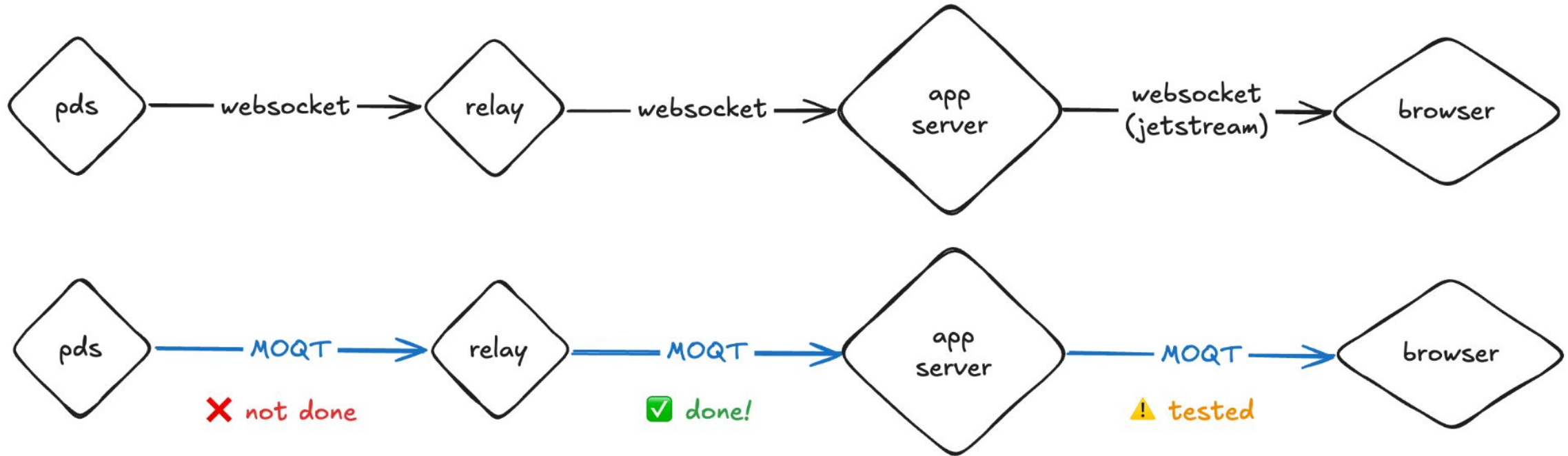


atmoq

atproto over media over quic transport

IETF atp working group 2026-07-23

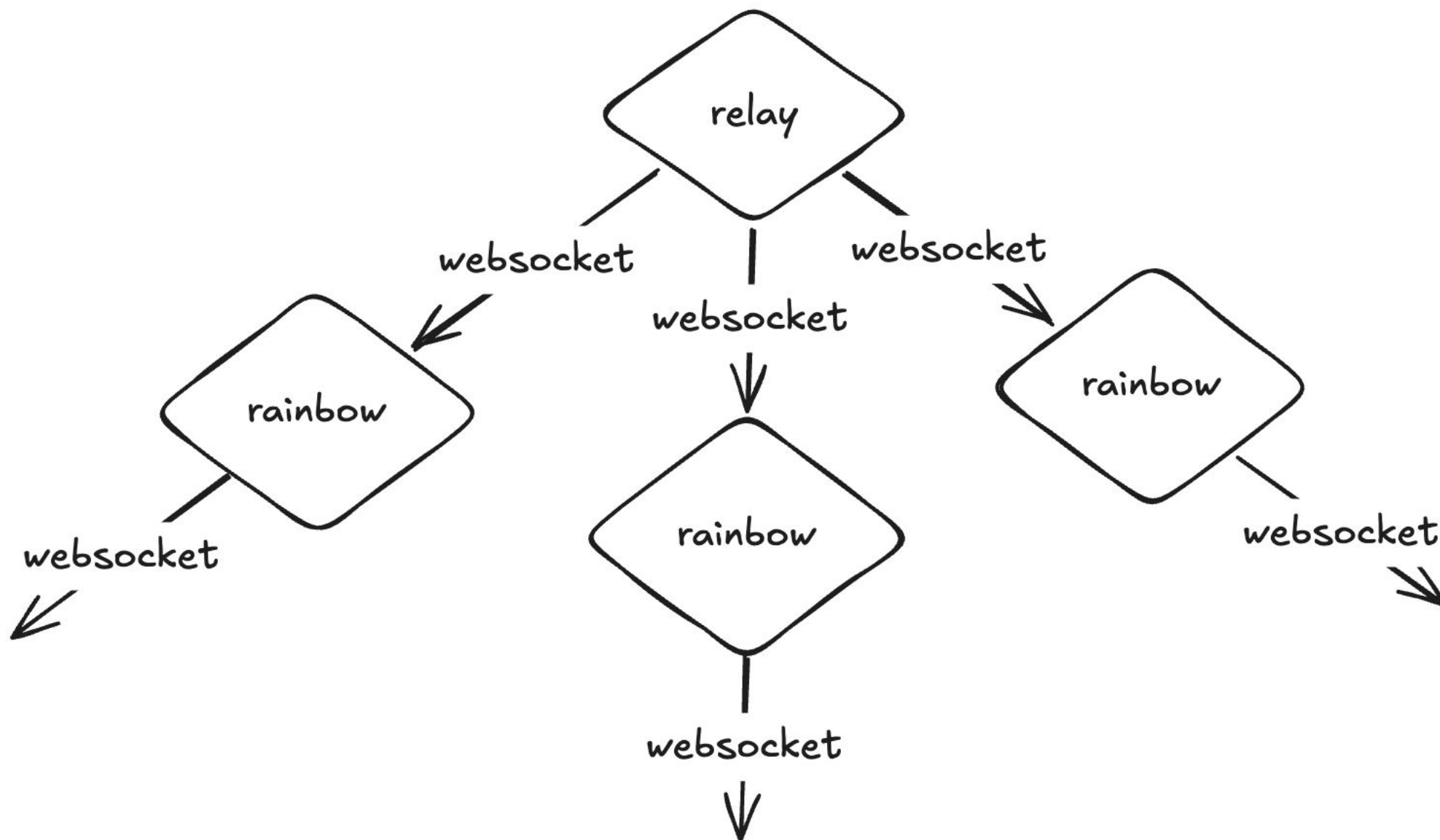
- Streamplace: Live video and VOD on the AT Protocol!
- Implementation of [draft-nandakumar-atproto-atom-00](#) posted in March
- In production at Streamplace!



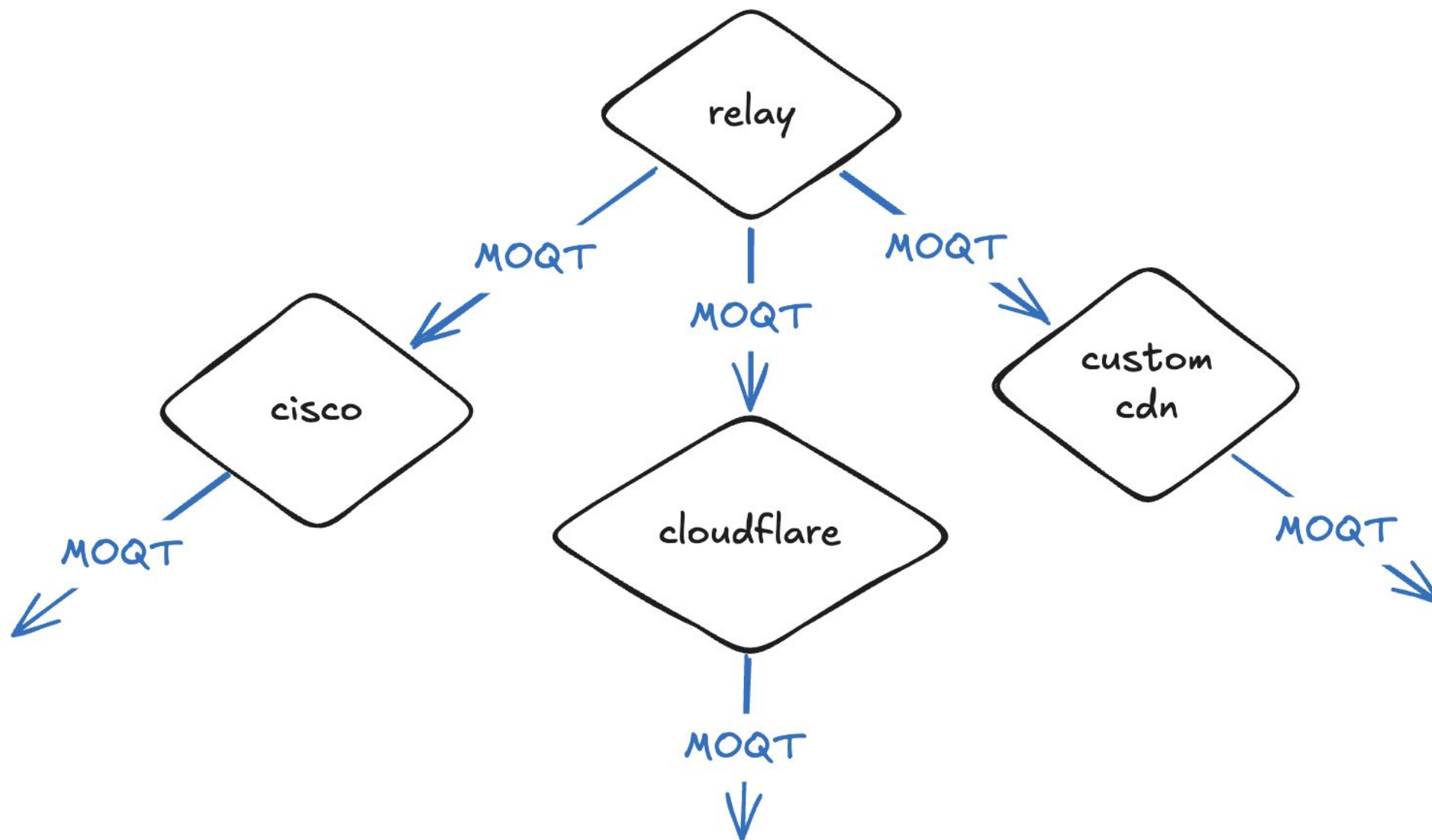
- Media over QUIC Transport
 - UDP protocol underlying HTTP/3
- Next-generation media protocol being standardized at the IETF
- Big global caching PUBLISH/SUBSCRIBE system
- Created to replace big HTTP CDNs
- Tons of excitement and consensus

- WebSocket scalability issues (single TCP socket)
 - Current firehose ~17mbps
 - Can't scale 100x over WebSockets!
 - You know who knows how to stably broadcast data above 1 Gbps? Video engineers.
- Utilize commodity MoQ relays
 - Tested and working with Cloudflare and moq.dev

Architecture (before)



Architecture (after)



- Currently proof-of-concept software sitting in front of a real relay
- 72h replay window via Group ID
- Rust server (**cargo install atmoq**)
- Rust, Go, and Typescript libraries
- **atmoq firehose --relay-host moqt://streamplace.network**

atproto status quo	atmoq
Event (#commit · #identity · #account · #sync)	object
One user's events	track (per-did)
Entire firehose	track ("all")
<i>n/a</i>	group (caching unit)
Cursor (at-seq)	group id
subscribeRepos live tail (WS)	SUBSCRIBE (live edge)

- Do relays require negotiation? Websocket relays have two CBOR formats and one JSON format, which do we broadcast? ([bluesky-social/protocol-proposals 0015](https://github.com/bluesky-social/protocol-proposals/pull/15))

OPEN PROTOCOL QUESTIONS - RELAY CONFORMANCE

MALFORMED CASE	atmoq	indigo	rsky	hydrant	zlay	
DRISL determinism valid CBOR, non-canonical encoding						
payload map keys out of DRISL order unordered-keys-payload	REJECT	ACCEPT	ACCEPT	ACCEPT	REJECT	●
header keys out of DRISL order (op before t) unordered-keys-header	REJECT	ACCEPT	ACCEPT	ACCEPT	REJECT	●
duplicate map key in payload duplicate-key-payload	REJECT	ACCEPT	REJECT	REJECT	REJECT	●
non-minimal integer encoding in payload nonminimal-int-payload	REJECT	REJECT	ACCEPT	ACCEPT	REJECT	●
non-minimal string length in payload nonminimal-len-payload	REJECT	REJECT	ACCEPT	REJECT	REJECT	●
indefinite-length map in payload indefinite-map-payload	REJECT	REJECT	REJECT	REJECT	REJECT	●
indefinite-length text string in payload indefinite-str-payload	REJECT	REJECT	ACCEPT	REJECT	REJECT	●

<https://streamplace.github.io/atmoq/>

- Suhas Nandakumar & Cullen “Fluffy” Jennings for draft-nandakumar-atproto-atom-00
- Richard Barnes for connecting everyone
- Byran Newbold for soliciting this presentation