QUIC addendums

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IETF 102 recap

- HiNT - HTTP-initiated Network Tunnelling

- IETF 102 presentation to HTTPbis
Distilling the capability of HTTP CONNECT

A signal that changes the meaning of the client-to-server hop. Currently this means:

- **HTTP/1.1** - the entire TCP connection
  - Also available via [HTTP Upgrade](https://tools.ietf.org/html/rfc7230) (RFC 7230)
- **HTTP/2** - one specific stream
- **HTTP/QUIC** - one specific stream
  - Presently for onward TCP use only

Stuff I’ve seen or heard since IETF 102

● Novel uses of streams may suffer from the characteristics of the whole connection. E.g.
  ○ Competing congestion control
  ○ Flow control where it is not need or is impractical
  ○ Unreliable delivery has use cases

● Ian Swett - MESSAGE frame extension for QUIC v1
  ○ Thread, Design Doc (including API as relevant for WebRTC).

● Eric Kinnear and Tommy Pauly (and David Schinazi)
  ○ I-D - HTTP/2 as a Transport for Arbitrary Bytestreams
  ○ I-D - An Unreliable Datagram Extension to QUIC
    ■ Presentation at IETF 103 QUIC session

● Tor Project - The case for Tor-over-QUIC
  ○ A call for a solution that provides end-to-end QUIC congestion control

● Colin Perkins and Jörg Ott

● Multiplexing different application protocols in a single connection
  ○ How to advertise and negotiate this

● WebRTC, QUIC and TAPS - API Mappings discussion at IETF TAPS session
Round up

I-Ds presented at IETF 102 have not changed

Some related work going on

Can we distill down the common desirable feature set? Do these ring true?

- Multiplexed flows with a la carte congestion and flow control within an always-secure connection.
- Simple and performant flow initiation that delivers wins over extant solutions.
- Under the umbrella of a connection: the ability to clearly relate associated flows and manage their shared fate cleanly.

Questions / Discussion

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