

Endpoints for Kaltura Live Streaming

RTMP Endpoints

RTMP endpoints are the URLs that should be configured on your encoder for streaming live to Kaltura SaaS.

The endpoint contains the following information:

- **Primary RTMP URL** (mandatory) - This is the primary stream target URL.
- **Backup RTMP URL** (optional) - This is the backup stream target URL. If it exists, your encoder will broadcast to both primary and backup endpoints for cases when redundancy is required.
- **Stream name** - This is a unique identifier of different streams to the same endpoint. "Stream Name" is usually just the number '1' unless more than one video flavors or multiple soundtracks are being streamed simultaneously. If you are broadcasting multiple bit-rates or multiple audio tracks from your encoder, you will need to use different stream names for the different flavors. Check [this article](#) for further details.

⚠ Primary to Backup switch is not always seamless and may require a browser refresh from the viewer. To get the "Seamless Failover" experience one should use Kaltura Player V7 with the "Live" plugin enabled. Also, in case of a primary stream failure, the backup stream VOD is not extracted automatically. Hence, a manual VOD restore request is needed.

RTMPS (RTMP over SSL)

RTMPS (RTMP over SSL) is the encrypted version of the RTMP protocol. This means you can send live content in an encrypted, secured and reliable way from your encoder to Kaltura cloud.

To use RTMPS, simply replace the `rtmp://` prefix and port number of the RTSP endpoint.

For example:

RTMP endpoint: `rtmp://1_gdrt137u.p.kpublish.kaltura.com:1935/kLive/?t=b9106yth4`

RTMPS endpoint: `rtmps://1_gdrt137u.p.kpublish.kaltura.com:443/kLive/?t=b9106yth4`

Regenerating the RTMP stream token

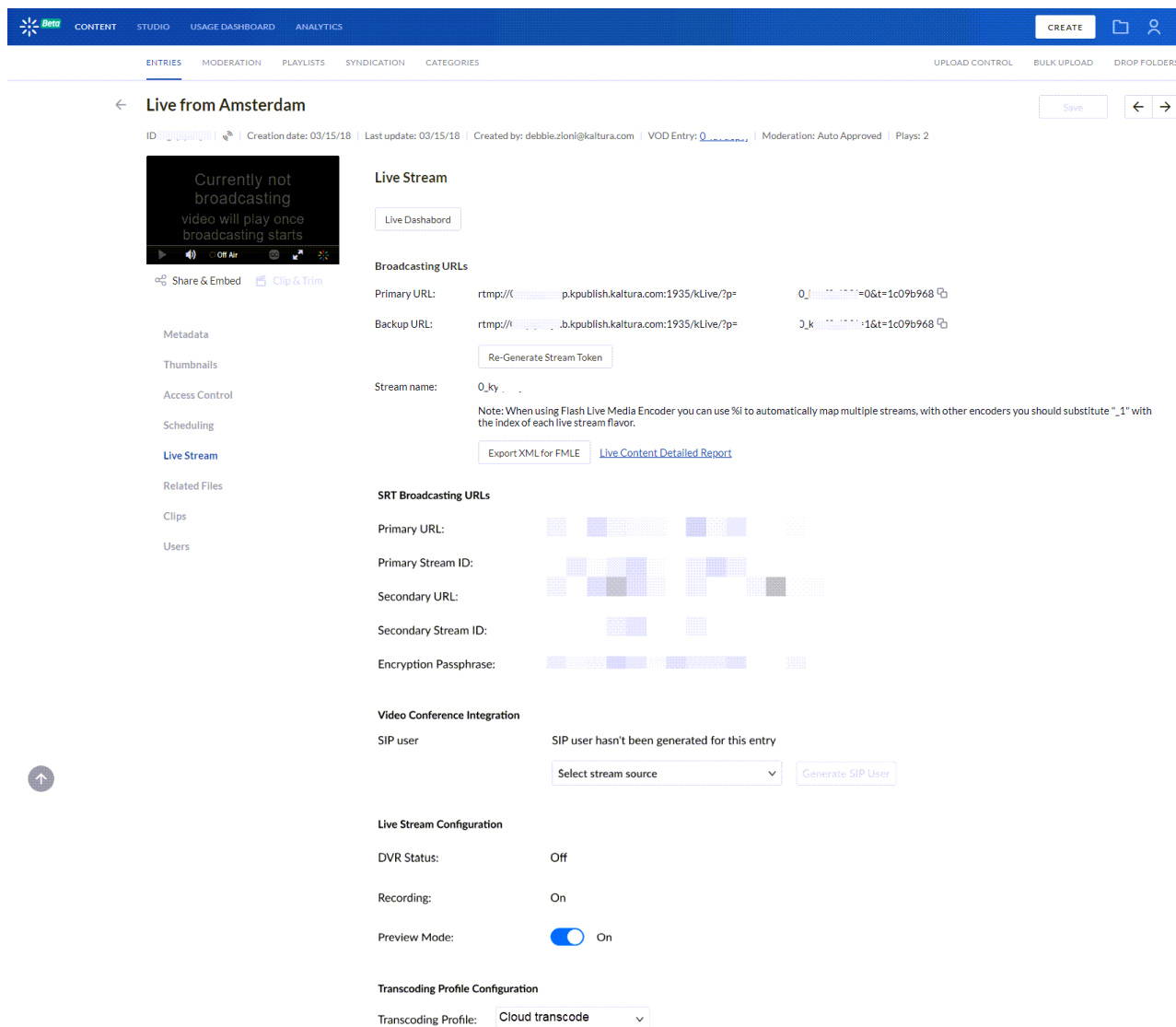
The RTMP token is unique per entry ID and ensures that the RTMP URL will not be manipulated.

if you try to broadcast with an incorrect token (or without one), your broadcast will be rejected.

To ensure that security requirements are met and to secure sensitive data, an option to regenerate the live stream token is provided. You can regenerate the stream token as often as required, however, please note that each time you regenerate the stream token you must update your encoder settings with the new token. Broadcasting with the previous token will be rejected.

A confirmation box is displayed notifying you of these changes if you choose to regenerate the stream token.

Sensitive information is blurred in the following graphic intentionally.



The screenshot shows the Kaltura interface for configuring a live stream titled "Live from Amsterdam". The top navigation bar includes "Beta", "CONTENT", "STUDIO", "USAGE DASHBOARD", and "ANALYTICS". The main content area is divided into a left sidebar with navigation links (ENTRIES, MODERATION, PLAYLISTS, SYNDICATION, CATEGORIES) and a right sidebar with "UPLOAD CONTROL", "BULK UPLOAD", and "DROP FOLDERS".

The main configuration area for the live stream includes:

- Live Stream** section with a "Live Dashboard" button.
- Broadcasting URLs** section showing Primary and Backup URLs, a "Re-Generate Stream Token" button, and a "Stream name" field.
- SRT Broadcasting URLs** section with fields for Primary URL, Primary Stream ID, Secondary URL, Secondary Stream ID, and Encryption Passphrase.
- Video Conference Integration** section with a "SIP user" field and a "Generate SIP User" button.
- Live Stream Configuration** section with "DVR Status" (Off), "Recording" (On), and "Preview Mode" (On).
- Transcoding Profile Configuration** section with a "Transcoding Profile" dropdown set to "Cloud transcode".

The left sidebar also includes a "Share & Embed" section with a "Clip & Trim" button, and a "Metadata" section with links to "Thumbnails", "Access Control", "Scheduling", "Live Stream", "Related Files", "Clips", and "Users".

The confirmation box displayed:

Re-Generate Stream Token?

Re-generating the token requires you to update your encoder settings with the new token. Broadcasting with the old token will be rejected. Are you sure?

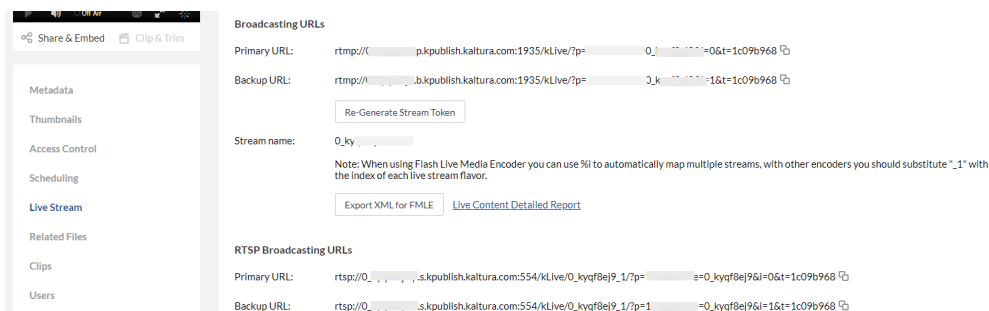
Configuring RTMP endpoints in your encoder

There are 2 ways to configure the RTMP endpoints in your encoder:

- [Manually](#)
- [Automatically](#)

Manually

Copy and paste the RTMP URLs and stream name from the entry page in the Kaltura Management Console (KMC). You can copy the URLs to your clipboard for later use.



Broadcasting URLs

Primary URL: `rtmp://[redacted].kpublish.kaltura.com:1935/kLive/?p=[redacted]&token=[redacted]`

Backup URL: `rtmp://[redacted].kpublish.kaltura.com:1935/kLive/?p=[redacted]&token=[redacted]`

Stream name: `O_ky[redacted]`

Note: When using Flash Live Media Encoder you can use %i to automatically map multiple streams, with other encoders you should substitute ".1" with the index of each live stream flavor.

[Live Content Detailed Report](#)

RTSP Broadcasting URLs

Primary URL: `rtsp://[redacted].kpublish.kaltura.com:554/kLive/O_kyqf8ej9_1/?p=[redacted]&token=[redacted]`

Backup URL: `rtsp://[redacted].kpublish.kaltura.com:554/kLive/O_kyqf8ej9_1/?p=[redacted]&token=[redacted]`

Automatically

Kaltura can export the RTMP settings into an Adobe FMLE configuration XML that can be imported to several encoders (such as FMLE and Wirecast). If your encoder can import FMLE XML, click "Export XML for FMLE" and save the file on your computer, then import the file into your encoder.

Beta

CONTENT

STUDIO

USAGE DASHBOARD

ANALYTICS

CREATE

ENTRIES

MODERATION

PLAYLISTS

SYNDICATION

CATEGORIES

UPLOAD CONTROL

BULK UPLOAD

DROP FOLDER

←

Live from Amsterdam

Save

←

→

ID: [redacted]

Creation date: 03/15/18

Last update: 03/15/18

Created by: debbie.zioni@kaltura.com

VOD Entry: [redacted]

Moderation: Auto Approved

Plays: 2

Currently not broadcasting
video will play once
broadcasting starts

Off Air

Share & Embed

Clip & Trim

Metadata

Thumbnails

Access Control

Scheduling

Live Stream

Related Files

Clips

Users

Live Stream

Live Dashboard

Broadcasting URLs

Primary URL: rtmp://[redacted].kpublish.kaltura.com:1935/kLive/?p=[redacted]&t=1c09b968

Backup URL: rtmp://[redacted].kpublish.kaltura.com:1935/kLive/?p=[redacted]&t=1c09b968

Re-Generate Stream Token

Stream name: 0_ky

Note: When using Flash Live Media Encoder you can use %i to automatically map multiple streams, with other encoders you should substitute "_1" with the index of each live stream flavor.

Export XML for FMLE

Live Content Detailed Report

RTSP Broadcasting URLs

Primary URL: rtsp://0_[redacted].spublish.kaltura.com:554/kLive/0_kyqf8ej9_1/?p=[redacted]&t=0_kyqf8ej9&i=0&t=1c09b968

Backup URL: rtsp://0_[redacted].spublish.kaltura.com:554/kLive/0_kyqf8ej9_1/?p=1[redacted]&t=0_kyqf8ej9&i=1&t=1c09b968

SRT Broadcasting URLs

Primary URL: [redacted]

Primary Stream ID: [redacted]

Secondary URL: [redacted]

Secondary Stream ID: [redacted]

Encryption Passphrase: [redacted]

Video Conference Integration

SIP user

SIP user hasn't been generated for this entry

Select stream source

Generate SIP User

Live Stream Configuration

DVR Status: Off

Recording: On

Preview Mode: On

Transcoding Profile Configuration

Transcoding Profile: Cloud transcode

RTMP URL structure

The RTMP URL structure is:

```
rtmp://[entryID].[p/b].kpublish.kaltura.com:1935/kLive/?t=[token]
```

- entryID - the unique identifier of your live stream in Kaltura. The entryID is auto-generated by Kaltura servers when creating a live entry
- p/b - "p" for primary, "b" for backup stream
- token - an auto generated token which is used to secure your RTMP URL. Streaming will be possible only when the token is correct.

Example: `rtmp://1_gdrt137u.p.kpublish.kaltura.com:1935/kLive/?t=b9106yth4`

Geographical considerations - using regional RTMP endpoints

Kaltura Geo-redundant data-centers are located in the US (New York and Palo Alto), In some cases, when broadcasting to Kaltura from outside of the US, there may be bandwidth issues and fluctuation.

To overcome this issue, Kaltura has setup up regional RTMP endpoints that maintain persistent connections to our US data-centers to eliminate most of the bandwidth issues that occur due to geography.

The proxies serve the following regions:

- EMEA (Frankfurt, Germany)

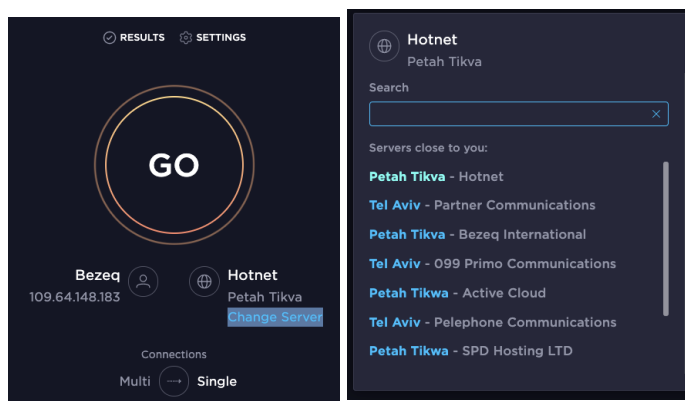
The regional proxies are fully redundant (primary/backup).

If you are broadcasting outside of the US and encounter connectivity or other issues, please contact Kaltura Customer Care and we will route you via a local regional RTMP endpoint.

We recommend testing your upload speed via <https://speedtest.net>

Make sure to:

- Select the server location that best fits your location in order to simulate to properly test the upload speed.
- Select Single from the connections options.



We recommend testing several times as bandwidth can fluctuate.

SRT ingestion

We also support Secure Reliable Transport (SRT) ingestion for Live broadcasts. SRT is an open source transport technology that optimizes streaming performance across unpredictable networks, such as the Internet. The SRT protocol brings several benefits

in areas such as video quality, low latency, and end-to-end security.

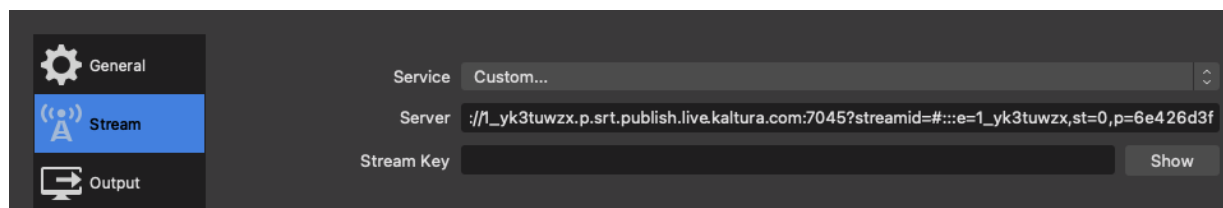
Use KMC or liveStream.get API call to get endpoints URLs and stream IDs for the primary and the backup SRT streams.

To enable end to end AES-128 encryption for the stream, set a 10 to 79 alphanumeric passphrase from KMC or using the API.

How to stream using OBS encoder

1. Use the streaming option.
2. Use the URL as the Server Address.
3. Concatenate the stream ID string to the URL by adding **?streamid=** between the URL and the stream ID.
4. Leave the Stream Key field empty.

<URL>?streamid=<stream_ID>



Currently Supported:

- Passthrough
- Transcoding
- Redundancy and Failover
- DVR
- Recording

[template("cat-subscribe")]