

Pantheon Report

Generated at 2017-08-12 12:33:51 (UTC).

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

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.

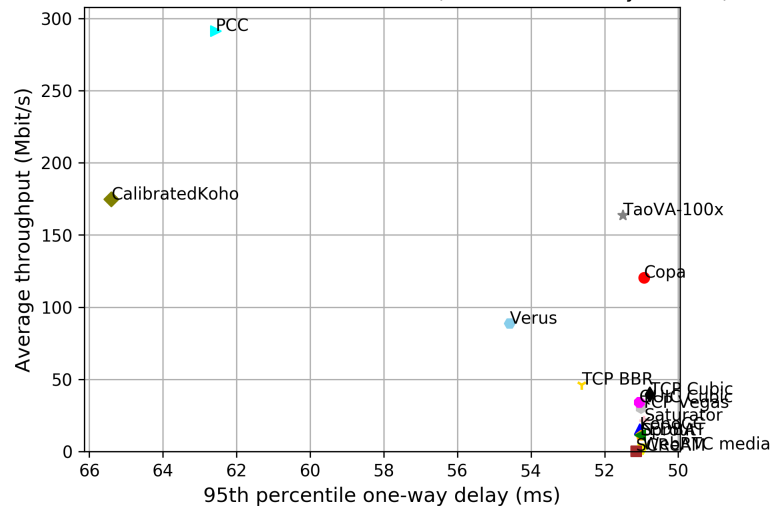
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

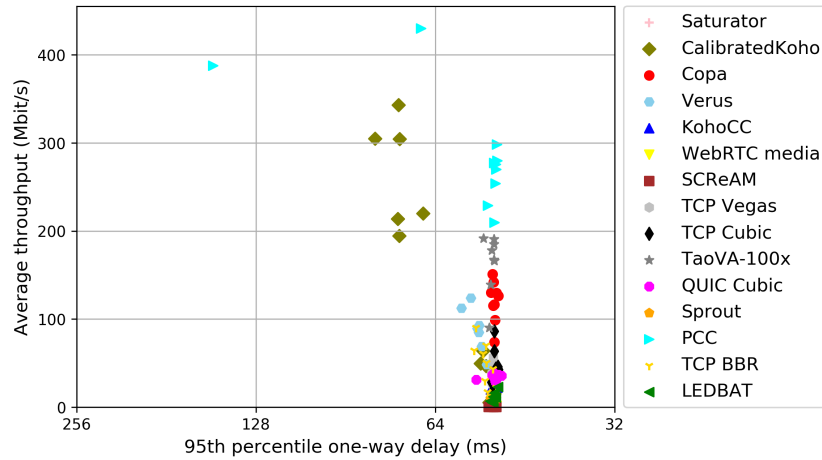
Git summary:

```
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 @ f1a14bffe749737437f61b1eaaeb30b267cde681
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 Iowa Ethernet to GCE London Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)



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



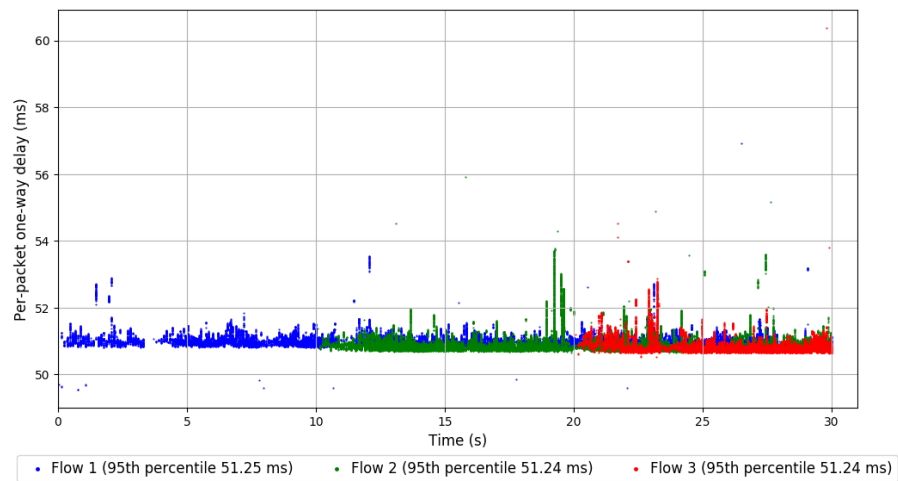
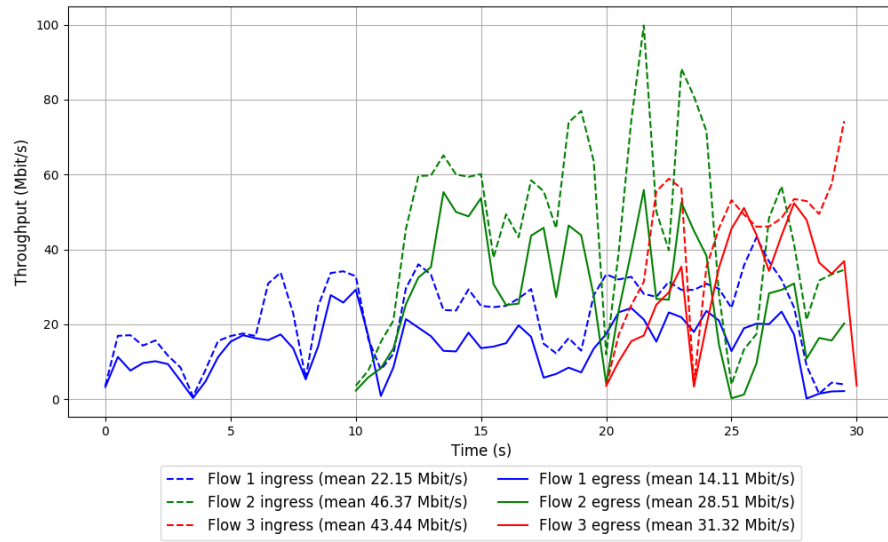
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	10	27.98	17.41	20.70	52.21	51.80	51.85	29.16	35.04	33.40
CalibratedKoho	10	69.89	133.95	47.10	58.70	63.32	58.50	52.69	32.24	40.89
Copa	9	77.25	65.40	62.99	67.29	50.70	50.55	1.96	0.58	0.12
TCP Cubic	10	21.07	25.15	5.54	50.34	50.81	50.73	1.43	3.24	6.49
KohoCC	10	8.34	7.42	6.76	50.98	51.18	50.86	26.37	34.70	38.92
LEDBAT	7	5.98	6.25	4.21	50.94	51.02	50.88	1.98	2.59	2.65
PCC	10	197.98	102.19	78.33	63.45	51.11	50.89	16.08	11.24	5.88
QUIC Cubic	10	0.06	38.10	27.62	50.56	51.01	50.20	0.00	0.00	0.00
Saturator	8	16.53	12.97	18.79	50.88	51.07	51.12	20.30	30.41	13.60
SCReAM	10	0.22	0.22	0.22	50.49	50.81	50.06	0.01	0.00	0.00
Sprout	10	5.25	6.02	5.54	51.14	50.80	50.74	12.88	9.02	10.25
TaoVA-100x	8	168.01	160.42	120.10	51.34	51.31	51.17	4.29	5.40	1.74
TCP Vegas	10	10.06	24.37	11.85	50.87	50.78	51.08	1.86	1.22	3.13
Verus	7	58.02	36.20	16.58	54.83	52.89	51.87	39.96	53.03	68.62
WebRTC media	9	0.06	1.88	0.49	69.38	50.58	51.24	0.00	0.02	0.00

```
Run 1: Statistics of TCP BBR

Start at: 2017-08-12 08:47:20
End at: 2017-08-12 08:47:50

# Below is generated by plot.py at 2017-08-12 12:11:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 43.46 Mbit/s
95th percentile per-packet one-way delay: 51.243 ms
Loss rate: 35.52%
-- Flow 1:
Average throughput: 14.11 Mbit/s
95th percentile per-packet one-way delay: 51.246 ms
Loss rate: 36.29%
-- Flow 2:
Average throughput: 28.51 Mbit/s
95th percentile per-packet one-way delay: 51.241 ms
Loss rate: 38.52%
-- Flow 3:
Average throughput: 31.32 Mbit/s
95th percentile per-packet one-way delay: 51.238 ms
Loss rate: 27.90%
```

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2017-08-12 08:58:38

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

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 70.32 Mbit/s

95th percentile per-packet one-way delay: 52.600 ms

Loss rate: 23.37%

-- Flow 1:

Average throughput: 66.58 Mbit/s

95th percentile per-packet one-way delay: 52.699 ms

Loss rate: 22.13%

-- Flow 2:

Average throughput: 1.85 Mbit/s

95th percentile per-packet one-way delay: 51.735 ms

Loss rate: 39.17%

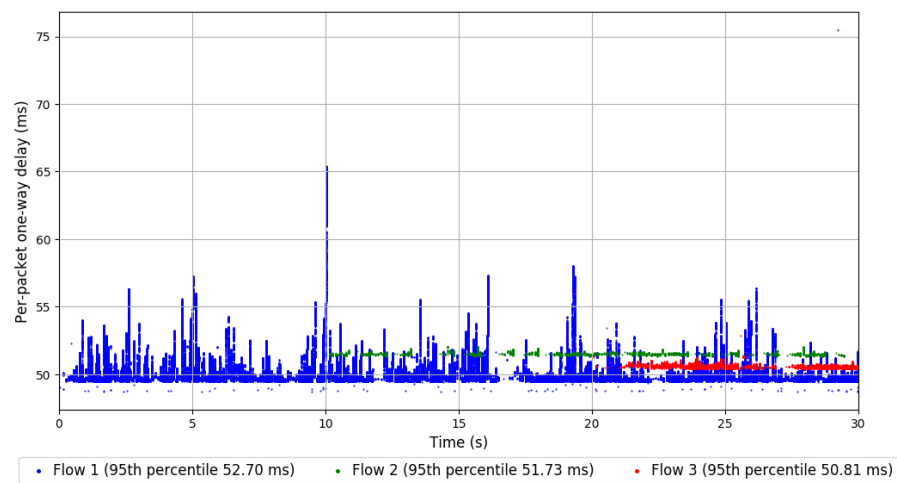
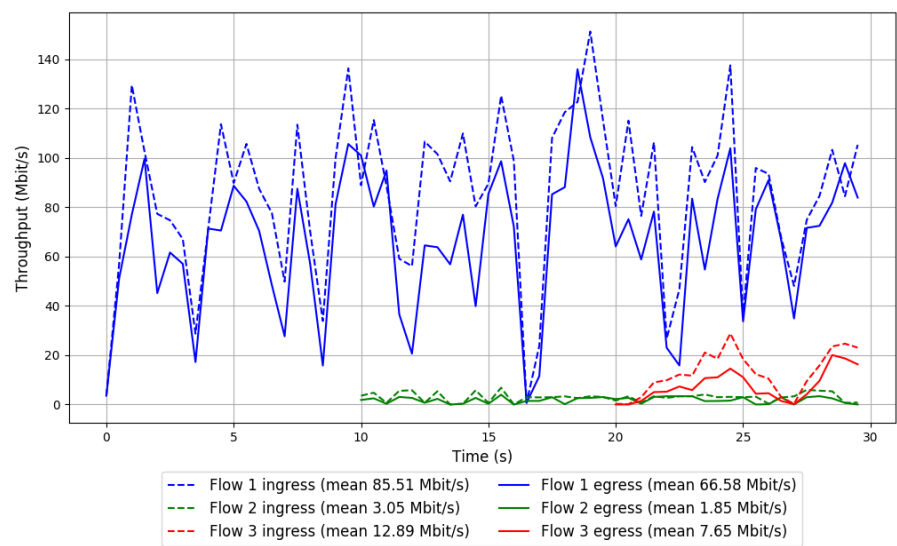
-- Flow 3:

Average throughput: 7.65 Mbit/s

95th percentile per-packet one-way delay: 50.811 ms

Loss rate: 40.67%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2017-08-12 09:09:31

End at: 2017-08-12 09:10:01

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 13.53 Mbit/s

95th percentile per-packet one-way delay: 51.180 ms

Loss rate: 37.82%

-- Flow 1:

Average throughput: 3.59 Mbit/s

95th percentile per-packet one-way delay: 51.187 ms

Loss rate: 38.12%

-- Flow 2:

Average throughput: 13.95 Mbit/s

95th percentile per-packet one-way delay: 51.104 ms

Loss rate: 37.95%

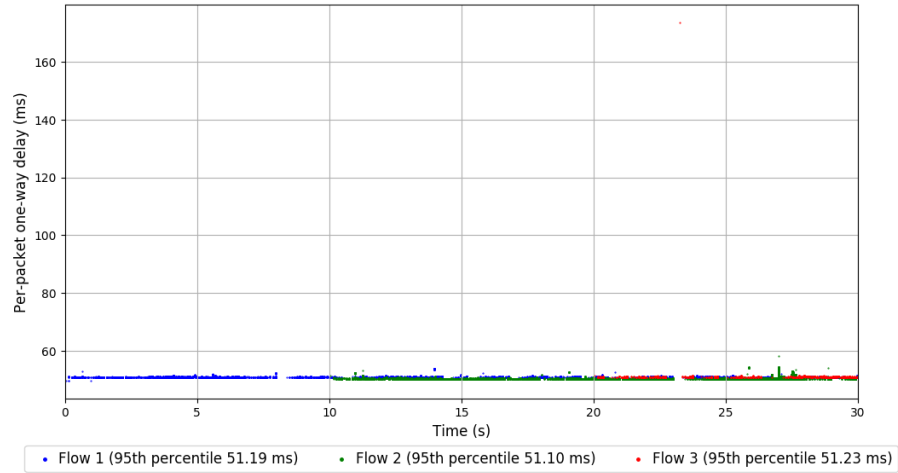
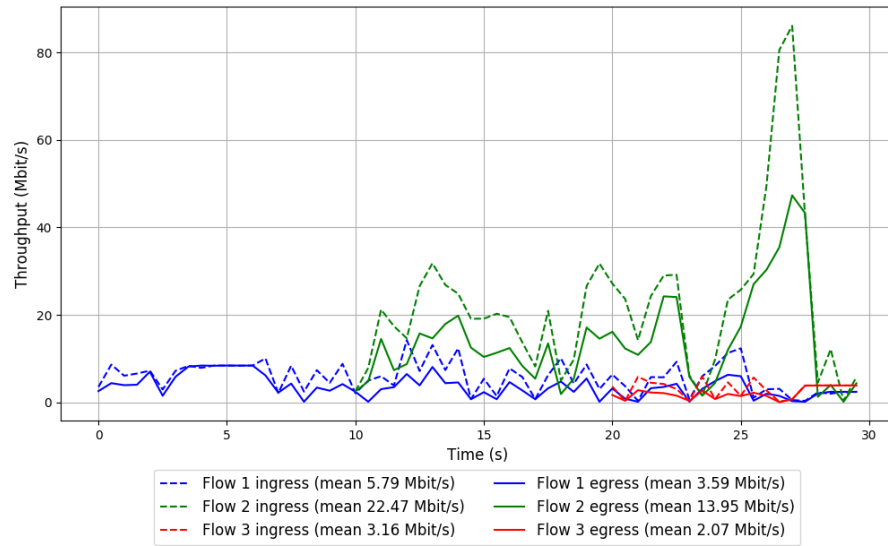
-- Flow 3:

Average throughput: 2.07 Mbit/s

95th percentile per-packet one-way delay: 51.234 ms

Loss rate: 34.35%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2017-08-12 09:20:47

End at: 2017-08-12 09:21:17

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 64.38 Mbit/s

95th percentile per-packet one-way delay: 55.062 ms

Loss rate: 24.17%

-- Flow 1:

Average throughput: 59.41 Mbit/s

95th percentile per-packet one-way delay: 55.235 ms

Loss rate: 22.25%

-- Flow 2:

Average throughput: 5.71 Mbit/s

95th percentile per-packet one-way delay: 51.085 ms

Loss rate: 40.57%

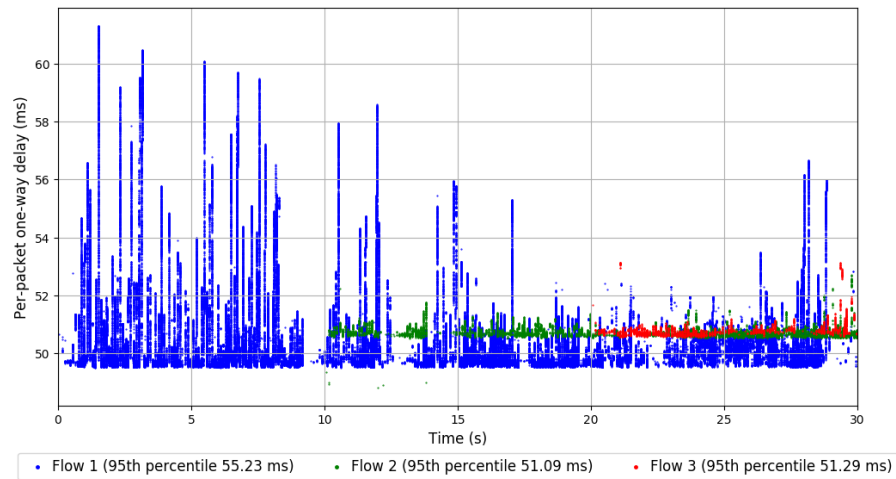
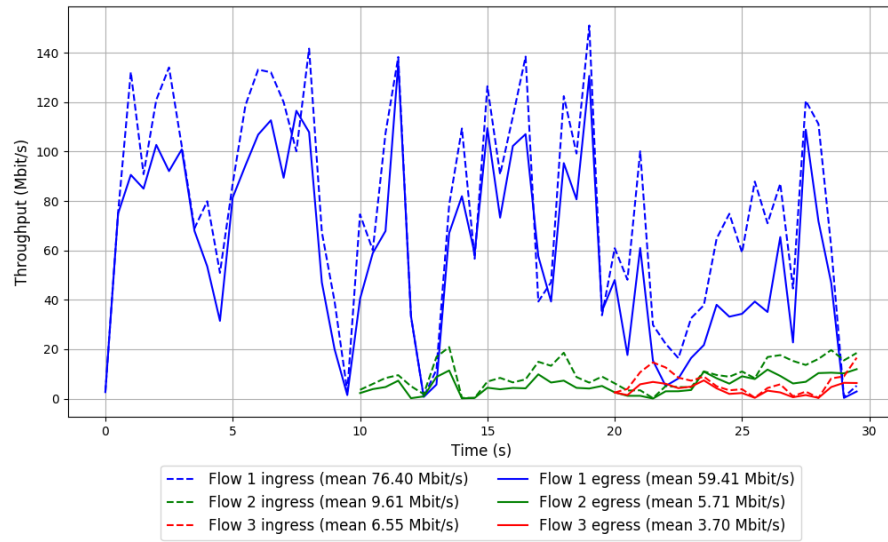
-- Flow 3:

Average throughput: 3.70 Mbit/s

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

Loss rate: 43.51%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2017-08-12 09:32:01

End at: 2017-08-12 09:32:31

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.35 Mbit/s

95th percentile per-packet one-way delay: 54.682 ms

Loss rate: 23.74%

-- Flow 1:

Average throughput: 48.71 Mbit/s

95th percentile per-packet one-way delay: 54.889 ms

Loss rate: 23.68%

-- Flow 2:

Average throughput: 39.62 Mbit/s

95th percentile per-packet one-way delay: 53.921 ms

Loss rate: 23.44%

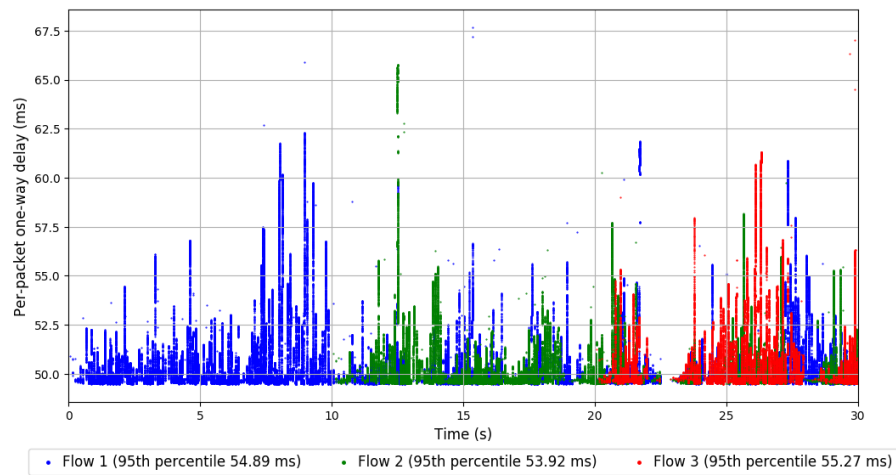
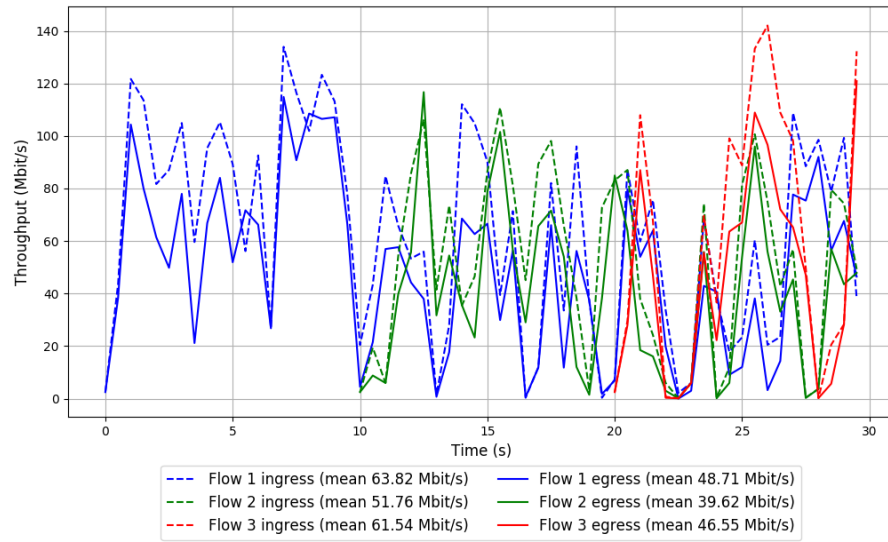
-- Flow 3:

Average throughput: 46.55 Mbit/s

95th percentile per-packet one-way delay: 55.269 ms

Loss rate: 24.39%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2017-08-12 09:43:06

End at: 2017-08-12 09:43:36

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 17.22 Mbit/s

95th percentile per-packet one-way delay: 52.337 ms

Loss rate: 37.04%

-- Flow 1:

Average throughput: 6.15 Mbit/s

95th percentile per-packet one-way delay: 50.993 ms

Loss rate: 31.32%

-- Flow 2:

Average throughput: 2.20 Mbit/s

95th percentile per-packet one-way delay: 52.088 ms

Loss rate: 28.07%

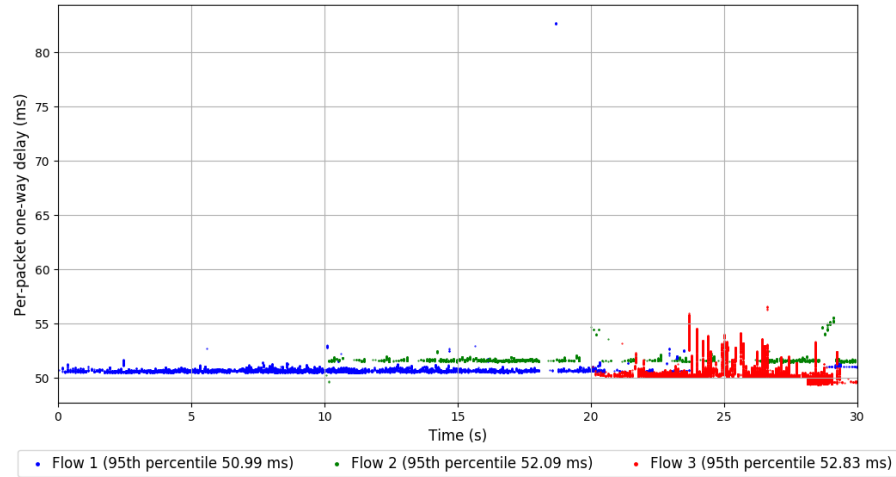
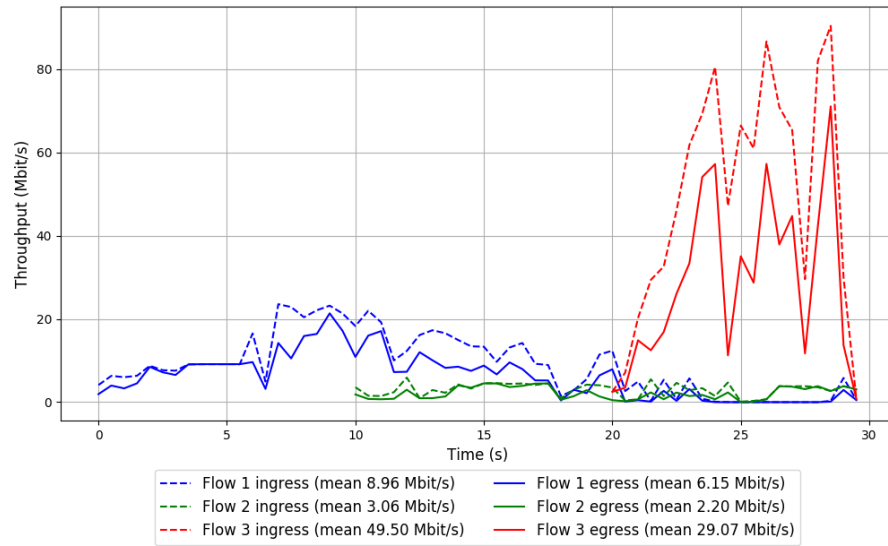
-- Flow 3:

Average throughput: 29.07 Mbit/s

95th percentile per-packet one-way delay: 52.831 ms

Loss rate: 41.28%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2017-08-12 09:54:19

End at: 2017-08-12 09:54:49

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 60.83 Mbit/s

95th percentile per-packet one-way delay: 53.198 ms

Loss rate: 21.24%

-- Flow 1:

Average throughput: 55.73 Mbit/s

95th percentile per-packet one-way delay: 53.430 ms

Loss rate: 19.26%

-- Flow 2:

Average throughput: 6.12 Mbit/s

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

Loss rate: 40.09%

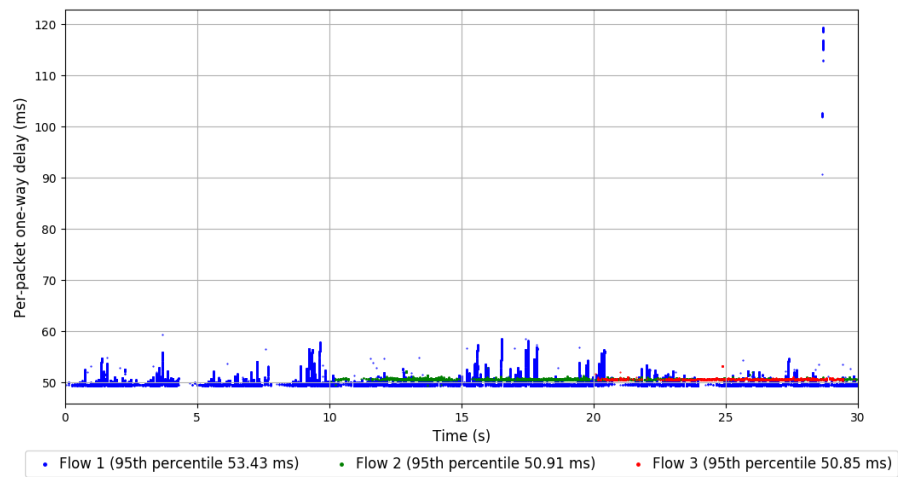
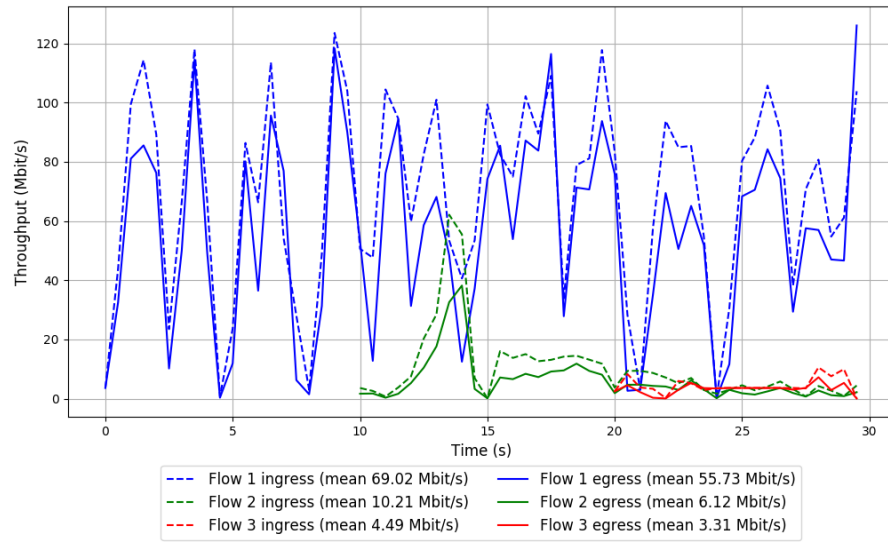
-- Flow 3:

Average throughput: 3.31 Mbit/s

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

Loss rate: 27.07%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2017-08-12 10:05:08

End at: 2017-08-12 10:05:38

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 30.22 Mbit/s

95th percentile per-packet one-way delay: 52.801 ms

Loss rate: 28.94%

-- Flow 1:

Average throughput: 5.90 Mbit/s

95th percentile per-packet one-way delay: 51.424 ms

Loss rate: 41.55%

-- Flow 2:

Average throughput: 6.15 Mbit/s

95th percentile per-packet one-way delay: 52.160 ms

Loss rate: 44.64%

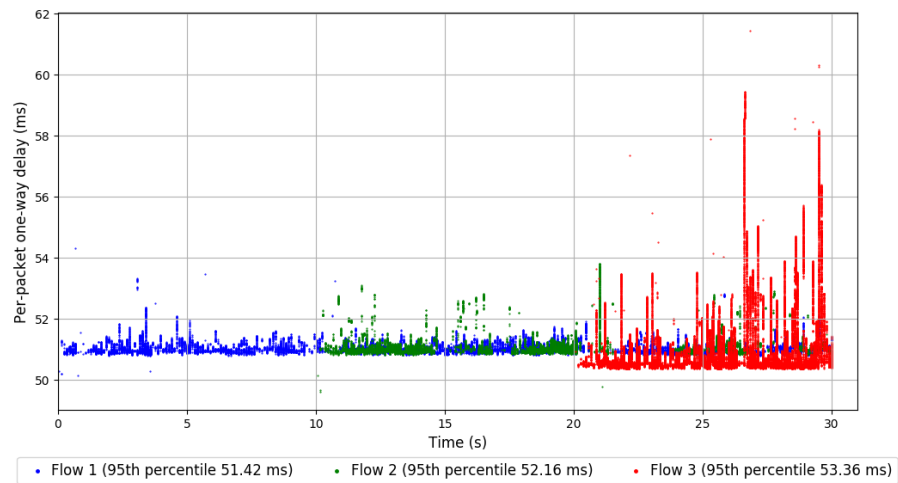
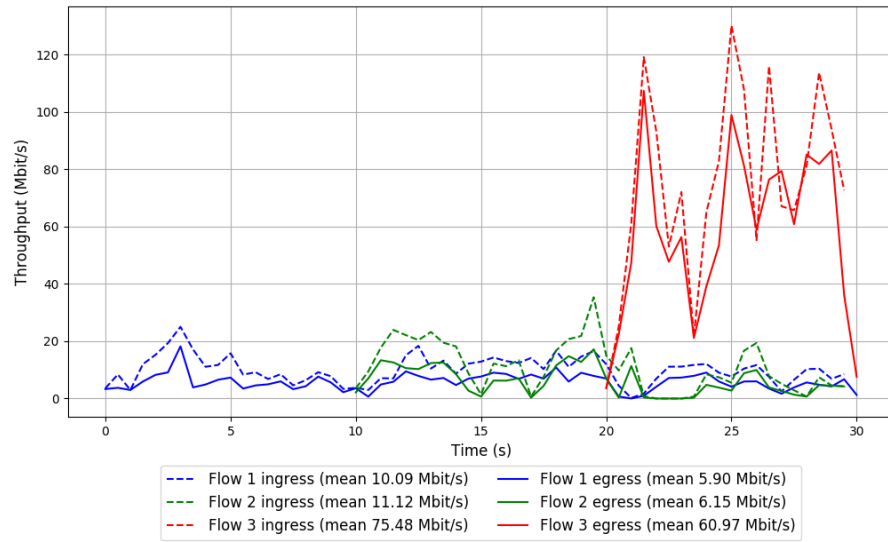
-- Flow 3:

Average throughput: 60.97 Mbit/s

95th percentile per-packet one-way delay: 53.356 ms

Loss rate: 19.23%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2017-08-12 10:16:20

End at: 2017-08-12 10:16:50

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 22.27 Mbit/s

95th percentile per-packet one-way delay: 50.565 ms

Loss rate: 34.19%

-- Flow 1:

Average throughput: 4.59 Mbit/s

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

Loss rate: 21.61%

-- Flow 2:

Average throughput: 18.28 Mbit/s

95th percentile per-packet one-way delay: 50.499 ms

Loss rate: 35.62%

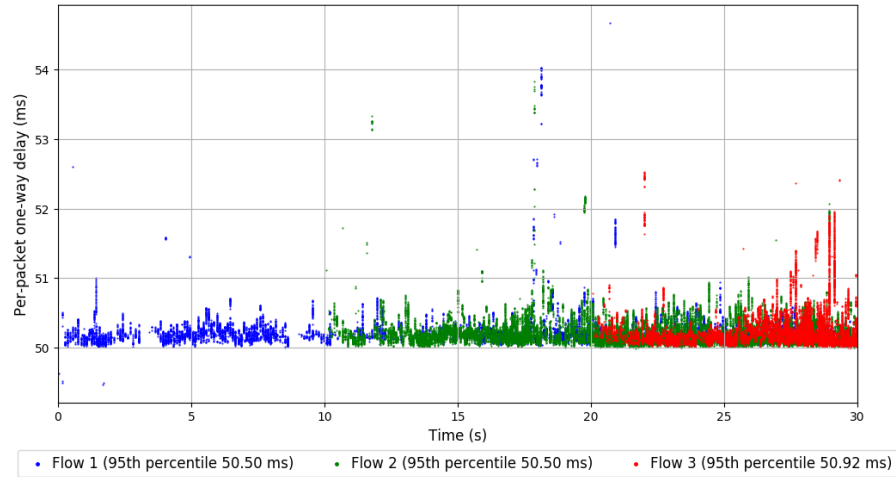
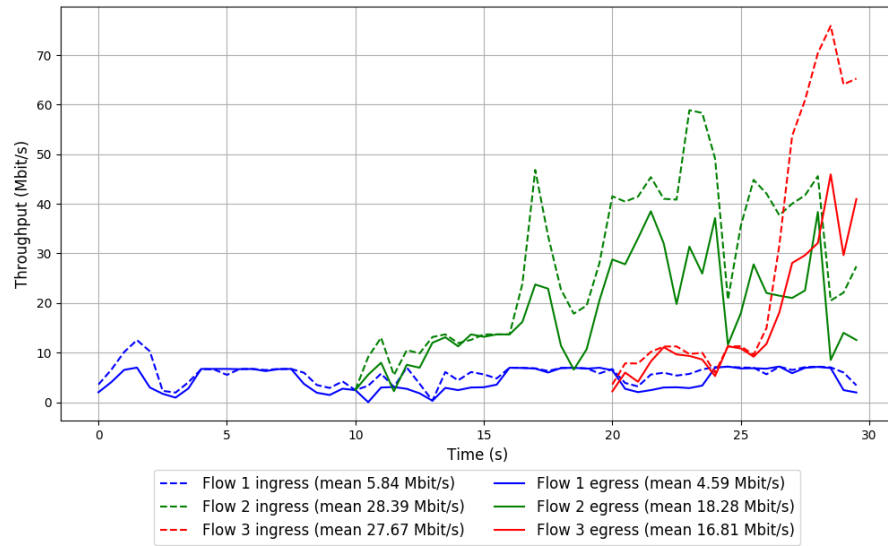
-- Flow 3:

Average throughput: 16.81 Mbit/s

95th percentile per-packet one-way delay: 50.917 ms

Loss rate: 39.24%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2017-08-12 10:27:25

End at: 2017-08-12 10:27:55

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 50.61 Mbit/s

95th percentile per-packet one-way delay: 52.537 ms

Loss rate: 27.30%

-- Flow 1:

Average throughput: 15.02 Mbit/s

95th percentile per-packet one-way delay: 50.536 ms

Loss rate: 35.44%

-- Flow 2:

Average throughput: 51.75 Mbit/s

95th percentile per-packet one-way delay: 53.298 ms

Loss rate: 22.35%

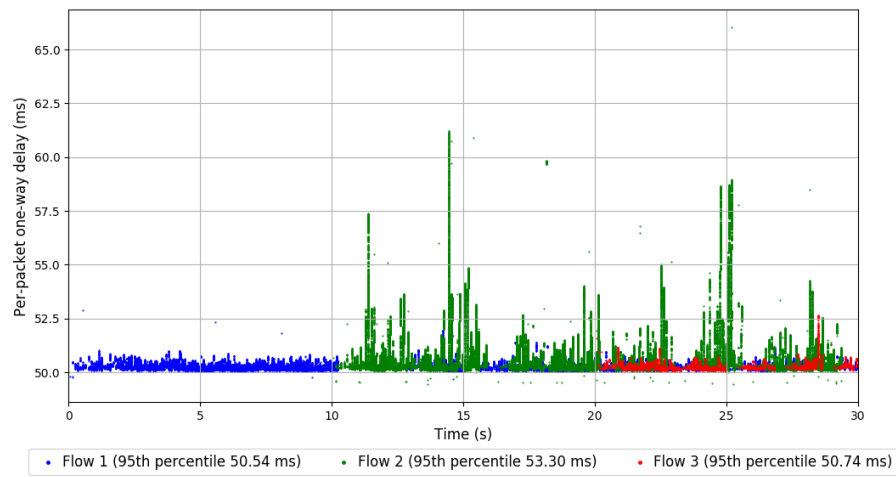
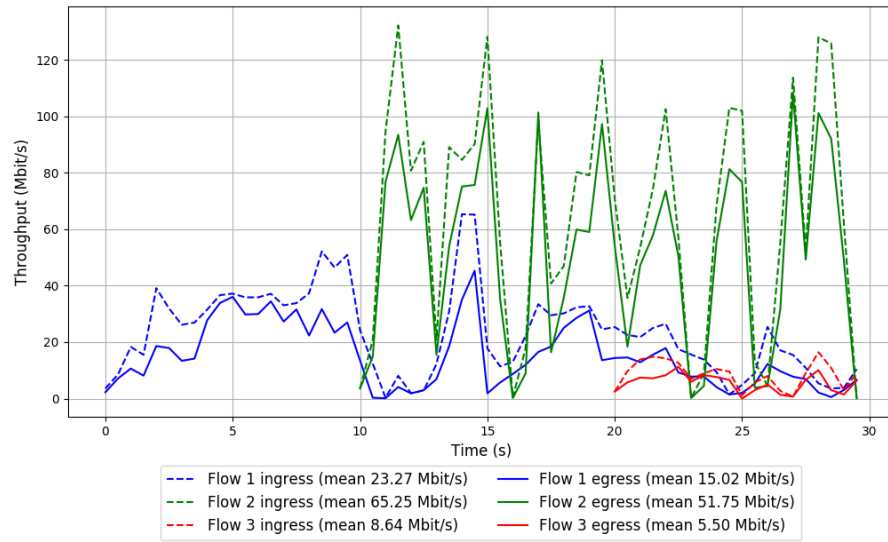
-- Flow 3:

Average throughput: 5.50 Mbit/s

95th percentile per-packet one-way delay: 50.741 ms

Loss rate: 36.34%

Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of CalibratedKoho

Start at: 2017-08-12 08:54:25

End at: 2017-08-12 08:54:55

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 304.98 Mbit/s

95th percentile per-packet one-way delay: 80.729 ms

Loss rate: 13.81%

-- Flow 1:

Average throughput: 283.47 Mbit/s

95th percentile per-packet one-way delay: 81.547 ms

Loss rate: 3.18%

-- Flow 2:

Average throughput: 31.47 Mbit/s

95th percentile per-packet one-way delay: 52.762 ms

Loss rate: 64.82%

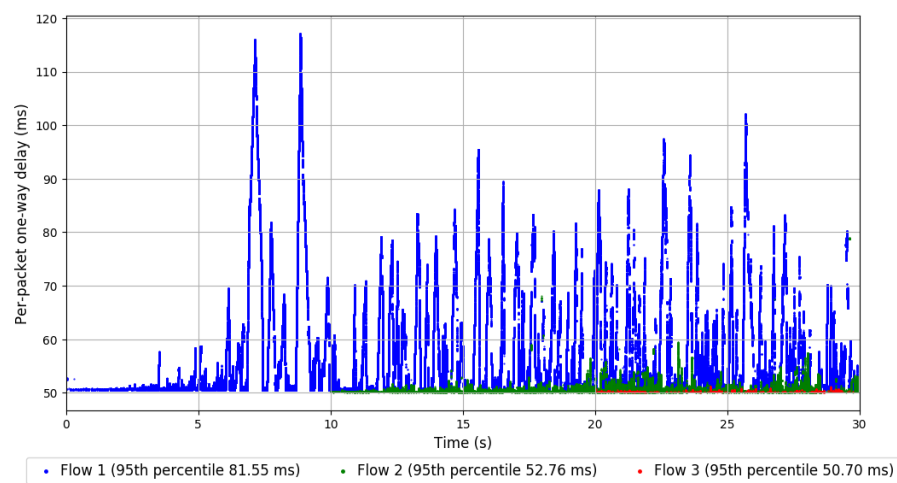
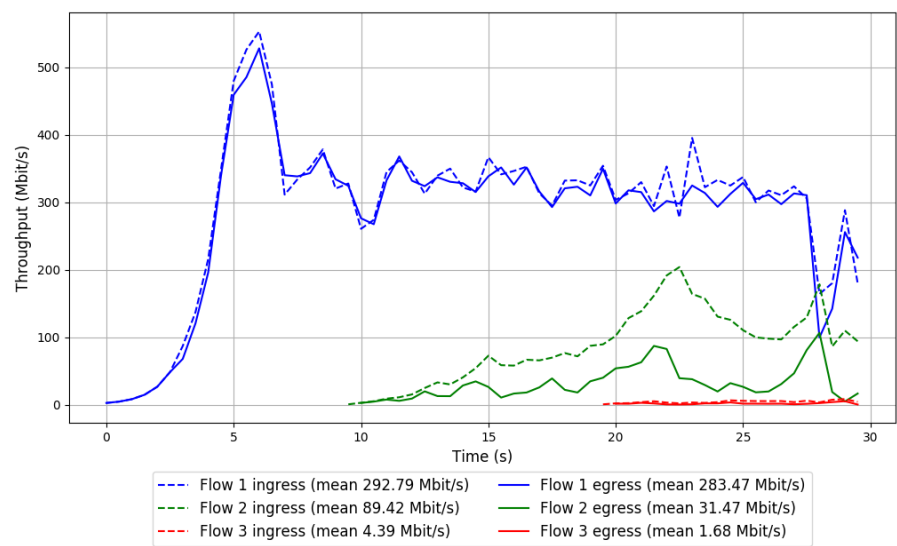
-- Flow 3:

Average throughput: 1.68 Mbit/s

95th percentile per-packet one-way delay: 50.704 ms

Loss rate: 62.29%

Run 1: Report of CalibratedKoho — Data Link



Run 2: Statistics of CalibratedKoho

Start at: 2017-08-12 09:05:42

End at: 2017-08-12 09:06:12

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.32 Mbit/s

95th percentile per-packet one-way delay: 51.916 ms

Loss rate: 67.65%

-- Flow 1:

Average throughput: 2.55 Mbit/s

95th percentile per-packet one-way delay: 51.220 ms

Loss rate: 70.23%

-- Flow 2:

Average throughput: 1.85 Mbit/s

95th percentile per-packet one-way delay: 52.172 ms

Loss rate: 68.37%

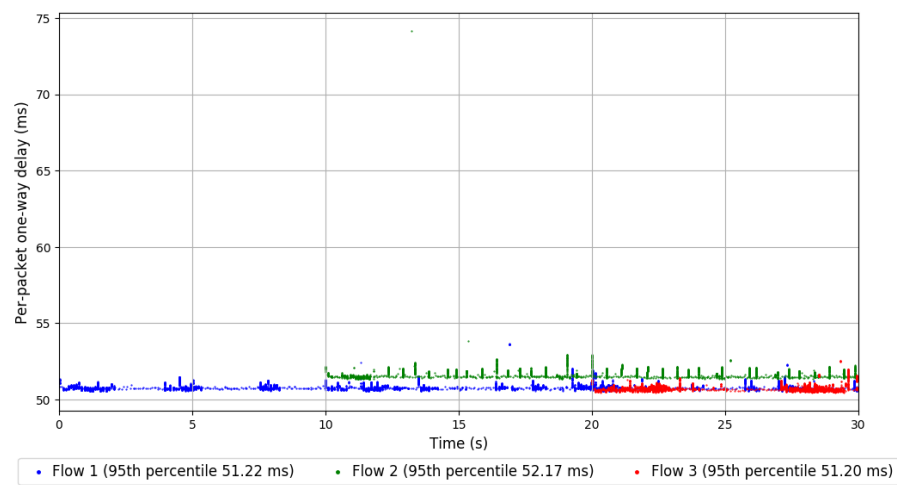
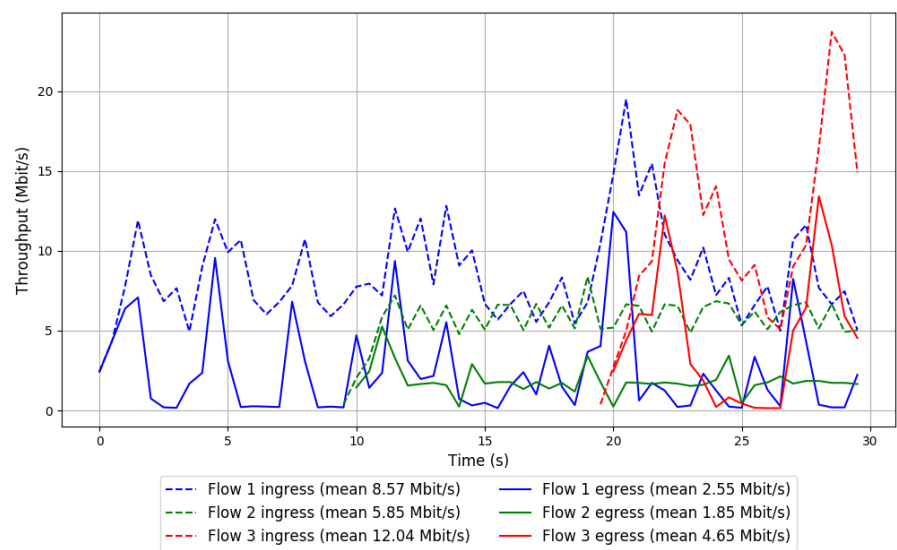
-- Flow 3:

Average throughput: 4.65 Mbit/s

95th percentile per-packet one-way delay: 51.203 ms

Loss rate: 61.39%

Run 2: Report of CalibratedKoho — Data Link



Run 3: Statistics of CalibratedKoho

Start at: 2017-08-12 09:16:32

End at: 2017-08-12 09:17:02

Below is generated by plot.py at 2017-08-12 12:13:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 304.38 Mbit/s

95th percentile per-packet one-way delay: 73.479 ms

Loss rate: 18.68%

-- Flow 1:

Average throughput: 142.03 Mbit/s

95th percentile per-packet one-way delay: 65.652 ms

Loss rate: 32.31%

-- Flow 2:

Average throughput: 215.96 Mbit/s

95th percentile per-packet one-way delay: 84.784 ms

Loss rate: 0.20%

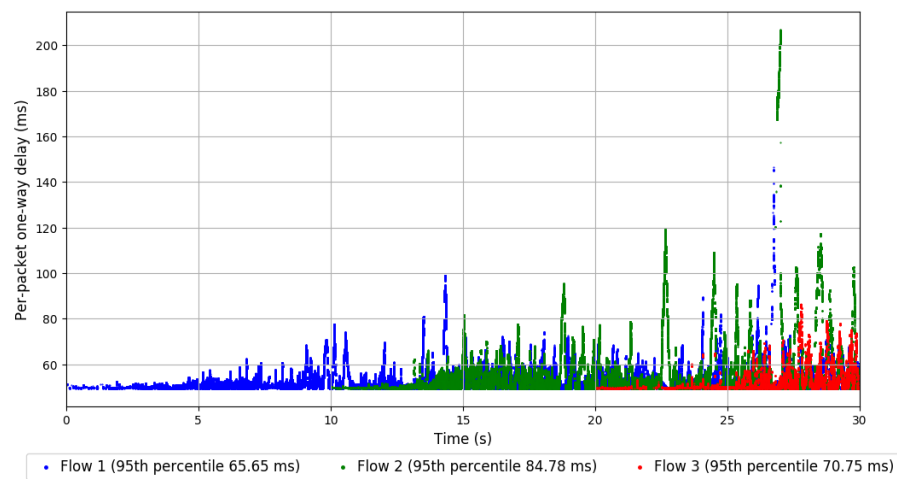
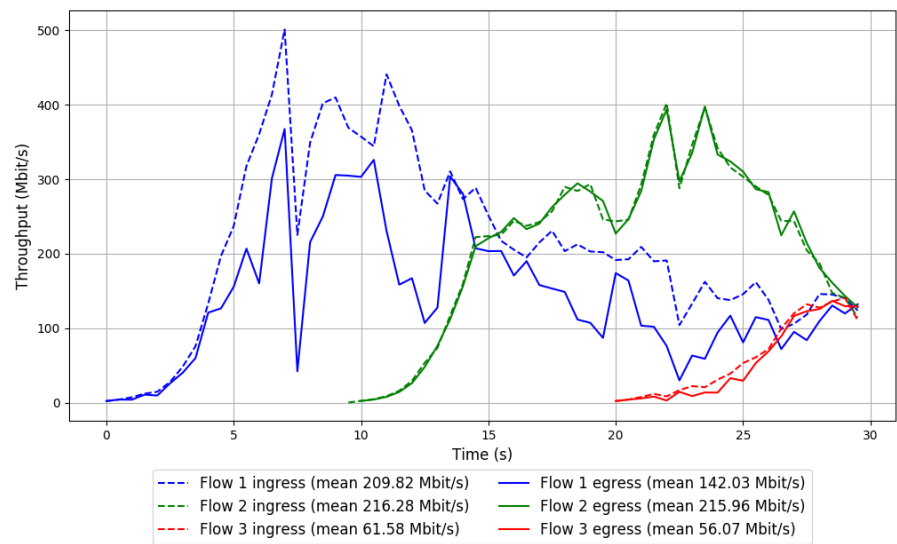
-- Flow 3:

Average throughput: 56.07 Mbit/s

95th percentile per-packet one-way delay: 70.754 ms

Loss rate: 8.90%

Run 3: Report of CalibratedKoho — Data Link



Run 4: Statistics of CalibratedKoho

Start at: 2017-08-12 09:27:52

End at: 2017-08-12 09:28:22

Below is generated by plot.py at 2017-08-12 12:13:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 220.15 Mbit/s

95th percentile per-packet one-way delay: 67.099 ms

Loss rate: 1.72%

-- Flow 1:

Average throughput: 1.15 Mbit/s

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

Loss rate: 70.65%

-- Flow 2:

Average throughput: 261.44 Mbit/s

95th percentile per-packet one-way delay: 67.865 ms

Loss rate: 0.39%

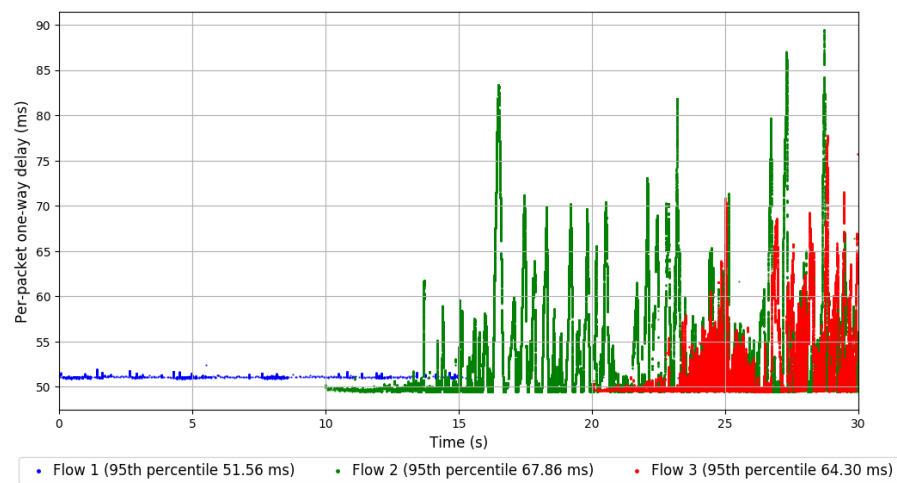
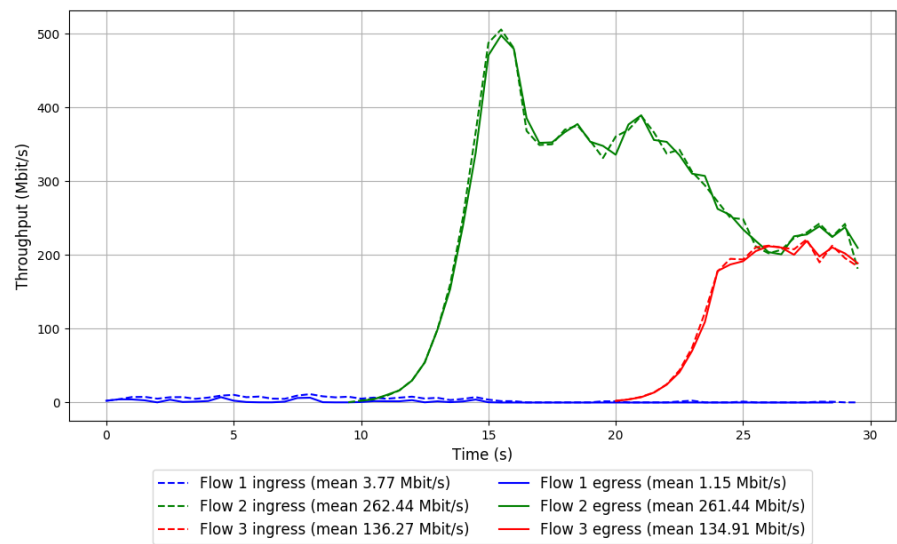
-- Flow 3:

Average throughput: 134.91 Mbit/s

95th percentile per-packet one-way delay: 64.295 ms

Loss rate: 1.09%

Run 4: Report of CalibratedKoho — Data Link



Run 5: Statistics of CalibratedKoho

Start at: 2017-08-12 09:39:10

End at: 2017-08-12 09:39:40

Below is generated by plot.py at 2017-08-12 12:13:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 213.92 Mbit/s

95th percentile per-packet one-way delay: 73.960 ms

Loss rate: 2.02%

-- Flow 1:

Average throughput: 1.14 Mbit/s

95th percentile per-packet one-way delay: 51.830 ms

Loss rate: 71.02%

-- Flow 2:

Average throughput: 261.09 Mbit/s

95th percentile per-packet one-way delay: 74.175 ms

Loss rate: 0.90%

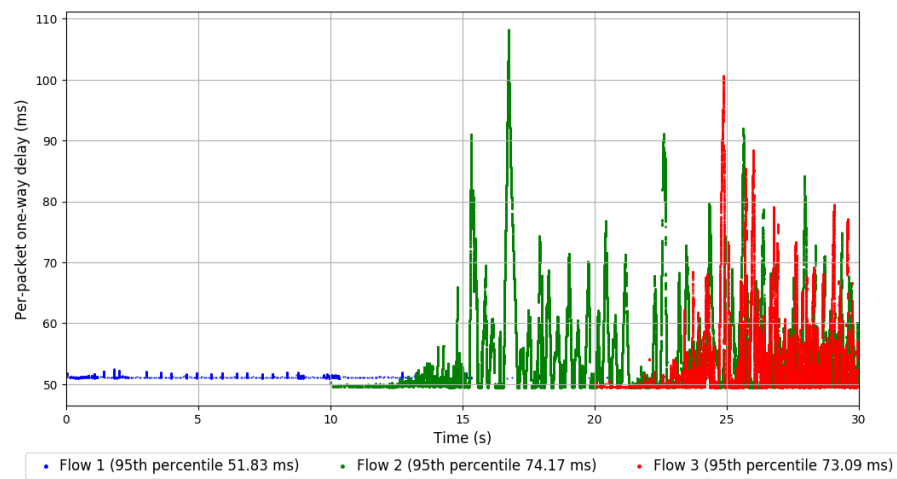
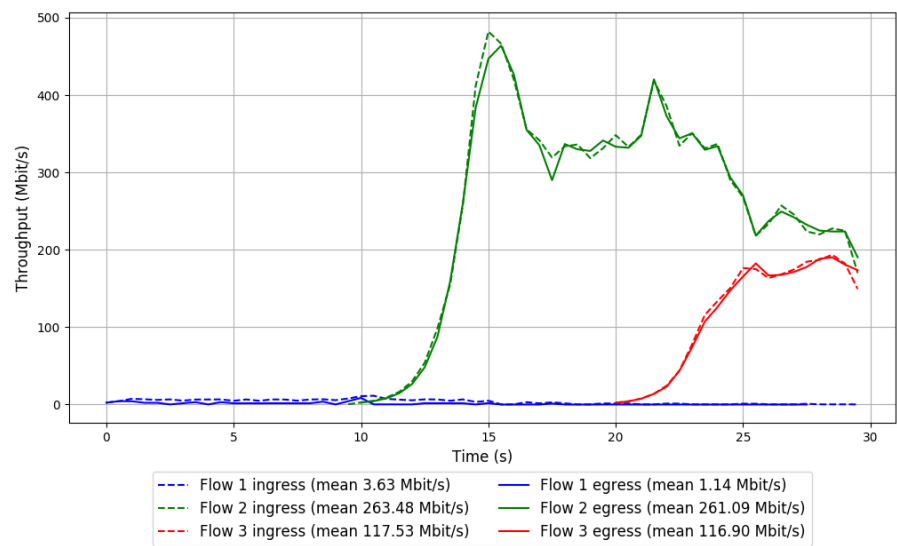
-- Flow 3:

Average throughput: 116.90 Mbit/s

95th percentile per-packet one-way delay: 73.087 ms

Loss rate: 0.64%

Run 5: Report of CalibratedKoho — Data Link



Run 6: Statistics of CalibratedKoho

Start at: 2017-08-12 09:50:15

End at: 2017-08-12 09:50:45

Below is generated by plot.py at 2017-08-12 12:14:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 194.45 Mbit/s

95th percentile per-packet one-way delay: 73.517 ms

Loss rate: 2.49%

-- Flow 1:

Average throughput: 1.38 Mbit/s

95th percentile per-packet one-way delay: 51.168 ms

Loss rate: 72.02%

-- Flow 2:

Average throughput: 289.27 Mbit/s

95th percentile per-packet one-way delay: 73.606 ms

Loss rate: 0.67%

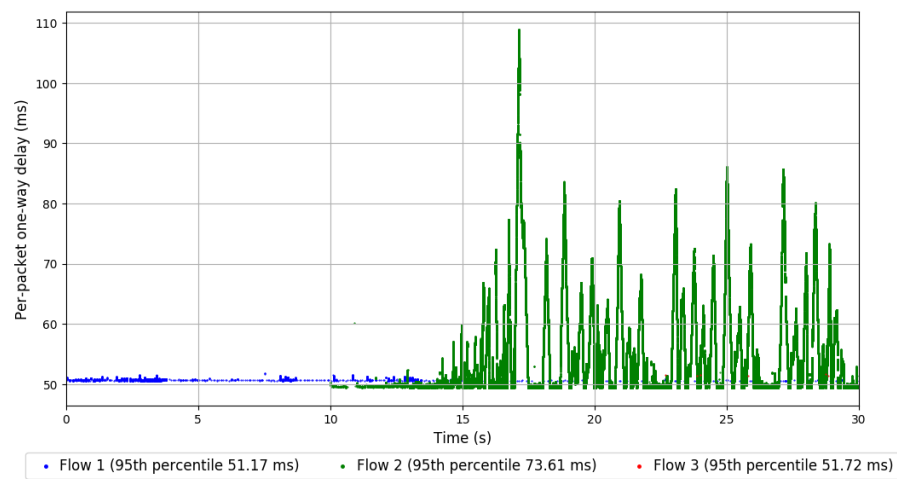
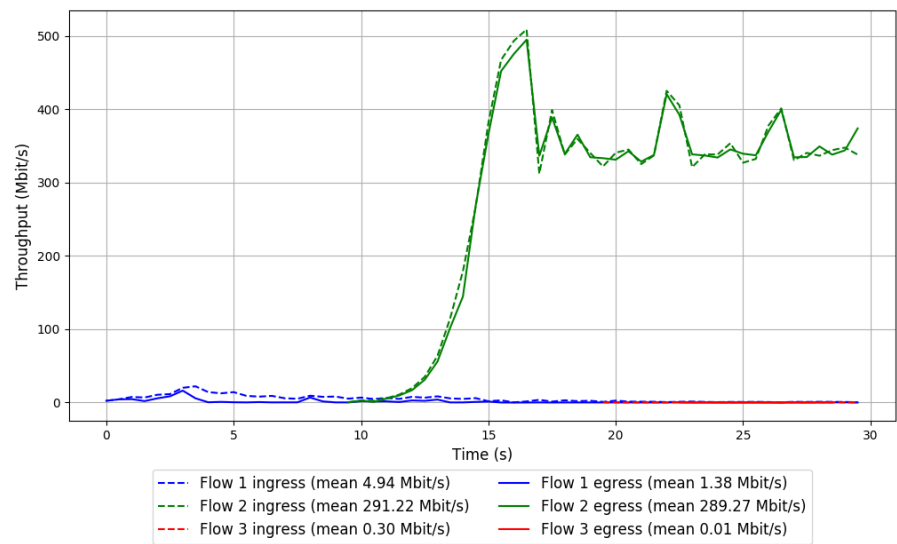
-- Flow 3:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 51.716 ms

Loss rate: 97.53%

Run 6: Report of CalibratedKoho — Data Link



Run 7: Statistics of CalibratedKoho

Start at: 2017-08-12 10:01:27

End at: 2017-08-12 10:01:57

Below is generated by plot.py at 2017-08-12 12:14:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 49.93 Mbit/s

95th percentile per-packet one-way delay: 53.725 ms

Loss rate: 64.29%

-- Flow 1:

Average throughput: 44.76 Mbit/s

95th percentile per-packet one-way delay: 53.853 ms

Loss rate: 63.97%

-- Flow 2:

Average throughput: 6.33 Mbit/s

95th percentile per-packet one-way delay: 52.213 ms

Loss rate: 67.62%

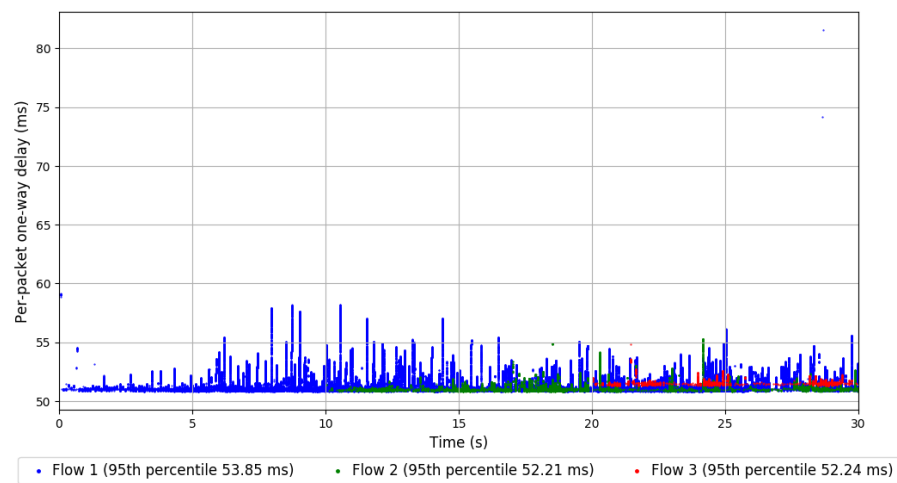
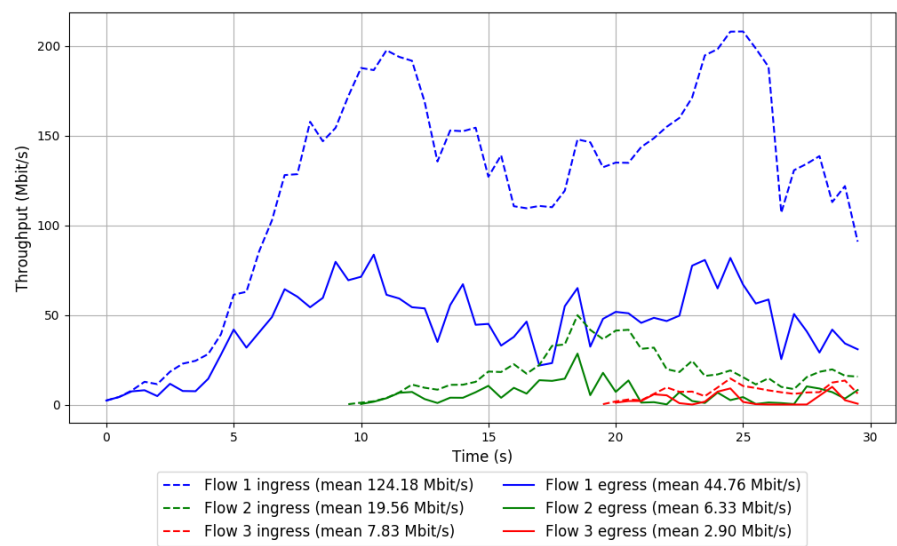
-- Flow 3:

Average throughput: 2.90 Mbit/s

95th percentile per-packet one-way delay: 52.244 ms

Loss rate: 62.90%

Run 7: Report of CalibratedKoho — Data Link



Run 8: Statistics of CalibratedKoho

Start at: 2017-08-12 10:12:21

End at: 2017-08-12 10:12:51

Below is generated by plot.py at 2017-08-12 12:14:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 46.93 Mbit/s

95th percentile per-packet one-way delay: 52.615 ms

Loss rate: 62.73%

-- Flow 1:

Average throughput: 8.74 Mbit/s

95th percentile per-packet one-way delay: 52.453 ms

Loss rate: 69.74%

-- Flow 2:

Average throughput: 54.65 Mbit/s

95th percentile per-packet one-way delay: 52.749 ms

Loss rate: 60.50%

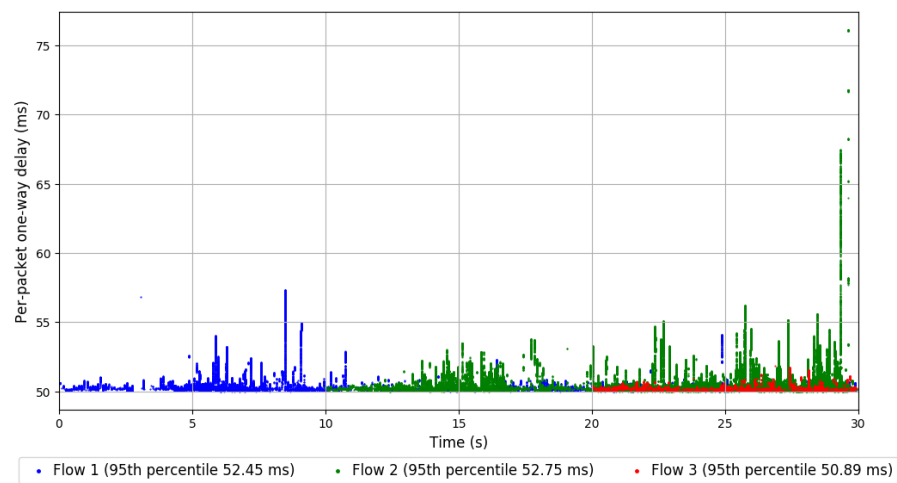
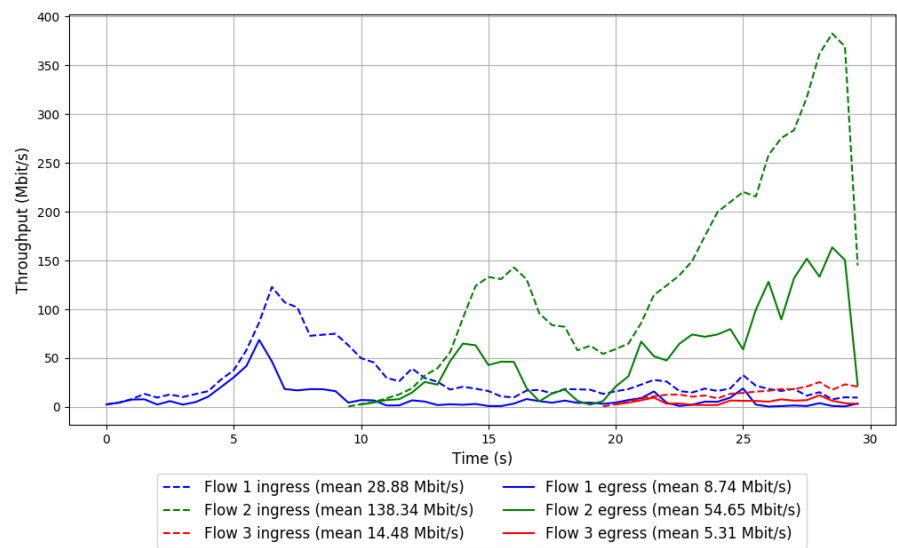
-- Flow 3:

Average throughput: 5.31 Mbit/s

95th percentile per-packet one-way delay: 50.891 ms

Loss rate: 63.35%

Run 8: Report of CalibratedKoho — Data Link



Run 9: Statistics of CalibratedKoho

Start at: 2017-08-12 10:23:27

End at: 2017-08-12 10:23:57

Below is generated by plot.py at 2017-08-12 12:14:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 64.14 Mbit/s

95th percentile per-packet one-way delay: 53.200 ms

Loss rate: 56.65%

-- Flow 1:

Average throughput: 3.83 Mbit/s

95th percentile per-packet one-way delay: 50.808 ms

Loss rate: 69.70%

-- Flow 2:

Average throughput: 63.32 Mbit/s

95th percentile per-packet one-way delay: 53.254 ms

Loss rate: 57.31%

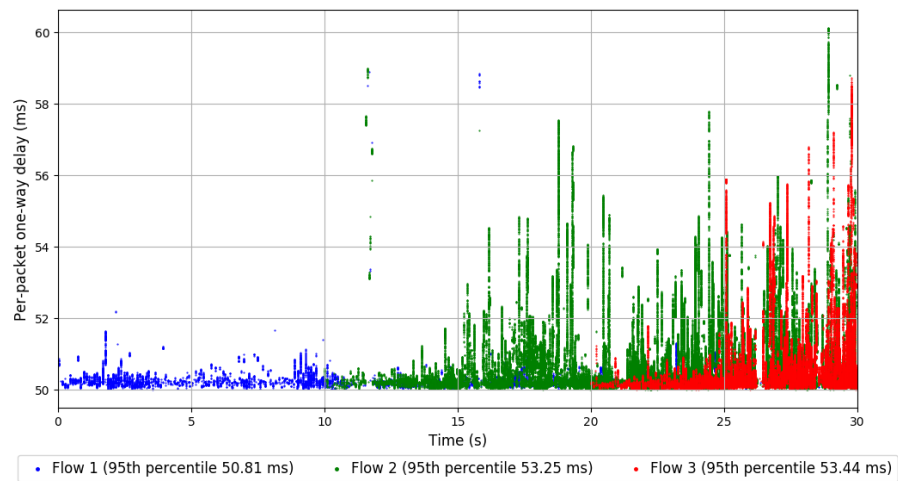
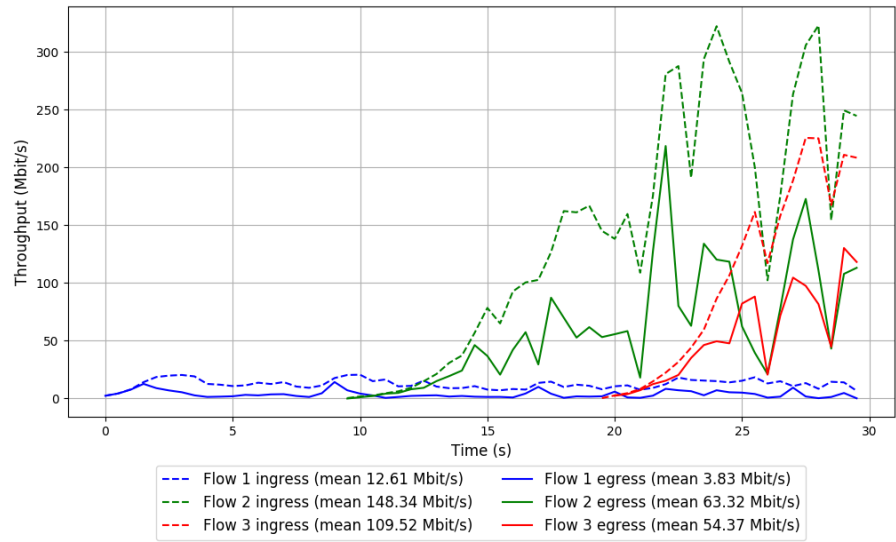
-- Flow 3:

Average throughput: 54.37 Mbit/s

95th percentile per-packet one-way delay: 53.435 ms

Loss rate: 50.35%

Run 9: Report of CalibratedKoho — Data Link



Run 10: Statistics of CalibratedKoho

Start at: 2017-08-12 10:34:35

End at: 2017-08-12 10:35:05

Below is generated by plot.py at 2017-08-12 12:15:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 343.34 Mbit/s

95th percentile per-packet one-way delay: 73.773 ms

Loss rate: 3.03%

-- Flow 1:

Average throughput: 209.82 Mbit/s

95th percentile per-packet one-way delay: 76.898 ms

Loss rate: 4.06%

-- Flow 2:

Average throughput: 154.09 Mbit/s

95th percentile per-packet one-way delay: 69.609 ms

Loss rate: 1.61%

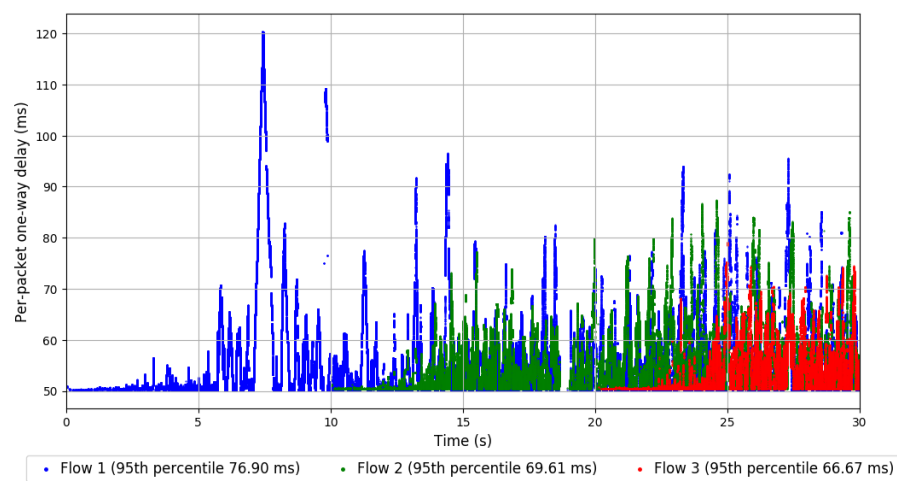
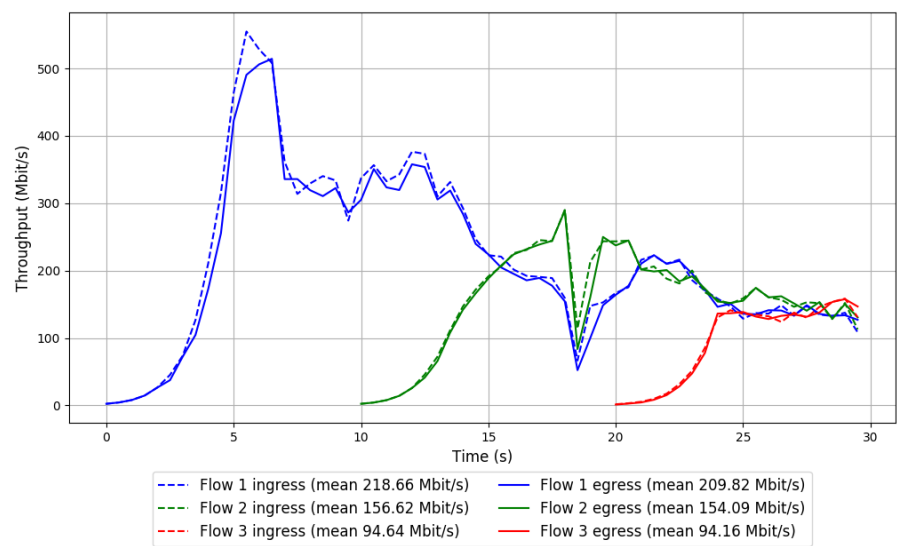
-- Flow 3:

Average throughput: 94.16 Mbit/s

95th percentile per-packet one-way delay: 66.666 ms

Loss rate: 0.49%

Run 10: Report of CalibratedKoho — Data Link

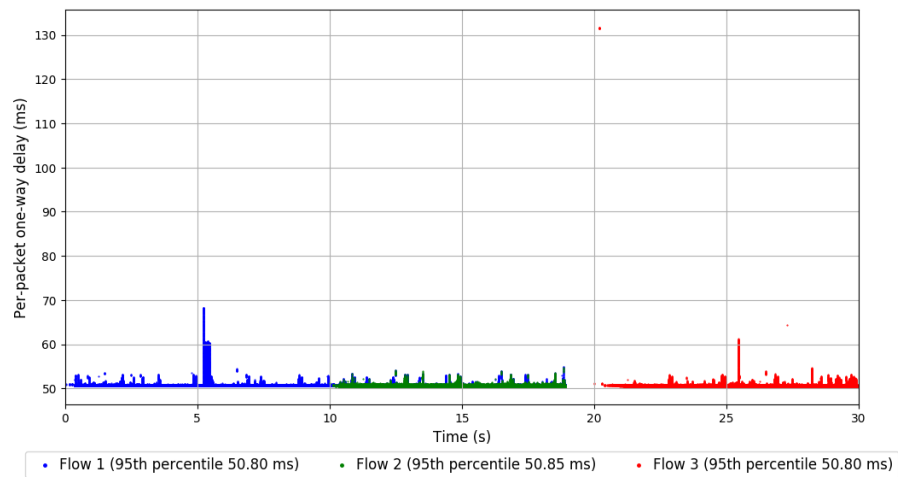
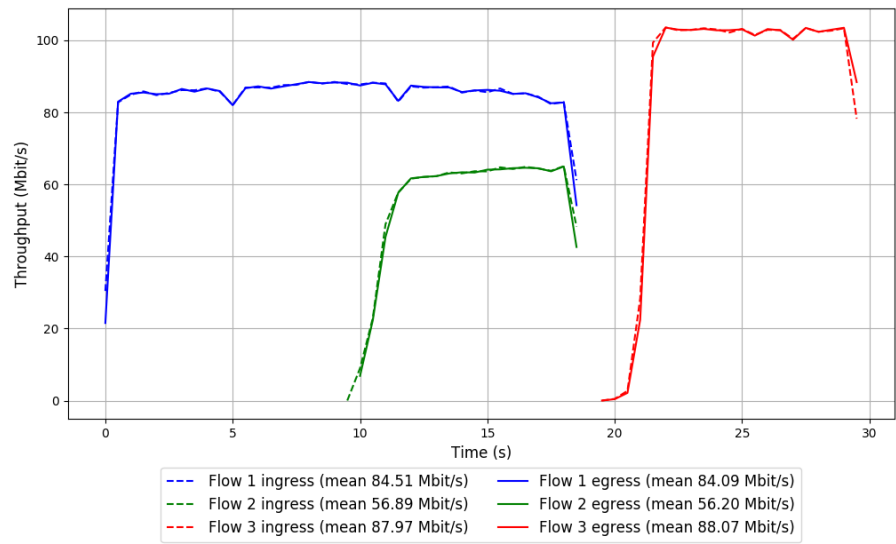


```
Run 1: Statistics of Copa

Start at: 2017-08-12 08:51:35
End at: 2017-08-12 08:52:05

# Below is generated by plot.py at 2017-08-12 12:15:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 99.14 Mbit/s
95th percentile per-packet one-way delay: 50.811 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 84.09 Mbit/s
95th percentile per-packet one-way delay: 50.796 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 56.20 Mbit/s
95th percentile per-packet one-way delay: 50.852 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 88.07 Mbit/s
95th percentile per-packet one-way delay: 50.803 ms
Loss rate: 0.00%
```

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2017-08-12 09:02:53

End at: 2017-08-12 09:03:23

Below is generated by plot.py at 2017-08-12 12:15:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 73.96 Mbit/s

95th percentile per-packet one-way delay: 50.902 ms

Loss rate: 0.62%

-- Flow 1:

Average throughput: 71.91 Mbit/s

95th percentile per-packet one-way delay: 198.081 ms

Loss rate: 15.06%

-- Flow 2:

Average throughput: 66.78 Mbit/s

95th percentile per-packet one-way delay: 50.949 ms

Loss rate: 0.02%

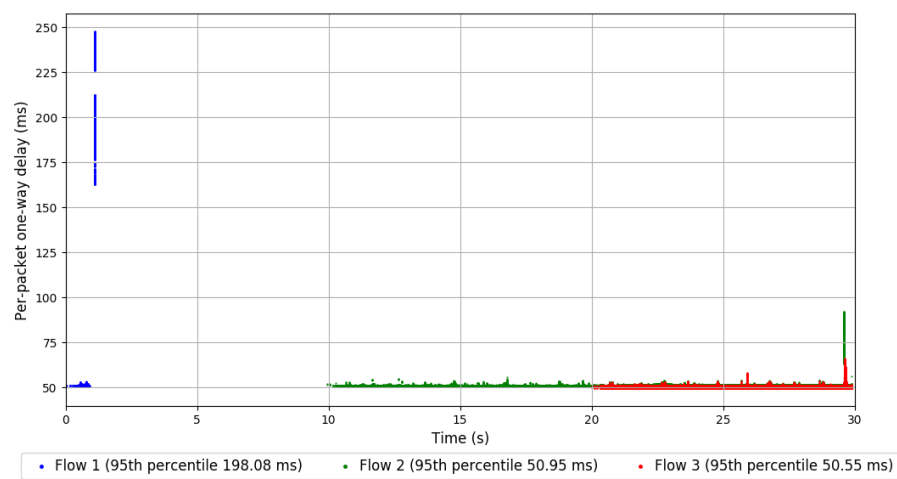
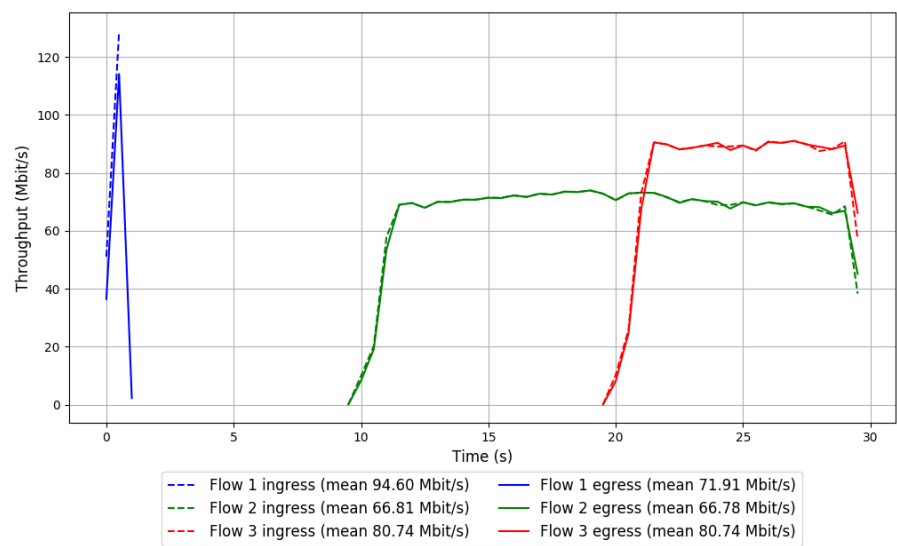
-- Flow 3:

Average throughput: 80.74 Mbit/s

95th percentile per-packet one-way delay: 50.545 ms

Loss rate: 0.00%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2017-08-12 09:13:36

End at: 2017-08-12 09:14:06

Below is generated by plot.py at 2017-08-12 12:16:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 130.21 Mbit/s

95th percentile per-packet one-way delay: 51.551 ms

Loss rate: 0.41%

-- Flow 1:

Average throughput: 66.60 Mbit/s

95th percentile per-packet one-way delay: 51.571 ms

Loss rate: 0.51%

-- Flow 2:

Average throughput: 82.00 Mbit/s

95th percentile per-packet one-way delay: 51.070 ms

Loss rate: 0.35%

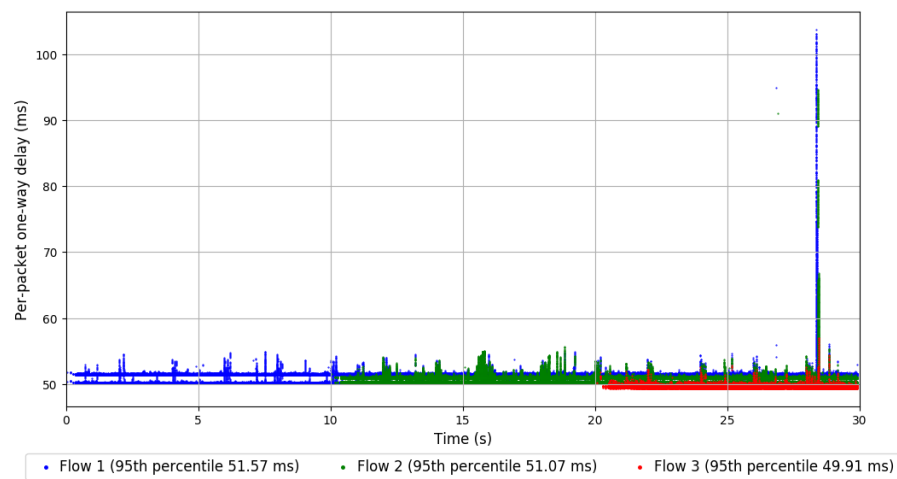
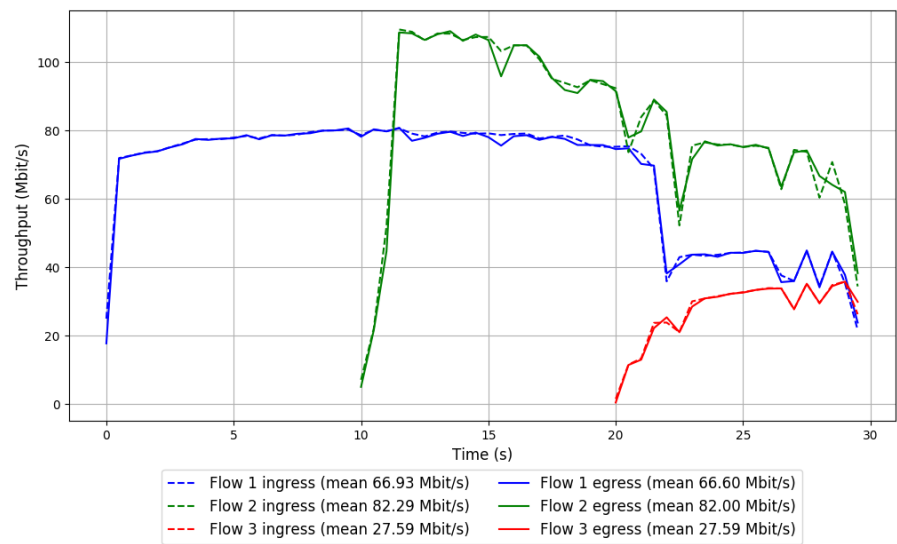
-- Flow 3:

Average throughput: 27.59 Mbit/s

95th percentile per-packet one-way delay: 49.909 ms

Loss rate: 0.00%

Run 3: Report of Copa — Data Link

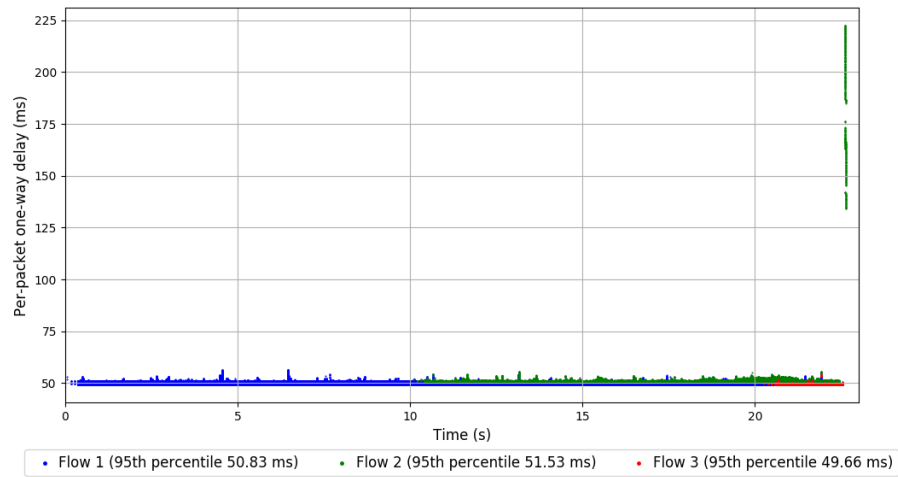
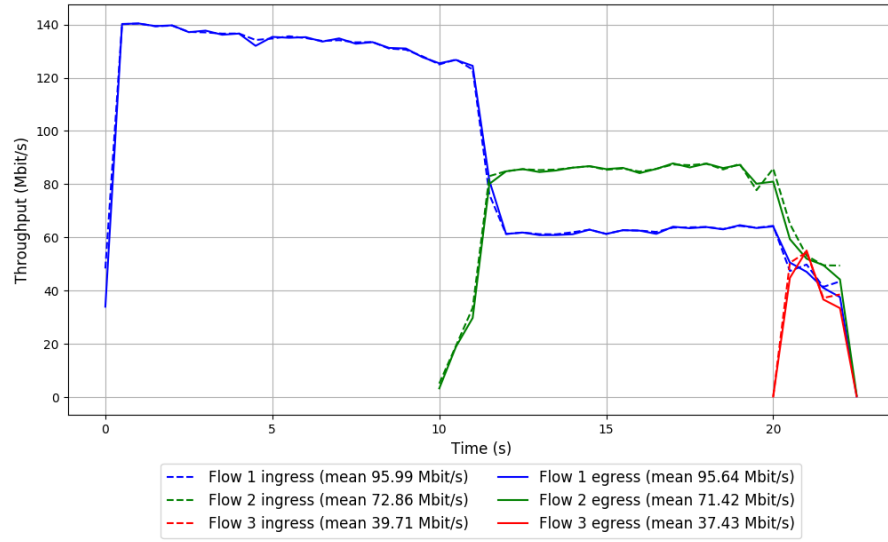


Run 4: Statistics of Copa

Start at: 2017-08-12 09:25:01

End at: 2017-08-12 09:25:31

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2017-08-12 09:36:18

End at: 2017-08-12 09:36:48

Below is generated by plot.py at 2017-08-12 12:16:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 115.34 Mbit/s

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

Loss rate: 0.97%

-- Flow 1:

Average throughput: 69.34 Mbit/s

95th percentile per-packet one-way delay: 51.112 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 51.84 Mbit/s

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

Loss rate: 1.64%

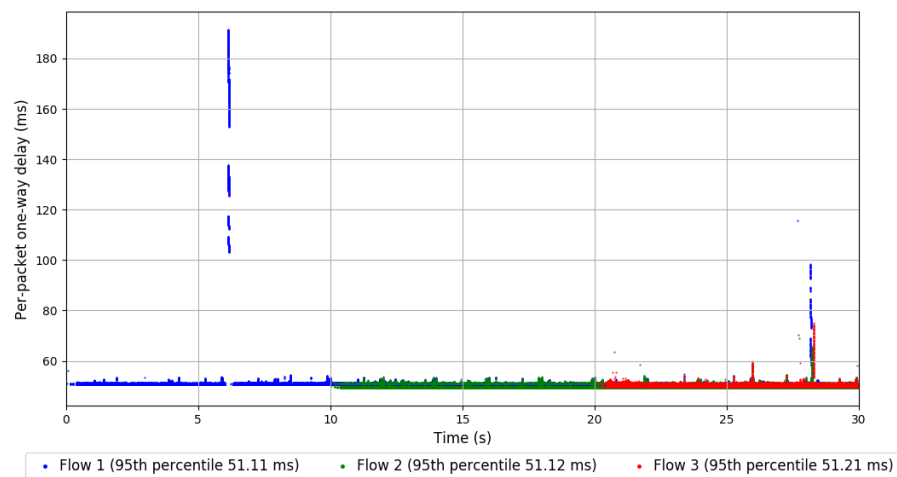
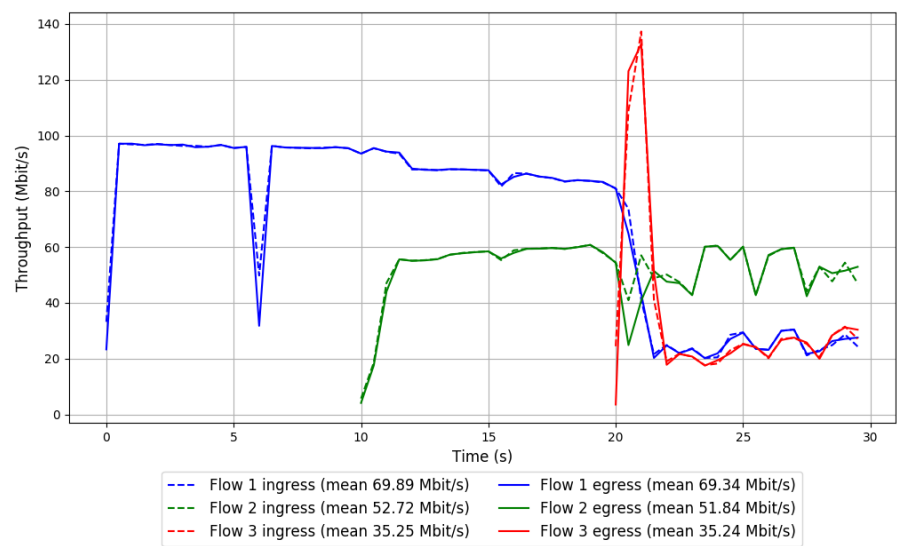
-- Flow 3:

Average throughput: 35.24 Mbit/s

95th percentile per-packet one-way delay: 51.213 ms

Loss rate: 0.03%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2017-08-12 09:47:20

End at: 2017-08-12 09:47:50

Below is generated by plot.py at 2017-08-12 12:17:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 142.20 Mbit/s

95th percentile per-packet one-way delay: 51.100 ms

Loss rate: 0.30%

-- Flow 1:

Average throughput: 81.71 Mbit/s

95th percentile per-packet one-way delay: 51.158 ms

Loss rate: 0.27%

-- Flow 2:

Average throughput: 57.82 Mbit/s

95th percentile per-packet one-way delay: 50.556 ms

Loss rate: 0.07%

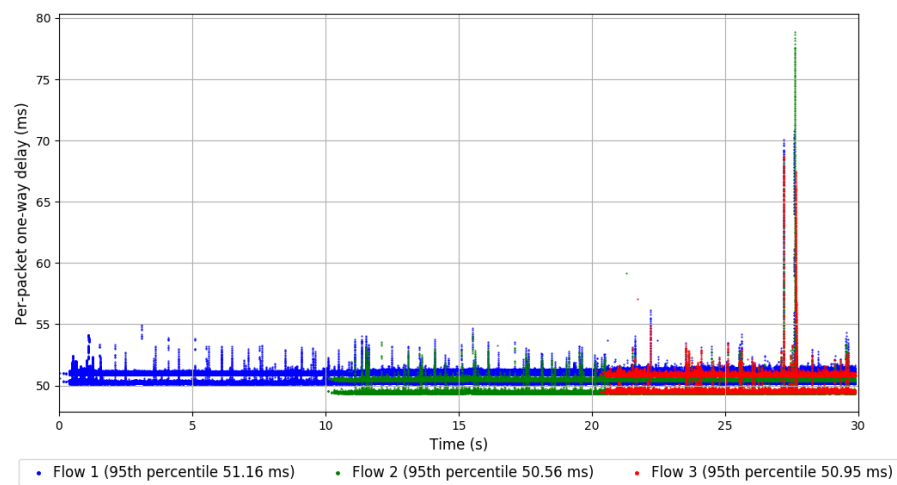
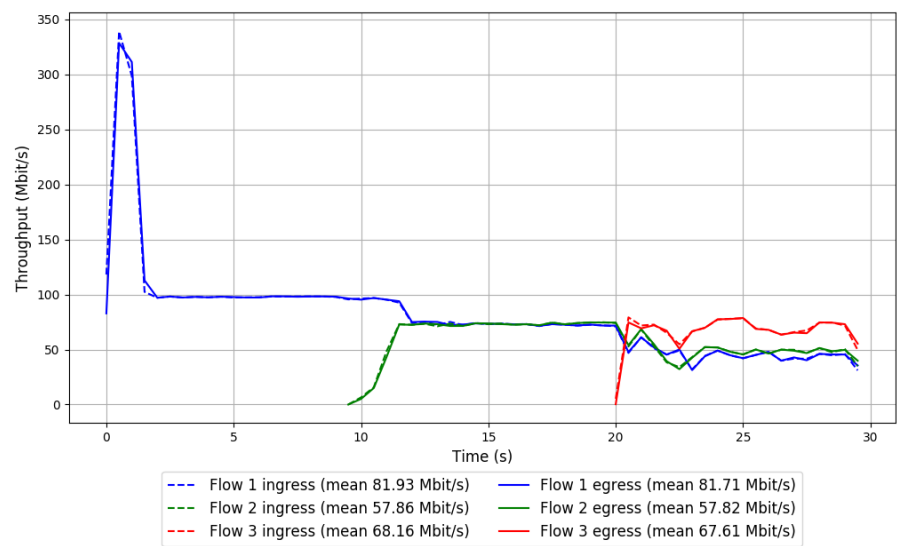
-- Flow 3:

Average throughput: 67.61 Mbit/s

95th percentile per-packet one-way delay: 50.955 ms

Loss rate: 0.81%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2017-08-12 09:58:36

End at: 2017-08-12 09:59:06

Below is generated by plot.py at 2017-08-12 12:17:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 116.57 Mbit/s

95th percentile per-packet one-way delay: 50.933 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 93.83 Mbit/s

95th percentile per-packet one-way delay: 50.949 ms

Loss rate: 0.51%

-- Flow 2:

Average throughput: 74.20 Mbit/s

95th percentile per-packet one-way delay: 50.956 ms

Loss rate: 1.55%

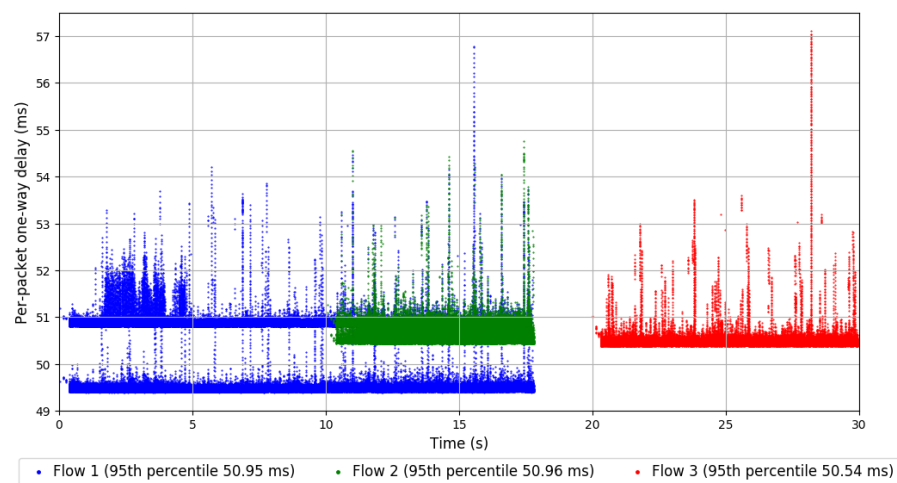
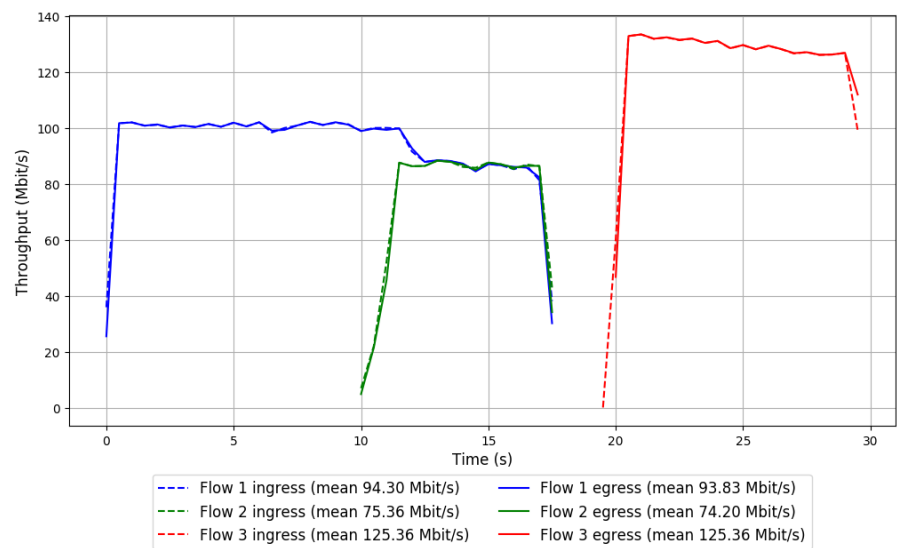
-- Flow 3:

Average throughput: 125.36 Mbit/s

95th percentile per-packet one-way delay: 50.539 ms

Loss rate: 0.00%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2017-08-12 10:09:24

End at: 2017-08-12 10:09:54

Below is generated by plot.py at 2017-08-12 12:17:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 151.03 Mbit/s

95th percentile per-packet one-way delay: 51.315 ms

Loss rate: 0.06%

-- Flow 1:

Average throughput: 85.47 Mbit/s

95th percentile per-packet one-way delay: 51.337 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 66.92 Mbit/s

95th percentile per-packet one-way delay: 50.157 ms

Loss rate: 0.01%

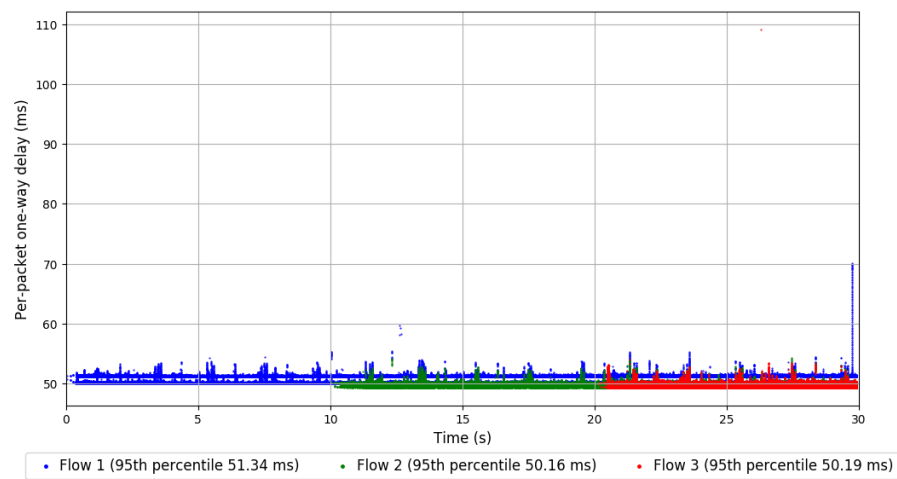
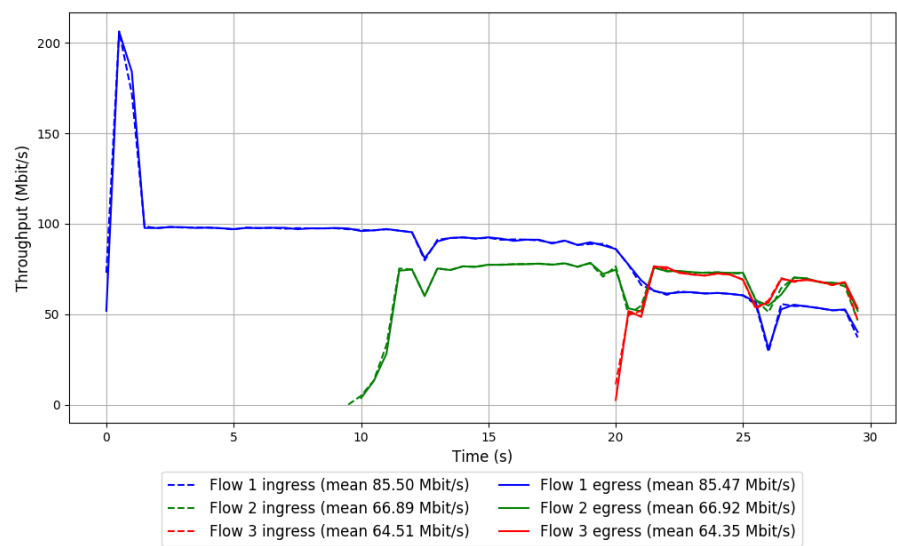
-- Flow 3:

Average throughput: 64.35 Mbit/s

95th percentile per-packet one-way delay: 50.191 ms

Loss rate: 0.24%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2017-08-12 10:20:33

End at: 2017-08-12 10:21:03

Below is generated by plot.py at 2017-08-12 12:18:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 126.56 Mbit/s

95th percentile per-packet one-way delay: 50.181 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 74.18 Mbit/s

95th percentile per-packet one-way delay: 50.187 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 66.21 Mbit/s

95th percentile per-packet one-way delay: 50.164 ms

Loss rate: 0.12%

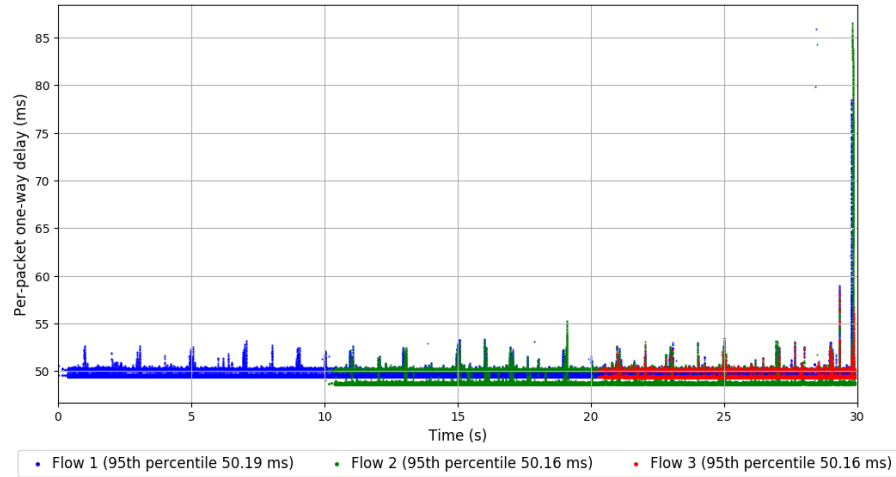
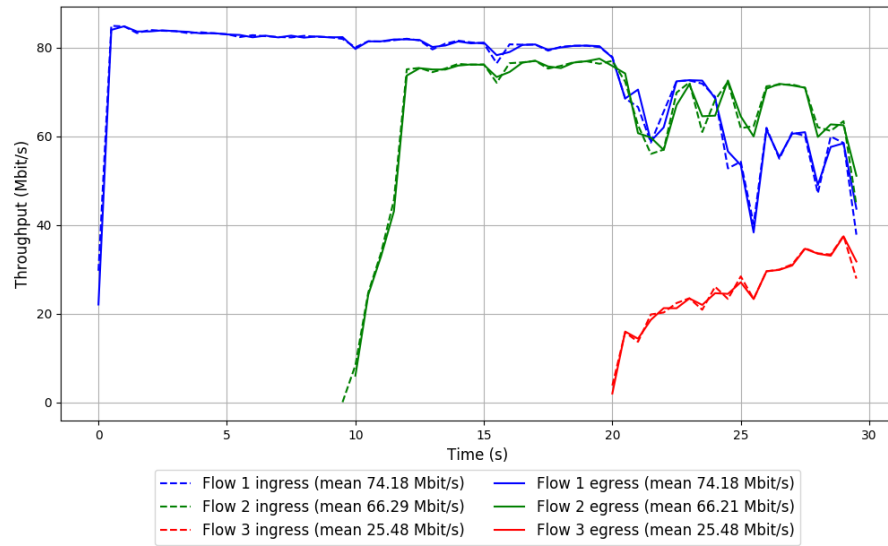
-- Flow 3:

Average throughput: 25.48 Mbit/s

95th percentile per-packet one-way delay: 50.155 ms

Loss rate: 0.00%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2017-08-12 10:31:40

End at: 2017-08-12 10:32:10

Below is generated by plot.py at 2017-08-12 12:18:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 129.67 Mbit/s

95th percentile per-packet one-way delay: 50.491 ms

Loss rate: 0.07%

-- Flow 1:

Average throughput: 68.14 Mbit/s

95th percentile per-packet one-way delay: 50.434 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 66.61 Mbit/s

95th percentile per-packet one-way delay: 50.518 ms

Loss rate: 0.20%

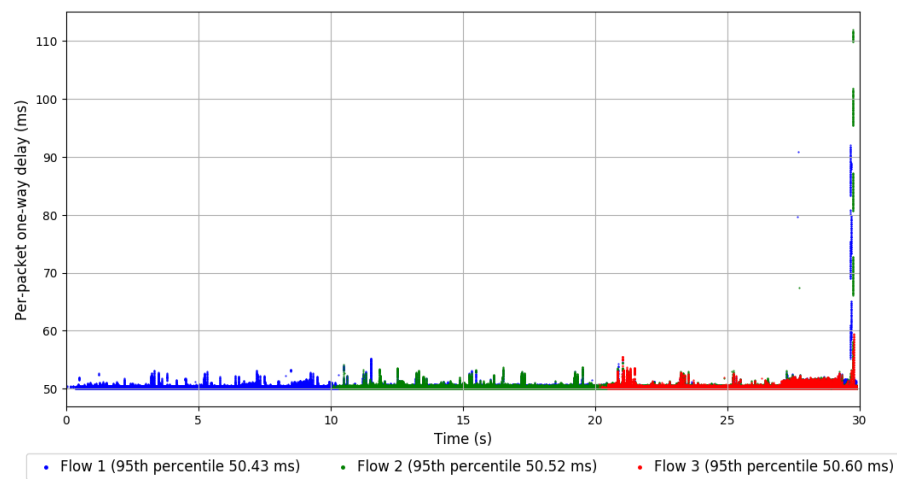
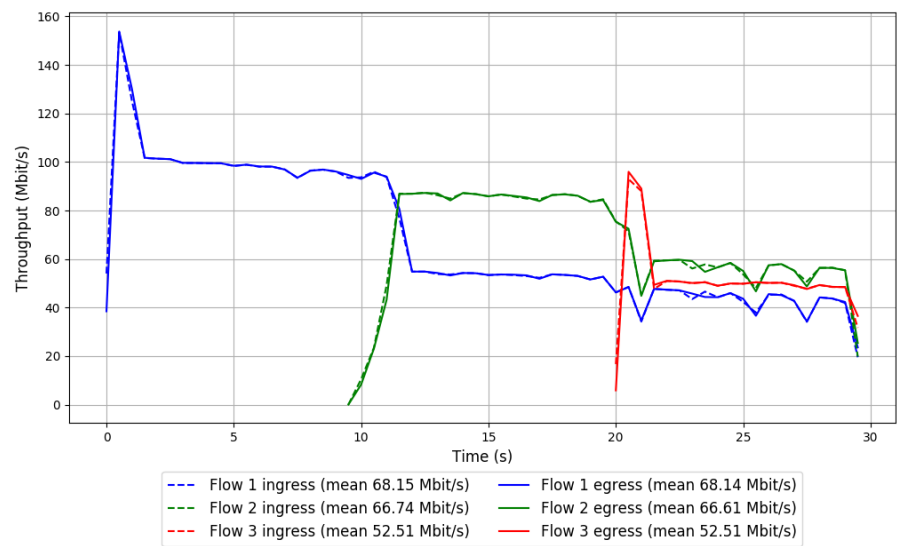
-- Flow 3:

Average throughput: 52.51 Mbit/s

95th percentile per-packet one-way delay: 50.602 ms

Loss rate: 0.00%

Run 10: Report of Copa — Data Link

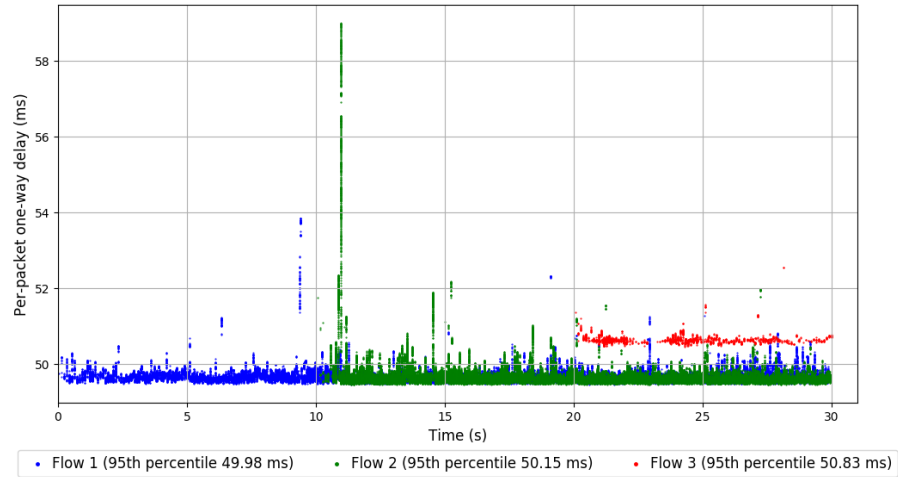
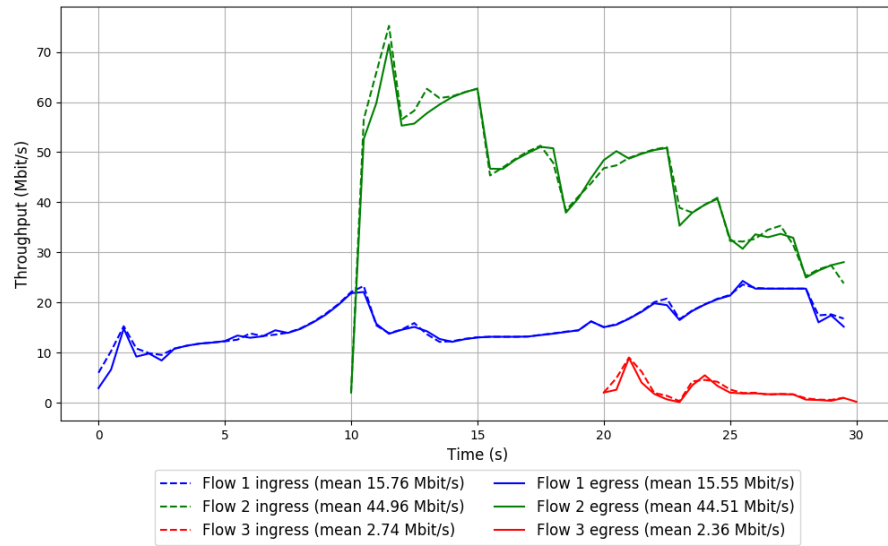


```
Run 1: Statistics of TCP Cubic

Start at: 2017-08-12 08:56:24
End at: 2017-08-12 08:56:54

# Below is generated by plot.py at 2017-08-12 12:18:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 45.87 Mbit/s
95th percentile per-packet one-way delay: 50.215 ms
Loss rate: 1.51%
-- Flow 1:
Average throughput: 15.55 Mbit/s
95th percentile per-packet one-way delay: 49.979 ms
Loss rate: 1.70%
-- Flow 2:
Average throughput: 44.51 Mbit/s
95th percentile per-packet one-way delay: 50.151 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 2.36 Mbit/s
95th percentile per-packet one-way delay: 50.831 ms
Loss rate: 13.84%
```

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2017-08-12 09:07:18

End at: 2017-08-12 09:07:48

Below is generated by plot.py at 2017-08-12 12:18:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 30.69 Mbit/s

95th percentile per-packet one-way delay: 50.455 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 23.69 Mbit/s

95th percentile per-packet one-way delay: 50.029 ms

Loss rate: 1.01%

-- Flow 2:

Average throughput: 1.72 Mbit/s

95th percentile per-packet one-way delay: 50.956 ms

Loss rate: 9.45%

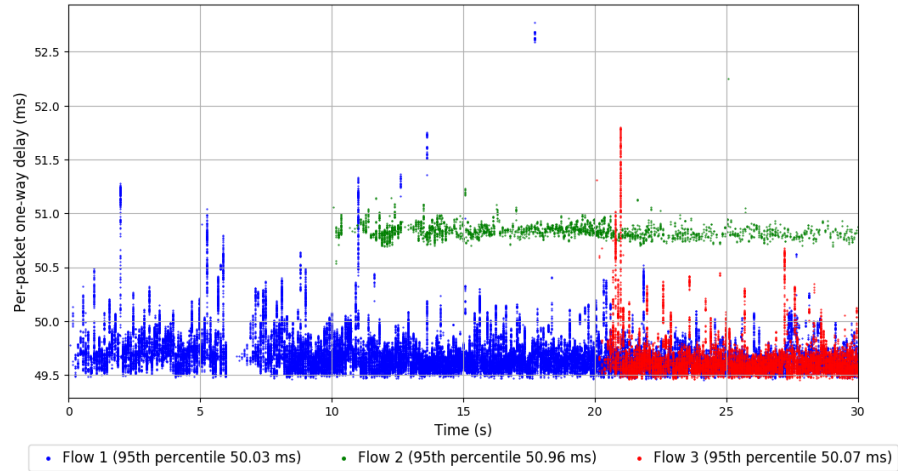
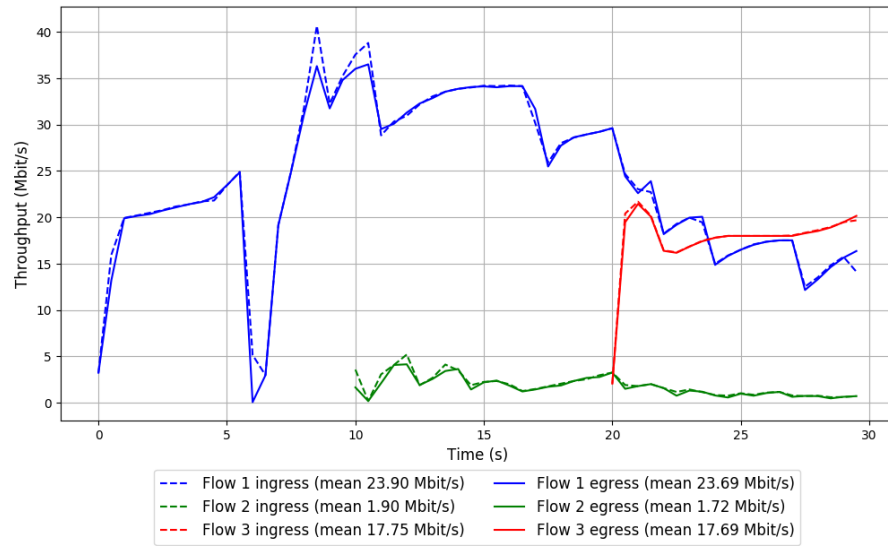
-- Flow 3:

Average throughput: 17.69 Mbit/s

95th percentile per-packet one-way delay: 50.068 ms

Loss rate: 0.33%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2017-08-12 09:18:31

End at: 2017-08-12 09:19:01

Below is generated by plot.py at 2017-08-12 12:18:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 28.43 Mbit/s

95th percentile per-packet one-way delay: 51.519 ms

Loss rate: 2.61%

-- Flow 1:

Average throughput: 25.86 Mbit/s

95th percentile per-packet one-way delay: 50.144 ms

Loss rate: 2.08%

-- Flow 2:

Average throughput: 1.97 Mbit/s

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

Loss rate: 8.70%

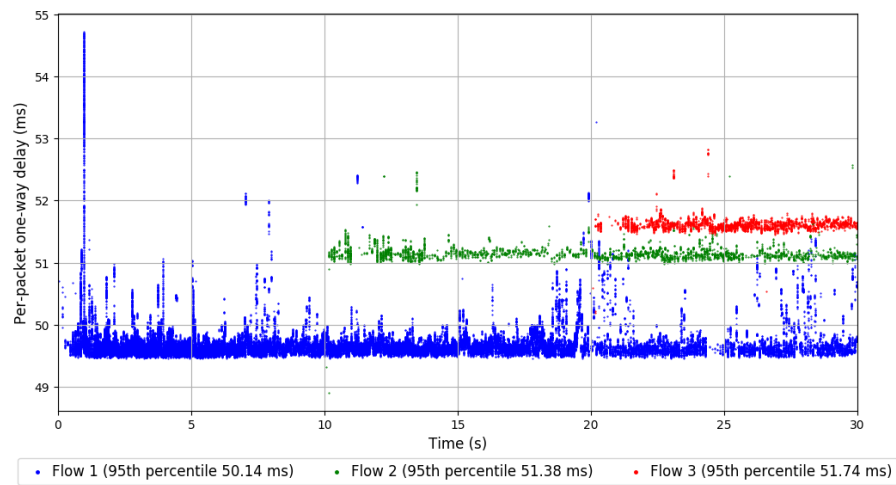
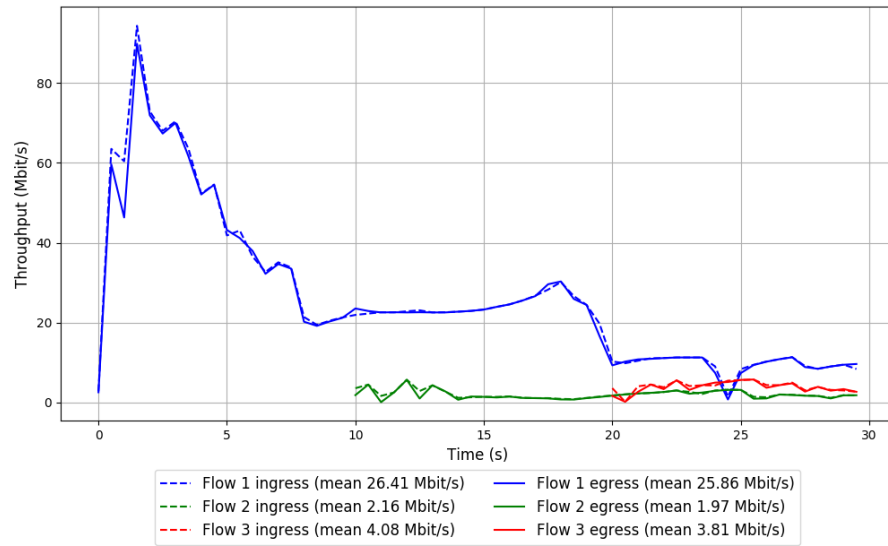
-- Flow 3:

Average throughput: 3.81 Mbit/s

95th percentile per-packet one-way delay: 51.737 ms

Loss rate: 6.53%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2017-08-12 09:29:44

End at: 2017-08-12 09:30:14

Below is generated by plot.py at 2017-08-12 12:18:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 20.90 Mbit/s

95th percentile per-packet one-way delay: 51.021 ms

Loss rate: 2.69%

-- Flow 1:

Average throughput: 18.52 Mbit/s

95th percentile per-packet one-way delay: 50.234 ms

Loss rate: 2.40%

-- Flow 2:

Average throughput: 1.78 Mbit/s

95th percentile per-packet one-way delay: 51.196 ms

Loss rate: 2.83%

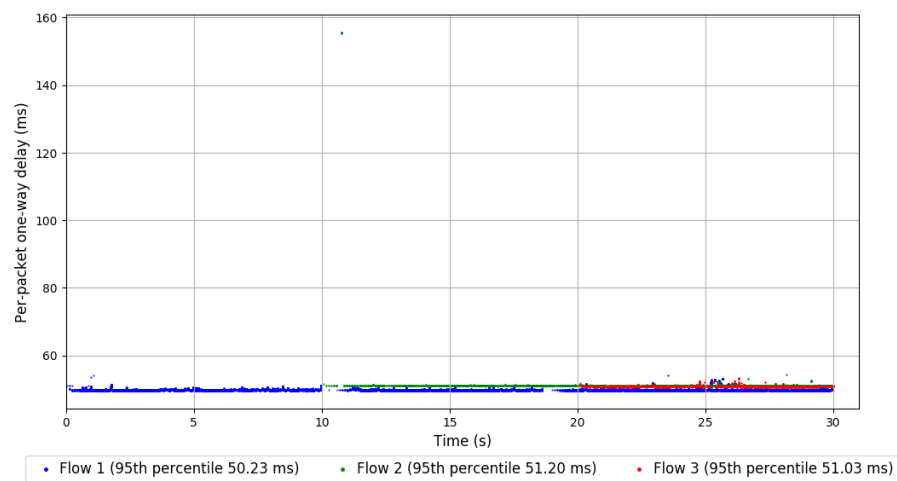
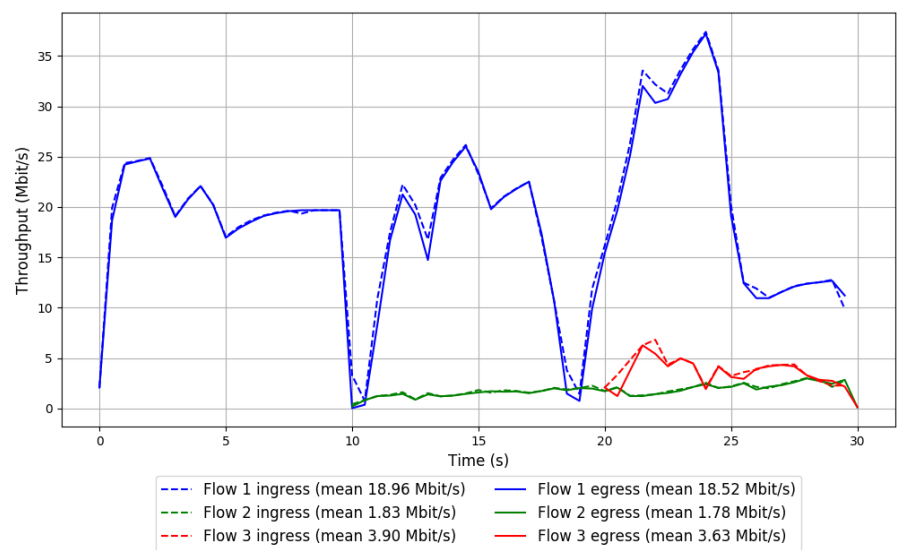
-- Flow 3:

Average throughput: 3.63 Mbit/s

95th percentile per-packet one-way delay: 51.033 ms

Loss rate: 6.73%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2017-08-12 09:40:55

End at: 2017-08-12 09:41:25

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 63.74 Mbit/s

95th percentile per-packet one-way delay: 50.962 ms

Loss rate: 0.41%

-- Flow 1:

Average throughput: 5.60 Mbit/s

95th percentile per-packet one-way delay: 50.587 ms

Loss rate: 1.08%

-- Flow 2:

Average throughput: 86.42 Mbit/s

95th percentile per-packet one-way delay: 51.026 ms

Loss rate: 0.14%

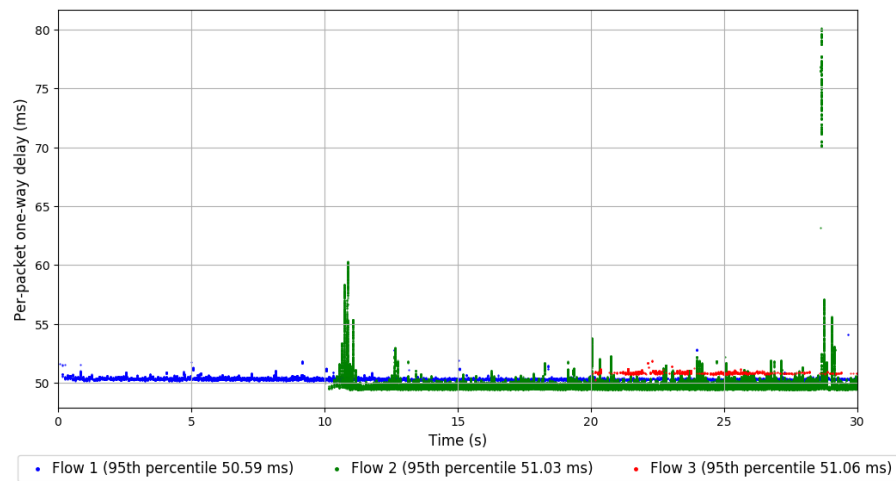
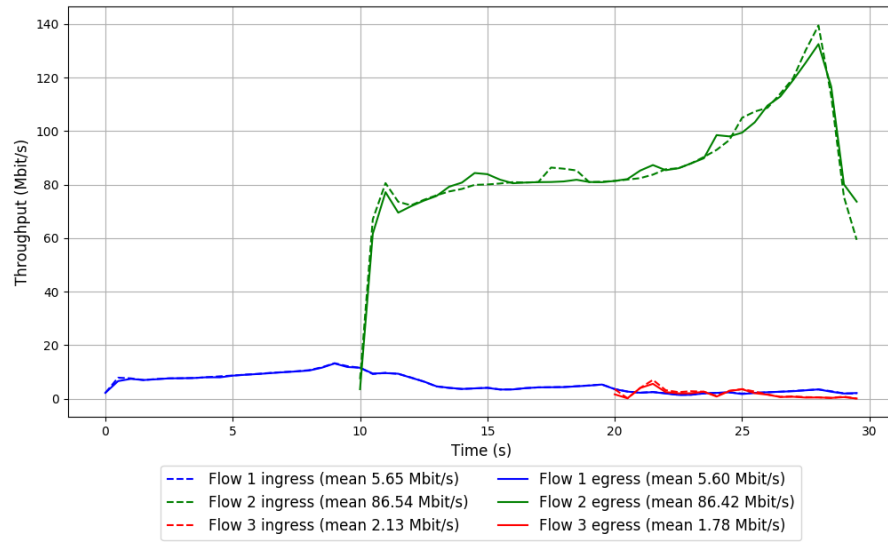
-- Flow 3:

Average throughput: 1.78 Mbit/s

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

Loss rate: 16.73%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2017-08-12 09:52:07

End at: 2017-08-12 09:52:37

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 42.61 Mbit/s

95th percentile per-packet one-way delay: 50.098 ms

Loss rate: 1.45%

-- Flow 1:

Average throughput: 25.31 Mbit/s

95th percentile per-packet one-way delay: 49.981 ms

Loss rate: 1.28%

-- Flow 2:

Average throughput: 24.78 Mbit/s

95th percentile per-packet one-way delay: 49.940 ms

Loss rate: 1.42%

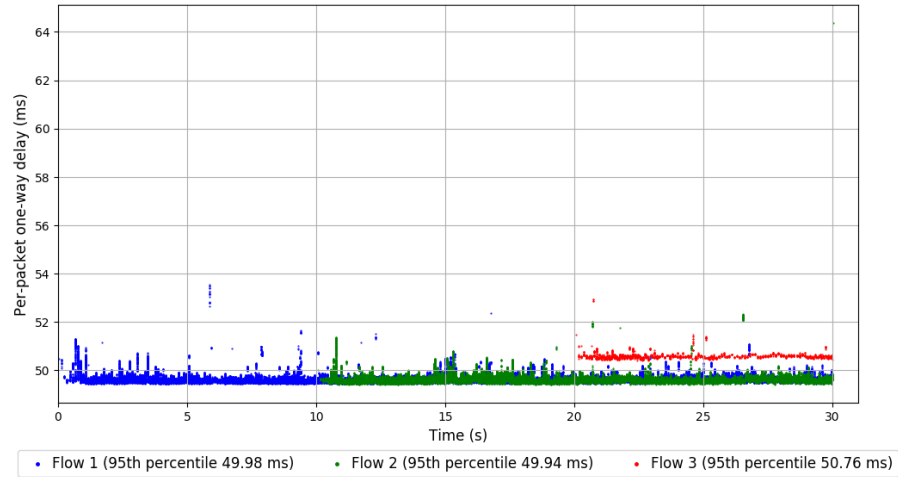
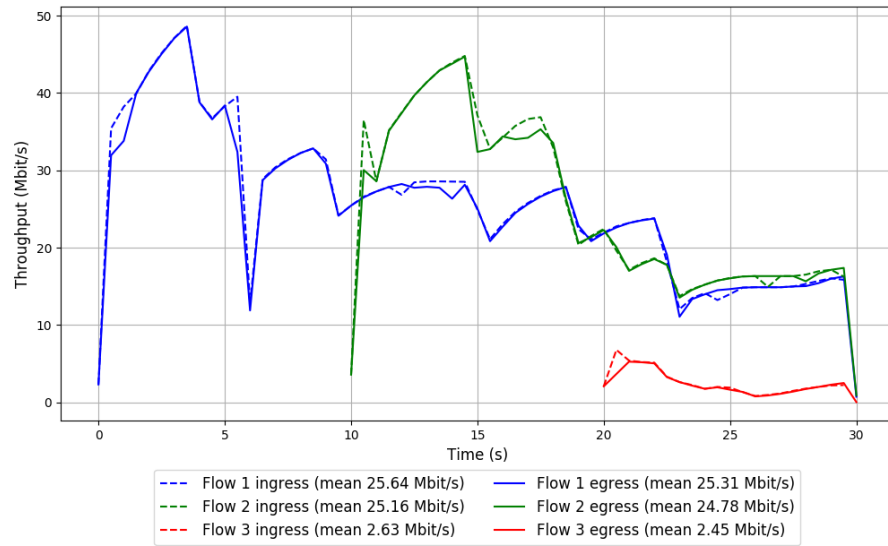
-- Flow 3:

Average throughput: 2.45 Mbit/s

95th percentile per-packet one-way delay: 50.764 ms

Loss rate: 7.11%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2017-08-12 10:02:56

End at: 2017-08-12 10:03:26

Below is generated by plot.py at 2017-08-12 12:19:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 19.62 Mbit/s

95th percentile per-packet one-way delay: 50.755 ms

Loss rate: 1.91%

-- Flow 1:

Average throughput: 8.58 Mbit/s

95th percentile per-packet one-way delay: 50.436 ms

Loss rate: 1.28%

-- Flow 2:

Average throughput: 13.37 Mbit/s

95th percentile per-packet one-way delay: 50.850 ms

Loss rate: 2.40%

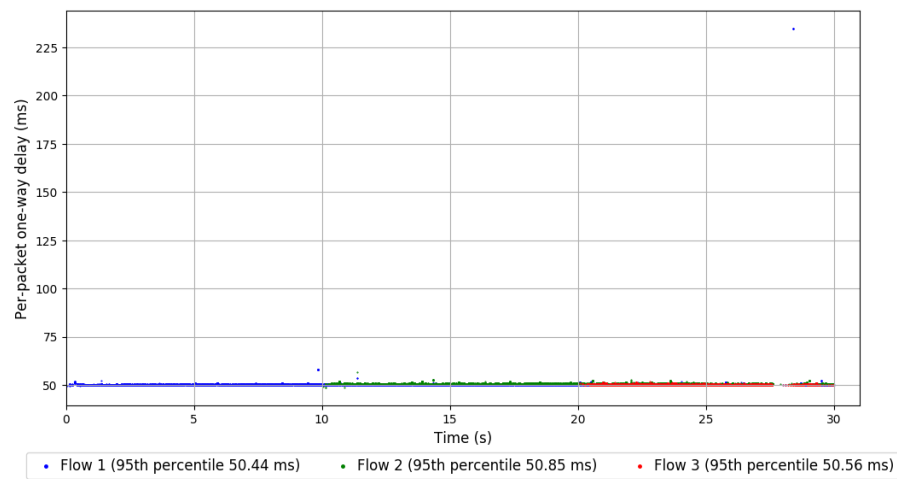
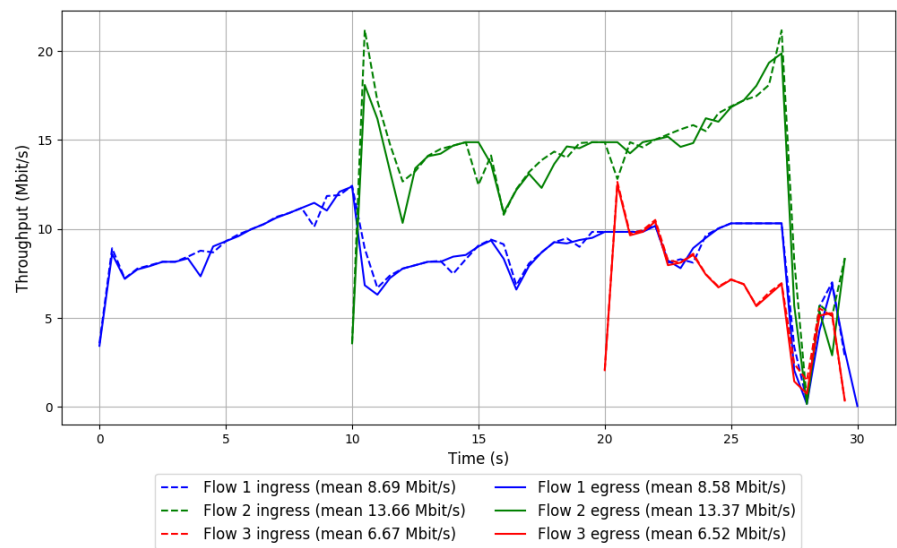
-- Flow 3:

Average throughput: 6.52 Mbit/s

95th percentile per-packet one-way delay: 50.564 ms

Loss rate: 2.32%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2017-08-12 10:14:07

End at: 2017-08-12 10:14:37

Below is generated by plot.py at 2017-08-12 12:19:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 44.14 Mbit/s

95th percentile per-packet one-way delay: 50.638 ms

Loss rate: 1.44%

-- Flow 1:

Average throughput: 39.99 Mbit/s

95th percentile per-packet one-way delay: 50.663 ms

Loss rate: 1.12%

-- Flow 2:

Average throughput: 2.61 Mbit/s

95th percentile per-packet one-way delay: 50.340 ms

Loss rate: 3.58%

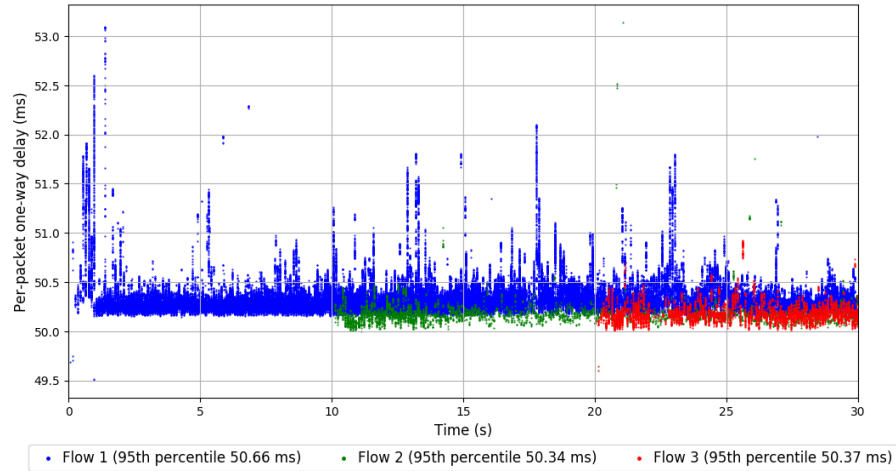
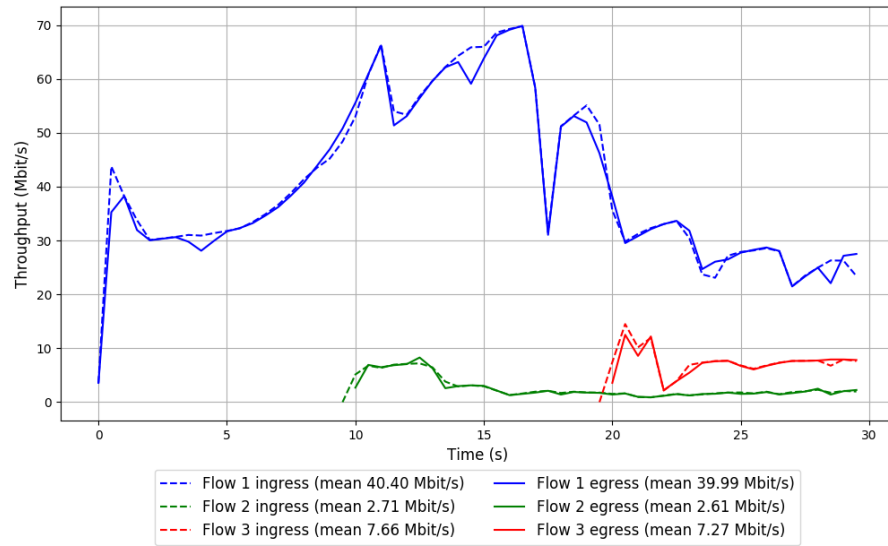
-- Flow 3:

Average throughput: 7.27 Mbit/s

95th percentile per-packet one-way delay: 50.368 ms

Loss rate: 5.01%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2017-08-12 10:25:13

End at: 2017-08-12 10:25:43

Below is generated by plot.py at 2017-08-12 12:19:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 14.32 Mbit/s

95th percentile per-packet one-way delay: 51.115 ms

Loss rate: 1.68%

-- Flow 1:

Average throughput: 7.08 Mbit/s

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

Loss rate: 1.35%

-- Flow 2:

Average throughput: 6.66 Mbit/s

95th percentile per-packet one-way delay: 51.213 ms

Loss rate: 1.44%

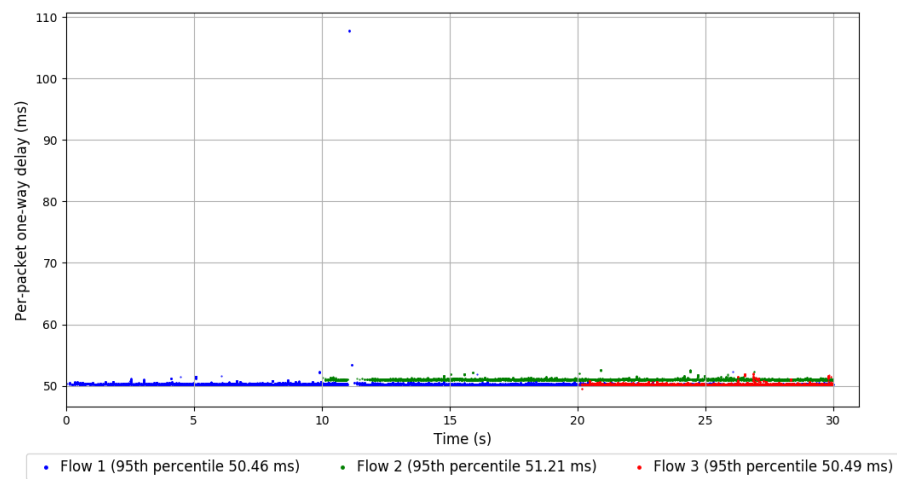
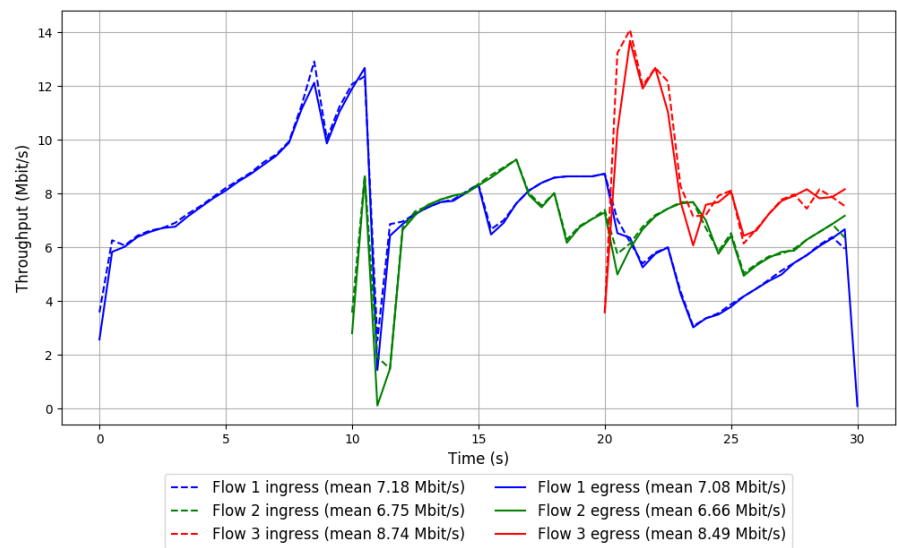
-- Flow 3:

Average throughput: 8.49 Mbit/s

95th percentile per-packet one-way delay: 50.487 ms

Loss rate: 2.87%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2017-08-12 10:36:34

End at: 2017-08-12 10:37:04

Below is generated by plot.py at 2017-08-12 12:19:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 86.09 Mbit/s

95th percentile per-packet one-way delay: 50.946 ms

Loss rate: 1.19%

-- Flow 1:

Average throughput: 40.57 Mbit/s

95th percentile per-packet one-way delay: 50.903 ms

Loss rate: 0.96%

-- Flow 2:

Average throughput: 67.65 Mbit/s

95th percentile per-packet one-way delay: 50.999 ms

Loss rate: 1.37%

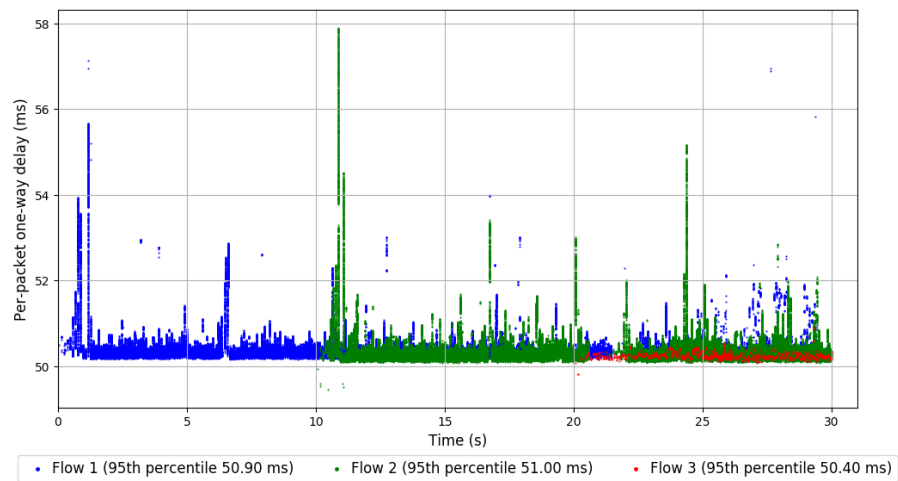
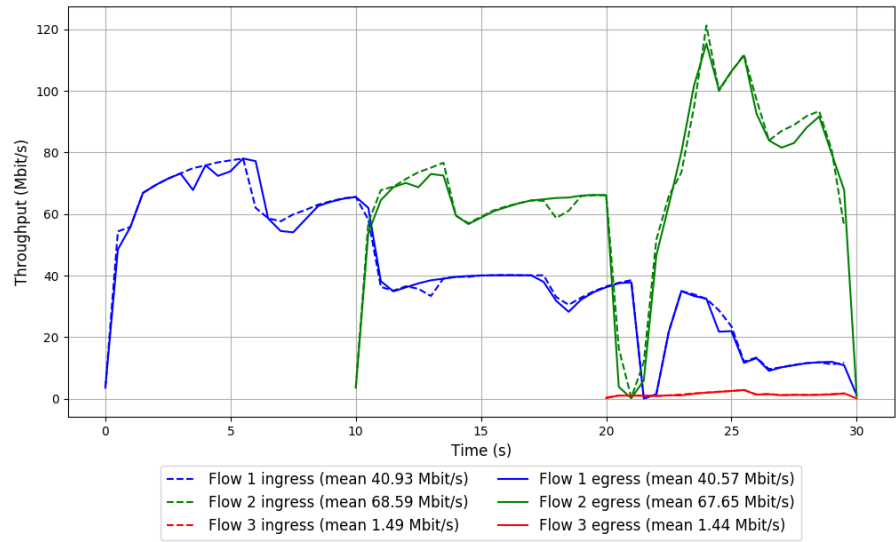
-- Flow 3:

Average throughput: 1.44 Mbit/s

95th percentile per-packet one-way delay: 50.397 ms

Loss rate: 3.41%

Run 10: Report of TCP Cubic — Data Link

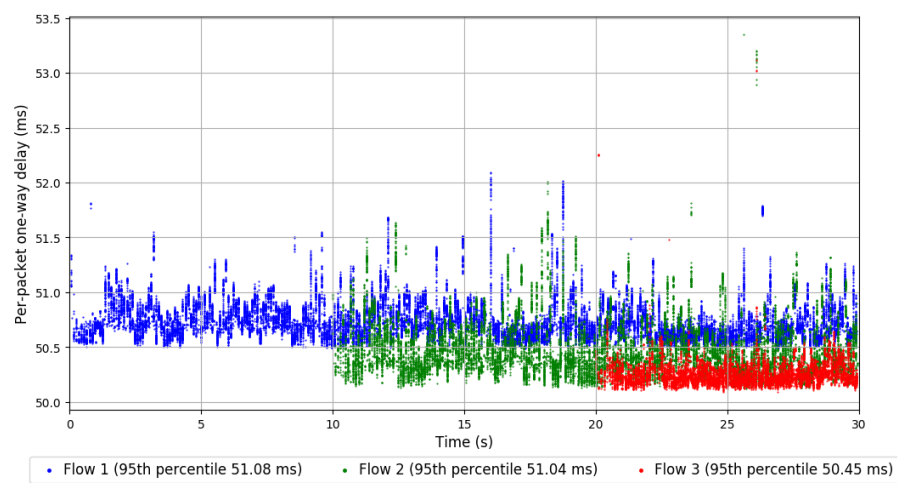
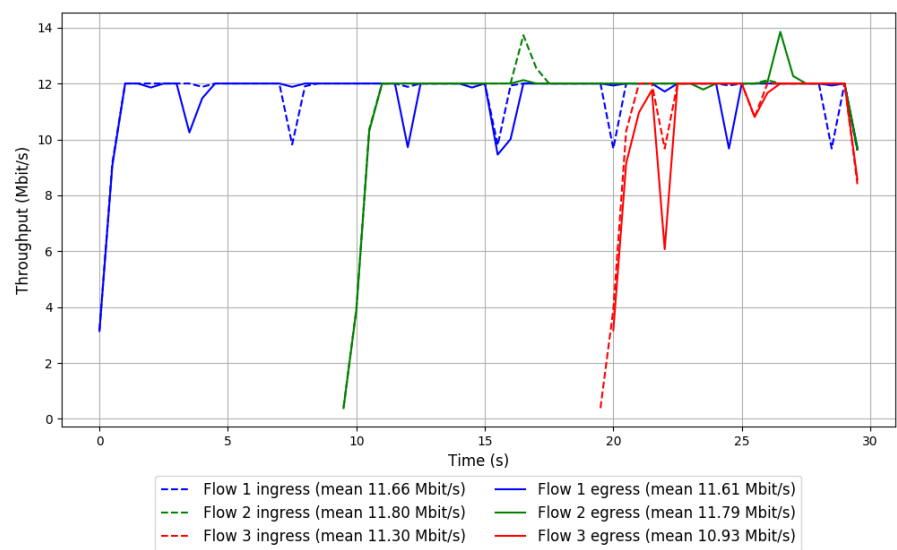


```
Run 1: Statistics of KohoCC

Start at: 2017-08-12 08:49:25
End at: 2017-08-12 08:49:55

# Below is generated by plot.py at 2017-08-12 12:19:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.09 Mbit/s
95th percentile per-packet one-way delay: 51.039 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 11.61 Mbit/s
95th percentile per-packet one-way delay: 51.084 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 11.79 Mbit/s
95th percentile per-packet one-way delay: 51.040 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 10.93 Mbit/s
95th percentile per-packet one-way delay: 50.447 ms
Loss rate: 3.28%
```

Run 1: Report of KohoCC — Data Link

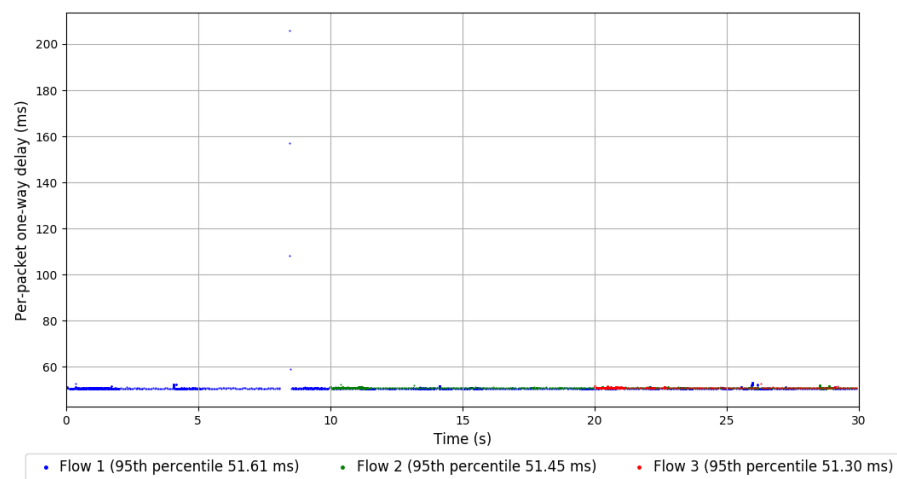
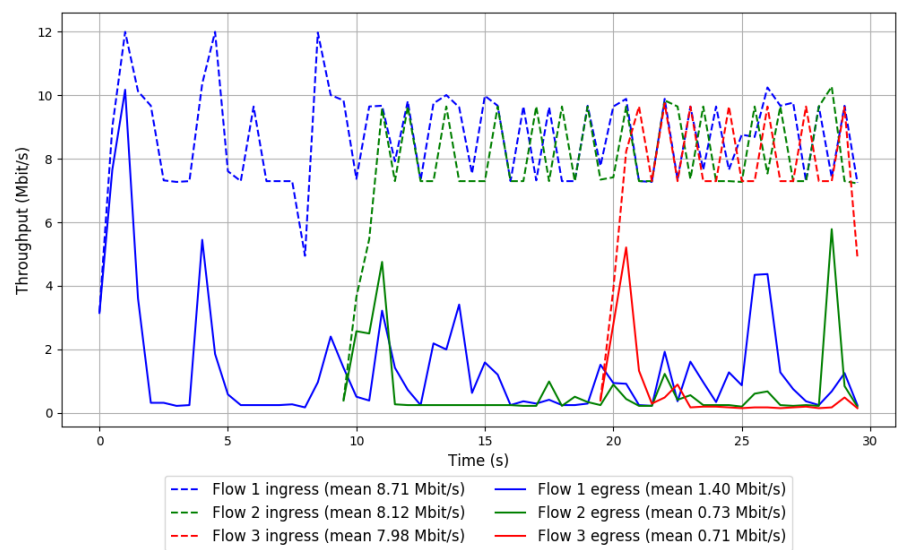


```
Run 2: Statistics of KohoCC

Start at: 2017-08-12 09:00:45
End at: 2017-08-12 09:01:15

# Below is generated by plot.py at 2017-08-12 12:19:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.13 Mbit/s
95th percentile per-packet one-way delay: 51.490 ms
Loss rate: 87.31%
-- Flow 1:
Average throughput: 1.40 Mbit/s
95th percentile per-packet one-way delay: 51.610 ms
Loss rate: 83.87%
-- Flow 2:
Average throughput: 0.73 Mbit/s
95th percentile per-packet one-way delay: 51.452 ms
Loss rate: 90.97%
-- Flow 3:
Average throughput: 0.71 Mbit/s
95th percentile per-packet one-way delay: 51.304 ms
Loss rate: 91.14%
```

Run 2: Report of KohoCC — Data Link



Run 3: Statistics of KohoCC

Start at: 2017-08-12 09:11:34

End at: 2017-08-12 09:12:04

Below is generated by plot.py at 2017-08-12 12:19:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.33 Mbit/s

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

Loss rate: 36.95%

-- Flow 1:

Average throughput: 11.73 Mbit/s

95th percentile per-packet one-way delay: 51.003 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 0.35 Mbit/s

95th percentile per-packet one-way delay: 51.638 ms

Loss rate: 95.39%

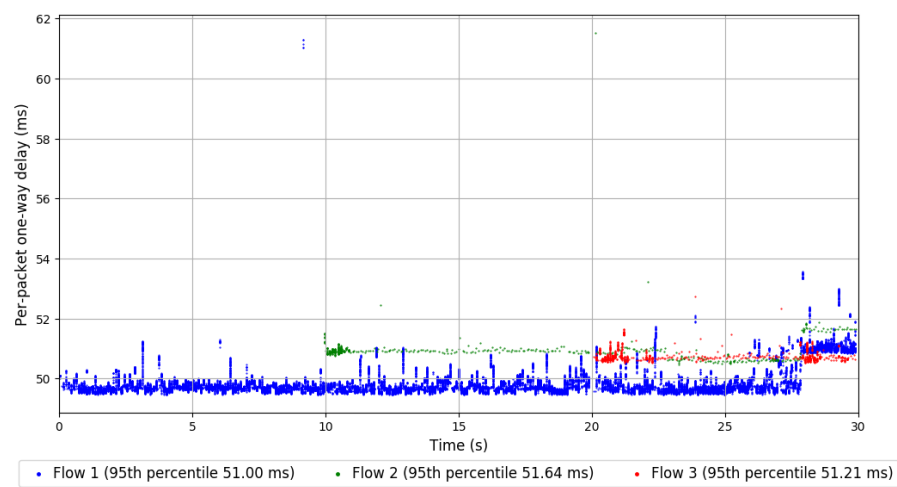
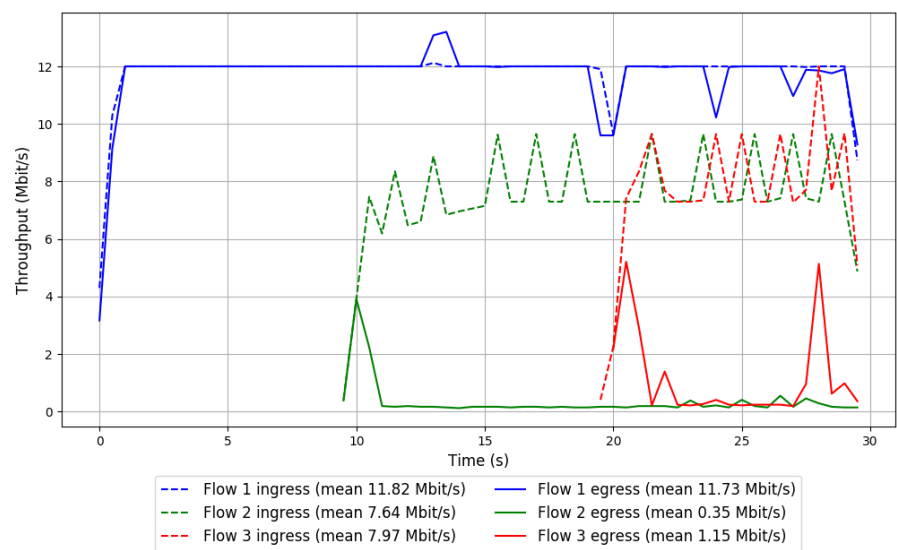
-- Flow 3:

Average throughput: 1.15 Mbit/s

95th percentile per-packet one-way delay: 51.212 ms

Loss rate: 85.78%

Run 3: Report of KohoCC — Data Link



Run 4: Statistics of KohoCC

Start at: 2017-08-12 09:22:54

End at: 2017-08-12 09:23:24

Below is generated by plot.py at 2017-08-12 12:19:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 9.03 Mbit/s

95th percentile per-packet one-way delay: 51.061 ms

Loss rate: 51.63%

-- Flow 1:

Average throughput: 8.45 Mbit/s

95th percentile per-packet one-way delay: 50.714 ms

Loss rate: 23.08%

-- Flow 2:

Average throughput: 0.56 Mbit/s

95th percentile per-packet one-way delay: 52.298 ms

Loss rate: 92.85%

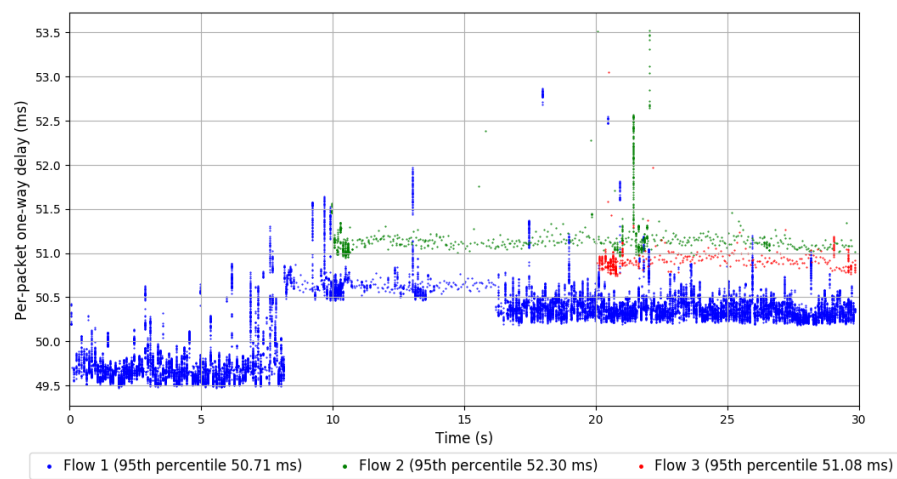
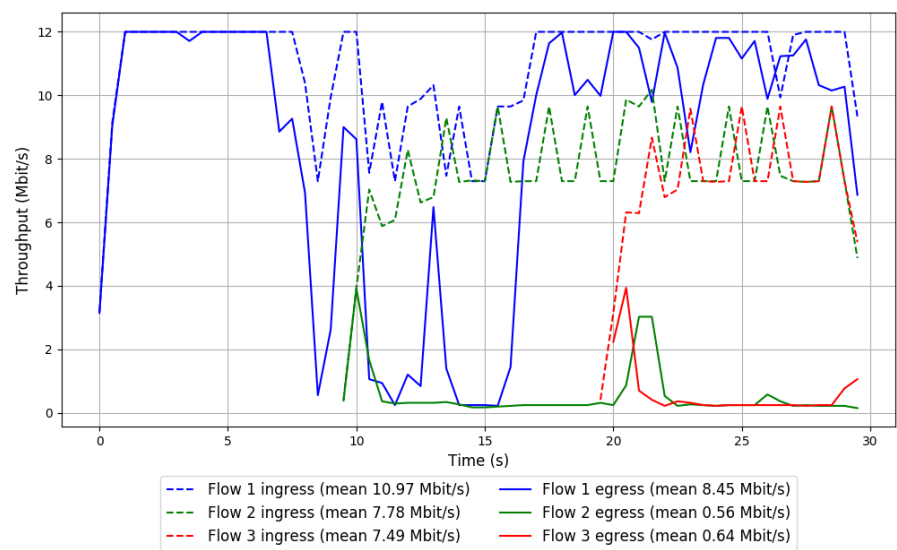
-- Flow 3:

Average throughput: 0.64 Mbit/s

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

Loss rate: 91.51%

Run 4: Report of KohoCC — Data Link



Run 5: Statistics of KohoCC

Start at: 2017-08-12 09:34:11

End at: 2017-08-12 09:34:41

Below is generated by plot.py at 2017-08-12 12:19:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 22.26 Mbit/s

95th percentile per-packet one-way delay: 50.372 ms

Loss rate: 3.70%

-- Flow 1:

Average throughput: 11.52 Mbit/s

95th percentile per-packet one-way delay: 50.102 ms

Loss rate: 1.15%

-- Flow 2:

Average throughput: 11.51 Mbit/s

95th percentile per-packet one-way delay: 50.061 ms

Loss rate: 1.05%

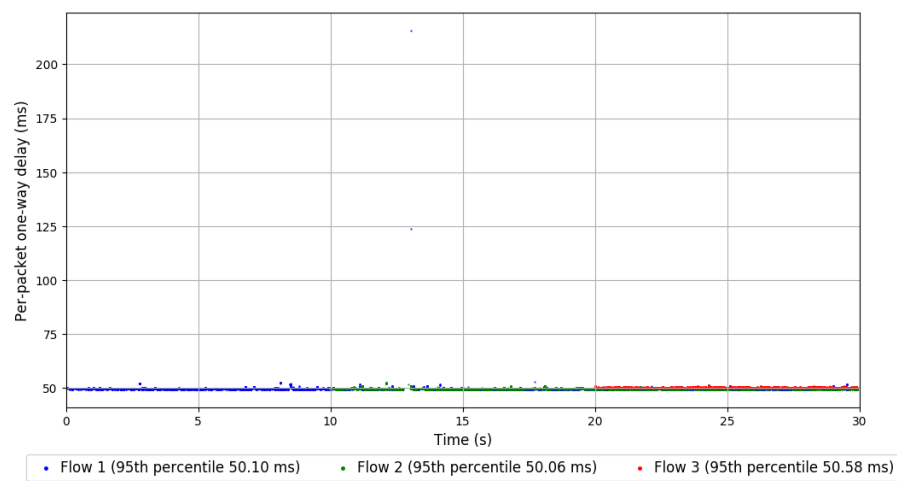
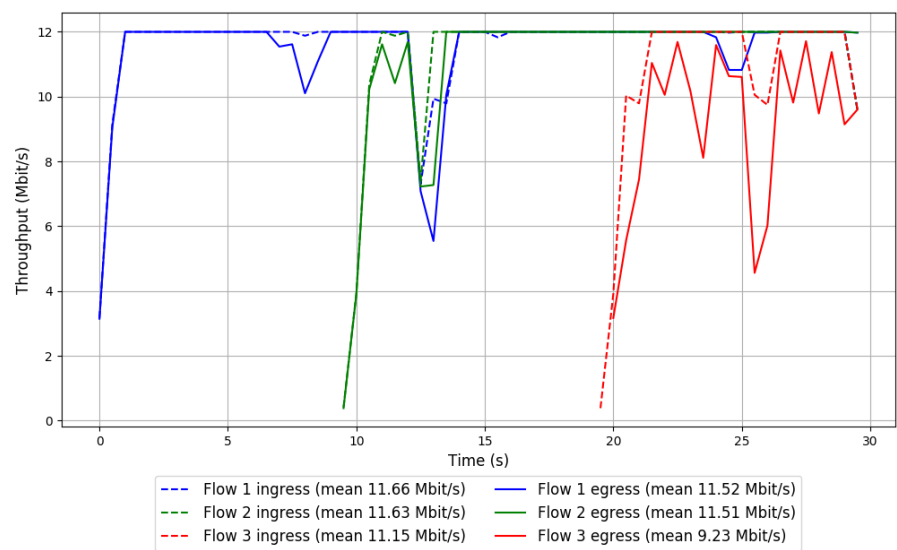
-- Flow 3:

Average throughput: 9.23 Mbit/s

95th percentile per-packet one-way delay: 50.578 ms

Loss rate: 17.29%

Run 5: Report of KohoCC — Data Link

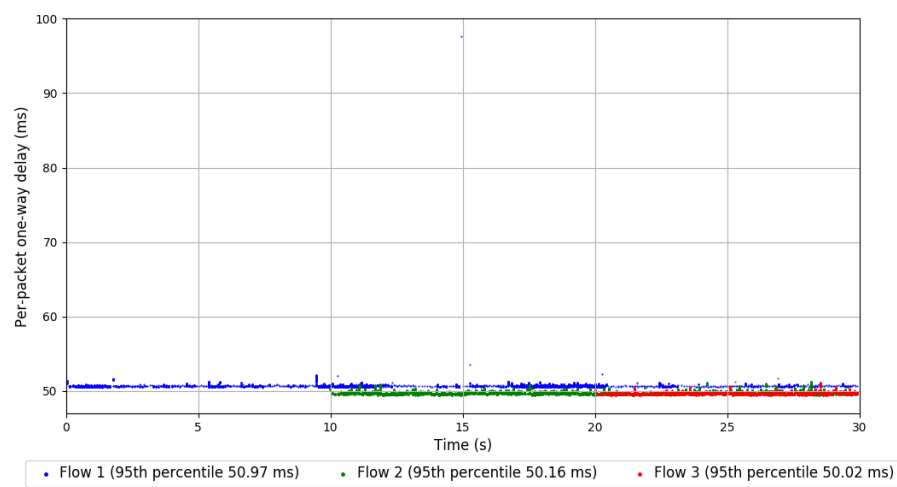
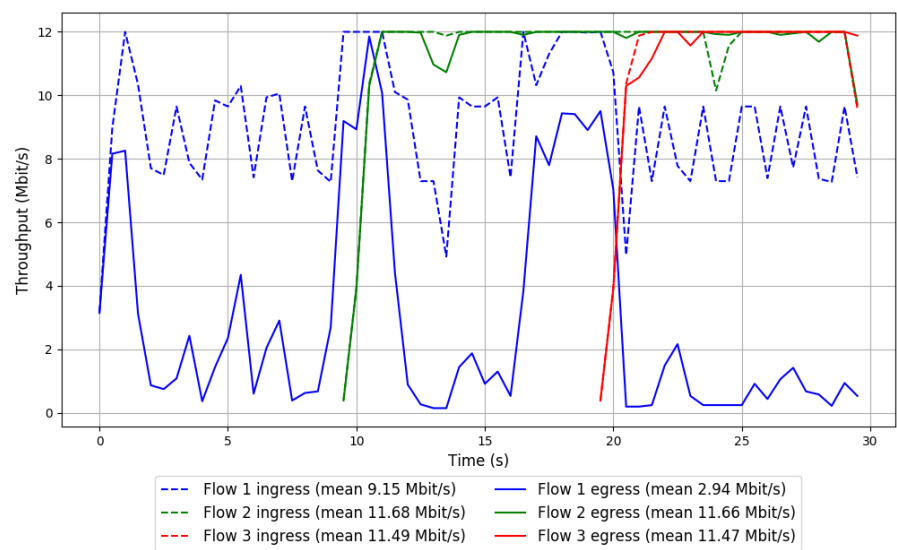


```
Run 6: Statistics of KohoCC

Start at: 2017-08-12 09:45:10
End at: 2017-08-12 09:45:40

# Below is generated by plot.py at 2017-08-12 12:19:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.53 Mbit/s
95th percentile per-packet one-way delay: 50.740 ms
Loss rate: 30.02%
-- Flow 1:
Average throughput: 2.94 Mbit/s
95th percentile per-packet one-way delay: 50.970 ms
Loss rate: 67.91%
-- Flow 2:
Average throughput: 11.66 Mbit/s
95th percentile per-packet one-way delay: 50.164 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 11.47 Mbit/s
95th percentile per-packet one-way delay: 50.024 ms
Loss rate: 0.19%
```

Run 6: Report of KohoCC — Data Link



Run 7: Statistics of KohoCC

Start at: 2017-08-12 09:56:27

End at: 2017-08-12 09:56:57

Below is generated by plot.py at 2017-08-12 12:19:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 22.83 Mbit/s

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

Loss rate: 2.08%

-- Flow 1:

Average throughput: 11.59 Mbit/s

95th percentile per-packet one-way delay: 50.762 ms

Loss rate: 0.66%

-- Flow 2:

Average throughput: 11.58 Mbit/s

95th percentile per-packet one-way delay: 50.986 ms

Loss rate: 1.27%

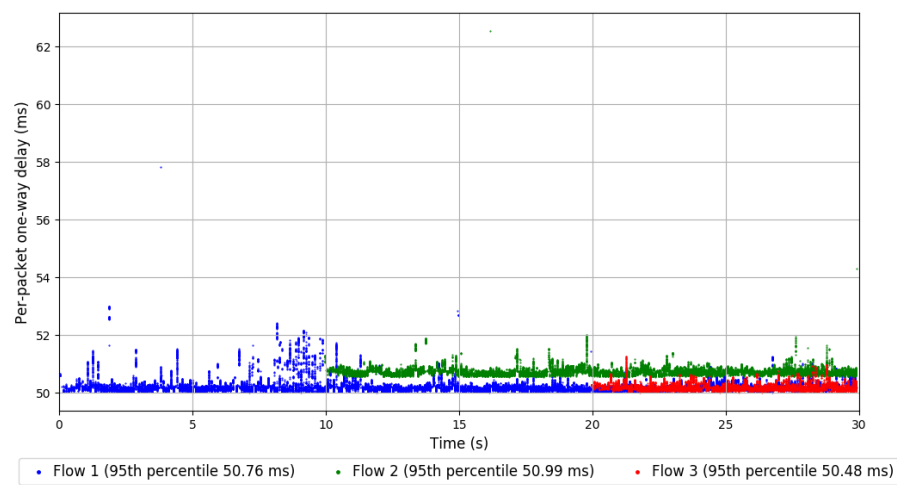
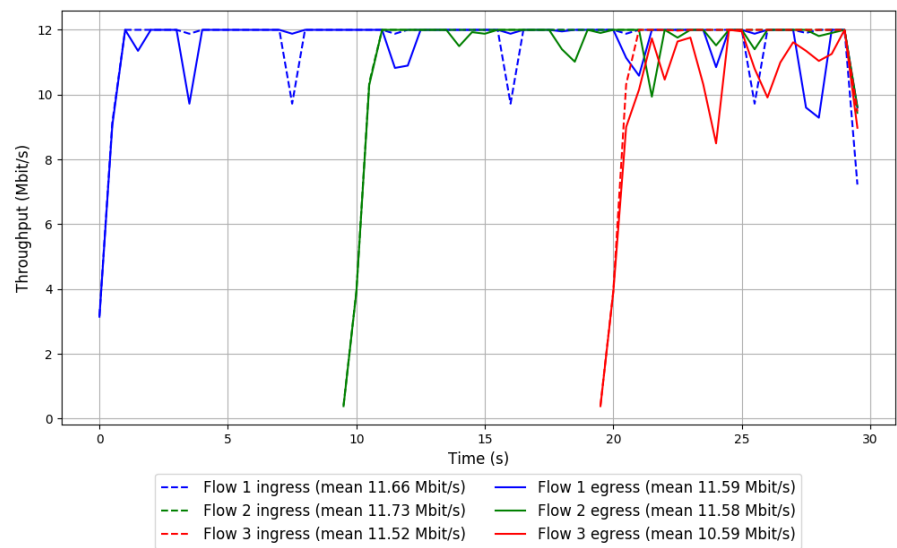
-- Flow 3:

Average throughput: 10.59 Mbit/s

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

Loss rate: 8.05%

Run 7: Report of KohoCC — Data Link



Run 8: Statistics of KohoCC

Start at: 2017-08-12 10:07:13

End at: 2017-08-12 10:07:43

Below is generated by plot.py at 2017-08-12 12:19:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 20.12 Mbit/s

95th percentile per-packet one-way delay: 51.675 ms

Loss rate: 11.05%

-- Flow 1:

Average throughput: 10.82 Mbit/s

95th percentile per-packet one-way delay: 51.333 ms

Loss rate: 5.91%

-- Flow 2:

Average throughput: 8.66 Mbit/s

95th percentile per-packet one-way delay: 52.030 ms

Loss rate: 21.28%

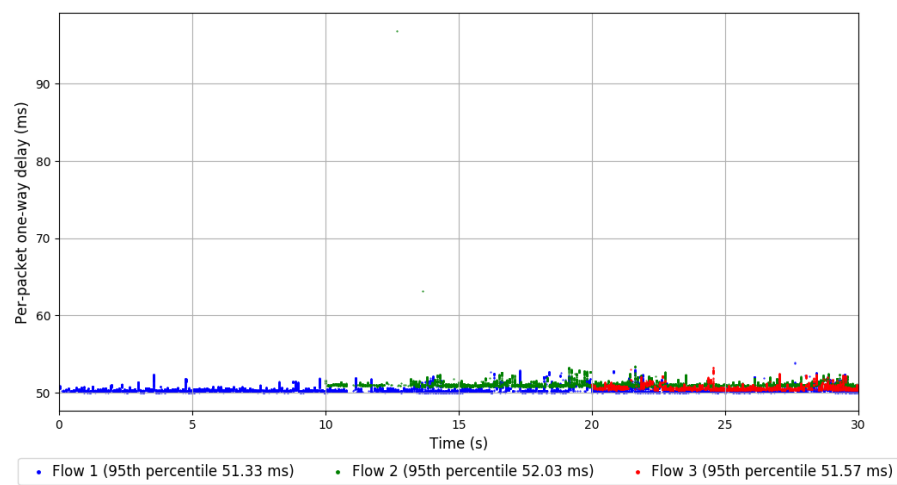
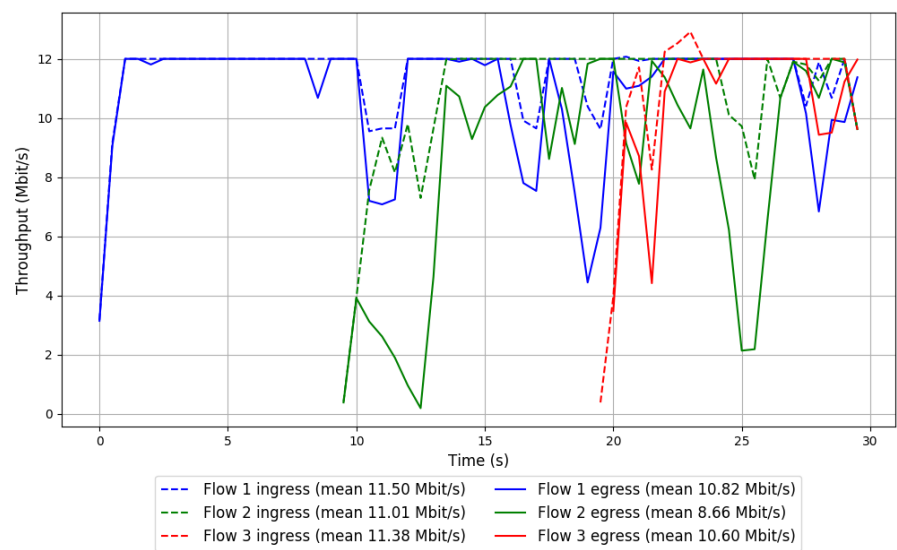
-- Flow 3:

Average throughput: 10.60 Mbit/s

95th percentile per-packet one-way delay: 51.570 ms

Loss rate: 6.83%

Run 8: Report of KohoCC — Data Link



Run 9: Statistics of KohoCC

Start at: 2017-08-12 10:18:24

End at: 2017-08-12 10:18:54

Below is generated by plot.py at 2017-08-12 12:19:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.89 Mbit/s

95th percentile per-packet one-way delay: 51.603 ms

Loss rate: 62.69%

-- Flow 1:

Average throughput: 2.15 Mbit/s

95th percentile per-packet one-way delay: 51.633 ms

Loss rate: 75.80%

-- Flow 2:

Average throughput: 6.17 Mbit/s

95th percentile per-packet one-way delay: 51.603 ms

Loss rate: 40.08%

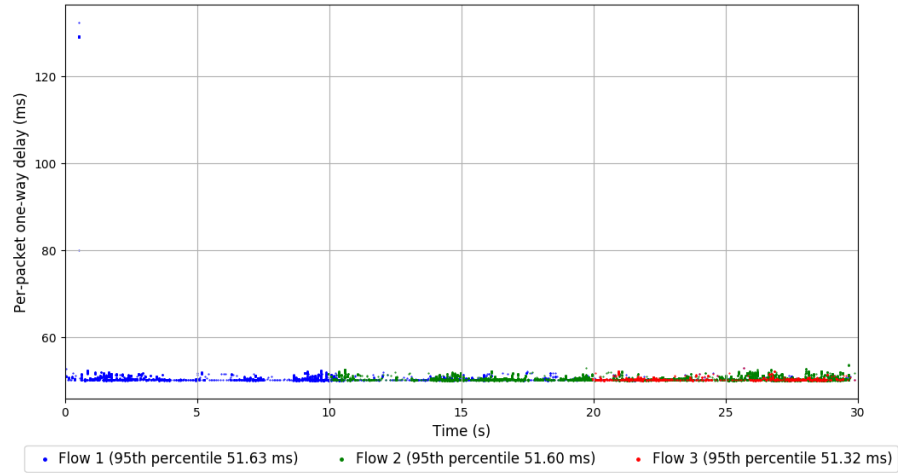
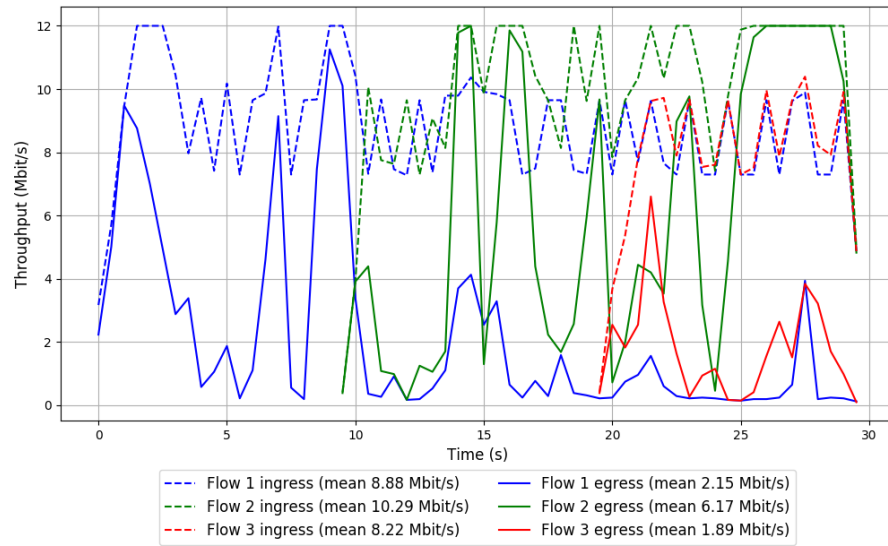
-- Flow 3:

Average throughput: 1.89 Mbit/s

95th percentile per-packet one-way delay: 51.316 ms

Loss rate: 76.99%

Run 9: Report of KohoCC — Data Link



Run 10: Statistics of KohoCC

Start at: 2017-08-12 10:29:31

End at: 2017-08-12 10:30:01

Below is generated by plot.py at 2017-08-12 12:19:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 22.05 Mbit/s

95th percentile per-packet one-way delay: 50.591 ms

Loss rate: 4.72%

-- Flow 1:

Average throughput: 11.15 Mbit/s

95th percentile per-packet one-way delay: 50.602 ms

Loss rate: 4.19%

-- Flow 2:

Average throughput: 11.19 Mbit/s

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

Loss rate: 3.89%

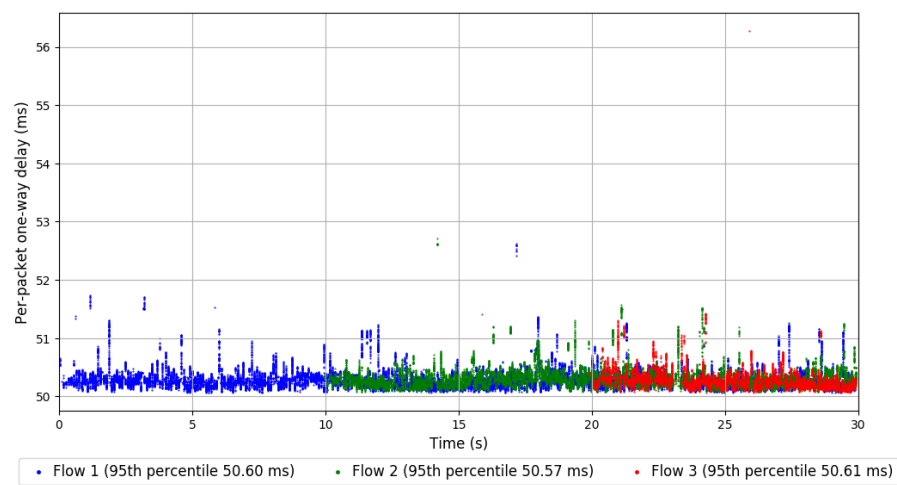
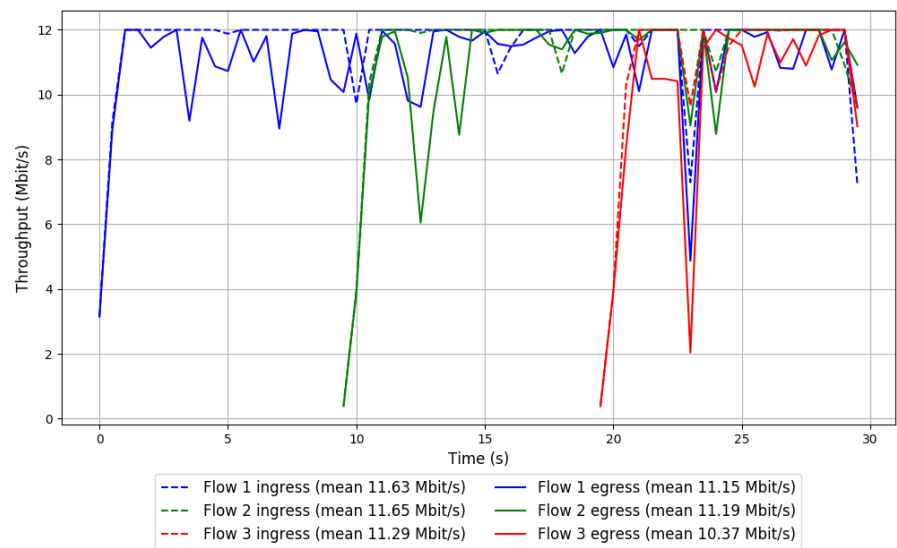
-- Flow 3:

Average throughput: 10.37 Mbit/s

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

Loss rate: 8.10%

Run 10: Report of KohoCC — Data Link

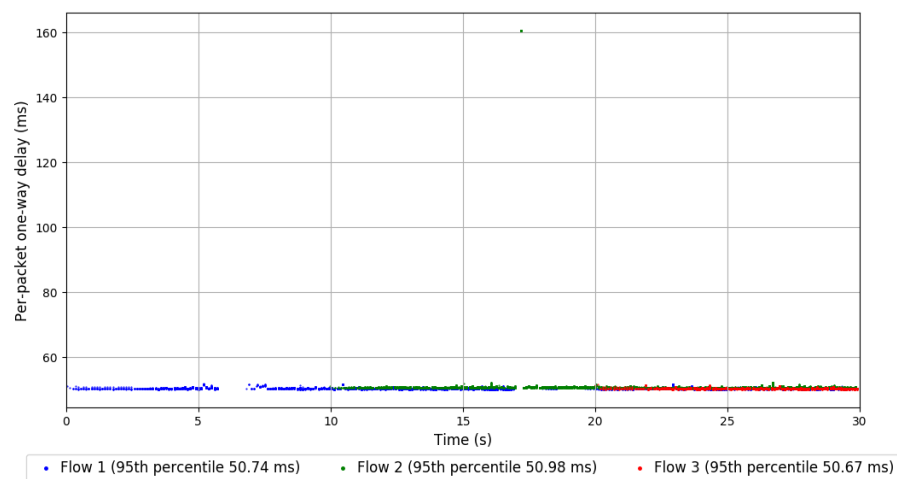
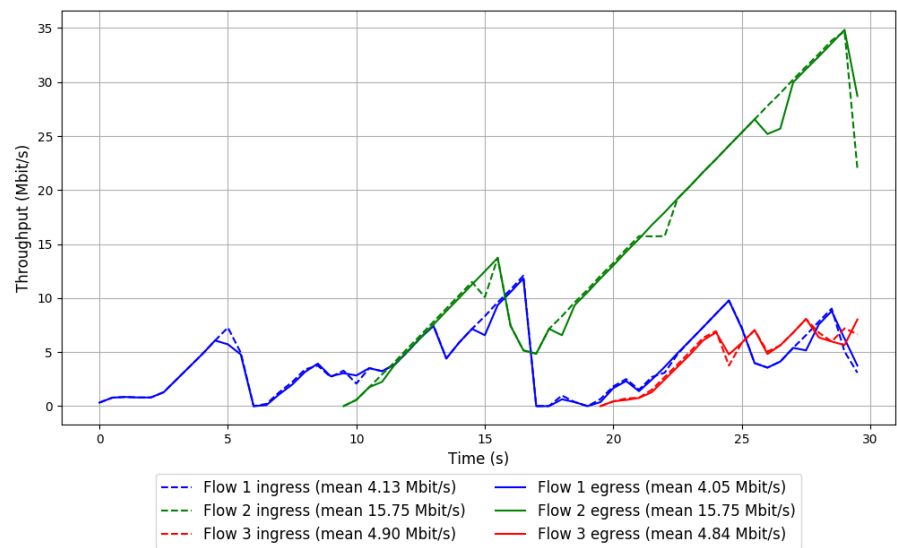


```
Run 1: Statistics of LEDBAT

Start at: 2017-08-12 08:50:07
End at: 2017-08-12 08:50:37

# Below is generated by plot.py at 2017-08-12 12:19:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.13 Mbit/s
95th percentile per-packet one-way delay: 50.938 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 4.05 Mbit/s
95th percentile per-packet one-way delay: 50.737 ms
Loss rate: 2.10%
-- Flow 2:
Average throughput: 15.75 Mbit/s
95th percentile per-packet one-way delay: 50.978 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.84 Mbit/s
95th percentile per-packet one-way delay: 50.669 ms
Loss rate: 1.33%
```

Run 1: Report of LEDBAT — Data Link

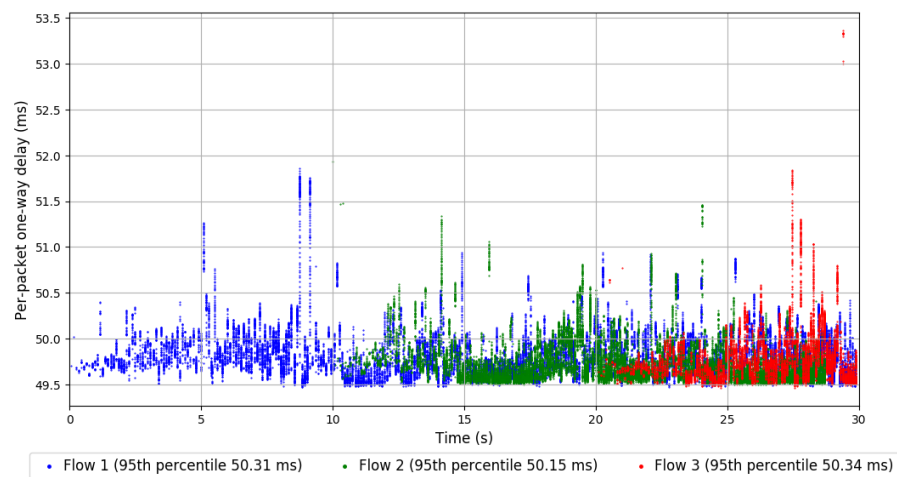
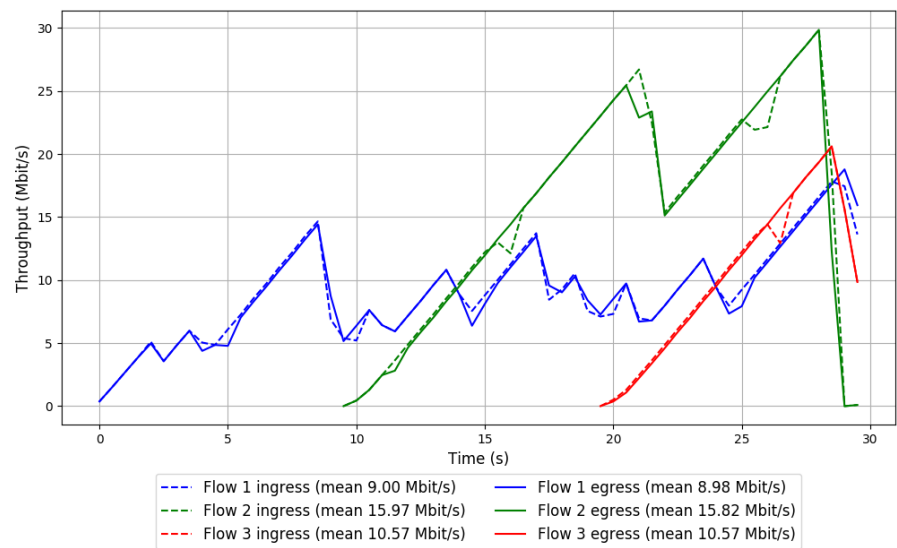


```
Run 2: Statistics of LEDBAT

Start at: 2017-08-12 09:01:25
End at: 2017-08-12 09:01:55

# Below is generated by plot.py at 2017-08-12 12:19:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.03 Mbit/s
95th percentile per-packet one-way delay: 50.261 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 8.98 Mbit/s
95th percentile per-packet one-way delay: 50.312 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 15.82 Mbit/s
95th percentile per-packet one-way delay: 50.151 ms
Loss rate: 0.98%
-- Flow 3:
Average throughput: 10.57 Mbit/s
95th percentile per-packet one-way delay: 50.335 ms
Loss rate: 0.00%
```


Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2017-08-12 09:12:14

End at: 2017-08-12 09:12:44

Below is generated by plot.py at 2017-08-12 12:19:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.02 Mbit/s

95th percentile per-packet one-way delay: 51.145 ms

Loss rate: 3.59%

-- Flow 1:

Average throughput: 3.04 Mbit/s

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

Loss rate: 3.30%

-- Flow 2:

Average throughput: 3.33 Mbit/s

95th percentile per-packet one-way delay: 51.146 ms

Loss rate: 3.84%

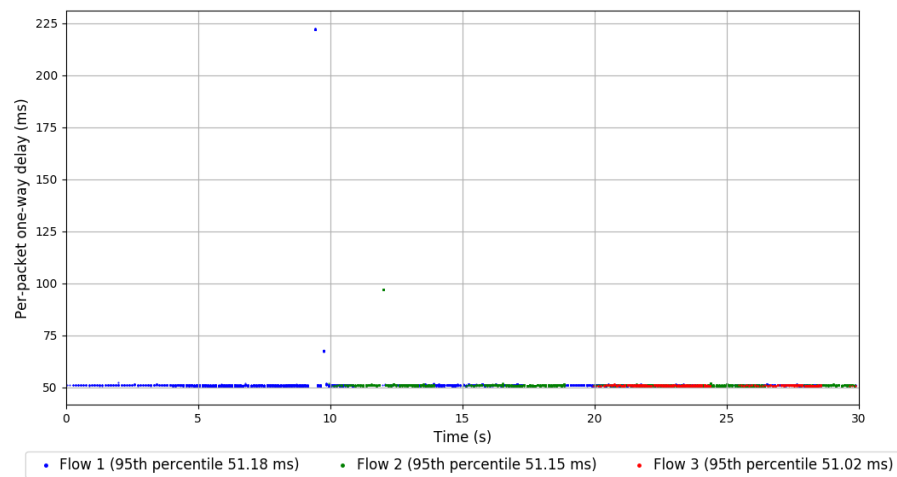
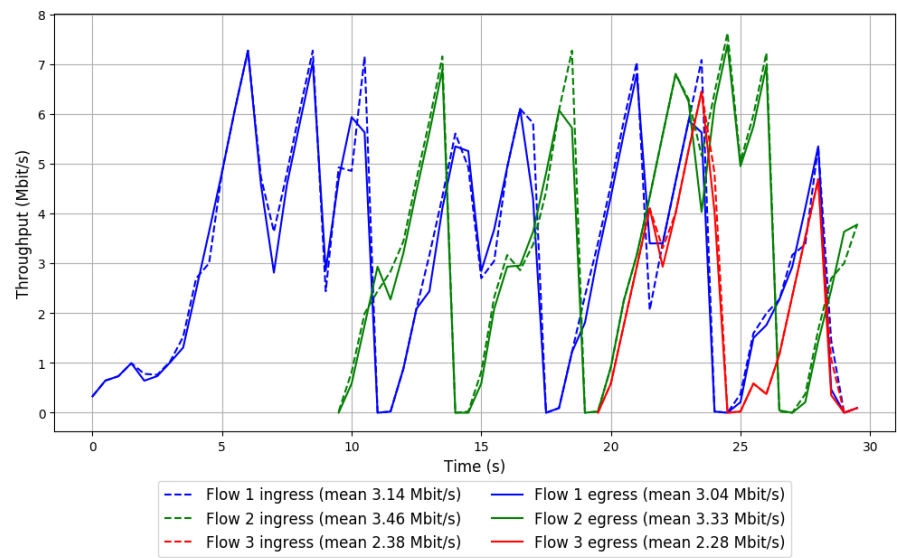
-- Flow 3:

Average throughput: 2.28 Mbit/s

95th percentile per-packet one-way delay: 51.024 ms

Loss rate: 3.98%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2017-08-12 09:23:34

End at: 2017-08-12 09:24:04

Below is generated by plot.py at 2017-08-12 12:19:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.46 Mbit/s

95th percentile per-packet one-way delay: 51.398 ms

Loss rate: 4.16%

-- Flow 1:

Average throughput: 2.96 Mbit/s

95th percentile per-packet one-way delay: 51.313 ms

Loss rate: 4.11%

-- Flow 2:

Average throughput: 2.40 Mbit/s

95th percentile per-packet one-way delay: 51.499 ms

Loss rate: 4.64%

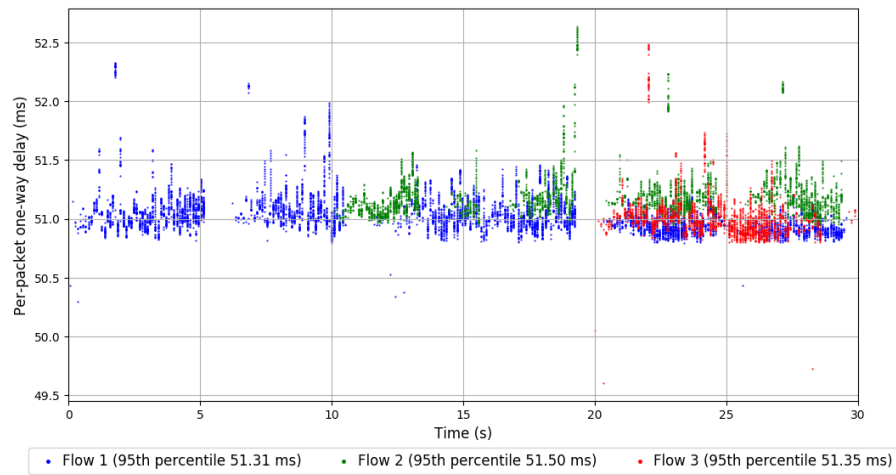
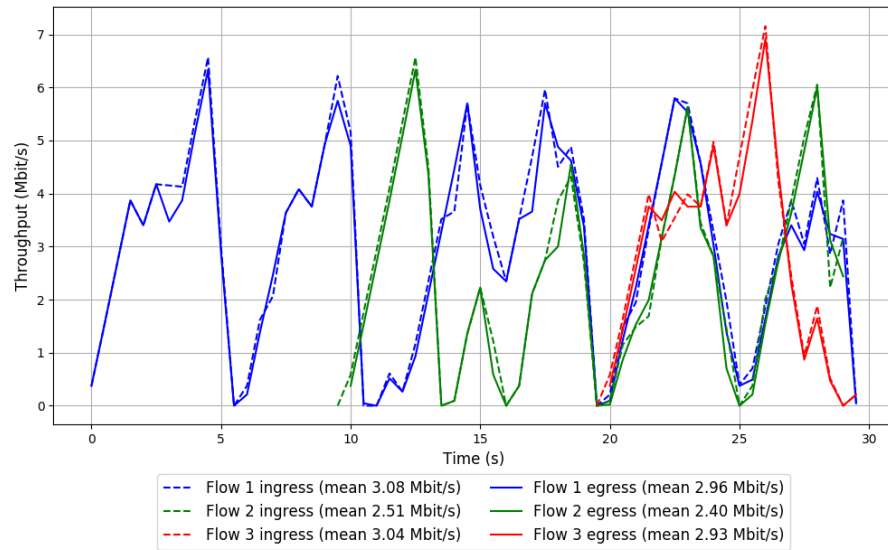
-- Flow 3:

Average throughput: 2.93 Mbit/s

95th percentile per-packet one-way delay: 51.346 ms

Loss rate: 3.53%

Run 4: Report of LEDBAT — Data Link

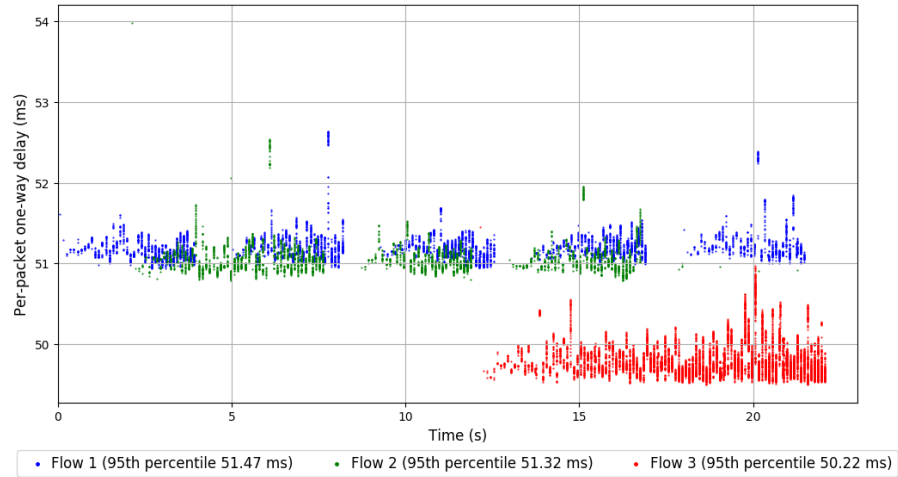
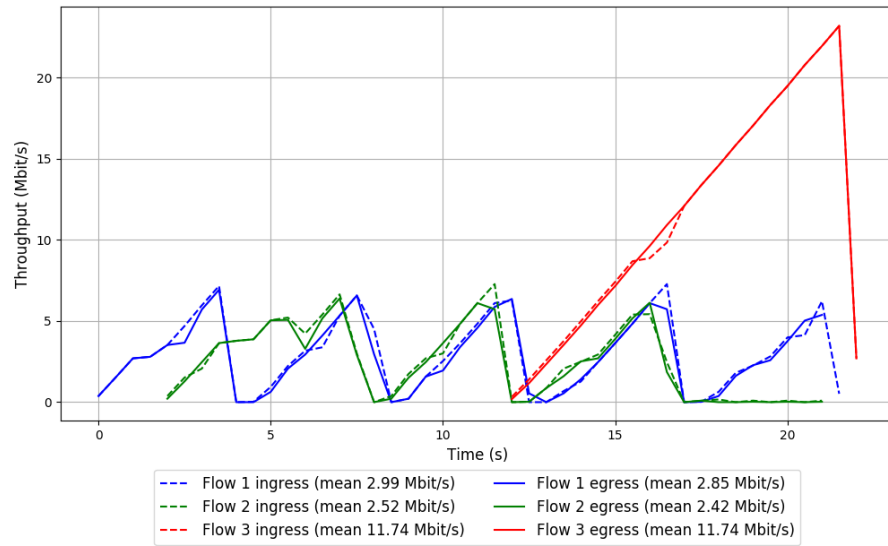


Run 5: Statistics of LEDBAT

Start at: 2017-08-12 09:34:52

End at: 2017-08-12 09:35:22

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2017-08-12 09:45:50

End at: 2017-08-12 09:46:20

Below is generated by plot.py at 2017-08-12 12:20:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 10.95 Mbit/s

95th percentile per-packet one-way delay: 50.644 ms

Loss rate: 0.71%

-- Flow 1:

Average throughput: 9.63 Mbit/s

95th percentile per-packet one-way delay: 50.123 ms

Loss rate: 0.11%

-- Flow 2:

Average throughput: 1.41 Mbit/s

95th percentile per-packet one-way delay: 50.896 ms

Loss rate: 5.25%

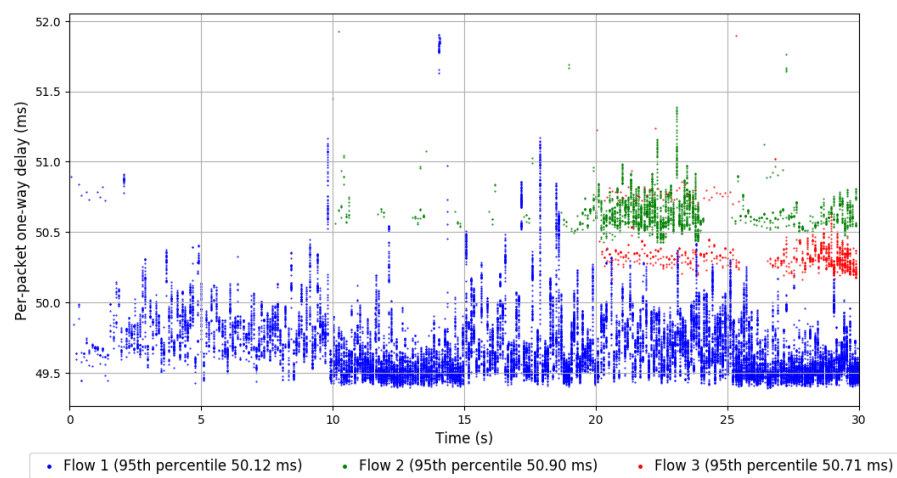
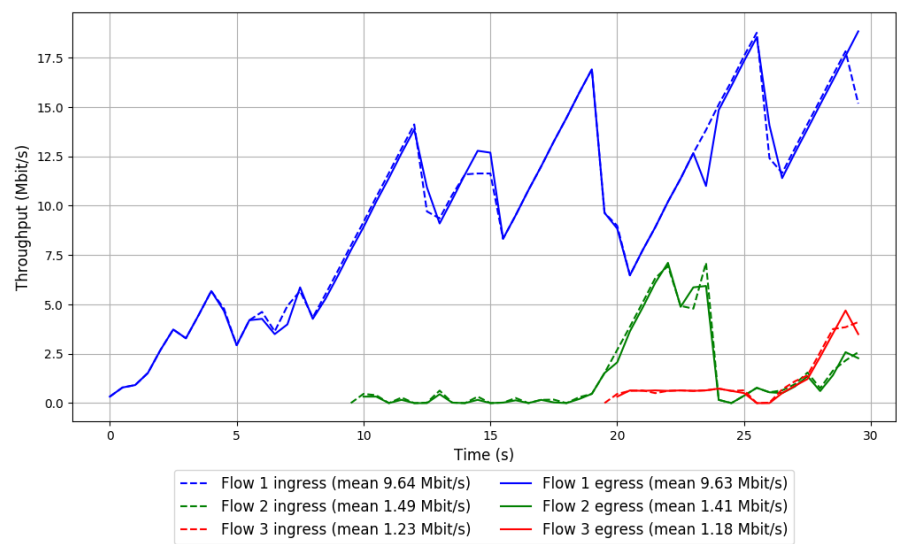
-- Flow 3:

Average throughput: 1.18 Mbit/s

95th percentile per-packet one-way delay: 50.713 ms

Loss rate: 4.16%

Run 6: Report of LEDBAT — Data Link

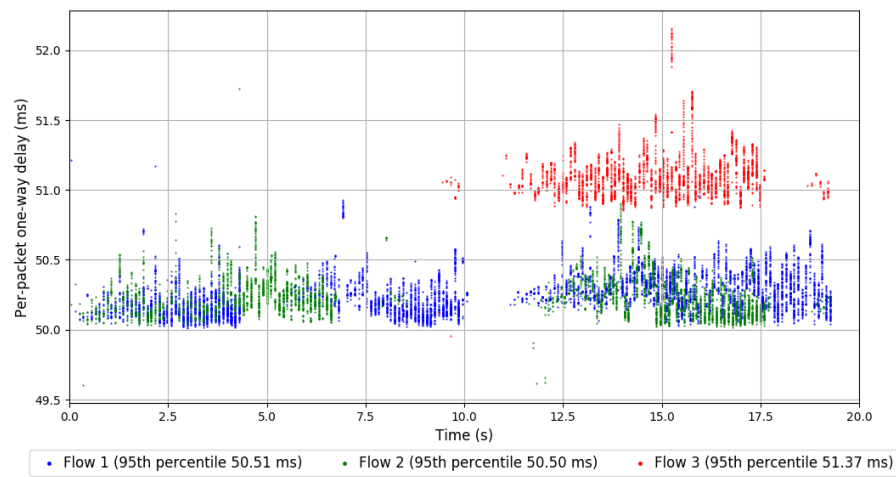
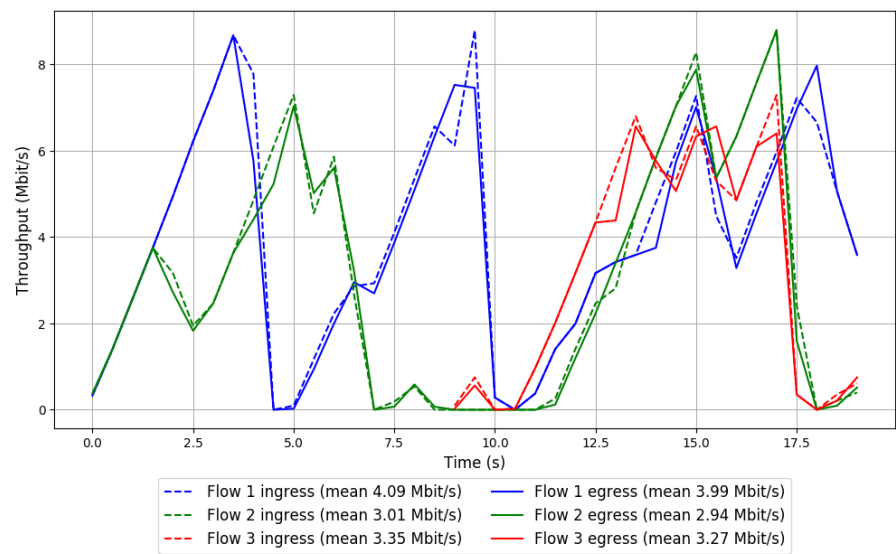


Run 7: Statistics of LEDBAT

Start at: 2017-08-12 09:57:09

End at: 2017-08-12 09:57:39

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2017-08-12 10:07:54

End at: 2017-08-12 10:08:24

Below is generated by plot.py at 2017-08-12 12:20:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 11.98 Mbit/s

95th percentile per-packet one-way delay: 51.161 ms

Loss rate: 0.86%

-- Flow 1:

Average throughput: 9.95 Mbit/s

95th percentile per-packet one-way delay: 51.205 ms

Loss rate: 0.62%

-- Flow 2:

Average throughput: 1.05 Mbit/s

95th percentile per-packet one-way delay: 50.762 ms

Loss rate: 2.26%

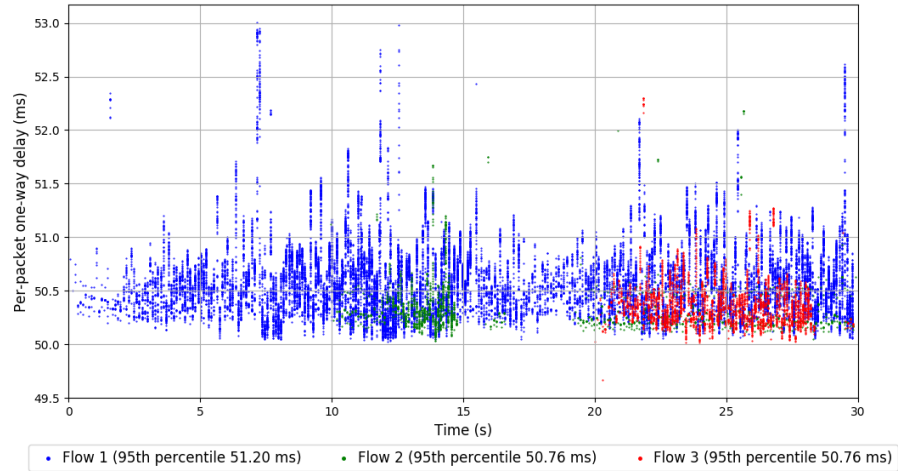
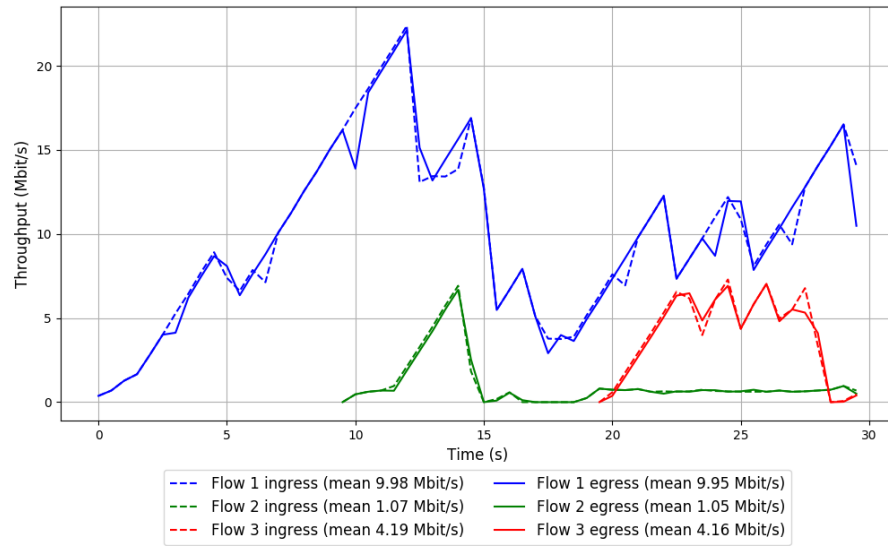
-- Flow 3:

Average throughput: 4.16 Mbit/s

95th percentile per-packet one-way delay: 50.758 ms

Loss rate: 1.92%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2017-08-12 10:19:04

End at: 2017-08-12 10:19:34

Below is generated by plot.py at 2017-08-12 12:20:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.03 Mbit/s

95th percentile per-packet one-way delay: 51.693 ms

Loss rate: 2.58%

-- Flow 1:

Average throughput: 3.22 Mbit/s

95th percentile per-packet one-way delay: 51.746 ms

Loss rate: 3.35%

-- Flow 2:

Average throughput: 3.96 Mbit/s

95th percentile per-packet one-way delay: 51.714 ms

Loss rate: 1.15%

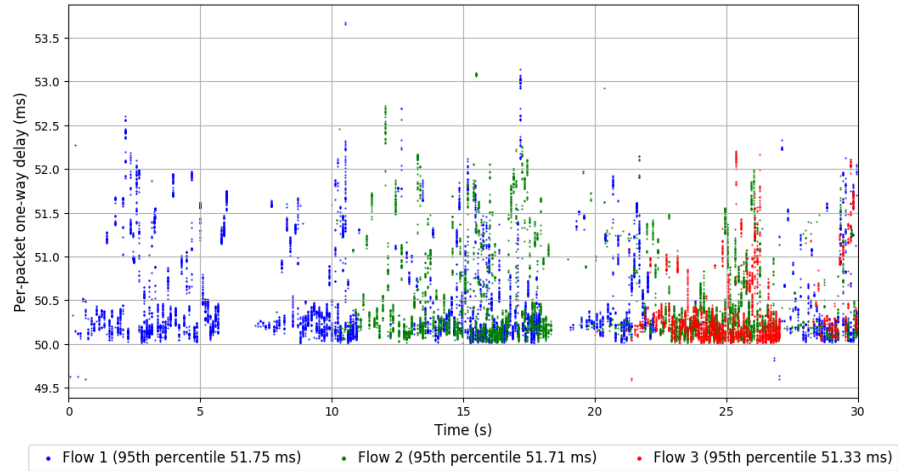
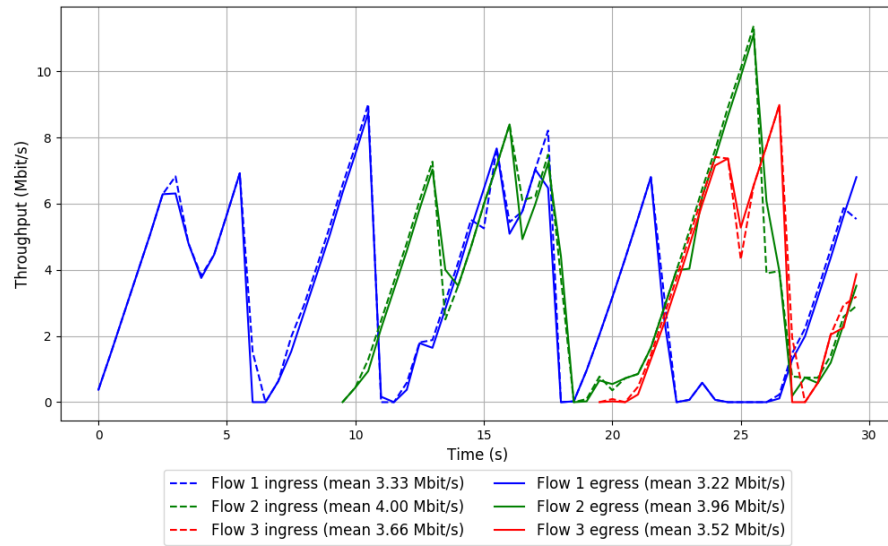
-- Flow 3:

Average throughput: 3.52 Mbit/s

95th percentile per-packet one-way delay: 51.330 ms

Loss rate: 3.65%

Run 9: Report of LEDBAT — Data Link

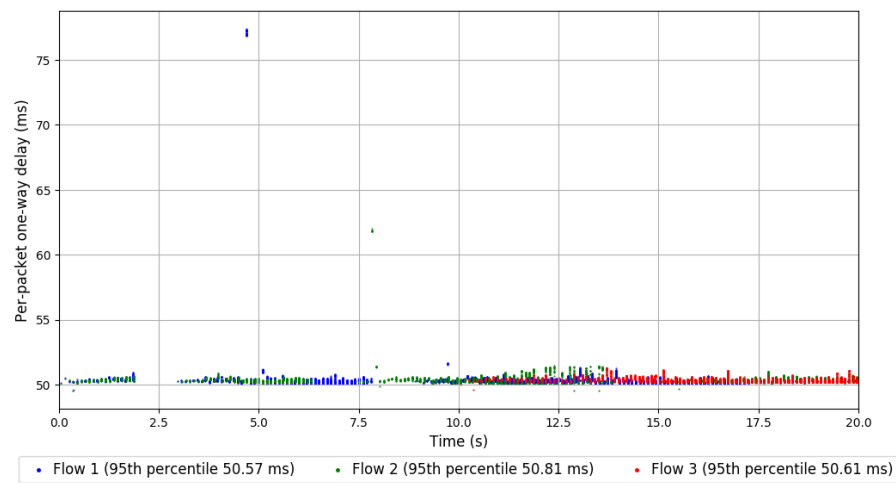
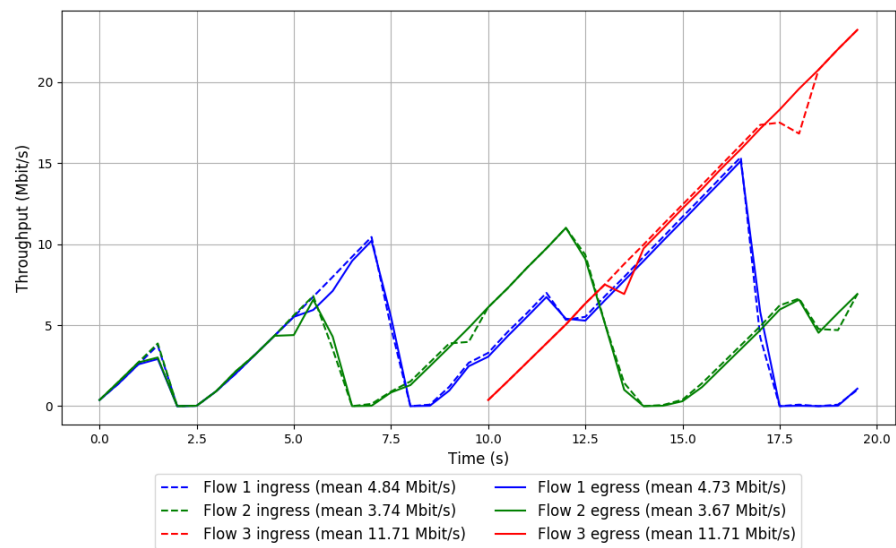


Run 10: Statistics of LEDBAT

Start at: 2017-08-12 10:30:12

End at: 2017-08-12 10:30:42

Run 10: Report of LEDBAT — Data Link

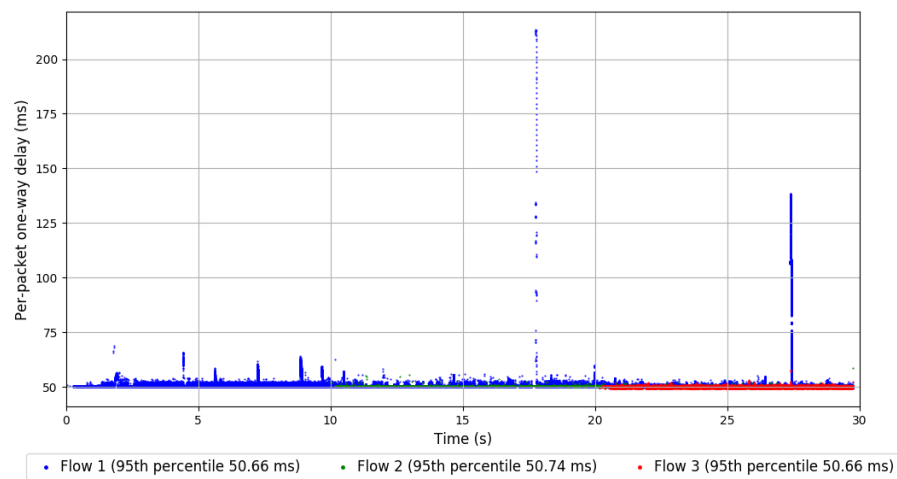
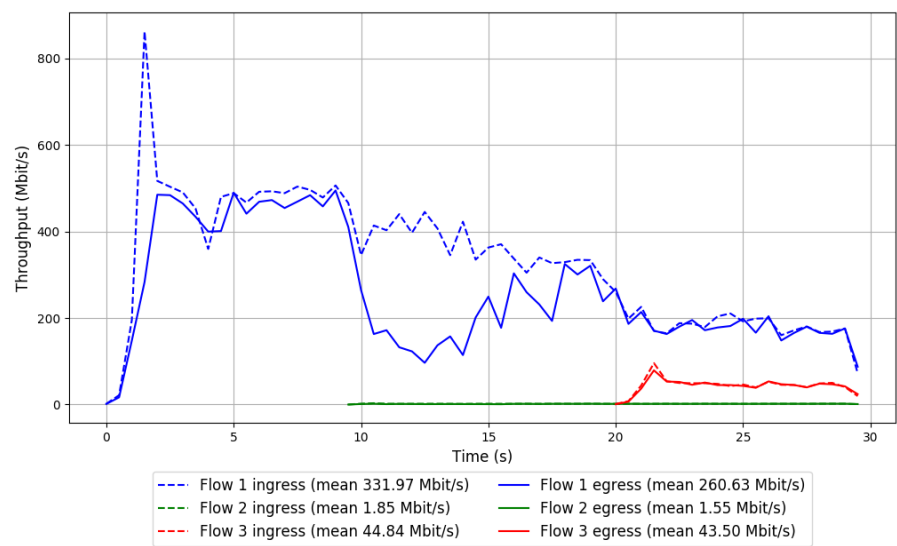


```
Run 1: Statistics of PCC

Start at: 2017-08-12 08:57:06
End at: 2017-08-12 08:57:36

# Below is generated by plot.py at 2017-08-12 12:21:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 275.77 Mbit/s
95th percentile per-packet one-way delay: 50.660 ms
Loss rate: 20.69%
-- Flow 1:
Average throughput: 260.63 Mbit/s
95th percentile per-packet one-way delay: 50.664 ms
Loss rate: 21.49%
-- Flow 2:
Average throughput: 1.55 Mbit/s
95th percentile per-packet one-way delay: 50.738 ms
Loss rate: 15.97%
-- Flow 3:
Average throughput: 43.50 Mbit/s
95th percentile per-packet one-way delay: 50.656 ms
Loss rate: 3.02%
```

Run 1: Report of PCC — Data Link

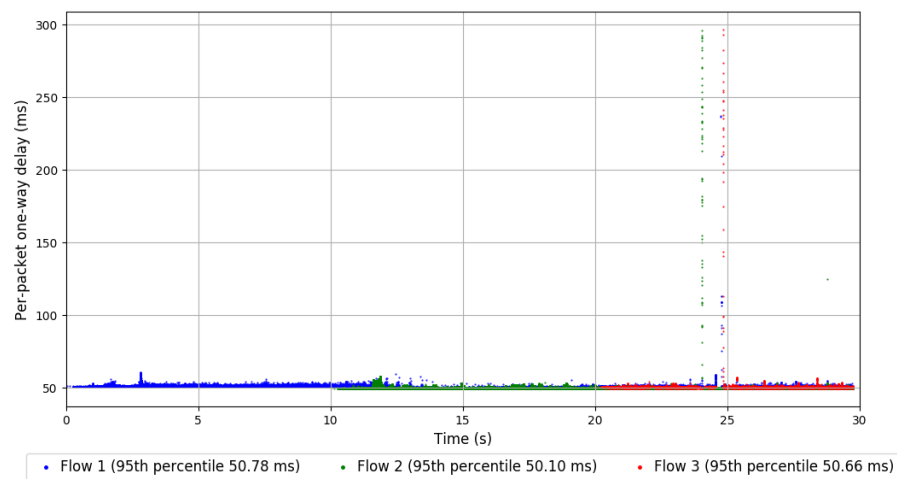
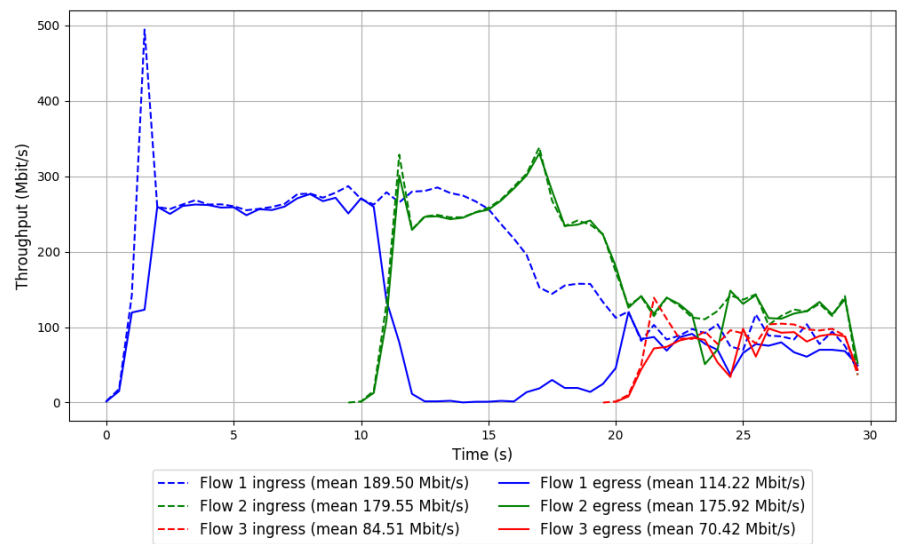


```
Run 2: Statistics of PCC

Start at: 2017-08-12 09:07:59
End at: 2017-08-12 09:08:29

# Below is generated by plot.py at 2017-08-12 12:21:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 254.03 Mbit/s
95th percentile per-packet one-way delay: 50.723 ms
Loss rate: 24.47%
-- Flow 1:
Average throughput: 114.22 Mbit/s
95th percentile per-packet one-way delay: 50.784 ms
Loss rate: 39.73%
-- Flow 2:
Average throughput: 175.92 Mbit/s
95th percentile per-packet one-way delay: 50.100 ms
Loss rate: 2.03%
-- Flow 3:
Average throughput: 70.42 Mbit/s
95th percentile per-packet one-way delay: 50.664 ms
Loss rate: 16.67%
```

Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2017-08-12 09:19:12

End at: 2017-08-12 09:19:42

Below is generated by plot.py at 2017-08-12 12:22:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 387.85 Mbit/s

95th percentile per-packet one-way delay: 151.135 ms

Loss rate: 6.41%

-- Flow 1:

Average throughput: 316.17 Mbit/s

95th percentile per-packet one-way delay: 152.372 ms

Loss rate: 7.36%

-- Flow 2:

Average throughput: 0.51 Mbit/s

95th percentile per-packet one-way delay: 51.123 ms

Loss rate: 70.18%

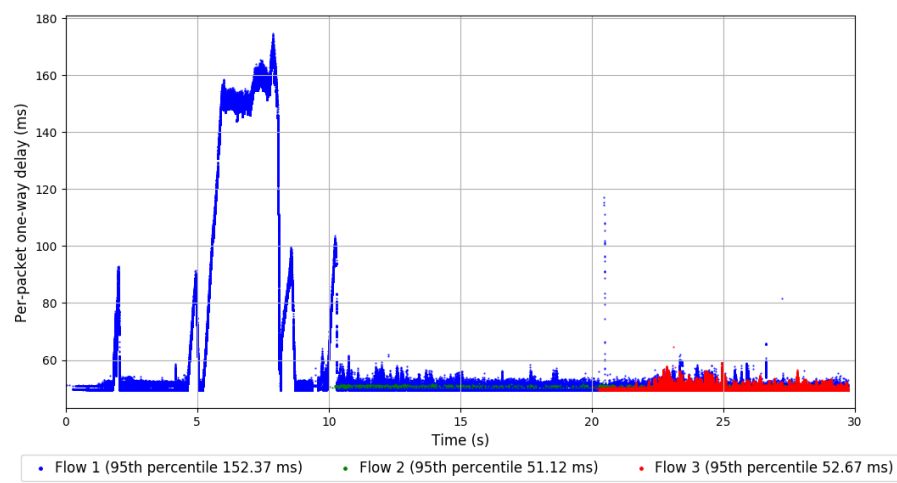
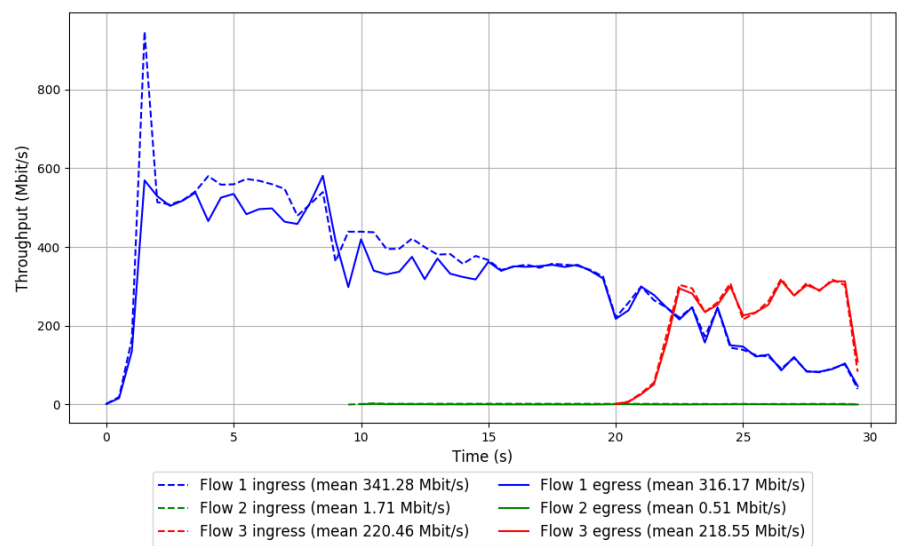
-- Flow 3:

Average throughput: 218.55 Mbit/s

95th percentile per-packet one-way delay: 52.671 ms

Loss rate: 0.87%

Run 3: Report of PCC — Data Link



Run 4: Statistics of PCC

Start at: 2017-08-12 09:30:24

End at: 2017-08-12 09:30:54

Below is generated by plot.py at 2017-08-12 12:22:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 430.15 Mbit/s

95th percentile per-packet one-way delay: 67.630 ms

Loss rate: 4.09%

-- Flow 1:

Average throughput: 286.61 Mbit/s

95th percentile per-packet one-way delay: 76.617 ms

Loss rate: 5.71%

-- Flow 2:

Average throughput: 178.05 Mbit/s

95th percentile per-packet one-way delay: 52.014 ms

Loss rate: 0.63%

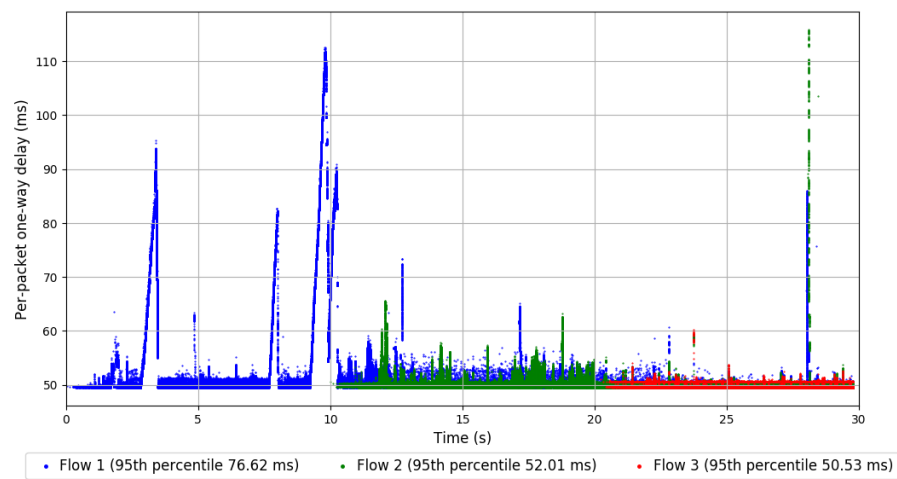
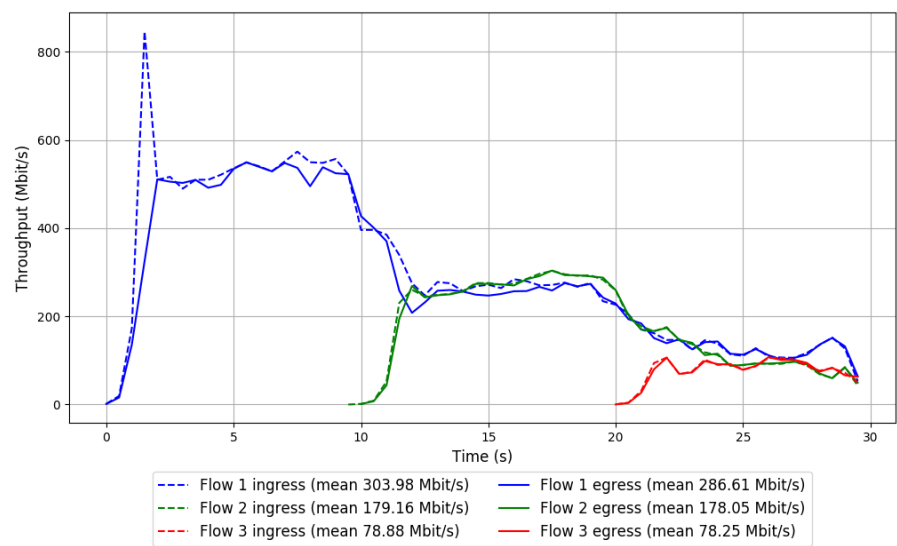
-- Flow 3:

Average throughput: 78.25 Mbit/s

95th percentile per-packet one-way delay: 50.527 ms

Loss rate: 0.95%

Run 4: Report of PCC — Data Link

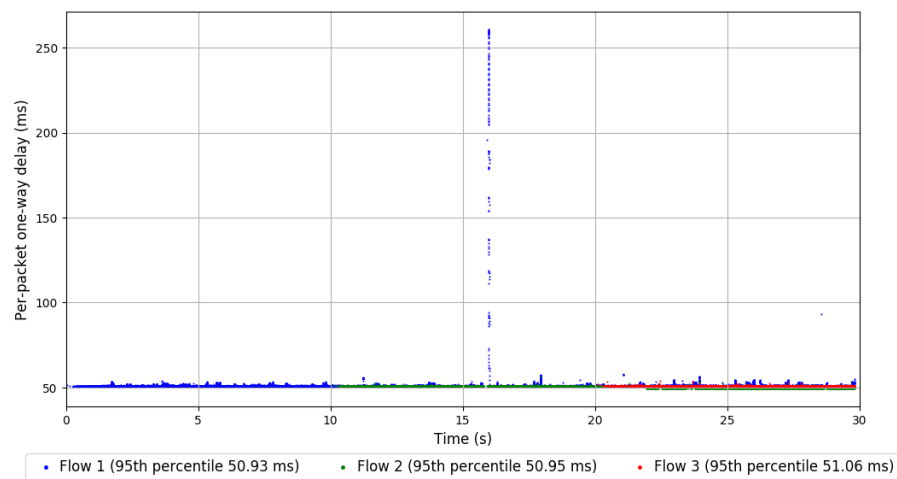
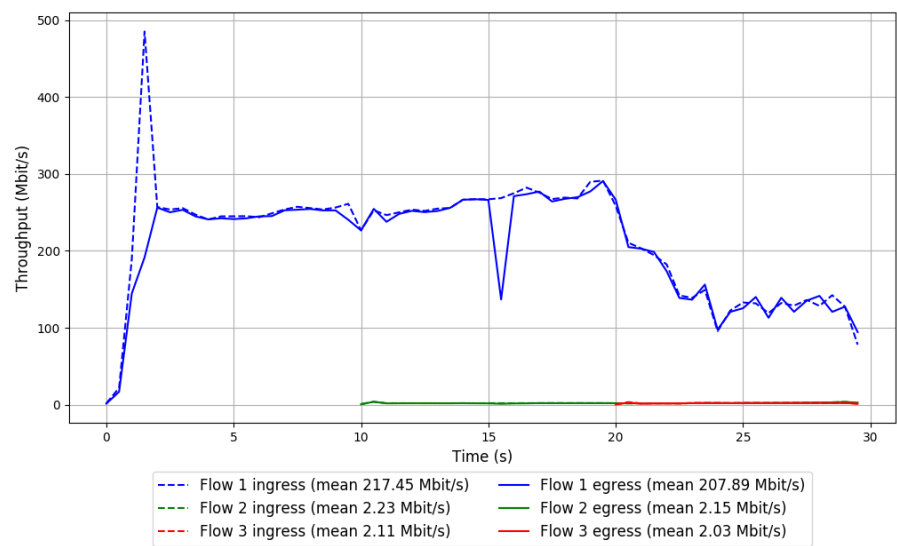


```
Run 5: Statistics of PCC

Start at: 2017-08-12 09:41:38
End at: 2017-08-12 09:42:08

# Below is generated by plot.py at 2017-08-12 12:22:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 209.98 Mbit/s
95th percentile per-packet one-way delay: 50.933 ms
Loss rate: 4.40%
-- Flow 1:
Average throughput: 207.89 Mbit/s
95th percentile per-packet one-way delay: 50.931 ms
Loss rate: 4.41%
-- Flow 2:
Average throughput: 2.15 Mbit/s
95th percentile per-packet one-way delay: 50.955 ms
Loss rate: 3.52%
-- Flow 3:
Average throughput: 2.03 Mbit/s
95th percentile per-packet one-way delay: 51.061 ms
Loss rate: 3.58%
```

Run 5: Report of PCC — Data Link



Run 6: Statistics of PCC

Start at: 2017-08-12 09:52:49

End at: 2017-08-12 09:53:19

Below is generated by plot.py at 2017-08-12 12:23:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 229.17 Mbit/s

95th percentile per-packet one-way delay: 52.205 ms

Loss rate: 21.74%

-- Flow 1:

Average throughput: 64.99 Mbit/s

95th percentile per-packet one-way delay: 50.959 ms

Loss rate: 47.95%

-- Flow 2:

Average throughput: 199.10 Mbit/s

95th percentile per-packet one-way delay: 53.291 ms

Loss rate: 2.61%

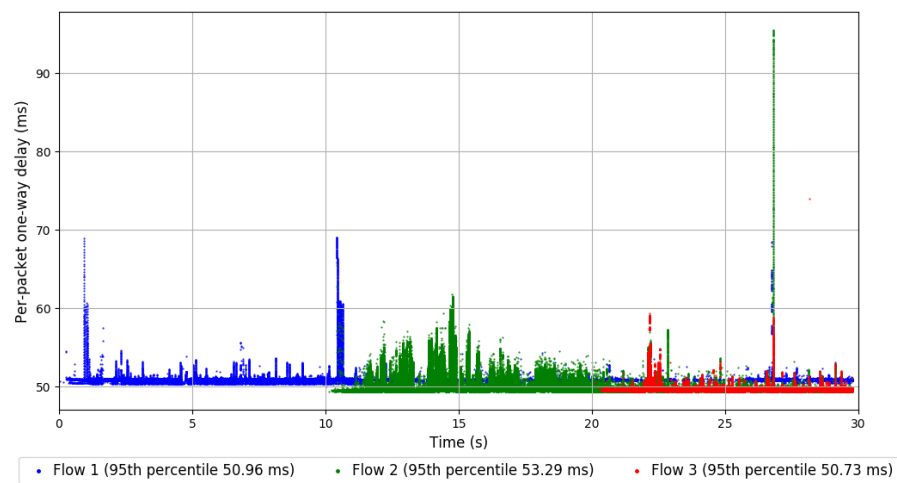
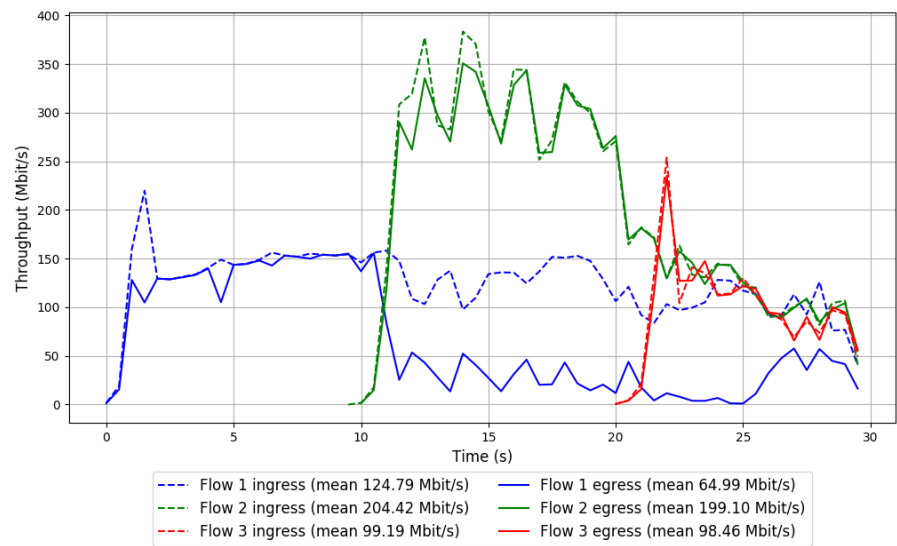
-- Flow 3:

Average throughput: 98.46 Mbit/s

95th percentile per-packet one-way delay: 50.733 ms

Loss rate: 0.75%

Run 6: Report of PCC — Data Link



Run 7: Statistics of PCC

Start at: 2017-08-12 10:03:37

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

Below is generated by plot.py at 2017-08-12 12:23:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 277.57 Mbit/s

95th percentile per-packet one-way delay: 50.999 ms

Loss rate: 13.84%

-- Flow 1:

Average throughput: 168.12 Mbit/s

95th percentile per-packet one-way delay: 50.993 ms

Loss rate: 17.73%

-- Flow 2:

Average throughput: 162.86 Mbit/s

95th percentile per-packet one-way delay: 50.949 ms

Loss rate: 7.02%

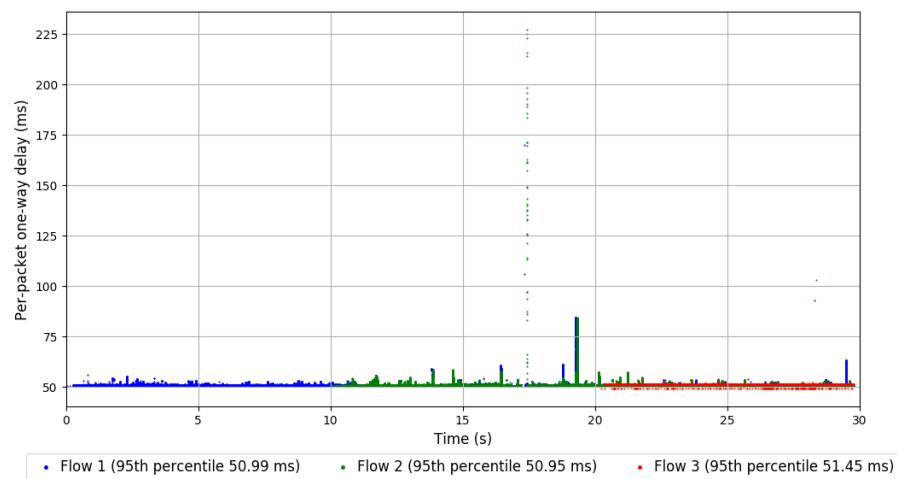
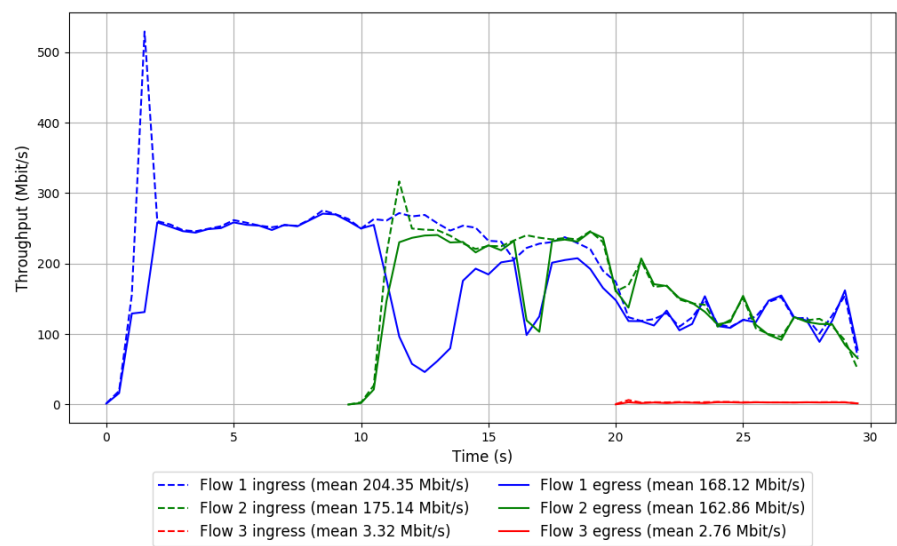
-- Flow 3:

Average throughput: 2.76 Mbit/s

95th percentile per-packet one-way delay: 51.455 ms

Loss rate: 16.63%

Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2017-08-12 10:14:49

End at: 2017-08-12 10:15:19

Below is generated by plot.py at 2017-08-12 12:24:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 270.09 Mbit/s

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

Loss rate: 6.52%

-- Flow 1:

Average throughput: 136.45 Mbit/s

95th percentile per-packet one-way delay: 50.296 ms

Loss rate: 8.27%

-- Flow 2:

Average throughput: 135.84 Mbit/s

95th percentile per-packet one-way delay: 51.223 ms

Loss rate: 3.97%

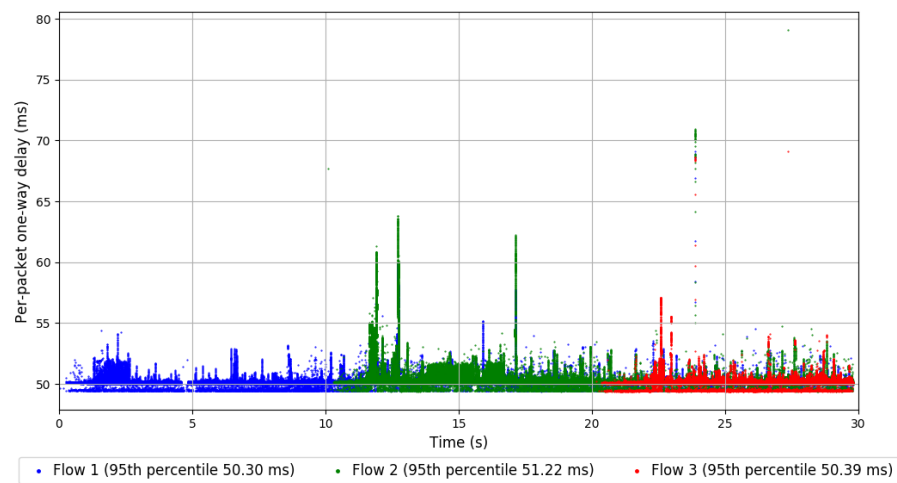
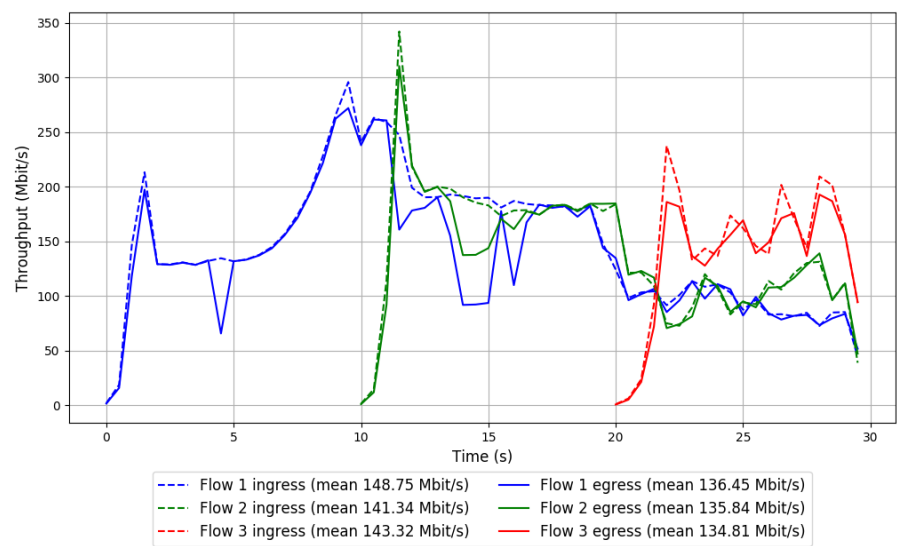
-- Flow 3:

Average throughput: 134.81 Mbit/s

95th percentile per-packet one-way delay: 50.388 ms

Loss rate: 6.02%

Run 8: Report of PCC — Data Link



Run 9: Statistics of PCC

Start at: 2017-08-12 10:25:53

End at: 2017-08-12 10:26:23

Below is generated by plot.py at 2017-08-12 12:24:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 298.56 Mbit/s

95th percentile per-packet one-way delay: 50.414 ms

Loss rate: 4.03%

-- Flow 1:

Average throughput: 219.99 Mbit/s

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

Loss rate: 3.34%

-- Flow 2:

Average throughput: 53.50 Mbit/s

95th percentile per-packet one-way delay: 50.230 ms

Loss rate: 2.56%

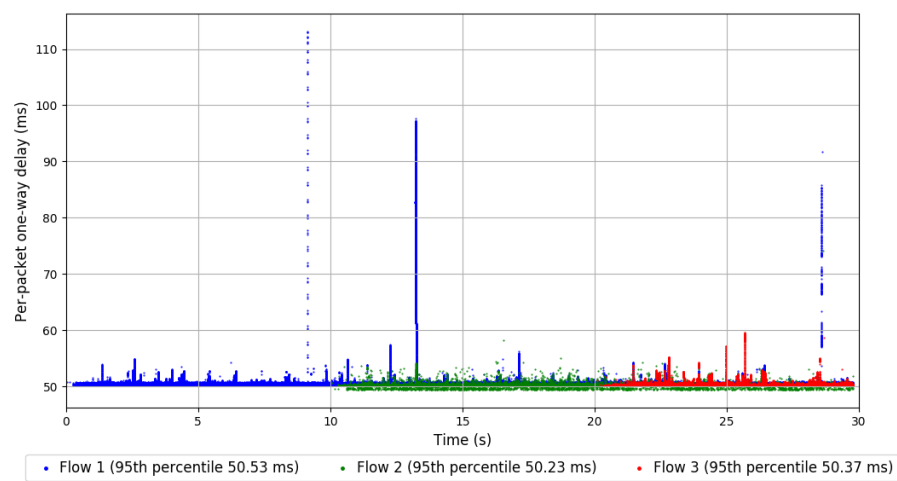
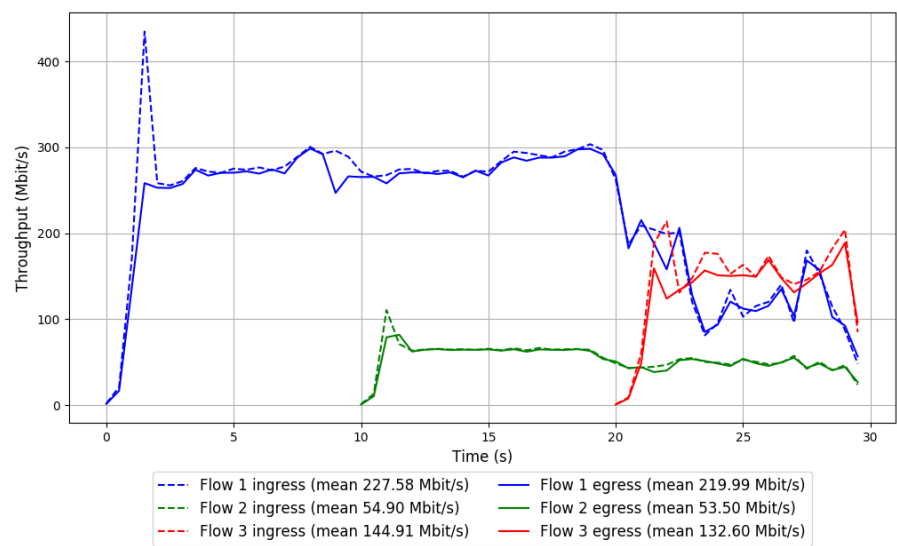
-- Flow 3:

Average throughput: 132.60 Mbit/s

95th percentile per-packet one-way delay: 50.371 ms

Loss rate: 8.51%

Run 9: Report of PCC — Data Link

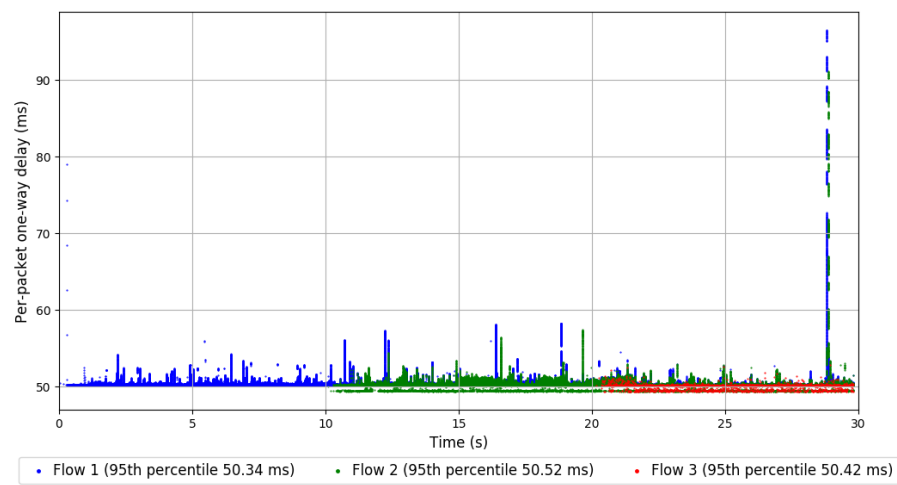
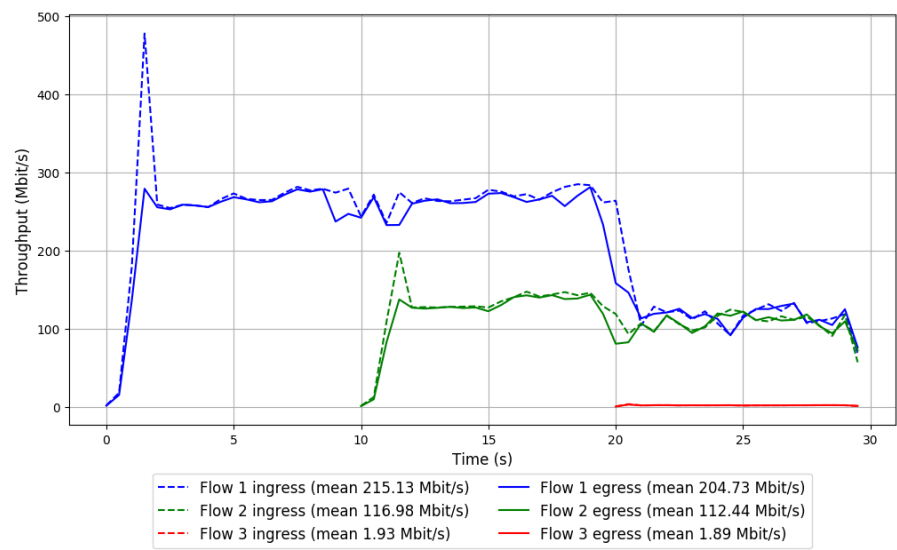


```
Run 10: Statistics of PCC

Start at: 2017-08-12 10:37:19
End at: 2017-08-12 10:37:49

# Below is generated by plot.py at 2017-08-12 12:25:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 279.84 Mbit/s
95th percentile per-packet one-way delay: 50.376 ms
Loss rate: 4.58%
-- Flow 1:
Average throughput: 204.73 Mbit/s
95th percentile per-packet one-way delay: 50.339 ms
Loss rate: 4.84%
-- Flow 2:
Average throughput: 112.44 Mbit/s
95th percentile per-packet one-way delay: 50.520 ms
Loss rate: 3.88%
-- Flow 3:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 50.423 ms
Loss rate: 1.81%
```

Run 10: Report of PCC — Data Link

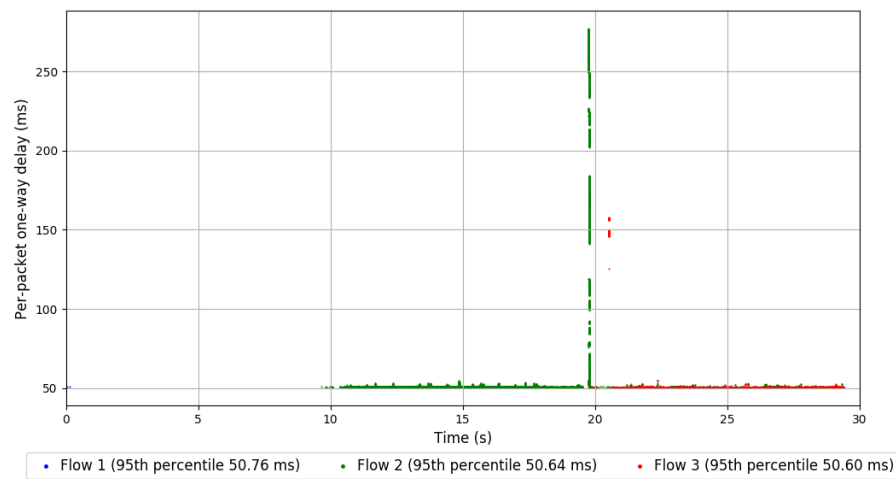
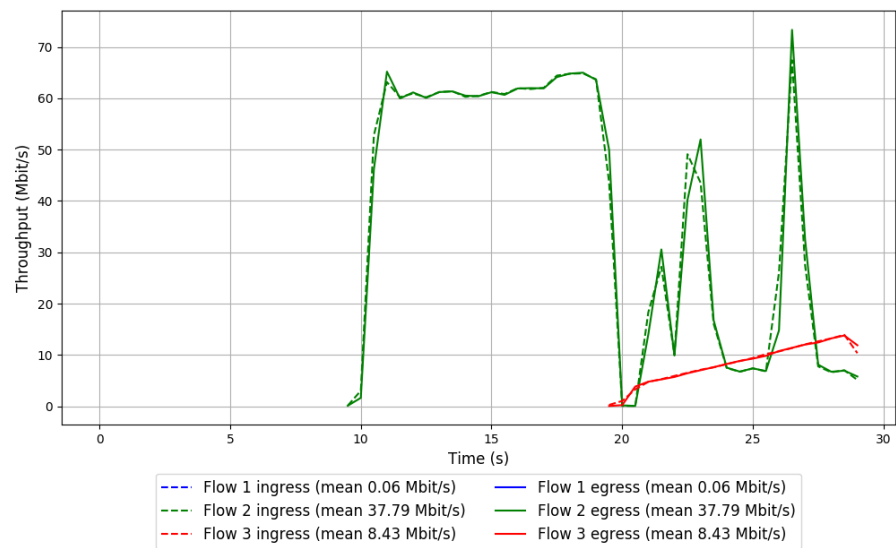


```
Run 1: Statistics of QUIC Cubic

Start at: 2017-08-12 08:48:03
End at: 2017-08-12 08:48:33

# Below is generated by plot.py at 2017-08-12 12:25:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 28.21 Mbit/s
95th percentile per-packet one-way delay: 50.633 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 50.761 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 37.79 Mbit/s
95th percentile per-packet one-way delay: 50.636 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 8.43 Mbit/s
95th percentile per-packet one-way delay: 50.597 ms
Loss rate: 0.00%
```

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2017-08-12 08:59:23

End at: 2017-08-12 08:59:53

Below is generated by plot.py at 2017-08-12 12:25:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 34.32 Mbit/s

95th percentile per-packet one-way delay: 50.543 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.569 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 41.61 Mbit/s

95th percentile per-packet one-way delay: 50.550 ms

Loss rate: 0.00%

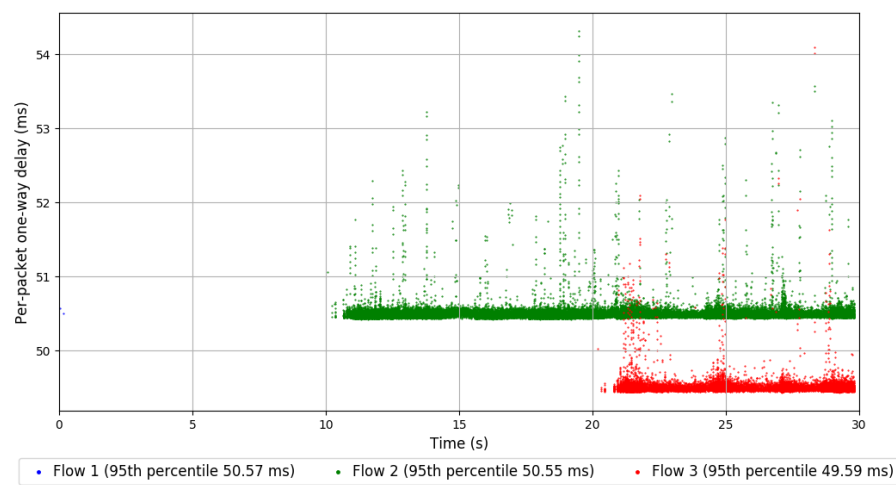
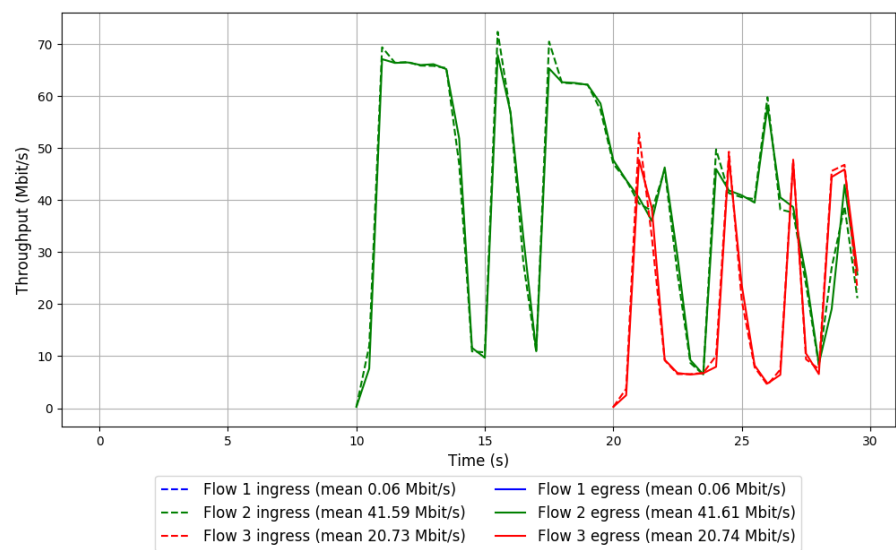
-- Flow 3:

Average throughput: 20.74 Mbit/s

95th percentile per-packet one-way delay: 49.585 ms

Loss rate: 0.01%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2017-08-12 09:10:11

End at: 2017-08-12 09:10:41

Below is generated by plot.py at 2017-08-12 12:25:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 30.47 Mbit/s

95th percentile per-packet one-way delay: 50.783 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 51.342 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 35.57 Mbit/s

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

Loss rate: 0.00%

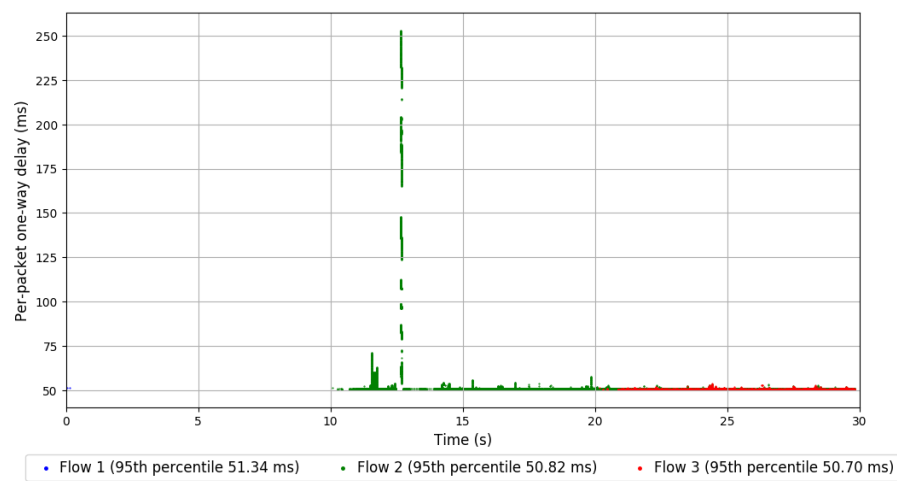
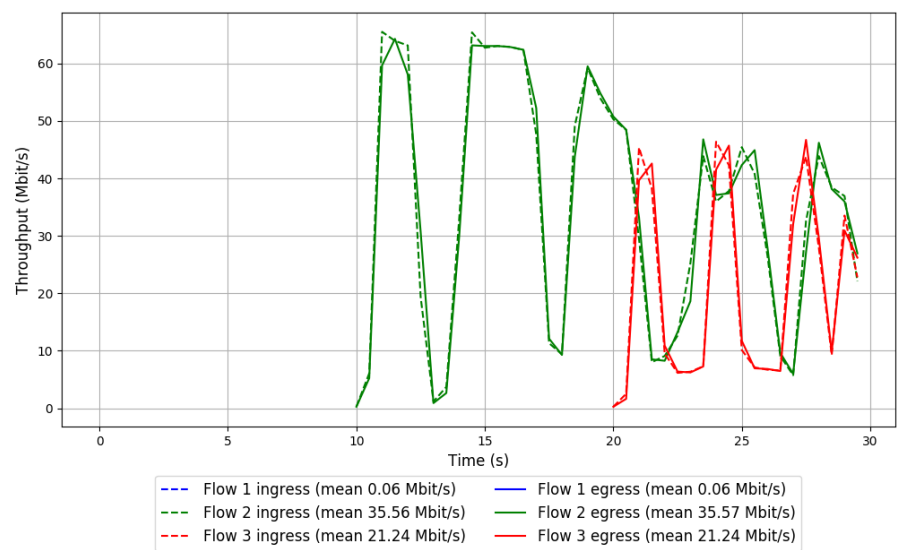
-- Flow 3:

Average throughput: 21.24 Mbit/s

95th percentile per-packet one-way delay: 50.704 ms

Loss rate: 0.00%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2017-08-12 09:21:31

End at: 2017-08-12 09:22:01

Below is generated by plot.py at 2017-08-12 12:25:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 33.49 Mbit/s

95th percentile per-packet one-way delay: 50.962 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.922 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 32.47 Mbit/s

95th percentile per-packet one-way delay: 50.254 ms

Loss rate: 0.00%

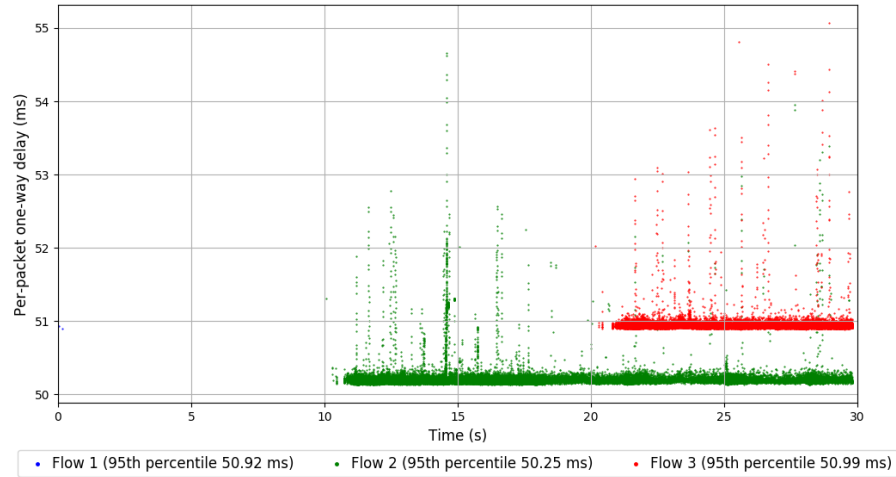
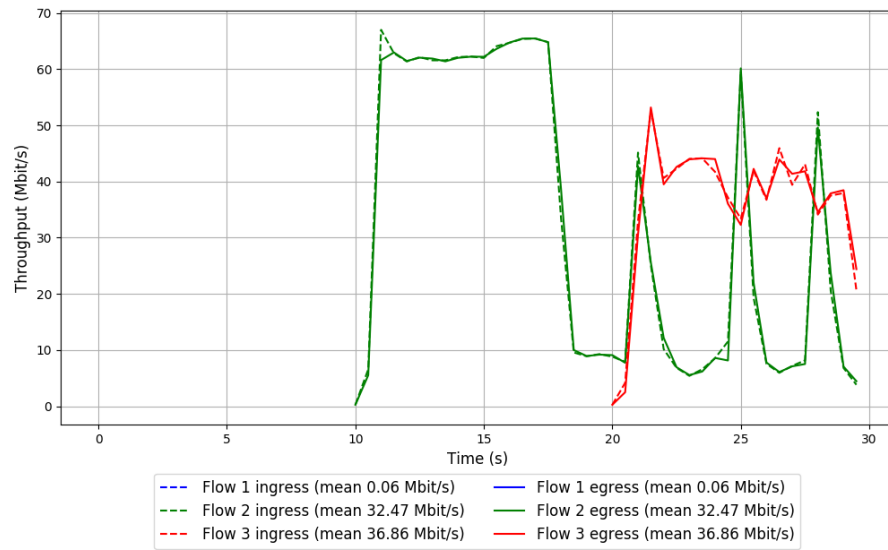
-- Flow 3:

Average throughput: 36.86 Mbit/s

95th percentile per-packet one-way delay: 50.993 ms

Loss rate: 0.00%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2017-08-12 09:32:48

End at: 2017-08-12 09:33:18

Below is generated by plot.py at 2017-08-12 12:25:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 31.42 Mbit/s

95th percentile per-packet one-way delay: 54.611 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 49.612 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 39.98 Mbit/s

95th percentile per-packet one-way delay: 54.707 ms

Loss rate: 0.00%

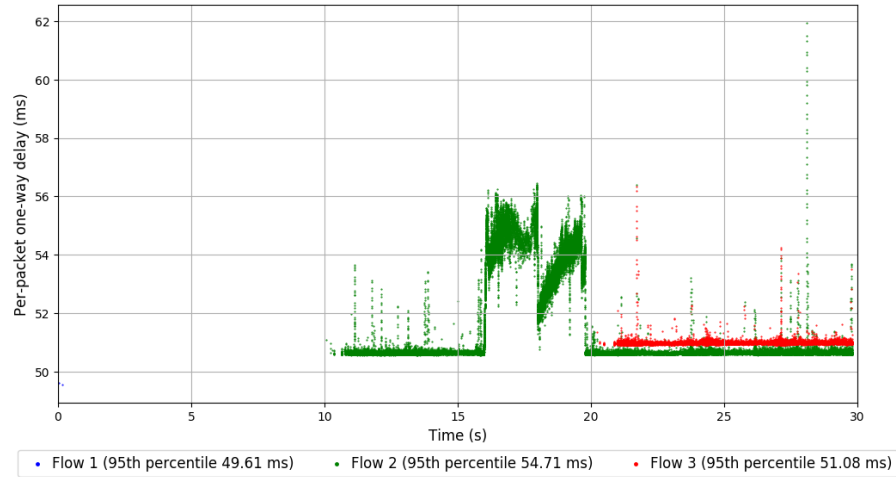
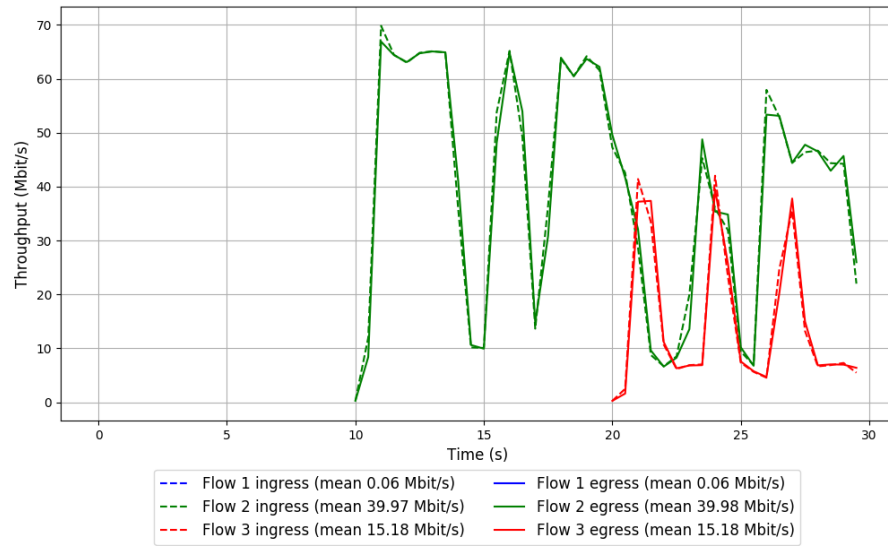
-- Flow 3:

Average throughput: 15.18 Mbit/s

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

Loss rate: 0.00%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2017-08-12 09:43:47

End at: 2017-08-12 09:44:17

Below is generated by plot.py at 2017-08-12 12:25:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 38.57 Mbit/s

95th percentile per-packet one-way delay: 51.020 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.562 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 44.91 Mbit/s

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

Loss rate: 0.00%

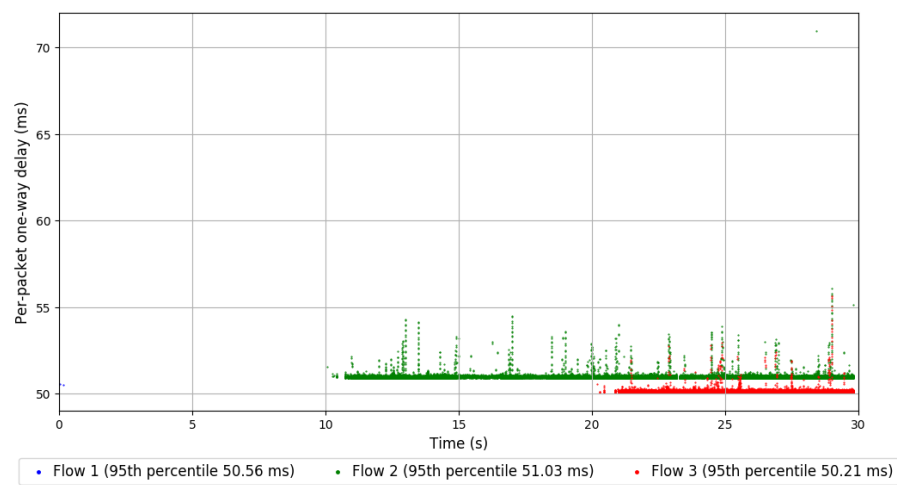
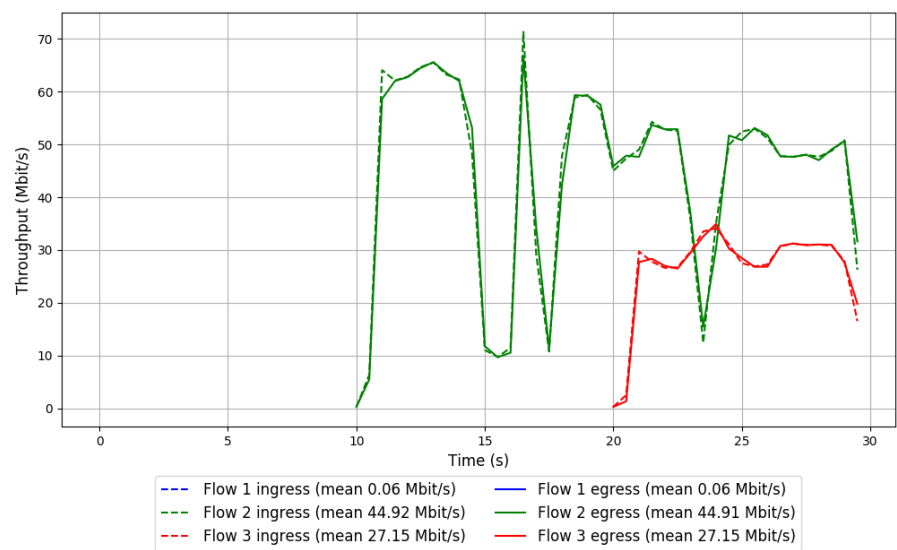
-- Flow 3:

Average throughput: 27.15 Mbit/s

95th percentile per-packet one-way delay: 50.208 ms

Loss rate: 0.00%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2017-08-12 09:55:04

End at: 2017-08-12 09:55:34

Below is generated by plot.py at 2017-08-12 12:25:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 36.65 Mbit/s

95th percentile per-packet one-way delay: 50.934 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 51.413 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 38.03 Mbit/s

95th percentile per-packet one-way delay: 50.947 ms

Loss rate: 0.00%

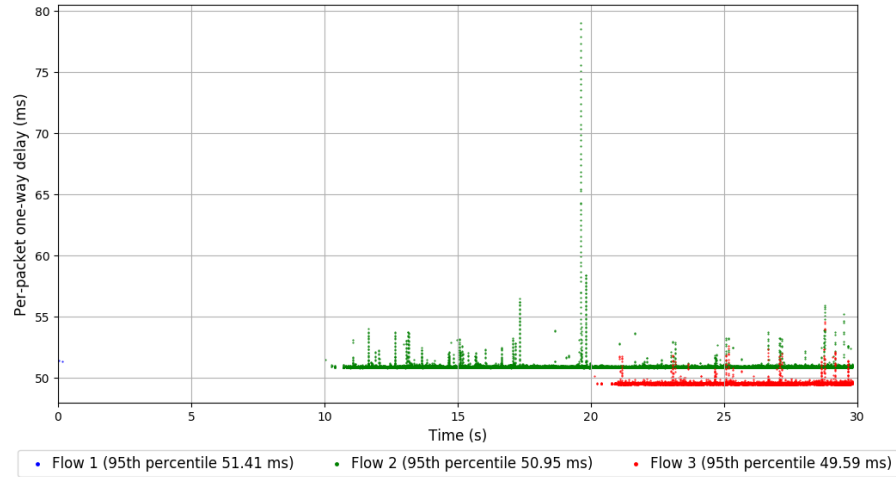
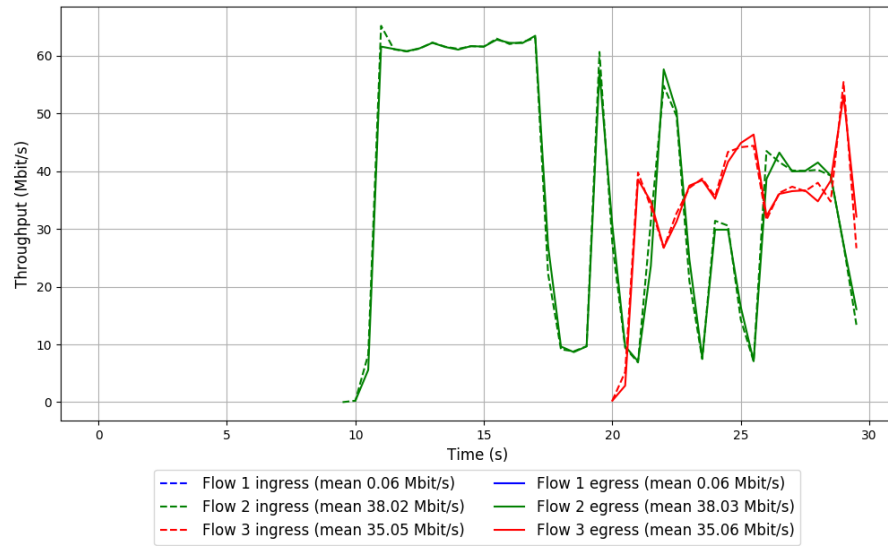
-- Flow 3:

Average throughput: 35.06 Mbit/s

95th percentile per-packet one-way delay: 49.590 ms

Loss rate: 0.00%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2017-08-12 10:05:50

End at: 2017-08-12 10:06:20

Below is generated by plot.py at 2017-08-12 12:25:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 36.95 Mbit/s

95th percentile per-packet one-way delay: 50.165 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 49.549 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 36.80 Mbit/s

95th percentile per-packet one-way delay: 50.181 ms

Loss rate: 0.00%

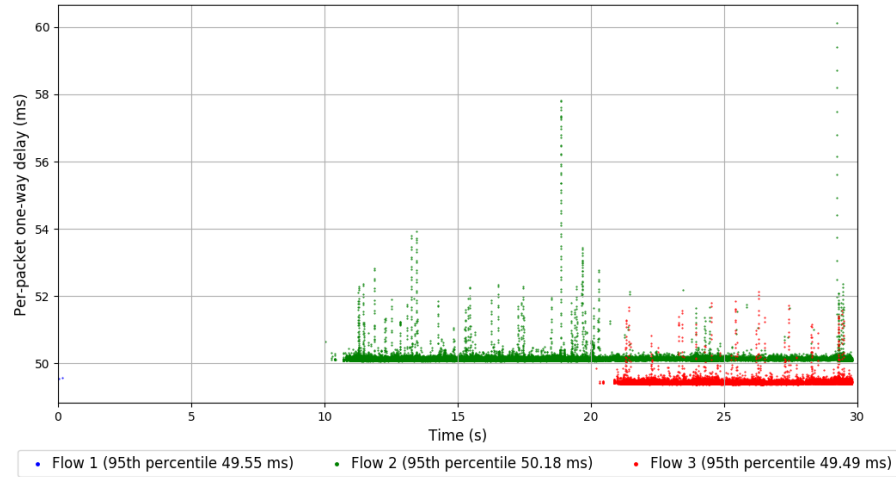
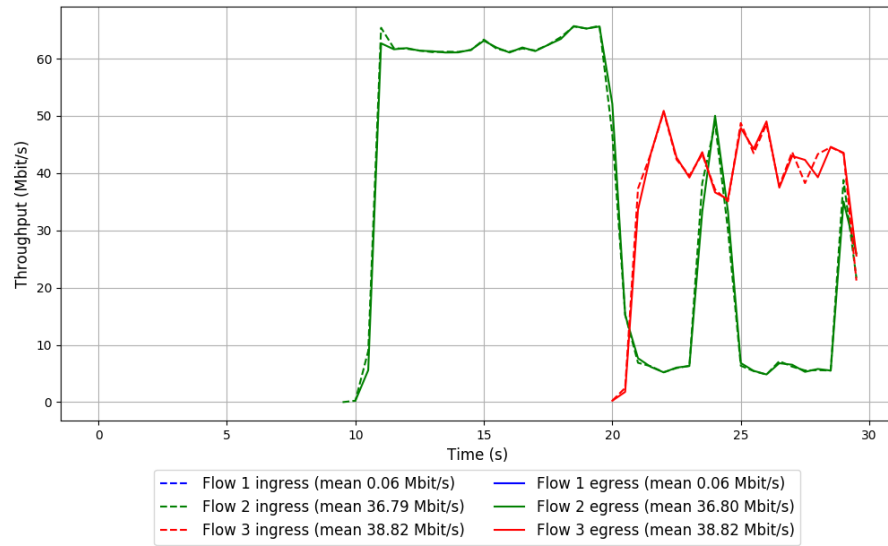
-- Flow 3:

Average throughput: 38.82 Mbit/s

95th percentile per-packet one-way delay: 49.488 ms

Loss rate: 0.00%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2017-08-12 10:17:01

End at: 2017-08-12 10:17:31

Below is generated by plot.py at 2017-08-12 12:25:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 36.55 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.622 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 38.82 Mbit/s

95th percentile per-packet one-way delay: 51.380 ms

Loss rate: 0.00%

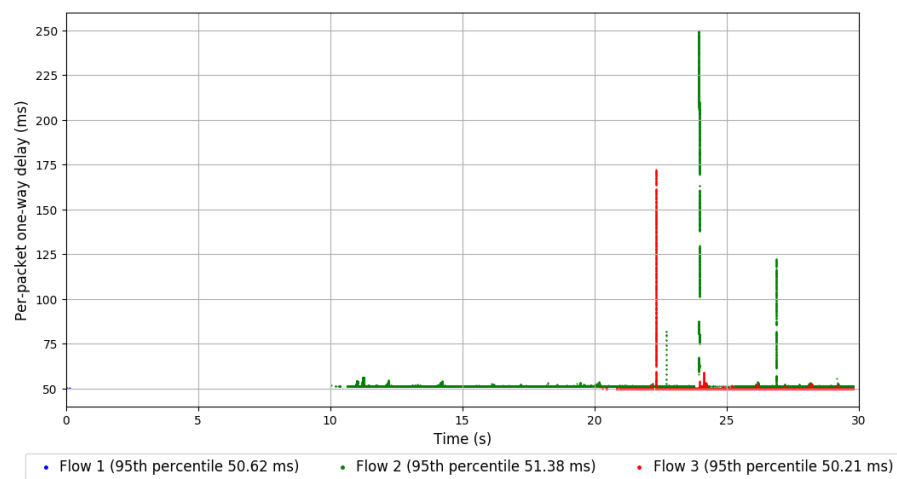
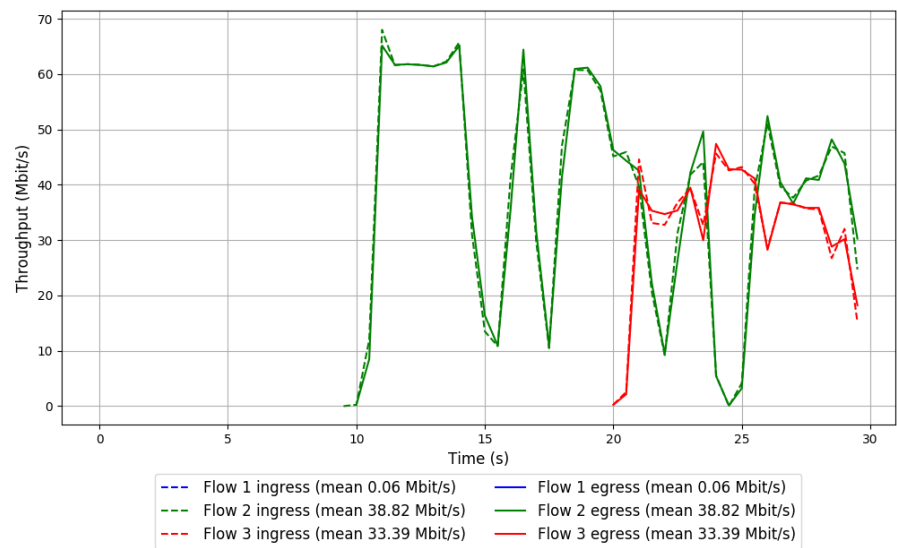
-- Flow 3:

Average throughput: 33.39 Mbit/s

95th percentile per-packet one-way delay: 50.213 ms

Loss rate: 0.00%

Run 9: Report of QUIC Cubic — Data Link

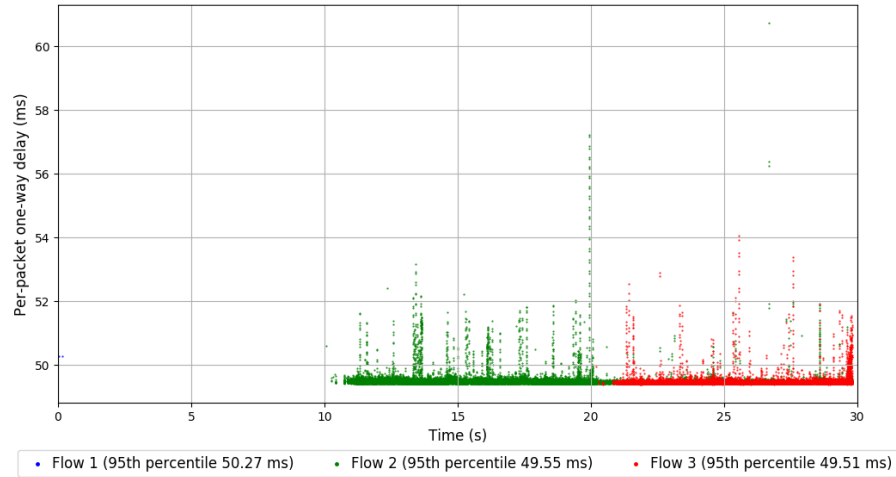
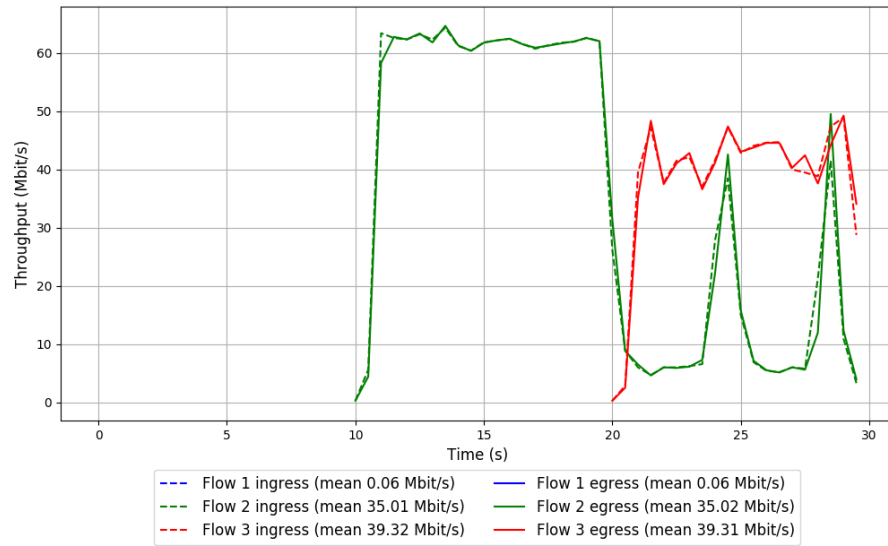


```
Run 10: Statistics of QUIC Cubic

Start at: 2017-08-12 10:28:08
End at: 2017-08-12 10:28:38

# Below is generated by plot.py at 2017-08-12 12:25:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 35.93 Mbit/s
95th percentile per-packet one-way delay: 49.542 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 50.274 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 35.02 Mbit/s
95th percentile per-packet one-way delay: 49.551 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 39.31 Mbit/s
95th percentile per-packet one-way delay: 49.513 ms
Loss rate: 0.00%
```


Run 10: Report of QUIC Cubic — Data Link

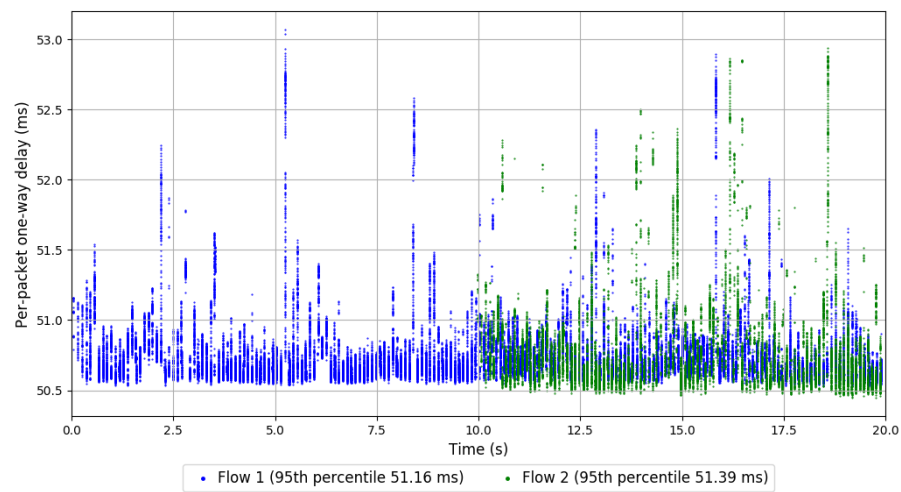
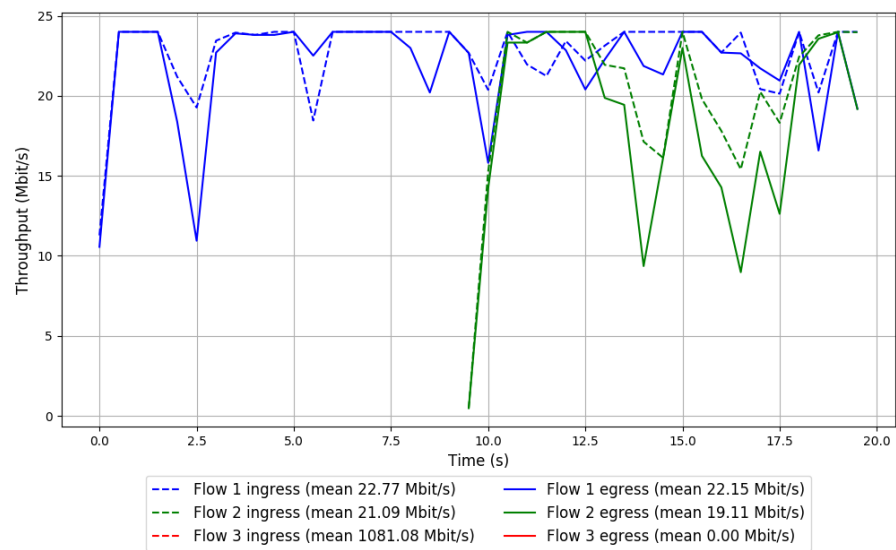


Run 1: Statistics of Saturator

Start at: 2017-08-12 08:53:04

End at: 2017-08-12 08:53:34

Run 1: Report of Saturator — Data Link



Run 2: Statistics of Saturator

Start at: 2017-08-12 09:04:19

End at: 2017-08-12 09:04:49

Below is generated by plot.py at 2017-08-12 12:25:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 14.15 Mbit/s

95th percentile per-packet one-way delay: 50.903 ms

Loss rate: 24.20%

-- Flow 1:

Average throughput: 8.34 Mbit/s

95th percentile per-packet one-way delay: 50.889 ms

Loss rate: 41.20%

-- Flow 2:

Average throughput: 2.91 Mbit/s

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

Loss rate: 56.64%

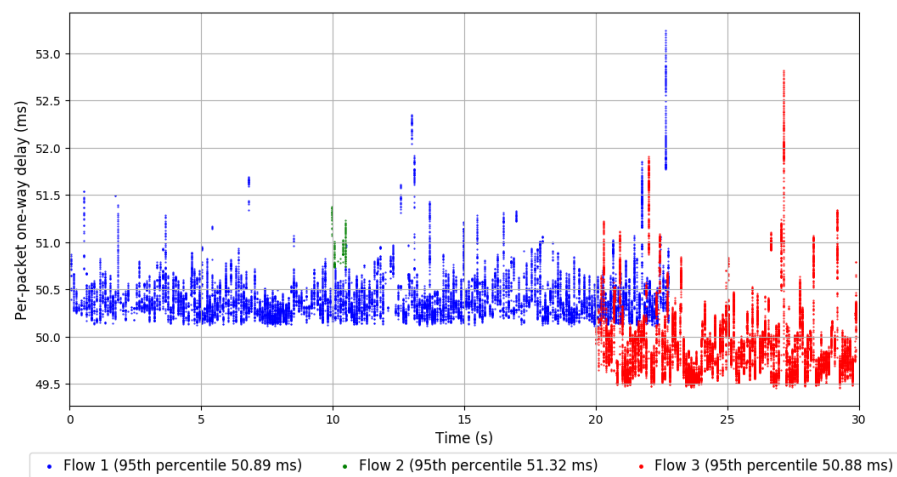
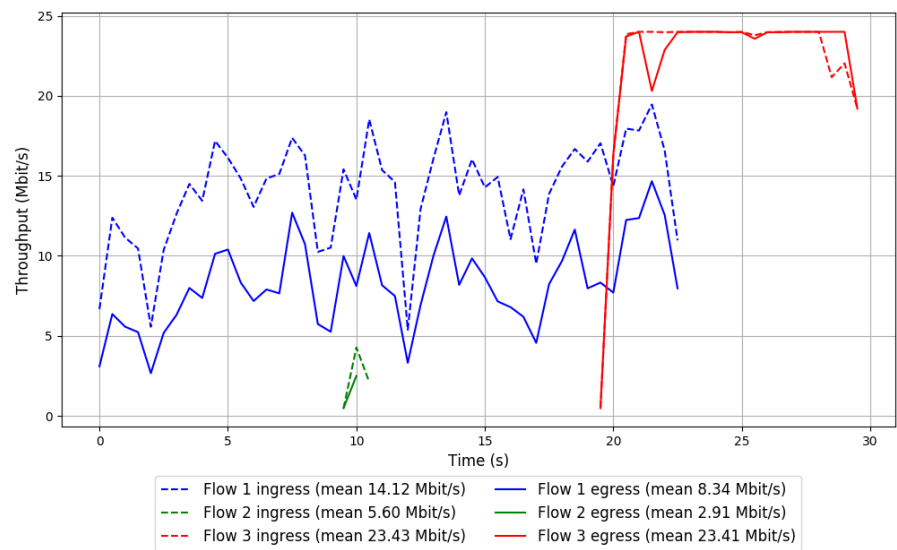
-- Flow 3:

Average throughput: 23.41 Mbit/s

95th percentile per-packet one-way delay: 50.882 ms

Loss rate: 0.09%

Run 2: Report of Saturator — Data Link



Run 3: Statistics of Saturator

Start at: 2017-08-12 09:15:08

End at: 2017-08-12 09:15:38

Below is generated by plot.py at 2017-08-12 12:25:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 23.20 Mbit/s

95th percentile per-packet one-way delay: 50.668 ms

Loss rate: 1.44%

-- Flow 1:

Average throughput: 23.16 Mbit/s

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

Loss rate: 1.39%

-- Flow 2:

Average throughput: 23.34 Mbit/s

95th percentile per-packet one-way delay: 50.816 ms

Loss rate: 1.98%

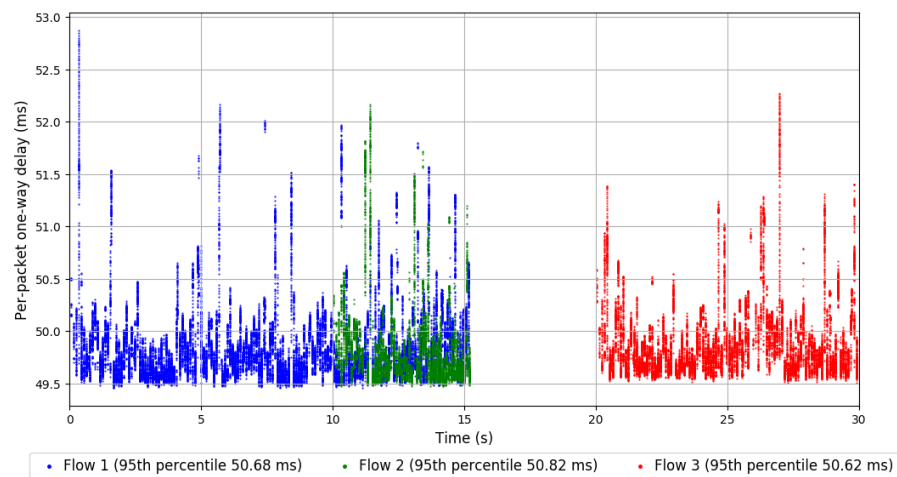
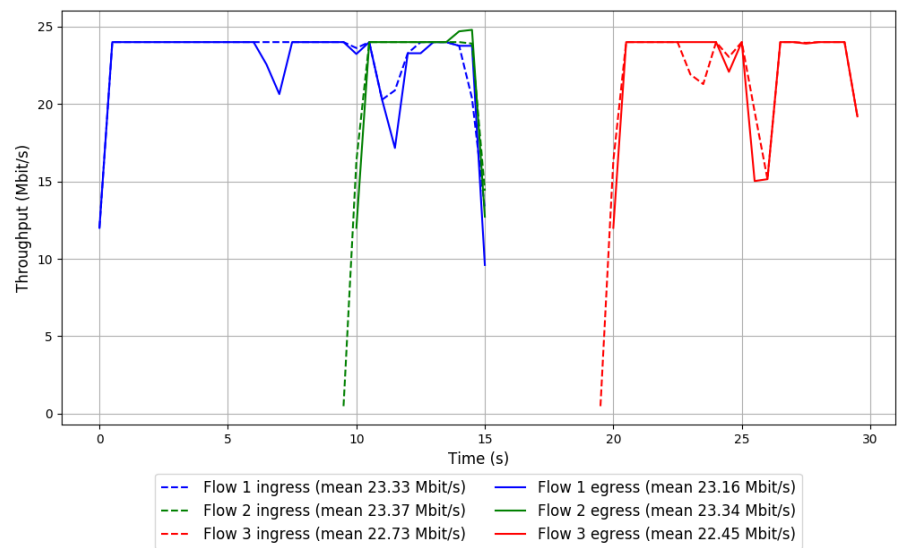
-- Flow 3:

Average throughput: 22.45 Mbit/s

95th percentile per-packet one-way delay: 50.623 ms

Loss rate: 1.22%

Run 3: Report of Saturator — Data Link

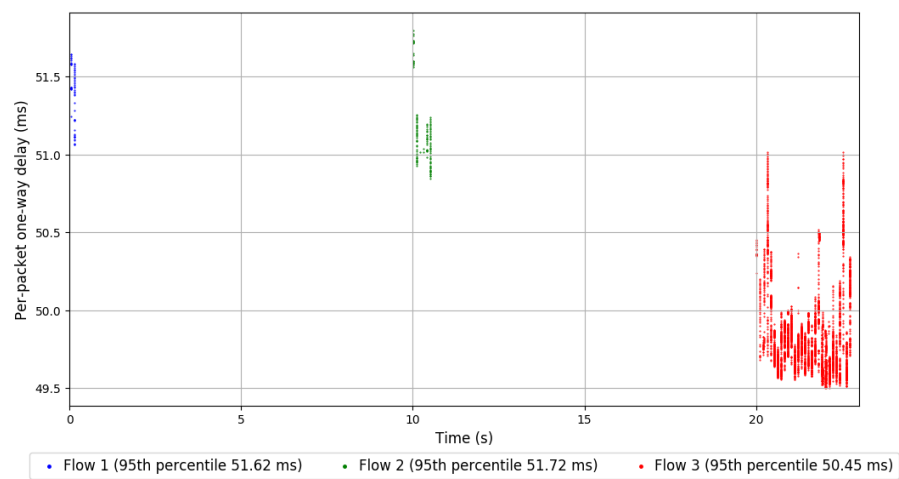
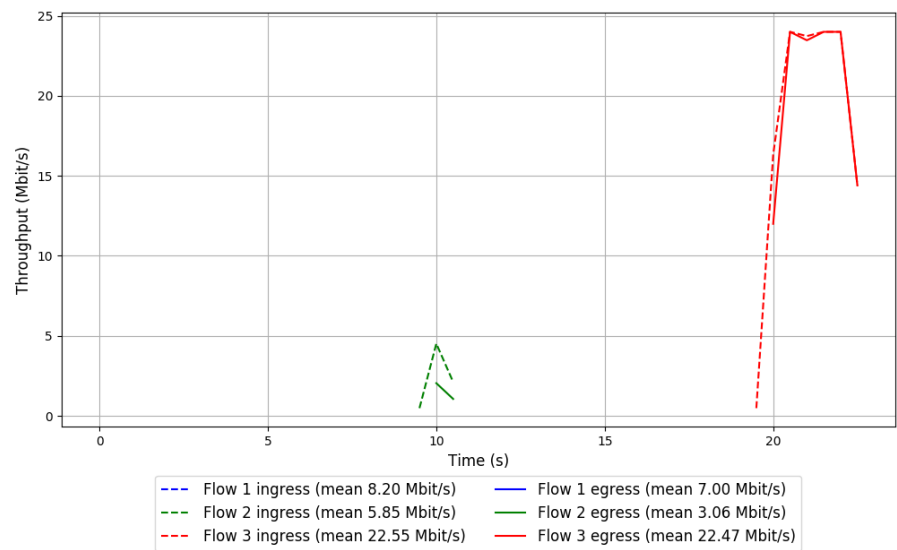


Run 4: Statistics of Saturator

Start at: 2017-08-12 09:26:31

End at: 2017-08-12 09:27:01

Run 4: Report of Saturator — Data Link



Run 5: Statistics of Saturator

Start at: 2017-08-12 09:37:48

End at: 2017-08-12 09:38:18

Below is generated by plot.py at 2017-08-12 12:25:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 27.23 Mbit/s

95th percentile per-packet one-way delay: 50.570 ms

Loss rate: 1.04%

-- Flow 1:

Average throughput: 22.97 Mbit/s

95th percentile per-packet one-way delay: 50.375 ms

Loss rate: 2.77%

-- Flow 2:

Average throughput: 22.99 Mbit/s

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

Loss rate: 1.00%

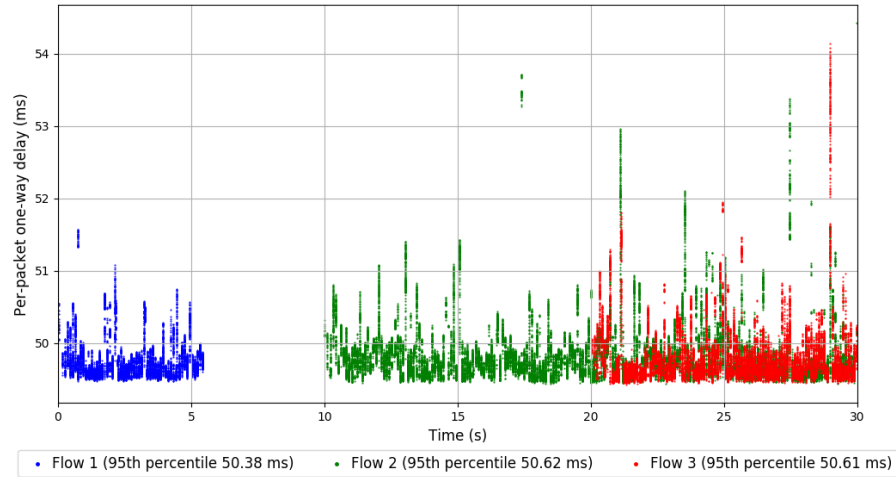
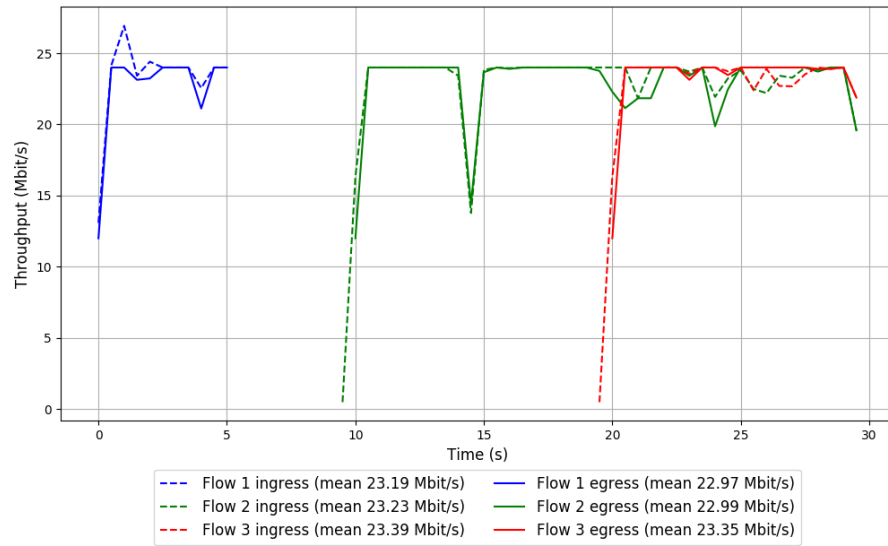
-- Flow 3:

Average throughput: 23.35 Mbit/s

95th percentile per-packet one-way delay: 50.613 ms

Loss rate: 0.17%

Run 5: Report of Saturator — Data Link



Run 6: Statistics of Saturator

Start at: 2017-08-12 09:48:54

End at: 2017-08-12 09:49:24

Below is generated by plot.py at 2017-08-12 12:25:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 23.40 Mbit/s

95th percentile per-packet one-way delay: 50.534 ms

Loss rate: 0.69%

-- Flow 1:

Average throughput: 23.35 Mbit/s

95th percentile per-packet one-way delay: 50.515 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 6.92 Mbit/s

95th percentile per-packet one-way delay: 52.283 ms

Loss rate: 57.14%

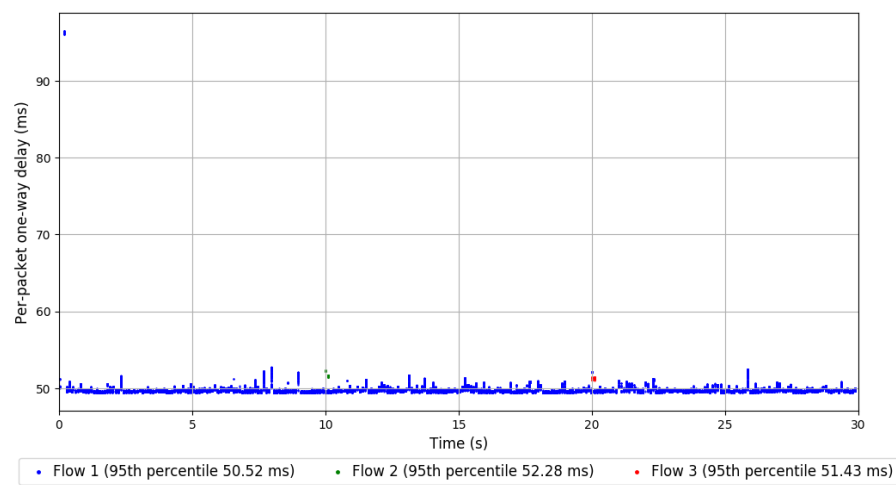
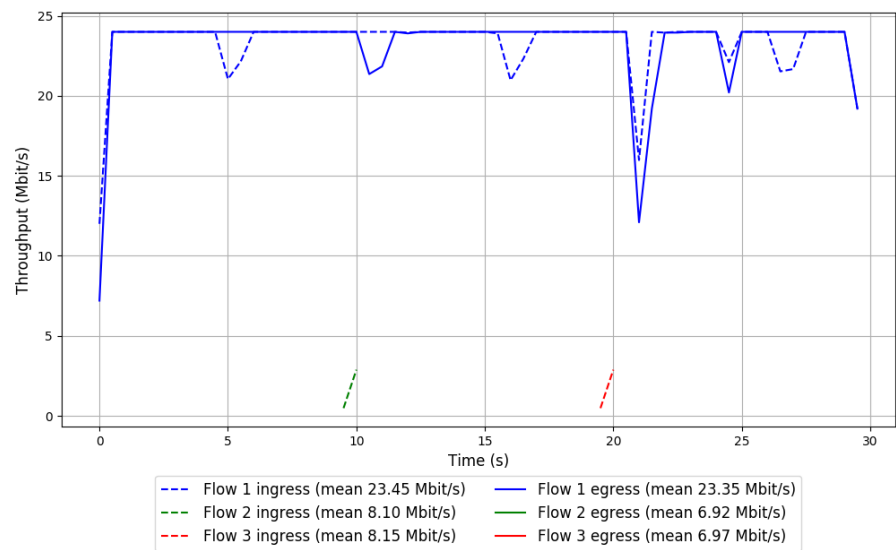
-- Flow 3:

Average throughput: 6.97 Mbit/s

95th percentile per-packet one-way delay: 51.430 ms

Loss rate: 57.14%

Run 6: Report of Saturator — Data Link



Run 7: Statistics of Saturator

Start at: 2017-08-12 10:00:07

End at: 2017-08-12 10:00:37

Below is generated by plot.py at 2017-08-12 12:26:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 10.36 Mbit/s

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

Loss rate: 19.39%

-- Flow 1:

Average throughput: 4.00 Mbit/s

95th percentile per-packet one-way delay: 51.642 ms

Loss rate: 50.31%

-- Flow 2:

Average throughput: 7.96 Mbit/s

95th percentile per-packet one-way delay: 50.897 ms

Loss rate: 43.60%

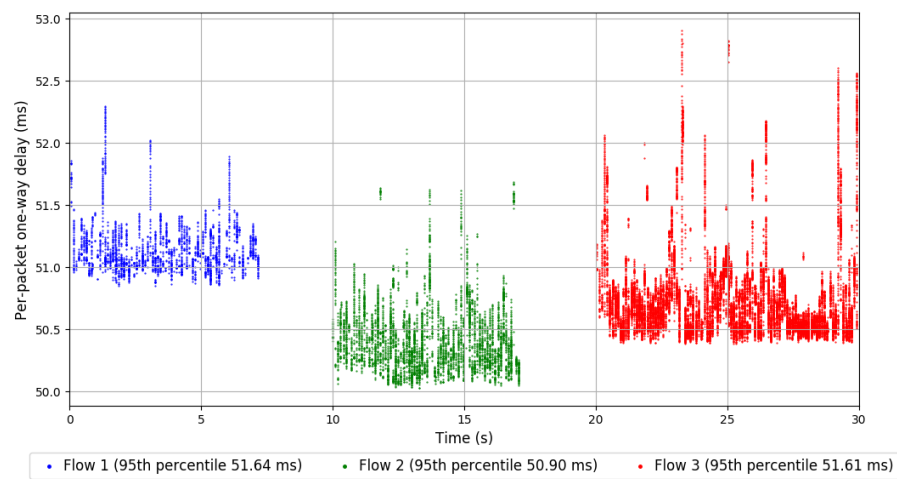
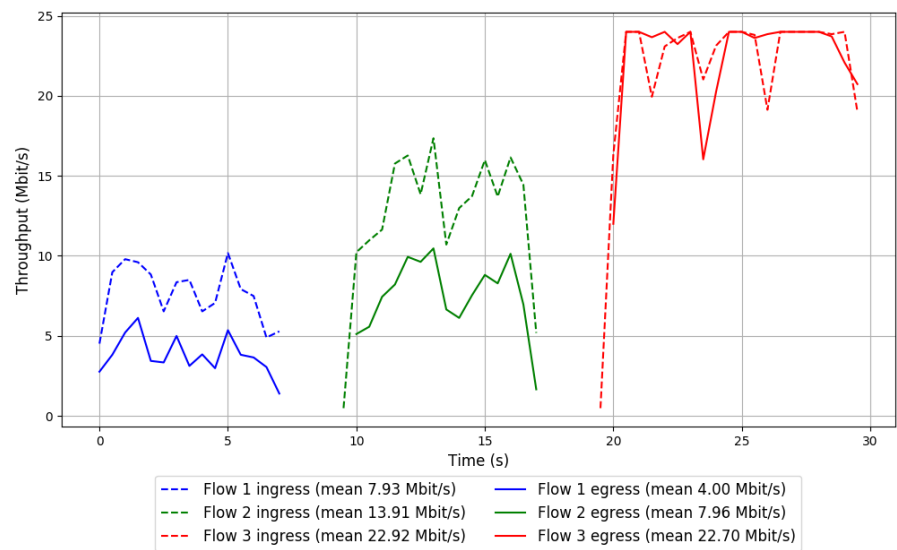
-- Flow 3:

Average throughput: 22.70 Mbit/s

95th percentile per-packet one-way delay: 51.610 ms

Loss rate: 0.93%

Run 7: Report of Saturator — Data Link



Run 8: Statistics of Saturator

Start at: 2017-08-12 10:10:58

End at: 2017-08-12 10:11:28

Below is generated by plot.py at 2017-08-12 12:26:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 42.31 Mbit/s

95th percentile per-packet one-way delay: 51.135 ms

Loss rate: 0.87%

-- Flow 1:

Average throughput: 23.51 Mbit/s

95th percentile per-packet one-way delay: 51.212 ms

Loss rate: 0.53%

-- Flow 2:

Average throughput: 23.35 Mbit/s

95th percentile per-packet one-way delay: 50.959 ms

Loss rate: 0.93%

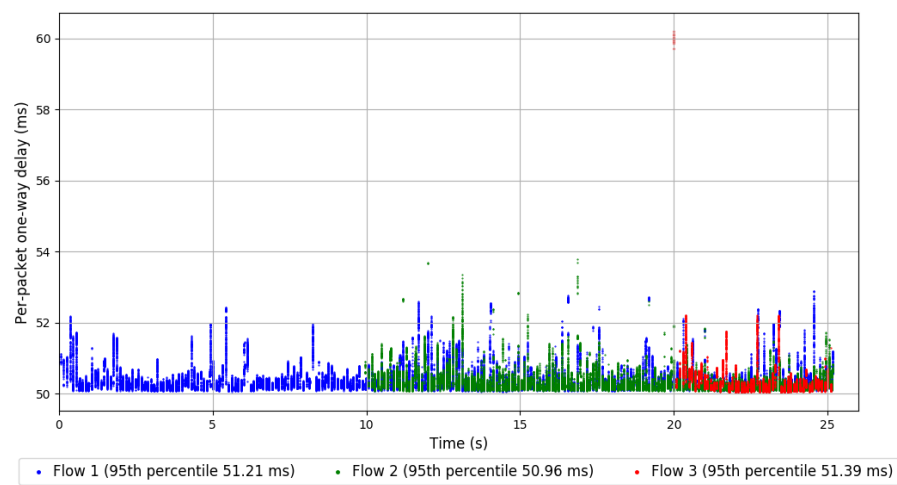
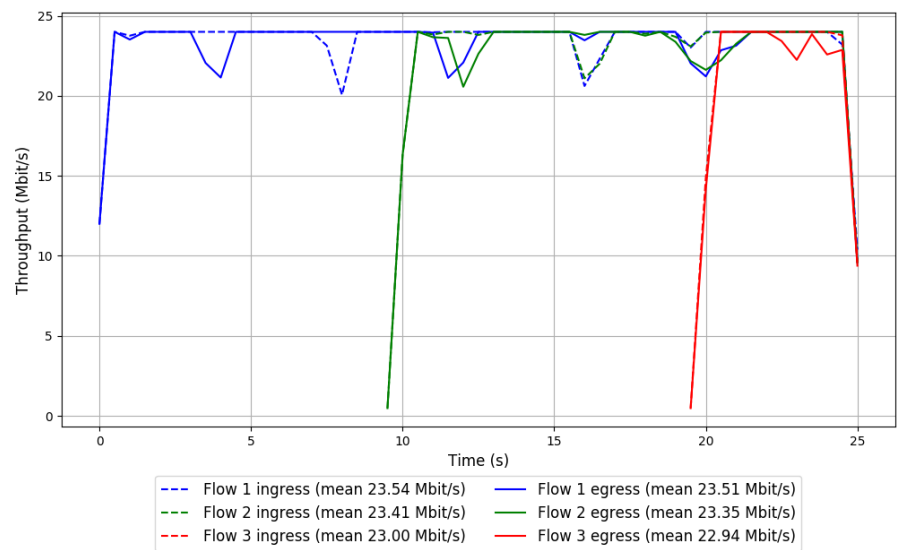
-- Flow 3:

Average throughput: 22.94 Mbit/s

95th percentile per-packet one-way delay: 51.391 ms

Loss rate: 2.38%

Run 8: Report of Saturator — Data Link



Run 9: Statistics of Saturator

Start at: 2017-08-12 10:22:05

End at: 2017-08-12 10:22:35

Below is generated by plot.py at 2017-08-12 12:26:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 25.42 Mbit/s

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

Loss rate: 16.67%

-- Flow 1:

Average throughput: 19.86 Mbit/s

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

Loss rate: 8.61%

-- Flow 2:

Average throughput: 7.56 Mbit/s

95th percentile per-packet one-way delay: 50.653 ms

Loss rate: 42.57%

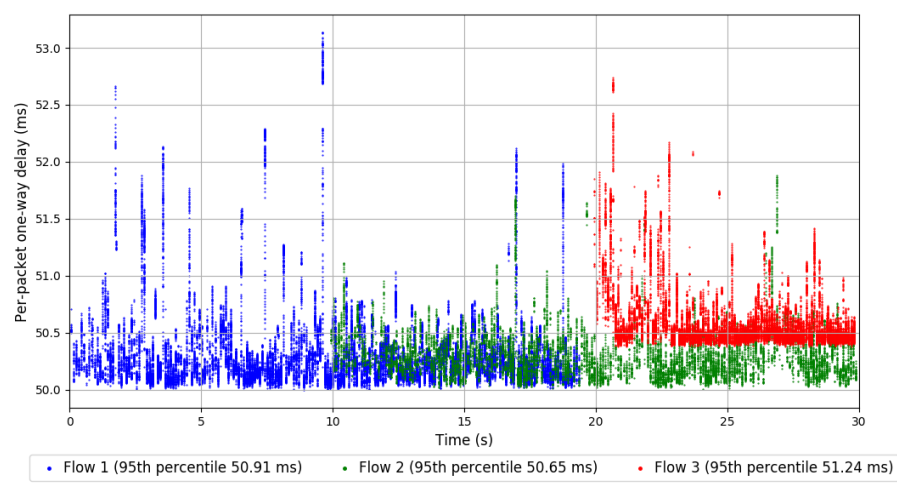
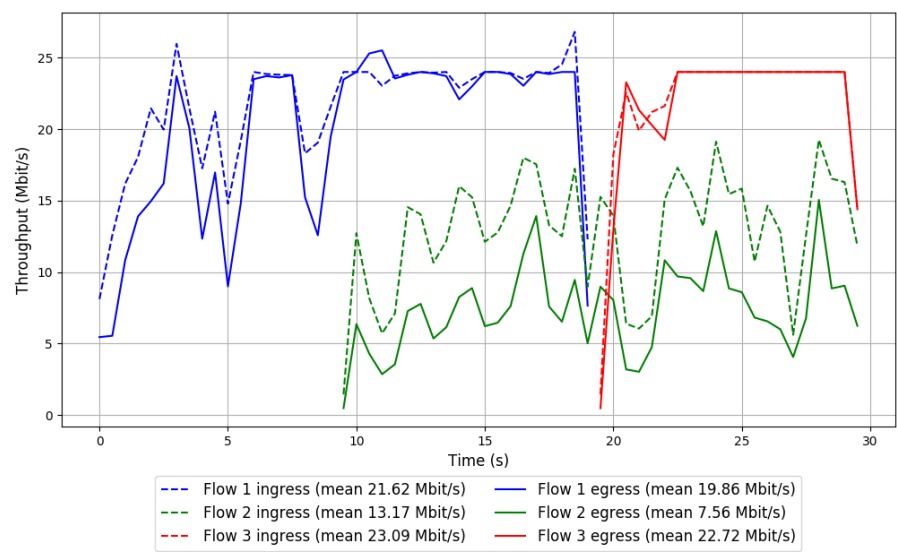
-- Flow 3:

Average throughput: 22.72 Mbit/s

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

Loss rate: 1.62%

Run 9: Report of Saturator — Data Link



Run 10: Statistics of Saturator

Start at: 2017-08-12 10:33:13

End at: 2017-08-12 10:33:43

Below is generated by plot.py at 2017-08-12 12:26:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.14 Mbit/s

95th percentile per-packet one-way delay: 51.064 ms

Loss rate: 41.35%

-- Flow 1:

Average throughput: 7.05 Mbit/s

95th percentile per-packet one-way delay: 50.809 ms

Loss rate: 57.14%

-- Flow 2:

Average throughput: 8.77 Mbit/s

95th percentile per-packet one-way delay: 51.029 ms

Loss rate: 39.41%

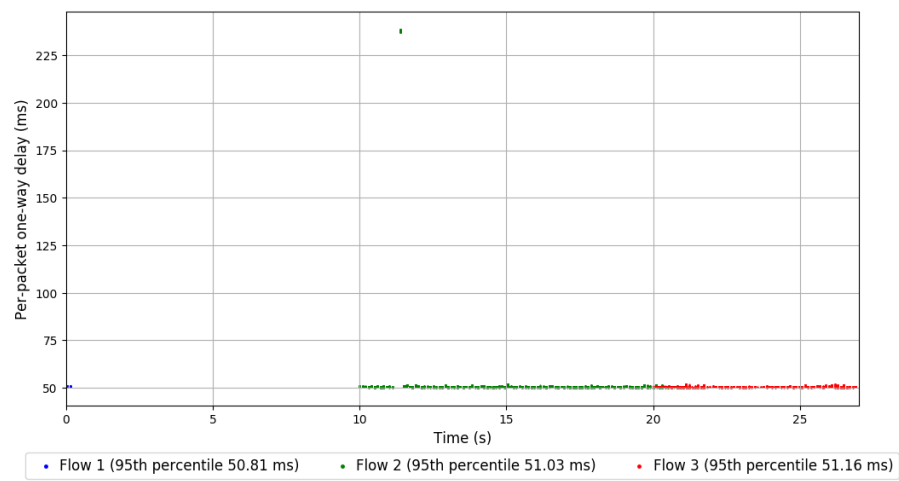
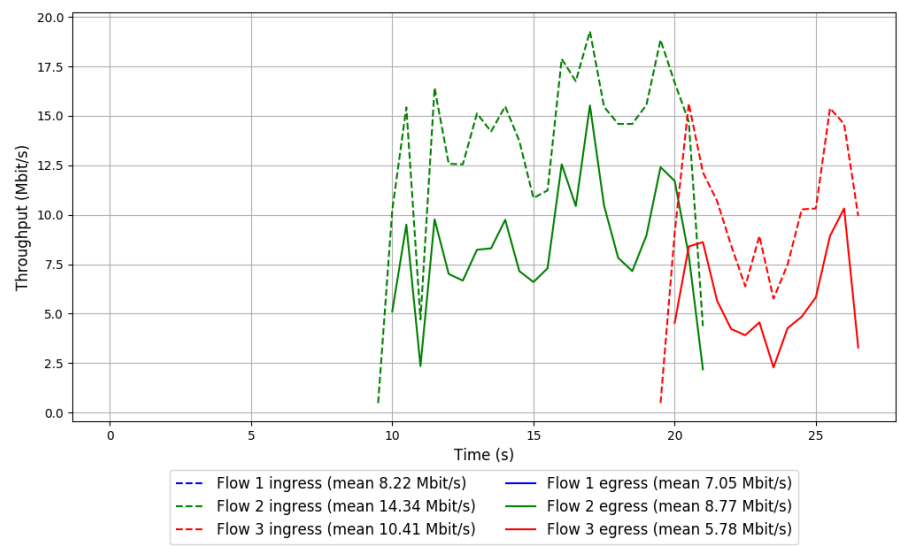
-- Flow 3:

Average throughput: 5.78 Mbit/s

95th percentile per-packet one-way delay: 51.157 ms

Loss rate: 45.25%

Run 10: Report of Saturator — Data Link

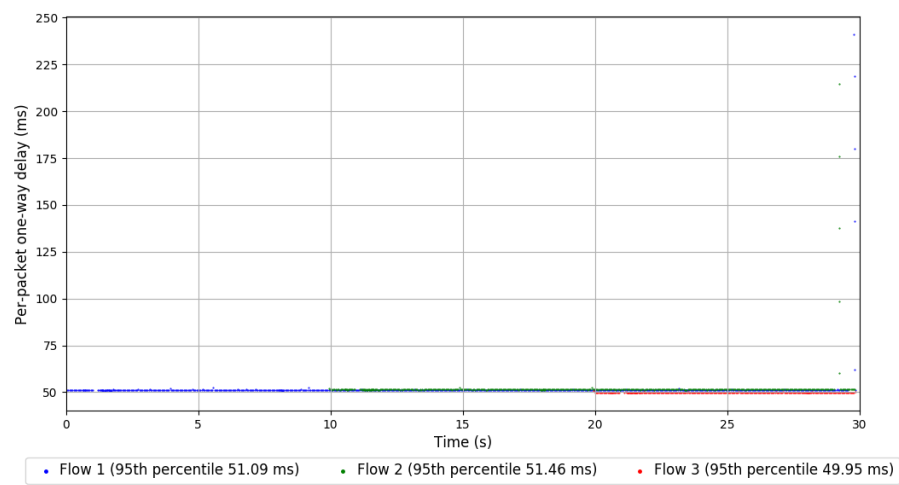
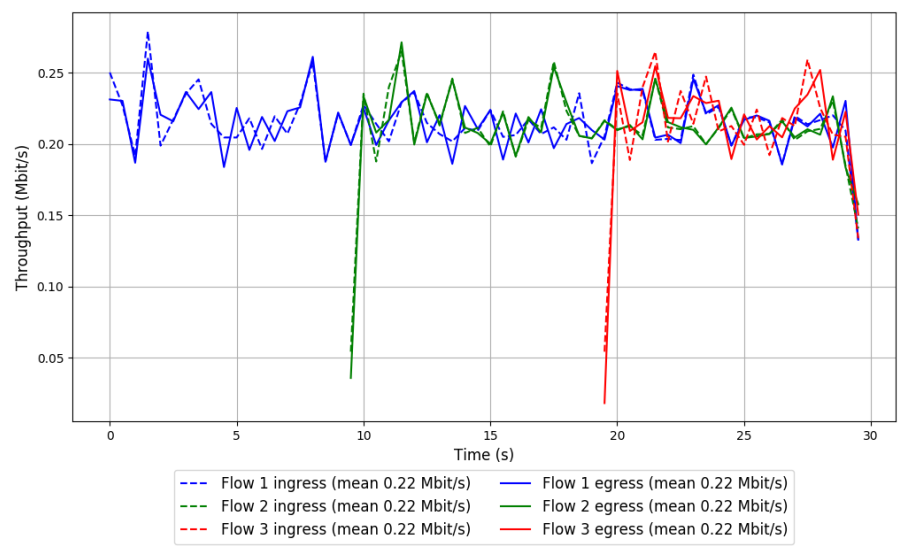


```
Run 1: Statistics of SCReAM

Start at: 2017-08-12 08:52:24
End at: 2017-08-12 08:52:54

# Below is generated by plot.py at 2017-08-12 12:26:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 51.429 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.092 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.458 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.950 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link

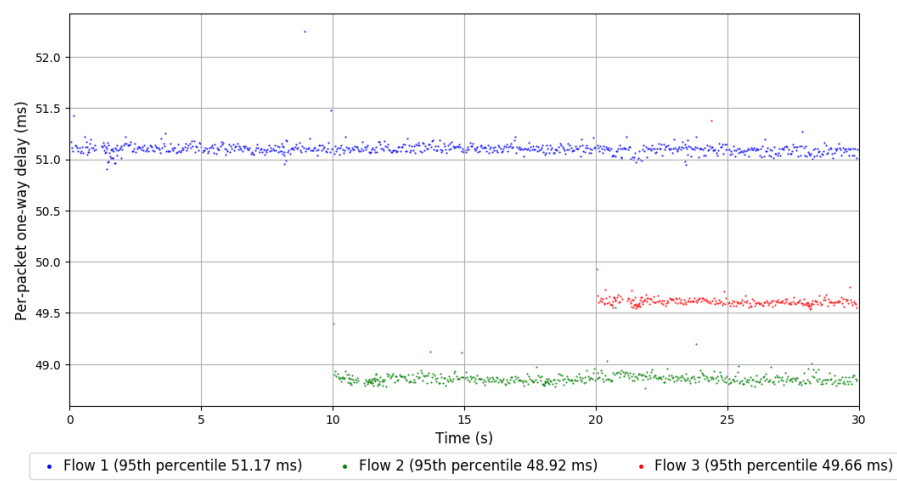
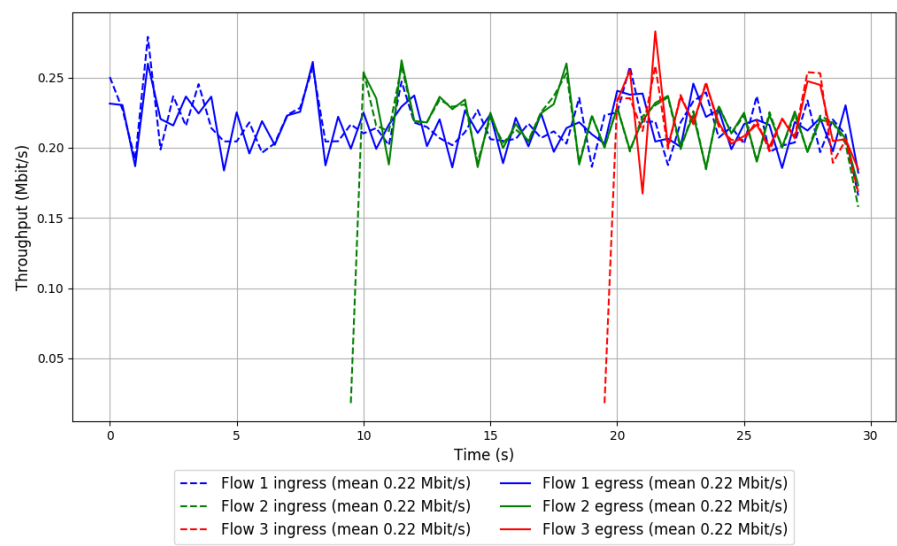


```
Run 2: Statistics of SCReAM

Start at: 2017-08-12 09:03:40
End at: 2017-08-12 09:04:10

# Below is generated by plot.py at 2017-08-12 12:26:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 51.147 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.166 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 48.924 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.664 ms
Loss rate: 0.00%
```


Run 2: Report of SReAM — Data Link



Run 3: Statistics of SReAM

Start at: 2017-08-12 09:14:29

End at: 2017-08-12 09:14:59

Below is generated by plot.py at 2017-08-12 12:26:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 52.118 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 49.772 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 52.775 ms

Loss rate: 0.00%

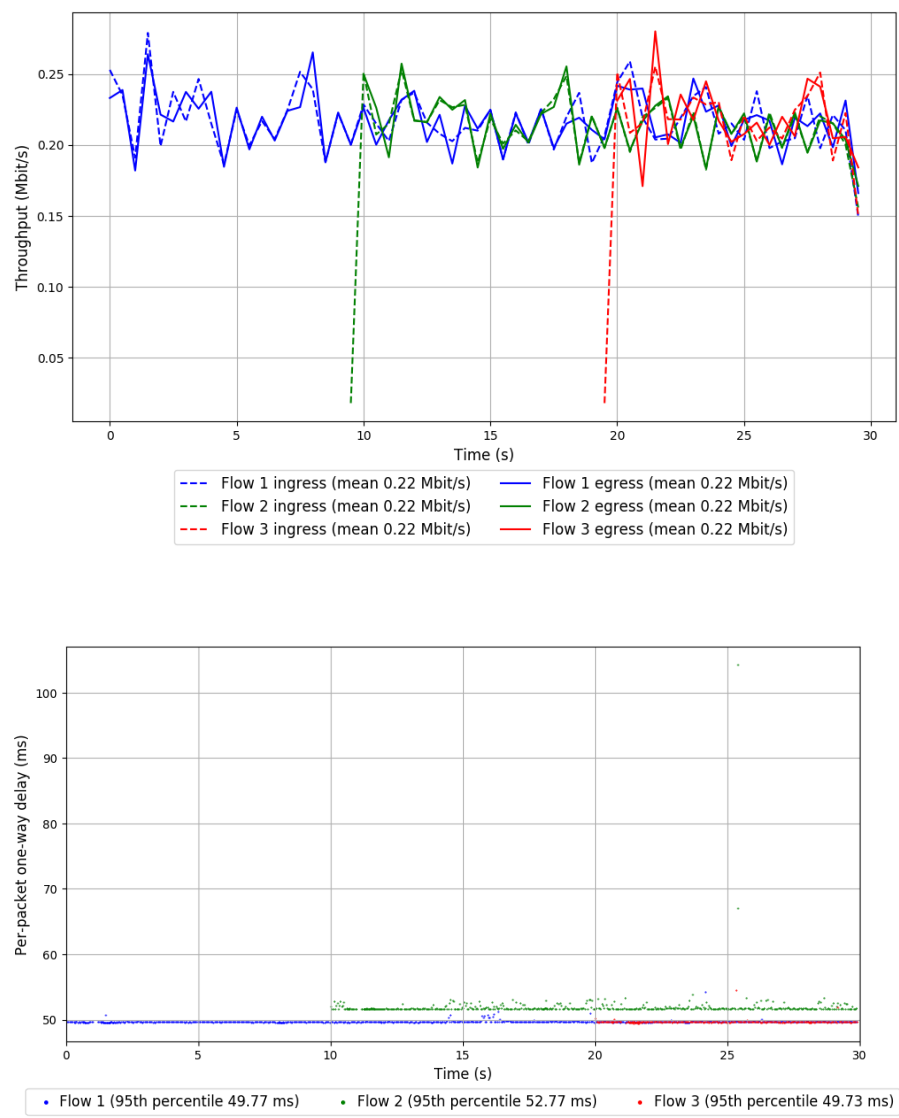
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 49.733 ms

Loss rate: 0.00%

Run 3: Report of SReAM — Data Link

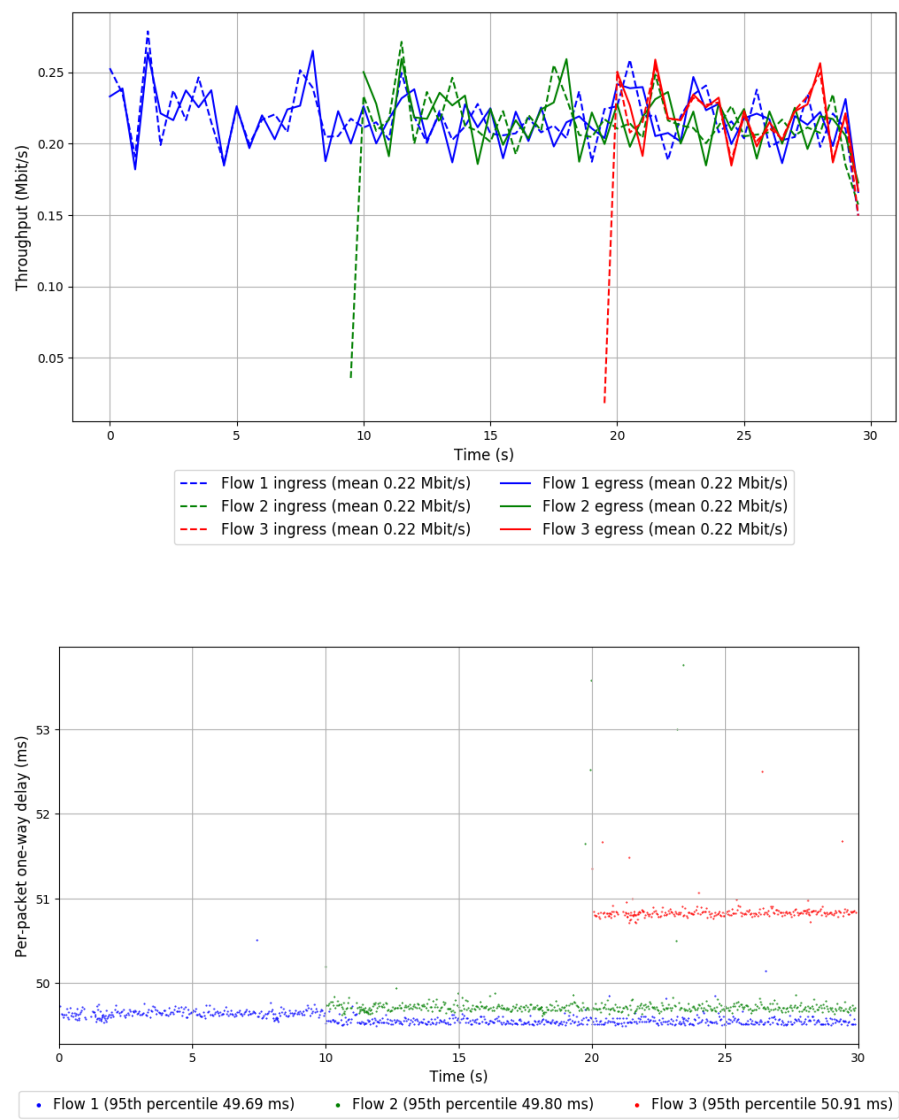


```
Run 4: Statistics of SCReAM

Start at: 2017-08-12 09:25:52
End at: 2017-08-12 09:26:22

# Below is generated by plot.py at 2017-08-12 12:26:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 50.846 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.689 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.796 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.907 ms
Loss rate: 0.00%
```

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SReAM

Start at: 2017-08-12 09:37:09

End at: 2017-08-12 09:37:39

Below is generated by plot.py at 2017-08-12 12:26:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 50.611 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 49.717 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.642 ms

Loss rate: 0.00%

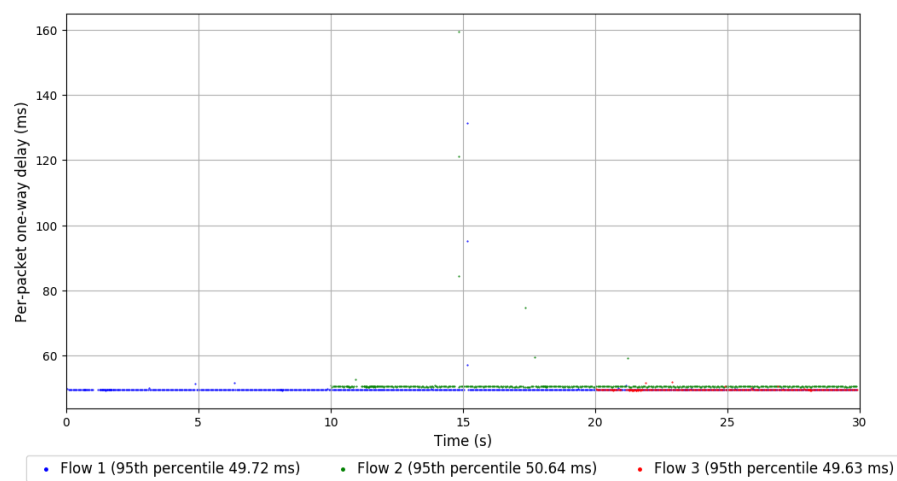
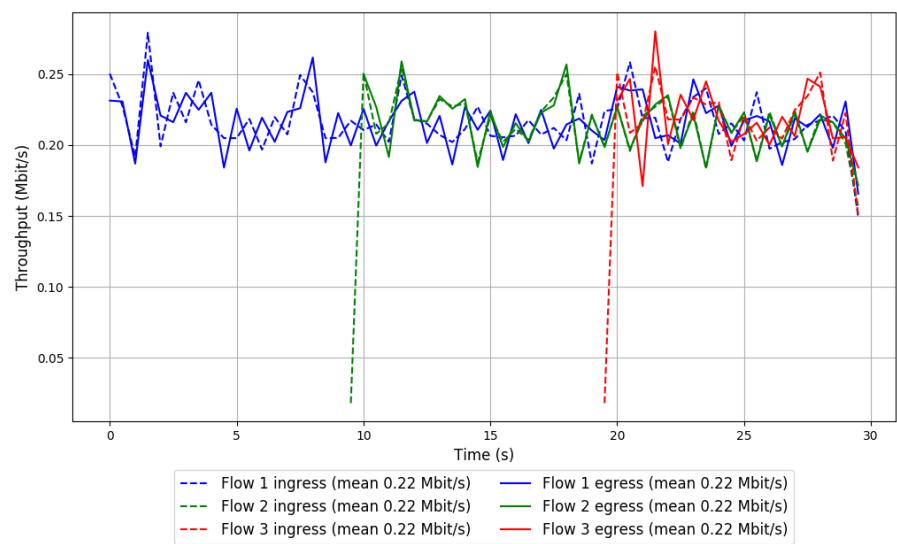
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 49.626 ms

Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



Run 6: Statistics of SCReAM

Start at: 2017-08-12 09:48:14

End at: 2017-08-12 09:48:44

Below is generated by plot.py at 2017-08-12 12:26:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 51.648 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 51.668 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

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

Loss rate: 0.00%

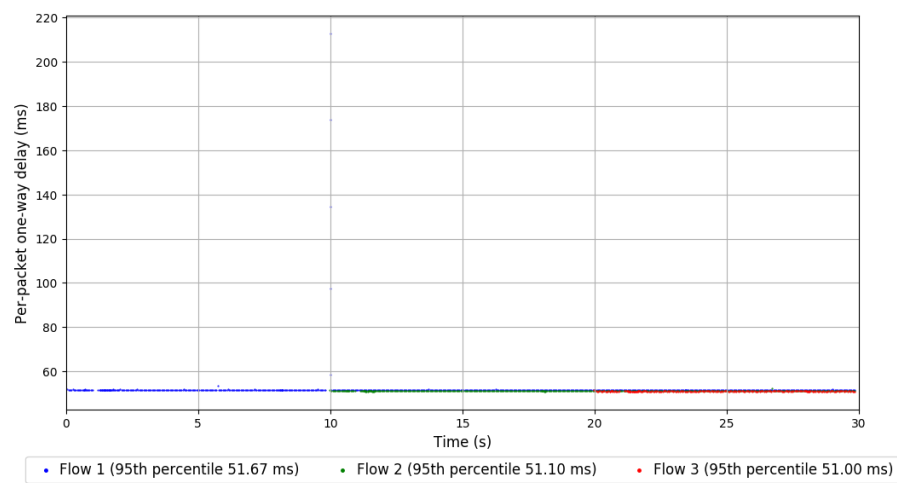
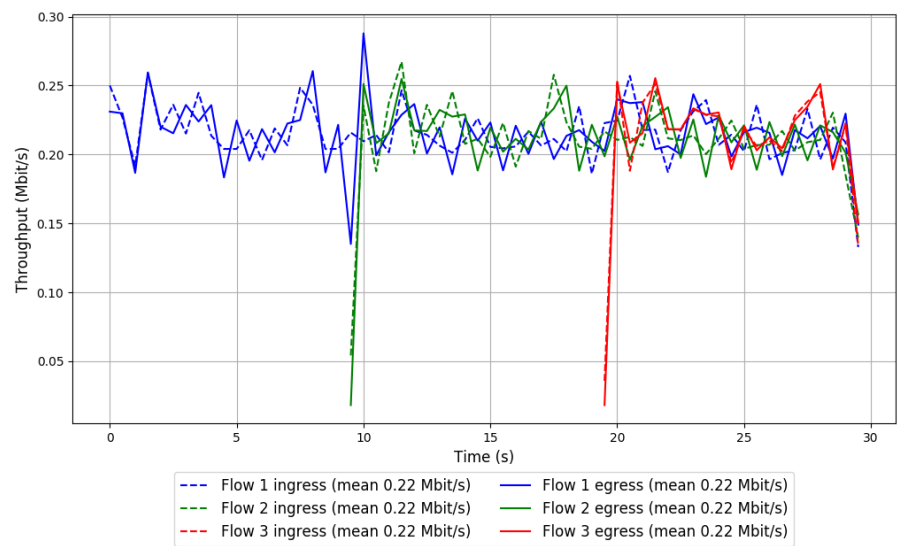
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.999 ms

Loss rate: 0.00%

Run 6: Report of SReAM — Data Link



Run 7: Statistics of SReAM

Start at: 2017-08-12 09:59:27

End at: 2017-08-12 09:59:57

Below is generated by plot.py at 2017-08-12 12:26:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 51.121 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.358 ms

Loss rate: 0.00%

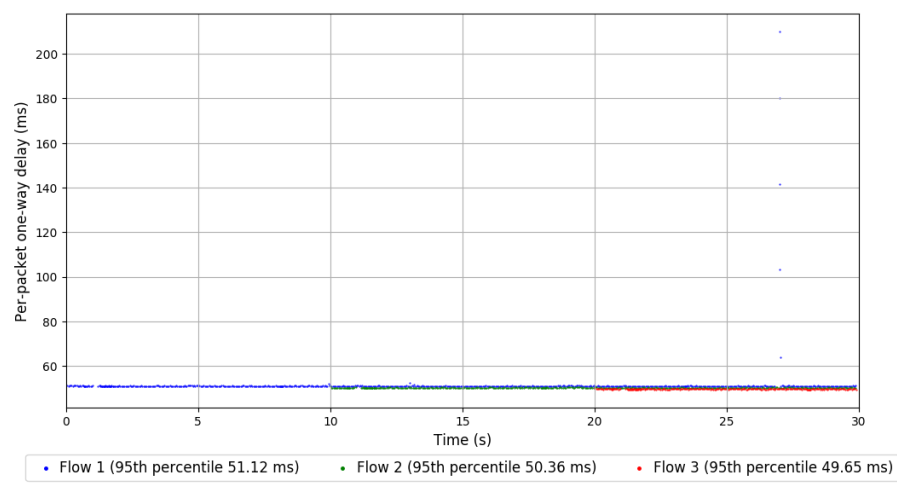
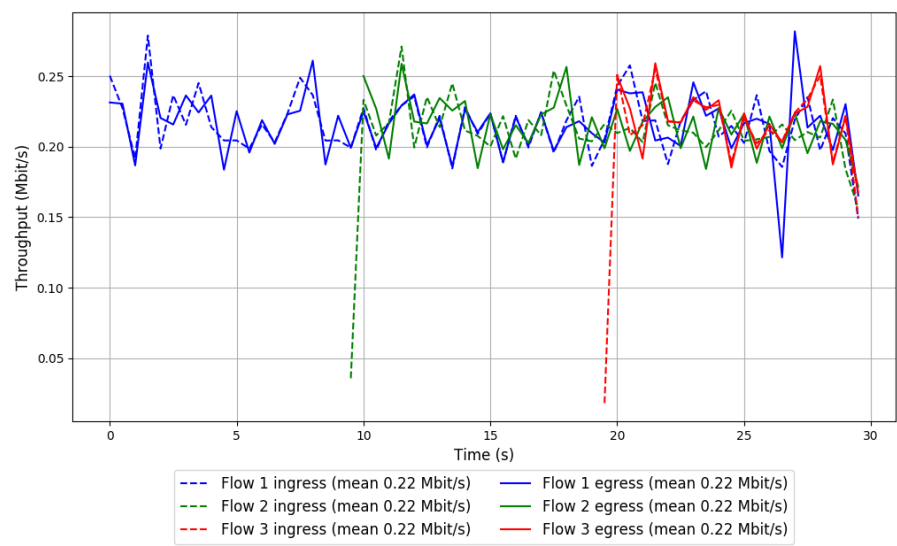
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 49.645 ms

Loss rate: 0.00%

Run 7: Report of SReAM — Data Link



Run 8: Statistics of SCReAM

Start at: 2017-08-12 10:10:19

End at: 2017-08-12 10:10:49

Below is generated by plot.py at 2017-08-12 12:26:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 51.127 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 51.173 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.679 ms

Loss rate: 0.00%

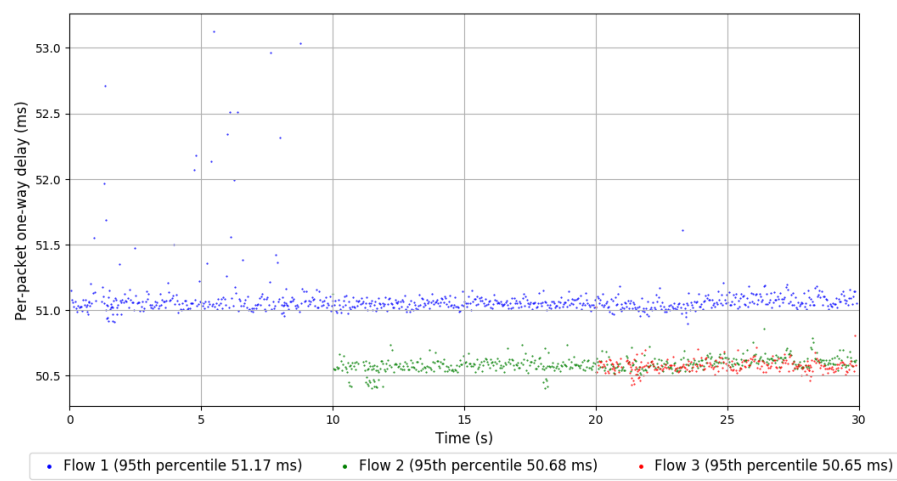
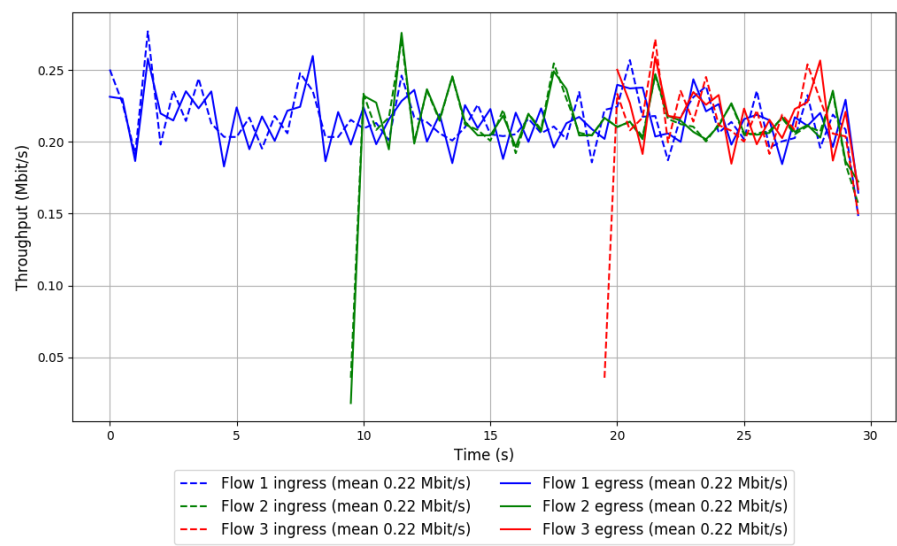
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.651 ms

Loss rate: 0.00%

Run 8: Report of SCSReAM — Data Link



Run 9: Statistics of SCReAM

Start at: 2017-08-12 10:21:26

End at: 2017-08-12 10:21:56

Below is generated by plot.py at 2017-08-12 12:26:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 50.607 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 49.742 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.634 ms

Loss rate: 0.00%

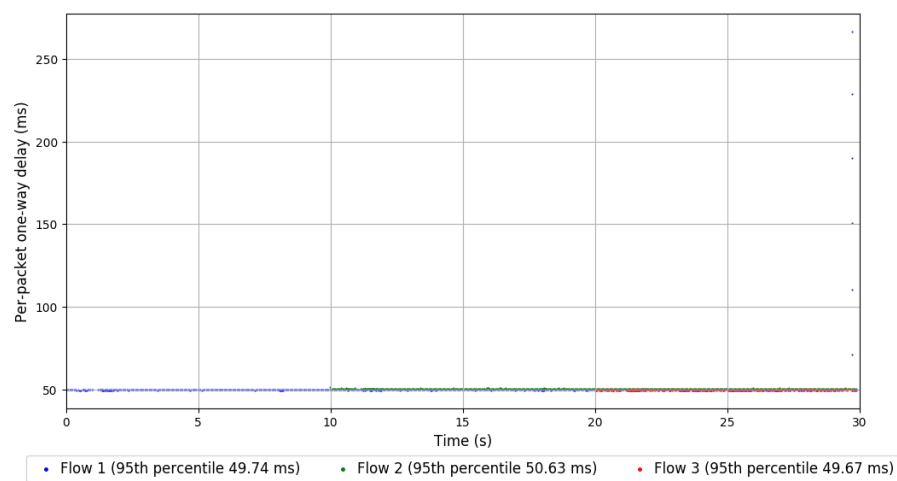
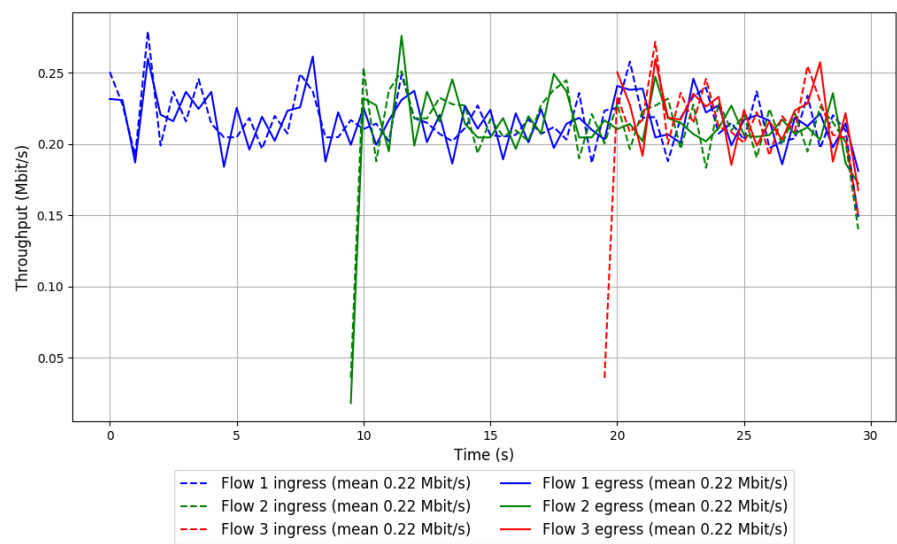
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 49.671 ms

Loss rate: 0.00%

Run 9: Report of SReAM — Data Link

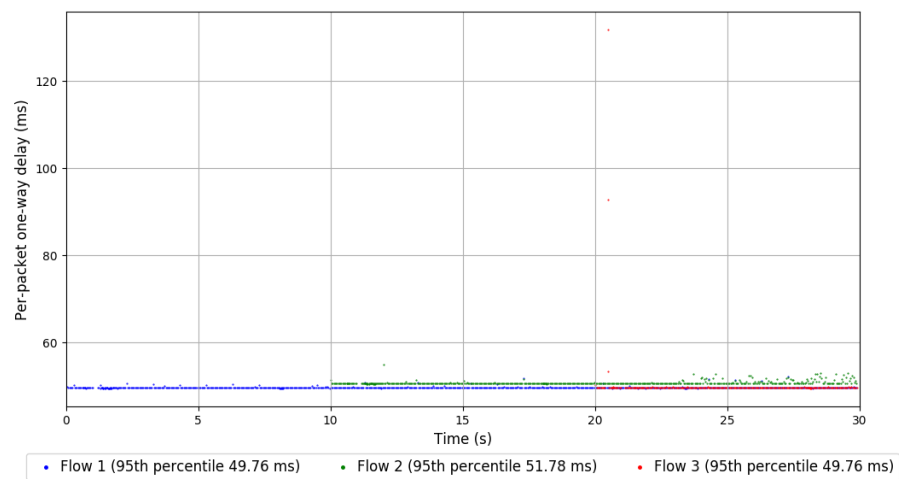
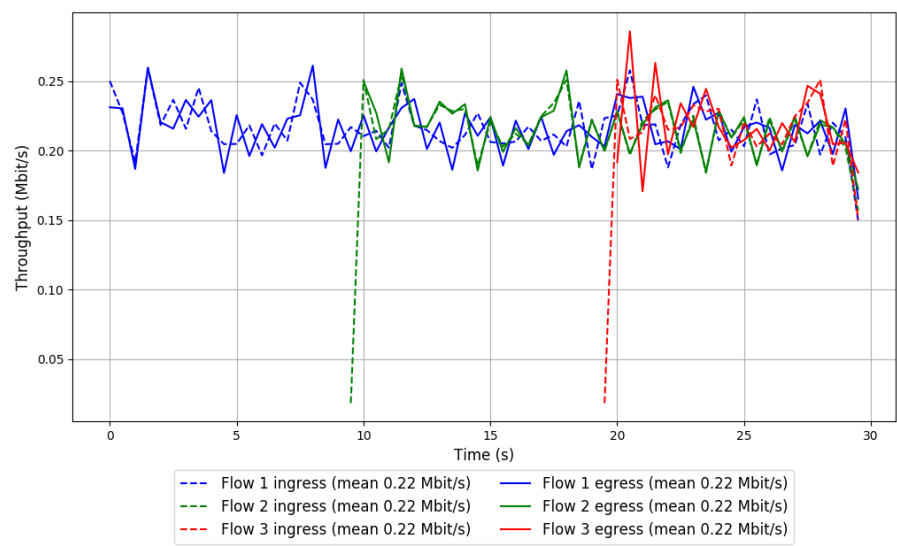


```
Run 10: Statistics of SReAM

Start at: 2017-08-12 10:32:34
End at: 2017-08-12 10:33:04

# Below is generated by plot.py at 2017-08-12 12:26:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.882 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.755 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.782 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.757 ms
Loss rate: 0.00%
```


Run 10: Report of SCReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2017-08-12 08:48:45

End at: 2017-08-12 08:49:16

Below is generated by plot.py at 2017-08-12 12:26:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 10.56 Mbit/s

95th percentile per-packet one-way delay: 51.594 ms

Loss rate: 10.63%

-- Flow 1:

Average throughput: 6.44 Mbit/s

95th percentile per-packet one-way delay: 51.142 ms

Loss rate: 7.29%

-- Flow 2:

Average throughput: 2.90 Mbit/s

95th percentile per-packet one-way delay: 51.728 ms

Loss rate: 22.94%

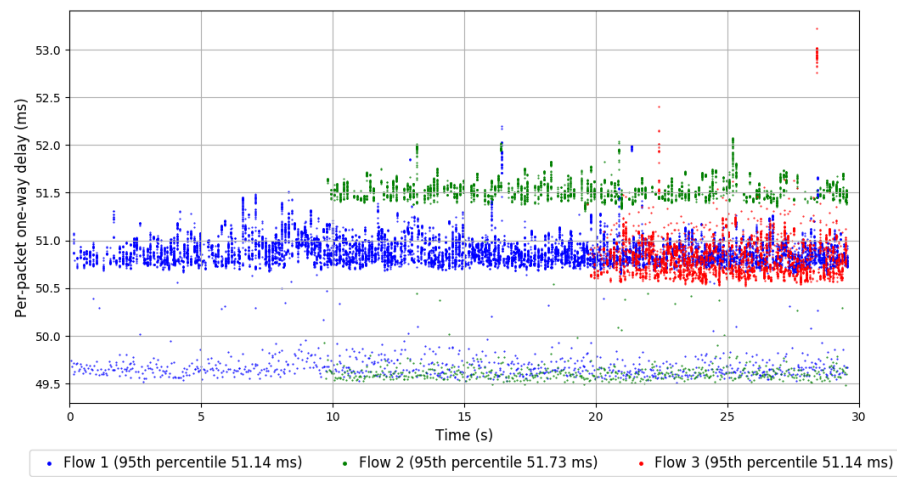
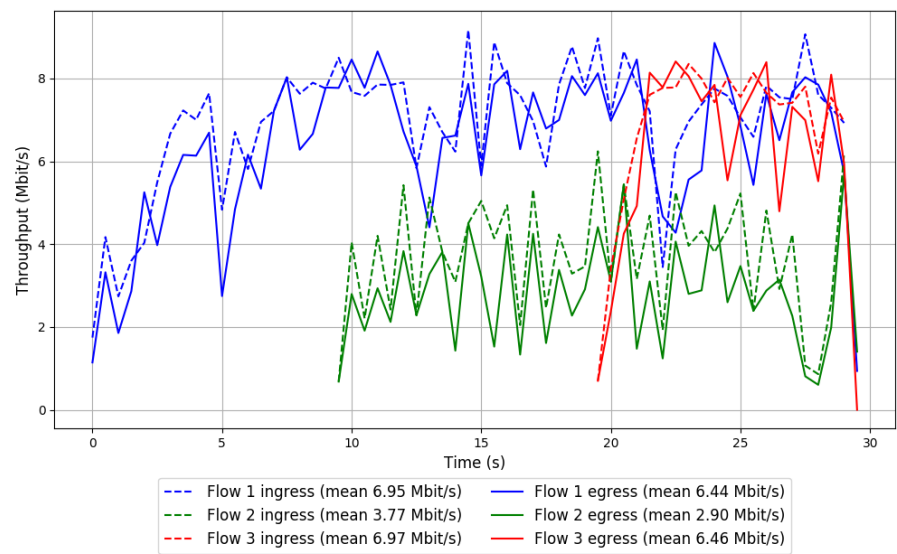
-- Flow 3:

Average throughput: 6.46 Mbit/s

95th percentile per-packet one-way delay: 51.142 ms

Loss rate: 7.24%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2017-08-12 09:00:05

End at: 2017-08-12 09:00:35

Below is generated by plot.py at 2017-08-12 12:26:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 9.29 Mbit/s

95th percentile per-packet one-way delay: 51.134 ms

Loss rate: 12.50%

-- Flow 1:

Average throughput: 3.25 Mbit/s

95th percentile per-packet one-way delay: 51.206 ms

Loss rate: 23.10%

-- Flow 2:

Average throughput: 7.58 Mbit/s

95th percentile per-packet one-way delay: 50.297 ms

Loss rate: 1.61%

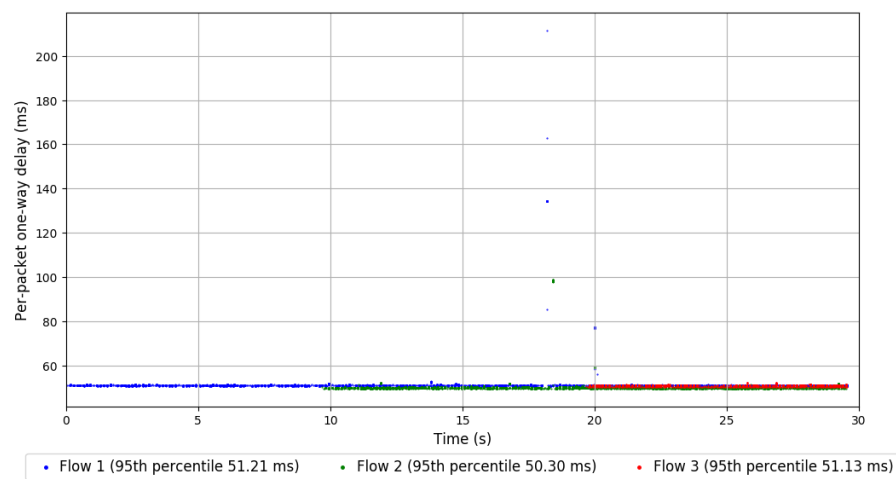
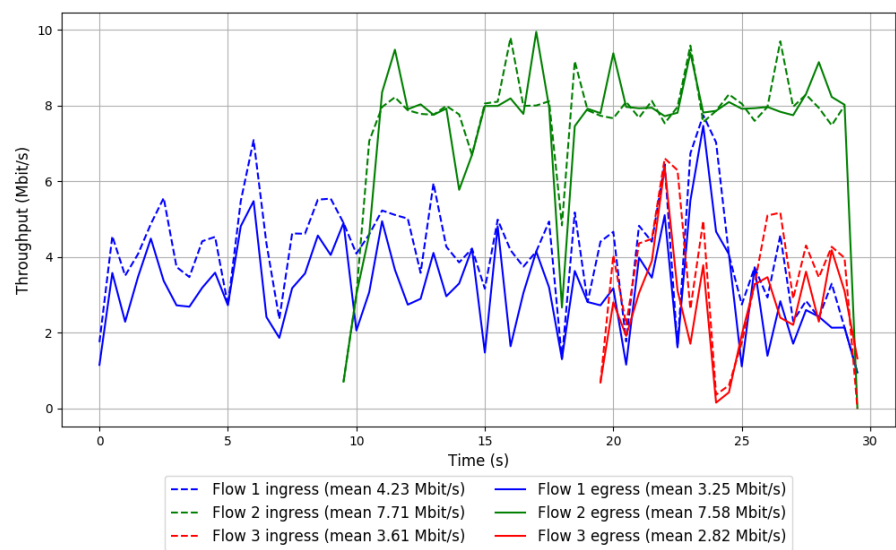
-- Flow 3:

Average throughput: 2.82 Mbit/s

95th percentile per-packet one-way delay: 51.126 ms

Loss rate: 22.07%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2017-08-12 09:10:54

End at: 2017-08-12 09:11:24

Below is generated by plot.py at 2017-08-12 12:26:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 14.02 Mbit/s

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

Loss rate: 4.21%

-- Flow 1:

Average throughput: 7.93 Mbit/s

95th percentile per-packet one-way delay: 50.541 ms

Loss rate: 0.48%

-- Flow 2:

Average throughput: 5.48 Mbit/s

95th percentile per-packet one-way delay: 50.600 ms

Loss rate: 12.96%

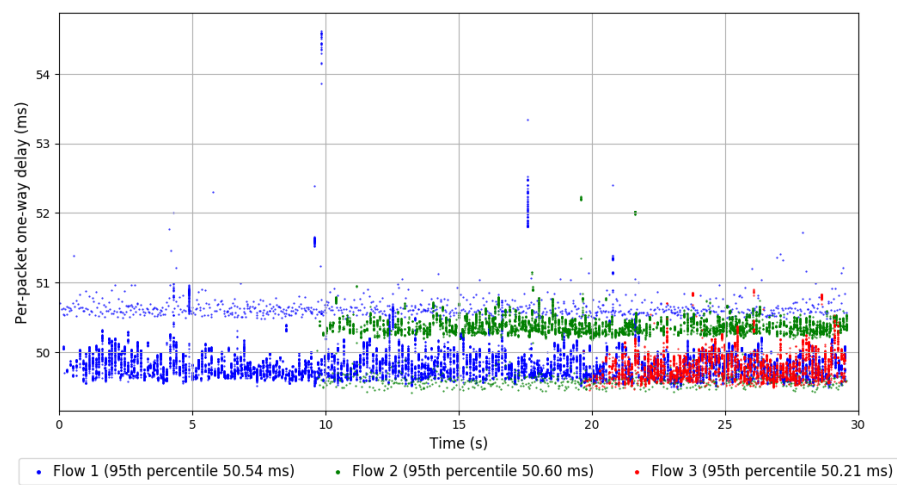
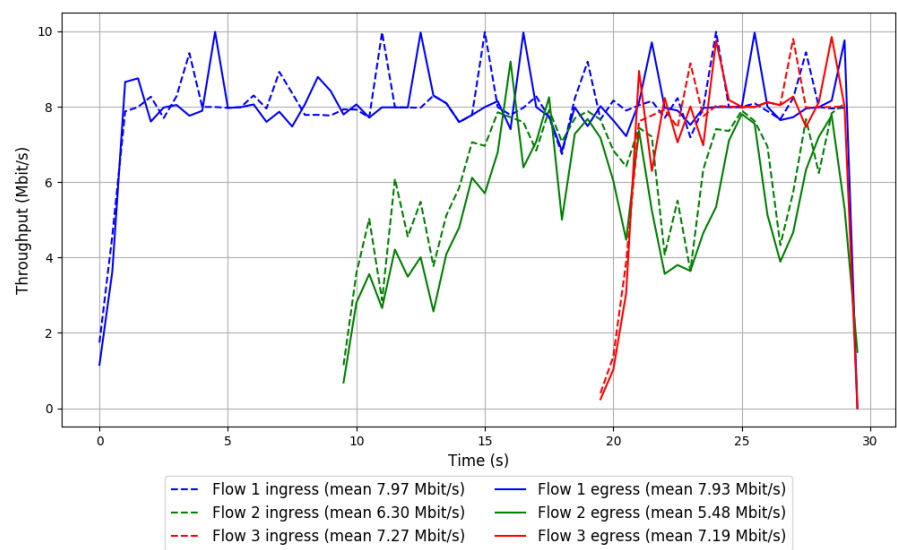
-- Flow 3:

Average throughput: 7.19 Mbit/s

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

Loss rate: 1.13%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2017-08-12 09:22:14

End at: 2017-08-12 09:22:44

Below is generated by plot.py at 2017-08-12 12:26:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 11.04 Mbit/s

95th percentile per-packet one-way delay: 50.661 ms

Loss rate: 6.60%

-- Flow 1:

Average throughput: 3.75 Mbit/s

95th percentile per-packet one-way delay: 50.724 ms

Loss rate: 13.21%

-- Flow 2:

Average throughput: 7.32 Mbit/s

95th percentile per-packet one-way delay: 50.946 ms

Loss rate: 3.14%

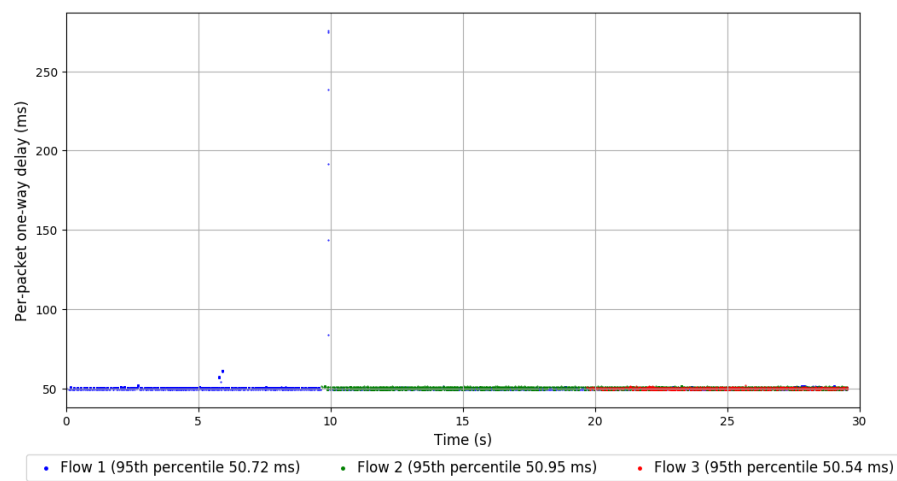
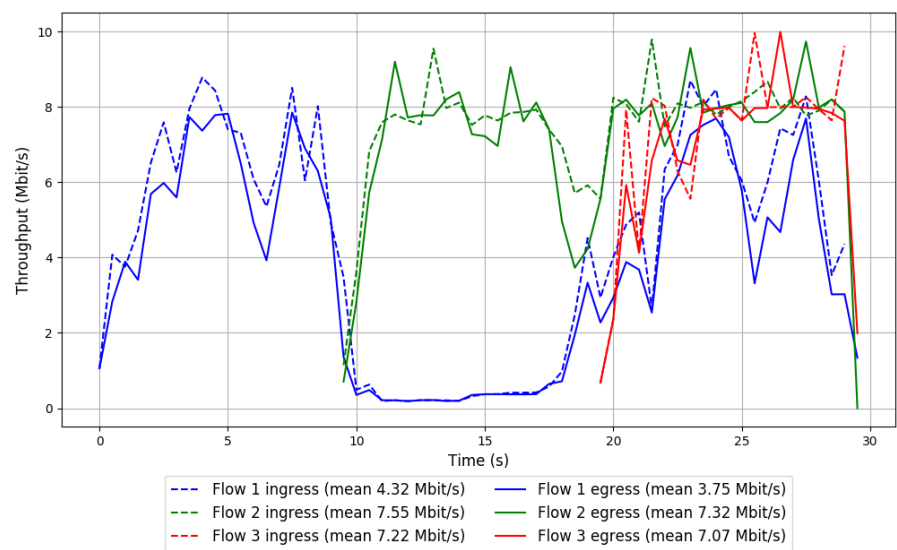
-- Flow 3:

Average throughput: 7.07 Mbit/s

95th percentile per-packet one-way delay: 50.538 ms

Loss rate: 2.04%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2017-08-12 09:33:30

End at: 2017-08-12 09:34:00

Below is generated by plot.py at 2017-08-12 12:26:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 14.05 Mbit/s

95th percentile per-packet one-way delay: 50.796 ms

Loss rate: 2.25%

-- Flow 1:

Average throughput: 7.98 Mbit/s

95th percentile per-packet one-way delay: 50.828 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.29 Mbit/s

95th percentile per-packet one-way delay: 50.295 ms

Loss rate: 1.14%

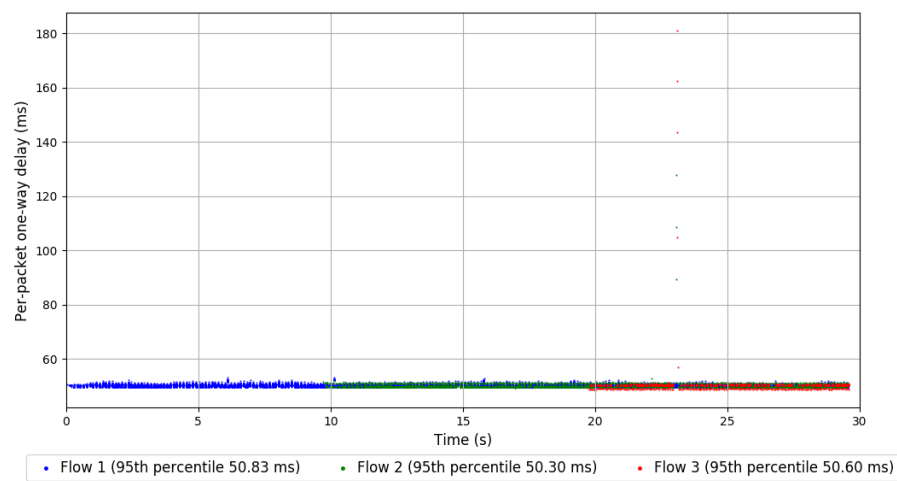
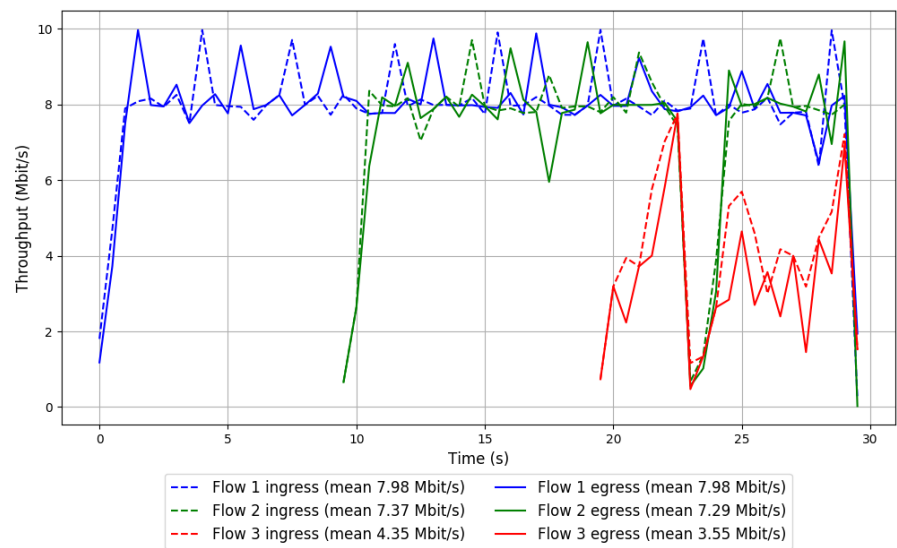
-- Flow 3:

Average throughput: 3.55 Mbit/s

95th percentile per-packet one-way delay: 50.598 ms

Loss rate: 18.37%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2017-08-12 09:44:30

End at: 2017-08-12 09:45:00

Below is generated by plot.py at 2017-08-12 12:26:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 10.95 Mbit/s

95th percentile per-packet one-way delay: 51.163 ms

Loss rate: 8.56%

-- Flow 1:

Average throughput: 3.05 Mbit/s

95th percentile per-packet one-way delay: 52.277 ms

Loss rate: 25.01%

-- Flow 2:

Average throughput: 7.94 Mbit/s

95th percentile per-packet one-way delay: 50.293 ms

Loss rate: 0.06%

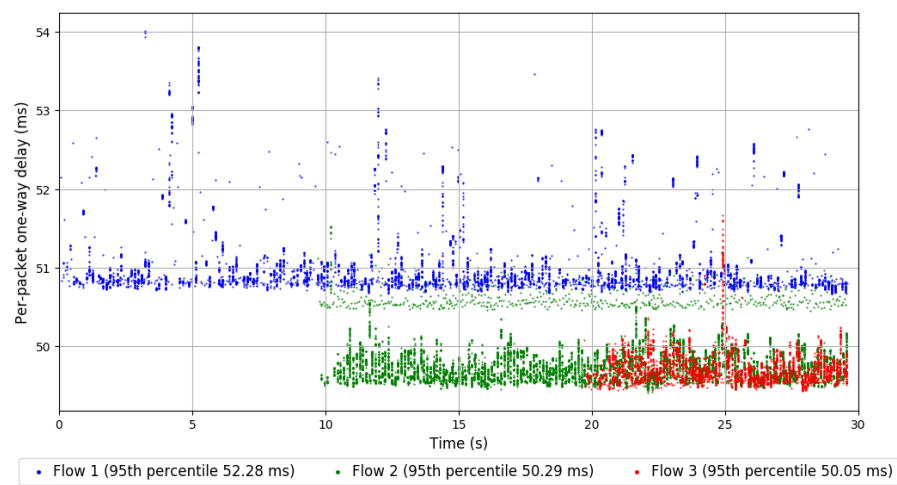
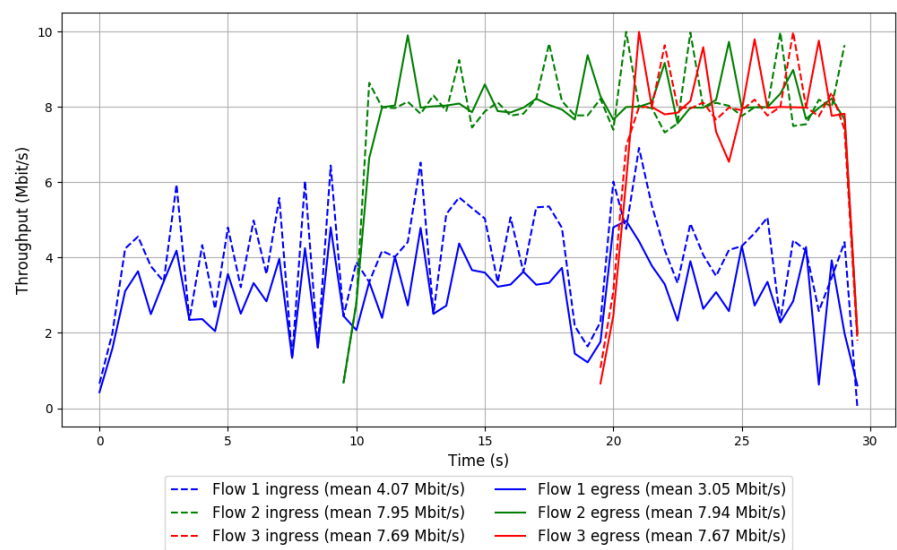
-- Flow 3:

Average throughput: 7.67 Mbit/s

95th percentile per-packet one-way delay: 50.047 ms

Loss rate: 0.19%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2017-08-12 09:55:47

End at: 2017-08-12 09:56:17

Below is generated by plot.py at 2017-08-12 12:26:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 10.97 Mbit/s

95th percentile per-packet one-way delay: 51.277 ms

Loss rate: 10.73%

-- Flow 1:

Average throughput: 3.83 Mbit/s

95th percentile per-packet one-way delay: 51.374 ms

Loss rate: 20.09%

-- Flow 2:

Average throughput: 7.07 Mbit/s

95th percentile per-packet one-way delay: 51.045 ms

Loss rate: 5.43%

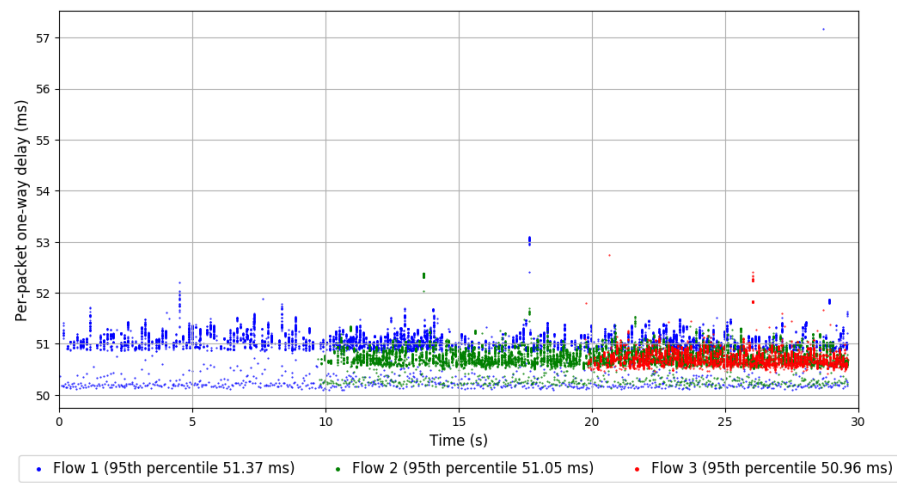
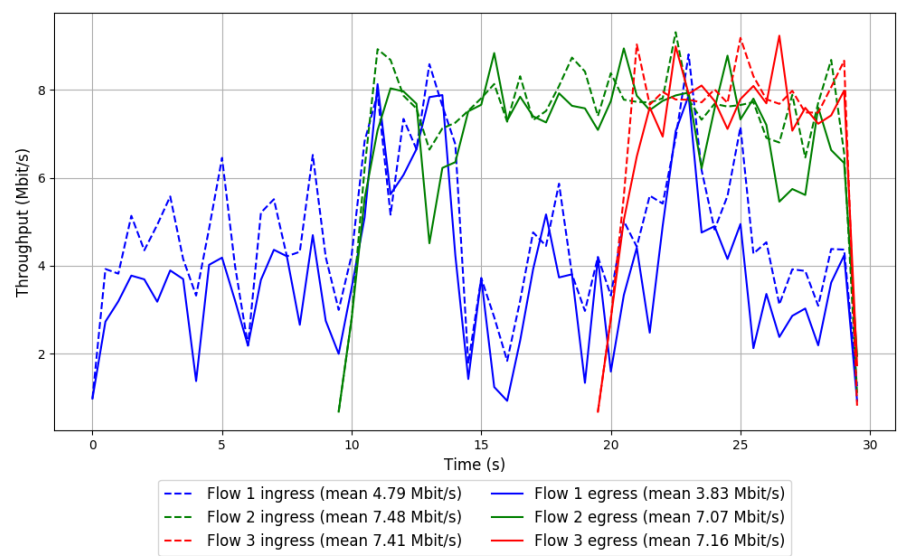
-- Flow 3:

Average throughput: 7.16 Mbit/s

95th percentile per-packet one-way delay: 50.959 ms

Loss rate: 3.36%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2017-08-12 10:06:33

End at: 2017-08-12 10:07:03

Below is generated by plot.py at 2017-08-12 12:26:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 11.05 Mbit/s

95th percentile per-packet one-way delay: 50.626 ms

Loss rate: 11.66%

-- Flow 1:

Average throughput: 6.21 Mbit/s

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

Loss rate: 10.43%

-- Flow 2:

Average throughput: 4.32 Mbit/s

95th percentile per-packet one-way delay: 50.606 ms

Loss rate: 16.39%

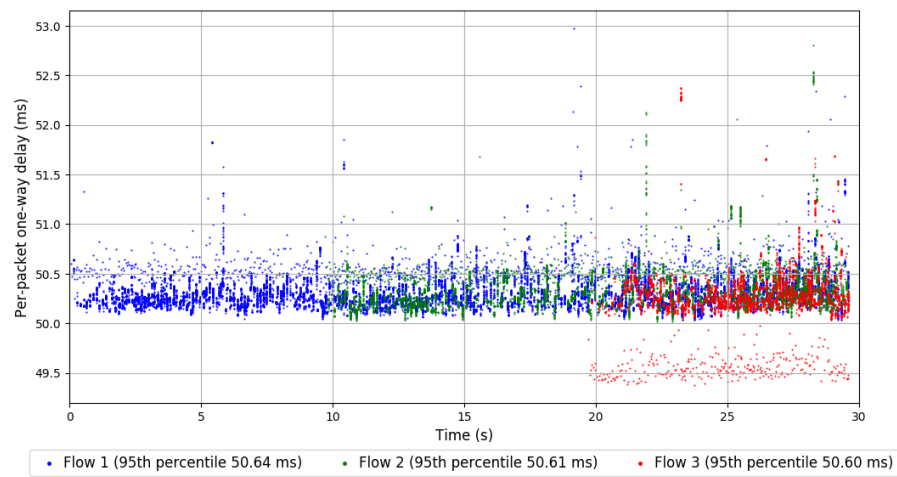
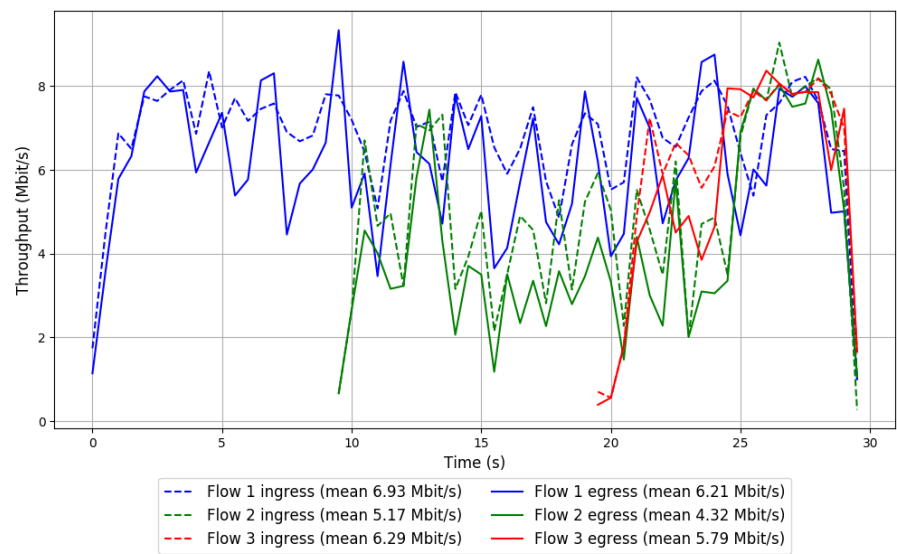
-- Flow 3:

Average throughput: 5.79 Mbit/s

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

Loss rate: 7.93%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2017-08-12 10:17:44

End at: 2017-08-12 10:18:14

Below is generated by plot.py at 2017-08-12 12:26:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 10.11 Mbit/s

95th percentile per-packet one-way delay: 51.744 ms

Loss rate: 13.51%

-- Flow 1:

Average throughput: 5.22 Mbit/s

95th percentile per-packet one-way delay: 52.005 ms

Loss rate: 13.86%

-- Flow 2:

Average throughput: 5.73 Mbit/s

95th percentile per-packet one-way delay: 51.520 ms

Loss rate: 9.92%

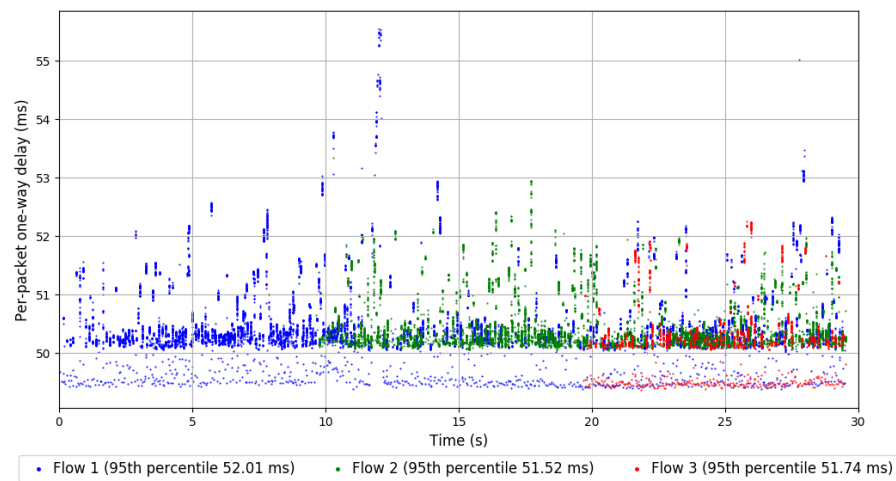
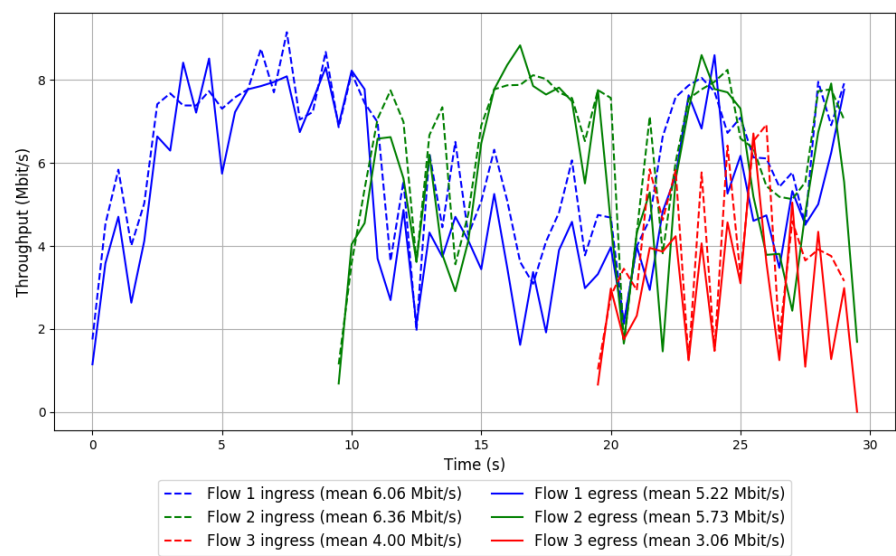
-- Flow 3:

Average throughput: 3.06 Mbit/s

95th percentile per-packet one-way delay: 51.743 ms

Loss rate: 23.42%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2017-08-12 10:28:51

End at: 2017-08-12 10:29:21

Below is generated by plot.py at 2017-08-12 12:26:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 9.49 Mbit/s

95th percentile per-packet one-way delay: 50.614 ms

Loss rate: 15.94%

-- Flow 1:

Average throughput: 4.88 Mbit/s

95th percentile per-packet one-way delay: 50.622 ms

Loss rate: 15.29%

-- Flow 2:

Average throughput: 4.57 Mbit/s

95th percentile per-packet one-way delay: 50.648 ms

Loss rate: 16.58%

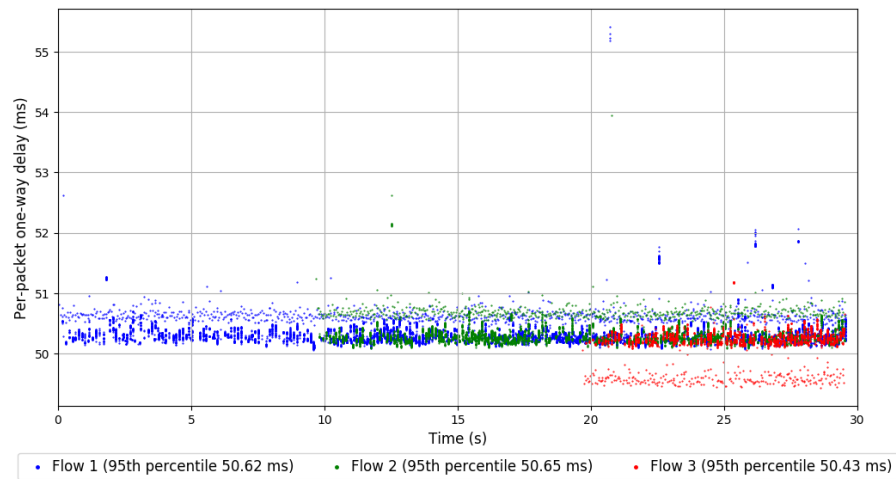
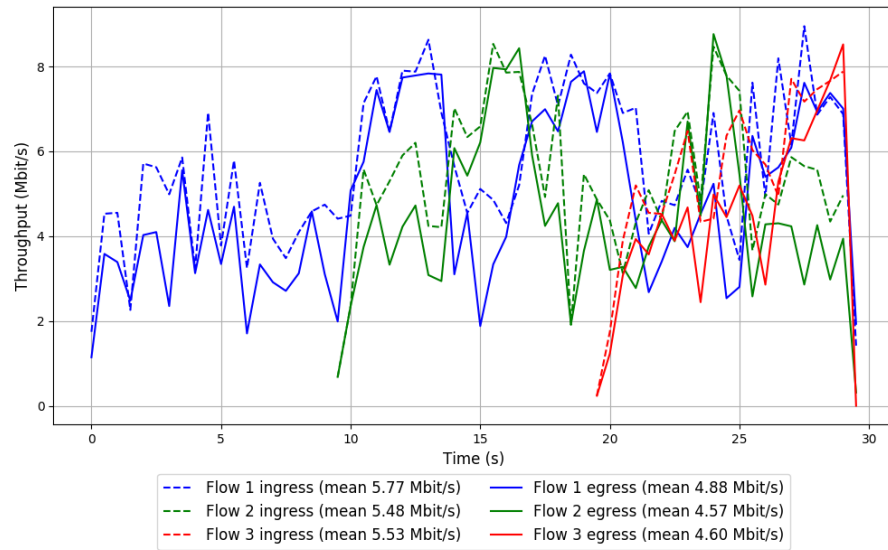
-- Flow 3:

Average throughput: 4.60 Mbit/s

95th percentile per-packet one-way delay: 50.433 ms

Loss rate: 16.71%

Run 10: Report of Sprout — Data Link

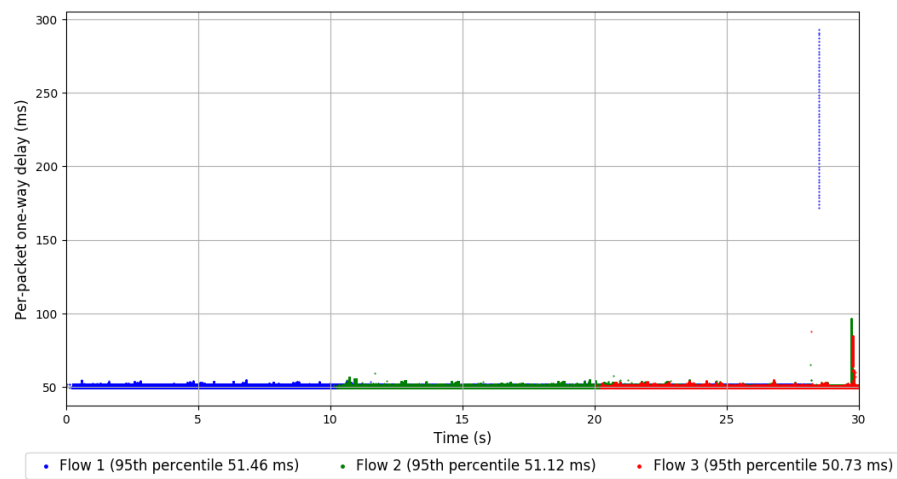
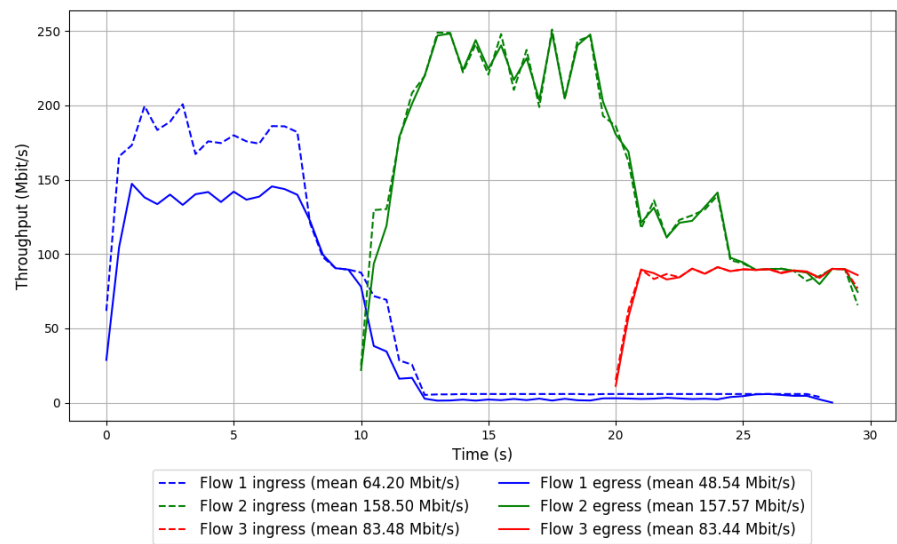


```
Run 1: Statistics of TaoVA-100x

Start at: 2017-08-12 08:55:27
End at: 2017-08-12 08:55:57

# Below is generated by plot.py at 2017-08-12 12:27:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 178.25 Mbit/s
95th percentile per-packet one-way delay: 51.418 ms
Loss rate: 7.88%
-- Flow 1:
Average throughput: 48.54 Mbit/s
95th percentile per-packet one-way delay: 51.460 ms
Loss rate: 24.06%
-- Flow 2:
Average throughput: 157.57 Mbit/s
95th percentile per-packet one-way delay: 51.116 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 83.44 Mbit/s
95th percentile per-packet one-way delay: 50.725 ms
Loss rate: 0.03%
```

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

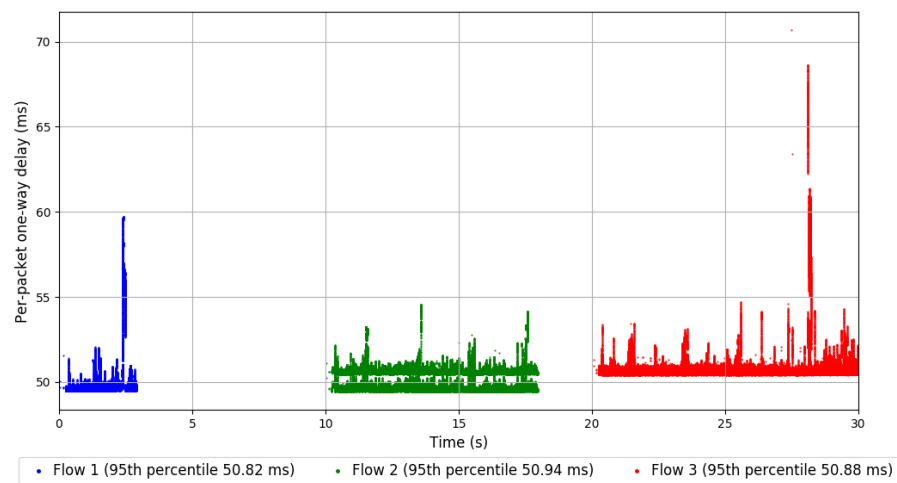
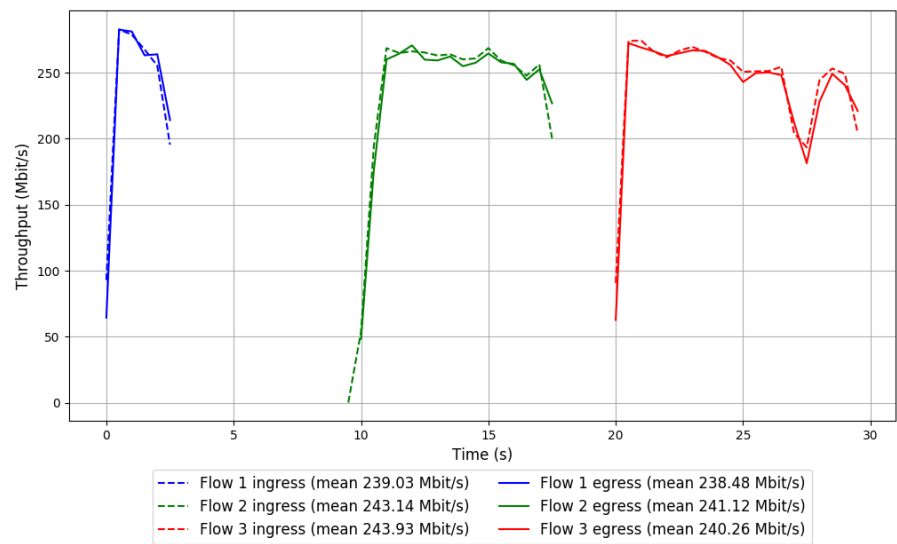


```
Run 2: Statistics of TaoVA-100x

Start at: 2017-08-12 09:06:22
End at: 2017-08-12 09:06:52

# Below is generated by plot.py at 2017-08-12 12:27:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 166.38 Mbit/s
95th percentile per-packet one-way delay: 50.910 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 238.48 Mbit/s
95th percentile per-packet one-way delay: 50.822 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 241.12 Mbit/s
95th percentile per-packet one-way delay: 50.943 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 240.26 Mbit/s
95th percentile per-packet one-way delay: 50.881 ms
Loss rate: 1.50%
```


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

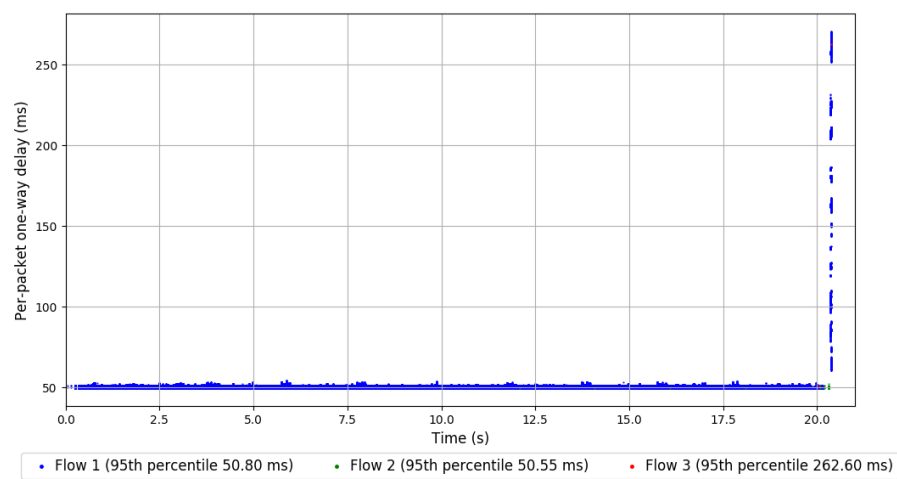
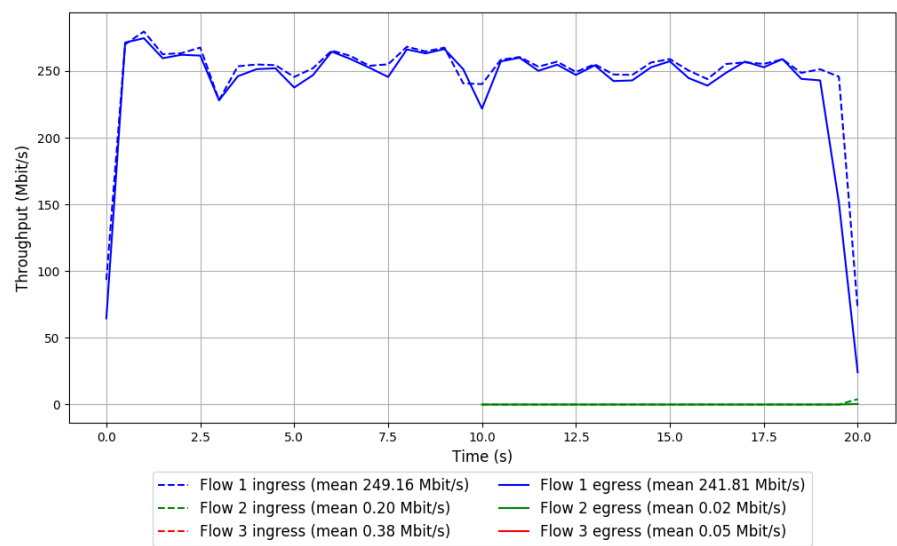


Run 3: Statistics of TaoVA-100x

Start at: 2017-08-12 09:17:34

End at: 2017-08-12 09:18:04

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

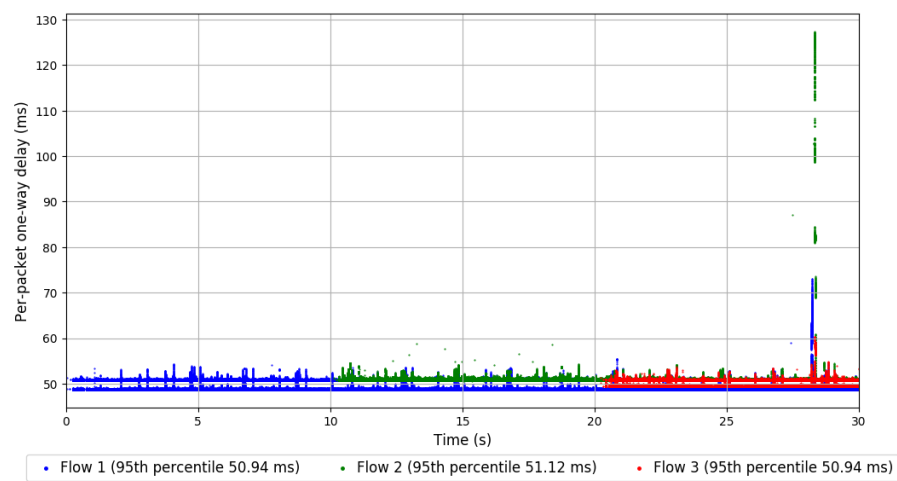
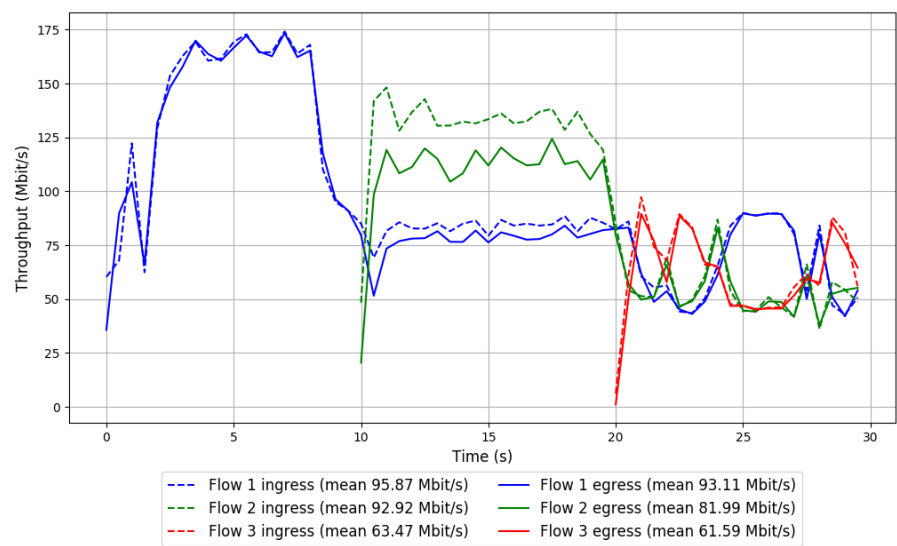


```
Run 4: Statistics of TaoVA-100x

Start at: 2017-08-12 09:28:47
End at: 2017-08-12 09:29:17

# Below is generated by plot.py at 2017-08-12 12:28:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 167.56 Mbit/s
95th percentile per-packet one-way delay: 51.006 ms
Loss rate: 5.96%
-- Flow 1:
Average throughput: 93.11 Mbit/s
95th percentile per-packet one-way delay: 50.936 ms
Loss rate: 2.88%
-- Flow 2:
Average throughput: 81.99 Mbit/s
95th percentile per-packet one-way delay: 51.119 ms
Loss rate: 11.76%
-- Flow 3:
Average throughput: 61.59 Mbit/s
95th percentile per-packet one-way delay: 50.940 ms
Loss rate: 2.95%
```

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

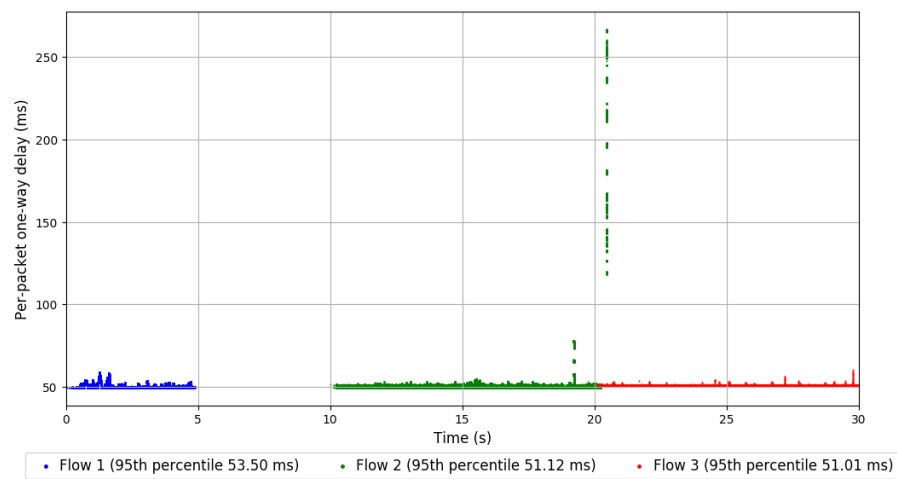
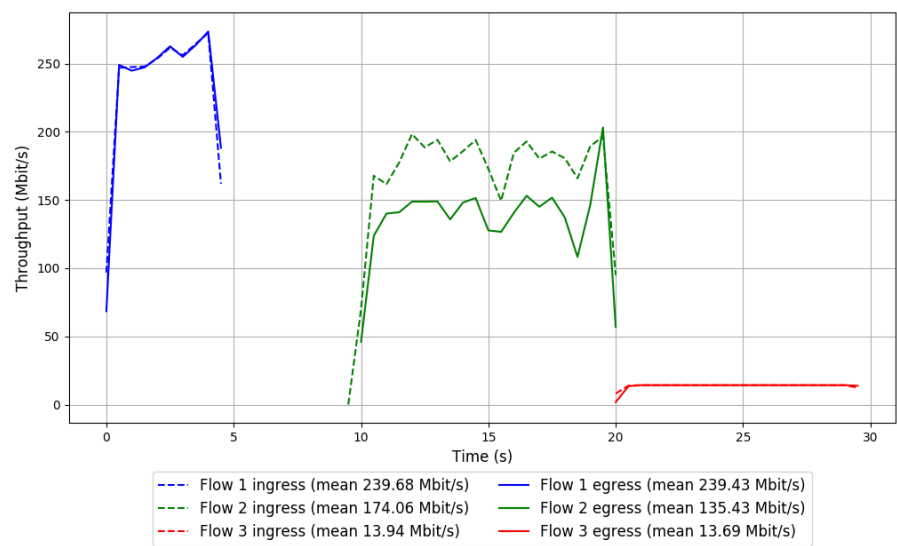


```
Run 5: Statistics of TaoVA-100x

Start at: 2017-08-12 09:40:05
End at: 2017-08-12 09:40:35

# Below is generated by plot.py at 2017-08-12 12:29:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.36 Mbit/s
95th percentile per-packet one-way delay: 51.969 ms
Loss rate: 12.71%
-- Flow 1:
Average throughput: 239.43 Mbit/s
95th percentile per-packet one-way delay: 53.502 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 135.43 Mbit/s
95th percentile per-packet one-way delay: 51.117 ms
Loss rate: 21.60%
-- Flow 3:
Average throughput: 13.69 Mbit/s
95th percentile per-packet one-way delay: 51.012 ms
Loss rate: 1.89%
```

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



Run 6: Statistics of TaoVA-100x

Start at: 2017-08-12 09:51:08

End at: 2017-08-12 09:51:38

Below is generated by plot.py at 2017-08-12 12:30:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 185.36 Mbit/s

95th percentile per-packet one-way delay: 51.013 ms

Loss rate: 4.99%

-- Flow 1:

Average throughput: 123.59 Mbit/s

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

Loss rate: 6.21%

-- Flow 2:

Average throughput: 87.42 Mbit/s

95th percentile per-packet one-way delay: 50.701 ms

Loss rate: 2.49%

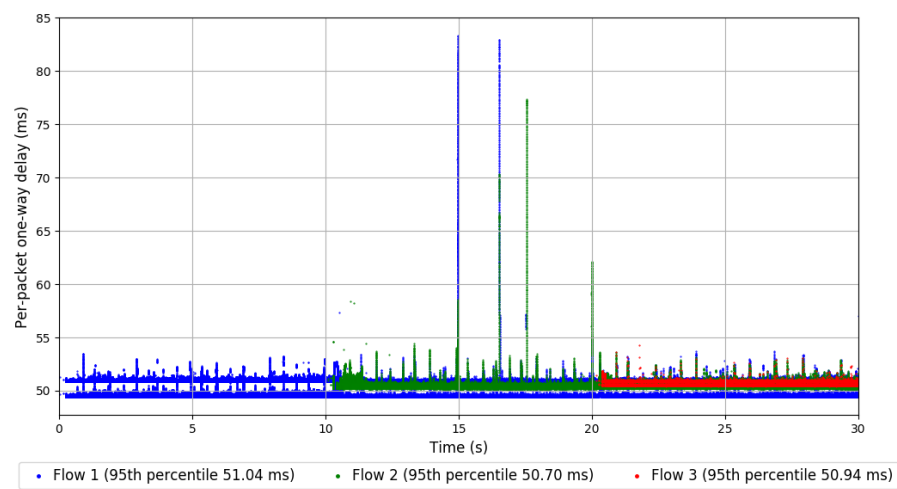
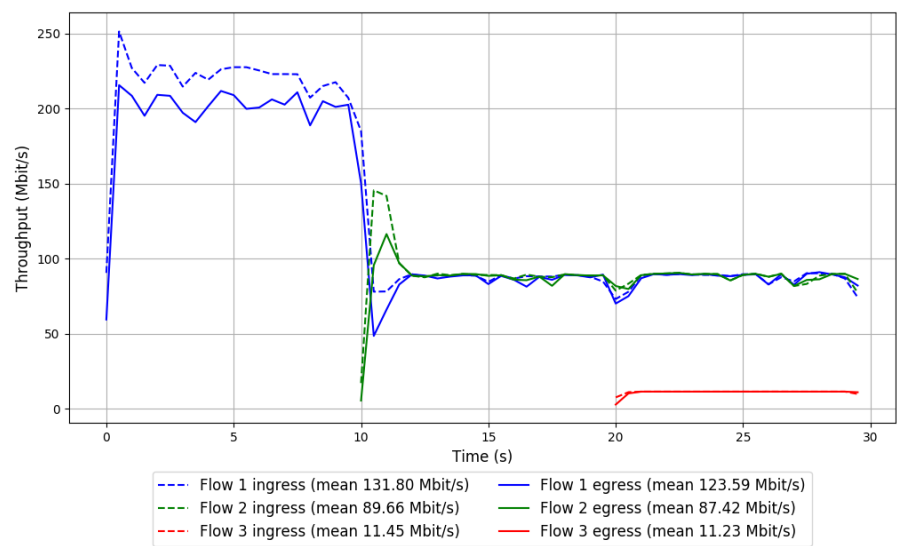
-- Flow 3:

Average throughput: 11.23 Mbit/s

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

Loss rate: 1.97%

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

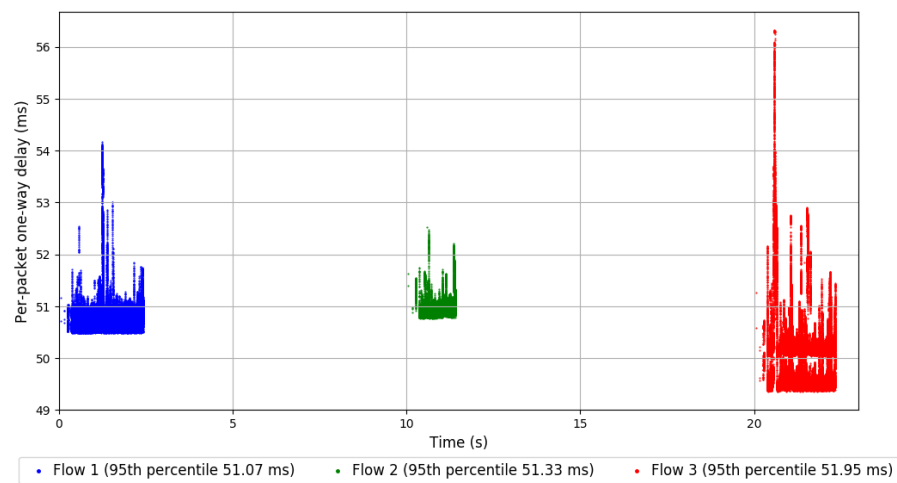
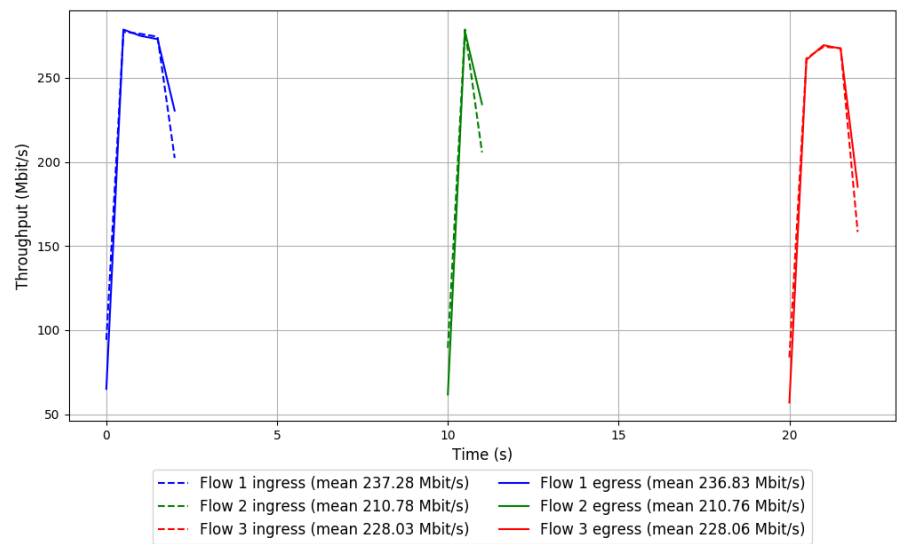


Run 7: Statistics of TaoVA-100x

Start at: 2017-08-12 10:02:12

End at: 2017-08-12 10:02:42

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



Run 8: Statistics of TaoVA-100x

Start at: 2017-08-12 10:13:07

End at: 2017-08-12 10:13:37

Below is generated by plot.py at 2017-08-12 12:30:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 191.54 Mbit/s

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

Loss rate: 0.53%

-- Flow 1:

Average throughput: 210.39 Mbit/s

95th percentile per-packet one-way delay: 51.496 ms

Loss rate: 0.27%

-- Flow 2:

Average throughput: 233.27 Mbit/s

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

Loss rate: 1.56%

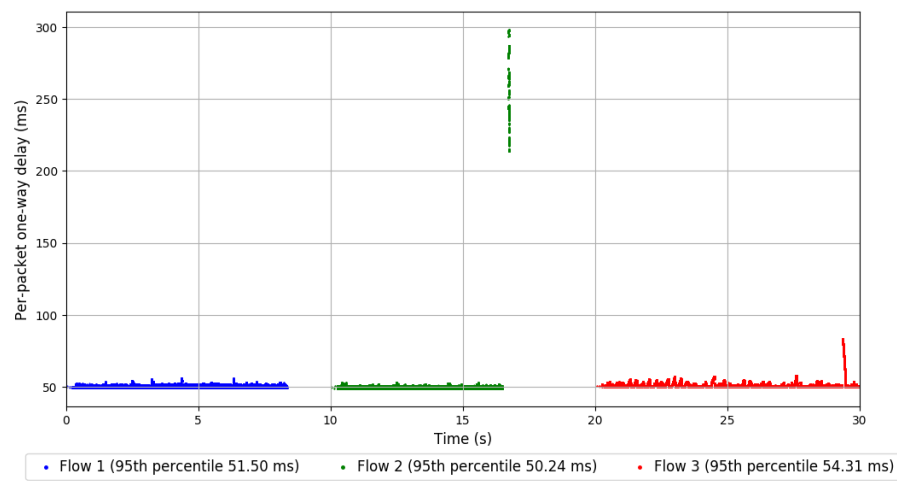
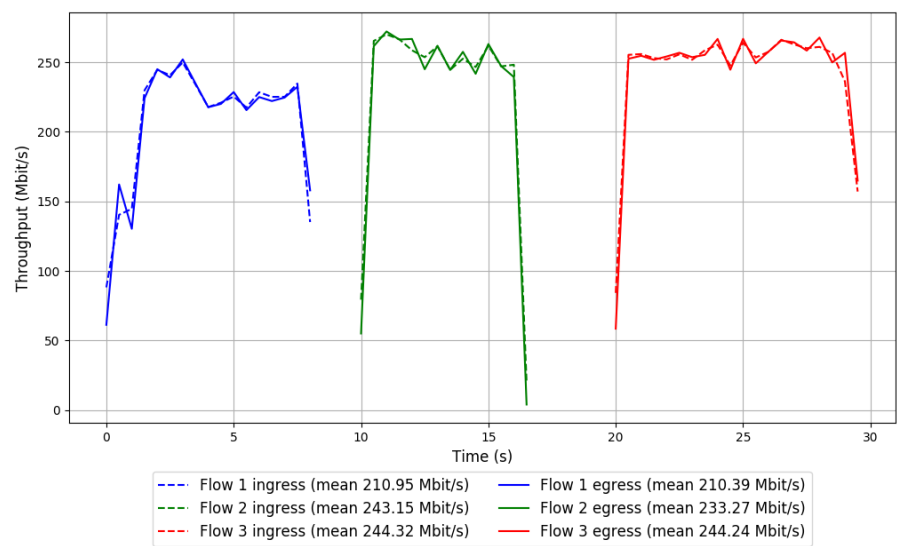
-- Flow 3:

Average throughput: 244.24 Mbit/s

95th percentile per-packet one-way delay: 54.308 ms

Loss rate: 0.03%

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



Run 9: Statistics of TaoVA-100x

Start at: 2017-08-12 10:24:13

End at: 2017-08-12 10:24:43

Below is generated by plot.py at 2017-08-12 12:31:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 190.76 Mbit/s

95th percentile per-packet one-way delay: 50.999 ms

Loss rate: 0.40%

-- Flow 1:

Average throughput: 145.71 Mbit/s

95th percentile per-packet one-way delay: 50.936 ms

Loss rate: 0.20%

-- Flow 2:

Average throughput: 113.54 Mbit/s

95th percentile per-packet one-way delay: 52.592 ms

Loss rate: 1.68%

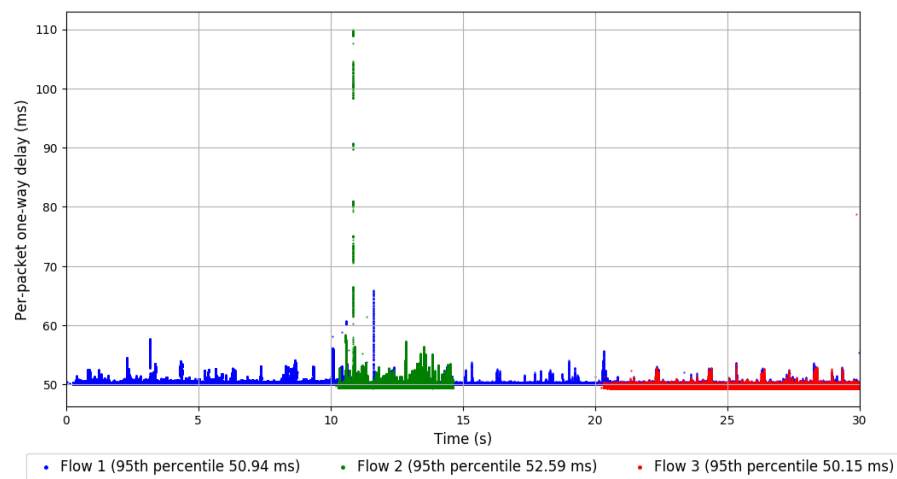
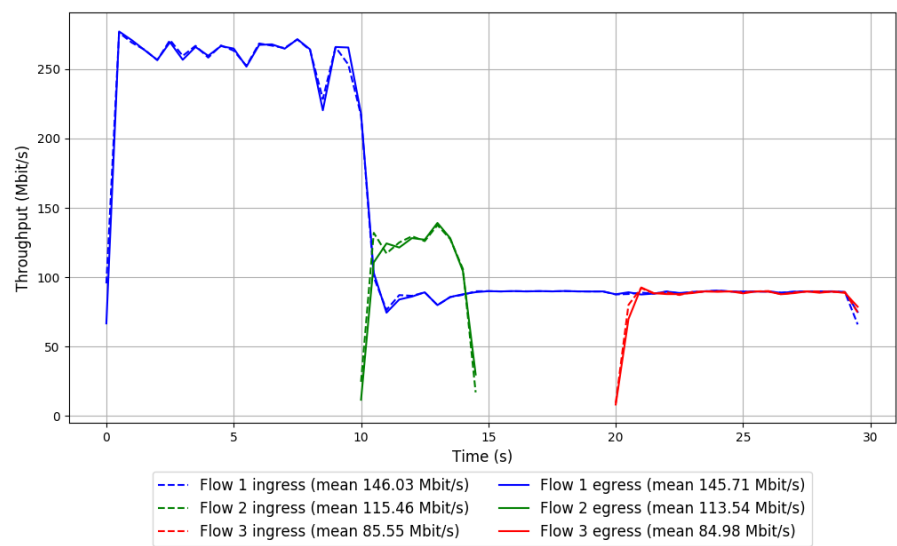
-- Flow 3:

Average throughput: 84.98 Mbit/s

95th percentile per-packet one-way delay: 50.145 ms

Loss rate: 0.66%

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

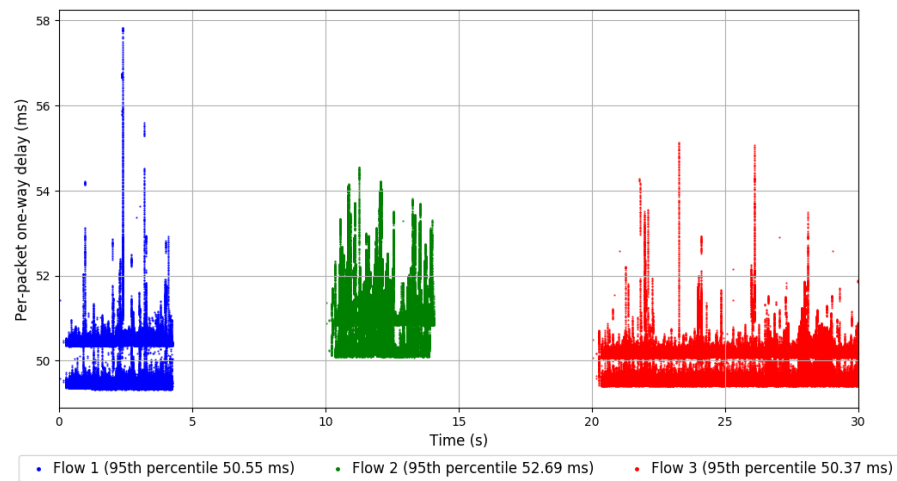
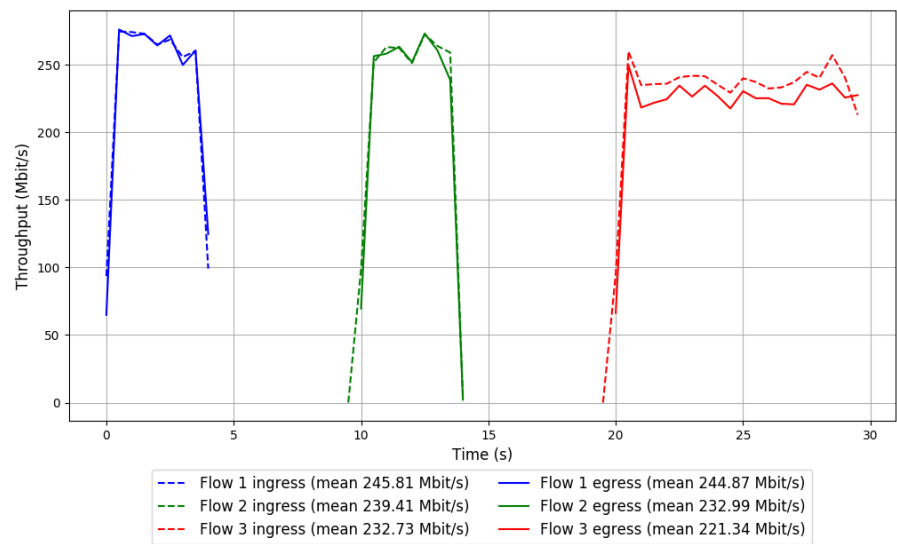


```
Run 10: Statistics of TaoVA-100x

Start at: 2017-08-12 10:35:40
End at: 2017-08-12 10:36:10

# Below is generated by plot.py at 2017-08-12 12:31:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 139.09 Mbit/s
95th percentile per-packet one-way delay: 51.662 ms
Loss rate: 3.32%
-- Flow 1:
Average throughput: 244.87 Mbit/s
95th percentile per-packet one-way delay: 50.546 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 232.99 Mbit/s
95th percentile per-packet one-way delay: 52.690 ms
Loss rate: 2.68%
-- Flow 3:
Average throughput: 221.34 Mbit/s
95th percentile per-packet one-way delay: 50.366 ms
Loss rate: 4.89%
```


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



Run 1: Statistics of TCP Vegas

Start at: 2017-08-12 08:53:44

End at: 2017-08-12 08:54:14

Below is generated by plot.py at 2017-08-12 12:31:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 27.29 Mbit/s

95th percentile per-packet one-way delay: 51.369 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 4.43 Mbit/s

95th percentile per-packet one-way delay: 51.077 ms

Loss rate: 1.73%

-- Flow 2:

Average throughput: 32.15 Mbit/s

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

Loss rate: 0.93%

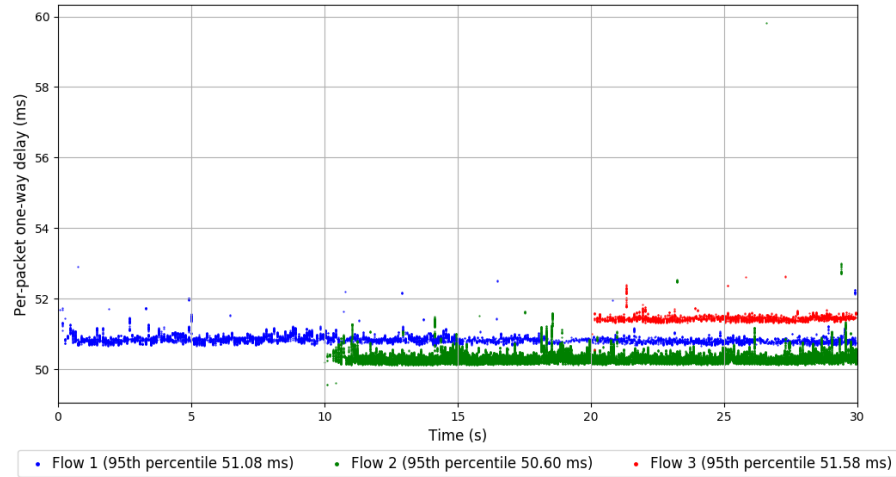
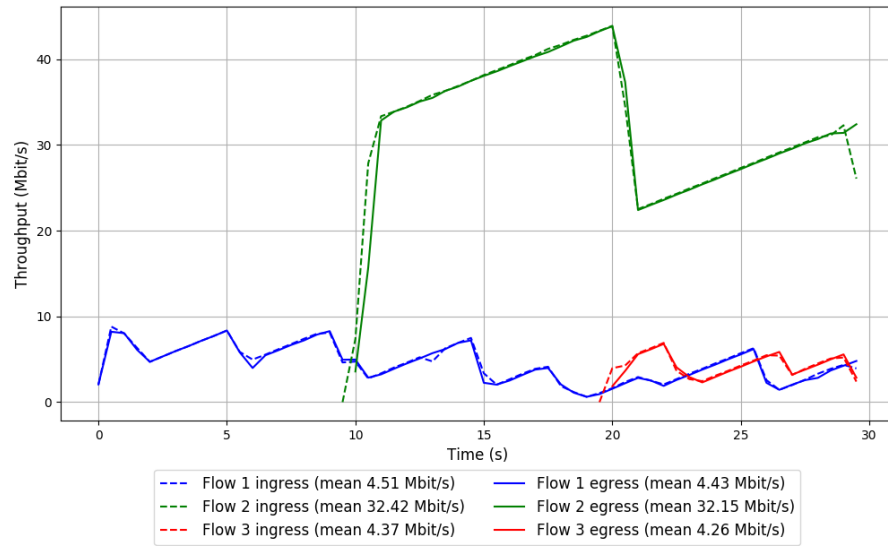
-- Flow 3:

Average throughput: 4.26 Mbit/s

95th percentile per-packet one-way delay: 51.581 ms

Loss rate: 2.60%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2017-08-12 09:05:00

End at: 2017-08-12 09:05:30

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 57.27 Mbit/s

95th percentile per-packet one-way delay: 51.116 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 4.80 Mbit/s

95th percentile per-packet one-way delay: 51.134 ms

Loss rate: 2.69%

-- Flow 2:

Average throughput: 73.93 Mbit/s

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

Loss rate: 0.10%

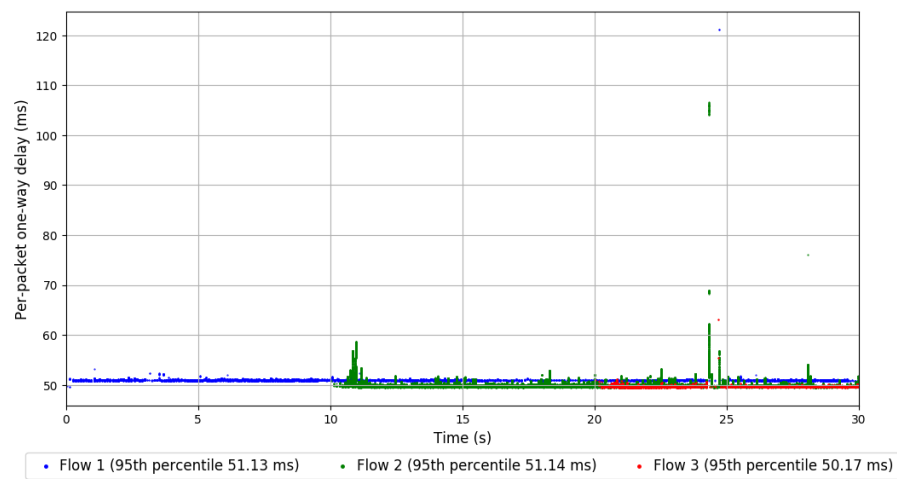
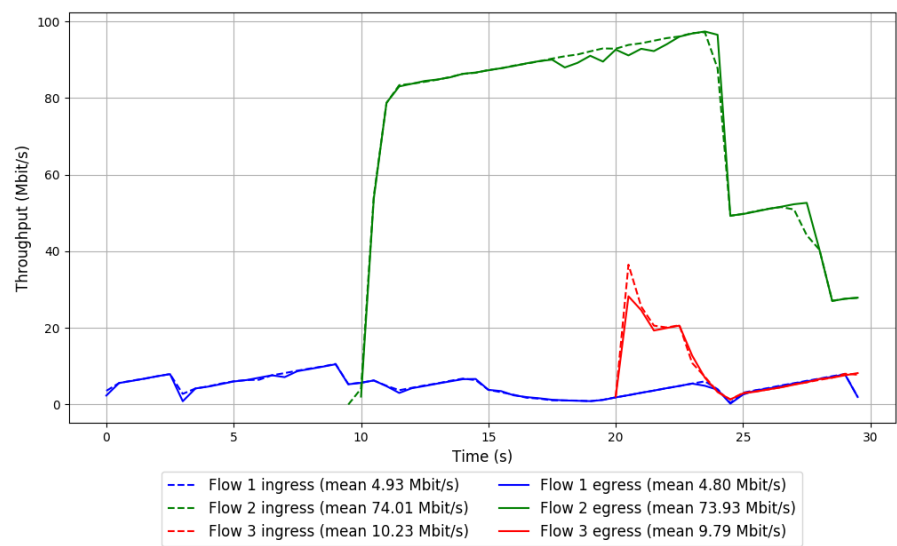
-- Flow 3:

Average throughput: 9.79 Mbit/s

95th percentile per-packet one-way delay: 50.175 ms

Loss rate: 4.48%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2017-08-12 09:15:50

End at: 2017-08-12 09:16:20

Below is generated by plot.py at 2017-08-12 12:31:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 43.74 Mbit/s

95th percentile per-packet one-way delay: 50.261 ms

Loss rate: 1.59%

-- Flow 1:

Average throughput: 14.90 Mbit/s

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

Loss rate: 0.82%

-- Flow 2:

Average throughput: 28.24 Mbit/s

95th percentile per-packet one-way delay: 50.414 ms

Loss rate: 1.67%

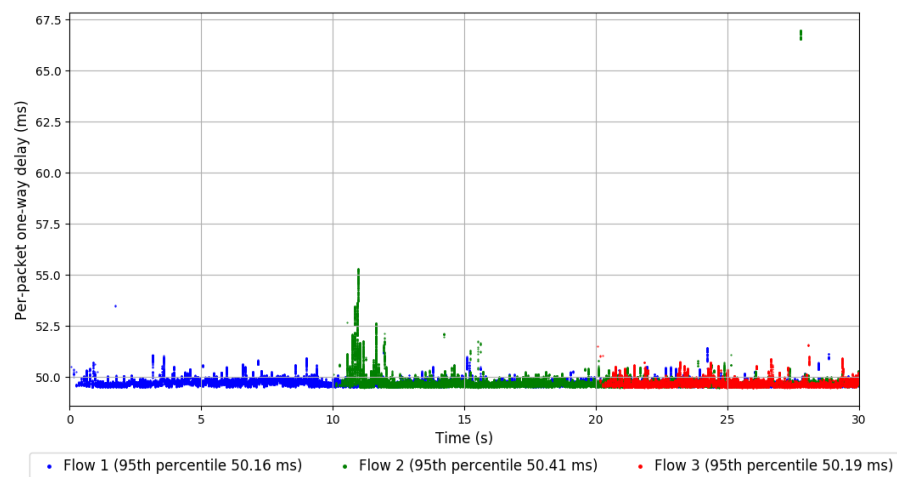
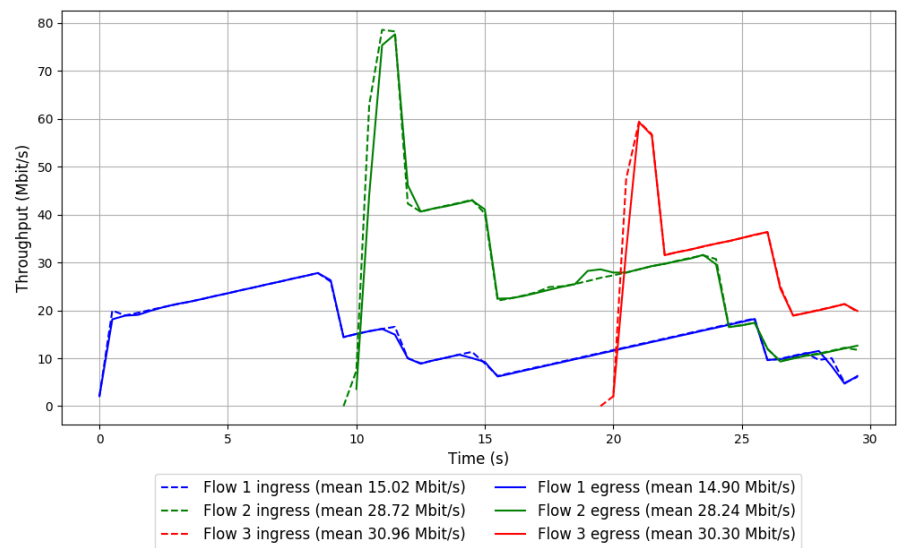
-- Flow 3:

Average throughput: 30.30 Mbit/s

95th percentile per-packet one-way delay: 50.186 ms

Loss rate: 2.55%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2017-08-12 09:27:10

End at: 2017-08-12 09:27:40

Below is generated by plot.py at 2017-08-12 12:31:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 38.68 Mbit/s

95th percentile per-packet one-way delay: 51.465 ms

Loss rate: 2.43%

-- Flow 1:

Average throughput: 19.95 Mbit/s

95th percentile per-packet one-way delay: 51.698 ms

Loss rate: 3.65%

-- Flow 2:

Average throughput: 15.91 Mbit/s

95th percentile per-packet one-way delay: 50.210 ms

Loss rate: 1.82%

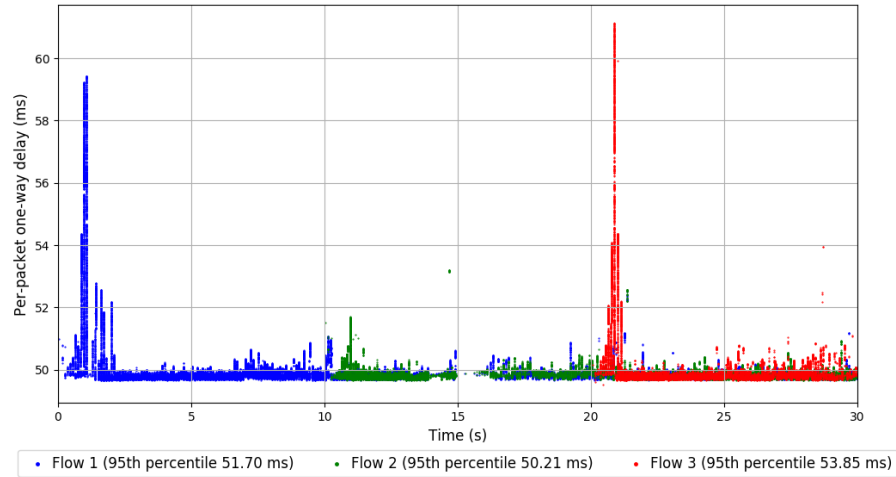
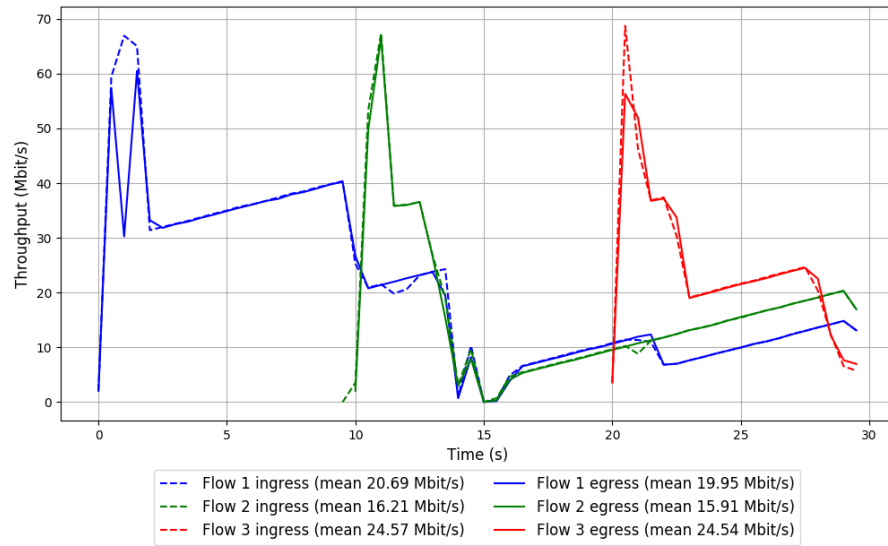
-- Flow 3:

Average throughput: 24.54 Mbit/s

95th percentile per-packet one-way delay: 53.846 ms

Loss rate: 0.13%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2017-08-12 09:38:30

End at: 2017-08-12 09:39:00

Below is generated by plot.py at 2017-08-12 12:31:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 11.77 Mbit/s

95th percentile per-packet one-way delay: 51.171 ms

Loss rate: 1.73%

-- Flow 1:

Average throughput: 7.51 Mbit/s

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

Loss rate: 1.01%

-- Flow 2:

Average throughput: 3.96 Mbit/s

95th percentile per-packet one-way delay: 51.280 ms

Loss rate: 2.62%

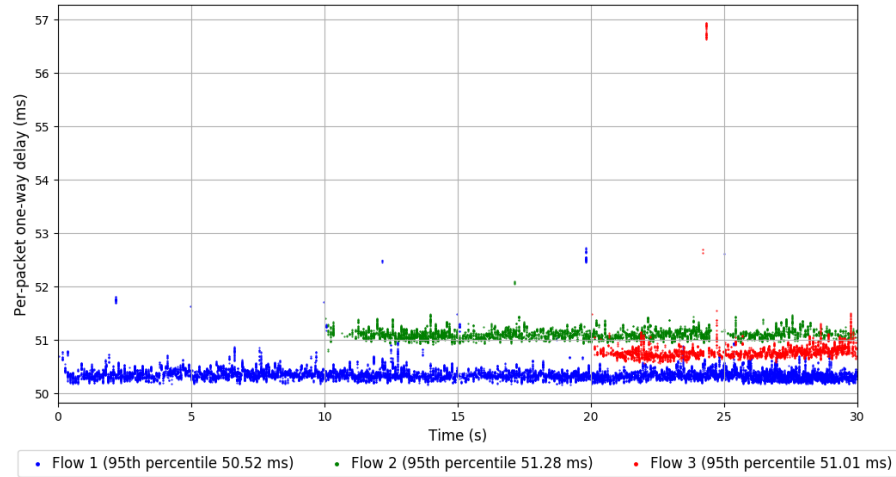
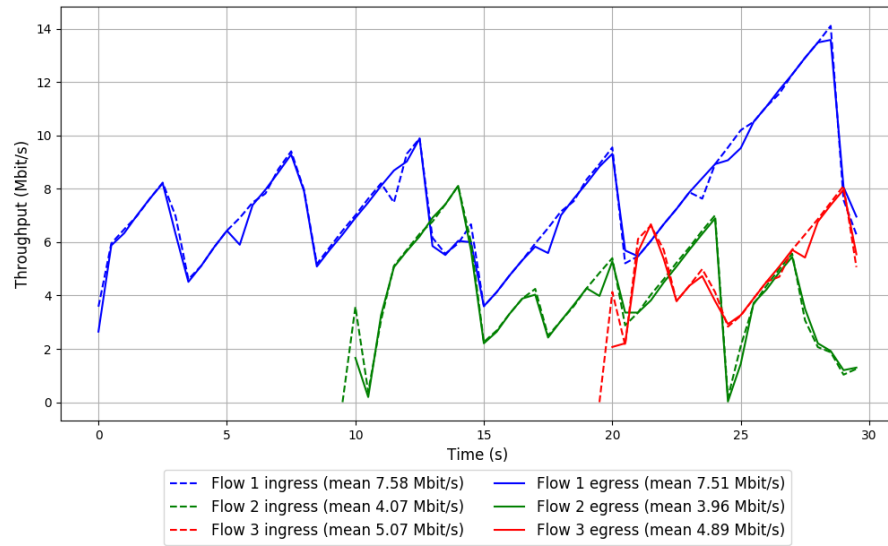
-- Flow 3:

Average throughput: 4.89 Mbit/s

95th percentile per-packet one-way delay: 51.013 ms

Loss rate: 3.55%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2017-08-12 09:49:35

End at: 2017-08-12 09:50:05

Below is generated by plot.py at 2017-08-12 12:31:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 20.13 Mbit/s

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

Loss rate: 1.33%

-- Flow 1:

Average throughput: 3.13 Mbit/s

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

Loss rate: 3.82%

-- Flow 2:

Average throughput: 24.67 Mbit/s

95th percentile per-packet one-way delay: 49.985 ms

Loss rate: 0.51%

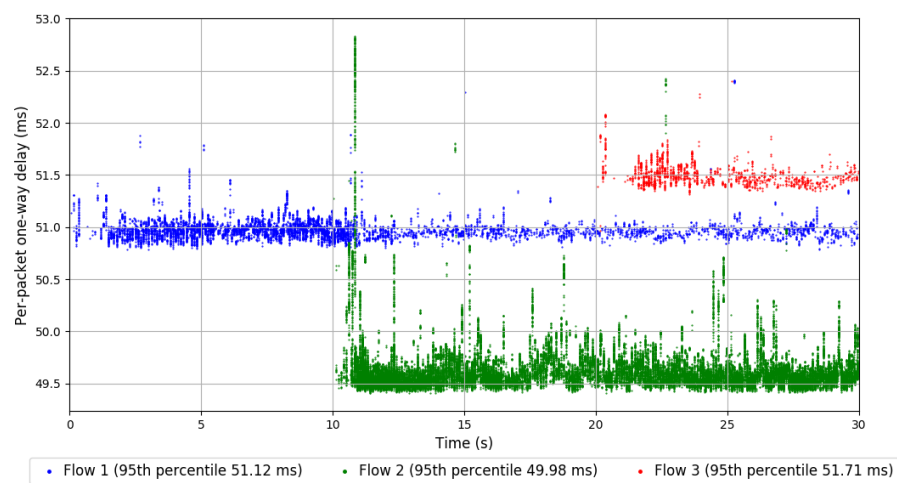
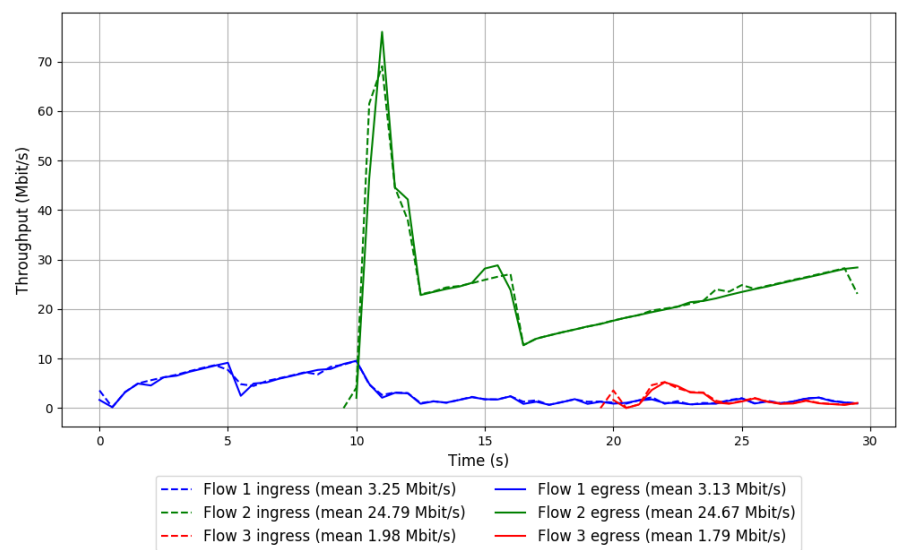
-- Flow 3:

Average throughput: 1.79 Mbit/s

95th percentile per-packet one-way delay: 51.712 ms

Loss rate: 9.61%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2017-08-12 10:00:47

End at: 2017-08-12 10:01:17

Below is generated by plot.py at 2017-08-12 12:31:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.28 Mbit/s

95th percentile per-packet one-way delay: 51.067 ms

Loss rate: 1.82%

-- Flow 1:

Average throughput: 8.92 Mbit/s

95th percentile per-packet one-way delay: 50.773 ms

Loss rate: 1.25%

-- Flow 2:

Average throughput: 7.51 Mbit/s

95th percentile per-packet one-way delay: 51.513 ms

Loss rate: 2.63%

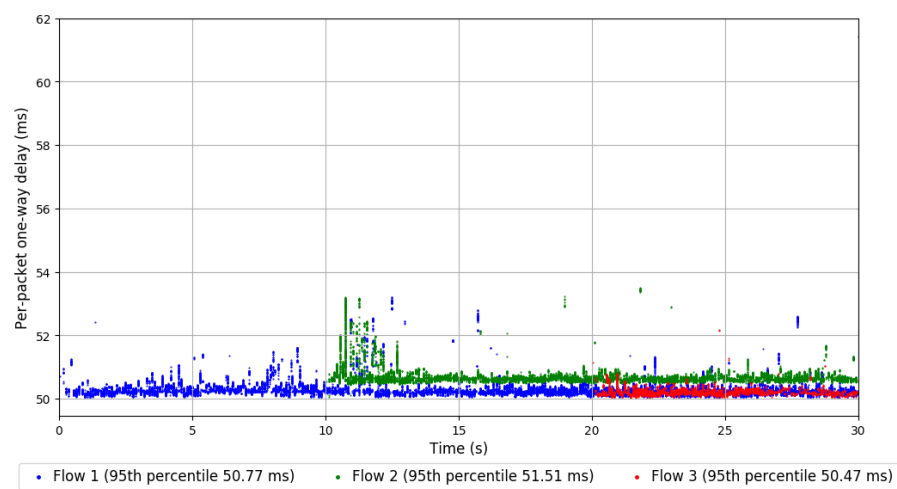
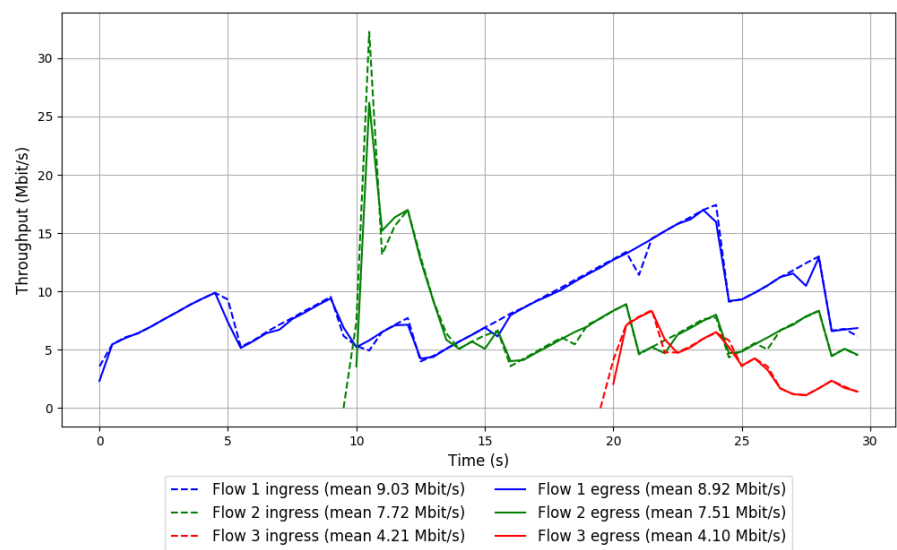
-- Flow 3:

Average throughput: 4.10 Mbit/s

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

Loss rate: 2.56%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2017-08-12 10:11:41

End at: 2017-08-12 10:12:11

Below is generated by plot.py at 2017-08-12 12:31:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 13.09 Mbit/s

95th percentile per-packet one-way delay: 50.780 ms

Loss rate: 0.96%

-- Flow 1:

Average throughput: 6.53 Mbit/s

95th percentile per-packet one-way delay: 50.527 ms

Loss rate: 0.73%

-- Flow 2:

Average throughput: 7.12 Mbit/s

95th percentile per-packet one-way delay: 50.865 ms

Loss rate: 1.01%

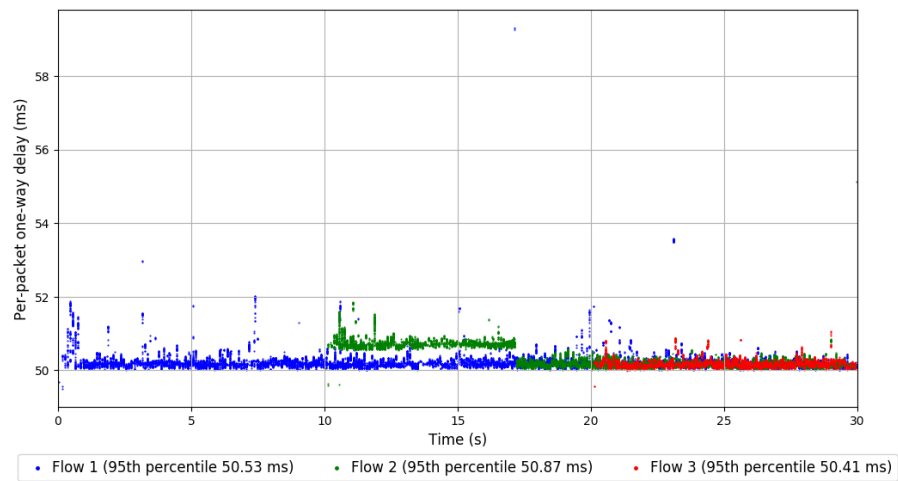
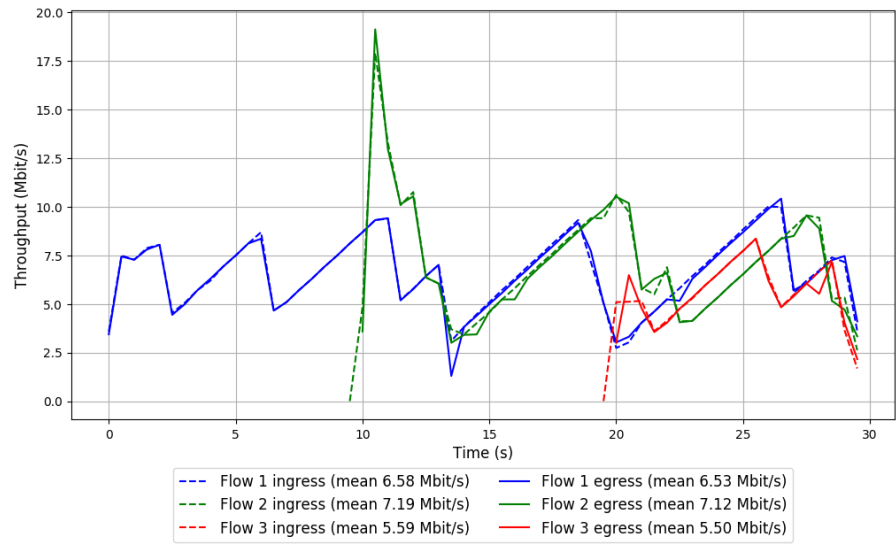
-- Flow 3:

Average throughput: 5.50 Mbit/s

95th percentile per-packet one-way delay: 50.410 ms

Loss rate: 1.69%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2017-08-12 10:22:46

End at: 2017-08-12 10:23:16

Below is generated by plot.py at 2017-08-12 12:31:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 24.01 Mbit/s

95th percentile per-packet one-way delay: 50.819 ms

Loss rate: 0.97%

-- Flow 1:

Average throughput: 4.74 Mbit/s

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

Loss rate: 2.24%

-- Flow 2:

Average throughput: 27.48 Mbit/s

95th percentile per-packet one-way delay: 50.866 ms

Loss rate: 0.50%

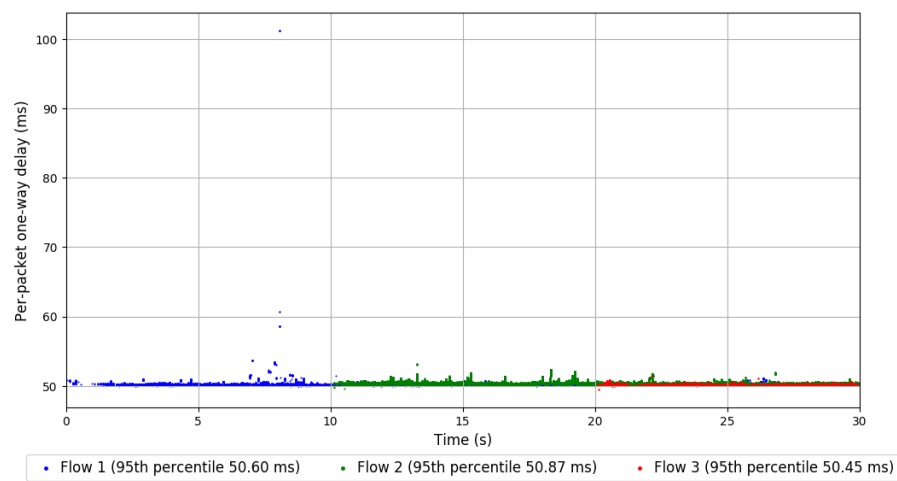
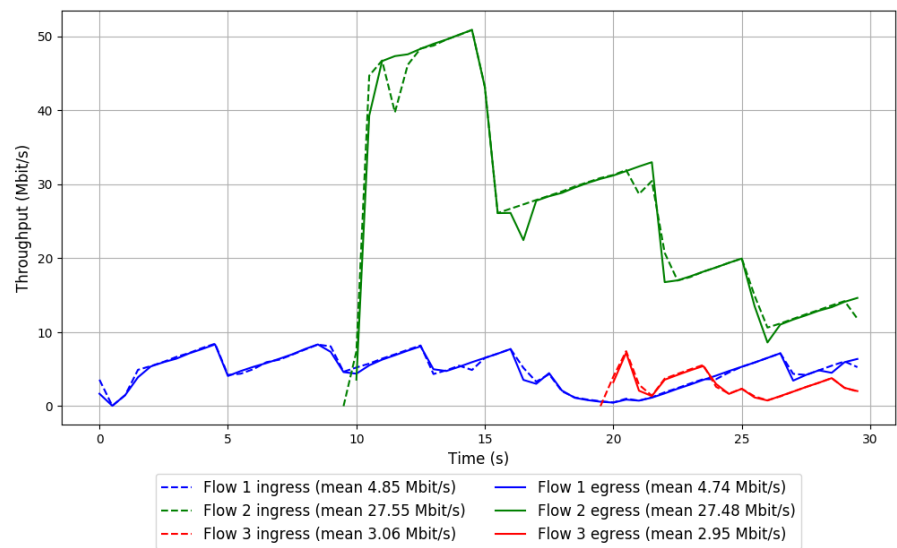
-- Flow 3:

Average throughput: 2.95 Mbit/s

95th percentile per-packet one-way delay: 50.447 ms

Loss rate: 3.53%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2017-08-12 10:33:53

End at: 2017-08-12 10:34:23

Below is generated by plot.py at 2017-08-12 12:31:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 50.87 Mbit/s

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

Loss rate: 0.55%

-- Flow 1:

Average throughput: 25.65 Mbit/s

95th percentile per-packet one-way delay: 51.129 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 22.70 Mbit/s

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

Loss rate: 0.37%

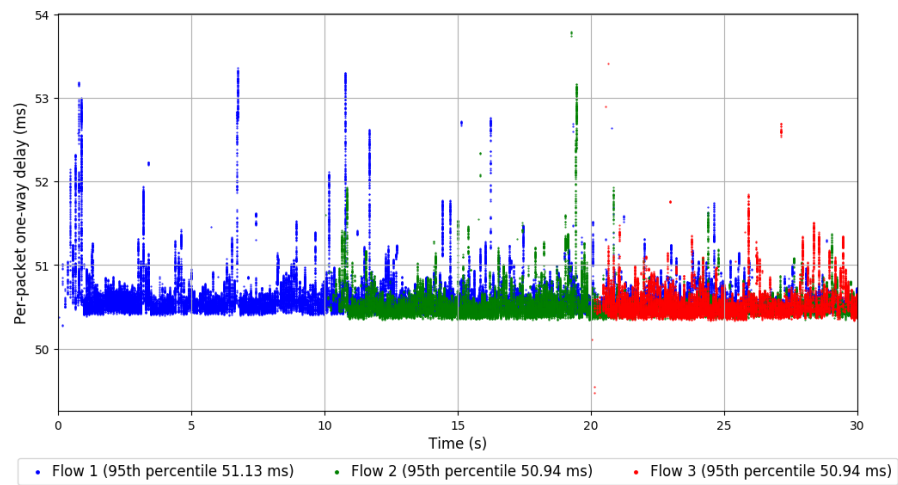
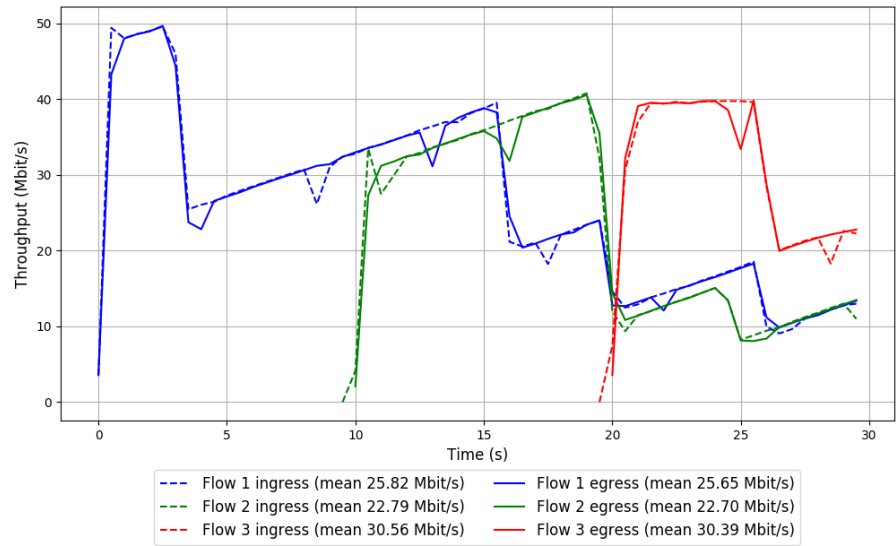
-- Flow 3:

Average throughput: 30.39 Mbit/s

95th percentile per-packet one-way delay: 50.942 ms

Loss rate: 0.55%

Run 10: Report of TCP Vegas — Data Link

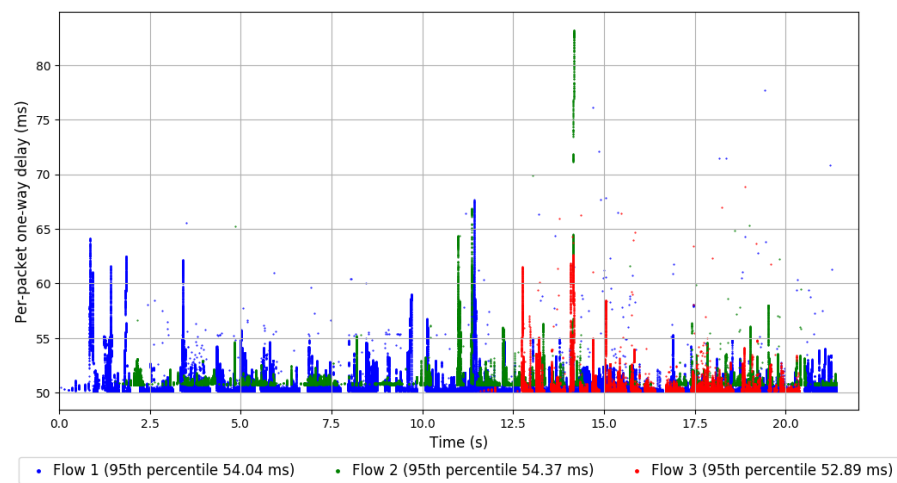
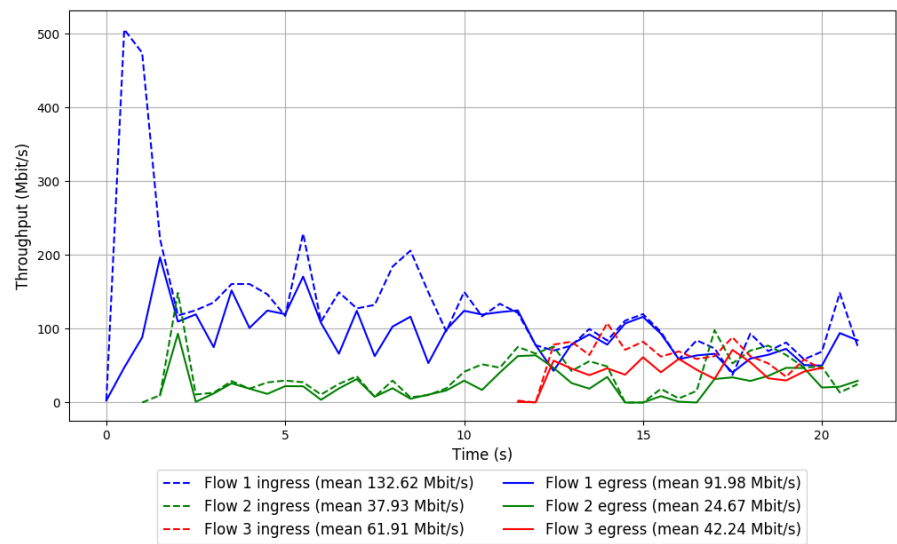


Run 1: Statistics of Verus

Start at: 2017-08-12 08:50:47

End at: 2017-08-12 08:51:17

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2017-08-12 09:02:06

End at: 2017-08-12 09:02:36

Below is generated by plot.py at 2017-08-12 12:32:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 84.89 Mbit/s

95th percentile per-packet one-way delay: 54.126 ms

Loss rate: 58.45%

-- Flow 1:

Average throughput: 20.55 Mbit/s

95th percentile per-packet one-way delay: 51.816 ms

Loss rate: 82.99%

-- Flow 2:

Average throughput: 70.81 Mbit/s

95th percentile per-packet one-way delay: 55.202 ms

Loss rate: 7.22%

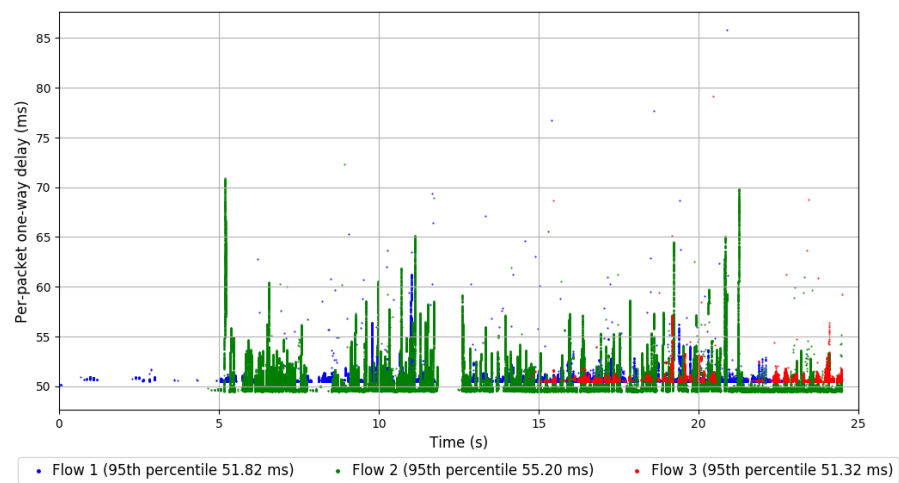
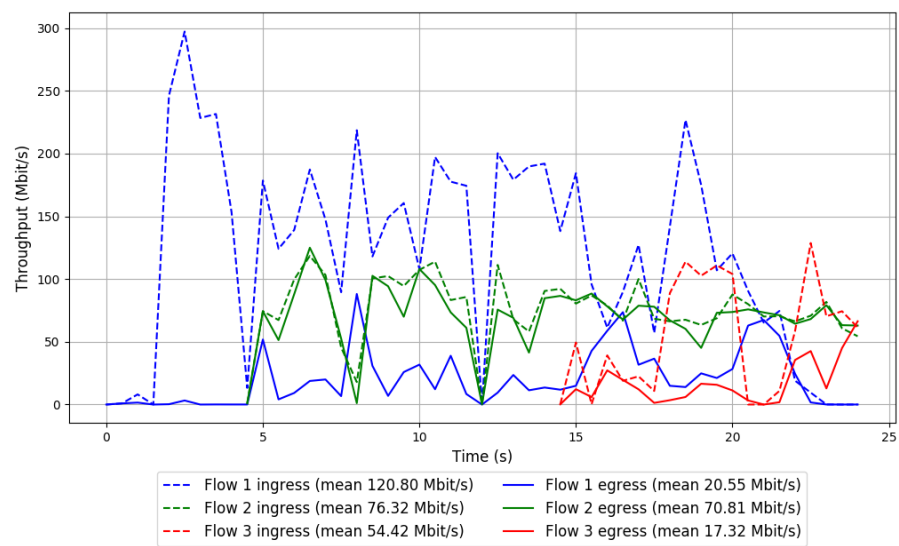
-- Flow 3:

Average throughput: 17.32 Mbit/s

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

Loss rate: 68.18%

Run 2: Report of Verus — Data Link

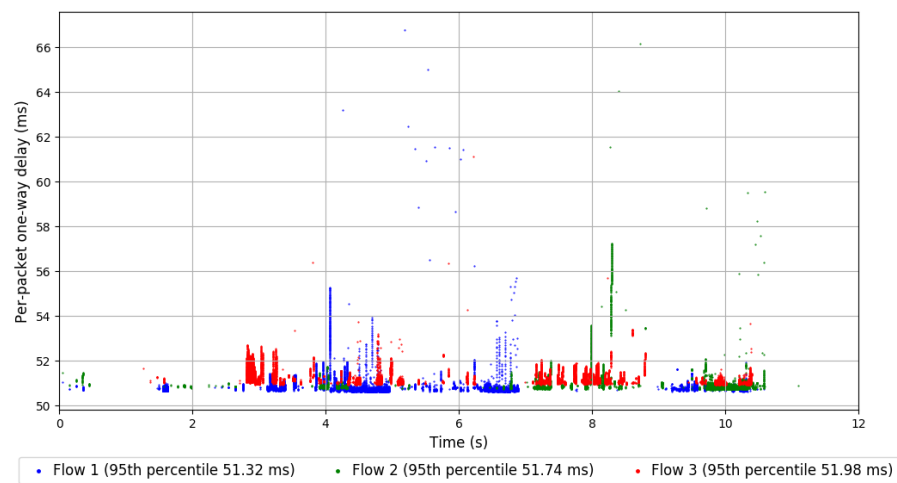
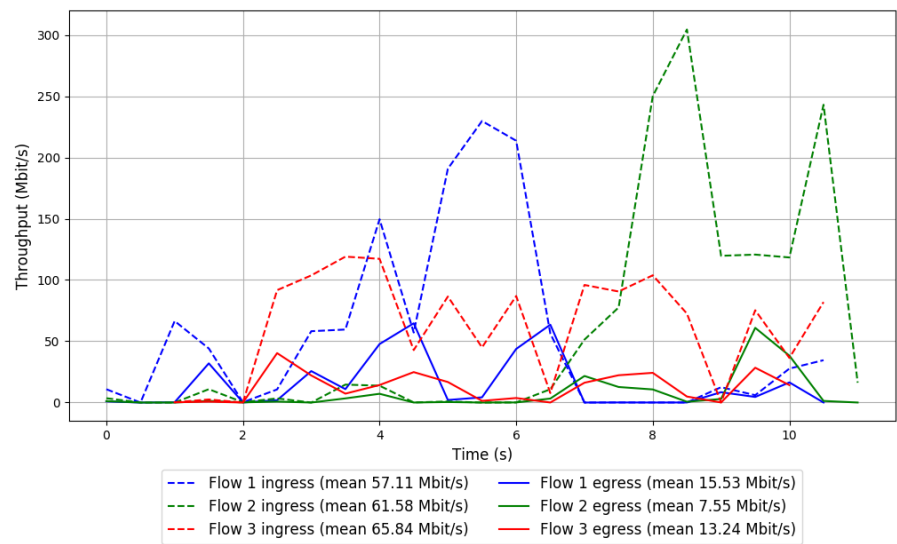


Run 3: Statistics of Verus

Start at: 2017-08-12 09:12:54

End at: 2017-08-12 09:13:24

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2017-08-12 09:24:14

End at: 2017-08-12 09:24:44

Below is generated by plot.py at 2017-08-12 12:32:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 89.63 Mbit/s

95th percentile per-packet one-way delay: 54.395 ms

Loss rate: 35.22%

-- Flow 1:

Average throughput: 62.07 Mbit/s

95th percentile per-packet one-way delay: 55.053 ms

Loss rate: 7.76%

-- Flow 2:

Average throughput: 40.06 Mbit/s

95th percentile per-packet one-way delay: 52.689 ms

Loss rate: 57.25%

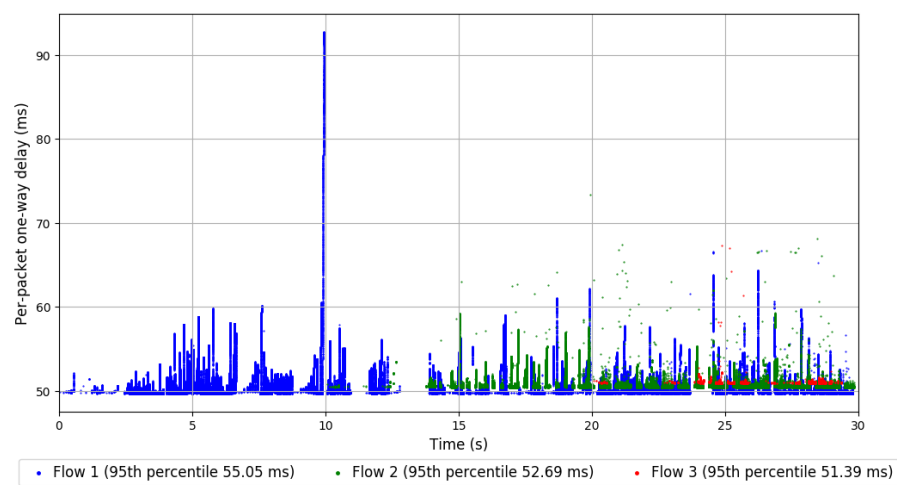
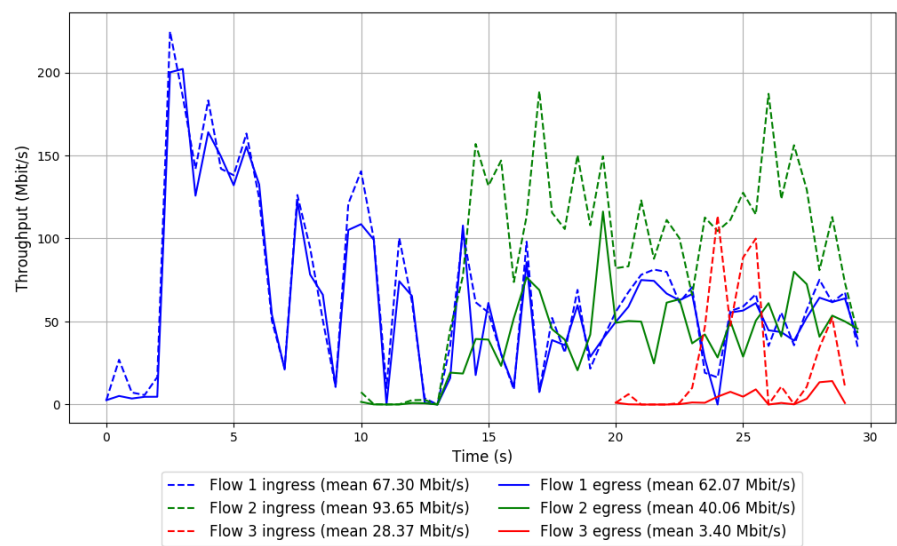
-- Flow 3:

Average throughput: 3.40 Mbit/s

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

Loss rate: 88.18%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2017-08-12 09:35:32

End at: 2017-08-12 09:36:02

Below is generated by plot.py at 2017-08-12 12:32:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 48.62 Mbit/s

95th percentile per-packet one-way delay: 52.482 ms

Loss rate: 73.19%

-- Flow 1:

Average throughput: 40.45 Mbit/s

95th percentile per-packet one-way delay: 52.362 ms

Loss rate: 63.29%

-- Flow 2:

Average throughput: 7.07 Mbit/s

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

Loss rate: 87.70%

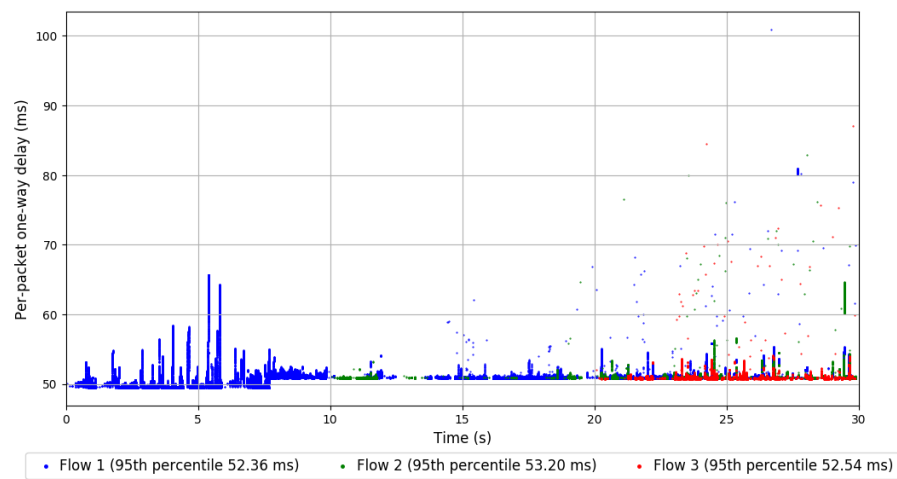
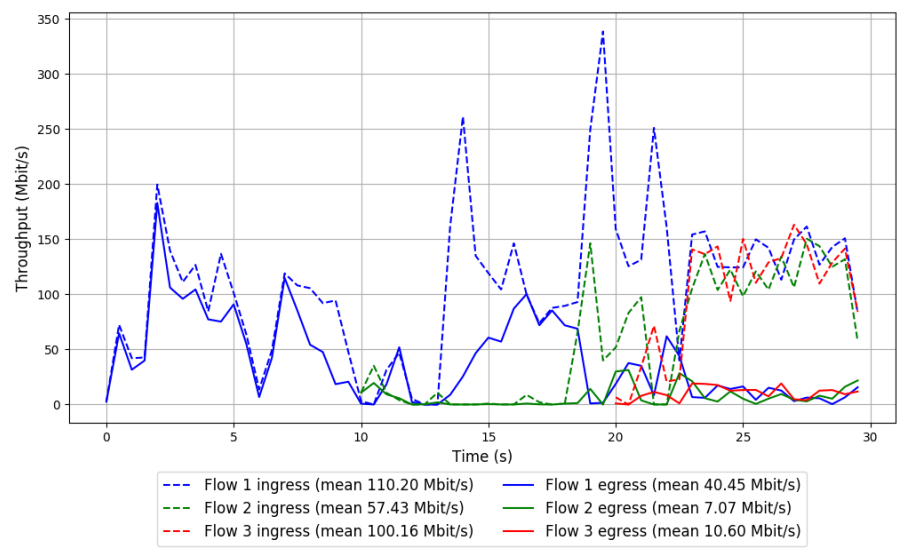
-- Flow 3:

Average throughput: 10.60 Mbit/s

95th percentile per-packet one-way delay: 52.537 ms

Loss rate: 89.48%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2017-08-12 09:46:30

End at: 2017-08-12 09:47:00

Below is generated by plot.py at 2017-08-12 12:33:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 112.64 Mbit/s

95th percentile per-packet one-way delay: 57.817 ms

Loss rate: 46.18%

-- Flow 1:

Average throughput: 98.16 Mbit/s

95th percentile per-packet one-way delay: 58.318 ms

Loss rate: 4.52%

-- Flow 2:

Average throughput: 17.46 Mbit/s

95th percentile per-packet one-way delay: 51.574 ms

Loss rate: 84.97%

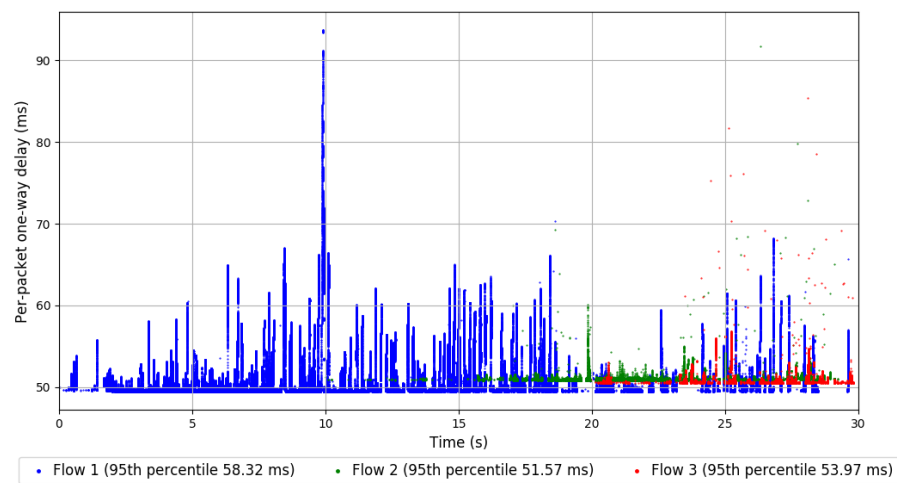
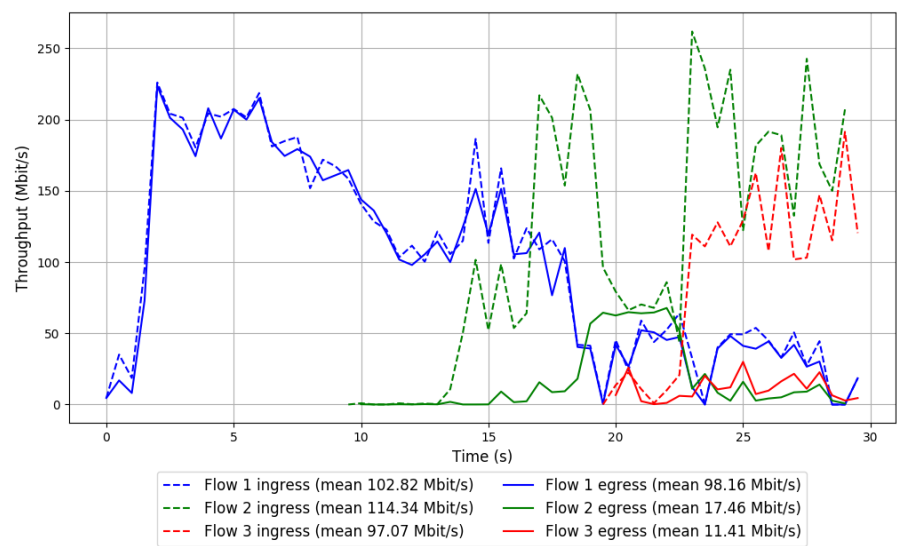
-- Flow 3:

Average throughput: 11.41 Mbit/s

95th percentile per-packet one-way delay: 53.969 ms

Loss rate: 88.28%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2017-08-12 09:57:48

End at: 2017-08-12 09:58:18

Below is generated by plot.py at 2017-08-12 12:33:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 69.03 Mbit/s

95th percentile per-packet one-way delay: 53.459 ms

Loss rate: 61.20%

-- Flow 1:

Average throughput: 36.44 Mbit/s

95th percentile per-packet one-way delay: 54.996 ms

Loss rate: 67.27%

-- Flow 2:

Average throughput: 39.09 Mbit/s

95th percentile per-packet one-way delay: 51.779 ms

Loss rate: 54.55%

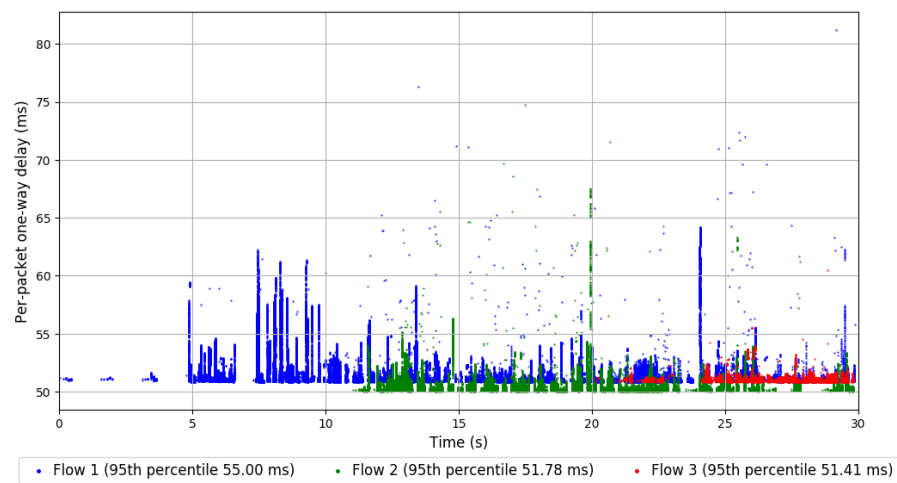
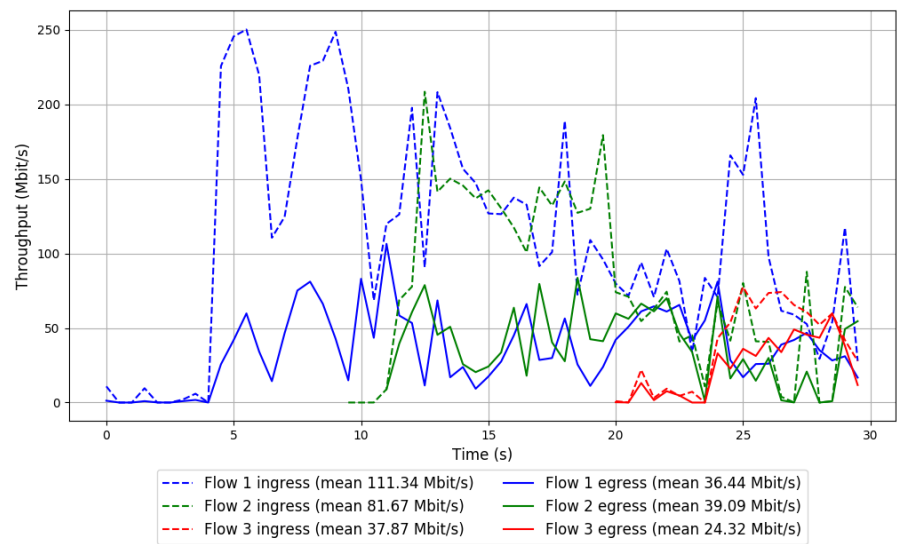
-- Flow 3:

Average throughput: 24.32 Mbit/s

95th percentile per-packet one-way delay: 51.409 ms

Loss rate: 35.78%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

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

End at: 2017-08-12 10:09:04

Below is generated by plot.py at 2017-08-12 12:33:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 124.06 Mbit/s

95th percentile per-packet one-way delay: 55.782 ms

Loss rate: 30.76%

-- Flow 1:

Average throughput: 84.28 Mbit/s

95th percentile per-packet one-way delay: 57.069 ms

Loss rate: 0.49%

-- Flow 2:

Average throughput: 49.44 Mbit/s

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

Loss rate: 58.74%

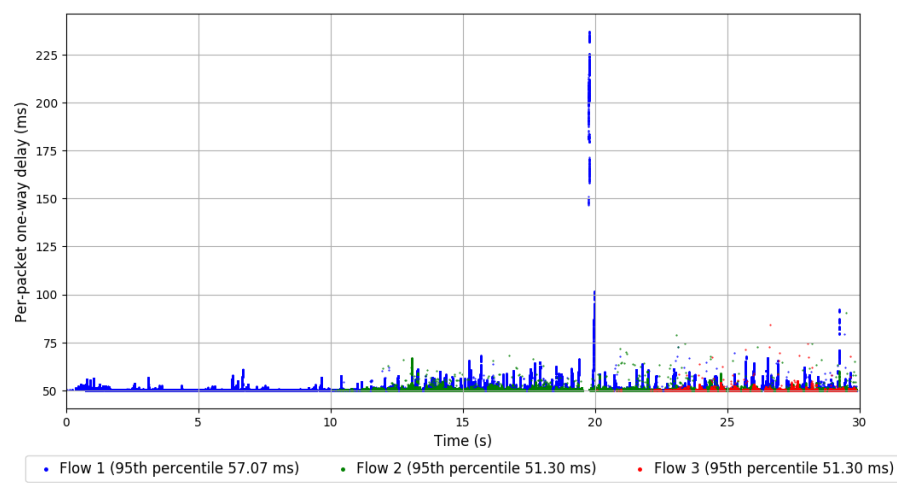
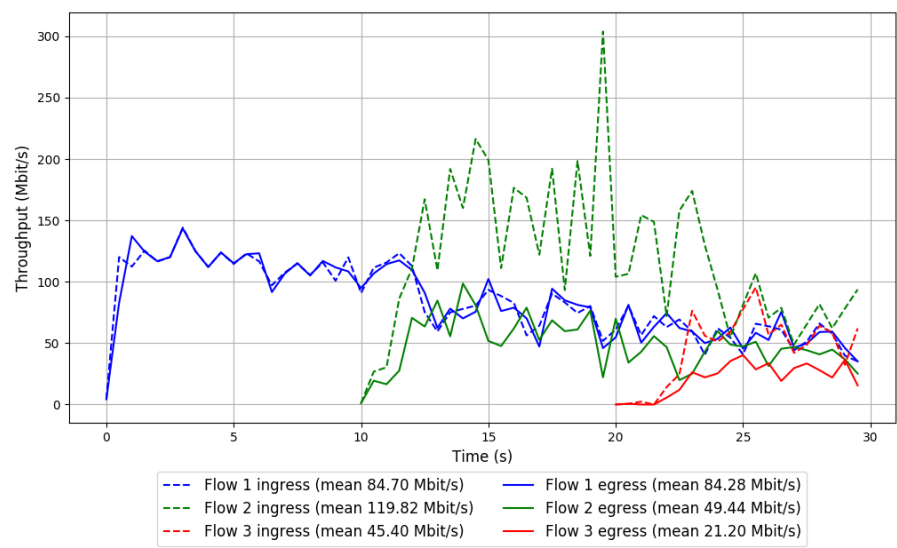
-- Flow 3:

Average throughput: 21.20 Mbit/s

95th percentile per-packet one-way delay: 51.298 ms

Loss rate: 53.30%

Run 8: Report of Verus — Data Link

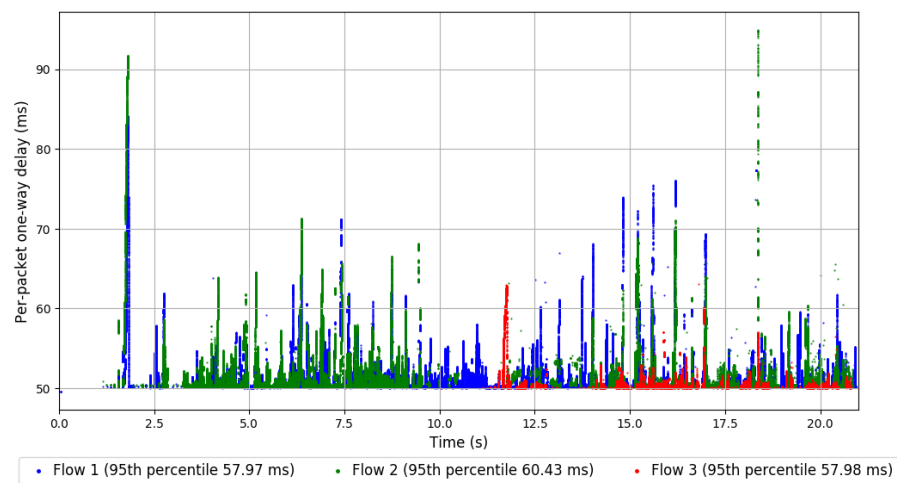
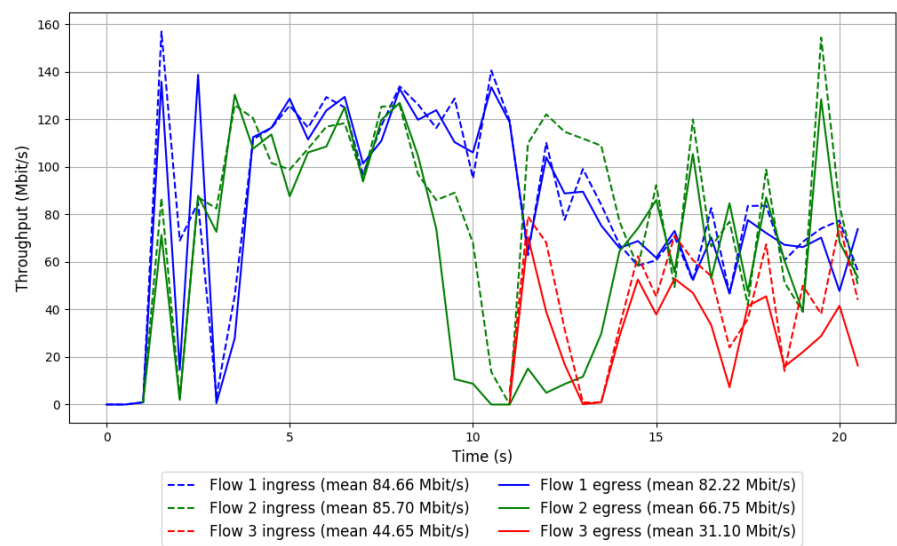


Run 9: Statistics of Verus

Start at: 2017-08-12 10:19:44

End at: 2017-08-12 10:20:14

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2017-08-12 10:30:52

End at: 2017-08-12 10:31:22

Below is generated by plot.py at 2017-08-12 12:33:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 92.89 Mbit/s

95th percentile per-packet one-way delay: 53.999 ms

Loss rate: 49.42%

-- Flow 1:

Average throughput: 64.18 Mbit/s

95th percentile per-packet one-way delay: 54.191 ms

Loss rate: 53.37%

-- Flow 2:

Average throughput: 29.45 Mbit/s

95th percentile per-packet one-way delay: 54.470 ms

Loss rate: 20.79%

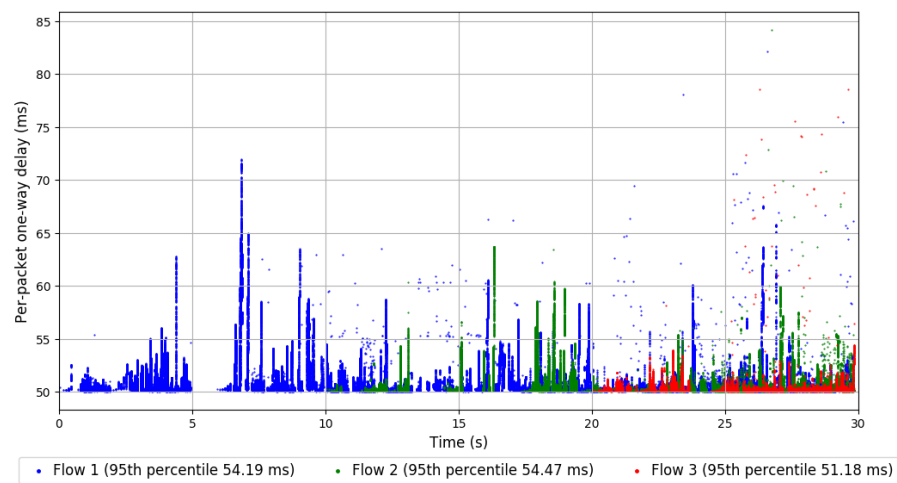
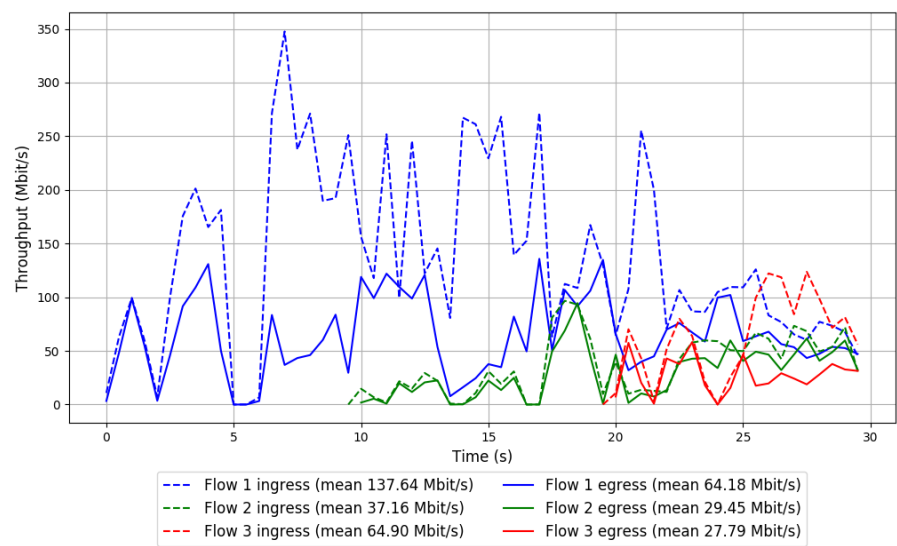
-- Flow 3:

Average throughput: 27.79 Mbit/s

95th percentile per-packet one-way delay: 51.178 ms

Loss rate: 57.16%

Run 10: Report of Verus — Data Link

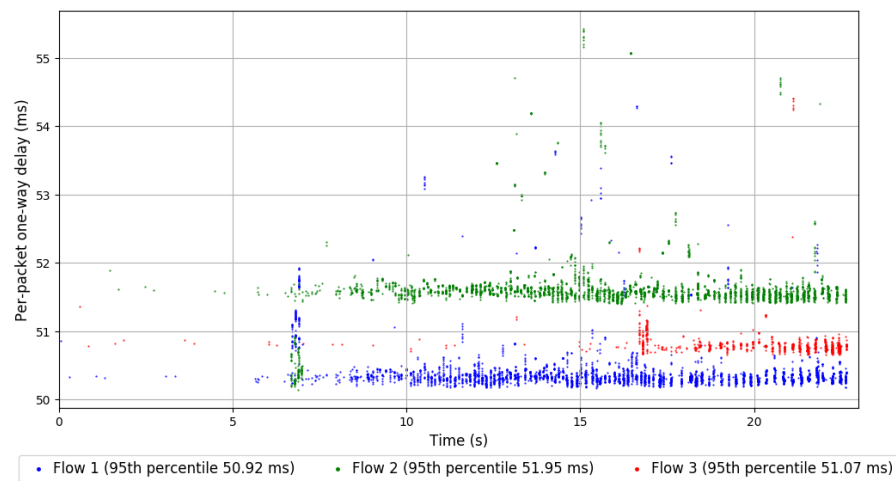
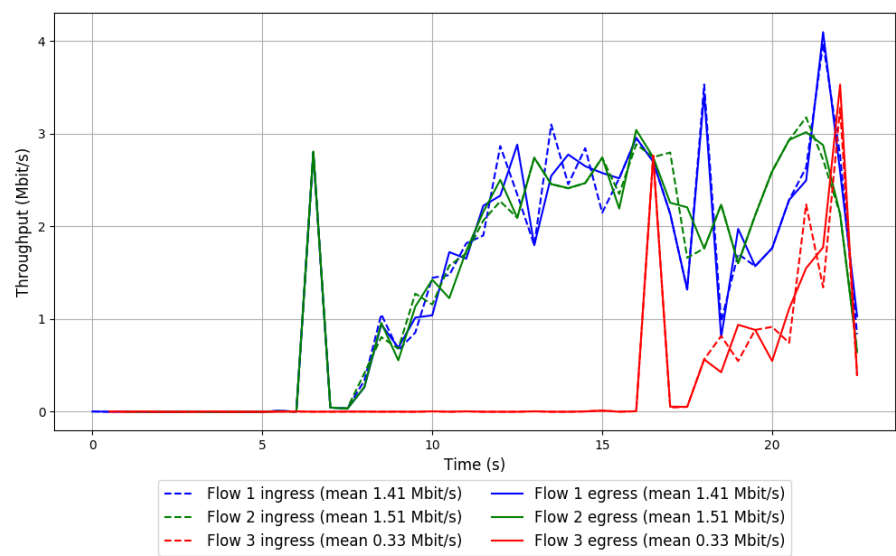


Run 1: Statistics of WebRTC media

Start at: 2017-08-12 08:46:41

End at: 2017-08-12 08:47:11

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2017-08-12 08:57:58

End at: 2017-08-12 08:58:28

Below is generated by plot.py at 2017-08-12 12:33:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.81 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 51.088 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.95 Mbit/s

95th percentile per-packet one-way delay: 49.851 ms

Loss rate: 0.00%

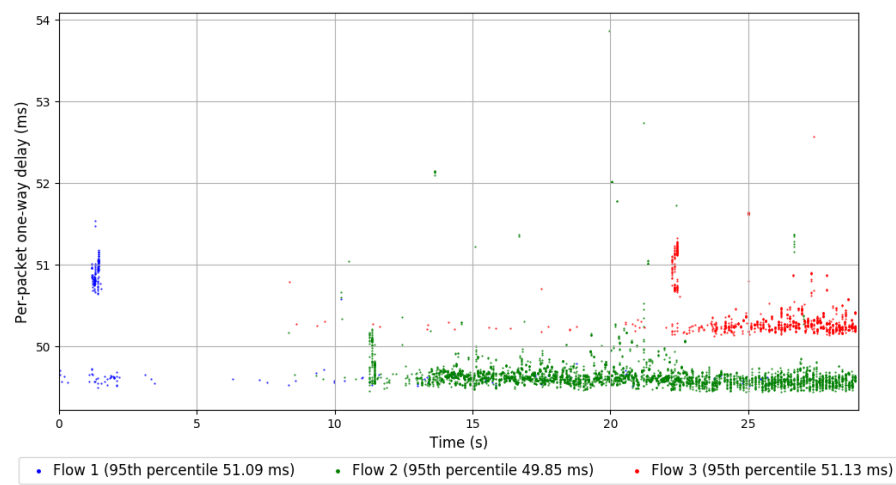
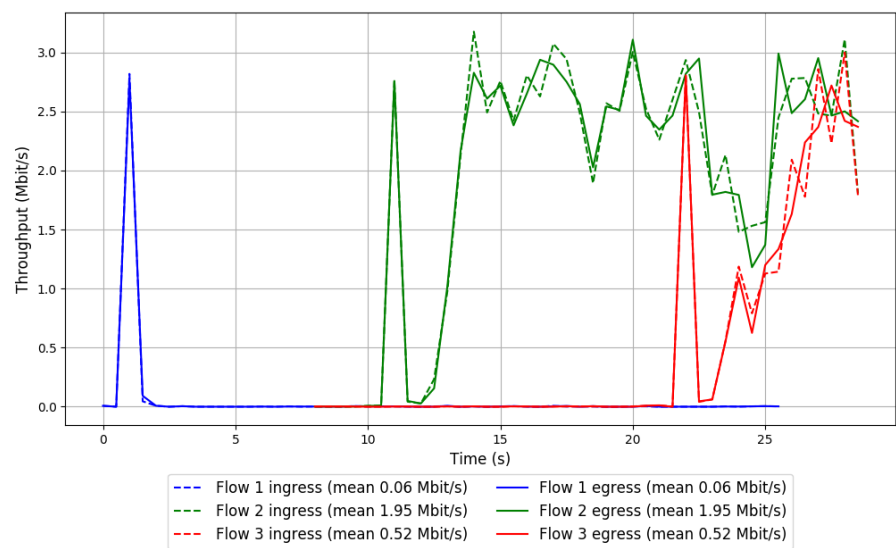
-- Flow 3:

Average throughput: 0.52 Mbit/s

95th percentile per-packet one-way delay: 51.132 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2017-08-12 09:08:51

End at: 2017-08-12 09:09:21

Below is generated by plot.py at 2017-08-12 12:33:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.72 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 215.435 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.87 Mbit/s

95th percentile per-packet one-way delay: 50.126 ms

Loss rate: 0.00%

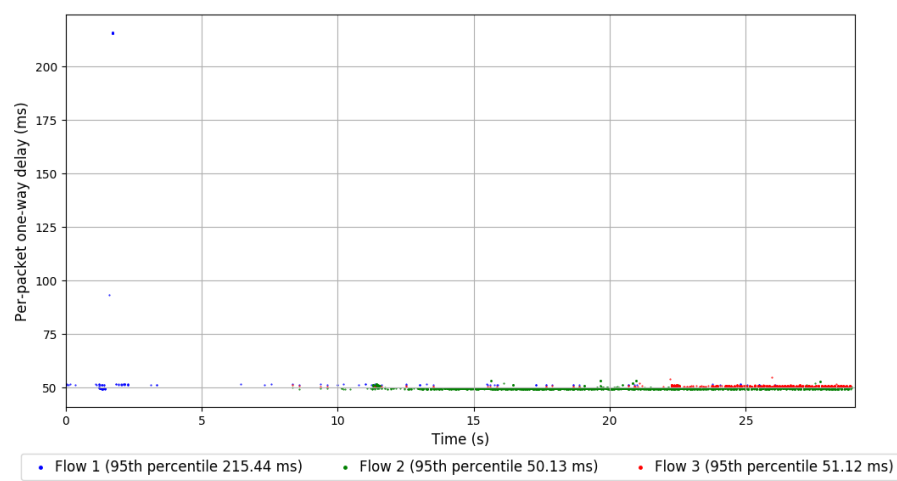
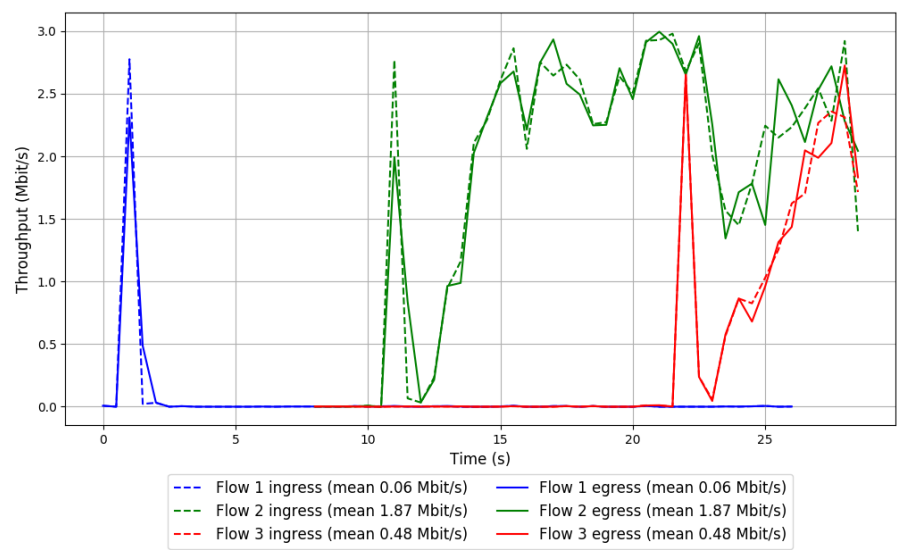
-- Flow 3:

Average throughput: 0.48 Mbit/s

95th percentile per-packet one-way delay: 51.125 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2017-08-12 09:20:07

End at: 2017-08-12 09:20:37

Below is generated by plot.py at 2017-08-12 12:33:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.71 Mbit/s

95th percentile per-packet one-way delay: 50.540 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 49.996 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.83 Mbit/s

95th percentile per-packet one-way delay: 50.031 ms

Loss rate: 0.00%

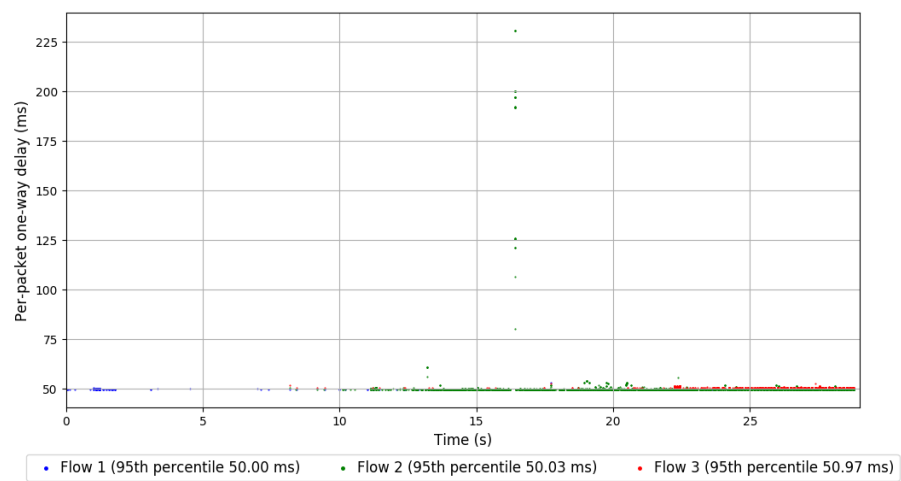
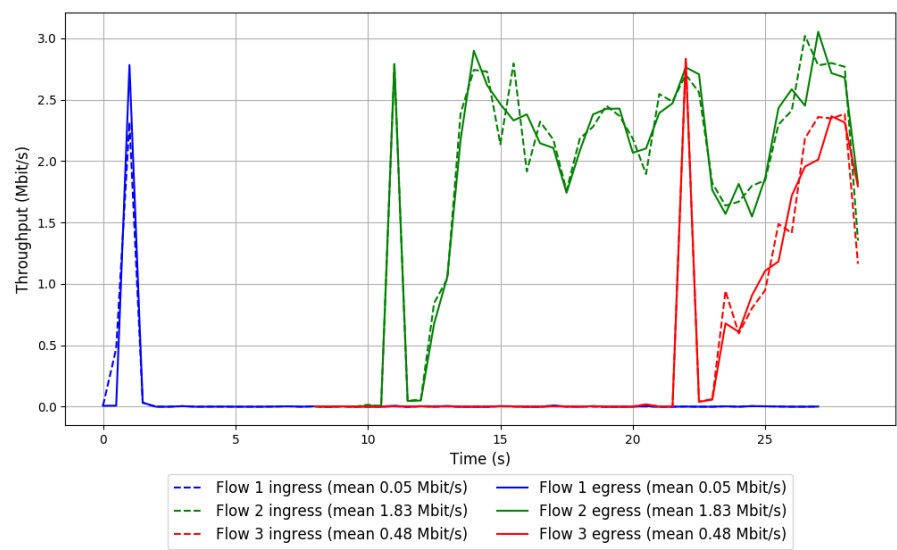
-- Flow 3:

Average throughput: 0.48 Mbit/s

95th percentile per-packet one-way delay: 50.972 ms

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2017-08-12 09:31:21

End at: 2017-08-12 09:31:52

Below is generated by plot.py at 2017-08-12 12:33:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.76 Mbit/s

95th percentile per-packet one-way delay: 51.199 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 51.623 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 2.02 Mbit/s

95th percentile per-packet one-way delay: 50.980 ms

Loss rate: 0.00%

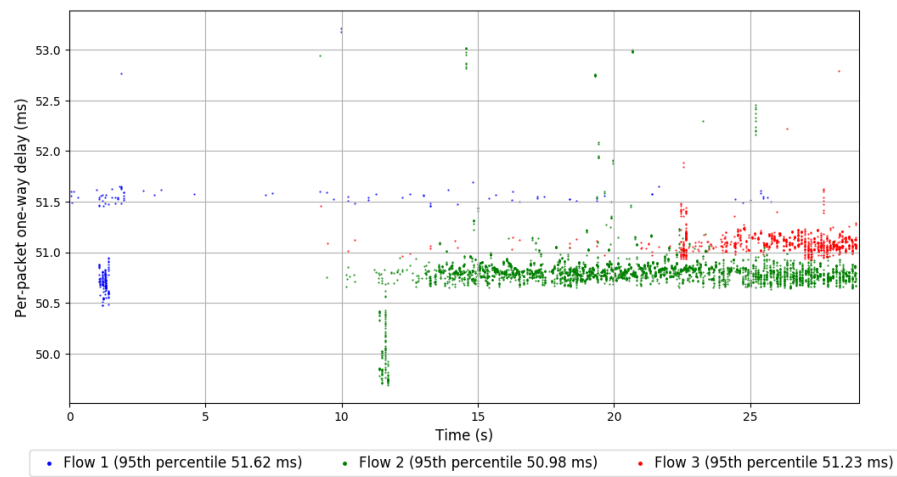
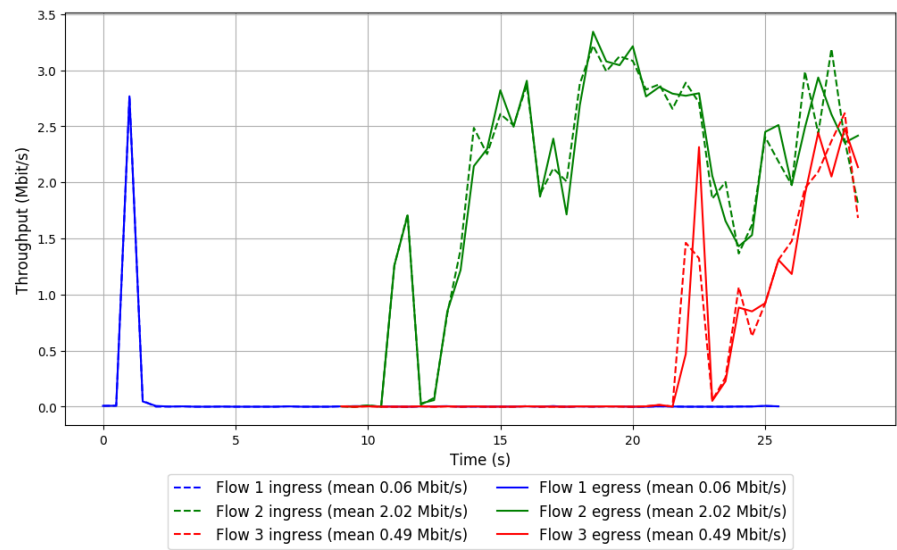
-- Flow 3:

Average throughput: 0.49 Mbit/s

95th percentile per-packet one-way delay: 51.225 ms

Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2017-08-12 09:42:26

End at: 2017-08-12 09:42:56

Below is generated by plot.py at 2017-08-12 12:33:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.62 Mbit/s

95th percentile per-packet one-way delay: 51.501 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 51.467 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.74 Mbit/s

95th percentile per-packet one-way delay: 51.346 ms

Loss rate: 0.00%

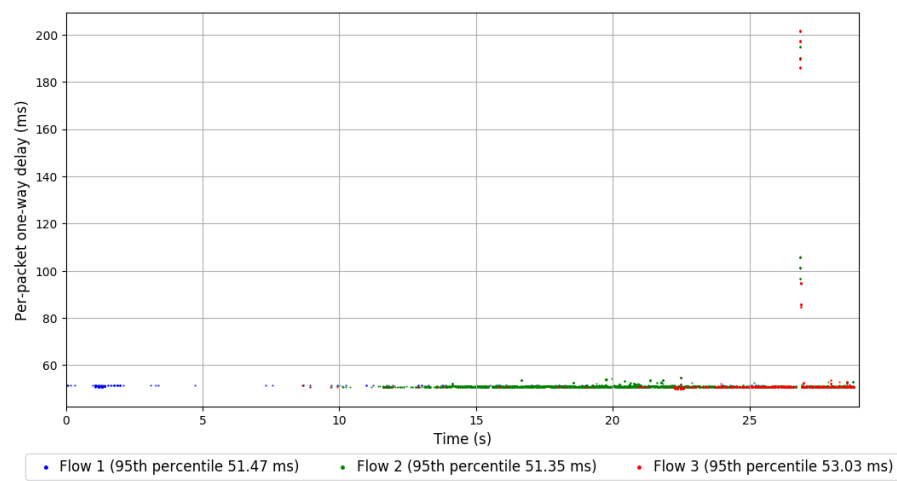
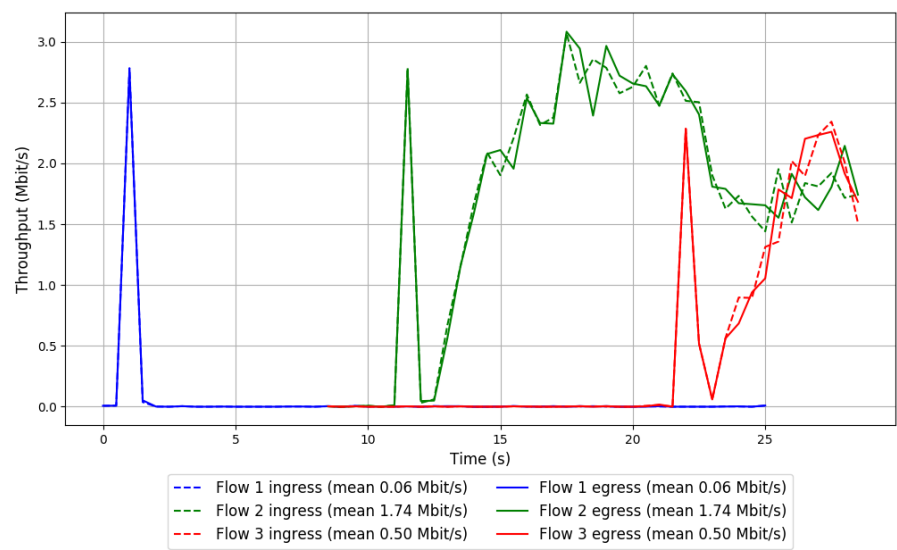
-- Flow 3:

Average throughput: 0.50 Mbit/s

95th percentile per-packet one-way delay: 53.027 ms

Loss rate: 0.00%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2017-08-12 09:53:40

End at: 2017-08-12 09:54:10

Below is generated by plot.py at 2017-08-12 12:33:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.74 Mbit/s

95th percentile per-packet one-way delay: 50.550 ms

Loss rate: 0.16%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 51.167 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.92 Mbit/s

95th percentile per-packet one-way delay: 49.855 ms

Loss rate: 0.21%

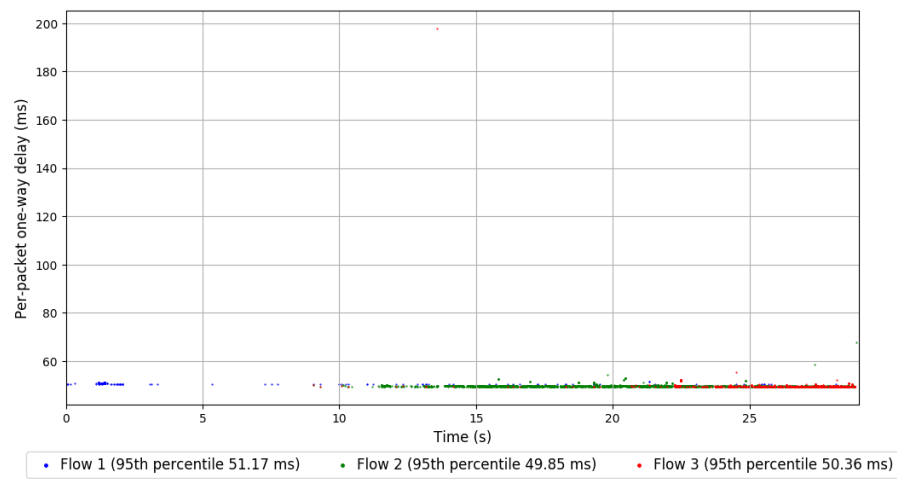
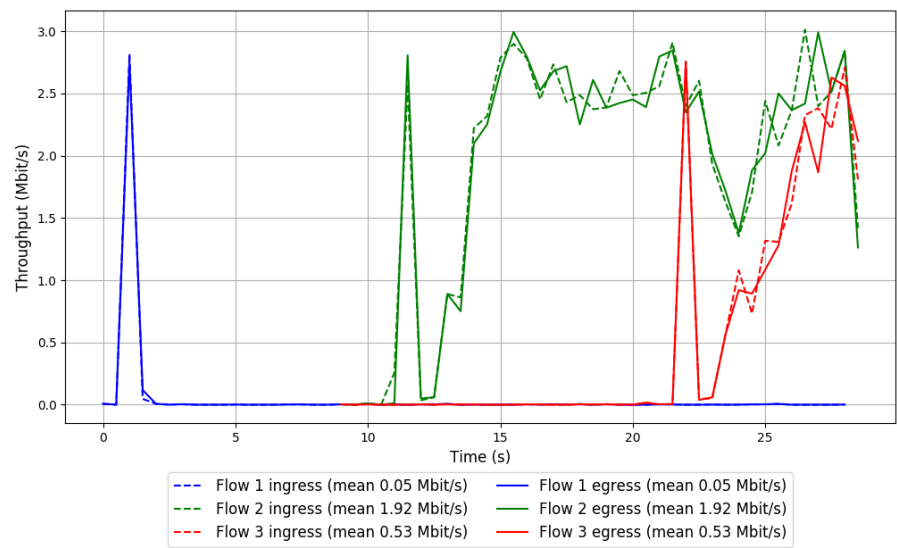
-- Flow 3:

Average throughput: 0.53 Mbit/s

95th percentile per-packet one-way delay: 50.358 ms

Loss rate: 0.00%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2017-08-12 10:04:29

End at: 2017-08-12 10:04:59

Below is generated by plot.py at 2017-08-12 12:33:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.69 Mbit/s

95th percentile per-packet one-way delay: 51.185 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 51.303 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.87 Mbit/s

95th percentile per-packet one-way delay: 50.974 ms

Loss rate: 0.00%

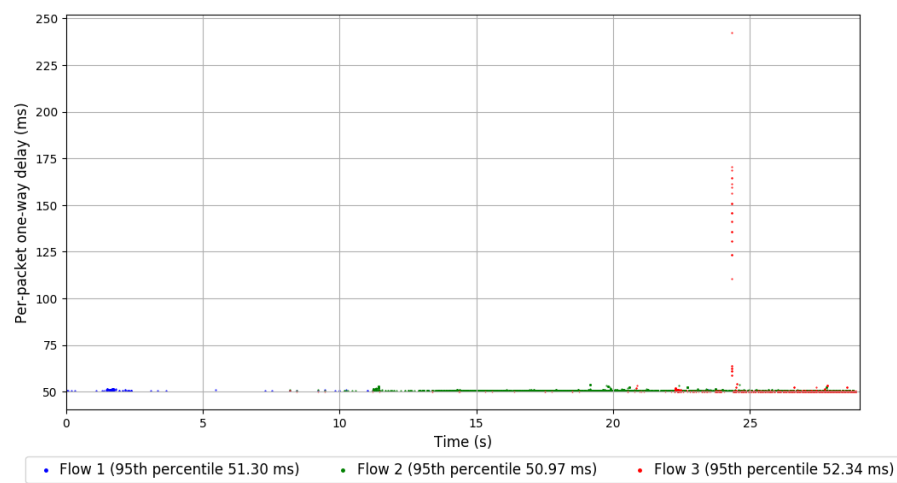
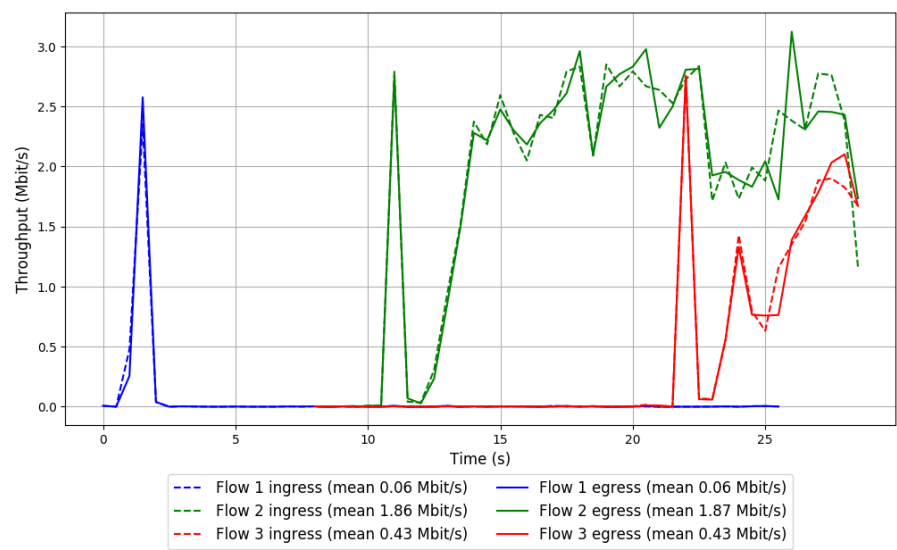
-- Flow 3:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 52.335 ms

Loss rate: 0.00%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2017-08-12 10:15:40

End at: 2017-08-12 10:16:10

Below is generated by plot.py at 2017-08-12 12:33:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.76 Mbit/s

95th percentile per-packet one-way delay: 50.720 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 51.568 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.86 Mbit/s

95th percentile per-packet one-way delay: 50.723 ms

Loss rate: 0.00%

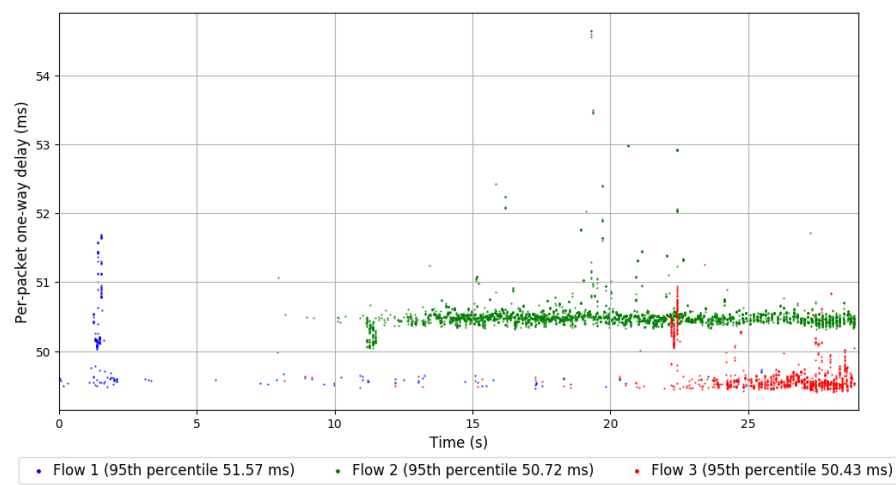
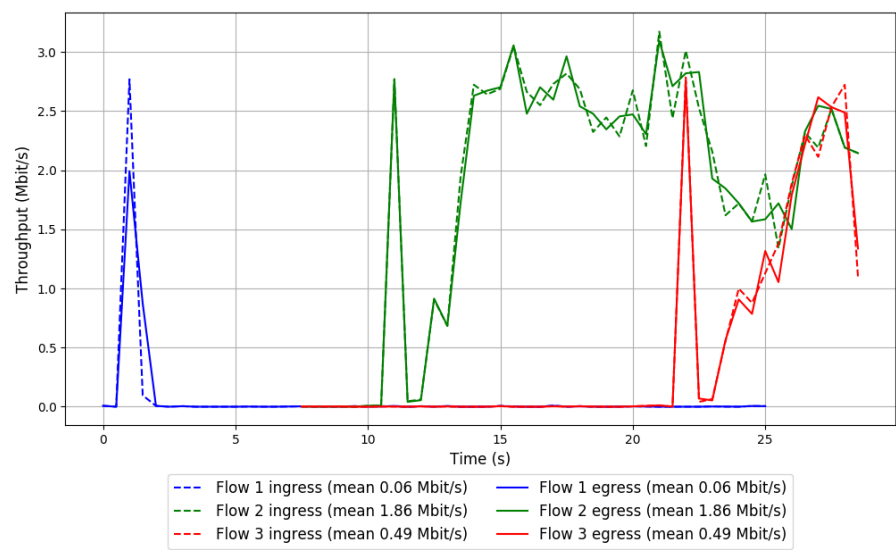
-- Flow 3:

Average throughput: 0.49 Mbit/s

95th percentile per-packet one-way delay: 50.434 ms

Loss rate: 0.00%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2017-08-12 10:26:45

End at: 2017-08-12 10:27:15

Below is generated by plot.py at 2017-08-12 12:33:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.68 Mbit/s

95th percentile per-packet one-way delay: 51.268 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.734 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.82 Mbit/s

95th percentile per-packet one-way delay: 51.329 ms

Loss rate: 0.00%

-- Flow 3:

Average throughput: 0.47 Mbit/s

95th percentile per-packet one-way delay: 50.566 ms

Loss rate: 0.00%

Run 10: Report of WebRTC media — Data Link

