



# Livestream Studio™

## Release Notes & New Features

For use with Livestream Studio™ version 4.2.0

*Published on February 16, 2017*



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# Release Notes

## 4.2.65 Release Notes

### New features

NEW → Live Simulcasting - ability to stream to multiple streaming providers simultaneously

- You no longer need to choose where your viewers have to watch your content. Followers from your various channels (Facebook, YouTube, etc.) can now watch from their preferred location while you stream to all of them at the same time.

NEW → Hardware video encoding via two methods:

- Using Intel® Quick Sync Video technology (for [Intel's CPUs that have integrated graphics core](#)).
- Using NVENC (via NVIDIA GeForce video cards with Kepler, Maxwell, or Pascal GPU architecture. [Learn more.](#))

NEW → 4K streaming when using hardware accelerated encoding

- Also includes more multi-bitrate quality options

NEW → Dropbox Integration for GFX Module

- Import GFX templates from Dropbox account
- Export GFX templates to Dropbox account
- Use Dropbox as filesystem for GFX layers (CSV, XLS)
- Use Dropbox for GFX dynamic data images

NEW → GFX in Web Control

- Add graphics layers from Livestream Graphics Store
- Import graphics layers from your Dropbox account
- Control layers visibility
- Edit dynamic data



## 4.2.65 Release Notes (continued)

### New features (cont'd)

- Auto Push functionality
- Edit layer settings (auto loop, update interval, etc.)
- Supports these GFX layer types: CSV, Excel, RSS, Clock, Timer, CSV over HTTP

### Improvements

#### Streaming

- Simplified and unified streaming quality settings and naming across all streaming providers
- Streaming to Facebook events
- Added YouTube Live "Stream Now" functionality
- Added Facebook's "Continuous Streaming" functionality

#### Web Control

- Improved Web Control FPS and smoothness
- Added VP8/VP9 switch in Web Control settings
- Updated design of "Select Studio" page
- Added notification about outdated browser version
- Added ability to control Web Control multiview to Web Control users

#### Remote Camera

- Improved Remote Livestream Event smoothness
- Added recommendations for Studio settings when using Mevo remote camera

## 4.2.65 Release Notes (continued)

### Improvements (cont'd)

- Improved stability of Mevo remote camera for long sessions

### Bug Fixes

- Fixed bug where XLR input audio would drop out
- Fixed bug where Remote Livestream Event would restart every 10 minutes
- Fixed bug where Studio would freeze when Live Interview was activated
- Fixed bug where Studio would crash when opening a link in the Microsoft Edge browser
- Fixed bug where Studio would crash when stopping the stream from Mevo remote camera
- Fixed crash on start streaming to incorrect RTMP server
- Fixed bug with Web Control slow connection status
- Fixed rare crash on change project
- Fixed rare crash with Mevo remote camera
- Fixed bug that caused a logout every 24 hours in Web Control
- Fixed infinite black screen after page-reload in Web Control

# Stream to Multiple Providers

It is now possible to stream to multiple providers at the same time with Livestream Studio.

Your video is only encoded once, so CPU demands for this feature are similar to those for streaming to just one provider.

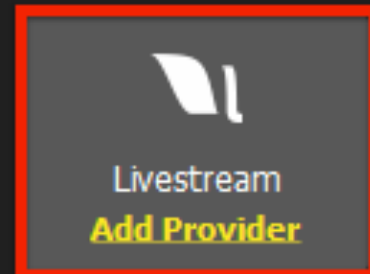
However, bandwidth requirements will be higher.

Multiple streams will use as much bandwidth as the qualities selected for each provider.

**Example:** If 720p + 480p + 360p + 240p (4862 Kbps) Stream Quality is selected for Livestream and 'Highest Quality' is selected for Facebook (in this case, 720p), then the total outgoing bitrate will average  $4862 + 2128 = \mathbf{6990\ Kbps}$ . We always recommend having twice the upload speed on your network as the selected bitrate, with about **14 Mbps upload speed** in this case.

## Set Up Your Stream

Select a provider below to configure stream settings



Facebook

RTMP

RTMP



Stream to File



Zixi



YouTube



Periscope

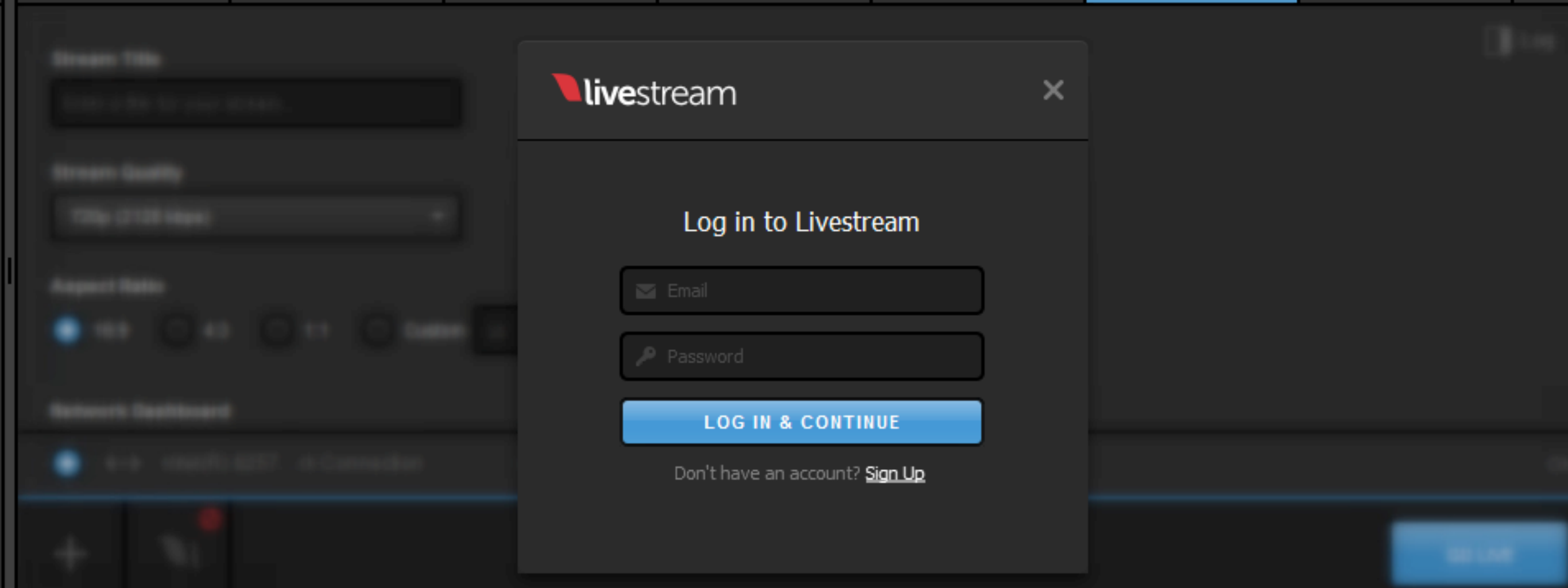
USTREAM

Ustream

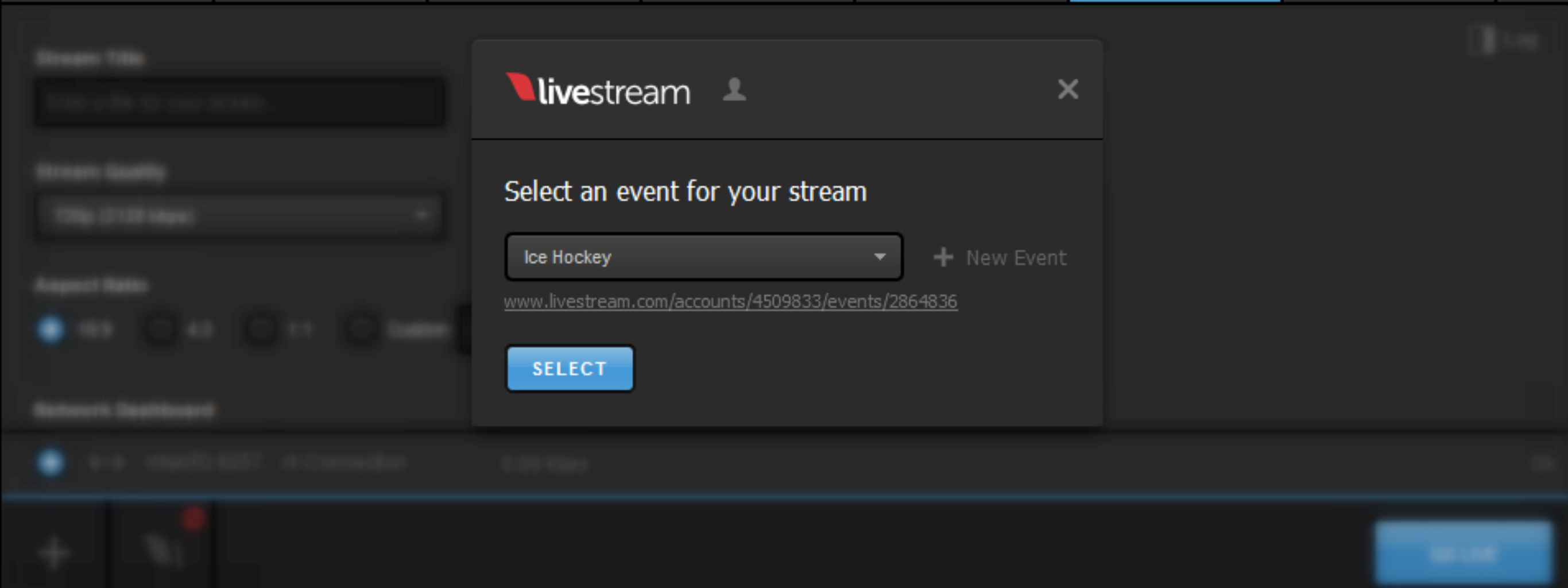


Twitch

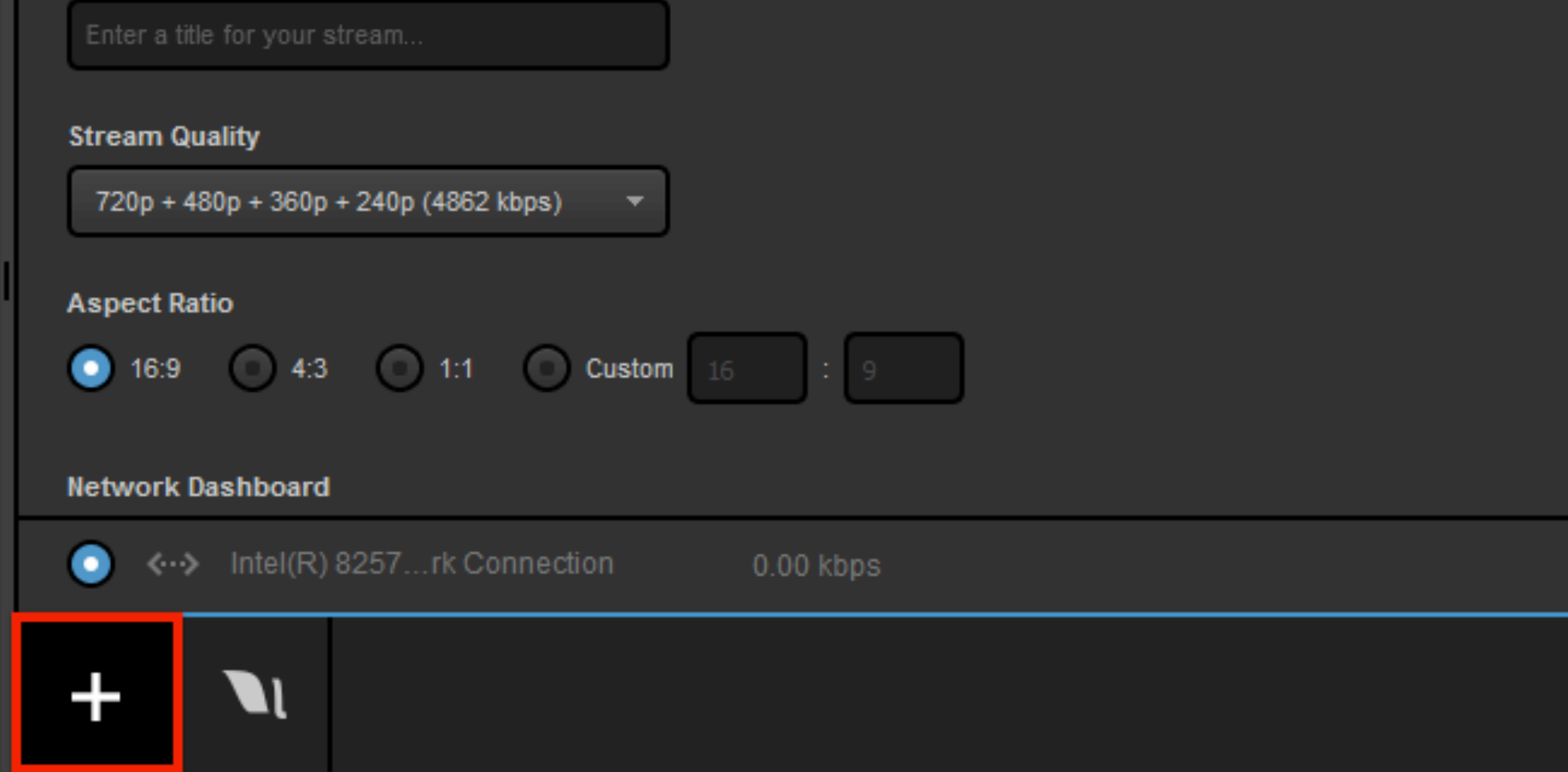
Start by clicking a provider's logo to add it to Studio (this example will use Livestream).



Log in to the selected provider to configure your stream settings.

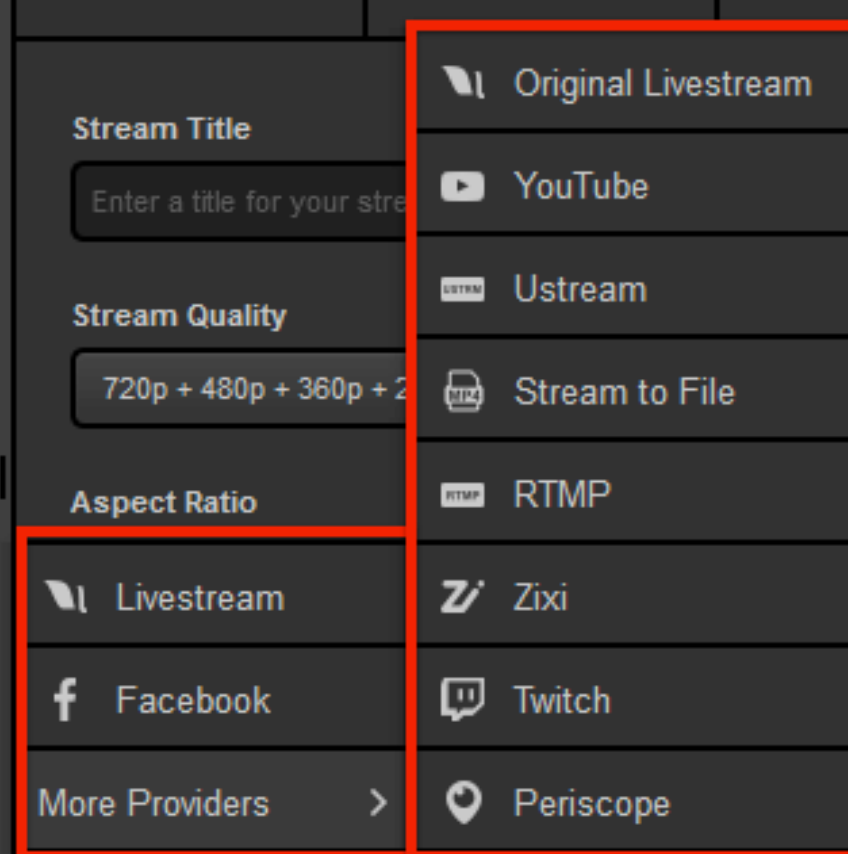


Choose your stream destination (i.e. the Livestream event, RTMP server, etc. to which you want to broadcast), then click 'Select.'

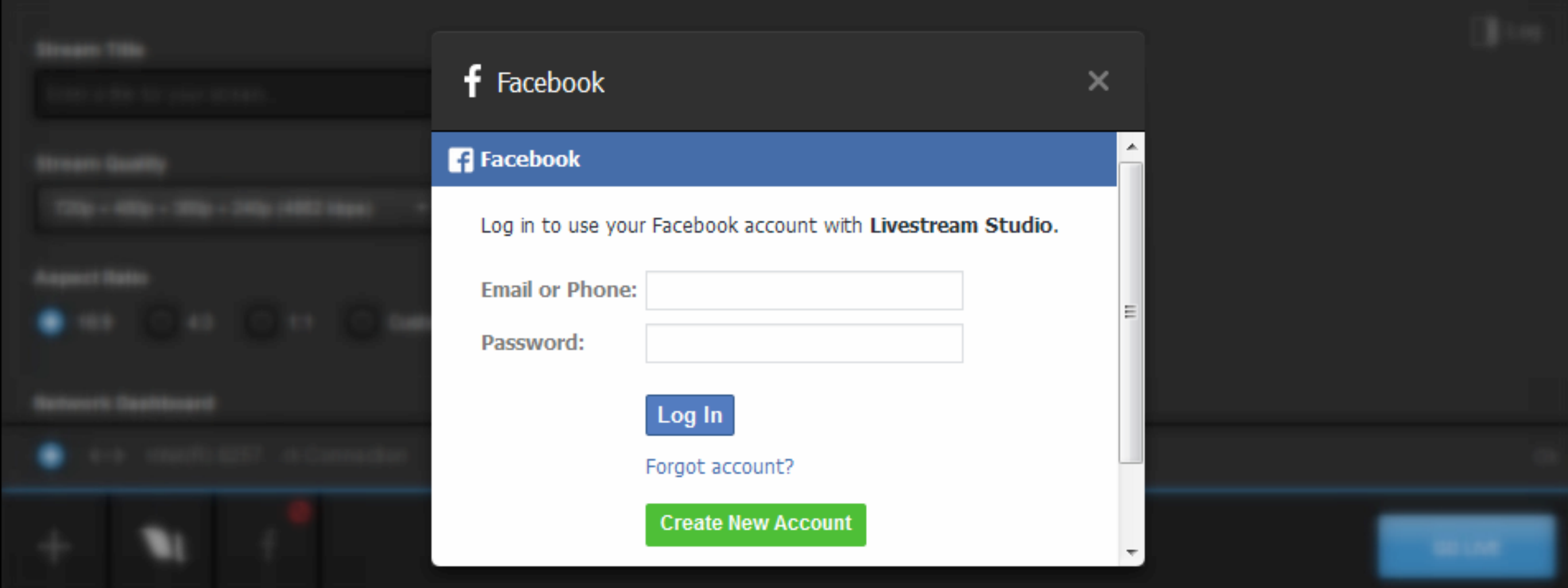


Now, add a second provider by clicking the '+' button in the lower left corner of the Stream module.

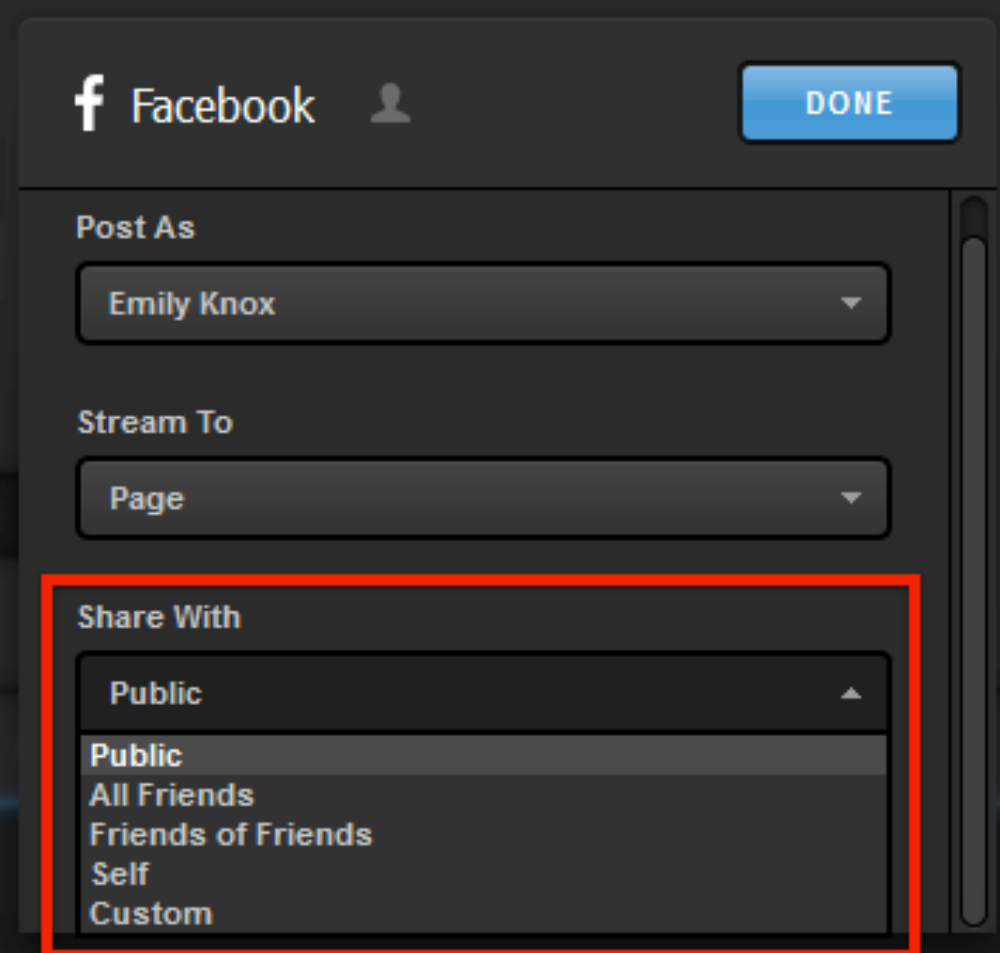
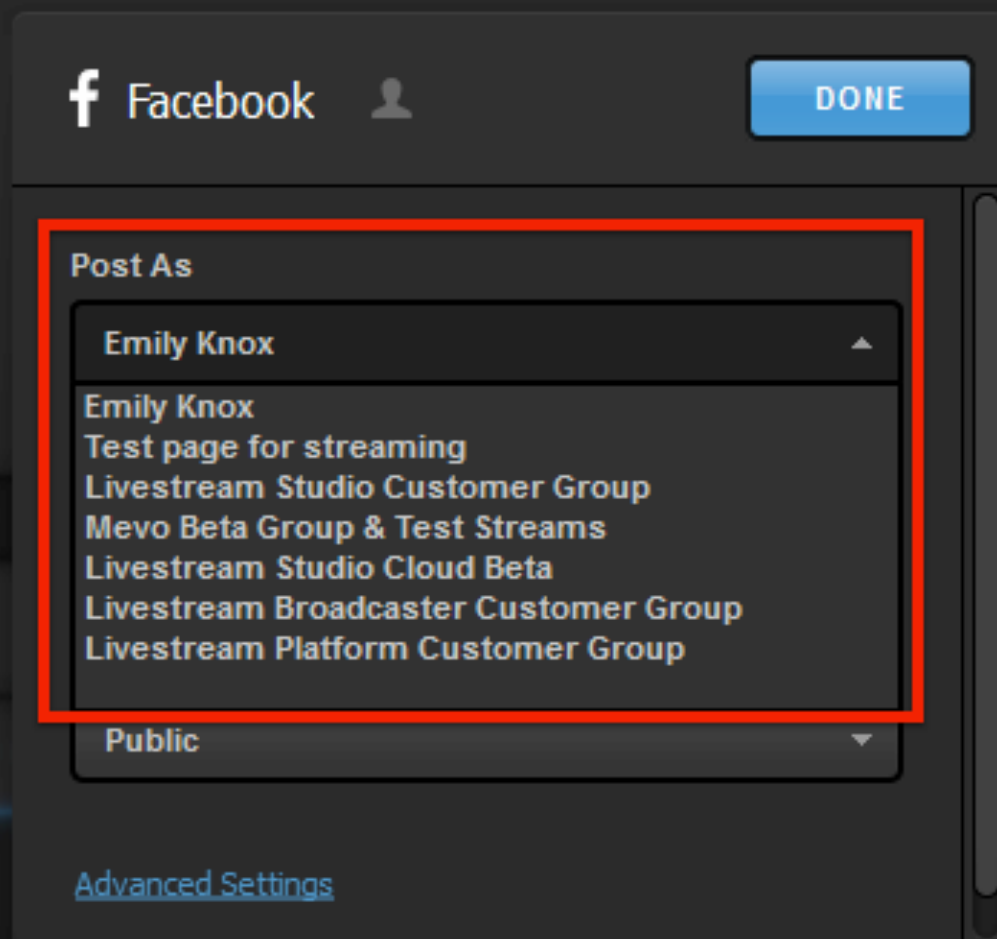




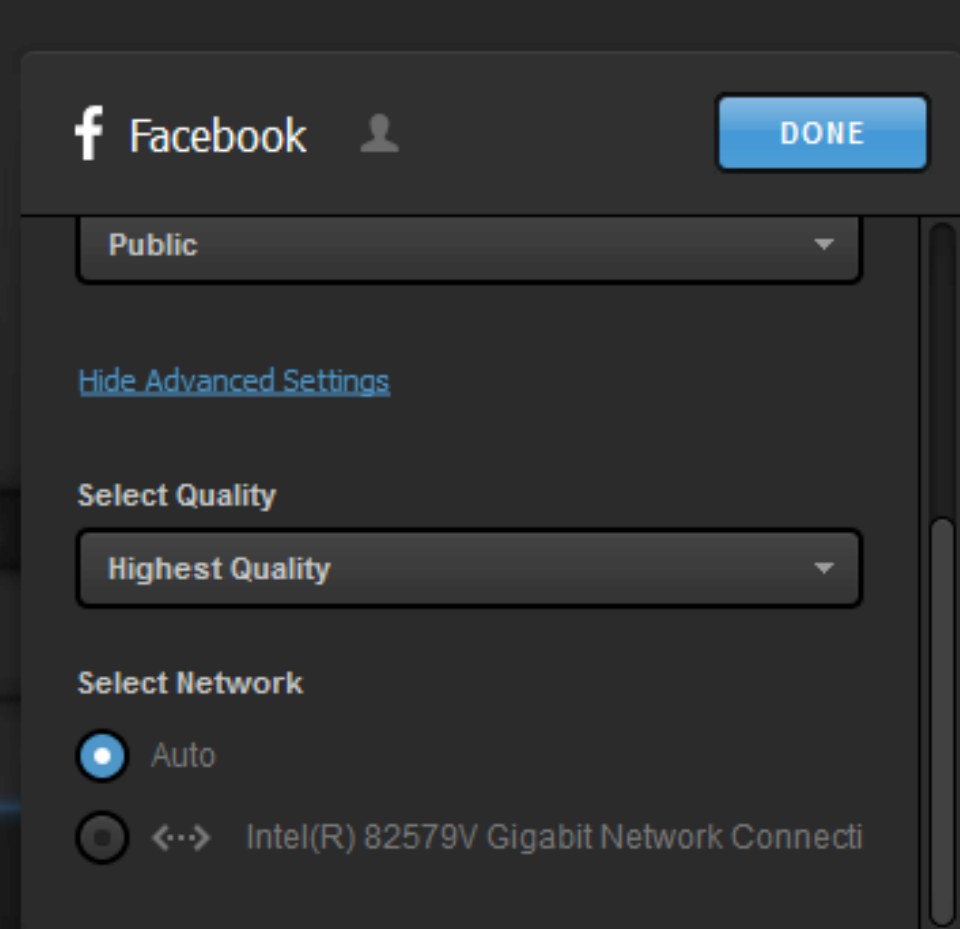
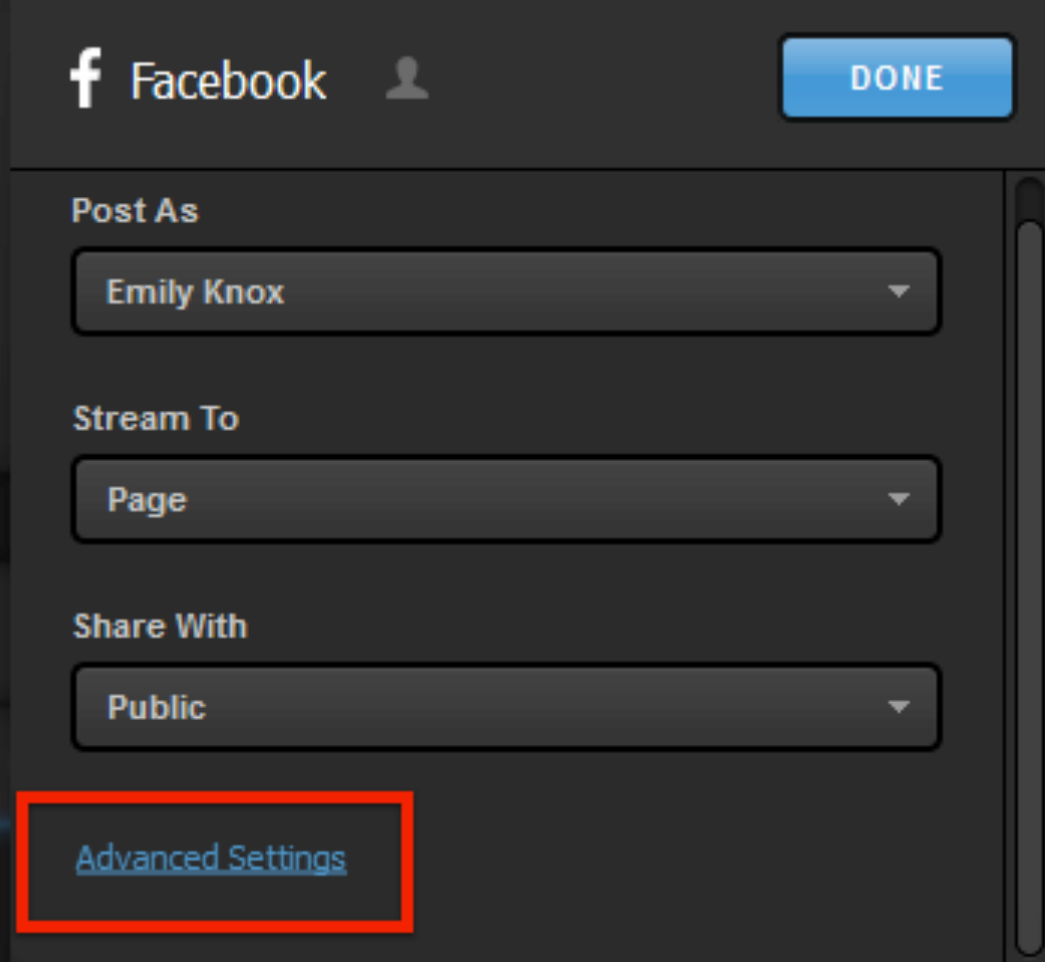
From the list, select a second provider to stream to (this example will show Facebook).



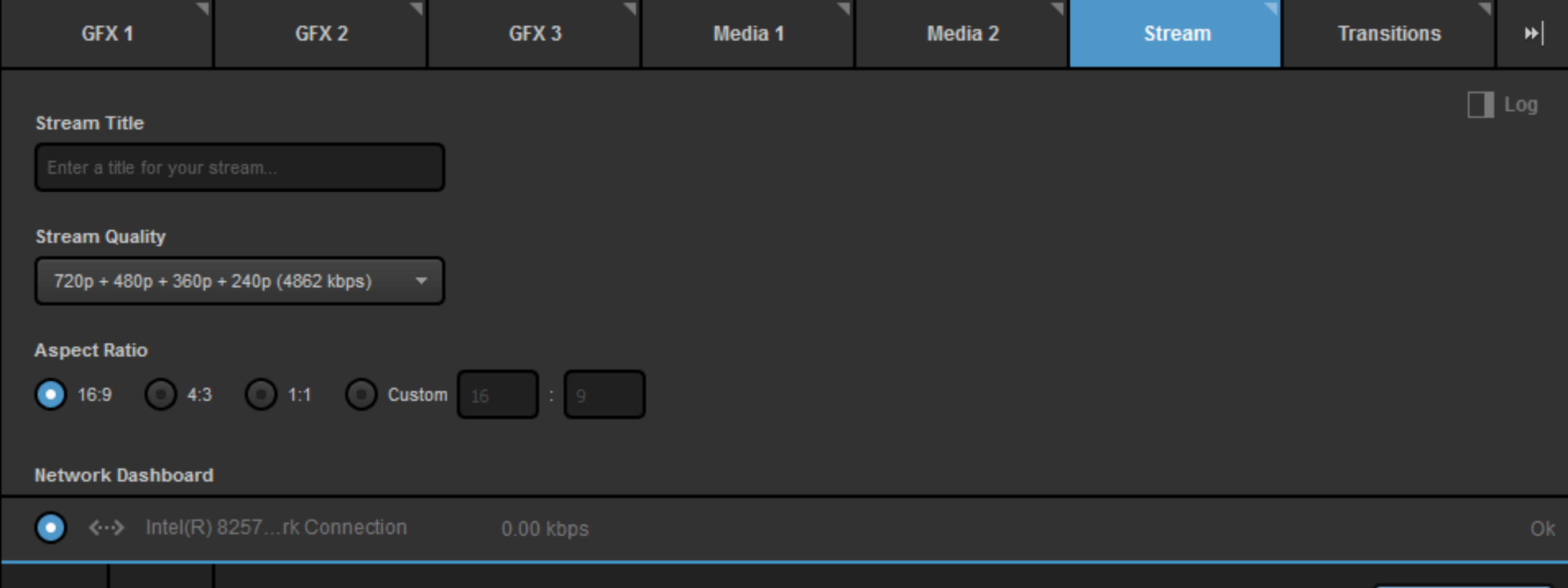
Log in to that provider and allow any permissions that the provider requests in order to use that provider with Studio.



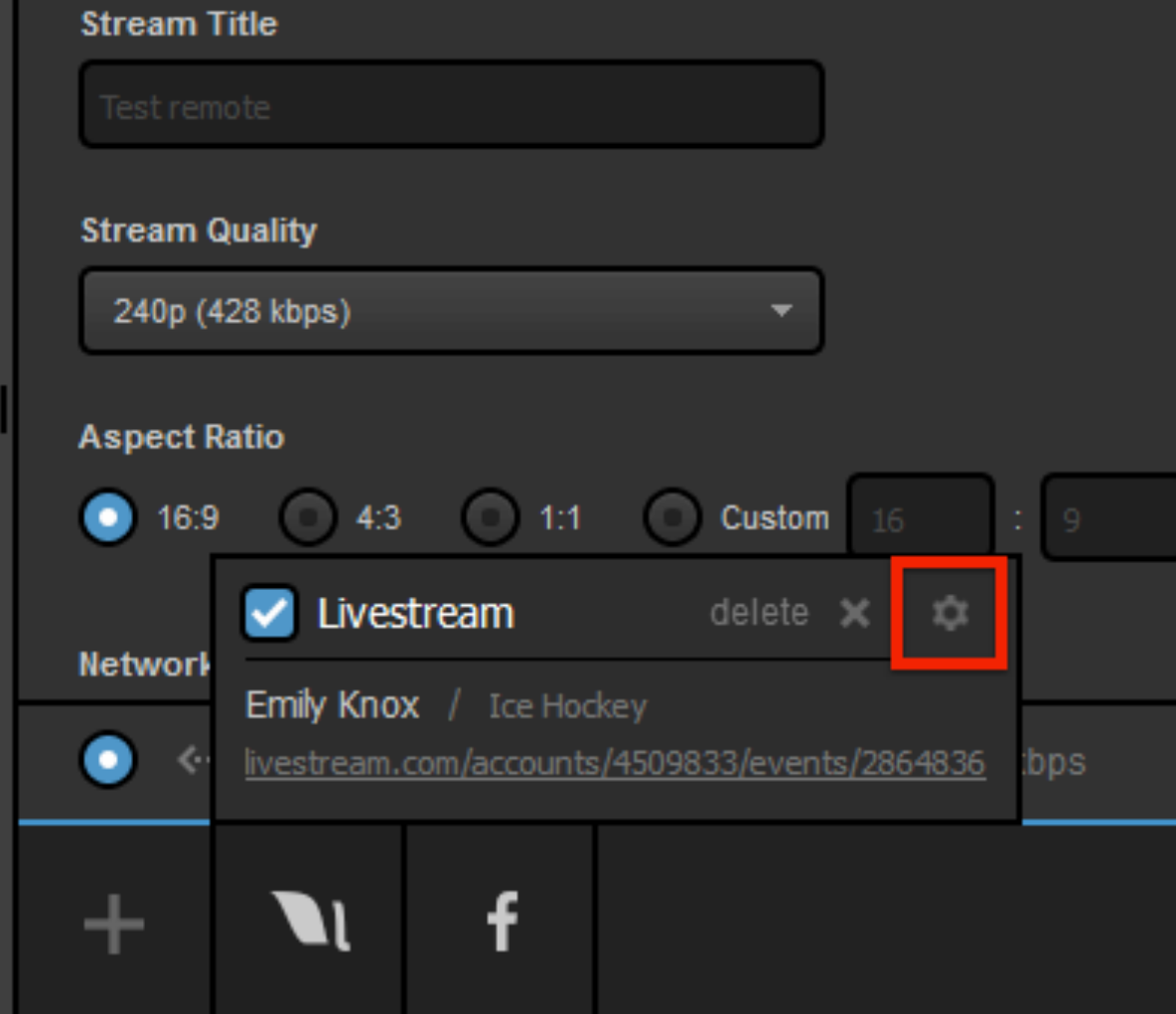
Configure your stream's destination for that provider: which profile is streaming to which page or group and your desired audience.



You can click 'Advanced Settings' to configure additional settings for that provider if you wish. Then, click **'Done.'**



Configure additional settings for your stream, such as title, bitrate, and aspect ratio.



If you need to change a setting for a particular provider, hover the cursor over the provider's icon at the bottom of the screen, then click the gearwheel in the pop-up that appears.

Note: You can also click the icon to make the menu pop up.

## Stream Title

Game 1

## Stream Quality

720p + 480p + 360p + 240p (4862 kbps) ▼

## Aspect Ratio

☒ 16:9 ☐ 4:3 ☐ 1:1 ☐ Custom 16 : 9

## Network Dashboard

☒ <--> Intel(R) 8257...rk Connection 0.00 kbps

Ok



GO LIVE

Click 'Go Live' in the bottom right corner to start your stream.

Intel(R) 8257...rk Connection 6.63 Mbps

Perfect Streaming



Perfect Streaming

30.00 FPS 4.50 Mbps 2 Viewers



Perfect Streaming

30.00 FPS 2.13 Mbps 0 Viewers

STREAMING

00:00:10;03

The Stream module in Studio will show the streaming status for each provider, as well as the overall outgoing bitrate.

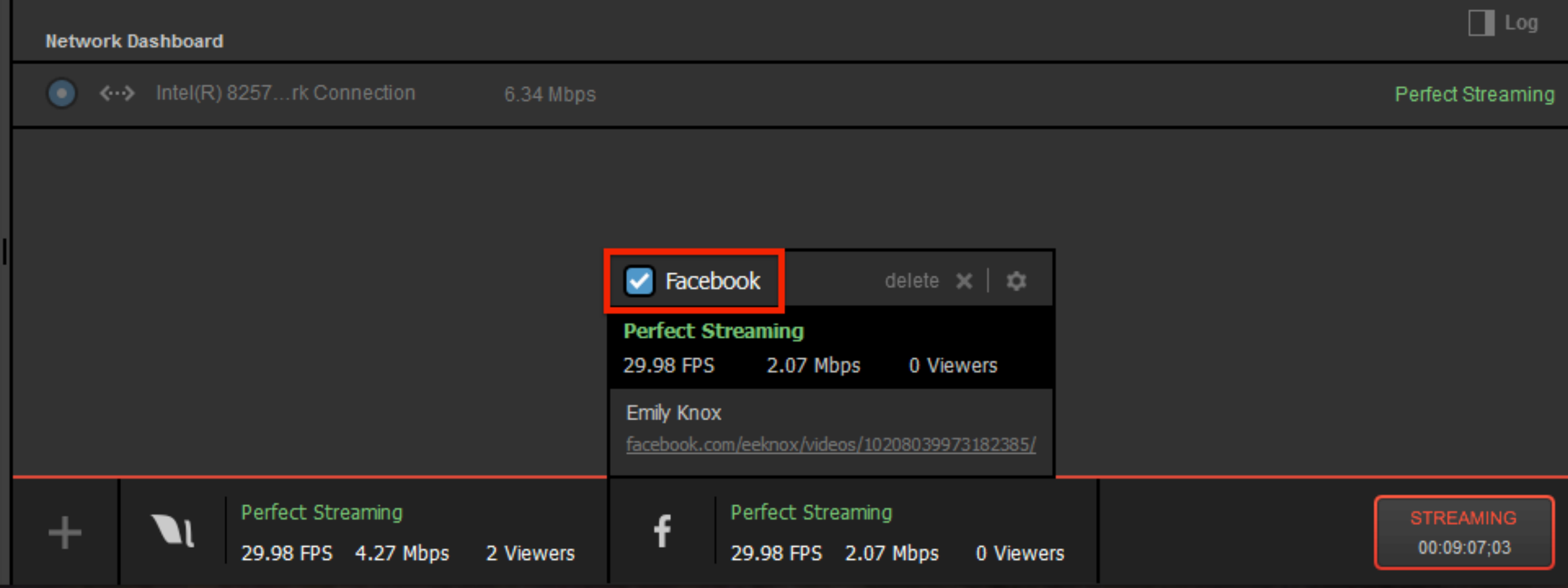




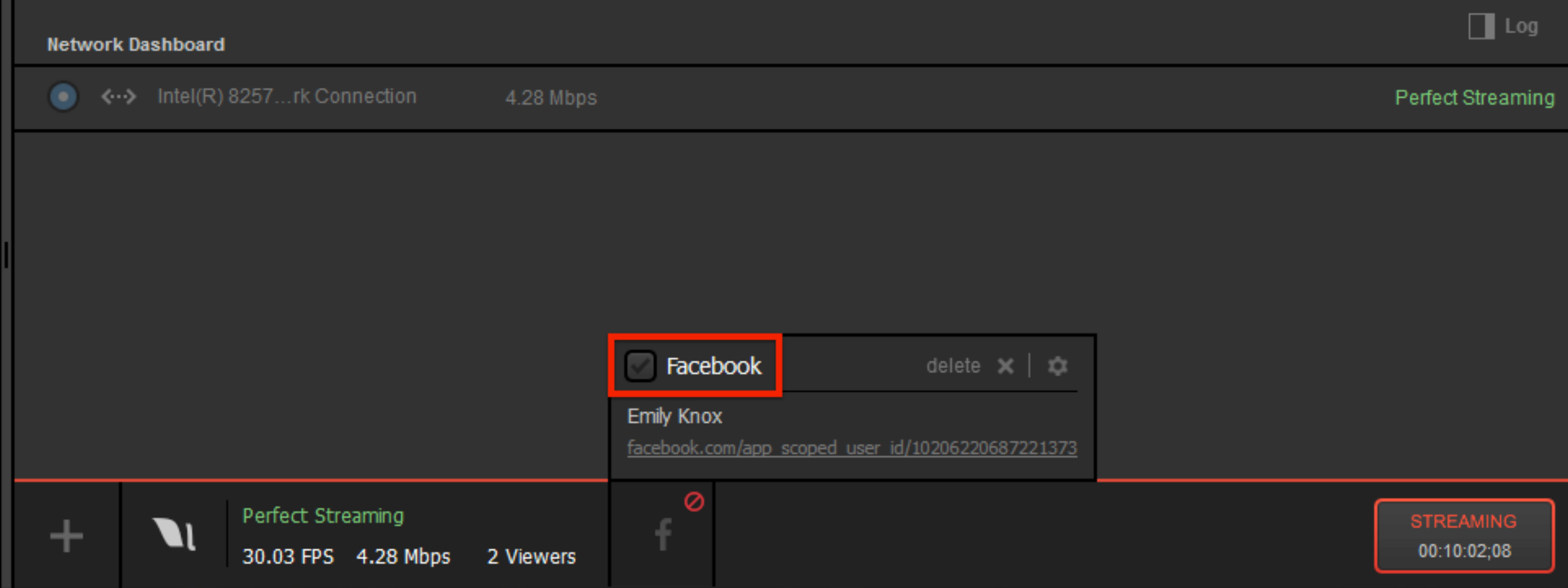
Game 1



Open a web browser and go to your selected stream destinations (e.g. [livestream.com](https://livestream.com) and [facebook.com](https://facebook.com)). You will see exactly the same live content in each player.



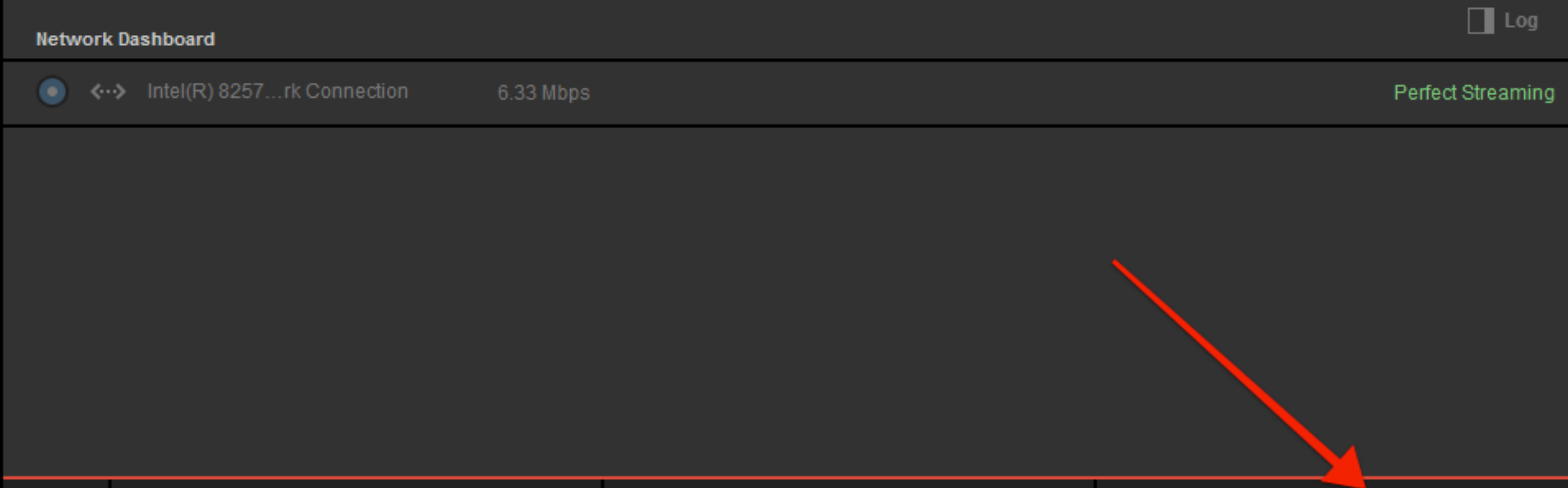
You can deactivate a provider by hovering your mouse over its icon and unchecking the checkbox in the upper left corner of the pop-up box. If this is done while you are streaming, only the stream on that provider will stop.





You can reactivate that provider at any time by checking the checkbox, whether or not you are live.

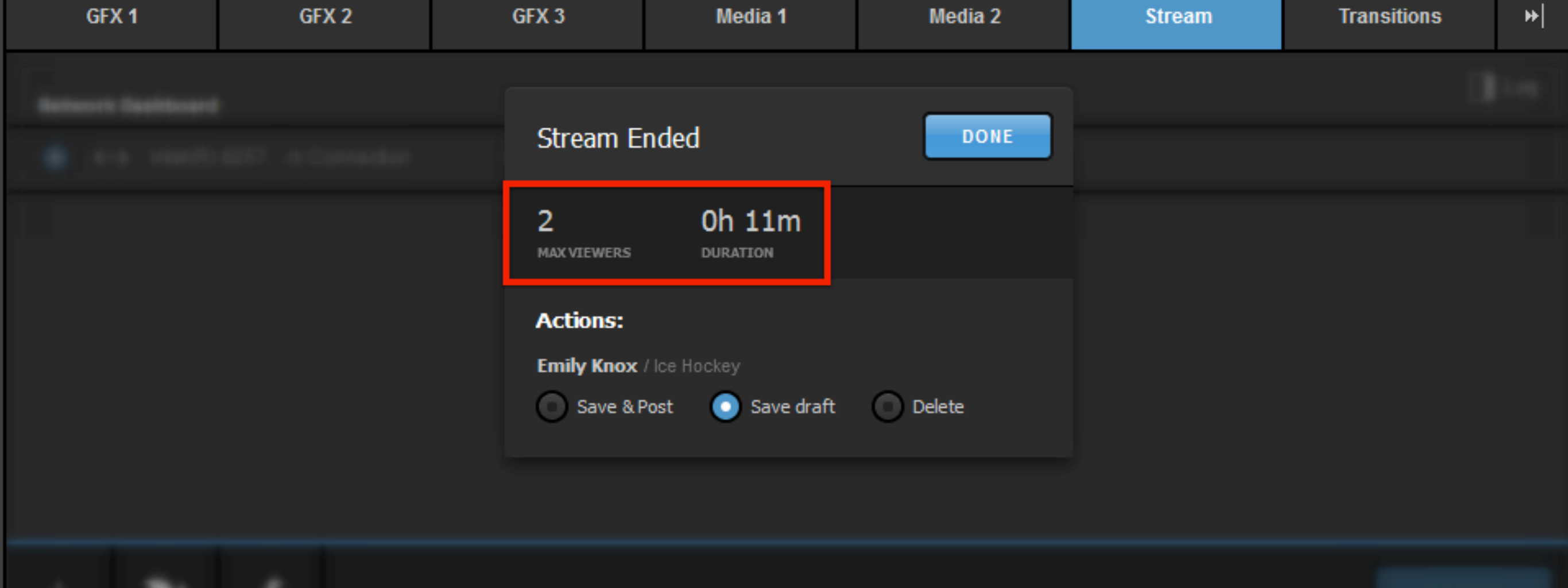
Intel(R) 8257...rk Connection 6.33 Mbps

Perfect Streaming

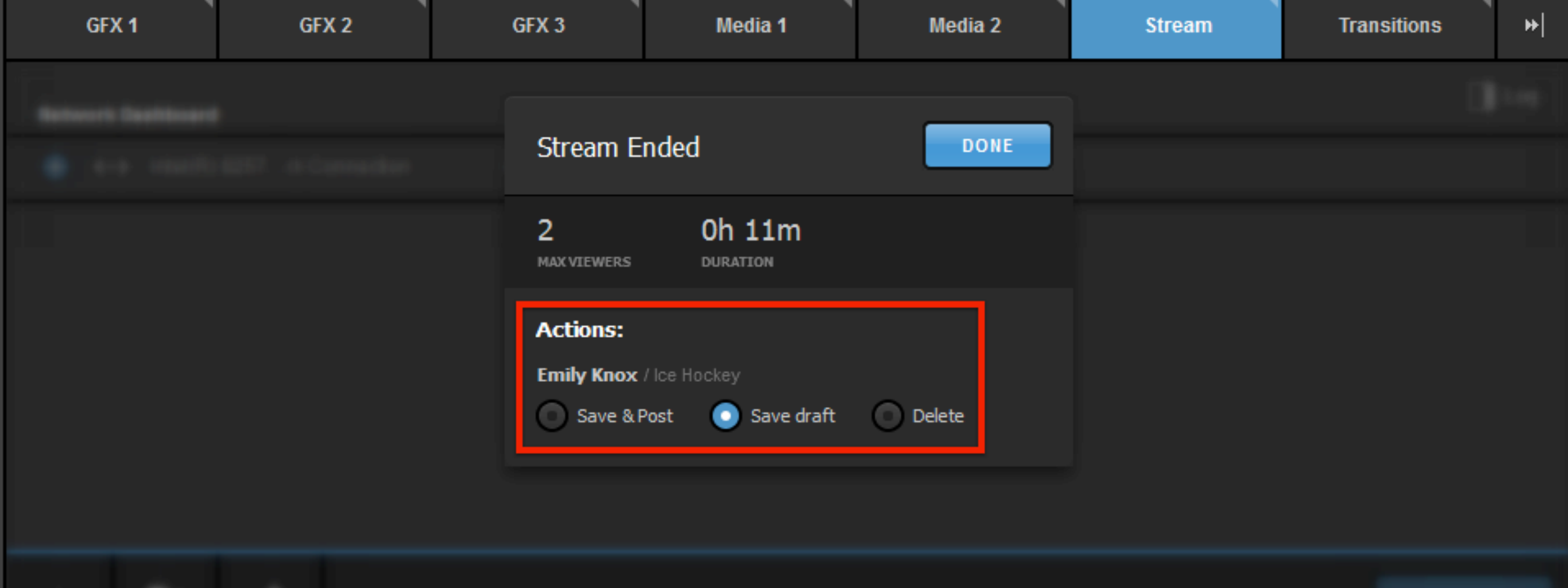


+		Perfect Streaming 29.98 FPS 4.27 Mbps 2 Viewers		Perfect Streaming 29.98 FPS 2.06 Mbps 0 Viewers	<b>STREAMING</b> 00:10:48;13
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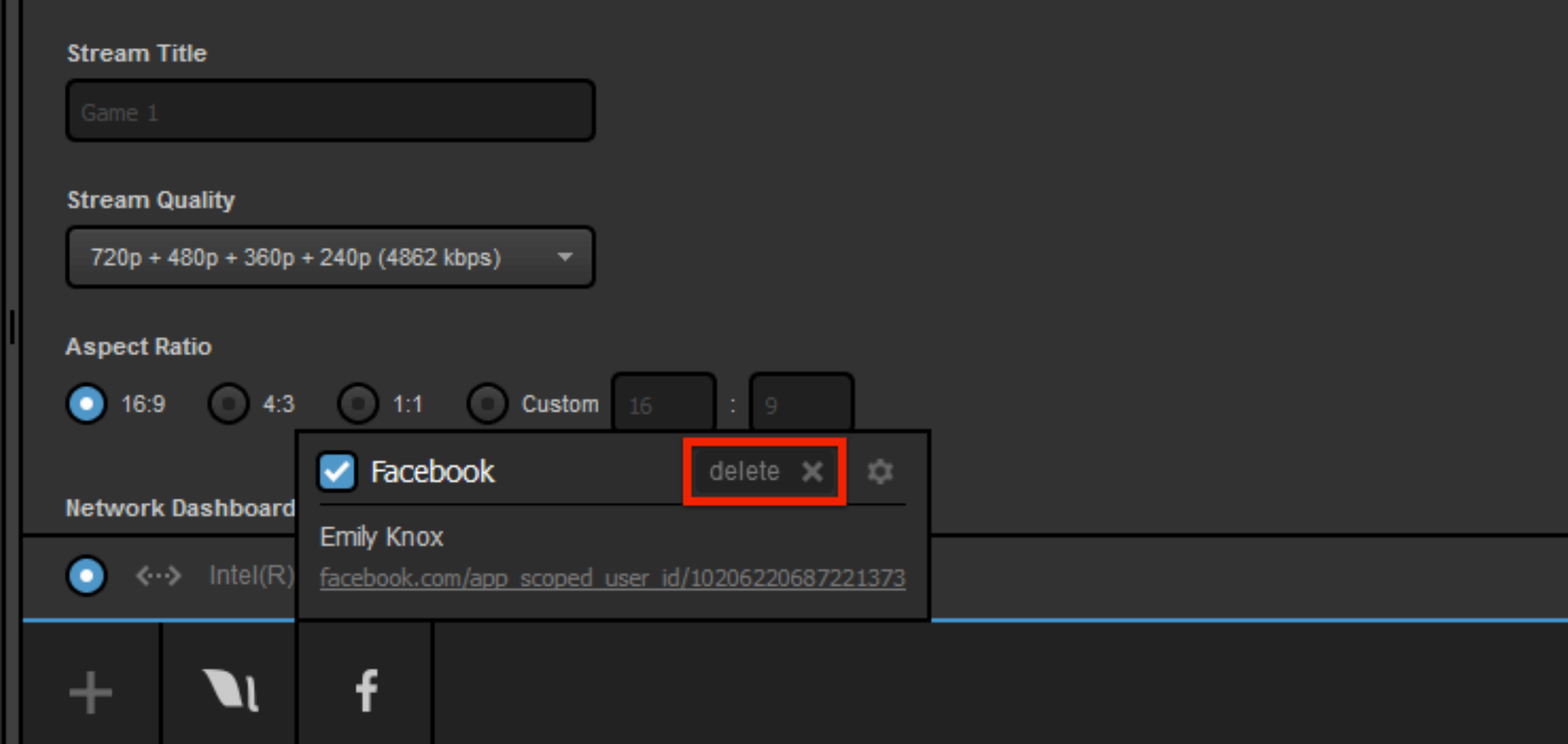
When your event is over, click  
'Streaming' in the lower left corner  
to end the stream.



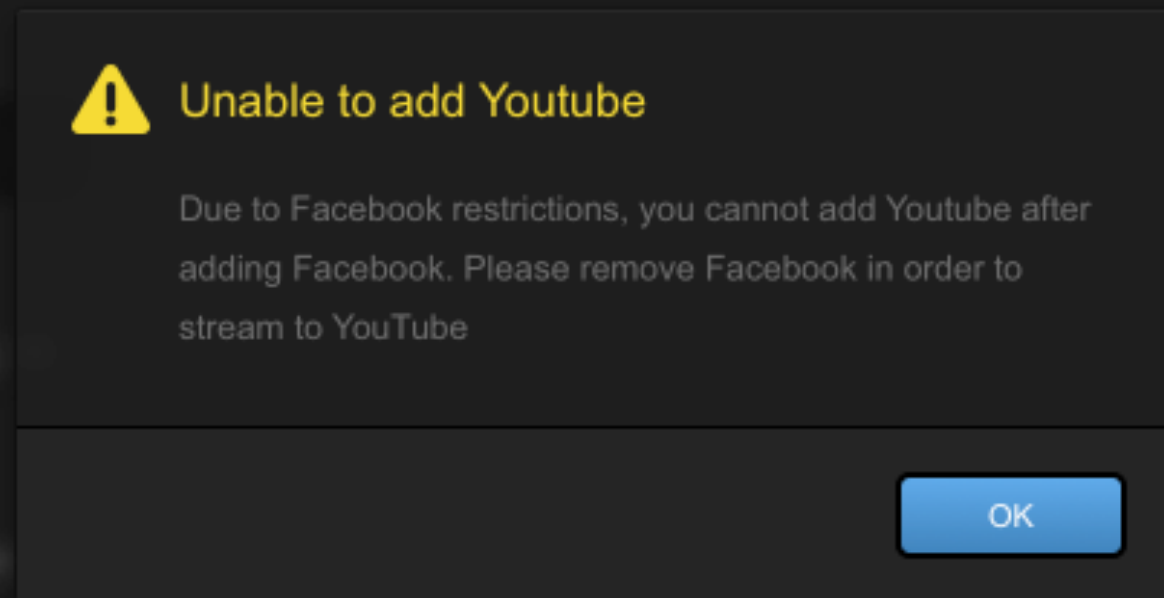
Studio will let you know that the stream has ended and display the maximum viewers your event had, along with the stream duration.



Certain providers may have actions for you to take after the broadcast. For example, Livestream will ask if you want to post the video on demand, save it as a draft, or delete it ('Save draft' is selected by default.) Choose your desired option, then click 'Done.'



If you want to remove a provider from your workflow entirely, hover your mouse over the icon and click 'Delete.' You can add it back to the workflow at any time.



It is important to note that Facebook will not stream alongside any other streaming provider than Livestream. Facebook must be disabled in Studio prior to streaming to YouTube, etc.





If you wish to stream to both Livestream and Facebook but have limited bandwidth, you may want to look into Facebook Live for Livestream on the Livestream Platform.

# Hardware encoding

Studio version 4.2 introduces **hardware encoding** as an option for streaming. This moves the video encoding to a dedicated GPU, greatly reducing your CPU usage while streaming.

This currently only applies to computers with Intel processors that include Quick Sync Video (which are listed here) or have an NVIDIA GeForce card with Kepler, Maxwell, or Pascal architecture, which includes NVENC.\*

*\*See next page for details*

The HD31, HD51 4K, and HD550 4K are the only *Livestream-built* units that have the required hardware that includes this feature, although many Windows laptops include it as well.

## GeForce Product Lineup

### GeForce GTX

The ultimate GPU for gamers. Delivers fastest performance and all the latest gaming technologies.

#### Desktop

NVIDIA TITAN X  
GeForce GTX 1080  
GeForce GTX 1070  
GeForce GTX 1060  
GeForce GTX 1050 (new!)  
GeForce GTX TITAN X  
GeForce GTX 980 Ti  
GeForce GTX 980  
GeForce GTX 970  
GeForce GTX 960  
GeForce GTX 950

### GeForce GT

Supercharged performance for your HD videos and photos, immersive 3D movies, and entry level gaming.

#### Desktop

GeForce GT 730  
GeForce GT 710

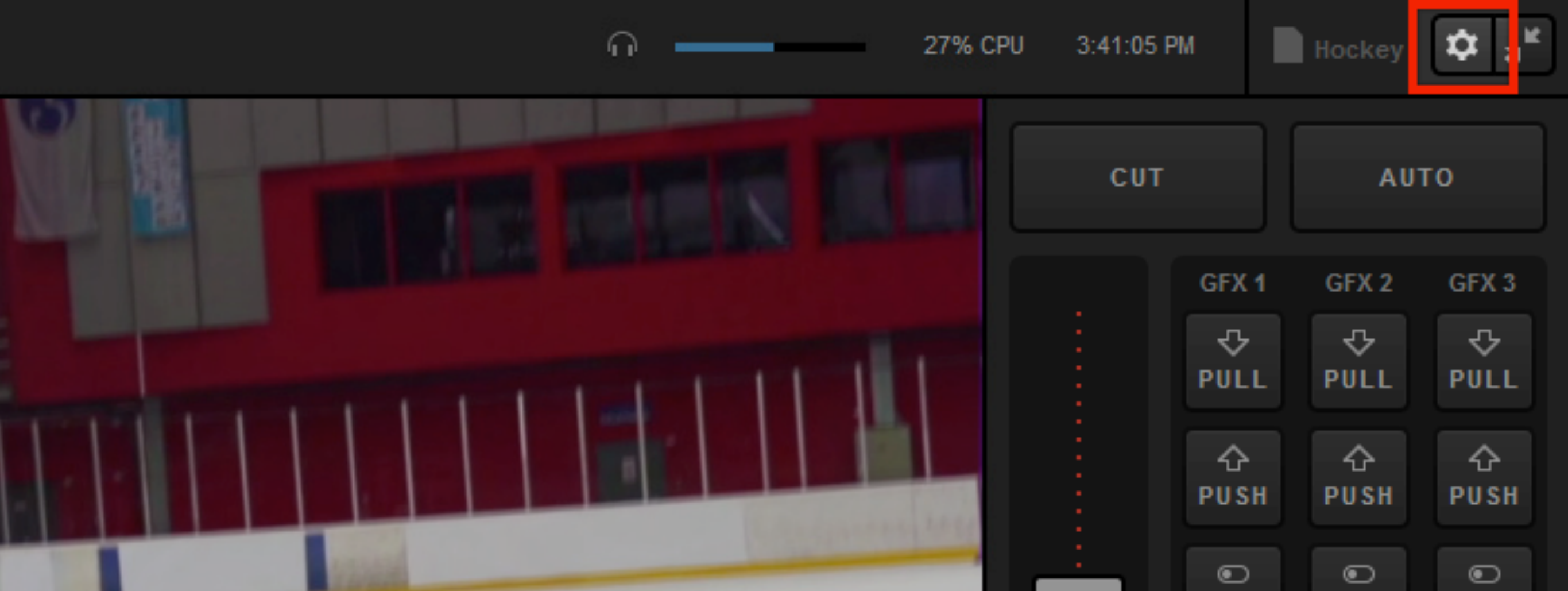
## SPECS

# THE POWER OF GEFORCE GTX 1050

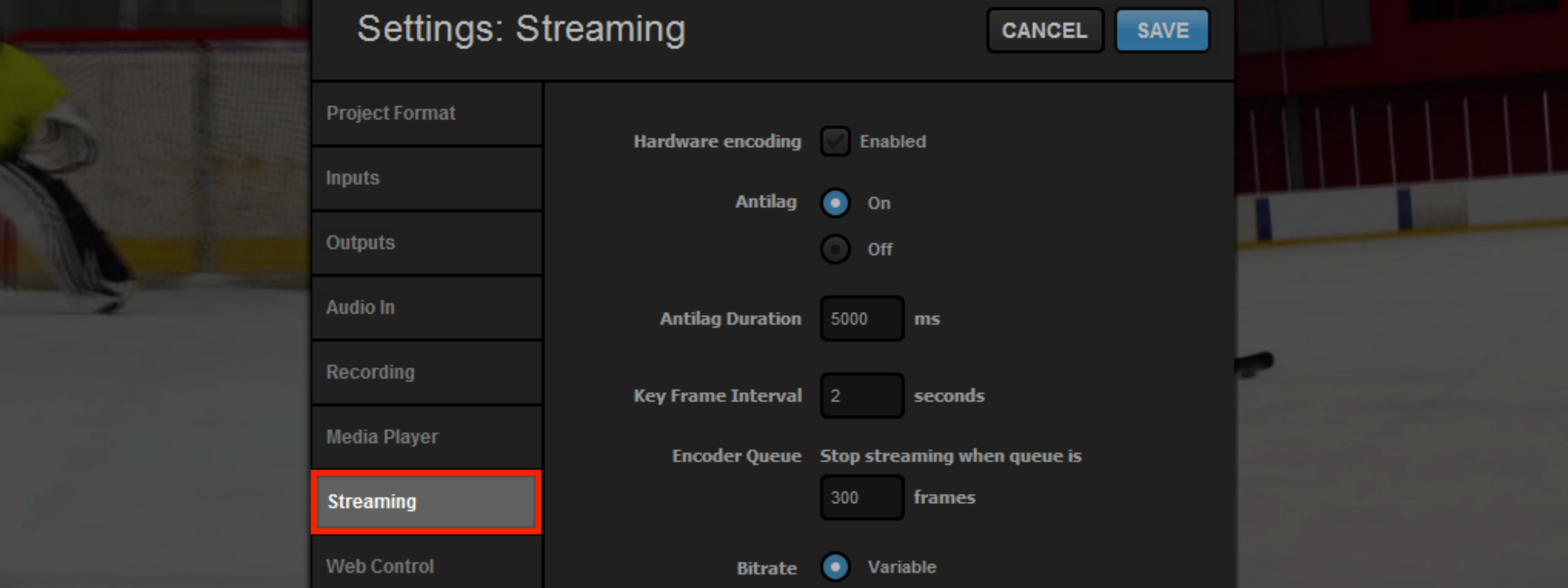
	GeForce GTX 1050 Ti	GeForce GTX 1050	GeForce GTX 750 Ti
GPU Architecture	Pascal	Pascal	Maxwell
NVIDIA CUDA® Cores	768	640	640
Frame Buffer	4 GB GDDR5	2 GB GDDR5	2 GB GDDR5
Memory Speed	7 Gbps	7 Gbps	5.4 Gbps
Boost Clock	Relative 1.3x	1.3x	1x

To determine if your graphics card includes NVENC, go to the [GeForce Hardware Products page](#) and click the name of the model card you have and check its specs. If it advertises Kepler, Maxwell, or Pascal GPU architecture, then hardware encoding is supported.

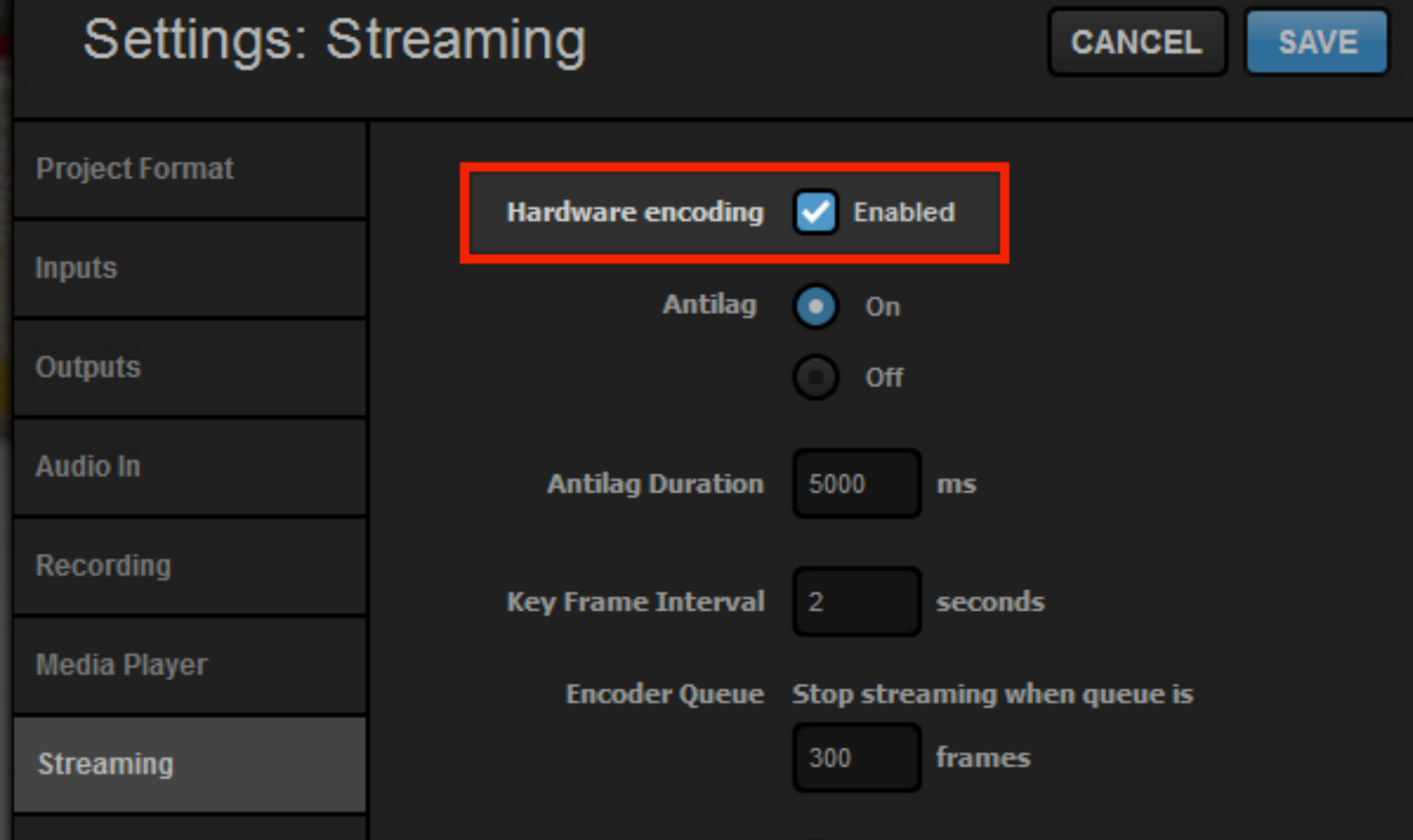
Note: We have tested the following GeForce models: GTX1050 , GTX950, GT730, GTX650



Hardware encoding in Livestream Studio is enabled by default. To find the setting, click the 'Settings' icon in the upper right corner of the interface.

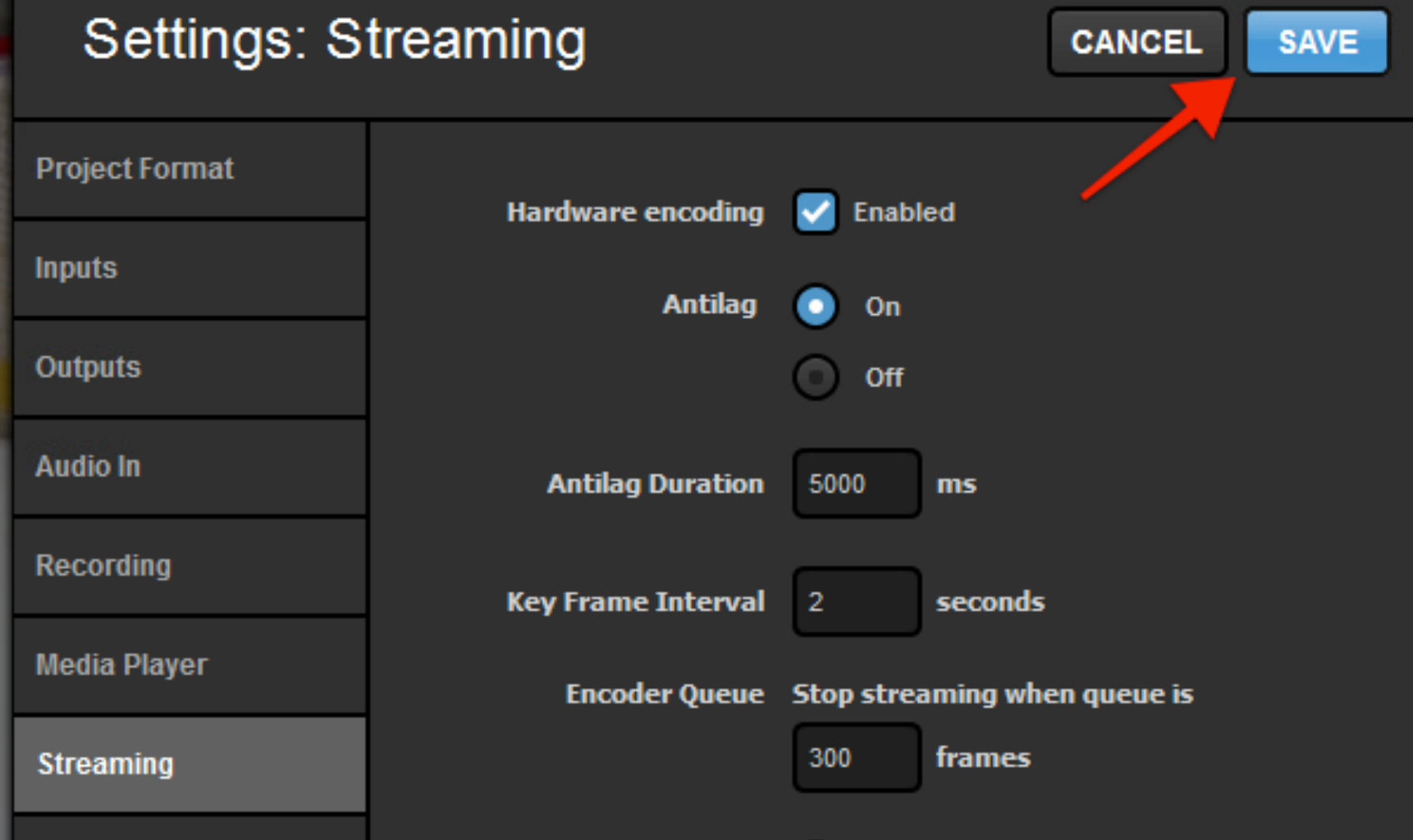


Navigate to the 'Streaming' menu.



At the top of the menu, you will see 'Hardware Encoding' checked. If you wish to disable it, click the checkbox to uncheck it.



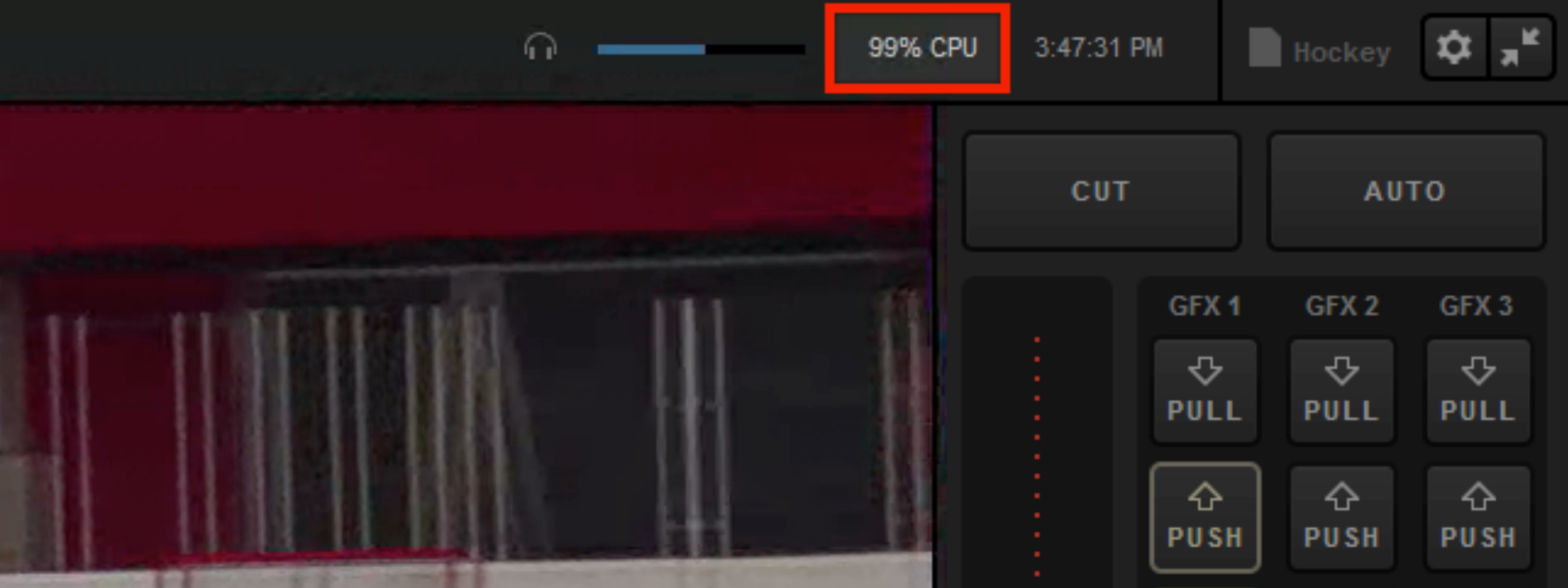


Click 'Save' in the upper right corner.

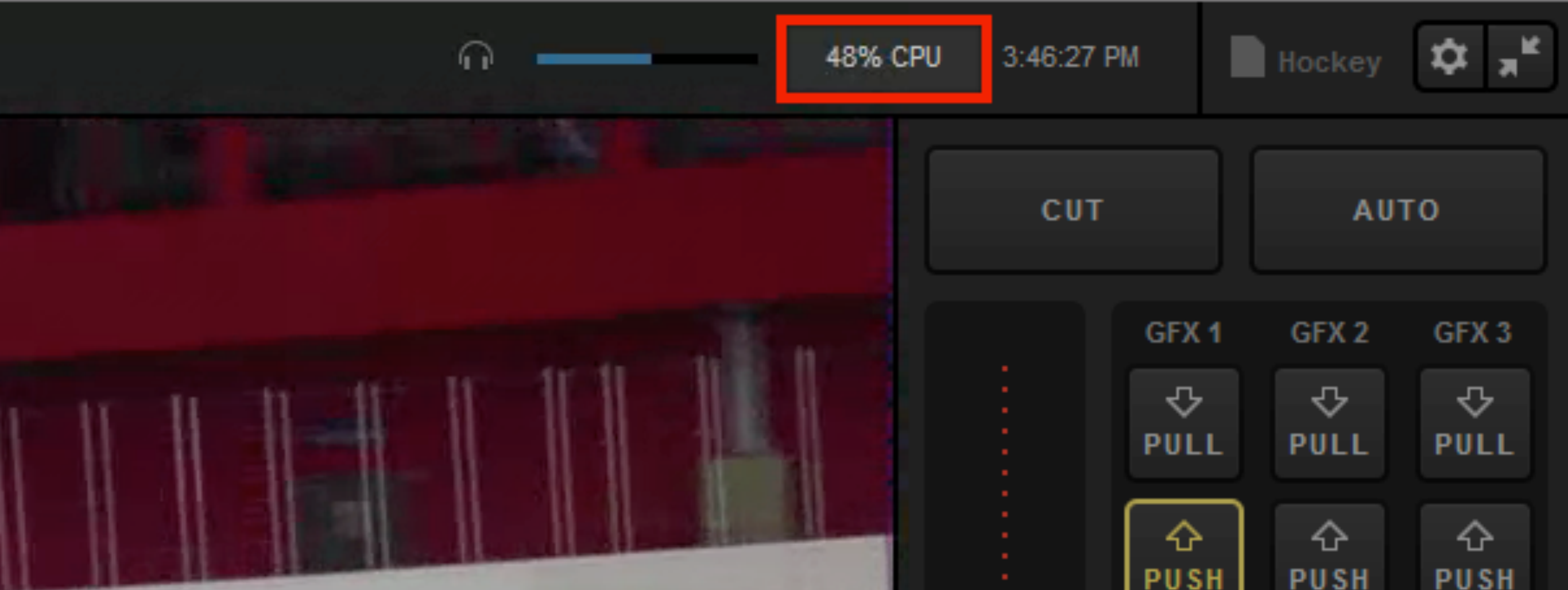


Notifications & actions	Edition	Windows 10 Pro
	Version	1607
Power & sleep	OS Build	14393.447
	Product ID	00330-80000-00000-AA648
Storage	Processor	Intel(R) Core(TM) i7-4790K CPU @ 4.00GHz 4.00 GHz
Offline maps	Installed RAM	16.0 GB (15.9 GB usable)
Tablet mode	System type	64-bit operating system, x64-based processor
Multitasking	Pen and touch	No pen or touch input is available for this display
Projecting to this PC	<a href="#">Change product key or upgrade your edition of Windows</a>	
	<a href="#">Read the Privacy Statement for Windows and Microsoft services</a>	

As an example, here is the processor being used on a Windows 10 computer.



The CPU usage when hardware encoding is turned off—streaming a single bitrate averaging 2128 Kbps with two media bins and one animated graphics overlay—is nearly 100%. The stream timed out after about one minute due to insufficient resources.

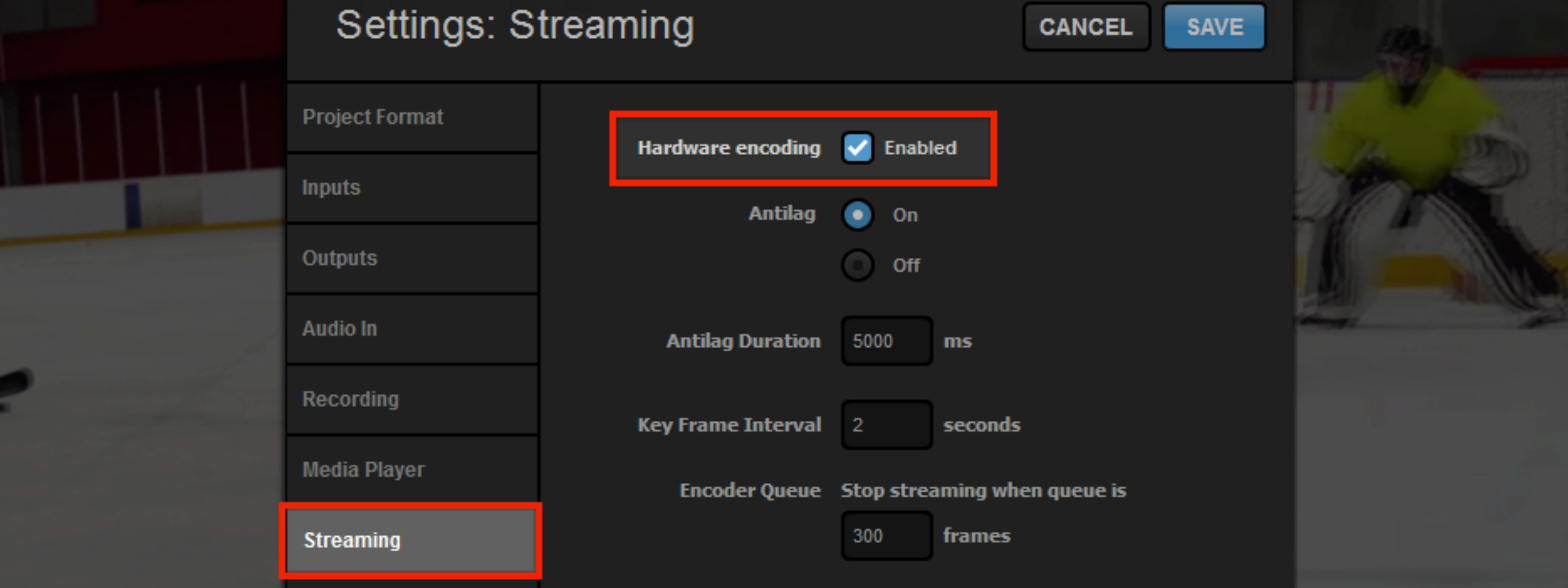


By comparison, the CPU usage with the same workflow while hardware encoding is turned on was cut in half, down to 48%.

# 4K, 1080p, and Custom Encoding

Studio now has more quality and multi-bitrate streaming options than ever before.

These include the ability to stream in 1080p, custom qualities, and the ability to stream in 4K.



In order to see these new quality options, you must enable hardware encoding on your Studio system.

## Stream Title

## Stream Quality

240p (428 kbps)

240p (428 kbps)

360p (678 kbps)

480p (1628 kbps)

720p (2128 kbps)

1080p (4628 kbps)

360p + 240p (1106 kbps)

480p + 360p + 240p (2734 kbps)

720p + 360p + 240p (3234 kbps)

720p + 480p + 360p + 240p (4862 kbps)

1080p + 360p + 240p (5734 kbps)

Navigate to the 'Stream' tab. After configuring your streaming providers, navigate to the 'Stream Quality' dropdown menu; more lower-quality multi-bitrate options are available.

## Stream Title

## Stream Quality

240p (428 kbps)

1080p + 480p + 360p + 240p (7362 kbps)

1080p + 720p + 360p + 240p (7862 kbps)

1080p + 720p + 480p + 360p + 240p (9490 kbps)

2160p (20128 kbps)

2160p + 1080p (24756 kbps)

2160p + 720p (22256 kbps)

2160p + 360p + 240p (21234 kbps)

2160p + 480p + 360p + 240p (22862 kbps)

2160p + 720p + 360p + 240p (23362 kbps)

2160p + 720p + 480p + 360p + 240p (24990 kbps)

As you continue to scroll down in the menu, you will see higher quality options, including 1080p and 2160p (4K) bitrates.



## Stream Title

## Stream Quality

240p (428 kbps)

- 2160p + 1080p (24756 kbps)
- 2160p + 720p (22256 kbps)
- 2160p + 360p + 240p (21234 kbps)
- 2160p + 480p + 360p + 240p (22862 kbps)
- 2160p + 720p + 360p + 240p (23362 kbps)
- 2160p + 720p + 480p + 360p + 240p (24990 kbps)
- 2160p + 1080p + 360p + 240p (25862 kbps)
- 2160p + 1080p + 480p + 360p + 240p (27490 kbps)
- 2160p + 1080p + 720p + 480p + 360p + 240p (29618 kbps)
- Custom (678 kbps)

If none of the preset options suits your needs, scroll to the bottom of the quality menu to create a custom quality to stream at.

### Stream Title

Enter a title for your stream...

### Stream Quality

Custom (678 kbps)

Custom 1 360p



+ Add Quality

### Aspect Ratio



16:9



4:3



1:1



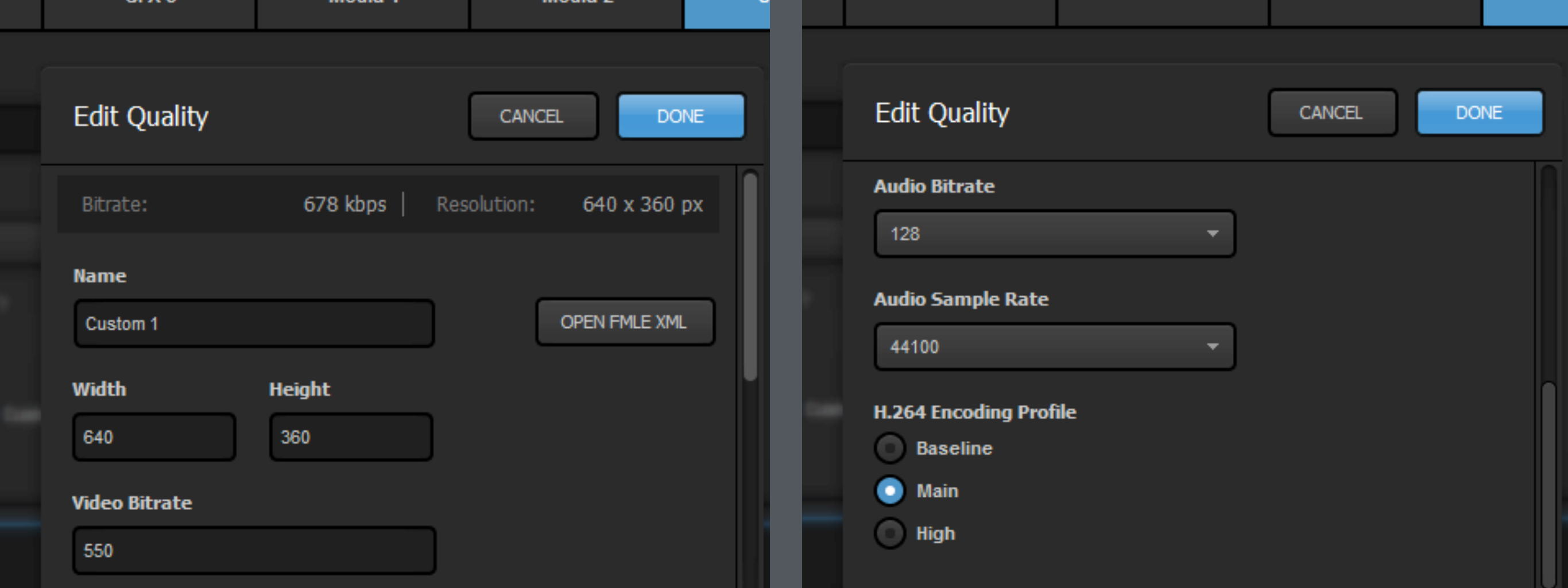
Custom

16

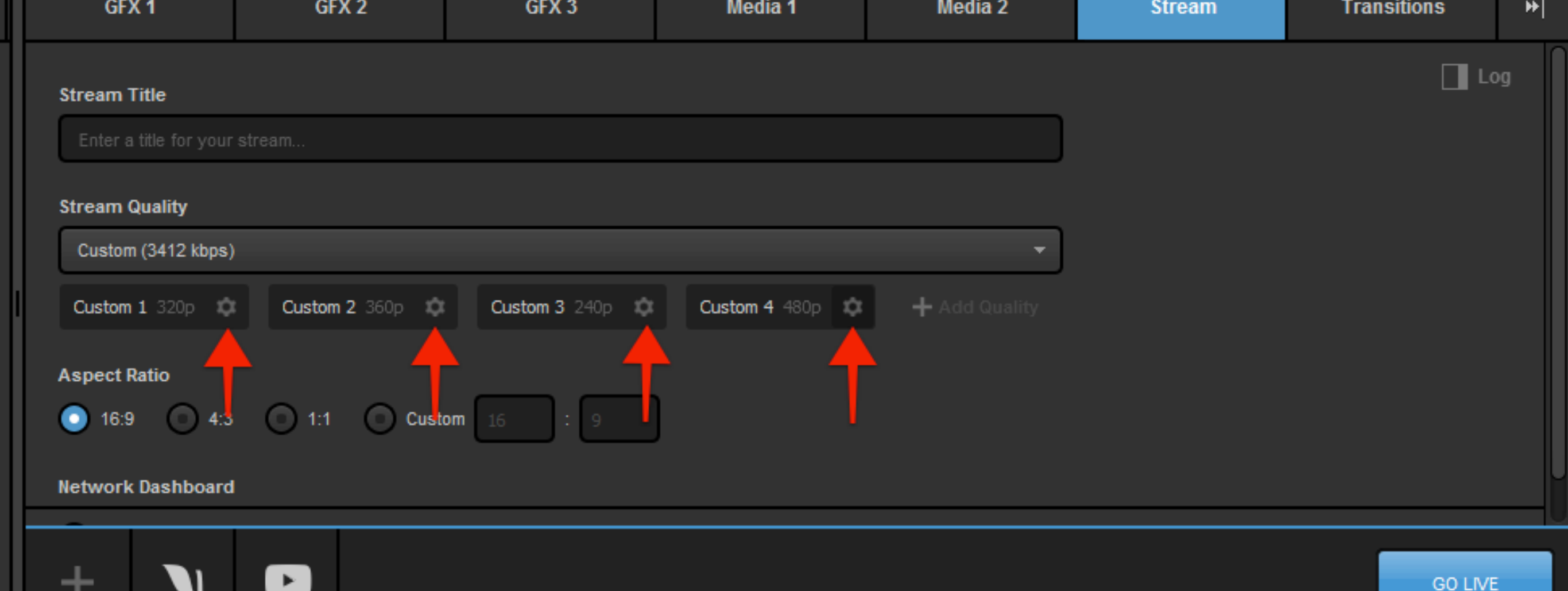
: 9

### Network Dashboard

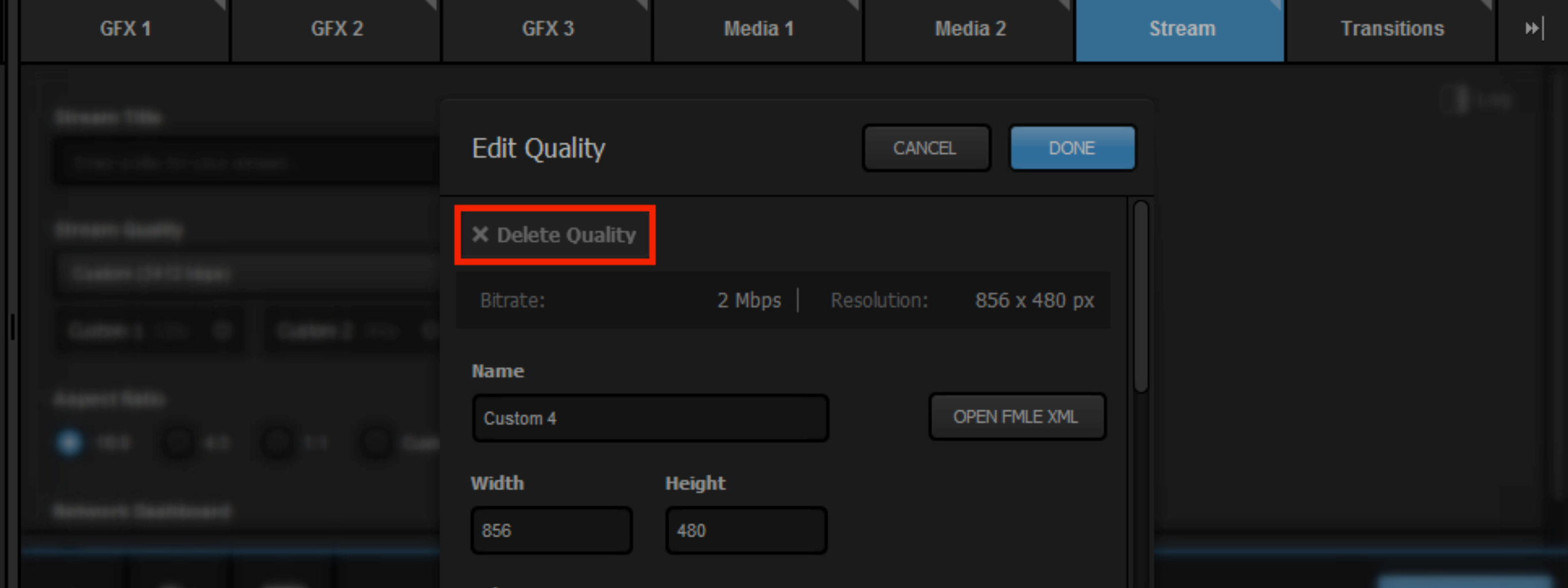
Selecting 'Custom' begins at 360p, the equivalent of a medium-quality stream. Click the gearwheel to open up the bitrate settings.



Here is where you can choose a name for this particular quality, set the width, height, video bitrate, audio bitrate, audio sample rate, and encoding profile. Once you have configured the settings, click 'Done.'



You can add up to four custom bitrates by clicking 'Add Quality.' Each quality can be edited individually by clicking the corresponding gearwheels.



You can remove a quality by going into its 'Edit Quality' menu and clicking 'Delete Quality.'

# Graphics Overlays in Studio Web Control

Studio 4.0 introduced Web Control, allowing the ability to control certain aspects of Livestream Studio via a web browser that supports WebRTC (e.g., Google Chrome, Mozilla Firefox).

This update adds more functionality to this tool, which now includes the ability to add .lsgfx files via Dropbox, insert data, and have full control over your graphic overlays' settings.



Dropbox

Upgrade account



Emily Knox



Search



Recents

Files

Team

Paper

Photos

Sharing

Links

Events

File requests

Lower Thirds

Download

Delete...

Rename

Move...

Copy...



Evan Jan6-Jan8 2017

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Get Started with Dropbox.pdf

1/5/2017 1:59 PM

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Lower Thirds


--

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Share


A Dropbox account is required in order to use this feature. Log in to Dropbox and locate your folders (or create a new one).







Dropbox > Lower Thirds














Search


 Recents


 Files


 Team


 Paper


 Photos

 Sharing

 Links

 Events

 File requests

Name ▲	Modified	Shared with
<div> black-red-gloss.lsgfx</div>	1/5/2017 2:00 PM	--

Save the .lsgfx files you wish to use in Livestream Studio in this folder. Only .lsgfx files are supported in Studio Web Control.



Lower Third: Black / Red Gloss

Free · Lower Third



Lower Third: Yellow Boxes

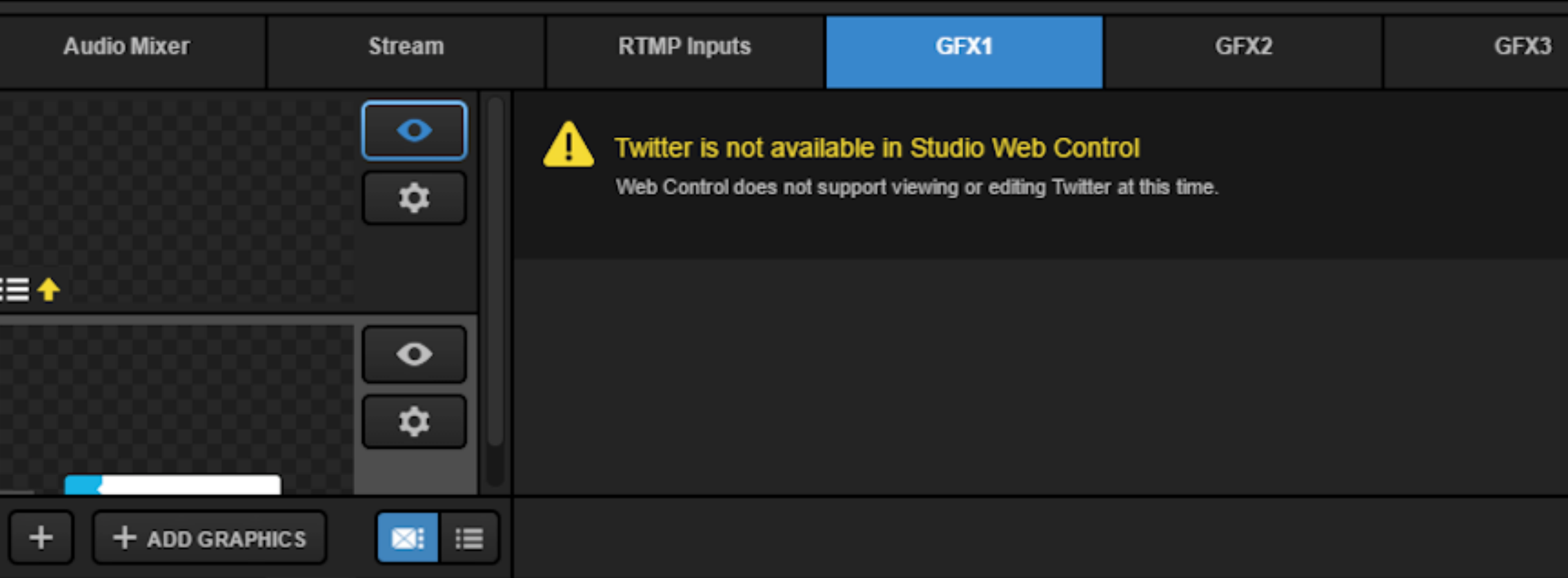
Free · Lower Third



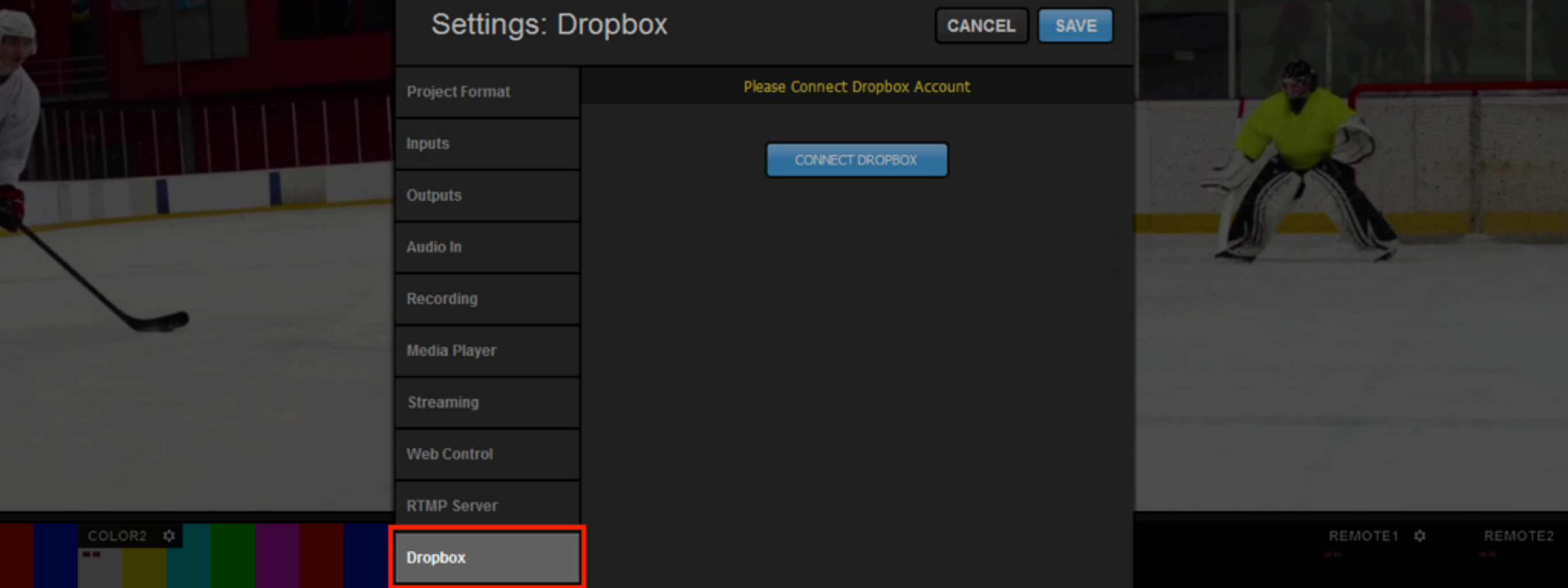
Lower Third: Blue Angular

Free · Lower Third

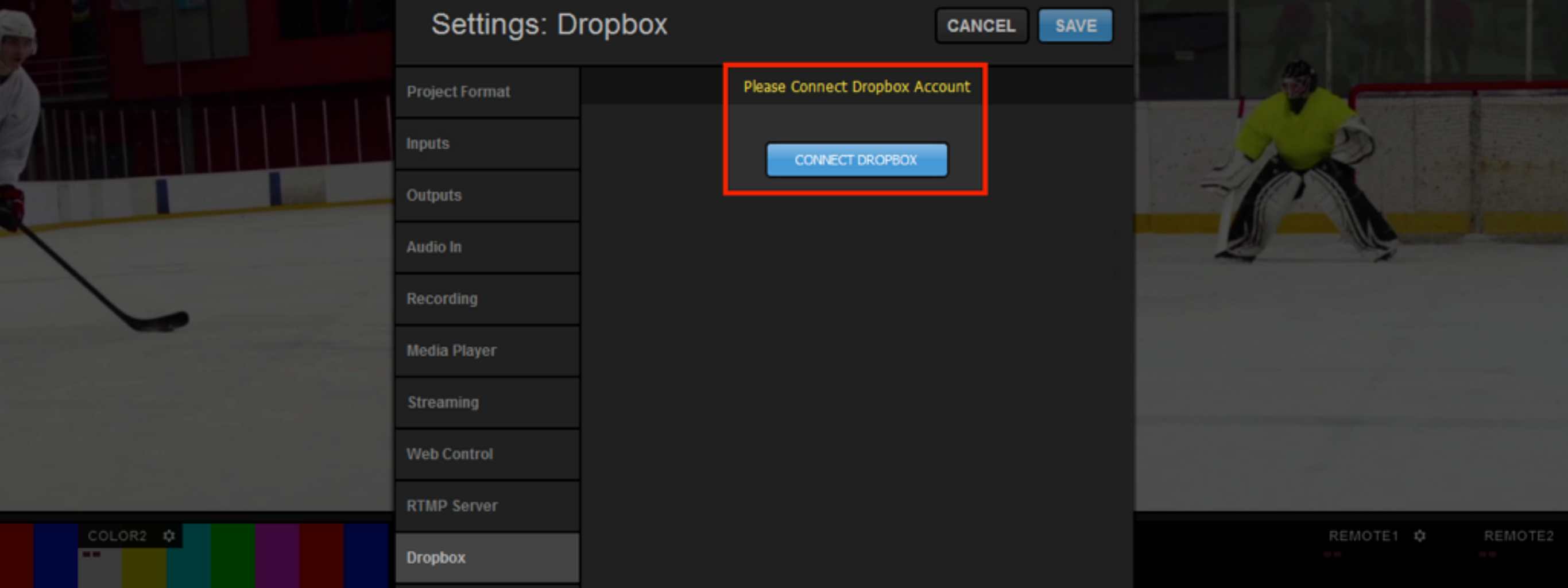
Sample .lsgfx files can be found in the [Studio Graphics Store](#), or can be created when you export a graphics overlay layer that you manually created in Livestream Studio.



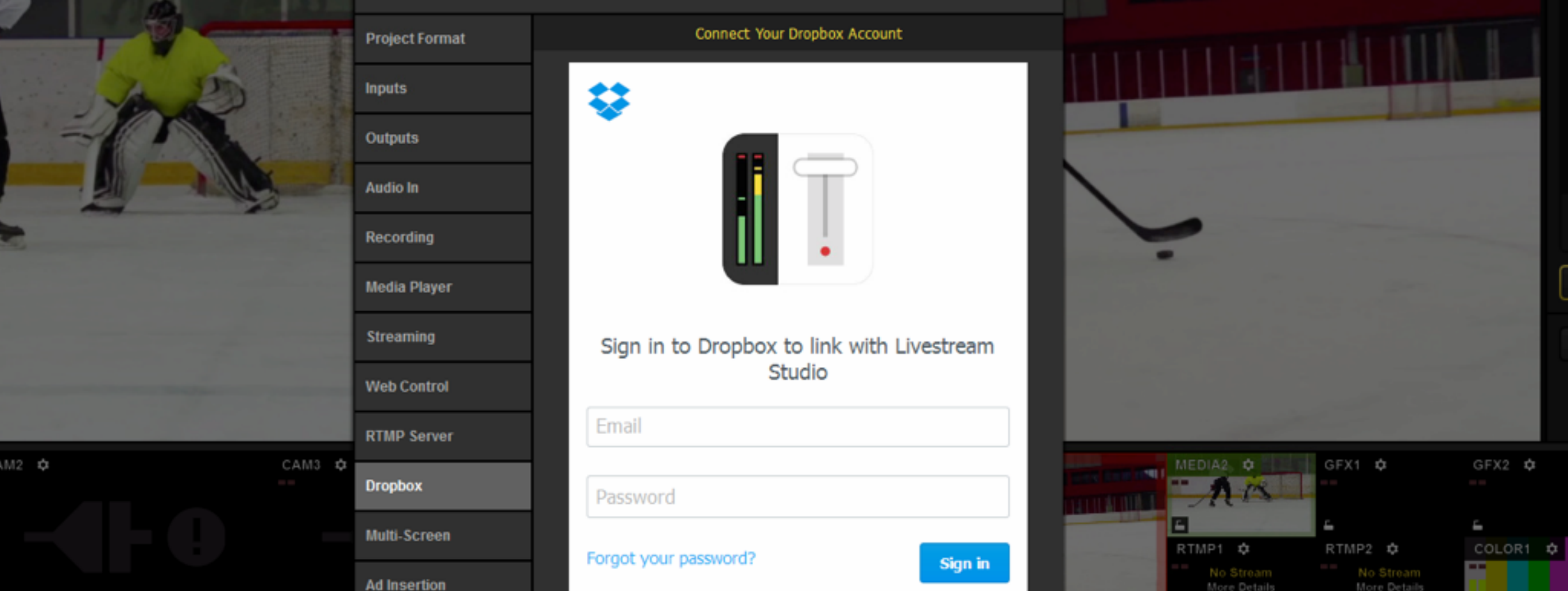
Twitter and Google Sheets are not supported in Web Control at this time. However, Excel files, .CSV files, and RSS feeds can be controlled with Web Control.



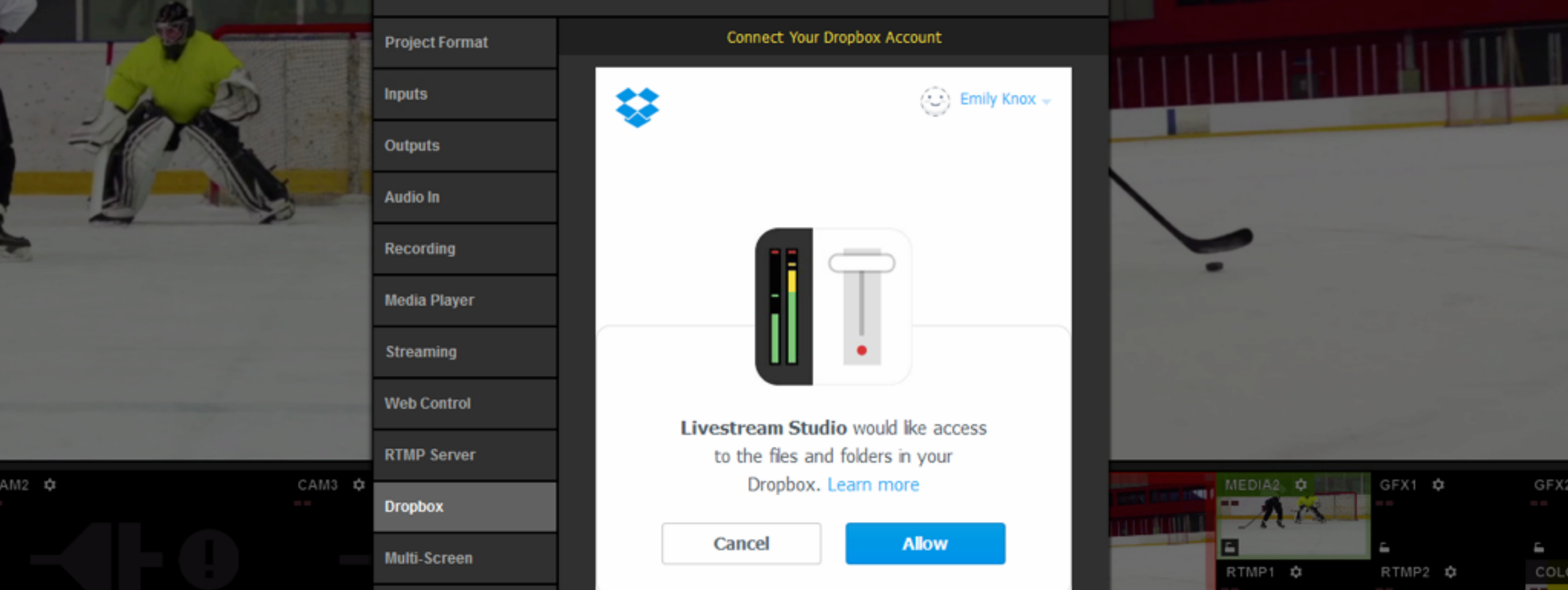
The first step is within the Livestream Studio software. Navigate to Settings, then select the 'Dropbox' tab.



Click 'Connect Dropbox.'

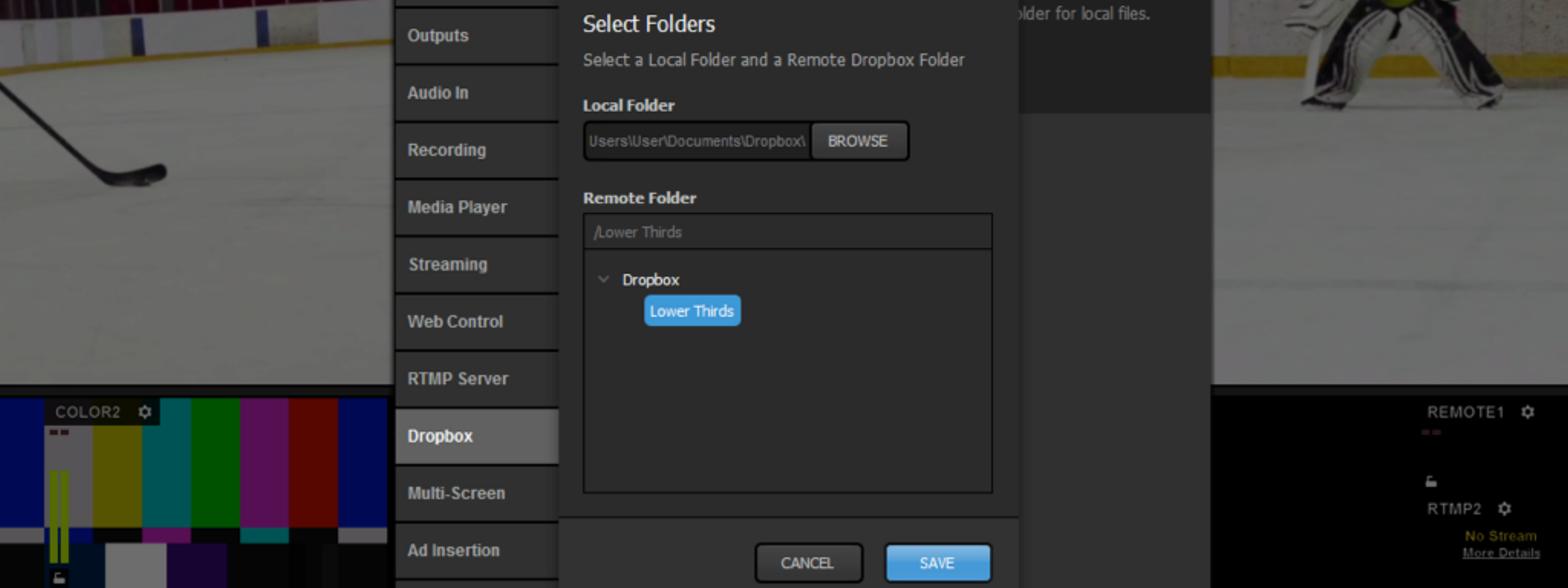


Log in to your Dropbox account by entering your account credentials and clicking 'Sign in.'



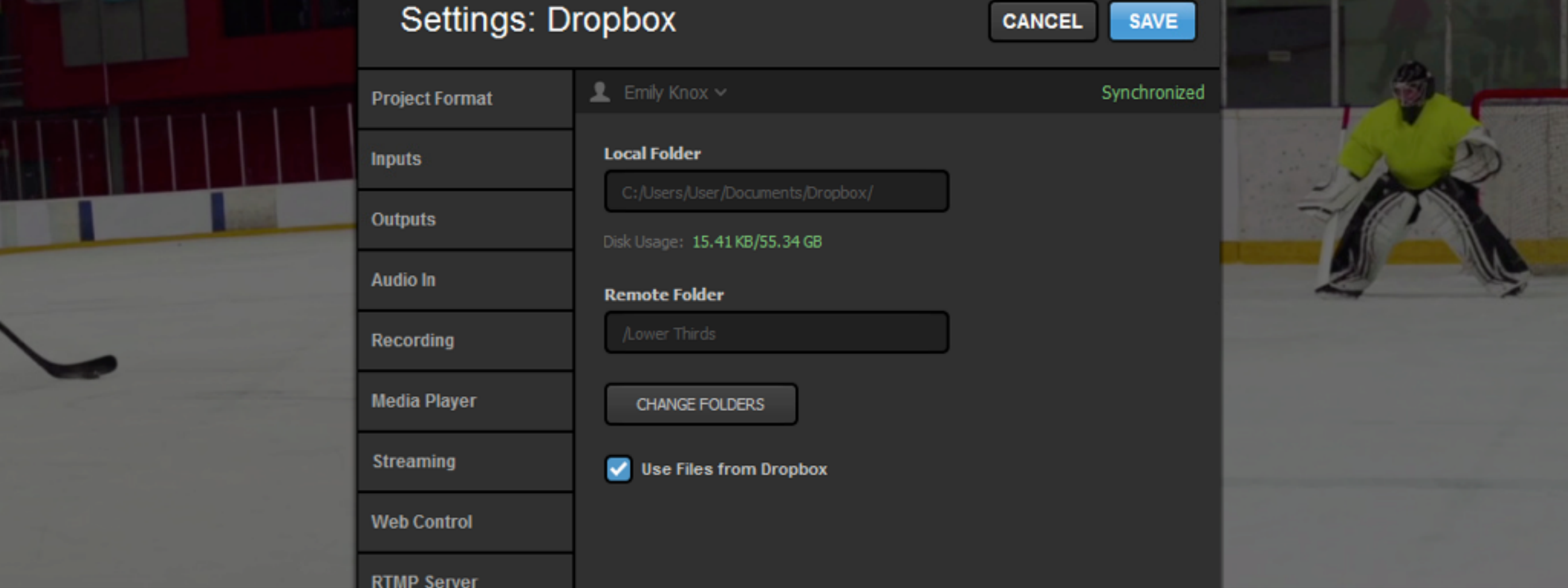
Studio will request permission to access your files in Dropbox. Click 'Allow.'



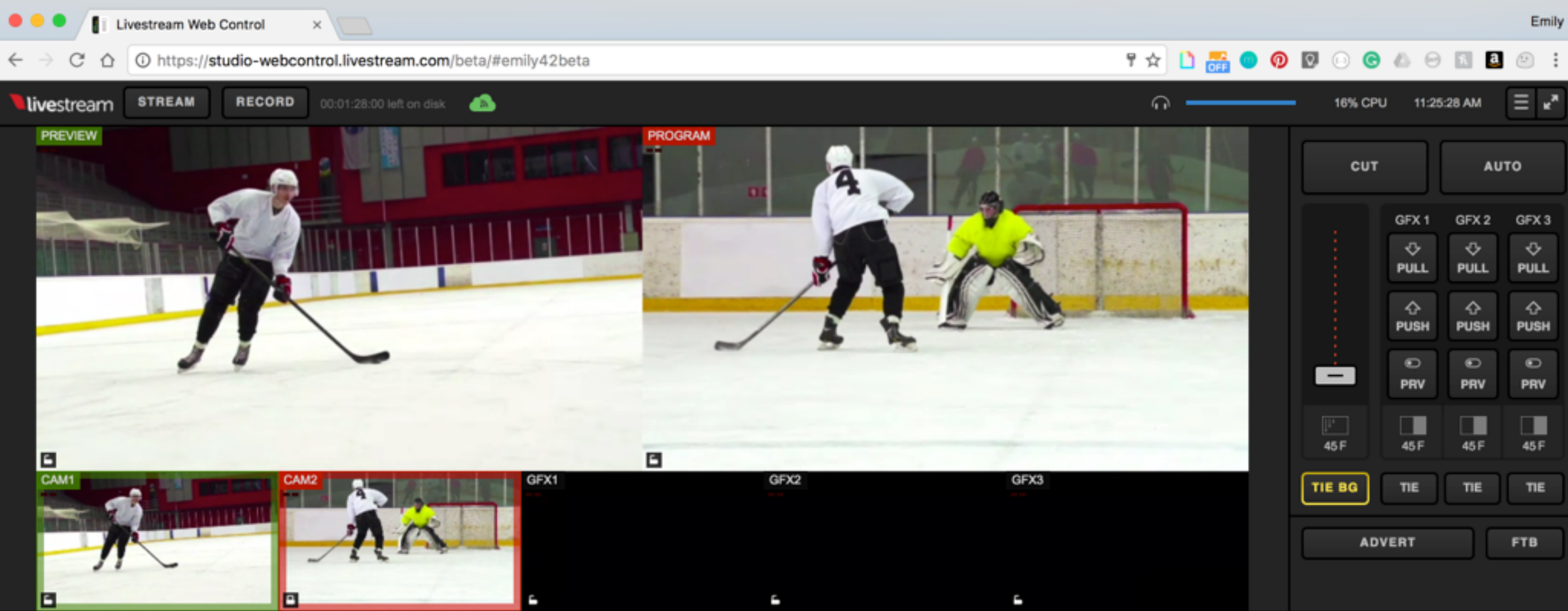


You will need to select a folder on your local drive to save your imported file to and a folder in your Dropbox from which to select .lsgfx files. Once you made you choices, click 'Save.'

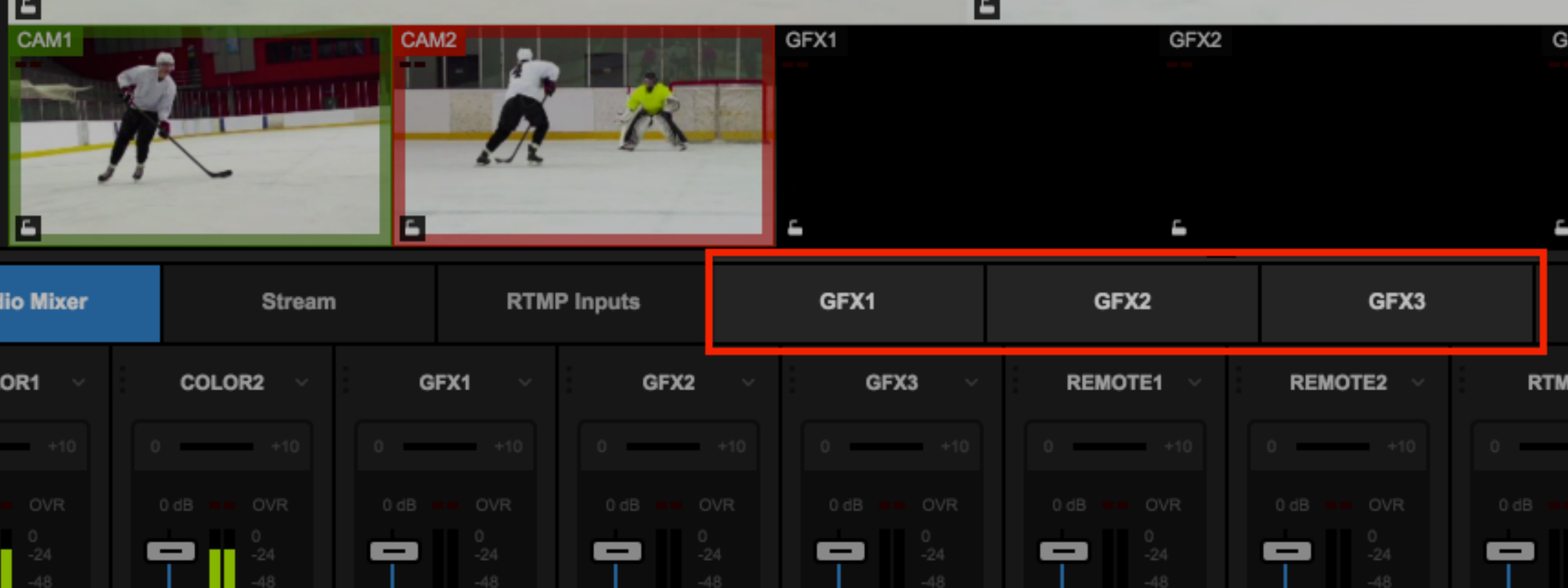




Studio will indicate that your Dropbox account is synchronized with Studio.



Next, log in to Web Control and open your Studio (assuming you have already added yourself as a user).

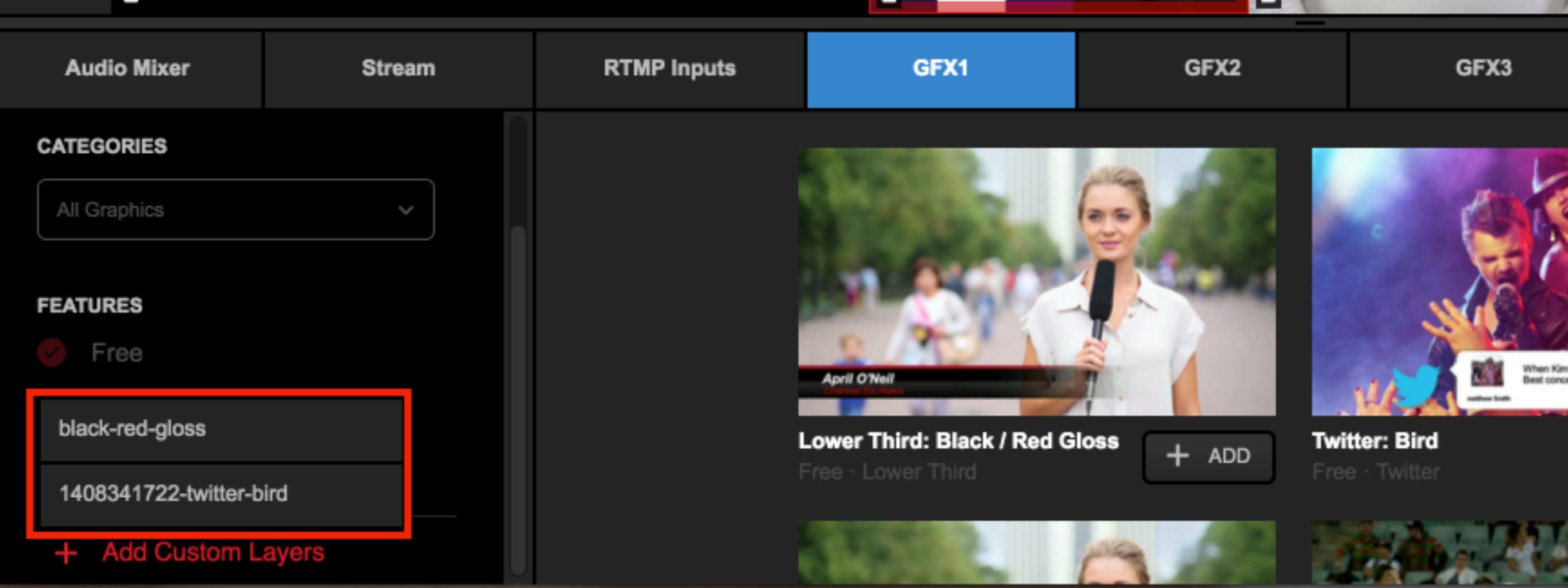


You should notice the three graphics overlay tabs in the bottom portion of the screen; select one of them to continue.

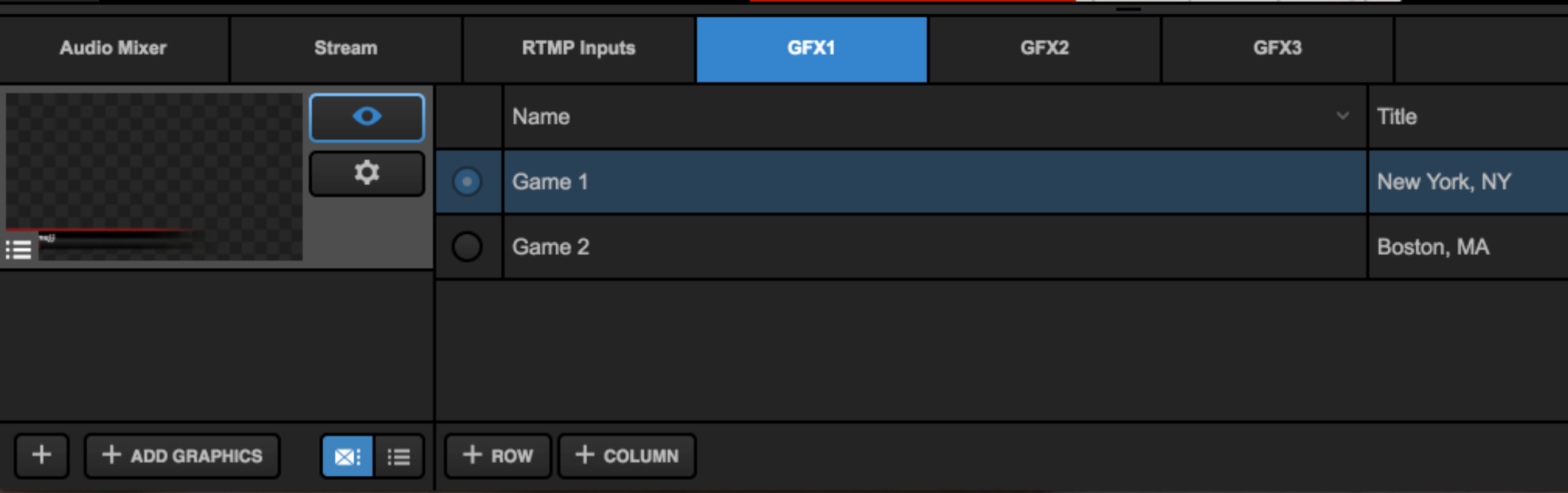


You can either browse the free Graphics Store within the Web Control graphics overlay module, or scroll down and click 'Add Custom Layers.'





Any .lsgfx files saved in your selected Dropbox folder will be listed here. Click the name of the file you wish to use.

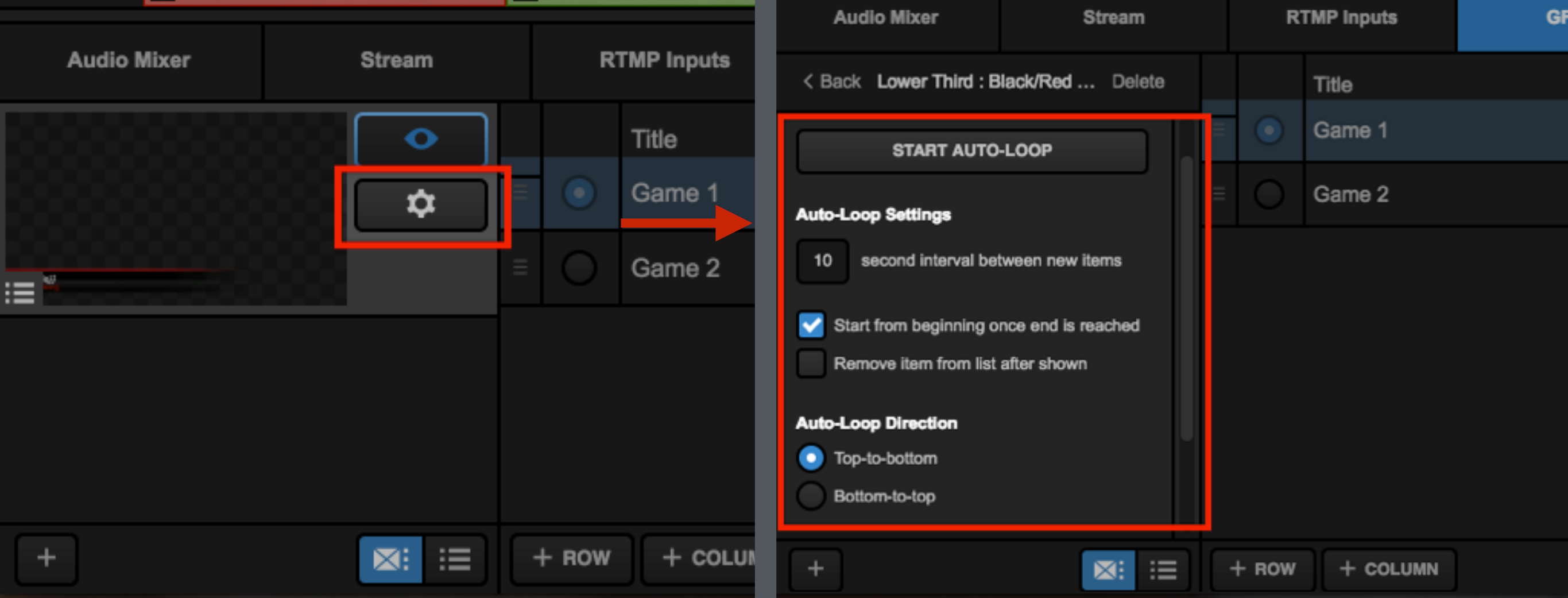


The graphics file will load with its design and settings on the left and its data on the right.

**Note:** It is not possible to open the GFX Designer in Web Control. The appearance of the graphic can only be edited within the Studio software.

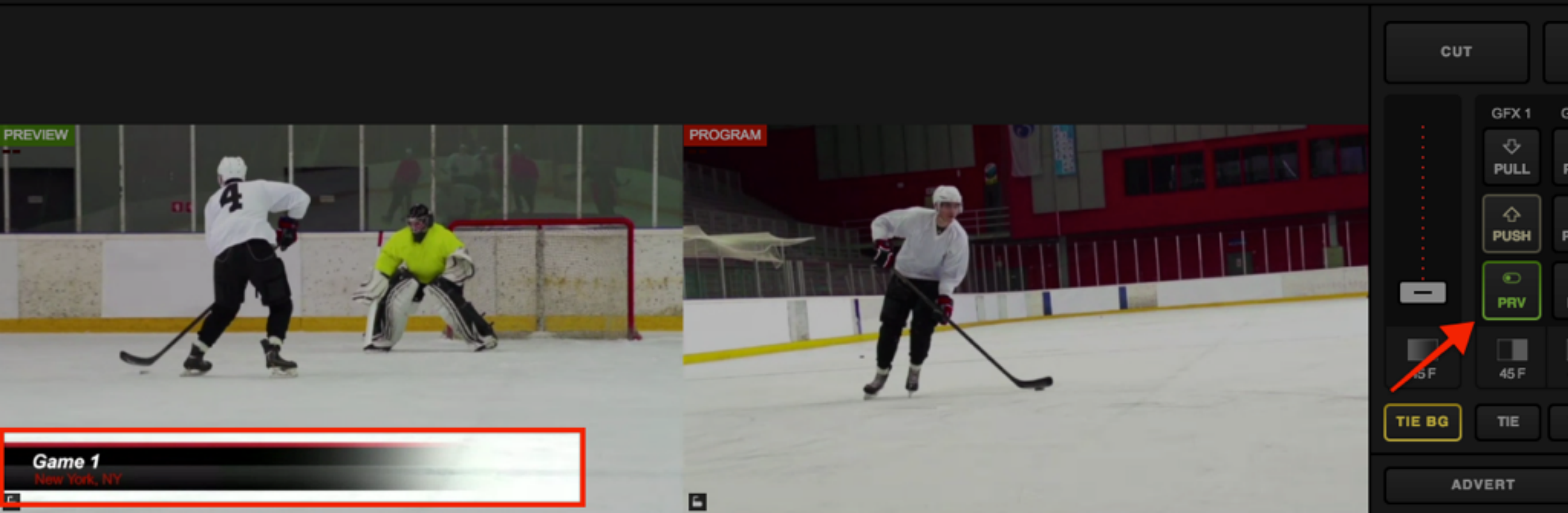
RTMP Inputs		GFX1	GFX2	GFX3	
		Title	Location		
	<input checked="" type="radio"/>	Game 1	New York, NY		
	<input type="radio"/>	Game 2	Boston, MA		
+ ROW		+ COLUMN		Auto PUSH/PULL	

On the right side, you have the ability to add data rows and columns and enable the Auto Push/Pull feature when selecting different rows.

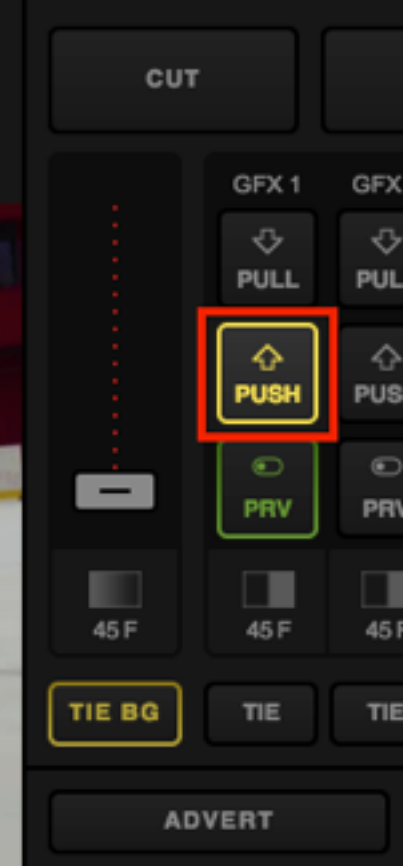


Clicking the gearwheel on the left side will open the settings available with that graphic, such as auto-loop timing, direction, and starting point.





Overlaying graphics in Web Control is the same as in Studio software. Click the corresponding 'PRV' button to show your graphics overlay in Preview.



Click 'PUSH' to transition the graphic overlay into Program.



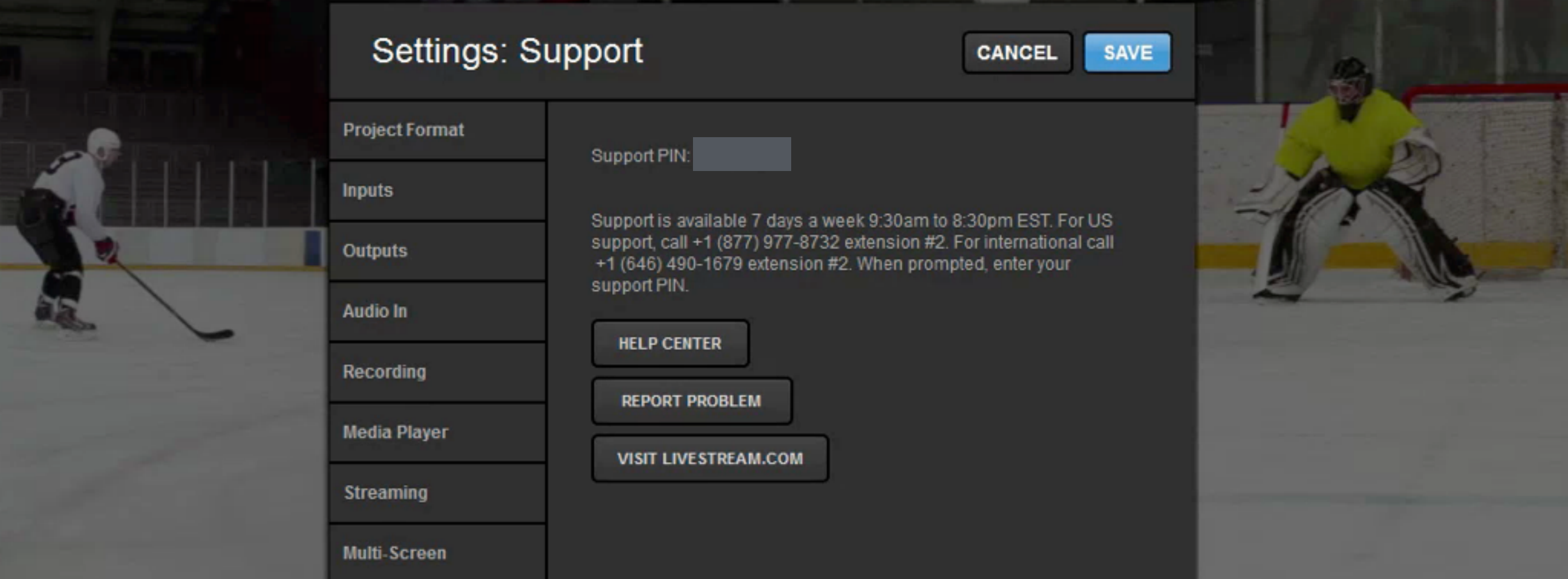
Now, you will see the graphic overlay in your Program monitor.



To remove it from Program, click the corresponding 'PULL' button.

# Support Information





If you have any questions or issues regarding Livestream Studio, navigate to the 'Support' tab for a link to our [help center](https://help.livestream.com) at [help.livestream.com](https://help.livestream.com) and ways to contact our support team.