HTTP/2 Adventure with Go

Eyal Posener
posener.github.io/http2
posener@gmail.com

Agenda

- HTTP/2
- HTTP/2 in Go
- Examples
- Full duplex communication
- h2conn

HTTP/2 - Why?

- TLS became popular, but handshake is expensive
- Efficiency/Performance
- Half-duplex is limiting

HTTP/2 - How?

- Preserve HTTP/1.1 API
  - Upgrade connection request
  - Request/Response are composed of verb + URL + headers + body.
- Persistent connection
- Binary format + compressed headers
- TLS is enforced

HTTP/2 in Go - Server

- Enabled by default for TLS server!
- Advanced features need some dedicated code
- Server - demo
- Server push - demo
- Server flush - demo (code)
- Server flush - full duplex - demo

HTTP/2 in Go - Client

- Client needs to explicitly use HTTP/2 transport
- Client with custom SSL certificate - demo
- Client with HTTP/2 transport - demo
- Client with full duplex HTTP/2 transport - demo

github.com/posener/h2conn

- I thought maybe the API can be simplified.
- Demo

Thanks!

- Detailed blog post: posener.github.io/http2
- Github repository: https://github.com/posener/h2conn
- Demo code Github repository: https://github.com/posener/h2demo
- Email me: posener@gmail.com