

# Understanding HTTP/2

Nathan LaFollette | Managing Consultant  
RootCon 2015 @http hacker



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# Talking Points

- 1 History of HTTP
- 2 The Good, The Bad, The Ugly
- 3 Configuration
- 4 Final Thoughts



# History of HTTP

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# History of WWW

Tim Berners-Lee?



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# History of WWW

AI Gore?



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# History of WWW

Semprix?



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# History of HTTP

## The Evolution

- **1989 – WWW**
- **1991 – HTTP 0.9**
- **1996 – HTTP 1.0**
- **1997 – HTTP 1.1**
- **2012 – HTTP 1.1 bis?**
- **2012 – SPDY v1**
- **2012 – 2015 SPDY v2, v3, v3.1, v4 alpha3**
- **2015 – HTTP/2**



**The Good,  
The Bad,  
The Ugly**



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# Why a new version?

## The Need

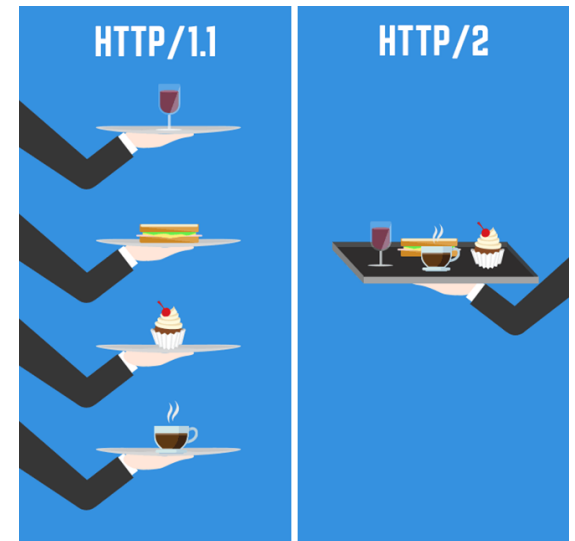
- As the web advances, we struggle to 'keep up'
- Less 'hacks' needed as with 1.1
- Added and required encryption
- QoS for the web
- Job Security, heehee...

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# The Good

## What comes with it?

- Comes with new Goodness
  - Compression
  - Server Pushing (a.k.a. Site Pushing)
  - Prioritization
  - Multiplexing
- Defense Mechanism
- Increases SEO weight
- Compliments CDNs and WAN Acceleration



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# The Bad and The Ugly

## What makes it hurt?

- **User Experience and Compatibility**
- **Lack of Developmental Tools**
- **Reimplementation and Architectural Considerations**
- **No good security testing tools**
- **Unknown issues with existing technologies**



# Configuration

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# Configuration

## Implementations

- **\*Server Support –**
  - Akamai supports draft 14
  - Apache 2.4.12 supports via module mod\_h2
  - CDN77 supported
  - F5 BIG-IP Local Traffic Manager 11.6 supported
  - Jetty 9.3 supported
  - LiteSpeed Web Server 5.0 supported
  - Microsoft IIS supported in Windows 10 and Server 2016
  - Nginx supported
  - OpenLiteSpeed 1.3.11 and 1.4.8 supported
  - Wildfly 9 supported
  - Numerous more...

*\*Source: <https://github.com/http2/http2-spec/wiki/Implementations>*

*\*Source: <https://en.wikipedia.org/wiki/HTTP/2>*

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# Configuration

## Implementations

- I've tried and like...

- H2O (<https://github.com/h2o/h2o>)
- Caddy Server (<https://caddyserver.com/>)
- Microsoft IIS (<http://blogs.iis.net/davidso/http2>)
- Apache ([https://github.com/icing/mod\\_h2](https://github.com/icing/mod_h2))
- Nginx (<https://www.nginx.com/blog/>)

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# Configuration

## Implementations

- **\*Browser Support –**
  - Chrome (Supports only over TLS)
  - Firefox (Supports only over TLS)
  - Microsoft Internet Explorer
  - Microsoft Edge
  - Opera
  - Safari

*\*Source: <https://en.wikipedia.org/wiki/HTTP/2>*



# Final Thoughts



# THANK YOU

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