

# Streaming Server

Streaming servers are set up and configured explicitly to deliver your webcasts. They enable transcoding for adaptive bit rate streaming so that your live event is made available in any network and on any device. In addition, the streaming server is responsible for the cue point injections, which are set by an operator during a live stream.

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A configuration of the streaming server is only necessary if you are using your own server. By default, movingimage offers this service for you, i.e. we make available our streaming server. You can simply select the setup from the list of streaming servers (see below).

## Choosing a Streaming Server Playout Source

The movingimage Webcast supports **Wowza Live** (Origin) as the sole source of playout information. It separates ingest streams from playback streams.

## Create a new Streaming Server configuration

To create a streaming server, perform the following steps:

1. In the navigation panel, click the "Streaming Server" entry. In the editing area, you will see a list of all previously created streaming servers.
2. Click the [Create] button to open a form.



All fields are ★ required, except for *Backup Ingest API Endpoint*, *Backup Ingest Username*, *Backup Ingest Password*. These three fields are only required if you intend to use a second, backup Wowza instance.

3. The **Ingest Endpoints** specify which Wowza server(s) will receive your live stream data. You may have to contact your administrator to obtain this data.

Ingest Endpoints	
<b>Primary Ingest API endpoint *</b>	<b>Backup Ingest API endpoint</b>
<input type="text" value="http://streaming-primary.domain.net"/>	<input type="text" value="Enter a URL, e.g. https://backup.wowza/api"/>
<b>Primary ingest username *</b>	<b>Backup ingest username</b>
<input type="text" value="webcast"/>	<input type="text" value="Enter a username"/>
<b>Primary ingest password</b>	<b>Backup ingest password</b>
<input type="text" value="Enter a password"/>	<input type="text" value="Enter a password"/>

4. The **Streaming Variables** are used within the **URL Templates** to construct the live and DVR playout URLs.

Streaming Variables	
<b>Wowza application name *</b>	<b>Wowza Host *</b>
<input type="text" value="mi-webcast-origin"/>	<input type="text" value="wbc-live-cdn.edge-cdn.net"/>
<b>Default language *</b>	<b>Wowza Host *</b>
<input type="text" value="English"/>	<input type="text" value="wbc-live-cdn.edge-cdn.net"/>



### Adaptive Qualities

These options control which transcoded qualities will be passed to the Akamai network. Select only the options you need and configure the same qualities within the Wowza transcoder settings.

**mi-webcast > Transcoder >** ▶ Test Players... 📄 Copy... 🔄 Restart... 🗑️ Delete...

**WBC**  
Live Single Server or Origin  
[← Return to Transcoder Templates](#)

Encoding Presets   **Decoding Preset**   Stream Name Groups

An encoding preset represents one resultant encoded bitrate in the output streams from the Transcoder. An adaptive bitrate stream has multiple presets. « Show Help

+ Add Preset

**Presets**

Enabled	Preset	Stream Name	Actions
<input checked="" type="checkbox"/>	720p	mp4:\${SourceStreamName}_720p	
<input checked="" type="checkbox"/>	360p	mp4:\${SourceStreamName}_360p	
<input checked="" type="checkbox"/>	480p	mp4:\${SourceStreamName}_480p	
<input checked="" type="checkbox"/>	1080p	mp4:\${SourceStreamName}_1080p	

## Standard Bitrates



### Standard Bitrates

Customers using the movingimage Wowza platform will use these predefined transcoder settings to create adaptive streams:

Quality	Video Codec	Video Bitrate	Width	Height	Audio Codec	Audio Bitrate
360p	H.264	500Kbps	640px	360px	AAC	96Kbps
480p	H.264	750Kbps	854px	480px	AAC	96Kbps
720p	H.264	1500Kbps	1280px	720px	AAC	128Kbps
1080p	H.264	2100Kbps	1920px	1080px	AAC	128Kbps

## Ingest framerate



### Supported framerates

Only ingests with a framerate of **up to 30fps** for live streaming are supported.

- The **URL Templates** construct the live and DVR playback URLs. There are default templates the Wowza playback source, although you can modify them to match your environment.

URL Templates

! You can use the \$variables\$ indicated above to create the URL templates. Additionally, each Webcast will create a unique \$streamname\$ variable.

HLS URL \*

`https://$wowzahost$/$appname$/ngrp:$streamname$_$language$_all/master.m3u8`

HLS DVR URL \*

`https://$wowzahost$/$appname$/ngrp:$streamname$_$language$Dvr/playlist.m3u8?DVR`



If you want streaming quality equal to and lower than 1080p for Wowza Live, use this HRS URL template (note that this is default setting for streaming servers):

[https://\\$wowzahost\\$/\\$appname\\$/ngrp:\\$streamname\\$\\_\\$language\\$\\_all/master.m3u8](https://$wowzahost$/$appname$/ngrp:$streamname$_$language$_all/master.m3u8)

If you want streaming quality equal to and lower than 720p (i.e. 360p, 480p, 720p), use the following HRS URL template:

[https://\\$wowzahost\\$/\\$appname\\$/ngrp:\\$streamname\\$\\_\\$language\\$\\_720p/master.m3u8](https://$wowzahost$/$appname$/ngrp:$streamname$_$language$_720p/master.m3u8)

## Summary Table

This table briefly describes the settings found within the Streaming Server

General Information:	
★ Name:	This name will appear in the Live panel within the webcast configuration when choosing a streaming server.
Ingest Endpoints:	
★ Primary Ingest API Endpoint:	The URL to the primary Wowza API endpoint (e.g. " <b>http://primary.wowza/api</b> ").
★ Primary Ingest Username:	A username that can connect to the primary Wowza API endpoint.
★ Primary Ingest Password:	The password for the above username.
Backup Ingest API Endpoint:	The URL to the backup Wowza API endpoint (e.g. " <b>http://backup.wowza/api</b> "). This optional field allows you to set up a backup API, which will make an extra set of recordings of your live stream, a primary set and a backup set.  For example, imagine you have a webcast with two language streams, and you set it up to upload to a VideoManager after the conclusion of the live stream.  If you have also set up a backup API, four video files should be uploaded to your VideoManager: one for each language created from the primary API, and one for each language created from the backup API.
Backup Ingest Username:	A username that can connect to the backup Wowza API endpoint.
Backup Ingest Password:	The password for the above username.
These fields below are the templates used to generate URLs for each webcast. Here you can use placeholders to construct your streaming URLs. The placeholders will be filled in with the items in the "Default Variables" pane (see details below). You can add a <b>\$language\$</b> placeholder if you intend to stream webcasts in multiple languages; this allows creation of different URLs for each language you choose to support.	
Streaming Variables:	
★ Wowza Application Name:	The "Application Name" as used in the Wowza configuration. The value here will be used in Streaming URL templates wherever the <b>\$appname\$</b> placeholder is set.
★ Wowza Host:	The value here will be used in Streaming URL templates wherever the <b>\$wowzahost\$</b> placeholder is set. This could be the same server as the primary Wowza server (in the <b>Ingest Endpoints</b> ), or a proxy / caching server in front of the Wowza server.
★ Default Language:	The default language that you intend Webcast streams to use. New webcasts will automatically create a language set using this language. The short country code (e.g. en, de) will be used in the templates wherever the <b>\$language\$</b> placeholder is set.
Stream Name:	Note that this is not an editable field in this edit pane or any other. Each webcast is given a unique stream name when it is created (e.g. "59196e2d2d85b47d5c1a0c8f"). It will appear in the templates wherever the <b>\$streamname\$</b> placeholder is set.
URL Templates	
URL templates are used to generate the streaming URLs for each webcast. Here you can use placeholders to construct your streaming URLs. The placeholders will be filled in with the items in the "Streaming Variables" pane (see details above). You can add a <b>\$language\$</b> placeholder if you intend to stream webcasts in multiple languages; this allows creation of different URLs for each language you choose to support.	
★ HLS URL:	The URL template for the live stream (e.g. " <b>https://\$wowzahost\$/\$appname\$/\$streamname\$_\$language\$/master.m3u8</b> ")
★ HLS DVR URL:	The URL template for the post-live DVR stream (e.g. " <b>https://\$wowzahost\$/\$appname\$/\$streamname\$_\$language\$Dvr/playlist.m3u8?DVR</b> ")
Template / Variable Usage Example:	
Imagine you've just created a webcast and it's automatically generated stream name is, "59196e2d2d85b47d5c1a0c8f". If the following settings (using Akamai CDN payout) had been configured here... *	
HLS URL Template:	<b>https://\$wowzahost\$/\$appname\$/\$streamname\$_\$language\$Dvr/playlist.m3u8?DVR</b>
Default Language:	English ( <b>en</b> )
Stream Name:	<b>59196e2d2d85b47d5c1a0c8f</b> (note: this is automatically generated and can not be modified)

## Validate and save the configuration

1. Click the [Validate] button to check the validity of your entries. You will see the following message if successful:



2. Click the [Save] button to save your entries. The newly created streaming server will appear immediately in the list. You can edit it later by clicking the item in the list.

## Edit a Streaming Server configuration

1. In the navigation panel, click the Streaming Server you wish to edit.
2. Using the information shown above, make the required changes.
3. Click the [Validate] button to check the validity of your entries. You will see the following message if successful:



4. Click the [Save] button to save your entries.
5. The new settings will take effect when creating new Webcasts.

## Set a Streaming Server configuration as default

Setting a default Streaming Server configuration means that it will be selected automatically when creating a new Webcast.

1. In the navigation panel, click the action menu at the edge of the Streaming Server you want to set as default.
2. Click the option *Set as default*.
3. The Streaming Server is moved to the top of the list and marked with a green border.
4. The new default will take effect when creating new Webcasts.