

QUIC (Quick UDP Internet Connection)

An experimental protocol developed by Google to speed up latency-sensitive applications such as Web search. A prime goal is that connections can be established more quickly than with [TCP](#) ("zero RTT connection establishment"). The protocol is layered on top of [UDP](#) for deployability. According to a Chromium Blog article from April 2015, "roughly half of all requests from Chrome to Google servers are served over QUIC".

The IETF [QUIC Working Group](#) was chartered in October 2016, with the following goals stated in its original [charter](#):

- Minimizing connection establishment and overall transport latency or applications, starting with HTTP/2;
- Providing multiplexing without head-of-line blocking;
- Requiring only changes to path endpoints to enable deployment;
- Enabling multipath and forward error correction extensions; and
- Providing always-secure transport, using TLS 1.3 by default.

The combination of QUIC and HTTP/2 with some enhancements should result in a new "HTTP/3" standard.

QUIC Encryption vs. Performance Analysis

QUIC mandates encryption for most information, including traditional "transport-level" fields such as sequence numbers. This complicates some performance analysis approaches. Various tools (e.g. [qlog/qvis](#)) and (protocol) mechanisms (such as the "spin" bit) have been suggested to address this.

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