk Level 1 (T1) - a high-speed (1.544Mb/s) digital telephone line with the equivalent of 24 individual 64Kb/s channels that are joined via time division multiplexing. A T1 line can be used to transmit voice or data, and many are used to provide connections to the Internet. T1 is the North American equivalent of an E1 line.

U

UDP - a connectionless transport layer protocol in the TCP/IP protocol stack. UDP is a simple protocol that exchanges datagram without acknowledgments or guaranteed delivery, requiring that error processing and retransmission be handled by other protocols.

Universal Serial Bus (USB) - is an interface with a protocol that is designed to handle a broad range of devices - telephones, modems, printers, etc.

Upstream - in communications, there are two circuits - one coming toward you and the other going away from you. Upstream is another term for the name of the channel going away from you.

URL - an identifier used to locate content that is transported via the HTTP protocol.

Username - identification name of the user. Usually used for registration and login.

V

VCI - parameter used to configure ATM settings and is usually given by the Internet provider.

Virtual Private Network (VPN) - connects two local networks (intranets) over the insecure Internet securely. VPN routers manage authentication between servers and clients and handle data encryption for the connection. Only authorized users can access the network and the data exchange cannot be intercepted. A VPN includes authentication and encryption to protect data integrity and confidentiality. VPNs are "virtual" in the sense that individuals can use the public Internet as a means of securely accessing an internal network. Once the VPN connection is established, users have access to the same network resources, addresses, and so forth as if they were connected locally. VPNs are "private" because the data is encrypted between two VPN gateways. Encryption makes it very difficult for anyone to intercept data and capture sensitive information such as passwords.

Voice mail - a brief message that external users can leave for the Quadro users in the event that nobody answers the call.

Voice Mail System (VMS) - a feature providing the possibility of leaving brief voice messages at the unavailable or busy Quadro extension's mailbox.

Voice mailbox - is the mailbox where voice mails are collected.

Voice message - help messages that are played to the user giving a hint on how to manipulate the menus within Quadro using the phone handset.

Voice Over Internet Protocol (VOIP) - technology used to transmit voice conversations over a data network using the Internet Protocol. The ability to carry normal telephony-style voice over an IP-based internet with POTS-like functionality, reliability, and voice quality.

VPI - parameter used to configure ATM settings usually given by the Internet provider.

W

Wide Area Network (WAN) - a communications network used to connect computers and other devices across a large area.