

Delivery protocol decision worksheet

Walk the eight nodes top to bottom. The leaves are stacks of two or three protocols, not single protocols.

1 • Latency target

Sub-second → WebRTC path (Node 4). Low-latency 1–4 s → LL-HLS / LL-DASH (Node 2). Standard 4–15 s → HLS / DASH (Node 2). VOD → HLS + DASH on CMAF over CDN. Done.

2 • Peak concurrent viewers per stream

Under 10,000 → single CDN. 10k–100k → single CDN with origin shielding. Over 100,000 → multi-CDN with content steering.

3 • Device coverage

Apple-only → HLS / LL-HLS only. Non-Apple browsers → DASH / LL-DASH. Mixed → both HLS + DASH off CMAF. Smart TV reach → add per-OS validation. Embedded → HLS over HTTP/1.1 fallback.

4 • Interactivity model (WebRTC branch)

Two-way A/V → WebRTC + SFU. One-to-many sub-second → WebRTC + WHEP + SFU mesh. One-to-many with a passive tail → hybrid: WebRTC + WHEP top tier, LL-HLS over CDN tail. Data only → use Node 1 LL-HLS branch + separate channel.

5 • Monetisation

Subscription / transactional / DRM → HLS or DASH in the stack (WebRTC alone does not carry FairPlay, Widevine, PlayReady). Ad-supported (SSAI / CSAI) → HLS or DASH. Brand / free → no constraint.

6 • Security and compliance

Geo-restricted → CDN edge (HLS, DASH). Forensic watermarking → HLS / DASH with A/B variant streaming. HIPAA / regulated medical → WebRTC with DTLS-SRTP for live; encrypted-at-rest recordings with customer KMS.

7 • Team capability and budget

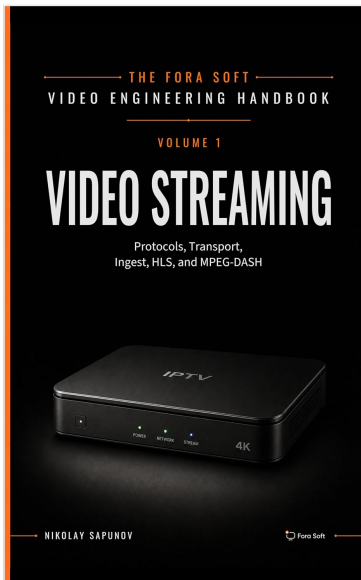
Streaming-native team → ship the technical stack from Nodes 1–6. General backend team → simplify: drop the second protocol; pick managed CDN, origin, transcoder. No team → use a managed platform's stack. Budget-constrained → drop the most expensive component.

8 • Future-proofing (optional)

MoQ pilot → run in parallel with production stack for 6–12 months; do not let MoQ be the only path to viewers in 2026 (pre-RFC). HESP evaluation → license player SDK from HESP Alliance; evaluate vs LL-HLS. No future-proofing required → ship the Node 7 stack; revisit in 12 months.

Eight common mistakes to avoid

1. Picking WebRTC for a passive broadcast at scale (10–20x cost penalty).
2. Picking HLS for a sub-second interactive use case (latency floor $\approx$ 2 s).
3. Picking MoQ as the only path to viewers in 2026 (pre-RFC; subject to change).
4. Conflating chat-real-time with video-real-time (separate channels, separate engineering).
5. Ignoring the device coverage matrix (Apple plays HLS only; DASH-only excludes Safari).
6. Forgetting DRM at the protocol decision (WebRTC alone does not carry the three commercial DRMs).
7. Single-CDN at six-figure concurrent (multi-CDN with steering is the standard).
8. Picking the protocol the team likes, not the one the use case demands.



GO DEEPER · VOLUME 2 OF 7

Video Streaming: A Complete Guide to Video Delivery

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This worksheet walks eight decision nodes to a delivery stack of two or three protocols. Volume 2 covers the protocols behind each leaf: live versus VOD, the glass-to-glass latency budget, TCP versus UDP, QUIC, and HLS, MPEG-DASH and CMAF packaging.

WHAT YOU WILL FIND INSIDE

- Glass-to-glass latency budget
- QUIC and HTTP/3 for media
- HLS, LL-HLS and MPEG-DASH
- Live versus VOD packaging

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