Denial-of-Service Considerations for Media over QUIC Relay Deployments

draft-englishm-moq-relay-dos

Mike English (Cloudflare), Lucas Pardue (Cloudflare), Aman Sharma (Meta), Ian Swett (Google)

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Background

At the Boulder interim (February 9–10, 2026), the WG discussed DoS and resource-protection considerations for MoQT relays

Decision: address this in a separate document rather than adding to the transport spec

Draft submitted March 2, 2026 — one version so far (-00)

MoQT's Security Considerations doesn't cover relay-specific amplification and resource exhaustion issues in depth; this document is intended to complement it

What the Draft Covers

Informational document — no normative requirements on MoQT implementations

- Threat model: subscriber, publisher, and relay as attack actors; amplification properties
- Control plane: subscription churn, namespace flooding, update coalescing
- Data plane: slow subscribers, join-time buffering, QUIC flow control limits
- Relay dual-role: resource isolation, upstream load, multi-publisher fan-out
- Operational guidance: cost tracking, rate limiting, mitigations table

Editors' copy: https://englishm.github.io/moq-relay-dos/

Current Status

- Working through open GitHub issues with co-authors (Lucas, Aman, Ian)
- Several issues open: FETCH storms (#2), GOAWAY redirect amplification (#4), multi-publisher fan-out (#23), routing loops (#24)
- PRs in review for: cross-node coordination (#10), update coalescing (#12), slow subscribers (#13), misbehaving subscriber topology (#9)
- Aiming for -01 after issue triage and co-author review (before Vienna)

Questions for the WG

1. Worth publishing?: Is this a document worth progressing toward RFC publication — or is it more valuable as a working reference helping the WG track important relay considerations during transport spec development, without necessarily targeting publication?
2. WG adoption: Is there appetite to adopt this as a WG document? What would the path look like?
3. Standalone vs. merge: Should this remain a standalone Informational document, or should this material be incorporated into another document (e.g. a MoQT Applicability or Security Considerations document or the MoQT base draft itself)? Current assumption: standalone Informational RFC.