CentovaCast
Reseller's Guide

Copyright 2007-2008, Centova Technologies Inc.

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1. Configuring Settings

Prior to creating your first Centova Cast hosting account, you should review the default Centova Cast reseller settings and customize them as necessary. To access the settings for your reseller account, click the `Settings` link under the `Management` heading in the reseller's control panel.

Centova Cast provides access to a wide range of settings for reseller accounts which are broken down into several tabbed sheets.

The following tabs are available:

1.1.1. Basic Configuration

The basic configuration tab includes general settings for your account. These include:

E-mail address
Specifies your E-mail address. Centova Cast will automatically send notifications regarding your user accounts to this address when necessary.

Company/organization
Specifies your company/organization.

Time zone
Specifies your time zone.

Character encoding
Specifies your preferred character encoding.

1.1.2. Reseller Options Page

The limits page configures additional options for your reseller account. Options include:

Default character encoding for new servers
Specifies the character encoding to be used by default for all new servers you create.

Sender E-mail address
Specifies an alternate E-mail address to use as the "return address" on any E-mail notifications sent to your clients. Leave this blank to use the address configured on the *Basic Configuration* tab.

Amazon Web Services Access Key ID

Specifies your Amazon AWS Access Key ID. When specified, the each stream may be configured with an Amazon.com affiliate ID to integrate with Amazon.com's affiliate program. This will cause album covers to be displayed next to each album on the stream's "Recent Tracks" list (on the start page and in the "Recent Tracks" code snippet), and a "Buy this album" link will appear next to each track. Sales generated through the "Buy this album" link will be credited toward the reseller's or client's Amazon.com affiliate account.

Enabling this option will, however, cause the "Update Media Library" feature to import the client's media much more slowly, as Centova Cast will need to contact Amazon.com to obtain the album cover and affiliate code for each and every album in the client's library.

Your AWS Access Key ID needs to be generated at Amazon.com and entered into this field.

Default Amazon affiliate ID
Specifies a default affiliate ID for all streams for which the client has not entered his own affiliate ID, allowing you, the reseller, to collect commissions for Amazon affiliate sales for those streams.

Allow client-specified Amazon affiliate IDs
Configures whether or not client accounts are permitted to specify their own affiliate ID to collect Amazon commissions from Amazon affiliate sales. If set to "No", only your reseller affiliate ID will be used.

Google Maps API key

Specifies the Google Maps API key for the domain name (FQDN) on which Centova Cast is hosted. Specifying a valid API key allows realtime mapping of listeners on a world map according to their geographic locations. Listener maps are shown both on the *View Current Listeners* page in each client's account, and on the start pages for each stream.

Logo image
Specifies a logo image to be displayed when your clients log into Centova Cast, instead of the default Centova Cast logo.

2. Managing Accounts

Centova Cast includes a comprehensive account editor allowing resellers to individually customize the operation of each client's server. To access the account manager, click `Manage Accounts`.

2.1. *The Account List*

2.1.1. Account List

The Centova Cast account list provides an overview of all user accounts hosted under your reseller account. The summary includes the following details:

Username
Indicates the username for the account. Click on the username to view or modify the account details.

Title
Indicates the title for the stream. This will be displayed by listeners' media players when they tune into the stream.

Port
Indicates the port number on which this client's streaming server listens. Click on the port number to access the streaming server's built-in interface.

Type
Indicates the type of server (ShoutCast or IceCast) used by the stream.

Clients
Indicates the maximum number of *concurrent* listeners permitted for this stream. The stream can never have more than this number of listeners tuned-in at the same time.

Bitrate
Indicates the maximum bit rate for this stream. Note that some streaming servers *do not enforce* this setting. Specifically, ShoutCast *does* enforce the bit rate, while IceCast does *not*.

Data Xfer
Indicates the maximum monthly data transfer limit for this stream. Centova Cast automatically keeps track of the amount of data transfer used by each stream each month, and will perform the actions defined in your master settings if a stream exceeds this limit. Note that this is not updated in realtime.

Disk Space
Indicates the disk space limit for this stream. Centova Cast automatically keeps track of the amount of disk space used by each stream, and will perform the actions defined in your master settings if a stream exceeds this limit. Note that this is not updated in realtime.

Next to each account, Centova Cast also displays an "suspend/unsuspend" icon (represented by an orange or green exclamation point) which can be used to enable or disable the account; a "delete" icon (represented by a red dash) which can be clicked to delete the account, a "login" icon (represented by a yellow lightning bolt) which can be used to login to the account, and an "edit" icon (represented by a gray cog) which can be clicked to access the account editor.

2.2. Creating New Accounts

Creation of new accounts is facilitated through a *New account* option near the top of the page. The following options must be specified to create the account:

Account Type
Indicates the type of account which should be created:

- *Manual entry*
  Specifies that you want to manually enter the settings for this account.

- *From template*
  Specifies that the account should be created based on an Account Template you have already created. Please refer to the *Account Templates* section for more information about account templates.

Server Type
Indicates the type of server to use for the account – currently, *ShoutCast* and *IceCast* are supported. Note that Centova Cast will only display server types which have been installed and enabled by the administrator of your server.

Source Type
Indicates the type of streaming source to use for the account's autoDJ. Note that Centova Cast will only display source types which have been installed and enabled by the administrator of your server. For ShoutCast and IceCast streams, you should virtually always choose *ices-cc* unless you have a specific reason for using something else, as ices-cc offers many features which other source types do not.

After setting your account options, click the `Create` button to proceed to the account editor to create your new account. The account creation interface is identical to the account editor interface described below.

2.3. Account Settings

A "User account" could more accurately be described as a "stream account" -- each user account corresponds to precisely one audio stream.

Centova Cast provides access to a wide range of settings for each user account which are broken down into several tabbed sheets. Some settings may differ based on the type of streaming server or streaming source installed on your server, and these differences are noted below.

The following tabs are available:

2.3.1. Stream

The stream tab includes general settings that will be required for virtually all accounts. These include:

Hostname
Specifies the hostname for this server. This is used by the streaming server to generate self-referencing links, and must be specified. If no hostname is configured in DNS for this server, you should enter server's IP address here.

IP address
Specifies the IP address on which the streaming server should listen. This will be locked to the IP address configured by the administrator of the server.

Port
Specifies the port number on which the streaming server should listen. This will be locked to "auto", and Centova Cast will automatically find an available port for your stream.

Stream title
Specifies the title for the stream. This will be displayed by listeners' media players when they tune into the stream.

E-mail address
Specifies the client's E-mail address. Centova Cast will automatically send notifications to this address when necessary.

Company/organization
Specifies the company/organization or client to whom this stream belongs.

Website URL
Specifies the URL to the web site associated with this stream (if any).

Source password
Specifies the password required by streaming sources to connect to this stream and begin broadcasting.

Administrator password
Specifies the password required to login to Centova Cast or the streaming server's internal administrative interface.

Time zone
Specifies your time zone. This will affect the display of times in areas such as the Scheduled Playlist editor.

Character encoding
Specifies your preferred character encoding. MP3 audio files do not contain any information about the language or "character set" in which they were encoded, so if you are using a non-Latin character set (Russian, etc.), you will need to set your character encoding appropriately to ensure that all of the letters in the alphabet of your language are interpreted correctly from your media.

2.3.2. Limits Page

The limits page configures the limits and restrictions imposed on the stream. You have complete freedom to allocate any limits you choose, as long as they are within the limits imposed by the administrator on your reseller account. If you attempt to exceed the limits on your account, you will be notified and the excess value will appear in red.

Options include:

Maximum listeners
Specifies the maximum number of concurrent listeners for this stream. The streaming server will never allow more than this number of listeners to be tuned in at the same time.

Maximum bit rate
Specifies the maximum bit rate for this stream, in kilobits per second (kbps). The autoDJ will be configured such that it cannot exceed this bit rate.

To enforce the bit rate on live broadcasts as well, Centova Cast will periodically check each stream and if the live broadcast is exceeding the bit rate limit, it will shut down the server (without suspending it) and send a notification E-mail to the stream owner and reseller.

Transfer limit
Specifies the maximum monthly data transfer limit for this stream, in megabytes (MB). Centova Cast automatically keeps track of the amount of data transfer used by each stream each month, and will perform the actions defined by the administrator (either suspending the stream, or notifying the administrator and reseller) if the limit is exceeded.

Disk quota
Specifies the maximum amount of disk space that this account may consume. This includes all data for the account, including logs, playlists, and media such as MP3 files for hosts with server-side streaming sources.

Centova Cast automatically keeps track of the disk usage for each stream, and will perform the actions defined by the administrator (either suspending the stream, or notifying the administrator and reseller) if the quota is exceeded.

Port 80 proxy
Specifies whether the client is allowed to use Centova Cast's internal port 80 proxy. Please refer to the section on Port 80 Proxying for more information about this feature, and the potentially adverse effects it may have on your web server.

2.3.3. AutoDJ

The AutoDJ tab includes options for configuring an autoDJ for the stream. These settings are only required if the client will be permitted to upload media (MP3 files, etc.) to the server. If the client will be providing his own, offsite source (such as SAM Broadcaster) and broadcasting live, then the autoDJ should be disabled. More information is provided in the *AutoDJs* section below.

Note that this tab will only appear if your reseller account has been configured with autoDJ support.

Options include:

AutoDJ status
Specifies whether the *server-side* streaming source should be enabled. Options include:
- *Prohibited (stream MUST use an offsite source)*: If selected, autoDJ support will be entirely disabled for this account. In this case, the client must provide his own source (such as WinAmp with the Oddcast plugin, or SAM Broadcaster).
- *Permitted, but disabled*: If selected, sautoDJ support will be turned off by default, but the client may turn it on if he chooses. This allows the client to switch from a live source to the autoDJ on demand.
- *Permitted and enabled*: If selected, autoDJ support will be turned on by default, but the client may turn it off if he chooses. This allows the client to switch from the autoDJ to a live source on demand.

Note that if the autoDJ is enabled, but no media (eg: MP3 files) have been uploaded, or media has not been added to an enabled playlist, the server will fail to start. As such, be sure to upload at least one track, and add one or more tracks to an enabled General Rotation playlist, before starting the server with autoDJ support enabled.

Rebuild playlist on startup

Specifies whether the playlist should be rebuilt automatically every time the server is started or restarted. If enabled, Centova Cast will re-index the client's media library and build a new playlist every time the server is started or restarted. If disabled, the same playlist will always be used unless the client manually updates it.

Note that if no playlist exists, Centova Cast will always build one regardless of this setting. Also note that when Centova Cast is operating with realtime track scheduling support (i.e., when using ices-cc), this setting will be ignored or hidden.

Randomize playlist
Specifies whether the playlist should be randomized automatically by the streaming source.

Note that when Centova Cast is operating with realtime track scheduling support (i.e., when using ices-cc), this setting will be ignored or hidden.

Mount point
Note: this option is only available when using the ices streaming source software, and does not appear when using sc_trans.

Specifies the mount point to which the streaming source should connect. If unsure, simply set this to `/stream` as a default value.

Channels
Specifies the number of channels to use in the audio stream. Use `Mono` for a mono stream, `Stereo` for a stereo stream, or `Auto` to play each track as it was recorded.

If set to any value other than `Auto`, transcoding will be enabled which will *significantly* increase the CPU usage of the stream.

Sample Rate
Specifies the sample rate for your stream in hertz. If set to `Auto`, each track will be played as it was recorded.

If set to any value other than `0`, transcoding will be enabled which will *significantly* increase the CPU usage of the stream.

Crossfade length
Specifies the duration in seconds of cross-fades between tracks, or `0` to disable cross-fading.

If set to any value other than `0`, transcoding will be enabled which will *significantly* increase the CPU usage of the stream.

Mount point

Note: this option may or may not be available depending on the server and source software being used. This option is used for IceCast servers only.

Specifies the mount point to which the streaming source should connect. If unsure, simply set this to `/stream` as a default value.

Description
Note: this option may or may not be available depending on the server software being used.

Specifies a description for your stream, which is used when submitting metadata to various directories.

2.3.4. Start Page

The Start Page tab includes options for configuring the stream "start page" provided by Centova Cast for each stream.

Activate start page
Specifies whether or not the start page will be available for this stream.

Enable song request widget
Specifies whether or not the Song Request widget will be enabled (both on the start page, and as a code snippet) for this stream. If enabled, users may use the song request widget to request songs, and the requests will be sent to your E-mail address.

Enable on-demand content widget
Specifies whether or not the On-Demand Content widget will be enabled (both on the start page, and as a code snippet) for this stream. If enabled, Centova Cast will provide a media browser with which the visitor can browse, download, or stream any media that the client has published in his "ondemand" folder.

Enable recent tracks widget
Specifies whether or not the Recent Tracks widget will be enabled (both on the start page, and as a code snippet) for this stream. If enabled, Centova Cast will provide a list of tracks and authors which have played recently on this stream. If the client has an Amazon.com access key ID, this feature can also display album covers for each track.

Number of recent tracks
Specifies the number of tracks which will be shown in the Recent Tracks widget.

Enable Google Maps widget
Specifies whether or not the start page will use Google Maps to plot the geographic locations of the stream's listeners on a world map in realtime. This option requires a Google Maps API key to be configured in the Centova Cast settings.

Amazon access key ID
Specifies the client's Amazon.com access key ID. If specified, Centova Cast will automatically fetch album cover images from Amazon.com to be displayed in the "recent tracks" list. This will also activate a "Buy album" link next to each album, and any sales generated through these links will be credited toward your Amazon.com affiliate account.

Note that this field is only displayed in the client's Start Page editor, not the reseller's view.

2.3.5. Files

The Files tab includes options for uploading various sound files for use by the streaming server. These include:

Introduction file
Specifies the introduction media file for the stream. The introduction file is an MP3 file that is played immediately after each listener connects, before tuning in to the live stream. This may be useful for for station identification or advertisement purposes.

Fallback file
Specifies the fallback media file for the stream. The fallback file is an MP3 file that is played in a loop if the source stream disconnects. Without a fallback file, listeners will either hear silence, or be disconnected entirely if the source stream disconnects.

2.3.6. Server Overrides

Note: this tab is only available when using the SHOUTcast streaming server software, and does not appear when using IceCast.

The Server Overrides tab includes options for forcing certain settings to override values provided by a source application.

Options include:

Stream title format
Specifies the format for the stream title displayed in listeners' media players. Set this to anything you want, and optionally include the symbol "%s" anywhere in the stream to insert the stream title provided by the streaming source.

Stream URL format
Specifies the format for the stream URL displayed in listeners' media players. Set this to anything you want, and optionally include the symbol "%s" anywhere in the stream to insert the stream URL provided by the streaming source.

Public server
Specifies whether or not the stream will appear in public yellow-pages services, such as the main SHOUTcast directory at: http://www.shoutcast.com

2.3.7. Relaying

Note: this tab is only available when using the SHOUTcast streaming server software, and does not appear when using IceCast.

The Relaying tab includes options for setting up relaying to or from another ShoutCast server.

Options include:

To allow OTHER servers to act as a relay for YOUR stream

- *Allow other servers to relay stream*
  Indicates whether other servers are allowed to relay your stream.

- *Allow relays to make stream public*
  Indicates whether relay servers are allowed to publish your stream in public yellow-pages services, such as the main SHOUTcast directory at: http://www.shoutcast.com

To act as a relay and receive audio FROM another stream

- *Stream server*
  Specifies the IP address or hostname of the server you want to relay.
- *Stream port*
  Specifies the port number of server you want to relay.

2.3.8. Master Relaying

Note: this tab is only available when using the IceCast streaming server software, and does not appear when using SHOUTcast.

The Master Relaying tab includes options for setting up a master relay for another IceCast server. Using Master Relay, the remote IceCast server essentially becomes the source for your own server, and all of the mount points from the remote server are made available on your server.

Options include:

Master server
Specifies the hostname or IP address of the master server whose stream(s) you wish to relay.

Master port
Specifies the port number of the master server whose stream(s) you wish to relay.

Master update interval
Specifies the interval at which the remote stream's configuration is replicated to the local server.

Master username
Specifies the username required by the remote server for relaying.

Master password
Specifies the password required by the remote server for relaying.

Relay on demand
If enabled, your IceCast server will only connect to the remote IceCast server when one or more listeners are connected, and it will disconnect from the remote server when there are no more listeners. If disabled, your IceCast server will remain connected to the remote server and continue receiving the stream even if no listeners are connected.

Enabling this setting may reduce unnecessary bandwidth usage, but may slightly increase the time required to begin streaming when your first listener connects.

2.3.9. Mountpoint Relaying

Note: this tab is only available when using the IceCast streaming server software, and does not appear when using SHOUTcast.

The Mountpoint Relaying tab includes options for setting up a relay for a single stream on a remote server. Using Mountpoint Relay, the remote stream essentially becomes the source for your own server, and listeners tuning into your server will hear the remote server's stream.

Options include:

Stream server
Specifies the hostname or IP address of the remote server whose stream you wish to relay.

Stream port
Specifies the port number of the remote server whose stream you wish to relay.

Stream mount point
Specifies the mount point for the desired stream on the remote server. If the remote server is a SHOUTcast server, you should specify `/stream` here.

Local mount point

Specifies the mount point for the relayed stream on the local server. If in doubt, you can specify `/stream` here as a default value.

Stream username
Specifies the username required by the remote server for relaying.

Stream password
Specifies the password required by the remote server for relaying.

Relay on demand
If enabled, your IceCast server will only connect to the remote IceCast server when one or more listeners are connected, and it will disconnect from the remote server when there are no more listeners. If disabled, your IceCast server will remain connected to the remote server and continue receiving the stream even if no listeners are connected.

Enabling this setting may reduce unnecessary bandwidth usage, but may slightly increase the time required to begin streaming when your first listener connects.

Relay metadata
If enabled, the metadata provided by the remote streaming server will be passed through to your own listeners. If disabled, the locally-configured metadata will be used instead.

2.3.10. Advanced

Note: the settings available on this tab will vary depending on which streaming server you are using, and is broken down into two sections below.

The Advanced tab includes options for configuring various advanced settings, and normally does not need to be adjusted.

2.3.11. Advanced: IceCast

When using IceCast as your streaming server, options include the following. Please consult the IceCast documentation for more information about these options.

Directory listings URL
Specifies the URL to your directory listings or "yellow pages" service.

Directory listings port
Specifies the port number of your directory listings or "yellow pages" service.

Suppress metadata
Prevents IceCast from sending song artist/title information to your listeners.

Relay password
Specifies the password required to relay your stream, if any.

Maximum sources
Specifies the maximum number of sources that may be connected to the IceCast server simultaneously.

Thread pool
Specifies the thread pool size for the IceCast server.

Queue size
Specifies the queue size for the IceCast server.

Client timeout
Specifies the client timeout value for the IceCast server.

Header timeout
Specifies the header timeout value for the IceCast server.

Source timeout
Specifies the source timeout value for the IceCast server.

Burst size
Specifies the burst size value for the IceCast server.

Burst on connect
Specifies the whether IceCast's burst-on-connect feature should be enabled. Enabling this may help reduce buffer underruns.

3. Managing E-mail Messages

Every E-mail message sent to resellers or clients by Centova Cast can be configured via the `Edit Messages` link in the reseller's control panel.

3.1. The Message List

The Centova Cast message list displays all available E-mail messages. The word *(default)* will appear next to the message title if you are currently using the original message as defined by the administrator of the server.

Click on the "edit message" icon next to a message to launch the message editor.

3.2. Editing Messages

The message editor provides the following fields:

Subject
Specifies the text to use in the "subject" line of the message.

Message text
Specifies the plain text content for the message. This represents the body of the message, and will be displayed for mail clients which do not support HTML E-mail.

Message HTML
Specifies the HTML content for the message. This represents the body of the message, and will be displayed for the majority of mail clients which support HTML E-mail. If this field is left blank, an HTML version of the message will be constructed automatically based on the text version.

Each message may include "placeholder" values that will be replaced with appropriate text before the message is sent to the client or reseller. These values are enclosed in braces, and typically look something like `{$account.username}`. The selection of available placeholders will vary per message; it is recommended that you base your custom messages on the default messages and retain any placeholders that already exist in each one.

4. Account Templates

Account templates allow the reseller to configure groups of settings to be applied to new accounts. At account creation time, you can simply select the desired account template and all of those settings will be applied directly to the newly-created account. For busy resellers this can save hours of time per week in repetitive account configuration.

Account templates can be configured via the `Account Templates` link in the reseller's control panel.

4.1. The Account Templates List

The Centova Cast account templates list displays all of the account templates you have previously created.. Click on the "edit template" icon next to a template to launch the template editor, or create a new account template as described in the following section.

4.2. Creating New Account Templates

Creation of new account templates is facilitated through a *New account template* option near the top of the page. This process is very similar to that of creating a new account. The following options must be specified to create the account template:

Server Type
Indicates the type of server to use for the account template – currently, *ShoutCast* and *IceCast* are supported. Note that Centova Cast will only display server types which have been installed and enabled on your server.

Source Type
Indicates the type of streaming source to use for the account template's autoDJ. Note that Centova Cast will only display source types which have been installed and enabled on your server.

After setting your account template options, click the `Create` button to proceed to the account template editor and customize your account template settings. The account template creation interface is identical to the account template editor interface described below.

4.3. Editing Account Templates

The account template editor is virtually identical to the account editor described in section 2.3. This is because when you set up an account template, you are essential "pre-configuring" an account just as you would when you create a new account.

The only significant differences between the template editor and the account editor are the absence of a few fields (such as the username) which cannot be configured until an account is actually created, and the addition of two fields which are specific to the account template editor:

Template name
Indicates the identifying name for the template. This is used internally (and by billing systems if you're using billing integration) and must consist of letters, digits, and underscores only. No spaces or other symbols are permitted.

Template description
Specifies a description for the template. This is displayed in the interface whenever a template selection is required, so you should be as detailed as necessary to help yourself identify the template by its description.

For assistance with all other options provided by the account template editor, please refer to section 2.3

5. Statistics

Centova Cast provides the most comprehensive streaming radio statistics system commercially available today. It provides information about listener trends and demographics, data transfer, track performances and popularity, user agents, and much, much more.

To access the master statistics for your reseller account, click the `Statistics` link in the reseller's control panel.

5.1. Recent Activity

The recent activity report provides a high-level overview of your streams' aggregate stream statistics, including details of listener trends, average session times, total listening hours, data transfer, track playback, and more.

- *Listener Minutes*
  This section contains information about listener trends over the past 7, 14, and 30 days, which help you determine how your streams' audiences are developing over time.

  The total listening hours (TLH) is also provided for the selected period, which may be useful if you need to report to a royalty/licensing authority.

- *Listeners*
  This section provides information about your streams' listeners. Total listener sessions describes the number of times a listener has tuned in. Unique listeners and unique countries indicate the number of distinct listeners and countries (respectively) which have tuned in during the reporting period.

- *Data Transfer*
  This section provides details of your streams' total data transfer during the reporting period.

- *Tracks*
  This section provides details of the tracks played on all of your streams during the reporting period.

- *Peak Period*
  This section provides information about the time at which the most users were connected during the reporting period. The number of listeners, track name, and date of that occasion are provided.

- *Listeners for Today*
  Provides a graph of the total number listeners connections established across all of your streams during each hour throughout the current day.

- *Listeners for Yesterday*

Provides a graph of the total number listeners connections established across all of your streams during each hour throughout the previous day.

5.2. Listeners

The listener overview provides information about listeners' usage of your streams.

- *Average Listener Session Length*
  The average length of a listener session is broken down into common intervals and charted and graphed.

- *Top Listeners by Listener Sessions*
  Top listeners are ranked according to the total number of times they have connected to your streams during the reporting period.

- *Top Listeners by Listener Minutes*
  Top listeners are ranked according to the total number of minutes they have spent connected to your streams during the reporting period.

Both of the *Top Listeners* reports automatically determine the countries from which the listeners were connected, and the software used by the listener to tune into the streams is noted and identified as a media player or stream ripper to assist in abuse detection.

5.3. User Agents

The user agents report provides an overview of the software programs listeners are using to tune in to your streams.

- *Top Agents by Listener Sesssions*
  The top software used to connect to your streams is charted and graphed according to the number of times each software application has connected to your streams during the reporting period.

- *Top Agents by Listener Minutes*
  The top software used to connect to your streams is charted and graphed according to the total amount of time each software application has spent connected to your streams during the reporting period.

In both reports, each user agent is also classified as a legitimate media player (such as WinAmp, iTunes, etc.), or a stream ripper (a program used to steal music from your streams) to assist in abuse detection.

5.4. Countries

The country overview provides information about the countries from which the majority of your streams' listeners are tuning in.

- *Top Countries by Listener Sesssions*
  The top countries connecting to your streams are charted and graphed according to the number of times a listener from each country has connected to your streams during the reporting period.

- *Top Countries by Listener Minutes*
  The top countries connecting to your streams are charted and graphed according to the total amount of time listeners from each country have spent connected to your streams during the reporting period.

In both reports, each country is identified (where possible) and the appropriate flag is displayed to aid in identification at a glance.

5.5. Historical Statistics

Historical statistics provide detailed daily and monthly data transfer and listener statistics, complete with graphs, allowing you to track listener trends and resource usage.

Unlike the other statistics provided by Centova Cast (which are limited to 60 days) historical statistics provide information about your server since it Centova Cast was first installed.

Graphs provided include:

- *Data Transfer*
  Indicates the total, combined data transfer for your streams over a period of time. Graphs are displayed for one-month and one-year intervals.

- *Minutes*
  Indicates the total, combined number of listener minutes for your streams over a period of time. Graphs are displayed for one-month and one-year intervals.

- *Listeners*
  Indicates the number of simultaneous listeners at each hour throughout the day for a one-day period.

6. AutoDJs

Streaming hosting providers often require that end-users provide their own streaming sources; for example, clients may use SAM Broadcaster, or WinAmp with the Oddcast plugin, to transmit a live stream to the streaming server. This provides great flexibility for the client, however it requires that the client keep his personal computer running 24 hours a day. If the client's computer or Internet connection goes offline for any reason, his stream will also become unavailable.

In addition to remote (client-provided) sources, Centova Cast also supports the use of server-side sources, known as an "autoDJ". When using an autoDJ, clients upload their media library (eg: MP3 files) to the hosting server's hard drive, and the media is locally delivered directly to the stream. This allows the stream to remain entirely self-contained on the hosting server, and completely independent of the client's computer.

If your server administrator included autoDJ access with your account, your clients will be permitted to upload media to the server by various means – usually via FTP. Please contact your server administrator for the necessary details.

7. Support

If you require technical support or assistance with Centova Cast, please contact your server administrator or hosting provider.

8. Credits

Centova Cast
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http://www.centova.com