

Pantheon Report

Generated at 2017-08-12 11:42:40 (UTC).

Data path: GCE Tokyo Ethernet (*remote*) → GCE Sydney Ethernet (*local*).

Repeated the test of 15 congestion control schemes 10 times.

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

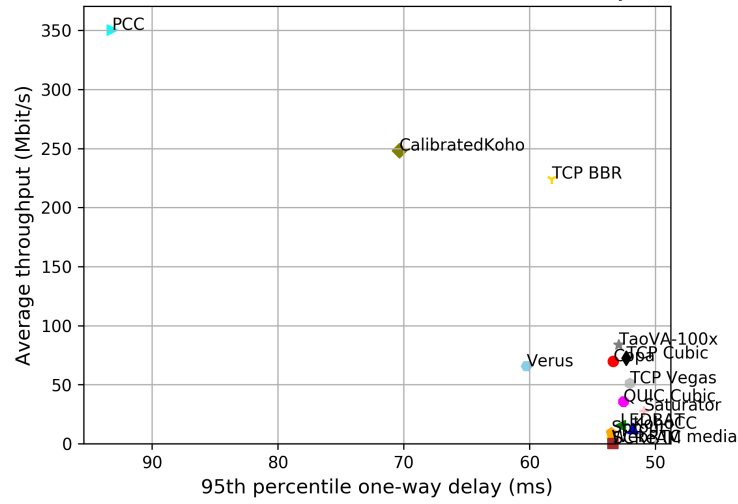
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

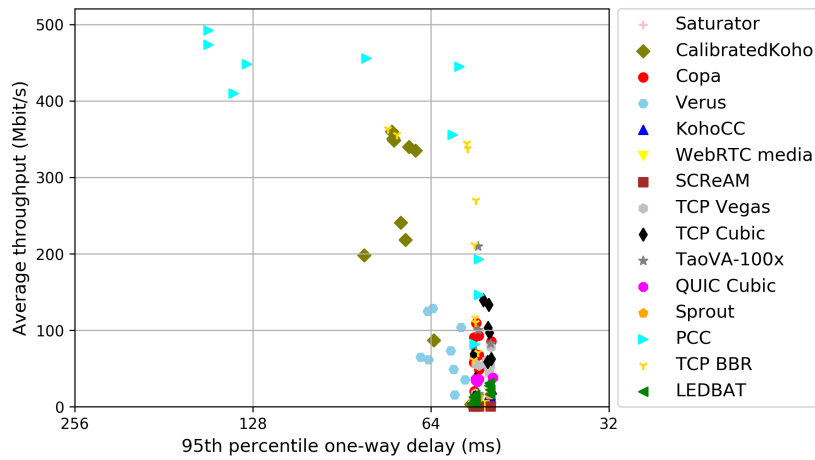
Git summary:

```
branch: master @ e43be7582298d552838afcf6382342bf187fbbd6
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/genericCC @ dae96123232f1bcb37725348fa2378691ce26725
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
  M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-stimuli @ fc73a85ca16c34366d1888dc8a0d0d88d4ebf2a7
third_party/pantheon-tunnel @ baf443516dea3eeddeccaf9b916cc313273ca4f4
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
third_party/proto-quick @ 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 Tokyo Ethernet to GCE Sydney Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)



test from GCE Tokyo Ethernet to GCE Sydney 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	127.73	97.71	111.11	56.27	58.80	59.65	6.93	14.45	21.20
CalibratedKoho	10	130.21	137.20	66.19	602.43	67.92	59.70	28.15	26.87	51.57
Copa	10	55.67	60.89	35.69	53.43	52.98	52.50	28.03	20.91	48.22
TCP Cubic	10	40.67	24.35	47.19	52.21	52.63	52.52	1.73	6.90	8.31
KohoCC	10	4.87	6.57	11.22	52.70	52.08	51.06	56.55	41.20	1.11
LEDBAT	10	8.42	8.66	3.85	52.53	52.13	52.67	3.27	3.29	11.34
PCC	10	236.63	135.34	74.46	97.93	53.10	53.63	17.79	15.71	37.39
QUIC Cubic	10	0.06	39.62	29.55	53.07	51.79	52.49	0.00	0.38	1.51
Saturator	7	18.51	15.39	16.35	51.89	52.24	51.41	16.82	19.43	12.45
SCReAM	10	0.21	0.21	0.22	51.94	52.79	51.35	0.34	0.46	0.92
Sprout	10	5.31	3.69	5.40	52.73	53.64	52.08	12.13	17.31	8.62
TaoVA-100x	6	52.08	15.54	72.44	52.91	51.28	51.95	20.10	60.65	31.58
TCP Vegas	10	29.29	21.44	23.55	51.94	52.72	53.14	1.55	10.26	9.42
Verus	10	32.15	36.85	29.46	56.12	59.37	56.62	65.36	49.95	39.52
WebRTC media	9	0.05	1.49	0.41	53.66	51.69	53.24	0.31	0.65	3.06

Run 1: Statistics of TCP BBR

Start at: 2017-08-12 06:56:42

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

Below is generated by plot.py at 2017-08-12 11:18:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 109.99 Mbit/s

95th percentile per-packet one-way delay: 53.831 ms

Loss rate: 5.09%

-- Flow 1:

Average throughput: 50.96 Mbit/s

95th percentile per-packet one-way delay: 53.871 ms

Loss rate: 9.92%

-- Flow 2:

Average throughput: 17.88 Mbit/s

95th percentile per-packet one-way delay: 53.807 ms

Loss rate: 9.18%

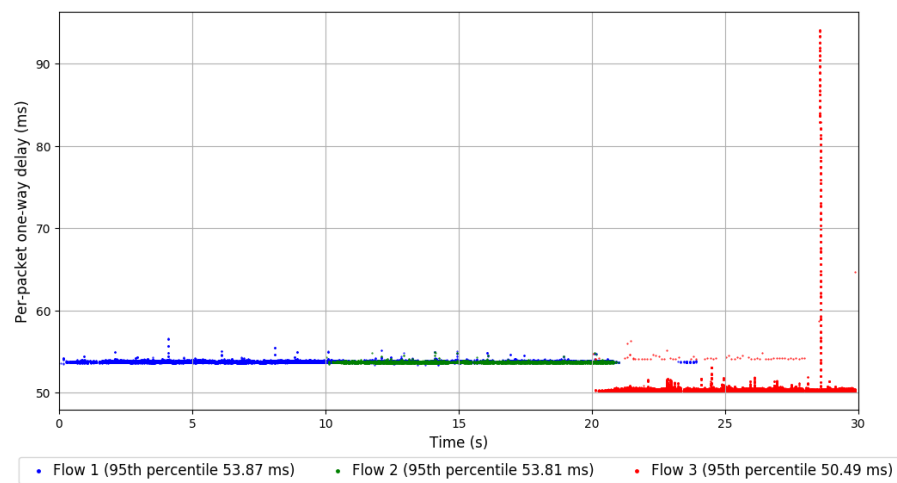
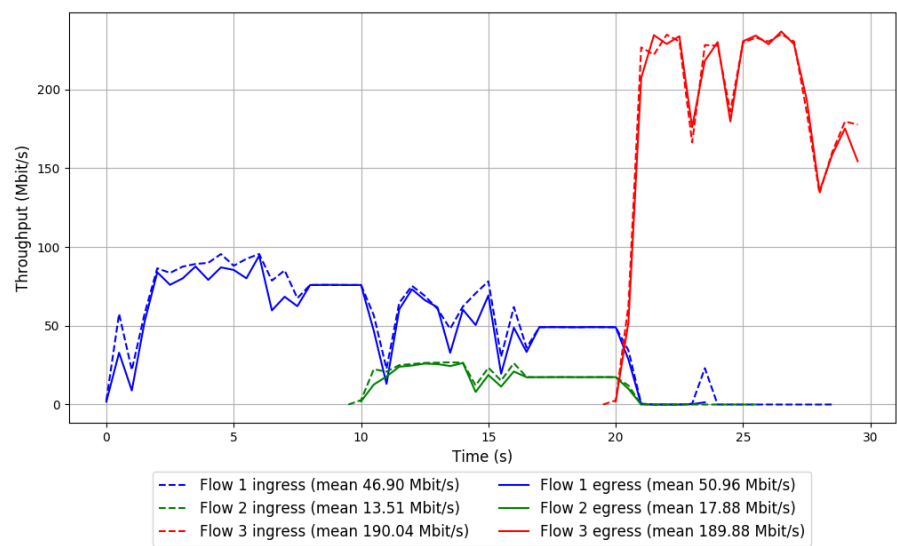
-- Flow 3:

Average throughput: 189.88 Mbit/s

95th percentile per-packet one-way delay: 50.486 ms

Loss rate: 1.18%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

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

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

Below is generated by plot.py at 2017-08-12 11:18:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 211.97 Mbit/s

95th percentile per-packet one-way delay: 54.060 ms

Loss rate: 3.76%

-- Flow 1:

Average throughput: 55.71 Mbit/s

95th percentile per-packet one-way delay: 53.825 ms

Loss rate: 18.63%

-- Flow 2:

Average throughput: 197.58 Mbit/s

95th percentile per-packet one-way delay: 53.755 ms

Loss rate: 0.67%

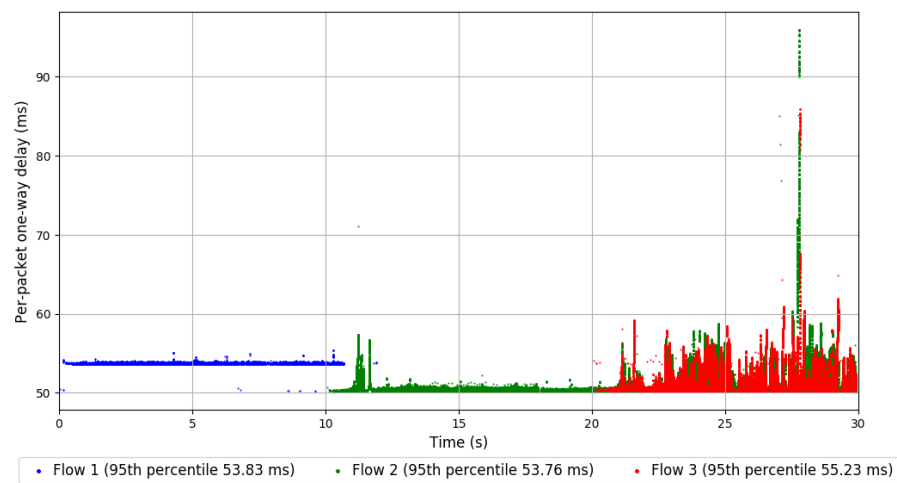
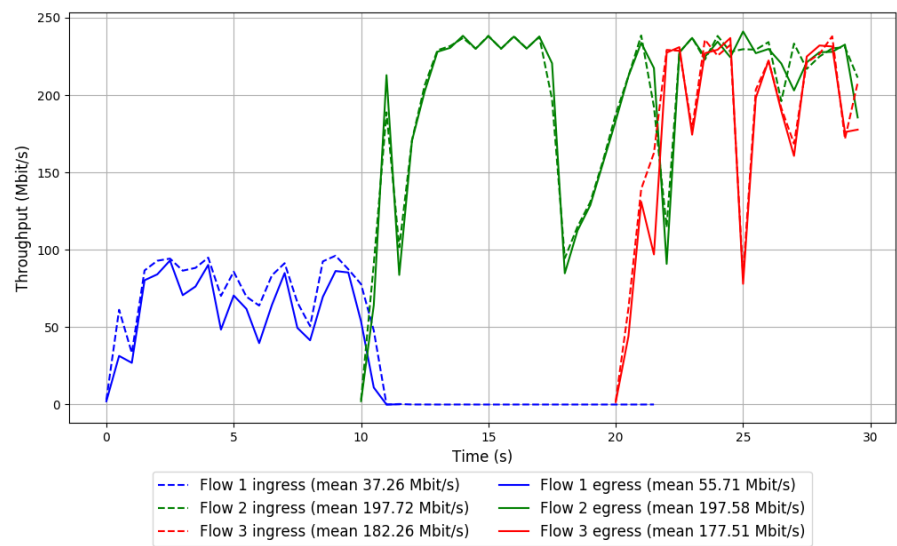
-- Flow 3:

Average throughput: 177.51 Mbit/s

95th percentile per-packet one-way delay: 55.232 ms

Loss rate: 3.84%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2017-08-12 07:19:34

End at: 2017-08-12 07:20:04

Below is generated by plot.py at 2017-08-12 11:19:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 355.75 Mbit/s

95th percentile per-packet one-way delay: 73.030 ms

Loss rate: 1.51%

-- Flow 1:

Average throughput: 217.55 Mbit/s

95th percentile per-packet one-way delay: 64.666 ms

Loss rate: 0.41%

-- Flow 2:

Average throughput: 143.12 Mbit/s

95th percentile per-packet one-way delay: 78.681 ms

Loss rate: 2.78%

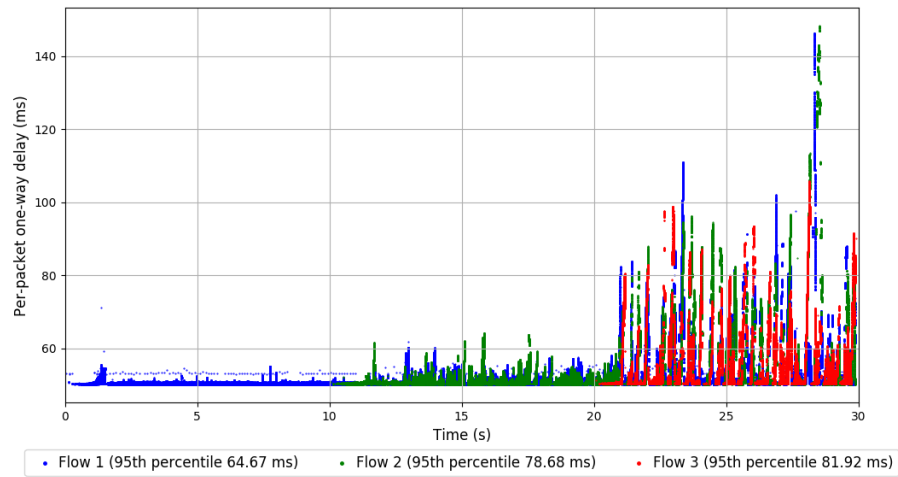
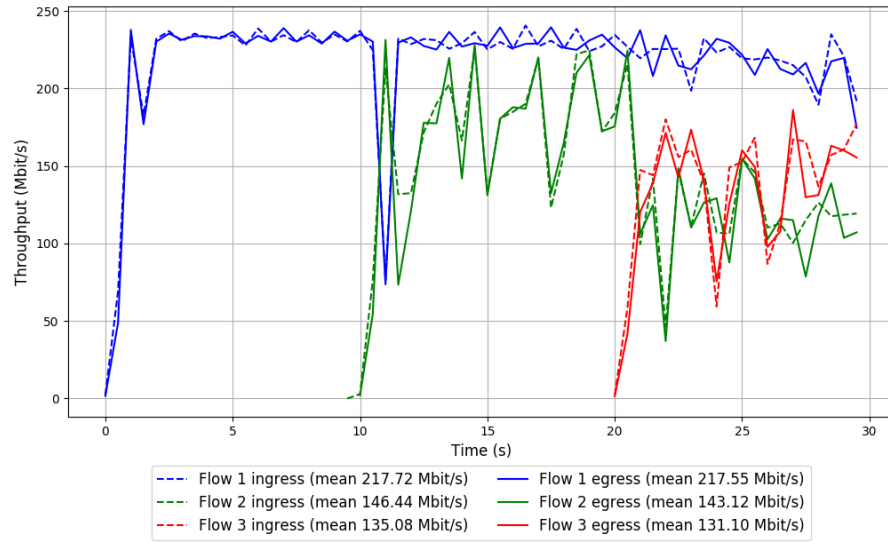
-- Flow 3:

Average throughput: 131.10 Mbit/s

95th percentile per-packet one-way delay: 81.921 ms

Loss rate: 4.06%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2017-08-12 07:31:06

End at: 2017-08-12 07:31:36

Below is generated by plot.py at 2017-08-12 11:19:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 270.22 Mbit/s

95th percentile per-packet one-way delay: 53.732 ms

Loss rate: 0.86%

-- Flow 1:

Average throughput: 207.14 Mbit/s

95th percentile per-packet one-way delay: 53.405 ms

Loss rate: 0.66%

-- Flow 2:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 53.827 ms

Loss rate: 55.19%

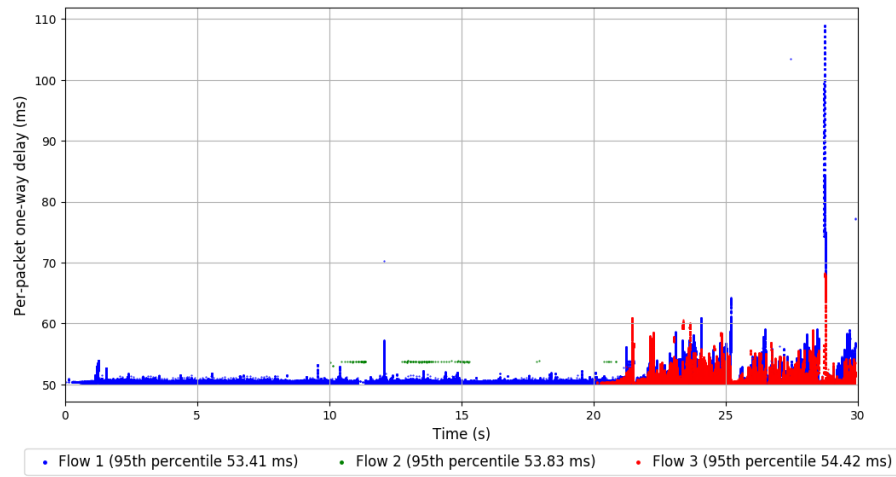
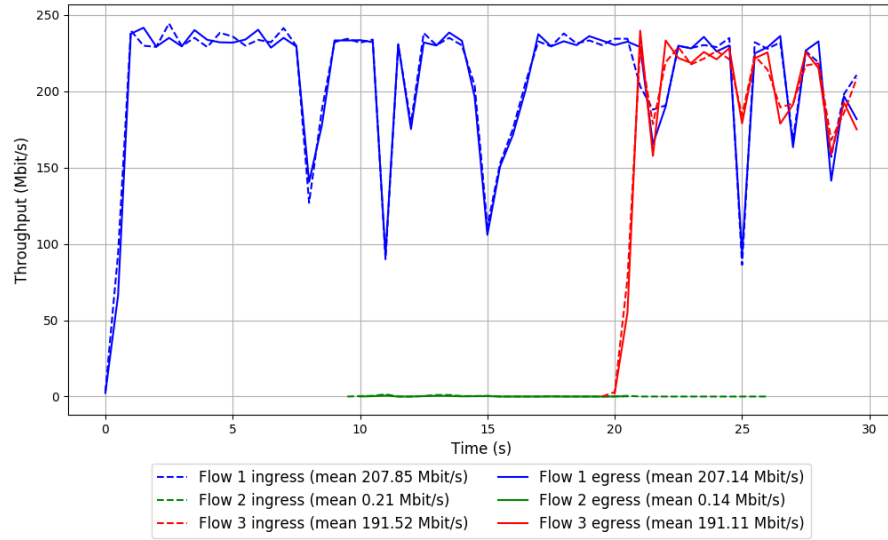
-- Flow 3:

Average throughput: 191.11 Mbit/s

95th percentile per-packet one-way delay: 54.424 ms

Loss rate: 1.44%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2017-08-12 07:42:19

End at: 2017-08-12 07:42:49

Below is generated by plot.py at 2017-08-12 11:20:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 363.53 Mbit/s

95th percentile per-packet one-way delay: 75.624 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 193.95 Mbit/s

95th percentile per-packet one-way delay: 65.828 ms

Loss rate: 0.62%

-- Flow 2:

Average throughput: 182.90 Mbit/s

95th percentile per-packet one-way delay: 73.864 ms

Loss rate: 0.92%

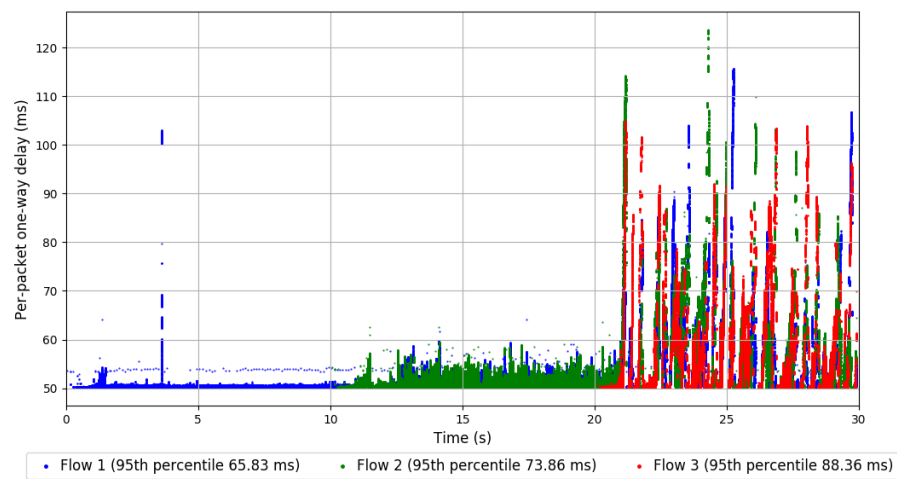
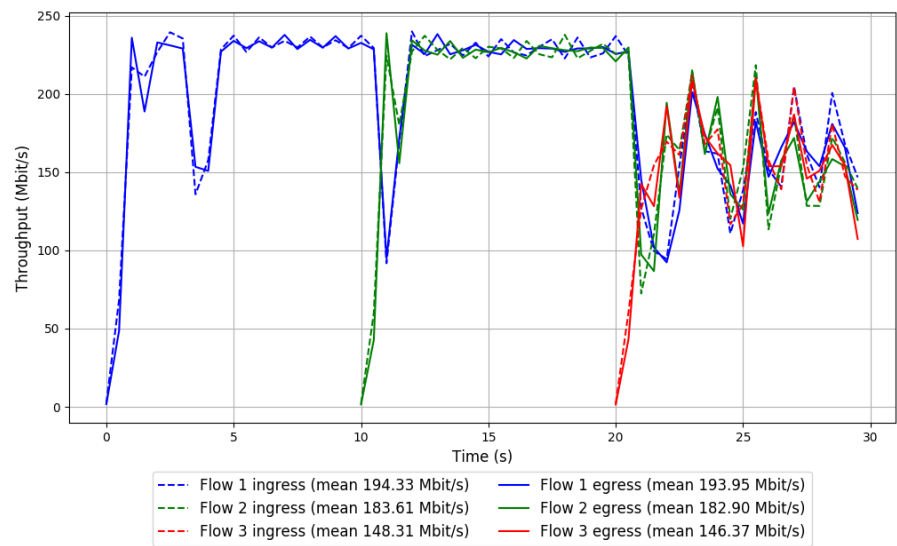
-- Flow 3:

Average throughput: 146.37 Mbit/s

95th percentile per-packet one-way delay: 88.359 ms

Loss rate: 2.33%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2017-08-12 07:54:03

End at: 2017-08-12 07:54:33

Below is generated by plot.py at 2017-08-12 11:20:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 71.05 Mbit/s

95th percentile per-packet one-way delay: 53.250 ms

Loss rate: 9.99%

-- Flow 1:

Average throughput: 51.90 Mbit/s

95th percentile per-packet one-way delay: 53.225 ms

Loss rate: 9.31%

-- Flow 2:

Average throughput: 2.61 Mbit/s

95th percentile per-packet one-way delay: 53.800 ms

Loss rate: 37.01%

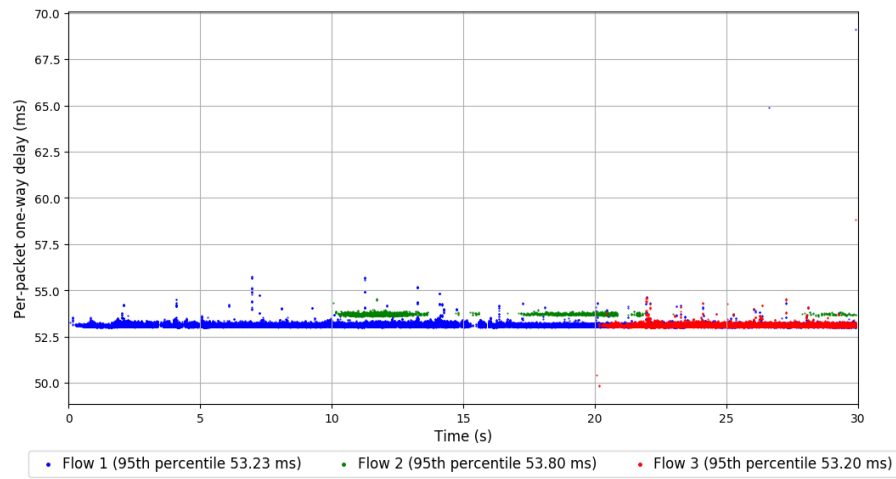
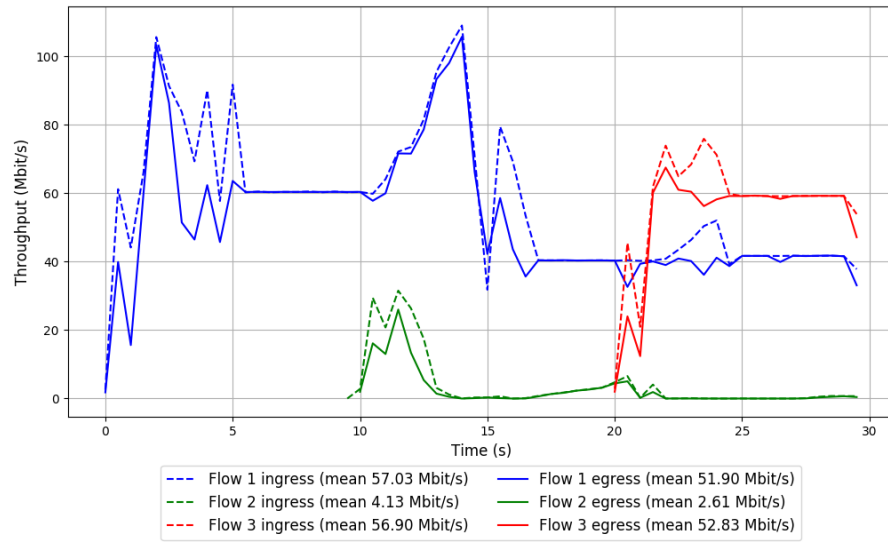
-- Flow 3:

Average throughput: 52.83 Mbit/s

95th percentile per-packet one-way delay: 53.204 ms

Loss rate: 8.10%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2017-08-12 08:05:06

End at: 2017-08-12 08:05:36

Below is generated by plot.py at 2017-08-12 11:20:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 60.87 Mbit/s

95th percentile per-packet one-way delay: 54.148 ms

Loss rate: 16.30%

-- Flow 1:

Average throughput: 46.43 Mbit/s

95th percentile per-packet one-way delay: 54.159 ms

Loss rate: 17.66%

-- Flow 2:

Average throughput: 12.48 Mbit/s

95th percentile per-packet one-way delay: 53.808 ms

Loss rate: 13.47%

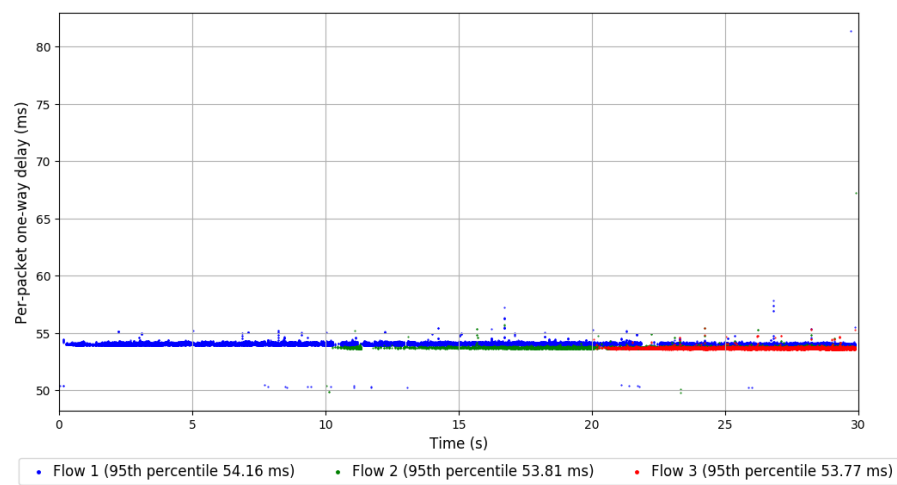
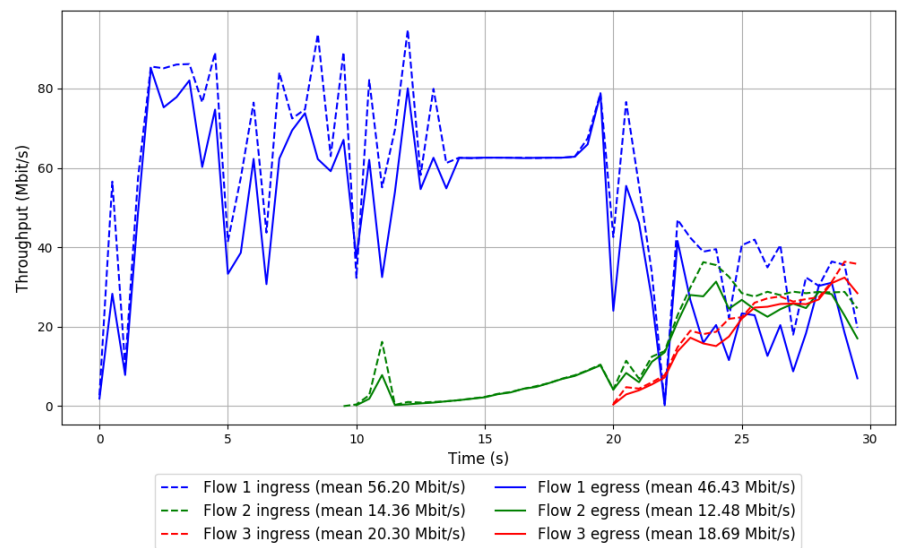
-- Flow 3:

Average throughput: 18.69 Mbit/s

95th percentile per-packet one-way delay: 53.769 ms

Loss rate: 9.00%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2017-08-12 08:16:01

End at: 2017-08-12 08:16:31

Below is generated by plot.py at 2017-08-12 11:20:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 337.71 Mbit/s

95th percentile per-packet one-way delay: 55.453 ms

Loss rate: 0.57%

-- Flow 1:

Average throughput: 201.42 Mbit/s

95th percentile per-packet one-way delay: 55.034 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 204.92 Mbit/s

95th percentile per-packet one-way delay: 55.927 ms

Loss rate: 0.77%

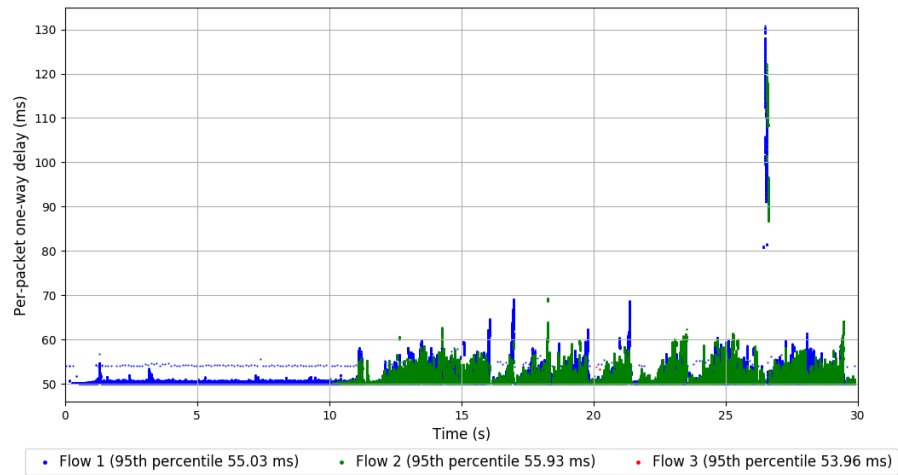
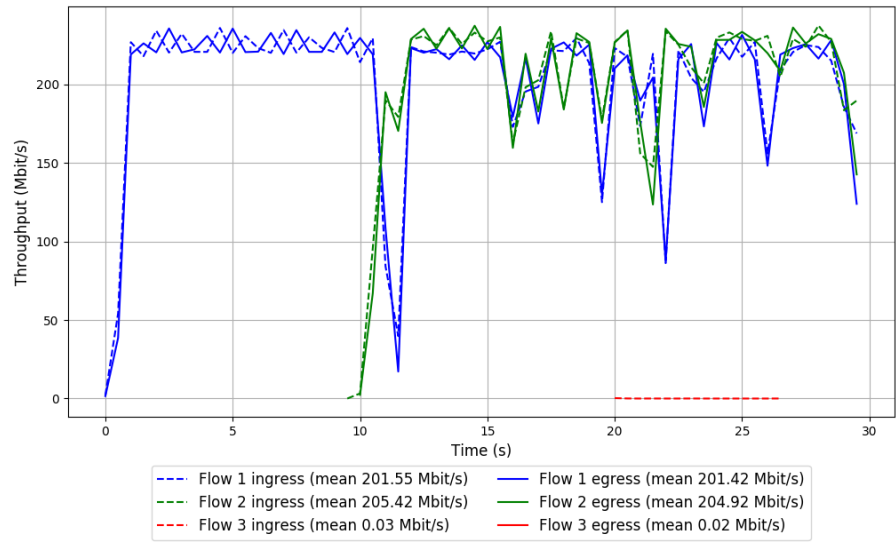
-- Flow 3:

Average throughput: 0.02 Mbit/s

95th percentile per-packet one-way delay: 53.962 ms

Loss rate: 98.73%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2017-08-12 08:27:16

End at: 2017-08-12 08:27:46

Below is generated by plot.py at 2017-08-12 11:20:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 116.05 Mbit/s

95th percentile per-packet one-way delay: 53.855 ms

Loss rate: 6.37%

-- Flow 1:

Average throughput: 45.57 Mbit/s

95th percentile per-packet one-way delay: 53.798 ms

Loss rate: 11.21%

-- Flow 2:

Average throughput: 7.66 Mbit/s

95th percentile per-packet one-way delay: 54.116 ms

Loss rate: 23.68%

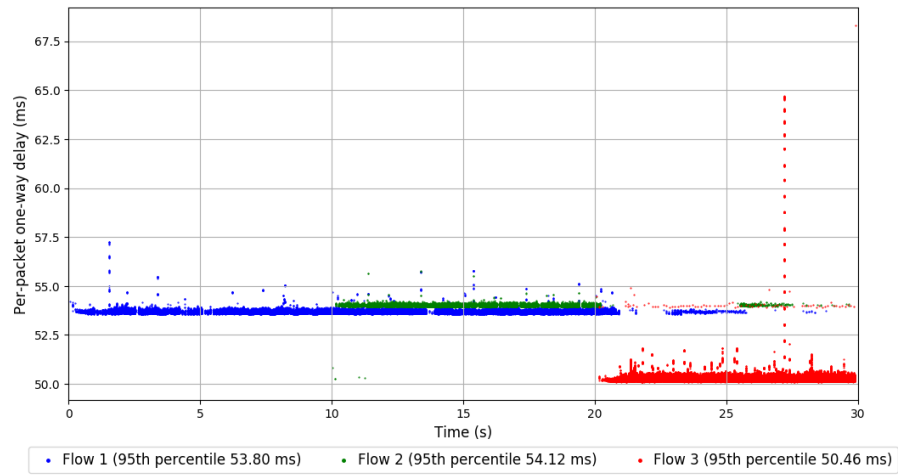
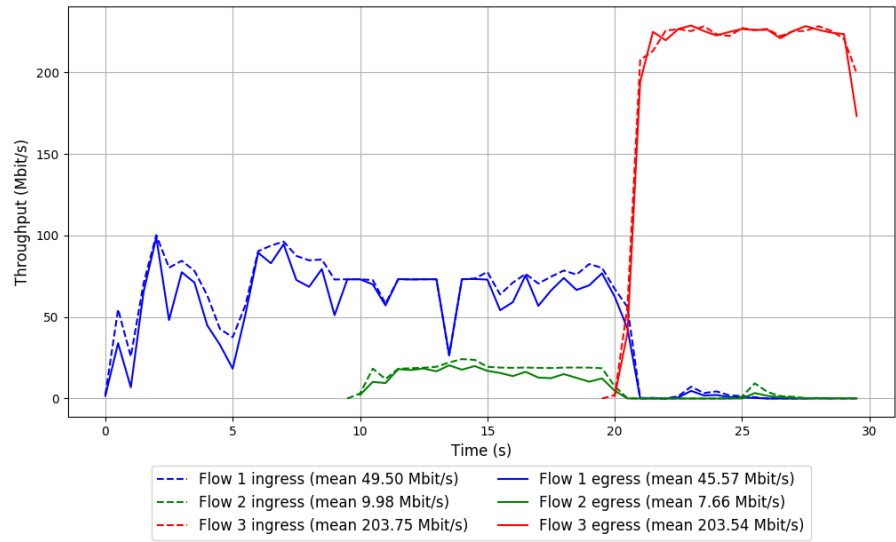
-- Flow 3:

Average throughput: 203.54 Mbit/s

95th percentile per-packet one-way delay: 50.457 ms

Loss rate: 1.18%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2017-08-12 08:38:26

End at: 2017-08-12 08:38:56

Below is generated by plot.py at 2017-08-12 11:22:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 344.86 Mbit/s

95th percentile per-packet one-way delay: 55.634 ms

Loss rate: 0.61%

-- Flow 1:

Average throughput: 206.65 Mbit/s

95th percentile per-packet one-way delay: 54.839 ms

Loss rate: 0.49%

-- Flow 2:

Average throughput: 207.78 Mbit/s

95th percentile per-packet one-way delay: 56.388 ms

Loss rate: 0.79%

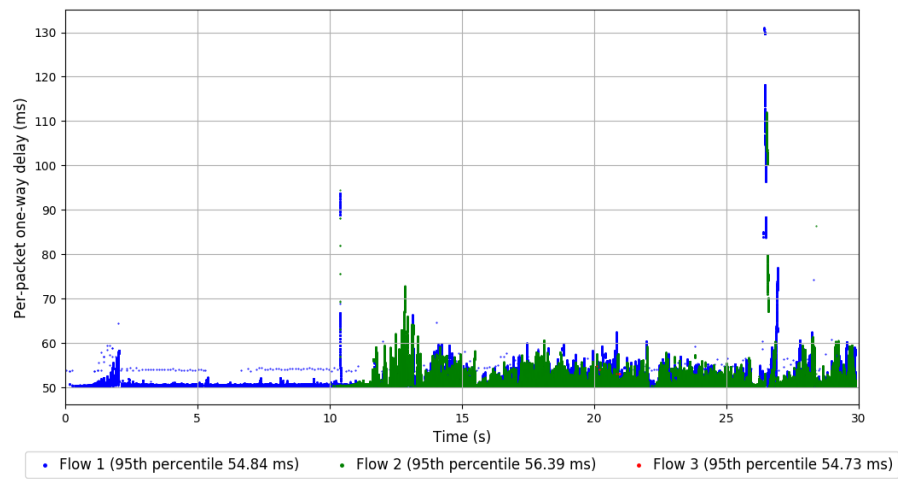
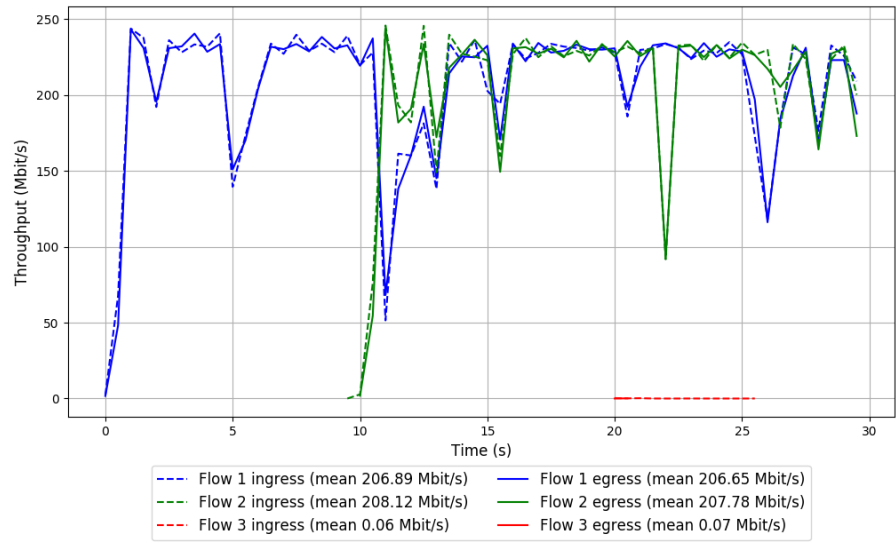
-- Flow 3:

Average throughput: 0.07 Mbit/s

95th percentile per-packet one-way delay: 54.735 ms

Loss rate: 82.18%

Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of CalibratedKoho

Start at: 2017-08-12 06:56:01

End at: 2017-08-12 06:56:31

Below is generated by plot.py at 2017-08-12 11:22:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.48 Mbit/s

95th percentile per-packet one-way delay: 54.731 ms

Loss rate: 69.11%

-- Flow 1:

Average throughput: 1.76 Mbit/s

95th percentile per-packet one-way delay: 53.848 ms

Loss rate: 70.00%

-- Flow 2:

Average throughput: 1.64 Mbit/s

95th percentile per-packet one-way delay: 54.880 ms

Loss rate: 69.35%

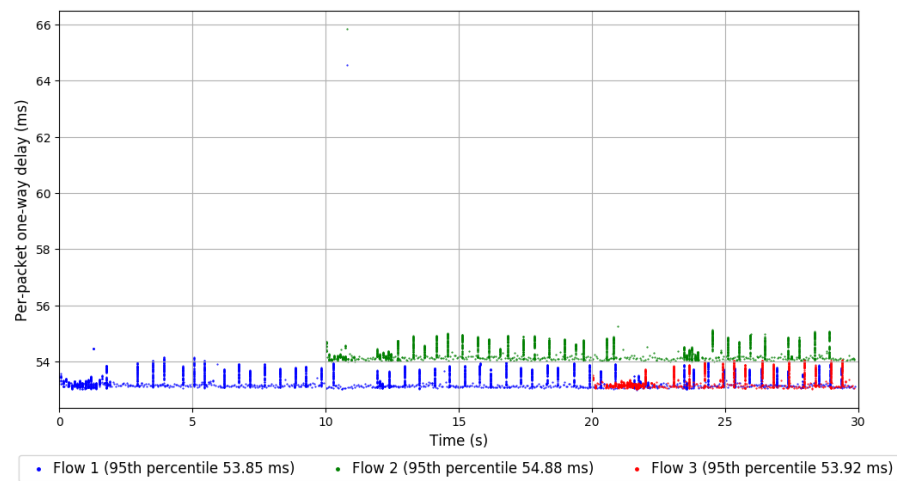
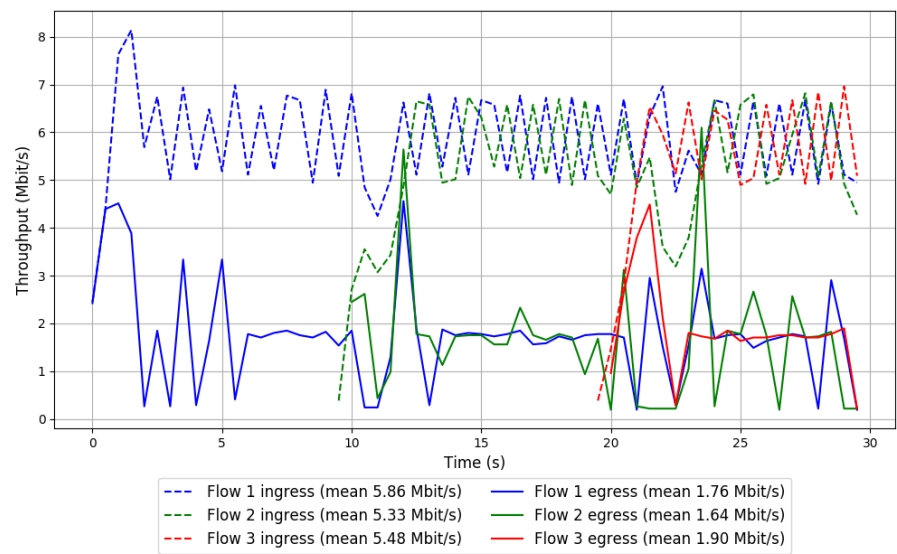
-- Flow 3:

Average throughput: 1.90 Mbit/s

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

Loss rate: 65.78%

Run 1: Report of CalibratedKoho — Data Link



Run 2: Statistics of CalibratedKoho

Start at: 2017-08-12 07:06:59

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

Below is generated by plot.py at 2017-08-12 11:22:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 348.23 Mbit/s

95th percentile per-packet one-way delay: 73.926 ms

Loss rate: 0.90%

-- Flow 1:

Average throughput: 218.46 Mbit/s

95th percentile per-packet one-way delay: 73.455 ms

Loss rate: 0.51%

-- Flow 2:

Average throughput: 195.30 Mbit/s

95th percentile per-packet one-way delay: 75.110 ms

Loss rate: 1.47%

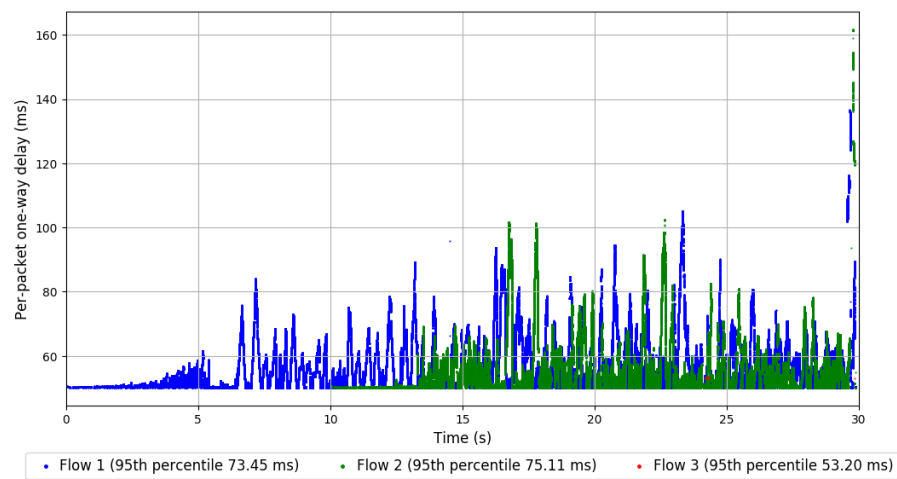
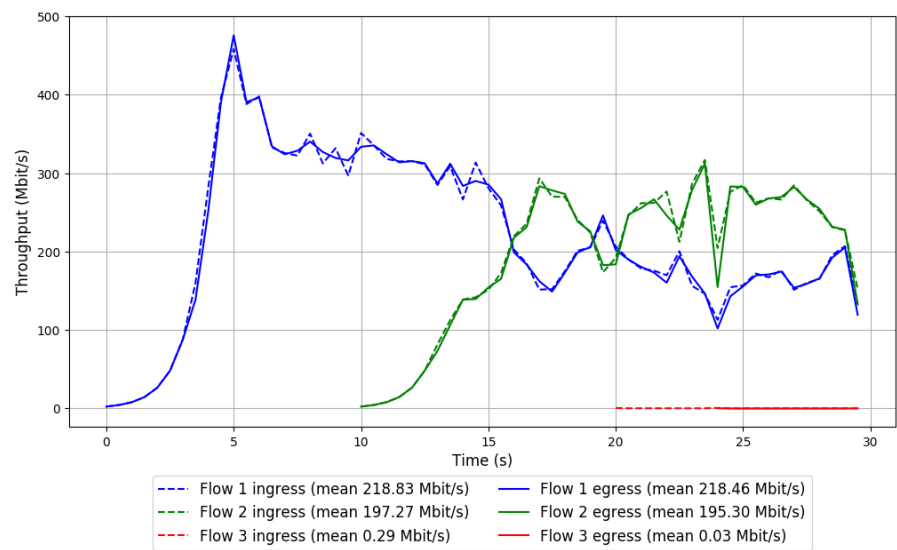
-- Flow 3:

Average throughput: 0.03 Mbit/s

95th percentile per-packet one-way delay: 53.202 ms

Loss rate: 94.47%

Run 2: Report of CalibratedKoho — Data Link



Run 3: Statistics of CalibratedKoho

Start at: 2017-08-12 07:18:29

End at: 2017-08-12 07:18:59

Below is generated by plot.py at 2017-08-12 11:23:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 360.25 Mbit/s

95th percentile per-packet one-way delay: 74.479 ms

Loss rate: 0.70%

-- Flow 1:

Average throughput: 234.95 Mbit/s

95th percentile per-packet one-way delay: 74.770 ms

Loss rate: 0.49%

-- Flow 2:

Average throughput: 138.86 Mbit/s

95th percentile per-packet one-way delay: 76.061 ms

Loss rate: 0.92%

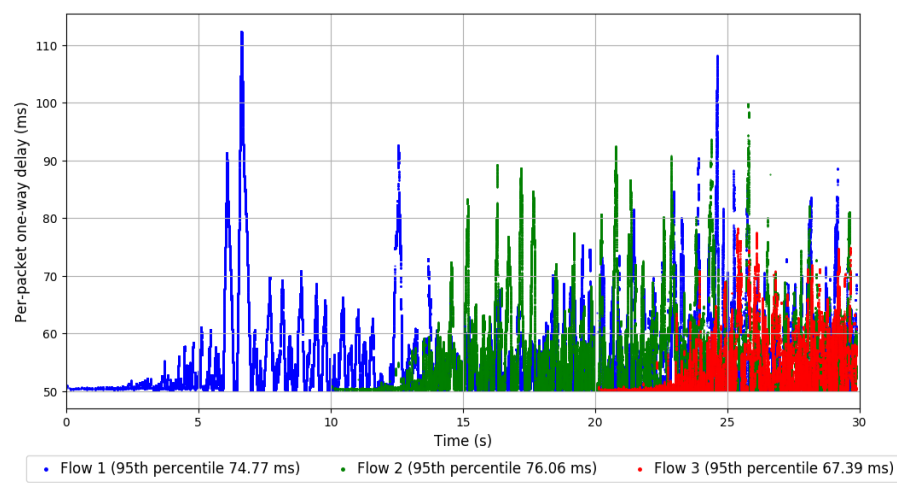
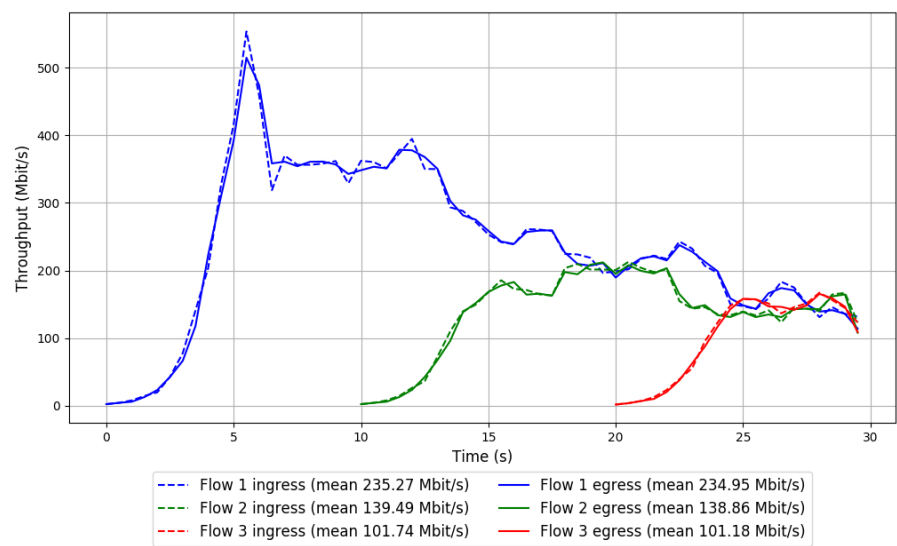
-- Flow 3:

Average throughput: 101.18 Mbit/s

95th percentile per-packet one-way delay: 67.385 ms

Loss rate: 1.58%

Run 3: Report of CalibratedKoho — Data Link



Run 4: Statistics of CalibratedKoho

Start at: 2017-08-12 07:30:02

End at: 2017-08-12 07:30:32

Below is generated by plot.py at 2017-08-12 11:23:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 335.31 Mbit/s

95th percentile per-packet one-way delay: 67.980 ms

Loss rate: 0.99%

-- Flow 1:

Average throughput: 304.59 Mbit/s

95th percentile per-packet one-way delay: 67.413 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.41 Mbit/s

95th percentile per-packet one-way delay: 53.873 ms

Loss rate: 98.38%

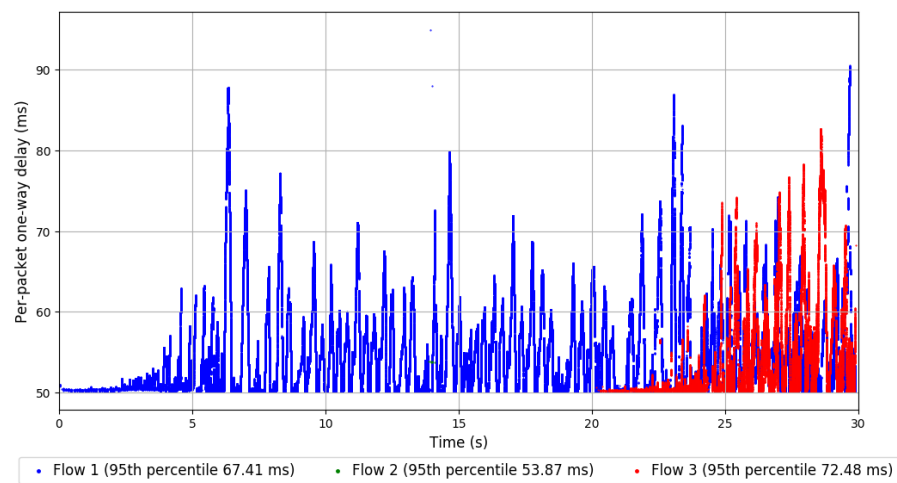
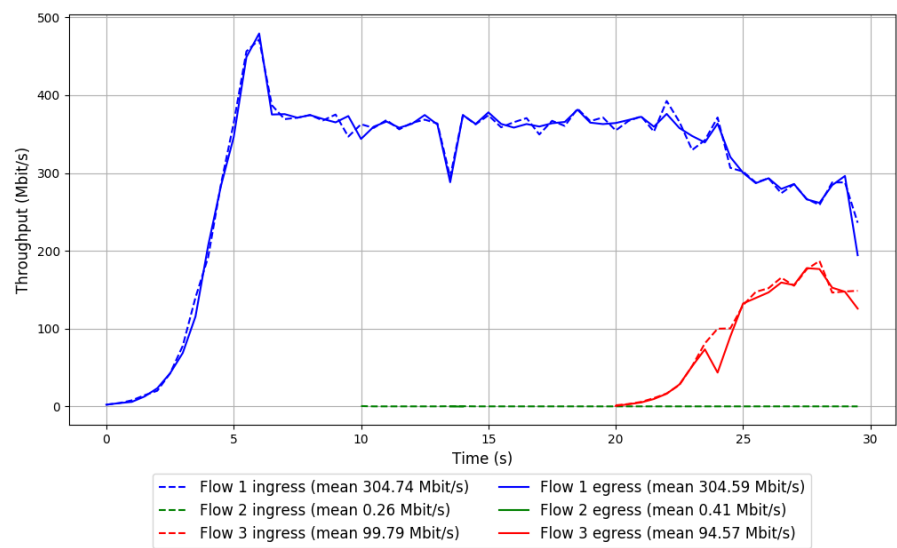
-- Flow 3:

Average throughput: 94.57 Mbit/s

95th percentile per-packet one-way delay: 72.482 ms

Loss rate: 6.11%

Run 4: Report of CalibratedKoho — Data Link



Run 5: Statistics of CalibratedKoho

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

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

Below is generated by plot.py at 2017-08-12 11:23:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 86.82 Mbit/s

95th percentile per-packet one-way delay: 63.310 ms

Loss rate: 7.56%

-- Flow 1:

Average throughput: 1.75 Mbit/s

95th percentile per-packet one-way delay: 53.752 ms

Loss rate: 69.70%

-- Flow 2:

Average throughput: 1.59 Mbit/s

95th percentile per-packet one-way delay: 54.373 ms

Loss rate: 69.01%

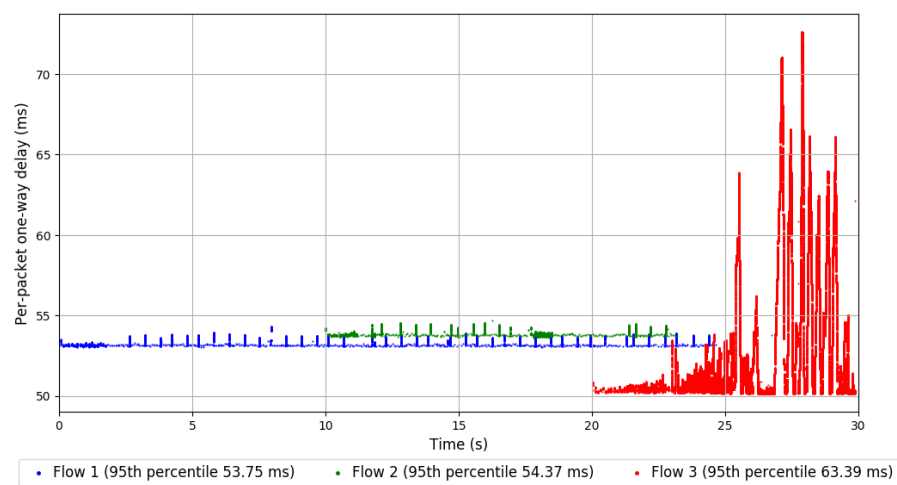
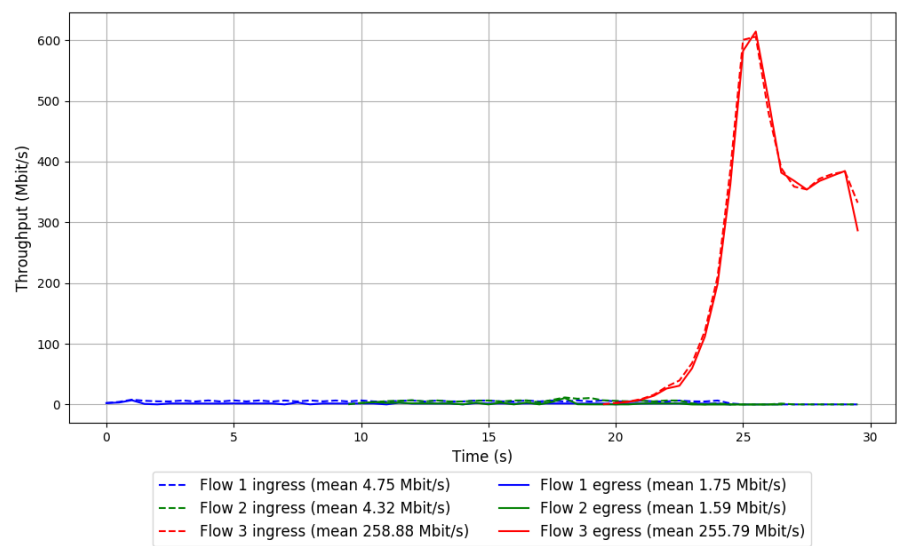
-- Flow 3:

Average throughput: 255.79 Mbit/s

95th percentile per-packet one-way delay: 63.387 ms

Loss rate: 2.07%

Run 5: Report of CalibratedKoho — Data Link



Run 6: Statistics of CalibratedKoho

Start at: 2017-08-12 07:53:03

End at: 2017-08-12 07:53:33

Below is generated by plot.py at 2017-08-12 11:24:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 340.09 Mbit/s

95th percentile per-packet one-way delay: 69.663 ms

Loss rate: 0.55%

-- Flow 1:

Average throughput: 289.25 Mbit/s

95th percentile per-packet one-way delay: 69.001 ms

Loss rate: 0.29%

-- Flow 2:

Average throughput: 0.00 Mbit/s

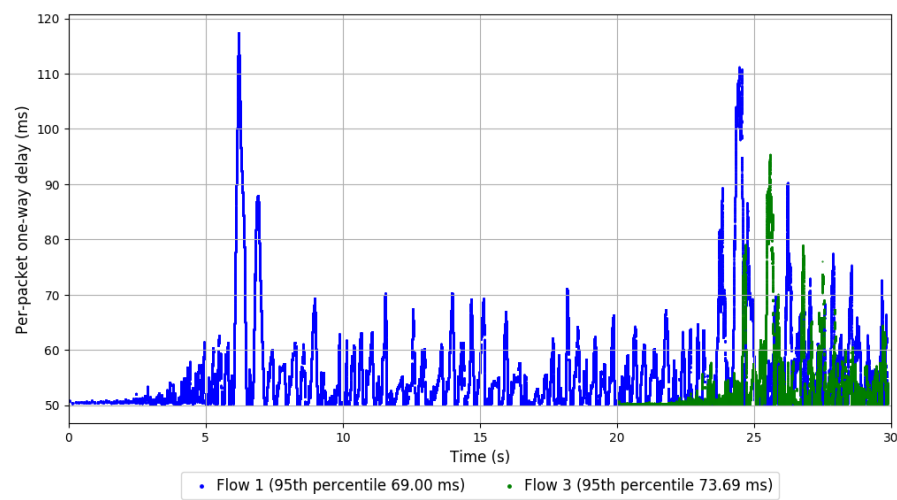
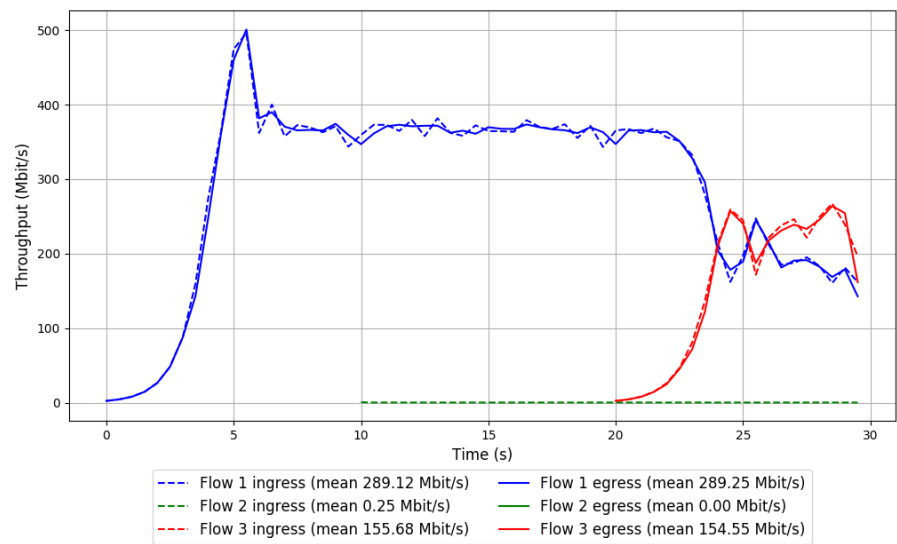
-- Flow 3:

Average throughput: 154.55 Mbit/s

95th percentile per-packet one-way delay: 73.693 ms

Loss rate: 1.73%

Run 6: Report of CalibratedKoho — Data Link



Run 7: Statistics of CalibratedKoho

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

End at: 2017-08-12 08:04:42

Below is generated by plot.py at 2017-08-12 11:24:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 240.73 Mbit/s

95th percentile per-packet one-way delay: 71.921 ms

Loss rate: 0.80%

-- Flow 1:

Average throughput: 20.58 Mbit/s

95th percentile per-packet one-way delay: 5447.937 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 295.93 Mbit/s

95th percentile per-packet one-way delay: 71.886 ms

Loss rate: 0.76%

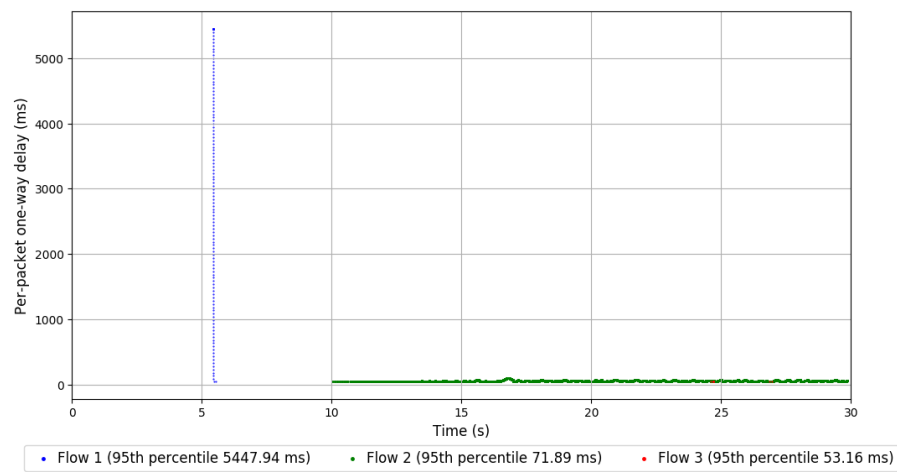
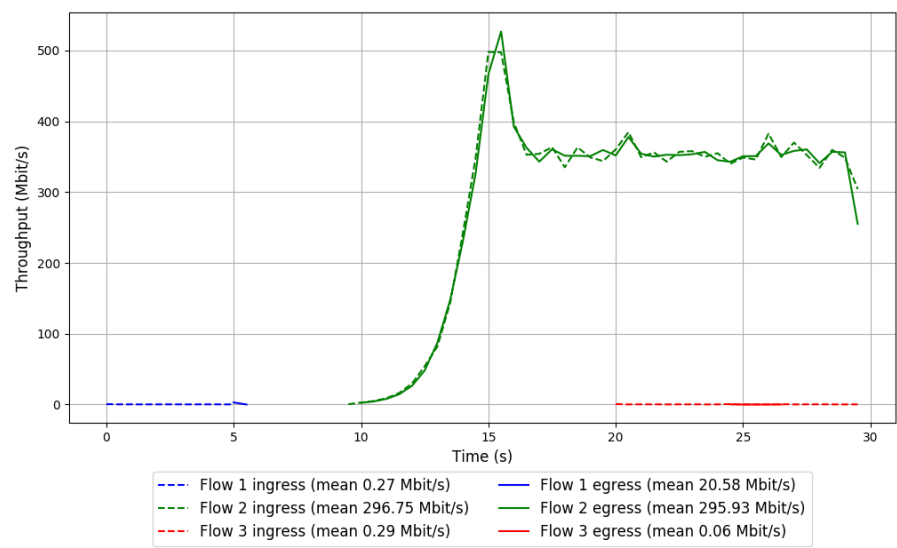
-- Flow 3:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 53.156 ms

Loss rate: 95.34%

Run 7: Report of CalibratedKoho — Data Link



Run 8: Statistics of CalibratedKoho

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

End at: 2017-08-12 08:15:37

Below is generated by plot.py at 2017-08-12 11:24:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 198.19 Mbit/s

95th percentile per-packet one-way delay: 82.996 ms

Loss rate: 1.97%

-- Flow 1:

Average throughput: 1.76 Mbit/s

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

Loss rate: 70.11%

-- Flow 2:

Average throughput: 296.35 Mbit/s

95th percentile per-packet one-way delay: 83.045 ms

Loss rate: 0.88%

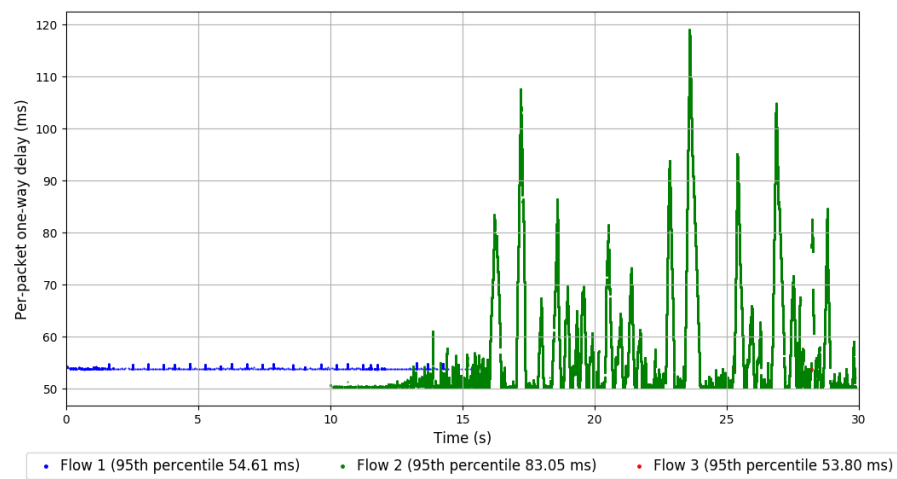
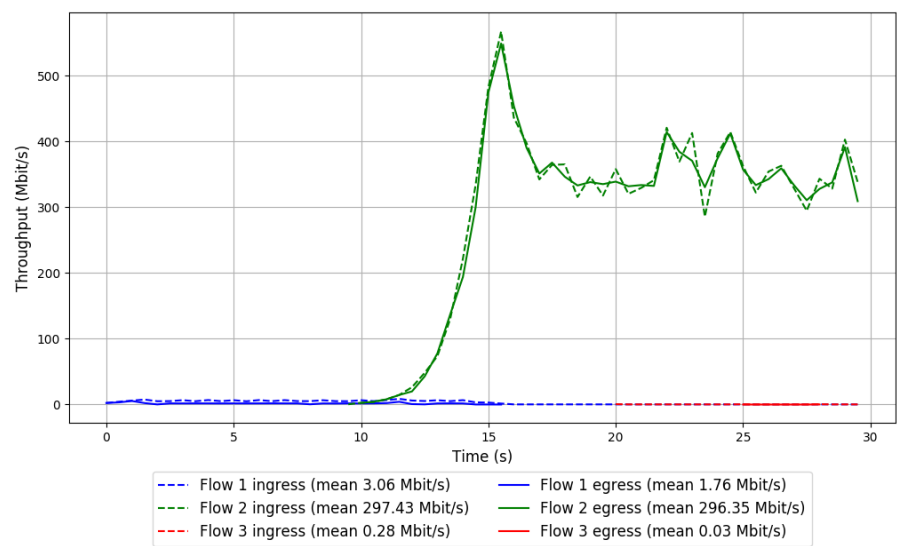
-- Flow 3:

Average throughput: 0.03 Mbit/s

95th percentile per-packet one-way delay: 53.796 ms

Loss rate: 96.96%

Run 8: Report of CalibratedKoho — Data Link



Run 9: Statistics of CalibratedKoho

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

End at: 2017-08-12 08:26:51

Below is generated by plot.py at 2017-08-12 11:25:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 218.41 Mbit/s

95th percentile per-packet one-way delay: 70.649 ms

Loss rate: 1.72%

-- Flow 1:

Average throughput: 1.02 Mbit/s

95th percentile per-packet one-way delay: 53.802 ms

Loss rate: 69.31%

-- Flow 2:

Average throughput: 256.25 Mbit/s

95th percentile per-packet one-way delay: 71.263 ms

Loss rate: 0.36%

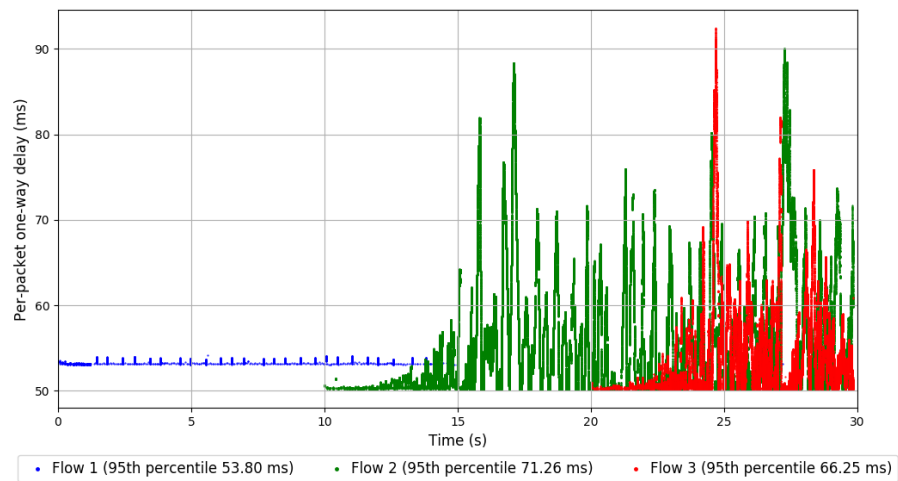
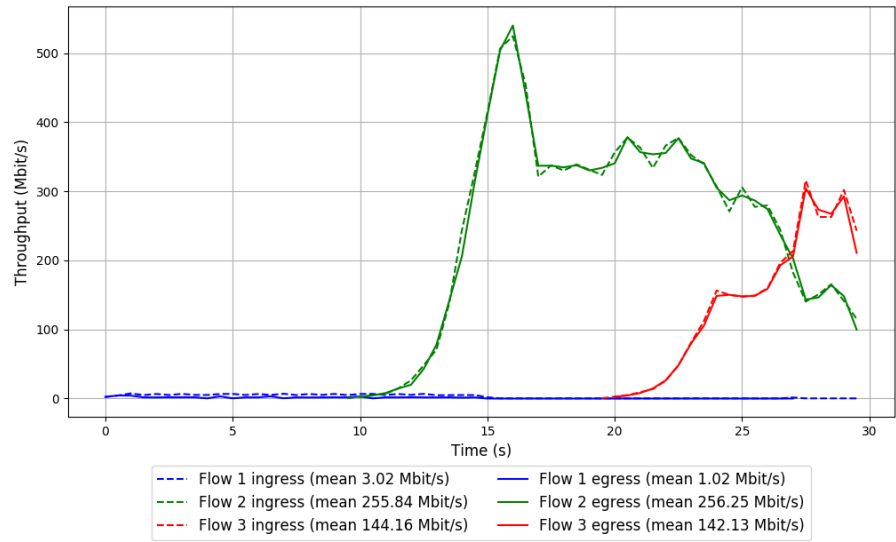
-- Flow 3:

Average throughput: 142.13 Mbit/s

95th percentile per-packet one-way delay: 66.246 ms

Loss rate: 2.32%

Run 9: Report of CalibratedKoho — Data Link



Run 10: Statistics of CalibratedKoho

Start at: 2017-08-12 08:37:21

End at: 2017-08-12 08:37:51

Below is generated by plot.py at 2017-08-12 11:26:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 350.93 Mbit/s

95th percentile per-packet one-way delay: 74.057 ms

Loss rate: 0.74%

-- Flow 1:

Average throughput: 227.98 Mbit/s

95th percentile per-packet one-way delay: 75.727 ms

Loss rate: 0.71%

-- Flow 2:

Average throughput: 185.69 Mbit/s

95th percentile per-packet one-way delay: 70.767 ms

Loss rate: 0.73%

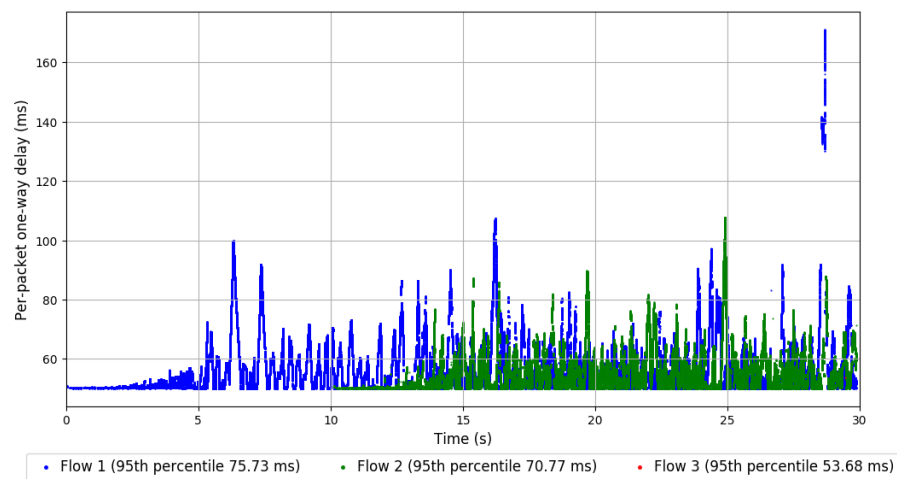
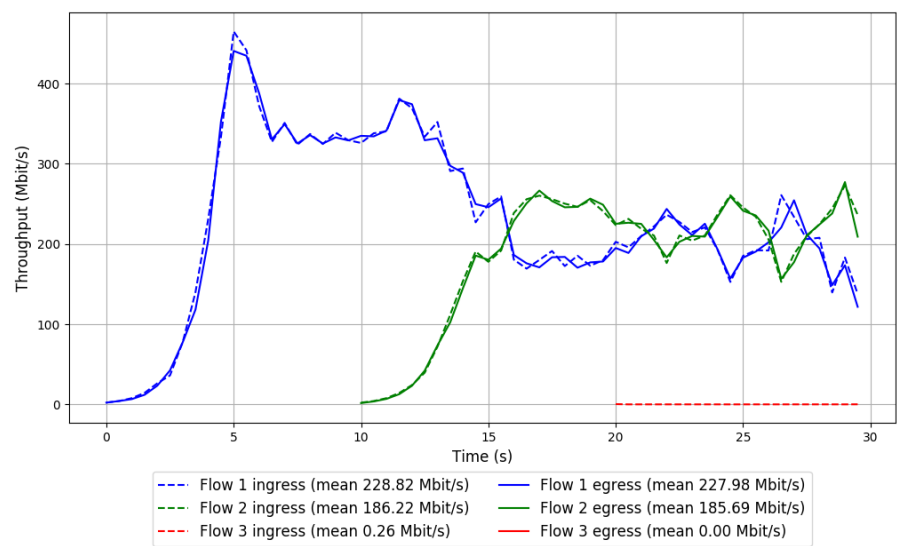
-- Flow 3:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 53.681 ms

Loss rate: 99.53%

Run 10: Report of CalibratedKoho — Data Link

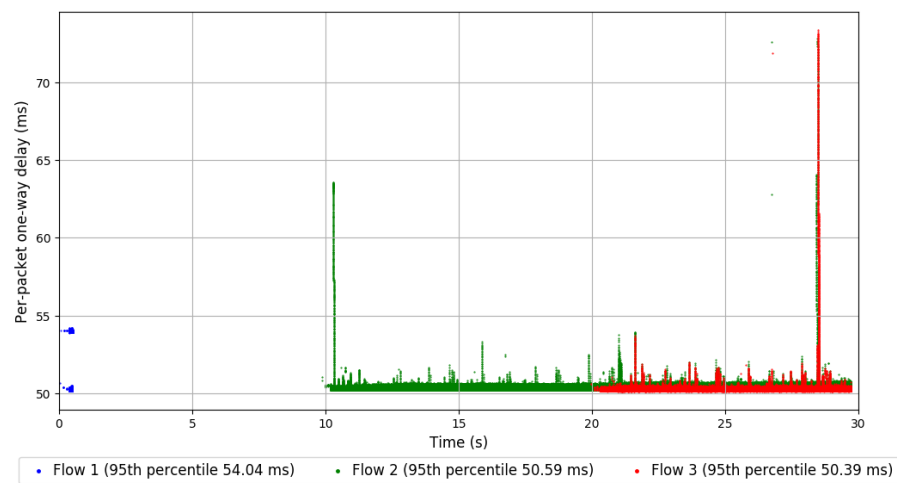
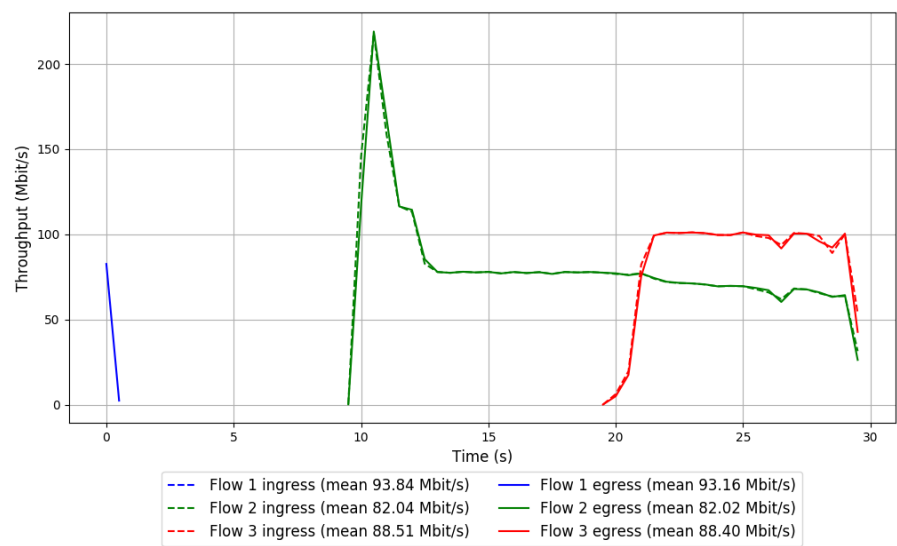


```
Run 1: Statistics of Copa

Start at: 2017-08-12 06:49:30
End at: 2017-08-12 06:50:00

# Below is generated by plot.py at 2017-08-12 11:26:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.34 Mbit/s
95th percentile per-packet one-way delay: 50.573 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 93.16 Mbit/s
95th percentile per-packet one-way delay: 54.043 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 82.02 Mbit/s
95th percentile per-packet one-way delay: 50.592 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 88.40 Mbit/s
95th percentile per-packet one-way delay: 50.391 ms
Loss rate: 1.20%
```


Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2017-08-12 07:00:15

End at: 2017-08-12 07:00:45

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.46 Mbit/s

95th percentile per-packet one-way delay: 54.080 ms

Loss rate: 0.67%

-- Flow 1:

Average throughput: 56.34 Mbit/s

95th percentile per-packet one-way delay: 54.054 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 89.25 Mbit/s

95th percentile per-packet one-way delay: 54.094 ms

Loss rate: 0.47%

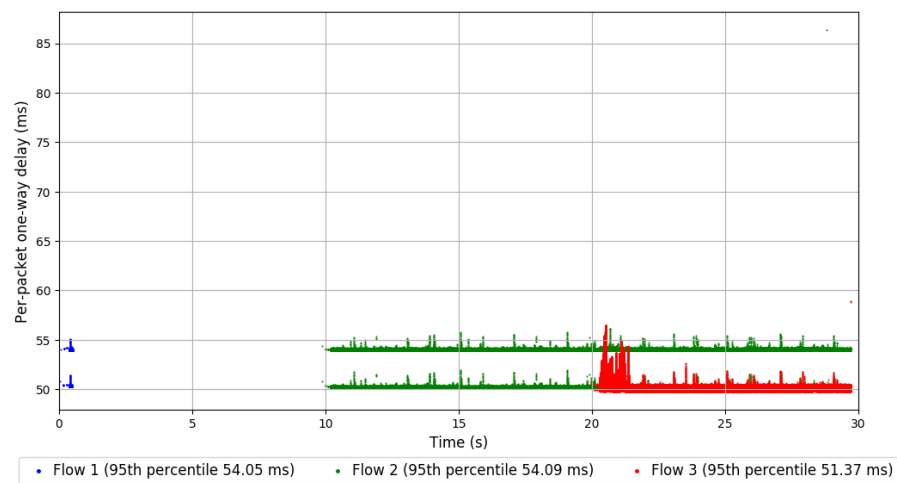
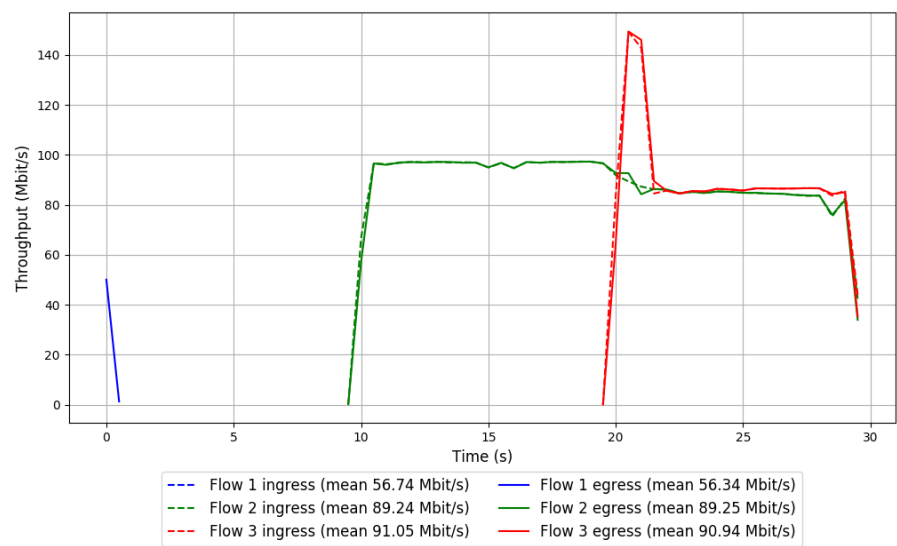
-- Flow 3:

Average throughput: 90.94 Mbit/s

95th percentile per-packet one-way delay: 51.372 ms

Loss rate: 1.08%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2017-08-12 07:11:47

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

Below is generated by plot.py at 2017-08-12 11:26:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 67.90 Mbit/s

95th percentile per-packet one-way delay: 53.104 ms

Loss rate: 24.01%

-- Flow 1:

Average throughput: 8.97 Mbit/s

95th percentile per-packet one-way delay: 53.986 ms

Loss rate: 85.86%

-- Flow 2:

Average throughput: 96.33 Mbit/s

95th percentile per-packet one-way delay: 53.101 ms

Loss rate: 0.57%

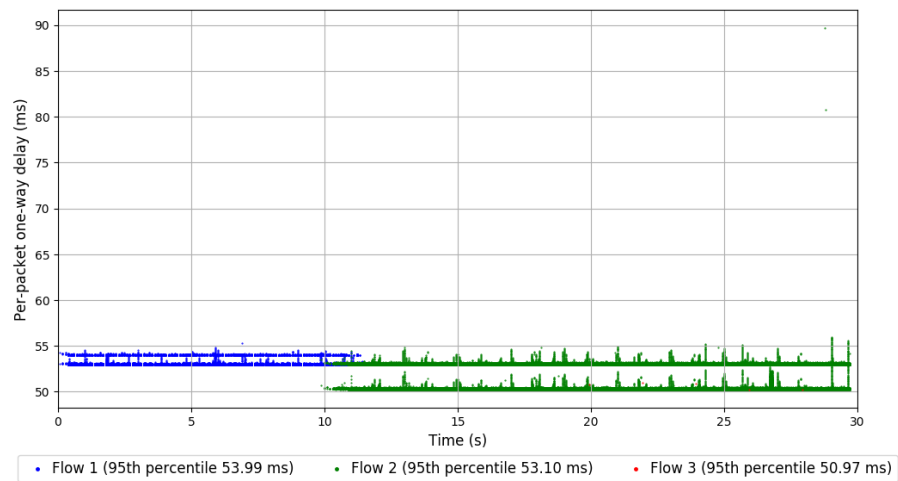
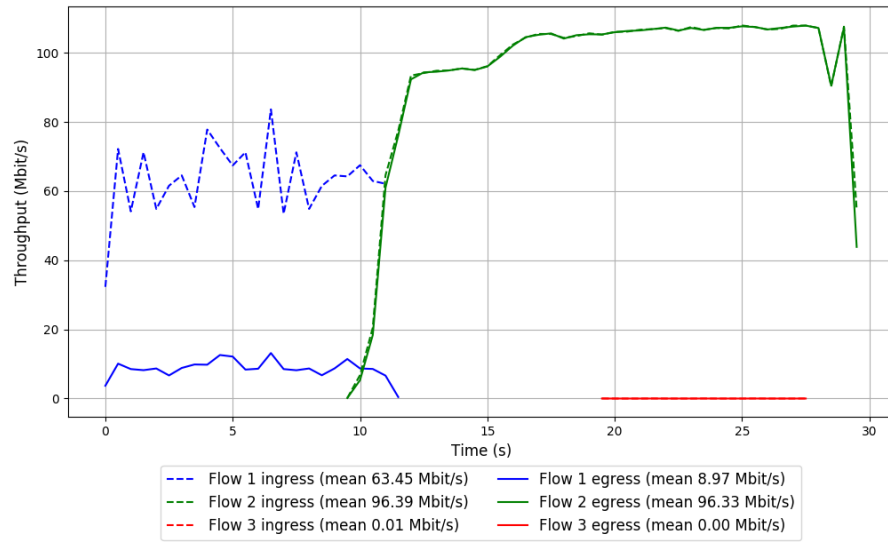
-- Flow 3:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 50.966 ms

Loss rate: 92.35%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2017-08-12 07:23:26

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

Below is generated by plot.py at 2017-08-12 11:26:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 57.74 Mbit/s

95th percentile per-packet one-way delay: 54.100 ms

Loss rate: 2.96%

-- Flow 1:

Average throughput: 65.19 Mbit/s

95th percentile per-packet one-way delay: 53.467 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 84.71 Mbit/s

95th percentile per-packet one-way delay: 54.101 ms

Loss rate: 1.70%

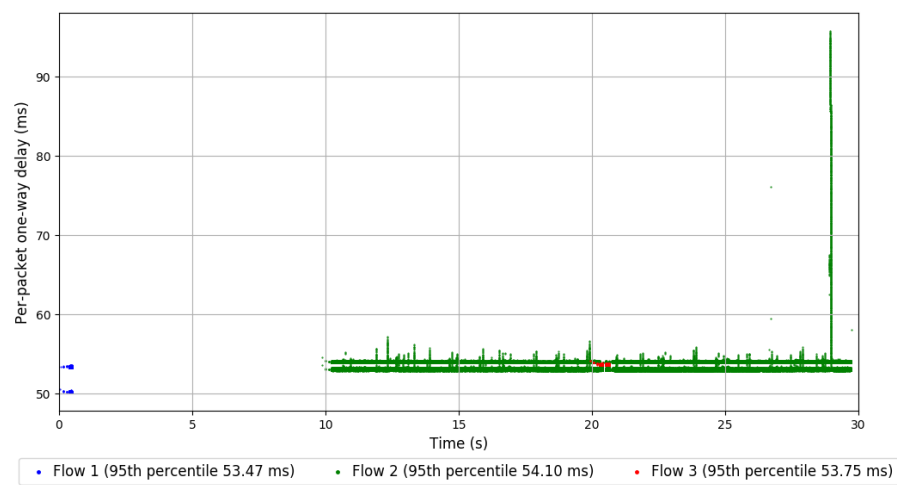
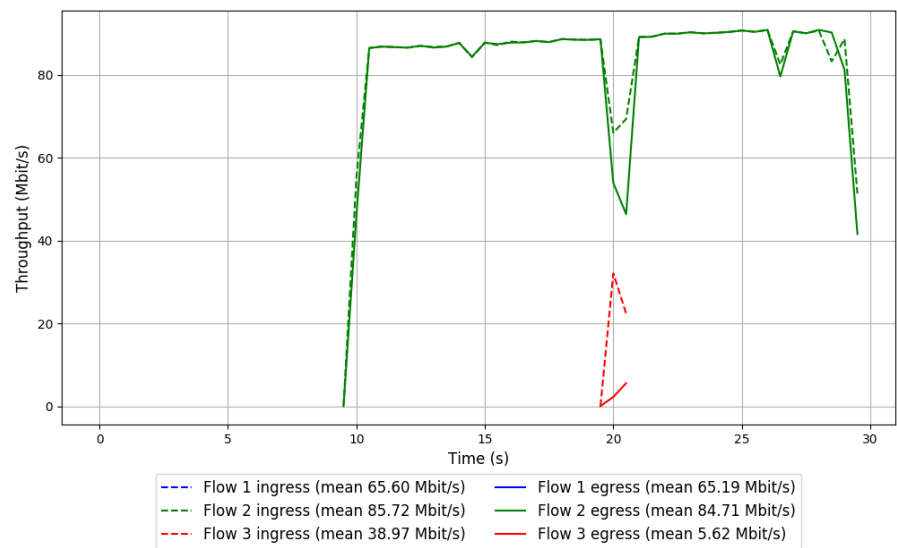
-- Flow 3:

Average throughput: 5.62 Mbit/s

95th percentile per-packet one-way delay: 53.752 ms

Loss rate: 85.58%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2017-08-12 07:34:54

End at: 2017-08-12 07:35:24

Below is generated by plot.py at 2017-08-12 11:27:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 93.01 Mbit/s

95th percentile per-packet one-way delay: 53.098 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 93.01 Mbit/s

95th percentile per-packet one-way delay: 53.098 ms

Loss rate: 0.55%

-- Flow 2:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 53.735 ms

Loss rate: 82.09%

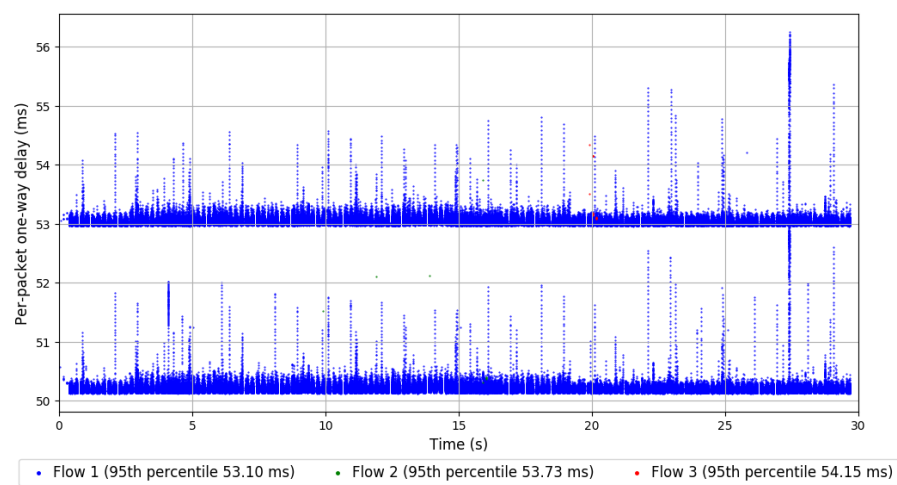
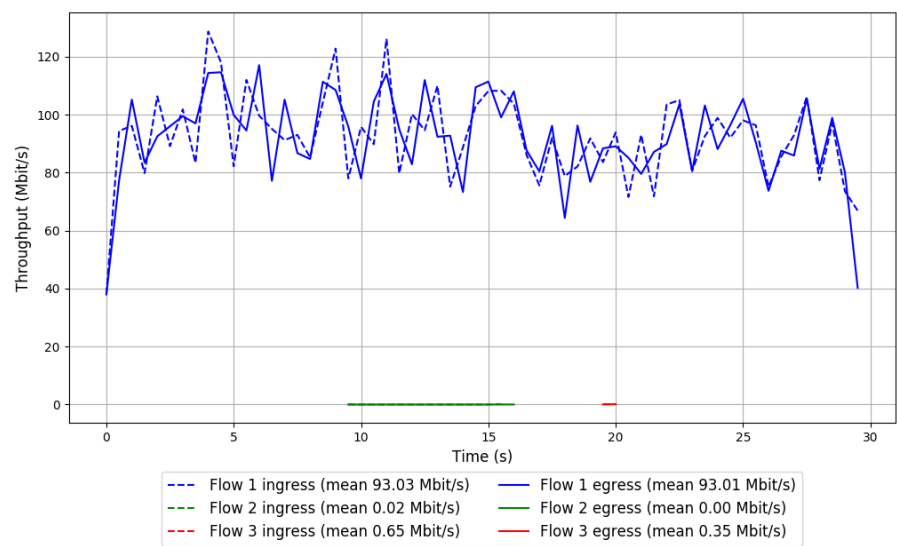
-- Flow 3:

Average throughput: 0.35 Mbit/s

95th percentile per-packet one-way delay: 54.154 ms

Loss rate: 46.17%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

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

End at: 2017-08-12 07:46:38

Below is generated by plot.py at 2017-08-12 11:27:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 109.55 Mbit/s

95th percentile per-packet one-way delay: 53.674 ms

Loss rate: 17.68%

-- Flow 1:

Average throughput: 9.80 Mbit/s

95th percentile per-packet one-way delay: 53.763 ms

Loss rate: 87.04%

-- Flow 2:

Average throughput: 158.60 Mbit/s

95th percentile per-packet one-way delay: 50.274 ms

Loss rate: 0.50%

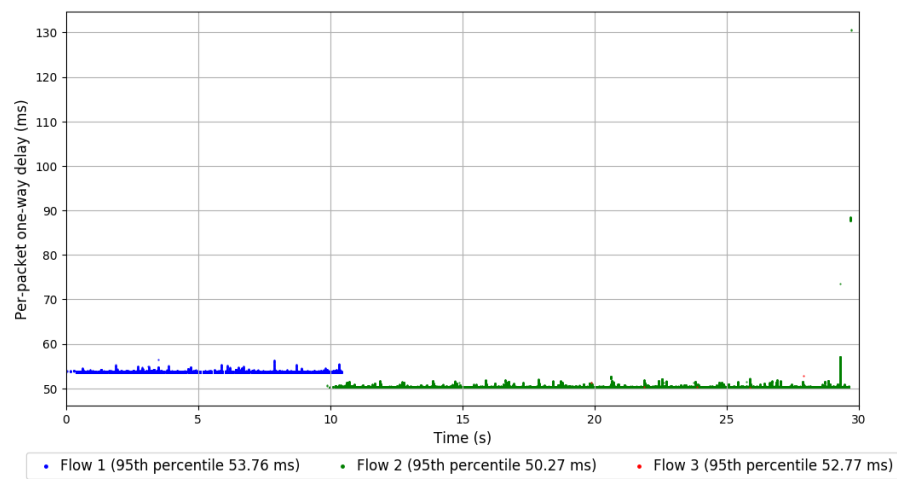
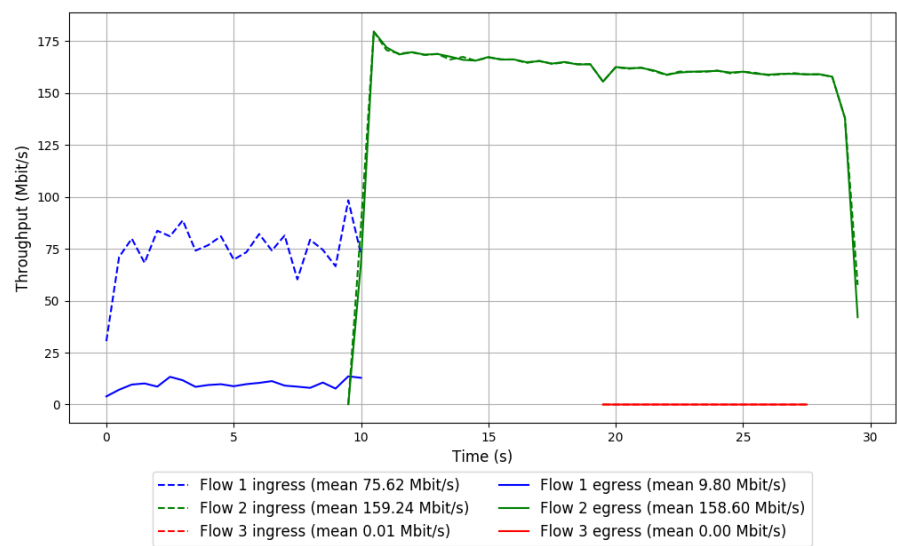
-- Flow 3:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 52.767 ms

Loss rate: 92.35%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2017-08-12 07:57:40

End at: 2017-08-12 07:58:10

Below is generated by plot.py at 2017-08-12 11:27:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 60.06 Mbit/s

95th percentile per-packet one-way delay: 54.051 ms

Loss rate: 5.05%

-- Flow 1:

Average throughput: 93.72 Mbit/s

95th percentile per-packet one-way delay: 53.729 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 79.58 Mbit/s

95th percentile per-packet one-way delay: 54.050 ms

Loss rate: 8.00%

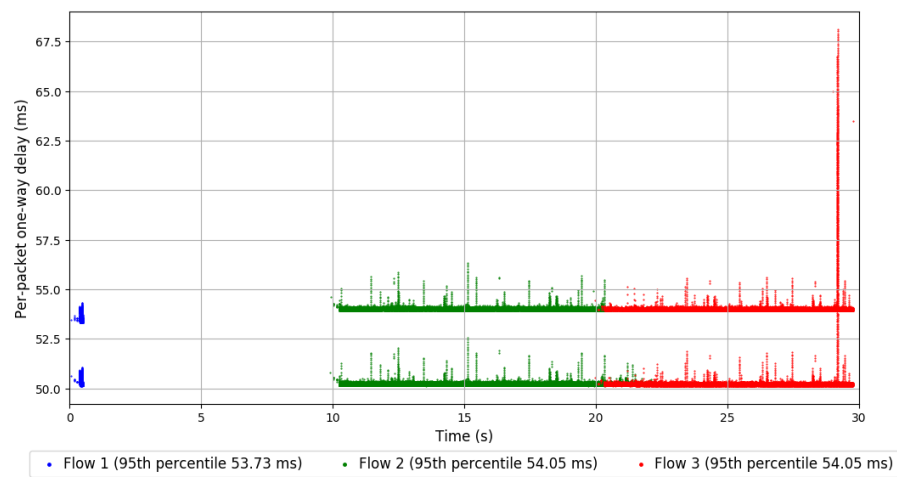
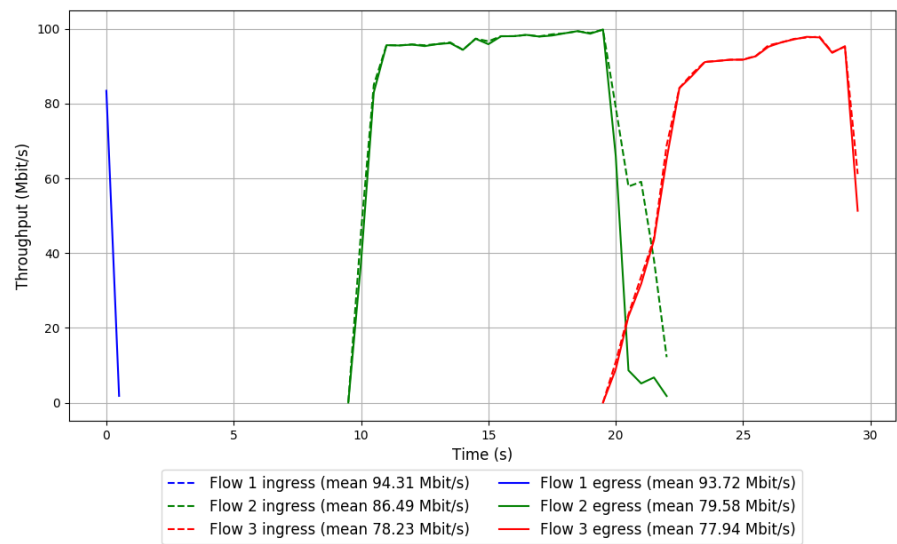
-- Flow 3:

Average throughput: 77.94 Mbit/s

95th percentile per-packet one-way delay: 54.054 ms

Loss rate: 1.28%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

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

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

Below is generated by plot.py at 2017-08-12 11:27:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 48.75 Mbit/s

95th percentile per-packet one-way delay: 53.043 ms

Loss rate: 36.07%

-- Flow 1:

Average throughput: 72.04 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 4.80 Mbit/s

95th percentile per-packet one-way delay: 53.076 ms

Loss rate: 0.00%

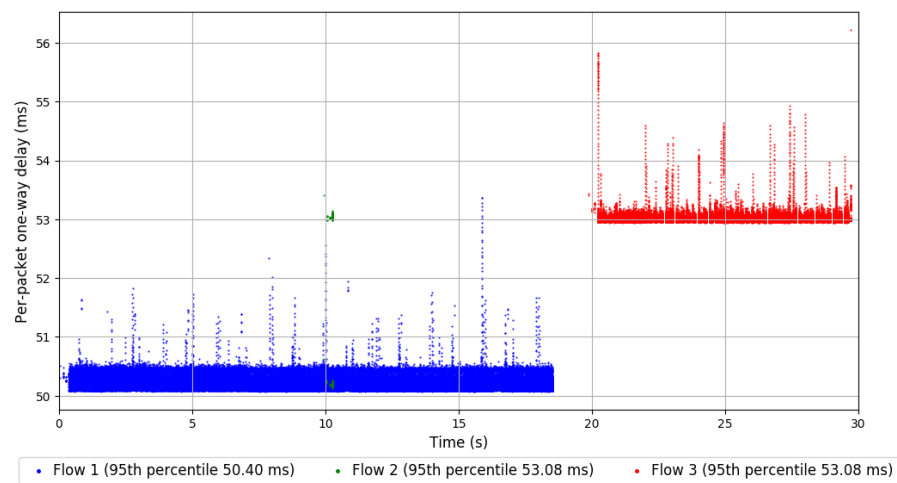
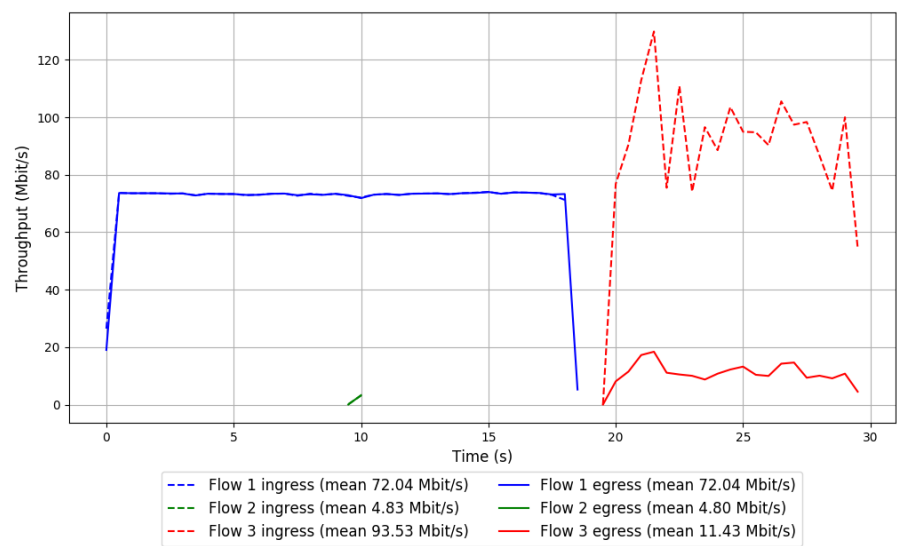
-- Flow 3:

Average throughput: 11.43 Mbit/s

95th percentile per-packet one-way delay: 53.084 ms

Loss rate: 87.88%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2017-08-12 08:19:47

End at: 2017-08-12 08:20:17

Below is generated by plot.py at 2017-08-12 11:28:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 65.71 Mbit/s

95th percentile per-packet one-way delay: 53.848 ms

Loss rate: 33.87%

-- Flow 1:

Average throughput: 47.29 Mbit/s

95th percentile per-packet one-way delay: 53.917 ms

Loss rate: 29.43%

-- Flow 2:

Average throughput: 13.21 Mbit/s

95th percentile per-packet one-way delay: 53.080 ms

Loss rate: 69.05%

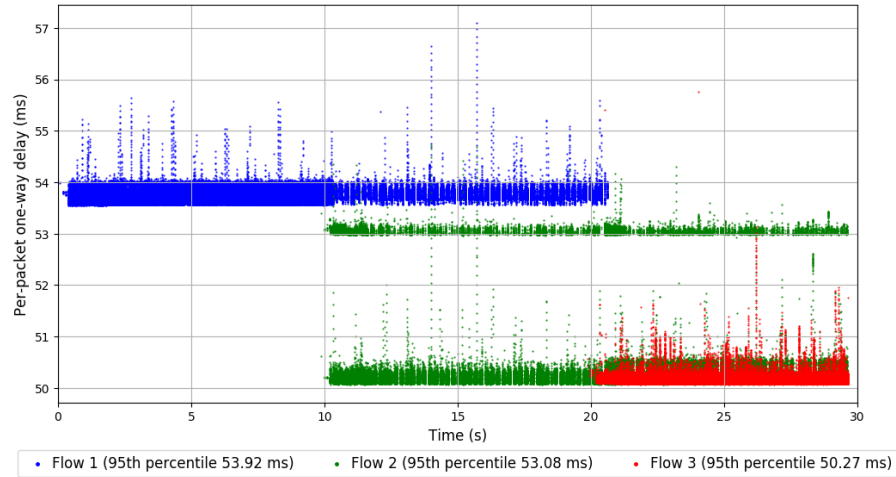
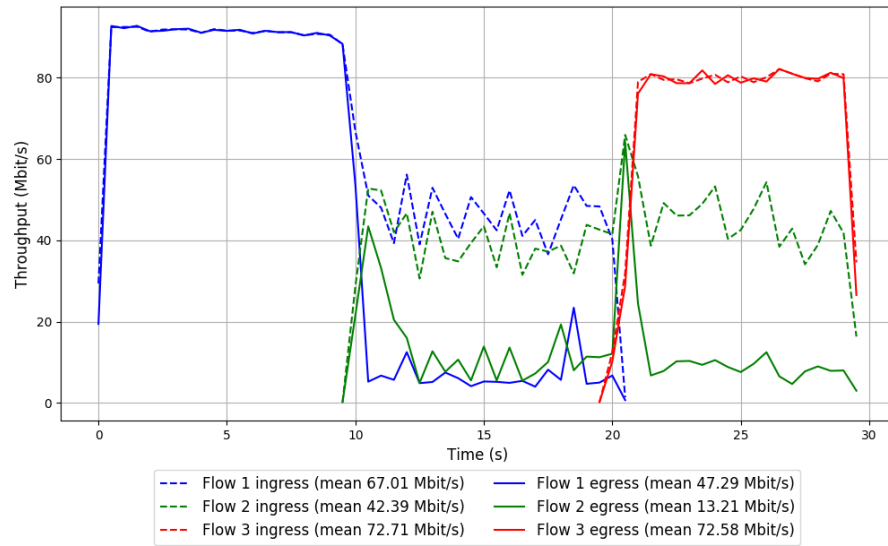
-- Flow 3:

Average throughput: 72.58 Mbit/s

95th percentile per-packet one-way delay: 50.275 ms

Loss rate: 1.16%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2017-08-12 08:30:54

End at: 2017-08-12 08:31:24

Below is generated by plot.py at 2017-08-12 11:28:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 20.36 Mbit/s

95th percentile per-packet one-way delay: 54.029 ms

Loss rate: 76.81%

-- Flow 1:

Average throughput: 17.20 Mbit/s

95th percentile per-packet one-way delay: 53.821 ms

Loss rate: 77.38%

-- Flow 2:

Average throughput: 0.35 Mbit/s

95th percentile per-packet one-way delay: 53.728 ms

Loss rate: 46.17%

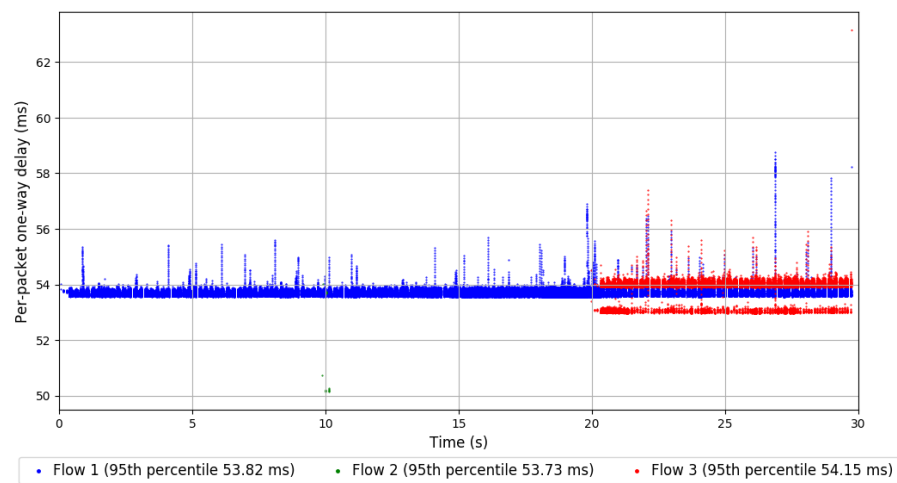
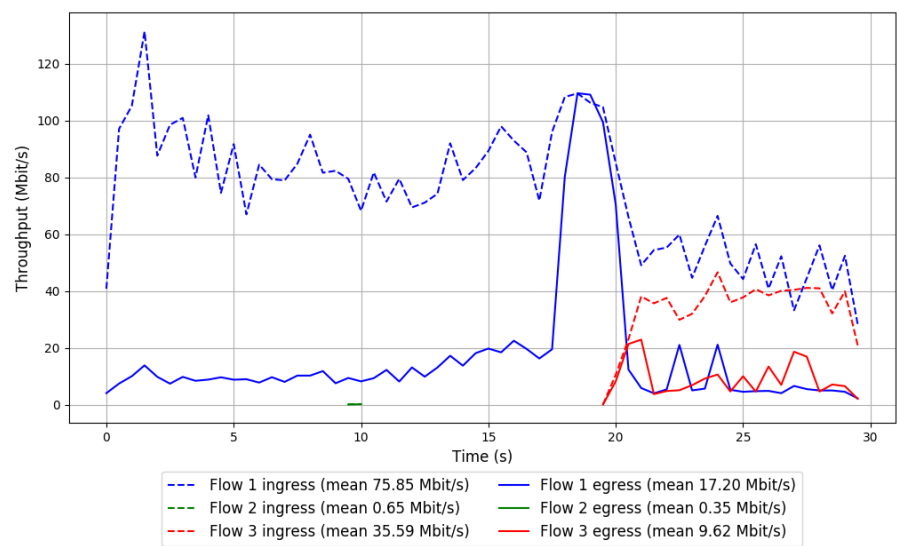
-- Flow 3:

Average throughput: 9.62 Mbit/s

95th percentile per-packet one-way delay: 54.150 ms

Loss rate: 73.16%

Run 10: Report of Copa — Data Link

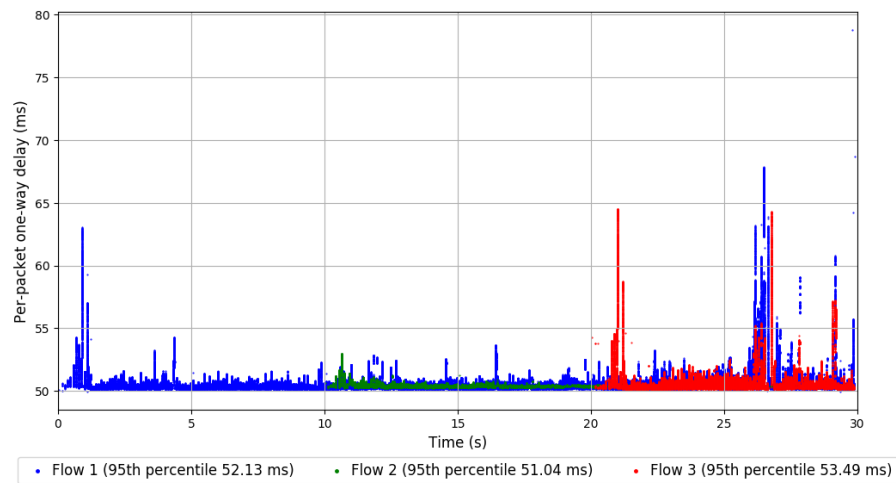
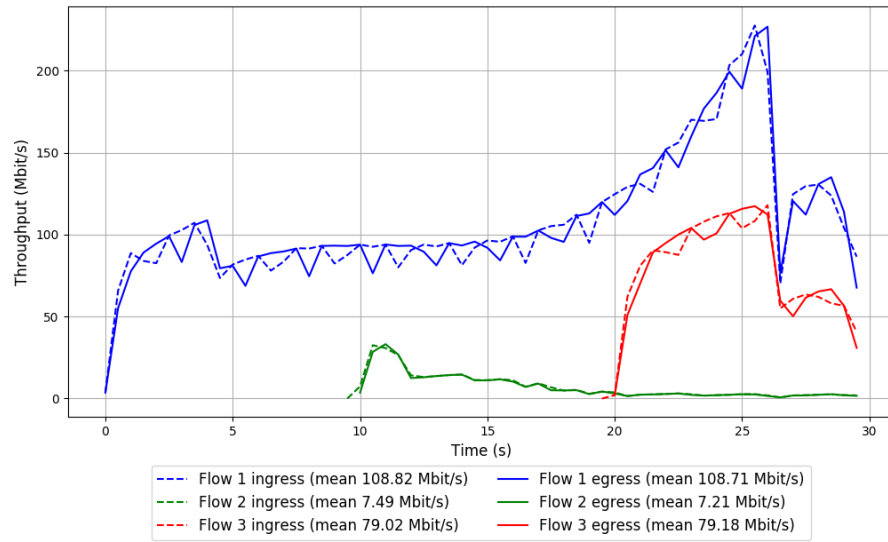


```
Run 1: Statistics of TCP Cubic

Start at: 2017-08-12 06:50:18
End at: 2017-08-12 06:50:48

# Below is generated by plot.py at 2017-08-12 11:28:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 139.57 Mbit/s
95th percentile per-packet one-way delay: 52.190 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 108.71 Mbit/s
95th percentile per-packet one-way delay: 52.128 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 7.21 Mbit/s
95th percentile per-packet one-way delay: 51.037 ms
Loss rate: 4.37%
-- Flow 3:
Average throughput: 79.18 Mbit/s
95th percentile per-packet one-way delay: 53.491 ms
Loss rate: 1.11%
```

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2017-08-12 07:01:03

End at: 2017-08-12 07:01:33

Below is generated by plot.py at 2017-08-12 11:28:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 62.67 Mbit/s

95th percentile per-packet one-way delay: 50.604 ms

Loss rate: 1.19%

-- Flow 1:

Average throughput: 49.51 Mbit/s

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

Loss rate: 0.99%

-- Flow 2:

Average throughput: 0.32 Mbit/s

95th percentile per-packet one-way delay: 53.949 ms

Loss rate: 30.66%

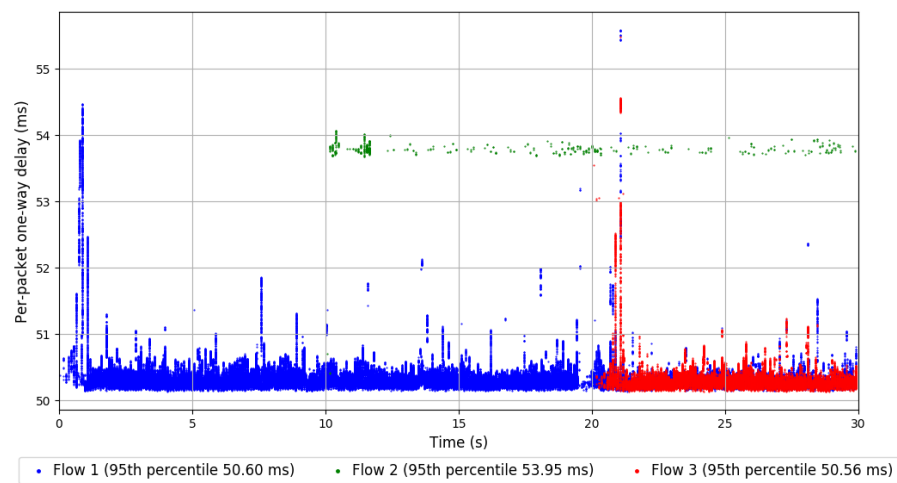
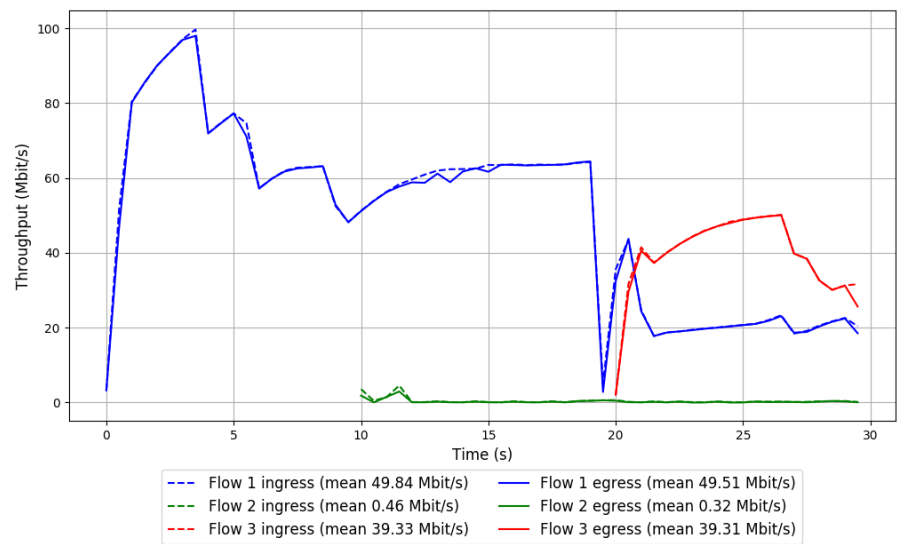
-- Flow 3:

Average throughput: 39.31 Mbit/s

95th percentile per-packet one-way delay: 50.561 ms

Loss rate: 1.27%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

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

End at: 2017-08-12 07:13:03

Below is generated by plot.py at 2017-08-12 11:28:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.09 Mbit/s

95th percentile per-packet one-way delay: 53.906 ms

Loss rate: 3.11%

-- Flow 1:

Average throughput: 7.01 Mbit/s

95th percentile per-packet one-way delay: 53.422 ms

Loss rate: 3.23%

-- Flow 2:

Average throughput: 6.07 Mbit/s

95th percentile per-packet one-way delay: 53.984 ms

Loss rate: 2.49%

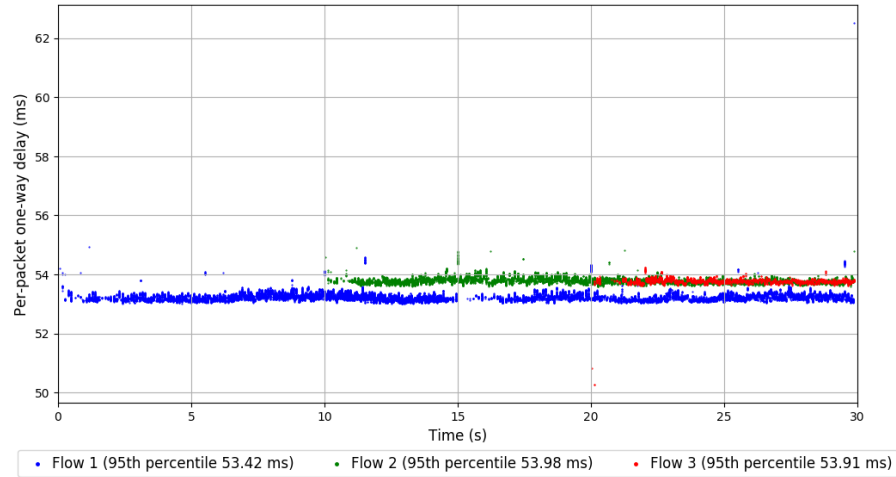
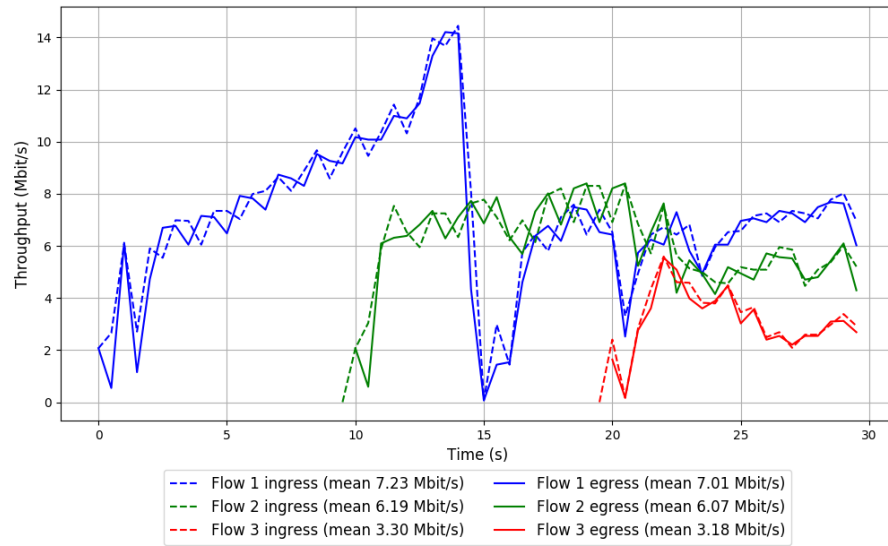
-- Flow 3:

Average throughput: 3.18 Mbit/s

95th percentile per-packet one-way delay: 53.913 ms

Loss rate: 4.62%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

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

End at: 2017-08-12 07:24:42

Below is generated by plot.py at 2017-08-12 11:28:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 133.62 Mbit/s

95th percentile per-packet one-way delay: 51.073 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 62.59 Mbit/s

95th percentile per-packet one-way delay: 50.910 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 67.10 Mbit/s

95th percentile per-packet one-way delay: 50.990 ms

Loss rate: 1.60%

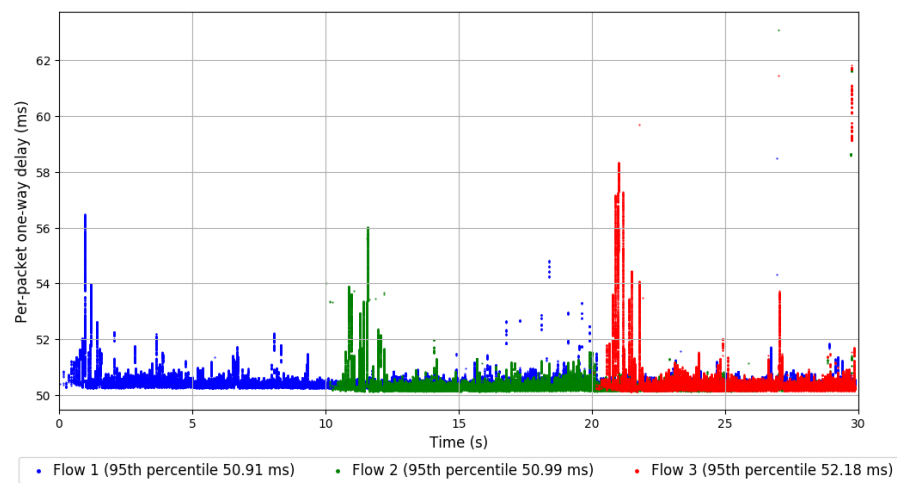
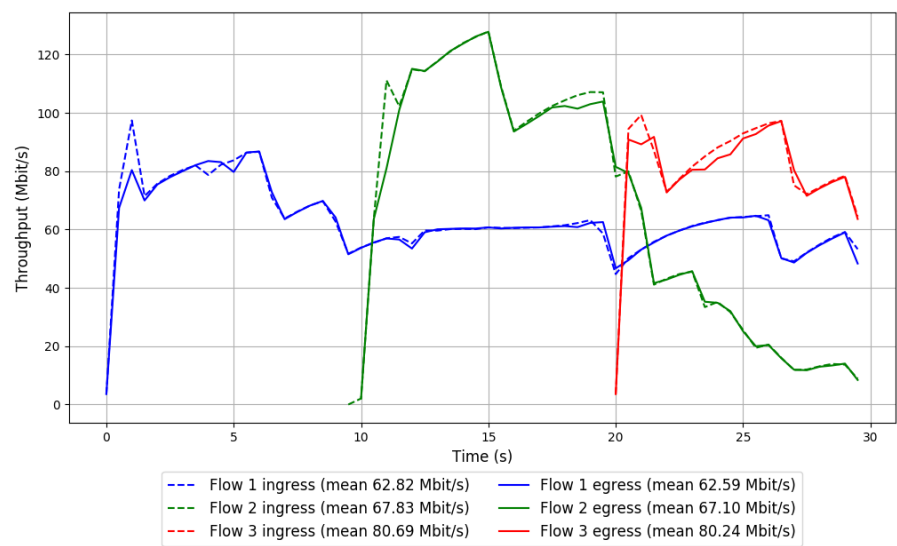
-- Flow 3:

Average throughput: 80.24 Mbit/s

95th percentile per-packet one-way delay: 52.180 ms

Loss rate: 1.58%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2017-08-12 07:35:39

End at: 2017-08-12 07:36:09

Below is generated by plot.py at 2017-08-12 11:28:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 69.00 Mbit/s

95th percentile per-packet one-way delay: 54.128 ms

Loss rate: 1.02%

-- Flow 1:

Average throughput: 3.66 Mbit/s

95th percentile per-packet one-way delay: 54.360 ms

Loss rate: 3.60%

-- Flow 2:

Average throughput: 58.81 Mbit/s

95th percentile per-packet one-way delay: 51.962 ms

Loss rate: 0.76%

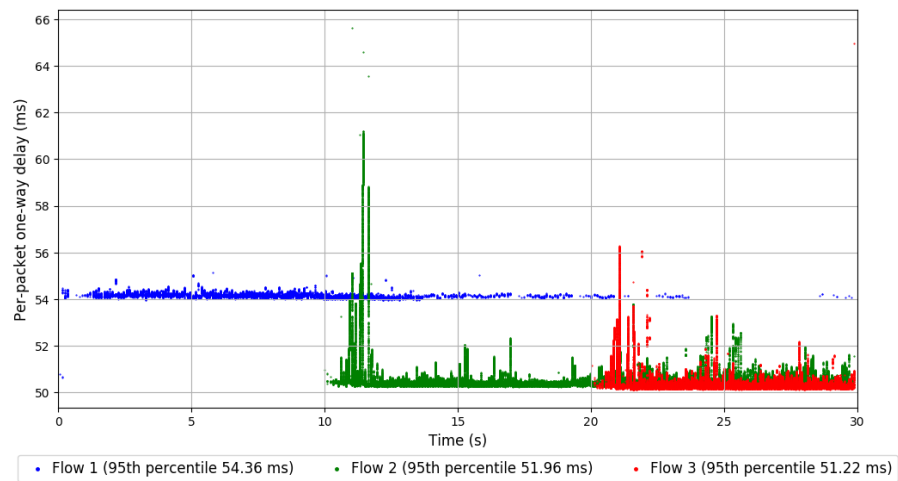
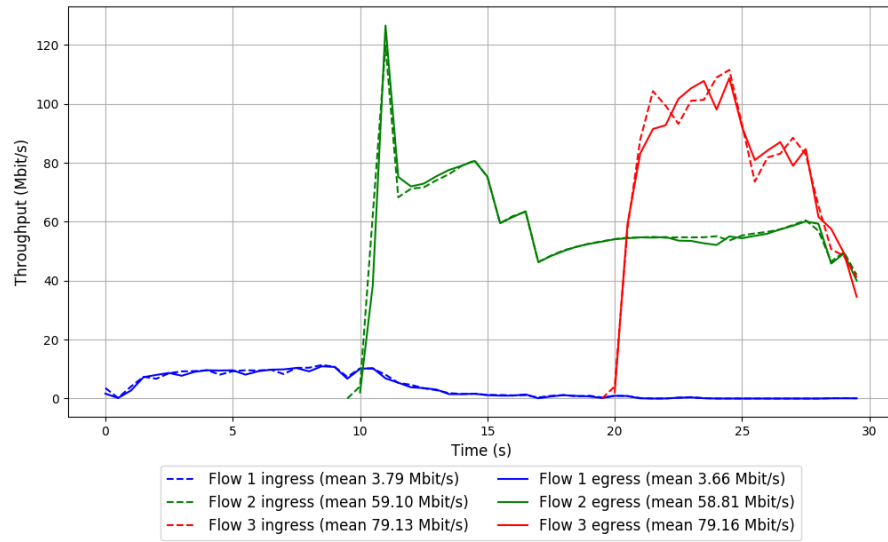
-- Flow 3:

Average throughput: 79.16 Mbit/s

95th percentile per-packet one-way delay: 51.216 ms

Loss rate: 1.04%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2017-08-12 07:46:57

End at: 2017-08-12 07:47:27

Below is generated by plot.py at 2017-08-12 11:28:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 36.92 Mbit/s

95th percentile per-packet one-way delay: 53.838 ms

Loss rate: 2.40%

-- Flow 1:

Average throughput: 6.39 Mbit/s

95th percentile per-packet one-way delay: 53.967 ms

Loss rate: 3.06%

-- Flow 2:

Average throughput: 4.02 Mbit/s

95th percentile per-packet one-way delay: 53.883 ms

Loss rate: 4.45%

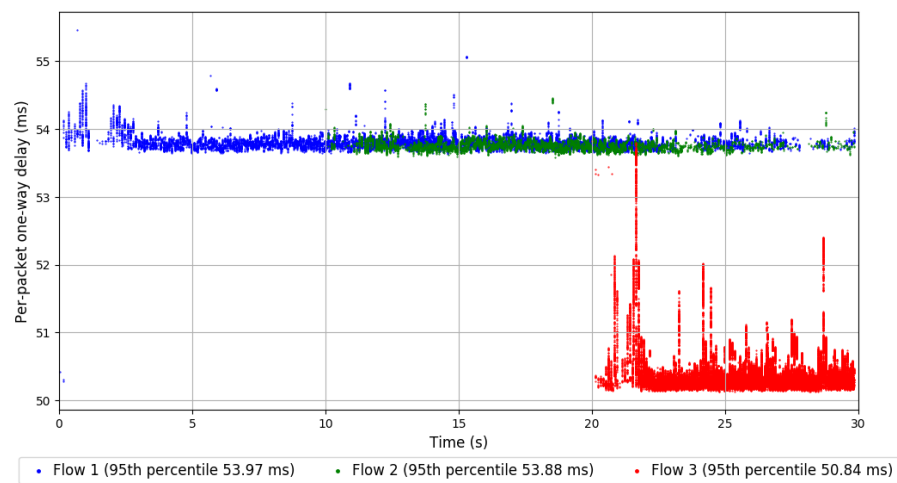
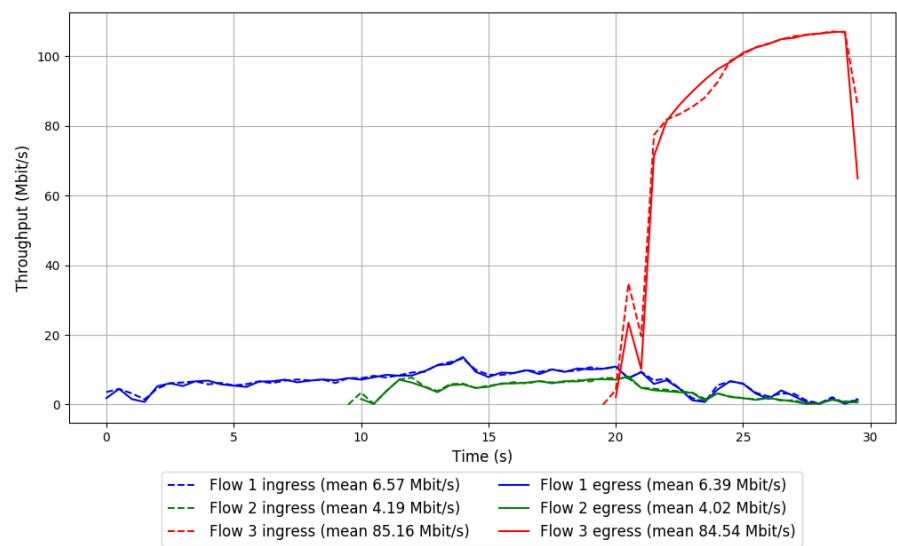
-- Flow 3:

Average throughput: 84.54 Mbit/s

95th percentile per-packet one-way delay: 50.838 ms

Loss rate: 2.05%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2017-08-12 07:58:26

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

Below is generated by plot.py at 2017-08-12 11:29:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 96.57 Mbit/s

95th percentile per-packet one-way delay: 50.965 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 44.99 Mbit/s

95th percentile per-packet one-way delay: 51.055 ms

Loss rate: 1.19%

-- Flow 2:

Average throughput: 27.08 Mbit/s

95th percentile per-packet one-way delay: 50.719 ms

Loss rate: 0.77%

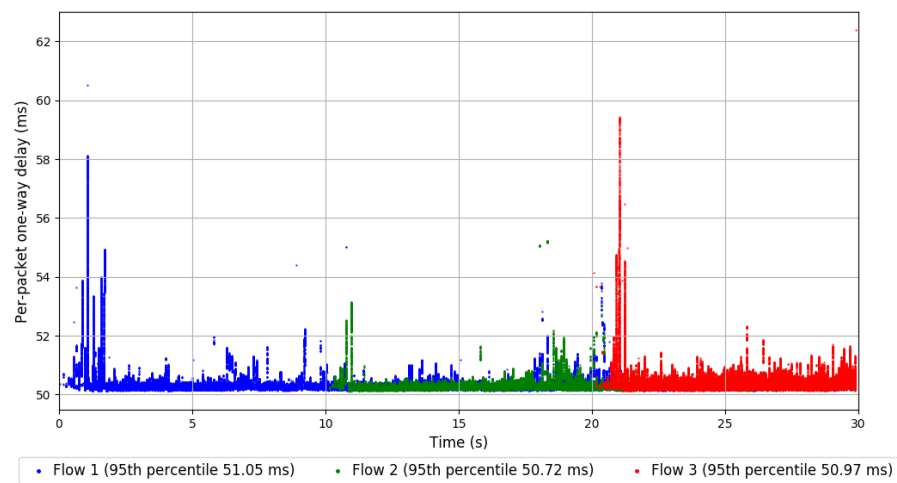
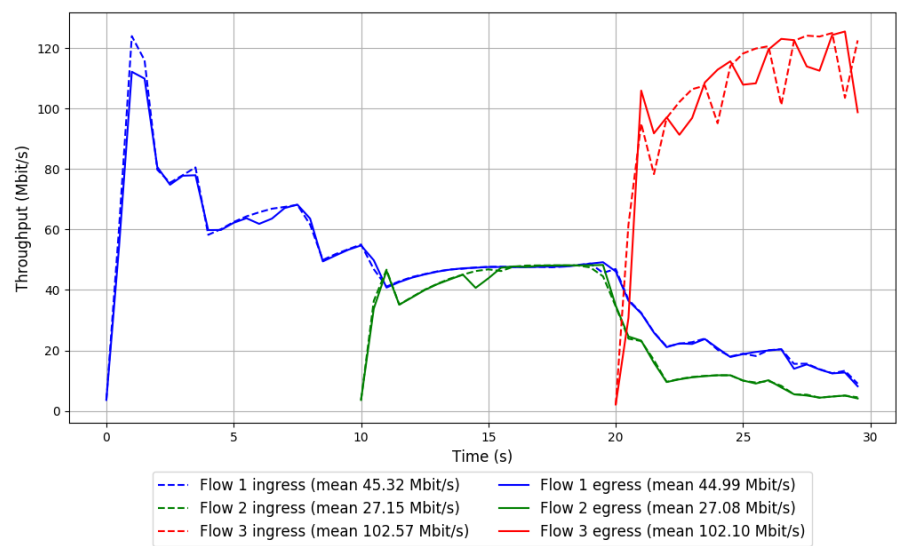
-- Flow 3:

Average throughput: 102.10 Mbit/s

95th percentile per-packet one-way delay: 50.965 ms

Loss rate: 1.53%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

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

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

Below is generated by plot.py at 2017-08-12 11:29:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 11.27 Mbit/s

95th percentile per-packet one-way delay: 54.152 ms

Loss rate: 2.88%

-- Flow 1:

Average throughput: 6.27 Mbit/s

95th percentile per-packet one-way delay: 53.899 ms

Loss rate: 2.82%

-- Flow 2:

Average throughput: 5.66 Mbit/s

95th percentile per-packet one-way delay: 53.963 ms

Loss rate: 1.14%

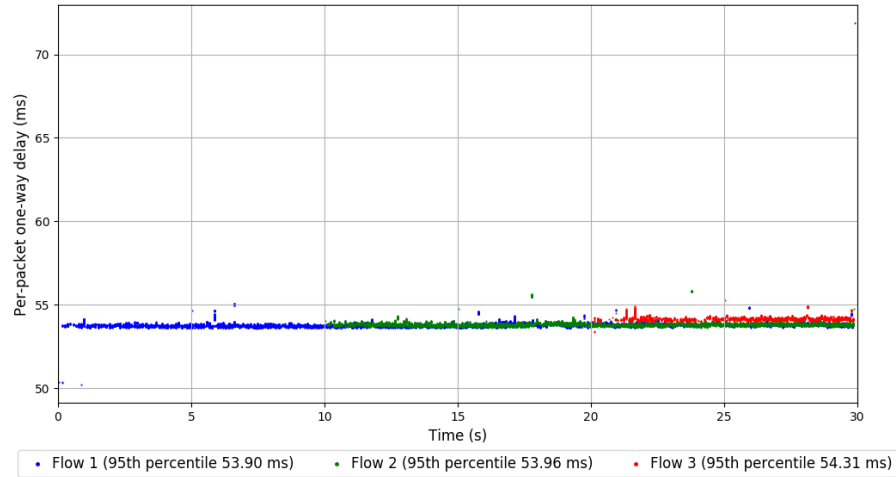
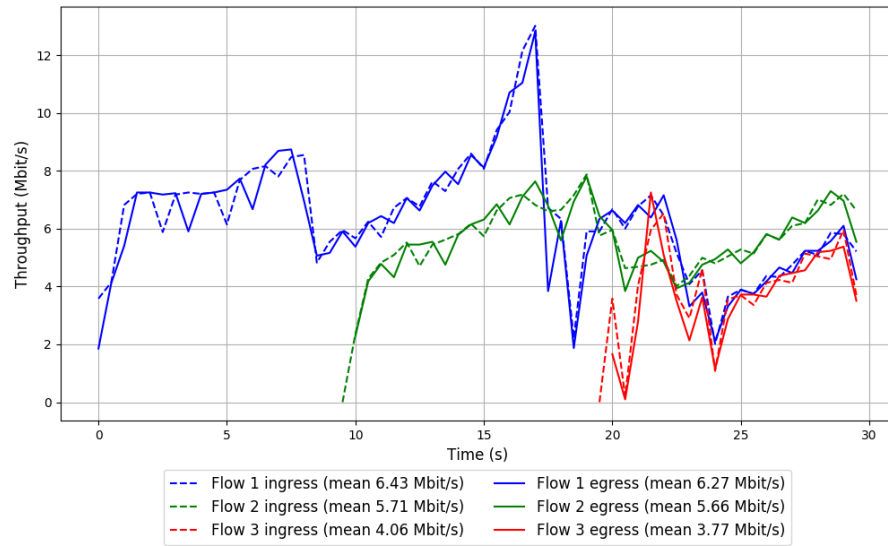
-- Flow 3:

Average throughput: 3.77 Mbit/s

95th percentile per-packet one-way delay: 54.307 ms

Loss rate: 8.08%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2017-08-12 08:20:35

End at: 2017-08-12 08:21:05

Below is generated by plot.py at 2017-08-12 11:29:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 58.88 Mbit/s

95th percentile per-packet one-way delay: 51.270 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 14.51 Mbit/s

95th percentile per-packet one-way delay: 50.533 ms

Loss rate: 0.72%

-- Flow 2:

Average throughput: 66.68 Mbit/s

95th percentile per-packet one-way delay: 51.845 ms

Loss rate: 0.98%

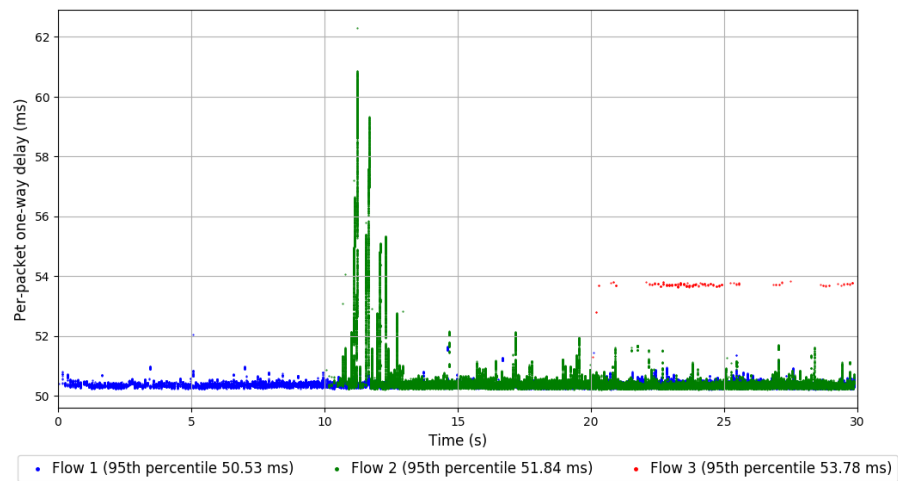
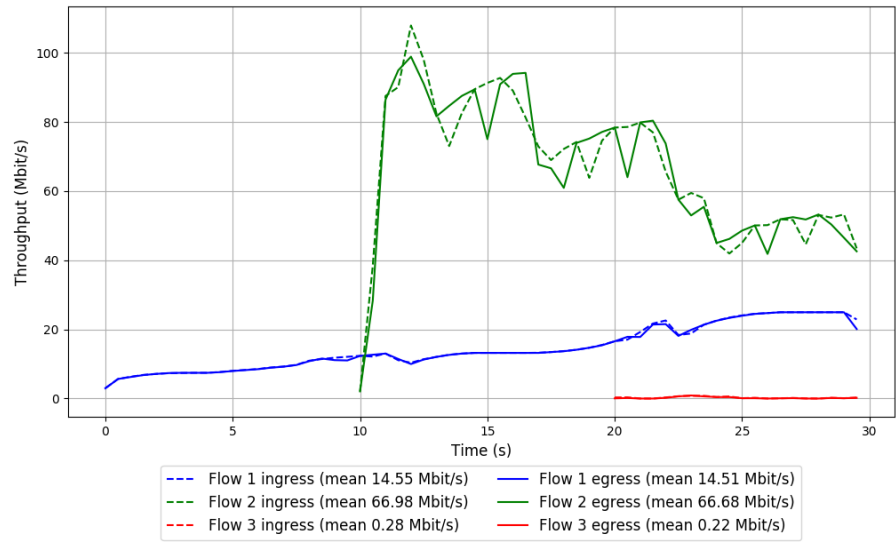
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 53.782 ms

Loss rate: 22.25%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2017-08-12 08:31:39

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

Below is generated by plot.py at 2017-08-12 11:29:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 103.44 Mbit/s

95th percentile per-packet one-way delay: 51.226 ms

Loss rate: 0.60%

-- Flow 1:

Average throughput: 103.02 Mbit/s

95th percentile per-packet one-way delay: 51.181 ms

Loss rate: 0.45%

-- Flow 2:

Average throughput: 0.55 Mbit/s

95th percentile per-packet one-way delay: 53.948 ms

Loss rate: 21.83%

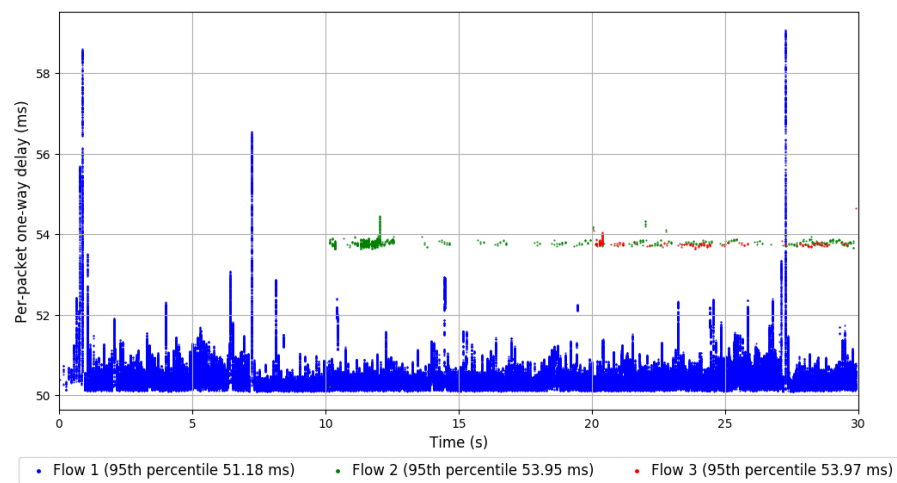
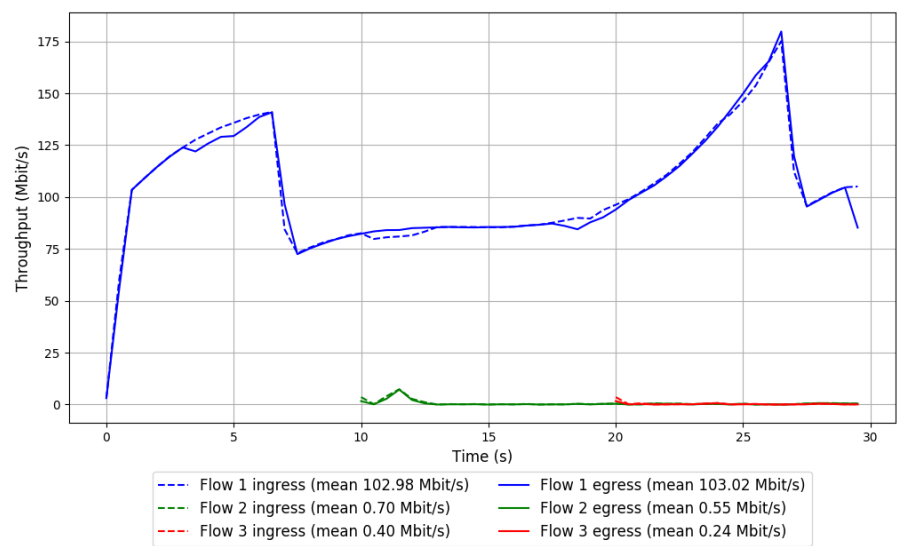
-- Flow 3:

Average throughput: 0.24 Mbit/s

95th percentile per-packet one-way delay: 53.965 ms

Loss rate: 39.61%

Run 10: Report of TCP Cubic — Data Link

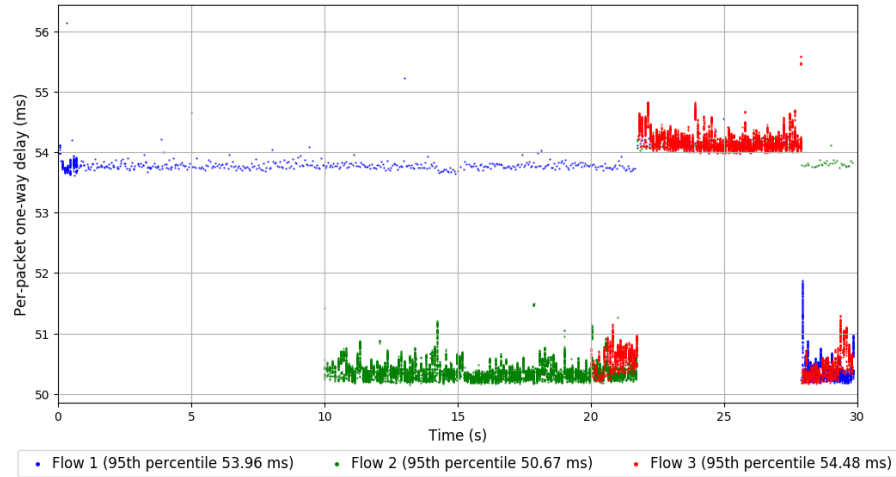
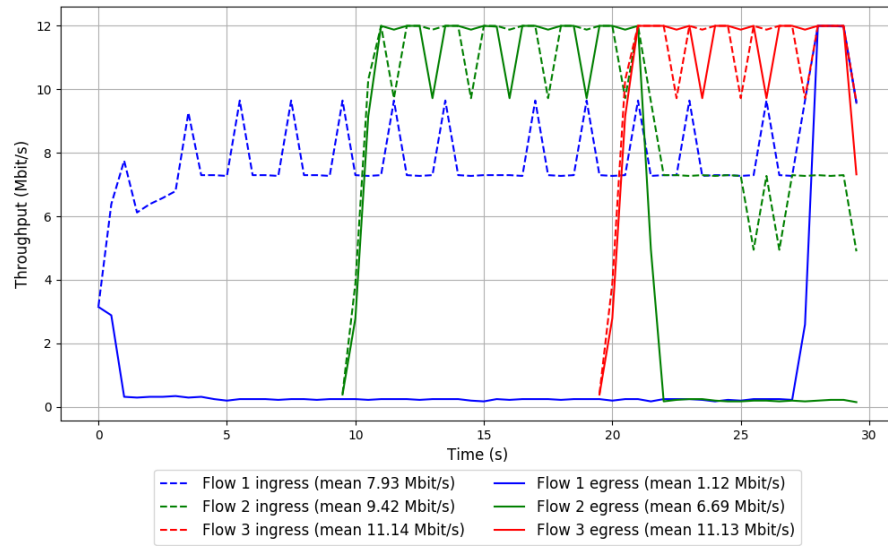


```
Run 1: Statistics of KohoCC

Start at: 2017-08-12 06:55:21
End at: 2017-08-12 06:55:51

# Below is generated by plot.py at 2017-08-12 11:29:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 9.24 Mbit/s
95th percentile per-packet one-way delay: 54.299 ms
Loss rate: 48.61%
-- Flow 1:
Average throughput: 1.12 Mbit/s
95th percentile per-packet one-way delay: 53.964 ms
Loss rate: 85.91%
-- Flow 2:
Average throughput: 6.69 Mbit/s
95th percentile per-packet one-way delay: 50.674 ms
Loss rate: 29.56%
-- Flow 3:
Average throughput: 11.13 Mbit/s
95th percentile per-packet one-way delay: 54.483 ms
Loss rate: 1.09%
```


Run 1: Report of KohoCC — Data Link

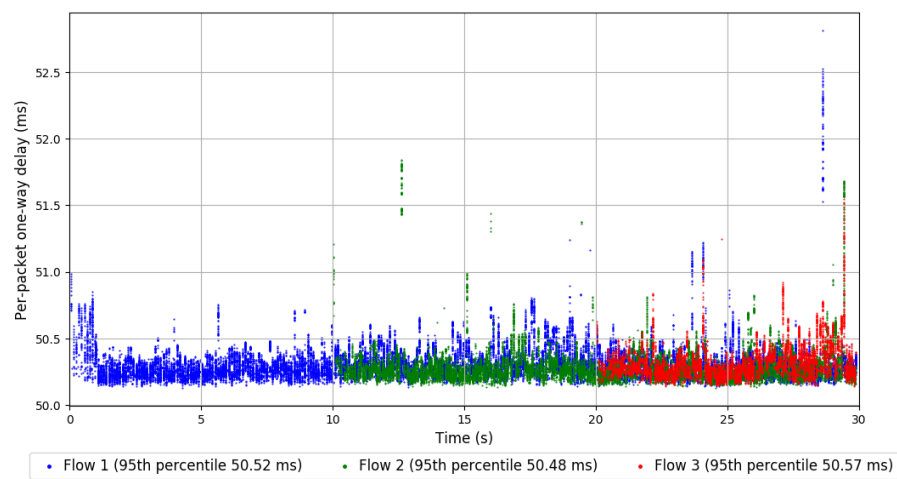
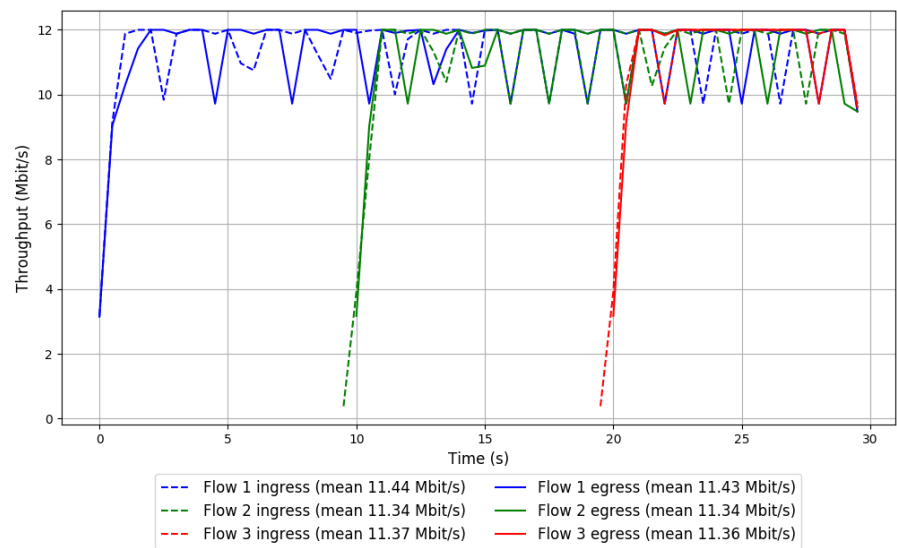


```
Run 2: Statistics of KohoCC

Start at: 2017-08-12 07:06:17
End at: 2017-08-12 07:06:47

# Below is generated by plot.py at 2017-08-12 11:29:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 22.71 Mbit/s
95th percentile per-packet one-way delay: 50.516 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 11.43 Mbit/s
95th percentile per-packet one-way delay: 50.516 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 11.34 Mbit/s
95th percentile per-packet one-way delay: 50.476 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 11.36 Mbit/s
95th percentile per-packet one-way delay: 50.573 ms
Loss rate: 1.08%
```

Run 2: Report of KohoCC — Data Link



Run 3: Statistics of KohoCC

Start at: 2017-08-12 07:17:48

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

Below is generated by plot.py at 2017-08-12 11:29:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.32 Mbit/s

95th percentile per-packet one-way delay: 54.044 ms

Loss rate: 73.35%

-- Flow 1:

Average throughput: 0.33 Mbit/s

95th percentile per-packet one-way delay: 54.057 ms

Loss rate: 95.64%

-- Flow 2:

Average throughput: 0.37 Mbit/s

95th percentile per-packet one-way delay: 54.191 ms

Loss rate: 95.00%

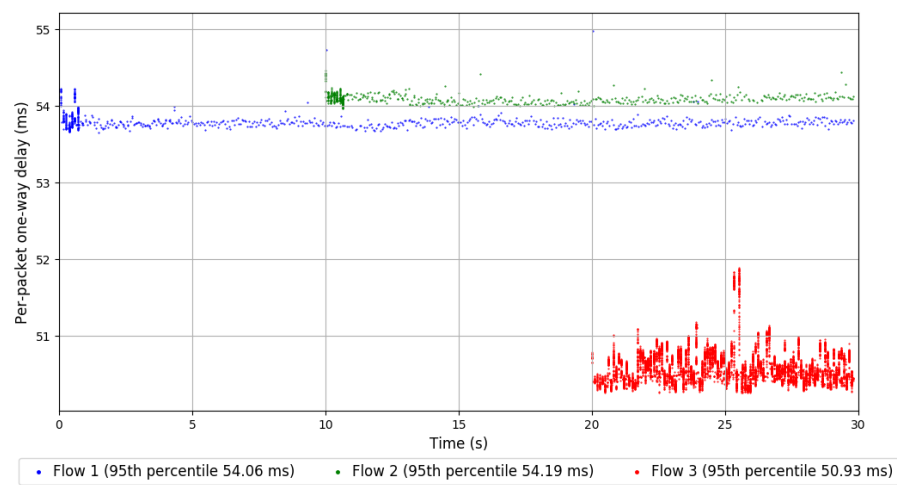
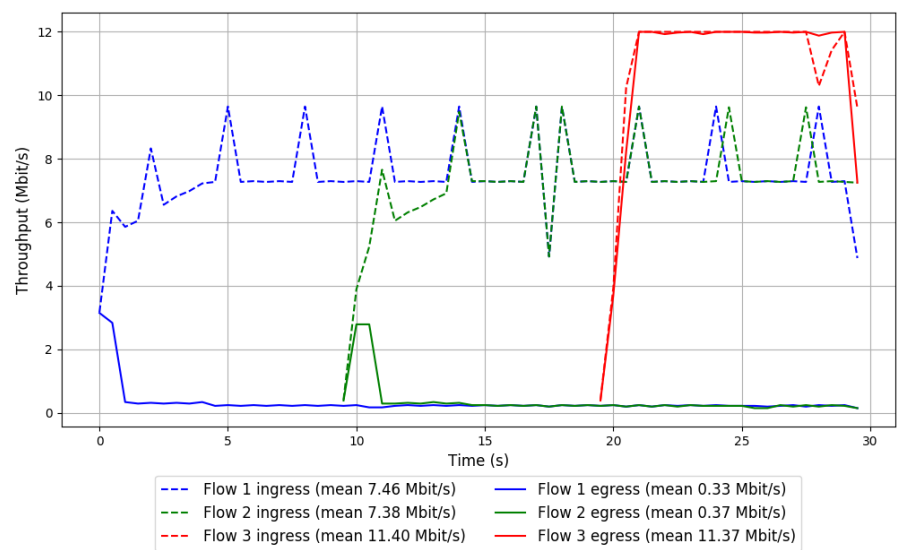
-- Flow 3:

Average throughput: 11.37 Mbit/s

95th percentile per-packet one-way delay: 50.928 ms

Loss rate: 1.21%

Run 3: Report of KohoCC — Data Link



Run 4: Statistics of KohoCC

Start at: 2017-08-12 07:29:21

End at: 2017-08-12 07:29:51

Below is generated by plot.py at 2017-08-12 11:29:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 22.80 Mbit/s

95th percentile per-packet one-way delay: 50.557 ms

Loss rate: 0.55%

-- Flow 1:

Average throughput: 11.42 Mbit/s

95th percentile per-packet one-way delay: 50.467 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 11.65 Mbit/s

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

Loss rate: 0.59%

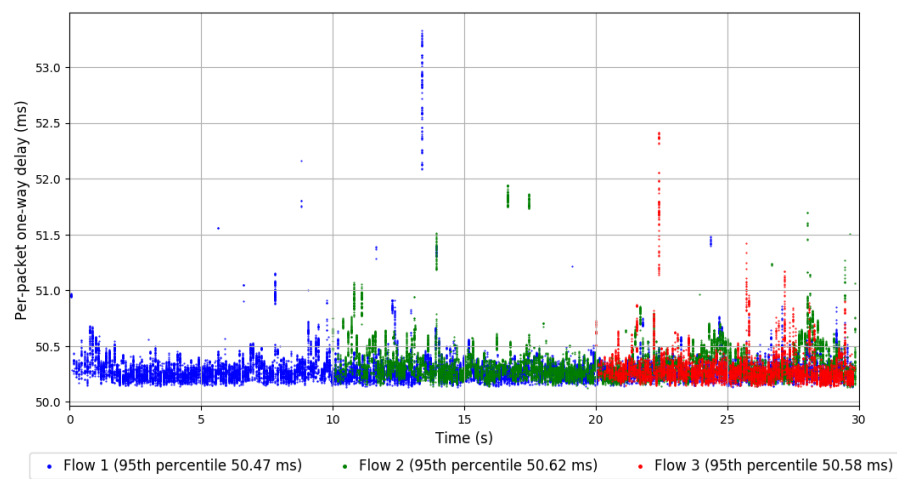
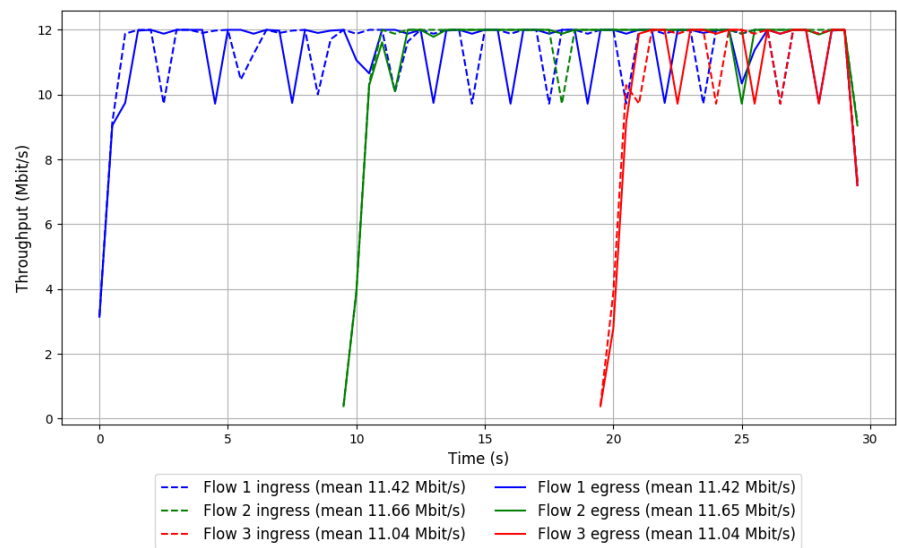
-- Flow 3:

Average throughput: 11.04 Mbit/s

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

Loss rate: 1.10%

Run 4: Report of KohoCC — Data Link

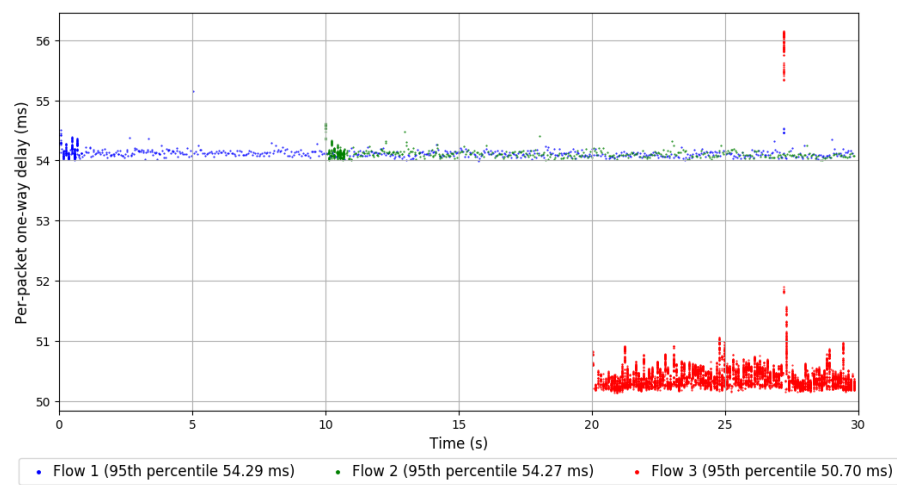
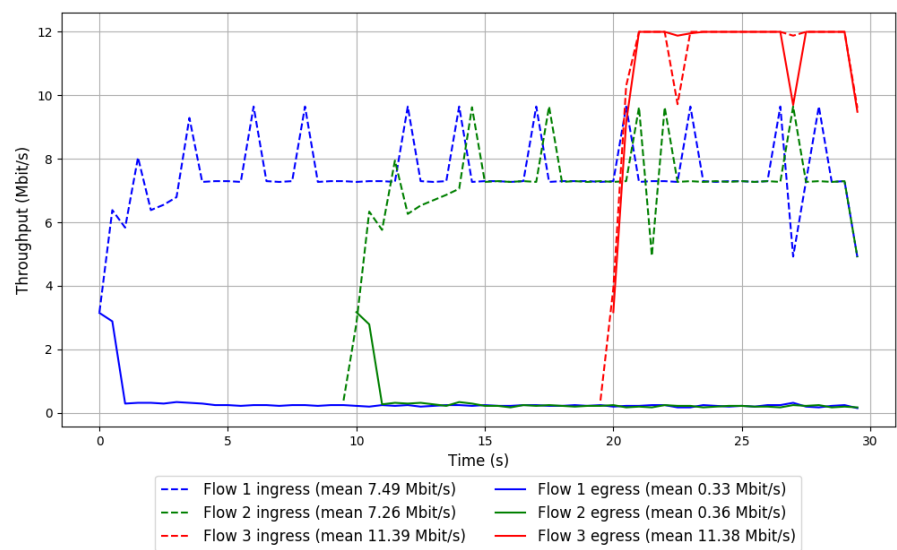


```
Run 5: Statistics of KohoCC

Start at: 2017-08-12 07:40:52
End at: 2017-08-12 07:41:22

# Below is generated by plot.py at 2017-08-12 11:29:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.32 Mbit/s
95th percentile per-packet one-way delay: 54.145 ms
Loss rate: 73.30%
-- Flow 1:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 54.293 ms
Loss rate: 95.65%
-- Flow 2:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 54.273 ms
Loss rate: 95.03%
-- Flow 3:
Average throughput: 11.38 Mbit/s
95th percentile per-packet one-way delay: 50.703 ms
Loss rate: 1.09%
```


Run 5: Report of KohoCC — Data Link



Run 6: Statistics of KohoCC

Start at: 2017-08-12 07:52:23

End at: 2017-08-12 07:52:53

Below is generated by plot.py at 2017-08-12 11:29:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 11.72 Mbit/s

95th percentile per-packet one-way delay: 51.261 ms

Loss rate: 37.08%

-- Flow 1:

Average throughput: 0.33 Mbit/s

95th percentile per-packet one-way delay: 54.567 ms

Loss rate: 95.42%

-- Flow 2:

Average throughput: 11.65 Mbit/s

95th percentile per-packet one-way delay: 51.053 ms

Loss rate: 0.66%

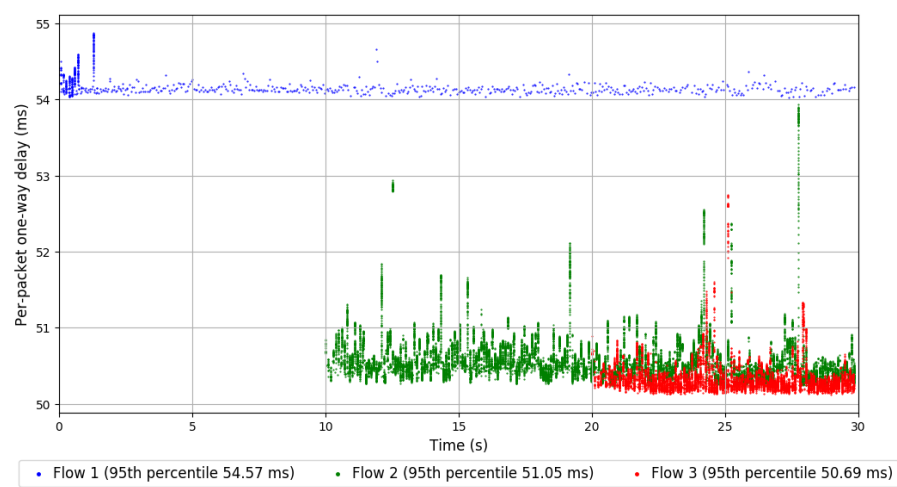
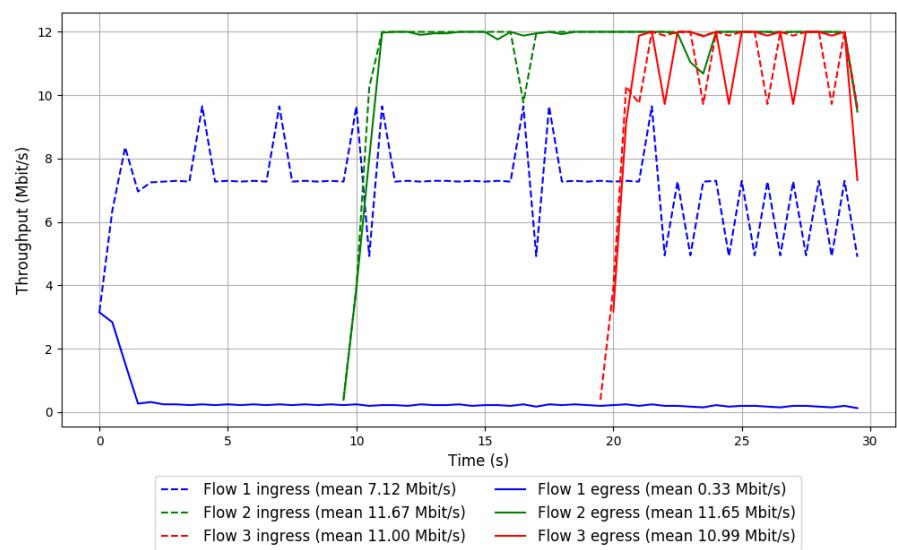
-- Flow 3:

Average throughput: 10.99 Mbit/s

95th percentile per-packet one-way delay: 50.685 ms

Loss rate: 1.11%

Run 6: Report of KohoCC — Data Link



Run 7: Statistics of KohoCC

Start at: 2017-08-12 08:03:31

End at: 2017-08-12 08:04:01

Below is generated by plot.py at 2017-08-12 11:29:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 11.52 Mbit/s

95th percentile per-packet one-way delay: 50.640 ms

Loss rate: 39.08%

-- Flow 1:

Average throughput: 0.33 Mbit/s

95th percentile per-packet one-way delay: 53.916 ms

Loss rate: 95.68%

-- Flow 2:

Average throughput: 11.31 Mbit/s

95th percentile per-packet one-way delay: 50.560 ms

Loss rate: 0.62%

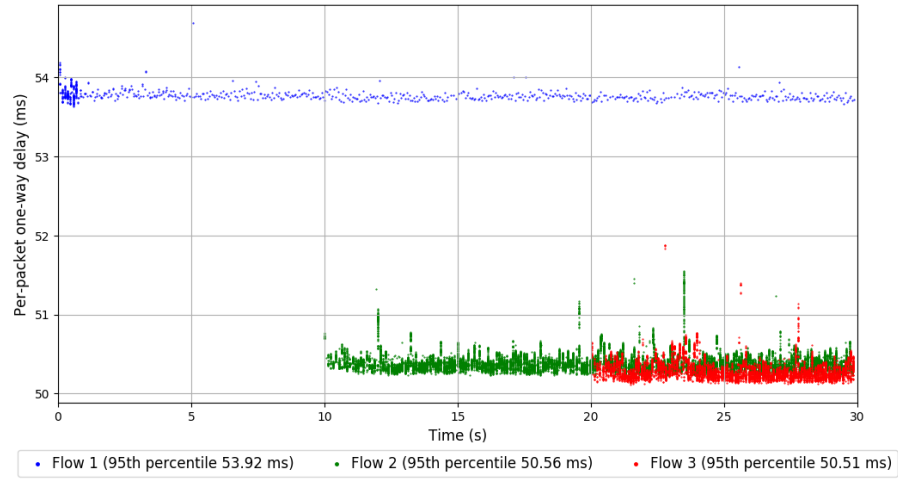
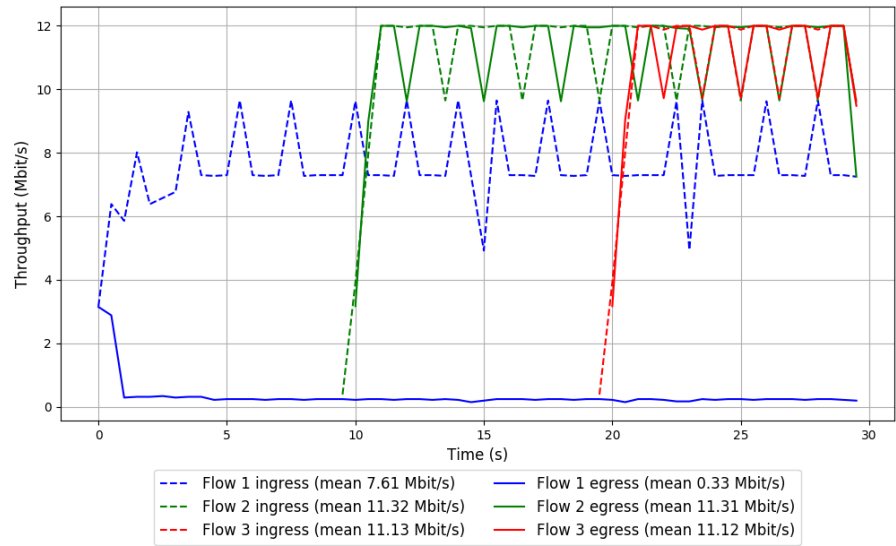
-- Flow 3:

Average throughput: 11.12 Mbit/s

95th percentile per-packet one-way delay: 50.514 ms

Loss rate: 1.10%

Run 7: Report of KohoCC — Data Link



Run 8: Statistics of KohoCC

Start at: 2017-08-12 08:14:26

End at: 2017-08-12 08:14:56

Below is generated by plot.py at 2017-08-12 11:29:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.33 Mbit/s

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

Loss rate: 21.41%

-- Flow 1:

Average throughput: 11.35 Mbit/s

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

Loss rate: 0.46%

-- Flow 2:

Average throughput: 0.35 Mbit/s

95th percentile per-packet one-way delay: 53.914 ms

Loss rate: 94.60%

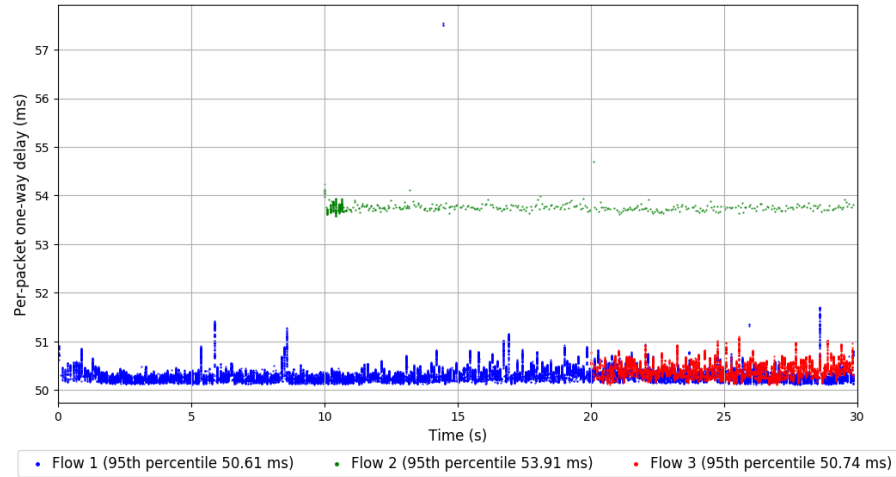
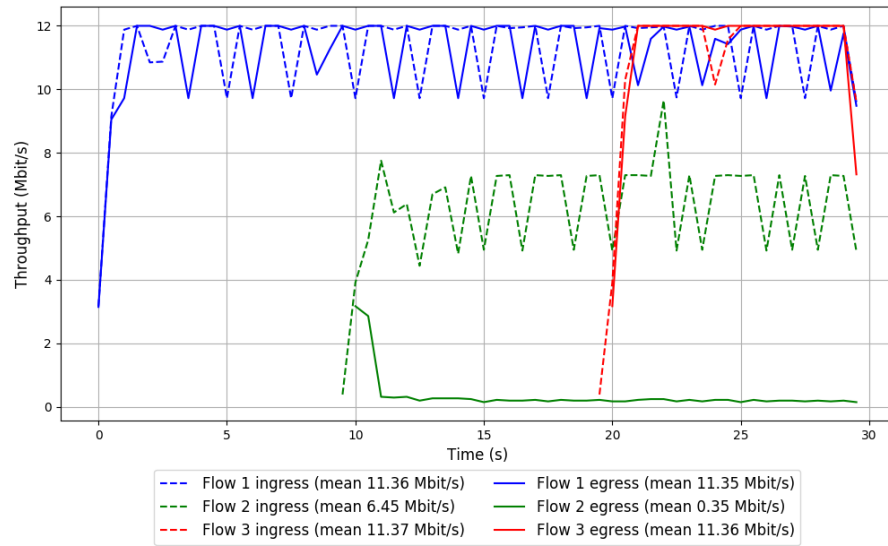
-- Flow 3:

Average throughput: 11.36 Mbit/s

95th percentile per-packet one-way delay: 50.738 ms

Loss rate: 1.06%

Run 8: Report of KohoCC — Data Link



Run 9: Statistics of KohoCC

Start at: 2017-08-12 08:25:40

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

Below is generated by plot.py at 2017-08-12 11:29:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.74 Mbit/s

95th percentile per-packet one-way delay: 50.775 ms

Loss rate: 22.76%

-- Flow 1:

Average throughput: 11.75 Mbit/s

95th percentile per-packet one-way delay: 50.738 ms

Loss rate: 0.41%

-- Flow 2:

Average throughput: 0.37 Mbit/s

95th percentile per-packet one-way delay: 54.343 ms

Loss rate: 94.82%

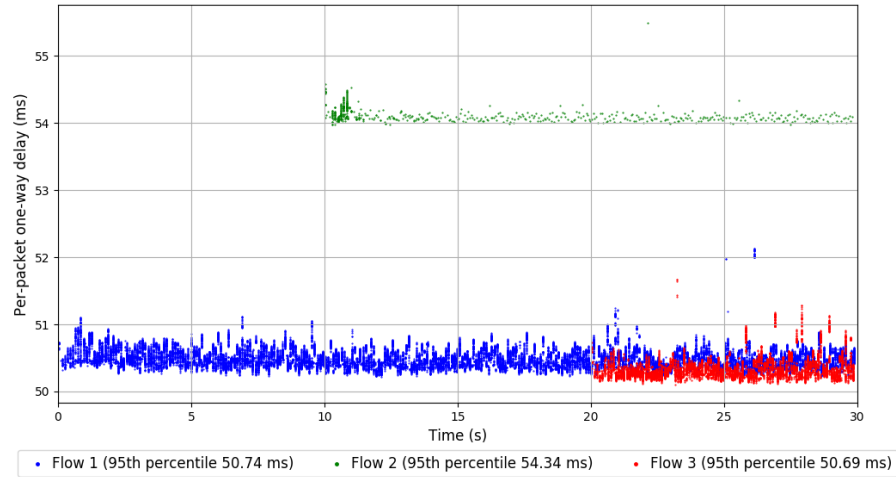
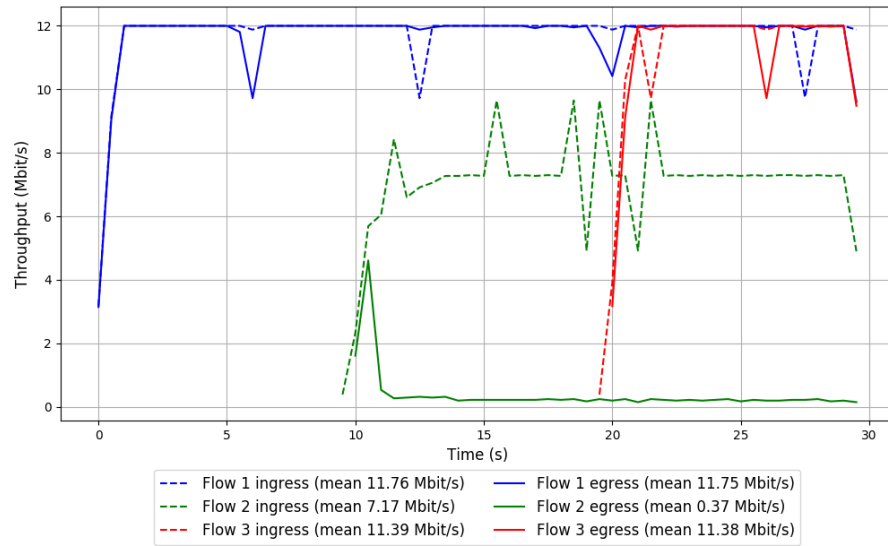
-- Flow 3:

Average throughput: 11.38 Mbit/s

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

Loss rate: 1.09%

Run 9: Report of KohoCC — Data Link



Run 10: Statistics of KohoCC

Start at: 2017-08-12 08:36:41

End at: 2017-08-12 08:37:11

Below is generated by plot.py at 2017-08-12 11:29:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 11.68 Mbit/s

95th percentile per-packet one-way delay: 50.874 ms

Loss rate: 36.84%

-- Flow 1:

Average throughput: 0.31 Mbit/s

95th percentile per-packet one-way delay: 53.904 ms

Loss rate: 95.56%

-- Flow 2:

Average throughput: 11.63 Mbit/s

95th percentile per-packet one-way delay: 50.734 ms

Loss rate: 0.54%

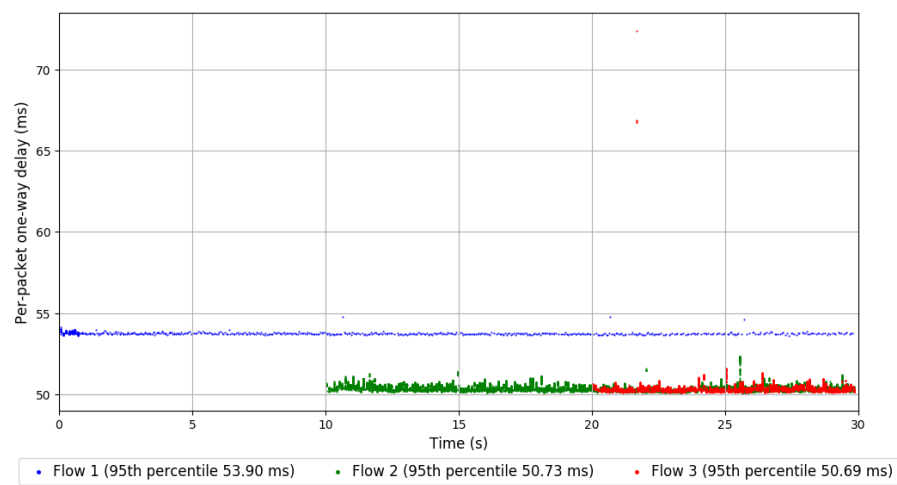
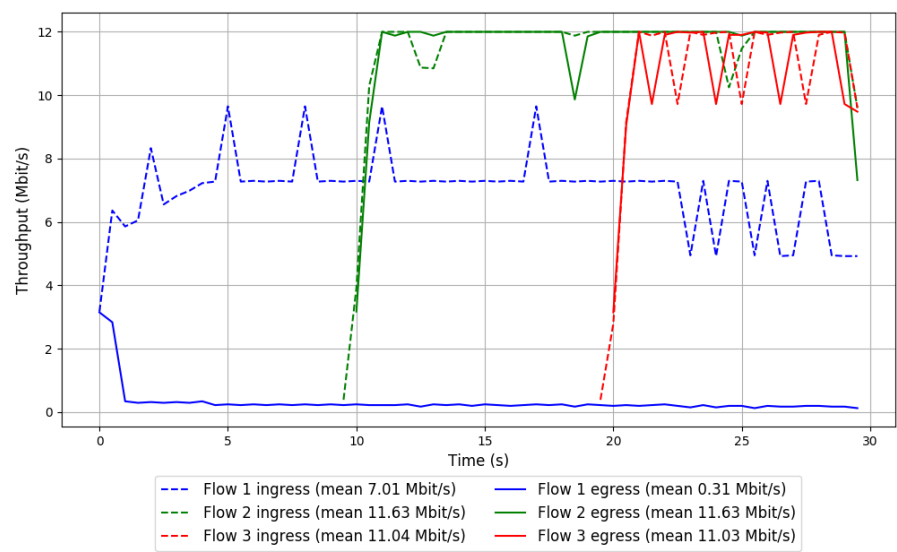
-- Flow 3:

Average throughput: 11.03 Mbit/s

95th percentile per-packet one-way delay: 50.691 ms

Loss rate: 1.14%

Run 10: Report of KohoCC — Data Link

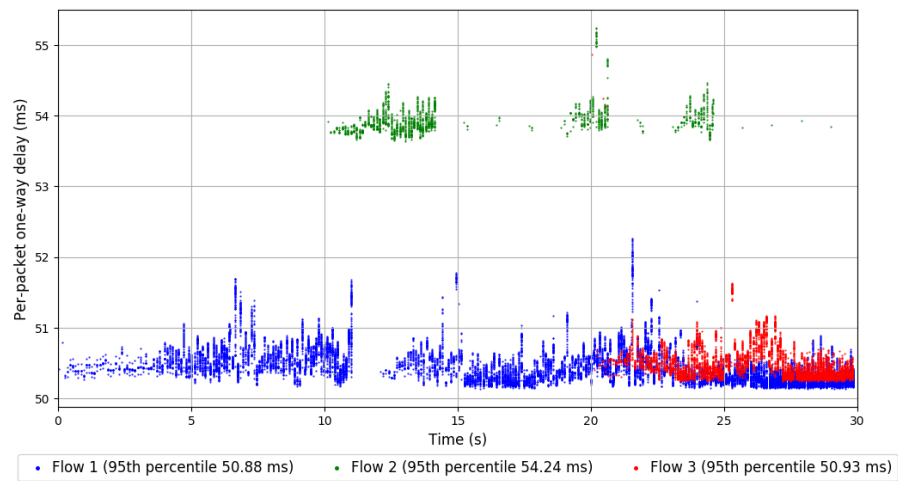
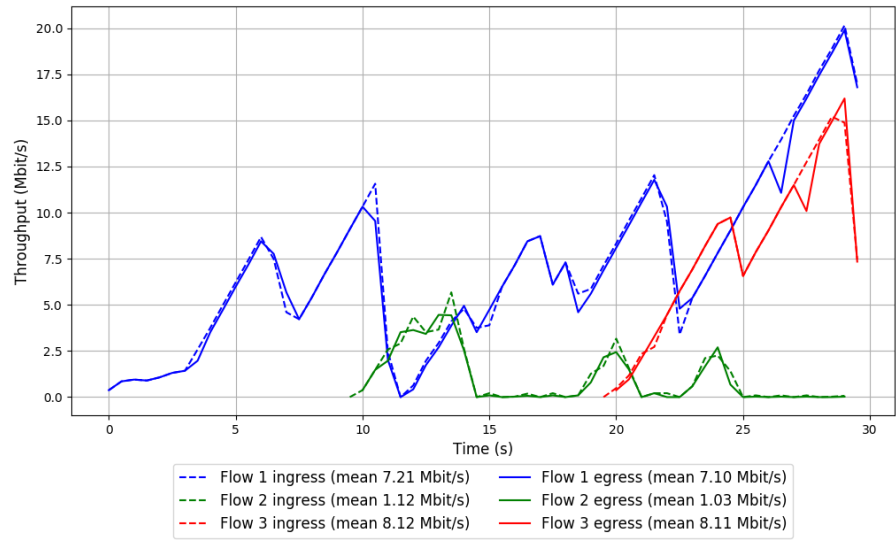


```
Run 1: Statistics of LEDBAT

Start at: 2017-08-12 06:57:28
End at: 2017-08-12 06:57:58

# Below is generated by plot.py at 2017-08-12 11:29:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.42 Mbit/s
95th percentile per-packet one-way delay: 53.804 ms
Loss rate: 2.11%
-- Flow 1:
Average throughput: 7.10 Mbit/s
95th percentile per-packet one-way delay: 50.877 ms
Loss rate: 1.79%
-- Flow 2:
Average throughput: 1.03 Mbit/s
95th percentile per-packet one-way delay: 54.238 ms
Loss rate: 8.72%
-- Flow 3:
Average throughput: 8.11 Mbit/s
95th percentile per-packet one-way delay: 50.934 ms
Loss rate: 1.21%
```

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

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

End at: 2017-08-12 07:09:26

Below is generated by plot.py at 2017-08-12 11:29:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.41 Mbit/s

95th percentile per-packet one-way delay: 54.074 ms

Loss rate: 5.99%

-- Flow 1:

Average throughput: 2.80 Mbit/s

95th percentile per-packet one-way delay: 54.103 ms

Loss rate: 5.69%

-- Flow 2:

Average throughput: 2.66 Mbit/s

95th percentile per-packet one-way delay: 54.063 ms

Loss rate: 6.21%

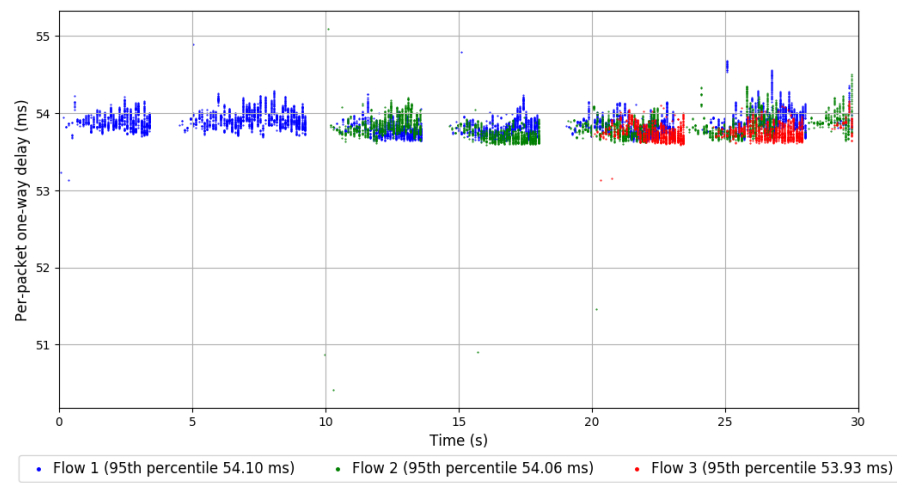
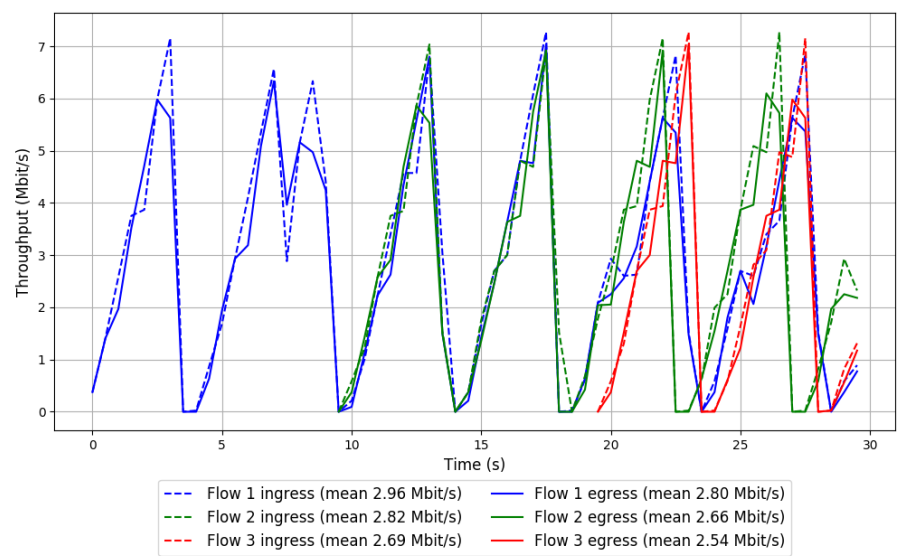
-- Flow 3:

Average throughput: 2.54 Mbit/s

95th percentile per-packet one-way delay: 53.926 ms

Loss rate: 6.54%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2017-08-12 07:20:35

End at: 2017-08-12 07:21:05

Below is generated by plot.py at 2017-08-12 11:29:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 31.21 Mbit/s

95th percentile per-packet one-way delay: 50.923 ms

Loss rate: 0.97%

-- Flow 1:

Average throughput: 24.14 Mbit/s

95th percentile per-packet one-way delay: 50.921 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 10.55 Mbit/s

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

Loss rate: 1.29%

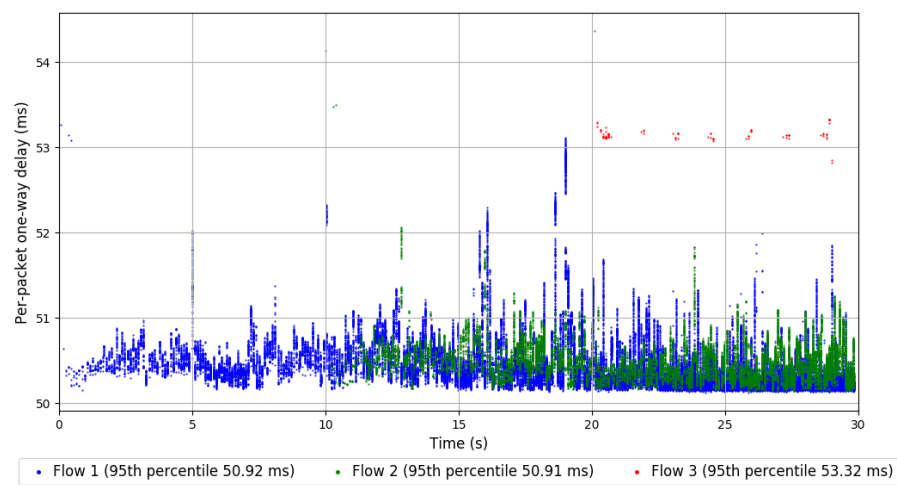
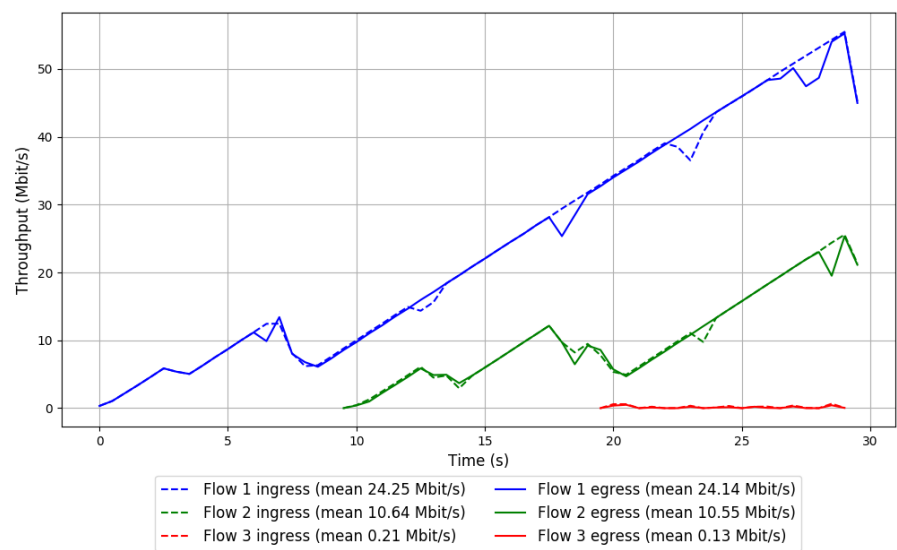
-- Flow 3:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 53.322 ms

Loss rate: 36.90%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2017-08-12 07:32:02

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

Below is generated by plot.py at 2017-08-12 11:29:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.49 Mbit/s

95th percentile per-packet one-way delay: 53.851 ms

Loss rate: 1.61%

-- Flow 1:

Average throughput: 1.26 Mbit/s

95th percentile per-packet one-way delay: 54.158 ms

Loss rate: 7.75%

-- Flow 2:

Average throughput: 17.13 Mbit/s

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

Loss rate: 0.71%

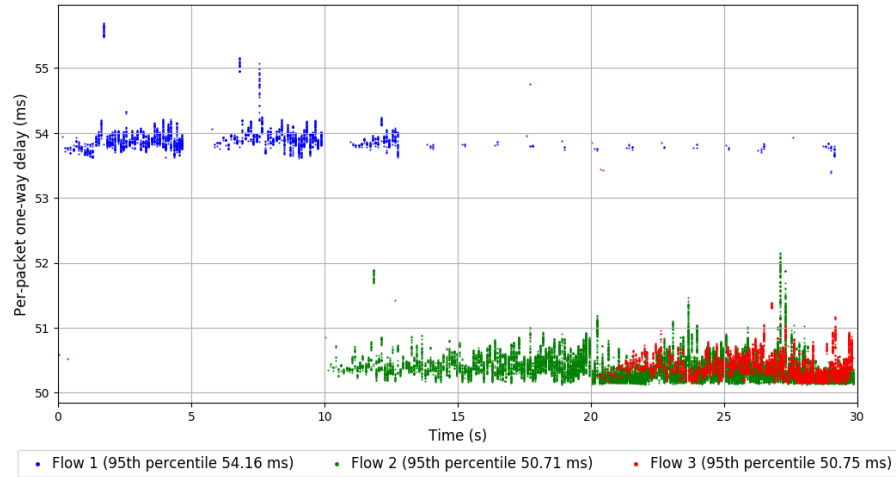
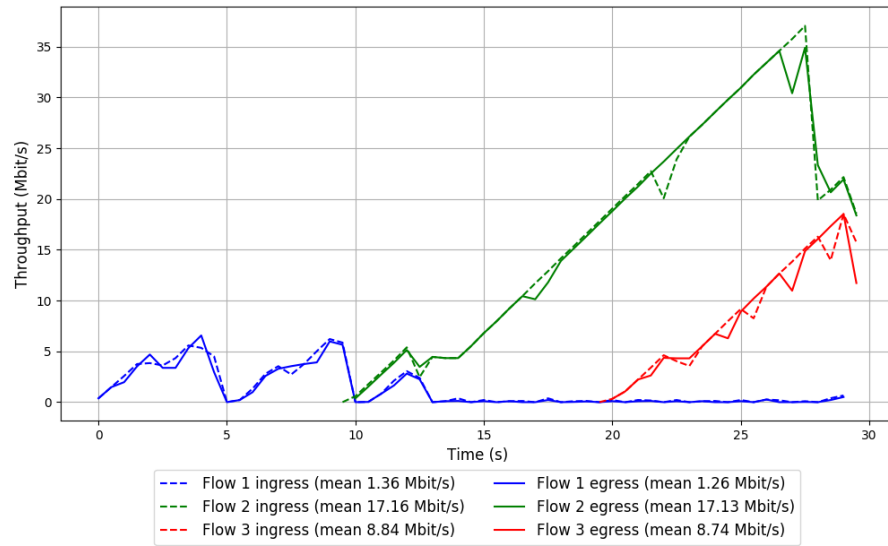
-- Flow 3:

Average throughput: 8.74 Mbit/s

95th percentile per-packet one-way delay: 50.752 ms

Loss rate: 2.30%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2017-08-12 07:43:20

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

Below is generated by plot.py at 2017-08-12 11:29:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 16.42 Mbit/s

95th percentile per-packet one-way delay: 50.810 ms

Loss rate: 0.94%

-- Flow 1:

Average throughput: 10.61 Mbit/s

95th percentile per-packet one-way delay: 50.804 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 8.60 Mbit/s

95th percentile per-packet one-way delay: 50.763 ms

Loss rate: 0.77%

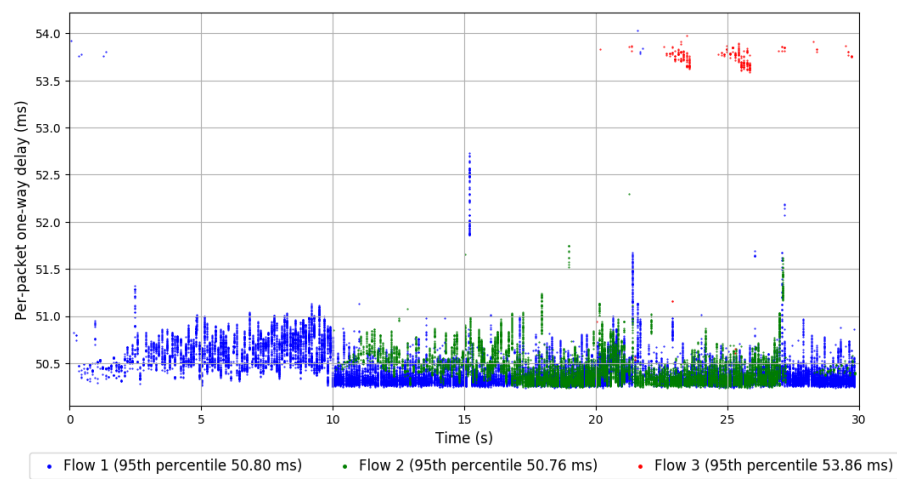
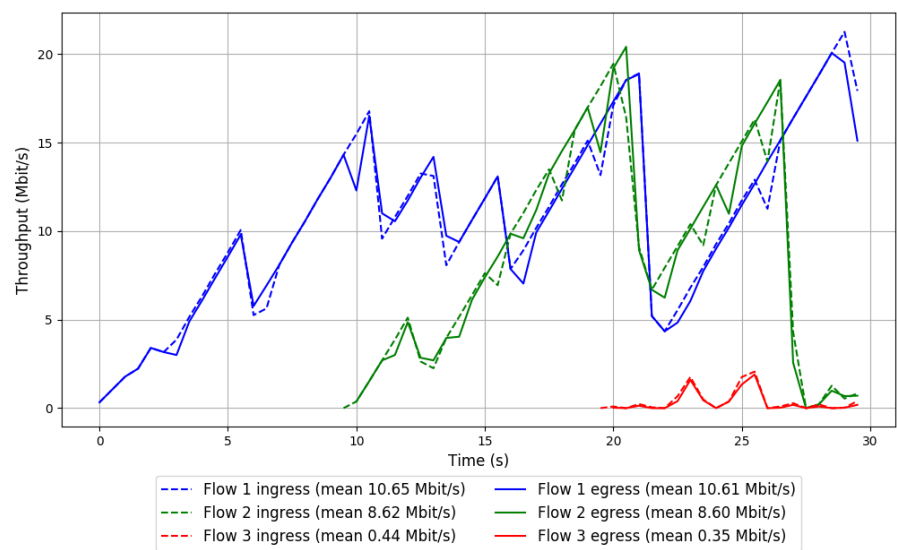
-- Flow 3:

Average throughput: 0.35 Mbit/s

95th percentile per-packet one-way delay: 53.856 ms

Loss rate: 20.96%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2017-08-12 07:54:47

End at: 2017-08-12 07:55:17

Below is generated by plot.py at 2017-08-12 11:30:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 27.68 Mbit/s

95th percentile per-packet one-way delay: 51.041 ms

Loss rate: 1.02%

-- Flow 1:

Average throughput: 17.33 Mbit/s

95th percentile per-packet one-way delay: 51.086 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 15.30 Mbit/s

95th percentile per-packet one-way delay: 50.831 ms

Loss rate: 1.23%

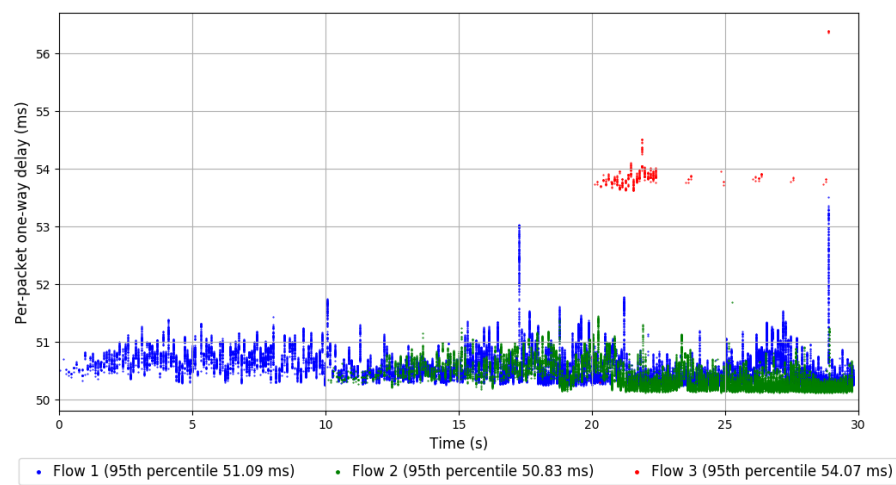
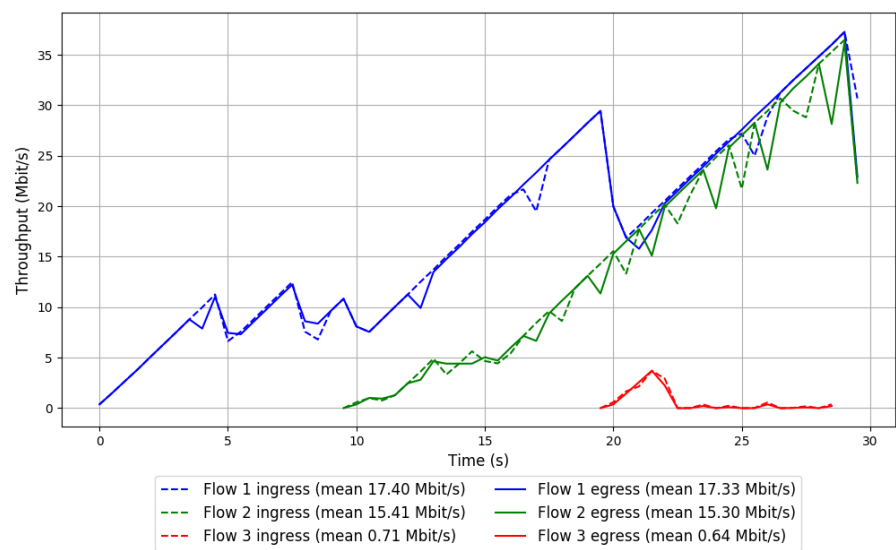
-- Flow 3:

Average throughput: 0.64 Mbit/s

95th percentile per-packet one-way delay: 54.071 ms

Loss rate: 11.52%

Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

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

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

Below is generated by plot.py at 2017-08-12 11:30:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.50 Mbit/s

95th percentile per-packet one-way delay: 54.529 ms

Loss rate: 5.78%

-- Flow 1:

Average throughput: 2.92 Mbit/s

95th percentile per-packet one-way delay: 54.595 ms

Loss rate: 4.98%

-- Flow 2:

Average throughput: 1.52 Mbit/s

95th percentile per-packet one-way delay: 54.177 ms

Loss rate: 7.18%

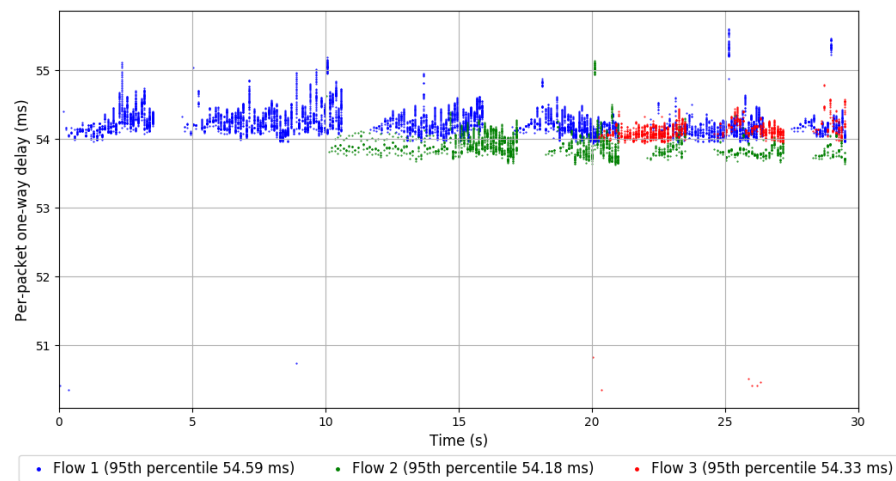
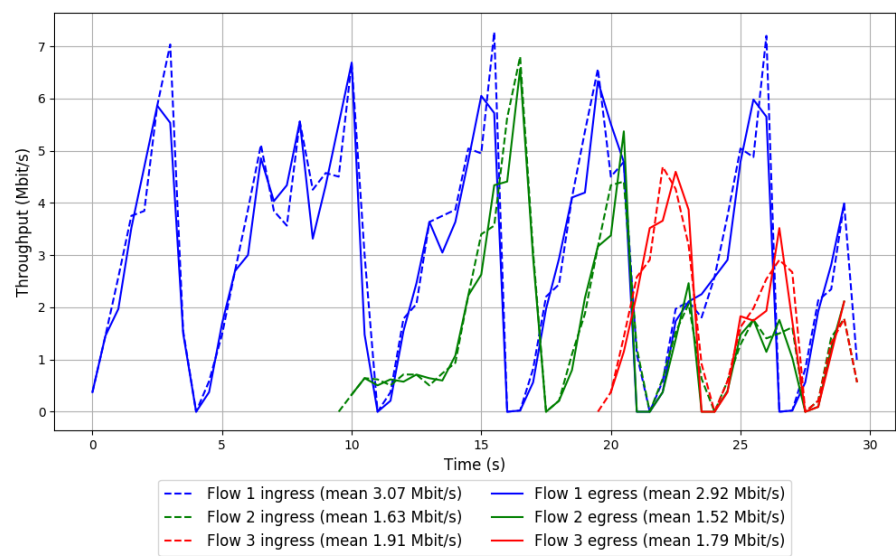
-- Flow 3:

Average throughput: 1.79 Mbit/s

95th percentile per-packet one-way delay: 54.329 ms

Loss rate: 7.32%

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

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

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

Below is generated by plot.py at 2017-08-12 11:30:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.19 Mbit/s

95th percentile per-packet one-way delay: 53.947 ms

Loss rate: 3.64%

-- Flow 1:

Average throughput: 3.33 Mbit/s

95th percentile per-packet one-way delay: 53.498 ms

Loss rate: 3.86%

-- Flow 2:

Average throughput: 3.20 Mbit/s

95th percentile per-packet one-way delay: 54.084 ms

Loss rate: 5.18%

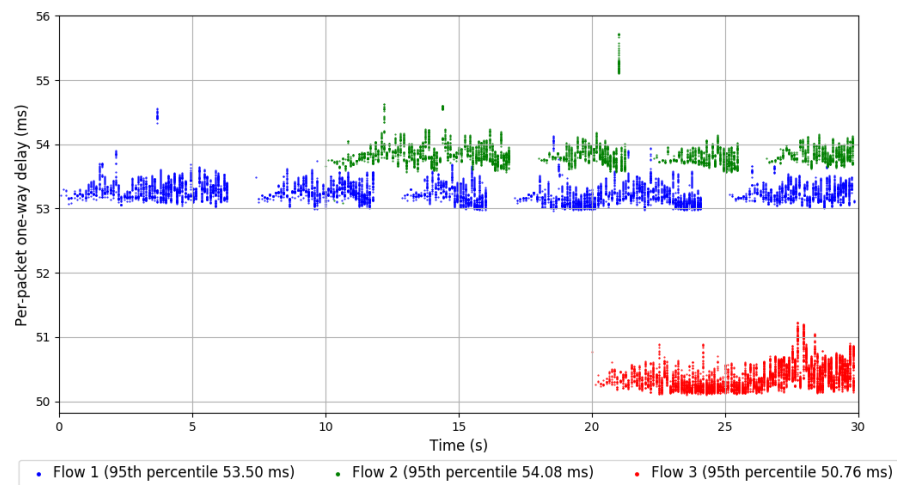
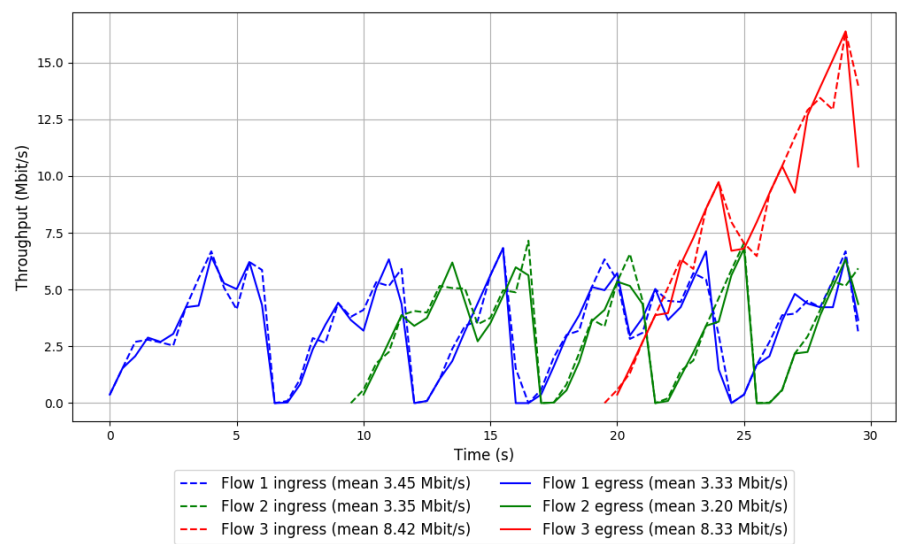
-- Flow 3:

Average throughput: 8.33 Mbit/s

95th percentile per-packet one-way delay: 50.756 ms

Loss rate: 2.14%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2017-08-12 08:28:03

End at: 2017-08-12 08:28:33

Below is generated by plot.py at 2017-08-12 11:30:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.61 Mbit/s

95th percentile per-packet one-way delay: 54.214 ms

Loss rate: 1.81%

-- Flow 1:

Average throughput: 1.29 Mbit/s

95th percentile per-packet one-way delay: 54.454 ms

Loss rate: 5.51%

-- Flow 2:

Average throughput: 13.28 Mbit/s

95th percentile per-packet one-way delay: 50.775 ms

Loss rate: 1.22%

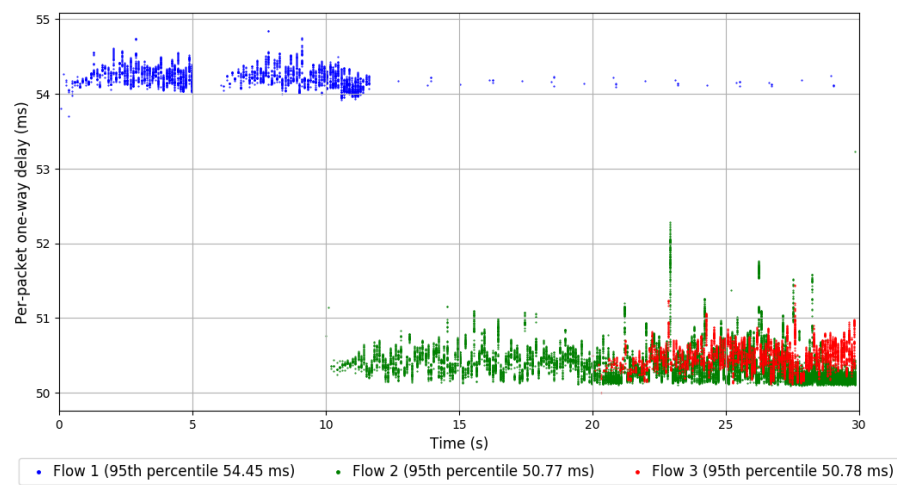
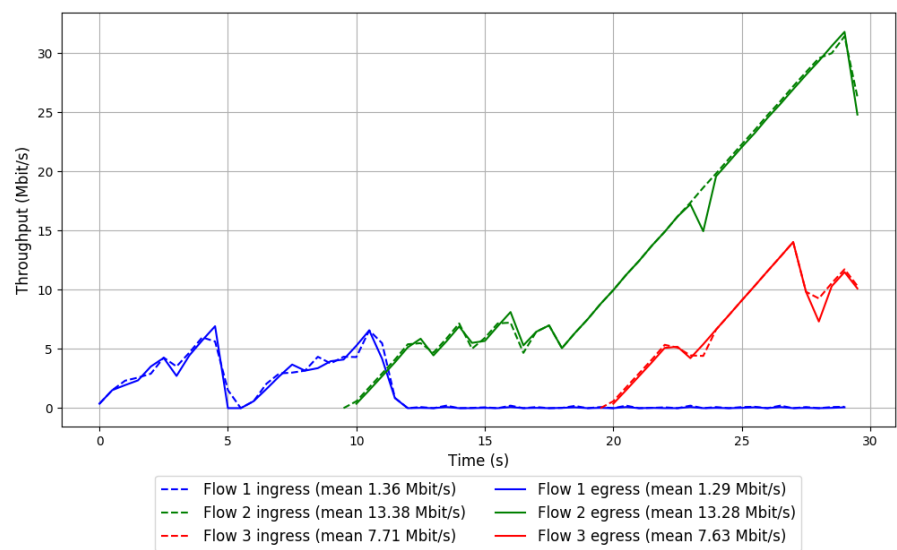
-- Flow 3:

Average throughput: 7.63 Mbit/s

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

Loss rate: 1.97%

Run 9: Report of LEDBAT — Data Link



Run 10: Statistics of LEDBAT

Start at: 2017-08-12 08:39:25

End at: 2017-08-12 08:39:55

Below is generated by plot.py at 2017-08-12 11:30:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 22.36 Mbit/s

95th percentile per-packet one-way delay: 50.805 ms

Loss rate: 0.72%

-- Flow 1:

Average throughput: 13.43 Mbit/s

95th percentile per-packet one-way delay: 50.802 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 13.33 Mbit/s

95th percentile per-packet one-way delay: 50.786 ms

Loss rate: 0.43%

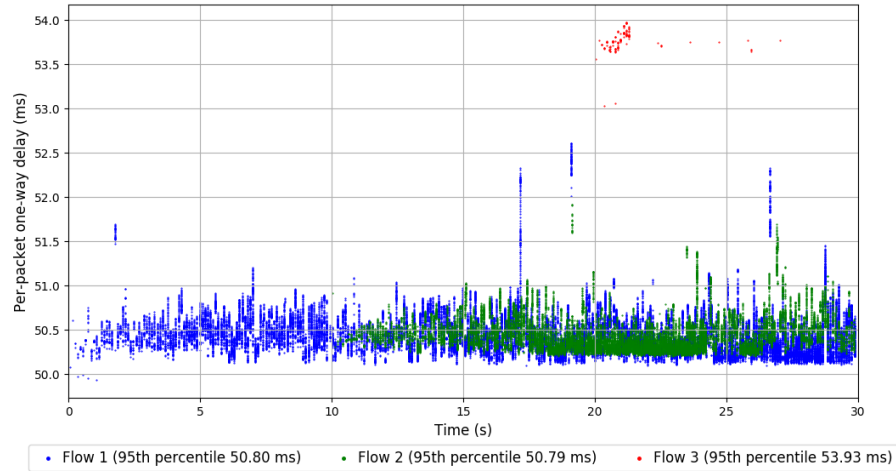
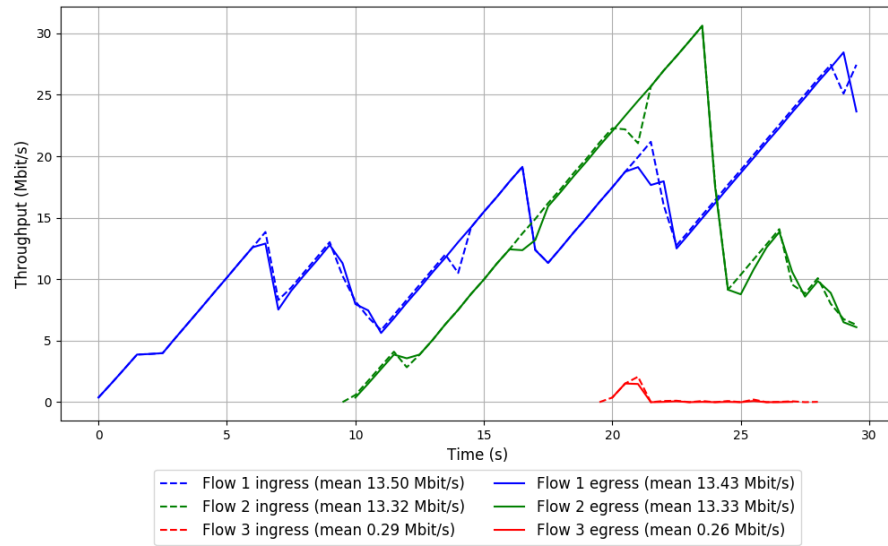
-- Flow 3:

Average throughput: 0.26 Mbit/s

95th percentile per-packet one-way delay: 53.934 ms

Loss rate: 22.54%

Run 10: Report of LEDBAT — Data Link

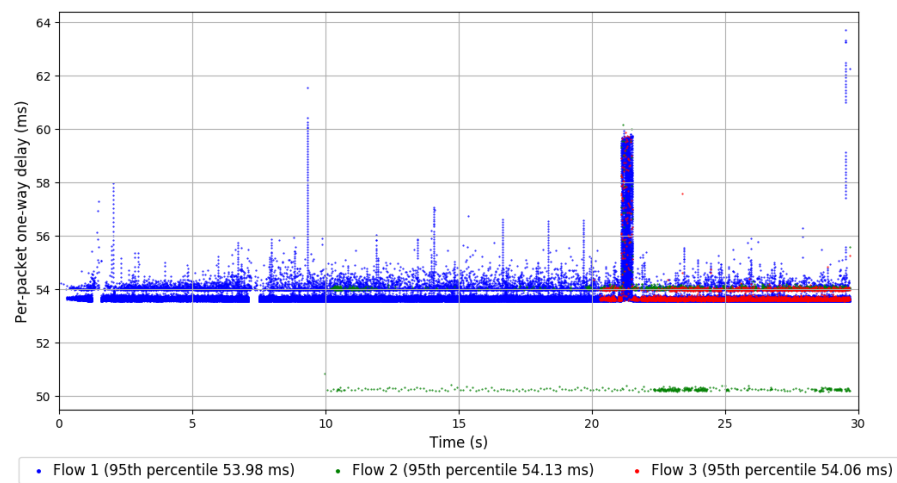
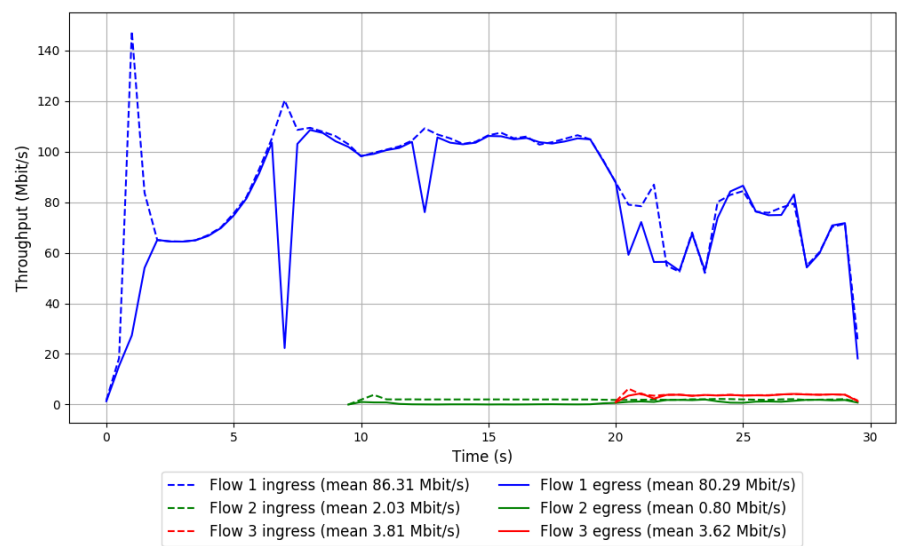


```
Run 1: Statistics of PCC

Start at: 2017-08-12 06:54:38
End at: 2017-08-12 06:55:08

# Below is generated by plot.py at 2017-08-12 11:30:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.99 Mbit/s
95th percentile per-packet one-way delay: 53.997 ms
Loss rate: 8.09%
-- Flow 1:
Average throughput: 80.29 Mbit/s
95th percentile per-packet one-way delay: 53.978 ms
Loss rate: 7.29%
-- Flow 2:
Average throughput: 0.80 Mbit/s
95th percentile per-packet one-way delay: 54.131 ms
Loss rate: 61.02%
-- Flow 3:
Average throughput: 3.62 Mbit/s
95th percentile per-packet one-way delay: 54.064 ms
Loss rate: 6.13%
```


Run 1: Report of PCC — Data Link



Run 2: Statistics of PCC

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

End at: 2017-08-12 07:05:49

Below is generated by plot.py at 2017-08-12 11:31:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 455.83 Mbit/s

95th percentile per-packet one-way delay: 82.304 ms

Loss rate: 0.74%

-- Flow 1:

Average throughput: 303.09 Mbit/s

95th percentile per-packet one-way delay: 95.021 ms

Loss rate: 0.68%

-- Flow 2:

Average throughput: 162.63 Mbit/s

95th percentile per-packet one-way delay: 55.025 ms

Loss rate: 0.89%

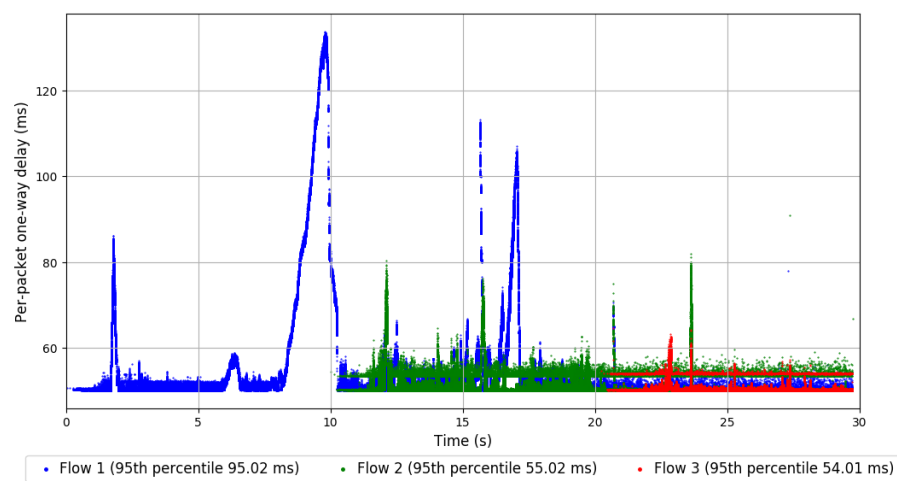
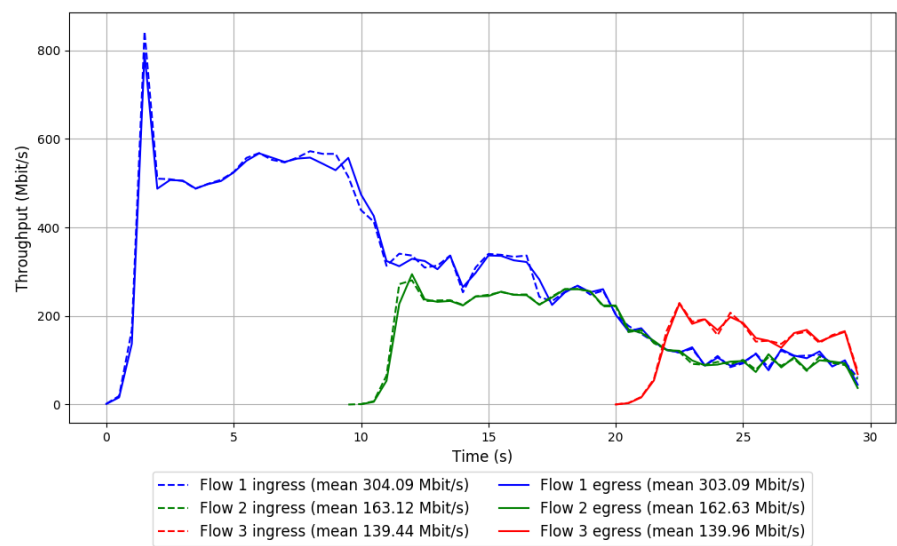
-- Flow 3:

Average throughput: 139.96 Mbit/s

95th percentile per-packet one-way delay: 54.005 ms

Loss rate: 0.78%

Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2017-08-12 07:16:59

End at: 2017-08-12 07:17:29

Below is generated by plot.py at 2017-08-12 11:31:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 193.08 Mbit/s

95th percentile per-packet one-way delay: 53.115 ms

Loss rate: 26.60%

-- Flow 1:

Average throughput: 37.53 Mbit/s

95th percentile per-packet one-way delay: 53.140 ms

Loss rate: 64.64%

-- Flow 2:

Average throughput: 170.61 Mbit/s

95th percentile per-packet one-way delay: 52.273 ms

Loss rate: 0.77%

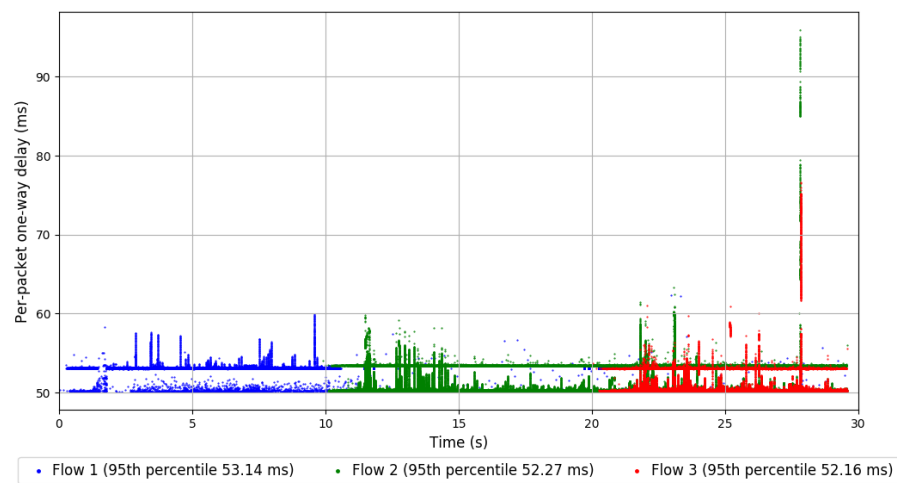
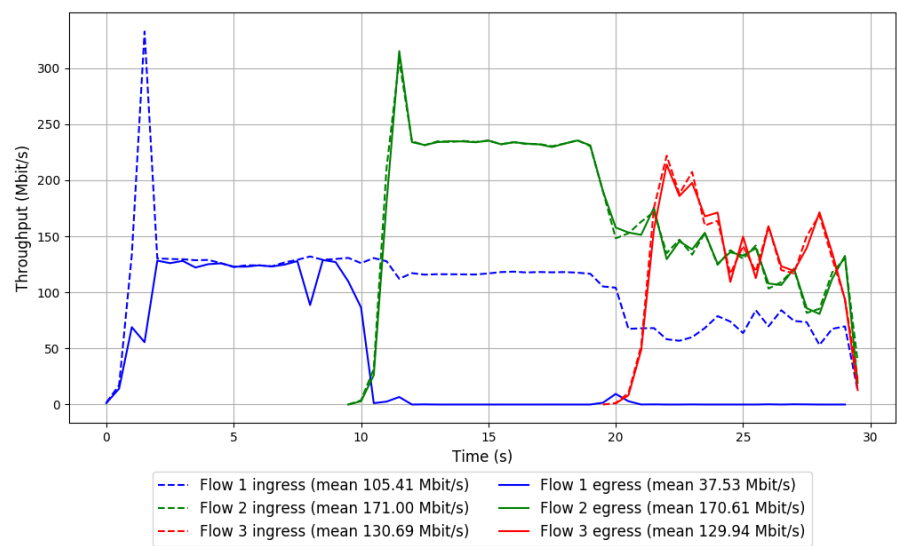
-- Flow 3:

Average throughput: 129.94 Mbit/s

95th percentile per-packet one-way delay: 52.159 ms

Loss rate: 1.67%

Run 3: Report of PCC — Data Link



Run 4: Statistics of PCC

Start at: 2017-08-12 07:28:22

End at: 2017-08-12 07:28:52

Below is generated by plot.py at 2017-08-12 11:32:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 473.55 Mbit/s

95th percentile per-packet one-way delay: 152.201 ms

Loss rate: 6.66%

-- Flow 1:

Average throughput: 313.78 Mbit/s

95th percentile per-packet one-way delay: 155.102 ms

Loss rate: 7.78%

-- Flow 2:

Average throughput: 135.50 Mbit/s

95th percentile per-packet one-way delay: 52.418 ms

Loss rate: 6.39%

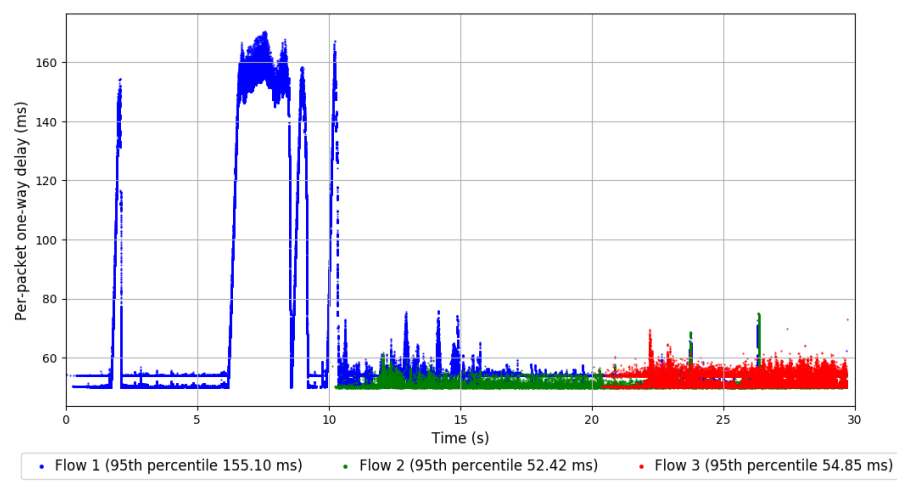
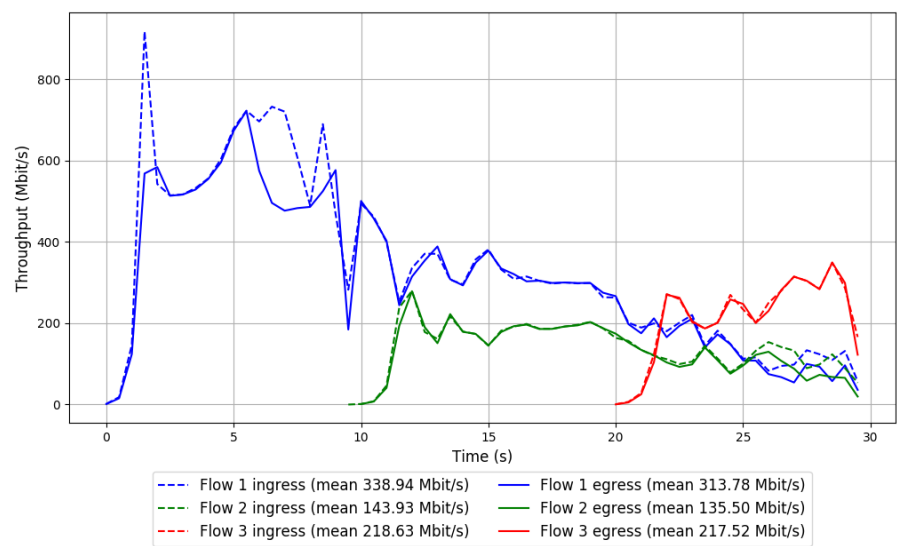
-- Flow 3:

Average throughput: 217.52 Mbit/s

95th percentile per-packet one-way delay: 54.848 ms

Loss rate: 1.64%

Run 4: Report of PCC — Data Link



Run 5: Statistics of PCC

Start at: 2017-08-12 07:39:56

End at: 2017-08-12 07:40:26

Below is generated by plot.py at 2017-08-12 11:32:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 410.04 Mbit/s

95th percentile per-packet one-way delay: 137.898 ms

Loss rate: 9.69%

-- Flow 1:

Average throughput: 299.17 Mbit/s

95th percentile per-packet one-way delay: 147.170 ms

Loss rate: 11.18%

-- Flow 2:

Average throughput: 167.26 Mbit/s

95th percentile per-packet one-way delay: 54.047 ms

Loss rate: 3.24%

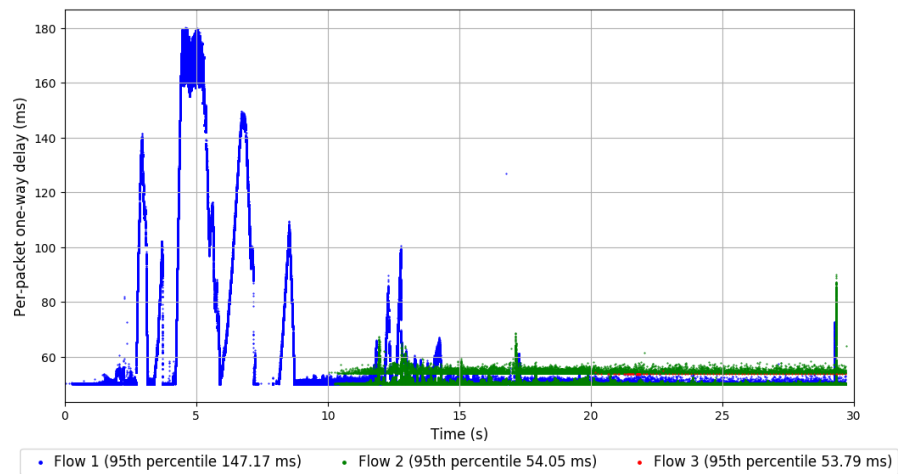
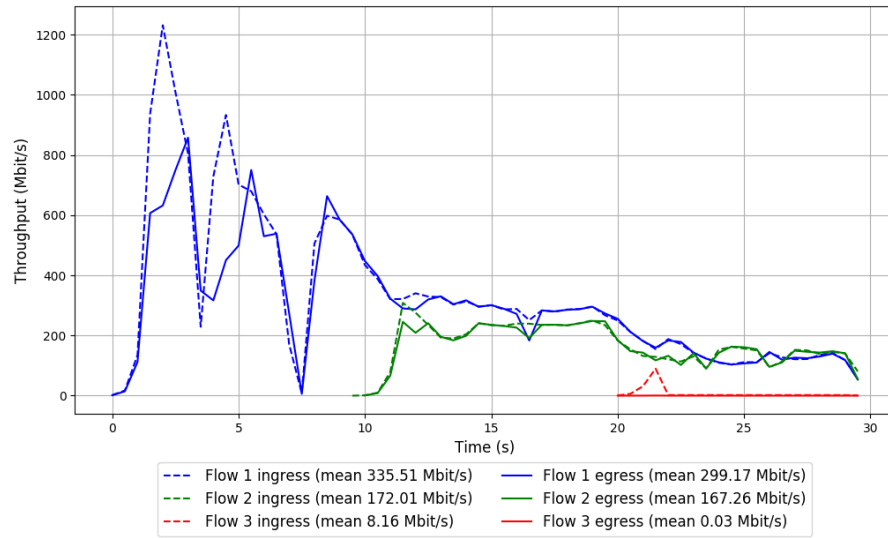
-- Flow 3:

Average throughput: 0.03 Mbit/s

95th percentile per-packet one-way delay: 53.787 ms

Loss rate: 99.59%

Run 5: Report of PCC — Data Link



Run 6: Statistics of PCC

Start at: 2017-08-12 07:51:24

End at: 2017-08-12 07:51:54

Below is generated by plot.py at 2017-08-12 11:34:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 448.49 Mbit/s

95th percentile per-packet one-way delay: 131.119 ms

Loss rate: 9.30%

-- Flow 1:

Average throughput: 287.98 Mbit/s

95th percentile per-packet one-way delay: 146.287 ms

Loss rate: 13.49%

-- Flow 2:

Average throughput: 182.25 Mbit/s

95th percentile per-packet one-way delay: 54.125 ms

Loss rate: 0.62%

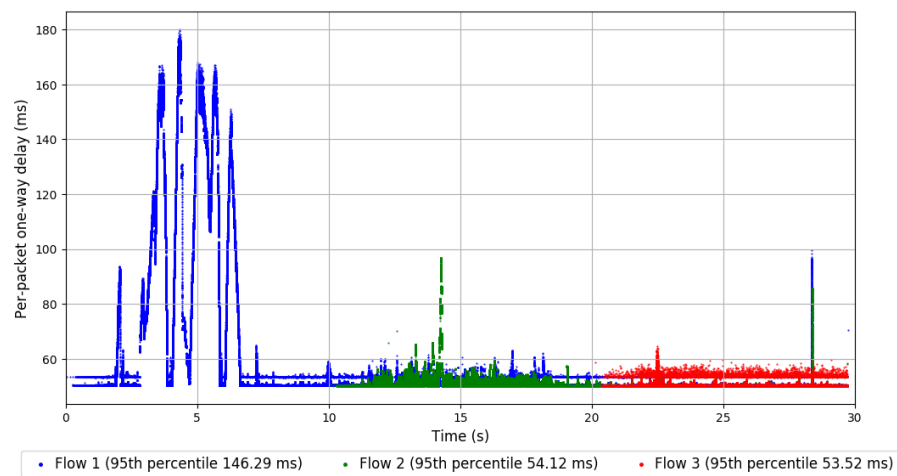
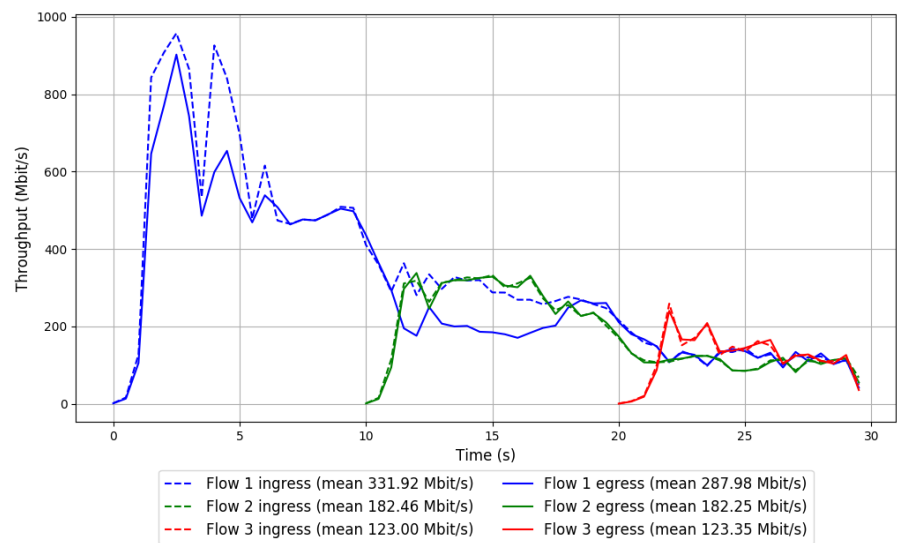
-- Flow 3:

Average throughput: 123.35 Mbit/s

95th percentile per-packet one-way delay: 53.520 ms

Loss rate: 0.81%

Run 6: Report of PCC — Data Link



Run 7: Statistics of PCC

Start at: 2017-08-12 08:02:37

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

Below is generated by plot.py at 2017-08-12 11:34:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 355.95 Mbit/s

95th percentile per-packet one-way delay: 58.857 ms

Loss rate: 1.25%

-- Flow 1:

Average throughput: 355.54 Mbit/s

95th percentile per-packet one-way delay: 58.862 ms

Loss rate: 0.87%

-- Flow 2:

Average throughput: 0.31 Mbit/s

95th percentile per-packet one-way delay: 54.095 ms

Loss rate: 82.80%

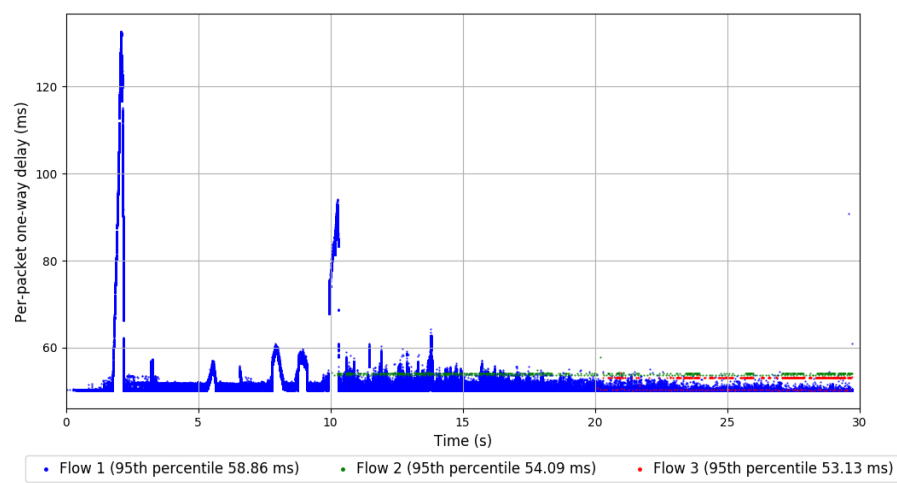
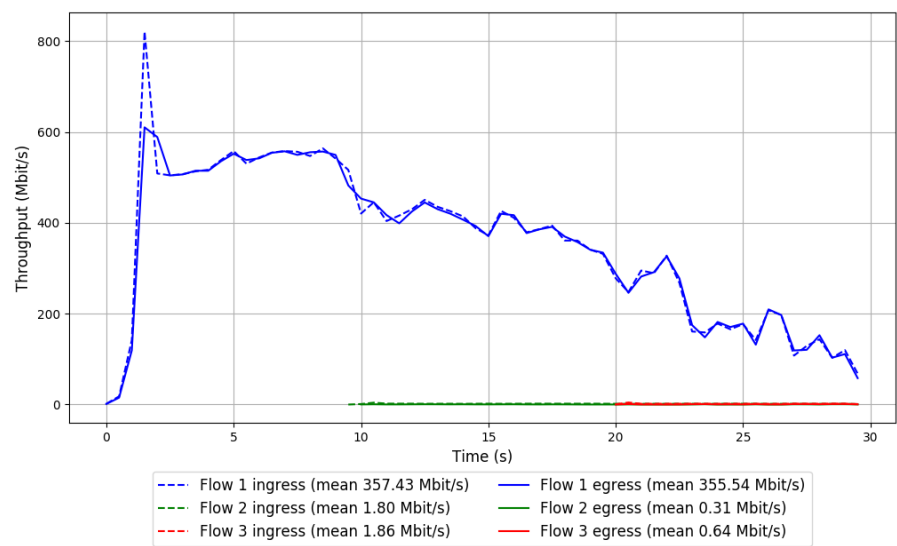
-- Flow 3:

Average throughput: 0.64 Mbit/s

95th percentile per-packet one-way delay: 53.127 ms

Loss rate: 66.12%

Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2017-08-12 08:13:26

End at: 2017-08-12 08:13:56

Below is generated by plot.py at 2017-08-12 11:35:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 492.32 Mbit/s

95th percentile per-packet one-way delay: 152.091 ms

Loss rate: 6.52%

-- Flow 1:

Average throughput: 328.74 Mbit/s

95th percentile per-packet one-way delay: 156.462 ms

Loss rate: 9.19%

-- Flow 2:

Average throughput: 184.35 Mbit/s

95th percentile per-packet one-way delay: 52.974 ms

Loss rate: 0.48%

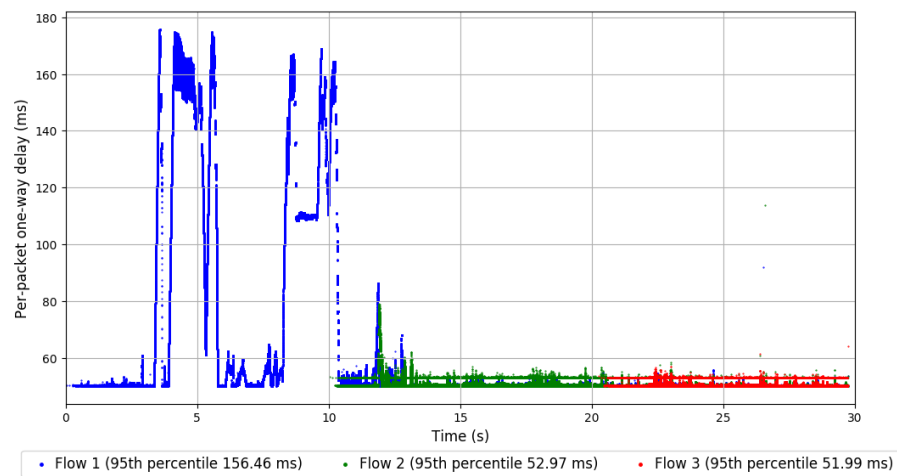
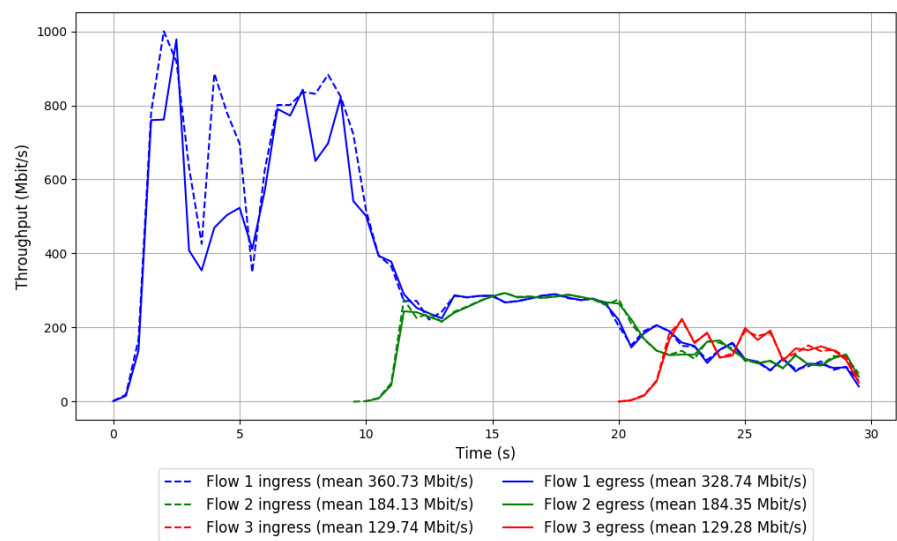
-- Flow 3:

Average throughput: 129.28 Mbit/s

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

Loss rate: 1.29%

Run 8: Report of PCC — Data Link

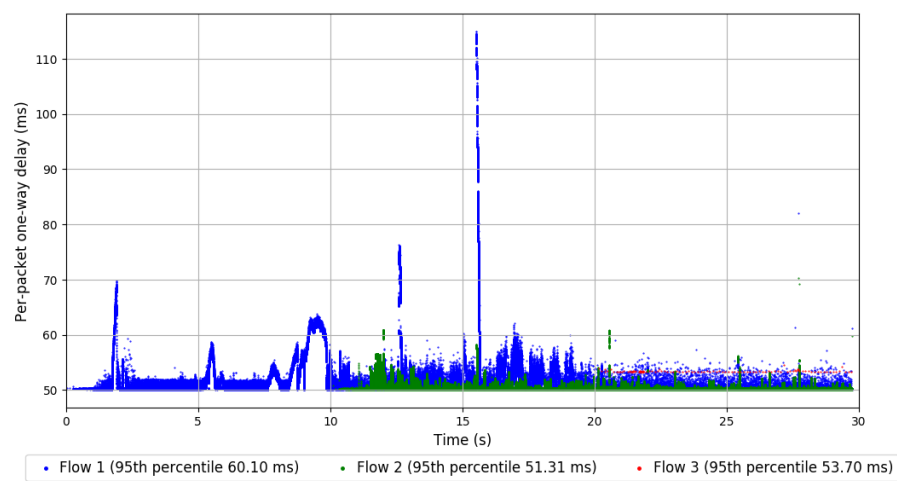
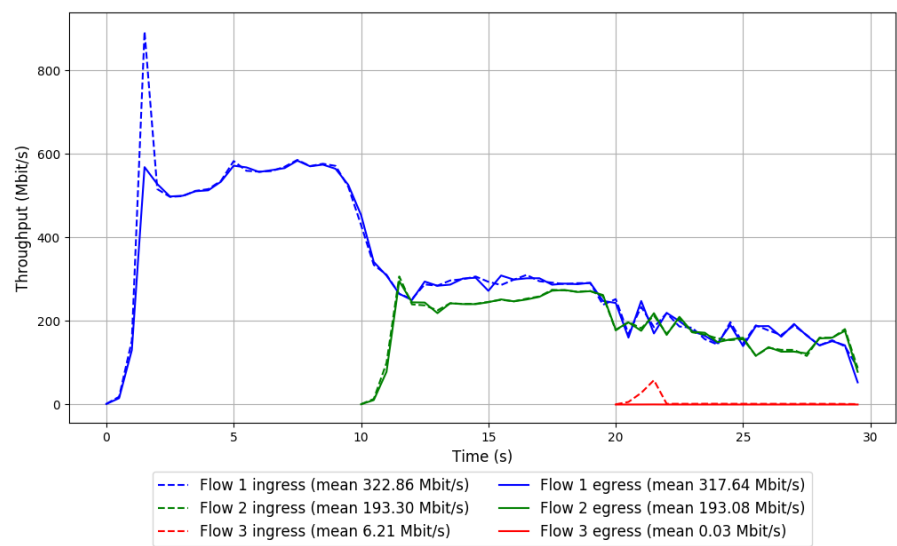


```
Run 9: Statistics of PCC

Start at: 2017-08-12 08:24:41
End at: 2017-08-12 08:25:11

# Below is generated by plot.py at 2017-08-12 11:35:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 445.32 Mbit/s
95th percentile per-packet one-way delay: 57.287 ms
Loss rate: 1.99%
-- Flow 1:
Average throughput: 317.64 Mbit/s
95th percentile per-packet one-way delay: 60.100 ms
Loss rate: 1.93%
-- Flow 2:
Average throughput: 193.08 Mbit/s
95th percentile per-packet one-way delay: 51.307 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 53.698 ms
Loss rate: 99.52%
```


Run 9: Report of PCC — Data Link



Run 10: Statistics of PCC

Start at: 2017-08-12 08:35:53

End at: 2017-08-12 08:36:23

Below is generated by plot.py at 2017-08-12 11:36:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 146.54 Mbit/s

95th percentile per-packet one-way delay: 53.069 ms

Loss rate: 31.80%

-- Flow 1:

Average throughput: 42.59 Mbit/s

95th percentile per-packet one-way delay: 53.145 ms

Loss rate: 60.89%

-- Flow 2:

Average throughput: 156.57 Mbit/s

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

Loss rate: 0.30%

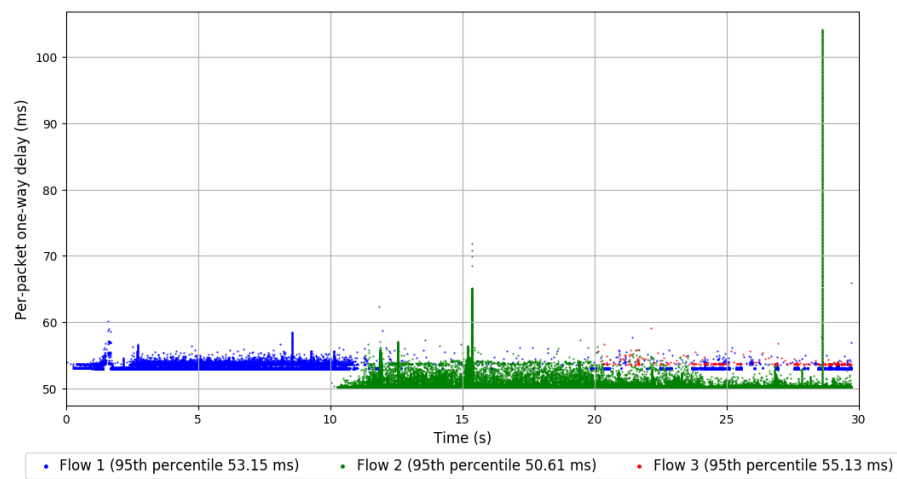
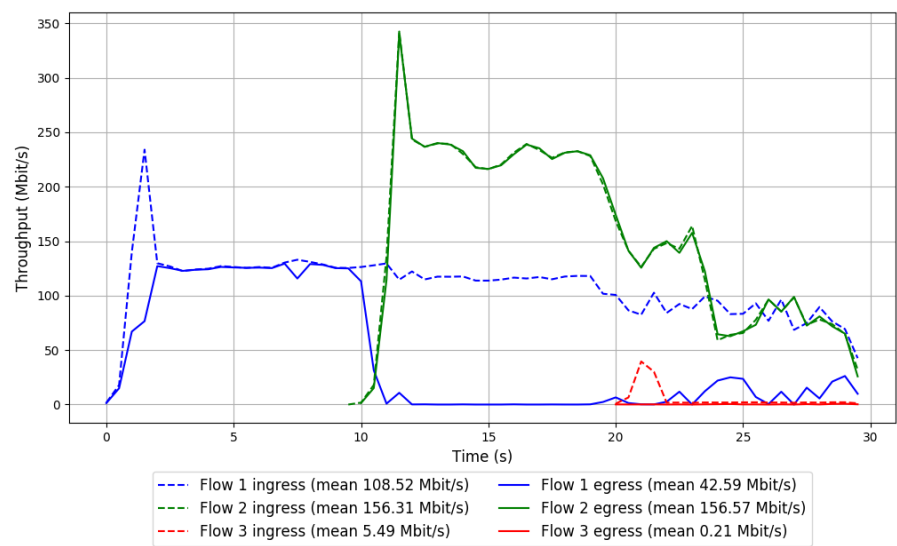
-- Flow 3:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 55.127 ms

Loss rate: 96.30%

Run 10: Report of PCC — Data Link

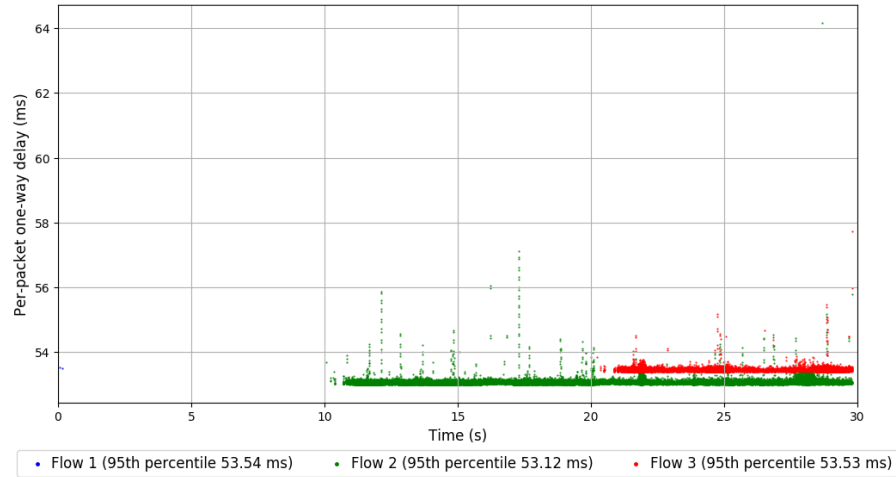
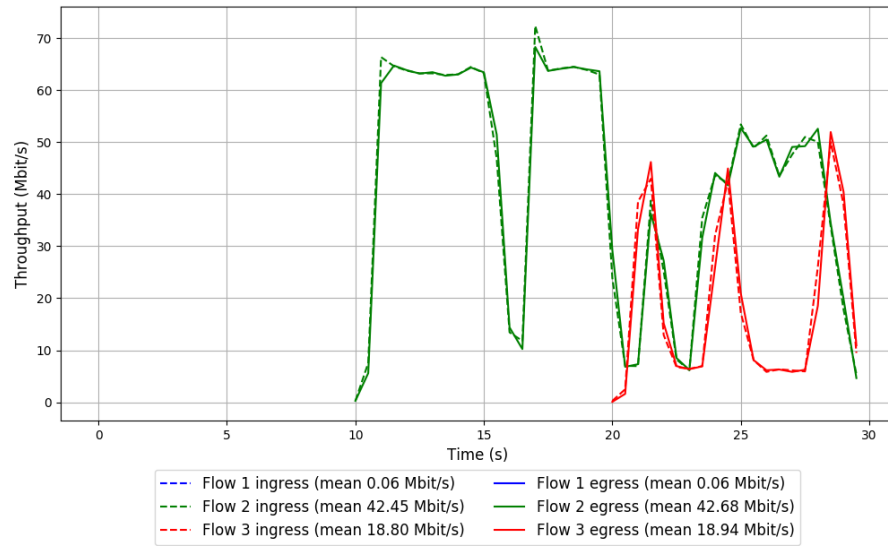


```
Run 1: Statistics of QUIC Cubic

Start at: 2017-08-12 06:48:47
End at: 2017-08-12 06:49:17

# Below is generated by plot.py at 2017-08-12 11:36:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 34.42 Mbit/s
95th percentile per-packet one-way delay: 53.460 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 53.536 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 42.68 Mbit/s
95th percentile per-packet one-way delay: 53.123 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 18.94 Mbit/s
95th percentile per-packet one-way delay: 53.526 ms
Loss rate: 0.58%
```

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2017-08-12 06:59:32

End at: 2017-08-12 07:00:02

Below is generated by plot.py at 2017-08-12 11:36:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 37.90 Mbit/s

95th percentile per-packet one-way delay: 50.269 ms

Loss rate: 0.72%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 54.080 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 40.14 Mbit/s

95th percentile per-packet one-way delay: 49.983 ms

Loss rate: 0.39%

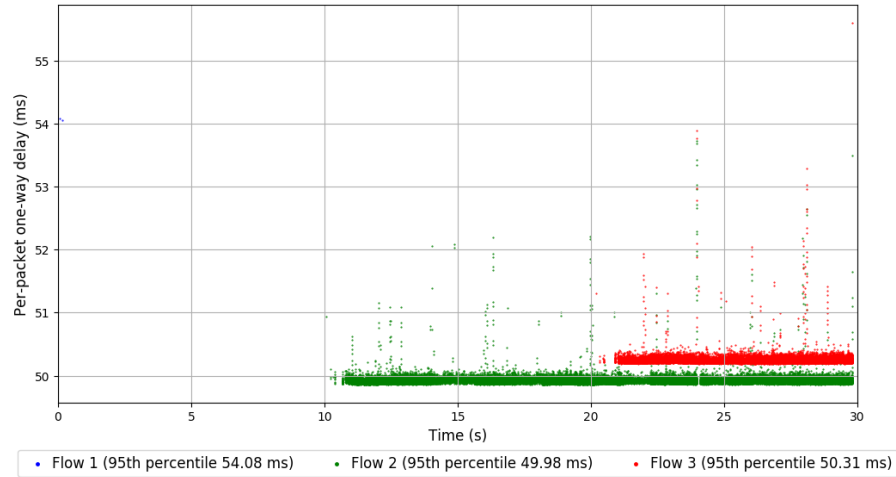
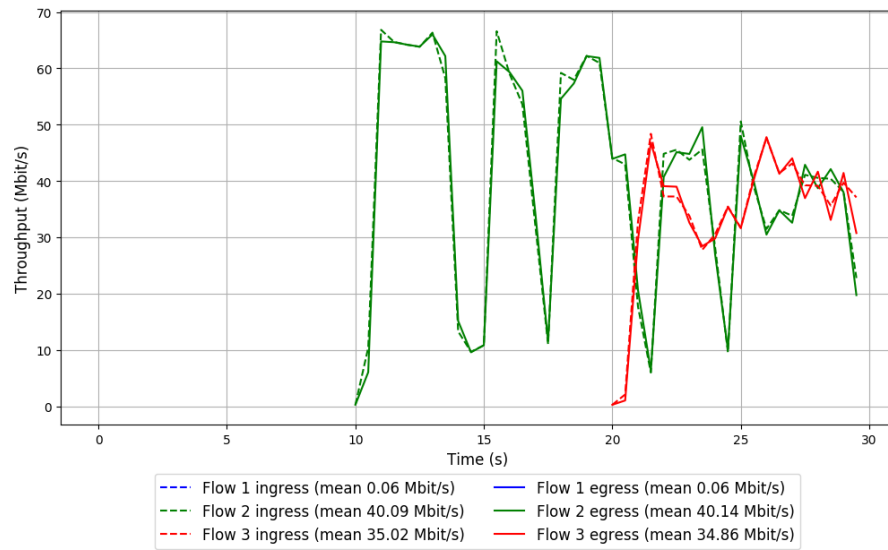
-- Flow 3:

Average throughput: 34.86 Mbit/s

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

Loss rate: 1.50%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2017-08-12 07:11:04

End at: 2017-08-12 07:11:34

Below is generated by plot.py at 2017-08-12 11:36:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 32.43 Mbit/s

95th percentile per-packet one-way delay: 53.441 ms

Loss rate: 0.90%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 53.628 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 38.46 Mbit/s

95th percentile per-packet one-way delay: 53.425 ms

Loss rate: 0.48%

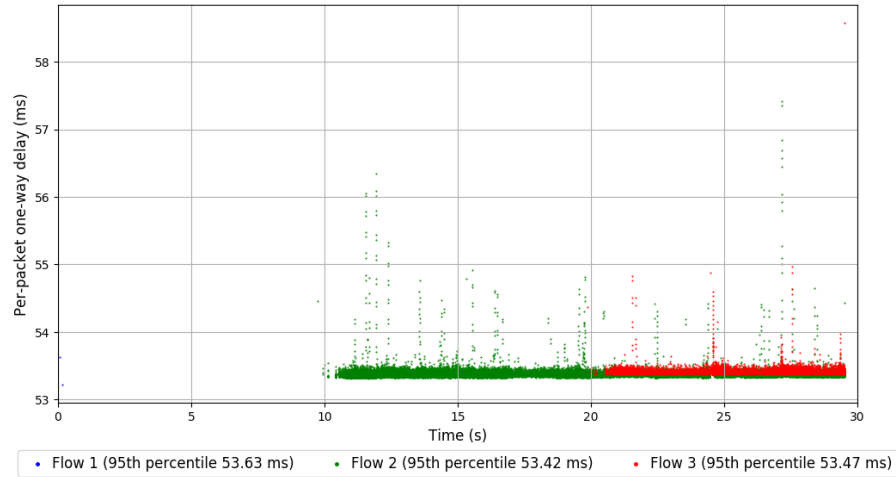
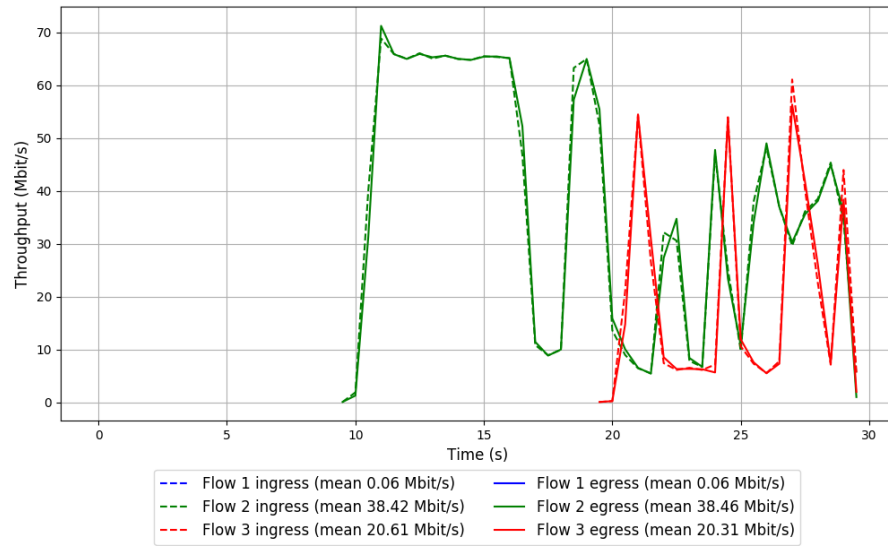
-- Flow 3:

Average throughput: 20.31 Mbit/s

95th percentile per-packet one-way delay: 53.470 ms

Loss rate: 2.49%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2017-08-12 07:22:43

End at: 2017-08-12 07:23:13

Below is generated by plot.py at 2017-08-12 11:36:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 36.24 Mbit/s

95th percentile per-packet one-way delay: 53.396 ms

Loss rate: 0.75%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 53.546 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 40.81 Mbit/s

95th percentile per-packet one-way delay: 50.277 ms

Loss rate: 0.50%

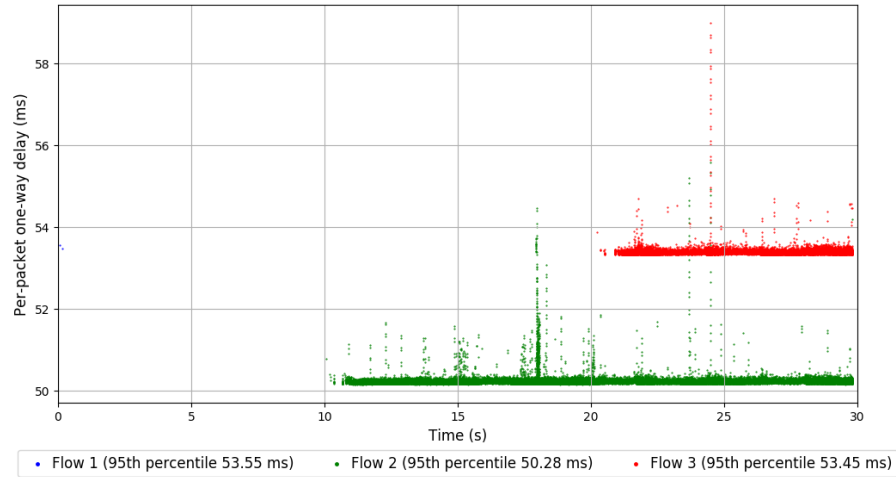
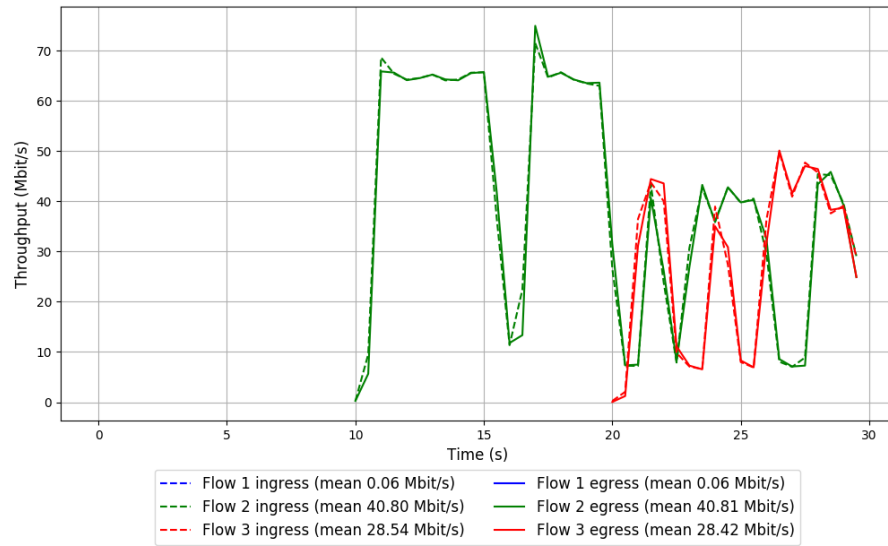
-- Flow 3:

Average throughput: 28.42 Mbit/s

95th percentile per-packet one-way delay: 53.451 ms

Loss rate: 1.48%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2017-08-12 07:34:11

End at: 2017-08-12 07:34:41

Below is generated by plot.py at 2017-08-12 11:36:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 37.53 Mbit/s

95th percentile per-packet one-way delay: 50.280 ms

Loss rate: 0.71%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 53.851 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 38.43 Mbit/s

95th percentile per-packet one-way delay: 50.292 ms

Loss rate: 0.54%

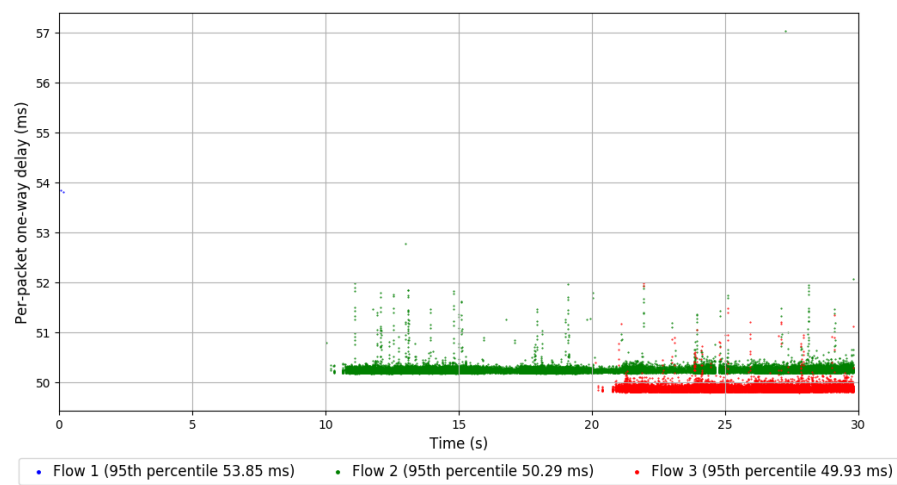
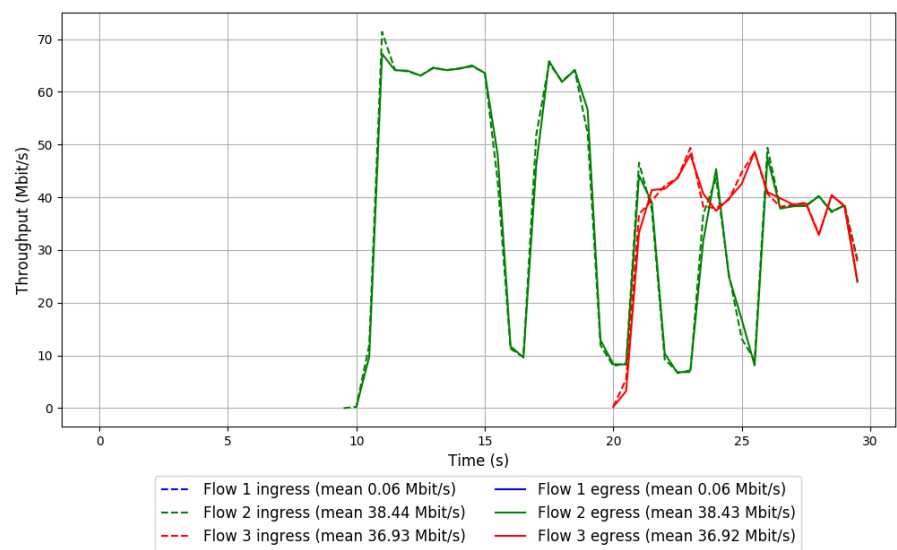
-- Flow 3:

Average throughput: 36.92 Mbit/s

95th percentile per-packet one-way delay: 49.932 ms

Loss rate: 1.07%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2017-08-12 07:45:25

End at: 2017-08-12 07:45:55

Below is generated by plot.py at 2017-08-12 11:36:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 38.04 Mbit/s

95th percentile per-packet one-way delay: 50.284 ms

Loss rate: 0.69%

-- Flow 1:

Average throughput: 0.06 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 38.78 Mbit/s

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

Loss rate: 0.49%

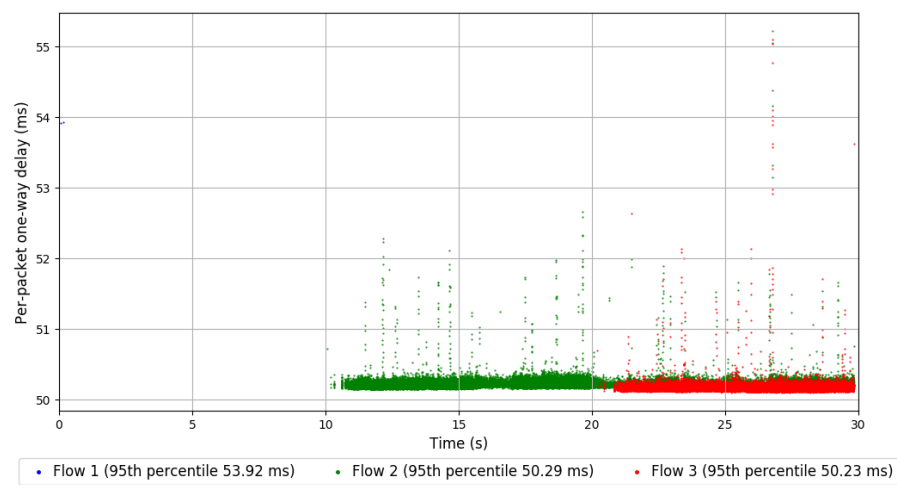
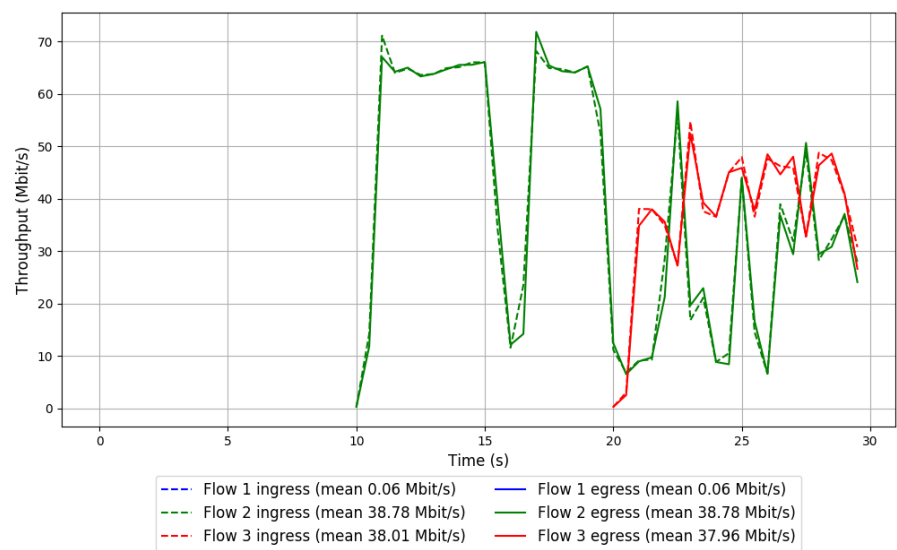
-- Flow 3:

Average throughput: 37.96 Mbit/s

95th percentile per-packet one-way delay: 50.231 ms

Loss rate: 1.11%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

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

End at: 2017-08-12 07:57:28

Below is generated by plot.py at 2017-08-12 11:36:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 34.08 Mbit/s

95th percentile per-packet one-way delay: 53.699 ms

Loss rate: 0.72%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.672 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 38.67 Mbit/s

95th percentile per-packet one-way delay: 53.439 ms

Loss rate: 0.07%

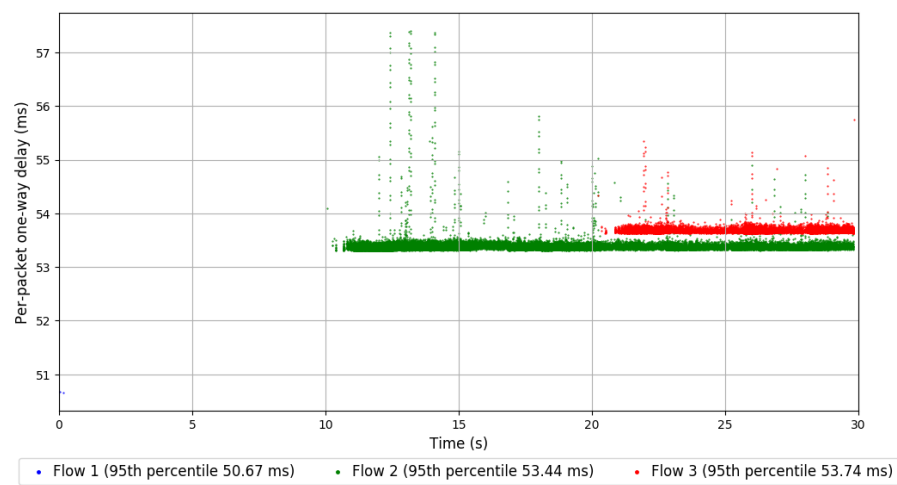
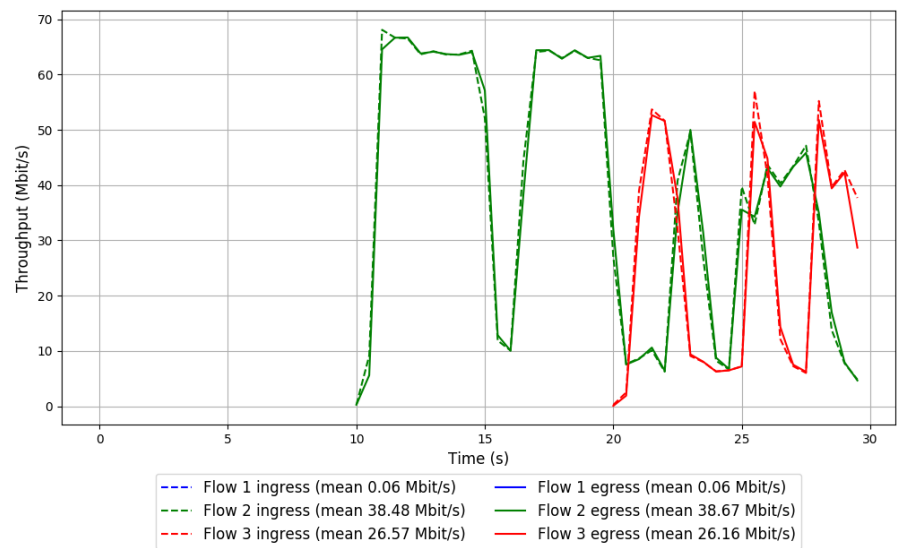
-- Flow 3:

Average throughput: 26.16 Mbit/s

95th percentile per-packet one-way delay: 53.742 ms

Loss rate: 2.65%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

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

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

Below is generated by plot.py at 2017-08-12 11:36:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 36.24 Mbit/s

95th percentile per-packet one-way delay: 53.796 ms

Loss rate: 0.45%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 53.191 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 42.57 Mbit/s

95th percentile per-packet one-way delay: 53.804 ms

Loss rate: 0.10%

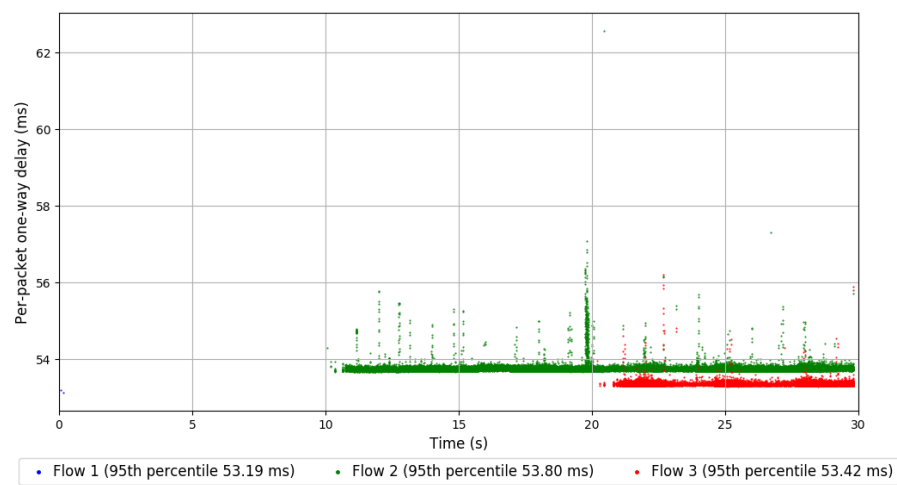
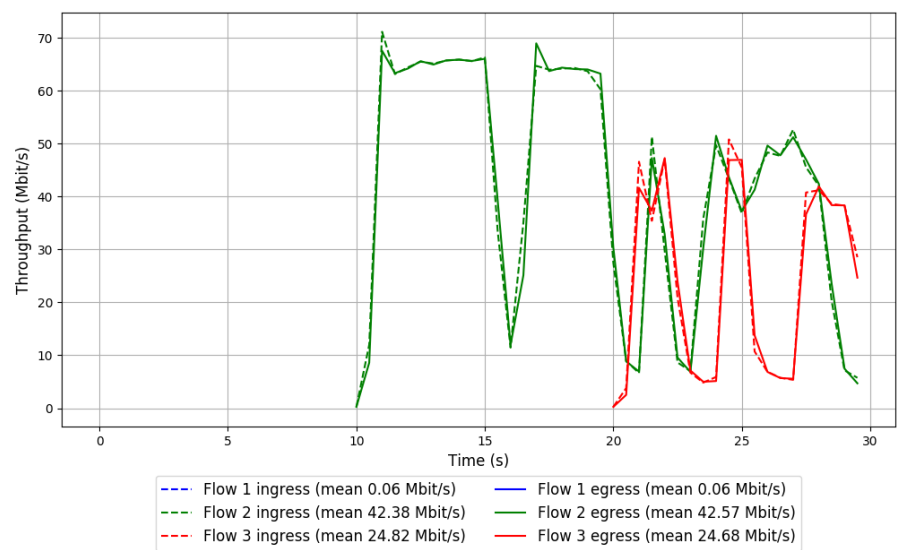
-- Flow 3:

Average throughput: 24.68 Mbit/s

95th percentile per-packet one-way delay: 53.423 ms

Loss rate: 1.65%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

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

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

Below is generated by plot.py at 2017-08-12 11:36:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 36.30 Mbit/s

95th percentile per-packet one-way delay: 53.080 ms

Loss rate: 0.77%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.347 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 40.79 Mbit/s

95th percentile per-packet one-way delay: 53.077 ms

Loss rate: 0.51%

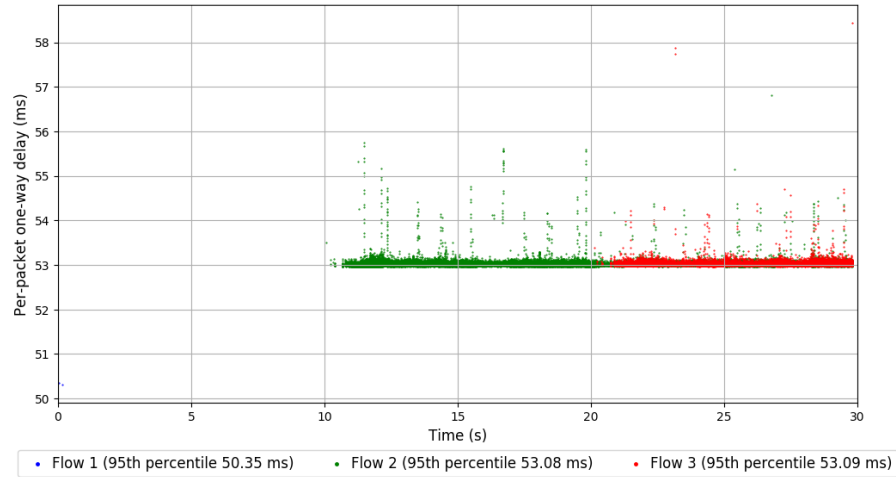
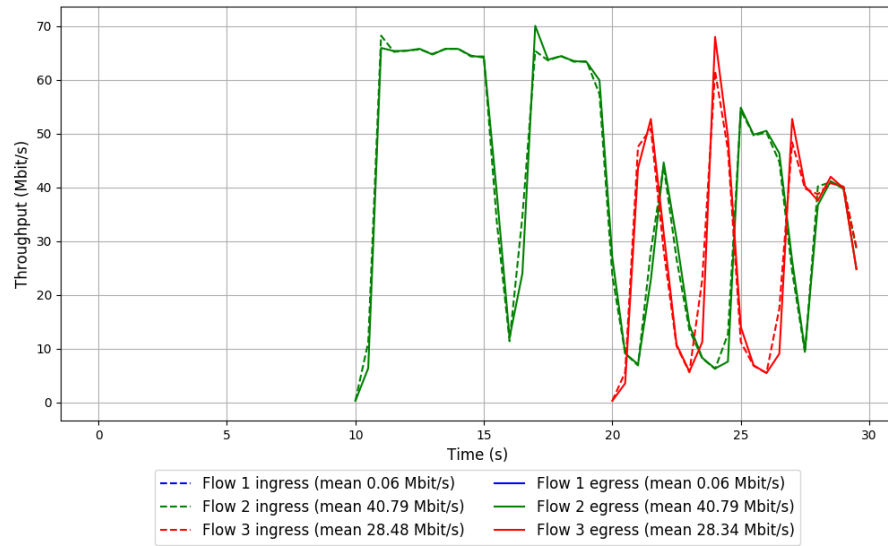
-- Flow 3:

Average throughput: 28.34 Mbit/s

95th percentile per-packet one-way delay: 53.090 ms

Loss rate: 1.53%

Run 9: Report of QUIC Cubic — Data Link

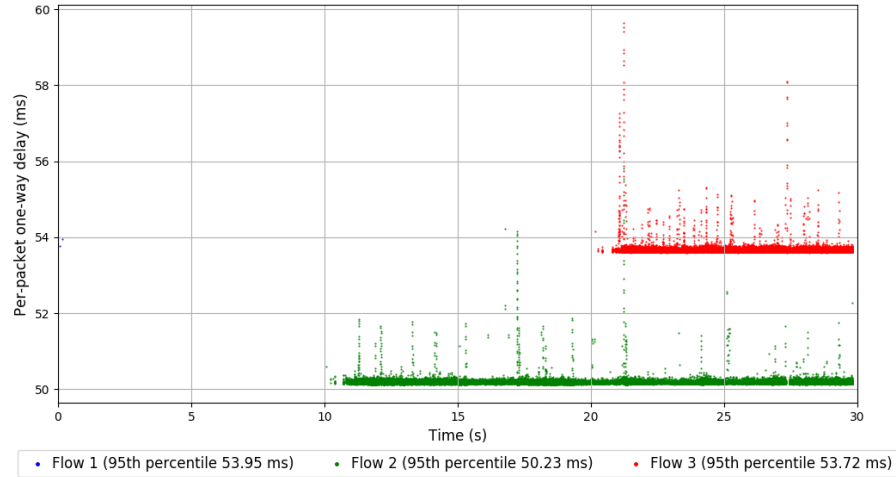
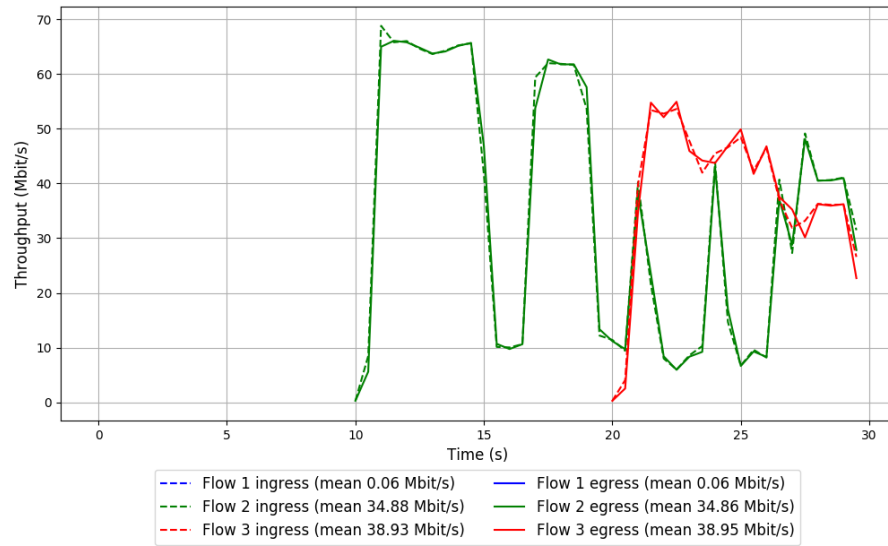


```
Run 10: Statistics of QUIC Cubic

Start at: 2017-08-12 08:30:10
End at: 2017-08-12 08:30:40

# Below is generated by plot.py at 2017-08-12 11:36:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 35.78 Mbit/s
95th percentile per-packet one-way delay: 53.685 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 53.953 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 34.86 Mbit/s
95th percentile per-packet one-way delay: 50.232 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 38.95 Mbit/s
95th percentile per-packet one-way delay: 53.723 ms
Loss rate: 1.02%
```

Run 10: Report of QUIC Cubic — Data Link



Run 1: Statistics of Saturator

Start at: 2017-08-12 06:53:16

End at: 2017-08-12 06:53:46

Below is generated by plot.py at 2017-08-12 11:36:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 39.35 Mbit/s

95th percentile per-packet one-way delay: 50.931 ms

Loss rate: 0.51%

-- Flow 1:

Average throughput: 23.66 Mbit/s

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

Loss rate: 0.37%

-- Flow 2:

Average throughput: 23.59 Mbit/s

95th percentile per-packet one-way delay: 50.940 ms

Loss rate: 0.53%

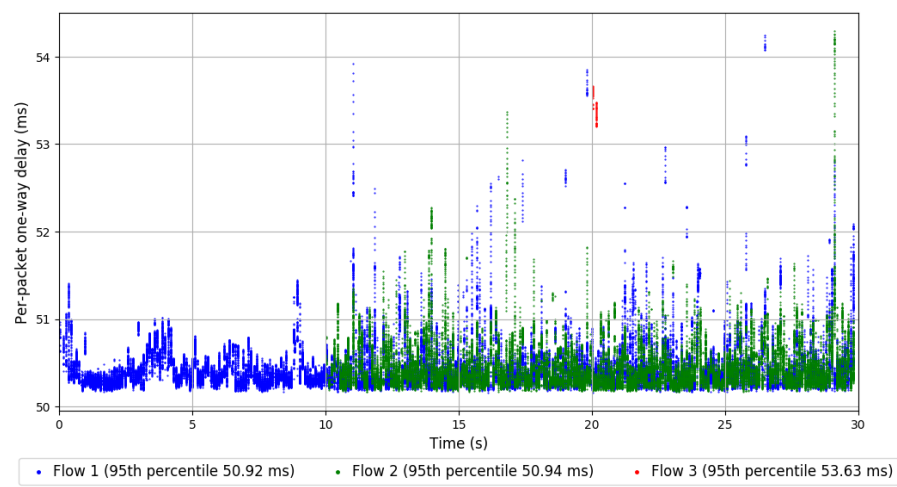
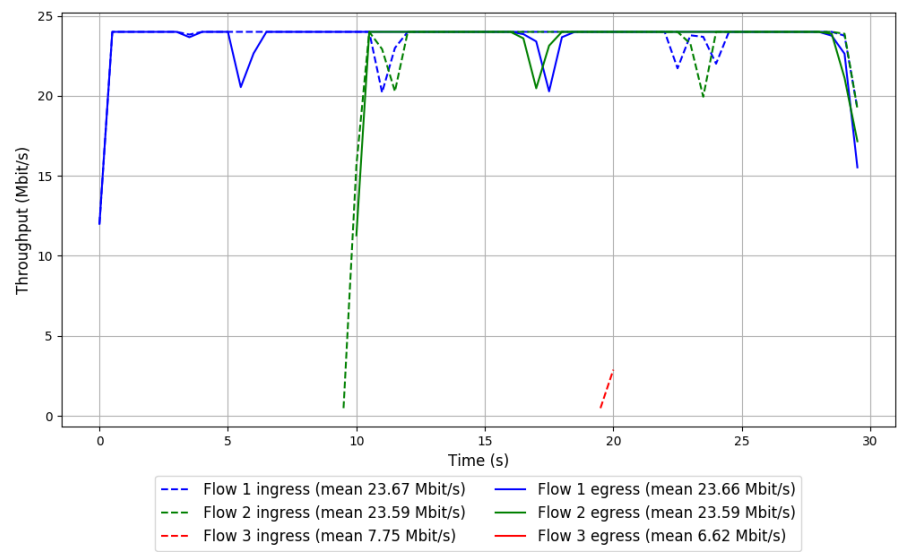
-- Flow 3:

Average throughput: 6.62 Mbit/s

95th percentile per-packet one-way delay: 53.630 ms

Loss rate: 57.14%

Run 1: Report of Saturator — Data Link

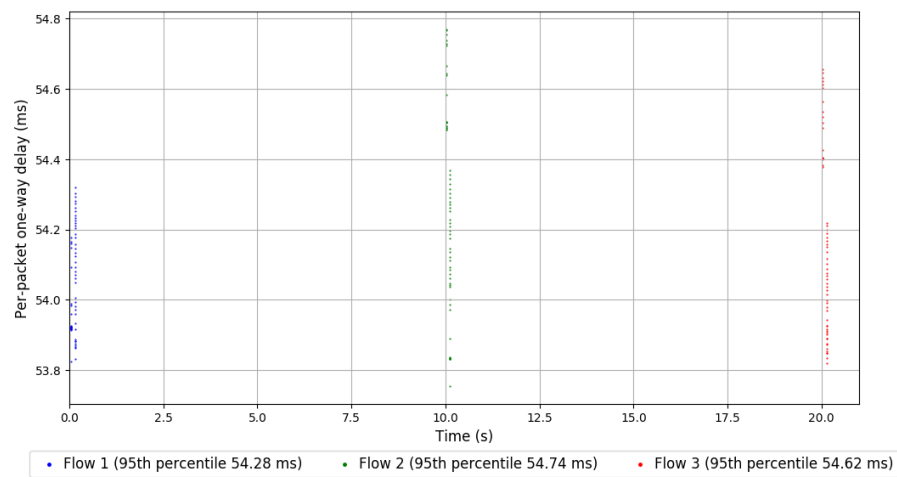
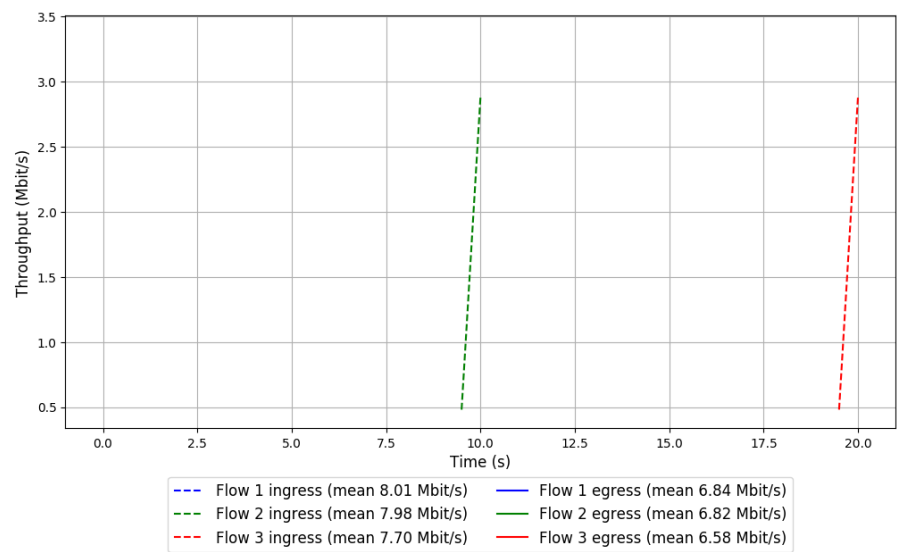


Run 2: Statistics of Saturator

Start at: 2017-08-12 07:03:59

End at: 2017-08-12 07:04:29

Run 2: Report of Saturator — Data Link



Run 3: Statistics of Saturator

Start at: 2017-08-12 07:15:36

End at: 2017-08-12 07:16:06

Below is generated by plot.py at 2017-08-12 11:36:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 46.09 Mbit/s

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

Loss rate: 0.66%

-- Flow 1:

Average throughput: 22.75 Mbit/s

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

Loss rate: 0.58%

-- Flow 2:

Average throughput: 23.56 Mbit/s

95th percentile per-packet one-way delay: 51.048 ms

Loss rate: 0.56%

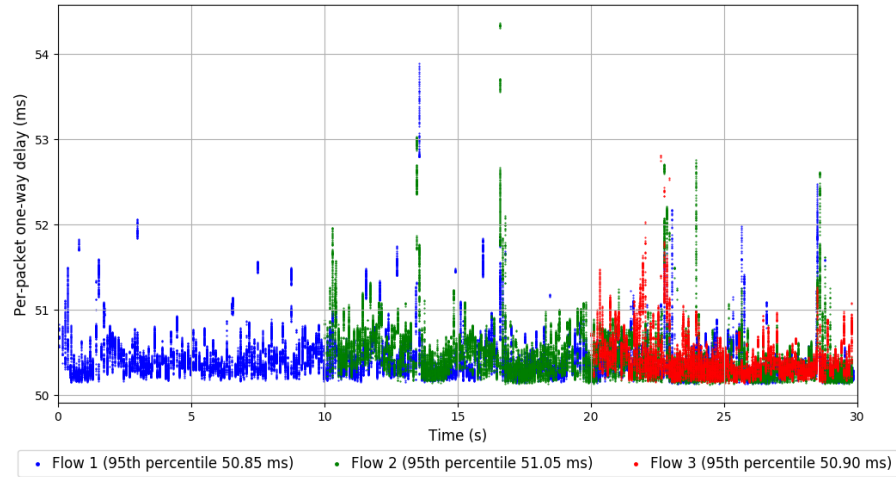
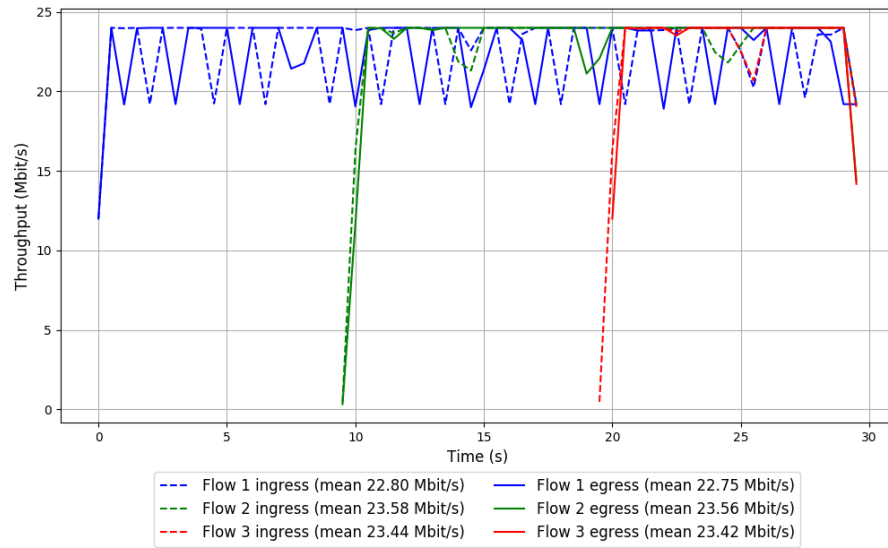
-- Flow 3:

Average throughput: 23.42 Mbit/s

95th percentile per-packet one-way delay: 50.901 ms

Loss rate: 1.09%

Run 3: Report of Saturator — Data Link

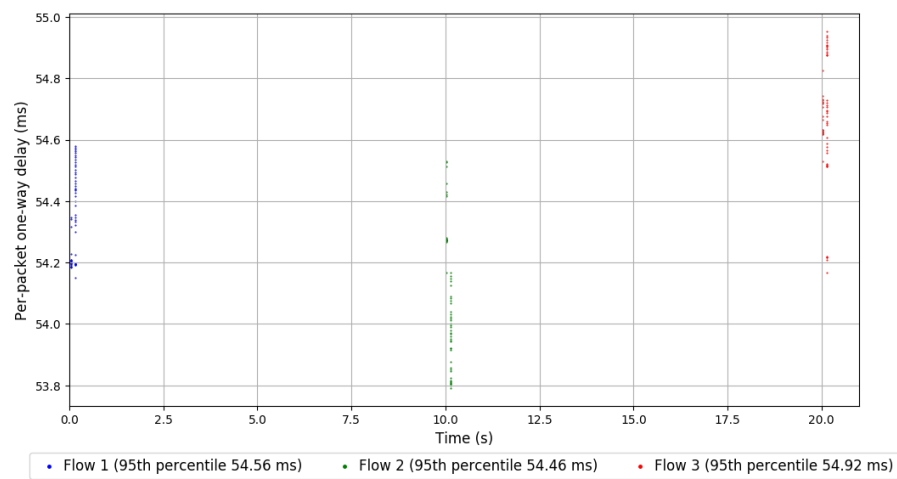
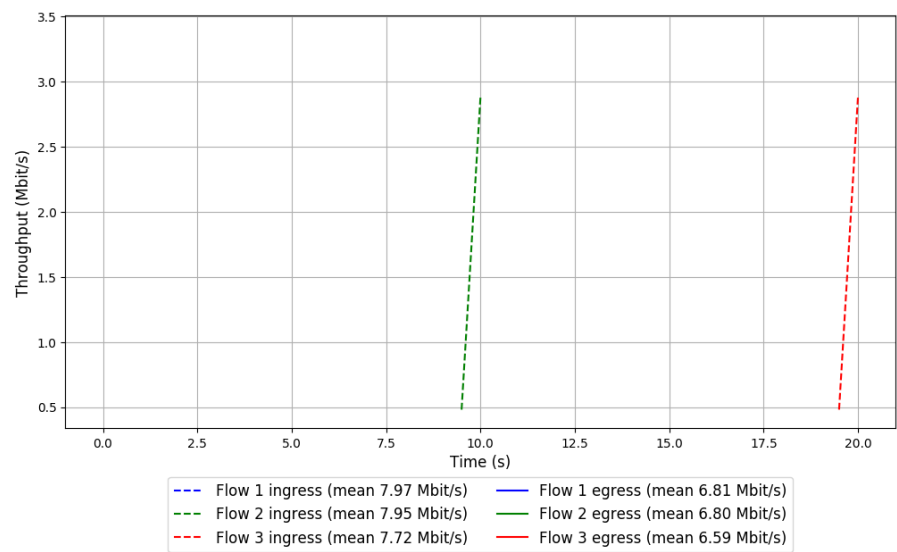


Run 4: Statistics of Saturator

Start at: 2017-08-12 07:27:02

End at: 2017-08-12 07:27:32

Run 4: Report of Saturator — Data Link



Run 5: Statistics of Saturator

Start at: 2017-08-12 07:38:35

End at: 2017-08-12 07:39:05

Below is generated by plot.py at 2017-08-12 11:37:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 23.37 Mbit/s

95th percentile per-packet one-way delay: 51.156 ms

Loss rate: 0.87%

-- Flow 1:

Average throughput: 6.62 Mbit/s

95th percentile per-packet one-way delay: 54.309 ms

Loss rate: 57.14%

-- Flow 2:

Average throughput: 23.58 Mbit/s

95th percentile per-packet one-way delay: 51.200 ms

Loss rate: 0.59%

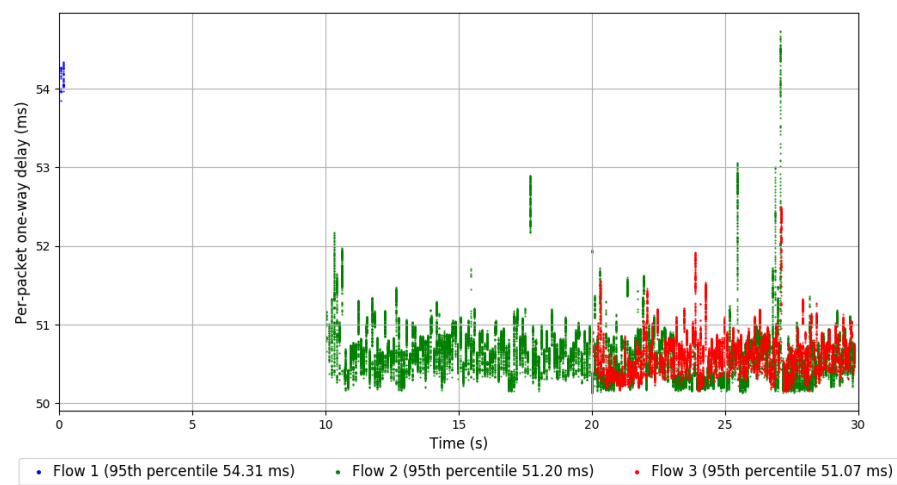
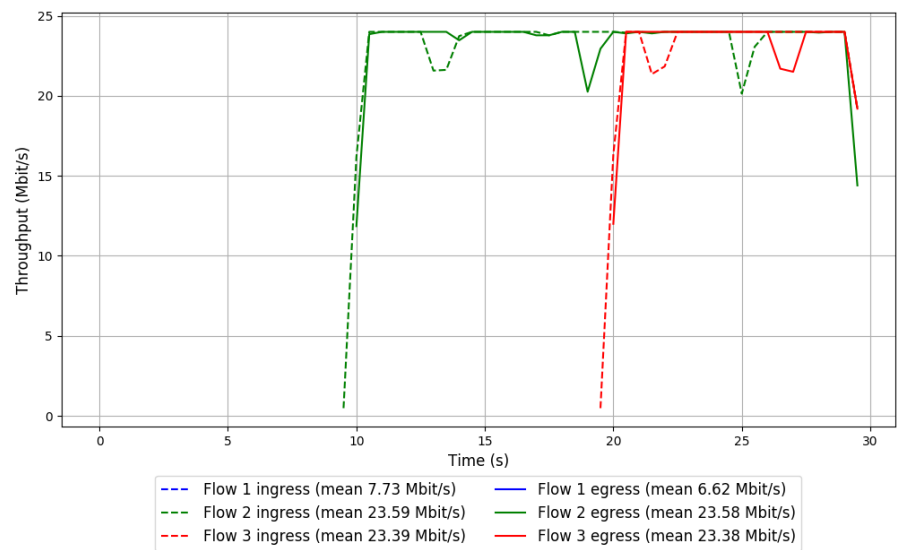
-- Flow 3:

Average throughput: 23.38 Mbit/s

95th percentile per-packet one-way delay: 51.068 ms

Loss rate: 1.04%

Run 5: Report of Saturator — Data Link



Run 6: Statistics of Saturator

Start at: 2017-08-12 07:50:03

End at: 2017-08-12 07:50:33

Below is generated by plot.py at 2017-08-12 11:37:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.72 Mbit/s

95th percentile per-packet one-way delay: 50.797 ms

Loss rate: 2.08%

-- Flow 1:

Average throughput: 22.57 Mbit/s

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

Loss rate: 1.87%

-- Flow 2:

Average throughput: 6.75 Mbit/s

95th percentile per-packet one-way delay: 54.361 ms

Loss rate: 57.14%

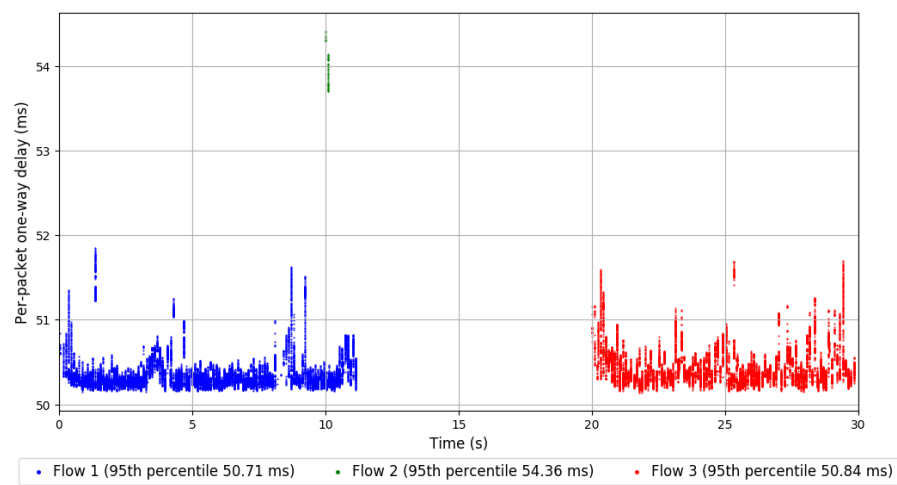
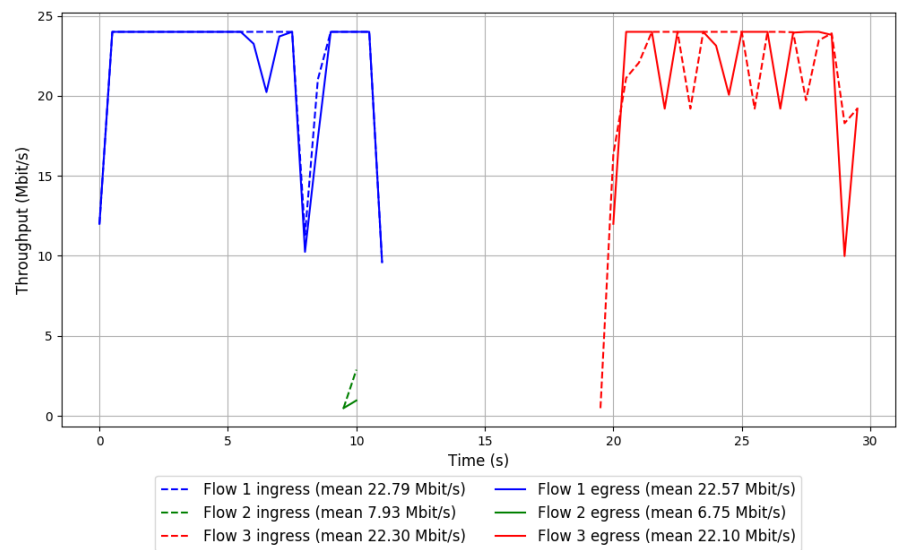
-- Flow 3:

Average throughput: 22.10 Mbit/s

95th percentile per-packet one-way delay: 50.843 ms

Loss rate: 1.90%

Run 6: Report of Saturator — Data Link



Run 7: Statistics of Saturator

Start at: 2017-08-12 08:01:16

End at: 2017-08-12 08:01:46

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 23.75 Mbit/s

95th percentile per-packet one-way delay: 50.931 ms

Loss rate: 0.64%

-- Flow 1:

Average throughput: 23.69 Mbit/s

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

Loss rate: 0.29%

-- Flow 2:

Average throughput: 0.00 Mbit/s

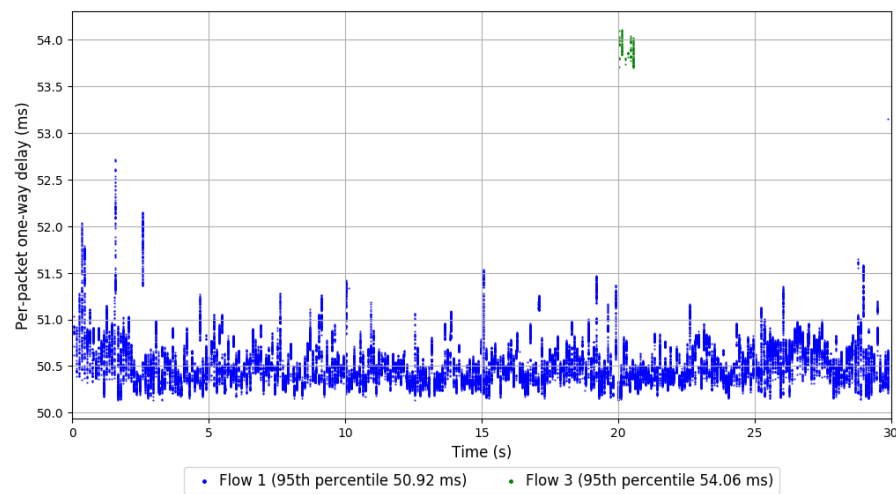
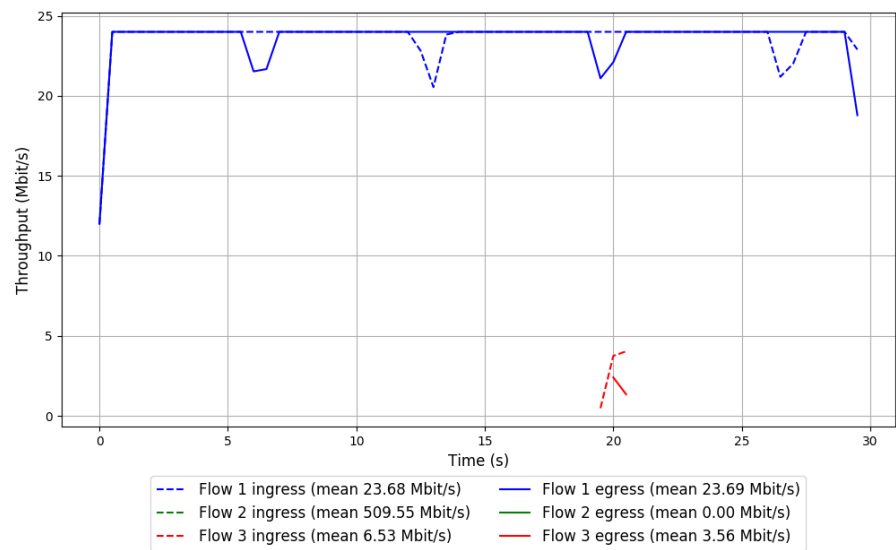
-- Flow 3:

Average throughput: 3.56 Mbit/s

95th percentile per-packet one-way delay: 54.056 ms

Loss rate: 54.65%

Run 7: Report of Saturator — Data Link



Run 8: Statistics of Saturator

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

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

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.49 Mbit/s

95th percentile per-packet one-way delay: 50.610 ms

Loss rate: 1.90%

-- Flow 1:

Average throughput: 6.61 Mbit/s

95th percentile per-packet one-way delay: 54.511 ms

Loss rate: 57.14%

-- Flow 2:

Average throughput: 6.79 Mbit/s

95th percentile per-packet one-way delay: 54.775 ms

Loss rate: 57.14%

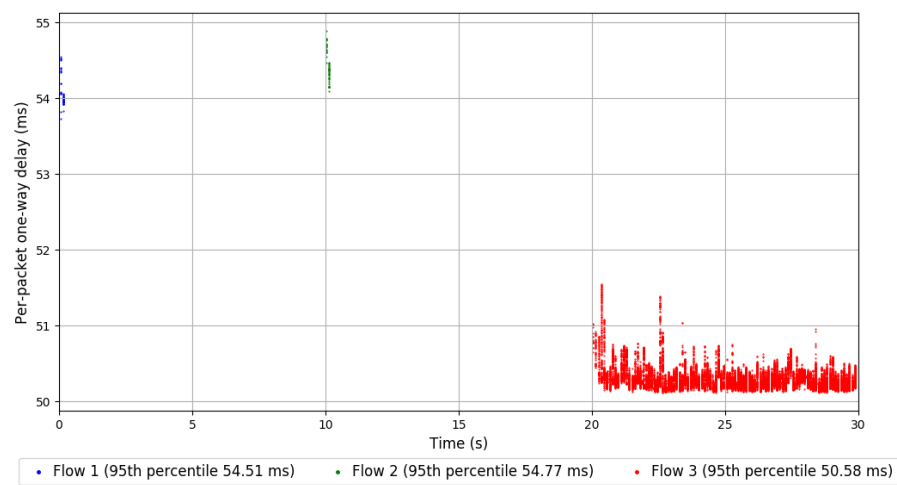
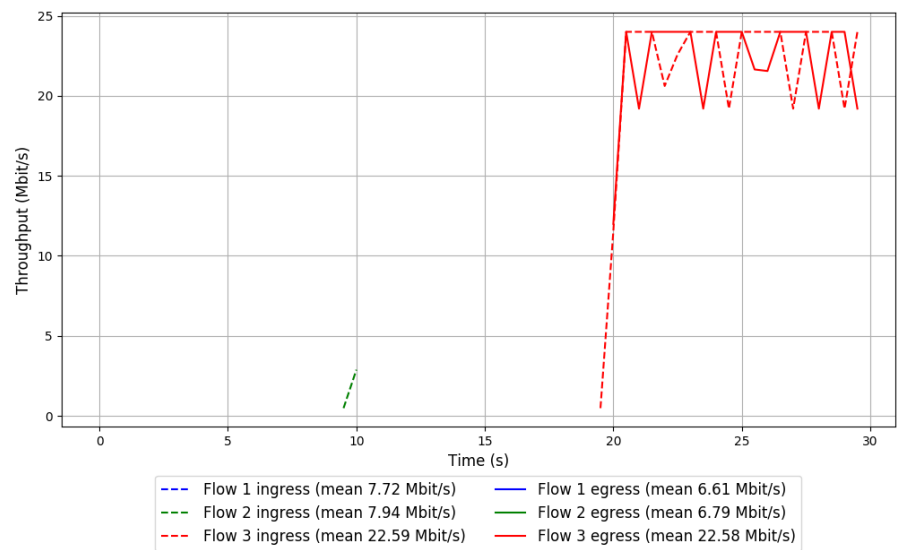
-- Flow 3:

Average throughput: 22.58 Mbit/s

95th percentile per-packet one-way delay: 50.584 ms

Loss rate: 1.07%

Run 8: Report of Saturator — Data Link

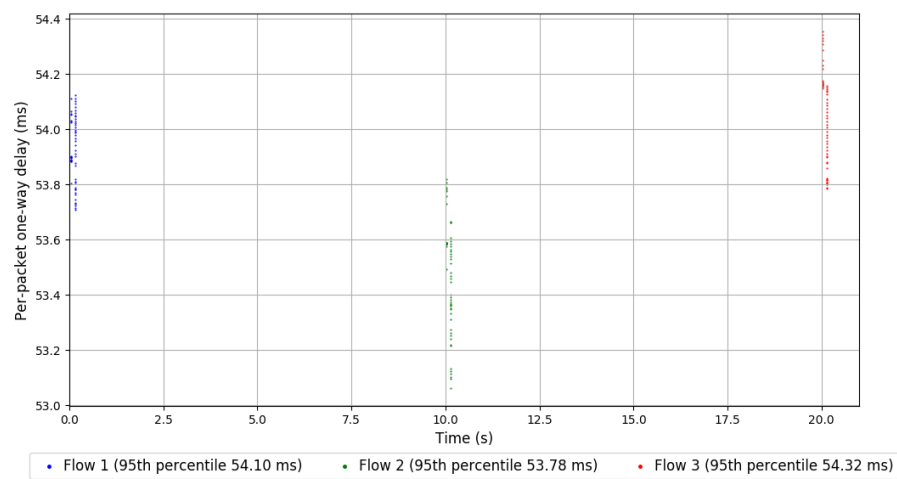
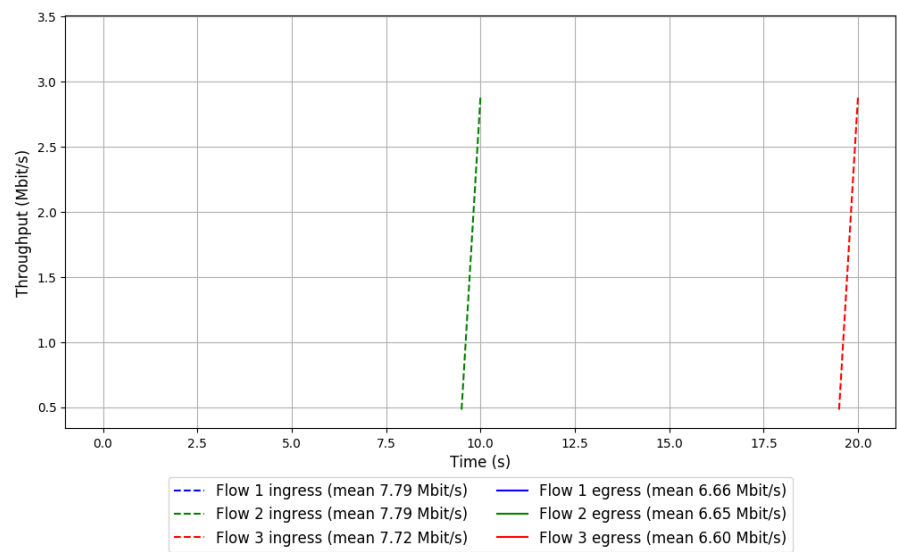


Run 9: Statistics of Saturator

Start at: 2017-08-12 08:23:22

End at: 2017-08-12 08:23:52

Run 9: Report of Saturator — Data Link



Run 10: Statistics of Saturator

Start at: 2017-08-12 08:34:32

End at: 2017-08-12 08:35:02

Below is generated by plot.py at 2017-08-12 11:37:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 39.32 Mbit/s

95th percentile per-packet one-way delay: 51.095 ms

Loss rate: 0.49%

-- Flow 1:

Average throughput: 23.70 Mbit/s

95th percentile per-packet one-way delay: 51.040 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 23.49 Mbit/s

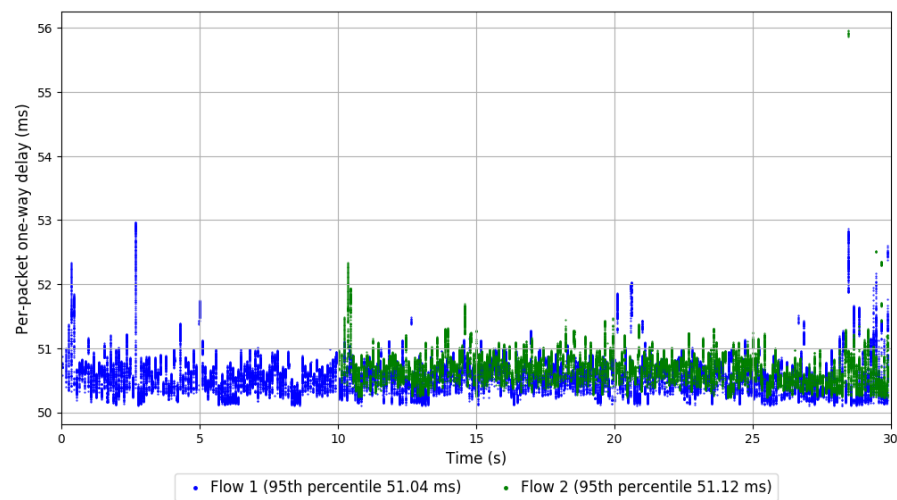
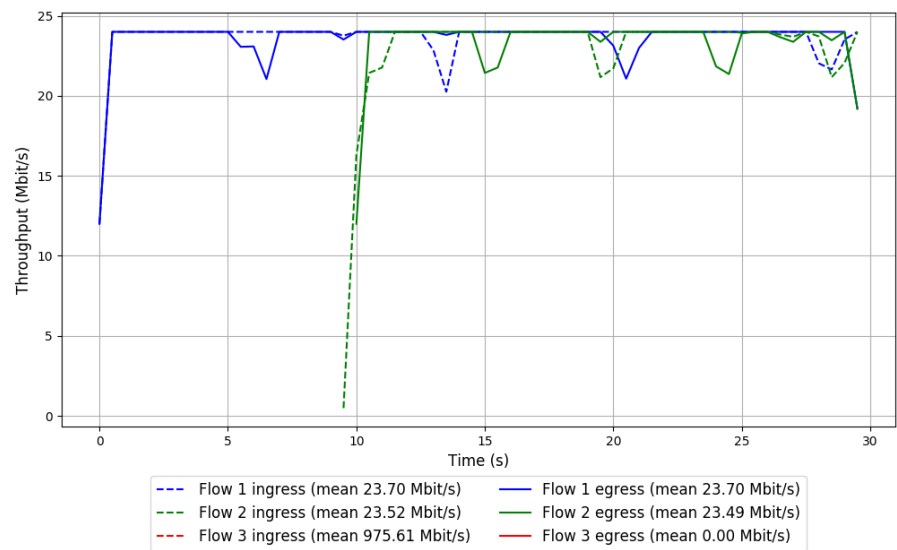
95th percentile per-packet one-way delay: 51.120 ms

Loss rate: 0.63%

-- Flow 3:

Average throughput: 0.00 Mbit/s

Run 10: Report of Saturator — Data Link

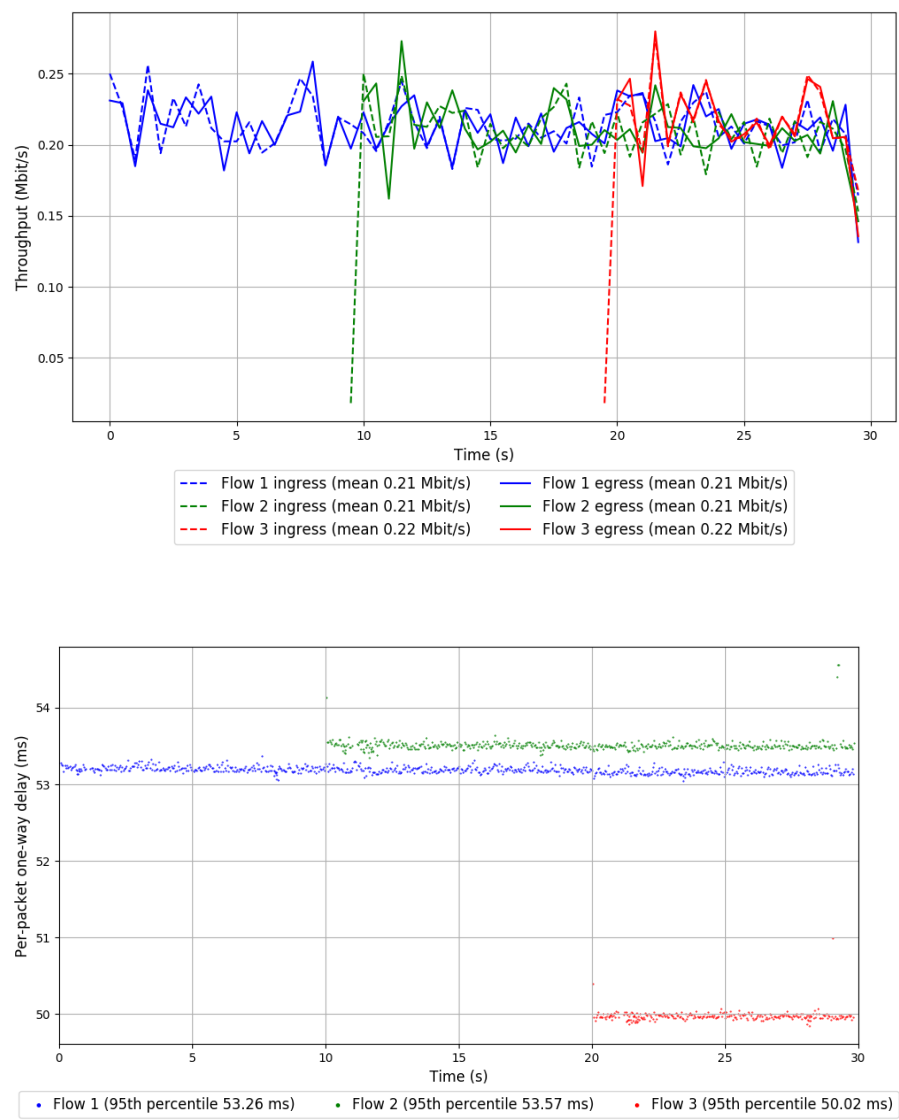


```
Run 1: Statistics of SCReAM

Start at: 2017-08-12 06:53:58
End at: 2017-08-12 06:54:28

# Below is generated by plot.py at 2017-08-12 11:37:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.543 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.258 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.570 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.024 ms
Loss rate: 1.11%
```

Run 1: Report of SReAM — Data Link

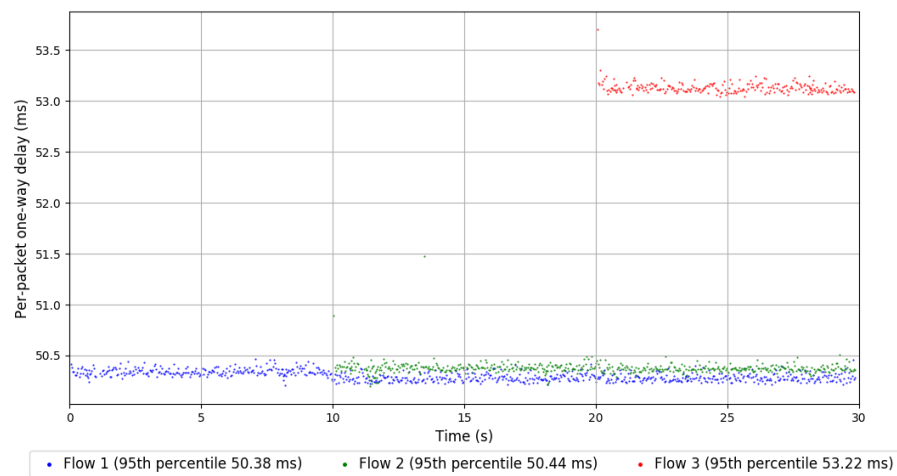
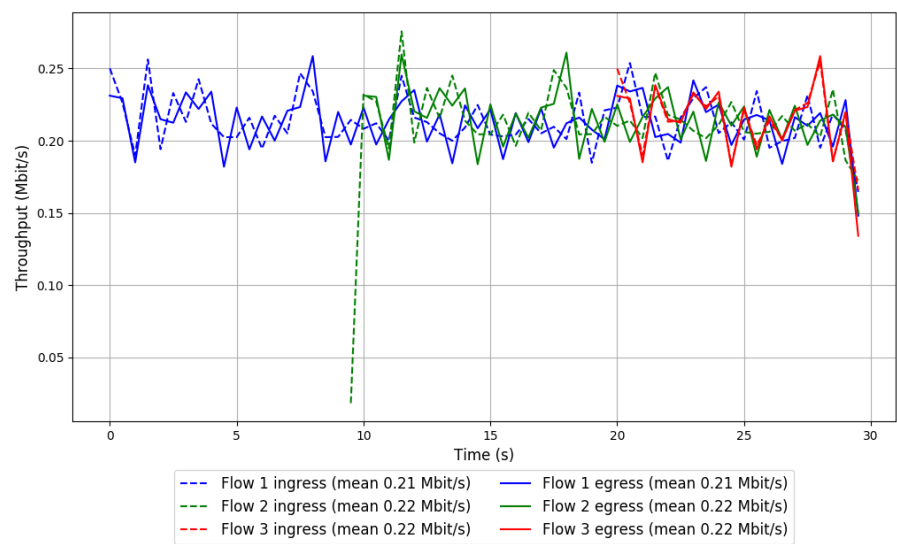


```
Run 2: Statistics of SCReAM

Start at: 2017-08-12 07:04:39
End at: 2017-08-12 07:05:09

# Below is generated by plot.py at 2017-08-12 11:37:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.149 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 50.382 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.438 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.215 ms
Loss rate: 1.11%
```

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2017-08-12 07:16:19

End at: 2017-08-12 07:16:49

Below is generated by plot.py at 2017-08-12 11:37:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 54.148 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 50.425 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 54.186 ms

Loss rate: 0.42%

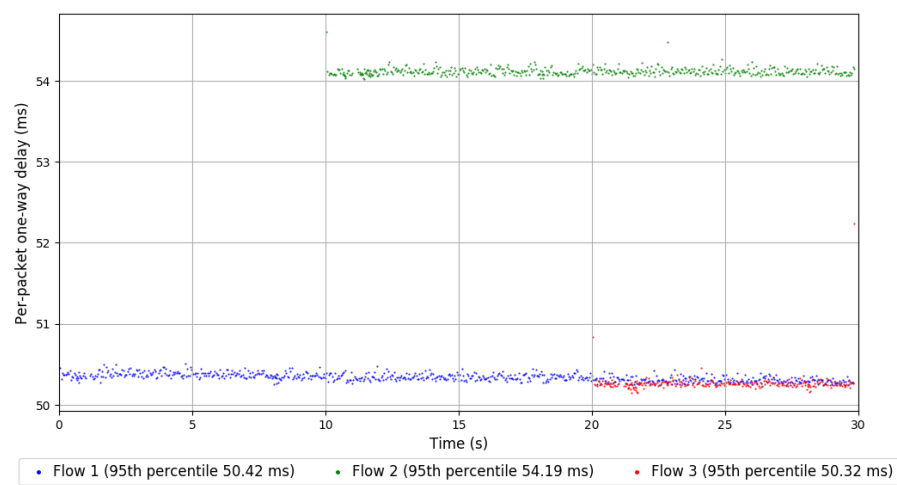
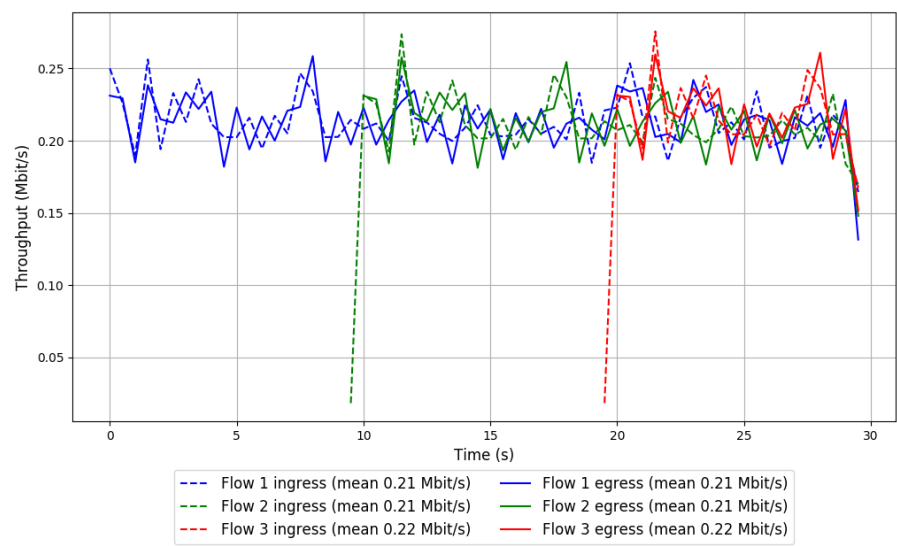
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.320 ms

Loss rate: 0.74%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SReAM

Start at: 2017-08-12 07:27:42

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

Below is generated by plot.py at 2017-08-12 11:37:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.820 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.208 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.842 ms

Loss rate: 0.42%

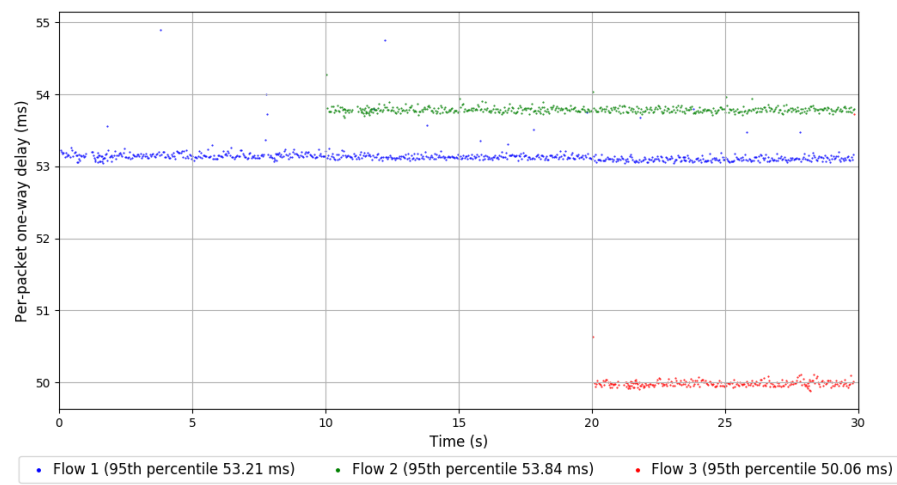
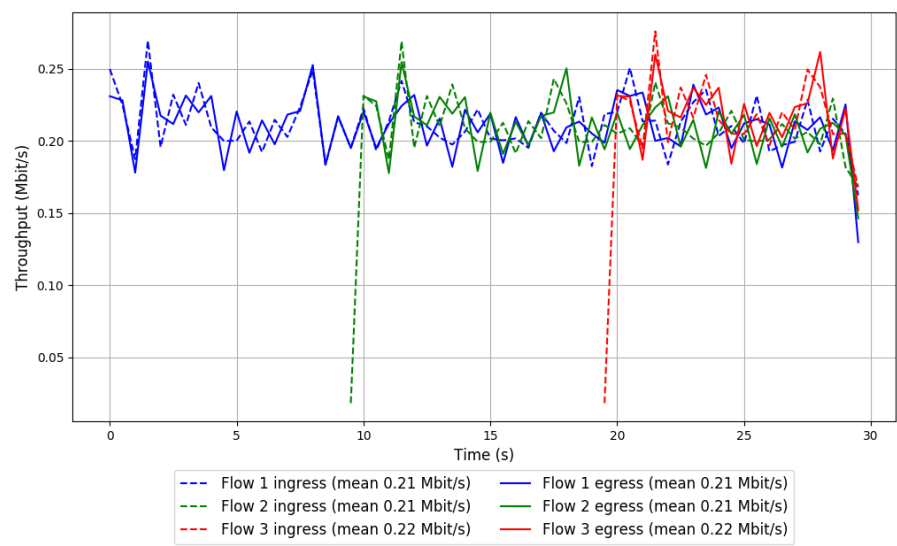
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.059 ms

Loss rate: 0.74%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2017-08-12 07:39:16

End at: 2017-08-12 07:39:46

Below is generated by plot.py at 2017-08-12 11:37:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 54.076 ms

Loss rate: 0.39%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.383 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.852 ms

Loss rate: 0.42%

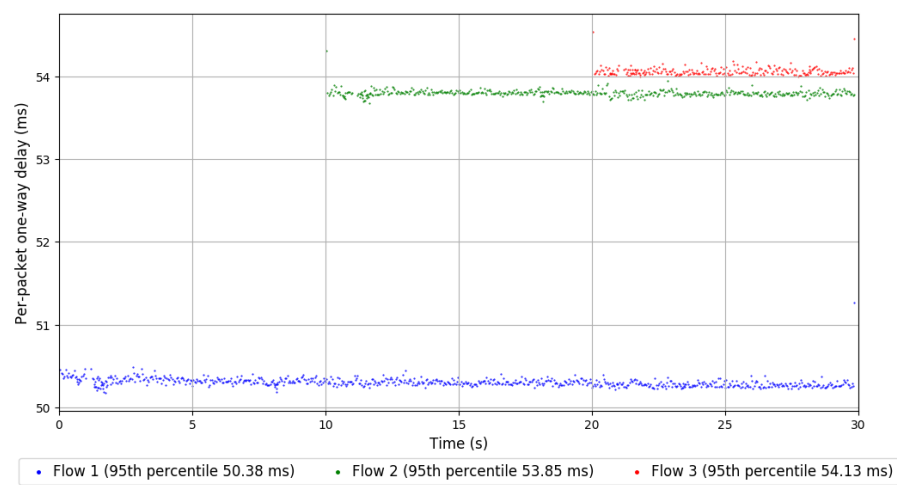
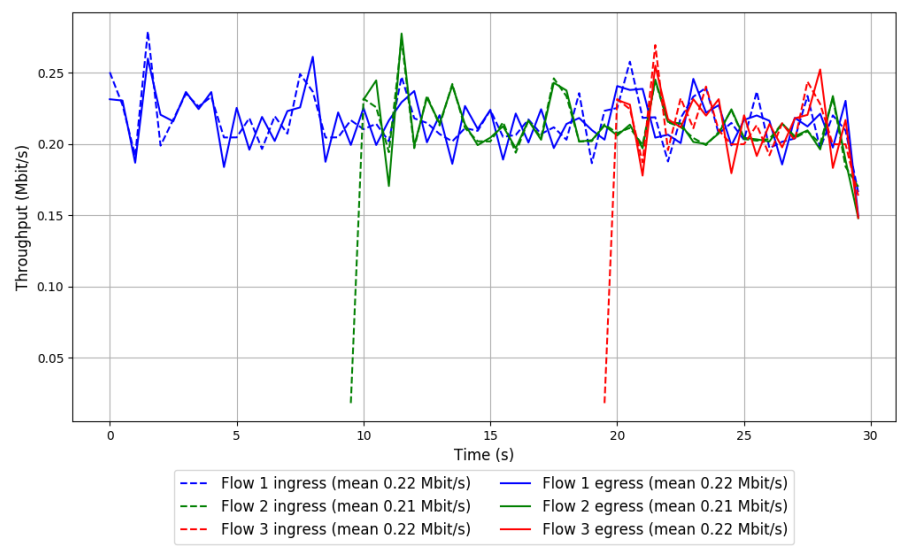
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 54.134 ms

Loss rate: 0.74%

Run 5: Report of SReAM — Data Link



Run 6: Statistics of SReAM

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

End at: 2017-08-12 07:51:14

Below is generated by plot.py at 2017-08-12 11:37:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

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

Loss rate: 0.58%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.519 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.421 ms

Loss rate: 0.61%

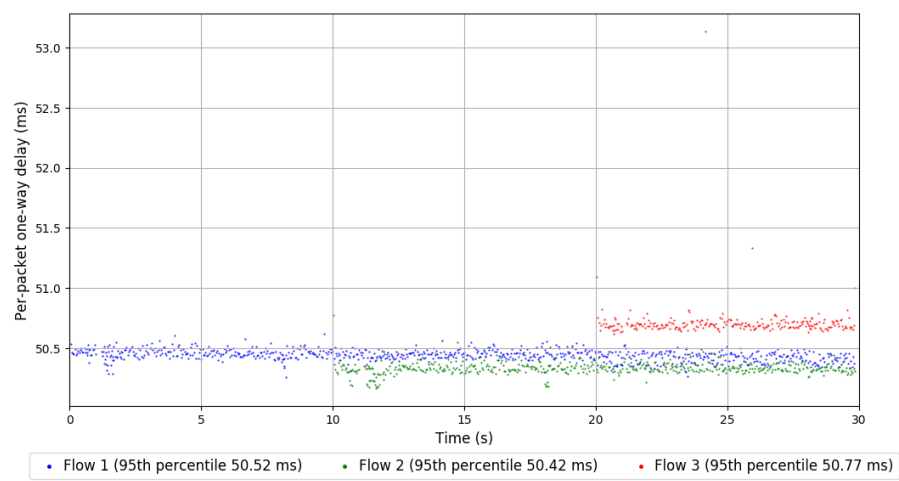
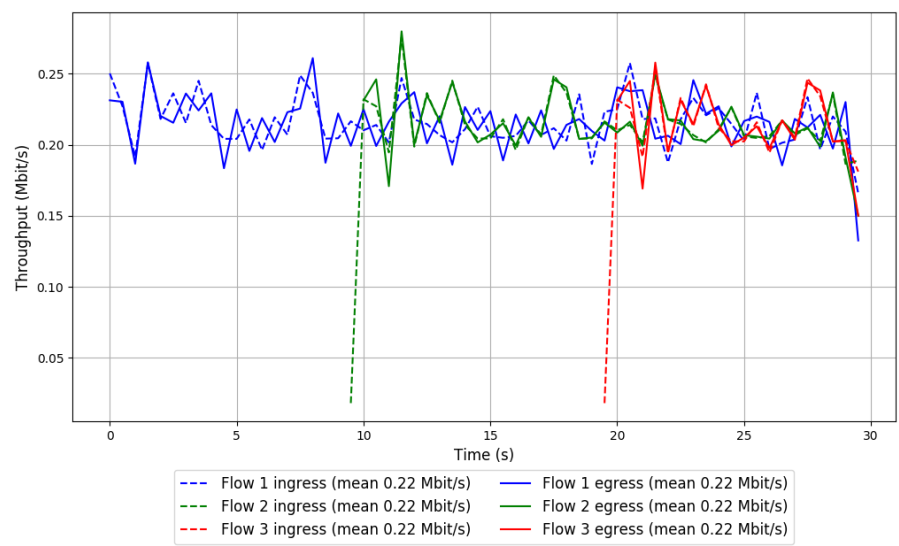
-- Flow 3:

Average throughput: 0.22 Mbit/s

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

Loss rate: 1.09%

Run 6: Report of SReAM — Data Link



Run 7: Statistics of SReAM

Start at: 2017-08-12 08:01:57

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

Below is generated by plot.py at 2017-08-12 11:37:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 54.203 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 54.216 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 54.174 ms

Loss rate: 0.63%

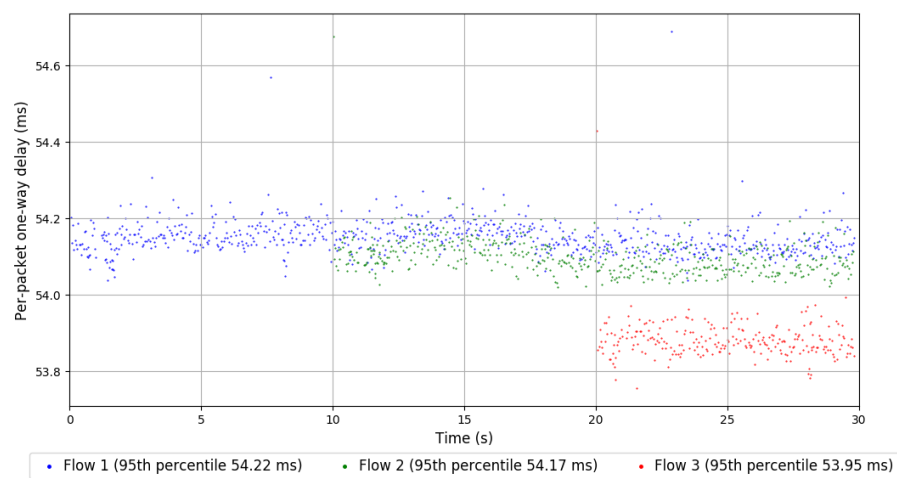
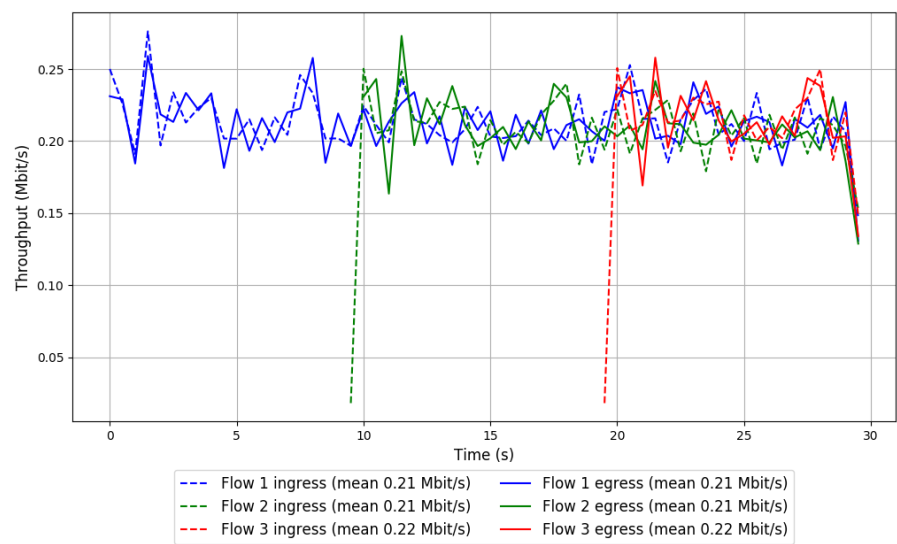
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 53.945 ms

Loss rate: 1.11%

Run 7: Report of SReAM — Data Link



Run 8: Statistics of SCReAM

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

End at: 2017-08-12 08:13:16

Below is generated by plot.py at 2017-08-12 11:37:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.140 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.157 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.349 ms

Loss rate: 0.42%

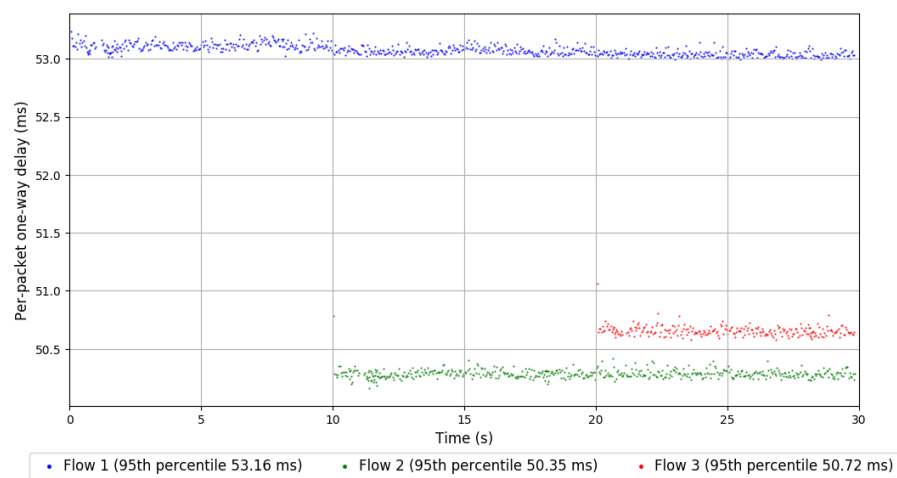
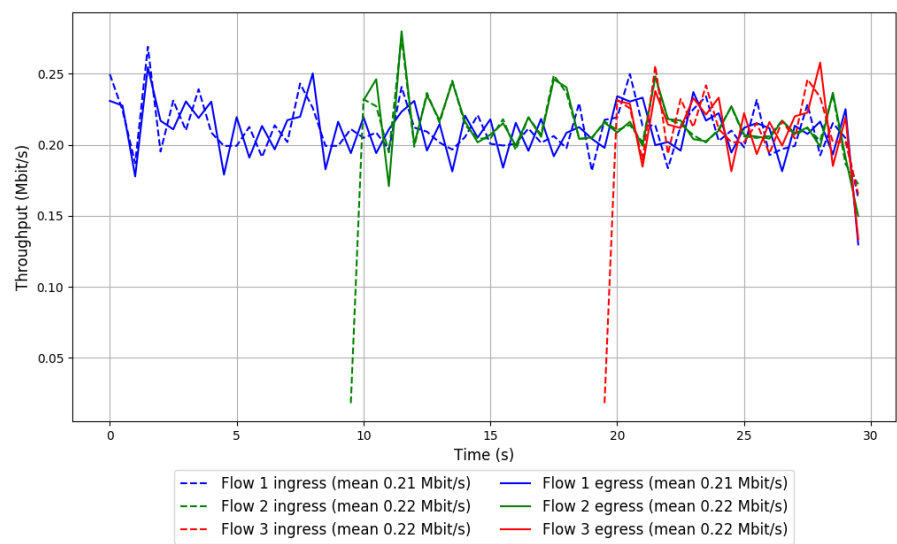
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.715 ms

Loss rate: 1.11%

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SReAM

Start at: 2017-08-12 08:24:02

End at: 2017-08-12 08:24:32

Below is generated by plot.py at 2017-08-12 11:37:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.827 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.843 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.547 ms

Loss rate: 0.43%

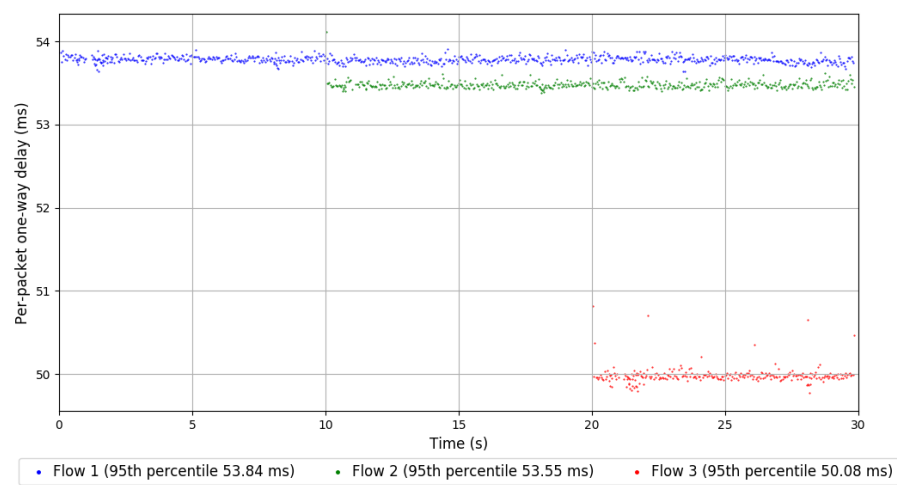
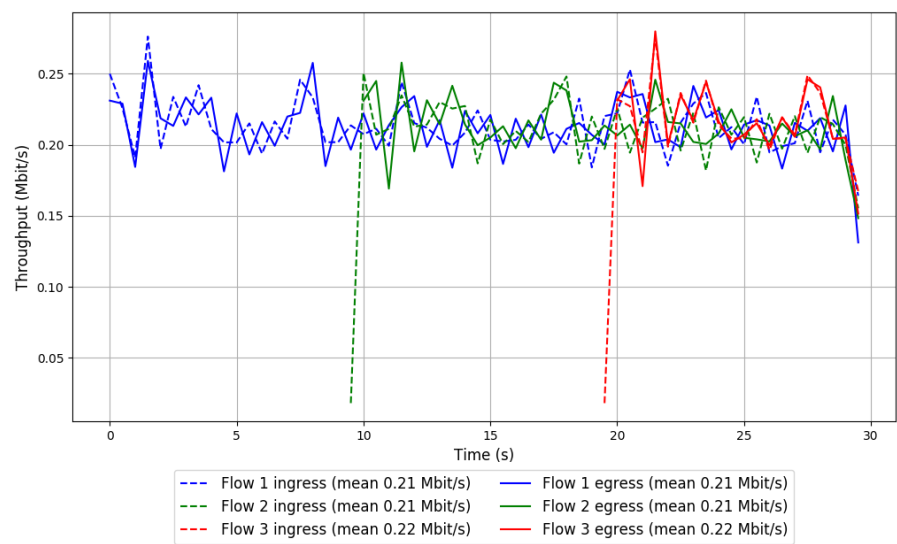
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.075 ms

Loss rate: 0.74%

Run 9: Report of SReAM — Data Link

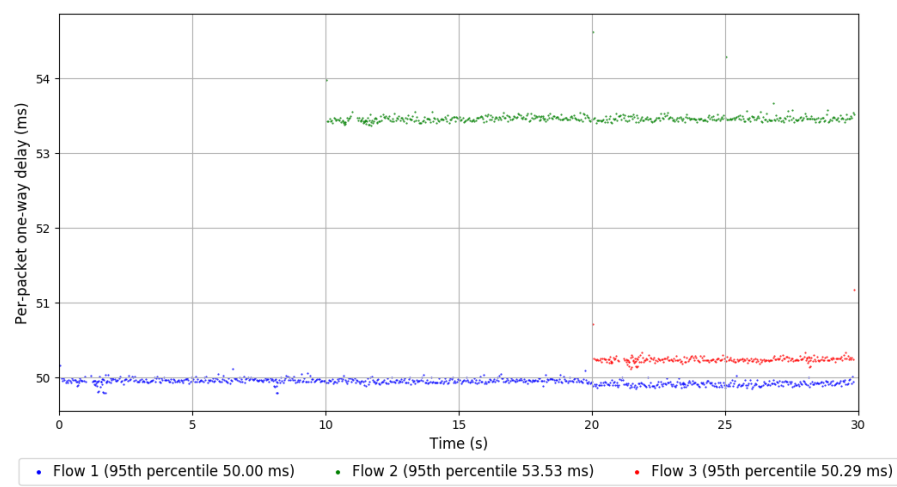
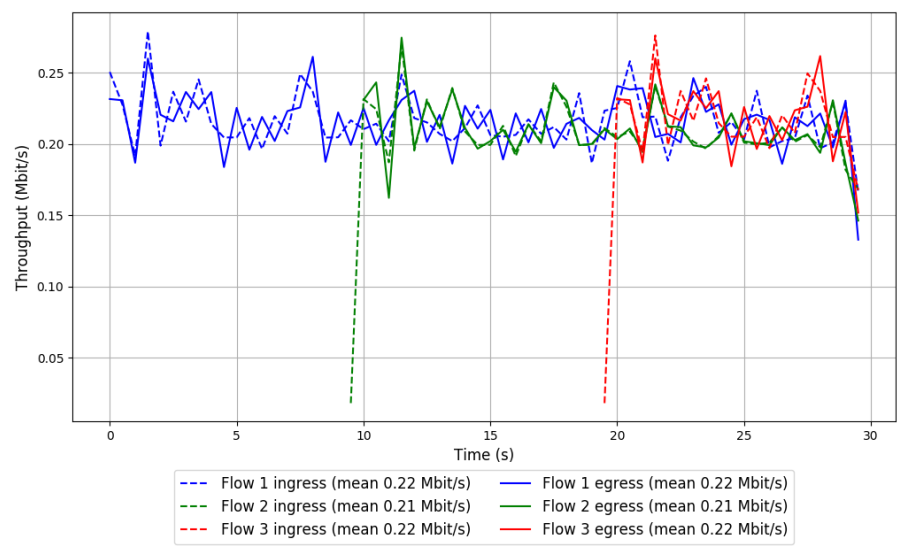


```
Run 10: Statistics of SReAM

Start at: 2017-08-12 08:35:14
End at: 2017-08-12 08:35:44

# Below is generated by plot.py at 2017-08-12 11:37:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.498 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.000 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.527 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.290 ms
Loss rate: 0.74%
```

Run 10: Report of SReAM — Data Link



Run 1: Statistics of Sprout

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

End at: 2017-08-12 06:51:36

Below is generated by plot.py at 2017-08-12 11:37:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.71 Mbit/s

95th percentile per-packet one-way delay: 53.836 ms

Loss rate: 15.65%

-- Flow 1:

Average throughput: 3.73 Mbit/s

95th percentile per-packet one-way delay: 53.345 ms

Loss rate: 20.51%

-- Flow 2:

Average throughput: 2.28 Mbit/s

95th percentile per-packet one-way delay: 53.976 ms

Loss rate: 21.79%

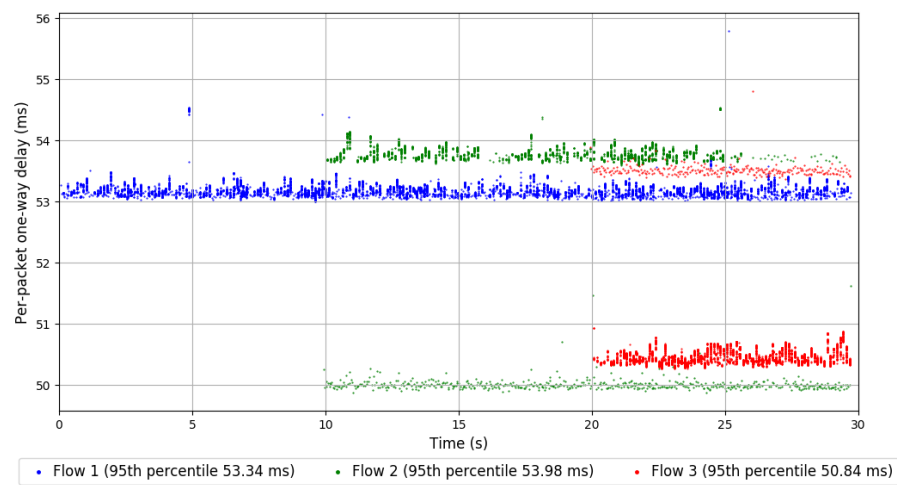
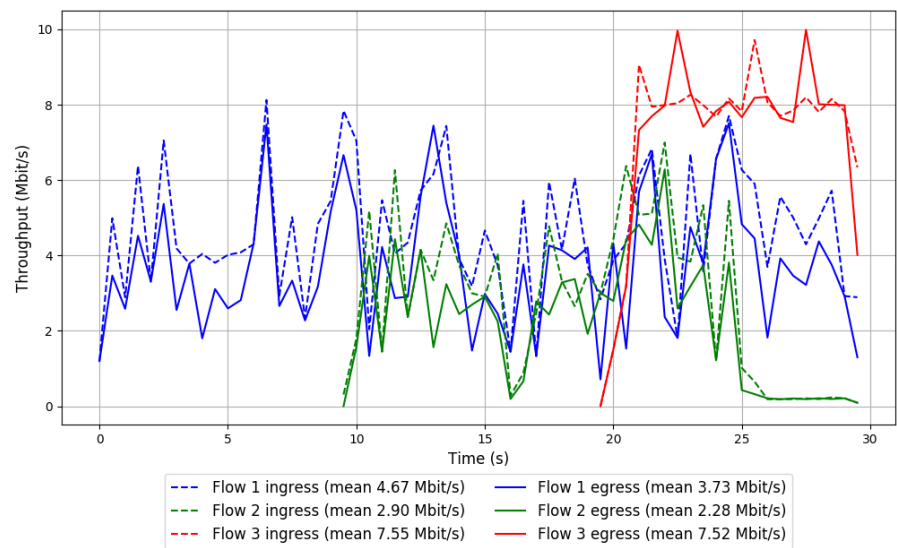
-- Flow 3:

Average throughput: 7.52 Mbit/s

95th percentile per-packet one-way delay: 50.842 ms

Loss rate: 1.84%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2017-08-12 07:01:46

End at: 2017-08-12 07:02:16

Below is generated by plot.py at 2017-08-12 11:37:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.64 Mbit/s

95th percentile per-packet one-way delay: 54.134 ms

Loss rate: 19.43%

-- Flow 1:

Average throughput: 3.54 Mbit/s

95th percentile per-packet one-way delay: 54.128 ms

Loss rate: 18.24%

-- Flow 2:

Average throughput: 3.40 Mbit/s

95th percentile per-packet one-way delay: 54.170 ms

Loss rate: 21.39%

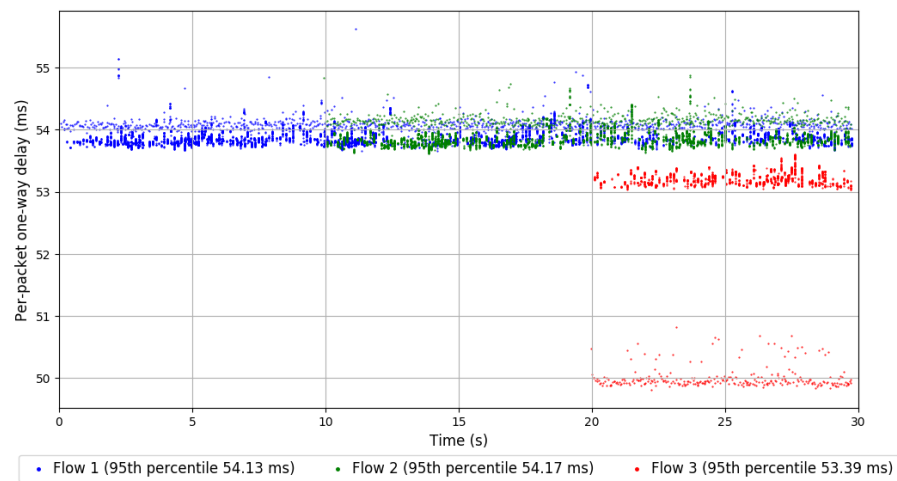
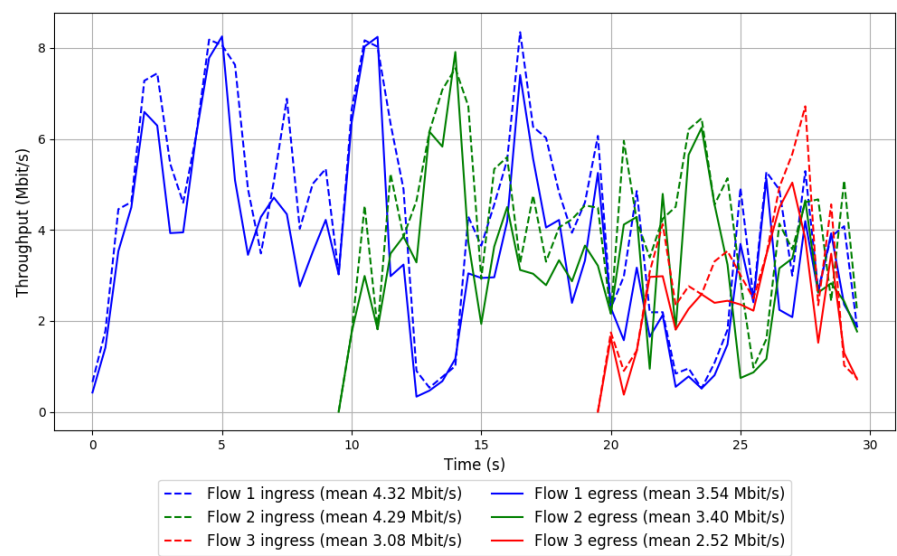
-- Flow 3:

Average throughput: 2.52 Mbit/s

95th percentile per-packet one-way delay: 53.387 ms

Loss rate: 18.96%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2017-08-12 07:13:14

End at: 2017-08-12 07:13:44

Below is generated by plot.py at 2017-08-12 11:37:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.15 Mbit/s

95th percentile per-packet one-way delay: 53.225 ms

Loss rate: 4.62%

-- Flow 1:

Average throughput: 7.75 Mbit/s

95th percentile per-packet one-way delay: 50.825 ms

Loss rate: 0.96%

-- Flow 2:

Average throughput: 2.91 Mbit/s

95th percentile per-packet one-way delay: 53.372 ms

Loss rate: 19.82%

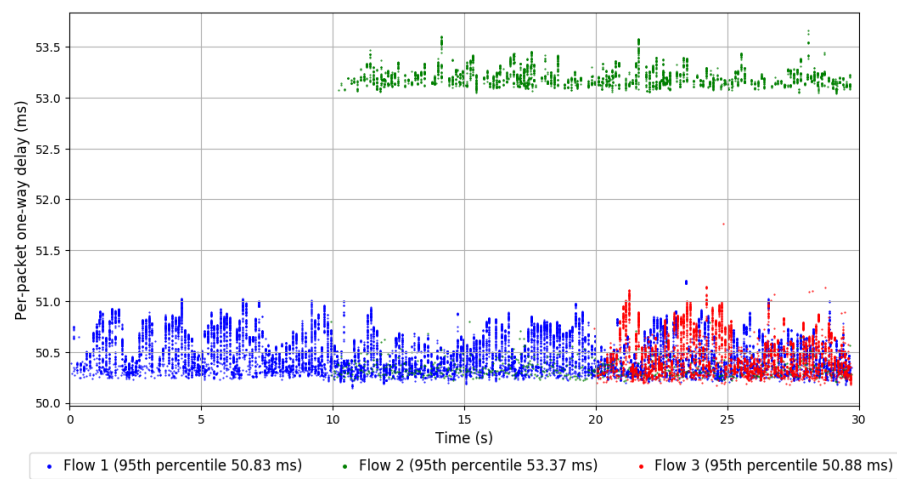
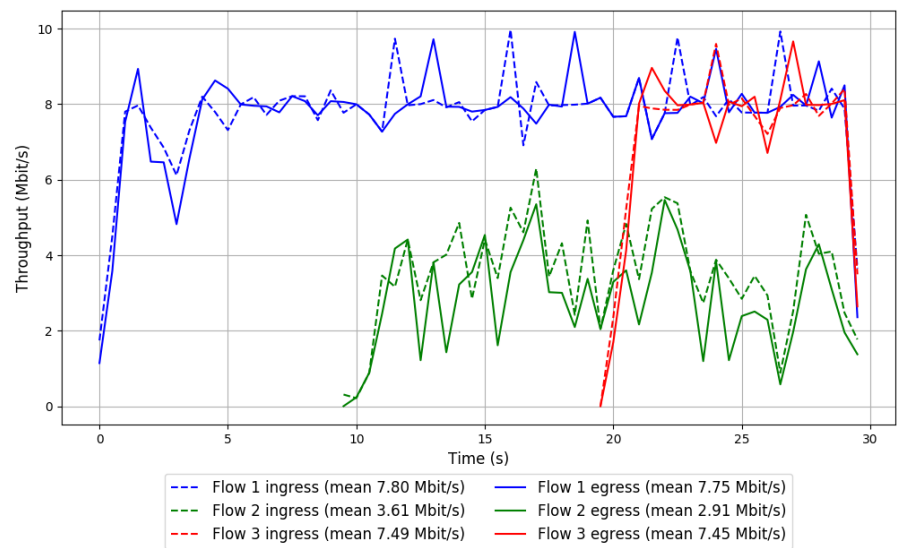
-- Flow 3:

Average throughput: 7.45 Mbit/s

95th percentile per-packet one-way delay: 50.881 ms

Loss rate: 1.35%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2017-08-12 07:24:59

End at: 2017-08-12 07:25:29

Below is generated by plot.py at 2017-08-12 11:37:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.75 Mbit/s

95th percentile per-packet one-way delay: 53.327 ms

Loss rate: 4.78%

-- Flow 1:

Average throughput: 7.79 Mbit/s

95th percentile per-packet one-way delay: 51.967 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 3.74 Mbit/s

95th percentile per-packet one-way delay: 54.076 ms

Loss rate: 18.31%

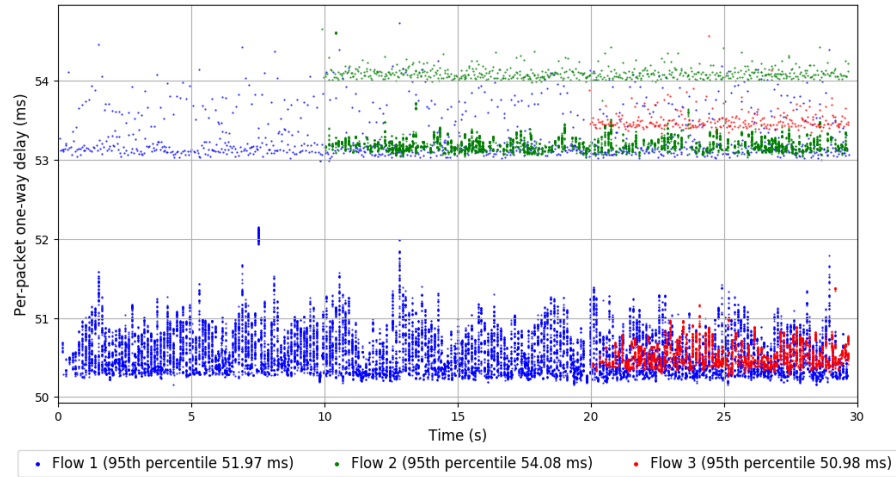
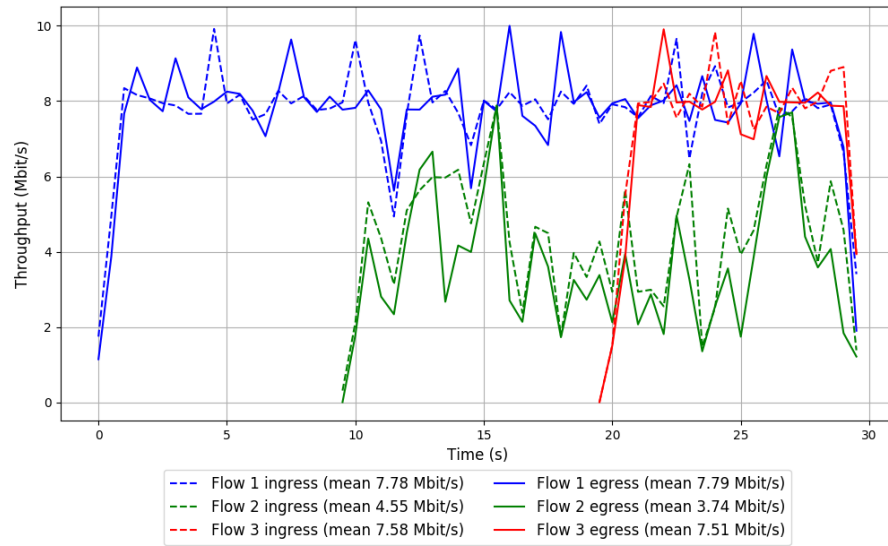
-- Flow 3:

Average throughput: 7.51 Mbit/s

95th percentile per-packet one-way delay: 50.981 ms

Loss rate: 2.16%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2017-08-12 07:36:23

End at: 2017-08-12 07:36:53

Below is generated by plot.py at 2017-08-12 11:37:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.81 Mbit/s

95th percentile per-packet one-way delay: 53.326 ms

Loss rate: 4.30%

-- Flow 1:

Average throughput: 7.79 Mbit/s

95th percentile per-packet one-way delay: 50.778 ms

Loss rate: 0.27%

-- Flow 2:

Average throughput: 3.91 Mbit/s

95th percentile per-packet one-way delay: 53.726 ms

Loss rate: 17.30%

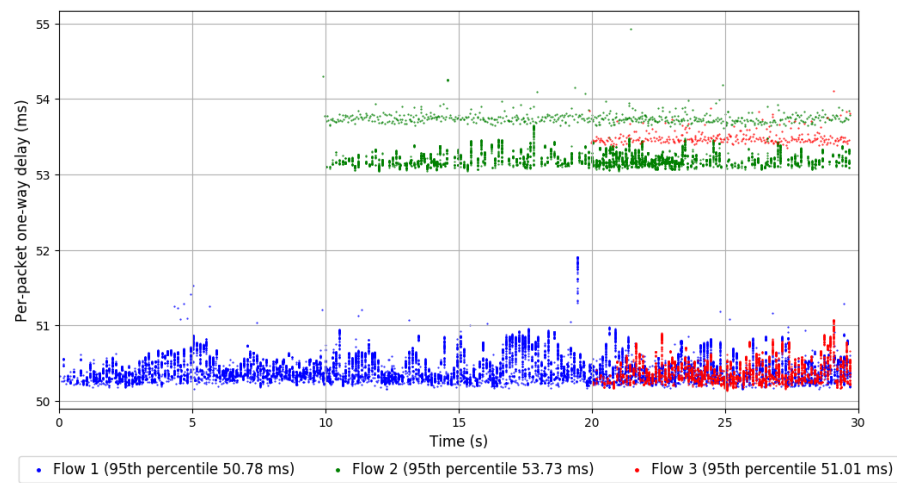
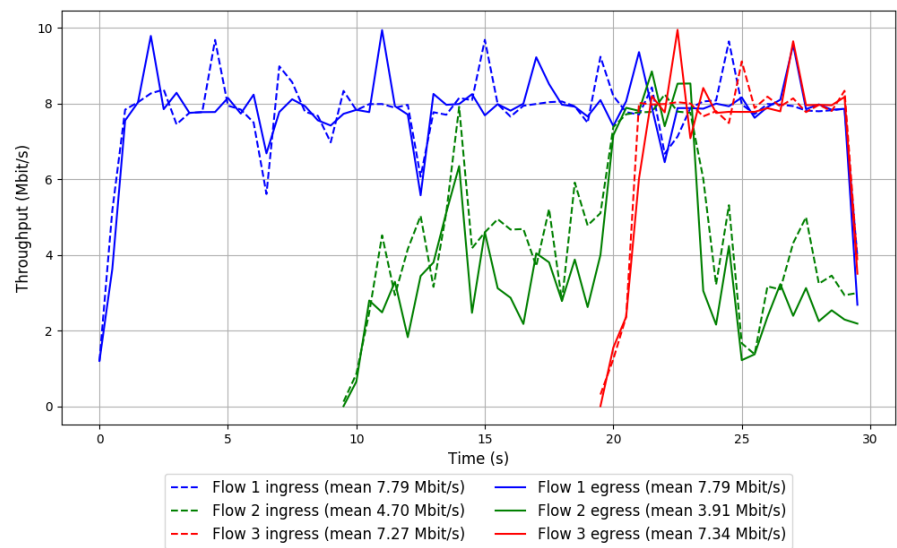
-- Flow 3:

Average throughput: 7.34 Mbit/s

95th percentile per-packet one-way delay: 51.006 ms

Loss rate: 0.36%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

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

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

Below is generated by plot.py at 2017-08-12 11:37:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.50 Mbit/s

95th percentile per-packet one-way delay: 50.981 ms

Loss rate: 0.78%

-- Flow 1:

Average throughput: 7.79 Mbit/s

95th percentile per-packet one-way delay: 51.349 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 7.84 Mbit/s

95th percentile per-packet one-way delay: 50.592 ms

Loss rate: 1.13%

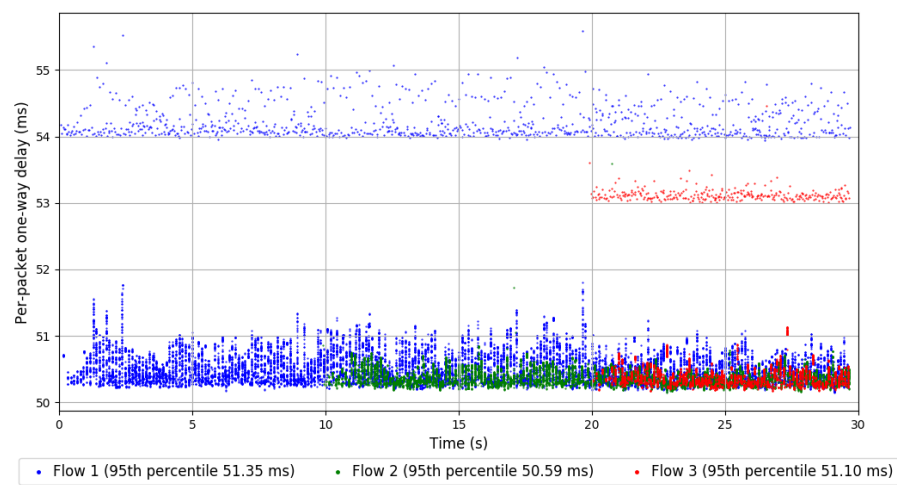
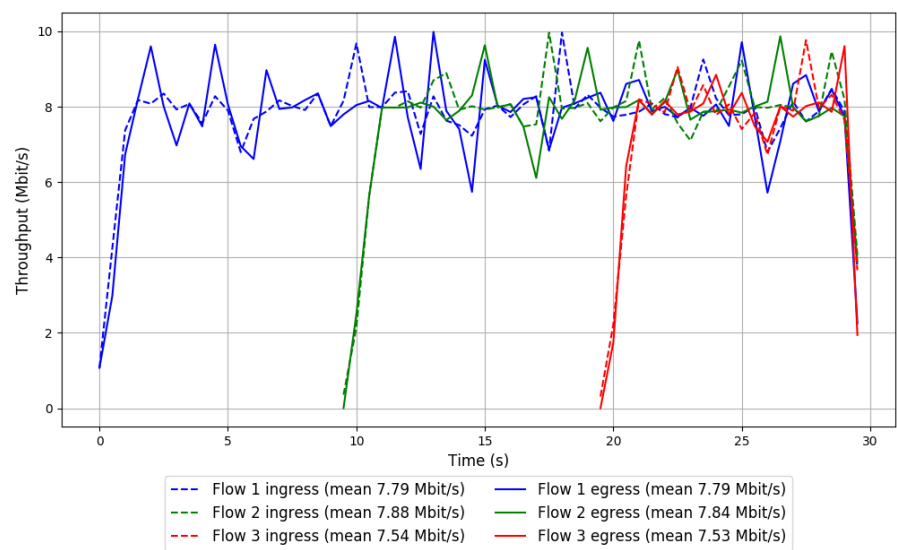
-- Flow 3:

Average throughput: 7.53 Mbit/s

95th percentile per-packet one-way delay: 51.102 ms

Loss rate: 1.33%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2017-08-12 07:59:11

End at: 2017-08-12 07:59:41

Below is generated by plot.py at 2017-08-12 11:37:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.67 Mbit/s

95th percentile per-packet one-way delay: 54.243 ms

Loss rate: 19.93%

-- Flow 1:

Average throughput: 3.17 Mbit/s

95th percentile per-packet one-way delay: 53.374 ms

Loss rate: 21.09%

-- Flow 2:

Average throughput: 2.91 Mbit/s

95th percentile per-packet one-way delay: 54.312 ms

Loss rate: 17.63%

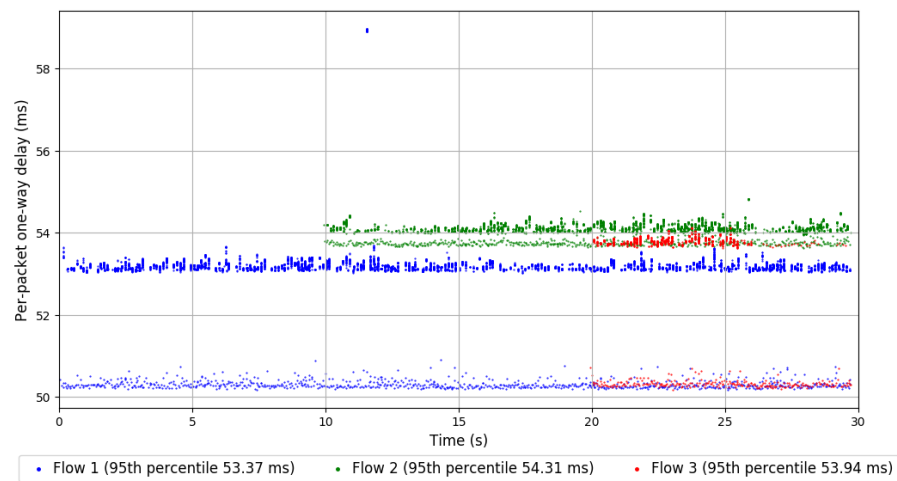
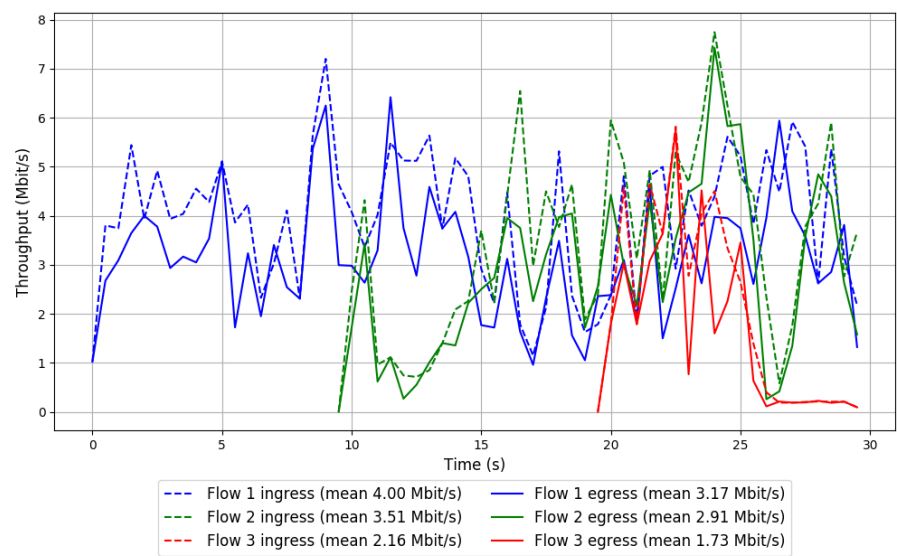
-- Flow 3:

Average throughput: 1.73 Mbit/s

95th percentile per-packet one-way delay: 53.936 ms

Loss rate: 20.96%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

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

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

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.07 Mbit/s

95th percentile per-packet one-way delay: 53.898 ms

Loss rate: 18.88%

-- Flow 1:

Average throughput: 4.03 Mbit/s

95th percentile per-packet one-way delay: 53.433 ms

Loss rate: 18.18%

-- Flow 2:

Average throughput: 2.30 Mbit/s

95th percentile per-packet one-way delay: 53.977 ms

Loss rate: 18.91%

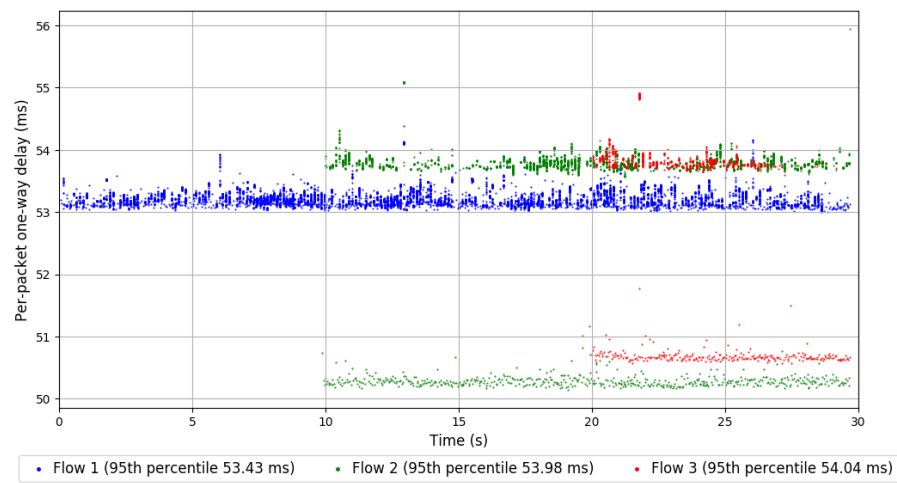
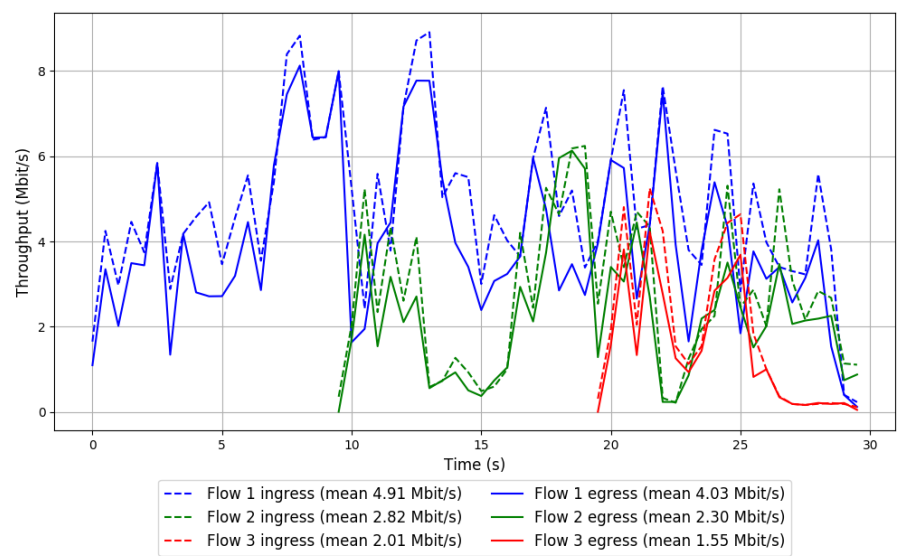
-- Flow 3:

Average throughput: 1.55 Mbit/s

95th percentile per-packet one-way delay: 54.040 ms

Loss rate: 23.89%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2017-08-12 08:21:18

End at: 2017-08-12 08:21:48

Below is generated by plot.py at 2017-08-12 11:37:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.36 Mbit/s

95th percentile per-packet one-way delay: 54.194 ms

Loss rate: 15.29%

-- Flow 1:

Average throughput: 3.70 Mbit/s

95th percentile per-packet one-way delay: 54.047 ms

Loss rate: 20.00%

-- Flow 2:

Average throughput: 3.39 Mbit/s

95th percentile per-packet one-way delay: 54.299 ms

Loss rate: 20.26%

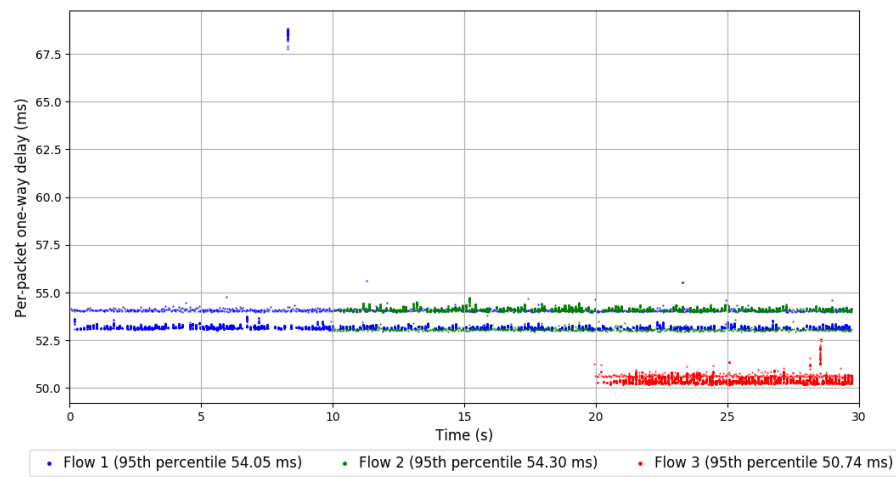
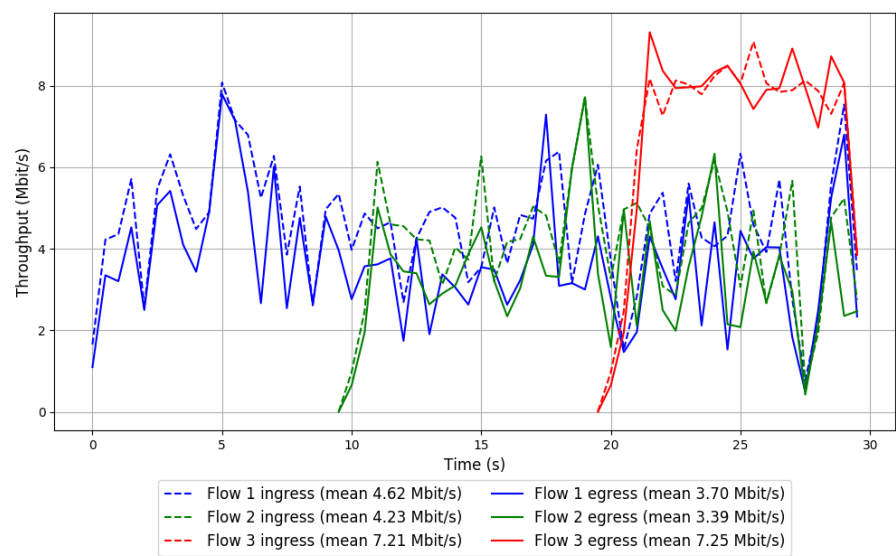
-- Flow 3:

Average throughput: 7.25 Mbit/s

95th percentile per-packet one-way delay: 50.738 ms

Loss rate: 0.32%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2017-08-12 08:32:25

End at: 2017-08-12 08:32:55

Below is generated by plot.py at 2017-08-12 11:37:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.78 Mbit/s

95th percentile per-packet one-way delay: 53.987 ms

Loss rate: 18.74%

-- Flow 1:

Average throughput: 3.78 Mbit/s

95th percentile per-packet one-way delay: 54.029 ms

Loss rate: 21.38%

-- Flow 2:

Average throughput: 4.20 Mbit/s

95th percentile per-packet one-way delay: 53.942 ms

Loss rate: 16.55%

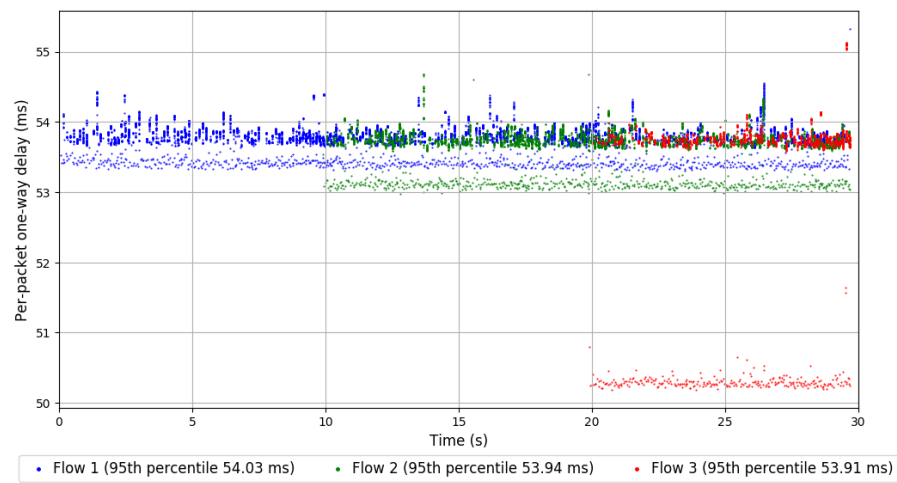
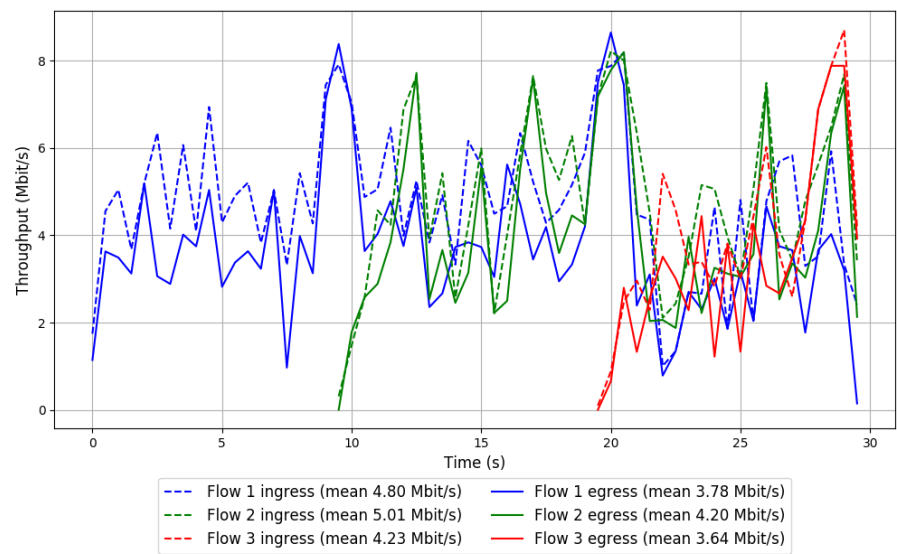
-- Flow 3:

Average throughput: 3.64 Mbit/s

95th percentile per-packet one-way delay: 53.913 ms

Loss rate: 14.99%

Run 10: Report of Sprout — Data Link

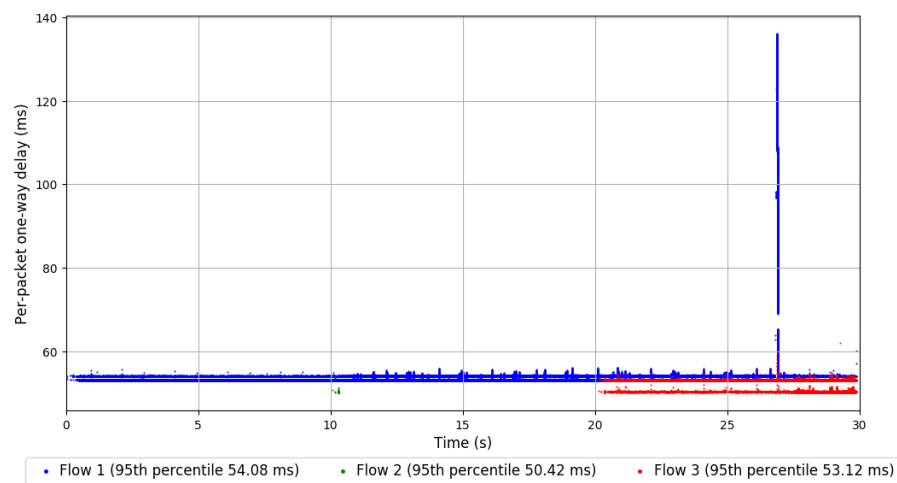
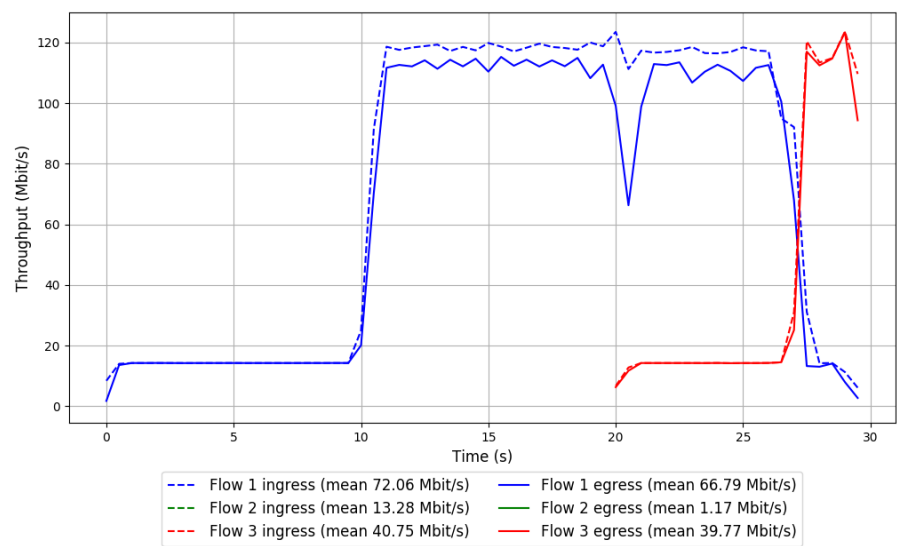


```
Run 1: Statistics of TaoVA-100x

Start at: 2017-08-12 06:51:46
End at: 2017-08-12 06:52:16

# Below is generated by plot.py at 2017-08-12 11:38:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.79 Mbit/s
95th percentile per-packet one-way delay: 54.070 ms
Loss rate: 7.08%
-- Flow 1:
Average throughput: 66.79 Mbit/s
95th percentile per-packet one-way delay: 54.078 ms
Loss rate: 7.64%
-- Flow 2:
Average throughput: 1.17 Mbit/s
95th percentile per-packet one-way delay: 50.420 ms
Loss rate: 91.17%
-- Flow 3:
Average throughput: 39.77 Mbit/s
95th percentile per-packet one-way delay: 53.122 ms
Loss rate: 3.42%
```

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

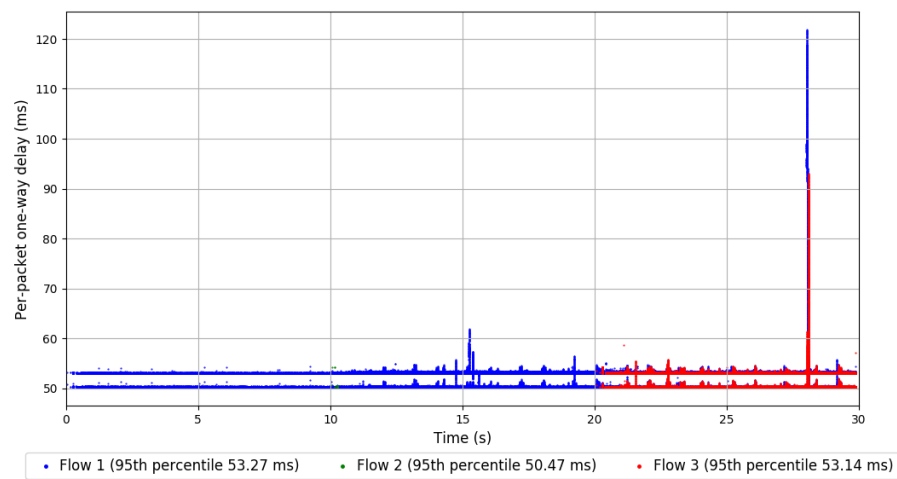
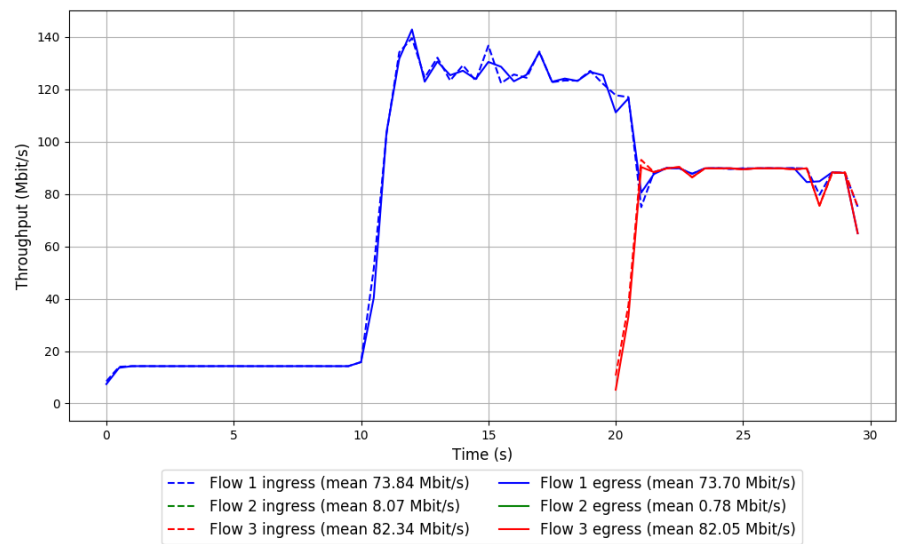


```
Run 2: Statistics of TaoVA-100x

Start at: 2017-08-12 07:02:27
End at: 2017-08-12 07:02:57

# Below is generated by plot.py at 2017-08-12 11:38:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 100.65 Mbit/s
95th percentile per-packet one-way delay: 53.248 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 73.70 Mbit/s
95th percentile per-packet one-way delay: 53.269 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 0.78 Mbit/s
95th percentile per-packet one-way delay: 50.466 ms
Loss rate: 90.31%
-- Flow 3:
Average throughput: 82.05 Mbit/s
95th percentile per-packet one-way delay: 53.140 ms
Loss rate: 1.40%
```

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

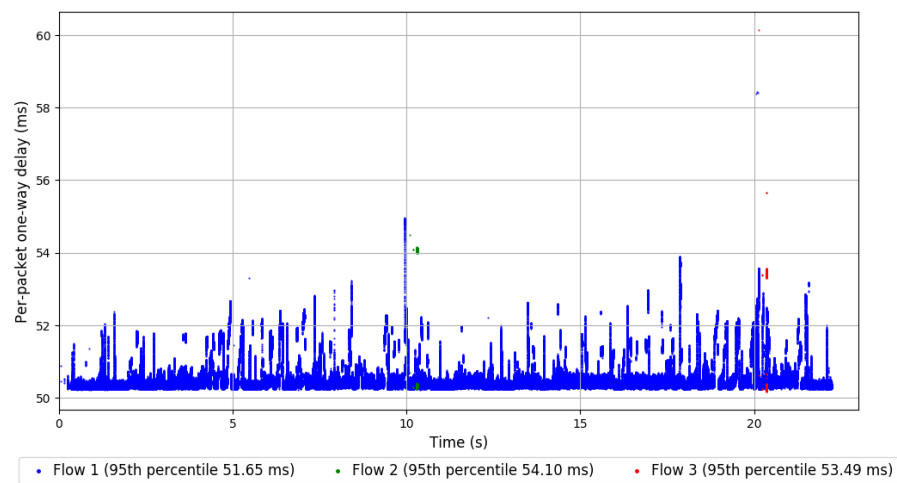
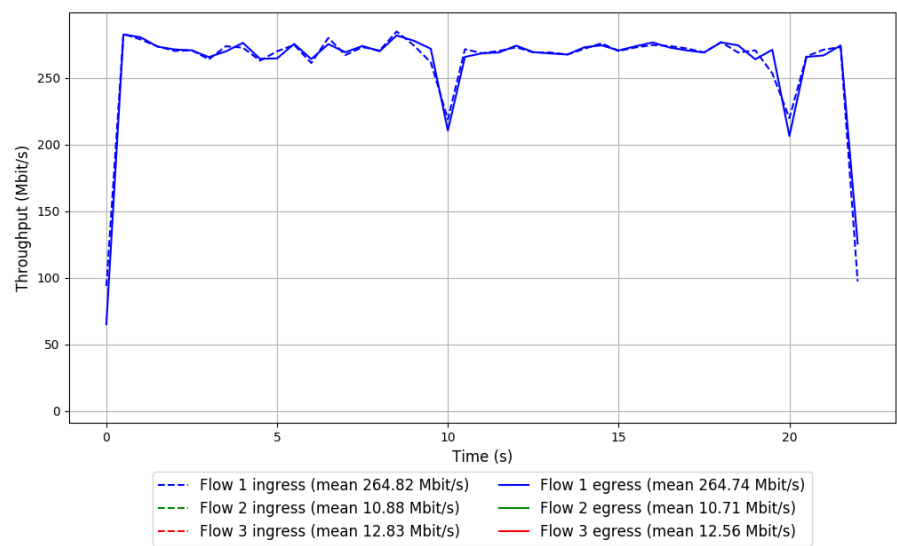


Run 3: Statistics of TaoVA-100x

Start at: 2017-08-12 07:13:54

End at: 2017-08-12 07:14:24

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

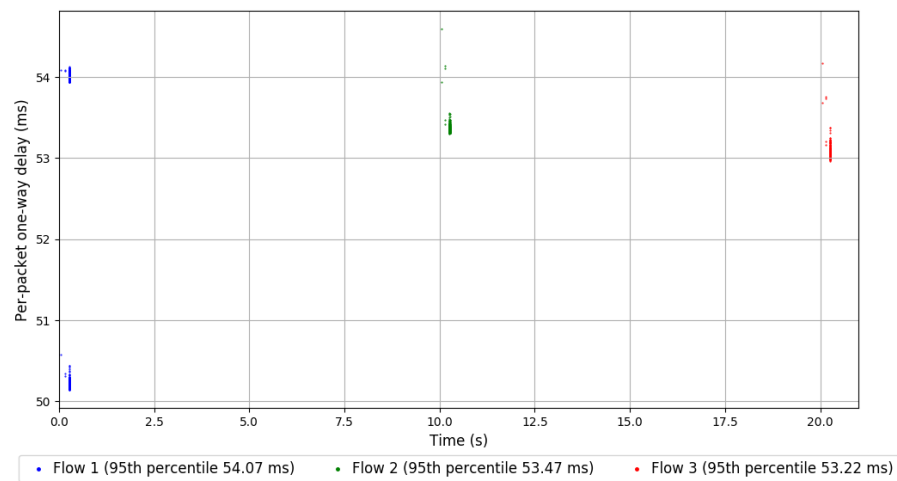
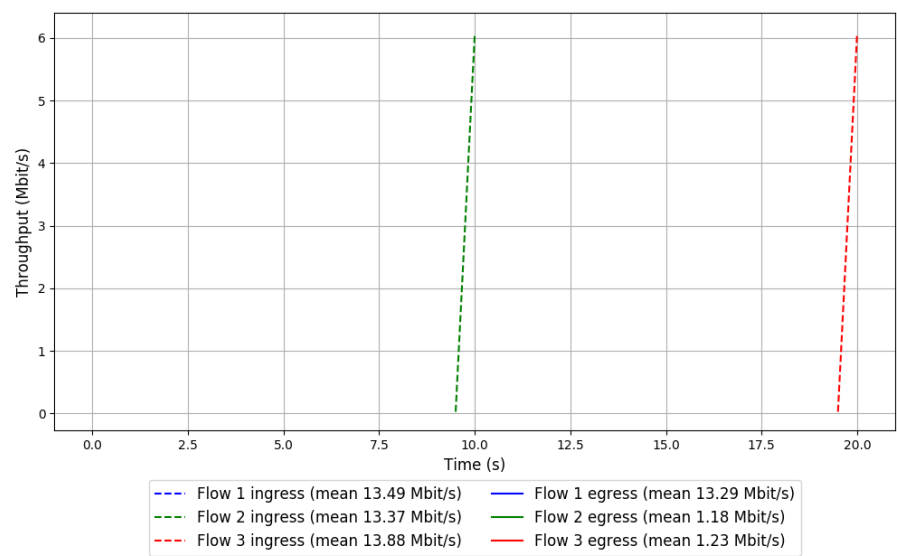


Run 4: Statistics of TaoVA-100x

Start at: 2017-08-12 07:25:40

End at: 2017-08-12 07:26:10

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



Run 5: Statistics of TaoVA-100x

Start at: 2017-08-12 07:37:03

End at: 2017-08-12 07:37:33

Below is generated by plot.py at 2017-08-12 11:39:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 82.90 Mbit/s

95th percentile per-packet one-way delay: 50.760 ms

Loss rate: 1.33%

-- Flow 1:

Average throughput: 1.22 Mbit/s

95th percentile per-packet one-way delay: 53.145 ms

Loss rate: 91.17%

-- Flow 2:

Average throughput: 1.20 Mbit/s

95th percentile per-packet one-way delay: 50.027 ms

Loss rate: 91.17%

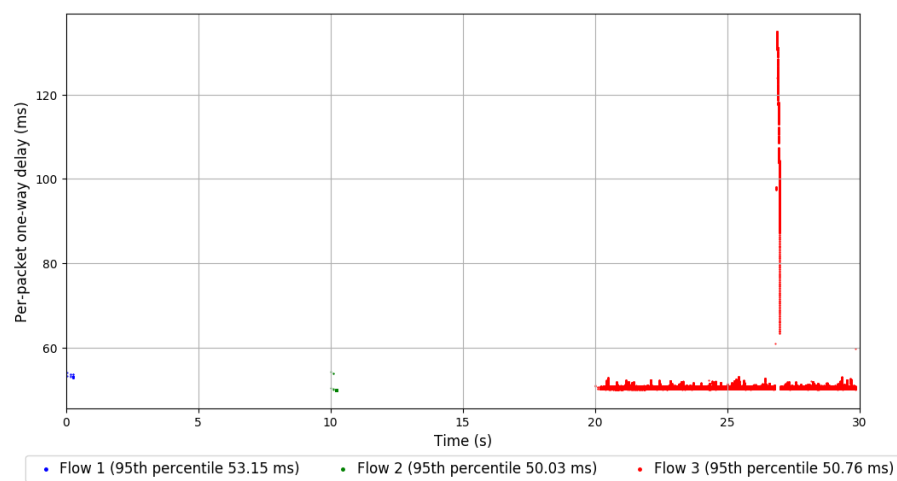
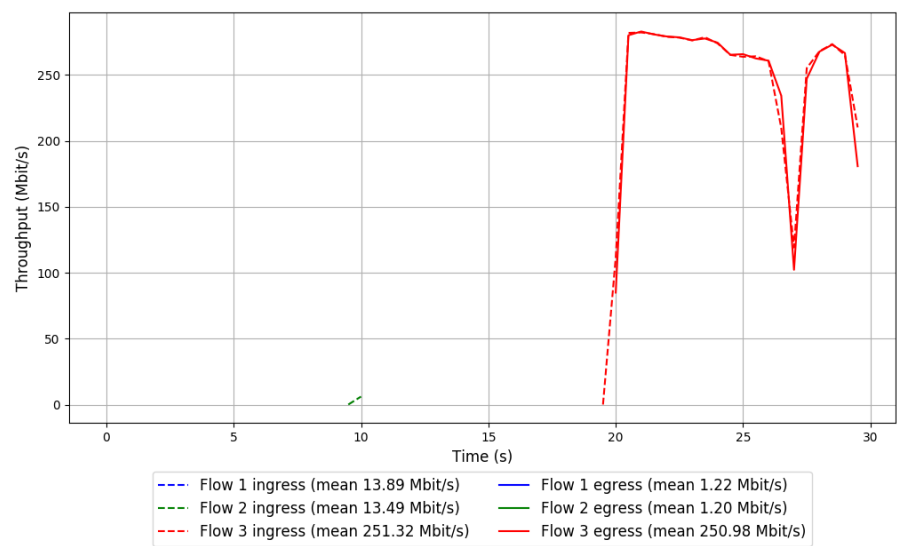
-- Flow 3:

Average throughput: 250.98 Mbit/s

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

Loss rate: 1.11%

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



Run 6: Statistics of TaoVA-100x

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

End at: 2017-08-12 07:48:49

Below is generated by plot.py at 2017-08-12 11:40:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 209.87 Mbit/s

95th percentile per-packet one-way delay: 53.311 ms

Loss rate: 0.36%

-- Flow 1:

Average throughput: 140.51 Mbit/s

95th percentile per-packet one-way delay: 50.863 ms

Loss rate: 0.22%

-- Flow 2:

Average throughput: 75.75 Mbit/s

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

Loss rate: 0.40%

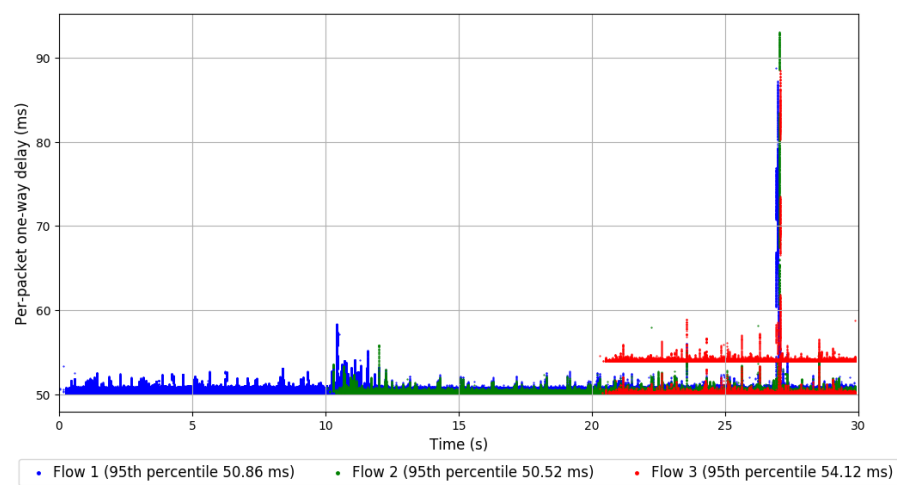
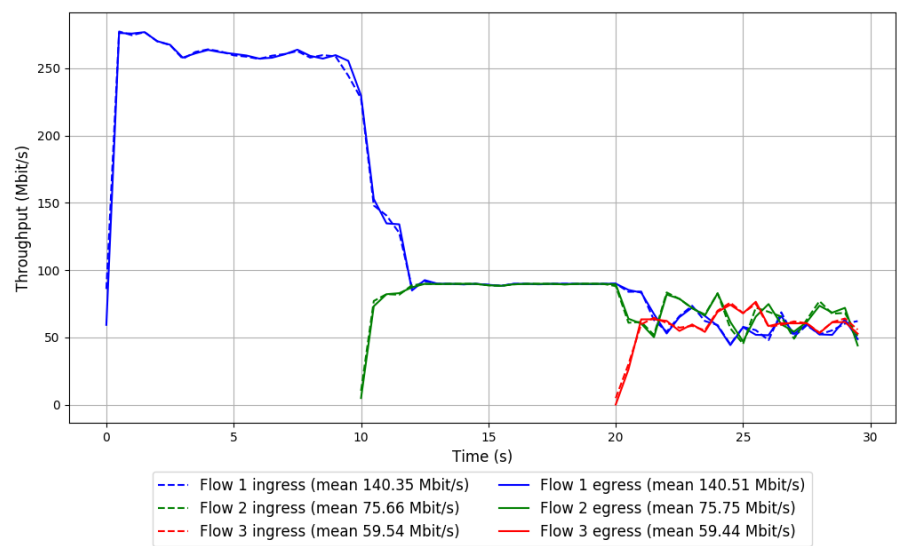
-- Flow 3:

Average throughput: 59.44 Mbit/s

95th percentile per-packet one-way delay: 54.125 ms

Loss rate: 1.22%

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

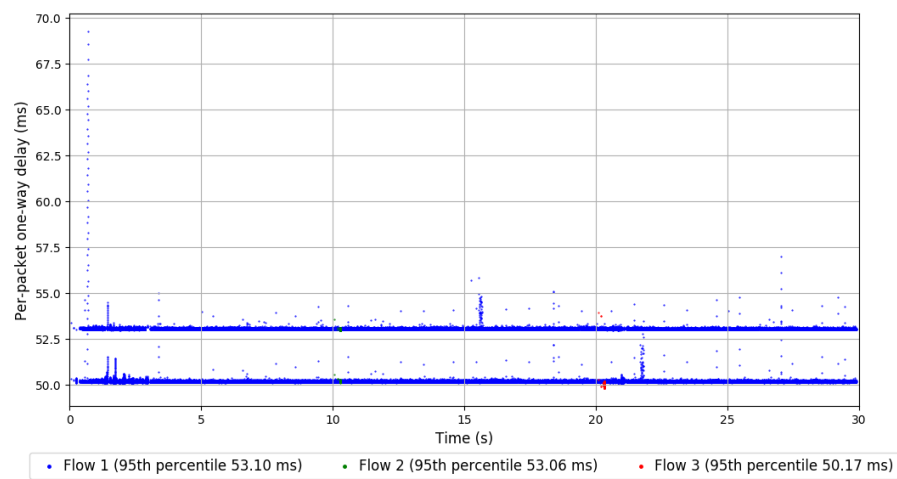
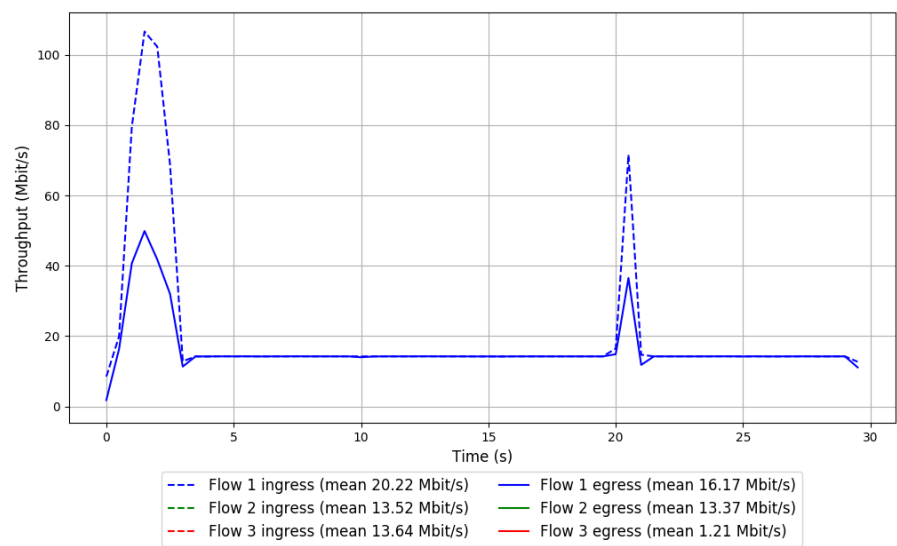


```
Run 7: Statistics of TaoVA-100x

Start at: 2017-08-12 07:59:51
End at: 2017-08-12 08:00:21

# Below is generated by plot.py at 2017-08-12 11:40:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.28 Mbit/s
95th percentile per-packet one-way delay: 53.100 ms
Loss rate: 20.57%
-- Flow 1:
Average throughput: 16.17 Mbit/s
95th percentile per-packet one-way delay: 53.100 ms
Loss rate: 20.31%
-- Flow 2:
Average throughput: 13.37 Mbit/s
95th percentile per-packet one-way delay: 53.056 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.21 Mbit/s
95th percentile per-packet one-way delay: 50.170 ms
Loss rate: 91.17%
```


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

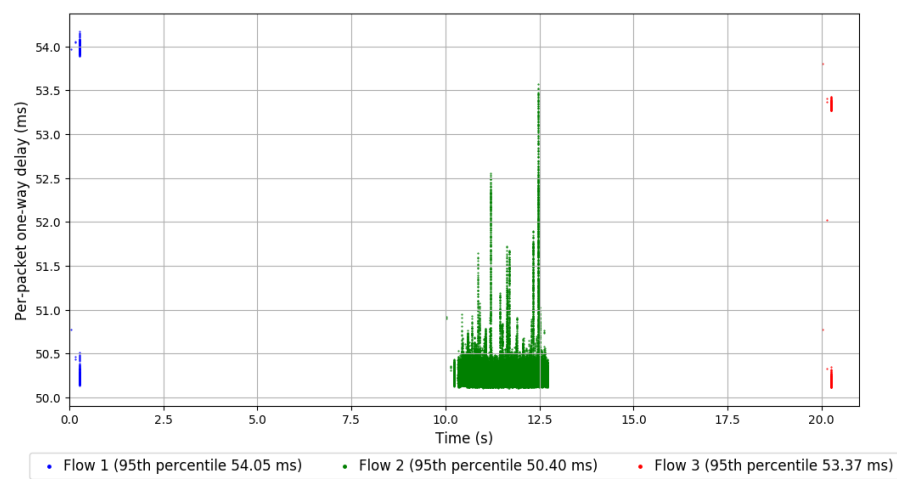
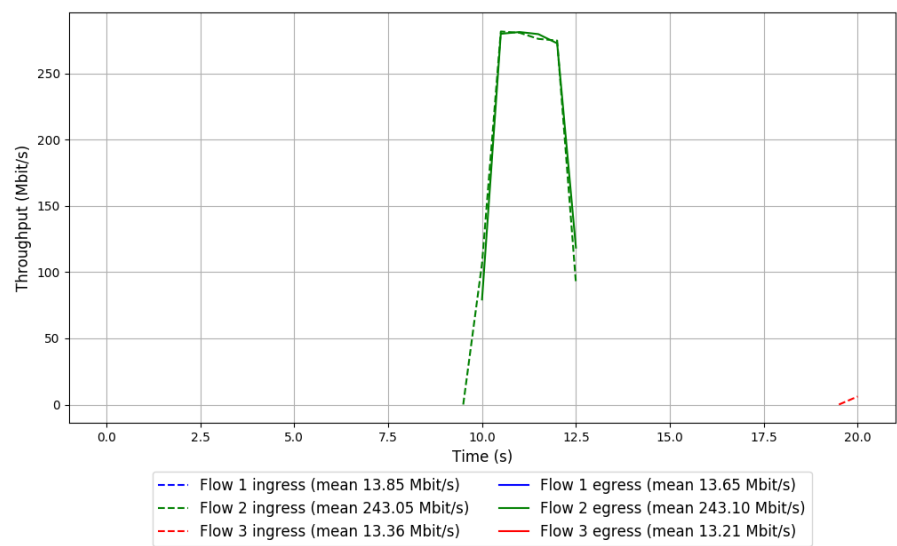


Run 8: Statistics of TaoVA-100x

Start at: 2017-08-12 08:10:43

End at: 2017-08-12 08:11:13

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



Run 9: Statistics of TaoVA-100x

Start at: 2017-08-12 08:21:59

End at: 2017-08-12 08:22:29

Below is generated by plot.py at 2017-08-12 11:40:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 14.09 Mbit/s

95th percentile per-packet one-way delay: 53.029 ms

Loss rate: 1.85%

-- Flow 1:

Average throughput: 14.07 Mbit/s

95th percentile per-packet one-way delay: 53.028 ms

Loss rate: 0.70%

-- Flow 2:

Average throughput: 0.96 Mbit/s

95th percentile per-packet one-way delay: 53.202 ms

Loss rate: 90.86%

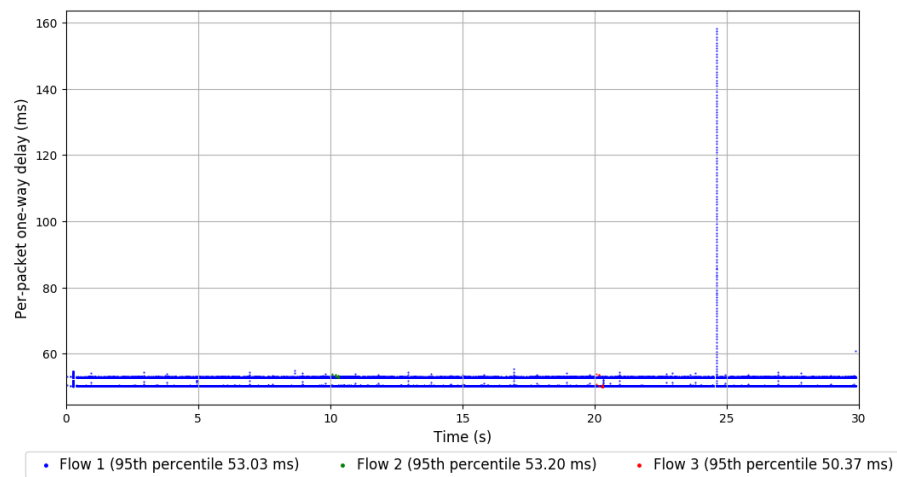
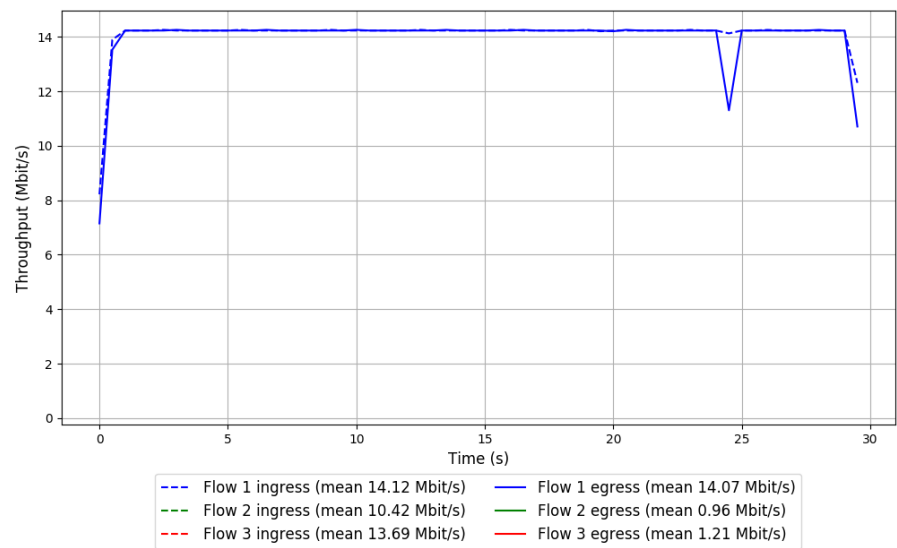
-- Flow 3:

Average throughput: 1.21 Mbit/s

95th percentile per-packet one-way delay: 50.366 ms

Loss rate: 91.17%

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

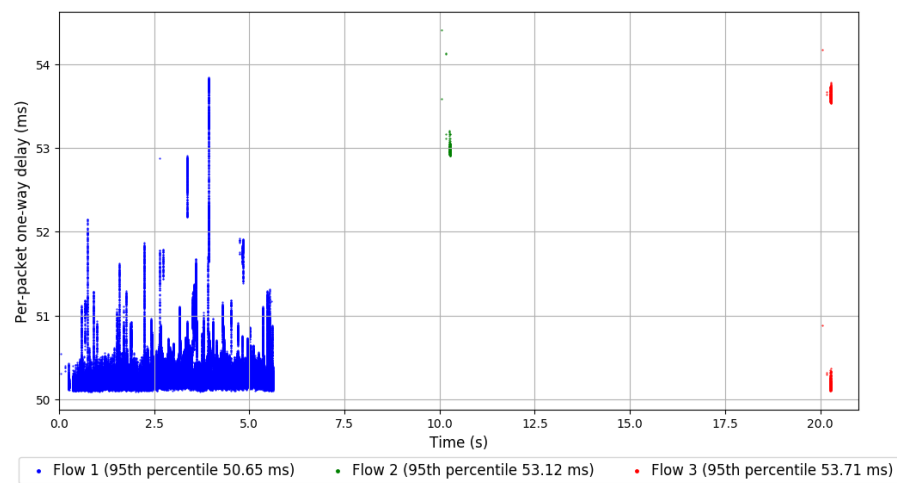
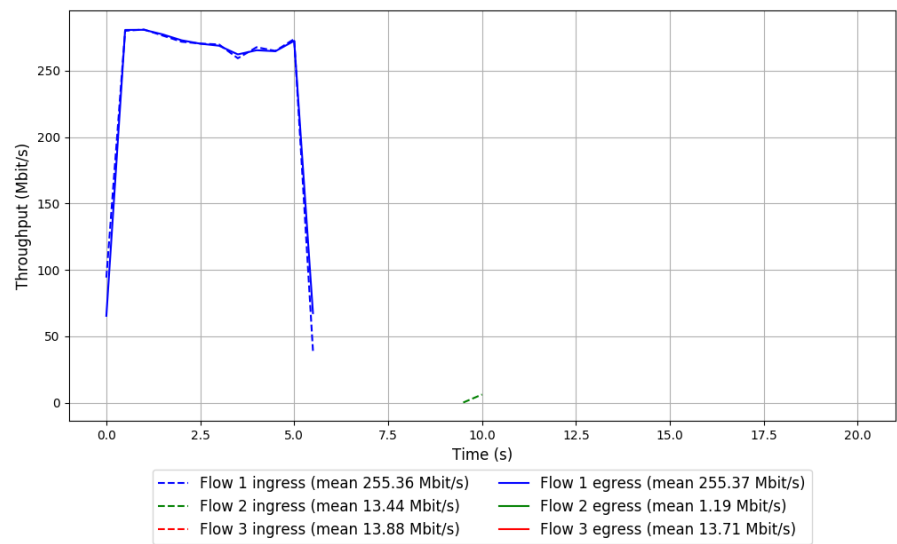


Run 10: Statistics of TaoVA-100x

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

End at: 2017-08-12 08:33:35

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



Run 1: Statistics of TCP Vegas

Start at: 2017-08-12 06:52:33

End at: 2017-08-12 06:53:03

Below is generated by plot.py at 2017-08-12 11:40:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 45.02 Mbit/s

95th percentile per-packet one-way delay: 51.006 ms

Loss rate: 0.74%

-- Flow 1:

Average throughput: 14.16 Mbit/s

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

Loss rate: 0.56%

-- Flow 2:

Average throughput: 45.50 Mbit/s

95th percentile per-packet one-way delay: 50.890 ms

Loss rate: 0.65%

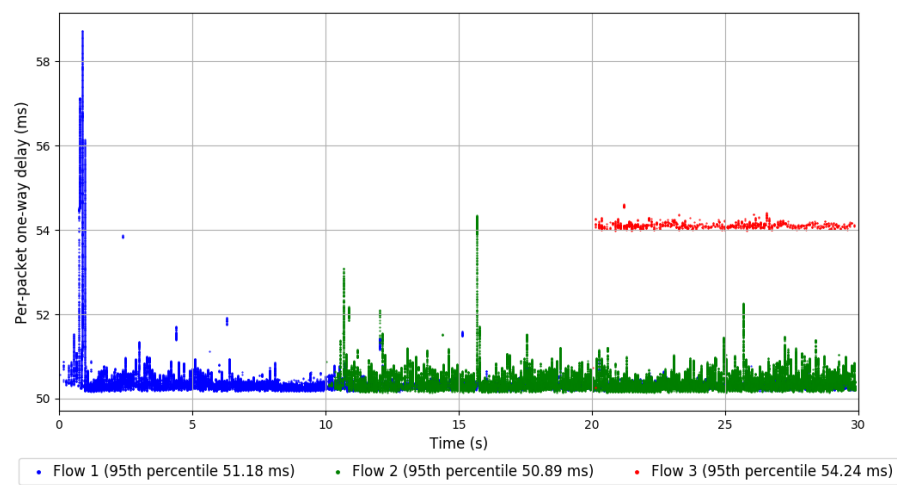
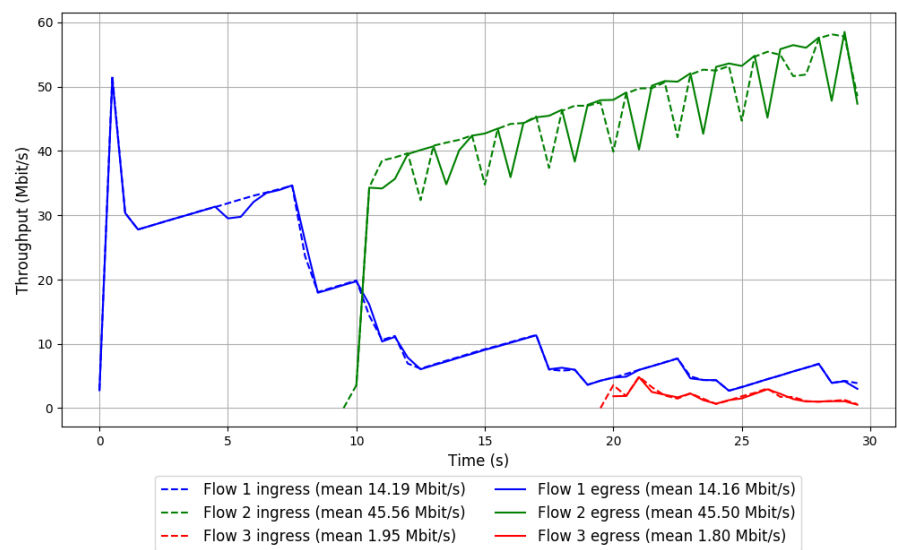
-- Flow 3:

Average throughput: 1.80 Mbit/s

95th percentile per-packet one-way delay: 54.245 ms

Loss rate: 8.27%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2017-08-12 07:03:16

End at: 2017-08-12 07:03:46

Below is generated by plot.py at 2017-08-12 11:40:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 56.01 Mbit/s

95th percentile per-packet one-way delay: 53.726 ms

Loss rate: 0.92%

-- Flow 1:

Average throughput: 3.29 Mbit/s

95th percentile per-packet one-way delay: 53.920 ms

Loss rate: 2.22%

-- Flow 2:

Average throughput: 38.45 Mbit/s

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

Loss rate: 0.86%

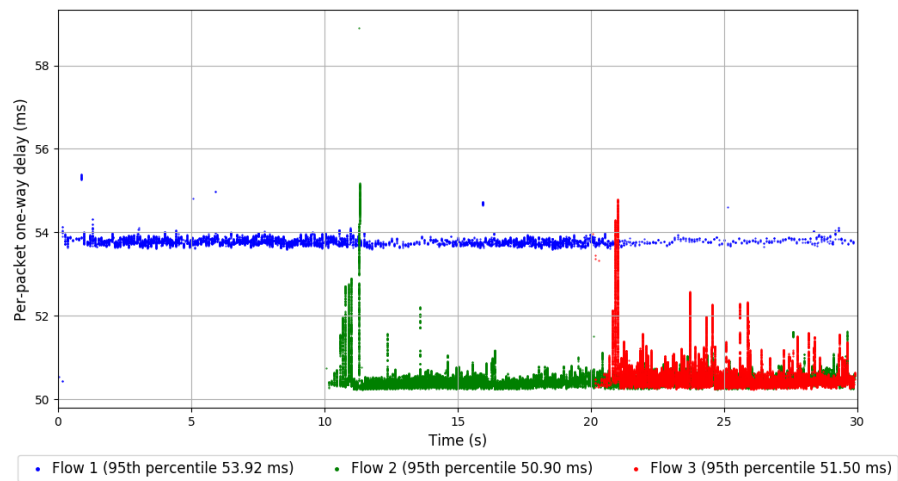
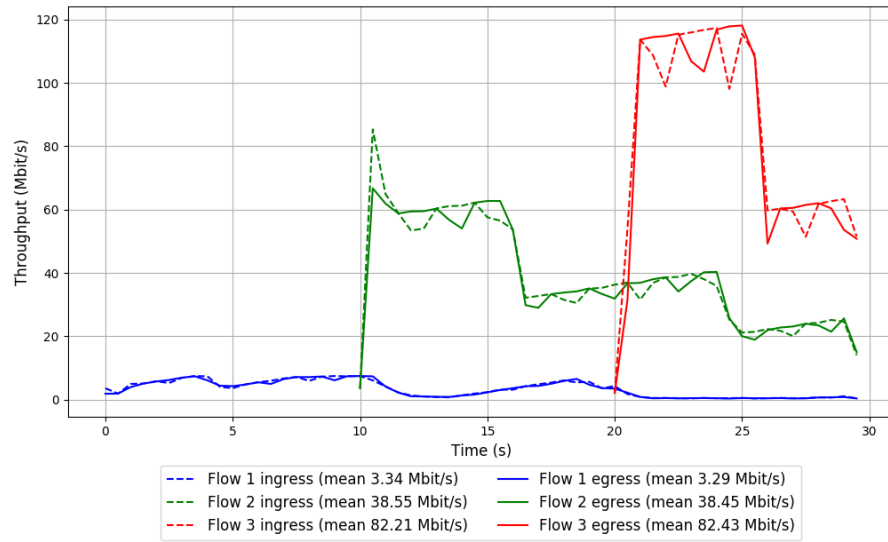
-- Flow 3:

Average throughput: 82.43 Mbit/s

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

Loss rate: 0.81%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2017-08-12 07:14:53

End at: 2017-08-12 07:15:23

Below is generated by plot.py at 2017-08-12 11:40:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 53.16 Mbit/s

95th percentile per-packet one-way delay: 50.833 ms

Loss rate: 0.86%

-- Flow 1:

Average throughput: 34.93 Mbit/s

95th percentile per-packet one-way delay: 50.723 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 0.56 Mbit/s

95th percentile per-packet one-way delay: 53.382 ms

Loss rate: 21.96%

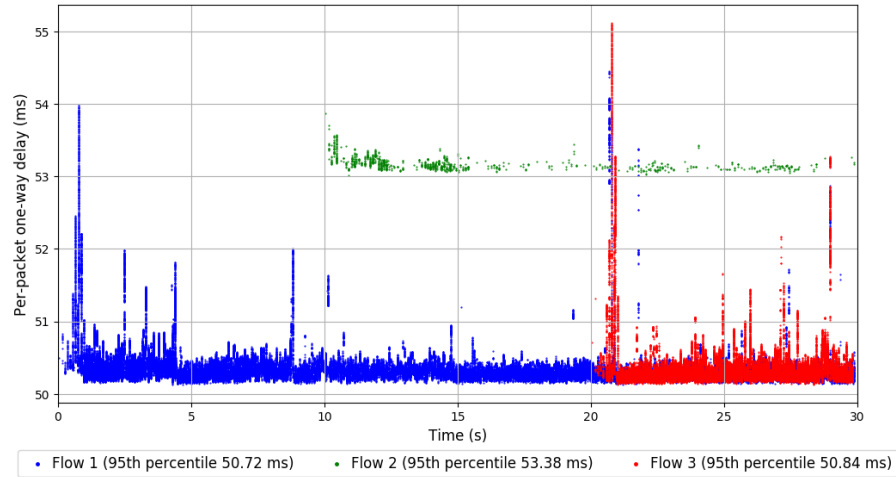
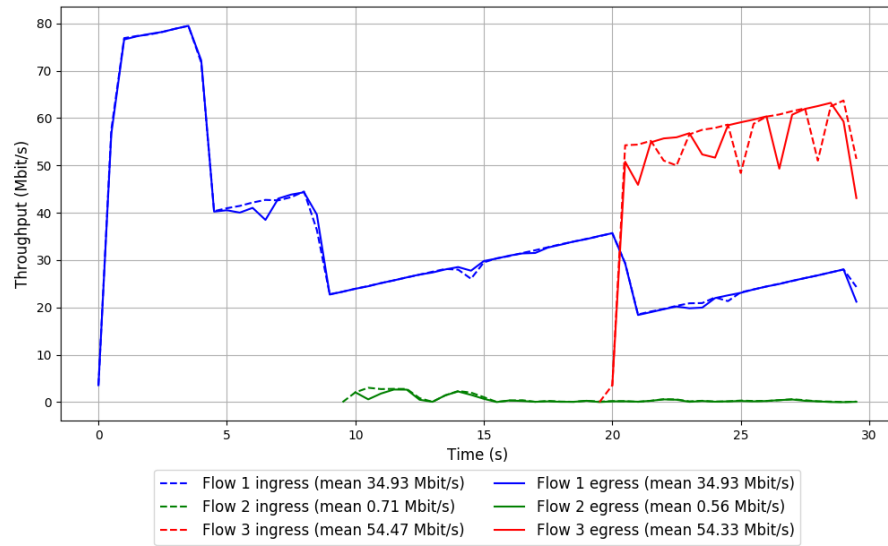
-- Flow 3:

Average throughput: 54.33 Mbit/s

95th percentile per-packet one-way delay: 50.835 ms

Loss rate: 1.31%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2017-08-12 07:26:19

End at: 2017-08-12 07:26:49

Below is generated by plot.py at 2017-08-12 11:40:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 55.88 Mbit/s

95th percentile per-packet one-way delay: 51.672 ms

Loss rate: 0.69%

-- Flow 1:

Average throughput: 39.07 Mbit/s

95th percentile per-packet one-way delay: 50.899 ms

Loss rate: 0.28%

-- Flow 2:

Average throughput: 3.04 Mbit/s

95th percentile per-packet one-way delay: 53.903 ms

Loss rate: 3.69%

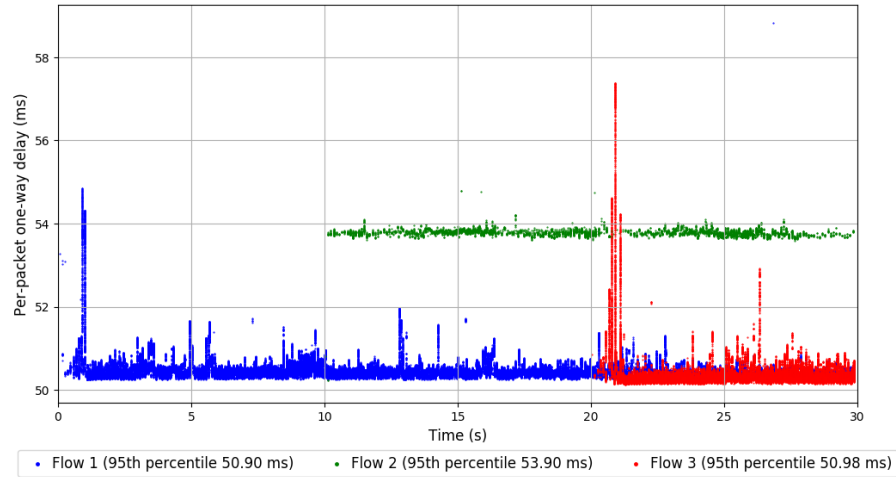
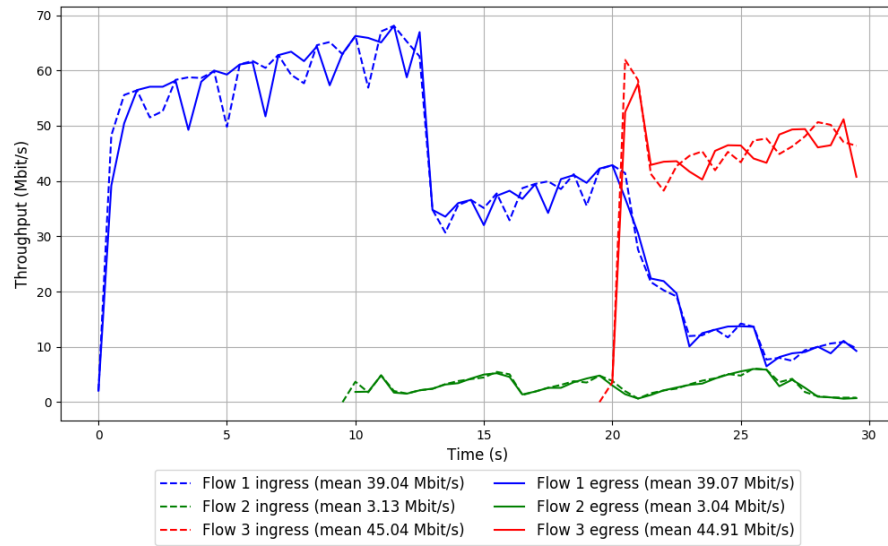
-- Flow 3:

Average throughput: 44.91 Mbit/s

95th percentile per-packet one-way delay: 50.981 ms

Loss rate: 1.34%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2017-08-12 07:37:51

End at: 2017-08-12 07:38:21

Below is generated by plot.py at 2017-08-12 11:40:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 77.80 Mbit/s

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

Loss rate: 0.39%

-- Flow 1:

Average throughput: 77.43 Mbit/s

95th percentile per-packet one-way delay: 50.677 ms

Loss rate: 0.21%

-- Flow 2:

Average throughput: 0.18 Mbit/s

95th percentile per-packet one-way delay: 54.205 ms

Loss rate: 30.27%

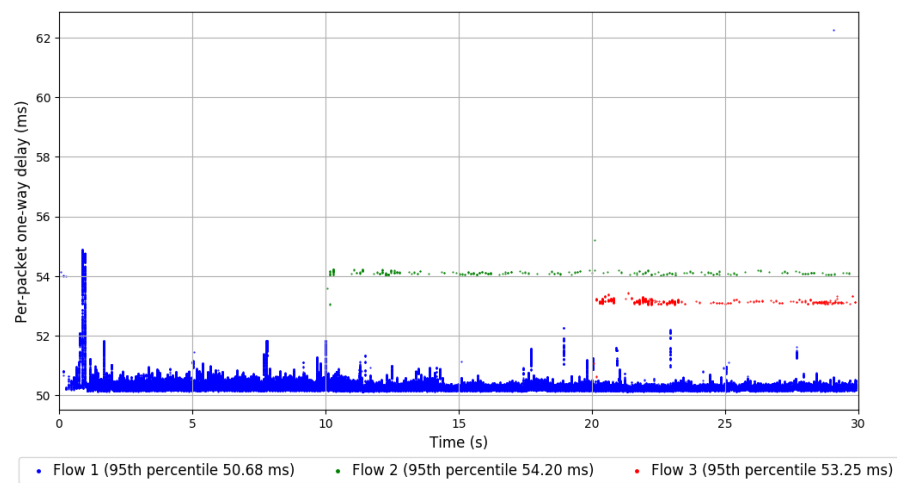
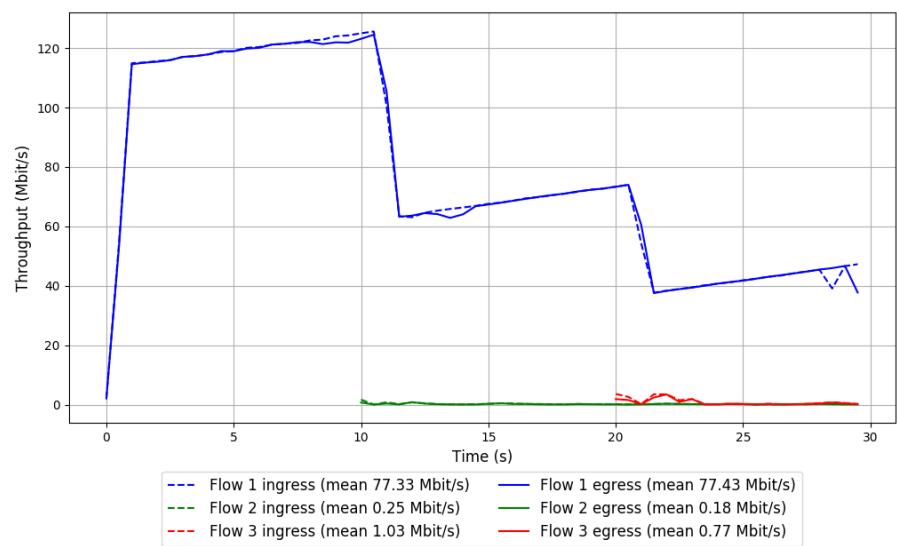
-- Flow 3:

Average throughput: 0.77 Mbit/s

95th percentile per-packet one-way delay: 53.252 ms

Loss rate: 25.79%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2017-08-12 07:49:20

End at: 2017-08-12 07:49:50

Below is generated by plot.py at 2017-08-12 11:40:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 60.51 Mbit/s

95th percentile per-packet one-way delay: 51.567 ms

Loss rate: 0.82%

-- Flow 1:

Average throughput: 54.56 Mbit/s

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

Loss rate: 0.54%

-- Flow 2:

Average throughput: 0.89 Mbit/s

95th percentile per-packet one-way delay: 53.312 ms

Loss rate: 15.03%

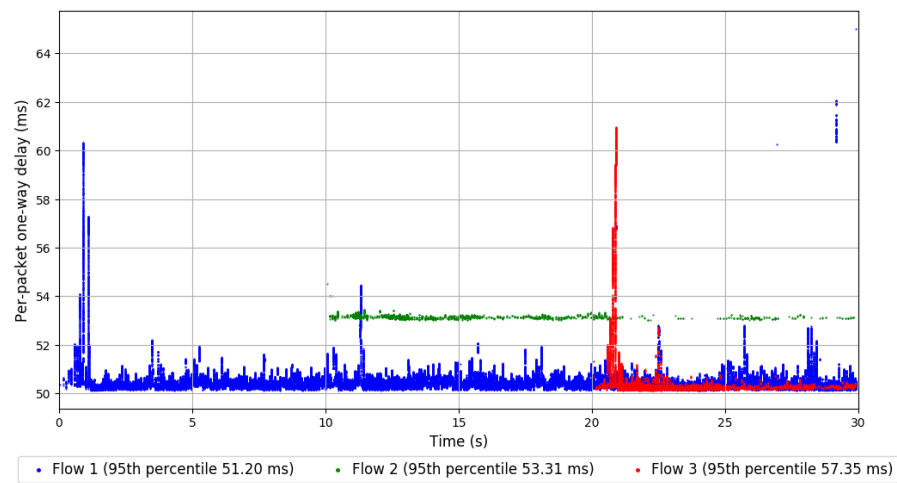
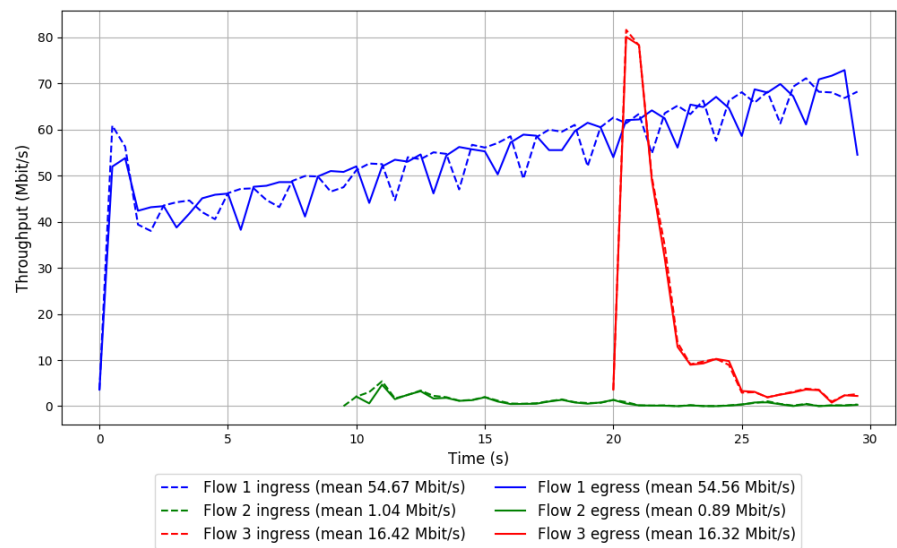
-- Flow 3:

Average throughput: 16.32 Mbit/s

95th percentile per-packet one-way delay: 57.353 ms

Loss rate: 1.87%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2017-08-12 08:00:33

End at: 2017-08-12 08:01:03

Below is generated by plot.py at 2017-08-12 11:40:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 60.03 Mbit/s

95th percentile per-packet one-way delay: 50.836 ms

Loss rate: 0.53%

-- Flow 1:

Average throughput: 59.60 Mbit/s

95th percentile per-packet one-way delay: 50.788 ms

Loss rate: 0.30%

-- Flow 2:

Average throughput: 0.36 Mbit/s

95th percentile per-packet one-way delay: 54.383 ms

Loss rate: 24.39%

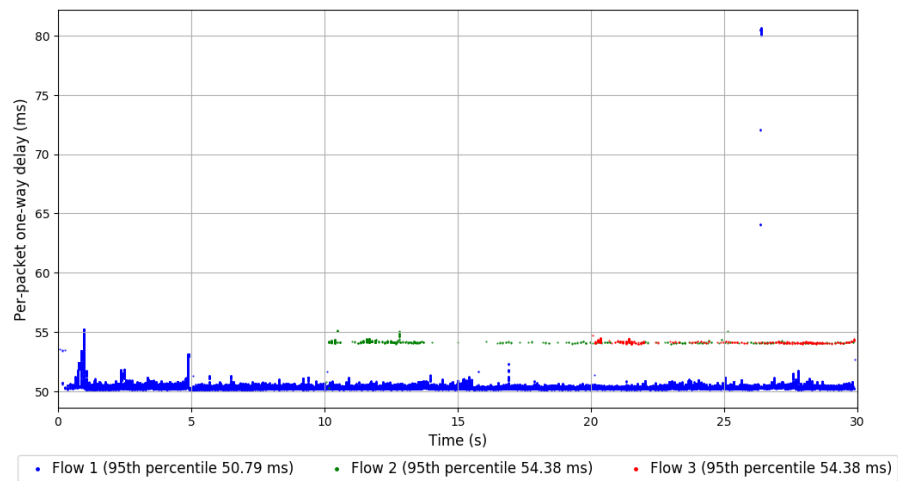
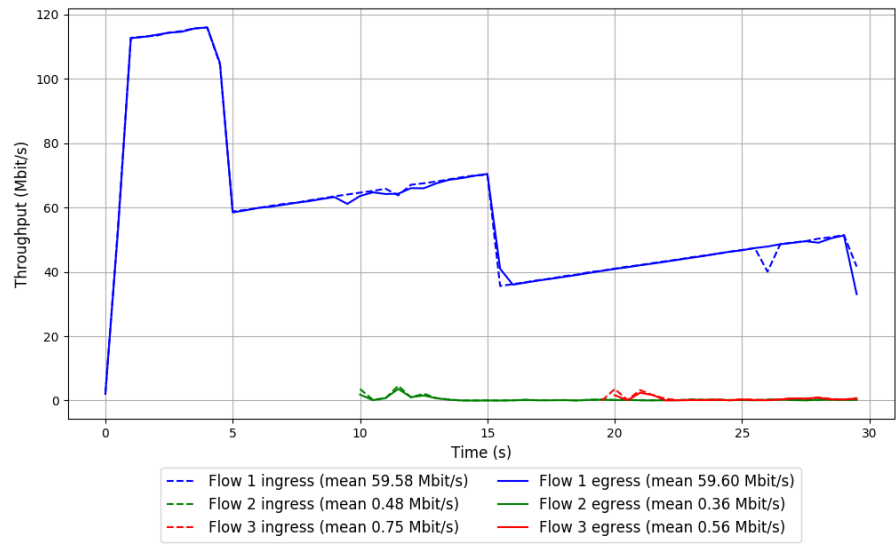
-- Flow 3:

Average throughput: 0.56 Mbit/s

95th percentile per-packet one-way delay: 54.376 ms

Loss rate: 27.07%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2017-08-12 08:11:25

End at: 2017-08-12 08:11:55

Below is generated by plot.py at 2017-08-12 11:40:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 17.36 Mbit/s

95th percentile per-packet one-way delay: 53.802 ms

Loss rate: 2.17%

-- Flow 1:

Average throughput: 4.42 Mbit/s

95th percentile per-packet one-way delay: 53.274 ms

Loss rate: 2.58%

-- Flow 2:

Average throughput: 3.38 Mbit/s

95th percentile per-packet one-way delay: 53.903 ms

Loss rate: 4.14%

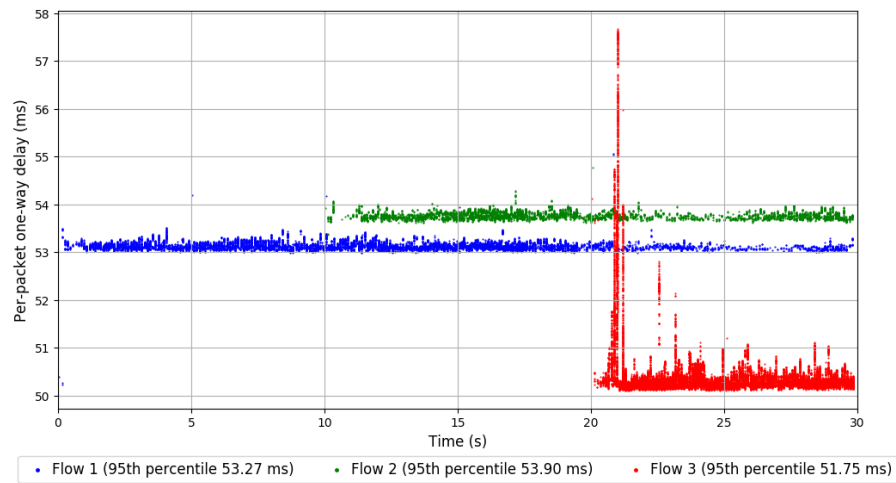
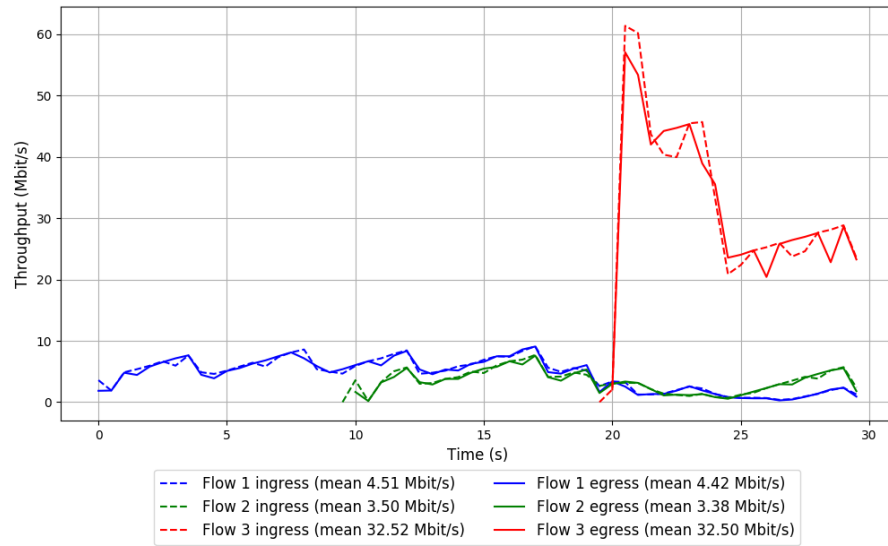
-- Flow 3:

Average throughput: 32.50 Mbit/s

95th percentile per-packet one-way delay: 51.748 ms

Loss rate: 1.57%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2017-08-12 08:22:40

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

Below is generated by plot.py at 2017-08-12 11:40:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 33.35 Mbit/s

95th percentile per-packet one-way delay: 53.224 ms

Loss rate: 1.50%

-- Flow 1:

Average throughput: 2.39 Mbit/s

95th percentile per-packet one-way delay: 53.368 ms

Loss rate: 4.63%

-- Flow 2:

Average throughput: 46.09 Mbit/s

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

Loss rate: 1.06%

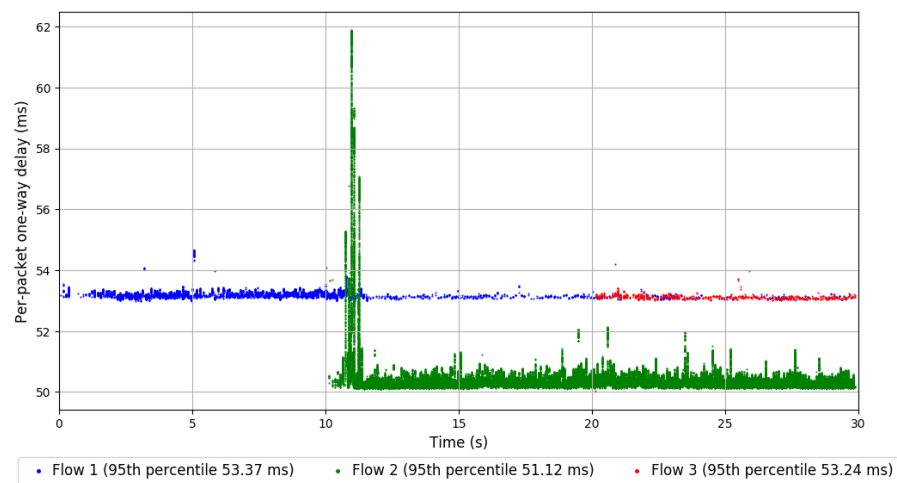
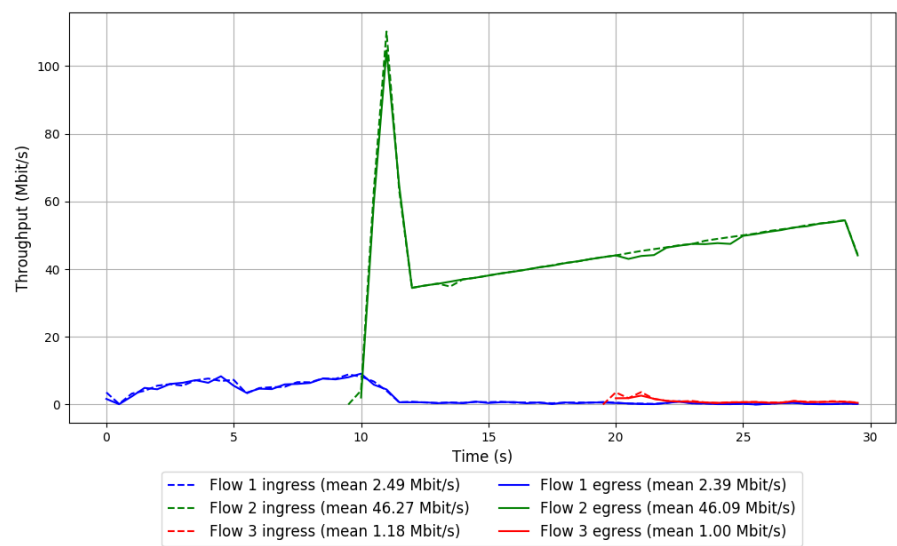
-- Flow 3:

Average throughput: 1.00 Mbit/s

95th percentile per-packet one-way delay: 53.238 ms

Loss rate: 16.10%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2017-08-12 08:33:49

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

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 53.83 Mbit/s

95th percentile per-packet one-way delay: 53.118 ms

Loss rate: 0.77%

-- Flow 1:

Average throughput: 3.03 Mbit/s

95th percentile per-packet one-way delay: 53.337 ms

Loss rate: 3.85%

-- Flow 2:

Average throughput: 75.97 Mbit/s

95th percentile per-packet one-way delay: 51.229 ms

Loss rate: 0.52%

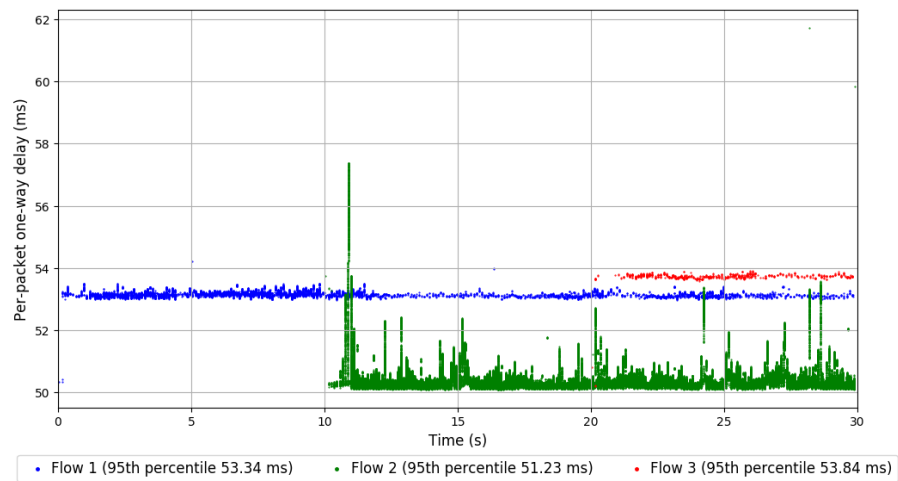
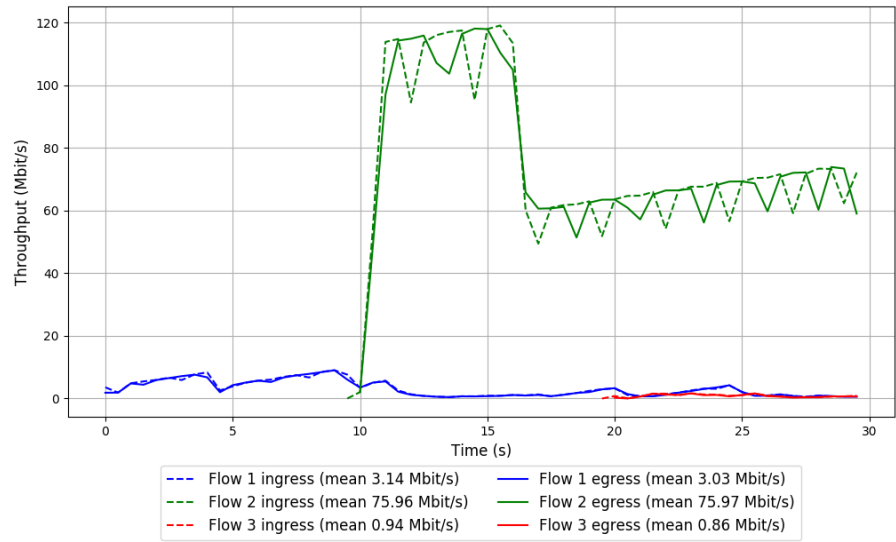
-- Flow 3:

Average throughput: 0.86 Mbit/s

95th percentile per-packet one-way delay: 53.836 ms

Loss rate: 10.05%

Run 10: Report of TCP Vegas — Data Link

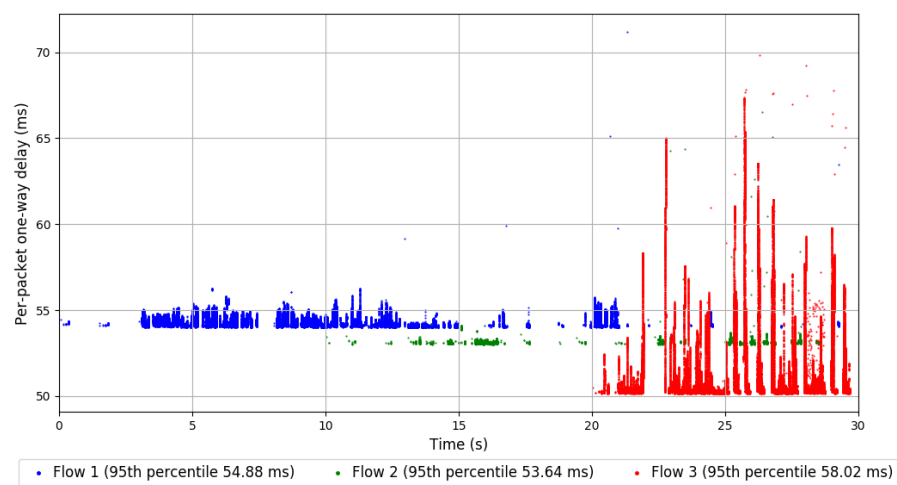
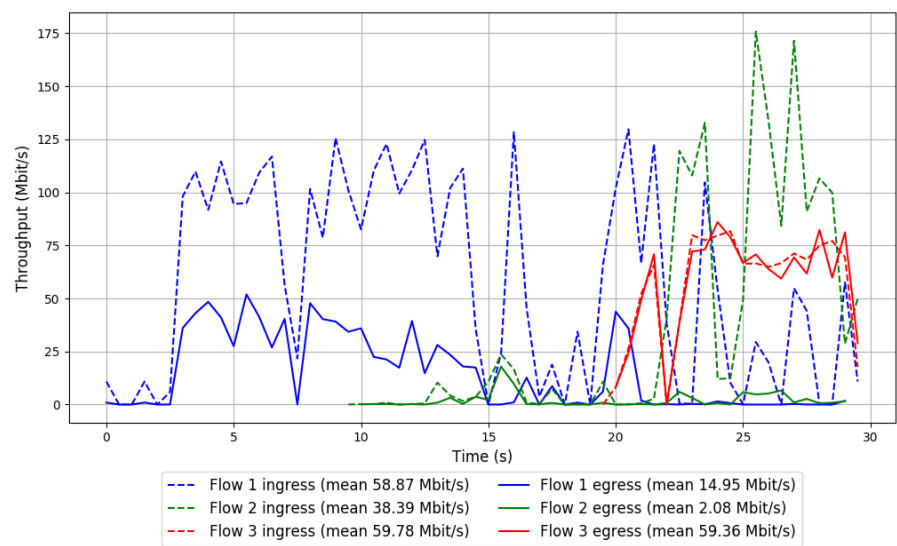


```
Run 1: Statistics of Verus

Start at: 2017-08-12 06:58:08
End at: 2017-08-12 06:58:38

# Below is generated by plot.py at 2017-08-12 11:41:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 35.42 Mbit/s
95th percentile per-packet one-way delay: 56.024 ms
Loss rate: 65.83%
-- Flow 1:
Average throughput: 14.95 Mbit/s
95th percentile per-packet one-way delay: 54.881 ms
Loss rate: 74.88%
-- Flow 2:
Average throughput: 2.08 Mbit/s
95th percentile per-packet one-way delay: 53.639 ms
Loss rate: 94.67%
-- Flow 3:
Average throughput: 59.36 Mbit/s
95th percentile per-packet one-way delay: 58.024 ms
Loss rate: 0.70%
```

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2017-08-12 07:09:36

End at: 2017-08-12 07:10:06

Below is generated by plot.py at 2017-08-12 11:41:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 61.61 Mbit/s

95th percentile per-packet one-way delay: 64.582 ms

Loss rate: 69.63%

-- Flow 1:

Average throughput: 1.73 Mbit/s

95th percentile per-packet one-way delay: 53.587 ms

Loss rate: 98.78%

-- Flow 2:

Average throughput: 69.89 Mbit/s

95th percentile per-packet one-way delay: 65.641 ms

Loss rate: 3.19%

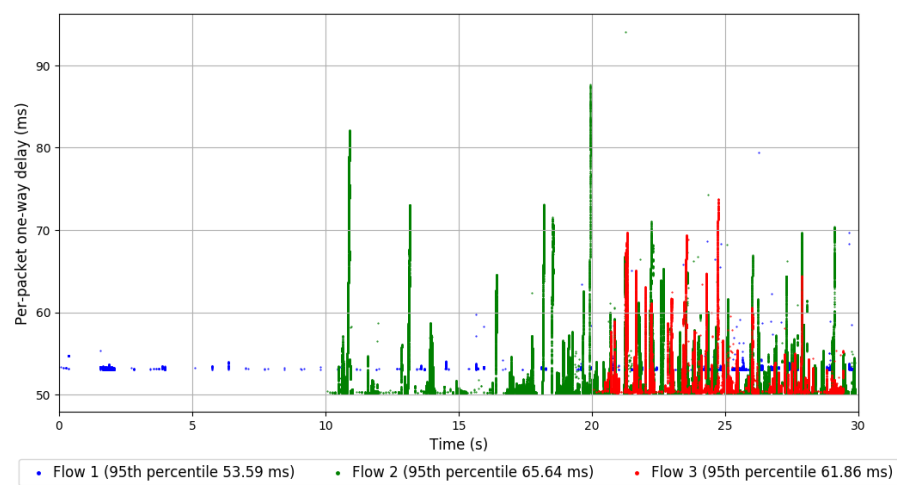
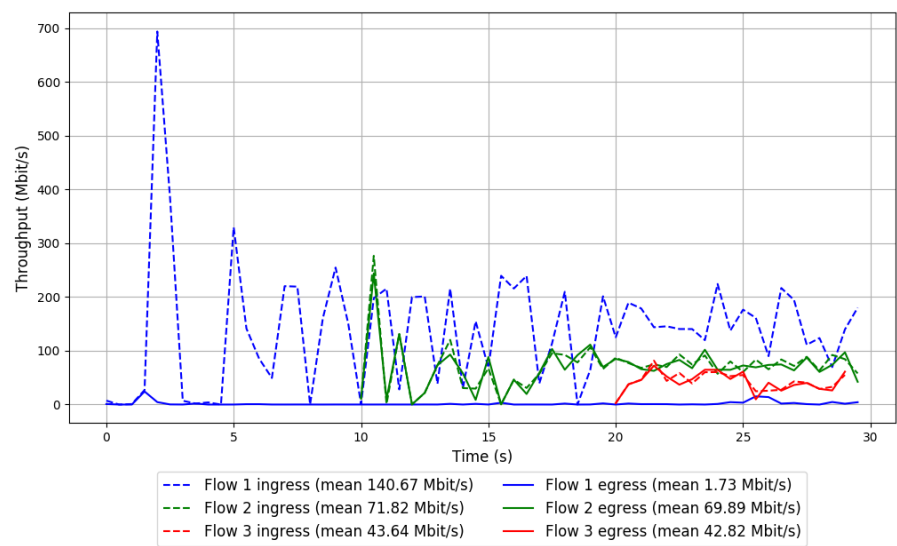
-- Flow 3:

Average throughput: 42.82 Mbit/s

95th percentile per-packet one-way delay: 61.858 ms

Loss rate: 1.88%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2017-08-12 07:21:17

End at: 2017-08-12 07:21:47

Below is generated by plot.py at 2017-08-12 11:41:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 65.03 Mbit/s

95th percentile per-packet one-way delay: 66.602 ms

Loss rate: 52.60%

-- Flow 1:

Average throughput: 4.14 Mbit/s

95th percentile per-packet one-way delay: 54.353 ms

Loss rate: 94.46%

-- Flow 2:

Average throughput: 65.33 Mbit/s

95th percentile per-packet one-way delay: 68.465 ms

Loss rate: 4.05%

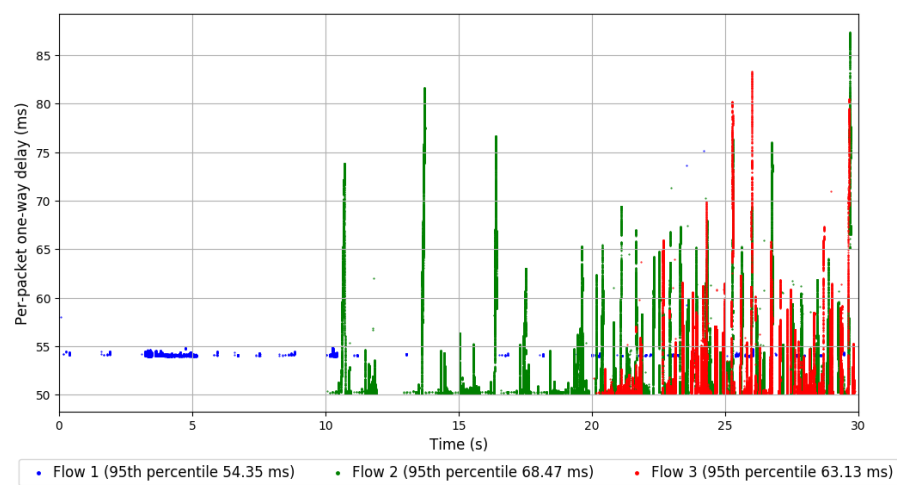
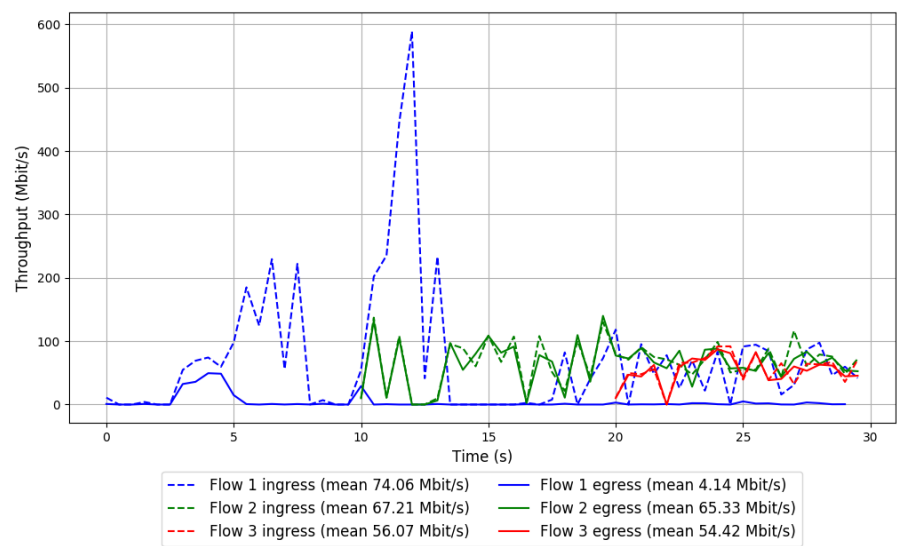
-- Flow 3:

Average throughput: 54.42 Mbit/s

95th percentile per-packet one-way delay: 63.128 ms

Loss rate: 4.03%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2017-08-12 07:32:42

End at: 2017-08-12 07:33:13

Below is generated by plot.py at 2017-08-12 11:41:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 103.96 Mbit/s

95th percentile per-packet one-way delay: 56.860 ms

Loss rate: 14.87%

-- Flow 1:

Average throughput: 88.68 Mbit/s

95th percentile per-packet one-way delay: 57.606 ms

Loss rate: 0.51%

-- Flow 2:

Average throughput: 1.07 Mbit/s

95th percentile per-packet one-way delay: 54.531 ms

Loss rate: 96.56%

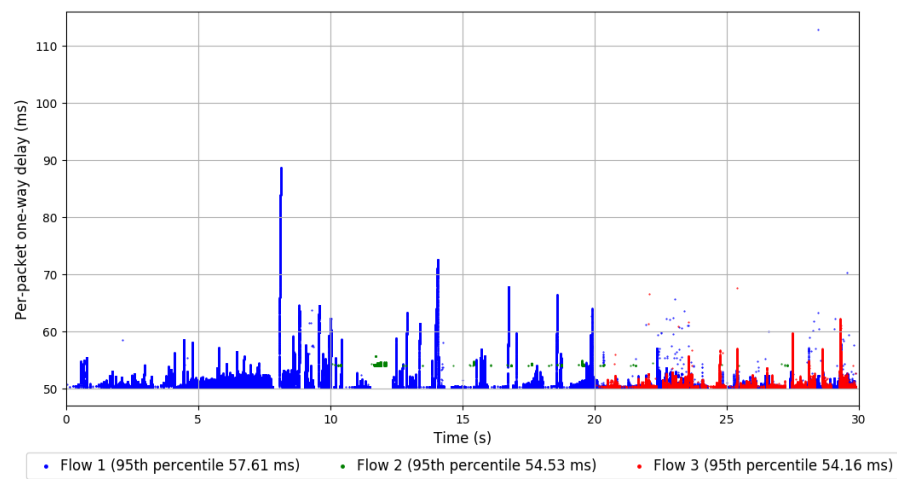
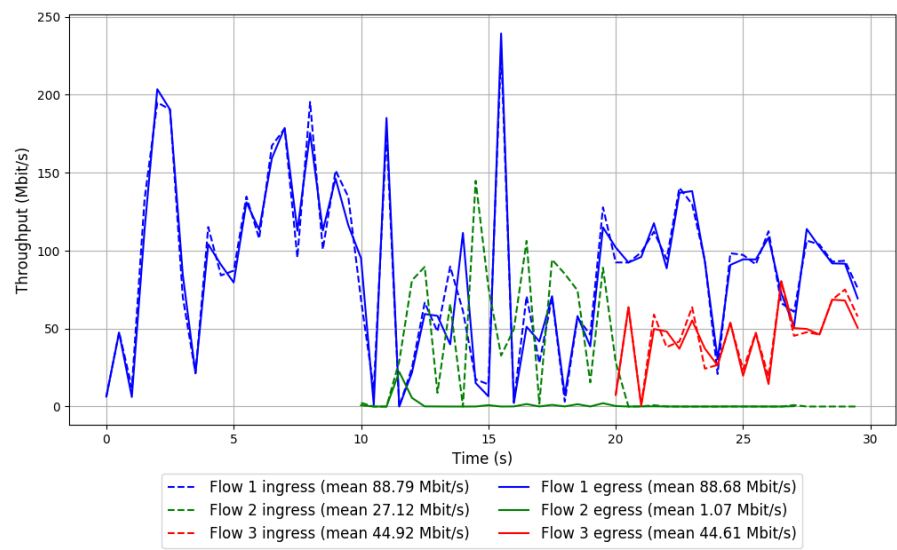
-- Flow 3:

Average throughput: 44.61 Mbit/s

95th percentile per-packet one-way delay: 54.155 ms

Loss rate: 1.82%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2017-08-12 07:44:00

End at: 2017-08-12 07:44:30

Below is generated by plot.py at 2017-08-12 11:41:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 49.13 Mbit/s

95th percentile per-packet one-way delay: 58.596 ms

Loss rate: 61.59%

-- Flow 1:

Average throughput: 3.17 Mbit/s

95th percentile per-packet one-way delay: 53.479 ms

Loss rate: 95.78%

-- Flow 2:

Average throughput: 70.22 Mbit/s

95th percentile per-packet one-way delay: 58.820 ms

Loss rate: 2.90%

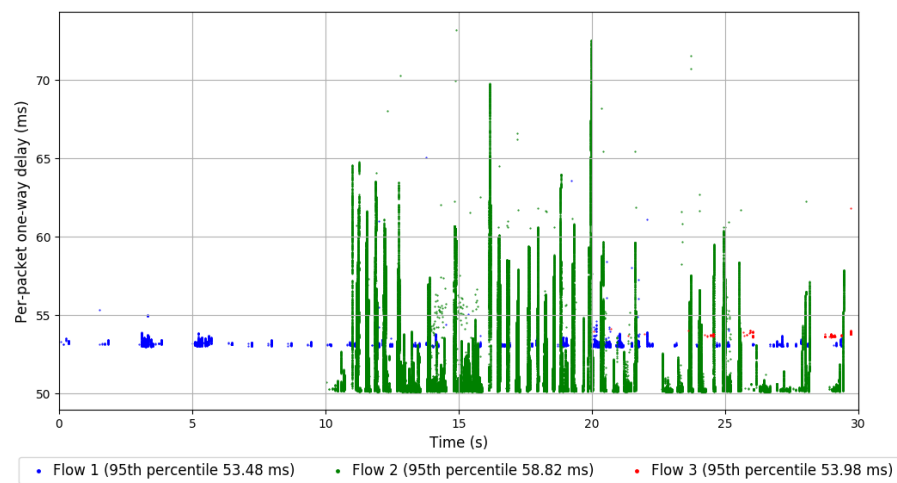
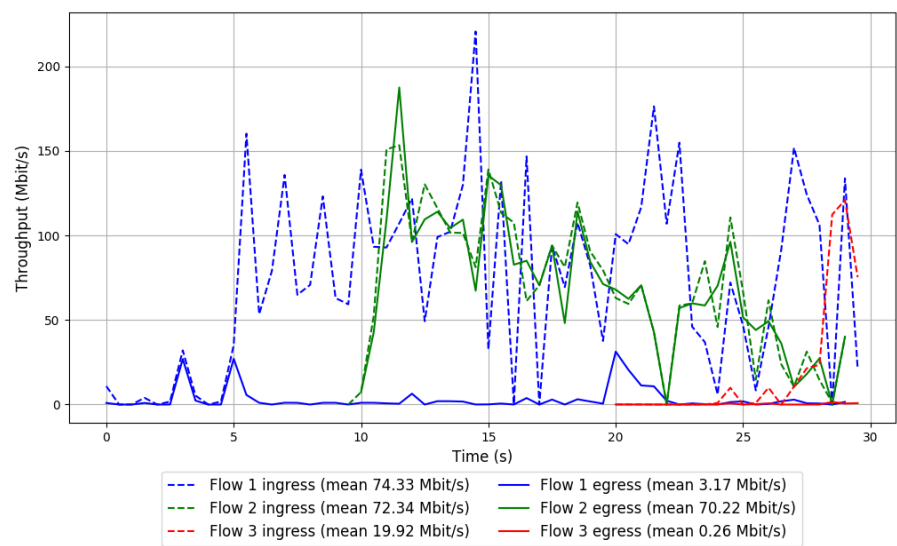
-- Flow 3:

Average throughput: 0.26 Mbit/s

95th percentile per-packet one-way delay: 53.985 ms

Loss rate: 98.71%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2017-08-12 07:55:29

End at: 2017-08-12 07:55:59

Below is generated by plot.py at 2017-08-12 11:42:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 124.85 Mbit/s

95th percentile per-packet one-way delay: 64.778 ms

Loss rate: 2.10%

-- Flow 1:

Average throughput: 88.18 Mbit/s

95th percentile per-packet one-way delay: 60.402 ms

Loss rate: 0.62%

-- Flow 2:

Average throughput: 55.16 Mbit/s

95th percentile per-packet one-way delay: 70.923 ms

Loss rate: 1.75%

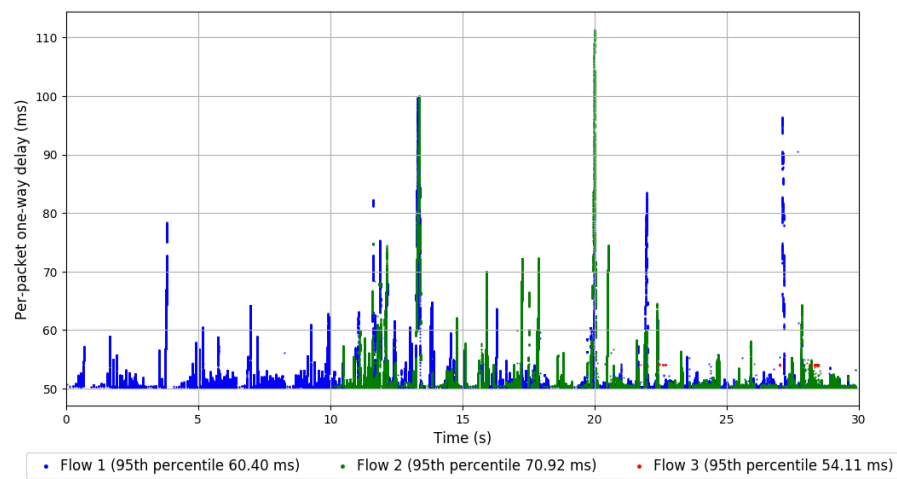
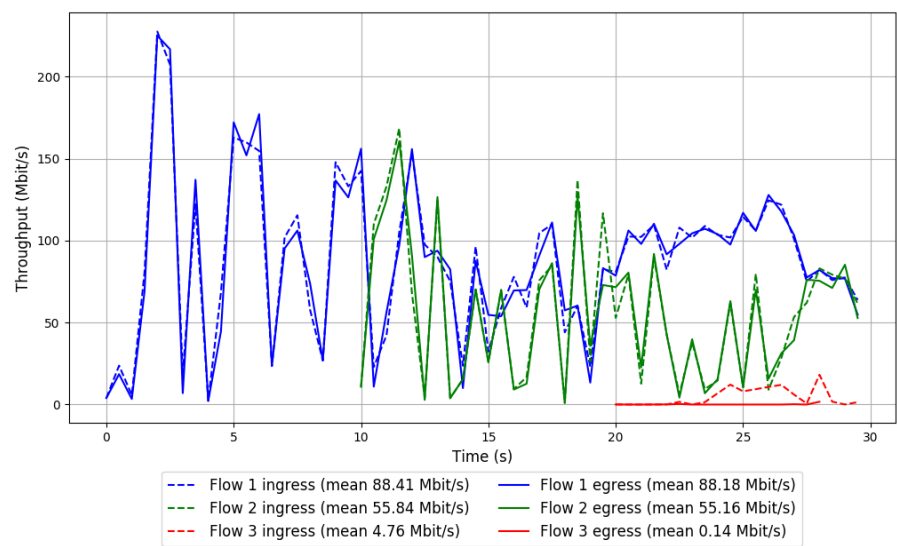
-- Flow 3:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 54.113 ms

Loss rate: 97.42%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2017-08-12 08:06:30

End at: 2017-08-12 08:07:00

Below is generated by plot.py at 2017-08-12 11:42:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.19 Mbit/s

95th percentile per-packet one-way delay: 53.990 ms

Loss rate: 98.99%

-- Flow 1:

Average throughput: 0.94 Mbit/s

95th percentile per-packet one-way delay: 53.682 ms

Loss rate: 98.90%

-- Flow 2:

Average throughput: 0.34 Mbit/s

95th percentile per-packet one-way delay: 54.265 ms

Loss rate: 99.33%

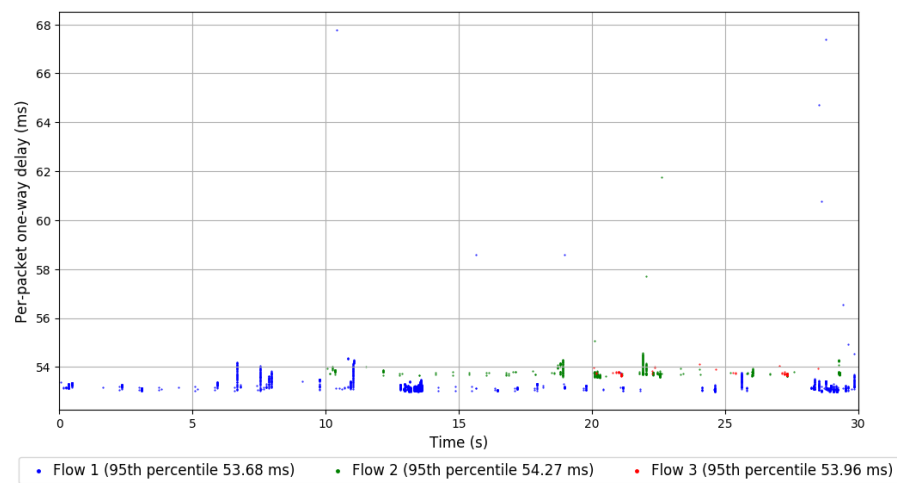
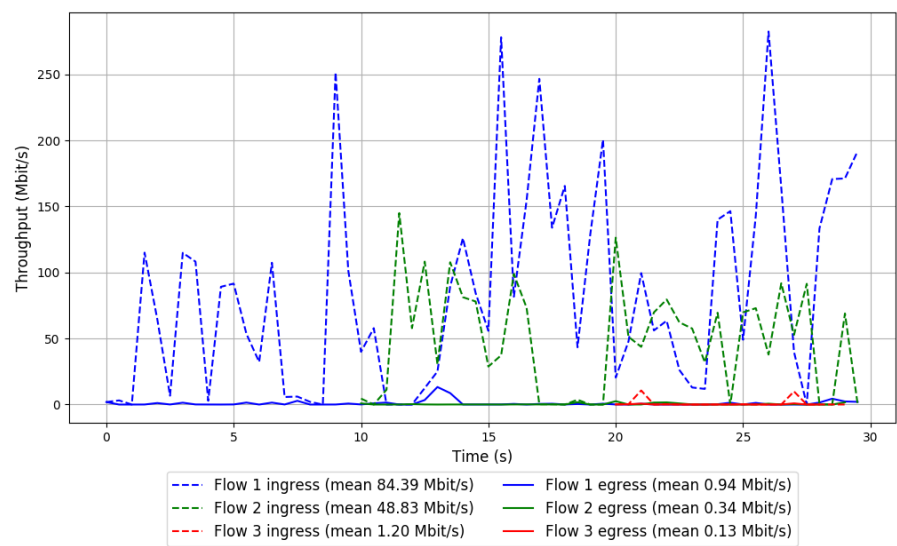
-- Flow 3:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 53.963 ms

Loss rate: 90.20%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2017-08-12 08:17:40

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

Below is generated by plot.py at 2017-08-12 11:42:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.77 Mbit/s

95th percentile per-packet one-way delay: 58.355 ms

Loss rate: 89.86%

-- Flow 1:

Average throughput: 2.60 Mbit/s

95th percentile per-packet one-way delay: 54.490 ms

Loss rate: 97.47%

-- Flow 2:

Average throughput: 2.32 Mbit/s

95th percentile per-packet one-way delay: 54.085 ms

Loss rate: 96.31%

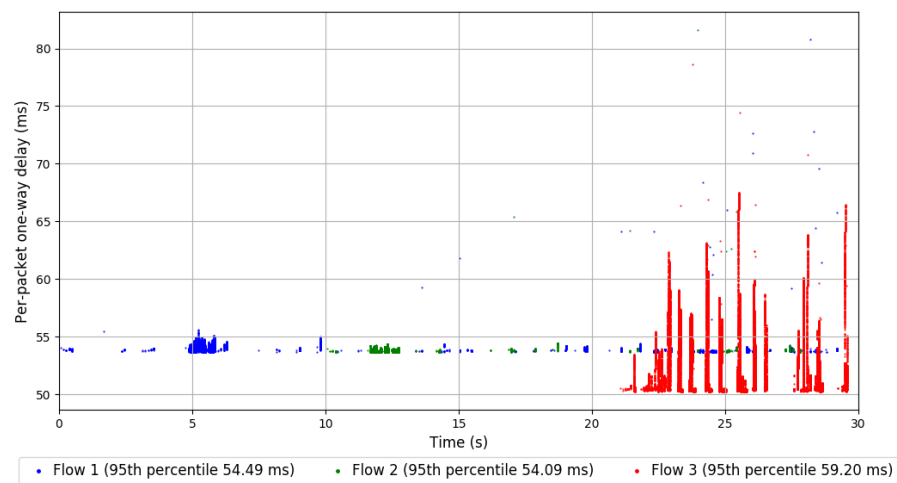
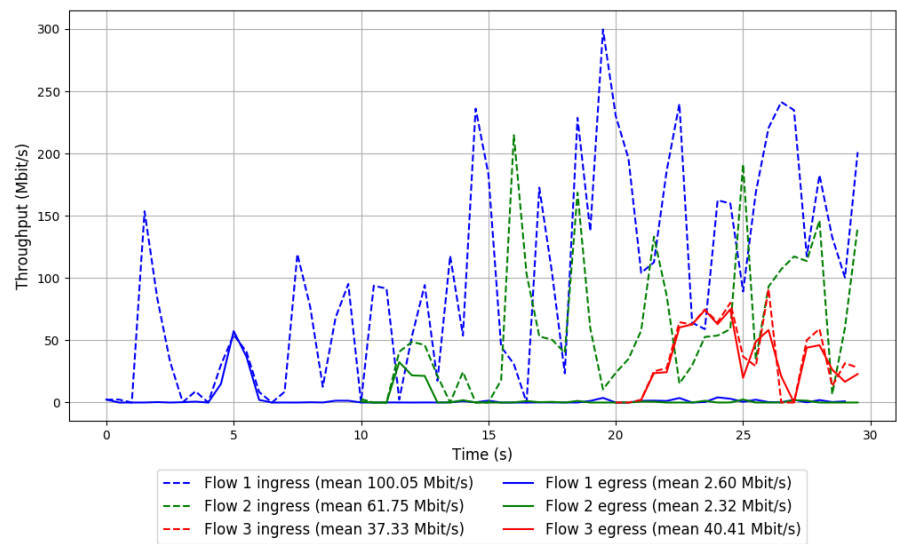
-- Flow 3:

Average throughput: 40.41 Mbit/s

95th percentile per-packet one-way delay: 59.204 ms

Loss rate: 6.95%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2017-08-12 08:28:44

End at: 2017-08-12 08:29:14

Below is generated by plot.py at 2017-08-12 11:42:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 73.10 Mbit/s

95th percentile per-packet one-way delay: 59.217 ms

Loss rate: 43.49%

-- Flow 1:

Average throughput: 5.33 Mbit/s

95th percentile per-packet one-way delay: 54.457 ms

Loss rate: 90.16%

-- Flow 2:

Average throughput: 101.93 Mbit/s

95th percentile per-packet one-way delay: 59.892 ms

Loss rate: 1.59%

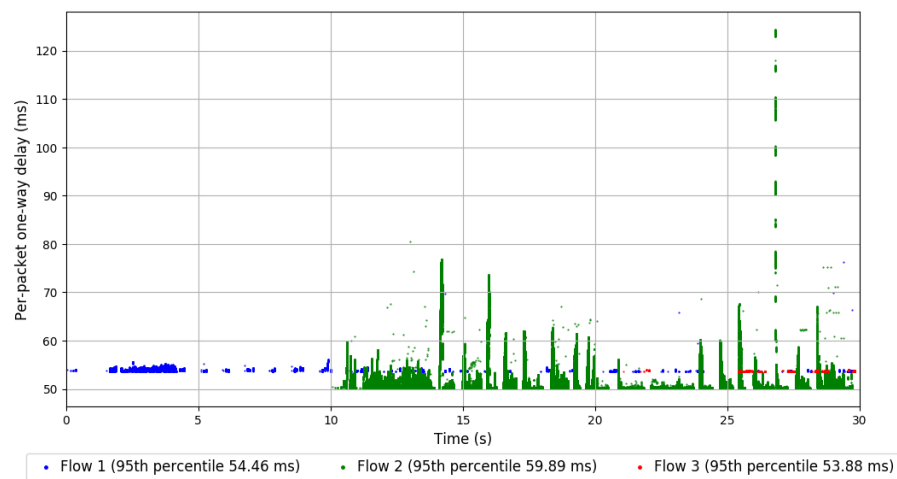
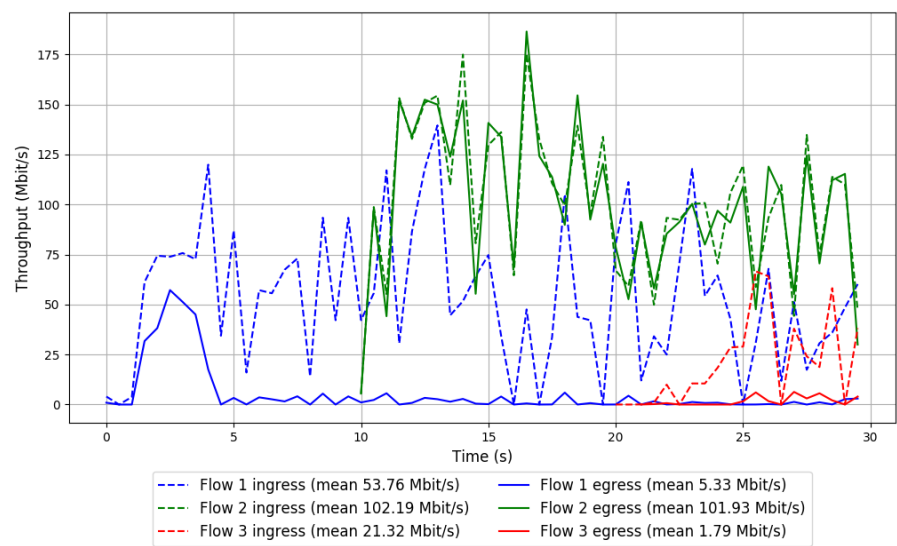
-- Flow 3:

Average throughput: 1.79 Mbit/s

95th percentile per-packet one-way delay: 53.883 ms

Loss rate: 92.45%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2017-08-12 08:40:06

End at: 2017-08-12 08:40:36

Below is generated by plot.py at 2017-08-12 11:42:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 128.56 Mbit/s

95th percentile per-packet one-way delay: 63.553 ms

Loss rate: 9.75%

-- Flow 1:

Average throughput: 111.81 Mbit/s

95th percentile per-packet one-way delay: 64.287 ms

Loss rate: 2.01%

-- Flow 2:

Average throughput: 0.16 Mbit/s

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

Loss rate: 99.18%

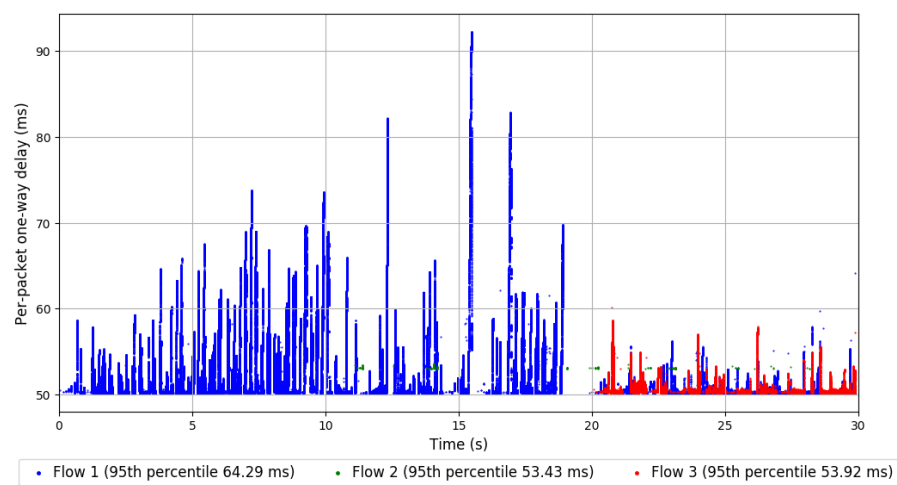
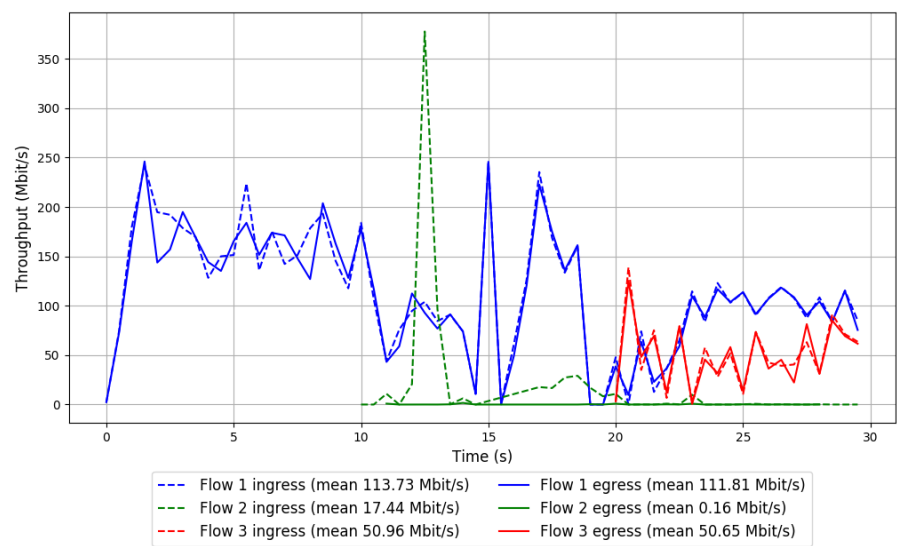
-- Flow 3:

Average throughput: 50.65 Mbit/s

95th percentile per-packet one-way delay: 53.918 ms

Loss rate: 1.08%

Run 10: Report of Verus — Data Link

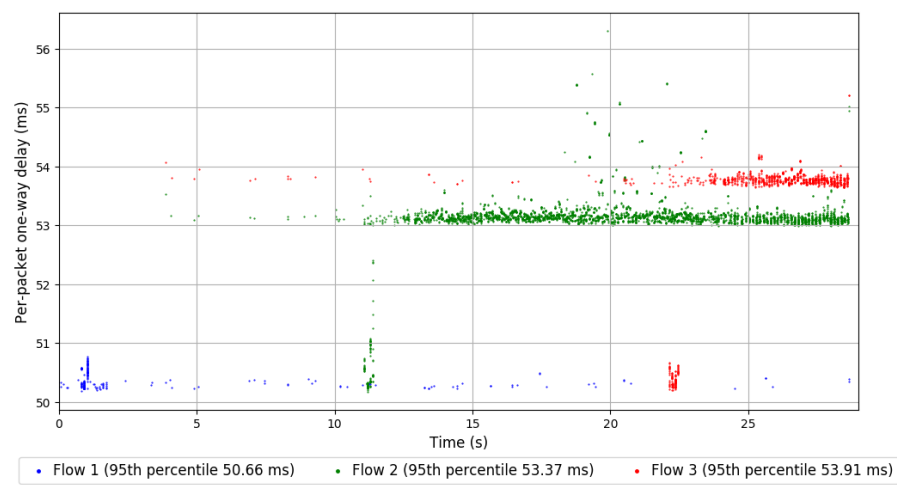
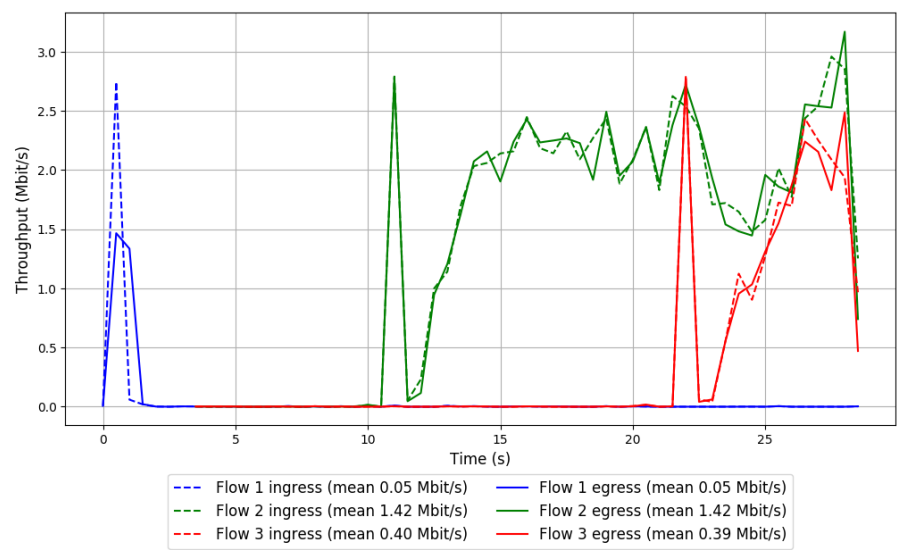


```
Run 1: Statistics of WebRTC media

Start at: 2017-08-12 06:58:52
End at: 2017-08-12 06:59:22

# Below is generated by plot.py at 2017-08-12 11:42:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.62 Mbit/s
95th percentile per-packet one-way delay: 53.834 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 50.665 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.42 Mbit/s
95th percentile per-packet one-way delay: 53.365 ms
Loss rate: 0.89%
-- Flow 3:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 53.913 ms
Loss rate: 2.49%
```


Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2017-08-12 07:10:24

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

Below is generated by plot.py at 2017-08-12 11:42:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.71 Mbit/s

95th percentile per-packet one-way delay: 54.365 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.788 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 1.54 Mbit/s

95th percentile per-packet one-way delay: 54.433 ms

Loss rate: 0.75%

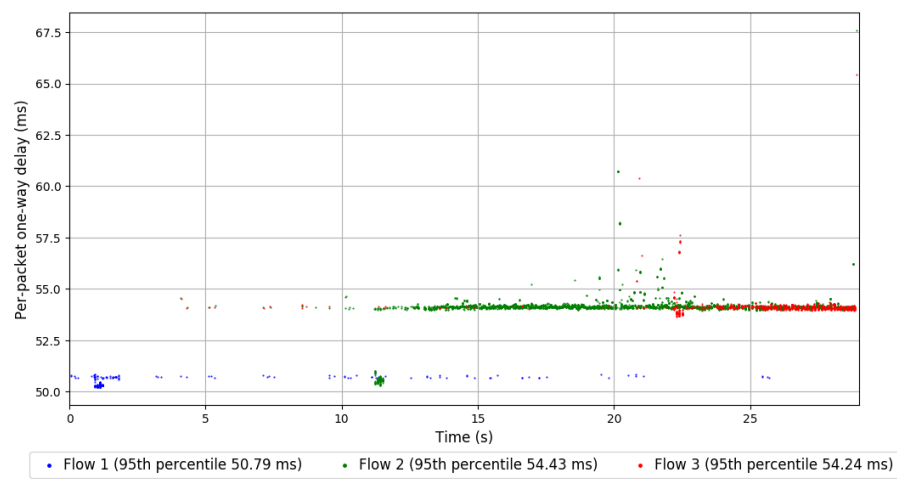
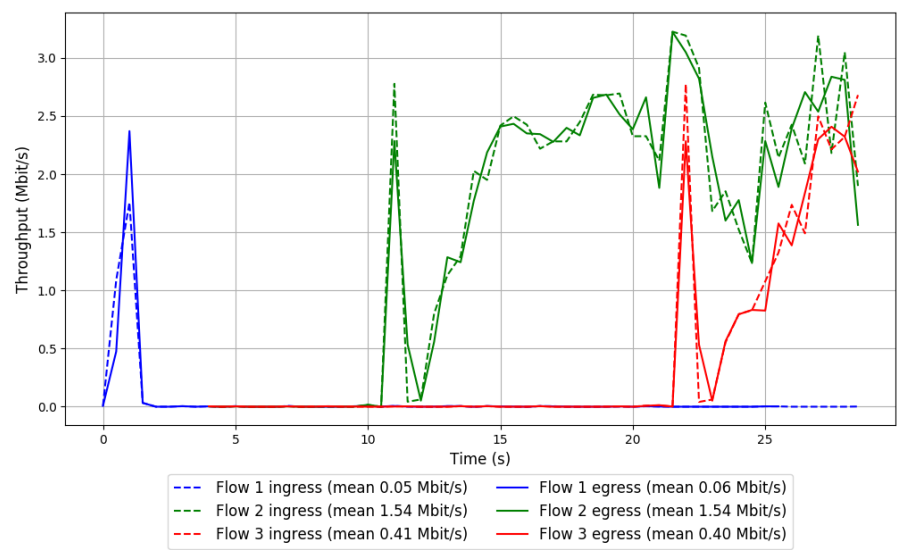
-- Flow 3:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 54.242 ms

Loss rate: 3.22%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2017-08-12 07:22:03

End at: 2017-08-12 07:22:33

Below is generated by plot.py at 2017-08-12 11:42:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.73 Mbit/s

95th percentile per-packet one-way delay: 53.623 ms

Loss rate: 1.64%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 53.574 ms

Loss rate: 0.16%

-- Flow 2:

Average throughput: 1.50 Mbit/s

95th percentile per-packet one-way delay: 53.665 ms

Loss rate: 0.86%

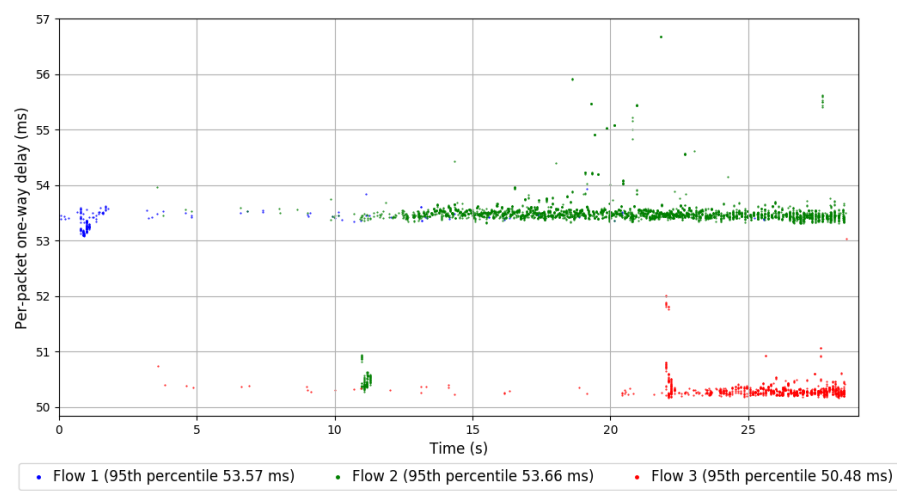
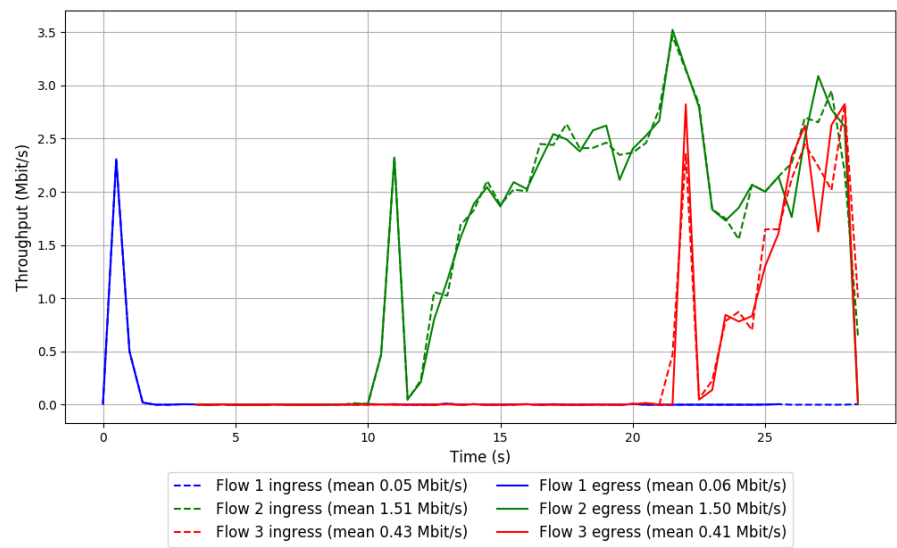
-- Flow 3:

Average throughput: 0.41 Mbit/s

95th percentile per-packet one-way delay: 50.483 ms

Loss rate: 4.60%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2017-08-12 07:33:31

End at: 2017-08-12 07:34:01

Below is generated by plot.py at 2017-08-12 11:42:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.72 Mbit/s

95th percentile per-packet one-way delay: 53.530 ms

Loss rate: 1.12%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 60.394 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.49 Mbit/s

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

Loss rate: 0.73%

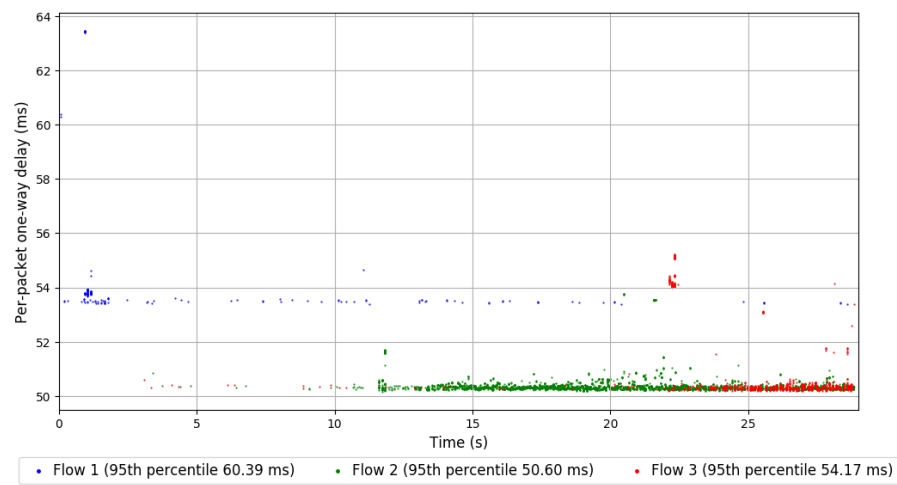
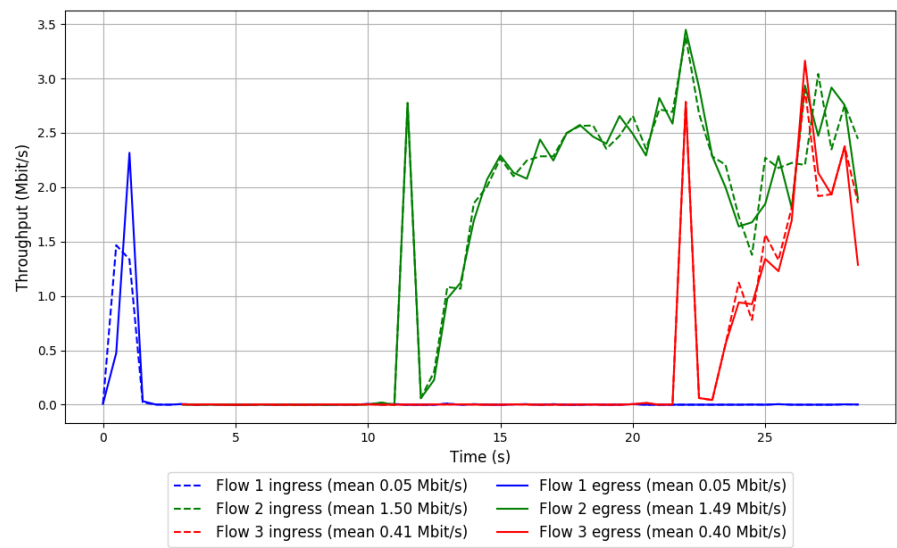
-- Flow 3:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 54.170 ms

Loss rate: 2.70%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2017-08-12 07:44:45

End at: 2017-08-12 07:45:15

Below is generated by plot.py at 2017-08-12 11:42:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.72 Mbit/s

95th percentile per-packet one-way delay: 53.144 ms

Loss rate: 1.35%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 54.118 ms

Loss rate: 0.87%

-- Flow 2:

Average throughput: 1.50 Mbit/s

95th percentile per-packet one-way delay: 50.839 ms

Loss rate: 0.96%

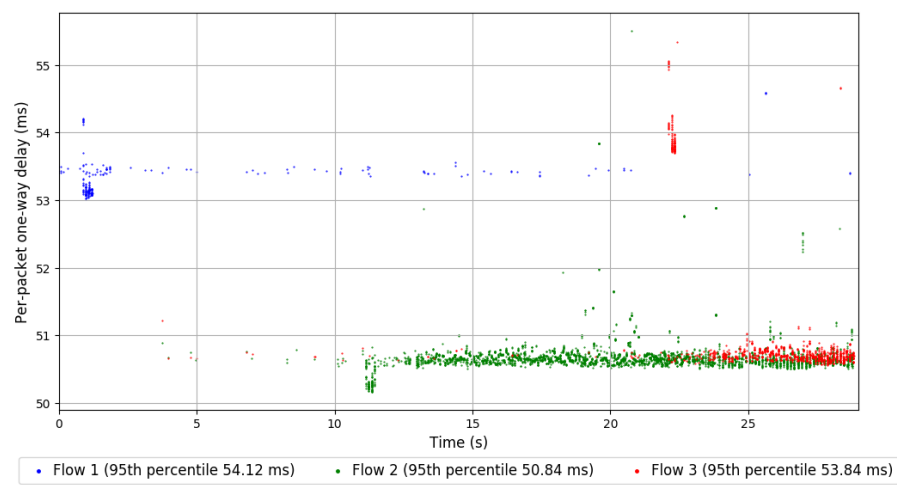
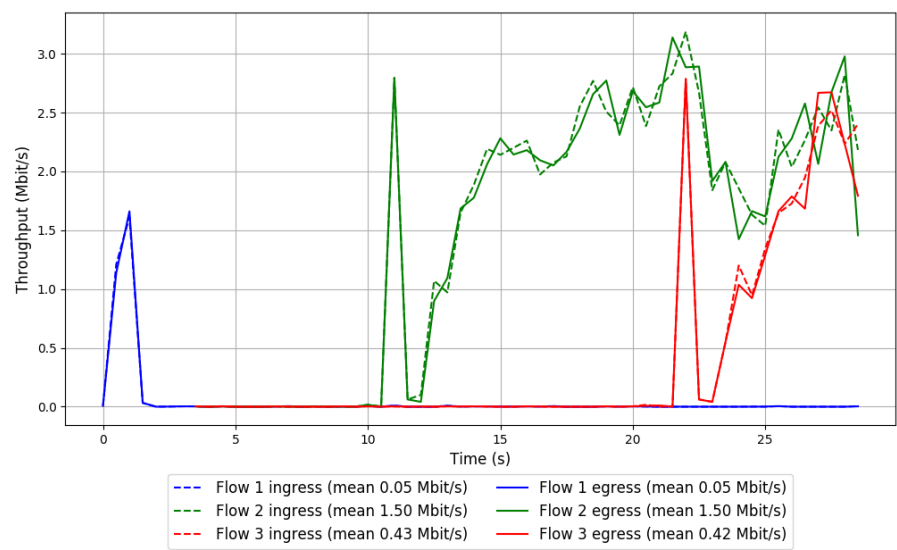
-- Flow 3:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 53.836 ms

Loss rate: 2.79%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2017-08-12 07:56:18

End at: 2017-08-12 07:56:48

Below is generated by plot.py at 2017-08-12 11:42:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.65 Mbit/s

95th percentile per-packet one-way delay: 53.534 ms

Loss rate: 1.03%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 50.765 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.45 Mbit/s

95th percentile per-packet one-way delay: 50.413 ms

Loss rate: 0.41%

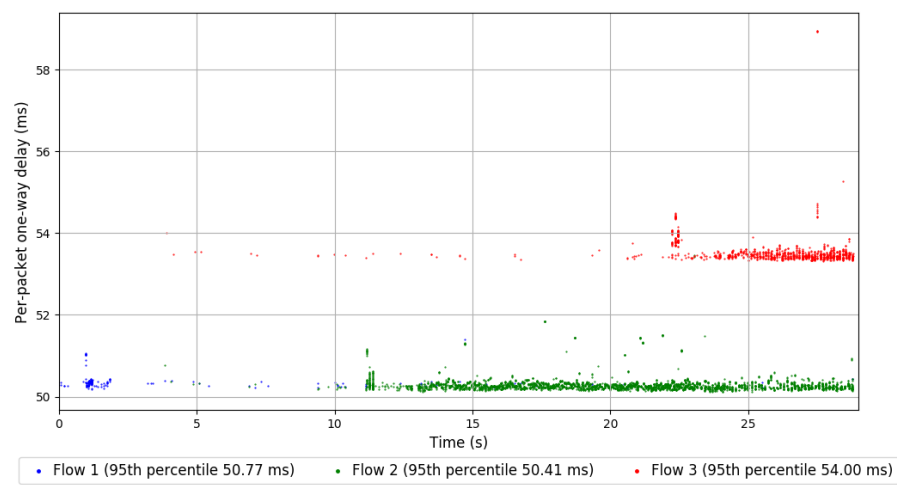
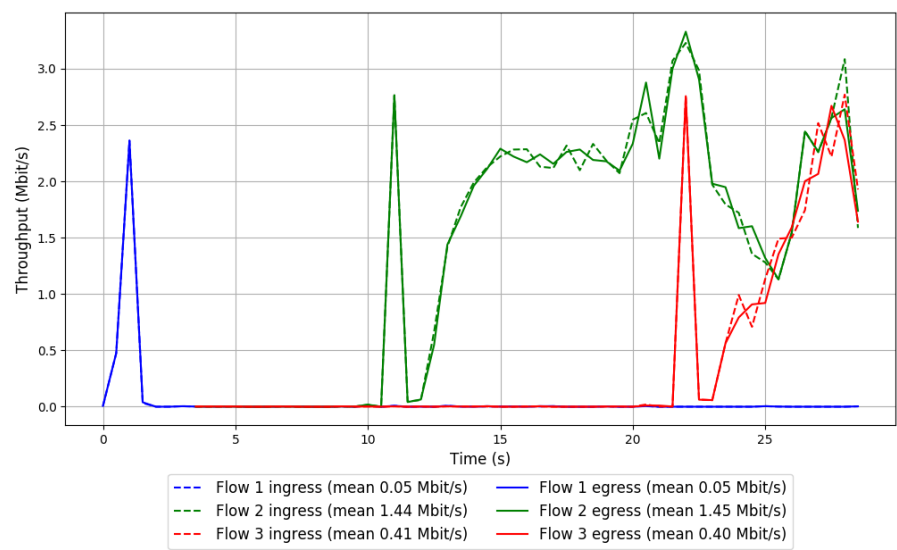
-- Flow 3:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 54.001 ms

Loss rate: 3.37%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

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

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

Below is generated by plot.py at 2017-08-12 11:42:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.77 Mbit/s

95th percentile per-packet one-way delay: 51.926 ms

Loss rate: 0.76%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 54.176 ms

Loss rate: 1.57%

-- Flow 2:

Average throughput: 1.60 Mbit/s

95th percentile per-packet one-way delay: 50.618 ms

Loss rate: 0.20%

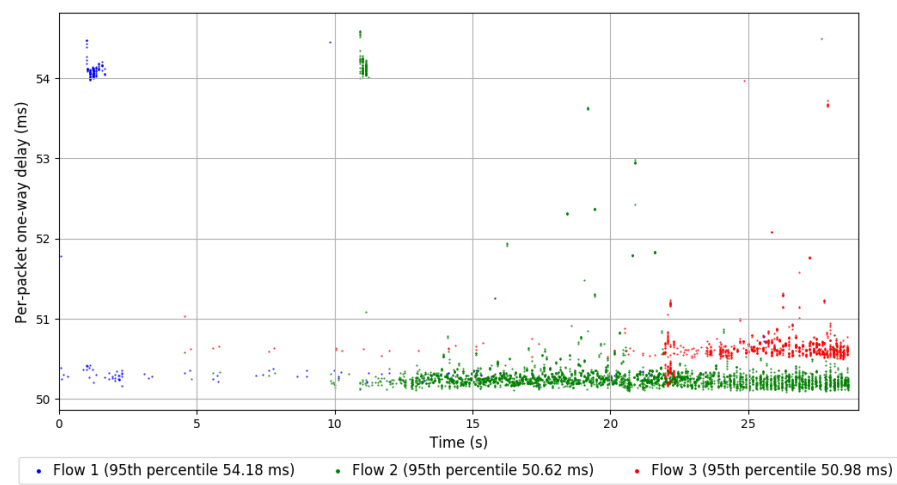
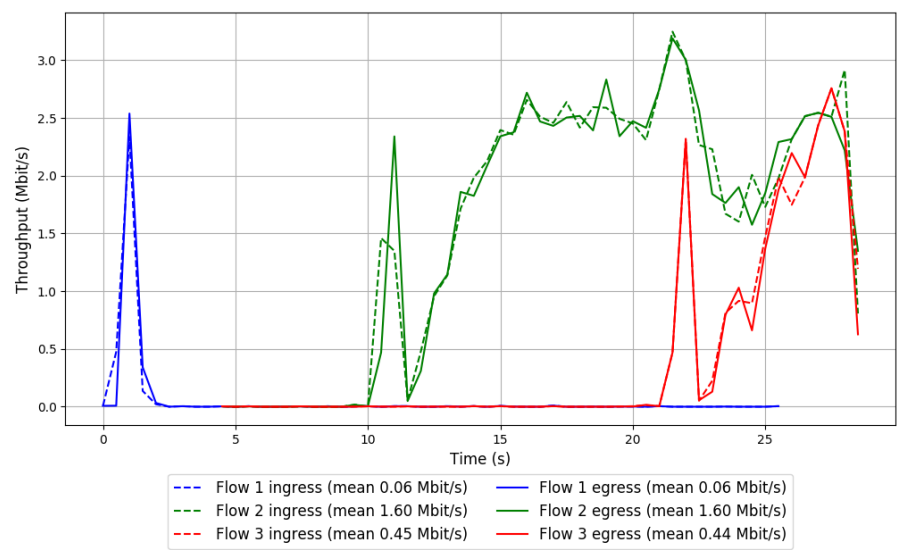
-- Flow 3:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 50.976 ms

Loss rate: 2.61%

Run 7: Report of WebRTC media — Data Link

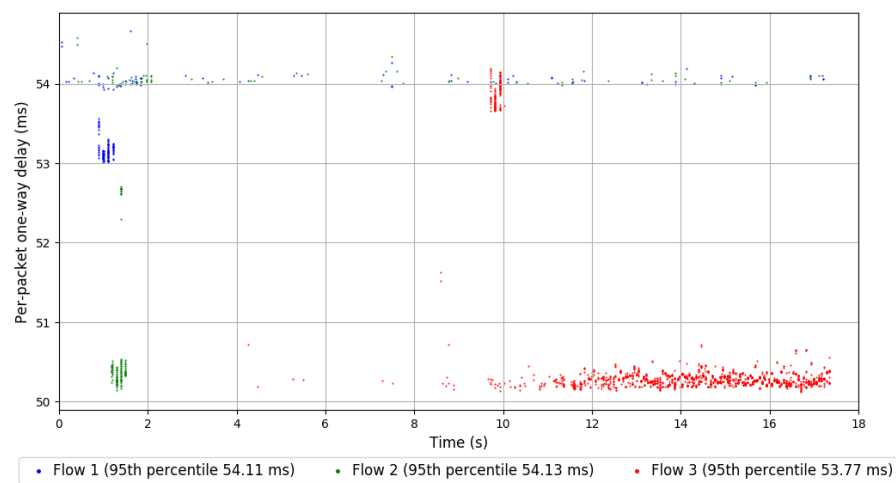
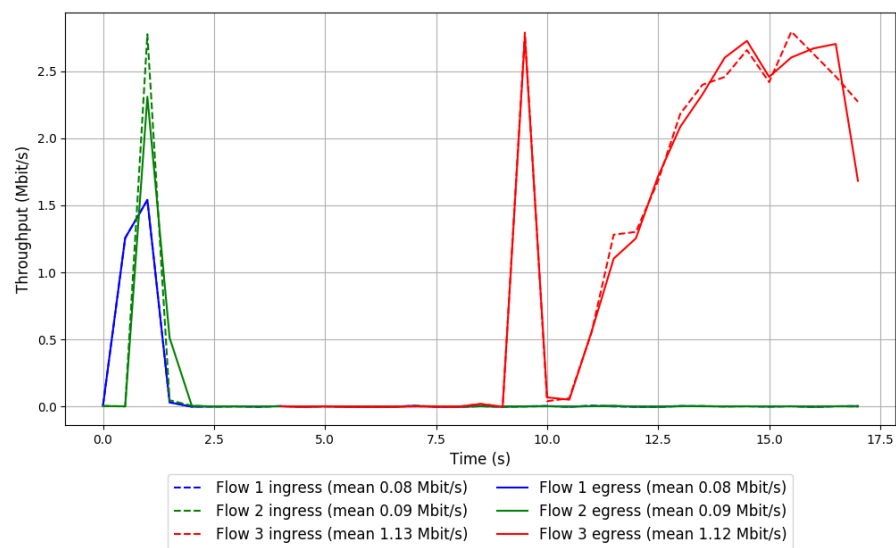


Run 8: Statistics of WebRTC media

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

End at: 2017-08-12 08:18:55

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

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

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

Below is generated by plot.py at 2017-08-12 11:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.76 Mbit/s

95th percentile per-packet one-way delay: 53.806 ms

Loss rate: 1.27%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 54.130 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.45 Mbit/s

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

Loss rate: 0.85%

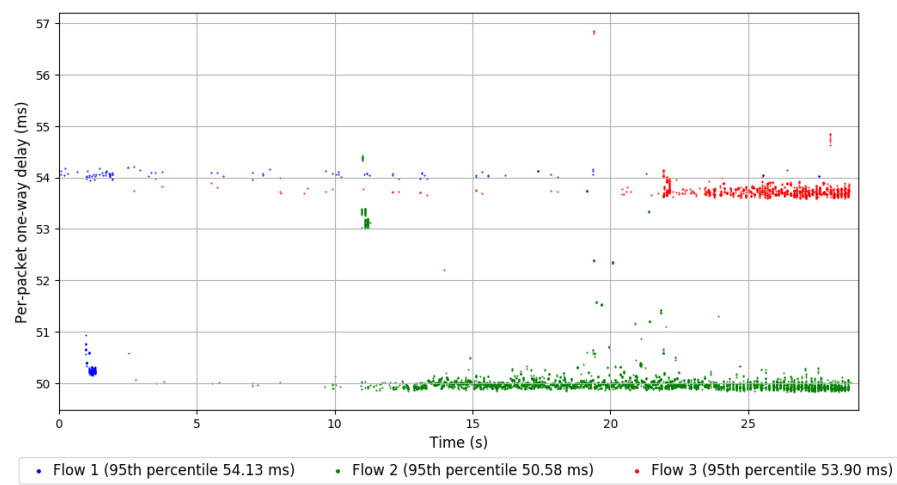
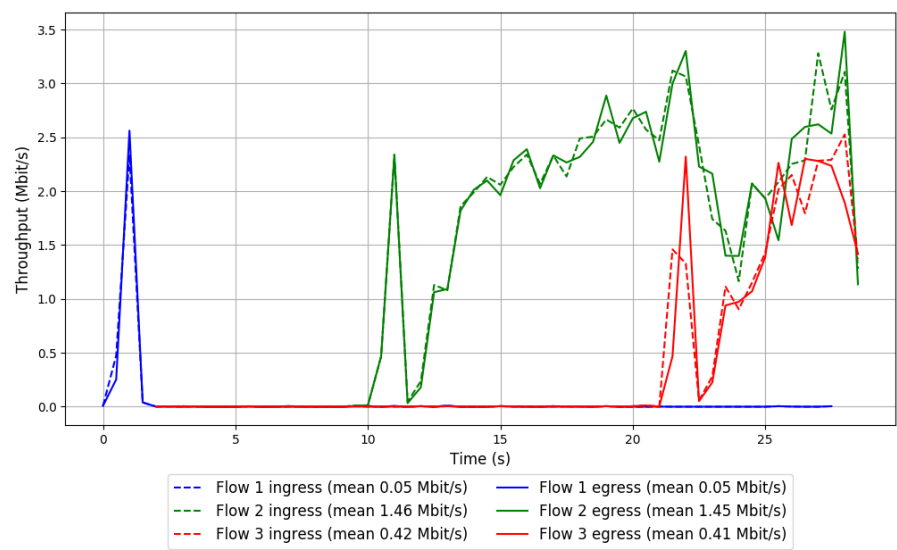
-- Flow 3:

Average throughput: 0.41 Mbit/s

95th percentile per-packet one-way delay: 53.902 ms

Loss rate: 2.89%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2017-08-12 08:40:56

End at: 2017-08-12 08:41:26

Below is generated by plot.py at 2017-08-12 11:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.71 Mbit/s

95th percentile per-packet one-way delay: 53.614 ms

Loss rate: 0.77%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 54.302 ms

Loss rate: 0.10%

-- Flow 2:

Average throughput: 1.50 Mbit/s

95th percentile per-packet one-way delay: 50.738 ms

Loss rate: 0.22%

-- Flow 3:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 53.624 ms

Loss rate: 2.87%

Run 10: Report of WebRTC media — Data Link

