# QUIC BDP Frame Extension

draft-kuhn-quic-bdpframe-extension

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# BDP Frame

Careful Resume  (draft-ietf-tsvwg-careful-resume) allows fast startup

Can be used with QUIC

BDP Frame is a QUIC extension to extend Careful Resume

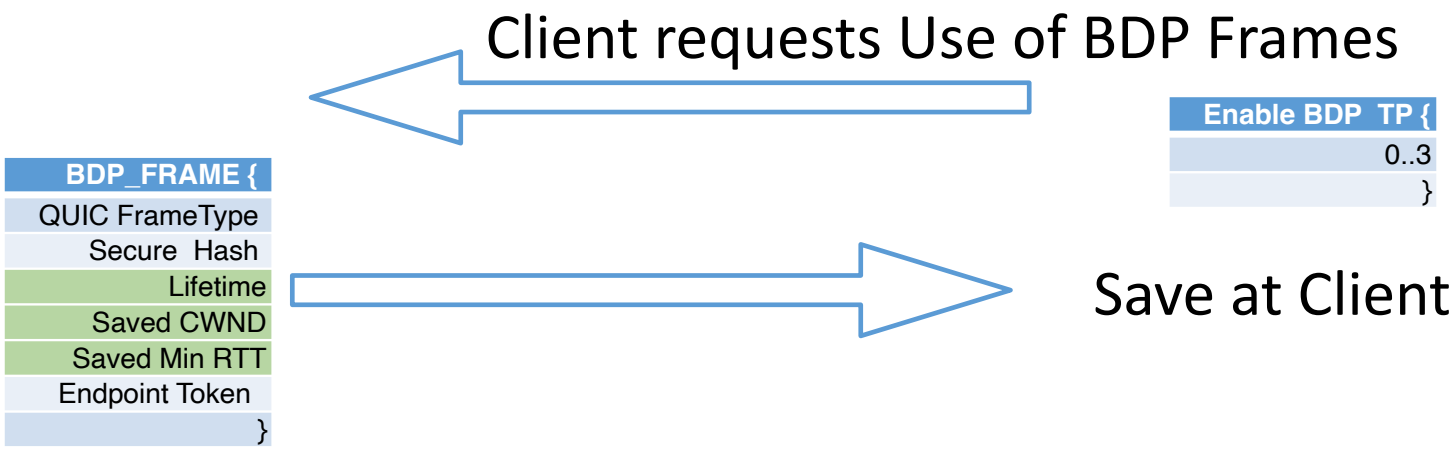
Enables client to participate in the "jump"

# BDP Frame Protocol

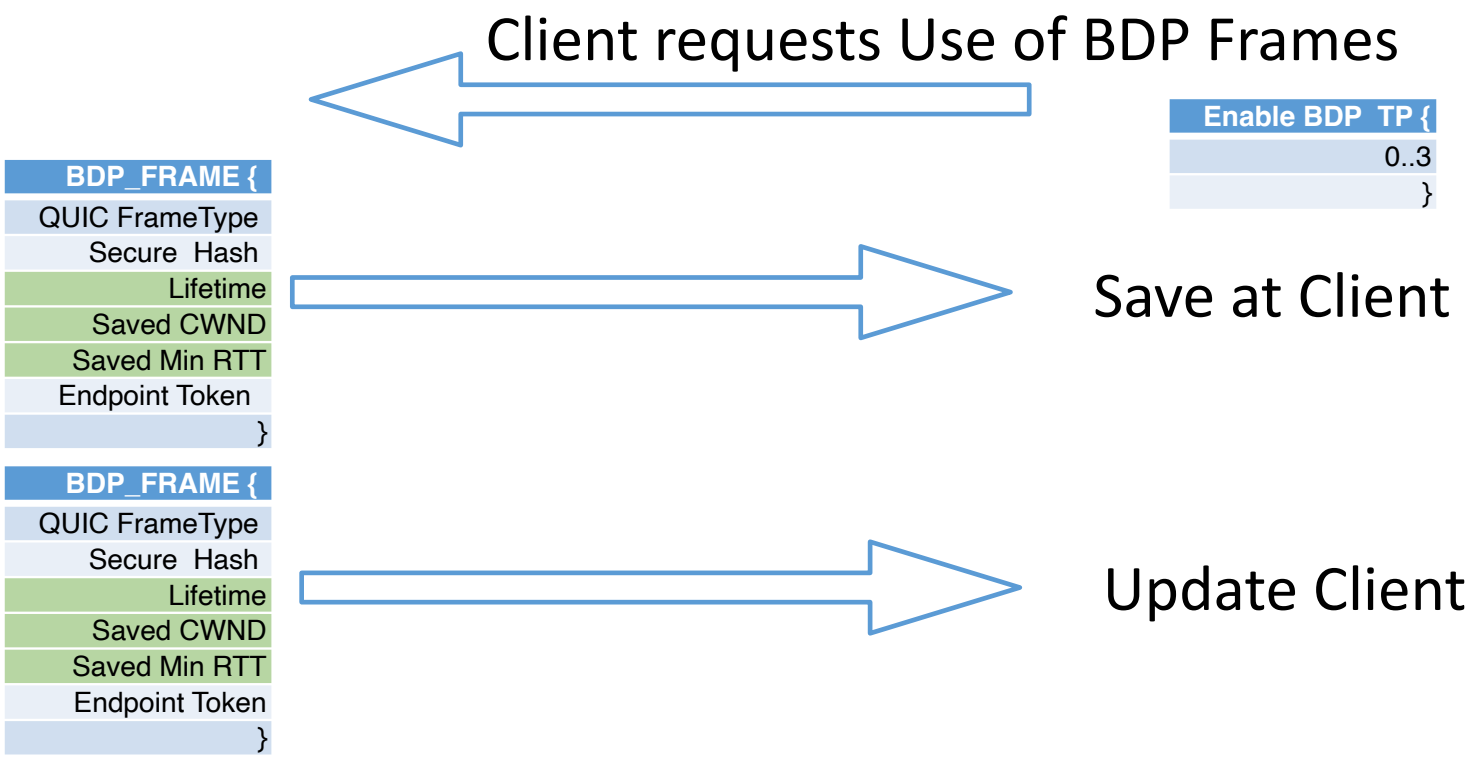
Client requests Use of BDP Frames

| Enable BDP TP { |
| --- |
| 0..3 |
| } |

# BDP Frame Protocol



# BDP Frame Protocol



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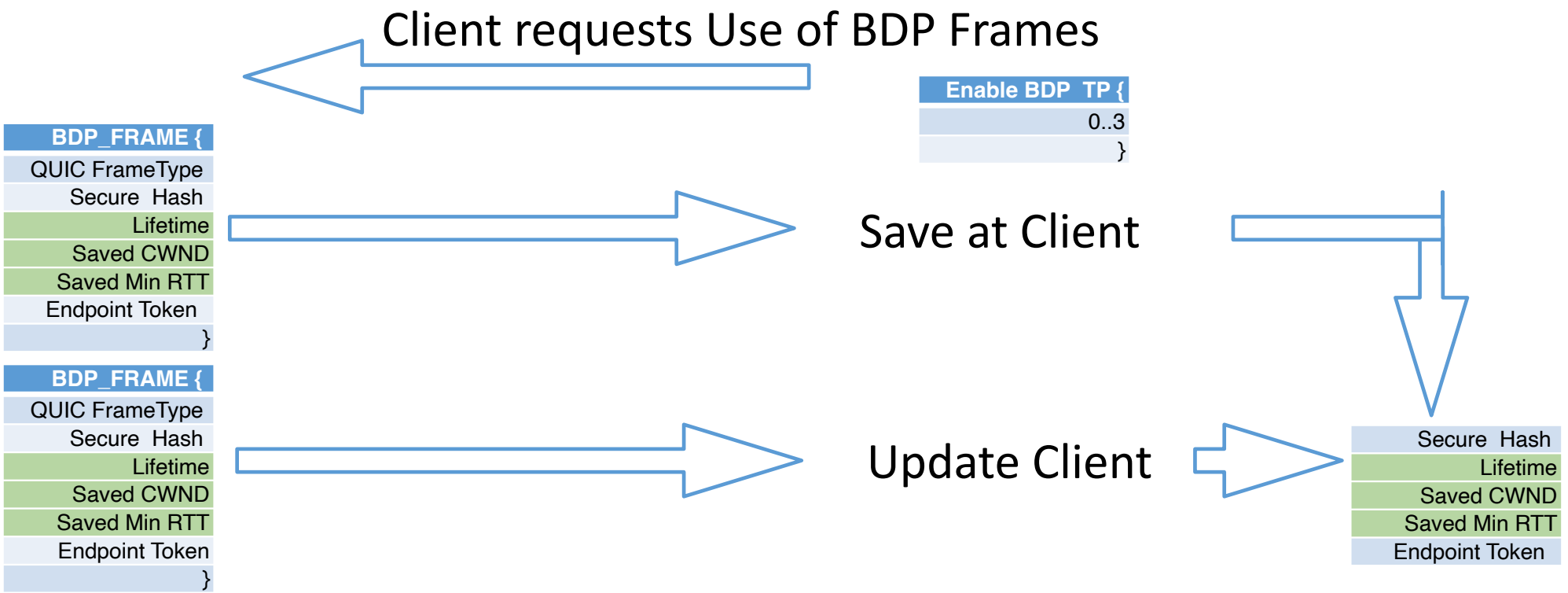

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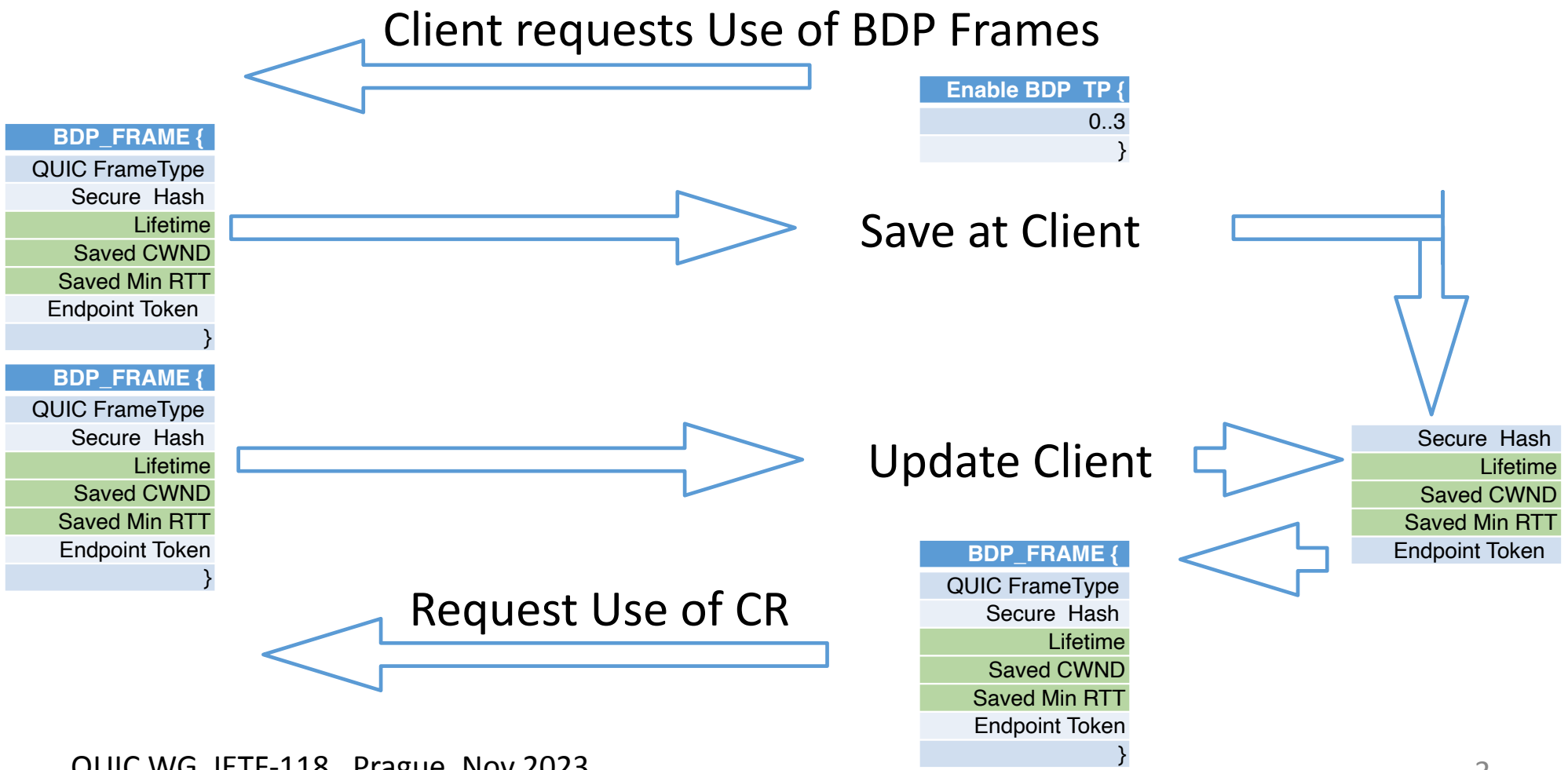

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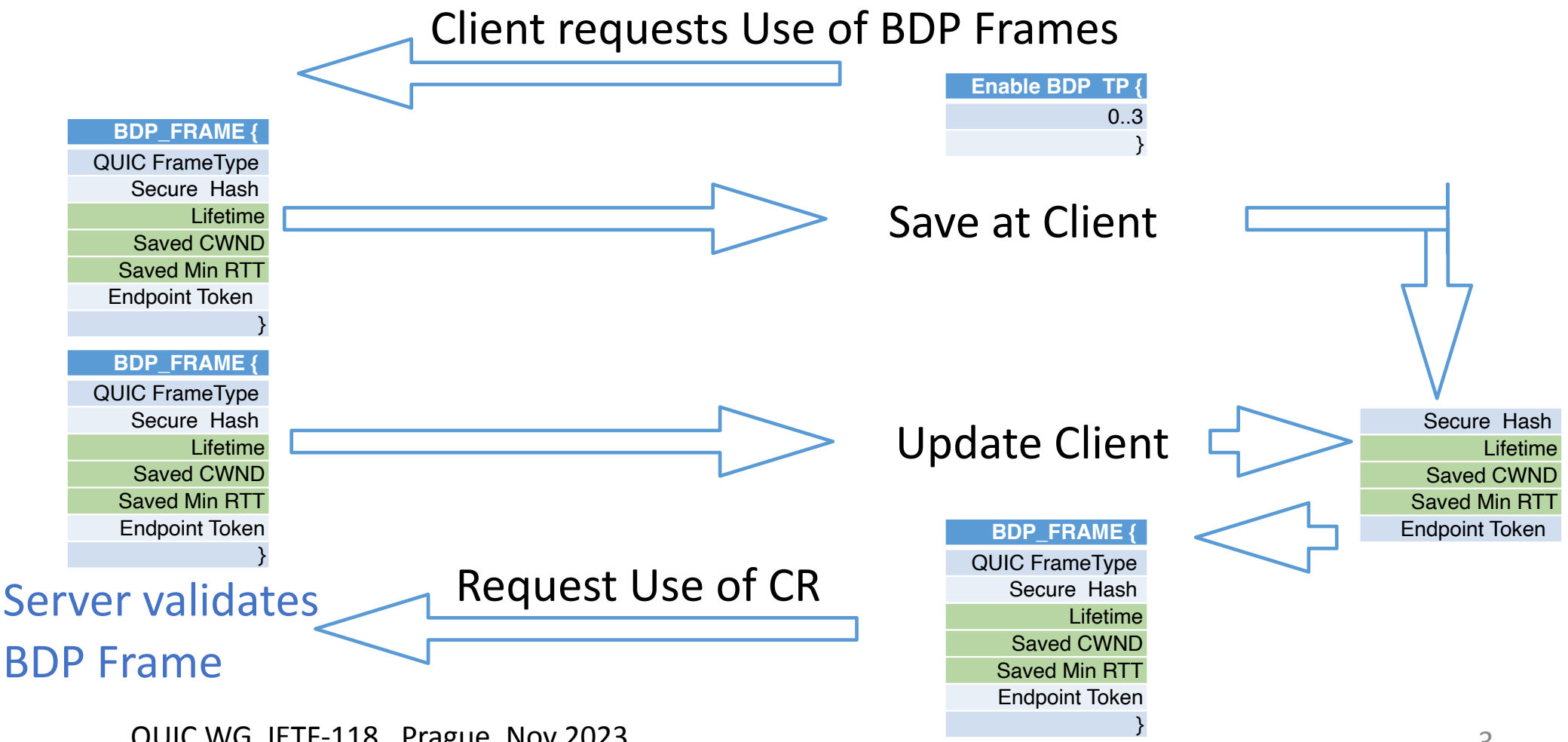

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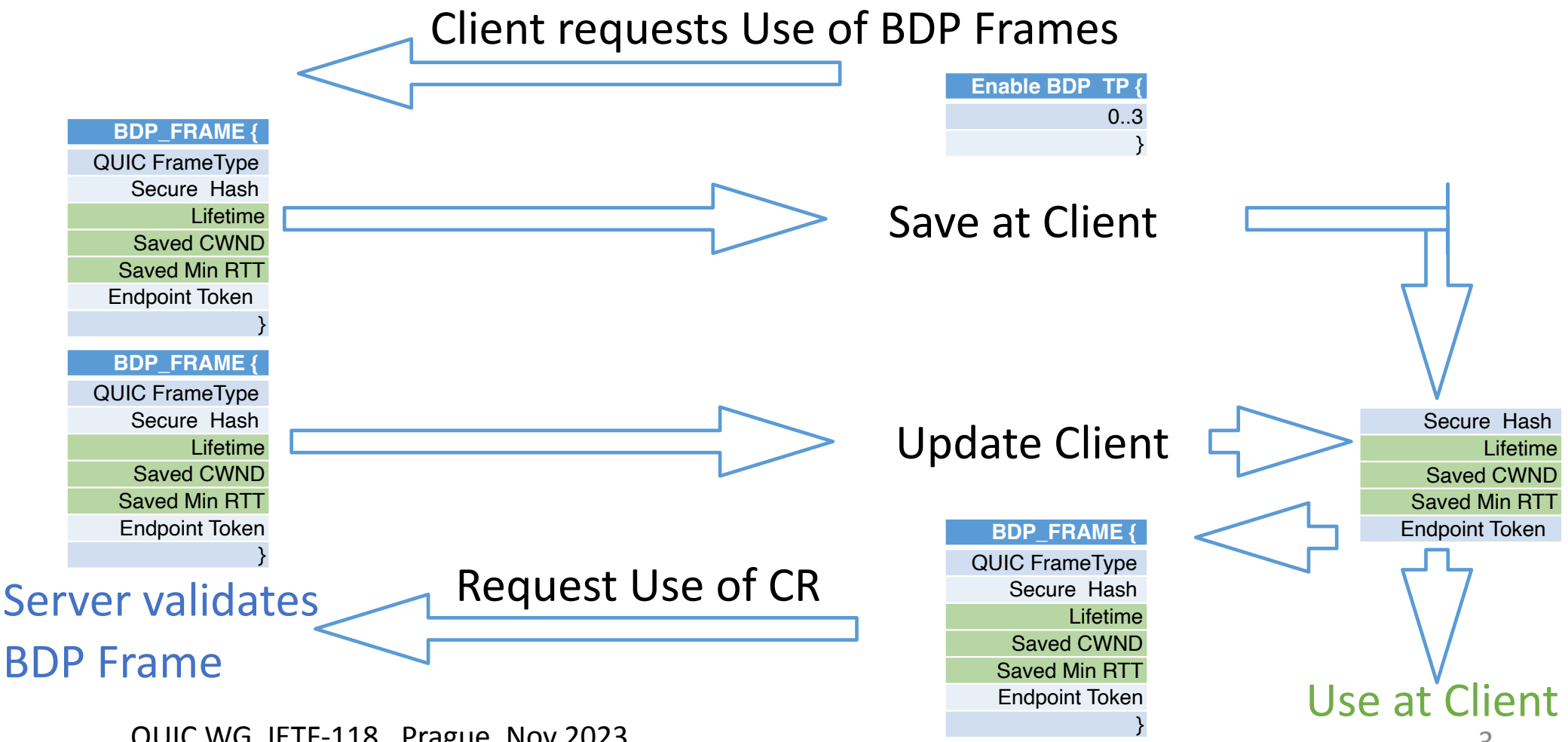


# BDP Frame Receiver Usage

Receiver can read, but not modify, the BDP Frame

Allows receiver to say if CR is not wanted

- Understanding of path/interface changes
- Understand which flow for Careful Resume (can use once)
- Can tune the QUIC flow credit?
- Can tune apps  to utilise capacity hints, e.g., DASH clients?
- etc

# Next Steps...

We plan to revise the draft

Is there interest in developing the BDP Frame resume method in QUIC ?

Will the WG consider adoption of draft-kuhn-quic-bdpframe-extension ?

.... Questions

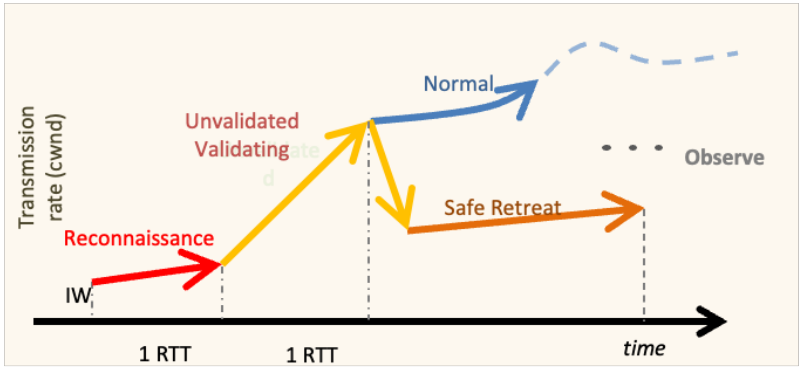
# Additional material

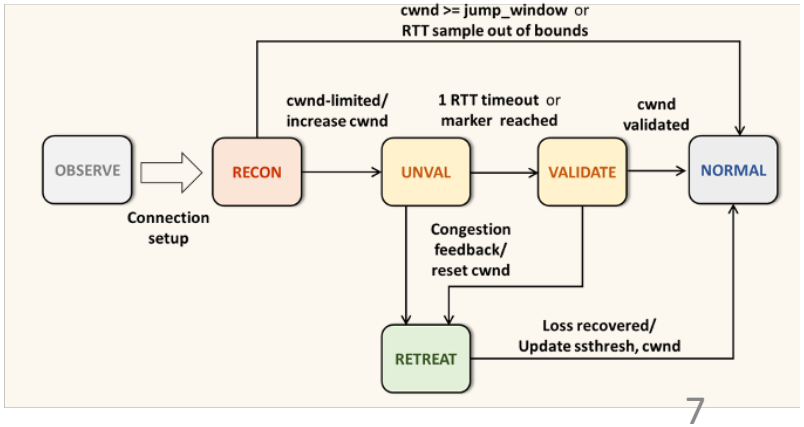
# Careful Resume Interaction

**draft-ietf-tsvwg-careful-resume**

- CR is a sender-side CC mechanism
- BDP Frame is a client/server protocol

- (Client enables BDP Frame)
- (BDP Frame sent to client - observe)
- (BDP Frame sent to server - recon)
- CR checks the path is similar (recon)
- Allows a large initial jump (unvalidated)
- Reacts if problems (safe retreat)
- Continues with normal CC



# Updates to draft-kuhn-quic-bdpframe-extension

Updates since last IETF meeting

-02 rewritten spec

- Moved to a simple design using only the BDP Frame
- Revised language to align with CR draft
- Capacity measured in bytes

-03 Editor copy: Corrections and improvements

- Revised to align with CR draft (after CR comments from Neil)