



Hangouts in 30 minutes with Socket.io

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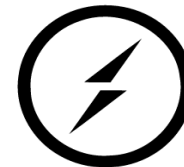
What is live streaming?

- Live streaming refers to content delivered live over the Internet, requires a form of source media (e.g. a video camera, an audio interface, screen capture software), an encoder to digitize the content, a media publisher, and a content delivery network to distribute and deliver the content.

Why to use it?

- Conversations
- Competitions
- Teaching lessons

How to implement?



socket.io



WebRTC



- Node.js uses an **event-driven, non-blocking I/O** model, which makes it lightweight.
- In simple words Node.js is “**server-side JavaScript**”
- In *not-so-simple* words Node.js is a high-performance **network applications framework**, well optimized for high concurrent environments.



- Socket.io is a framework that creates a persistent, real time, connection between server and client.
- Works on every platform, browser, device.
- Mainly used for
 - Instant messaging and chat
 - Binary streaming (image/video/audio)



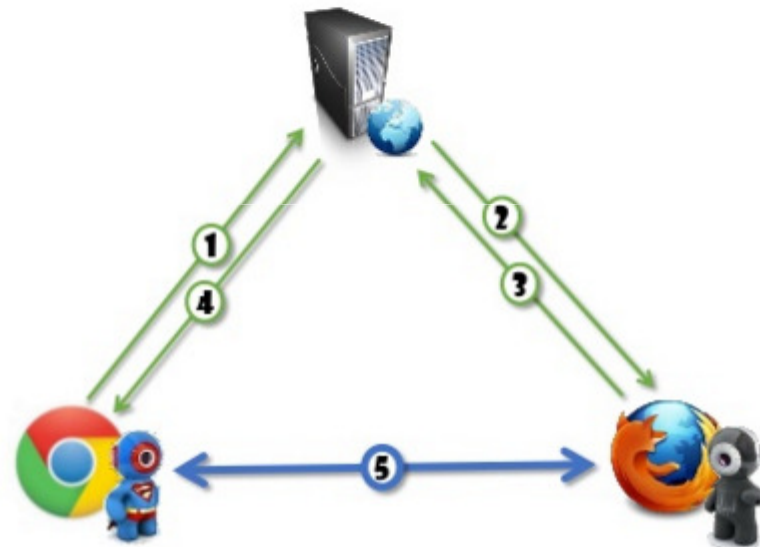
WebRTC



- WebRTC offers real time communication natively from a web browser.
- WebRTC is a media engine with JavaScript API.
 - MediaStream
 - RTCPeerConnection
 - RTCDataChannel

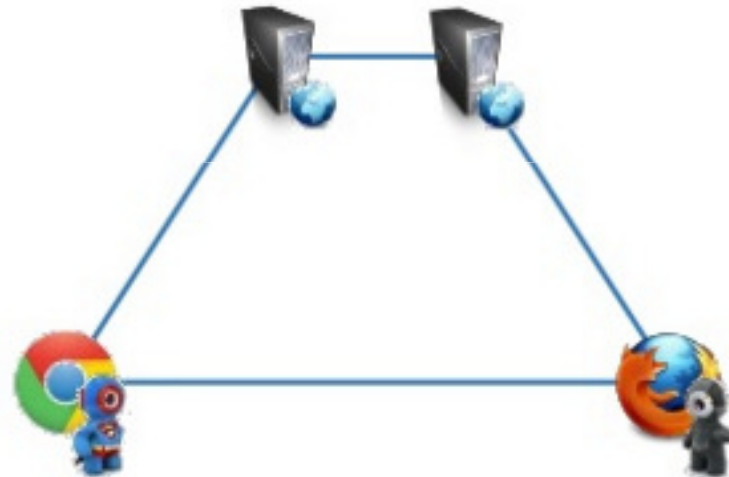
Architectures

- Triangle



Architectures

- Trapezoid



Compatibility

Where & When



May 2011: WebRTC Announced

Google releases WebRTC source code for the first time under a permissive BSD license

Nov 2011: Chrome 23 adds WebRTC

No optional flag is required. Data channel capabilities not supported

2012

Jan 2013: Firefox 20 adds WebRTC

First release of Firefox supporting WebRTC. Comes with GetUserMedia support only, which gives access to the local camera

2013

Feb 2013: Interoperability

Initial interoperability between Chrome and Firefox browsers achieved. This is still early on in the process, so things still don't work as expected, but this is an indication of things to come

Jun 2013: Firefox 22 released

First Firefox release that officially supports the ability to make video calls as well as use the Data channel API

Jul 2013: Chrome for Android Beta with WebRTC

The beta version of Chrome 29 on Android supports WebRTC

Aug 2013: Chrome for Android

Chrome 29 for Android now fully supports WebRTC

Sep 2013: Firefox for Android supports WebRTC

The beta version of Chrome 29 on Android supports WebRTC



Demo



Questions?



Discussion

- How to implement live streaming application with more than two clients?