

Pantheon Report

Generated at 2017-08-12 17:38:40 (UTC).

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

Repeated the test of 15 congestion control schemes 10 times.

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

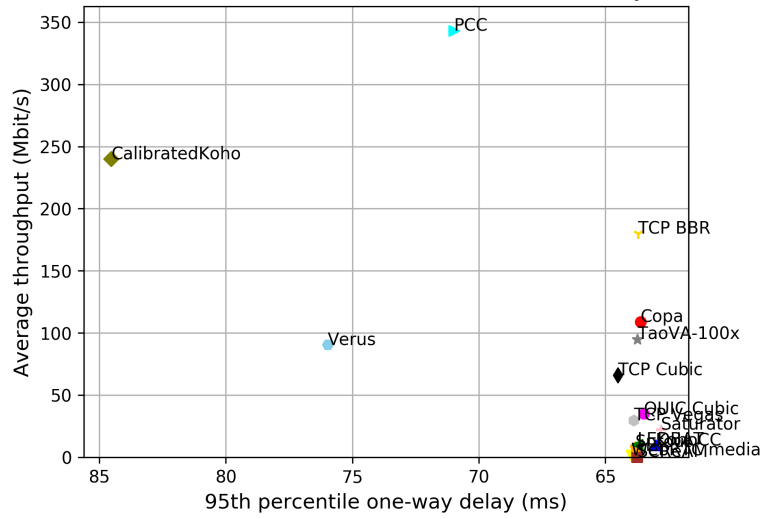
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

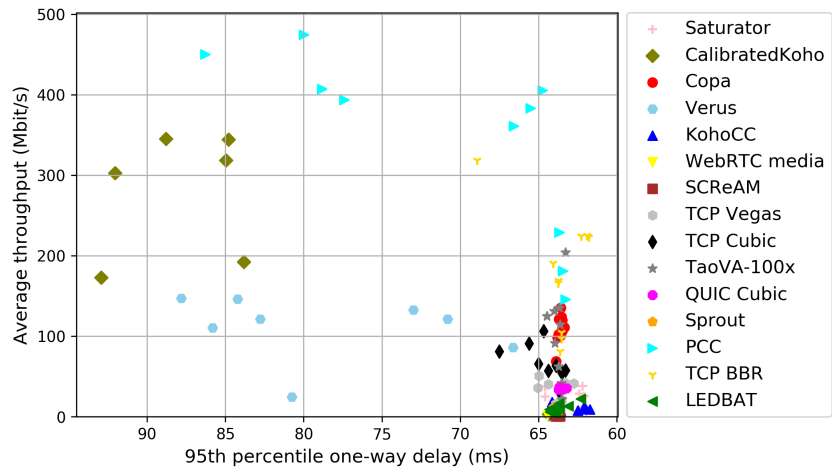
Git summary:

```
branch: master @ e43be7582298d552838afcf6382342bf187fbbd6
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/genericCC @ dae96123232f1bcb37725348fa2378691ce26725
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
  M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-stimuli @ fc73a85ca16c34366d1888dc8a0d0d88d4ebf2a7
third_party/pantheon-tunnel @ baf443516dea3eeddeccaf9b916cc313273ca4f4
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
third_party/proto-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaeab30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
  M src/examples/cellsim.cc
  M src/examples/sproutbt2.cc
  M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
  M src/verus.hpp
  M tools/plot.py
third_party/webrtc @ a488197ddd041ace68a42849b2540ad834825f42
```

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



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



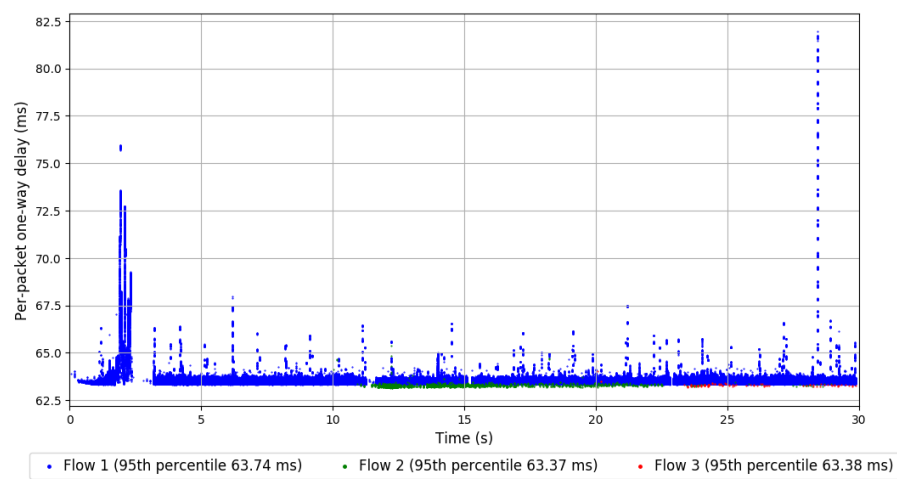
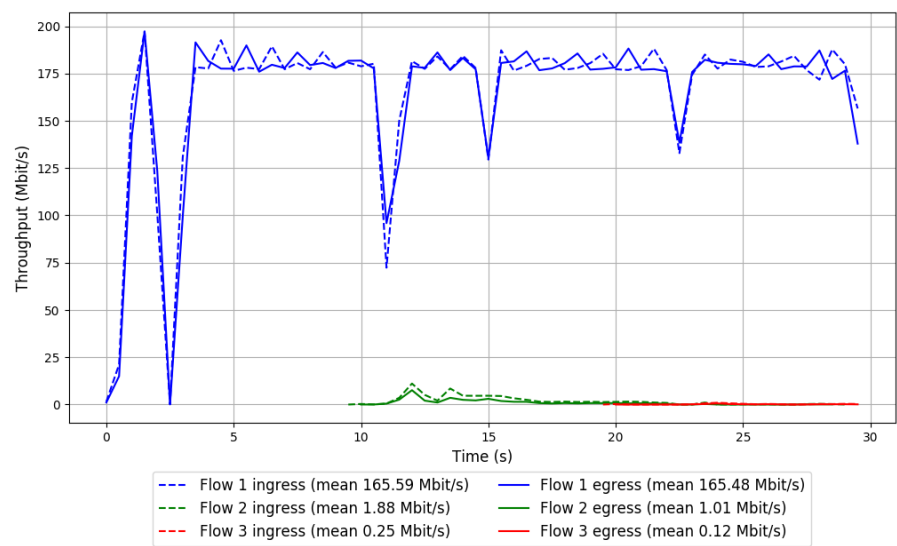
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	10	122.50	45.59	92.25	63.28	63.95	64.70	6.85	37.78	16.71
CalibratedKoho	7	144.15	107.51	74.01	78.09	77.37	76.79	30.06	38.00	23.26
Copa	10	64.23	50.70	34.24	63.40	63.36	63.34	8.61	2.49	14.71
TCP Cubic	10	24.93	40.02	44.66	64.19	63.84	63.98	2.53	3.87	3.99
KohoCC	8	4.44	6.00	5.96	654.45	62.80	63.14	35.72	35.42	33.09
LEDBAT	10	5.99	5.06	2.92	63.25	63.43	63.78	3.09	3.12	5.56
PCC	10	231.14	125.99	88.54	74.38	64.90	65.31	14.75	17.17	39.22
QUIC Cubic	9	0.05	40.92	23.10	63.62	63.25	63.28	0.00	0.62	1.76
Saturator	8	13.92	12.19	15.42	63.51	63.43	63.19	21.76	28.95	15.40
SCReAM	10	0.22	0.22	0.22	63.68	63.27	63.20	0.41	0.63	1.10
Sprout	9	3.95	4.18	4.43	63.63	63.83	63.34	12.43	10.96	9.63
TaoVA-100x	10	106.27	47.75	76.35	63.51	63.41	63.99	3.07	25.72	18.86
TCP Vegas	10	11.22	17.24	21.49	88.53	63.50	64.33	2.04	3.37	6.33
Verus	10	64.65	30.28	19.05	75.64	68.30	67.78	30.33	55.73	55.58
WebRTC media	10	0.18	1.47	0.35	63.55	64.01	64.04	0.22	0.78	3.43

```
Run 1: Statistics of TCP BBR

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

# Below is generated by plot.py at 2017-08-12 17:14:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 166.15 Mbit/s
95th percentile per-packet one-way delay: 63.740 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 165.48 Mbit/s
95th percentile per-packet one-way delay: 63.740 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 1.01 Mbit/s
95th percentile per-packet one-way delay: 63.372 ms
Loss rate: 47.84%
-- Flow 3:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 63.384 ms
Loss rate: 54.49%
```


Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2017-08-12 12:52:50

End at: 2017-08-12 12:53:20

Below is generated by plot.py at 2017-08-12 17:14:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 169.21 Mbit/s

95th percentile per-packet one-way delay: 63.730 ms

Loss rate: 0.74%

-- Flow 1:

Average throughput: 169.20 Mbit/s

95th percentile per-packet one-way delay: 63.730 ms

Loss rate: 0.72%

-- Flow 2:

Average throughput: 0.02 Mbit/s

95th percentile per-packet one-way delay: 61.802 ms

Loss rate: 98.81%

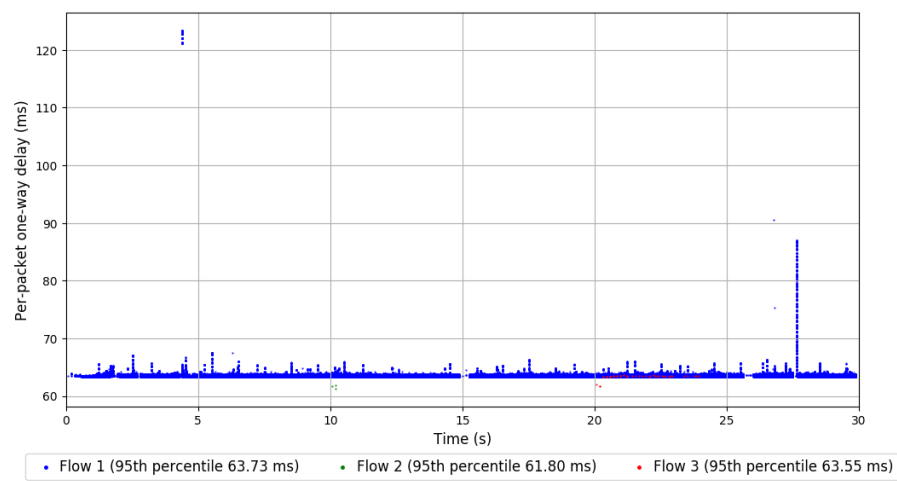
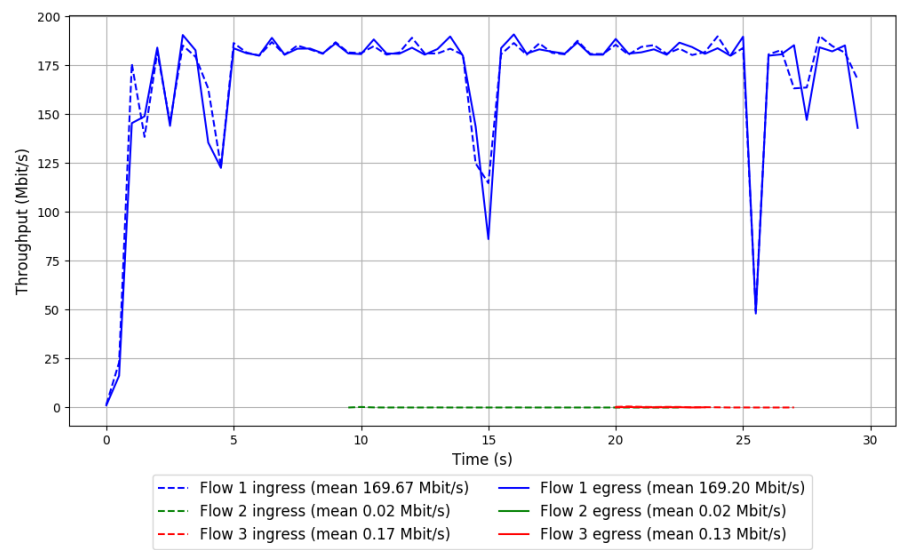
-- Flow 3:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 63.554 ms

Loss rate: 58.46%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2017-08-12 13:04:39

End at: 2017-08-12 13:05:09

Below is generated by plot.py at 2017-08-12 17:15:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 190.50 Mbit/s

95th percentile per-packet one-way delay: 64.067 ms

Loss rate: 4.16%

-- Flow 1:

Average throughput: 54.50 Mbit/s

95th percentile per-packet one-way delay: 63.539 ms

Loss rate: 19.99%

-- Flow 2:

Average throughput: 166.97 Mbit/s

95th percentile per-packet one-way delay: 64.027 ms

Loss rate: 0.71%

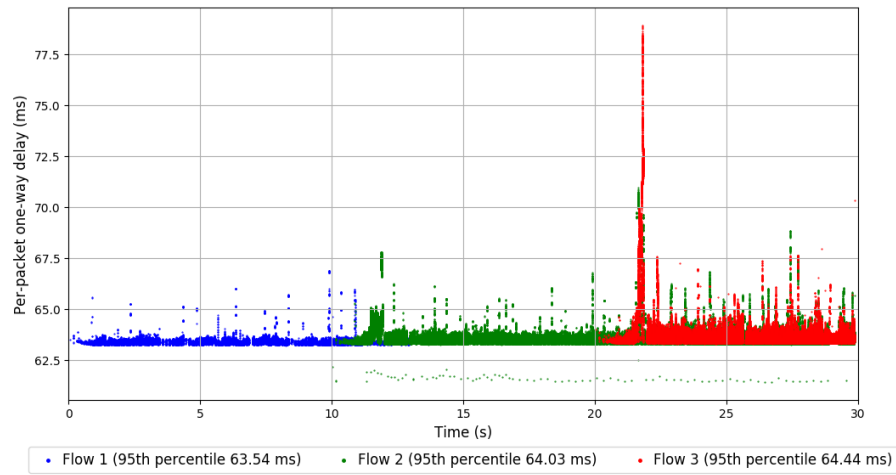
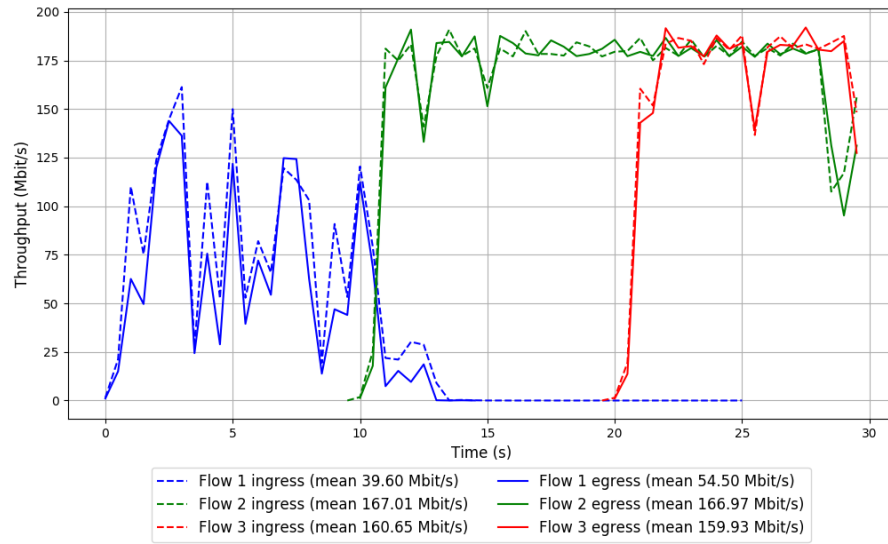
-- Flow 3:

Average throughput: 159.93 Mbit/s

95th percentile per-packet one-way delay: 64.442 ms

Loss rate: 1.48%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2017-08-12 13:16:14

End at: 2017-08-12 13:16:44

Below is generated by plot.py at 2017-08-12 17:15:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 96.70 Mbit/s

95th percentile per-packet one-way delay: 63.530 ms

Loss rate: 15.29%

-- Flow 1:

Average throughput: 64.07 Mbit/s

95th percentile per-packet one-way delay: 63.541 ms

Loss rate: 15.34%

-- Flow 2:

Average throughput: 46.61 Mbit/s

95th percentile per-packet one-way delay: 63.501 ms

Loss rate: 15.41%

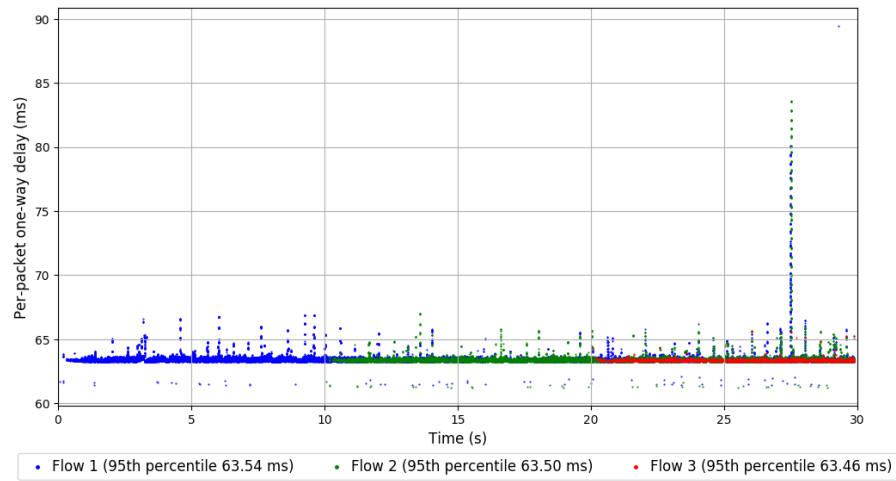
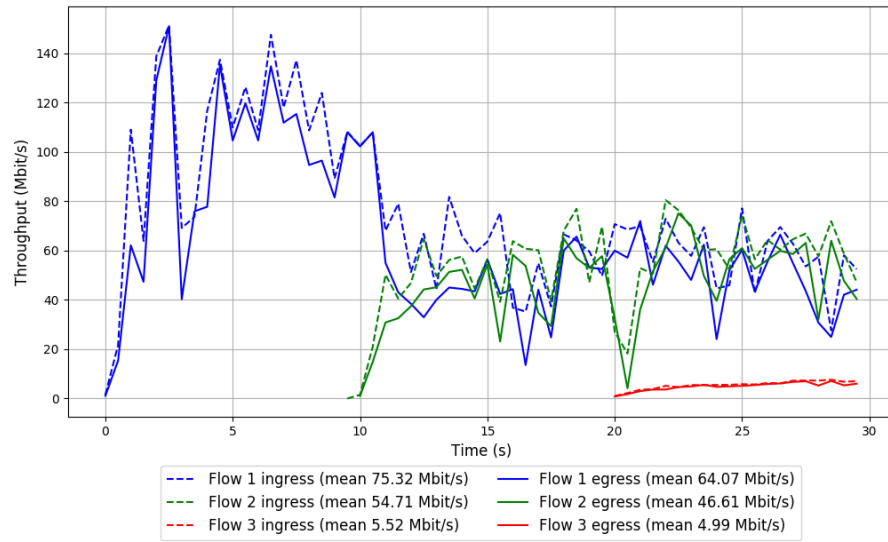
-- Flow 3:

Average throughput: 4.99 Mbit/s

95th percentile per-packet one-way delay: 63.460 ms

Loss rate: 10.80%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

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

End at: 2017-08-12 13:28:43

Below is generated by plot.py at 2017-08-12 17:16:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 318.60 Mbit/s

95th percentile per-packet one-way delay: 68.924 ms

Loss rate: 0.85%

-- Flow 1:

Average throughput: 162.52 Mbit/s

95th percentile per-packet one-way delay: 65.997 ms

Loss rate: 0.49%

-- Flow 2:

Average throughput: 161.18 Mbit/s

95th percentile per-packet one-way delay: 68.561 ms

Loss rate: 0.93%

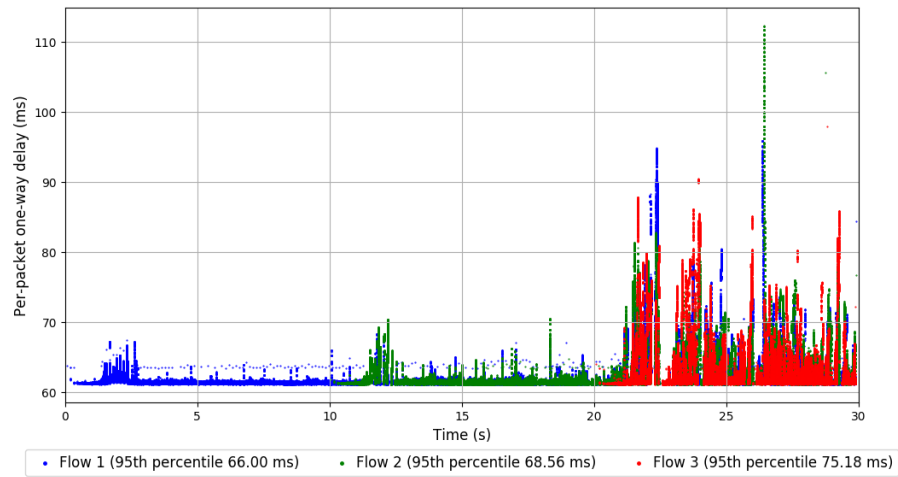
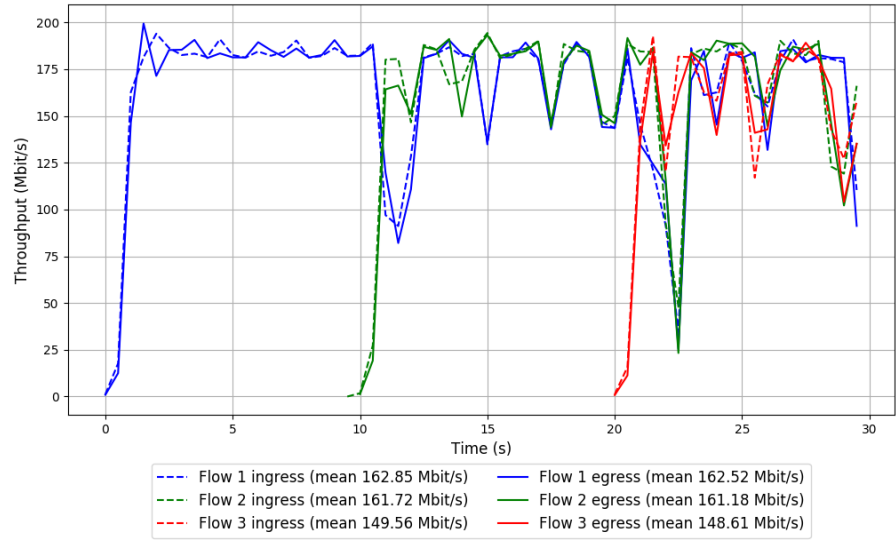
-- Flow 3:

Average throughput: 148.61 Mbit/s

95th percentile per-packet one-way delay: 75.184 ms

Loss rate: 1.82%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2017-08-12 13:40:02

End at: 2017-08-12 13:40:32

Below is generated by plot.py at 2017-08-12 17:16:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 223.01 Mbit/s

95th percentile per-packet one-way delay: 61.792 ms

Loss rate: 0.91%

-- Flow 1:

Average throughput: 171.34 Mbit/s

95th percentile per-packet one-way delay: 61.668 ms

Loss rate: 0.68%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.543 ms

Loss rate: 47.59%

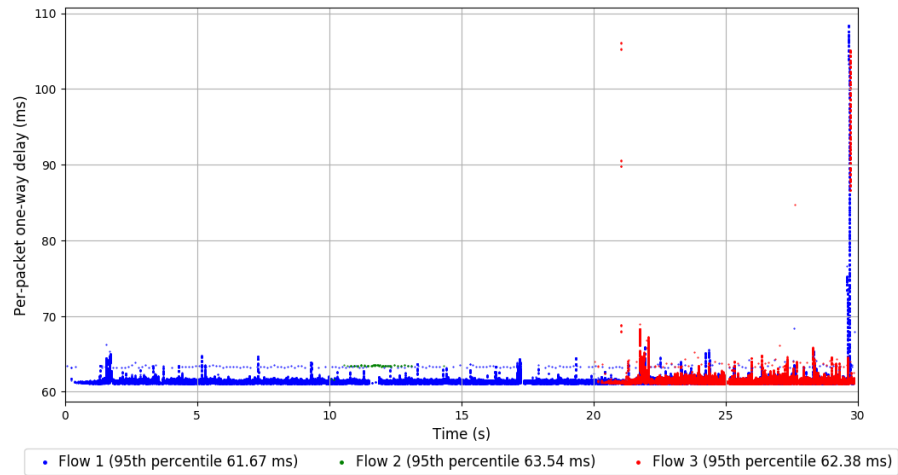
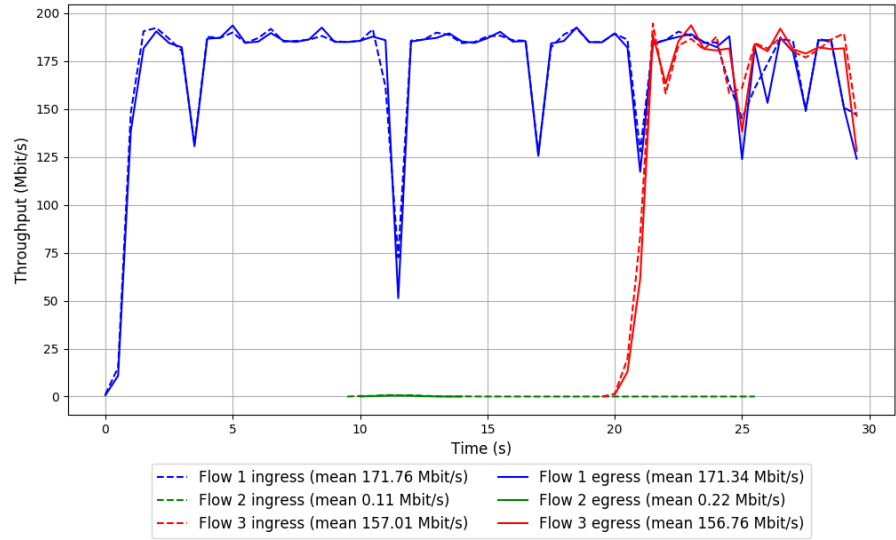
-- Flow 3:

Average throughput: 156.76 Mbit/s

95th percentile per-packet one-way delay: 62.384 ms

Loss rate: 1.62%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2017-08-12 13:51:31

End at: 2017-08-12 13:52:01

Below is generated by plot.py at 2017-08-12 17:16:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 104.40 Mbit/s

95th percentile per-packet one-way delay: 63.543 ms

Loss rate: 11.53%

-- Flow 1:

Average throughput: 43.71 Mbit/s

95th percentile per-packet one-way delay: 63.575 ms

Loss rate: 17.48%

-- Flow 2:

Average throughput: 34.66 Mbit/s

95th percentile per-packet one-way delay: 63.573 ms

Loss rate: 16.32%

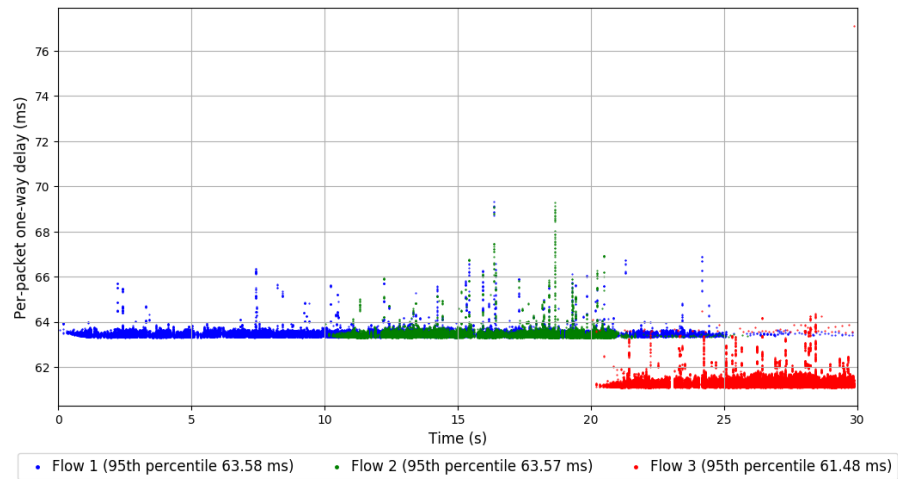
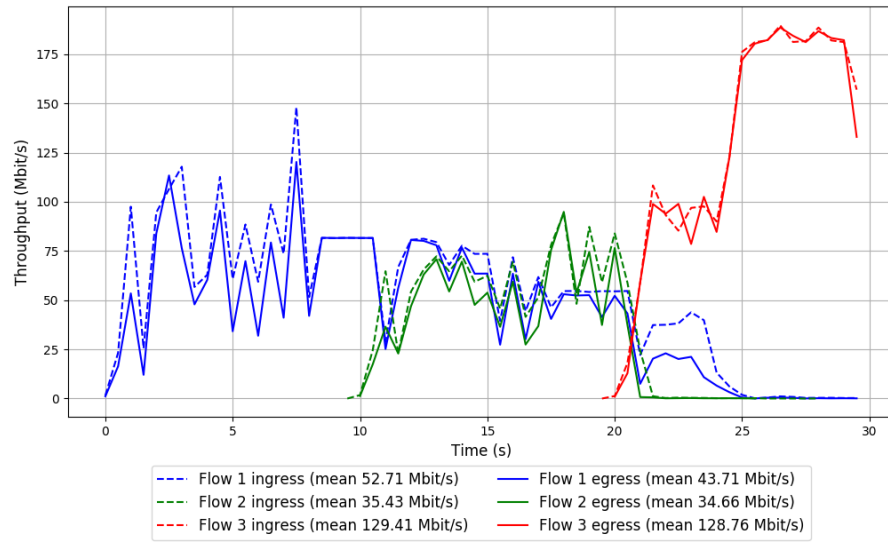
-- Flow 3:

Average throughput: 128.76 Mbit/s

95th percentile per-packet one-way delay: 61.485 ms

Loss rate: 1.79%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2017-08-12 14:03:04

End at: 2017-08-12 14:03:34

Below is generated by plot.py at 2017-08-12 17:16:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 225.06 Mbit/s

95th percentile per-packet one-way delay: 61.913 ms

Loss rate: 0.64%

-- Flow 1:

Average throughput: 173.01 Mbit/s

95th percentile per-packet one-way delay: 61.729 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 0.03 Mbit/s

95th percentile per-packet one-way delay: 63.999 ms

Loss rate: 85.60%

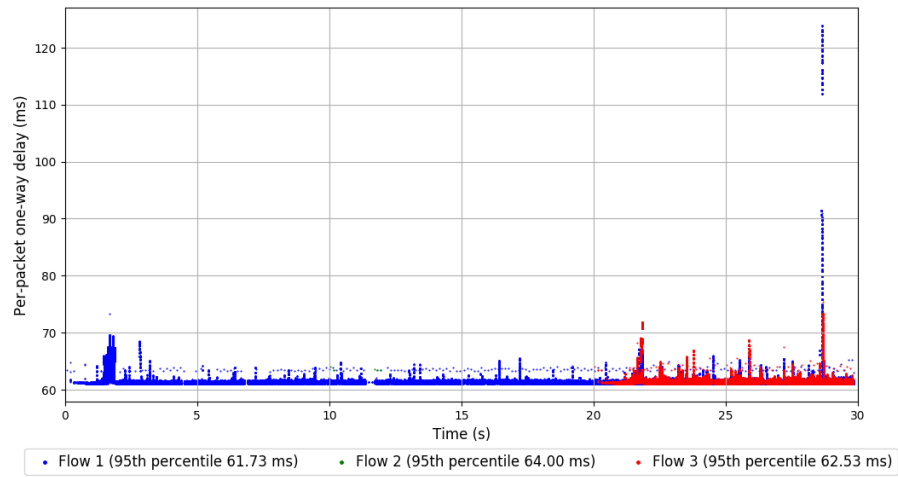
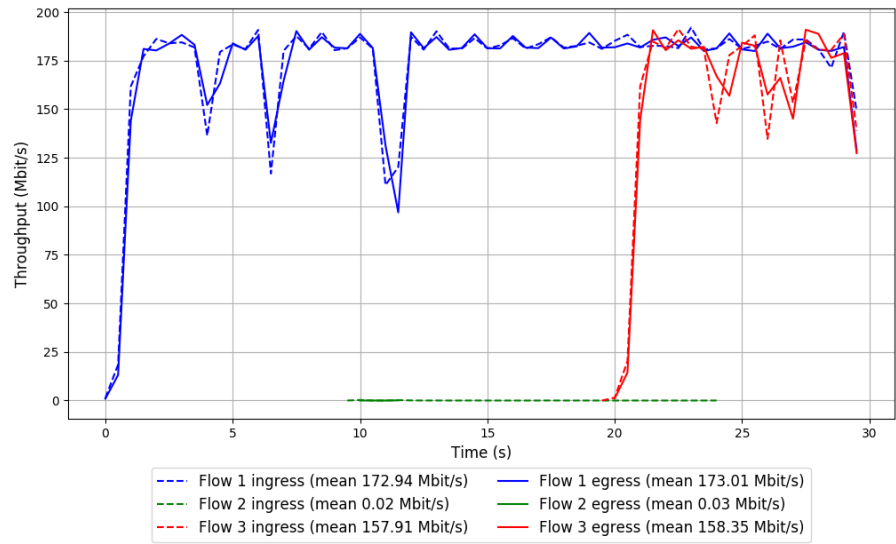
-- Flow 3:

Average throughput: 158.35 Mbit/s

95th percentile per-packet one-way delay: 62.530 ms

Loss rate: 1.31%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2017-08-12 14:14:16

End at: 2017-08-12 14:14:46

Below is generated by plot.py at 2017-08-12 17:17:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 224.28 Mbit/s

95th percentile per-packet one-way delay: 62.272 ms

Loss rate: 0.97%

-- Flow 1:

Average throughput: 170.78 Mbit/s

95th percentile per-packet one-way delay: 61.657 ms

Loss rate: 0.69%

-- Flow 2:

Average throughput: 0.25 Mbit/s

95th percentile per-packet one-way delay: 63.563 ms

Loss rate: 53.06%

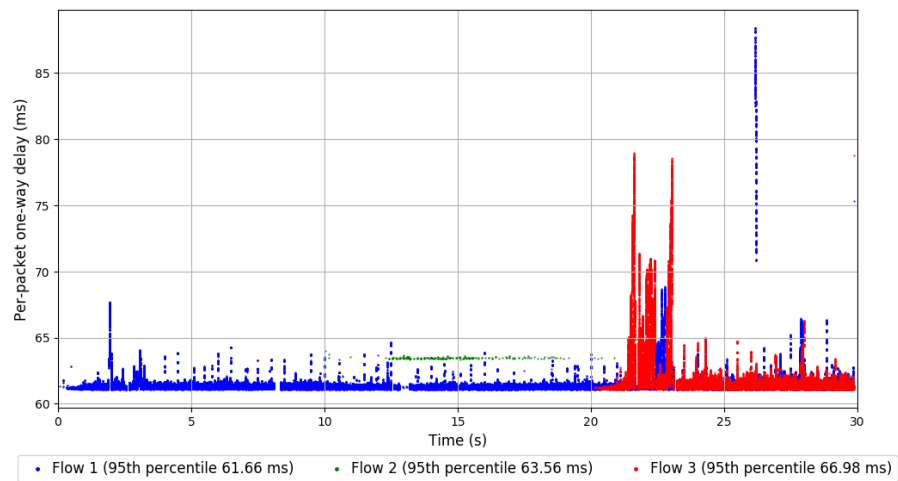
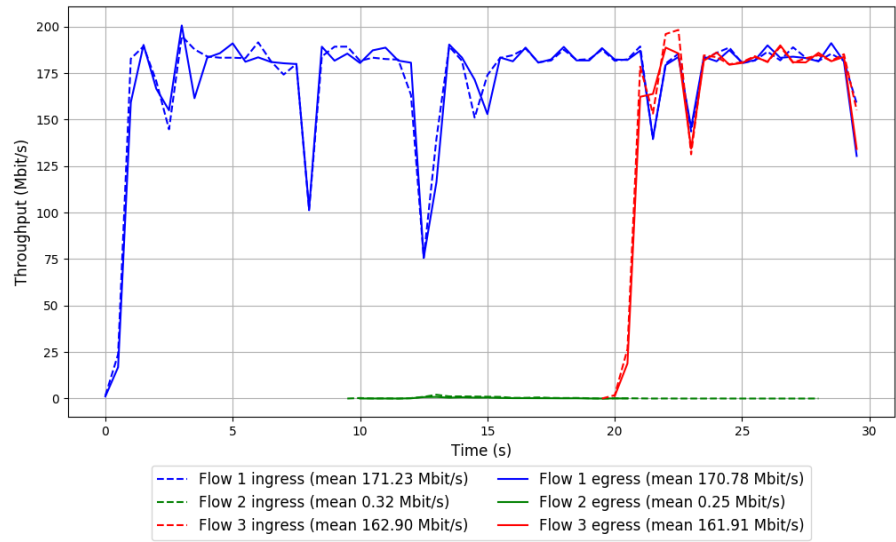
-- Flow 3:

Average throughput: 161.91 Mbit/s

95th percentile per-packet one-way delay: 66.979 ms

Loss rate: 1.68%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2017-08-12 14:25:28

End at: 2017-08-12 14:25:58

Below is generated by plot.py at 2017-08-12 17:17:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 81.20 Mbit/s

95th percentile per-packet one-way delay: 63.619 ms

Loss rate: 12.26%

-- Flow 1:

Average throughput: 50.36 Mbit/s

95th percentile per-packet one-way delay: 63.635 ms

Loss rate: 12.13%

-- Flow 2:

Average throughput: 44.93 Mbit/s

95th percentile per-packet one-way delay: 63.582 ms

Loss rate: 11.55%

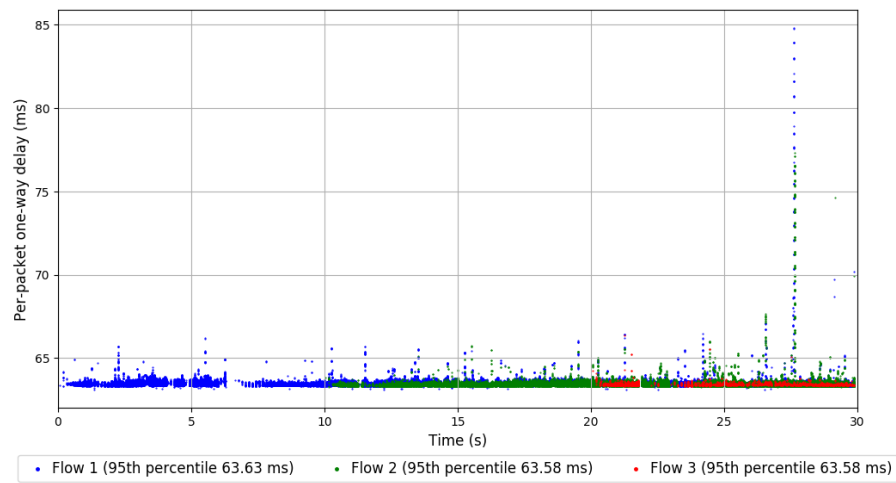
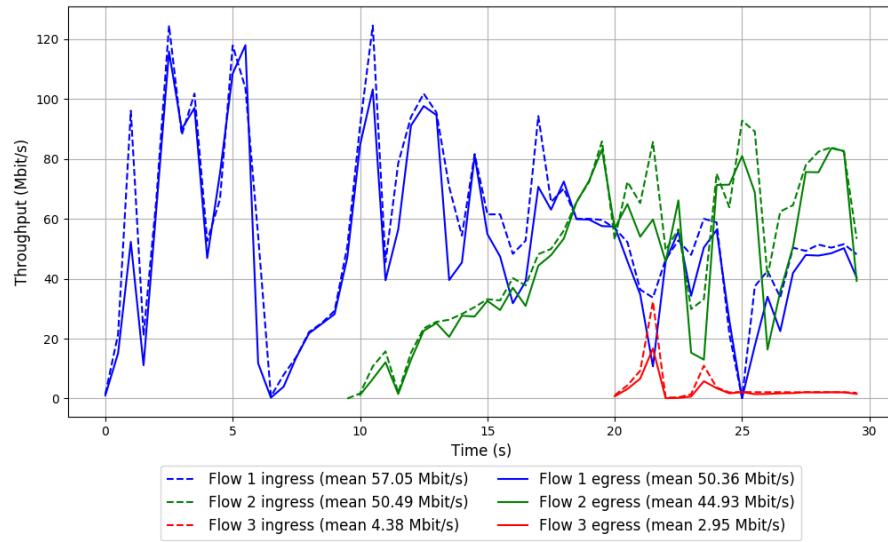
-- Flow 3:

Average throughput: 2.95 Mbit/s

95th percentile per-packet one-way delay: 63.582 ms

Loss rate: 33.61%

Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of CalibratedKoho

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

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

Below is generated by plot.py at 2017-08-12 17:17:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 172.70 Mbit/s

95th percentile per-packet one-way delay: 92.921 ms

Loss rate: 2.14%

-- Flow 1:

Average throughput: 0.97 Mbit/s

95th percentile per-packet one-way delay: 64.042 ms

Loss rate: 70.33%

-- Flow 2:

Average throughput: 257.56 Mbit/s

95th percentile per-packet one-way delay: 93.005 ms

Loss rate: 0.80%

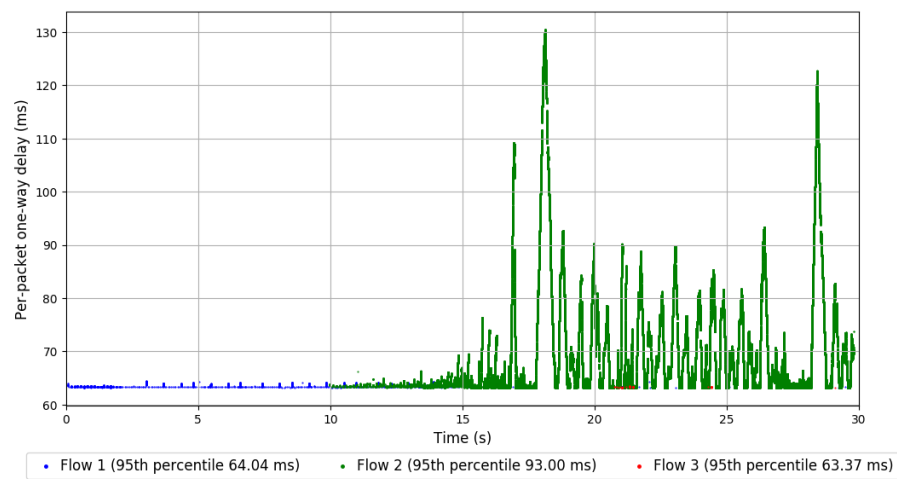
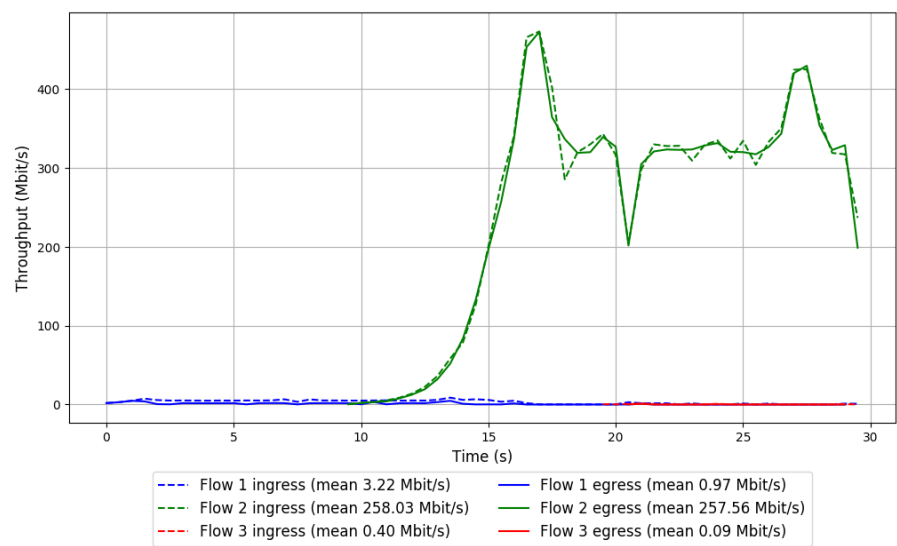
-- Flow 3:

Average throughput: 0.09 Mbit/s

95th percentile per-packet one-way delay: 63.373 ms

Loss rate: 81.04%

Run 1: Report of CalibratedKoho — Data Link



Run 2: Statistics of CalibratedKoho

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

End at: 2017-08-12 12:50:34

Below is generated by plot.py at 2017-08-12 17:18:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 302.46 Mbit/s

95th percentile per-packet one-way delay: 92.056 ms

Loss rate: 0.74%

-- Flow 1:

Average throughput: 269.32 Mbit/s

95th percentile per-packet one-way delay: 93.171 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 0.03 Mbit/s

95th percentile per-packet one-way delay: 63.669 ms

Loss rate: 93.18%

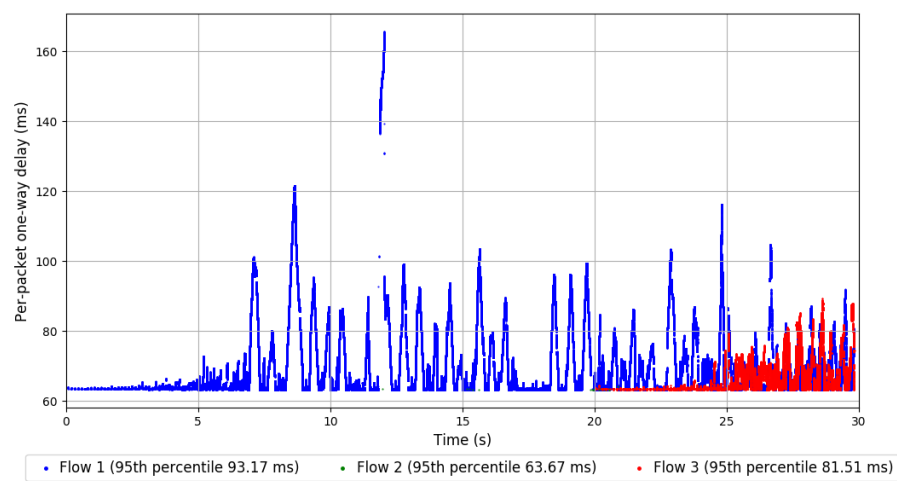
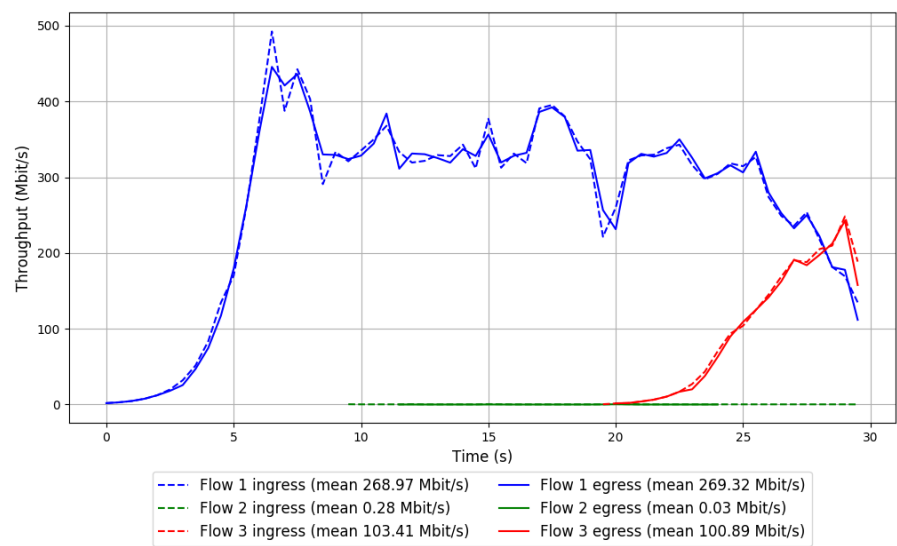
-- Flow 3:

Average throughput: 100.89 Mbit/s

95th percentile per-packet one-way delay: 81.514 ms

Loss rate: 3.60%

Run 2: Report of CalibratedKoho — Data Link



Run 3: Statistics of CalibratedKoho

Start at: 2017-08-12 13:01:47

End at: 2017-08-12 13:02:17

Below is generated by plot.py at 2017-08-12 17:18:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 345.38 Mbit/s

95th percentile per-packet one-way delay: 88.784 ms

Loss rate: 1.10%

-- Flow 1:

Average throughput: 228.73 Mbit/s

95th percentile per-packet one-way delay: 90.215 ms

Loss rate: 0.58%

-- Flow 2:

Average throughput: 132.50 Mbit/s

95th percentile per-packet one-way delay: 85.023 ms

Loss rate: 1.78%

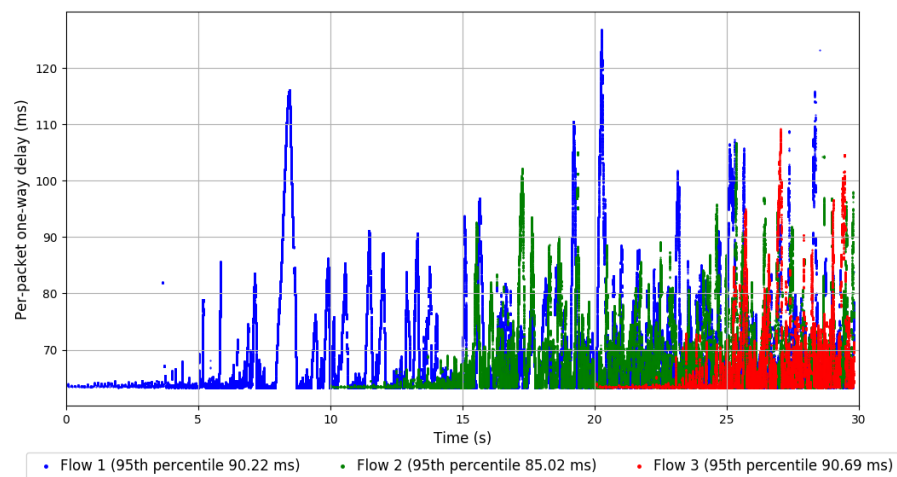
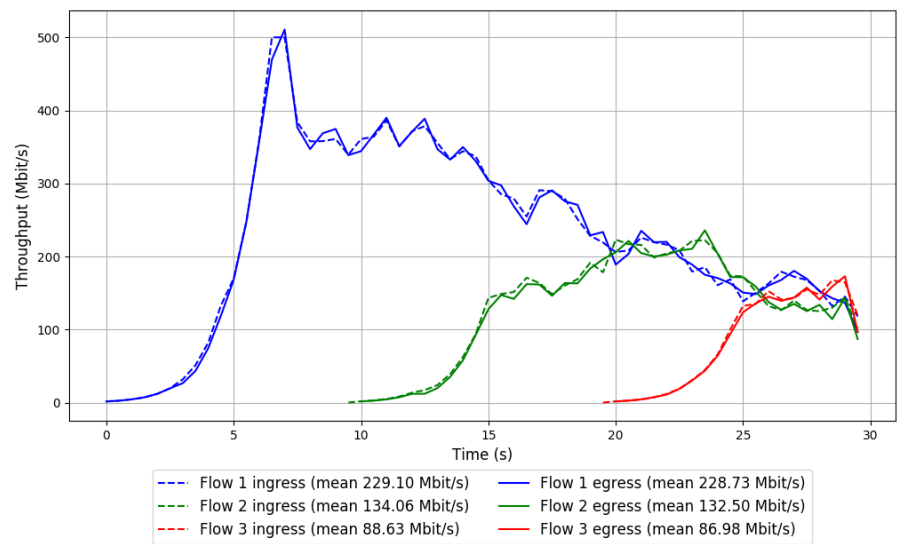
-- Flow 3:

Average throughput: 86.98 Mbit/s

95th percentile per-packet one-way delay: 90.687 ms

Loss rate: 3.10%

Run 3: Report of CalibratedKoho — Data Link

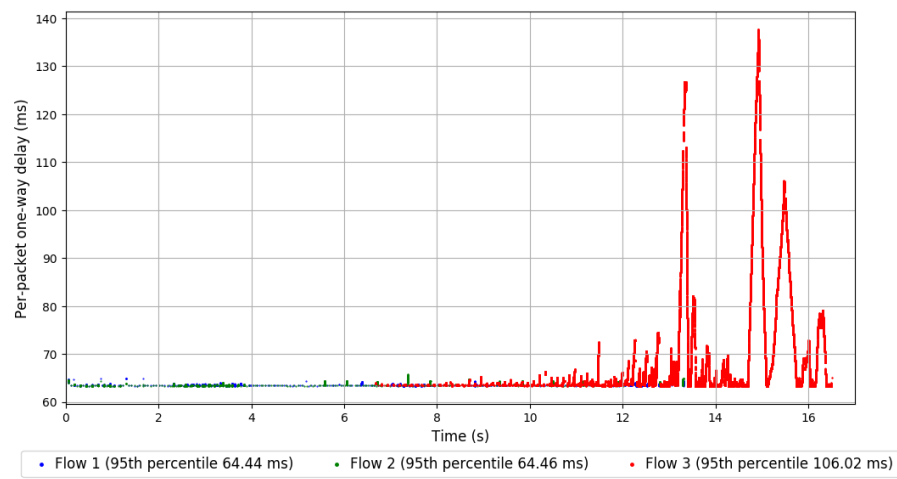
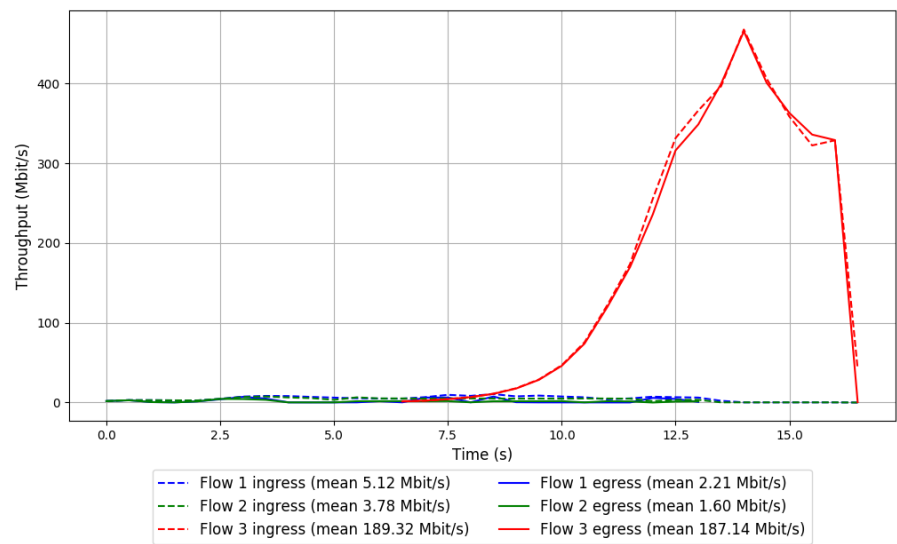


Run 4: Statistics of CalibratedKoho

Start at: 2017-08-12 13:13:39

End at: 2017-08-12 13:14:09

Run 4: Report of CalibratedKoho — Data Link



Run 5: Statistics of CalibratedKoho

Start at: 2017-08-12 13:25:18

End at: 2017-08-12 13:25:48

Below is generated by plot.py at 2017-08-12 17:19:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 318.71 Mbit/s

95th percentile per-packet one-way delay: 84.954 ms

Loss rate: 0.80%

-- Flow 1:

Average throughput: 277.49 Mbit/s

95th percentile per-packet one-way delay: 85.436 ms

Loss rate: 0.41%

-- Flow 2:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 65.632 ms

Loss rate: 99.05%

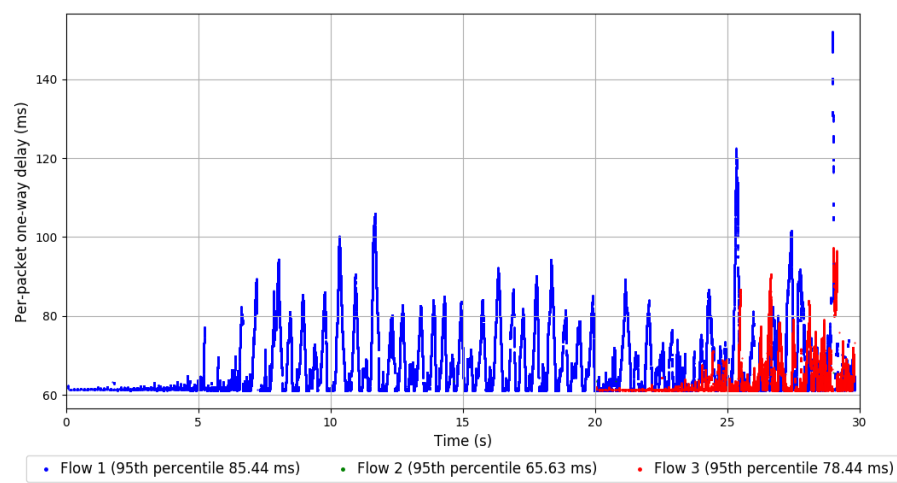
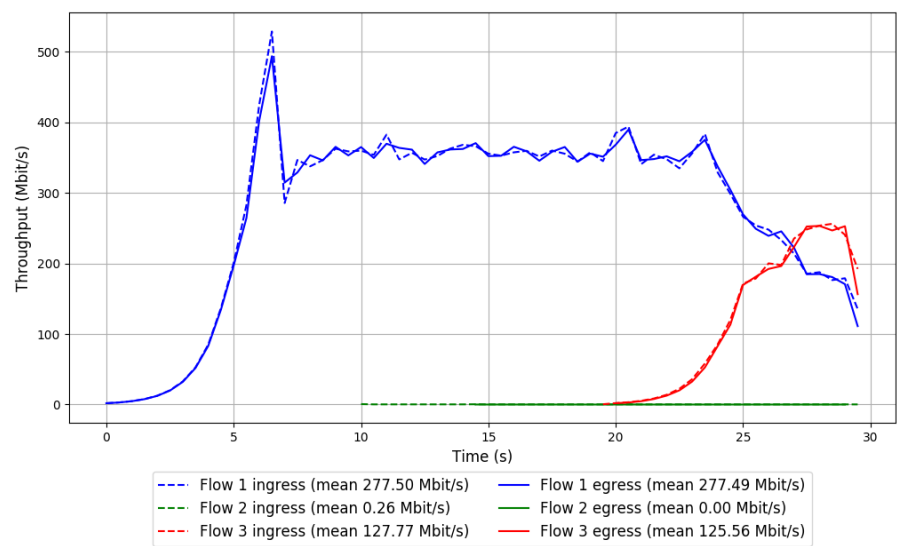
-- Flow 3:

Average throughput: 125.56 Mbit/s

95th percentile per-packet one-way delay: 78.442 ms

Loss rate: 2.92%

Run 5: Report of CalibratedKoho — Data Link



Run 6: Statistics of CalibratedKoho

Start at: 2017-08-12 13:37:13

End at: 2017-08-12 13:37:43

Below is generated by plot.py at 2017-08-12 17:19:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 344.44 Mbit/s

95th percentile per-packet one-way delay: 84.799 ms

Loss rate: 0.90%

-- Flow 1:

Average throughput: 229.48 Mbit/s

95th percentile per-packet one-way delay: 85.149 ms

Loss rate: 0.47%

-- Flow 2:

Average throughput: 131.25 Mbit/s

95th percentile per-packet one-way delay: 85.630 ms

Loss rate: 1.30%

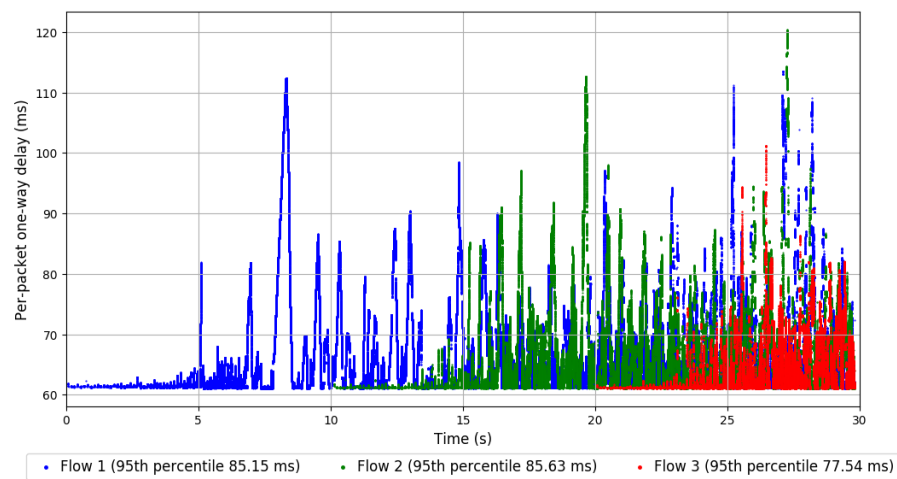
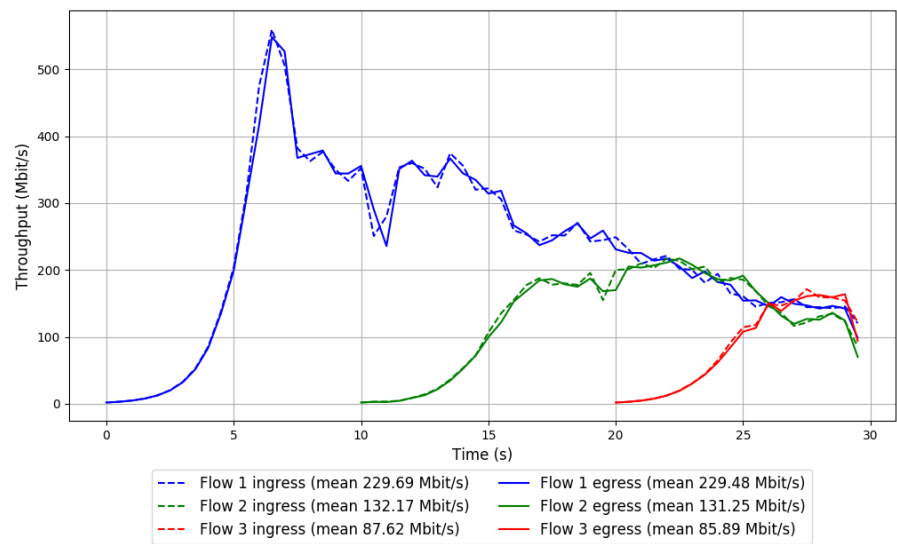
-- Flow 3:

Average throughput: 85.89 Mbit/s

95th percentile per-packet one-way delay: 77.544 ms

Loss rate: 3.19%

Run 6: Report of CalibratedKoho — Data Link



Run 7: Statistics of CalibratedKoho

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

End at: 2017-08-12 13:49:38

Below is generated by plot.py at 2017-08-12 17:20:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 192.34 Mbit/s

95th percentile per-packet one-way delay: 83.832 ms

Loss rate: 2.54%

-- Flow 1:

Average throughput: 1.48 Mbit/s

95th percentile per-packet one-way delay: 64.239 ms

Loss rate: 69.05%

-- Flow 2:

Average throughput: 229.57 Mbit/s

95th percentile per-packet one-way delay: 84.279 ms

Loss rate: 1.30%

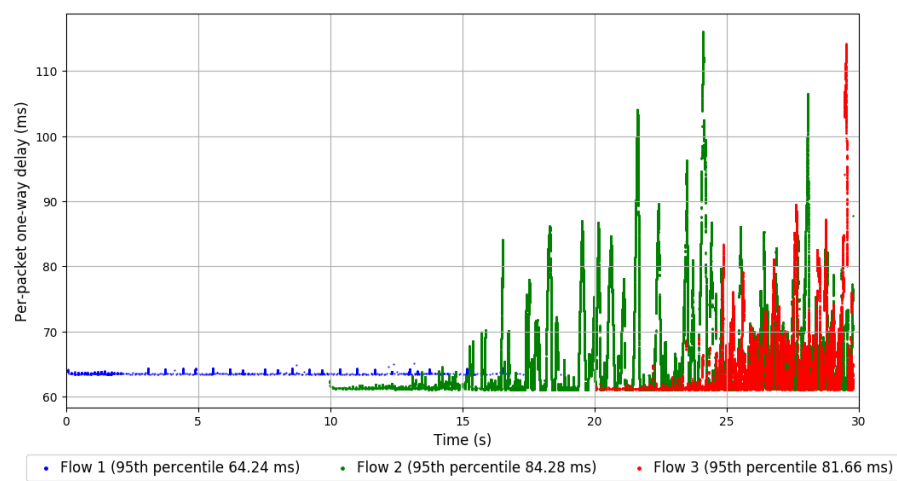
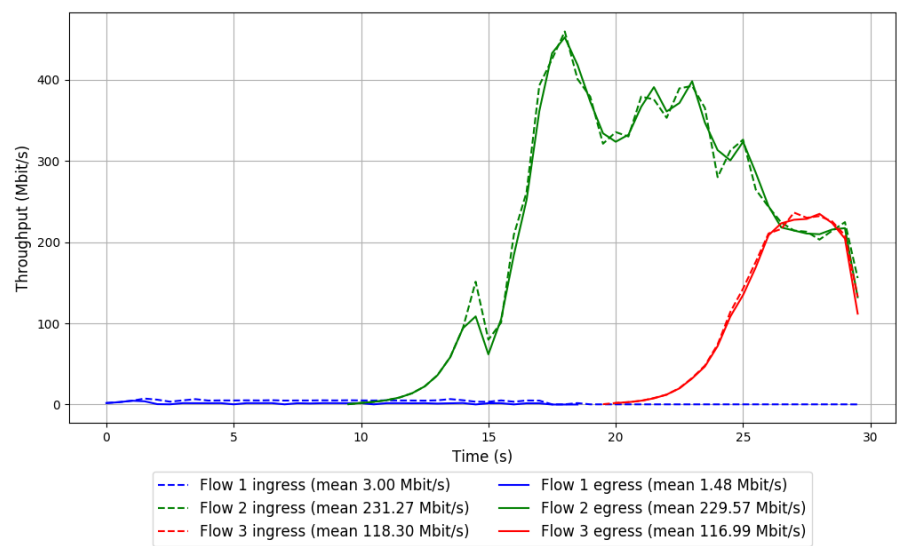
-- Flow 3:

Average throughput: 116.99 Mbit/s

95th percentile per-packet one-way delay: 81.655 ms

Loss rate: 2.35%

Run 7: Report of CalibratedKoho — Data Link

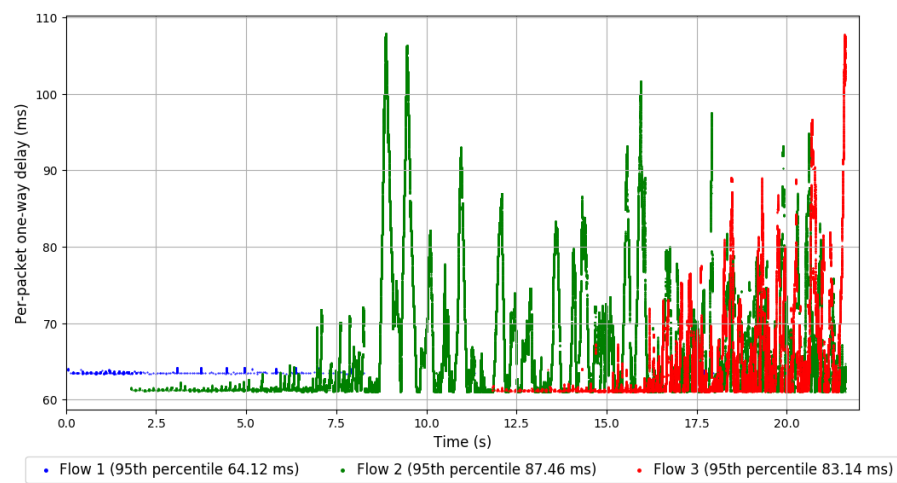
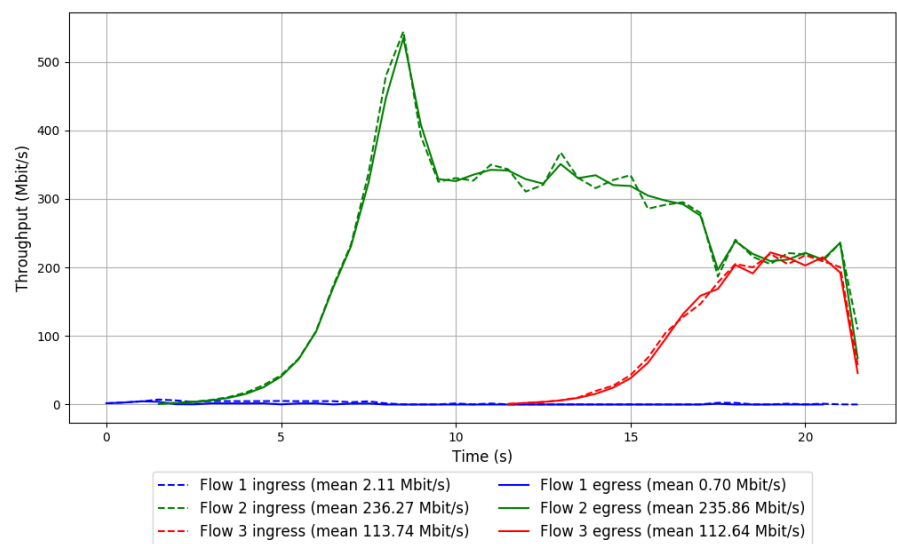


Run 8: Statistics of CalibratedKoho

Start at: 2017-08-12 14:00:28

End at: 2017-08-12 14:00:58

Run 8: Report of CalibratedKoho — Data Link

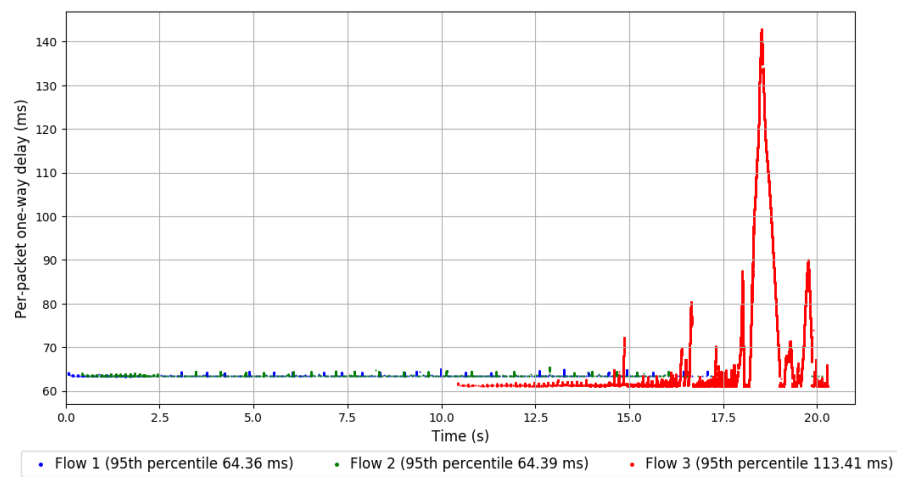
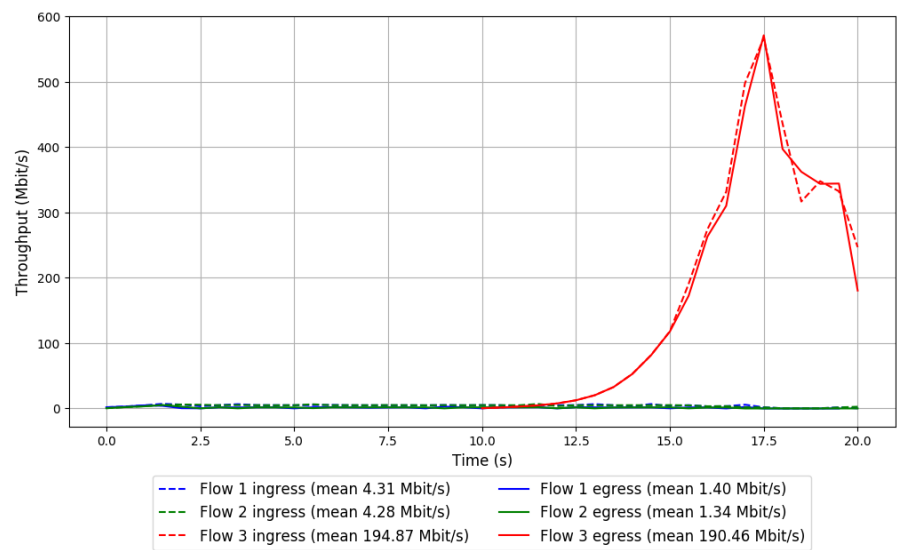


Run 9: Statistics of CalibratedKoho

Start at: 2017-08-12 14:12:03

End at: 2017-08-12 14:12:33

Run 9: Report of CalibratedKoho — Data Link



Run 10: Statistics of CalibratedKoho

Start at: 2017-08-12 14:23:17

End at: 2017-08-12 14:23:47

Below is generated by plot.py at 2017-08-12 17:20:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.24 Mbit/s

95th percentile per-packet one-way delay: 64.346 ms

Loss rate: 68.61%

-- Flow 1:

Average throughput: 1.60 Mbit/s

95th percentile per-packet one-way delay: 64.372 ms

Loss rate: 69.25%

-- Flow 2:

Average throughput: 1.65 Mbit/s

95th percentile per-packet one-way delay: 64.324 ms

Loss rate: 68.59%

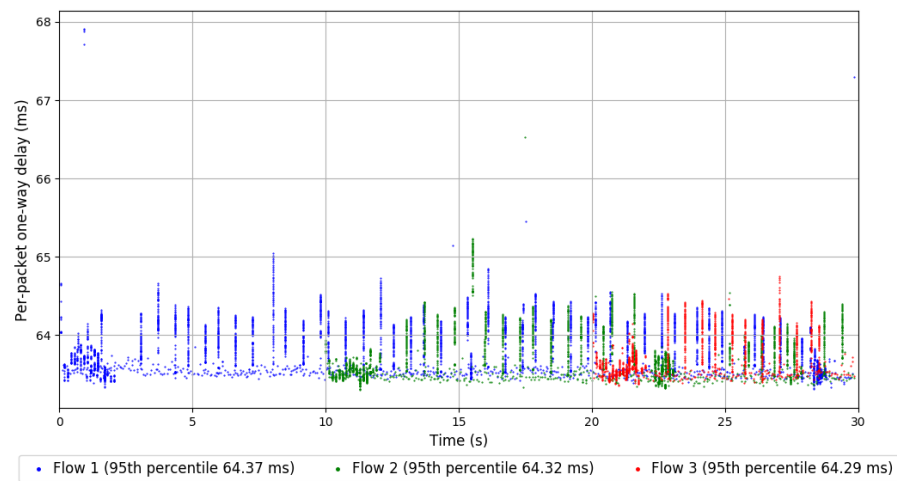
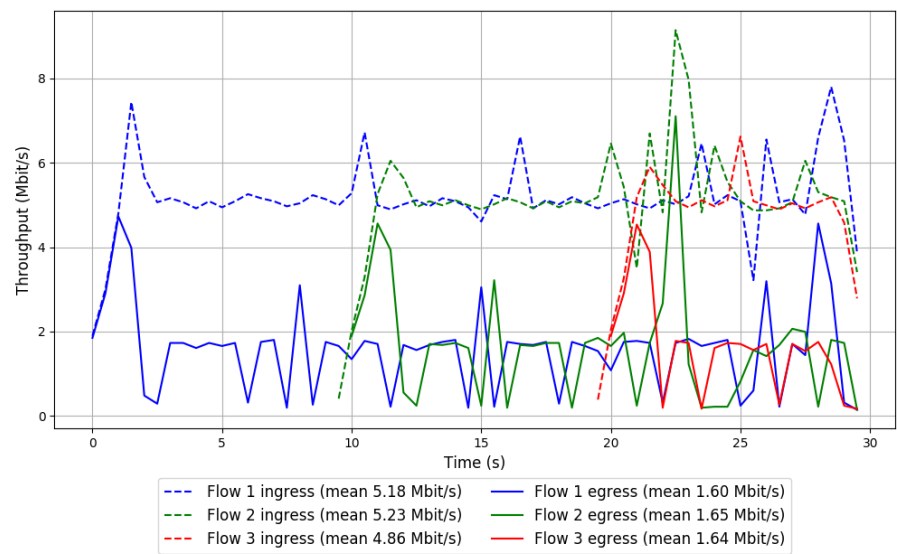
-- Flow 3:

Average throughput: 1.64 Mbit/s

95th percentile per-packet one-way delay: 64.288 ms

Loss rate: 66.60%

Run 10: Report of CalibratedKoho — Data Link

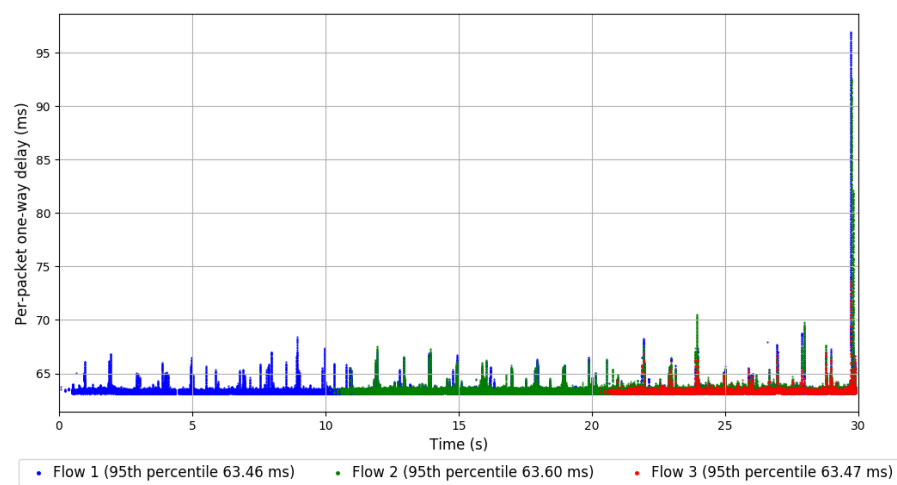
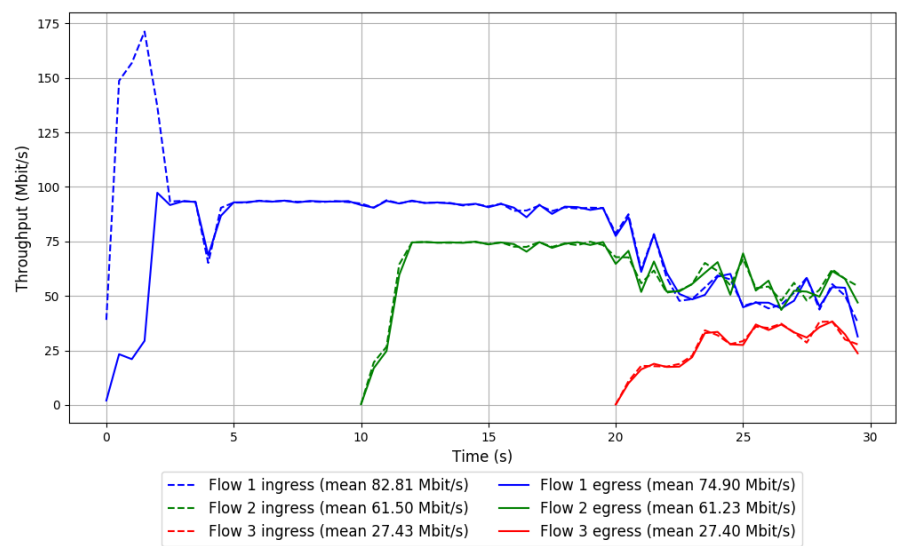


```
Run 1: Statistics of Copa

Start at: 2017-08-12 12:42:50
End at: 2017-08-12 12:43:20

# Below is generated by plot.py at 2017-08-12 17:21:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 124.21 Mbit/s
95th percentile per-packet one-way delay: 63.530 ms
Loss rate: 6.61%
-- Flow 1:
Average throughput: 74.90 Mbit/s
95th percentile per-packet one-way delay: 63.458 ms
Loss rate: 9.91%
-- Flow 2:
Average throughput: 61.23 Mbit/s
95th percentile per-packet one-way delay: 63.597 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 27.40 Mbit/s
95th percentile per-packet one-way delay: 63.467 ms
Loss rate: 1.36%
```


Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

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

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

Below is generated by plot.py at 2017-08-12 17:21:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 121.10 Mbit/s

95th percentile per-packet one-way delay: 63.698 ms

Loss rate: 0.65%

-- Flow 1:

Average throughput: 68.48 Mbit/s

95th percentile per-packet one-way delay: 63.790 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 62.46 Mbit/s

95th percentile per-packet one-way delay: 63.398 ms

Loss rate: 0.93%

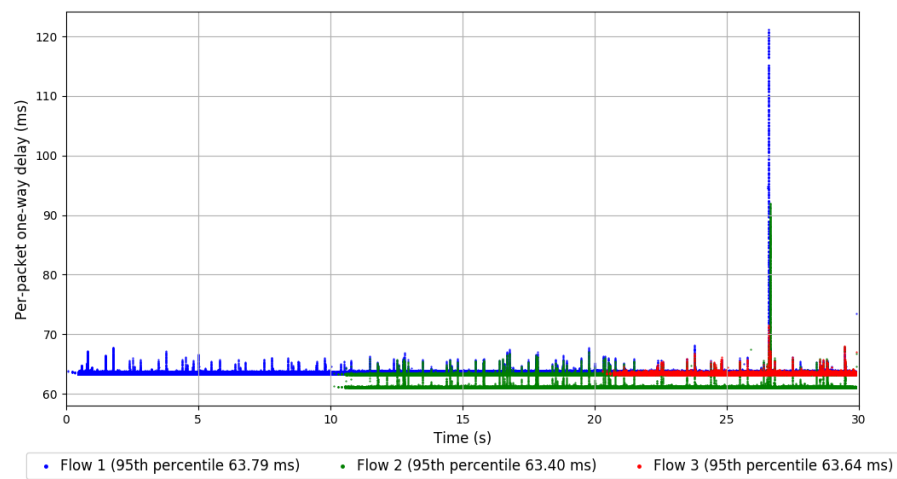
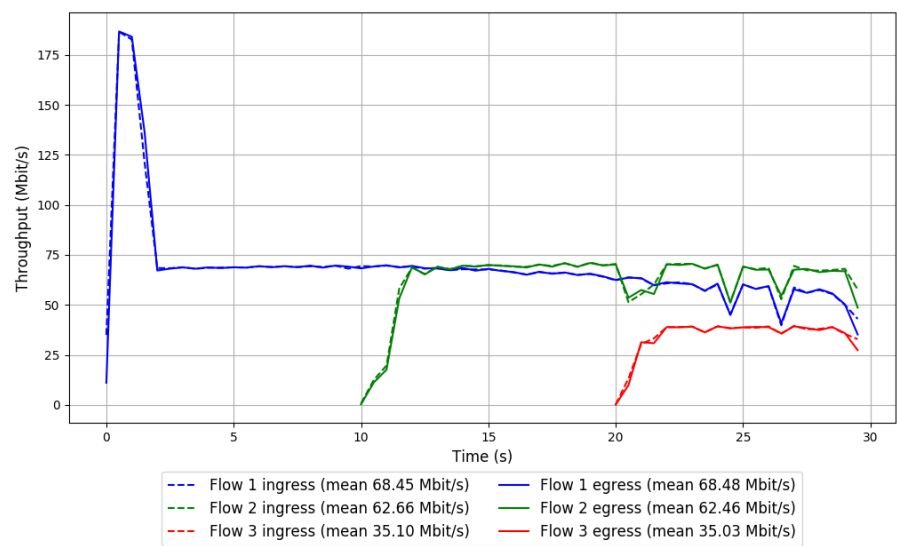
-- Flow 3:

Average throughput: 35.03 Mbit/s

95th percentile per-packet one-way delay: 63.644 ms

Loss rate: 1.47%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2017-08-12 13:06:17

End at: 2017-08-12 13:06:47

Below is generated by plot.py at 2017-08-12 17:21:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 68.81 Mbit/s

95th percentile per-packet one-way delay: 63.886 ms

Loss rate: 0.77%

-- Flow 1:

Average throughput: 0.37 Mbit/s

95th percentile per-packet one-way delay: 64.061 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 79.76 Mbit/s

95th percentile per-packet one-way delay: 63.909 ms

Loss rate: 0.55%

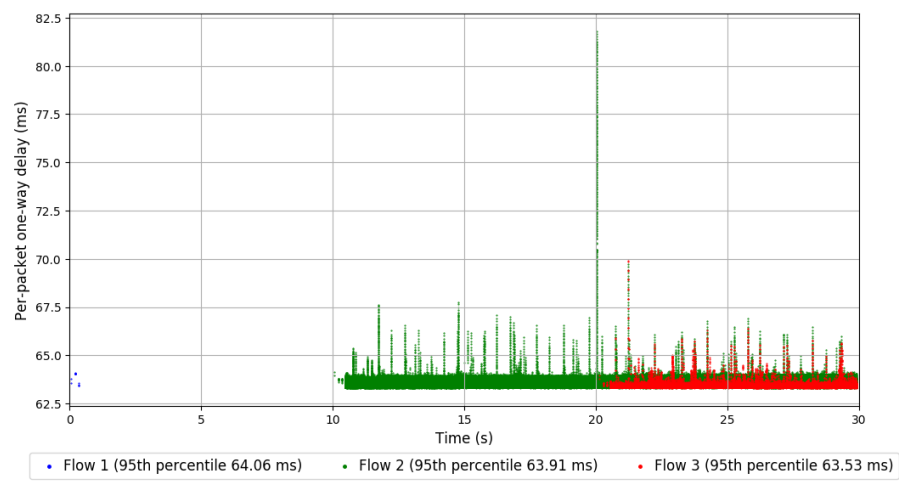
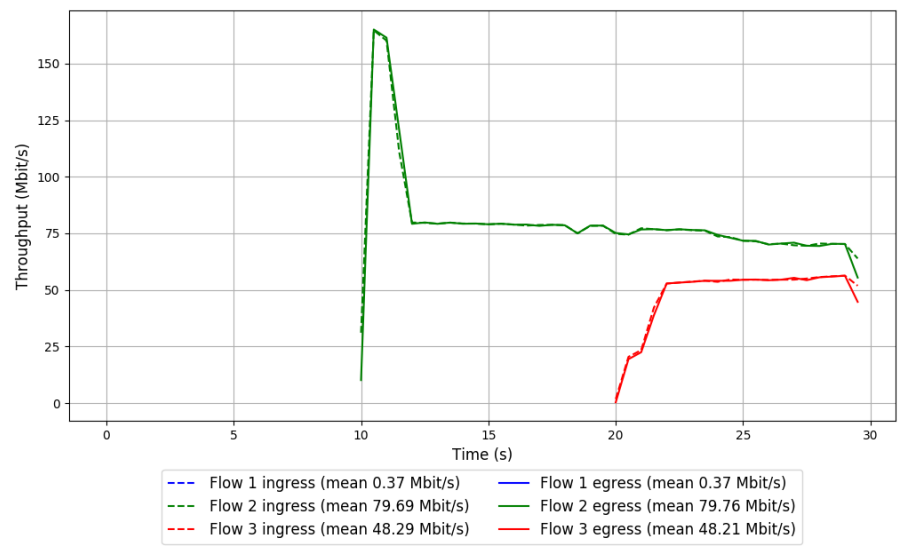
-- Flow 3:

Average throughput: 48.21 Mbit/s

95th percentile per-packet one-way delay: 63.535 ms

Loss rate: 1.50%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2017-08-12 13:17:46

End at: 2017-08-12 13:18:16

Below is generated by plot.py at 2017-08-12 17:22:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 135.43 Mbit/s

95th percentile per-packet one-way delay: 63.584 ms

Loss rate: 0.64%

-- Flow 1:

Average throughput: 87.90 Mbit/s

95th percentile per-packet one-way delay: 63.430 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 54.21 Mbit/s

95th percentile per-packet one-way delay: 63.658 ms

Loss rate: 1.13%

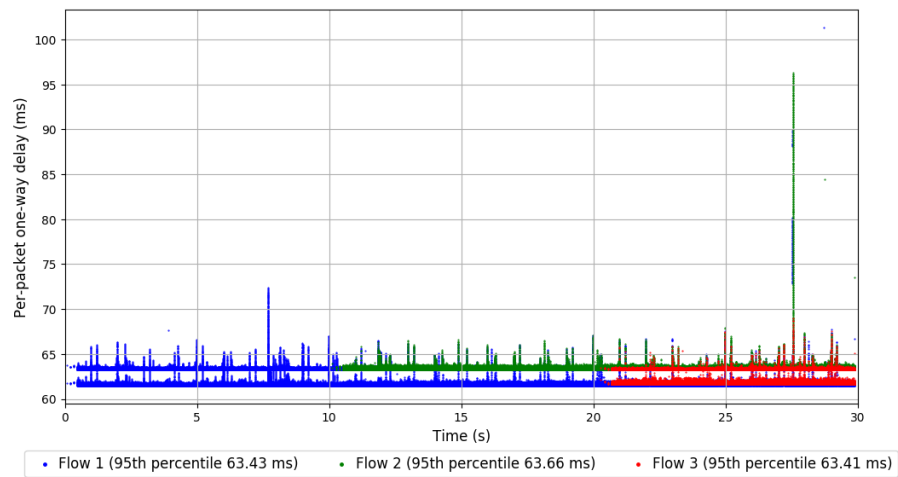
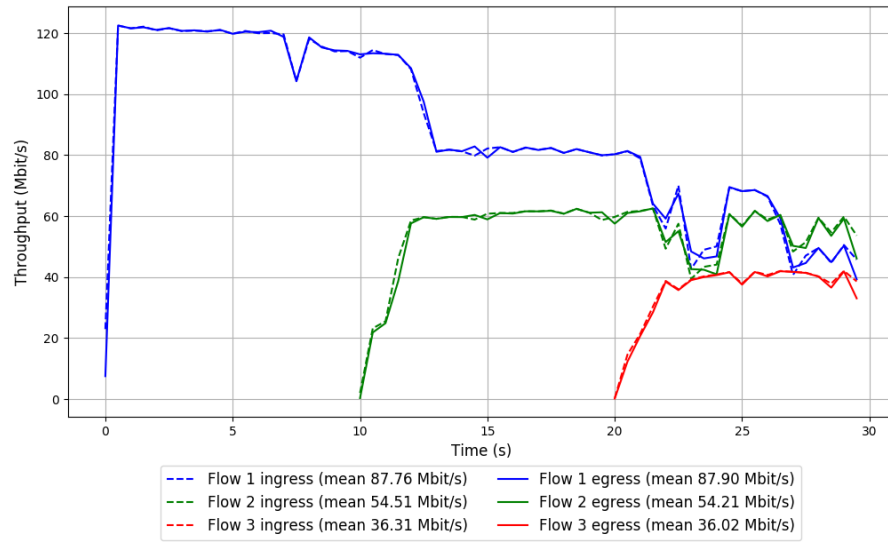
-- Flow 3:

Average throughput: 36.02 Mbit/s

95th percentile per-packet one-way delay: 63.410 ms

Loss rate: 2.05%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2017-08-12 13:29:58

End at: 2017-08-12 13:30:28

Below is generated by plot.py at 2017-08-12 17:22:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 111.03 Mbit/s

95th percentile per-packet one-way delay: 63.352 ms

Loss rate: 0.61%

-- Flow 1:

Average throughput: 65.27 Mbit/s

95th percentile per-packet one-way delay: 63.337 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 56.49 Mbit/s

95th percentile per-packet one-way delay: 61.604 ms

Loss rate: 0.65%

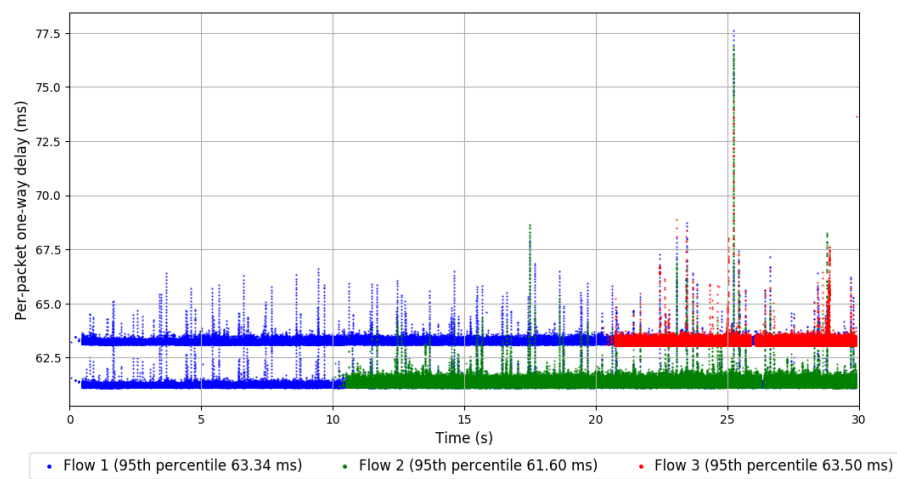
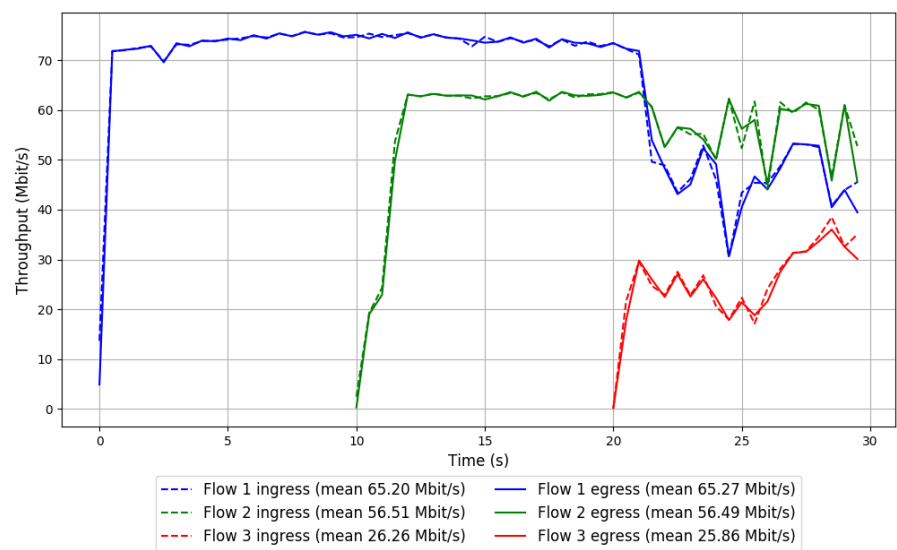
-- Flow 3:

Average throughput: 25.86 Mbit/s

95th percentile per-packet one-way delay: 63.498 ms

Loss rate: 2.67%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2017-08-12 13:41:40

End at: 2017-08-12 13:42:10

Below is generated by plot.py at 2017-08-12 17:22:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 106.56 Mbit/s

95th percentile per-packet one-way delay: 63.480 ms

Loss rate: 6.45%

-- Flow 1:

Average throughput: 62.57 Mbit/s

95th percentile per-packet one-way delay: 61.681 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 53.06 Mbit/s

95th percentile per-packet one-way delay: 61.324 ms

Loss rate: 0.72%

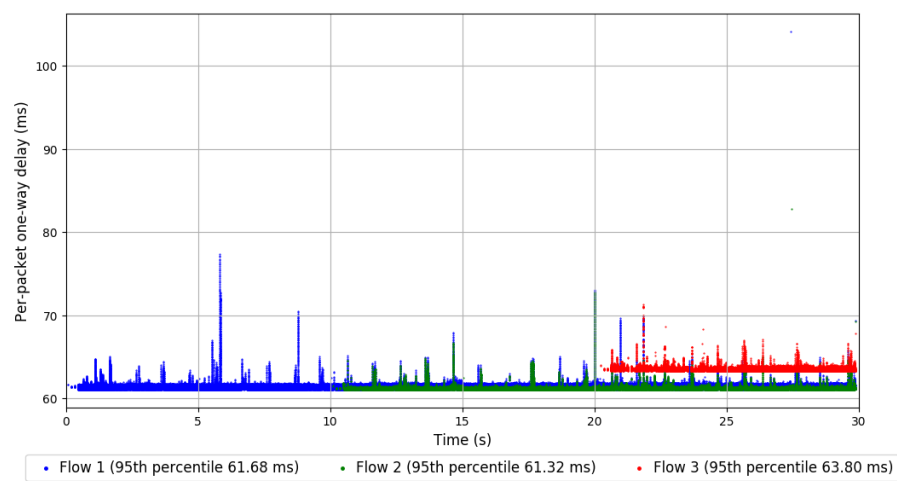
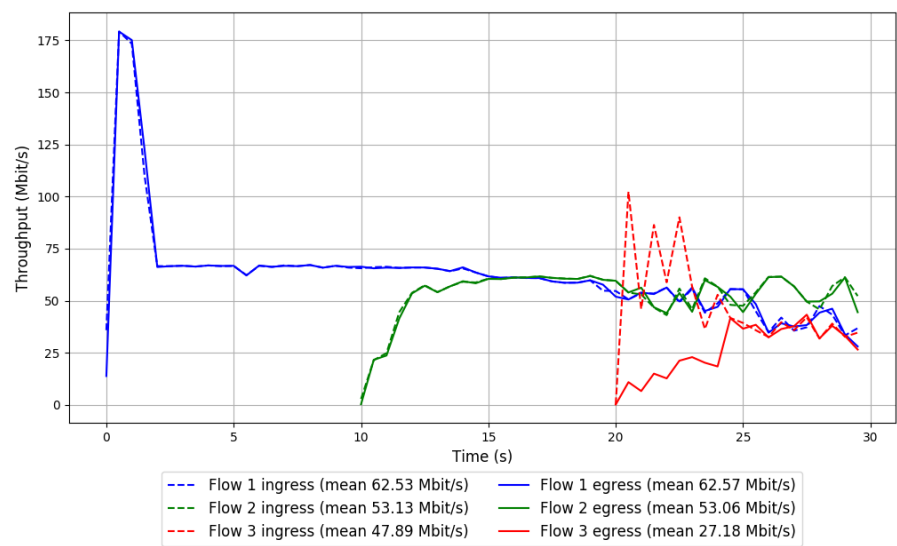
-- Flow 3:

Average throughput: 27.18 Mbit/s

95th percentile per-packet one-way delay: 63.797 ms

Loss rate: 43.95%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2017-08-12 13:53:04

End at: 2017-08-12 13:53:34

Below is generated by plot.py at 2017-08-12 17:23:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 98.38 Mbit/s

95th percentile per-packet one-way delay: 63.800 ms

Loss rate: 21.38%

-- Flow 1:

Average throughput: 44.42 Mbit/s

95th percentile per-packet one-way delay: 63.855 ms

Loss rate: 30.54%

-- Flow 2:

Average throughput: 48.40 Mbit/s

95th percentile per-packet one-way delay: 63.432 ms

Loss rate: 17.82%

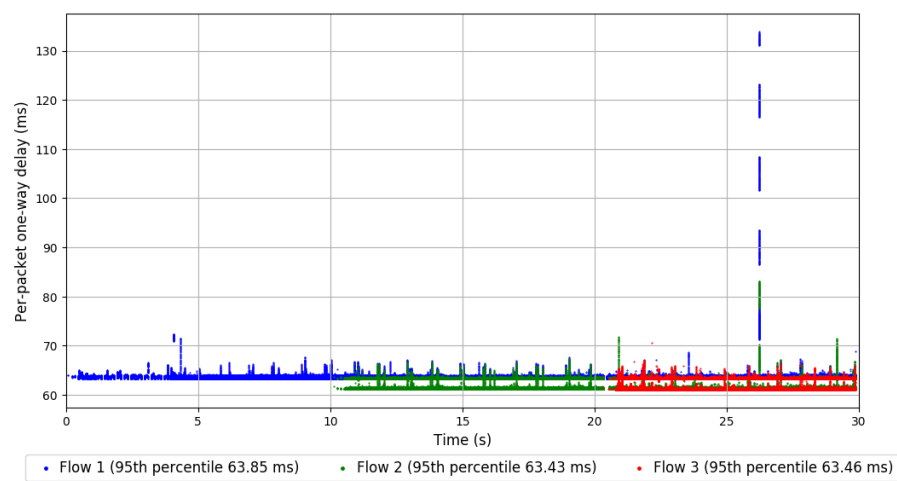
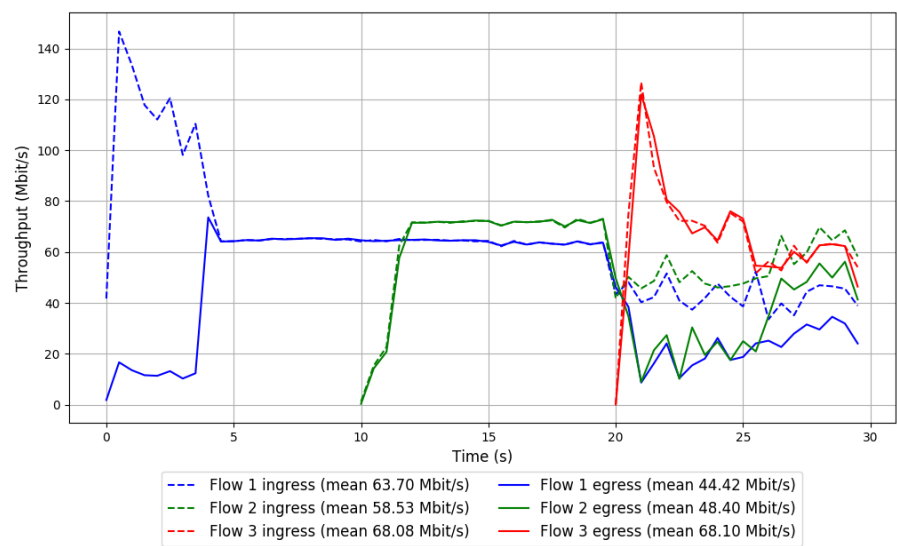
-- Flow 3:

Average throughput: 68.10 Mbit/s

95th percentile per-packet one-way delay: 63.459 ms

Loss rate: 1.22%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2017-08-12 14:04:42

End at: 2017-08-12 14:05:12

Below is generated by plot.py at 2017-08-12 17:23:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 102.14 Mbit/s

95th percentile per-packet one-way delay: 63.723 ms

Loss rate: 0.55%

-- Flow 1:

Average throughput: 72.15 Mbit/s

95th percentile per-packet one-way delay: 63.482 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 24.34 Mbit/s

95th percentile per-packet one-way delay: 64.160 ms

Loss rate: 0.66%

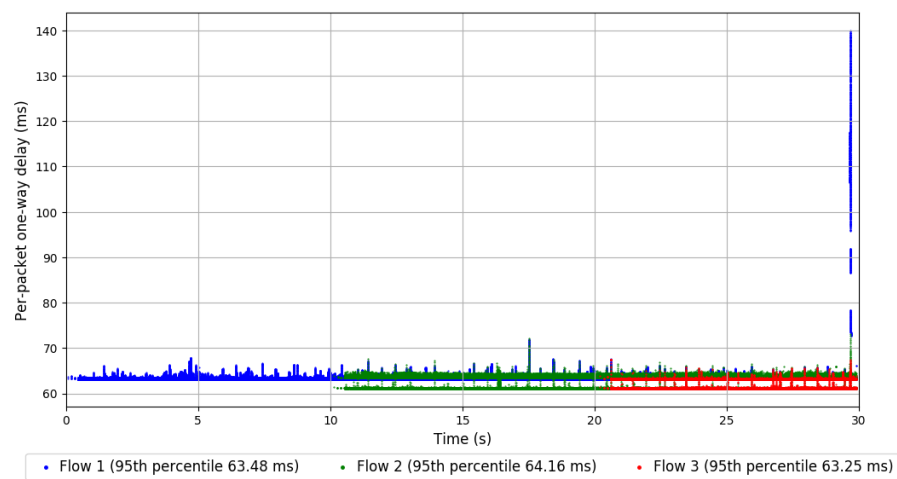
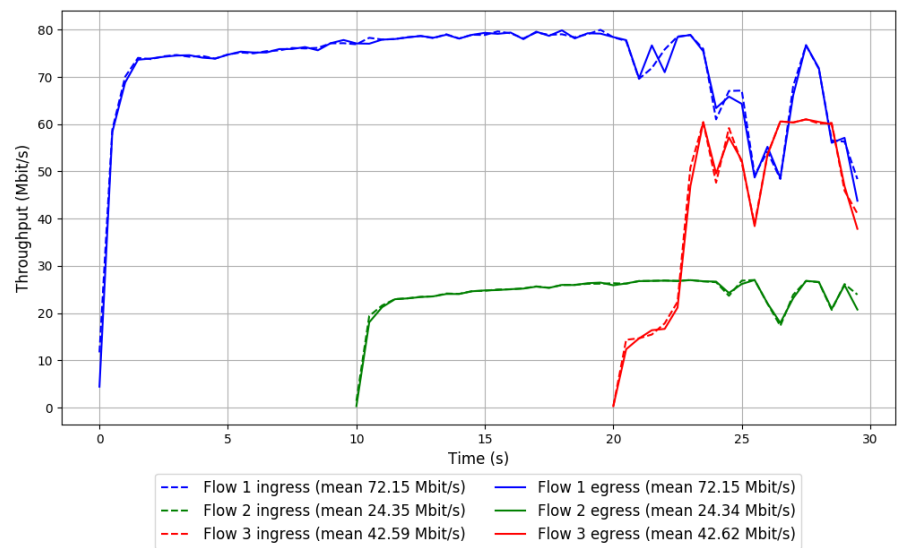
-- Flow 3:

Average throughput: 42.62 Mbit/s

95th percentile per-packet one-way delay: 63.253 ms

Loss rate: 1.16%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2017-08-12 14:15:51

End at: 2017-08-12 14:16:21

Below is generated by plot.py at 2017-08-12 17:23:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 120.04 Mbit/s

95th percentile per-packet one-way delay: 63.492 ms

Loss rate: 0.55%

-- Flow 1:

Average throughput: 101.12 Mbit/s

95th percentile per-packet one-way delay: 63.433 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 13.46 Mbit/s

95th percentile per-packet one-way delay: 64.579 ms

Loss rate: 0.93%

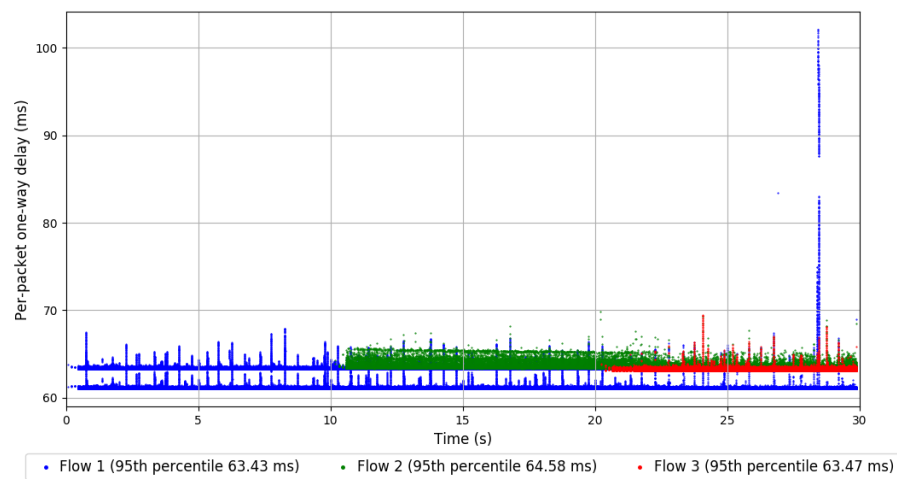
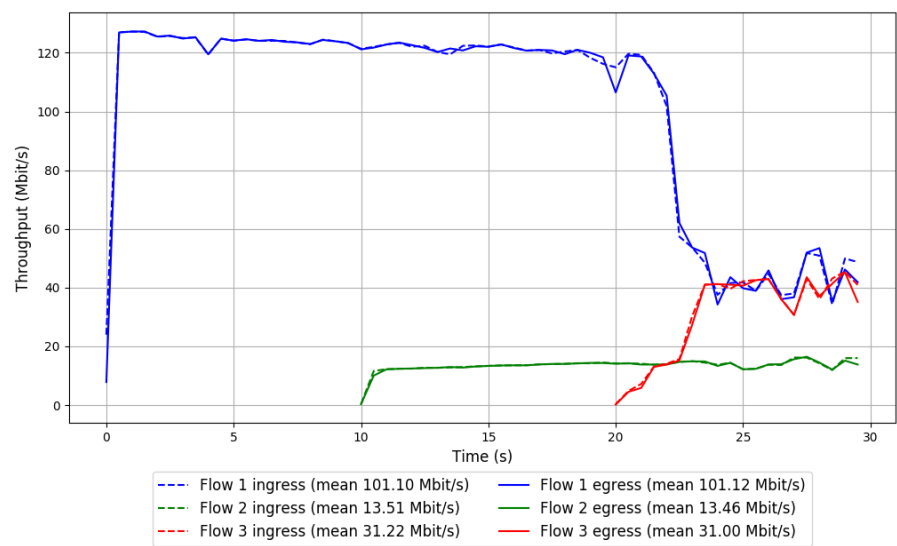
-- Flow 3:

Average throughput: 31.00 Mbit/s

95th percentile per-packet one-way delay: 63.470 ms

Loss rate: 1.97%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2017-08-12 14:26:58

End at: 2017-08-12 14:27:28

Below is generated by plot.py at 2017-08-12 17:24:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 100.80 Mbit/s

95th percentile per-packet one-way delay: 63.577 ms

Loss rate: 33.70%

-- Flow 1:

Average throughput: 65.08 Mbit/s

95th percentile per-packet one-way delay: 63.457 ms

Loss rate: 43.60%

-- Flow 2:

Average throughput: 53.60 Mbit/s

95th percentile per-packet one-way delay: 63.916 ms

Loss rate: 0.43%

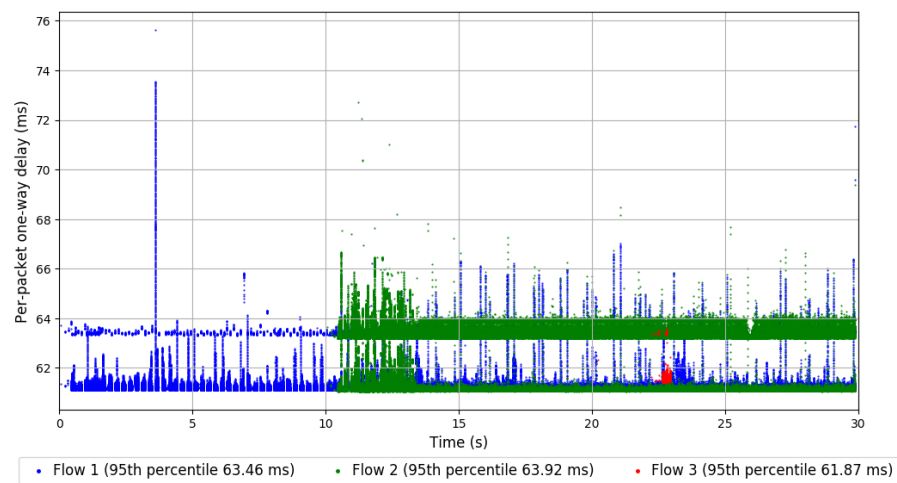
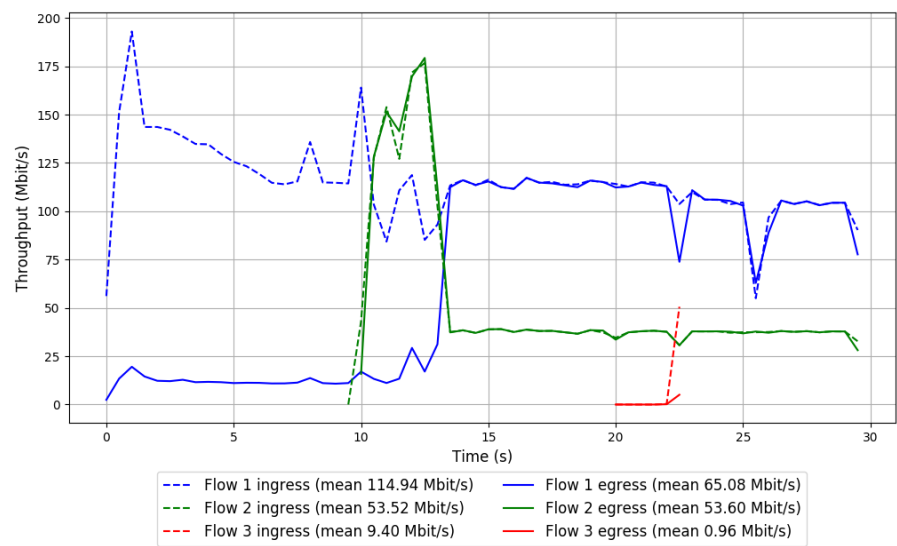
-- Flow 3:

Average throughput: 0.96 Mbit/s

95th percentile per-packet one-way delay: 61.868 ms

Loss rate: 89.76%

Run 10: Report of Copa — Data Link

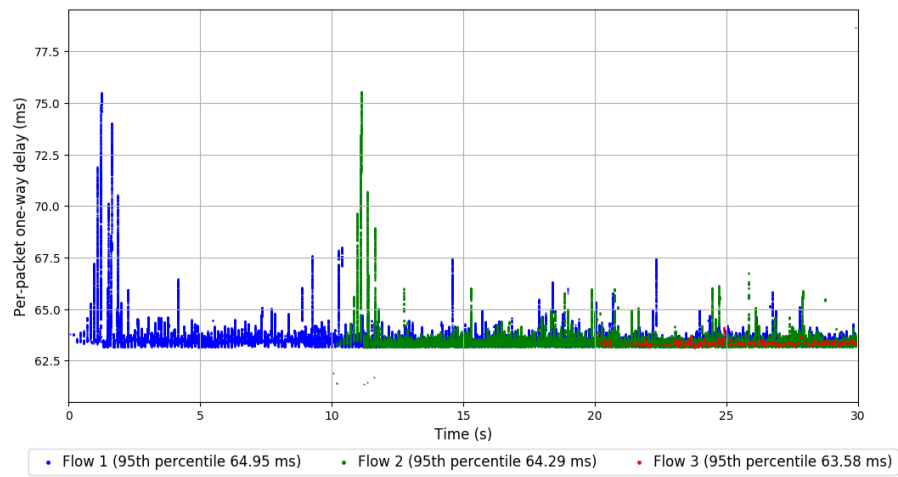
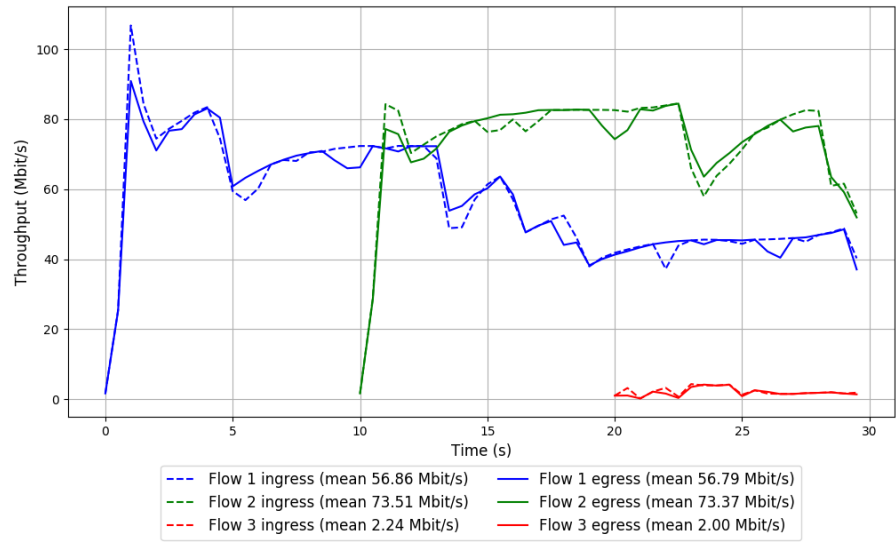


```
Run 1: Statistics of TCP Cubic

Start at: 2017-08-12 12:42:03
End at: 2017-08-12 12:42:33

# Below is generated by plot.py at 2017-08-12 17:24:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 106.15 Mbit/s
95th percentile per-packet one-way delay: 64.685 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 56.79 Mbit/s
95th percentile per-packet one-way delay: 64.948 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 73.37 Mbit/s
95th percentile per-packet one-way delay: 64.294 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 2.00 Mbit/s
95th percentile per-packet one-way delay: 63.579 ms
Loss rate: 11.94%
```

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

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

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

Below is generated by plot.py at 2017-08-12 17:24:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 56.90 Mbit/s

95th percentile per-packet one-way delay: 64.369 ms

Loss rate: 1.12%

-- Flow 1:

Average throughput: 53.20 Mbit/s

95th percentile per-packet one-way delay: 64.417 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 3.06 Mbit/s

95th percentile per-packet one-way delay: 63.630 ms

Loss rate: 3.37%

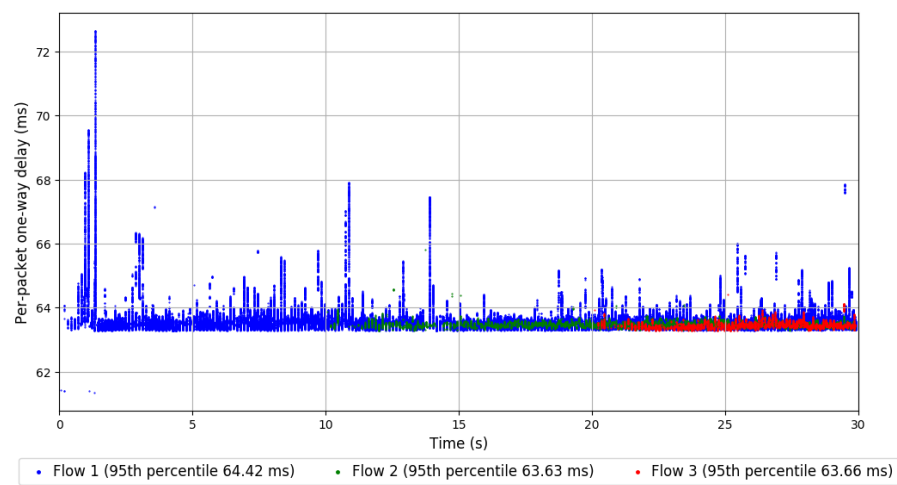
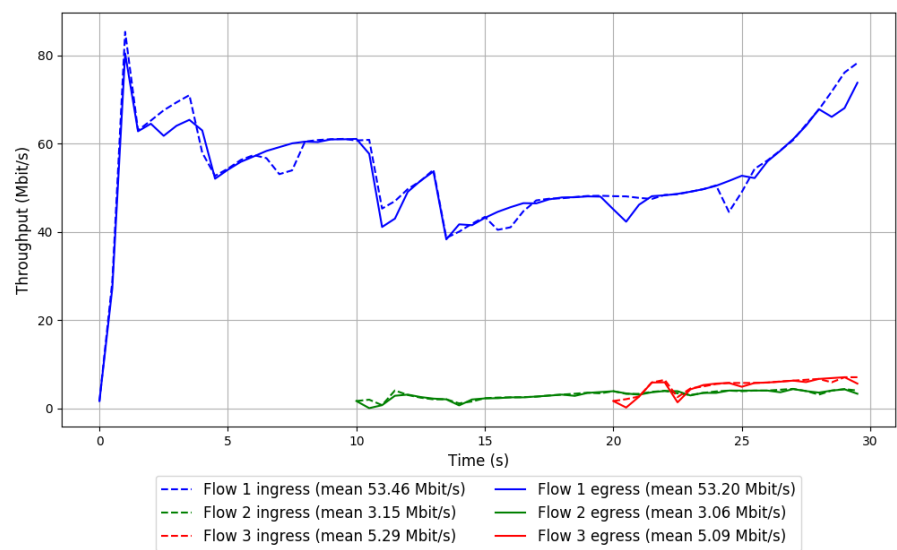
-- Flow 3:

Average throughput: 5.09 Mbit/s

95th percentile per-packet one-way delay: 63.659 ms

Loss rate: 5.17%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2017-08-12 13:05:31

End at: 2017-08-12 13:06:01

Below is generated by plot.py at 2017-08-12 17:24:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.98 Mbit/s

95th percentile per-packet one-way delay: 65.608 ms

Loss rate: 0.78%

-- Flow 1:

Average throughput: 33.88 Mbit/s

95th percentile per-packet one-way delay: 64.255 ms

Loss rate: 0.54%

-- Flow 2:

Average throughput: 85.07 Mbit/s

95th percentile per-packet one-way delay: 67.080 ms

Loss rate: 0.86%

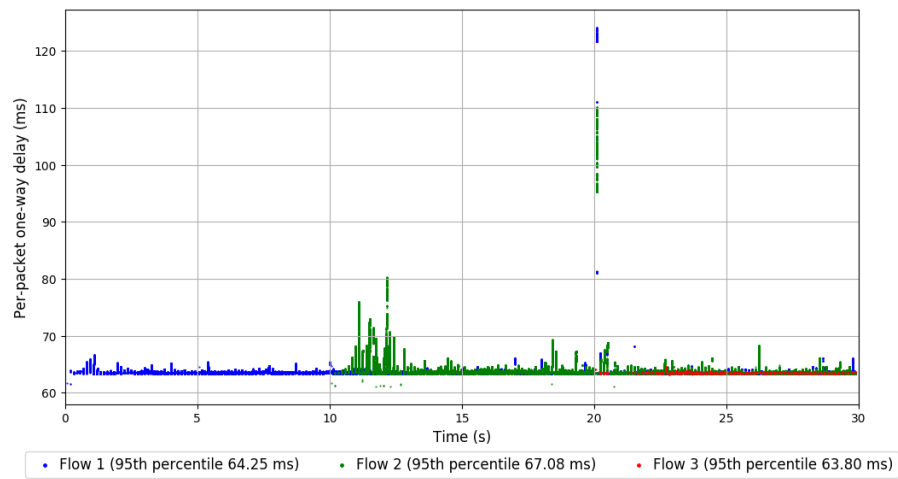
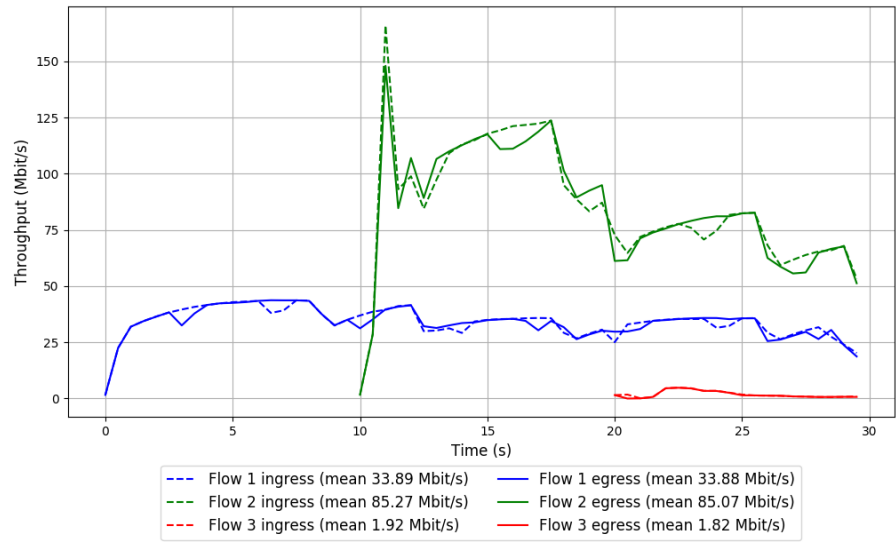
-- Flow 3:

Average throughput: 1.82 Mbit/s

95th percentile per-packet one-way delay: 63.805 ms

Loss rate: 6.68%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2017-08-12 13:17:02

End at: 2017-08-12 13:17:32

Below is generated by plot.py at 2017-08-12 17:24:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 65.84 Mbit/s

95th percentile per-packet one-way delay: 65.007 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 3.26 Mbit/s

95th percentile per-packet one-way delay: 63.686 ms

Loss rate: 4.06%

-- Flow 2:

Average throughput: 83.21 Mbit/s

95th percentile per-packet one-way delay: 65.063 ms

Loss rate: 0.94%

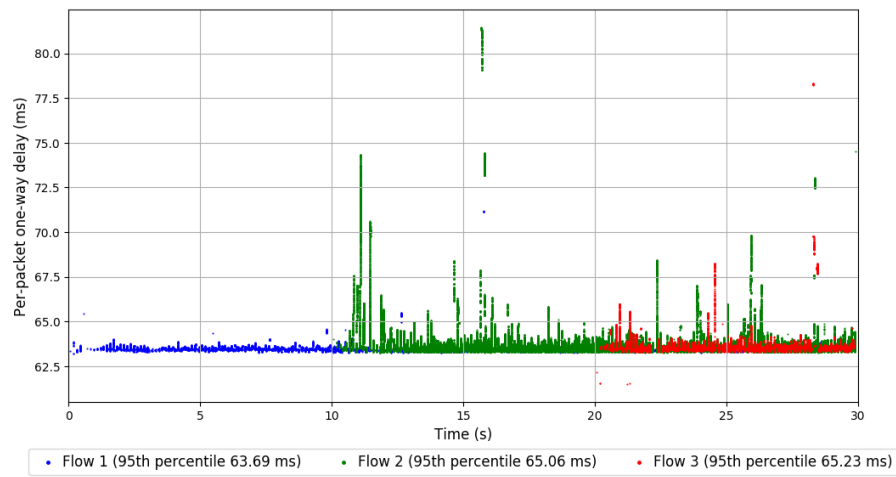
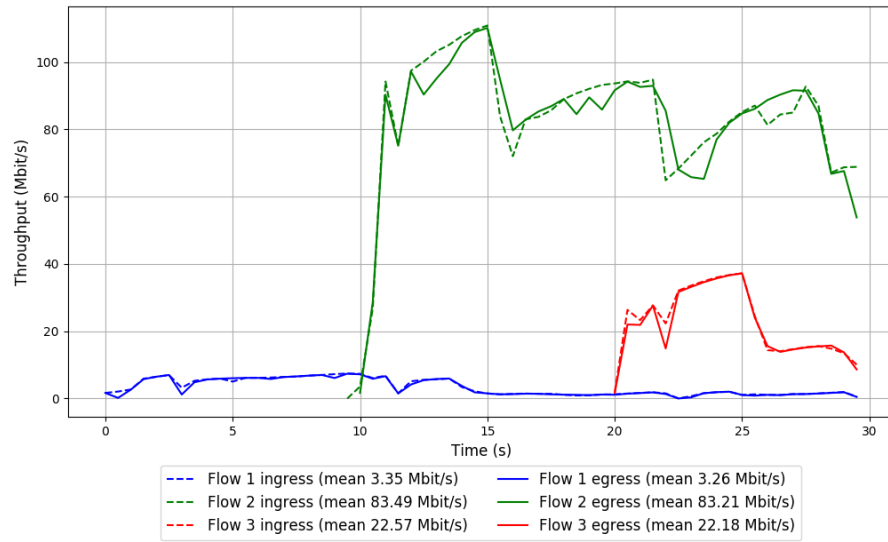
-- Flow 3:

Average throughput: 22.18 Mbit/s

95th percentile per-packet one-way delay: 65.235 ms

Loss rate: 3.30%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2017-08-12 13:29:12

End at: 2017-08-12 13:29:42

Below is generated by plot.py at 2017-08-12 17:24:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 81.06 Mbit/s

95th percentile per-packet one-way delay: 67.513 ms

Loss rate: 2.46%

-- Flow 1:

Average throughput: 54.45 Mbit/s

95th percentile per-packet one-way delay: 67.023 ms

Loss rate: 1.70%

-- Flow 2:

Average throughput: 1.05 Mbit/s

95th percentile per-packet one-way delay: 63.807 ms

Loss rate: 14.48%

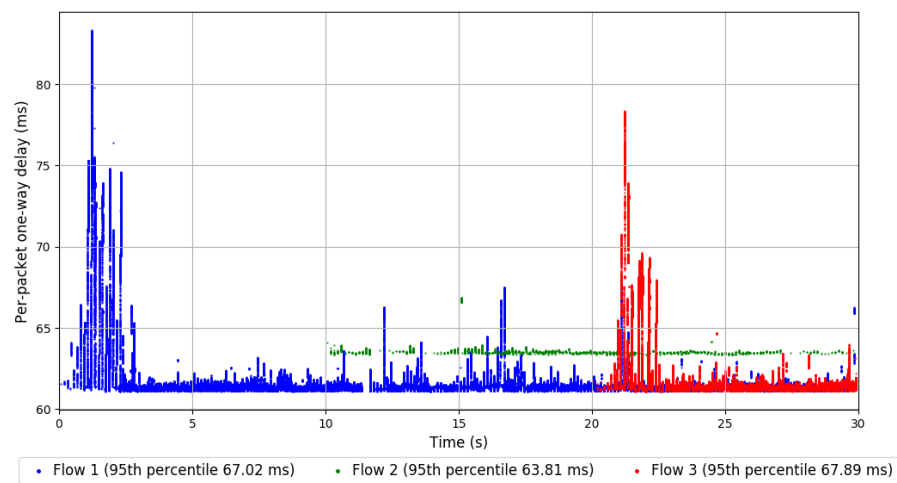
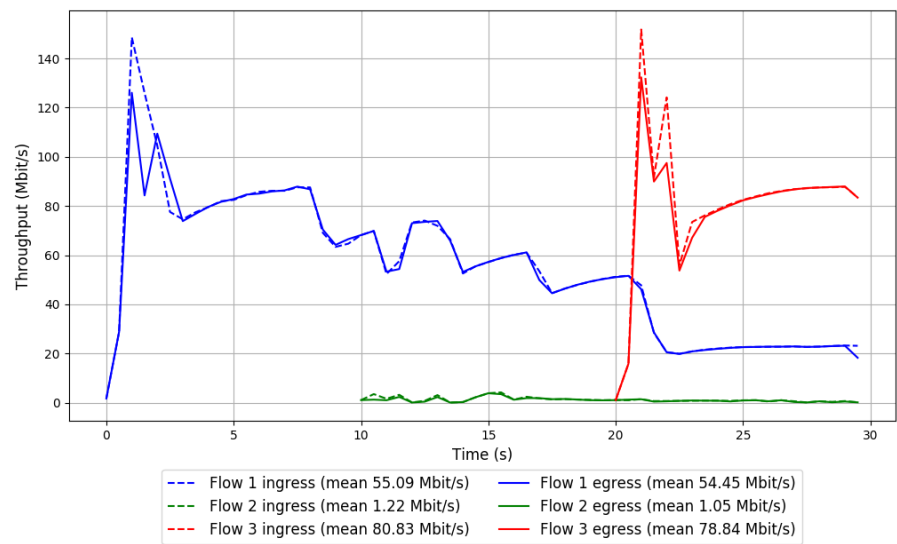
-- Flow 3:

Average throughput: 78.84 Mbit/s

95th percentile per-packet one-way delay: 67.889 ms

Loss rate: 3.67%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2017-08-12 13:40:55

End at: 2017-08-12 13:41:25

Below is generated by plot.py at 2017-08-12 17:24:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 57.73 Mbit/s

95th percentile per-packet one-way delay: 63.286 ms

Loss rate: 1.06%

-- Flow 1:

Average throughput: 34.94 Mbit/s

95th percentile per-packet one-way delay: 62.333 ms

Loss rate: 0.58%

-- Flow 2:

Average throughput: 1.94 Mbit/s

95th percentile per-packet one-way delay: 63.718 ms

Loss rate: 8.47%

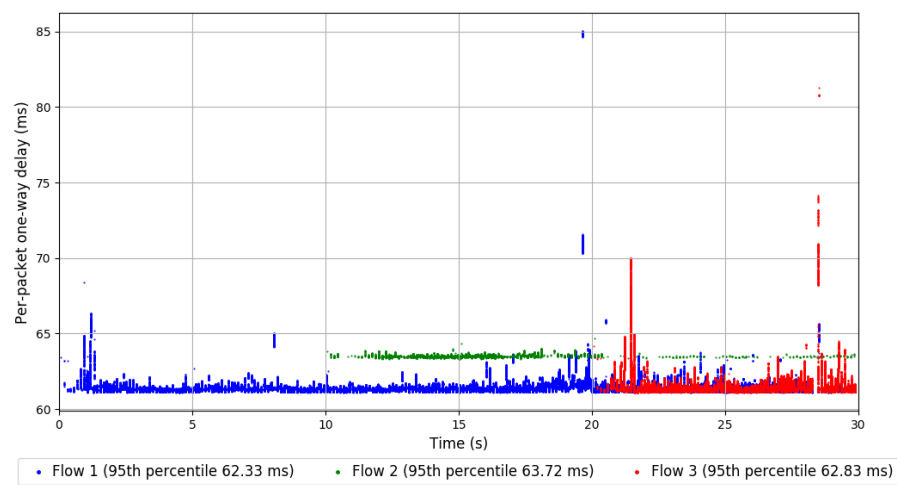
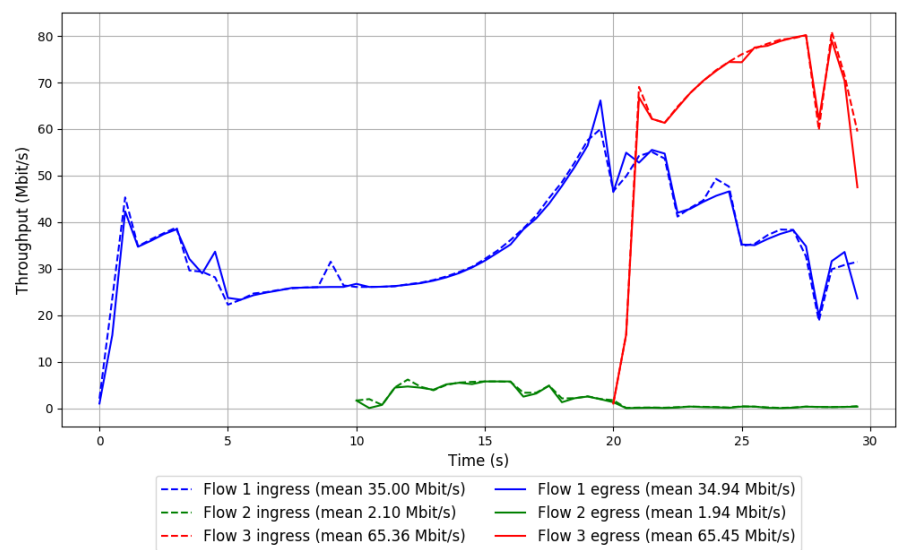
-- Flow 3:

Average throughput: 65.45 Mbit/s

95th percentile per-packet one-way delay: 62.828 ms

Loss rate: 1.35%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2017-08-12 13:52:19

End at: 2017-08-12 13:52:49

Below is generated by plot.py at 2017-08-12 17:25:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 63.58 Mbit/s

95th percentile per-packet one-way delay: 63.877 ms

Loss rate: 1.38%

-- Flow 1:

Average throughput: 3.00 Mbit/s

95th percentile per-packet one-way delay: 63.827 ms

Loss rate: 4.64%

-- Flow 2:

Average throughput: 50.55 Mbit/s

95th percentile per-packet one-way delay: 63.023 ms

Loss rate: 0.67%

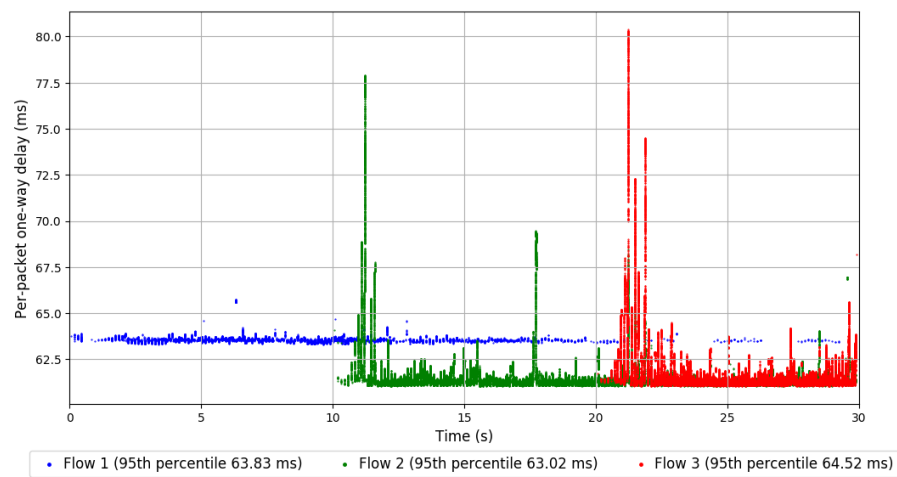
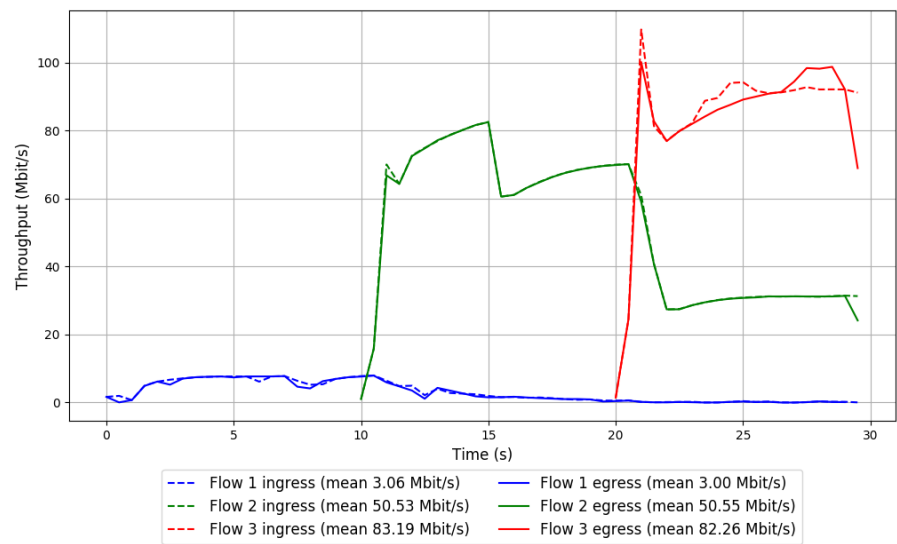
-- Flow 3:

Average throughput: 82.26 Mbit/s

95th percentile per-packet one-way delay: 64.521 ms

Loss rate: 1.89%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2017-08-12 14:03:58

End at: 2017-08-12 14:04:28

Below is generated by plot.py at 2017-08-12 17:25:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 55.17 Mbit/s

95th percentile per-packet one-way delay: 63.507 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 2.63 Mbit/s

95th percentile per-packet one-way delay: 63.808 ms

Loss rate: 2.92%

-- Flow 2:

Average throughput: 59.38 Mbit/s

95th percentile per-packet one-way delay: 62.379 ms

Loss rate: 0.73%

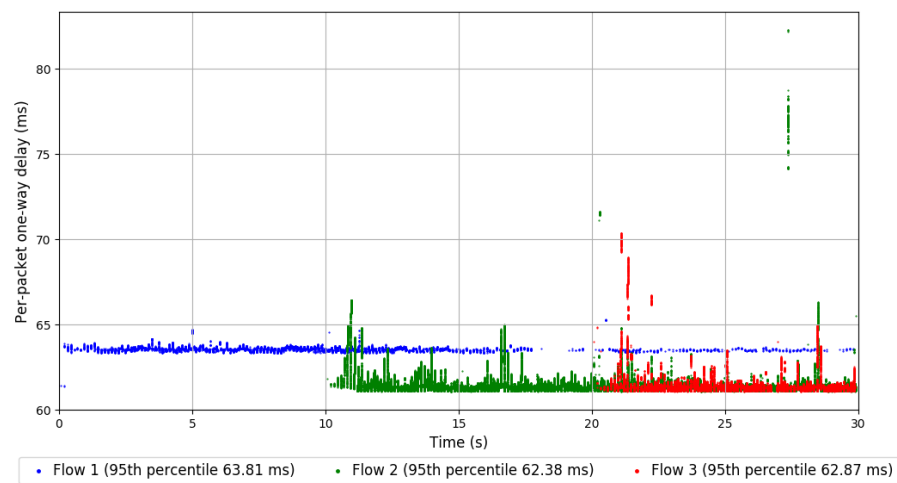
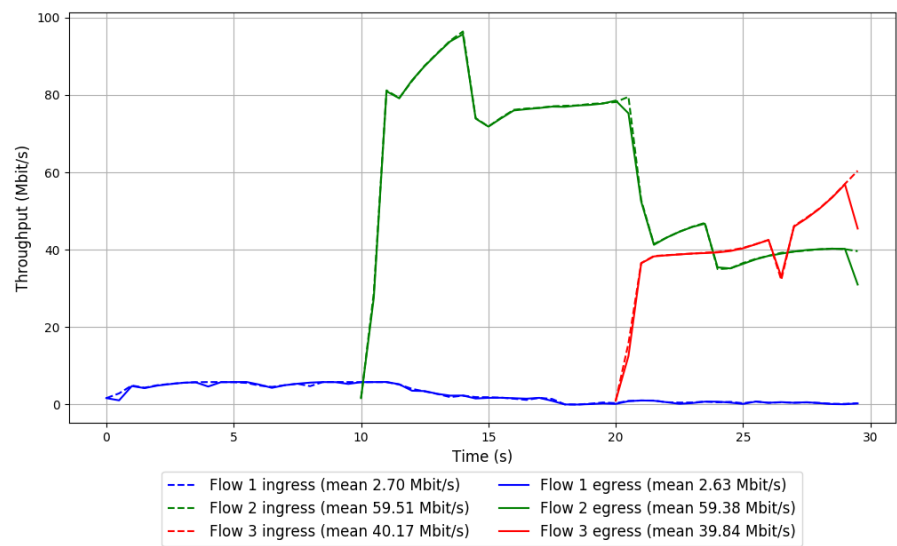
-- Flow 3:

Average throughput: 39.84 Mbit/s

95th percentile per-packet one-way delay: 62.866 ms

Loss rate: 2.36%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2017-08-12 14:15:09

End at: 2017-08-12 14:15:39

Below is generated by plot.py at 2017-08-12 17:25:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 30.18 Mbit/s

95th percentile per-packet one-way delay: 63.656 ms

Loss rate: 2.36%

-- Flow 1:

Average throughput: 4.98 Mbit/s

95th percentile per-packet one-way delay: 63.753 ms

Loss rate: 3.06%

-- Flow 2:

Average throughput: 3.23 Mbit/s

95th percentile per-packet one-way delay: 63.750 ms

Loss rate: 7.26%

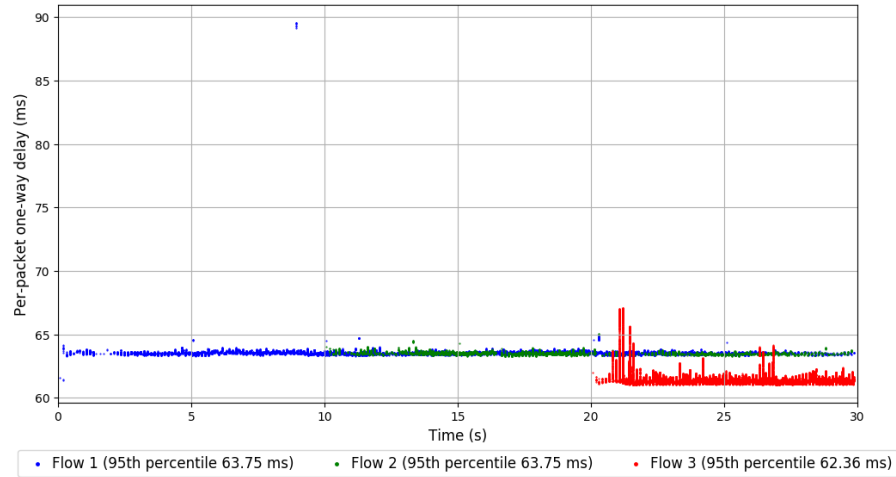
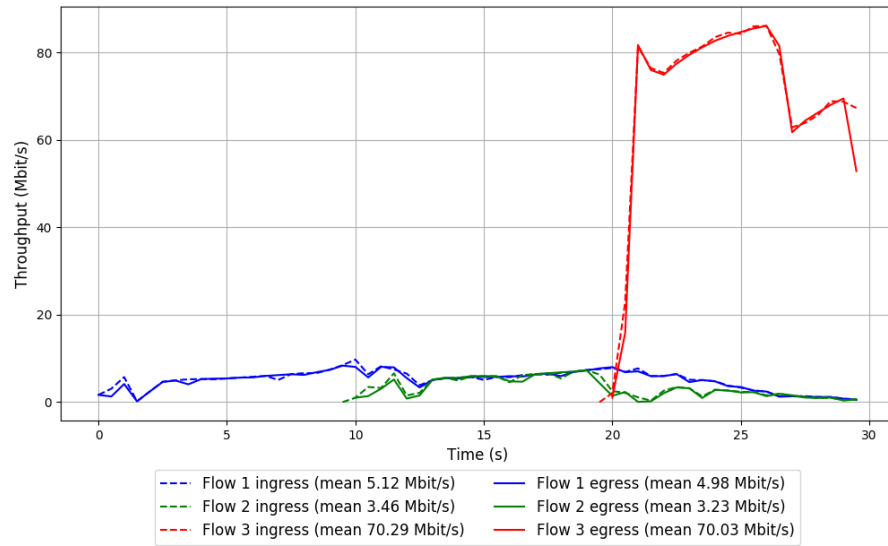
-- Flow 3:

Average throughput: 70.03 Mbit/s

95th percentile per-packet one-way delay: 62.361 ms

Loss rate: 1.73%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

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

End at: 2017-08-12 14:26:44

Below is generated by plot.py at 2017-08-12 17:25:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 54.38 Mbit/s

95th percentile per-packet one-way delay: 63.512 ms

Loss rate: 1.70%

-- Flow 1:

Average throughput: 2.21 Mbit/s

95th percentile per-packet one-way delay: 63.887 ms

Loss rate: 6.29%

-- Flow 2:

Average throughput: 39.33 Mbit/s

95th percentile per-packet one-way delay: 61.686 ms

Loss rate: 1.20%

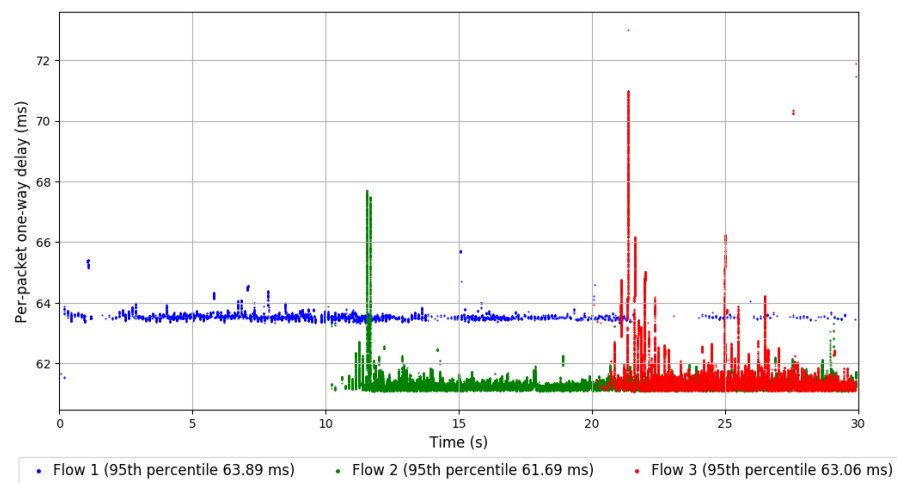
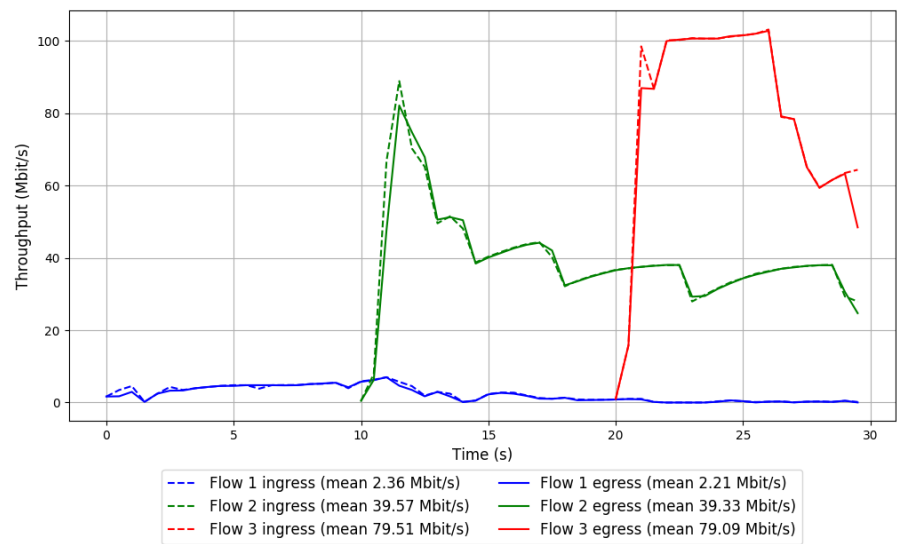
-- Flow 3:

Average throughput: 79.09 Mbit/s

95th percentile per-packet one-way delay: 63.060 ms

Loss rate: 1.78%

Run 10: Report of TCP Cubic — Data Link

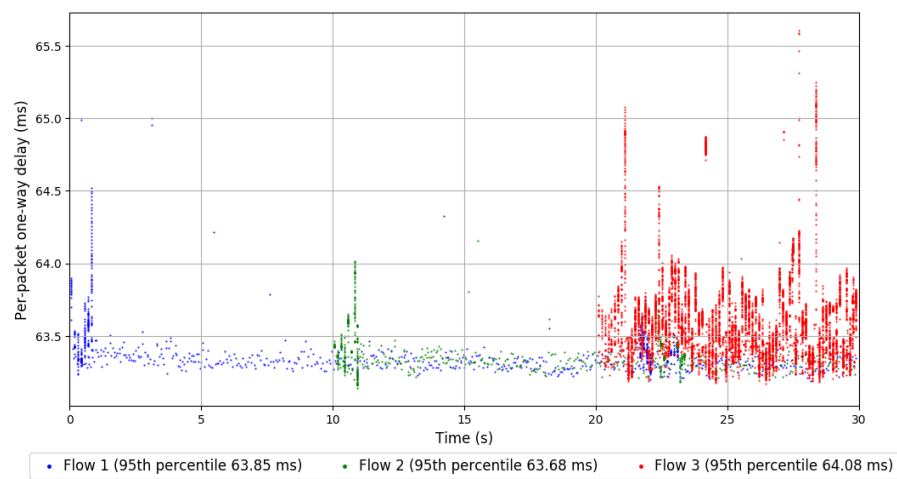
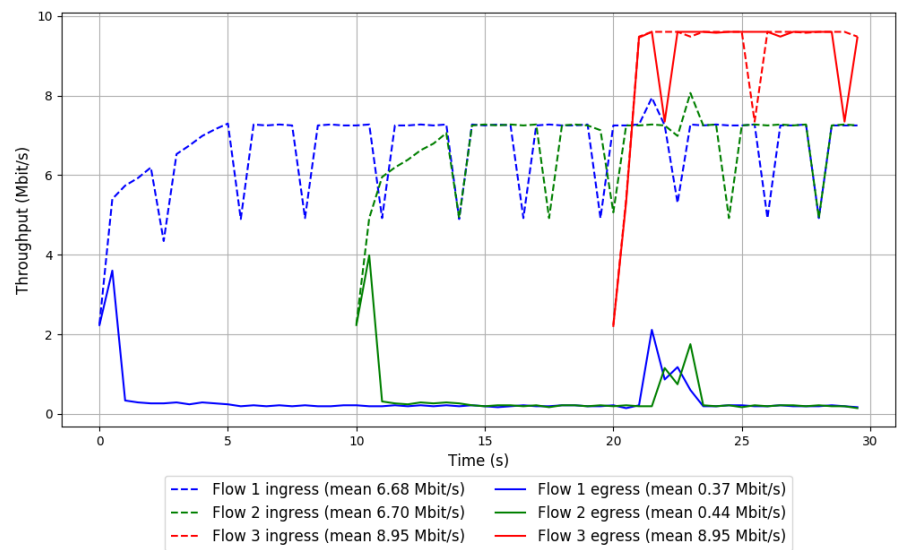


```
Run 1: Statistics of KohoCC

Start at: 2017-08-12 12:35:47
End at: 2017-08-12 12:36:18

# Below is generated by plot.py at 2017-08-12 17:25:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.60 Mbit/s
95th percentile per-packet one-way delay: 64.021 ms
Loss rate: 74.58%
-- Flow 1:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 63.851 ms
Loss rate: 94.49%
-- Flow 2:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 63.678 ms
Loss rate: 93.49%
-- Flow 3:
Average throughput: 8.95 Mbit/s
95th percentile per-packet one-way delay: 64.084 ms
Loss rate: 1.35%
```


Run 1: Report of KohoCC — Data Link

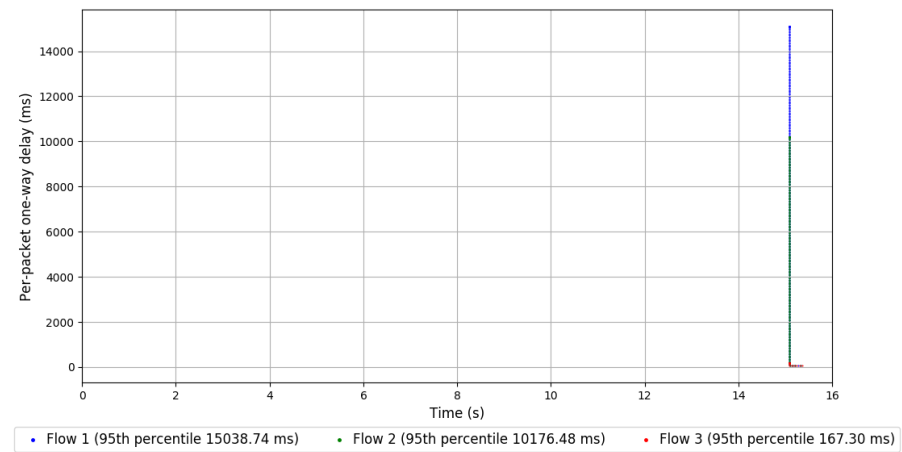
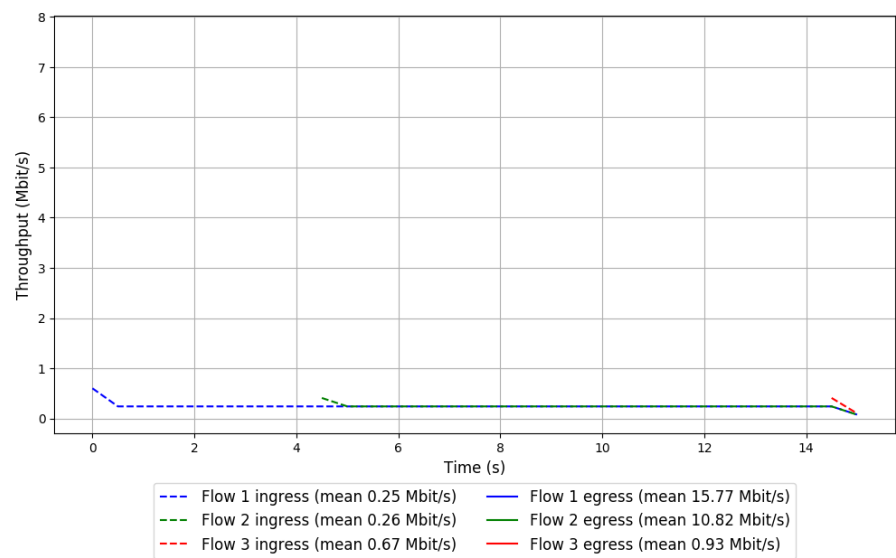


Run 2: Statistics of KohoCC

Start at: 2017-08-12 12:47:18

End at: 2017-08-12 12:47:48

Run 2: Report of KohoCC — Data Link



Run 3: Statistics of KohoCC

Start at: 2017-08-12 12:59:00

End at: 2017-08-12 12:59:30

Below is generated by plot.py at 2017-08-12 17:25:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 18.22 Mbit/s

95th percentile per-packet one-way delay: 64.149 ms

Loss rate: 0.66%

-- Flow 1:

Average throughput: 9.23 Mbit/s

95th percentile per-packet one-way delay: 64.141 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 9.10 Mbit/s

95th percentile per-packet one-way delay: 64.164 ms

Loss rate: 0.67%

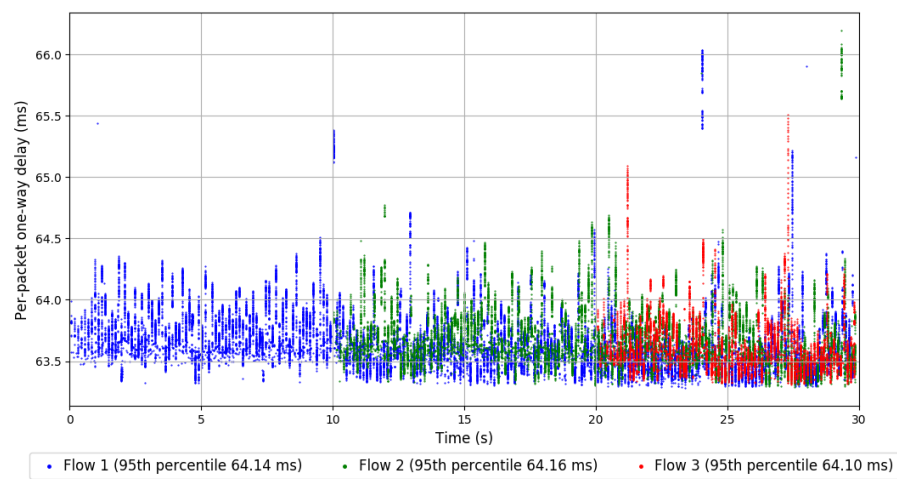
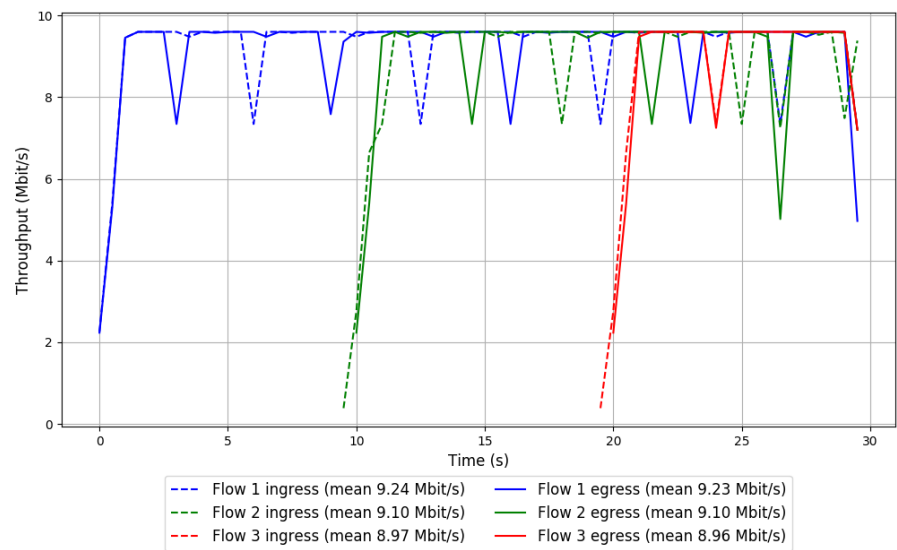
-- Flow 3:

Average throughput: 8.96 Mbit/s

95th percentile per-packet one-way delay: 64.103 ms

Loss rate: 1.35%

Run 3: Report of KohoCC — Data Link



Run 4: Statistics of KohoCC

Start at: 2017-08-12 13:10:52

End at: 2017-08-12 13:11:22

Below is generated by plot.py at 2017-08-12 17:25:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 9.75 Mbit/s

95th percentile per-packet one-way delay: 64.101 ms

Loss rate: 38.03%

-- Flow 1:

Average throughput: 9.23 Mbit/s

95th percentile per-packet one-way delay: 64.109 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 0.53 Mbit/s

95th percentile per-packet one-way delay: 63.744 ms

Loss rate: 92.05%

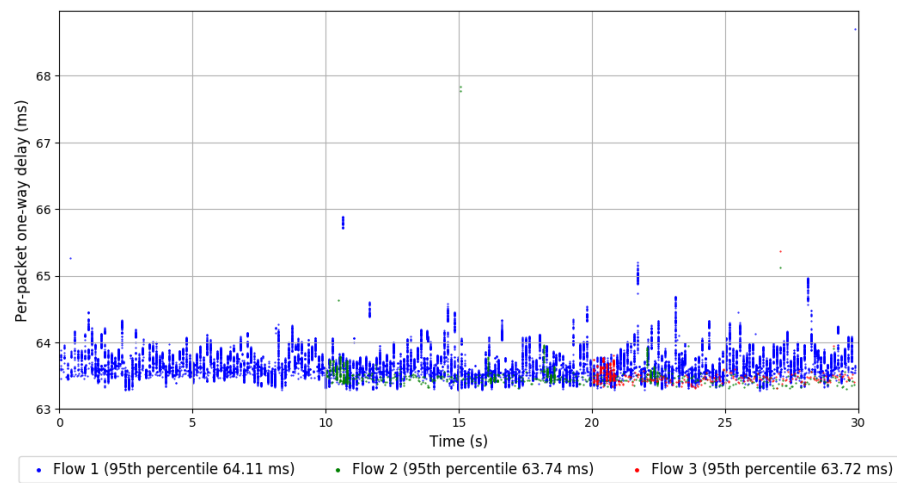
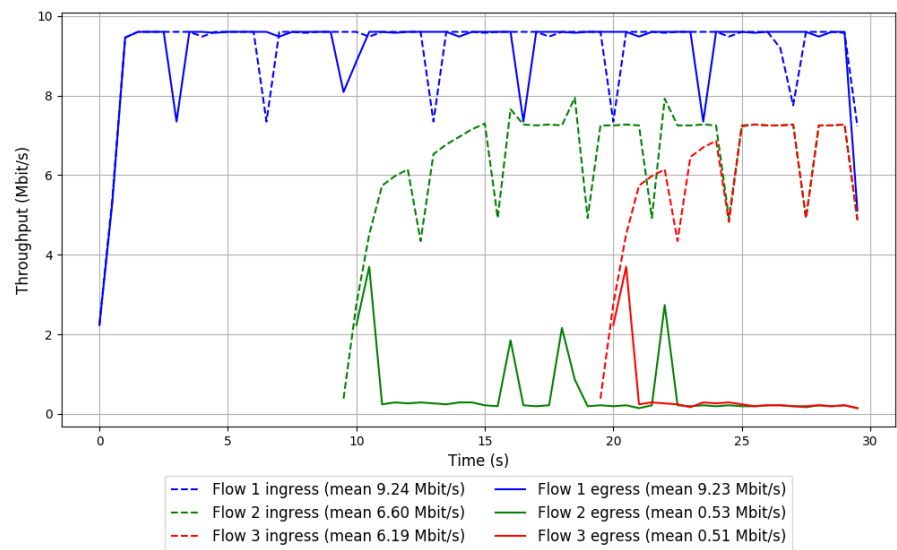
-- Flow 3:

Average throughput: 0.51 Mbit/s

95th percentile per-packet one-way delay: 63.719 ms

Loss rate: 91.85%

Run 4: Report of KohoCC — Data Link



Run 5: Statistics of KohoCC

Start at: 2017-08-12 13:22:31

End at: 2017-08-12 13:23:01

Below is generated by plot.py at 2017-08-12 17:25:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.73 Mbit/s

95th percentile per-packet one-way delay: 62.498 ms

Loss rate: 23.53%

-- Flow 1:

Average throughput: 5.49 Mbit/s

95th percentile per-packet one-way delay: 4613.337 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 9.46 Mbit/s

95th percentile per-packet one-way delay: 61.816 ms

Loss rate: 0.70%

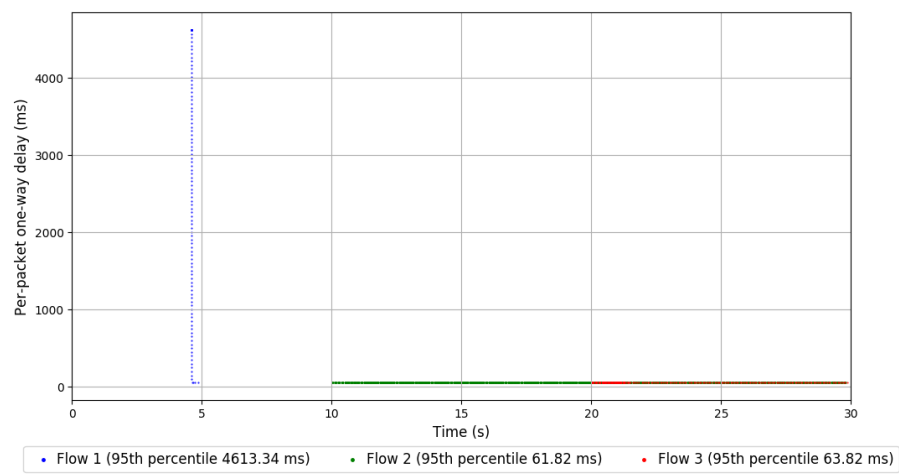
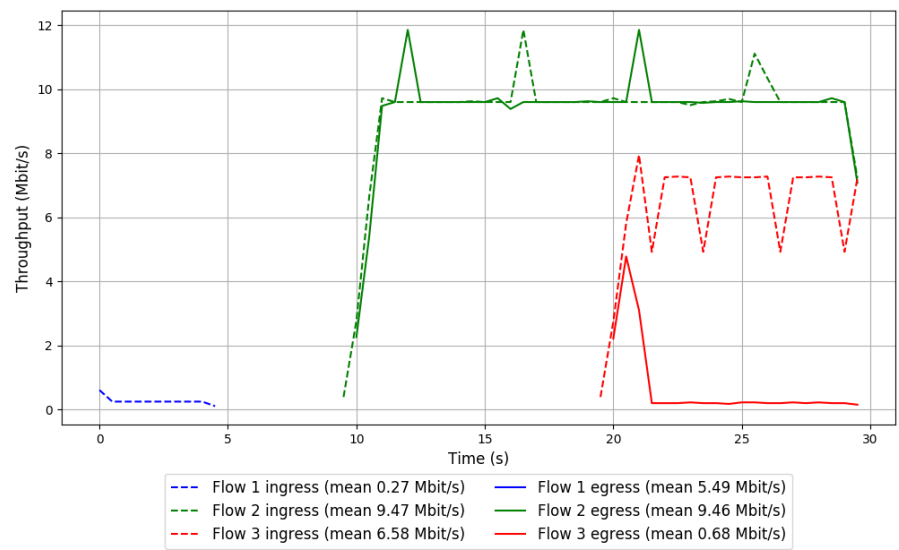
-- Flow 3:

Average throughput: 0.68 Mbit/s

95th percentile per-packet one-way delay: 63.820 ms

Loss rate: 89.77%

Run 5: Report of KohoCC — Data Link



Run 6: Statistics of KohoCC

Start at: 2017-08-12 13:34:25

End at: 2017-08-12 13:34:55

Below is generated by plot.py at 2017-08-12 17:25:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.57 Mbit/s

95th percentile per-packet one-way delay: 62.071 ms

Loss rate: 24.74%

-- Flow 1:

Average throughput: 9.43 Mbit/s

95th percentile per-packet one-way delay: 61.992 ms

Loss rate: 0.48%

-- Flow 2:

Average throughput: 0.35 Mbit/s

95th percentile per-packet one-way delay: 63.743 ms

Loss rate: 94.49%

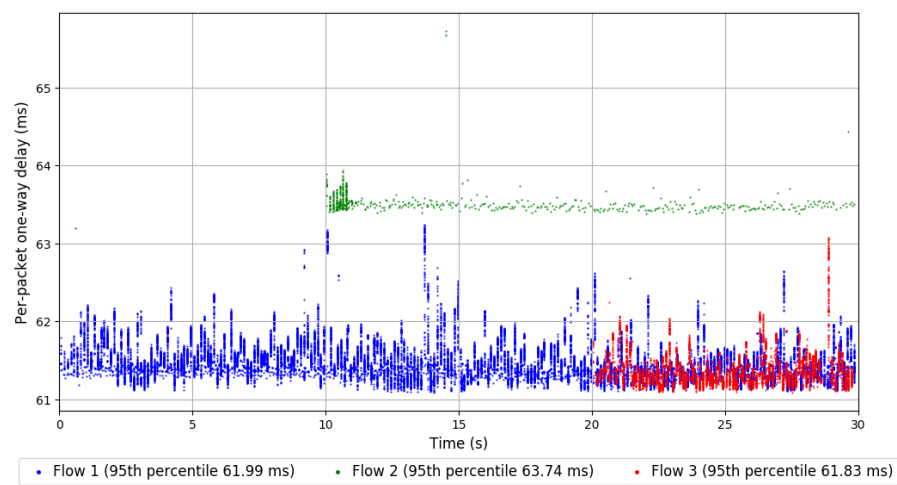
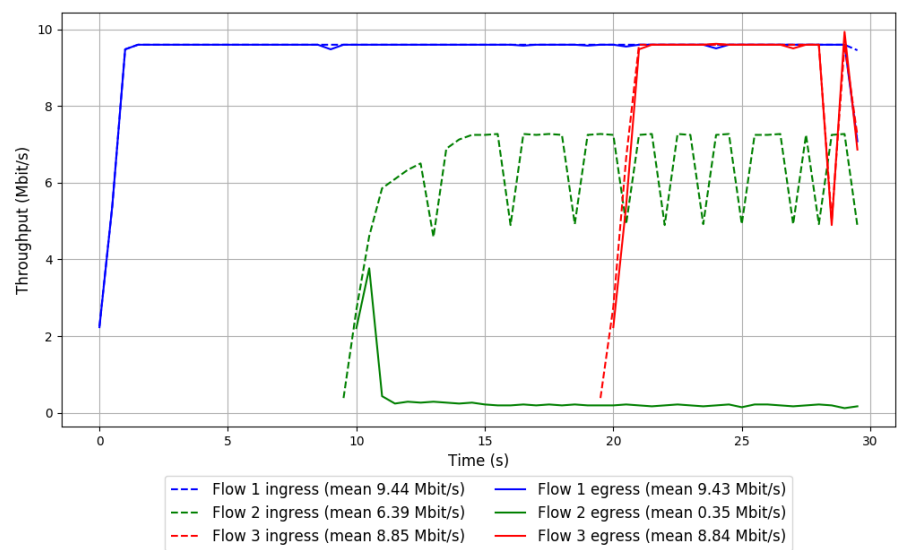
-- Flow 3:

Average throughput: 8.84 Mbit/s

95th percentile per-packet one-way delay: 61.825 ms

Loss rate: 1.42%

Run 6: Report of KohoCC — Data Link



Run 7: Statistics of KohoCC

Start at: 2017-08-12 13:46:23

End at: 2017-08-12 13:46:53

Below is generated by plot.py at 2017-08-12 17:25:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 9.49 Mbit/s

95th percentile per-packet one-way delay: 62.013 ms

Loss rate: 40.27%

-- Flow 1:

Average throughput: 0.30 Mbit/s

95th percentile per-packet one-way delay: 63.673 ms

Loss rate: 95.43%

-- Flow 2:

Average throughput: 9.32 Mbit/s

95th percentile per-packet one-way delay: 61.644 ms

Loss rate: 0.65%

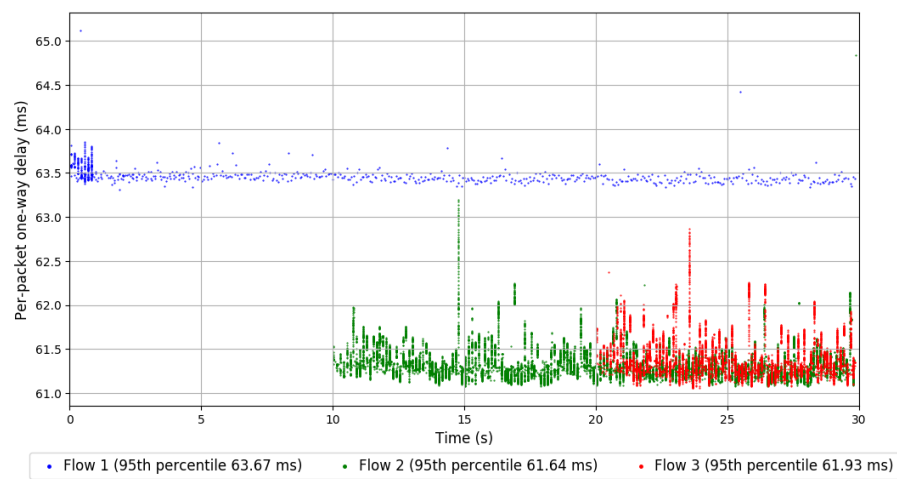
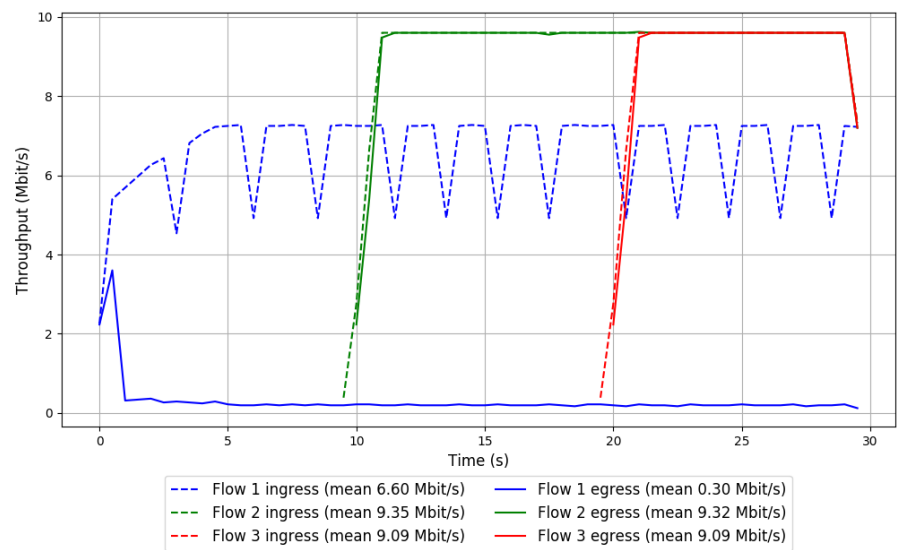
-- Flow 3:

Average throughput: 9.09 Mbit/s

95th percentile per-packet one-way delay: 61.926 ms

Loss rate: 1.33%

Run 7: Report of KohoCC — Data Link



Run 8: Statistics of KohoCC

Start at: 2017-08-12 13:57:41

End at: 2017-08-12 13:58:11

Below is generated by plot.py at 2017-08-12 17:25:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 9.34 Mbit/s

95th percentile per-packet one-way delay: 61.721 ms

Loss rate: 0.86%

-- Flow 1:

Average throughput: 1.08 Mbit/s

95th percentile per-packet one-way delay: 240.422 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 9.46 Mbit/s

95th percentile per-packet one-way delay: 61.737 ms

Loss rate: 0.64%

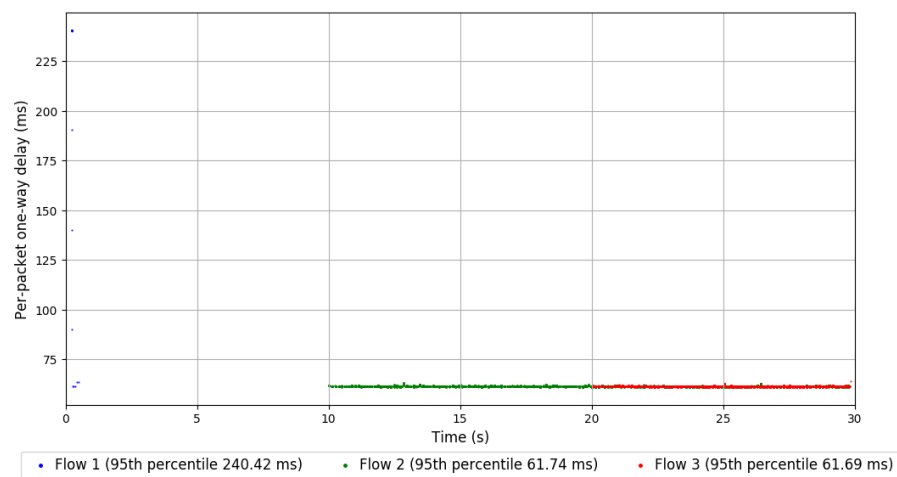
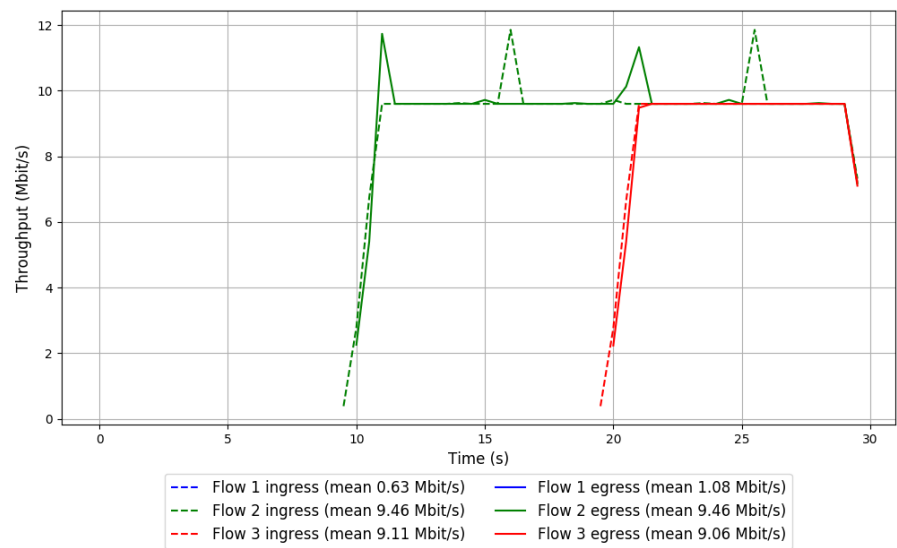
-- Flow 3:

Average throughput: 9.06 Mbit/s

95th percentile per-packet one-way delay: 61.687 ms

Loss rate: 1.32%

Run 8: Report of KohoCC — Data Link

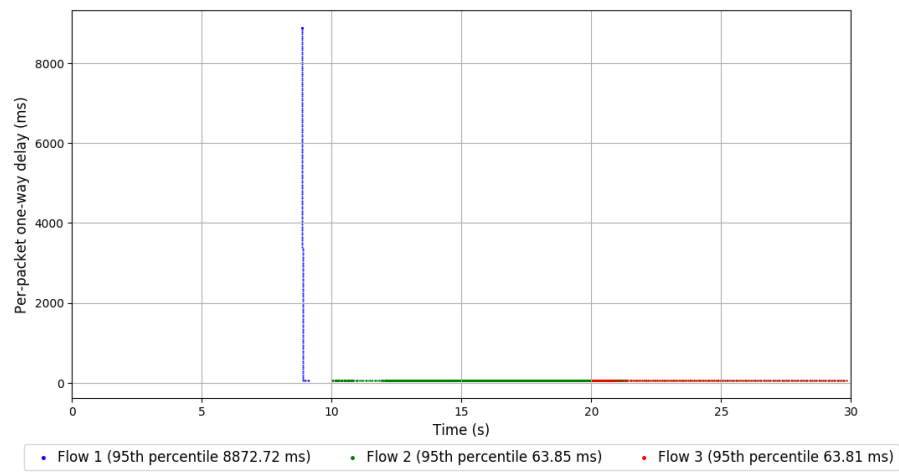
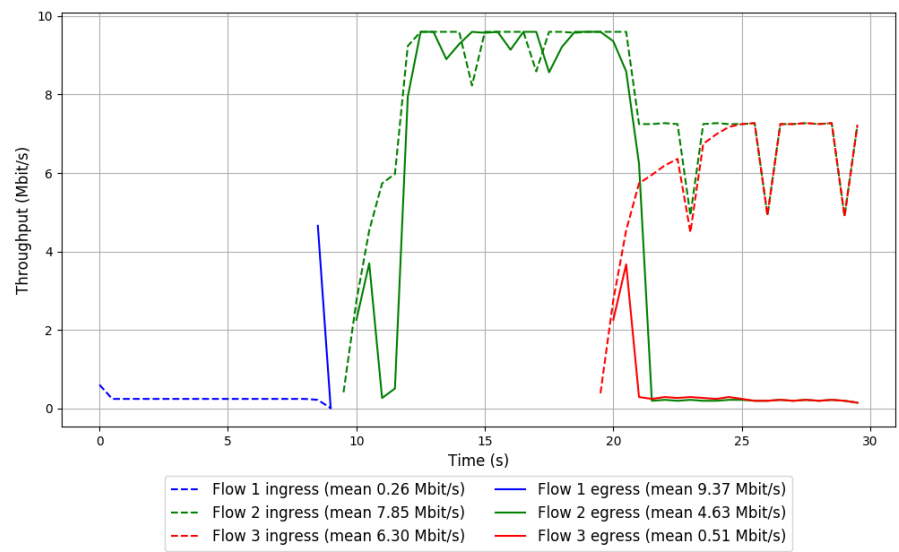


Run 9: Statistics of KohoCC

Start at: 2017-08-12 14:09:17

End at: 2017-08-12 14:09:47

Run 9: Report of KohoCC — Data Link



Run 10: Statistics of KohoCC

Start at: 2017-08-12 14:20:29

End at: 2017-08-12 14:20:59

Below is generated by plot.py at 2017-08-12 17:25:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.09 Mbit/s

95th percentile per-packet one-way delay: 63.594 ms

Loss rate: 53.07%

-- Flow 1:

Average throughput: 0.37 Mbit/s

95th percentile per-packet one-way delay: 64.066 ms

Loss rate: 94.49%

-- Flow 2:

Average throughput: 9.33 Mbit/s

95th percentile per-packet one-way delay: 61.881 ms

Loss rate: 0.66%

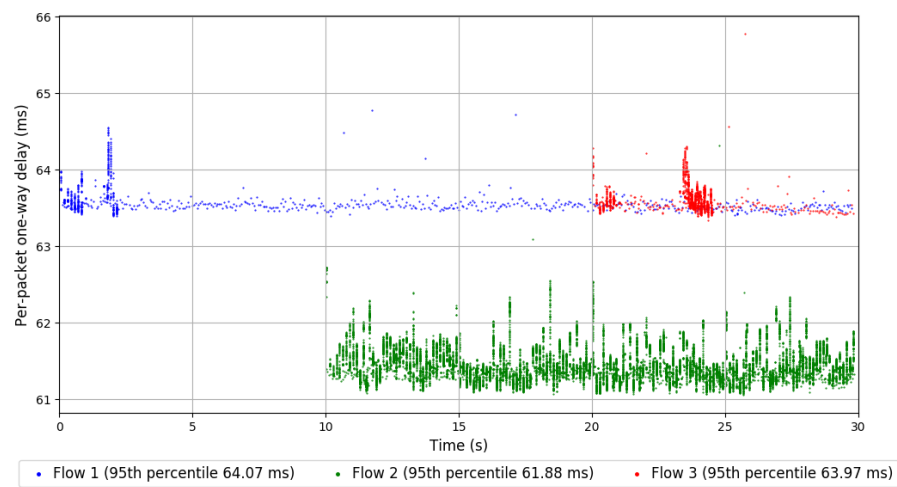
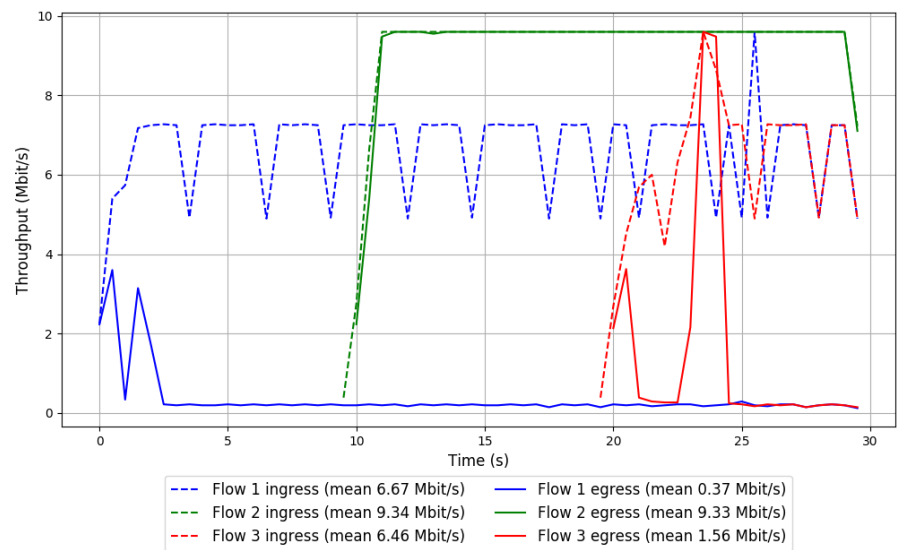
-- Flow 3:

Average throughput: 1.56 Mbit/s

95th percentile per-packet one-way delay: 63.973 ms

Loss rate: 76.34%

Run 10: Report of KohoCC — Data Link

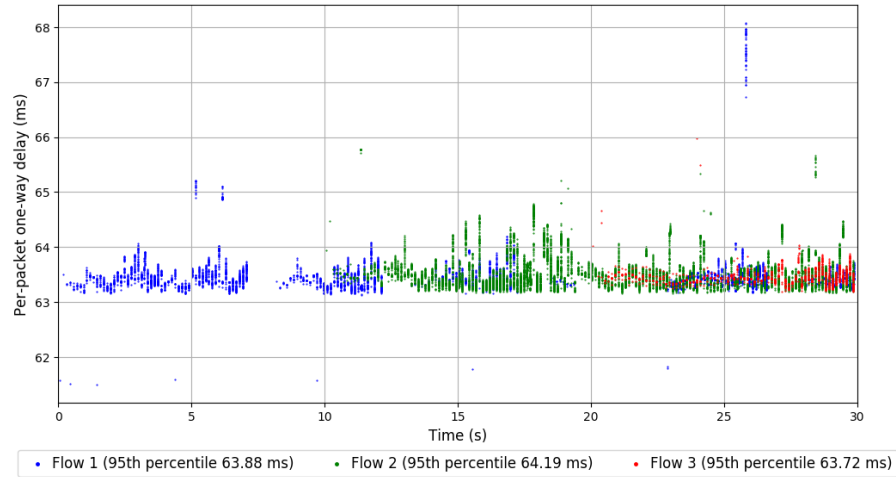
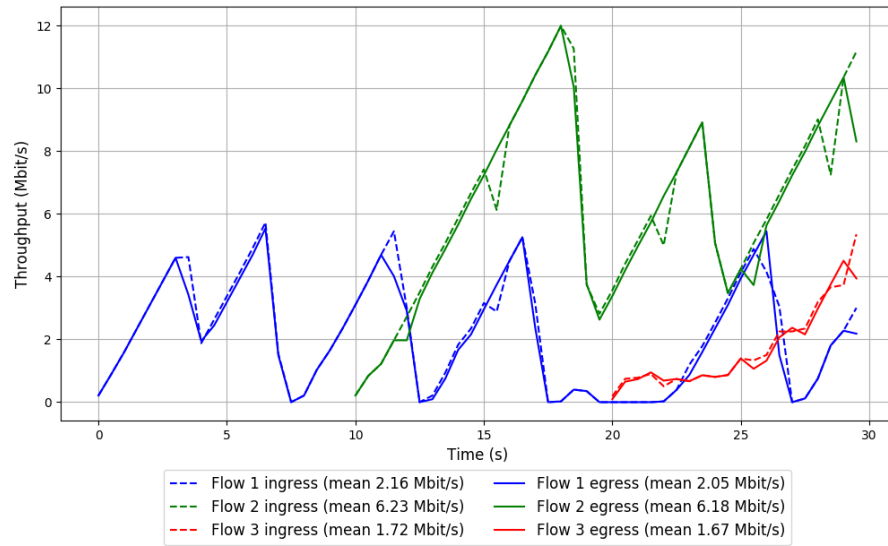


```
Run 1: Statistics of LEDBAT

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

# Below is generated by plot.py at 2017-08-12 17:25:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.70 Mbit/s
95th percentile per-packet one-way delay: 64.091 ms
Loss rate: 2.85%
-- Flow 1:
Average throughput: 2.05 Mbit/s
95th percentile per-packet one-way delay: 63.883 ms
Loss rate: 5.27%
-- Flow 2:
Average throughput: 6.18 Mbit/s
95th percentile per-packet one-way delay: 64.188 ms
Loss rate: 1.40%
-- Flow 3:
Average throughput: 1.67 Mbit/s
95th percentile per-packet one-way delay: 63.724 ms
Loss rate: 4.27%
```

Run 1: Report of LEDBAT — Data Link

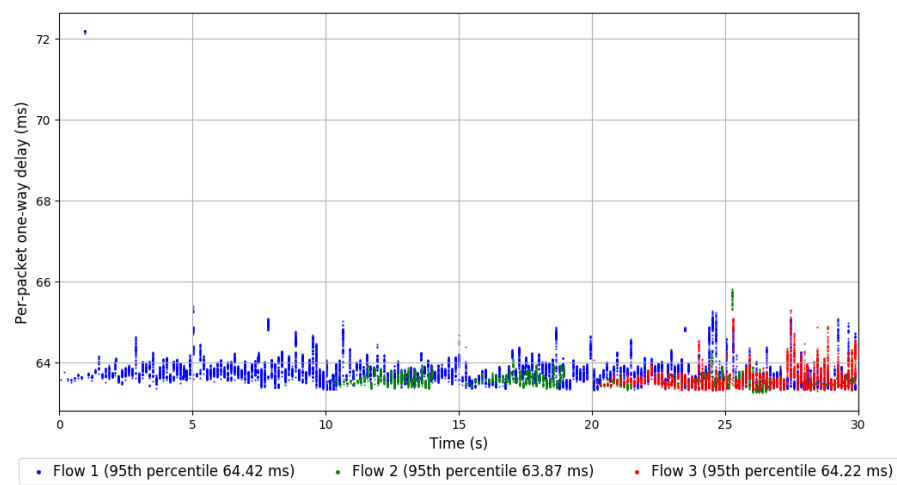
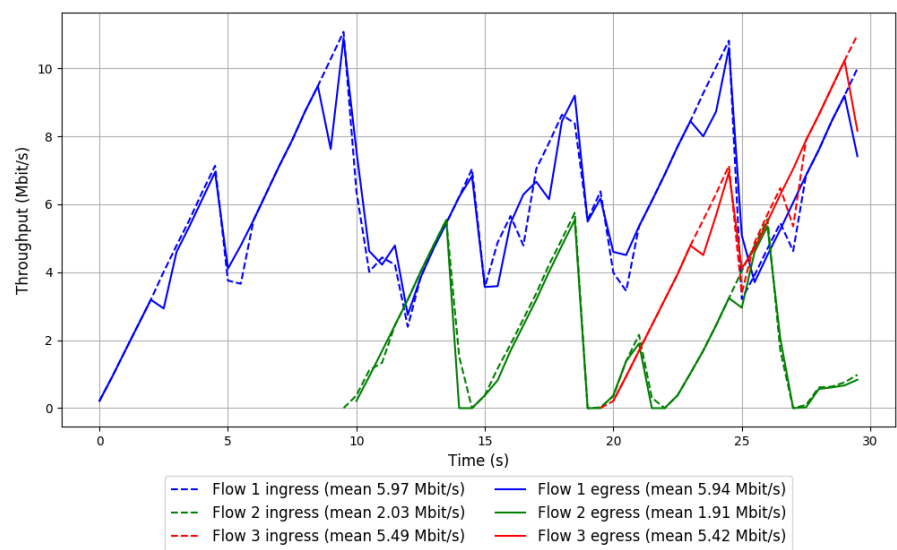


```
Run 2: Statistics of LEDBAT

Start at: 2017-08-12 12:46:37
End at: 2017-08-12 12:47:07

# Below is generated by plot.py at 2017-08-12 17:25:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.99 Mbit/s
95th percentile per-packet one-way delay: 64.312 ms
Loss rate: 2.10%
-- Flow 1:
Average throughput: 5.94 Mbit/s
95th percentile per-packet one-way delay: 64.420 ms
Loss rate: 1.00%
-- Flow 2:
Average throughput: 1.91 Mbit/s
95th percentile per-packet one-way delay: 63.867 ms
Loss rate: 6.33%
-- Flow 3:
Average throughput: 5.42 Mbit/s
95th percentile per-packet one-way delay: 64.219 ms
Loss rate: 2.60%
```

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

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

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

Below is generated by plot.py at 2017-08-12 17:25:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.81 Mbit/s

95th percentile per-packet one-way delay: 64.290 ms

Loss rate: 3.32%

-- Flow 1:

Average throughput: 1.64 Mbit/s

95th percentile per-packet one-way delay: 63.909 ms

Loss rate: 4.54%

-- Flow 2:

Average throughput: 5.43 Mbit/s

95th percentile per-packet one-way delay: 64.349 ms

Loss rate: 2.01%

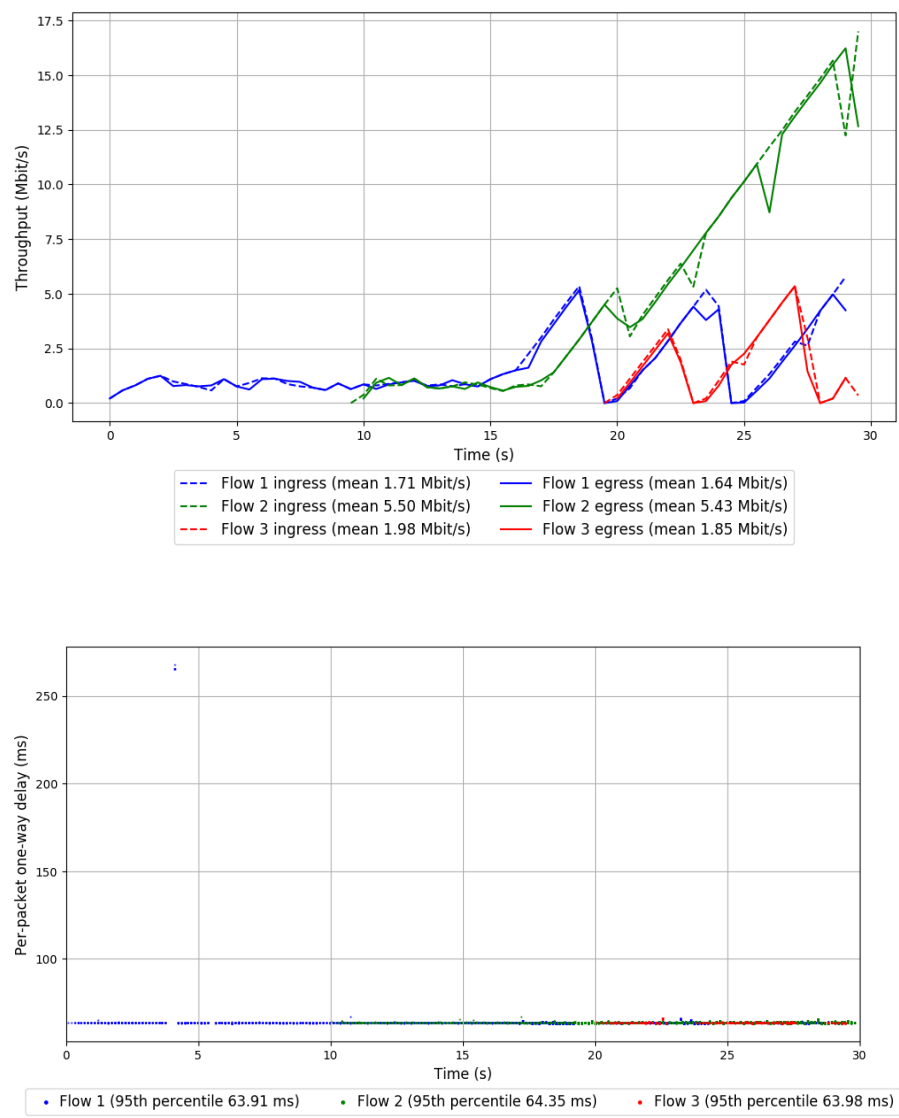
-- Flow 3:

Average throughput: 1.85 Mbit/s

95th percentile per-packet one-way delay: 63.975 ms

Loss rate: 7.71%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2017-08-12 13:10:11

End at: 2017-08-12 13:10:41

Below is generated by plot.py at 2017-08-12 17:25:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 11.23 Mbit/s

95th percentile per-packet one-way delay: 64.051 ms

Loss rate: 2.27%

-- Flow 1:

Average throughput: 1.99 Mbit/s

95th percentile per-packet one-way delay: 63.922 ms

Loss rate: 5.46%

-- Flow 2:

Average throughput: 10.91 Mbit/s

95th percentile per-packet one-way delay: 64.084 ms

Loss rate: 1.23%

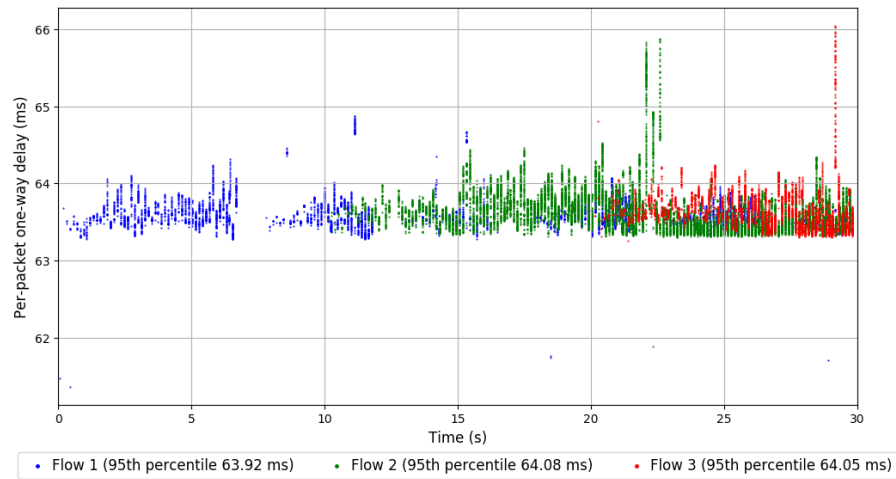
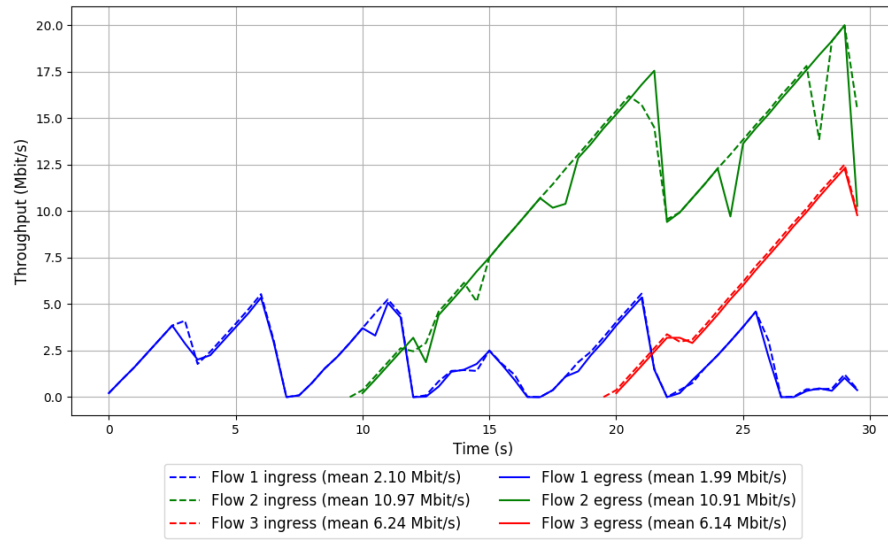
-- Flow 3:

Average throughput: 6.14 Mbit/s

95th percentile per-packet one-way delay: 64.046 ms

Loss rate: 2.75%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2017-08-12 13:21:49

End at: 2017-08-12 13:22:19

Below is generated by plot.py at 2017-08-12 17:25:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 16.15 Mbit/s

95th percentile per-packet one-way delay: 63.697 ms

Loss rate: 1.04%

-- Flow 1:

Average throughput: 11.13 Mbit/s

95th percentile per-packet one-way delay: 62.090 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 4.75 Mbit/s

95th percentile per-packet one-way delay: 61.815 ms

Loss rate: 0.77%

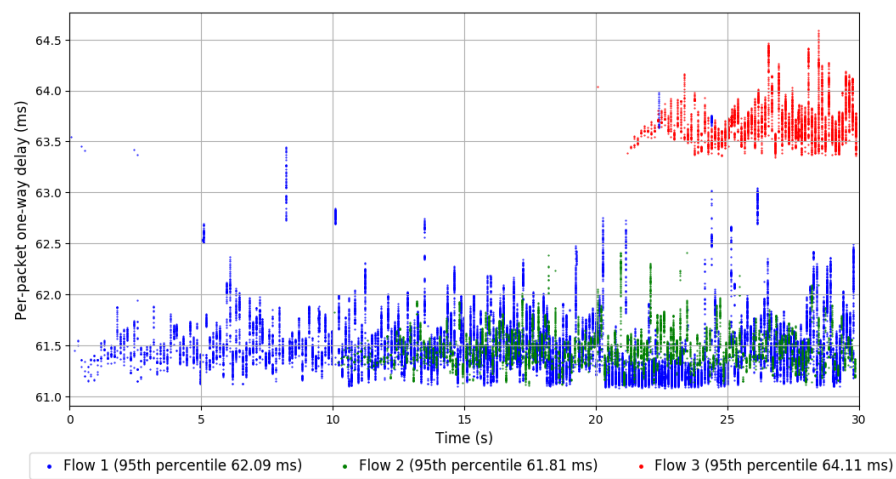
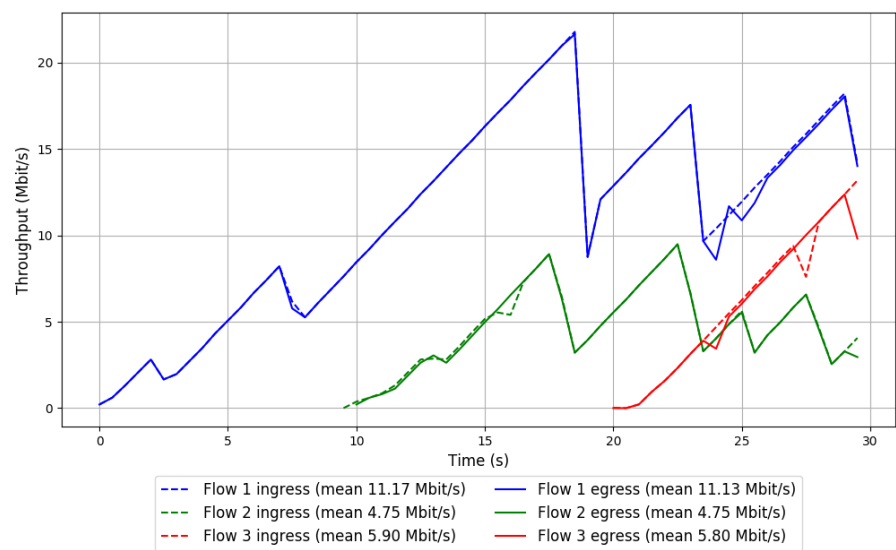
-- Flow 3:

Average throughput: 5.80 Mbit/s

95th percentile per-packet one-way delay: 64.111 ms

Loss rate: 2.90%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2017-08-12 13:33:44

End at: 2017-08-12 13:34:14

Below is generated by plot.py at 2017-08-12 17:25:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.21 Mbit/s

95th percentile per-packet one-way delay: 63.889 ms

Loss rate: 5.49%

-- Flow 1:

Average throughput: 2.28 Mbit/s

95th percentile per-packet one-way delay: 63.913 ms

Loss rate: 6.10%

-- Flow 2:

Average throughput: 1.51 Mbit/s

95th percentile per-packet one-way delay: 63.962 ms

Loss rate: 6.47%

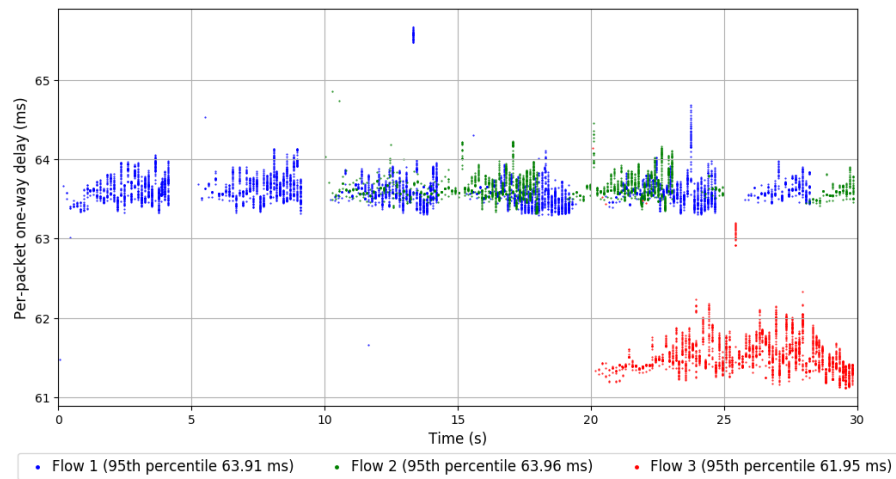
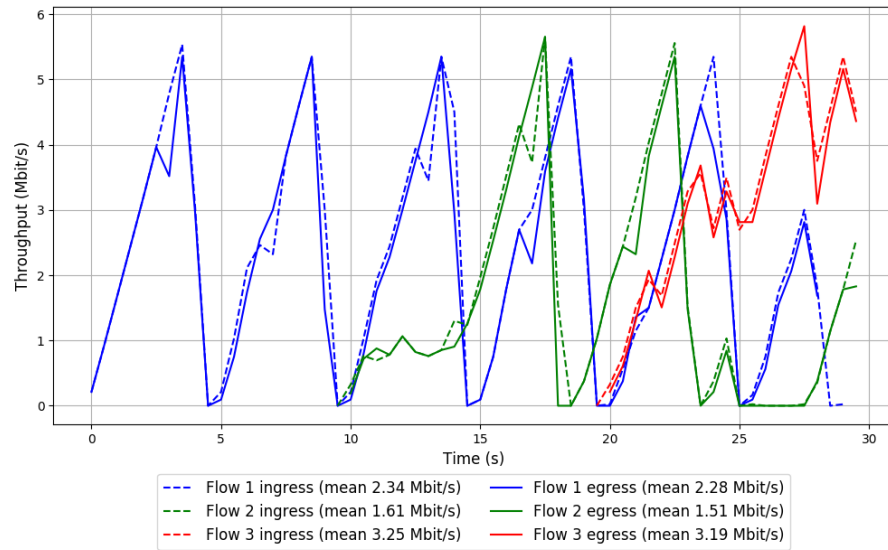
-- Flow 3:

Average throughput: 3.19 Mbit/s

95th percentile per-packet one-way delay: 61.945 ms

Loss rate: 3.21%

Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

Start at: 2017-08-12 13:45:40

End at: 2017-08-12 13:46:11

Below is generated by plot.py at 2017-08-12 17:25:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 22.26 Mbit/s

95th percentile per-packet one-way delay: 62.303 ms

Loss rate: 1.17%

-- Flow 1:

Average throughput: 17.68 Mbit/s

95th percentile per-packet one-way delay: 62.264 ms

Loss rate: 0.94%

-- Flow 2:

Average throughput: 6.67 Mbit/s

95th percentile per-packet one-way delay: 62.180 ms

Loss rate: 1.66%

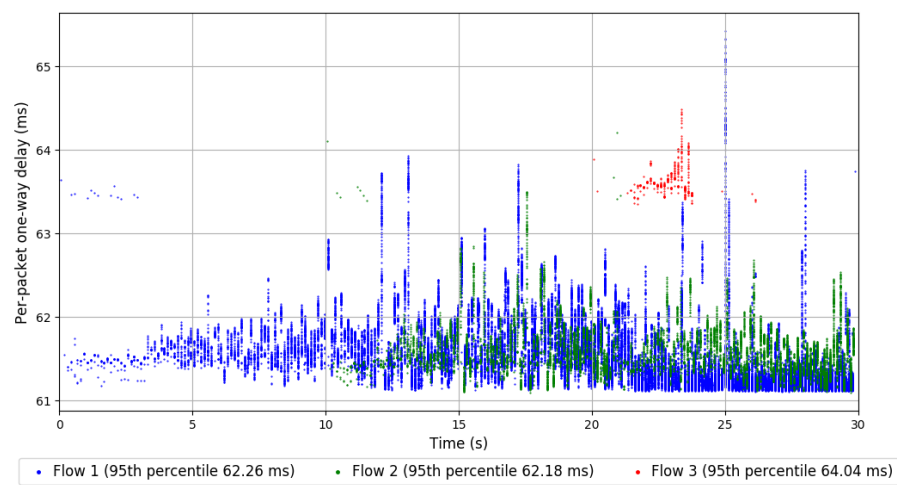
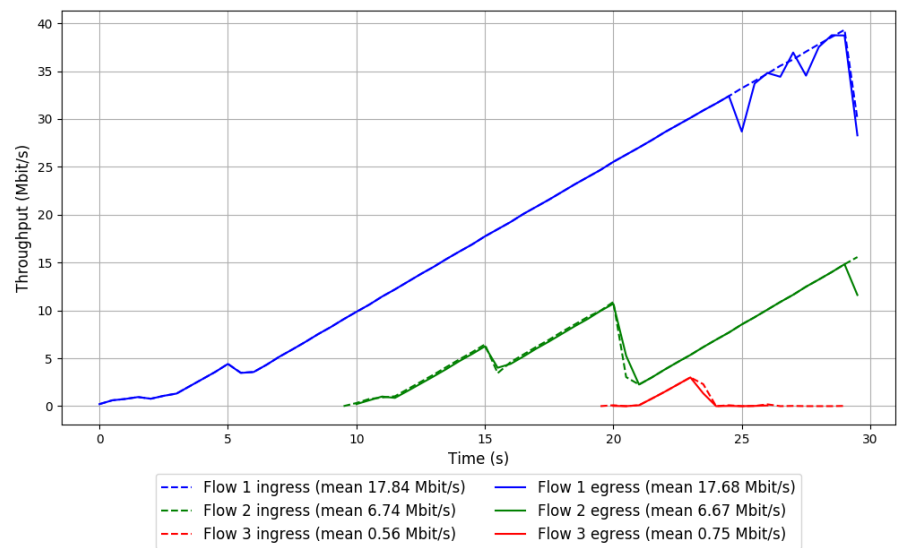
-- Flow 3:

Average throughput: 0.75 Mbit/s

95th percentile per-packet one-way delay: 64.037 ms

Loss rate: 12.20%

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2017-08-12 13:56:59

End at: 2017-08-12 13:57:29

Below is generated by plot.py at 2017-08-12 17:25:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 9.49 Mbit/s

95th percentile per-packet one-way delay: 63.675 ms

Loss rate: 2.01%

-- Flow 1:

Average throughput: 7.72 Mbit/s

95th percentile per-packet one-way delay: 61.898 ms

Loss rate: 0.89%

-- Flow 2:

Average throughput: 1.91 Mbit/s

95th percentile per-packet one-way delay: 63.900 ms

Loss rate: 6.33%

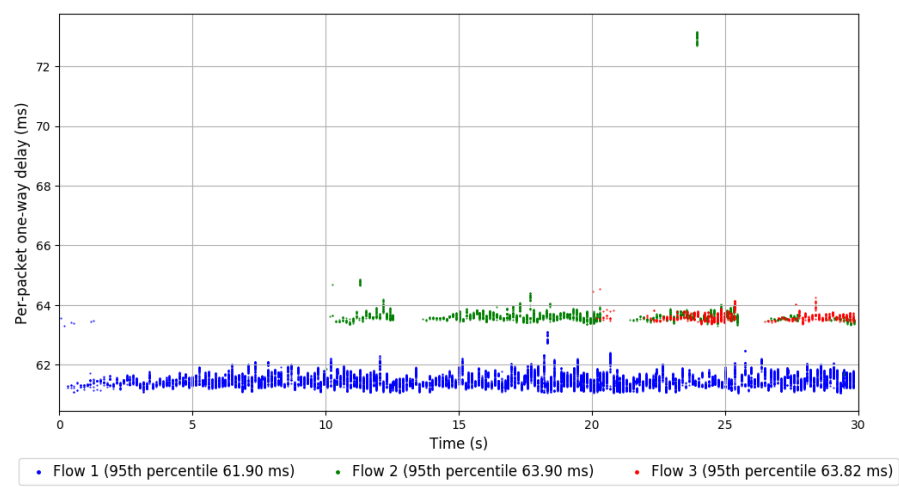
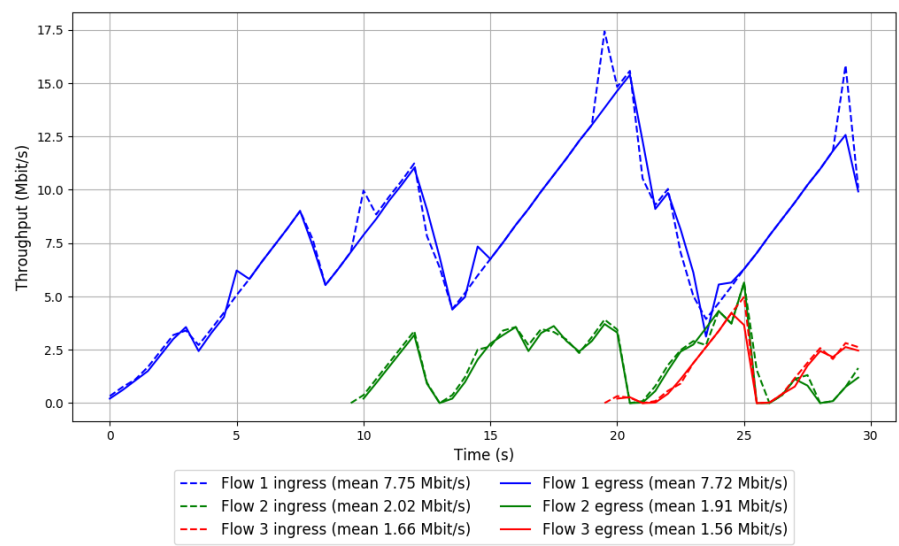
-- Flow 3:

Average throughput: 1.56 Mbit/s

95th percentile per-packet one-way delay: 63.823 ms

Loss rate: 7.14%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2017-08-12 14:08:36

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

Below is generated by plot.py at 2017-08-12 17:25:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.64 Mbit/s

95th percentile per-packet one-way delay: 64.030 ms

Loss rate: 4.91%

-- Flow 1:

Average throughput: 2.55 Mbit/s

95th percentile per-packet one-way delay: 64.112 ms

Loss rate: 5.12%

-- Flow 2:

Average throughput: 2.76 Mbit/s

95th percentile per-packet one-way delay: 63.855 ms

Loss rate: 4.34%

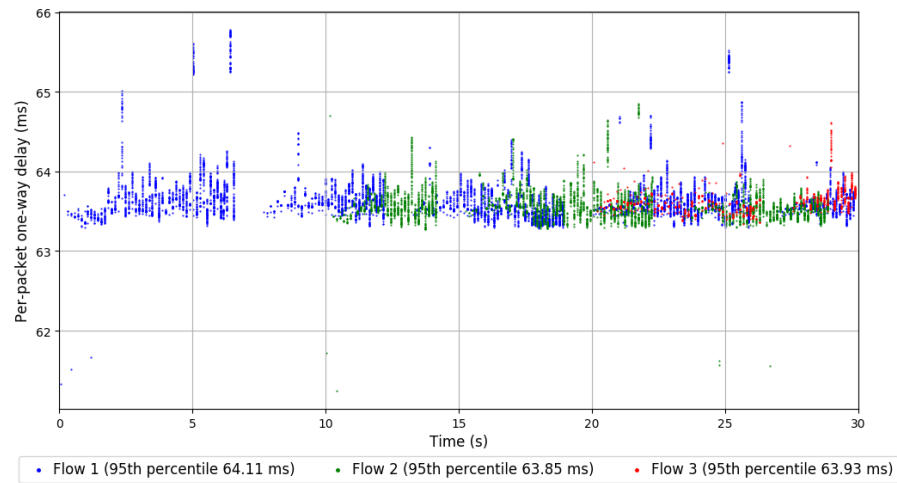
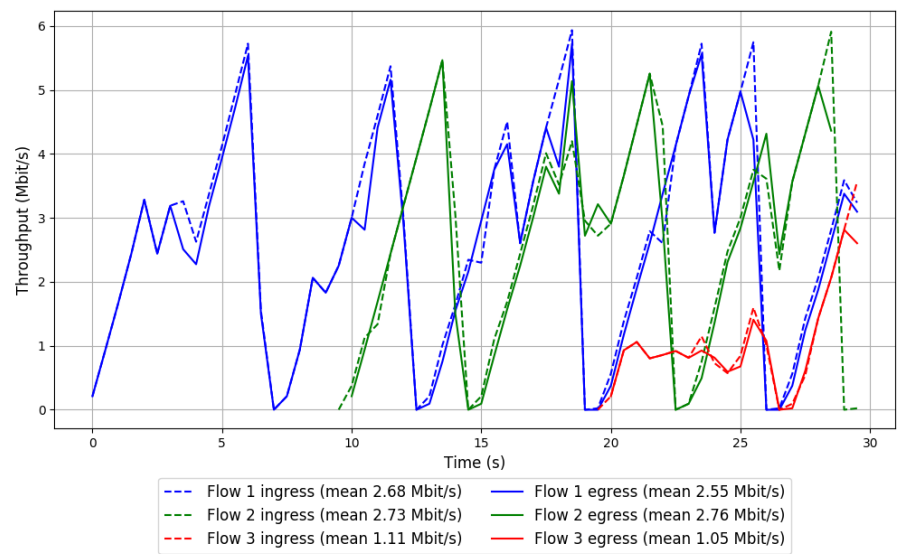
-- Flow 3:

Average throughput: 1.05 Mbit/s

95th percentile per-packet one-way delay: 63.929 ms

Loss rate: 6.19%

Run 9: Report of LEDBAT — Data Link



Run 10: Statistics of LEDBAT

Start at: 2017-08-12 14:19:48

End at: 2017-08-12 14:20:18

Below is generated by plot.py at 2017-08-12 17:25:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 13.16 Mbit/s

95th percentile per-packet one-way delay: 63.090 ms

Loss rate: 0.97%

-- Flow 1:

Average throughput: 6.91 Mbit/s

95th percentile per-packet one-way delay: 62.073 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 8.61 Mbit/s

95th percentile per-packet one-way delay: 62.112 ms

Loss rate: 0.66%

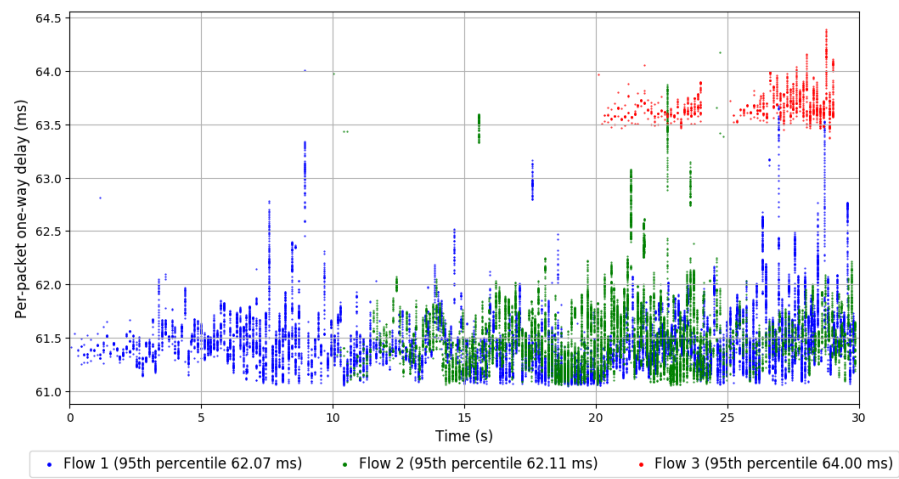
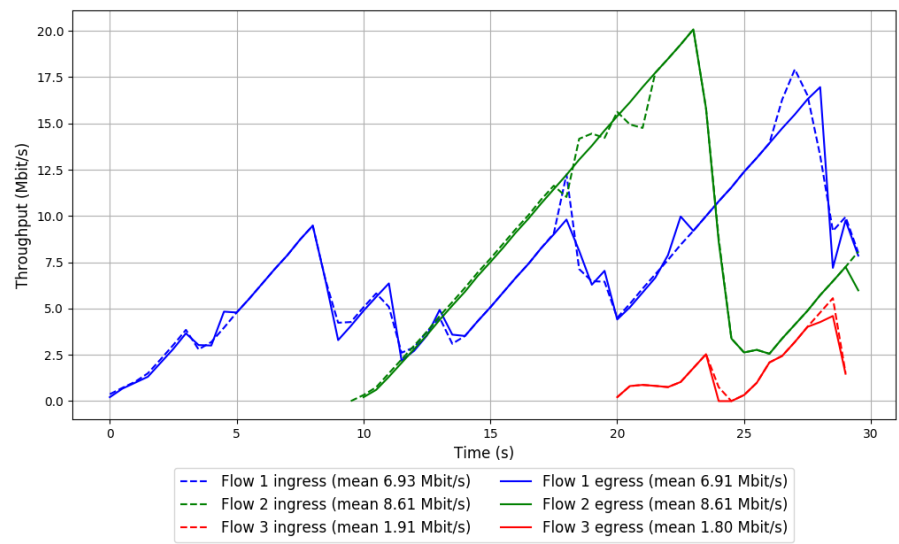
-- Flow 3:

Average throughput: 1.80 Mbit/s

95th percentile per-packet one-way delay: 63.996 ms

Loss rate: 6.60%

Run 10: Report of LEDBAT — Data Link

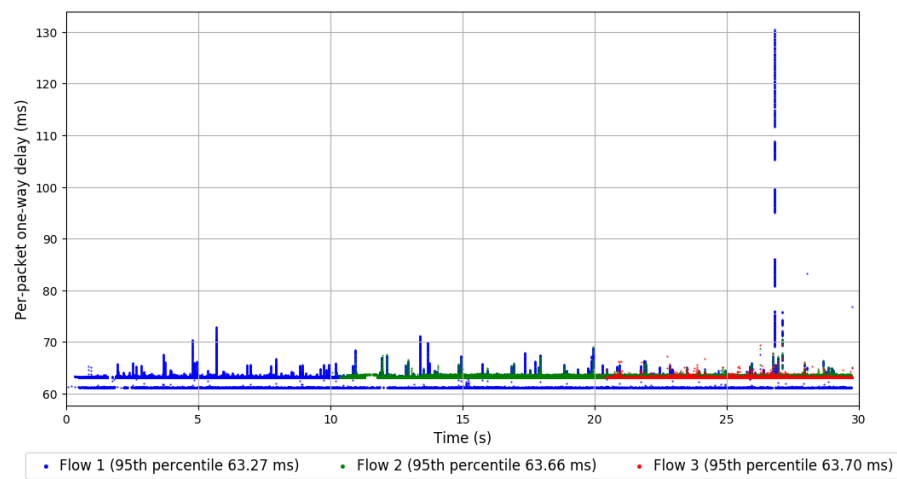
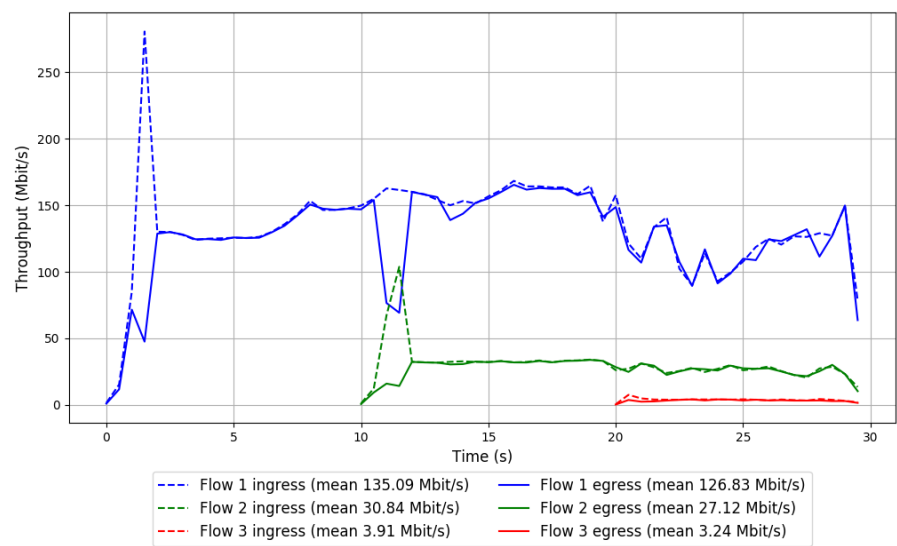


```
Run 1: Statistics of PCC

Start at: 2017-08-12 12:45:07
End at: 2017-08-12 12:45:37

# Below is generated by plot.py at 2017-08-12 17:26:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 145.83 Mbit/s
95th percentile per-packet one-way delay: 63.279 ms
Loss rate: 7.36%
-- Flow 1:
Average throughput: 126.83 Mbit/s
95th percentile per-packet one-way delay: 63.270 ms
Loss rate: 6.46%
-- Flow 2:
Average throughput: 27.12 Mbit/s
95th percentile per-packet one-way delay: 63.657 ms
Loss rate: 12.61%
-- Flow 3:
Average throughput: 3.24 Mbit/s
95th percentile per-packet one-way delay: 63.701 ms
Loss rate: 18.25%
```


Run 1: Report of PCC — Data Link

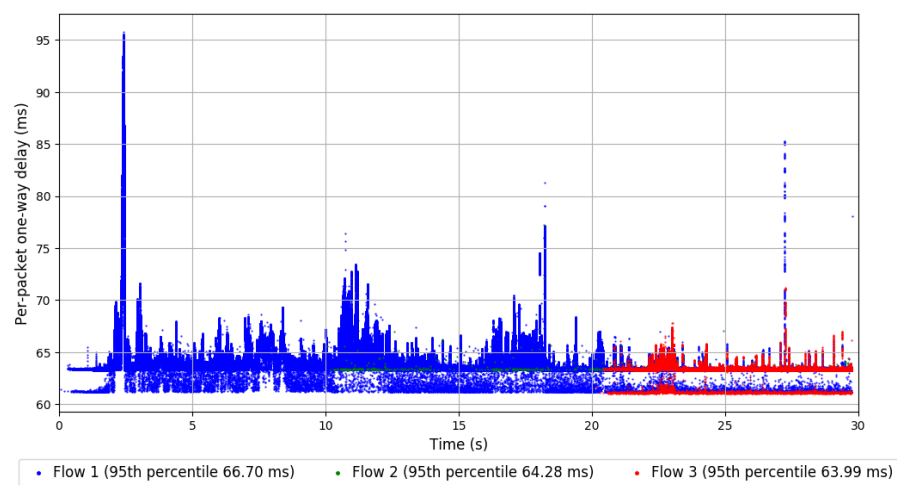
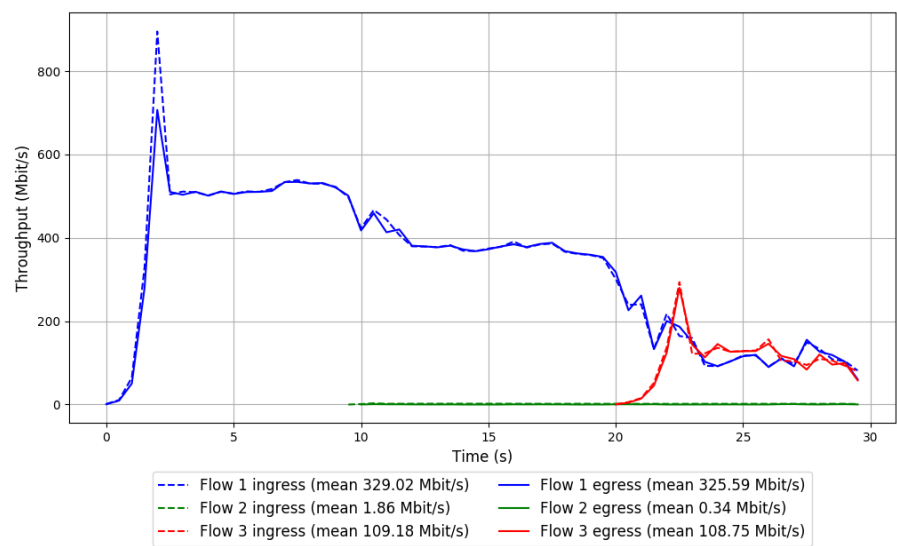


```
Run 2: Statistics of PCC

Start at: 2017-08-12 12:56:42
End at: 2017-08-12 12:57:12

# Below is generated by plot.py at 2017-08-12 17:27:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 360.88 Mbit/s
95th percentile per-packet one-way delay: 66.589 ms
Loss rate: 1.71%
-- Flow 1:
Average throughput: 325.59 Mbit/s
95th percentile per-packet one-way delay: 66.698 ms
Loss rate: 1.41%
-- Flow 2:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 64.278 ms
Loss rate: 82.04%
-- Flow 3:
Average throughput: 108.75 Mbit/s
95th percentile per-packet one-way delay: 63.988 ms
Loss rate: 1.64%
```

Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2017-08-12 13:08:29

End at: 2017-08-12 13:08:59

Below is generated by plot.py at 2017-08-12 17:27:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 407.19 Mbit/s

95th percentile per-packet one-way delay: 78.819 ms

Loss rate: 2.15%

-- Flow 1:

Average throughput: 263.72 Mbit/s

95th percentile per-packet one-way delay: 83.224 ms

Loss rate: 2.50%

-- Flow 2:

Average throughput: 216.98 Mbit/s

95th percentile per-packet one-way delay: 76.539 ms

Loss rate: 1.07%

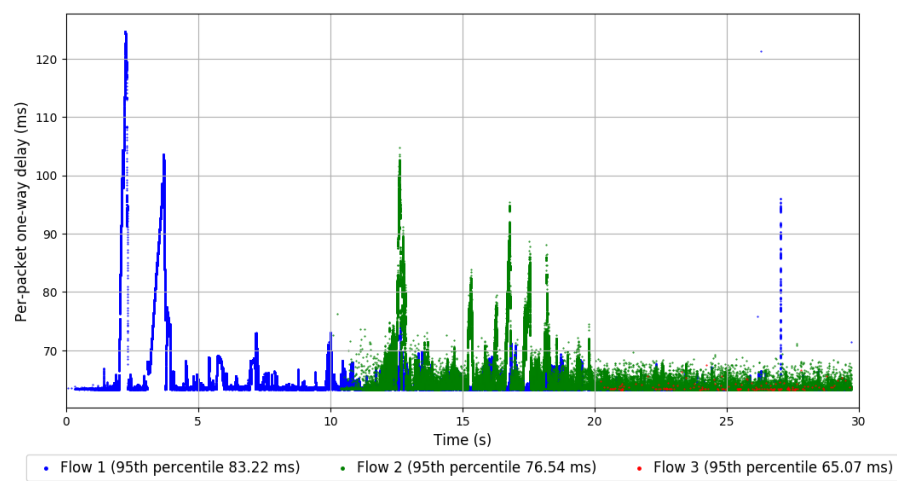
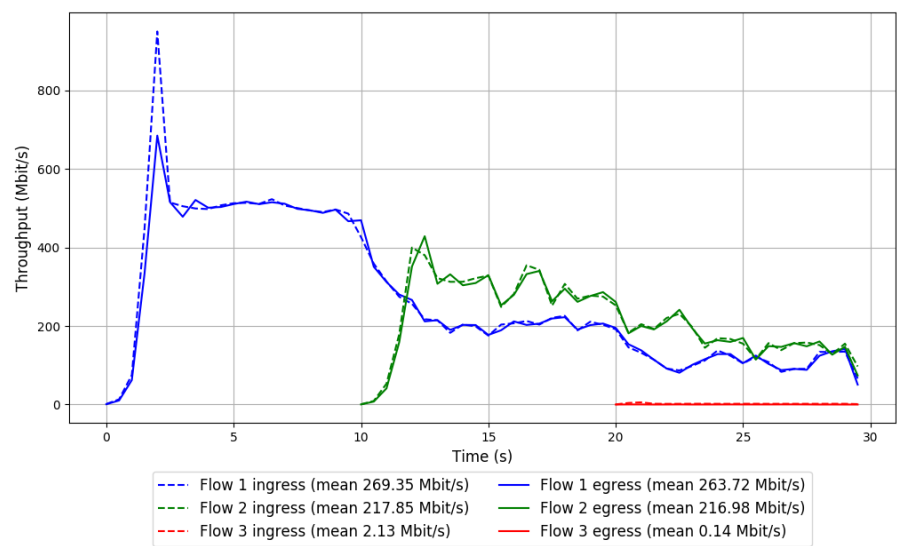
-- Flow 3:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 65.072 ms

Loss rate: 93.37%

Run 3: Report of PCC — Data Link



Run 4: Statistics of PCC

Start at: 2017-08-12 13:20:06

End at: 2017-08-12 13:20:36

Below is generated by plot.py at 2017-08-12 17:28:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 474.40 Mbit/s

95th percentile per-packet one-way delay: 79.990 ms

Loss rate: 1.41%

-- Flow 1:

Average throughput: 299.31 Mbit/s

95th percentile per-packet one-way delay: 92.317 ms

Loss rate: 1.12%

-- Flow 2:

Average throughput: 170.54 Mbit/s

95th percentile per-packet one-way delay: 64.213 ms

Loss rate: 2.03%

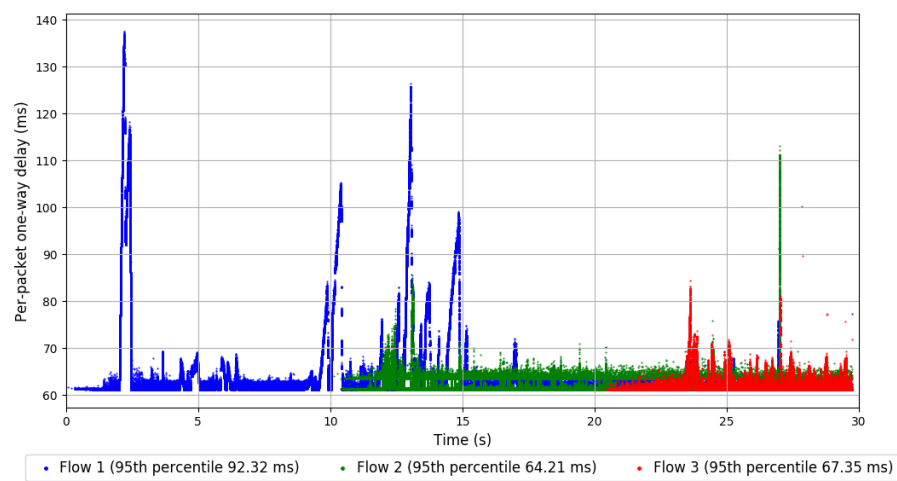
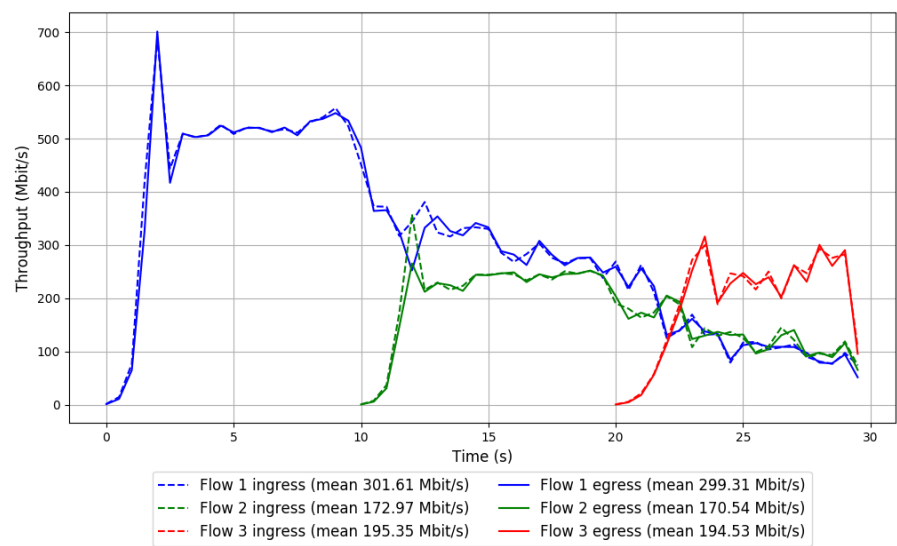
-- Flow 3:

Average throughput: 194.53 Mbit/s

95th percentile per-packet one-way delay: 67.349 ms

Loss rate: 1.61%

Run 4: Report of PCC — Data Link



Run 5: Statistics of PCC

Start at: 2017-08-12 13:32:12

End at: 2017-08-12 13:32:42

Below is generated by plot.py at 2017-08-12 17:28:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 180.80 Mbit/s

95th percentile per-packet one-way delay: 63.448 ms

Loss rate: 32.43%

-- Flow 1:

Average throughput: 50.76 Mbit/s

95th percentile per-packet one-way delay: 63.543 ms

Loss rate: 62.83%

-- Flow 2:

Average throughput: 195.98 Mbit/s

95th percentile per-packet one-way delay: 63.265 ms

Loss rate: 0.30%

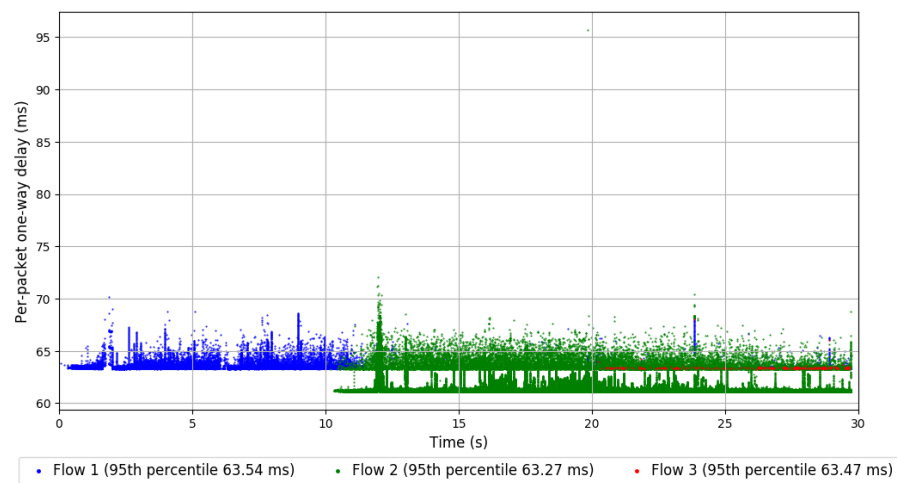
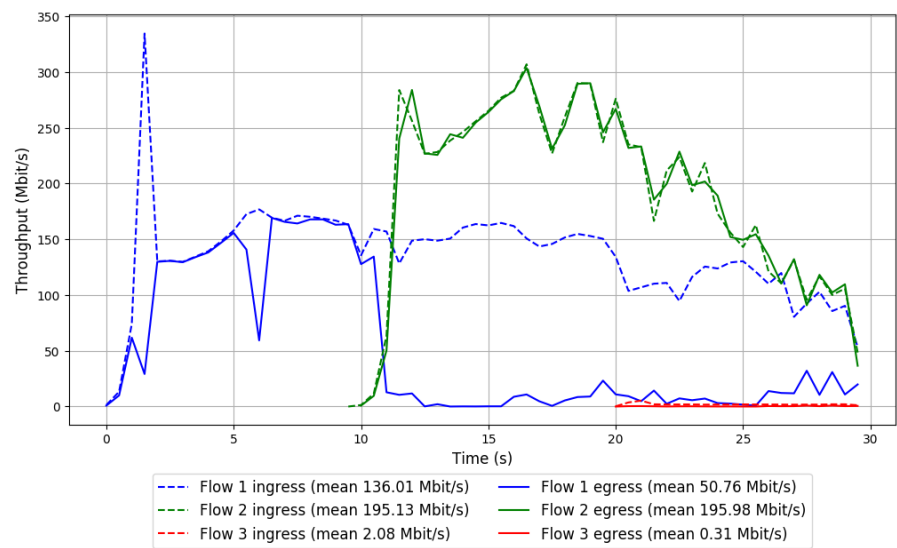
-- Flow 3:

Average throughput: 0.31 Mbit/s

95th percentile per-packet one-way delay: 63.474 ms

Loss rate: 85.56%

Run 5: Report of PCC — Data Link



Run 6: Statistics of PCC

Start at: 2017-08-12 13:43:57

End at: 2017-08-12 13:44:27

Below is generated by plot.py at 2017-08-12 17:29:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 450.11 Mbit/s

95th percentile per-packet one-way delay: 86.296 ms

Loss rate: 1.21%

-- Flow 1:

Average throughput: 299.86 Mbit/s

95th percentile per-packet one-way delay: 94.239 ms

Loss rate: 1.16%

-- Flow 2:

Average throughput: 170.06 Mbit/s

95th percentile per-packet one-way delay: 62.873 ms

Loss rate: 1.25%

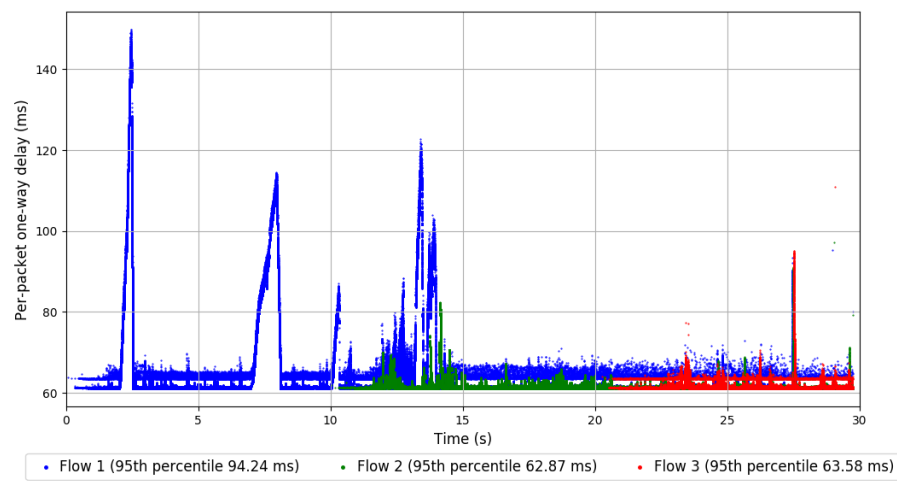
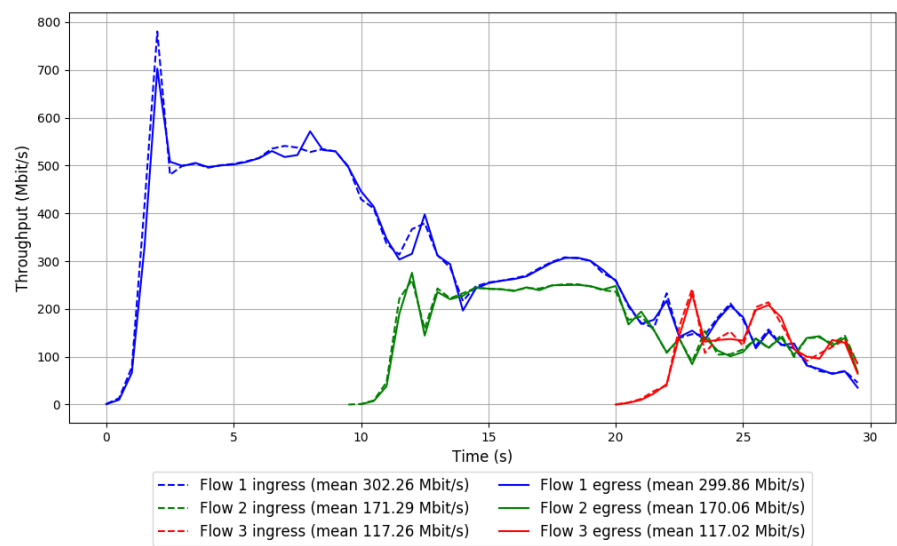
-- Flow 3:

Average throughput: 117.02 Mbit/s

95th percentile per-packet one-way delay: 63.581 ms

Loss rate: 1.50%

Run 6: Report of PCC — Data Link



Run 7: Statistics of PCC

Start at: 2017-08-12 13:55:20

End at: 2017-08-12 13:55:50

Below is generated by plot.py at 2017-08-12 17:29:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 405.18 Mbit/s

95th percentile per-packet one-way delay: 64.735 ms

Loss rate: 2.97%

-- Flow 1:

Average throughput: 294.30 Mbit/s

95th percentile per-packet one-way delay: 65.741 ms

Loss rate: 3.00%

-- Flow 2:

Average throughput: 167.54 Mbit/s

95th percentile per-packet one-way delay: 63.542 ms

Loss rate: 2.21%

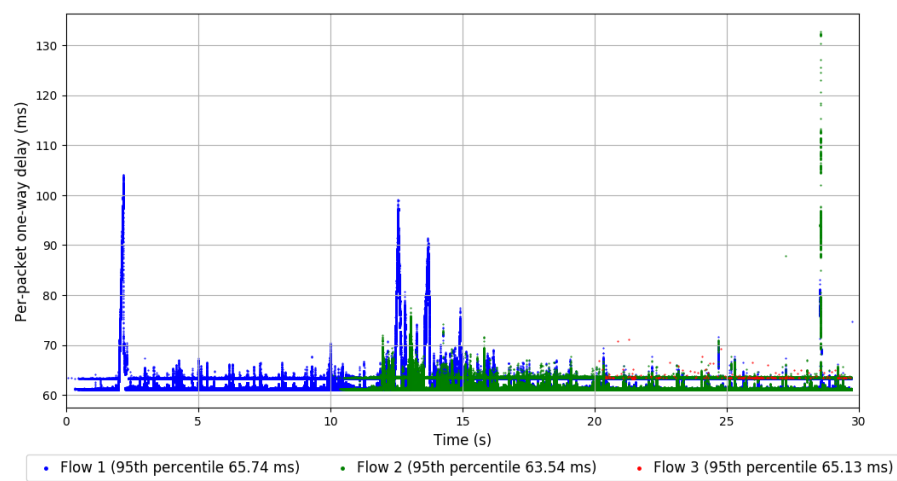
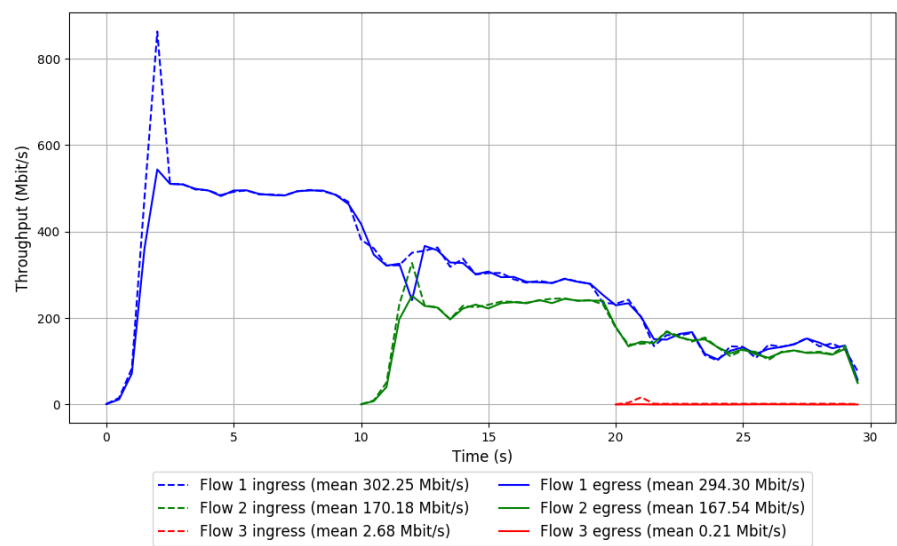
-- Flow 3:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 65.134 ms

Loss rate: 92.26%

Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2017-08-12 14:06:56

End at: 2017-08-12 14:07:26

Below is generated by plot.py at 2017-08-12 17:31:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 383.32 Mbit/s

95th percentile per-packet one-way delay: 65.514 ms

Loss rate: 1.75%

-- Flow 1:

Average throughput: 293.26 Mbit/s

95th percentile per-packet one-way delay: 66.853 ms

Loss rate: 1.49%

-- Flow 2:

Average throughput: 135.83 Mbit/s

95th percentile per-packet one-way delay: 63.256 ms

Loss rate: 1.79%

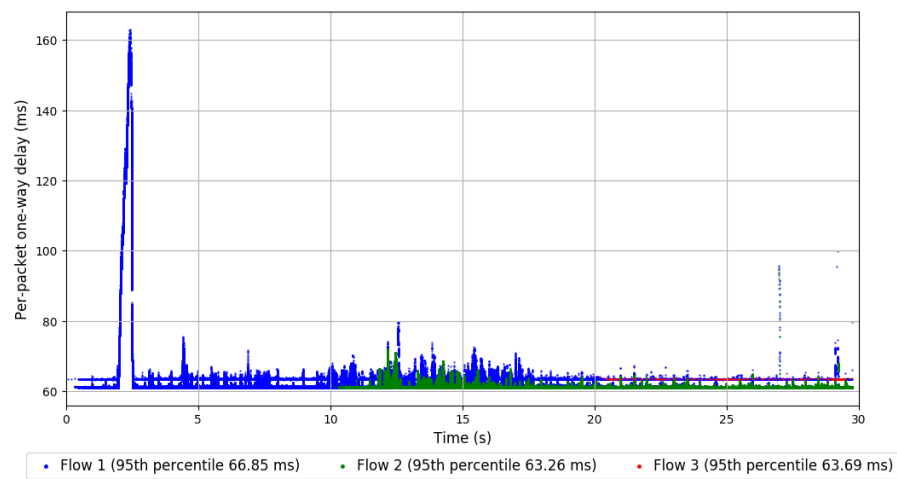
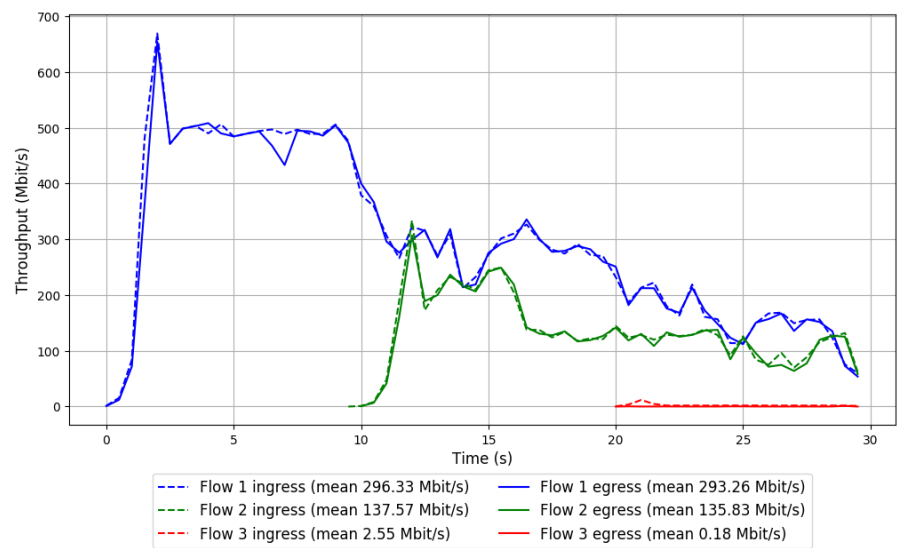
-- Flow 3:

Average throughput: 0.18 Mbit/s

95th percentile per-packet one-way delay: 63.691 ms

Loss rate: 93.08%

Run 8: Report of PCC — Data Link



Run 9: Statistics of PCC

Start at: 2017-08-12 14:18:08

End at: 2017-08-12 14:18:38

Below is generated by plot.py at 2017-08-12 17:31:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 393.55 Mbit/s

95th percentile per-packet one-way delay: 77.402 ms

Loss rate: 3.84%

-- Flow 1:

Average throughput: 311.36 Mbit/s

95th percentile per-packet one-way delay: 84.264 ms

Loss rate: 3.71%

-- Flow 2:

Average throughput: 0.62 Mbit/s

95th percentile per-packet one-way delay: 64.932 ms

Loss rate: 67.94%

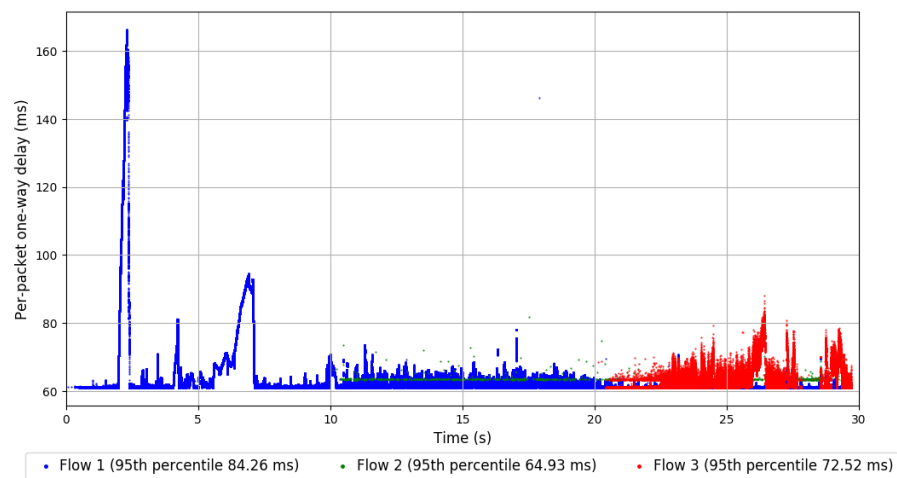
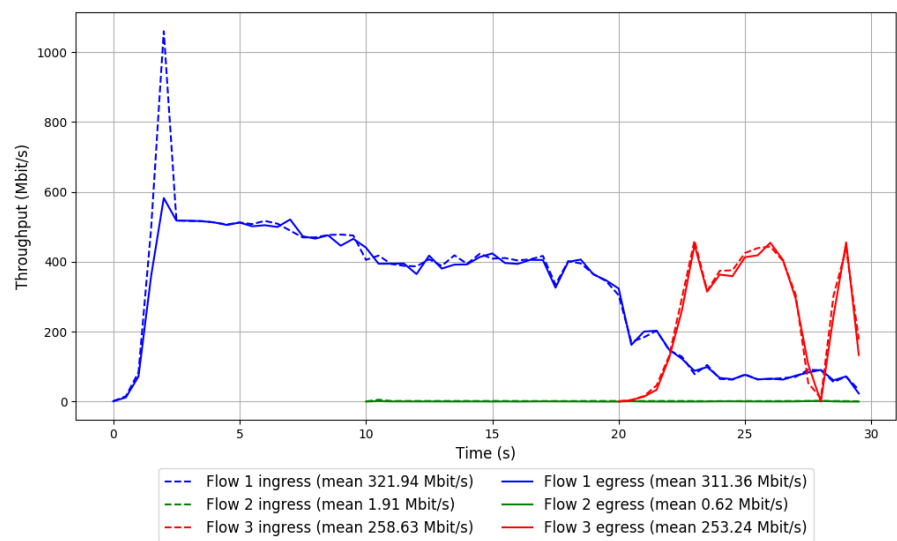
-- Flow 3:

Average throughput: 253.24 Mbit/s

95th percentile per-packet one-way delay: 72.522 ms

Loss rate: 3.40%

Run 9: Report of PCC — Data Link



Run 10: Statistics of PCC

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

End at: 2017-08-12 14:29:44

Below is generated by plot.py at 2017-08-12 17:31:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 229.15 Mbit/s

95th percentile per-packet one-way delay: 63.682 ms

Loss rate: 26.68%

-- Flow 1:

Average throughput: 46.45 Mbit/s

95th percentile per-packet one-way delay: 63.648 ms

Loss rate: 63.86%

-- Flow 2:

Average throughput: 174.86 Mbit/s

95th percentile per-packet one-way delay: 62.444 ms

Loss rate: 0.46%

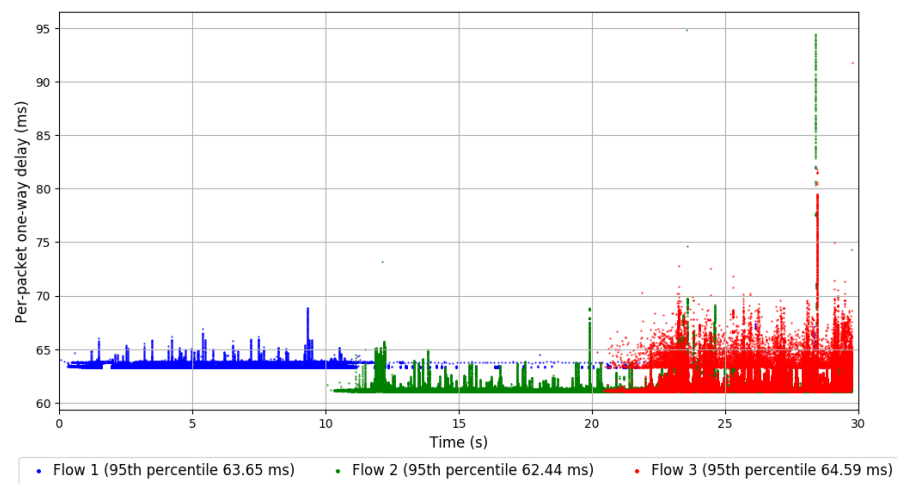
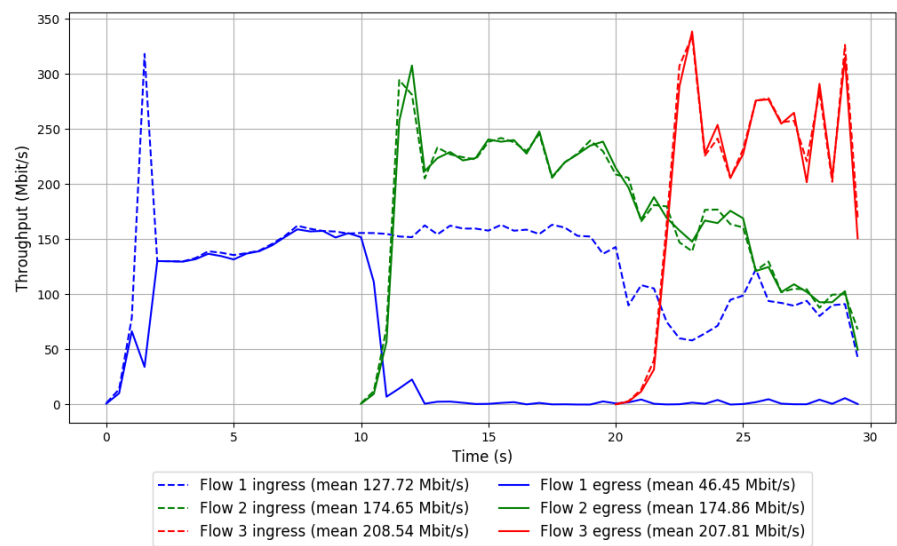
-- Flow 3:

Average throughput: 207.81 Mbit/s

95th percentile per-packet one-way delay: 64.586 ms

Loss rate: 1.51%

Run 10: Report of PCC — Data Link

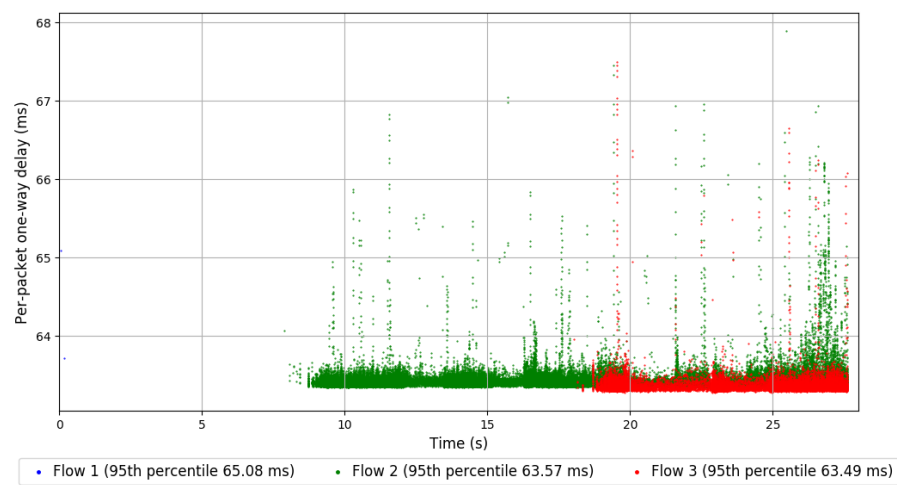
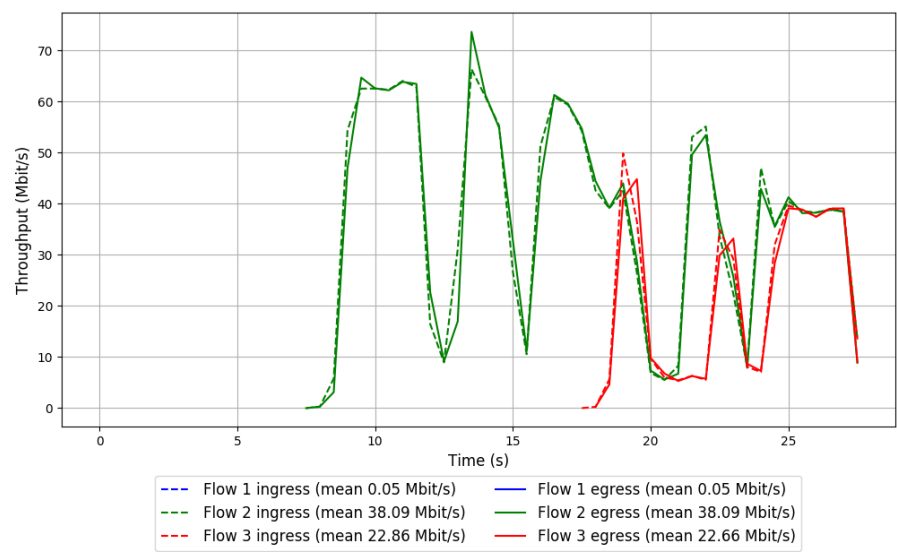


```
Run 1: Statistics of QUIC Cubic

Start at: 2017-08-12 12:37:51
End at: 2017-08-12 12:38:21

# Below is generated by plot.py at 2017-08-12 17:31:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 35.15 Mbit/s
95th percentile per-packet one-way delay: 63.551 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 65.083 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 38.09 Mbit/s
95th percentile per-packet one-way delay: 63.567 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 22.66 Mbit/s
95th percentile per-packet one-way delay: 63.488 ms
Loss rate: 2.11%
```

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

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

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

Below is generated by plot.py at 2017-08-12 17:31:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 35.22 Mbit/s

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

Loss rate: 1.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 64.325 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 40.49 Mbit/s

95th percentile per-packet one-way delay: 61.284 ms

Loss rate: 0.50%

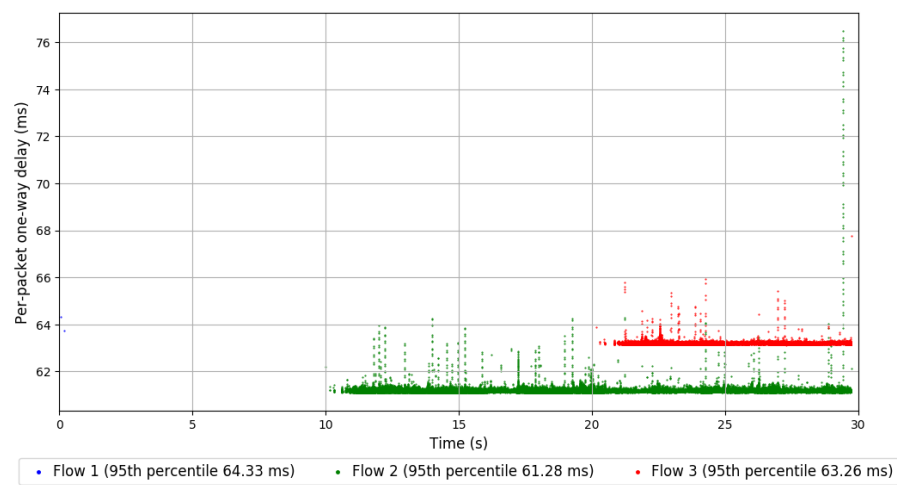
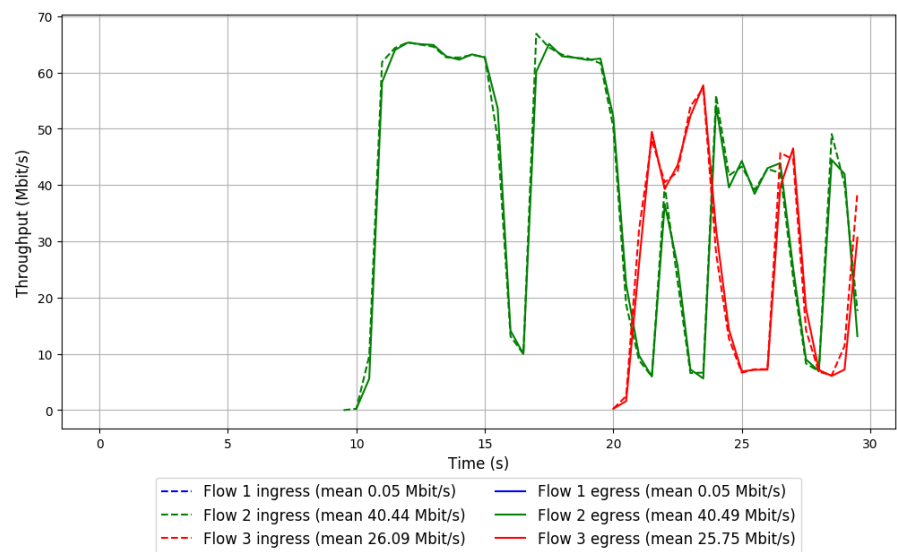
-- Flow 3:

Average throughput: 25.75 Mbit/s

95th percentile per-packet one-way delay: 63.259 ms

Loss rate: 2.59%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2017-08-12 13:01:03

End at: 2017-08-12 13:01:33

Below is generated by plot.py at 2017-08-12 17:31:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 33.64 Mbit/s

95th percentile per-packet one-way delay: 63.719 ms

Loss rate: 0.97%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 61.718 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 39.01 Mbit/s

95th percentile per-packet one-way delay: 63.730 ms

Loss rate: 0.63%

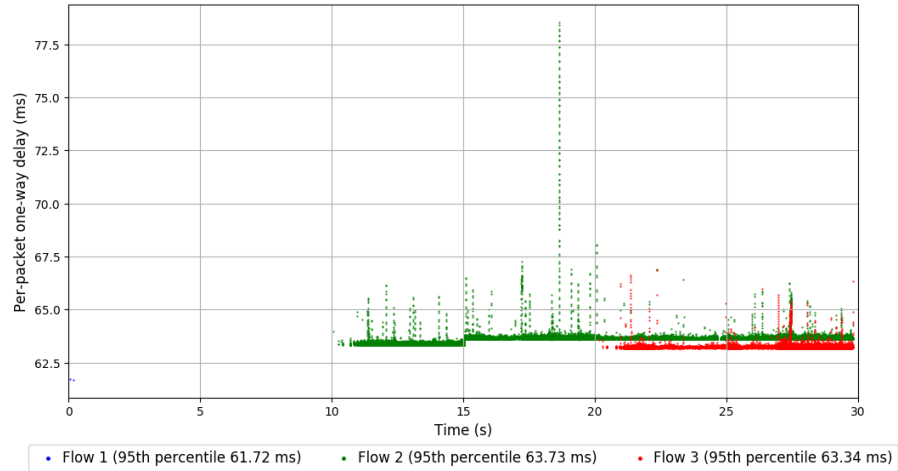
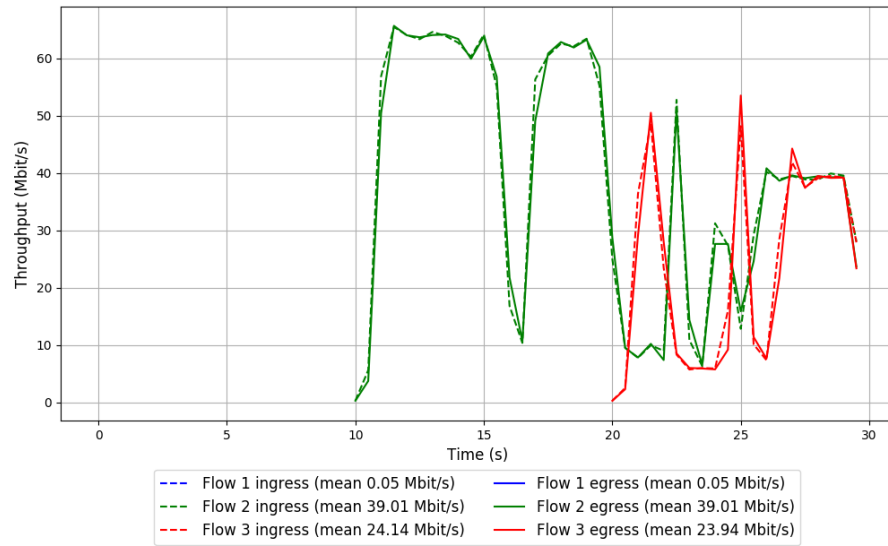
-- Flow 3:

Average throughput: 23.94 Mbit/s

95th percentile per-packet one-way delay: 63.342 ms

Loss rate: 2.07%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

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

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

Below is generated by plot.py at 2017-08-12 17:31:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 35.11 Mbit/s

95th percentile per-packet one-way delay: 63.435 ms

Loss rate: 1.09%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 63.561 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 42.96 Mbit/s

95th percentile per-packet one-way delay: 63.382 ms

Loss rate: 0.86%

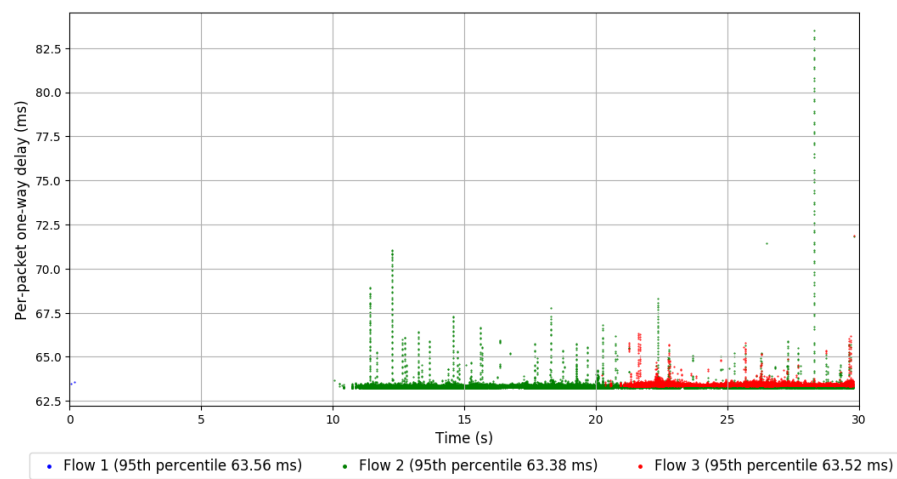
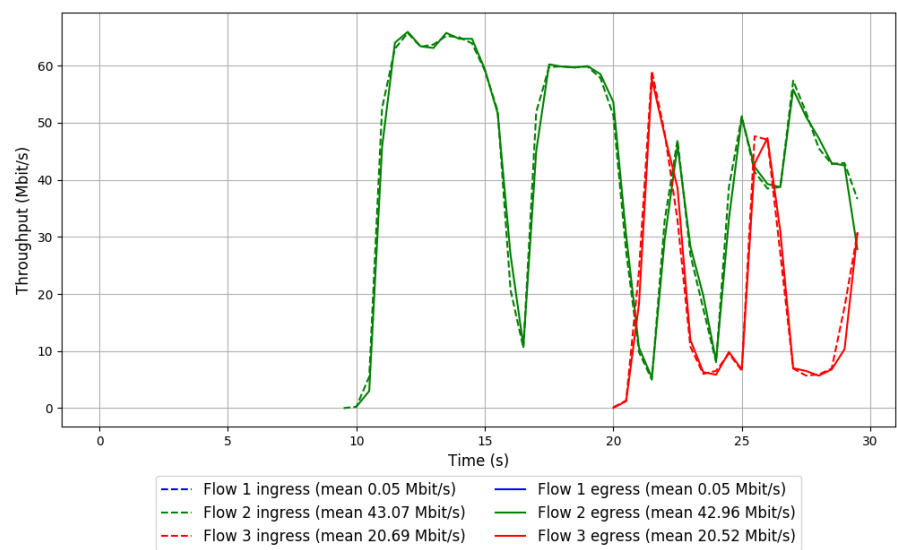
-- Flow 3:

Average throughput: 20.52 Mbit/s

95th percentile per-packet one-way delay: 63.520 ms

Loss rate: 2.08%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2017-08-12 13:24:34

End at: 2017-08-12 13:25:04

Below is generated by plot.py at 2017-08-12 17:31:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 35.38 Mbit/s

95th percentile per-packet one-way delay: 63.398 ms

Loss rate: 0.96%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 63.509 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 41.50 Mbit/s

95th percentile per-packet one-way delay: 63.373 ms

Loss rate: 0.63%

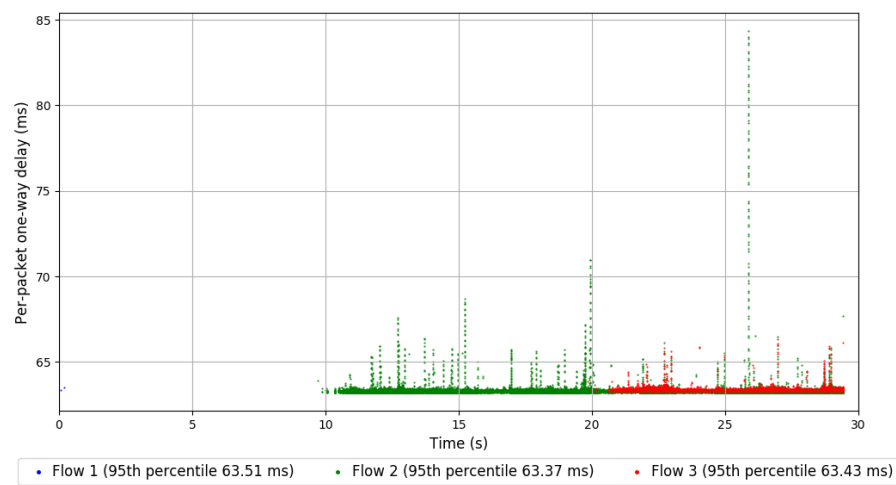
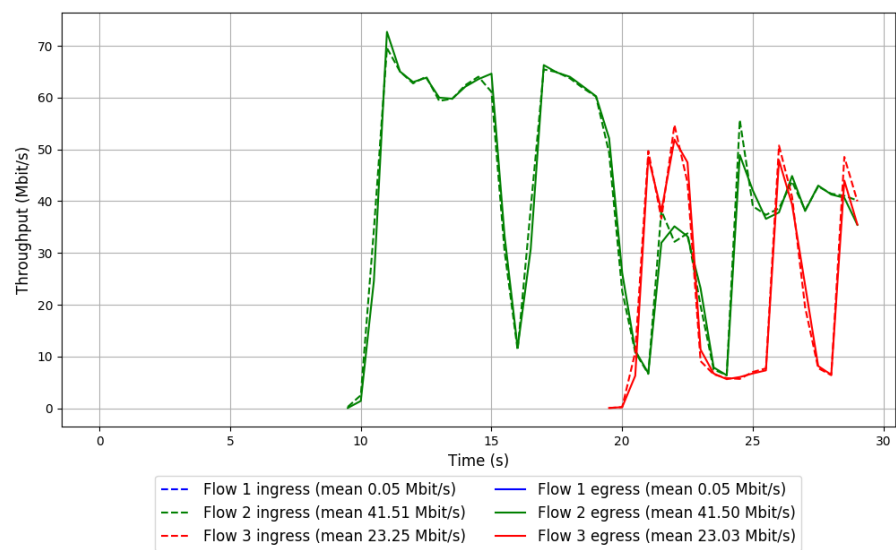
-- Flow 3:

Average throughput: 23.03 Mbit/s

95th percentile per-packet one-way delay: 63.432 ms

Loss rate: 2.20%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2017-08-12 13:36:29

End at: 2017-08-12 13:36:59

Below is generated by plot.py at 2017-08-12 17:32:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 34.19 Mbit/s

95th percentile per-packet one-way delay: 63.423 ms

Loss rate: 0.72%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 63.476 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 40.19 Mbit/s

95th percentile per-packet one-way delay: 63.419 ms

Loss rate: 0.37%

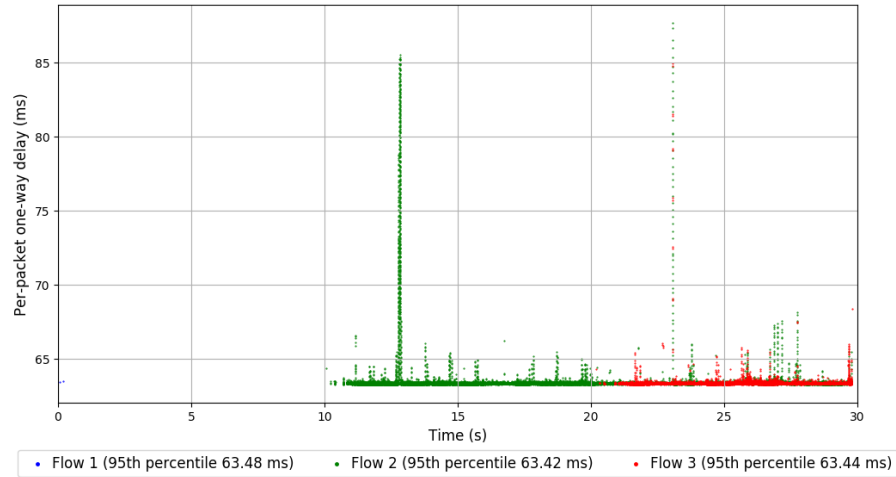
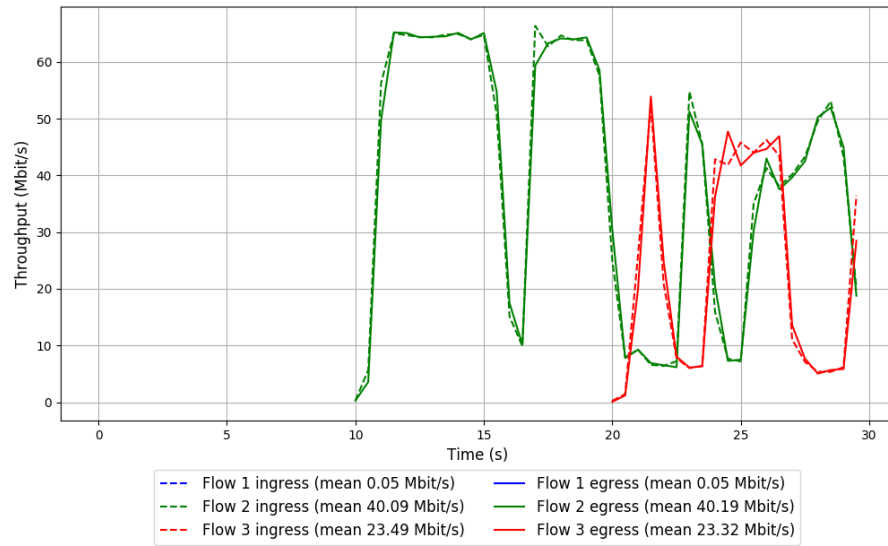
-- Flow 3:

Average throughput: 23.32 Mbit/s

95th percentile per-packet one-way delay: 63.439 ms

Loss rate: 1.96%

Run 6: Report of QUIC Cubic — Data Link

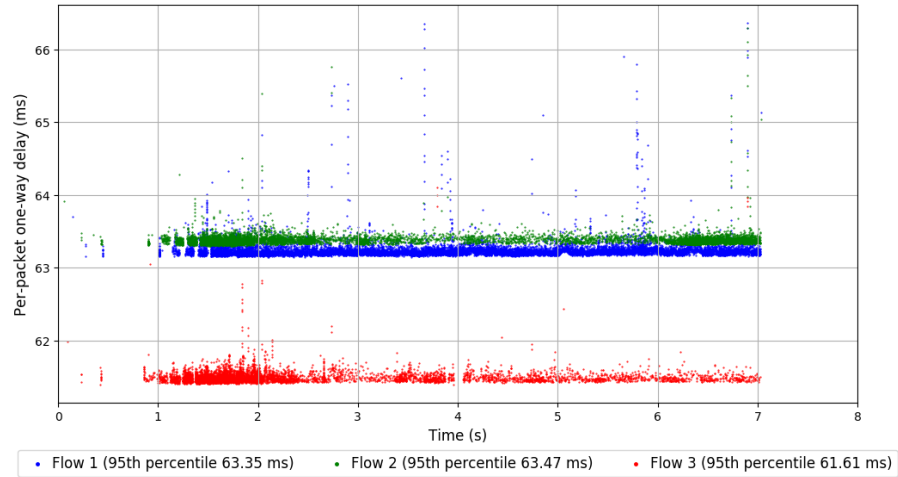
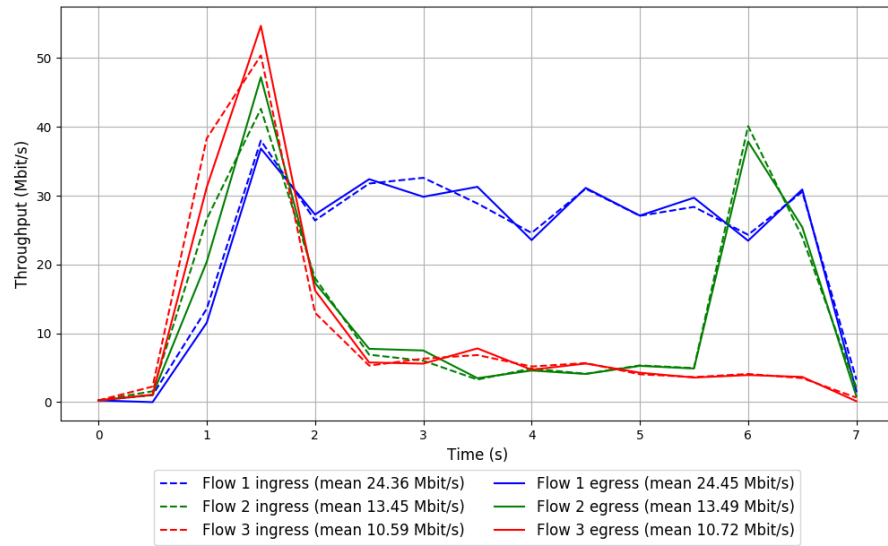


Run 7: Statistics of QUIC Cubic

Start at: 2017-08-12 13:48:26

End at: 2017-08-12 13:48:56

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2017-08-12 13:59:44

End at: 2017-08-12 14:00:14

Below is generated by plot.py at 2017-08-12 17:32:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 36.78 Mbit/s

95th percentile per-packet one-way delay: 63.667 ms

Loss rate: 0.91%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 63.559 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 42.13 Mbit/s

95th percentile per-packet one-way delay: 63.544 ms

Loss rate: 0.60%

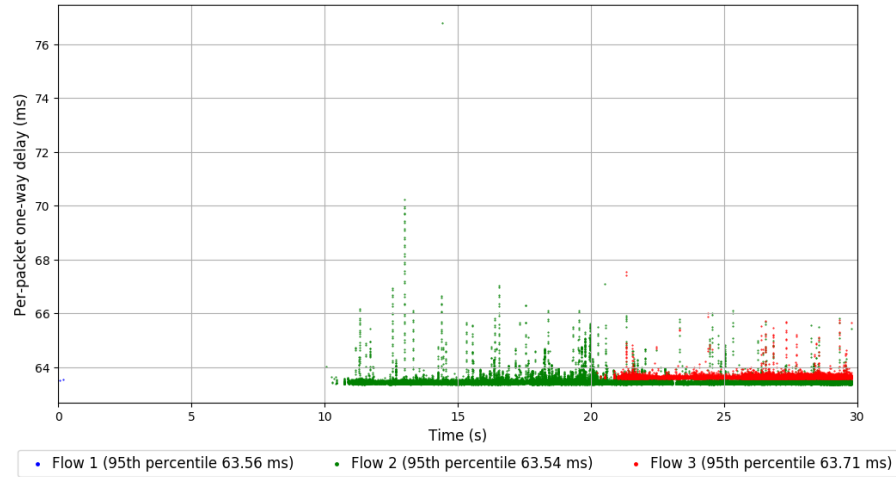
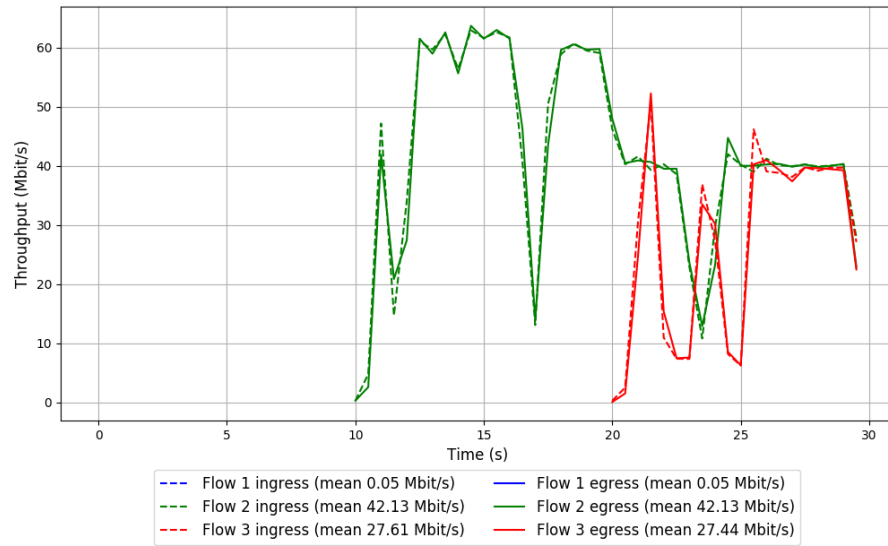
-- Flow 3:

Average throughput: 27.44 Mbit/s

95th percentile per-packet one-way delay: 63.711 ms

Loss rate: 1.88%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2017-08-12 14:11:19

End at: 2017-08-12 14:11:49

Below is generated by plot.py at 2017-08-12 17:32:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 33.78 Mbit/s

95th percentile per-packet one-way delay: 63.491 ms

Loss rate: 0.71%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 63.855 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 42.69 Mbit/s

95th percentile per-packet one-way delay: 63.495 ms

Loss rate: 0.72%

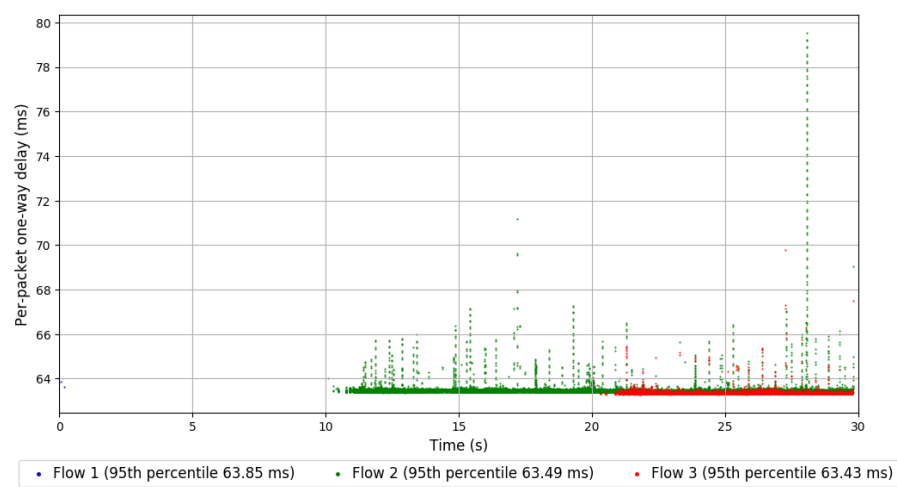
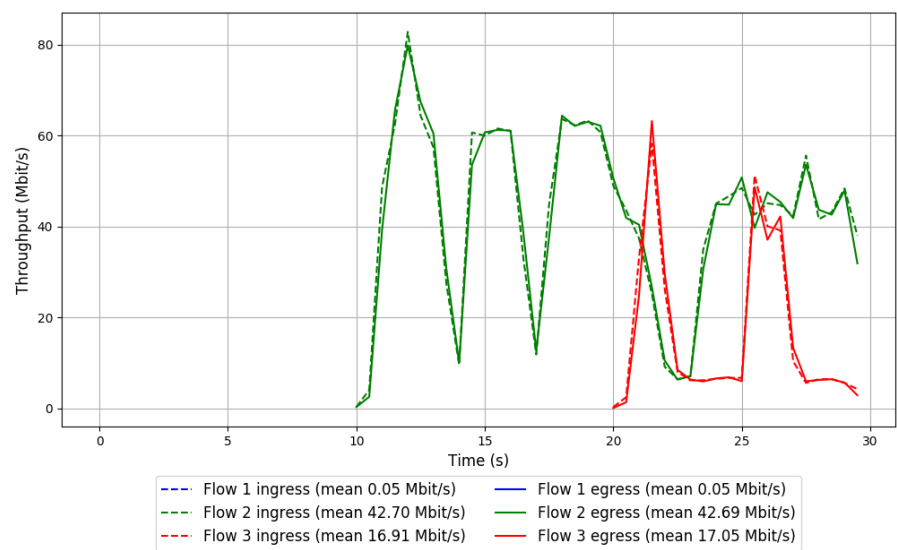
-- Flow 3:

Average throughput: 17.05 Mbit/s

95th percentile per-packet one-way delay: 63.429 ms

Loss rate: 0.61%

Run 9: Report of QUIC Cubic — Data Link

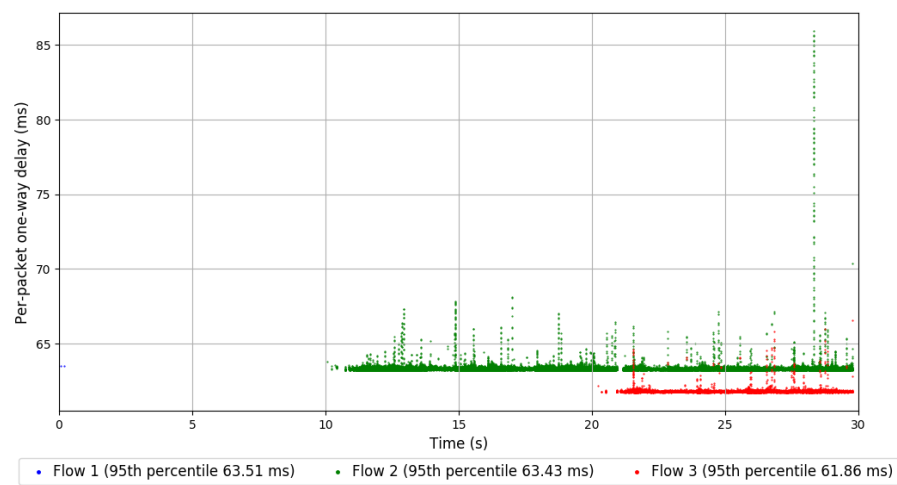
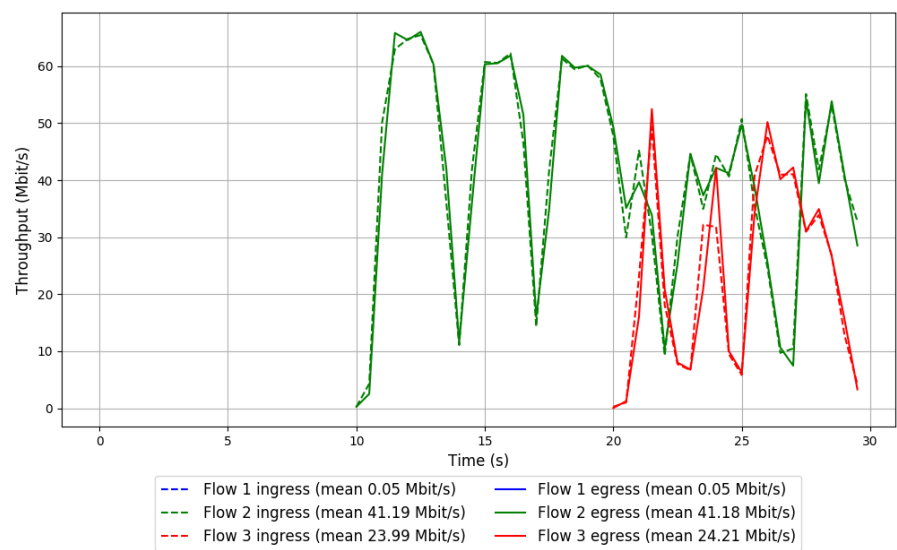


```
Run 10: Statistics of QUIC Cubic

Start at: 2017-08-12 14:22:33
End at: 2017-08-12 14:23:03

# Below is generated by plot.py at 2017-08-12 17:32:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 35.12 Mbit/s
95th percentile per-packet one-way delay: 63.410 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 63.512 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 41.18 Mbit/s
95th percentile per-packet one-way delay: 63.429 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 24.21 Mbit/s
95th percentile per-packet one-way delay: 61.859 ms
Loss rate: 0.36%
```

Run 10: Report of QUIC Cubic — Data Link



Run 1: Statistics of Saturator

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

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

Below is generated by plot.py at 2017-08-12 17:32:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 24.81 Mbit/s

95th percentile per-packet one-way delay: 64.580 ms

Loss rate: 0.81%

-- Flow 1:

Average throughput: 18.72 Mbit/s

95th percentile per-packet one-way delay: 64.651 ms

Loss rate: 0.48%

-- Flow 2:

Average throughput: 5.61 Mbit/s

95th percentile per-packet one-way delay: 63.528 ms

Loss rate: 57.14%

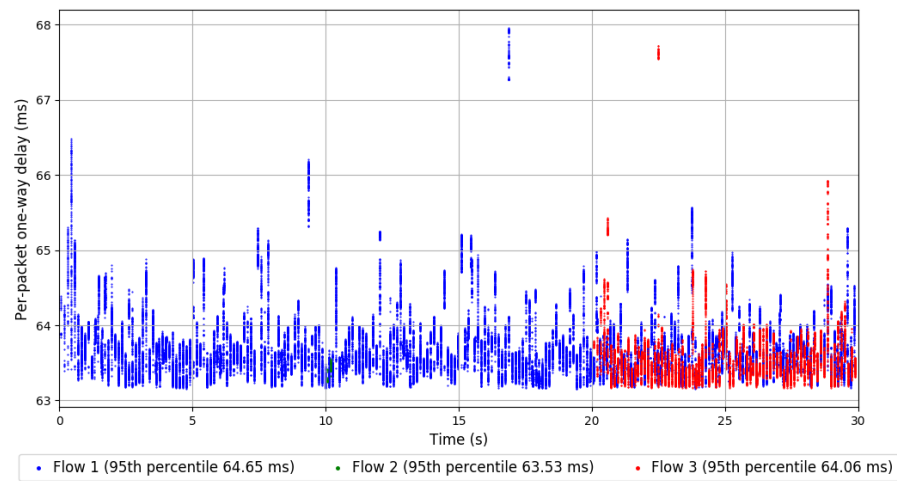
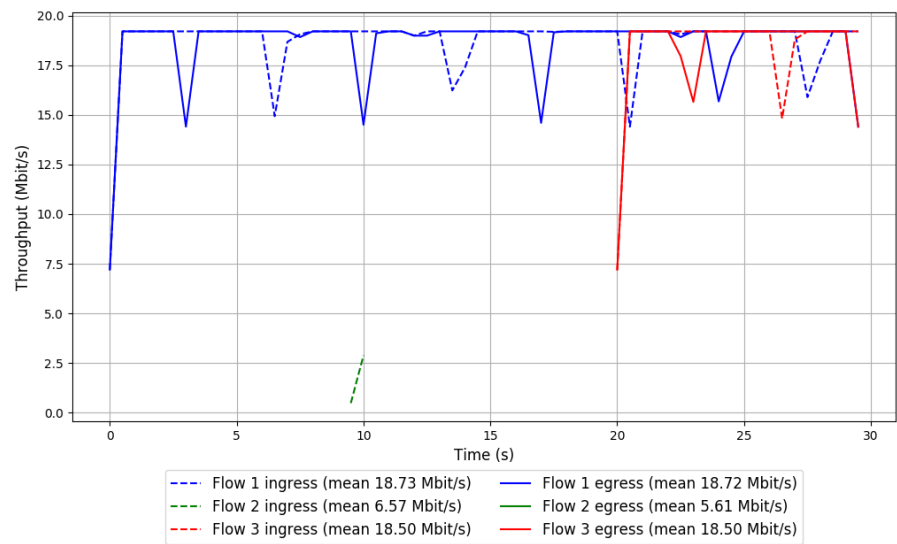
-- Flow 3:

Average throughput: 18.50 Mbit/s

95th percentile per-packet one-way delay: 64.059 ms

Loss rate: 1.31%

Run 1: Report of Saturator — Data Link

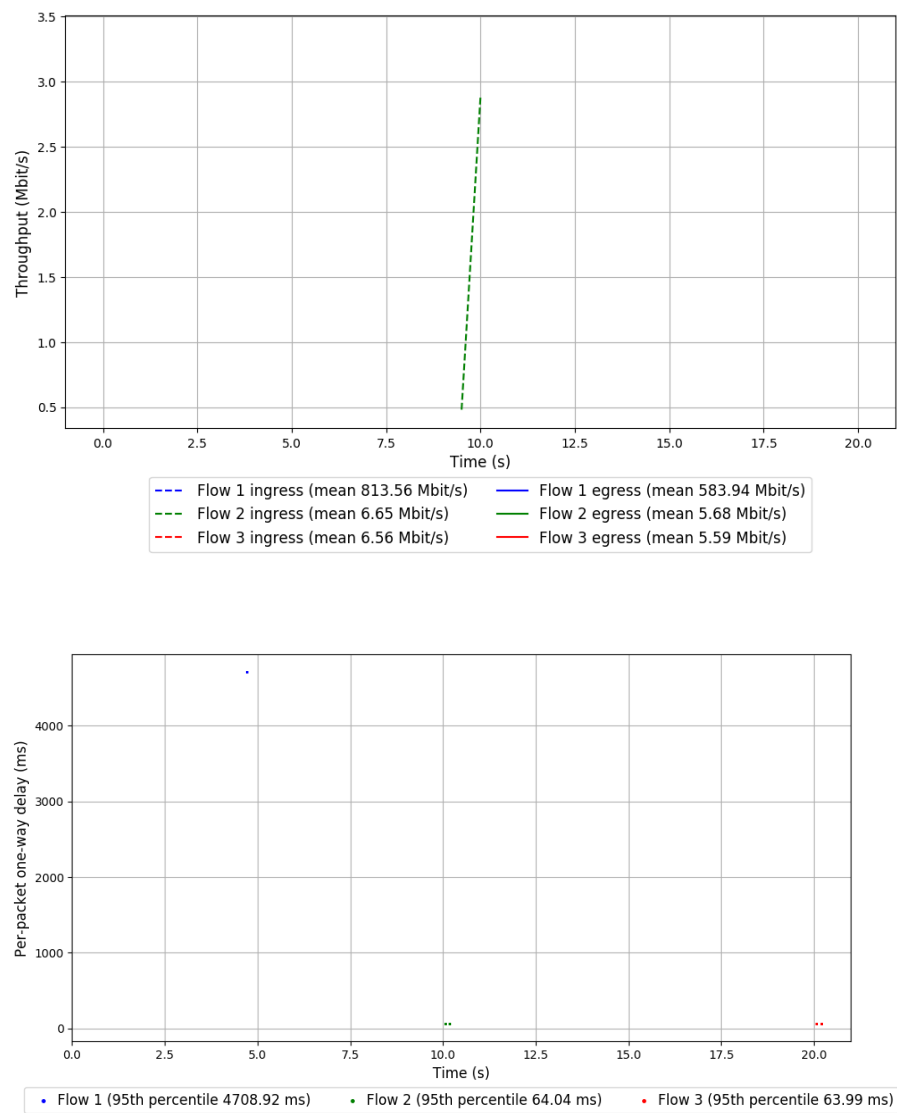


Run 2: Statistics of Saturator

Start at: 2017-08-12 12:57:38

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

Run 2: Report of Saturator — Data Link



Run 3: Statistics of Saturator

Start at: 2017-08-12 13:09:27

End at: 2017-08-12 13:09:57

Below is generated by plot.py at 2017-08-12 17:32:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 37.04 Mbit/s

95th percentile per-packet one-way delay: 64.590 ms

Loss rate: 0.71%

-- Flow 1:

Average throughput: 18.81 Mbit/s

95th percentile per-packet one-way delay: 64.739 ms

Loss rate: 0.48%

-- Flow 2:

Average throughput: 18.61 Mbit/s

95th percentile per-packet one-way delay: 64.465 ms

Loss rate: 0.71%

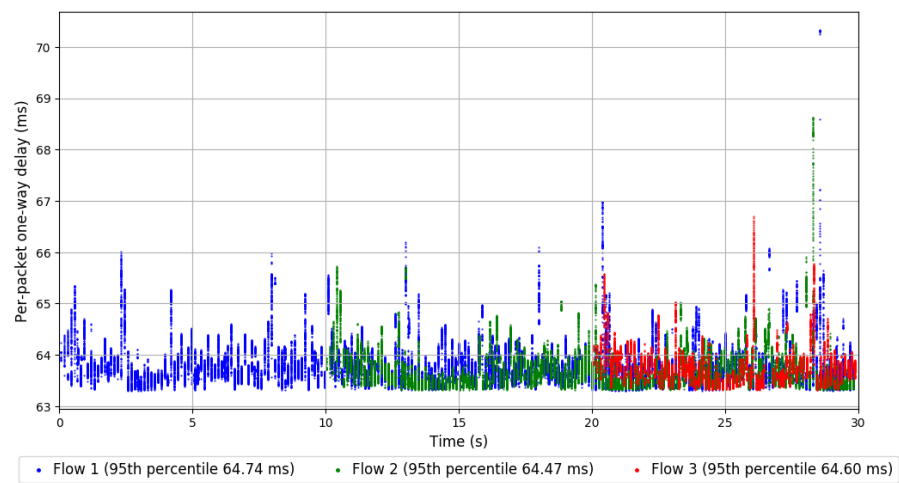
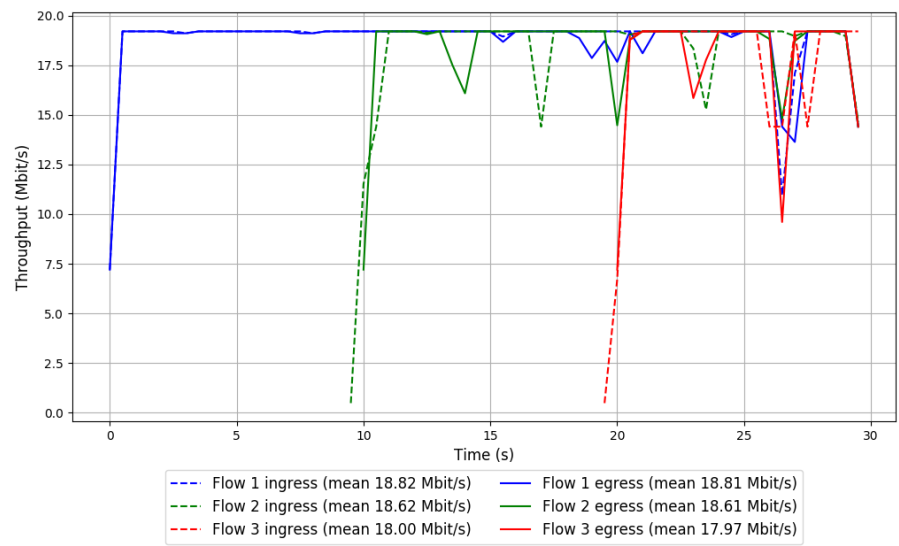
-- Flow 3:

Average throughput: 17.97 Mbit/s

95th percentile per-packet one-way delay: 64.600 ms

Loss rate: 1.40%

Run 3: Report of Saturator — Data Link



Run 4: Statistics of Saturator

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

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

Below is generated by plot.py at 2017-08-12 17:32:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 25.24 Mbit/s

95th percentile per-packet one-way delay: 62.097 ms

Loss rate: 0.86%

-- Flow 1:

Average throughput: 18.98 Mbit/s

95th percentile per-packet one-way delay: 62.070 ms

Loss rate: 0.53%

-- Flow 2:

Average throughput: 5.58 Mbit/s

95th percentile per-packet one-way delay: 64.325 ms

Loss rate: 57.14%

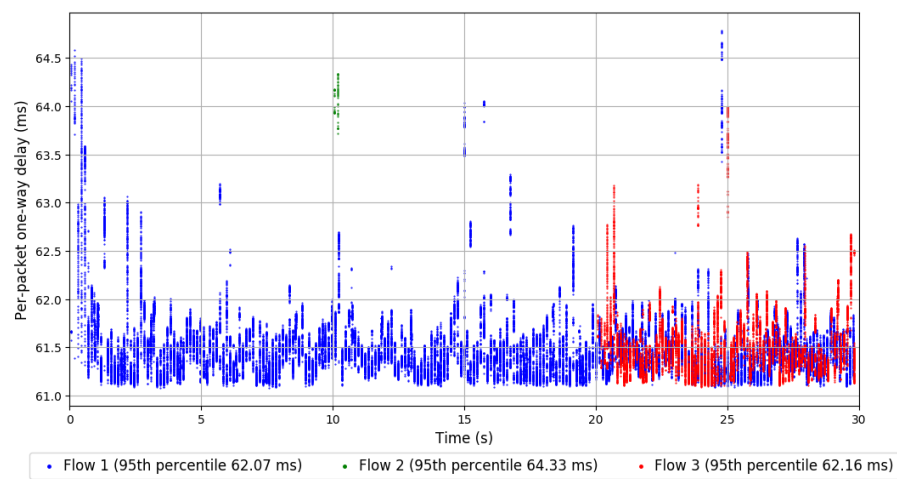
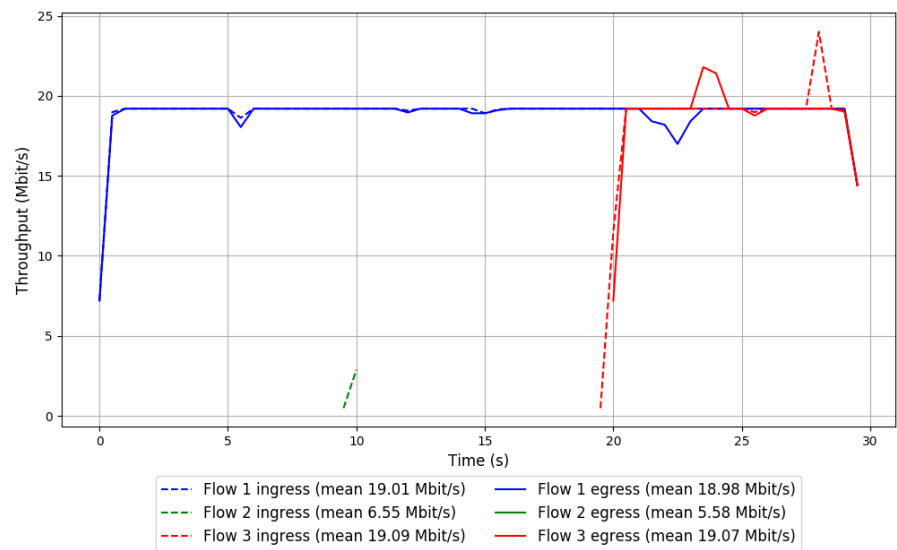
-- Flow 3:

Average throughput: 19.07 Mbit/s

95th percentile per-packet one-way delay: 62.164 ms

Loss rate: 1.36%

Run 4: Report of Saturator — Data Link



Run 5: Statistics of Saturator

Start at: 2017-08-12 13:33:03

End at: 2017-08-12 13:33:33

Below is generated by plot.py at 2017-08-12 17:32:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.22 Mbit/s

95th percentile per-packet one-way delay: 62.529 ms

Loss rate: 2.97%

-- Flow 1:

Average throughput: 5.63 Mbit/s

95th percentile per-packet one-way delay: 63.850 ms

Loss rate: 57.14%

-- Flow 2:

Average throughput: 5.59 Mbit/s

95th percentile per-packet one-way delay: 64.583 ms

Loss rate: 57.14%

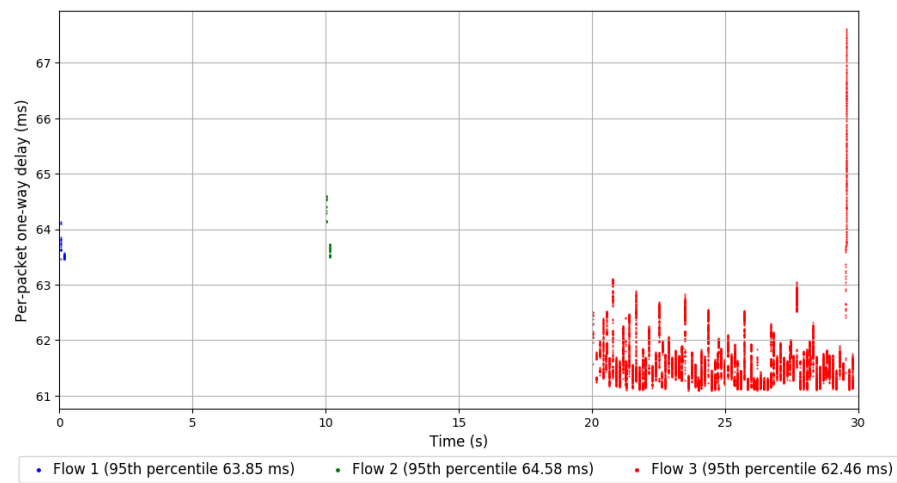
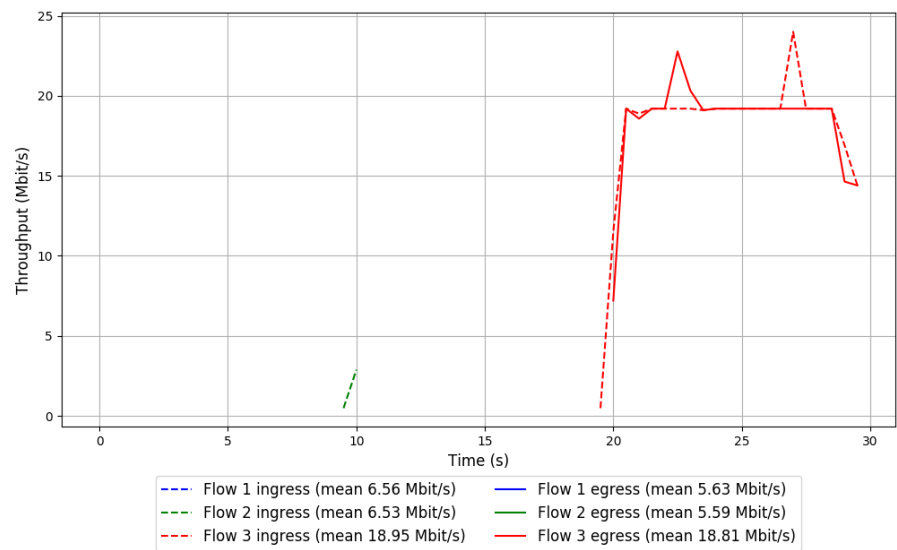
-- Flow 3:

Average throughput: 18.81 Mbit/s

95th percentile per-packet one-way delay: 62.461 ms

Loss rate: 2.00%

Run 5: Report of Saturator — Data Link



Run 6: Statistics of Saturator

Start at: 2017-08-12 13:44:57

End at: 2017-08-12 13:45:27

Below is generated by plot.py at 2017-08-12 17:32:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 37.86 Mbit/s

95th percentile per-packet one-way delay: 62.201 ms

Loss rate: 0.70%

-- Flow 1:

Average throughput: 19.03 Mbit/s

95th percentile per-packet one-way delay: 62.332 ms

Loss rate: 0.49%

-- Flow 2:

Average throughput: 18.96 Mbit/s

95th percentile per-packet one-way delay: 62.010 ms

Loss rate: 0.65%

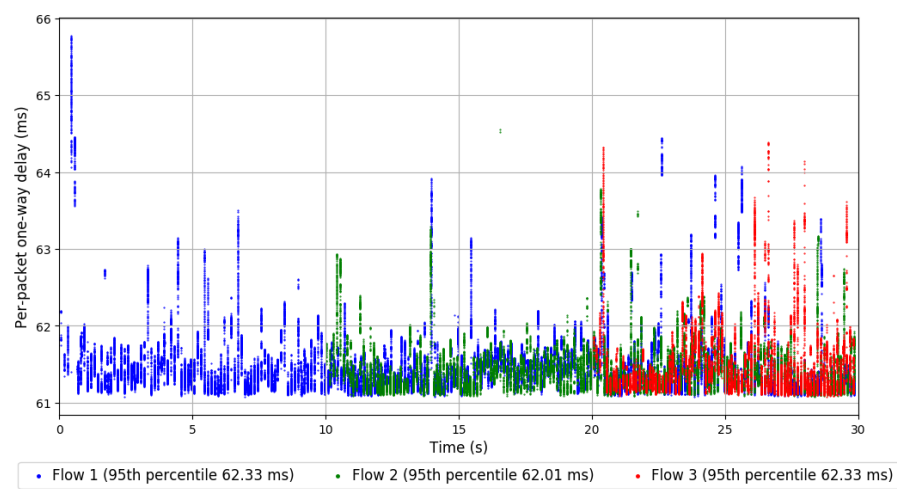
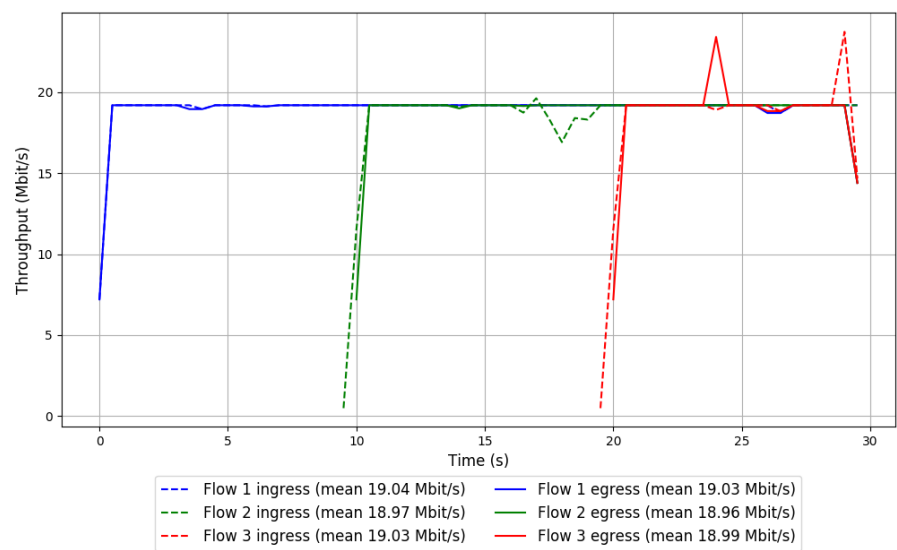
-- Flow 3:

Average throughput: 18.99 Mbit/s

95th percentile per-packet one-way delay: 62.326 ms

Loss rate: 1.45%

Run 6: Report of Saturator — Data Link



Run 7: Statistics of Saturator

Start at: 2017-08-12 13:56:18

End at: 2017-08-12 13:56:48

Below is generated by plot.py at 2017-08-12 17:32:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.21 Mbit/s

95th percentile per-packet one-way delay: 61.971 ms

Loss rate: 2.39%

-- Flow 1:

Average throughput: 5.63 Mbit/s

95th percentile per-packet one-way delay: 63.753 ms

Loss rate: 57.14%

-- Flow 2:

Average throughput: 5.58 Mbit/s

95th percentile per-packet one-way delay: 64.163 ms

Loss rate: 57.14%

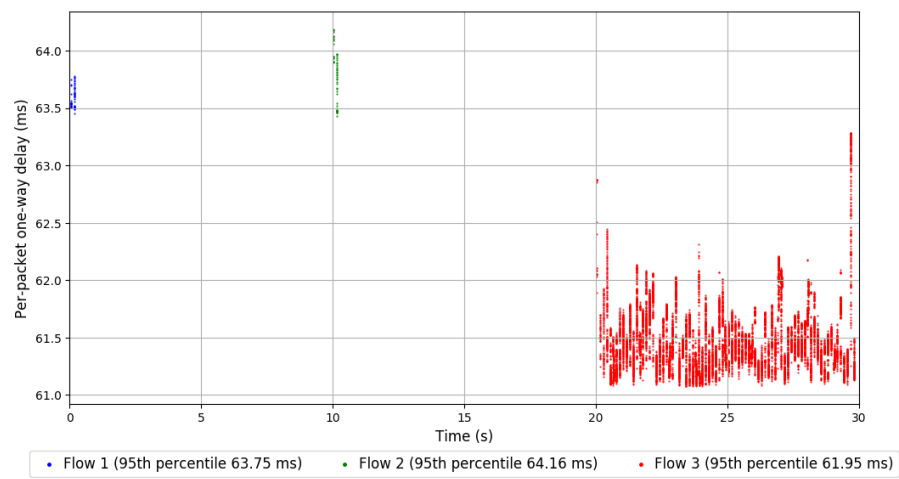
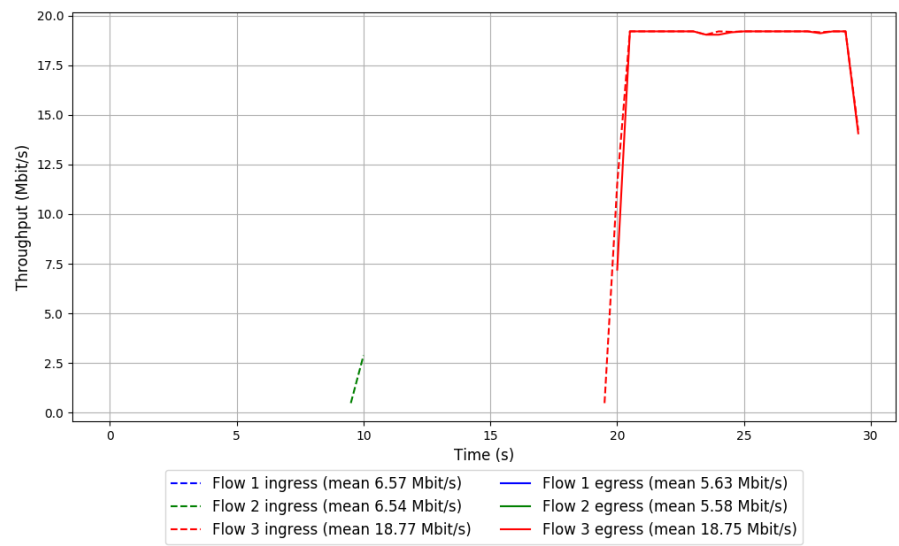
-- Flow 3:

Average throughput: 18.75 Mbit/s

95th percentile per-packet one-way delay: 61.947 ms

Loss rate: 1.40%

Run 7: Report of Saturator — Data Link



Run 8: Statistics of Saturator

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

End at: 2017-08-12 14:08:23

Below is generated by plot.py at 2017-08-12 17:32:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 28.44 Mbit/s

95th percentile per-packet one-way delay: 62.395 ms

Loss rate: 0.89%

-- Flow 1:

Average throughput: 18.88 Mbit/s

95th percentile per-packet one-way delay: 62.448 ms

Loss rate: 0.69%

-- Flow 2:

Average throughput: 18.86 Mbit/s

95th percentile per-packet one-way delay: 62.289 ms

Loss rate: 0.94%

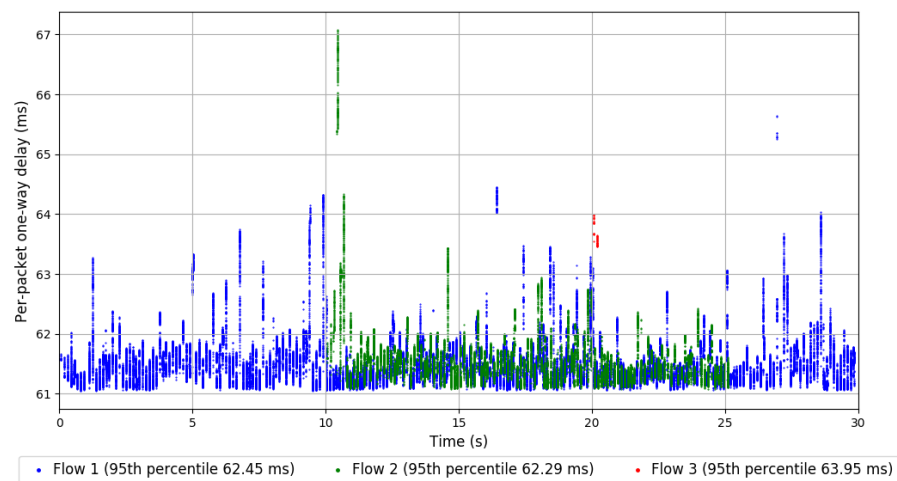
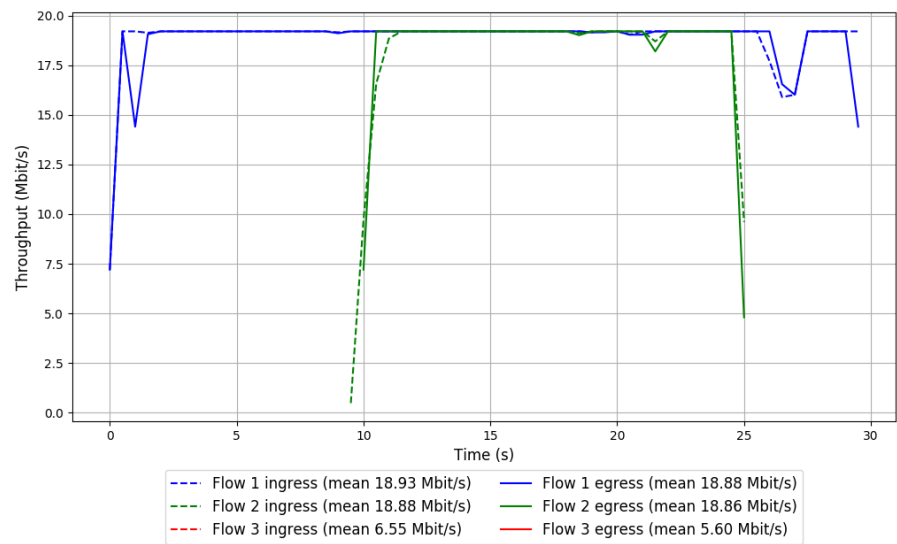
-- Flow 3:

Average throughput: 5.60 Mbit/s

95th percentile per-packet one-way delay: 63.951 ms

Loss rate: 57.14%

Run 8: Report of Saturator — Data Link

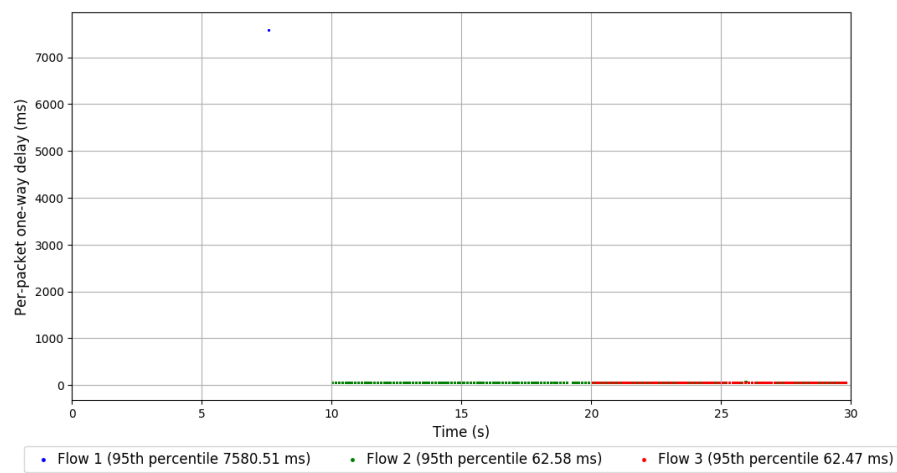
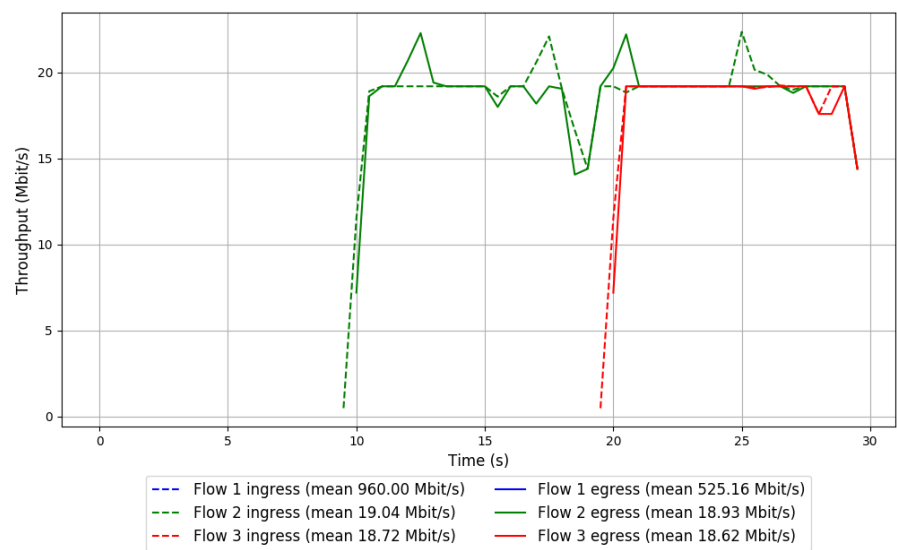


Run 9: Statistics of Saturator

Start at: 2017-08-12 14:19:06

End at: 2017-08-12 14:19:36

Run 9: Report of Saturator — Data Link



Run 10: Statistics of Saturator

Start at: 2017-08-12 14:30:07

End at: 2017-08-12 14:30:37

Below is generated by plot.py at 2017-08-12 17:32:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.50 Mbit/s

95th percentile per-packet one-way delay: 62.132 ms

Loss rate: 1.24%

-- Flow 1:

Average throughput: 5.70 Mbit/s

95th percentile per-packet one-way delay: 64.231 ms

Loss rate: 57.14%

-- Flow 2:

Average throughput: 18.74 Mbit/s

95th percentile per-packet one-way delay: 62.096 ms

Loss rate: 0.74%

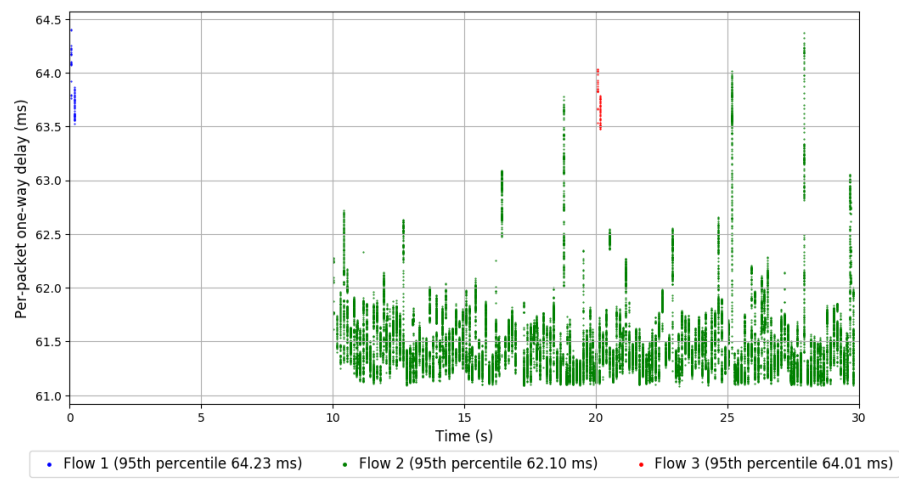
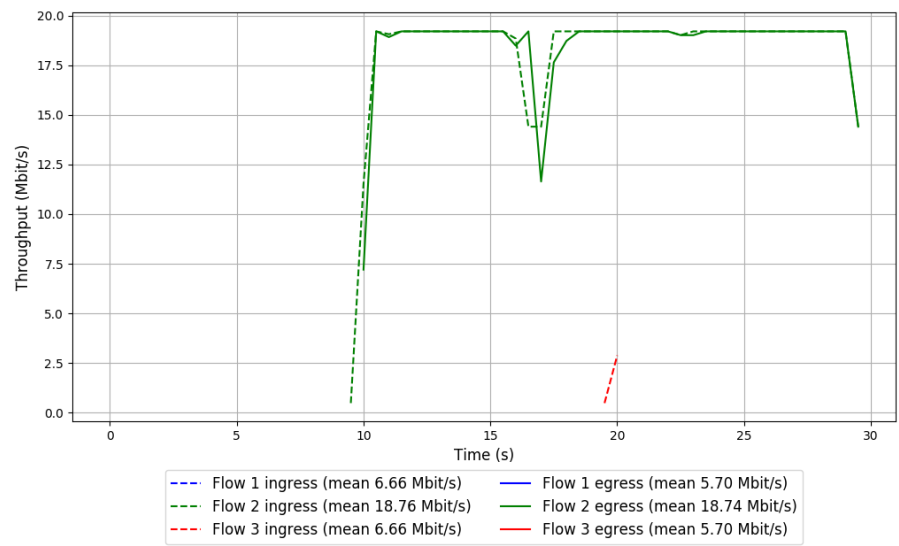
-- Flow 3:

Average throughput: 5.70 Mbit/s

95th percentile per-packet one-way delay: 64.012 ms

Loss rate: 57.14%

Run 10: Report of Saturator — Data Link

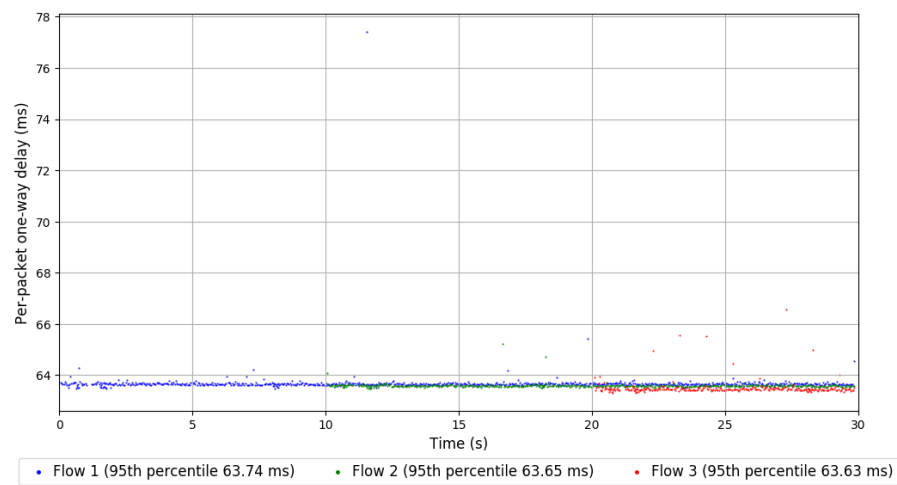
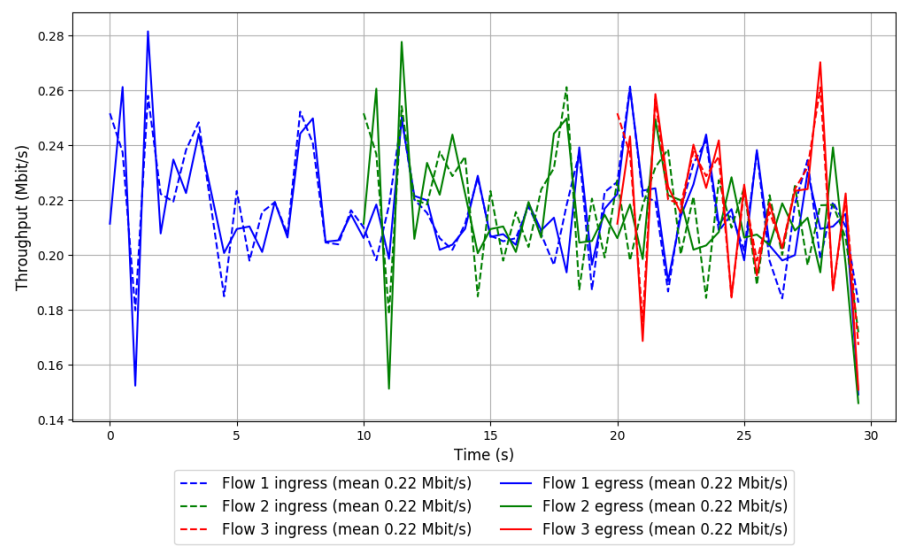


```
Run 1: Statistics of SCReAM

Start at: 2017-08-12 12:37:10
End at: 2017-08-12 12:37:40

# Below is generated by plot.py at 2017-08-12 17:32:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 63.716 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.738 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.646 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.635 ms
Loss rate: 1.10%
```

Run 1: Report of SReAM — Data Link

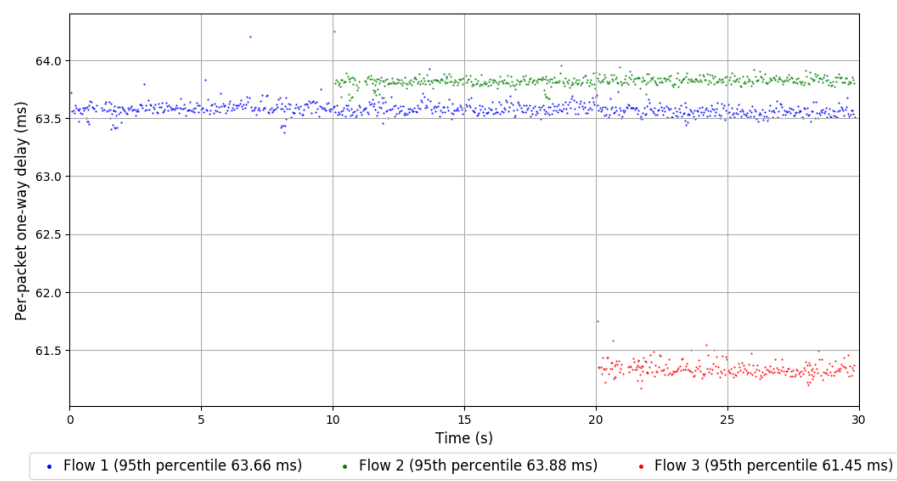
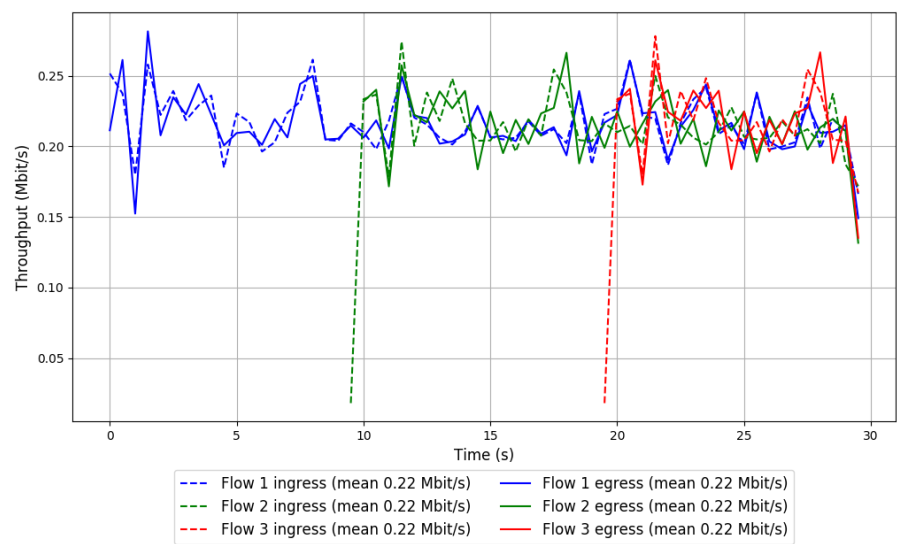


```
Run 2: Statistics of SReAM

Start at: 2017-08-12 12:48:40
End at: 2017-08-12 12:49:10

# Below is generated by plot.py at 2017-08-12 17:32:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 63.853 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.657 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.877 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.451 ms
Loss rate: 1.10%
```

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2017-08-12 13:00:23

End at: 2017-08-12 13:00:53

Below is generated by plot.py at 2017-08-12 17:32:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 63.911 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.571 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.941 ms

Loss rate: 0.63%

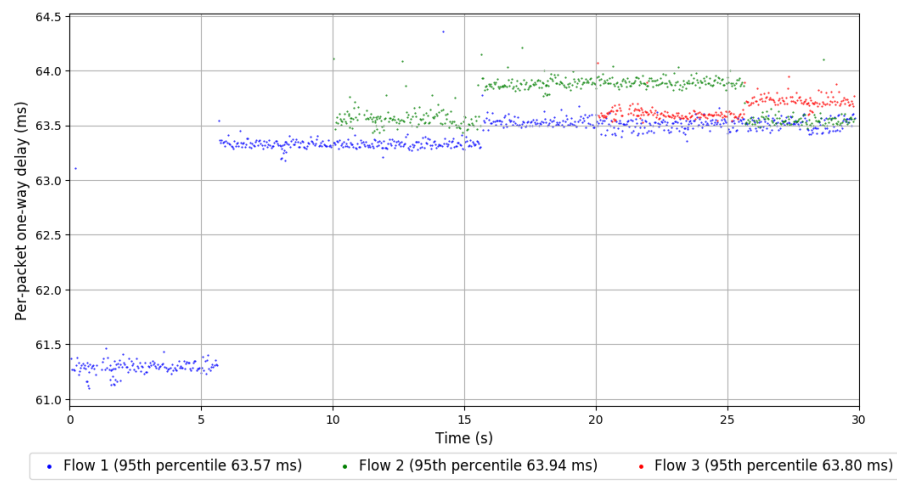
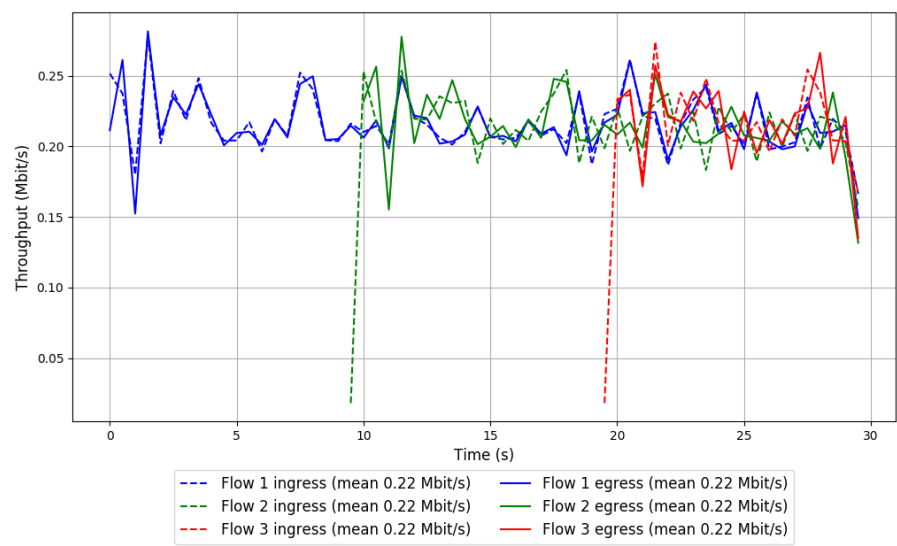
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.799 ms

Loss rate: 1.10%

Run 3: Report of SCSReAM — Data Link



Run 4: Statistics of SCReAM

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

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

Below is generated by plot.py at 2017-08-12 17:32:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 63.800 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.581 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.820 ms

Loss rate: 0.63%

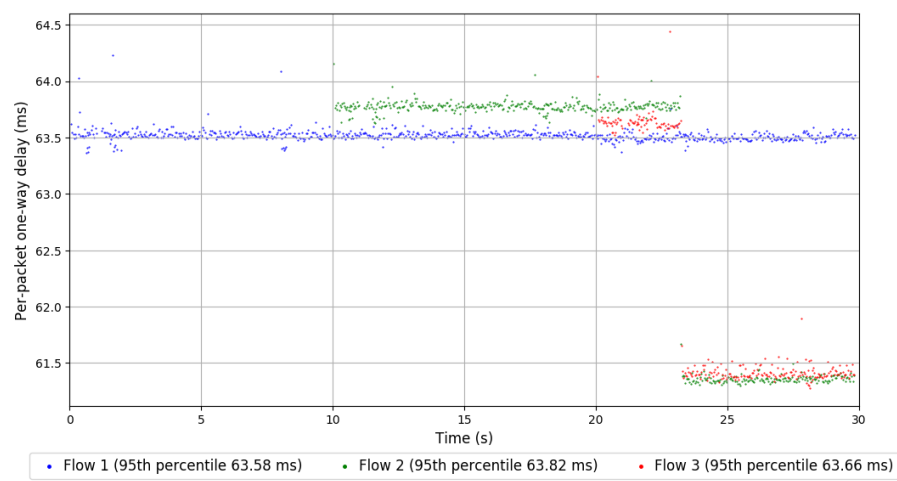
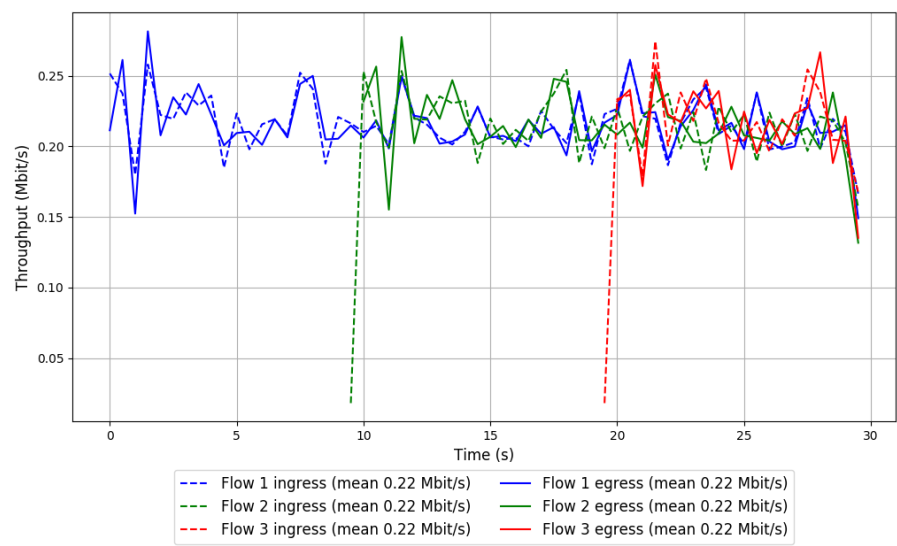
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.663 ms

Loss rate: 1.10%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SReAM

Start at: 2017-08-12 13:23:54

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

Below is generated by plot.py at 2017-08-12 17:32:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 63.724 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.595 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.605 ms

Loss rate: 0.63%

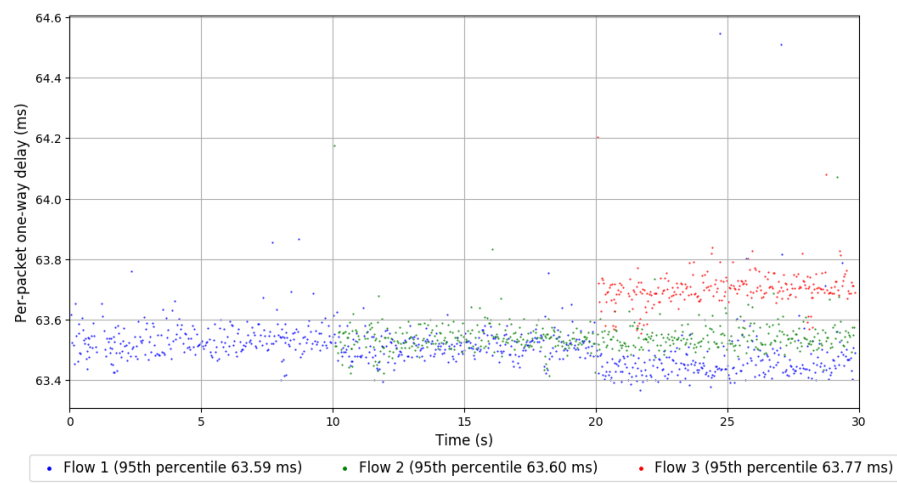
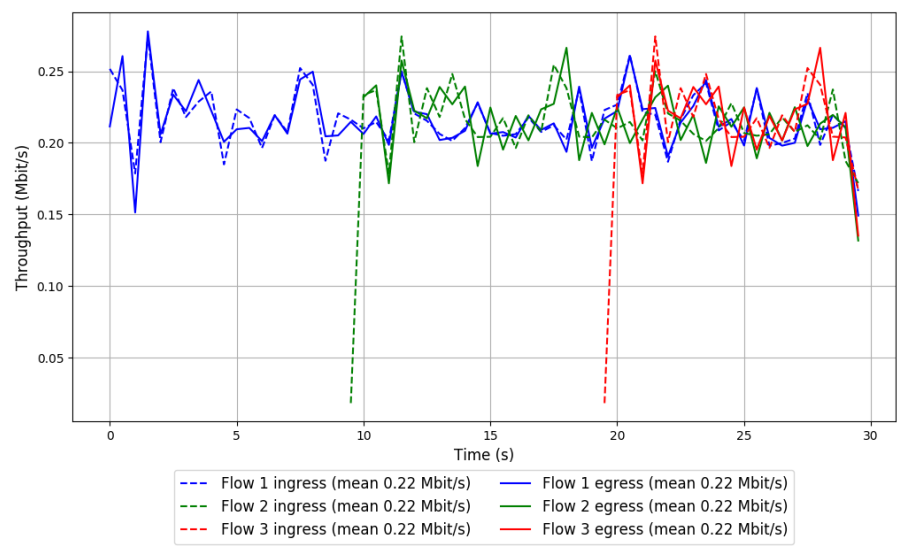
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.772 ms

Loss rate: 1.10%

Run 5: Report of SReAM — Data Link



Run 6: Statistics of SReAM

Start at: 2017-08-12 13:35:48

End at: 2017-08-12 13:36:18

Below is generated by plot.py at 2017-08-12 17:32:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 63.629 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.659 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.568 ms

Loss rate: 0.63%

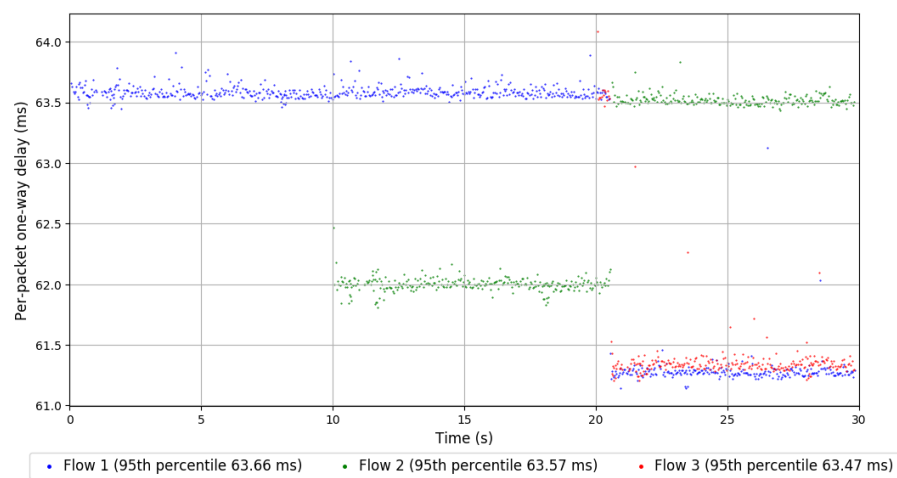
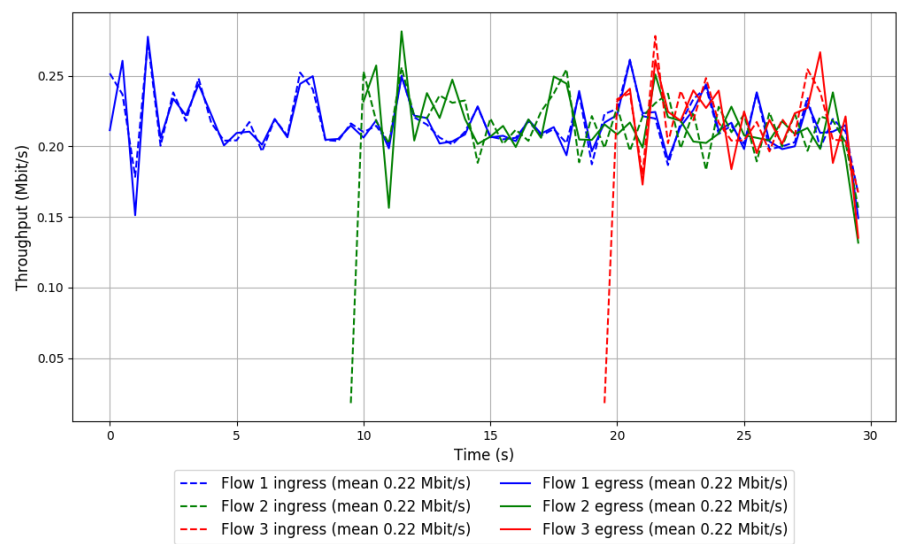
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.467 ms

Loss rate: 1.10%

Run 6: Report of SReAM — Data Link



Run 7: Statistics of SReAM

Start at: 2017-08-12 13:47:45

End at: 2017-08-12 13:48:15

Below is generated by plot.py at 2017-08-12 17:32:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 63.642 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.647 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 61.653 ms

Loss rate: 0.63%

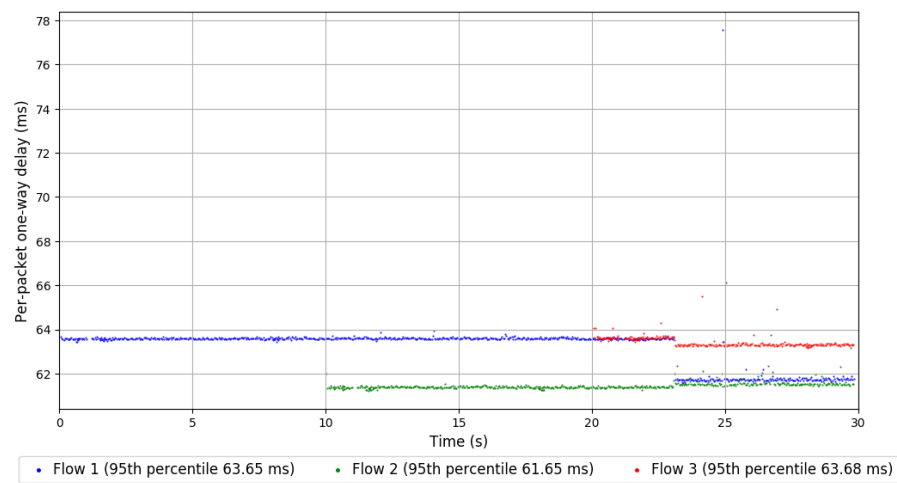
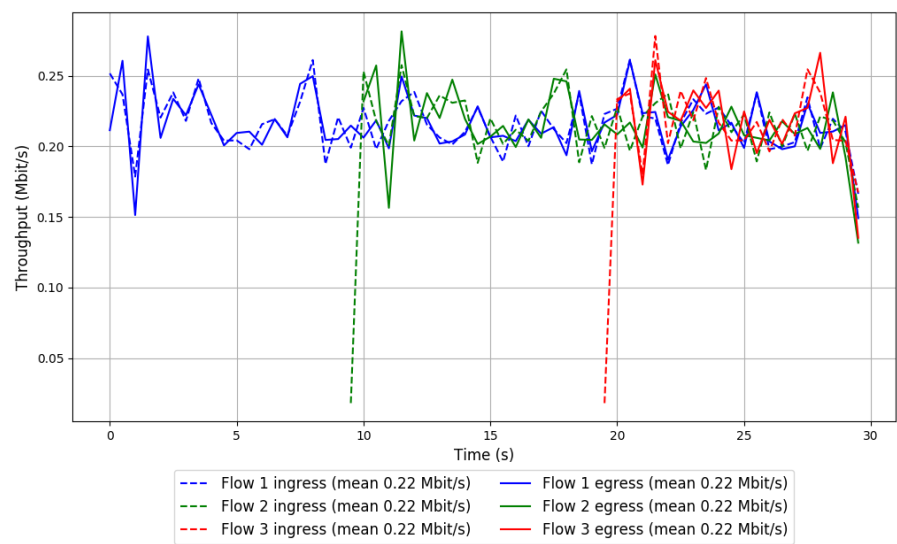
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.680 ms

Loss rate: 1.10%

Run 7: Report of SReAM — Data Link



Run 8: Statistics of SReAM

Start at: 2017-08-12 13:59:04

End at: 2017-08-12 13:59:34

Below is generated by plot.py at 2017-08-12 17:32:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 63.698 ms

Loss rate: 0.65%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.712 ms

Loss rate: 0.51%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.587 ms

Loss rate: 0.63%

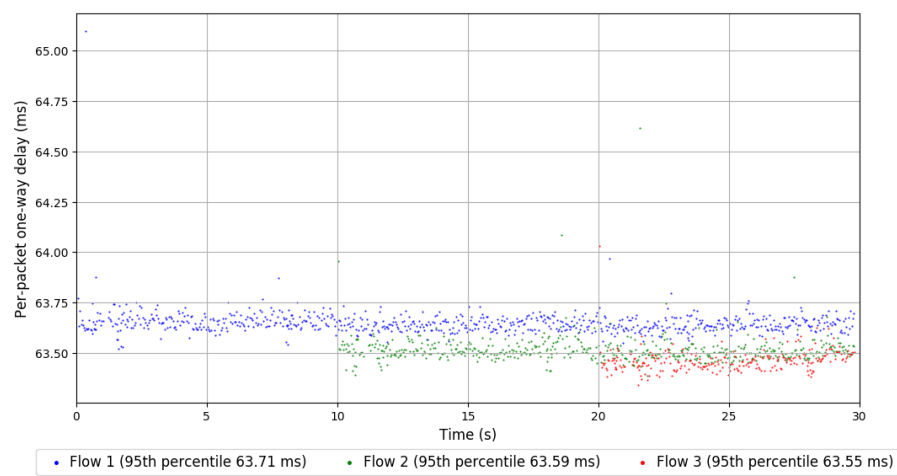
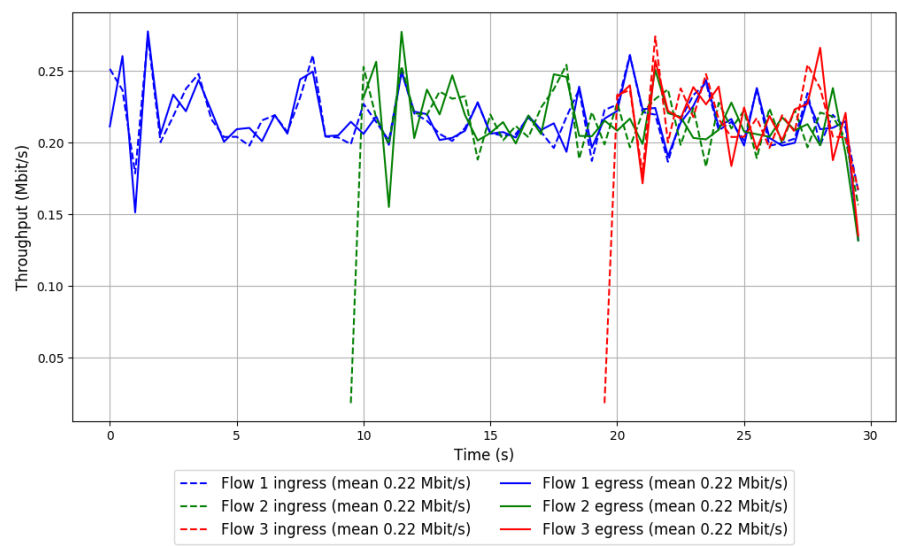
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.548 ms

Loss rate: 1.10%

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SReAM

Start at: 2017-08-12 14:10:39

End at: 2017-08-12 14:11:09

Below is generated by plot.py at 2017-08-12 17:32:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 63.750 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.763 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.594 ms

Loss rate: 0.63%

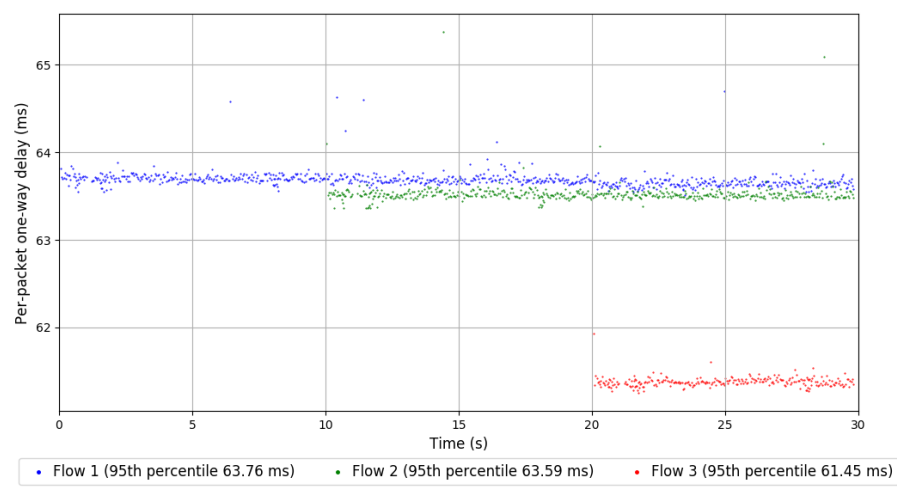
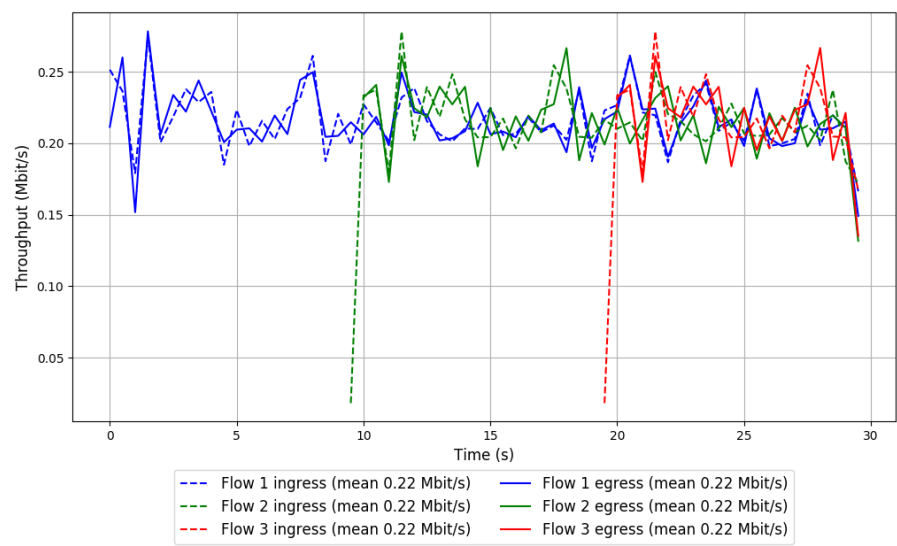
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 61.447 ms

Loss rate: 1.10%

Run 9: Report of SReAM — Data Link

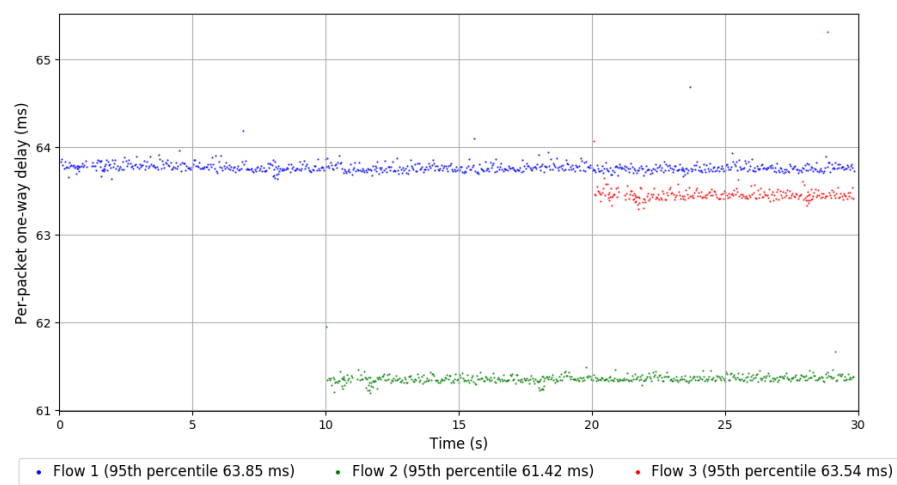
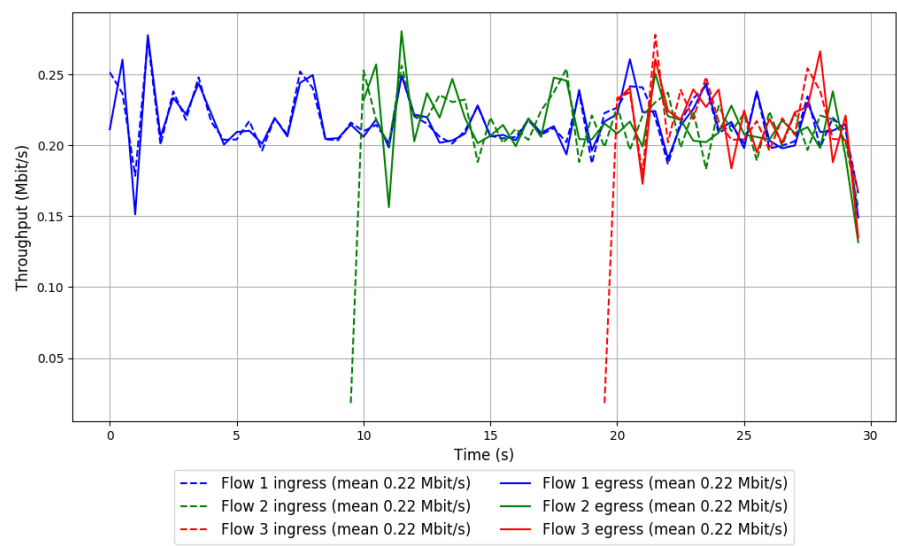


```
Run 10: Statistics of SReAM

Start at: 2017-08-12 14:21:52
End at: 2017-08-12 14:22:22

# Below is generated by plot.py at 2017-08-12 17:32:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 63.827 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.849 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.422 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.541 ms
Loss rate: 1.10%
```

Run 10: Report of SReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2017-08-12 12:36:29

End at: 2017-08-12 12:36:59

Below is generated by plot.py at 2017-08-12 17:32:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 9.08 Mbit/s

95th percentile per-packet one-way delay: 63.776 ms

Loss rate: 8.26%

-- Flow 1:

Average throughput: 3.89 Mbit/s

95th percentile per-packet one-way delay: 63.713 ms

Loss rate: 12.52%

-- Flow 2:

Average throughput: 6.46 Mbit/s

95th percentile per-packet one-way delay: 63.842 ms

Loss rate: 0.39%

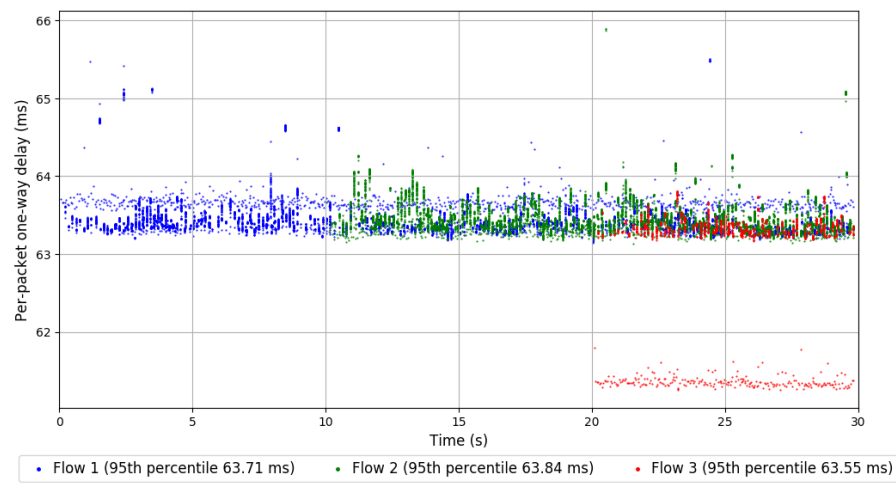
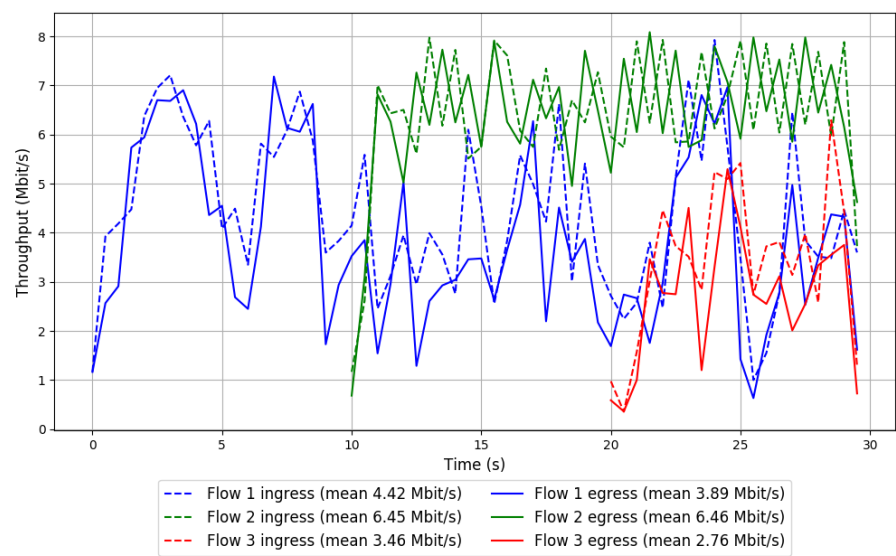
-- Flow 3:

Average throughput: 2.76 Mbit/s

95th percentile per-packet one-way delay: 63.553 ms

Loss rate: 21.26%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2017-08-12 12:47:59

End at: 2017-08-12 12:48:29

Below is generated by plot.py at 2017-08-12 17:32:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 9.64 Mbit/s

95th percentile per-packet one-way delay: 63.965 ms

Loss rate: 6.91%

-- Flow 1:

Average throughput: 3.38 Mbit/s

95th percentile per-packet one-way delay: 63.795 ms

Loss rate: 16.05%

-- Flow 2:

Average throughput: 6.42 Mbit/s

95th percentile per-packet one-way delay: 64.022 ms

Loss rate: 0.91%

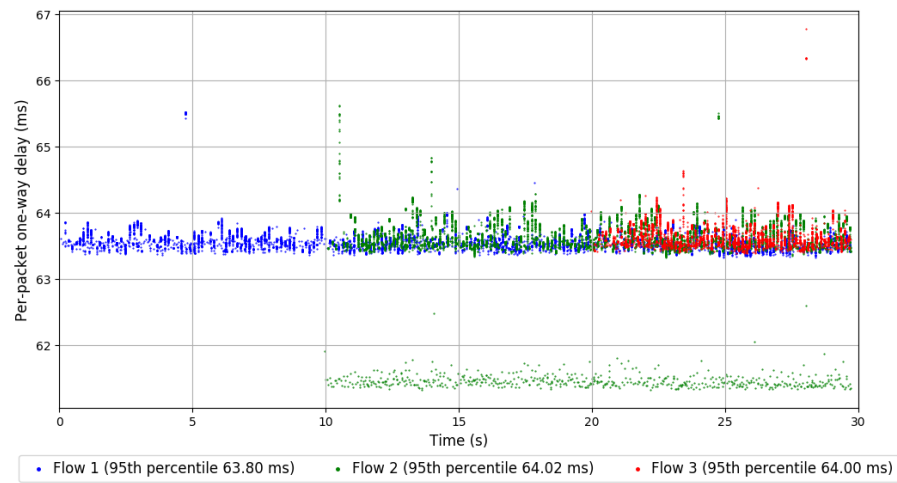
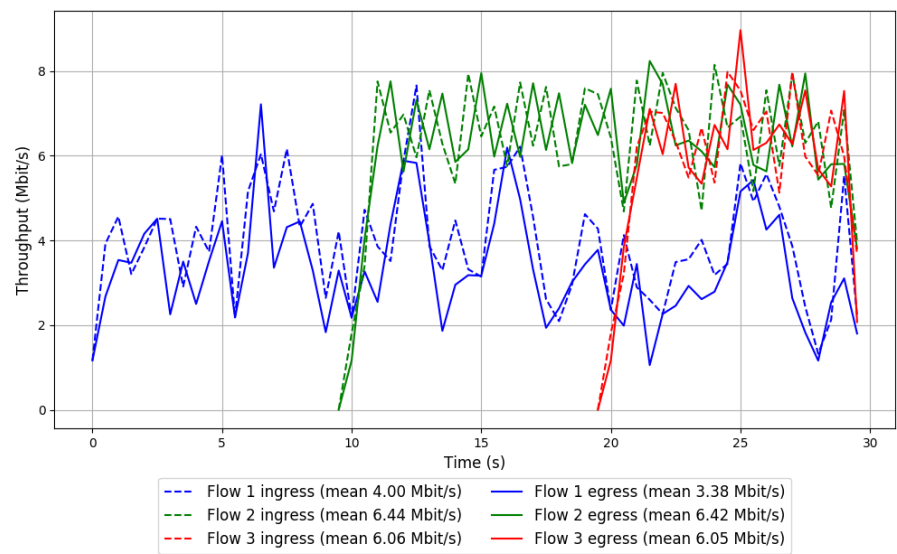
-- Flow 3:

Average throughput: 6.05 Mbit/s

95th percentile per-packet one-way delay: 64.002 ms

Loss rate: 1.55%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2017-08-12 12:59:42

End at: 2017-08-12 13:00:12

Below is generated by plot.py at 2017-08-12 17:32:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 11.70 Mbit/s

95th percentile per-packet one-way delay: 64.047 ms

Loss rate: 2.73%

-- Flow 1:

Average throughput: 6.52 Mbit/s

95th percentile per-packet one-way delay: 64.106 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 6.30 Mbit/s

95th percentile per-packet one-way delay: 63.980 ms

Loss rate: 0.67%

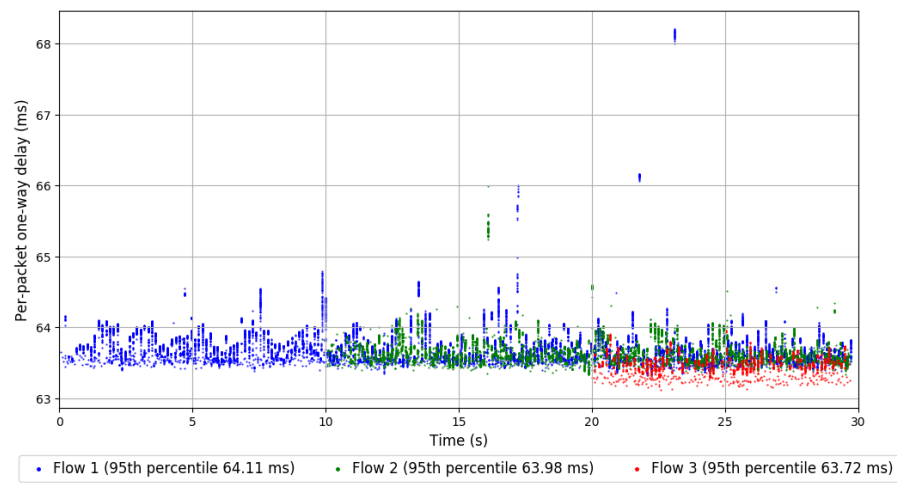
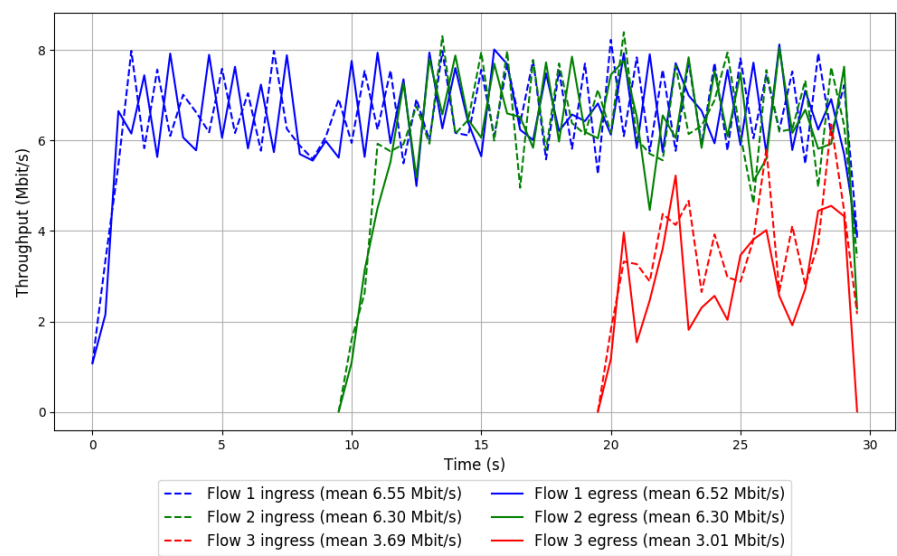
-- Flow 3:

Average throughput: 3.01 Mbit/s

95th percentile per-packet one-way delay: 63.716 ms

Loss rate: 19.61%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2017-08-12 13:11:34

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

Below is generated by plot.py at 2017-08-12 17:32:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.61 Mbit/s

95th percentile per-packet one-way delay: 63.770 ms

Loss rate: 16.45%

-- Flow 1:

Average throughput: 2.86 Mbit/s

95th percentile per-packet one-way delay: 63.796 ms

Loss rate: 15.52%

-- Flow 2:

Average throughput: 2.72 Mbit/s

95th percentile per-packet one-way delay: 63.758 ms

Loss rate: 18.14%

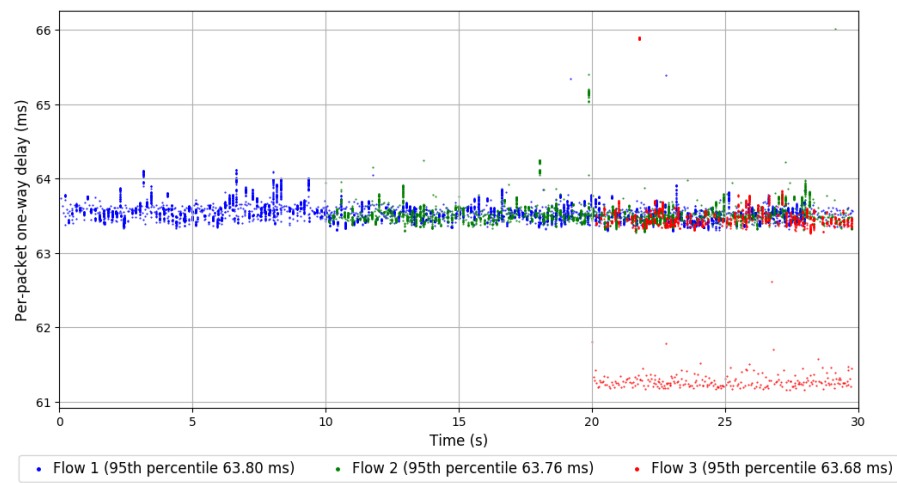
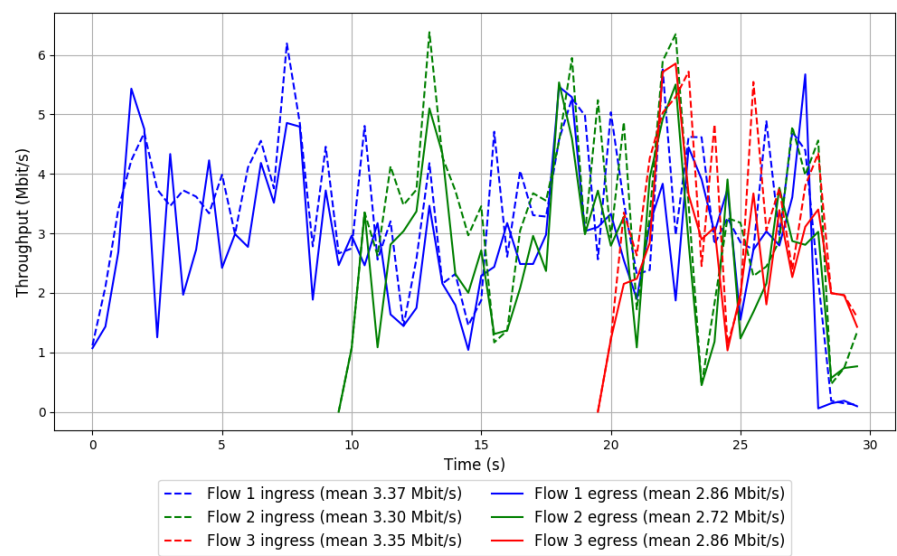
-- Flow 3:

Average throughput: 2.86 Mbit/s

95th percentile per-packet one-way delay: 63.678 ms

Loss rate: 15.89%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2017-08-12 13:23:12

End at: 2017-08-12 13:23:42

Below is generated by plot.py at 2017-08-12 17:33:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 10.51 Mbit/s

95th percentile per-packet one-way delay: 63.600 ms

Loss rate: 4.02%

-- Flow 1:

Average throughput: 6.57 Mbit/s

95th percentile per-packet one-way delay: 61.885 ms

Loss rate: 0.71%

-- Flow 2:

Average throughput: 3.08 Mbit/s

95th percentile per-packet one-way delay: 63.711 ms

Loss rate: 14.98%

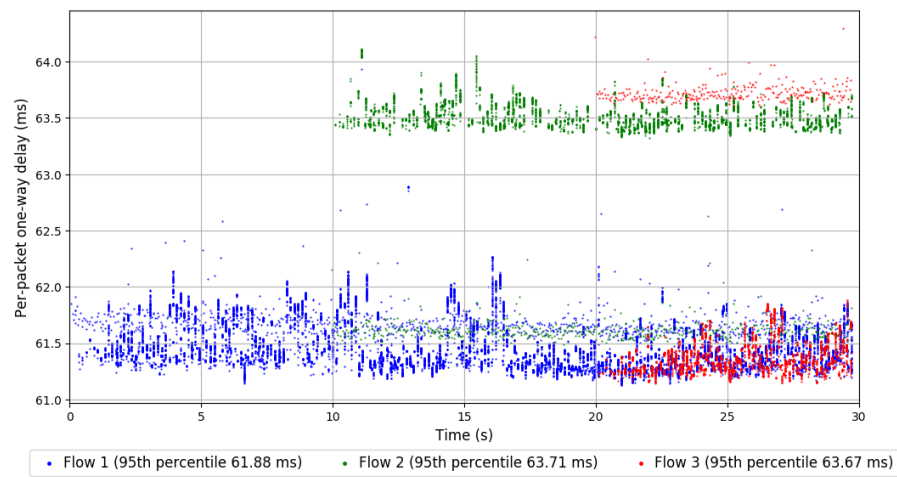
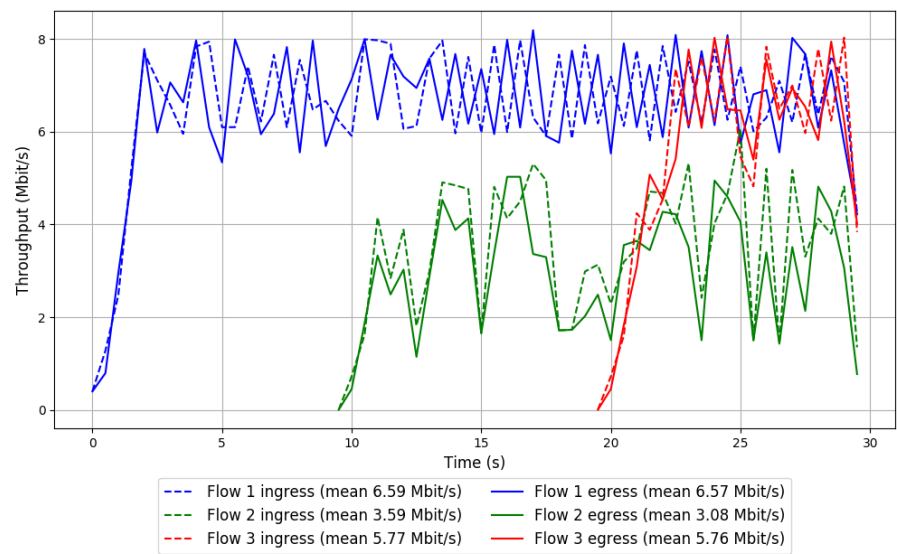
-- Flow 3:

Average throughput: 5.76 Mbit/s

95th percentile per-packet one-way delay: 63.667 ms

Loss rate: 1.66%

Run 5: Report of Sprout — Data Link

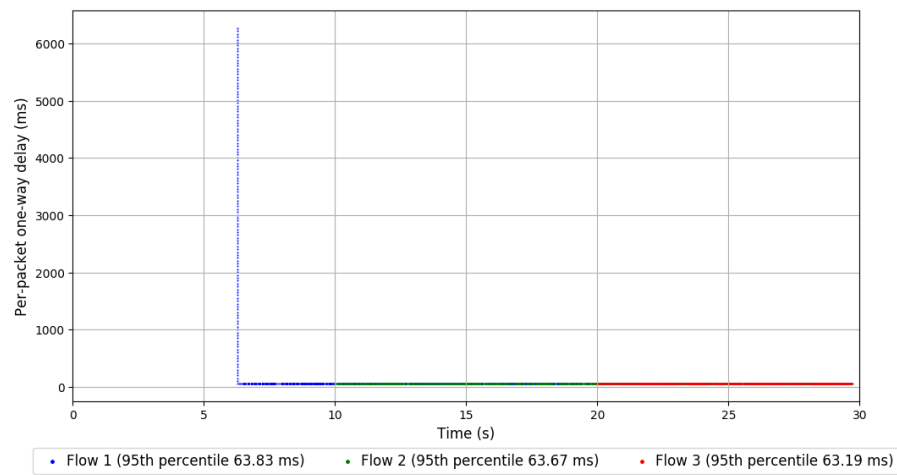
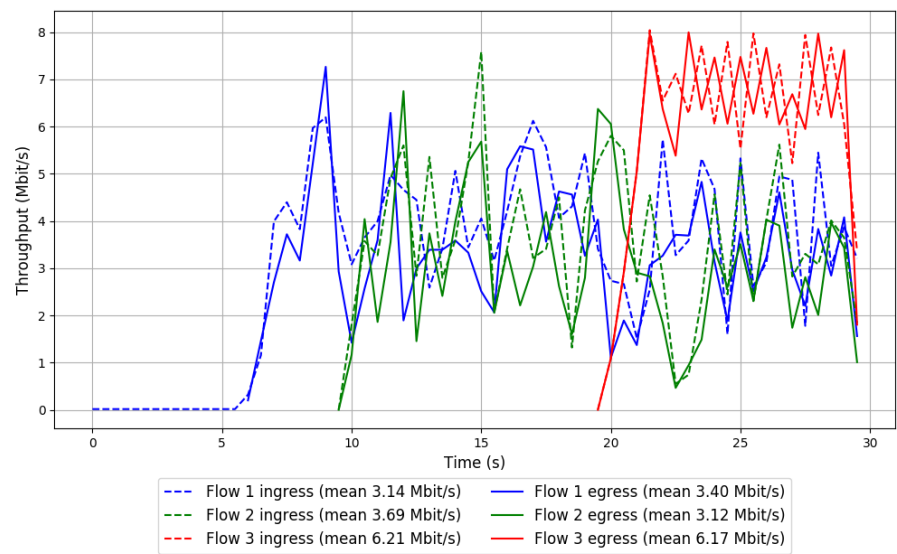


Run 6: Statistics of Sprout

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

End at: 2017-08-12 13:35:37

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2017-08-12 13:47:04

End at: 2017-08-12 13:47:34

Below is generated by plot.py at 2017-08-12 17:33:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.14 Mbit/s

95th percentile per-packet one-way delay: 63.828 ms

Loss rate: 13.04%

-- Flow 1:

Average throughput: 3.06 Mbit/s

95th percentile per-packet one-way delay: 63.910 ms

Loss rate: 17.06%

-- Flow 2:

Average throughput: 3.07 Mbit/s

95th percentile per-packet one-way delay: 63.722 ms

Loss rate: 17.32%

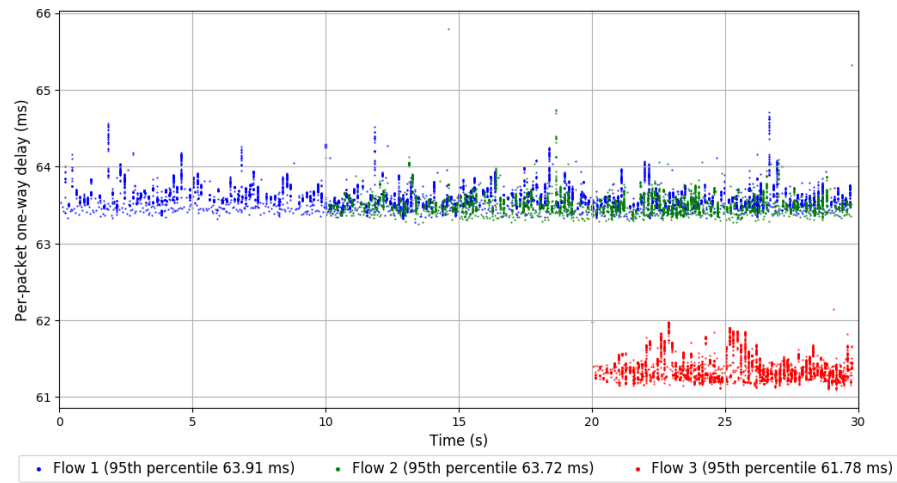
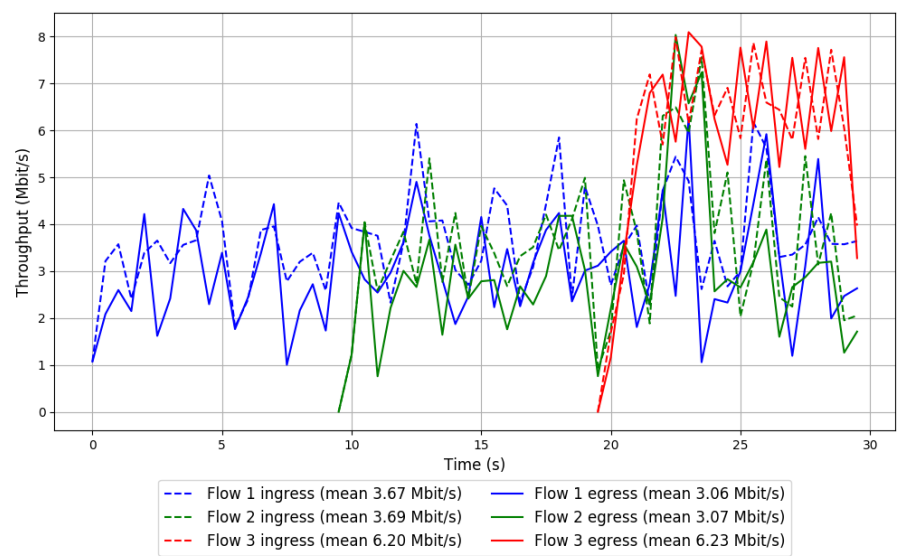
-- Flow 3:

Average throughput: 6.23 Mbit/s

95th percentile per-packet one-way delay: 61.778 ms

Loss rate: 0.75%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2017-08-12 13:58:22

End at: 2017-08-12 13:58:52

Below is generated by plot.py at 2017-08-12 17:33:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.12 Mbit/s

95th percentile per-packet one-way delay: 63.772 ms

Loss rate: 12.05%

-- Flow 1:

Average throughput: 2.97 Mbit/s

95th percentile per-packet one-way delay: 63.775 ms

Loss rate: 15.52%

-- Flow 2:

Average throughput: 3.07 Mbit/s

95th percentile per-packet one-way delay: 63.822 ms

Loss rate: 16.56%

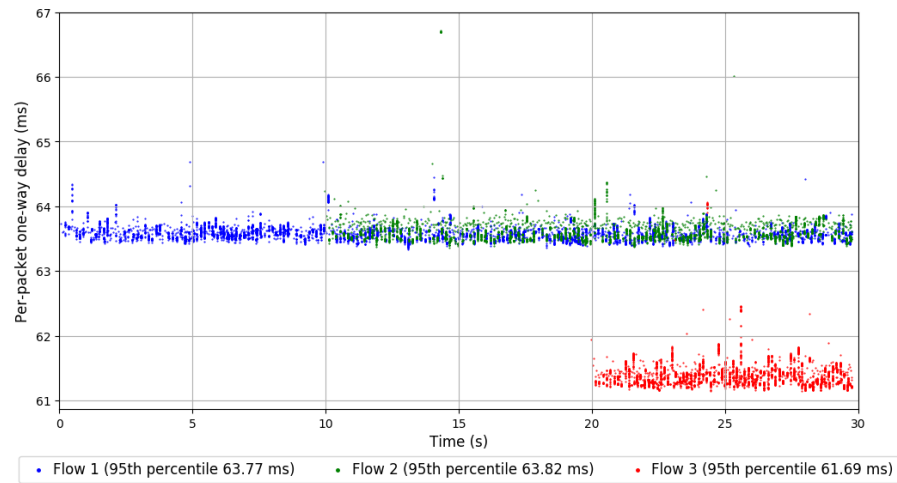
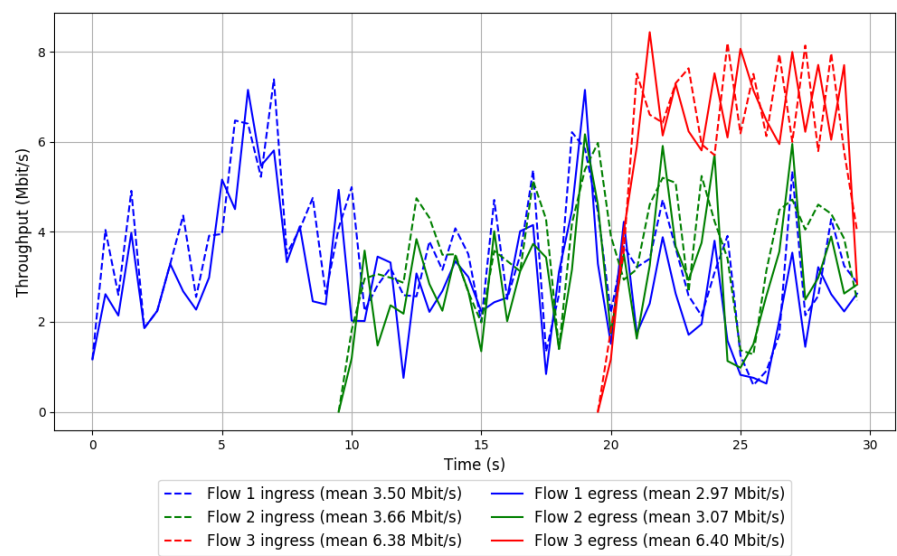
-- Flow 3:

Average throughput: 6.40 Mbit/s

95th percentile per-packet one-way delay: 61.686 ms

Loss rate: 1.13%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2017-08-12 14:09:58

End at: 2017-08-12 14:10:28

Below is generated by plot.py at 2017-08-12 17:33:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.60 Mbit/s

95th percentile per-packet one-way delay: 63.826 ms

Loss rate: 17.71%

-- Flow 1:

Average throughput: 2.71 Mbit/s

95th percentile per-packet one-way delay: 63.853 ms

Loss rate: 19.93%

-- Flow 2:

Average throughput: 3.15 Mbit/s

95th percentile per-packet one-way delay: 63.781 ms

Loss rate: 15.39%

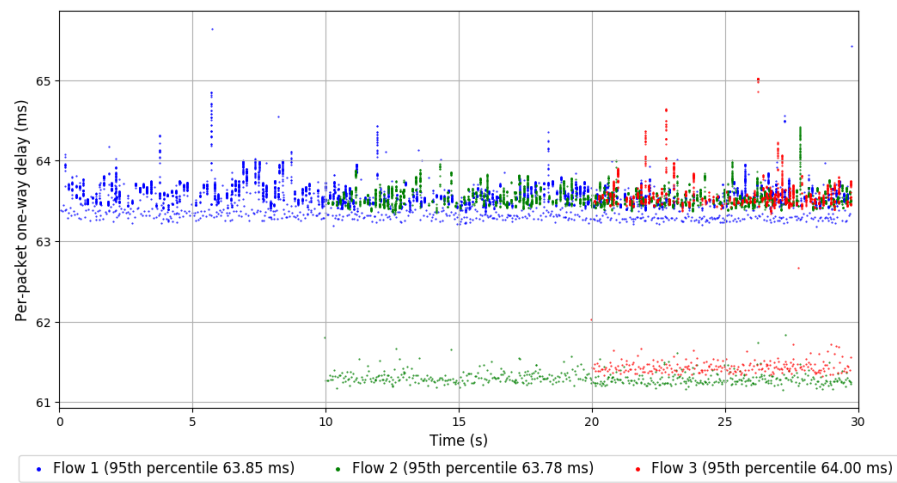
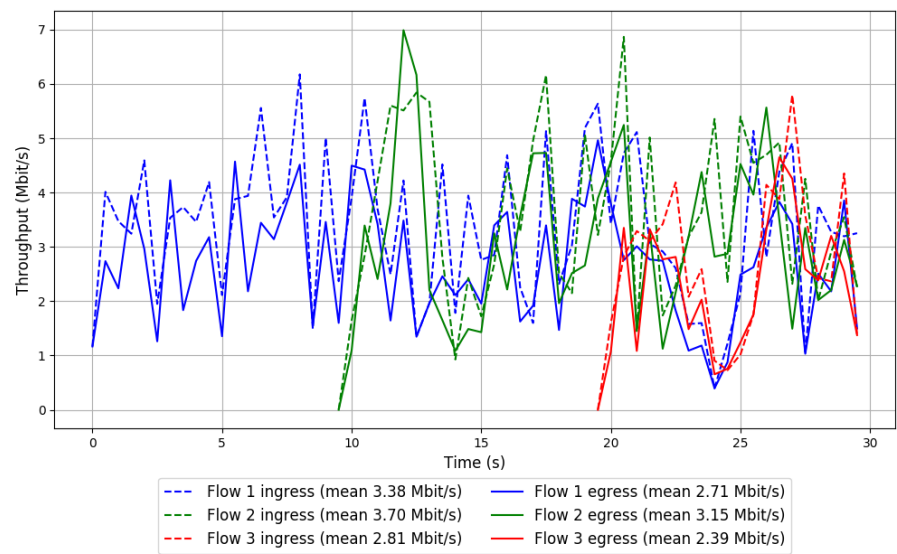
-- Flow 3:

Average throughput: 2.39 Mbit/s

95th percentile per-packet one-way delay: 64.003 ms

Loss rate: 15.79%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2017-08-12 14:21:11

End at: 2017-08-12 14:21:41

Below is generated by plot.py at 2017-08-12 17:33:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.24 Mbit/s

95th percentile per-packet one-way delay: 63.845 ms

Loss rate: 12.96%

-- Flow 1:

Average throughput: 3.57 Mbit/s

95th percentile per-packet one-way delay: 63.812 ms

Loss rate: 13.66%

-- Flow 2:

Average throughput: 3.32 Mbit/s

95th percentile per-packet one-way delay: 63.849 ms

Loss rate: 14.29%

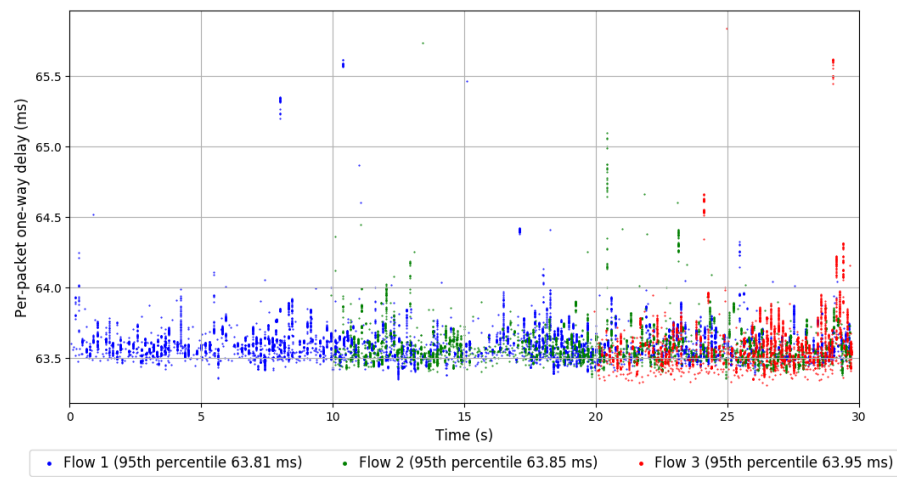
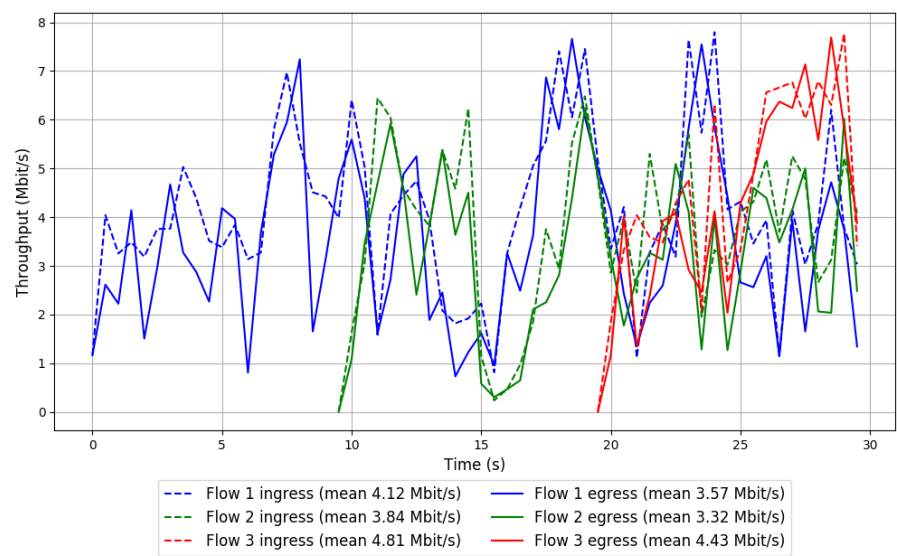
-- Flow 3:

Average throughput: 4.43 Mbit/s

95th percentile per-packet one-way delay: 63.947 ms

Loss rate: 9.04%

Run 10: Report of Sprout — Data Link

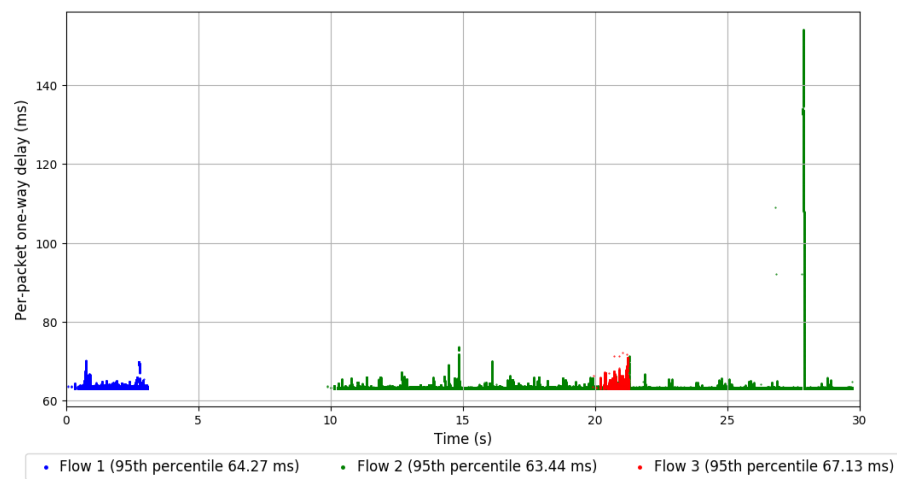
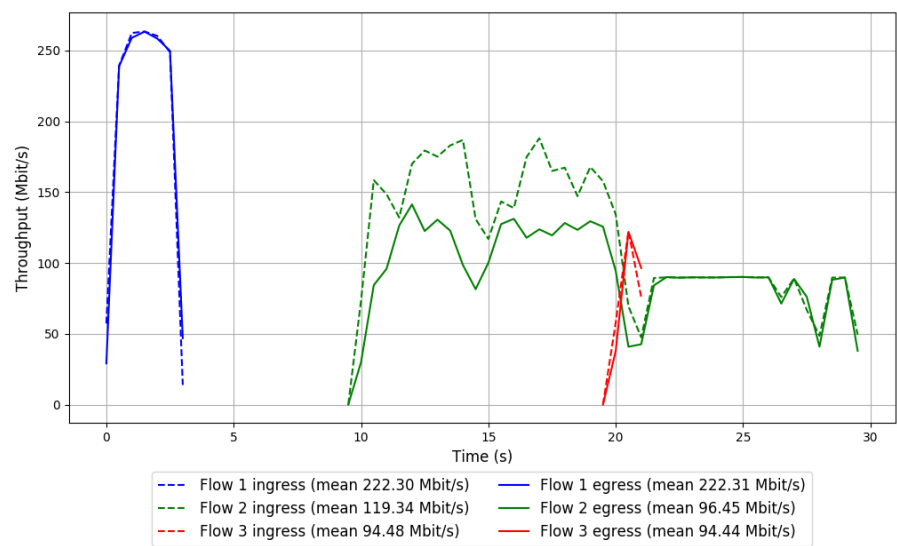


```
Run 1: Statistics of TaoVA-100x

Start at: 2017-08-12 12:40:21
End at: 2017-08-12 12:40:51

# Below is generated by plot.py at 2017-08-12 17:33:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.50 Mbit/s
95th percentile per-packet one-way delay: 63.949 ms
Loss rate: 14.76%
-- Flow 1:
Average throughput: 222.31 Mbit/s
95th percentile per-packet one-way delay: 64.272 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 96.45 Mbit/s
95th percentile per-packet one-way delay: 63.438 ms
Loss rate: 19.72%
-- Flow 3:
Average throughput: 94.44 Mbit/s
95th percentile per-packet one-way delay: 67.127 ms
Loss rate: 0.06%
```

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

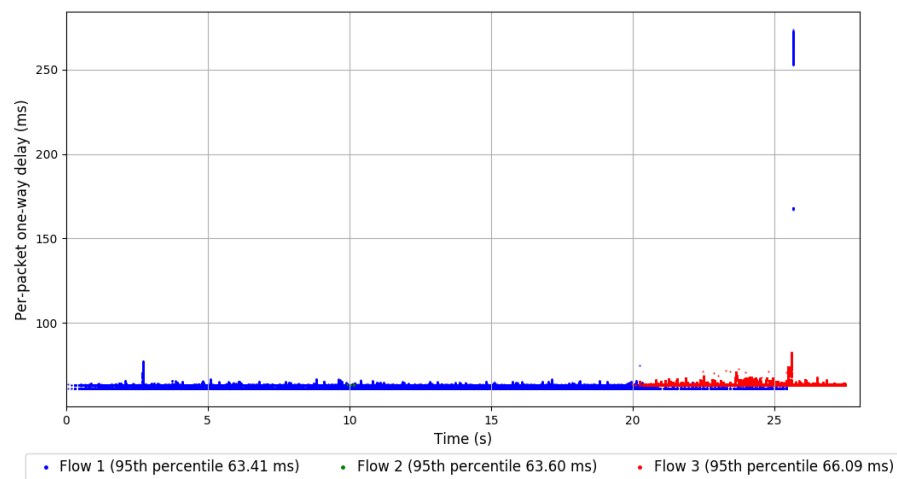
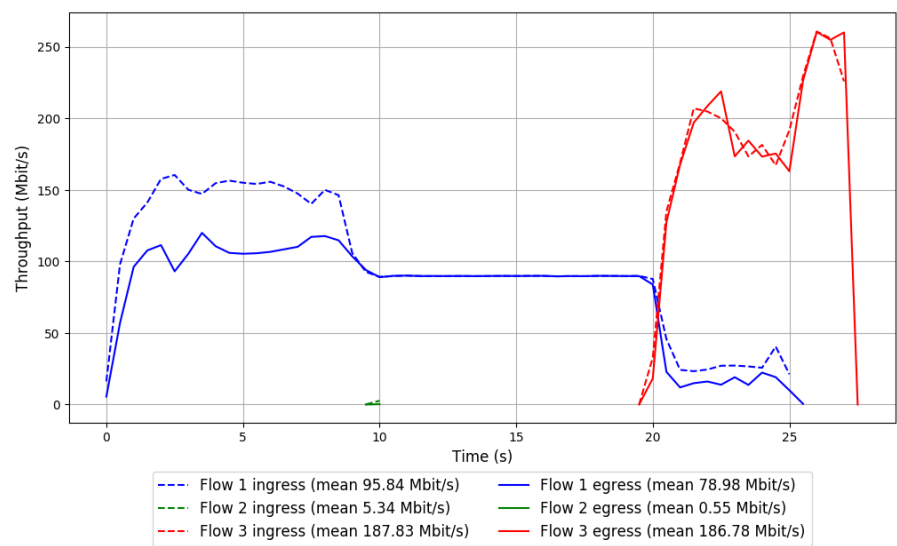


```
Run 2: Statistics of TaoVA-100x

Start at: 2017-08-12 12:51:57
End at: 2017-08-12 12:52:27

# Below is generated by plot.py at 2017-08-12 17:33:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 124.91 Mbit/s
95th percentile per-packet one-way delay: 64.458 ms
Loss rate: 11.14%
-- Flow 1:
Average throughput: 78.98 Mbit/s
95th percentile per-packet one-way delay: 63.406 ms
Loss rate: 17.22%
-- Flow 2:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 63.597 ms
Loss rate: 89.73%
-- Flow 3:
Average throughput: 186.78 Mbit/s
95th percentile per-packet one-way delay: 66.088 ms
Loss rate: 0.56%
```

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



Run 3: Statistics of TaoVA-100x

Start at: 2017-08-12 13:03:44

End at: 2017-08-12 13:04:14

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 131.26 Mbit/s

95th percentile per-packet one-way delay: 63.994 ms

Loss rate: 7.41%

-- Flow 1:

Average throughput: 239.62 Mbit/s

95th percentile per-packet one-way delay: 64.148 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 26.30 Mbit/s

95th percentile per-packet one-way delay: 63.761 ms

Loss rate: 41.52%

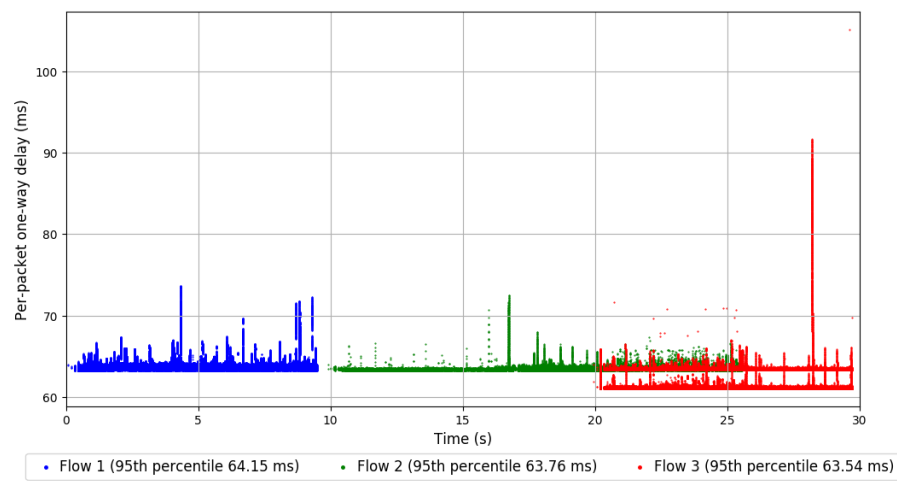
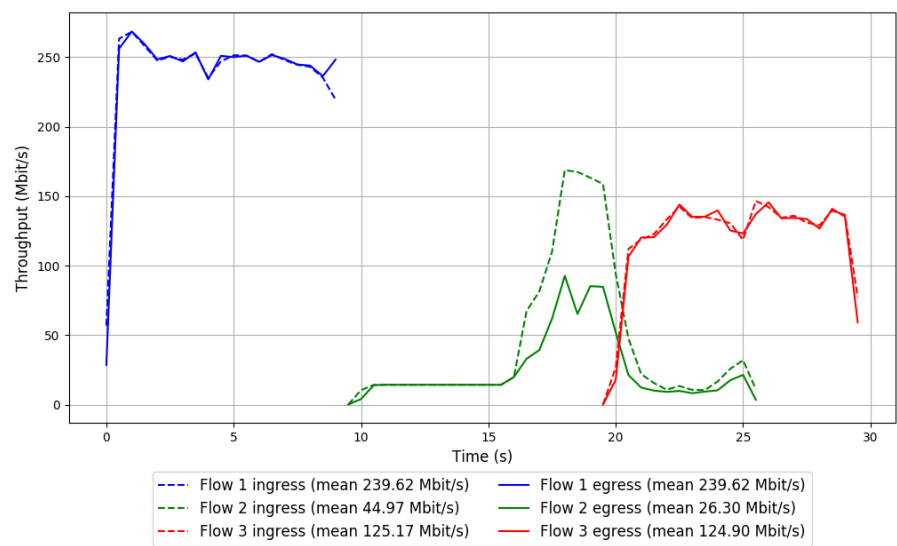
-- Flow 3:

Average throughput: 124.90 Mbit/s

95th percentile per-packet one-way delay: 63.536 ms

Loss rate: 1.46%

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

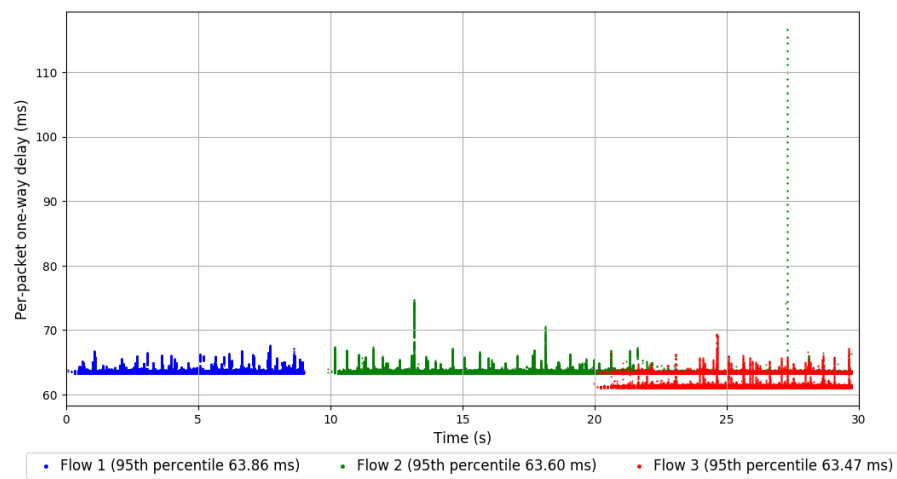
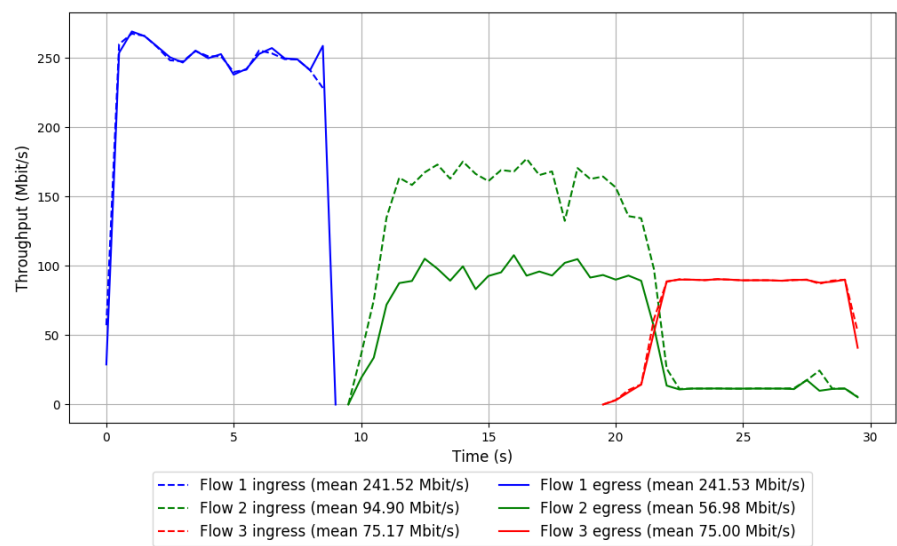


```
Run 4: Statistics of TaoVA-100x

Start at: 2017-08-12 13:15:16
End at: 2017-08-12 13:15:46

# Below is generated by plot.py at 2017-08-12 17:34:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 135.54 Mbit/s
95th percentile per-packet one-way delay: 63.676 ms
Loss rate: 16.19%
-- Flow 1:
Average throughput: 241.53 Mbit/s
95th percentile per-packet one-way delay: 63.861 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 56.98 Mbit/s
95th percentile per-packet one-way delay: 63.598 ms
Loss rate: 40.38%
-- Flow 3:
Average throughput: 75.00 Mbit/s
95th percentile per-packet one-way delay: 63.466 ms
Loss rate: 1.55%
```

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



Run 5: Statistics of TaoVA-100x

Start at: 2017-08-12 13:27:11

End at: 2017-08-12 13:27:41

Below is generated by plot.py at 2017-08-12 17:35:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 204.21 Mbit/s

95th percentile per-packet one-way delay: 63.291 ms

Loss rate: 0.41%

-- Flow 1:

Average throughput: 136.12 Mbit/s

95th percentile per-packet one-way delay: 61.780 ms

Loss rate: 0.24%

-- Flow 2:

Average throughput: 71.44 Mbit/s

95th percentile per-packet one-way delay: 61.588 ms

Loss rate: 0.46%

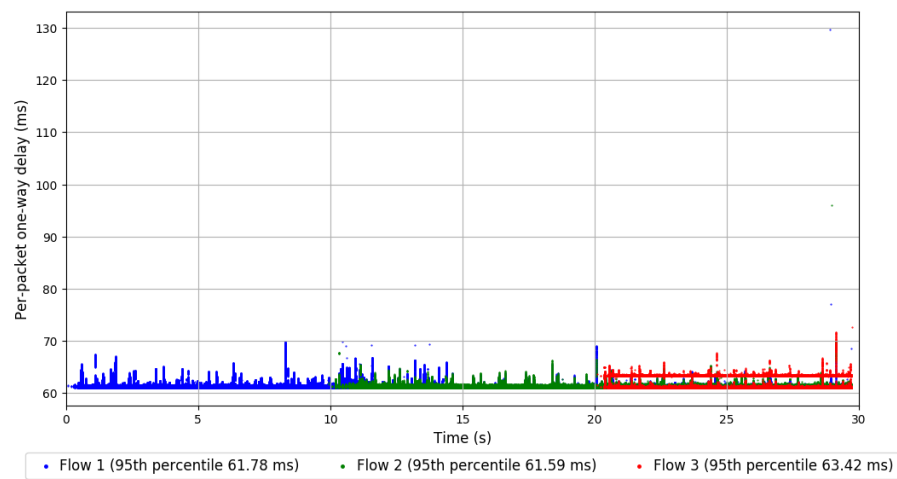
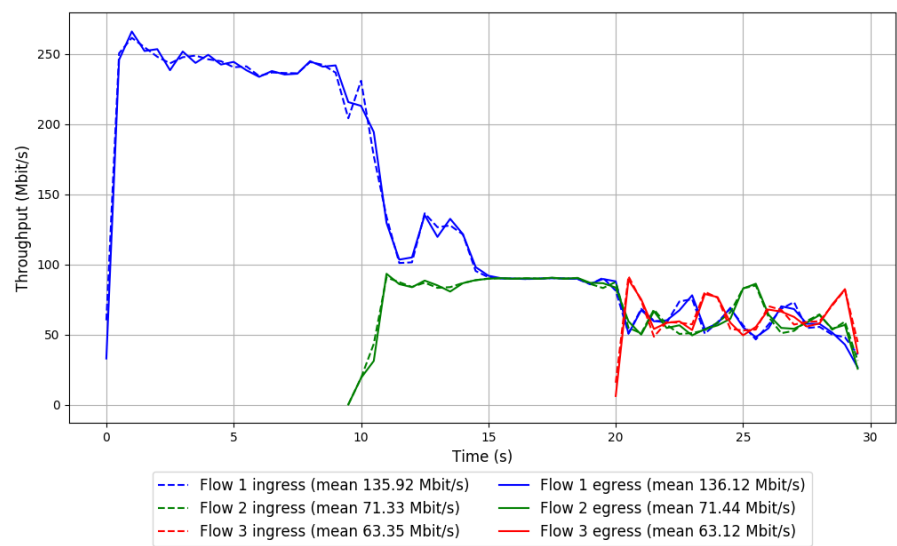
-- Flow 3:

Average throughput: 63.12 Mbit/s

95th percentile per-packet one-way delay: 63.421 ms

Loss rate: 1.39%

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



Run 6: Statistics of TaoVA-100x

Start at: 2017-08-12 13:39:10

End at: 2017-08-12 13:39:40

Below is generated by plot.py at 2017-08-12 17:35:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 114.56 Mbit/s

95th percentile per-packet one-way delay: 63.632 ms

Loss rate: 2.11%

-- Flow 1:

Average throughput: 96.02 Mbit/s

95th percentile per-packet one-way delay: 63.638 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 100.54 Mbit/s

95th percentile per-packet one-way delay: 63.682 ms

Loss rate: 0.00%

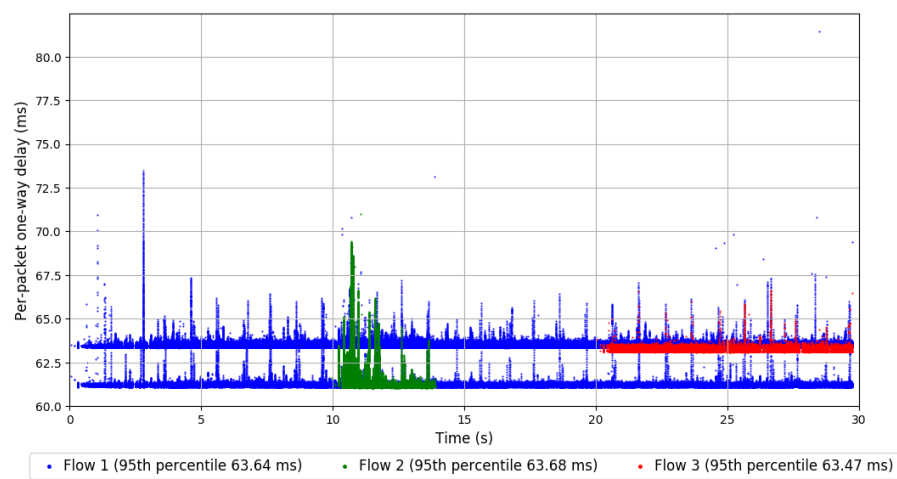
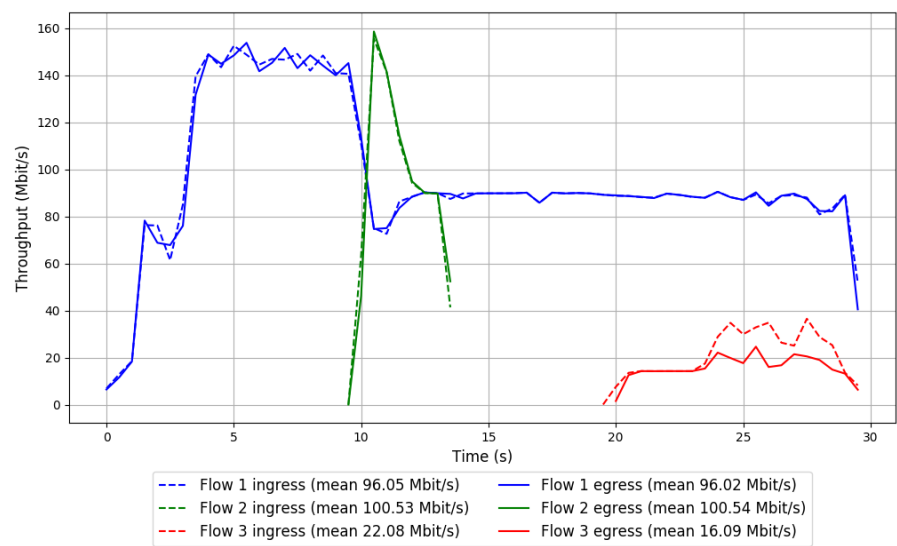
-- Flow 3:

Average throughput: 16.09 Mbit/s

95th percentile per-packet one-way delay: 63.473 ms

Loss rate: 28.04%

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

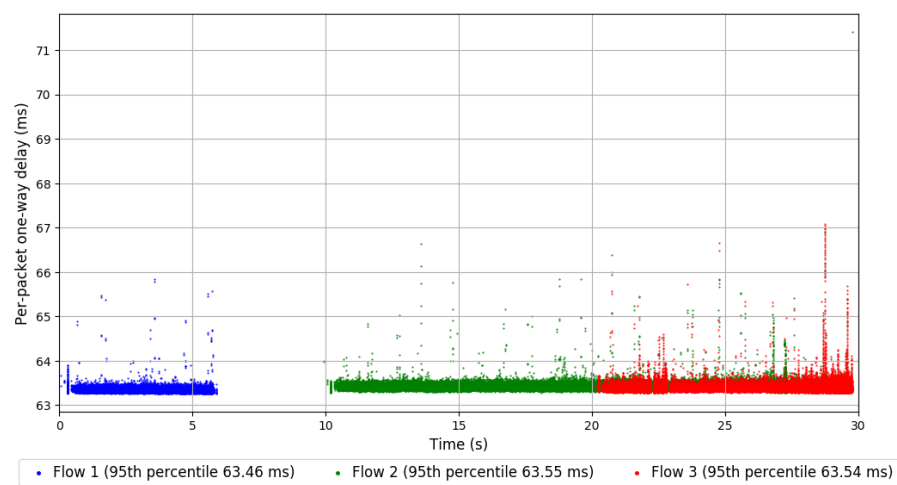
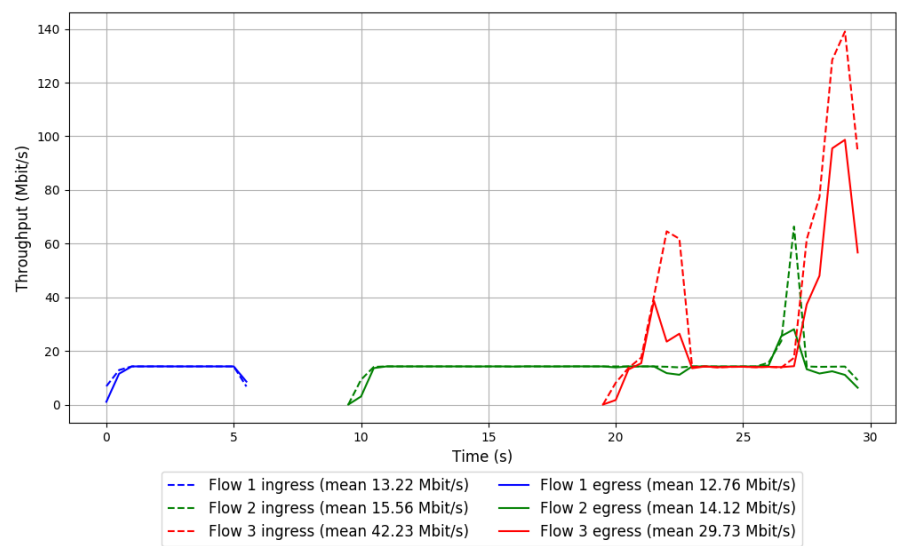


```
Run 7: Statistics of TaoVA-100x

Start at: 2017-08-12 13:50:48
End at: 2017-08-12 13:51:18

# Below is generated by plot.py at 2017-08-12 17:35:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.73 Mbit/s
95th percentile per-packet one-way delay: 63.542 ms
Loss rate: 19.92%
-- Flow 1:
Average throughput: 12.76 Mbit/s
95th percentile per-packet one-way delay: 63.456 ms
Loss rate: 3.47%
-- Flow 2:
Average throughput: 14.12 Mbit/s
95th percentile per-packet one-way delay: 63.551 ms
Loss rate: 9.79%
-- Flow 3:
Average throughput: 29.73 Mbit/s
95th percentile per-packet one-way delay: 63.543 ms
Loss rate: 30.48%
```


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



Run 8: Statistics of TaoVA-100x

Start at: 2017-08-12 14:02:16

End at: 2017-08-12 14:02:46

Below is generated by plot.py at 2017-08-12 17:36:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 62.42 Mbit/s

95th percentile per-packet one-way delay: 63.728 ms

Loss rate: 22.85%

-- Flow 1:

Average throughput: 13.11 Mbit/s

95th percentile per-packet one-way delay: 63.485 ms

Loss rate: 2.49%

-- Flow 2:

Average throughput: 88.53 Mbit/s

95th percentile per-packet one-way delay: 63.734 ms

Loss rate: 23.66%

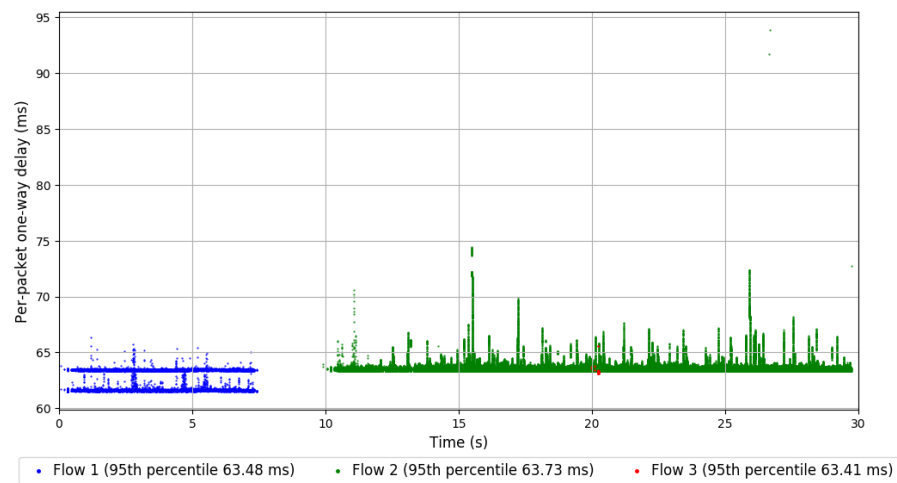
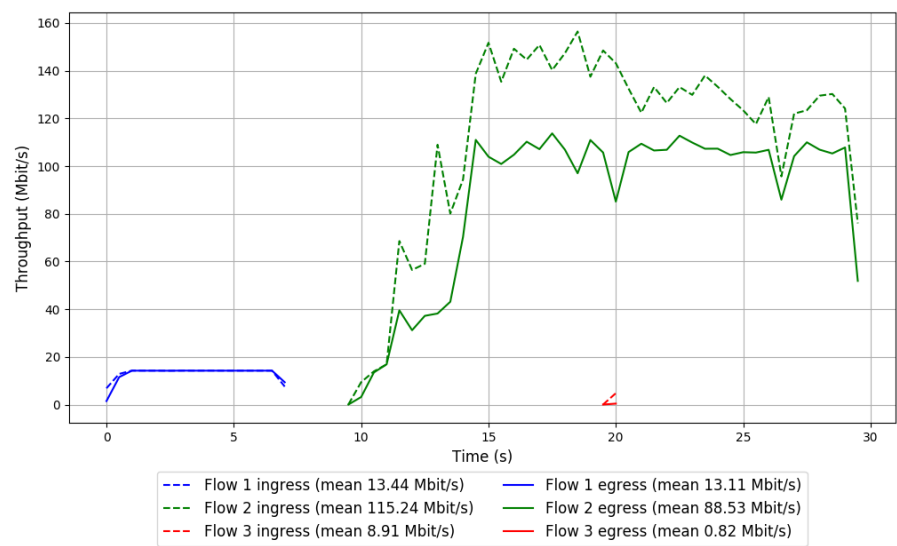
-- Flow 3:

Average throughput: 0.82 Mbit/s

95th percentile per-packet one-way delay: 63.405 ms

Loss rate: 90.86%

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

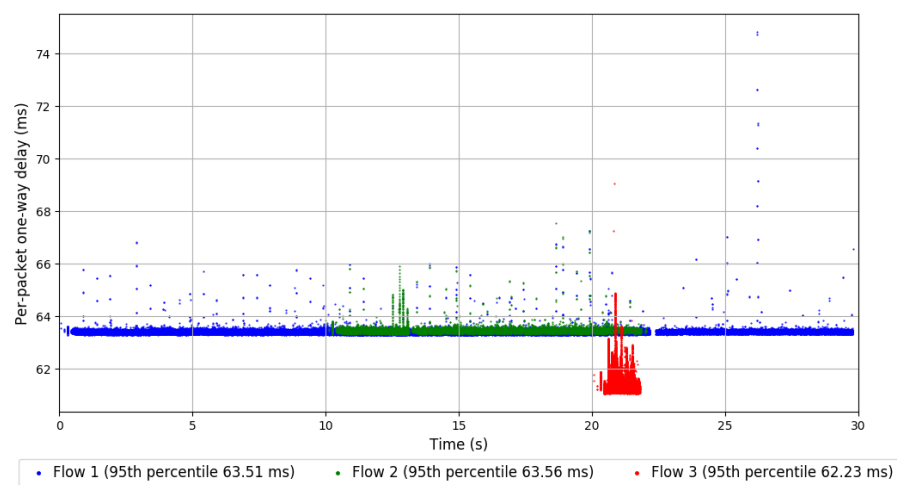
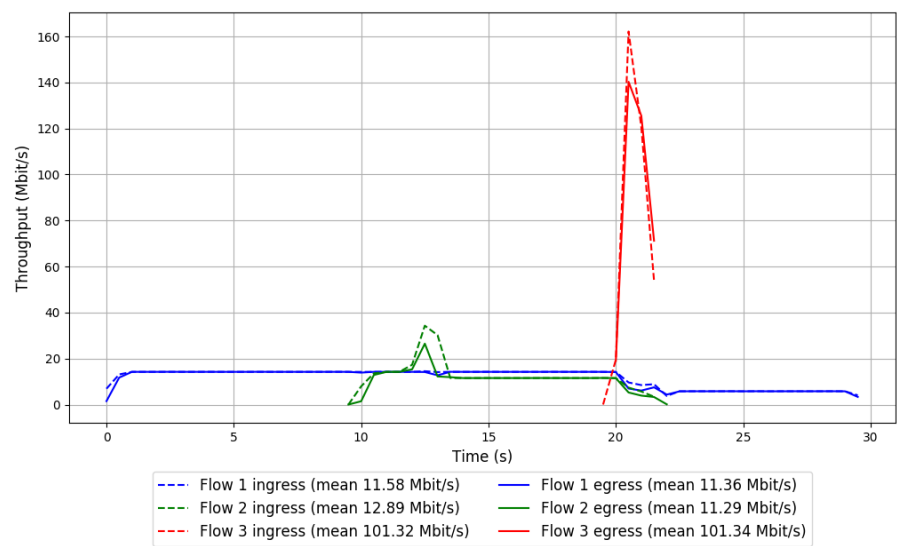


```
Run 9: Statistics of TaoVA-100x

Start at: 2017-08-12 14:13:32
End at: 2017-08-12 14:14:02

# Below is generated by plot.py at 2017-08-12 17:36:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.92 Mbit/s
95th percentile per-packet one-way delay: 63.518 ms
Loss rate: 3.97%
-- Flow 1:
Average throughput: 11.36 Mbit/s
95th percentile per-packet one-way delay: 63.513 ms
Loss rate: 2.23%
-- Flow 2:
Average throughput: 11.29 Mbit/s
95th percentile per-packet one-way delay: 63.563 ms
Loss rate: 12.43%
-- Flow 3:
Average throughput: 101.34 Mbit/s
95th percentile per-packet one-way delay: 62.233 ms
Loss rate: 0.00%
```

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

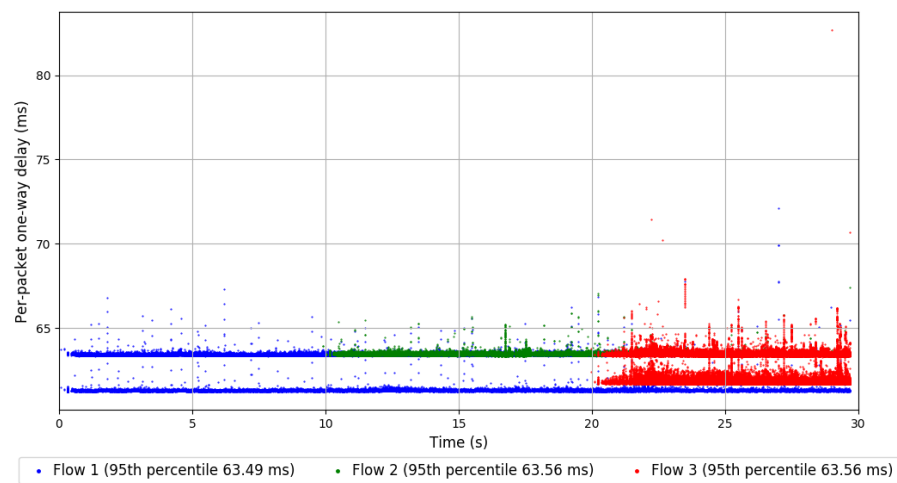
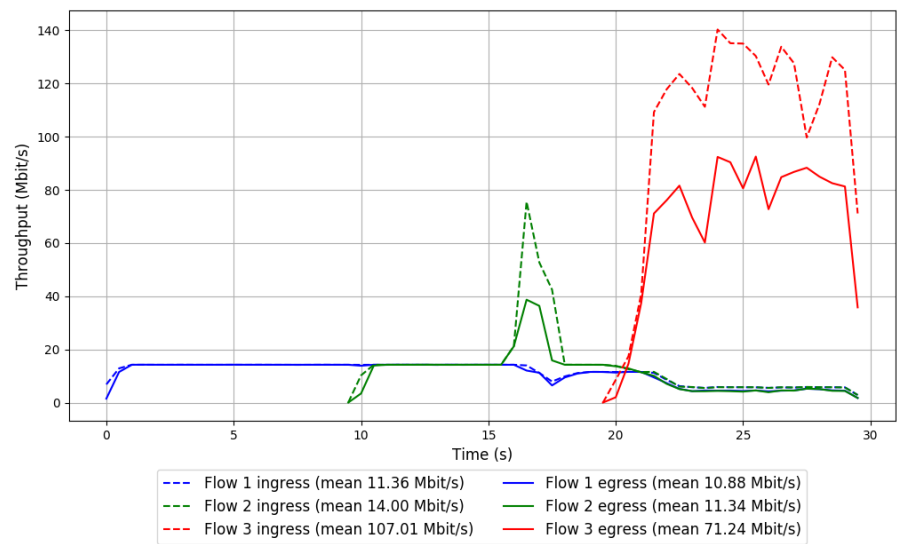


```
Run 10: Statistics of TaoVA-100x

Start at: 2017-08-12 14:24:42
End at: 2017-08-12 14:25:12

# Below is generated by plot.py at 2017-08-12 17:36:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 41.83 Mbit/s
95th percentile per-packet one-way delay: 63.548 ms
Loss rate: 25.79%
-- Flow 1:
Average throughput: 10.88 Mbit/s
95th percentile per-packet one-way delay: 63.494 ms
Loss rate: 4.63%
-- Flow 2:
Average throughput: 11.34 Mbit/s
95th percentile per-packet one-way delay: 63.562 ms
Loss rate: 19.53%
-- Flow 3:
Average throughput: 71.24 Mbit/s
95th percentile per-packet one-way delay: 63.561 ms
Loss rate: 34.23%
```

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



Run 1: Statistics of TCP Vegas

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

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

Below is generated by plot.py at 2017-08-12 17:36:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.65 Mbit/s

95th percentile per-packet one-way delay: 63.587 ms

Loss rate: 3.22%

-- Flow 1:

Average throughput: 4.22 Mbit/s

95th percentile per-packet one-way delay: 63.610 ms

Loss rate: 2.94%

-- Flow 2:

Average throughput: 4.55 Mbit/s

95th percentile per-packet one-way delay: 63.565 ms

Loss rate: 3.04%

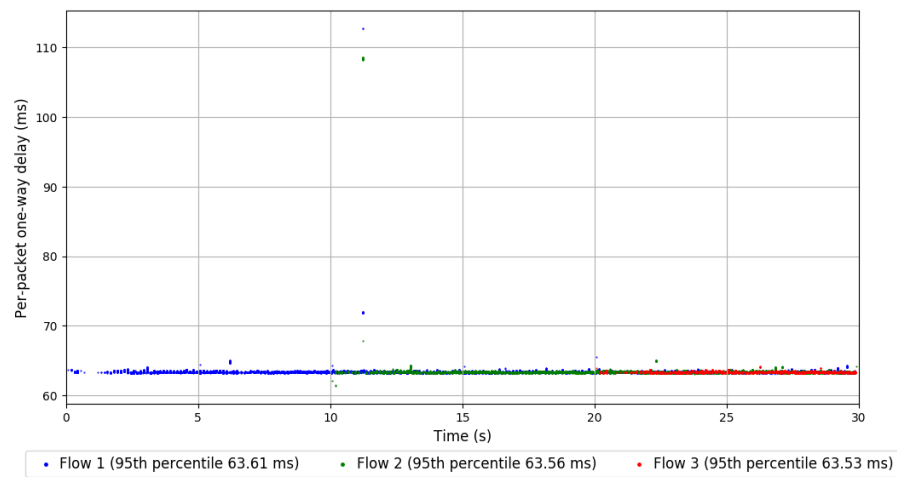
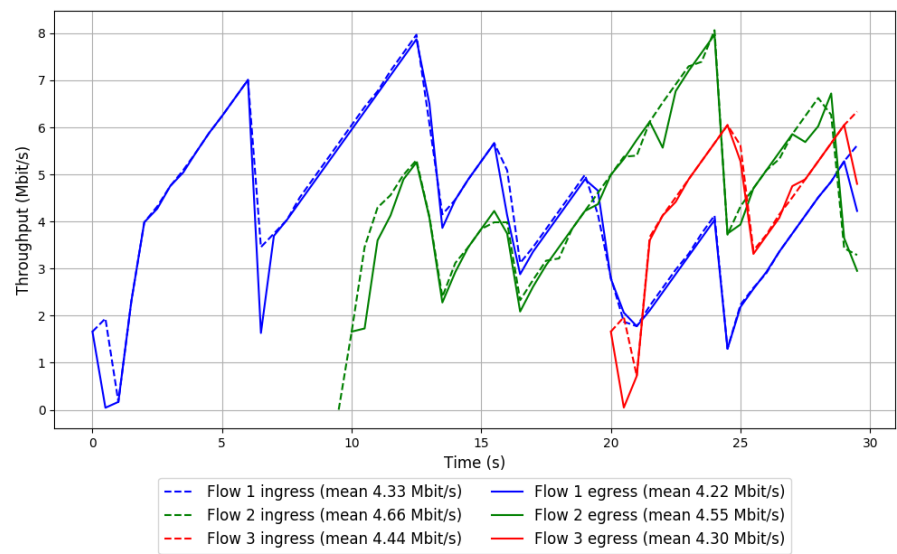
-- Flow 3:

Average throughput: 4.30 Mbit/s

95th percentile per-packet one-way delay: 63.526 ms

Loss rate: 4.41%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2017-08-12 12:55:18

End at: 2017-08-12 12:55:48

Below is generated by plot.py at 2017-08-12 17:36:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 50.61 Mbit/s

95th percentile per-packet one-way delay: 64.980 ms

Loss rate: 1.11%

-- Flow 1:

Average throughput: 24.38 Mbit/s

95th percentile per-packet one-way delay: 65.105 ms

Loss rate: 0.71%

-- Flow 2:

Average throughput: 10.02 Mbit/s

95th percentile per-packet one-way delay: 64.086 ms

Loss rate: 1.11%

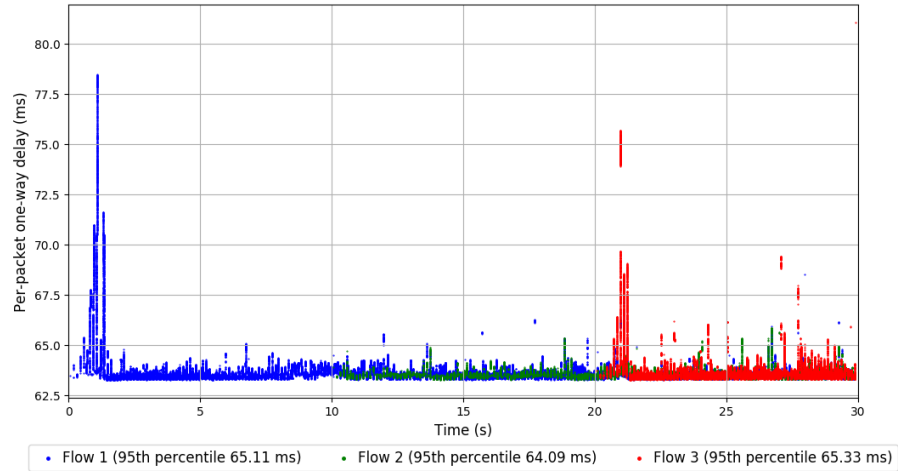
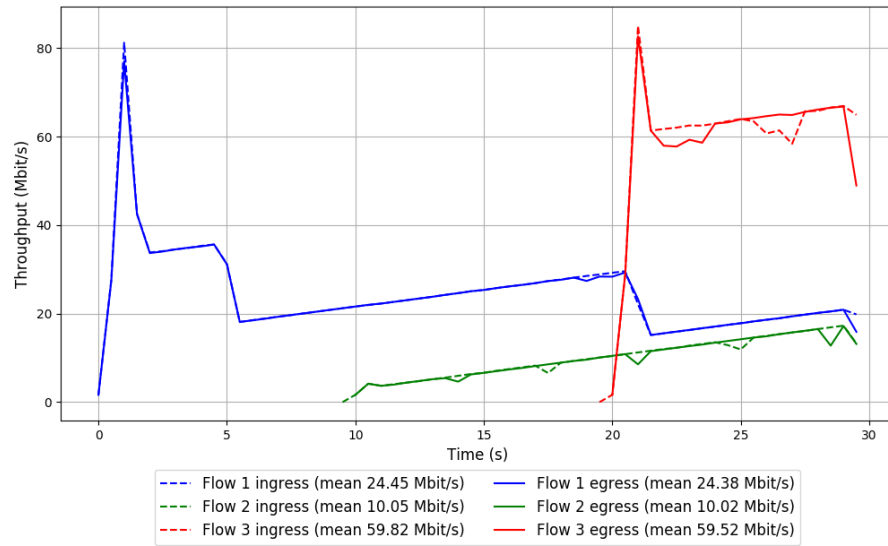
-- Flow 3:

Average throughput: 59.52 Mbit/s

95th percentile per-packet one-way delay: 65.326 ms

Loss rate: 1.60%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

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

End at: 2017-08-12 13:07:36

Below is generated by plot.py at 2017-08-12 17:36:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 35.68 Mbit/s

95th percentile per-packet one-way delay: 65.044 ms

Loss rate: 0.83%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 312.848 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 31.29 Mbit/s

95th percentile per-packet one-way delay: 64.656 ms

Loss rate: 0.81%

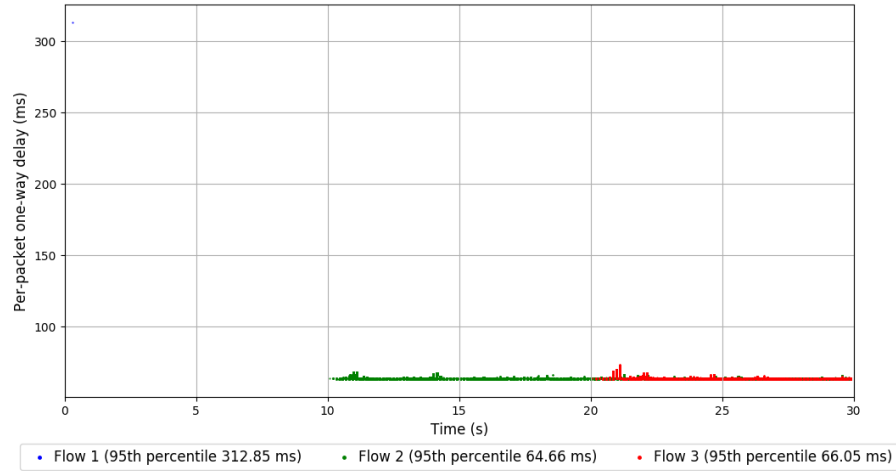
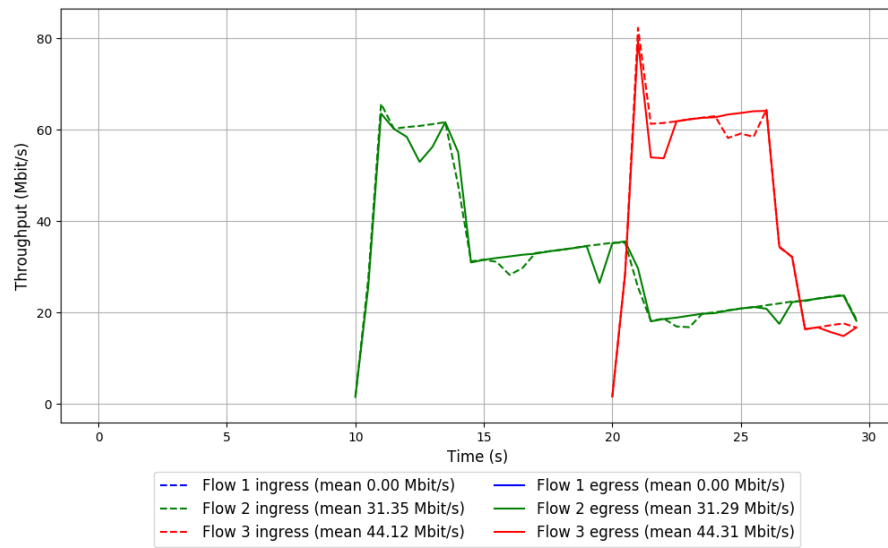
-- Flow 3:

Average throughput: 44.31 Mbit/s

95th percentile per-packet one-way delay: 66.049 ms

Loss rate: 0.85%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2017-08-12 13:18:42

End at: 2017-08-12 13:19:12

Below is generated by plot.py at 2017-08-12 17:36:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 40.55 Mbit/s

95th percentile per-packet one-way delay: 64.371 ms

Loss rate: 0.63%

-- Flow 1:

Average throughput: 20.62 Mbit/s

95th percentile per-packet one-way delay: 64.241 ms

Loss rate: 0.28%

-- Flow 2:

Average throughput: 29.14 Mbit/s

95th percentile per-packet one-way delay: 64.906 ms

Loss rate: 0.64%

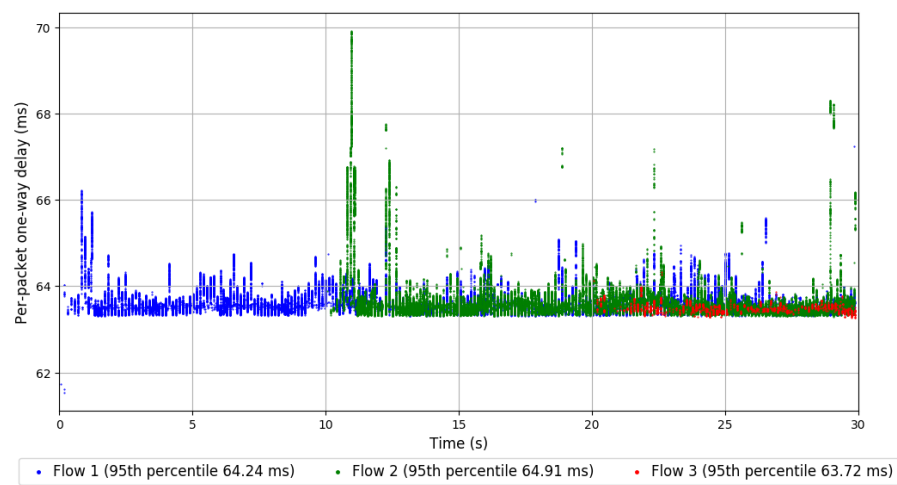
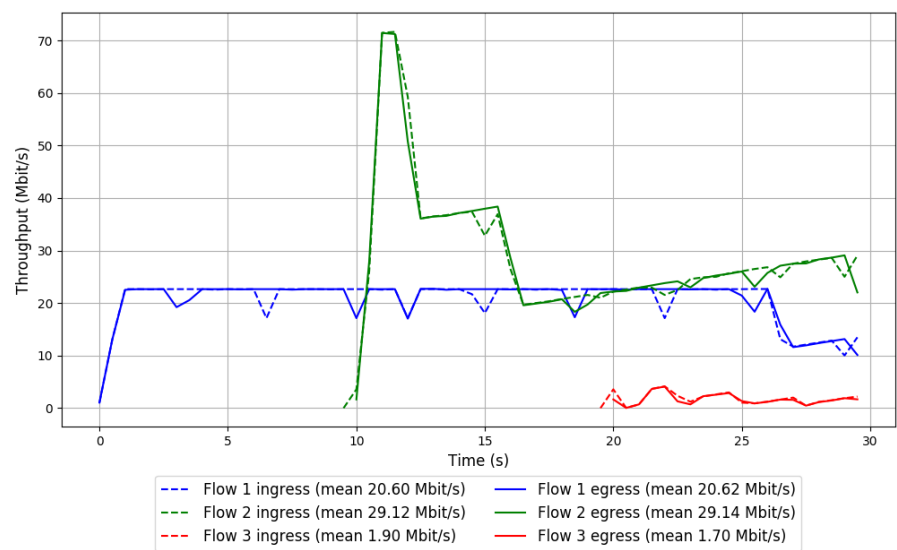
-- Flow 3:

Average throughput: 1.70 Mbit/s

95th percentile per-packet one-way delay: 63.718 ms

Loss rate: 11.82%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2017-08-12 13:30:50

End at: 2017-08-12 13:31:20

Below is generated by plot.py at 2017-08-12 17:36:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.58 Mbit/s

95th percentile per-packet one-way delay: 63.791 ms

Loss rate: 4.04%

-- Flow 1:

Average throughput: 5.01 Mbit/s

95th percentile per-packet one-way delay: 63.820 ms

Loss rate: 2.88%

-- Flow 2:

Average throughput: 4.42 Mbit/s

95th percentile per-packet one-way delay: 63.741 ms

Loss rate: 3.89%

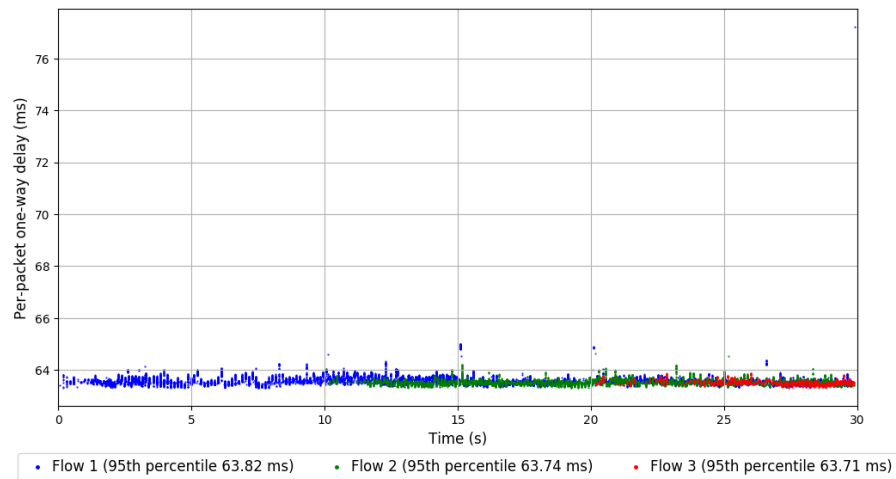
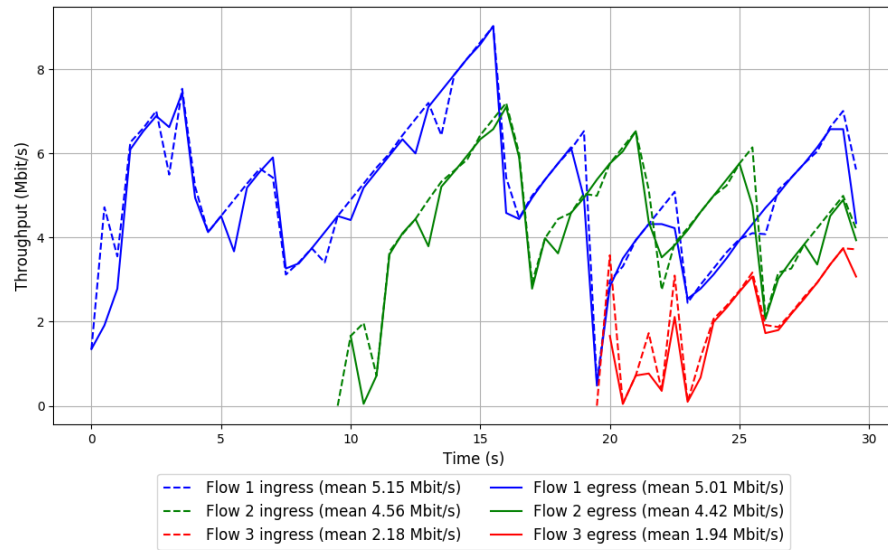
-- Flow 3:

Average throughput: 1.94 Mbit/s

95th percentile per-packet one-way delay: 63.710 ms

Loss rate: 12.81%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2017-08-12 13:42:32

End at: 2017-08-12 13:43:02

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 41.49 Mbit/s

95th percentile per-packet one-way delay: 63.284 ms

Loss rate: 1.43%

-- Flow 1:

Average throughput: 8.39 Mbit/s

95th percentile per-packet one-way delay: 62.105 ms

Loss rate: 0.63%

-- Flow 2:

Average throughput: 26.89 Mbit/s

95th percentile per-packet one-way delay: 62.422 ms

Loss rate: 0.88%

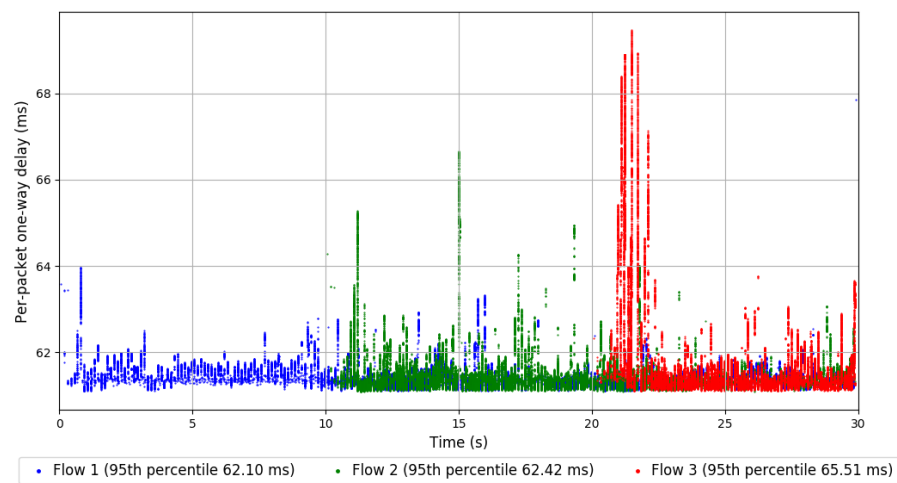
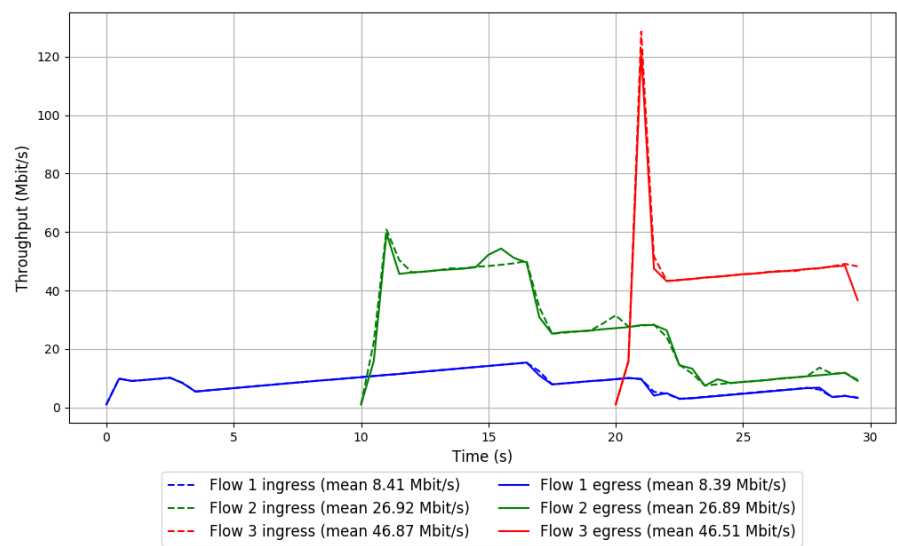
-- Flow 3:

Average throughput: 46.51 Mbit/s

95th percentile per-packet one-way delay: 65.511 ms

Loss rate: 2.49%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2017-08-12 13:53:56

End at: 2017-08-12 13:54:26

Below is generated by plot.py at 2017-08-12 17:36:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 41.39 Mbit/s

95th percentile per-packet one-way delay: 62.757 ms

Loss rate: 0.81%

-- Flow 1:

Average throughput: 40.47 Mbit/s

95th percentile per-packet one-way delay: 62.240 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 0.73 Mbit/s

95th percentile per-packet one-way delay: 63.660 ms

Loss rate: 15.51%

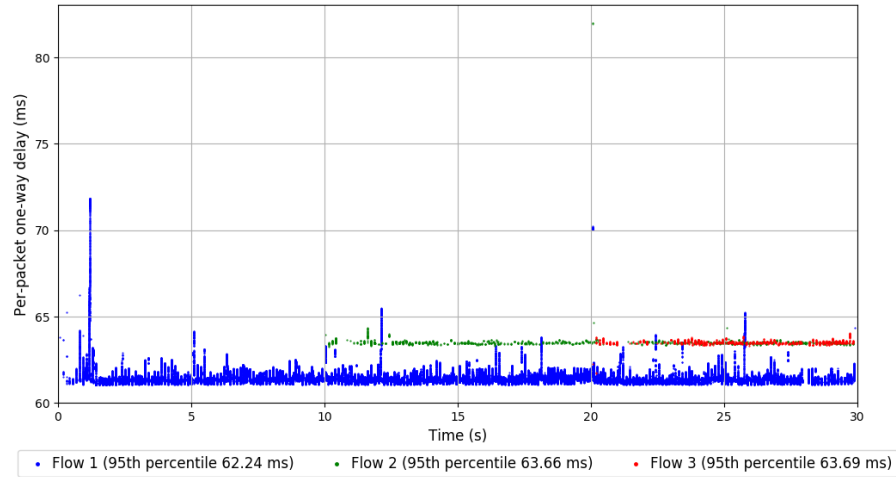
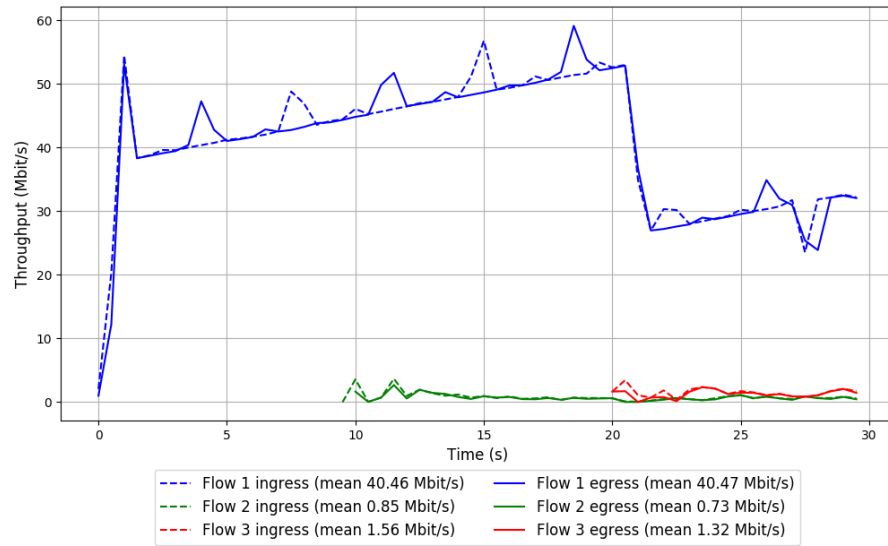
-- Flow 3:

Average throughput: 1.32 Mbit/s

95th percentile per-packet one-way delay: 63.688 ms

Loss rate: 16.50%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2017-08-12 14:05:33

End at: 2017-08-12 14:06:03

Below is generated by plot.py at 2017-08-12 17:36:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 20.81 Mbit/s

95th percentile per-packet one-way delay: 63.514 ms

Loss rate: 2.25%

-- Flow 1:

Average throughput: 2.90 Mbit/s

95th percentile per-packet one-way delay: 63.687 ms

Loss rate: 4.13%

-- Flow 2:

Average throughput: 15.76 Mbit/s

95th percentile per-packet one-way delay: 61.892 ms

Loss rate: 1.20%

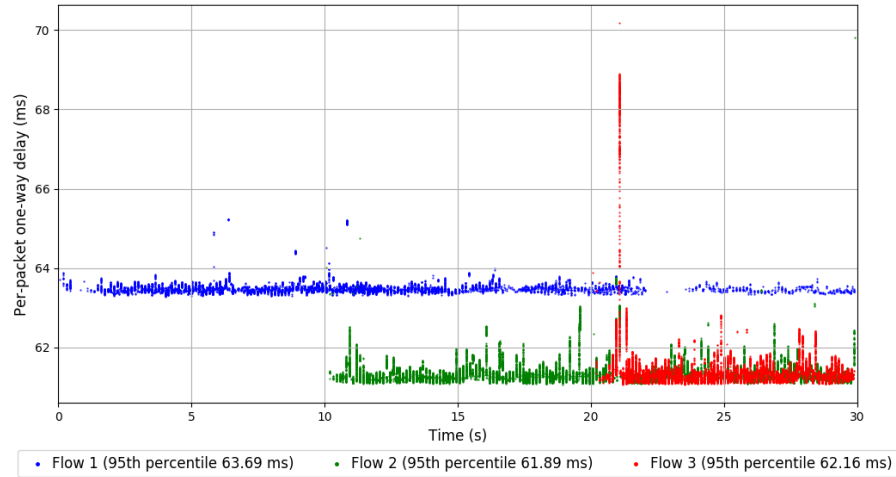
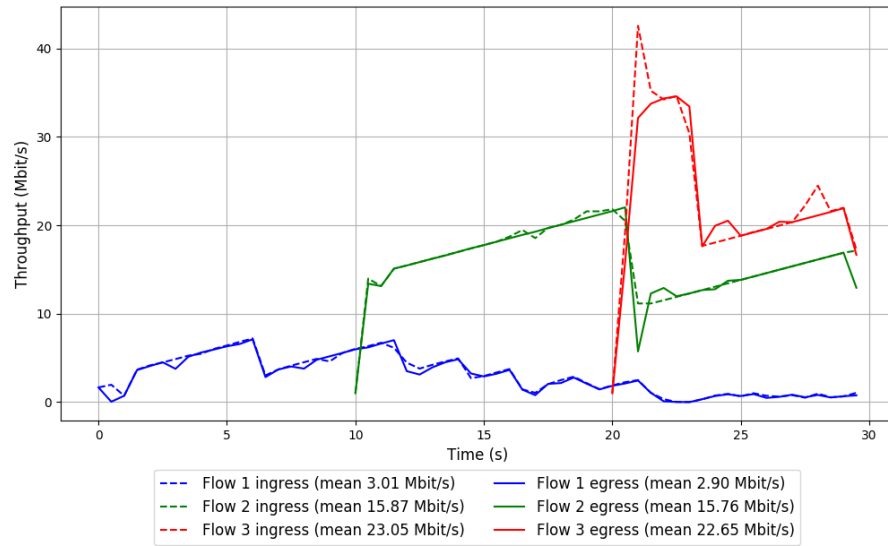
-- Flow 3:

Average throughput: 22.65 Mbit/s

95th percentile per-packet one-way delay: 62.155 ms

Loss rate: 2.95%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2017-08-12 14:16:45

End at: 2017-08-12 14:17:15

Below is generated by plot.py at 2017-08-12 17:36:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 33.69 Mbit/s

95th percentile per-packet one-way delay: 63.544 ms

Loss rate: 1.62%

-- Flow 1:

Average throughput: 2.12 Mbit/s

95th percentile per-packet one-way delay: 63.898 ms

Loss rate: 5.86%

-- Flow 2:

Average throughput: 46.82 Mbit/s

95th percentile per-packet one-way delay: 62.322 ms

Loss rate: 1.16%

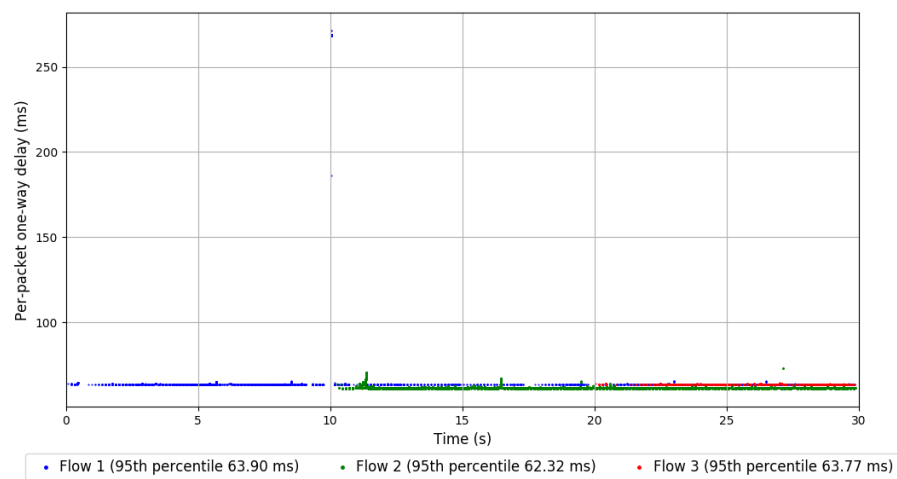
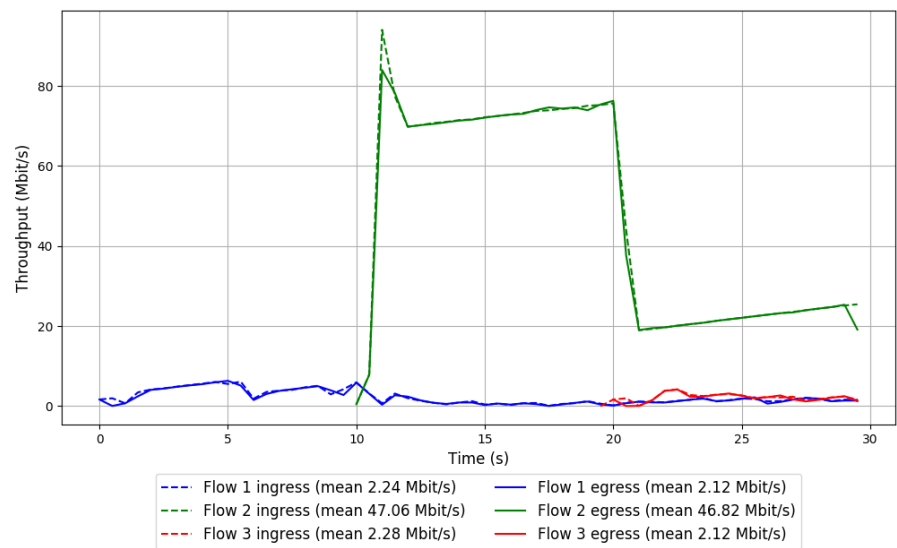
-- Flow 3:

Average throughput: 2.12 Mbit/s

95th percentile per-packet one-way delay: 63.768 ms

Loss rate: 8.16%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2017-08-12 14:27:52

End at: 2017-08-12 14:28:22

Below is generated by plot.py at 2017-08-12 17:36:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.98 Mbit/s

95th percentile per-packet one-way delay: 63.918 ms

Loss rate: 2.41%

-- Flow 1:

Average throughput: 4.12 Mbit/s

95th percentile per-packet one-way delay: 63.722 ms

Loss rate: 2.62%

-- Flow 2:

Average throughput: 2.74 Mbit/s

95th percentile per-packet one-way delay: 63.753 ms

Loss rate: 5.45%

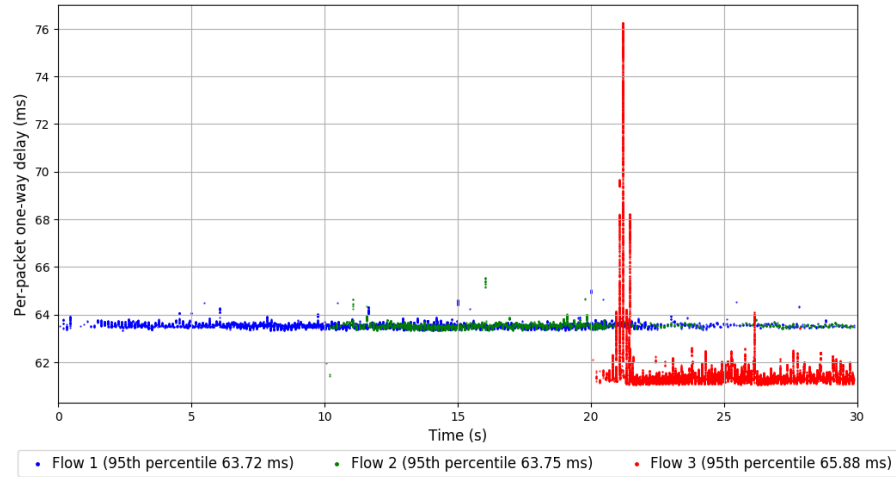
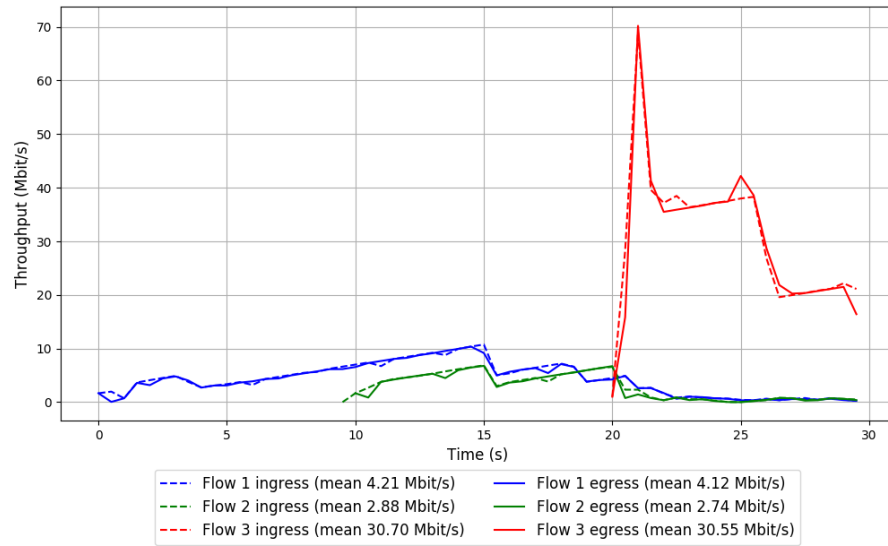
-- Flow 3:

Average throughput: 30.55 Mbit/s

95th percentile per-packet one-way delay: 65.878 ms

Loss rate: 1.75%

Run 10: Report of TCP Vegas — Data Link

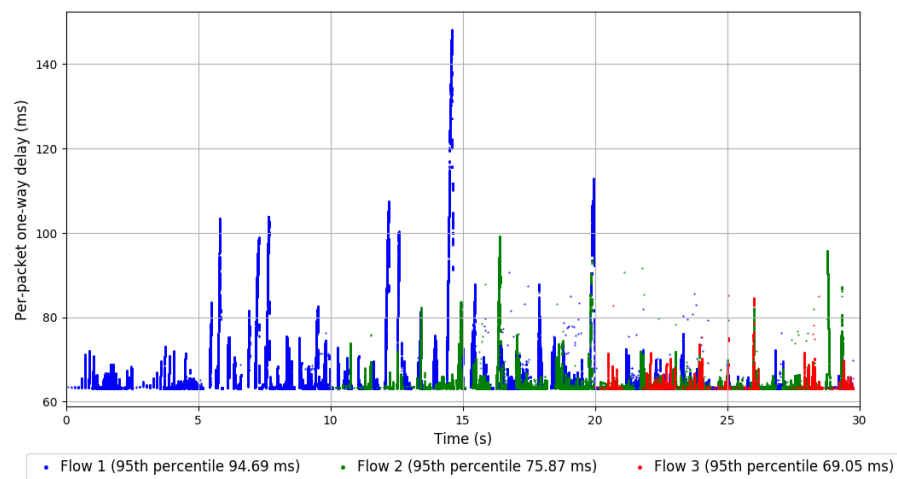
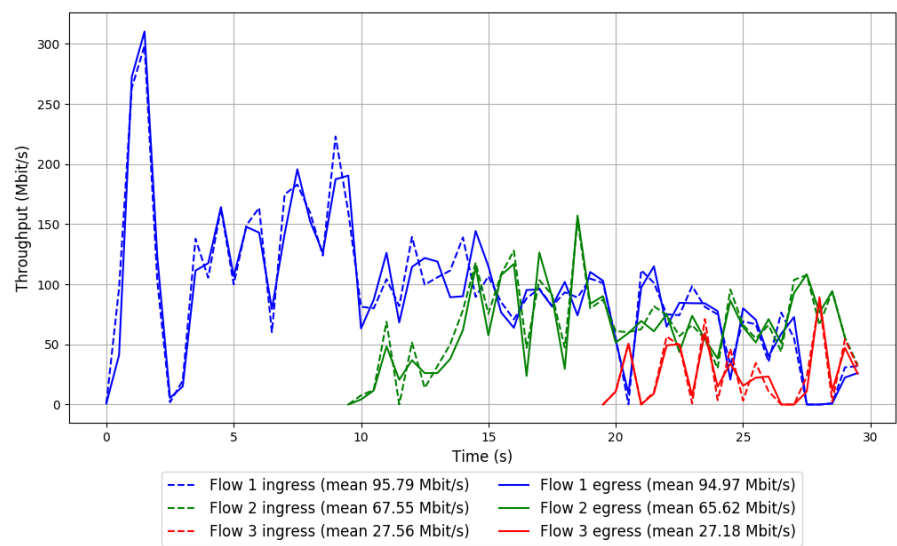


```
Run 1: Statistics of Verus

Start at: 2017-08-12 12:39:28
End at: 2017-08-12 12:39:58

# Below is generated by plot.py at 2017-08-12 17:37:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 146.88 Mbit/s
95th percentile per-packet one-way delay: 87.825 ms
Loss rate: 2.54%
-- Flow 1:
Average throughput: 94.97 Mbit/s
95th percentile per-packet one-way delay: 94.686 ms
Loss rate: 1.28%
-- Flow 2:
Average throughput: 65.62 Mbit/s
95th percentile per-packet one-way delay: 75.867 ms
Loss rate: 5.20%
-- Flow 3:
Average throughput: 27.18 Mbit/s
95th percentile per-packet one-way delay: 69.048 ms
Loss rate: 2.65%
```

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

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

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

Below is generated by plot.py at 2017-08-12 17:37:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 110.30 Mbit/s

95th percentile per-packet one-way delay: 85.815 ms

Loss rate: 38.91%

-- Flow 1:

Average throughput: 96.02 Mbit/s

95th percentile per-packet one-way delay: 89.075 ms

Loss rate: 5.42%

-- Flow 2:

Average throughput: 2.91 Mbit/s

95th percentile per-packet one-way delay: 63.810 ms

Loss rate: 97.36%

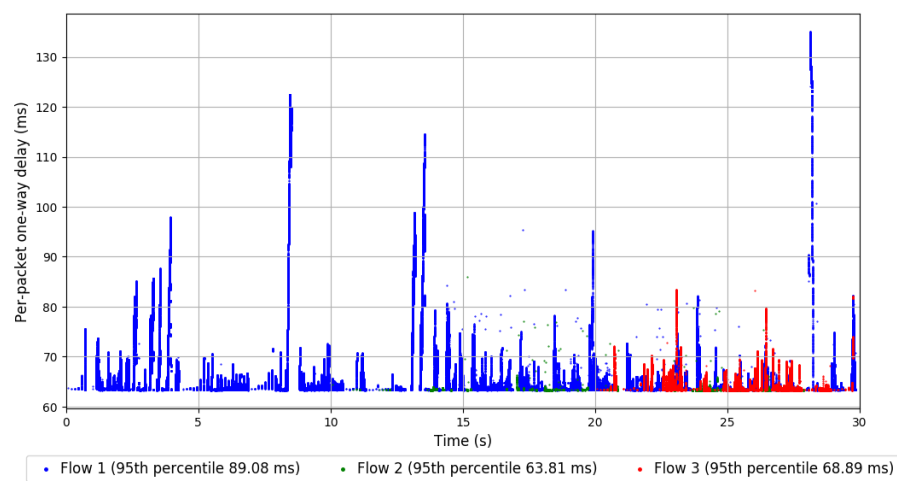
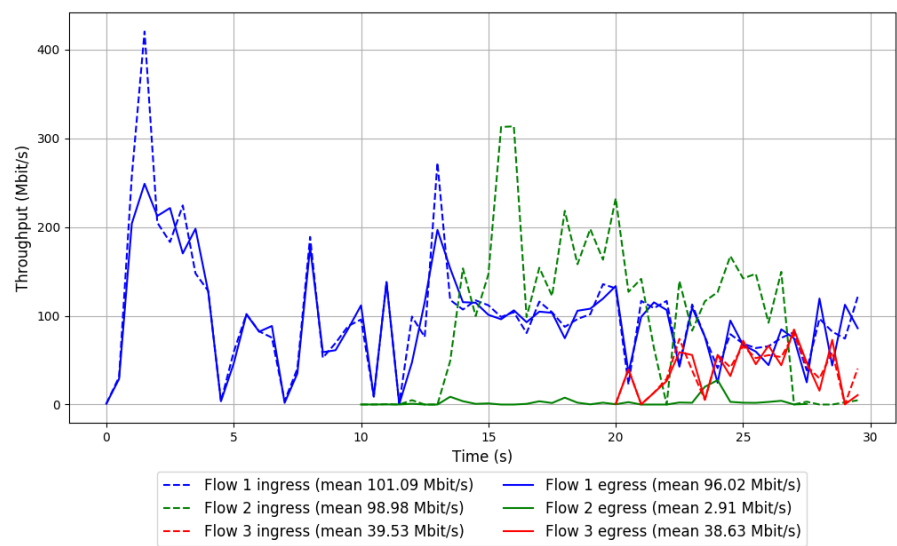
-- Flow 3:

Average throughput: 38.63 Mbit/s

95th percentile per-packet one-way delay: 68.895 ms

Loss rate: 3.89%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2017-08-12 13:02:54

End at: 2017-08-12 13:03:24

Below is generated by plot.py at 2017-08-12 17:37:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 121.07 Mbit/s

95th percentile per-packet one-way delay: 70.816 ms

Loss rate: 2.45%

-- Flow 1:

Average throughput: 64.16 Mbit/s

95th percentile per-packet one-way delay: 70.345 ms

Loss rate: 1.30%

-- Flow 2:

Average throughput: 85.50 Mbit/s

95th percentile per-packet one-way delay: 71.247 ms

Loss rate: 1.02%

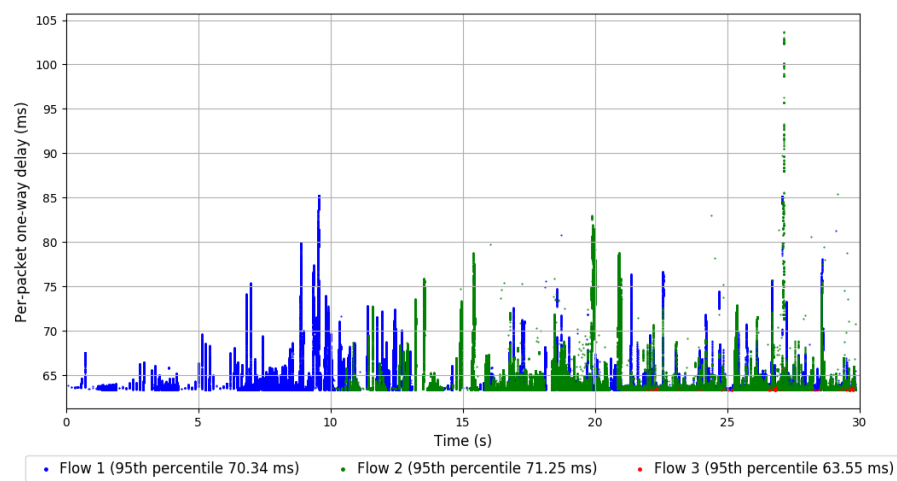
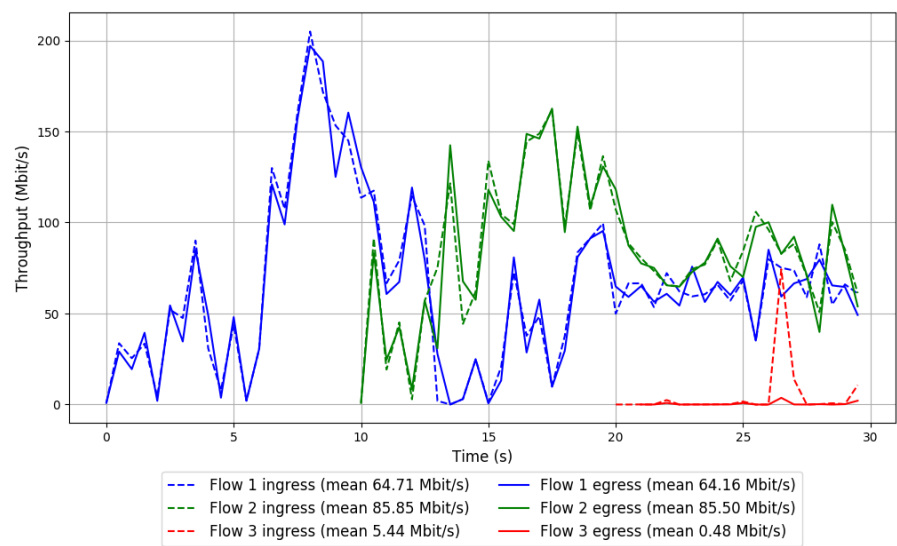
-- Flow 3:

Average throughput: 0.48 Mbit/s

95th percentile per-packet one-way delay: 63.549 ms

Loss rate: 92.16%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2017-08-12 13:14:25

End at: 2017-08-12 13:14:55

Below is generated by plot.py at 2017-08-12 17:37:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 132.72 Mbit/s

95th percentile per-packet one-way delay: 72.993 ms

Loss rate: 16.64%

-- Flow 1:

Average throughput: 92.06 Mbit/s

95th percentile per-packet one-way delay: 74.240 ms

Loss rate: 2.63%

-- Flow 2:

Average throughput: 60.98 Mbit/s

95th percentile per-packet one-way delay: 70.803 ms

Loss rate: 3.57%

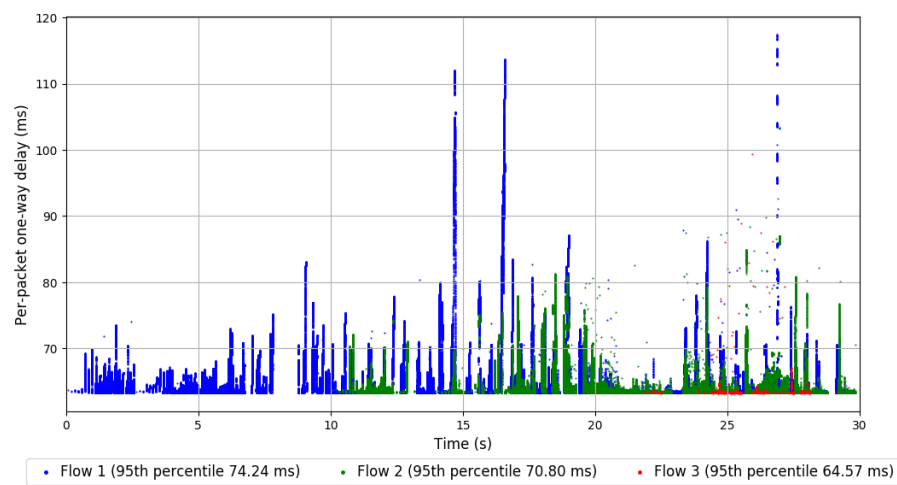
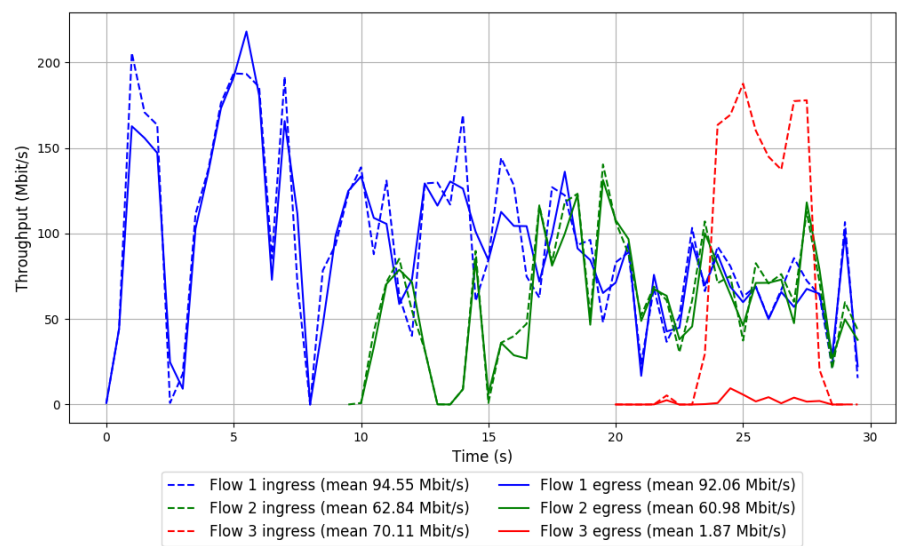
-- Flow 3:

Average throughput: 1.87 Mbit/s

95th percentile per-packet one-way delay: 64.572 ms

Loss rate: 97.54%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2017-08-12 13:26:22

End at: 2017-08-12 13:26:52

Below is generated by plot.py at 2017-08-12 17:38:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 86.21 Mbit/s

95th percentile per-packet one-way delay: 66.631 ms

Loss rate: 39.44%

-- Flow 1:

Average throughput: 85.60 Mbit/s

95th percentile per-packet one-way delay: 66.655 ms

Loss rate: 2.35%

-- Flow 2:

Average throughput: 0.57 Mbit/s

95th percentile per-packet one-way delay: 63.658 ms

Loss rate: 97.96%

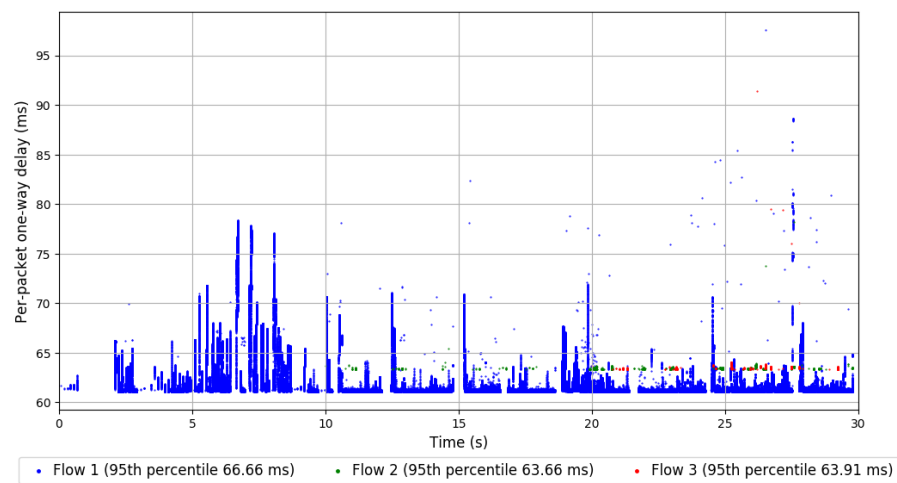
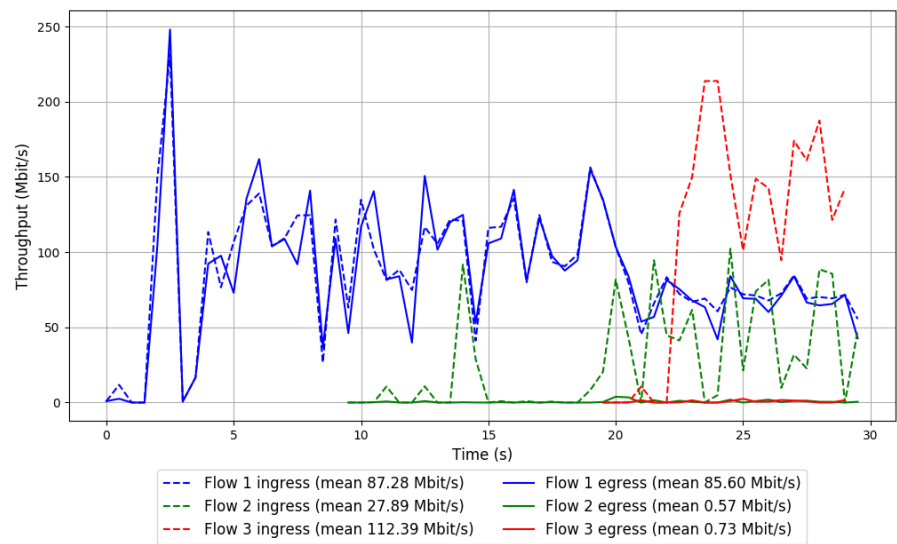
-- Flow 3:

Average throughput: 0.73 Mbit/s

95th percentile per-packet one-way delay: 63.909 ms

Loss rate: 99.37%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2017-08-12 13:38:20

End at: 2017-08-12 13:38:50

Below is generated by plot.py at 2017-08-12 17:38:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 121.45 Mbit/s

95th percentile per-packet one-way delay: 82.784 ms

Loss rate: 5.94%

-- Flow 1:

Average throughput: 121.87 Mbit/s

95th percentile per-packet one-way delay: 82.817 ms

Loss rate: 2.13%

-- Flow 2:

Average throughput: 0.10 Mbit/s

95th percentile per-packet one-way delay: 63.952 ms

Loss rate: 98.10%

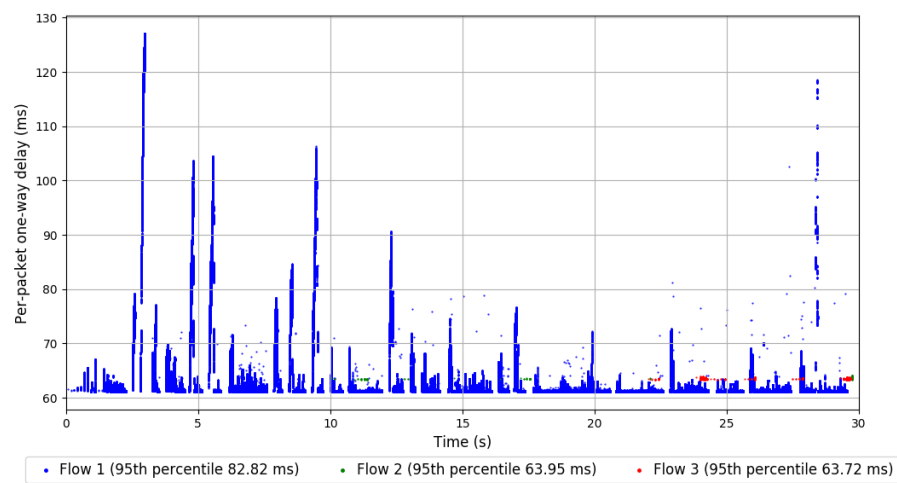
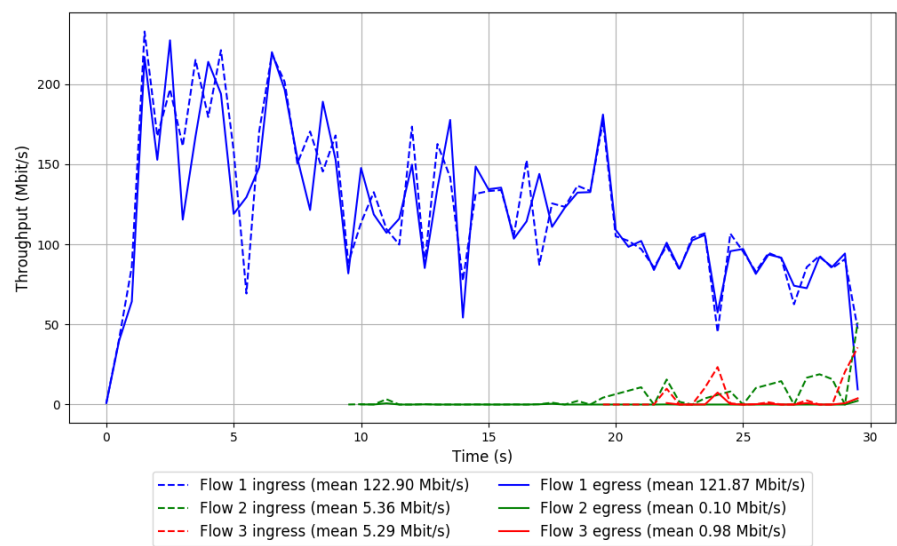
-- Flow 3:

Average throughput: 0.98 Mbit/s

95th percentile per-packet one-way delay: 63.722 ms

Loss rate: 85.65%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2017-08-12 13:50:04

End at: 2017-08-12 13:50:34

Below is generated by plot.py at 2017-08-12 17:38:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.48 Mbit/s

95th percentile per-packet one-way delay: 63.967 ms

Loss rate: 95.15%

-- Flow 1:

Average throughput: 2.43 Mbit/s

95th percentile per-packet one-way delay: 64.035 ms

Loss rate: 97.22%

-- Flow 2:

Average throughput: 3.98 Mbit/s

95th percentile per-packet one-way delay: 63.963 ms

Loss rate: 89.17%

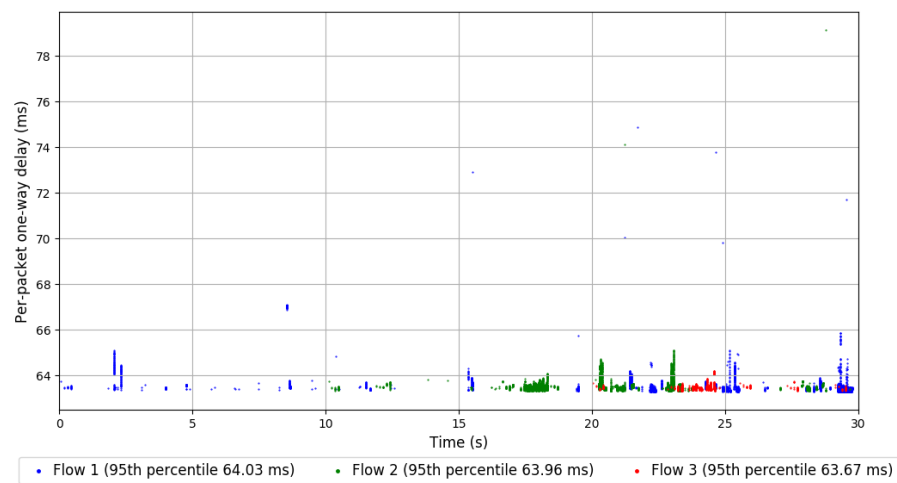
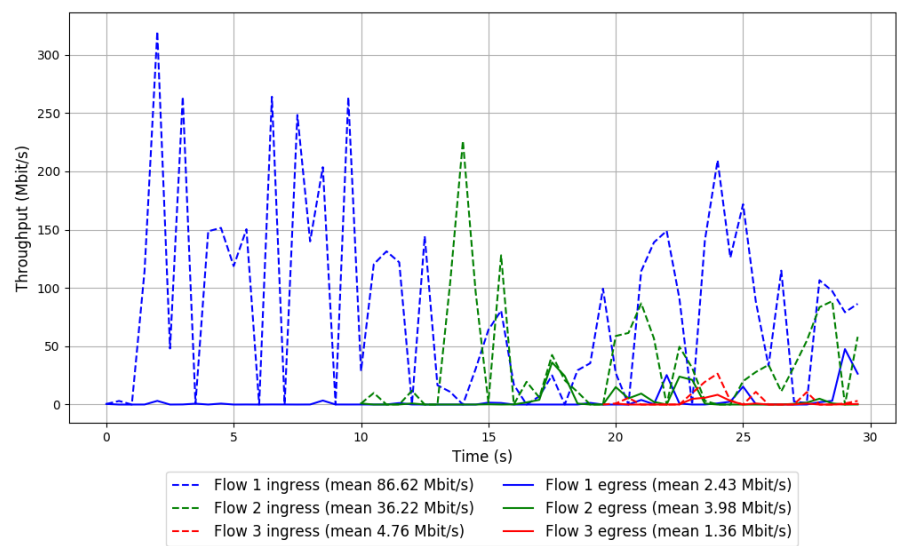
-- Flow 3:

Average throughput: 1.36 Mbit/s

95th percentile per-packet one-way delay: 63.672 ms

Loss rate: 71.88%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2017-08-12 14:01:24

End at: 2017-08-12 14:01:54

Below is generated by plot.py at 2017-08-12 17:38:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 146.24 Mbit/s

95th percentile per-packet one-way delay: 84.227 ms

Loss rate: 6.19%

-- Flow 1:

Average throughput: 82.22 Mbit/s

95th percentile per-packet one-way delay: 86.616 ms

Loss rate: 7.74%

-- Flow 2:

Average throughput: 73.00 Mbit/s

95th percentile per-packet one-way delay: 81.815 ms

Loss rate: 2.48%

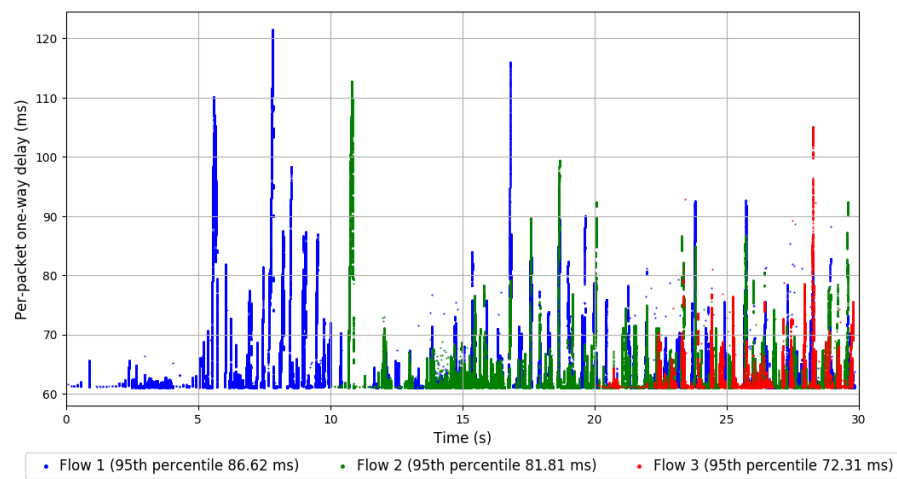
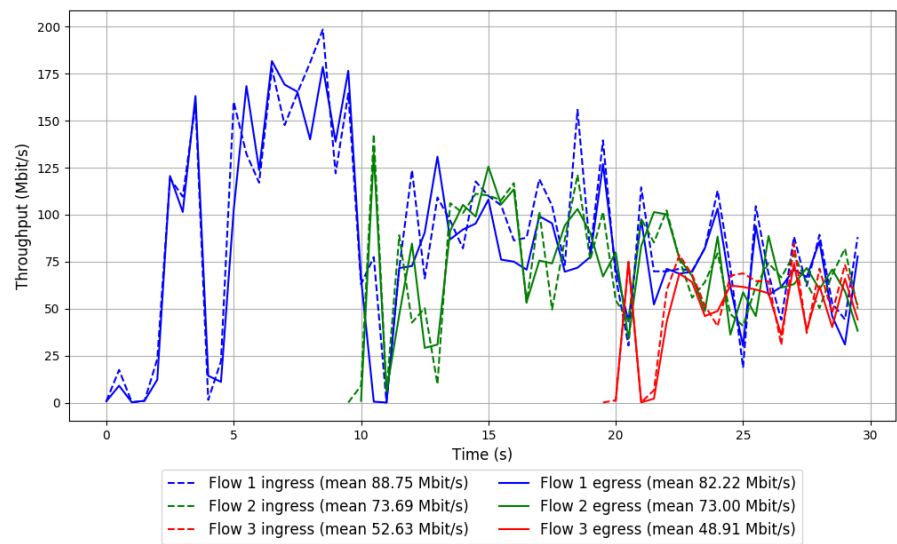
-- Flow 3:

Average throughput: 48.91 Mbit/s

95th percentile per-packet one-way delay: 72.306 ms

Loss rate: 8.76%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

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

End at: 2017-08-12 14:13:18

Below is generated by plot.py at 2017-08-12 17:38:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 11.16 Mbit/s

95th percentile per-packet one-way delay: 63.994 ms

Loss rate: 87.23%

-- Flow 1:

Average throughput: 6.51 Mbit/s

95th percentile per-packet one-way delay: 64.049 ms

Loss rate: 84.67%

-- Flow 2:

Average throughput: 7.53 Mbit/s

95th percentile per-packet one-way delay: 63.881 ms

Loss rate: 89.24%

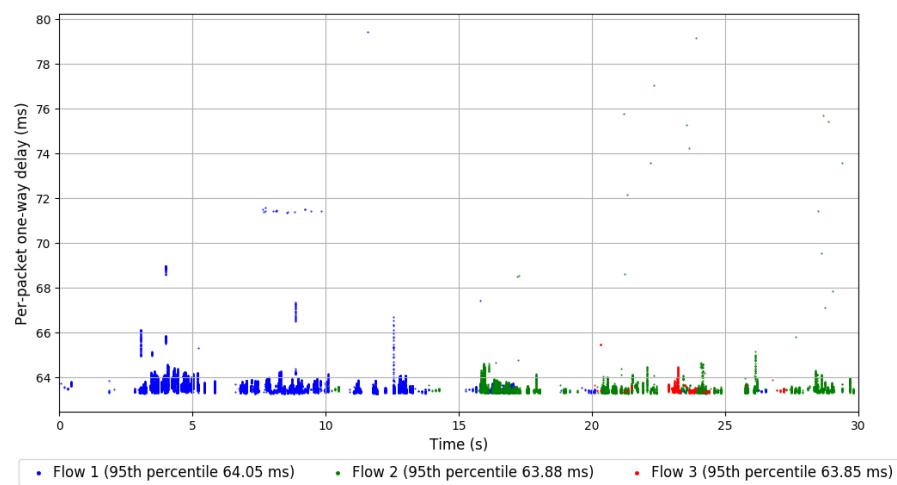
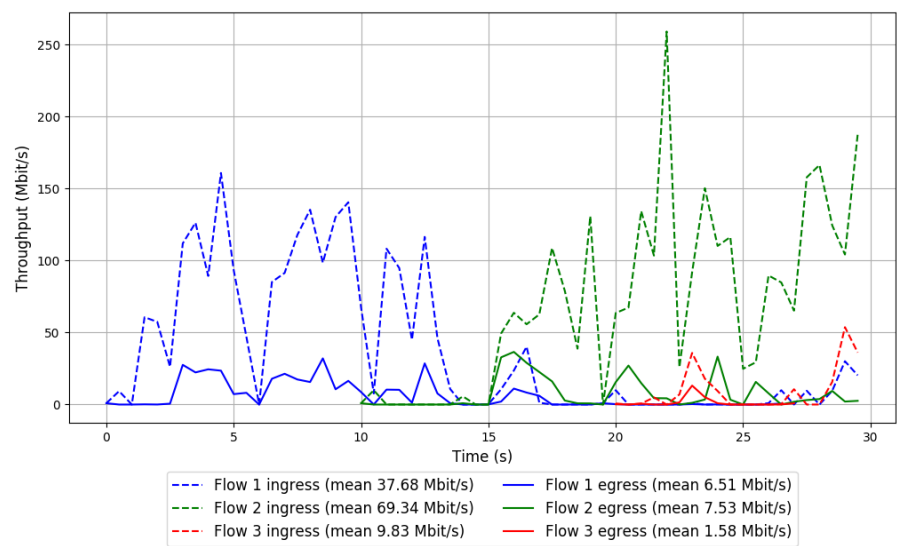
-- Flow 3:

Average throughput: 1.58 Mbit/s

95th percentile per-packet one-way delay: 63.850 ms

Loss rate: 88.38%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2017-08-12 14:23:58

End at: 2017-08-12 14:24:28

Below is generated by plot.py at 2017-08-12 17:38:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 24.66 Mbit/s

95th percentile per-packet one-way delay: 80.743 ms

Loss rate: 67.88%

-- Flow 1:

Average throughput: 0.70 Mbit/s

95th percentile per-packet one-way delay: 63.905 ms

Loss rate: 98.55%

-- Flow 2:

Average throughput: 2.60 Mbit/s

95th percentile per-packet one-way delay: 63.961 ms

Loss rate: 73.20%

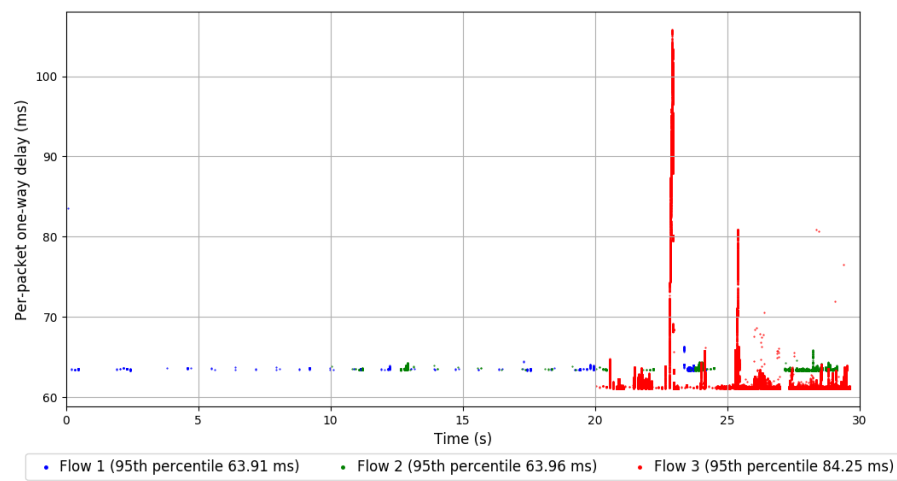
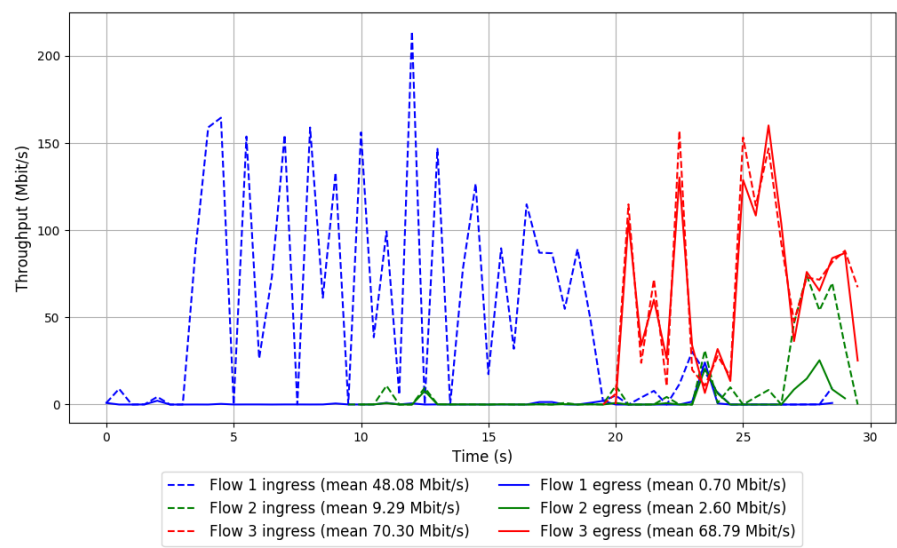
-- Flow 3:

Average throughput: 68.79 Mbit/s

95th percentile per-packet one-way delay: 84.251 ms

Loss rate: 5.55%

Run 10: Report of Verus — Data Link

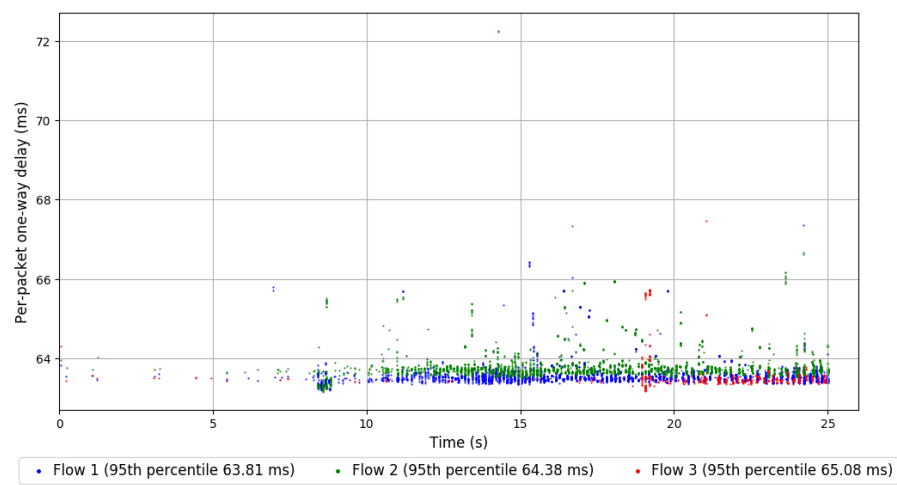
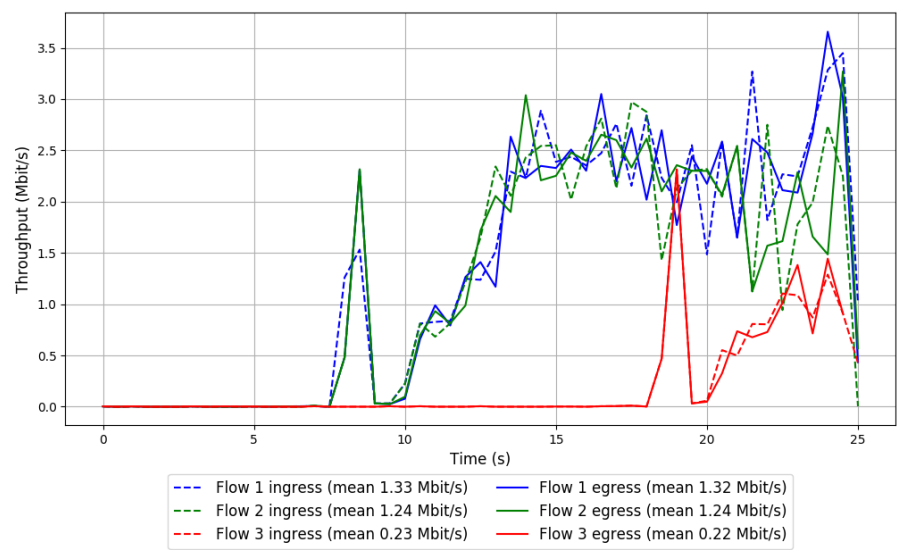


```
Run 1: Statistics of WebRTC media

Start at: 2017-08-12 12:44:26
End at: 2017-08-12 12:44:56

# Below is generated by plot.py at 2017-08-12 17:38:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.78 Mbit/s
95th percentile per-packet one-way delay: 64.165 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 1.32 Mbit/s
95th percentile per-packet one-way delay: 63.811 ms
Loss rate: 1.52%
-- Flow 2:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 64.381 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 65.075 ms
Loss rate: 3.79%
```


Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

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

End at: 2017-08-12 12:56:32

Below is generated by plot.py at 2017-08-12 17:38:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.52 Mbit/s

95th percentile per-packet one-way delay: 64.024 ms

Loss rate: 2.11%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 63.984 ms

Loss rate: 0.16%

-- Flow 2:

Average throughput: 1.34 Mbit/s

95th percentile per-packet one-way delay: 64.037 ms

Loss rate: 1.06%

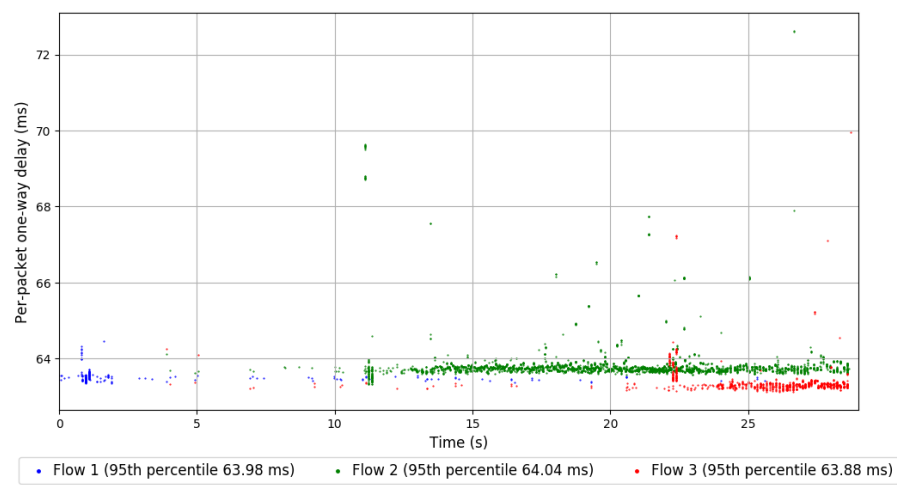
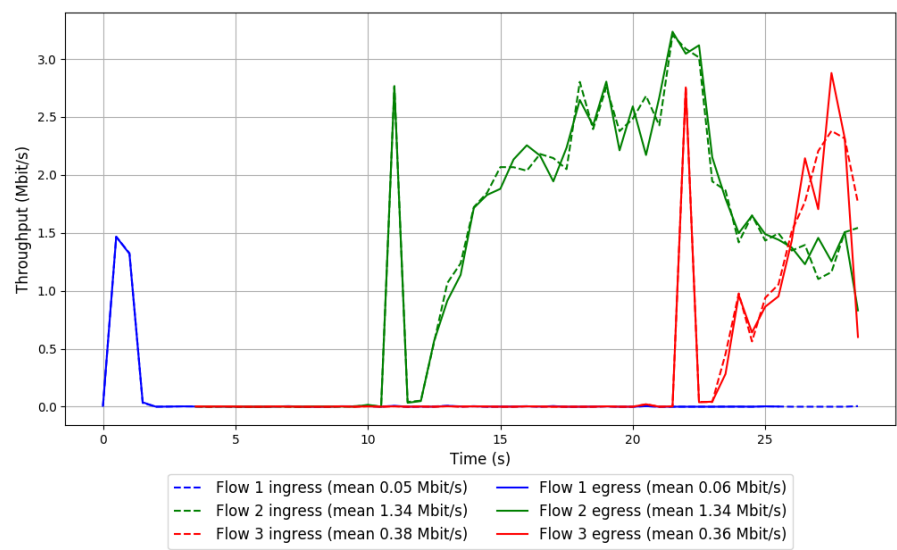
-- Flow 3:

Average throughput: 0.36 Mbit/s

95th percentile per-packet one-way delay: 63.878 ms

Loss rate: 6.15%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

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

End at: 2017-08-12 13:08:19

Below is generated by plot.py at 2017-08-12 17:38:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.68 Mbit/s

95th percentile per-packet one-way delay: 63.902 ms

Loss rate: 0.66%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 63.746 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.48 Mbit/s

95th percentile per-packet one-way delay: 63.876 ms

Loss rate: 0.03%

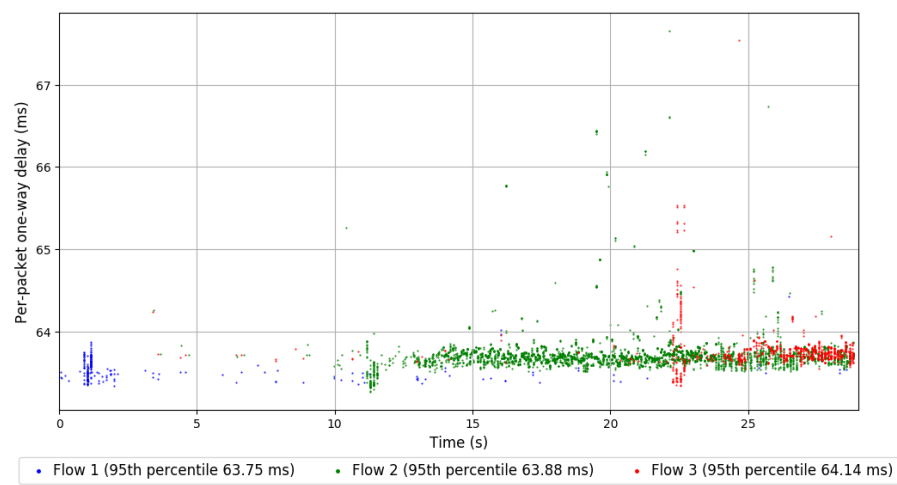
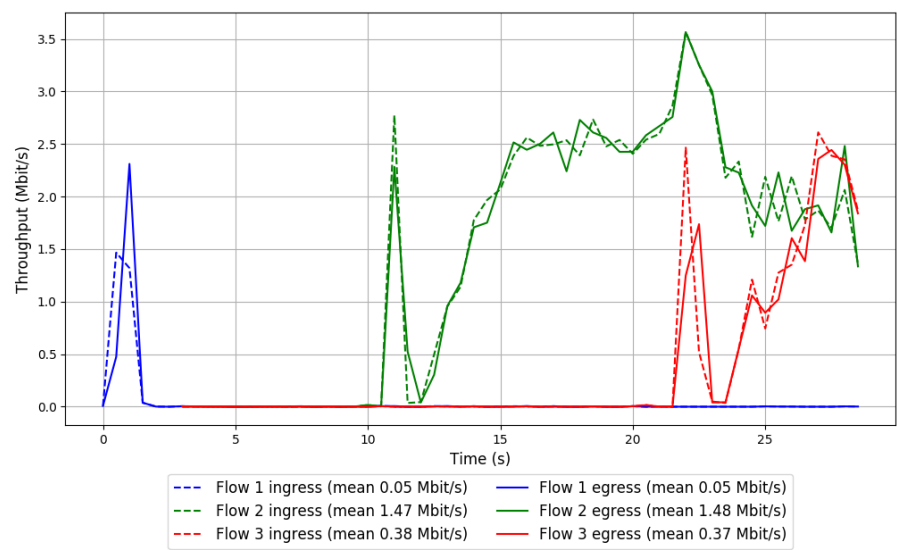
-- Flow 3:

Average throughput: 0.37 Mbit/s

95th percentile per-packet one-way delay: 64.144 ms

Loss rate: 3.24%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2017-08-12 13:19:25

End at: 2017-08-12 13:19:55

Below is generated by plot.py at 2017-08-12 17:38:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.70 Mbit/s

95th percentile per-packet one-way delay: 63.905 ms

Loss rate: 1.46%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 63.664 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.55 Mbit/s

95th percentile per-packet one-way delay: 63.738 ms

Loss rate: 1.11%

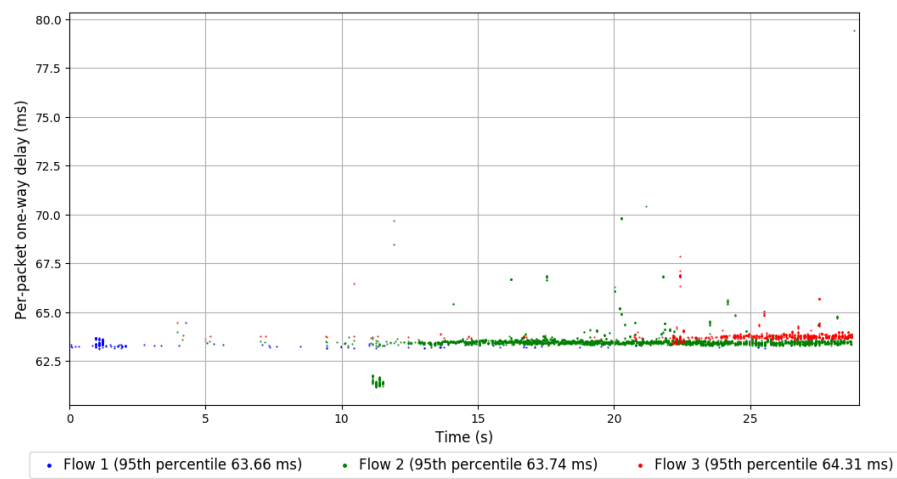
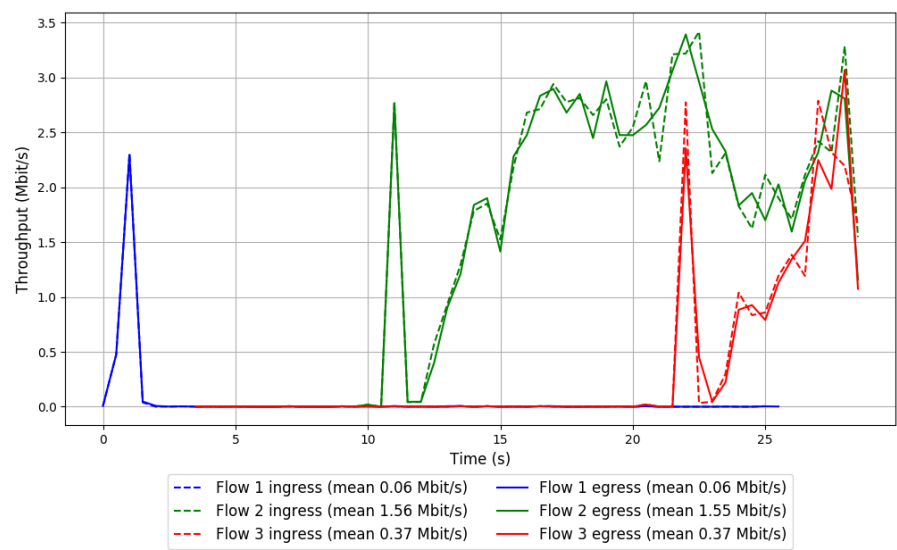
-- Flow 3:

Average throughput: 0.37 Mbit/s

95th percentile per-packet one-way delay: 64.308 ms

Loss rate: 3.11%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2017-08-12 13:31:32

End at: 2017-08-12 13:32:02

Below is generated by plot.py at 2017-08-12 17:38:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.91 Mbit/s

95th percentile per-packet one-way delay: 63.921 ms

Loss rate: 1.25%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 63.777 ms

Loss rate: 0.16%

-- Flow 2:

Average throughput: 1.54 Mbit/s

95th percentile per-packet one-way delay: 63.913 ms

Loss rate: 0.84%

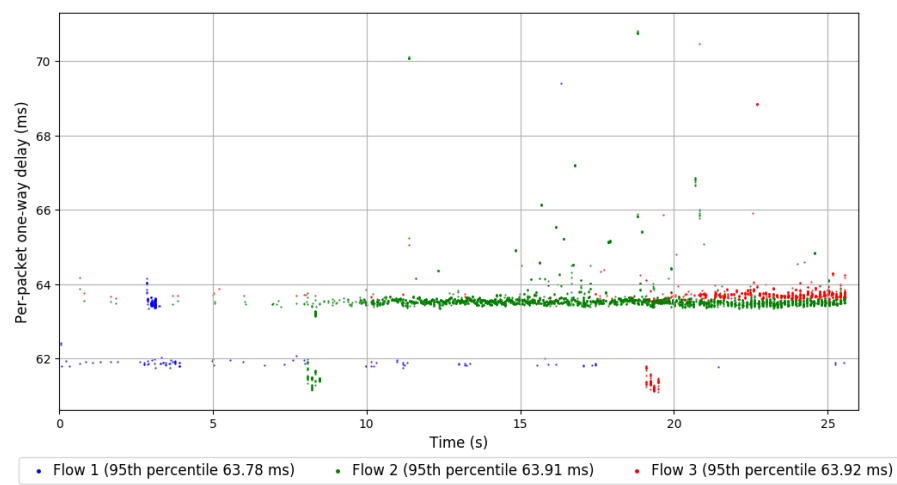
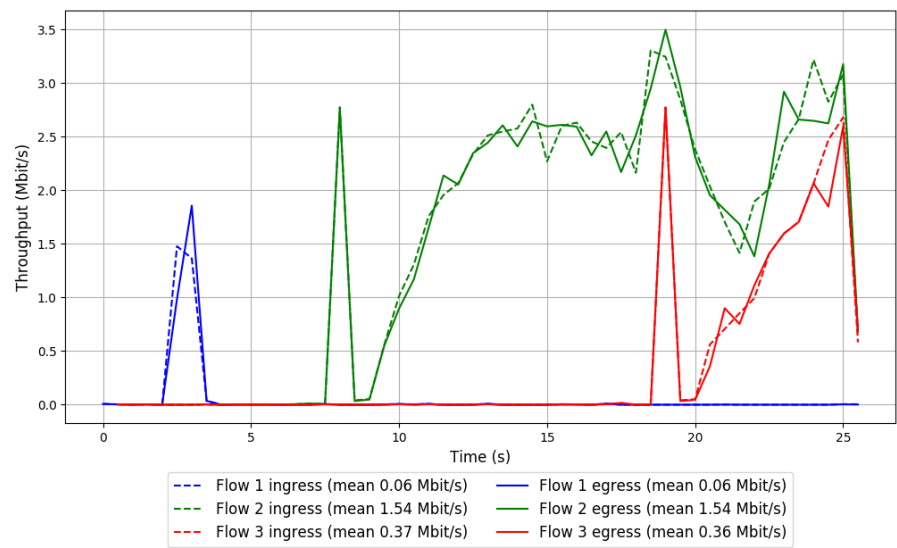
-- Flow 3:

Average throughput: 0.36 Mbit/s

95th percentile per-packet one-way delay: 63.924 ms

Loss rate: 3.13%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2017-08-12 13:43:16

End at: 2017-08-12 13:43:46

Below is generated by plot.py at 2017-08-12 17:38:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.70 Mbit/s

95th percentile per-packet one-way delay: 63.806 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 65.324 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.54 Mbit/s

95th percentile per-packet one-way delay: 63.792 ms

Loss rate: 0.79%

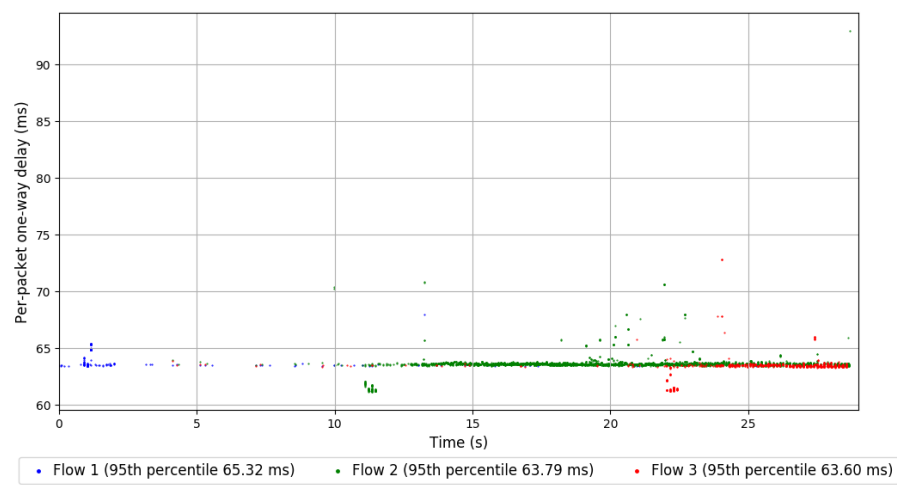
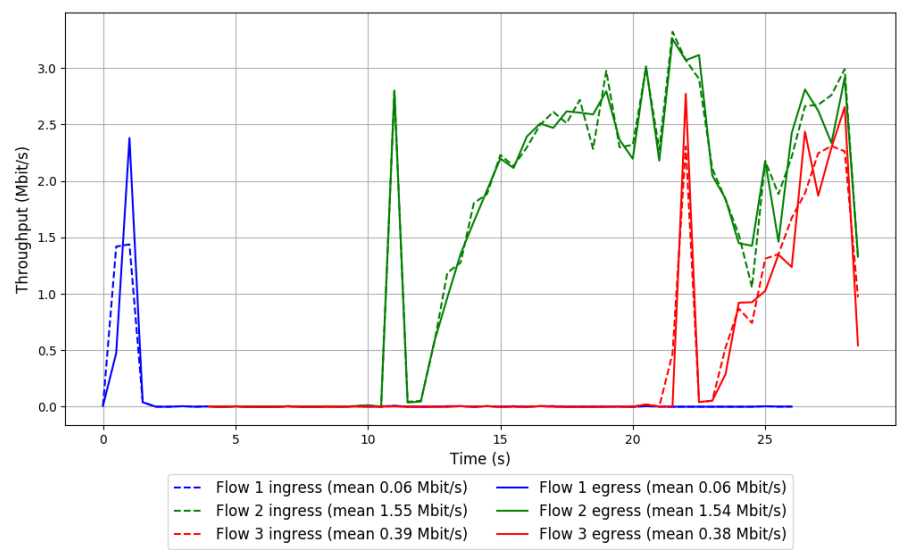
-- Flow 3:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 63.599 ms

Loss rate: 3.16%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2017-08-12 13:54:40

End at: 2017-08-12 13:55:10

Below is generated by plot.py at 2017-08-12 17:38:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.68 Mbit/s

95th percentile per-packet one-way delay: 64.420 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 63.828 ms

Loss rate: 0.10%

-- Flow 2:

Average throughput: 1.54 Mbit/s

95th percentile per-packet one-way delay: 64.626 ms

Loss rate: 0.75%

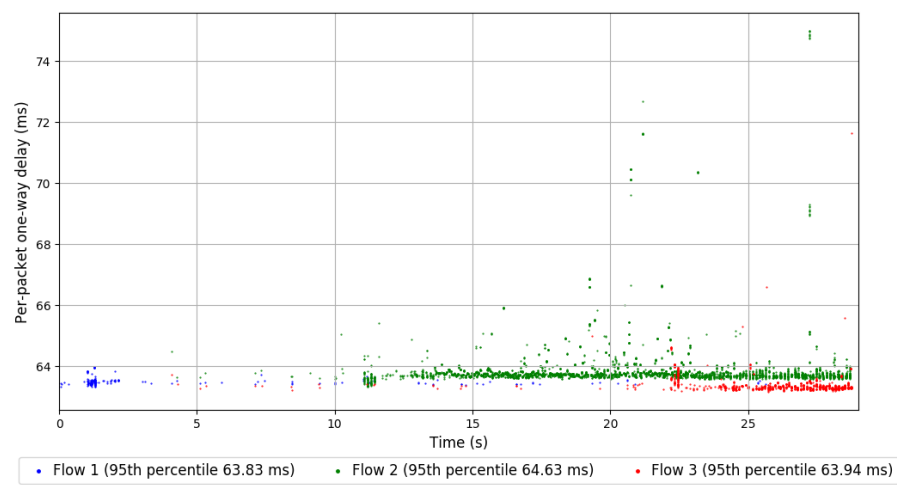
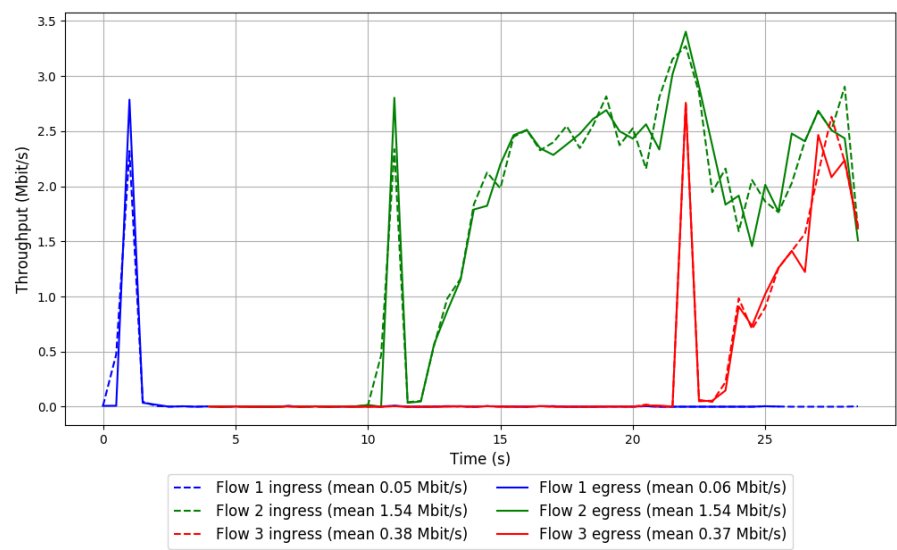
-- Flow 3:

Average throughput: 0.37 Mbit/s

95th percentile per-packet one-way delay: 63.937 ms

Loss rate: 2.98%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2017-08-12 14:06:15

End at: 2017-08-12 14:06:45

Below is generated by plot.py at 2017-08-12 17:38:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.66 Mbit/s

95th percentile per-packet one-way delay: 63.829 ms

Loss rate: 1.68%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 63.683 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 1.46 Mbit/s

95th percentile per-packet one-way delay: 63.843 ms

Loss rate: 1.13%

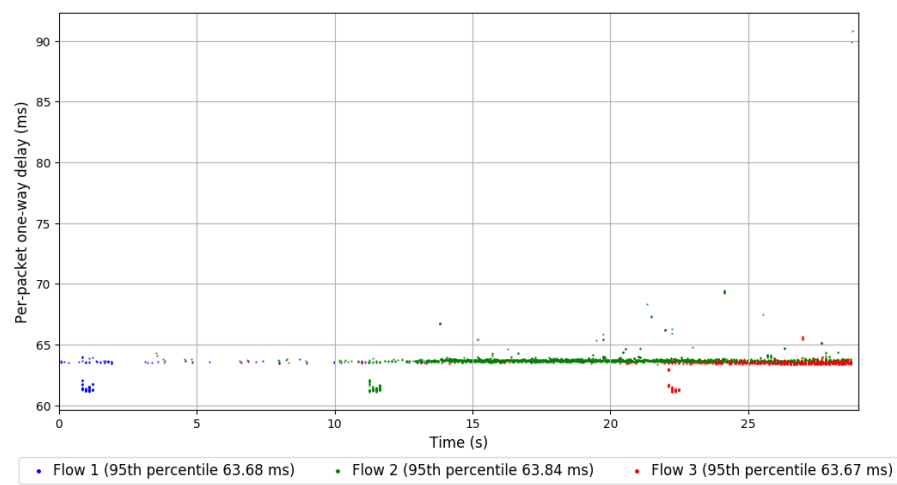
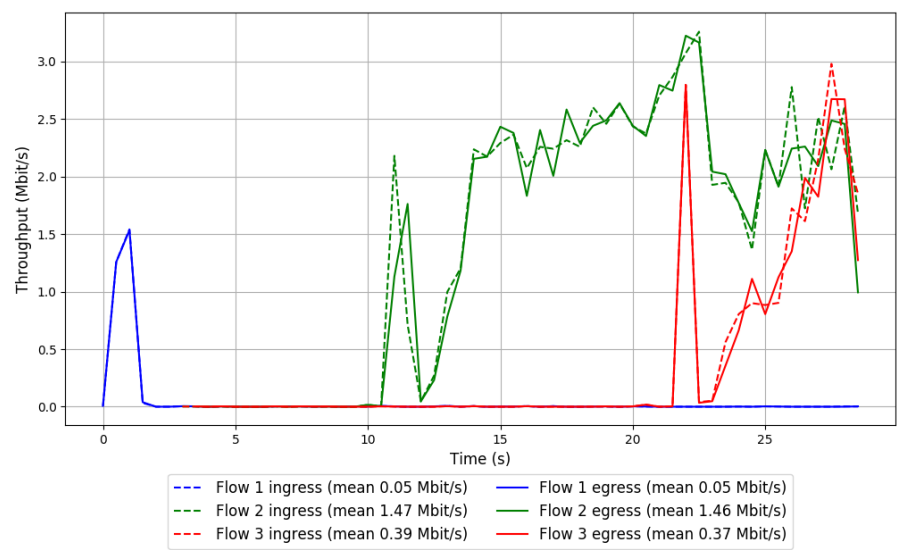
-- Flow 3:

Average throughput: 0.37 Mbit/s

95th percentile per-packet one-way delay: 63.668 ms

Loss rate: 3.99%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2017-08-12 14:17:27

End at: 2017-08-12 14:17:57

Below is generated by plot.py at 2017-08-12 17:38:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.61 Mbit/s

95th percentile per-packet one-way delay: 63.881 ms

Loss rate: 1.26%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 62.100 ms

Loss rate: 0.11%

-- Flow 2:

Average throughput: 1.45 Mbit/s

95th percentile per-packet one-way delay: 63.820 ms

Loss rate: 1.12%

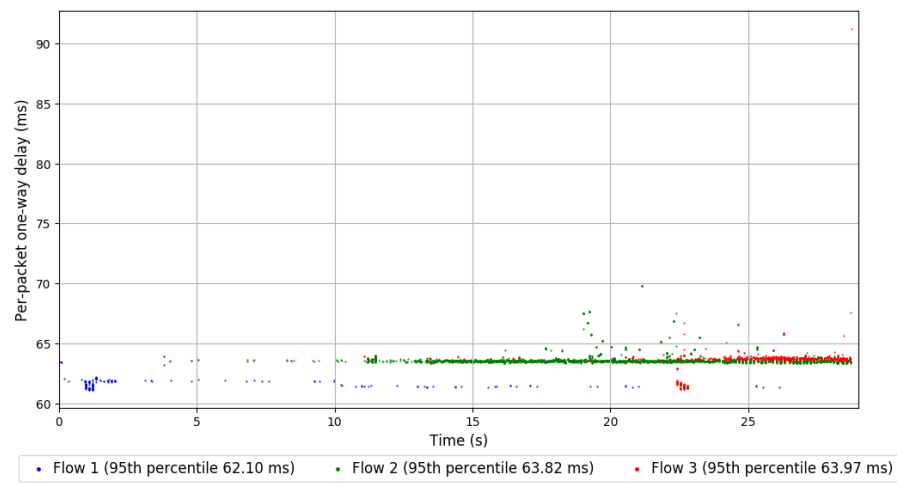
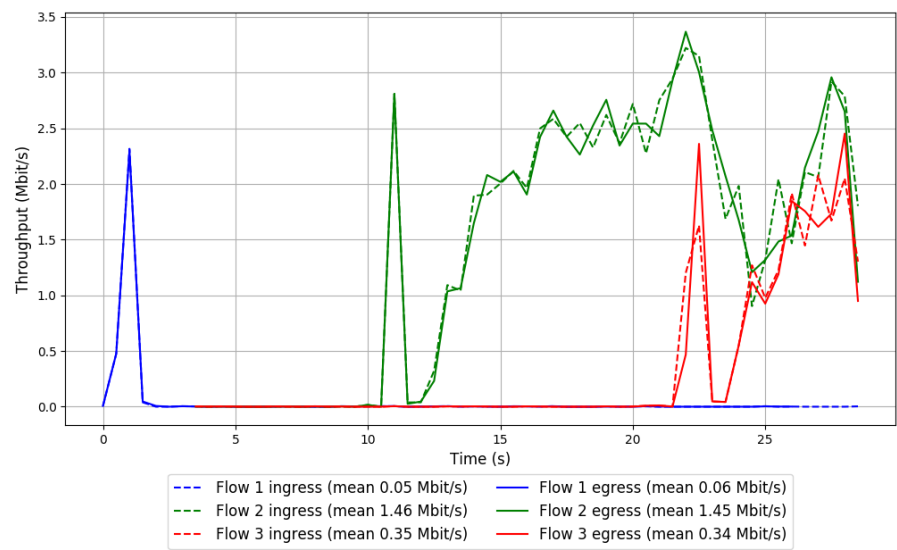
-- Flow 3:

Average throughput: 0.34 Mbit/s

95th percentile per-packet one-way delay: 63.973 ms

Loss rate: 2.03%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2017-08-12 14:28:33

End at: 2017-08-12 14:29:03

Below is generated by plot.py at 2017-08-12 17:38:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.65 Mbit/s

95th percentile per-packet one-way delay: 63.986 ms

Loss rate: 1.26%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 61.600 ms

Loss rate: 0.11%

-- Flow 2:

Average throughput: 1.51 Mbit/s

95th percentile per-packet one-way delay: 64.052 ms

Loss rate: 0.96%

-- Flow 3:

Average throughput: 0.34 Mbit/s

95th percentile per-packet one-way delay: 63.873 ms

Loss rate: 2.75%

Run 10: Report of WebRTC media — Data Link

