

KIT Cloud™

Live Module User Guide

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Getting Started

The process to deliver a live event with KIT Cloud involves three components:

- An active KIT Cloud account with live enabled.
- Flash Media Live Encoder; which is available at Adobe's website. (www.adobe.com)
- Laptop or PC with a broadband connection and a camera. Flash Media Live Encoder will not run on a Mac.

Setting up a Live Project in KIT Cloud

Log in to your KIT Cloud account with your user name and password. Navigate to the 'Projects' tab. Select the 'Live Projects' tab to get a list of your live projects.

The screenshot displays the 'Live Projects' section of the KIT Cloud interface. At the top, there are navigation tabs: Home, Clients, **Projects**, Media Bin, and Dashboard. Below these are links for 'All Profiles | Help | Sign Out'. A secondary navigation bar includes 'Create a New Project | Media On Demand | **Live Projects** | Custom Players | Security | Live Streams'. The main heading is 'Live Projects'. Below the heading, there are links for 'List' (selected) and 'Calendar', along with download links for 'Download Flash Media Live Encoder' and 'Download Media Suite Live Documentation'. The 'Server Time' is shown as '3/13/12 5:18 PM UTC'. A search bar contains 'Name:' and 'Contact Name:'. A filter dropdown is set to '- All Series -'. The 'Rows:' dropdown is set to '10'. A red square icon is labeled '= needs attention'. A small box shows the number '1'. Below this is a table with columns: Name ^, Start Date, Time Remaining, Contact Name, and Delete. The table lists three 'Live Player Test' projects. At the bottom right, there is a 'Delete' button.

Name ^	Start Date	Time Remaining	Contact Name	Delete
Live Player Test 1	3/17/12 10:00 AM	3 days 20 hours 41 minutes 23 seconds	[None Specified]	Get Code Clone <input type="checkbox"/>
Live Player Test 2	3/24/12 10:00 AM	1 week 3 days 20 hours 41 minutes 23 seconds	[None Specified]	Get Code Clone <input type="checkbox"/>
Live Player Test 3	3/31/12 10:00 AM	2 weeks 3 days 20 hours 41 minutes 23 seconds	[None Specified]	Get Code Clone <input type="checkbox"/>

Adding Live Streams & Live Stream Packages

Before you start creating your project, you must first add streams to your account. When you add them, you must then add them to packages, for easy addition into projects.

To add streams:

- From the **Projects** tab, click on **Live Streams**.
- Click on **Add Live Stream**.
- Fill out the necessary **Title**, **CDN Account**, **Primary Entry** and **Stream Name**. (If this is an HD Stream, do not forget to check the **Is HD Stream** check box.
- *NOTE* You can fill out additional information such as **Secondary Entry**, **Username** and **Password** for easy storage for future use.
- Click **Save**.

The screenshot shows the 'Live Stream' configuration form within the 'Projects' tab. The form includes the following fields and options:

- Title ***: Text input field containing 'Live Test Stream'.
- Cdn Account ***: Dropdown menu showing 'Akamai - 54218'.
- Primary Entry ***: Text input field containing a URL.
- Secondary Entry**: Text input field.
- Stream Name ***: Text input field containing 'Stream Name'.
- Username**: Text input field.
- Password**: Text input field.
- Bitrate**: Text input field containing '500'.
- Is HD Stream**: Check box, currently unchecked.

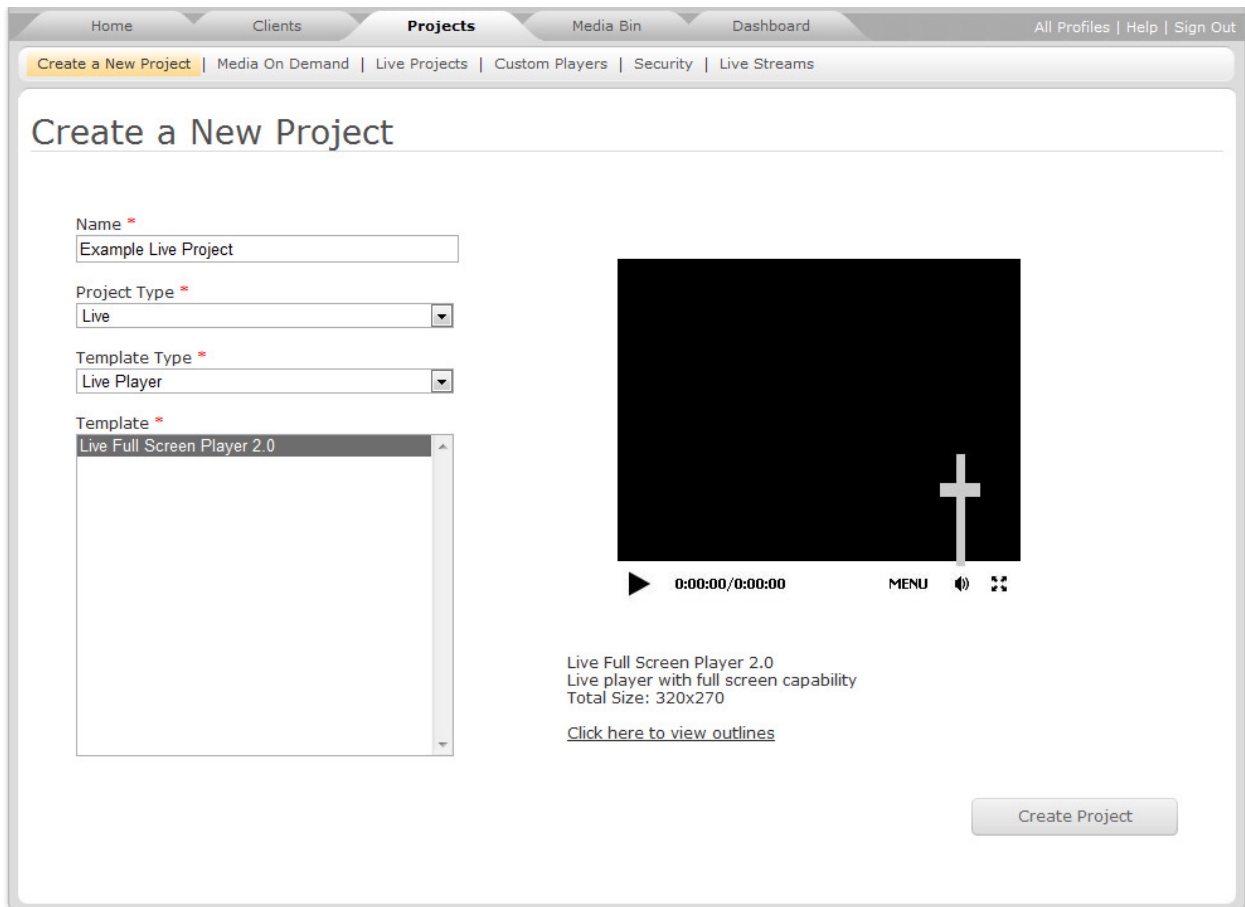
At the bottom of the form are two buttons: 'Update' and 'Cancel'.

Repeat this process until you have inputted all your streams.

To add a stream package:

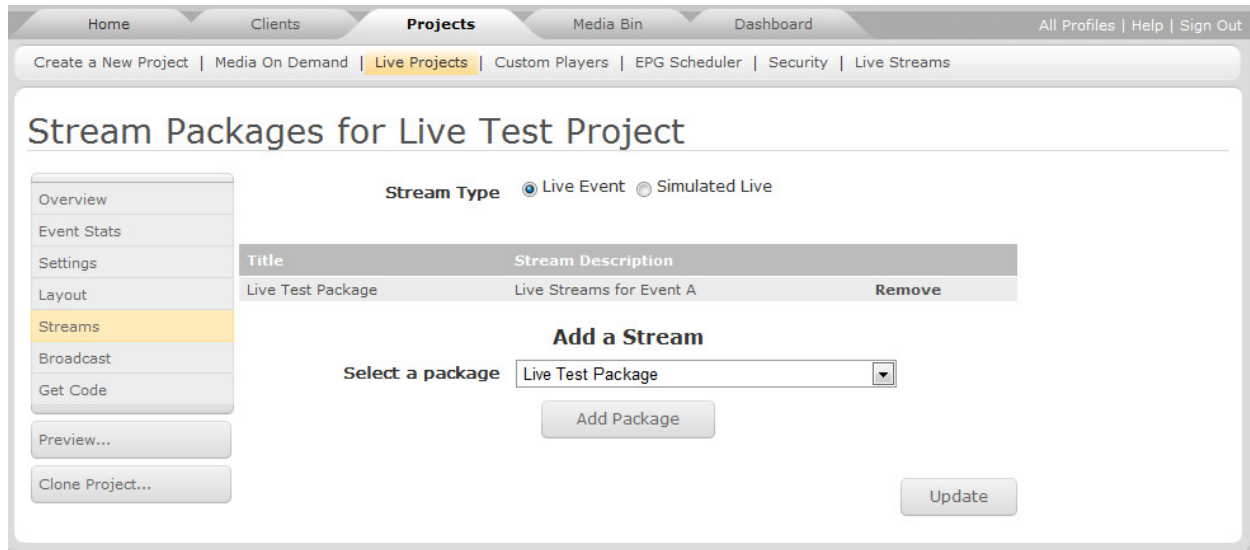
- From the **Projects** tab, click on **Live Streams**.
- Click on **Add Live Stream Package**.

- Choose the template.
- Once you select a template, the preview of the template layout and its description appear on the right. To preview the template in a separate window, select **“Click here to view outlines.”**
- Click Create Project.



Once the project is created you can modify the look and feel of the player using the Settings page and you can add a live stream package using the Streams page. To make these changes select the live project from the project list. The Settings and Stream pages are available from the left hand navigation.

All the stream packages that you have set up will be available in the streams dropdown. Select at a stream package for your event.



Once stream package is selected, it appears in the stream package list on this page.

The 'Get Code' page provides several code snippets that can be used to embed your new player. At the bottom of the page we also display the stream credentials for Flash Media Live Encoder.

Cloning a Live Project

It is important that when a project has been created it should only be used for one live event. This will ensure that all the statics and history for the event are saved with the project. If you need to create a new event that is similar to an event that has already been set up, you can clone the event to create the new project. Cloning will carry over all the project information from the original event, including any slides that were included with the event. Once the project is cloned you can make whatever modifications are needed for the new event.

The screenshot shows the 'Live Projects' section of the KIT Cloud Live Module. At the top, there is a navigation bar with tabs for 'Home', 'Clients', 'Projects' (selected), 'Media Bin', and 'Dashboard'. Below the navigation bar, there are links for 'Create a New Project', 'Media On Demand', 'Live Projects' (highlighted), and 'Security'. The main content area has a sub-navigation bar with 'All Presentation Lists' and 'Add Presentation List'. The title 'Live Projects' is displayed prominently. Below the title, there are two download links: 'Download Flash Media Live Encoder' and 'Download Media Suite Live Documentation'. The current server time is shown as '11/12/2009 07:08 pm UTC'. There are two input fields for 'Name:' and 'Contact Name:', with a '1' button next to the 'Contact Name' field. Below these fields is a table of live projects. The table has columns for 'Name', 'Contact Name', 'Start Date', and 'Time Remaining'. The 'Time Remaining' column is further divided into 'Started', 'Config', 'Get Code', 'Control', 'Clone', and 'Delete'. The 'Clone' button in the first row of the table is highlighted with a red box.

Name	Contact Name	Start Date	Time Remaining					
Example of Live Project	[None Specified]	[Not set]	Started	Config	Get Code	Control	Clone	Delete
Live Player Test 2	John Smith	05/26/2009 05:21 pm America/New_York [-04:00]	Started	Config	Get Code	Control	Clone	Delete
Live Player Test 3	John Smith	05/26/2009 05:30 pm America/New_York [-04:00]	Started	Config	Get Code	Control	Clone	Delete
Live Project Test 1	John Smith	04/14/2008 11:00 am America/Detroit [-04:00]	Started	Config	Get Code	Control	Clone	Delete

Repeating a Live Project

When scheduling a Live Event, you have the option to repeat that event using the **Recurring Event Generator**. Repeating a live event using the Recurring Event Generator is like cloning, but allows you to schedule the event many times at one time.

Overview

Event Stats

Settings

Layout

Streams

Broadcast

Get Code

Preview...

Clone Project...

Scheduling

Start Date

Start Time :

Timezone

Event Duration Hour(s) Minutes

Show recurring event generator

Series information

- Last event in series scheduled on: **8/18/11**
- First available date for recurring start: **8/19/11**
- Recurring events may be scheduled up to 6 months from start date

Generate for these days:

	SU	MO	TU	WE	TH	FR	SA	Duration (H:M)
<input type="text" value="12"/> : <input type="text" value="00"/> <input type="text" value="pm"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="1"/> : <input type="text" value="0"/>
<input type="text" value="12"/> : <input type="text" value="00"/> <input type="text" value="pm"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="1"/> : <input type="text" value="0"/>
<input type="text" value="12"/> : <input type="text" value="00"/> <input type="text" value="pm"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="1"/> : <input type="text" value="0"/>

Recurring start date

Recurring end date

In the **Recurring Event Generator**, you can repeat the event any day of the week with any duration, at any time, and as many times as you request for up to one year. You can only schedule up to three different times for the live event at a time. To schedule more, you will need to open the **Recurring Event Generator** again after you click update.

Series and Events

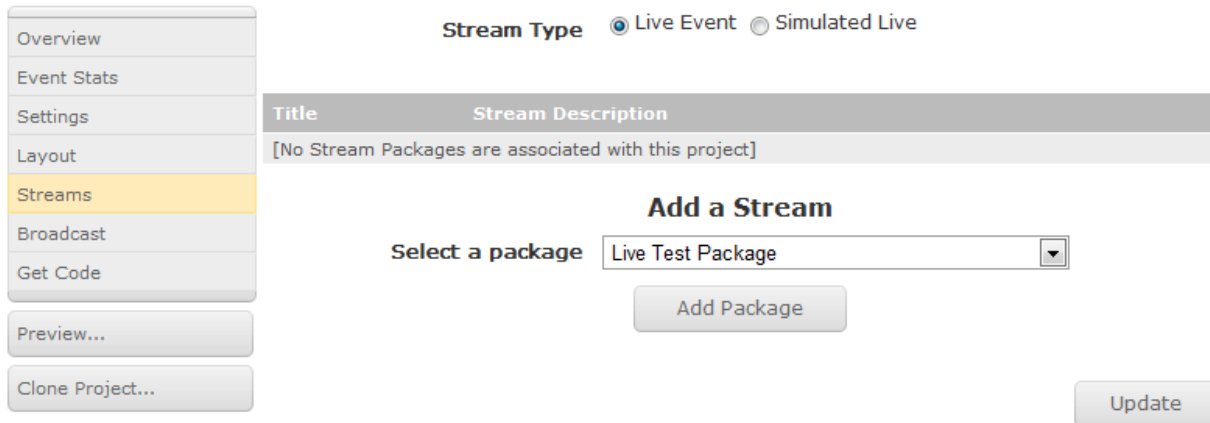
Cloned events are tied together as a Series. Each cloned project is considered a single event within the series. Most of the code snippets provided in the get code page point to the series rather than the individual event. The one exception is the Single Event Permalink. The difference between the two is apparent when the event is over. If the Single Event Permalink is used, the viewer will see a message that the event is over at the end of the event. If the code for the Series is used the user will see a count down to the next event in the series.

Simulating a Live Event

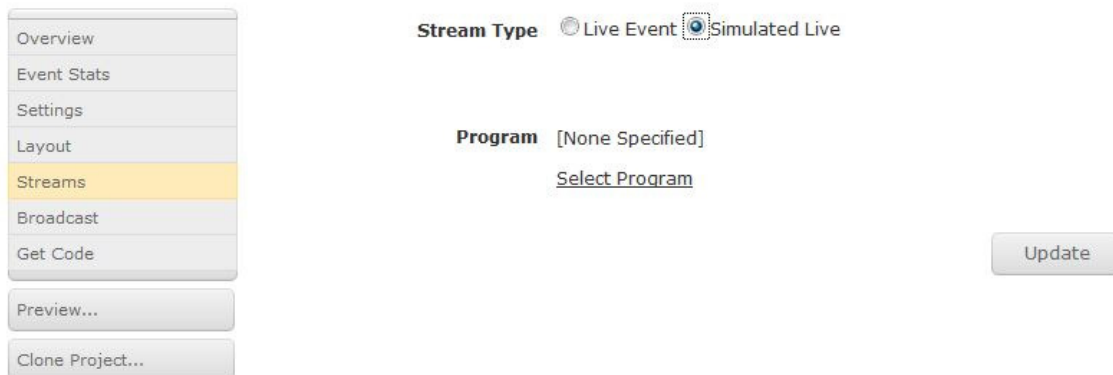
Note that this option is not available for all users.

You can simulate a live event using a pre-recorded asset. This is done by creating a standard live project, but instead of using a live stream as a source, you would use an asset from the media bin. The program will begin to broadcast using the start time of the live project and stream for the duration of the asset. If a user starts a player after the start time of the project, they will be placed at the time point in the video that assumes the program started at the project start time. For example, if a one-hour program is scheduled to start at 2:00 pm and a user opens the player at 2:30 pm, they will start watching the video from the 30-minute point.

To set up a simulated live event, go to the Streams tab. There is an option to use a Live Event or Simulated Live stream type.



When you click on the Simulated Live option, you will be given the option to select a program as your source.



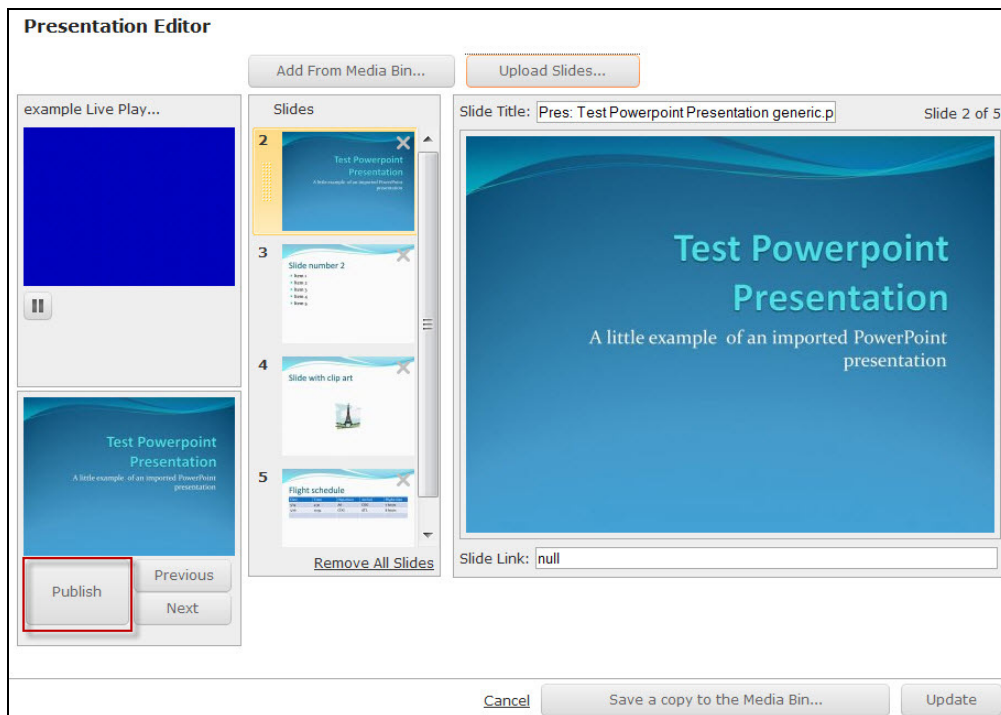
Select the program from the list of assets and click on Update. This will associate a pre-recorded asset as your source and will modify the duration for the project to match the length of the asset.

Using Slides in a Live Event

Some of the Live Player templates support the use of slides. Slides for a live event are handled differently than slides for an on demand player. For a live event, each slide is published manually to make sure that the slide is synchronized with the live broadcast.

To set up the slides for the presentation you can either select presentation or slides from the Media Bin using the **Add From Media Bin...** option, or upload new slides or presentation using the **Upload Slides...** option just as you would for an on demand project. Once you have included slides in your project you can begin publishing slides.

Slides are published manually during the broadcast. To help coordinate the timing of the slides, the top left corner of the presentation editor has a small video window where the person controlling the slides can monitor the broadcast. To publish a slide, select the slide from the list (see slide number 2 below for example) and click on Publish. This will push the selected slide out to the end viewer. The slide that is currently displayed in the player will appear in the bottom left corner of the Presentation Control page. To publish the next slide you can either select another slide and click on Publish or use the **Next** and **Previous** buttons to move through the list of slides in order.



Live Monitor page

The Live Monitor page provides a real time view into your live event. From this page, you see a count down for your live event, a test view of your live stream, along with real time information on player launches.

Live Stream Display

The top left corner of the page displays the current live stream. The player on this page is a fixed size so it may not reflect the actual size of your player.

Launches by Minute Chart

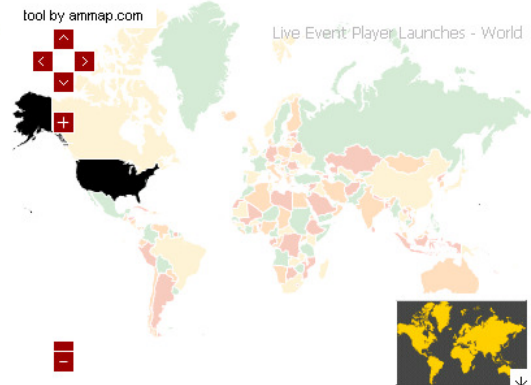
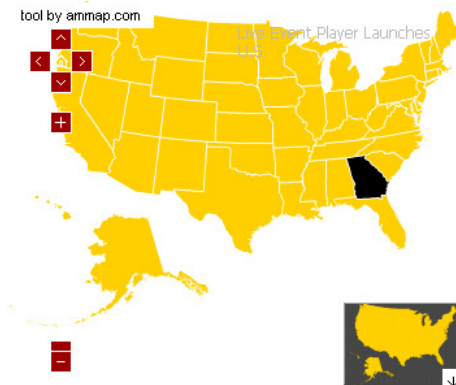
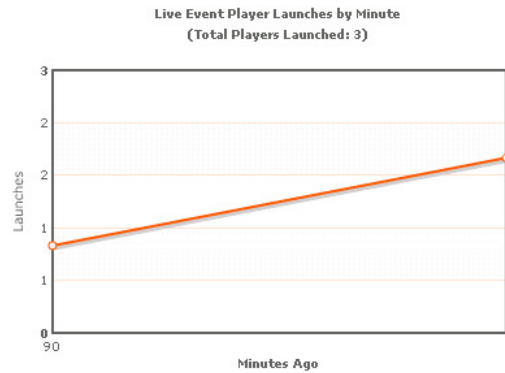
The chart at the top right shows each minute that a player has launched and how many players launched in the minute. The chart displays launches starting 30 minutes prior to the event and ends 30 minutes after the event. The chart displays 60 minutes at a time.

U.S. and World Maps

The maps at the bottom of the page show the location of the viewers launching the players. The location is based on the viewers IP address. The map will summarize the player launches starting 30 minutes before the event through 30 minutes after the event for a maximum of 5000 launches. If the event exceeds 5000 launches, the oldest launches will be dropped. This is just a total of player launches and does not reflect the time a user viewed the event.

- Overview
- Monitor
- Settings
- Layout
- Streams
- Broadcast
- Get Code
- Preview

Event Start Time: 08/04/2009 08:00 am | Current Server Time: 08/04/2009 10:08 am [America/New_York]
End Time: 08/04/2009 06:00 pm



Managing your Live Projects

You are able to manage your live events in either list view or calendar view.

Create a New Project | Media On Demand | **Live Projects** | Security | Live Streams

Live Projects

List || Calendar Download Flash Media Live Encoder Download Media Suite Live Documentation **Server Time: 8/18/11 4:37 PM UTC**

Name: Contact Name: Filter by Series: Rows: ■ = needs attention 1 2 ▶ ▶▶

Name ^	Start Date	Time Remaining	Contact Name	Delete
****Live HD MASTER PROJECT - CLONE THIS****	5/23/10 10:10 AM	Started	Josh Pappas	Get Code Clone
7/31/11 Sunday AM	7/31/11 10:10 AM	Started	Vaughn Waters	Get Code Clone
7/31/11 Sunday PM	7/31/11 6:00 PM	Started	Vaughn Waters	Get Code Clone
8/14/11 Sunday AM	8/14/11 10:20 AM	Started	Vaughn Waters	Get Code Clone
8/14/11 Sunday PM	8/14/11 6:00 PM	Started	Vaughn Waters	Get Code Clone
8/21/11 Sunday AM	8/21/11 10:20 AM	2 days 21 hours 42 minutes 34 seconds	Vaughn Waters	Get Code Clone
8/21/11 Sunday PM	8/21/11 6:00 PM	3 days 5 hours 22 minutes 34 seconds	Vaughn Waters	Get Code Clone
8/28/11 Sunday AM	8/28/11 10:20 AM	1 week 2 days 21 hours 42 minutes 34 seconds	Vaughn Waters	Get Code Clone
8/28/11 Sunday PM	8/28/11 6:00 PM	1 week 3 days 5 hours 22 minutes 34 seconds	Vaughn Waters	Get Code Clone
8/7/11 Sunday AM	8/7/11 10:20 AM	Started	Vaughn Waters	Get Code Clone

Select / Deselect All

From List view, you can do the following:

- Sort by Name, Start Date or Contact Name.
- Filter the list by Series Token.
- Batch Delete
- Show results by rows of 10, 20, 50, 100, 200 or 500.
- Search by Name or Contract Name.

List view also will alert you when an event has an issue. If the event is highlighted in pink, it is either not scheduled or is missing a live stream. In case of it being a simulated live event, it could be missing the On Demand video that is to be simulated.

Live Projects

List || **Calendar** Download Flash Media Live Encoder Download Media Suite Live Documentation **Server Time: 8/18/11 4:37 PM UTC**

◀ ▶ today **August 2011** month week day

Sun	Mon	Tue	Wed	Thu	Fri	Sat
31 10:10a 7/31/11 Sunday AM 6p 7/31/11 Sunday PM 7p Inlight - 7/31/11	1	2	3	4	5	6
7 10:20a 8/7/11 Sunday AM 6p 8/7/11 Sunday PM 7p Inlight - 8/7/11	8	9	10	11	12	13
14 10:20a 8/14/11 Sunday AM 6p 8/14/11 Sunday PM 7p Inlight - 8/14/11	15	16	17	18	19	20
21 10:20a 8/21/11 Sunday AM 6p 8/21/11 Sunday PM 7p Inlight - 8/21/11	22	23	24	25	26	27
28 10:20a 8/28/11 Sunday AM 6p 8/28/11 Sunday PM 7p Inlight - 8/28/11	29	30	31	1	2	3
4 10:20a 9/4/11 Sunday AM 7p Inlight - 9/4/11	5	6	7	8	9	10

Calendar view allows you to find a live event via the calendar in either Month, Week or Day view. You can select an event from the calendar and go into its settings to adjust anything as needed. Events are color coded. Pink events are in need of attention just like in List View, and blue events are for events that are ready to go.

Flash Media Live Encoder

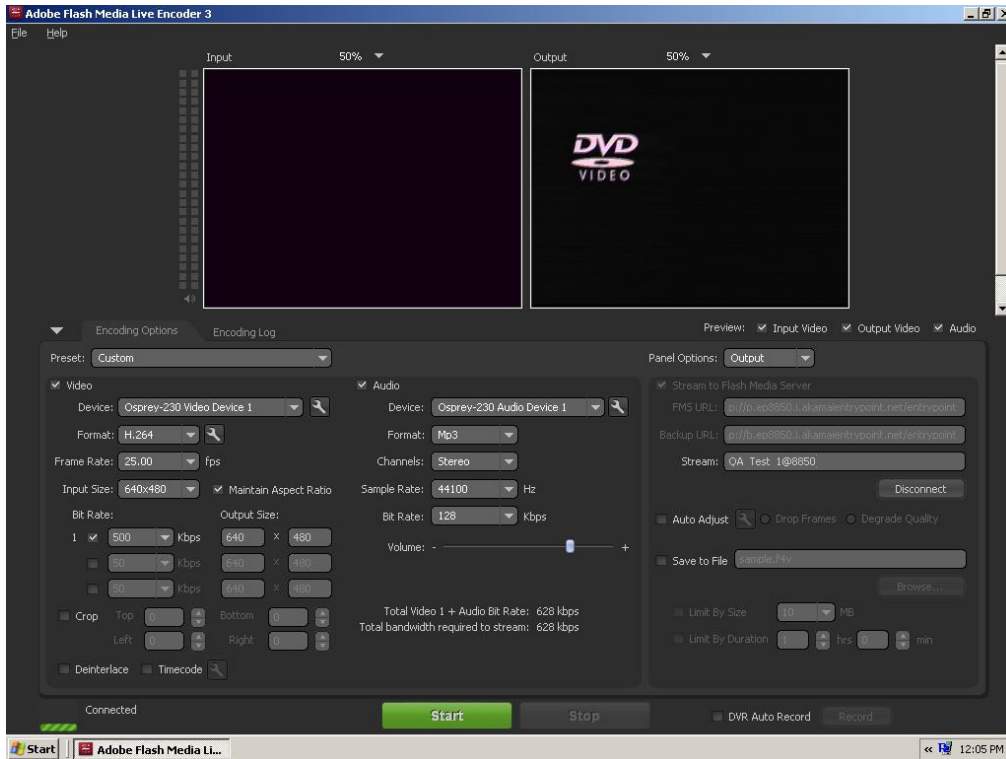
To run a Live Flash 8 broadcast on your own, you will need the following:

- Flash Media Live Encoder (Free download from Adobe)
- Windows Based PC with the following system requirements:
 - Microsoft® Windows XP® Service Pack 2
 - Intel Pentium®3 or compatible processor; 933MHz, 256MB RAM
 - 40MB hard disk space (excludes archived Flash Video files)
 - 1024 x 768 screen resolution with 32 bit Color Quality
 - Microsoft DirectX End-User Runtime version9.0c, Microsoft DirectShow-compatible video capture device
- Provisioned live stream in your KIT Cloud account
- Live stream Flash Media Live Encoder credentials
- Firewire or USB camera, video switcher or analog-to-digital converter, capture card, or microphone
- High speed connection at broadcast point. For example, if you are running a 300 kbps broadcast to both the primary and backup entry points, you will need a connection with no less than 600 – 800 kbps. A good way to check your connection is to go to www.SpeedTest.net and follow the directions to run a test.

NOTE: Network instability is one of the biggest sources of broadcast problems and failure. In this case, broadcasting to the primary entry point (FMS URL) only would be an option to reduce the needed bandwidth in half. This method, however, removes the redundant backup in case the primary stream fails.

Operating Flash Media Live Encoder in your desktop

You must have a copy of the Adobe Flash Media Encoder on the desktop of the PC you are using at the event location to capture, encode, and stream the content. To get a free copy of this encoding software, use the download link available in KIT Cloud on the Live Projects page. After installing the Flash Media Live Encoder software, connect your camera to the PC and then open the Flash Media Live Encoder application. This is what you should see.

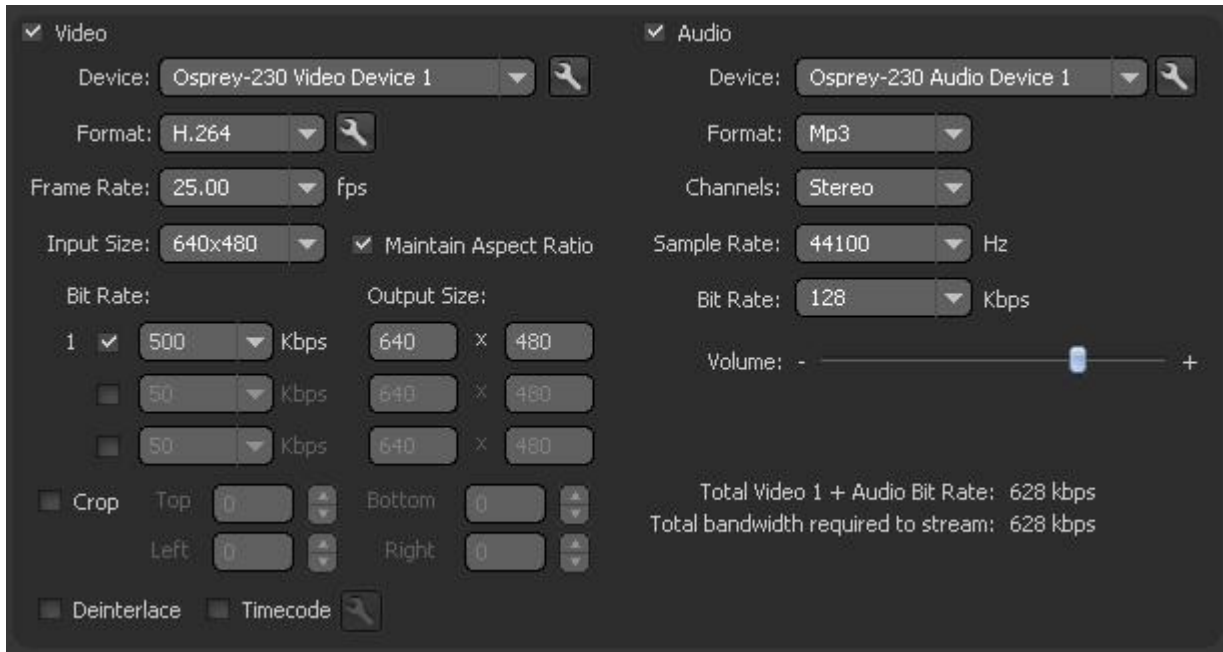


Saving a local version of the broadcast is possible by selecting 'Save to File' in the Flash Media Encoder Interface. Selecting this option will save a Flash (FLV) formatted video to the user's local hard drive. Note: you can limit the size and duration of the file to keep the file size smaller.



Stream credentials will be provided to you for the following steps. At this point, running a live broadcast is fairly straightforward.

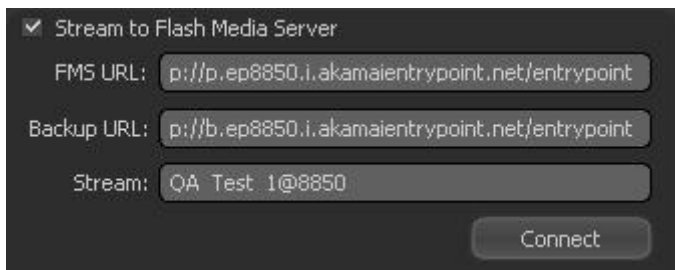
- Confirm that both your video and audio sources are connected and are being detected by Flash Media Encoder.
- In the Flash Media Live Encoder interface, select the desired encoding settings (recommendations below).



- Enter in the 'FMS URL' also known as the primary entry point.
- Then enter the 'backup URL' also know as the backup entry point.
- Enter the 'Stream' (Stream Name).
- Save your profile before moving on.



- Select the 'Connect' button.



- You will be prompted to input the Username (CP Code) and password. You will be prompted for the same login information twice if both the primary and backup URLs are entered.
- After a successful connection is established, you need to select 'Start' to begin the broadcast stream.



Encoding Settings

There are many things to consider when deciding upon your encoding settings for a live broadcast and we can not emphasize enough that each situation is different. What we have laid out here are rough guidelines to use as a starting point. The best way to decide upon settings for your event is to start testing different options.

High Motion Events

For high motion events like most sports broadcasts or anything else with quickly changing visual content, you will need to use a higher bit-rate. Assuming you are broadcasting a 320x240 video size (a standard web-video size), you should push the frame rate up to something close to 30fps (29.97 frames per second is the standard definition NTSC frame rate). Video bit-rate is probably the biggest decision to make because of many factors involved. Obviously, the higher bit rate that is used, the better quality the video will appear to end-users. However, by using a higher bit-rate, you are requiring end-users to have a higher speed internet connection in order to smoothly view the stream. In our experiences with various international sporting events, a target video bit-rate of 300 – 350 kbps is a good balance of quality and accessibility. Under the Advanced Encoder Settings, you can further refine your quality settings. Since it is higher motion content, we would recommend lowering the keyframe frequency to 2-3 seconds. The quality can be left at 'Good Quality – Good Framerate' or depending on the event, you might choose to sacrifice a little bit of quality for a better framerate. For most all events, we would highly recommend setting the CPU usage to 'Dedicated' this will ensure the best quality broadcast.

Low Motion Events

For low motion video events like a lecture, substantially greater quality can be achieved with the same or even less bandwidth usage than high motion events. Again, assuming a 320x240 video size, you can afford to drop the framerate down below 30fps (we recommend no less than 20fps). Depending on how static most of the video is, the broadcast could use a bit-rate of 150 – 200 kbps. Using the default 5 second keyframe frequency (in the advanced encoding settings) is fine. Depending on the event, it might even be best to choose the 'Best Quality – Lower Framerate' option.

Audio Only Events

If you are using the NellyMoser codec, it is best to choose a higher bit-rate if you will be using music or dynamic frequency ranges for your broadcast. If you are using the MP3 codec, you have the choice of stereo or monaural channels. Unless stereo is a requirement, monaural channels provide adequate quality for less bandwidth. For commentary a sample rate of 11kHz or 22kHz is fine. For musical broadcasts, 44kHz is recommended with 22kHz being the minimum requirement for music. For the bit-rate 48, 96, or 128kbps are standard. We suggest testing to see what bit-rate works best for your target audience.

Helpful Tips to a Successful Live Event

- Practice and test often, if possible, at the actual venue in real world conditions.
- Test the Internet connection a couple of times prior to the event. Open a browser, then go to www.speedtest.net and see what the connection is at the venue.
- Make sure you have sufficient Internet connection at the time of your event. Even basic internet activity and e-mail uses vital bandwidth. This is why we recommend a dedicated broadband connection.
- Make sure you have enough battery power if you are using a laptop in battery mode.
- Make sure you have enough battery on your camera if you are using it in battery mode.
- Turn off all other applications on the encoder PC other than Flash Media Live Encoder. Instant messengers, browser pages, and Outlook all have resource requirements on your PC.
- Ask someone offsite to check the test stream, if you try to test the broadcast at the venue, keep in mind you will be using the same internet connection you are broadcasting out.
- Make sure the location of the encoder is away from possible obstructions and high traffic areas.
- If you are using a camera that has a tape, make sure there is a tape in the camera.
- Know your surroundings, either indoors or out, make sure your surrounding area is safe for the encode and camera hardware.