

MOQT Updates Since IETF 124 (draft-15)

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Timeline

Draft-16 published January 13 → Current interop target

Draft-17 published March 2

This presentation covers both together - see the change log appendices for blow-by-blow coverage

Next interop target likely draft-18 approximately May 11 (8 weeks from now, 4 weeks before Hybrid Interim)

“This almost feels like a completely new protocol”

Replaced single bidi control stream

Pair of Uni Streams for SETUP (now a single message), GOAWAY

Bidi control stream per request, removed 7 control messages:

UNSUBSCRIBE, FETCH_CANCEL, PUB_NS_DONE, PUB_NS_CANCEL,
UNSUBSCRIBE_NS, MAX_REQUEST_ID, REQUESTS_BLOCKED

Data transfer still uses uni streams or datagrams

Look Ma, our own varints!

Larger 1 byte range, support 64 bit varints

Paint for the Bike Shed

~~Setup Parameters~~

→ Setup Options

~~Extensions, Object Extensions, Object Extension Headers~~

→ Track Properties/Object Properties

There's a canonical recommendation for encoding track names

```
example.2enet-team2-project_x--report
```

Track Properties and Message Parameters

Publishers can attach K/V metadata to Tracks in PUBLISH, SUBSCRIBE_OK and FETCH

Track Properties are end-to-end - goes everywhere the Track goes

Message Parameters are hop-by-hop

A relay can consider ingress params when making outbound requests (e.g. filters, NewGroupRequest)

Message Parameters are now TV instead of TLV

Message Parameters are mandatory to understand, new ones negotiated

Control Plane

SUBSCRIBE_UPDATE → REQUEST_UPDATE

Now you can update all kinds of requests, including refreshing auth

Explain what EXPIRES means and how to set it

Re-joining FETCH → seamlessly rejoin after pause/resume (forward=1)

SUBSCRIBE_NAMESPACE rewrite

New "discovery" messages NAMESPACE/_DONE in bidi response stream instead of PUBLISH_NAMESPACE

Can get Namespaces, PUBLISH or both

Data Plane

Allow mix-and-match streams and datagrams in a single track

FETCH can communicate an "unknown" range

Fixed the interpretation of Object Status

- No Properties on non-Normal

- Removed Does-not-Exist

- End-of-* explained much better

Grease all the things

We agreed on our extensibility points, and greased them

- Setup Options
- Properties
- Session Termination Error Codes
- REQUEST_ERROR Codes
- PUBLISH_DONE Codes
- Data Stream Reset Error Codes
- MOQT Auth Token Type

Everything else requires negotiation

message types, parameters, enums, stream/datagram types



I heard you like Delta Encoding

Setup Options, Track/Object Properties, Filter Ranges all now delta encoded

Absolute FETCH Group ID/Object ID days look numbered 🙄🙄

Err...

REQUEST_ERROR now contains a Retry-After field

Many new error codes added to express important failure conditions

- NAMESPACE_TOO_LARGE
- EXCESSIVE_LOAD
- GOING_AWAY

GOAWAY has a timeout hint

Rendezvous - that's French

New relay mechanism for subscriber to wait for a publisher to materialize



Issue Management for PRs in development

SWITCH, Filters and the Rewind Proposal are all in an iteration phase

Since none have merged into moq-transport, we are tracking the issues which each in the author's repo.

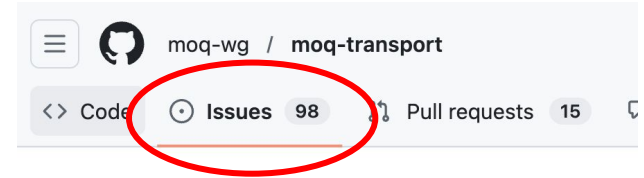
This works better than commenting on the PR with threads that get crushed when the PR updates, or cluttering moq-transport when not all proposals have clear consensus.

SWITCH - <https://github.com/gwendalsimon/moq-transport/issues> (2)

Filters - <https://github.com/mzanaty/moq-transport/issues> (16)

Rewind - <https://github.com/martinduke/draft-duke-moq-subscribe-rewind/issues> (1)

Current Issue Status



NotTransport	Parked	Has PR	Editorial	Needs PR	Needs Discussion	Triage
5 (-1)	16 (-15)	25 (+8)	33 (-3)	6 (-6)	8 (-6)	1 (-5)

↑
Close

↑
Review

↑
Write

↑
Write

↑
Opine

Total: 96 (-26)

The Dream - Issue 0 post 126