

Creating a Live Linear Stream (Simulive) from a Playlist of Recorded Videos

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Introduction

This article explains how to stream a playlist of pre-recorded videos as a Live Stream, using Kaltura and several free, open-source tools. Streaming pre-recorded videos as a "Live Linear" stream provides many benefits for certain use cases. It ensures that viewers view the content sequentially, without skipping backward or forward through the playlist (like watching TV). It also allows a live stream to be simulated for viewers during times when real live content is not available. Live Linear streams can also be useful for public displays (including digital out-of-home advertising), or websites that normally contain live shows. Herein, you will learn the steps to set up and configure Live Linear.

⚠️ **Note:** The illustrations used herein depict a live stream of marketing videos Kaltura created for our educational clients.

Prerequisites for Streaming

To enable the live stream, you must:

- Have a computer (Mac, Windows, or Linux) available for the duration of time you wish your simulated live stream to play.

Note: The instructions herein are based on a Windows 10 computer. Other operating systems will work similarly.

- Have an active Kaltura account, enabled for Live Streaming.
- Download and install the VLC Media Player. **You must install VLC Media Player first.**
- Download and install the Open Broadcaster Software (OBS) Studio.

Setup

Log in to your Kaltura KMC account. See the section [Getting Started](#) in the [Kaltura Management Console User Manual](#).

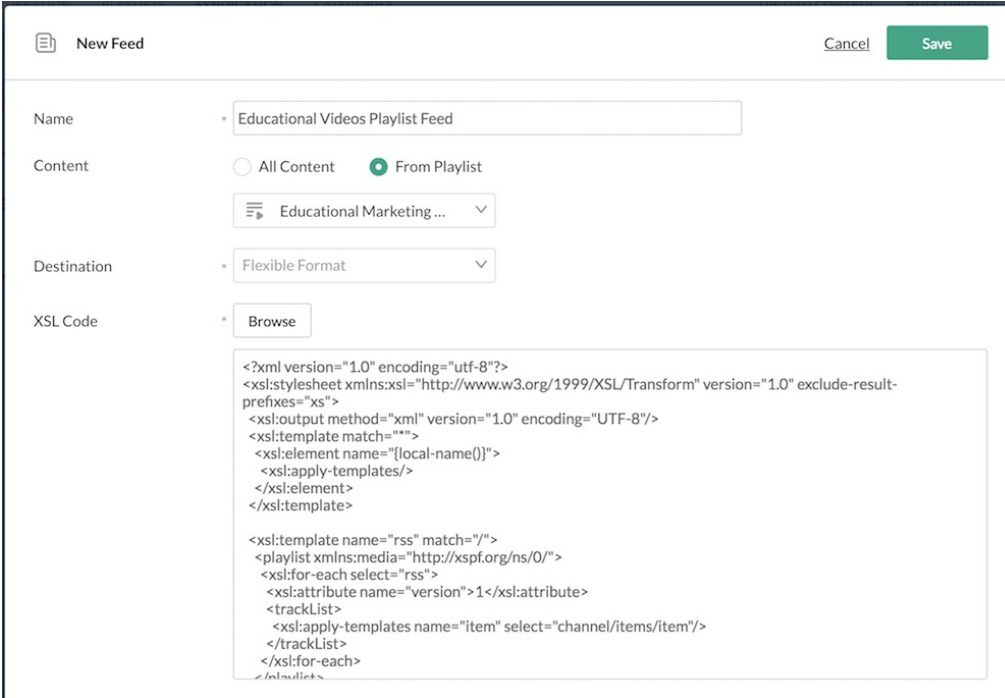
Upload Videos and Create a Playlist

1. Upload your desired videos using KMC. See the section [Upload Media](#) in the [Kaltura Management Console User Manual](#).
2. Create a Manual Playlist of the videos that you would like to have played. See the section [Creating a Manual Playlist](#) in the [Kaltura Management Console User Manual](#).

Create Syndication Feed

1. Create a Syndication Feed in KMC. See section titled [Setting up Syndication](#) in the Kaltura Management Console User Manual. Configure the settings as follows:

Feed Name	Type a feed name.
Select Content	1. Select Only content from this playlist. 2. Pick the playlist you created earlier.
Feed Type	Select <i>Flexible Format Feed</i>
XSL Code	Unzip and upload this XSLT file (xspf.xslt).



New Feed Cancel Save

Name

Content All Content From Playlist

Destination

XSL Code

```
<?xml version="1.0" encoding="utf-8"?>
<xsl:stylesheet xmlns:xsl="http://www.w3.org/1999/XSL/Transform" version="1.0" exclude-result-
prefixes="xs">
  <xsl:output method="xml" version="1.0" encoding="UTF-8"/>
  <xsl:template match="*">
    <xsl:element name="{local-name()}">
      <xsl:apply-templates/>
    </xsl:element>
  </xsl:template>

  <xsl:template name="rss" match="/">
    <playlist xmlns:media="http://xspf.org/ns/0/">
      <xsl:for-each select="rss">
        <xsl:attribute name="version">1</xsl:attribute>
        <trackList>
          <xsl:apply-templates name="item" select="channel/items/item"/>
        </trackList>
      </xsl:for-each>
    </playlist>
  </xsl:template>
</xsl:stylesheet>
```

Figure 1. **Add Video Feed Window Settings**

2. Copy the Feed URL. You will need this later to configure OBS Studio.

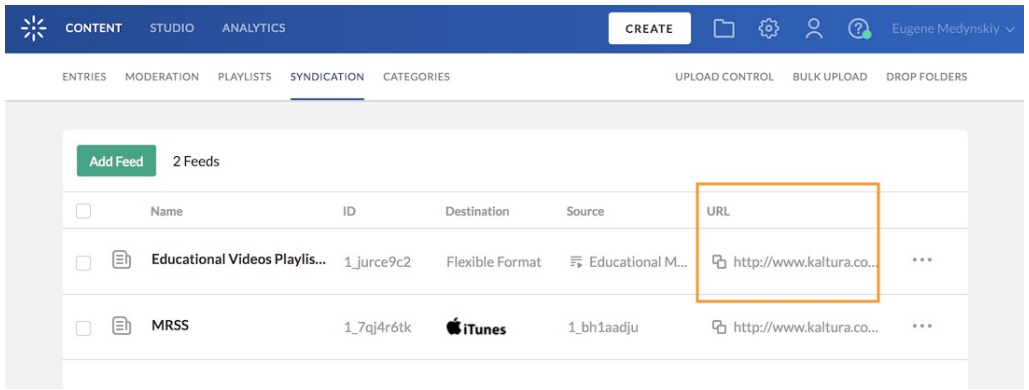


Figure 2. **Feed URL Screen**

Create Live Streaming Entry

1. Create a Live Streaming Entry in KMC. See the section [Creating a Live Streaming Entry](#) in the Kaltura Management Console User Manual.
2. Configure the settings as follows.

Live Stream Type	Kaltura Live Streaming
Name	A name for your stream
Description	A description for your stream (not required)
Live Transcoding Profile	Select one of the available options.
Enable Live DVR	Off (Recommended)
Enable Recording	Off (Recommended)
Auto-start	On (Recommended)

Create Live Stream Entry

Stream Type	<input type="text" value="Kaltura Live Streaming (HDS/HLS/DASH)"/>
Name	<input type="text" value="Educational Video Continuous Loop"/>
Description	<input type="text"/>
Live Transcoding Profiles	<input type="text" value="Passthrough"/>
Live DVR	<input type="checkbox"/> Off <small>Seeking to previous parts of the live stream. The DVR window is 2 hours by default.</small>
Recording	<input type="checkbox"/> Off <input type="text" value="Append recorded content to a single entry"/>
Preview Mode	<input type="checkbox"/> Off

Figure 3. Add New Stream Window Settings

⚠️ If you do not see the option to create a live streaming entry, your account is not provisioned for Live Streaming. Please contact your Kaltura representative for assistance.

2. View the new Live Stream entry details when prompted.

3. On the left side of the screen select **Live Stream**. In the Broadcasting URLs section, note the Primary URL and Stream name. You will need these later to stream to this entry.

Educational Marketing Videos Continuous Loop

ID: 1_mfn5obz2 | Creation Date: 07/01/18 | Last Update: 07/01/18 | Created By: eugene.medynskiy@kaltura.com

Save
← →

Currently not broadcasting
video will play once broadcasting starts

▶ 🔊 ⏻ Off Air 🔍 ⌂

🔗 Share & Embed
📄 Editor

Metadata

Thumbnails

Access Control

Scheduling

Live Stream

Related Files

Clips

Users

Live Stream

🏠 Live Dashboard

Broadcasting URLs

Primary URL: rtmp://1_mfn5obz2.p.kpublish.kaltura.com:1935/kLive?t=f136

Backup URL: rtmp://1_mfn5obz2.b.kpublish.kaltura.com:1935/kLive?t=f136

Re-Generate Stream Token

Stream name: 1_mfn5obz2_1

Export XML for FMLE
Live Content Detailed Report

RTSP Broadcasting URLs

Primary URL: rtsp://1_mfn5obz2.p.s.kpublish.kaltura.com:554/kLive/1_mfn5obz2_1?t=f136

Backup URL: rtsp://1_mfn5obz2.b.s.kpublish.kaltura.com:554/kLive/1_mfn5obz2_1?t=f136

Figure 4. **Primary URL and Stream Name**

Software Download and Installation

⚠️ Kaltura does not provide technical support for the VLC Media Player or the OBS Studio.

⚠️ You must install VLC Media Player first.

Download and Install VLC Media Player

1. Navigate to <http://download.videolan.org/pub/videolan/vlc/>
2. Click on 2.2.8/ (you may need to scroll down the list to see 2.2.8/)

Note: As of September 2018, you must use VLC version 2.2.x. The brand new 3.x version does not yet integrate with OBS. This has no impact on playback quality or user experience. The 2.2.x version is well-maintained and continues to be popular with most users.
3. Click on win64 or win32.

Note: You may use either the 64-bit or the 32-bit version, but the bit versions for both VLC Media Player and OBS Studio must match. For example, you cannot choose 32-bit for VLC and 64-bit for OBS.

4. Wait for download to finish then complete the installation on your machine.
Note: Uncheck the "Regularly check for VLC updates" option, because you do not want to upgrade to the latest (3.x) version.

Download and Install OBS Studio

1. Navigate to <https://obsproject.com/>
2. Click on the latest version (64-bit or 32-bit).
Note: The bit versions for both VLC Media Player and OBS Studio must match. For example, you cannot choose 32-bit for VLC and 64-bit for OBS.
3. Wait for download to finish then complete the installation on your machine.
4. Launch the software.
5. Decline Auto Configuration Wizard.
6. Mute the Desktop and Mic audio in the "Mixer" to avoid feedback or streaming from your machine's microphone.
7. On the far right side of the screen, click on Studio Mode.

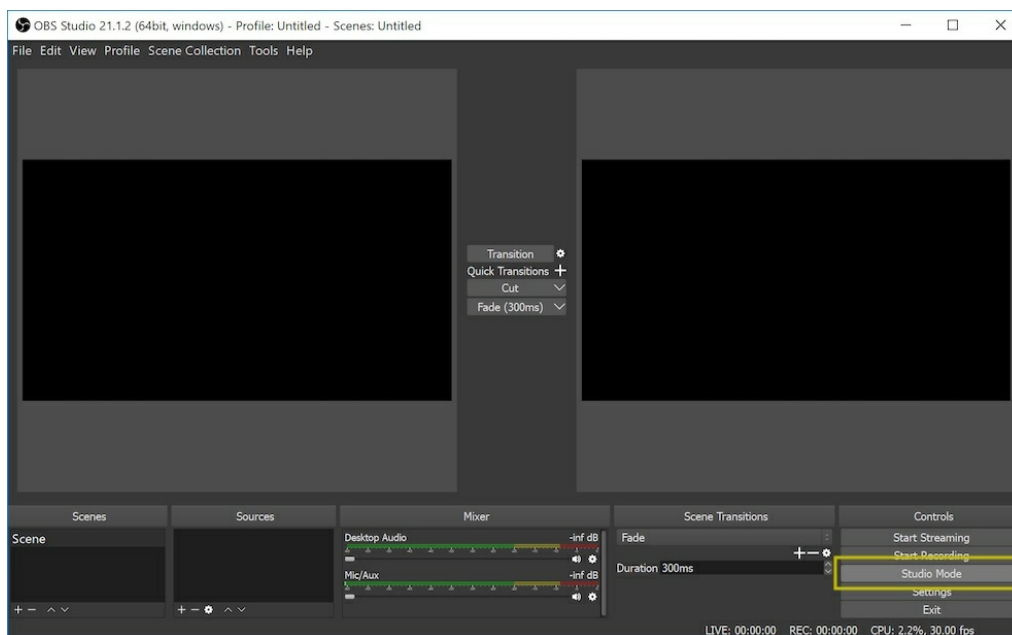


Figure 5. **OBS Studio Mode**

8. Under Sources, click the + button to confirm that VLC Video Source is shown in the list. If it is not shown, you either failed to install VLC first or the bit-version (32-bit or 64-bit) you installed does not match the bit-version of OBS that you are running. You must uninstall and reinstall in the correct order.

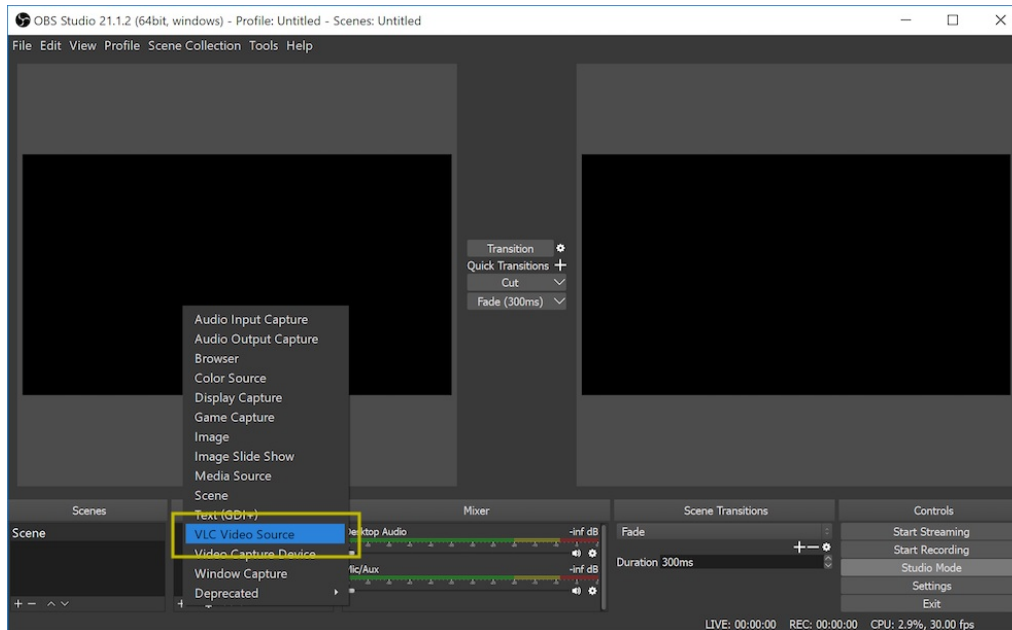


Figure 6. **VLC Video Source**

Configure the OBS Studio

1. Launch the software if it is not already open.
2. Under Sources, click the **+** button and choose **VLC Video Source**.
3. Make sure **Create new** is toggled on and type a name for your stream output and click **OK**.

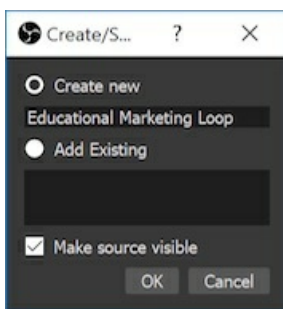


Figure 7. **Create New VLC Video Source**

4. Select **Loop Playlist**, if desired.
5. Under Visibility Behavior, select **Always play even when not visible**.
6. Click the **+** button to the right of Playlist entry field and click **Add Path/URL**.
7. Copy and paste the Feed URL here, directly followed by `&name=ANY_STREAM_NAME_YOU_CHOOSE.xspf`

⚠️ The URL you enter must end in .xspf to be recognized correctly by OBS.

⚠️ It is best practice to use the current date and time, for example &name=2019-01-01-1030.xspf. This allows you to easily check when the playlist was added to the system.

8. Click OK.

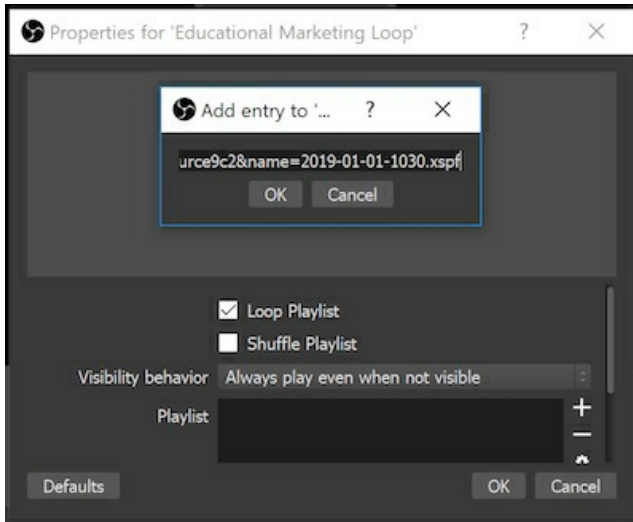


Figure 8. **Configuring Properties for New VLC Video Source and Adding Feed URL**

The playlist videos now play in the preview window on the left hand side of the screen. Adjust its size as needed to fill the canvas.

9. Click the upper left hand corner of the screen and choose **Settings**.

10. Click **Video** in the list on the left and confirm your streaming settings.

Base (Canvas) Resolution	Select based on your input resolution.	
Output (Scaled) Resolution	1280x720 (Recommended)	
Downscale Filter	Bicubic (Recommended)	
Common FPS Values	30 (Recommended)	

⚠️ To stream at a resolution higher than 720p, or at a framerate faster than 30fps, please contact your Kaltura representative.

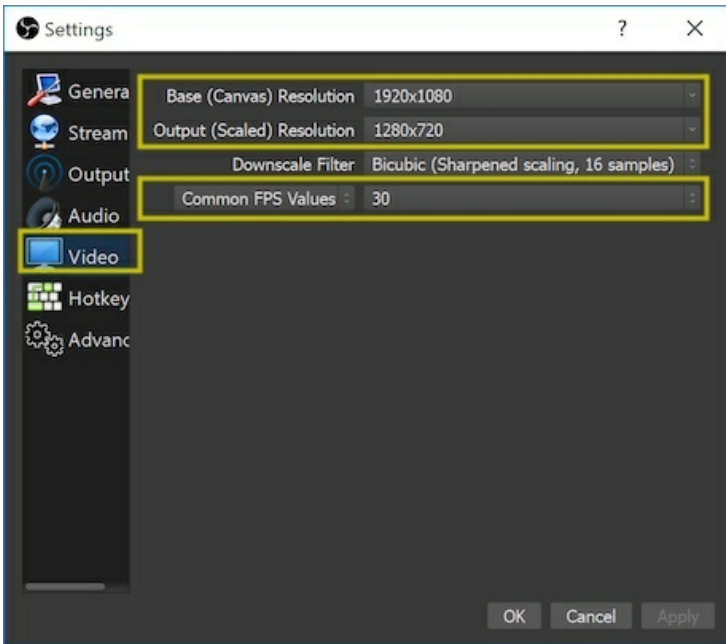


Figure 9. **Video Settings**

11. Click Output in the list on the left and ensure the Video Bitrate and Encoder settings are as desired.

Video Bitrate	2500 (or match to video source)
Audio Bitrate	128 (or match to video source)

⚠ Please review the [Encoder Settings](#) section of [Kaltura's Live Streaming Best Practices Guide](#).

12. Click **Stream** in the list on the left and select **Custom Stream Server** as the Stream Type.

13. In the URL field, copy and paste the [primary Live Entry RTMP URL](#).

14. In the Stream Key field, copy and paste the [Stream Name](#) from the Live Entry parameters.

15. Leave Use Authorization unchecked.

16. Click **OK**.

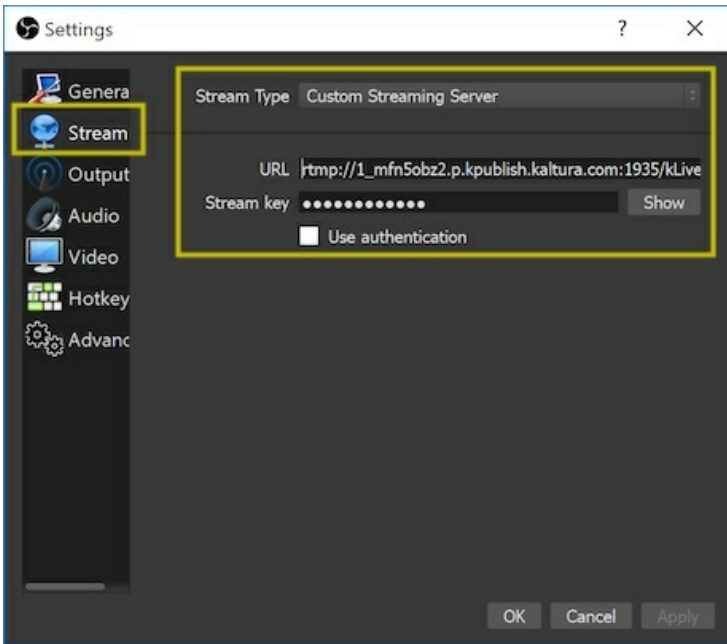


Figure 10. **Stream Settings**

Begin the Stream

1. Pull up a Kaltura Player that is looking at the stream. "Currently not broadcasting" displays.
2. In the lower right corner of the OBS Studio interface, click Start Streaming.
3. In the center of the OBS Studio interface, click Transition.

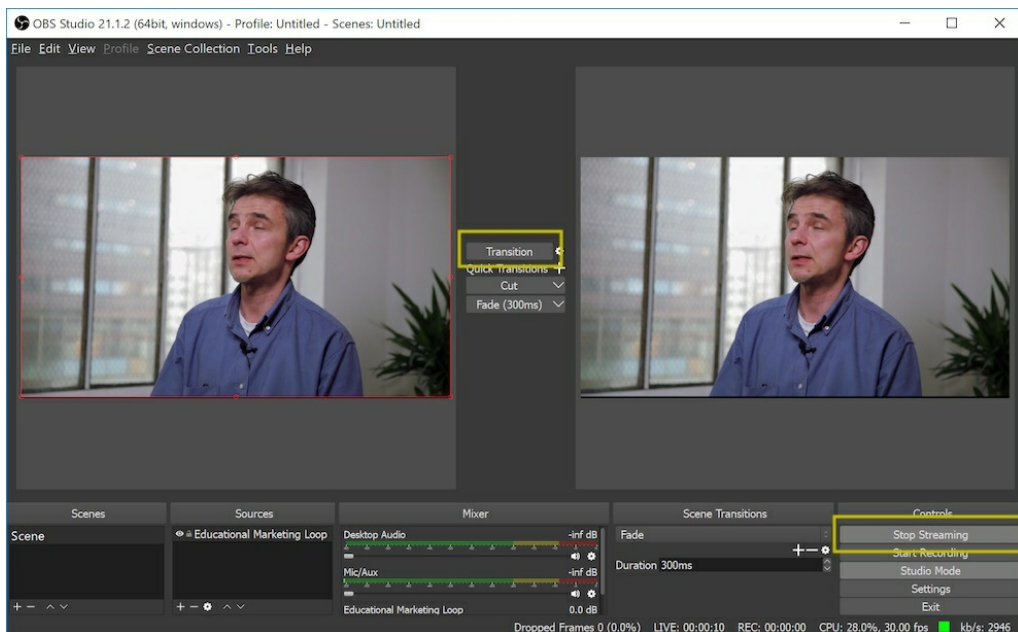


Figure 11. **Transition Stream**

4. The Kaltura Player should display that it is live within 1-2 minutes. Click the Play button to play the video.

You may leave the OBS Studio application running as long as you would like the stream to play.

Change/Update the Playlist

The OBS reads the playlist once and keeps a copy of it to play when looping.

To change your playlist

1. Edit the Manual playlist using the Kaltura Playlist Editor. See the article [Creating and Configuring Playlists](#).
2. Edit the VLC Video Source in OBS Studio.
3. Update the Feed URL with a new `&name=NEW_STREAM_NAME.xspf` parameter. Save the Feed.

Note: A different `&name=` parameter must be appended to the URL, and the URL must end in `.xspf`

The feed switches immediately so be mindful about the timing of your action.
