



Server-Chosen Connection ID

QUIC Interim 2017-06, Paris

Previous Design (draft-02)

Client chooses Connection ID (CCID)

- Client Cleartext, 0-RTT have CCID
- Stateless Retry, Version Negotiation have CCID (for verification)

Server chooses Connection ID (SCID)

- Server Cleartext has Server-chosen Connection ID (SCID)
- All 1-RTT packets have SCID

Issue with Design

Server may want to redirect incoming connection to a different server

Cannot do in this design -- server is stuck serving client

New Design (draft-03): Simple Case

Client chooses Connection ID (CCID)

- Client Initial, 0-RTT have CCID

Server proceeds as usual, chooses Connection ID (SCID)

- Server Cleartext has SCID
- Client Cleartext and 1-RTT packets have SCID

New Design (draft-03): With Retry

Client chooses Connection ID (CCID)

- Client Initial, 0-RTT have CCID

Server chooses Connection ID (SCID1)

- Stateless Retry, Version Negotiation have SCID1
- Packet number echoed for verification

Client now retries, but with SCID1

- Client Initial, 0-RTT have SCID1

Server proceeds as usual, chooses Connection ID (SCID2)

- Server Cleartext has SCID2
- Client Cleartext and 1-RTT packets have SCID2

New Design (draft-03)

To redirect client, server generates SCID1 such that Client Initial will reach desired server when SCID1 is treated as Client-chosen Connection ID.

Server-chosen ID in Version Negotiation saves an RTT when Version mismatch AND Server redirection occurs