

HTTP/2



Tamas Piros

What is HTTP/2?



- Protocol aiming to make web apps faster
 - Reduced latency via full request/response multiplexing
 - Efficient HTTP header field compression
 - Support for “server push”
- No changes required
 - All HTTP/2 changes are “behind the scenes”

SPDY vs HTTP/2



- SPDY = experimental protocol by Google
- HTTP/2 = official protocol from the HTTP Working group
- SPDY is now used for features, HTTP/2 implements and ships features

HTTP1.1 vs HTTP/2



- HTTP1.1 uses parallel TCP connections
 - Each request = new TCP connection
 - Biggest issue: resource blocking
 - “Solution”: ‘keepalive’

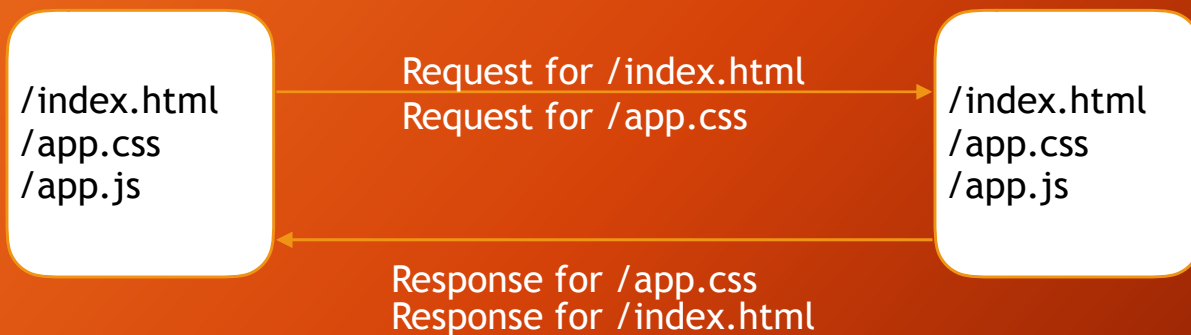
- Sprite images
- Concatenation (“bundle.js”)
- Inline CSS/JS
- data-uri



HTTP1.1 vs HTTP/2



- HTTP/2 uses a single TCP connection
 - independent, bi-directional sequences
 - No blocking resources
 - Always **HTTPS!**



HTTP/2 - Push



- Sends additional catchable information
- Multiple responses for a single request
 - Great for future requests
- Warning: Push can push resources already cached
 - Potentially waisting bandwidth

HTTP/2 Push



How HTTP/2 push works

Page

Hey example.com, can I have your homepage please? 10:24

Server

Sure thing! Oh, but while I'm sending you that, here's a stylesheet, some images, some JavaScript, and some JSON. 10:24

Page

Uh, sure. 10:24

Page

I'm just reading the HTML here, and it looks like I'm going to need a stylesheet... oh it's the one you're already sending me, cool! 10:25

<https://jakearchibald.com/2017/h2-push-tougher-than-i-thought/>