

# Centova Cast

## Administrator's Reference Manual

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# Chapter 1

## Introduction

This is the administrator's reference manual for Centova Cast, the leading Internet radio stream hosting solution.

This manual provides detailed reference information for the features and capabilities of the Centova Cast v3.x administration area.

## Chapter 2

# Managing Accounts

Centova Cast includes a comprehensive account editor allowing the administrator to individually customize the operation of each client's streaming server.

To access the account manager, click *Manage* under the *Accounts* heading in the navigation menu.

## 2.1 Managing Existing Accounts

Accounts in Centova Cast may be managed via the account management page, which is displayed immediately after logging in, and may be accessed at any time by clicking the *Manage* link under the *Accounts* heading.

### 2.1.1 Account List

The account list provides an overview of all accounts managed by this Centova Cast control panel.

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.
- **Server**  
Indicates the name of the server on which the account is hosted.
- **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 administrative interface.
- **Type**  
Indicates the type of server software (ShoutCast2, IceCast, etc.) 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.
- **Data Xfer**  
Indicates the current and maximum monthly data transfer 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 the server settings if a stream exceeds this limit. Note that the current data transfer usage for each account is not updated in realtime.
- **Disk Space**  
Indicates the current and maximum disk space utilization 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 the server settings if a stream exceeds this limit. Note that the current disk space usage for each account is not updated in realtime.

Next to each account, Centova Cast also displays the following icons:

- **Login**  
Represented by a yellow lightning bolt, this icon can be used to login to the account.
- **Edit**  
Represented by a gray cog, this icon can be clicked to access the account editor.

## 2.1.2 Editing an Account

To edit an account, click on its username or click the gray cog icon next to its entry.

The account editor interface is described under [User Account Settings](#) for user accounts, and under [Reseller Account Settings](#) for reseller accounts.

## 2.1.3 Batch Operations

Centova Cast supports performing an action on multiple accounts simultaneously, known as “batch operation”. To perform a batch operation, click the checkbox next to each of the accounts you want to operate on, and then click one of the buttons below the account list.

The following batch operation buttons are available:

- **Start**  
Starts the streaming servers for the selected account(s).
- **Stop**  
Stops the streaming servers for the selected account(s).



- **Suspend**  
Suspends the selected account(s).
- **Unsuspend**  
Unsusponds the selected account(s).
- **Delete**  
Permanently deletes the selected account(s).

## 2.1.4 Searching, Filtering, Sorting

### Searching

To display only the accounts whose username, title, or other basic information contain a specific keyword, enter your keyword in the Search . . . box on the toolbar above the account list. The Search . . . box can also be accessed by pressing the backslash (\) key on the keyboard.

### Filtering

To filter the account list by other criteria, click the View button on the toolbar just above the account list. The following filter/search options are available:

- **By reseller**  
Displays only accounts by the specified reseller.
- **By server**  
Displays only accounts hosted on the specified server.
- **By streaming server type**  
Displays only accounts using the specified streaming server type (eg: SHOUTcast DNAS v2, IceCast, etc.)

### Sorting

To sort the account list by a specific set of criteria, click the View button on the toolbar just above the account list. Select your sort criteria from the Sort dropdown box.

## 2.2 Creating New Accounts

New accounts may be created using the New account link near the top of the page. The *New Account* dialog prompts for the following options:

- **Type**  
Specifies the type of account which should be created:

- `User` - Specifies that a user account should be created. This option is used to set up new streaming accounts.
  - `Reseller` - Specifies that a reseller account should be created. Reseller accounts are much like limited administrator accounts, and can independently create and manage their own user accounts.
  
  - `From template` - Specifies that the account should be created based on an Account Template you have already created. Consult the [Account Templates](#) section for more information about account templates.
- **Template**  
Specifies the account template to use to create the account. This option is only available if `From template` is selected in the `Type` field.
  - **Host**  
Specifies the hosting server on which the account should be created. Leaving this option set to `Automatically choose best` will choose the server which has the fewest existing accounts.
  - **Server Type**  
Indicates the type of server software to use for the account – currently, `ShoutCast2`, `ShoutCast`, and `IceCast` are supported. Note that Centova Cast will only display server types which have been installed and enabled on your server.
  - **AutoDJ Type**  
Indicates the type of autoDJ software to use for the account. Note that Centova Cast will only display autoDJ types which have been installed and enabled on your server and are compatible with the `Server type` you have chosen above.

After setting your account options, click the `Create` button to proceed to the account editor to create your new account.

The account editor interface is described under [User Account Settings](#) for user accounts, and under [Reseller Account Settings](#) for reseller accounts.

## 2.3 User 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 pages. Some settings may differ based on the type of streaming server or autoDJ software configured for each account, and those differences are noted below.

### 2.3.1 Stream

The stream tab contains the basic configuration settings for the station. The fields available include:

- **Username**

Specifies the username for this streaming server. Note that this is only displayed while creating the account; after the account is created, its username cannot be changed through the account editor.
- **Hostname**

Specifies the hostname for this streaming server. This is used by the streaming server software 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. Specify `auto` to use the default IP address for the hosting server.
- **Port**

Specifies the port number on which the streaming server should listen. When more than one port is used, this value specifies the first port used by the stream.

SHOUTcast v2 requires 6 ports; SHOUTcast v1 requires 2 ports; IceCast requires one port.

Specify `auto` to choose any available port.
- **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 E-mail of the person in charge of managing the stream. Centova Cast will automatically send notifications to this address when necessary.
- **Company/organization**

Specifies the company/organization name. This may be used by the streaming server for various purposes.
- **Website URL**

Specifies the URL to the web site associated with this stream (if any). This may be published by the streaming server.
- **Source password**

Specifies the password required by streaming sources to connect to this stream and begin broadcasting. This password must be provided to DJs who will be connecting to the server via a live source to perform live broadcasts.
- **Administrator password**

Specifies the password required to login to the client's Centova Cast account or the streaming server's internal administrative interface. Some streaming servers require that this password must differ from the source password, so it is best to use a unique password here.
- **Time zone**

Specifies the client's time zone. The autoDJ's track scheduler uses this to ensure that the times configured for playlists (in the Playlist Manager) always reflect the client's local time zone.

- **Locale**

Specifies the client's preferred locale. This determines the language and the date and time formats used in the control panel.

- **Character encoding**

Specifies the client's preferred character encoding for reading MP3 ID3 (metadata) tags. MP3 audio files do not contain any information about the language or "character set" in which they were encoded, so if the client's MP3s' artist, album or track names use a non-Latin character set (Cyrillic, Asian, etc.), the character encoding must be appropriately to ensure that all of the letters in the alphabet of the client's language are interpreted correctly from the client's media.

Note that this feature is only used for the interpretation of MP3 ID3 tags. Centova Cast itself uses Unicode (UTF-8) character encoding internally which can represent characters from virtually any language.

## 2.3.2 Limits

The limits page configures the limits and restrictions imposed on the stream.

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 administrator.

- **Transfer limit**

Specifies the maximum monthly data transfer limit for this stream, in megabytes (MB). This includes all data transfer recorded by the streaming server in its log files. 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.

- **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 the autoDJ. Centova Cast automatically keeps track of the disk usage for each stream, and will perform the actions defined in your master settings if a stream exceeds this limit.

- **Mount point limit**

Specifies the maximum number of mount points that may be created for this account.

- **Raw configuration**

Specifies whether or not the user may edit the raw configuration files for the streaming server and autoDJ software. Typically this should not be enabled as it would permit the client to bypass most of the limits imposed upon his account.

- **Port 80 proxy**

Specifies whether the client is allowed to use Centova Cast's port 80 proxy. This option will only be displayed if the port 80 proxy has been enabled.

### 2.3.3 AutoDJ

The AutoDJ tab contains options for configuring the stream's autoDJ, if enabled.

The autoDJ tab will differ depending on the type of autoDJ you have selected for the stream. Each variation is described in its own section below.

The following fields will always be displayed regardless of which autoDJ type has been selected:

- **AutoDJ status**

Specifies whether the autoDJ should be enabled. This option will be unavailable if the stream is currently online; the stream will need to be stopped to change this option. 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 live source (such as WinAmp with the DSP plugin, or SAM Broadcaster).

- Permitted, but disabled

If selected, autoDJ support will be turned off by default, but the client may choose to turn it on. 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 choose to turn it off. 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, the client must 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.

- **Genre**

Specifies the genre for the station. This is informational only and may be displayed to the public.

#### Liquidsoap autoDJ Settings

With Liquidsoap, the following additional autoDJ options are available:

- **Song title codes**

If enabled, the autoDJ will include a small tracking code at the end of the song titles shown in your listeners' media players.

For example, instead of: Artist Name -- Song Title

You might see the following instead: Artist Name -- Song Title [C51B]

This allows detailed reports to be generated (on the *Tracks* tab of the *Statistics Report* page) containing most of the information needed to make reports to the appropriate entities for royalty

determination purposes. If this option is disabled, the generated reports may be less detailed and may not contain sufficient information for accurate royalty reporting purposes.

- **Crossfade length**

When crossfading is enabled, specifies how many seconds of the end of a track are blended into the beginning of the next track.

- **Crossfade fade-in**

When crossfading is enabled, specifies the duration of the fade-in for the next track in seconds. Decimal values (eg: 0.5) are permitted.

- **Crossfade fade-out**

When crossfading is enabled, specifies the duration of the fade-out for the current track in seconds. Decimal values (eg: 0.5) are permitted.

- **Crossfade mode**

When crossfading is enabled, specifies how tracks are blended together during a crossfade. Options include:

- Normal

- When selected, a standard crossfade algorithm is used in which the current and next track are crossfaded per the fade-in, fade-out, and length values.

- Smart

- When selected, a “smart” crossfade algorithm is used in which the perceived loudness of the last few seconds of the current track and the first few seconds of the next track are used to determine the optimal method for the crossfade. In theory this should result in a better-sounding crossfade, however in practice (depending upon the media being streamed) the “Normal” crossfade mode may yield results closer to what most listeners expect to hear.

- **Apply replay gain** Enable to use the replay gain values (if any) stored in the MP3 files to normalize the volume of the audio stream. This may be useful to avoid dramatic per-track changes in volume when using MP3s from different sources.

## ices-cc autoDJ Settings

With ices-cc, the following autoDJ options are available:

- **Song title codes**

If enabled, the autoDJ will include a small tracking code at the end of the song titles shown in your listeners’ media players.

For example, instead of: `Artist Name -- Song Title`

You might see the following instead: `Artist Name -- Song Title [C51B]`

This allows detailed reports to be generated (on the *Tracks* tab of the *Statistics Report* page) containing most of the information needed to make reports to the appropriate entities for royalty determination purposes. If this option is disabled, the generated reports may be less detailed and may not contain sufficient information for accurate royalty reporting purposes.

- **Crossfade length**  
When crossfading is enabled, specifies how many seconds of the end of a track are blended into the beginning of the next track.
- **Crossfade style**  
When crossfading is enabled, specifies how tracks are blended together during a crossfade.
- **Minimum track length**  
When crossfading is enabled, tracks shorter in duration than the minimum length will not be cross-faded. This ensures that short clips (station branding, very short advertisements, etc.) remain audible.

### sc\_trans v2 autoDJ Settings

With sc\_trans v2, the following autoDJ options are available:

- **Crossfade length**  
When crossfading is enabled, specifies how many seconds of the end of a track are blended into the beginning of the next track.
- **Crossfade threshold**  
Specifies the minimum track length (in seconds) for which crossfading should be enabled. Tracks shorter than this length of time will not be crossfaded.
- **MP3 unlock name** (SHOUTcast only)  
Specifies the name from the client's SHOUTcast license key for MP3 broadcasting.
- **MP3 unlock code** (SHOUTcast only)  
Specifies the code from the client's SHOUTcast license key for MP3 broadcasting.
- **ICQ** (SHOUTcast only)  
Specifies your ICQ UIN, which is published by SHOUTcast DNAS.
- **AIM** (SHOUTcast only)  
Specifies your AIM handle, which is published by SHOUTcast DNAS.
- **IRC** (SHOUTcast only)  
Specifies your IRC nick, which is published by SHOUTcast DNAS.
- **Apply replay gain** (SHOUTcast only)  
Enable to instruct sc\_trans to honour the replay gain values stored in the MP3 files.
- **Calculate replay gain** (SHOUTcast only)  
Enable to instruct sc\_trans to calculate the replay gain on the MP3 files.

### 2.3.4 Widgets

The Widgets tab contains options for configuring and customizing the widgets provided for use on the client's web site. It is organized into sub-tabs representing the individual widgets available for configuration.

- **General**

Configures the availability of various widgets and options.

- **Activate start page**

Specifies whether a start page is made available for the stream. See the separate section on start pages for details about this feature.

- **Enable on-demand content widget**

Specifies whether the on-demand content widget is made available for the stream. See the separate section on the On-demand Content widget for details about this feature.

- **Enable Google Maps widget**

Specifies whether the Google Maps widget is made available for the stream. See the separate section on the Google Maps widget for details about this feature.

- **Song Requests**

Configures the Song Request widget. See also the separate section on the Song Request widget for details about this feature.

- **Enable song request widget**

Specifies whether the Song Request widget is made available for the stream.

- **Automatically queue requests**

Specifies whether song requests submitted by users are automatically compared against the media library and queued for playback via the autoDJ.

If enabled, a best-effort attempt is made to match the artist name and song title provided by the user against a track in the media library. This does, however, largely rely upon the user to use correct spelling.

- **Request delay**

Specifies the length of time to wait after a song request is received before playing the requested track via the autoDJ. A delay of a specific period of time may be required by certain music licensing authorities when streaming copyrighted music.

- **Request probability**

After the request delay has elapsed, a requested track will normally be queued for immediate playback. Specifying a request probability less than 100% increases a further delay in the queueing of the requested track.

Example: If you specify a 60% request probability, then each time a track finishes playing (after the request delay has elapsed) there is a 60% probability of the requested track being selected for playback as the next track.

- **E-mail unknown requests**

Specifies whether requests for songs that could not be identified in the media library should be emailed to the stream administrator. If this option is set to No, the request is discarded if it cannot be found in the media library.

- **Recent Tracks**

Configures the Recent Tracks widget. See also the separate section on the Recent Tracks widget for details about this feature.

- **Enable recent tracks widget**

Specifies whether the Recent Tracks widget is made available for the stream.



- **Number of recent tracks**

Specifies the number of tracks that will be shown in the Recent Tracks widget.

### 2.3.5 Hosts

The Hosts tab includes options for configuring the hosting server on which the stream is hosted.

Options include:

- **Hosted on**

Specifies the server on which the account is hosted. This is only modifiable when initially creating the account; after the account is created, this field becomes static and simply displays the hosting server on which the account is hosted.

### 2.3.6 Albums

The Albums tab contains options for configuring the retrieval of album art and metadata for the tracks in the media library. Album data can be retrieved from a variety of sources, known as “album data sources”.

Once retrieved, the album art can be displayed in the *Recent Tracks* widget and in other places in the control panel. Some data sources also provide links to purchase an album, which in some cases may allow the station operator to generate affiliate revenue. When available, a “Buy now” link is also included in the *Recent Tracks* widget.

The Albums page is organized into sub-tabs representing each of the supported album data sources. The tabs include:

- **Settings**

Configures the order in which the album data sources are consulted when retrieving album data. If, for example, you prefer to retrieve covers from last.fm before using the iTunes store, you would drag the *last.fm* entry above the *iTunes Store* entry in the list.

- **Embedded (ID3/metadata)**

Configures the retrieval of album covers from the internal metadata of the media files. Many media files include album covers and other data embedded directly within the file, and this data source will extract the embedded data and use it in the media library.

- **Folder images**

Configures the use of images saved in the media library folders for use as album covers. This data source will search for JPEG (.jpg) images saved in the media folders in the following order:

- In a JPEG file with the same name as the MP3 file.

Example:

Uploaded MP3 filename: My Music\demo\_track.mp3

Cover image filename: My Music\demo\_track.jpg

- In a JPEG file named `albumartsmall.jpg` in the same folder as the MP3 file. (This is a standard filename also used by Windows explorer.)  
Example:  
Uploaded MP3 filename: `My Music\demo_track.mp3`  
Cover image filename: `My Music\albumartsmall.jpg`
- In a JPEG file named `folder.jpg` in the same folder as the MP3 file. (Much like `albumartsmall.jpg`, this is a standard filename also used by Windows explorer.)  
Example:  
Uploaded MP3 filename: `My Music\demo_track.mp3`  
Cover image filename: `My Music\folder.jpg`
- In any JPEG file in the same folder as the MP3 file. If more than one JPEG exists, preference will be given to those with filenames containing the words “front” or “cover”. If no filenames contain “front” or “cover”, the first image Centova Cast finds will be used.  
Example:  
Uploaded MP3 filename: `My Music\demo_track.mp3`  
Cover image filename: `My Music\any_filename_will_work.jpg`

- **last.fm**

Configures the use of last.fm for album covers and data. This data source will retrieve album covers and data from the last.fm web site.

- **iTunes Store**

Configures the use of the iTunes Store for album covers and data. This data source will retrieve album covers and data from the iTunes Store.

- **Amazon.com**

Configures the use of Amazon.com for album covers and data. This data source will retrieve album covers and data from Amazon.com.

- **Amazon affiliate ID**

Specifies the client’s Amazon.com affiliate ID. If specified, Amazon will credit your affiliate account for any albums purchased by clicking the “Buy now” link in the Recent Tracks widget.

- **Custom**

Configures the use of custom album covers and data. Custom album covers and data can be specified in the media library by right-clicking on an album and selecting `Edit album details`.

### 2.3.7 Server Overrides (SHOUTcast v1/v2)

The Server Overrides tab contains options for configuring values which will override any values provided by a live DJ via a live source application.

- **Stream title format**

Configures the format string used to present the stream title to the end-user. If this is a plain text string, it will completely replace any stream title provided by a live source.

If the format string contains the characters %s, these characters will be replaced with the stream title provided by the live source.

Example: Stream title format: Station XYZ: %s Stream title provided by live source: Artist Foo - Album Bar Actual title displayed in listeners' media players: Station XYZ: Artist Foo - Album Bar

- **Stream URL format**

Identical in nature to the Stream title format option above, but specifies the format for the stream URL presented to the end-user.

- **Public server**

Specifies whether the stream should be published with directory services. Options include:

- Automatic (determined by source)  
If selected, the live source can make the stream public or private at its discretion.
- Never  
If selected, the stream is never published.
- Always  
If selected, the stream is always published.

### 2.3.8 Relaying (SHOUTcast v1/v2)

The Relaying tab contains options for controlling the relaying of the client's stream by other servers.

Note that these options are used to control the ability of a *remote* server to rebroadcast *the client's* stream. If you wish to do the inverse, and rebroadcast a *remote* stream from *the client's* server, the relevant options are on the *Mount Points* tab.

- **Allow other servers to relay stream**

Specifies whether or not remote servers are permitted to relay the client's stream.

- **Allow relays to make stream public**

Specifies whether or not remote servers relaying the client's stream are permitted to advertise their relays with directory services.

### 2.3.9 Master Relaying (IceCast)

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

Options include:

- **Master server**

Specifies the hostname or IP address of the master server whose stream(s) the client wants to relay.

- **Master port**  
Specifies the port number of the master server whose stream(s) the client wants 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, the client's 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, the client's 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 the client's first listener connects.

### 2.3.10 Mountpoint Relaying (IceCast)

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

Options include:

- **Stream server**  
Specifies the hostname or IP address of the remote server whose stream the client wants to relay.
- **Stream port**  
Specifies the port number of the remote server whose stream the client wants 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, the client's 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, the client's 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 the client's first listener connects.

- **Relay metadata**

If enabled, the metadata provided by the remote streaming server will be passed through to the client's listeners. If disabled, the locally-configured metadata will be used instead.

### 2.3.11 Mount Points

The Mount Points tab provides an interface for managing the mount points on the client's server. Mount points allow the creation of multiple, distinct broadcasts within the streaming server.

By convention, a mount point named `/stream` should always exist and be the default mount point. Additional mount points may, however, be created to allow for additional broadcasts.

#### Creating Mount Points

To create a new mount point, click the `Create new` button below the mount point list. Then, configure the mount point fields per the appropriate *Mount Point Options* section below.

#### Editing Mount Points

To edit an existing mount point, simply click on its entry in the mount point list. Then, configure the mount point fields per the appropriate *Mount Point Options* section below.

#### Removing Mount Points

To remove an existing mount point, simply click on its entry in the mount point list, then click the `Remove` button below the mount point list.

#### Mount Point Options (SHOUTcast v2)

The mount point editor is arranged into tabs which logically group sets of options for the mount point. The tabs available include:

- **Settings**

Configures the basic options for the mount point.

- **Stream path**

Specifies the path (name) for the mount point. The name should always begin with a forward slash (`/`), for example: `/stream`

- **AutoDJ Settings**

Each mount point may either be independent, or use the autoDJ.

If the mount point is independent, it may be used with a live source to create a separate broadcast that is completely independent of any other mount points on the server.

An account can only have a single autoDJ, however, so if the mount point uses the autoDJ, it can only be used to rebroadcast the main autoDJ stream (for example, to create multiple streams for the same station at different bit rates).

- **Use autoDJ**

- Specifies whether or not this mount point should use the autoDJ. If this is set to `No`, the rest of the options on this tab are disabled.

- **Audio encoder**

- Specifies the audio format to use for this mount point. Supported options include AAC+, for a low-bandwidth AAC+ stream, or MP3, for a more common MP3-format stream.

- **Bit rate**

- Specifies the bit rate at which the autoDJ will encode the audio on this mount point. Note that the combined total bit rates of all mount points may not exceed the maximum bit rate for the client's account.

- **Channels**

- Specifies whether the autoDJ will encode in `Stereo` or `Mono` on this mount point.

- **Sample rate**

- Specifies the sample rate at which the autoDJ will encode the audio on this mount point.

- **MP3 CBR/VBR mode**

- Specifies CBR (constant bit rate)/VBR (variable bit rate) encoding mode used for this mount point. Consult the SHOUTcast DNAS v2 documentation for details.

- **Optimize for**

- Specifies the optimization method used for this mount point. Consult the SHOUTcast DNAS v2 documentation for details.

- **Relaying**

If an autoDJ is not being used on the mount point, the mount point may be used to relay a remote stream.

- **Relay URL**

- Specifies the URL of the remote stream to relay through this mount point.

## Mount Point Options (IceCast)

The mount point editor is arranged into tabs which logically group sets of options for the mount point. The tabs available include:

- **Settings**

Configures the basic options for the mount point.

- **Mount point**

- Specifies the name for the mount point. The name should always begin with a forward slash (`/`), for example: `/stream`

- **Intro clip**

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 station identification or advertisement purposes.

- **Fallback clip**

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.

**IMPORTANT:** The encoding options (bit rate, sample rate, channels, etc.) used in the introduction and fallback clips must *precisely* match the encoding options for the client's stream. If they are not identical, the client will experience playback problems on his stream.

- **AutoDJ Settings**

Each mount point may either be independent, or use the autoDJ.

If the mount point is independent, it may be used with a live source to create a separate broadcast that is completely independent of any other mount points on the server.

An account can only have a single autoDJ, however, so if the mount point uses the autoDJ, it can only be used to rebroadcast the main autoDJ stream (for example, to create multiple streams for the same station at different bit rates).

- **Use autoDJ**

Specifies whether or not this mount point should use the autoDJ. If this is set to `No`, the rest of the options on this tab are disabled.

- **Mount point name**

Specifies a title for this mount point. Commonly this is the name of the station.

- **Description**

Specifies a description of this mount point.

- **Genre**

Specifies a genre for this mount point.

- **Genre**

Specifies whether or not this mount point should be advertised on directory services.

- **Re-encoding**

Specifies whether or not the audio for this mount point should be re-encoded before broadcast.

- **Channels**

Specifies whether the autoDJ will encode in `Stereo` or `Mono` on this mount point.

- **Sample rate**

Specifies the sample rate at which the autoDJ will encode the audio on this mount point.

- **Bit rate** Specifies the bit rate at which the autoDJ will encode the audio on this mount point. Note that the combined total bit rates of all mount points may not exceed the maximum bit rate for the account.

- **Fallback Mount**

In the event that the current mount point does not have a source connected (or the source disconnects during a broadcast), a fallback mount allows IceCast to redirect all listeners to a different mount point.

- **Fallback mount point**  
Specifies the mount point to redirect listeners to when this mount point is not sourced.
- **Fallback override**  
If the source disconnects from this mount point, listeners will be redirected to the fallback mount. If *Fallback override* is `Enabled`, listeners will be moved *back* to this mount point when its source reconnects. If *Fallback override* is `Disabled`, listeners will remain on the fallback mount even when the source reconnects to this mount point.
- **Fallback when full**  
Specifies whether listeners should be redirected to the fallback mount if the current mount point is at its listener capacity.

- **Setting Overrides**

Configures settings for this mount point that override the global defaults.

- **Advertise in directory**  
Specifies whether or not this mount point should be advertised with directory services.
- **Source username**  
Specifies a custom username for live DJs to use when connecting to this mount point with a live source.
- **Source password**  
Specifies a custom password for live DJs to use when connecting to this mount point with a live source.
- **Maximum listeners**  
Specifies the maximum number of listeners for this mount point. Once the mount point reaches capacity, further listeners will be refused (or redirected to a different mount point if the *Fallback when full* option on the *Fallback Mount* tab is used.)
- **Disconnect listeners after**  
Specifies the number of seconds after which listeners on this mount point will be disconnected. Leave blank or enter 0 to impose no time limit.

- **Metadata Overrides**

Configures metadata values for this mount point that override the global defaults.

- **Stream name**  
Specifies a custom stream name.
- **Stream description**  
Specifies a custom stream description.
- **Stream URL**  
Specifies a custom stream URL.
- **Stream genre**  
Specifies a custom stream genre.
- **Advertised bit rate**  
Specifies a custom advertised bit rate.
- **MIME type**  
Specifies a custom MIME type.



### 2.3.12 Advanced

The Advanced tab includes options for configuring various advanced settings which normally do not need to be adjusted.

#### Advanced (SHOUTcast v2)

When using SHOUTcast v2 as your streaming server, options include the following. Please consult the SHOUTcast v2 documentation for more information about these options.

- **UVOX cipher key**  
Specifies the UVOX cipher key for your stream.
- **Disconnect idle sources after**  
Specifies the number of seconds after which idle sources should be disconnected. Idle sources are sources which are connected to the server but not actually sending any audio data.
- **Disconnect listeners if source connects**  
Specifies whether listeners should be disconnected from the server if the source disconnects from the server. Typically this is unwanted and should be set to No.
- **Always disconnect listeners after**  
Specifies the number of seconds after which listeners should be disconnected.
- **Hostname lookups**  
Specifies whether the streaming server should look up the IP addresses of all incoming clients in DNS, and log the client's hostname to the access log. This may cause dramatic delays during tune-in if the DNS server is slow or unresponsive.
- **Use server**  
For internal use. Do not modify.
- **Use YP v2**  
Specifies whether or not to contact the directory service to advertise your stream.
- **YP server address**  
Specifies the Internet address for the directory server to use.
- **YP server path**  
Specifies the URI for the directory service.
- **YP report interval**  
Specifies the frequency (in seconds) at which the streaming server should update the directory server.
- **YP request retries**  
Specifies the number of times the streaming server should retry a connection to the directory server upon failure.
- **YP server port**  
Specifies the port number for the directory server to use.

- **YP request timeout**  
Specifies the number of seconds after which the streaming server should time out while attempting to connect to the directory server.
- **YP minimum report interval**  
Specifies the minimum report interval.

### 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 service.
- **Directory listings port**  
Specifies the port number of your directory 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.
- **Song length detect limit**  
Specifies the maximum expected length of time for a song played on your station.  

This is necessary as IceCast's logs only include the start time of each track; they do not provide information about the length of each song. As such, Centova Cast must determine the length by checking the duration between the start times of each song. If the server is stopped between songs, however, the song will appear to last for the duration of the outage. This limit is used to ensure that if any song 'appears' to last longer than a certain number of seconds, it will not be included in the track statistics.
- **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.

### 2.3.13 User Account Operations

The account editor page includes a number of additional buttons at the bottom of the page to assist in managing user accounts. These buttons include:

- **Move to another reseller**  
Moves the user account under the control of a different reseller account, or optionally removes the account from the control of any reseller.
- **Login to this account**  
Logs in to the account as if you had entered the user's username and password.
- **Change account username**  
Changes the username assigned to the account.

## 2.4 Reseller Account Settings

A "Reseller account" is much like a limited administrator account; it is able to create and manage its own set of user accounts subject to limits imposed by the administrator.

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

### 2.4.1 Basic Configuration

The basic configuration tab contains the basic configuration settings for the reseller account. The fields available include:

- **E-mail address**  
Specifies the reseller's E-mail address. Centova Cast will automatically send notifications regarding the reseller's user accounts to this address when necessary.
- **Company/organization**  
Specifies the reseller's company/organization.
- **Time zone**  
Specifies the reseller's time zone, which will be used as the default for user accounts created by this reseller.
- **Character encoding**  
Specifies the reseller's preferred character encoding which will be used as the default for user accounts created by this reseller.

## 2.4.2 Limits

The limits page configures the limits and restrictions imposed on the reseller. Options include:

- **Maximum bit rate**  
Specifies the maximum bit rate that this reseller can assign to each user account he creates. Note that this is a per-user limit, not a combined total.
- **Maximum accounts**  
Specifies the maximum number of user accounts (streams) that the reseller can create.
- **Disk quota**  
Specifies the total amount of disk space allocated to this reseller. The reseller may assign this disk space to his user accounts as he sees fit, but the combined total of the disk space used by the reseller's user accounts will never be permitted to exceed this limit.
- **Listener slots (total)**  
Specifies the total number of listeners this reseller can potentially host. This is a combined total limit for all user accounts created by this reseller. For example, if this value is set to 50, then the reseller could create two 25-listener streams, or he could create two 10-listener streams and one 30-listener stream, etc.
- **Data transfer limit**  
Specifies the maximum monthly data transfer limit for this reseller, in megabytes (MB). The reseller may assign data transfer limits to his user accounts as he sees fit, but the combined total of the data transfer used by the reseller's user accounts will never be permitted to exceed this limit.
- **Bandwidth limit**  
Specifies the total amount of bandwidth (in kbps - NOT data transfer) which this reseller can allocate. This is an alternative to specifying a data transfer limit, and is simply an alternate way of imposing a similar restriction.  
  
For example, 10 listener slots at 128kbps would use 1280kbps of bandwidth ( $10 \times 128 = 1280$ ). Or, 5 slots at 128kbps and 8 slots at 64kbps would use 1152kbps of bandwidth ( $5 \times 128 + 8 \times 64 = 1152$ ).  
  
If you do not fully understand this metric, leave it set to "Unlimited" and assign a more conventional data transfer limit instead.
- **AutoDJ capabilities**  
Specifies whether the reseller is permitted to assign autoDJ capabilities to his clients.
- **Port 80 proxy**  
Specifies whether the reseller is allowed to use Centova Cast's port 80 proxy. This option will only be displayed if the port 80 proxy has been enabled.

## 2.4.3 Albums

The tabs on this page configure the reseller's options for each individual album data source. The data sources are described in detail in the Albums Configuration Settings section of the User's Manual.

- **Amazon.com**

Configures the use of Amazon.com for album covers and data.

- *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 the reseller's (or administrator's) affiliate ID will be used.
- *Default Amazon affiliate ID* - Specifies a default affiliate ID for all streams for which the client has not entered his own affiliate ID, allowing the reseller to collect commissions for Amazon affiliate sales for those streams.
- *Amazon Web Services Access Key ID* - Specifies your Amazon AWS Access Key ID, allowing each stream to be configured with an Amazon.com affiliate ID to integrate with Amazon.com's affiliate program and retrieve album covers. Your AWS Access Key ID can be generated at Amazon.com.
- *Amazon Web Services secret key* - Specifies your Amazon AWS Secret Key, which accompanies your AWS Access Key ID. Your secret key can be generated at Amazon.com.

## 2.4.4 Reseller Options Page

The reseller options page configures additional options for the reseller. Options include:

- **Default character encoding for new servers**

Specifies the character encoding to be used by default for all new servers created by this reseller.

- **Sender E-mail address**

Specifies the E-mail address that should be used as a return address for all E-mail messages generated by the Centova Cast on behalf of this reseller. This allows for further branding of the reseller's hosting services.

- **Logo image**

Specifies a logo image to be displayed when the reseller's clients log into Centova Cast, instead of the default Centova Cast logo.

## 2.4.5 Reseller Account Operations

The account editor page includes a number of additional buttons at the bottom of the page to assist in managing reseller accounts. These buttons include:

- **Login to this account**

Logs in to the account as if you had entered the reseller's username and password.

- **Change account username**

Changes the username assigned to the account.

## Chapter 3

# Statistics Report

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.

The statistics page may be accessed using the [Statistics](#) link under the *Accounts* heading in the navigation menu.

### 3.1 Reporting Period

All of the metrics provided on the statistics page – with the exception those on the *Recent Activity* tab – are valid for the current selected reporting period.

The default reporting period is the past 14 days. To change the reporting period, click the [Change reporting](#) feature link at the top of the page, and select the period for which you would like to view statistics.

Centova Cast can report by the following intervals: - activity for the last x days - activity from a specific start date, until a specific end date - activity for a specific calendar month

Reports may be generated for any period of up to 90 days.

The statistics available are described in the following sections.

### 3.2 Recent Activity

The recent activity report provides a high-level overview of your server-wide statistics for the *past 48 hours*, 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 activity during the past 48 hours. The *total minutes* and *total listening hours* (TLH) indicate your server's overall volume of listeners, and the *average session length* indicates the length of time for which listeners are typically remaining tuned-in to a station.

- **Listeners**

This section provides information about listeners tuned in to your server's streams. *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 server's data transfer during the past 48 hours, including the total aggregate and per-session data transfer amounts.

- **Tracks**

This section provides details of the tracks played during the past 48 hours, including the *number of tracks* and the *number of unique tracks* played during that period. The *average number of tracks per hour* and *average track length* are also provided.

- **Peak Period**

This section provides information about the time at which the greatest number of listeners were connected during the past 48 hours. The *number of listeners*, the *track name*, and the *date* of that occasion are provided.

- **Listeners Graph**

Provides a graph of the total number listeners connections established during each hour throughout the past 48 hours.

## 3.3 Listeners

The listener overview provides information about listeners' usage of your server for the selected reporting period.

### 3.3.1 Period Overview

- **Total listener minutes**

Provides the total number of aggregate listener minutes for your server for the reporting period.

- **Total listening hours**

Provides the total listening hours (TLH) for your server for the reporting period. This metric is commonly used to report listener volume with music licensing authorities.

The total listening hours is calculated by simply adding up the number of minutes for which each listener was tuned-in to a station during the reporting period.

- **Total sessions**

Provides the total number of listener sessions for the reporting period.

This value is incremented each time a listener connects to a station during the reporting period.

- **Average session length**

Provides the average length of a listening session during the reporting period, in minutes.

- **Total data transfer**  
Provides the total data transfer, in MB, for the reporting period.
- **Average data transfer**  
Provides the average data transfer per listener session, in MB, for the reporting period.
- **Unique listeners**  
Provides the number of unique listeners for the reporting period.  
A listener is considered “unique” if nobody else from the listener’s IP address connected to a station with the same user-agent string as the listener during the reporting period.
- **Unique countries**  
Provides the number of unique listener countries for the reporting period.  
Each listener’s country is determined solely based on his IP address.

### 3.3.2 Listener Trends

Provides information about listener trends over the past 7, 14, and 30 days.

### 3.3.3 Average Listener Session Length

The average length of a listener session is broken down into common intervals and charted and graphed.

### 3.3.4 Top Listeners by Listener Sessions

Top listeners are ranked according to the total number of times they have connected to a stream during the reporting period.

Centova Cast automatically determines the countries from which listeners were connected based on their IP addresses, and the software used by the listener to tune into the stream is noted and identified as a media player or stream ripper to assist in abuse detection.

### 3.3.5 Top Listeners by Listener Minutes

Top listeners are ranked according to the total number of minutes they have spent connected to a stream during the reporting period.

Centova Cast automatically determines the countries from which listeners were connected based on their IP addresses, and the software used by the listener to tune into a stream is noted and identified as a media player or stream ripper to assist in abuse detection.



## 3.4 User Agents

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

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

### 3.4.1 Top Agents by Listener Sessions

The top software used to connect to a stream is charted and graphed according to the number of times each software application has connected to your stream during the reporting period.

### 3.4.2 Top Agents by Listener Minutes

The top software used to connect to a stream is charted and graphed according to the total amount of time each software application has spent connected to a stream during the reporting period.

## 3.5 Countries

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

Each country is identified (where possible) based on the listener's IP address, and the appropriate flag is displayed to aid in identification at a glance.

### 3.5.1 Top Countries by Listener Sessions

The top countries connecting to a stream are charted and graphed according to the number of times a listener from each country has connected to a stream during the reporting period.

### 3.5.2 Top Countries by Listener Minutes

The top countries connecting to a stream are charted and graphed according to the total amount of time listeners from each country have spent connected to a stream during the reporting period.

## 3.6 Historical Statistics

Historical statistics provide detailed data transfer and listener statistics, complete with graphs, allowing you to track listener trends and resource usage over a period of time.

### 3.6.1 Graphs

The graphs on the Historical Statistics page are dynamic and interactive. Hovering your mouse over any point on the graph will display a summary of the sample taken at that point. For more detailed reporting, you may make a selection on the timeline below each graph to “zoom” into a specific portion of the reporting period.

Each graph also includes a link to download a CSV-format spreadsheet file containing the raw data used to generate the graph.

Graphs provided include:

- **Listeners**  
Indicates the number of simultaneous listeners at each hour during the reporting period.
- **Minutes**  
Indicates the listener minutes at each hour during the reporting period.
- **Data Transfer**  
Indicates the data transfer at each hour during the reporting period.

### 3.6.2 Average Listeners Per Hour Chart

The Average Listeners Per Hour chart provides an overview of the popularity of the streams on your server at specific times of the day on specific days of the week.

The average number of listeners for each day, and each time of day, are then charted based on the following time periods:

- Graveyard (00:00 - 07:00)
- Morning (07:00 - 11:00)
- Lunch (11:00 - 13:00)
- Afternoon (13:00 - 19:00)
- Evening (19:00 - 00:00)

This chart is extremely useful for scheduling advertisements and planning shows to take advantage of your peak listening audience.

## Chapter 4

# Server Settings

Prior to creating your first Centova Cast hosting account, you should review the default Centova Cast settings and customize them as necessary.

To access the Server Settings page, click the `Settings` link under the *Settings* heading in the navigation menu.

Centova Cast provides access to a wide range of settings for your server which are broken down into several tabbed pages, described below.

### 4.1 General

- **Site name**  
Specifies the name of your web site or company.
- **Notification E-mail address**  
Specifies the E-mail address to which any administrative notifications will be sent. You should set this to your real E-mail address to ensure that you receive any important notifications.
- **Sender E-mail address**  
Specifies the E-mail address which will be used as the “Sender” or “From” address on notification E-mails sent to clients. You may either use a real address here, or a “no-reply” address of your choosing.

### 4.2 E-mail

These settings allow you to configure an SMTP server to be used for all outgoing E-mail generated by Centova Cast. If your clients complain that they are not receiving messages generated by Centova Cast, you likely need to use this feature.

- **SMTP server**  
Specifies the hostname for your SMTP server - usually `mail.example.com` or `smtp.example.com`. If your SMTP server uses SSL, use add `ssl://` to the beginning of the hostname (eg: `ssl://mail.example.com`).

- **SMTP port**  
Specifies the port for your SMTP server - usually 25 for standard SMTP, or 465 if your SMTP server uses SSL.
- **SMTP username**  
Specifies the username to use to authenticate with your SMTP server. Leave blank if your SMTP server does not use SMTP authentication.
- **SMTP password**  
Specifies the password to use to authenticate with your SMTP server. Leave blank if your SMTP server does not use SMTP authentication.

## 4.3 Limits

### 4.3.1 Data Transfer

- **Notify clients via E-mail when... (data transfer)**  
Specifies when to notify clients as they approach their data transfer limit. Enter a percentage value (from 0 to 100), and Centova Cast will automatically notify the client via E-mail when his stream uses this percentage of his monthly data transfer limit.
- **When transfer limit is exceeded...**  
Specifies what action Centova Cast should take when a client reaches his data transfer limit. Options available include:
  - `Shutdown streaming server and suspend account`  
If selected, Centova Cast will automatically shut down and suspend the client's streaming server account when it reaches its monthly transfer limit. Note that the stream will remain offline and the client will not be able to reactivate it until the following month. A suspension notice will be sent via E-mail to both the client and the administrator.
  - `Take no action`  
If selected, Centova Cast will take no action other than notifying the client and administrator via E-mail.
- **When an account has been suspended...**  
Specifies what action Centova Cast should take after an account has been suspended. Options available include:
  - `Automatically unsuspend it until the following month`  
If selected, Centova Cast will automatically unsuspend the client's account at the beginning of the following month.
  - `Leave it suspended until unsuspended by an administrator`  
If selected, Centova Cast will not automatically unsuspend the client's account. The administrator will be responsible for logging in and manually unsuspending the account.
- **Total data transfer limit for this server**  
Specifies the data transfer limit that your own server provider has imposed on your server. This is only used to display a graph of your total Centova Cast-related bandwidth usage in the administrator's control panel; this setting is otherwise unused and is entirely optional.

## 4.3.2 Disk Quota

- **Notify clients via E-mail when... (disk quota)**

Specifies when to notify clients as they approach their disk quota. Enter a percentage value (from 0 to 100), and Centova Cast will automatically notify the client via E-mail when his account has used this percentage of its disk quota.

- **When disk quota is exceeded...**

Specifies what action Centova Cast should take when a client exceeds his disk quota. Options available include:

- `Shutdown streaming server and suspend account`

If selected, Centova Cast will automatically shut down and suspend the client's streaming server account when it reaches its disk quota. Note that the stream will remain offline and the client will not be able to reactivate it until the administrator unsuspends it. A suspension notice will be sent via E-mail to both the client and the administrator.

- `Take no action`

If selected, Centova Cast will take no action other than notifying the client and administrator via E-mail.

## 4.3.3 Logins

- **Login failures**

Specifies how to handle repeated login attempts which fail due to an invalid password. This feature is designed to prevent brute-force password attacks.

If a user fails to enter a correct password the specified number of times during the specified time span, his account will be locked out for the specified number of minutes, during which time he will be unable to log in (even with the correct password).

Brute-force attack prevention is applied universally across all login mechanisms, including the login form and XML API system; all login failures count toward this limit.

## 4.4 Defaults

### 4.4.1 General

- **Port range for new servers**

Specifies the default port range for port numbers assigned to new streaming accounts. When creating new streaming server accounts, Centova Cast will automatically determine which ports are already in use by other streaming servers, and pre-populate the *Port* field with the next available (unused) port within this range. Note that the administrator will still be able to change this value prior to provisioning the account if desired.

- **Default character encoding for new servers.**

Specifies the default character encoding to use for new servers. This is used to interpret metadata from media uploaded for use with the autoDJ.

## 4.4.2 AutoDJ

- **Enable re-encoding on new servers**

Specifies whether or not new streaming servers should be configured to re-encode media to the stream bit rate by default. Disabling re-encoding will reduce the CPU usage for a stream to practically zero (allowing *many* more streams to be hosted on a single machine than would normally be possible) however it requires that the client's media be pre-encoded to the correct bit rate and sample rate before it is uploaded. If any of the client's media is encoded at an incorrect bit rate or sample rate, the stream will use a disproportionate amount of bandwidth, and some songs may be broadcast at an incorrect speed (leading to a “chipmunk vocal” effect). This has no effect when the streaming source is `sc_trans`, as `sc_trans` always re-encodes the media it streams.
- **Default channels for re-encoding**

Specifies the default number of channels to be used by the encoder when the `Enable re-encoding on new servers` feature is enabled.
- **Default sample rate for re-encoding**

Specifies the default sample rate to be used by the encoder when the `Enable re-encoding on new servers` feature is enabled.
- **Default crossfade length for re-encoding**

Specifies the default crossfade length (in seconds) to be used by the encoder when the `Enable re-encoding on new servers` feature is enabled.

## 4.5 Features

- **Allow server log downloads**

Determines whether clients are permitted to download their raw ShoutCast/IceCast and autoDJ log files.
- **Provide stream directory**

Determines whether Centova Cast will offer the *Stream Directory* widget to your clients. This widget discloses information about all stations on your server which may represent a privacy issue, and as such is disabled by default.

## 4.6 Albums

- **Import album cover images when available**

Centova Cast is able to import album cover images when importing media for the autoDJ, to be shown in the client area, the media library, and in the *Recent Tracks* widget.

The procedure for obtaining album covers is explained in the the Albums Configuration Settings section of the User's Manual.

This option configures whether or not Centova Cast will attempt to import cover images, which may slightly increase the time required to import media.

## 4.6.1 Album Data Source Configuration

The tabs on this page configure the options for each individual album data source. The data sources are described in detail in the Albums Configuration Settings section of the User's Manual.

- **Embedded (ID3/Metadata)**

Configures the retrieval of album covers from the internal metadata of clients' media files.

- *Enabled* - Enables or disables this album data source.

- **Folder Images**

Configures the use of images saved in clients' media library folders for use as album covers.

- *Enabled* - Enables or disables this album data source.

- **iTunes Store**

Configures the use of the iTunes Store for album covers and data.

- *Enabled* - Enables or disables this album data source.

- **Amazon.com**

Configures the use of Amazon.com for album covers and data.

- *Enabled* - Enables or disables this album data source.
- *Amazon Web Services Access Key ID* - Specifies your Amazon AWS Access Key ID, allowing each stream to be configured with an Amazon.com affiliate ID to integrate with Amazon.com's affiliate program and retrieve album covers. Your AWS Access Key ID can be generated at Amazon.com.
- *Amazon Web Services secret key* - Specifies your Amazon AWS Secret Key, which accompanies your AWS Access Key ID. Your secret key can be generated at Amazon.com.
- *Default Amazon affiliate ID* - Specifies a default affiliate ID for all streams for which the client has not entered his own affiliate ID, allowing the administrator 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 the administrator's affiliate ID will be used.

- **last.fm**

Configures the use of last.fm for album covers and data.

- *Enabled* - Enables or disables this album data source.
- *last.fm API key* - Specifies your last.fm API key. Your API key can be generated at last.fm.

## 4.7 Feature Buttons

Centova Cast provides a set of feature buttons at the bottom of the Server Settings page, which perform the following tasks:

- **E-mail test**  
Tests the validity of the settings on the E-mail tab. After updating your E-mail settings, press this button to verify that Centova Cast is able to send mail via your SMTP server.
- **Change administrator password**  
Changes the password for the `admin` account.



## Chapter 5

# Managing E-mail Messages

Every E-mail message sent by Centova Cast to administrators or clients can be customized via the *E-mail management* page.

To access the *E-mail management* page, click the `E-mails` link under the Settings heading in the navigation menu.

### 5.1 The Message List

The message list displays all available E-mail messages. Click on the `Edit Message` icon next to a message to launch the message editor.

### 5.2 Editing Messages

The message editor provides the following fields:

- **Subject**  
Specifies the text to use in the “subject” line of the E-mail message.
- **Message text**  
Specifies the plain text content for the E-mail message. This represents the body of the message, and will be displayed by E-mail mail clients which do not support HTML messages.  
After composing a text version of your message, you may optionally click the `To HTML` button to automatically generate an HTML version of the message based on your text version.
- **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.  
After composing an HTML version of your message, you may optionally click the `To Text` button to automatically generate a text version of the message based on your HTML version.

## 5.3 Placeholders / Variables

Each message may include “placeholder” values that will be replaced with alternate text before the message is sent. These are typically used to insert content such as the client’s name or E-mail address into the message template.

Placeholders 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.

## 5.4 Message Previews

At any time while editing your message content, click the `Preview` button at the bottom of the page to display a preview of your messages.

The preview feature displays both the HTML and text messages as they would appear in a user’s E-mail client, with all variable placeholders replaced with sample text. This feature is especially useful when composing HTML messages, to ensure that your HTML code is valid and correct.

## Chapter 6

# Host Management

The host manager allows the administrator to review and configure the list of stream hosting servers managed by the Centova Cast web interface.

The host manager may be accessed using the `Hosts` link under the *Management* heading in the navigation menu.

### 6.1 The Hosting Servers List

The hosting servers list displays all of the hosting servers that are currently being managed by the Centova Cast web interface. The list is organized into columns with the following headings:

- **Title**  
The name of the hosting server; usually the server's hostname or a descriptive title.
- **Address**  
The IP address of the hosting server.
- **Master**  
Indicates whether or not the server can act as a master hosting server.
- **Relay**  
Indicates whether or not the server can act as a relay hosting server.

Click on the `Edit Server` icon next to a server to launch the hosting server editor to edit the server connection parameters.

Click on the `Delete Server` icon next to a server to remove it from management by the Centova Cast web interface.

### 6.2 Adding Hosting Servers

New hosting servers may be added to the web interface using the `Add hosting server` link near the top of the page. (Note that you should not normally need to do this manually, however; this is typically done automatically by the installer when setting up the hosting server.)

The hosting server editor interface displayed when adding new hosting servers is identical to the hosting server editor interface described in the *Editing Hosting Servers* section below.

## 6.3 Editing Hosting Servers

The hosting server editor interface provides access to the settings for each hosting server. The settings available include:

- **Server title**  
Specifies a descriptive name used to identify the hosting server; usually the server's hostname, and possibly including information about where the server is hosted.
- **IP Address**  
Specifies the IP address on which the control daemon on the remote server is listening.
- **Hostname**  
Specifies the hostname (if any) that corresponds to the server's IP address. This will be used when applicable for self-referencing links that point directly to this server.
- **Port**  
Specifies the port on which the control daemon on the remote server is listening. This should virtually always be set to 2198.
- **Authentication Key**  
Specifies the authentication key configured for the control daemon on the remote server. This should always match the contents of `/usr/local/centovacast/etc/rpcshadow` on the remote server.
- **Role**  
Specifies the roles for which this server may be used: *master* and/or *relay*. At the present time this functionality is not used, but will be used for clustering support in future versions of Centova Cast.
- **Default stream IP address**  
Specifies the default IP address to be assigned to streams created on this server.

## Chapter 7

# Account Templates

Account templates allow the administrator 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 administrators this can save hours of time per week in repetitive account configuration.

The account templates page may be accessed using the `Templates` link under the *Management* heading in the navigation menu.

## 7.1 The Account Templates List

The 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.

## 7.2 Creating New Account Templates

New account templates may be created using the `New account template` link 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:

- **Type**

Specifies the type of account which should be created:

- `User` - Specifies that a user account should be created. This option is used to set up new streaming accounts.
- `Reseller` - Specifies that a reseller account should be created. Reseller accounts are much like limited administrator accounts, and can independently create and manage their own user accounts.

- **Server Type**

Indicates the type of server software to use for the account – currently, `ShoutCast2`, `ShoutCast`,

and IceCast are supported. Note that Centova Cast will only display server types which have been installed and enabled on your server.

- **AutoDJ Type**

Indicates the type of autoDJ software to use for the account. Note that Centova Cast will only display autoDJ types which have been installed and enabled on your server and are compatible with the *Server type* you have chosen above.

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 in the [Editing Account Templates](#) section below.

## 7.3 Editing Account Templates

The account template editor is virtually identical to the account editor described in the [User Account Settings](#) for user accounts, and under [Reseller Account Settings](#) for reseller accounts. This is because when you set up an account template, you are essentially “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 the [User Account Settings](#) and [Reseller Account Settings](#) sections.

## Chapter 8

# System Status

The system status page provides an overview of the type and system resource utilization of each server in your hosting cluster.

To access the *System Status* page, click the *Status* link under the *System* heading in the navigation menu.

Centova Cast provides access to a variety of information about each server in your cluster, which is broken down into columns with the following headings:

- **Server**  
Displays the title of the server as configured under [Host Management](#).
- **OS**  
Displays information about the operating system installed on the server, and the underlying hardware specifications.
- **Uptime**  
Displays uptime information (the length of time for which the server has been operating since its last reboot) for the server.
- **Load**  
Displays system load information for the server. The format of this information depends on the operating system of the remote server; for Linux, it represents the 5-minute load average, for Windows, it represents the CPU utilization percentage.
- **Mem Used**  
Displays the memory usage information for the server, expressed as *memory used* as a fraction of the server's *total memory*. Note that memory allocated to the filesystem cache is explicitly omitted from the total amount of used memory displayed, to yield a more accurate representation of the server's memory usage.
- **Swap**  
Displays the swap usage information for the server, expressed as *swap used* as a fraction of the server's *total swap*.

## Chapter 9

# System Logs

Centova Cast provides a comprehensive, centralized log management system allowing the administrator to review not just the master Centova Cast event log, but also the system logs for the web interface and each individual hosting server in the cluster.

To access the *System Logs* page, click the *Logs* link under the *System* heading in the navigation menu.

### 9.1 Log Browser

The log browser pane, which extends down the left-hand side of the log manager page, provides a tree of log resources available for review. The top-level items in the tree are the *Log Manager* and the *Server Logs*.

#### 9.1.1 Log Manager

The *Log Manager* heading contains a single sub-item, *Event Log*, which provides access to the master event log for the Centova Cast web interface.

The event log documents all user activity (including logins and logouts), account operations (account creations, removals, etc.), a detailed record of any application errors that may have occurred, and other vital information about the operation of Centova Cast.

#### 9.1.2 Server Logs

The *Server Logs* heading provides access to the low-level system logs for each of your Centova Cast hosting servers (configured on the [Host Management](#) page).

After selecting a particular server, the complete list of log files available on the server is displayed in the log browser pane.

The specific log files available on each server will depend on the type of hosting server and its installed operating system; more information may be available in the Core Files and Paths section of the Internals Reference.



## 9.2 Log Viewer

The log viewer pane, which is displayed to the right of the log browser pane, displays the contents of the selected log resource.

To improve loading speeds, logs are split into multiple pages and only a single page is displayed at any time. The page navigation controls in the lower-right corner of the screen may be used to skip to the next or previous page, or to jump directly to a specific page in the log.

In some log resources, a search feature may also be supported; when available, this will be displayed as a *Keyword* field to the left of the page navigation controls. Entering a search term and pressing the *enter* key will filter the log file by the specified keyword.

## Chapter 10

# Staff Management

Centova Cast supports delegation of administrative tasks to staff accounts separate from the master `admin` account.

The staff manager allows the administrator to review and configure the staff account configured for each staff member, and delegate specific permissions to each member.

The staff manager may be accessed using the `Staff` link under the *Account* heading in the navigation menu.

### 10.1 The Staff List

The staff accounts list displays all of the staff accounts that have been configured in Centova Cast. The list is organized into columns with the following headings:

- **Real name**  
The name of the staff member.
- **Username**  
The username used by the staff member to log in to Centova Cast.
- **Status**  
Indicates whether the account is enabled or disabled.

Click on the `Edit Account` icon next to a staff account to launch the staff account editor and configure the staff account properties.

Click on the `Disable Account` icon next to a staff account to disable the account. This icon changes to `Enable Account` when the account is disabled, and may be clicked again to re-enable the account.

Click on the `Delete Account` icon next to a staff account to remove the account.

## 10.2 Adding Staff Accounts

New staff accounts may be added using the `Create staff account` link near the top of the page.

The staff account editor interface displayed when adding new staff accounts is identical to the staff account editor interface described in the *Editing Staff Accounts* section below.

## 10.3 Editing Staff Accounts

The staff account editor interface provides access to the settings for each staff account. The settings available include:

- **Username**  
Specifies the username for this staff account. Note that this is only displayed while creating the account; after the account is created, its username cannot be changed.
- **Password**  
Specifies the password required to login to the staff account.
- **Real name**  
Specifies the real name of the staff member, or any unique identifier that you wish to assign to the account. This is for identification purposes only and is not used by Centova Cast.
- **E-mail address**  
Specifies the E-mail of the staff member associated with this account.
- **Status**  
Specifies whether this account is `Enabled` or `Disabled`. When disabled, Centova Cast effectively treats the account as if it does not exist.

### 10.3.1 Permissions

Each staff account can be assigned a unique set of privileges which limit its access to Centova Cast's administration features. Permissions available include:

- **Superuser (unrestricted access)**  
Provides unrestricted access to nearly all administration features, identical to the master `admin` account. (Only command-line and API access are controlled separately; see below.)
- **List accounts**  
Provides access to view the list of user and reseller accounts.
- **Change account statuses**  
Provides access to suspend and unsuspend user and reseller accounts. This requires the *List accounts* permission.
- **Create accounts**  
Provides access to create new user and reseller accounts.

- **Edit accounts**  
Provides access to view and edit all settings of any existing user and reseller accounts. Note that this includes permission to view any existing user account passwords. This requires the *List accounts* permission.
- **Delete accounts**  
Provides access to delete any existing user and reseller accounts. This requires the *List accounts* permission.
- **Start/stop account streams**  
Provides access to start, stop, reload, and restart streaming servers and sources. This requires the *List accounts* permission.
- **Log in to client accounts**  
Provides access to log in to user and reseller accounts using the “Log in to account” feature. This requires the *List accounts* permission.
- **View master statistics**  
Provides access to the master statistics page (aggregating the statistics for all accounts) in the admin area.
- **Manage settings**  
Provides access to view and edit the options on the settings page in the Centova Cast admin area. Note that this refers to the global Centova Cast settings, accessed via the ‘Settings\*’ link under the *Settings* heading in the Centova Cast admin area, not the settings for user and reseller accounts.
- **Manage E-mails**  
Provides access to view and edit the notification E-mail templates on the *E-mails* page under the *Settings* heading in the Centova Cast admin area.
- **Manage hosts**  
Provides access to manage the cluster host servers on the *Hosts* page under the *Management* heading in the Centova Cast admin area.
- **Manage account templates**  
Provides access to view, edit, and create account templates on the *Templates* page under the *Management* heading in the Centova Cast admin area.
- **Manage news articles**  
Provides access to view, edit, and add news articles on the *News* page under the *Management* heading in the Centova Cast admin area.
- **View server status**  
Provides access to view the Centova Cast server status on the *Status* page under the *System* heading in the admin area.
- **View logs**  
Provides access to the system log viewer on the *Logs* page under the *System* heading in the admin area.

- **Trim logs**

Provides access to trim the Centova Cast event log on the `Logs` page under the *System* heading in the admin area. This requires the *View logs* permission.

- **Access system utilities**

Provides access to the features on the `Utilities` page under the *System* heading in the admin area (with the exception of the database manager, which requires the *Superuser* permission).

- **View active user sessions**

Provides access to the current login sessions list, accessed via the `Current login sessions` link on the `Utilities` page under the *System* heading in the admin area. This current login sessions list provides a list of every user, reseller, or administrator currently logged in to Centova Cast, as well as the option to forcibly log out each user. This requires the *Access system utilities* permission.

- **Manage staff accounts**

Provides access to view, edit, and create staff accounts on the `Staff` page under the *Accounts* heading in the Centova Cast admin area.

When a staff member is assigned this permission and creates or edits a staff account, he or she can only assign permissions that he or she possesses. For example, if a staff member does not possess the *Manage settings* permission, he cannot assign the *Manage settings* permission to any other staff account.

- **Command-line access (requires superuser)**

Provides access to invoke Centova Cast's `ccmanage` and `sumanage` commands using the staff account's username and password. Tasks performed using `ccmanage` or `sumanage` with a staff account are executed as if they had been invoked by the master `admin` account.

The staff member would, of course, need to have shell access to the Linux server hosting Centova Cast in order to make use of this permission, and assigning such access is left to the administrator. This permission requires the *Superuser* permission.

- **API access (requires superuser)**

Provides access to the Centova Cast XML and JSON APIs using the staff account's username and password. API methods invoked using a staff account are executed as if they had been invoked by the master `admin` account. This permission requires the *Superuser* permission.

## Chapter 11

# System Utilities

The System Utilities page contains a number of features intended for use by advanced administrators to perform low-level maintenance on Centova Cast.

As incorrect use of the utilities on this page will likely result in permanent damage to your Centova Cast installation, it is strongly recommended that only advanced administrators use these tools.

To access the System Utilities page, click the `Utilities` link under the *System* heading in the navigation menu.

The utilities available are described in the following subsections.

### 11.1 Database Manager

The `Manage` database link provides raw access to the Centova Cast database tables via a bundled database management tool based on [Adminer](#).

### 11.2 Database Optimizer

The `Optimize` database link performs a number of extensive optimizations on the Centova Cast database tables.

Note that these optimizations may take quite some time to complete, and during that time the database tables may be locked. As such, errors may occur in the Centova Cast web interface while the optimizations are performed.

## Chapter 12

# Credits

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#### 12.2.1 libxml

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This software consists of voluntary contributions made by many individuals on behalf of the PHP Group. The PHP Group can be contacted via Email at [group@php.net](mailto:group@php.net).

For more information on the PHP Group and the PHP project, please see <http://www.php.net>.

PHP includes the Zend Engine, freely available at <http://www.zend.com>.

### 12.2.3 pcre

#### PCRE LICENCE

PCRE is a library of functions to support regular expressions whose syntax and semantics are as close as possible to those of the Perl 5 language.

Release 7 of PCRE is distributed under the terms of the “BSD” licence, as specified below. The documentation for PCRE, supplied in the “doc” directory, is distributed under the same terms as the software itself.

The basic library functions are written in C and are freestanding. Also included in the distribution is a set of C++ wrapper functions.

#### THE BASIC LIBRARY FUNCTIONS

Written by: Philip Hazel Email local part: ph10 Email domain: cam.ac.uk

University of Cambridge Computing Service, Cambridge, England.

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#### THE C++ WRAPPER FUNCTIONS

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## 12.2.4 taglib

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