QUIC BDP Frame Extension

draft-kuhn-quic-bdpframe-extension

Nicolas Kuhn (Thales Alenia Space)

Emile Stephan (Orange)

Gorry Fairhurst (University of Aberdeen)

Christian Huitema (Private Octopus Inc.)

Exchanging Congestion Control (CC) params

Careful Resume (CR)* is a *sender-side* change for fast CC startup (applicable to QUIC)

We propose an extension for *a receiver* to participate in deciding to "jump"

Allow a receiver to say when CR is not beneficial:

- Understand path/interface changes
- Understand which flow for Careful Resume (can be used once)

Allow a receiver to use CC params as a hint to improve performance:

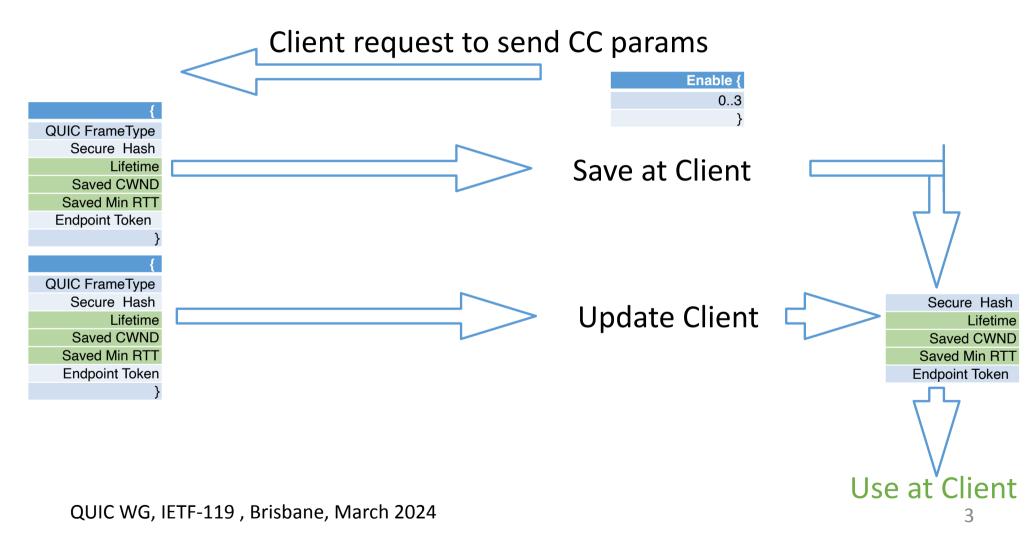
- Receiver tuning of QUIC flow credit
- Tune apps to utilise capacity hints, e.g., DASH clients?
- etc

*draft-ietf-tsvwg-careful-resume

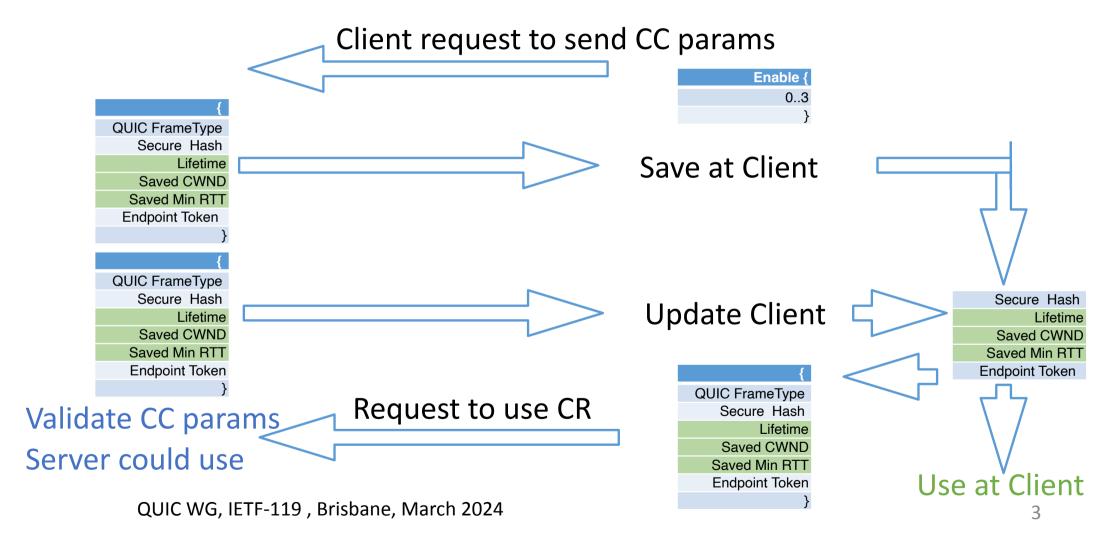
Interaction: A Receiver can read, but not modify, the CC params

Client request to send CC params

Enable { 0..3 } Interaction: A Receiver can read, but not modify, the CC params



Interaction: A Receiver can read, but not modify, the CC params



Next Steps...

Is there interest in developing a method to exchange CC params for QUIC?

We do plan to revise the draft - the methods and name can change!

.... Questions

Additional material

Careful Resume

draft-ietf-tsvwg-careful-resume

- CR is a sender-side CC mechanism
- CR checks the path is similar (recon)
- Allows a large initial jump (unvalidated)
- Reacts if problems (safe retreat)
- Continues with normal CC

