Comparing DUALPI2-RC (IETF draft parameters) with any_ect option set, DUALPI2-DEV with old default parameters, labeled as OPT1 (use wrr bytes option 1 implementation) and FQ-CODEL with ce threshold of 1ms.

Full description of parameters:

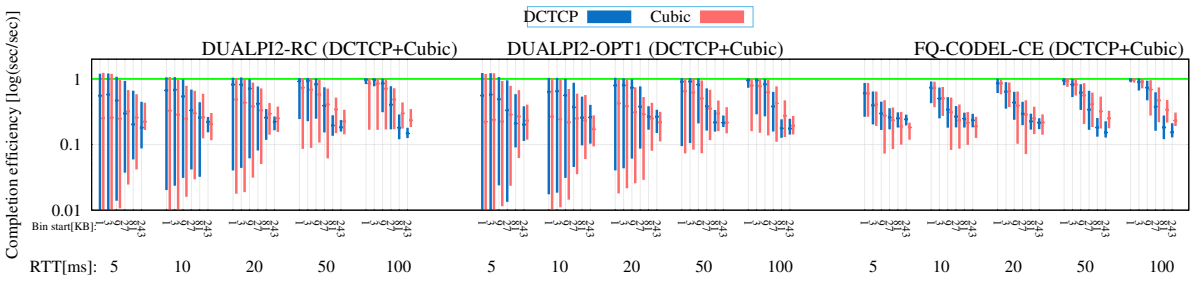
dualpi2rc: limit 40000p target 15.0ms tupdate 16.0ms alpha 0.156250 beta 3.195312 any_ect coupling_factor 2 drop_on_overload step_thresh 1.0ms drop_dequeue classic_protection 10%

dualpi2-opt1: limit 40000p target 20.0ms tupdate 32.0ms alpha 0.312500 beta 3.125000 dc_dualq dc_ecn k 2 l_drop 100 et_time l_thresh 1.0ms drop_dequeue wrr_ratio 9

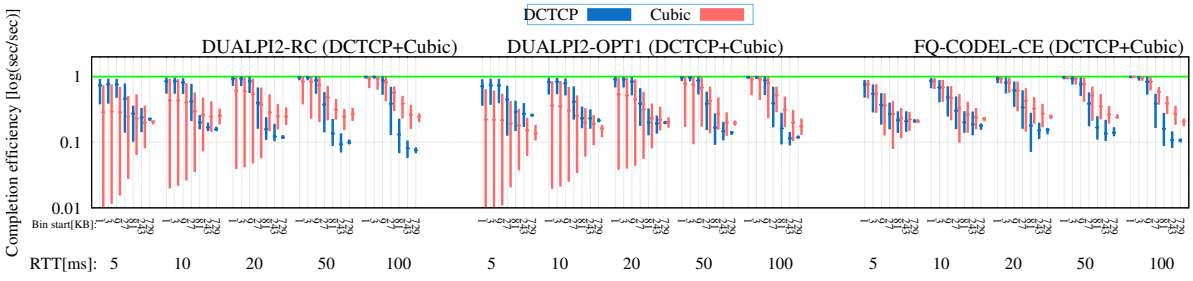
fqcodel: ecn ce_threshold 1ms

Appendix A

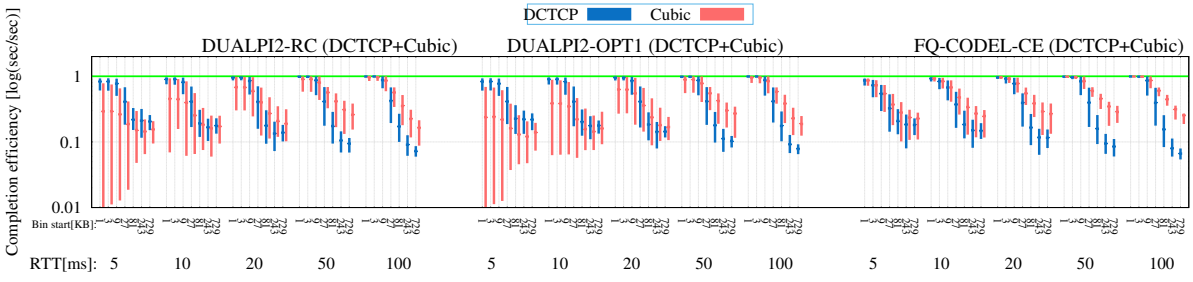
Equal RTT experiments



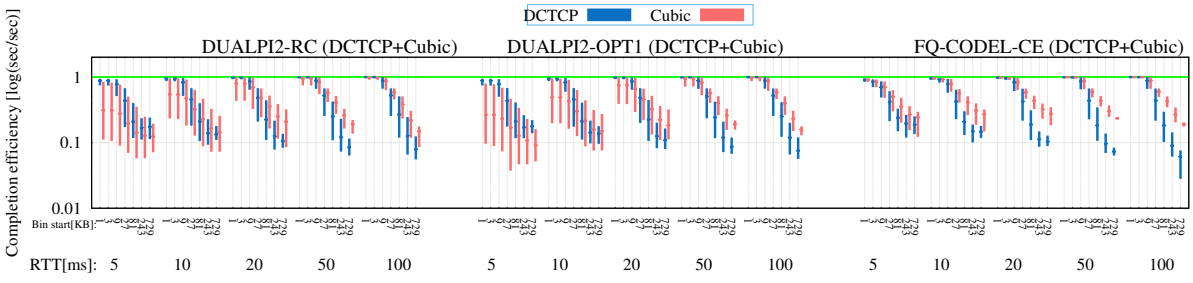
(a) 4Mbps link capacity



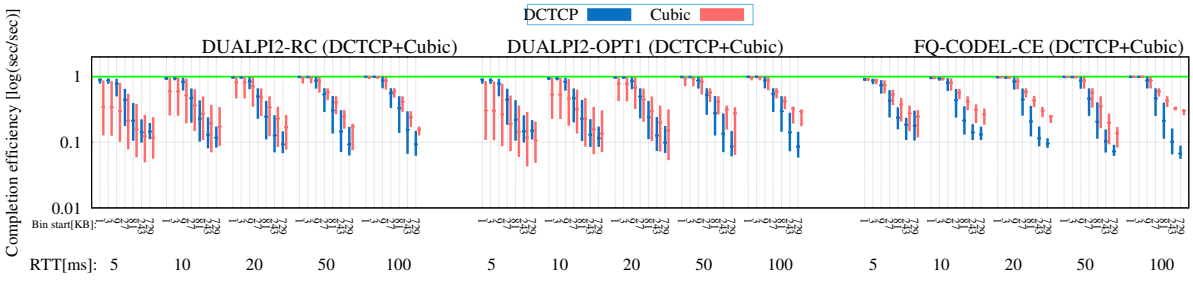
(b) 12Mbps link capacity



(c) 40Mbps link capacity



(d) 120 Mbps link capacity



(e) 200 Mbps link capacity

Figure A.1: Equal RTT (1h-1h)

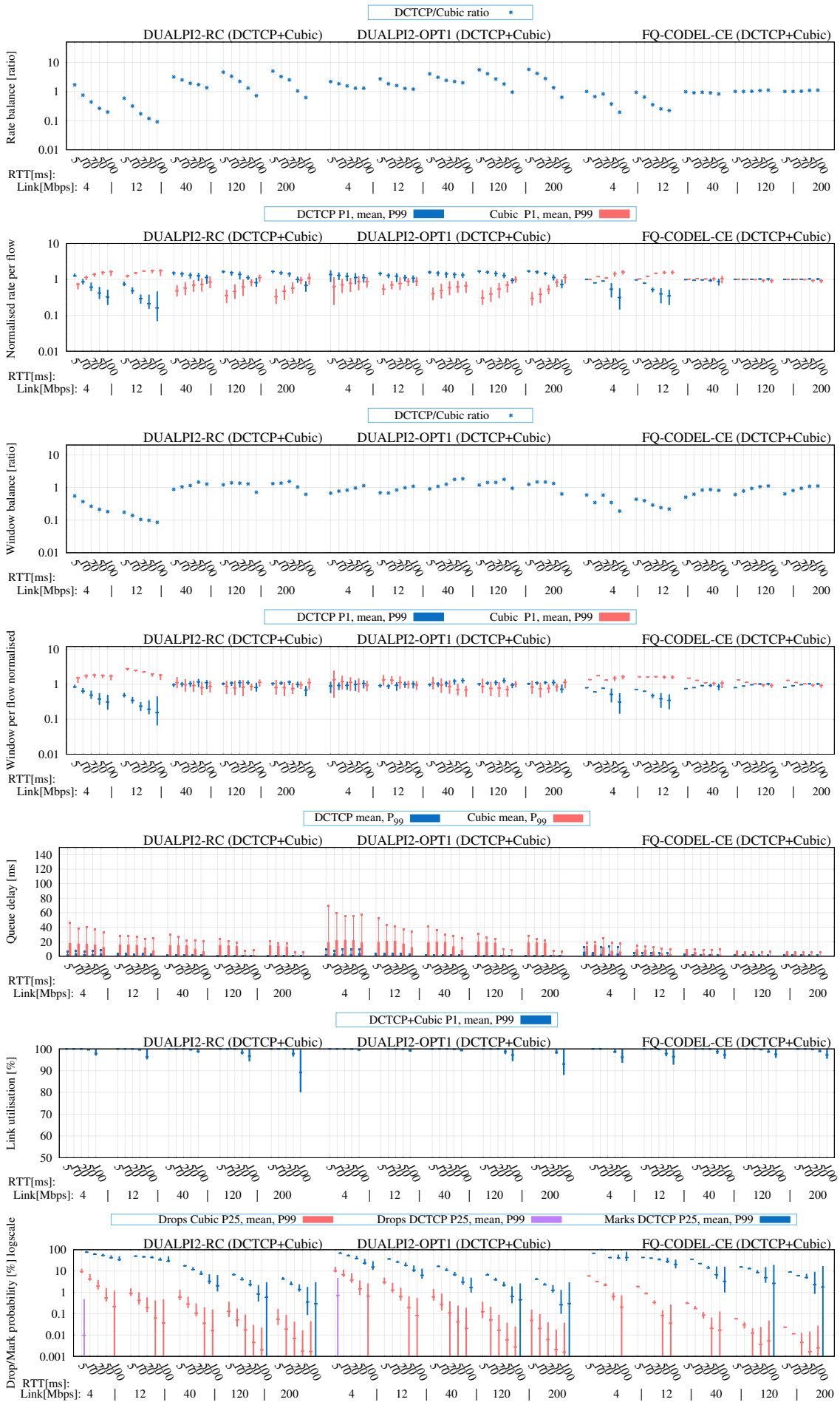


Figure A.2: Equal RTT (1-1)

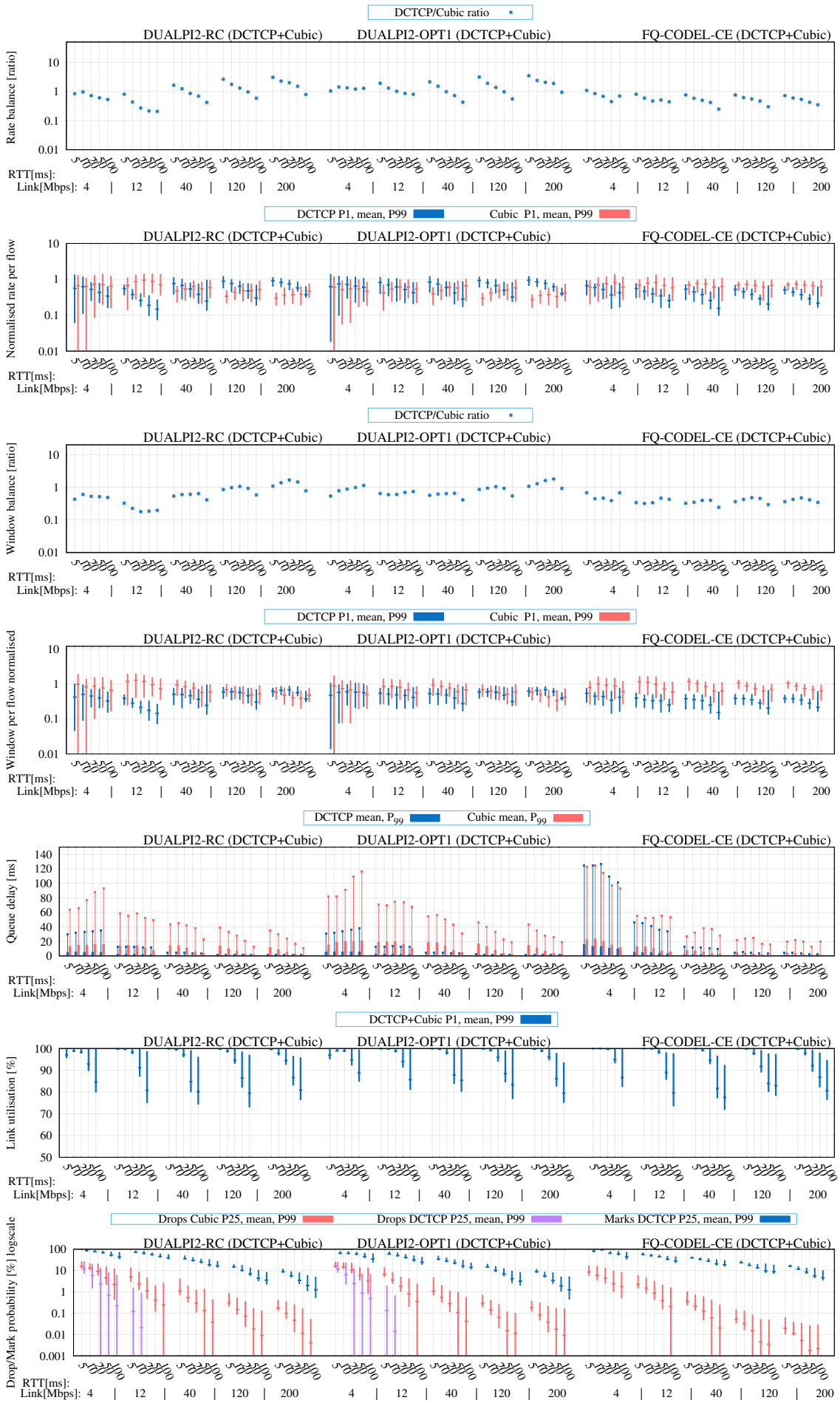


Figure A.3: Equal RTT (1h-1h)

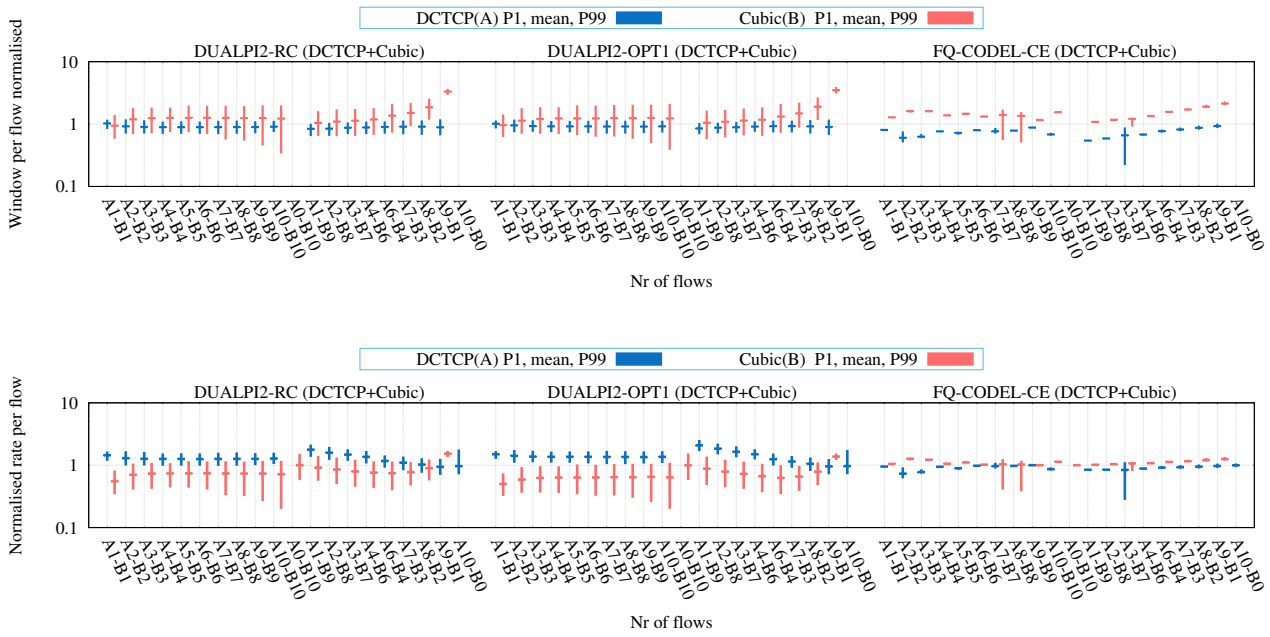


Figure A.4: Normalised rate and window size per flow. 40Mbps link capacity, 10ms RTT. Equal RTT

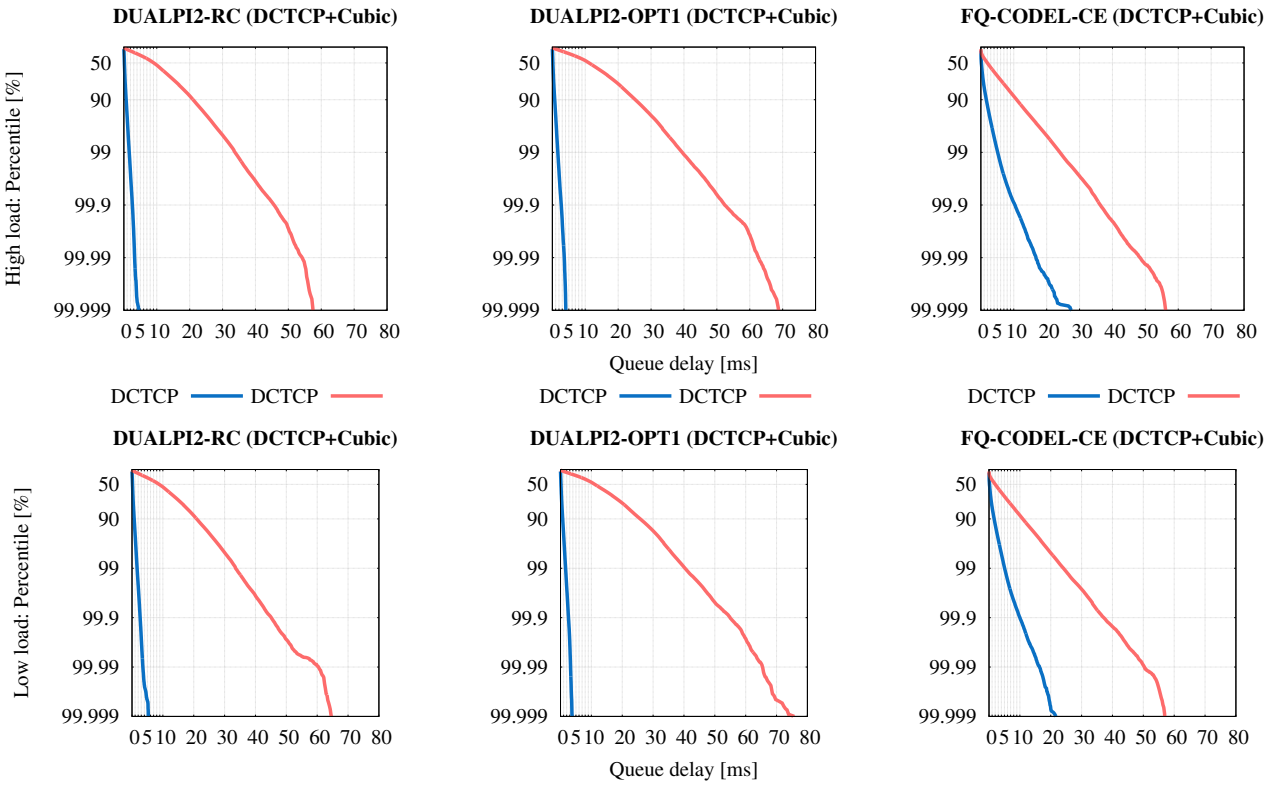


Figure A.5: Queue delay CCDF. 120Mbps link capacity, 10ms RTT. Equal RTT

Appendix B

Mixed RTT experiments

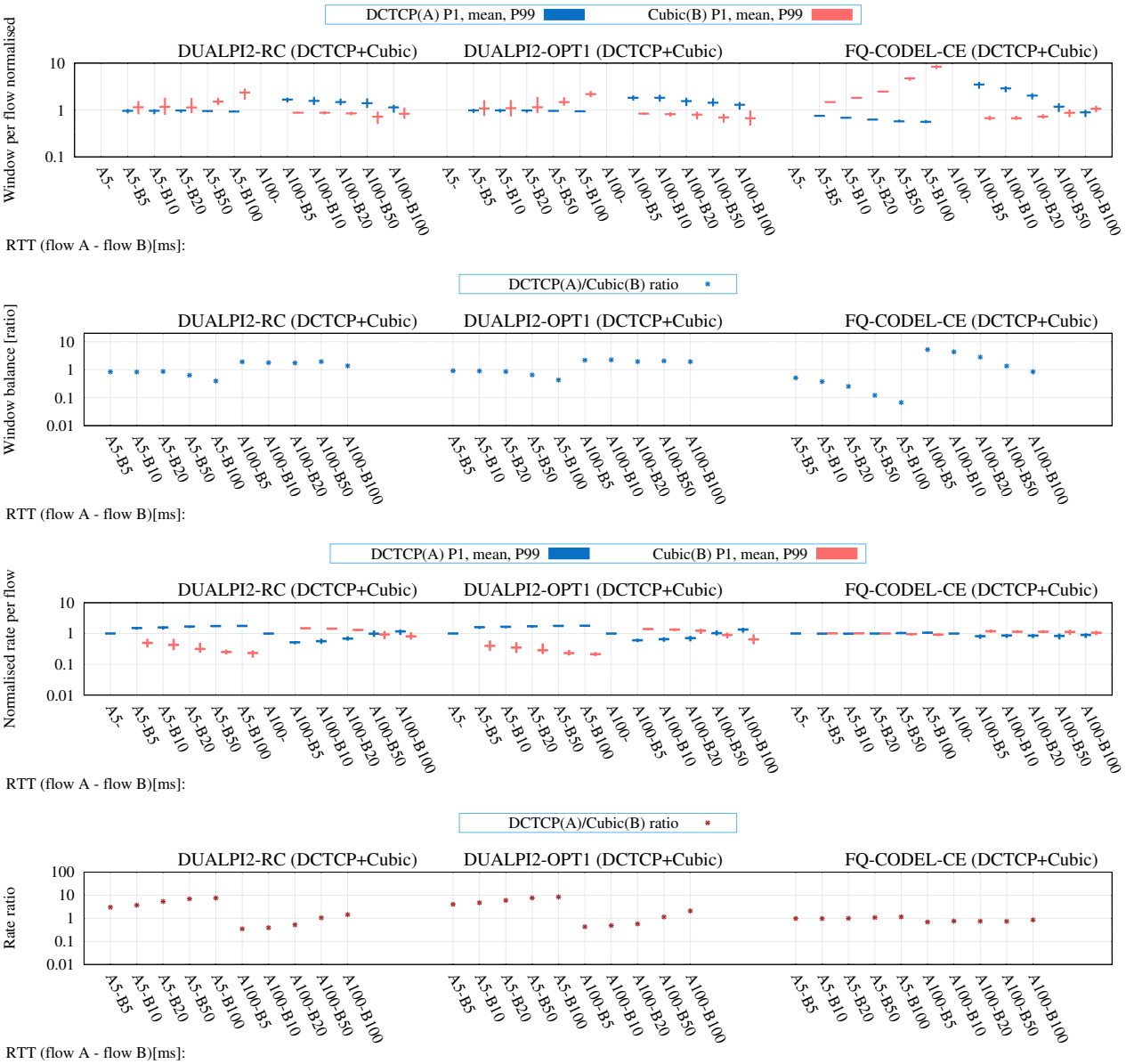


Figure B.1: 1 flow for each CC. Mixed RTT (mrtt2˙link40)

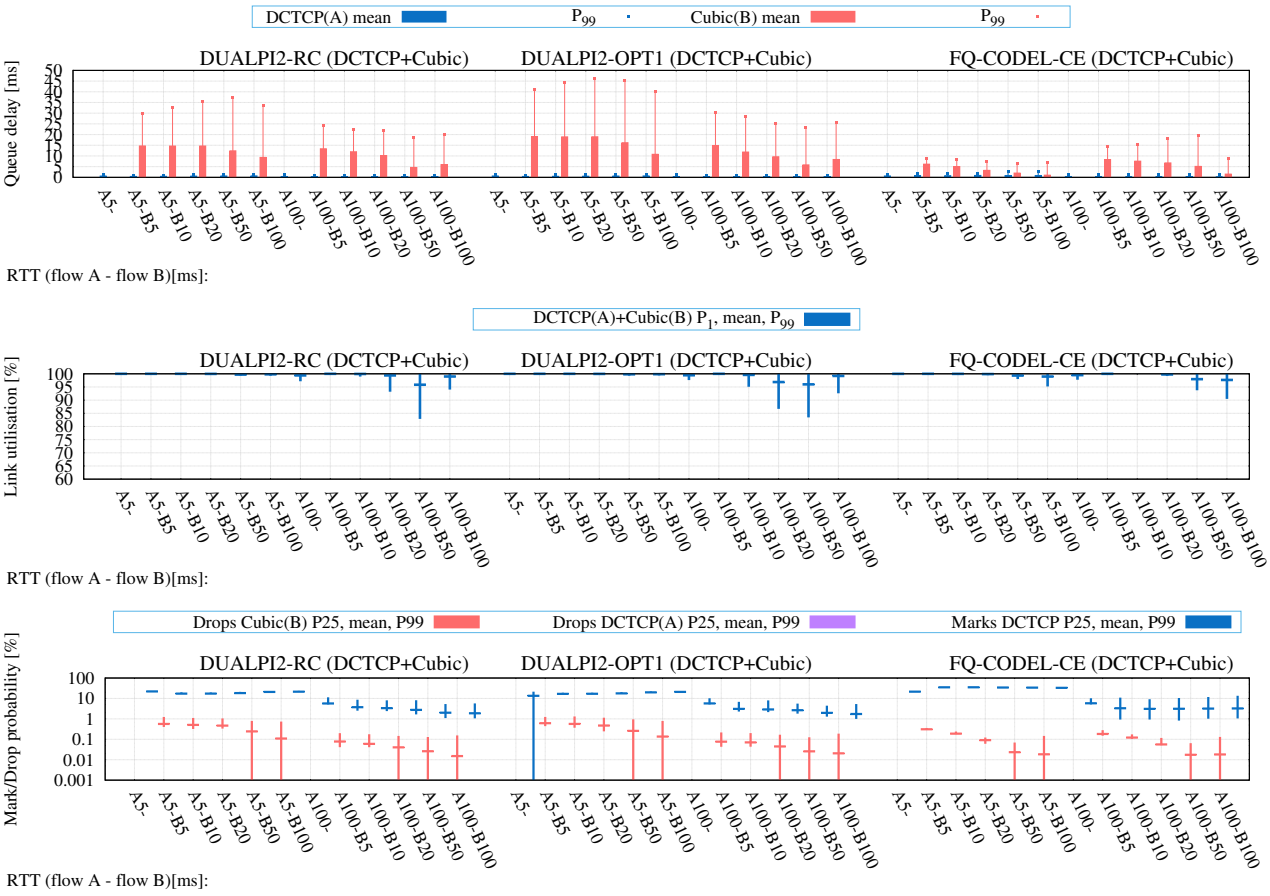


Figure B.2: 1 flow for each CC. Mixed RTT (mrtt2˙link40)

Appendix C

Overload experiments

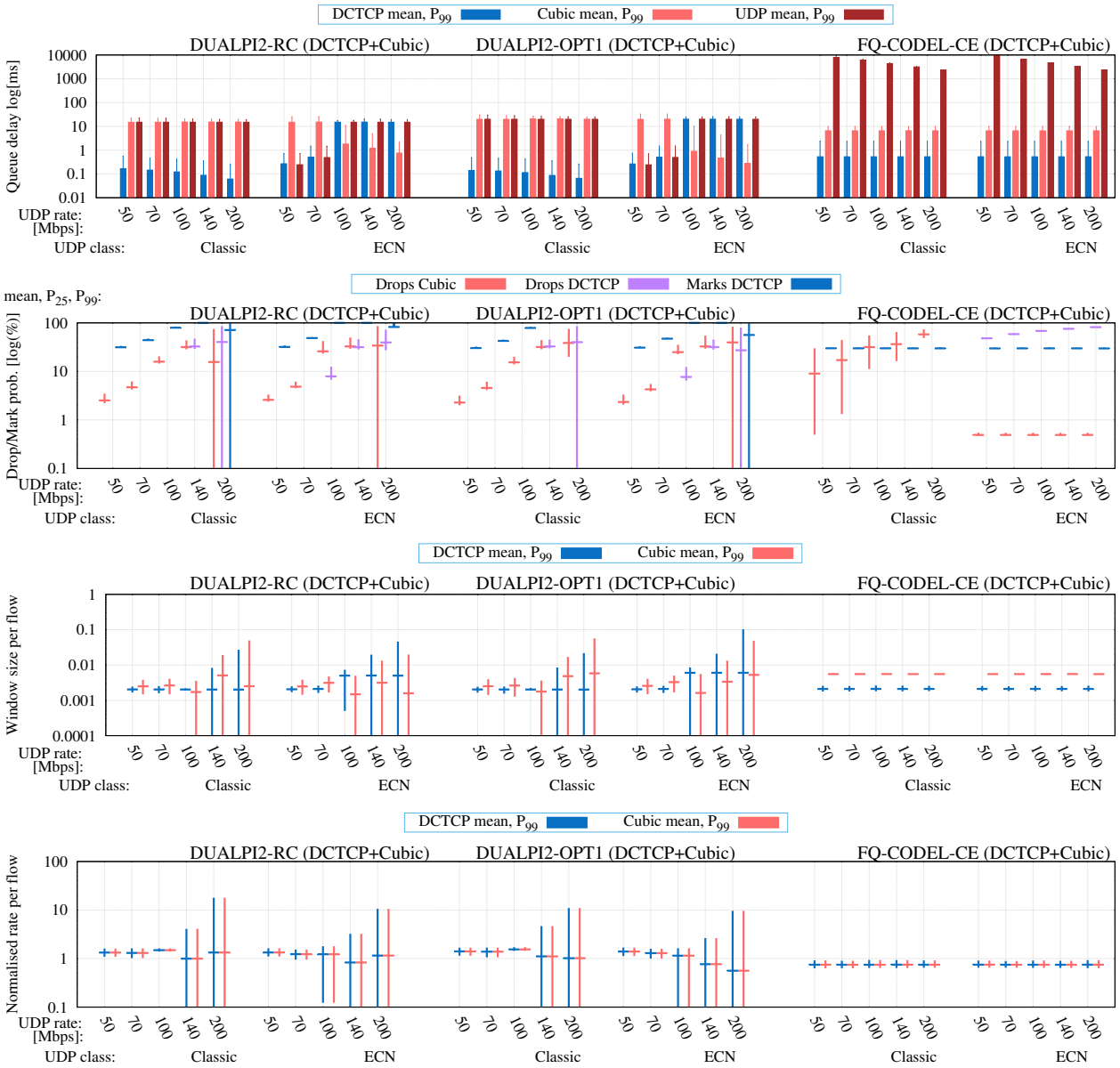


Figure C.1: Overload experiments. 1 flow for each CC