

TSVWG 99 Prague

Status update DualQ draft

[draft-ietf-tsvwg-aqm-dualq-coupled-01](#)

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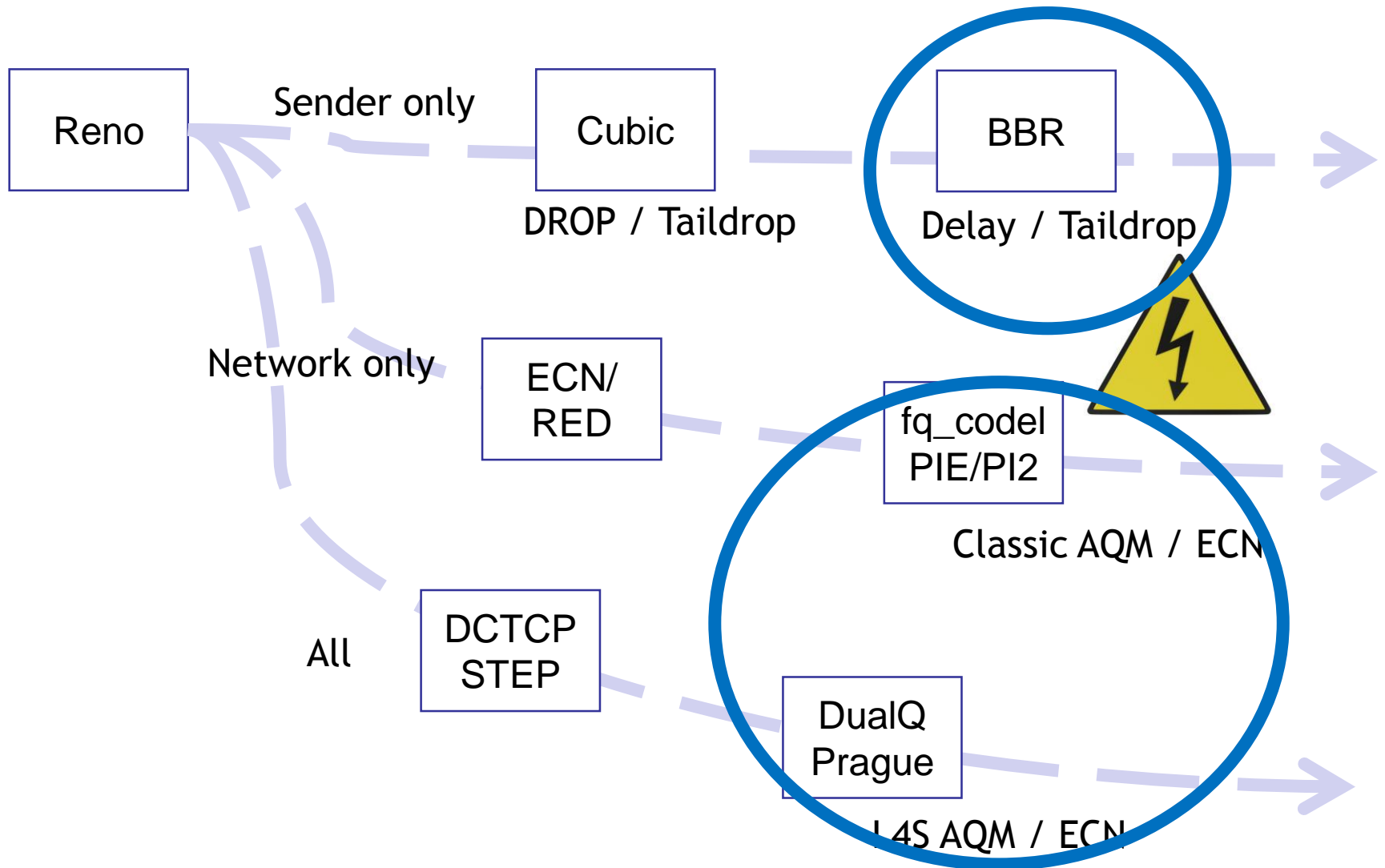
DualQ status

Further improvements on the draft were done:

- Adopted IETF draft submitted
- Overload handling pseudo code is added
- PIE heuristics removed in DualPI2 have been assessed and discussed on the mailing list
- Linux open source release cleanup:
 - PI2 config parameters simpler than PIE: Inter-dependencies removed (e.g. between (α, β) and T_update and k)
- Linux upstream submission ongoing
 - extra classifier filter hooks to be added



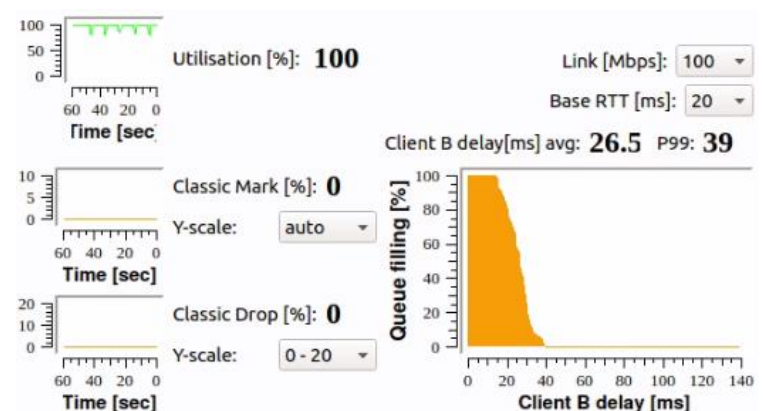
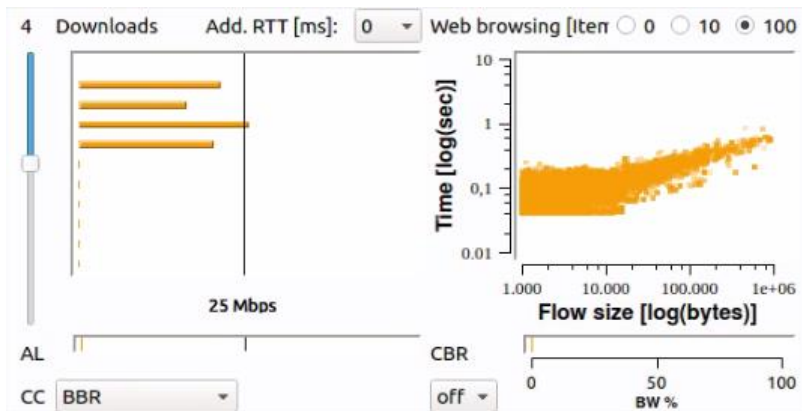
WARNING: Ongoing (r)evolutions



Sender only evolution: BBR & Taildrop / Bufferbloat

BBR controls the queue on 20ms on 100Mbps & 20ms RTT link

High throughput and full link for long flows



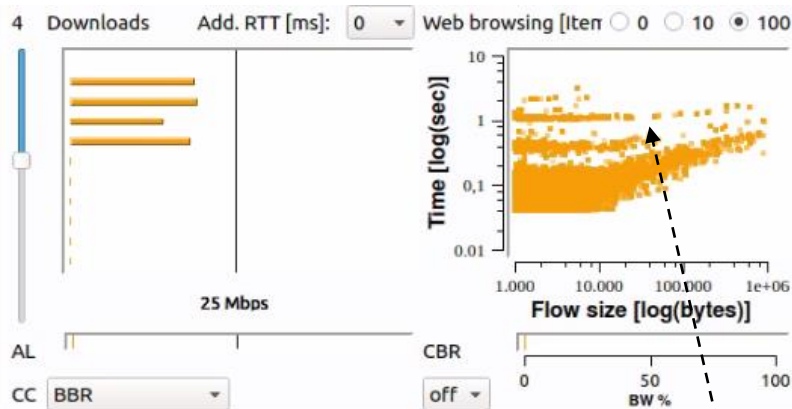
No drop and limited delay for short flows

Short flow variations build on top of queue target

Network-only and Sender-only clash: BBR & AQM

PIE AQM tries to limit queue to 15ms, needs 5 to 20% drop

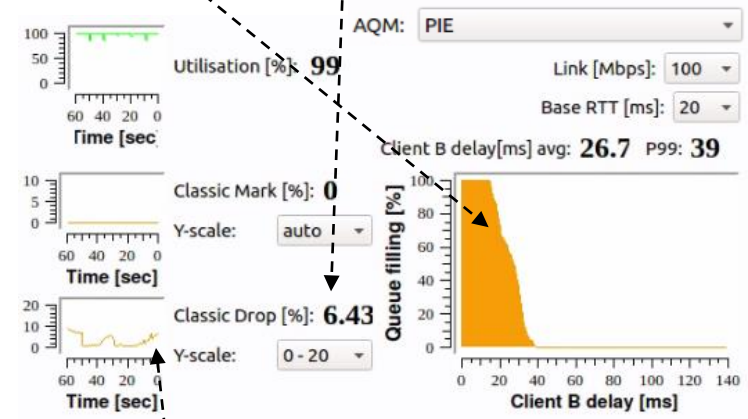
BBR enforces bigger Q and does not respond to high drop probability



Very bad short flows completion times

BBR with AQM: <https://youtu.be/4eYfyKYe9nM>

BBR with Cubic: <https://youtu.be/akO1HN2ey48>



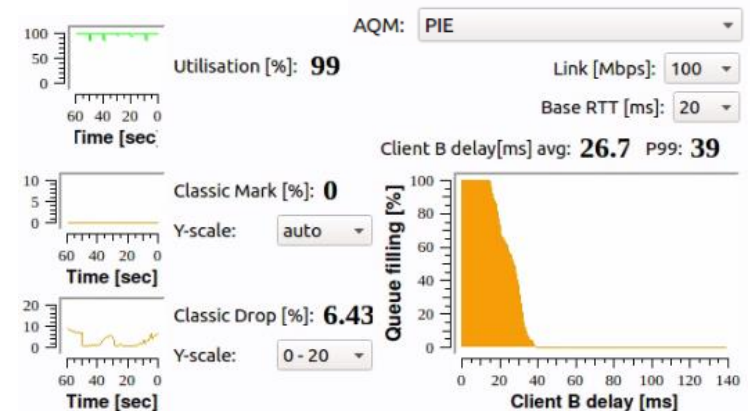
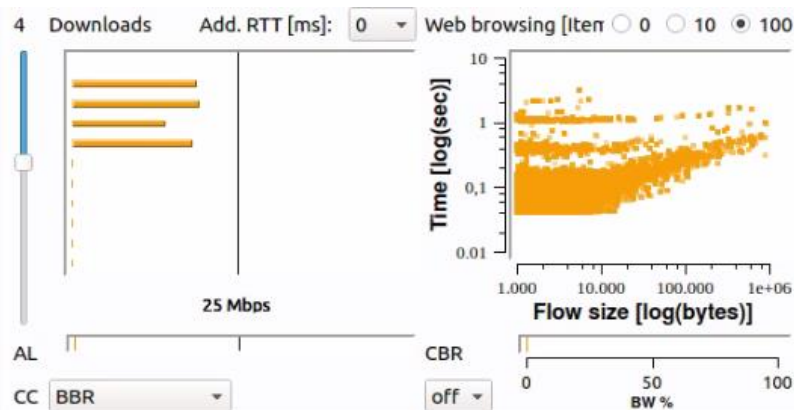
10-20s very high drop 5-20%

10-20s policing detection 1%

Network-only and Sender-only clash: BBR & AQM

PIE AQM tries to limit queue to 15ms, needs 5 to 20% drop

BBR enforces bigger Q and does not respond to high drop probability



Will using BBR (as is) force operators to disable AQMs (with ECN) ?

Where to solve the clash??

BBR (as is in current Linux release) clashes with AQM

→ BBR ignores drop

→ AQMs make things worse!

→ immediate network solution will be to disable AQMs?

We proposed a possible solution in ICCRG

Who (which WG) should handle this clash?

Questions

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