Making the Internet fast, reliable and secure

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IETF 96 - Berlin - July 20, 2016
QUIC
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The Journey

0. Broad prior experience of developing UDP-based protocols
1. Goal: compatibility with Chrome
   - Protocol evolving rapidly, documentation incomplete
   => QUIC code from Chromium as a foundation
2. Added Akamai congestion control algorithms
3. Media Acceleration SDK for app integration on client-side
4. Deployed to all Akamai’s edge servers for HTTP delivery
5. Slowly enabling traffic
   - No results to share yet
The Challenges

- Keeping up w/ rate of changes
  - Compatibility, Version negotiation
- Compliance (e.g., PCI) - TLS 1.3 will help
- Compatibility with product features built for TCP
  - Need to design for both TCP and QUIC (similar to IPv4/6)
- Load balancing

+ Fallback to TCP
+ Selective enablement (alt-svc)
The Plan

- IETF WG participation
- Performance Optimizations
  - Congestion Control, FEC, Multipath, …
- Current deployment
  - Option for some products
- Long-term plan
  - Default feature of all Akamai products
Thank you!