

# Introduction to Live Streaming



What is it, and how to get started

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## INTRODUCTION

Live streaming is everywhere these days. In fact, you'd be hard pressed to find a major planned event that isn't scheduled to be streamed online. Past examples are the Olympic Games, the royal wedding, American inaugurations, even the landing of spacecraft on Mars. Online viewership is increasing each year as mobile devices make watching on the go easy. For example:

- BBC reports 106m video requests during the course of the Olympic games in 2012 compared to 32m for the Beijing games in 2008.<sup>1</sup>
- 72m people watched the royal wedding of William and Kate streamed live on YouTube. Viewers represented 188 different countries.<sup>2</sup>
- Over 3.2m watched NASA's Mars rover Curiosity landing live online, almost 50% more than watched it on American TV.<sup>3</sup>

While these numbers are impressive, today live streaming is simple and affordable enough for anyone wanting to share with the world. Small, intimate weddings are being streamed to distant relatives. Corporate meetings are streamed live to all employees on the globe simultaneously. Even individuals hosting their own TV or radio shows stream live from their garages, lounges, or home offices.

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## FREQUENTLY USED TERMS

**Codecs:** A software program that converts a video/audio signal into a compressed format to send over the internet. A codec is also required at the receiving end to decompress the signal prior to viewing on a computer or mobile device. Most browsers and players come with the proper codecs installed.

**Player:** The software a computer or mobile device uses to play the video/audio stream. The player can be part of a browser, built into a website, or a stand-alone program (like Windows Media Player).

**Encoding:** A term used to describe what a codec does. For example, "The laptop encodes the signal from the camera before uploading to the Internet."

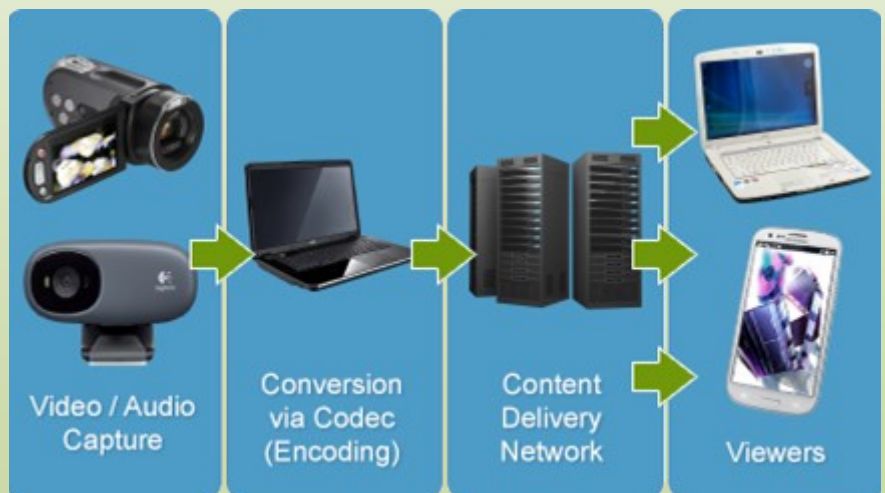
**CDN:** A Content Delivery Network. CDNs are large computer networks, usually with locations all over the world, designed to handle large amounts of content (audio, video, image, etc.) in order to ensure high performance and low latency. Using a CDN helps ensure viewers have few, if any, delays in watching video even when watching high definition content.

**Bandwidth:** This refers to the amount of data transferred over a network (the Internet for example) in a given time. It is measured in bits per second (bits/s or bps), or more commonly Megabytes per second (Mbps) or Gigabytes per second (Gbps).



## WHAT EXACTLY IS LIVE STREAMING?

Live streaming is very similar to what most people understand about traditional broadcast TV. But rather than the video (and/or audio) signal being broadcast over the air, or via cable, the signal is captured and converted to a format suitable for sending over the internet. The conversion involves compressing the signal into continuous "chunks", or a "stream," across the internet. The stream can be received by a computer or mobile device and converted back into a video/audio signal.



There are many formats and various standards used in the conversion. You've probably seen format abbreviations such as MP4, FLV (Flash), MOV, H.264 and others. Each format has a bit of software used in the conversion, referred to as codecs.

Thankfully, though, it isn't necessary to understand all the technical details to use live streaming.





## HOW DO I GET STARTED?

There are three ways you can get started with live streaming:

In-house, using your own audio/video department and IT infrastructure

- Outsource to a video production company
- Use a third party streaming service
- Which option works best for you will depend on your budget, frequency of use, and level of expertise.

Generally speaking, in-house solutions are expensive and limited by the available hardware in your network. The number of viewers you'll be able to reach is fixed unless you upgrade to higher powered servers or purchase additional servers to support your live streaming. You also will have to have trained people working the systems that understand how to configure the network to work with live streaming and to troubleshoot problems.

Outsourcing can be a reasonable solution if you only want to live stream a single event, or on a rare occasion. Depending on what you want to stream, however, the cost can also be expensive. Streaming a board meeting to a member out of the country costs significantly less than a large corporate annual meeting with multiple cameras, mixed media, and a stream delivered to 1,000 employees around the world.

Using third party streaming services offers a balance between cost and ease of use. Examples of streaming services are PlanetStream and YouTube (currently offering live streaming to a limited number of users). The benefits of using a service are that you are usually only responsible for capturing the live feed and sending it to a computer. That is, you usually only need a camera (and a microphone for audio) and a computer.

After the computer uploads the live signal to the service, the service takes over and delivers it to all your viewers in formats that support whatever devices are being used. There is generally no limit to the number of viewers you can have (other than cost). This is important because if you get a larger than expected number of viewers

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without using a streaming service, the result will either be a server crash and the live stream will stop. Or everyone will receive a degraded stream making their viewing difficult or impossible. Third party live streaming services are the only truly scalable and flexible solution to meet both your and your viewer's needs.

There are many companies offering live streaming services for free. If you opt for a free service, make sure you understand what that means for your viewers. Free services are usually ad supported. You have no control over what ads are shown and in some cases when they are shown (meaning an ad can appear in the middle of your live stream). Also free services usually have limited features unless you upgrade to a paid package or purchase their specific software tools.

Beyond the free services are dedicated streaming service companies. The costs and available features differ greatly. When researching your options, make sure to look for these things:

- Do they offer a free trial? And if they do, is support included? Many companies offer free trial access to their service, but if you need help getting started they charge you by the hour for support. Also check to see how much support costs when the trial period ends or if it is included in the package you purchase.
- Do they have a free player you can use on your website? There are many free or open sourced players available, but having one already integrated with the service will save you time and make your job easier.
- Are all the fees and charges explained? Most services will charge overage fees if you exceed your purchased bandwidth. Make sure you know exactly how much these fees are. Also find out if there are any hidden charges, automatic upgrade policies (to the next expensive package), and how easy it is to move between set bandwidth packages.
- What features are included with each price level or package? Are you getting what you need for the cost? For example, can you record your live event for later playback on-demand or is that an extra fee?

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If you can't get answers to these questions, you should probably find a different service to use.

And if you decide you need professional help with the videography after all, be sure to ask the video production company whether they are using a streaming service or if they are supporting streaming in house. Whatever their answer, just be sure to understand the costs involved and whether they can support the features you need.

## SUMMARY

Today live streaming is an easy and affordable way to reach family, friends, employees and customers. And you don't necessarily have to understand the technology of how it works in order to be able to use it effectively. Third party streaming services offer the ability to get started easily for free or a reasonable cost. By being a savvy researcher and asking questions you can be sure to find the right streaming provider for your live event.

## NOTES

1. BBC. "BBC Sport Breaks Online Records with First Truly Digital Olympics." BBC Media Centre. BBC, 13 Aug. 2012. Web. 6 Mar. 2013.
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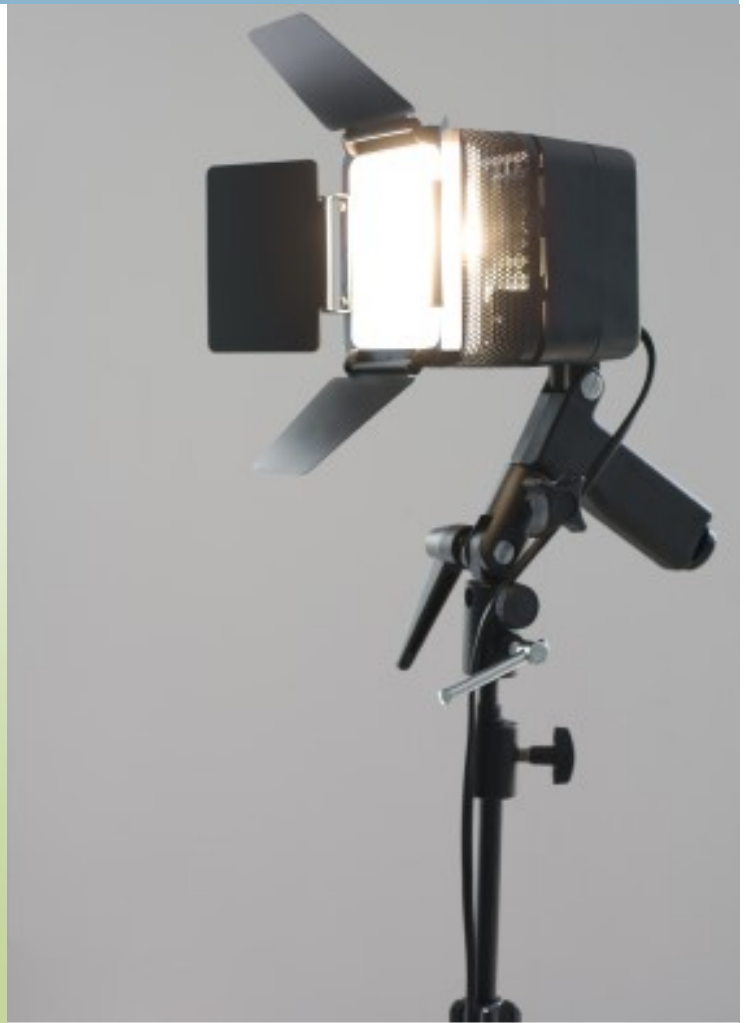
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## ABOUT PLANETSTREAM

PlanetStream, launched in 2003, is one of the UK's first established streaming providers. They offer live and on-demand video streaming to any device worldwide over a network that is 25% faster than the competition. Offering affordable pricing packages and dedicated customer service, PlanetStream is committed to providing unbeatable value for money.

For more information please visit:  
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