

QUIC adoption checklist

One-page reference for evaluating QUIC, HTTP/3, WebTransport, and MoQ for a 2026 streaming product.

1. What QUIC gives you

Feature	TCP + TLS 1.3	QUIC (RFC 9000)
Handshake (cold)	3 RTTs before first byte	1 RTT before first byte
Handshake (resumed)	1 RTT (TLS session ticket)	0 RTT (request in first packet)
Stream multiplexing	Shared ordered byte stream — head-of-line blocking on every loss	Independent streams — loss on A does not stall B or C
Network change	Connection dies on IP/port change	Connection migrates on Connection ID match
Encryption	Optional TLS layer on top	TLS 1.3 mandatory, integral to handshake
Unreliable datagrams	Need separate UDP path	Same connection (DATAGRAM frame, RFC 9221)
Middlebox ossification	Severe (kernel + box assumptions)	Encrypted on the wire; user-space stack

2. Three-step rollout for a 2026 streaming product

1. Turn on HTTP/3 at the CDN edge

Every major CDN (Cloudflare, Fastly, Akamai, AWS, GCP, Azure, BunnyCDN) ships HTTP/3 with a single config flag. The CDN negotiates HTTP/3 with clients that support it and falls back to HTTP/2 automatically. Capture before/after time-to-first-frame, rebuffer rate, segment p95.

2. Pair the QUIC stack with BBR

BBRv3 is the de-facto congestion controller for QUIC in production. On mvfst, quiche, ngtcp2, msquic — set the algorithm string. The transport wins (no head-of-line blocking, fast handshake) are amplified by BBR's loss-tolerance on lossy mobile links.

3. Pilot WebTransport / MoQ

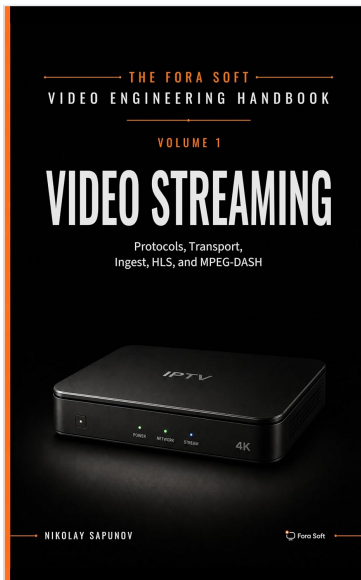
For the lowest-latency use case (sports, esports, telemedicine), prototype a MoQ-based ingest+delivery path. Use Cloudflare moq-rs or Meta mvfst-moq. Goal in 2026 is not production — it is to know how the protocol behaves on your real network by the time MoQ ships.

3. The RFC reading list — read these in order

Document	Title	Status / date
RFC 8999	Version-Independent Properties of QUIC	Standards · May 2021
RFC 9000	QUIC: A UDP-Based Multiplexed and Secure Transport	Standards · May 2021
RFC 9001	Using TLS to Secure QUIC	Standards · May 2021
RFC 9002	QUIC Loss Detection and Congestion Control	Standards · May 2021
RFC 9221	An Unreliable Datagram Extension to QUIC	Proposed · Mar 2022
RFC 9114	HTTP/3	Standards · Jun 2022
RFC 9204	QPACK: Field Compression for HTTP/3	Standards · Jun 2022
draft-ietf-moq-transport-17	Media over QUIC Transport	Draft · Jan 2026
W3C WebTransport	Browser API exposing QUIC streams + datagrams	Working Draft · 2025

4. Six pitfalls before you ship

UDP/443	Enterprise networks block UDP/443; HTTP/3 silently falls back to HTTP/2. Test from inside a representative customer network.
0-RTT	0-RTT data can be replayed. Use only for idempotent requests (GET). Never for POSTs that buy something or start a payment.
Migration	Connection migration is optional in RFC 9000 §9. Test by changing network mid-stream and verifying the connection survives.
Congestion	QUIC's congestion controller is a separate setting from TCP's. Picking BBR for TCP does nothing for QUIC — also set it in the QUIC stack.
Safari	Safari shipped HTTP/3 in iOS 17. WebTransport and full datagram support are partial in iOS 17-18; check caniuse before promising browser support.
Tracing	QUIC traces are encrypted. Wireshark needs SSLKEYLOGFILE to decrypt. Plan for it in incident-response training.



GO DEEPER · VOLUME 2 OF 7

Video Streaming: A Complete Guide to Video Delivery

From Network Protocols and Transport to Ingest, HLS, and MPEG-DASH

By Nikolay Sapunov, CEO at Fora Soft · 1,124 pages · Kindle & paperback on Amazon

Read it on Amazon →

amazon.com/dp/B0HH8F4R82

This checklist covers what QUIC changes over TCP, a three-step rollout, the RFC reading list and six pitfalls before shipping. Volume 2 explains the transport in depth: TCP vs UDP, congestion control, QUIC and HTTP/3, NAT traversal, and how HLS, DASH and CMAF ride on top of it.

WHAT YOU WILL FIND INSIDE

- QUIC and HTTP/3 in streaming delivery
- Congestion control on lossy networks
- NAT and middlebox behaviour
- Glass-to-glass latency budgets

THE FULL HANDBOOK · 7 VOLUMES · 9,000+ PAGES · ALL ON AMAZON

Vol. 1 · Video Encoding — pixels and color to H.264, HEVC, AV1, quality metrics and AI

Vol. 2 · Video Streaming I — network transport, contribution and ingest, HLS, MPEG-DASH, CMAF

Vol. 3 · Video Streaming II — ABR, CDNs, players, WebRTC, DRM and the economics of delivery

Vol. 4 · Audio for Video I — PCM, codecs, loudness, accessibility, real-time voice processing

Vol. 5 · Audio for Video II — jitter buffers, lip sync, Atmos, quality metrics, neural codecs

Vol. 6 · AI for Video I — models and inference, computer vision, speech, search, generative video

Vol. 7 · AI for Video II — real-time pipelines, agents, serving, cost, compliance, verticals

Planning HTTP/3, WebTransport or MoQ for your streaming product?

We will measure QUIC on your real audience networks, tune the congestion controller and pilot the low-latency path without risking playback. 250+ video products shipped since 2005.

Book a 30-min call →

WhatsApp →

Email us →