Automating QUIC Interoperability Testing

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Why Interoperability testing?

- test compatibility of protocol implementations
- expose irregularities in the specification
Interoperability testing - so far

- doesn’t scale!
- unpredictable network conditions
- Tests are interpreted by different implementers
QUIC Interop Runner - Setup
QUIC Interop Runner - Tests

Feature Tests:

- Handshake
- Retry
- 0-RTT
- Heavy Stream Multiplexing
- Handshake Completion under Packet Loss / Corruption
- ...

Benchmark Tests:

- Goodput
- TCP Cross-Traffic
Running a Test

**Setup**

1. generate random files
2. mount files into the server image
3. start the client with a list of URLs

**Validation**

1. check return value
2. compare downloaded files
3. check pcaps for test-specific features