

Pantheon Report

Generated at 2017-08-21 16:22:43 (UTC).

Data path: GCE London 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.

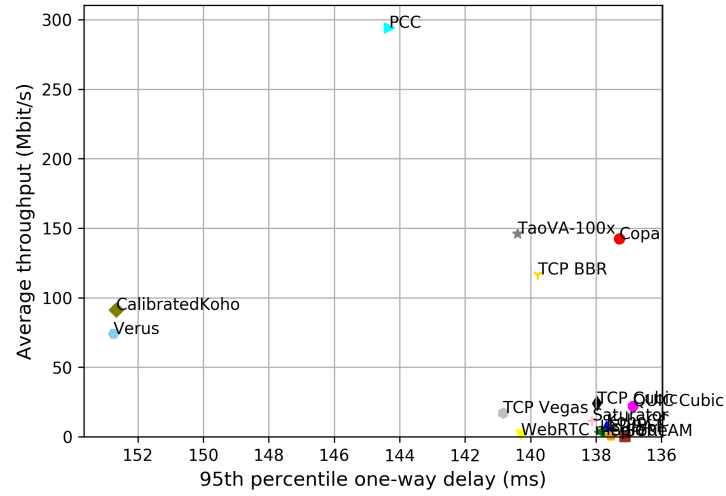
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

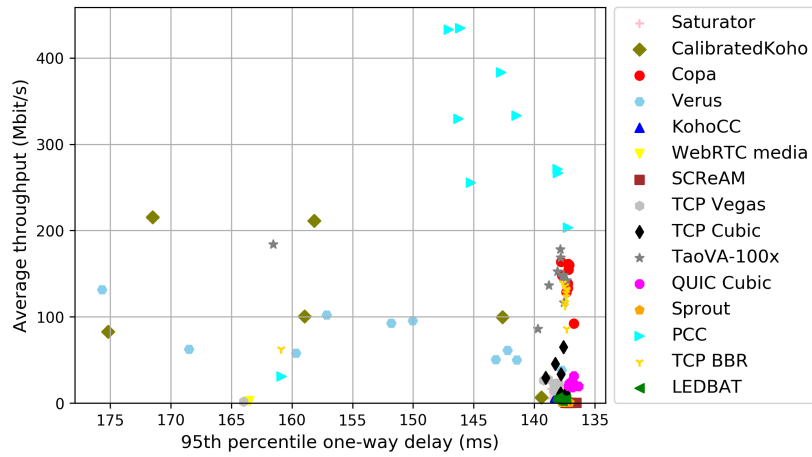
Git summary:

```
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 London 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 London Ethernet to GCE Sydney Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows



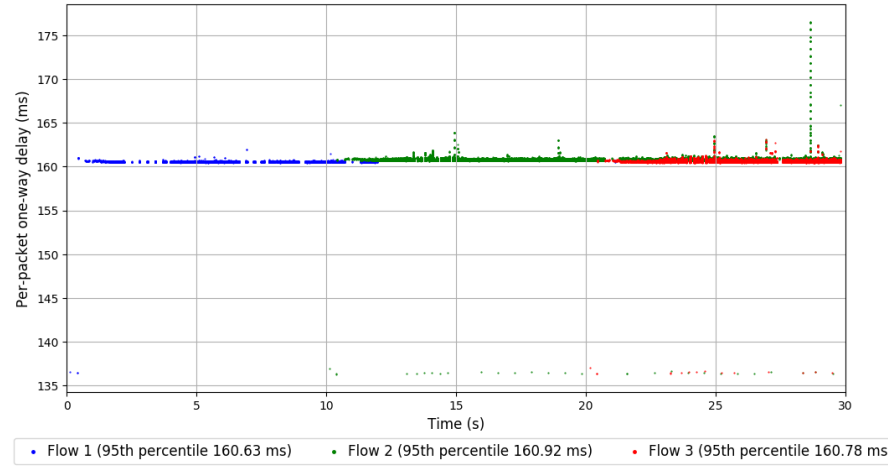
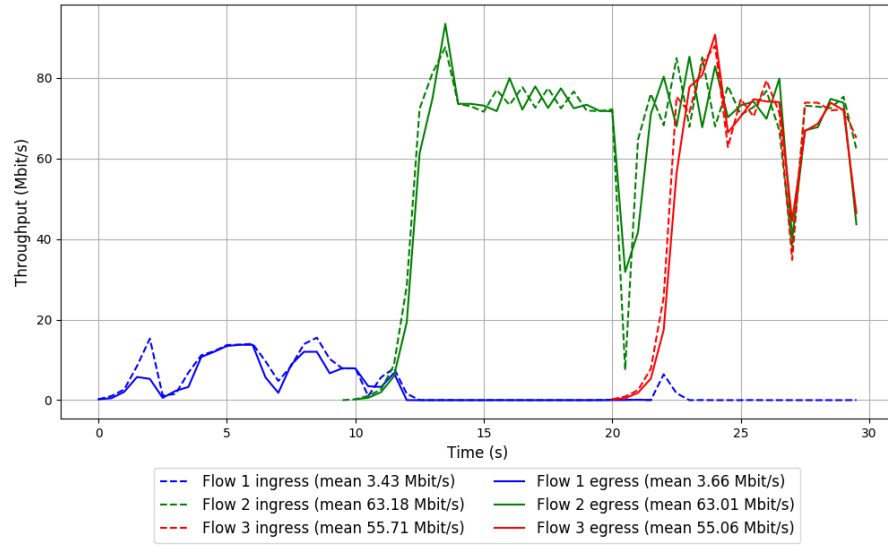
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	10	63.09	56.95	48.70	139.71	139.74	139.82	3.24	4.01	5.81
CalibratedKoho	8	43.30	65.67	6.58	1912.37	152.38	138.14	8.98	26.06	31.13
Copa	9	87.88	65.37	34.98	137.26	137.18	137.72	0.48	2.44	2.79
TCP Cubic	9	9.58	16.13	12.38	701.83	138.14	137.79	3.33	3.29	5.43
KohoCC	10	4.06	3.71	3.54	140.22	137.63	137.61	3.93	10.39	11.19
LEDBAT	10	1.96	2.18	1.26	137.89	137.81	137.69	1.78	2.37	5.21
PCC	10	221.24	61.52	100.77	143.45	143.06	143.14	13.94	20.27	8.49
QUIC Cubic	9	1.83	22.84	15.74	136.73	136.62	136.83	0.00	0.86	1.43
Saturator	10	6.71	6.78	4.81	137.98	137.98	137.87	17.15	16.88	31.27
SCReAM	10	0.21	0.22	0.22	137.10	136.61	136.65	0.83	1.38	2.60
Sprout	10	0.43	0.41	0.44	137.45	137.39	137.45	0.69	1.38	2.38
TaoVA-100x	10	118.34	32.22	28.75	140.08	137.93	140.55	1.17	11.20	4.06
TCP Vegas	10	9.68	7.47	7.49	140.23	140.48	140.63	1.53	3.04	5.58
Verus	10	43.71	39.33	14.80	156.41	144.81	141.09	36.26	27.71	54.81
WebRTC media	9	0.21	1.19	0.24	137.43	140.07	140.31	0.15	1.59	8.20

```
Run 1: Statistics of TCP BBR

Start at: 2017-08-21 10:56:30
End at: 2017-08-21 10:57:00

# Below is generated by plot.py at 2017-08-21 16:03:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.39 Mbit/s
95th percentile per-packet one-way delay: 160.899 ms
Loss rate: 3.42%
-- Flow 1:
Average throughput: 3.66 Mbit/s
95th percentile per-packet one-way delay: 160.632 ms
Loss rate: 21.97%
-- Flow 2:
Average throughput: 63.01 Mbit/s
95th percentile per-packet one-way delay: 160.918 ms
Loss rate: 1.70%
-- Flow 3:
Average throughput: 55.06 Mbit/s
95th percentile per-packet one-way delay: 160.782 ms
Loss rate: 3.89%
```

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2017-08-21 11:09:44

End at: 2017-08-21 11:10:14

Below is generated by plot.py at 2017-08-21 16:03:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 123.28 Mbit/s

95th percentile per-packet one-way delay: 137.399 ms

Loss rate: 1.91%

-- Flow 1:

Average throughput: 72.45 Mbit/s

95th percentile per-packet one-way delay: 137.395 ms

Loss rate: 1.01%

-- Flow 2:

Average throughput: 66.43 Mbit/s

95th percentile per-packet one-way delay: 137.419 ms

Loss rate: 1.82%

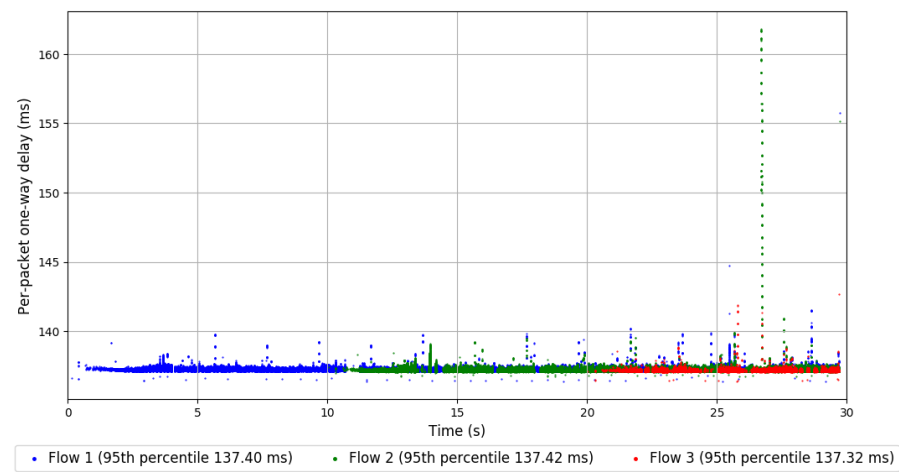
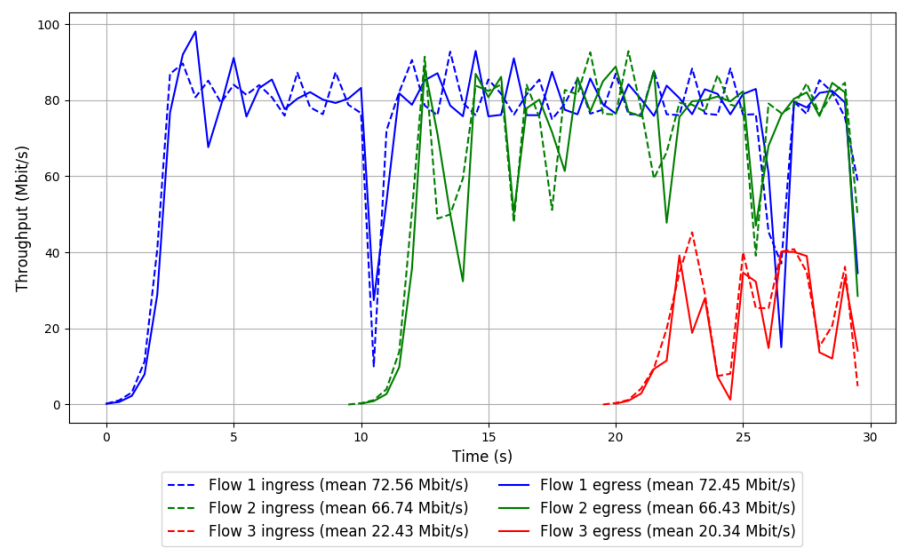
-- Flow 3:

Average throughput: 20.34 Mbit/s

95th percentile per-packet one-way delay: 137.319 ms

Loss rate: 11.21%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2017-08-21 11:23:51

End at: 2017-08-21 11:24:21

Below is generated by plot.py at 2017-08-21 16:03:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 86.20 Mbit/s

95th percentile per-packet one-way delay: 137.327 ms

Loss rate: 6.34%

-- Flow 1:

Average throughput: 57.90 Mbit/s

95th percentile per-packet one-way delay: 137.316 ms

Loss rate: 2.89%

-- Flow 2:

Average throughput: 34.32 Mbit/s

95th percentile per-packet one-way delay: 137.365 ms

Loss rate: 12.43%

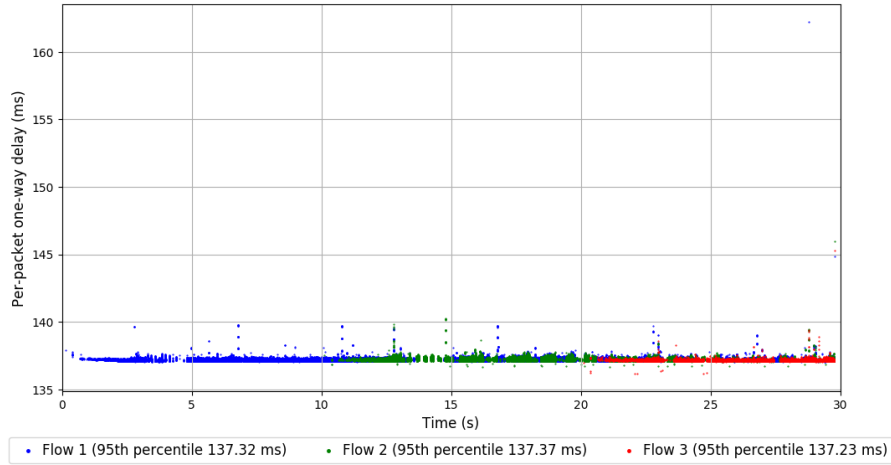
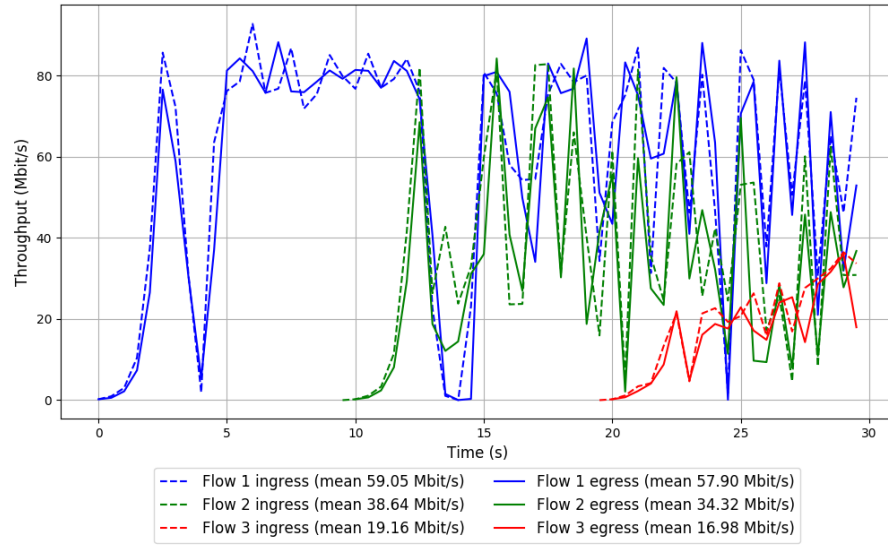
-- Flow 3:

Average throughput: 16.98 Mbit/s

95th percentile per-packet one-way delay: 137.232 ms

Loss rate: 13.75%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2017-08-21 11:37:28

End at: 2017-08-21 11:37:58

Below is generated by plot.py at 2017-08-21 16:03:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 127.34 Mbit/s

95th percentile per-packet one-way delay: 137.391 ms

Loss rate: 1.71%

-- Flow 1:

Average throughput: 71.57 Mbit/s

95th percentile per-packet one-way delay: 137.384 ms

Loss rate: 1.03%

-- Flow 2:

Average throughput: 62.38 Mbit/s

95th percentile per-packet one-way delay: 137.384 ms

Loss rate: 1.63%

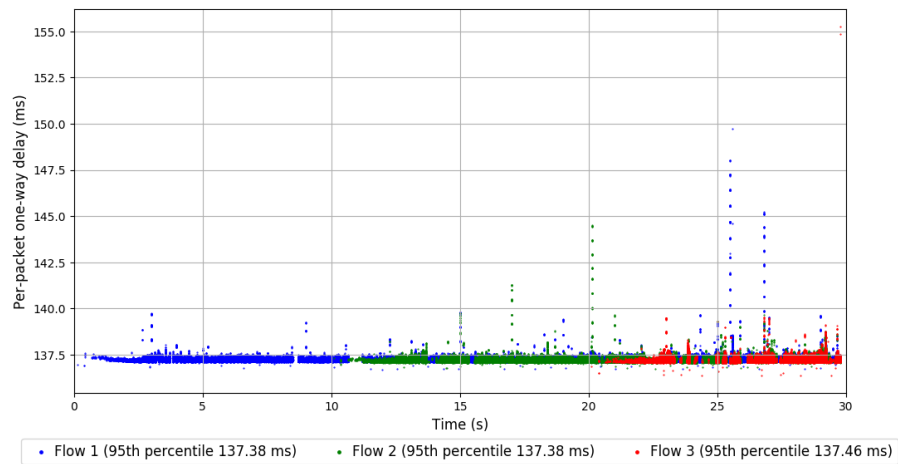
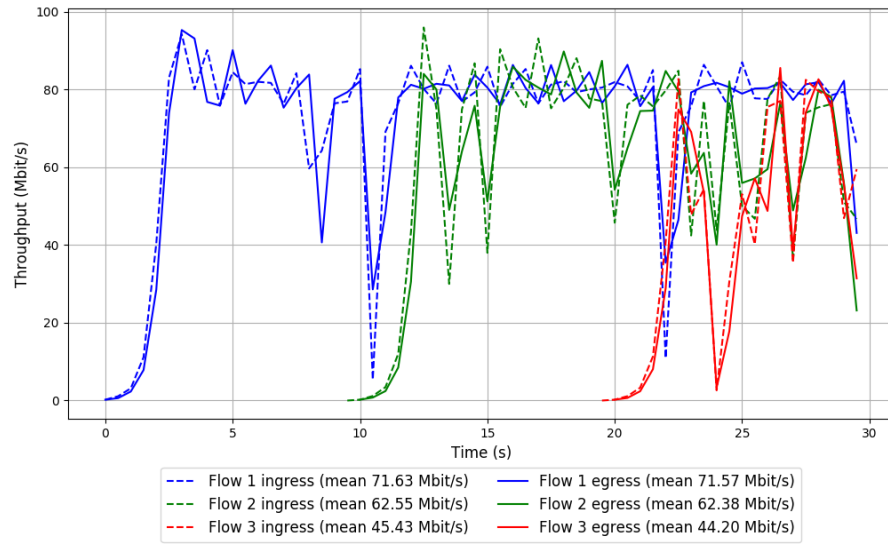
-- Flow 3:

Average throughput: 44.20 Mbit/s

95th percentile per-packet one-way delay: 137.463 ms

Loss rate: 5.20%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2017-08-21 11:51:10

End at: 2017-08-21 11:51:40

Below is generated by plot.py at 2017-08-21 16:03:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 132.55 Mbit/s

95th percentile per-packet one-way delay: 137.367 ms

Loss rate: 1.71%

-- Flow 1:

Average throughput: 67.37 Mbit/s

95th percentile per-packet one-way delay: 137.316 ms

Loss rate: 1.22%

-- Flow 2:

Average throughput: 67.15 Mbit/s

95th percentile per-packet one-way delay: 137.353 ms

Loss rate: 1.65%

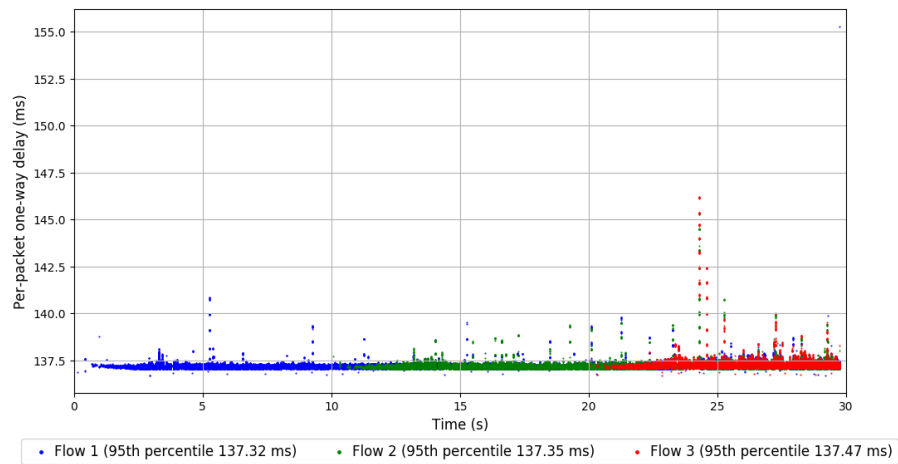
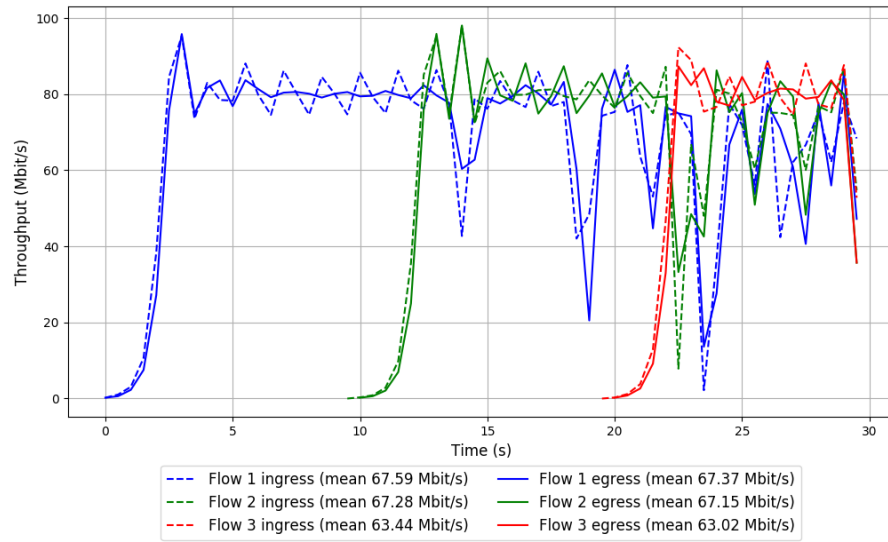
-- Flow 3:

Average throughput: 63.02 Mbit/s

95th percentile per-packet one-way delay: 137.471 ms

Loss rate: 3.41%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2017-08-21 12:04:53

End at: 2017-08-21 12:05:23

Below is generated by plot.py at 2017-08-21 16:04:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 138.84 Mbit/s

95th percentile per-packet one-way delay: 137.654 ms

Loss rate: 1.57%

-- Flow 1:

Average throughput: 71.34 Mbit/s

95th percentile per-packet one-way delay: 137.344 ms

Loss rate: 1.04%

-- Flow 2:

Average throughput: 72.35 Mbit/s

95th percentile per-packet one-way delay: 137.399 ms

Loss rate: 1.49%

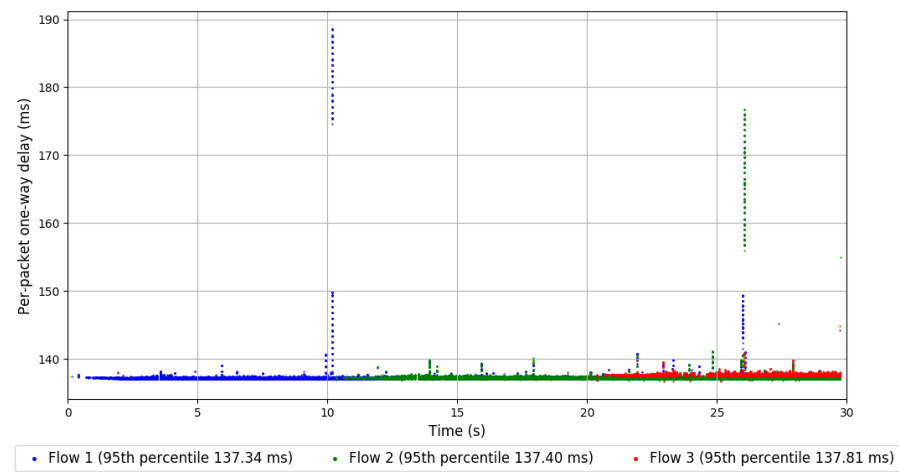
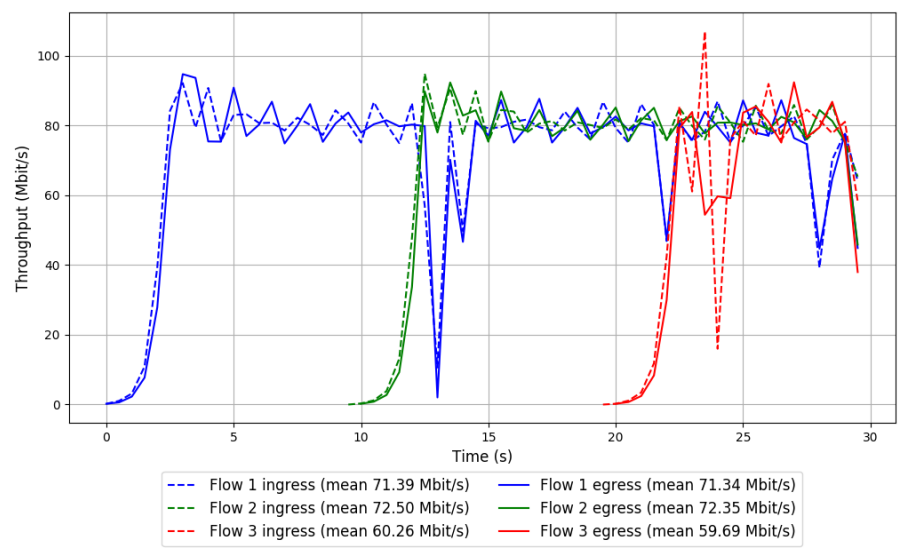
-- Flow 3:

Average throughput: 59.69 Mbit/s

95th percentile per-packet one-way delay: 137.806 ms

Loss rate: 3.62%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2017-08-21 12:18:33

End at: 2017-08-21 12:19:03

Below is generated by plot.py at 2017-08-21 16:04:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 130.91 Mbit/s

95th percentile per-packet one-way delay: 137.342 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 65.26 Mbit/s

95th percentile per-packet one-way delay: 137.288 ms

Loss rate: 0.23%

-- Flow 2:

Average throughput: 67.57 Mbit/s

95th percentile per-packet one-way delay: 137.344 ms

Loss rate: 1.59%

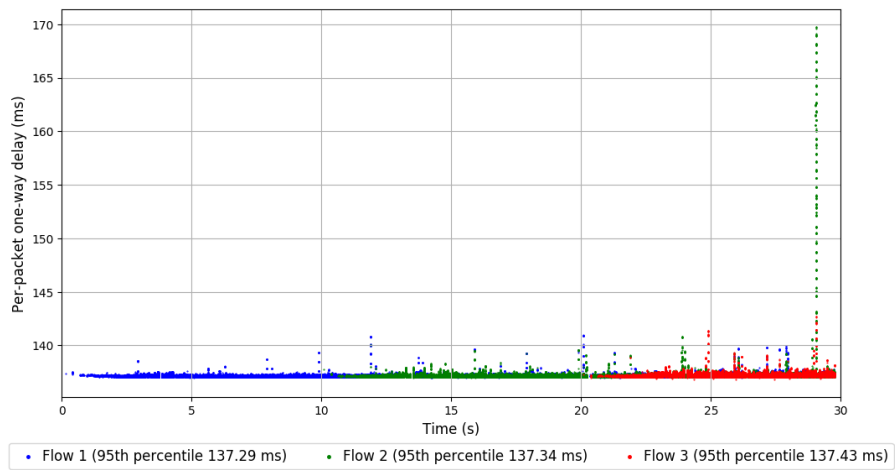
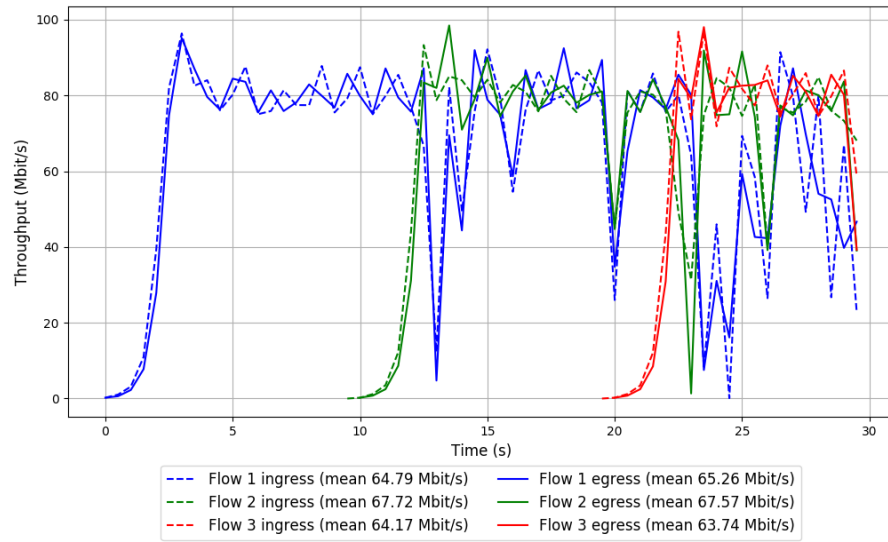
-- Flow 3:

Average throughput: 63.74 Mbit/s

95th percentile per-packet one-way delay: 137.429 ms

Loss rate: 3.46%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2017-08-21 12:32:05

End at: 2017-08-21 12:32:35

Below is generated by plot.py at 2017-08-21 16:04:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 112.97 Mbit/s

95th percentile per-packet one-way delay: 137.467 ms

Loss rate: 3.15%

-- Flow 1:

Average throughput: 74.62 Mbit/s

95th percentile per-packet one-way delay: 137.469 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 36.64 Mbit/s

95th percentile per-packet one-way delay: 137.405 ms

Loss rate: 7.64%

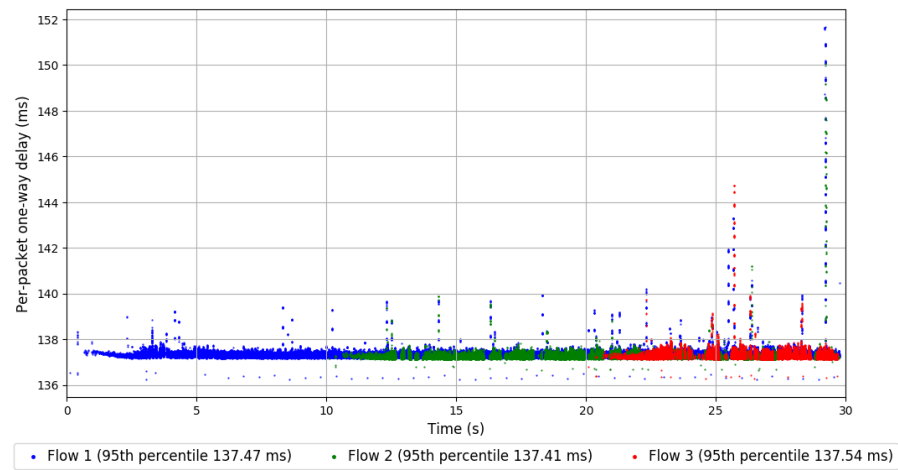
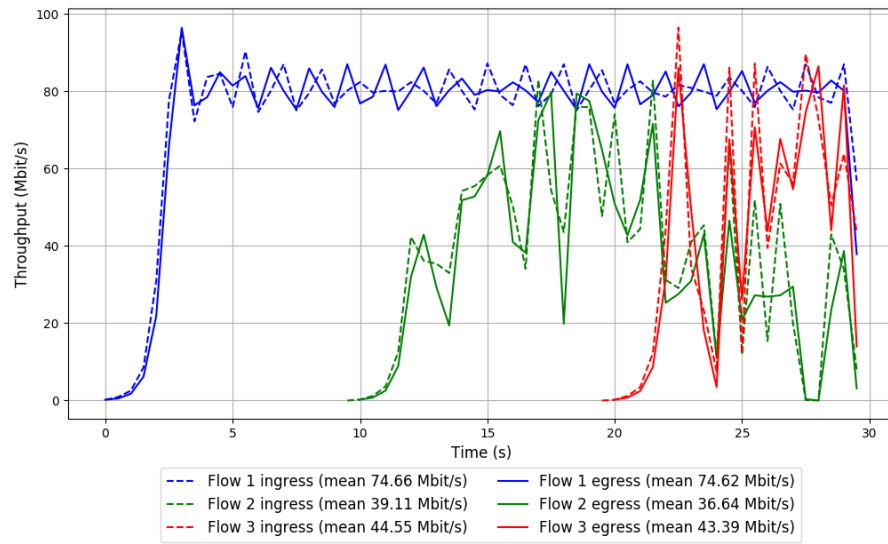
-- Flow 3:

Average throughput: 43.39 Mbit/s

95th percentile per-packet one-way delay: 137.536 ms

Loss rate: 6.14%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2017-08-21 12:45:33

End at: 2017-08-21 12:46:03

Below is generated by plot.py at 2017-08-21 16:04:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 135.77 Mbit/s

95th percentile per-packet one-way delay: 137.483 ms

Loss rate: 1.70%

-- Flow 1:

Average throughput: 73.23 Mbit/s

95th percentile per-packet one-way delay: 137.463 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 65.97 Mbit/s

95th percentile per-packet one-way delay: 137.475 ms

Loss rate: 1.86%

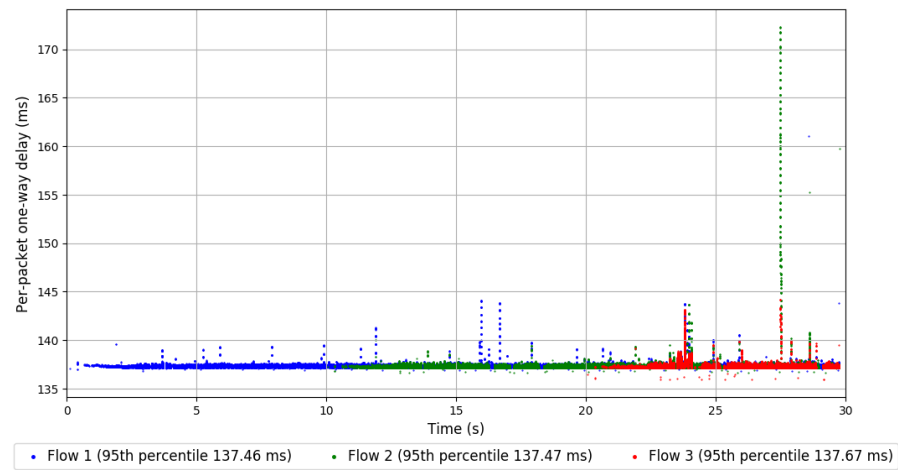
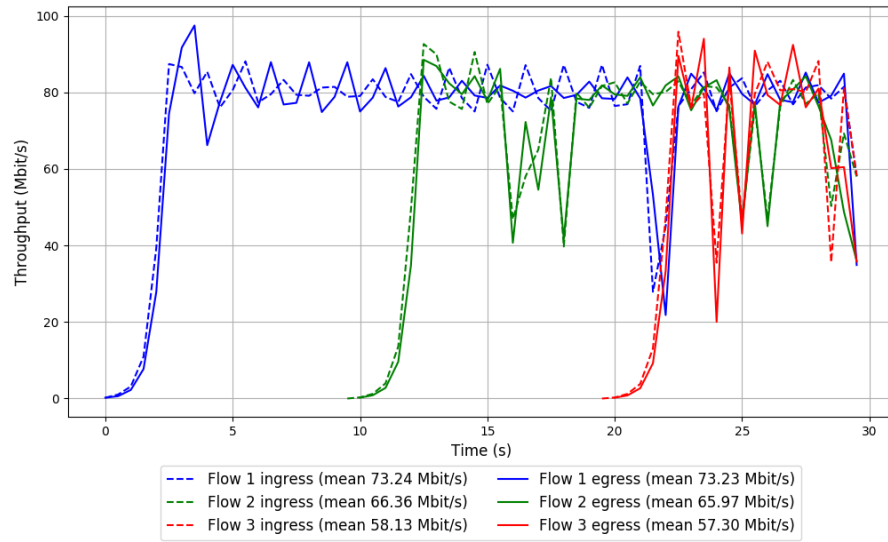
-- Flow 3:

Average throughput: 57.30 Mbit/s

95th percentile per-packet one-way delay: 137.672 ms

Loss rate: 4.07%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

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

End at: 2017-08-21 12:59:38

Below is generated by plot.py at 2017-08-21 16:04:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 116.57 Mbit/s

95th percentile per-packet one-way delay: 137.462 ms

Loss rate: 2.91%

-- Flow 1:

Average throughput: 73.55 Mbit/s

95th percentile per-packet one-way delay: 137.465 ms

Loss rate: 1.01%

-- Flow 2:

Average throughput: 33.68 Mbit/s

95th percentile per-packet one-way delay: 137.373 ms

Loss rate: 8.28%

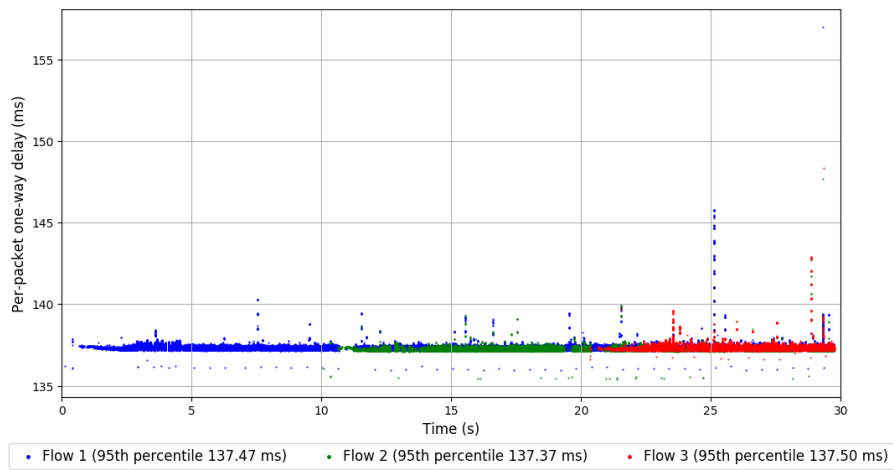
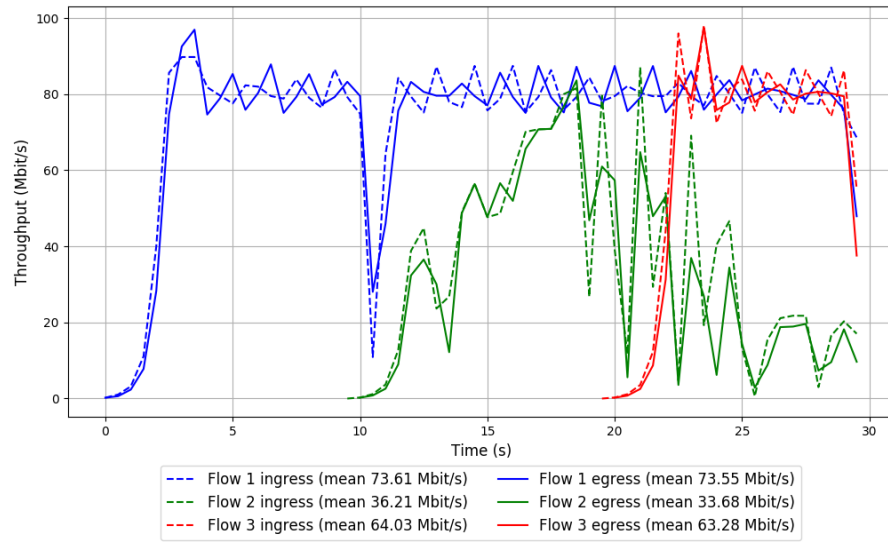
-- Flow 3:

Average throughput: 63.28 Mbit/s

95th percentile per-packet one-way delay: 137.505 ms

Loss rate: 3.35%

Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of CalibratedKoho

Start at: 2017-08-21 11:08:52

End at: 2017-08-21 11:09:22

Below is generated by plot.py at 2017-08-21 16:04:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 9.98 Mbit/s

95th percentile per-packet one-way delay: 137.923 ms

Loss rate: 50.16%

-- Flow 1:

Average throughput: 1.97 Mbit/s

95th percentile per-packet one-way delay: 3484.894 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.76 Mbit/s

95th percentile per-packet one-way delay: 137.494 ms

Loss rate: 62.09%

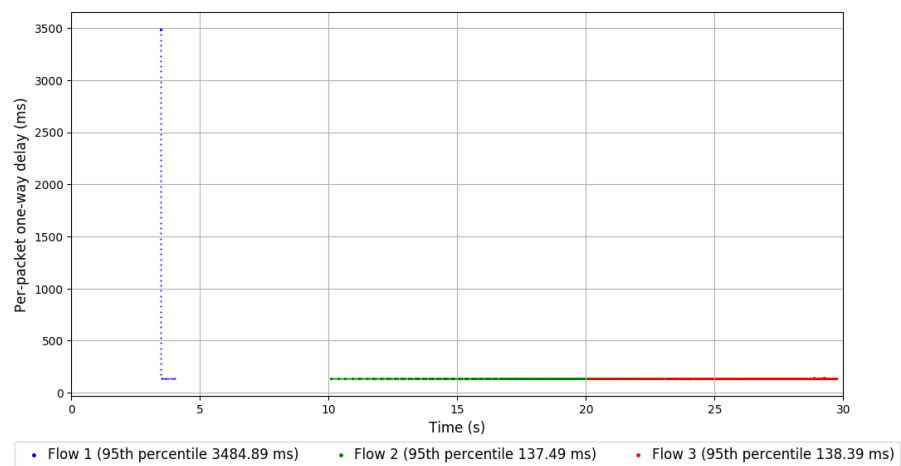
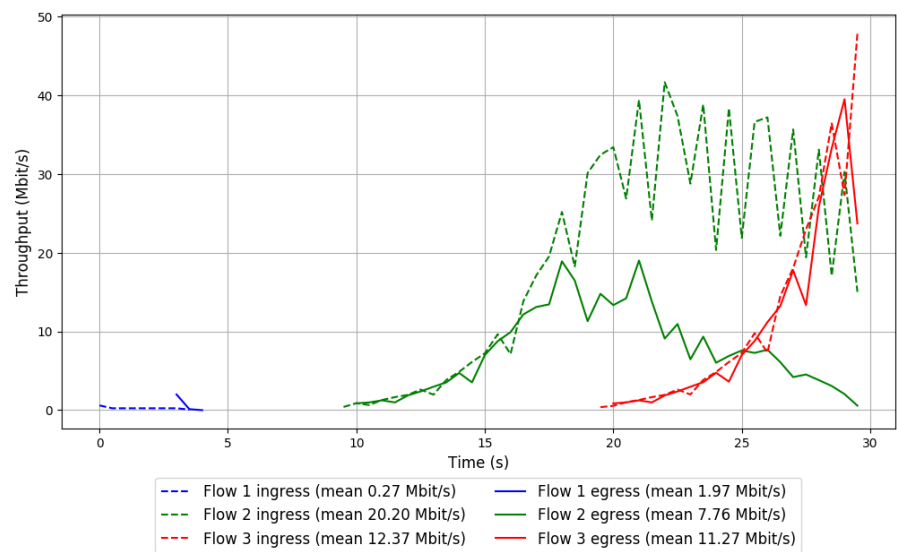
-- Flow 3:

Average throughput: 11.27 Mbit/s

95th percentile per-packet one-way delay: 138.389 ms

Loss rate: 11.42%

Run 1: Report of CalibratedKoho — Data Link



Run 2: Statistics of CalibratedKoho

Start at: 2017-08-21 11:22:41

End at: 2017-08-21 11:23:11

Below is generated by plot.py at 2017-08-21 16:05:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 215.33 Mbit/s

95th percentile per-packet one-way delay: 171.489 ms

Loss rate: 1.76%

-- Flow 1:

Average throughput: 163.31 Mbit/s

95th percentile per-packet one-way delay: 170.914 ms

Loss rate: 1.09%

-- Flow 2:

Average throughput: 78.36 Mbit/s

95th percentile per-packet one-way delay: 174.476 ms

Loss rate: 3.56%

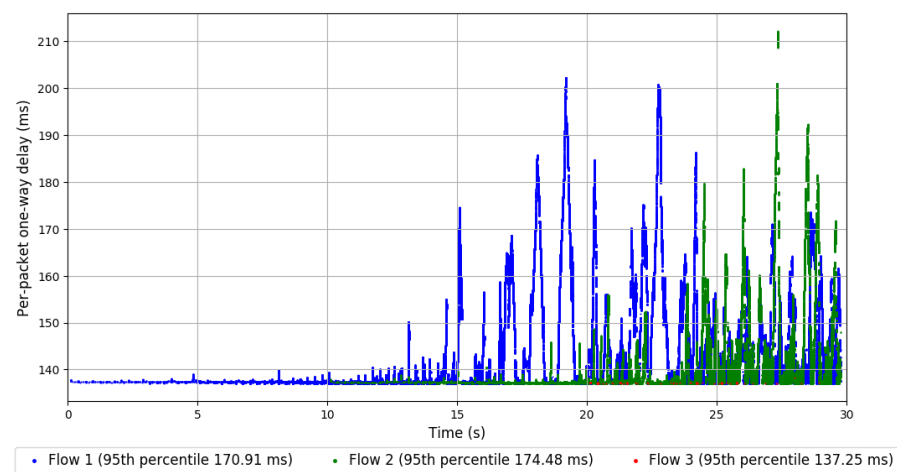
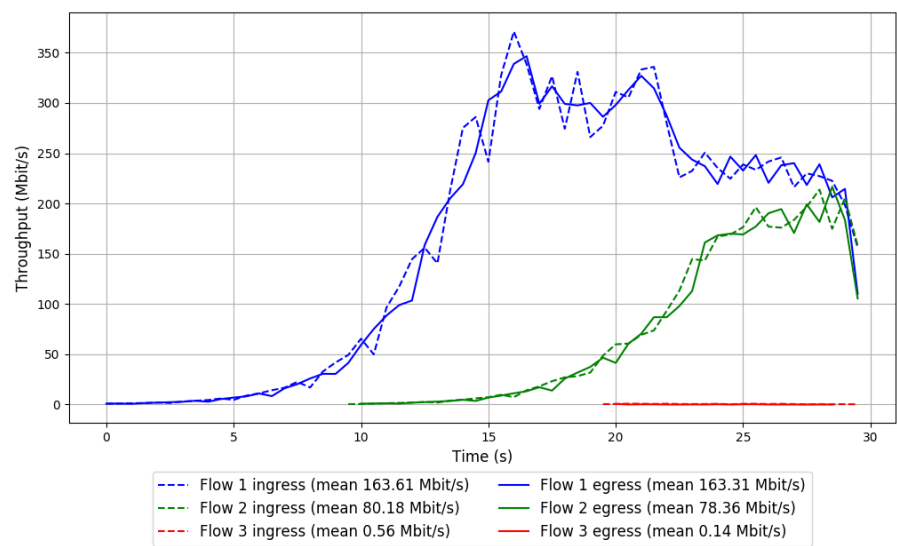
-- Flow 3:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 137.246 ms

Loss rate: 77.22%

Run 2: Report of CalibratedKoho — Data Link



Run 3: Statistics of CalibratedKoho

Start at: 2017-08-21 11:36:30

End at: 2017-08-21 11:37:00

Below is generated by plot.py at 2017-08-21 16:05:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 99.57 Mbit/s

95th percentile per-packet one-way delay: 142.616 ms

Loss rate: 4.35%

-- Flow 1:

Average throughput: 1.60 Mbit/s

95th percentile per-packet one-way delay: 2633.325 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 134.47 Mbit/s

95th percentile per-packet one-way delay: 142.668 ms

Loss rate: 3.76%

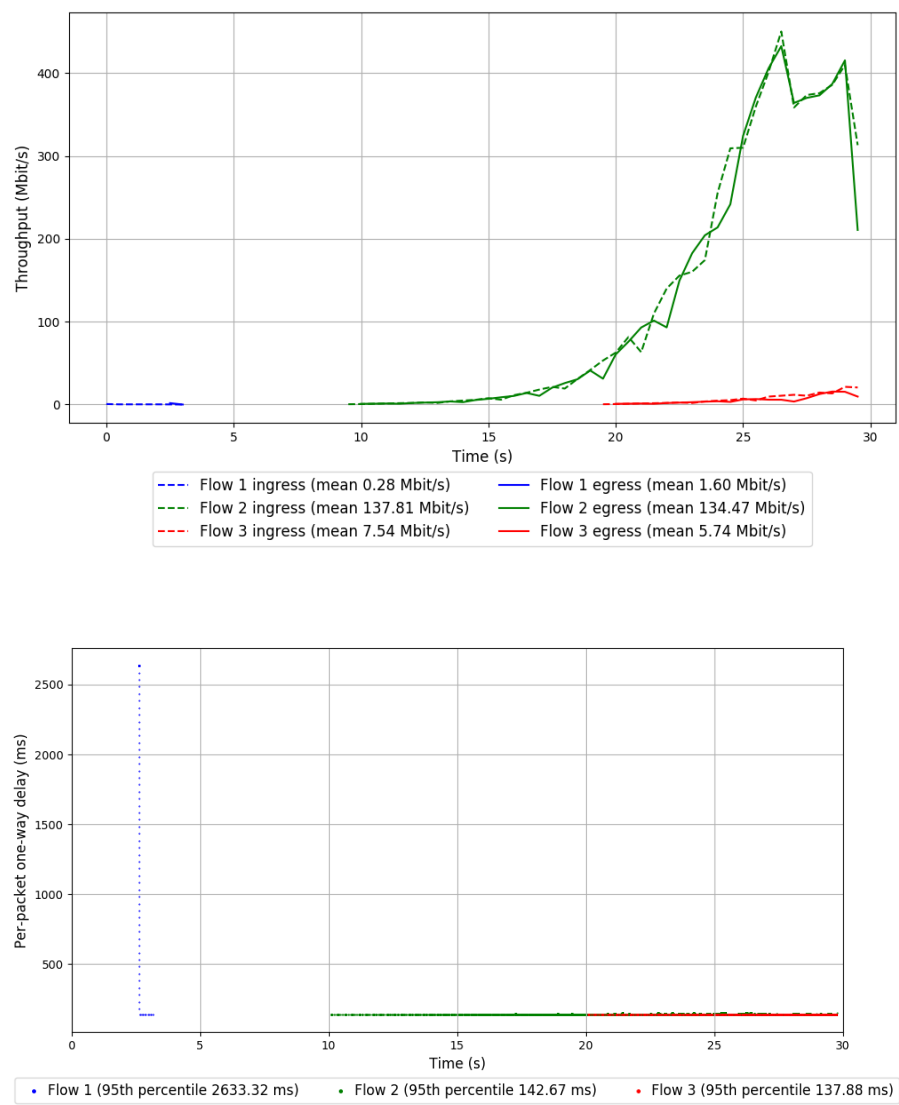
-- Flow 3:

Average throughput: 5.74 Mbit/s

95th percentile per-packet one-way delay: 137.883 ms

Loss rate: 25.95%

Run 3: Report of CalibratedKoho — Data Link



Run 4: Statistics of CalibratedKoho

Start at: 2017-08-21 11:50:12

End at: 2017-08-21 11:50:42

Below is generated by plot.py at 2017-08-21 16:05:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 82.83 Mbit/s

95th percentile per-packet one-way delay: 175.179 ms

Loss rate: 12.32%

-- Flow 1:

Average throughput: 4.23 Mbit/s

95th percentile per-packet one-way delay: 137.557 ms

Loss rate: 64.26%

-- Flow 2:

Average throughput: 117.28 Mbit/s

95th percentile per-packet one-way delay: 177.599 ms

Loss rate: 4.12%

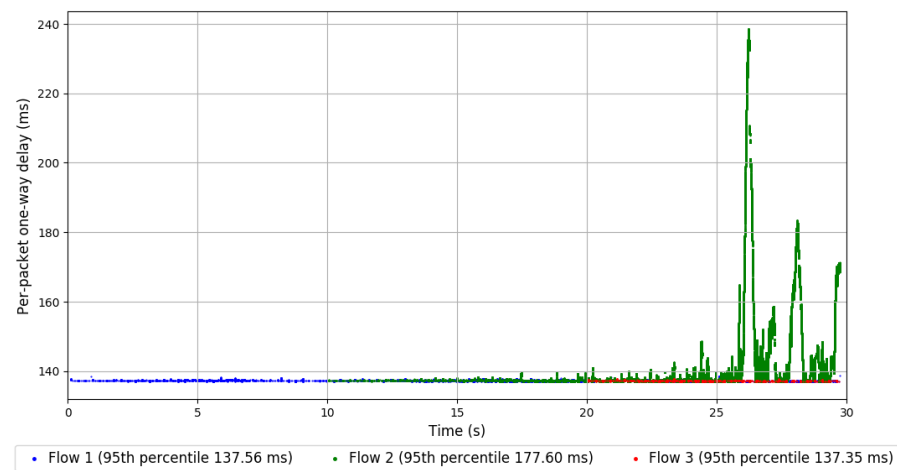
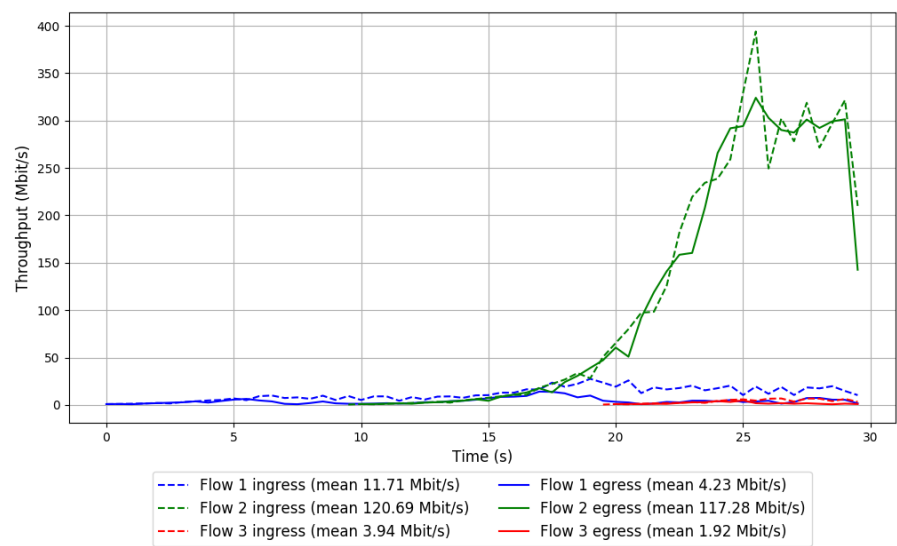
-- Flow 3:

Average throughput: 1.92 Mbit/s

95th percentile per-packet one-way delay: 137.351 ms

Loss rate: 52.51%

Run 4: Report of CalibratedKoho — Data Link



Run 5: Statistics of CalibratedKoho

Start at: 2017-08-21 12:03:56

End at: 2017-08-21 12:04:26

Below is generated by plot.py at 2017-08-21 16:05:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 100.35 Mbit/s

95th percentile per-packet one-way delay: 158.948 ms

Loss rate: 4.11%

-- Flow 1:

Average throughput: 2.96 Mbit/s

95th percentile per-packet one-way delay: 5324.800 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 119.88 Mbit/s

95th percentile per-packet one-way delay: 159.136 ms

Loss rate: 3.78%

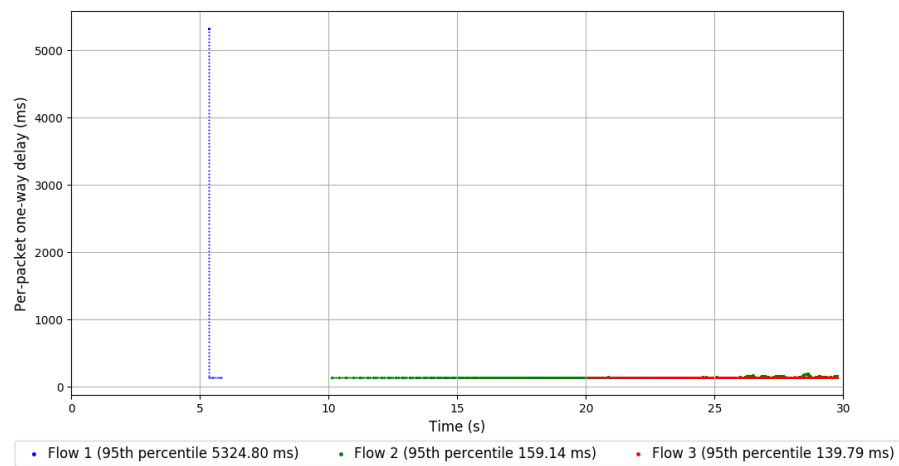
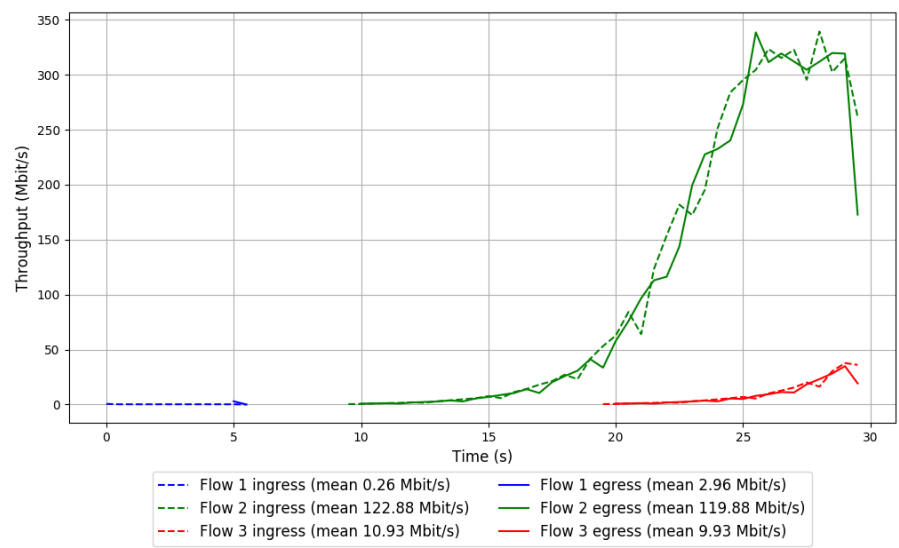
-- Flow 3:

Average throughput: 9.93 Mbit/s

95th percentile per-packet one-way delay: 139.787 ms

Loss rate: 11.66%

Run 5: Report of CalibratedKoho — Data Link



Run 6: Statistics of CalibratedKoho

Start at: 2017-08-21 12:17:25

End at: 2017-08-21 12:17:55

Below is generated by plot.py at 2017-08-21 16:06:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 211.37 Mbit/s

95th percentile per-packet one-way delay: 158.150 ms

Loss rate: 6.71%

-- Flow 1:

Average throughput: 169.89 Mbit/s

95th percentile per-packet one-way delay: 159.492 ms

Loss rate: 6.49%

-- Flow 2:

Average throughput: 61.91 Mbit/s

95th percentile per-packet one-way delay: 152.302 ms

Loss rate: 6.90%

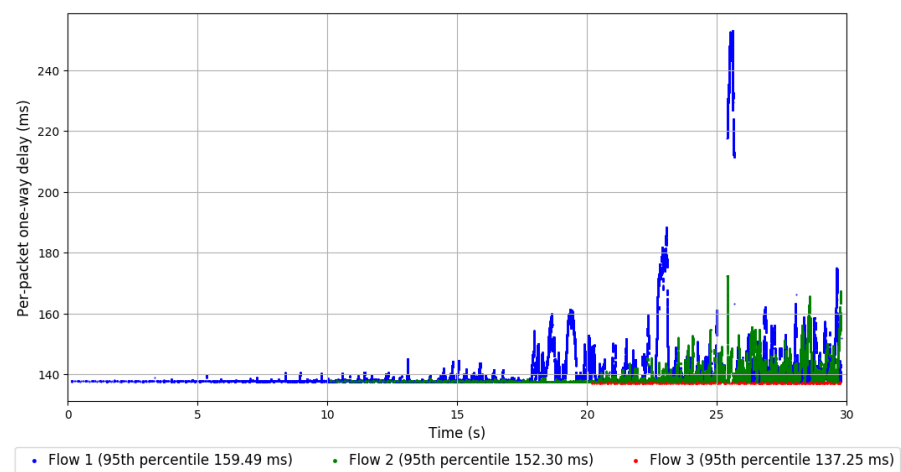
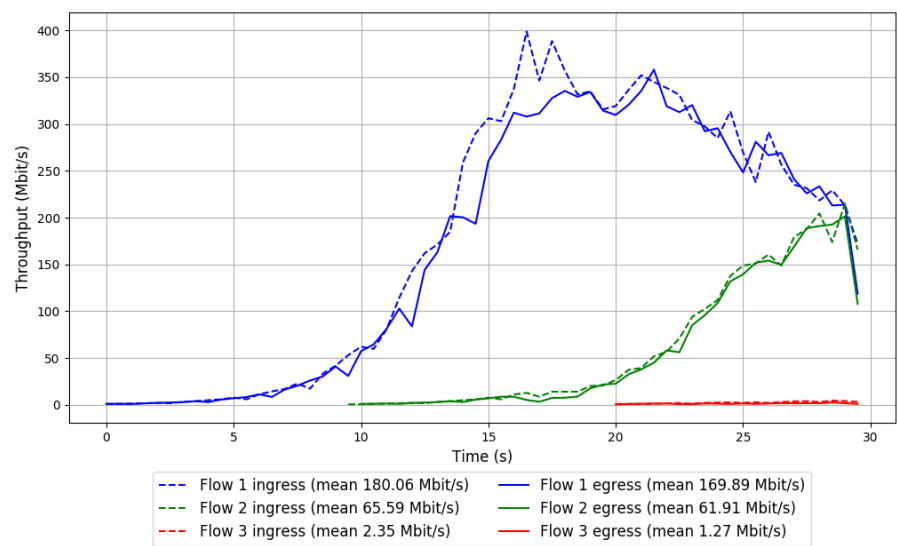
-- Flow 3:

Average throughput: 1.27 Mbit/s

95th percentile per-packet one-way delay: 137.252 ms

Loss rate: 47.53%

Run 6: Report of CalibratedKoho — Data Link



Run 7: Statistics of CalibratedKoho

Start at: 2017-08-21 12:31:14

End at: 2017-08-21 12:31:44

Below is generated by plot.py at 2017-08-21 16:06:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.58 Mbit/s

95th percentile per-packet one-way delay: 139.416 ms

Loss rate: 45.31%

-- Flow 1:

Average throughput: 1.23 Mbit/s

95th percentile per-packet one-way delay: 1664.644 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 3.86 Mbit/s

95th percentile per-packet one-way delay: 137.824 ms

Loss rate: 64.78%

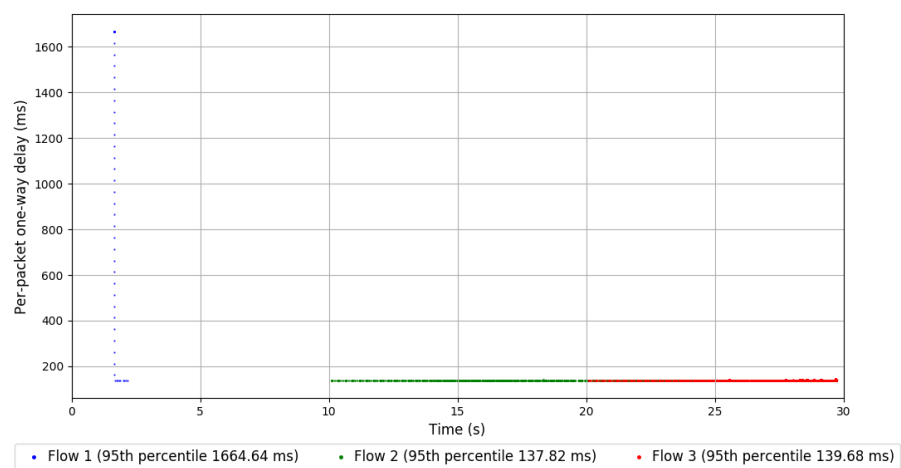
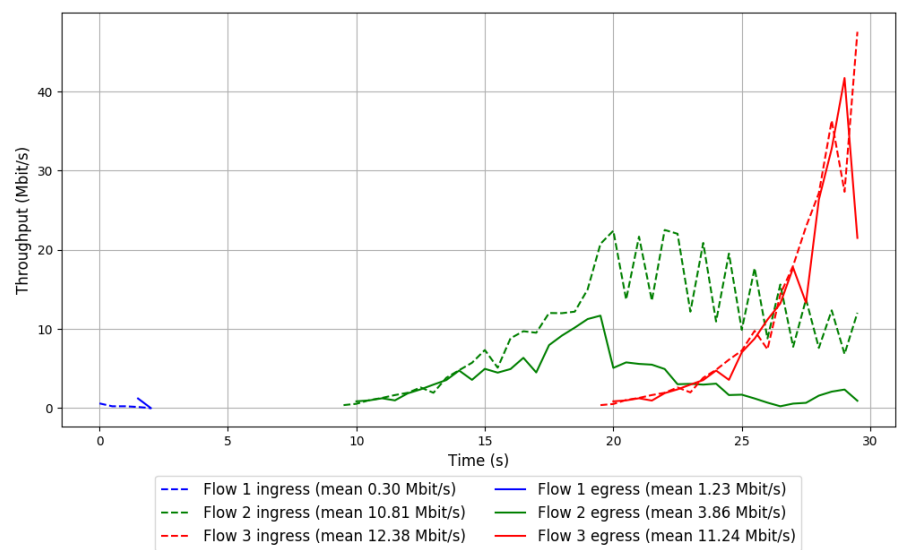
-- Flow 3:

Average throughput: 11.24 Mbit/s

95th percentile per-packet one-way delay: 139.676 ms

Loss rate: 11.28%

Run 7: Report of CalibratedKoho — Data Link



Run 8: Statistics of CalibratedKoho

Start at: 2017-08-21 12:44:43

End at: 2017-08-21 12:45:13

Below is generated by plot.py at 2017-08-21 16:06:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.14 Mbit/s

95th percentile per-packet one-way delay: 137.551 ms

Loss rate: 31.75%

-- Flow 1:

Average throughput: 1.18 Mbit/s

95th percentile per-packet one-way delay: 1723.308 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.84 Mbit/s

95th percentile per-packet one-way delay: 137.559 ms

Loss rate: 59.51%

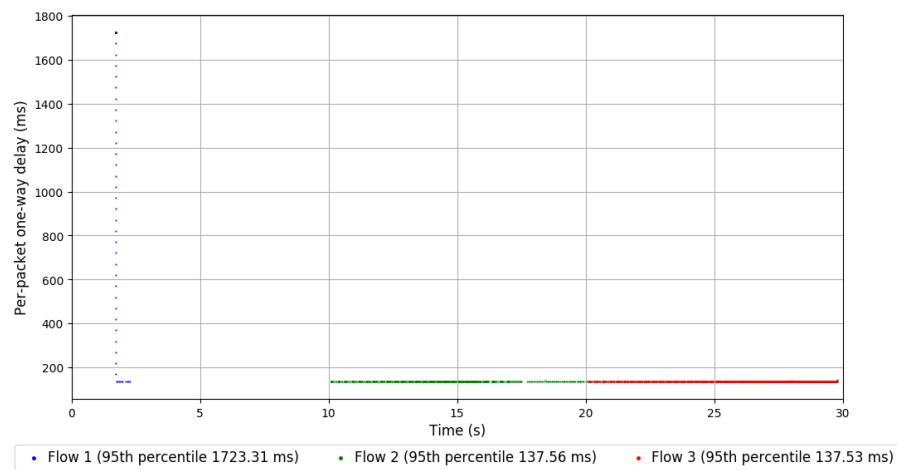
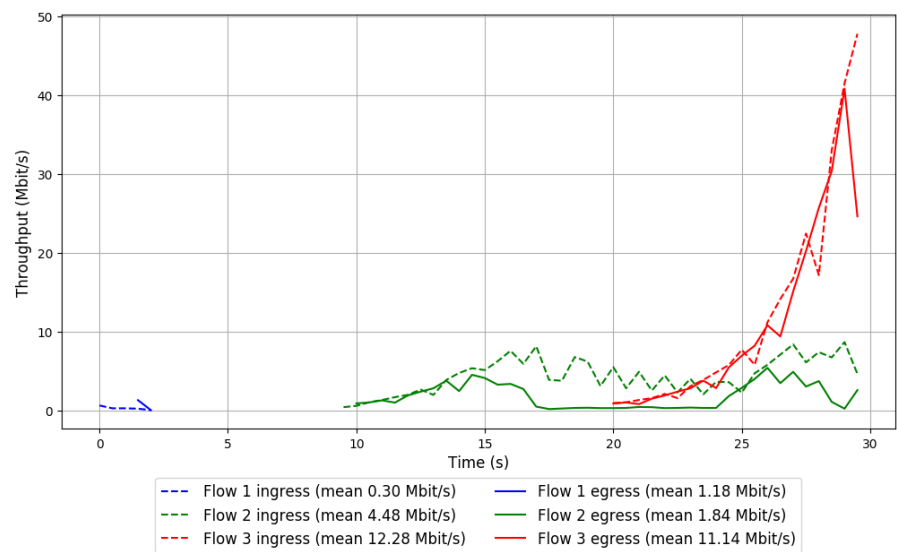
-- Flow 3:

Average throughput: 11.14 Mbit/s

95th percentile per-packet one-way delay: 137.526 ms

Loss rate: 11.50%

Run 8: Report of CalibratedKoho — Data Link

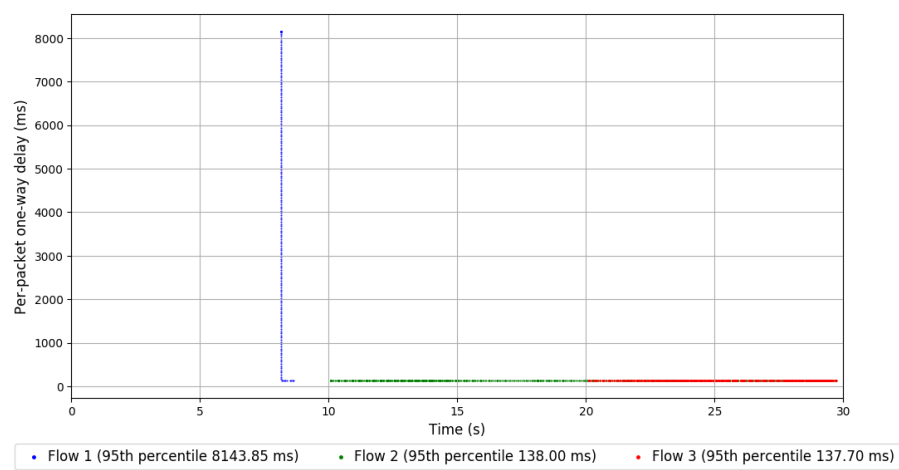
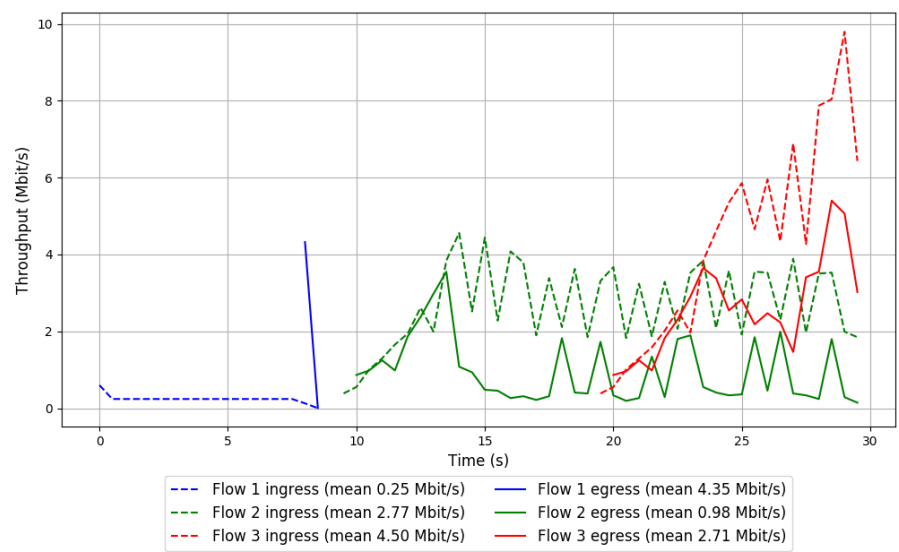


Run 9: Statistics of CalibratedKoho

Start at: 2017-08-21 12:58:18

End at: 2017-08-21 12:58:48

Run 9: Report of CalibratedKoho — Data Link

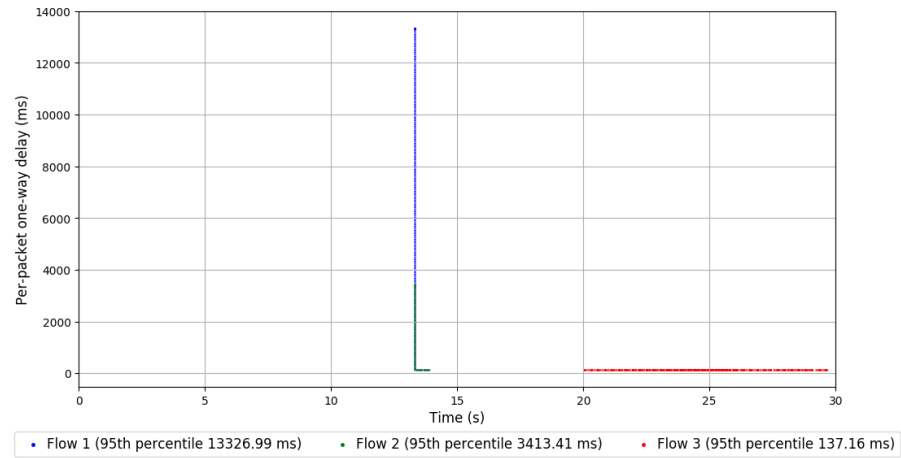
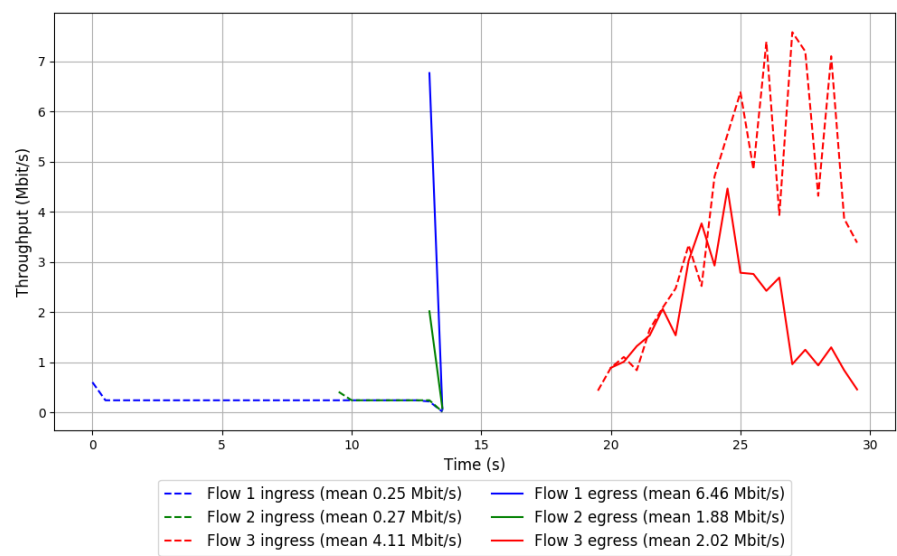


Run 10: Statistics of CalibratedKoho

Start at: 2017-08-21 13:12:00

End at: 2017-08-21 13:12:30

Run 10: Report of CalibratedKoho — Data Link



Run 1: Statistics of Copa

Start at: 2017-08-21 11:07:46

End at: 2017-08-21 11:08:16

Below is generated by plot.py at 2017-08-21 16:06:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 138.77 Mbit/s

95th percentile per-packet one-way delay: 137.253 ms

Loss rate: 1.74%

-- Flow 1:

Average throughput: 82.18 Mbit/s

95th percentile per-packet one-way delay: 137.213 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 56.86 Mbit/s

95th percentile per-packet one-way delay: 137.231 ms

Loss rate: 4.70%

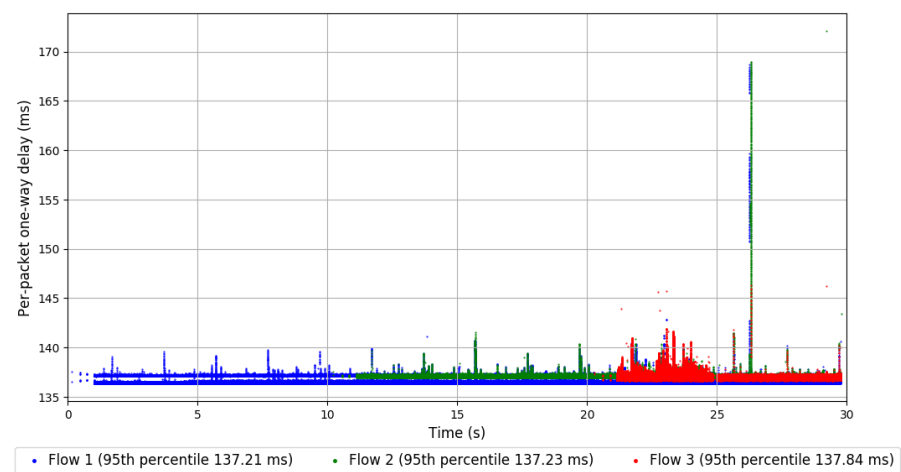
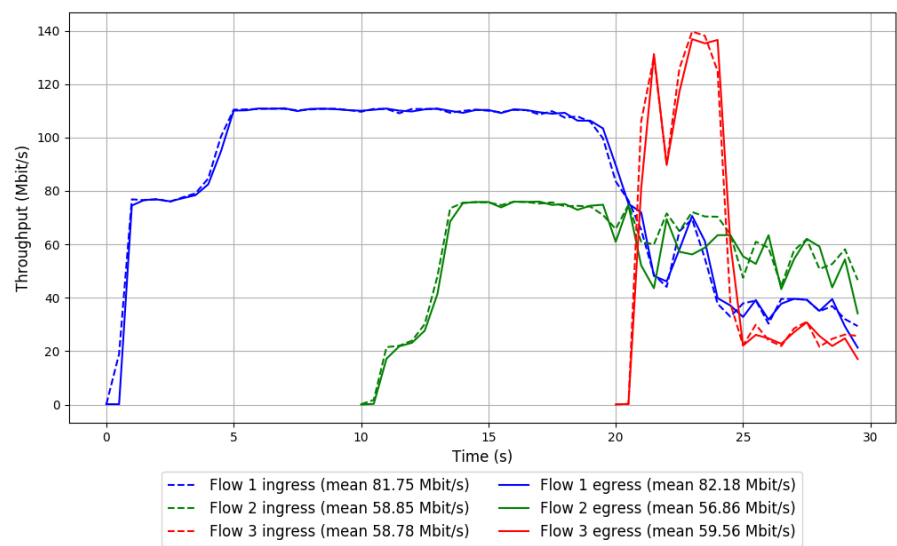
-- Flow 3:

Average throughput: 59.56 Mbit/s

95th percentile per-packet one-way delay: 137.838 ms

Loss rate: 1.50%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2017-08-21 11:21:31

End at: 2017-08-21 11:22:02

Below is generated by plot.py at 2017-08-21 16:07:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 163.71 Mbit/s

95th percentile per-packet one-way delay: 137.787 ms

Loss rate: 3.15%

-- Flow 1:

Average throughput: 101.67 Mbit/s

95th percentile per-packet one-way delay: 137.200 ms

Loss rate: 0.65%

-- Flow 2:

Average throughput: 63.92 Mbit/s

95th percentile per-packet one-way delay: 137.209 ms

Loss rate: 8.82%

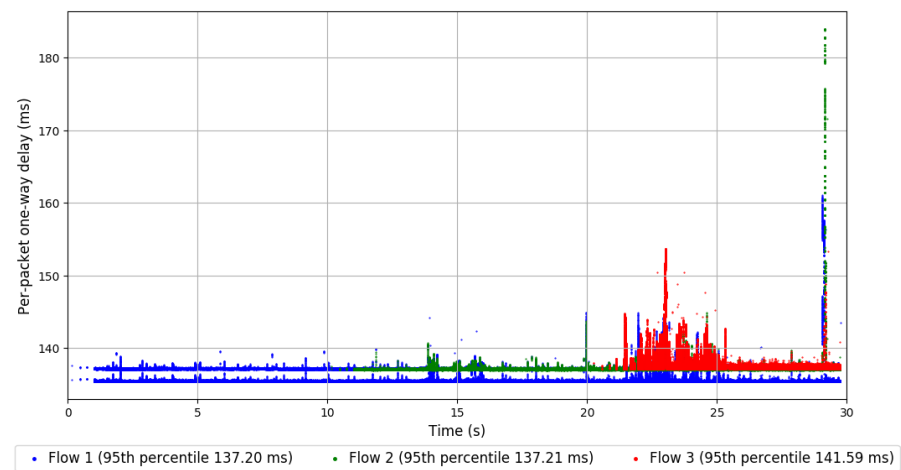
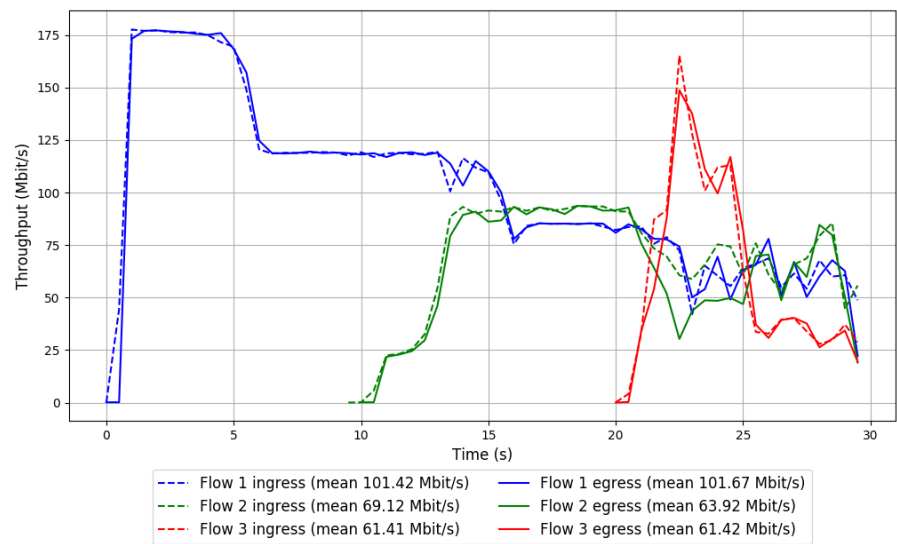
-- Flow 3:

Average throughput: 61.42 Mbit/s

95th percentile per-packet one-way delay: 141.592 ms

Loss rate: 2.79%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2017-08-21 11:35:22

End at: 2017-08-21 11:35:52

Below is generated by plot.py at 2017-08-21 16:07:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 154.86 Mbit/s

95th percentile per-packet one-way delay: 137.174 ms

Loss rate: 1.09%

-- Flow 1:

Average throughput: 134.43 Mbit/s

95th percentile per-packet one-way delay: 137.165 ms

Loss rate: 0.58%

-- Flow 2:

Average throughput: 0.19 Mbit/s

95th percentile per-packet one-way delay: 137.134 ms

Loss rate: 0.00%

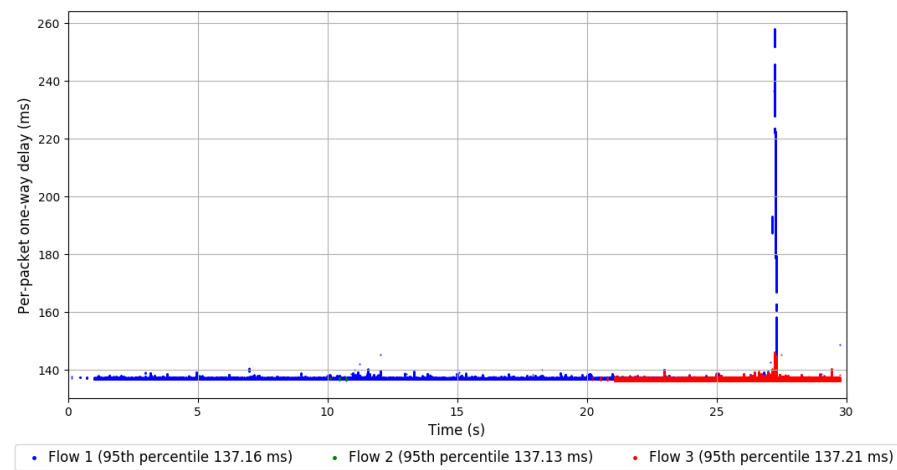
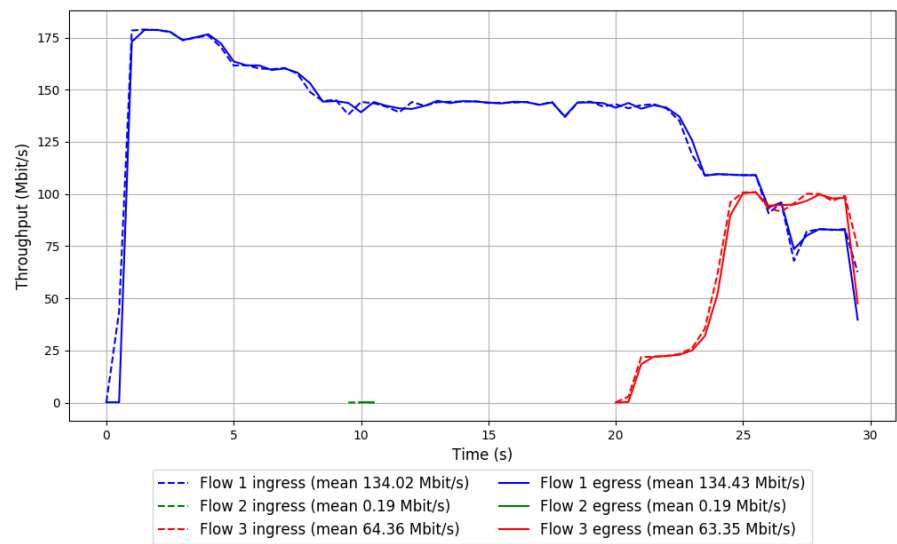
-- Flow 3:

Average throughput: 63.35 Mbit/s

95th percentile per-packet one-way delay: 137.206 ms

Loss rate: 4.30%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2017-08-21 11:49:07

End at: 2017-08-21 11:49:37

Below is generated by plot.py at 2017-08-21 16:07:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 128.82 Mbit/s

95th percentile per-packet one-way delay: 137.353 ms

Loss rate: 1.18%

-- Flow 1:

Average throughput: 76.07 Mbit/s

95th percentile per-packet one-way delay: 137.399 ms

Loss rate: 0.60%

-- Flow 2:

Average throughput: 67.28 Mbit/s

95th percentile per-packet one-way delay: 137.217 ms

Loss rate: 1.63%

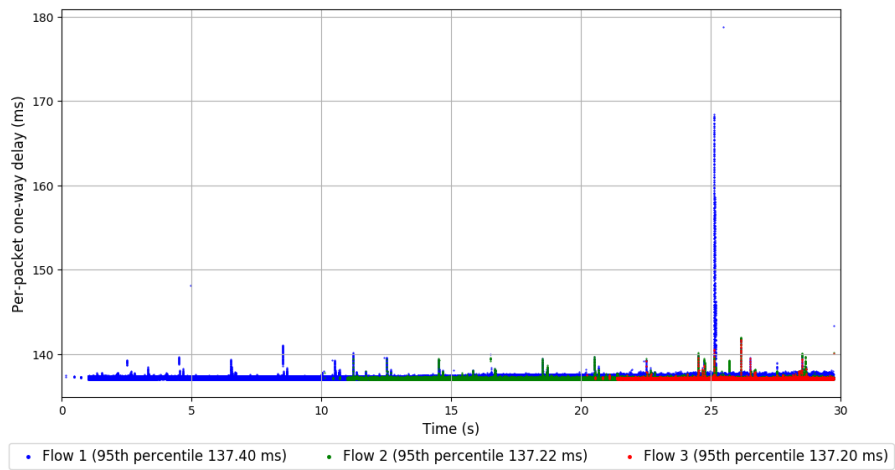
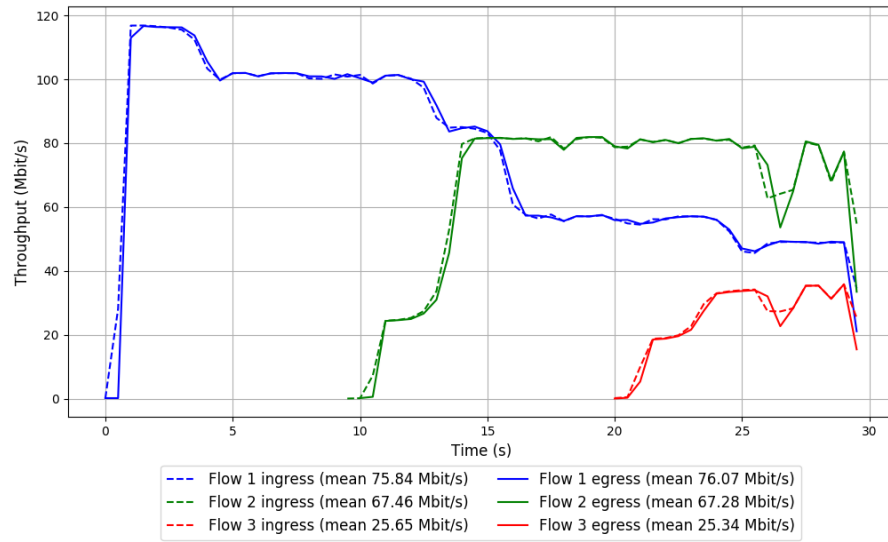
-- Flow 3:

Average throughput: 25.34 Mbit/s

95th percentile per-packet one-way delay: 137.198 ms

Loss rate: 3.92%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2017-08-21 12:02:48

End at: 2017-08-21 12:03:18

Below is generated by plot.py at 2017-08-21 16:08:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 147.91 Mbit/s

95th percentile per-packet one-way delay: 137.702 ms

Loss rate: 0.82%

-- Flow 1:

Average throughput: 93.35 Mbit/s

95th percentile per-packet one-way delay: 137.740 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 71.01 Mbit/s

95th percentile per-packet one-way delay: 137.456 ms

Loss rate: 0.96%

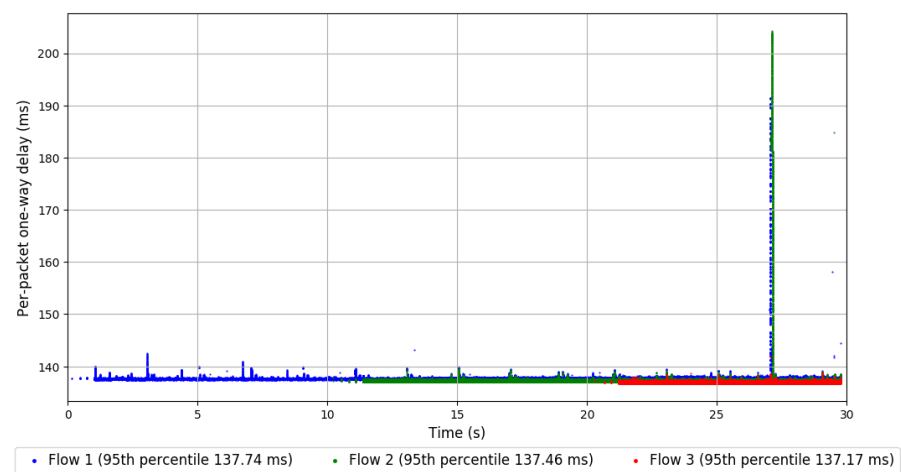
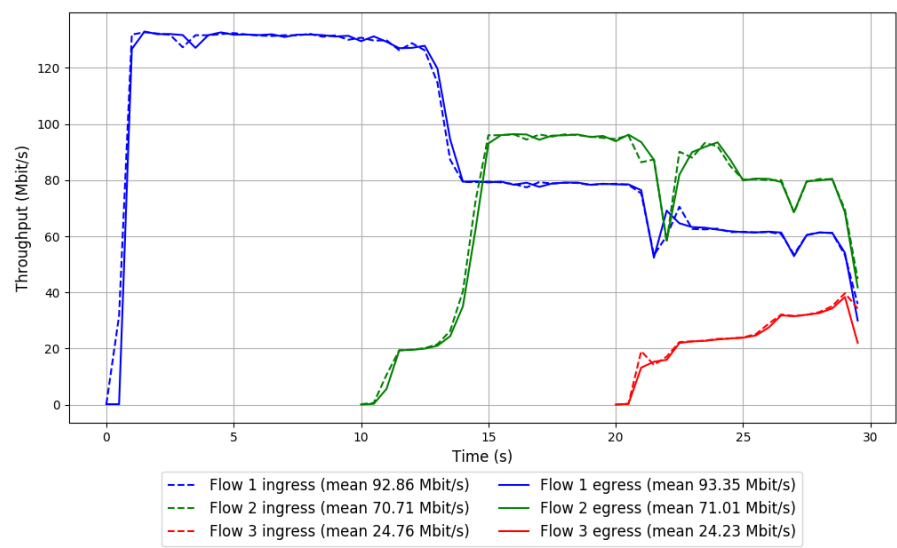
-- Flow 3:

Average throughput: 24.23 Mbit/s

95th percentile per-packet one-way delay: 137.170 ms

Loss rate: 4.91%

Run 5: Report of Copa — Data Link

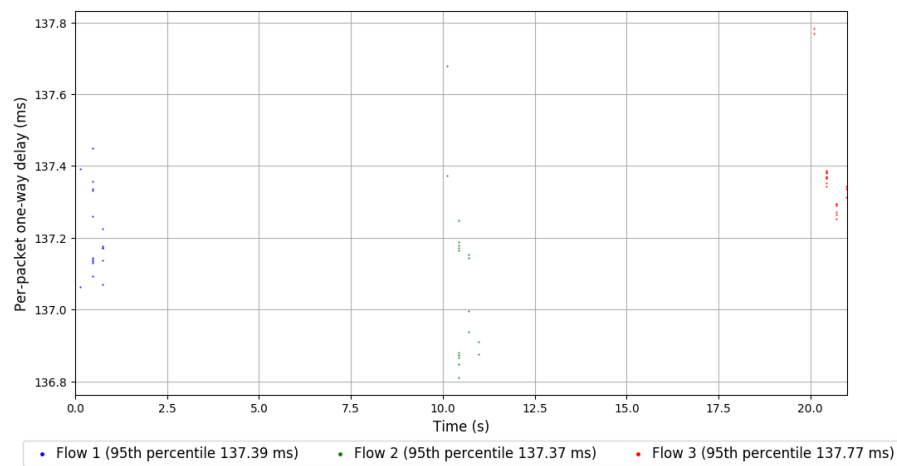
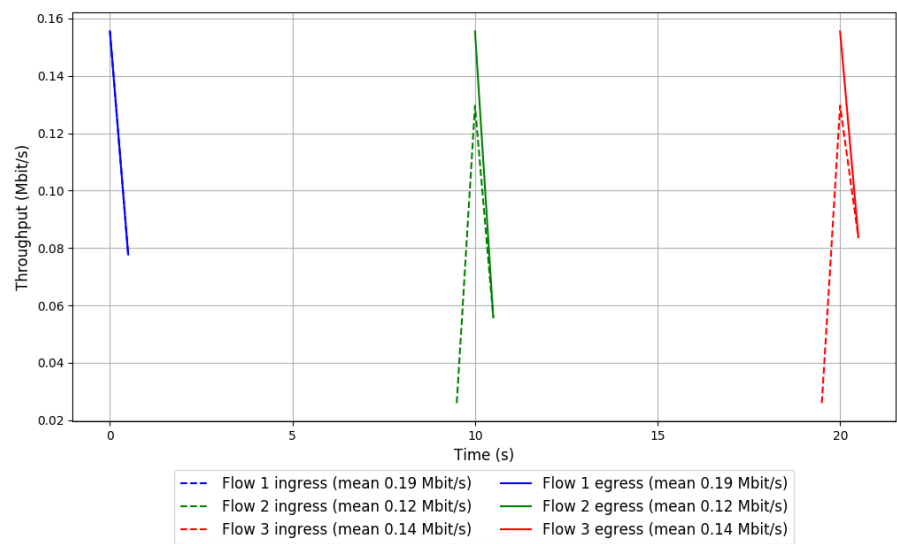


Run 6: Statistics of Copa

Start at: 2017-08-21 12:16:36

End at: 2017-08-21 12:17:06

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2017-08-21 12:30:05

End at: 2017-08-21 12:30:35

Below is generated by plot.py at 2017-08-21 16:08:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 160.13 Mbit/s

95th percentile per-packet one-way delay: 137.125 ms

Loss rate: 1.01%

-- Flow 1:

Average throughput: 108.47 Mbit/s

95th percentile per-packet one-way delay: 137.126 ms

Loss rate: 0.71%

-- Flow 2:

Average throughput: 78.27 Mbit/s

95th percentile per-packet one-way delay: 137.121 ms

Loss rate: 1.63%

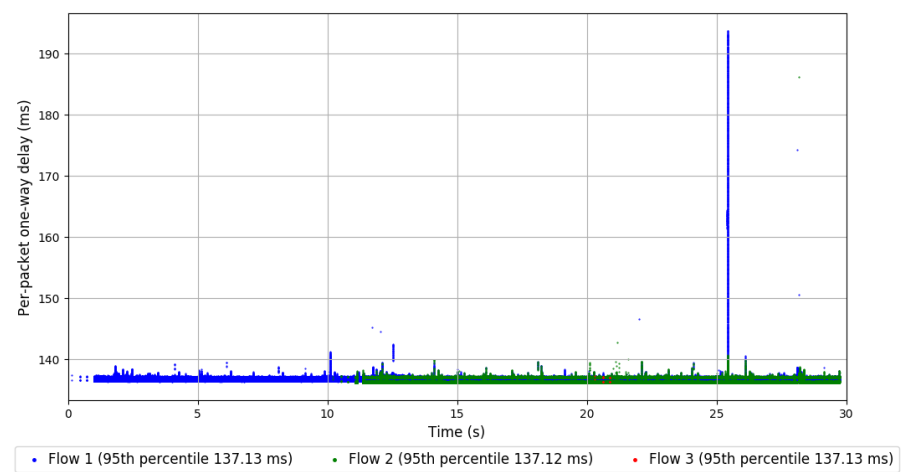
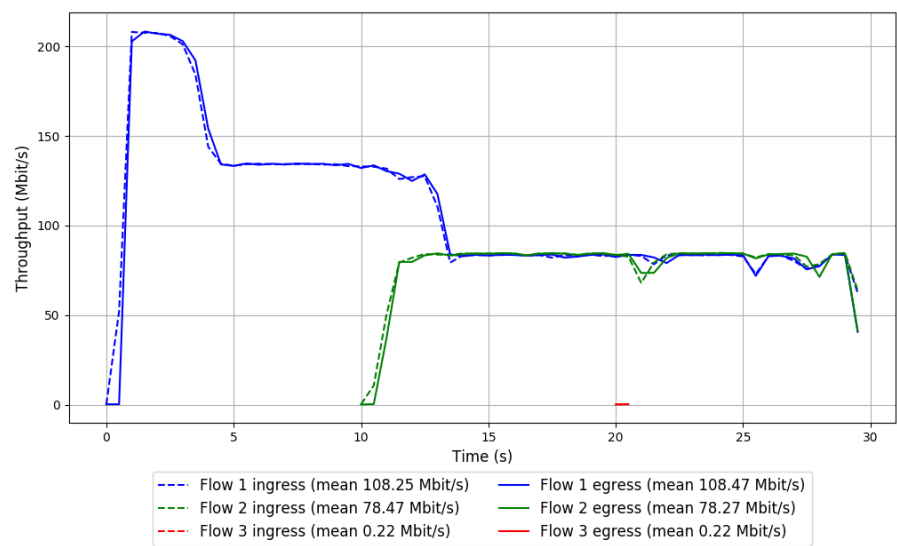
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 137.134 ms

Loss rate: 0.00%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2017-08-21 12:43:34

End at: 2017-08-21 12:44:04

Below is generated by plot.py at 2017-08-21 16:09:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 161.47 Mbit/s

95th percentile per-packet one-way delay: 137.223 ms

Loss rate: 0.73%

-- Flow 1:

Average throughput: 112.87 Mbit/s

95th percentile per-packet one-way delay: 137.220 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 65.60 Mbit/s

95th percentile per-packet one-way delay: 137.235 ms

Loss rate: 1.45%

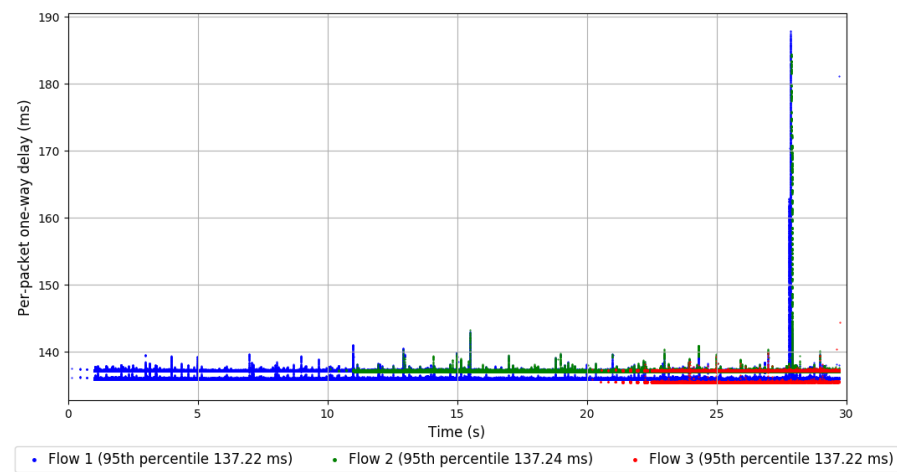
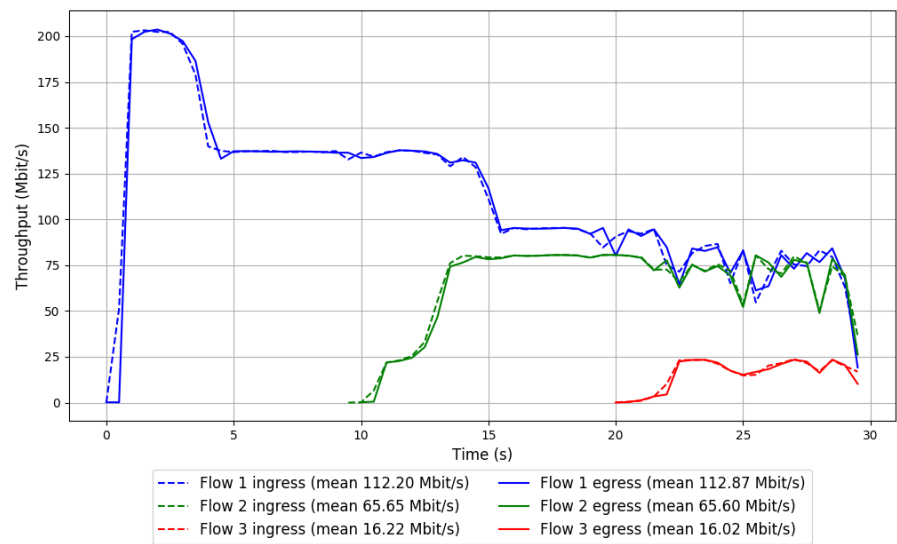
-- Flow 3:

Average throughput: 16.02 Mbit/s

95th percentile per-packet one-way delay: 137.223 ms

Loss rate: 3.88%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2017-08-21 12:57:12

End at: 2017-08-21 12:57:42

Below is generated by plot.py at 2017-08-21 16:09:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 133.16 Mbit/s

95th percentile per-packet one-way delay: 137.229 ms

Loss rate: 1.32%

-- Flow 1:

Average throughput: 81.71 Mbit/s

95th percentile per-packet one-way delay: 137.222 ms

Loss rate: 0.66%

-- Flow 2:

Average throughput: 46.57 Mbit/s

95th percentile per-packet one-way delay: 137.232 ms

Loss rate: 1.37%

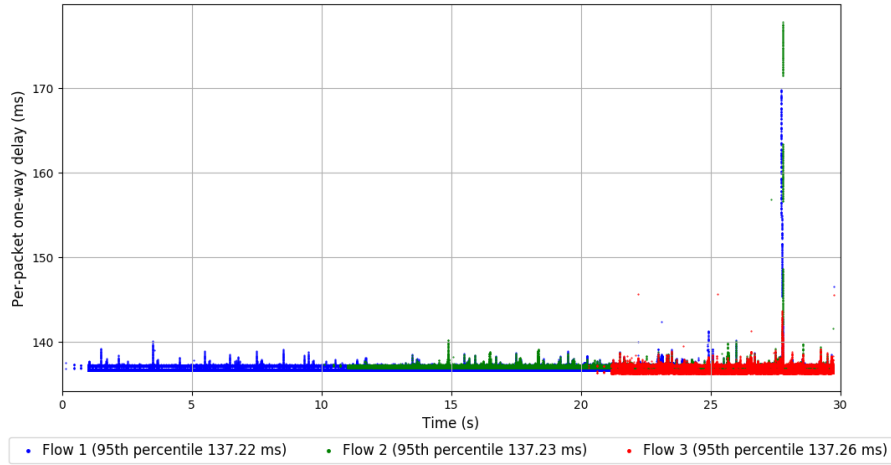
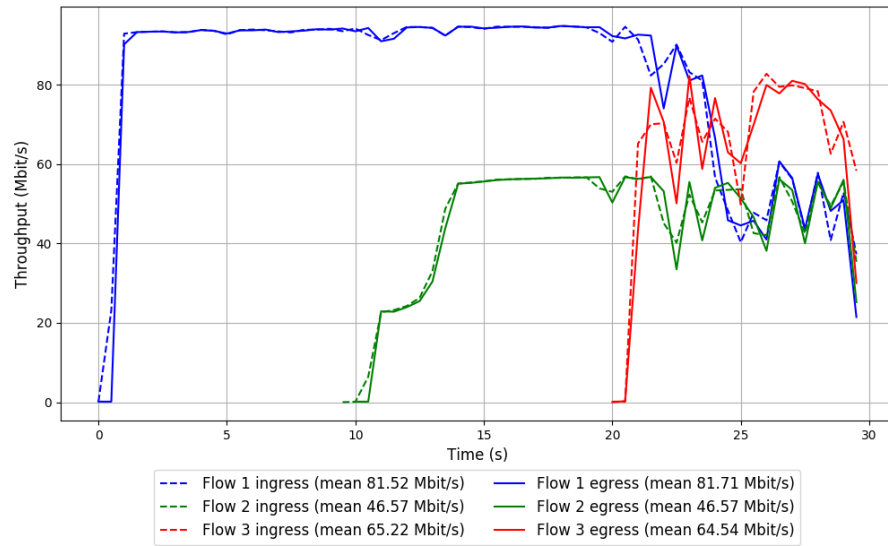
-- Flow 3:

Average throughput: 64.54 Mbit/s

95th percentile per-packet one-way delay: 137.257 ms

Loss rate: 3.77%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2017-08-21 13:11:00

End at: 2017-08-21 13:11:30

Below is generated by plot.py at 2017-08-21 16:10:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 92.26 Mbit/s

95th percentile per-packet one-way delay: 136.754 ms

Loss rate: 1.40%

-- Flow 1:

Average throughput: 0.17 Mbit/s

95th percentile per-packet one-way delay: 137.035 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 138.67 Mbit/s

95th percentile per-packet one-way delay: 136.754 ms

Loss rate: 1.40%

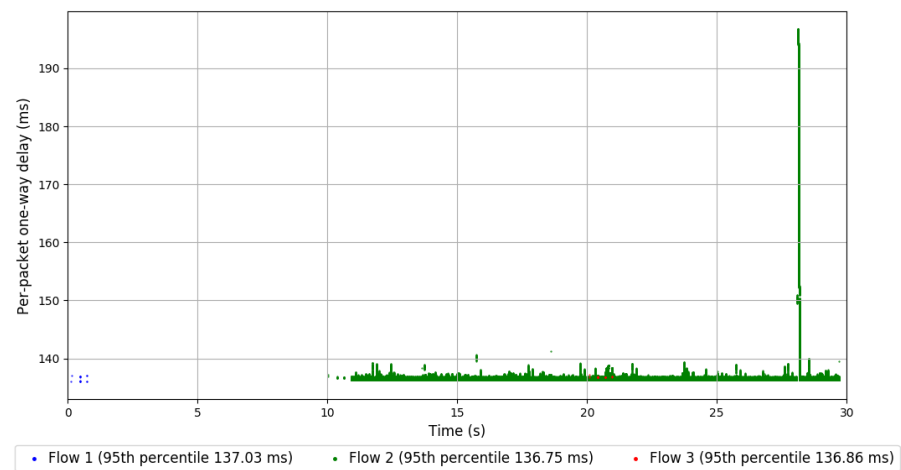
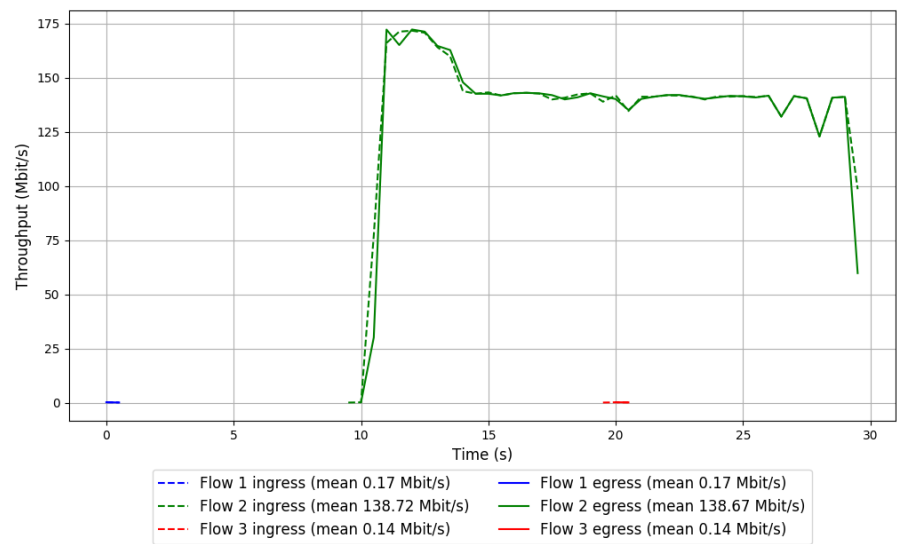
-- Flow 3:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 136.856 ms

Loss rate: 0.00%

Run 10: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2017-08-21 11:02:41

End at: 2017-08-21 11:03:11

Below is generated by plot.py at 2017-08-21 16:10:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.53 Mbit/s

95th percentile per-packet one-way delay: 137.919 ms

Loss rate: 3.55%

-- Flow 1:

Average throughput: 2.51 Mbit/s

95th percentile per-packet one-way delay: 137.417 ms

Loss rate: 3.57%

-- Flow 2:

Average throughput: 4.93 Mbit/s

95th percentile per-packet one-way delay: 138.035 ms

Loss rate: 2.77%

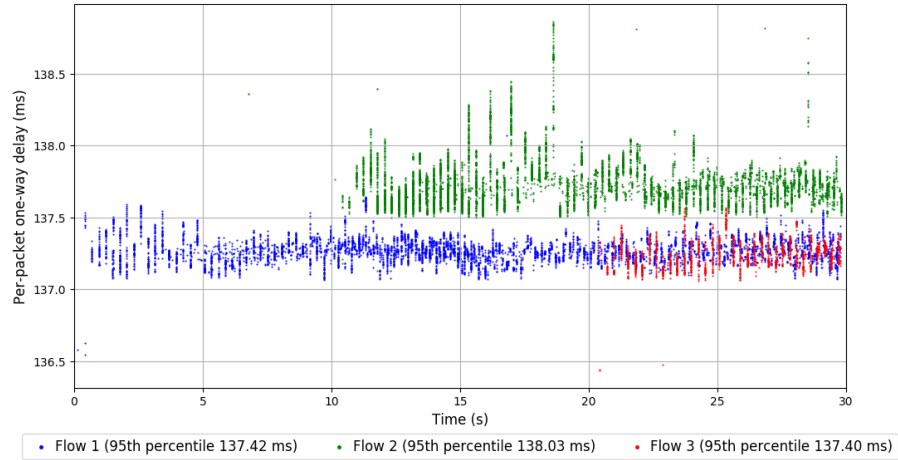
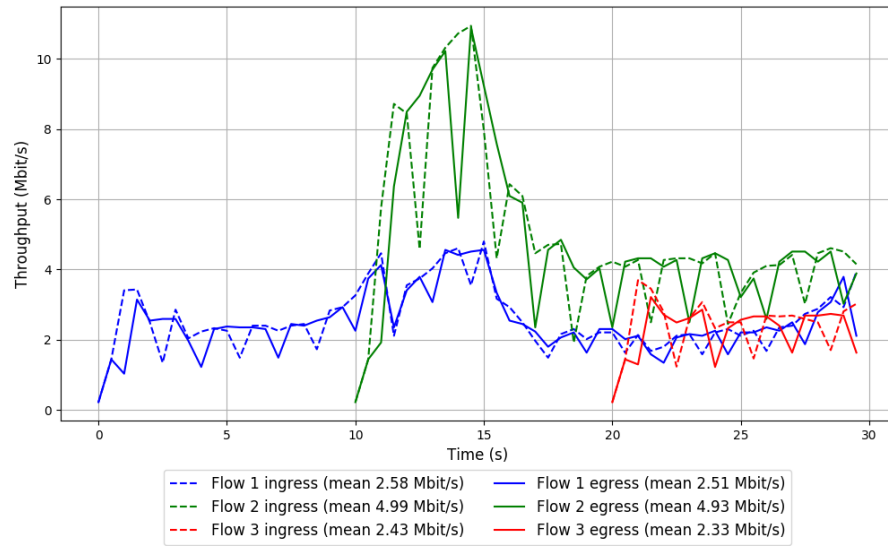
-- Flow 3:

Average throughput: 2.33 Mbit/s

95th percentile per-packet one-way delay: 137.403 ms

Loss rate: 6.70%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2017-08-21 11:16:21

End at: 2017-08-21 11:16:51

Below is generated by plot.py at 2017-08-21 16:10:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 45.71 Mbit/s

95th percentile per-packet one-way delay: 138.279 ms

Loss rate: 2.12%

-- Flow 1:

Average throughput: 1.66 Mbit/s

95th percentile per-packet one-way delay: 137.450 ms

Loss rate: 4.57%

-- Flow 2:

Average throughput: 55.69 Mbit/s

95th percentile per-packet one-way delay: 138.122 ms

Loss rate: 1.58%

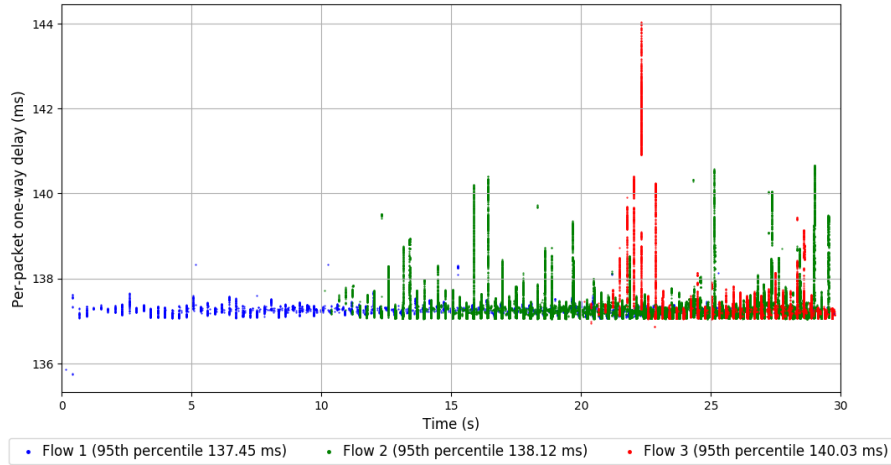
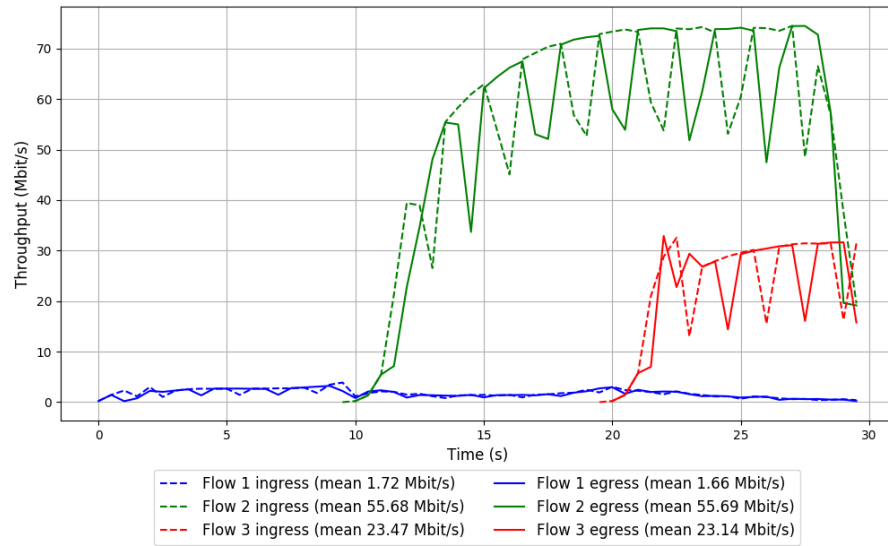
-- Flow 3:

Average throughput: 23.14 Mbit/s

95th percentile per-packet one-way delay: 140.030 ms

Loss rate: 4.10%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2017-08-21 11:30:19

End at: 2017-08-21 11:30:49

Below is generated by plot.py at 2017-08-21 16:10:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.86 Mbit/s

95th percentile per-packet one-way delay: 137.893 ms

Loss rate: 5.23%

-- Flow 1:

Average throughput: 2.77 Mbit/s

95th percentile per-packet one-way delay: 137.373 ms

Loss rate: 5.25%

-- Flow 2:

Average throughput: 5.68 Mbit/s

95th percentile per-packet one-way delay: 138.061 ms

Loss rate: 5.52%

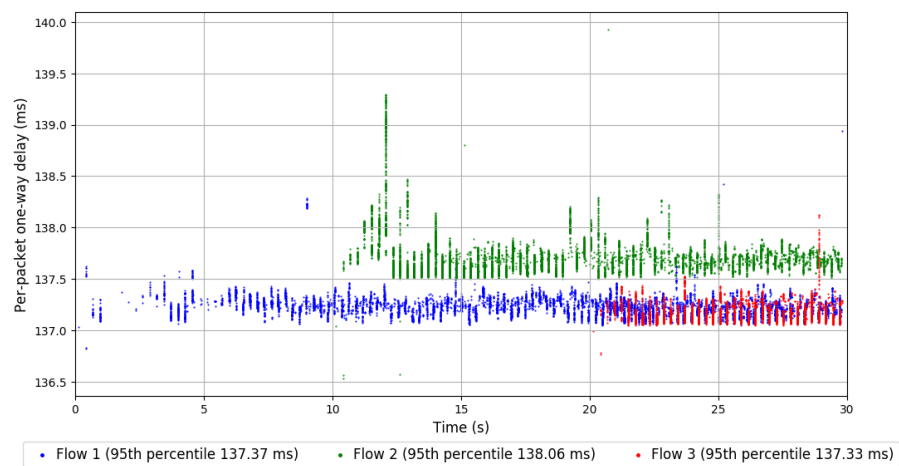
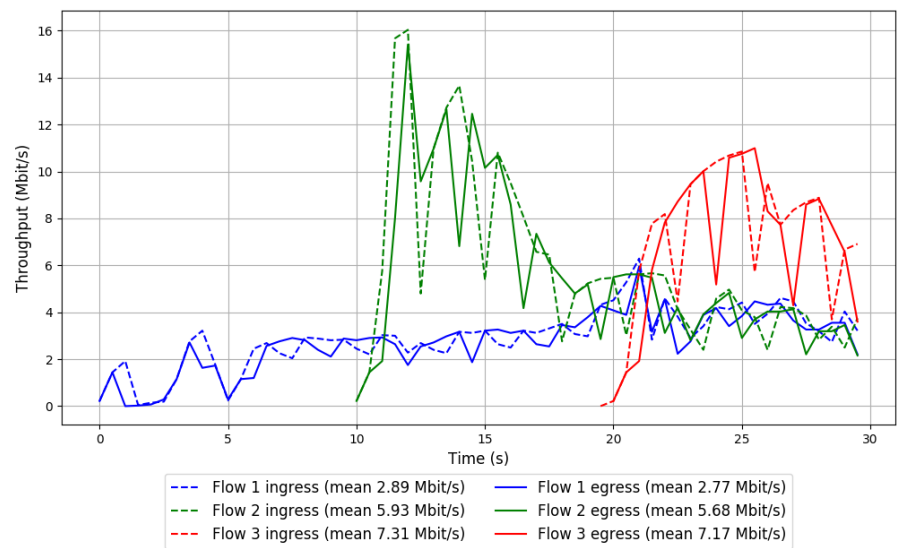
-- Flow 3:

Average throughput: 7.17 Mbit/s

95th percentile per-packet one-way delay: 137.329 ms

Loss rate: 4.72%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2017-08-21 11:44:02

End at: 2017-08-21 11:44:32

Below is generated by plot.py at 2017-08-21 16:10:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.71 Mbit/s

95th percentile per-packet one-way delay: 137.979 ms

Loss rate: 3.31%

-- Flow 1:

Average throughput: 1.63 Mbit/s

95th percentile per-packet one-way delay: 5216.299 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 4.05 Mbit/s

95th percentile per-packet one-way delay: 138.049 ms

Loss rate: 1.88%

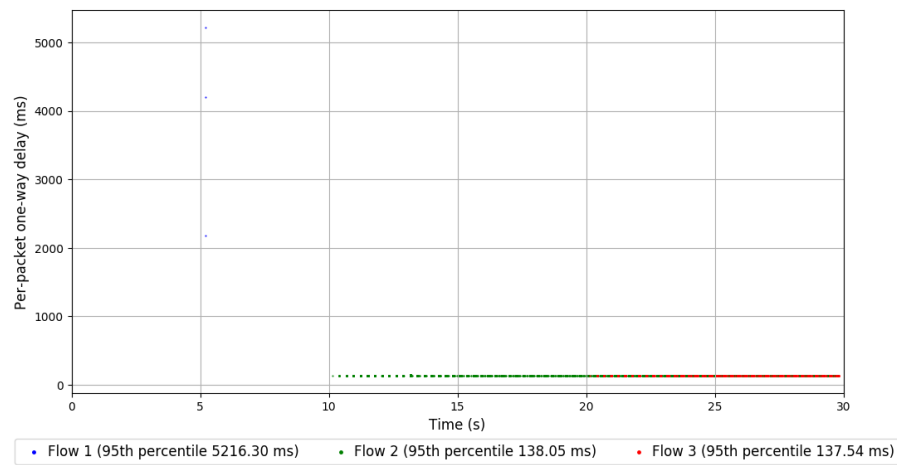
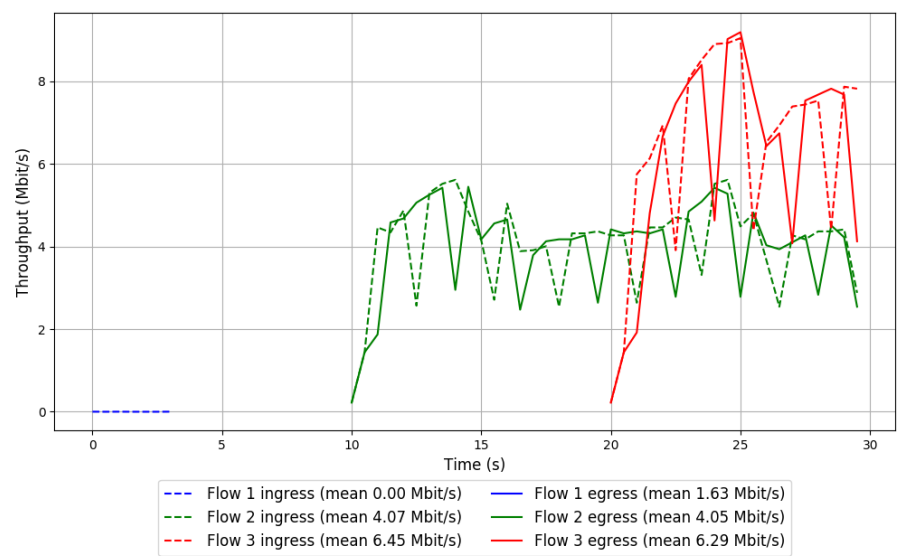
-- Flow 3:

Average throughput: 6.29 Mbit/s

95th percentile per-packet one-way delay: 137.536 ms

Loss rate: 5.13%

Run 4: Report of TCP Cubic — Data Link

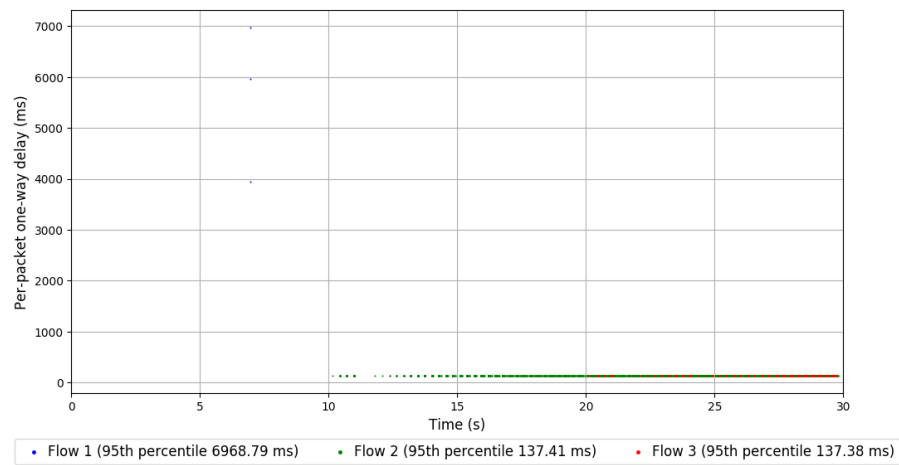
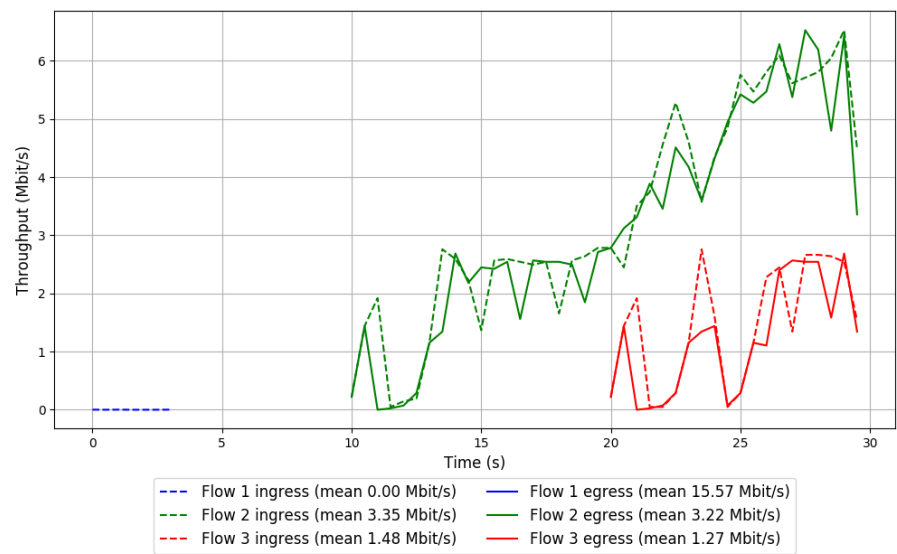


Run 5: Statistics of TCP Cubic

Start at: 2017-08-21 11:57:44

End at: 2017-08-21 11:58:14

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2017-08-21 12:11:27

End at: 2017-08-21 12:11:57

Below is generated by plot.py at 2017-08-21 16:10:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 11.46 Mbit/s

95th percentile per-packet one-way delay: 137.383 ms

Loss rate: 5.73%

-- Flow 1:

Average throughput: 2.22 Mbit/s

95th percentile per-packet one-way delay: 137.372 ms

Loss rate: 7.31%

-- Flow 2:

Average throughput: 3.09 Mbit/s

95th percentile per-packet one-way delay: 137.382 ms

Loss rate: 7.46%

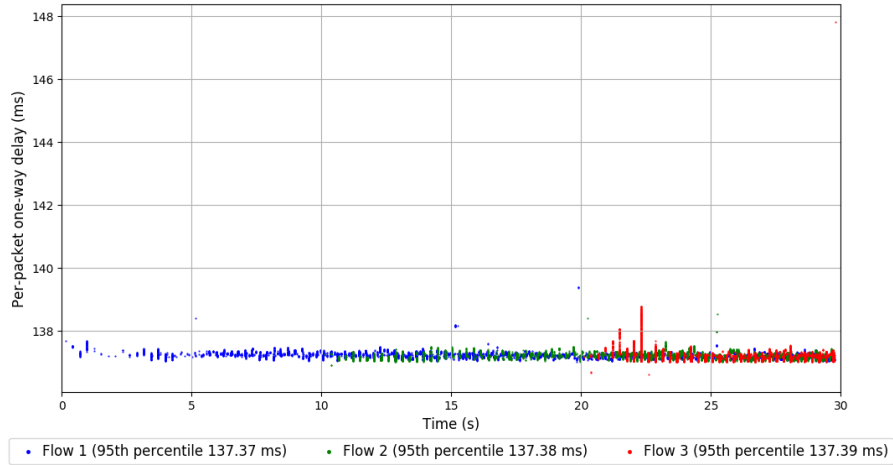
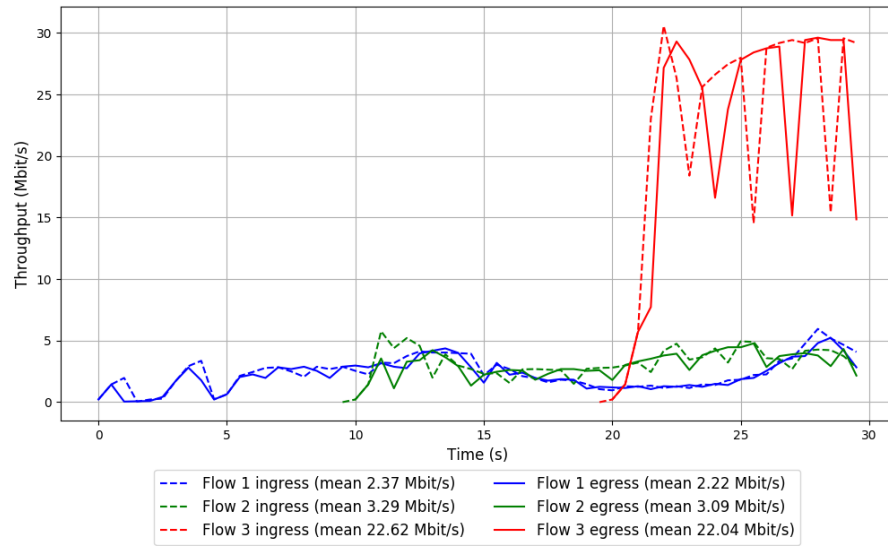
-- Flow 3:

Average throughput: 22.04 Mbit/s

95th percentile per-packet one-way delay: 137.390 ms

Loss rate: 4.73%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2017-08-21 12:24:59

End at: 2017-08-21 12:25:29

Below is generated by plot.py at 2017-08-21 16:10:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 11.20 Mbit/s

95th percentile per-packet one-way delay: 137.829 ms

Loss rate: 3.30%

-- Flow 1:

Average throughput: 3.36 Mbit/s

95th percentile per-packet one-way delay: 137.381 ms

Loss rate: 2.28%

-- Flow 2:

Average throughput: 9.04 Mbit/s

95th percentile per-packet one-way delay: 137.834 ms

Loss rate: 3.51%

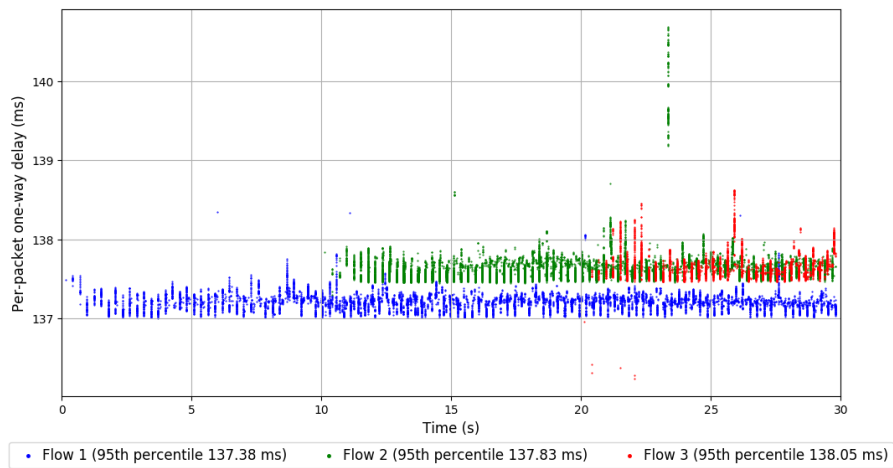
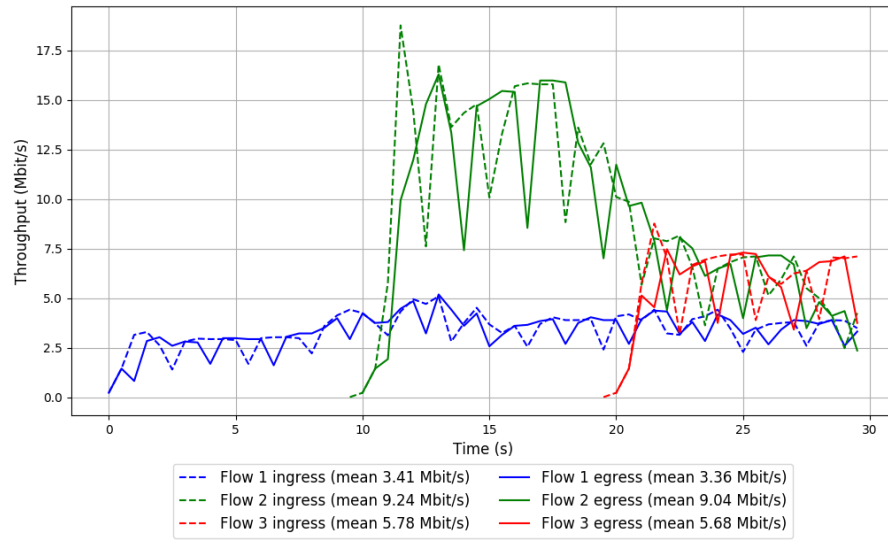
-- Flow 3:

Average throughput: 5.68 Mbit/s

95th percentile per-packet one-way delay: 138.053 ms

Loss rate: 4.43%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2017-08-21 12:38:24

End at: 2017-08-21 12:38:54

Below is generated by plot.py at 2017-08-21 16:10:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 33.56 Mbit/s

95th percentile per-packet one-way delay: 137.803 ms

Loss rate: 1.98%

-- Flow 1:

Average throughput: 30.99 Mbit/s

95th percentile per-packet one-way delay: 137.854 ms

Loss rate: 1.73%

-- Flow 2:

Average throughput: 2.83 Mbit/s

95th percentile per-packet one-way delay: 137.459 ms

Loss rate: 2.91%

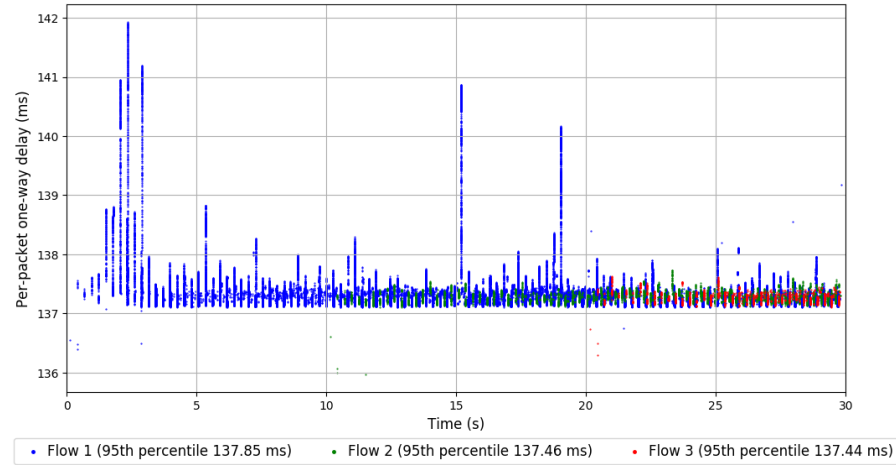
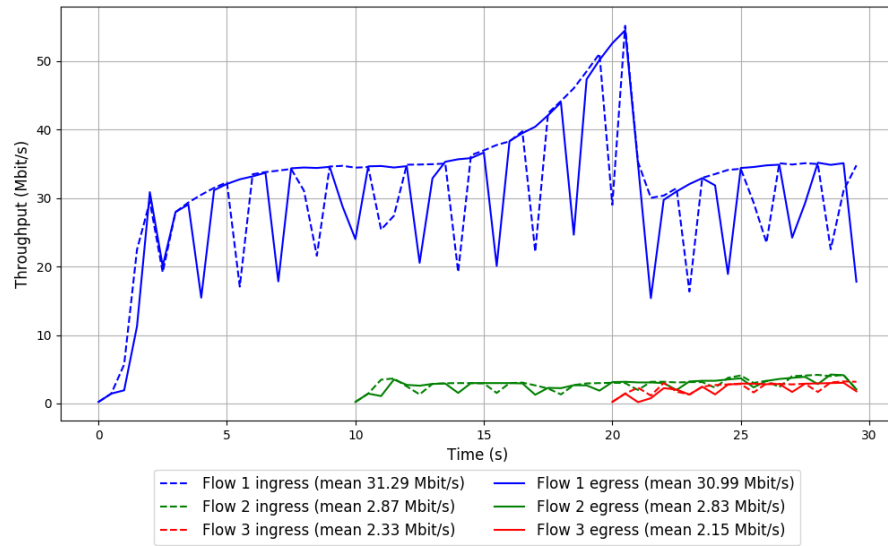
-- Flow 3:

Average throughput: 2.15 Mbit/s

95th percentile per-packet one-way delay: 137.443 ms

Loss rate: 10.16%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2017-08-21 12:52:05

End at: 2017-08-21 12:52:35

Below is generated by plot.py at 2017-08-21 16:10:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 29.42 Mbit/s

95th percentile per-packet one-way delay: 139.064 ms

Loss rate: 2.59%

-- Flow 1:

Average throughput: 2.37 Mbit/s

95th percentile per-packet one-way delay: 137.558 ms

Loss rate: 3.90%

-- Flow 2:

Average throughput: 26.20 Mbit/s

95th percentile per-packet one-way delay: 140.809 ms

Loss rate: 1.87%

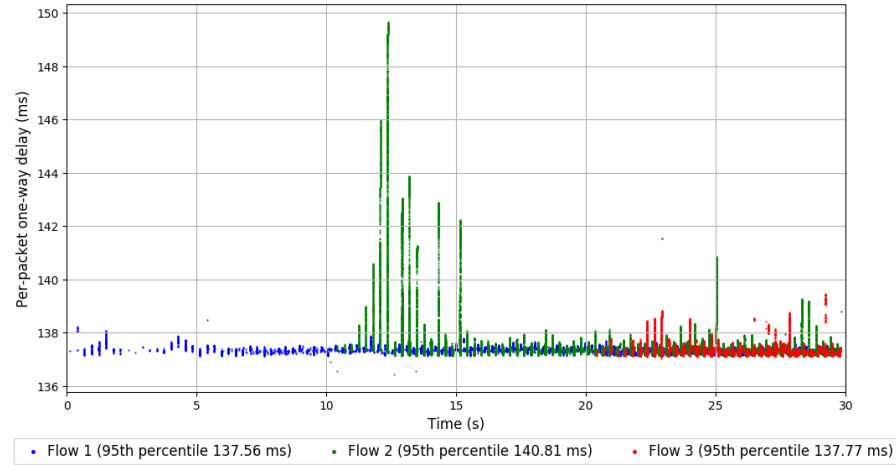
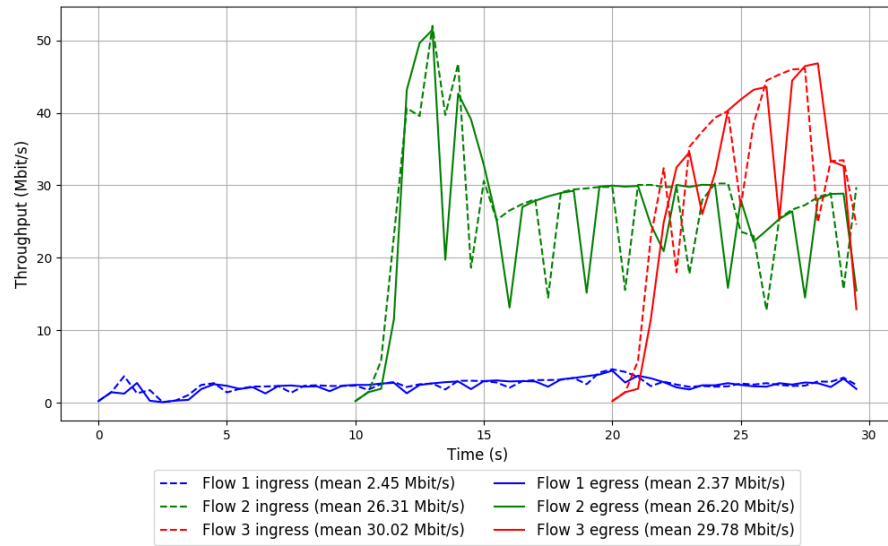
-- Flow 3:

Average throughput: 29.78 Mbit/s

95th percentile per-packet one-way delay: 137.769 ms

Loss rate: 3.53%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2017-08-21 13:05:47

End at: 2017-08-21 13:06:17

Below is generated by plot.py at 2017-08-21 16:10:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 65.10 Mbit/s

95th percentile per-packet one-way delay: 137.595 ms

Loss rate: 1.86%

-- Flow 1:

Average throughput: 38.68 Mbit/s

95th percentile per-packet one-way delay: 137.800 ms

Loss rate: 1.33%

-- Flow 2:

Average throughput: 33.65 Mbit/s

95th percentile per-packet one-way delay: 137.511 ms

Loss rate: 2.08%

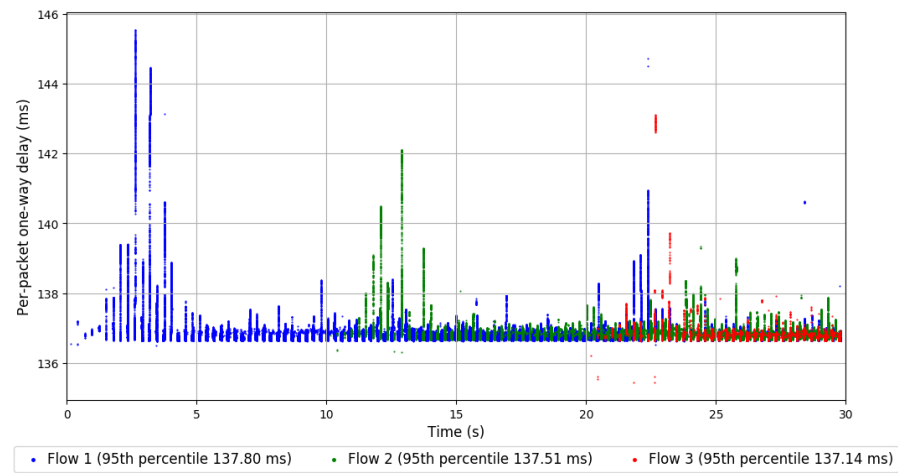
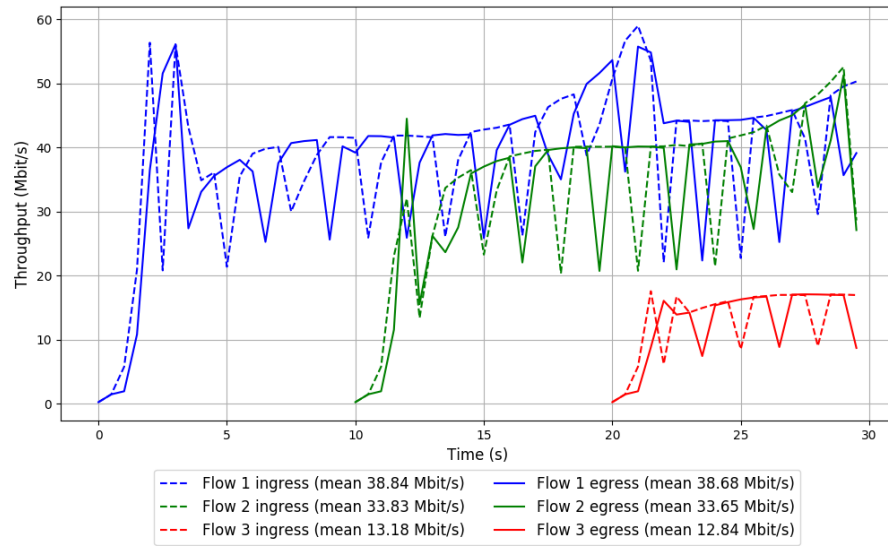
-- Flow 3:

Average throughput: 12.84 Mbit/s

95th percentile per-packet one-way delay: 137.144 ms

Loss rate: 5.39%

Run 10: Report of TCP Cubic — Data Link

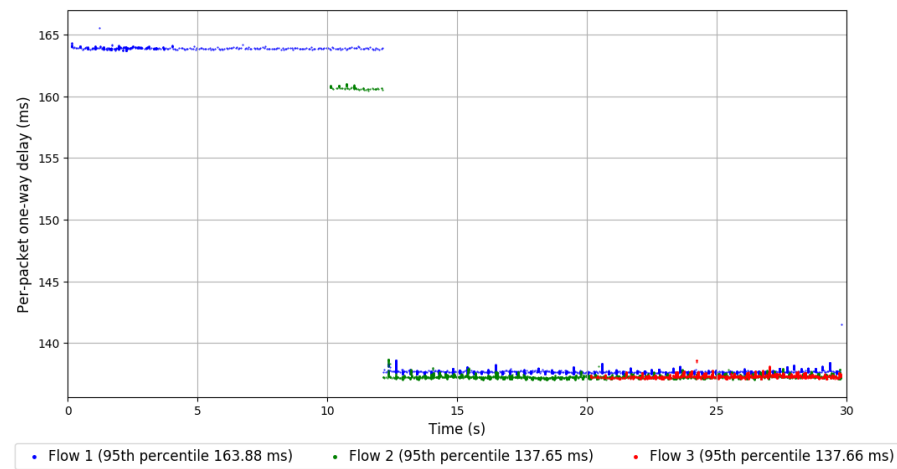
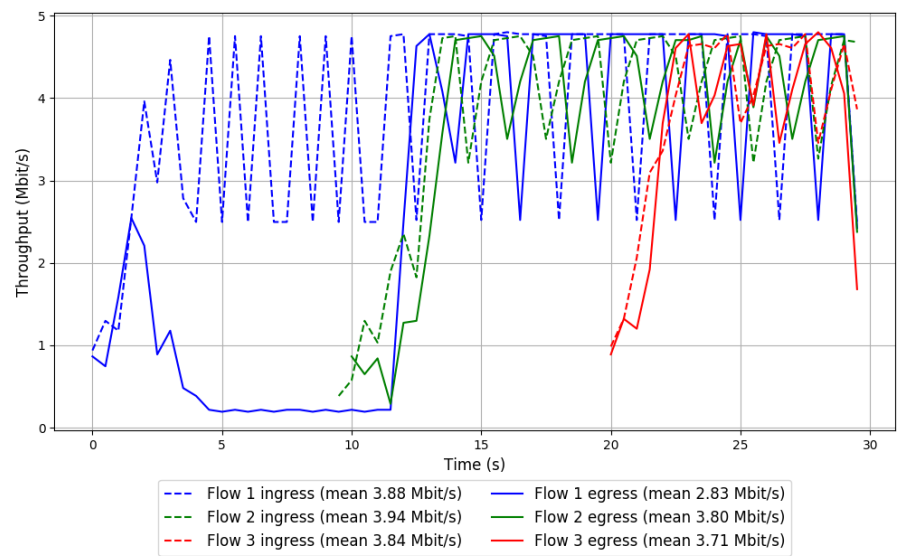


```
Run 1: Statistics of KohoCC

Start at: 2017-08-21 11:01:01
End at: 2017-08-21 11:01:31

# Below is generated by plot.py at 2017-08-21 16:10:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.55 Mbit/s
95th percentile per-packet one-way delay: 138.294 ms
Loss rate: 16.49%
-- Flow 1:
Average throughput: 2.83 Mbit/s
95th percentile per-packet one-way delay: 163.885 ms
Loss rate: 27.76%
-- Flow 2:
Average throughput: 3.80 Mbit/s
95th percentile per-packet one-way delay: 137.653 ms
Loss rate: 4.95%
-- Flow 3:
Average throughput: 3.71 Mbit/s
95th percentile per-packet one-way delay: 137.657 ms
Loss rate: 5.97%
```

Run 1: Report of KohoCC — Data Link

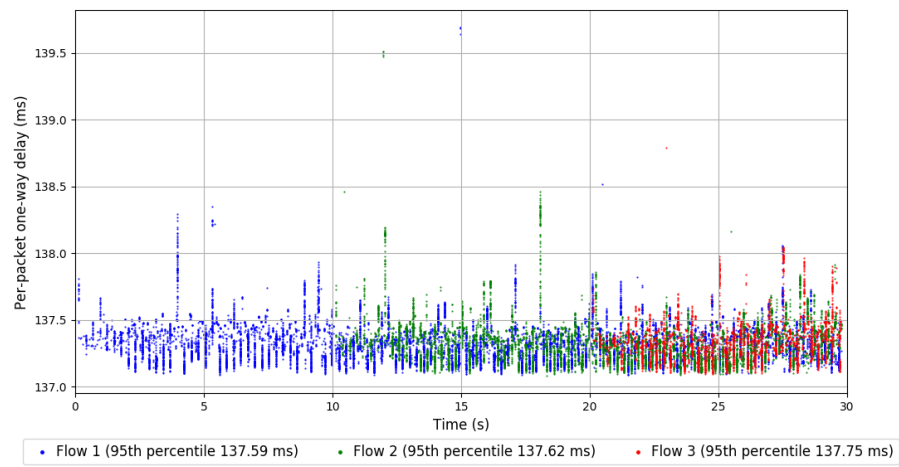
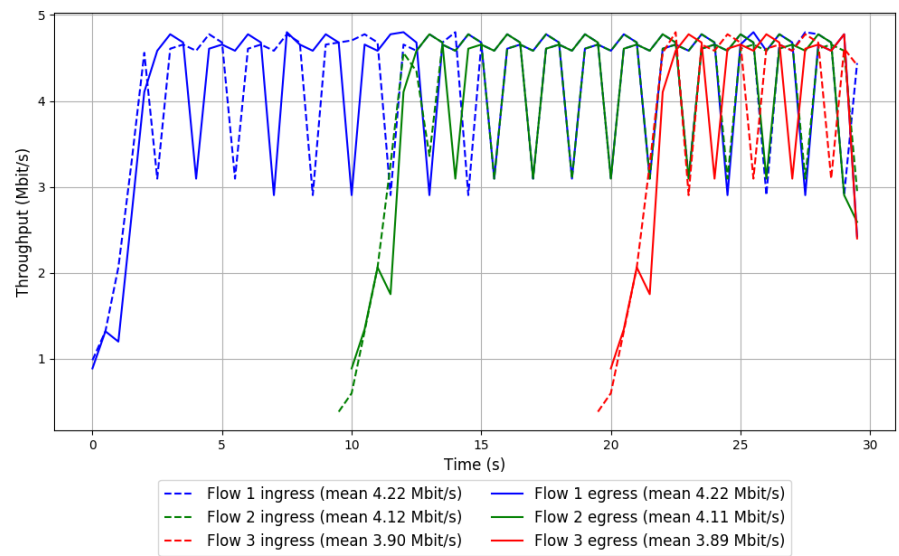


```
Run 2: Statistics of KohoCC

Start at: 2017-08-21 11:14:40
End at: 2017-08-21 11:15:10

# Below is generated by plot.py at 2017-08-21 16:10:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.20 Mbit/s
95th percentile per-packet one-way delay: 137.613 ms
Loss rate: 1.46%
-- Flow 1:
Average throughput: 4.22 Mbit/s
95th percentile per-packet one-way delay: 137.590 ms
Loss rate: 0.95%
-- Flow 2:
Average throughput: 4.11 Mbit/s
95th percentile per-packet one-way delay: 137.623 ms
Loss rate: 1.46%
-- Flow 3:
Average throughput: 3.89 Mbit/s
95th percentile per-packet one-way delay: 137.755 ms
Loss rate: 3.11%
```

Run 2: Report of KohoCC — Data Link



Run 3: Statistics of KohoCC

Start at: 2017-08-21 11:28:38

End at: 2017-08-21 11:29:08

Below is generated by plot.py at 2017-08-21 16:10:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.12 Mbit/s

95th percentile per-packet one-way delay: 137.613 ms

Loss rate: 2.23%

-- Flow 1:

Average throughput: 4.13 Mbit/s

95th percentile per-packet one-way delay: 137.475 ms

Loss rate: 2.32%

-- Flow 2:

Average throughput: 4.11 Mbit/s

95th percentile per-packet one-way delay: 137.737 ms

Loss rate: 1.46%

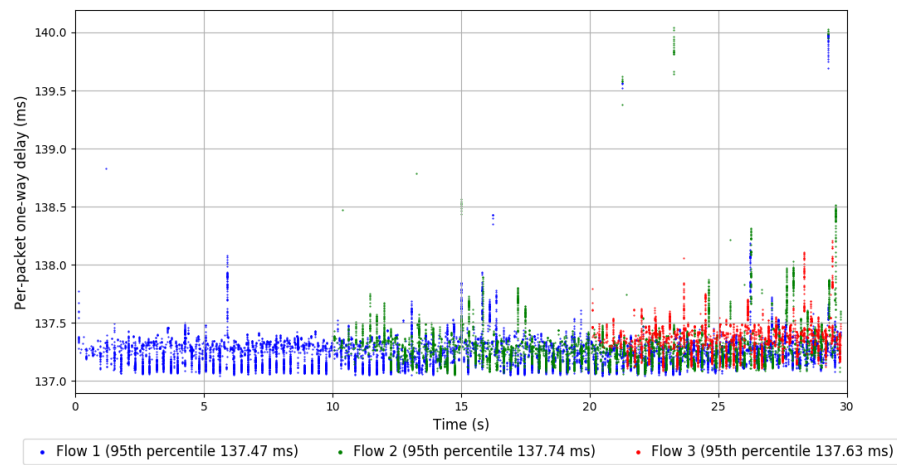
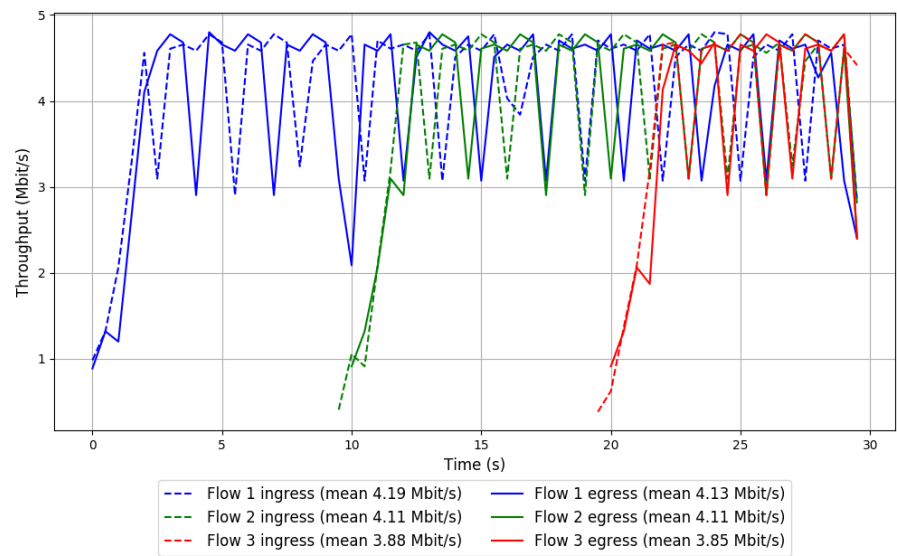
-- Flow 3:

Average throughput: 3.85 Mbit/s

95th percentile per-packet one-way delay: 137.633 ms

Loss rate: 3.55%

Run 3: Report of KohoCC — Data Link



Run 4: Statistics of KohoCC

Start at: 2017-08-21 11:42:21

End at: 2017-08-21 11:42:51

Below is generated by plot.py at 2017-08-21 16:10:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.20 Mbit/s

95th percentile per-packet one-way delay: 137.685 ms

Loss rate: 1.46%

-- Flow 1:

Average throughput: 4.21 Mbit/s

95th percentile per-packet one-way delay: 137.693 ms

Loss rate: 0.95%

-- Flow 2:

Average throughput: 4.10 Mbit/s

95th percentile per-packet one-way delay: 137.594 ms

Loss rate: 1.46%

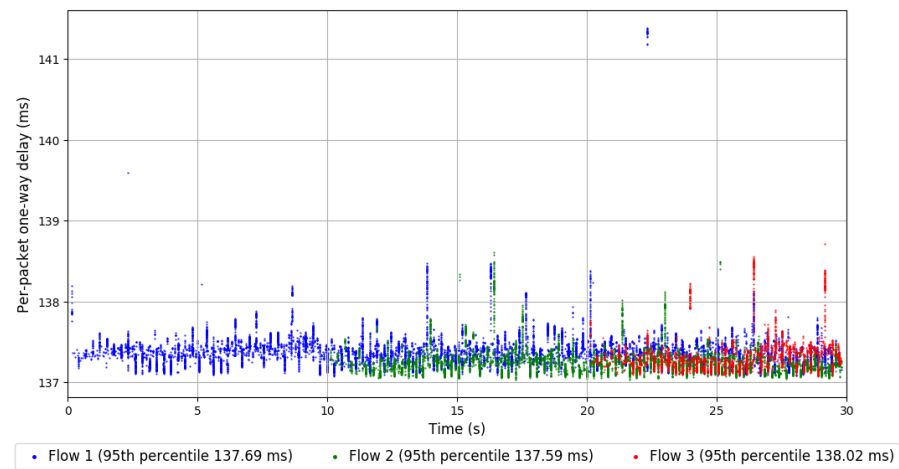
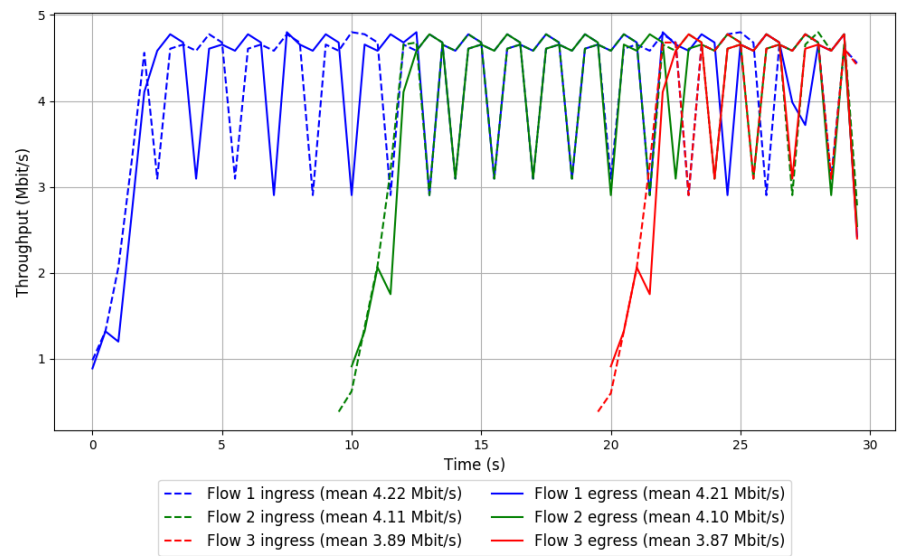
-- Flow 3:

Average throughput: 3.87 Mbit/s

95th percentile per-packet one-way delay: 138.021 ms

Loss rate: 3.11%

Run 4: Report of KohoCC — Data Link



Run 5: Statistics of KohoCC

Start at: 2017-08-21 11:56:04

End at: 2017-08-21 11:56:34

Below is generated by plot.py at 2017-08-21 16:10:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.19 Mbit/s

95th percentile per-packet one-way delay: 137.613 ms

Loss rate: 1.52%

-- Flow 1:

Average throughput: 4.21 Mbit/s

95th percentile per-packet one-way delay: 137.599 ms

Loss rate: 1.08%

-- Flow 2:

Average throughput: 4.11 Mbit/s

95th percentile per-packet one-way delay: 137.661 ms

Loss rate: 1.46%

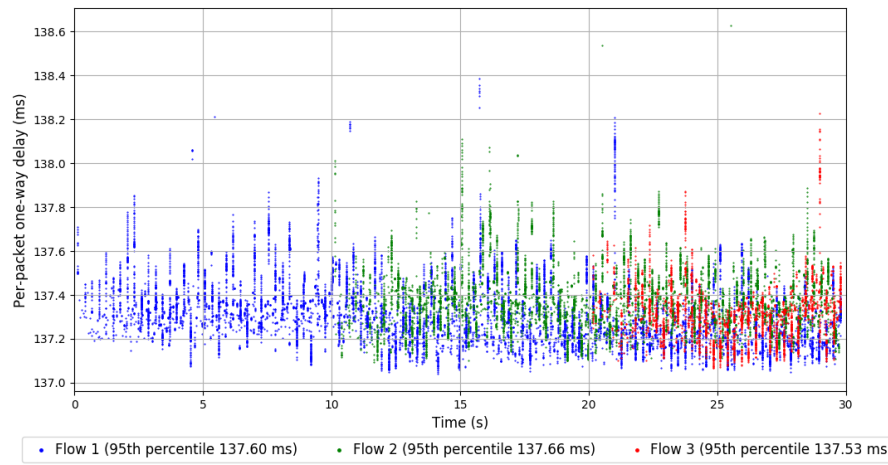
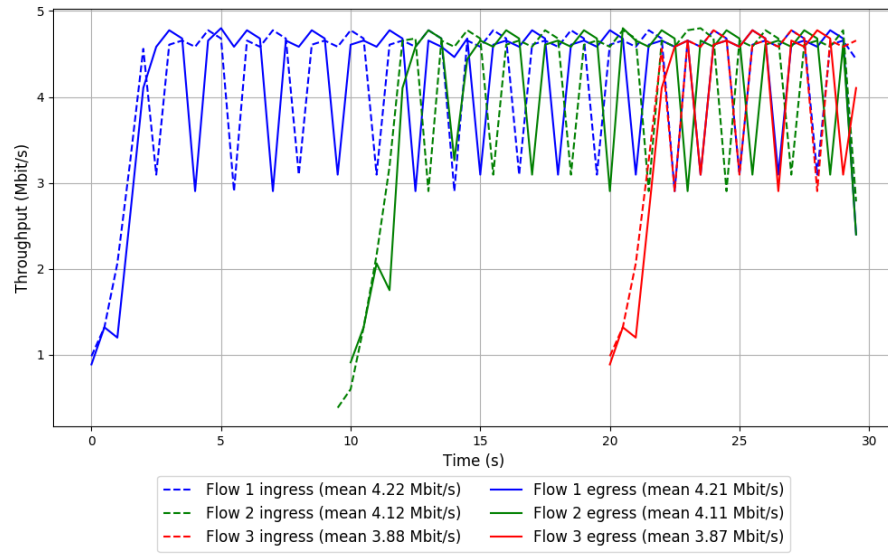
-- Flow 3:

Average throughput: 3.87 Mbit/s

95th percentile per-packet one-way delay: 137.528 ms

Loss rate: 3.12%

Run 5: Report of KohoCC — Data Link



Run 6: Statistics of KohoCC

Start at: 2017-08-21 12:09:47

End at: 2017-08-21 12:10:17

Below is generated by plot.py at 2017-08-21 16:10:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.17 Mbit/s

95th percentile per-packet one-way delay: 137.566 ms

Loss rate: 1.73%

-- Flow 1:

Average throughput: 4.20 Mbit/s

95th percentile per-packet one-way delay: 137.539 ms

Loss rate: 1.46%

-- Flow 2:

Average throughput: 4.11 Mbit/s

95th percentile per-packet one-way delay: 137.618 ms

Loss rate: 1.49%

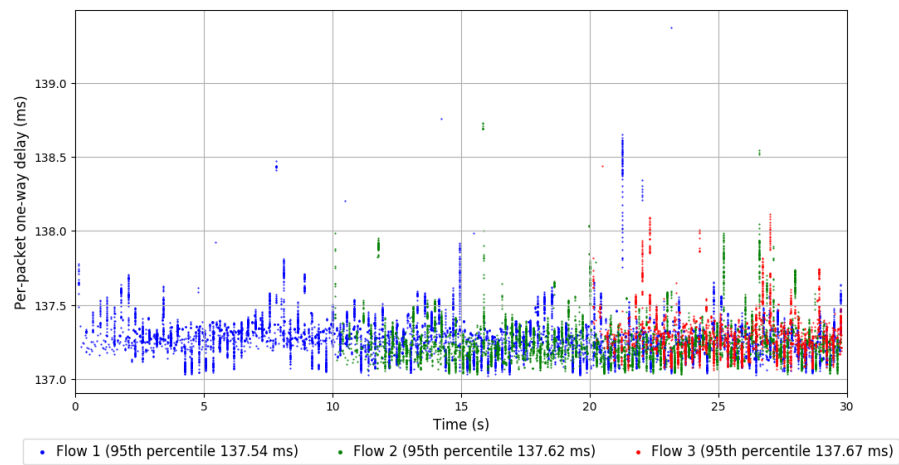
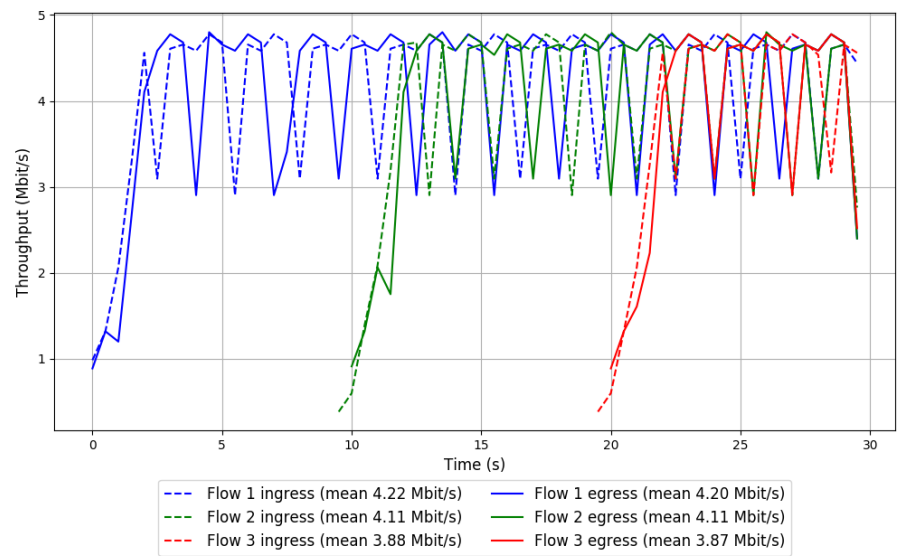
-- Flow 3:

Average throughput: 3.87 Mbit/s

95th percentile per-packet one-way delay: 137.670 ms

Loss rate: 3.11%

Run 6: Report of KohoCC — Data Link



Run 7: Statistics of KohoCC

Start at: 2017-08-21 12:23:18

End at: 2017-08-21 12:23:48

Below is generated by plot.py at 2017-08-21 16:10:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.80 Mbit/s

95th percentile per-packet one-way delay: 137.494 ms

Loss rate: 27.36%

-- Flow 1:

Average throughput: 4.21 Mbit/s

95th percentile per-packet one-way delay: 137.534 ms

Loss rate: 0.95%

-- Flow 2:

Average throughput: 0.49 Mbit/s

95th percentile per-packet one-way delay: 137.554 ms

Loss rate: 86.68%

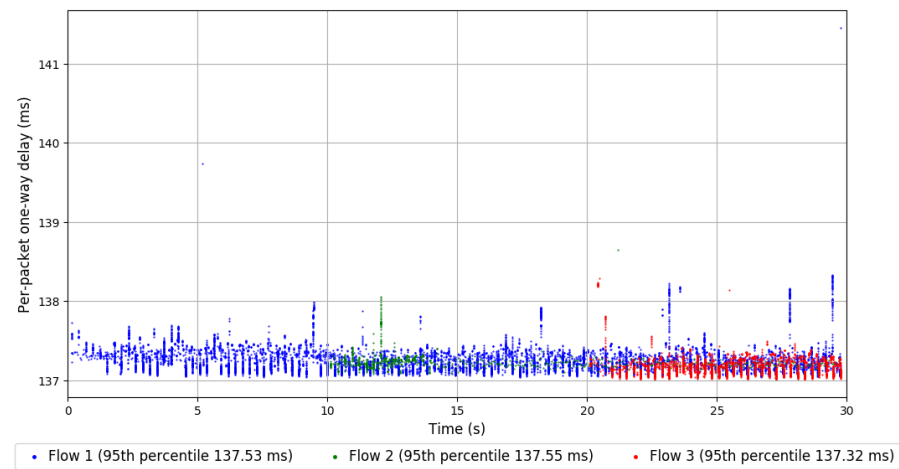
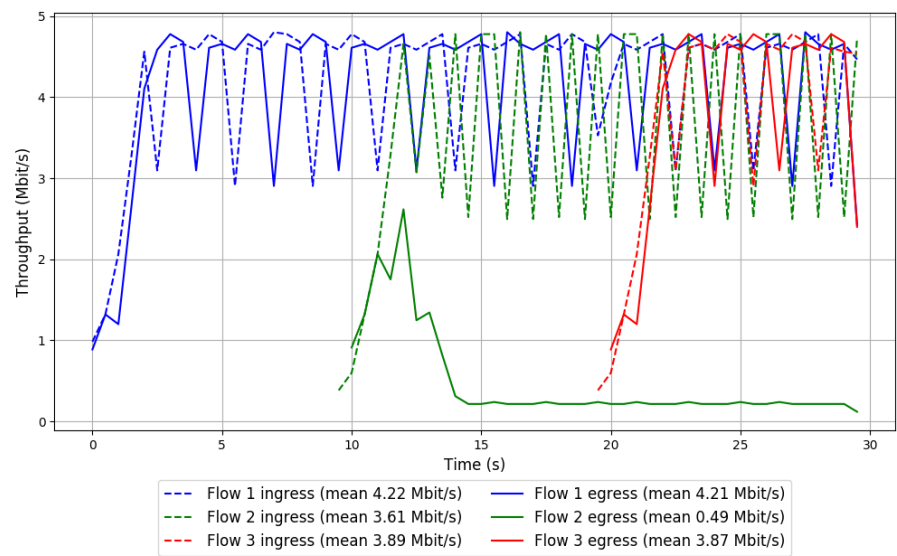
-- Flow 3:

Average throughput: 3.87 Mbit/s

95th percentile per-packet one-way delay: 137.318 ms

Loss rate: 3.12%

Run 7: Report of KohoCC — Data Link



Run 8: Statistics of KohoCC

Start at: 2017-08-21 12:36:43

End at: 2017-08-21 12:37:13

Below is generated by plot.py at 2017-08-21 16:10:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.19 Mbit/s

95th percentile per-packet one-way delay: 137.707 ms

Loss rate: 1.53%

-- Flow 1:

Average throughput: 4.21 Mbit/s

95th percentile per-packet one-way delay: 137.656 ms

Loss rate: 0.96%

-- Flow 2:

Average throughput: 4.10 Mbit/s

95th percentile per-packet one-way delay: 137.783 ms

Loss rate: 1.66%

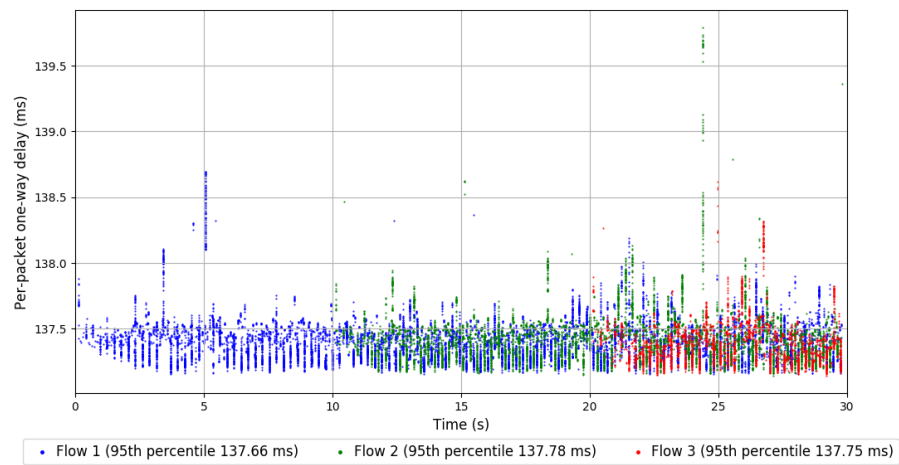
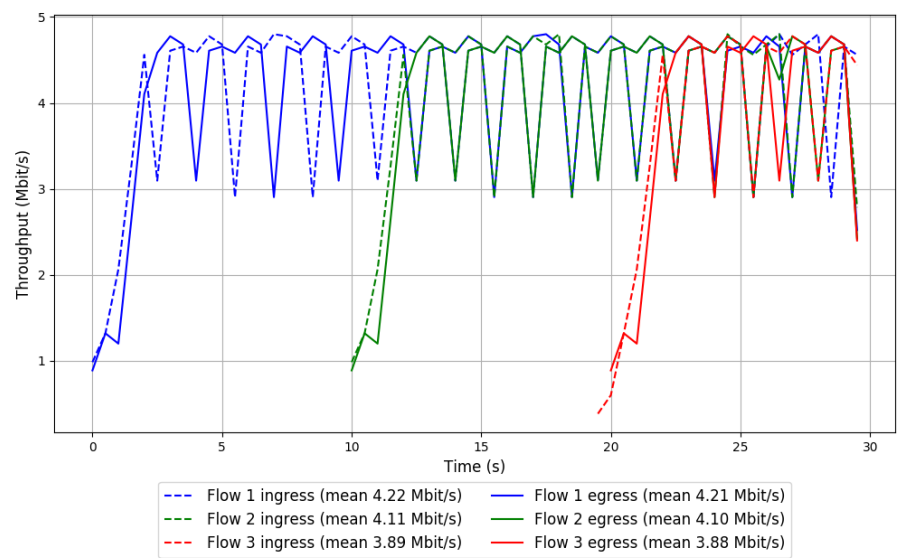
-- Flow 3:

Average throughput: 3.88 Mbit/s

95th percentile per-packet one-way delay: 137.754 ms

Loss rate: 3.12%

Run 8: Report of KohoCC — Data Link



Run 9: Statistics of KohoCC

Start at: 2017-08-21 12:50:23

End at: 2017-08-21 12:50:53

Below is generated by plot.py at 2017-08-21 16:10:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.06 Mbit/s

95th percentile per-packet one-way delay: 137.886 ms

Loss rate: 12.69%

-- Flow 1:

Average throughput: 4.14 Mbit/s

95th percentile per-packet one-way delay: 137.860 ms

Loss rate: 1.92%

-- Flow 2:

Average throughput: 4.09 Mbit/s

95th percentile per-packet one-way delay: 137.921 ms

Loss rate: 1.79%

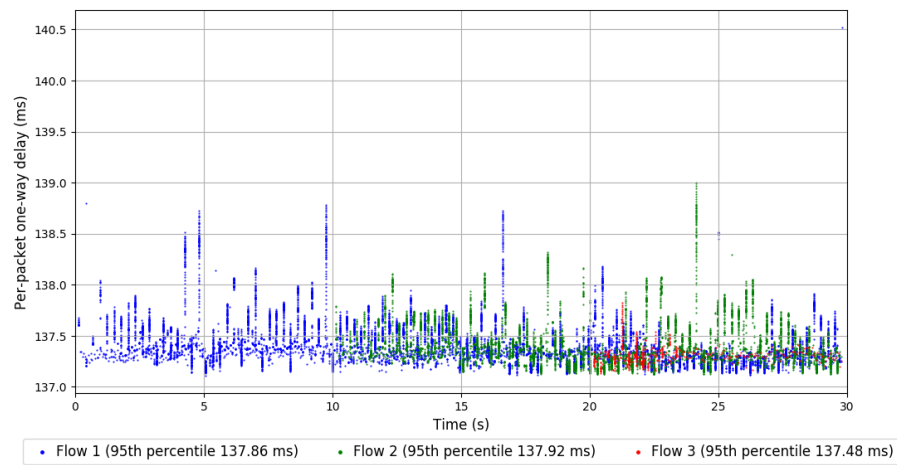
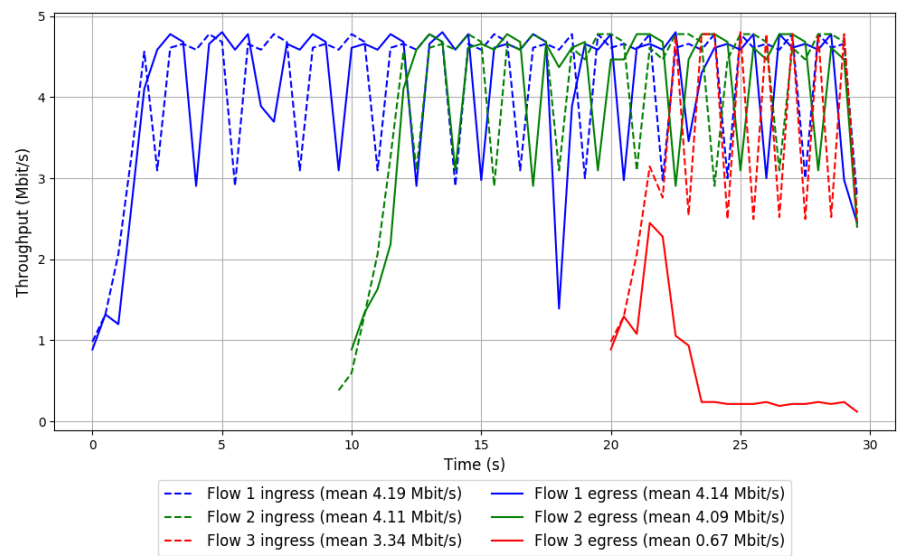
-- Flow 3:

Average throughput: 0.67 Mbit/s

95th percentile per-packet one-way delay: 137.484 ms

Loss rate: 80.62%

Run 9: Report of KohoCC — Data Link



Run 10: Statistics of KohoCC

Start at: 2017-08-21 13:04:06

End at: 2017-08-21 13:04:36

Below is generated by plot.py at 2017-08-21 16:10:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.21 Mbit/s

95th percentile per-packet one-way delay: 137.279 ms

Loss rate: 1.46%

-- Flow 1:

Average throughput: 4.22 Mbit/s

95th percentile per-packet one-way delay: 137.359 ms

Loss rate: 0.95%

-- Flow 2:

Average throughput: 4.11 Mbit/s

95th percentile per-packet one-way delay: 137.156 ms

Loss rate: 1.47%

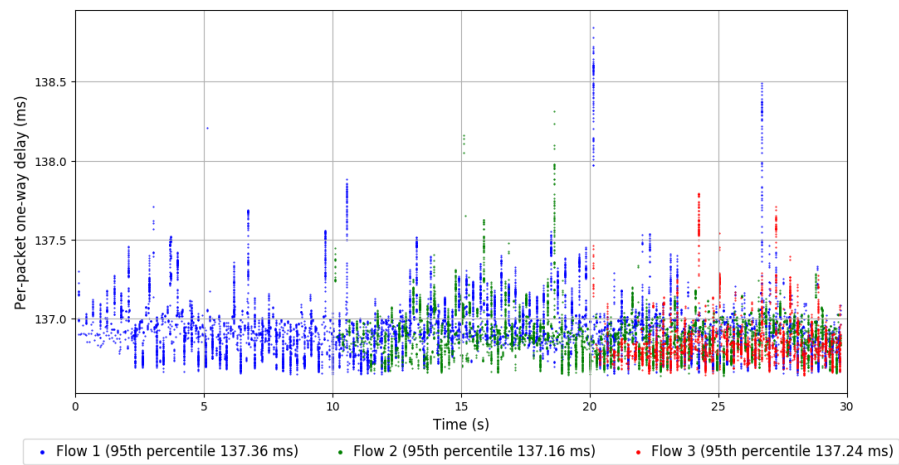
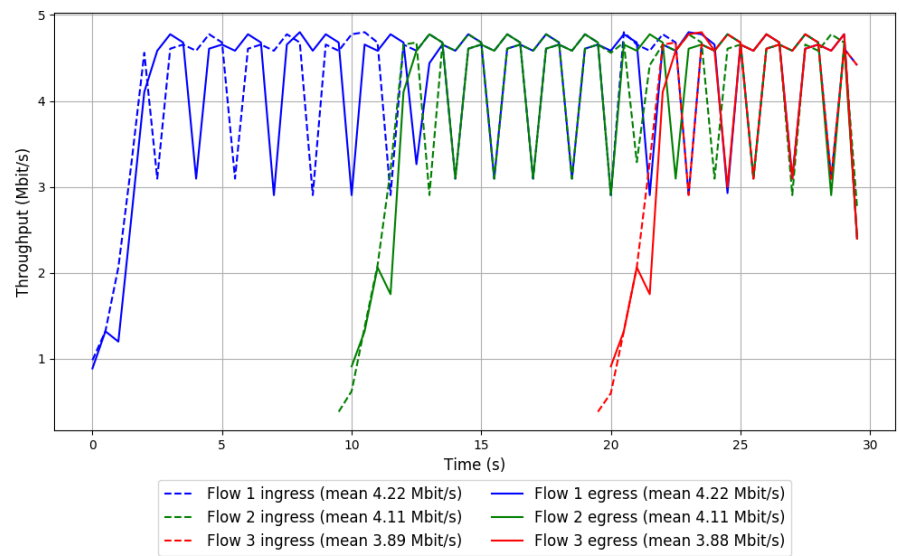
-- Flow 3:

Average throughput: 3.88 Mbit/s

95th percentile per-packet one-way delay: 137.237 ms

Loss rate: 3.11%

Run 10: Report of KohoCC — Data Link

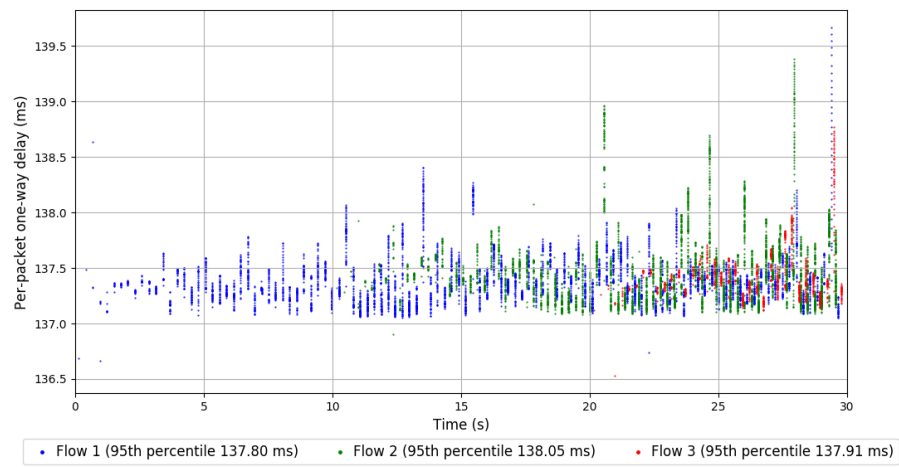
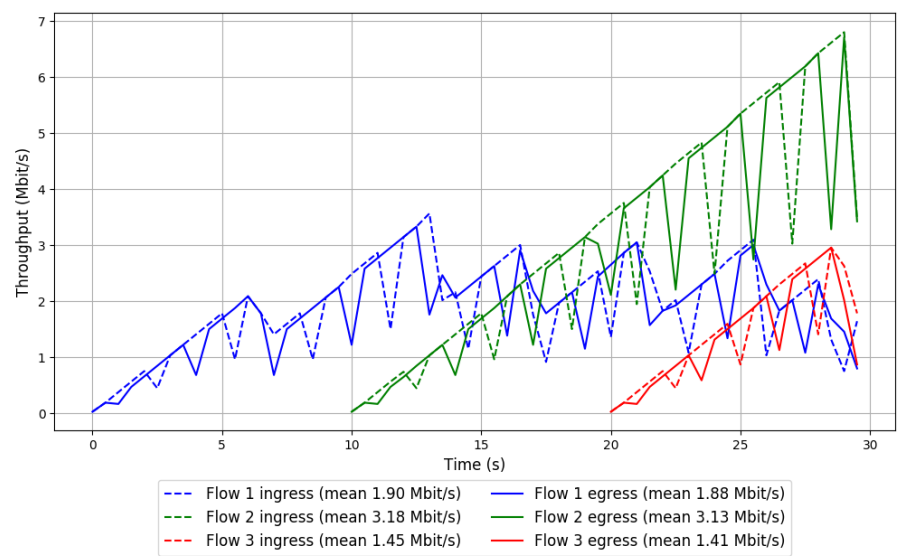


```
Run 1: Statistics of LEDBAT

Start at: 2017-08-21 11:04:26
End at: 2017-08-21 11:04:56

# Below is generated by plot.py at 2017-08-21 16:10:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.38 Mbit/s
95th percentile per-packet one-way delay: 137.940 ms
Loss rate: 2.59%
-- Flow 1:
Average throughput: 1.88 Mbit/s
95th percentile per-packet one-way delay: 137.802 ms
Loss rate: 1.68%
-- Flow 2:
Average throughput: 3.13 Mbit/s
95th percentile per-packet one-way delay: 138.046 ms
Loss rate: 2.78%
-- Flow 3:
Average throughput: 1.41 Mbit/s
95th percentile per-packet one-way delay: 137.909 ms
Loss rate: 5.32%
```

Run 1: Report of LEDBAT — Data Link

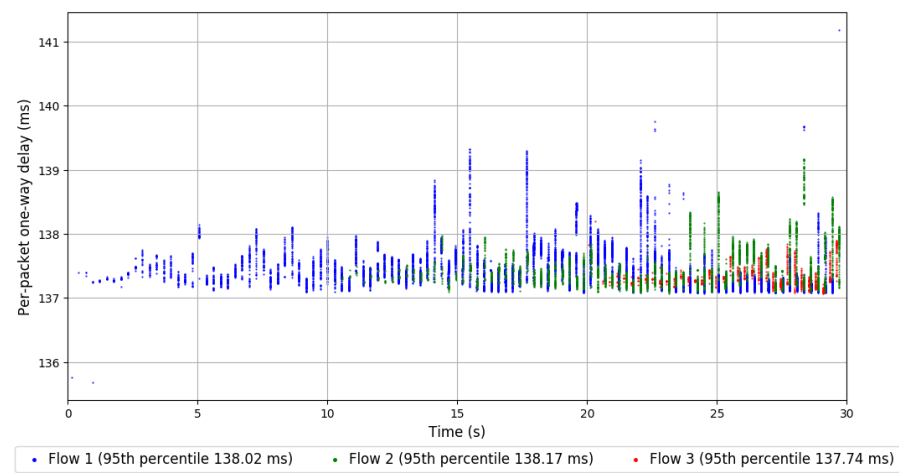
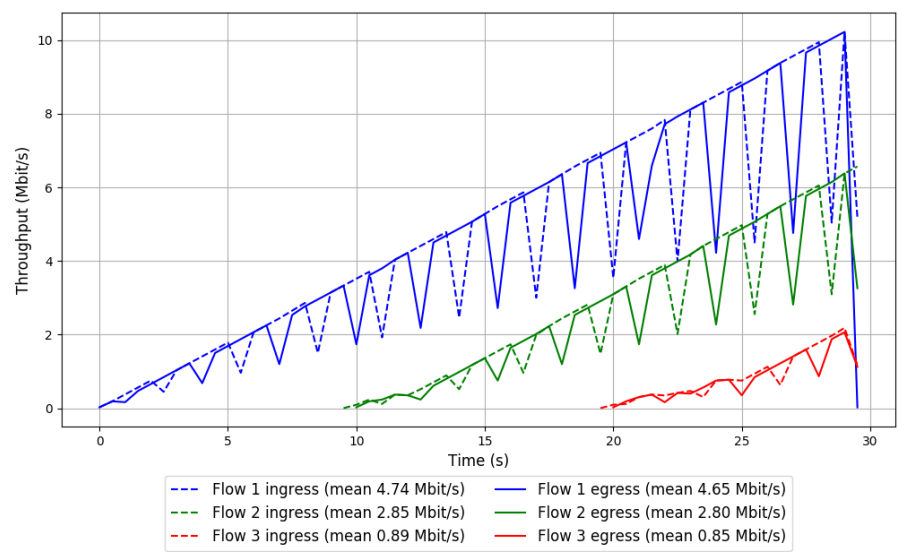


```
Run 2: Statistics of LEDBAT

Start at: 2017-08-21 11:18:11
End at: 2017-08-21 11:18:41

# Below is generated by plot.py at 2017-08-21 16:10:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.79 Mbit/s
95th percentile per-packet one-way delay: 138.066 ms
Loss rate: 2.34%
-- Flow 1:
Average throughput: 4.65 Mbit/s
95th percentile per-packet one-way delay: 138.017 ms
Loss rate: 1.84%
-- Flow 2:
Average throughput: 2.80 Mbit/s
95th percentile per-packet one-way delay: 138.173 ms
Loss rate: 2.91%
-- Flow 3:
Average throughput: 0.85 Mbit/s
95th percentile per-packet one-way delay: 137.738 ms
Loss rate: 6.70%
```

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2017-08-21 11:32:03

End at: 2017-08-21 11:32:33

Below is generated by plot.py at 2017-08-21 16:10:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.22 Mbit/s

95th percentile per-packet one-way delay: 138.028 ms

Loss rate: 2.67%

-- Flow 1:

Average throughput: 1.63 Mbit/s

95th percentile per-packet one-way delay: 138.141 ms

Loss rate: 2.42%

-- Flow 2:

Average throughput: 1.95 Mbit/s

95th percentile per-packet one-way delay: 137.709 ms

Loss rate: 2.16%

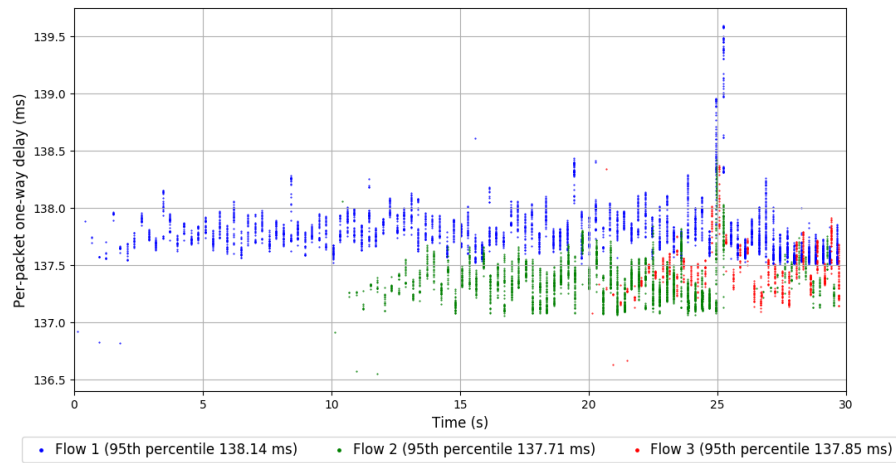
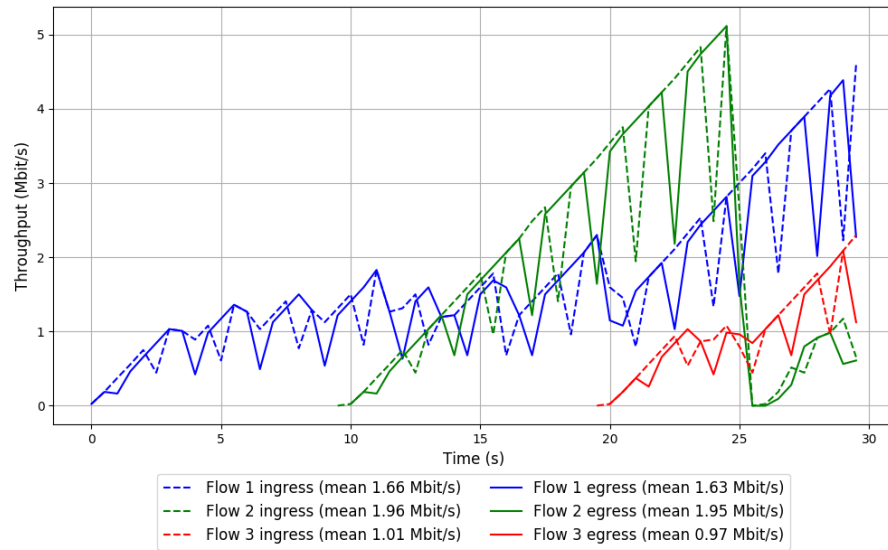
-- Flow 3:

Average throughput: 0.97 Mbit/s

95th percentile per-packet one-way delay: 137.850 ms

Loss rate: 5.91%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2017-08-21 11:45:48

End at: 2017-08-21 11:46:18

Below is generated by plot.py at 2017-08-21 16:10:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.33 Mbit/s

95th percentile per-packet one-way delay: 137.778 ms

Loss rate: 2.78%

-- Flow 1:

Average throughput: 1.57 Mbit/s

95th percentile per-packet one-way delay: 137.814 ms

Loss rate: 1.47%

-- Flow 2:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 137.672 ms

Loss rate: 3.26%

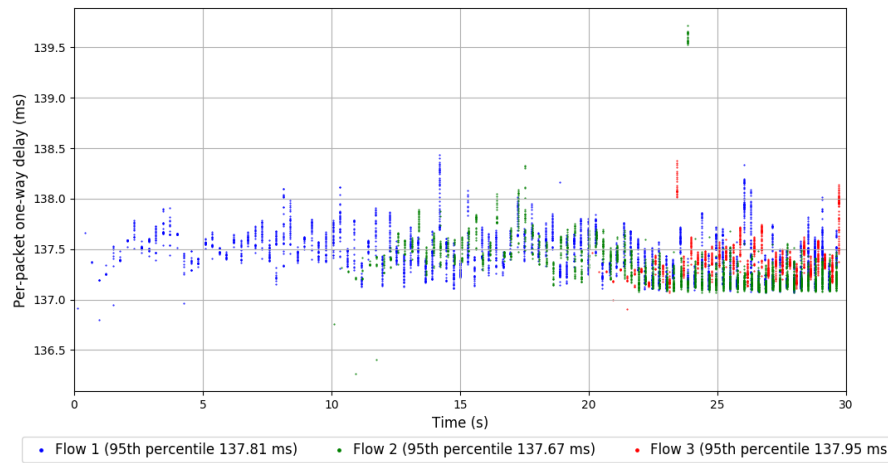
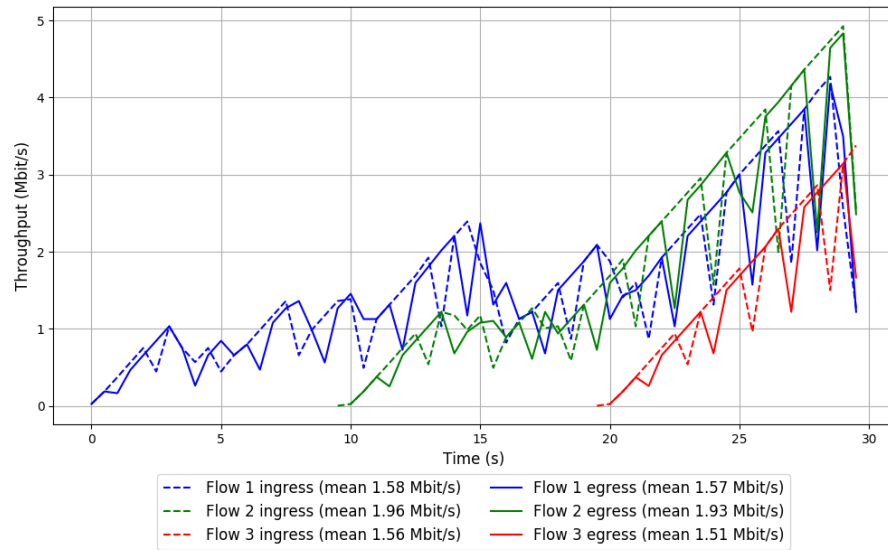
-- Flow 3:

Average throughput: 1.51 Mbit/s

95th percentile per-packet one-way delay: 137.950 ms

Loss rate: 5.57%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2017-08-21 11:59:29

End at: 2017-08-21 11:59:59

Below is generated by plot.py at 2017-08-21 16:10:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.90 Mbit/s

95th percentile per-packet one-way delay: 137.965 ms

Loss rate: 1.93%

-- Flow 1:

Average throughput: 1.00 Mbit/s

95th percentile per-packet one-way delay: 137.882 ms

Loss rate: 1.60%

-- Flow 2:

Average throughput: 2.29 Mbit/s

95th percentile per-packet one-way delay: 138.004 ms

Loss rate: 1.37%

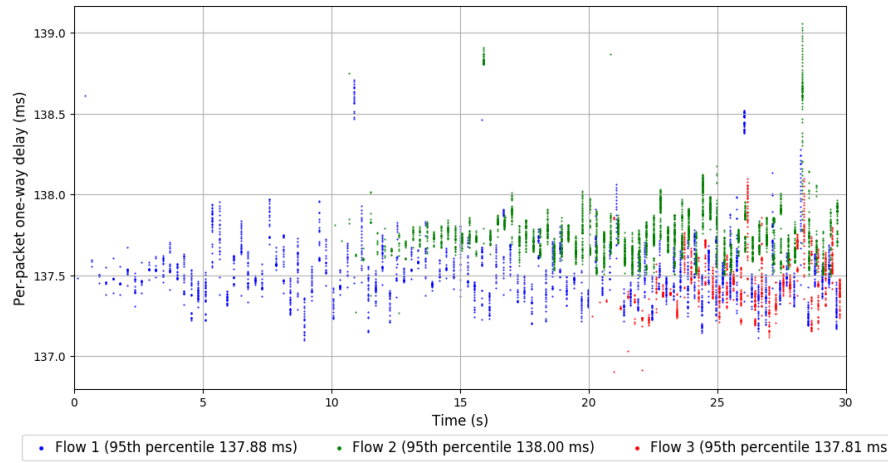
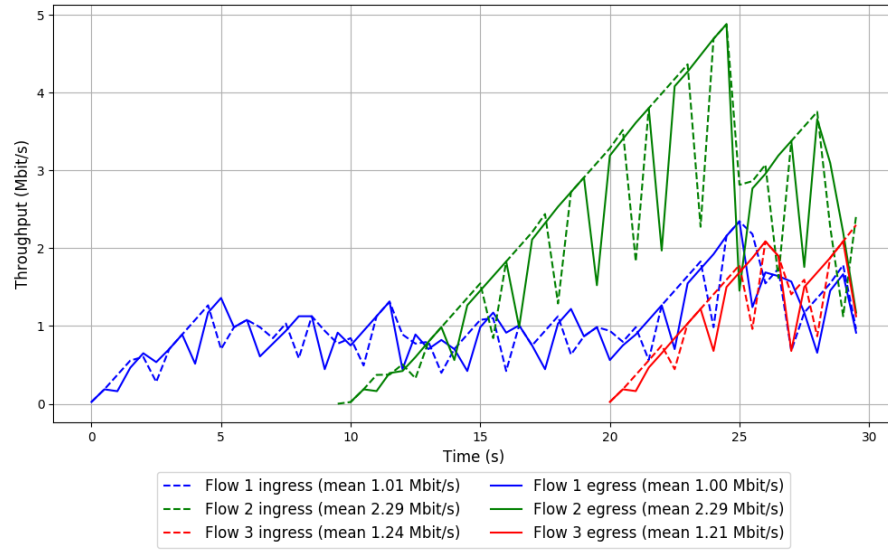
-- Flow 3:

Average throughput: 1.21 Mbit/s

95th percentile per-packet one-way delay: 137.814 ms

Loss rate: 4.80%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2017-08-21 12:13:17

End at: 2017-08-21 12:13:47

Below is generated by plot.py at 2017-08-21 16:10:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.45 Mbit/s

95th percentile per-packet one-way delay: 137.834 ms

Loss rate: 1.83%

-- Flow 1:

Average throughput: 1.21 Mbit/s

95th percentile per-packet one-way delay: 137.920 ms

Loss rate: 1.88%

-- Flow 2:

Average throughput: 2.75 Mbit/s

95th percentile per-packet one-way delay: 137.723 ms

Loss rate: 1.02%

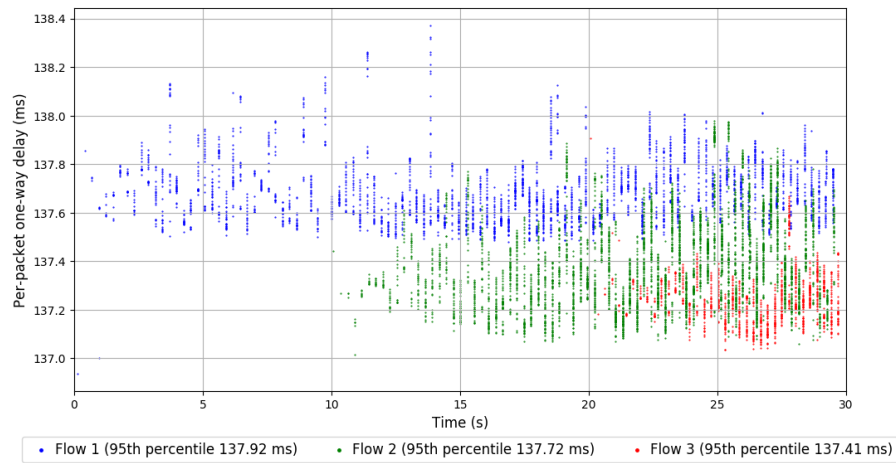
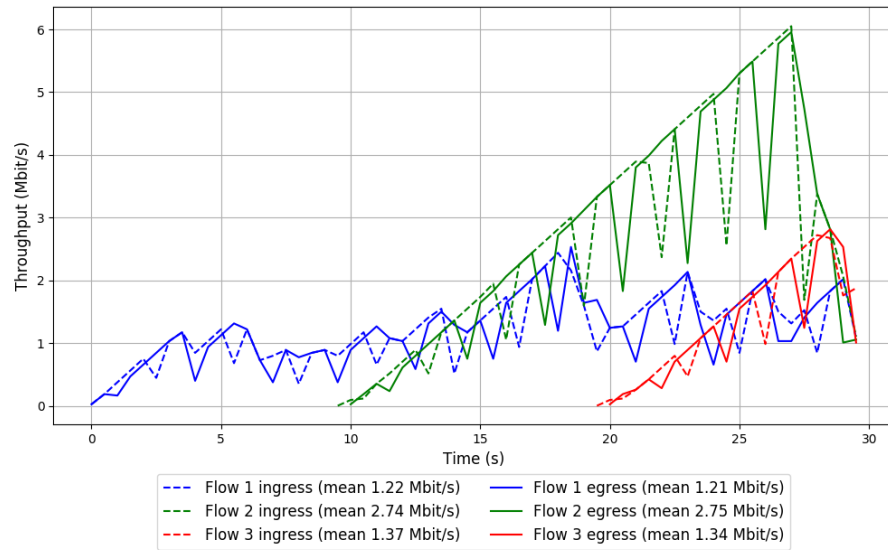
-- Flow 3:

Average throughput: 1.34 Mbit/s

95th percentile per-packet one-way delay: 137.408 ms

Loss rate: 4.94%

Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

Start at: 2017-08-21 12:26:45

End at: 2017-08-21 12:27:15

Below is generated by plot.py at 2017-08-21 16:10:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.77 Mbit/s

95th percentile per-packet one-way delay: 138.093 ms

Loss rate: 2.49%

-- Flow 1:

Average throughput: 1.97 Mbit/s

95th percentile per-packet one-way delay: 138.163 ms

Loss rate: 2.24%

-- Flow 2:

Average throughput: 0.78 Mbit/s

95th percentile per-packet one-way delay: 137.833 ms

Loss rate: 3.51%

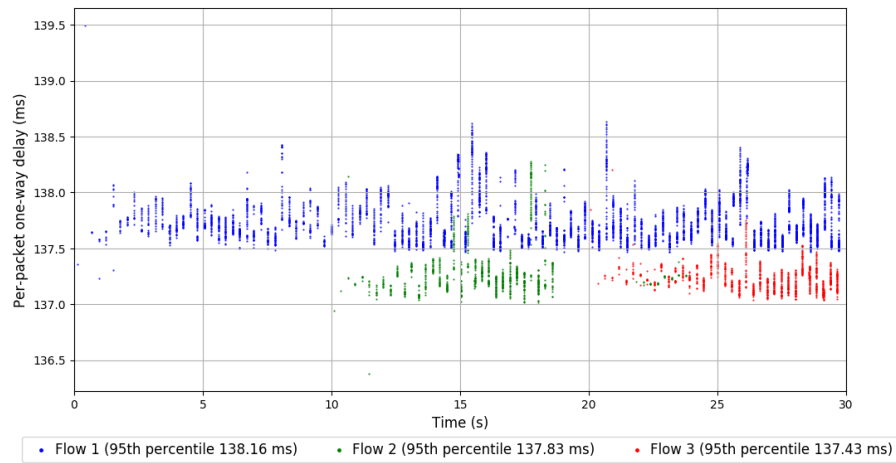
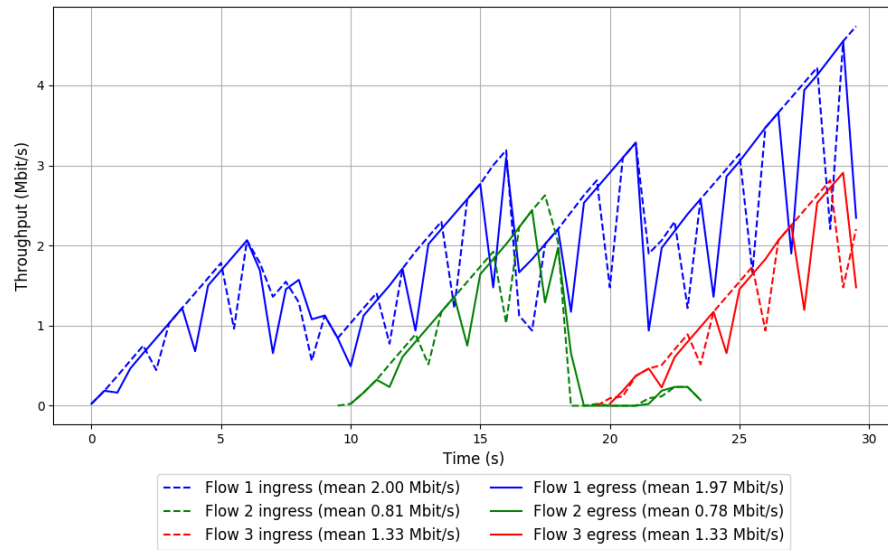
-- Flow 3:

Average throughput: 1.33 Mbit/s

95th percentile per-packet one-way delay: 137.434 ms

Loss rate: 2.76%

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2017-08-21 12:40:15

End at: 2017-08-21 12:40:45

Below is generated by plot.py at 2017-08-21 16:10:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.44 Mbit/s

95th percentile per-packet one-way delay: 137.685 ms

Loss rate: 2.18%

-- Flow 1:

Average throughput: 1.16 Mbit/s

95th percentile per-packet one-way delay: 137.680 ms

Loss rate: 1.05%

-- Flow 2:

Average throughput: 1.33 Mbit/s

95th percentile per-packet one-way delay: 137.674 ms

Loss rate: 1.87%

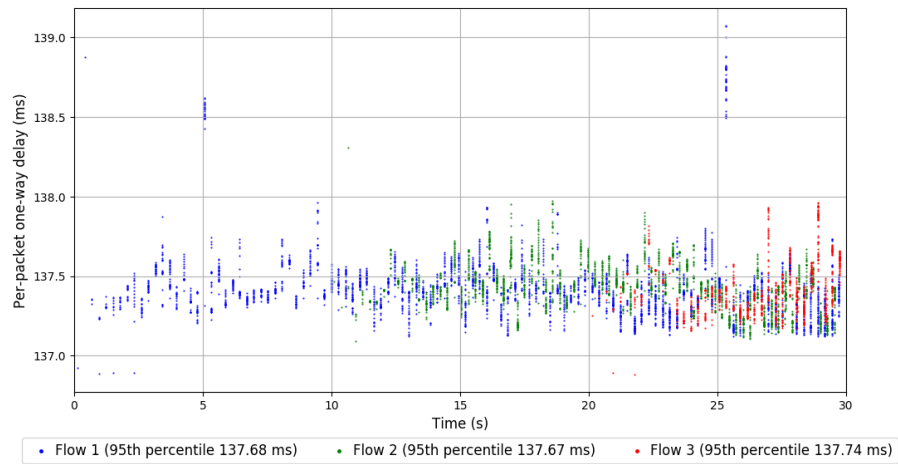
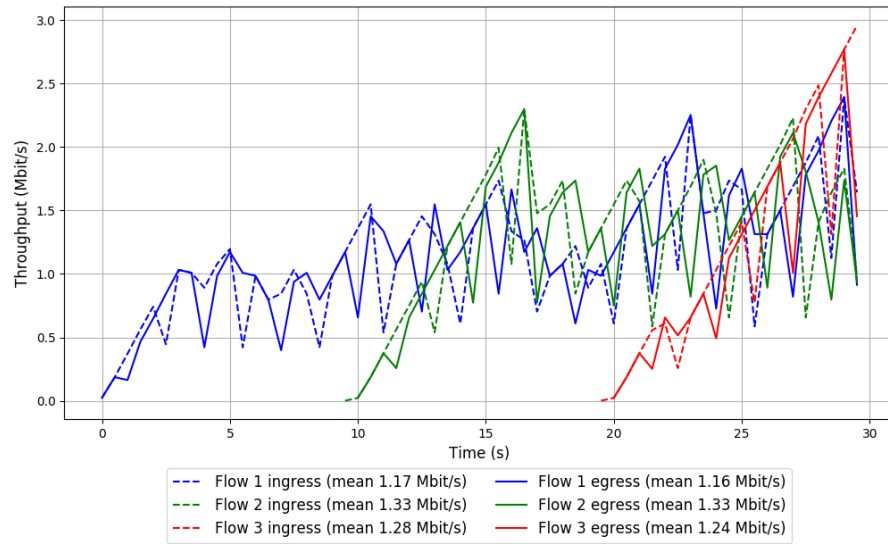
-- Flow 3:

Average throughput: 1.24 Mbit/s

95th percentile per-packet one-way delay: 137.741 ms

Loss rate: 5.91%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2017-08-21 12:53:52

End at: 2017-08-21 12:54:22

Below is generated by plot.py at 2017-08-21 16:10:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.86 Mbit/s

95th percentile per-packet one-way delay: 138.098 ms

Loss rate: 2.34%

-- Flow 1:

Average throughput: 2.29 Mbit/s

95th percentile per-packet one-way delay: 138.171 ms

Loss rate: 1.45%

-- Flow 2:

Average throughput: 1.79 Mbit/s

95th percentile per-packet one-way delay: 137.819 ms

Loss rate: 3.27%

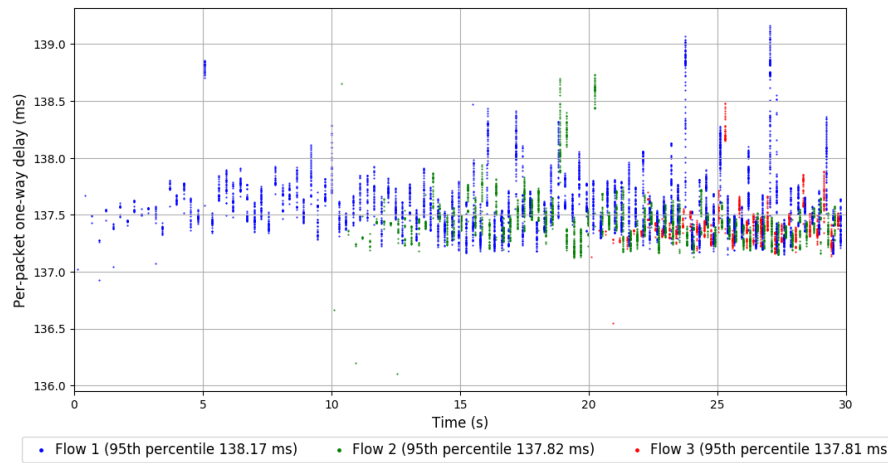
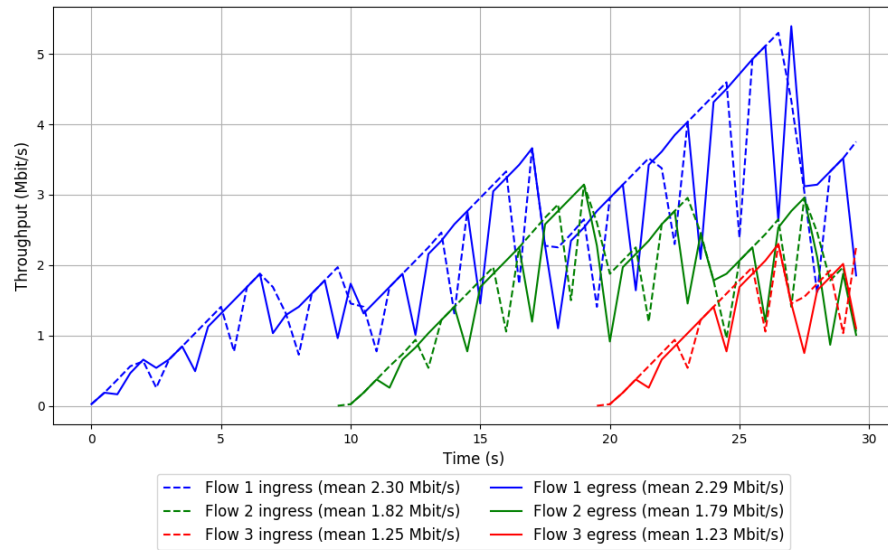
-- Flow 3:

Average throughput: 1.23 Mbit/s

95th percentile per-packet one-way delay: 137.813 ms

Loss rate: 4.66%

Run 9: Report of LEDBAT — Data Link



Run 10: Statistics of LEDBAT

Start at: 2017-08-21 13:07:42

End at: 2017-08-21 13:08:12

Below is generated by plot.py at 2017-08-21 16:10:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.70 Mbit/s

95th percentile per-packet one-way delay: 137.378 ms

Loss rate: 2.27%

-- Flow 1:

Average throughput: 2.23 Mbit/s

95th percentile per-packet one-way delay: 137.319 ms

Loss rate: 2.14%

-- Flow 2:

Average throughput: 3.01 Mbit/s

95th percentile per-packet one-way delay: 137.442 ms

Loss rate: 1.57%

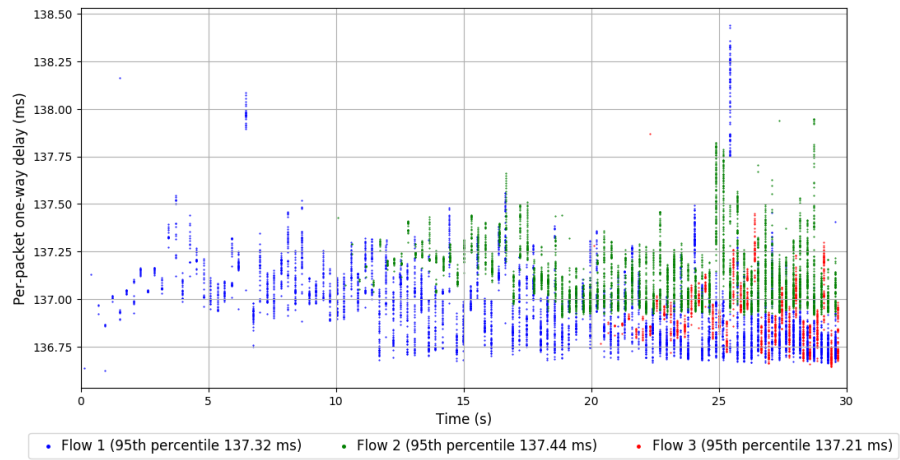
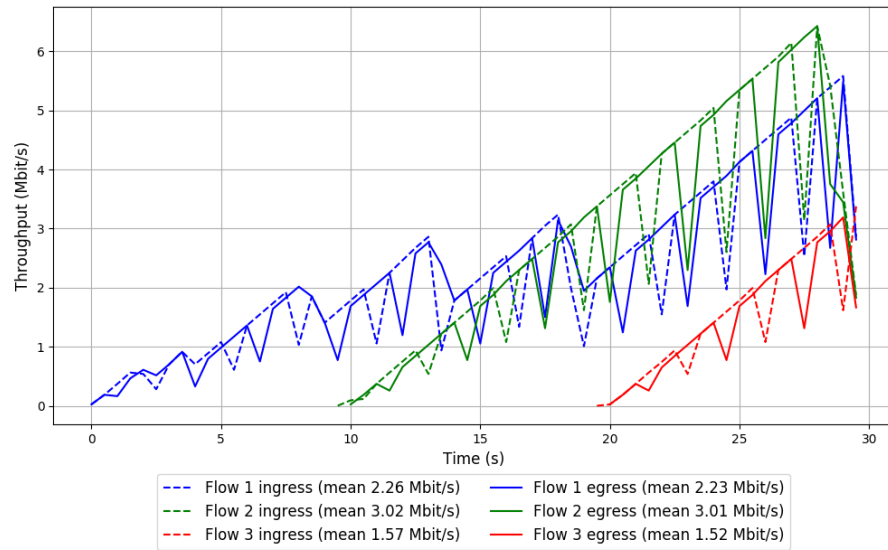
-- Flow 3:

Average throughput: 1.52 Mbit/s

95th percentile per-packet one-way delay: 137.214 ms

Loss rate: 5.55%

Run 10: Report of LEDBAT — Data Link

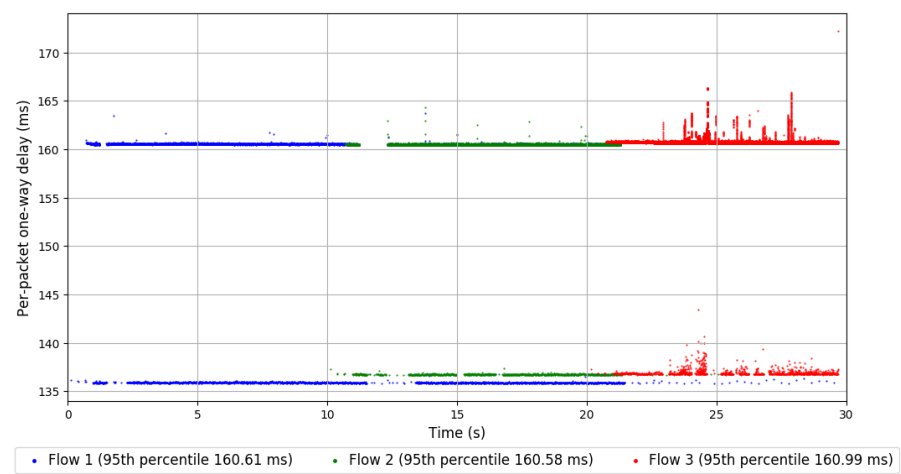
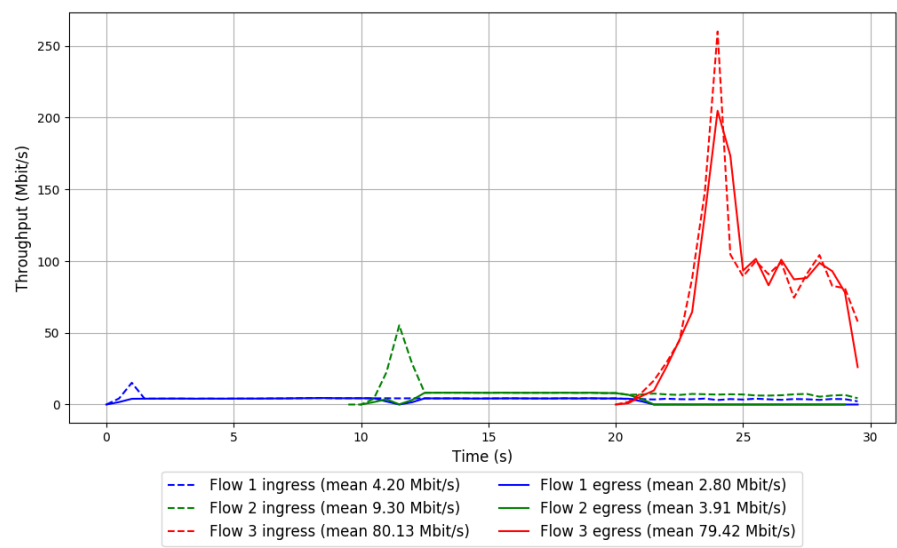


```
Run 1: Statistics of PCC

Start at: 2017-08-21 10:58:14
End at: 2017-08-21 10:58:44

# Below is generated by plot.py at 2017-08-21 16:10:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 30.95 Mbit/s
95th percentile per-packet one-way delay: 160.886 ms
Loss rate: 16.52%
-- Flow 1:
Average throughput: 2.80 Mbit/s
95th percentile per-packet one-way delay: 160.609 ms
Loss rate: 34.18%
-- Flow 2:
Average throughput: 3.91 Mbit/s
95th percentile per-packet one-way delay: 160.577 ms
Loss rate: 59.18%
-- Flow 3:
Average throughput: 79.42 Mbit/s
95th percentile per-packet one-way delay: 160.988 ms
Loss rate: 3.70%
```

Run 1: Report of PCC — Data Link

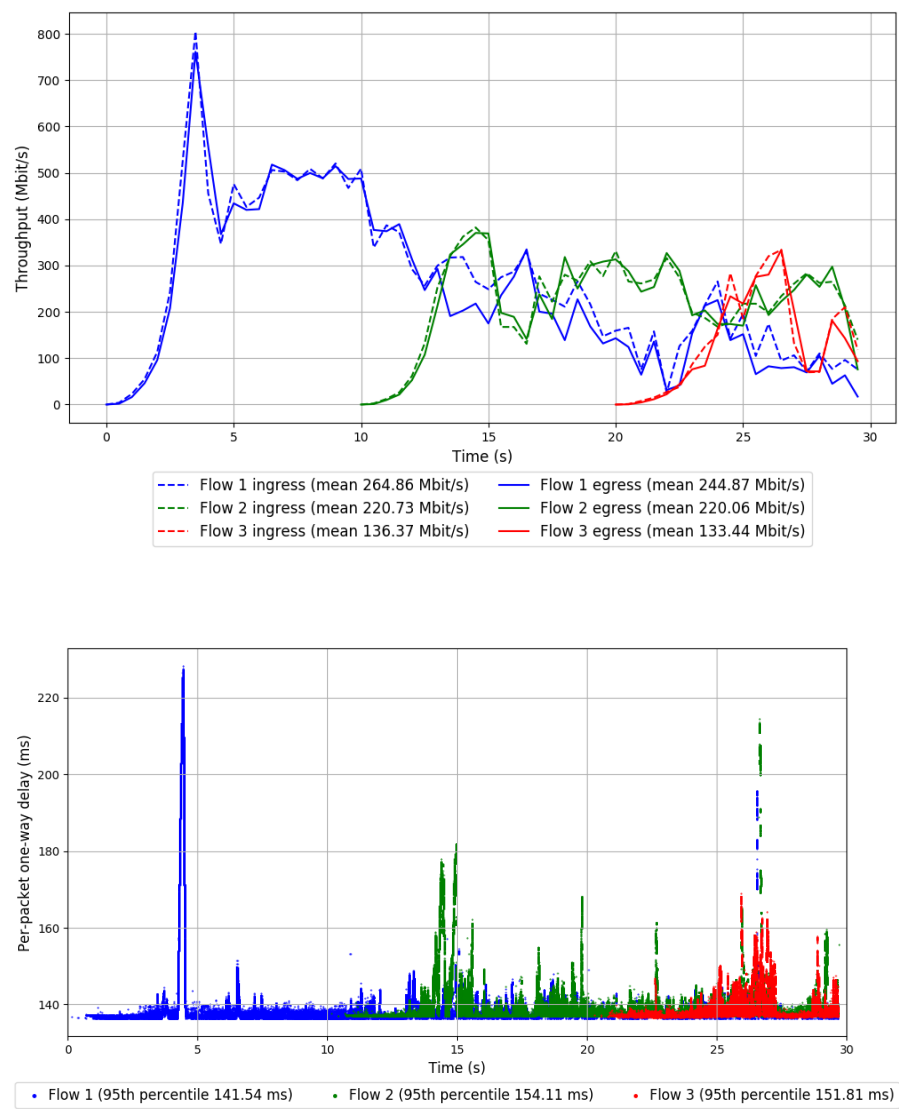


```
Run 2: Statistics of PCC

Start at: 2017-08-21 11:11:32
End at: 2017-08-21 11:12:02

# Below is generated by plot.py at 2017-08-21 16:12:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 432.71 Mbit/s
95th percentile per-packet one-way delay: 147.071 ms
Loss rate: 5.85%
-- Flow 1:
Average throughput: 244.87 Mbit/s
95th percentile per-packet one-way delay: 141.537 ms
Loss rate: 8.39%
-- Flow 2:
Average throughput: 220.06 Mbit/s
95th percentile per-packet one-way delay: 154.113 ms
Loss rate: 1.59%
-- Flow 3:
Average throughput: 133.44 Mbit/s
95th percentile per-packet one-way delay: 151.806 ms
Loss rate: 4.78%
```

Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2017-08-21 11:25:38

End at: 2017-08-21 11:26:08

Below is generated by plot.py at 2017-08-21 16:12:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 266.59 Mbit/s

95th percentile per-packet one-way delay: 138.056 ms

Loss rate: 16.30%

-- Flow 1:

Average throughput: 225.83 Mbit/s

95th percentile per-packet one-way delay: 138.124 ms

Loss rate: 17.14%

-- Flow 2:

Average throughput: 1.90 Mbit/s

95th percentile per-packet one-way delay: 137.556 ms

Loss rate: 5.39%

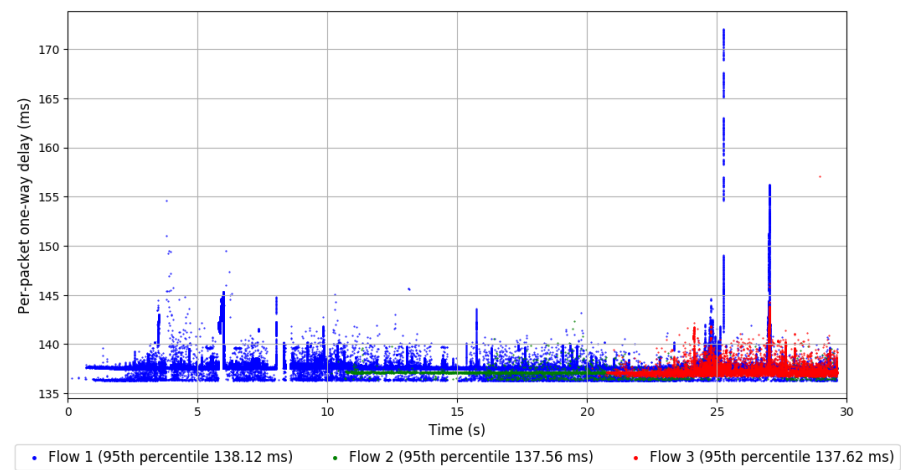
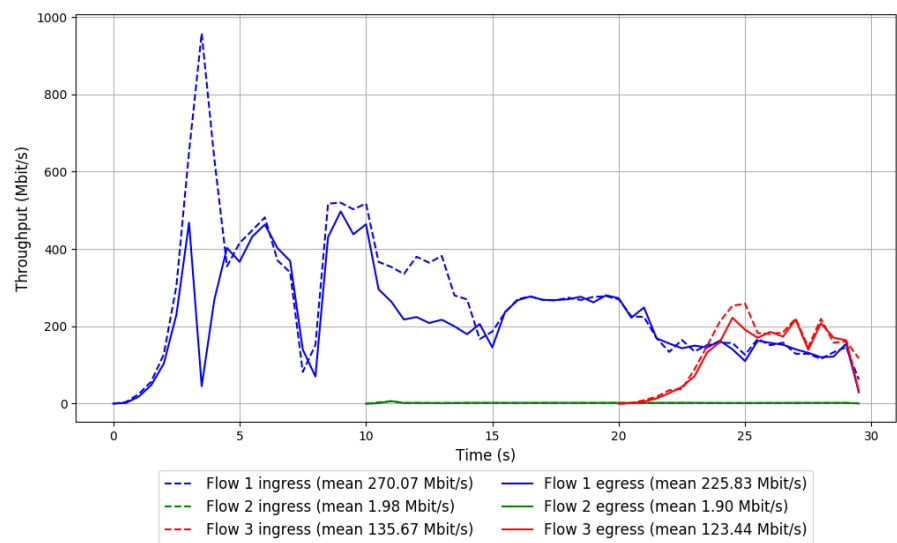
-- Flow 3:

Average throughput: 123.44 Mbit/s

95th percentile per-packet one-way delay: 137.619 ms

Loss rate: 11.54%

Run 3: Report of PCC — Data Link



Run 4: Statistics of PCC

Start at: 2017-08-21 11:39:16

End at: 2017-08-21 11:39:46

Below is generated by plot.py at 2017-08-21 16:12:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 333.45 Mbit/s

95th percentile per-packet one-way delay: 141.490 ms

Loss rate: 13.55%

-- Flow 1:

Average throughput: 174.38 Mbit/s

95th percentile per-packet one-way delay: 138.702 ms

Loss rate: 21.86%

-- Flow 2:

Average throughput: 203.87 Mbit/s

95th percentile per-packet one-way delay: 143.696 ms

Loss rate: 1.14%

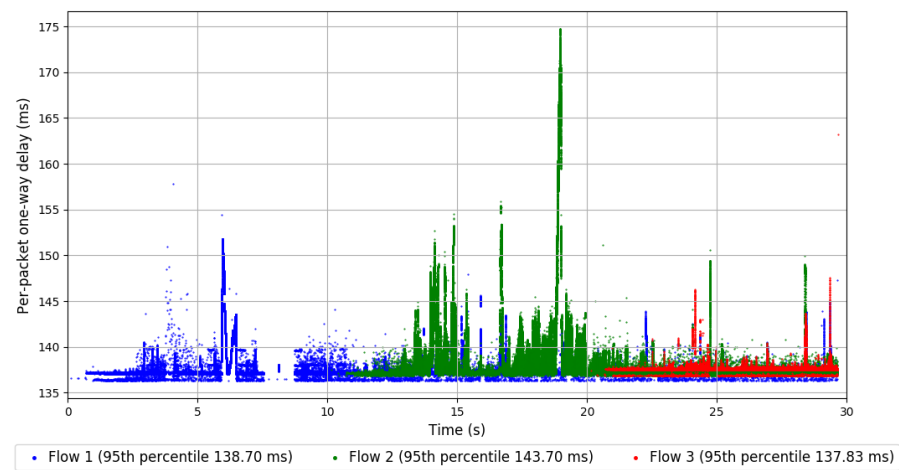
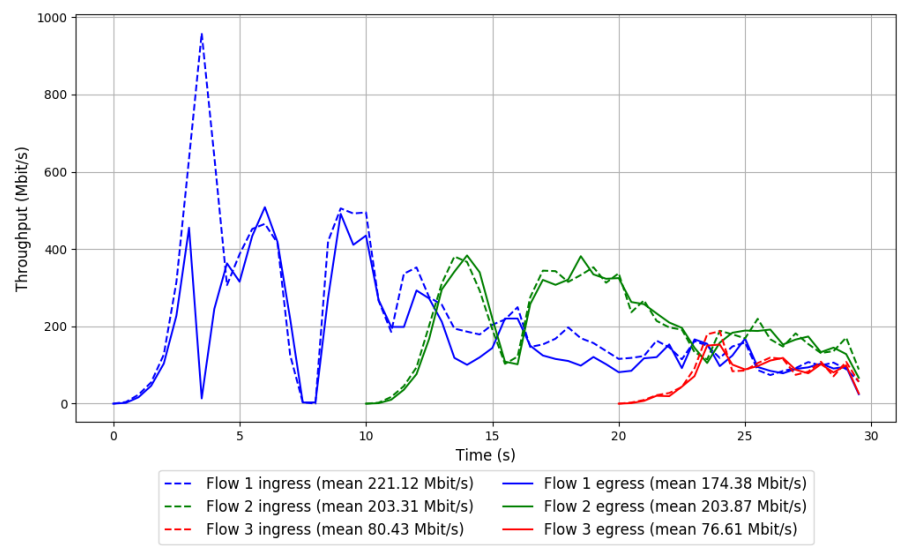
-- Flow 3:

Average throughput: 76.61 Mbit/s

95th percentile per-packet one-way delay: 137.832 ms

Loss rate: 7.36%

Run 4: Report of PCC — Data Link



Run 5: Statistics of PCC

Start at: 2017-08-21 11:53:00

End at: 2017-08-21 11:53:30

Below is generated by plot.py at 2017-08-21 16:13:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 383.25 Mbit/s

95th percentile per-packet one-way delay: 142.735 ms

Loss rate: 1.65%

-- Flow 1:

Average throughput: 326.71 Mbit/s

95th percentile per-packet one-way delay: 141.626 ms

Loss rate: 0.96%

-- Flow 2:

Average throughput: 1.57 Mbit/s

95th percentile per-packet one-way delay: 137.308 ms

Loss rate: 17.38%

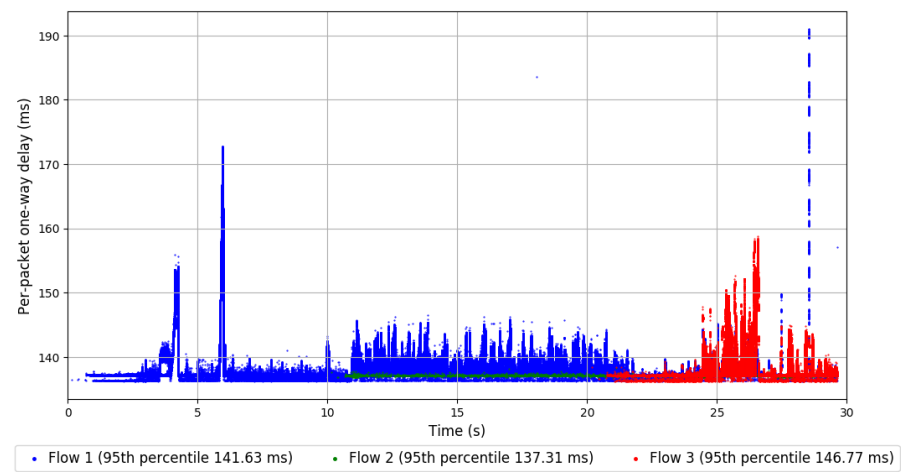
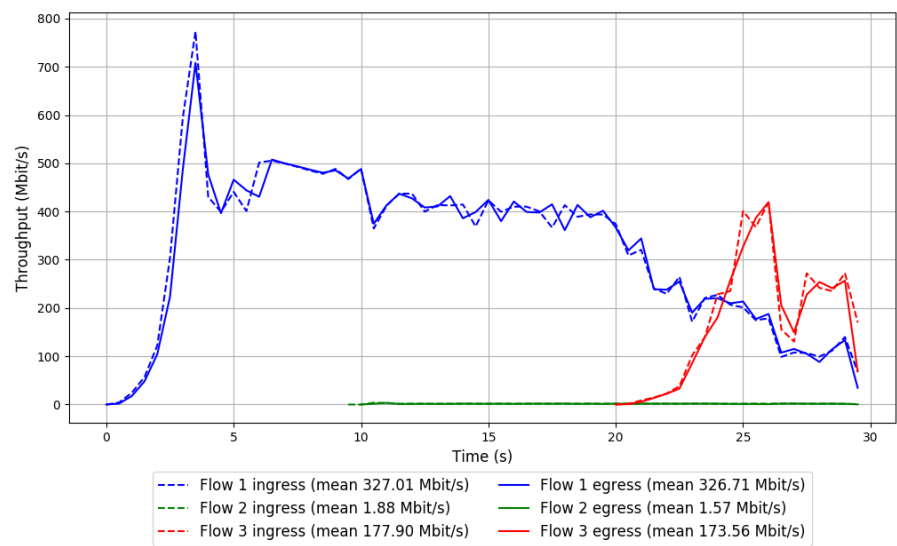
-- Flow 3:

Average throughput: 173.56 Mbit/s

95th percentile per-packet one-way delay: 146.769 ms

Loss rate: 5.22%

Run 5: Report of PCC — Data Link



Run 6: Statistics of PCC

Start at: 2017-08-21 12:06:43

End at: 2017-08-21 12:07:13

Below is generated by plot.py at 2017-08-21 16:13:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 271.29 Mbit/s

95th percentile per-packet one-way delay: 138.099 ms

Loss rate: 10.16%

-- Flow 1:

Average throughput: 226.35 Mbit/s

95th percentile per-packet one-way delay: 137.917 ms

Loss rate: 11.39%

-- Flow 2:

Average throughput: 1.88 Mbit/s

95th percentile per-packet one-way delay: 137.202 ms

Loss rate: 16.95%

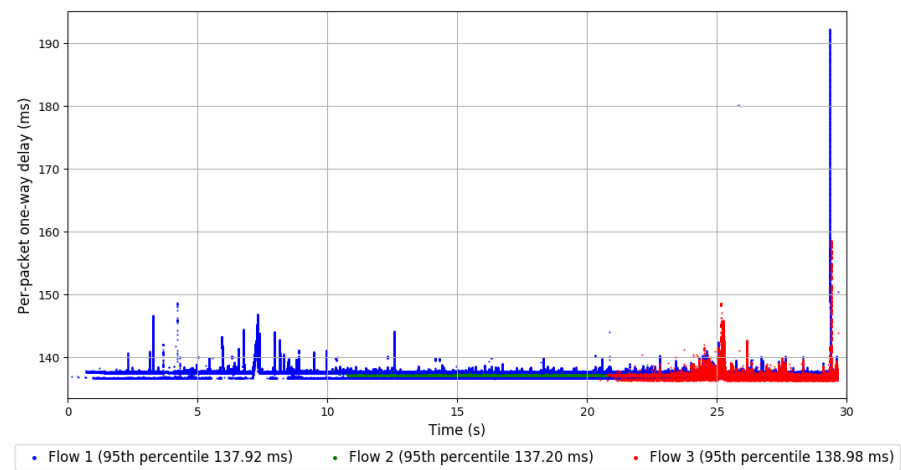
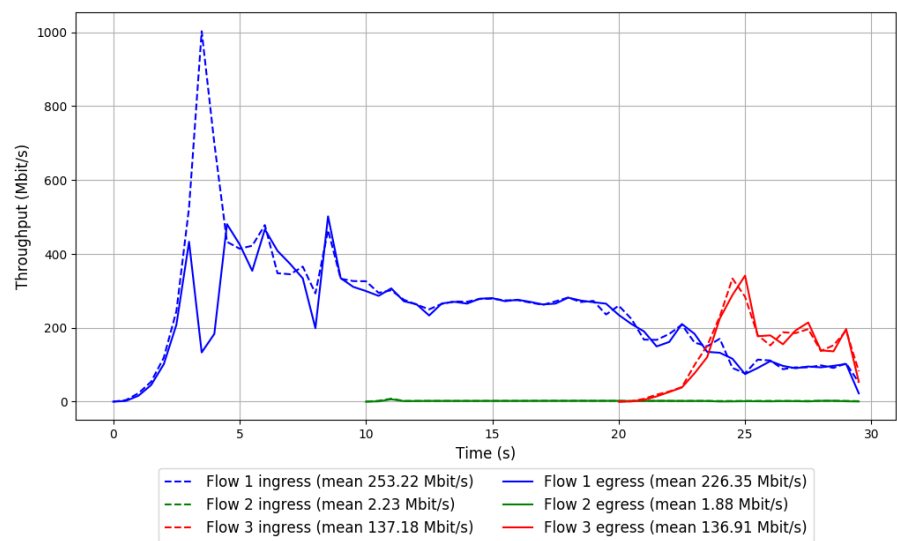
-- Flow 3:

Average throughput: 136.91 Mbit/s

95th percentile per-packet one-way delay: 138.980 ms

Loss rate: 2.98%

Run 6: Report of PCC — Data Link



Run 7: Statistics of PCC

Start at: 2017-08-21 12:20:21

End at: 2017-08-21 12:20:51

Below is generated by plot.py at 2017-08-21 16:14:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 255.36 Mbit/s

95th percentile per-packet one-way delay: 145.231 ms

Loss rate: 24.49%

-- Flow 1:

Average throughput: 201.11 Mbit/s

95th percentile per-packet one-way delay: 146.619 ms

Loss rate: 28.13%

-- Flow 2:

Average throughput: 1.28 Mbit/s

95th percentile per-packet one-way delay: 137.433 ms

Loss rate: 35.47%

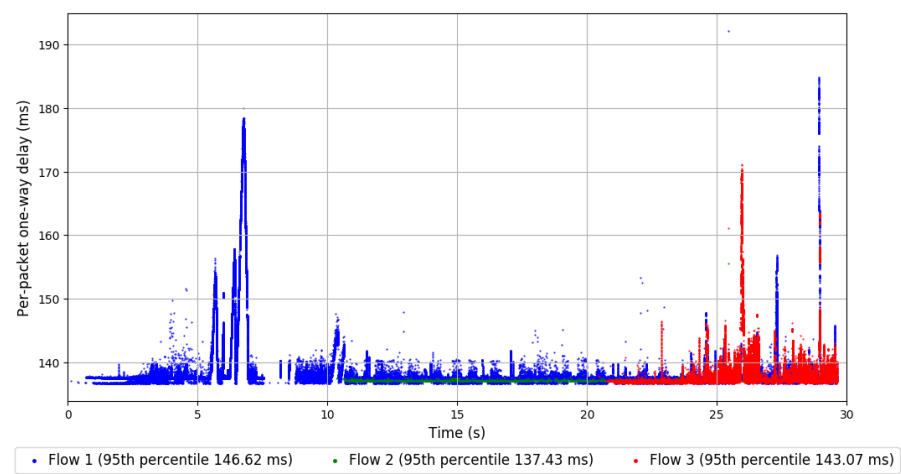
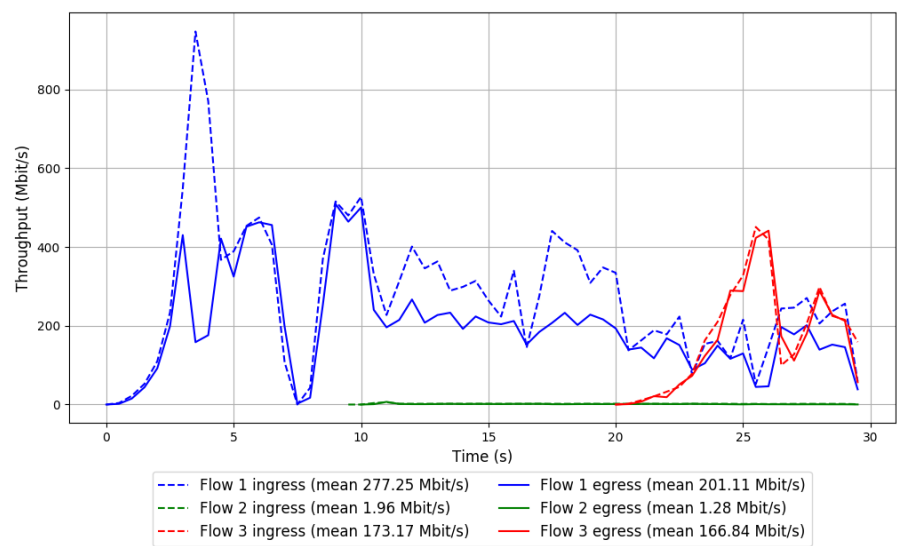
-- Flow 3:

Average throughput: 166.84 Mbit/s

95th percentile per-packet one-way delay: 143.074 ms

Loss rate: 6.41%

Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2017-08-21 12:33:54

End at: 2017-08-21 12:34:24

Below is generated by plot.py at 2017-08-21 16:14:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 203.38 Mbit/s

95th percentile per-packet one-way delay: 137.241 ms

Loss rate: 11.33%

-- Flow 1:

Average throughput: 185.73 Mbit/s

95th percentile per-packet one-way delay: 137.242 ms

Loss rate: 10.88%

-- Flow 2:

Average throughput: 25.71 Mbit/s

95th percentile per-packet one-way delay: 137.234 ms

Loss rate: 16.22%

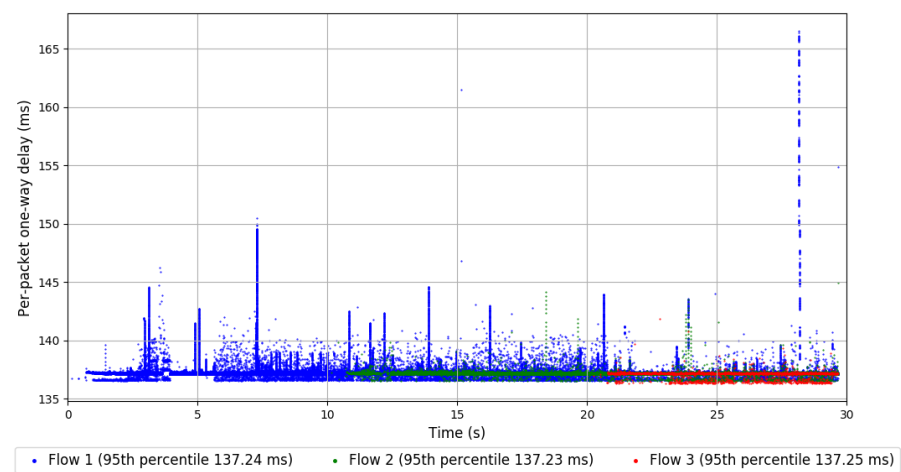
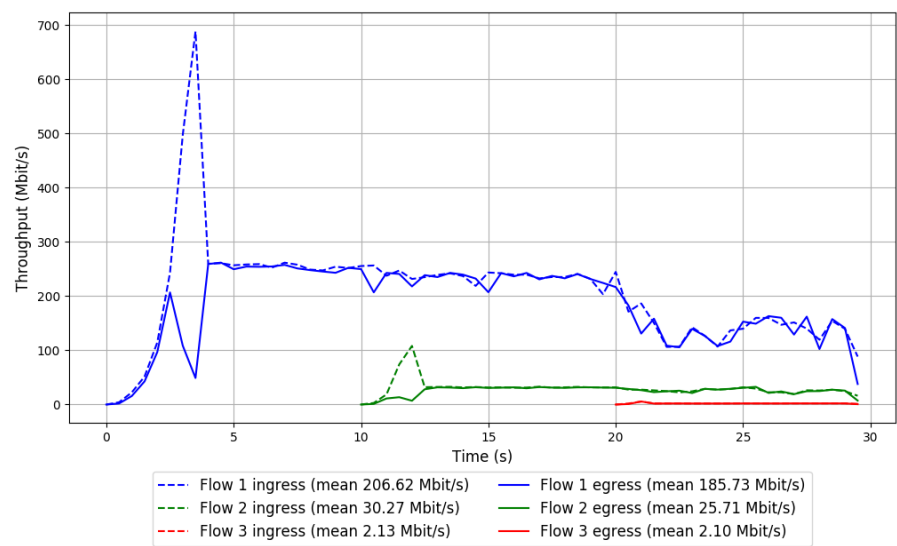
-- Flow 3:

Average throughput: 2.10 Mbit/s

95th percentile per-packet one-way delay: 137.251 ms

Loss rate: 4.16%

Run 8: Report of PCC — Data Link



Run 9: Statistics of PCC

Start at: 2017-08-21 12:47:23

End at: 2017-08-21 12:47:53

Below is generated by plot.py at 2017-08-21 16:15:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 329.50 Mbit/s

95th percentile per-packet one-way delay: 146.267 ms

Loss rate: 4.76%

-- Flow 1:

Average throughput: 328.38 Mbit/s

95th percentile per-packet one-way delay: 146.435 ms

Loss rate: 4.55%

-- Flow 2:

Average throughput: 1.07 Mbit/s

95th percentile per-packet one-way delay: 137.283 ms

Loss rate: 46.38%

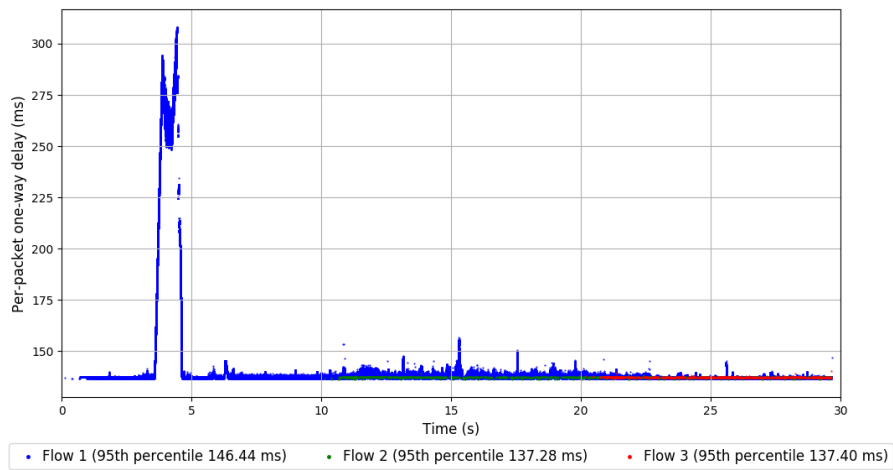
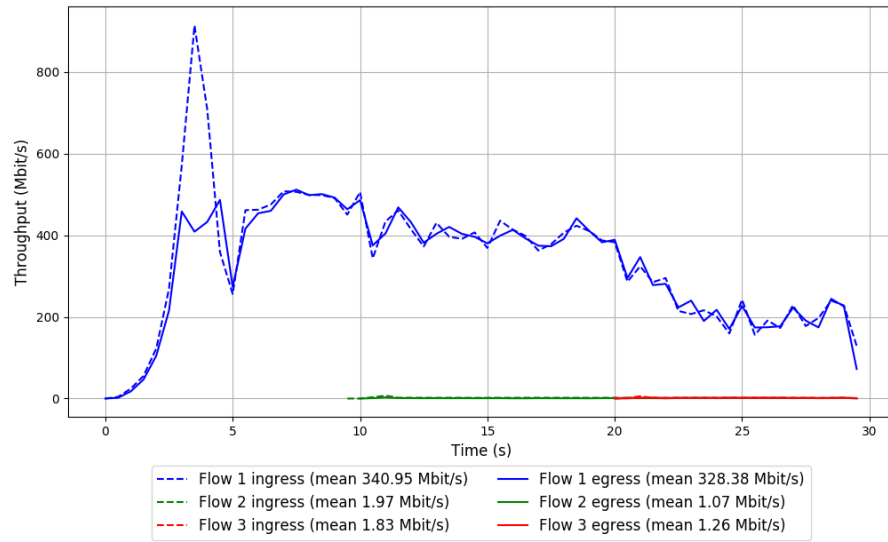
-- Flow 3:

Average throughput: 1.26 Mbit/s

95th percentile per-packet one-way delay: 137.404 ms

Loss rate: 33.26%

Run 9: Report of PCC — Data Link



Run 10: Statistics of PCC

Start at: 2017-08-21 13:00:56

End at: 2017-08-21 13:01:26

Below is generated by plot.py at 2017-08-21 16:15:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 434.56 Mbit/s

95th percentile per-packet one-way delay: 146.140 ms

Loss rate: 2.50%

-- Flow 1:

Average throughput: 296.25 Mbit/s

95th percentile per-packet one-way delay: 145.675 ms

Loss rate: 1.93%

-- Flow 2:

Average throughput: 153.93 Mbit/s

95th percentile per-packet one-way delay: 148.178 ms

Loss rate: 3.02%

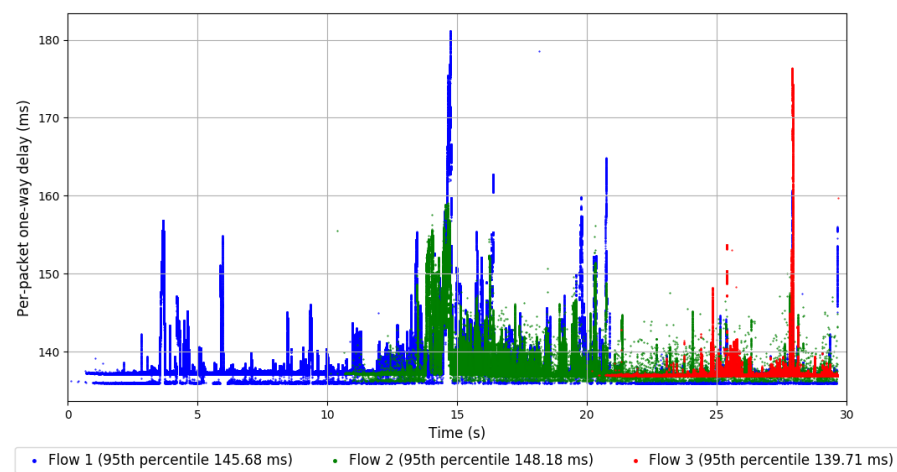
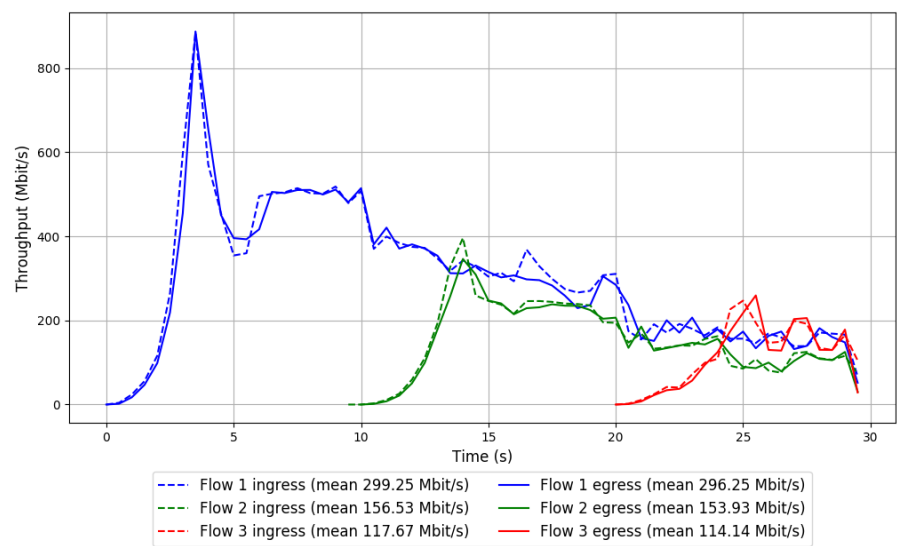
-- Flow 3:

Average throughput: 114.14 Mbit/s

95th percentile per-packet one-way delay: 139.713 ms

Loss rate: 5.50%

Run 10: Report of PCC — Data Link

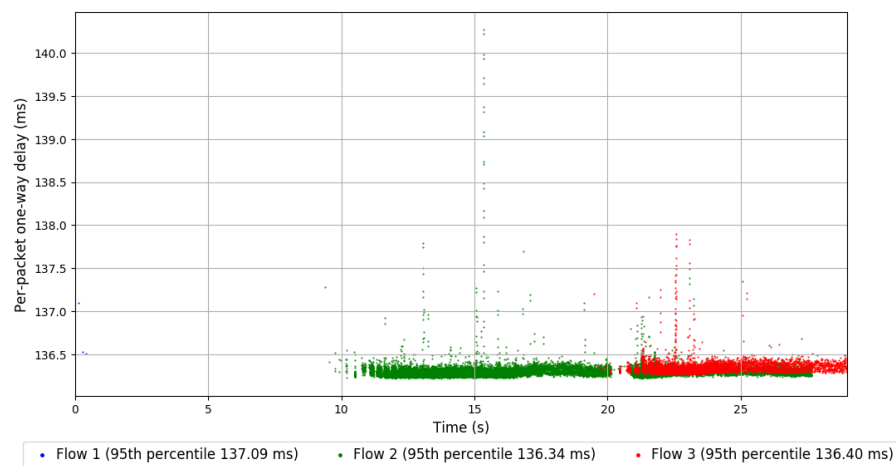
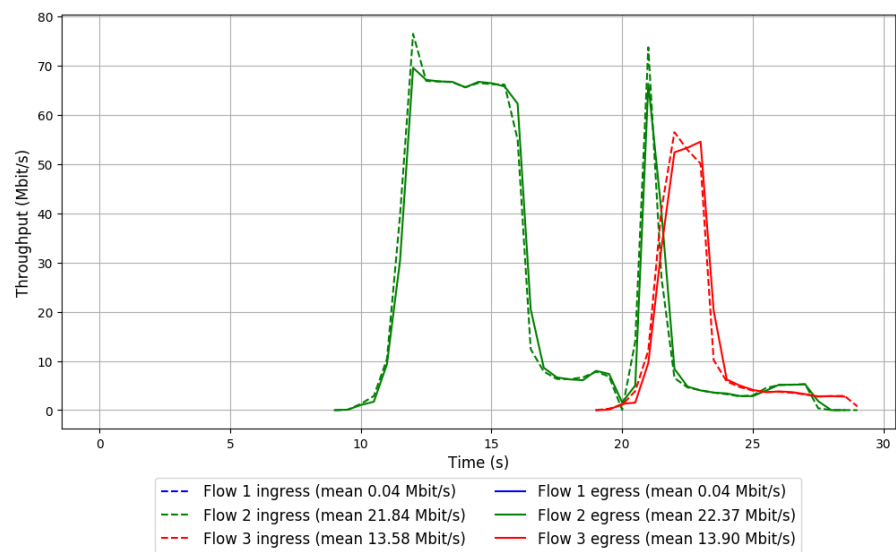


```
Run 1: Statistics of QUIC Cubic

Start at: 2017-08-21 11:05:16
End at: 2017-08-21 11:05:46

# Below is generated by plot.py at 2017-08-21 16:15:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.61 Mbit/s
95th percentile per-packet one-way delay: 136.362 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 137.091 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 22.37 Mbit/s
95th percentile per-packet one-way delay: 136.342 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 13.90 Mbit/s
95th percentile per-packet one-way delay: 136.400 ms
Loss rate: 0.64%
```

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2017-08-21 11:19:01

End at: 2017-08-21 11:19:31

Below is generated by plot.py at 2017-08-21 16:15:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 18.06 Mbit/s

95th percentile per-packet one-way delay: 136.848 ms

Loss rate: 0.48%

-- Flow 1:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 137.232 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 22.63 Mbit/s

95th percentile per-packet one-way delay: 136.254 ms

Loss rate: 0.27%

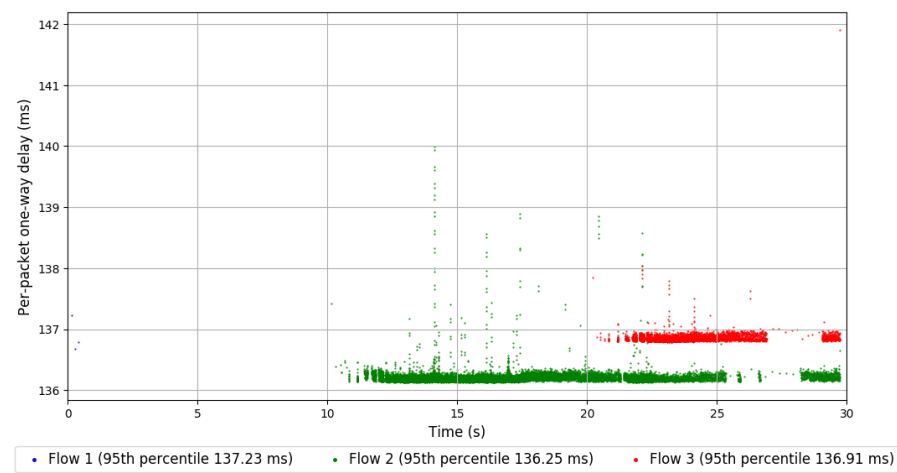
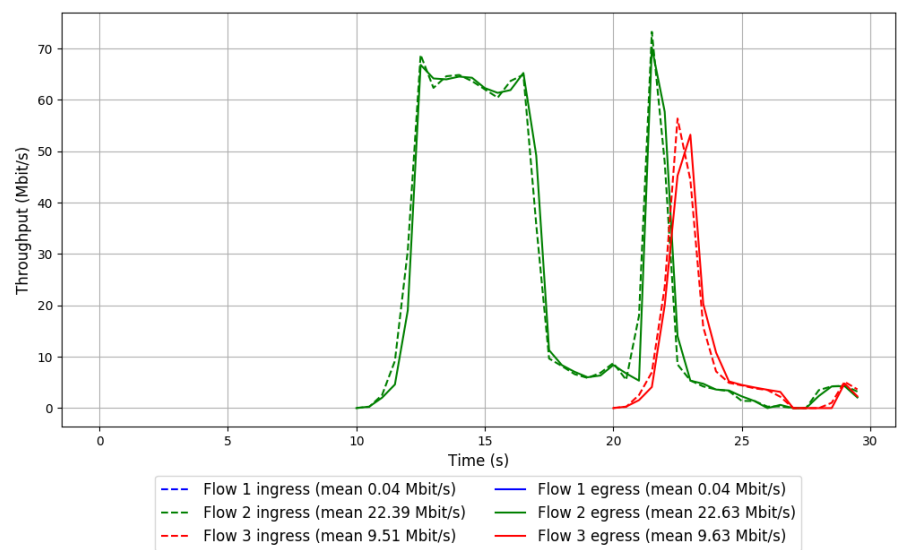
-- Flow 3:

Average throughput: 9.63 Mbit/s

95th percentile per-packet one-way delay: 136.915 ms

Loss rate: 1.47%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2017-08-21 11:32:52

End at: 2017-08-21 11:33:22

Below is generated by plot.py at 2017-08-21 16:15:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 21.95 Mbit/s

95th percentile per-packet one-way delay: 136.706 ms

Loss rate: 2.04%

-- Flow 1:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 136.389 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 28.18 Mbit/s

95th percentile per-packet one-way delay: 136.086 ms

Loss rate: 2.13%

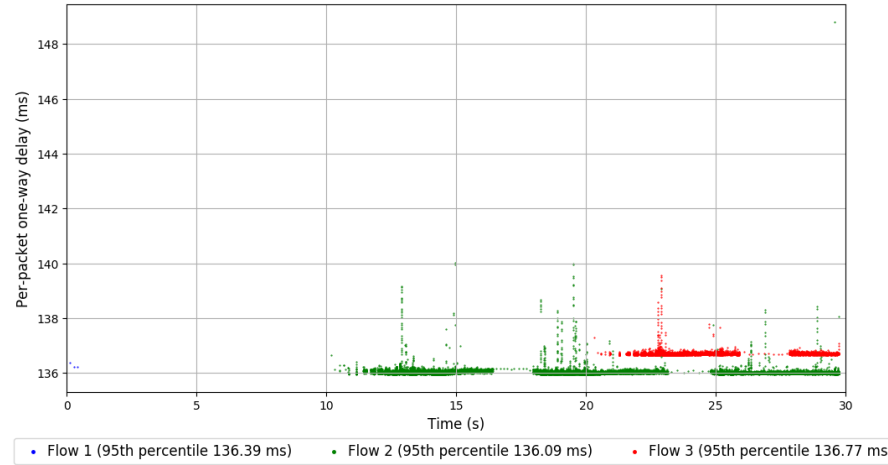
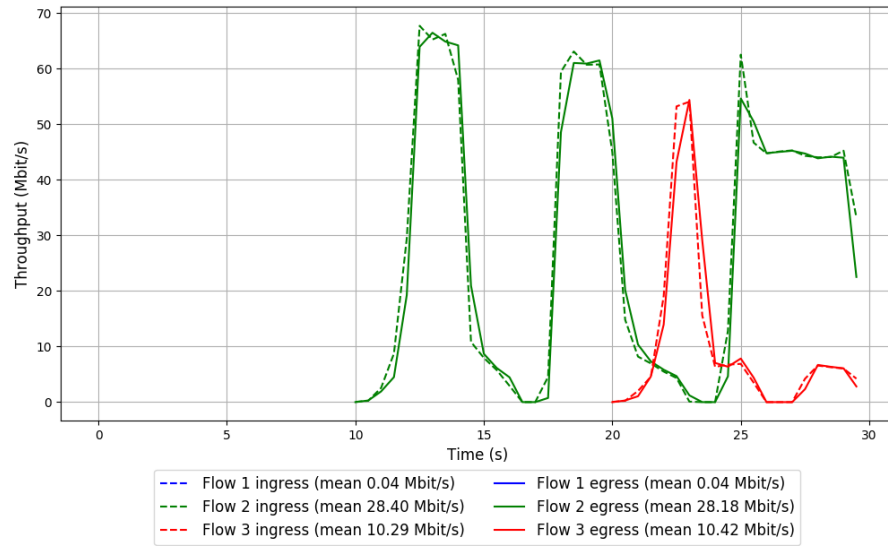
-- Flow 3:

Average throughput: 10.42 Mbit/s

95th percentile per-packet one-way delay: 136.771 ms

Loss rate: 1.53%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2017-08-21 11:46:37

End at: 2017-08-21 11:47:07

Below is generated by plot.py at 2017-08-21 16:15:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 22.71 Mbit/s

95th percentile per-packet one-way delay: 136.985 ms

Loss rate: 0.32%

-- Flow 1:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 136.904 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 23.55 Mbit/s

95th percentile per-packet one-way delay: 136.478 ms

Loss rate: 0.28%

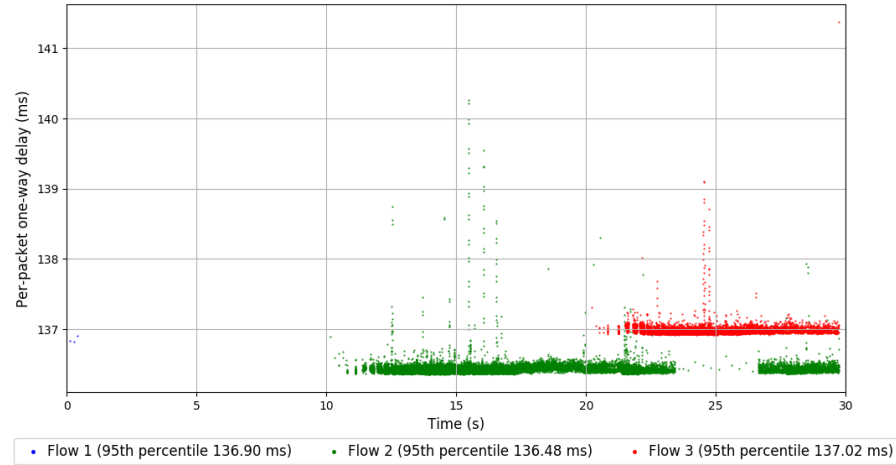
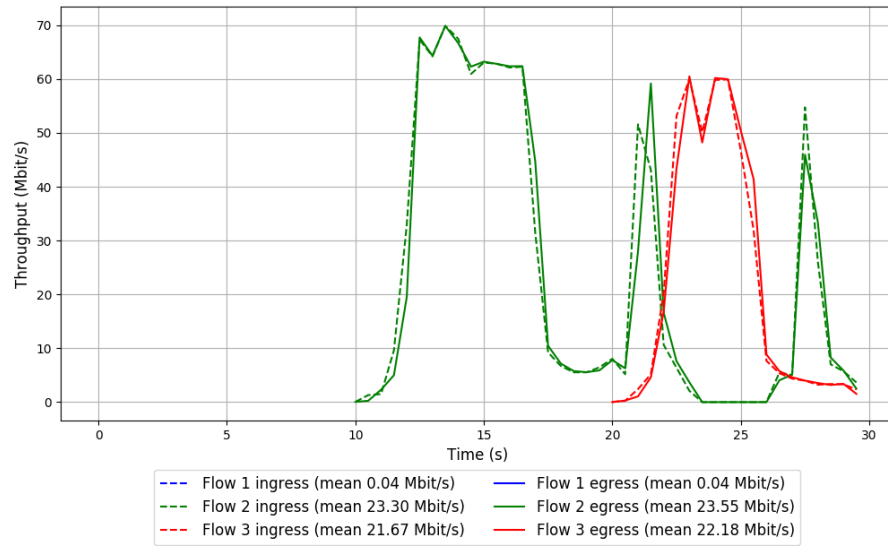
-- Flow 3:

Average throughput: 22.18 Mbit/s

95th percentile per-packet one-way delay: 137.021 ms

Loss rate: 0.40%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2017-08-21 12:00:18

End at: 2017-08-21 12:00:48

Below is generated by plot.py at 2017-08-21 16:15:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 22.98 Mbit/s

95th percentile per-packet one-way delay: 137.134 ms

Loss rate: 1.66%

-- Flow 1:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 136.566 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 30.16 Mbit/s

95th percentile per-packet one-way delay: 137.138 ms

Loss rate: 1.69%

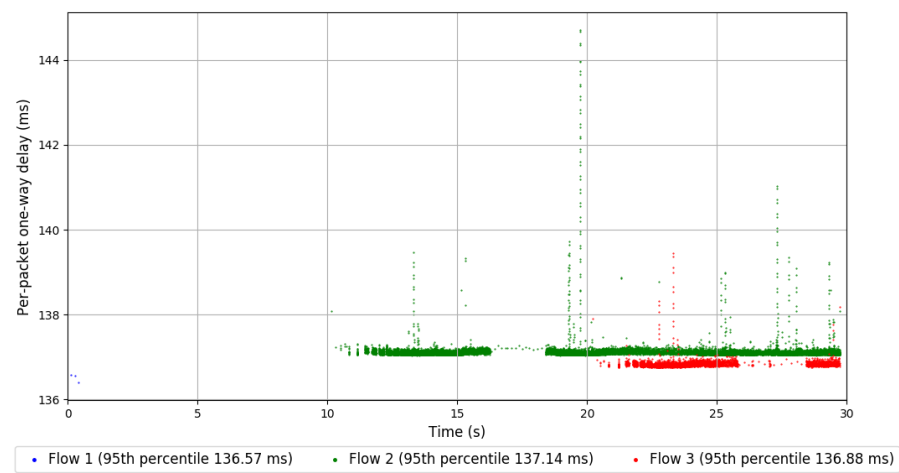
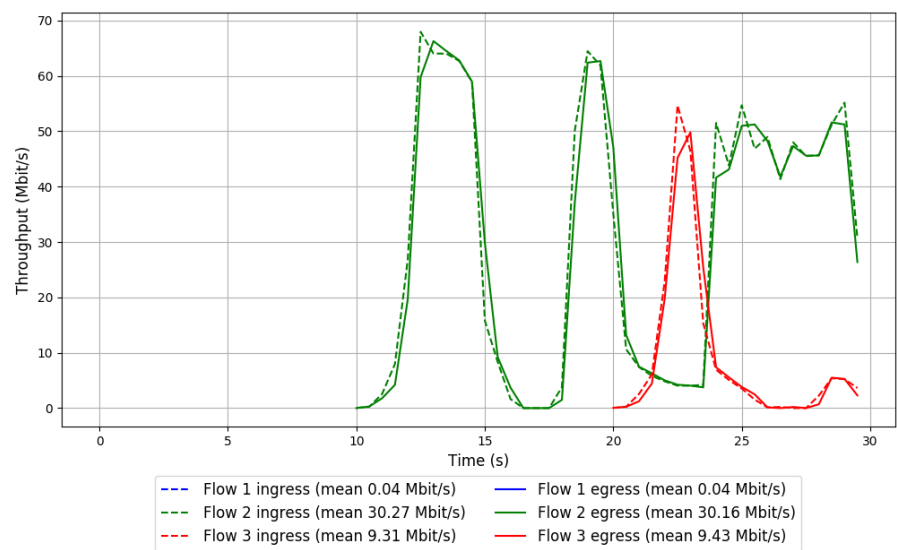
-- Flow 3:

Average throughput: 9.43 Mbit/s

95th percentile per-packet one-way delay: 136.883 ms

Loss rate: 1.51%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2017-08-21 12:14:06

End at: 2017-08-21 12:14:36

Below is generated by plot.py at 2017-08-21 16:15:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 18.68 Mbit/s

95th percentile per-packet one-way delay: 136.931 ms

Loss rate: 0.47%

-- Flow 1:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 136.956 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 23.01 Mbit/s

95th percentile per-packet one-way delay: 136.846 ms

Loss rate: 0.26%

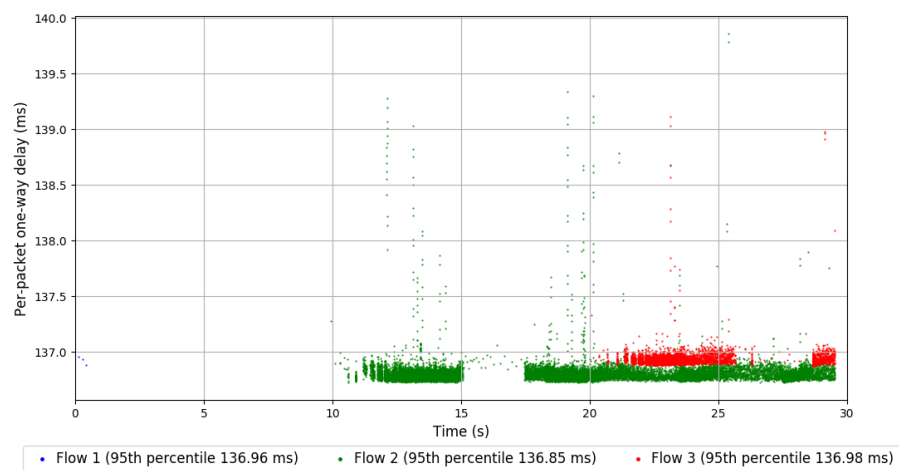
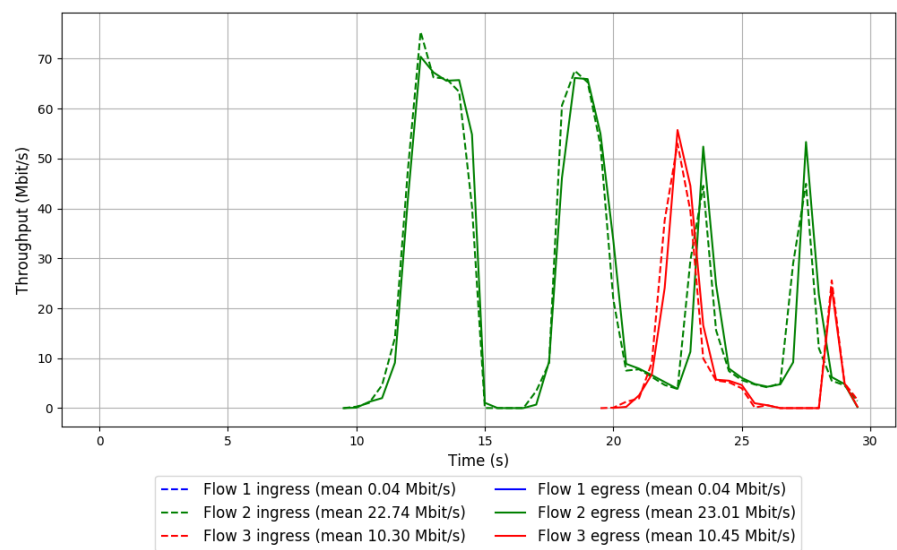
-- Flow 3:

Average throughput: 10.45 Mbit/s

95th percentile per-packet one-way delay: 136.979 ms

Loss rate: 1.41%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2017-08-21 12:27:35

End at: 2017-08-21 12:28:05

Below is generated by plot.py at 2017-08-21 16:15:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 31.64 Mbit/s

95th percentile per-packet one-way delay: 136.735 ms

Loss rate: 1.03%

-- Flow 1:

Average throughput: 16.19 Mbit/s

95th percentile per-packet one-way delay: 136.431 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 10.50 Mbit/s

95th percentile per-packet one-way delay: 136.790 ms

Loss rate: 0.00%

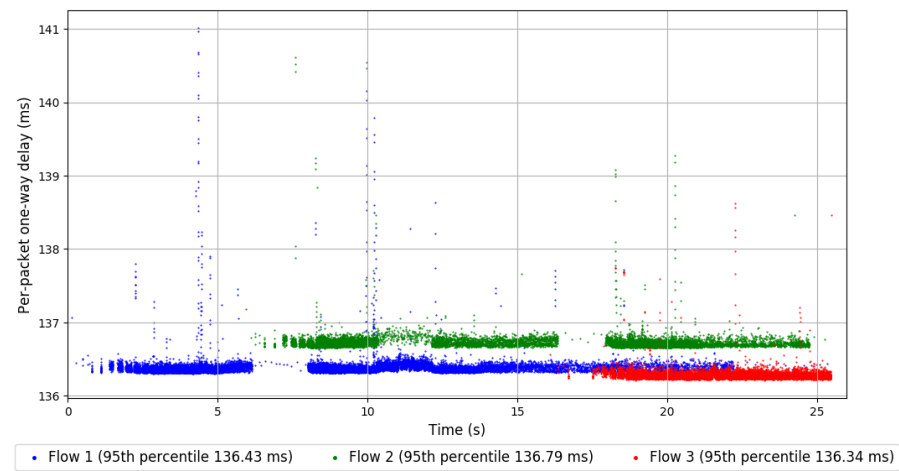
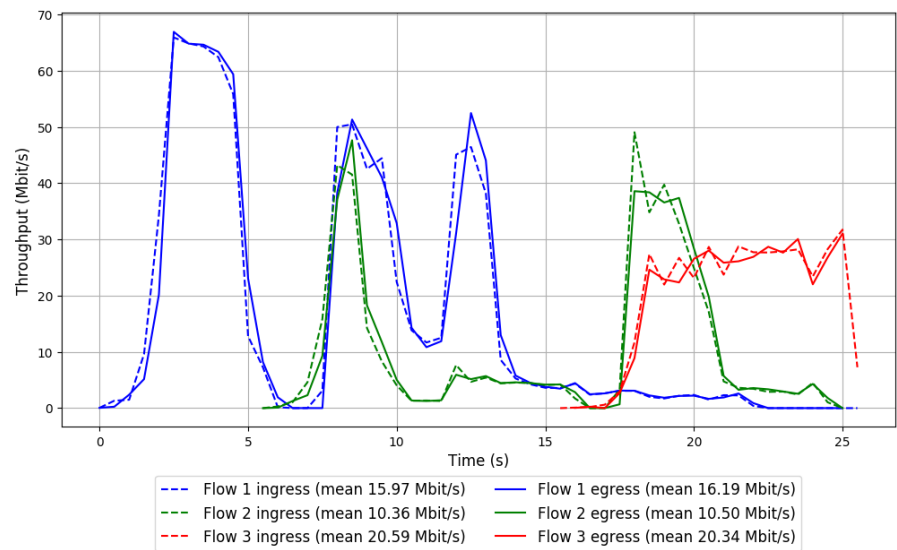
-- Flow 3:

Average throughput: 20.34 Mbit/s

95th percentile per-packet one-way delay: 136.339 ms

Loss rate: 4.20%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2017-08-21 12:41:04

End at: 2017-08-21 12:41:34

Below is generated by plot.py at 2017-08-21 16:15:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 24.34 Mbit/s

95th percentile per-packet one-way delay: 136.966 ms

Loss rate: 1.75%

-- Flow 1:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 136.189 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 20.09 Mbit/s

95th percentile per-packet one-way delay: 136.971 ms

Loss rate: 2.83%

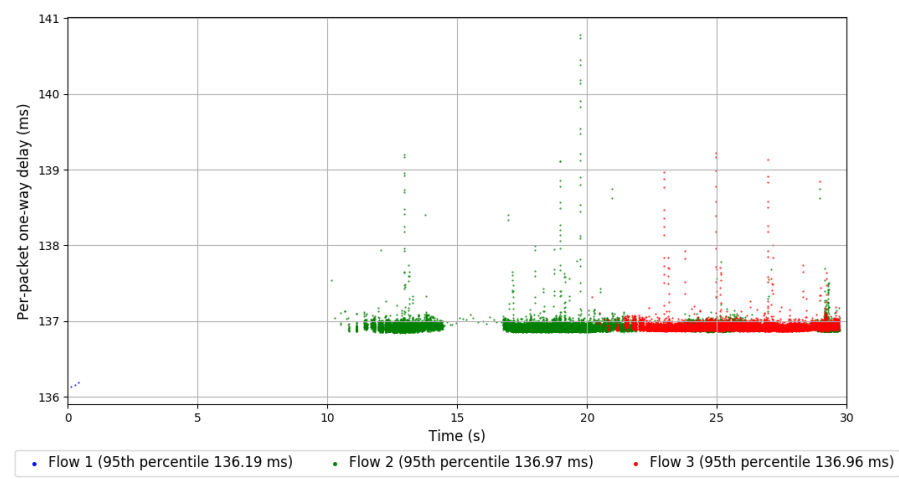
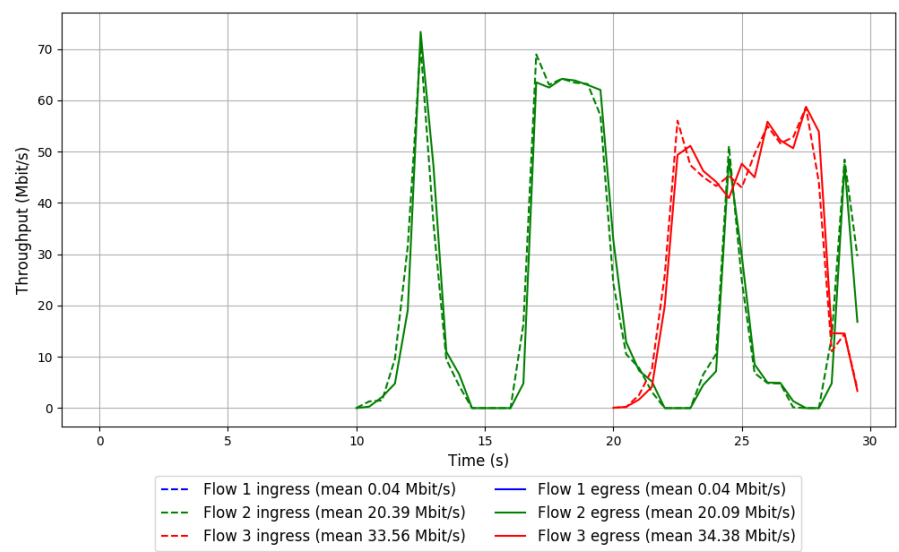
-- Flow 3:

Average throughput: 34.38 Mbit/s

95th percentile per-packet one-way delay: 136.961 ms

Loss rate: 0.43%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2017-08-21 12:54:42

End at: 2017-08-21 12:55:12

Below is generated by plot.py at 2017-08-21 16:15:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 20.10 Mbit/s

95th percentile per-packet one-way delay: 137.172 ms

Loss rate: 0.49%

-- Flow 1:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 136.838 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 25.05 Mbit/s

95th percentile per-packet one-way delay: 136.660 ms

Loss rate: 0.31%

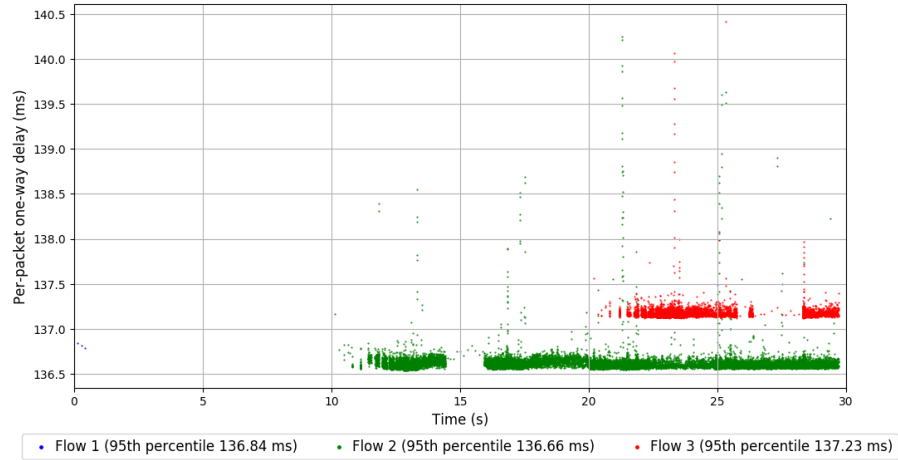
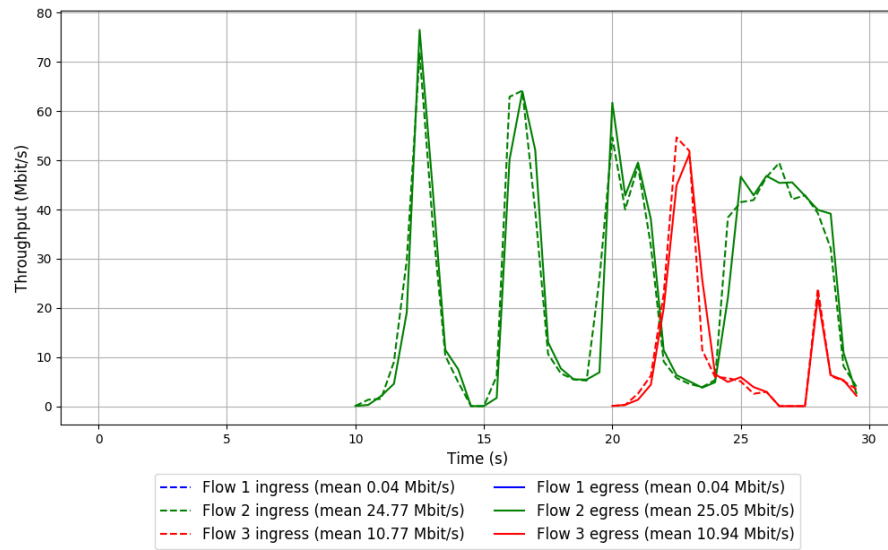
-- Flow 3:

Average throughput: 10.94 Mbit/s

95th percentile per-packet one-way delay: 137.227 ms

Loss rate: 1.30%

Run 9: Report of QUIC Cubic — Data Link

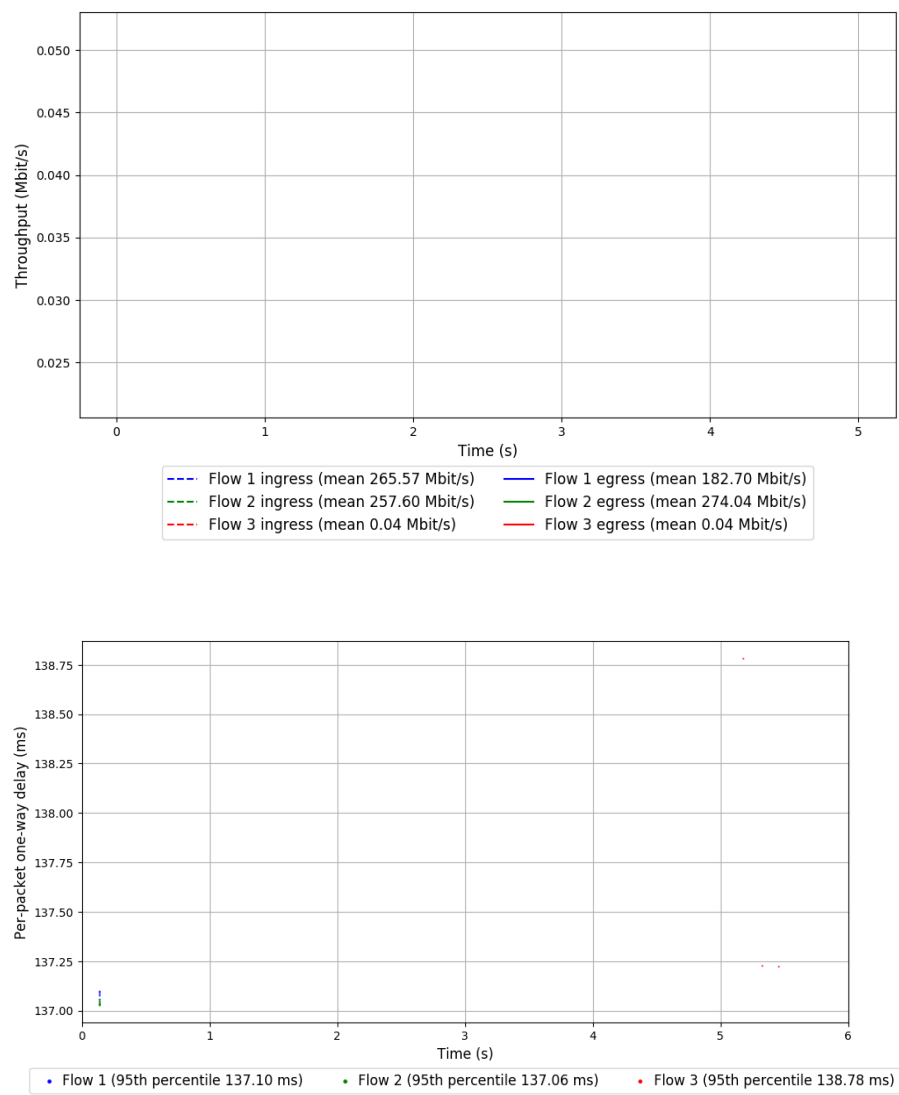


Run 10: Statistics of QUIC Cubic

Start at: 2017-08-21 13:08:32

End at: 2017-08-21 13:09:02

Run 10: Report of QUIC Cubic — Data Link



Run 1: Statistics of Saturator

Start at: 2017-08-21 11:01:51

End at: 2017-08-21 11:02:21

Below is generated by plot.py at 2017-08-21 16:15:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.63 Mbit/s

95th percentile per-packet one-way delay: 138.610 ms

Loss rate: 3.26%

-- Flow 1:

Average throughput: 2.63 Mbit/s

95th percentile per-packet one-way delay: 137.709 ms

Loss rate: 57.14%

-- Flow 2:

Average throughput: 8.46 Mbit/s

95th percentile per-packet one-way delay: 138.612 ms

Loss rate: 2.19%

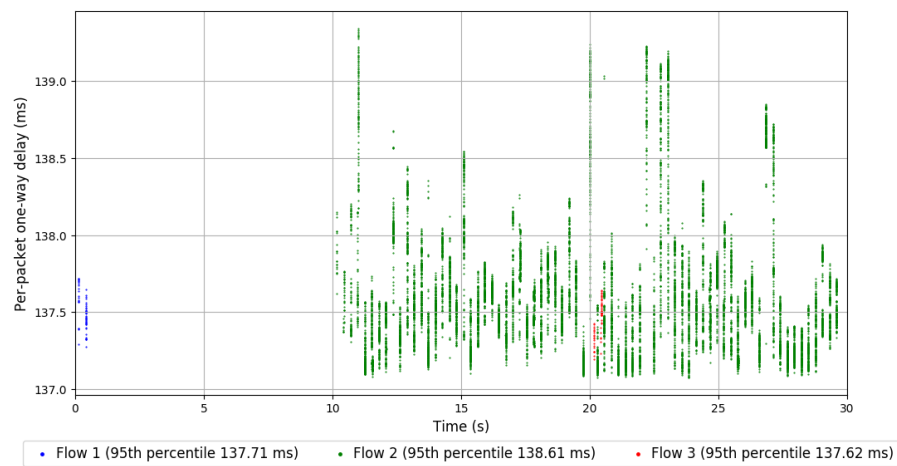
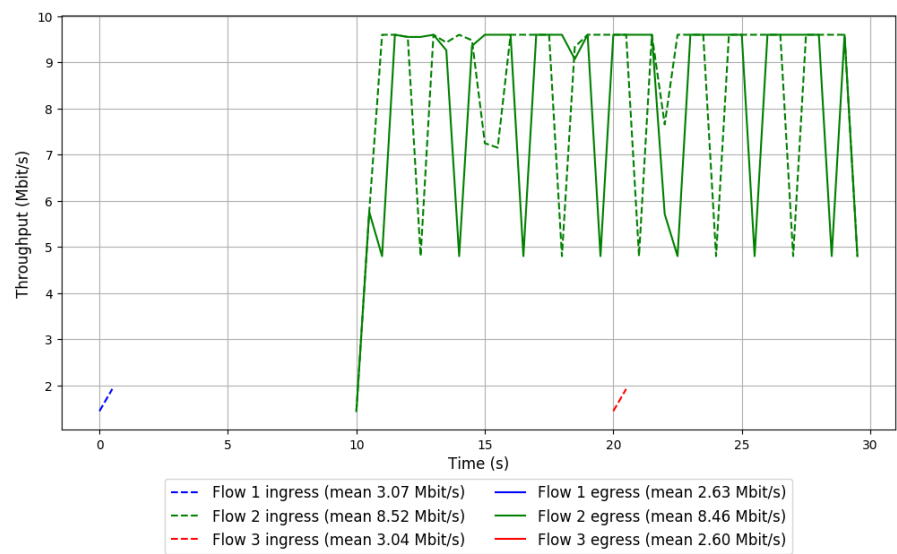
-- Flow 3:

Average throughput: 2.60 Mbit/s

95th percentile per-packet one-way delay: 137.620 ms

Loss rate: 57.14%

Run 1: Report of Saturator — Data Link



Run 2: Statistics of Saturator

Start at: 2017-08-21 11:15:31

End at: 2017-08-21 11:16:01

Below is generated by plot.py at 2017-08-21 16:15:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 9.83 Mbit/s

95th percentile per-packet one-way delay: 138.311 ms

Loss rate: 7.77%

-- Flow 1:

Average throughput: 8.65 Mbit/s

95th percentile per-packet one-way delay: 138.384 ms

Loss rate: 0.93%

-- Flow 2:

Average throughput: 2.61 Mbit/s

95th percentile per-packet one-way delay: 137.354 ms

Loss rate: 57.14%

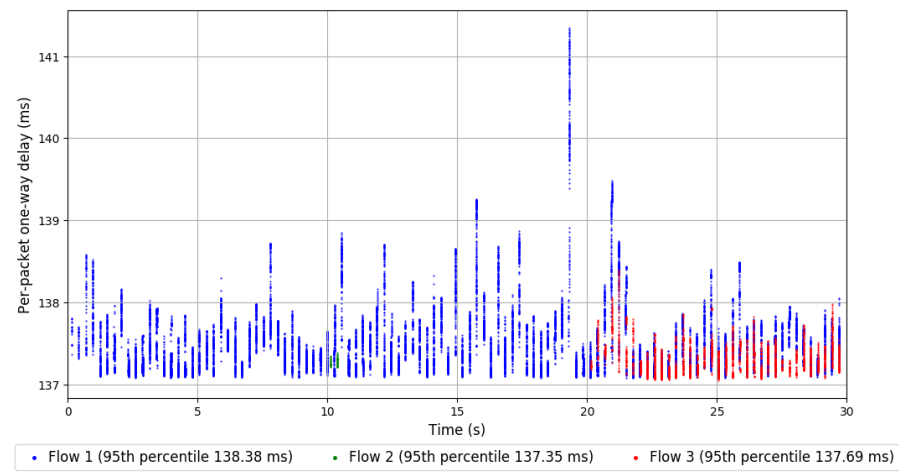
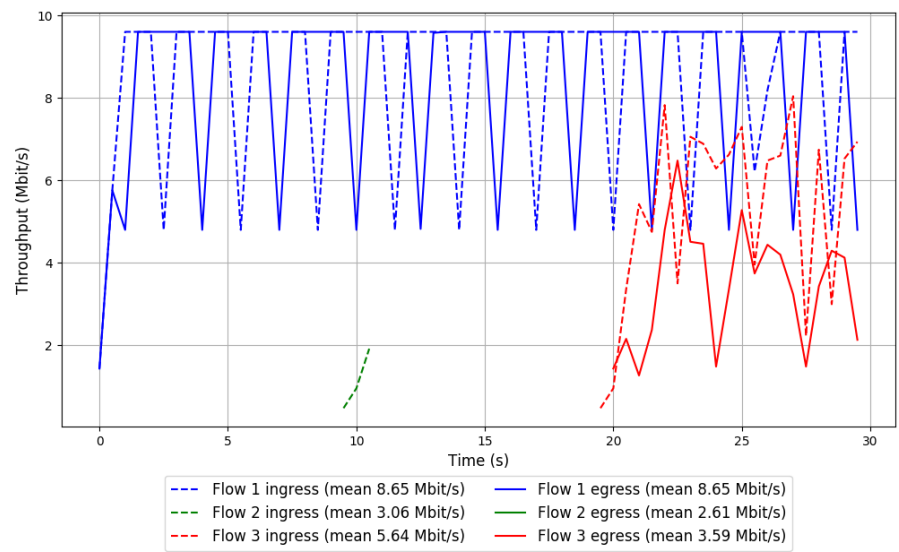
-- Flow 3:

Average throughput: 3.59 Mbit/s

95th percentile per-packet one-way delay: 137.687 ms

Loss rate: 38.06%

Run 2: Report of Saturator — Data Link



Run 3: Statistics of Saturator

Start at: 2017-08-21 11:29:28

End at: 2017-08-21 11:29:58

Below is generated by plot.py at 2017-08-21 16:16:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 14.22 Mbit/s

95th percentile per-packet one-way delay: 137.753 ms

Loss rate: 1.17%

-- Flow 1:

Average throughput: 8.61 Mbit/s

95th percentile per-packet one-way delay: 137.801 ms

Loss rate: 0.41%

-- Flow 2:

Average throughput: 8.49 Mbit/s

95th percentile per-packet one-way delay: 137.528 ms

Loss rate: 1.77%

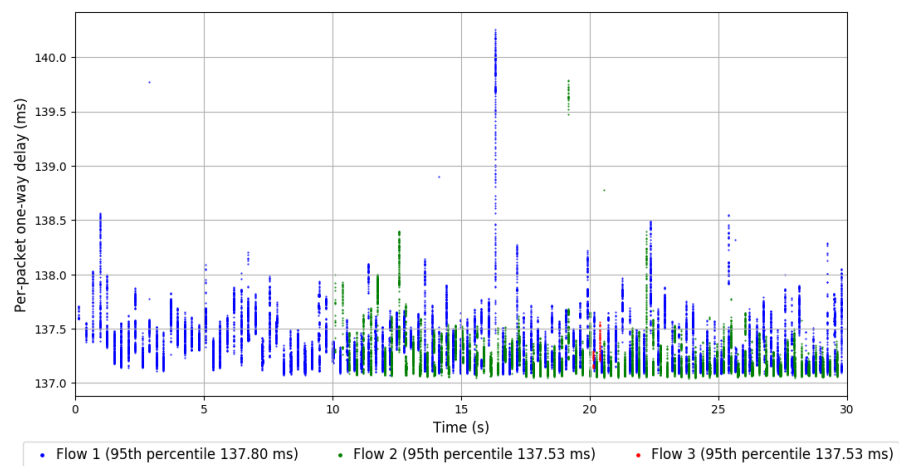
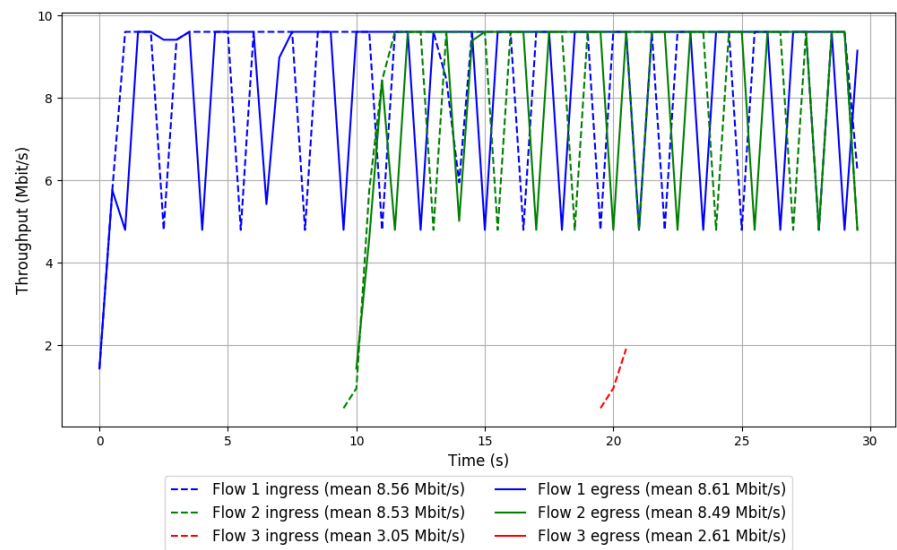
-- Flow 3:

Average throughput: 2.61 Mbit/s

95th percentile per-packet one-way delay: 137.533 ms

Loss rate: 57.14%

Run 3: Report of Saturator — Data Link



Run 4: Statistics of Saturator

Start at: 2017-08-21 11:43:11

End at: 2017-08-21 11:43:41

Below is generated by plot.py at 2017-08-21 16:16:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 16.78 Mbit/s

95th percentile per-packet one-way delay: 138.632 ms

Loss rate: 1.77%

-- Flow 1:

Average throughput: 8.54 Mbit/s

95th percentile per-packet one-way delay: 138.742 ms

Loss rate: 1.15%

-- Flow 2:

Average throughput: 8.43 Mbit/s

95th percentile per-packet one-way delay: 138.503 ms

Loss rate: 1.92%

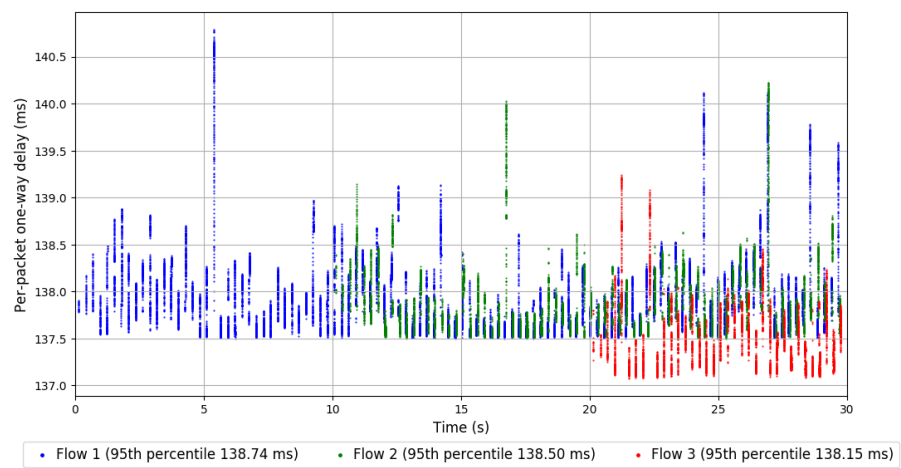
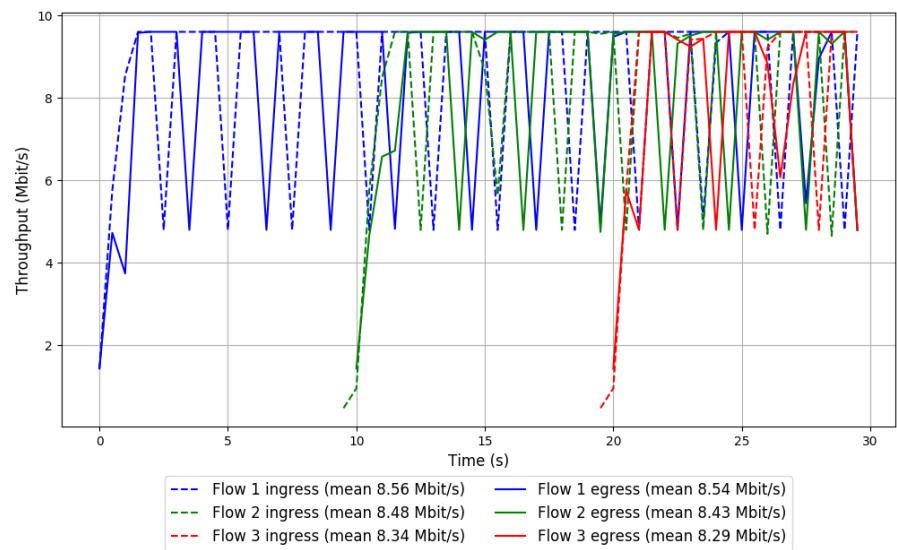
-- Flow 3:

Average throughput: 8.29 Mbit/s

95th percentile per-packet one-way delay: 138.154 ms

Loss rate: 3.36%

Run 4: Report of Saturator — Data Link



Run 5: Statistics of Saturator

Start at: 2017-08-21 11:56:54

End at: 2017-08-21 11:57:24

Below is generated by plot.py at 2017-08-21 16:16:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.68 Mbit/s

95th percentile per-packet one-way delay: 137.804 ms

Loss rate: 50.51%

-- Flow 1:

Average throughput: 1.59 Mbit/s

95th percentile per-packet one-way delay: 137.812 ms

Loss rate: 50.20%

-- Flow 2:

Average throughput: 2.61 Mbit/s

95th percentile per-packet one-way delay: 137.448 ms

Loss rate: 57.14%

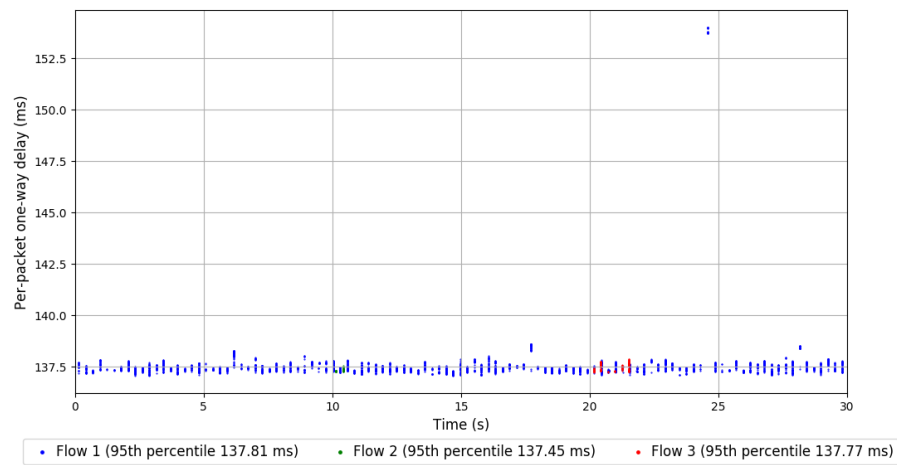
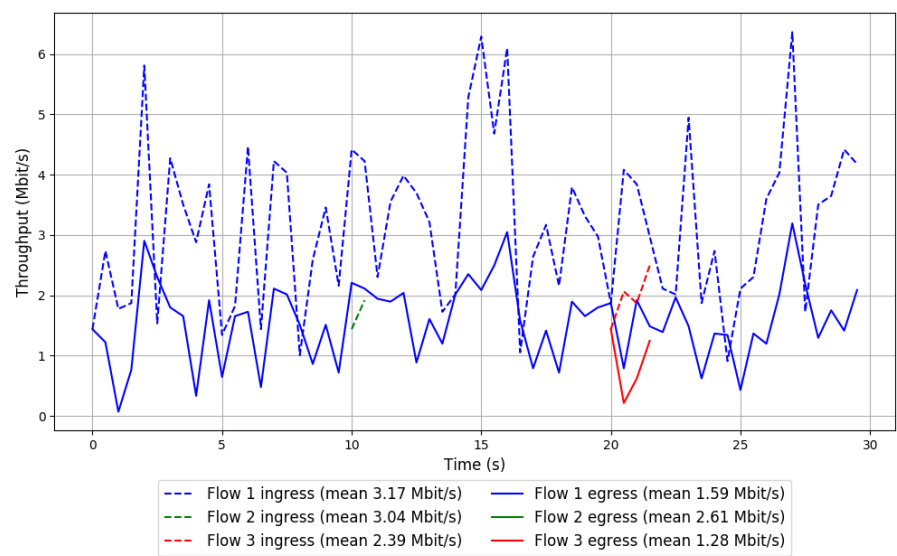
-- Flow 3:

Average throughput: 1.28 Mbit/s

95th percentile per-packet one-way delay: 137.767 ms

Loss rate: 55.18%

Run 5: Report of Saturator — Data Link



Run 6: Statistics of Saturator

Start at: 2017-08-21 12:10:37

End at: 2017-08-21 12:11:07

Below is generated by plot.py at 2017-08-21 16:16:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.86 Mbit/s

95th percentile per-packet one-way delay: 138.287 ms

Loss rate: 5.26%

-- Flow 1:

Average throughput: 2.61 Mbit/s

95th percentile per-packet one-way delay: 137.735 ms

Loss rate: 57.14%

-- Flow 2:

Average throughput: 8.53 Mbit/s

95th percentile per-packet one-way delay: 138.309 ms

Loss rate: 1.56%

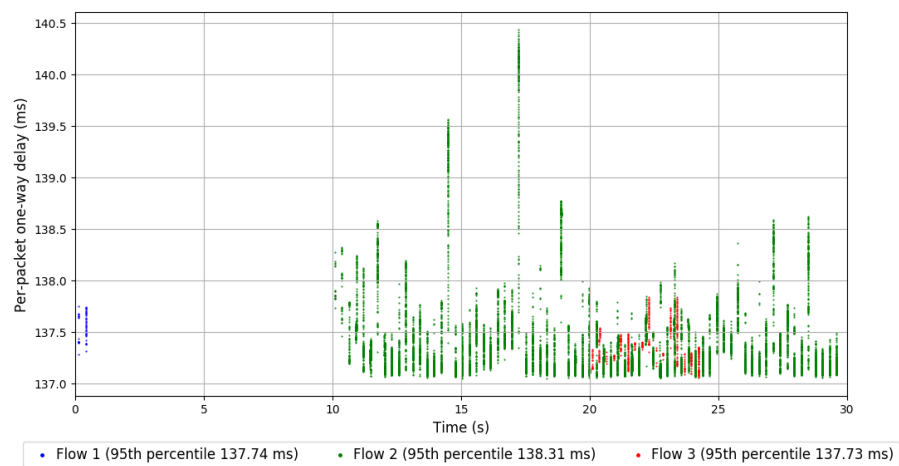
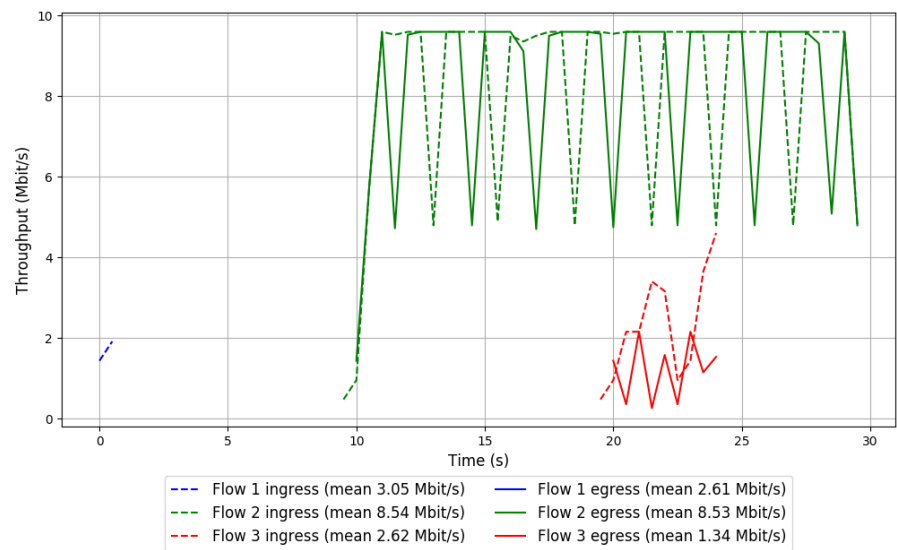
-- Flow 3:

Average throughput: 1.34 Mbit/s

95th percentile per-packet one-way delay: 137.729 ms

Loss rate: 52.09%

Run 6: Report of Saturator — Data Link



Run 7: Statistics of Saturator

Start at: 2017-08-21 12:24:09

End at: 2017-08-21 12:24:39

Below is generated by plot.py at 2017-08-21 16:16:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 11.76 Mbit/s

95th percentile per-packet one-way delay: 137.656 ms

Loss rate: 16.47%

-- Flow 1:

Average throughput: 8.63 Mbit/s

95th percentile per-packet one-way delay: 137.624 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 3.08 Mbit/s

95th percentile per-packet one-way delay: 137.821 ms

Loss rate: 42.43%

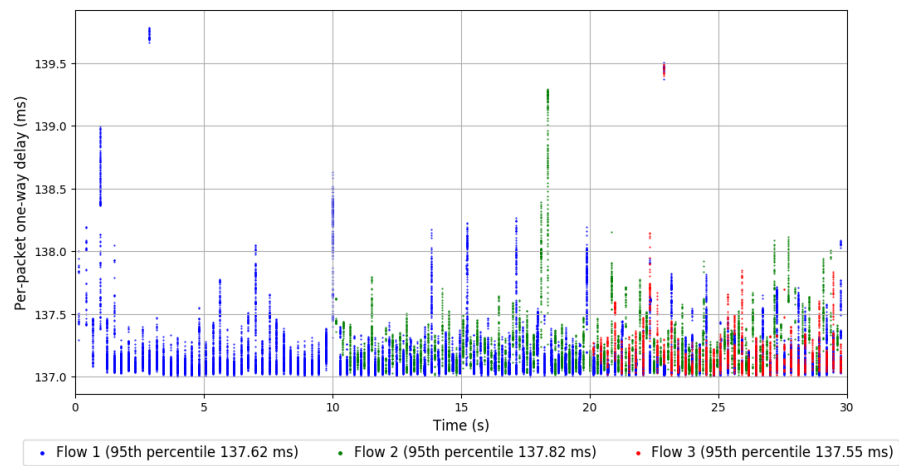
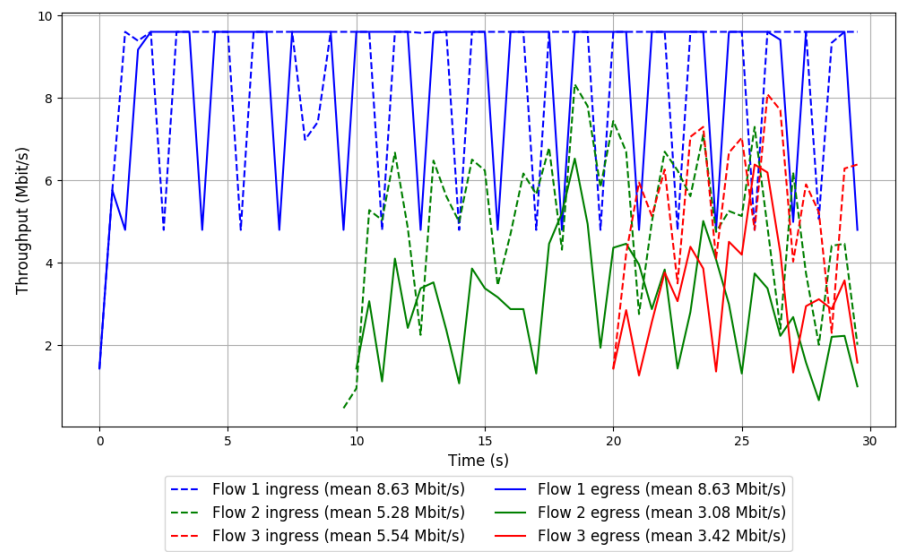
-- Flow 3:

Average throughput: 3.42 Mbit/s

95th percentile per-packet one-way delay: 137.553 ms

Loss rate: 40.05%

Run 7: Report of Saturator — Data Link



Run 8: Statistics of Saturator

Start at: 2017-08-21 12:37:33

End at: 2017-08-21 12:38:03

Below is generated by plot.py at 2017-08-21 16:16:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 16.94 Mbit/s

95th percentile per-packet one-way delay: 138.042 ms

Loss rate: 1.51%

-- Flow 1:

Average throughput: 8.60 Mbit/s

95th percentile per-packet one-way delay: 137.933 ms

Loss rate: 1.08%

-- Flow 2:

Average throughput: 8.55 Mbit/s

95th percentile per-packet one-way delay: 138.126 ms

Loss rate: 1.42%

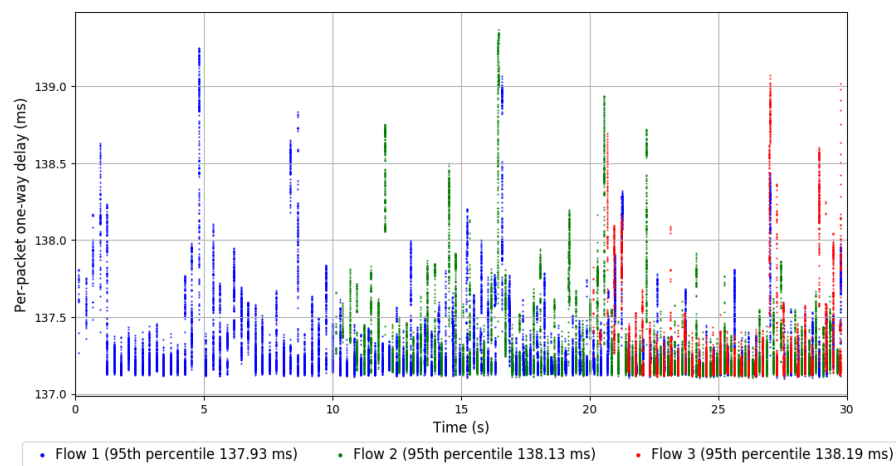
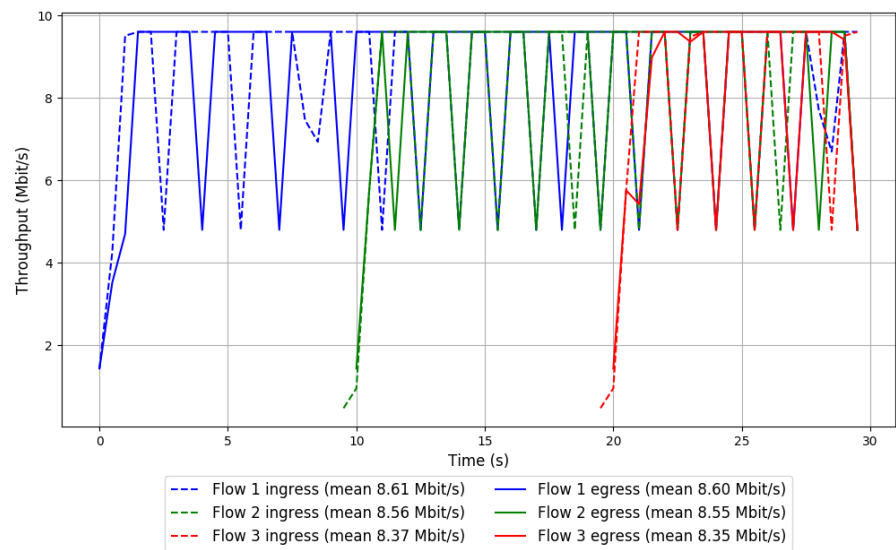
-- Flow 3:

Average throughput: 8.35 Mbit/s

95th percentile per-packet one-way delay: 138.186 ms

Loss rate: 3.03%

Run 8: Report of Saturator — Data Link



Run 9: Statistics of Saturator

Start at: 2017-08-21 12:51:13

End at: 2017-08-21 12:51:43

Below is generated by plot.py at 2017-08-21 16:16:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 16.92 Mbit/s

95th percentile per-packet one-way delay: 138.327 ms

Loss rate: 1.59%

-- Flow 1:

Average throughput: 8.66 Mbit/s

95th percentile per-packet one-way delay: 138.318 ms

Loss rate: 0.93%

-- Flow 2:

Average throughput: 8.50 Mbit/s

95th percentile per-packet one-way delay: 138.502 ms

Loss rate: 1.69%

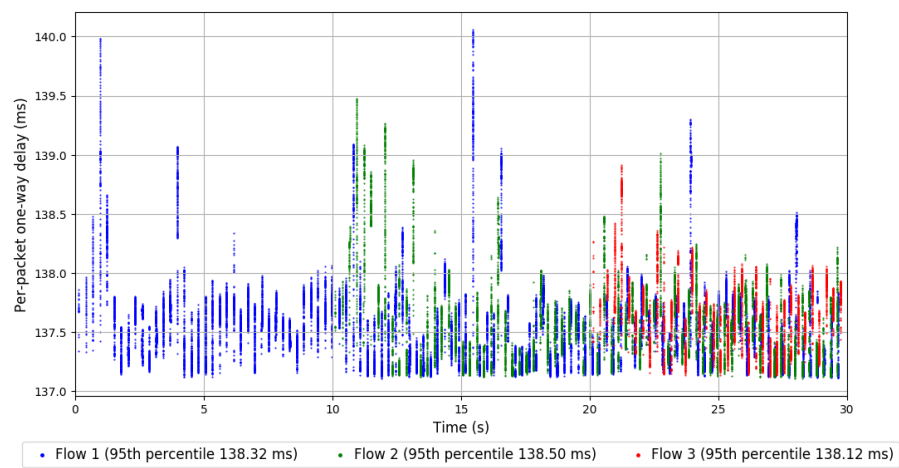
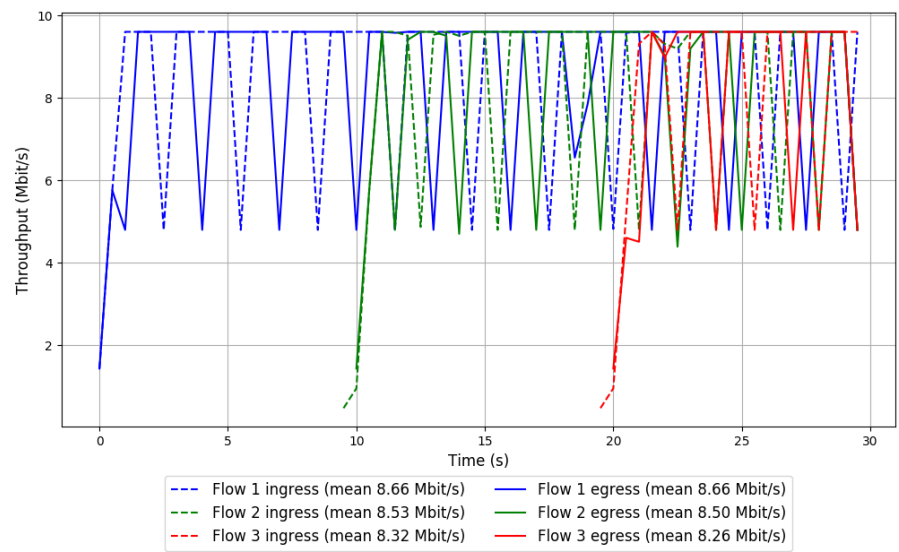
-- Flow 3:

Average throughput: 8.26 Mbit/s

95th percentile per-packet one-way delay: 138.122 ms

Loss rate: 3.46%

Run 9: Report of Saturator — Data Link



Run 10: Statistics of Saturator

Start at: 2017-08-21 13:04:56

End at: 2017-08-21 13:05:26

Below is generated by plot.py at 2017-08-21 16:16:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 16.84 Mbit/s

95th percentile per-packet one-way delay: 137.763 ms

Loss rate: 1.81%

-- Flow 1:

Average throughput: 8.53 Mbit/s

95th percentile per-packet one-way delay: 137.713 ms

Loss rate: 1.52%

-- Flow 2:

Average throughput: 8.51 Mbit/s

95th percentile per-packet one-way delay: 137.567 ms

Loss rate: 1.57%

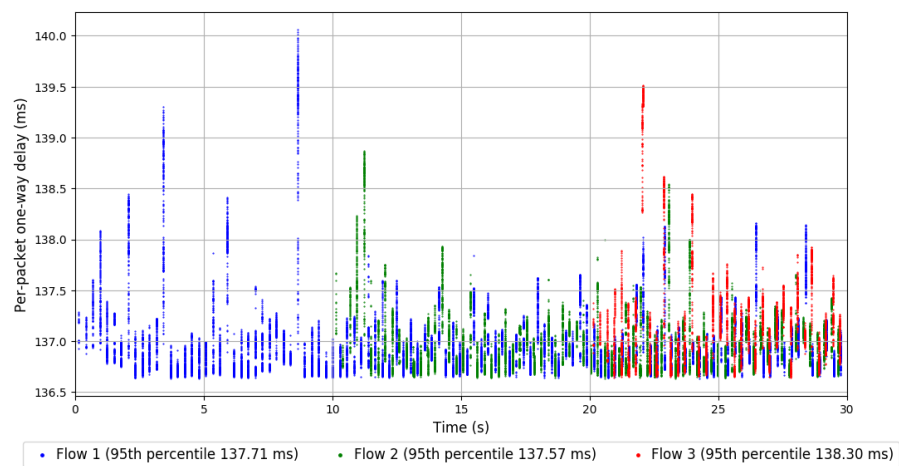
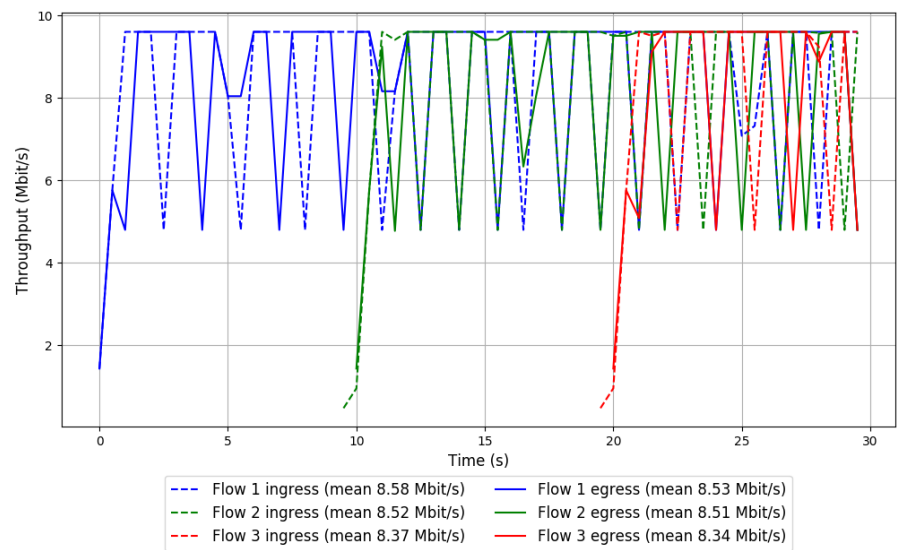
-- Flow 3:

Average throughput: 8.34 Mbit/s

95th percentile per-packet one-way delay: 138.301 ms

Loss rate: 3.18%

Run 10: Report of Saturator — Data Link

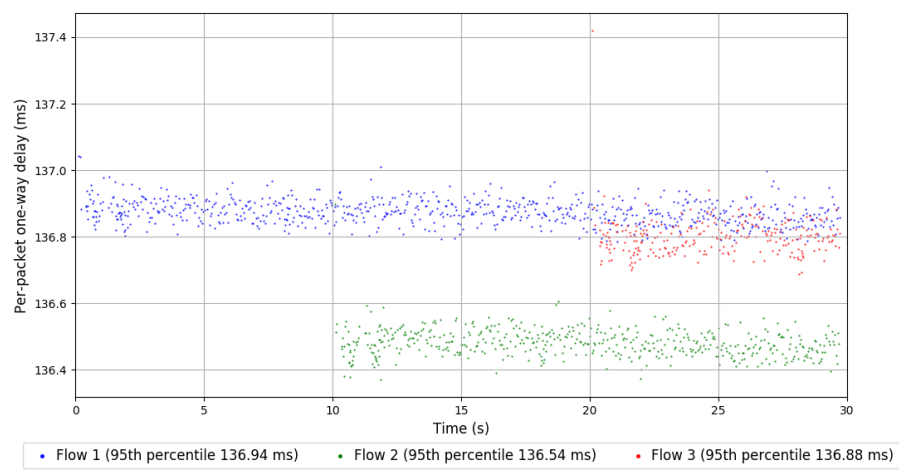
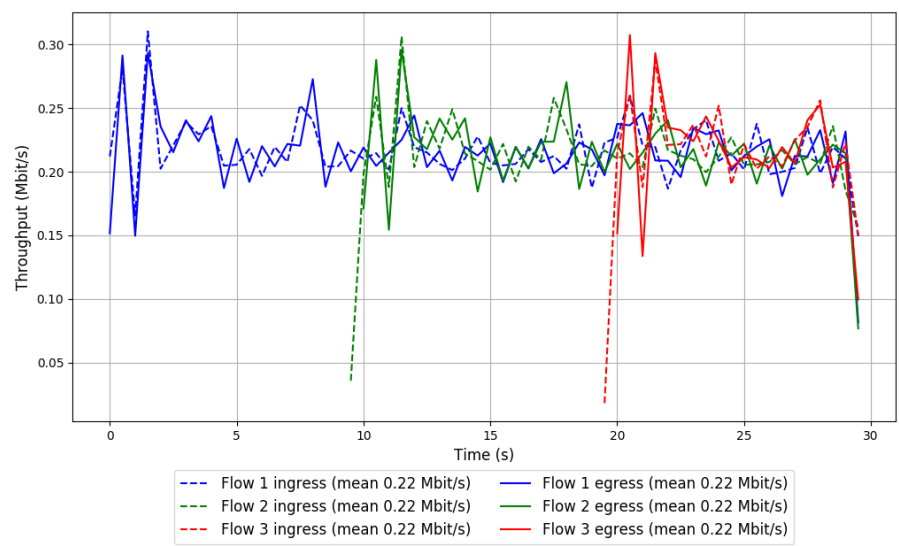


```
Run 1: Statistics of SCReAM

Start at: 2017-08-21 11:06:57
End at: 2017-08-21 11:07:27

# Below is generated by plot.py at 2017-08-21 16:16:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 136.919 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.936 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.542 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.875 ms
Loss rate: 2.63%
```

Run 1: Report of SCReAM — Data Link



Run 2: Statistics of SReAM

Start at: 2017-08-21 11:20:43

End at: 2017-08-21 11:21:13

Below is generated by plot.py at 2017-08-21 16:16:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 137.285 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 137.302 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 135.720 ms

Loss rate: 1.42%

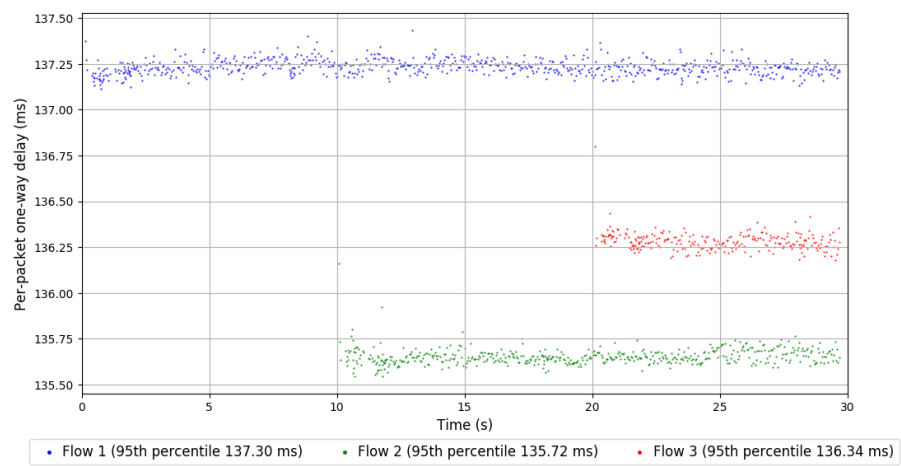
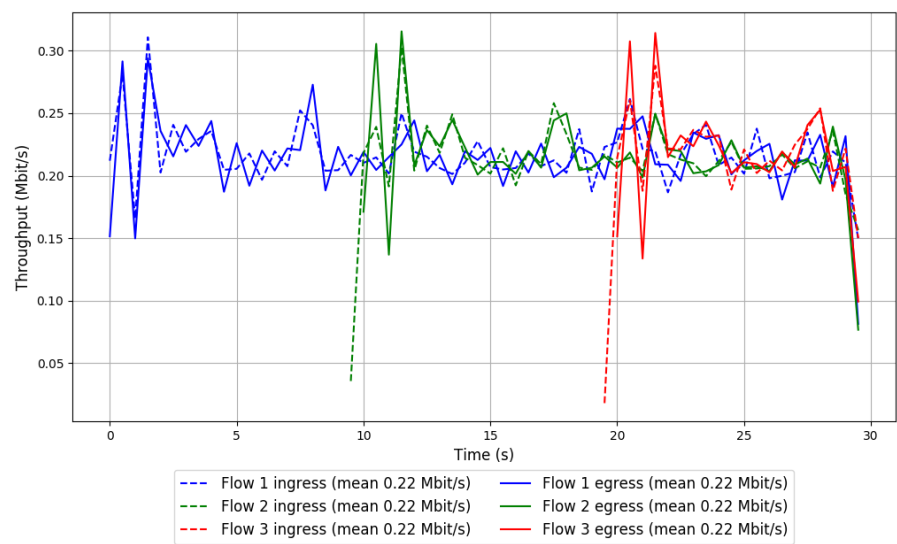
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.344 ms

Loss rate: 2.63%

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SReAM

Start at: 2017-08-21 11:34:34

End at: 2017-08-21 11:35:04

Below is generated by plot.py at 2017-08-21 16:16:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 137.277 ms

Loss rate: 1.25%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.972 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 137.313 ms

Loss rate: 1.24%

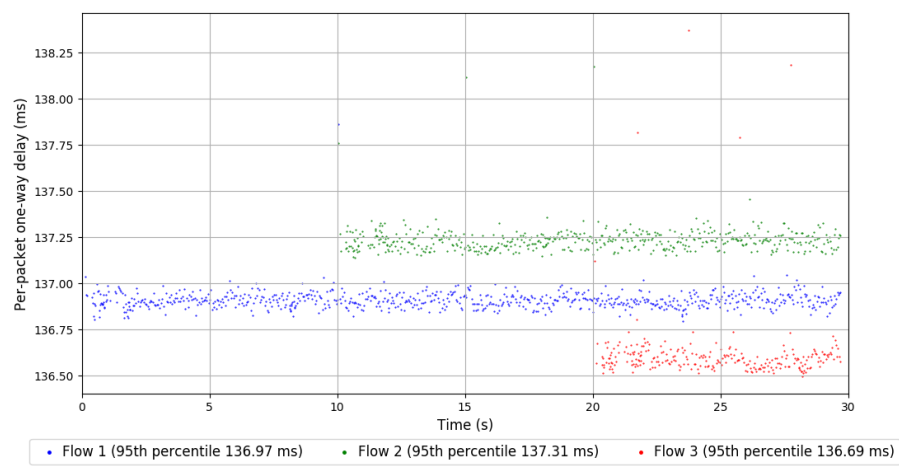
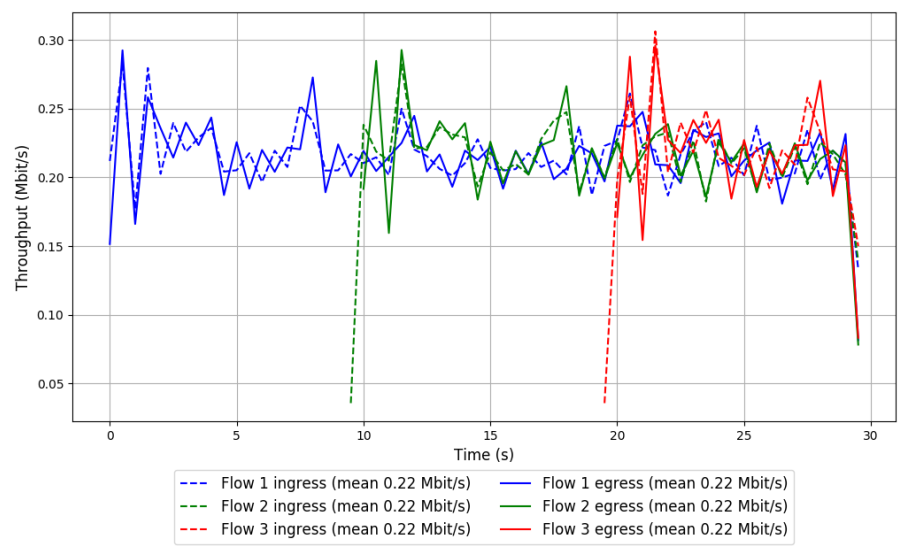
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.687 ms

Loss rate: 2.63%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2017-08-21 11:48:18

End at: 2017-08-21 11:48:48

Below is generated by plot.py at 2017-08-21 16:16:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 136.905 ms

Loss rate: 1.32%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 136.874 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.924 ms

Loss rate: 1.42%

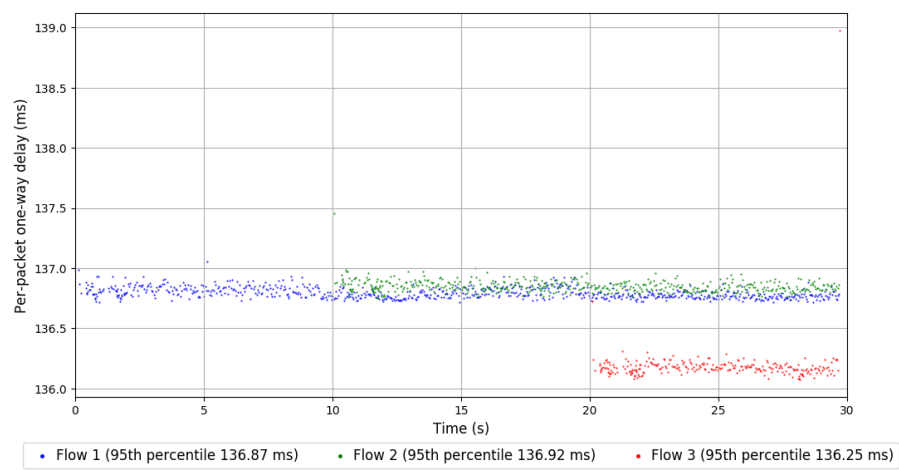
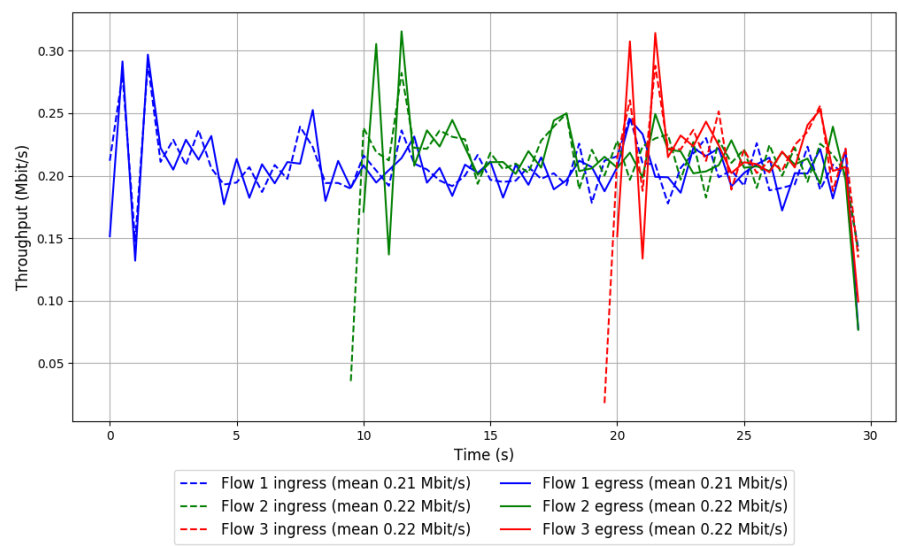
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.249 ms

Loss rate: 2.29%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2017-08-21 12:01:59

End at: 2017-08-21 12:02:29

Below is generated by plot.py at 2017-08-21 16:16:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 137.283 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 137.296 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.677 ms

Loss rate: 1.42%

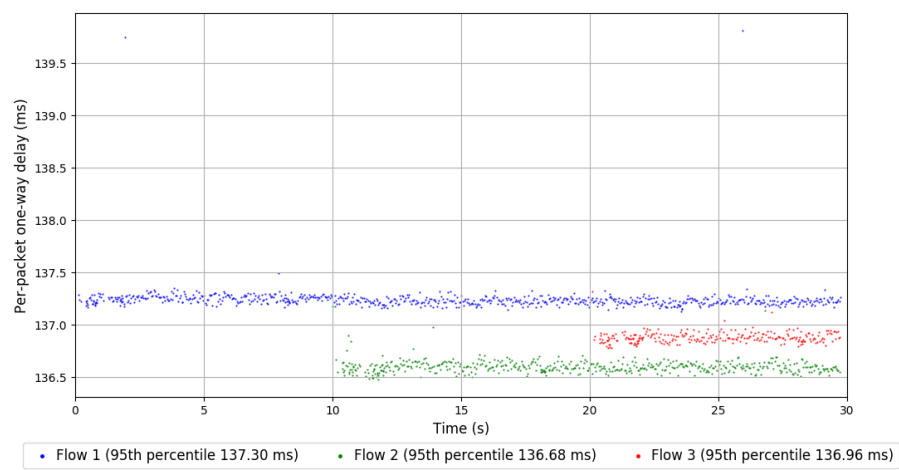
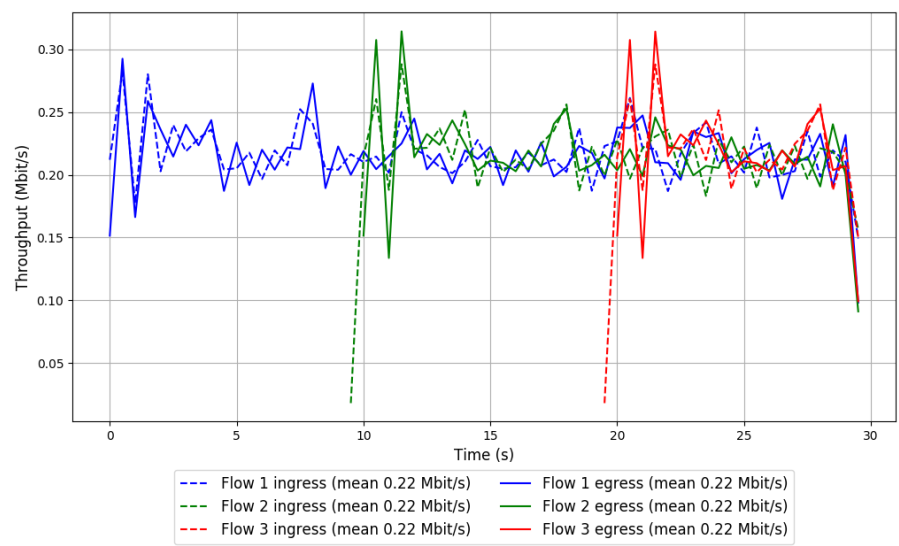
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.957 ms

Loss rate: 2.63%

Run 5: Report of SReAM — Data Link



Run 6: Statistics of SCReAM

Start at: 2017-08-21 12:15:47

End at: 2017-08-21 12:16:17

Below is generated by plot.py at 2017-08-21 16:16:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 137.443 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 137.465 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 137.148 ms

Loss rate: 1.42%

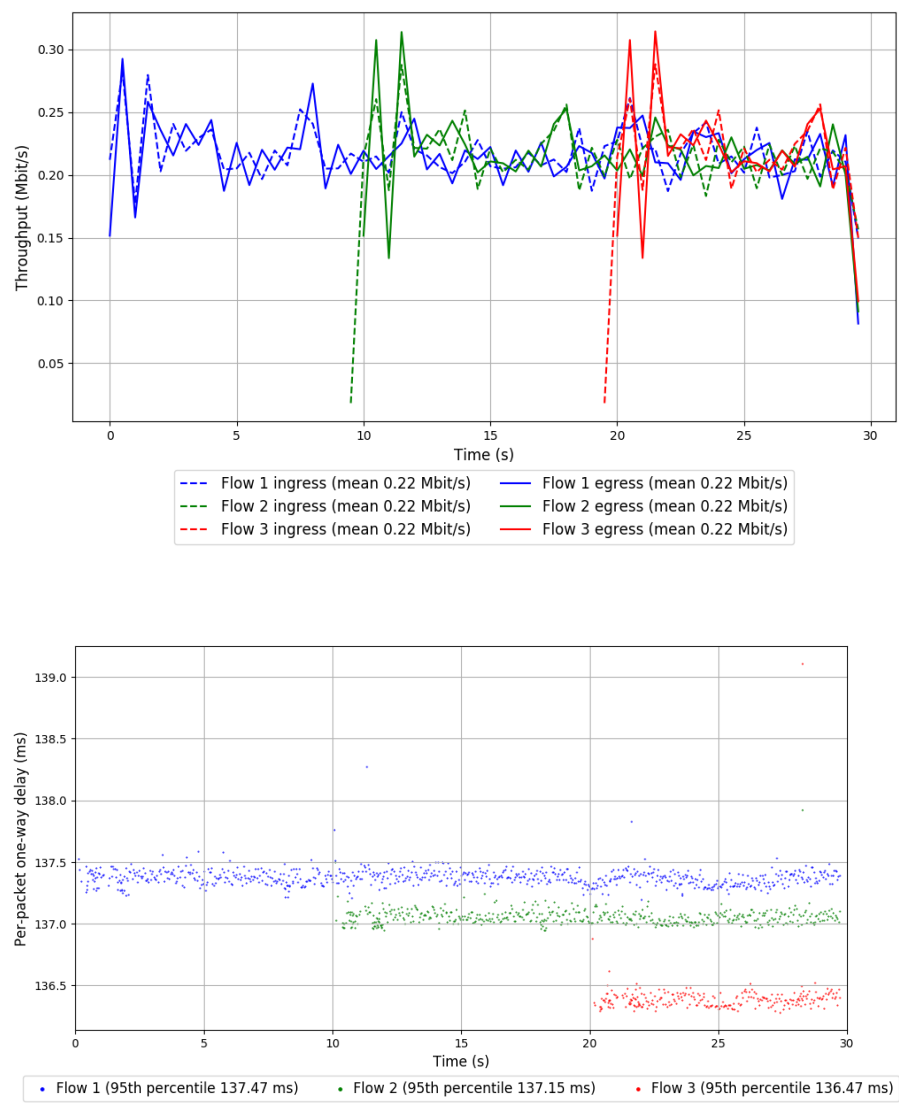
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.469 ms

Loss rate: 2.63%

Run 6: Report of SReAM — Data Link



Run 7: Statistics of SReAM

Start at: 2017-08-21 12:29:16

End at: 2017-08-21 12:29:46

Below is generated by plot.py at 2017-08-21 16:16:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 136.948 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.918 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.976 ms

Loss rate: 1.42%

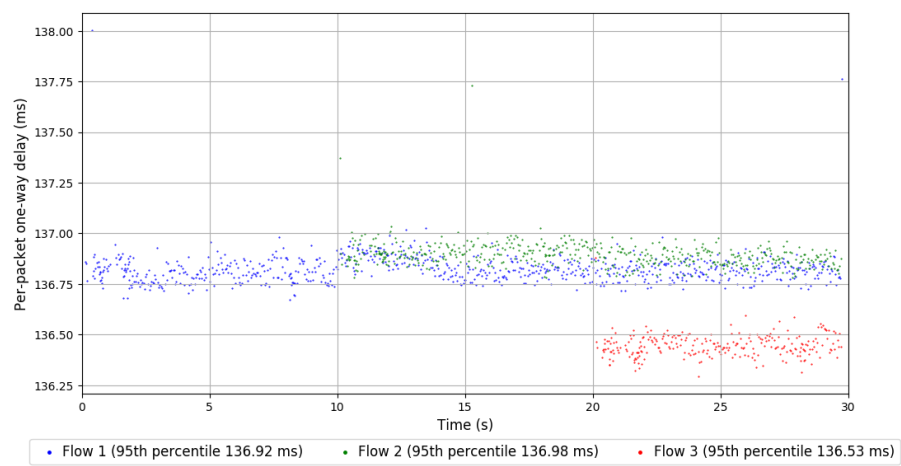
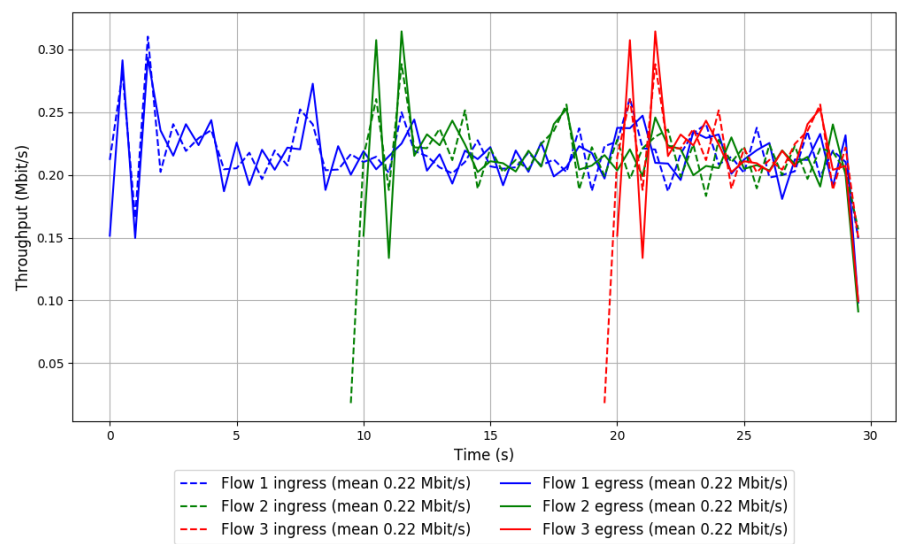
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.527 ms

Loss rate: 2.63%

Run 7: Report of SReAM — Data Link



Run 8: Statistics of SCReAM

Start at: 2017-08-21 12:42:46

End at: 2017-08-21 12:43:16

Below is generated by plot.py at 2017-08-21 16:16:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 137.358 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 137.377 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.515 ms

Loss rate: 1.42%

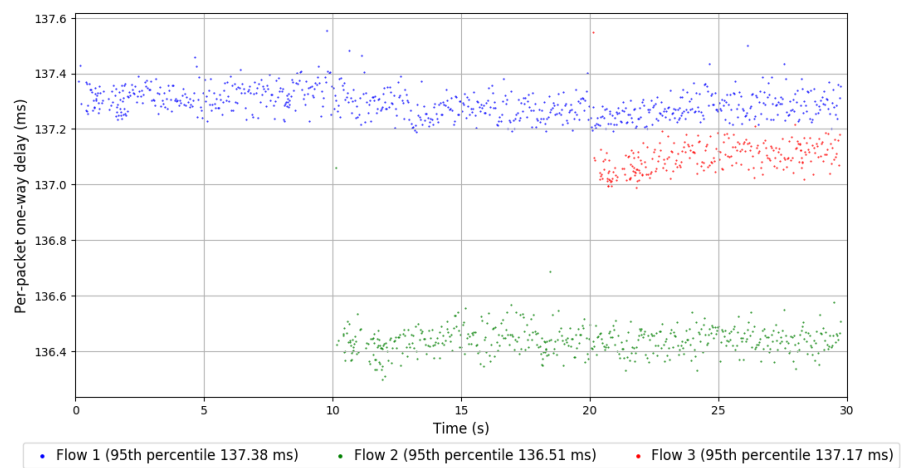
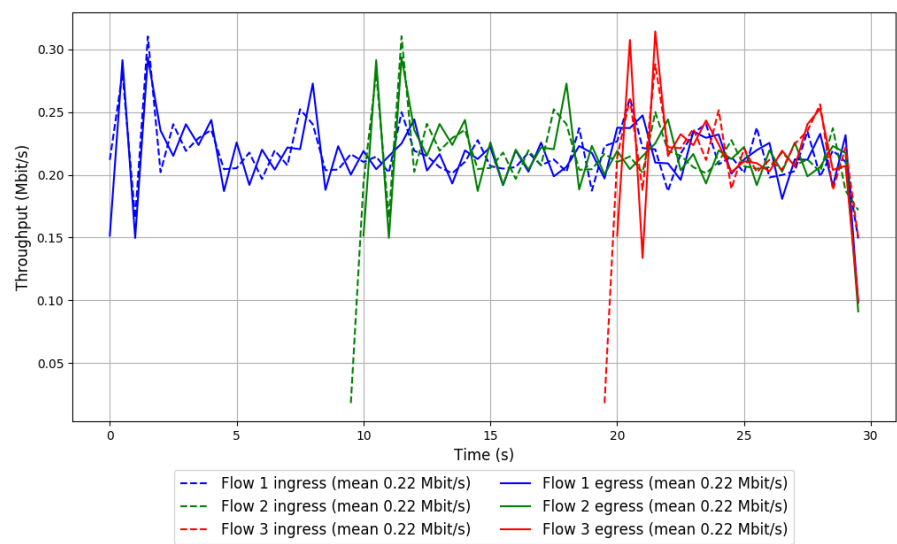
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 137.174 ms

Loss rate: 2.63%

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SReAM

Start at: 2017-08-21 12:56:23

End at: 2017-08-21 12:56:53

Below is generated by plot.py at 2017-08-21 16:16:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 137.261 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 137.277 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.904 ms

Loss rate: 1.42%

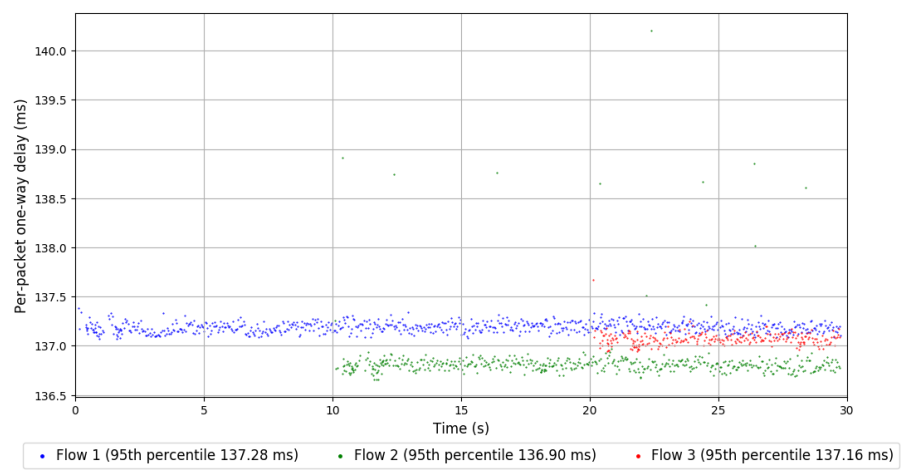
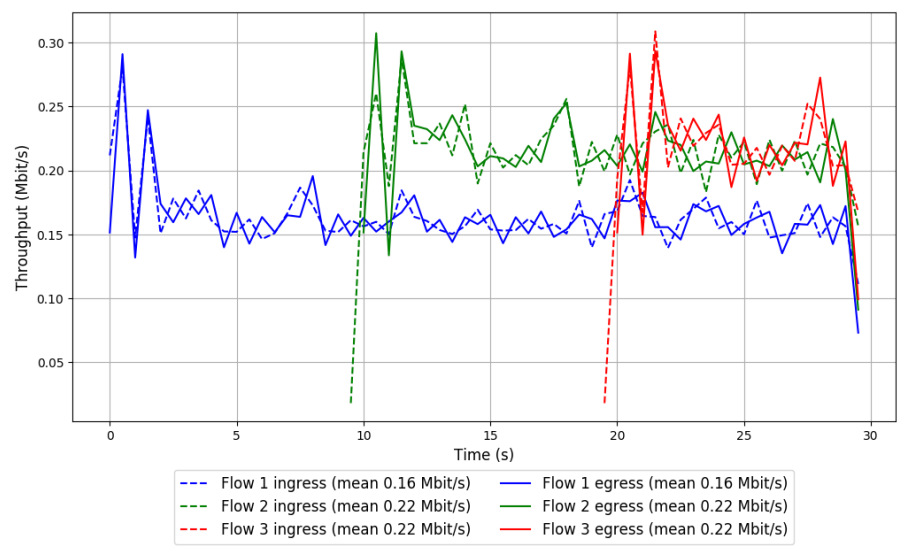
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 137.160 ms

Loss rate: 2.63%

Run 9: Report of SReAM — Data Link

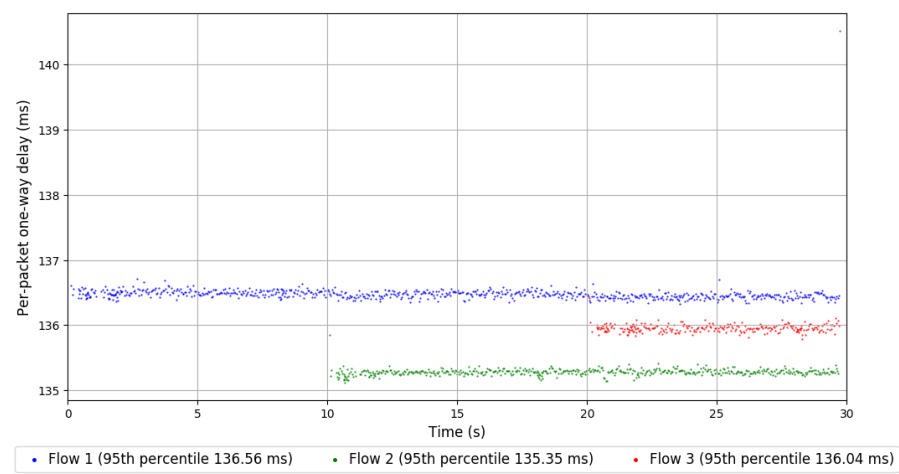
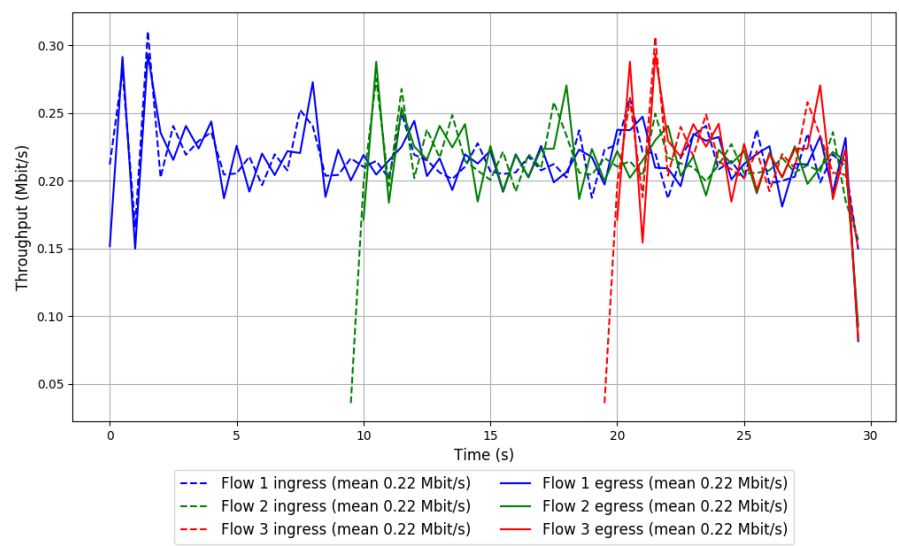


```
Run 10: Statistics of SReAM

Start at: 2017-08-21 13:10:11
End at: 2017-08-21 13:10:41

# Below is generated by plot.py at 2017-08-21 16:16:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 136.542 ms
Loss rate: 1.31%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.563 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.350 ms
Loss rate: 1.24%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.041 ms
Loss rate: 2.63%
```

Run 10: Report of SReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2017-08-21 11:06:08

End at: 2017-08-21 11:06:38

Below is generated by plot.py at 2017-08-21 16:16:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.86 Mbit/s

95th percentile per-packet one-way delay: 137.397 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 137.315 ms

Loss rate: 0.49%

-- Flow 2:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 137.456 ms

Loss rate: 1.46%

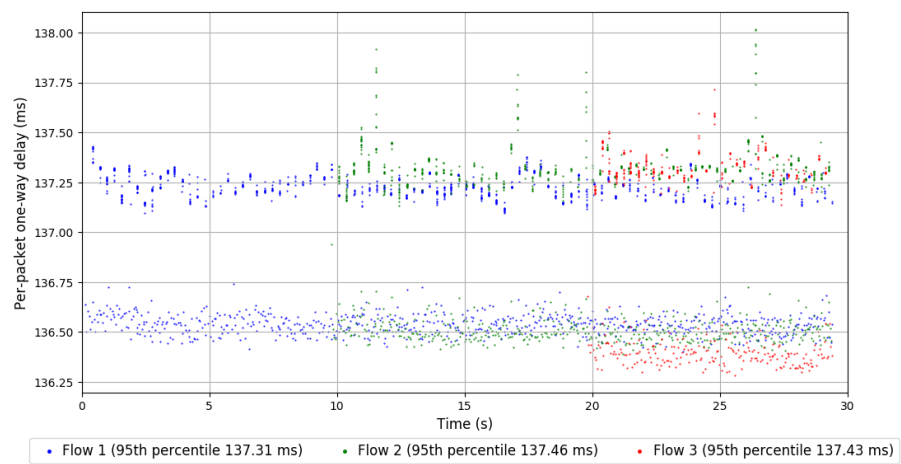
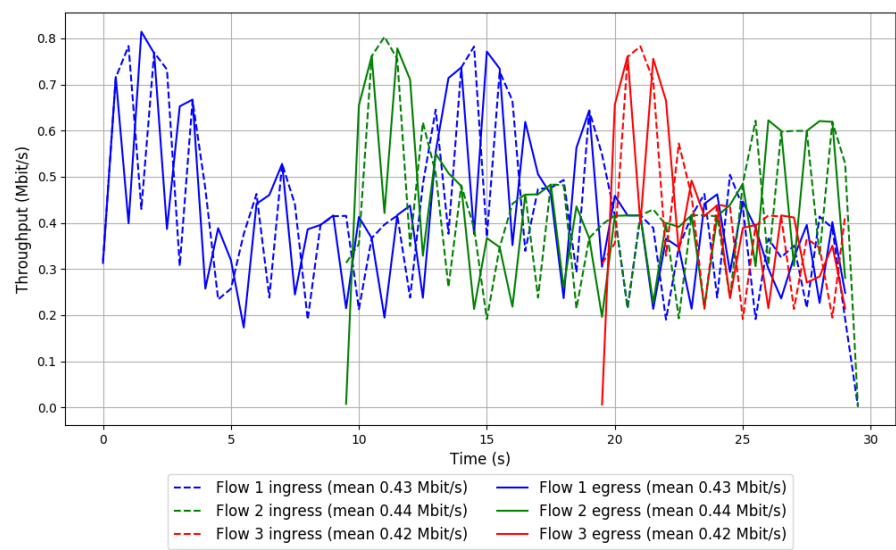
-- Flow 3:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 137.427 ms

Loss rate: 2.49%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2017-08-21 11:19:54

End at: 2017-08-21 11:20:24

Below is generated by plot.py at 2017-08-21 16:16:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.99 Mbit/s

95th percentile per-packet one-way delay: 137.727 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 0.59 Mbit/s

95th percentile per-packet one-way delay: 137.318 ms

Loss rate: 0.27%

-- Flow 2:

Average throughput: 0.39 Mbit/s

95th percentile per-packet one-way delay: 137.761 ms

Loss rate: 1.64%

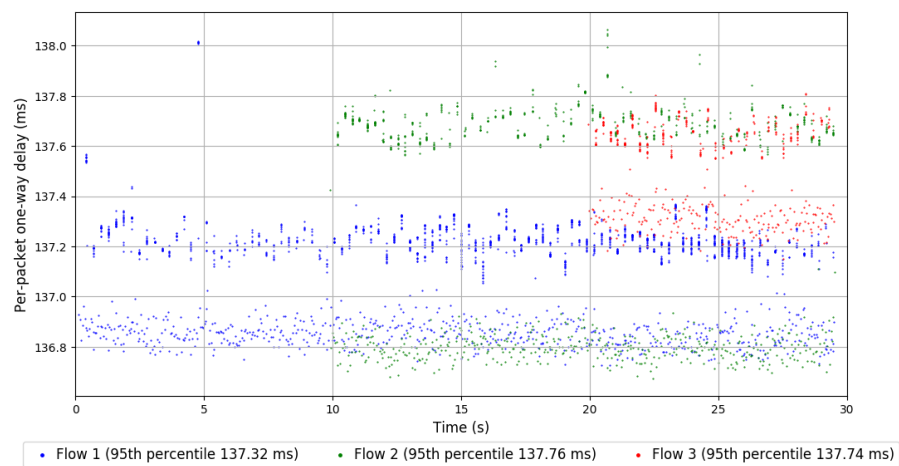
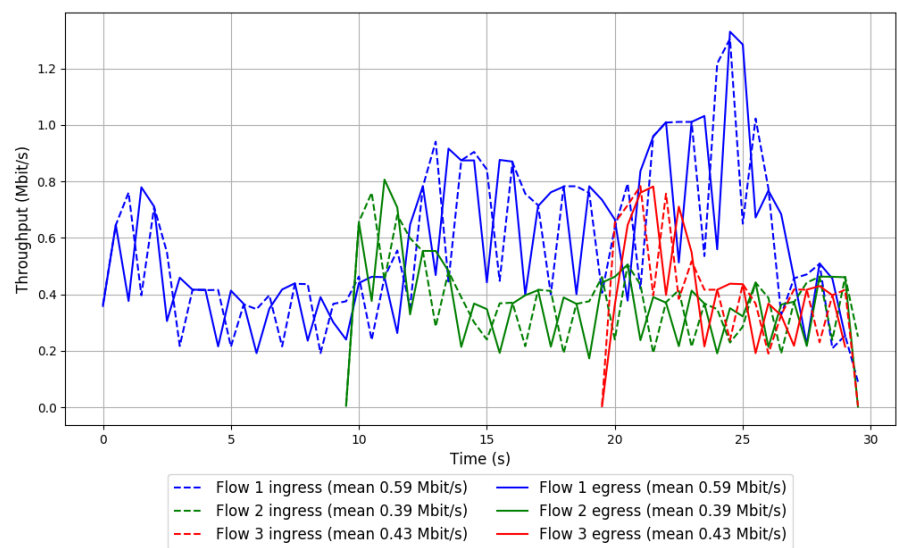
-- Flow 3:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 137.736 ms

Loss rate: 2.49%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2017-08-21 11:33:45

End at: 2017-08-21 11:34:15

Below is generated by plot.py at 2017-08-21 16:16:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.81 Mbit/s

95th percentile per-packet one-way delay: 137.692 ms

Loss rate: 1.17%

-- Flow 1:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 137.327 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 0.37 Mbit/s

95th percentile per-packet one-way delay: 137.754 ms

Loss rate: 1.16%

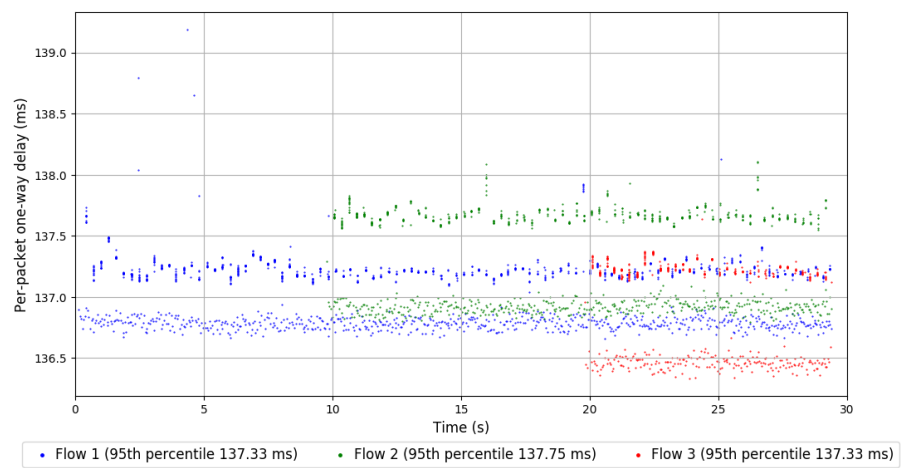
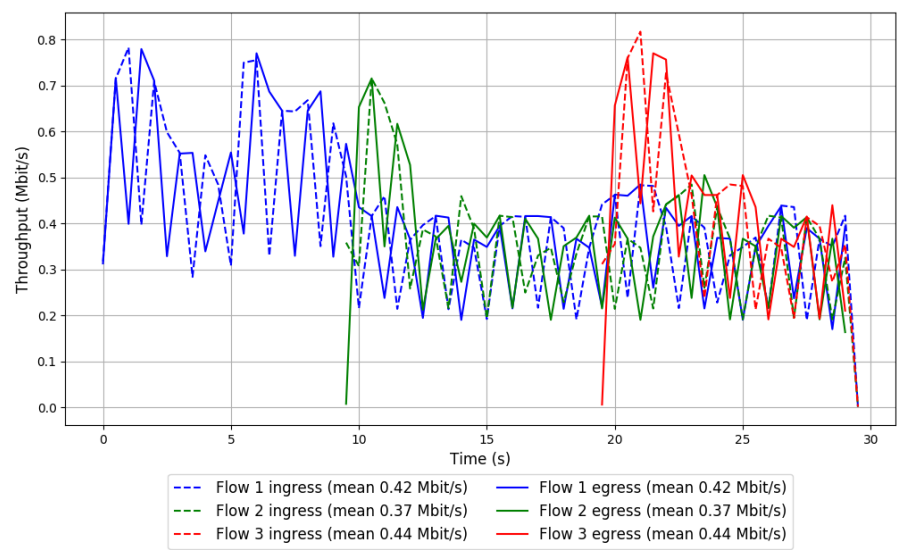
-- Flow 3:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 137.326 ms

Loss rate: 2.11%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2017-08-21 11:47:29

End at: 2017-08-21 11:47:59

Below is generated by plot.py at 2017-08-21 16:16:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.81 Mbit/s

95th percentile per-packet one-way delay: 137.739 ms

Loss rate: 1.07%

-- Flow 1:

Average throughput: 0.39 Mbit/s

95th percentile per-packet one-way delay: 137.845 ms

Loss rate: 0.62%

-- Flow 2:

Average throughput: 0.39 Mbit/s

95th percentile per-packet one-way delay: 137.290 ms

Loss rate: 1.31%

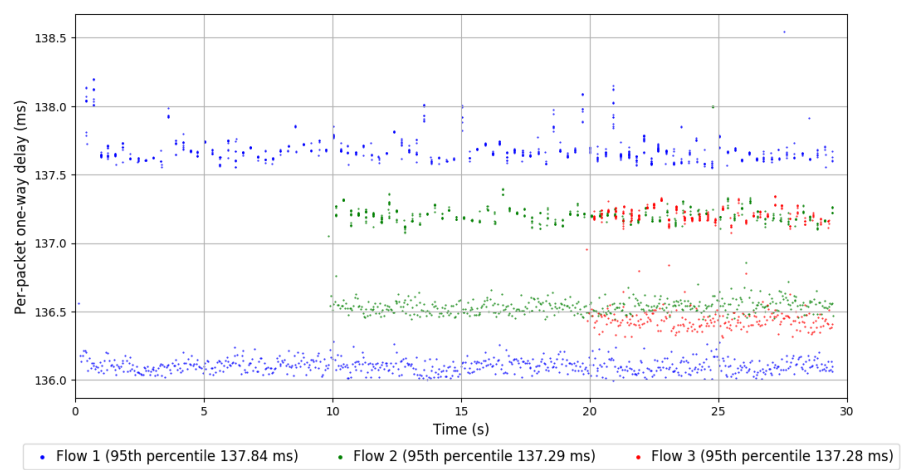
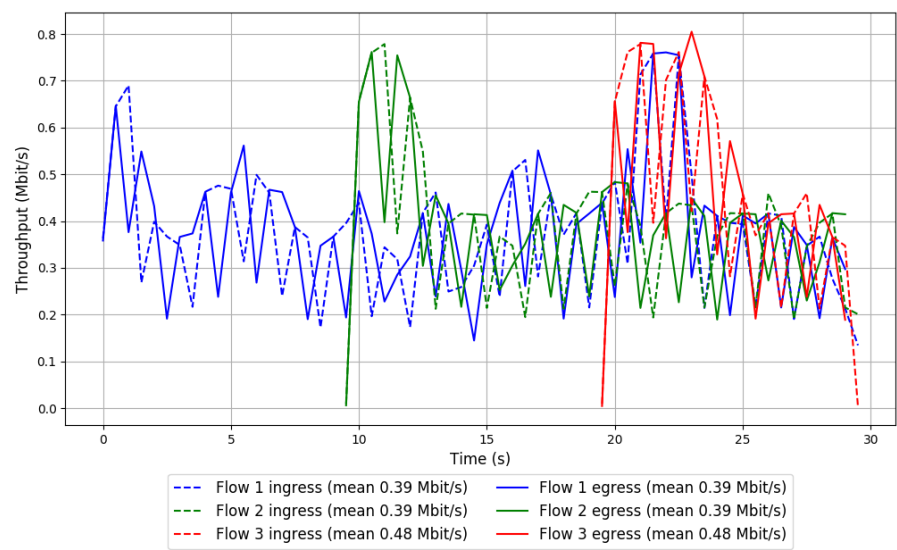
-- Flow 3:

Average throughput: 0.48 Mbit/s

95th percentile per-packet one-way delay: 137.285 ms

Loss rate: 1.78%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2017-08-21 12:01:10

End at: 2017-08-21 12:01:40

Below is generated by plot.py at 2017-08-21 16:16:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.83 Mbit/s

95th percentile per-packet one-way delay: 137.648 ms

Loss rate: 1.61%

-- Flow 1:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 137.510 ms

Loss rate: 1.56%

-- Flow 2:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 137.292 ms

Loss rate: 1.33%

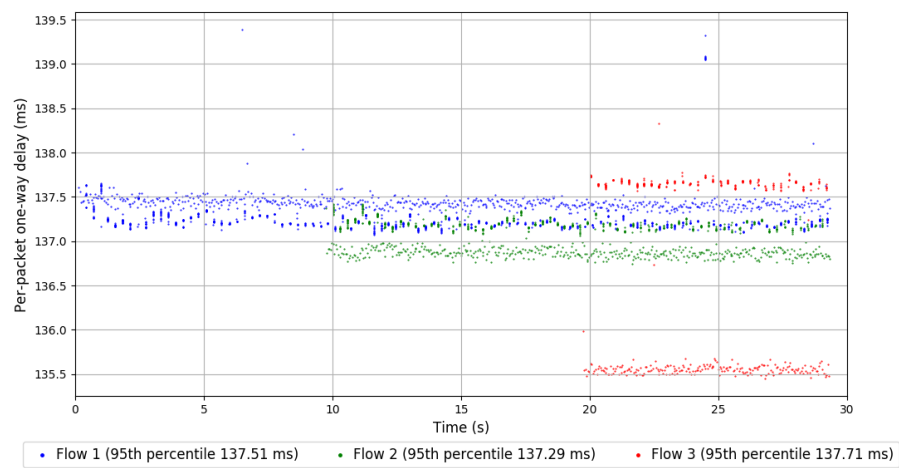
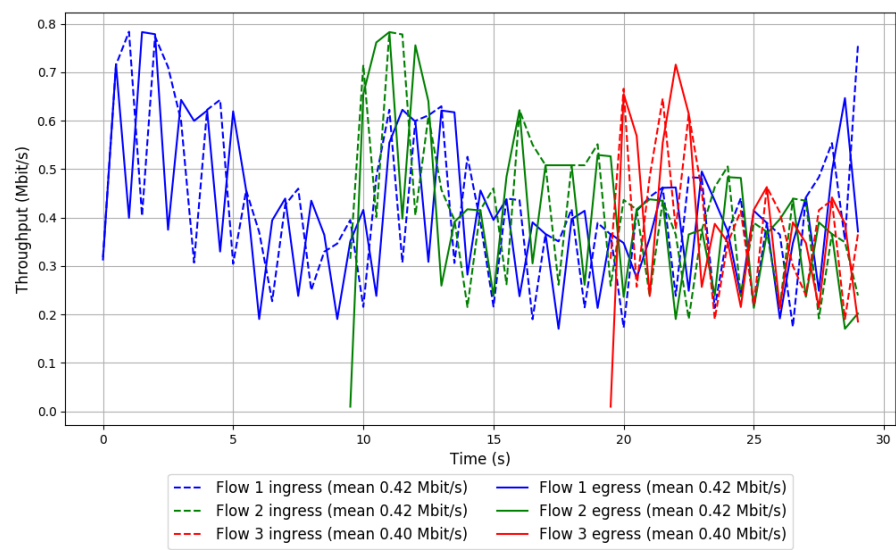
-- Flow 3:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 137.711 ms

Loss rate: 2.36%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2017-08-21 12:14:58

End at: 2017-08-21 12:15:28

Below is generated by plot.py at 2017-08-21 16:16:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.85 Mbit/s

95th percentile per-packet one-way delay: 137.634 ms

Loss rate: 1.20%

-- Flow 1:

Average throughput: 0.47 Mbit/s

95th percentile per-packet one-way delay: 137.375 ms

Loss rate: 0.67%

-- Flow 2:

Average throughput: 0.36 Mbit/s

95th percentile per-packet one-way delay: 137.289 ms

Loss rate: 1.64%

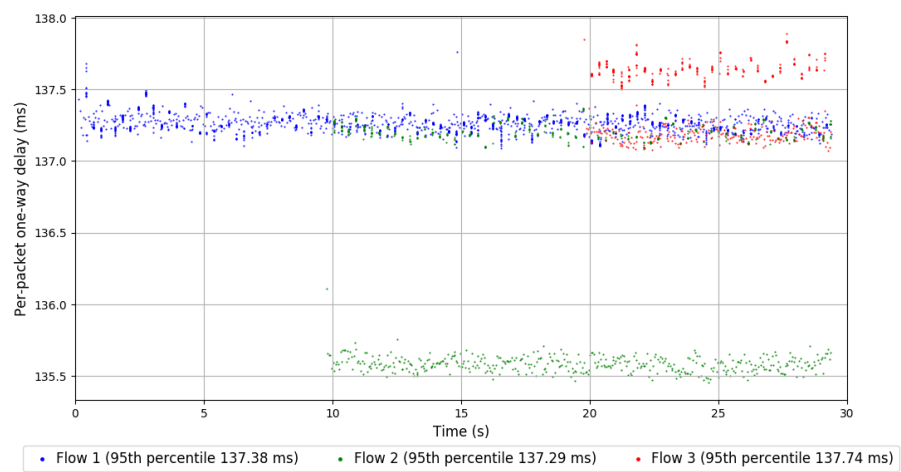
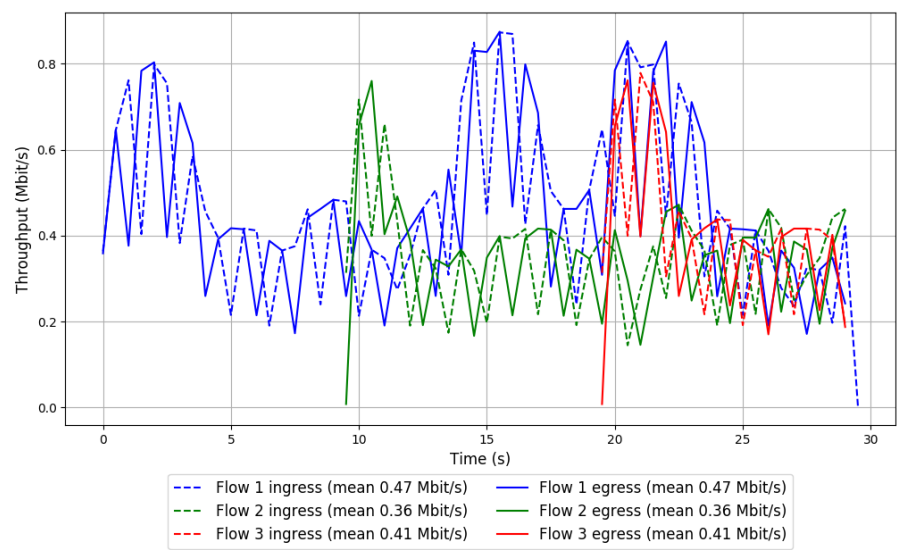
-- Flow 3:

Average throughput: 0.41 Mbit/s

95th percentile per-packet one-way delay: 137.744 ms

Loss rate: 2.26%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2017-08-21 12:28:27

End at: 2017-08-21 12:28:57

Below is generated by plot.py at 2017-08-21 16:16:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.87 Mbit/s

95th percentile per-packet one-way delay: 137.747 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 137.918 ms

Loss rate: 0.93%

-- Flow 2:

Average throughput: 0.46 Mbit/s

95th percentile per-packet one-way delay: 137.317 ms

Loss rate: 0.38%

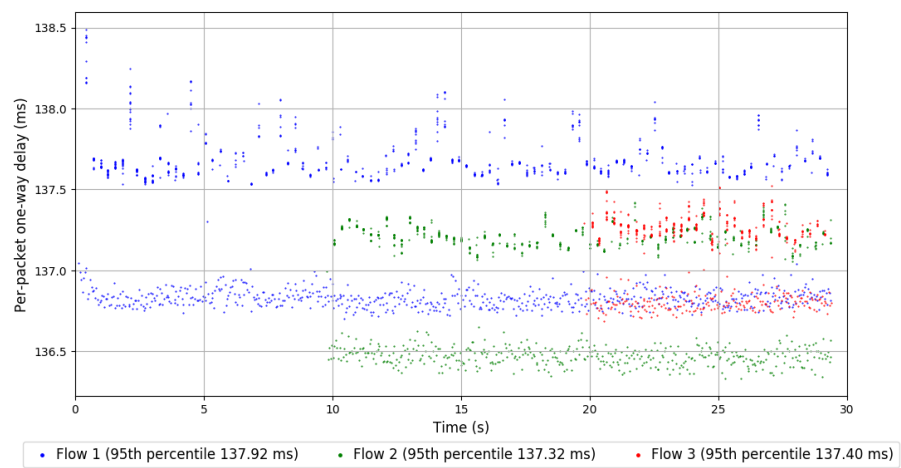
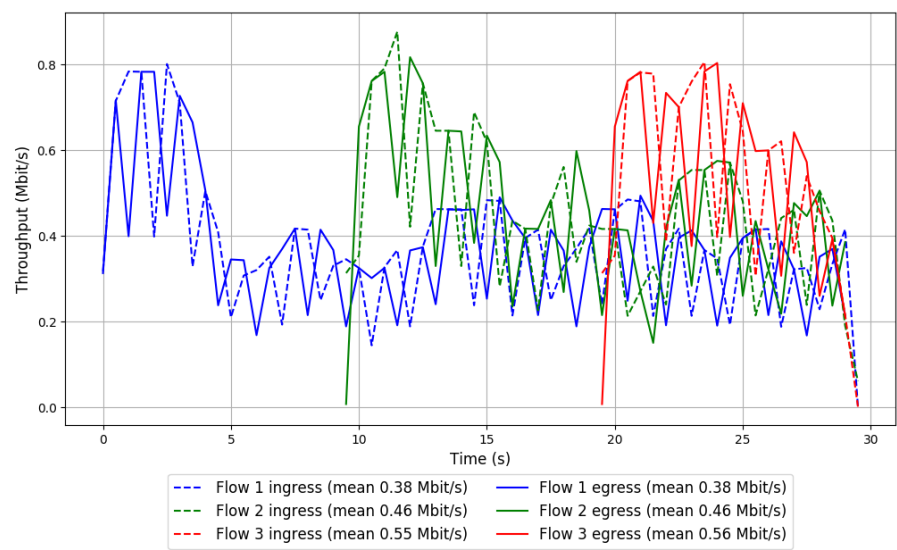
-- Flow 3:

Average throughput: 0.56 Mbit/s

95th percentile per-packet one-way delay: 137.399 ms

Loss rate: 1.91%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2017-08-21 12:41:57

End at: 2017-08-21 12:42:27

Below is generated by plot.py at 2017-08-21 16:16:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.80 Mbit/s

95th percentile per-packet one-way delay: 137.471 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 137.382 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 137.490 ms

Loss rate: 2.49%

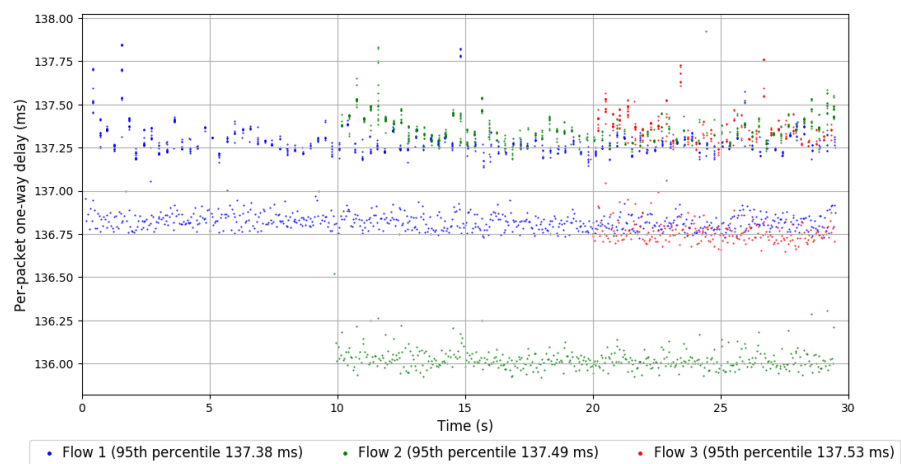
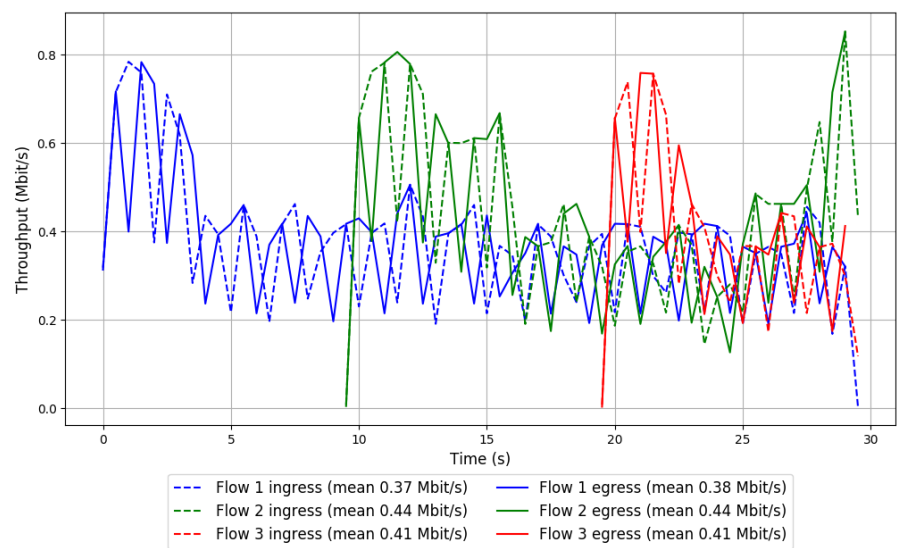
-- Flow 3:

Average throughput: 0.41 Mbit/s

95th percentile per-packet one-way delay: 137.525 ms

Loss rate: 2.57%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2017-08-21 12:55:34

End at: 2017-08-21 12:56:04

Below is generated by plot.py at 2017-08-21 16:16:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.84 Mbit/s

95th percentile per-packet one-way delay: 137.367 ms

Loss rate: 1.25%

-- Flow 1:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 137.354 ms

Loss rate: 0.92%

-- Flow 2:

Average throughput: 0.50 Mbit/s

95th percentile per-packet one-way delay: 137.356 ms

Loss rate: 0.96%

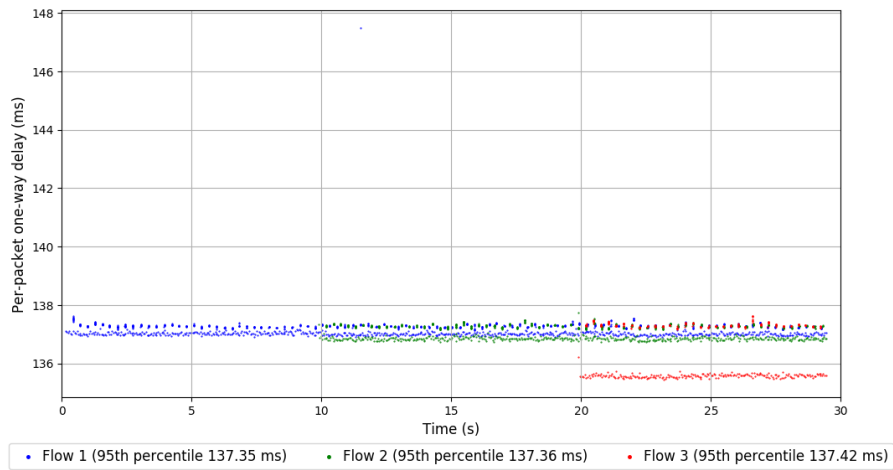
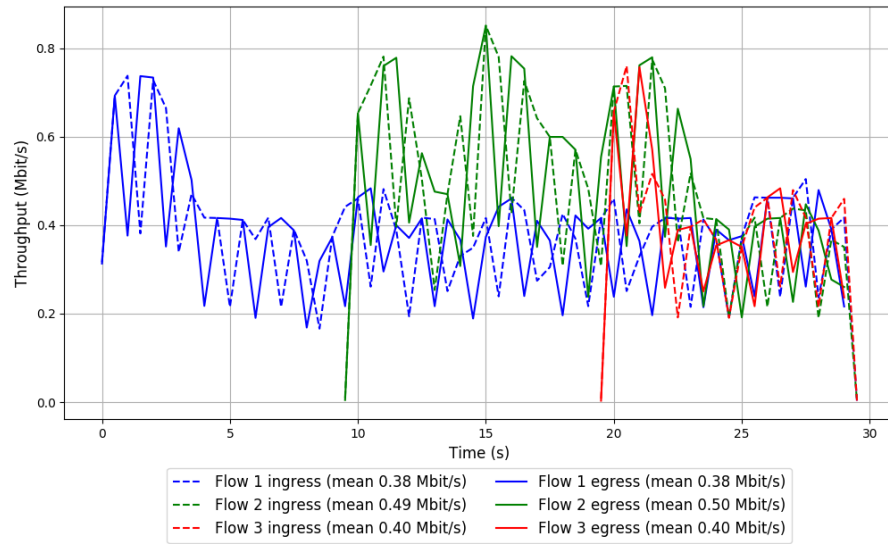
-- Flow 3:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 137.417 ms

Loss rate: 2.93%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2017-08-21 13:09:22

End at: 2017-08-21 13:09:52

Below is generated by plot.py at 2017-08-21 16:16:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.84 Mbit/s

95th percentile per-packet one-way delay: 137.089 ms

Loss rate: 1.20%

-- Flow 1:

Average throughput: 0.46 Mbit/s

95th percentile per-packet one-way delay: 137.129 ms

Loss rate: 0.59%

-- Flow 2:

Average throughput: 0.37 Mbit/s

95th percentile per-packet one-way delay: 136.876 ms

Loss rate: 1.42%

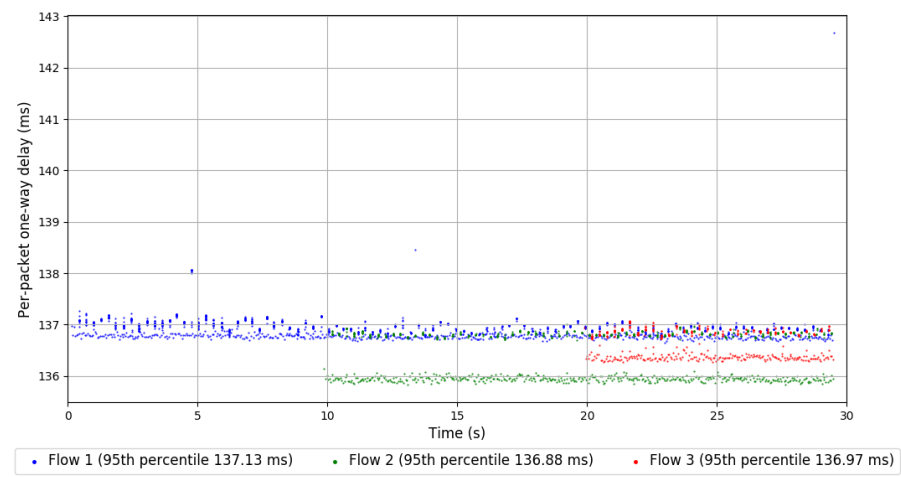
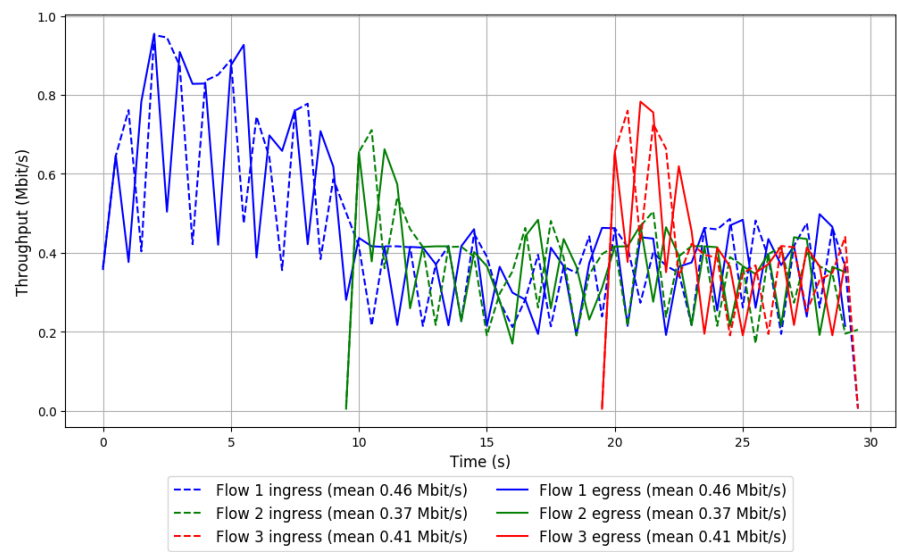
-- Flow 3:

Average throughput: 0.41 Mbit/s

95th percentile per-packet one-way delay: 136.966 ms

Loss rate: 2.88%

Run 10: Report of Sprout — Data Link

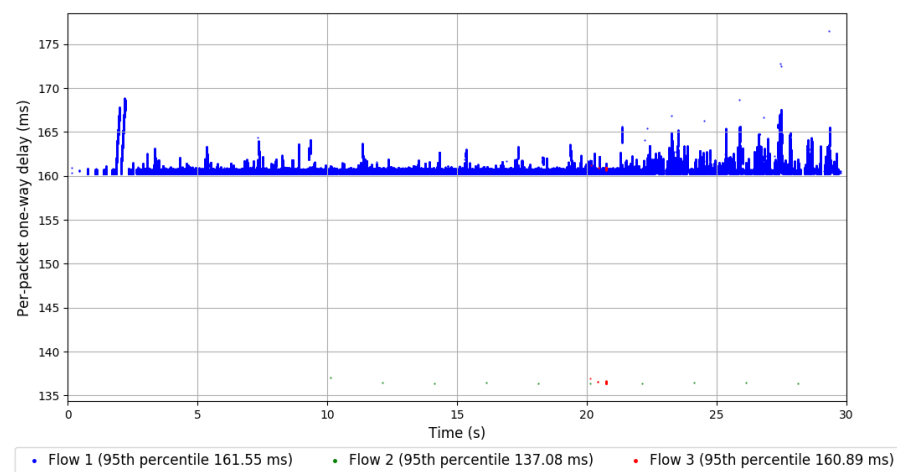
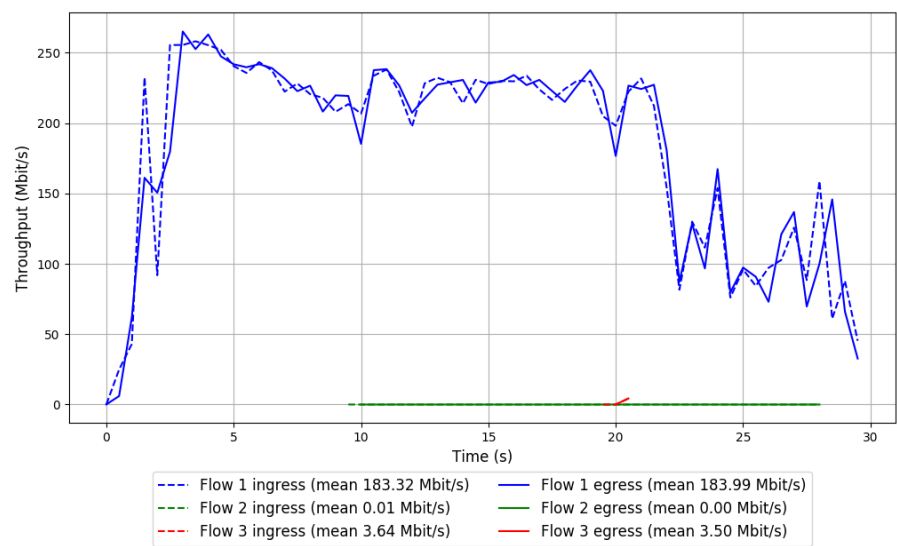


```
Run 1: Statistics of TaoVA-100x

Start at: 2017-08-21 10:59:54
End at: 2017-08-21 11:00:24

# Below is generated by plot.py at 2017-08-21 16:17:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 184.06 Mbit/s
95th percentile per-packet one-way delay: 161.548 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 183.99 Mbit/s
95th percentile per-packet one-way delay: 161.549 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 137.083 ms
Loss rate: 92.35%
-- Flow 3:
Average throughput: 3.50 Mbit/s
95th percentile per-packet one-way delay: 160.889 ms
Loss rate: 0.00%
```

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

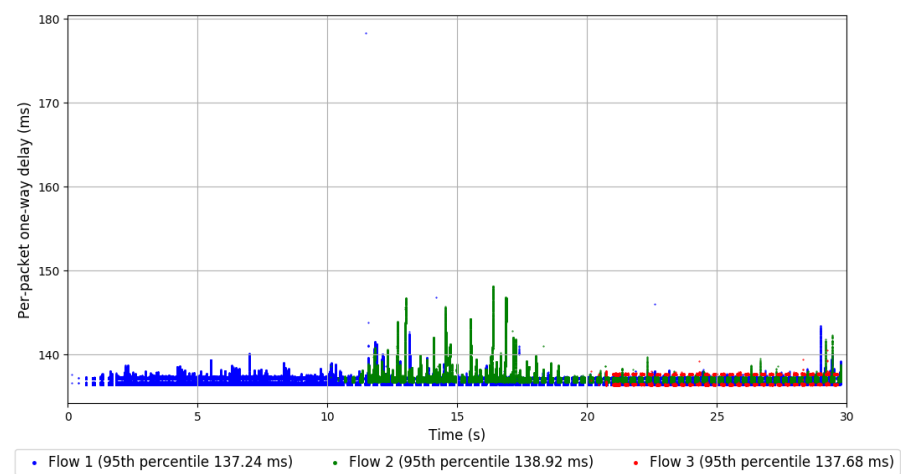
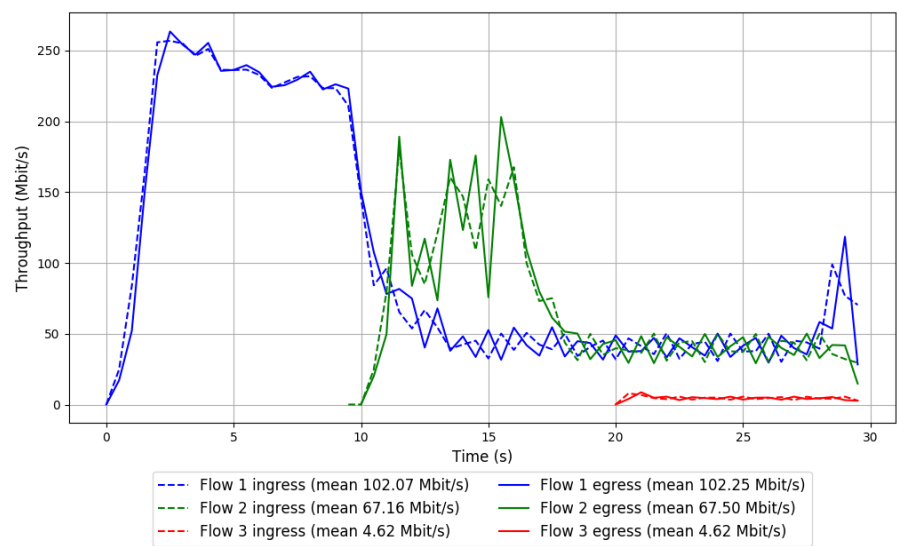


```
Run 2: Statistics of TaoVA-100x

Start at: 2017-08-21 11:13:33
End at: 2017-08-21 11:14:03

# Below is generated by plot.py at 2017-08-21 16:17:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 148.45 Mbit/s
95th percentile per-packet one-way delay: 137.587 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 102.25 Mbit/s
95th percentile per-packet one-way delay: 137.240 ms
Loss rate: 0.75%
-- Flow 2:
Average throughput: 67.50 Mbit/s
95th percentile per-packet one-way delay: 138.918 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 4.62 Mbit/s
95th percentile per-packet one-way delay: 137.678 ms
Loss rate: 3.10%
```

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



Run 3: Statistics of TaoVA-100x

Start at: 2017-08-21 11:27:31

End at: 2017-08-21 11:28:01

Below is generated by plot.py at 2017-08-21 16:18:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 142.36 Mbit/s

95th percentile per-packet one-way delay: 137.323 ms

Loss rate: 0.80%

-- Flow 1:

Average throughput: 133.54 Mbit/s

95th percentile per-packet one-way delay: 137.339 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 7.51 Mbit/s

95th percentile per-packet one-way delay: 137.176 ms

Loss rate: 9.28%

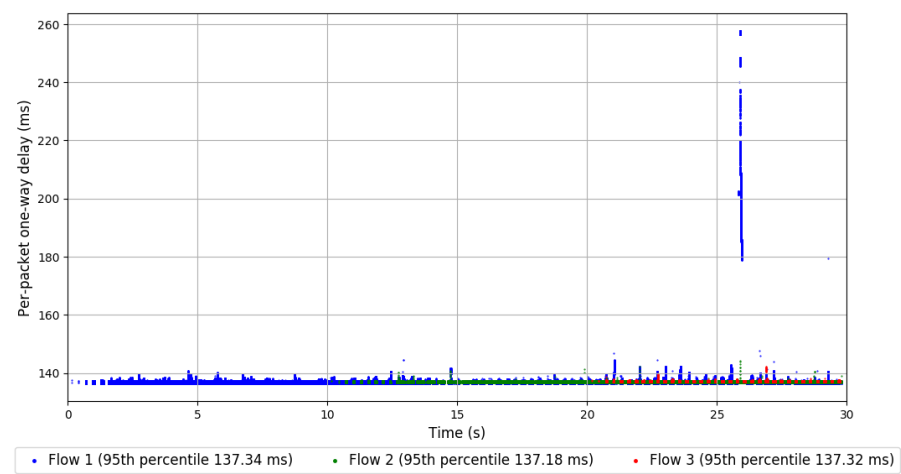
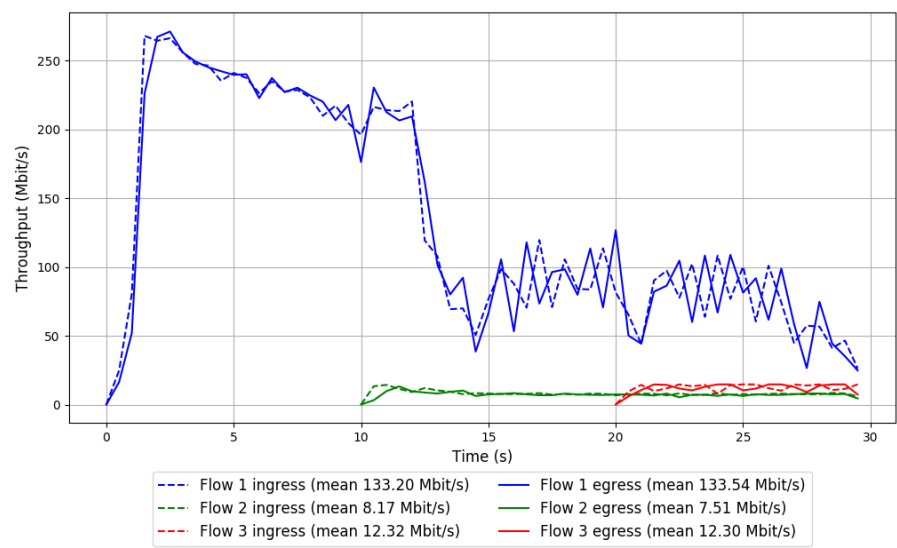
-- Flow 3:

Average throughput: 12.30 Mbit/s

95th percentile per-packet one-way delay: 137.322 ms

Loss rate: 3.04%

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



Run 4: Statistics of TaoVA-100x

Start at: 2017-08-21 11:41:13

End at: 2017-08-21 11:41:43

Below is generated by plot.py at 2017-08-21 16:18:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 152.65 Mbit/s

95th percentile per-packet one-way delay: 138.089 ms

Loss rate: 0.75%

-- Flow 1:

Average throughput: 140.35 Mbit/s

95th percentile per-packet one-way delay: 138.169 ms

Loss rate: 0.49%

-- Flow 2:

Average throughput: 12.86 Mbit/s

95th percentile per-packet one-way delay: 137.193 ms

Loss rate: 1.44%

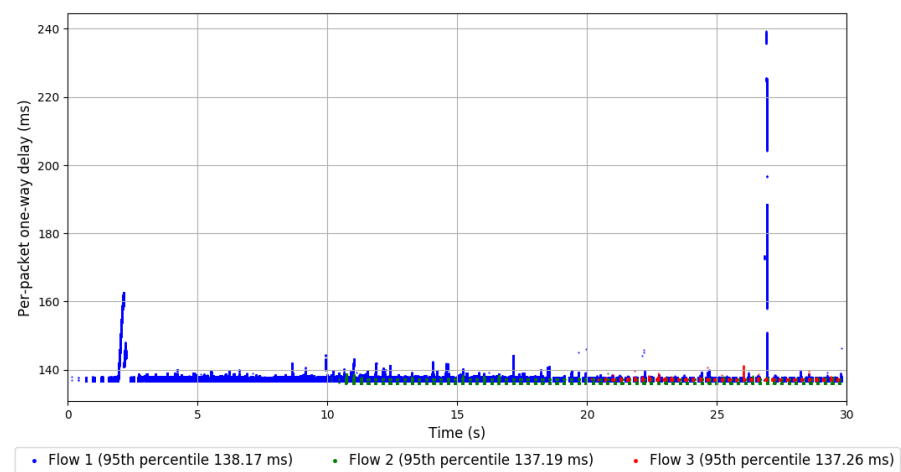
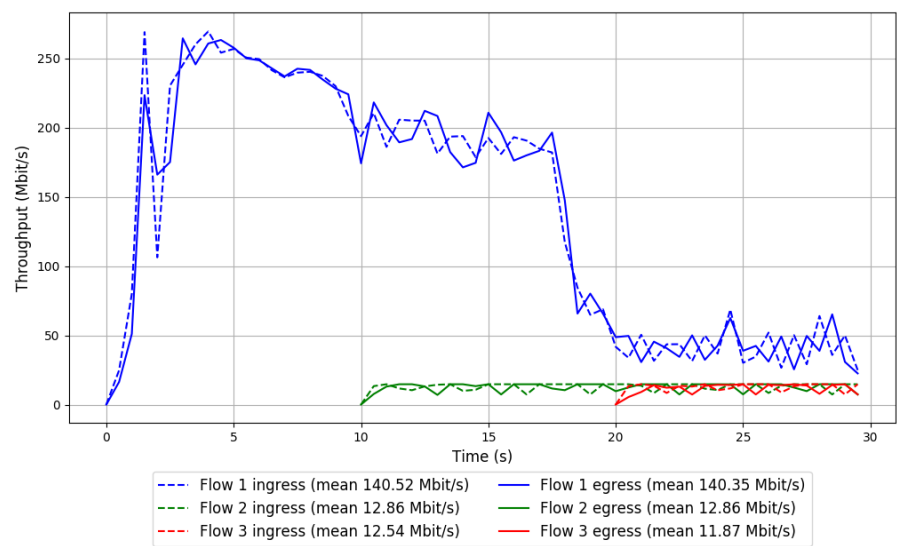
-- Flow 3:

Average throughput: 11.87 Mbit/s

95th percentile per-packet one-way delay: 137.259 ms

Loss rate: 8.02%

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



Run 5: Statistics of TaoVA-100x

Start at: 2017-08-21 11:54:57

End at: 2017-08-21 11:55:27

Below is generated by plot.py at 2017-08-21 16:19:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 146.61 Mbit/s

95th percentile per-packet one-way delay: 137.694 ms

Loss rate: 0.84%

-- Flow 1:

Average throughput: 102.92 Mbit/s

95th percentile per-packet one-way delay: 137.557 ms

Loss rate: 0.63%

-- Flow 2:

Average throughput: 60.46 Mbit/s

95th percentile per-packet one-way delay: 138.278 ms

Loss rate: 1.10%

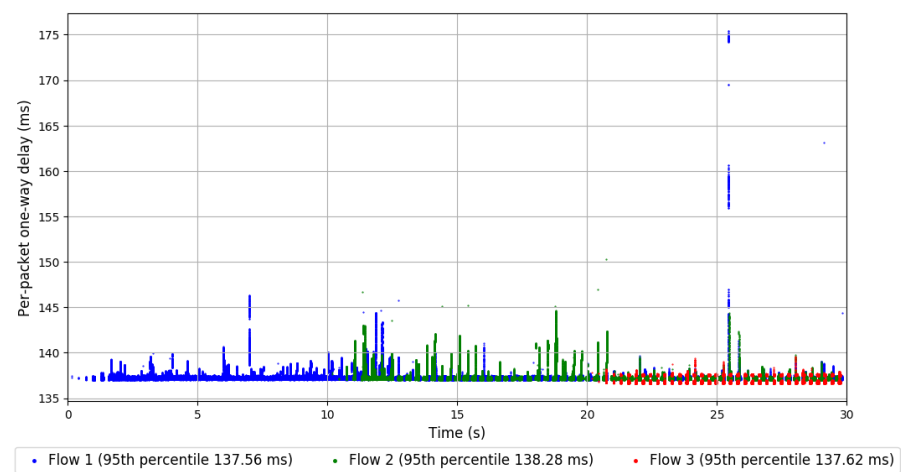
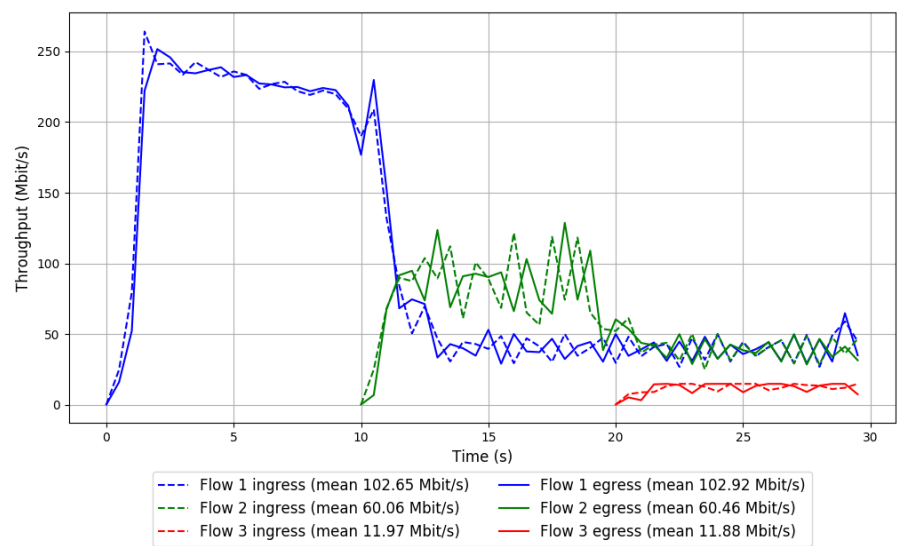
-- Flow 3:

Average throughput: 11.88 Mbit/s

95th percentile per-packet one-way delay: 137.619 ms

Loss rate: 3.51%

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



Run 6: Statistics of TaoVA-100x

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

End at: 2017-08-21 12:09:07

Below is generated by plot.py at 2017-08-21 16:19:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 178.24 Mbit/s

95th percentile per-packet one-way delay: 137.860 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 150.47 Mbit/s

95th percentile per-packet one-way delay: 137.624 ms

Loss rate: 0.89%

-- Flow 2:

Average throughput: 12.52 Mbit/s

95th percentile per-packet one-way delay: 137.173 ms

Loss rate: 1.46%

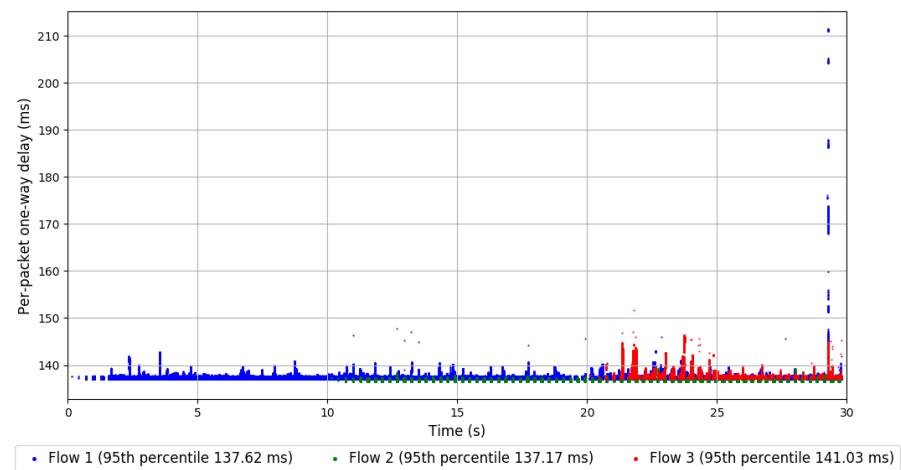
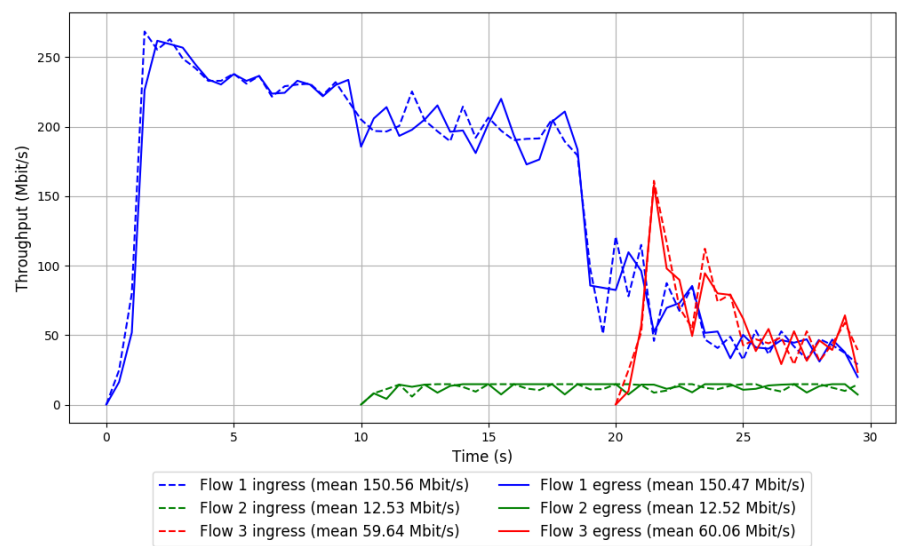
-- Flow 3:

Average throughput: 60.06 Mbit/s

95th percentile per-packet one-way delay: 141.026 ms

Loss rate: 2.11%

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

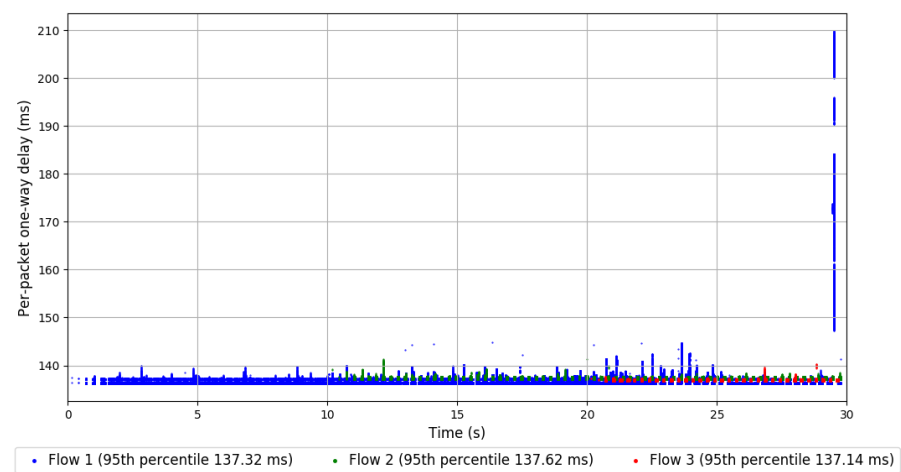
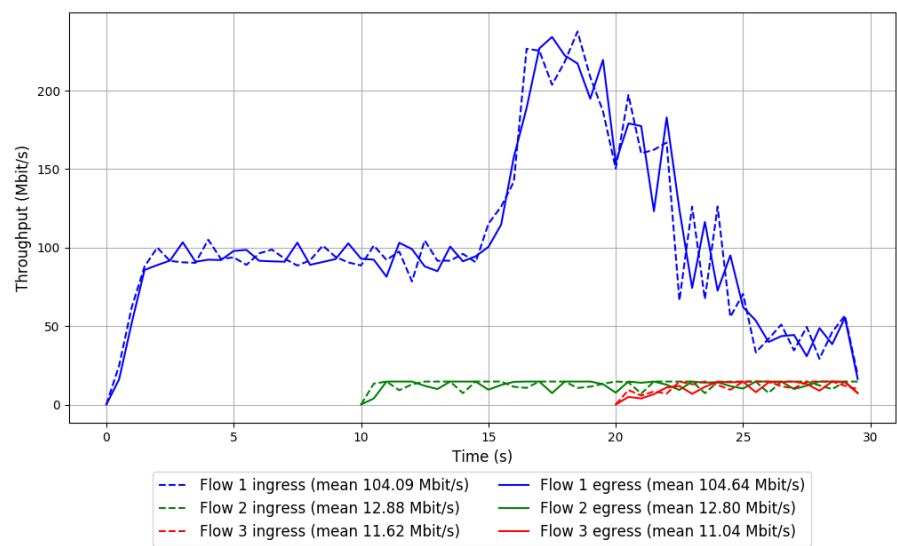


```
Run 7: Statistics of TaoVA-100x

Start at: 2017-08-21 12:22:15
End at: 2017-08-21 12:22:45

# Below is generated by plot.py at 2017-08-21 16:19:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 116.63 Mbit/s
95th percentile per-packet one-way delay: 137.552 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 104.64 Mbit/s
95th percentile per-packet one-way delay: 137.319 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 12.80 Mbit/s
95th percentile per-packet one-way delay: 137.615 ms
Loss rate: 2.05%
-- Flow 3:
Average throughput: 11.04 Mbit/s
95th percentile per-packet one-way delay: 137.138 ms
Loss rate: 7.69%
```

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



Run 8: Statistics of TaoVA-100x

Start at: 2017-08-21 12:35:43

End at: 2017-08-21 12:36:13

Below is generated by plot.py at 2017-08-21 16:20:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 86.22 Mbit/s

95th percentile per-packet one-way delay: 139.710 ms

Loss rate: 1.66%

-- Flow 1:

Average throughput: 12.26 Mbit/s

95th percentile per-packet one-way delay: 137.236 ms

Loss rate: 4.99%

-- Flow 2:

Average throughput: 73.29 Mbit/s

95th percentile per-packet one-way delay: 138.607 ms

Loss rate: 0.74%

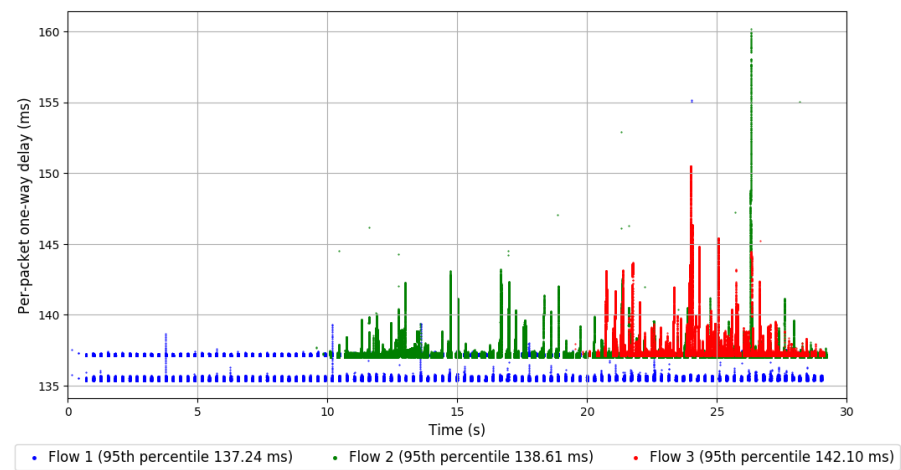
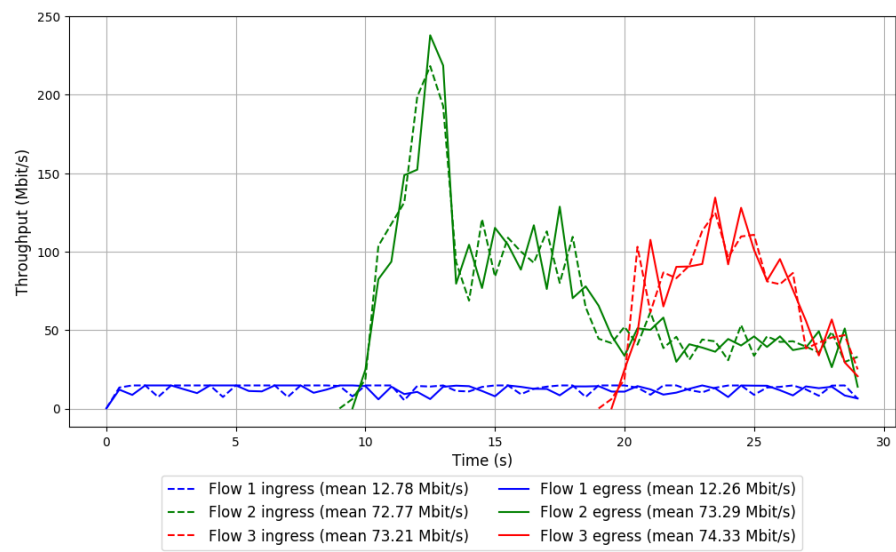
-- Flow 3:

Average throughput: 74.33 Mbit/s

95th percentile per-packet one-way delay: 142.098 ms

Loss rate: 1.80%

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

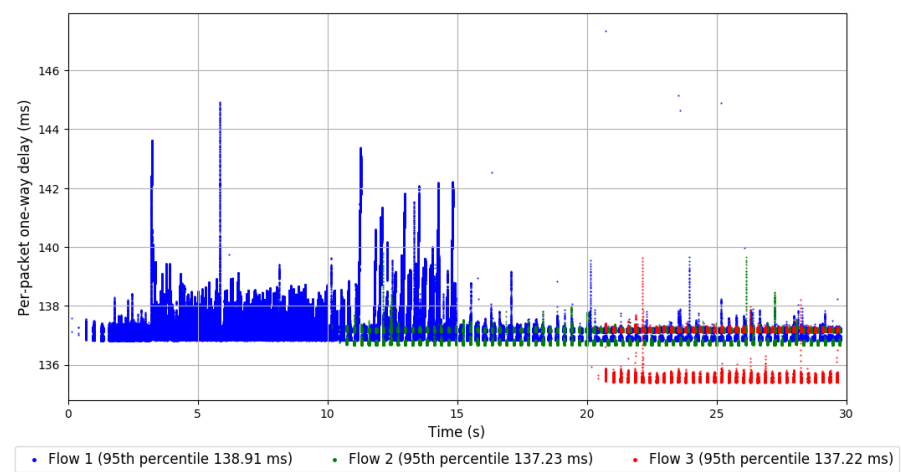
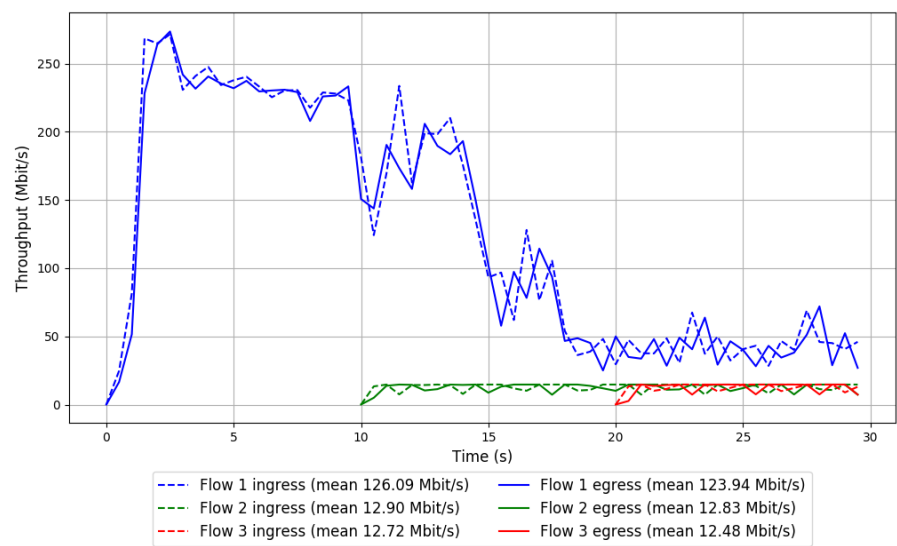


```
Run 9: Statistics of TaoVA-100x

Start at: 2017-08-21 12:49:17
End at: 2017-08-21 12:49:47

# Below is generated by plot.py at 2017-08-21 16:20:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 136.40 Mbit/s
95th percentile per-packet one-way delay: 138.812 ms
Loss rate: 2.67%
-- Flow 1:
Average throughput: 123.94 Mbit/s
95th percentile per-packet one-way delay: 138.913 ms
Loss rate: 2.64%
-- Flow 2:
Average throughput: 12.83 Mbit/s
95th percentile per-packet one-way delay: 137.226 ms
Loss rate: 2.00%
-- Flow 3:
Average throughput: 12.48 Mbit/s
95th percentile per-packet one-way delay: 137.223 ms
Loss rate: 4.70%
```

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

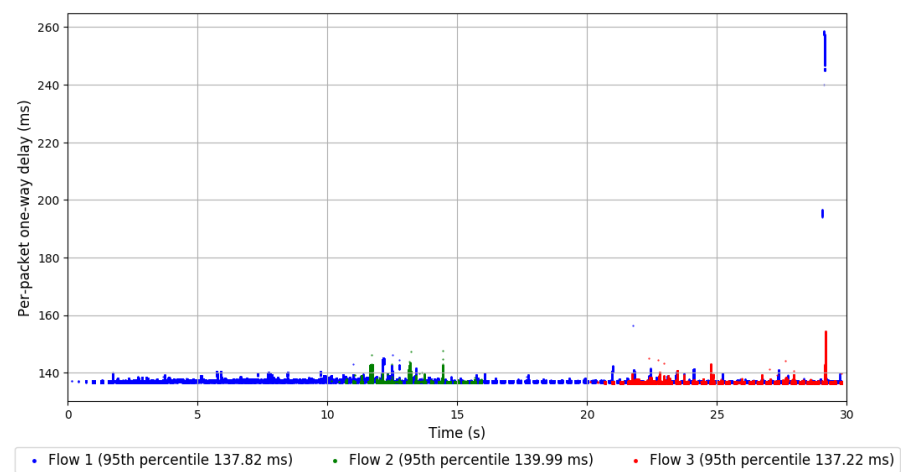
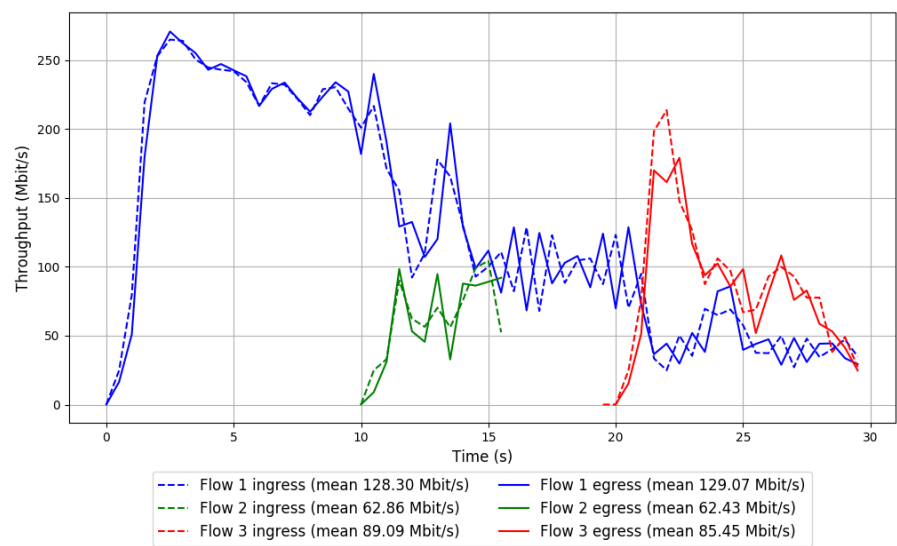


```
Run 10: Statistics of TaoVA-100x

Start at: 2017-08-21 13:02:56
End at: 2017-08-21 13:03:26

# Below is generated by plot.py at 2017-08-21 16:20:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 168.88 Mbit/s
95th percentile per-packet one-way delay: 137.829 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 129.07 Mbit/s
95th percentile per-packet one-way delay: 137.818 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 62.43 Mbit/s
95th percentile per-packet one-way delay: 139.991 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 85.45 Mbit/s
95th percentile per-packet one-way delay: 137.220 ms
Loss rate: 6.64%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2017-08-21 10:57:24

End at: 2017-08-21 10:57:54

Below is generated by plot.py at 2017-08-21 16:20:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.90 Mbit/s

95th percentile per-packet one-way delay: 163.979 ms

Loss rate: 1.72%

-- Flow 1:

Average throughput: 0.88 Mbit/s

95th percentile per-packet one-way delay: 160.912 ms

Loss rate: 1.05%

-- Flow 2:

Average throughput: 0.85 Mbit/s

95th percentile per-packet one-way delay: 164.059 ms

Loss rate: 1.55%

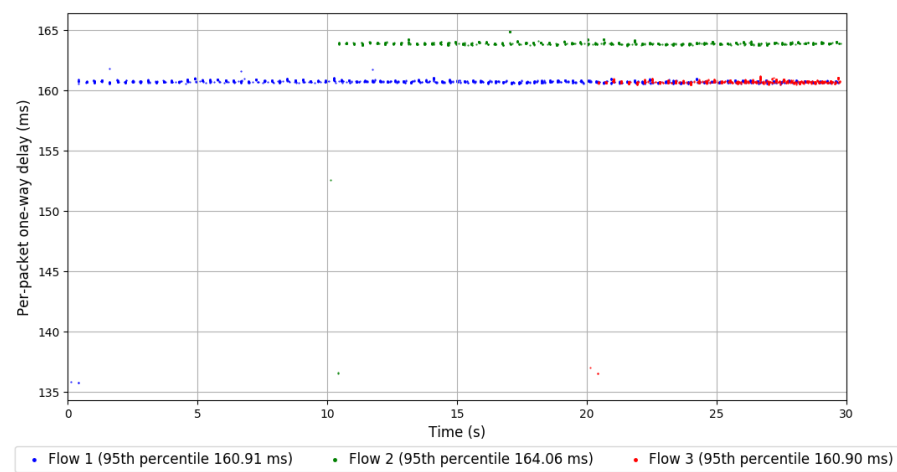
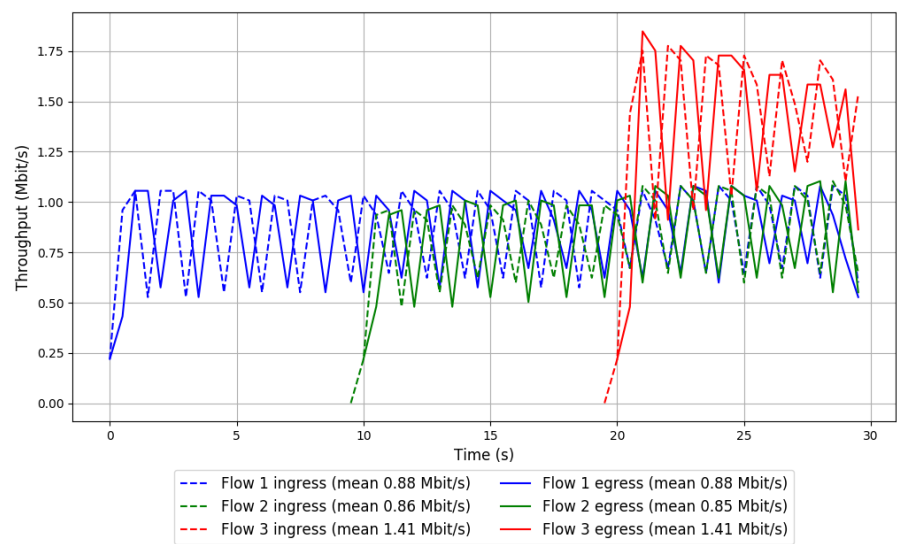
-- Flow 3:

Average throughput: 1.41 Mbit/s

95th percentile per-packet one-way delay: 160.899 ms

Loss rate: 3.17%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2017-08-21 11:10:42

End at: 2017-08-21 11:11:12

Below is generated by plot.py at 2017-08-21 16:20:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 14.62 Mbit/s

95th percentile per-packet one-way delay: 138.430 ms

Loss rate: 1.79%

-- Flow 1:

Average throughput: 1.86 Mbit/s

95th percentile per-packet one-way delay: 137.386 ms

Loss rate: 1.44%

-- Flow 2:

Average throughput: 17.33 Mbit/s

95th percentile per-packet one-way delay: 138.507 ms

Loss rate: 1.57%

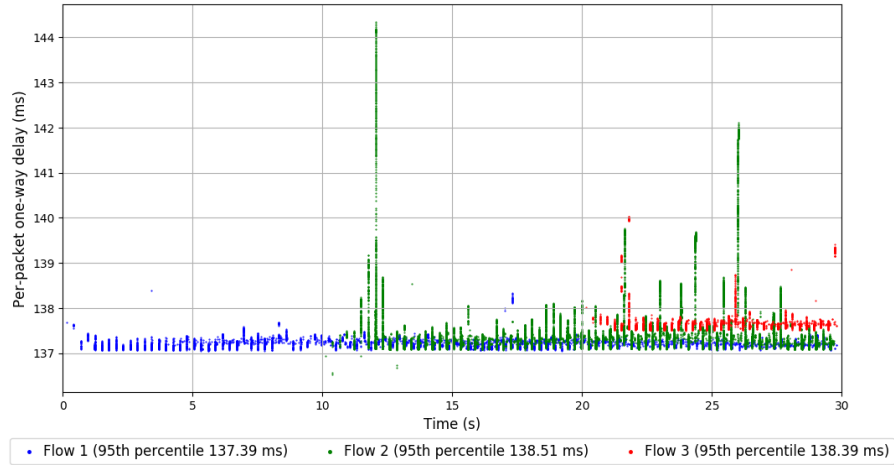
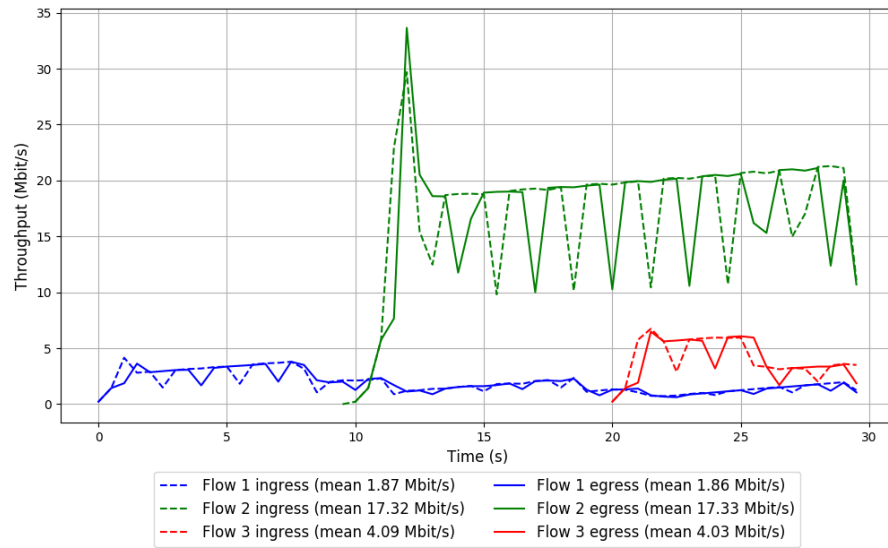
-- Flow 3:

Average throughput: 4.03 Mbit/s

95th percentile per-packet one-way delay: 138.392 ms

Loss rate: 4.09%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2017-08-21 11:24:47

End at: 2017-08-21 11:25:17

Below is generated by plot.py at 2017-08-21 16:20:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 22.19 Mbit/s

95th percentile per-packet one-way delay: 137.987 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 19.22 Mbit/s

95th percentile per-packet one-way delay: 138.044 ms

Loss rate: 0.96%

-- Flow 2:

Average throughput: 2.12 Mbit/s

95th percentile per-packet one-way delay: 137.379 ms

Loss rate: 4.54%

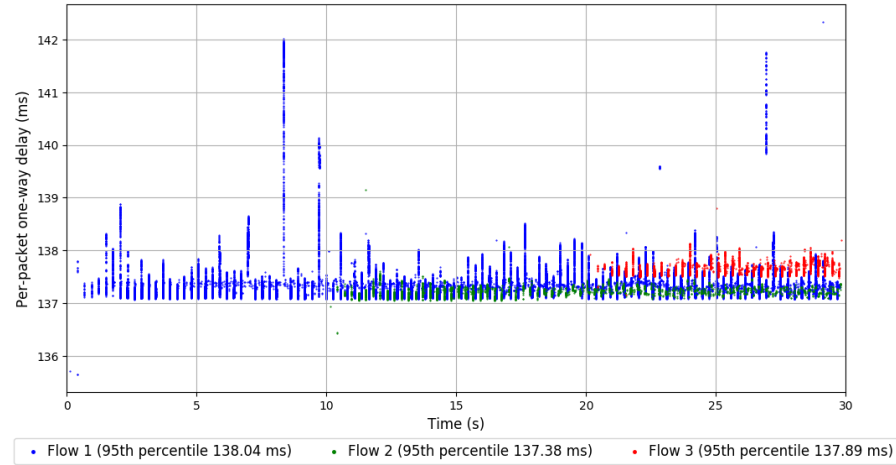
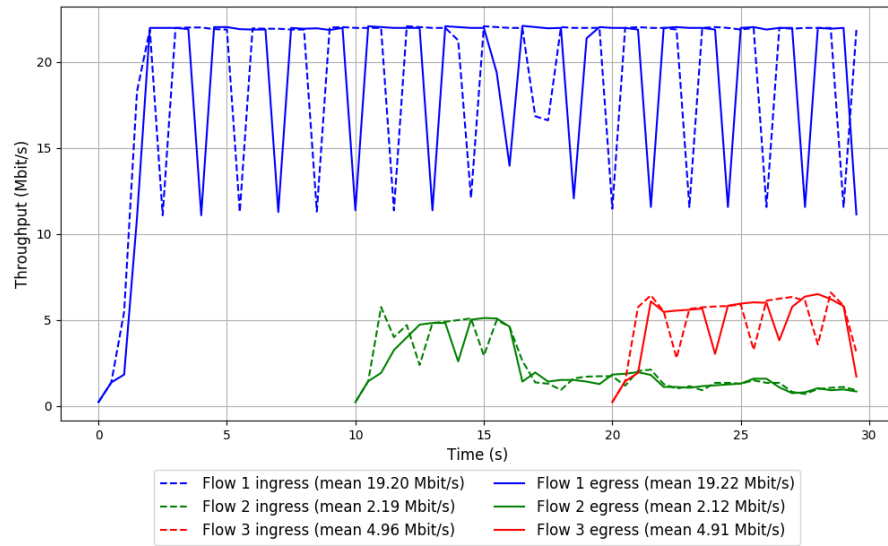
-- Flow 3:

Average throughput: 4.91 Mbit/s

95th percentile per-packet one-way delay: 137.887 ms

Loss rate: 3.32%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2017-08-21 11:38:27

End at: 2017-08-21 11:38:57

Below is generated by plot.py at 2017-08-21 16:20:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.35 Mbit/s

95th percentile per-packet one-way delay: 137.900 ms

Loss rate: 3.65%

-- Flow 1:

Average throughput: 3.63 Mbit/s

95th percentile per-packet one-way delay: 137.971 ms

Loss rate: 1.96%

-- Flow 2:

Average throughput: 1.94 Mbit/s

95th percentile per-packet one-way delay: 137.395 ms

Loss rate: 6.04%

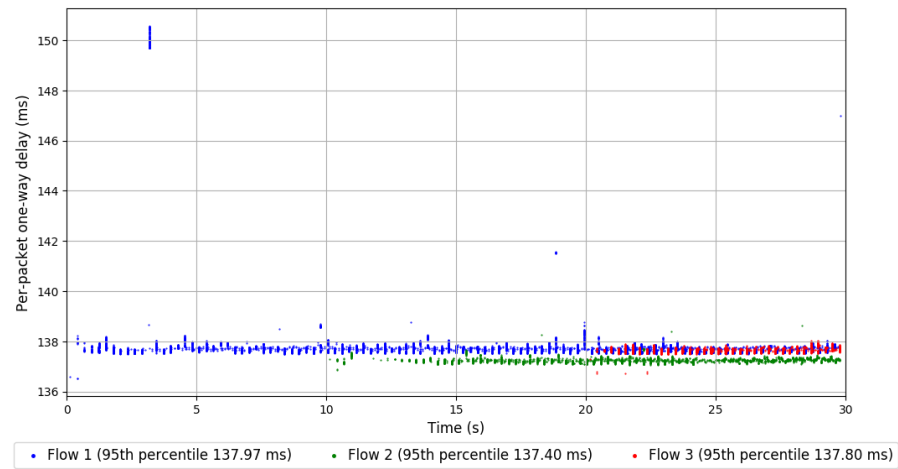
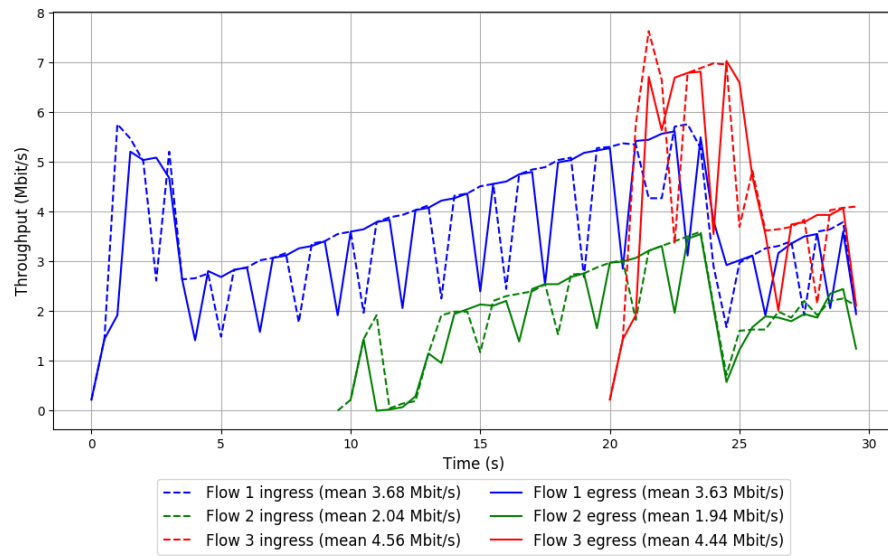
-- Flow 3:

Average throughput: 4.44 Mbit/s

95th percentile per-packet one-way delay: 137.800 ms

Loss rate: 5.63%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2017-08-21 11:52:09

End at: 2017-08-21 11:52:39

Below is generated by plot.py at 2017-08-21 16:20:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 27.78 Mbit/s

95th percentile per-packet one-way delay: 138.860 ms

Loss rate: 1.32%

-- Flow 1:

Average throughput: 19.60 Mbit/s

95th percentile per-packet one-way delay: 137.736 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 1.85 Mbit/s

95th percentile per-packet one-way delay: 137.925 ms

Loss rate: 1.91%

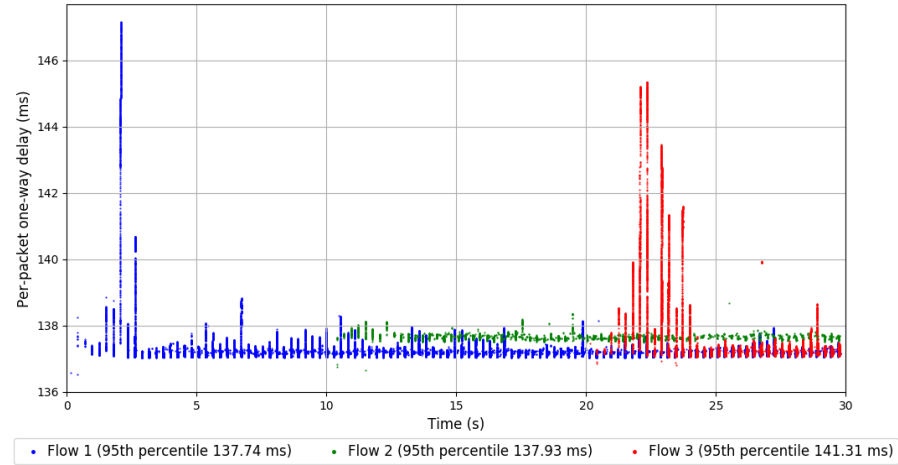
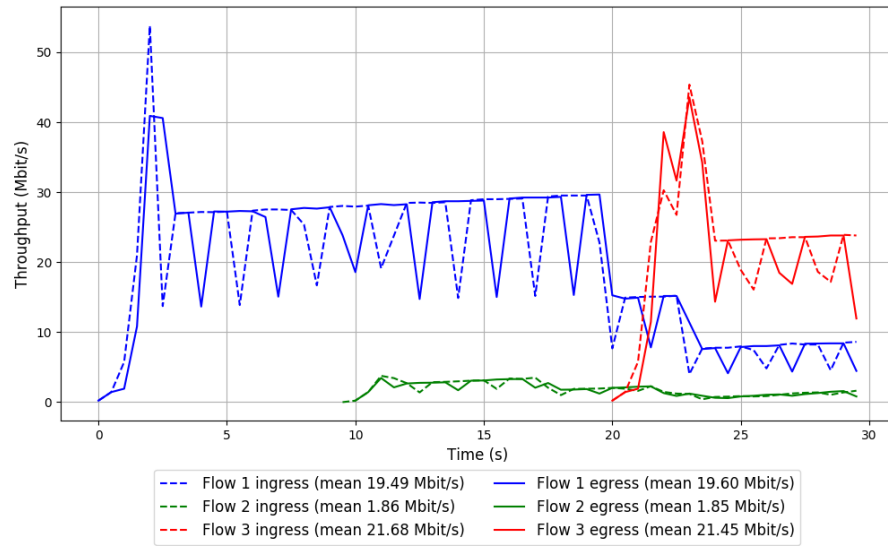
-- Flow 3:

Average throughput: 21.45 Mbit/s

95th percentile per-packet one-way delay: 141.311 ms

Loss rate: 3.76%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2017-08-21 12:05:52

End at: 2017-08-21 12:06:22

Below is generated by plot.py at 2017-08-21 16:21:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 22.81 Mbit/s

95th percentile per-packet one-way delay: 138.222 ms

Loss rate: 1.99%

-- Flow 1:

Average throughput: 3.28 Mbit/s

95th percentile per-packet one-way delay: 137.941 ms

Loss rate: 1.60%

-- Flow 2:

Average throughput: 28.05 Mbit/s

95th percentile per-packet one-way delay: 138.509 ms

Loss rate: 1.62%

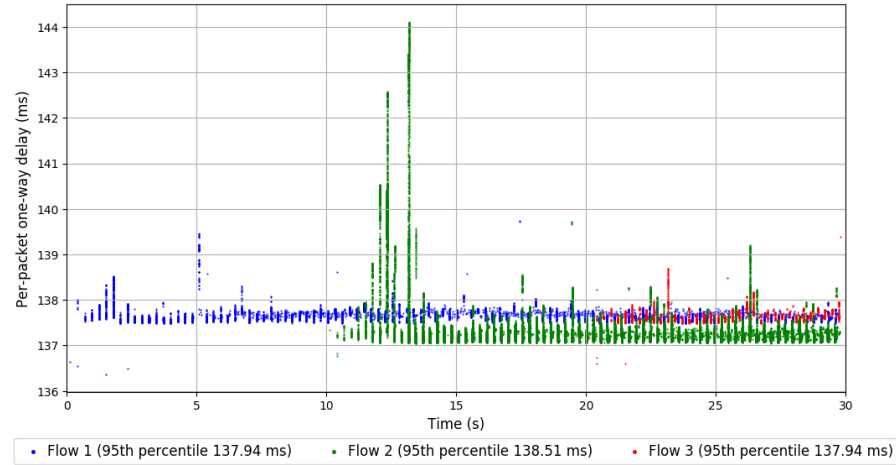
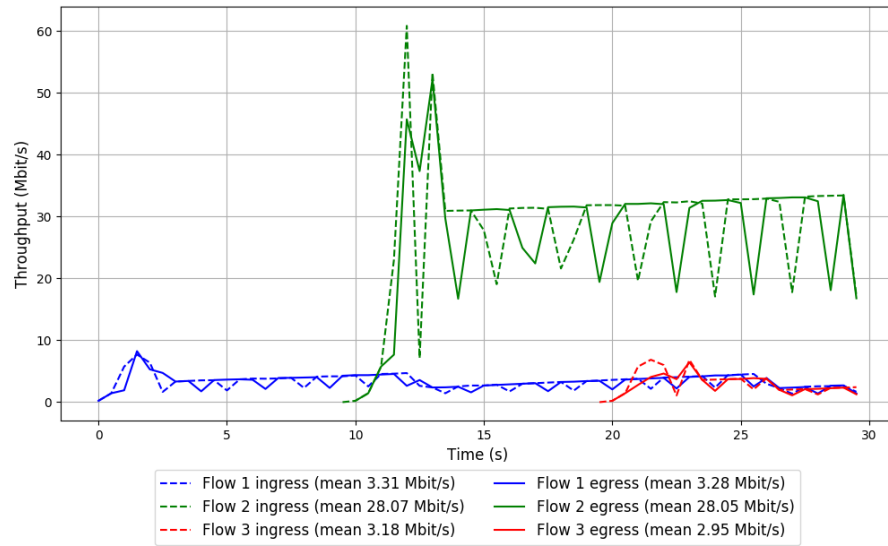
-- Flow 3:

Average throughput: 2.95 Mbit/s

95th percentile per-packet one-way delay: 137.940 ms

Loss rate: 9.82%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2017-08-21 12:19:32

End at: 2017-08-21 12:20:02

Below is generated by plot.py at 2017-08-21 16:21:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.89 Mbit/s

95th percentile per-packet one-way delay: 137.352 ms

Loss rate: 5.51%

-- Flow 1:

Average throughput: 2.05 Mbit/s

95th percentile per-packet one-way delay: 137.347 ms

Loss rate: 4.16%

-- Flow 2:

Average throughput: 2.14 Mbit/s

95th percentile per-packet one-way delay: 137.373 ms

Loss rate: 5.24%

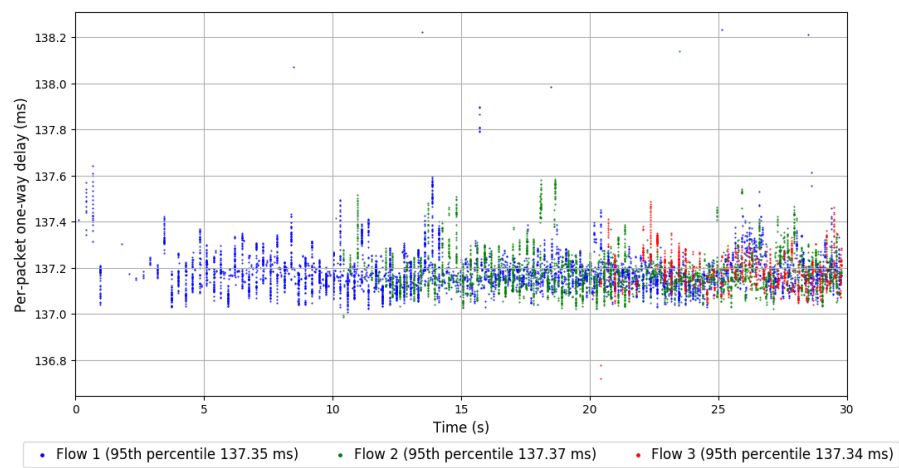
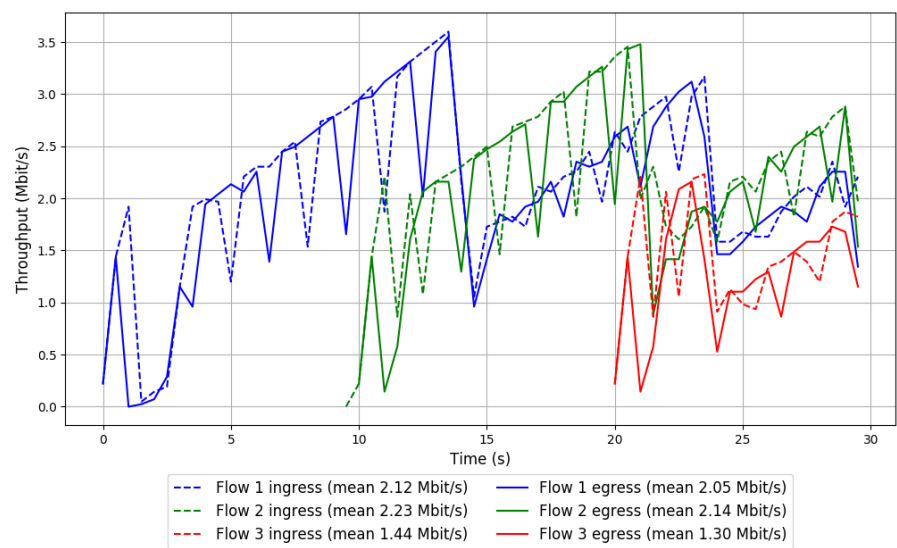
-- Flow 3:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 137.338 ms

Loss rate: 12.37%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2017-08-21 12:33:03

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

Below is generated by plot.py at 2017-08-21 16:21:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 22.44 Mbit/s

95th percentile per-packet one-way delay: 138.380 ms

Loss rate: 1.67%

-- Flow 1:

Average throughput: 9.39 Mbit/s

95th percentile per-packet one-way delay: 138.054 ms

Loss rate: 1.25%

-- Flow 2:

Average throughput: 16.16 Mbit/s

95th percentile per-packet one-way delay: 138.612 ms

Loss rate: 1.71%

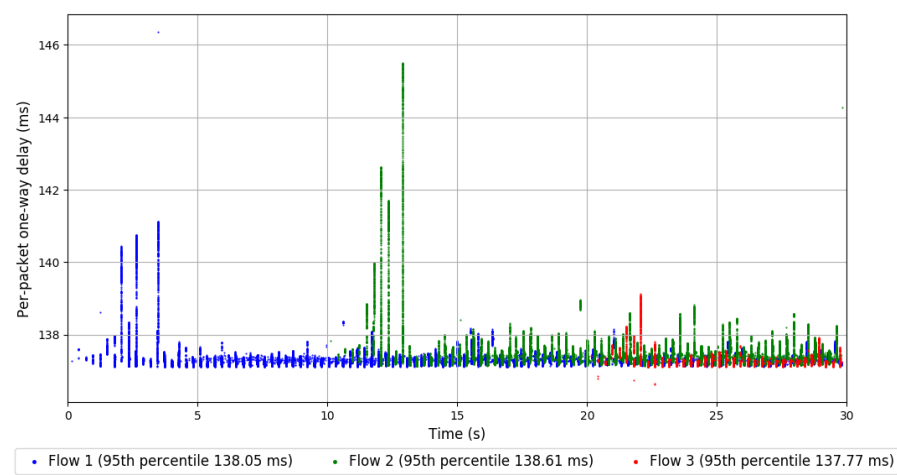
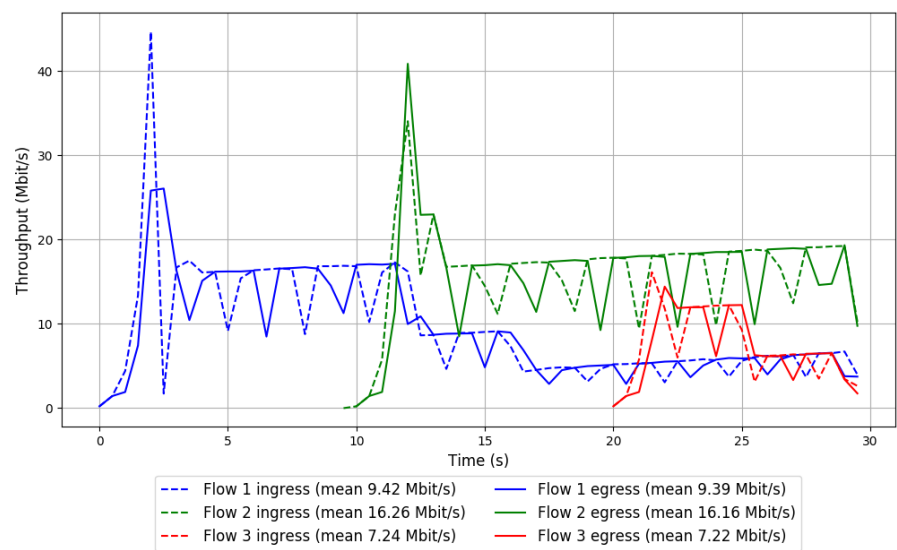
-- Flow 3:

Average throughput: 7.22 Mbit/s

95th percentile per-packet one-way delay: 137.773 ms

Loss rate: 3.14%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2017-08-21 12:46:32

End at: 2017-08-21 12:47:02

Below is generated by plot.py at 2017-08-21 16:21:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 26.34 Mbit/s

95th percentile per-packet one-way delay: 139.248 ms

Loss rate: 1.38%

-- Flow 1:

Average throughput: 24.21 Mbit/s

95th percentile per-packet one-way delay: 139.339 ms

Loss rate: 1.13%

-- Flow 2:

Average throughput: 2.36 Mbit/s

95th percentile per-packet one-way delay: 137.512 ms

Loss rate: 3.20%

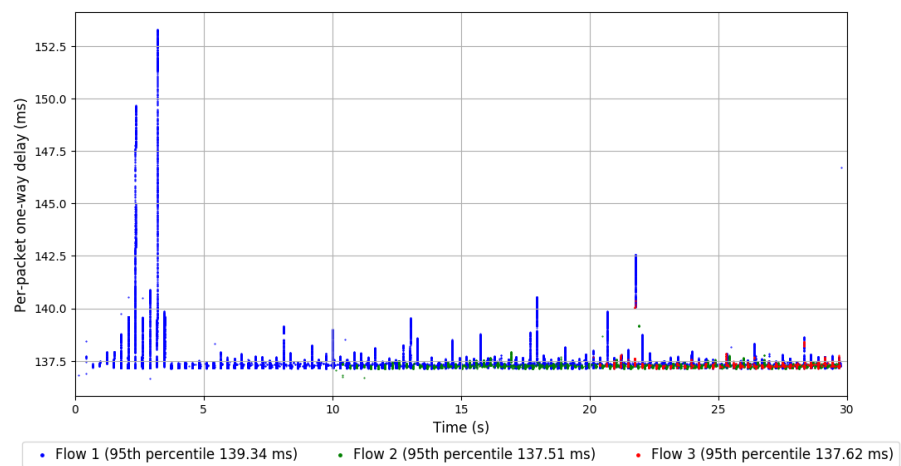
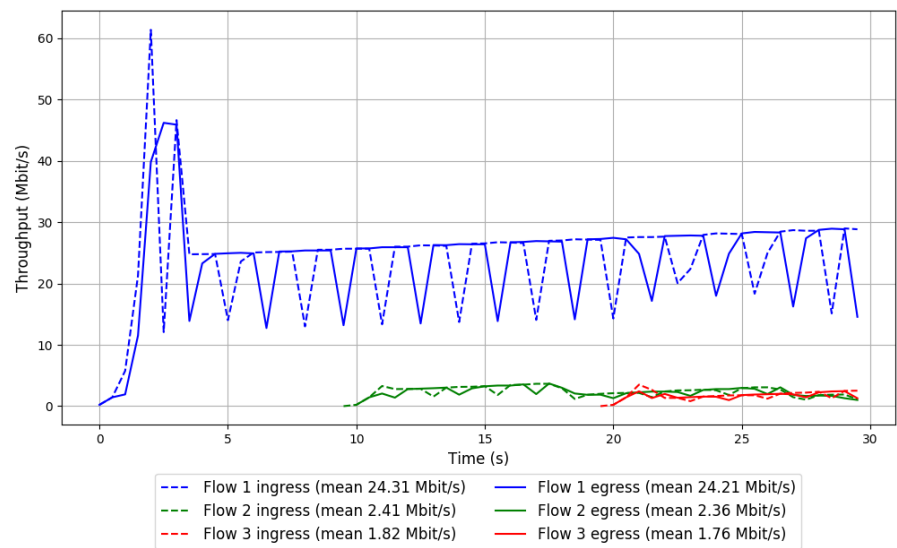
-- Flow 3:

Average throughput: 1.76 Mbit/s

95th percentile per-packet one-way delay: 137.617 ms

Loss rate: 6.71%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2017-08-21 13:00:05

End at: 2017-08-21 13:00:35

Below is generated by plot.py at 2017-08-21 16:21:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 22.23 Mbit/s

95th percentile per-packet one-way delay: 138.076 ms

Loss rate: 2.37%

-- Flow 1:

Average throughput: 12.72 Mbit/s

95th percentile per-packet one-way delay: 137.593 ms

Loss rate: 1.40%

-- Flow 2:

Average throughput: 1.89 Mbit/s

95th percentile per-packet one-way delay: 137.525 ms

Loss rate: 3.02%

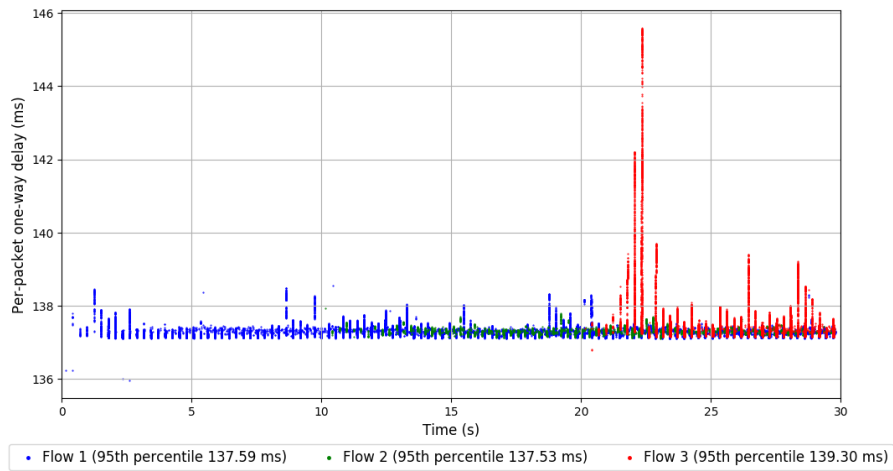
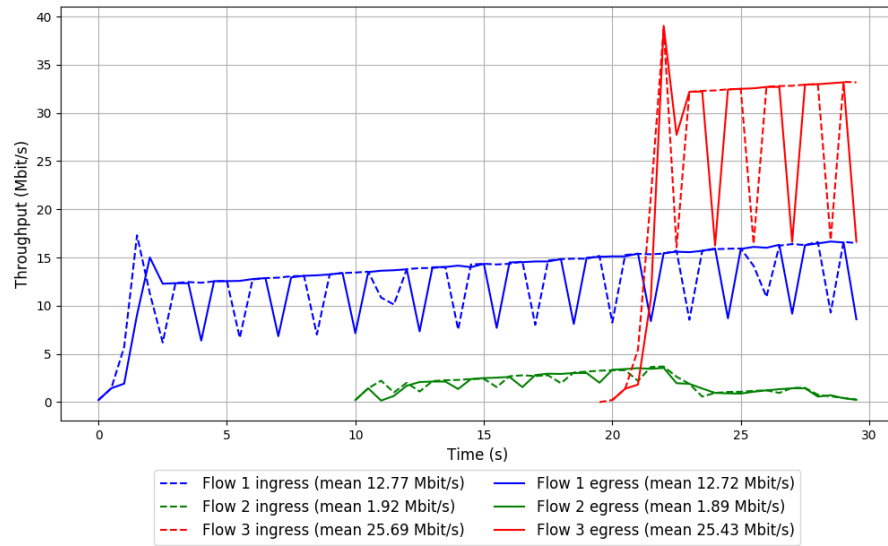
-- Flow 3:

Average throughput: 25.43 Mbit/s

95th percentile per-packet one-way delay: 139.296 ms

Loss rate: 3.74%

Run 10: Report of TCP Vegas — Data Link

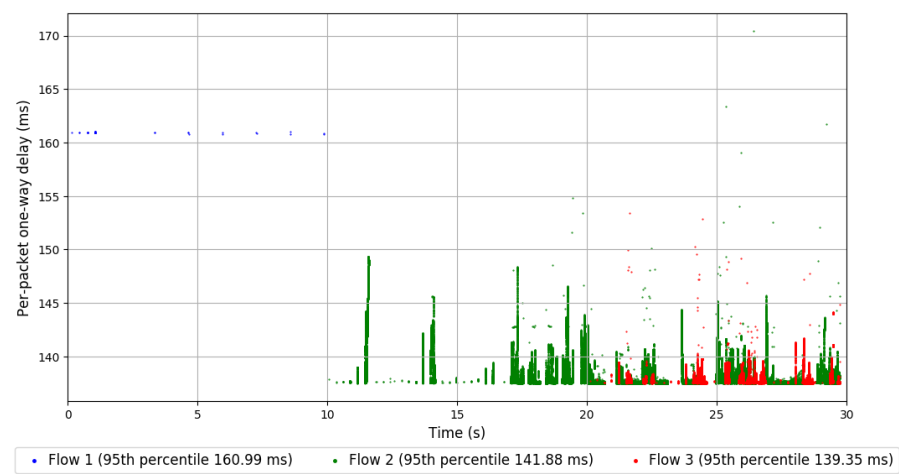
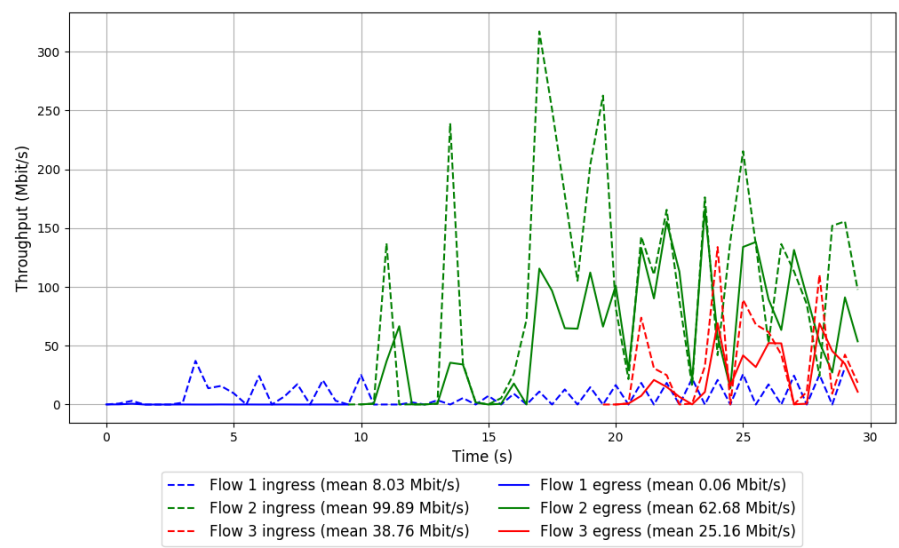


```
Run 1: Statistics of Verus

Start at: 2017-08-21 11:03:31
End at: 2017-08-21 11:04:01

# Below is generated by plot.py at 2017-08-21 16:21:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 49.93 Mbit/s
95th percentile per-packet one-way delay: 141.460 ms
Loss rate: 43.23%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 160.985 ms
Loss rate: 99.74%
-- Flow 2:
Average throughput: 62.68 Mbit/s
95th percentile per-packet one-way delay: 141.885 ms
Loss rate: 38.10%
-- Flow 3:
Average throughput: 25.16 Mbit/s
95th percentile per-packet one-way delay: 139.347 ms
Loss rate: 35.34%
```

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2017-08-21 11:17:14

End at: 2017-08-21 11:17:44

Below is generated by plot.py at 2017-08-21 16:21:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 92.74 Mbit/s

95th percentile per-packet one-way delay: 151.794 ms

Loss rate: 3.26%

-- Flow 1:

Average throughput: 22.59 Mbit/s

95th percentile per-packet one-way delay: 145.385 ms

Loss rate: 2.39%

-- Flow 2:

Average throughput: 89.66 Mbit/s

95th percentile per-packet one-way delay: 155.070 ms

Loss rate: 2.20%

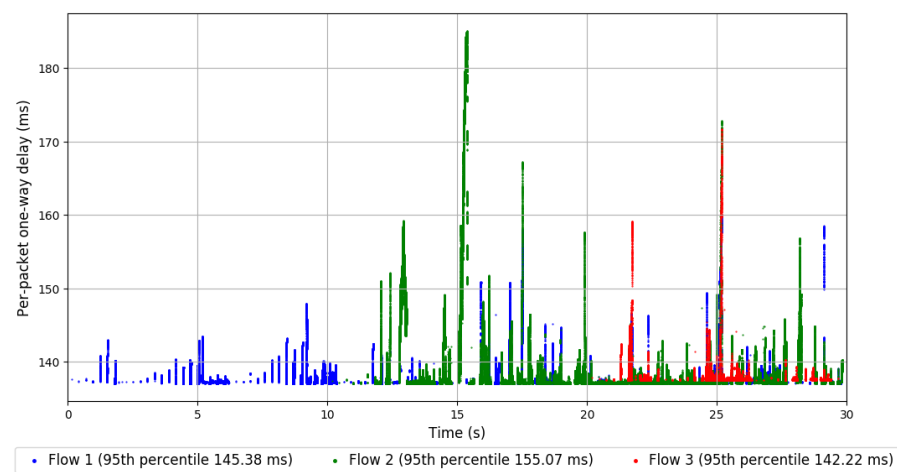
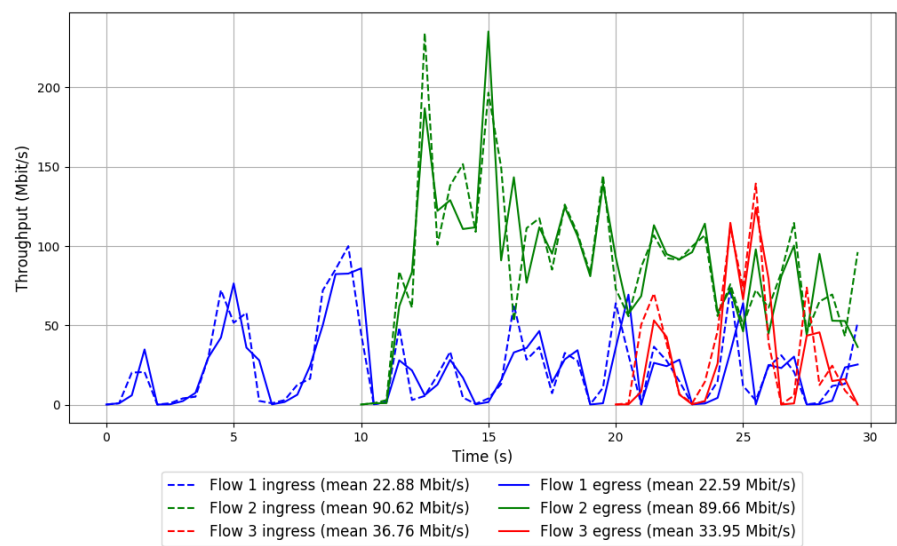
-- Flow 3:

Average throughput: 33.95 Mbit/s

95th percentile per-packet one-way delay: 142.215 ms

Loss rate: 10.24%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2017-08-21 11:31:09

End at: 2017-08-21 11:31:39

Below is generated by plot.py at 2017-08-21 16:21:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 50.33 Mbit/s

95th percentile per-packet one-way delay: 143.196 ms

Loss rate: 36.26%

-- Flow 1:

Average throughput: 31.24 Mbit/s

95th percentile per-packet one-way delay: 144.363 ms

Loss rate: 35.91%

-- Flow 2:

Average throughput: 27.71 Mbit/s

95th percentile per-packet one-way delay: 141.947 ms

Loss rate: 22.07%

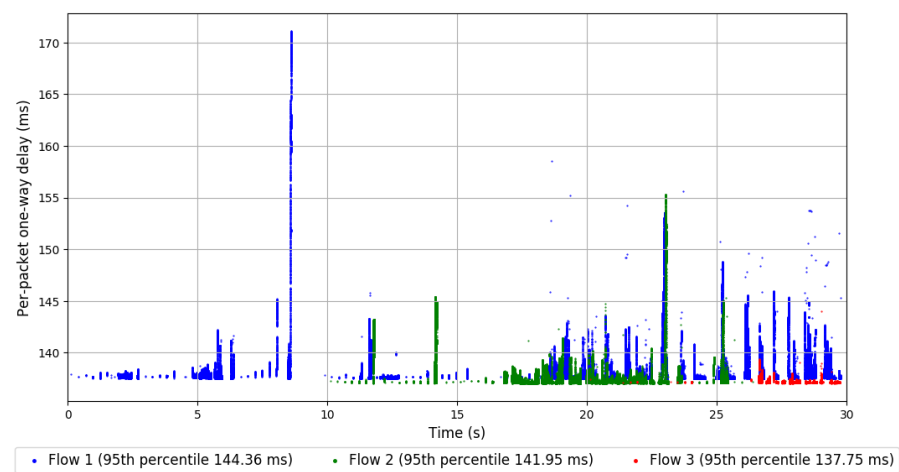
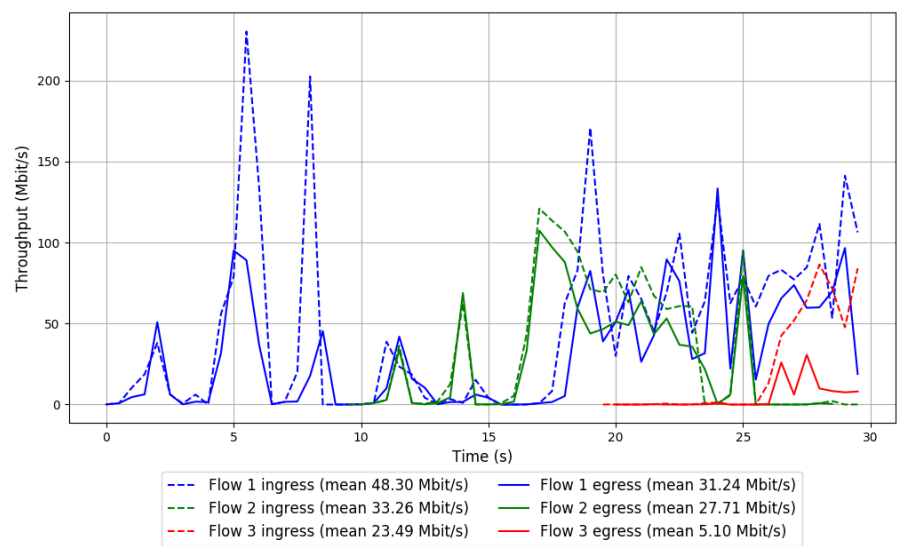
-- Flow 3:

Average throughput: 5.10 Mbit/s

95th percentile per-packet one-way delay: 137.752 ms

Loss rate: 78.88%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2017-08-21 11:44:52

End at: 2017-08-21 11:45:22

Below is generated by plot.py at 2017-08-21 16:21:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 37.99 Mbit/s

95th percentile per-packet one-way delay: 137.735 ms

Loss rate: 74.78%

-- Flow 1:

Average throughput: 23.34 Mbit/s

95th percentile per-packet one-way delay: 137.613 ms

Loss rate: 69.19%

-- Flow 2:

Average throughput: 12.84 Mbit/s

95th percentile per-packet one-way delay: 137.366 ms

Loss rate: 86.72%

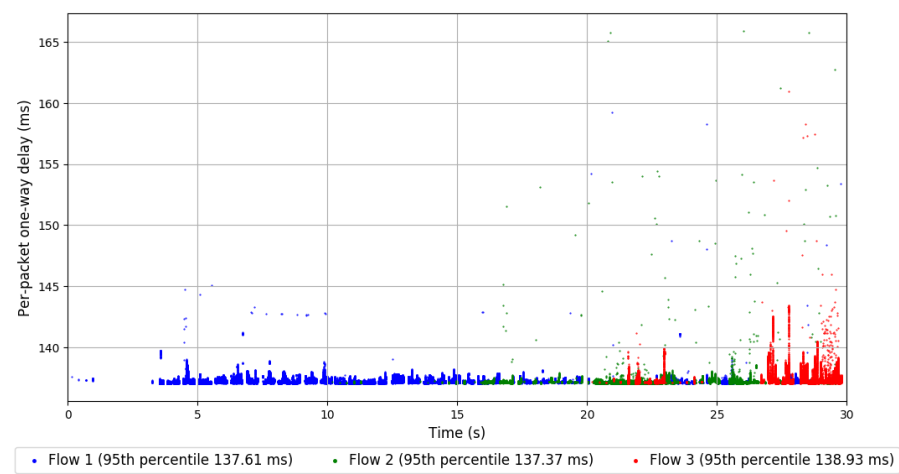
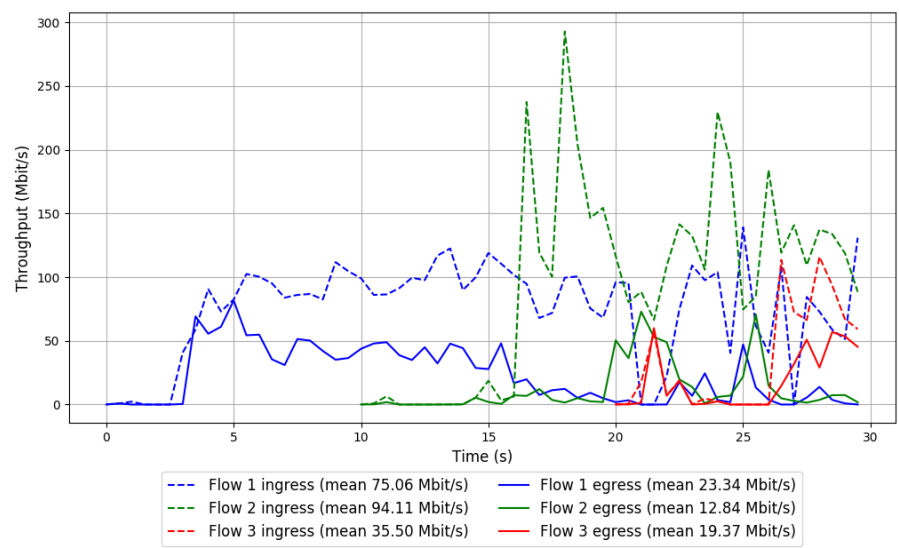
-- Flow 3:

Average throughput: 19.37 Mbit/s

95th percentile per-packet one-way delay: 138.933 ms

Loss rate: 46.58%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2017-08-21 11:58:33

End at: 2017-08-21 11:59:03

Below is generated by plot.py at 2017-08-21 16:21:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 62.31 Mbit/s

95th percentile per-packet one-way delay: 168.501 ms

Loss rate: 30.29%

-- Flow 1:

Average throughput: 33.90 Mbit/s

95th percentile per-packet one-way delay: 182.006 ms

Loss rate: 0.55%

-- Flow 2:

Average throughput: 32.70 Mbit/s

95th percentile per-packet one-way delay: 141.364 ms

Loss rate: 39.65%

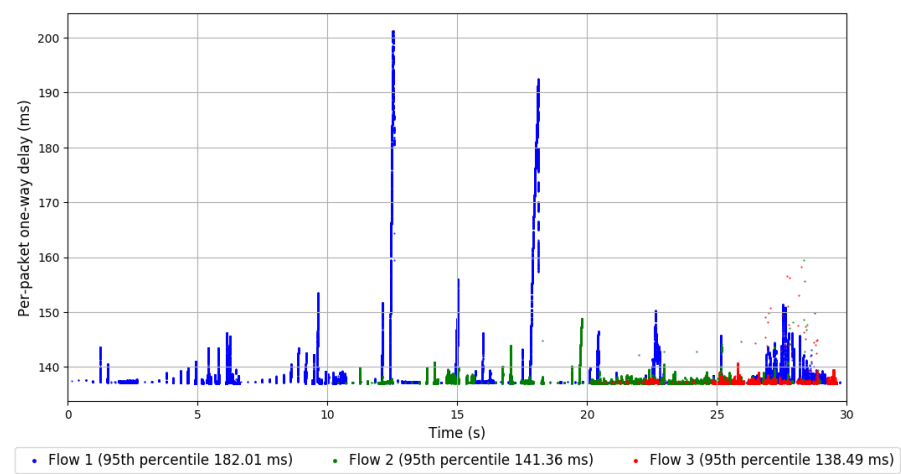
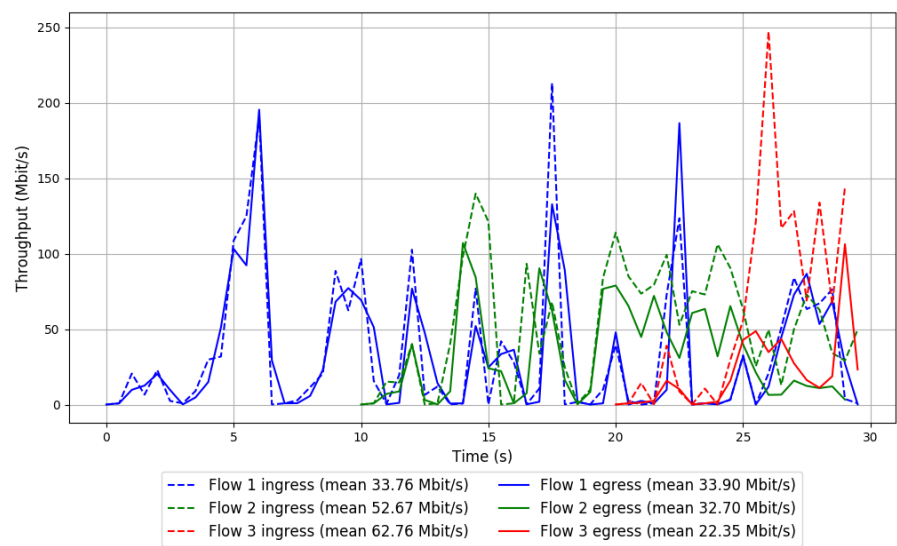
-- Flow 3:

Average throughput: 22.35 Mbit/s

95th percentile per-packet one-way delay: 138.489 ms

Loss rate: 64.39%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

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

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

Below is generated by plot.py at 2017-08-21 16:22:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 95.39 Mbit/s

95th percentile per-packet one-way delay: 150.052 ms

Loss rate: 37.38%

-- Flow 1:

Average throughput: 64.69 Mbit/s

95th percentile per-packet one-way delay: 145.523 ms

Loss rate: 42.94%

-- Flow 2:

Average throughput: 44.65 Mbit/s

95th percentile per-packet one-way delay: 158.812 ms

Loss rate: 5.54%

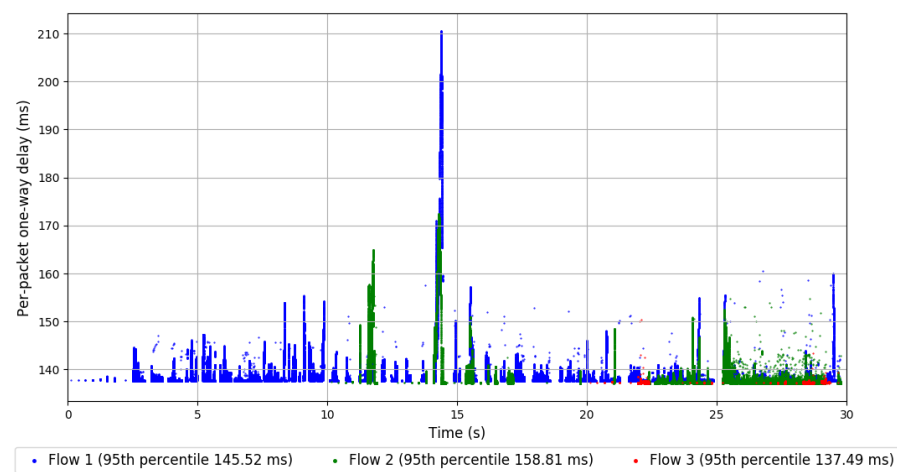
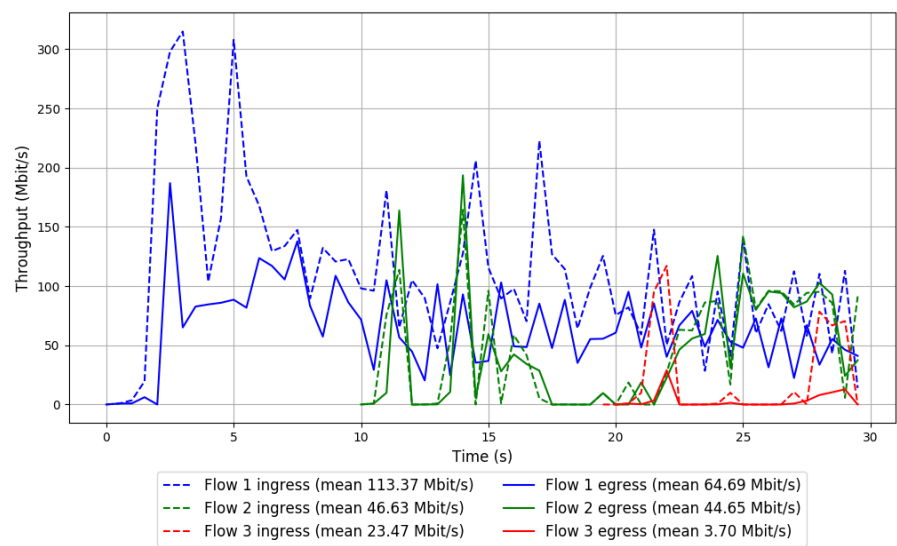
-- Flow 3:

Average throughput: 3.70 Mbit/s

95th percentile per-packet one-way delay: 137.492 ms

Loss rate: 84.66%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2017-08-21 12:25:49

End at: 2017-08-21 12:26:19

Below is generated by plot.py at 2017-08-21 16:22:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 58.12 Mbit/s

95th percentile per-packet one-way delay: 159.669 ms

Loss rate: 39.87%

-- Flow 1:

Average throughput: 42.06 Mbit/s

95th percentile per-packet one-way delay: 171.631 ms

Loss rate: 30.47%

-- Flow 2:

Average throughput: 18.54 Mbit/s

95th percentile per-packet one-way delay: 142.251 ms

Loss rate: 61.45%

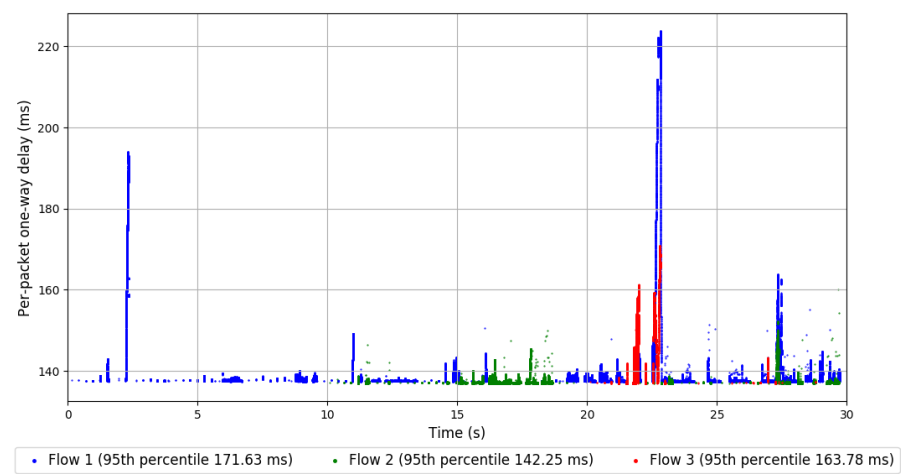
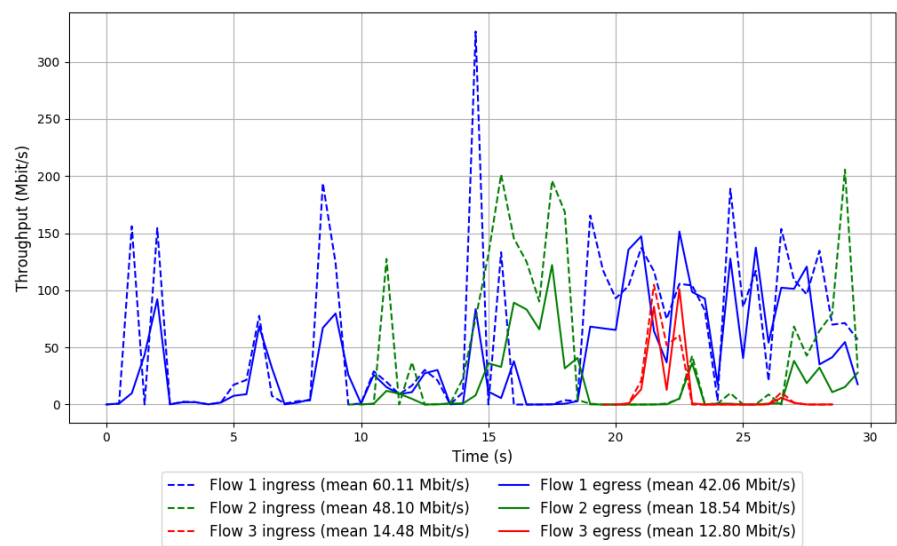
-- Flow 3:

Average throughput: 12.80 Mbit/s

95th percentile per-packet one-way delay: 163.782 ms

Loss rate: 11.57%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2017-08-21 12:39:16

End at: 2017-08-21 12:39:46

Below is generated by plot.py at 2017-08-21 16:22:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 102.25 Mbit/s

95th percentile per-packet one-way delay: 157.139 ms

Loss rate: 9.87%

-- Flow 1:

Average throughput: 83.42 Mbit/s

95th percentile per-packet one-way delay: 159.962 ms

Loss rate: 2.95%

-- Flow 2:

Average throughput: 25.54 Mbit/s

95th percentile per-packet one-way delay: 142.576 ms

Loss rate: 5.03%

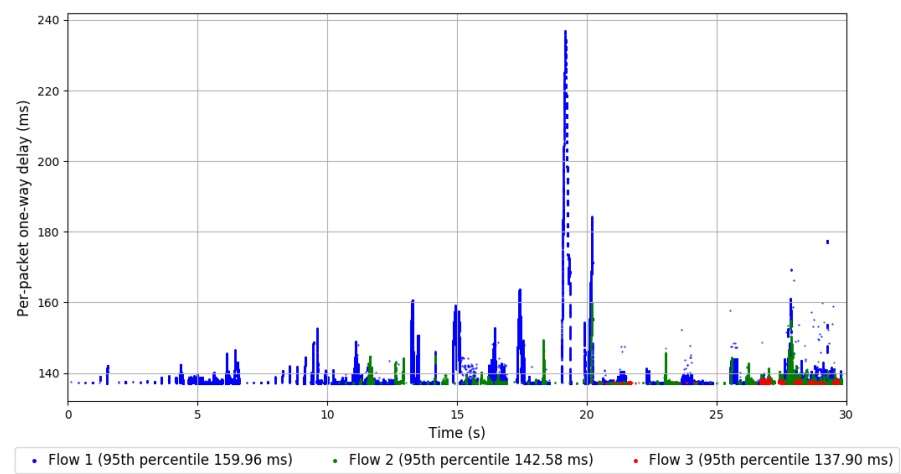
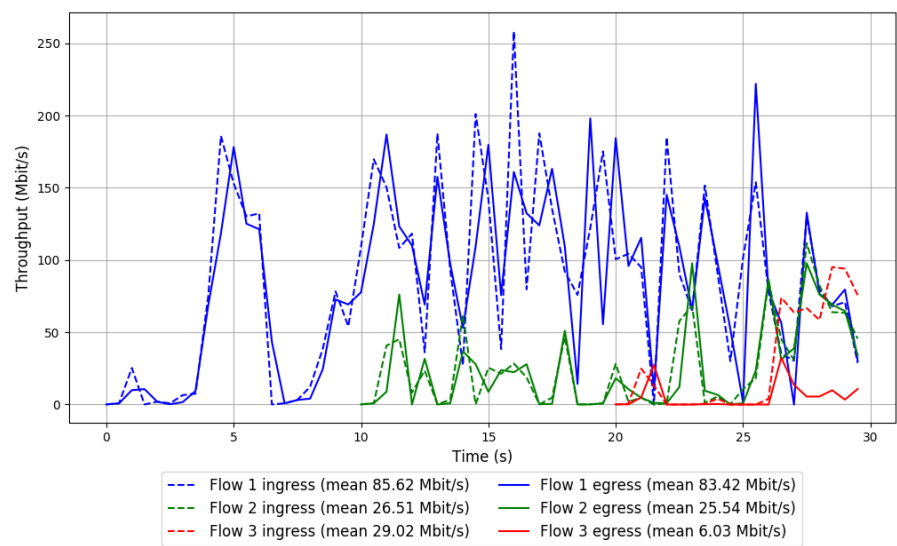
-- Flow 3:

Average throughput: 6.03 Mbit/s

95th percentile per-packet one-way delay: 137.903 ms

Loss rate: 80.11%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2017-08-21 12:52:56

End at: 2017-08-21 12:53:26

Below is generated by plot.py at 2017-08-21 16:22:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 61.05 Mbit/s

95th percentile per-packet one-way delay: 142.209 ms

Loss rate: 53.27%

-- Flow 1:

Average throughput: 20.67 Mbit/s

95th percentile per-packet one-way delay: 138.582 ms

Loss rate: 75.37%

-- Flow 2:

Average throughput: 56.62 Mbit/s

95th percentile per-packet one-way delay: 143.635 ms

Loss rate: 4.21%

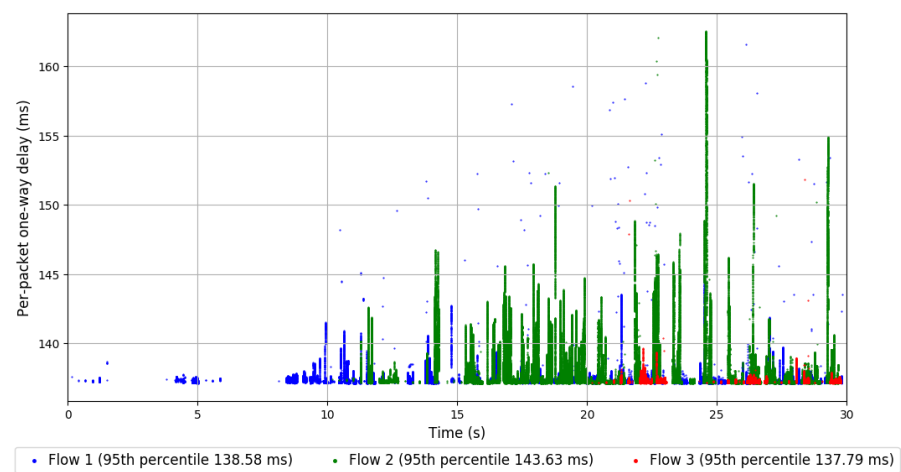
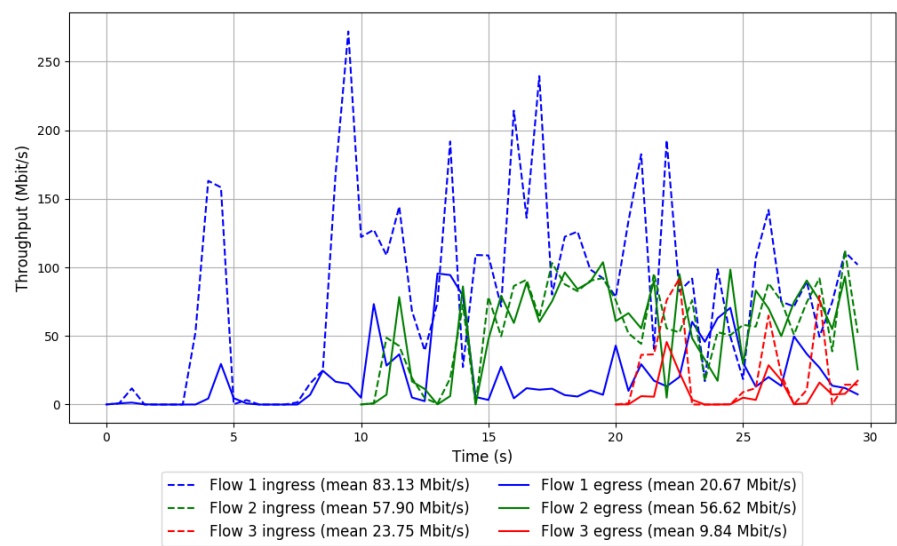
-- Flow 3:

Average throughput: 9.84 Mbit/s

95th percentile per-packet one-way delay: 137.789 ms

Loss rate: 59.75%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2017-08-21 13:06:41

End at: 2017-08-21 13:07:11

Below is generated by plot.py at 2017-08-21 16:22:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 131.47 Mbit/s

95th percentile per-packet one-way delay: 175.672 ms

Loss rate: 10.18%

-- Flow 1:

Average throughput: 115.12 Mbit/s

95th percentile per-packet one-way delay: 178.020 ms

Loss rate: 3.05%

-- Flow 2:

Average throughput: 22.38 Mbit/s

95th percentile per-packet one-way delay: 143.204 ms

Loss rate: 12.15%

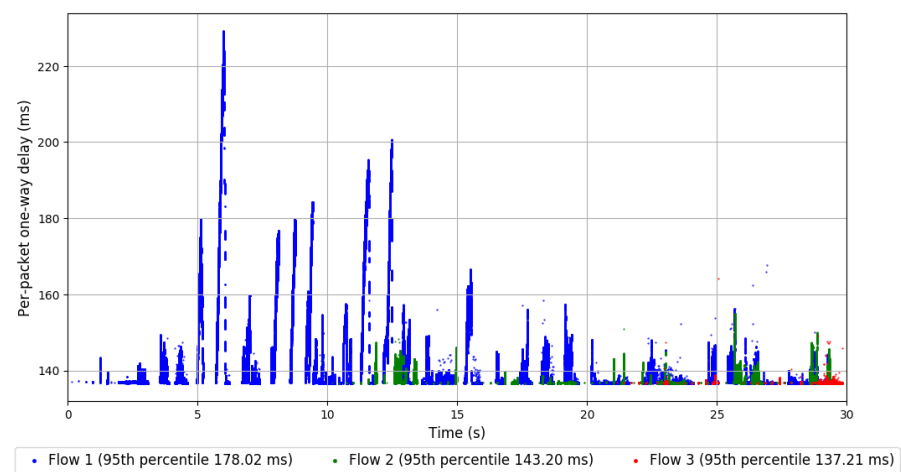
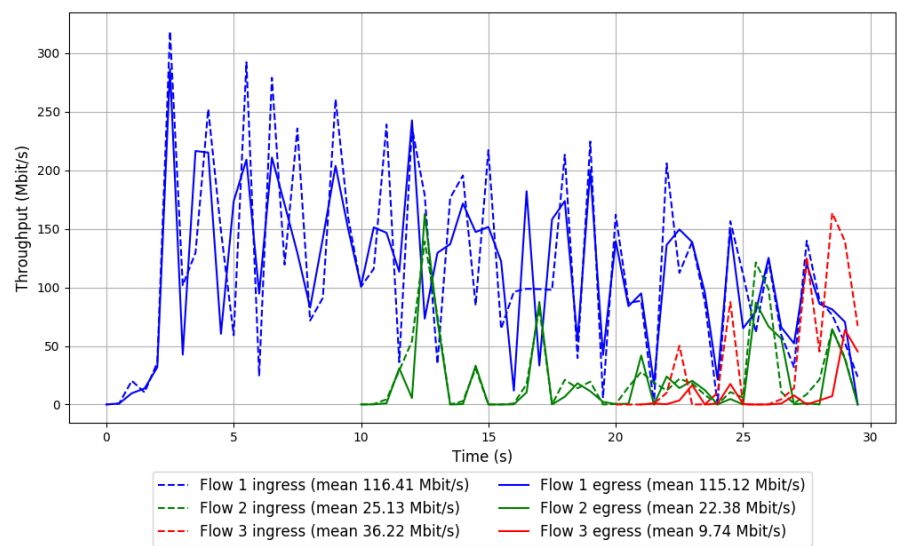
-- Flow 3:

Average throughput: 9.74 Mbit/s

95th percentile per-packet one-way delay: 137.209 ms

Loss rate: 76.54%

Run 10: Report of Verus — Data Link

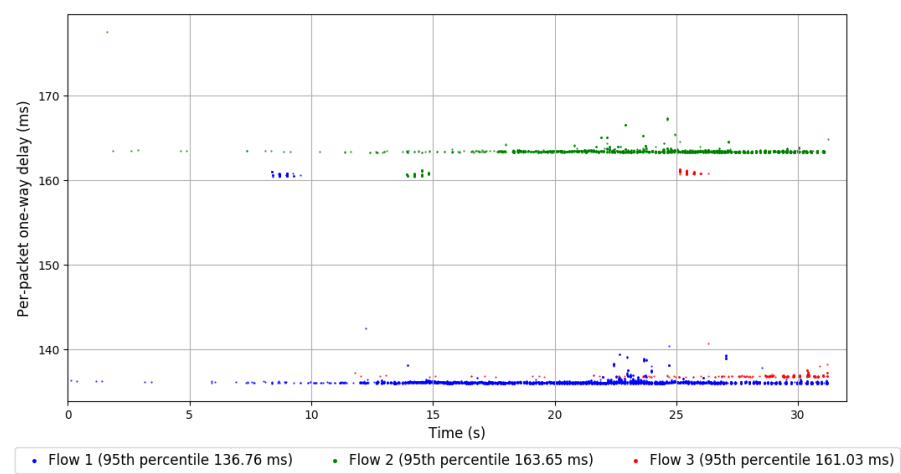
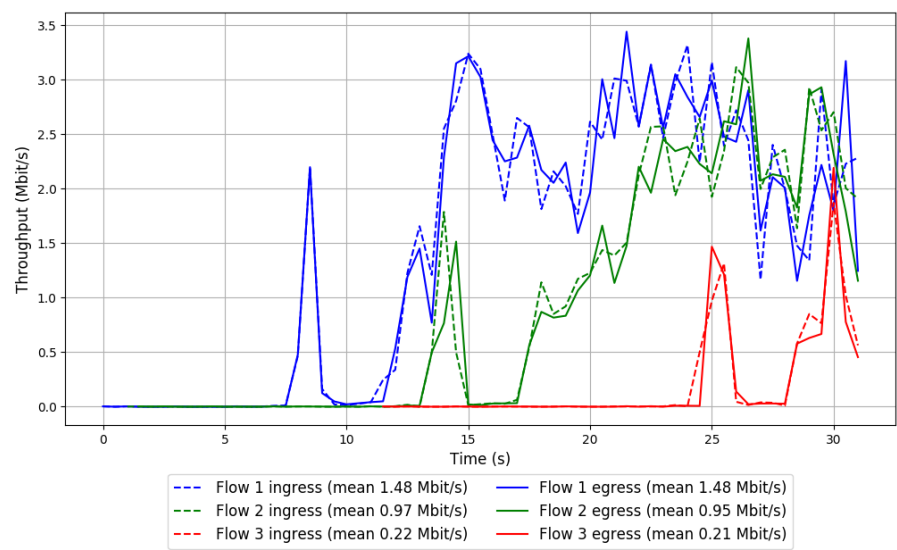


```
Run 1: Statistics of WebRTC media

Start at: 2017-08-21 10:59:05
End at: 2017-08-21 10:59:35

# Below is generated by plot.py at 2017-08-21 16:22:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.51 Mbit/s
95th percentile per-packet one-way delay: 163.511 ms
Loss rate: 2.07%
-- Flow 1:
Average throughput: 1.48 Mbit/s
95th percentile per-packet one-way delay: 136.759 ms
Loss rate: 1.12%
-- Flow 2:
Average throughput: 0.95 Mbit/s
95th percentile per-packet one-way delay: 163.650 ms
Loss rate: 3.29%
-- Flow 3:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 161.032 ms
Loss rate: 4.04%
```

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2017-08-21 11:12:44

End at: 2017-08-21 11:13:14

Below is generated by plot.py at 2017-08-21 16:22:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.40 Mbit/s

95th percentile per-packet one-way delay: 137.336 ms

Loss rate: 2.42%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 137.507 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.41 Mbit/s

95th percentile per-packet one-way delay: 137.143 ms

Loss rate: 1.30%

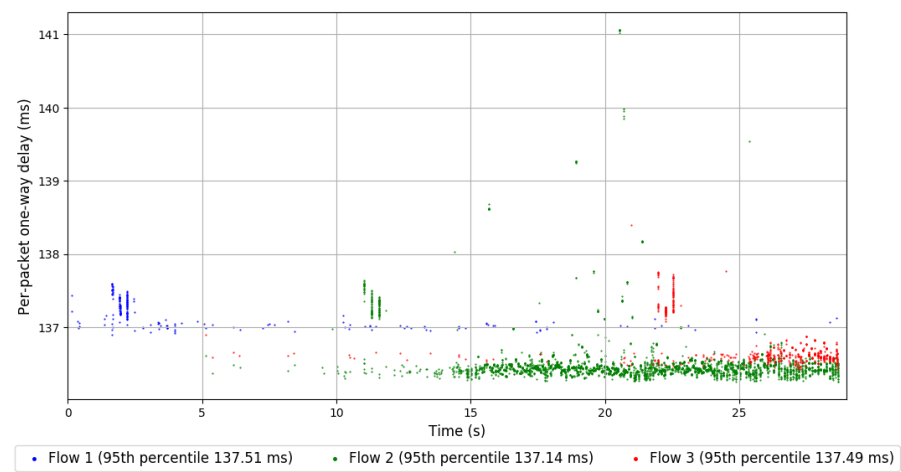
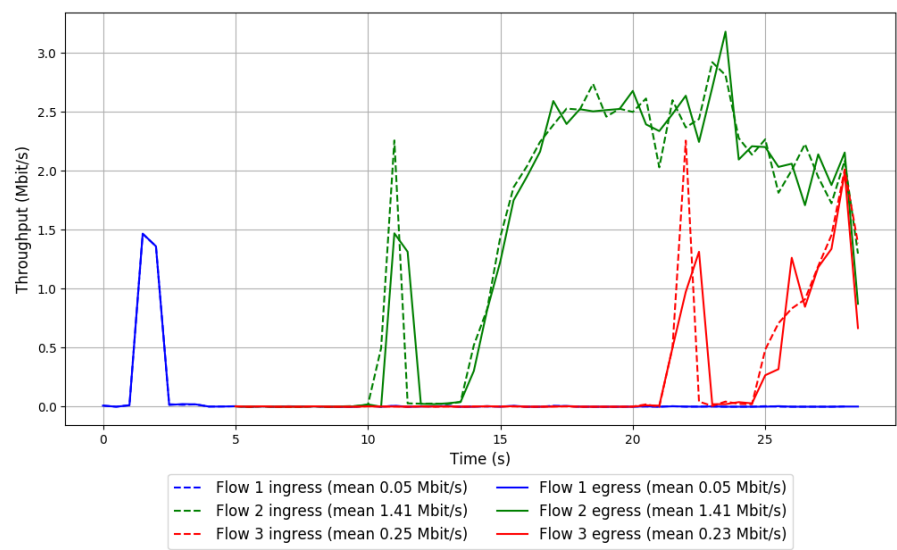
-- Flow 3:

Average throughput: 0.23 Mbit/s

95th percentile per-packet one-way delay: 137.493 ms

Loss rate: 9.31%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2017-08-21 11:26:42

End at: 2017-08-21 11:27:12

Below is generated by plot.py at 2017-08-21 16:22:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.46 Mbit/s

95th percentile per-packet one-way delay: 137.425 ms

Loss rate: 5.47%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 137.532 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 0.08 Mbit/s

95th percentile per-packet one-way delay: 137.437 ms

Loss rate: 0.05%

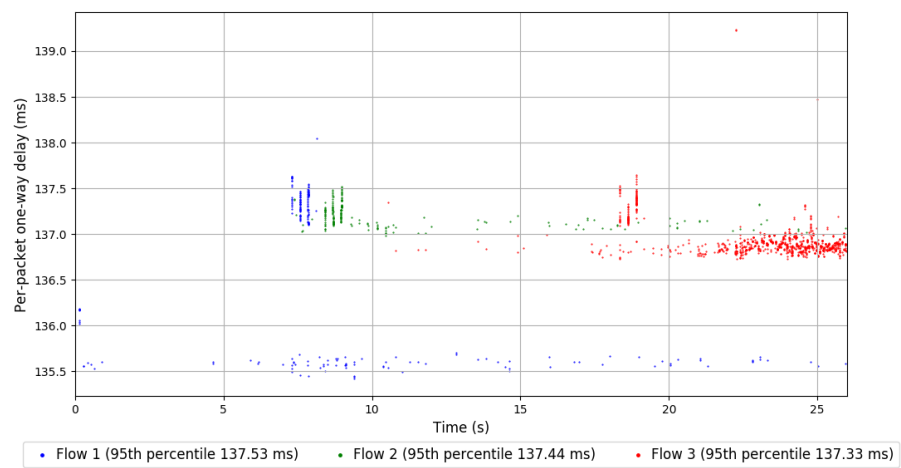
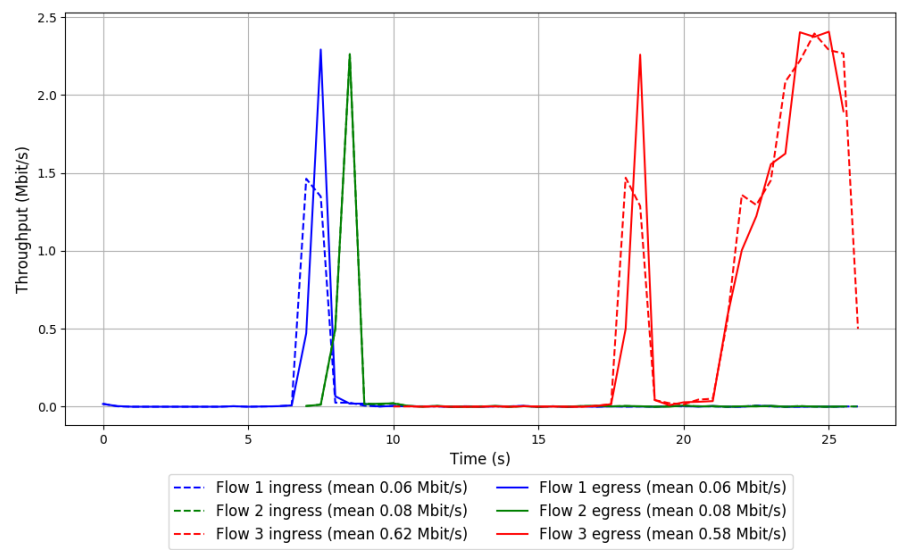
-- Flow 3:

Average throughput: 0.58 Mbit/s

95th percentile per-packet one-way delay: 137.332 ms

Loss rate: 7.12%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2017-08-21 11:40:24

End at: 2017-08-21 11:40:54

Below is generated by plot.py at 2017-08-21 16:22:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.36 Mbit/s

95th percentile per-packet one-way delay: 137.314 ms

Loss rate: 2.02%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 137.505 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.41 Mbit/s

95th percentile per-packet one-way delay: 136.959 ms

Loss rate: 1.22%

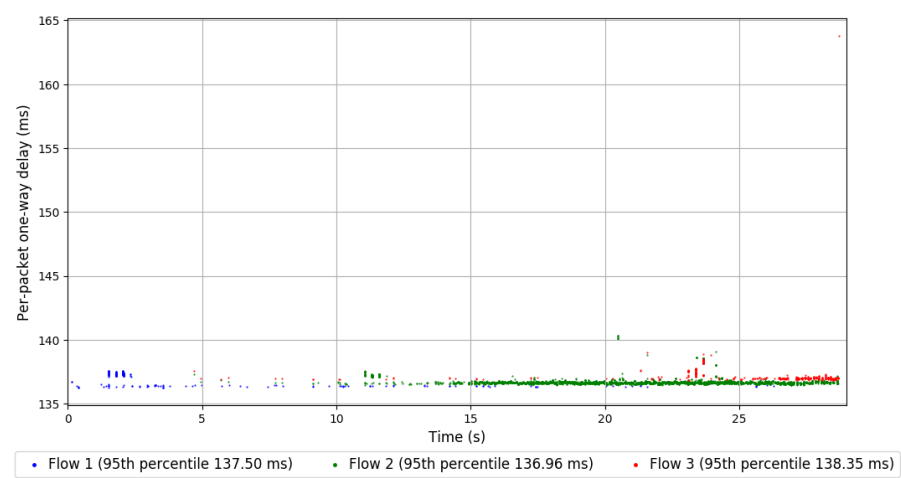
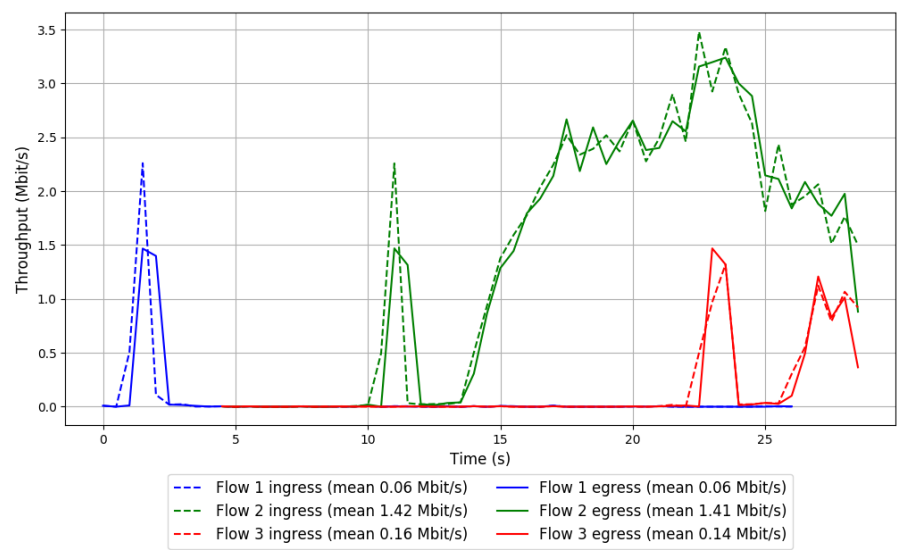
-- Flow 3:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 138.349 ms

Loss rate: 9.89%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2017-08-21 11:54:08

End at: 2017-08-21 11:54:38

Below is generated by plot.py at 2017-08-21 16:22:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 137.652 ms

Loss rate: 3.03%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 137.467 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 1.44 Mbit/s

95th percentile per-packet one-way delay: 137.626 ms

Loss rate: 1.75%

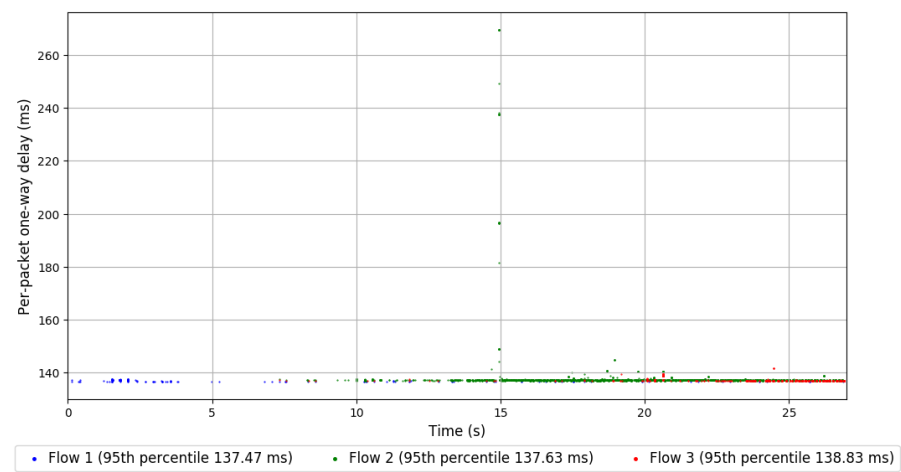
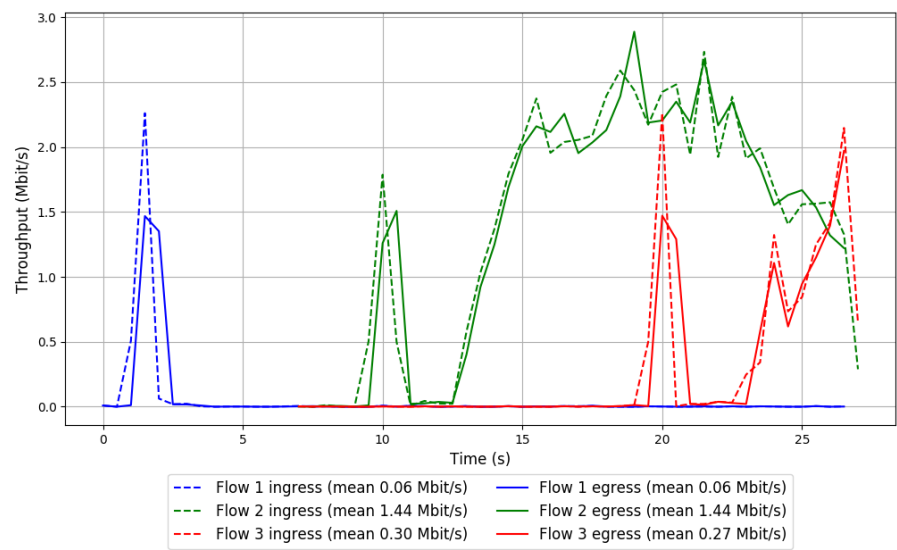
-- Flow 3:

Average throughput: 0.27 Mbit/s

95th percentile per-packet one-way delay: 138.833 ms

Loss rate: 9.93%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2017-08-21 12:07:48

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

Below is generated by plot.py at 2017-08-21 16:22:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.38 Mbit/s

95th percentile per-packet one-way delay: 137.434 ms

Loss rate: 2.72%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 137.471 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.36 Mbit/s

95th percentile per-packet one-way delay: 136.993 ms

Loss rate: 1.84%

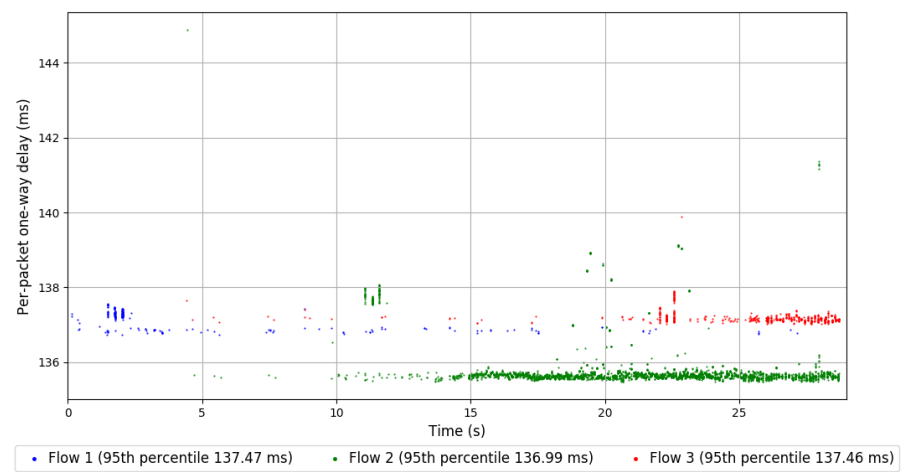
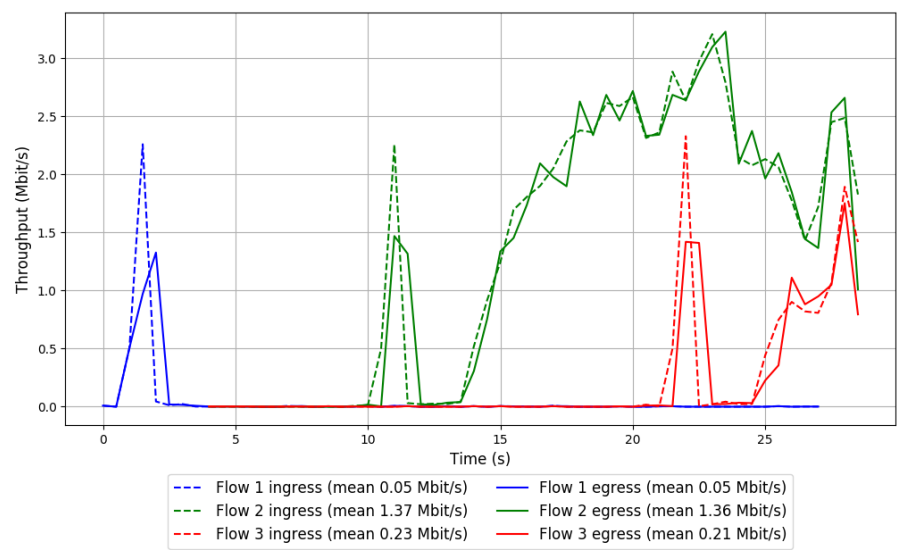
-- Flow 3:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 137.463 ms

Loss rate: 8.80%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2017-08-21 12:21:25

End at: 2017-08-21 12:21:55

Below is generated by plot.py at 2017-08-21 16:22:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.37 Mbit/s

95th percentile per-packet one-way delay: 137.305 ms

Loss rate: 2.33%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 137.511 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.37 Mbit/s

95th percentile per-packet one-way delay: 136.346 ms

Loss rate: 1.60%

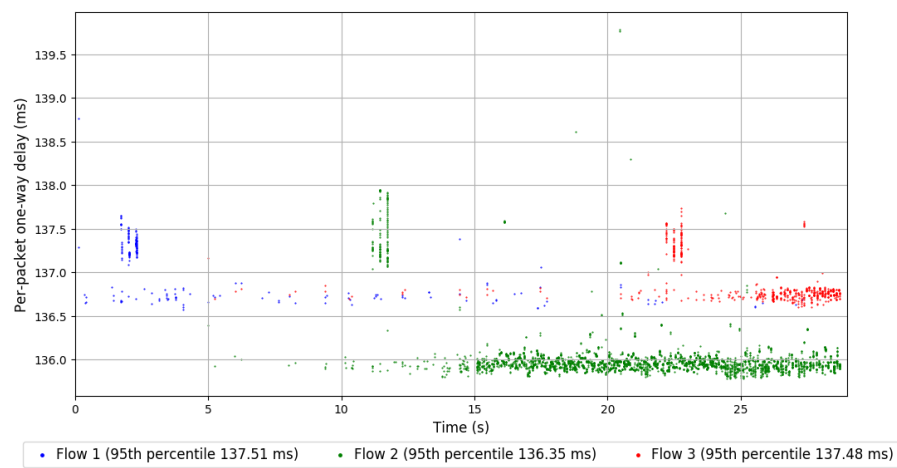
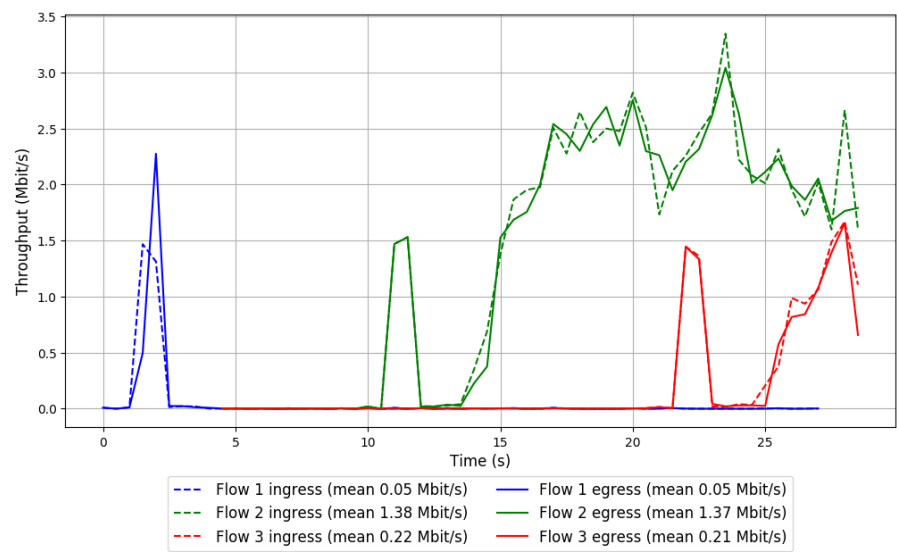
-- Flow 3:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 137.477 ms

Loss rate: 7.42%

Run 7: Report of WebRTC media — Data Link

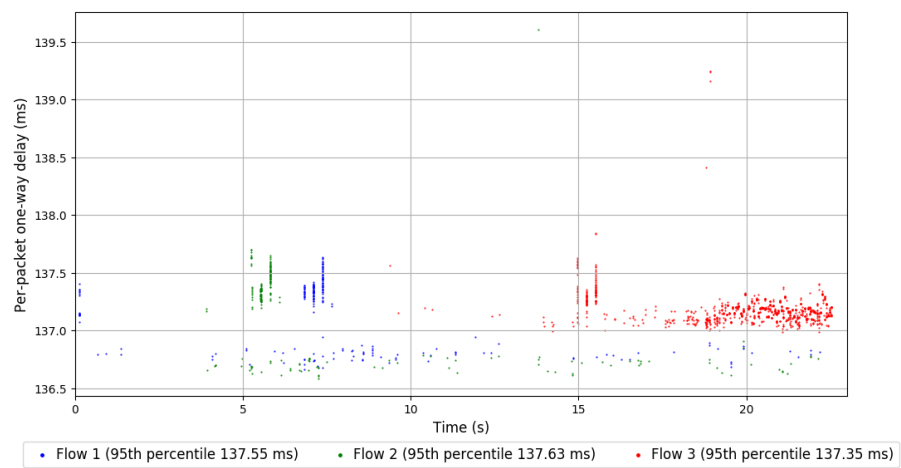
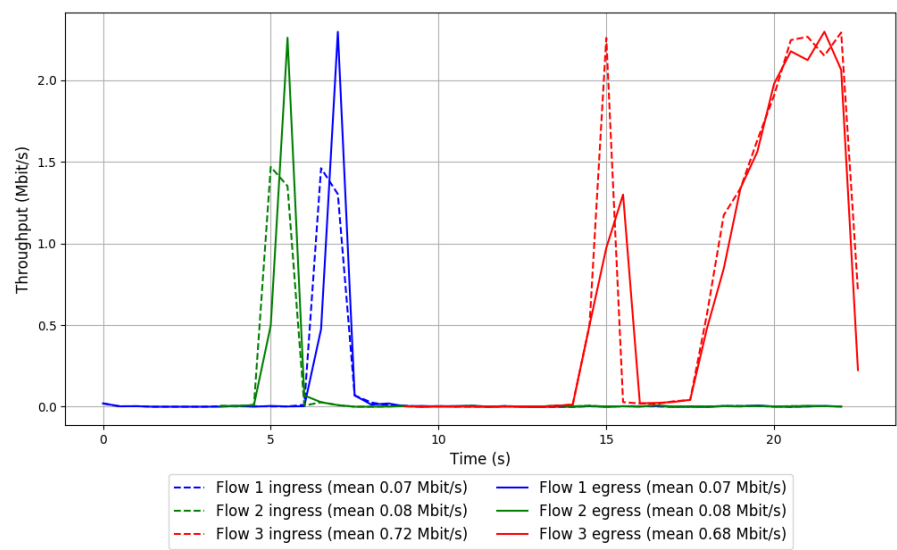


Run 8: Statistics of WebRTC media

Start at: 2017-08-21 12:34:54

End at: 2017-08-21 12:35:24

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2017-08-21 12:48:28

End at: 2017-08-21 12:48:58

Below is generated by plot.py at 2017-08-21 16:22:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.23 Mbit/s

95th percentile per-packet one-way delay: 137.481 ms

Loss rate: 1.54%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 137.576 ms

Loss rate: 0.14%

-- Flow 2:

Average throughput: 1.27 Mbit/s

95th percentile per-packet one-way delay: 137.353 ms

Loss rate: 1.09%

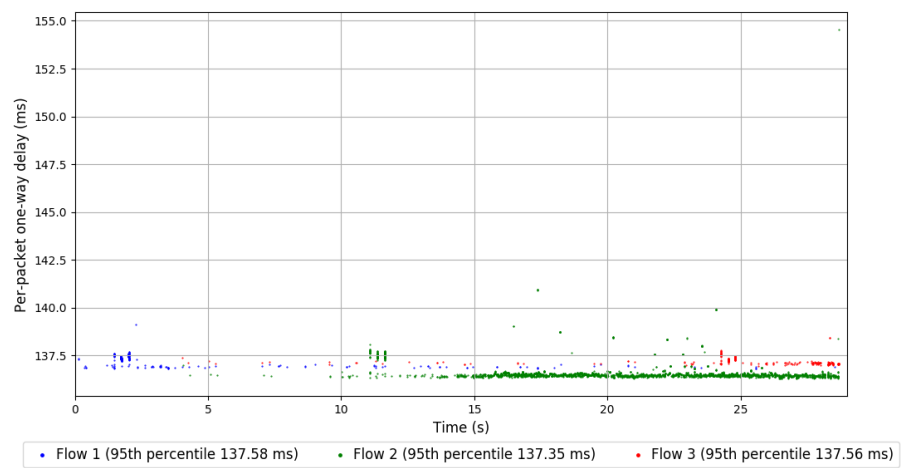
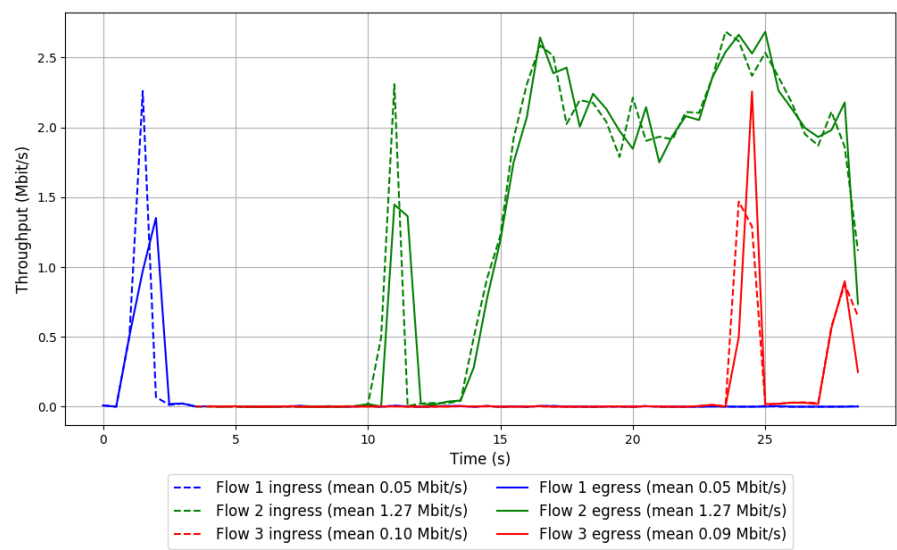
-- Flow 3:

Average throughput: 0.09 Mbit/s

95th percentile per-packet one-way delay: 137.556 ms

Loss rate: 7.95%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2017-08-21 13:02:07

End at: 2017-08-21 13:02:37

Below is generated by plot.py at 2017-08-21 16:22:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.36 Mbit/s

95th percentile per-packet one-way delay: 137.186 ms

Loss rate: 3.13%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 137.498 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 1.40 Mbit/s

95th percentile per-packet one-way delay: 137.080 ms

Loss rate: 2.18%

-- Flow 3:

Average throughput: 0.23 Mbit/s

95th percentile per-packet one-way delay: 137.216 ms

Loss rate: 9.36%

Run 10: Report of WebRTC media — Data Link

