

Pantheon Report

Generated at 2017-08-12 12:10:22 (UTC).

Data path: GCE London Ethernet (*remote*) → GCE Iowa Ethernet (*local*).

Repeated the test of 15 congestion control schemes 10 times.

Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.

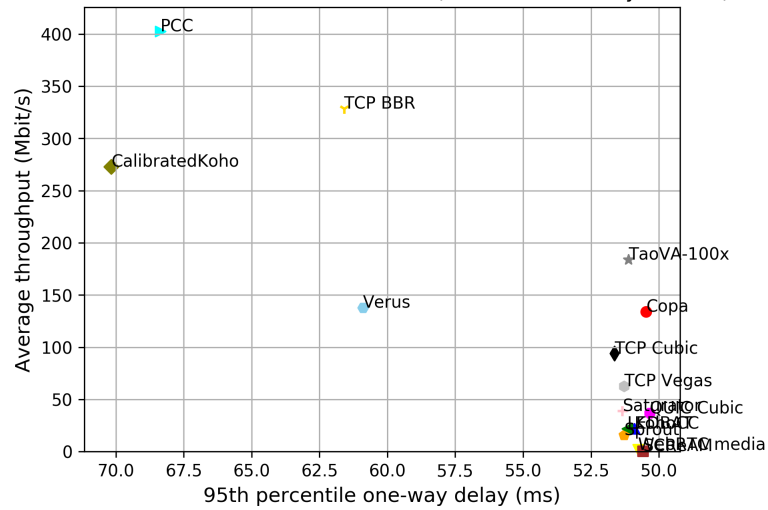
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

Tested BBR with qdisc of Fair Queuing (**fq**), and other schemes with the default Linux qdisc (**pfifo_fast**).

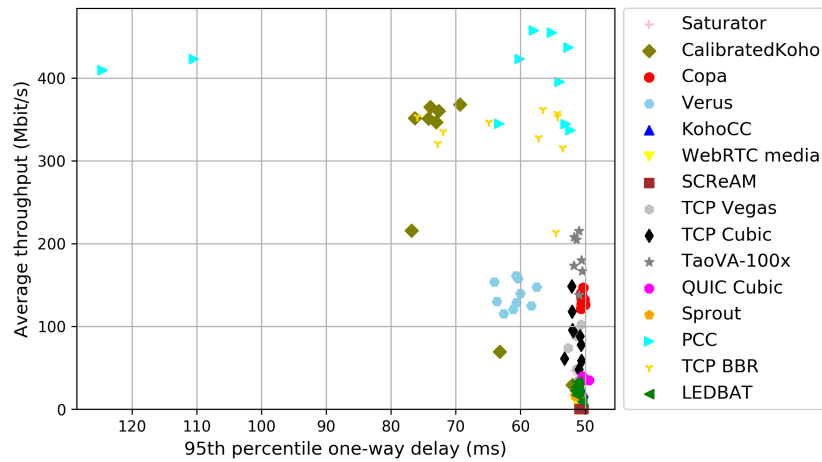
Git summary:

```
branch: master @ e43be7582298d552838afcf6382342bf187fbbd6
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/genericCC @ dae96123232f1bcb37725348fa2378691ce26725
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
  M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-stimuli @ fc73a85ca16c34366d1888dc8a0d0d88d4ebf2a7
third_party/pantheon-tunnel @ baf443516dea3eeddeccaf9b916cc313273ca4f4
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaeeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
  M src/examples/cellsim.cc
  M src/examples/sproutbt2.cc
  M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
  M src/verus.hpp
  M tools/plot.py
third_party/webrtc @ a488197ddd041ace68a42849b2540ad834825f42
```

test from GCE London Ethernet to GCE Iowa Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)



test from GCE London Ethernet to GCE Iowa Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows



scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	10	170.51	177.81	120.99	236.26	62.07	64.95	0.94	2.25	8.67
CalibratedKoho	9	156.55	132.42	86.75	67.74	70.16	68.93	19.78	10.82	10.29
Copa	10	78.69	61.76	44.40	50.34	50.34	50.58	0.24	0.51	1.25
TCP Cubic	10	37.81	53.69	62.09	51.30	51.31	52.08	1.17	1.32	2.18
KohoCC	10	11.33	11.31	9.90	50.87	50.87	50.92	2.37	2.60	12.51
LEDBAT	10	11.78	11.82	7.17	51.17	51.14	51.15	0.85	1.01	1.96
PCC	10	272.87	132.15	130.79	72.53	52.62	51.66	5.26	2.68	1.94
QUIC Cubic	10	0.06	39.04	32.39	50.51	49.60	50.40	0.00	0.49	1.31
Saturator	10	21.53	19.76	21.31	51.35	51.36	51.30	5.66	10.18	6.15
SCReAM	10	0.22	0.22	0.22	50.13	50.33	50.09	0.32	0.44	0.74
Sprout	10	7.82	7.70	7.43	51.27	51.25	51.15	1.02	1.18	2.54
TaoVA-100x	7	189.19	104.66	123.51	51.10	50.70	50.95	0.33	0.31	5.66
TCP Vegas	10	29.47	34.01	31.50	51.35	51.12	51.22	0.77	1.06	1.51
Verus	10	85.34	59.45	41.29	62.35	57.55	60.92	3.97	14.16	15.81
WebRTC media	10	0.36	1.50	0.40	51.03	50.53	50.85	0.20	0.80	2.27

Run 1: Statistics of TCP BBR

Start at: 2017-08-12 06:50:25

End at: 2017-08-12 06:50:55

Below is generated by plot.py at 2017-08-12 11:37:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 357.16 Mbit/s

95th percentile per-packet one-way delay: 54.306 ms

Loss rate: 0.57%

-- Flow 1:

Average throughput: 216.32 Mbit/s

95th percentile per-packet one-way delay: 54.296 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 210.20 Mbit/s

95th percentile per-packet one-way delay: 54.332 ms

Loss rate: 0.63%

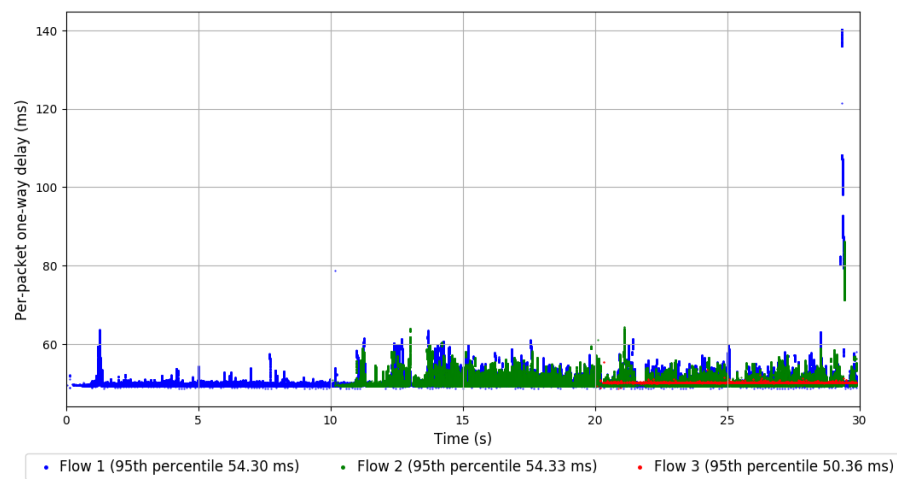
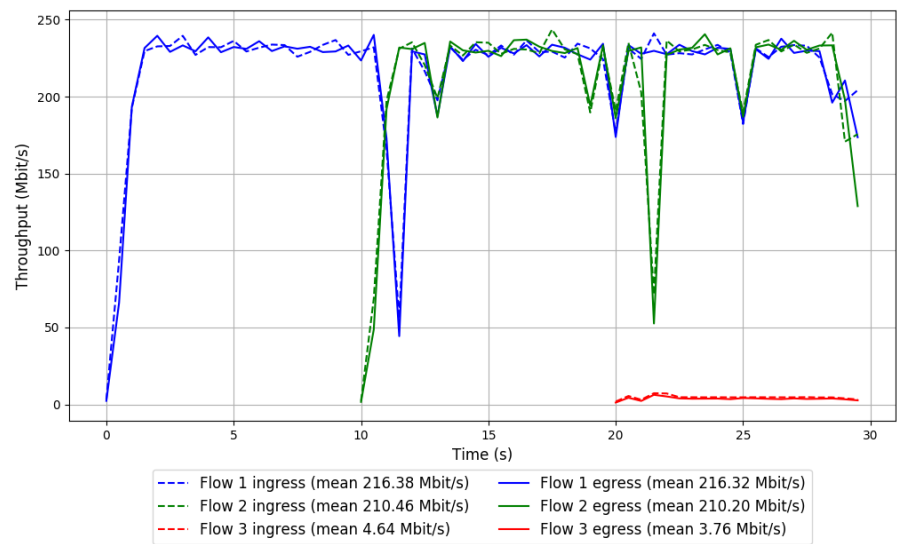
-- Flow 3:

Average throughput: 3.76 Mbit/s

95th percentile per-packet one-way delay: 50.363 ms

Loss rate: 19.85%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2017-08-12 07:02:20

End at: 2017-08-12 07:02:50

Below is generated by plot.py at 2017-08-12 11:37:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 315.76 Mbit/s

95th percentile per-packet one-way delay: 53.499 ms

Loss rate: 2.09%

-- Flow 1:

Average throughput: 216.34 Mbit/s

95th percentile per-packet one-way delay: 52.950 ms

Loss rate: 0.58%

-- Flow 2:

Average throughput: 48.79 Mbit/s

95th percentile per-packet one-way delay: 50.552 ms

Loss rate: 12.58%

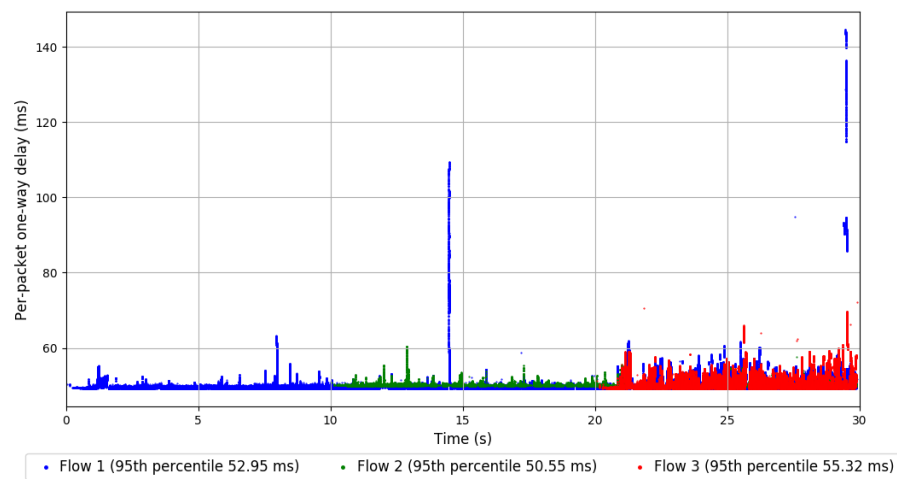
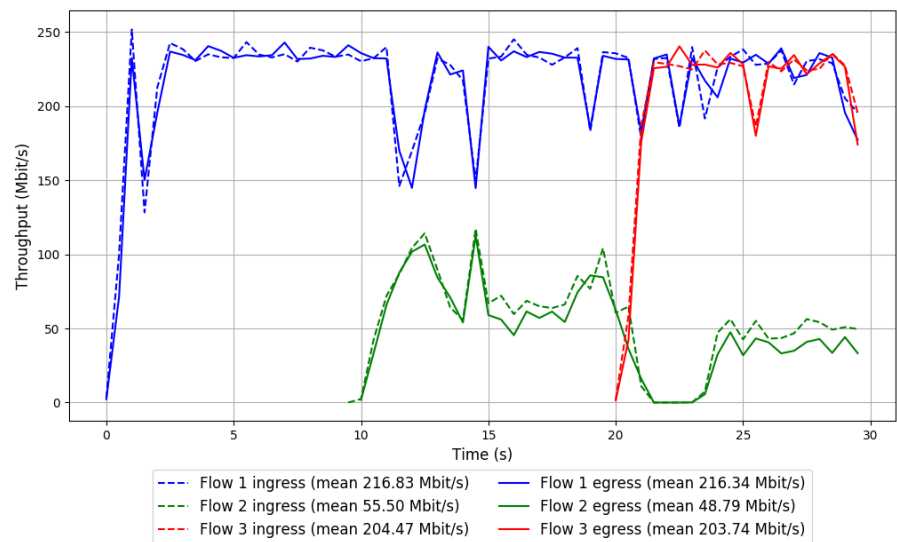
-- Flow 3:

Average throughput: 203.74 Mbit/s

95th percentile per-packet one-way delay: 55.316 ms

Loss rate: 1.18%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2017-08-12 07:13:45

End at: 2017-08-12 07:14:15

Below is generated by plot.py at 2017-08-12 11:39:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 362.01 Mbit/s

95th percentile per-packet one-way delay: 56.539 ms

Loss rate: 1.57%

-- Flow 1:

Average throughput: 207.26 Mbit/s

95th percentile per-packet one-way delay: 56.493 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 207.47 Mbit/s

95th percentile per-packet one-way delay: 56.702 ms

Loss rate: 0.65%

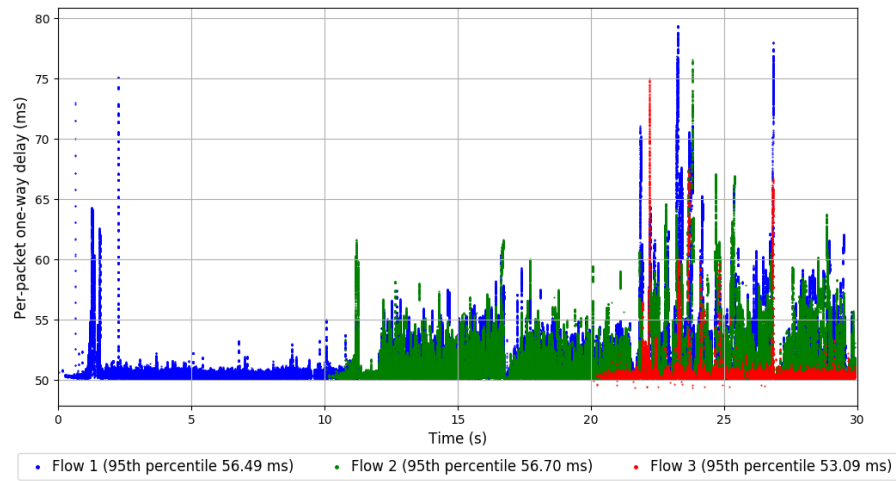
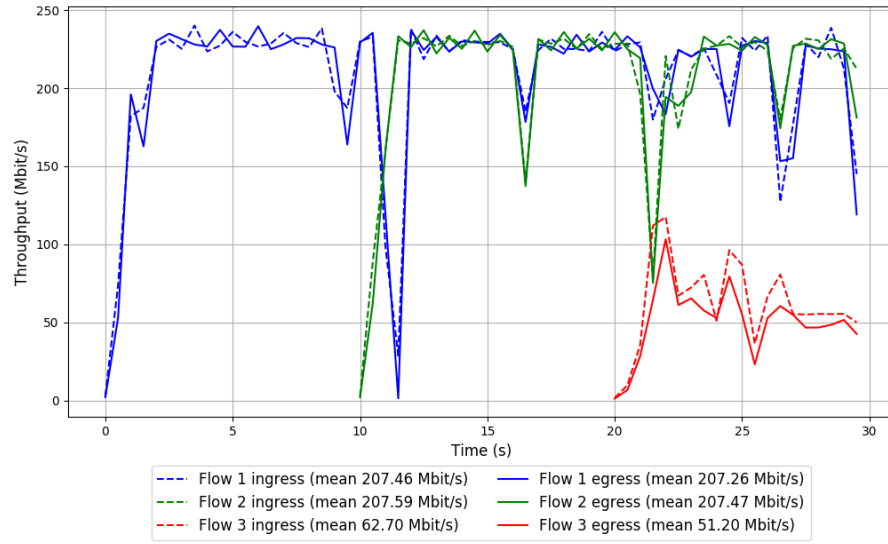
-- Flow 3:

Average throughput: 51.20 Mbit/s

95th percentile per-packet one-way delay: 53.095 ms

Loss rate: 19.18%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2017-08-12 07:25:17

End at: 2017-08-12 07:25:47

Below is generated by plot.py at 2017-08-12 11:39:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 353.29 Mbit/s

95th percentile per-packet one-way delay: 54.274 ms

Loss rate: 0.99%

-- Flow 1:

Average throughput: 202.16 Mbit/s

95th percentile per-packet one-way delay: 54.167 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 214.36 Mbit/s

95th percentile per-packet one-way delay: 54.521 ms

Loss rate: 0.65%

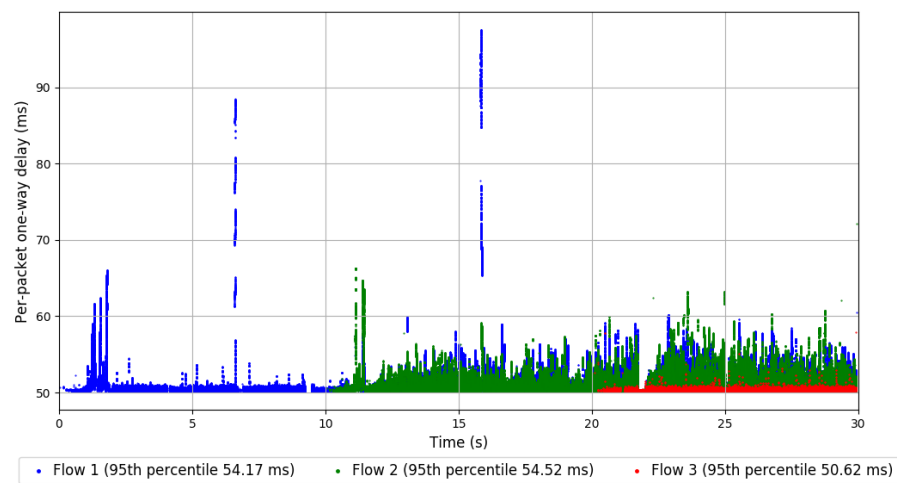
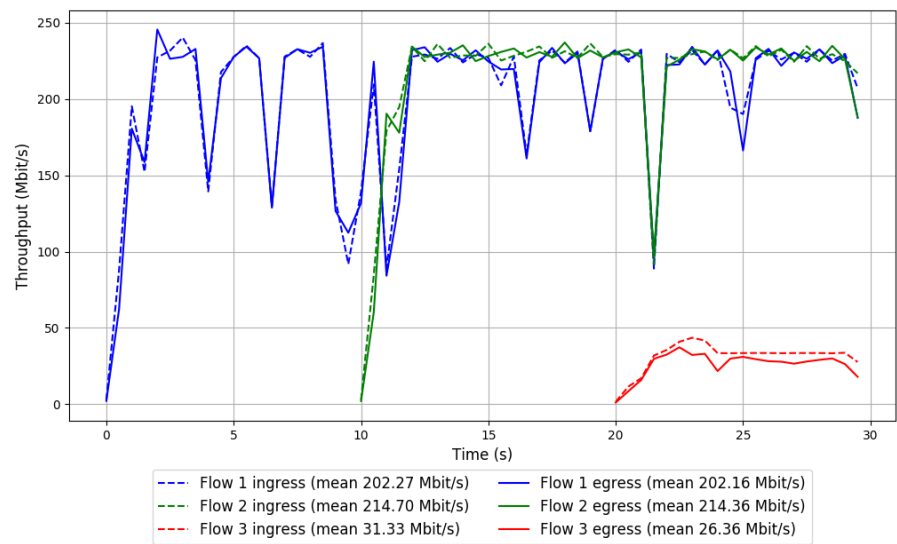
-- Flow 3:

Average throughput: 26.36 Mbit/s

95th percentile per-packet one-way delay: 50.621 ms

Loss rate: 16.70%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2017-08-12 07:37:14

End at: 2017-08-12 07:37:44

Below is generated by plot.py at 2017-08-12 11:40:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 327.68 Mbit/s

95th percentile per-packet one-way delay: 57.206 ms

Loss rate: 2.00%

-- Flow 1:

Average throughput: 129.94 Mbit/s

95th percentile per-packet one-way delay: 54.461 ms

Loss rate: 3.38%

-- Flow 2:

Average throughput: 203.02 Mbit/s

95th percentile per-packet one-way delay: 57.441 ms

Loss rate: 0.84%

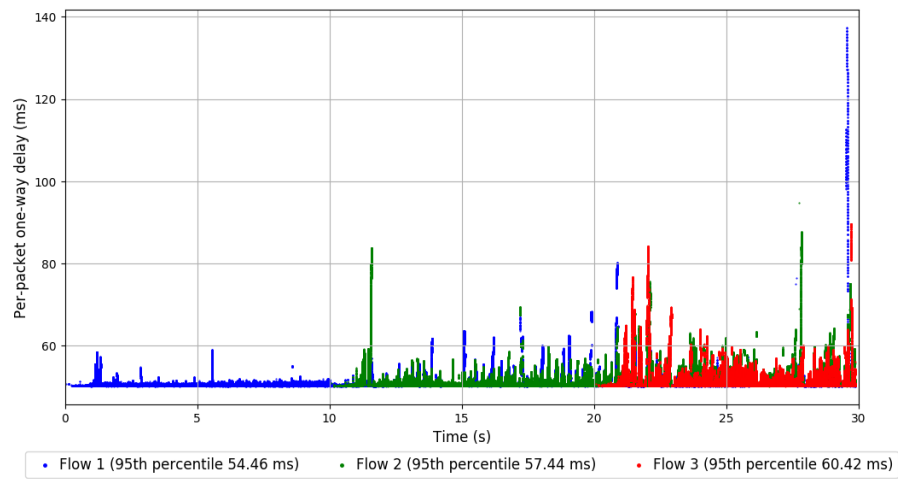
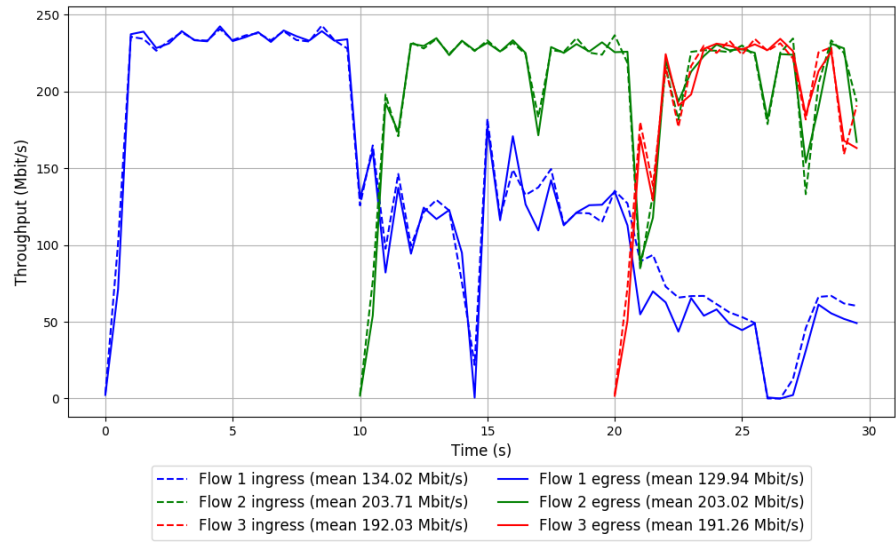
-- Flow 3:

Average throughput: 191.26 Mbit/s

95th percentile per-packet one-way delay: 60.423 ms

Loss rate: 1.58%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2017-08-12 07:49:13

End at: 2017-08-12 07:49:43

Below is generated by plot.py at 2017-08-12 11:40:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 353.18 Mbit/s

95th percentile per-packet one-way delay: 75.910 ms

Loss rate: 1.11%

-- Flow 1:

Average throughput: 209.87 Mbit/s

95th percentile per-packet one-way delay: 67.229 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 153.33 Mbit/s

95th percentile per-packet one-way delay: 78.529 ms

Loss rate: 2.03%

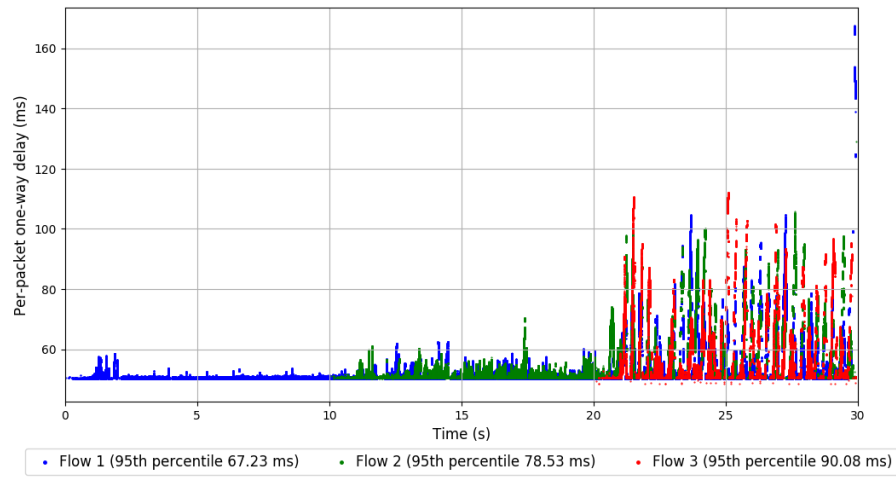
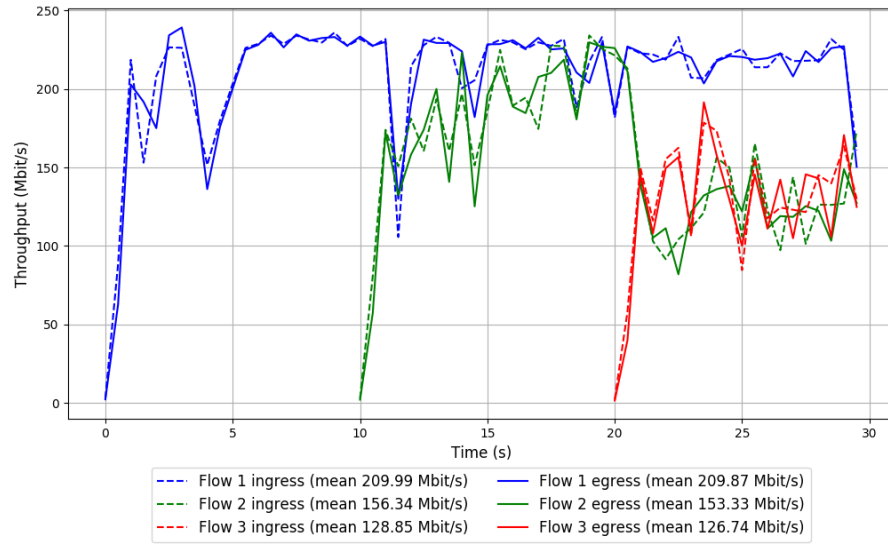
-- Flow 3:

Average throughput: 126.74 Mbit/s

95th percentile per-packet one-way delay: 90.080 ms

Loss rate: 2.65%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2017-08-12 08:01:07

End at: 2017-08-12 08:01:37

Below is generated by plot.py at 2017-08-12 11:41:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 335.37 Mbit/s

95th percentile per-packet one-way delay: 71.977 ms

Loss rate: 1.90%

-- Flow 1:

Average throughput: 160.02 Mbit/s

95th percentile per-packet one-way delay: 68.423 ms

Loss rate: 1.87%

-- Flow 2:

Average throughput: 206.82 Mbit/s

95th percentile per-packet one-way delay: 69.534 ms

Loss rate: 0.63%

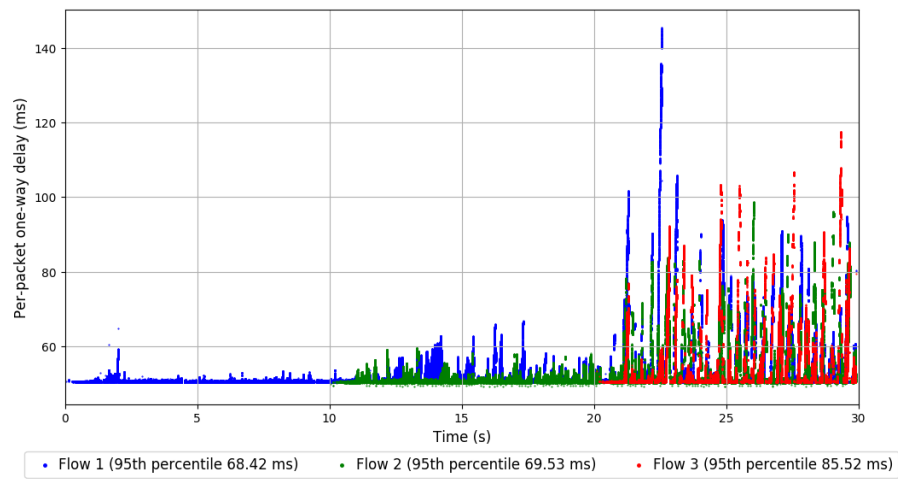
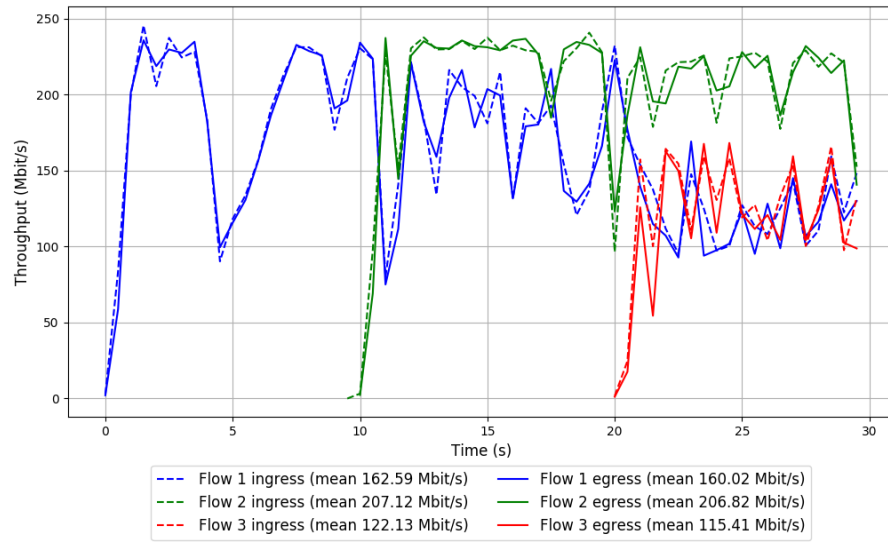
-- Flow 3:

Average throughput: 115.41 Mbit/s

95th percentile per-packet one-way delay: 85.523 ms

Loss rate: 6.38%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2017-08-12 08:12:58

End at: 2017-08-12 08:13:28

Below is generated by plot.py at 2017-08-12 11:41:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 213.35 Mbit/s

95th percentile per-packet one-way delay: 54.525 ms

Loss rate: 0.84%

-- Flow 1:

Average throughput: 11.38 Mbit/s

95th percentile per-packet one-way delay: 1830.112 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 202.40 Mbit/s

95th percentile per-packet one-way delay: 54.165 ms

Loss rate: 0.61%

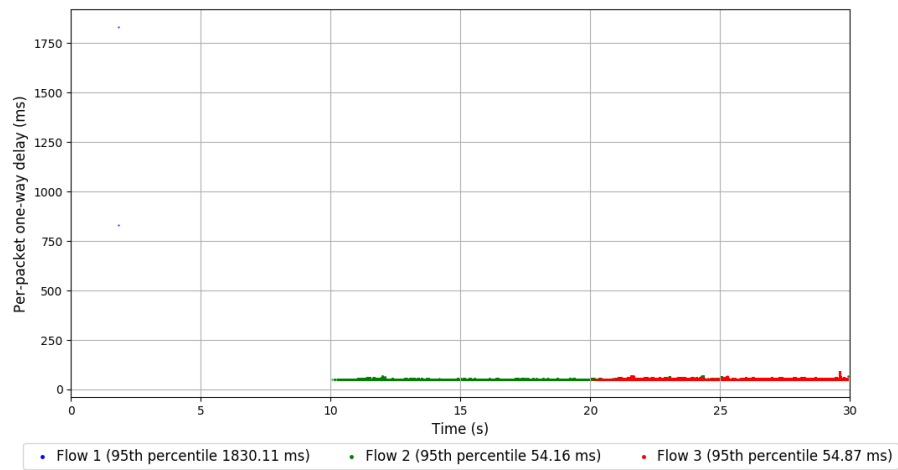
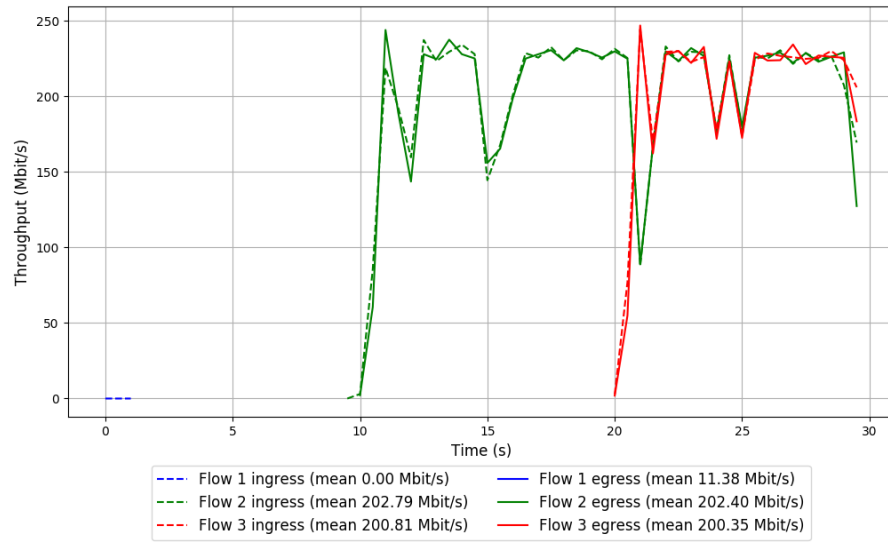
-- Flow 3:

Average throughput: 200.35 Mbit/s

95th percentile per-packet one-way delay: 54.873 ms

Loss rate: 1.31%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2017-08-12 08:24:26

End at: 2017-08-12 08:24:56

Below is generated by plot.py at 2017-08-12 11:42:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 346.78 Mbit/s

95th percentile per-packet one-way delay: 64.894 ms

Loss rate: 2.26%

-- Flow 1:

Average throughput: 190.03 Mbit/s

95th percentile per-packet one-way delay: 60.480 ms

Loss rate: 0.47%

-- Flow 2:

Average throughput: 189.88 Mbit/s

95th percentile per-packet one-way delay: 67.764 ms

Loss rate: 0.83%

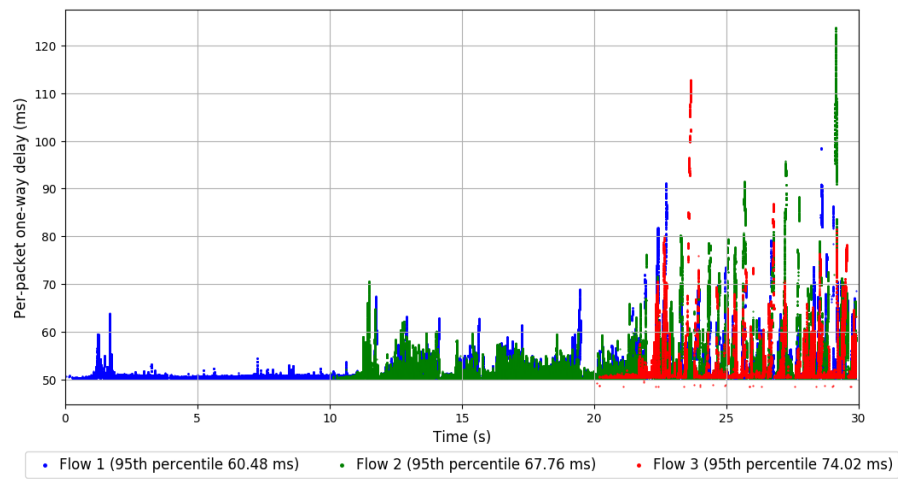
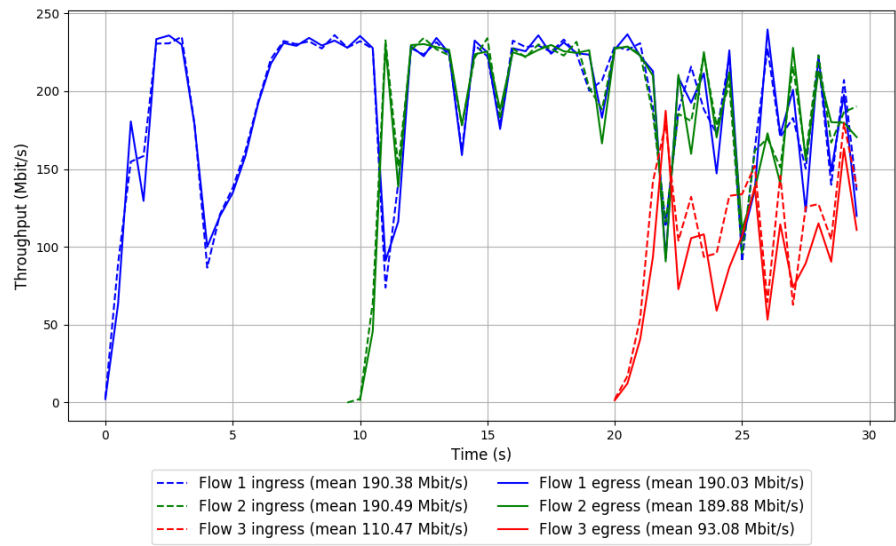
-- Flow 3:

Average throughput: 93.08 Mbit/s

95th percentile per-packet one-way delay: 74.015 ms

Loss rate: 16.60%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2017-08-12 08:36:17

End at: 2017-08-12 08:36:47

Below is generated by plot.py at 2017-08-12 11:42:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 321.05 Mbit/s

95th percentile per-packet one-way delay: 72.834 ms

Loss rate: 1.90%

-- Flow 1:

Average throughput: 161.77 Mbit/s

95th percentile per-packet one-way delay: 63.945 ms

Loss rate: 1.47%

-- Flow 2:

Average throughput: 141.84 Mbit/s

95th percentile per-packet one-way delay: 77.146 ms

Loss rate: 3.03%

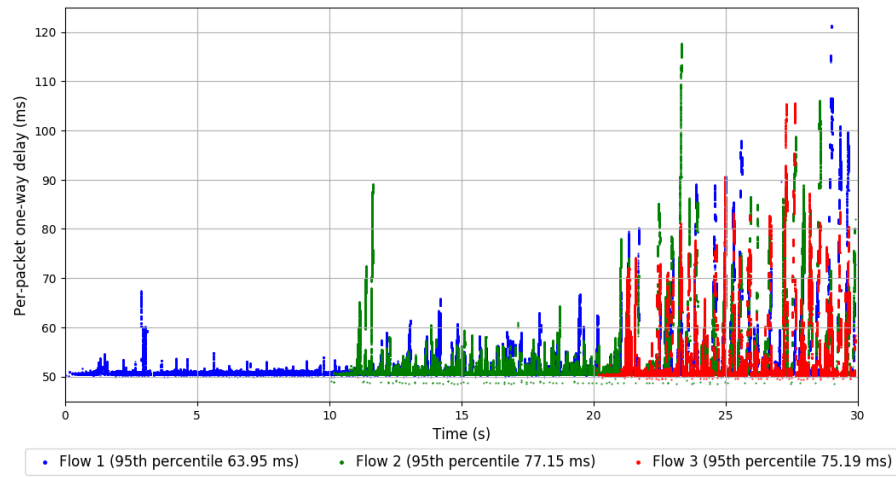
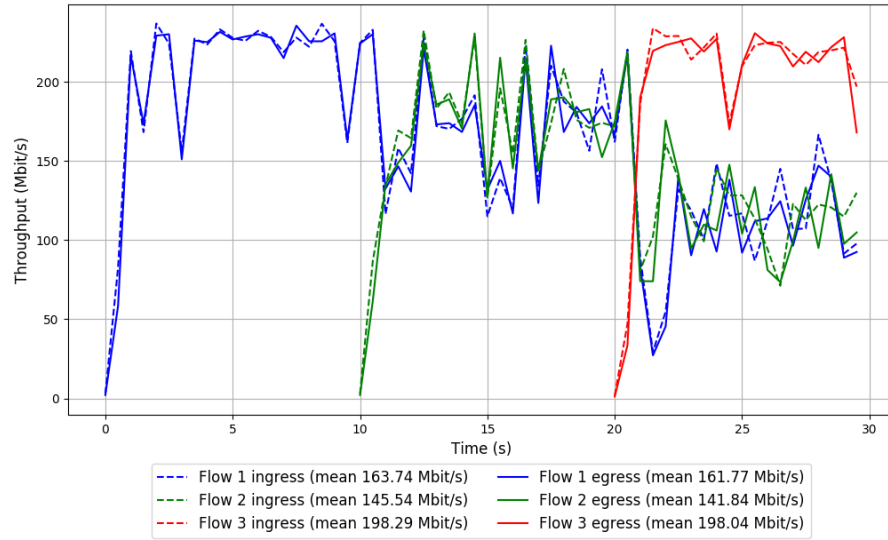
-- Flow 3:

Average throughput: 198.04 Mbit/s

95th percentile per-packet one-way delay: 75.194 ms

Loss rate: 1.31%

Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of CalibratedKoho

Start at: 2017-08-12 06:53:08

End at: 2017-08-12 06:53:38

Below is generated by plot.py at 2017-08-12 11:42:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 215.73 Mbit/s

95th percentile per-packet one-way delay: 76.843 ms

Loss rate: 5.81%

-- Flow 1:

Average throughput: 4.79 Mbit/s

95th percentile per-packet one-way delay: 52.061 ms

Loss rate: 70.29%

-- Flow 2:

Average throughput: 248.87 Mbit/s

95th percentile per-packet one-way delay: 79.643 ms

Loss rate: 0.67%

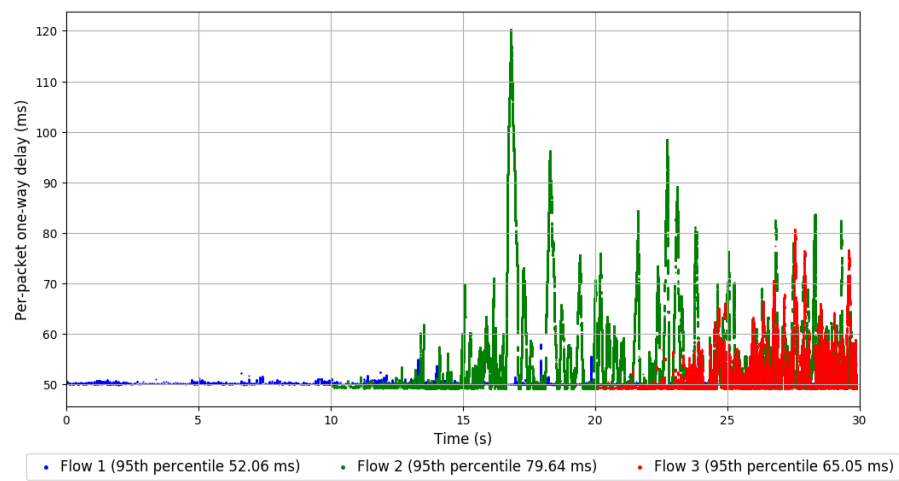
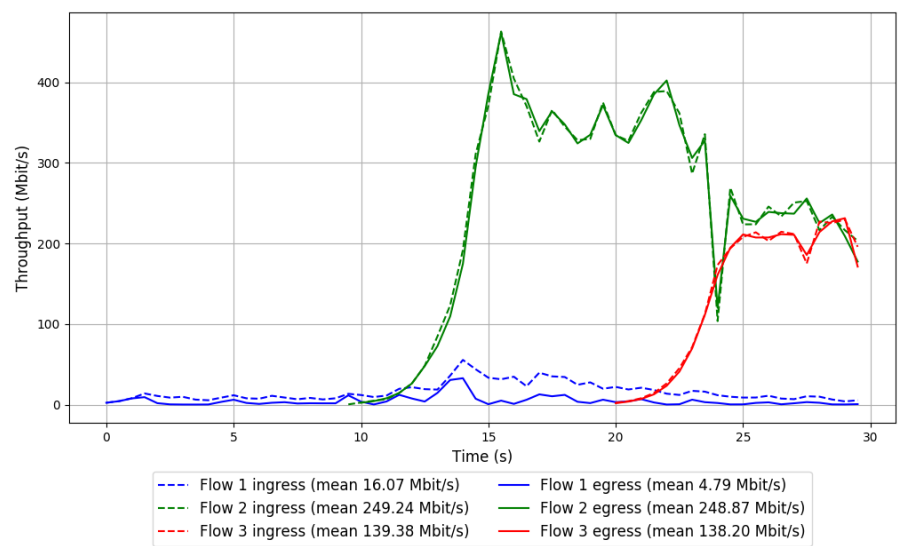
-- Flow 3:

Average throughput: 138.20 Mbit/s

95th percentile per-packet one-way delay: 65.049 ms

Loss rate: 1.85%

Run 1: Report of CalibratedKoho — Data Link



Run 2: Statistics of CalibratedKoho

Start at: 2017-08-12 07:04:50

End at: 2017-08-12 07:05:20

Below is generated by plot.py at 2017-08-12 11:42:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 29.41 Mbit/s

95th percentile per-packet one-way delay: 51.992 ms

Loss rate: 65.57%

-- Flow 1:

Average throughput: 17.94 Mbit/s

95th percentile per-packet one-way delay: 52.187 ms

Loss rate: 65.37%

-- Flow 2:

Average throughput: 12.76 Mbit/s

95th percentile per-packet one-way delay: 51.541 ms

Loss rate: 66.73%

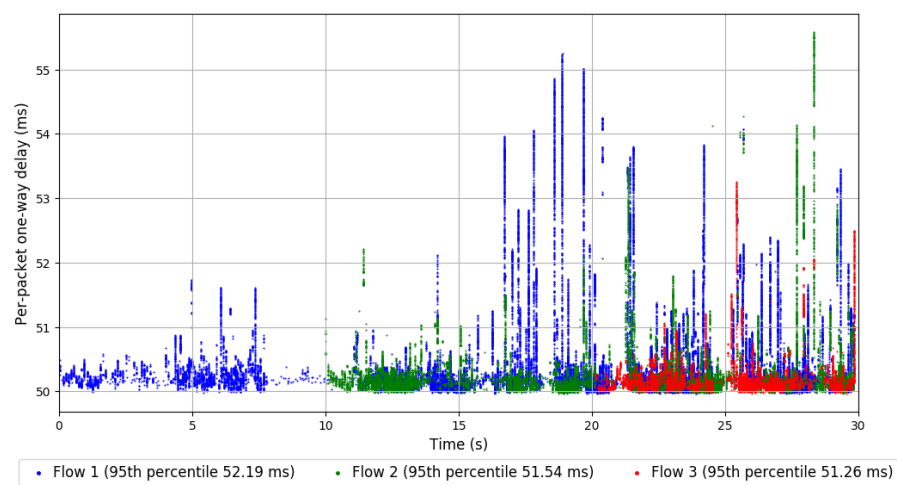
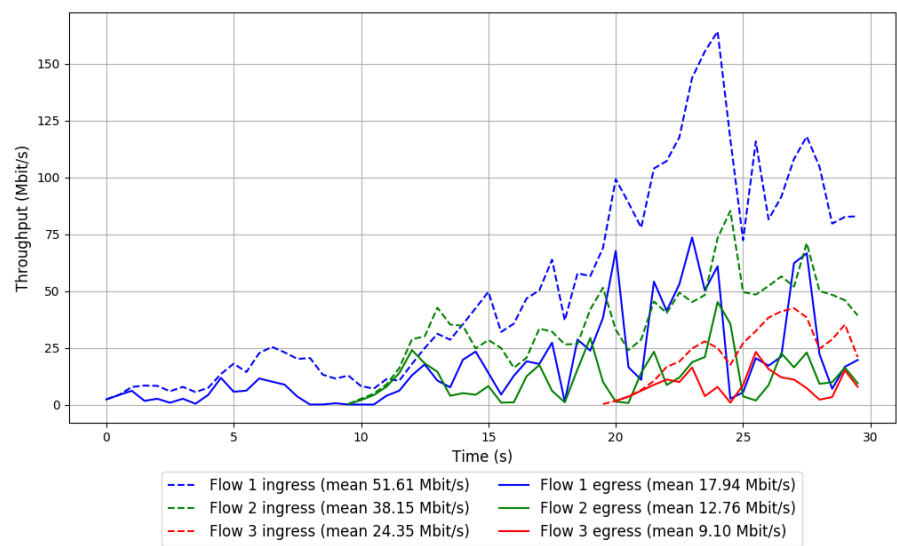
-- Flow 3:

Average throughput: 9.10 Mbit/s

95th percentile per-packet one-way delay: 51.255 ms

Loss rate: 63.20%

Run 2: Report of CalibratedKoho — Data Link



Run 3: Statistics of CalibratedKoho

Start at: 2017-08-12 07:16:20

End at: 2017-08-12 07:16:50

Below is generated by plot.py at 2017-08-12 11:42:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 69.33 Mbit/s

95th percentile per-packet one-way delay: 63.209 ms

Loss rate: 32.08%

-- Flow 1:

Average throughput: 39.61 Mbit/s

95th percentile per-packet one-way delay: 63.296 ms

Loss rate: 38.77%

-- Flow 2:

Average throughput: 24.19 Mbit/s

95th percentile per-packet one-way delay: 62.583 ms

Loss rate: 25.07%

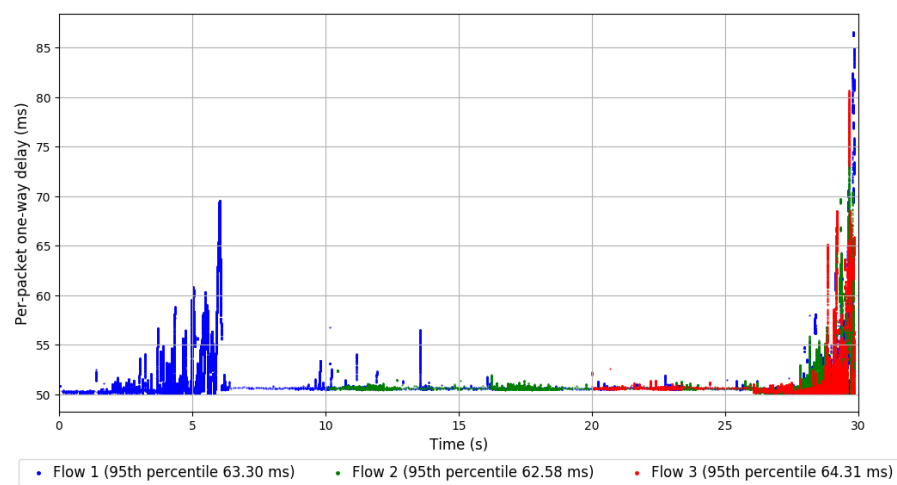
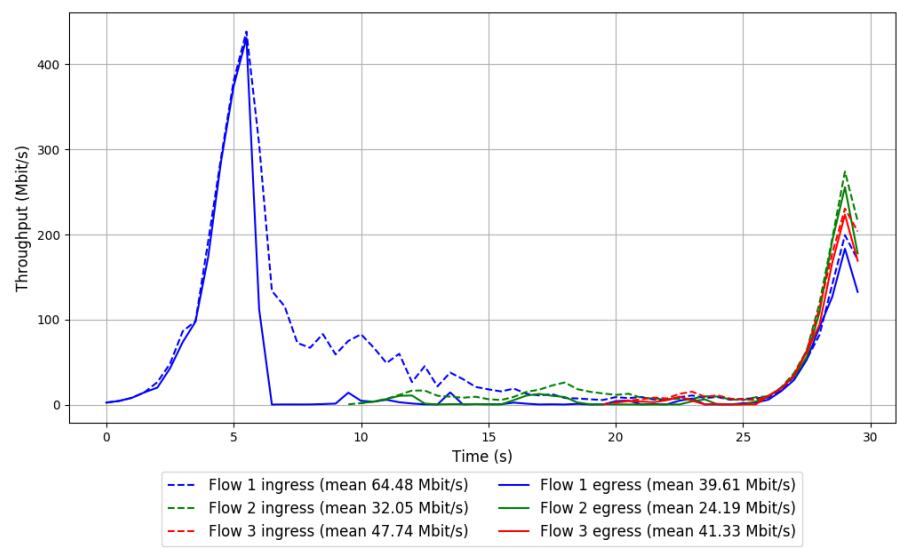
-- Flow 3:

Average throughput: 41.33 Mbit/s

95th percentile per-packet one-way delay: 64.312 ms

Loss rate: 14.33%

Run 3: Report of CalibratedKoho — Data Link



Run 4: Statistics of CalibratedKoho

Start at: 2017-08-12 07:27:53

End at: 2017-08-12 07:28:23

Below is generated by plot.py at 2017-08-12 11:43:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 351.47 Mbit/s

95th percentile per-packet one-way delay: 76.335 ms

Loss rate: 0.71%

-- Flow 1:

Average throughput: 219.26 Mbit/s

95th percentile per-packet one-way delay: 81.034 ms

Loss rate: 0.58%

-- Flow 2:

Average throughput: 150.34 Mbit/s

95th percentile per-packet one-way delay: 70.946 ms

Loss rate: 0.73%

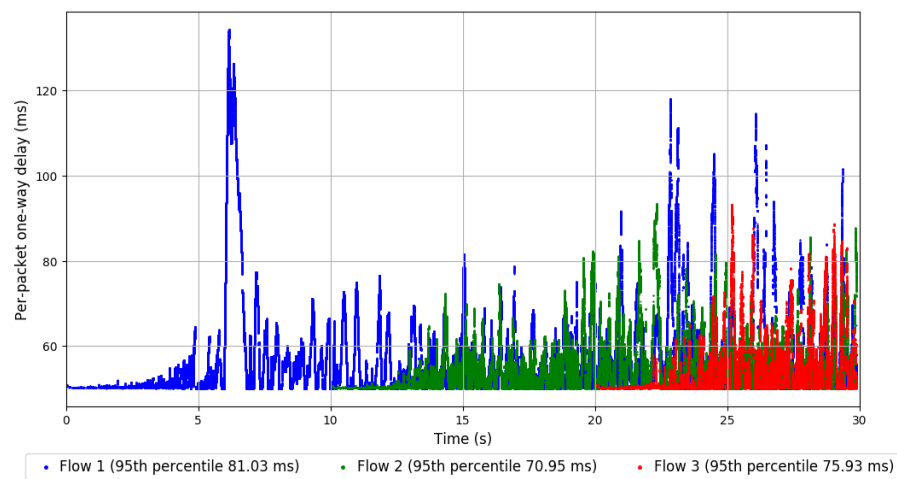
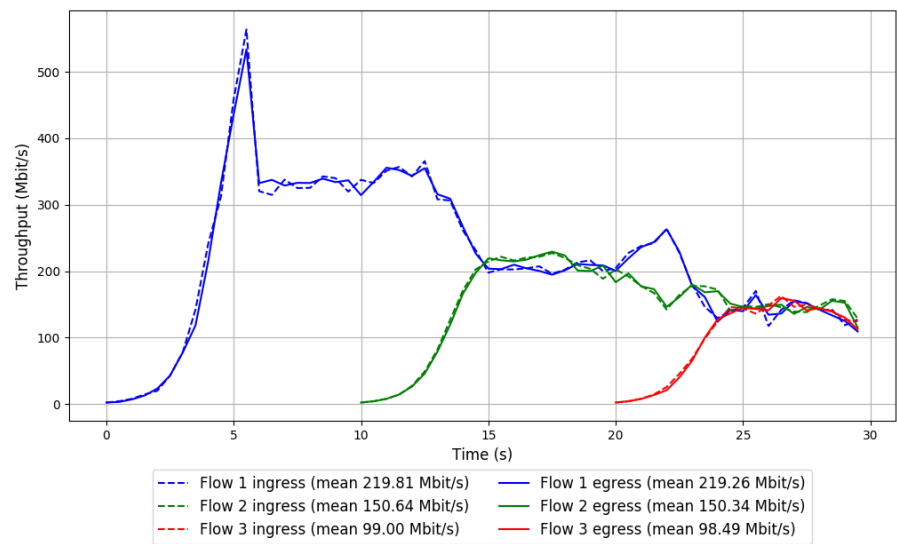
-- Flow 3:

Average throughput: 98.49 Mbit/s

95th percentile per-packet one-way delay: 75.932 ms

Loss rate: 1.55%

Run 4: Report of CalibratedKoho — Data Link



Run 5: Statistics of CalibratedKoho

Start at: 2017-08-12 07:39:47

End at: 2017-08-12 07:40:17

Below is generated by plot.py at 2017-08-12 11:44:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 368.22 Mbit/s

95th percentile per-packet one-way delay: 69.351 ms

Loss rate: 0.96%

-- Flow 1:

Average throughput: 232.46 Mbit/s

95th percentile per-packet one-way delay: 70.432 ms

Loss rate: 0.86%

-- Flow 2:

Average throughput: 153.30 Mbit/s

95th percentile per-packet one-way delay: 67.755 ms

Loss rate: 0.49%

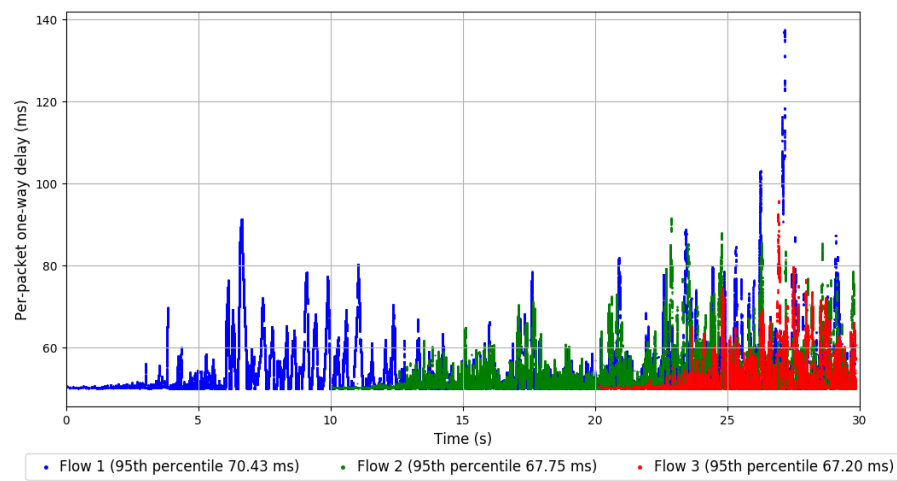
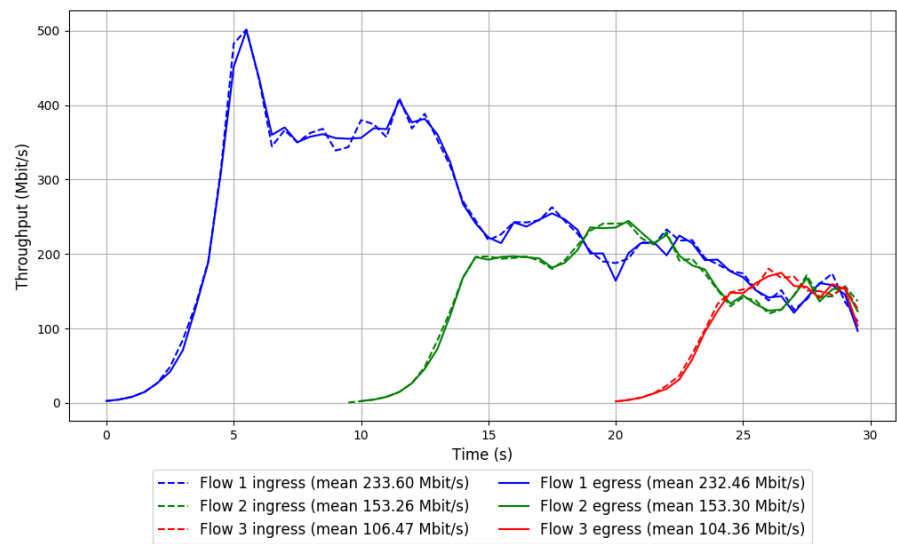
-- Flow 3:

Average throughput: 104.36 Mbit/s

95th percentile per-packet one-way delay: 67.205 ms

Loss rate: 2.94%

Run 5: Report of CalibratedKoho — Data Link



Run 6: Statistics of CalibratedKoho

Start at: 2017-08-12 07:51:49

End at: 2017-08-12 07:52:19

Below is generated by plot.py at 2017-08-12 11:45:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 360.19 Mbit/s

95th percentile per-packet one-way delay: 72.614 ms

Loss rate: 0.65%

-- Flow 1:

Average throughput: 224.79 Mbit/s

95th percentile per-packet one-way delay: 74.331 ms

Loss rate: 0.33%

-- Flow 2:

Average throughput: 156.86 Mbit/s

95th percentile per-packet one-way delay: 69.010 ms

Loss rate: 1.00%

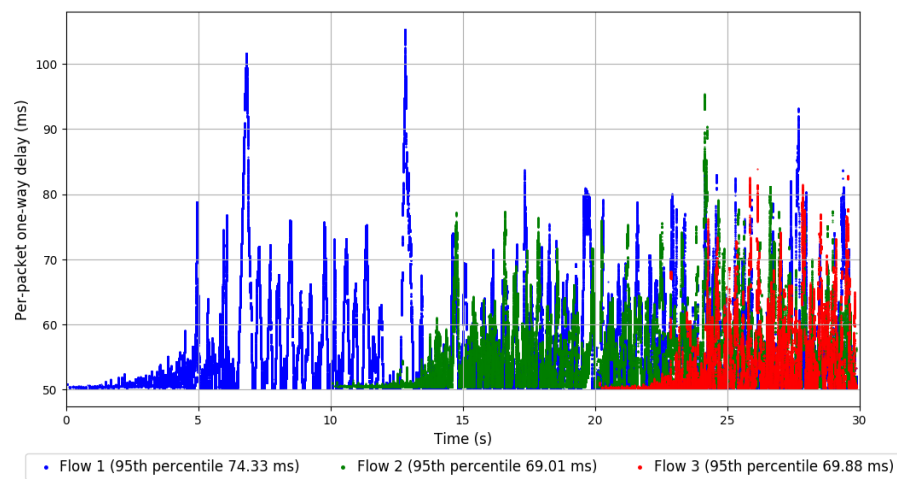
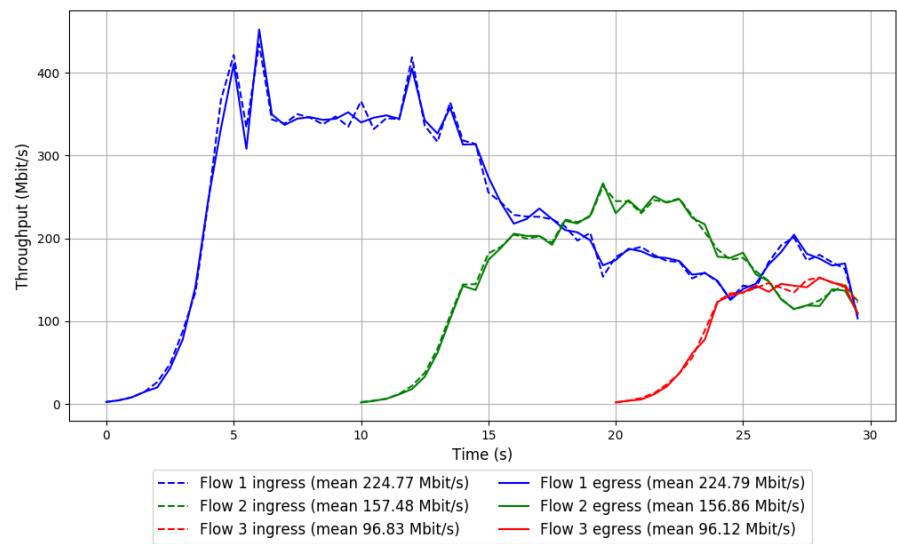
-- Flow 3:

Average throughput: 96.12 Mbit/s

95th percentile per-packet one-way delay: 69.881 ms

Loss rate: 1.75%

Run 6: Report of CalibratedKoho — Data Link



Run 7: Statistics of CalibratedKoho

Start at: 2017-08-12 08:03:43

End at: 2017-08-12 08:04:13

Below is generated by plot.py at 2017-08-12 11:45:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 351.02 Mbit/s

95th percentile per-packet one-way delay: 74.209 ms

Loss rate: 0.45%

-- Flow 1:

Average throughput: 215.87 Mbit/s

95th percentile per-packet one-way delay: 73.173 ms

Loss rate: 0.30%

-- Flow 2:

Average throughput: 154.22 Mbit/s

95th percentile per-packet one-way delay: 75.791 ms

Loss rate: 0.40%

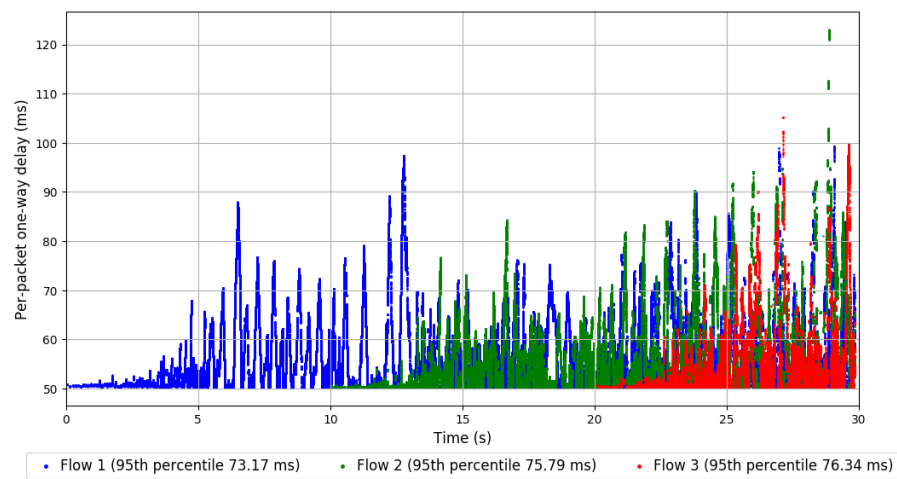
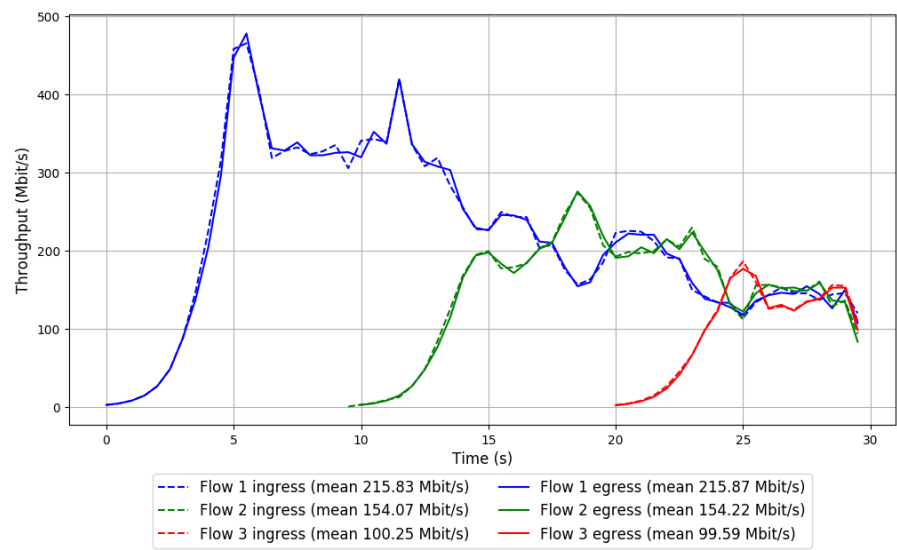
-- Flow 3:

Average throughput: 99.59 Mbit/s

95th percentile per-packet one-way delay: 76.343 ms

Loss rate: 1.65%

Run 7: Report of CalibratedKoho — Data Link

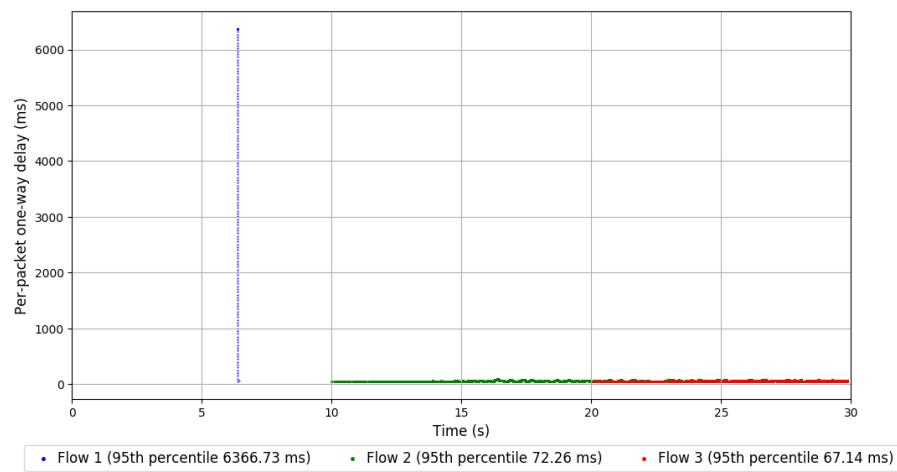
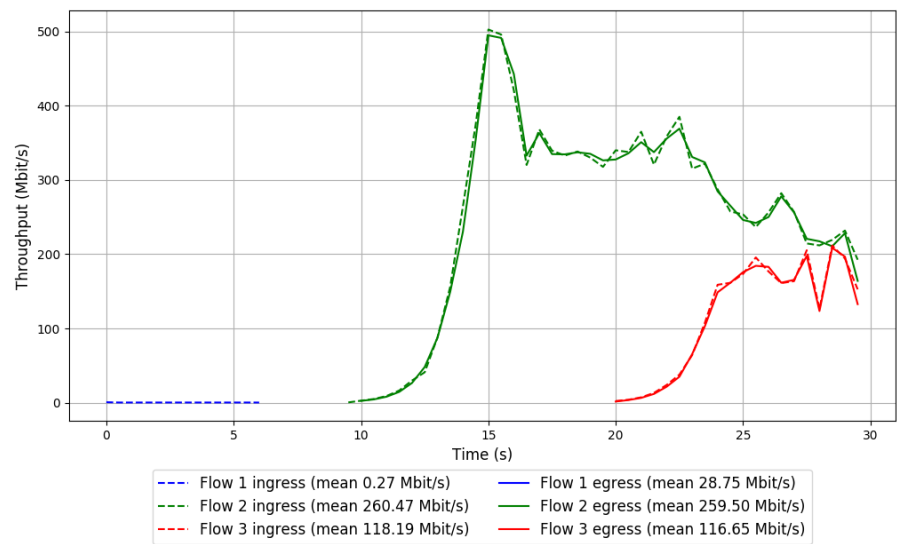


Run 8: Statistics of CalibratedKoho

Start at: 2017-08-12 08:15:26

End at: 2017-08-12 08:15:56

Run 8: Report of CalibratedKoho — Data Link



Run 9: Statistics of CalibratedKoho

Start at: 2017-08-12 08:27:02

End at: 2017-08-12 08:27:32

Below is generated by plot.py at 2017-08-12 11:46:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 346.66 Mbit/s

95th percentile per-packet one-way delay: 73.022 ms

Loss rate: 1.46%

-- Flow 1:

Average throughput: 211.24 Mbit/s

95th percentile per-packet one-way delay: 71.704 ms

Loss rate: 1.15%

-- Flow 2:

Average throughput: 151.50 Mbit/s

95th percentile per-packet one-way delay: 75.554 ms

Loss rate: 1.61%

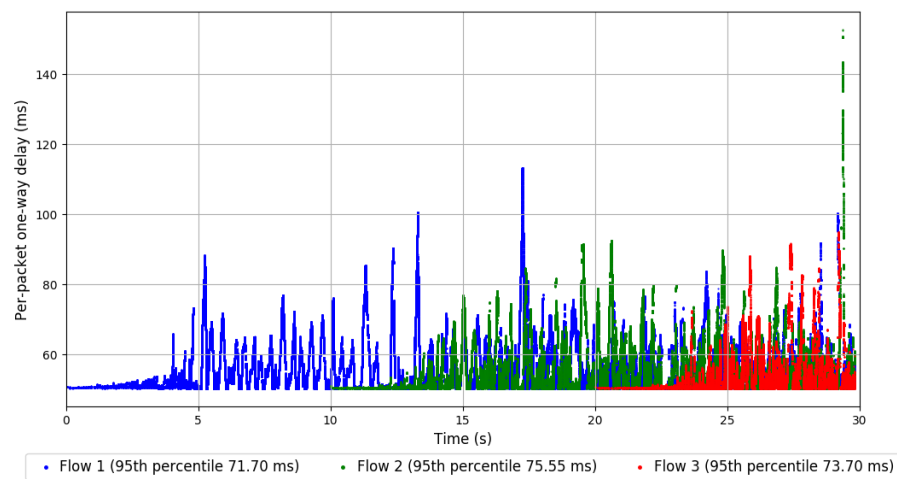
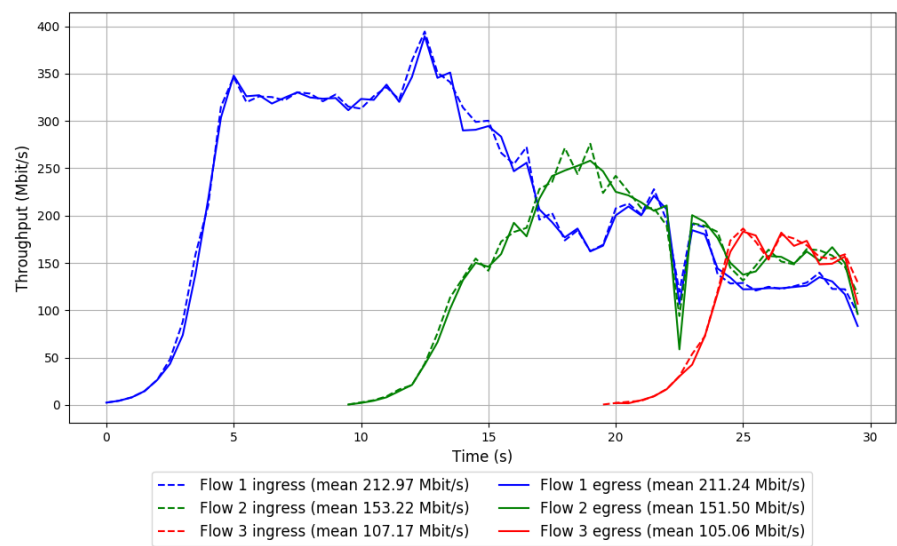
-- Flow 3:

Average throughput: 105.06 Mbit/s

95th percentile per-packet one-way delay: 73.705 ms

Loss rate: 2.89%

Run 9: Report of CalibratedKoho — Data Link



Run 10: Statistics of CalibratedKoho

Start at: 2017-08-12 08:38:53

End at: 2017-08-12 08:39:23

Below is generated by plot.py at 2017-08-12 11:46:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 365.06 Mbit/s

95th percentile per-packet one-way delay: 73.923 ms

Loss rate: 0.63%

-- Flow 1:

Average throughput: 242.97 Mbit/s

95th percentile per-packet one-way delay: 71.471 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 139.71 Mbit/s

95th percentile per-packet one-way delay: 78.590 ms

Loss rate: 0.68%

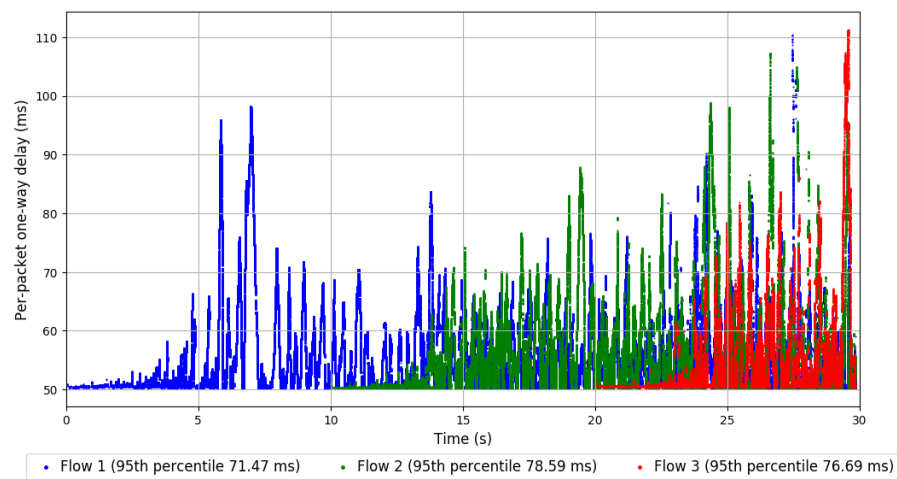
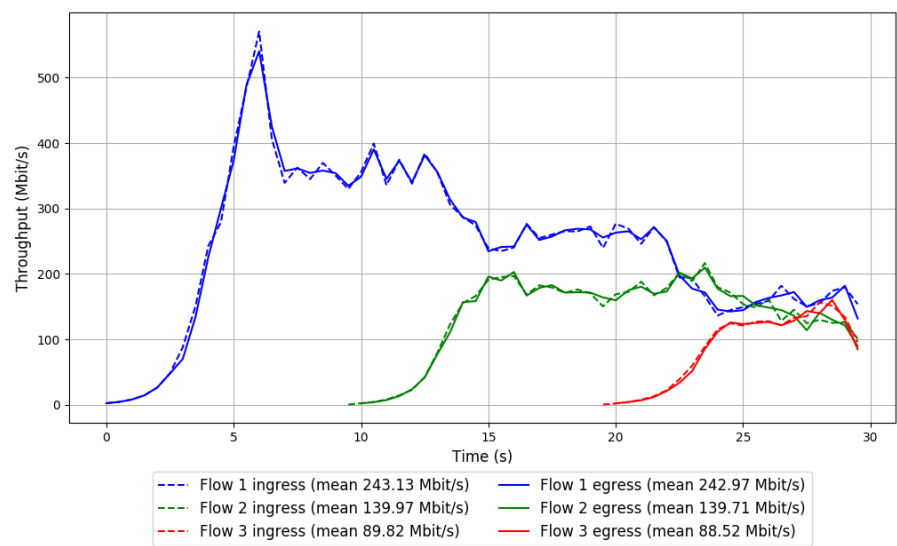
-- Flow 3:

Average throughput: 88.52 Mbit/s

95th percentile per-packet one-way delay: 76.693 ms

Loss rate: 2.47%

Run 10: Report of CalibratedKoho — Data Link



Run 1: Statistics of Copa

Start at: 2017-08-12 06:51:24

End at: 2017-08-12 06:51:54

Below is generated by plot.py at 2017-08-12 11:47:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 126.19 Mbit/s

95th percentile per-packet one-way delay: 50.042 ms

Loss rate: 0.41%

-- Flow 1:

Average throughput: 78.57 Mbit/s

95th percentile per-packet one-way delay: 49.545 ms

Loss rate: 0.24%

-- Flow 2:

Average throughput: 62.88 Mbit/s

95th percentile per-packet one-way delay: 49.707 ms

Loss rate: 0.54%

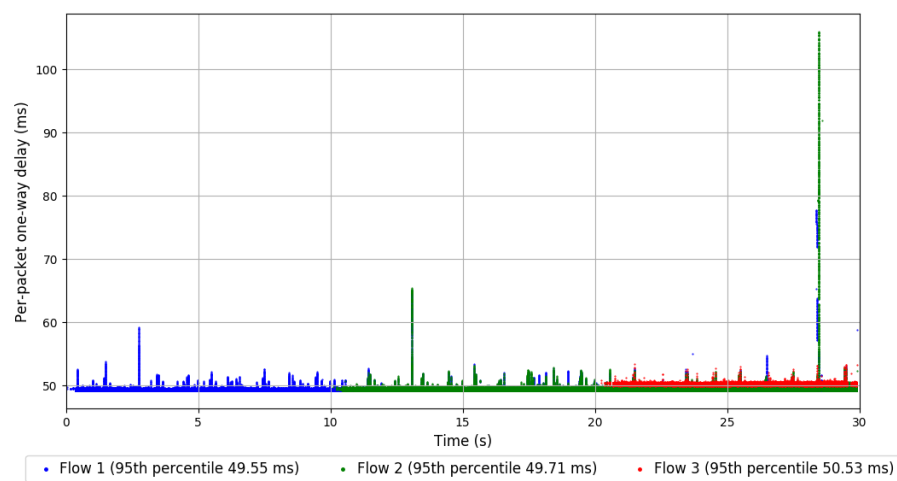
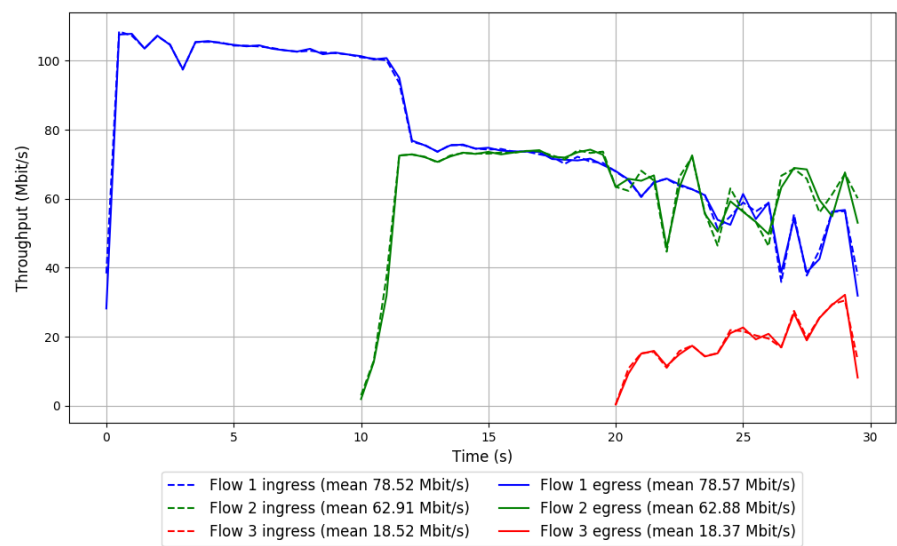
-- Flow 3:

Average throughput: 18.37 Mbit/s

95th percentile per-packet one-way delay: 50.528 ms

Loss rate: 1.82%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2017-08-12 07:03:17

End at: 2017-08-12 07:03:47

Below is generated by plot.py at 2017-08-12 11:47:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 132.43 Mbit/s

95th percentile per-packet one-way delay: 50.158 ms

Loss rate: 0.41%

-- Flow 1:

Average throughput: 80.54 Mbit/s

95th percentile per-packet one-way delay: 50.154 ms

Loss rate: 0.19%

-- Flow 2:

Average throughput: 68.36 Mbit/s

95th percentile per-packet one-way delay: 50.149 ms

Loss rate: 0.62%

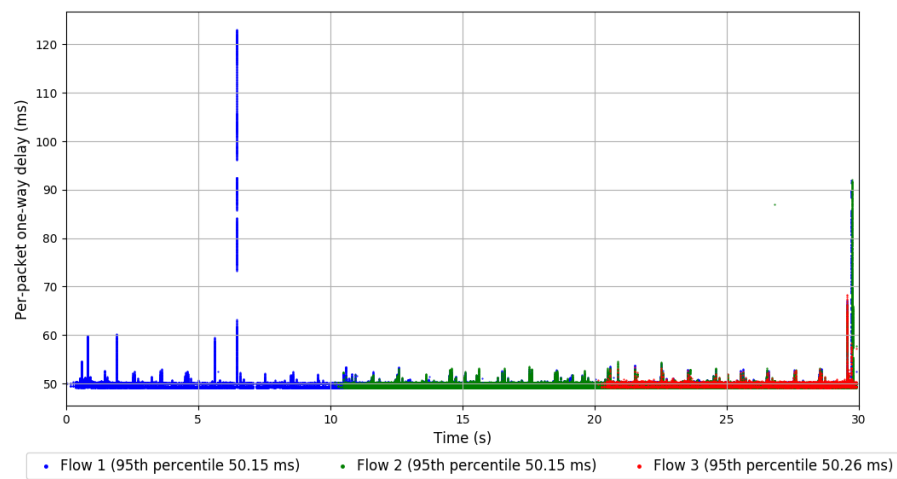
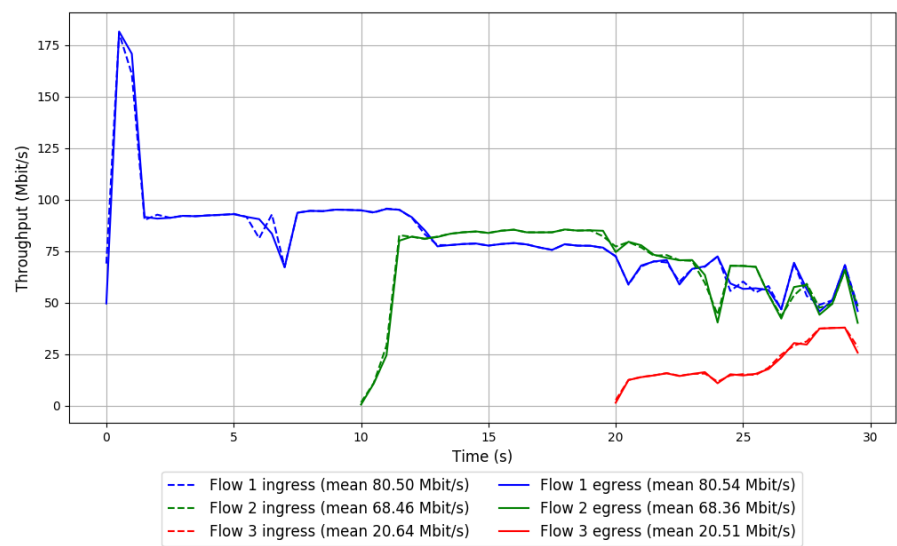
-- Flow 3:

Average throughput: 20.51 Mbit/s

95th percentile per-packet one-way delay: 50.257 ms

Loss rate: 1.60%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2017-08-12 07:14:45

End at: 2017-08-12 07:15:15

Below is generated by plot.py at 2017-08-12 11:47:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 121.45 Mbit/s

95th percentile per-packet one-way delay: 50.662 ms

Loss rate: 0.47%

-- Flow 1:

Average throughput: 66.55 Mbit/s

95th percentile per-packet one-way delay: 50.272 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 66.55 Mbit/s

95th percentile per-packet one-way delay: 50.283 ms

Loss rate: 0.47%

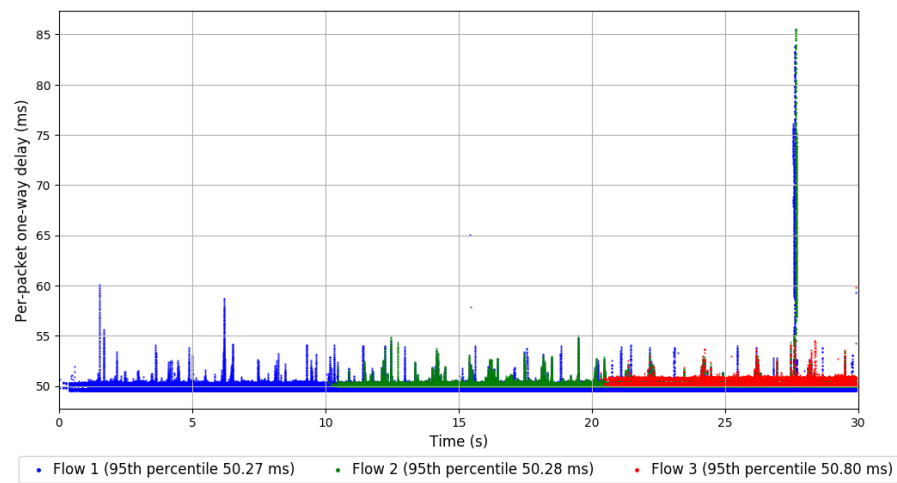
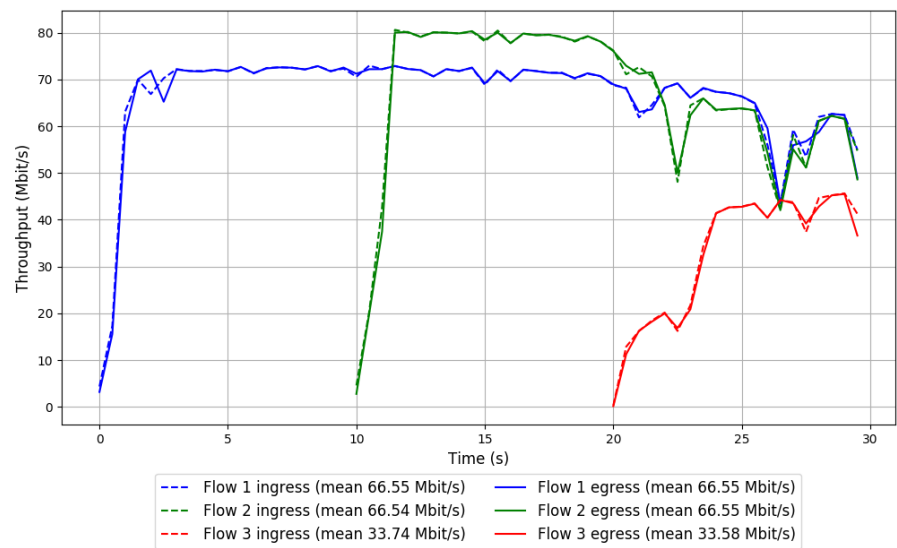
-- Flow 3:

Average throughput: 33.58 Mbit/s

95th percentile per-packet one-way delay: 50.795 ms

Loss rate: 1.44%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2017-08-12 07:26:16

End at: 2017-08-12 07:26:46

Below is generated by plot.py at 2017-08-12 11:48:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 146.59 Mbit/s

95th percentile per-packet one-way delay: 50.310 ms

Loss rate: 0.40%

-- Flow 1:

Average throughput: 90.92 Mbit/s

95th percentile per-packet one-way delay: 50.328 ms

Loss rate: 0.19%

-- Flow 2:

Average throughput: 56.37 Mbit/s

95th percentile per-packet one-way delay: 50.265 ms

Loss rate: 0.53%

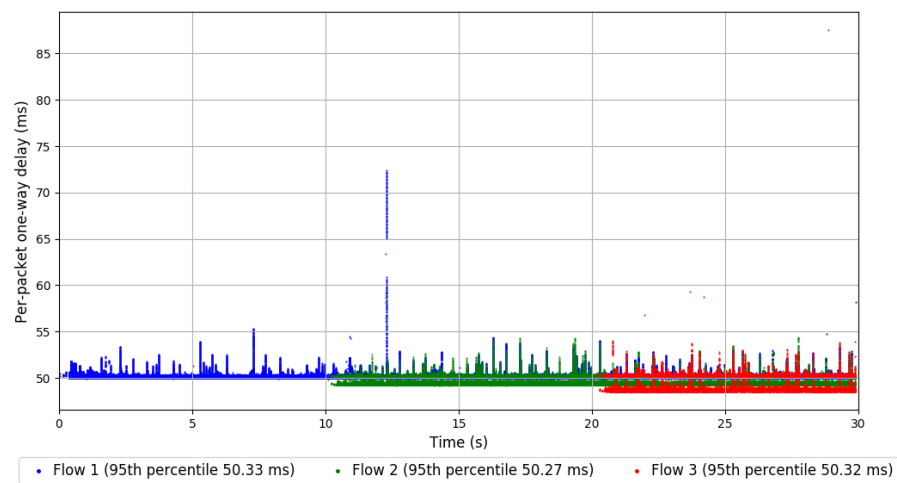
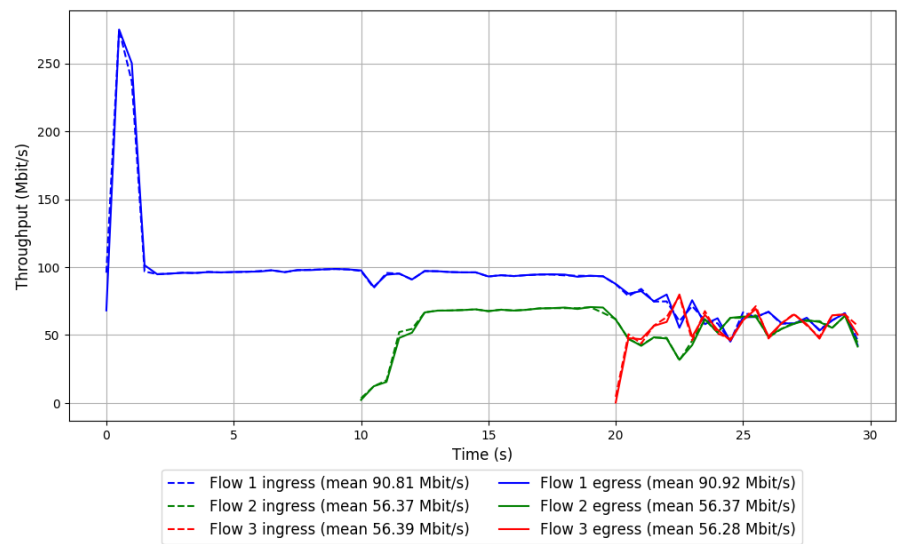
-- Flow 3:

Average throughput: 56.28 Mbit/s

95th percentile per-packet one-way delay: 50.316 ms

Loss rate: 1.19%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2017-08-12 07:38:13

End at: 2017-08-12 07:38:43

Below is generated by plot.py at 2017-08-12 11:48:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 131.62 Mbit/s

95th percentile per-packet one-way delay: 50.542 ms

Loss rate: 0.41%

-- Flow 1:

Average throughput: 80.51 Mbit/s

95th percentile per-packet one-way delay: 50.420 ms

Loss rate: 0.24%

-- Flow 2:

Average throughput: 58.06 Mbit/s

95th percentile per-packet one-way delay: 50.268 ms

Loss rate: 0.41%

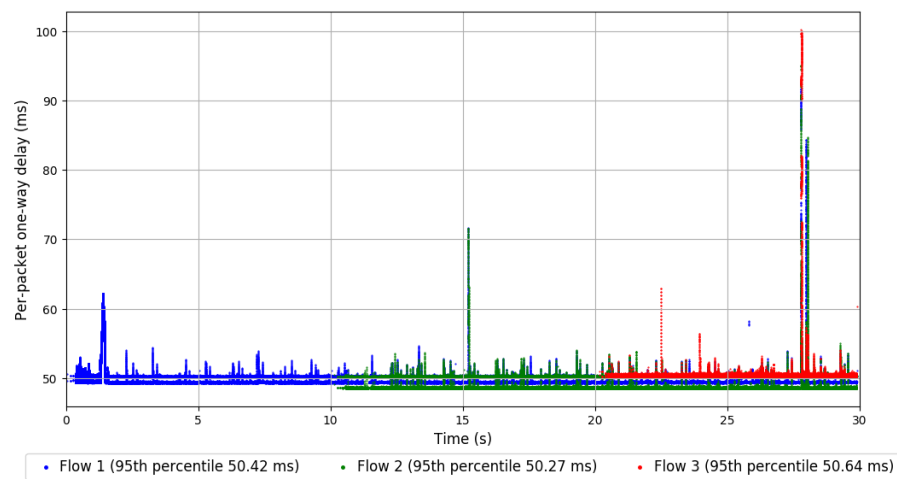
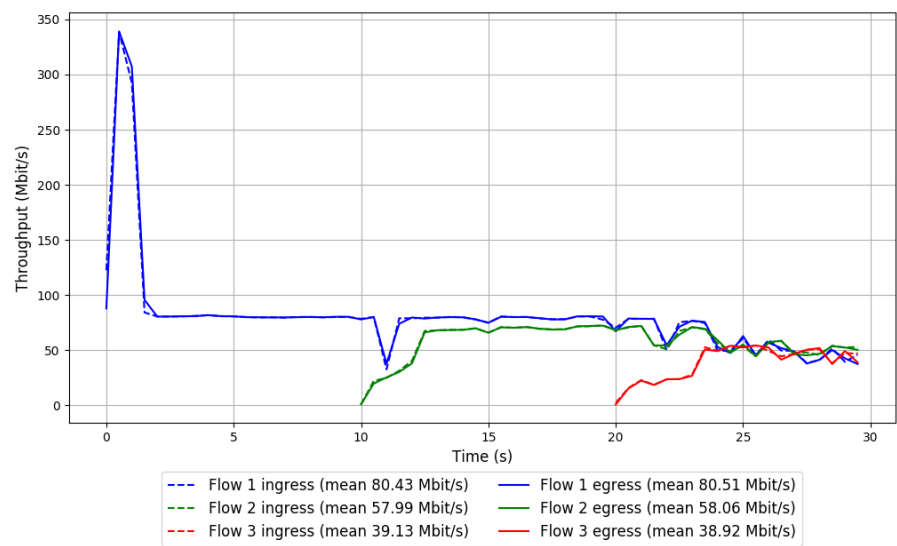
-- Flow 3:

Average throughput: 38.92 Mbit/s

95th percentile per-packet one-way delay: 50.637 ms

Loss rate: 1.46%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2017-08-12 07:50:13

End at: 2017-08-12 07:50:43

Below is generated by plot.py at 2017-08-12 11:49:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 126.66 Mbit/s

95th percentile per-packet one-way delay: 50.581 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 69.74 Mbit/s

95th percentile per-packet one-way delay: 50.494 ms

Loss rate: 0.26%

-- Flow 2:

Average throughput: 54.19 Mbit/s

95th percentile per-packet one-way delay: 50.616 ms

Loss rate: 0.58%

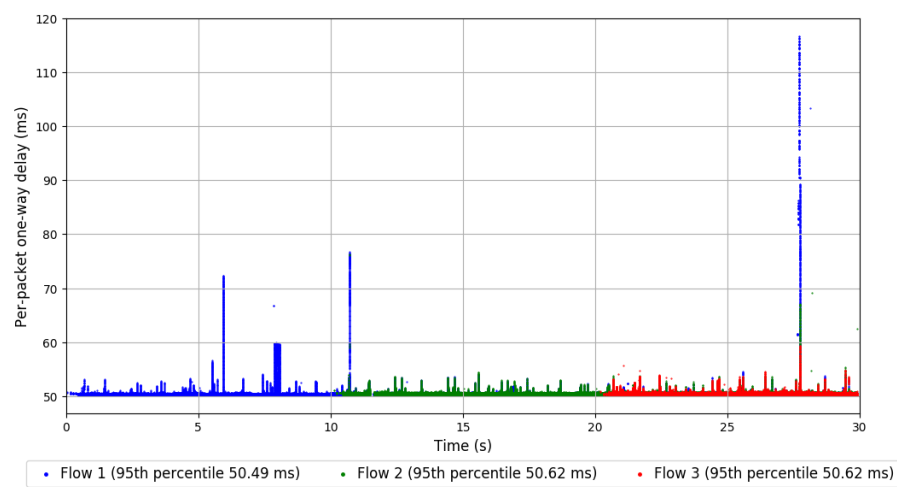
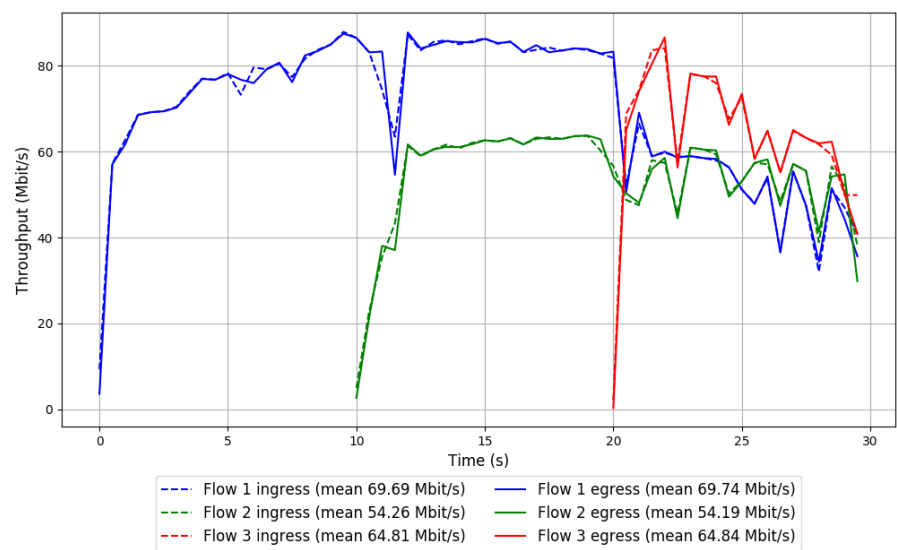
-- Flow 3:

Average throughput: 64.84 Mbit/s

95th percentile per-packet one-way delay: 50.619 ms

Loss rate: 0.95%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2017-08-12 08:02:06

End at: 2017-08-12 08:02:36

Below is generated by plot.py at 2017-08-12 11:49:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 136.10 Mbit/s

95th percentile per-packet one-way delay: 50.621 ms

Loss rate: 0.42%

-- Flow 1:

Average throughput: 82.55 Mbit/s

95th percentile per-packet one-way delay: 50.597 ms

Loss rate: 0.33%

-- Flow 2:

Average throughput: 54.60 Mbit/s

95th percentile per-packet one-way delay: 50.552 ms

Loss rate: 0.55%

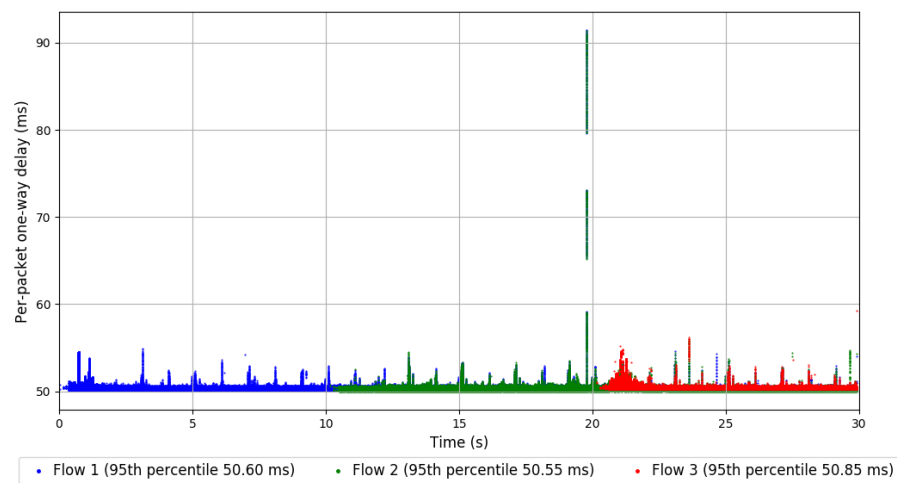
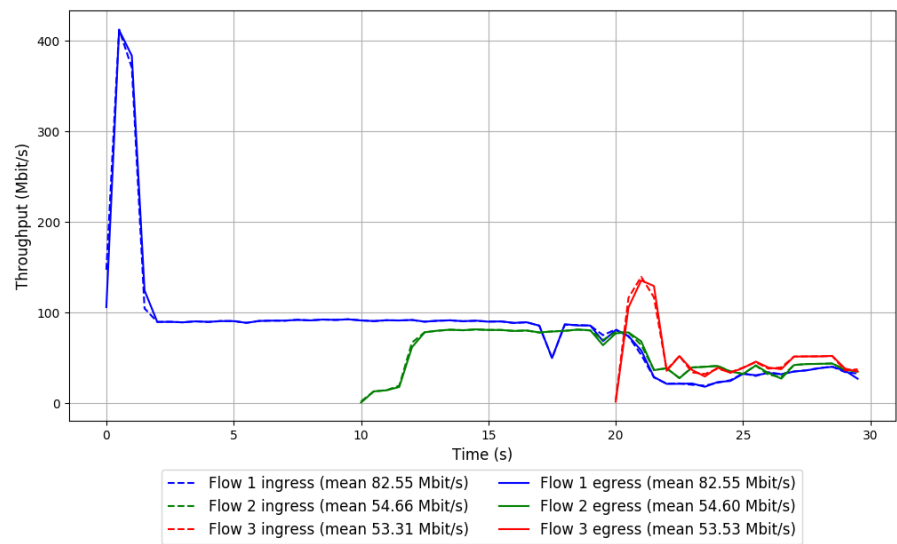
-- Flow 3:

Average throughput: 53.53 Mbit/s

95th percentile per-packet one-way delay: 50.846 ms

Loss rate: 0.54%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2017-08-12 08:13:49

End at: 2017-08-12 08:14:19

Below is generated by plot.py at 2017-08-12 11:50:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 138.34 Mbit/s

95th percentile per-packet one-way delay: 50.551 ms

Loss rate: 0.36%

-- Flow 1:

Average throughput: 73.98 Mbit/s

95th percentile per-packet one-way delay: 50.572 ms

Loss rate: 0.17%

-- Flow 2:

Average throughput: 64.43 Mbit/s

95th percentile per-packet one-way delay: 50.524 ms

Loss rate: 0.36%

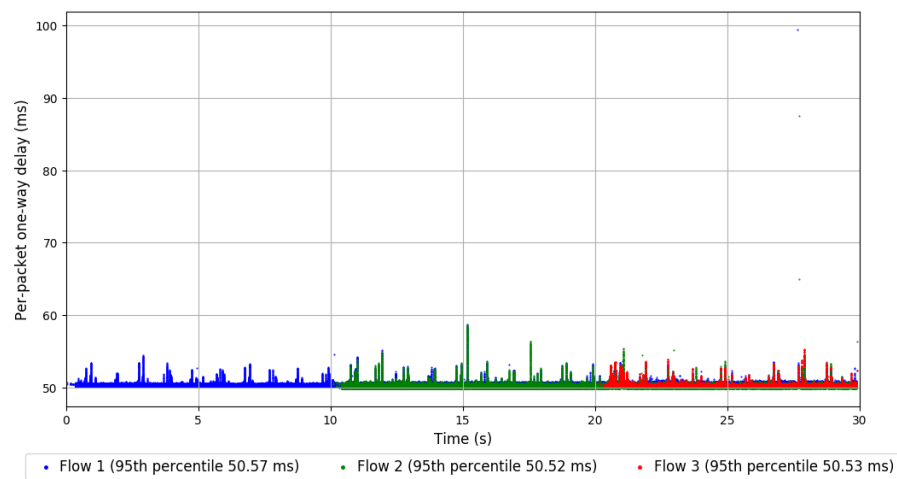
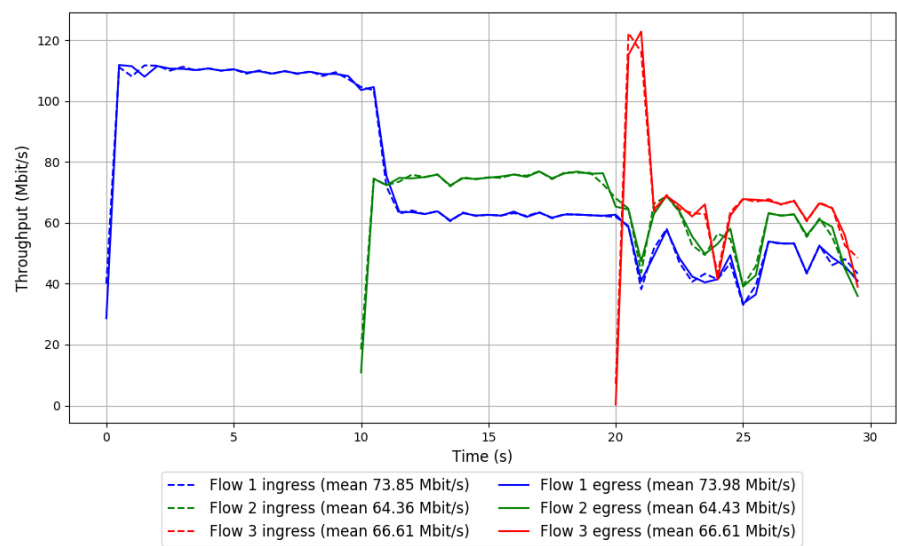
-- Flow 3:

Average throughput: 66.61 Mbit/s

95th percentile per-packet one-way delay: 50.529 ms

Loss rate: 1.00%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2017-08-12 08:25:25

End at: 2017-08-12 08:25:55

Below is generated by plot.py at 2017-08-12 11:50:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 140.19 Mbit/s

95th percentile per-packet one-way delay: 50.641 ms

Loss rate: 0.42%

-- Flow 1:

Average throughput: 76.29 Mbit/s

95th percentile per-packet one-way delay: 50.409 ms

Loss rate: 0.21%

-- Flow 2:

Average throughput: 69.84 Mbit/s

95th percentile per-packet one-way delay: 50.688 ms

Loss rate: 0.53%

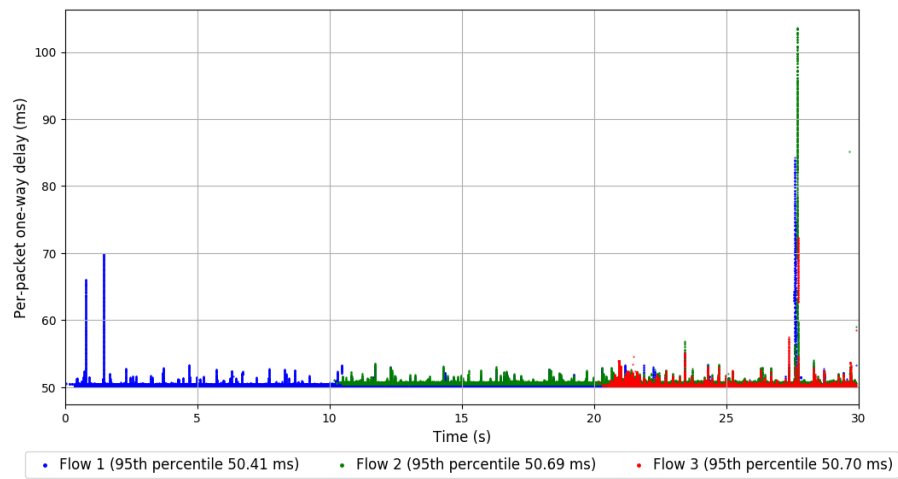
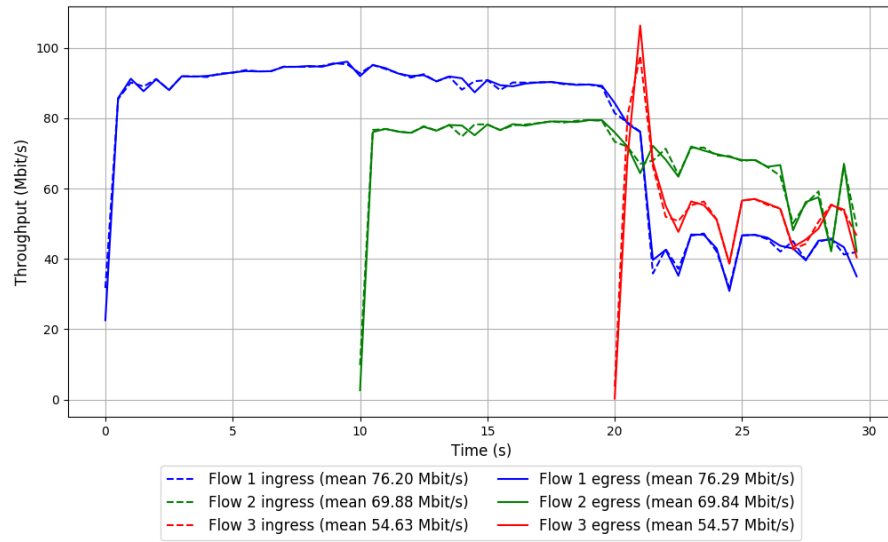
-- Flow 3:

Average throughput: 54.57 Mbit/s

95th percentile per-packet one-way delay: 50.699 ms

Loss rate: 1.07%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2017-08-12 08:37:16

End at: 2017-08-12 08:37:46

Below is generated by plot.py at 2017-08-12 11:51:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 140.56 Mbit/s

95th percentile per-packet one-way delay: 50.612 ms

Loss rate: 0.41%

-- Flow 1:

Average throughput: 87.25 Mbit/s

95th percentile per-packet one-way delay: 50.643 ms

Loss rate: 0.22%

-- Flow 2:

Average throughput: 62.32 Mbit/s

95th percentile per-packet one-way delay: 50.377 ms

Loss rate: 0.51%

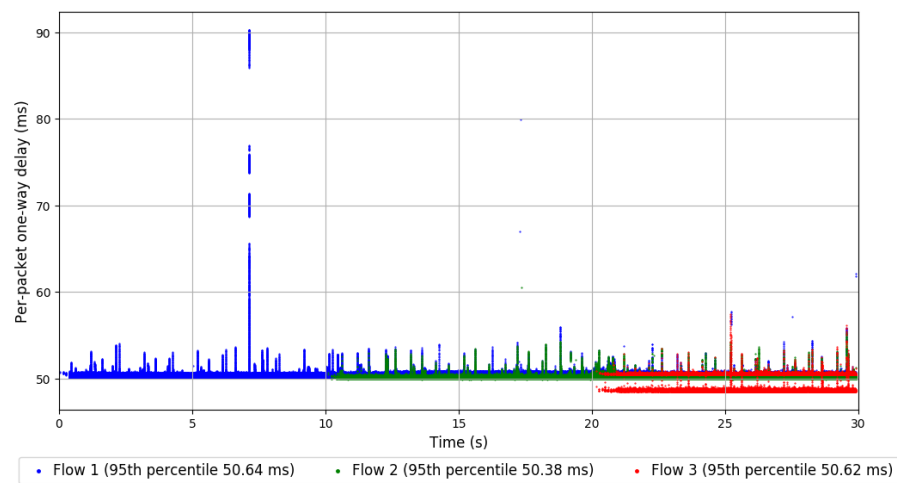
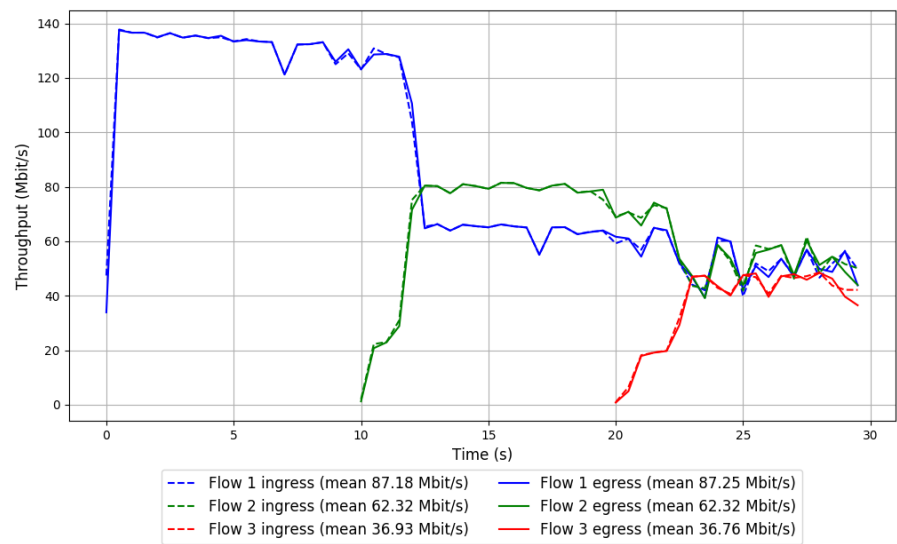
-- Flow 3:

Average throughput: 36.76 Mbit/s

95th percentile per-packet one-way delay: 50.620 ms

Loss rate: 1.45%

Run 10: Report of Copa — Data Link

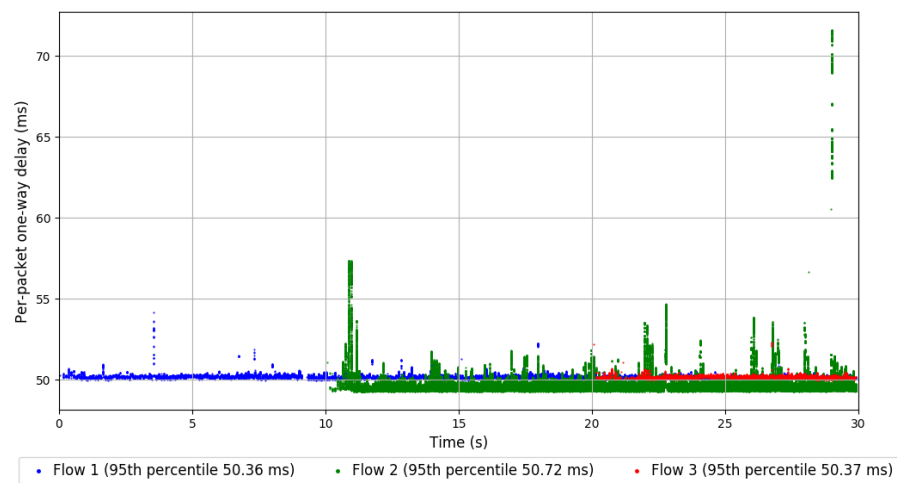
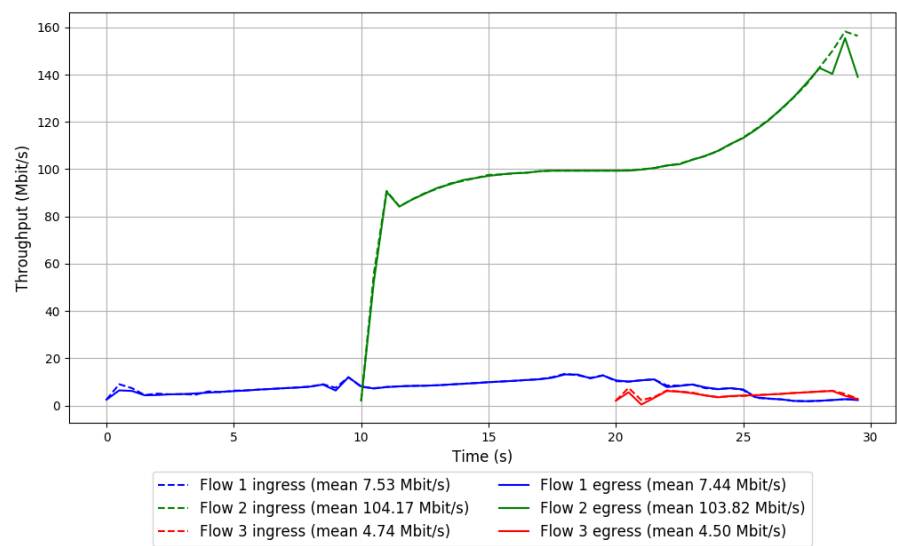


```
Run 1: Statistics of TCP Cubic

Start at: 2017-08-12 06:59:20
End at: 2017-08-12 06:59:50

# Below is generated by plot.py at 2017-08-12 11:51:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.96 Mbit/s
95th percentile per-packet one-way delay: 50.628 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 7.44 Mbit/s
95th percentile per-packet one-way delay: 50.360 ms
Loss rate: 1.48%
-- Flow 2:
Average throughput: 103.82 Mbit/s
95th percentile per-packet one-way delay: 50.724 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 4.50 Mbit/s
95th percentile per-packet one-way delay: 50.369 ms
Loss rate: 6.06%
```

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2017-08-12 07:10:41

End at: 2017-08-12 07:11:11

Below is generated by plot.py at 2017-08-12 11:51:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 58.72 Mbit/s

95th percentile per-packet one-way delay: 50.601 ms

Loss rate: 0.92%

-- Flow 1:

Average throughput: 5.09 Mbit/s

95th percentile per-packet one-way delay: 50.468 ms

Loss rate: 1.92%

-- Flow 2:

Average throughput: 78.67 Mbit/s

95th percentile per-packet one-way delay: 50.660 ms

Loss rate: 0.71%

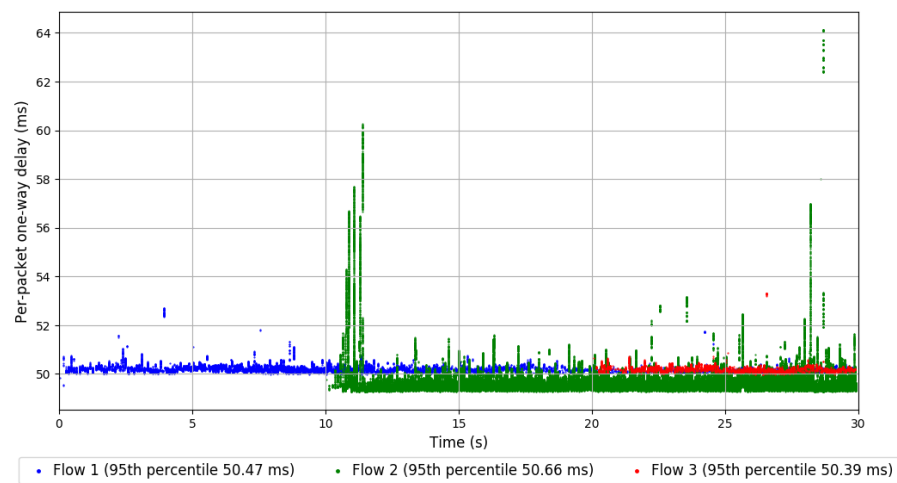
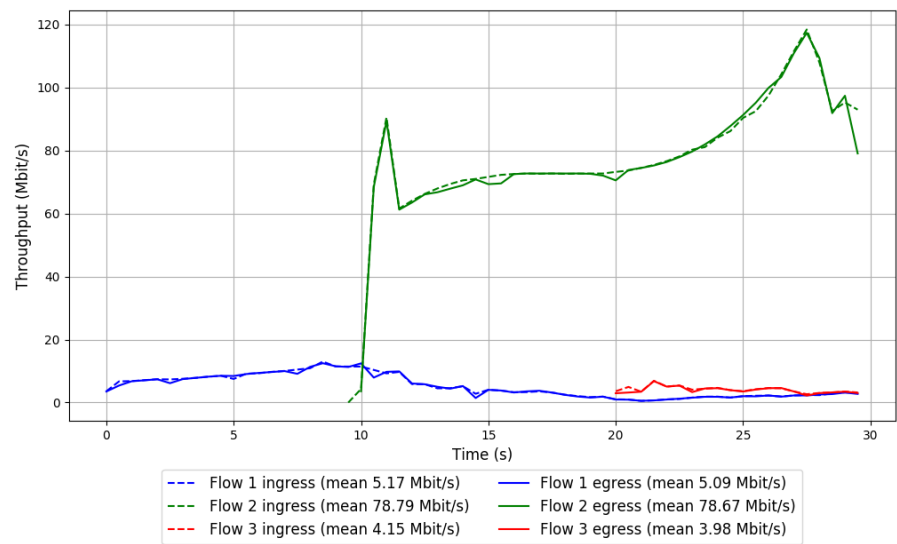
-- Flow 3:

Average throughput: 3.98 Mbit/s

95th percentile per-packet one-way delay: 50.386 ms

Loss rate: 5.12%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2017-08-12 07:22:15

End at: 2017-08-12 07:22:45

Below is generated by plot.py at 2017-08-12 11:51:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 48.00 Mbit/s

95th percentile per-packet one-way delay: 50.979 ms

Loss rate: 1.41%

-- Flow 1:

Average throughput: 22.30 Mbit/s

95th percentile per-packet one-way delay: 50.939 ms

Loss rate: 1.35%

-- Flow 2:

Average throughput: 22.87 Mbit/s

95th percentile per-packet one-way delay: 50.912 ms

Loss rate: 1.66%

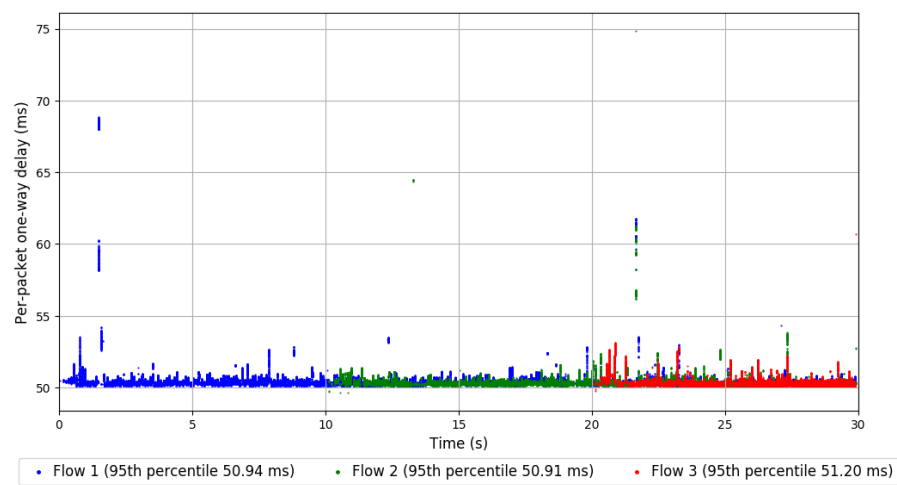
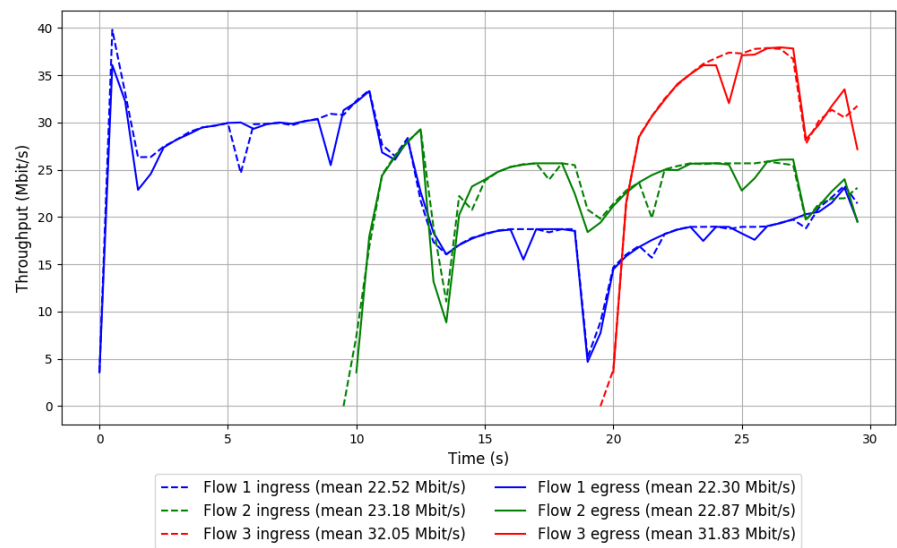
-- Flow 3:

Average throughput: 31.83 Mbit/s

95th percentile per-packet one-way delay: 51.204 ms

Loss rate: 1.16%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2017-08-12 07:34:10

End at: 2017-08-12 07:34:40

Below is generated by plot.py at 2017-08-12 11:51:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 95.77 Mbit/s

95th percentile per-packet one-way delay: 52.003 ms

Loss rate: 0.79%

-- Flow 1:

Average throughput: 70.43 Mbit/s

95th percentile per-packet one-way delay: 51.992 ms

Loss rate: 0.29%

-- Flow 2:

Average throughput: 16.53 Mbit/s

95th percentile per-packet one-way delay: 51.689 ms

Loss rate: 3.90%

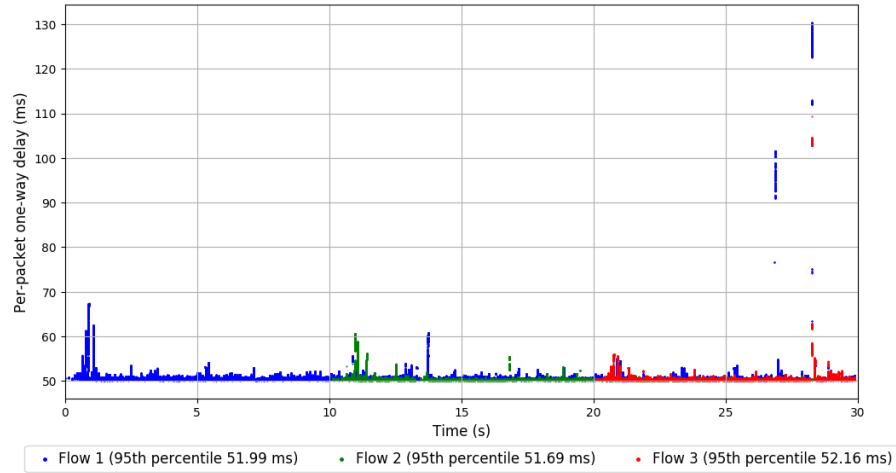
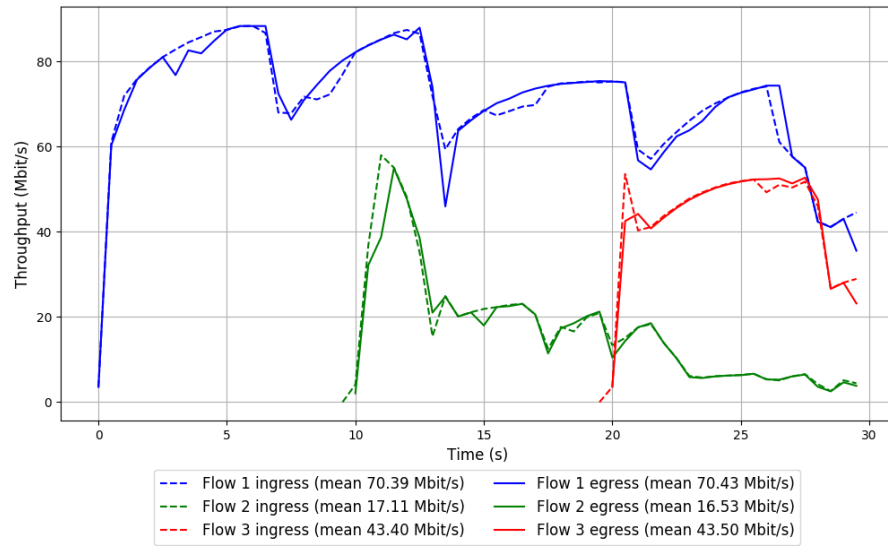
-- Flow 3:

Average throughput: 43.50 Mbit/s

95th percentile per-packet one-way delay: 52.156 ms

Loss rate: 0.80%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2017-08-12 07:46:07

End at: 2017-08-12 07:46:37

Below is generated by plot.py at 2017-08-12 11:51:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 148.48 Mbit/s

95th percentile per-packet one-way delay: 52.080 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 69.65 Mbit/s

95th percentile per-packet one-way delay: 51.660 ms

Loss rate: 0.29%

-- Flow 2:

Average throughput: 76.30 Mbit/s

95th percentile per-packet one-way delay: 52.228 ms

Loss rate: 0.43%

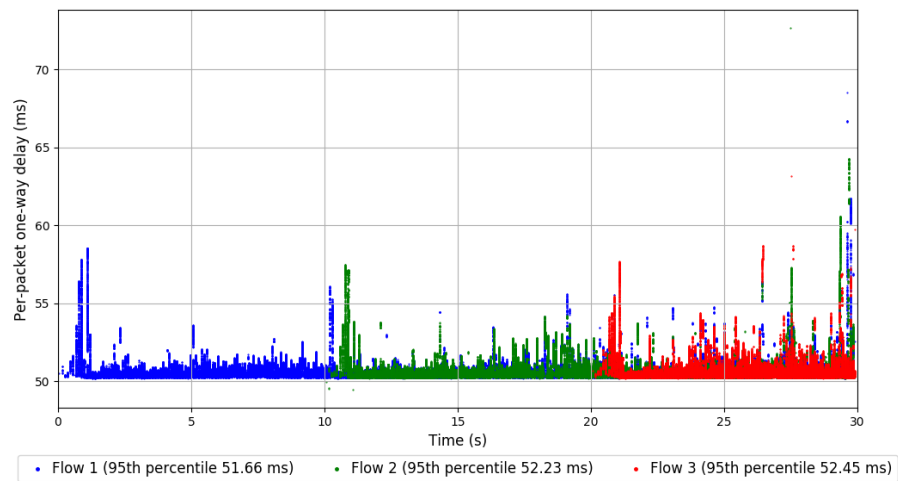
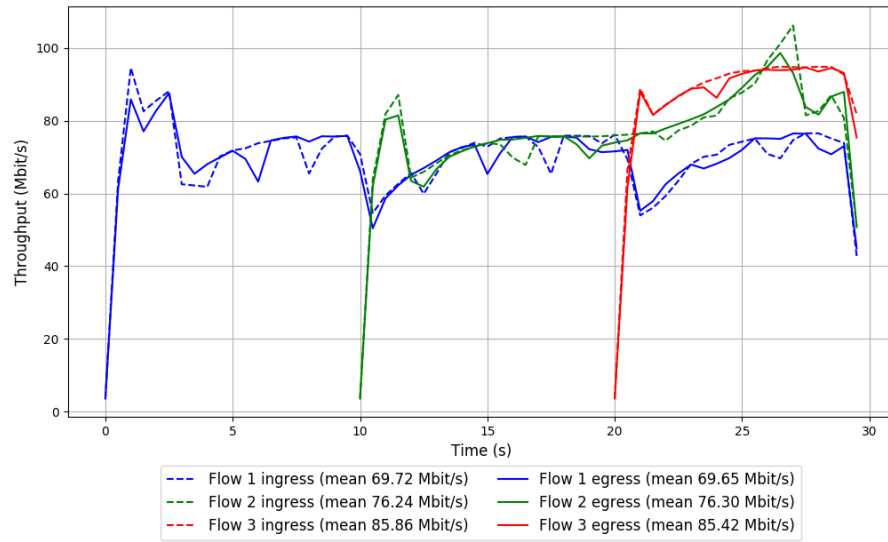
-- Flow 3:

Average throughput: 85.42 Mbit/s

95th percentile per-packet one-way delay: 52.450 ms

Loss rate: 1.43%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2017-08-12 07:58:12

End at: 2017-08-12 07:58:42

Below is generated by plot.py at 2017-08-12 11:51:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.53 Mbit/s

95th percentile per-packet one-way delay: 51.887 ms

Loss rate: 0.78%

-- Flow 1:

Average throughput: 29.17 Mbit/s

95th percentile per-packet one-way delay: 51.319 ms

Loss rate: 0.66%

-- Flow 2:

Average throughput: 58.11 Mbit/s

95th percentile per-packet one-way delay: 51.796 ms

Loss rate: 0.48%

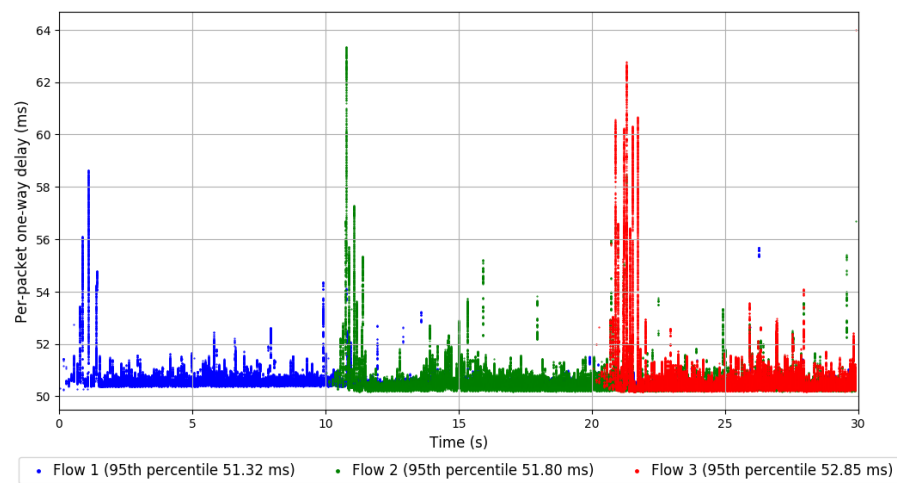
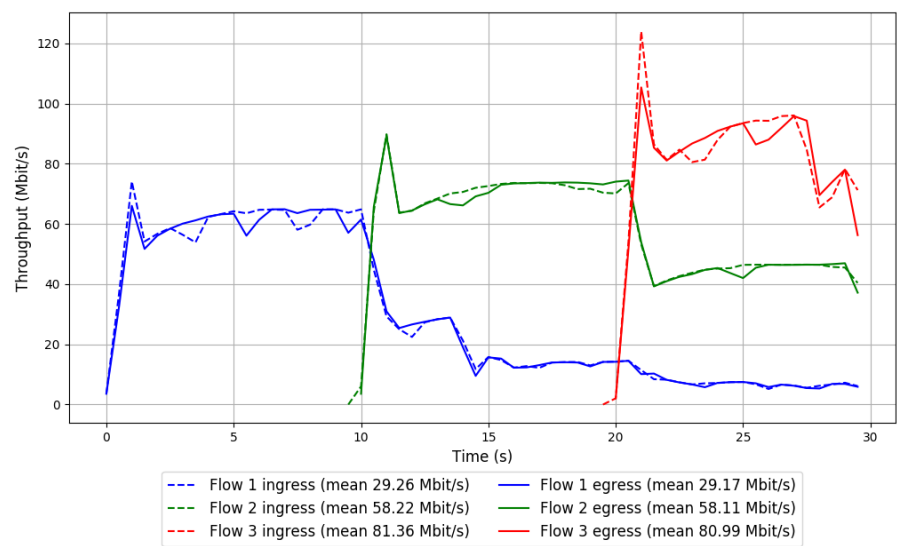
-- Flow 3:

Average throughput: 80.99 Mbit/s

95th percentile per-packet one-way delay: 52.846 ms

Loss rate: 1.33%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2017-08-12 08:09:58

End at: 2017-08-12 08:10:28

Below is generated by plot.py at 2017-08-12 11:51:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 118.05 Mbit/s

95th percentile per-packet one-way delay: 52.061 ms

Loss rate: 0.74%

-- Flow 1:

Average throughput: 81.37 Mbit/s

95th percentile per-packet one-way delay: 51.813 ms

Loss rate: 0.33%

-- Flow 2:

Average throughput: 12.94 Mbit/s

95th percentile per-packet one-way delay: 50.968 ms

Loss rate: 2.30%

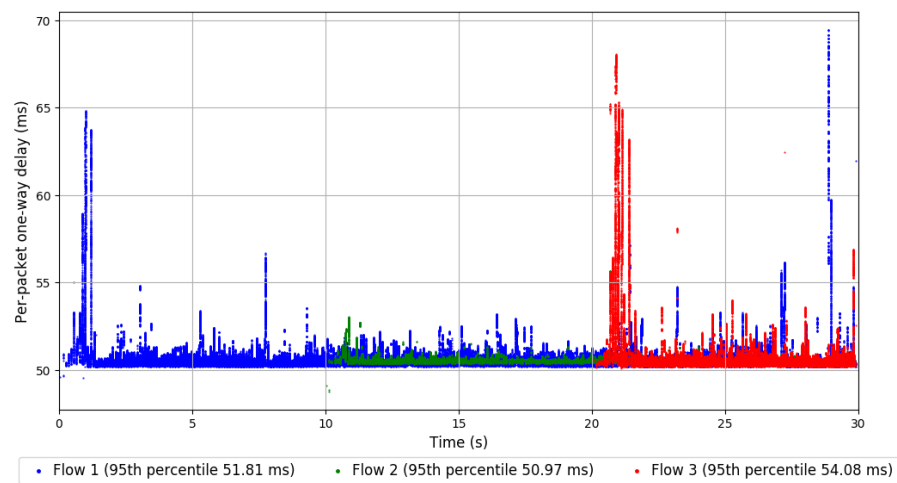
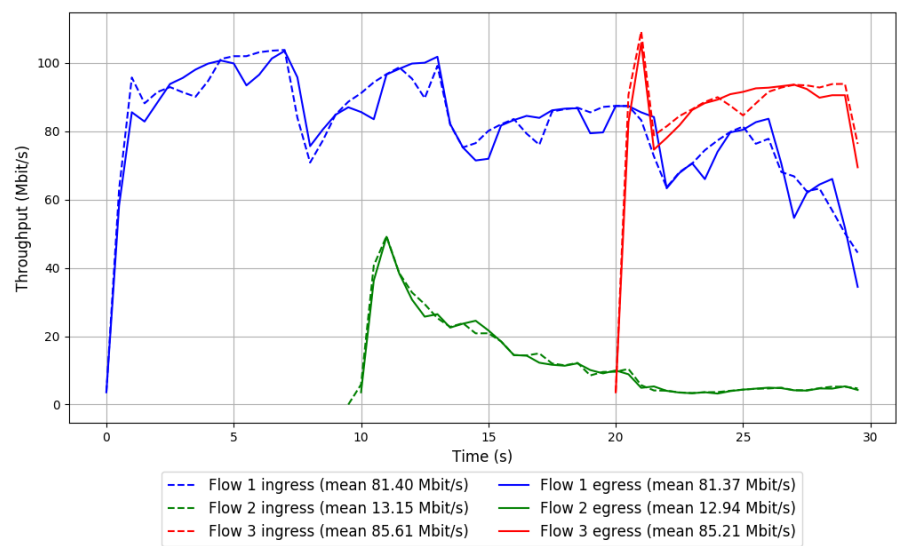
-- Flow 3:

Average throughput: 85.21 Mbit/s

95th percentile per-packet one-way delay: 54.075 ms

Loss rate: 1.42%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2017-08-12 08:21:33

End at: 2017-08-12 08:22:03

Below is generated by plot.py at 2017-08-12 11:51:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 61.33 Mbit/s

95th percentile per-packet one-way delay: 53.203 ms

Loss rate: 2.02%

-- Flow 1:

Average throughput: 12.64 Mbit/s

95th percentile per-packet one-way delay: 51.300 ms

Loss rate: 2.11%

-- Flow 2:

Average throughput: 17.54 Mbit/s

95th percentile per-packet one-way delay: 51.536 ms

Loss rate: 1.81%

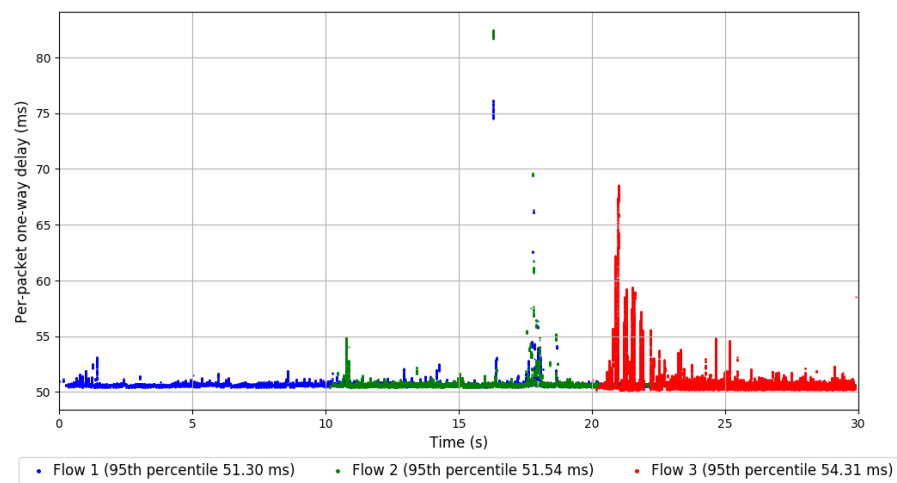
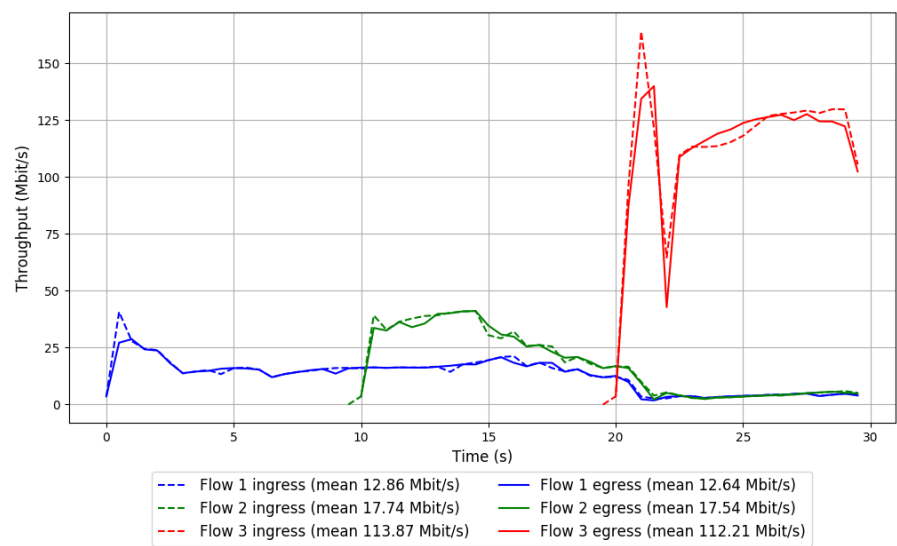
-- Flow 3:

Average throughput: 112.21 Mbit/s

95th percentile per-packet one-way delay: 54.314 ms

Loss rate: 2.06%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2017-08-12 08:33:24

End at: 2017-08-12 08:33:54

Below is generated by plot.py at 2017-08-12 11:52:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 148.58 Mbit/s

95th percentile per-packet one-way delay: 52.108 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 74.63 Mbit/s

95th percentile per-packet one-way delay: 52.212 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 66.62 Mbit/s

95th percentile per-packet one-way delay: 52.099 ms

Loss rate: 0.52%

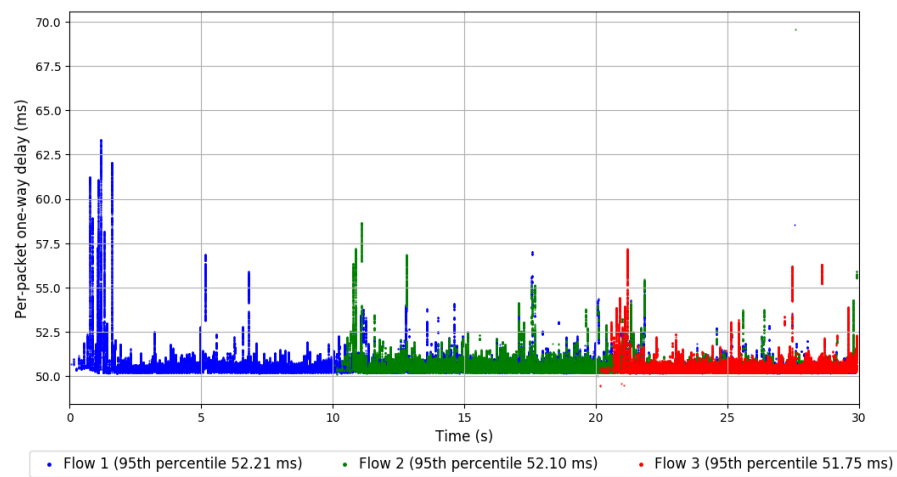
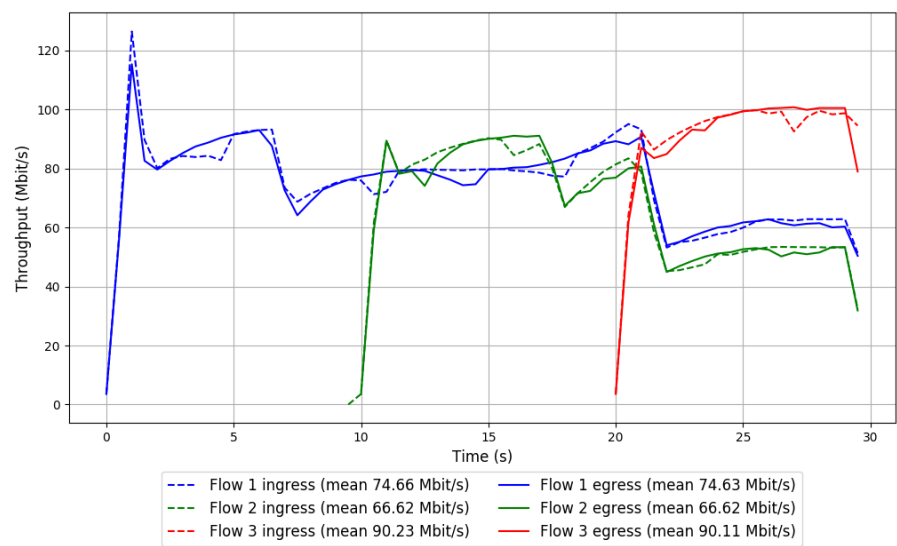
-- Flow 3:

Average throughput: 90.11 Mbit/s

95th percentile per-packet one-way delay: 51.752 ms

Loss rate: 1.12%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2017-08-12 08:45:09

End at: 2017-08-12 08:45:39

Below is generated by plot.py at 2017-08-12 11:52:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 88.21 Mbit/s

95th percentile per-packet one-way delay: 50.824 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 5.35 Mbit/s

95th percentile per-packet one-way delay: 50.908 ms

Loss rate: 2.90%

-- Flow 2:

Average throughput: 83.51 Mbit/s

95th percentile per-packet one-way delay: 50.454 ms

Loss rate: 0.60%

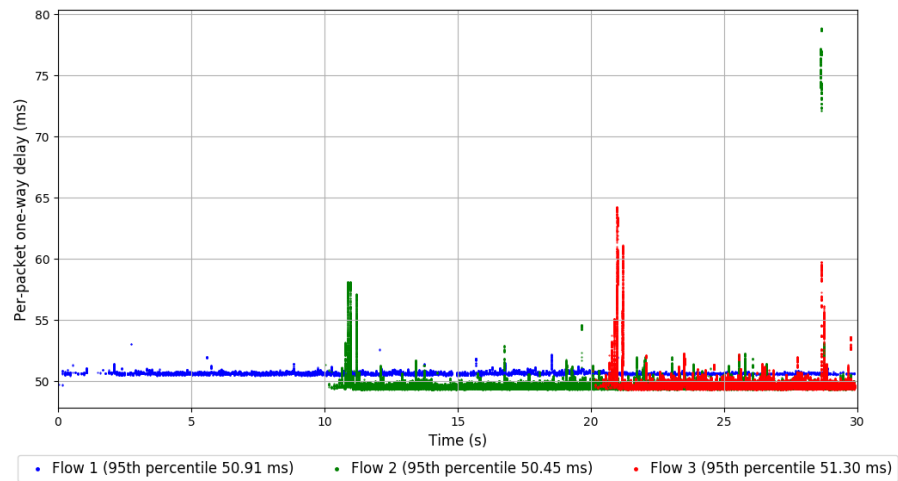
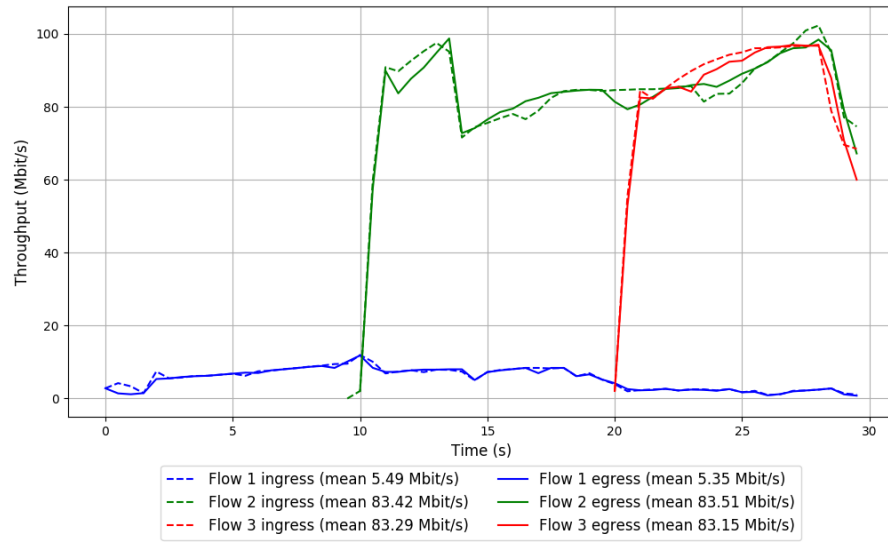
-- Flow 3:

Average throughput: 83.15 Mbit/s

95th percentile per-packet one-way delay: 51.296 ms

Loss rate: 1.26%

Run 10: Report of TCP Cubic — Data Link

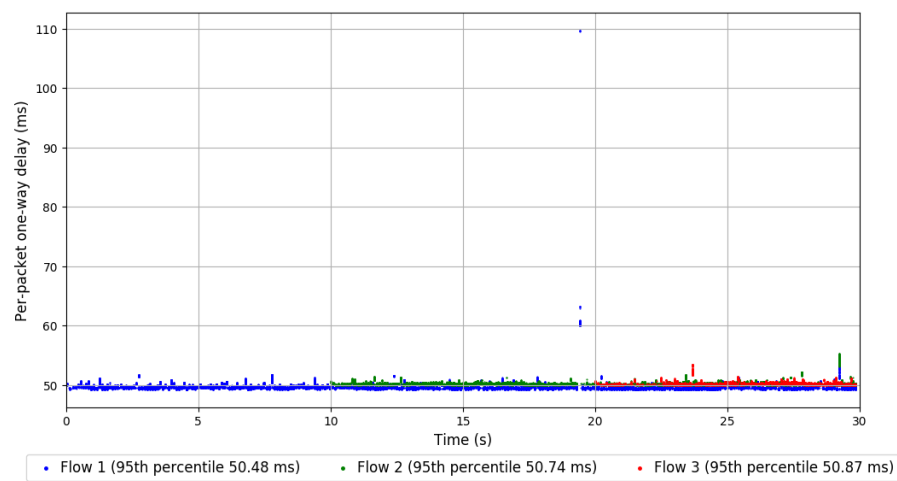
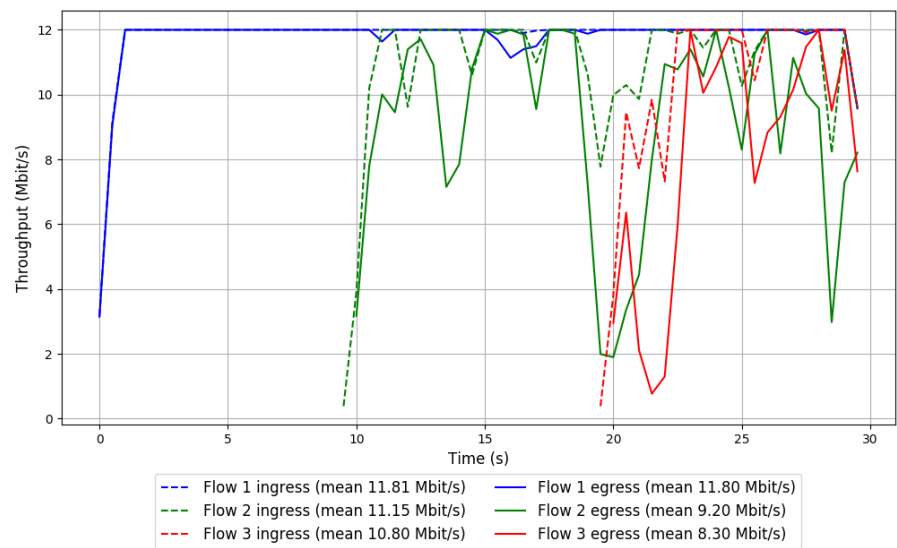


```
Run 1: Statistics of KohoCC

Start at: 2017-08-12 07:00:04
End at: 2017-08-12 07:00:34

# Below is generated by plot.py at 2017-08-12 11:52:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.66 Mbit/s
95th percentile per-packet one-way delay: 50.646 ms
Loss rate: 9.81%
-- Flow 1:
Average throughput: 11.80 Mbit/s
95th percentile per-packet one-way delay: 50.475 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 9.20 Mbit/s
95th percentile per-packet one-way delay: 50.739 ms
Loss rate: 17.93%
-- Flow 3:
Average throughput: 8.30 Mbit/s
95th percentile per-packet one-way delay: 50.865 ms
Loss rate: 23.89%
```

Run 1: Report of KohoCC — Data Link

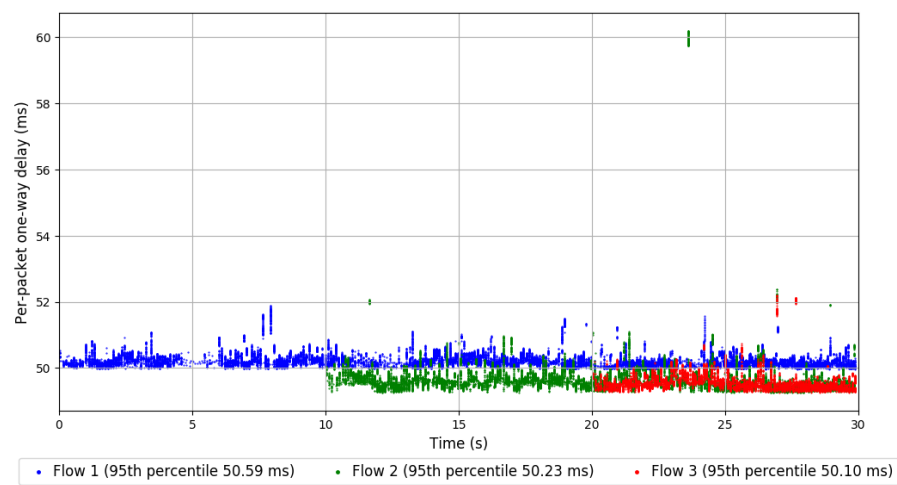
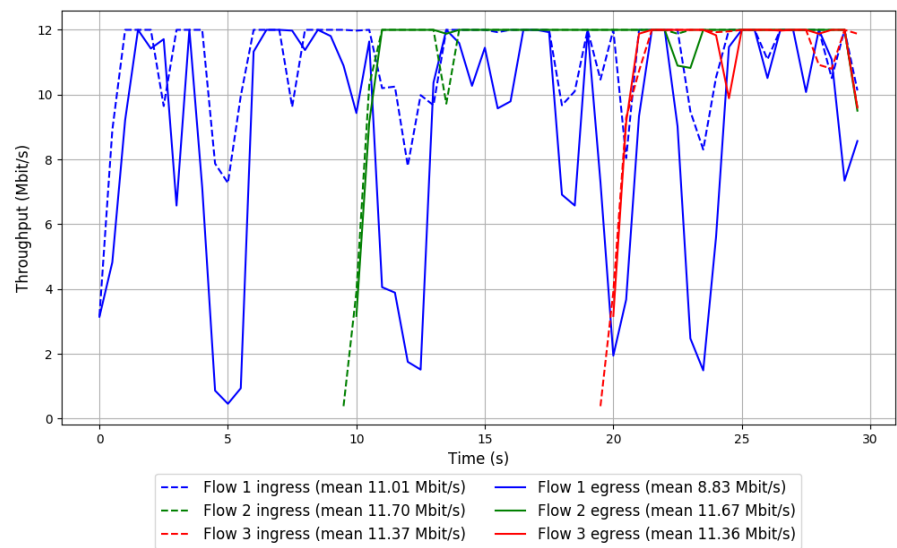


```
Run 2: Statistics of KohoCC

Start at: 2017-08-12 07:11:24
End at: 2017-08-12 07:11:54

# Below is generated by plot.py at 2017-08-12 11:52:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.33 Mbit/s
95th percentile per-packet one-way delay: 50.499 ms
Loss rate: 10.15%
-- Flow 1:
Average throughput: 8.83 Mbit/s
95th percentile per-packet one-way delay: 50.591 ms
Loss rate: 20.08%
-- Flow 2:
Average throughput: 11.67 Mbit/s
95th percentile per-packet one-way delay: 50.229 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 11.36 Mbit/s
95th percentile per-packet one-way delay: 50.103 ms
Loss rate: 1.07%
```

Run 2: Report of KohoCC — Data Link



Run 3: Statistics of KohoCC

Start at: 2017-08-12 07:22:57

End at: 2017-08-12 07:23:27

Below is generated by plot.py at 2017-08-12 11:52:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 22.80 Mbit/s

95th percentile per-packet one-way delay: 51.019 ms

Loss rate: 0.78%

-- Flow 1:

Average throughput: 11.47 Mbit/s

95th percentile per-packet one-way delay: 50.945 ms

Loss rate: 0.66%

-- Flow 2:

Average throughput: 11.44 Mbit/s

95th percentile per-packet one-way delay: 51.035 ms

Loss rate: 0.65%

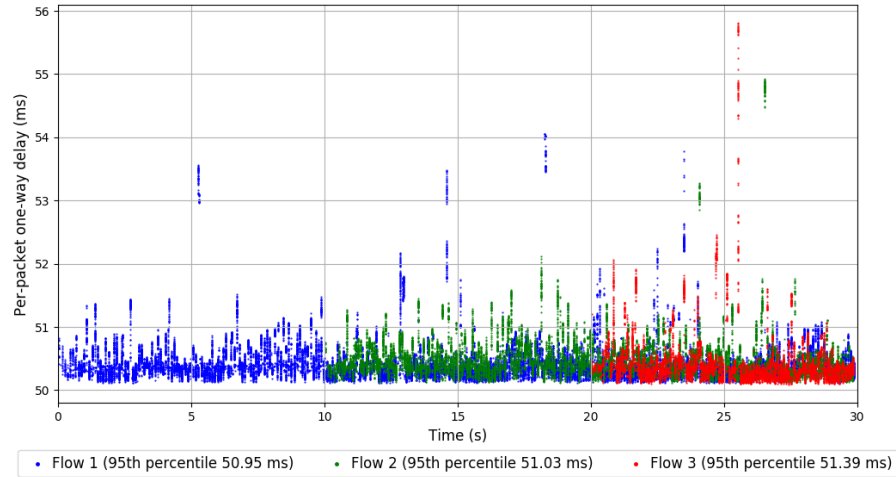
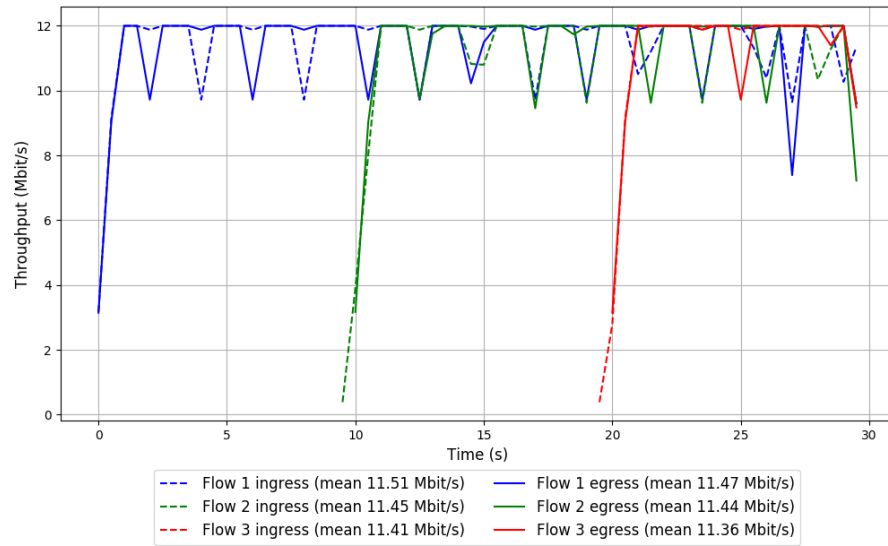
-- Flow 3:

Average throughput: 11.36 Mbit/s

95th percentile per-packet one-way delay: 51.392 ms

Loss rate: 1.38%

Run 3: Report of KohoCC — Data Link



Run 4: Statistics of KohoCC

Start at: 2017-08-12 07:34:55

End at: 2017-08-12 07:35:25

Below is generated by plot.py at 2017-08-12 11:52:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 22.86 Mbit/s

95th percentile per-packet one-way delay: 51.014 ms

Loss rate: 0.91%

-- Flow 1:

Average throughput: 11.59 Mbit/s

95th percentile per-packet one-way delay: 51.075 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 11.42 Mbit/s

95th percentile per-packet one-way delay: 51.051 ms

Loss rate: 1.61%

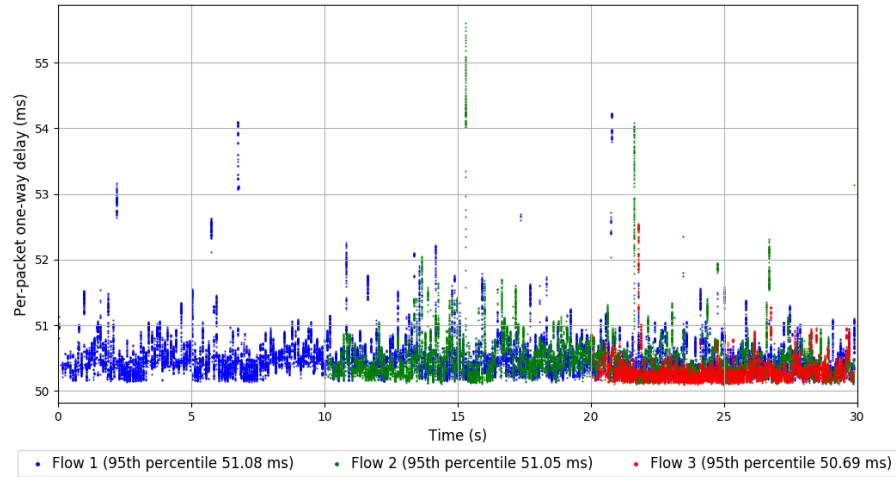
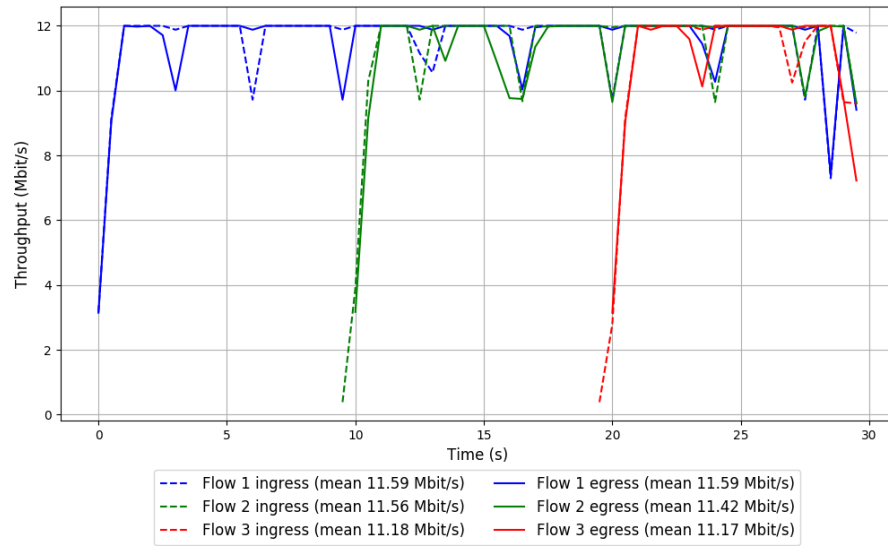
-- Flow 3:

Average throughput: 11.17 Mbit/s

95th percentile per-packet one-way delay: 50.693 ms

Loss rate: 1.15%

Run 4: Report of KohoCC — Data Link



Run 5: Statistics of KohoCC

Start at: 2017-08-12 07:46:55

End at: 2017-08-12 07:47:25

Below is generated by plot.py at 2017-08-12 11:52:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 22.96 Mbit/s

95th percentile per-packet one-way delay: 51.098 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 11.63 Mbit/s

95th percentile per-packet one-way delay: 51.140 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 11.47 Mbit/s

95th percentile per-packet one-way delay: 51.056 ms

Loss rate: 2.36%

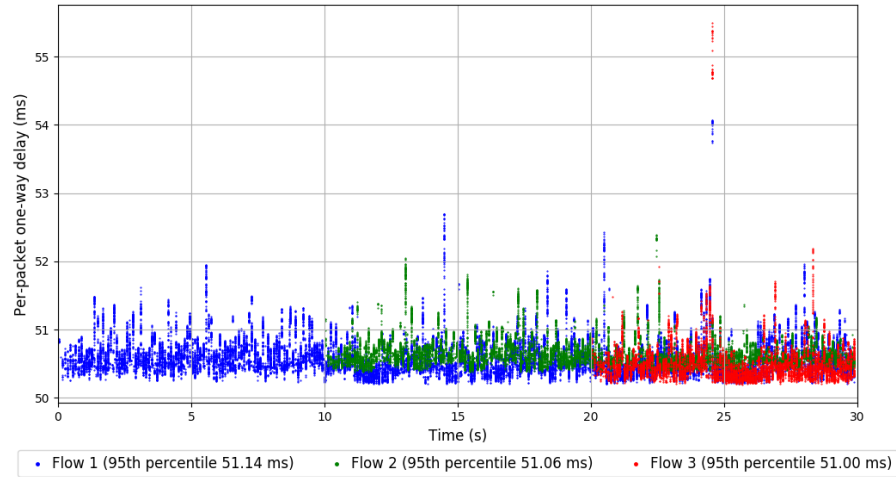
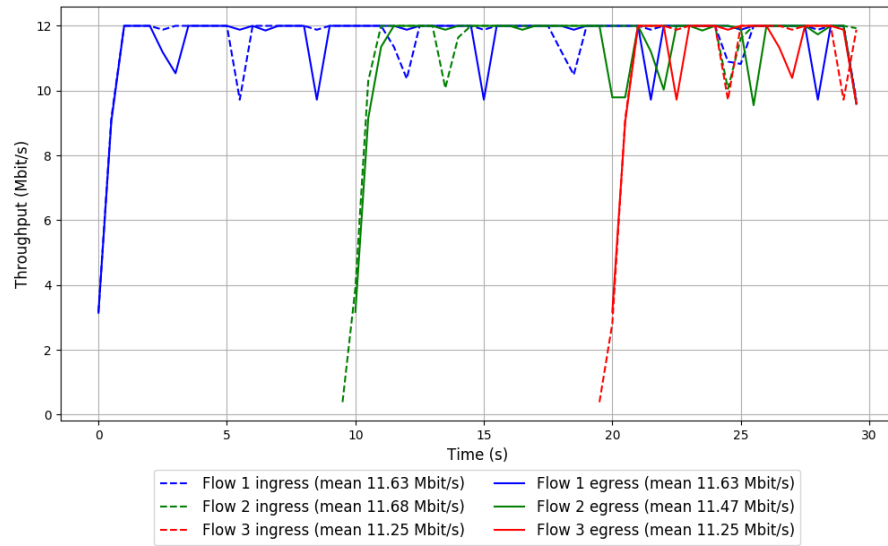
-- Flow 3:

Average throughput: 11.25 Mbit/s

95th percentile per-packet one-way delay: 50.997 ms

Loss rate: 1.07%

Run 5: Report of KohoCC — Data Link



Run 6: Statistics of KohoCC

Start at: 2017-08-12 07:58:56

End at: 2017-08-12 07:59:26

Below is generated by plot.py at 2017-08-12 11:52:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 23.01 Mbit/s

95th percentile per-packet one-way delay: 51.136 ms

Loss rate: 0.49%

-- Flow 1:

Average throughput: 11.70 Mbit/s

95th percentile per-packet one-way delay: 51.151 ms

Loss rate: 0.34%

-- Flow 2:

Average throughput: 11.49 Mbit/s

95th percentile per-packet one-way delay: 51.037 ms

Loss rate: 0.52%

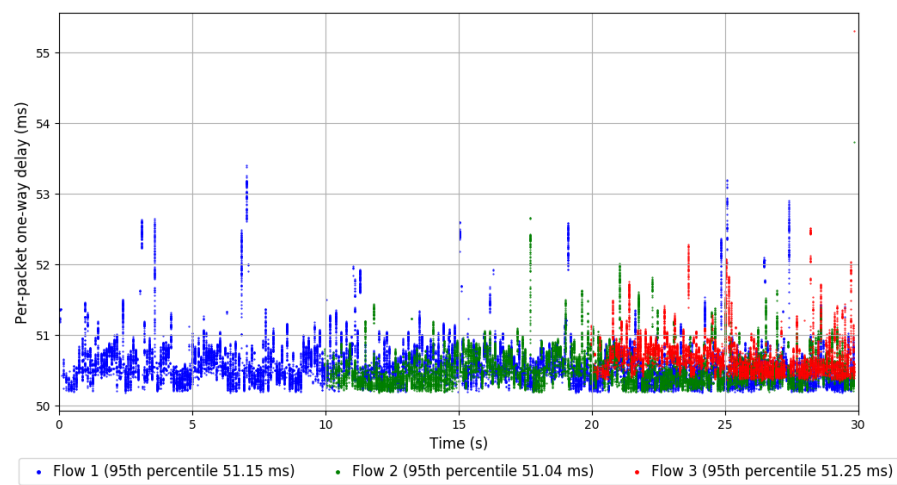
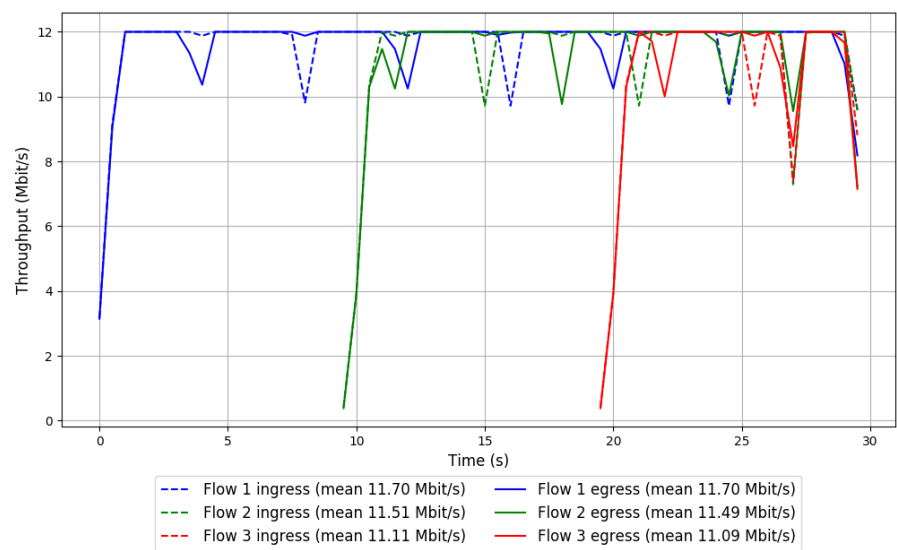
-- Flow 3:

Average throughput: 11.09 Mbit/s

95th percentile per-packet one-way delay: 51.247 ms

Loss rate: 0.91%

Run 6: Report of KohoCC — Data Link



Run 7: Statistics of KohoCC

Start at: 2017-08-12 08:10:45

End at: 2017-08-12 08:11:15

Below is generated by plot.py at 2017-08-12 11:52:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 23.02 Mbit/s

95th percentile per-packet one-way delay: 51.052 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 11.49 Mbit/s

95th percentile per-packet one-way delay: 51.080 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 11.77 Mbit/s

95th percentile per-packet one-way delay: 51.066 ms

Loss rate: 0.68%

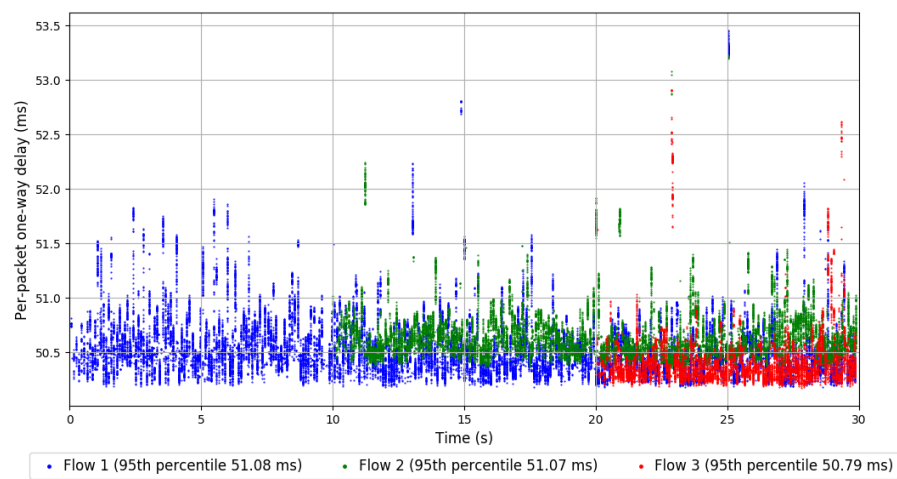
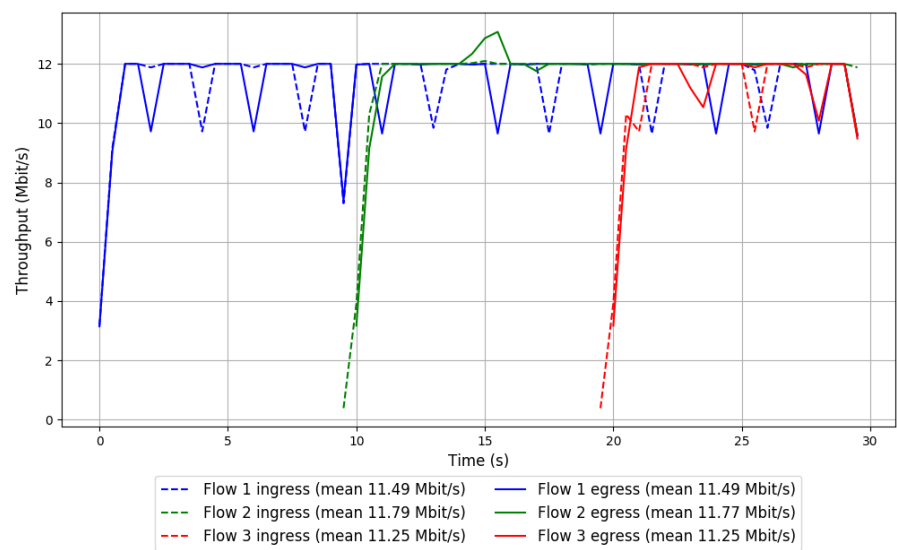
-- Flow 3:

Average throughput: 11.25 Mbit/s

95th percentile per-packet one-way delay: 50.791 ms

Loss rate: 1.07%

Run 7: Report of KohoCC — Data Link



Run 8: Statistics of KohoCC

Start at: 2017-08-12 08:22:16

End at: 2017-08-12 08:22:46

Below is generated by plot.py at 2017-08-12 11:52:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 22.88 Mbit/s

95th percentile per-packet one-way delay: 51.120 ms

Loss rate: 0.66%

-- Flow 1:

Average throughput: 11.51 Mbit/s

95th percentile per-packet one-way delay: 50.905 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 11.49 Mbit/s

95th percentile per-packet one-way delay: 51.202 ms

Loss rate: 0.63%

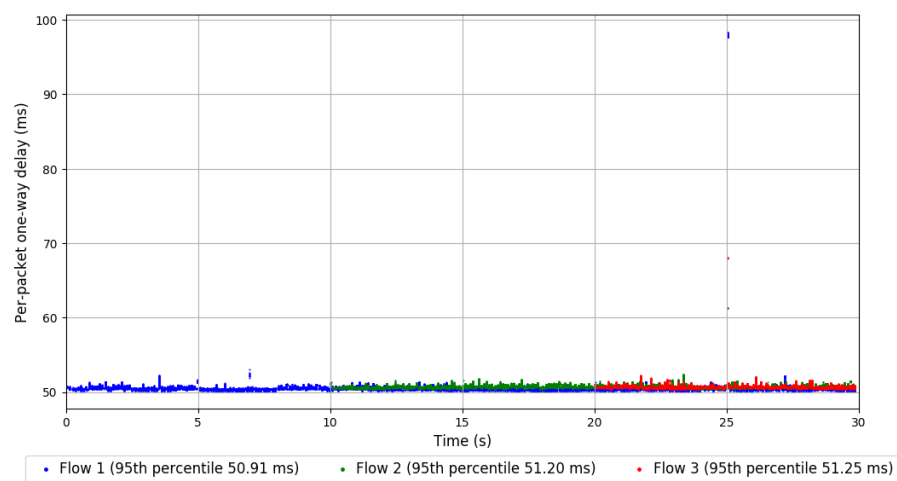
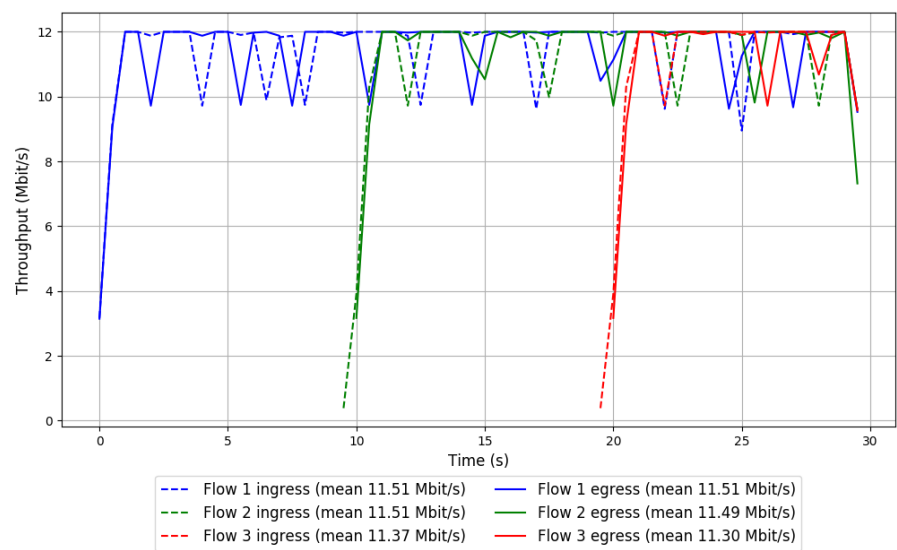
-- Flow 3:

Average throughput: 11.30 Mbit/s

95th percentile per-packet one-way delay: 51.252 ms

Loss rate: 1.68%

Run 8: Report of KohoCC — Data Link



Run 9: Statistics of KohoCC

Start at: 2017-08-12 08:34:13

End at: 2017-08-12 08:34:43

Below is generated by plot.py at 2017-08-12 11:52:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 23.06 Mbit/s

95th percentile per-packet one-way delay: 51.096 ms

Loss rate: 0.55%

-- Flow 1:

Average throughput: 11.60 Mbit/s

95th percentile per-packet one-way delay: 51.143 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 11.66 Mbit/s

95th percentile per-packet one-way delay: 51.028 ms

Loss rate: 0.55%

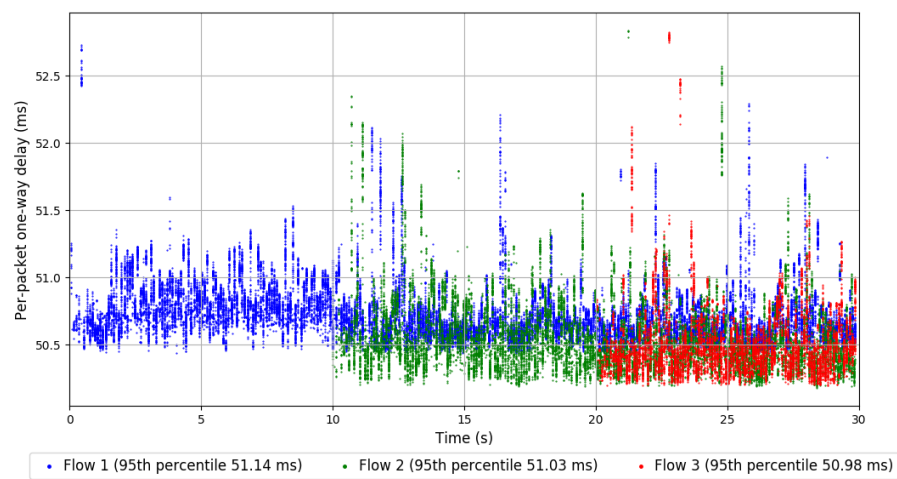
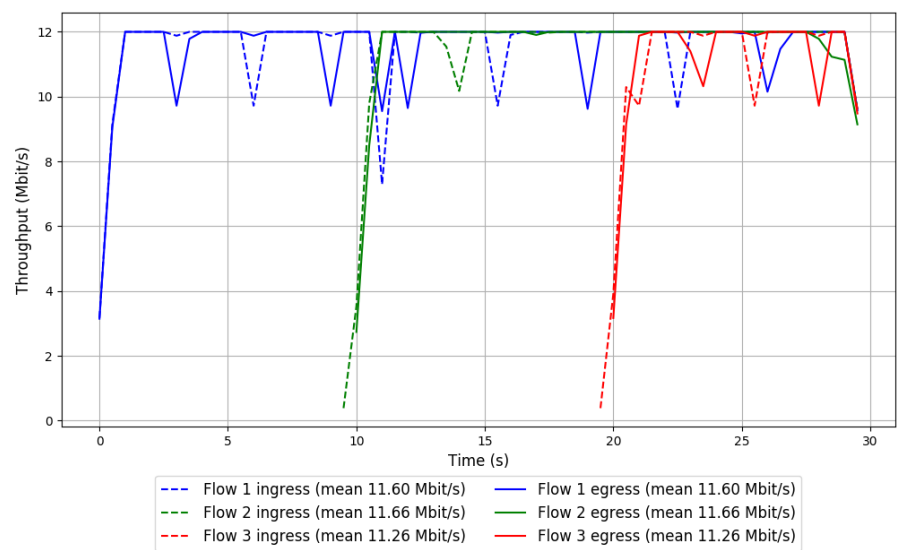
-- Flow 3:

Average throughput: 11.26 Mbit/s

95th percentile per-packet one-way delay: 50.984 ms

Loss rate: 1.07%

Run 9: Report of KohoCC — Data Link



Run 10: Statistics of KohoCC

Start at: 2017-08-12 08:45:54

End at: 2017-08-12 08:46:24

Below is generated by plot.py at 2017-08-12 11:52:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 19.57 Mbit/s

95th percentile per-packet one-way delay: 50.290 ms

Loss rate: 11.11%

-- Flow 1:

Average throughput: 11.70 Mbit/s

95th percentile per-packet one-way delay: 50.192 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 11.46 Mbit/s

95th percentile per-packet one-way delay: 50.240 ms

Loss rate: 0.56%

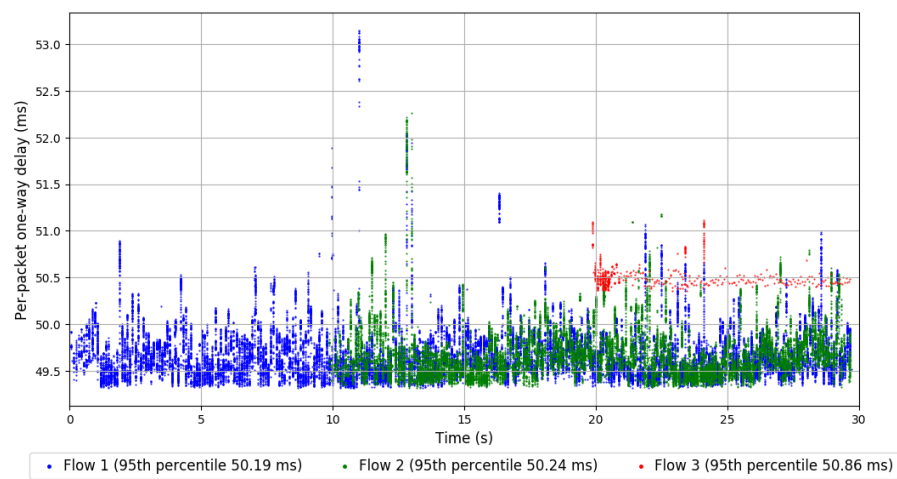
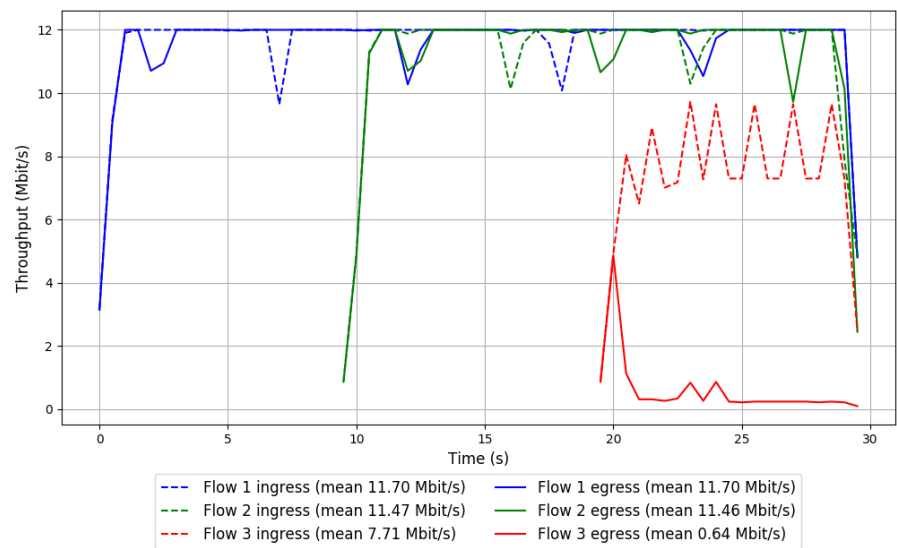
-- Flow 3:

Average throughput: 0.64 Mbit/s

95th percentile per-packet one-way delay: 50.861 ms

Loss rate: 91.82%

Run 10: Report of KohoCC — Data Link

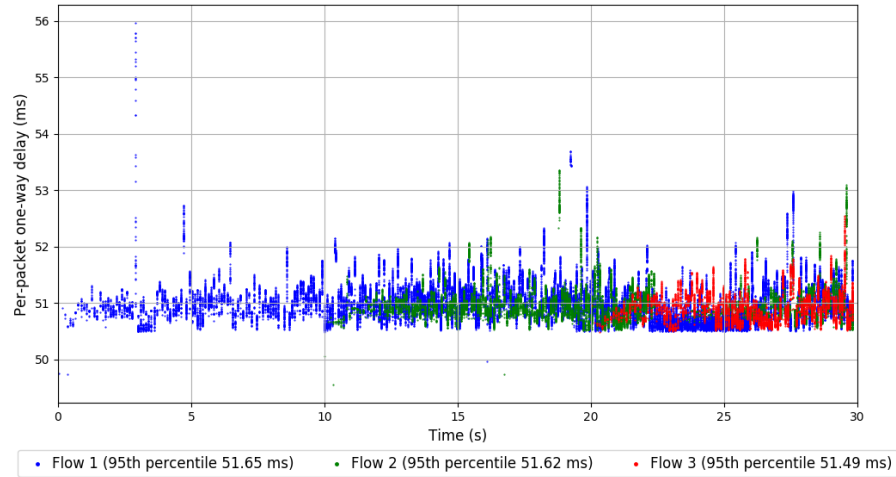
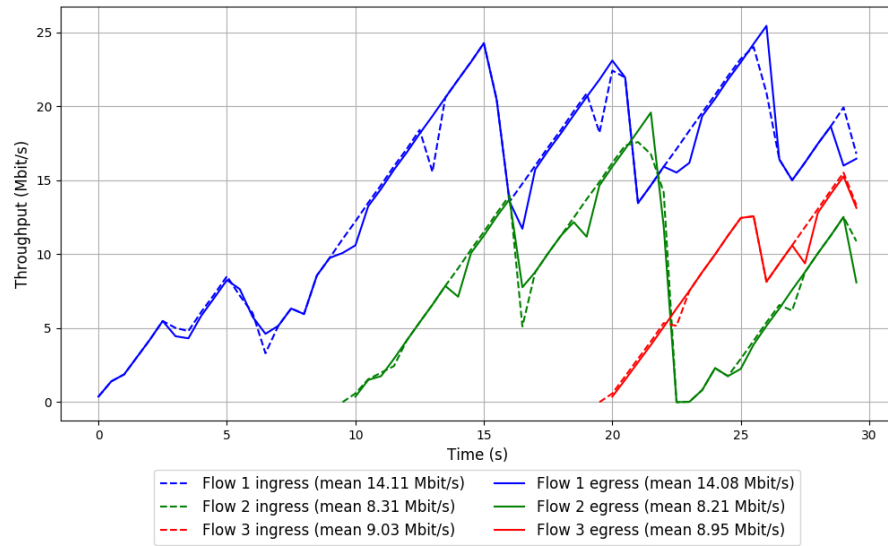


```
Run 1: Statistics of LEDBAT

Start at: 2017-08-12 06:54:45
End at: 2017-08-12 06:55:15

# Below is generated by plot.py at 2017-08-12 11:52:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 22.48 Mbit/s
95th percentile per-packet one-way delay: 51.615 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 14.08 Mbit/s
95th percentile per-packet one-way delay: 51.646 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 8.21 Mbit/s
95th percentile per-packet one-way delay: 51.623 ms
Loss rate: 1.62%
-- Flow 3:
Average throughput: 8.95 Mbit/s
95th percentile per-packet one-way delay: 51.494 ms
Loss rate: 1.90%
```

Run 1: Report of LEDBAT — Data Link

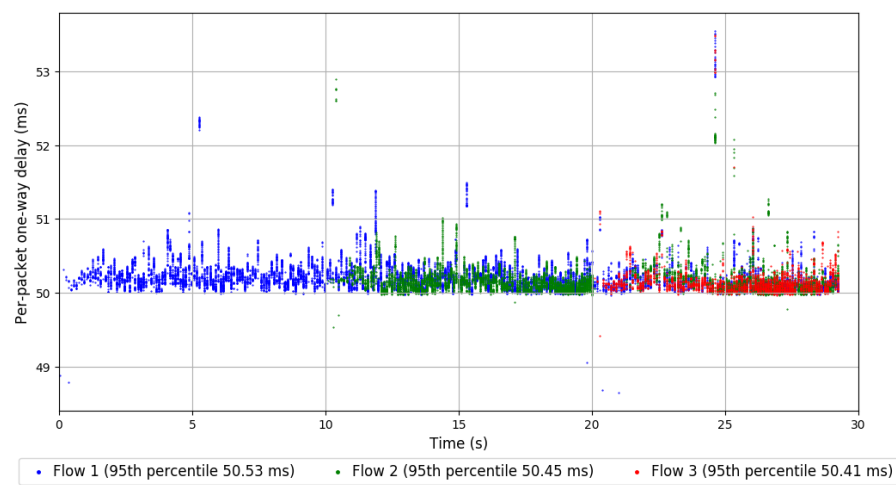
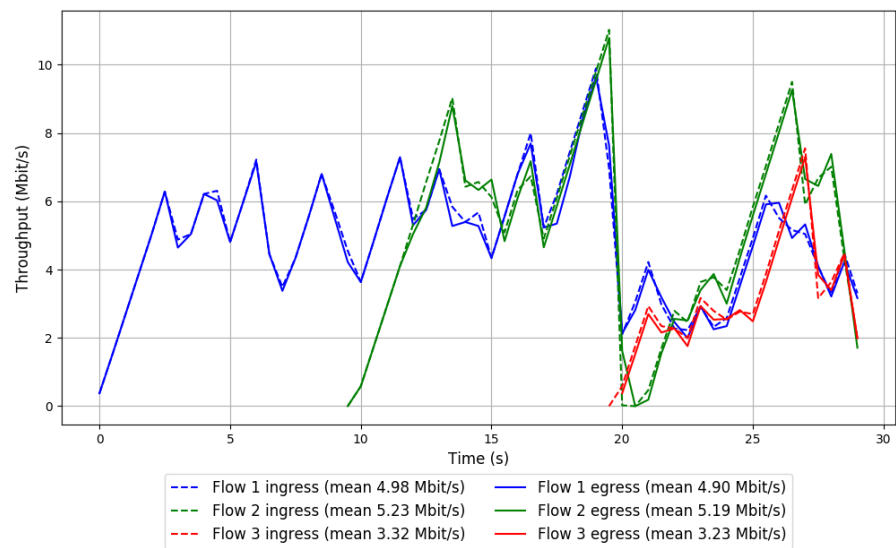


```
Run 2: Statistics of LEDBAT

Start at: 2017-08-12 07:06:13
End at: 2017-08-12 07:06:43

# Below is generated by plot.py at 2017-08-12 11:52:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 9.35 Mbit/s
95th percentile per-packet one-way delay: 50.497 ms
Loss rate: 1.88%
-- Flow 1:
Average throughput: 4.90 Mbit/s
95th percentile per-packet one-way delay: 50.526 ms
Loss rate: 1.83%
-- Flow 2:
Average throughput: 5.19 Mbit/s
95th percentile per-packet one-way delay: 50.450 ms
Loss rate: 1.40%
-- Flow 3:
Average throughput: 3.23 Mbit/s
95th percentile per-packet one-way delay: 50.414 ms
Loss rate: 3.71%
```


Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2017-08-12 07:17:45

End at: 2017-08-12 07:18:15

Below is generated by plot.py at 2017-08-12 11:52:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 21.06 Mbit/s

95th percentile per-packet one-way delay: 50.984 ms

Loss rate: 1.10%

-- Flow 1:

Average throughput: 6.68 Mbit/s

95th percentile per-packet one-way delay: 50.915 ms

Loss rate: 1.22%

-- Flow 2:

Average throughput: 19.30 Mbit/s

95th percentile per-packet one-way delay: 51.043 ms

Loss rate: 1.07%

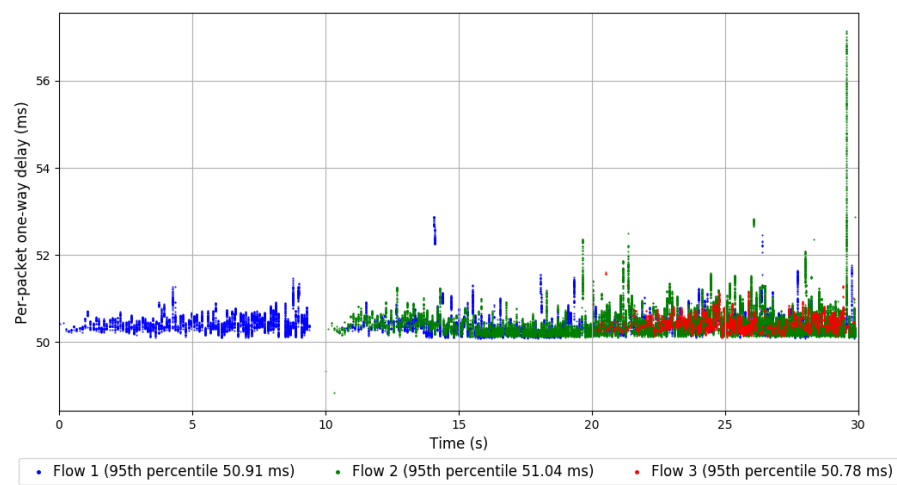
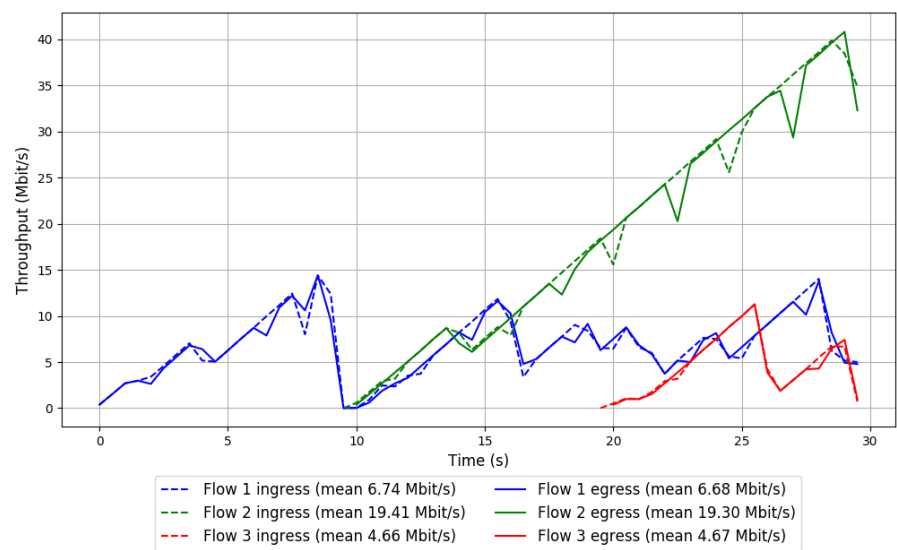
-- Flow 3:

Average throughput: 4.67 Mbit/s

95th percentile per-packet one-way delay: 50.779 ms

Loss rate: 0.88%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2017-08-12 07:29:38

End at: 2017-08-12 07:30:08

Below is generated by plot.py at 2017-08-12 11:53:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 17.66 Mbit/s

95th percentile per-packet one-way delay: 51.256 ms

Loss rate: 0.96%

-- Flow 1:

Average throughput: 10.40 Mbit/s

95th percentile per-packet one-way delay: 51.367 ms

Loss rate: 0.61%

-- Flow 2:

Average throughput: 6.96 Mbit/s

95th percentile per-packet one-way delay: 50.914 ms

Loss rate: 1.49%

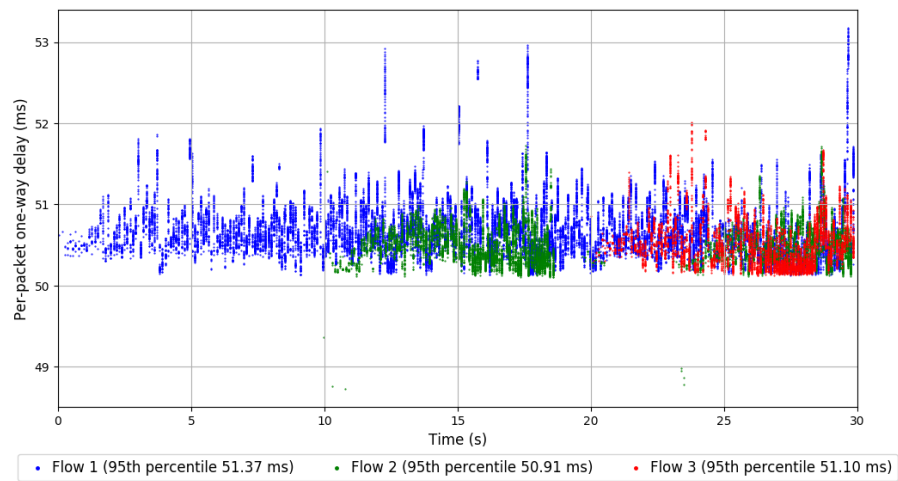
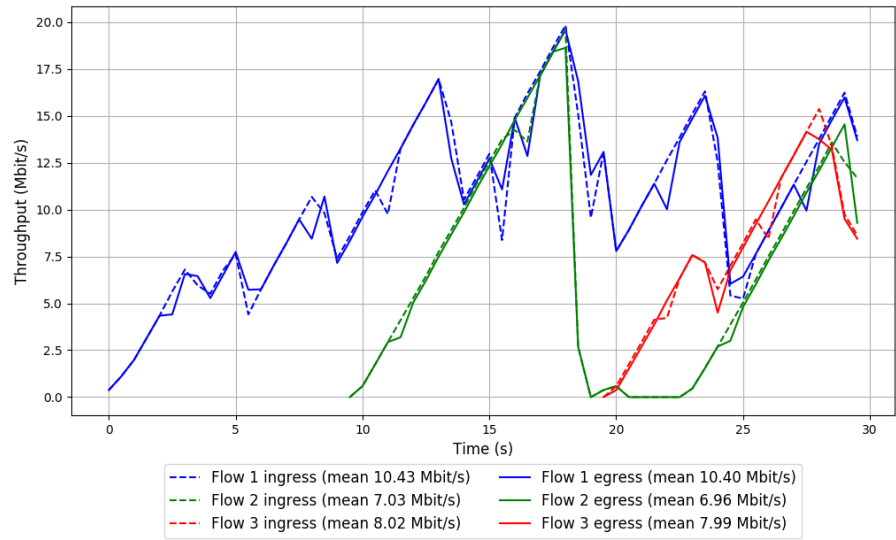
-- Flow 3:

Average throughput: 7.99 Mbit/s

95th percentile per-packet one-way delay: 51.096 ms

Loss rate: 1.40%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2017-08-12 07:41:33

End at: 2017-08-12 07:42:03

Below is generated by plot.py at 2017-08-12 11:53:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 27.21 Mbit/s

95th percentile per-packet one-way delay: 51.420 ms

Loss rate: 0.80%

-- Flow 1:

Average throughput: 16.45 Mbit/s

95th percentile per-packet one-way delay: 51.487 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 11.14 Mbit/s

95th percentile per-packet one-way delay: 51.252 ms

Loss rate: 0.20%

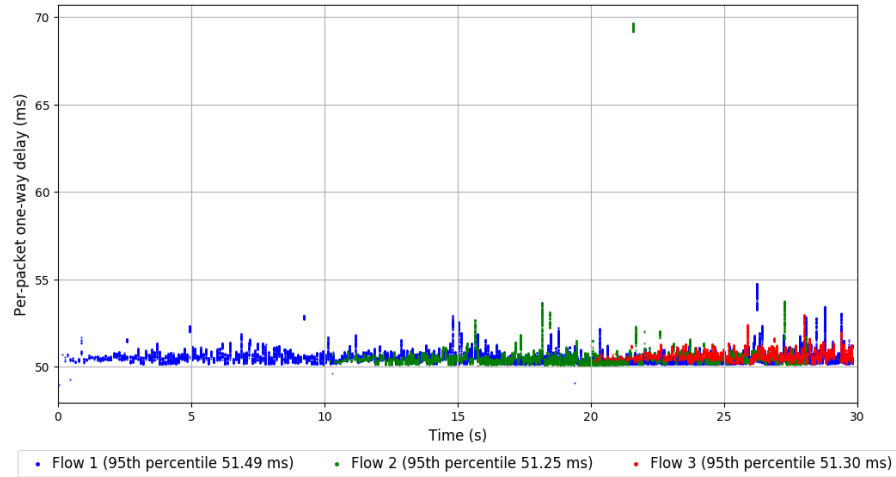
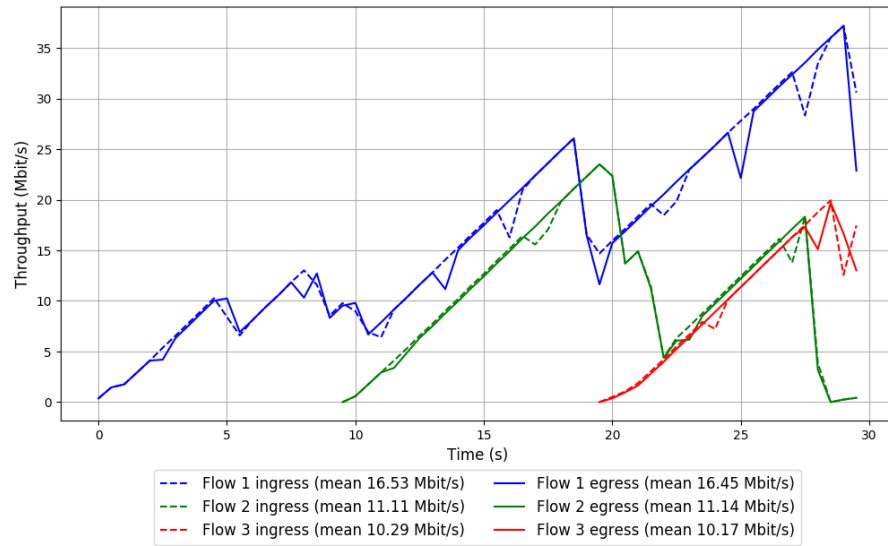
-- Flow 3:

Average throughput: 10.17 Mbit/s

95th percentile per-packet one-way delay: 51.305 ms

Loss rate: 2.18%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2017-08-12 07:53:34

End at: 2017-08-12 07:54:04

Below is generated by plot.py at 2017-08-12 11:53:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 33.20 Mbit/s

95th percentile per-packet one-way delay: 51.274 ms

Loss rate: 0.90%

-- Flow 1:

Average throughput: 24.65 Mbit/s

95th percentile per-packet one-way delay: 51.278 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 7.38 Mbit/s

95th percentile per-packet one-way delay: 51.353 ms

Loss rate: 0.72%

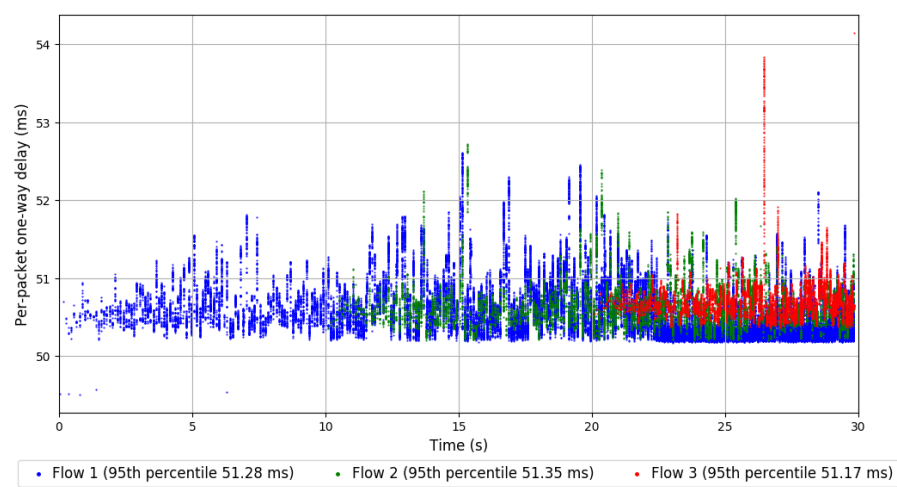
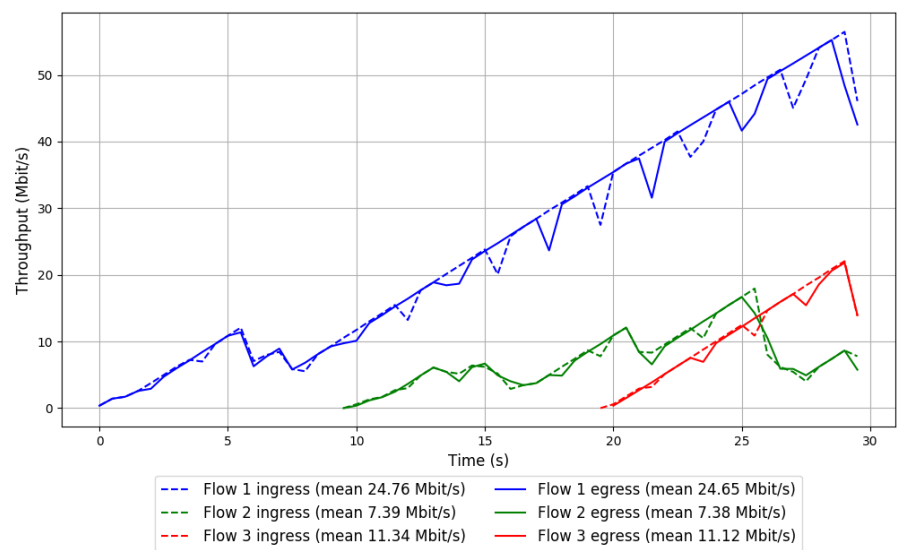
-- Flow 3:

Average throughput: 11.12 Mbit/s

95th percentile per-packet one-way delay: 51.169 ms

Loss rate: 1.94%

Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

Start at: 2017-08-12 08:05:28

End at: 2017-08-12 08:05:59

Below is generated by plot.py at 2017-08-12 11:53:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 29.78 Mbit/s

95th percentile per-packet one-way delay: 51.028 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 14.48 Mbit/s

95th percentile per-packet one-way delay: 51.030 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 19.99 Mbit/s

95th percentile per-packet one-way delay: 50.968 ms

Loss rate: 0.70%

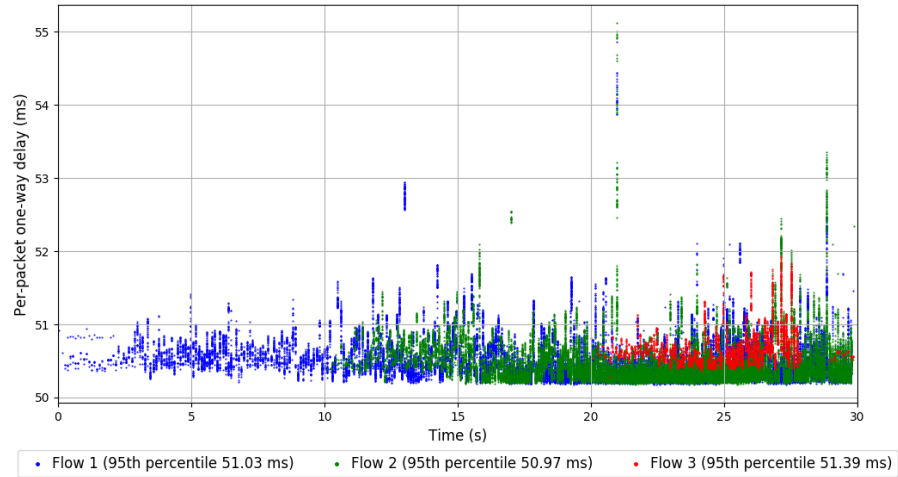
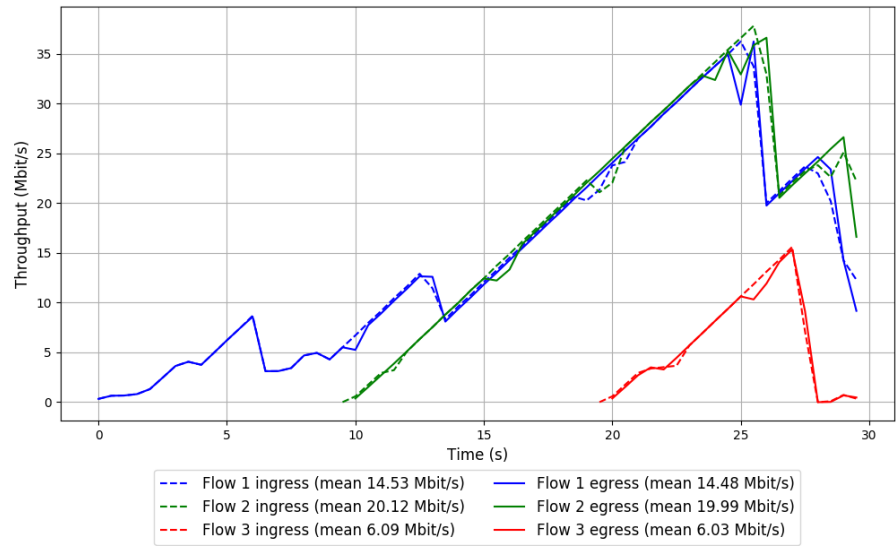
-- Flow 3:

Average throughput: 6.03 Mbit/s

95th percentile per-packet one-way delay: 51.394 ms

Loss rate: 0.98%

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2017-08-12 08:17:00

End at: 2017-08-12 08:17:30

Below is generated by plot.py at 2017-08-12 11:53:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 17.30 Mbit/s

95th percentile per-packet one-way delay: 51.311 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 9.37 Mbit/s

95th percentile per-packet one-way delay: 51.260 ms

Loss rate: 0.74%

-- Flow 2:

Average throughput: 9.32 Mbit/s

95th percentile per-packet one-way delay: 51.331 ms

Loss rate: 0.70%

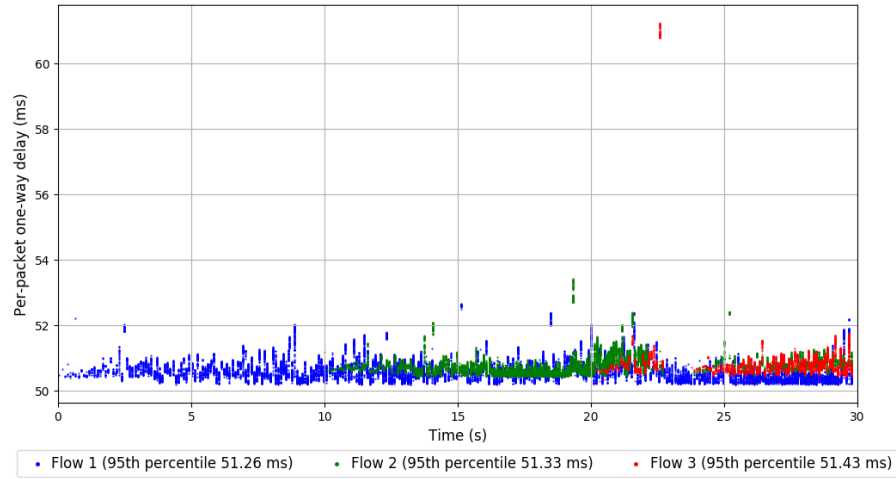
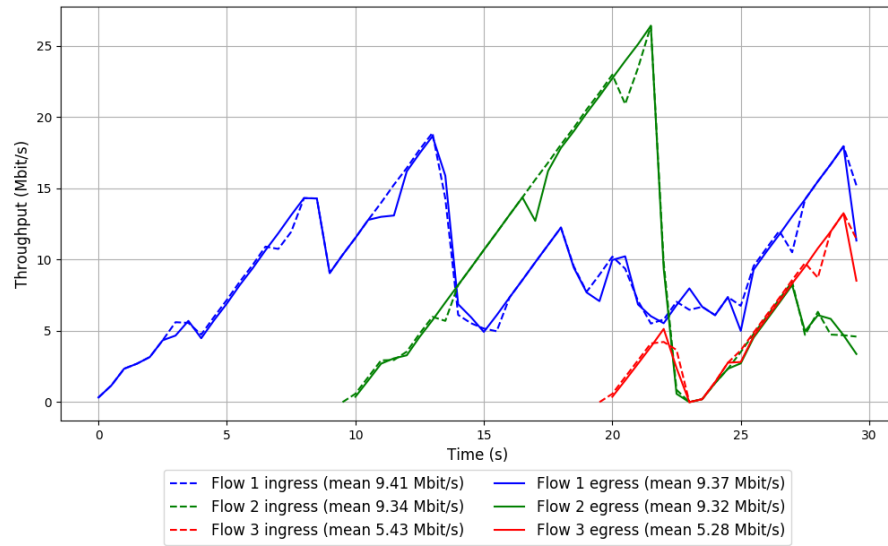
-- Flow 3:

Average throughput: 5.28 Mbit/s

95th percentile per-packet one-way delay: 51.428 ms

Loss rate: 3.91%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2017-08-12 08:28:47

End at: 2017-08-12 08:29:17

Below is generated by plot.py at 2017-08-12 11:53:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 22.43 Mbit/s

95th percentile per-packet one-way delay: 51.144 ms

Loss rate: 0.97%

-- Flow 1:

Average throughput: 8.43 Mbit/s

95th percentile per-packet one-way delay: 51.060 ms

Loss rate: 1.09%

-- Flow 2:

Average throughput: 17.84 Mbit/s

95th percentile per-packet one-way delay: 51.177 ms

Loss rate: 0.87%

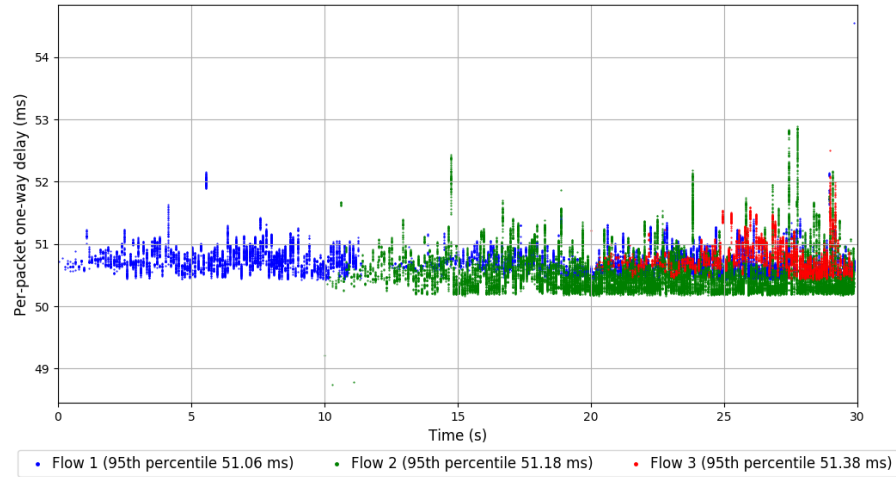
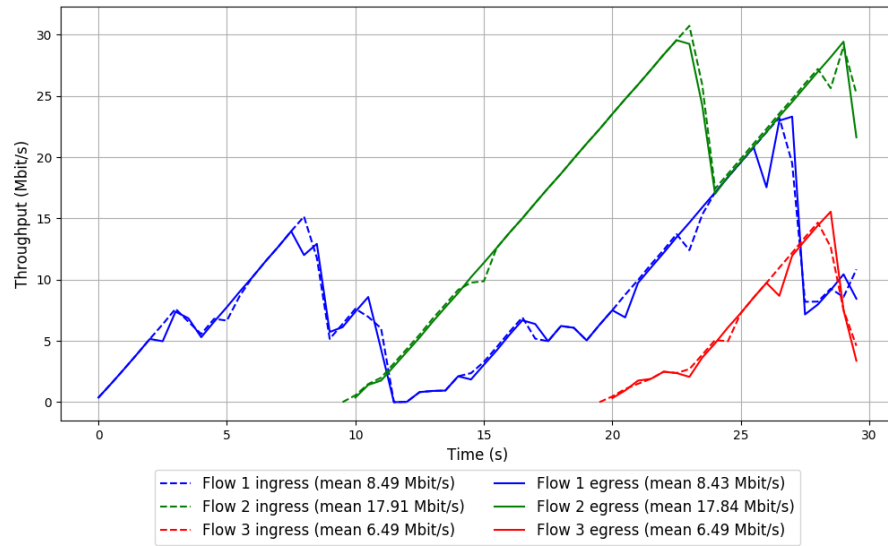
-- Flow 3:

Average throughput: 6.49 Mbit/s

95th percentile per-packet one-way delay: 51.381 ms

Loss rate: 1.06%

Run 9: Report of LEDBAT — Data Link

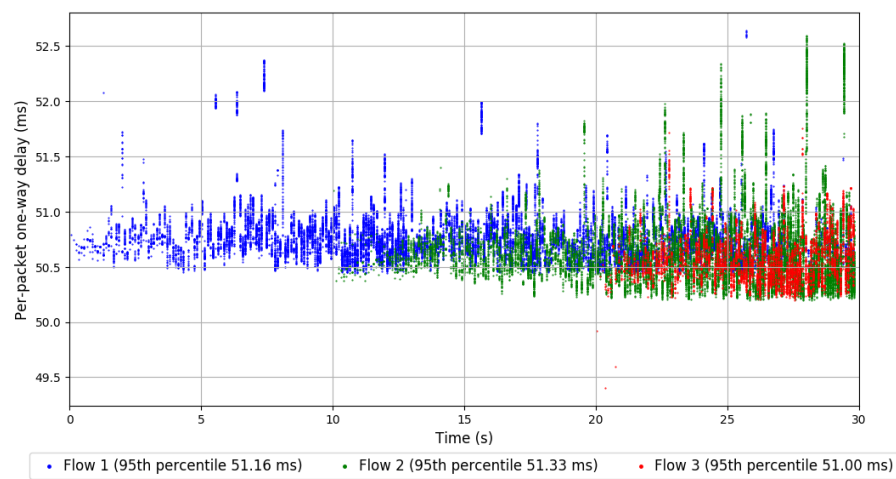
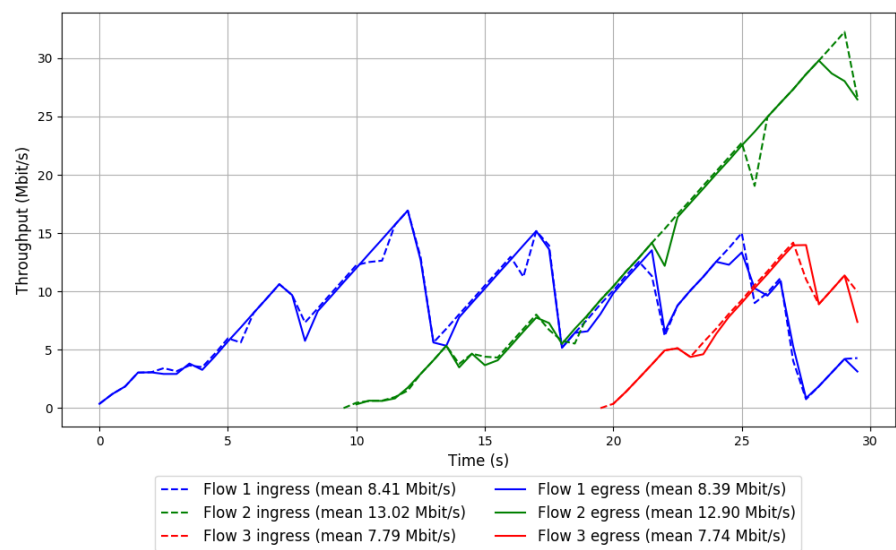


```
Run 10: Statistics of LEDBAT

Start at: 2017-08-12 08:40:40
End at: 2017-08-12 08:41:10

# Below is generated by plot.py at 2017-08-12 11:53:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.50 Mbit/s
95th percentile per-packet one-way delay: 51.187 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 8.39 Mbit/s
95th percentile per-packet one-way delay: 51.163 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 12.90 Mbit/s
95th percentile per-packet one-way delay: 51.331 ms
Loss rate: 1.38%
-- Flow 3:
Average throughput: 7.74 Mbit/s
95th percentile per-packet one-way delay: 50.997 ms
Loss rate: 1.68%
```


Run 10: Report of LEDBAT — Data Link

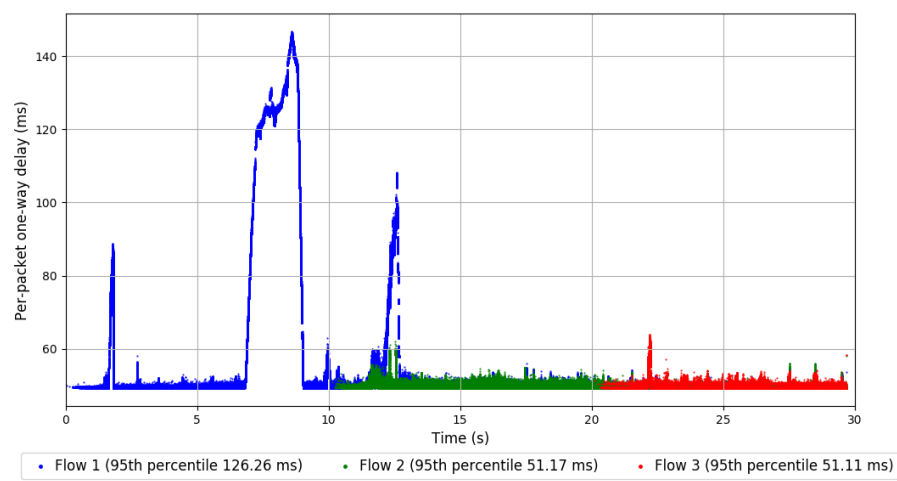
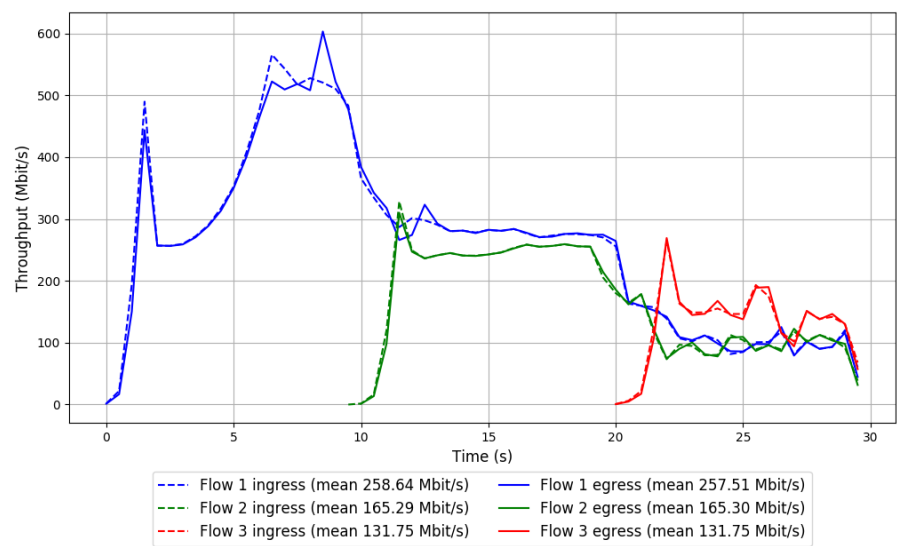


```
Run 1: Statistics of PCC

Start at: 2017-08-12 06:57:34
End at: 2017-08-12 06:58:04

# Below is generated by plot.py at 2017-08-12 11:54:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 409.56 Mbit/s
95th percentile per-packet one-way delay: 124.585 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 257.51 Mbit/s
95th percentile per-packet one-way delay: 126.263 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 165.30 Mbit/s
95th percentile per-packet one-way delay: 51.169 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 131.75 Mbit/s
95th percentile per-packet one-way delay: 51.114 ms
Loss rate: 0.95%
```

Run 1: Report of PCC — Data Link

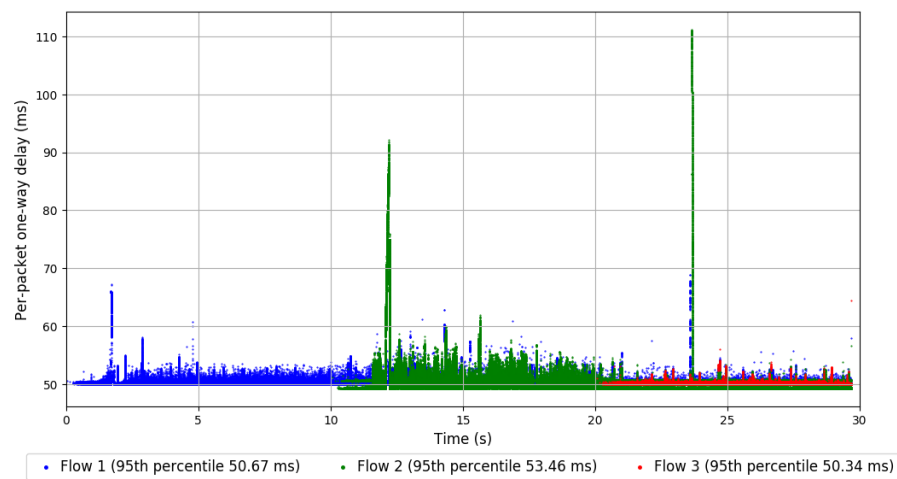
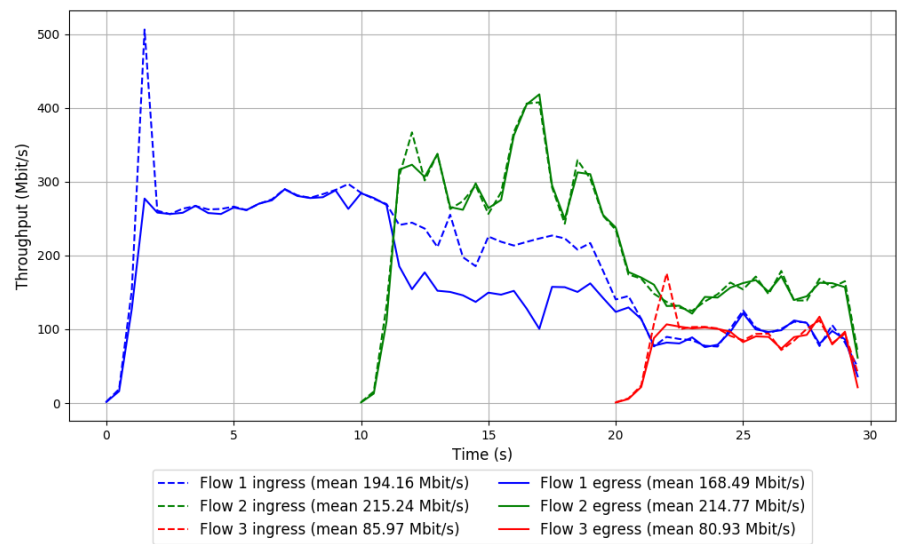


```
Run 2: Statistics of PCC

Start at: 2017-08-12 07:08:57
End at: 2017-08-12 07:09:27

# Below is generated by plot.py at 2017-08-12 11:54:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 336.94 Mbit/s
95th percentile per-packet one-way delay: 52.302 ms
Loss rate: 7.98%
-- Flow 1:
Average throughput: 168.49 Mbit/s
95th percentile per-packet one-way delay: 50.673 ms
Loss rate: 13.50%
-- Flow 2:
Average throughput: 214.77 Mbit/s
95th percentile per-packet one-way delay: 53.462 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 80.93 Mbit/s
95th percentile per-packet one-way delay: 50.345 ms
Loss rate: 6.72%
```

Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2017-08-12 07:20:29

End at: 2017-08-12 07:20:59

Below is generated by plot.py at 2017-08-12 11:55:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 454.83 Mbit/s

95th percentile per-packet one-way delay: 55.190 ms

Loss rate: 2.37%

-- Flow 1:

Average throughput: 298.50 Mbit/s

95th percentile per-packet one-way delay: 62.316 ms

Loss rate: 2.63%

-- Flow 2:

Average throughput: 134.80 Mbit/s

95th percentile per-packet one-way delay: 51.511 ms

Loss rate: 1.83%

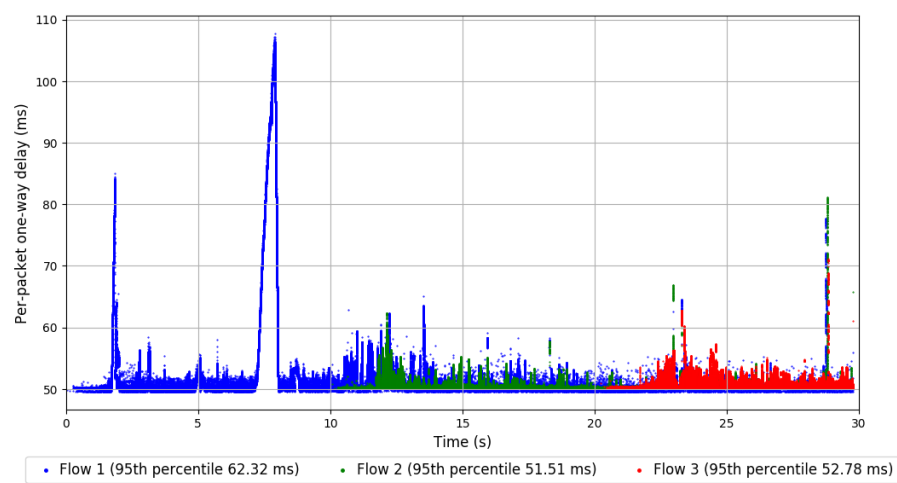
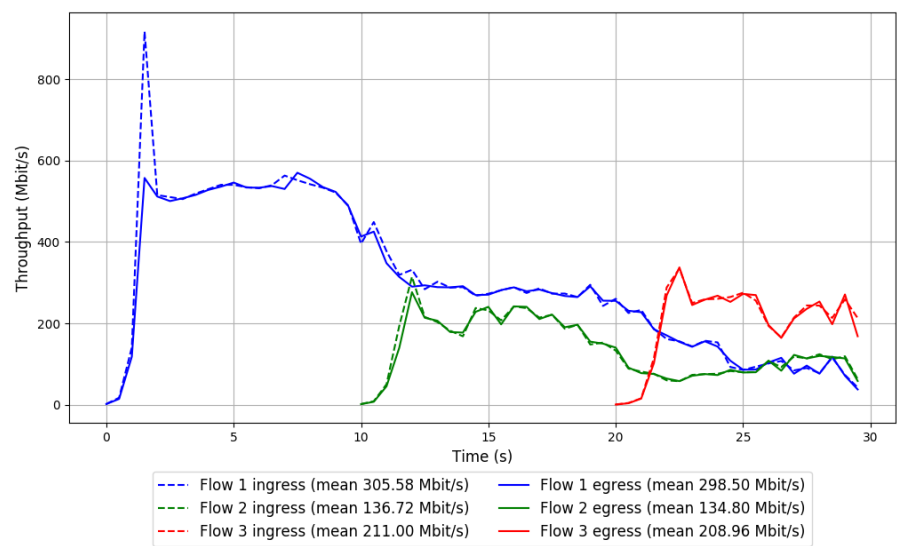
-- Flow 3:

Average throughput: 208.96 Mbit/s

95th percentile per-packet one-way delay: 52.785 ms

Loss rate: 1.93%

Run 3: Report of PCC — Data Link



Run 4: Statistics of PCC

Start at: 2017-08-12 07:32:24

End at: 2017-08-12 07:32:54

Below is generated by plot.py at 2017-08-12 11:56:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 423.14 Mbit/s

95th percentile per-packet one-way delay: 60.116 ms

Loss rate: 1.83%

-- Flow 1:

Average throughput: 296.71 Mbit/s

95th percentile per-packet one-way delay: 73.771 ms

Loss rate: 2.16%

-- Flow 2:

Average throughput: 131.21 Mbit/s

95th percentile per-packet one-way delay: 53.197 ms

Loss rate: 1.01%

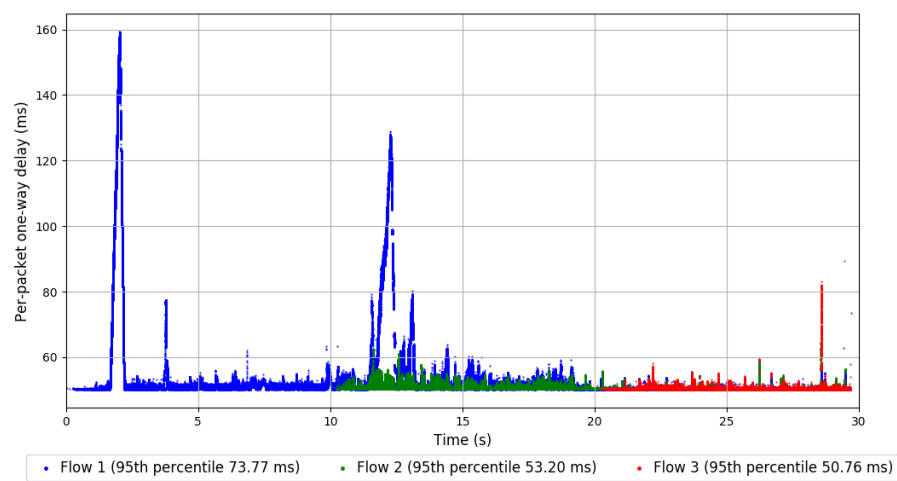
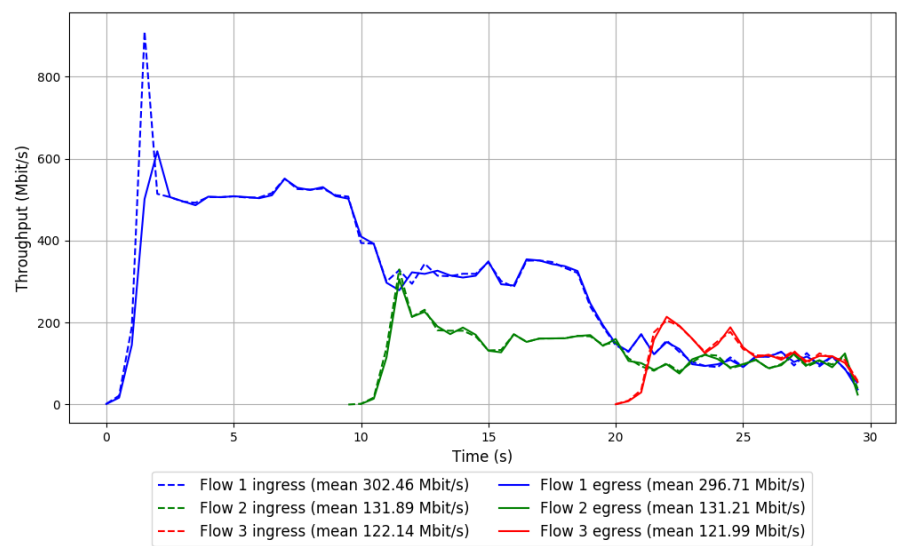
-- Flow 3:

Average throughput: 121.99 Mbit/s

95th percentile per-packet one-way delay: 50.761 ms

Loss rate: 1.12%

Run 4: Report of PCC — Data Link



Run 5: Statistics of PCC

Start at: 2017-08-12 07:44:20

End at: 2017-08-12 07:44:50

Below is generated by plot.py at 2017-08-12 11:57:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 395.58 Mbit/s

95th percentile per-packet one-way delay: 53.968 ms

Loss rate: 5.72%

-- Flow 1:

Average throughput: 255.15 Mbit/s

95th percentile per-packet one-way delay: 52.220 ms

Loss rate: 8.25%

-- Flow 2:

Average throughput: 209.36 Mbit/s

95th percentile per-packet one-way delay: 58.631 ms

Loss rate: 0.74%

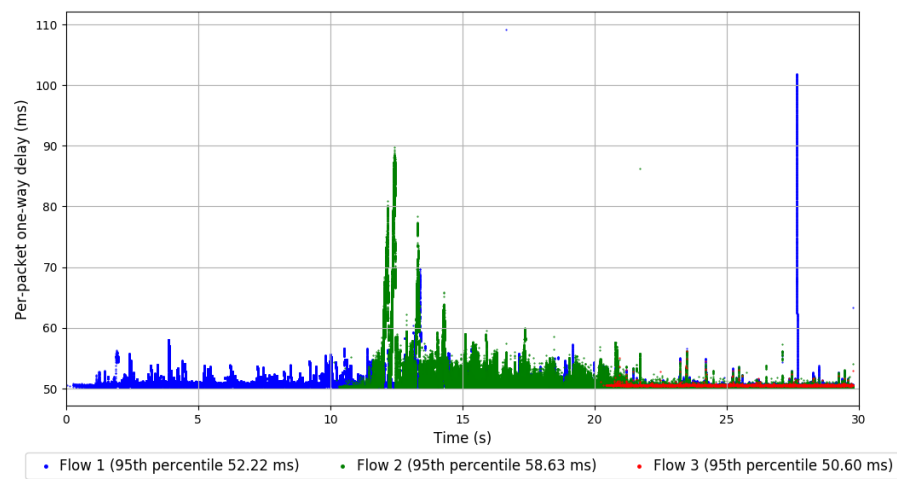
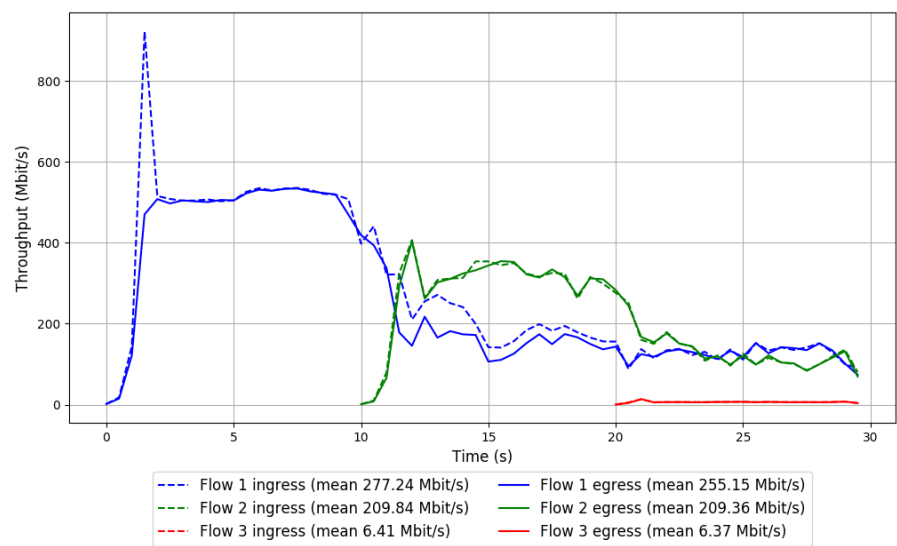
-- Flow 3:

Average throughput: 6.37 Mbit/s

95th percentile per-packet one-way delay: 50.599 ms

Loss rate: 1.65%

Run 5: Report of PCC — Data Link



Run 6: Statistics of PCC

Start at: 2017-08-12 07:56:23

End at: 2017-08-12 07:56:53

Below is generated by plot.py at 2017-08-12 11:57:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 436.93 Mbit/s

95th percentile per-packet one-way delay: 52.575 ms

Loss rate: 0.92%

-- Flow 1:

Average throughput: 281.07 Mbit/s

95th percentile per-packet one-way delay: 52.700 ms

Loss rate: 1.11%

-- Flow 2:

Average throughput: 177.11 Mbit/s

95th percentile per-packet one-way delay: 52.709 ms

Loss rate: 0.59%

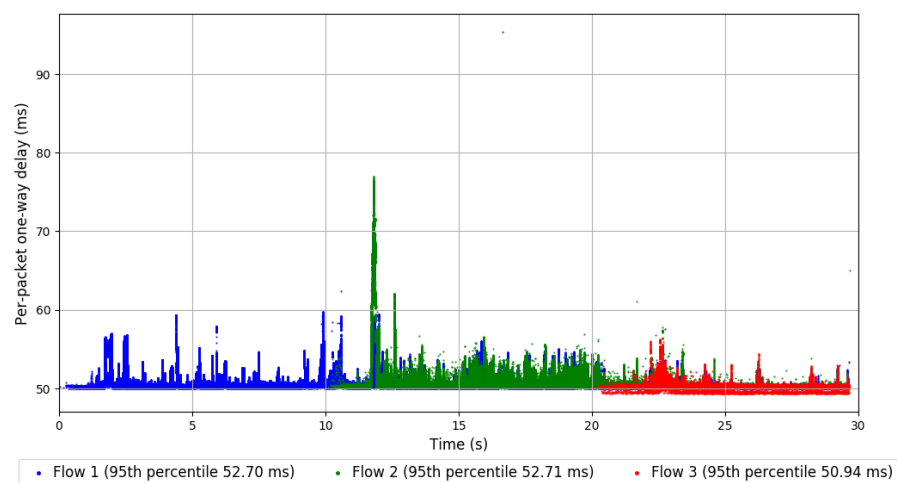
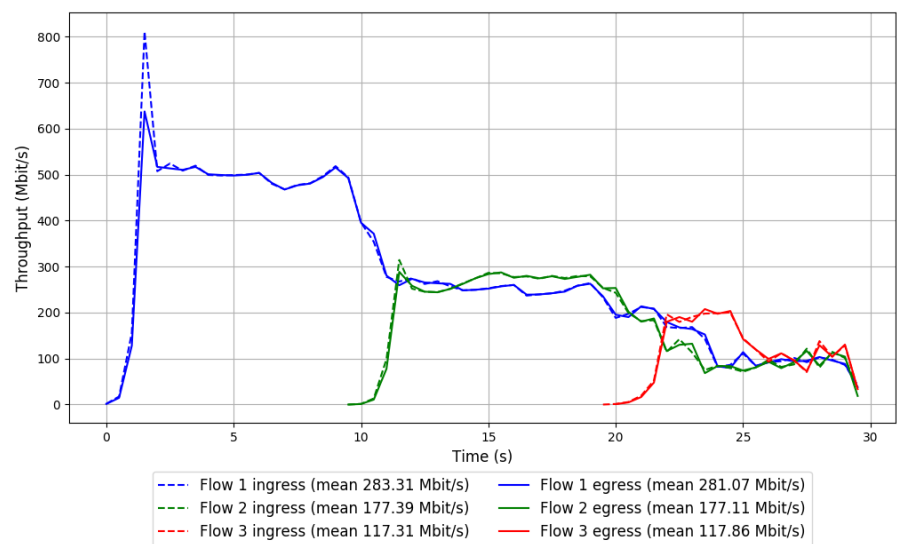
-- Flow 3:

Average throughput: 117.86 Mbit/s

95th percentile per-packet one-way delay: 50.944 ms

Loss rate: 0.61%

Run 6: Report of PCC — Data Link



Run 7: Statistics of PCC

Start at: 2017-08-12 08:08:14

End at: 2017-08-12 08:08:44

Below is generated by plot.py at 2017-08-12 11:58:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 344.93 Mbit/s

95th percentile per-packet one-way delay: 63.339 ms

Loss rate: 5.02%

-- Flow 1:

Average throughput: 304.82 Mbit/s

95th percentile per-packet one-way delay: 66.165 ms

Loss rate: 5.34%

-- Flow 2:

Average throughput: 2.13 Mbit/s

95th percentile per-packet one-way delay: 50.520 ms

Loss rate: 1.64%

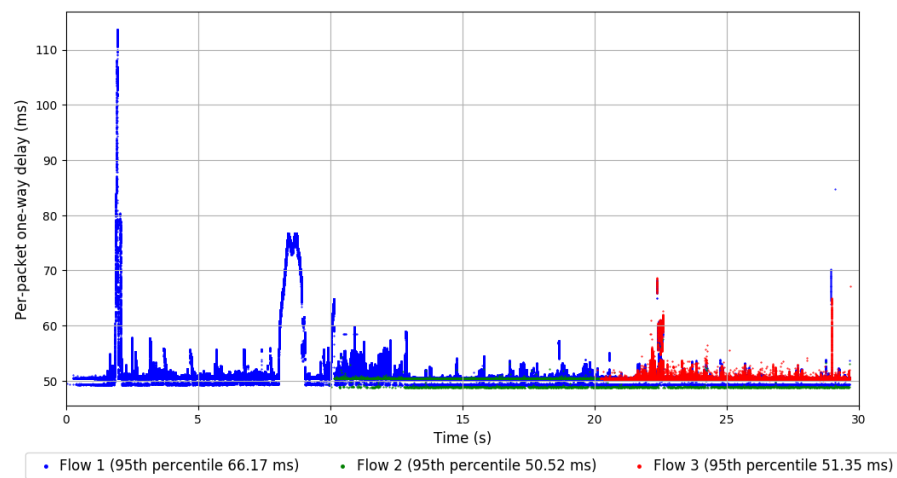
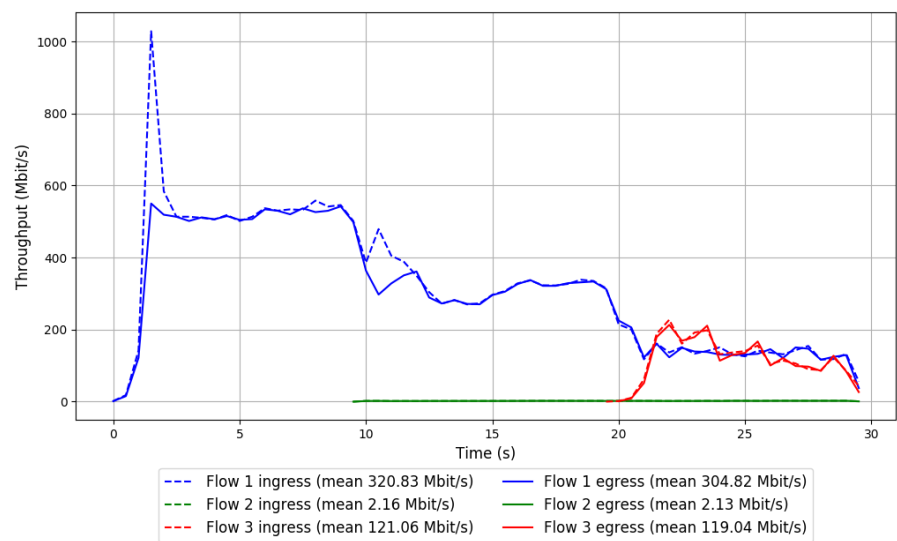
-- Flow 3:

Average throughput: 119.04 Mbit/s

95th percentile per-packet one-way delay: 51.355 ms

Loss rate: 2.54%

Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2017-08-12 08:19:48

End at: 2017-08-12 08:20:18

Below is generated by plot.py at 2017-08-12 11:58:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 423.00 Mbit/s

95th percentile per-packet one-way delay: 110.429 ms

Loss rate: 2.16%

-- Flow 1:

Average throughput: 304.64 Mbit/s

95th percentile per-packet one-way delay: 122.906 ms

Loss rate: 2.13%

-- Flow 2:

Average throughput: 111.04 Mbit/s

95th percentile per-packet one-way delay: 50.837 ms

Loss rate: 2.45%

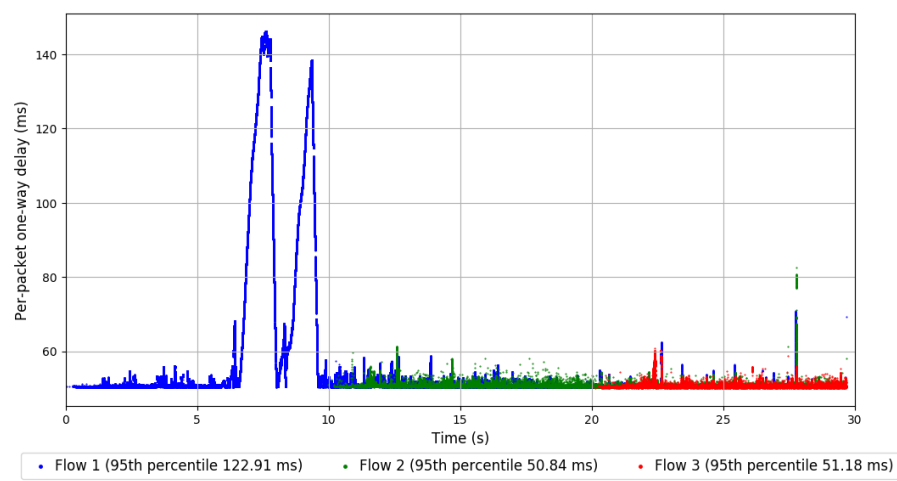
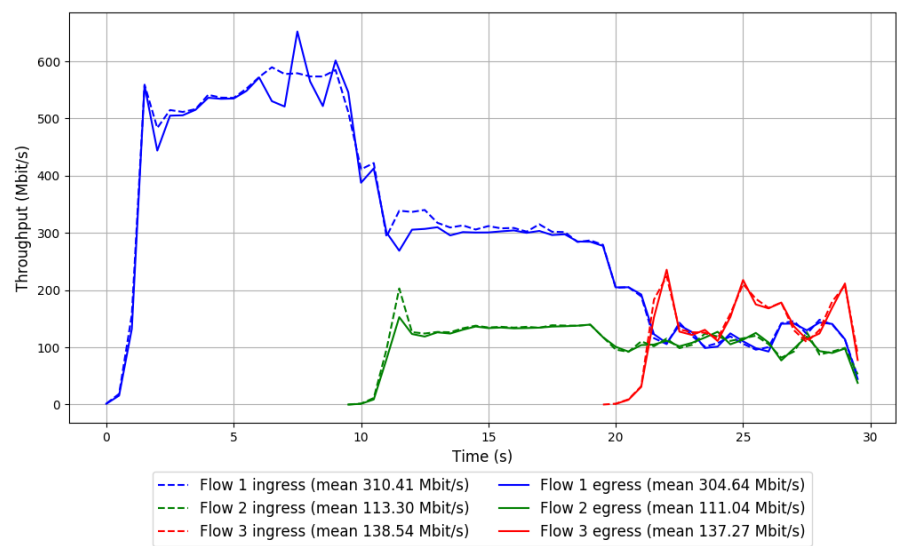
-- Flow 3:

Average throughput: 137.27 Mbit/s

95th percentile per-packet one-way delay: 51.179 ms

Loss rate: 1.92%

Run 8: Report of PCC — Data Link



Run 9: Statistics of PCC

Start at: 2017-08-12 08:31:32

End at: 2017-08-12 08:32:02

Below is generated by plot.py at 2017-08-12 11:59:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 457.44 Mbit/s

95th percentile per-packet one-way delay: 57.957 ms

Loss rate: 4.06%

-- Flow 1:

Average throughput: 282.70 Mbit/s

95th percentile per-packet one-way delay: 64.885 ms

Loss rate: 6.02%

-- Flow 2:

Average throughput: 174.11 Mbit/s

95th percentile per-packet one-way delay: 53.331 ms

Loss rate: 0.43%

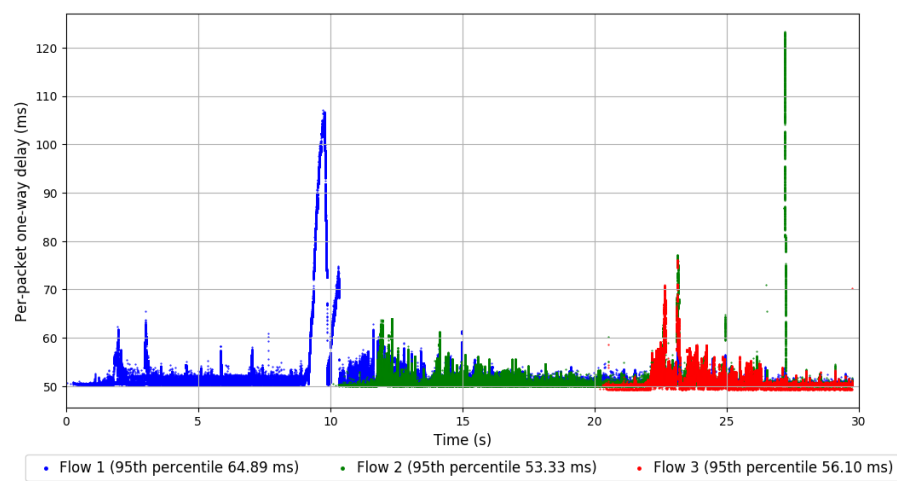
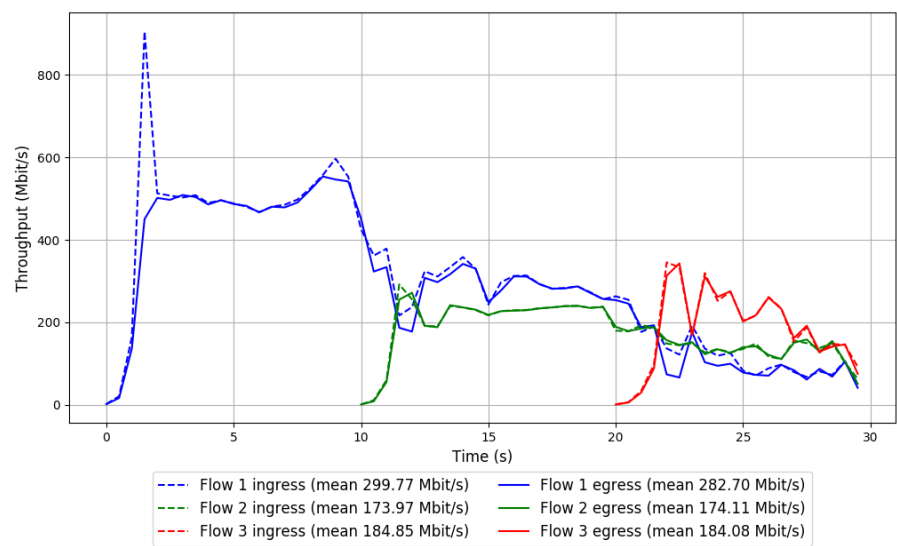
-- Flow 3:

Average throughput: 184.08 Mbit/s

95th percentile per-packet one-way delay: 56.102 ms

Loss rate: 1.29%

Run 9: Report of PCC — Data Link

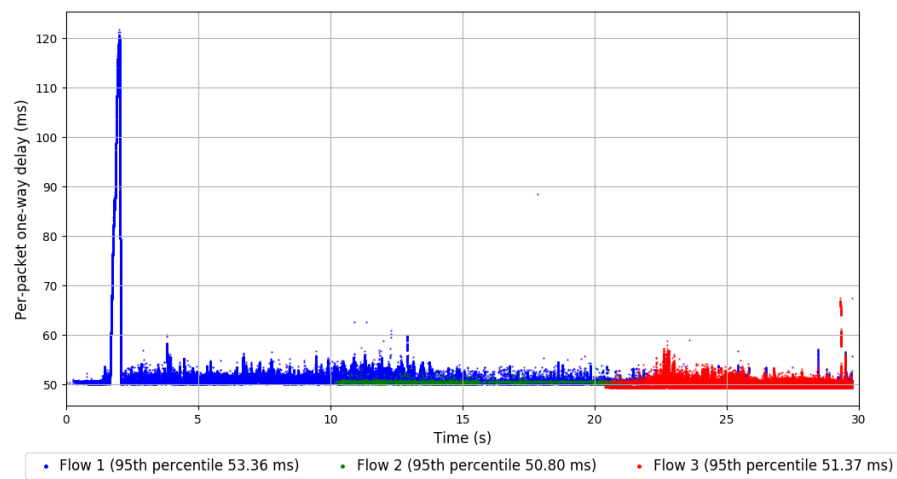
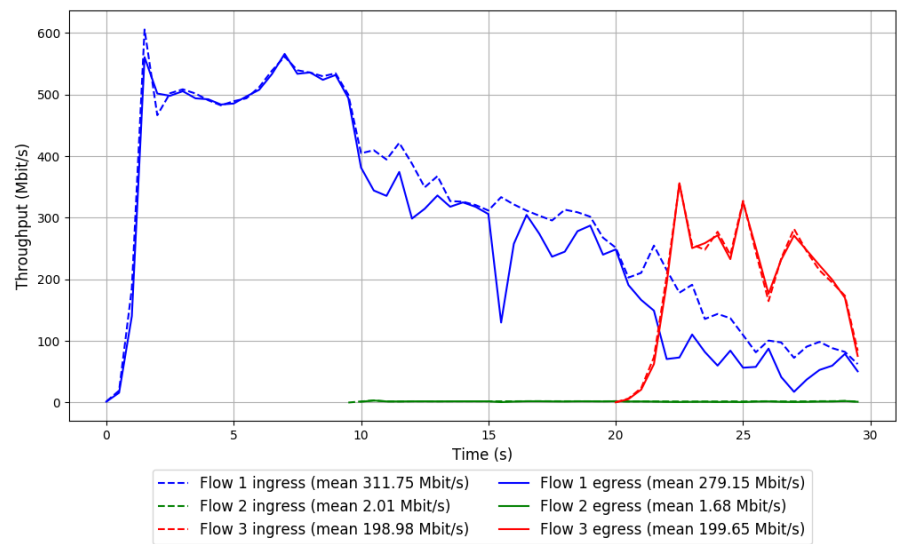


```
Run 10: Statistics of PCC

Start at: 2017-08-12 08:43:25
End at: 2017-08-12 08:43:55

# Below is generated by plot.py at 2017-08-12 12:00:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 344.49 Mbit/s
95th percentile per-packet one-way delay: 53.057 ms
Loss rate: 9.05%
-- Flow 1:
Average throughput: 279.15 Mbit/s
95th percentile per-packet one-way delay: 53.357 ms
Loss rate: 10.75%
-- Flow 2:
Average throughput: 1.68 Mbit/s
95th percentile per-packet one-way delay: 50.796 ms
Loss rate: 16.89%
-- Flow 3:
Average throughput: 199.65 Mbit/s
95th percentile per-packet one-way delay: 51.367 ms
Loss rate: 0.69%
```

Run 10: Report of PCC — Data Link

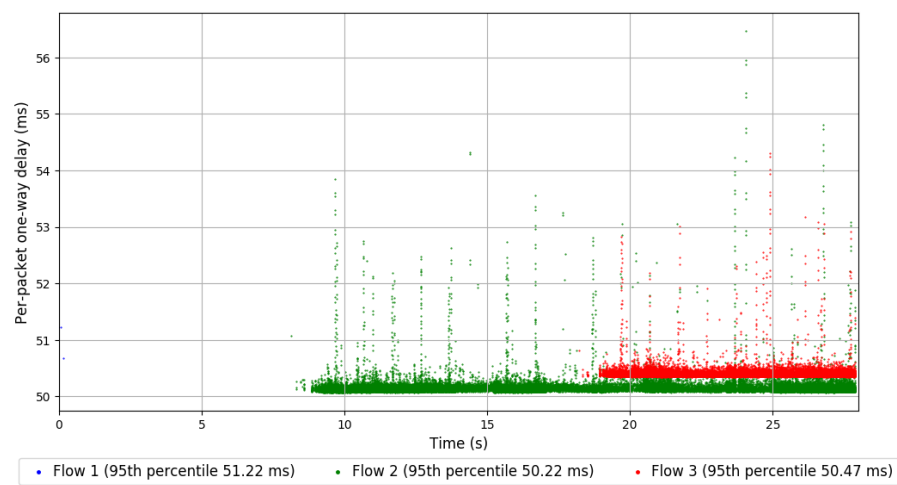
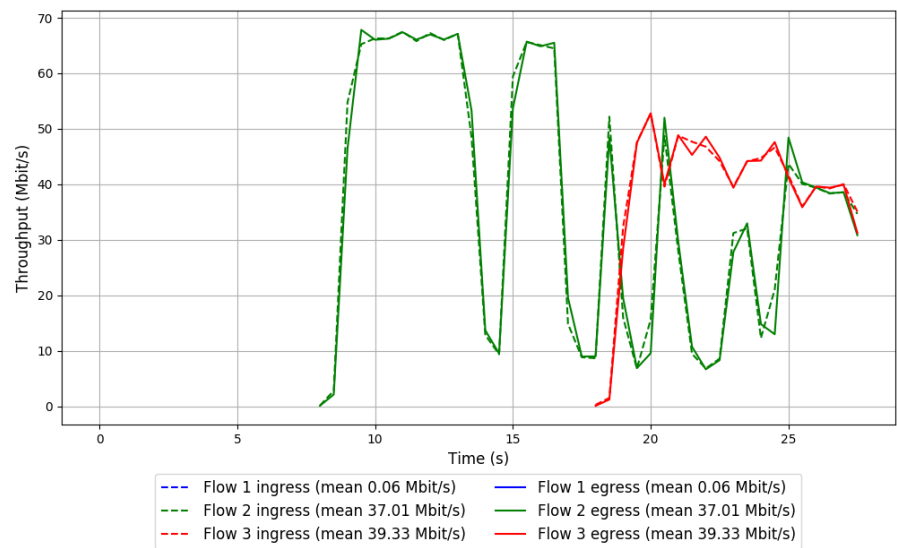


```
Run 1: Statistics of QUIC Cubic

Start at: 2017-08-12 06:56:06
End at: 2017-08-12 06:56:36

# Below is generated by plot.py at 2017-08-12 12:00:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 39.91 Mbit/s
95th percentile per-packet one-way delay: 50.429 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 51.223 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 37.01 Mbit/s
95th percentile per-packet one-way delay: 50.224 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 39.33 Mbit/s
95th percentile per-packet one-way delay: 50.470 ms
Loss rate: 1.02%
```

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2017-08-12 07:07:33

End at: 2017-08-12 07:08:03

Below is generated by plot.py at 2017-08-12 12:00:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 34.93 Mbit/s

95th percentile per-packet one-way delay: 49.414 ms

Loss rate: 0.76%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.582 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 38.64 Mbit/s

95th percentile per-packet one-way delay: 49.375 ms

Loss rate: 0.35%

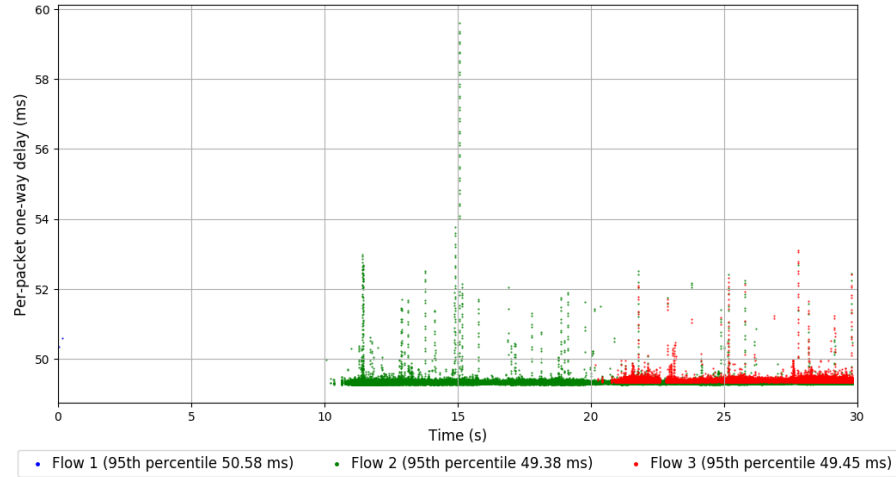
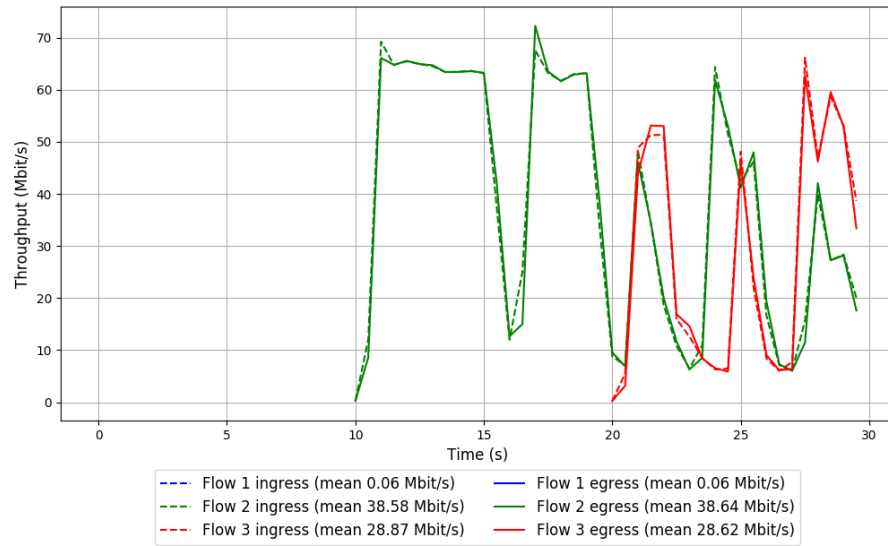
-- Flow 3:

Average throughput: 28.62 Mbit/s

95th percentile per-packet one-way delay: 49.453 ms

Loss rate: 1.87%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2017-08-12 07:19:05

End at: 2017-08-12 07:19:35

Below is generated by plot.py at 2017-08-12 12:00:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 37.78 Mbit/s

95th percentile per-packet one-way delay: 50.428 ms

Loss rate: 1.08%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.551 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 39.61 Mbit/s

95th percentile per-packet one-way delay: 48.823 ms

Loss rate: 0.63%

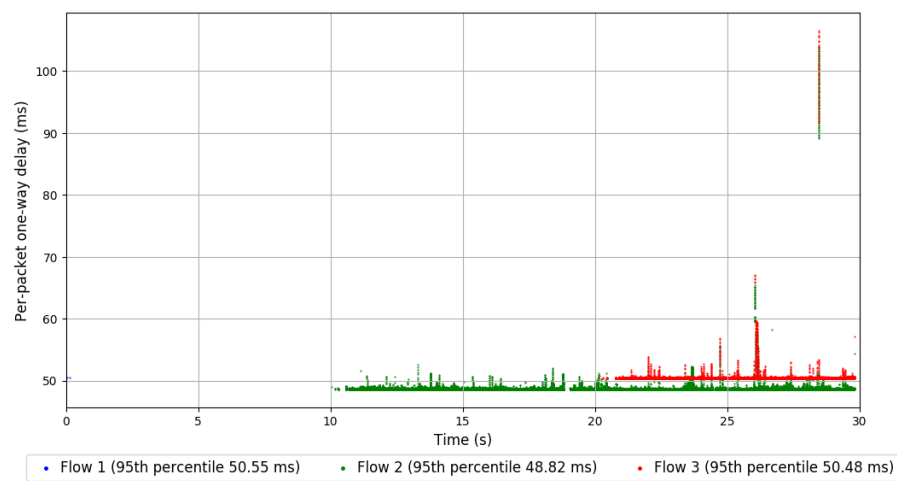
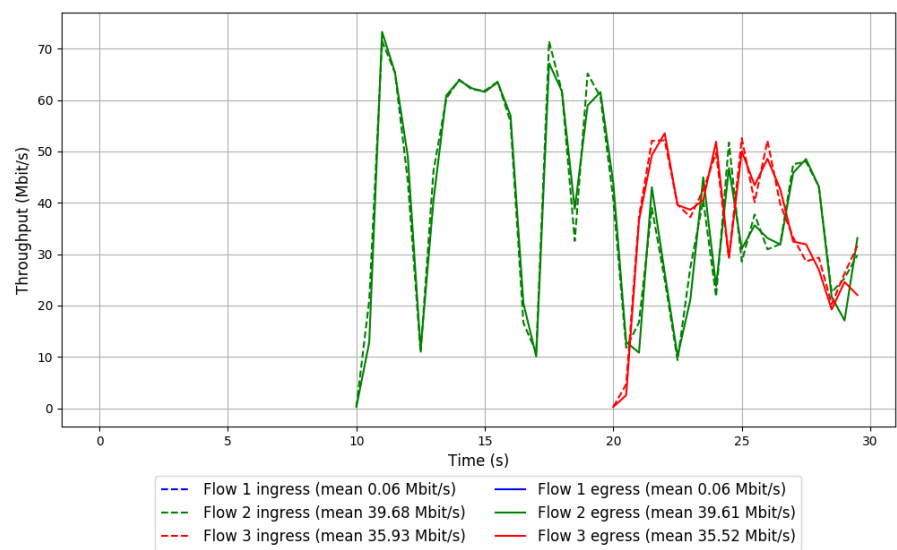
-- Flow 3:

Average throughput: 35.52 Mbit/s

95th percentile per-packet one-way delay: 50.481 ms

Loss rate: 2.10%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2017-08-12 07:30:58

End at: 2017-08-12 07:31:28

Below is generated by plot.py at 2017-08-12 12:00:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 37.31 Mbit/s

95th percentile per-packet one-way delay: 50.377 ms

Loss rate: 0.83%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 49.771 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 35.38 Mbit/s

95th percentile per-packet one-way delay: 50.166 ms

Loss rate: 0.40%

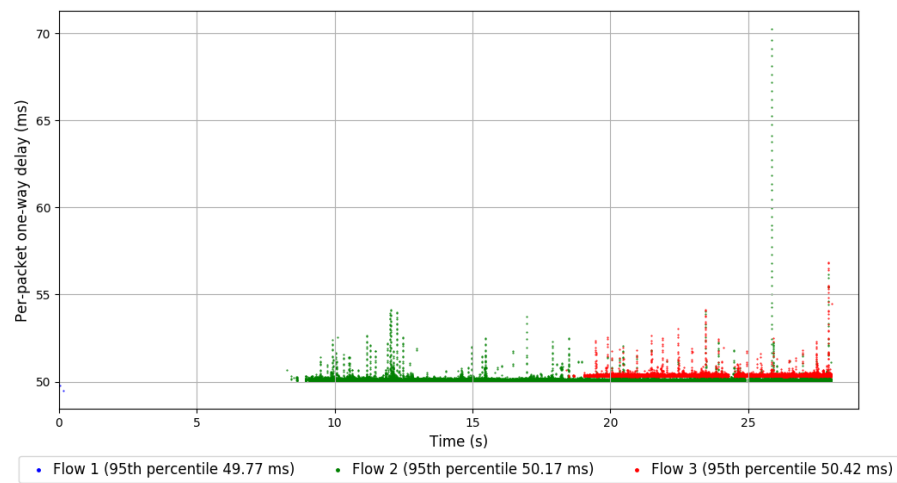
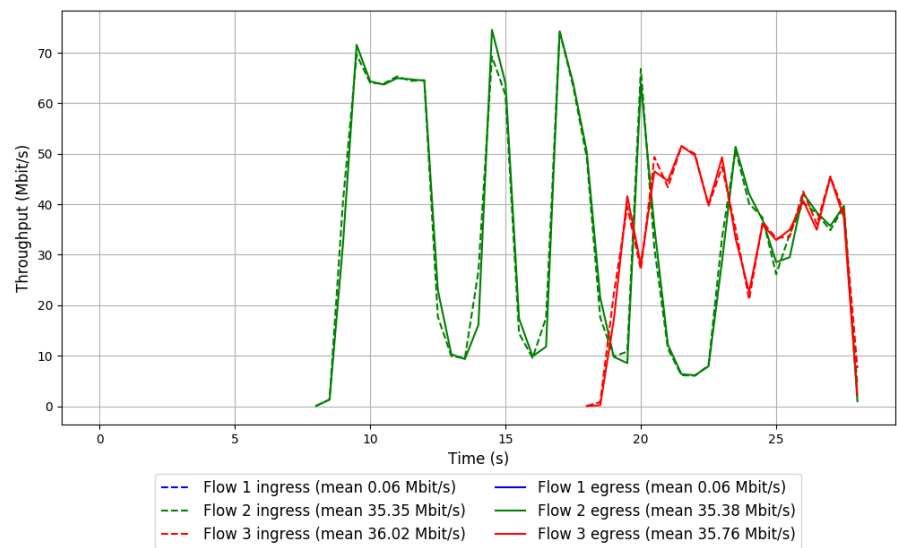
-- Flow 3:

Average throughput: 35.76 Mbit/s

95th percentile per-packet one-way delay: 50.416 ms

Loss rate: 1.70%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2017-08-12 07:42:53

End at: 2017-08-12 07:43:23

Below is generated by plot.py at 2017-08-12 12:00:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 33.70 Mbit/s

95th percentile per-packet one-way delay: 50.582 ms

Loss rate: 0.83%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.583 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 39.73 Mbit/s

95th percentile per-packet one-way delay: 48.693 ms

Loss rate: 0.50%

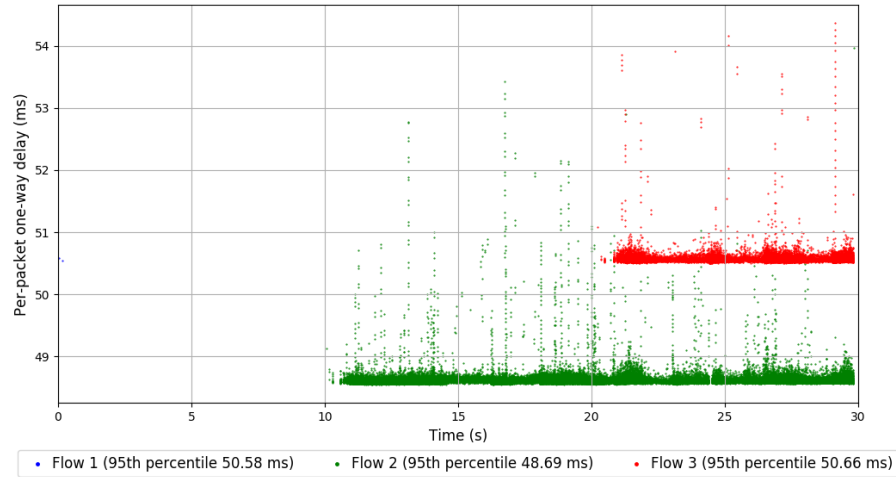
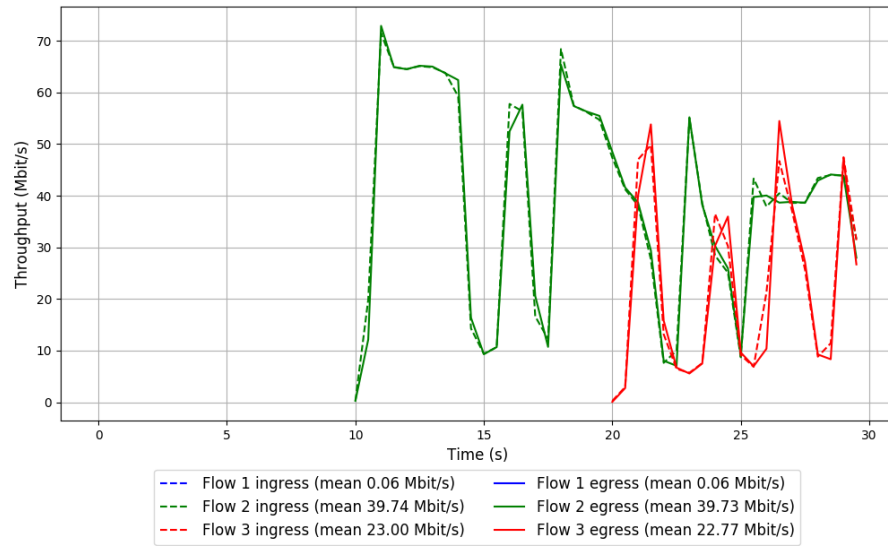
-- Flow 3:

Average throughput: 22.77 Mbit/s

95th percentile per-packet one-way delay: 50.658 ms

Loss rate: 1.99%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2017-08-12 07:54:55

End at: 2017-08-12 07:55:25

Below is generated by plot.py at 2017-08-12 12:00:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 37.81 Mbit/s

95th percentile per-packet one-way delay: 50.498 ms

Loss rate: 0.68%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.378 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 39.70 Mbit/s

95th percentile per-packet one-way delay: 48.695 ms

Loss rate: 0.49%

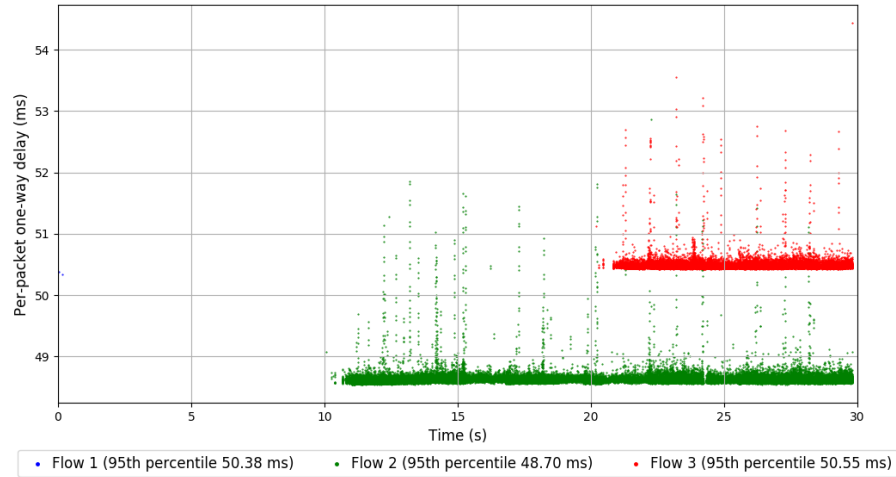
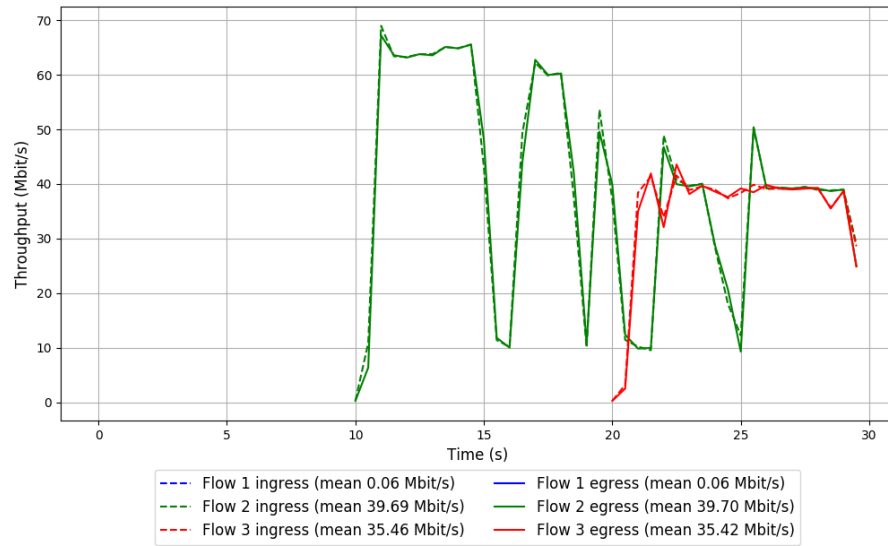
-- Flow 3:

Average throughput: 35.42 Mbit/s

95th percentile per-packet one-way delay: 50.553 ms

Loss rate: 1.12%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2017-08-12 08:06:49

End at: 2017-08-12 08:07:19

Below is generated by plot.py at 2017-08-12 12:00:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 37.03 Mbit/s

95th percentile per-packet one-way delay: 50.385 ms

Loss rate: 0.68%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.209 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 36.79 Mbit/s

95th percentile per-packet one-way delay: 50.207 ms

Loss rate: 0.53%

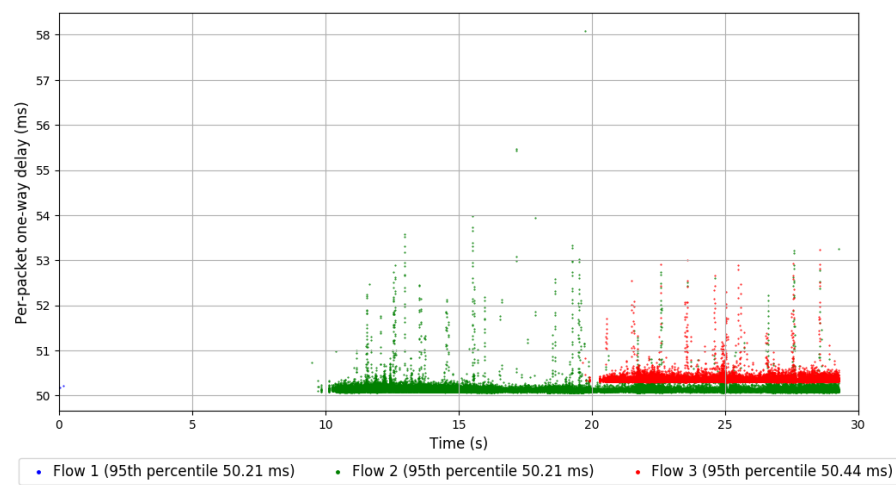
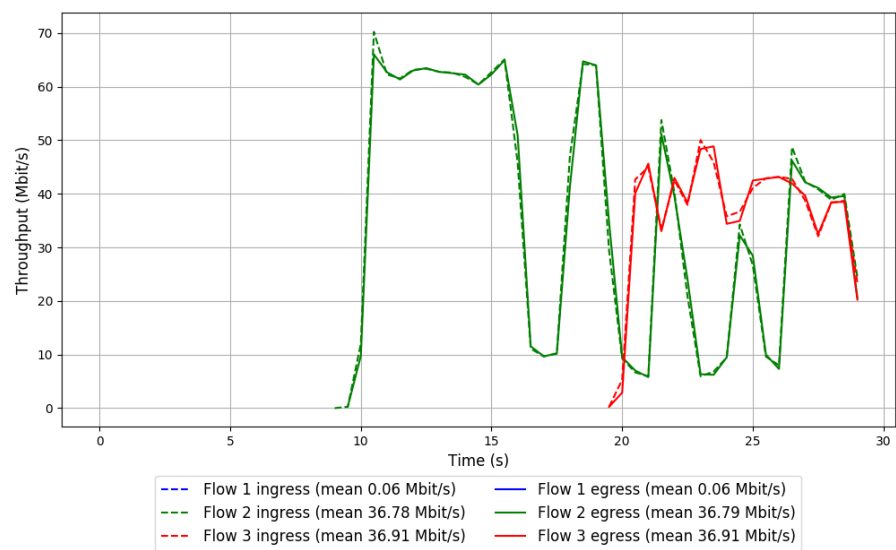
-- Flow 3:

Average throughput: 36.91 Mbit/s

95th percentile per-packet one-way delay: 50.442 ms

Loss rate: 0.99%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2017-08-12 08:18:20

End at: 2017-08-12 08:18:50

Below is generated by plot.py at 2017-08-12 12:00:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 38.19 Mbit/s

95th percentile per-packet one-way delay: 50.198 ms

Loss rate: 0.81%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.589 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 39.80 Mbit/s

95th percentile per-packet one-way delay: 49.381 ms

Loss rate: 0.79%

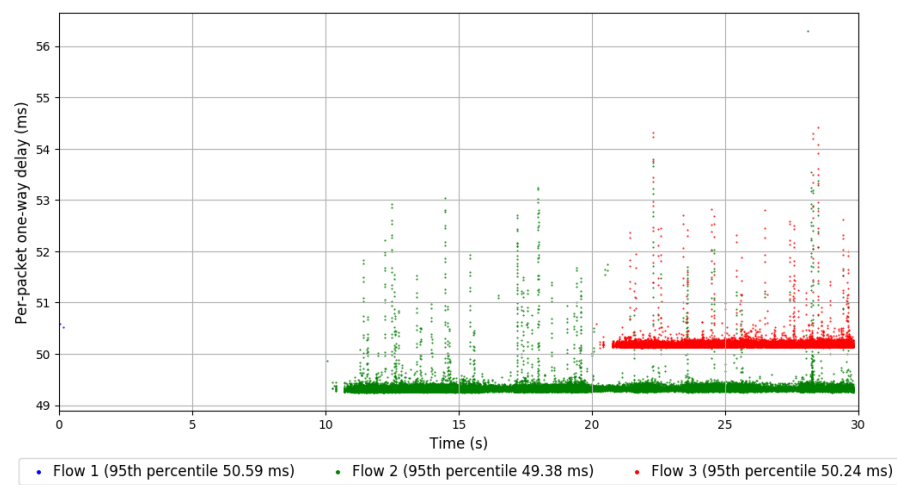
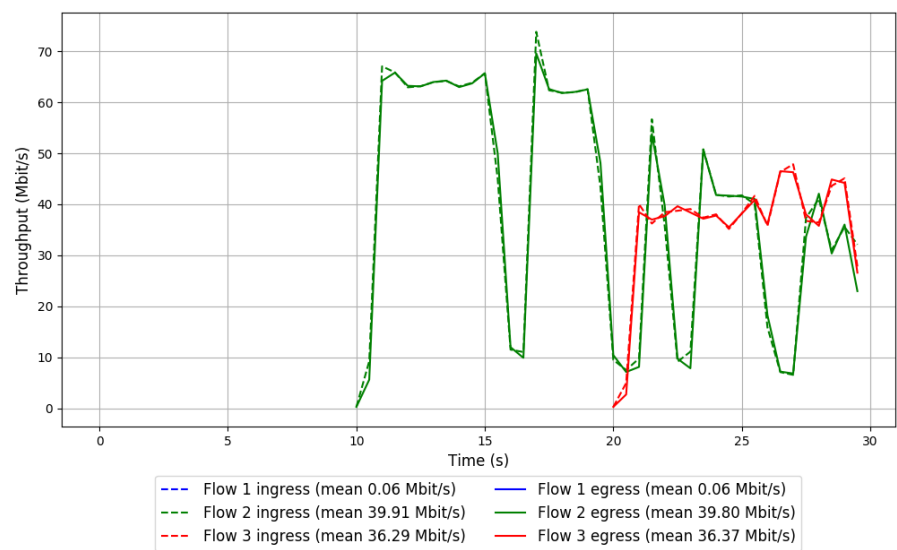
-- Flow 3:

Average throughput: 36.37 Mbit/s

95th percentile per-packet one-way delay: 50.239 ms

Loss rate: 0.85%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2017-08-12 08:30:07

End at: 2017-08-12 08:30:37

Below is generated by plot.py at 2017-08-12 12:00:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 38.53 Mbit/s

95th percentile per-packet one-way delay: 50.438 ms

Loss rate: 0.71%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.750 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 43.06 Mbit/s

95th percentile per-packet one-way delay: 50.332 ms

Loss rate: 0.60%

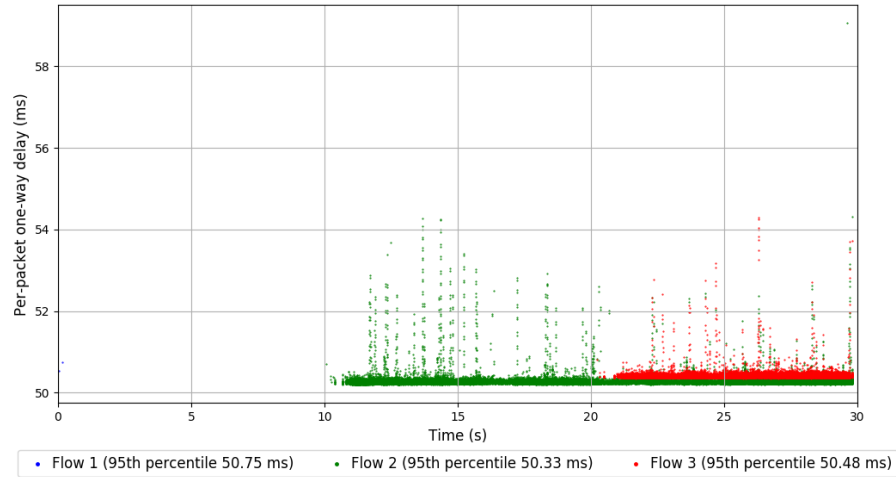
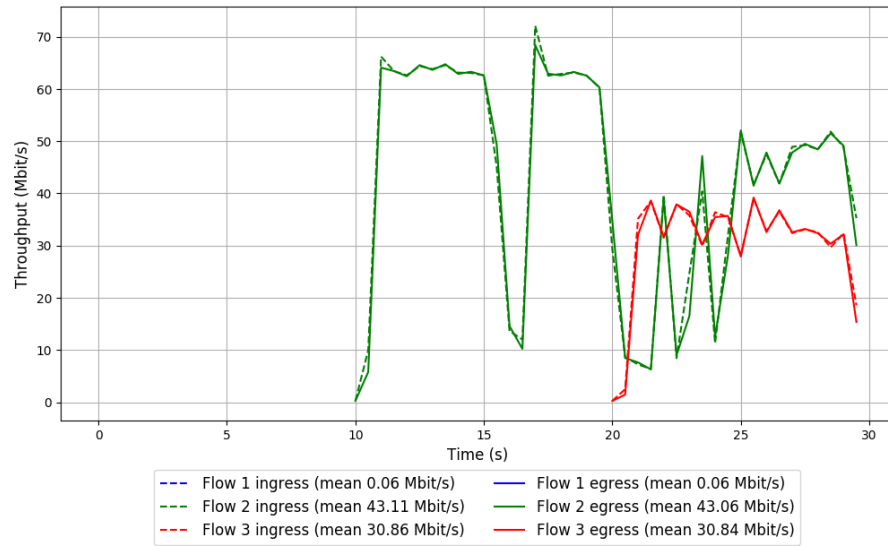
-- Flow 3:

Average throughput: 30.84 Mbit/s

95th percentile per-packet one-way delay: 50.480 ms

Loss rate: 1.04%

Run 9: Report of QUIC Cubic — Data Link

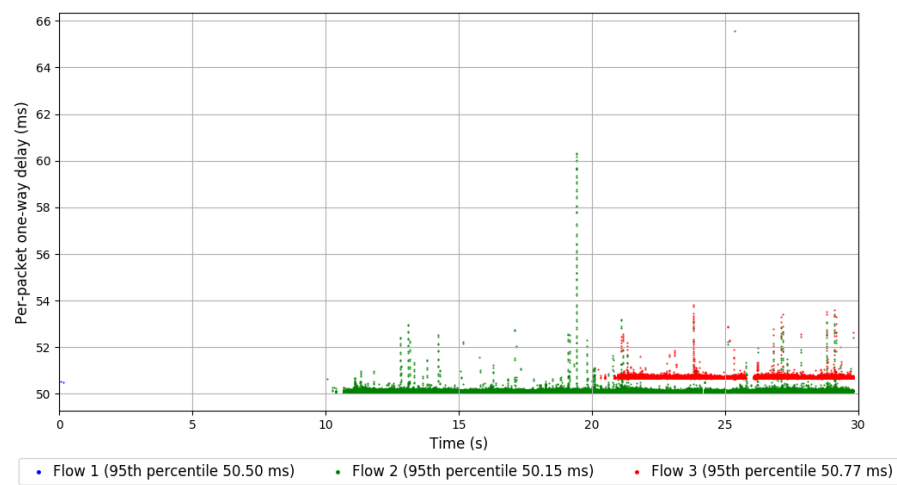
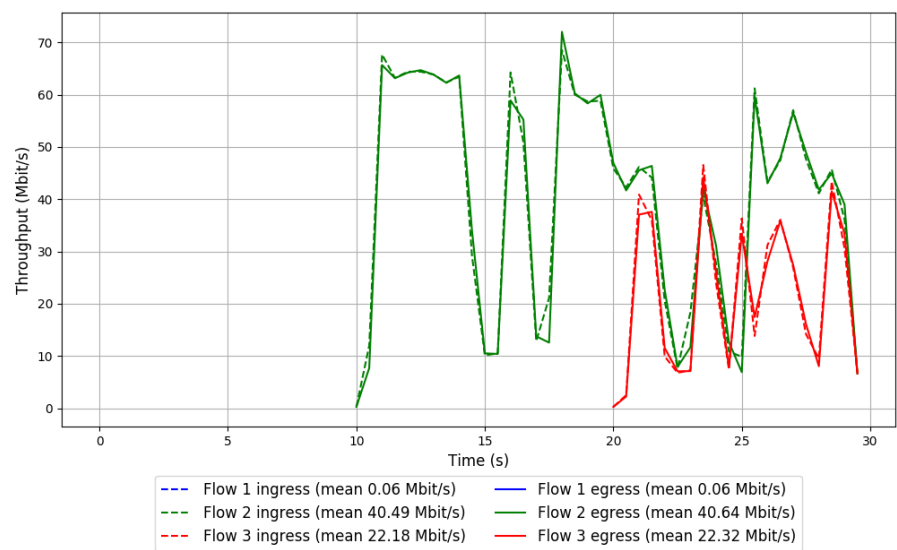


```
Run 10: Statistics of QUIC Cubic

Start at: 2017-08-12 08:42:00
End at: 2017-08-12 08:42:30

# Below is generated by plot.py at 2017-08-12 12:00:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 34.16 Mbit/s
95th percentile per-packet one-way delay: 50.712 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 50.498 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 40.64 Mbit/s
95th percentile per-packet one-way delay: 50.153 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 22.32 Mbit/s
95th percentile per-packet one-way delay: 50.769 ms
Loss rate: 0.39%
```


Run 10: Report of QUIC Cubic — Data Link



Run 1: Statistics of Saturator

Start at: 2017-08-12 06:52:26

End at: 2017-08-12 06:52:56

Below is generated by plot.py at 2017-08-12 12:00:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 32.19 Mbit/s

95th percentile per-packet one-way delay: 50.680 ms

Loss rate: 2.87%

-- Flow 1:

Average throughput: 23.78 Mbit/s

95th percentile per-packet one-way delay: 50.692 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 6.11 Mbit/s

95th percentile per-packet one-way delay: 50.671 ms

Loss rate: 47.24%

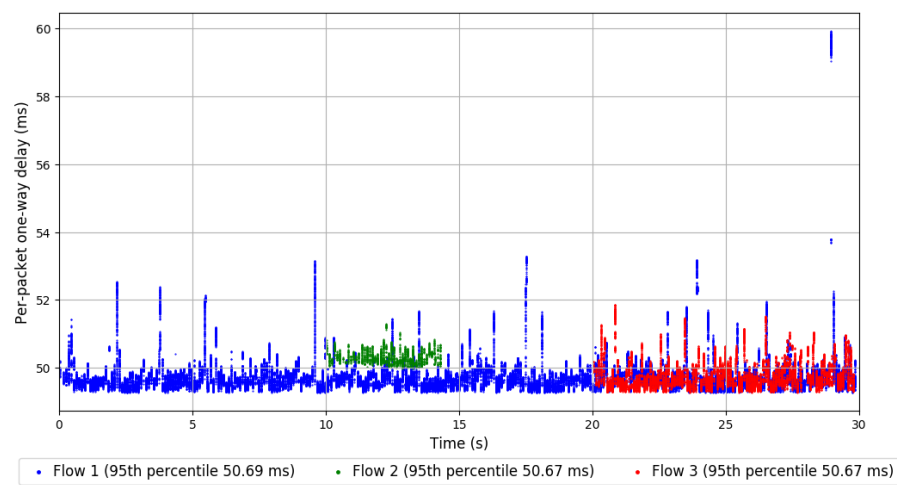
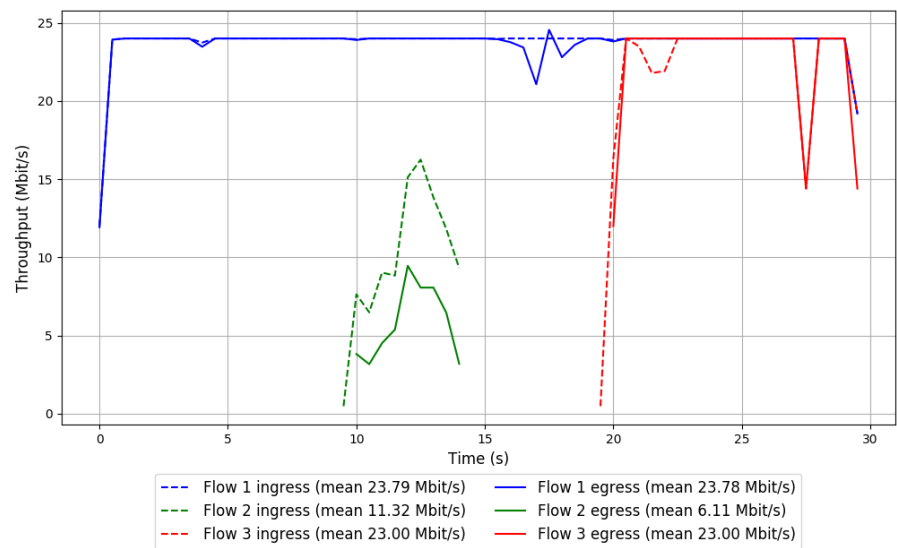
-- Flow 3:

Average throughput: 23.00 Mbit/s

95th percentile per-packet one-way delay: 50.670 ms

Loss rate: 1.06%

Run 1: Report of Saturator — Data Link



Run 2: Statistics of Saturator

Start at: 2017-08-12 07:04:10

End at: 2017-08-12 07:04:40

Below is generated by plot.py at 2017-08-12 12:00:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.52 Mbit/s

95th percentile per-packet one-way delay: 50.694 ms

Loss rate: 49.16%

-- Flow 1:

Average throughput: 3.89 Mbit/s

95th percentile per-packet one-way delay: 50.687 ms

Loss rate: 53.11%

-- Flow 2:

Average throughput: 5.08 Mbit/s

95th percentile per-packet one-way delay: 50.703 ms

Loss rate: 48.72%

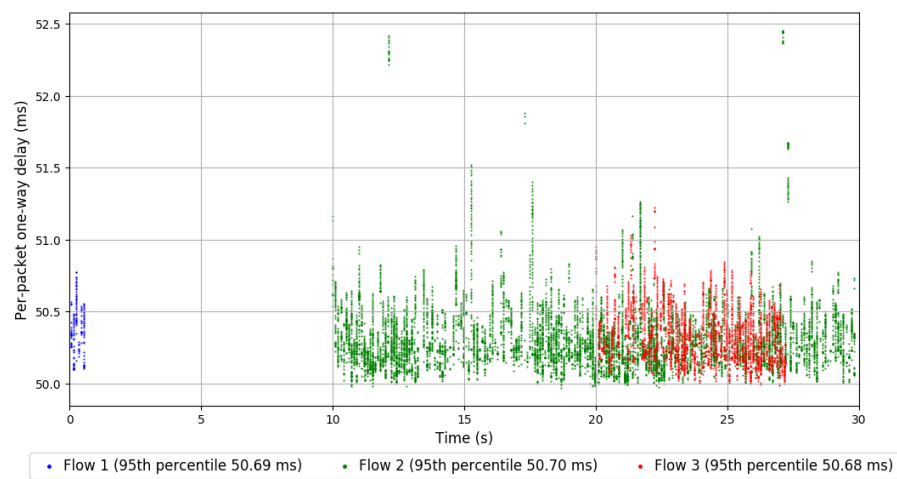
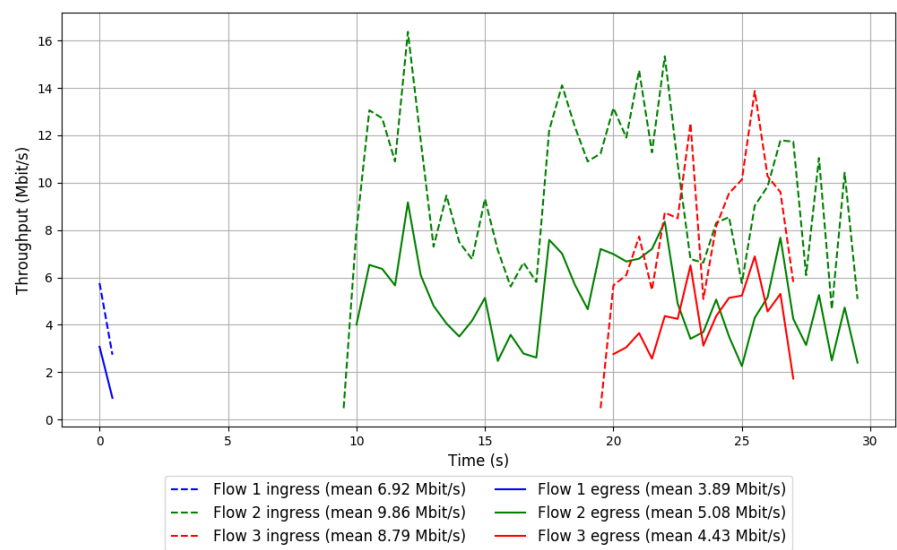
-- Flow 3:

Average throughput: 4.43 Mbit/s

95th percentile per-packet one-way delay: 50.680 ms

Loss rate: 50.27%

Run 2: Report of Saturator — Data Link



Run 3: Statistics of Saturator

Start at: 2017-08-12 07:15:37

End at: 2017-08-12 07:16:07

Below is generated by plot.py at 2017-08-12 12:00:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 46.41 Mbit/s

95th percentile per-packet one-way delay: 51.469 ms

Loss rate: 0.54%

-- Flow 1:

Average throughput: 23.42 Mbit/s

95th percentile per-packet one-way delay: 51.414 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 23.13 Mbit/s

95th percentile per-packet one-way delay: 51.533 ms

Loss rate: 0.52%

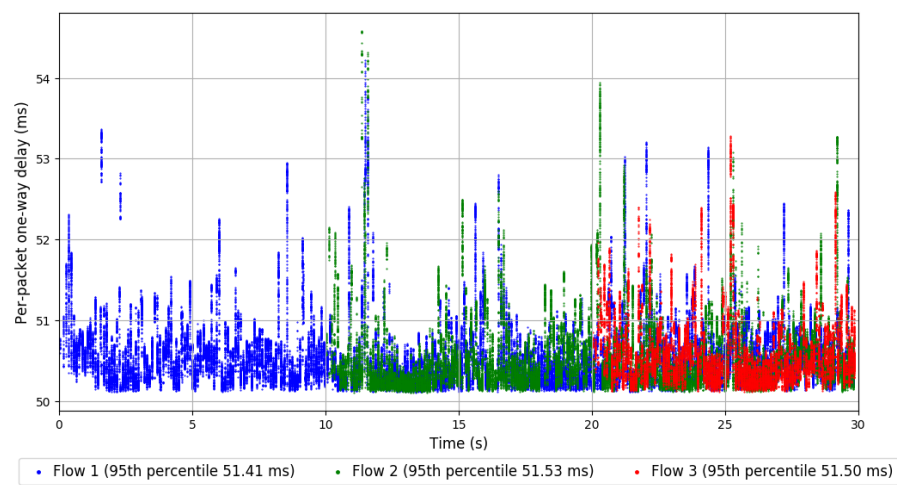
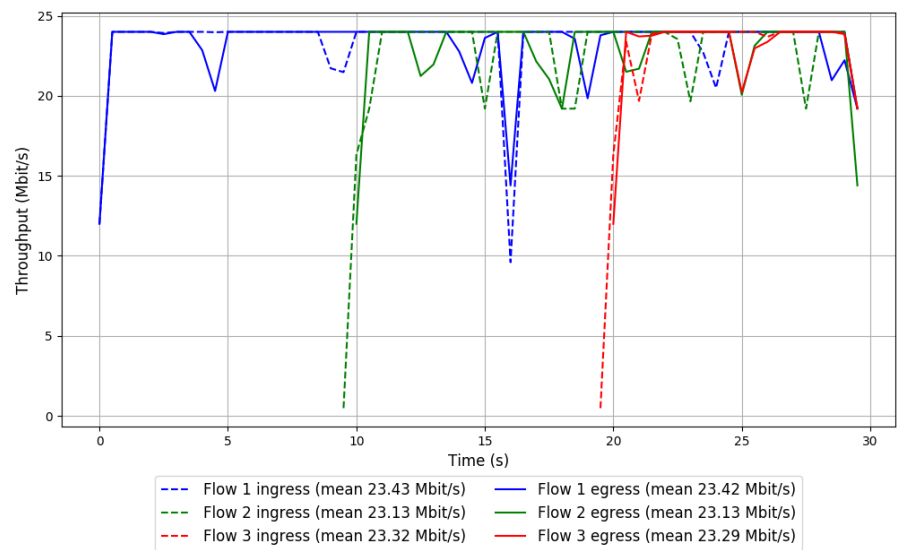
-- Flow 3:

Average throughput: 23.29 Mbit/s

95th percentile per-packet one-way delay: 51.503 ms

Loss rate: 1.18%

Run 3: Report of Saturator — Data Link



Run 4: Statistics of Saturator

Start at: 2017-08-12 07:27:10

End at: 2017-08-12 07:27:40

Below is generated by plot.py at 2017-08-12 12:01:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 46.84 Mbit/s

95th percentile per-packet one-way delay: 51.288 ms

Loss rate: 0.60%

-- Flow 1:

Average throughput: 23.64 Mbit/s

95th percentile per-packet one-way delay: 51.356 ms

Loss rate: 0.34%

-- Flow 2:

Average throughput: 23.44 Mbit/s

95th percentile per-packet one-way delay: 51.331 ms

Loss rate: 0.54%

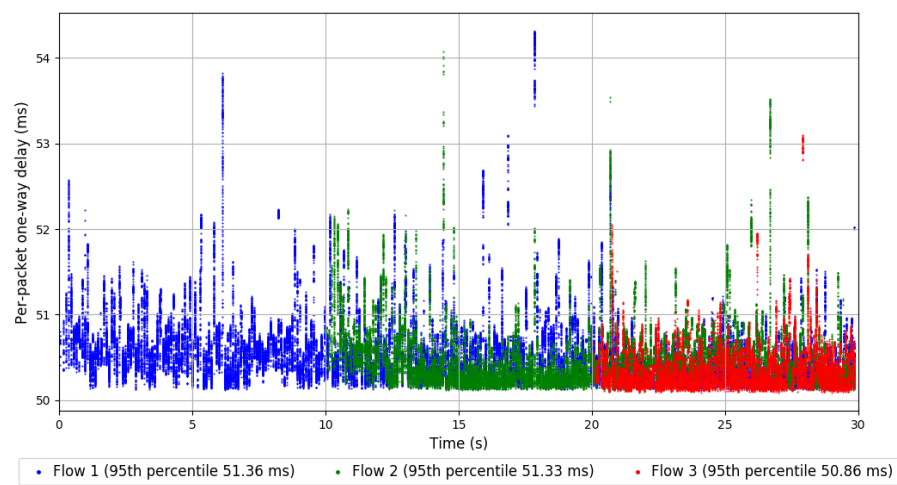
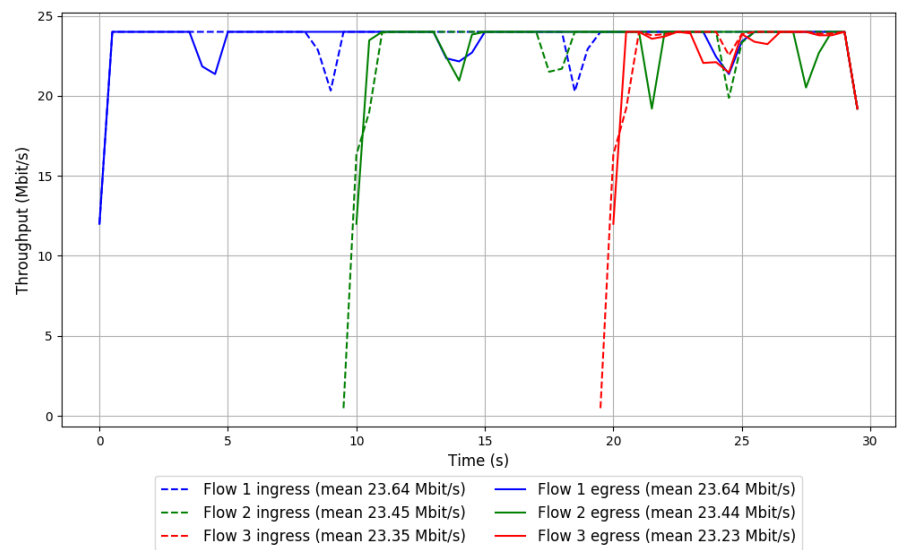
-- Flow 3:

Average throughput: 23.23 Mbit/s

95th percentile per-packet one-way delay: 50.858 ms

Loss rate: 1.51%

Run 4: Report of Saturator — Data Link



Run 5: Statistics of Saturator

Start at: 2017-08-12 07:39:06

End at: 2017-08-12 07:39:36

Below is generated by plot.py at 2017-08-12 12:01:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 25.37 Mbit/s

95th percentile per-packet one-way delay: 51.438 ms

Loss rate: 0.97%

-- Flow 1:

Average throughput: 23.22 Mbit/s

95th percentile per-packet one-way delay: 51.422 ms

Loss rate: 0.66%

-- Flow 2:

Average throughput: 23.08 Mbit/s

95th percentile per-packet one-way delay: 51.552 ms

Loss rate: 1.63%

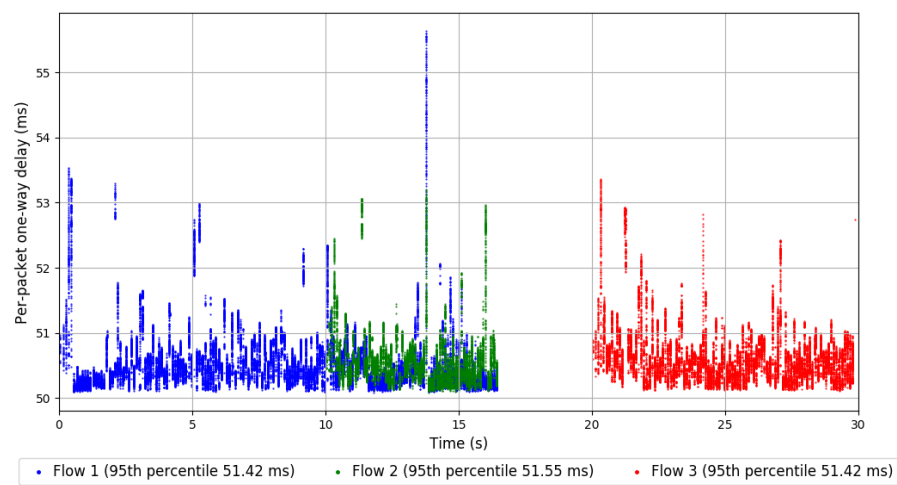
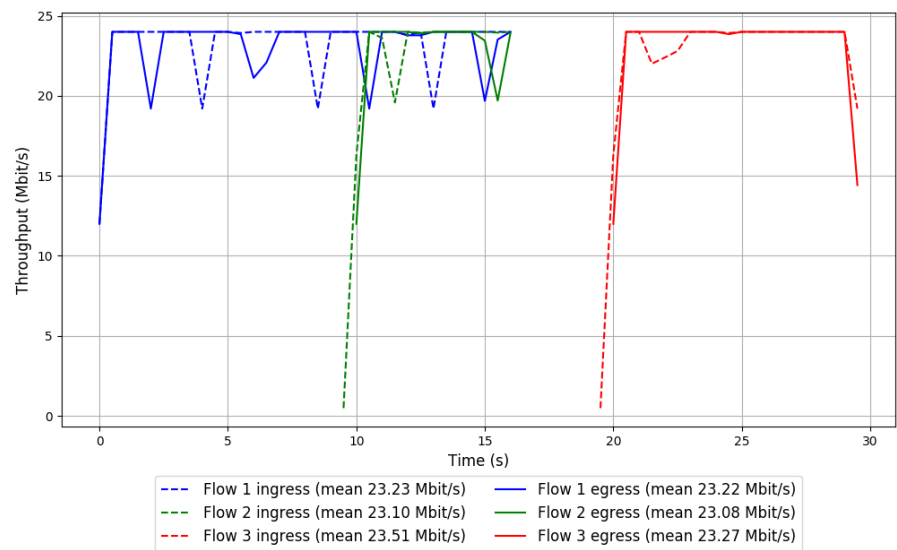
-- Flow 3:

Average throughput: 23.27 Mbit/s

95th percentile per-packet one-way delay: 51.418 ms

Loss rate: 1.05%

Run 5: Report of Saturator — Data Link



Run 6: Statistics of Saturator

Start at: 2017-08-12 07:51:06

End at: 2017-08-12 07:51:36

Below is generated by plot.py at 2017-08-12 12:01:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 46.41 Mbit/s

95th percentile per-packet one-way delay: 51.652 ms

Loss rate: 0.60%

-- Flow 1:

Average throughput: 23.18 Mbit/s

95th percentile per-packet one-way delay: 51.588 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 23.53 Mbit/s

95th percentile per-packet one-way delay: 51.641 ms

Loss rate: 0.52%

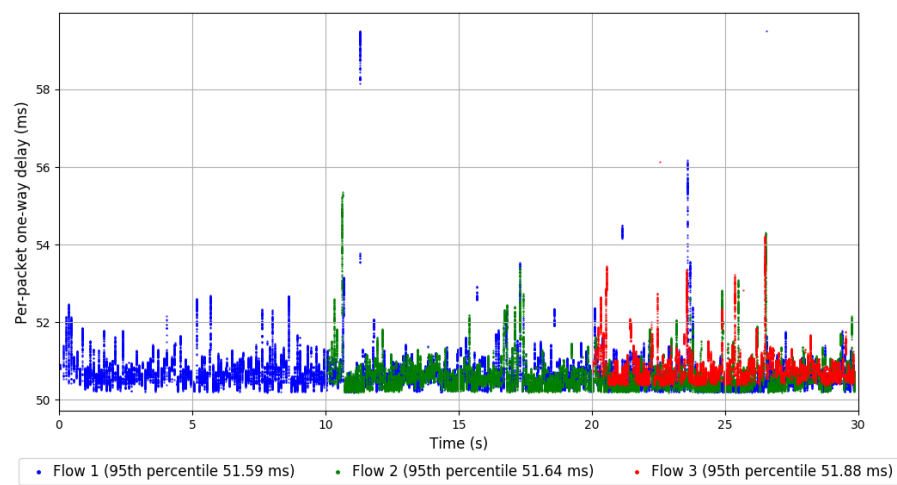
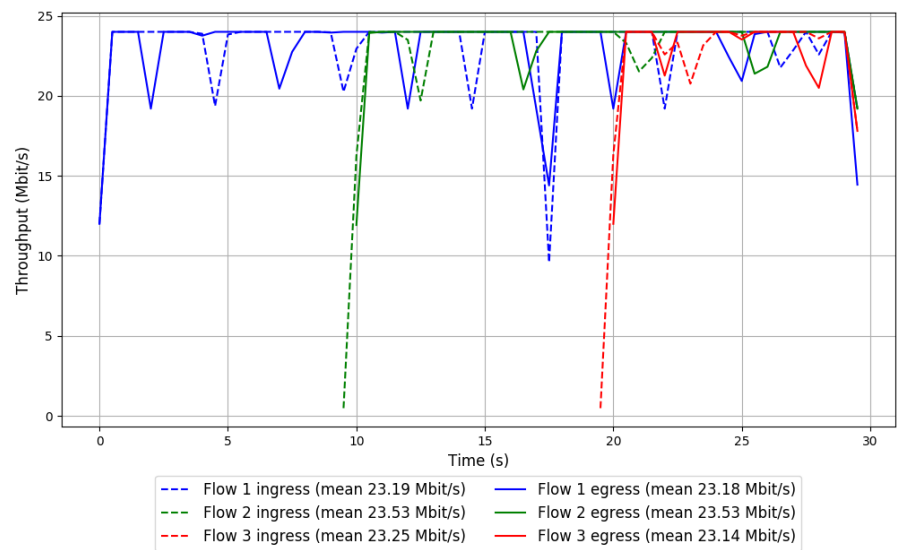
-- Flow 3:

Average throughput: 23.14 Mbit/s

95th percentile per-packet one-way delay: 51.875 ms

Loss rate: 1.48%

Run 6: Report of Saturator — Data Link



Run 7: Statistics of Saturator

Start at: 2017-08-12 08:03:00

End at: 2017-08-12 08:03:30

Below is generated by plot.py at 2017-08-12 12:01:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 46.94 Mbit/s

95th percentile per-packet one-way delay: 51.601 ms

Loss rate: 0.55%

-- Flow 1:

Average throughput: 23.76 Mbit/s

95th percentile per-packet one-way delay: 51.785 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 23.38 Mbit/s

95th percentile per-packet one-way delay: 51.401 ms

Loss rate: 0.57%

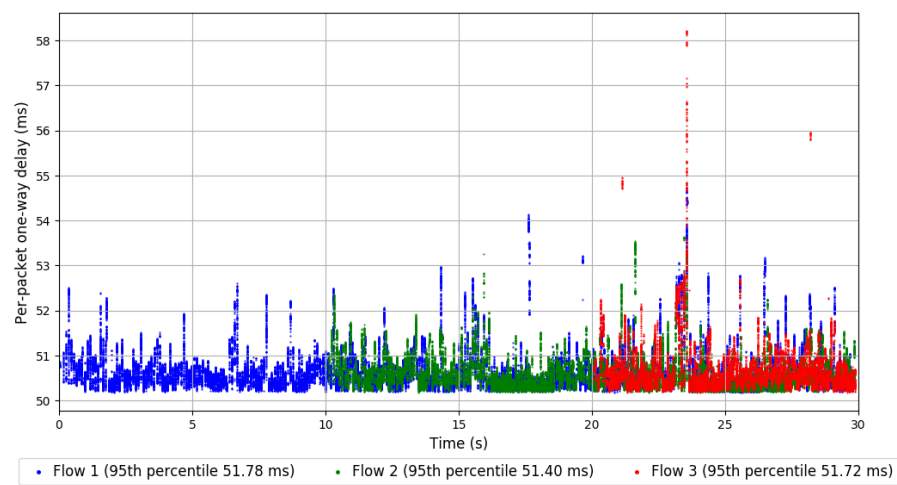
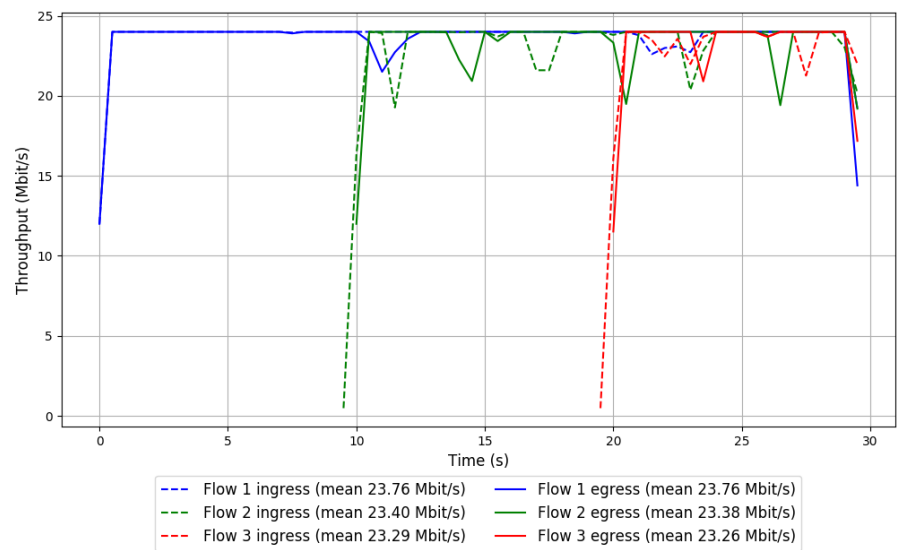
-- Flow 3:

Average throughput: 23.26 Mbit/s

95th percentile per-packet one-way delay: 51.722 ms

Loss rate: 1.16%

Run 7: Report of Saturator — Data Link



Run 8: Statistics of Saturator

Start at: 2017-08-12 08:14:43

End at: 2017-08-12 08:15:13

Below is generated by plot.py at 2017-08-12 12:01:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 46.69 Mbit/s

95th percentile per-packet one-way delay: 51.433 ms

Loss rate: 0.53%

-- Flow 1:

Average throughput: 23.53 Mbit/s

95th percentile per-packet one-way delay: 51.318 ms

Loss rate: 0.34%

-- Flow 2:

Average throughput: 23.36 Mbit/s

95th percentile per-packet one-way delay: 51.437 ms

Loss rate: 0.53%

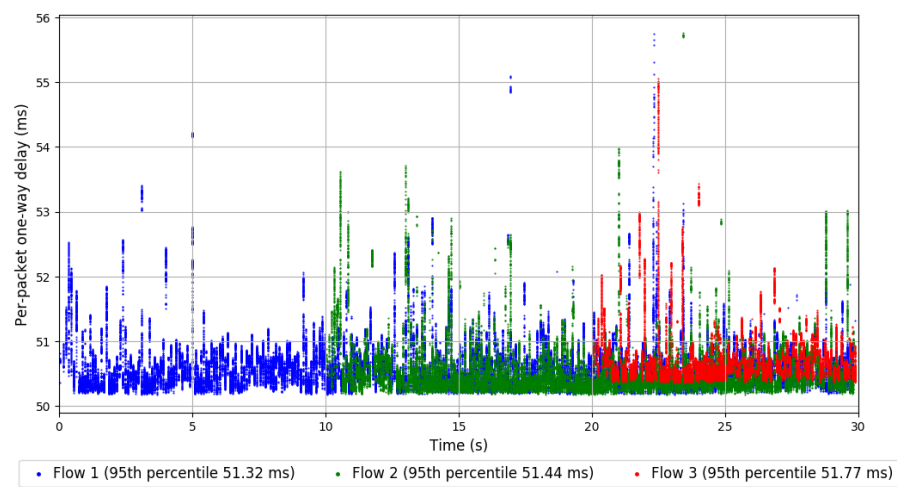
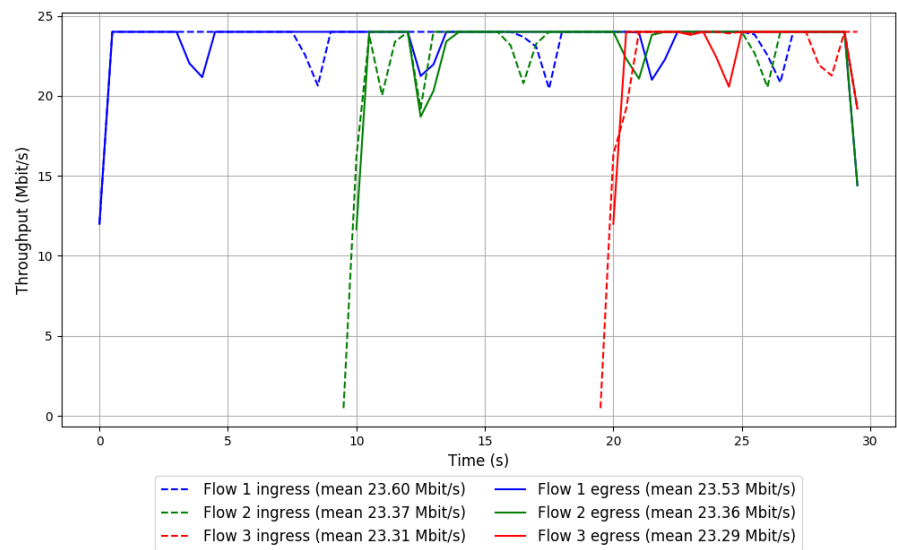
-- Flow 3:

Average throughput: 23.29 Mbit/s

95th percentile per-packet one-way delay: 51.765 ms

Loss rate: 1.08%

Run 8: Report of Saturator — Data Link



Run 9: Statistics of Saturator

Start at: 2017-08-12 08:26:19

End at: 2017-08-12 08:26:49

Below is generated by plot.py at 2017-08-12 12:01:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 46.58 Mbit/s

95th percentile per-packet one-way delay: 51.543 ms

Loss rate: 0.61%

-- Flow 1:

Average throughput: 23.51 Mbit/s

95th percentile per-packet one-way delay: 51.560 ms

Loss rate: 0.34%

-- Flow 2:

Average throughput: 23.43 Mbit/s

95th percentile per-packet one-way delay: 51.621 ms

Loss rate: 0.52%

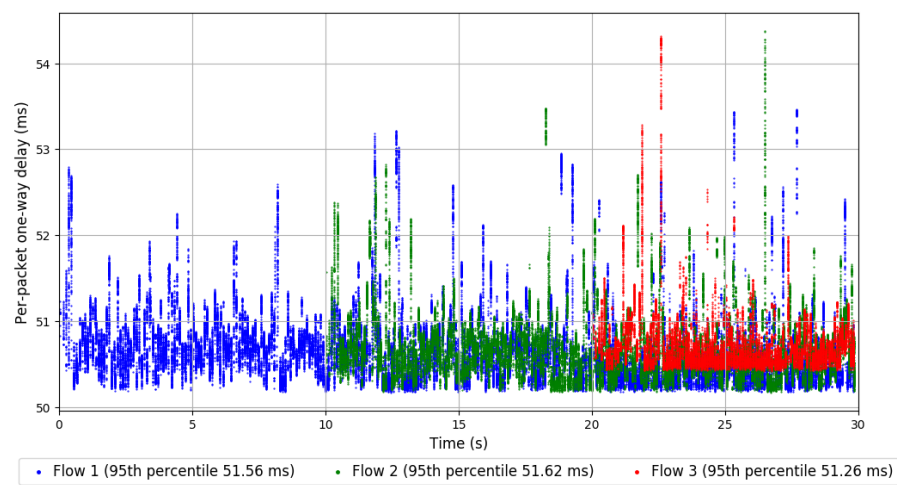
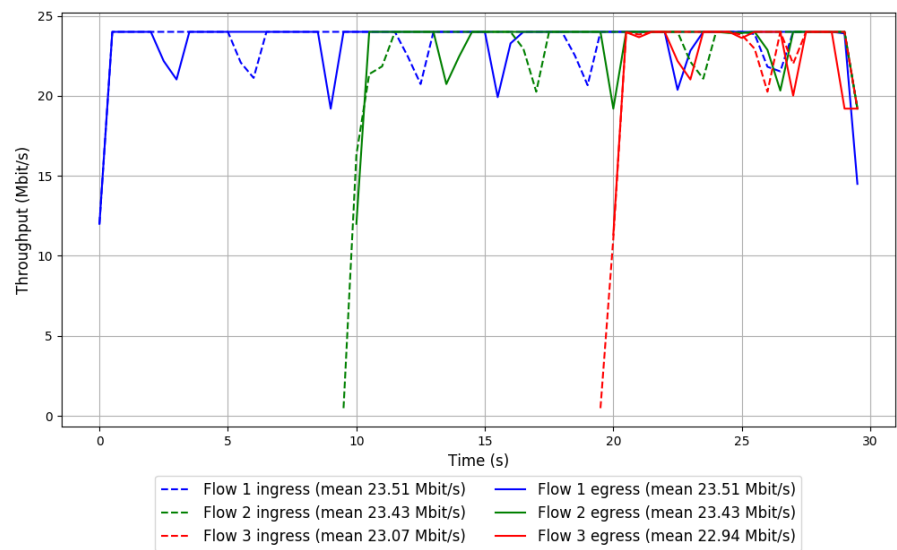
-- Flow 3:

Average throughput: 22.94 Mbit/s

95th percentile per-packet one-way delay: 51.262 ms

Loss rate: 1.62%

Run 9: Report of Saturator — Data Link



Run 10: Statistics of Saturator

Start at: 2017-08-12 08:38:11

End at: 2017-08-12 08:38:41

Below is generated by plot.py at 2017-08-12 12:01:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 46.27 Mbit/s

95th percentile per-packet one-way delay: 51.605 ms

Loss rate: 0.70%

-- Flow 1:

Average throughput: 23.35 Mbit/s

95th percentile per-packet one-way delay: 51.629 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 23.02 Mbit/s

95th percentile per-packet one-way delay: 51.683 ms

Loss rate: 1.02%

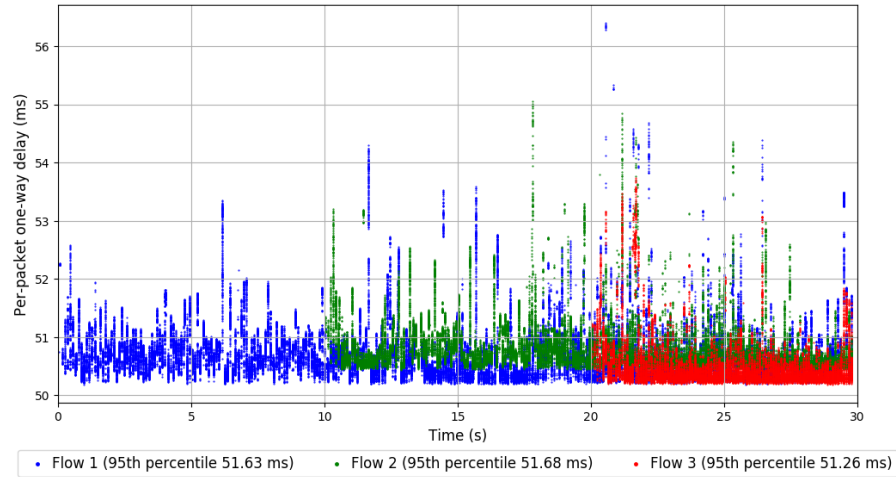
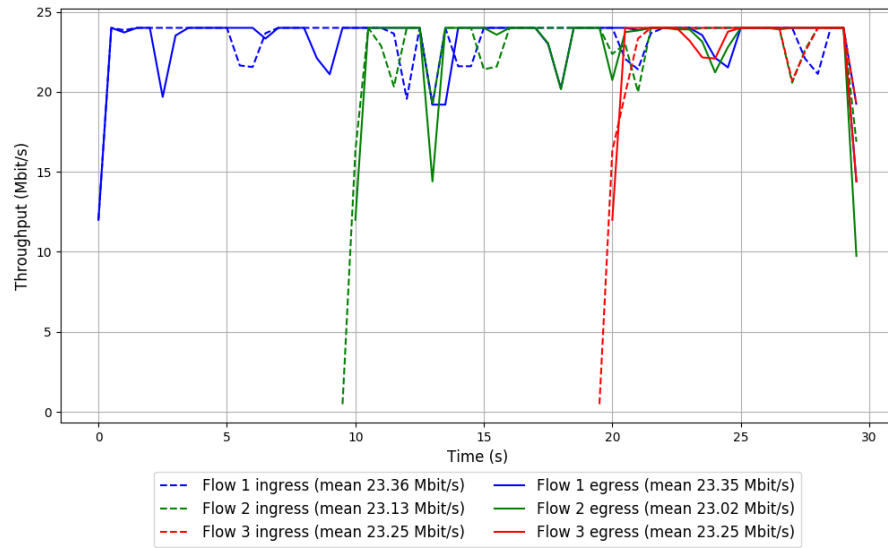
-- Flow 3:

Average throughput: 23.25 Mbit/s

95th percentile per-packet one-way delay: 51.255 ms

Loss rate: 1.05%

Run 10: Report of Saturator — Data Link

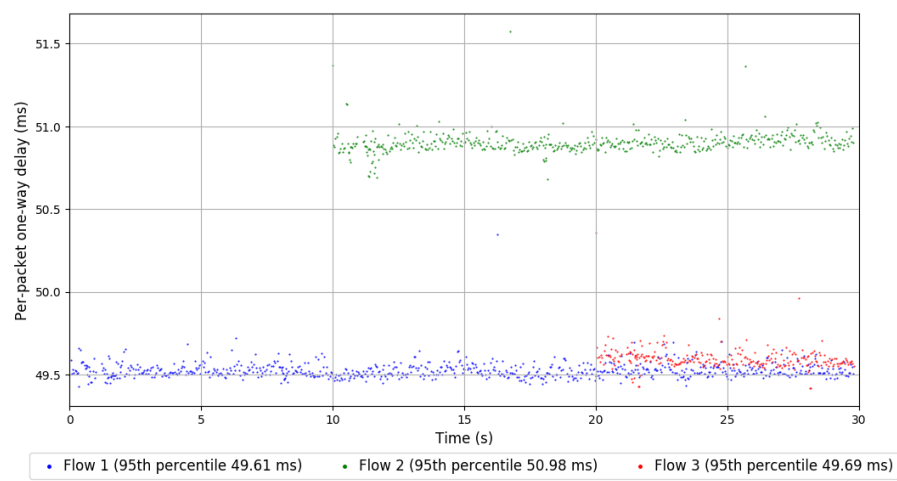
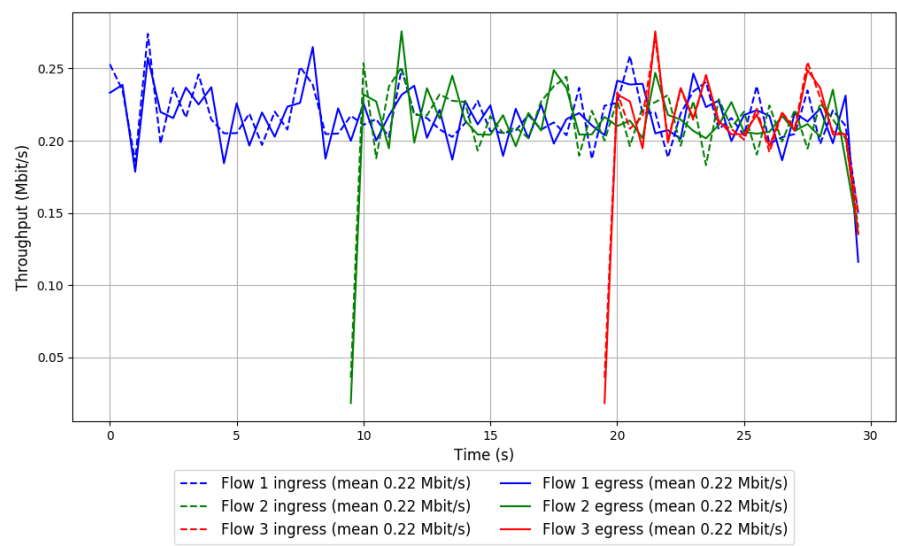


```
Run 1: Statistics of SCReAM

Start at: 2017-08-12 06:49:46
End at: 2017-08-12 06:50:16

# Below is generated by plot.py at 2017-08-12 12:01:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.941 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.607 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.976 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.694 ms
Loss rate: 0.74%
```

Run 1: Report of SReAM — Data Link

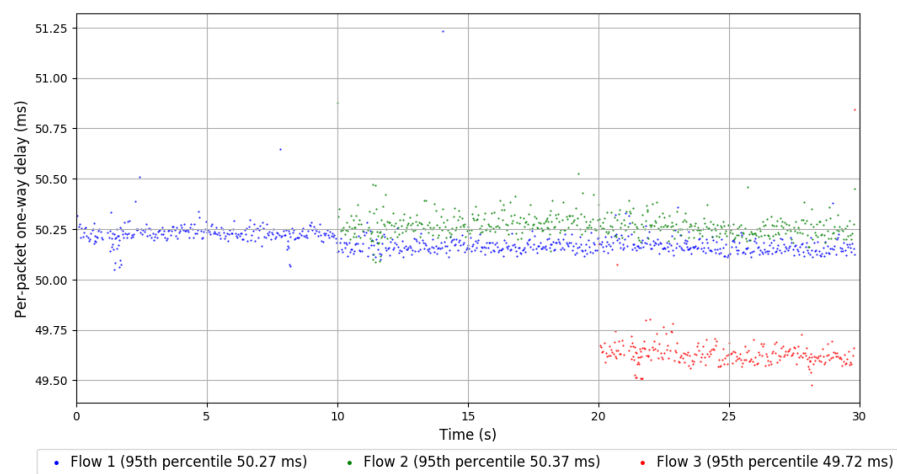
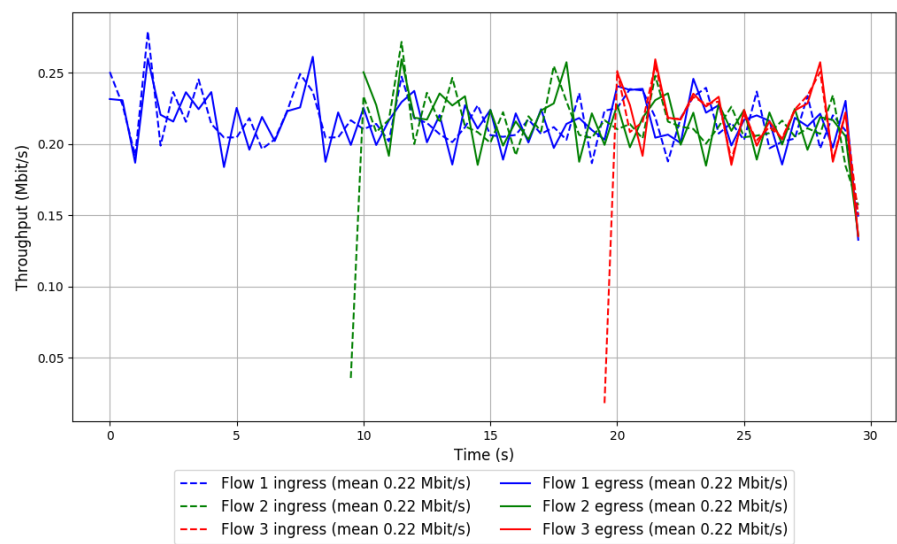


```
Run 2: Statistics of SReAM

Start at: 2017-08-12 07:01:40
End at: 2017-08-12 07:02:10

# Below is generated by plot.py at 2017-08-12 12:01:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.323 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.265 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.366 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.719 ms
Loss rate: 0.74%
```


Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2017-08-12 07:13:05

End at: 2017-08-12 07:13:35

Below is generated by plot.py at 2017-08-12 12:01:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 50.573 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.581 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.568 ms

Loss rate: 0.42%

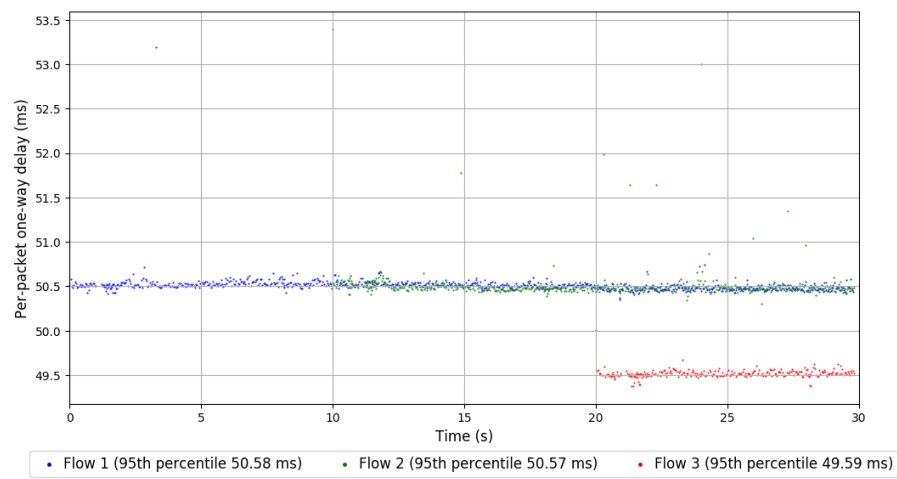
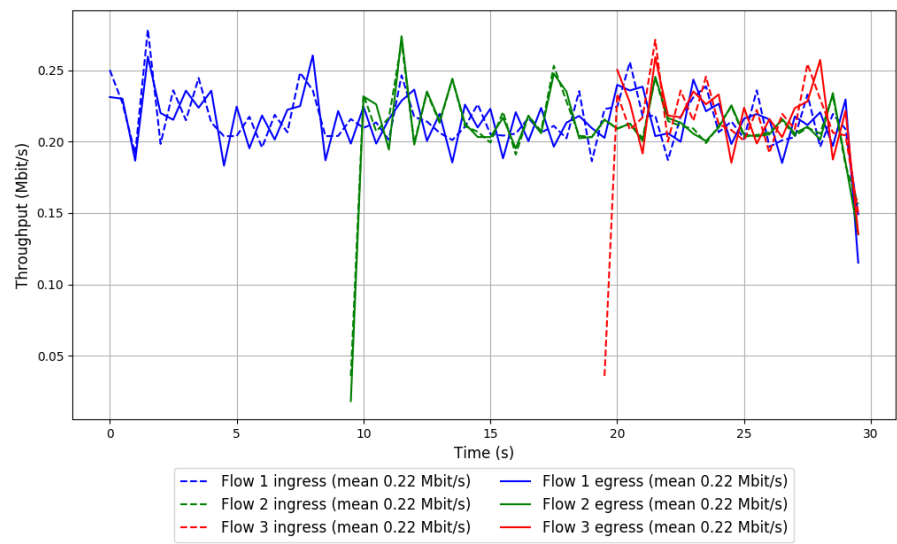
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 49.594 ms

Loss rate: 0.74%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SReAM

Start at: 2017-08-12 07:24:38

End at: 2017-08-12 07:25:08

Below is generated by plot.py at 2017-08-12 12:01:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 50.299 ms

Loss rate: 0.39%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 49.565 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 48.964 ms

Loss rate: 0.42%

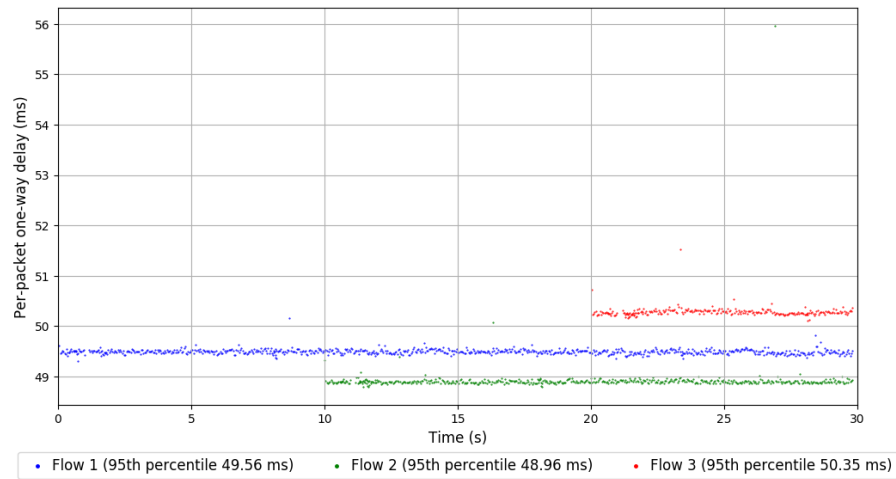
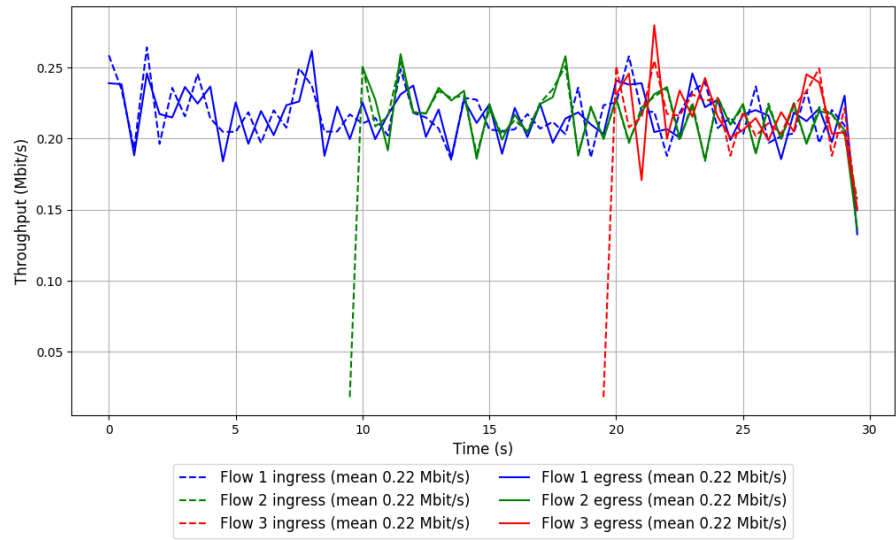
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.355 ms

Loss rate: 0.74%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2017-08-12 07:36:34

End at: 2017-08-12 07:37:04

Below is generated by plot.py at 2017-08-12 12:01:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 50.678 ms

Loss rate: 0.39%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 49.623 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.710 ms

Loss rate: 0.42%

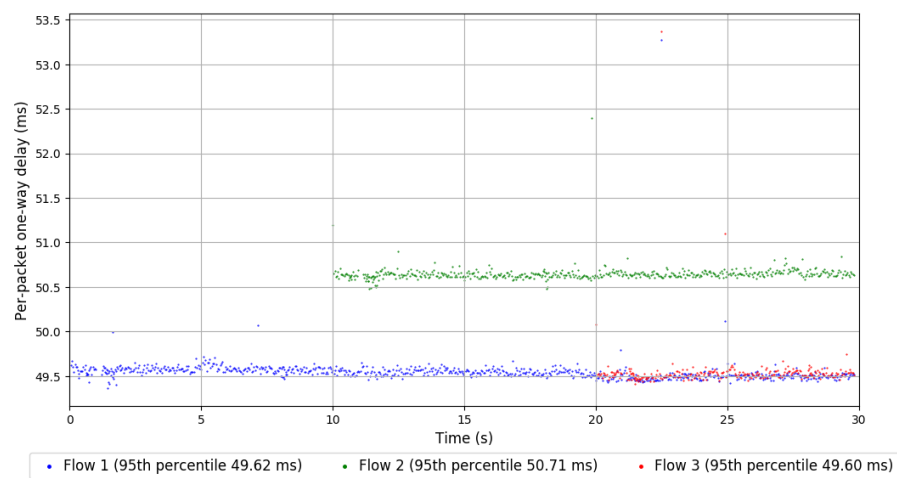
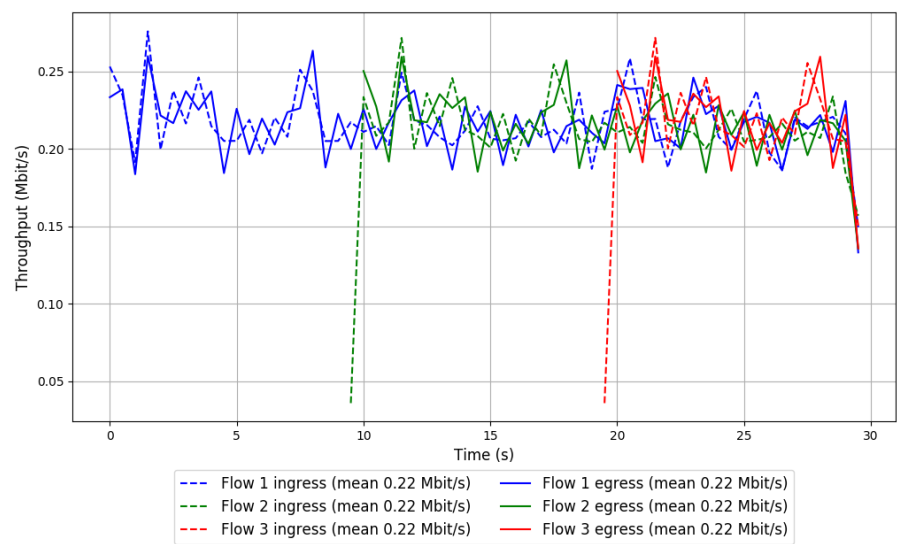
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 49.601 ms

Loss rate: 0.74%

Run 5: Report of SReAM — Data Link



Run 6: Statistics of SCReAM

Start at: 2017-08-12 07:48:34

End at: 2017-08-12 07:49:04

Below is generated by plot.py at 2017-08-12 12:01:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 50.649 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.221 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.669 ms

Loss rate: 0.42%

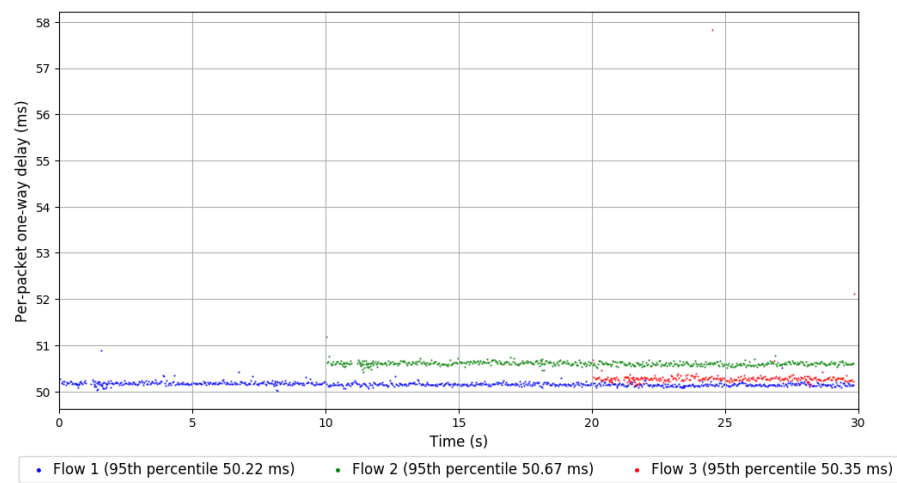
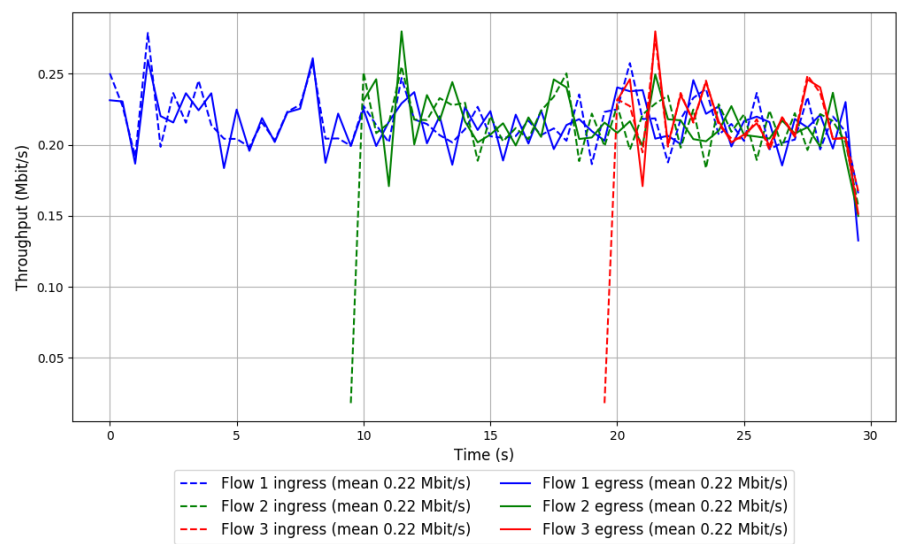
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.354 ms

Loss rate: 0.74%

Run 6: Report of SReAM — Data Link



Run 7: Statistics of SReAM

Start at: 2017-08-12 08:00:28

End at: 2017-08-12 08:00:58

Below is generated by plot.py at 2017-08-12 12:01:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 50.605 ms

Loss rate: 0.39%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.639 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.357 ms

Loss rate: 0.42%

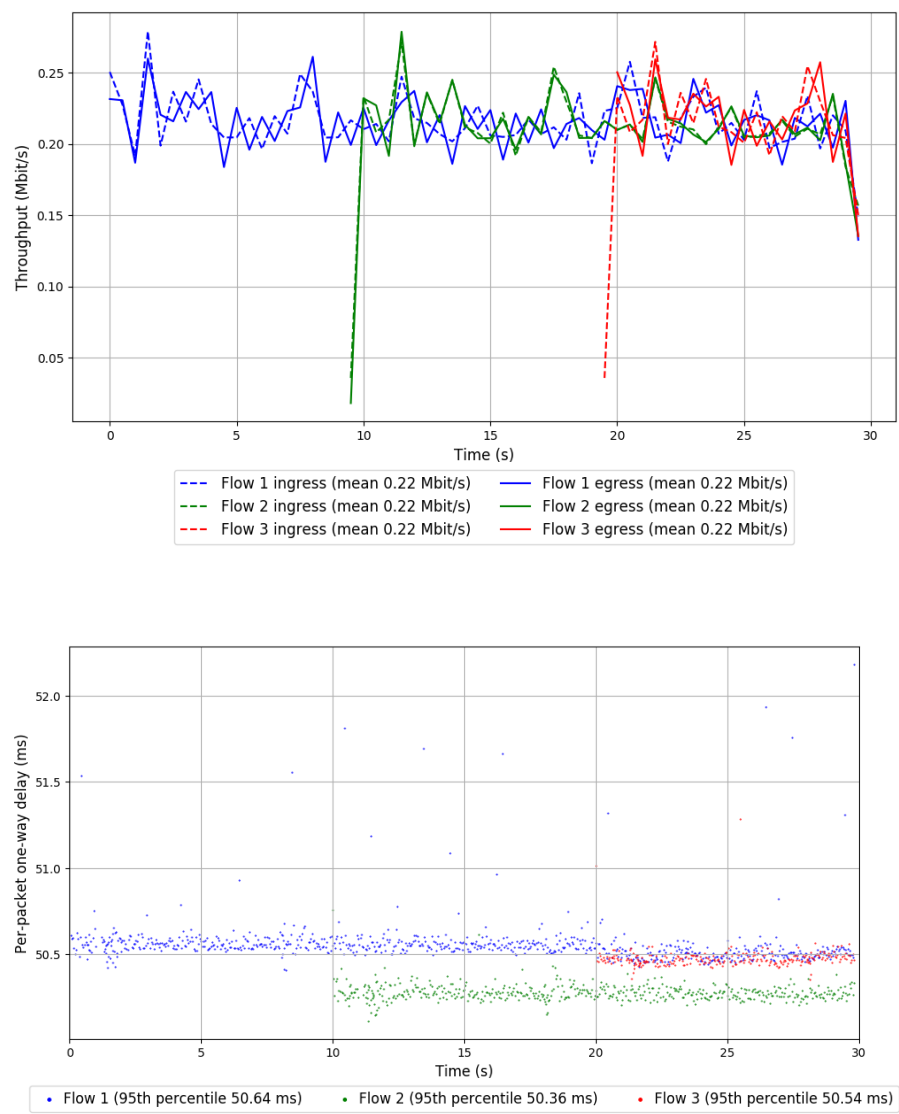
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.537 ms

Loss rate: 0.74%

Run 7: Report of SReAM — Data Link



Run 8: Statistics of SReAM

Start at: 2017-08-12 08:12:19

End at: 2017-08-12 08:12:49

Below is generated by plot.py at 2017-08-12 12:01:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 50.675 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 49.720 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.671 ms

Loss rate: 0.42%

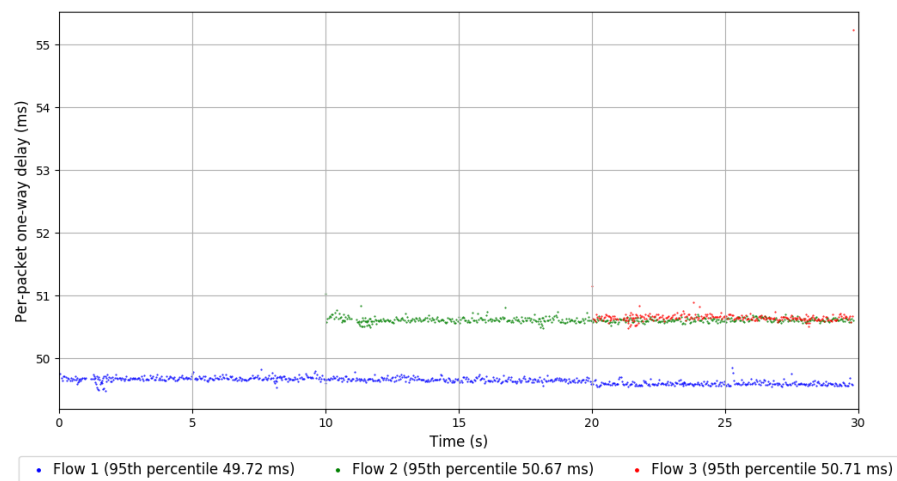
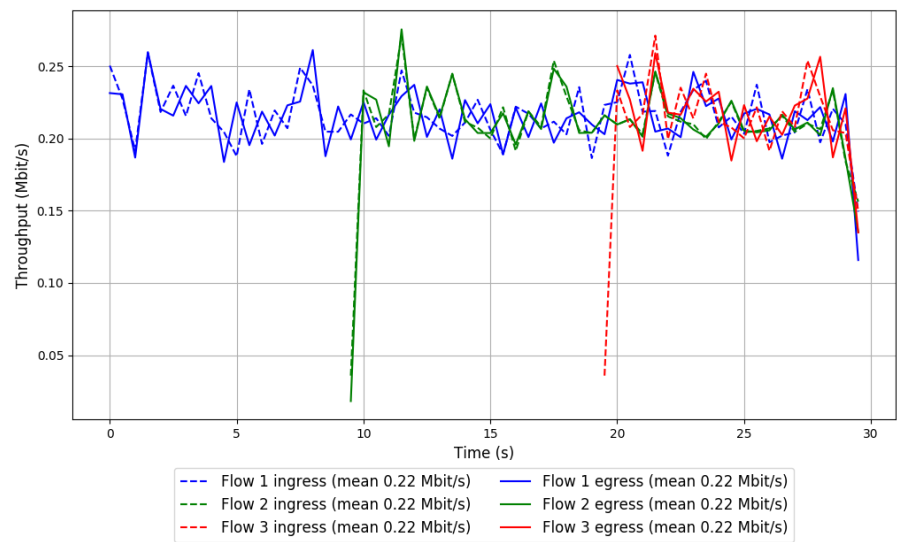
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.709 ms

Loss rate: 0.74%

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SReAM

Start at: 2017-08-12 08:23:47

End at: 2017-08-12 08:24:17

Below is generated by plot.py at 2017-08-12 12:01:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 50.597 ms

Loss rate: 0.39%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.615 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.237 ms

Loss rate: 0.42%

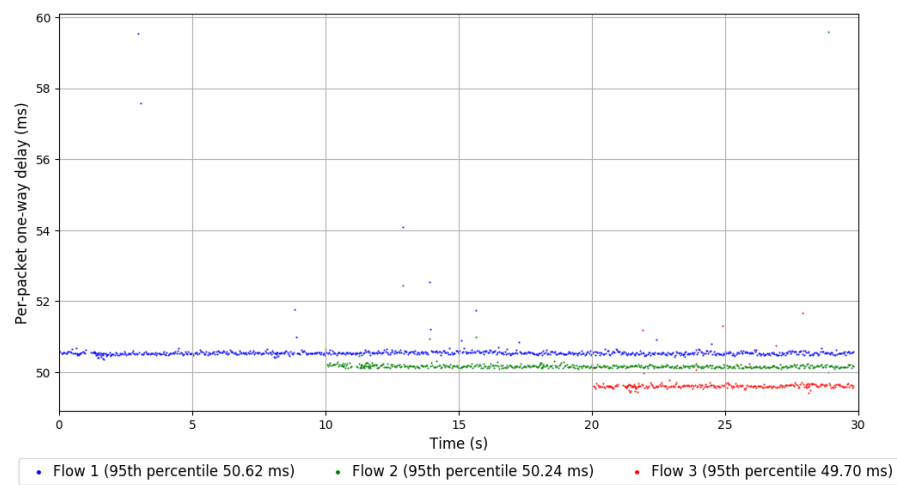
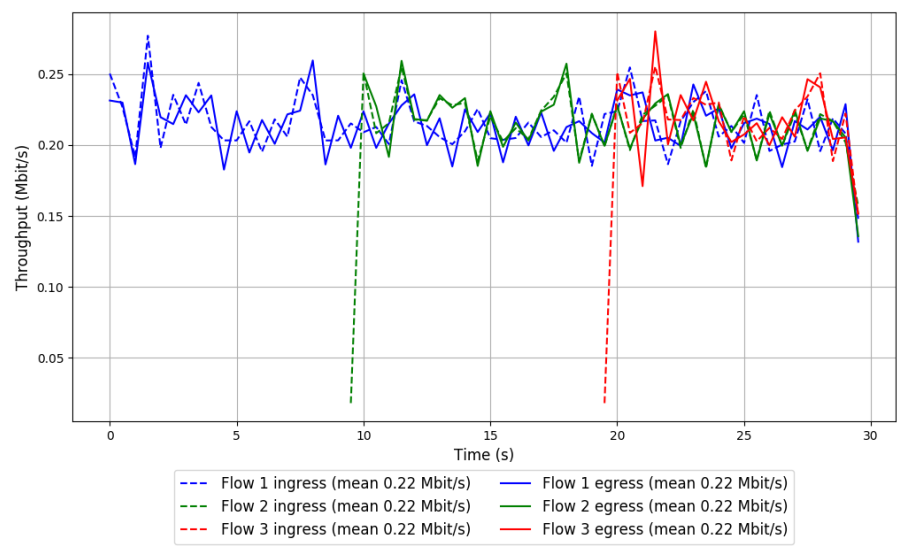
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 49.703 ms

Loss rate: 0.74%

Run 9: Report of SReAM — Data Link

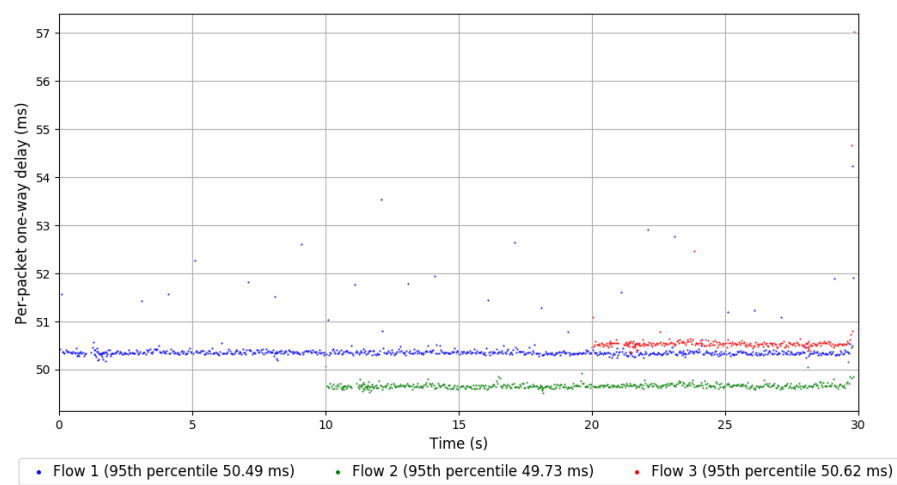
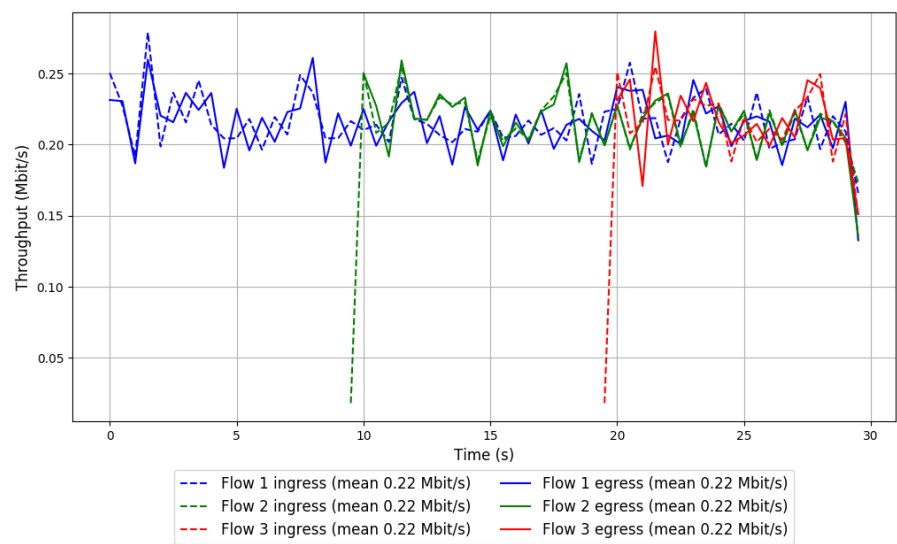


```
Run 10: Statistics of SReAM

Start at: 2017-08-12 08:35:38
End at: 2017-08-12 08:36:08

# Below is generated by plot.py at 2017-08-12 12:01:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.559 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.486 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.733 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.617 ms
Loss rate: 0.74%
```


Run 10: Report of SReAM — Data Link

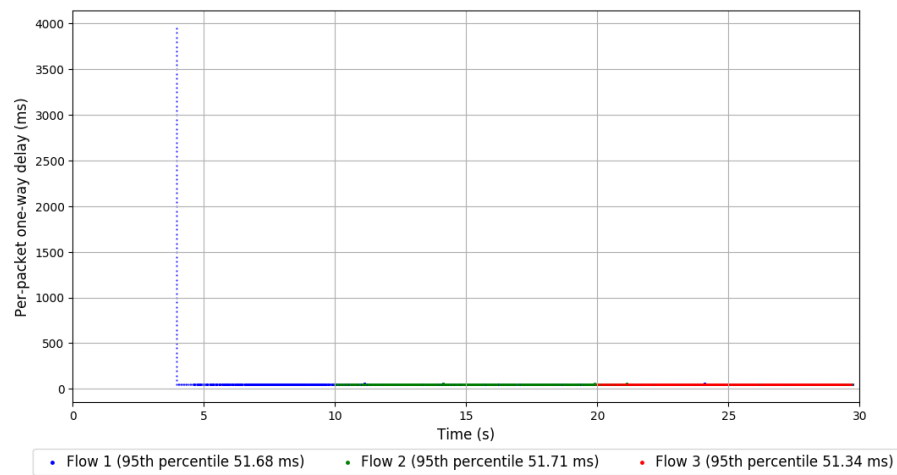
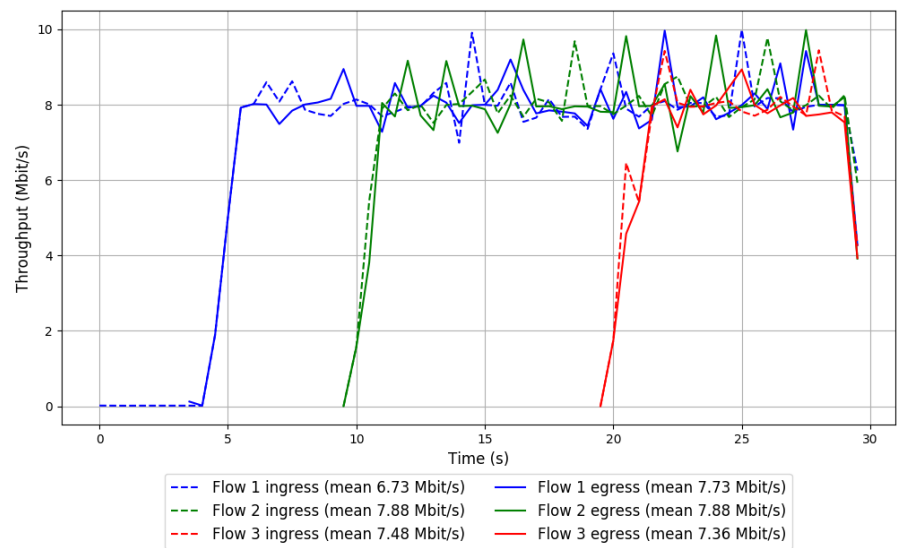


```
Run 1: Statistics of Sprout

Start at: 2017-08-12 06:54:05
End at: 2017-08-12 06:54:35

# Below is generated by plot.py at 2017-08-12 12:01:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.54 Mbit/s
95th percentile per-packet one-way delay: 51.657 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 7.73 Mbit/s
95th percentile per-packet one-way delay: 51.676 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 7.88 Mbit/s
95th percentile per-packet one-way delay: 51.708 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 7.36 Mbit/s
95th percentile per-packet one-way delay: 51.338 ms
Loss rate: 2.72%
```

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2017-08-12 07:05:33

End at: 2017-08-12 07:06:03

Below is generated by plot.py at 2017-08-12 12:01:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.75 Mbit/s

95th percentile per-packet one-way delay: 50.577 ms

Loss rate: 0.62%

-- Flow 1:

Average throughput: 8.01 Mbit/s

95th percentile per-packet one-way delay: 50.595 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 7.92 Mbit/s

95th percentile per-packet one-way delay: 50.503 ms

Loss rate: 0.55%

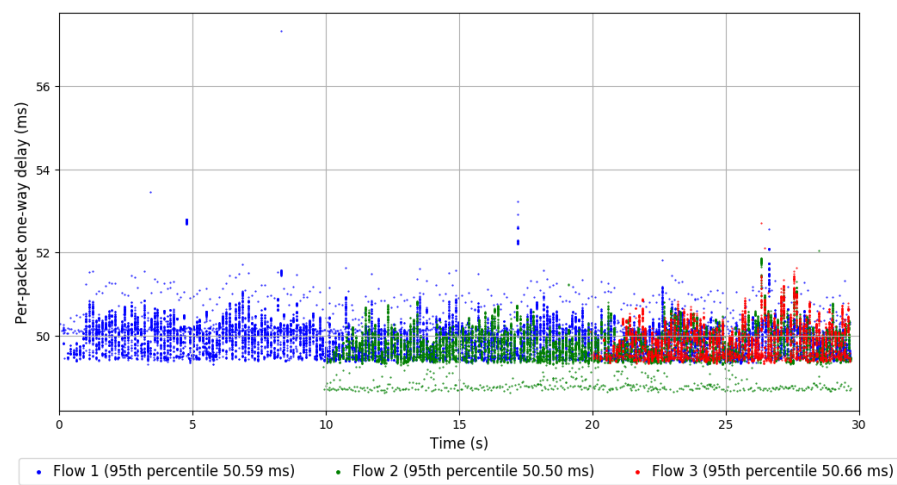
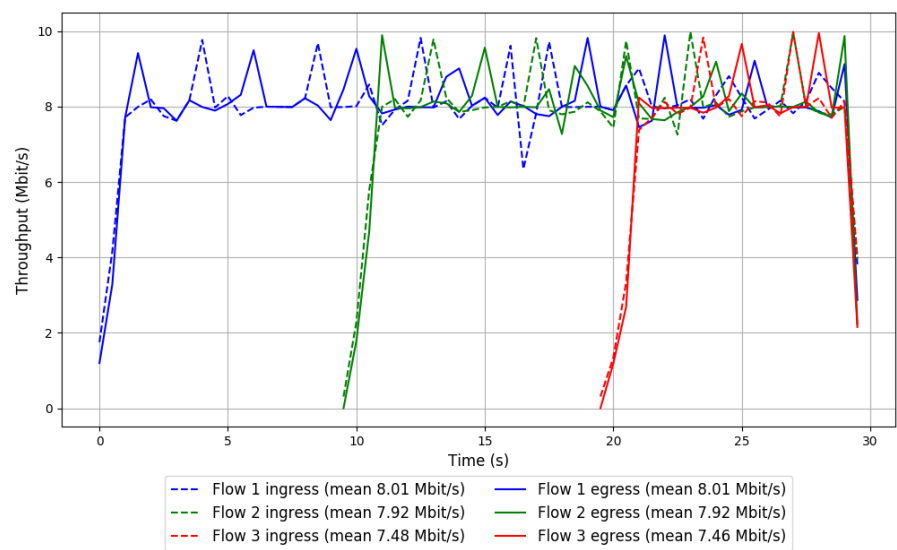
-- Flow 3:

Average throughput: 7.46 Mbit/s

95th percentile per-packet one-way delay: 50.665 ms

Loss rate: 1.45%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2017-08-12 07:17:05

End at: 2017-08-12 07:17:35

Below is generated by plot.py at 2017-08-12 12:01:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.48 Mbit/s

95th percentile per-packet one-way delay: 51.389 ms

Loss rate: 1.33%

-- Flow 1:

Average throughput: 7.95 Mbit/s

95th percentile per-packet one-way delay: 51.414 ms

Loss rate: 0.41%

-- Flow 2:

Average throughput: 7.86 Mbit/s

95th percentile per-packet one-way delay: 51.397 ms

Loss rate: 0.63%

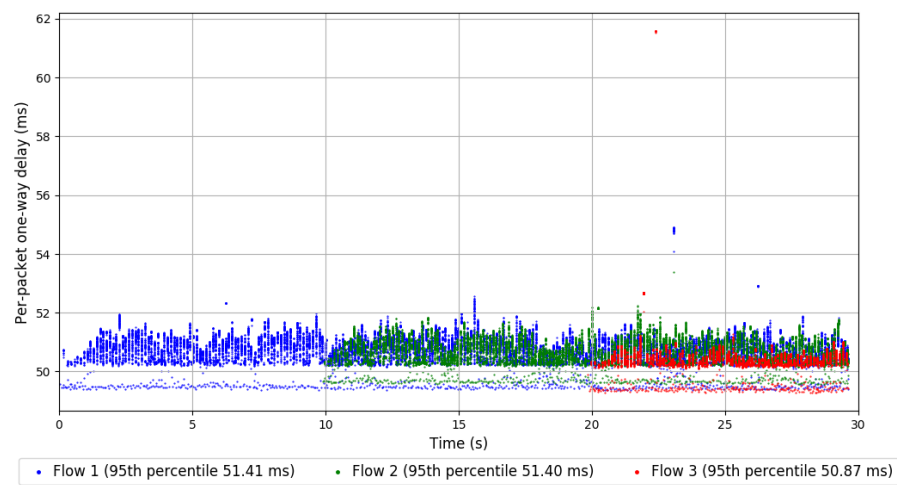
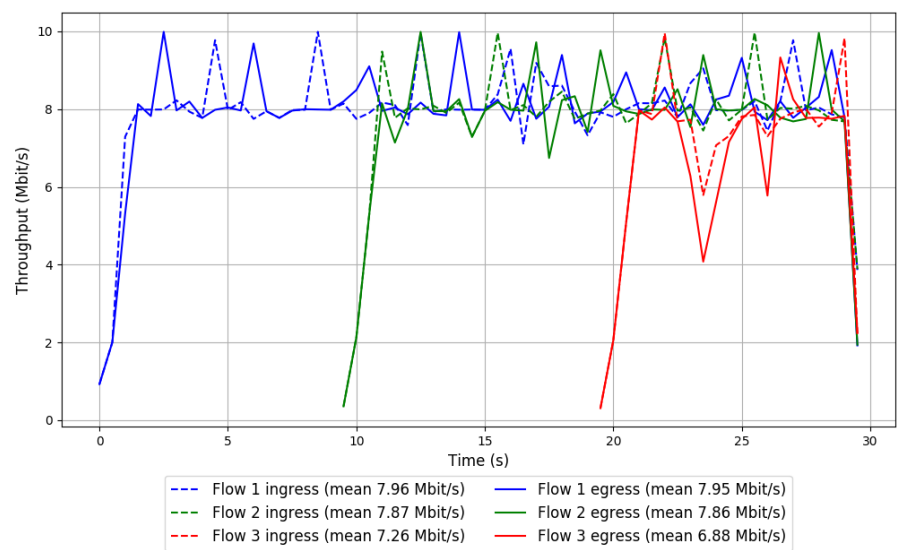
-- Flow 3:

Average throughput: 6.88 Mbit/s

95th percentile per-packet one-way delay: 50.867 ms

Loss rate: 5.87%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2017-08-12 07:28:58

End at: 2017-08-12 07:29:28

Below is generated by plot.py at 2017-08-12 12:01:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 16.32 Mbit/s

95th percentile per-packet one-way delay: 51.402 ms

Loss rate: 0.70%

-- Flow 1:

Average throughput: 7.93 Mbit/s

95th percentile per-packet one-way delay: 51.288 ms

Loss rate: 0.50%

-- Flow 2:

Average throughput: 7.69 Mbit/s

95th percentile per-packet one-way delay: 51.539 ms

Loss rate: 0.65%

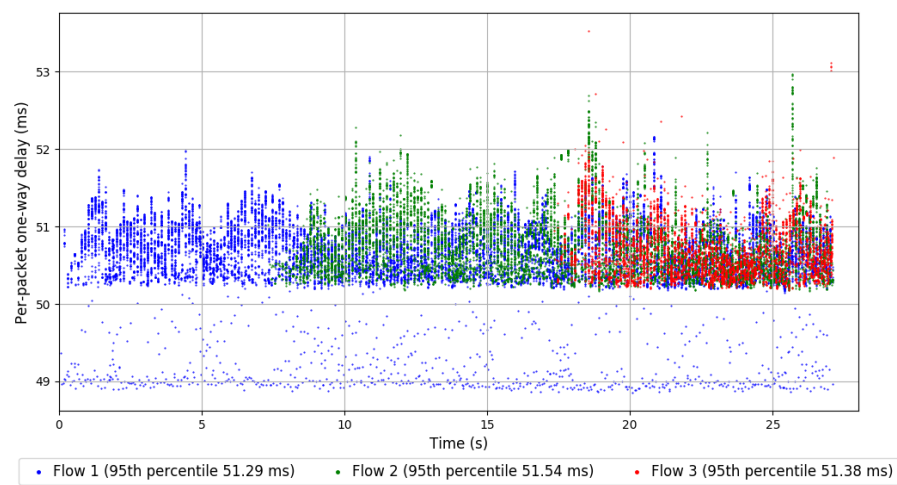
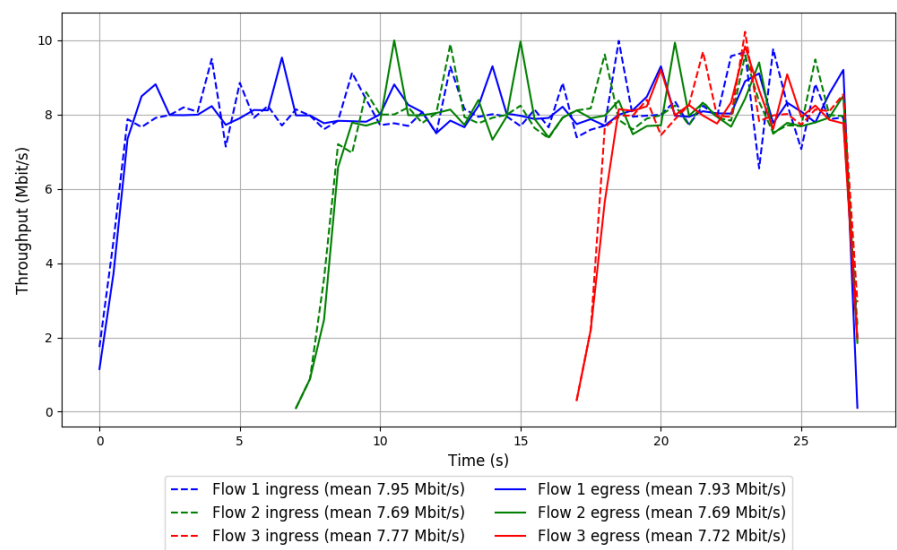
-- Flow 3:

Average throughput: 7.72 Mbit/s

95th percentile per-packet one-way delay: 51.382 ms

Loss rate: 1.35%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2017-08-12 07:40:53

End at: 2017-08-12 07:41:23

Below is generated by plot.py at 2017-08-12 12:01:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 16.54 Mbit/s

95th percentile per-packet one-way delay: 51.348 ms

Loss rate: 0.93%

-- Flow 1:

Average throughput: 7.84 Mbit/s

95th percentile per-packet one-way delay: 51.470 ms

Loss rate: 0.56%

-- Flow 2:

Average throughput: 7.52 Mbit/s

95th percentile per-packet one-way delay: 50.847 ms

Loss rate: 1.37%

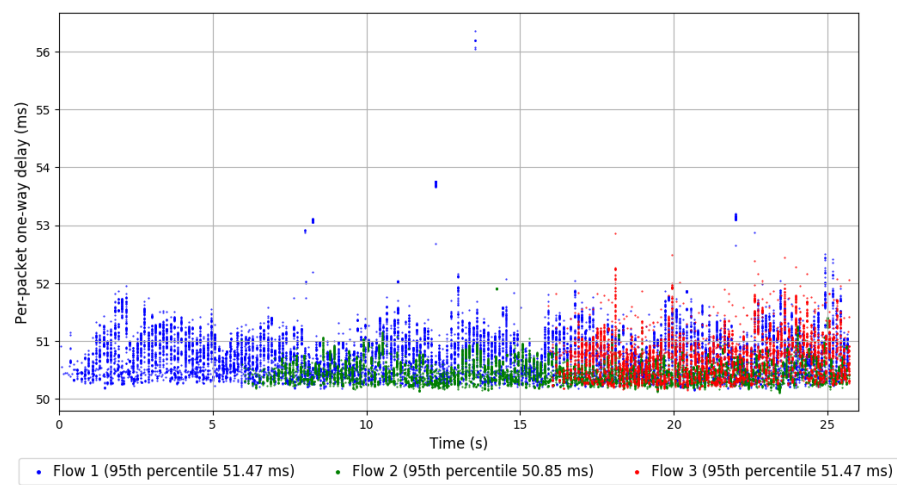
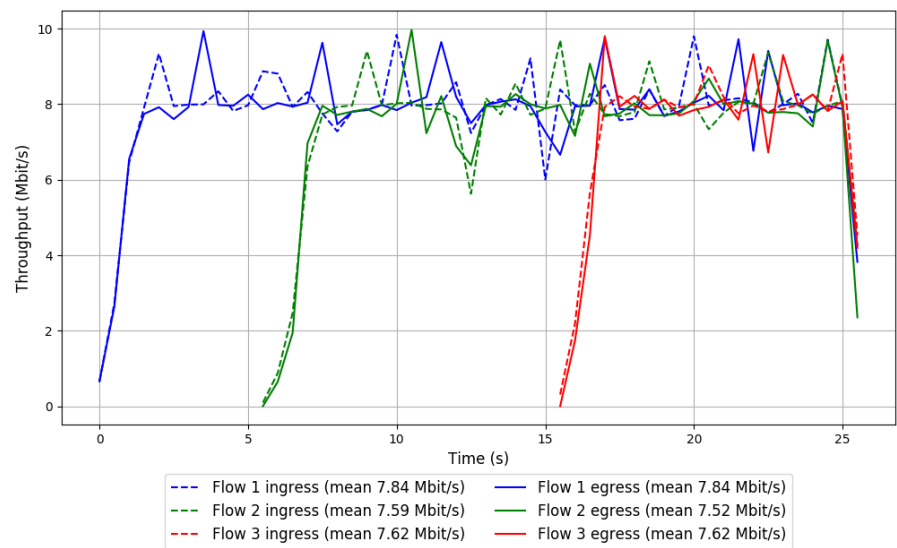
-- Flow 3:

Average throughput: 7.62 Mbit/s

95th percentile per-packet one-way delay: 51.472 ms

Loss rate: 1.05%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2017-08-12 07:52:54

End at: 2017-08-12 07:53:24

Below is generated by plot.py at 2017-08-12 12:01:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.44 Mbit/s

95th percentile per-packet one-way delay: 51.406 ms

Loss rate: 0.99%

-- Flow 1:

Average throughput: 7.86 Mbit/s

95th percentile per-packet one-way delay: 51.460 ms

Loss rate: 0.51%

-- Flow 2:

Average throughput: 7.66 Mbit/s

95th percentile per-packet one-way delay: 51.362 ms

Loss rate: 0.87%

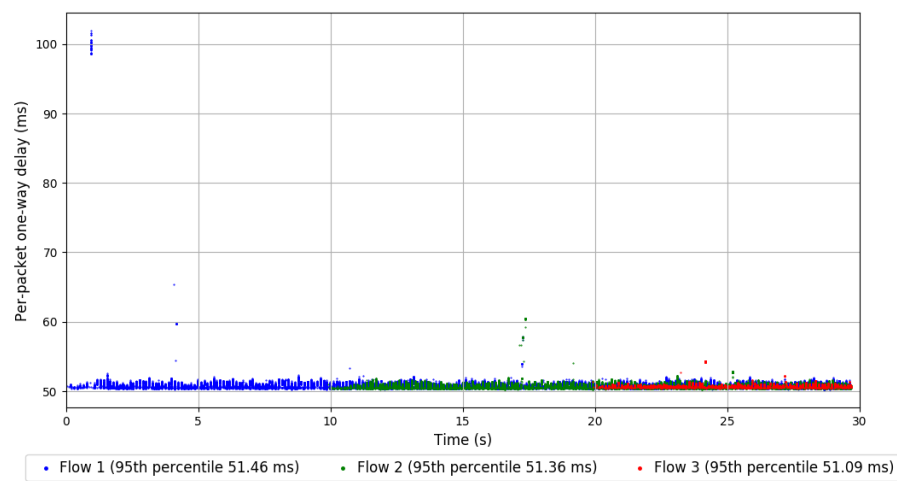
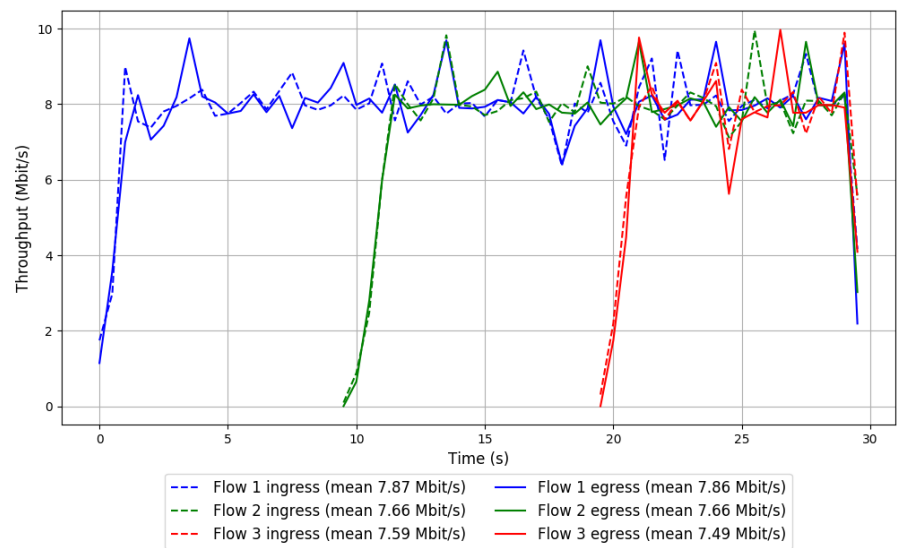
-- Flow 3:

Average throughput: 7.49 Mbit/s

95th percentile per-packet one-way delay: 51.094 ms

Loss rate: 2.74%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2017-08-12 08:04:48

End at: 2017-08-12 08:05:18

Below is generated by plot.py at 2017-08-12 12:01:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.46 Mbit/s

95th percentile per-packet one-way delay: 51.292 ms

Loss rate: 1.39%

-- Flow 1:

Average throughput: 7.80 Mbit/s

95th percentile per-packet one-way delay: 51.082 ms

Loss rate: 1.74%

-- Flow 2:

Average throughput: 7.66 Mbit/s

95th percentile per-packet one-way delay: 51.508 ms

Loss rate: 0.65%

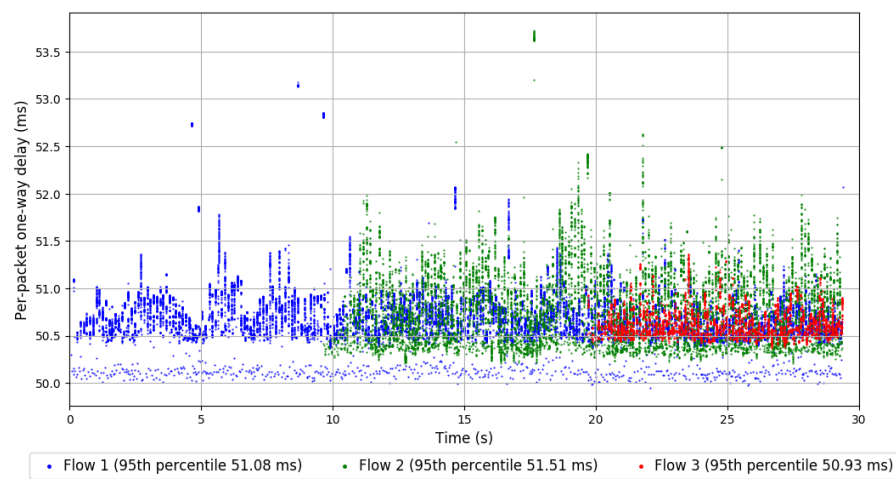
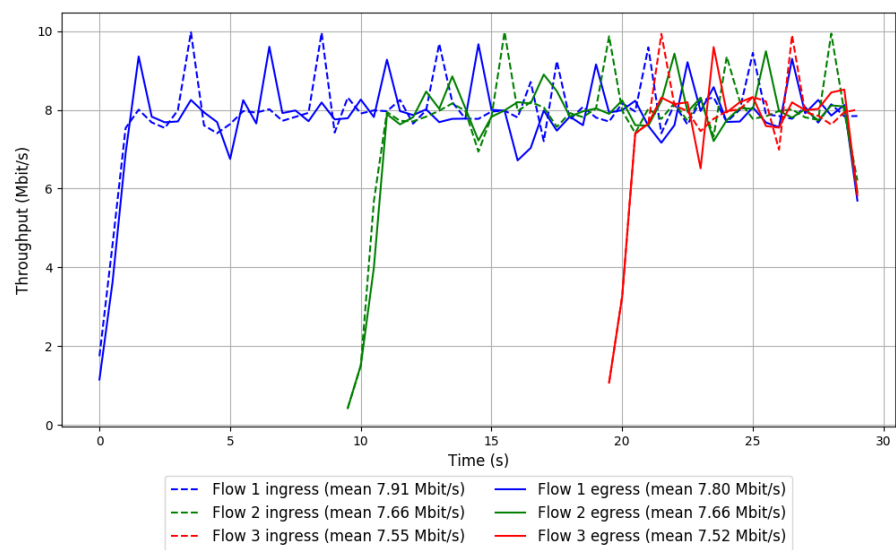
-- Flow 3:

Average throughput: 7.52 Mbit/s

95th percentile per-packet one-way delay: 50.926 ms

Loss rate: 1.78%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2017-08-12 08:16:20

End at: 2017-08-12 08:16:50

Below is generated by plot.py at 2017-08-12 12:01:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.07 Mbit/s

95th percentile per-packet one-way delay: 51.106 ms

Loss rate: 2.75%

-- Flow 1:

Average throughput: 7.61 Mbit/s

95th percentile per-packet one-way delay: 51.099 ms

Loss rate: 2.76%

-- Flow 2:

Average throughput: 7.58 Mbit/s

95th percentile per-packet one-way delay: 51.119 ms

Loss rate: 2.25%

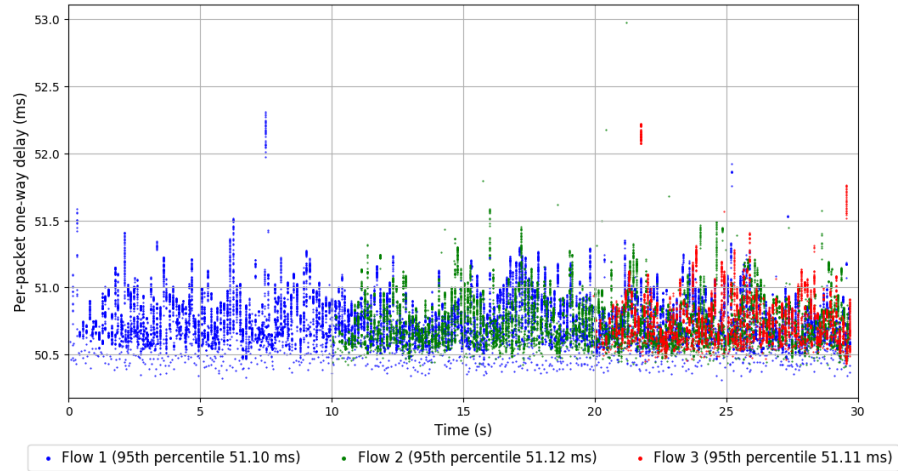
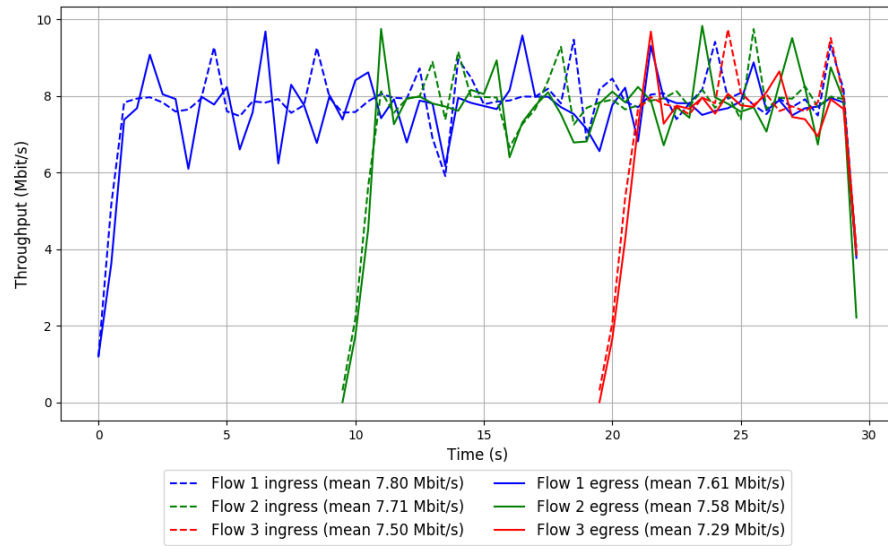
-- Flow 3:

Average throughput: 7.29 Mbit/s

95th percentile per-packet one-way delay: 51.110 ms

Loss rate: 3.78%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2017-08-12 08:28:07

End at: 2017-08-12 08:28:37

Below is generated by plot.py at 2017-08-12 12:01:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.38 Mbit/s

95th percentile per-packet one-way delay: 51.364 ms

Loss rate: 0.96%

-- Flow 1:

Average throughput: 7.81 Mbit/s

95th percentile per-packet one-way delay: 51.382 ms

Loss rate: 0.49%

-- Flow 2:

Average throughput: 7.74 Mbit/s

95th percentile per-packet one-way delay: 51.428 ms

Loss rate: 0.62%

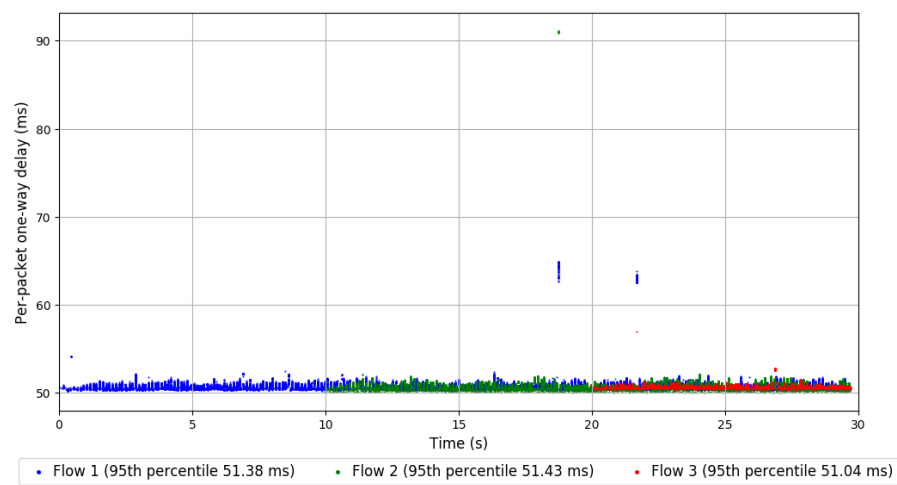
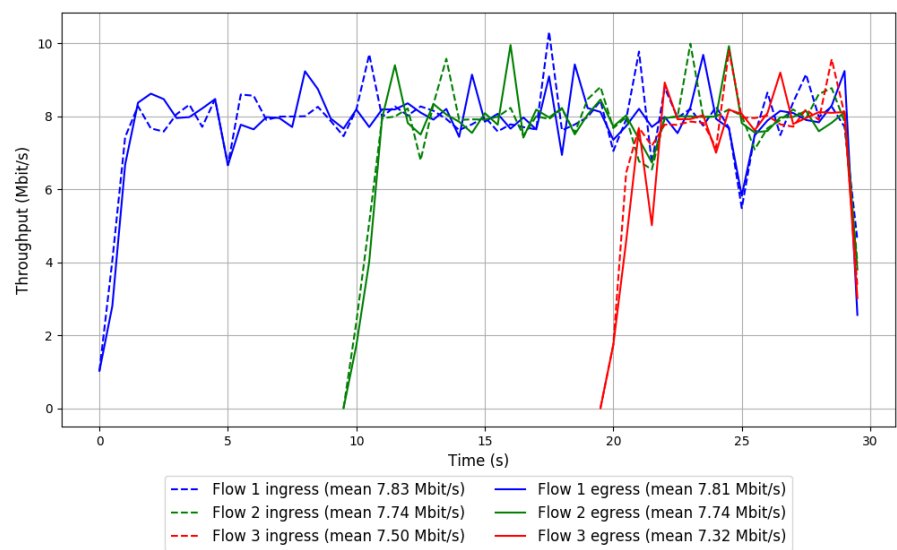
-- Flow 3:

Average throughput: 7.32 Mbit/s

95th percentile per-packet one-way delay: 51.042 ms

Loss rate: 3.16%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2017-08-12 08:40:00

End at: 2017-08-12 08:40:30

Below is generated by plot.py at 2017-08-12 12:02:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.14 Mbit/s

95th percentile per-packet one-way delay: 51.286 ms

Loss rate: 2.60%

-- Flow 1:

Average throughput: 7.63 Mbit/s

95th percentile per-packet one-way delay: 51.242 ms

Loss rate: 2.36%

-- Flow 2:

Average throughput: 7.51 Mbit/s

95th percentile per-packet one-way delay: 51.047 ms

Loss rate: 3.49%

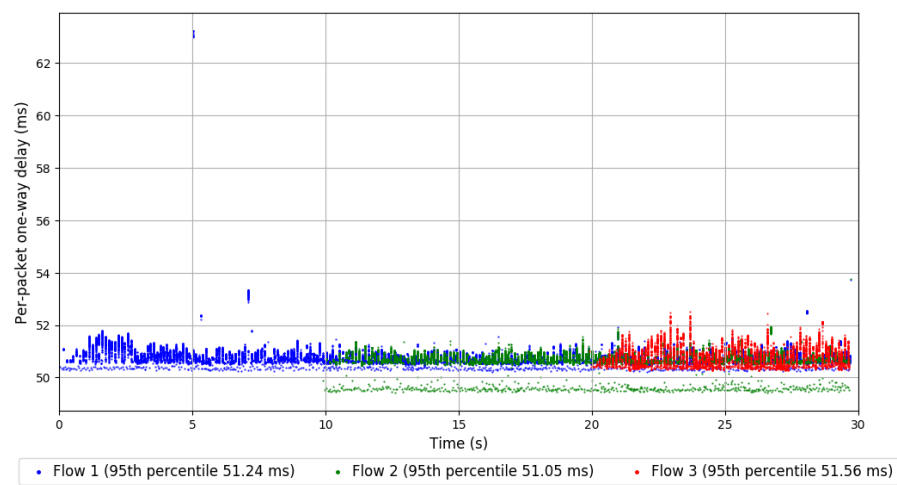
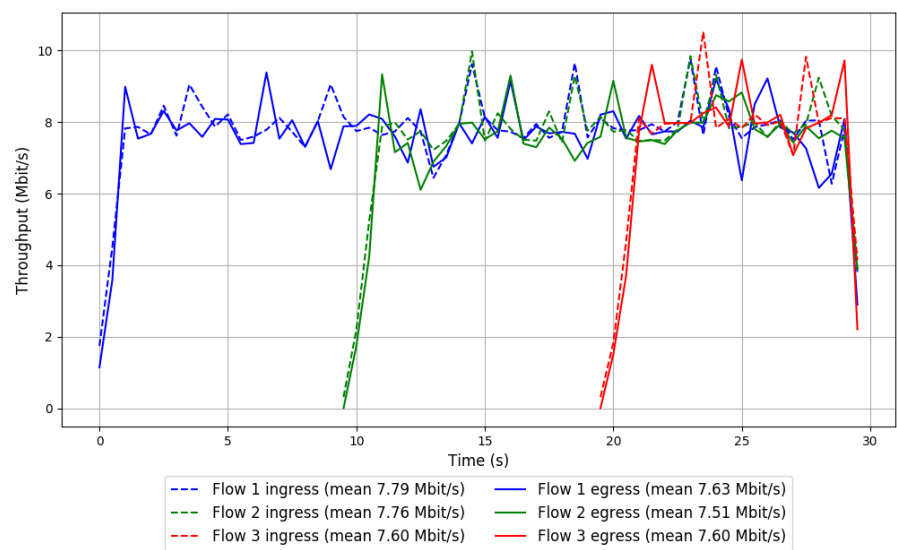
-- Flow 3:

Average throughput: 7.60 Mbit/s

95th percentile per-packet one-way delay: 51.560 ms

Loss rate: 1.48%

Run 10: Report of Sprout — Data Link

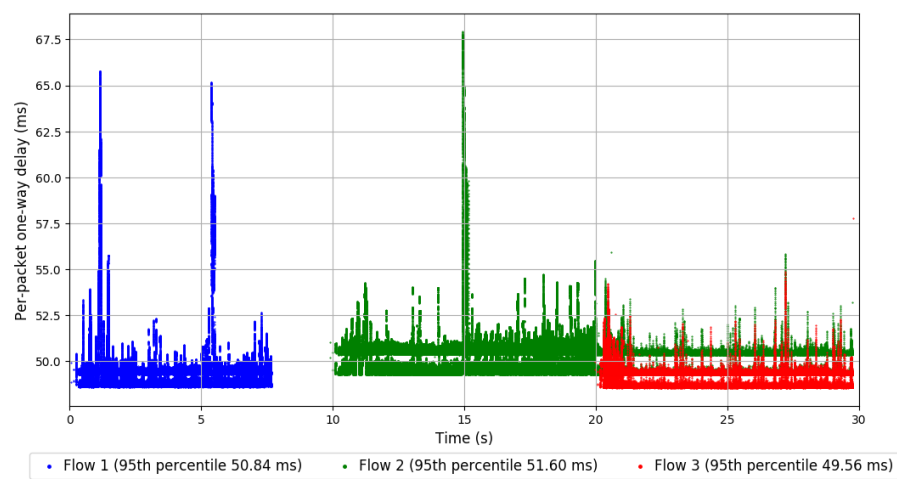
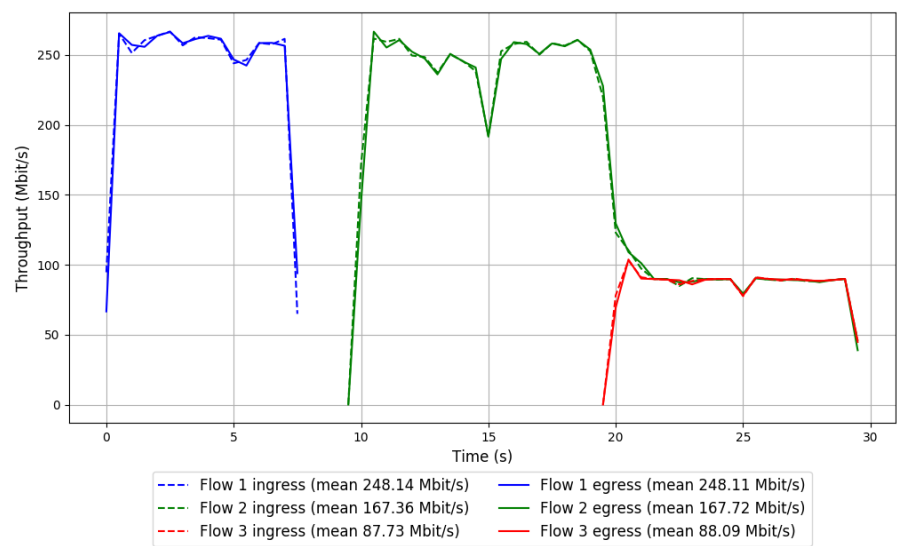


```
Run 1: Statistics of TaoVA-100x

Start at: 2017-08-12 06:48:46
End at: 2017-08-12 06:49:16

# Below is generated by plot.py at 2017-08-12 12:03:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 204.69 Mbit/s
95th percentile per-packet one-way delay: 51.396 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 248.11 Mbit/s
95th percentile per-packet one-way delay: 50.843 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 167.72 Mbit/s
95th percentile per-packet one-way delay: 51.603 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 88.09 Mbit/s
95th percentile per-packet one-way delay: 49.558 ms
Loss rate: 0.56%
```

Run 1: Report of TaoVA-100x — Data Link

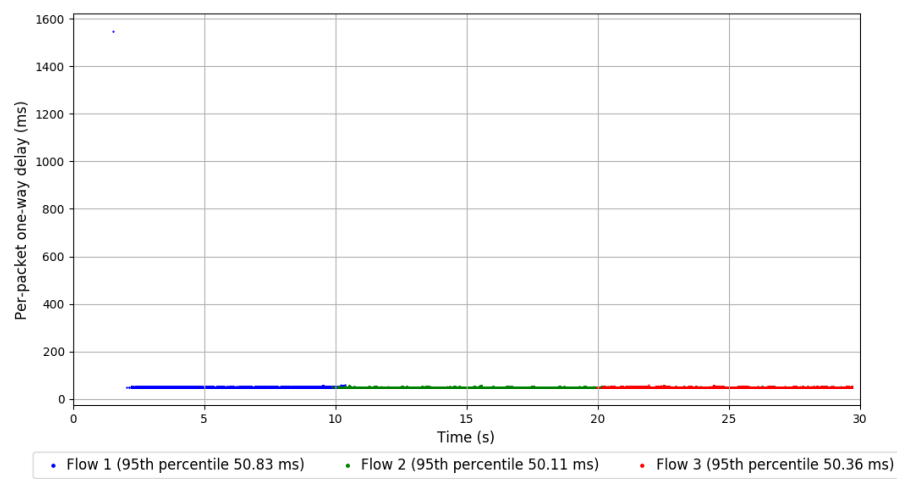
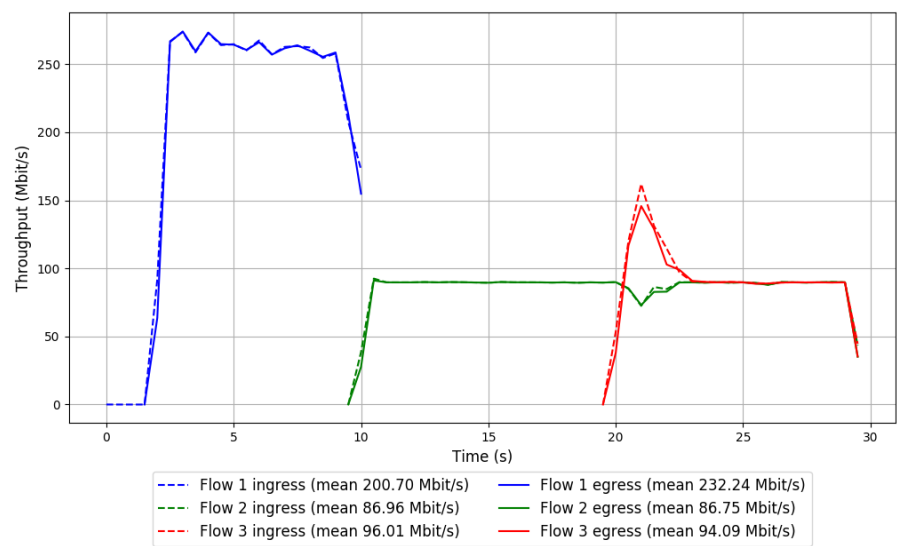


```
Run 2: Statistics of TaoVA-100x

Start at: 2017-08-12 07:00:45
End at: 2017-08-12 07:01:15

# Below is generated by plot.py at 2017-08-12 12:03:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 166.71 Mbit/s
95th percentile per-packet one-way delay: 50.459 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 232.24 Mbit/s
95th percentile per-packet one-way delay: 50.826 ms
Loss rate: 1.01%
-- Flow 2:
Average throughput: 86.75 Mbit/s
95th percentile per-packet one-way delay: 50.110 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 94.09 Mbit/s
95th percentile per-packet one-way delay: 50.361 ms
Loss rate: 2.98%
```


Run 2: Report of TaoVA-100x — Data Link



Run 3: Statistics of TaoVA-100x

Start at: 2017-08-12 07:12:05

End at: 2017-08-12 07:12:35

Below is generated by plot.py at 2017-08-12 12:04:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 215.25 Mbit/s

95th percentile per-packet one-way delay: 51.004 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 159.41 Mbit/s

95th percentile per-packet one-way delay: 51.124 ms

Loss rate: 0.68%

-- Flow 2:

Average throughput: 60.26 Mbit/s

95th percentile per-packet one-way delay: 50.698 ms

Loss rate: 0.48%

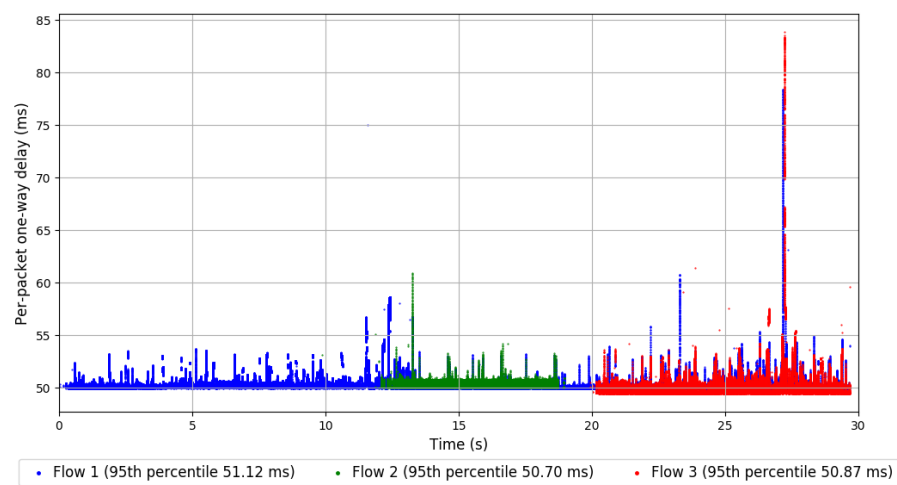
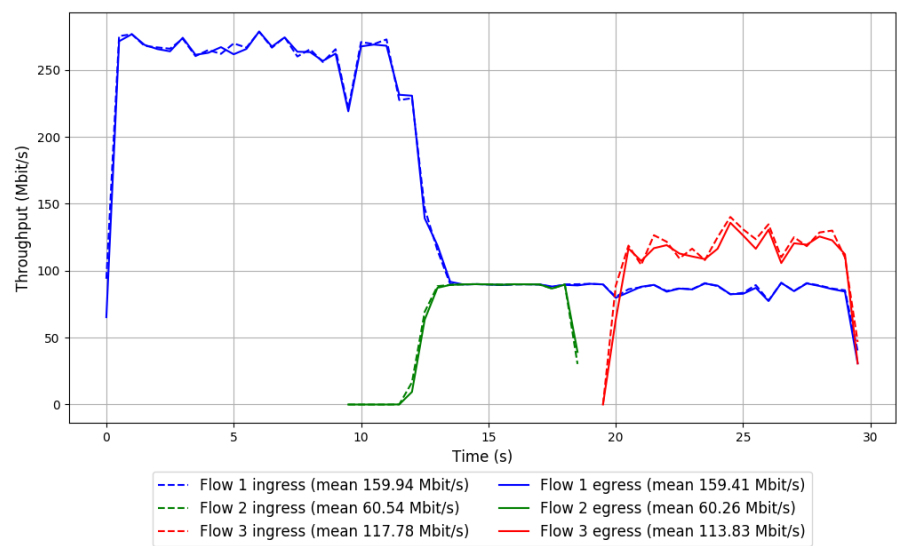
-- Flow 3:

Average throughput: 113.83 Mbit/s

95th percentile per-packet one-way delay: 50.869 ms

Loss rate: 4.26%

Run 3: Report of TaoVA-100x — Data Link

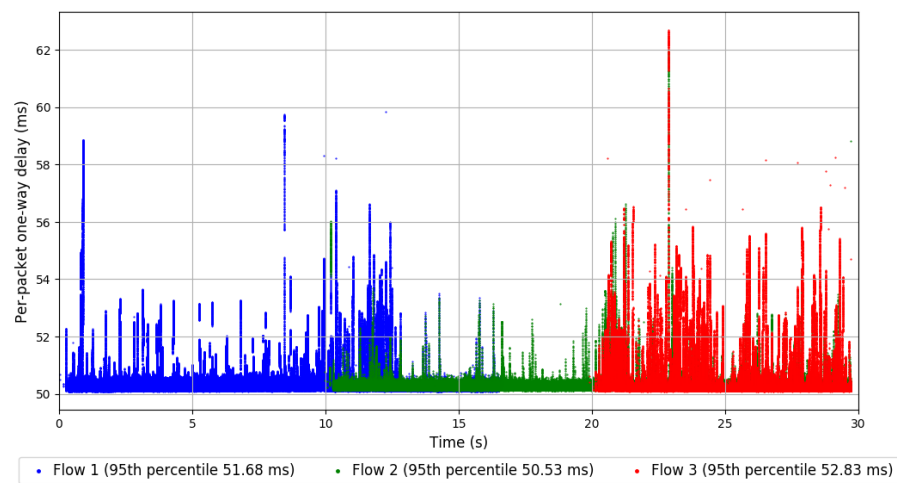
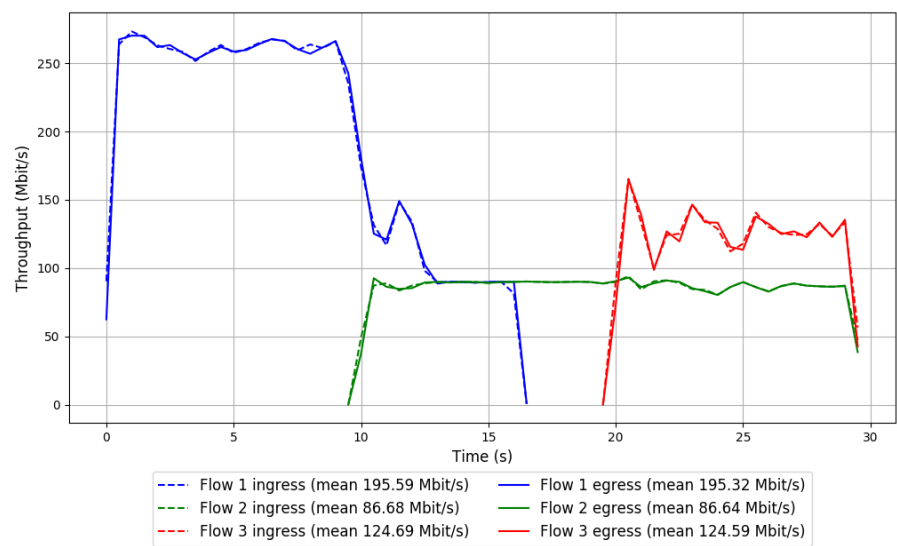


```
Run 4: Statistics of TaoVA-100x

Start at: 2017-08-12 07:23:38
End at: 2017-08-12 07:24:08

# Below is generated by plot.py at 2017-08-12 12:04:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 207.80 Mbit/s
95th percentile per-packet one-way delay: 51.695 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 195.32 Mbit/s
95th percentile per-packet one-way delay: 51.676 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 86.64 Mbit/s
95th percentile per-packet one-way delay: 50.529 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 124.59 Mbit/s
95th percentile per-packet one-way delay: 52.830 ms
Loss rate: 1.07%
```

Run 4: Report of TaoVA-100x — Data Link

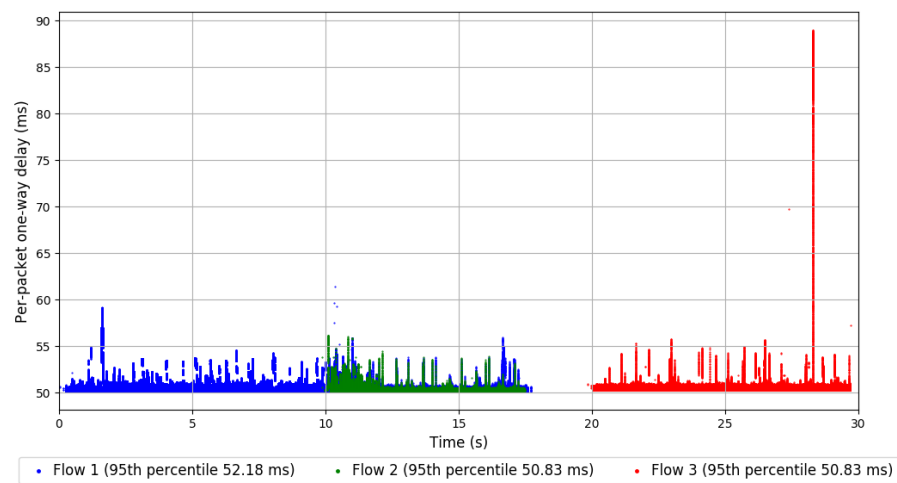
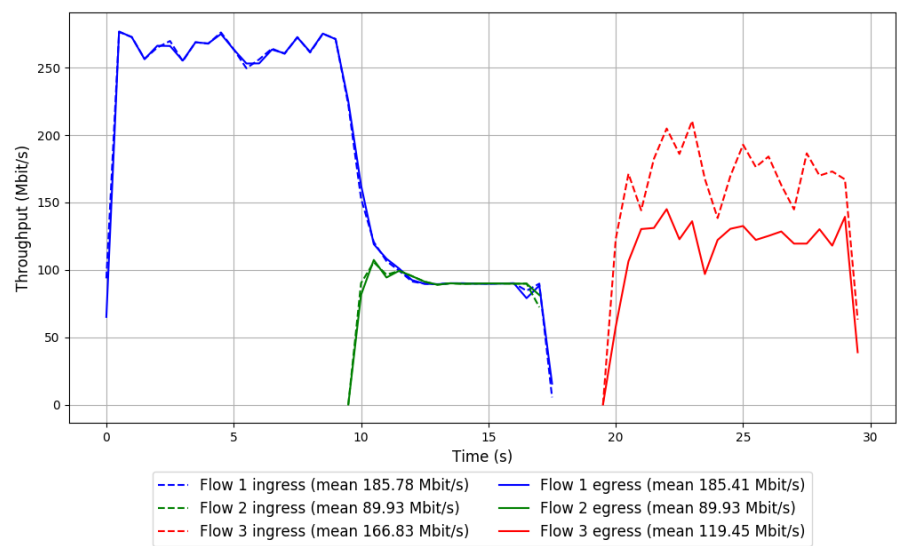


```
Run 5: Statistics of TaoVA-100x

Start at: 2017-08-12 07:35:36
End at: 2017-08-12 07:36:06

# Below is generated by plot.py at 2017-08-12 12:05:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 173.23 Mbit/s
95th percentile per-packet one-way delay: 51.758 ms
Loss rate: 8.70%
-- Flow 1:
Average throughput: 185.41 Mbit/s
95th percentile per-packet one-way delay: 52.183 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 89.93 Mbit/s
95th percentile per-packet one-way delay: 50.831 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 119.45 Mbit/s
95th percentile per-packet one-way delay: 50.827 ms
Loss rate: 29.10%
```

Run 5: Report of TaoVA-100x — Data Link

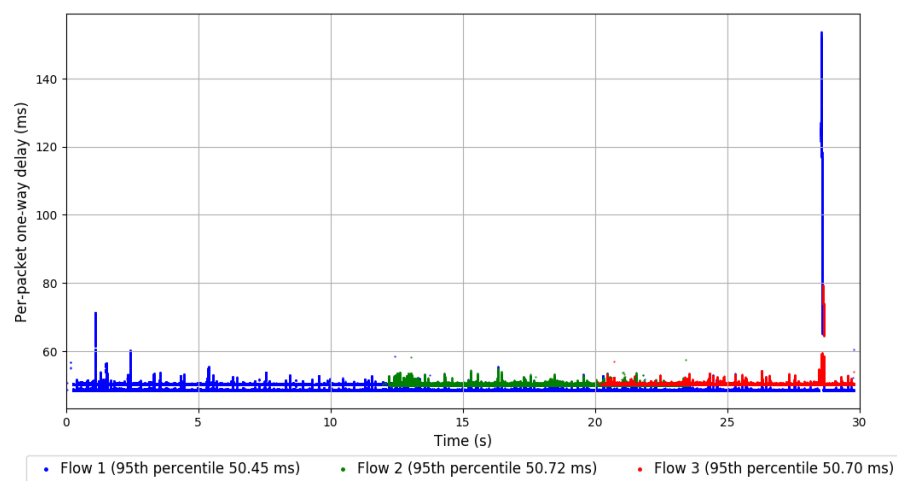
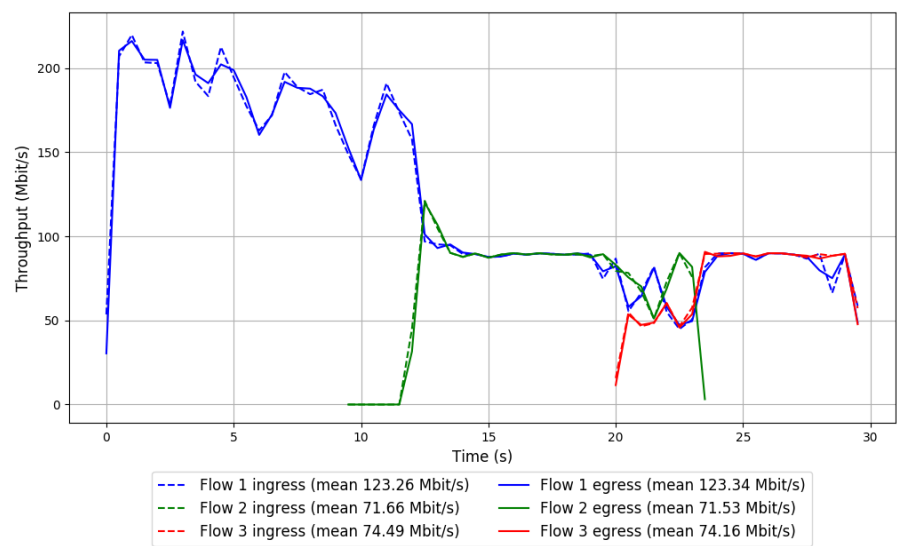


```
Run 6: Statistics of TaoVA-100x

Start at: 2017-08-12 07:47:36
End at: 2017-08-12 07:48:06

# Below is generated by plot.py at 2017-08-12 12:05:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 180.10 Mbit/s
95th percentile per-packet one-way delay: 50.581 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 123.34 Mbit/s
95th percentile per-packet one-way delay: 50.450 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 71.53 Mbit/s
95th percentile per-packet one-way delay: 50.717 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 74.16 Mbit/s
95th percentile per-packet one-way delay: 50.701 ms
Loss rate: 1.50%
```


Run 6: Report of TaoVA-100x — Data Link

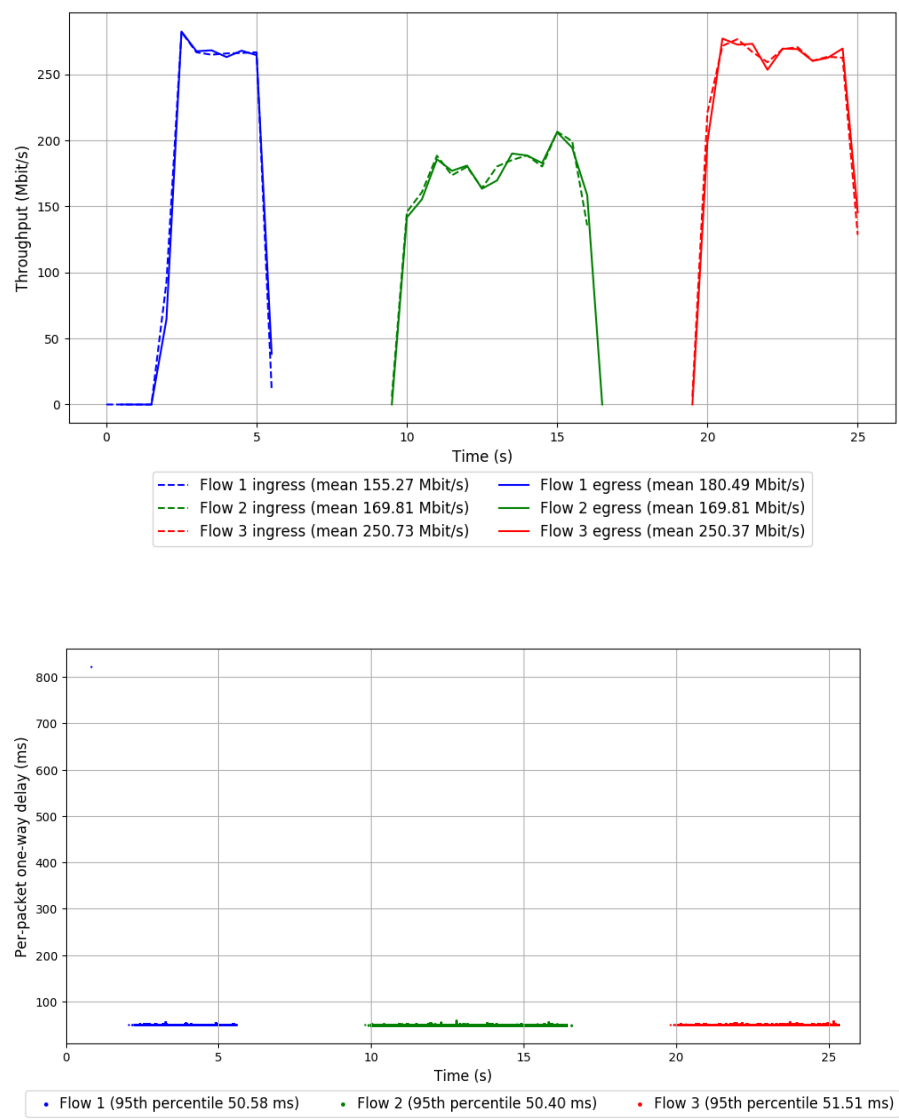


```
Run 7: Statistics of TaoVA-100x

Start at: 2017-08-12 07:59:37
End at: 2017-08-12 08:00:07

# Below is generated by plot.py at 2017-08-12 12:06:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 138.11 Mbit/s
95th percentile per-packet one-way delay: 50.973 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 180.49 Mbit/s
95th percentile per-packet one-way delay: 50.582 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 169.81 Mbit/s
95th percentile per-packet one-way delay: 50.402 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 250.37 Mbit/s
95th percentile per-packet one-way delay: 51.505 ms
Loss rate: 0.16%
```

Run 7: Report of TaoVA-100x — Data Link

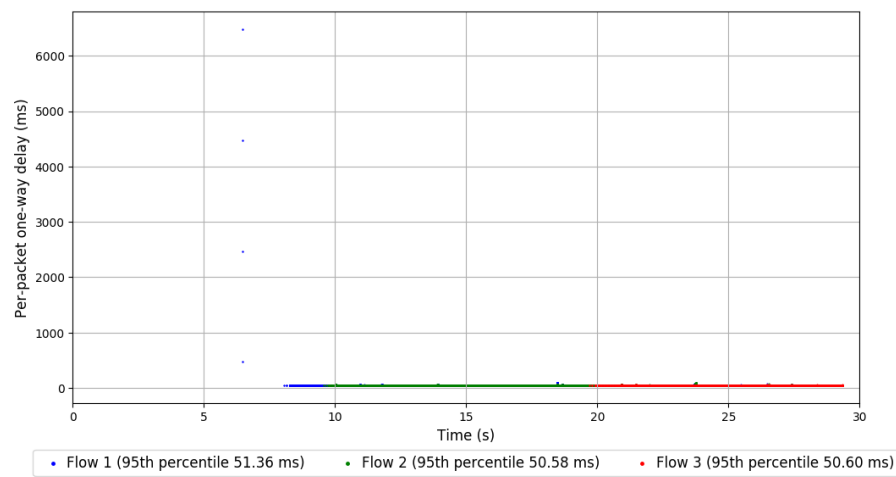
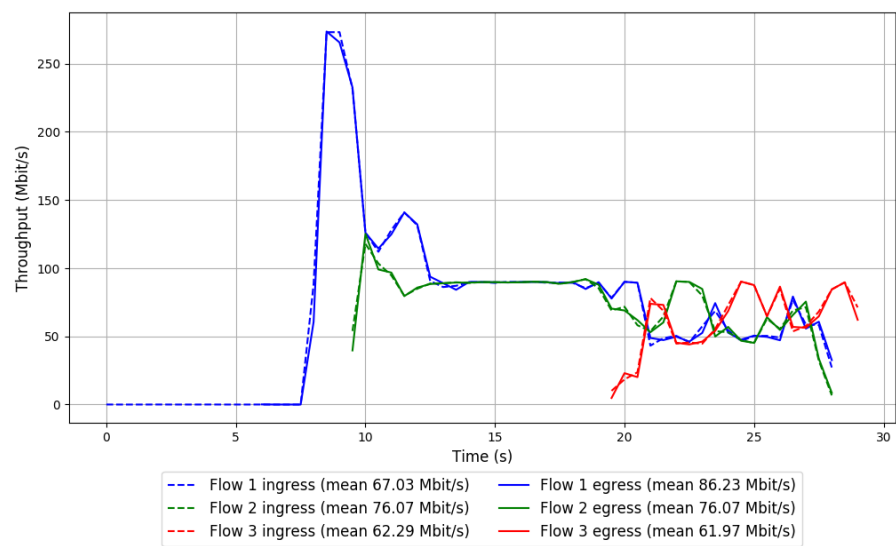


Run 8: Statistics of TaoVA-100x

Start at: 2017-08-12 08:11:26

End at: 2017-08-12 08:11:56

Run 8: Report of TaoVA-100x — Data Link

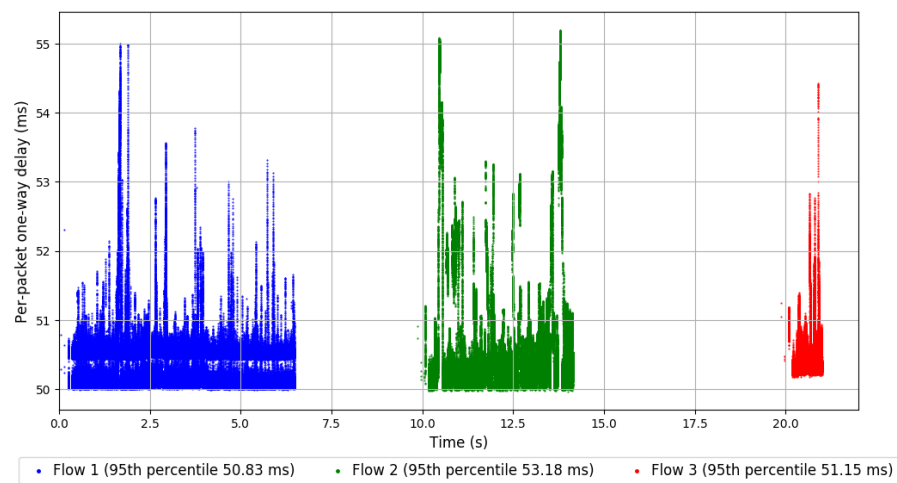
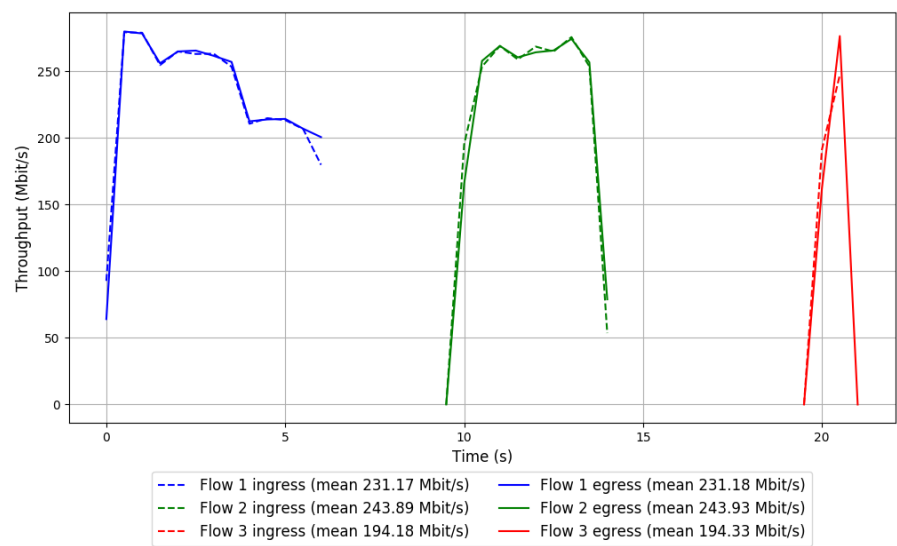


Run 9: Statistics of TaoVA-100x

Start at: 2017-08-12 08:22:58

End at: 2017-08-12 08:23:28

Run 9: Report of TaoVA-100x — Data Link

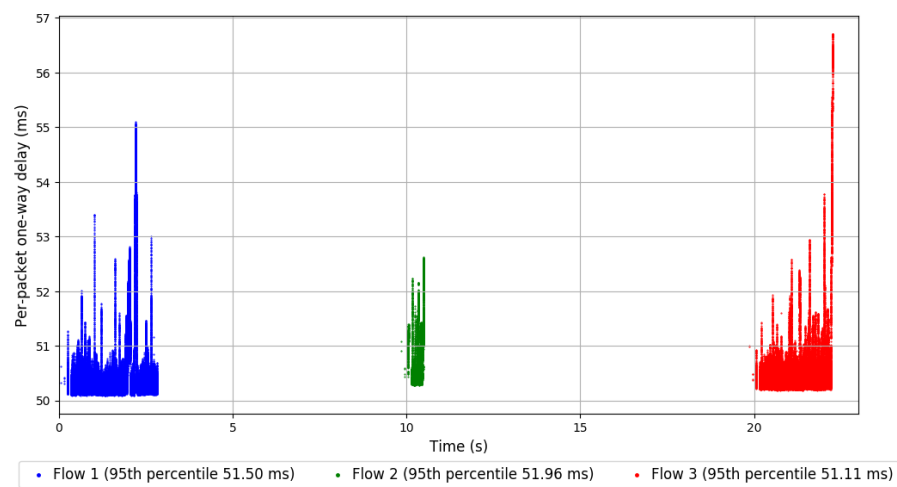
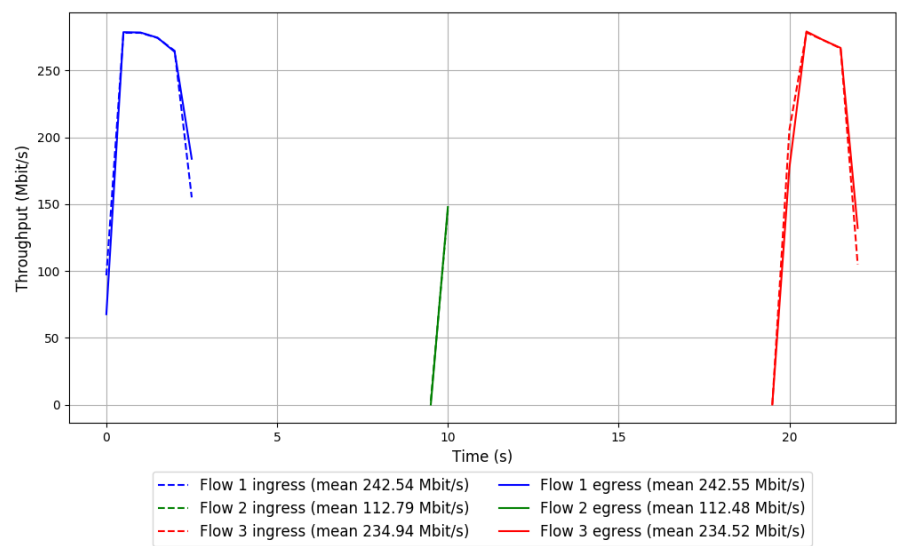


Run 10: Statistics of TaoVA-100x

Start at: 2017-08-12 08:34:54

End at: 2017-08-12 08:35:24

Run 10: Report of TaoVA-100x — Data Link



Run 1: Statistics of TCP Vegas

Start at: 2017-08-12 06:56:48

End at: 2017-08-12 06:57:18

Below is generated by plot.py at 2017-08-12 12:06:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 102.39 Mbit/s

95th percentile per-packet one-way delay: 50.656 ms

Loss rate: 0.57%

-- Flow 1:

Average throughput: 38.15 Mbit/s

95th percentile per-packet one-way delay: 50.800 ms

Loss rate: 0.69%

-- Flow 2:

Average throughput: 75.43 Mbit/s

95th percentile per-packet one-way delay: 50.575 ms

Loss rate: 0.29%

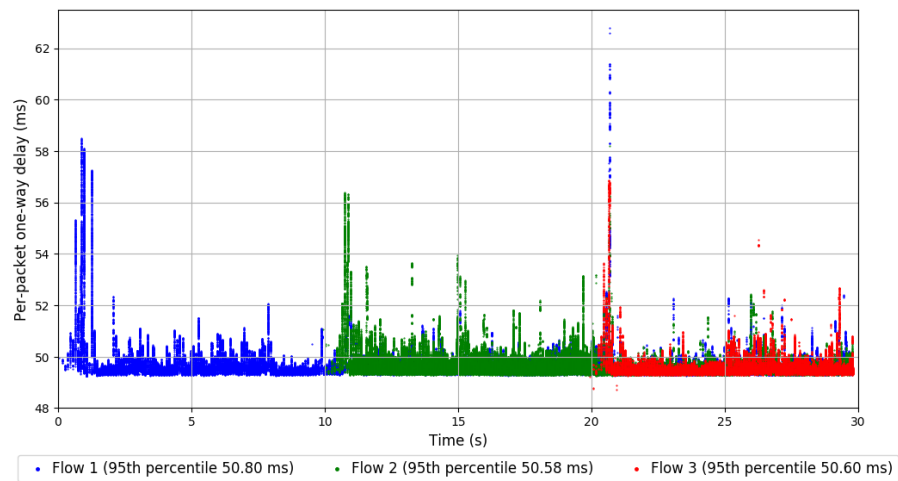
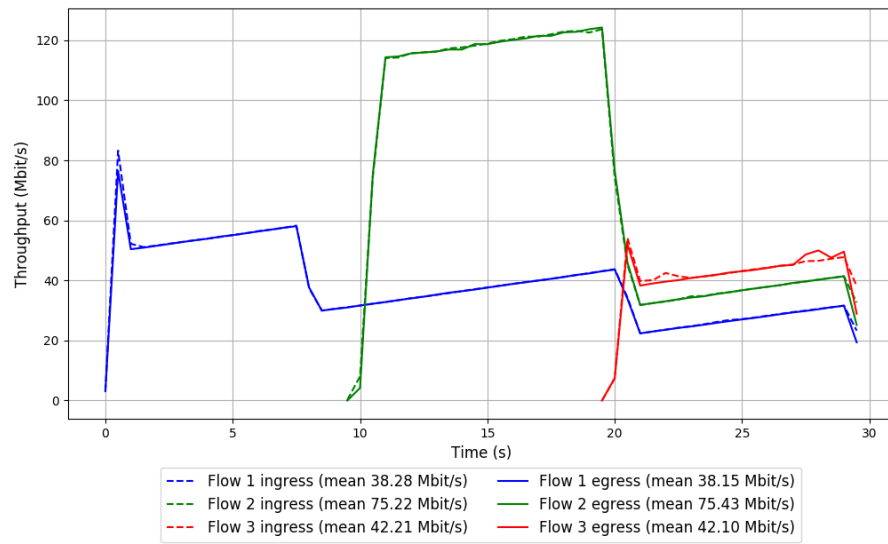
-- Flow 3:

Average throughput: 42.10 Mbit/s

95th percentile per-packet one-way delay: 50.596 ms

Loss rate: 1.27%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2017-08-12 07:08:15

End at: 2017-08-12 07:08:45

Below is generated by plot.py at 2017-08-12 12:06:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 33.79 Mbit/s

95th percentile per-packet one-way delay: 51.036 ms

Loss rate: 1.12%

-- Flow 1:

Average throughput: 5.13 Mbit/s

95th percentile per-packet one-way delay: 50.462 ms

Loss rate: 1.42%

-- Flow 2:

Average throughput: 5.27 Mbit/s

95th percentile per-packet one-way delay: 50.510 ms

Loss rate: 1.97%

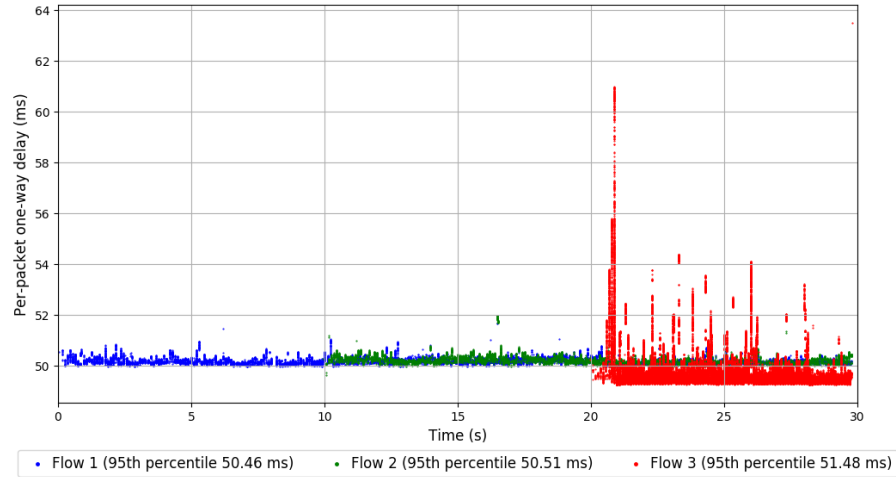
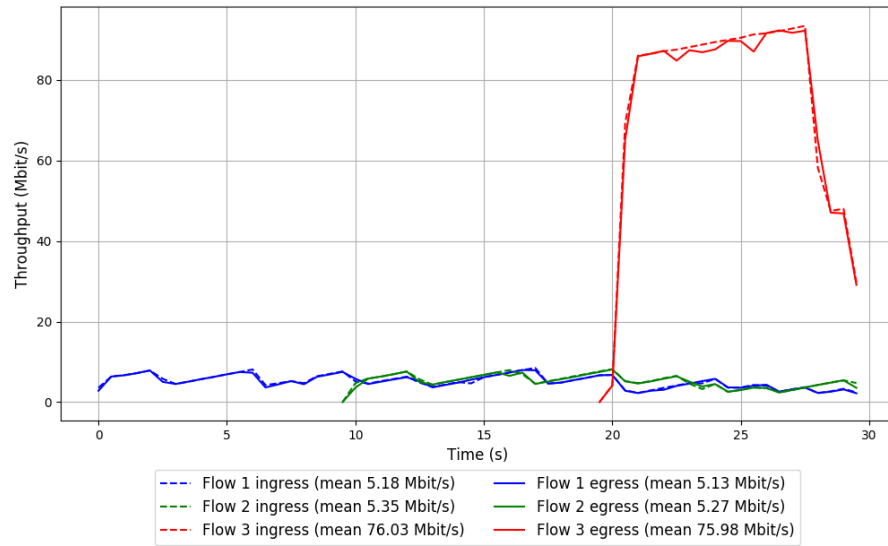
-- Flow 3:

Average throughput: 75.98 Mbit/s

95th percentile per-packet one-way delay: 51.478 ms

Loss rate: 0.94%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2017-08-12 07:19:48

End at: 2017-08-12 07:20:18

Below is generated by plot.py at 2017-08-12 12:06:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 30.39 Mbit/s

95th percentile per-packet one-way delay: 50.944 ms

Loss rate: 1.12%

-- Flow 1:

Average throughput: 8.74 Mbit/s

95th percentile per-packet one-way delay: 50.781 ms

Loss rate: 1.09%

-- Flow 2:

Average throughput: 12.84 Mbit/s

95th percentile per-packet one-way delay: 50.636 ms

Loss rate: 1.03%

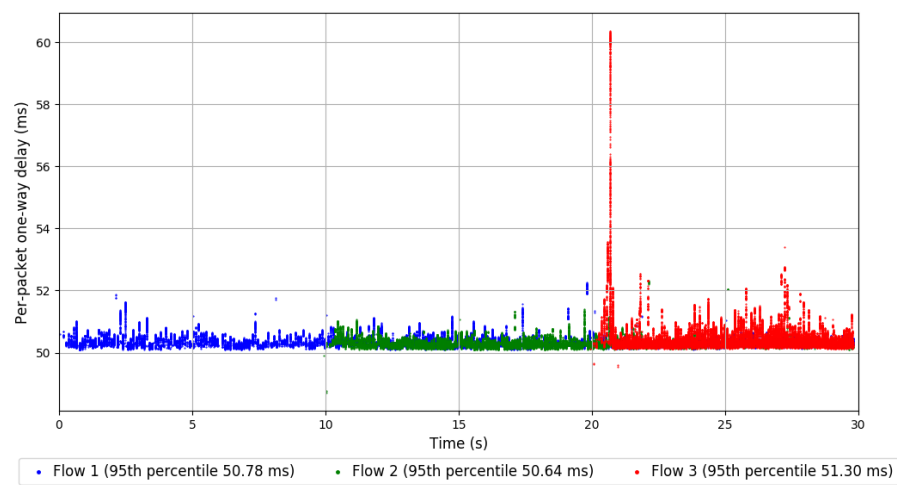
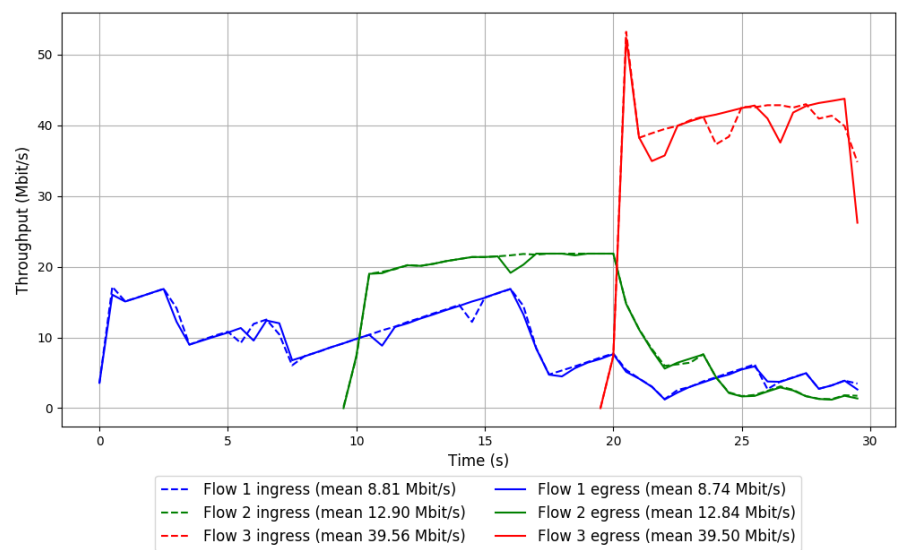
-- Flow 3:

Average throughput: 39.50 Mbit/s

95th percentile per-packet one-way delay: 51.305 ms

Loss rate: 1.20%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2017-08-12 07:31:41

End at: 2017-08-12 07:32:11

Below is generated by plot.py at 2017-08-12 12:07:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 73.97 Mbit/s

95th percentile per-packet one-way delay: 52.641 ms

Loss rate: 1.16%

-- Flow 1:

Average throughput: 32.76 Mbit/s

95th percentile per-packet one-way delay: 54.270 ms

Loss rate: 1.04%

-- Flow 2:

Average throughput: 43.39 Mbit/s

95th percentile per-packet one-way delay: 52.013 ms

Loss rate: 1.27%

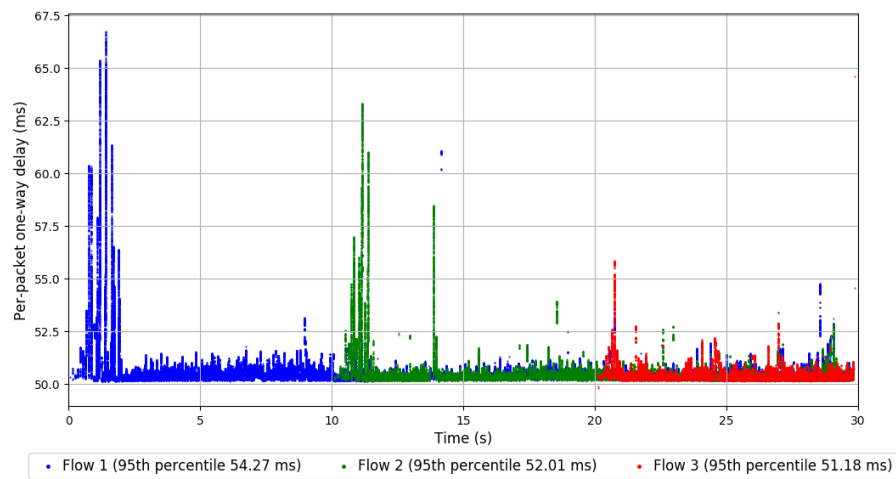
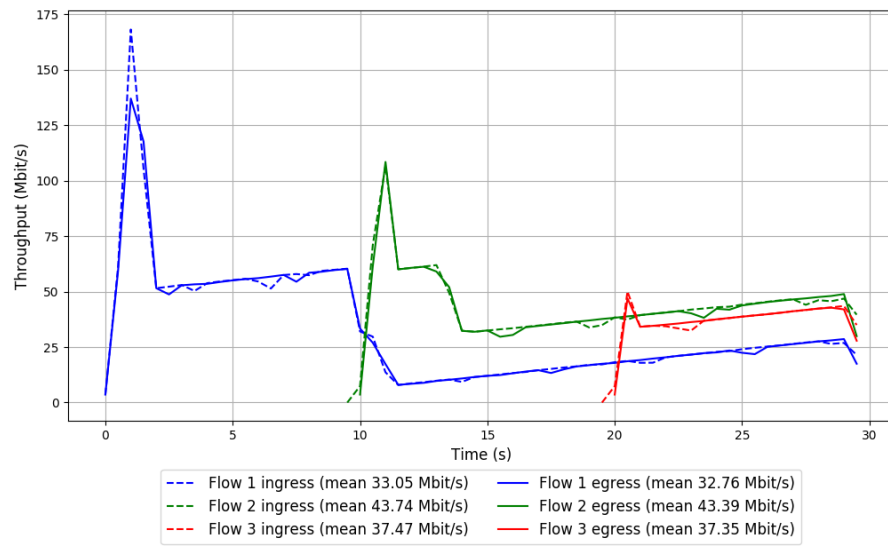
-- Flow 3:

Average throughput: 37.35 Mbit/s

95th percentile per-packet one-way delay: 51.184 ms

Loss rate: 1.21%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2017-08-12 07:43:36

End at: 2017-08-12 07:44:06

Below is generated by plot.py at 2017-08-12 12:07:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 88.88 Mbit/s

95th percentile per-packet one-way delay: 51.438 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 38.02 Mbit/s

95th percentile per-packet one-way delay: 51.240 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 64.55 Mbit/s

95th percentile per-packet one-way delay: 51.588 ms

Loss rate: 0.52%

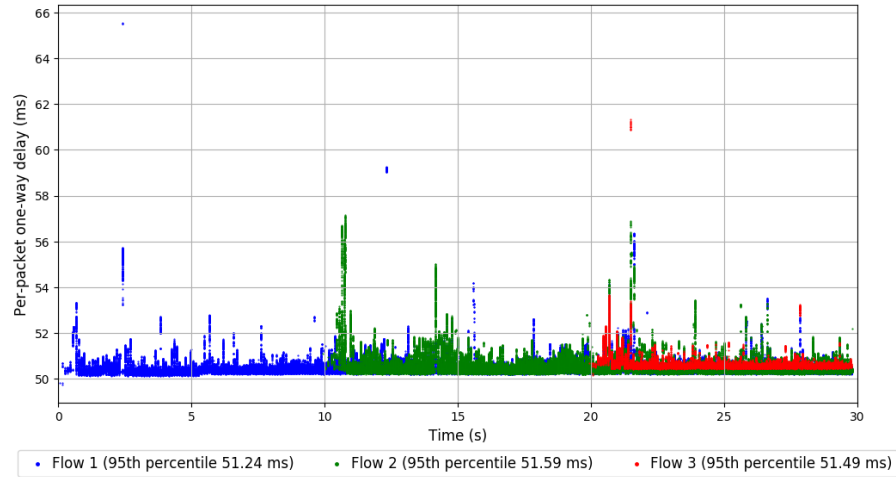
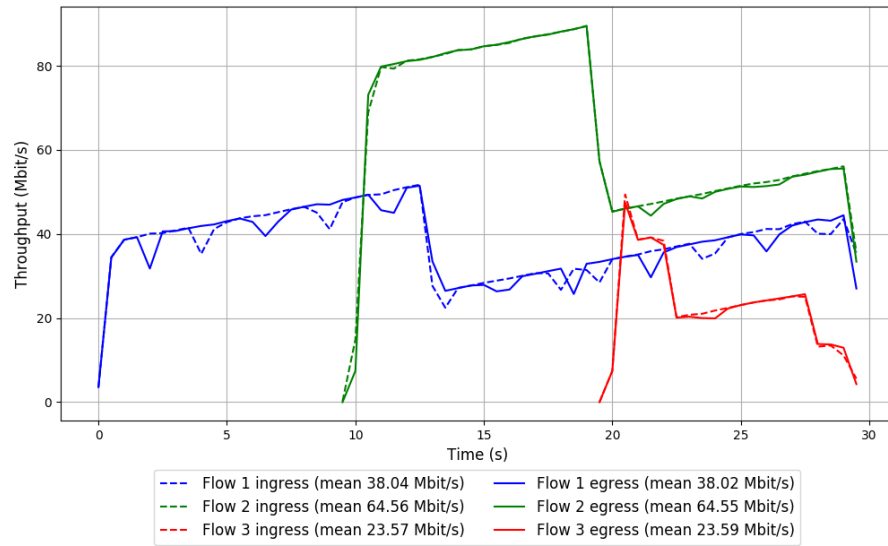
-- Flow 3:

Average throughput: 23.59 Mbit/s

95th percentile per-packet one-way delay: 51.489 ms

Loss rate: 0.92%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2017-08-12 07:55:38

End at: 2017-08-12 07:56:08

Below is generated by plot.py at 2017-08-12 12:07:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 92.34 Mbit/s

95th percentile per-packet one-way delay: 51.448 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 52.51 Mbit/s

95th percentile per-packet one-way delay: 51.367 ms

Loss rate: 0.46%

-- Flow 2:

Average throughput: 45.29 Mbit/s

95th percentile per-packet one-way delay: 51.492 ms

Loss rate: 0.77%

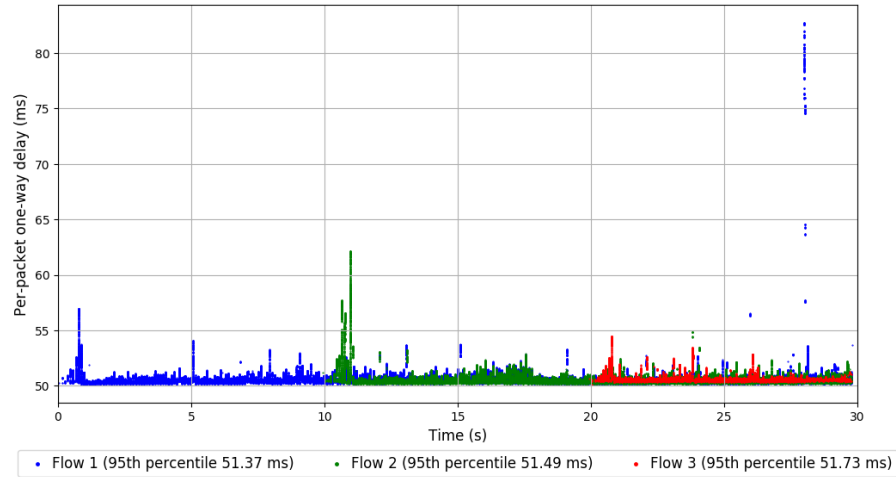
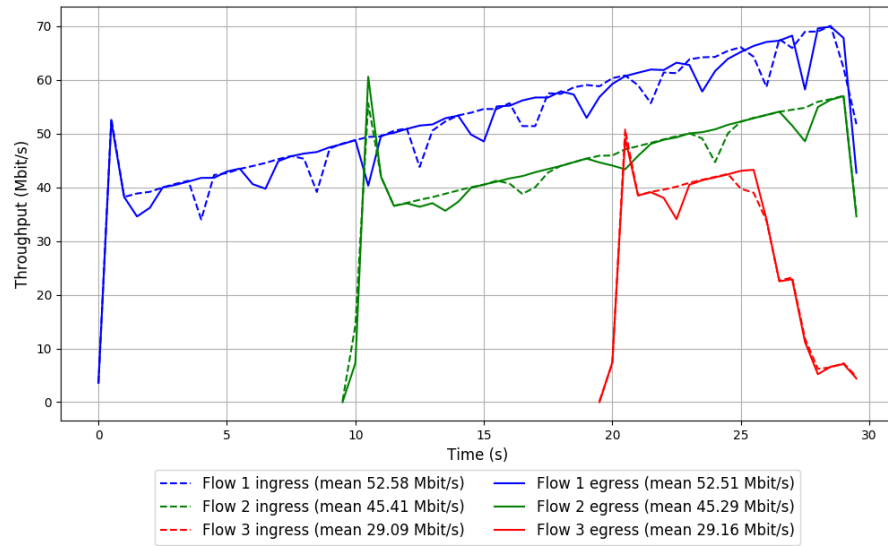
-- Flow 3:

Average throughput: 29.16 Mbit/s

95th percentile per-packet one-way delay: 51.732 ms

Loss rate: 0.76%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2017-08-12 08:07:32

End at: 2017-08-12 08:08:02

Below is generated by plot.py at 2017-08-12 12:07:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 30.92 Mbit/s

95th percentile per-packet one-way delay: 50.991 ms

Loss rate: 1.10%

-- Flow 1:

Average throughput: 14.89 Mbit/s

95th percentile per-packet one-way delay: 50.998 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 19.63 Mbit/s

95th percentile per-packet one-way delay: 51.007 ms

Loss rate: 1.58%

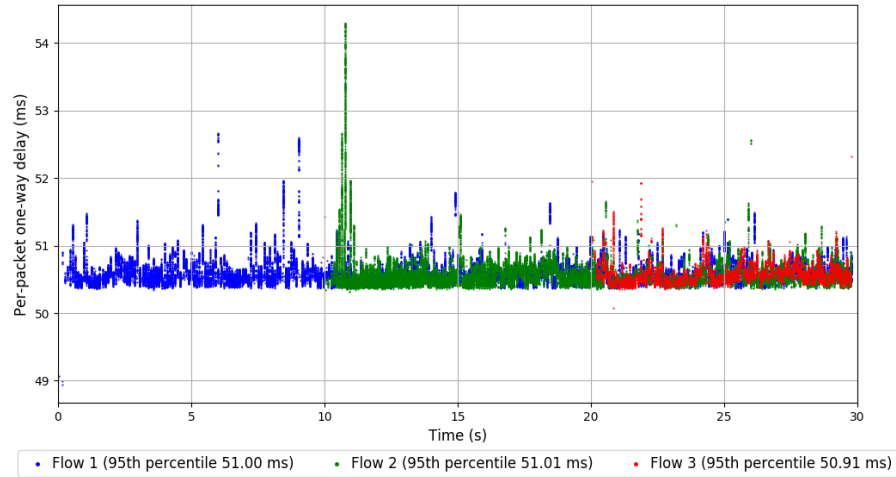
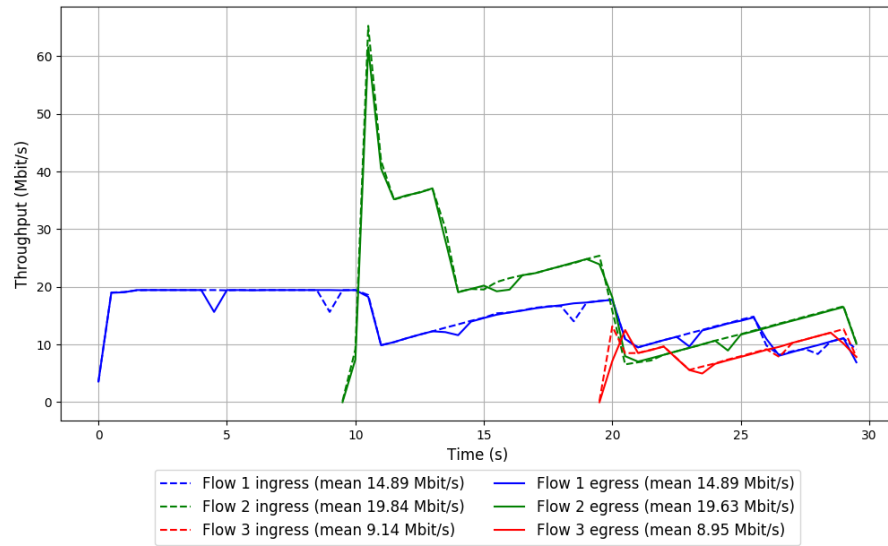
-- Flow 3:

Average throughput: 8.95 Mbit/s

95th percentile per-packet one-way delay: 50.907 ms

Loss rate: 2.70%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2017-08-12 08:19:03

End at: 2017-08-12 08:19:33

Below is generated by plot.py at 2017-08-12 12:07:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 89.73 Mbit/s

95th percentile per-packet one-way delay: 51.321 ms

Loss rate: 0.49%

-- Flow 1:

Average throughput: 77.24 Mbit/s

95th percentile per-packet one-way delay: 51.382 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 12.33 Mbit/s

95th percentile per-packet one-way delay: 50.968 ms

Loss rate: 1.42%

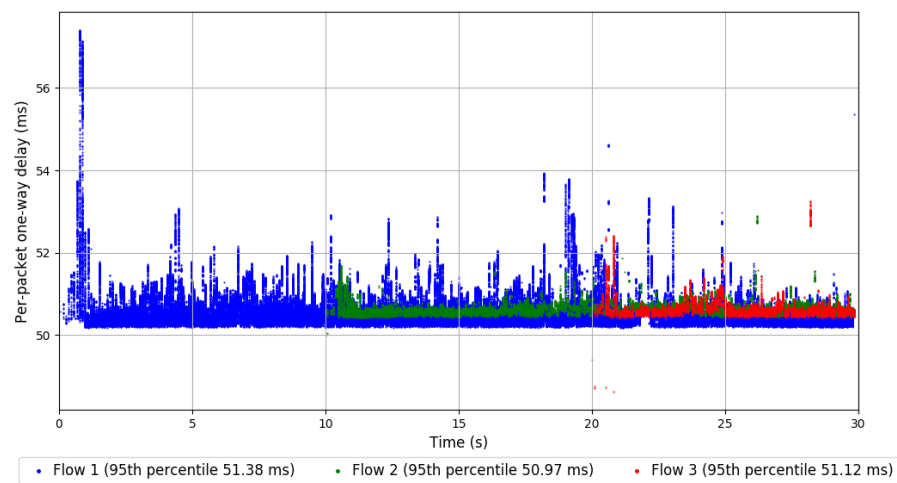
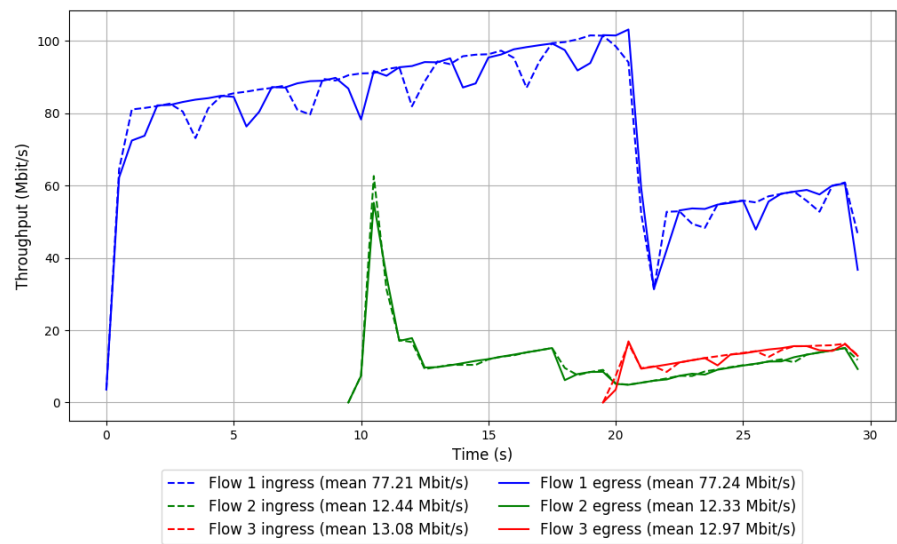
-- Flow 3:

Average throughput: 12.97 Mbit/s

95th percentile per-packet one-way delay: 51.118 ms

Loss rate: 1.79%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2017-08-12 08:30:50

End at: 2017-08-12 08:31:20

Below is generated by plot.py at 2017-08-12 12:07:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 48.82 Mbit/s

95th percentile per-packet one-way delay: 51.291 ms

Loss rate: 0.99%

-- Flow 1:

Average throughput: 11.70 Mbit/s

95th percentile per-packet one-way delay: 51.111 ms

Loss rate: 1.26%

-- Flow 2:

Average throughput: 51.99 Mbit/s

95th percentile per-packet one-way delay: 51.374 ms

Loss rate: 0.74%

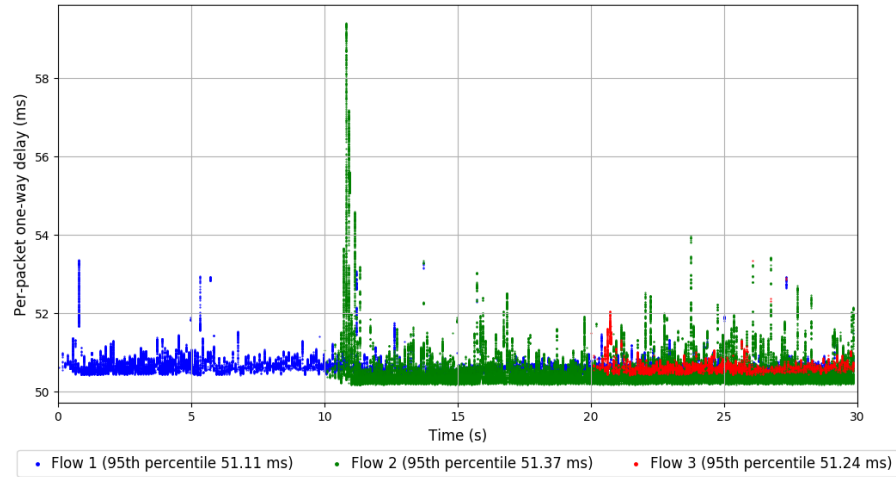
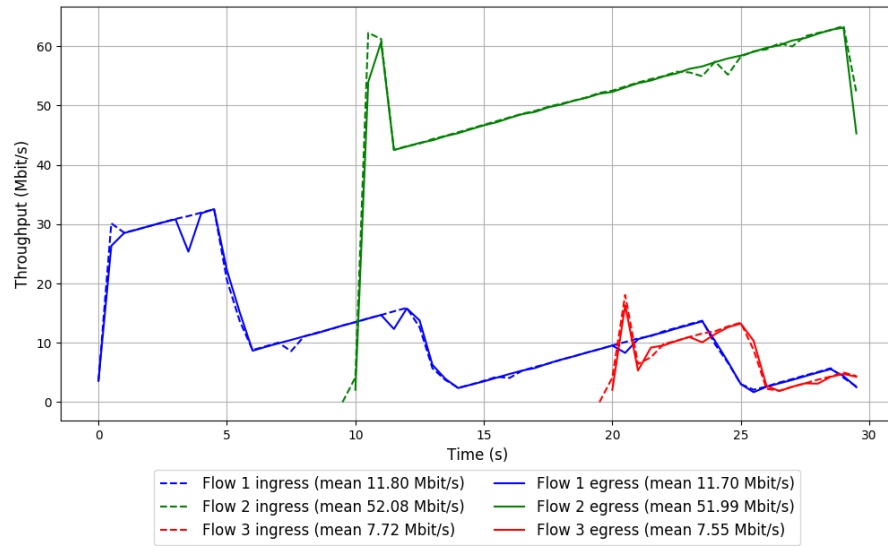
-- Flow 3:

Average throughput: 7.55 Mbit/s

95th percentile per-packet one-way delay: 51.240 ms

Loss rate: 3.19%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2017-08-12 08:42:43

End at: 2017-08-12 08:43:13

Below is generated by plot.py at 2017-08-12 12:07:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 34.39 Mbit/s

95th percentile per-packet one-way delay: 51.085 ms

Loss rate: 0.89%

-- Flow 1:

Average throughput: 15.60 Mbit/s

95th percentile per-packet one-way delay: 51.104 ms

Loss rate: 0.62%

-- Flow 2:

Average throughput: 9.41 Mbit/s

95th percentile per-packet one-way delay: 51.031 ms

Loss rate: 1.05%

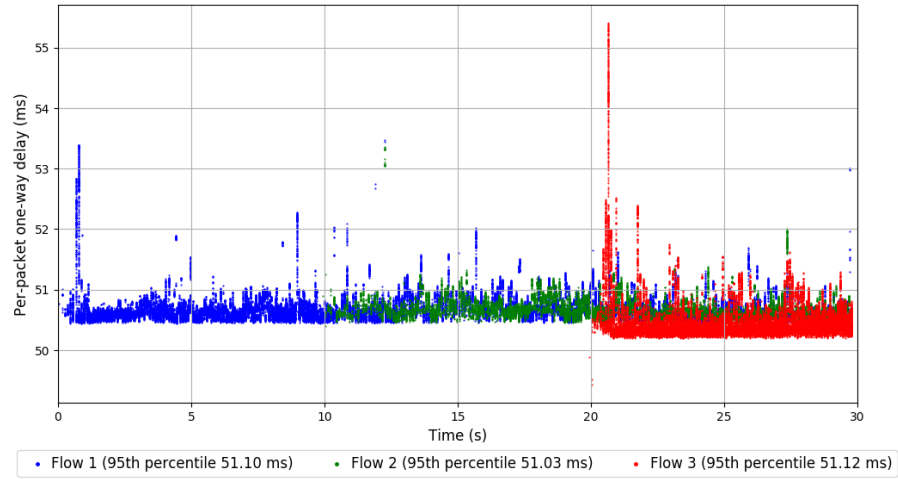
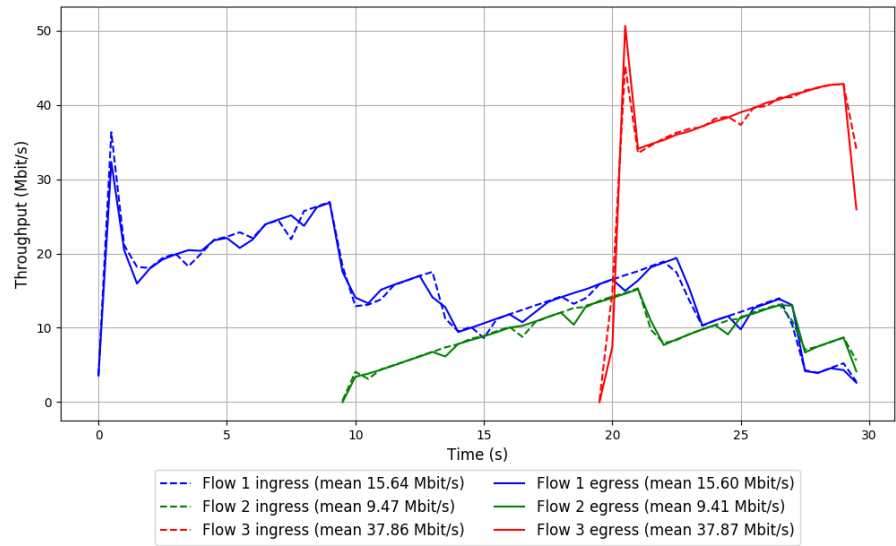
-- Flow 3:

Average throughput: 37.87 Mbit/s

95th percentile per-packet one-way delay: 51.120 ms

Loss rate: 1.16%

Run 10: Report of TCP Vegas — Data Link

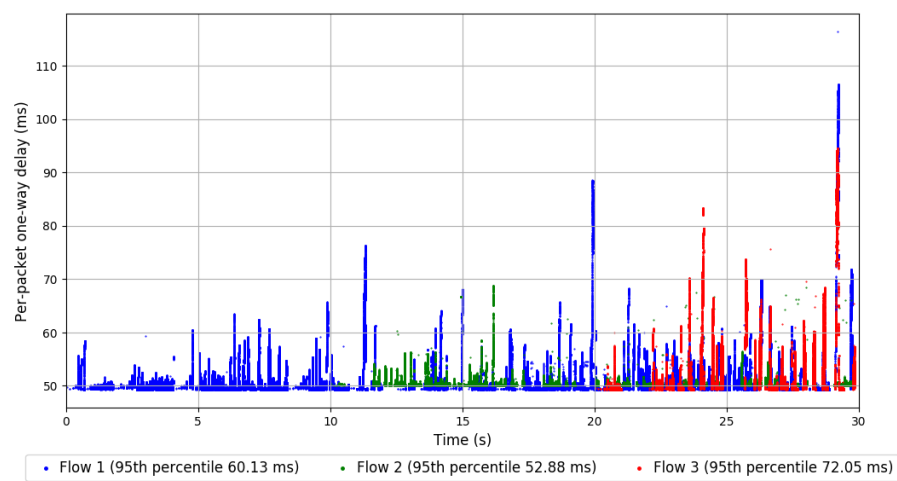
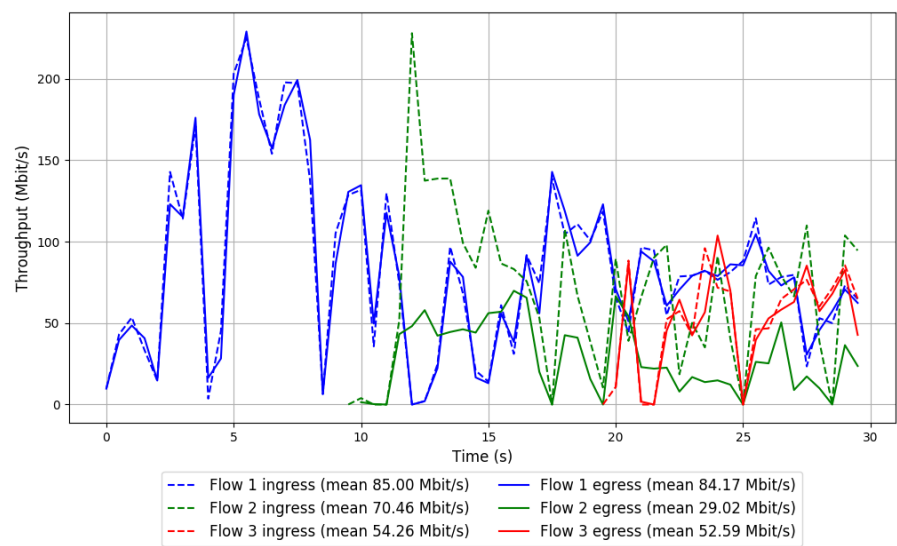


```
Run 1: Statistics of Verus

Start at: 2017-08-12 06:58:31
End at: 2017-08-12 06:59:01

# Below is generated by plot.py at 2017-08-12 12:08:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 120.52 Mbit/s
95th percentile per-packet one-way delay: 61.162 ms
Loss rate: 19.62%
-- Flow 1:
Average throughput: 84.17 Mbit/s
95th percentile per-packet one-way delay: 60.131 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 29.02 Mbit/s
95th percentile per-packet one-way delay: 52.883 ms
Loss rate: 59.11%
-- Flow 3:
Average throughput: 52.59 Mbit/s
95th percentile per-packet one-way delay: 72.046 ms
Loss rate: 4.12%
```

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2017-08-12 07:09:51

End at: 2017-08-12 07:10:21

Below is generated by plot.py at 2017-08-12 12:08:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 124.99 Mbit/s

95th percentile per-packet one-way delay: 58.361 ms

Loss rate: 30.85%

-- Flow 1:

Average throughput: 80.69 Mbit/s

95th percentile per-packet one-way delay: 60.847 ms

Loss rate: 1.36%

-- Flow 2:

Average throughput: 54.89 Mbit/s

95th percentile per-packet one-way delay: 51.039 ms

Loss rate: 52.56%

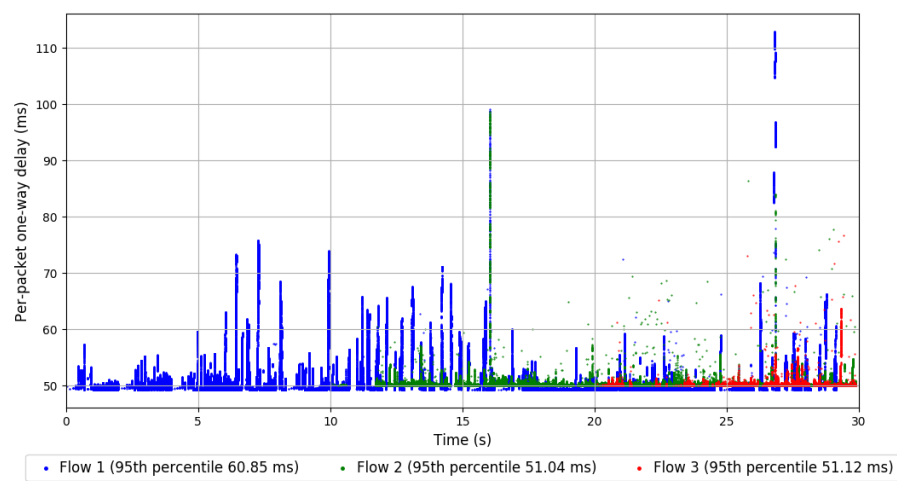
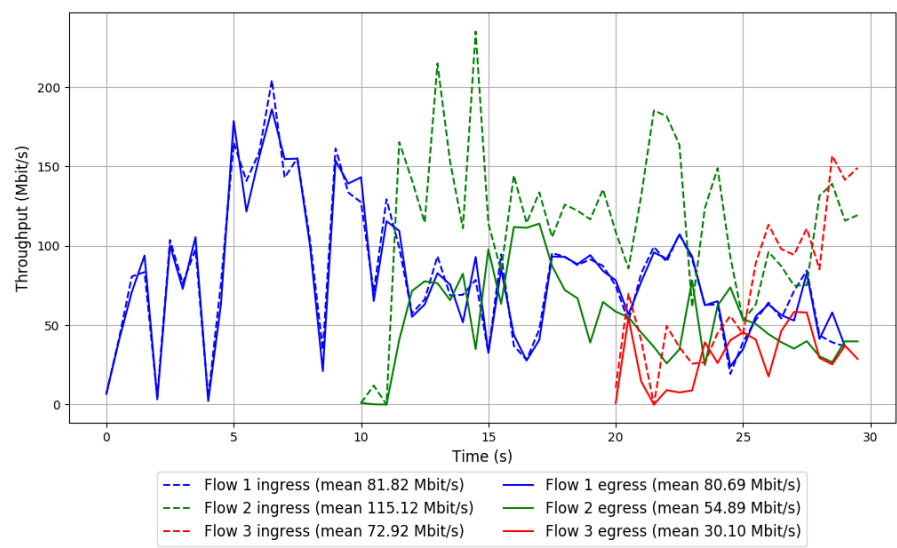
-- Flow 3:

Average throughput: 30.10 Mbit/s

95th percentile per-packet one-way delay: 51.124 ms

Loss rate: 59.18%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2017-08-12 07:21:27

End at: 2017-08-12 07:21:57

Below is generated by plot.py at 2017-08-12 12:08:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 115.09 Mbit/s

95th percentile per-packet one-way delay: 62.567 ms

Loss rate: 8.66%

-- Flow 1:

Average throughput: 63.97 Mbit/s

95th percentile per-packet one-way delay: 59.830 ms

Loss rate: 13.91%

-- Flow 2:

Average throughput: 50.31 Mbit/s

95th percentile per-packet one-way delay: 66.237 ms

Loss rate: 1.31%

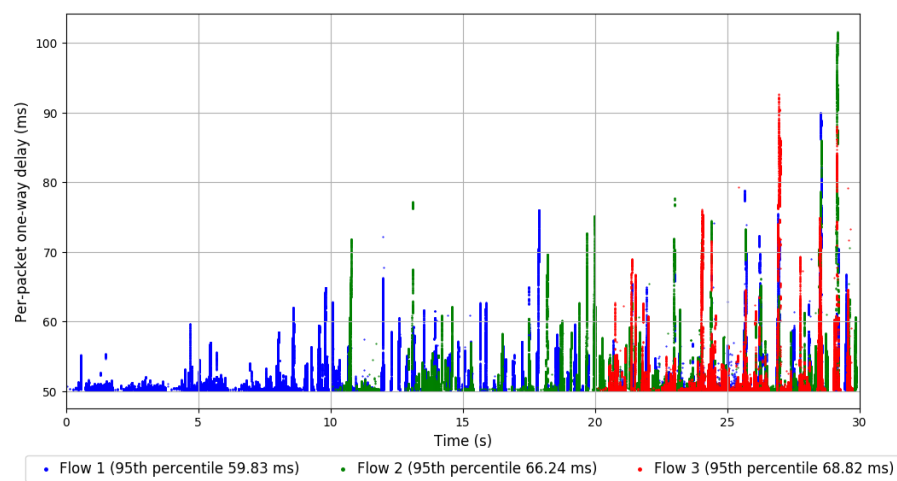
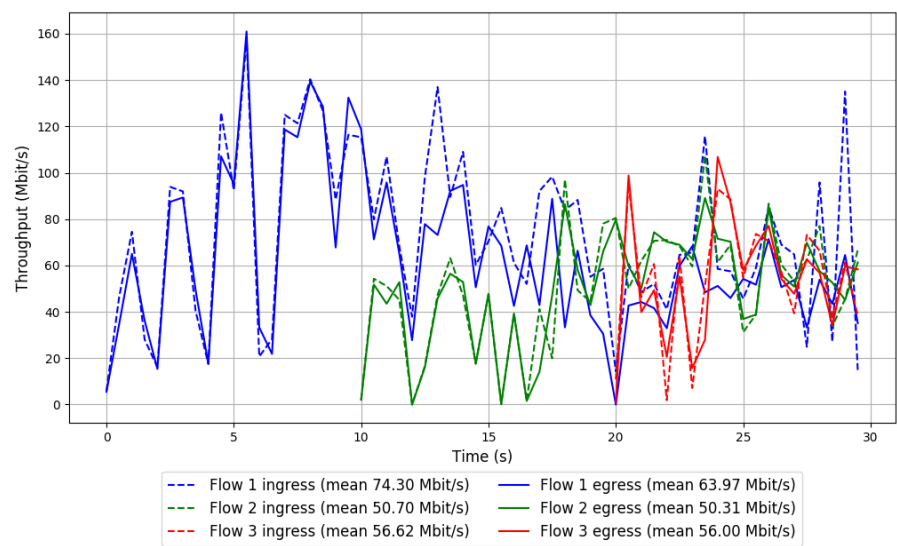
-- Flow 3:

Average throughput: 56.00 Mbit/s

95th percentile per-packet one-way delay: 68.816 ms

Loss rate: 1.09%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2017-08-12 07:33:21

End at: 2017-08-12 07:33:51

Below is generated by plot.py at 2017-08-12 12:08:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 128.75 Mbit/s

95th percentile per-packet one-way delay: 60.628 ms

Loss rate: 2.22%

-- Flow 1:

Average throughput: 76.03 Mbit/s

95th percentile per-packet one-way delay: 64.095 ms

Loss rate: 1.20%

-- Flow 2:

Average throughput: 54.43 Mbit/s

95th percentile per-packet one-way delay: 57.882 ms

Loss rate: 1.73%

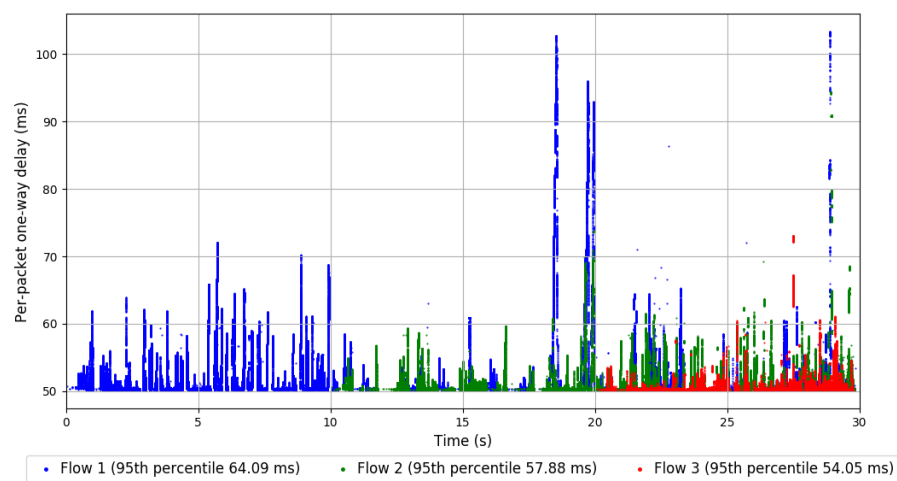
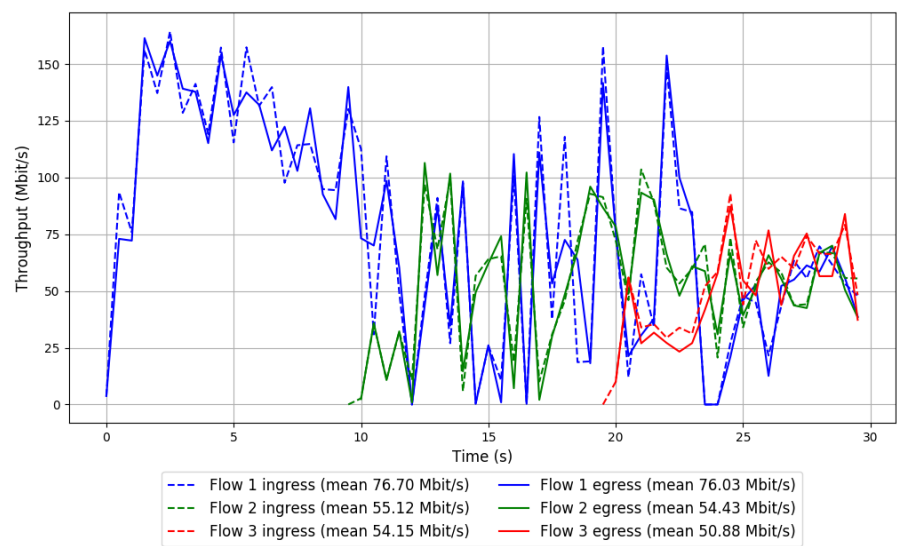
-- Flow 3:

Average throughput: 50.88 Mbit/s

95th percentile per-packet one-way delay: 54.054 ms

Loss rate: 7.63%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2017-08-12 07:45:16

End at: 2017-08-12 07:45:46

Below is generated by plot.py at 2017-08-12 12:09:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 147.76 Mbit/s

95th percentile per-packet one-way delay: 57.513 ms

Loss rate: 3.86%

-- Flow 1:

Average throughput: 86.53 Mbit/s

95th percentile per-packet one-way delay: 63.187 ms

Loss rate: 5.85%

-- Flow 2:

Average throughput: 64.44 Mbit/s

95th percentile per-packet one-way delay: 55.020 ms

Loss rate: 0.65%

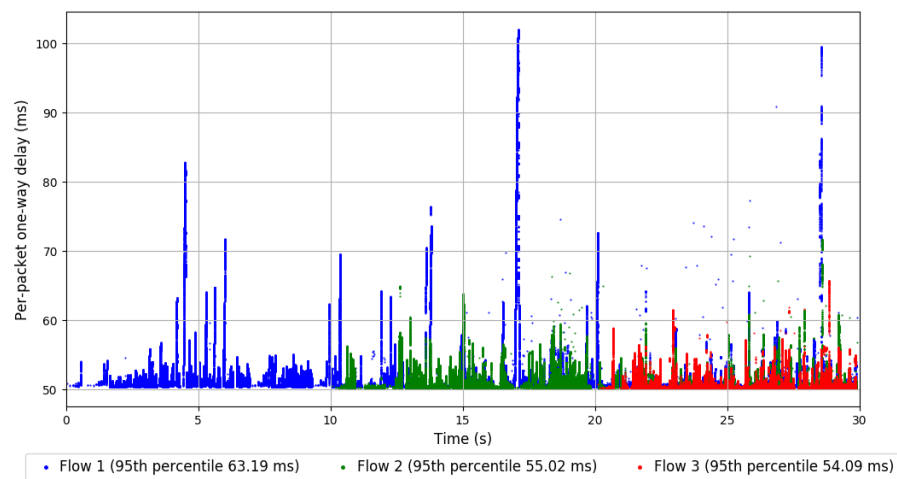
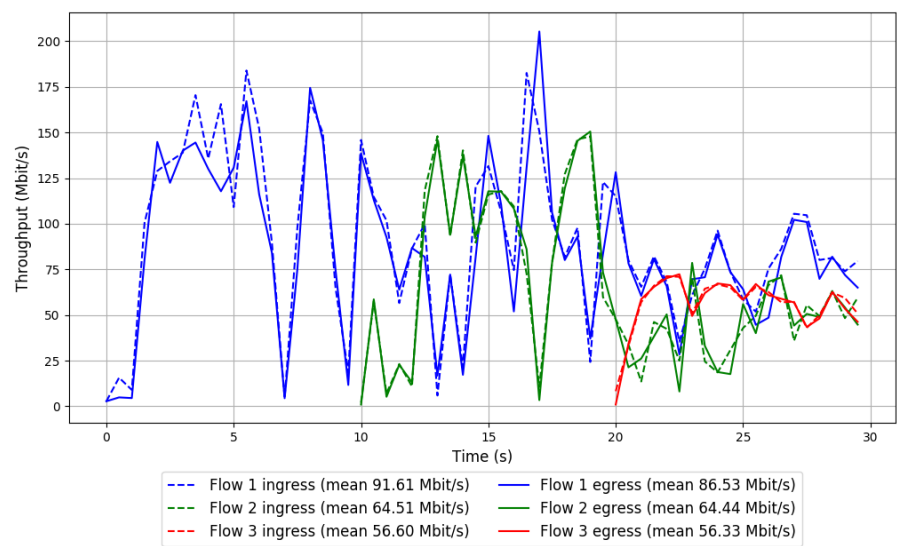
-- Flow 3:

Average throughput: 56.33 Mbit/s

95th percentile per-packet one-way delay: 54.094 ms

Loss rate: 1.49%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2017-08-12 07:57:20

End at: 2017-08-12 07:57:50

Below is generated by plot.py at 2017-08-12 12:09:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 161.22 Mbit/s

95th percentile per-packet one-way delay: 60.679 ms

Loss rate: 3.41%

-- Flow 1:

Average throughput: 115.70 Mbit/s

95th percentile per-packet one-way delay: 59.940 ms

Loss rate: 0.99%

-- Flow 2:

Average throughput: 43.10 Mbit/s

95th percentile per-packet one-way delay: 59.189 ms

Loss rate: 11.73%

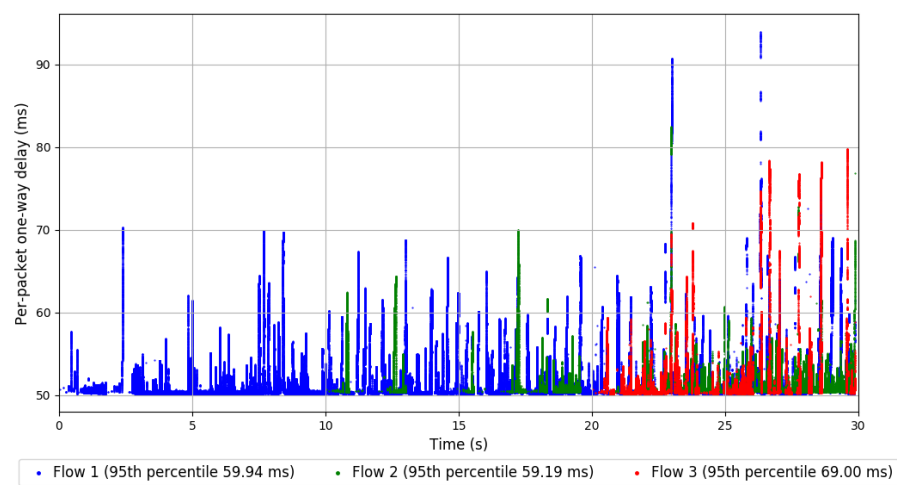
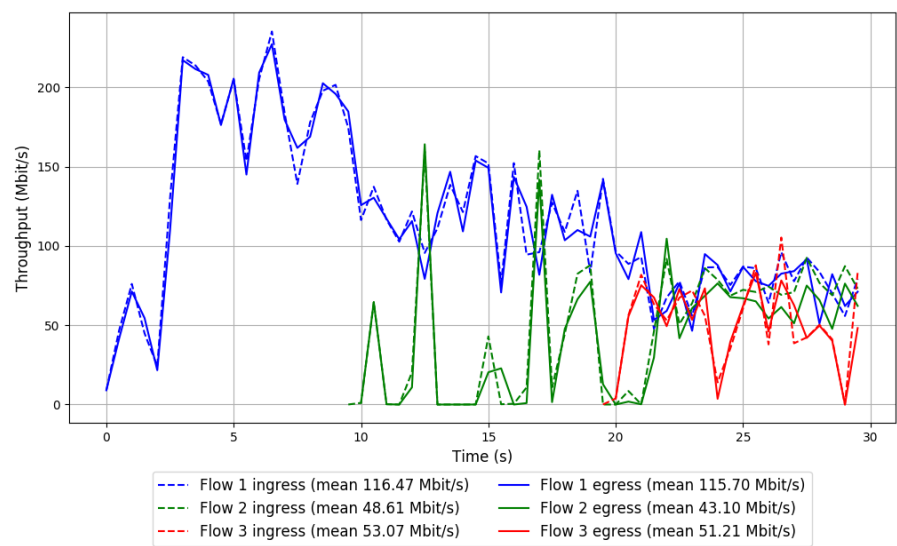
-- Flow 3:

Average throughput: 51.21 Mbit/s

95th percentile per-packet one-way delay: 68.999 ms

Loss rate: 4.13%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2017-08-12 08:09:07

End at: 2017-08-12 08:09:37

Below is generated by plot.py at 2017-08-12 12:09:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 153.91 Mbit/s

95th percentile per-packet one-way delay: 64.050 ms

Loss rate: 2.23%

-- Flow 1:

Average throughput: 86.80 Mbit/s

95th percentile per-packet one-way delay: 68.144 ms

Loss rate: 2.89%

-- Flow 2:

Average throughput: 86.23 Mbit/s

95th percentile per-packet one-way delay: 58.312 ms

Loss rate: 0.63%

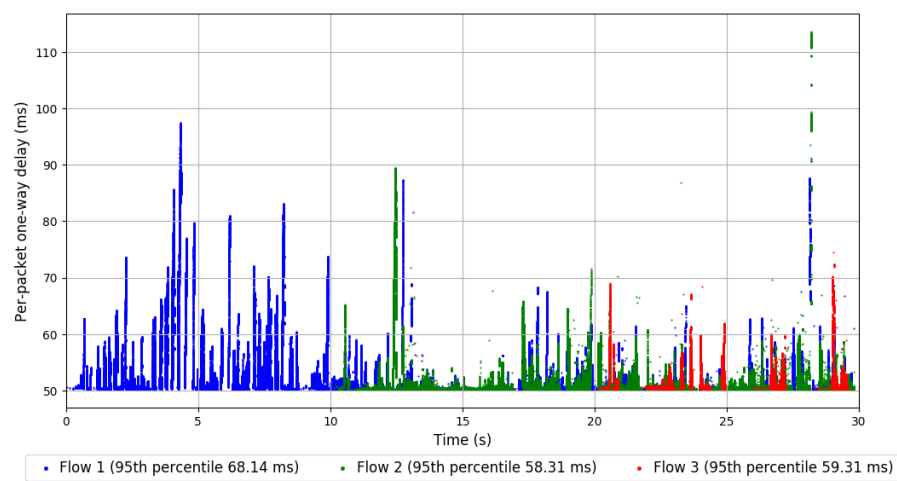
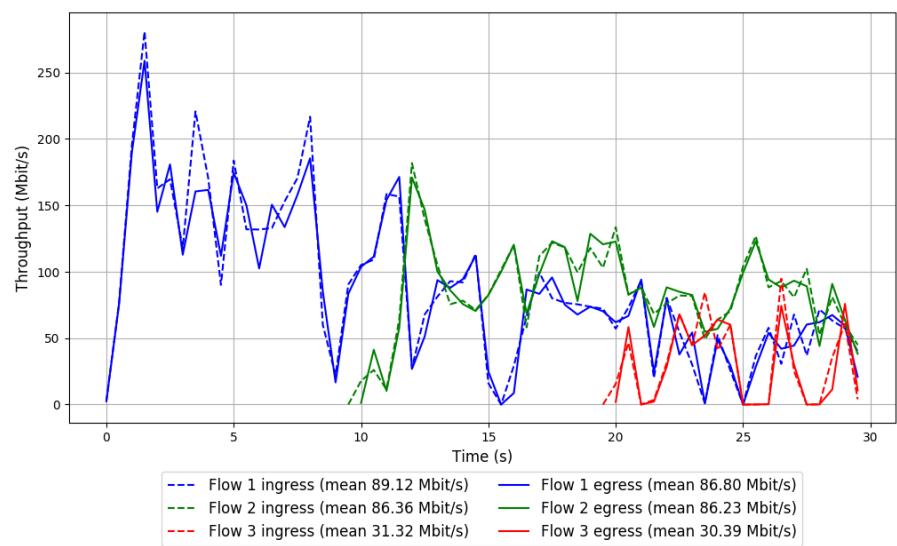
-- Flow 3:

Average throughput: 30.39 Mbit/s

95th percentile per-packet one-way delay: 59.307 ms

Loss rate: 5.46%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2017-08-12 08:20:44

End at: 2017-08-12 08:21:14

Below is generated by plot.py at 2017-08-12 12:09:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 129.95 Mbit/s

95th percentile per-packet one-way delay: 63.623 ms

Loss rate: 3.96%

-- Flow 1:

Average throughput: 94.21 Mbit/s

95th percentile per-packet one-way delay: 64.839 ms

Loss rate: 1.94%

-- Flow 2:

Average throughput: 35.73 Mbit/s

95th percentile per-packet one-way delay: 58.348 ms

Loss rate: 12.29%

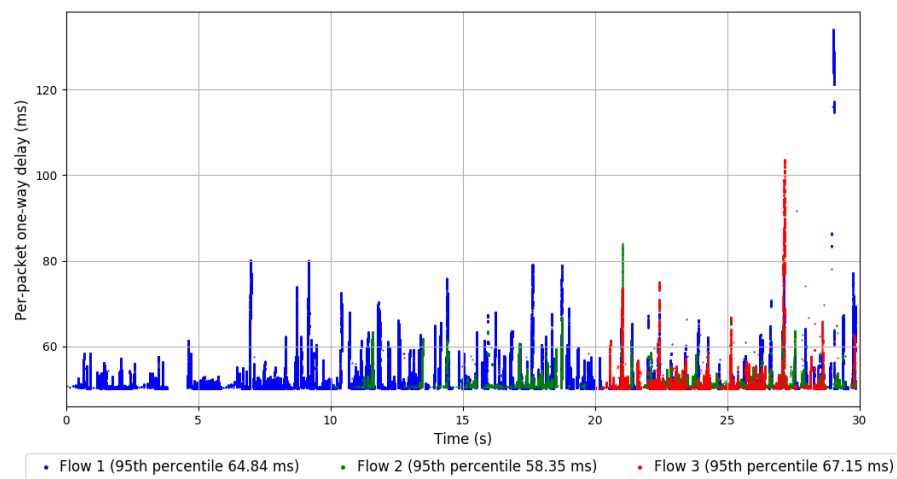
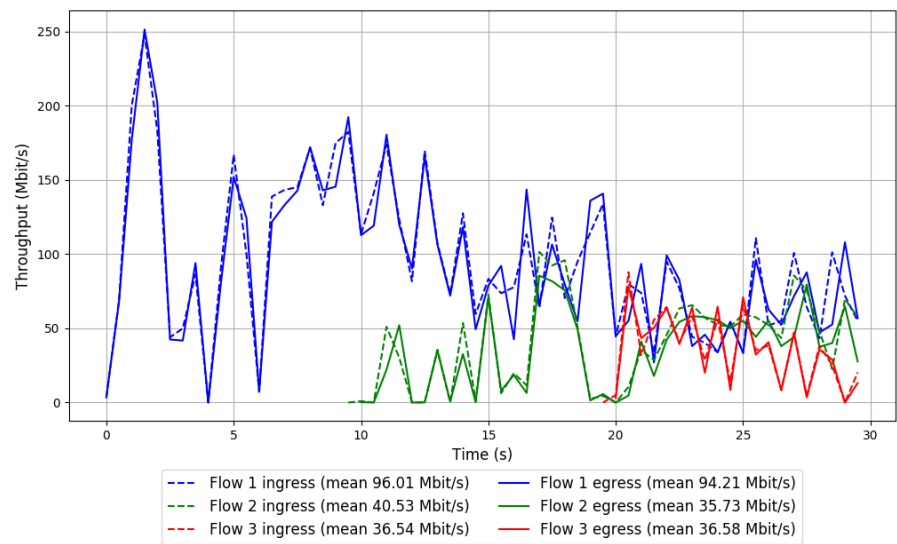
-- Flow 3:

Average throughput: 36.58 Mbit/s

95th percentile per-packet one-way delay: 67.147 ms

Loss rate: 1.39%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2017-08-12 08:32:32

End at: 2017-08-12 08:33:02

Below is generated by plot.py at 2017-08-12 12:10:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 157.77 Mbit/s

95th percentile per-packet one-way delay: 60.333 ms

Loss rate: 5.96%

-- Flow 1:

Average throughput: 84.37 Mbit/s

95th percentile per-packet one-way delay: 60.290 ms

Loss rate: 9.44%

-- Flow 2:

Average throughput: 92.08 Mbit/s

95th percentile per-packet one-way delay: 59.844 ms

Loss rate: 1.00%

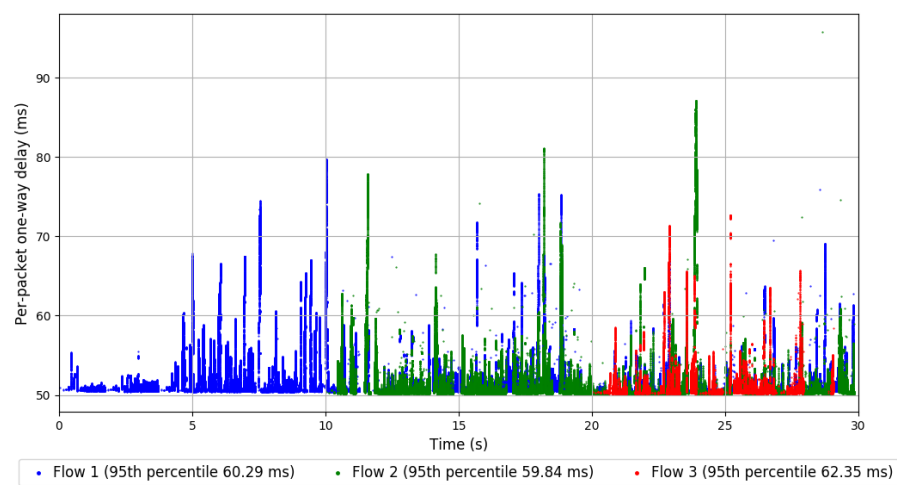
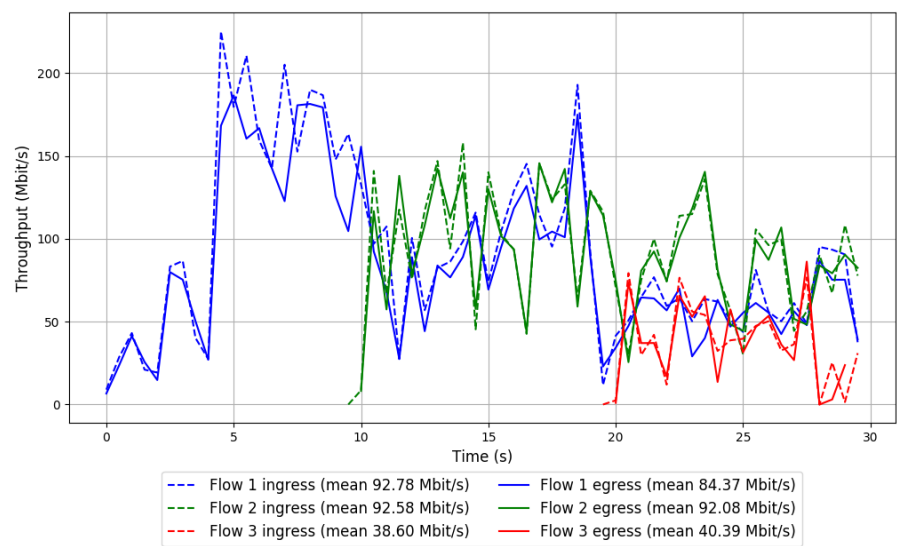
-- Flow 3:

Average throughput: 40.39 Mbit/s

95th percentile per-packet one-way delay: 62.346 ms

Loss rate: 4.69%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2017-08-12 08:44:19

End at: 2017-08-12 08:44:49

Below is generated by plot.py at 2017-08-12 12:10:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 139.76 Mbit/s

95th percentile per-packet one-way delay: 60.037 ms

Loss rate: 5.07%

-- Flow 1:

Average throughput: 80.89 Mbit/s

95th percentile per-packet one-way delay: 62.242 ms

Loss rate: 1.18%

-- Flow 2:

Average throughput: 84.29 Mbit/s

95th percentile per-packet one-way delay: 56.771 ms

Loss rate: 0.60%

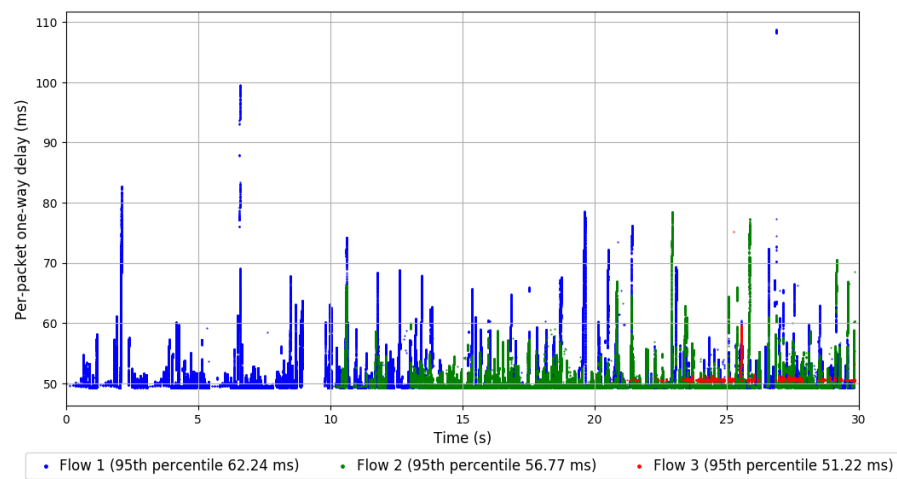
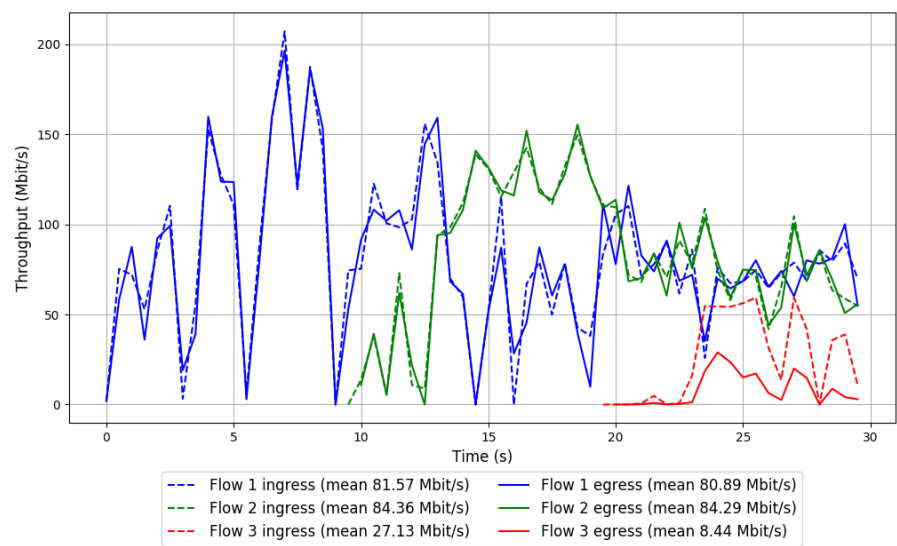
-- Flow 3:

Average throughput: 8.44 Mbit/s

95th percentile per-packet one-way delay: 51.218 ms

Loss rate: 68.92%

Run 10: Report of Verus — Data Link

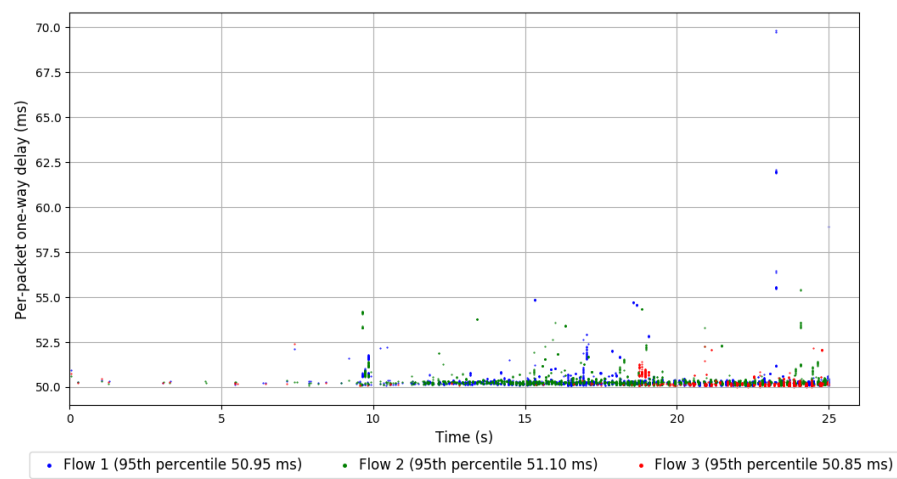
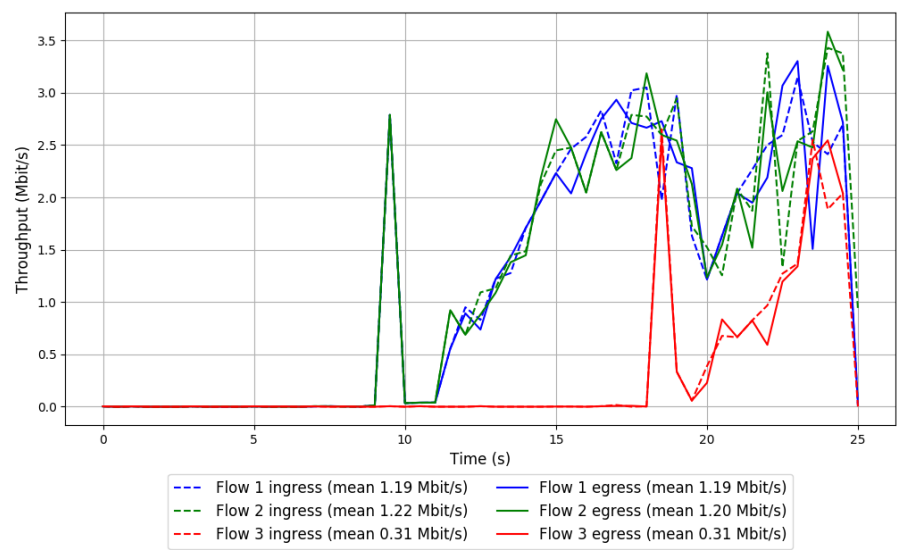


```
Run 1: Statistics of WebRTC media

Start at: 2017-08-12 06:55:26
End at: 2017-08-12 06:55:57

# Below is generated by plot.py at 2017-08-12 12:10:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.70 Mbit/s
95th percentile per-packet one-way delay: 50.954 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 1.19 Mbit/s
95th percentile per-packet one-way delay: 50.953 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 1.20 Mbit/s
95th percentile per-packet one-way delay: 51.104 ms
Loss rate: 1.78%
-- Flow 3:
Average throughput: 0.31 Mbit/s
95th percentile per-packet one-way delay: 50.850 ms
Loss rate: 0.63%
```

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2017-08-12 07:06:53

End at: 2017-08-12 07:07:23

Below is generated by plot.py at 2017-08-12 12:10:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.64 Mbit/s

95th percentile per-packet one-way delay: 50.592 ms

Loss rate: 1.02%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 50.641 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.52 Mbit/s

95th percentile per-packet one-way delay: 50.426 ms

Loss rate: 0.61%

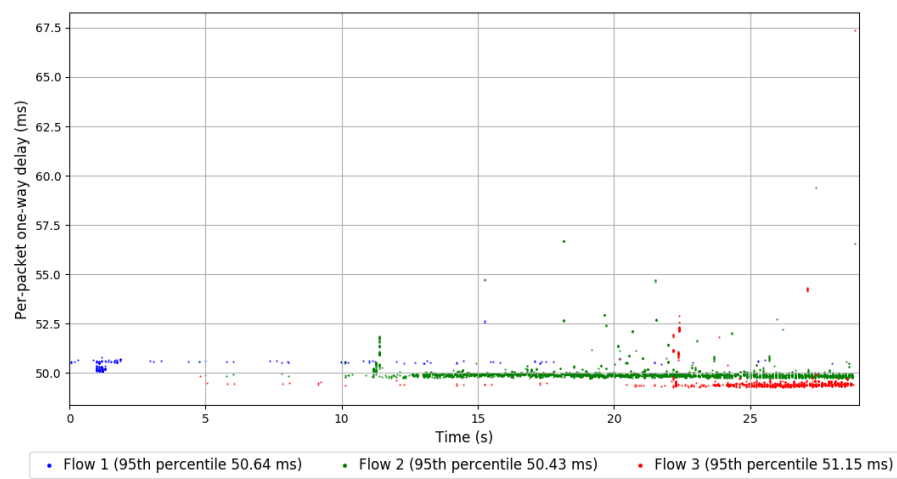
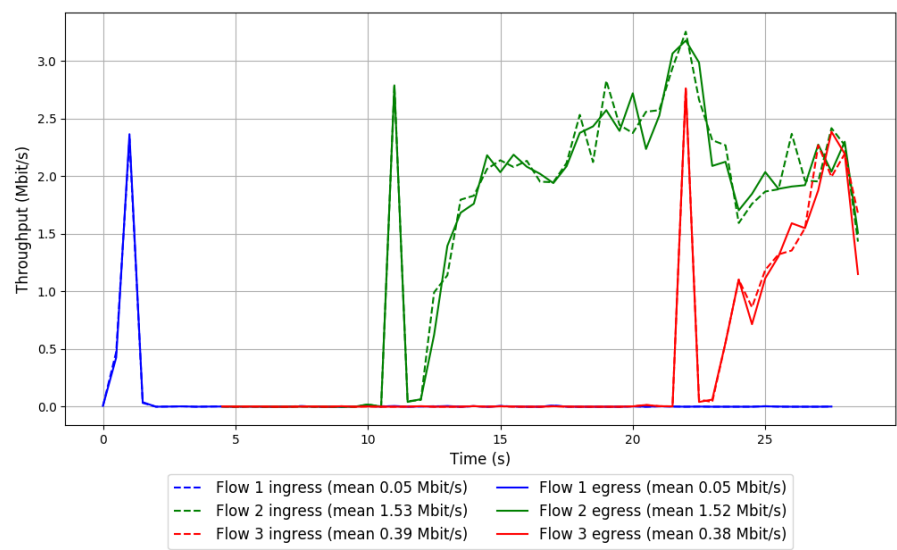
-- Flow 3:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 51.149 ms

Loss rate: 2.77%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2017-08-12 07:18:26

End at: 2017-08-12 07:18:56

Below is generated by plot.py at 2017-08-12 12:10:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.71 Mbit/s

95th percentile per-packet one-way delay: 50.602 ms

Loss rate: 1.26%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 50.584 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.56 Mbit/s

95th percentile per-packet one-way delay: 50.552 ms

Loss rate: 0.80%

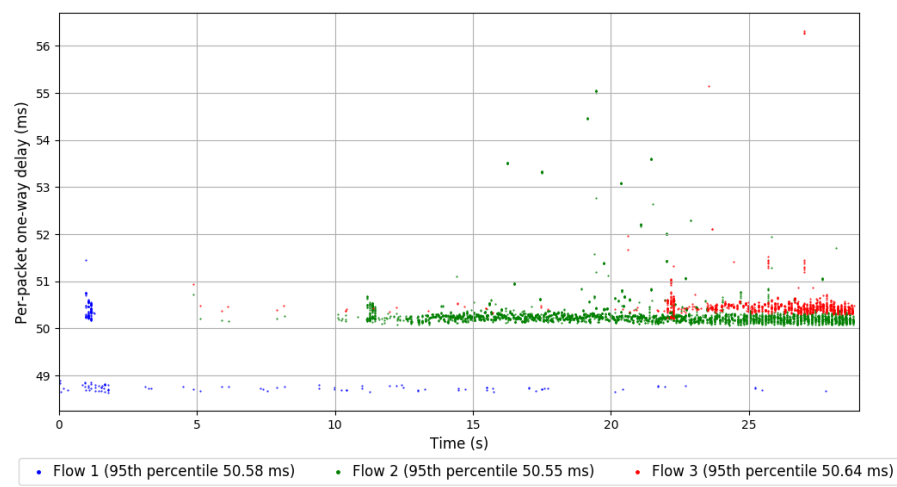
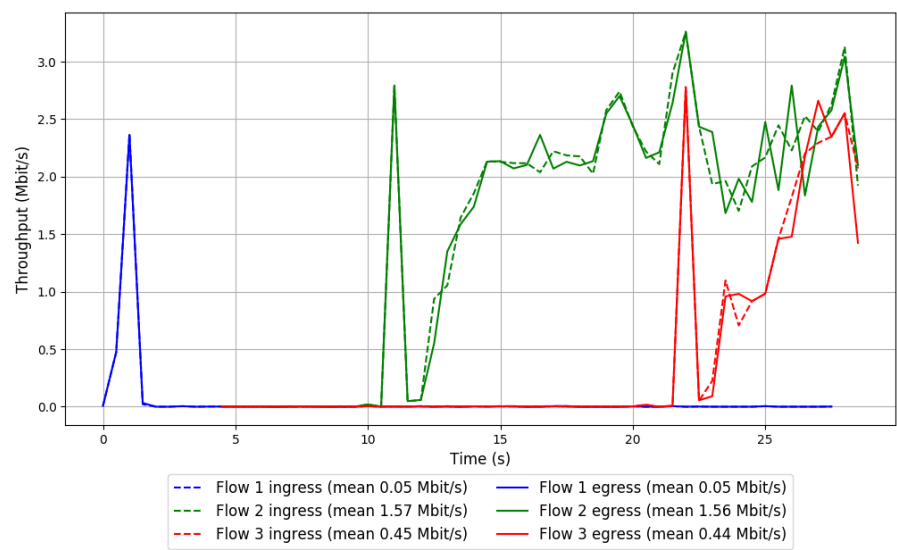
-- Flow 3:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 50.640 ms

Loss rate: 3.01%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2017-08-12 07:30:18

End at: 2017-08-12 07:30:48

Below is generated by plot.py at 2017-08-12 12:10:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.80 Mbit/s

95th percentile per-packet one-way delay: 50.610 ms

Loss rate: 1.29%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.697 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.58 Mbit/s

95th percentile per-packet one-way delay: 50.265 ms

Loss rate: 0.86%

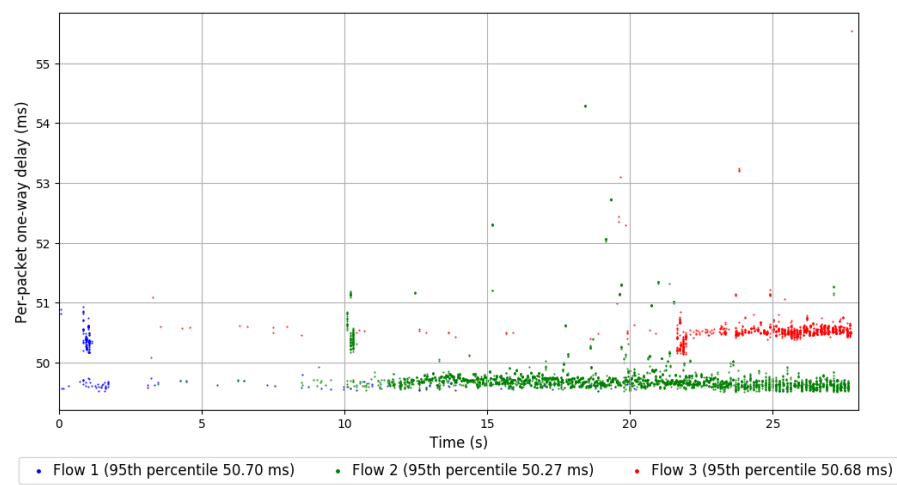
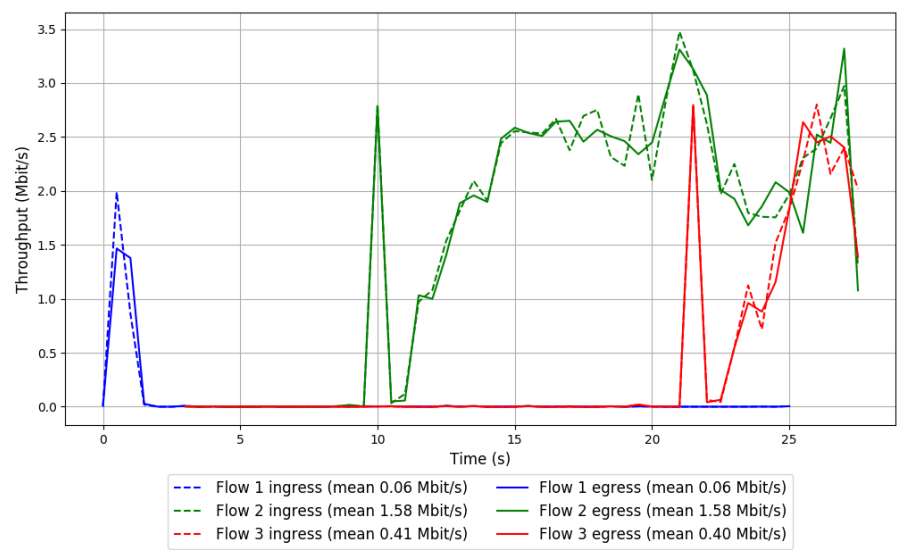
-- Flow 3:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 50.683 ms

Loss rate: 3.10%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2017-08-12 07:42:14

End at: 2017-08-12 07:42:44

Below is generated by plot.py at 2017-08-12 12:10:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.80 Mbit/s

95th percentile per-packet one-way delay: 50.785 ms

Loss rate: 1.33%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.486 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.58 Mbit/s

95th percentile per-packet one-way delay: 50.792 ms

Loss rate: 0.91%

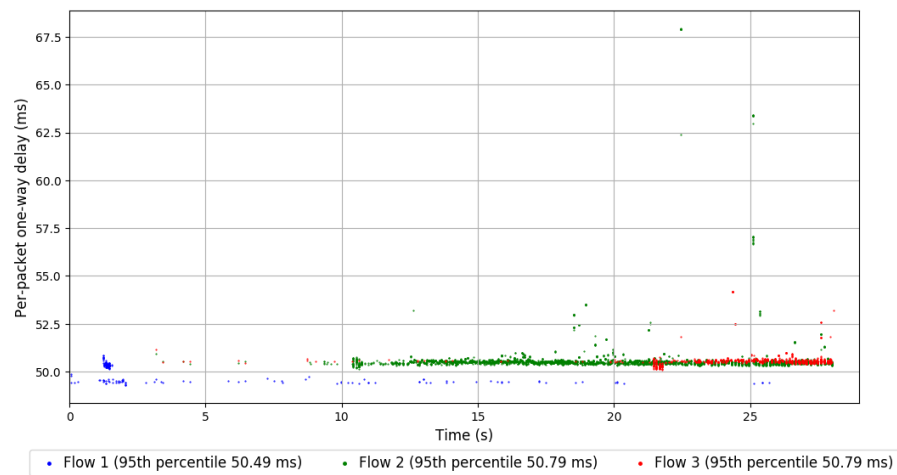
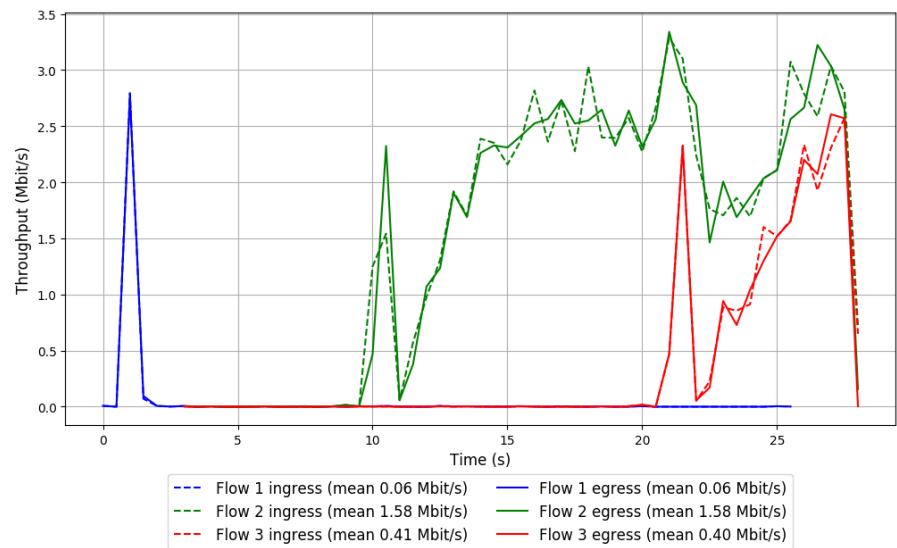
-- Flow 3:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 50.791 ms

Loss rate: 3.18%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2017-08-12 07:54:16

End at: 2017-08-12 07:54:46

Below is generated by plot.py at 2017-08-12 12:10:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.60 Mbit/s

95th percentile per-packet one-way delay: 50.716 ms

Loss rate: 1.01%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 51.673 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.41 Mbit/s

95th percentile per-packet one-way delay: 50.736 ms

Loss rate: 0.54%

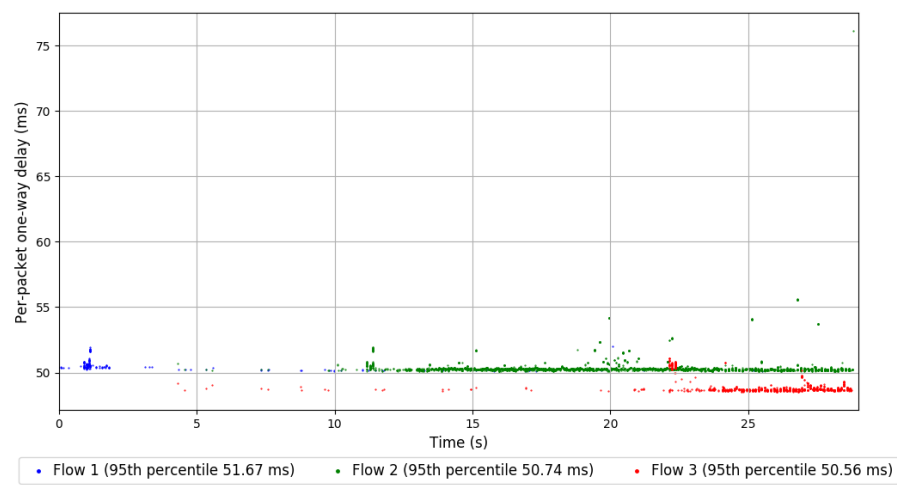
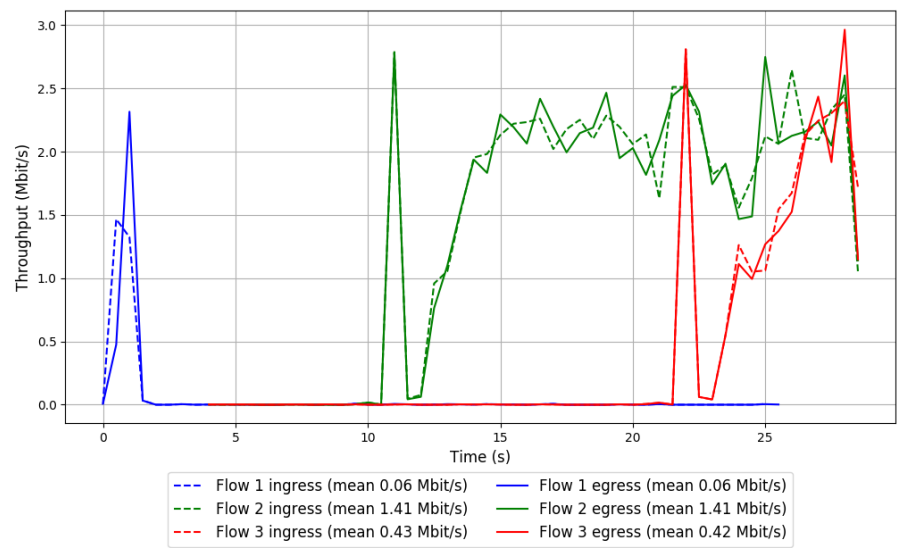
-- Flow 3:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 50.563 ms

Loss rate: 2.73%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2017-08-12 08:06:10

End at: 2017-08-12 08:06:40

Below is generated by plot.py at 2017-08-12 12:10:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.56 Mbit/s

95th percentile per-packet one-way delay: 51.073 ms

Loss rate: 0.87%

-- Flow 1:

Average throughput: 1.91 Mbit/s

95th percentile per-packet one-way delay: 51.222 ms

Loss rate: 1.61%

-- Flow 2:

Average throughput: 1.39 Mbit/s

95th percentile per-packet one-way delay: 50.744 ms

Loss rate: 0.00%

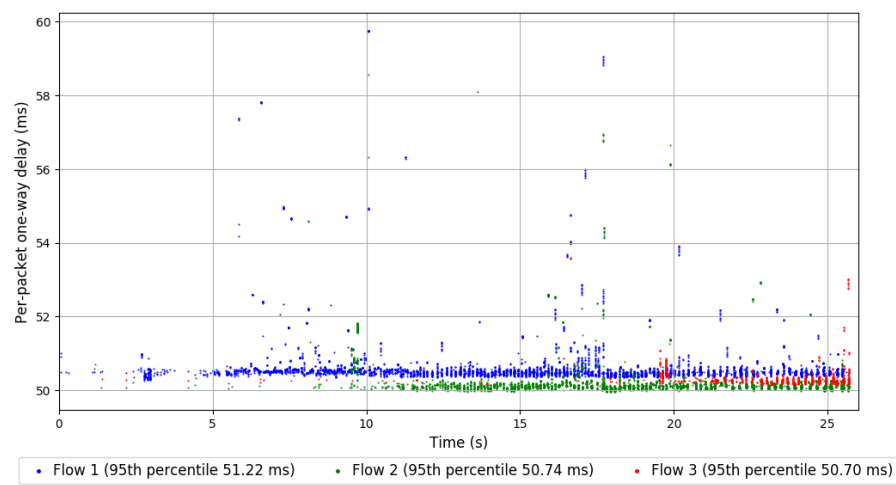
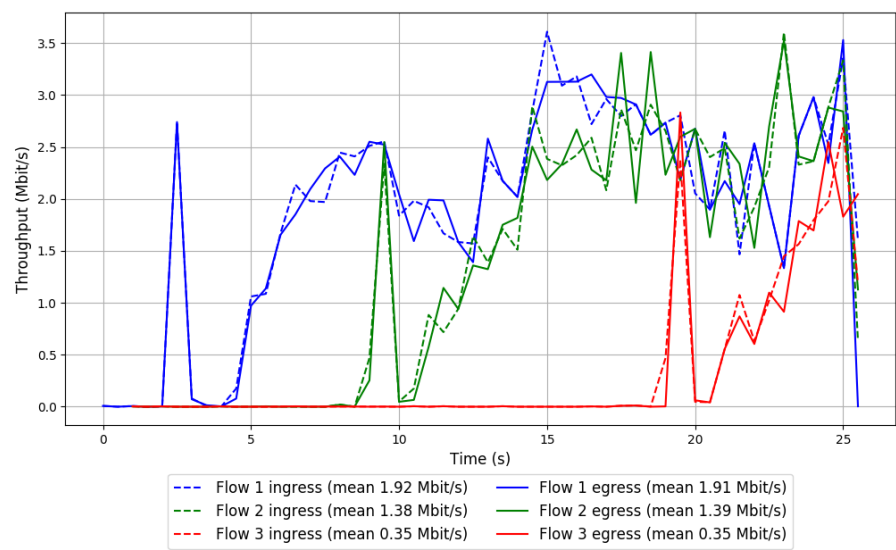
-- Flow 3:

Average throughput: 0.35 Mbit/s

95th percentile per-packet one-way delay: 50.704 ms

Loss rate: 0.00%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2017-08-12 08:17:41

End at: 2017-08-12 08:18:11

Below is generated by plot.py at 2017-08-12 12:10:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.72 Mbit/s

95th percentile per-packet one-way delay: 50.867 ms

Loss rate: 1.18%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.657 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 1.60 Mbit/s

95th percentile per-packet one-way delay: 50.876 ms

Loss rate: 0.77%

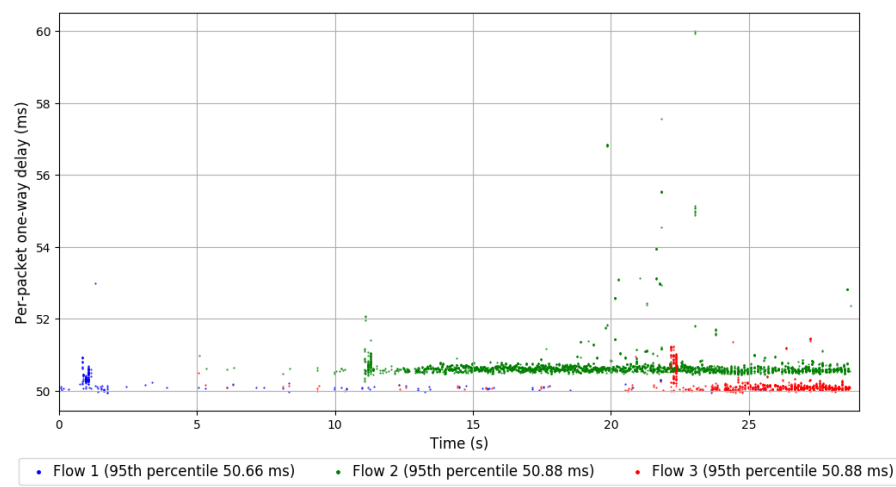
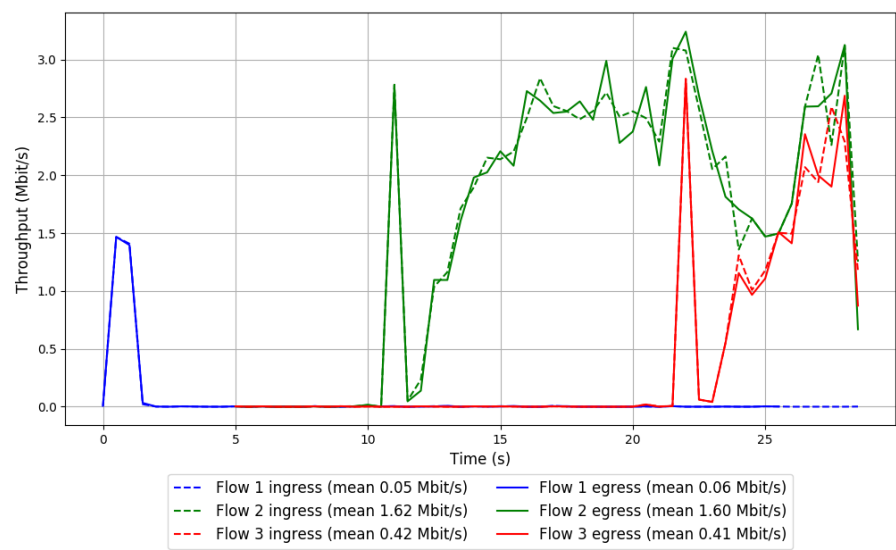
-- Flow 3:

Average throughput: 0.41 Mbit/s

95th percentile per-packet one-way delay: 50.881 ms

Loss rate: 2.95%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2017-08-12 08:29:28

End at: 2017-08-12 08:29:58

Below is generated by plot.py at 2017-08-12 12:10:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.74 Mbit/s

95th percentile per-packet one-way delay: 50.750 ms

Loss rate: 1.35%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 52.632 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.60 Mbit/s

95th percentile per-packet one-way delay: 50.345 ms

Loss rate: 0.79%

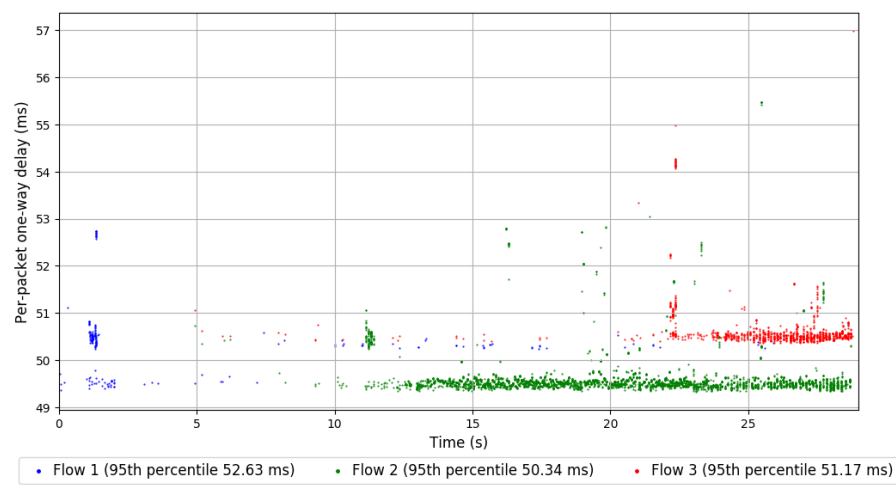
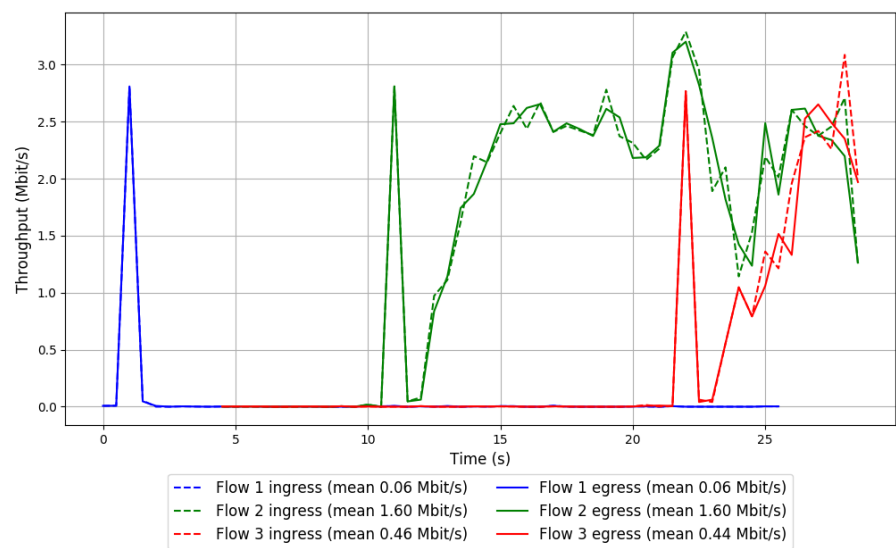
-- Flow 3:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 51.174 ms

Loss rate: 3.49%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2017-08-12 08:41:21

End at: 2017-08-12 08:41:51

Below is generated by plot.py at 2017-08-12 12:10:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.76 Mbit/s

95th percentile per-packet one-way delay: 50.682 ms

Loss rate: 0.87%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.726 ms

Loss rate: 0.10%

-- Flow 2:

Average throughput: 1.55 Mbit/s

95th percentile per-packet one-way delay: 49.419 ms

Loss rate: 0.91%

-- Flow 3:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 51.031 ms

Loss rate: 0.82%

Run 10: Report of WebRTC media — Data Link

