DNS-over-QUIC
(DoQ)

draft-ietf-dprive-dnsoquic

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DoQ - Background

- **April 2017** - First Draft in QUIC WG (stub to resolver ONLY)

- **Apr 2020** - Draft adopted in DPRIVE WG

- **May 2021** - RFC9000 (QUIC specification)

- **March 2021** - IETF110 discussion on scope

Updates in -03 draft (July 2021)

1. Redefine scope of draft - it now covers
   a. Stub-recursive (RDoQ)
   b. Recursive-authoritative (ADoQ)
   c. Zone transfer (XoQ)

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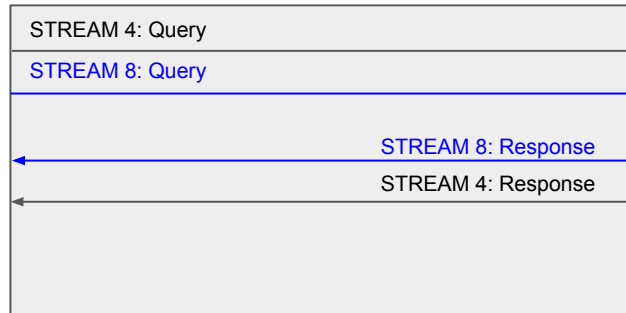   b. Support for multiple responses on a single stream

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4. Update IANA Considerations: Now plan to request port 853
   a. Share this with DNS-over-DTLS
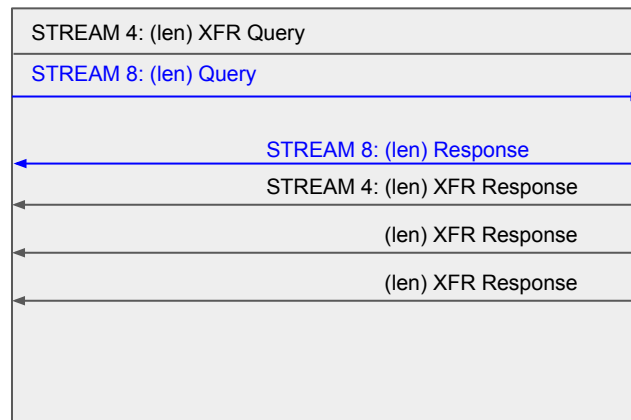   b. MAY use port 784 for experiments

How to support XFR?

- **Old mapping**

Single QUIC connection

STREAM 4: Query →
STREAM 8: Query →
STREAM 8: Response ←
STREAM 4: Response ←

- **New mapping**

Single QUIC connection

STREAM 4: (len) XFR Query →
STREAM 8: (len) Query →
STREAM 8: (len) Response ←
STREAM 4: (len) XFR Response ←
(len) XFR Response ←
(len) XFR Response ←

Open Questions

- General support for new mapping and scope?

- Several experimental implementations of `doq-i02` (and one deployment)
  - Work in progress on a POC of new mapping (`doq-i03`)
  - Update to `doq-i03` and interop of new spec would be good

- Authentication model for ADoQ use is deliberately deferred in spec
  - Enable experimentation recursive to auth

- Some discussion around message size limits
  - Proposal is to retain 64kB limit in this specification (same reasons as DoT/DoH)

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Comments/Questions?