

IPv6 Dual-Stack Readiness Checklist

Companion to: IPv6 in Streaming and the Dual-Stack Reality (2026)

1 · DNS authority

Every host the player resolves needs both records.

- ☐ Publish A and AAAA for every origin, edge, signalling, TURN host.
- ☐ Verify with dig AAAA from at least four geographies.
- ☐ Check that CNAMEs resolve to AAAA-bearing targets.
- ☐ Monitor AAAA records with the same SLO as A records.
- ☐ Watch for missing AAAA — the #1 dual-stack failure mode.

2 · CDN edge and origin pull

Both directions must speak both families.

- ☐ Enable IPv6 delivery in CloudFront, Akamai, Fastly, Cloudflare property settings.
- ☐ Enable IPv6 origin pull where supported (CloudFront, Fastly).
- ☐ Bind the origin server on both v4 and v6 sockets.
- ☐ Test from an IPv6-only client outside your office.
- ☐ Log per-family request volume — alert if either drops > 20%.

3 · WebRTC ICE candidates

An IPv4-only SFU costs the mobile-IPv6 audience.

- ☐ Bind SFU on both v4 and v6 sockets (mediasoup, Janus, LiveKit, Pion).
- ☐ List both families in every SDP candidate pool.
- ☐ Run STUN / TURN dual-stack — reflexive candidates on both sides.
- ☐ Confirm data channels traverse, not just media (SCTP/DTLS).
- ☐ Mobile-IPv6 → NAT64 UDP fails 5–15% without dual-stack.

4 · Signed URLs and tokens

Bind to the session, never to a literal IP.

- ☐ Do not hash the client IP into signed URLs.
- ☐ If you must, bind to a /64 IPv6 and /24 IPv4 prefix.
- ☐ Verify the player's auth call and segment fetch can use different families.
- ☐ Validate VAST ad beacons do not embed IPv4 literals.
- ☐ Reject any manifest referencing `http://<ipv4>/...` as a hard bug.

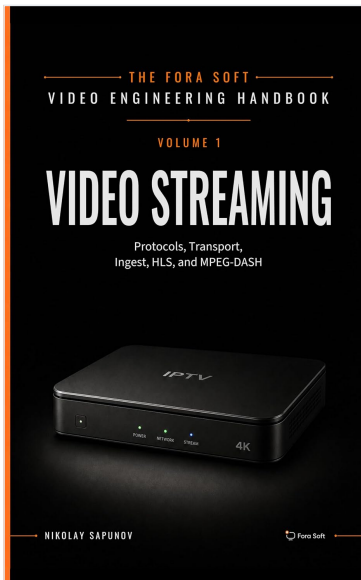
Audit questions you will be asked in every operations review

1 · What percentage of your traffic arrives over IPv6 today, broken down by country and by mobile vs fixed network? 2 · Which hosts in the player's network waterfall lack an AAAA record, and what is the remediation timeline? 3 · Does your CDN-to-origin pull use IPv6 where the CDN supports it, and is the origin actually listening on both families?

4 · Does your WebRTC SFU advertise IPv6 ICE candidates, and are STUN / TURN servers dual-stack? 5 · How does the signed-URL / token system handle a client whose auth call and segment fetch arrive over different address families? 6 · For markets above 70% IPv6 capability (France, India, Germany), what is your IPv6 readiness SLO?

Controlling specs: RFC 8305 (Happy Eyeballs v2) · draft-ietf-happy-happyeyeballs-v3 · RFC 6877 (464XLAT) · RFC 6147 (DNS64) · RFC 6052 (IPv6 address synthesis) · RFC 8925 (IPv6-Only-Preferred DHCPv4 option).

Measurements: Google IPv6 Statistics · APNIC Labs · Cloudflare Radar.



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This checklist walks DNS, CDN edge and origin, WebRTC ICE candidates and signed URLs through a dual-stack audit. Volume 2 covers the network layer these checks sit on: what the network does to a stream, TCP and UDP behaviour, QUIC and HTTP/3, NAT traversal, and how ingest and HLS or DASH delivery ride on top.

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