

Pantheon Report

Generated at 2017-12-21 04:32:47 (UTC).

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

Repeated the test of 14 congestion control schemes 10 times.

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

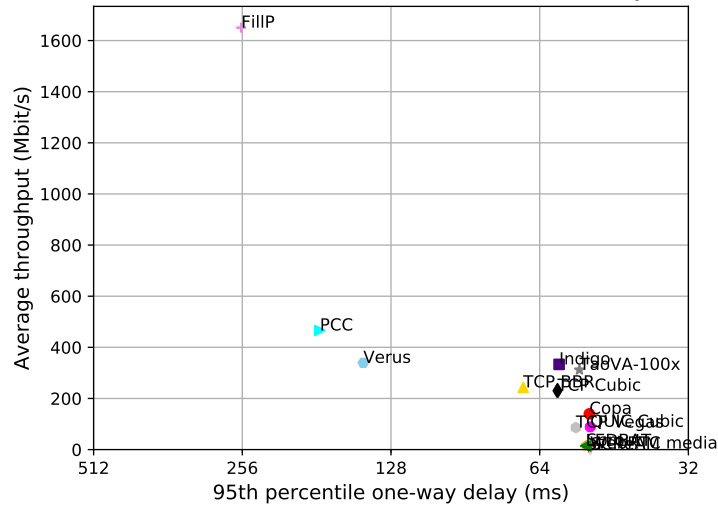
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

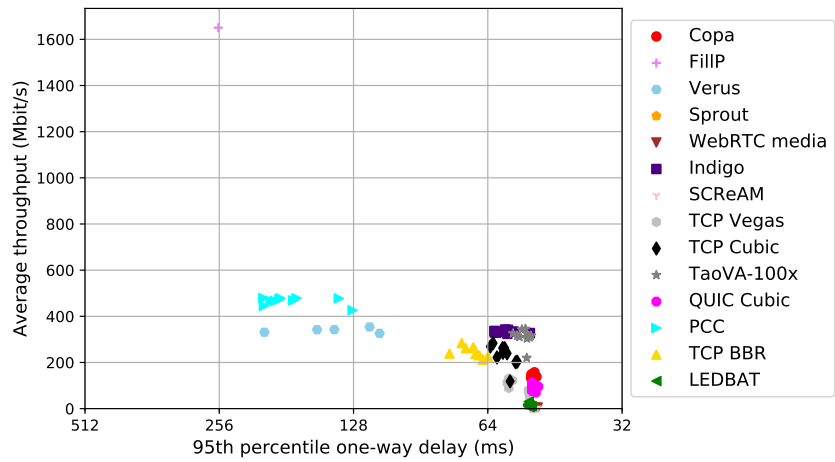
Git summary:

```
branch: master @ 904a5750834816b1e46a2c86405d707788d27c16
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/fillp @ dcaef6b00654e660f73f7ed679d2eab61ce08639
third_party/genericCC @ 80b516c448f795fd6e9675f7177b69c622f07da8
third_party/indigo @ b19f3730105f9aa95452552af924e3719b03cc55
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
  M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcf993
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
third_party/proto-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaaeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
  M src/examples/cellsim.cc
  M src/examples/sproutbt2.cc
  M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
  M src/verus.hpp
  M tools/plot.py
third_party/webRTC @ a488197ddd041ace68a42849b2540ad834825f42
```

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



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



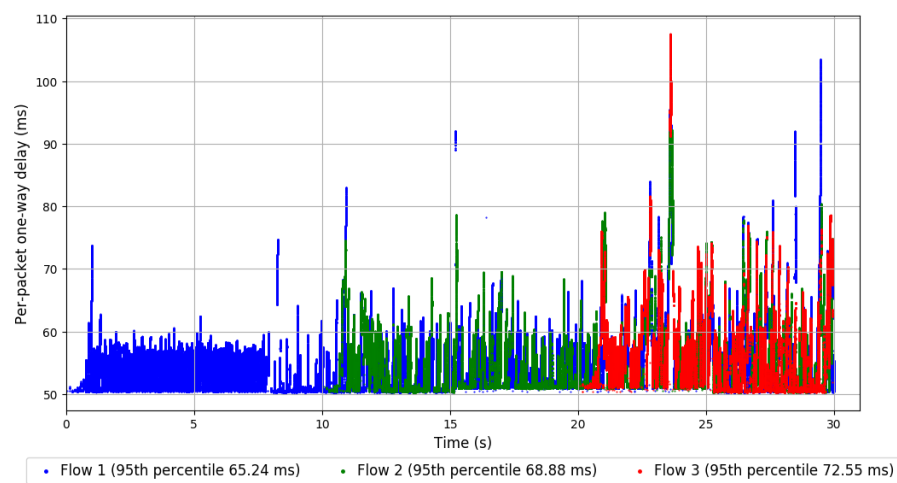
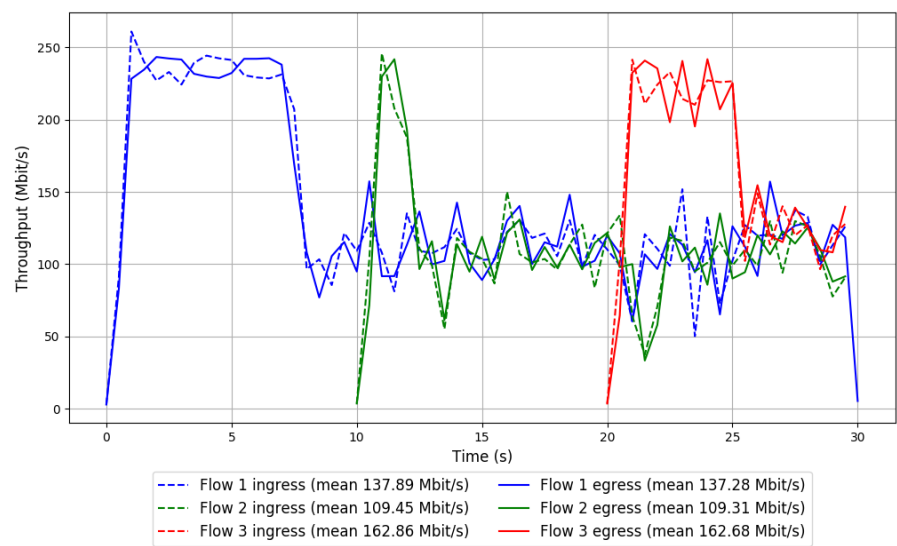
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	10	114.09	124.89	139.54	66.36	68.63	73.07	0.32	0.10	0.11
TCP Cubic	10	110.53	117.16	126.05	57.69	59.02	58.10	0.16	0.24	0.01
LEDBAT	7	6.82	7.89	6.31	80.32	51.63	51.55	1.27	1.00	1.76
PCC	10	440.93	21.82	32.09	178.59	159.49	122.02	1.01	0.93	0.83
QUIC Cubic	10	50.29	41.01	35.63	50.25	50.43	50.23	0.00	0.00	0.00
SCReAM	10	0.22	0.22	0.22	50.41	50.32	50.26	0.01	0.00	0.00
WebRTC media	10	2.24	1.41	0.58	50.52	50.18	50.52	0.00	0.00	0.01
Sprout	10	7.80	7.68	7.54	51.47	51.45	51.34	0.57	0.66	0.24
TaoVA-100x	10	191.54	144.40	106.95	52.43	53.67	54.84	0.01	0.04	0.04
TCP Vegas	9	36.21	47.07	61.76	903.49	52.97	52.70	0.26	0.24	0.16
Verus	5	220.82	129.40	100.22	142.93	134.76	156.76	0.79	0.28	0.93
Copa	10	78.17	68.64	61.93	50.72	50.78	50.82	0.01	0.00	0.00
FillP	1	925.82	728.49	733.19	253.73	264.46	268.20	3.61	13.39	12.53
Indigo	10	178.12	172.28	126.27	56.52	58.87	62.57	0.01	0.01	0.01

```
Run 1: Statistics of TCP BBR

Start at: 2017-12-20 23:35:38
End at: 2017-12-20 23:36:08

# Below is generated by plot.py at 2017-12-21 03:32:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 263.54 Mbit/s
95th percentile per-packet one-way delay: 68.951 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 137.28 Mbit/s
95th percentile per-packet one-way delay: 65.243 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 109.31 Mbit/s
95th percentile per-packet one-way delay: 68.876 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 162.68 Mbit/s
95th percentile per-packet one-way delay: 72.550 ms
Loss rate: 0.00%
```


Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2017-12-20 23:48:36

End at: 2017-12-20 23:49:06

Below is generated by plot.py at 2017-12-21 03:32:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 225.77 Mbit/s

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

Loss rate: 0.25%

-- Flow 1:

Average throughput: 100.27 Mbit/s

95th percentile per-packet one-way delay: 61.704 ms

Loss rate: 0.49%

-- Flow 2:

Average throughput: 138.03 Mbit/s

95th percentile per-packet one-way delay: 64.985 ms

Loss rate: 0.09%

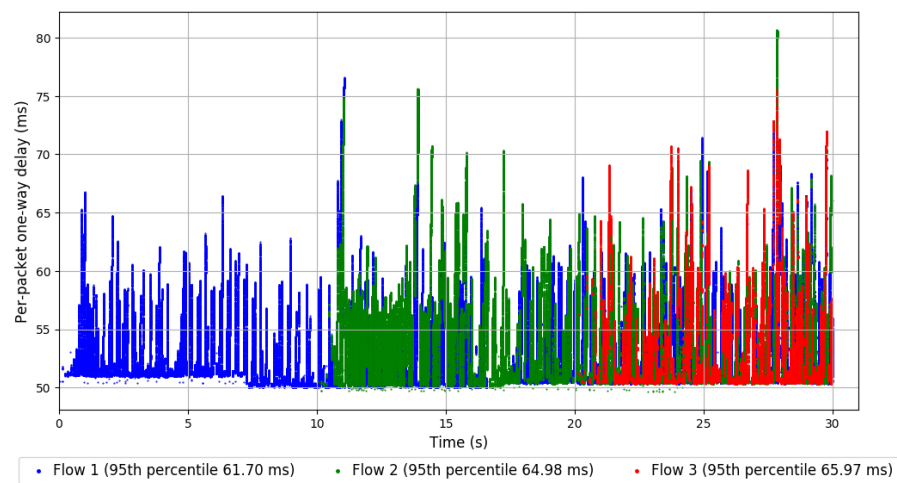
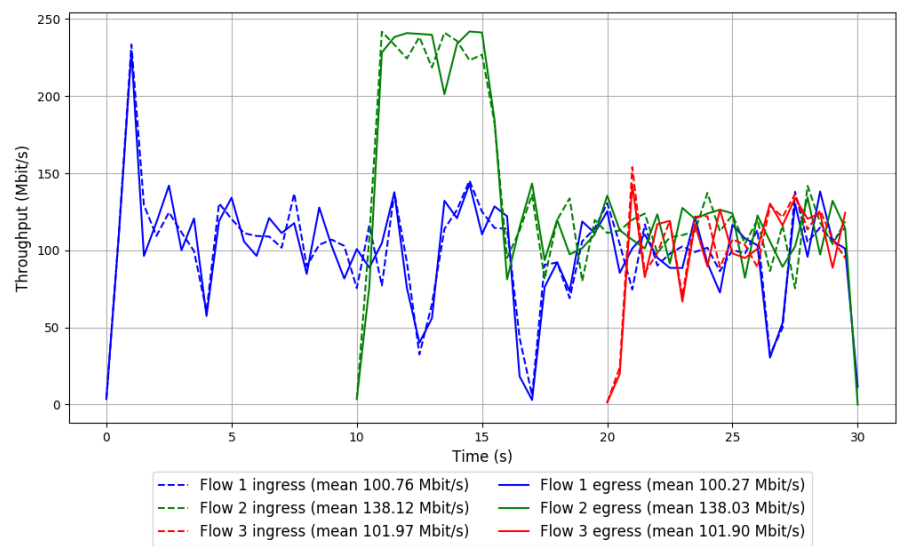
-- Flow 3:

Average throughput: 101.90 Mbit/s

95th percentile per-packet one-way delay: 65.969 ms

Loss rate: 0.00%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2017-12-21 00:01:44

End at: 2017-12-21 00:02:14

Below is generated by plot.py at 2017-12-21 03:32:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 231.30 Mbit/s

95th percentile per-packet one-way delay: 66.855 ms

Loss rate: 0.17%

-- Flow 1:

Average throughput: 105.36 Mbit/s

95th percentile per-packet one-way delay: 65.010 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 135.72 Mbit/s

95th percentile per-packet one-way delay: 68.025 ms

Loss rate: 0.00%

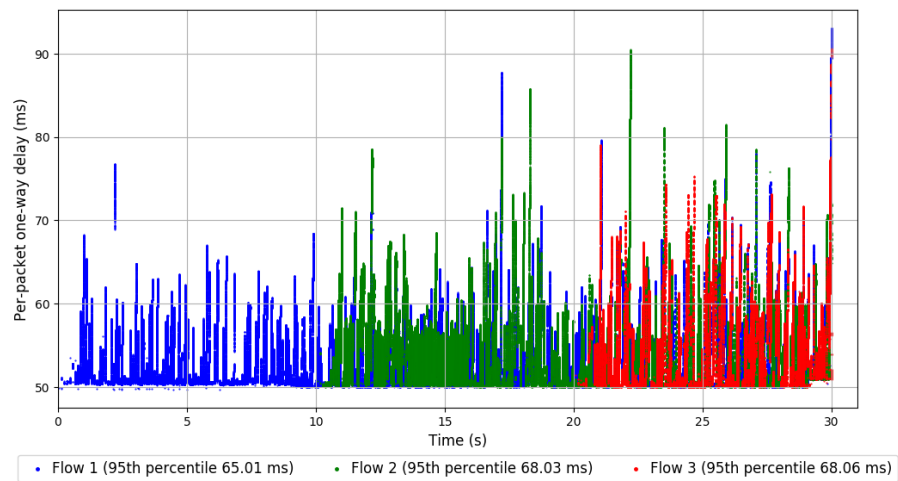
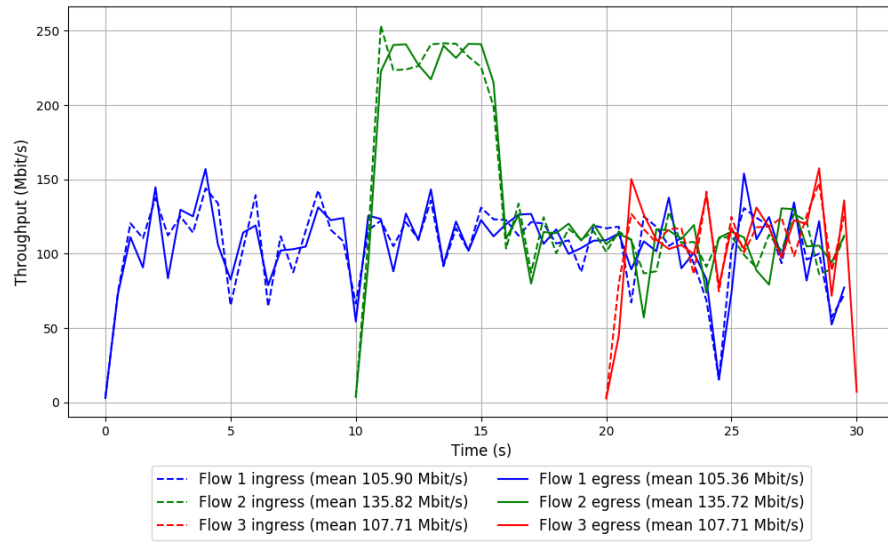
-- Flow 3:

Average throughput: 107.71 Mbit/s

95th percentile per-packet one-way delay: 68.065 ms

Loss rate: 0.00%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2017-12-21 00:14:32

End at: 2017-12-21 00:15:02

Below is generated by plot.py at 2017-12-21 03:32:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 238.30 Mbit/s

95th percentile per-packet one-way delay: 77.989 ms

Loss rate: 0.23%

-- Flow 1:

Average throughput: 129.49 Mbit/s

95th percentile per-packet one-way delay: 75.486 ms

Loss rate: 0.18%

-- Flow 2:

Average throughput: 105.88 Mbit/s

95th percentile per-packet one-way delay: 75.998 ms

Loss rate: 0.41%

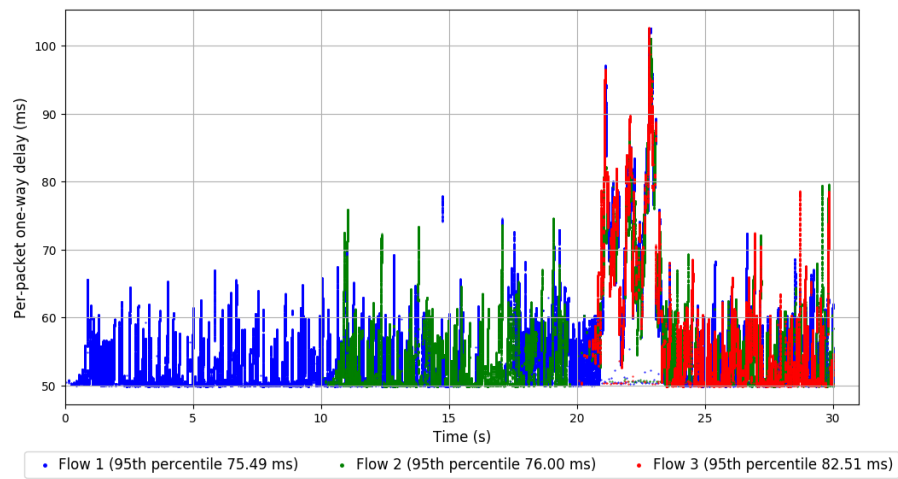
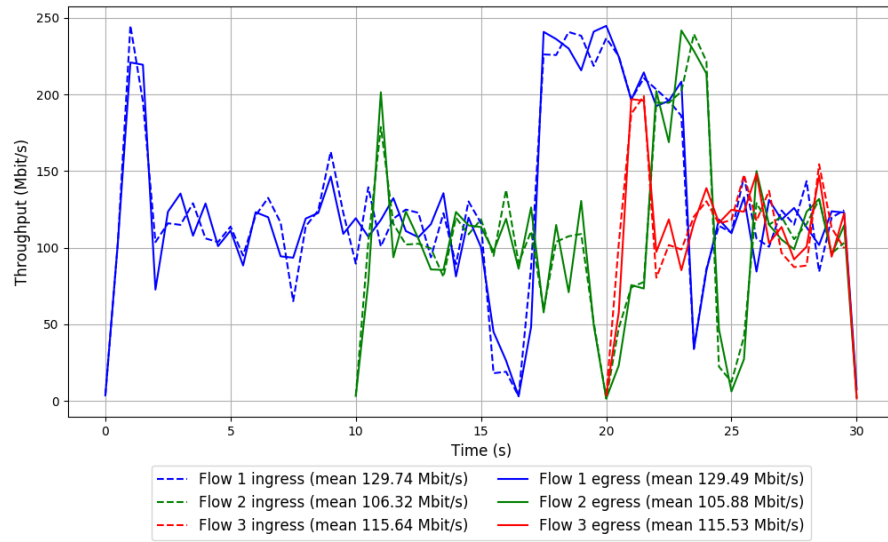
-- Flow 3:

Average throughput: 115.53 Mbit/s

95th percentile per-packet one-way delay: 82.513 ms

Loss rate: 0.08%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2017-12-21 00:27:49

End at: 2017-12-21 00:28:19

Below is generated by plot.py at 2017-12-21 03:32:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 212.39 Mbit/s

95th percentile per-packet one-way delay: 65.660 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 104.73 Mbit/s

95th percentile per-packet one-way delay: 65.010 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 110.61 Mbit/s

95th percentile per-packet one-way delay: 64.634 ms

Loss rate: 0.00%

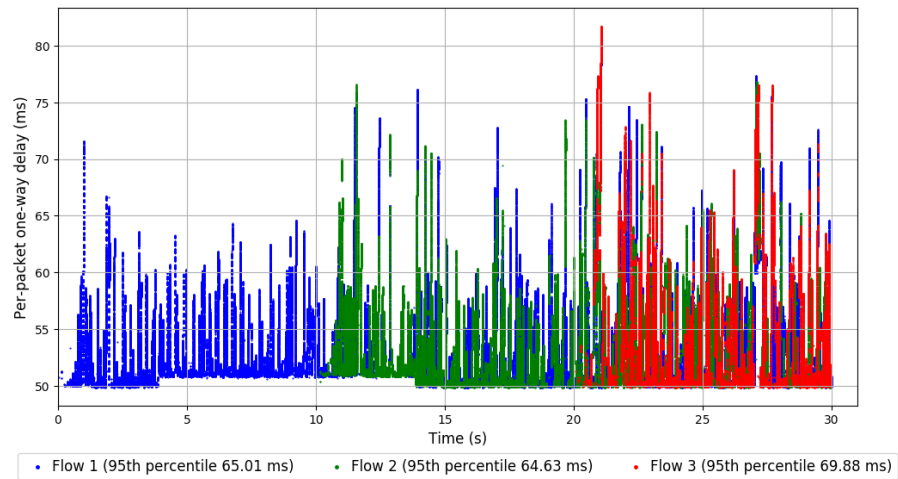
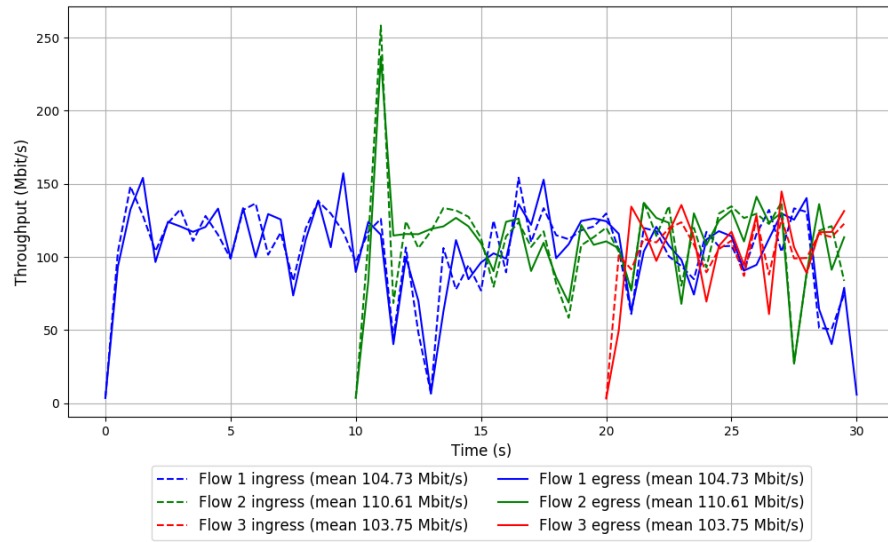
-- Flow 3:

Average throughput: 103.75 Mbit/s

95th percentile per-packet one-way delay: 69.875 ms

Loss rate: 0.00%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2017-12-21 00:40:41

End at: 2017-12-21 00:41:11

Below is generated by plot.py at 2017-12-21 03:32:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 261.33 Mbit/s

95th percentile per-packet one-way delay: 71.689 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 100.72 Mbit/s

95th percentile per-packet one-way delay: 68.331 ms

Loss rate: 1.18%

-- Flow 2:

Average throughput: 143.24 Mbit/s

95th percentile per-packet one-way delay: 70.163 ms

Loss rate: 0.15%

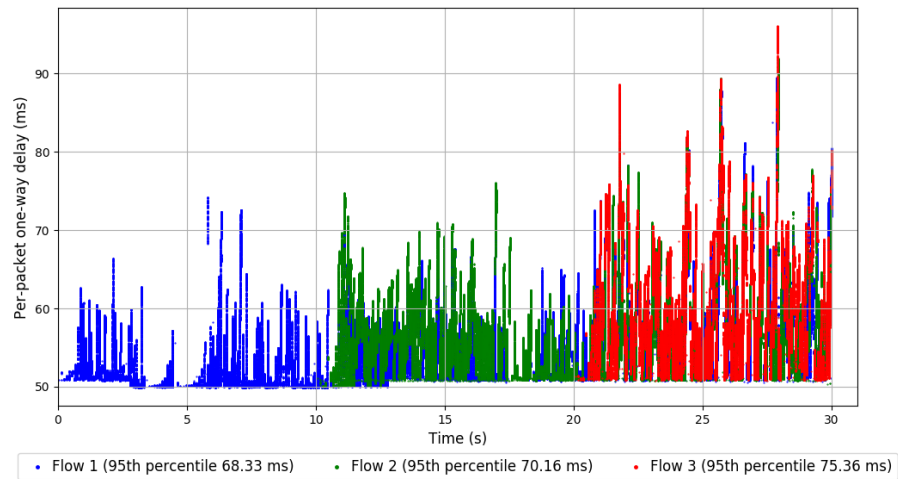
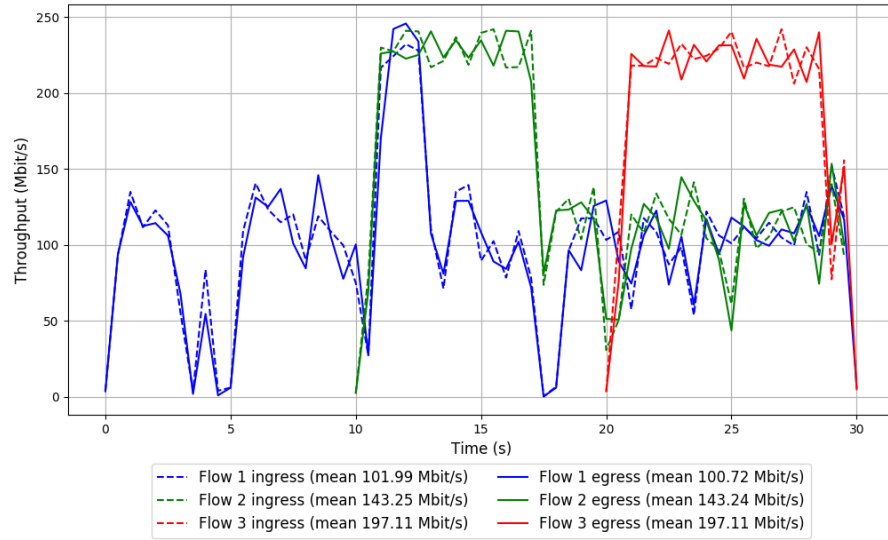
-- Flow 3:

Average throughput: 197.11 Mbit/s

95th percentile per-packet one-way delay: 75.361 ms

Loss rate: 0.02%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2017-12-21 00:54:21

End at: 2017-12-21 00:54:51

Below is generated by plot.py at 2017-12-21 03:32:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 284.13 Mbit/s

95th percentile per-packet one-way delay: 73.243 ms

Loss rate: 0.09%

-- Flow 1:

Average throughput: 138.19 Mbit/s

95th percentile per-packet one-way delay: 66.928 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 118.28 Mbit/s

95th percentile per-packet one-way delay: 71.864 ms

Loss rate: 0.00%

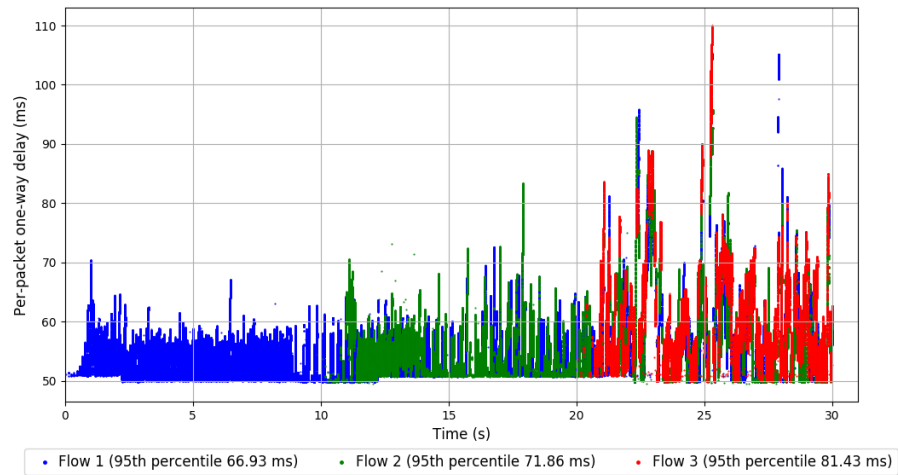
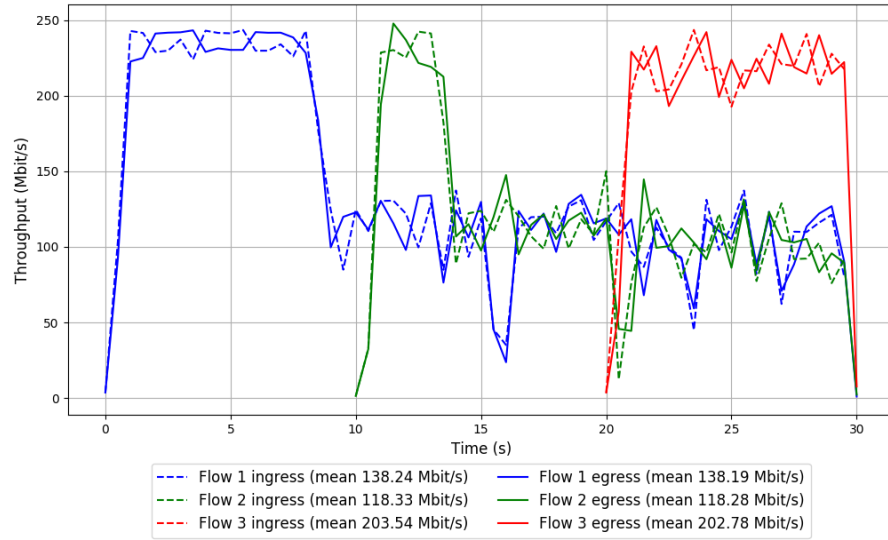
-- Flow 3:

Average throughput: 202.78 Mbit/s

95th percentile per-packet one-way delay: 81.433 ms

Loss rate: 0.39%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2017-12-21 01:07:11

End at: 2017-12-21 01:07:41

Below is generated by plot.py at 2017-12-21 03:32:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 212.47 Mbit/s

95th percentile per-packet one-way delay: 65.640 ms

Loss rate: 0.20%

-- Flow 1:

Average throughput: 109.96 Mbit/s

95th percentile per-packet one-way delay: 64.893 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 103.17 Mbit/s

95th percentile per-packet one-way delay: 65.494 ms

Loss rate: 0.00%

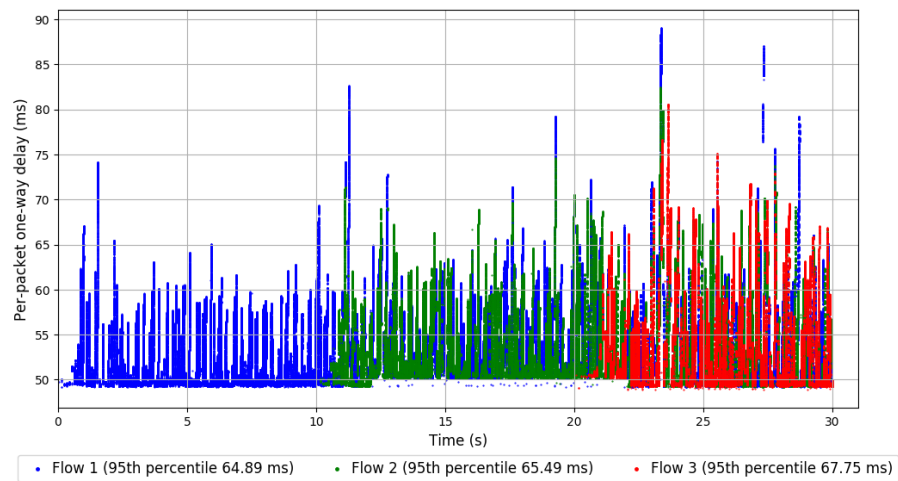
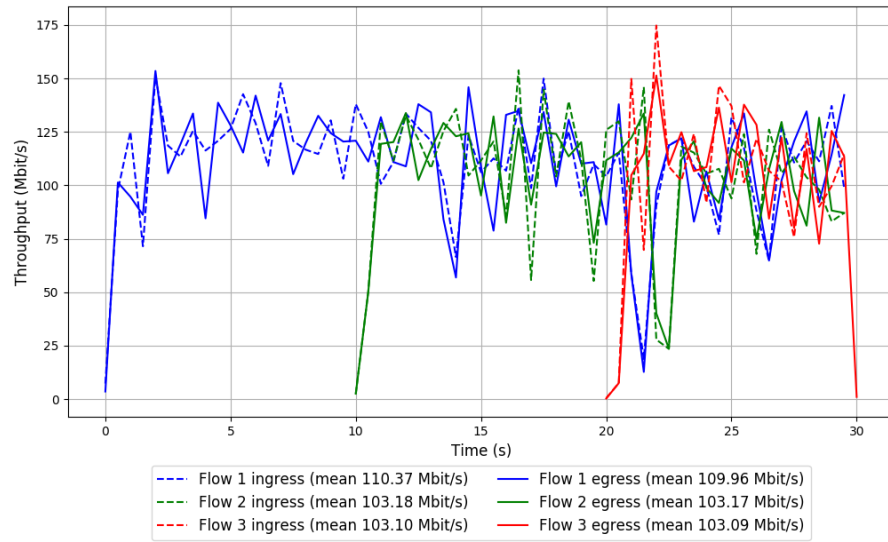
-- Flow 3:

Average throughput: 103.09 Mbit/s

95th percentile per-packet one-way delay: 67.753 ms

Loss rate: 0.02%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2017-12-21 01:20:16

End at: 2017-12-21 01:20:46

Below is generated by plot.py at 2017-12-21 03:35:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 236.68 Mbit/s

95th percentile per-packet one-way delay: 68.186 ms

Loss rate: 0.17%

-- Flow 1:

Average throughput: 103.55 Mbit/s

95th percentile per-packet one-way delay: 65.078 ms

Loss rate: 0.16%

-- Flow 2:

Average throughput: 103.70 Mbit/s

95th percentile per-packet one-way delay: 67.798 ms

Loss rate: 0.36%

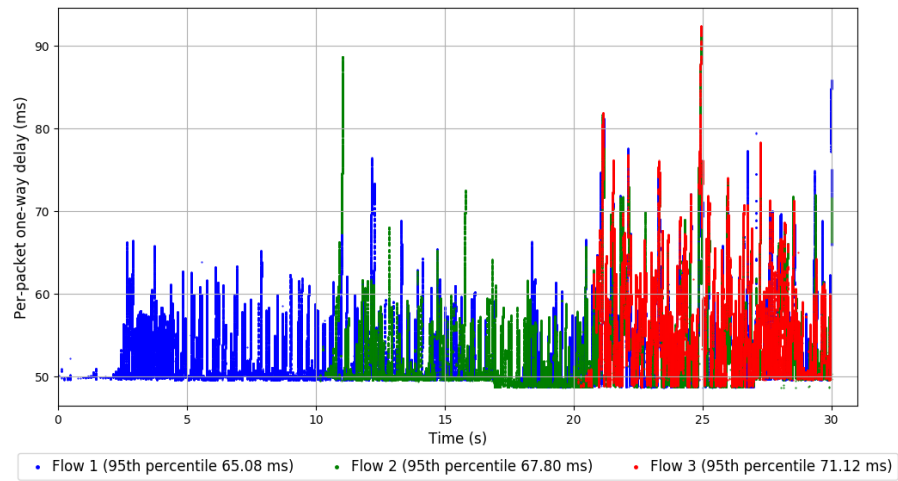
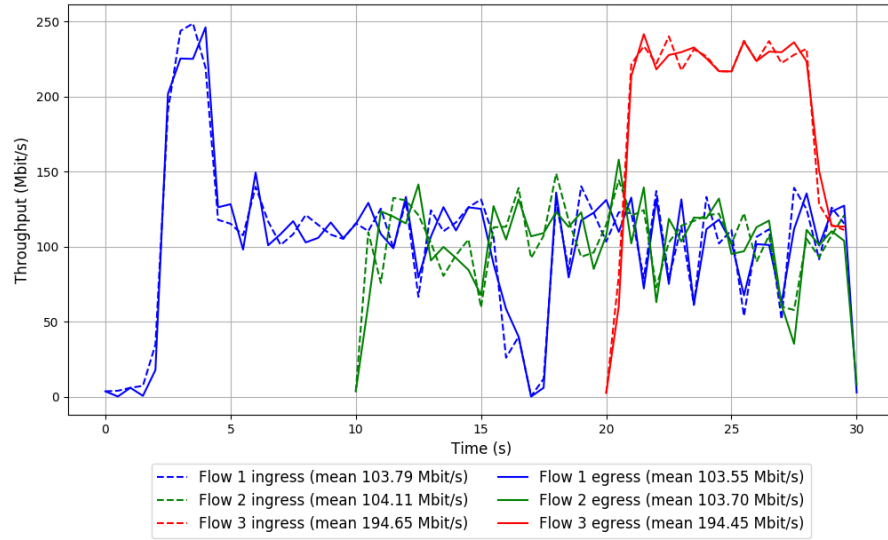
-- Flow 3:

Average throughput: 194.45 Mbit/s

95th percentile per-packet one-way delay: 71.122 ms

Loss rate: 0.00%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2017-12-21 01:32:52

End at: 2017-12-21 01:33:22

Below is generated by plot.py at 2017-12-21 03:35:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 266.55 Mbit/s

95th percentile per-packet one-way delay: 68.949 ms

Loss rate: 0.10%

-- Flow 1:

Average throughput: 111.34 Mbit/s

95th percentile per-packet one-way delay: 65.956 ms

Loss rate: 0.06%

-- Flow 2:

Average throughput: 180.92 Mbit/s

95th percentile per-packet one-way delay: 68.471 ms

Loss rate: 0.00%

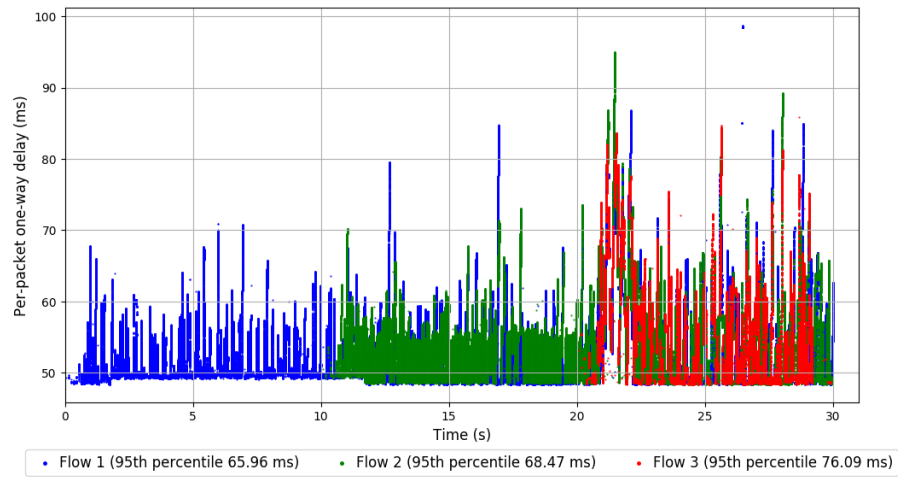
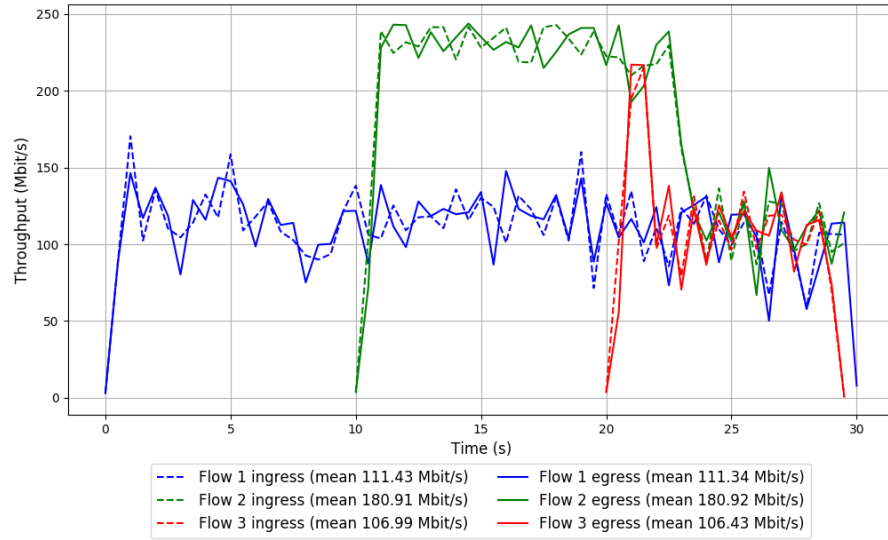
-- Flow 3:

Average throughput: 106.43 Mbit/s

95th percentile per-packet one-way delay: 76.088 ms

Loss rate: 0.57%

Run 10: Report of TCP BBR — Data Link

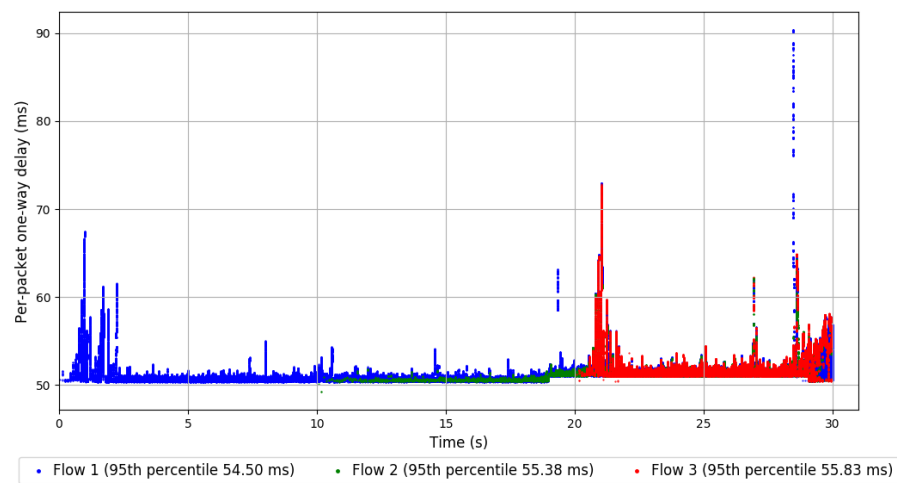
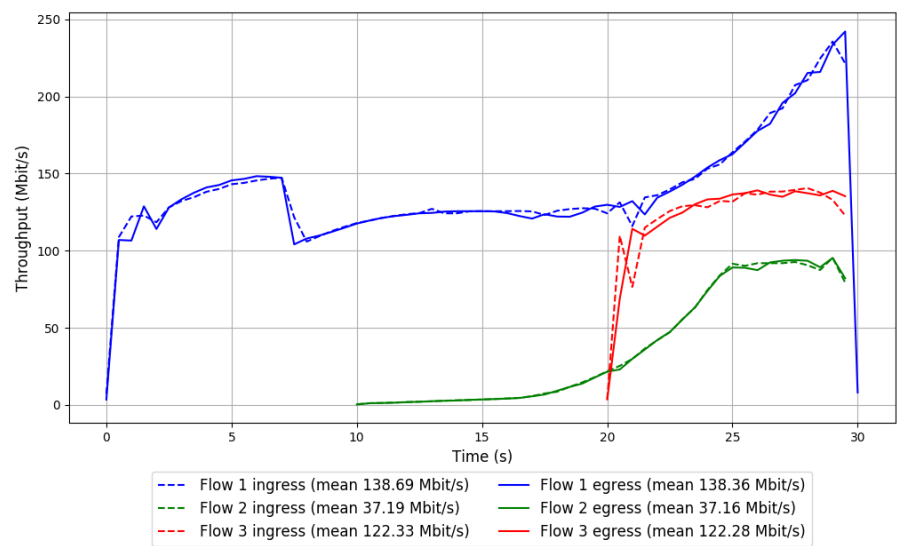


```
Run 1: Statistics of TCP Cubic

Start at: 2017-12-20 23:33:04
End at: 2017-12-20 23:33:34

# Below is generated by plot.py at 2017-12-21 03:35:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 203.52 Mbit/s
95th percentile per-packet one-way delay: 54.977 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 138.36 Mbit/s
95th percentile per-packet one-way delay: 54.496 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 37.16 Mbit/s
95th percentile per-packet one-way delay: 55.377 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 122.28 Mbit/s
95th percentile per-packet one-way delay: 55.834 ms
Loss rate: 0.00%
```

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2017-12-20 23:46:08

End at: 2017-12-20 23:46:38

Below is generated by plot.py at 2017-12-21 03:35:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 118.44 Mbit/s

95th percentile per-packet one-way delay: 57.040 ms

Loss rate: 0.51%

-- Flow 1:

Average throughput: 30.70 Mbit/s

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

Loss rate: 0.23%

-- Flow 2:

Average throughput: 129.03 Mbit/s

95th percentile per-packet one-way delay: 57.396 ms

Loss rate: 0.62%

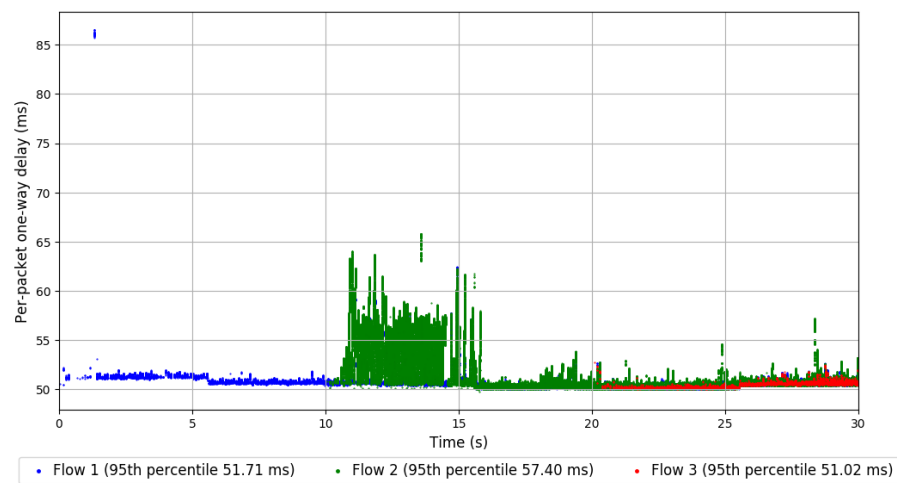
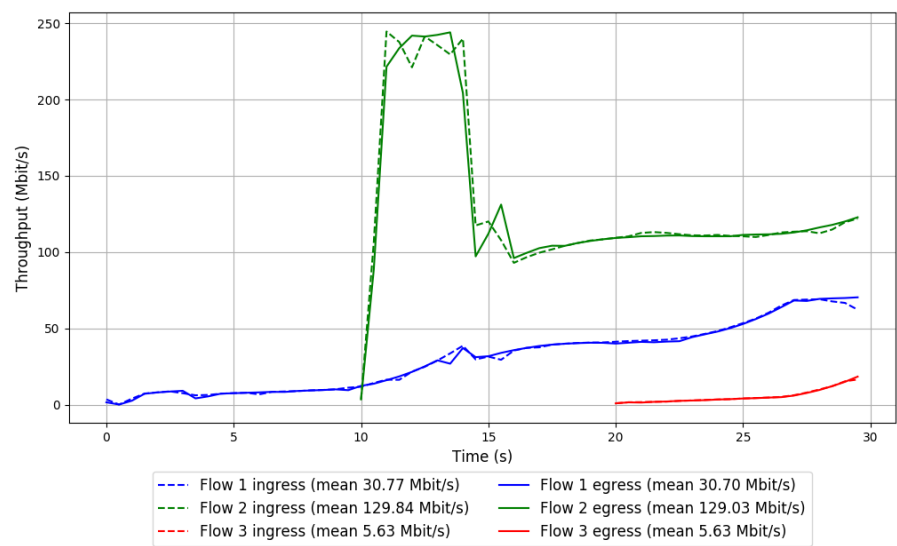
-- Flow 3:

Average throughput: 5.63 Mbit/s

95th percentile per-packet one-way delay: 51.022 ms

Loss rate: 0.04%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2017-12-20 23:59:05

End at: 2017-12-20 23:59:35

Below is generated by plot.py at 2017-12-21 03:36:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 283.51 Mbit/s

95th percentile per-packet one-way delay: 62.288 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 152.16 Mbit/s

95th percentile per-packet one-way delay: 60.641 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 136.82 Mbit/s

95th percentile per-packet one-way delay: 60.744 ms

Loss rate: 0.11%

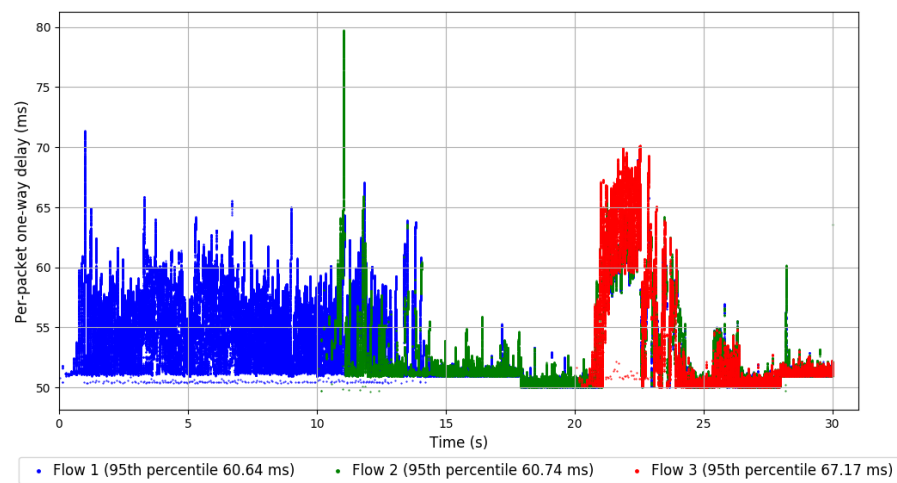
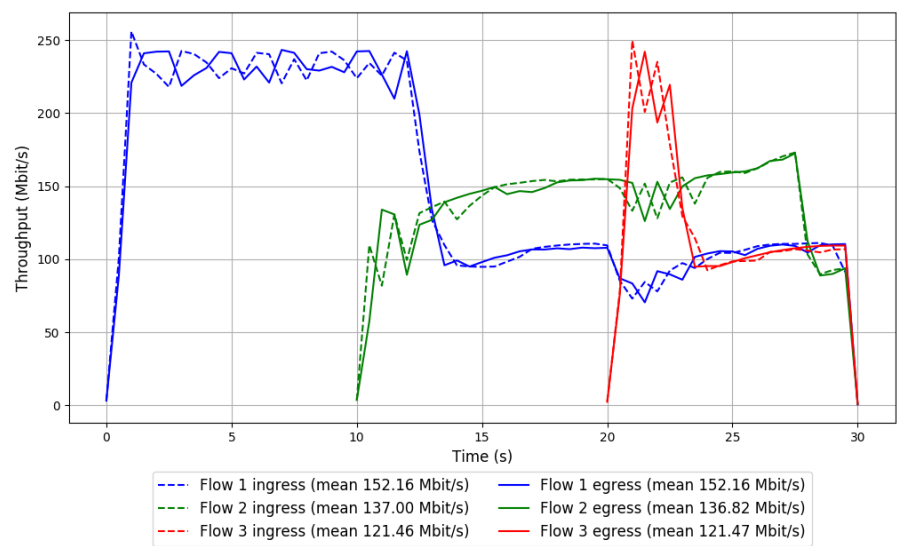
-- Flow 3:

Average throughput: 121.47 Mbit/s

95th percentile per-packet one-way delay: 67.175 ms

Loss rate: 0.00%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2017-12-21 00:11:57

End at: 2017-12-21 00:12:27

Below is generated by plot.py at 2017-12-21 03:36:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 239.70 Mbit/s

95th percentile per-packet one-way delay: 57.934 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 110.15 Mbit/s

95th percentile per-packet one-way delay: 56.739 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 123.14 Mbit/s

95th percentile per-packet one-way delay: 59.079 ms

Loss rate: 0.00%

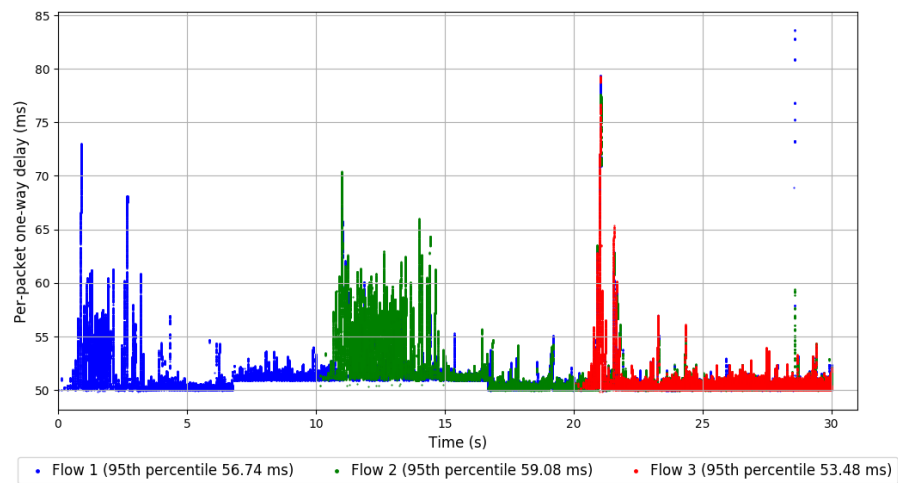
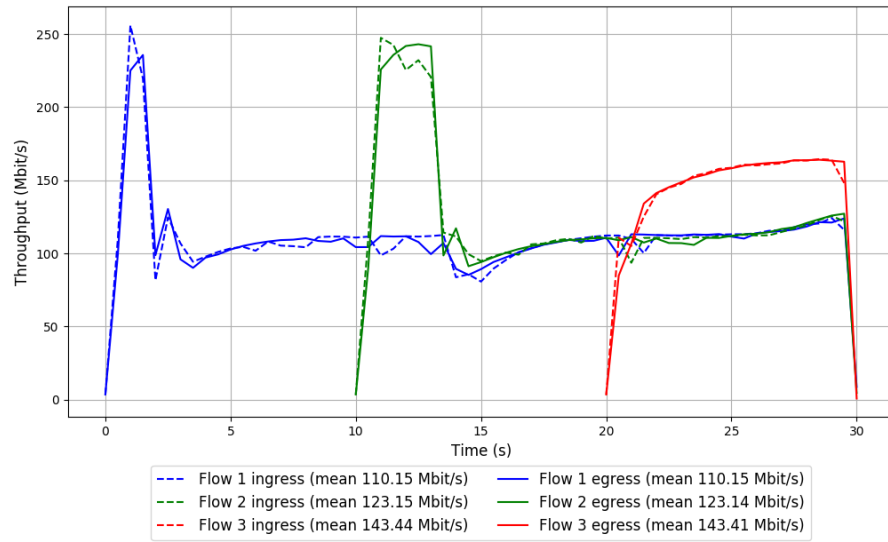
-- Flow 3:

Average throughput: 143.41 Mbit/s

95th percentile per-packet one-way delay: 53.484 ms

Loss rate: 0.00%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2017-12-21 00:25:14

End at: 2017-12-21 00:25:44

Below is generated by plot.py at 2017-12-21 03:36:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 242.03 Mbit/s

95th percentile per-packet one-way delay: 59.190 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 118.56 Mbit/s

95th percentile per-packet one-way delay: 59.208 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 122.52 Mbit/s

95th percentile per-packet one-way delay: 59.412 ms

Loss rate: 0.00%

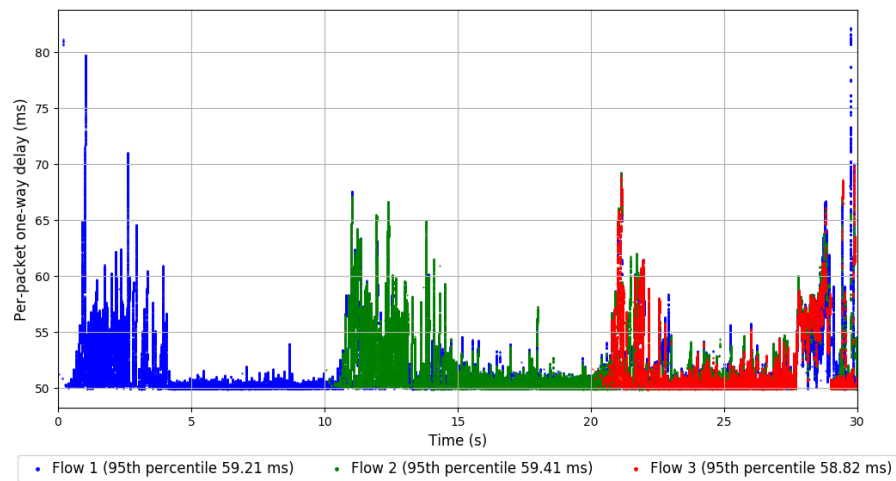
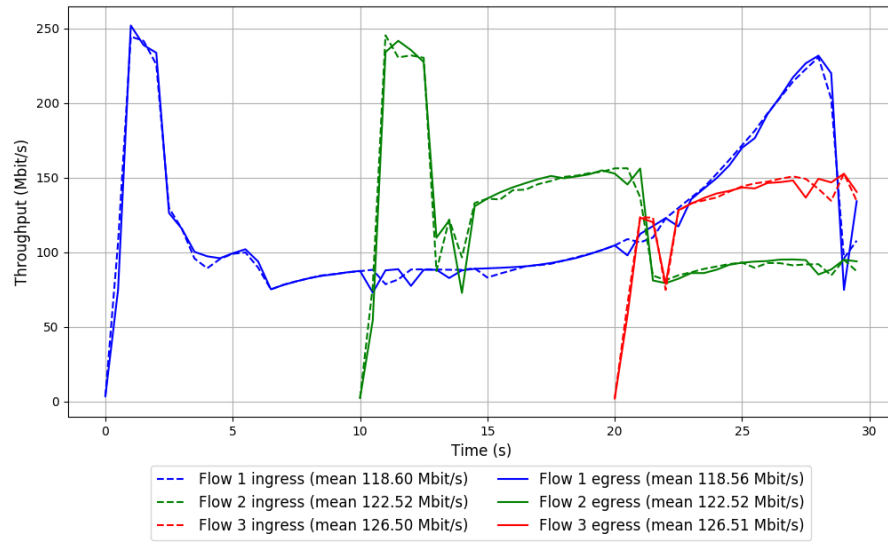
-- Flow 3:

Average throughput: 126.51 Mbit/s

95th percentile per-packet one-way delay: 58.817 ms

Loss rate: 0.00%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2017-12-21 00:38:04

End at: 2017-12-21 00:38:34

Below is generated by plot.py at 2017-12-21 03:37:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 262.29 Mbit/s

95th percentile per-packet one-way delay: 59.290 ms

Loss rate: 0.47%

-- Flow 1:

Average throughput: 107.57 Mbit/s

95th percentile per-packet one-way delay: 58.653 ms

Loss rate: 0.50%

-- Flow 2:

Average throughput: 126.62 Mbit/s

95th percentile per-packet one-way delay: 60.387 ms

Loss rate: 0.81%

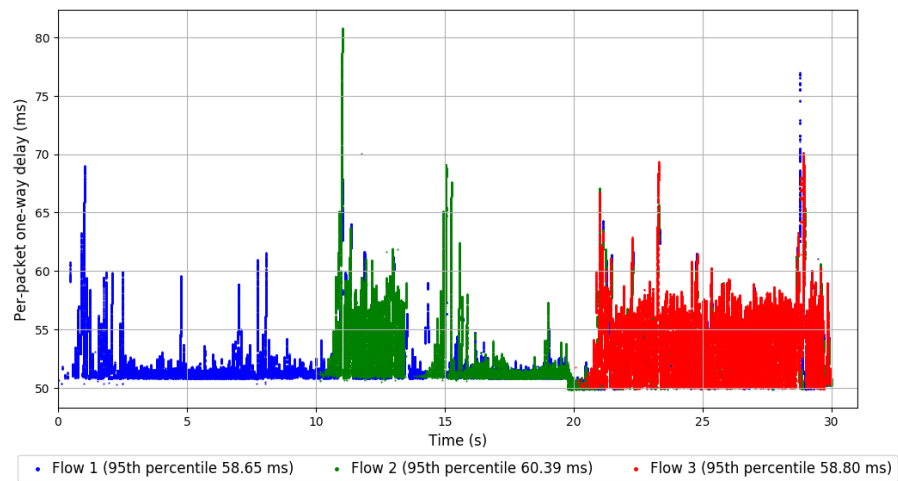
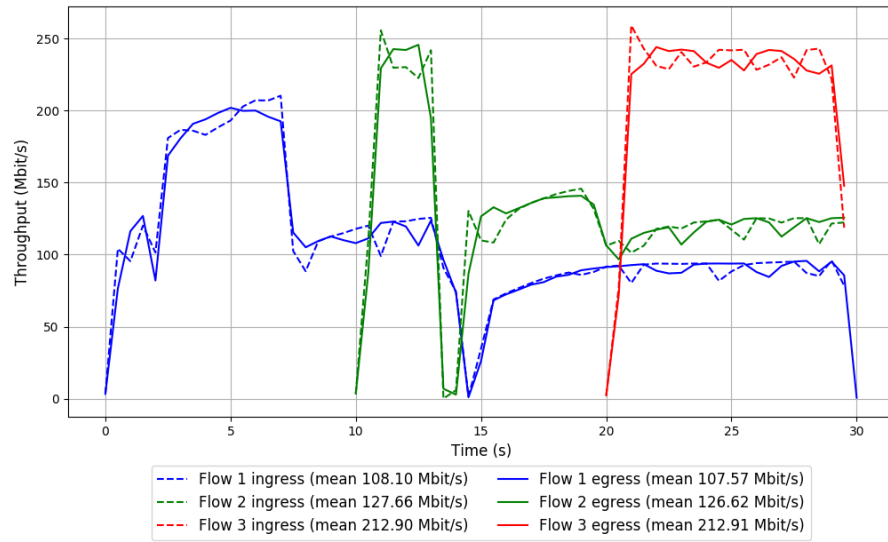
-- Flow 3:

Average throughput: 212.91 Mbit/s

95th percentile per-packet one-way delay: 58.800 ms

Loss rate: 0.00%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2017-12-21 00:51:43

End at: 2017-12-21 00:52:13

Below is generated by plot.py at 2017-12-21 03:38:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 261.90 Mbit/s

95th percentile per-packet one-way delay: 58.662 ms

Loss rate: 0.33%

-- Flow 1:

Average throughput: 97.96 Mbit/s

95th percentile per-packet one-way delay: 58.632 ms

Loss rate: 0.21%

-- Flow 2:

Average throughput: 195.33 Mbit/s

95th percentile per-packet one-way delay: 59.090 ms

Loss rate: 0.50%

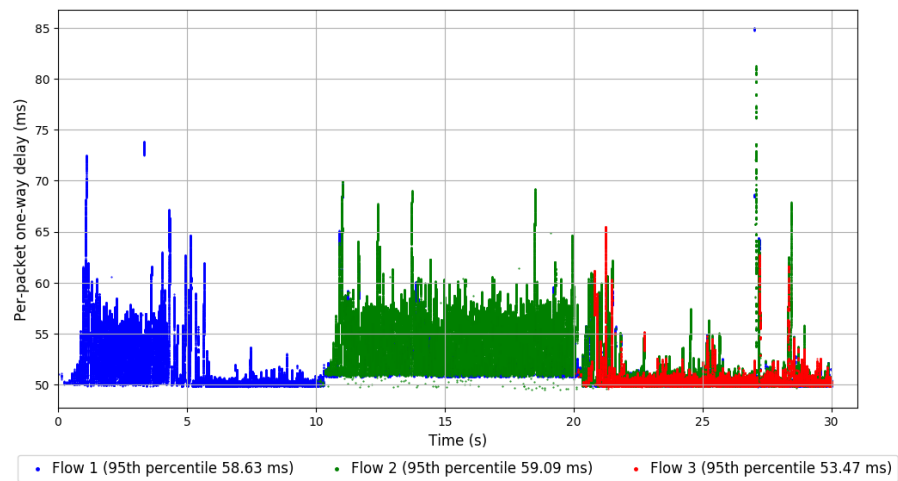
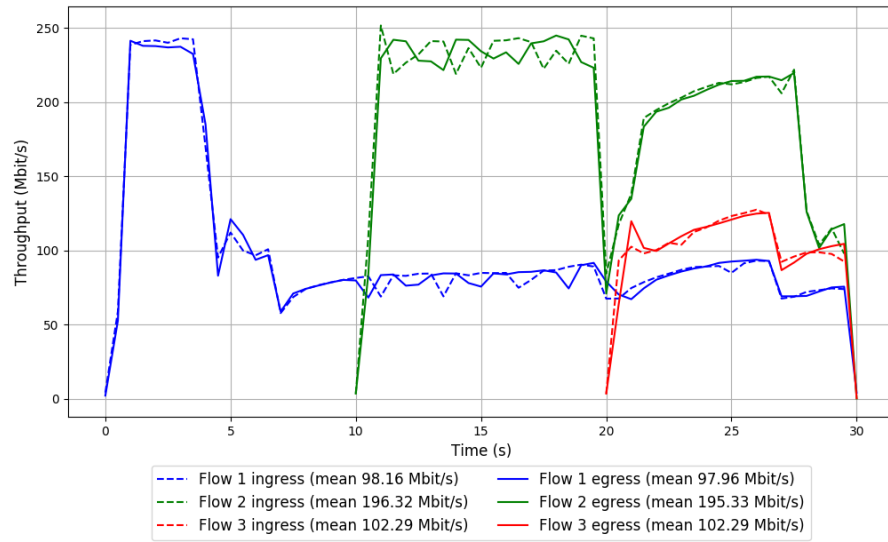
-- Flow 3:

Average throughput: 102.29 Mbit/s

95th percentile per-packet one-way delay: 53.465 ms

Loss rate: 0.01%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2017-12-21 01:04:35

End at: 2017-12-21 01:05:05

Below is generated by plot.py at 2017-12-21 03:38:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 221.72 Mbit/s

95th percentile per-packet one-way delay: 61.045 ms

Loss rate: 0.10%

-- Flow 1:

Average throughput: 105.31 Mbit/s

95th percentile per-packet one-way delay: 60.923 ms

Loss rate: 0.11%

-- Flow 2:

Average throughput: 85.33 Mbit/s

95th percentile per-packet one-way delay: 60.070 ms

Loss rate: 0.18%

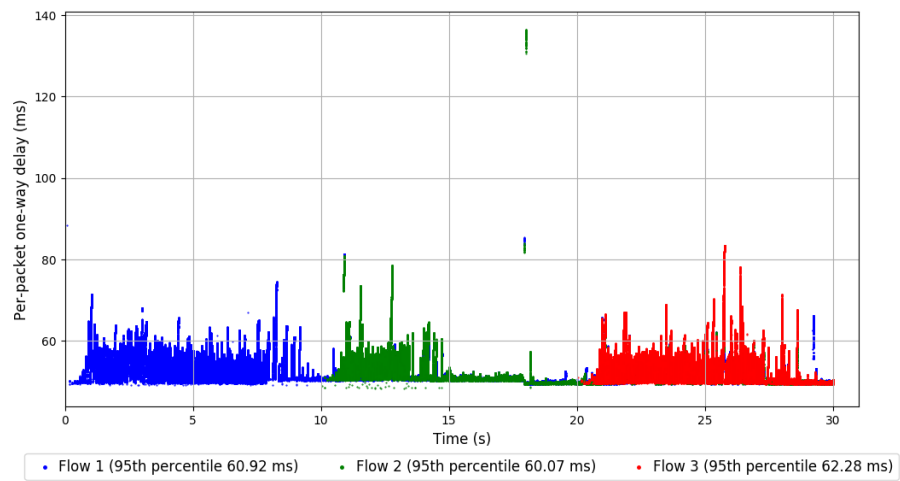
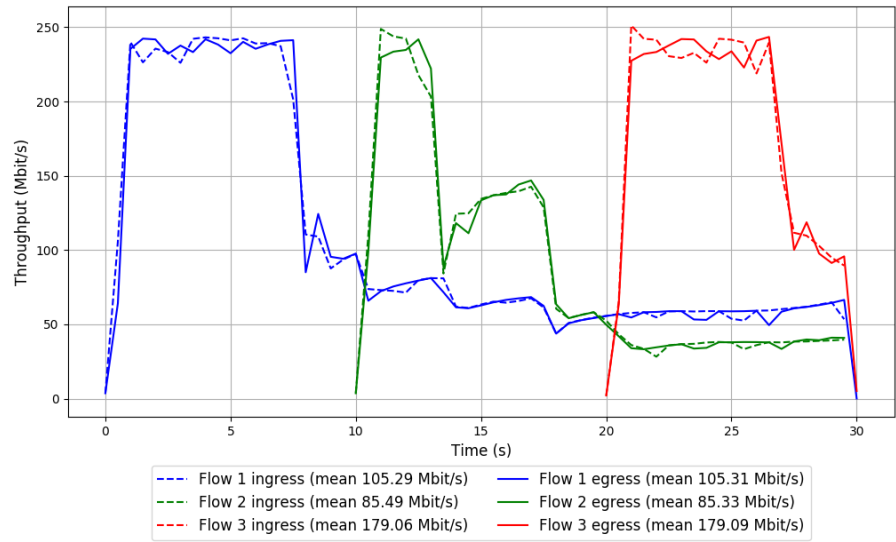
-- Flow 3:

Average throughput: 179.09 Mbit/s

95th percentile per-packet one-way delay: 62.280 ms

Loss rate: 0.00%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2017-12-21 01:17:42

End at: 2017-12-21 01:18:12

Below is generated by plot.py at 2017-12-21 03:38:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 200.70 Mbit/s

95th percentile per-packet one-way delay: 55.450 ms

Loss rate: 0.10%

-- Flow 1:

Average throughput: 99.58 Mbit/s

95th percentile per-packet one-way delay: 53.133 ms

Loss rate: 0.19%

-- Flow 2:

Average throughput: 96.04 Mbit/s

95th percentile per-packet one-way delay: 56.721 ms

Loss rate: 0.00%

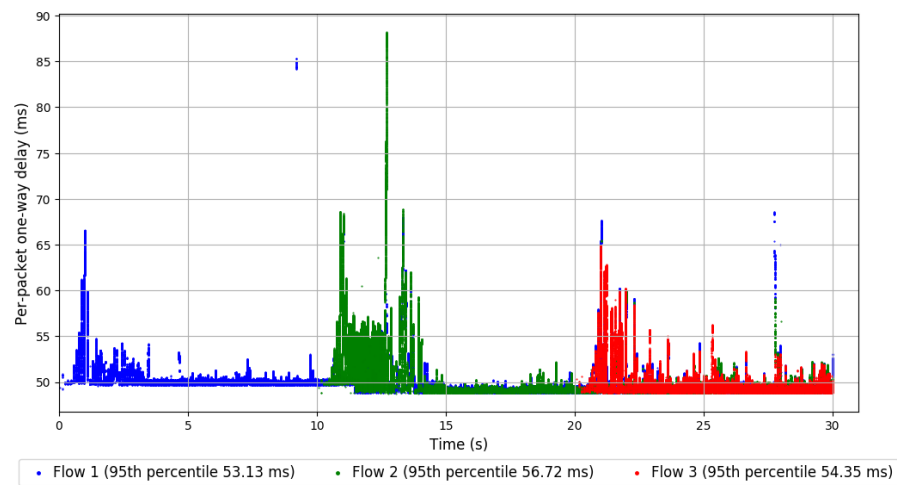
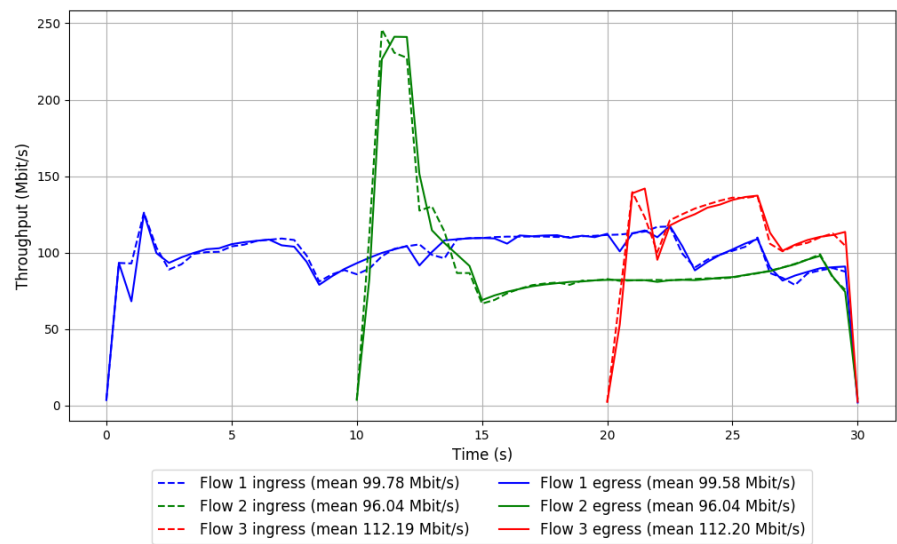
-- Flow 3:

Average throughput: 112.20 Mbit/s

95th percentile per-packet one-way delay: 54.351 ms

Loss rate: 0.00%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2017-12-21 01:30:15

End at: 2017-12-21 01:30:45

Below is generated by plot.py at 2017-12-21 03:40:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 269.08 Mbit/s

95th percentile per-packet one-way delay: 63.157 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 144.92 Mbit/s

95th percentile per-packet one-way delay: 62.747 ms

Loss rate: 0.07%

-- Flow 2:

Average throughput: 119.64 Mbit/s

95th percentile per-packet one-way delay: 61.960 ms

Loss rate: 0.00%

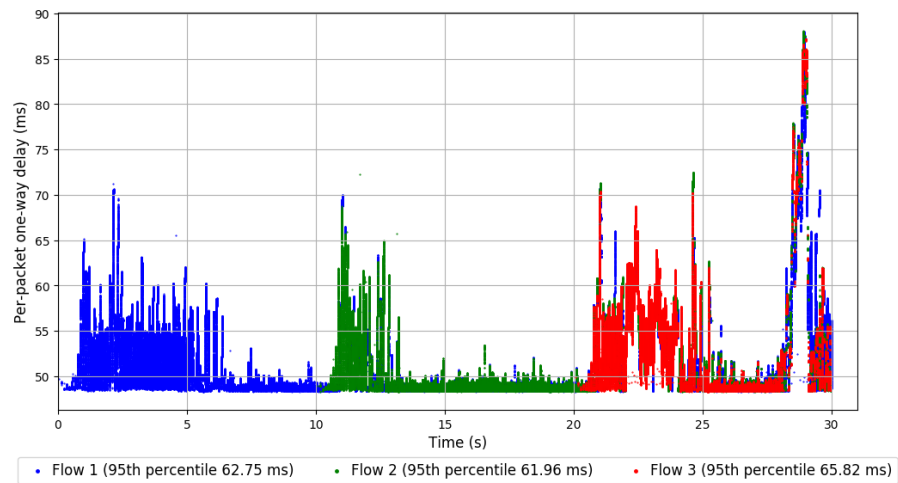
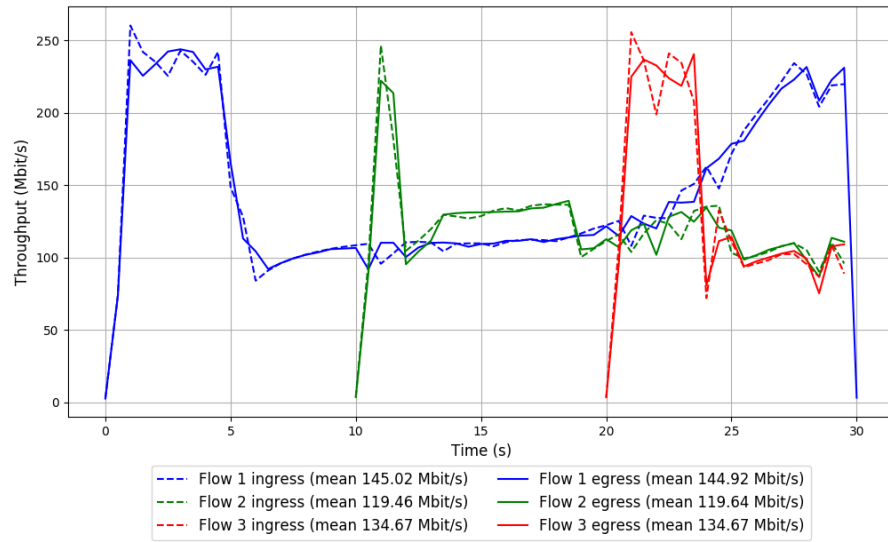
-- Flow 3:

Average throughput: 134.67 Mbit/s

95th percentile per-packet one-way delay: 65.820 ms

Loss rate: 0.01%

Run 10: Report of TCP Cubic — Data Link

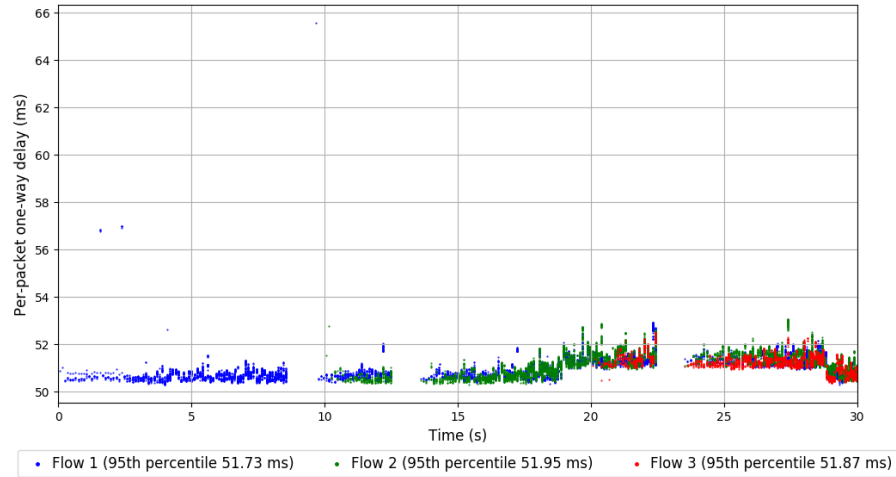
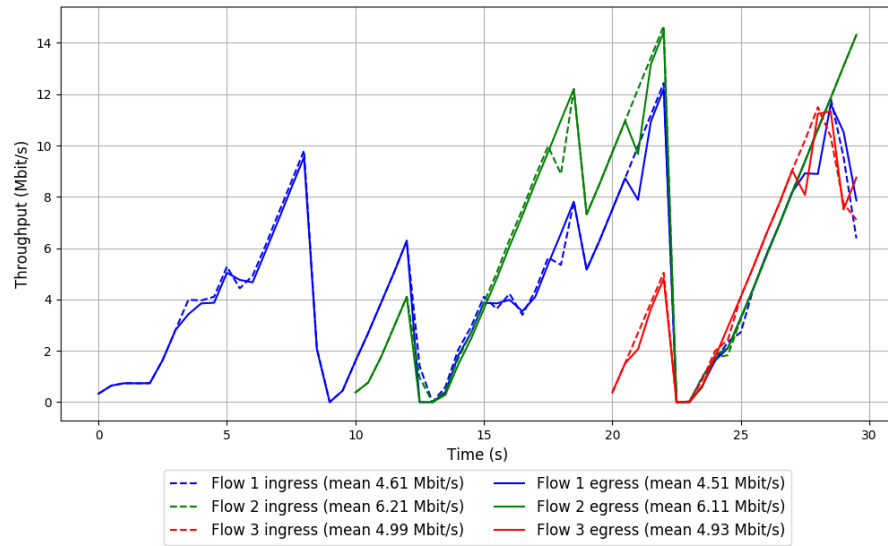


```
Run 1: Statistics of LEDBAT

Start at: 2017-12-20 23:27:54
End at: 2017-12-20 23:28:24

# Below is generated by plot.py at 2017-12-21 03:40:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.20 Mbit/s
95th percentile per-packet one-way delay: 51.857 ms
Loss rate: 1.81%
-- Flow 1:
Average throughput: 4.51 Mbit/s
95th percentile per-packet one-way delay: 51.733 ms
Loss rate: 2.24%
-- Flow 2:
Average throughput: 6.11 Mbit/s
95th percentile per-packet one-way delay: 51.948 ms
Loss rate: 1.61%
-- Flow 3:
Average throughput: 4.93 Mbit/s
95th percentile per-packet one-way delay: 51.868 ms
Loss rate: 1.12%
```


Run 1: Report of LEDBAT — Data Link

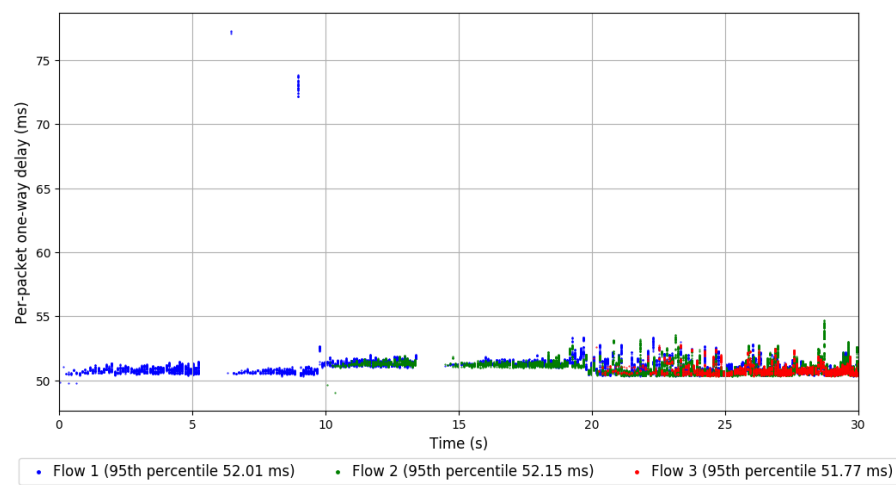
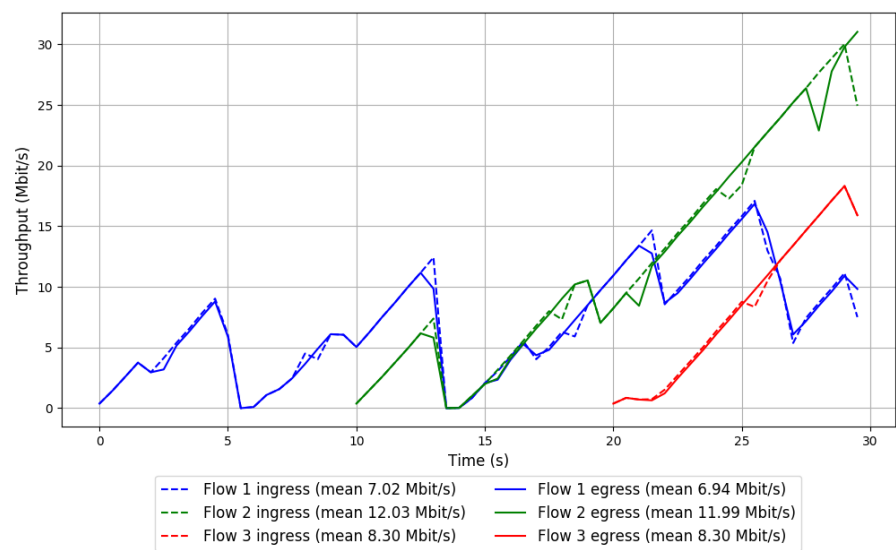


```
Run 2: Statistics of LEDBAT

Start at: 2017-12-20 23:40:34
End at: 2017-12-20 23:41:04

# Below is generated by plot.py at 2017-12-21 03:40:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.63 Mbit/s
95th percentile per-packet one-way delay: 52.033 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 6.94 Mbit/s
95th percentile per-packet one-way delay: 52.006 ms
Loss rate: 1.15%
-- Flow 2:
Average throughput: 11.99 Mbit/s
95th percentile per-packet one-way delay: 52.153 ms
Loss rate: 0.33%
-- Flow 3:
Average throughput: 8.30 Mbit/s
95th percentile per-packet one-way delay: 51.772 ms
Loss rate: 0.00%
```

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2017-12-20 23:53:29

End at: 2017-12-20 23:53:59

Below is generated by plot.py at 2017-12-21 03:40:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 13.63 Mbit/s

95th percentile per-packet one-way delay: 52.021 ms

Loss rate: 1.24%

-- Flow 1:

Average throughput: 7.44 Mbit/s

95th percentile per-packet one-way delay: 52.167 ms

Loss rate: 1.41%

-- Flow 2:

Average throughput: 7.15 Mbit/s

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

Loss rate: 0.48%

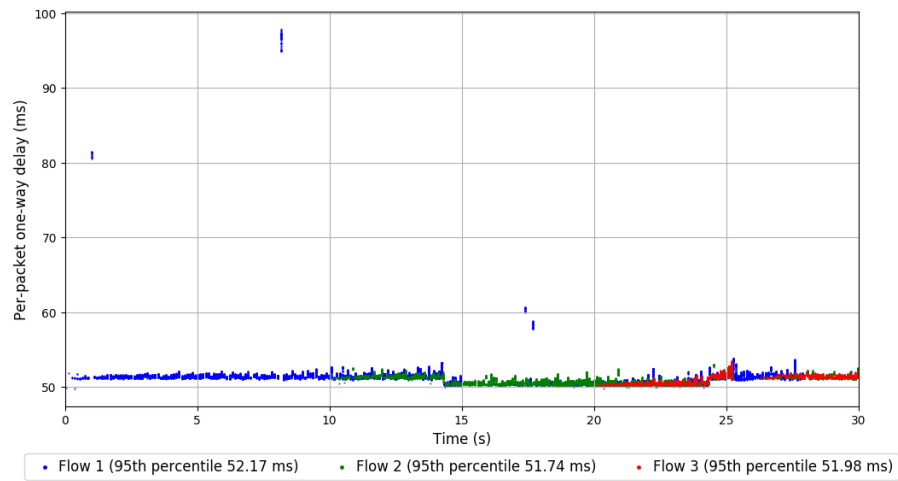
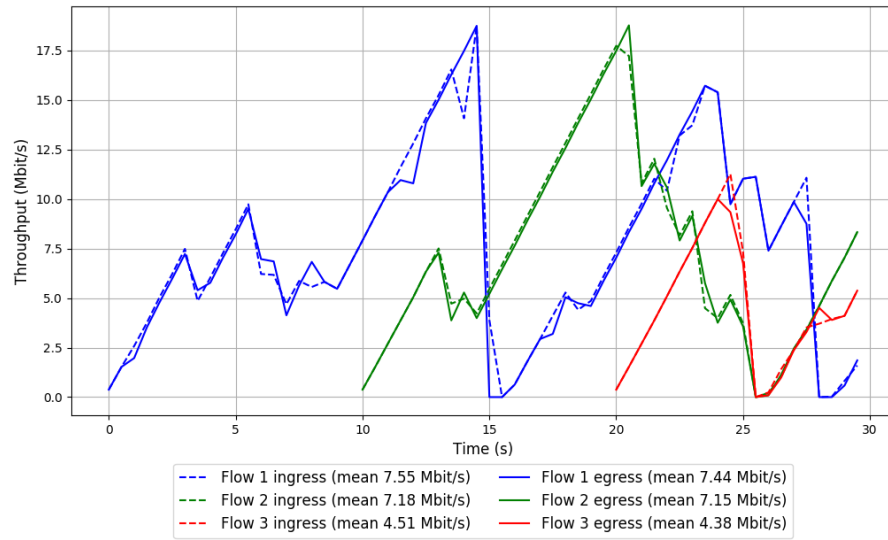
-- Flow 3:

Average throughput: 4.38 Mbit/s

95th percentile per-packet one-way delay: 51.984 ms

Loss rate: 2.83%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2017-12-21 00:06:27

End at: 2017-12-21 00:06:57

Below is generated by plot.py at 2017-12-21 03:40:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 30.41 Mbit/s

95th percentile per-packet one-way delay: 51.817 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 17.87 Mbit/s

95th percentile per-packet one-way delay: 51.995 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 10.84 Mbit/s

95th percentile per-packet one-way delay: 51.546 ms

Loss rate: 0.05%

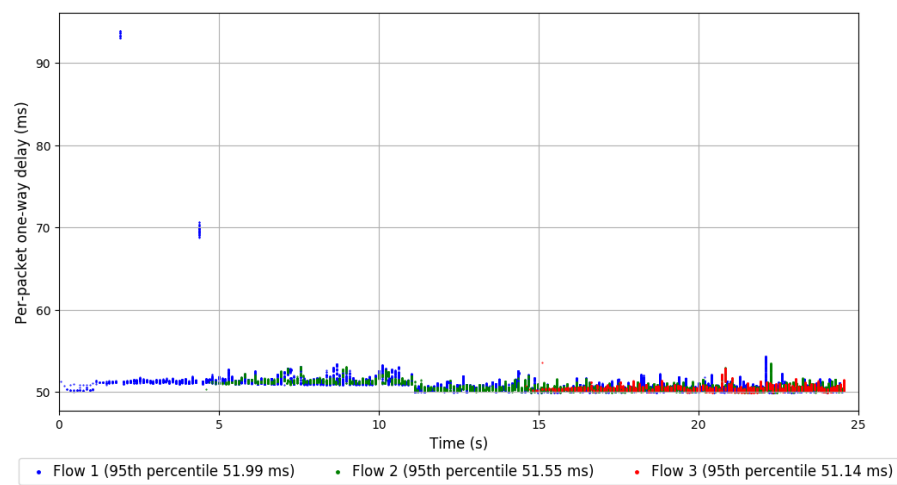
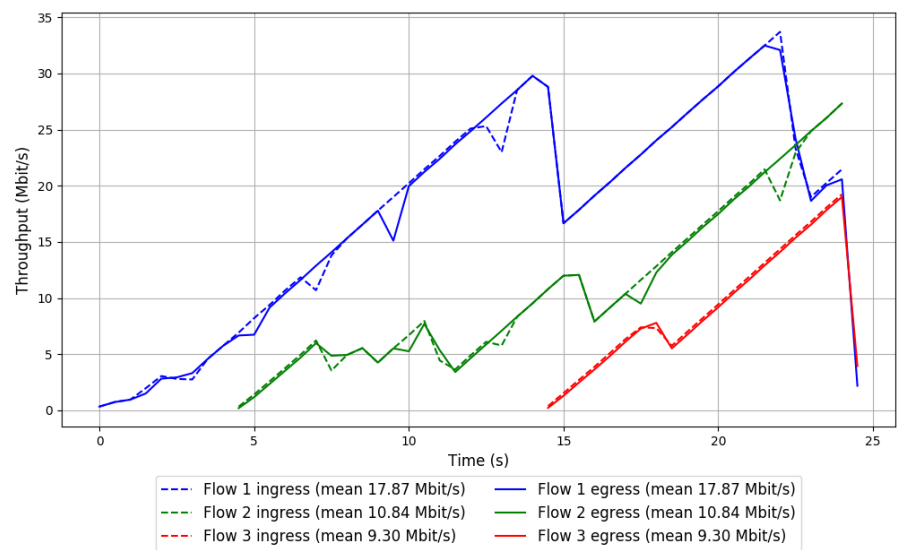
-- Flow 3:

Average throughput: 9.30 Mbit/s

95th percentile per-packet one-way delay: 51.139 ms

Loss rate: 0.00%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2017-12-21 00:19:24

End at: 2017-12-21 00:19:54

Below is generated by plot.py at 2017-12-21 03:40:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.59 Mbit/s

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

Loss rate: 0.03%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 251.938 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 5.53 Mbit/s

95th percentile per-packet one-way delay: 51.464 ms

Loss rate: 0.05%

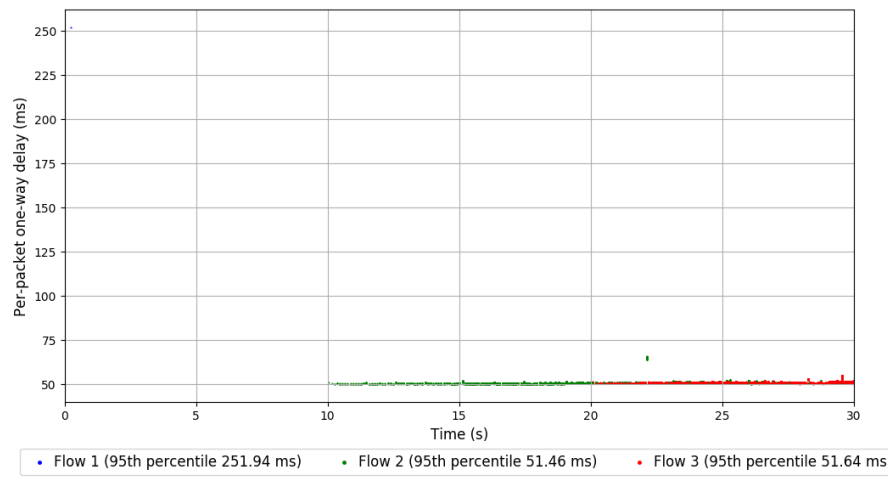
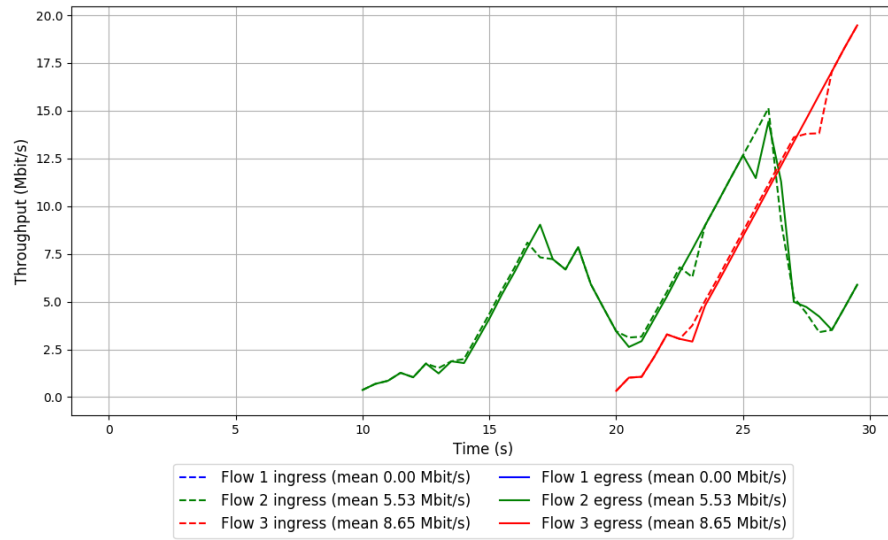
-- Flow 3:

Average throughput: 8.65 Mbit/s

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

Loss rate: 0.00%

Run 5: Report of LEDBAT — Data Link

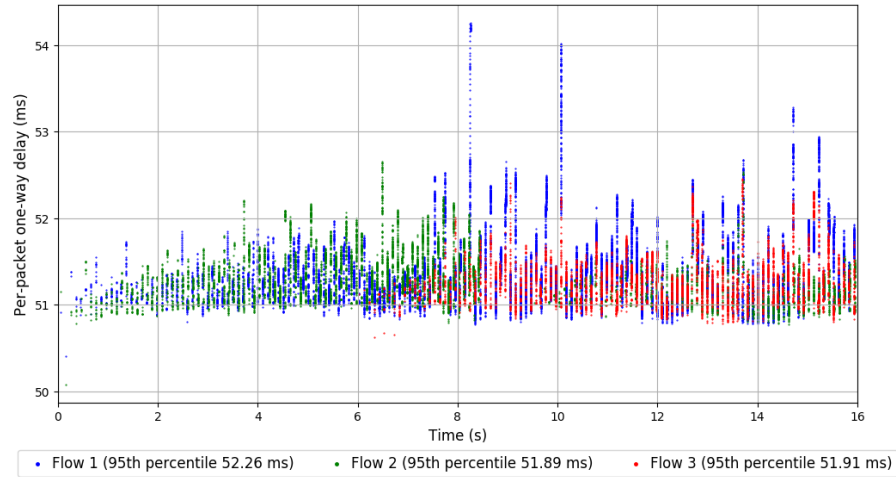
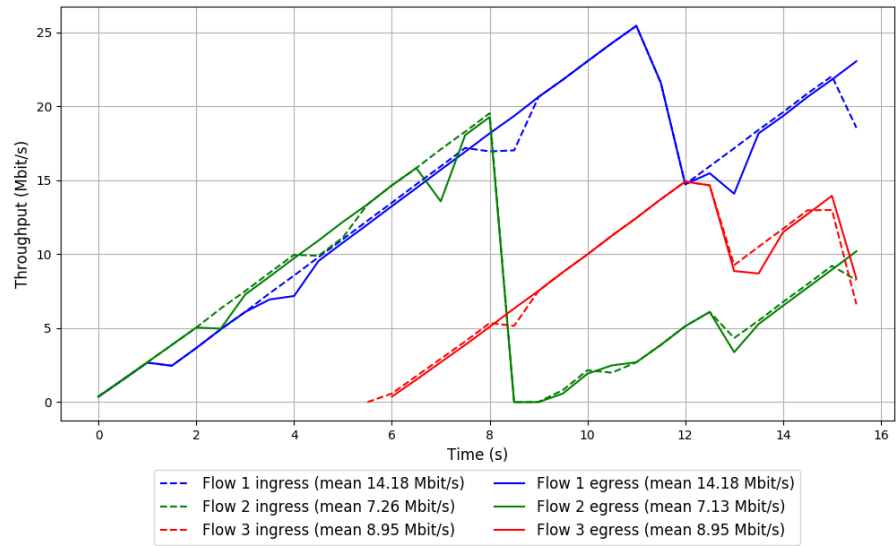


Run 6: Statistics of LEDBAT

Start at: 2017-12-21 00:32:29

End at: 2017-12-21 00:32:59

Run 6: Report of LEDBAT — Data Link

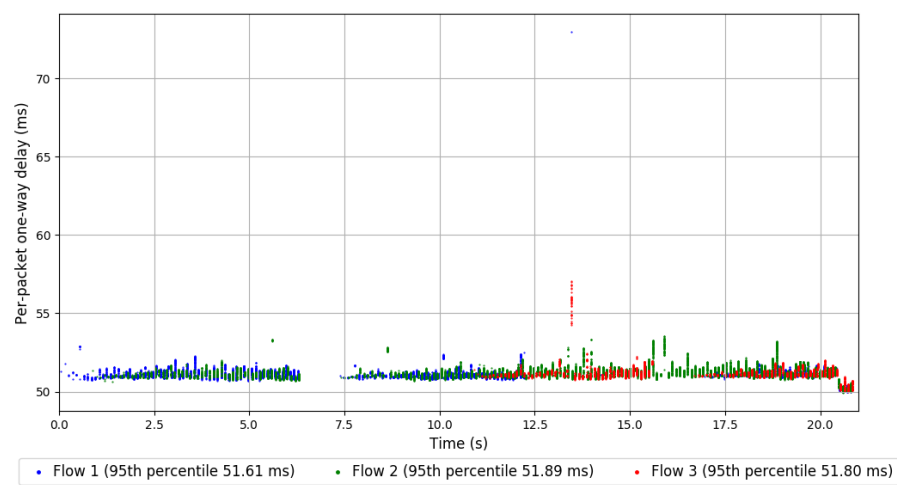
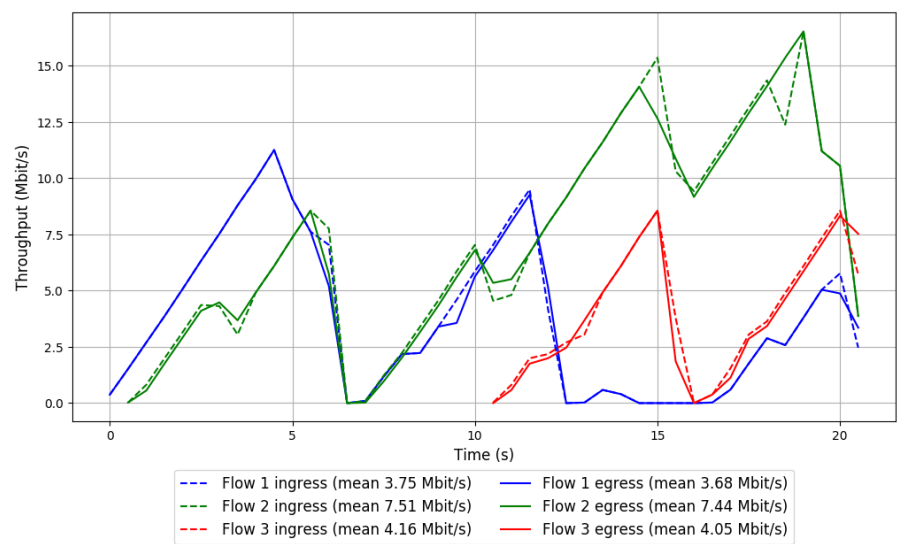


Run 7: Statistics of LEDBAT

Start at: 2017-12-21 00:45:24

End at: 2017-12-21 00:45:54

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2017-12-21 00:59:09

End at: 2017-12-21 00:59:39

Below is generated by plot.py at 2017-12-21 03:40:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.63 Mbit/s

95th percentile per-packet one-way delay: 51.483 ms

Loss rate: 2.15%

-- Flow 1:

Average throughput: 4.89 Mbit/s

95th percentile per-packet one-way delay: 51.345 ms

Loss rate: 2.53%

-- Flow 2:

Average throughput: 10.13 Mbit/s

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

Loss rate: 1.39%

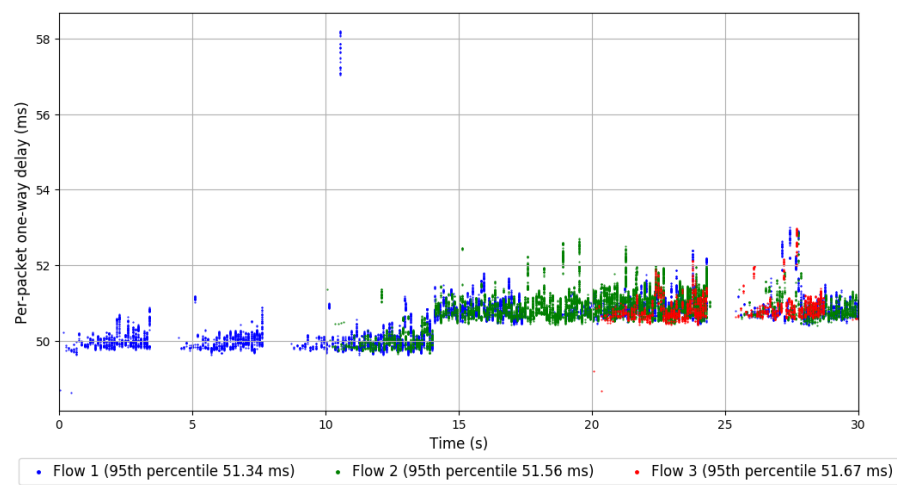
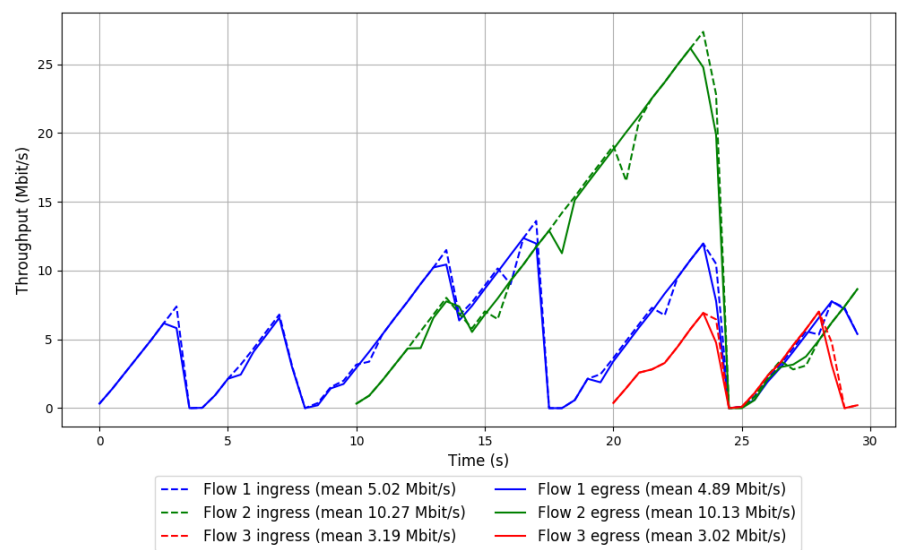
-- Flow 3:

Average throughput: 3.02 Mbit/s

95th percentile per-packet one-way delay: 51.673 ms

Loss rate: 5.27%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2017-12-21 01:12:04

End at: 2017-12-21 01:12:34

Below is generated by plot.py at 2017-12-21 03:40:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 10.21 Mbit/s

95th percentile per-packet one-way delay: 51.002 ms

Loss rate: 2.17%

-- Flow 1:

Average throughput: 6.10 Mbit/s

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

Loss rate: 1.55%

-- Flow 2:

Average throughput: 3.45 Mbit/s

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

Loss rate: 3.06%

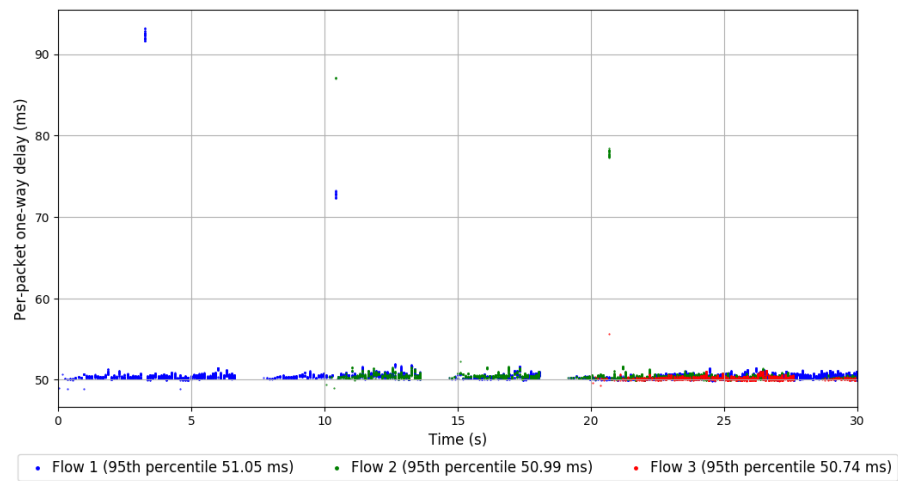
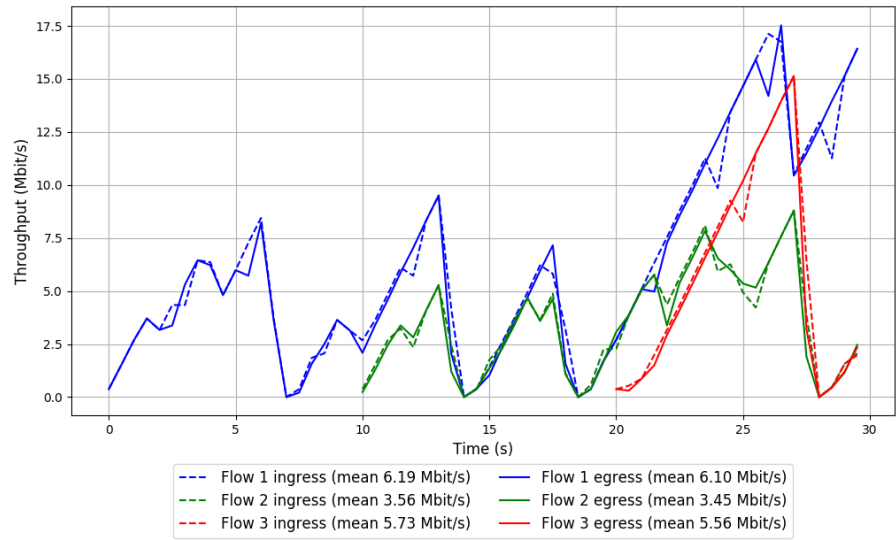
-- Flow 3:

Average throughput: 5.56 Mbit/s

95th percentile per-packet one-way delay: 50.745 ms

Loss rate: 3.08%

Run 9: Report of LEDBAT — Data Link

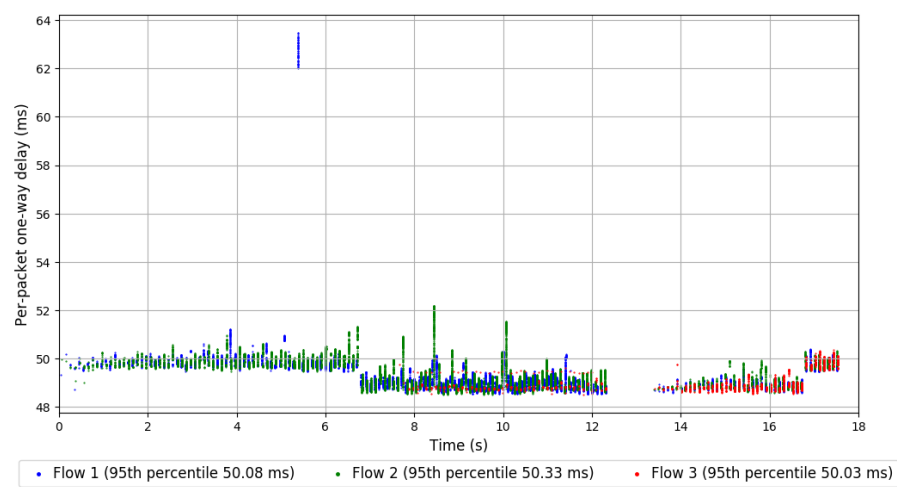
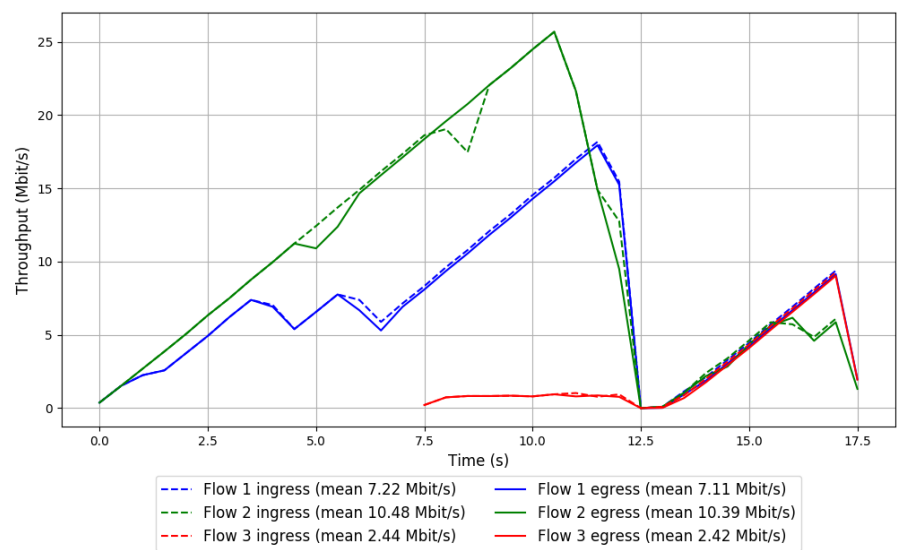


Run 10: Statistics of LEDBAT

Start at: 2017-12-21 01:24:54

End at: 2017-12-21 01:25:24

Run 10: Report of LEDBAT — Data Link

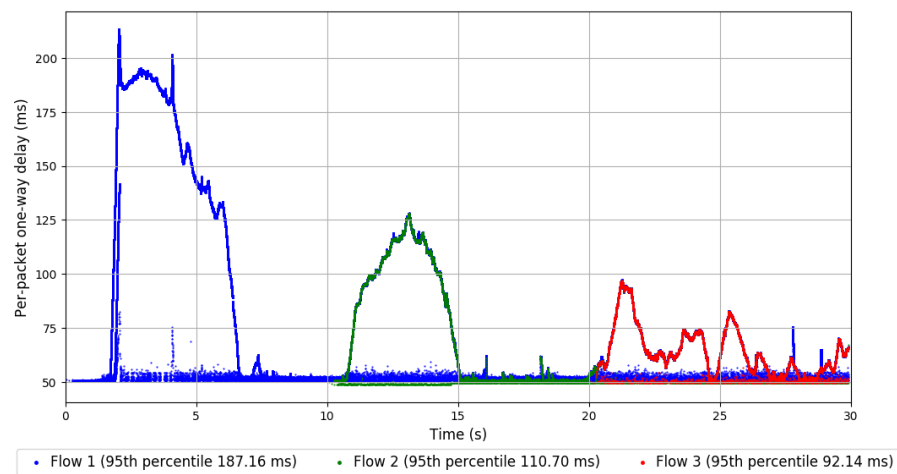
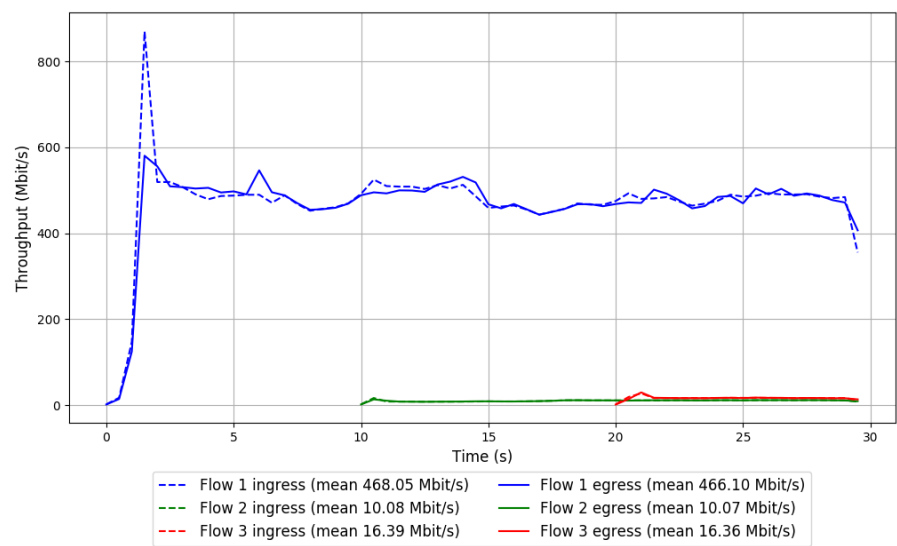


```
Run 1: Statistics of PCC

Start at: 2017-12-20 23:26:56
End at: 2017-12-20 23:27:26

# Below is generated by plot.py at 2017-12-21 03:45:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 478.17 Mbit/s
95th percentile per-packet one-way delay: 186.613 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 466.10 Mbit/s
95th percentile per-packet one-way delay: 187.162 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 10.07 Mbit/s
95th percentile per-packet one-way delay: 110.704 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 16.36 Mbit/s
95th percentile per-packet one-way delay: 92.143 ms
Loss rate: 0.16%
```

Run 1: Report of PCC — Data Link

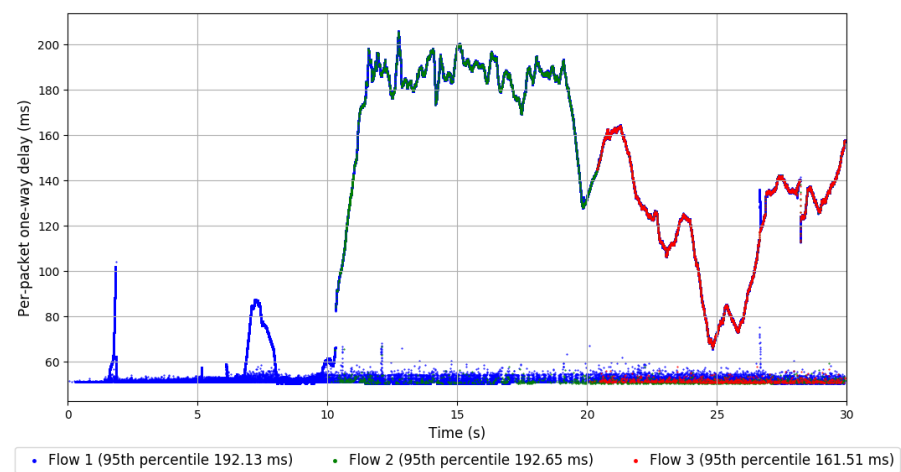
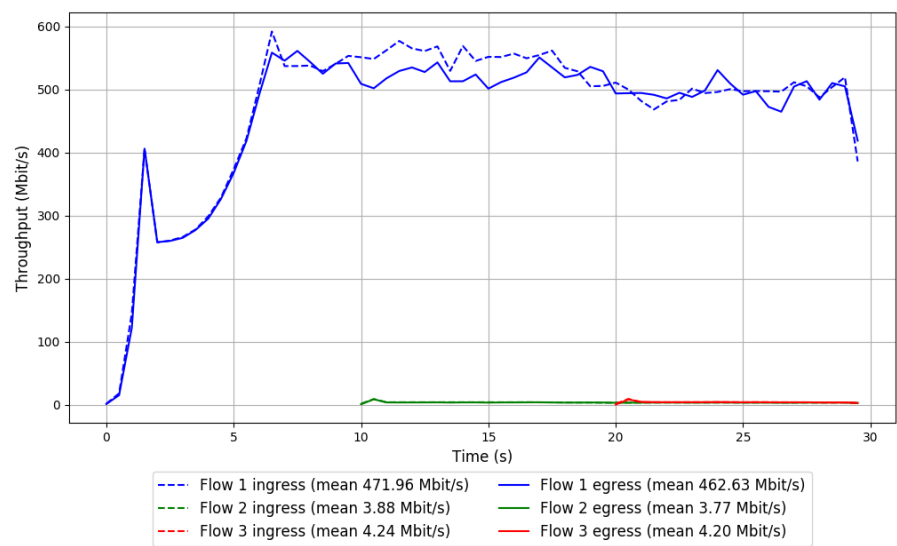


```
Run 2: Statistics of PCC

Start at: 2017-12-20 23:39:36
End at: 2017-12-20 23:40:06

# Below is generated by plot.py at 2017-12-21 03:45:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 466.52 Mbit/s
95th percentile per-packet one-way delay: 192.120 ms
Loss rate: 1.98%
-- Flow 1:
Average throughput: 462.63 Mbit/s
95th percentile per-packet one-way delay: 192.130 ms
Loss rate: 1.97%
-- Flow 2:
Average throughput: 3.77 Mbit/s
95th percentile per-packet one-way delay: 192.650 ms
Loss rate: 3.05%
-- Flow 3:
Average throughput: 4.20 Mbit/s
95th percentile per-packet one-way delay: 161.510 ms
Loss rate: 0.98%
```

Run 2: Report of PCC — Data Link

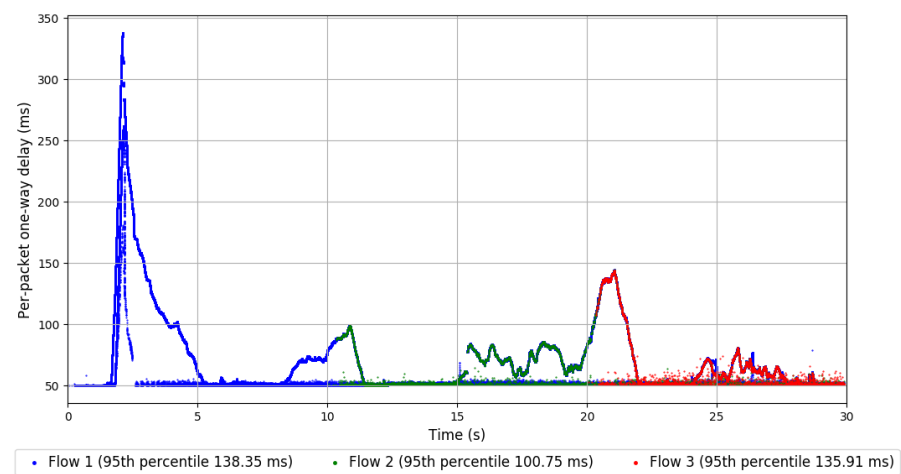
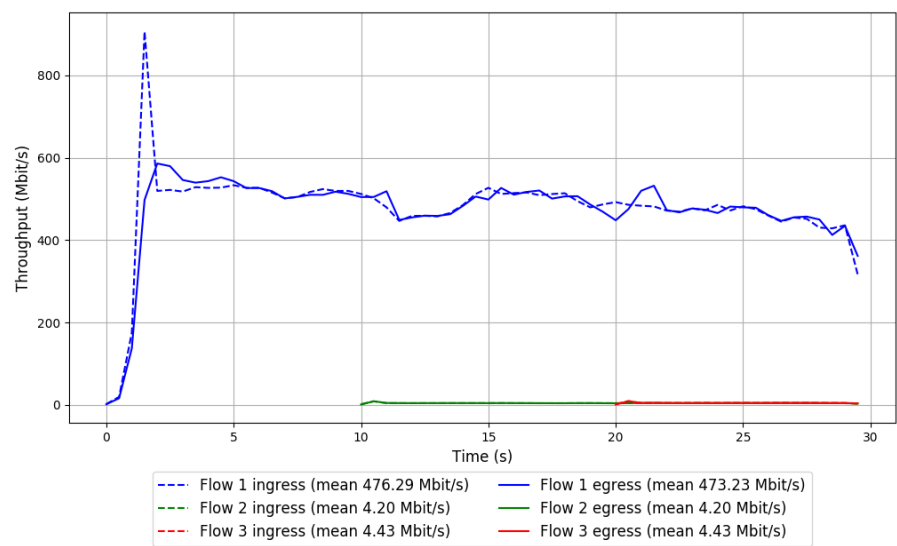


```
Run 3: Statistics of PCC

Start at: 2017-12-20 23:52:31
End at: 2017-12-20 23:53:01

# Below is generated by plot.py at 2017-12-21 03:45:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 477.48 Mbit/s
95th percentile per-packet one-way delay: 138.121 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 473.23 Mbit/s
95th percentile per-packet one-way delay: 138.347 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 4.20 Mbit/s
95th percentile per-packet one-way delay: 100.745 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.43 Mbit/s
95th percentile per-packet one-way delay: 135.912 ms
Loss rate: 0.00%
```


Run 3: Report of PCC — Data Link



Run 4: Statistics of PCC

Start at: 2017-12-21 00:05:29

End at: 2017-12-21 00:05:59

Below is generated by plot.py at 2017-12-21 03:45:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 478.41 Mbit/s

95th percentile per-packet one-way delay: 171.752 ms

Loss rate: 0.33%

-- Flow 1:

Average throughput: 463.75 Mbit/s

95th percentile per-packet one-way delay: 172.101 ms

Loss rate: 0.34%

-- Flow 2:

Average throughput: 5.59 Mbit/s

95th percentile per-packet one-way delay: 156.822 ms

Loss rate: 0.00%

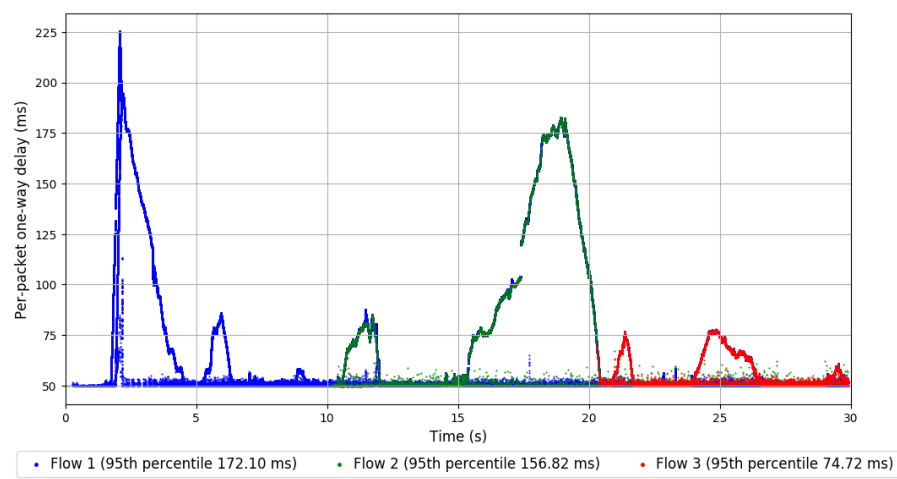
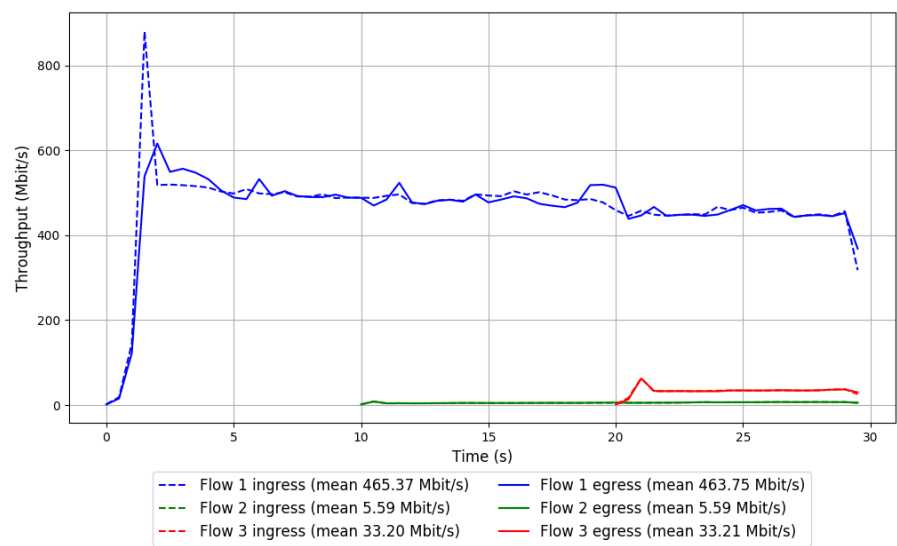
-- Flow 3:

Average throughput: 33.21 Mbit/s

95th percentile per-packet one-way delay: 74.716 ms

Loss rate: 0.00%

Run 4: Report of PCC — Data Link



Run 5: Statistics of PCC

Start at: 2017-12-21 00:18:26

End at: 2017-12-21 00:18:56

Below is generated by plot.py at 2017-12-21 03:46:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 472.99 Mbit/s

95th percentile per-packet one-way delay: 187.889 ms

Loss rate: 0.57%

-- Flow 1:

Average throughput: 417.71 Mbit/s

95th percentile per-packet one-way delay: 188.264 ms

Loss rate: 0.63%

-- Flow 2:

Average throughput: 74.64 Mbit/s

95th percentile per-packet one-way delay: 184.660 ms

Loss rate: 0.16%

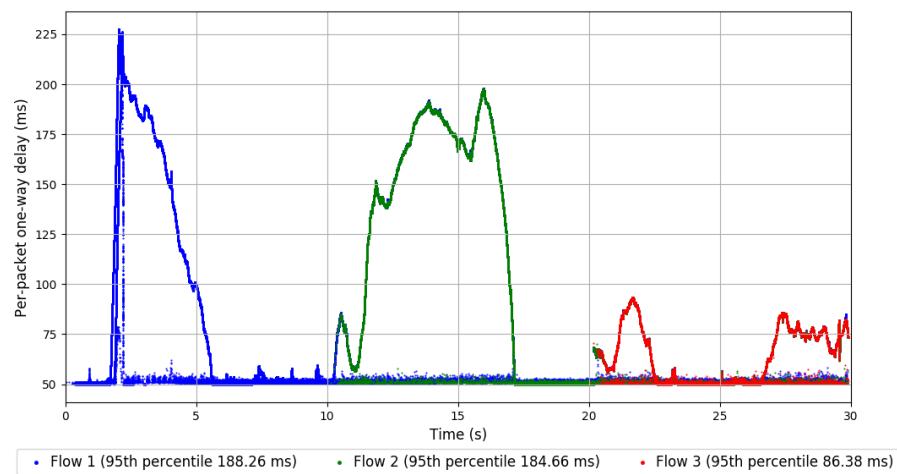
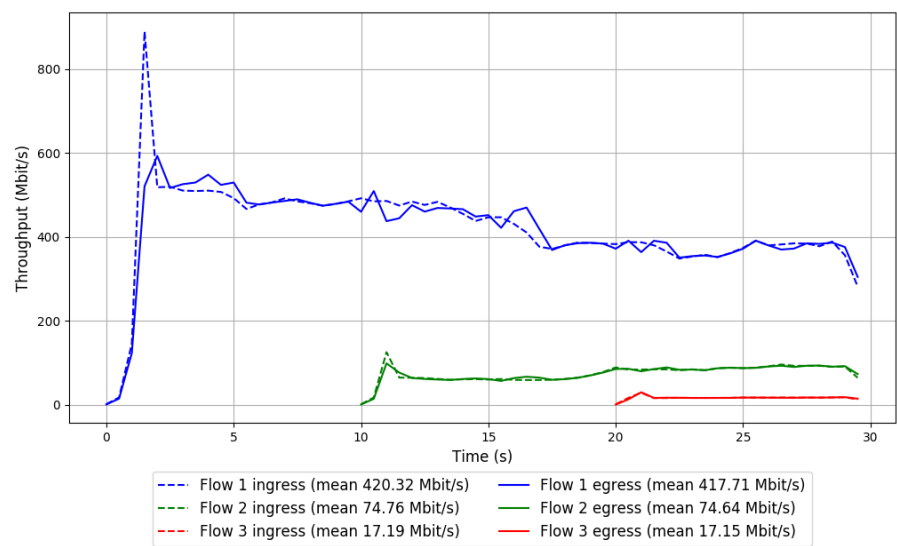
-- Flow 3:

Average throughput: 17.15 Mbit/s

95th percentile per-packet one-way delay: 86.380 ms

Loss rate: 0.25%

Run 5: Report of PCC — Data Link



Run 6: Statistics of PCC

Start at: 2017-12-21 00:31:32

End at: 2017-12-21 00:32:02

Below is generated by plot.py at 2017-12-21 03:46:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 444.92 Mbit/s

95th percentile per-packet one-way delay: 203.309 ms

Loss rate: 1.49%

-- Flow 1:

Average throughput: 400.07 Mbit/s

95th percentile per-packet one-way delay: 203.551 ms

Loss rate: 1.61%

-- Flow 2:

Average throughput: 4.24 Mbit/s

95th percentile per-packet one-way delay: 203.385 ms

Loss rate: 2.38%

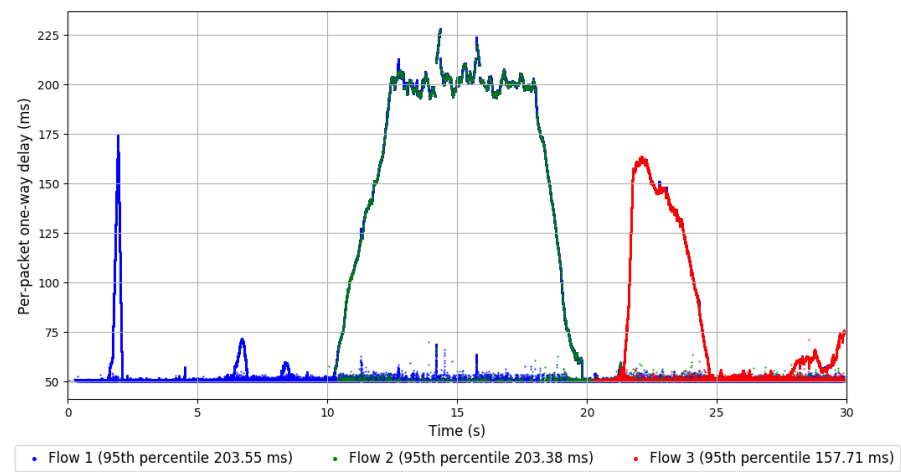
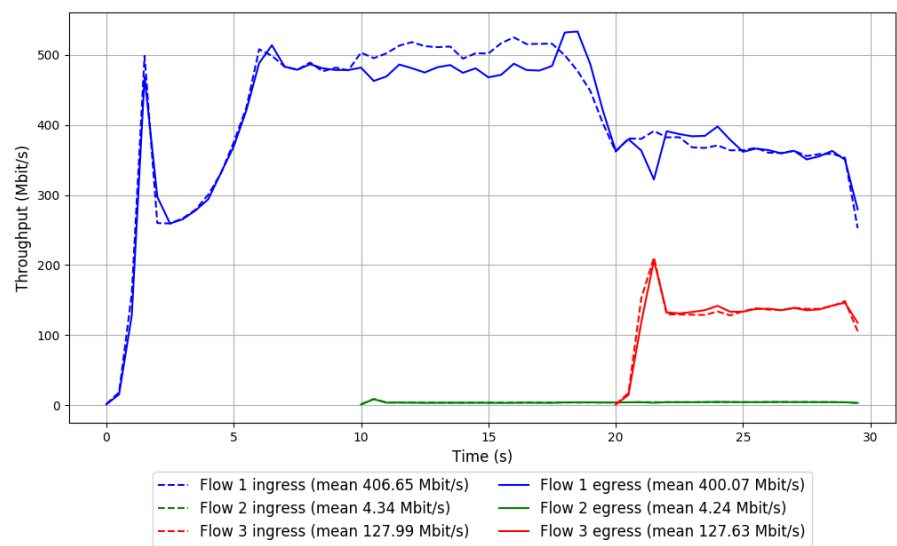
-- Flow 3:

Average throughput: 127.63 Mbit/s

95th percentile per-packet one-way delay: 157.709 ms

Loss rate: 0.27%

Run 6: Report of PCC — Data Link



Run 7: Statistics of PCC

Start at: 2017-12-21 00:44:26

End at: 2017-12-21 00:44:56

Below is generated by plot.py at 2017-12-21 03:47:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 468.96 Mbit/s

95th percentile per-packet one-way delay: 174.695 ms

Loss rate: 0.37%

-- Flow 1:

Average throughput: 425.86 Mbit/s

95th percentile per-packet one-way delay: 174.983 ms

Loss rate: 0.41%

-- Flow 2:

Average throughput: 31.75 Mbit/s

95th percentile per-packet one-way delay: 118.020 ms

Loss rate: 0.00%

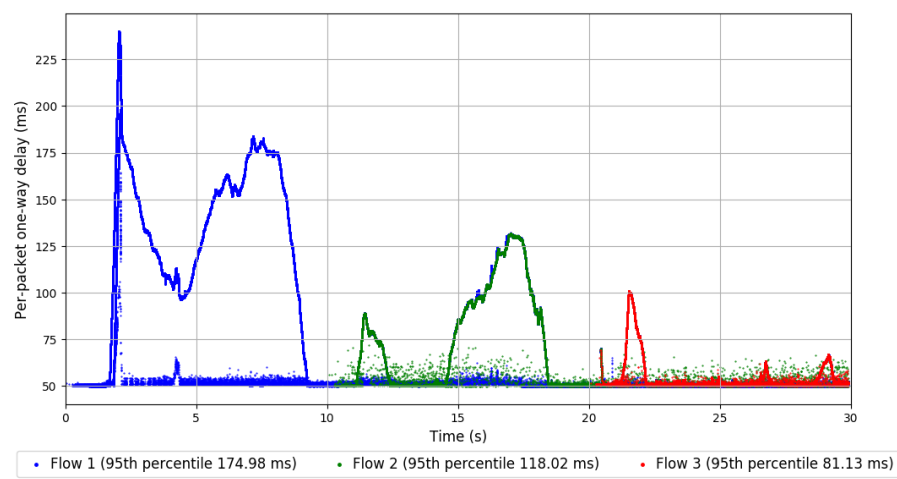
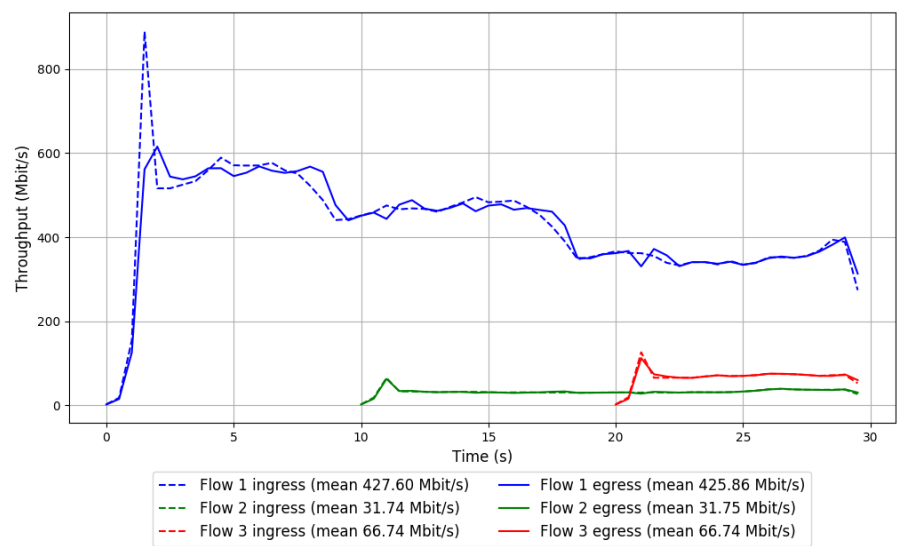
-- Flow 3:

Average throughput: 66.74 Mbit/s

95th percentile per-packet one-way delay: 81.133 ms

Loss rate: 0.00%

Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2017-12-21 00:58:14

End at: 2017-12-21 00:58:44

Below is generated by plot.py at 2017-12-21 03:48:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 426.15 Mbit/s

95th percentile per-packet one-way delay: 128.615 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 415.30 Mbit/s

95th percentile per-packet one-way delay: 128.920 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 8.48 Mbit/s

95th percentile per-packet one-way delay: 129.014 ms

Loss rate: 0.01%

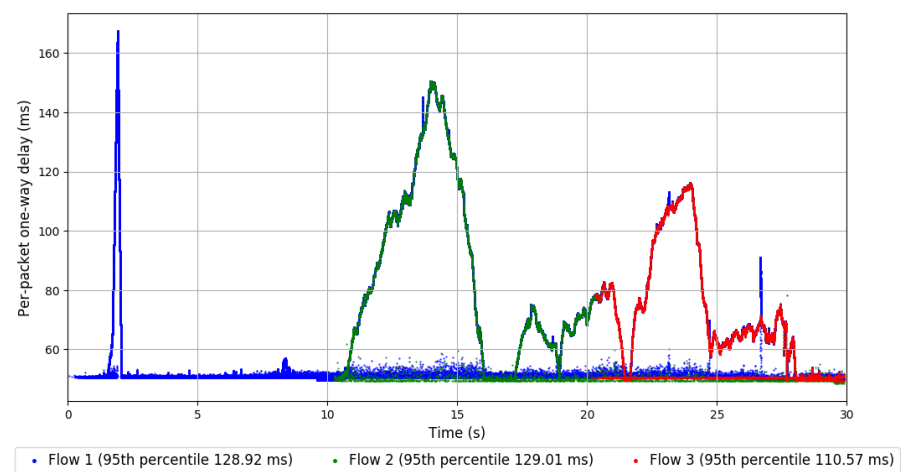
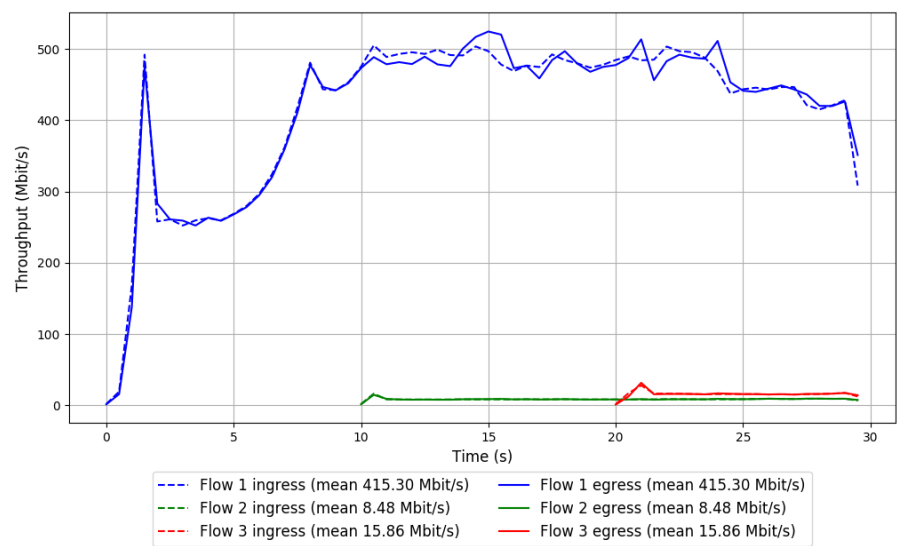
-- Flow 3:

Average throughput: 15.86 Mbit/s

95th percentile per-packet one-way delay: 110.572 ms

Loss rate: 0.00%

Run 8: Report of PCC — Data Link



Run 9: Statistics of PCC

Start at: 2017-12-21 01:11:06

End at: 2017-12-21 01:11:36

Below is generated by plot.py at 2017-12-21 03:53:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 479.26 Mbit/s

95th percentile per-packet one-way delay: 203.879 ms

Loss rate: 3.14%

-- Flow 1:

Average throughput: 430.59 Mbit/s

95th percentile per-packet one-way delay: 203.888 ms

Loss rate: 3.11%

-- Flow 2:

Average throughput: 71.29 Mbit/s

95th percentile per-packet one-way delay: 203.792 ms

Loss rate: 3.38%

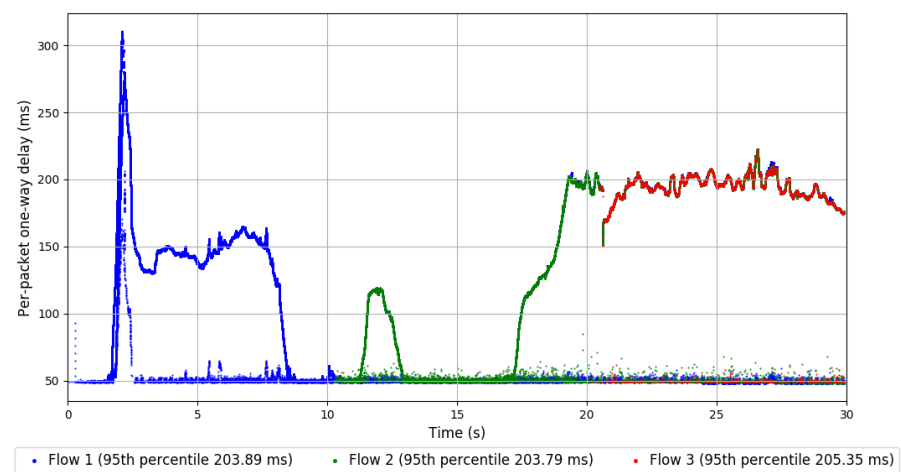
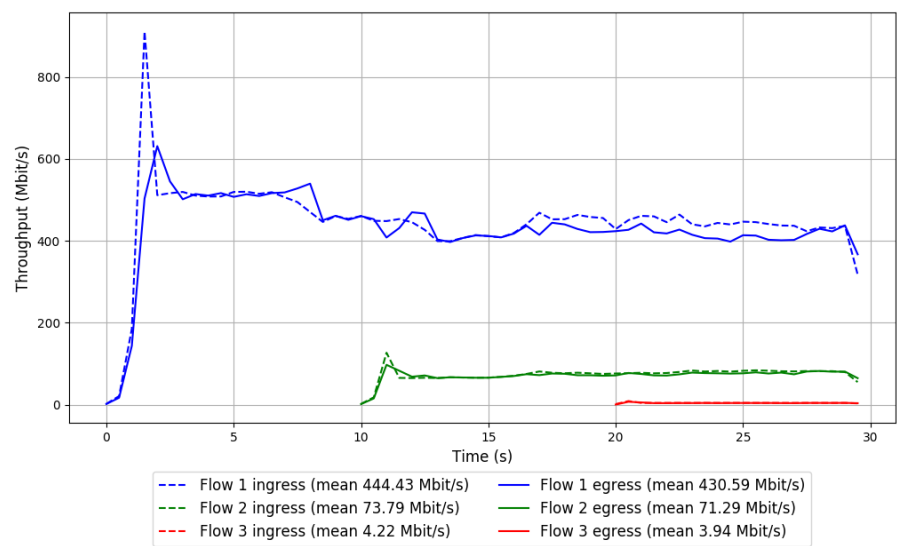
-- Flow 3:

Average throughput: 3.94 Mbit/s

95th percentile per-packet one-way delay: 205.351 ms

Loss rate: 6.63%

Run 9: Report of PCC — Data Link

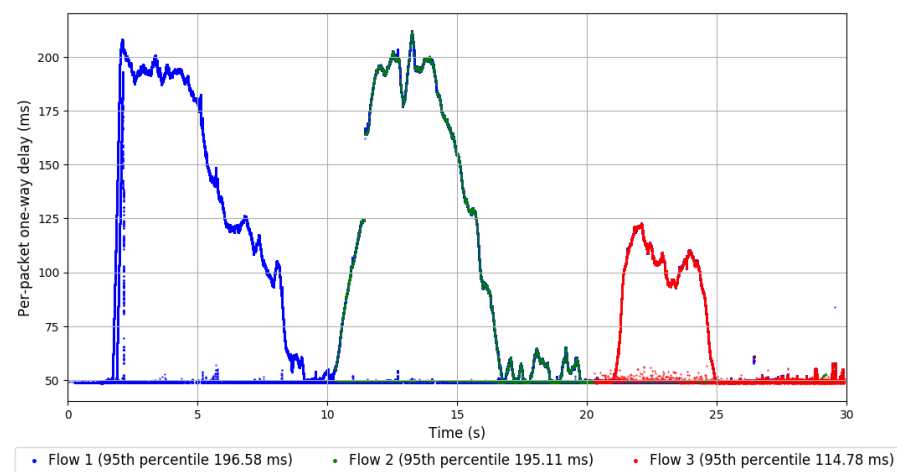
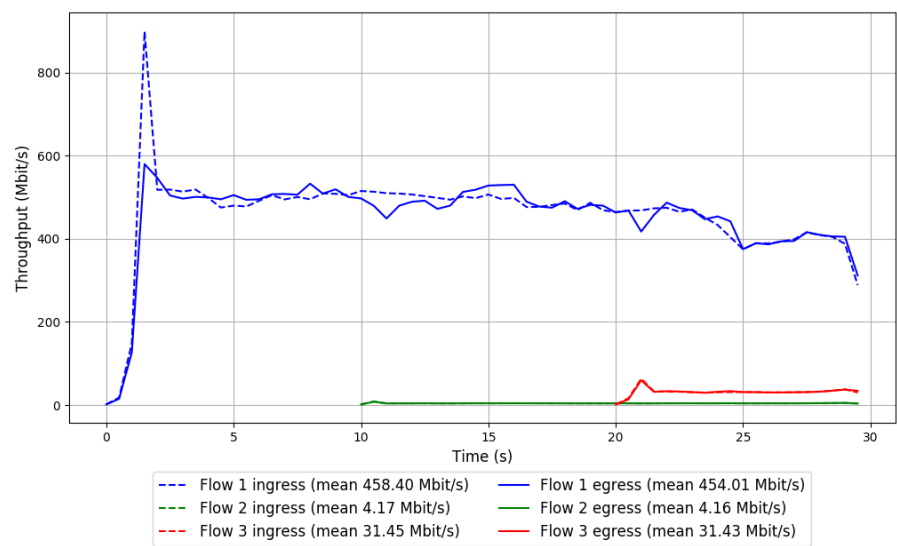


```
Run 10: Statistics of PCC

Start at: 2017-12-21 01:23:57
End at: 2017-12-21 01:24:27

# Below is generated by plot.py at 2017-12-21 03:53:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 467.12 Mbit/s
95th percentile per-packet one-way delay: 196.455 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 454.01 Mbit/s
95th percentile per-packet one-way delay: 196.580 ms
Loss rate: 0.96%
-- Flow 2:
Average throughput: 4.16 Mbit/s
95th percentile per-packet one-way delay: 195.113 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 31.43 Mbit/s
95th percentile per-packet one-way delay: 114.778 ms
Loss rate: 0.06%
```

Run 10: Report of PCC — Data Link

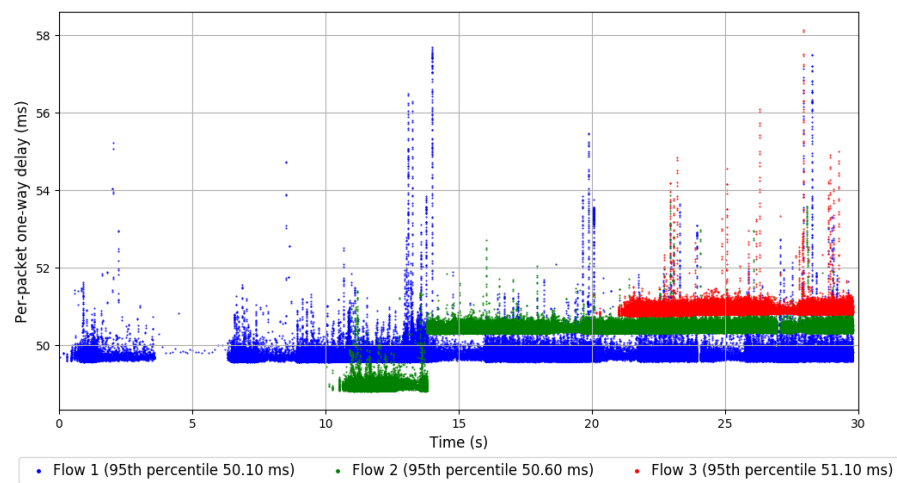
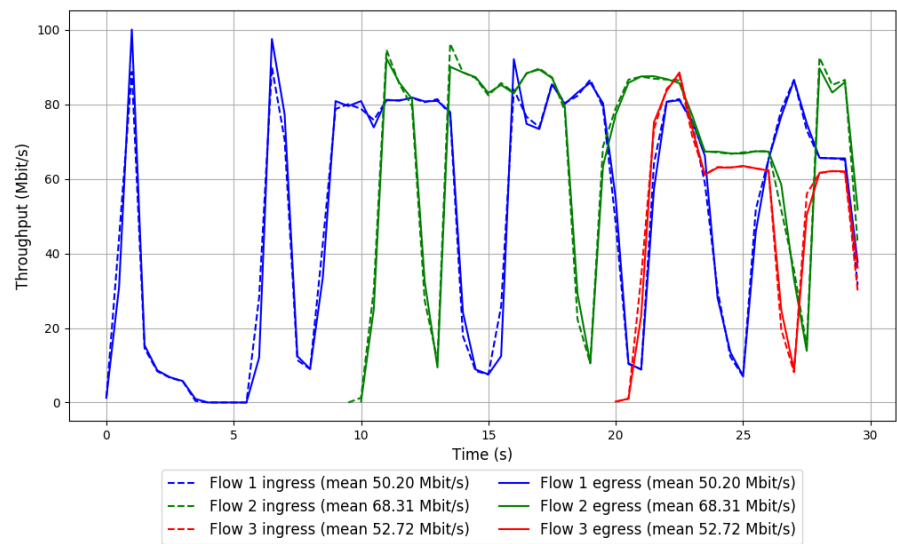


```
Run 1: Statistics of QUIC Cubic

Start at: 2017-12-20 23:30:59
End at: 2017-12-20 23:31:29

# Below is generated by plot.py at 2017-12-21 03:53:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 112.82 Mbit/s
95th percentile per-packet one-way delay: 50.950 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.20 Mbit/s
95th percentile per-packet one-way delay: 50.097 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 68.31 Mbit/s
95th percentile per-packet one-way delay: 50.603 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 52.72 Mbit/s
95th percentile per-packet one-way delay: 51.104 ms
Loss rate: 0.00%
```


Run 1: Report of QUIC Cubic — Data Link

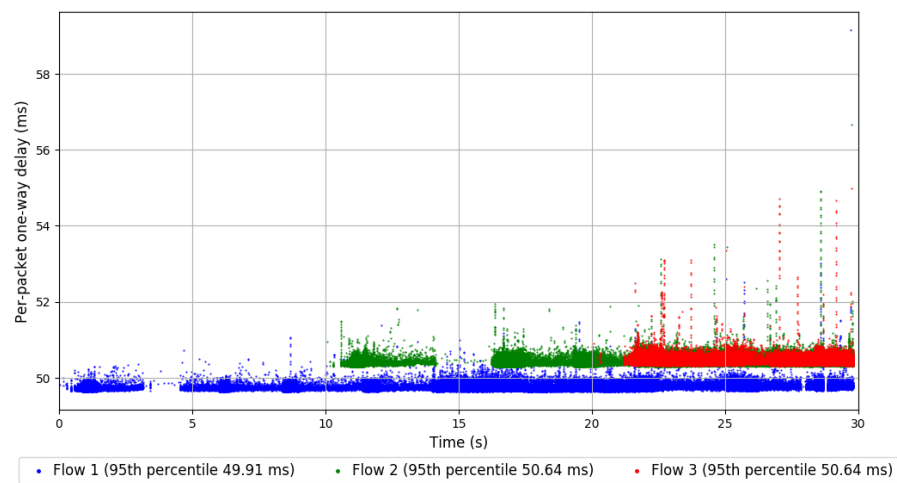
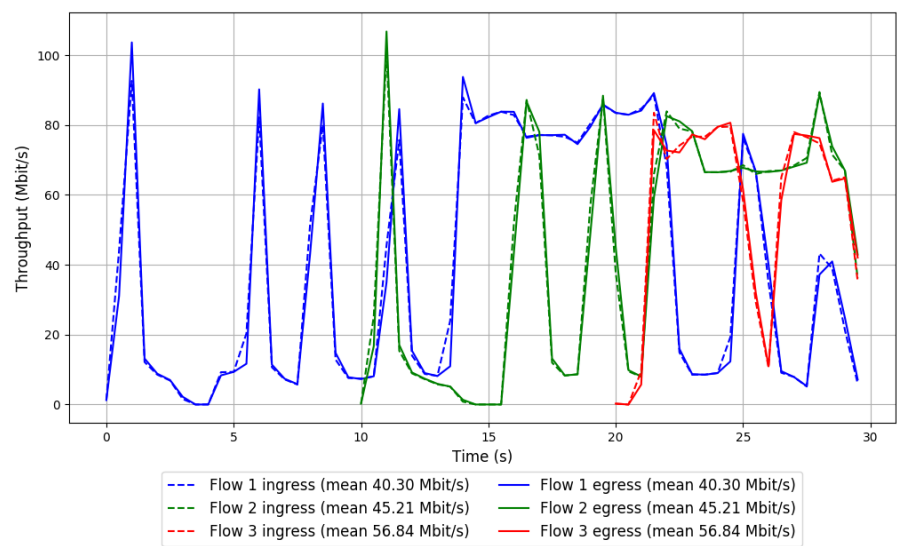


```
Run 2: Statistics of QUIC Cubic

Start at: 2017-12-20 23:43:48
End at: 2017-12-20 23:44:18

# Below is generated by plot.py at 2017-12-21 03:53:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.89 Mbit/s
95th percentile per-packet one-way delay: 50.589 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 40.30 Mbit/s
95th percentile per-packet one-way delay: 49.910 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 45.21 Mbit/s
95th percentile per-packet one-way delay: 50.644 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 56.84 Mbit/s
95th percentile per-packet one-way delay: 50.639 ms
Loss rate: 0.00%
```

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2017-12-20 23:56:42

End at: 2017-12-20 23:57:12

Below is generated by plot.py at 2017-12-21 03:53:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 78.76 Mbit/s

95th percentile per-packet one-way delay: 50.751 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 42.58 Mbit/s

95th percentile per-packet one-way delay: 50.586 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 27.46 Mbit/s

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

Loss rate: 0.00%

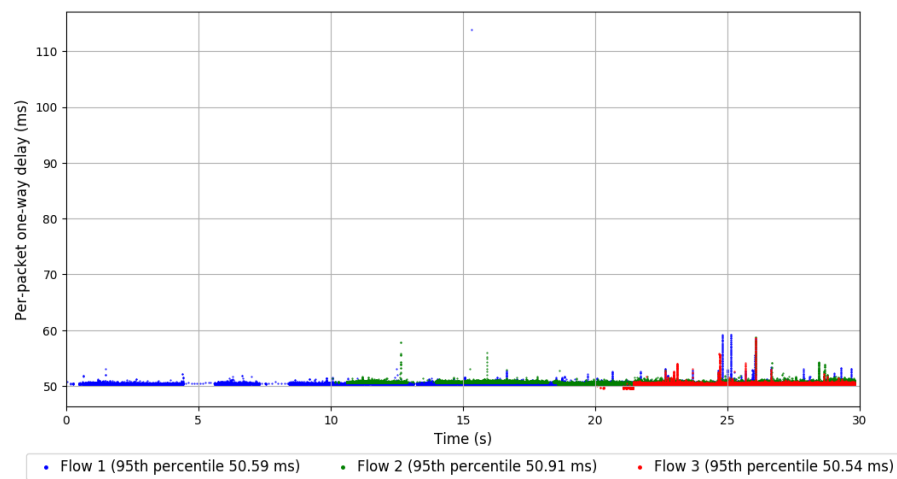
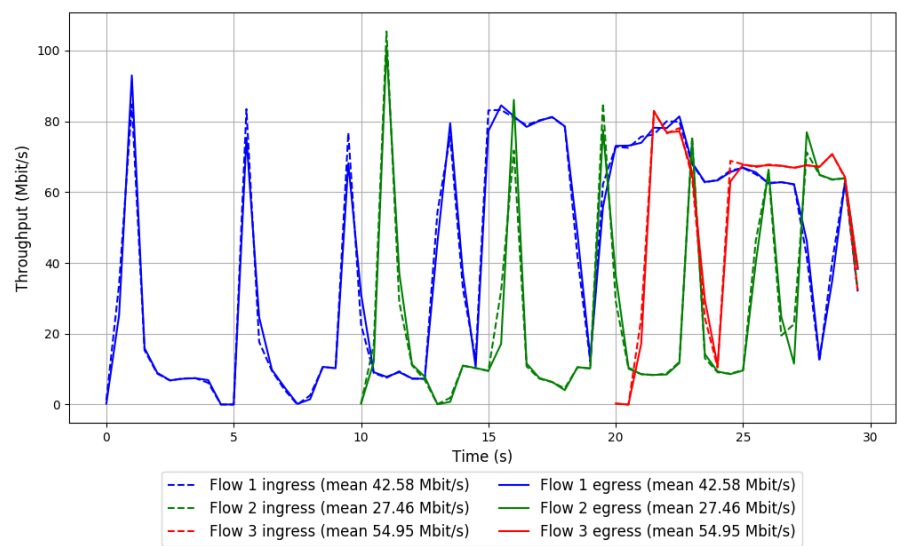
-- Flow 3:

Average throughput: 54.95 Mbit/s

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

Loss rate: 0.00%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2017-12-21 00:09:40

End at: 2017-12-21 00:10:10

Below is generated by plot.py at 2017-12-21 03:53:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 76.10 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 47.07 Mbit/s

95th percentile per-packet one-way delay: 50.953 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 39.70 Mbit/s

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

Loss rate: 0.00%

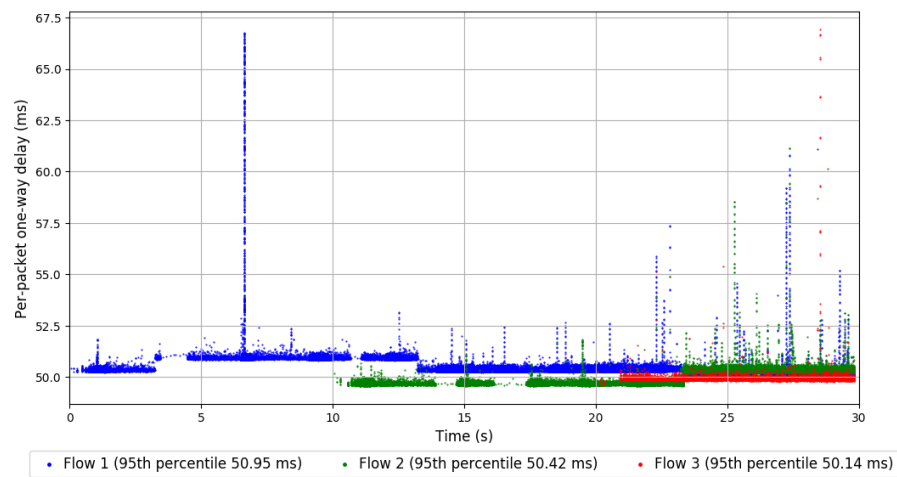
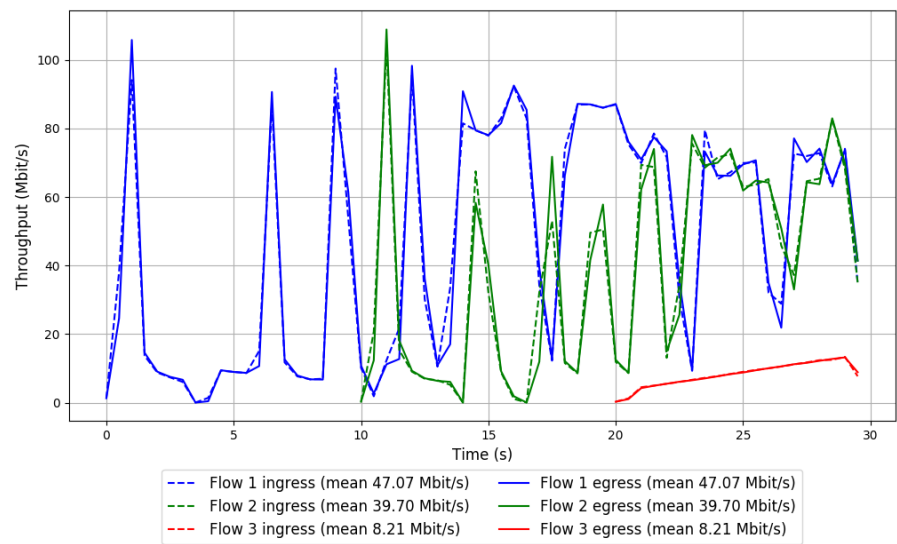
-- Flow 3:

Average throughput: 8.21 Mbit/s

95th percentile per-packet one-way delay: 50.138 ms

Loss rate: 0.00%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2017-12-21 00:22:39

End at: 2017-12-21 00:23:09

Below is generated by plot.py at 2017-12-21 03:53:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 93.79 Mbit/s

95th percentile per-packet one-way delay: 50.963 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 54.19 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 33.92 Mbit/s

95th percentile per-packet one-way delay: 50.007 ms

Loss rate: 0.00%

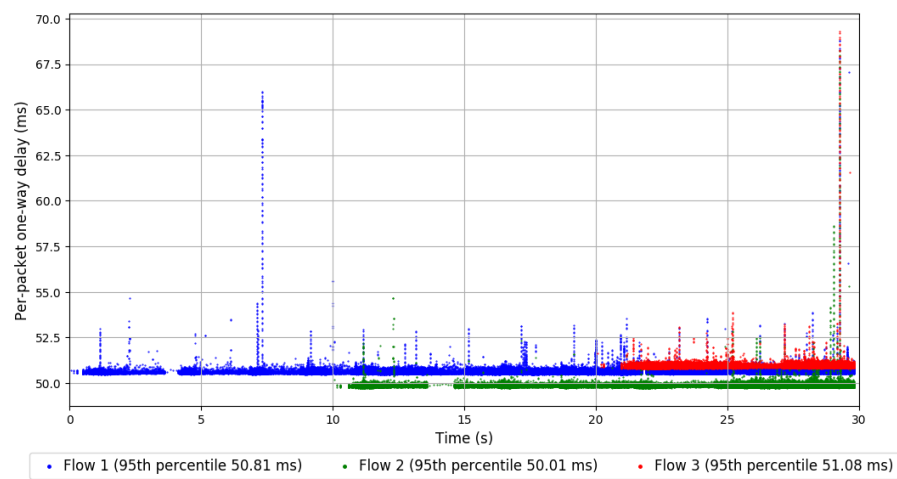
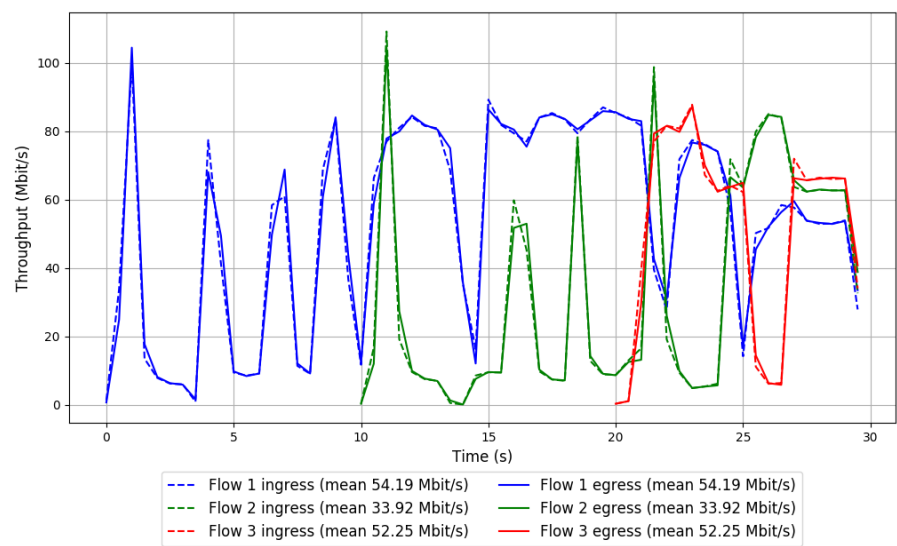
-- Flow 3:

Average throughput: 52.25 Mbit/s

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

Loss rate: 0.00%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2017-12-21 00:35:42

End at: 2017-12-21 00:36:12

Below is generated by plot.py at 2017-12-21 03:53:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 98.95 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 66.83 Mbit/s

95th percentile per-packet one-way delay: 50.943 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 39.37 Mbit/s

95th percentile per-packet one-way delay: 50.925 ms

Loss rate: 0.00%

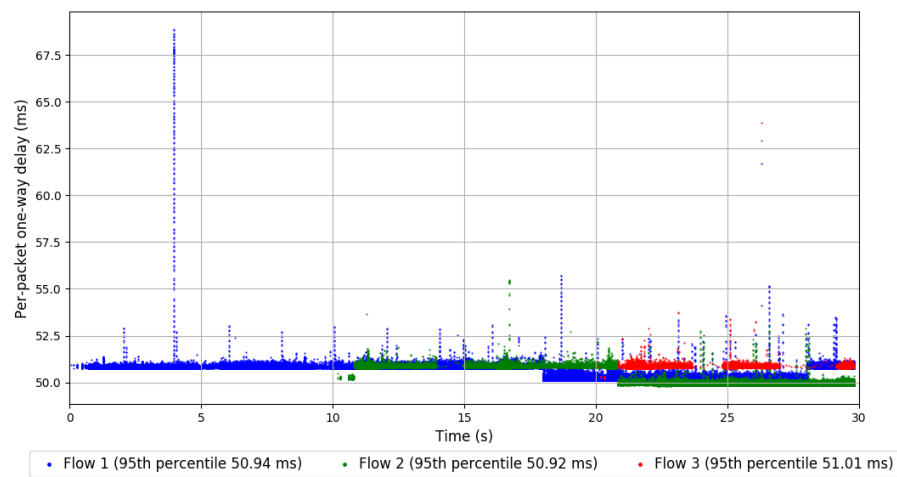
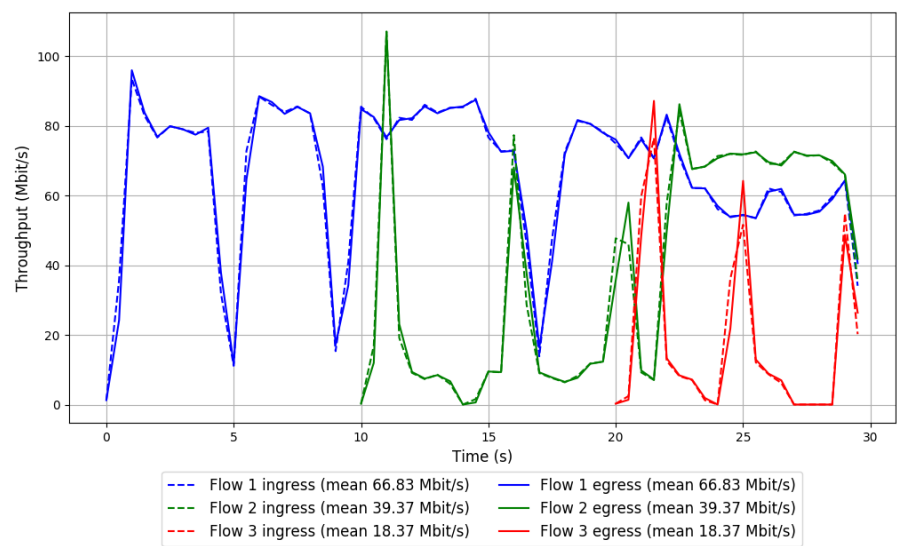
-- Flow 3:

Average throughput: 18.37 Mbit/s

95th percentile per-packet one-way delay: 51.005 ms

Loss rate: 0.00%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2017-12-21 00:48:31

End at: 2017-12-21 00:49:01

Below is generated by plot.py at 2017-12-21 03:53:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 79.65 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 46.61 Mbit/s

95th percentile per-packet one-way delay: 50.720 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 34.15 Mbit/s

95th percentile per-packet one-way delay: 51.038 ms

Loss rate: 0.00%

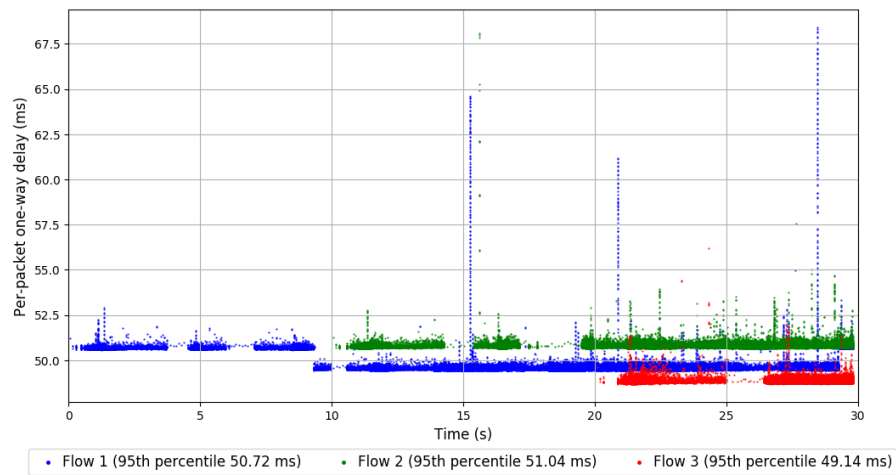
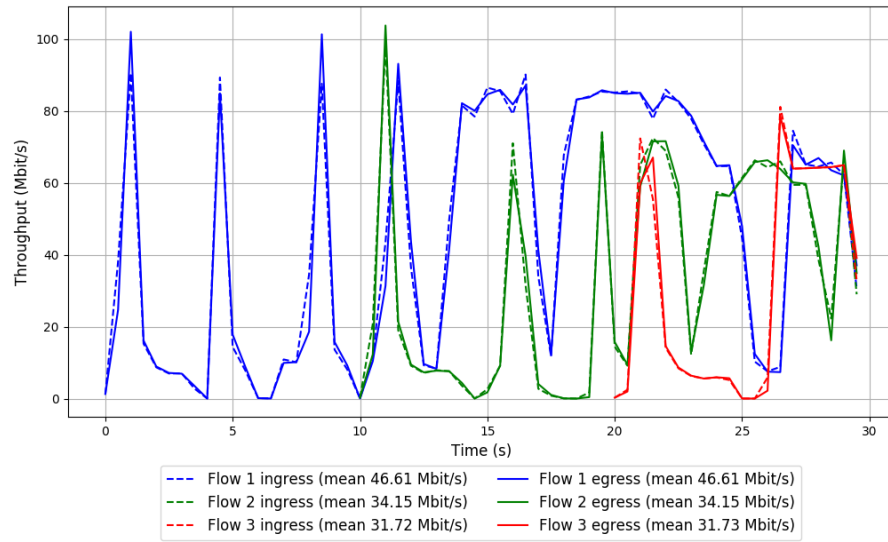
-- Flow 3:

Average throughput: 31.73 Mbit/s

95th percentile per-packet one-way delay: 49.144 ms

Loss rate: 0.00%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2017-12-21 01:02:21

End at: 2017-12-21 01:02:51

Below is generated by plot.py at 2017-12-21 03:53:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.18 Mbit/s

95th percentile per-packet one-way delay: 50.381 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 70.78 Mbit/s

95th percentile per-packet one-way delay: 50.008 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 31.15 Mbit/s

95th percentile per-packet one-way delay: 50.456 ms

Loss rate: 0.00%

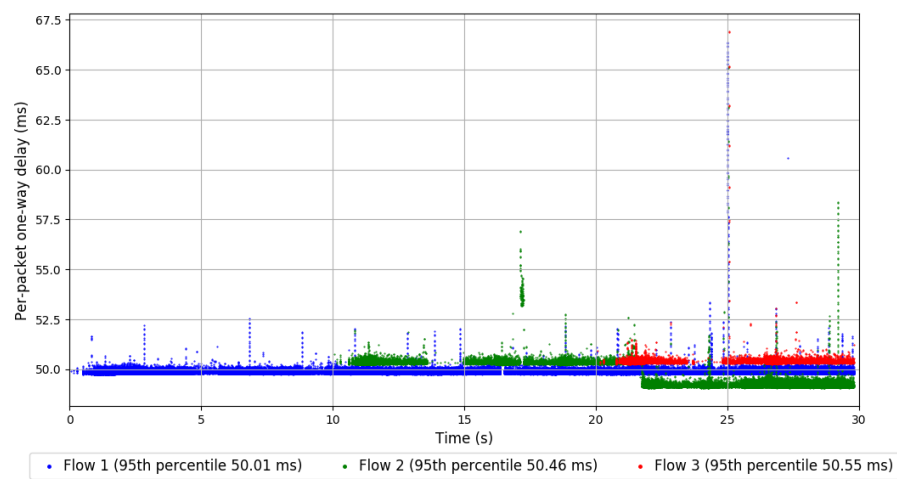
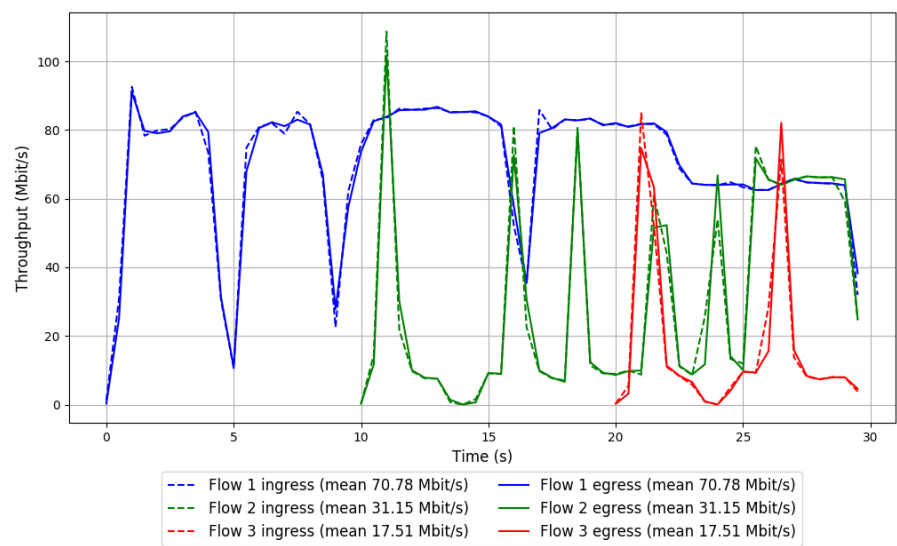
-- Flow 3:

Average throughput: 17.51 Mbit/s

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

Loss rate: 0.00%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2017-12-21 01:15:19

End at: 2017-12-21 01:15:49

Below is generated by plot.py at 2017-12-21 03:53:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 69.86 Mbit/s

95th percentile per-packet one-way delay: 49.933 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 44.50 Mbit/s

95th percentile per-packet one-way delay: 49.147 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 29.31 Mbit/s

95th percentile per-packet one-way delay: 50.056 ms

Loss rate: 0.00%

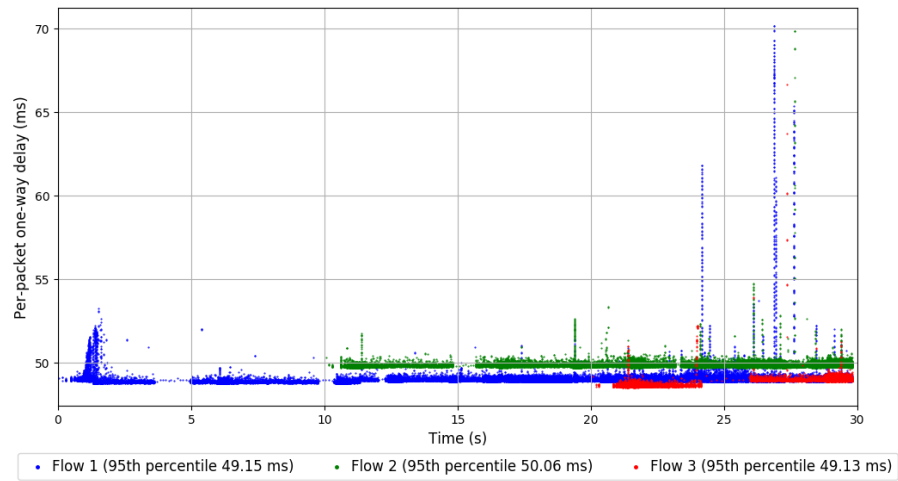
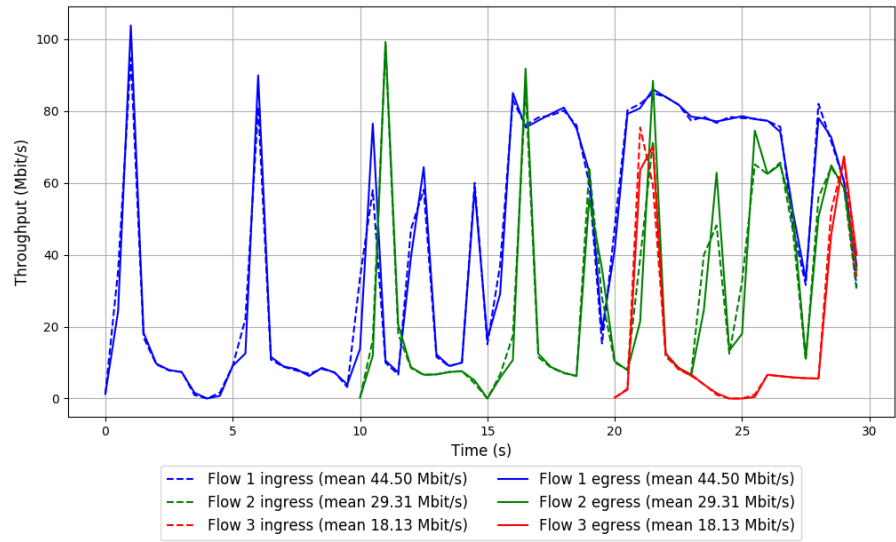
-- Flow 3:

Average throughput: 18.13 Mbit/s

95th percentile per-packet one-way delay: 49.130 ms

Loss rate: 0.00%

Run 9: Report of QUIC Cubic — Data Link



Run 10: Statistics of QUIC Cubic

Start at: 2017-12-21 01:28:05

End at: 2017-12-21 01:28:35

Below is generated by plot.py at 2017-12-21 03:53:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 95.25 Mbit/s

95th percentile per-packet one-way delay: 49.302 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 39.79 Mbit/s

95th percentile per-packet one-way delay: 49.360 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 61.52 Mbit/s

95th percentile per-packet one-way delay: 49.253 ms

Loss rate: 0.00%

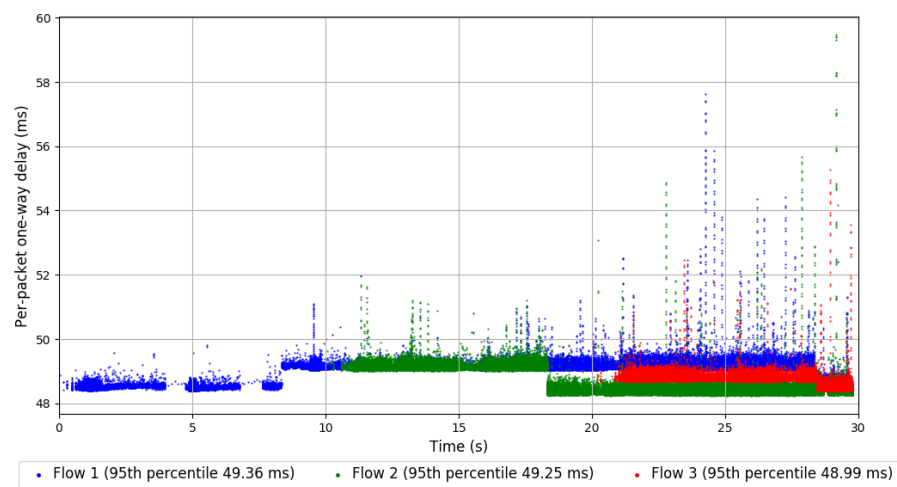
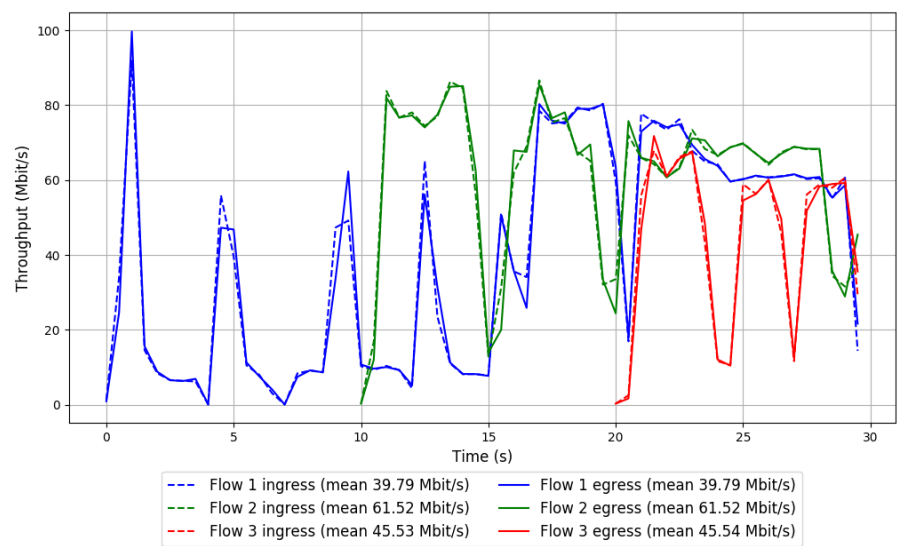
-- Flow 3:

Average throughput: 45.54 Mbit/s

95th percentile per-packet one-way delay: 48.988 ms

Loss rate: 0.00%

Run 10: Report of QUIC Cubic — Data Link

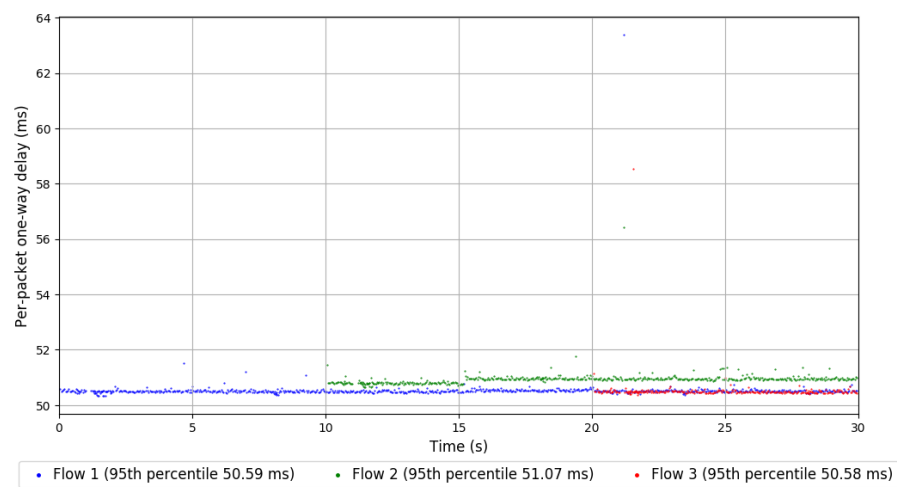
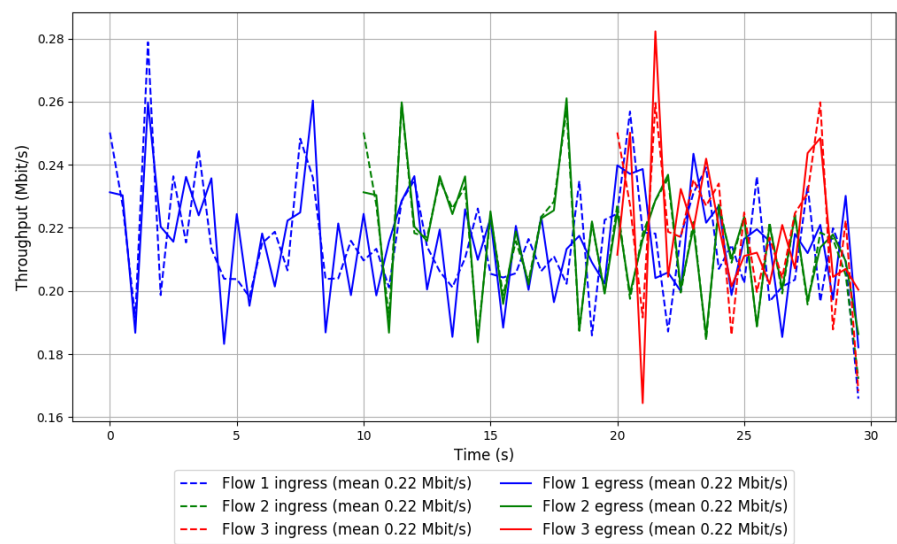


```
Run 1: Statistics of SCReAM

Start at: 2017-12-20 23:32:25
End at: 2017-12-20 23:32:55

# Below is generated by plot.py at 2017-12-21 03:53:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.993 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.594 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.066 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.581 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link

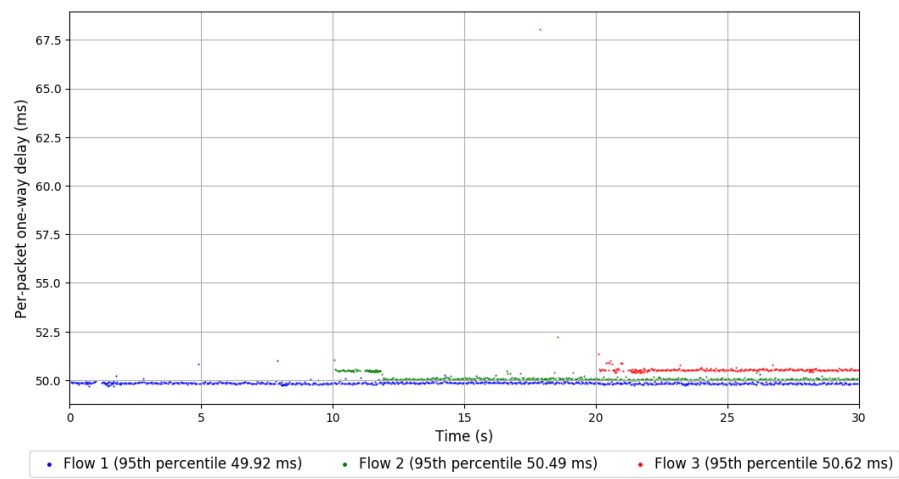
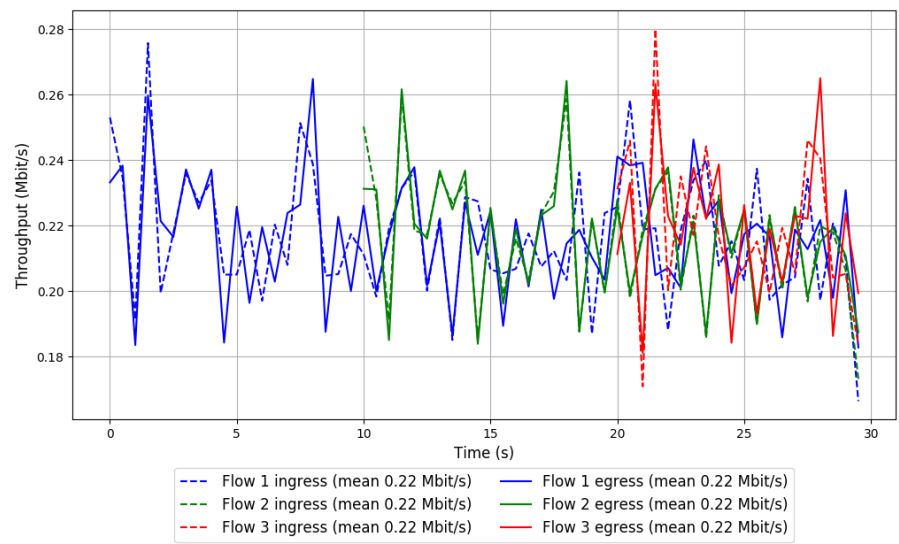


```
Run 2: Statistics of SReAM

Start at: 2017-12-20 23:45:29
End at: 2017-12-20 23:45:59

# Below is generated by plot.py at 2017-12-21 03:53:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 50.545 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.922 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.494 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.619 ms
Loss rate: 0.00%
```

Run 2: Report of SReAM — Data Link

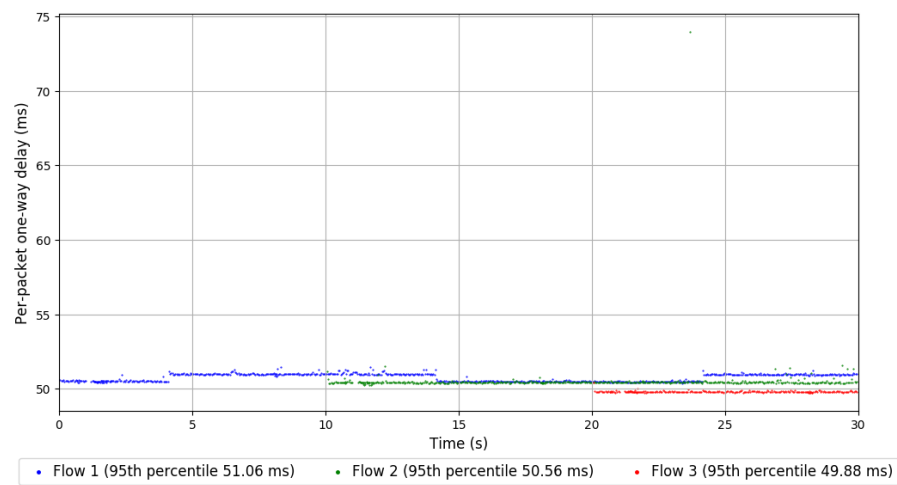
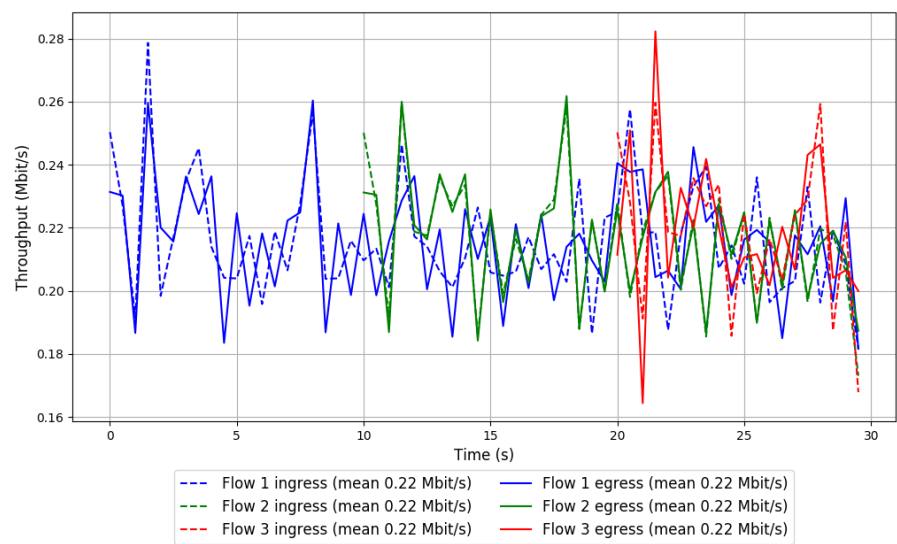


```
Run 3: Statistics of SReAM

Start at: 2017-12-20 23:58:26
End at: 2017-12-20 23:58:56

# Below is generated by plot.py at 2017-12-21 03:53:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 51.014 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.057 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.561 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.880 ms
Loss rate: 0.00%
```


Run 3: Report of SCRaM — Data Link

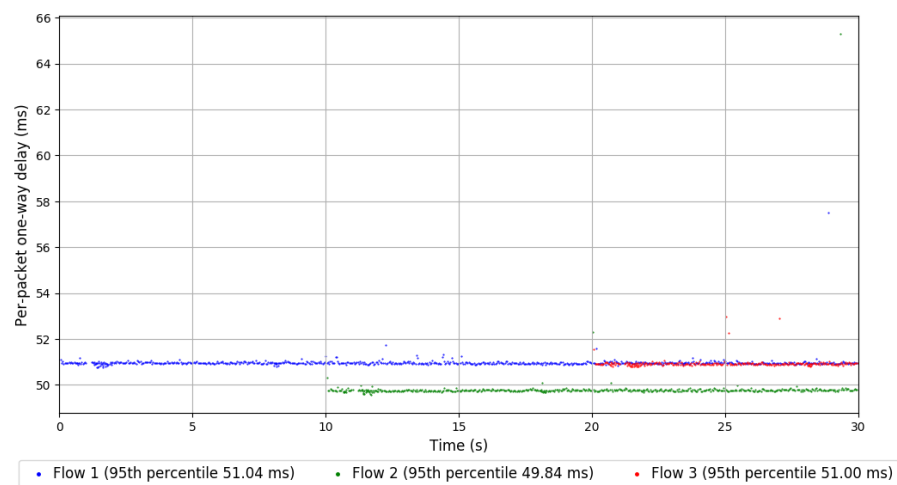
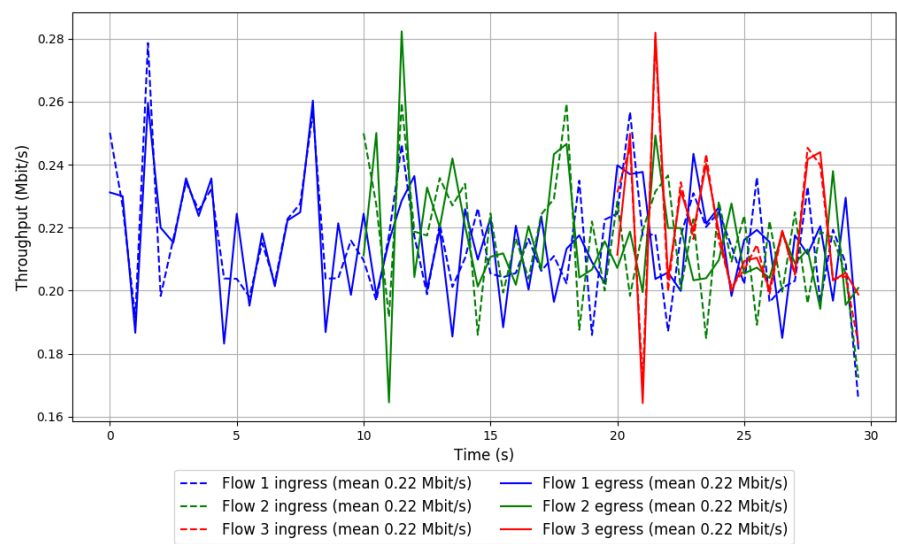


```
Run 4: Statistics of SCReAM

Start at: 2017-12-21 00:11:17
End at: 2017-12-21 00:11:47

# Below is generated by plot.py at 2017-12-21 03:53:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 51.015 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.041 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.836 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.001 ms
Loss rate: 0.00%
```

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2017-12-21 00:24:35

End at: 2017-12-21 00:25:05

Below is generated by plot.py at 2017-12-21 03:53:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.753 ms

Loss rate: 0.00%

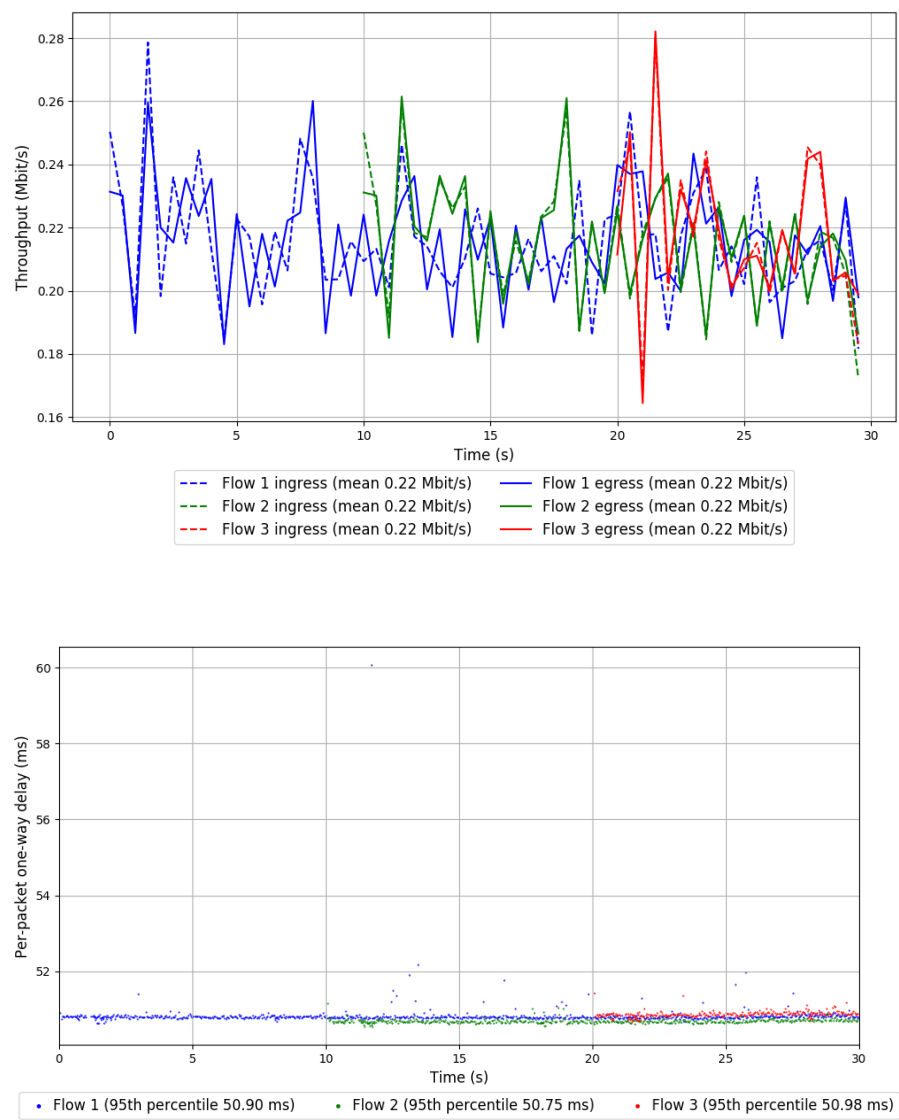
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.983 ms

Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



Run 6: Statistics of SCReAM

Start at: 2017-12-21 00:37:24

End at: 2017-12-21 00:37:54

Below is generated by plot.py at 2017-12-21 03:53:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.817 ms

Loss rate: 0.00%

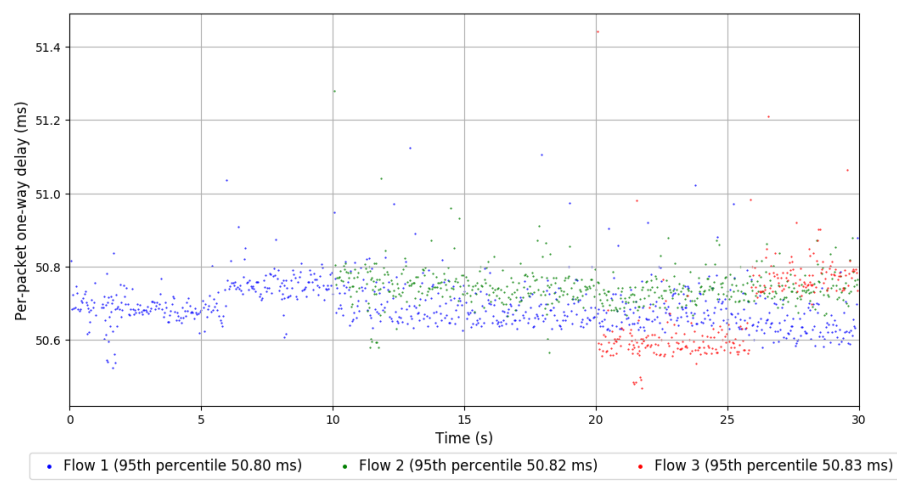
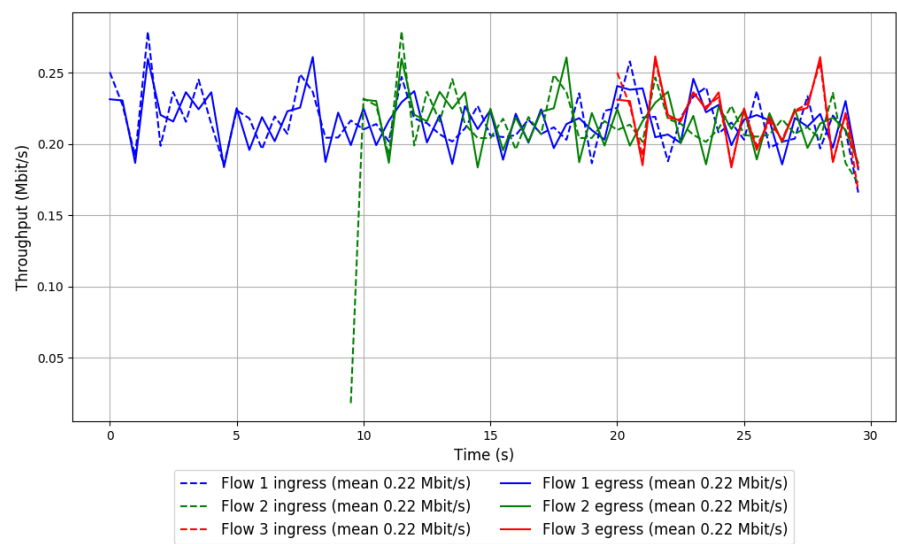
-- Flow 3:

Average throughput: 0.22 Mbit/s

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

Loss rate: 0.00%

Run 6: Report of SReAM — Data Link

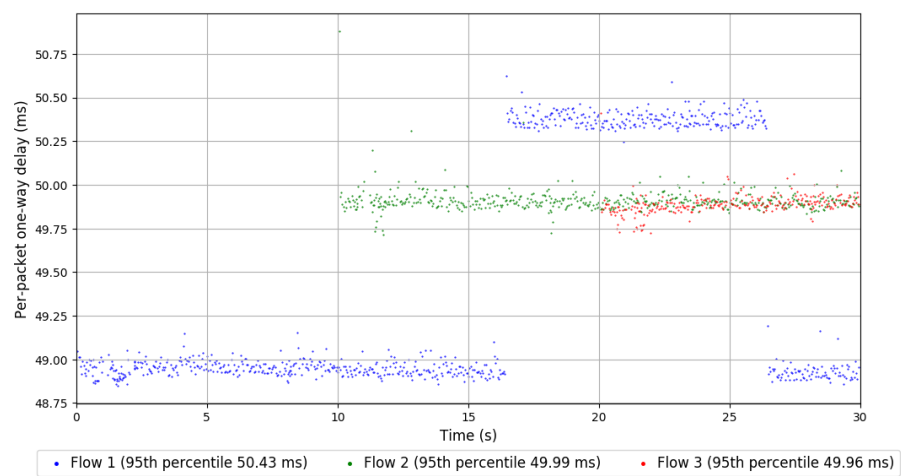
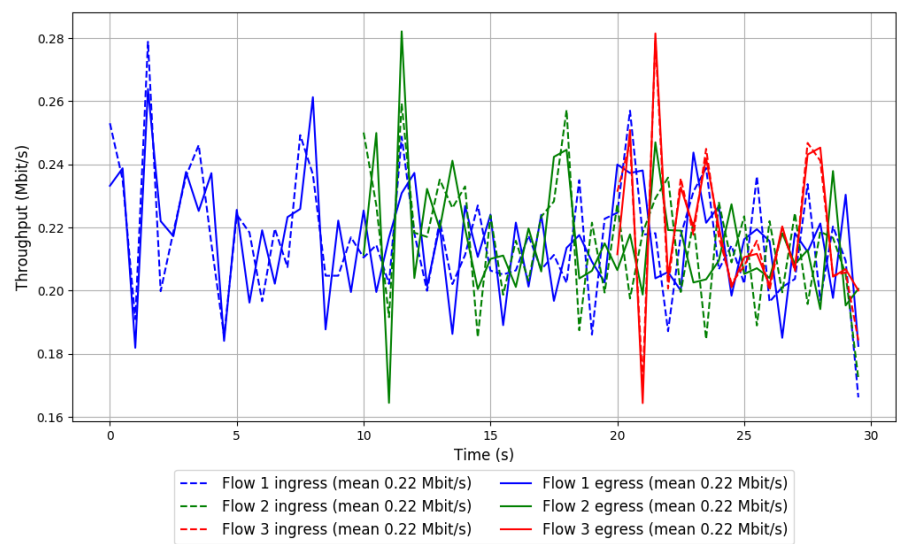


```
Run 7: Statistics of SReAM

Start at: 2017-12-21 00:51:04
End at: 2017-12-21 00:51:34

# Below is generated by plot.py at 2017-12-21 03:53:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.401 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.426 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.988 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.956 ms
Loss rate: 0.00%
```


Run 7: Report of SReAM — Data Link



Run 8: Statistics of SReAM

Start at: 2017-12-21 01:03:56

End at: 2017-12-21 01:04:26

Below is generated by plot.py at 2017-12-21 03:53:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 50.401 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 49.965 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.417 ms

Loss rate: 0.00%

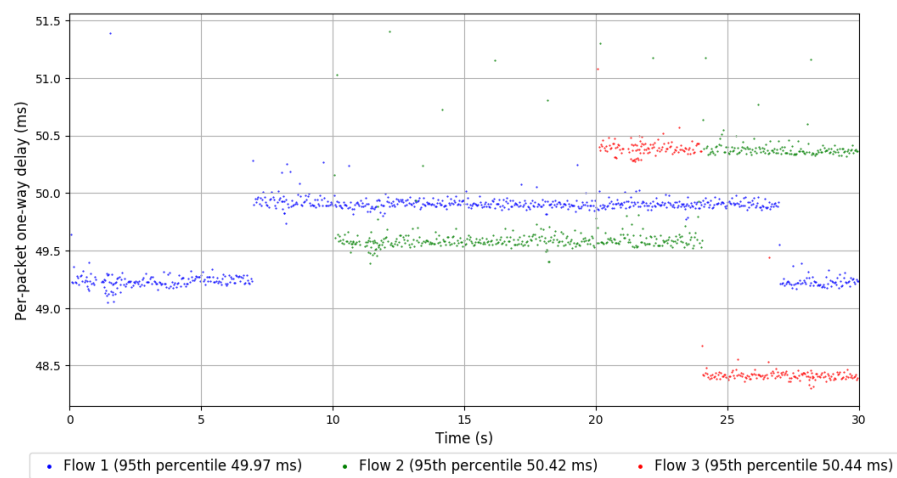
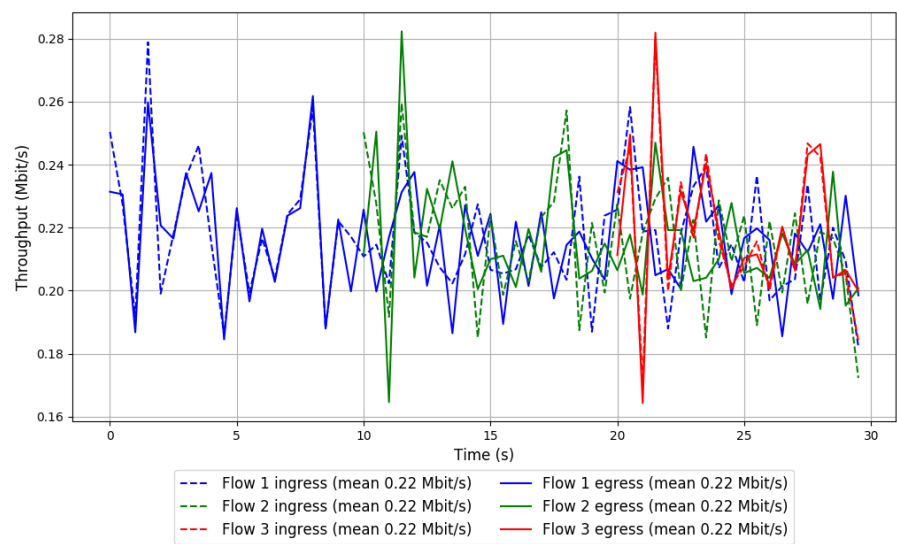
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.441 ms

Loss rate: 0.00%

Run 8: Report of SReAM — Data Link

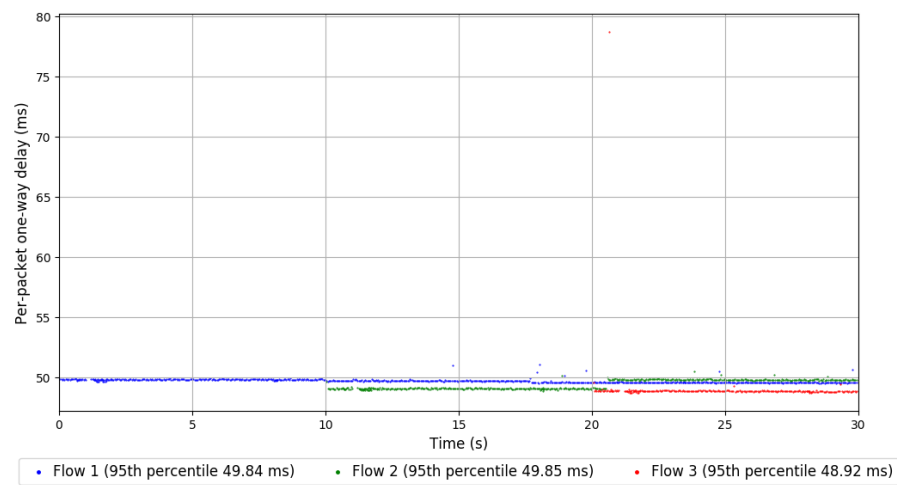
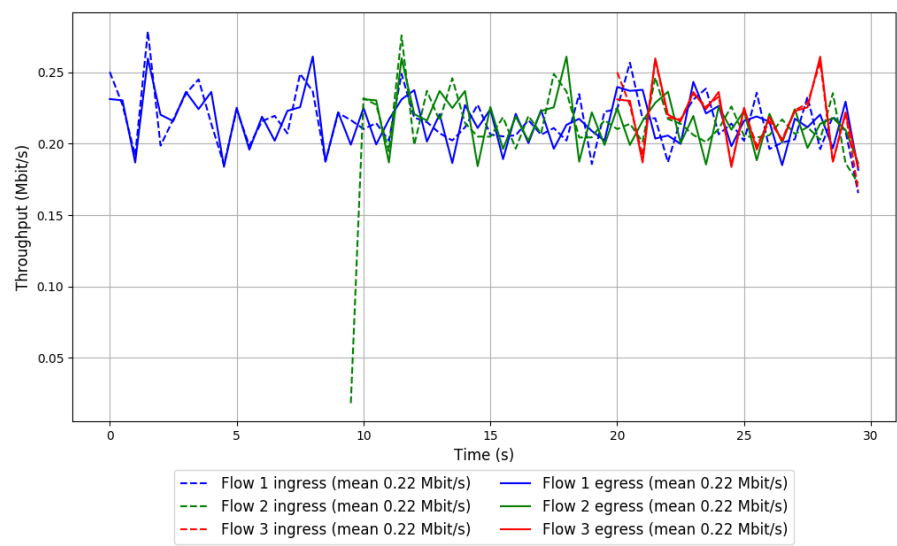


```
Run 9: Statistics of SReAM

Start at: 2017-12-21 01:17:03
End at: 2017-12-21 01:17:33

# Below is generated by plot.py at 2017-12-21 03:53:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 49.840 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.842 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.849 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 48.923 ms
Loss rate: 0.00%
```

Run 9: Report of SReAM — Data Link

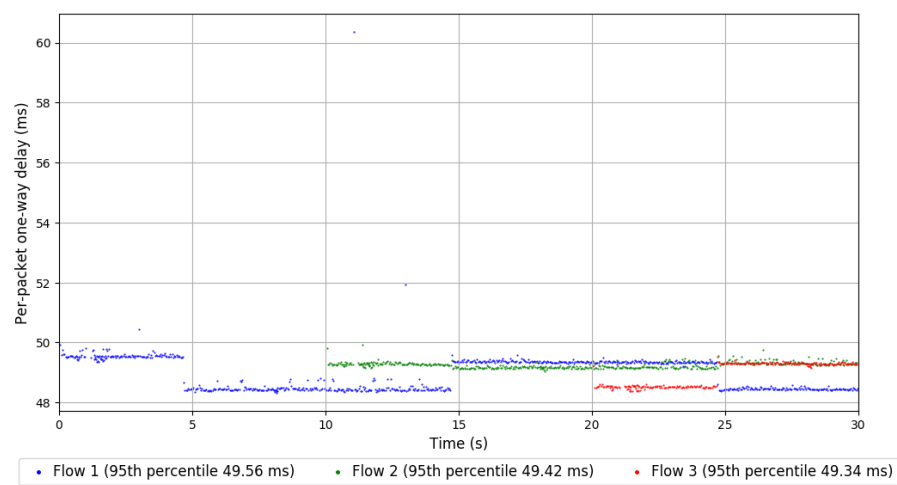
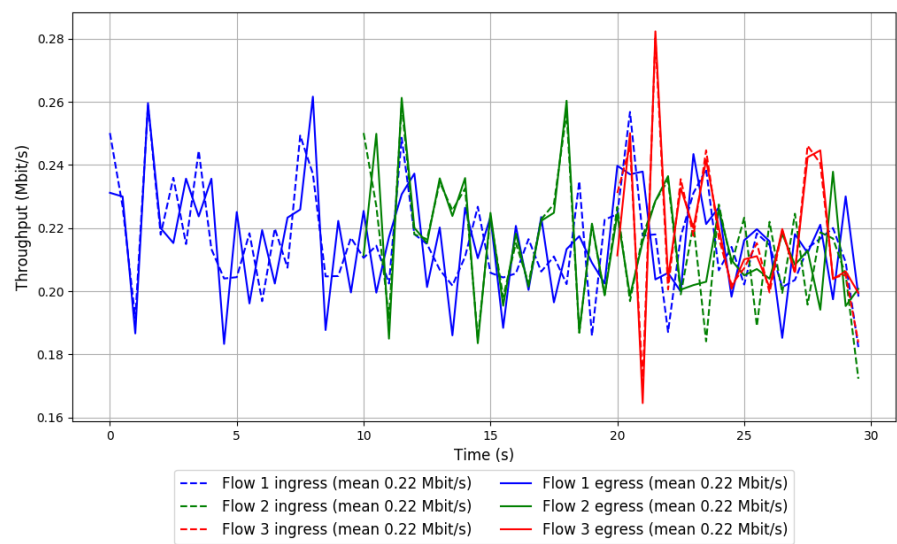


```
Run 10: Statistics of SReAM

Start at: 2017-12-21 01:29:36
End at: 2017-12-21 01:30:06

# Below is generated by plot.py at 2017-12-21 03:53:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 49.532 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.562 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.420 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.344 ms
Loss rate: 0.00%
```

Run 10: Report of SReAM — Data Link

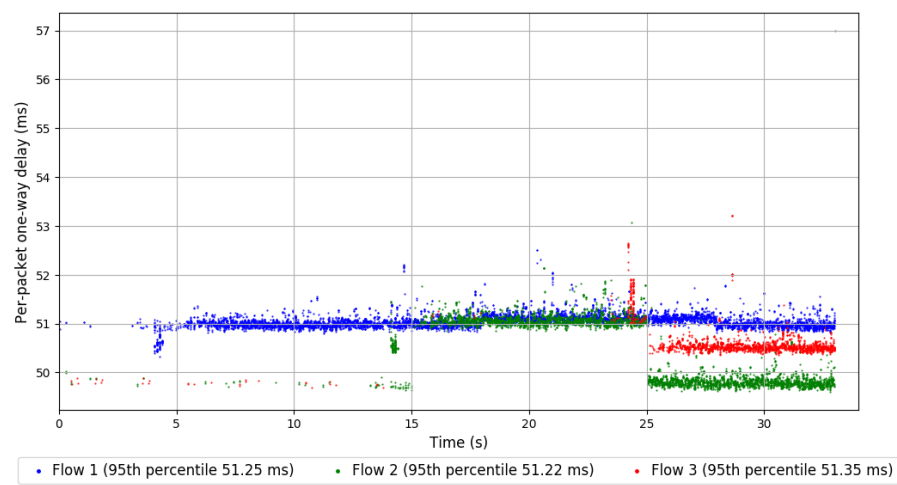
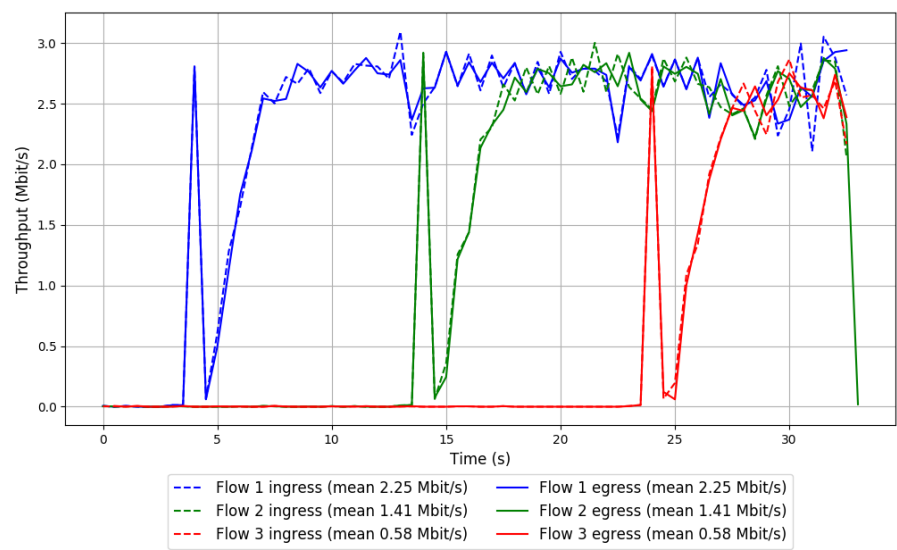


```
Run 1: Statistics of WebRTC media

Start at: 2017-12-20 23:34:58
End at: 2017-12-20 23:35:28

# Below is generated by plot.py at 2017-12-21 03:53:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.22 Mbit/s
95th percentile per-packet one-way delay: 51.243 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.25 Mbit/s
95th percentile per-packet one-way delay: 51.249 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.41 Mbit/s
95th percentile per-packet one-way delay: 51.217 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 51.348 ms
Loss rate: 0.00%
```


Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2017-12-20 23:47:56

End at: 2017-12-20 23:48:26

Below is generated by plot.py at 2017-12-21 03:53:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.19 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.23 Mbit/s

95th percentile per-packet one-way delay: 50.244 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.41 Mbit/s

95th percentile per-packet one-way delay: 50.070 ms

Loss rate: 0.00%

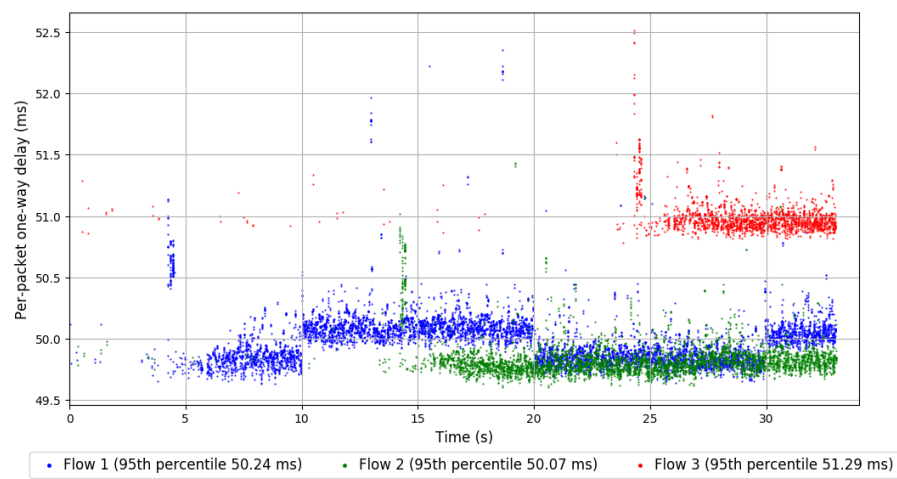
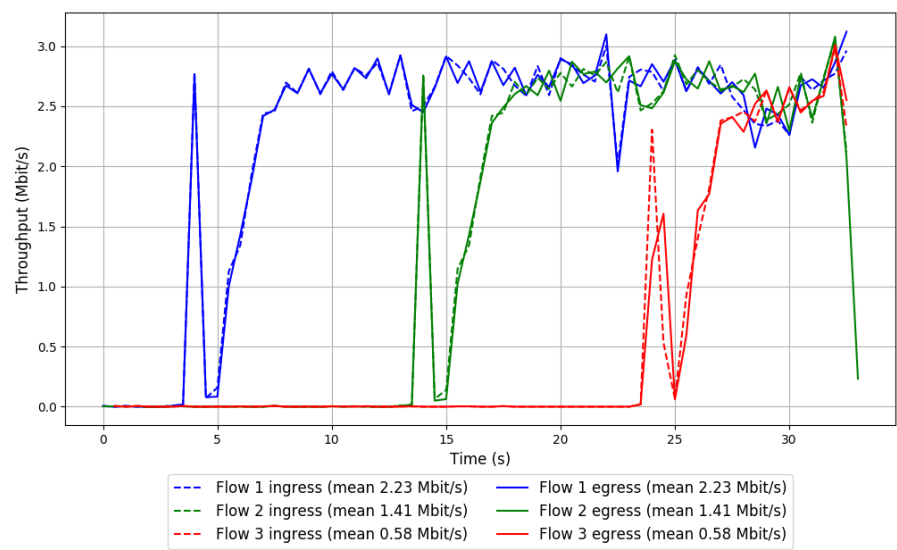
-- Flow 3:

Average throughput: 0.58 Mbit/s

95th percentile per-packet one-way delay: 51.289 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2017-12-21 00:01:04

End at: 2017-12-21 00:01:34

Below is generated by plot.py at 2017-12-21 03:53:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.21 Mbit/s

95th percentile per-packet one-way delay: 50.887 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 2.22 Mbit/s

95th percentile per-packet one-way delay: 50.339 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.41 Mbit/s

95th percentile per-packet one-way delay: 50.603 ms

Loss rate: 0.02%

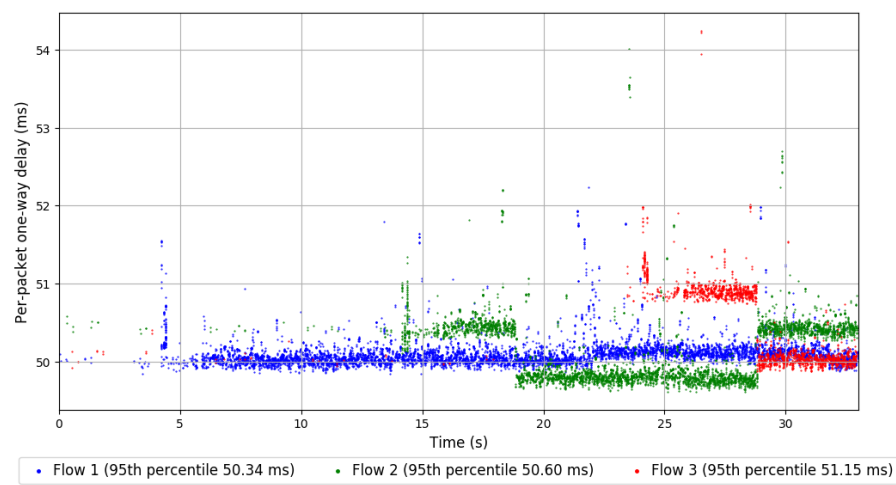
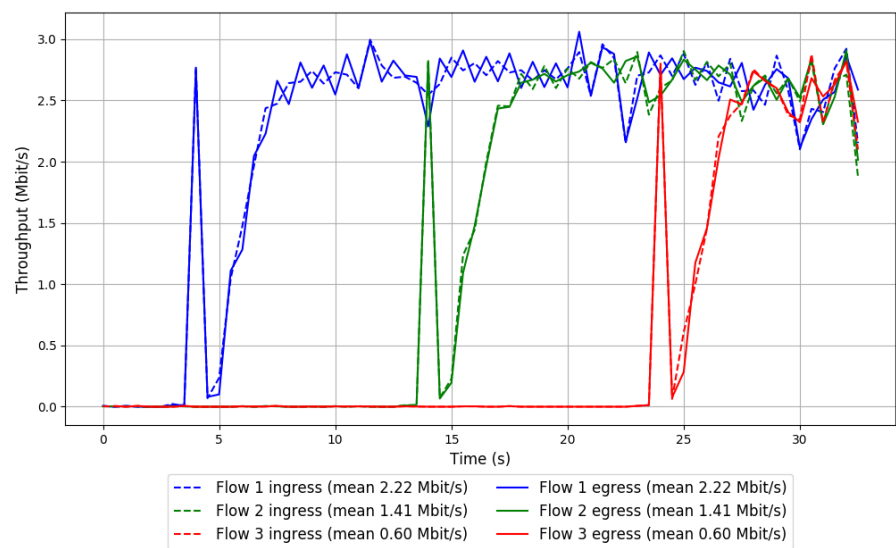
-- Flow 3:

Average throughput: 0.60 Mbit/s

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

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2017-12-21 00:13:52

End at: 2017-12-21 00:14:22

Below is generated by plot.py at 2017-12-21 03:53:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.22 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.24 Mbit/s

95th percentile per-packet one-way delay: 50.851 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.41 Mbit/s

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

Loss rate: 0.00%

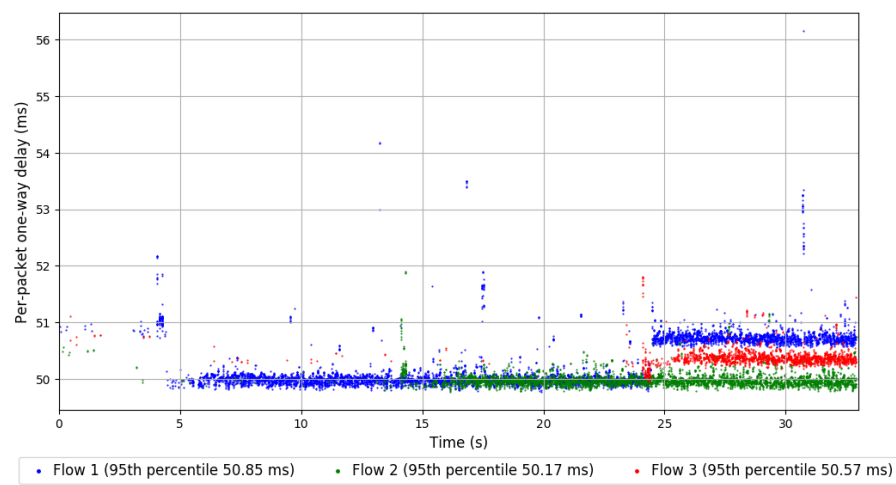
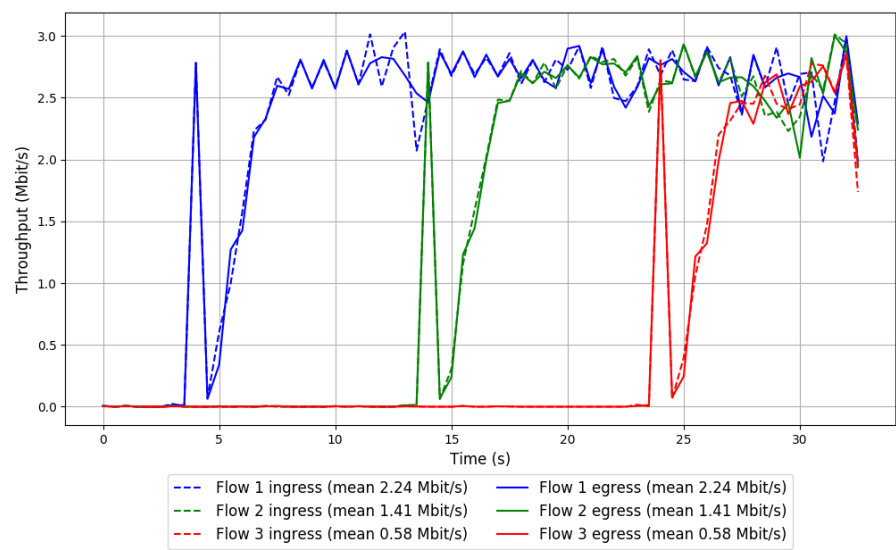
-- Flow 3:

Average throughput: 0.58 Mbit/s

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

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2017-12-21 00:27:10

End at: 2017-12-21 00:27:40

Below is generated by plot.py at 2017-12-21 03:53:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.25 Mbit/s

95th percentile per-packet one-way delay: 50.950 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 2.26 Mbit/s

95th percentile per-packet one-way delay: 50.957 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 1.42 Mbit/s

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

Loss rate: 0.00%

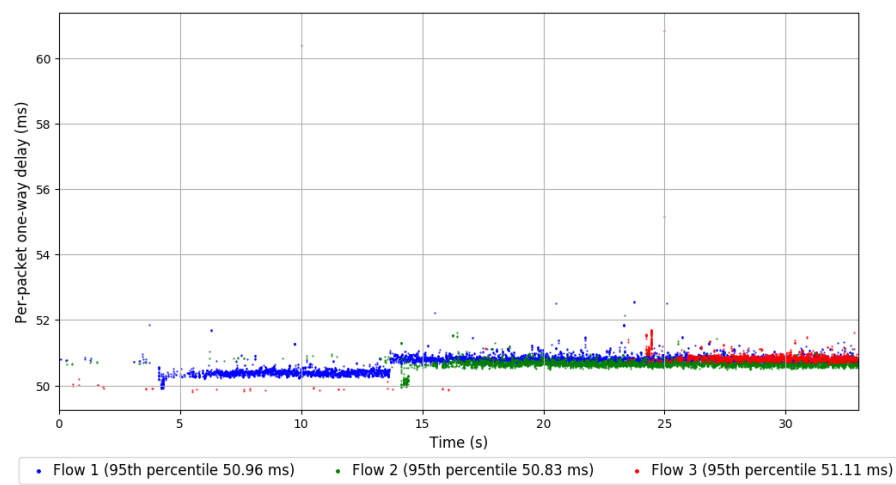
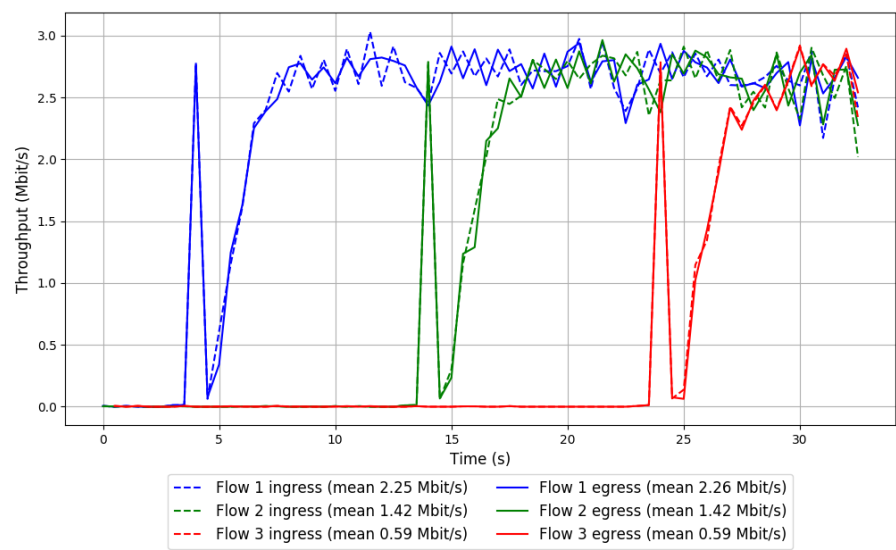
-- Flow 3:

Average throughput: 0.59 Mbit/s

95th percentile per-packet one-way delay: 51.114 ms

Loss rate: 0.05%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2017-12-21 00:40:01

End at: 2017-12-21 00:40:31

Below is generated by plot.py at 2017-12-21 03:53:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.19 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.23 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.40 Mbit/s

95th percentile per-packet one-way delay: 50.497 ms

Loss rate: 0.00%

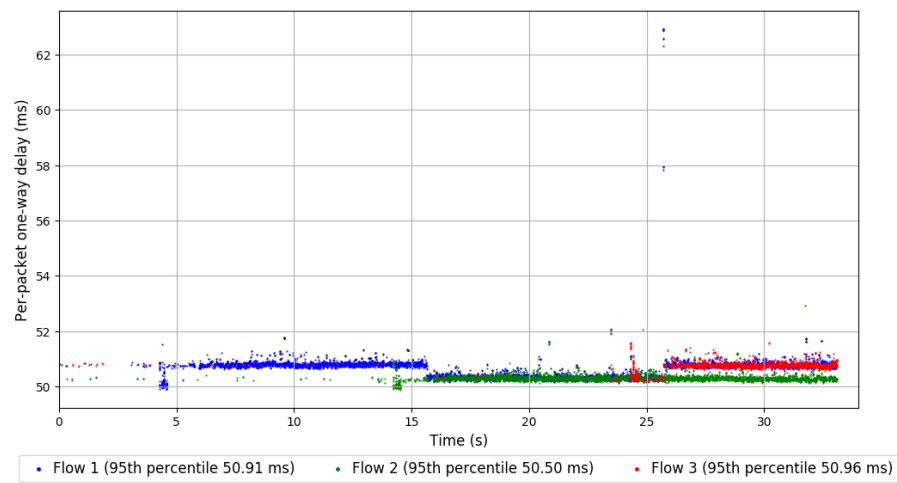
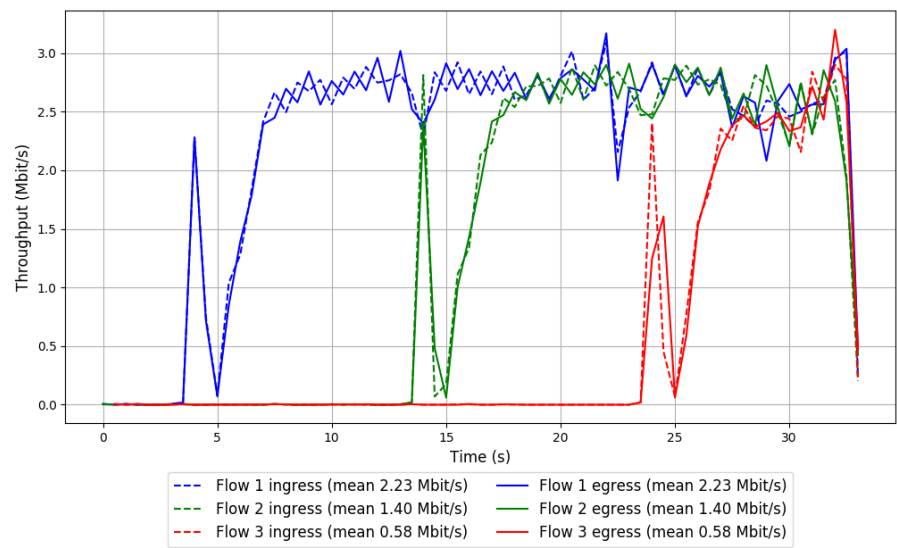
-- Flow 3:

Average throughput: 0.58 Mbit/s

95th percentile per-packet one-way delay: 50.963 ms

Loss rate: 0.00%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2017-12-21 00:53:41

End at: 2017-12-21 00:54:11

Below is generated by plot.py at 2017-12-21 03:53:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.20 Mbit/s

95th percentile per-packet one-way delay: 50.887 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.23 Mbit/s

95th percentile per-packet one-way delay: 50.929 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.42 Mbit/s

95th percentile per-packet one-way delay: 50.032 ms

Loss rate: 0.00%

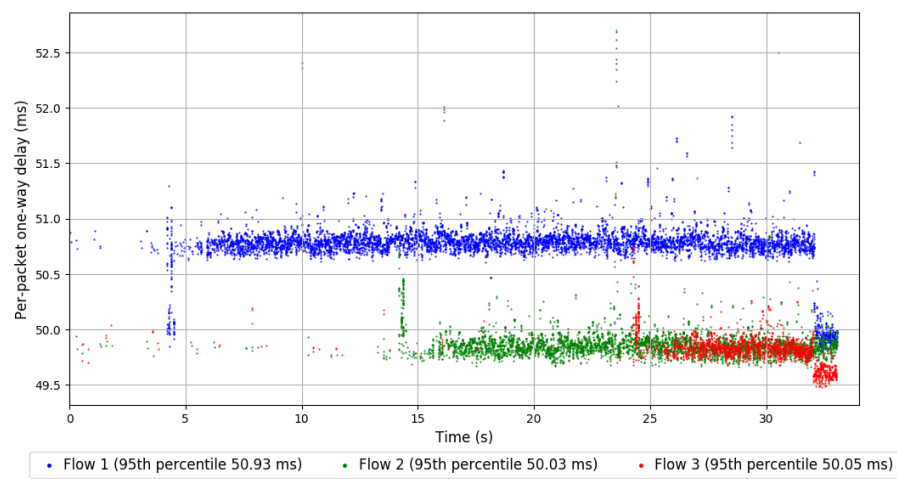
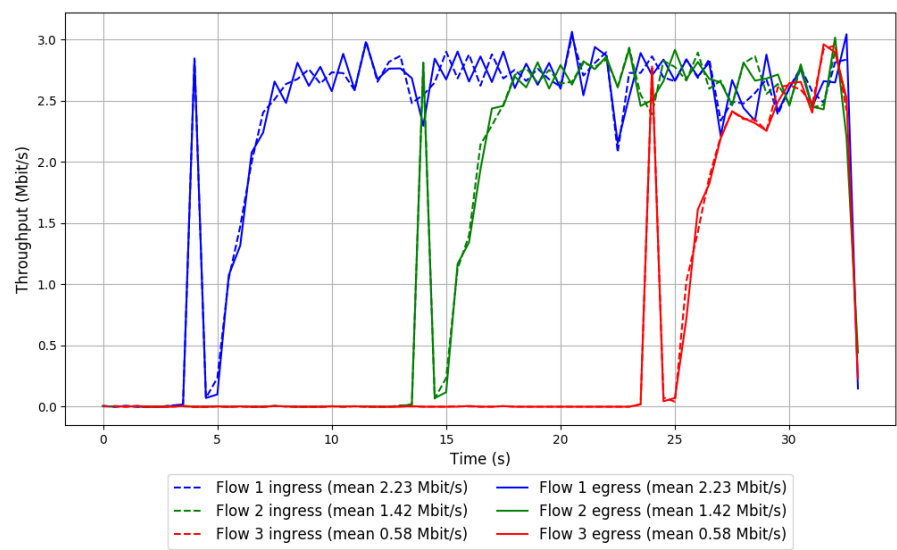
-- Flow 3:

Average throughput: 0.58 Mbit/s

95th percentile per-packet one-way delay: 50.045 ms

Loss rate: 0.00%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2017-12-21 01:06:31

End at: 2017-12-21 01:07:01

Below is generated by plot.py at 2017-12-21 03:53:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.21 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.24 Mbit/s

95th percentile per-packet one-way delay: 50.392 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.41 Mbit/s

95th percentile per-packet one-way delay: 49.933 ms

Loss rate: 0.00%

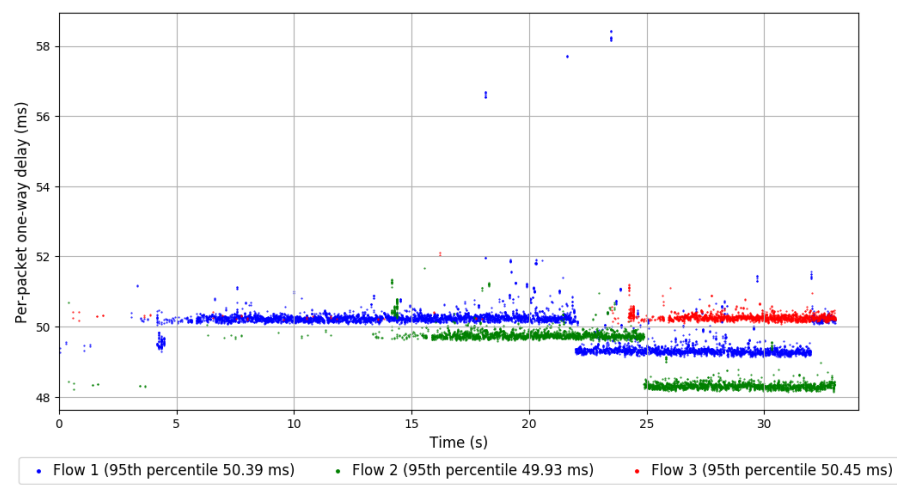
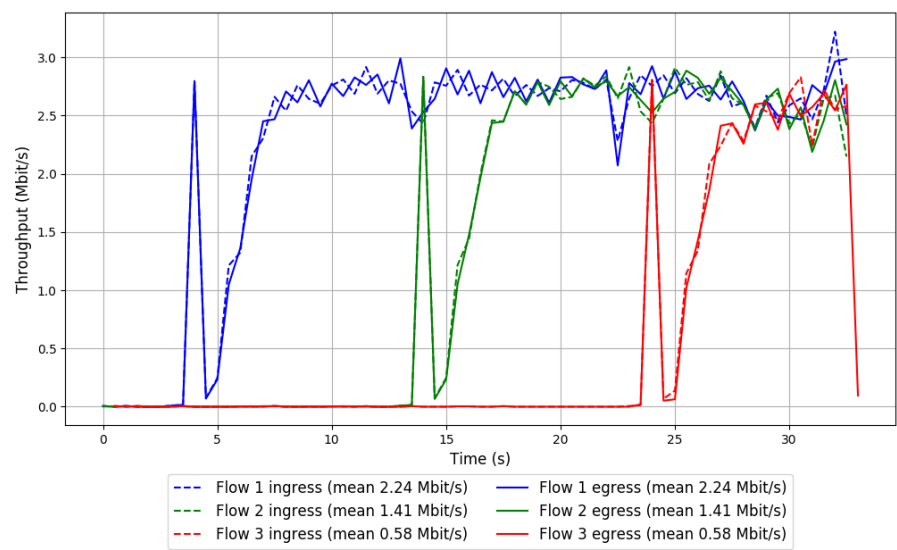
-- Flow 3:

Average throughput: 0.58 Mbit/s

95th percentile per-packet one-way delay: 50.449 ms

Loss rate: 0.00%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2017-12-21 01:19:37

End at: 2017-12-21 01:20:07

Below is generated by plot.py at 2017-12-21 03:53:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.18 Mbit/s

95th percentile per-packet one-way delay: 49.808 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.23 Mbit/s

95th percentile per-packet one-way delay: 49.799 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.39 Mbit/s

95th percentile per-packet one-way delay: 49.836 ms

Loss rate: 0.00%

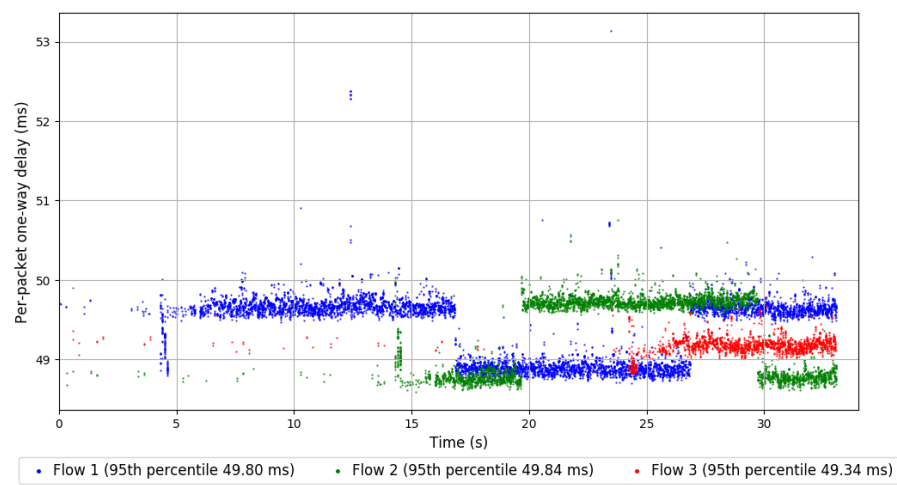
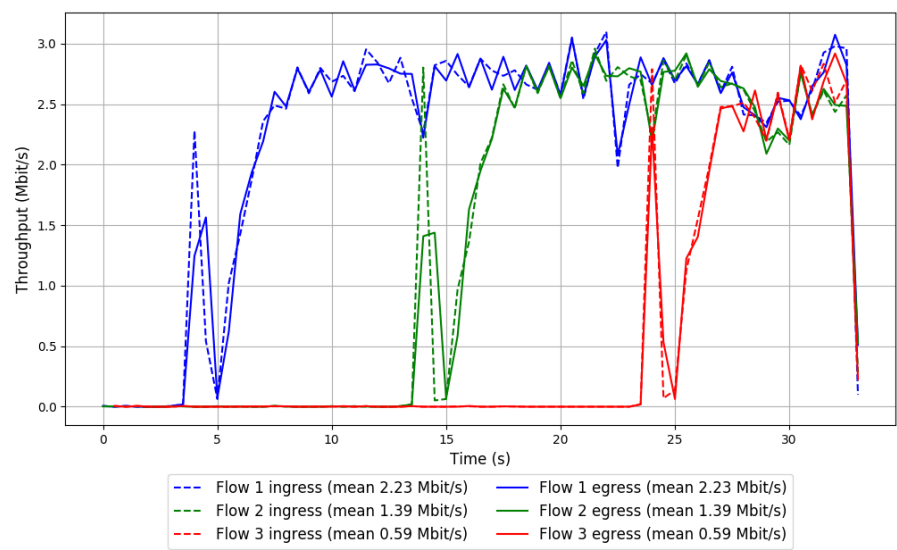
-- Flow 3:

Average throughput: 0.59 Mbit/s

95th percentile per-packet one-way delay: 49.341 ms

Loss rate: 0.00%

Run 9: Report of WebRTC media — Data Link

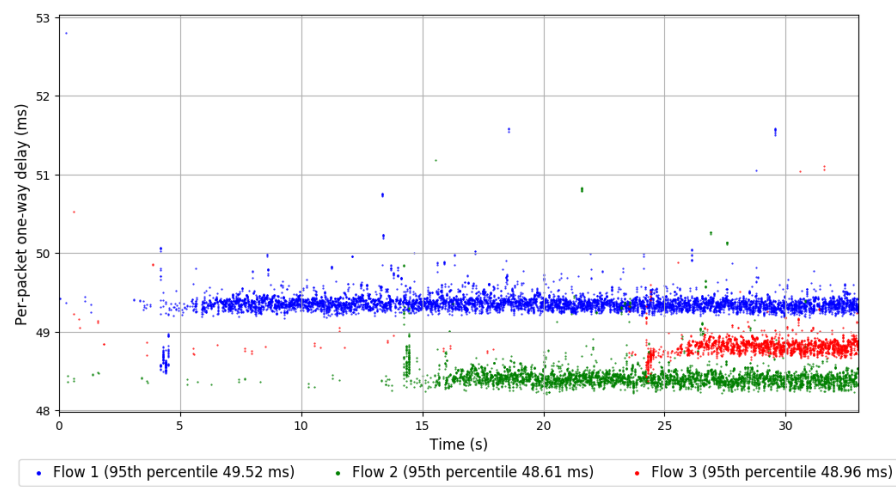
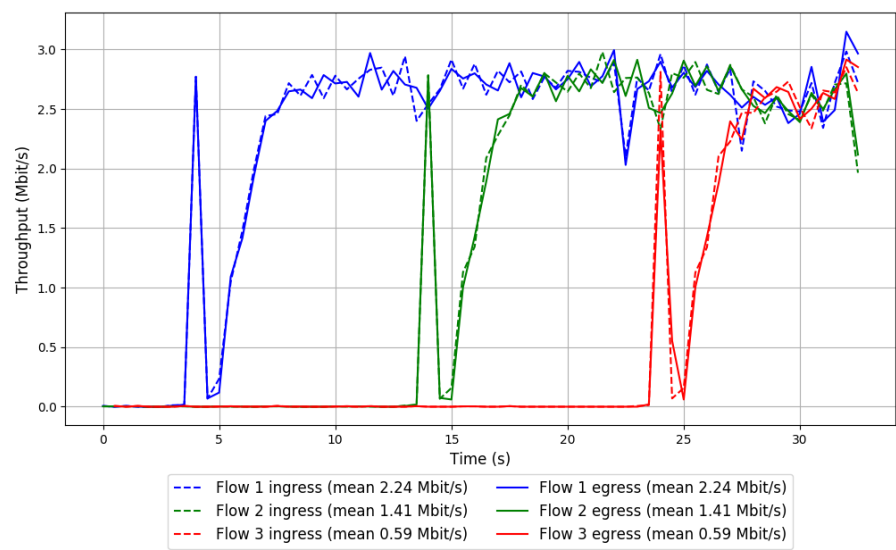


```
Run 10: Statistics of WebRTC media

Start at: 2017-12-21 01:32:12
End at: 2017-12-21 01:32:42

# Below is generated by plot.py at 2017-12-21 03:53:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.21 Mbit/s
95th percentile per-packet one-way delay: 49.467 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.24 Mbit/s
95th percentile per-packet one-way delay: 49.525 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.41 Mbit/s
95th percentile per-packet one-way delay: 48.612 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.59 Mbit/s
95th percentile per-packet one-way delay: 48.958 ms
Loss rate: 0.00%
```

Run 10: Report of WebRTC media — Data Link

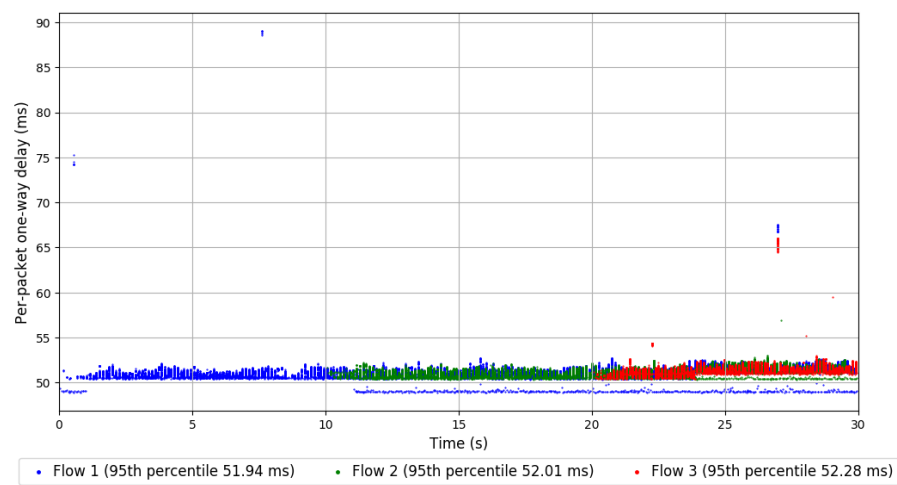
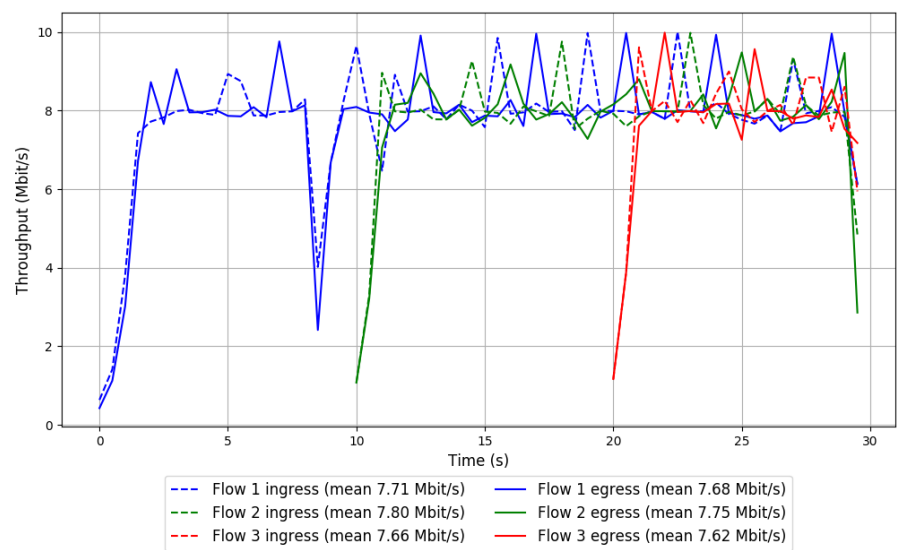


```
Run 1: Statistics of Sprout

Start at: 2017-12-20 23:29:19
End at: 2017-12-20 23:29:49

# Below is generated by plot.py at 2017-12-21 03:53:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.35 Mbit/s
95th percentile per-packet one-way delay: 52.023 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 7.68 Mbit/s
95th percentile per-packet one-way delay: 51.937 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 7.75 Mbit/s
95th percentile per-packet one-way delay: 52.009 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 7.62 Mbit/s
95th percentile per-packet one-way delay: 52.276 ms
Loss rate: 0.49%
```

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2017-12-20 23:42:00

End at: 2017-12-20 23:42:30

Below is generated by plot.py at 2017-12-21 03:53:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.74 Mbit/s

95th percentile per-packet one-way delay: 51.678 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 8.00 Mbit/s

95th percentile per-packet one-way delay: 51.701 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.89 Mbit/s

95th percentile per-packet one-way delay: 51.678 ms

Loss rate: 0.00%

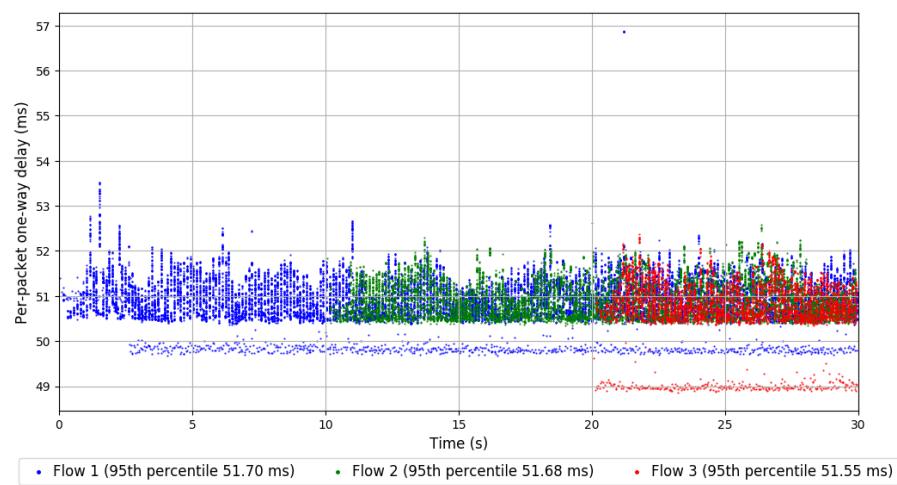
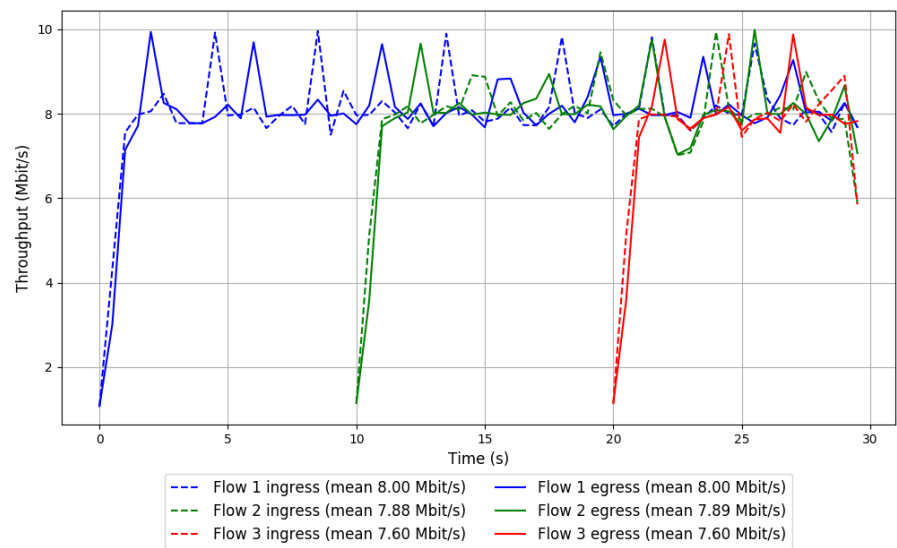
-- Flow 3:

Average throughput: 7.60 Mbit/s

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

Loss rate: 0.00%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2017-12-20 23:54:55

End at: 2017-12-20 23:55:25

Below is generated by plot.py at 2017-12-21 03:53:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.16 Mbit/s

95th percentile per-packet one-way delay: 51.439 ms

Loss rate: 0.70%

-- Flow 1:

Average throughput: 7.80 Mbit/s

95th percentile per-packet one-way delay: 51.475 ms

Loss rate: 0.60%

-- Flow 2:

Average throughput: 7.28 Mbit/s

95th percentile per-packet one-way delay: 51.442 ms

Loss rate: 1.23%

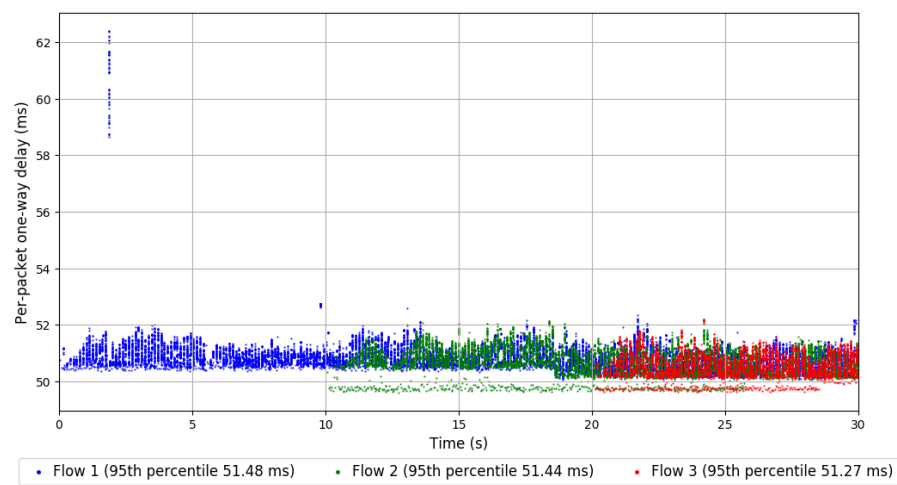
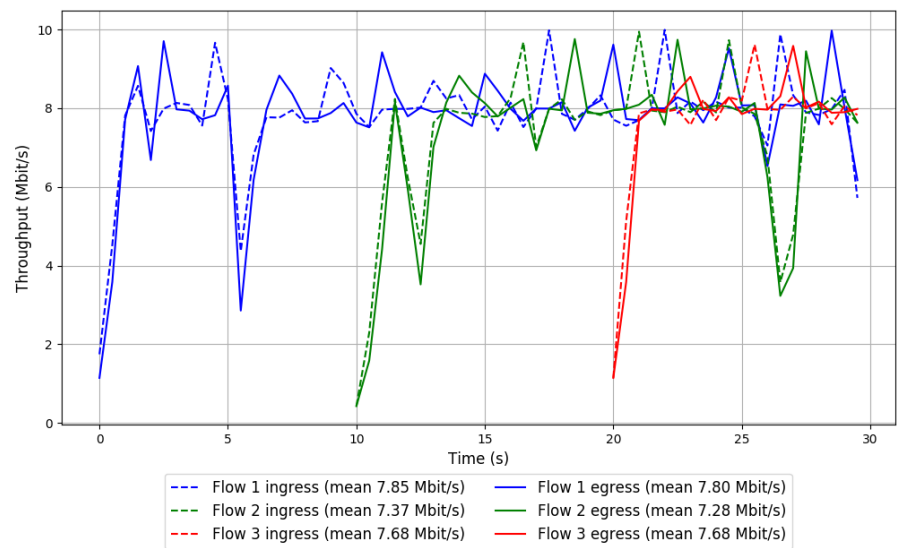
-- Flow 3:

Average throughput: 7.68 Mbit/s

95th percentile per-packet one-way delay: 51.275 ms

Loss rate: 0.00%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2017-12-21 00:07:51

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

Below is generated by plot.py at 2017-12-21 03:53:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.31 Mbit/s

95th percentile per-packet one-way delay: 51.696 ms

Loss rate: 1.12%

-- Flow 1:

Average throughput: 7.68 Mbit/s

95th percentile per-packet one-way delay: 51.719 ms

Loss rate: 1.44%

-- Flow 2:

Average throughput: 7.68 Mbit/s

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

Loss rate: 1.16%

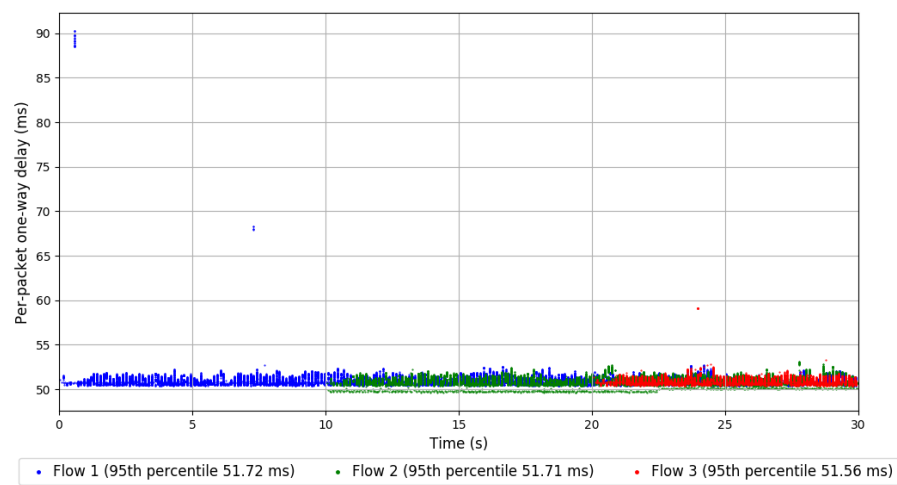
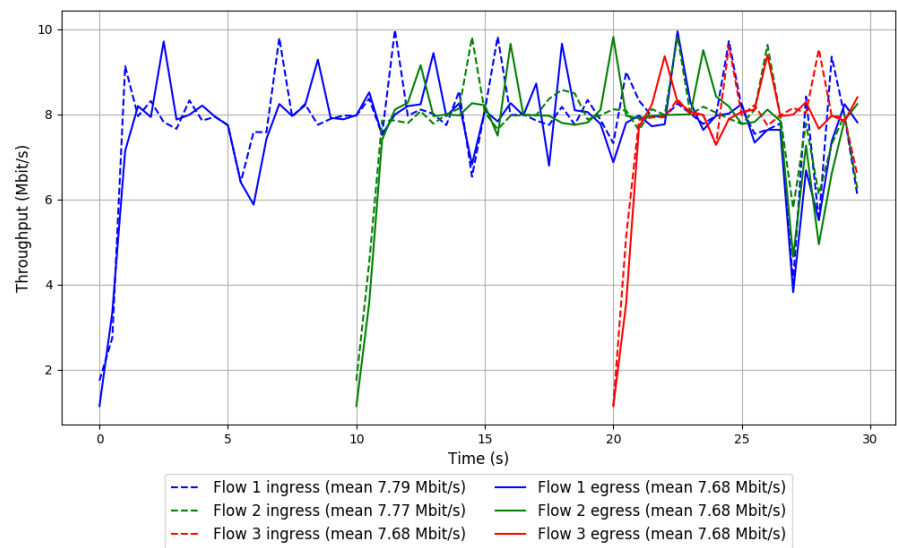
-- Flow 3:

Average throughput: 7.68 Mbit/s

95th percentile per-packet one-way delay: 51.562 ms

Loss rate: 0.08%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2017-12-21 00:20:51

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

Below is generated by plot.py at 2017-12-21 03:53:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.19 Mbit/s

95th percentile per-packet one-way delay: 51.944 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 7.78 Mbit/s

95th percentile per-packet one-way delay: 51.911 ms

Loss rate: 1.00%

-- Flow 2:

Average throughput: 7.47 Mbit/s

95th percentile per-packet one-way delay: 51.963 ms

Loss rate: 1.82%

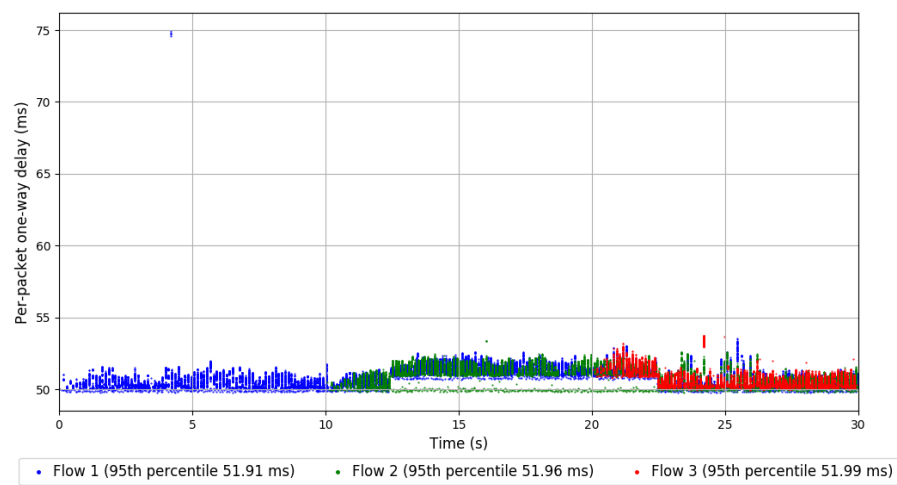
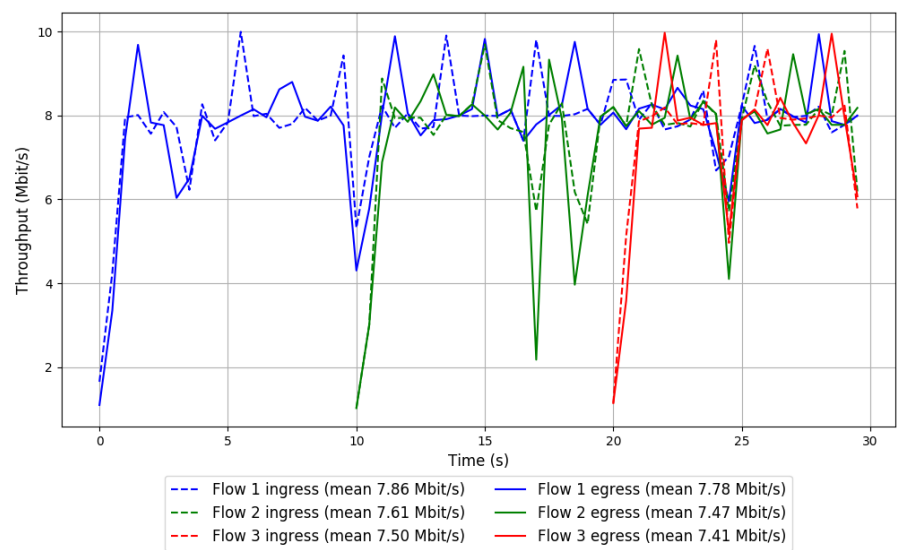
-- Flow 3:

Average throughput: 7.41 Mbit/s

95th percentile per-packet one-way delay: 51.986 ms

Loss rate: 1.17%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2017-12-21 00:33:51

End at: 2017-12-21 00:34:21

Below is generated by plot.py at 2017-12-21 03:53:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.27 Mbit/s

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

Loss rate: 0.52%

-- Flow 1:

Average throughput: 7.78 Mbit/s

95th percentile per-packet one-way delay: 51.192 ms

Loss rate: 0.48%

-- Flow 2:

Average throughput: 7.88 Mbit/s

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

Loss rate: 0.49%

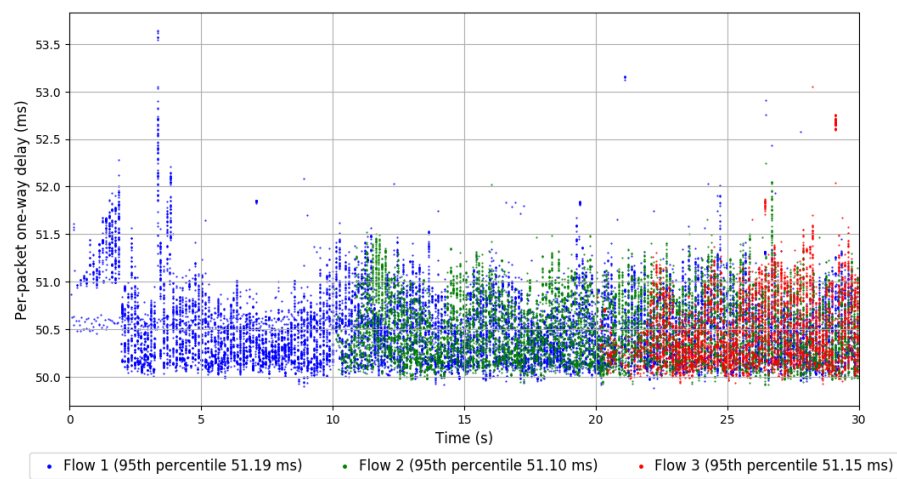
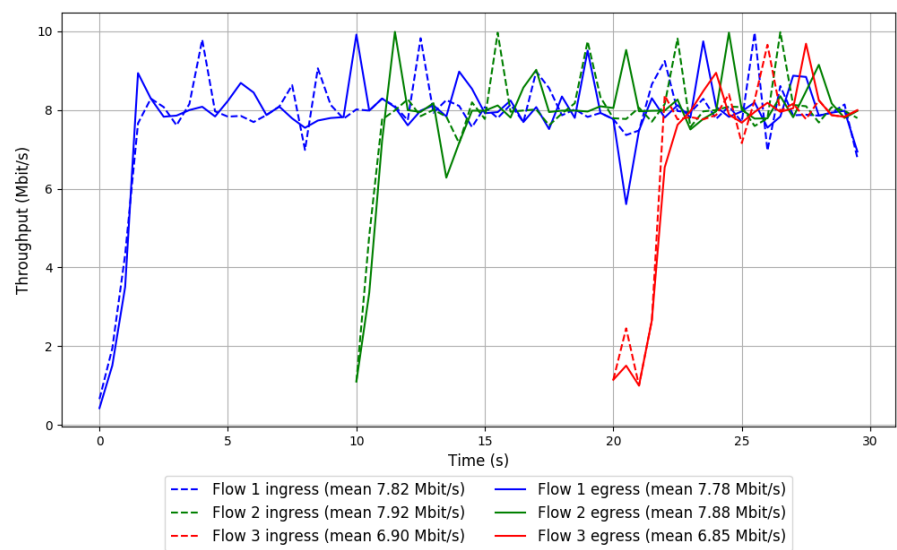
-- Flow 3:

Average throughput: 6.85 Mbit/s

95th percentile per-packet one-way delay: 51.147 ms

Loss rate: 0.71%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2017-12-21 00:46:44

End at: 2017-12-21 00:47:14

Below is generated by plot.py at 2017-12-21 03:53:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.26 Mbit/s

95th percentile per-packet one-way delay: 51.910 ms

Loss rate: 0.64%

-- Flow 1:

Average throughput: 7.75 Mbit/s

95th percentile per-packet one-way delay: 51.879 ms

Loss rate: 0.49%

-- Flow 2:

Average throughput: 7.50 Mbit/s

95th percentile per-packet one-way delay: 51.936 ms

Loss rate: 1.19%

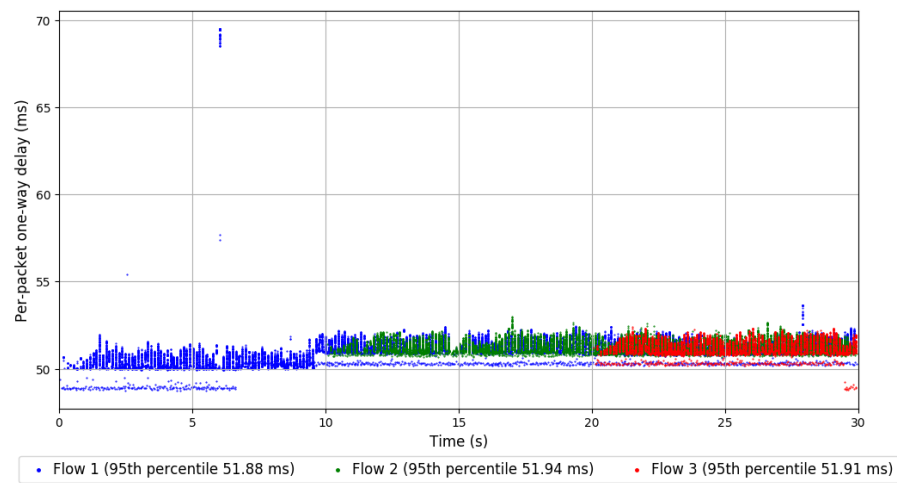
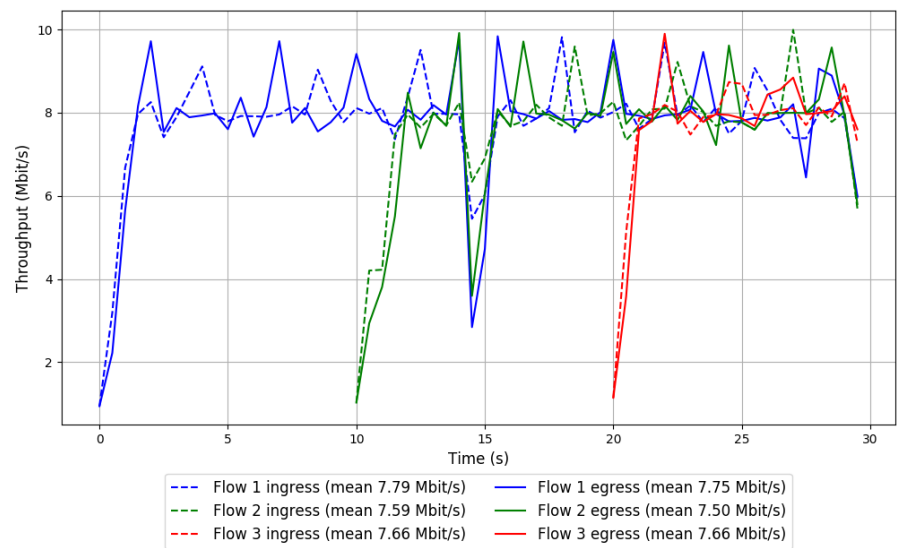
-- Flow 3:

Average throughput: 7.66 Mbit/s

95th percentile per-packet one-way delay: 51.915 ms

Loss rate: 0.00%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2017-12-21 01:00:34

End at: 2017-12-21 01:01:04

Below is generated by plot.py at 2017-12-21 03:53:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.50 Mbit/s

95th percentile per-packet one-way delay: 51.524 ms

Loss rate: 0.21%

-- Flow 1:

Average throughput: 7.84 Mbit/s

95th percentile per-packet one-way delay: 51.554 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 7.73 Mbit/s

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

Loss rate: 0.00%

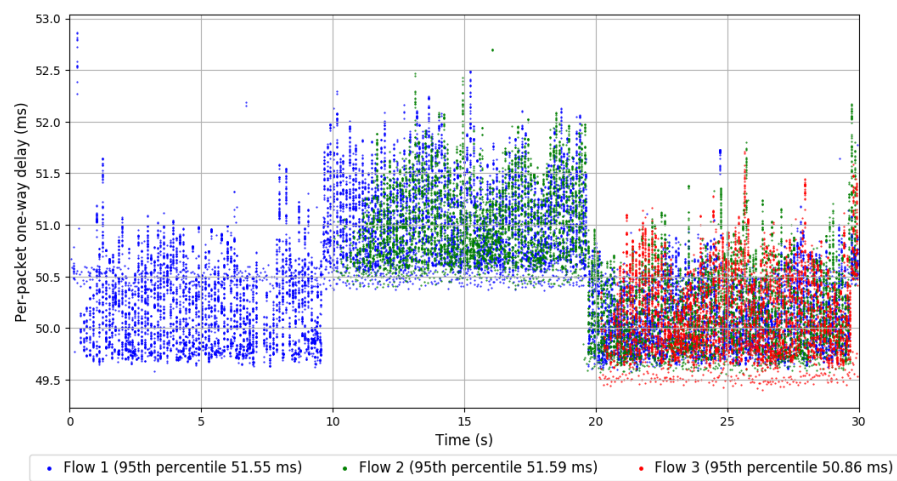
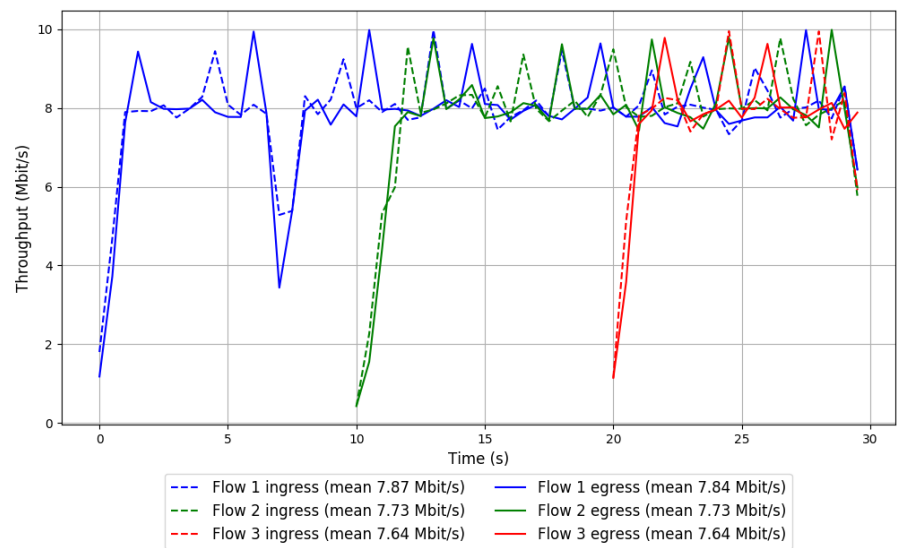
-- Flow 3:

Average throughput: 7.64 Mbit/s

95th percentile per-packet one-way delay: 50.856 ms

Loss rate: 0.00%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2017-12-21 01:13:29

End at: 2017-12-21 01:13:59

Below is generated by plot.py at 2017-12-21 03:53:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.56 Mbit/s

95th percentile per-packet one-way delay: 50.511 ms

Loss rate: 0.22%

-- Flow 1:

Average throughput: 7.82 Mbit/s

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

Loss rate: 0.41%

-- Flow 2:

Average throughput: 7.88 Mbit/s

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

Loss rate: 0.03%

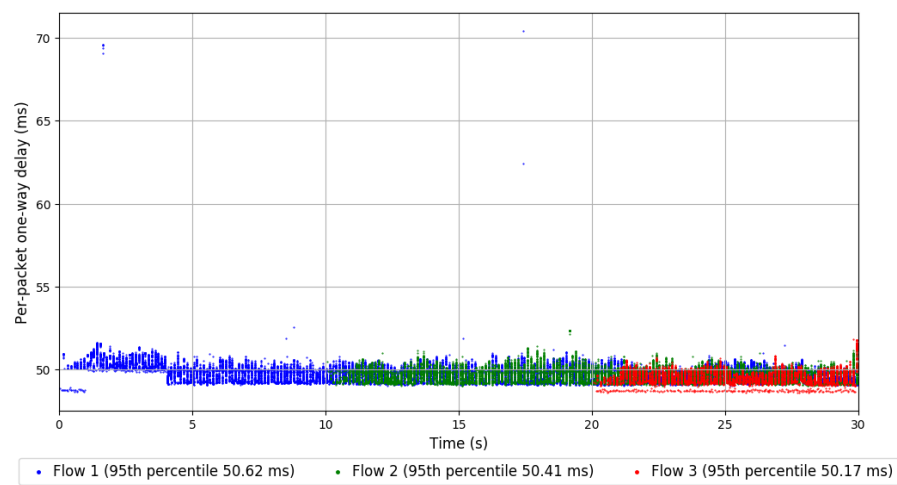
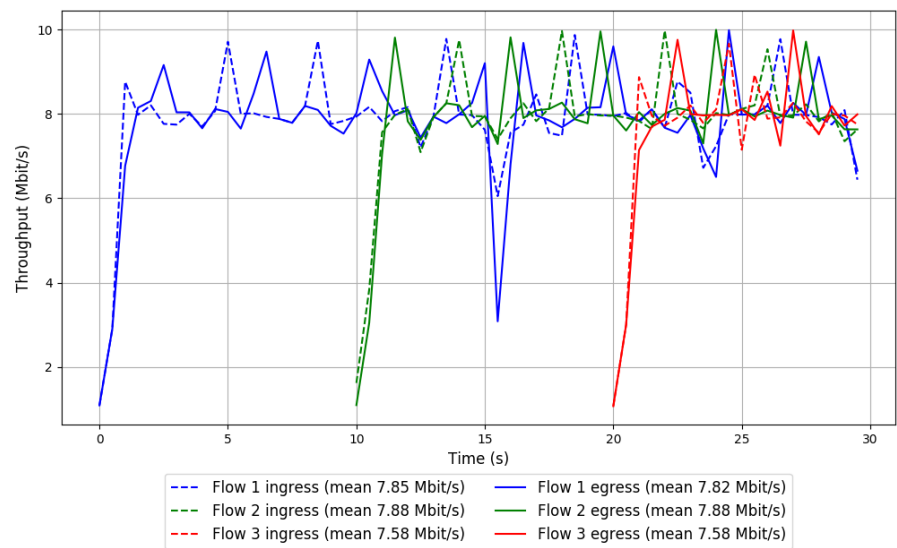
-- Flow 3:

Average throughput: 7.58 Mbit/s

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

Loss rate: 0.00%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2017-12-21 01:26:17

End at: 2017-12-21 01:26:47

Below is generated by plot.py at 2017-12-21 03:53:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.55 Mbit/s

95th percentile per-packet one-way delay: 50.647 ms

Loss rate: 0.24%

-- Flow 1:

Average throughput: 7.86 Mbit/s

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

Loss rate: 0.47%

-- Flow 2:

Average throughput: 7.77 Mbit/s

95th percentile per-packet one-way delay: 50.628 ms

Loss rate: 0.01%

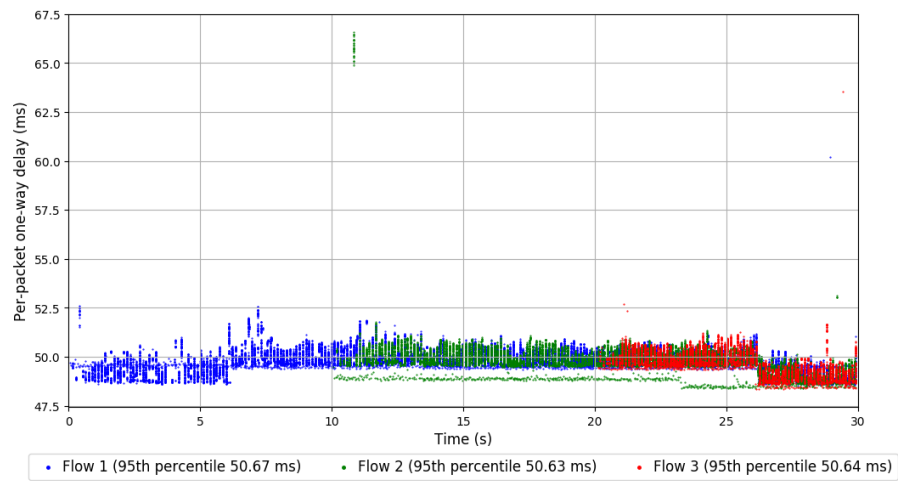
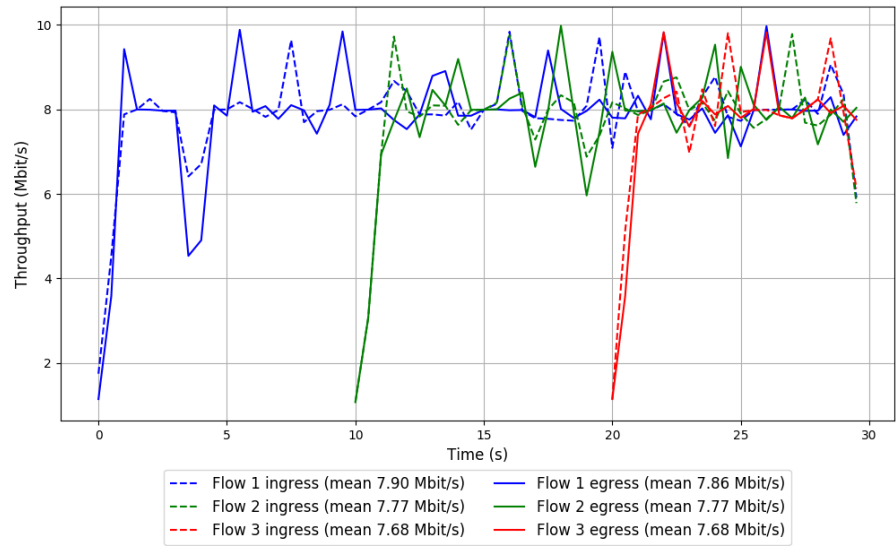
-- Flow 3:

Average throughput: 7.68 Mbit/s

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

Loss rate: 0.00%

Run 10: Report of Sprout — Data Link

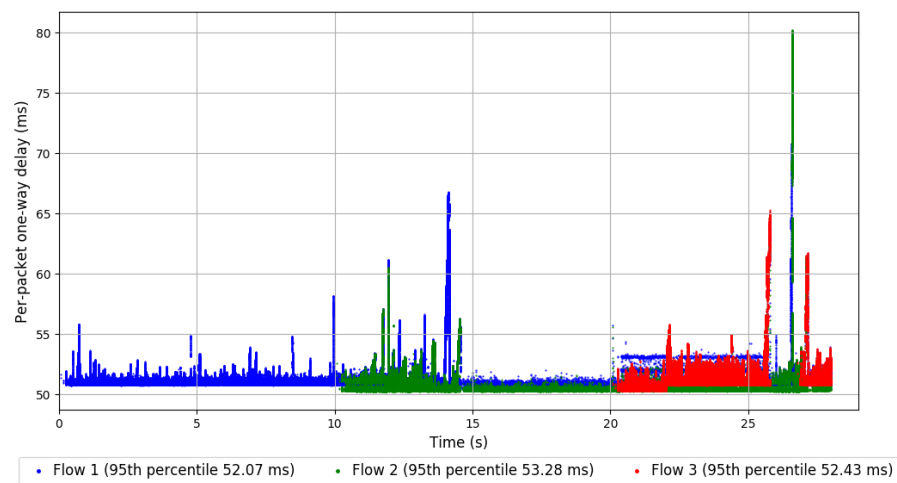
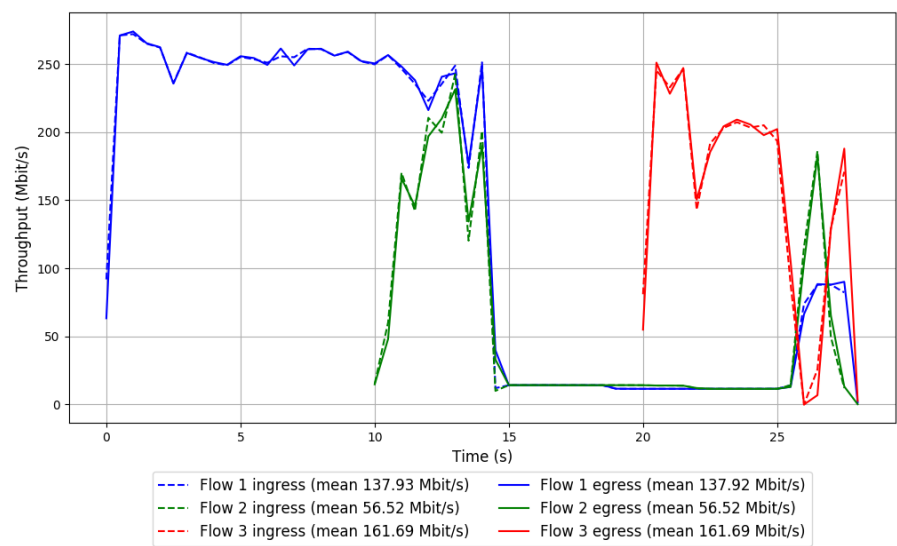


```
Run 1: Statistics of TaoVA-100x

Start at: 2017-12-20 23:29:59
End at: 2017-12-20 23:30:29

# Below is generated by plot.py at 2017-12-21 03:57:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 220.10 Mbit/s
95th percentile per-packet one-way delay: 52.350 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 137.92 Mbit/s
95th percentile per-packet one-way delay: 52.070 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 56.52 Mbit/s
95th percentile per-packet one-way delay: 53.277 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 161.69 Mbit/s
95th percentile per-packet one-way delay: 52.427 ms
Loss rate: 0.00%
```


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

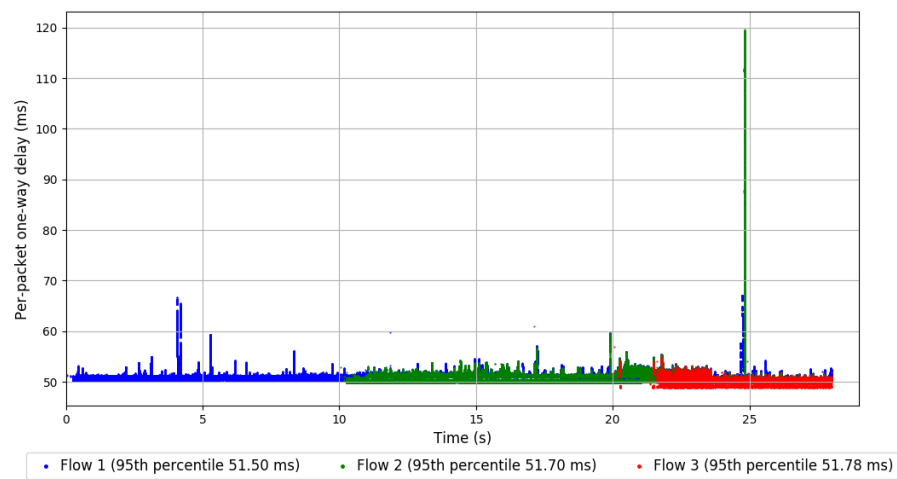
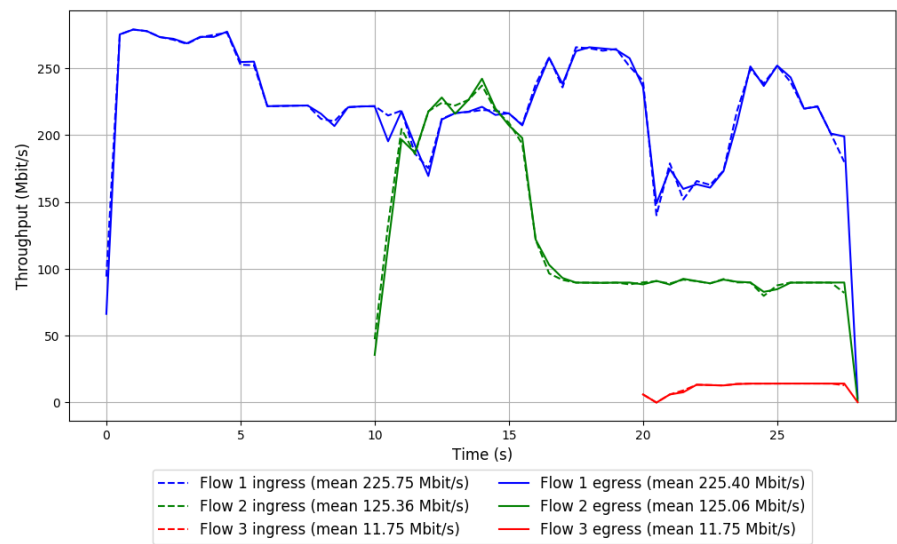


```
Run 2: Statistics of TaoVA-100x

Start at: 2017-12-20 23:42:40
End at: 2017-12-20 23:43:10

# Below is generated by plot.py at 2017-12-21 03:59:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 309.03 Mbit/s
95th percentile per-packet one-way delay: 51.572 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 225.40 Mbit/s
95th percentile per-packet one-way delay: 51.503 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 125.06 Mbit/s
95th percentile per-packet one-way delay: 51.696 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 11.75 Mbit/s
95th percentile per-packet one-way delay: 51.783 ms
Loss rate: 0.00%
```

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

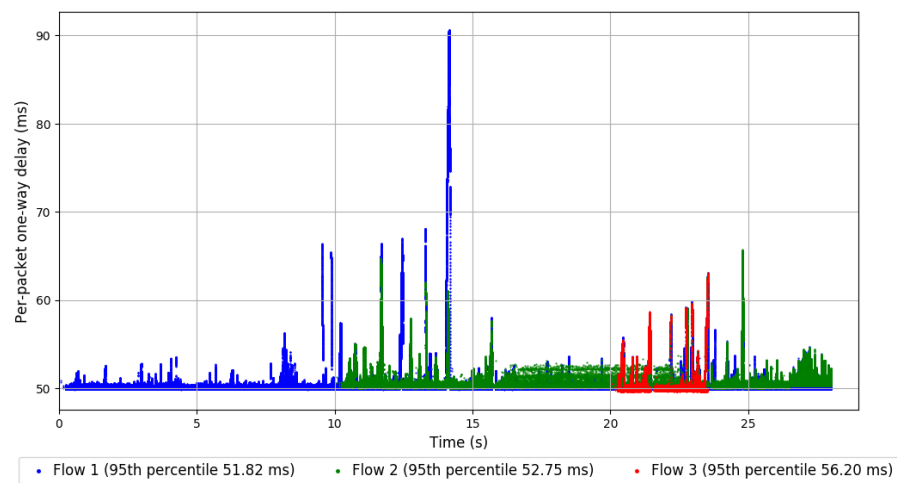
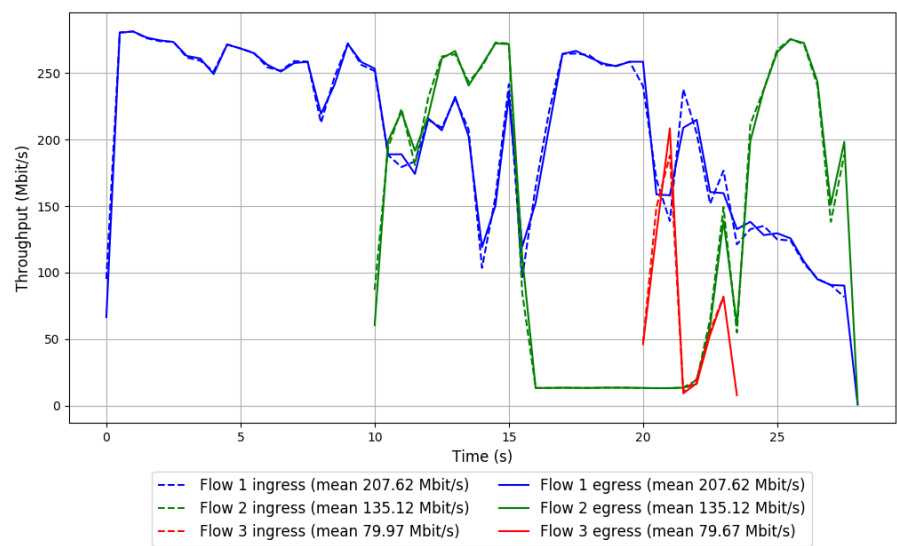


```
Run 3: Statistics of TaoVA-100x

Start at: 2017-12-20 23:55:35
End at: 2017-12-20 23:56:05

# Below is generated by plot.py at 2017-12-21 03:59:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 304.26 Mbit/s
95th percentile per-packet one-way delay: 52.306 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 207.62 Mbit/s
95th percentile per-packet one-way delay: 51.816 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 135.12 Mbit/s
95th percentile per-packet one-way delay: 52.747 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 79.67 Mbit/s
95th percentile per-packet one-way delay: 56.198 ms
Loss rate: 0.01%
```

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

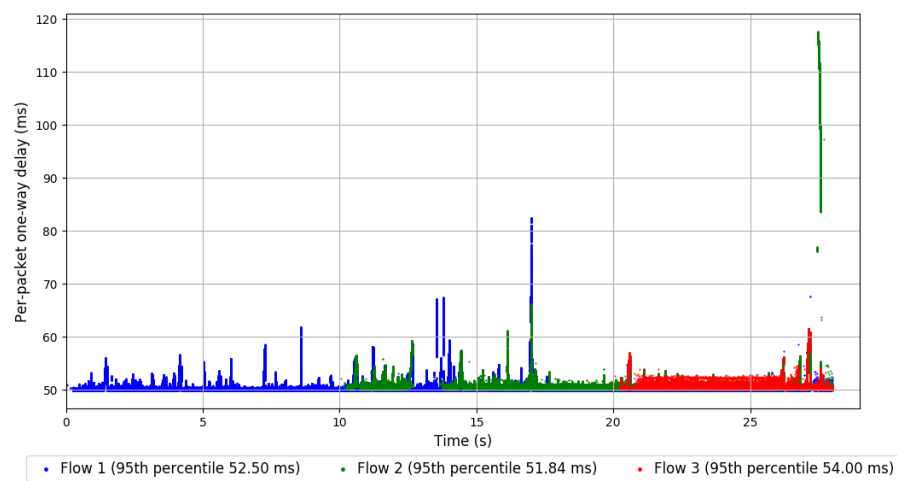
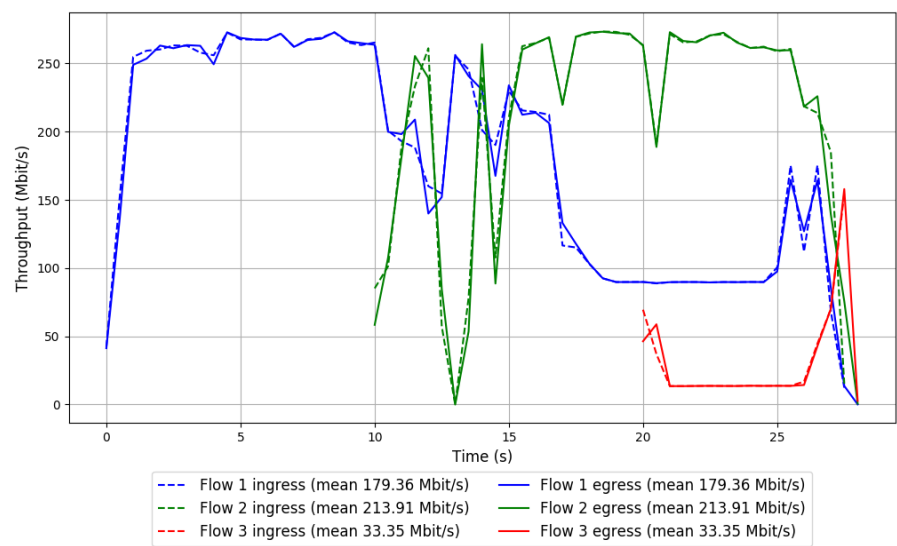


```
Run 4: Statistics of TaoVA-100x

Start at: 2017-12-21 00:08:31
End at: 2017-12-21 00:09:01

# Below is generated by plot.py at 2017-12-21 04:00:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 326.14 Mbit/s
95th percentile per-packet one-way delay: 52.334 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 179.36 Mbit/s
95th percentile per-packet one-way delay: 52.503 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 213.91 Mbit/s
95th percentile per-packet one-way delay: 51.838 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 33.35 Mbit/s
95th percentile per-packet one-way delay: 54.002 ms
Loss rate: 0.00%
```

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



Run 5: Statistics of TaoVA-100x

Start at: 2017-12-21 00:21:31

End at: 2017-12-21 00:22:01

Below is generated by plot.py at 2017-12-21 04:00:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 326.06 Mbit/s

95th percentile per-packet one-way delay: 56.205 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 191.69 Mbit/s

95th percentile per-packet one-way delay: 54.486 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 179.61 Mbit/s

95th percentile per-packet one-way delay: 58.295 ms

Loss rate: 0.00%

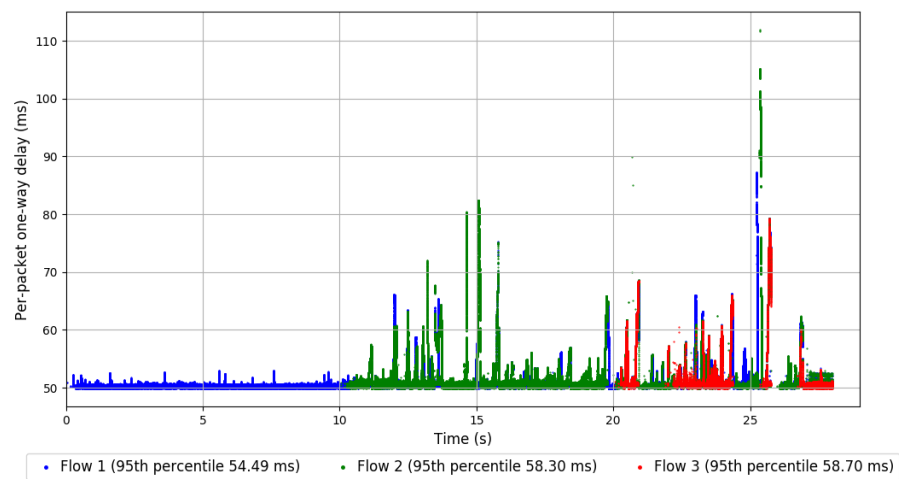
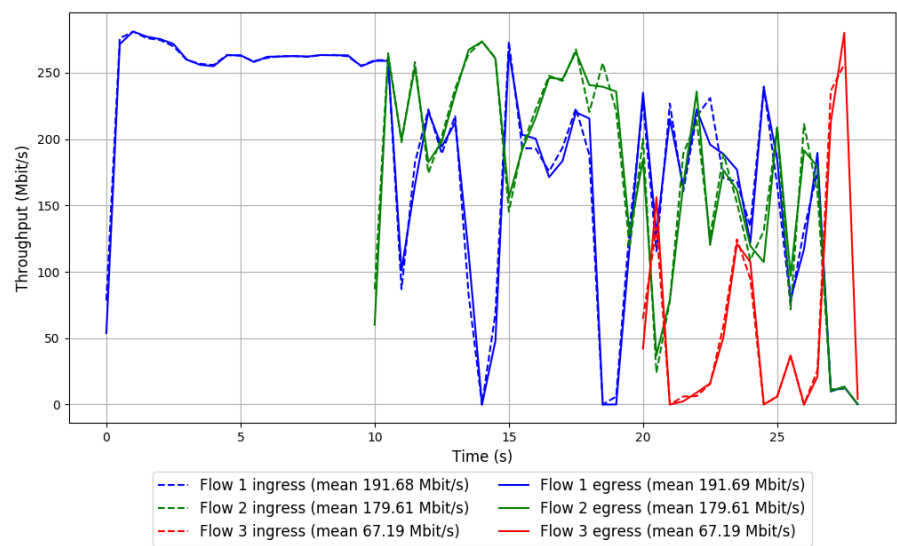
-- Flow 3:

Average throughput: 67.19 Mbit/s

95th percentile per-packet one-way delay: 58.699 ms

Loss rate: 0.00%

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



Run 6: Statistics of TaoVA-100x

Start at: 2017-12-21 00:34:32

End at: 2017-12-21 00:35:02

Below is generated by plot.py at 2017-12-21 04:01:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 345.79 Mbit/s

95th percentile per-packet one-way delay: 52.688 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 216.05 Mbit/s

95th percentile per-packet one-way delay: 52.692 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 123.97 Mbit/s

95th percentile per-packet one-way delay: 52.601 ms

Loss rate: 0.08%

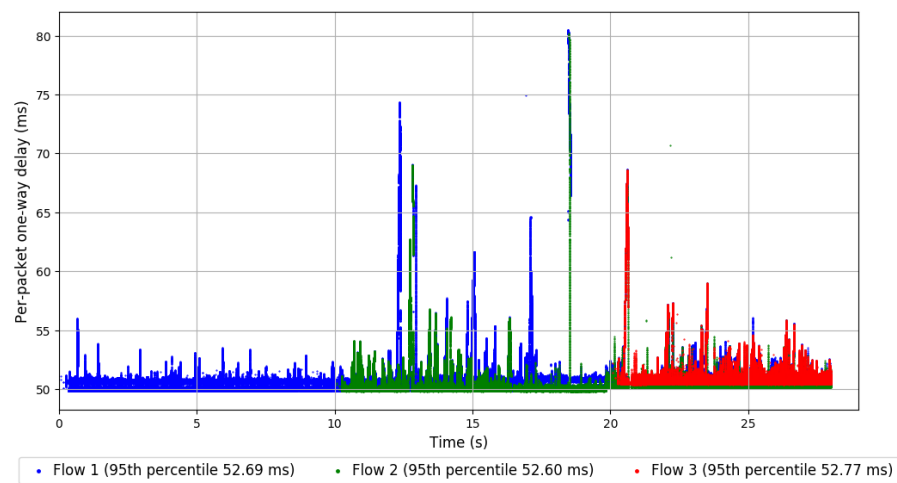
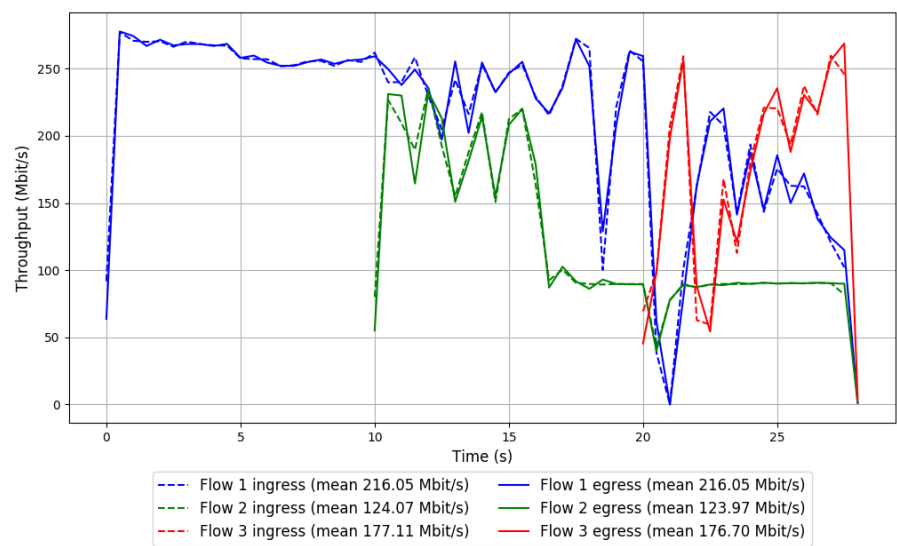
-- Flow 3:

Average throughput: 176.70 Mbit/s

95th percentile per-packet one-way delay: 52.766 ms

Loss rate: 0.23%

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



Run 7: Statistics of TaoVA-100x

Start at: 2017-12-21 00:47:24

End at: 2017-12-21 00:47:54

Below is generated by plot.py at 2017-12-21 04:03:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 310.55 Mbit/s

95th percentile per-packet one-way delay: 54.365 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 191.96 Mbit/s

95th percentile per-packet one-way delay: 52.576 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 163.24 Mbit/s

95th percentile per-packet one-way delay: 56.221 ms

Loss rate: 0.07%

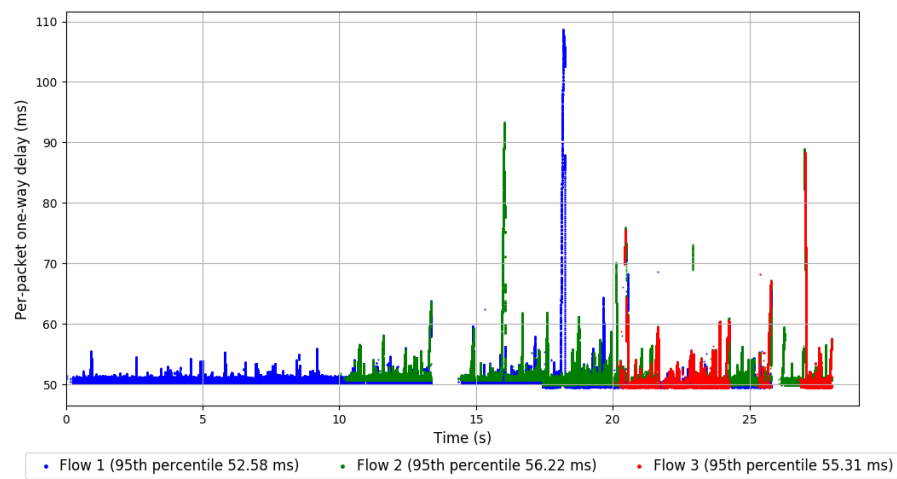
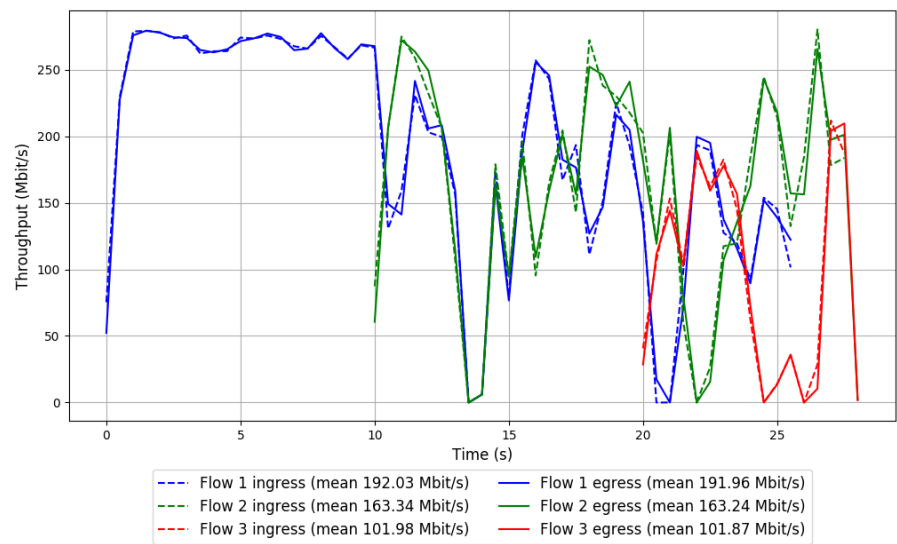
-- Flow 3:

Average throughput: 101.87 Mbit/s

95th percentile per-packet one-way delay: 55.313 ms

Loss rate: 0.12%

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



Run 8: Statistics of TaoVA-100x

Start at: 2017-12-21 01:01:14

End at: 2017-12-21 01:01:44

Below is generated by plot.py at 2017-12-21 04:03:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 316.31 Mbit/s

95th percentile per-packet one-way delay: 54.976 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 154.64 Mbit/s

95th percentile per-packet one-way delay: 52.754 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 207.69 Mbit/s

95th percentile per-packet one-way delay: 56.069 ms

Loss rate: 0.00%

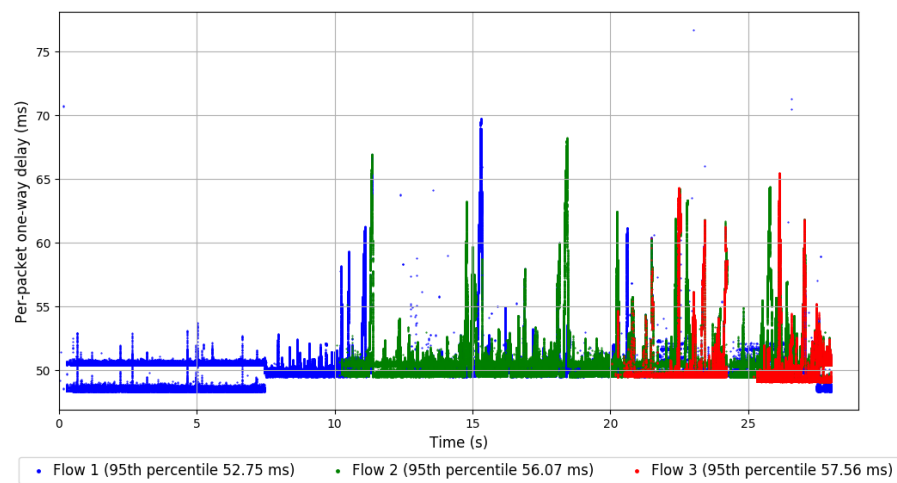
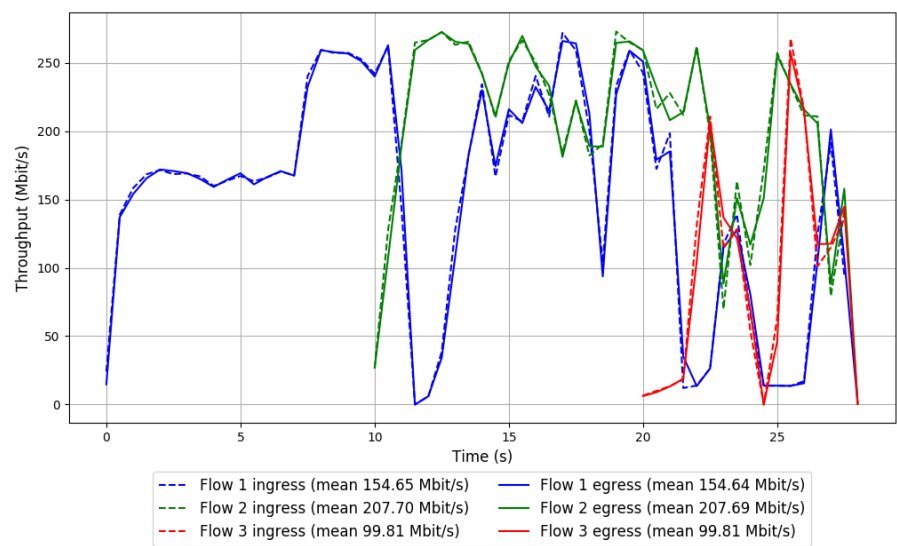
-- Flow 3:

Average throughput: 99.81 Mbit/s

95th percentile per-packet one-way delay: 57.561 ms

Loss rate: 0.00%

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

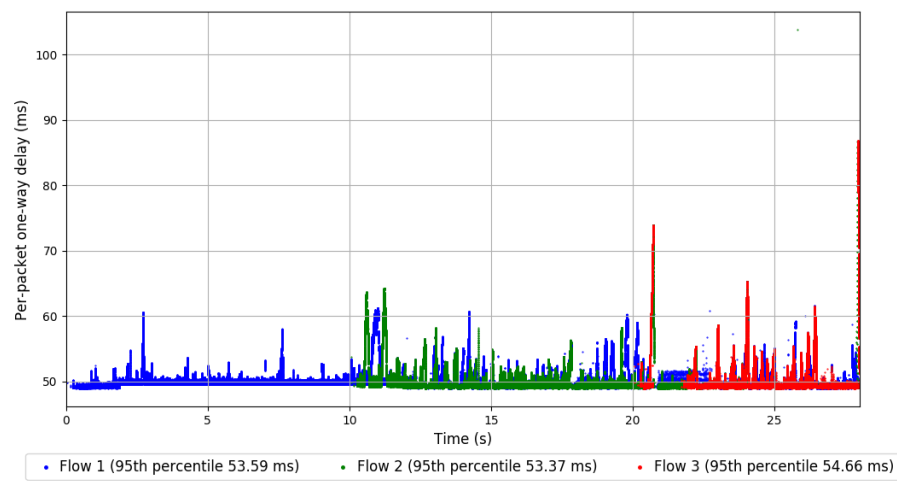
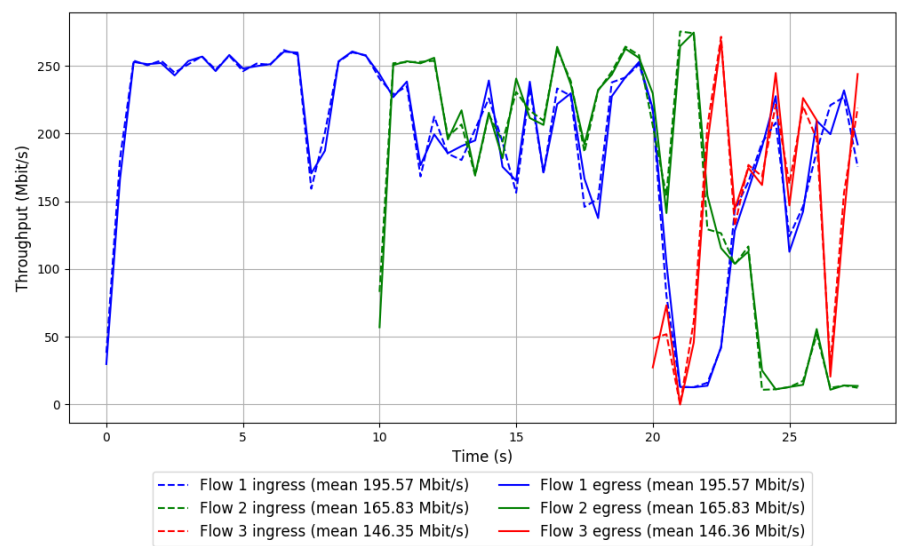


```
Run 9: Statistics of TaoVA-100x

Start at: 2017-12-21 01:14:09
End at: 2017-12-21 01:14:39

# Below is generated by plot.py at 2017-12-21 04:08:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 343.52 Mbit/s
95th percentile per-packet one-way delay: 53.664 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 195.57 Mbit/s
95th percentile per-packet one-way delay: 53.593 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 165.83 Mbit/s
95th percentile per-packet one-way delay: 53.373 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 146.36 Mbit/s
95th percentile per-packet one-way delay: 54.661 ms
Loss rate: 0.00%
```


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

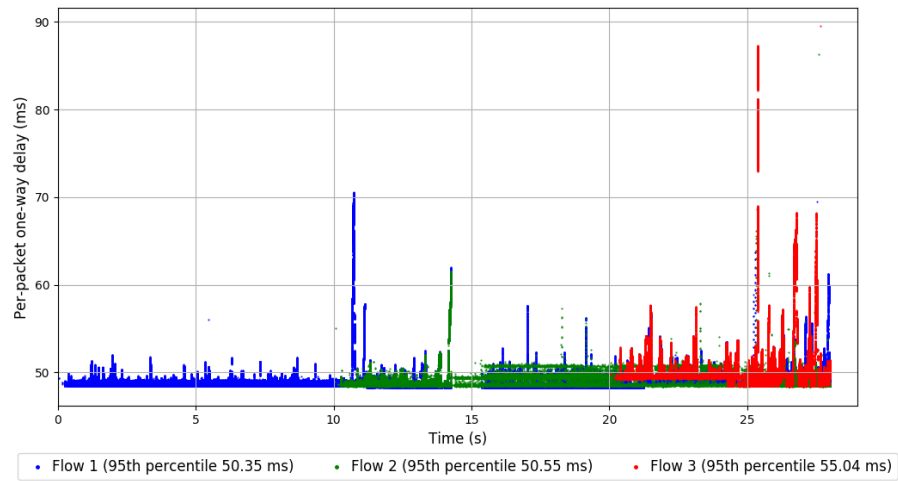
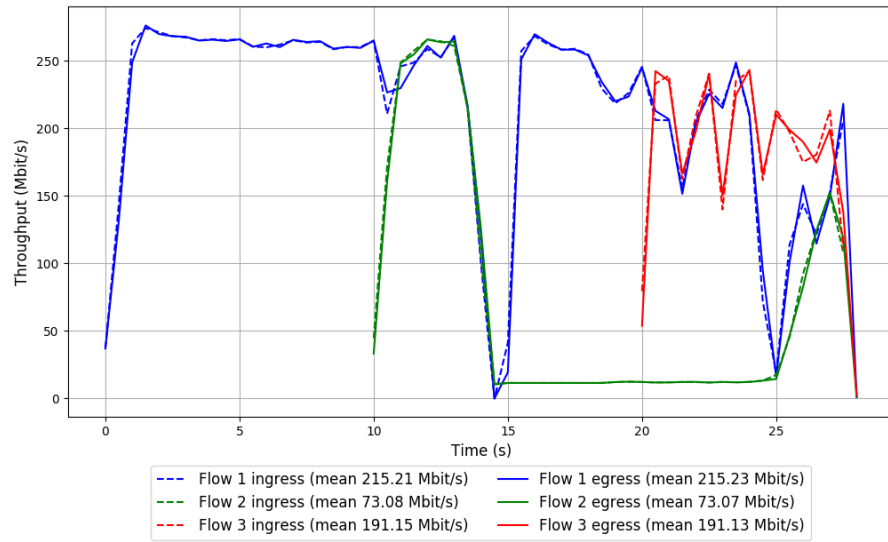


```
Run 10: Statistics of TaoVA-100x

Start at: 2017-12-21 01:26:57
End at: 2017-12-21 01:27:27

# Below is generated by plot.py at 2017-12-21 04:09:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 316.39 Mbit/s
95th percentile per-packet one-way delay: 51.203 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 215.23 Mbit/s
95th percentile per-packet one-way delay: 50.354 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 73.07 Mbit/s
95th percentile per-packet one-way delay: 50.552 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 191.13 Mbit/s
95th percentile per-packet one-way delay: 55.039 ms
Loss rate: 0.02%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2017-12-20 23:28:35

End at: 2017-12-20 23:29:05

Below is generated by plot.py at 2017-12-21 04:09:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 89.36 Mbit/s

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

Loss rate: 0.58%

-- Flow 1:

Average throughput: 62.98 Mbit/s

95th percentile per-packet one-way delay: 57.976 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 37.21 Mbit/s

95th percentile per-packet one-way delay: 51.822 ms

Loss rate: 0.05%

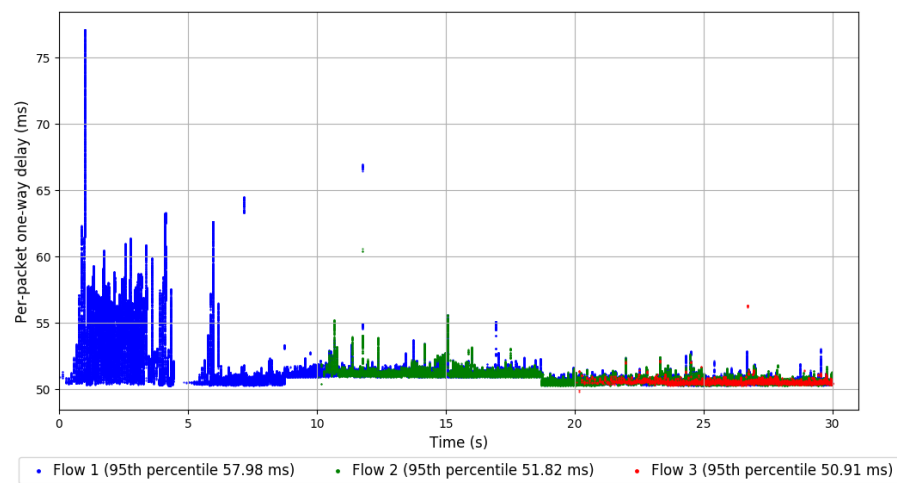
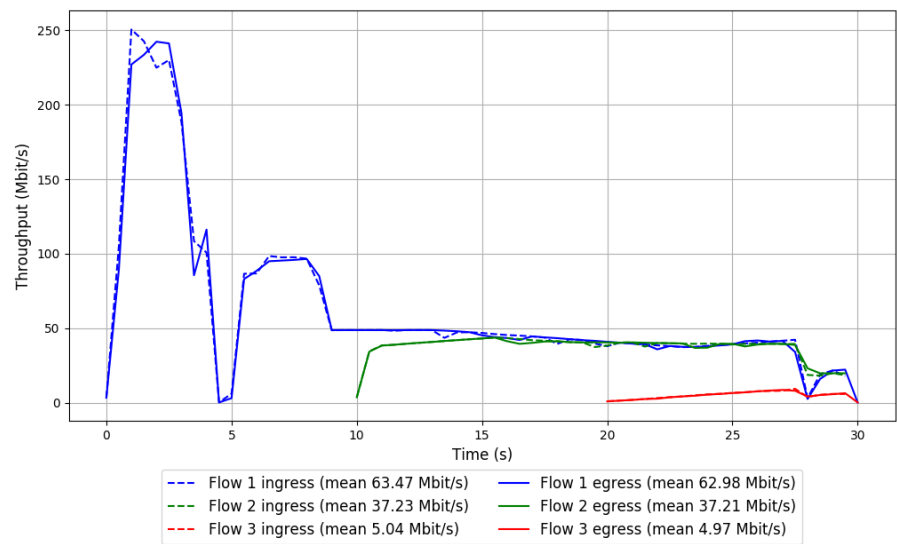
-- Flow 3:

Average throughput: 4.97 Mbit/s

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

Loss rate: 1.39%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2017-12-20 23:41:14

End at: 2017-12-20 23:41:44

Below is generated by plot.py at 2017-12-21 04:09:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 121.92 Mbit/s

95th percentile per-packet one-way delay: 56.356 ms

Loss rate: 0.26%

-- Flow 1:

Average throughput: 55.35 Mbit/s

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

Loss rate: 0.36%

-- Flow 2:

Average throughput: 25.96 Mbit/s

95th percentile per-packet one-way delay: 53.583 ms

Loss rate: 0.68%

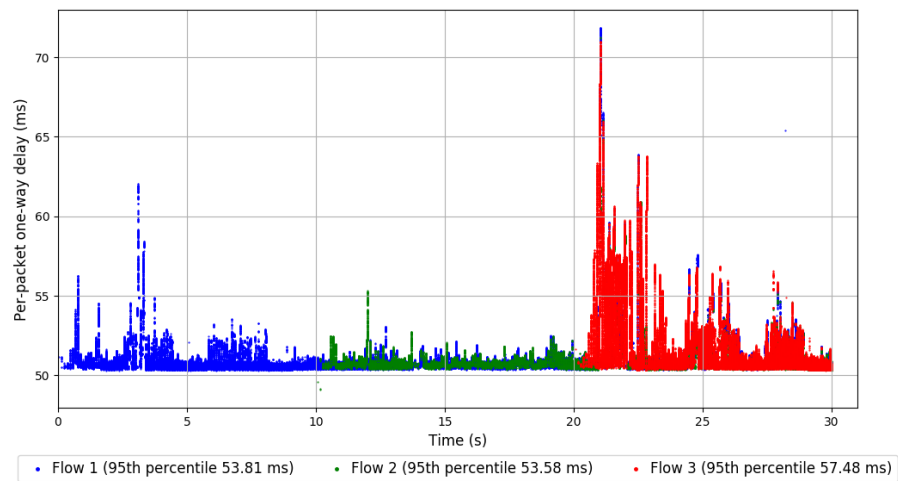
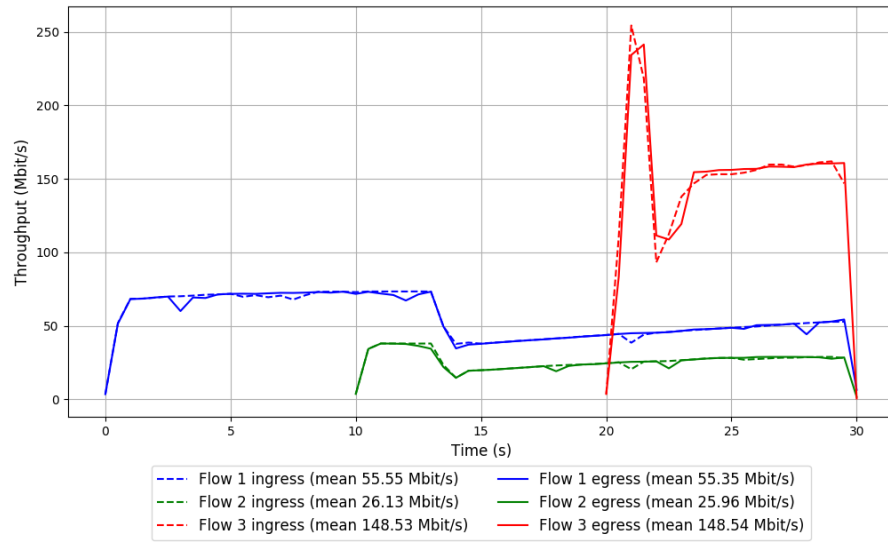
-- Flow 3:

Average throughput: 148.54 Mbit/s

95th percentile per-packet one-way delay: 57.477 ms

Loss rate: 0.00%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2017-12-20 23:54:09

End at: 2017-12-20 23:54:39

Below is generated by plot.py at 2017-12-21 04:09:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 112.49 Mbit/s

95th percentile per-packet one-way delay: 57.857 ms

Loss rate: 0.07%

-- Flow 1:

Average throughput: 22.78 Mbit/s

95th percentile per-packet one-way delay: 55.411 ms

Loss rate: 0.34%

-- Flow 2:

Average throughput: 53.48 Mbit/s

95th percentile per-packet one-way delay: 56.139 ms

Loss rate: 0.00%

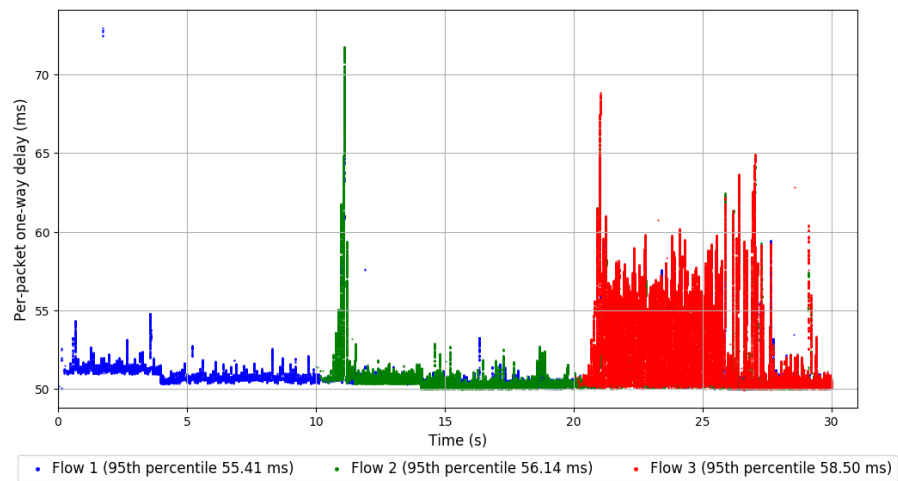
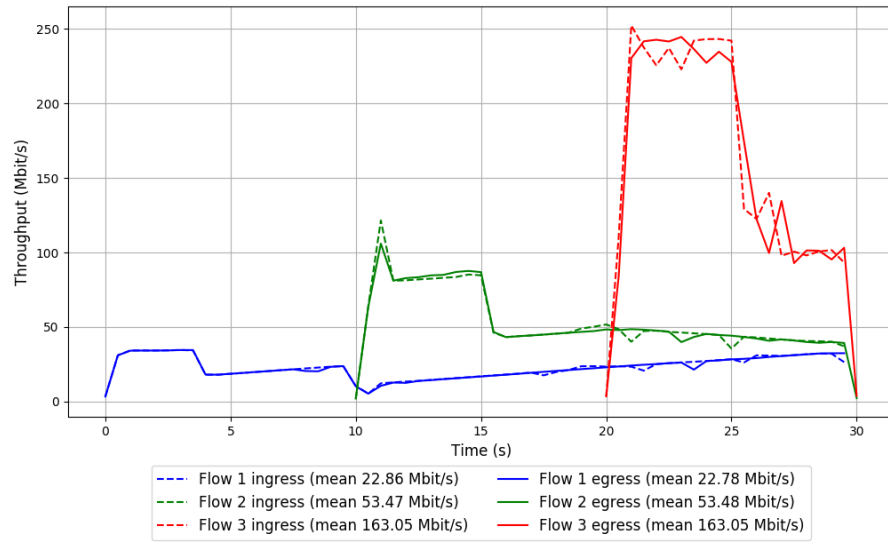
-- Flow 3:

Average throughput: 163.05 Mbit/s

95th percentile per-packet one-way delay: 58.498 ms

Loss rate: 0.00%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2017-12-21 00:07:08

End at: 2017-12-21 00:07:38

Below is generated by plot.py at 2017-12-21 04:09:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 66.53 Mbit/s

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

Loss rate: 0.04%

-- Flow 1:

Average throughput: 17.11 Mbit/s

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

Loss rate: 0.16%

-- Flow 2:

Average throughput: 54.69 Mbit/s

95th percentile per-packet one-way delay: 51.852 ms

Loss rate: 0.00%

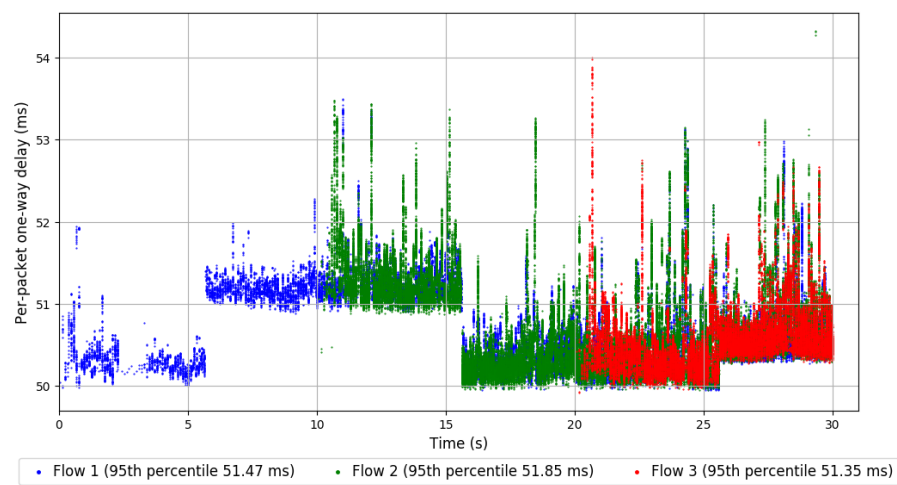
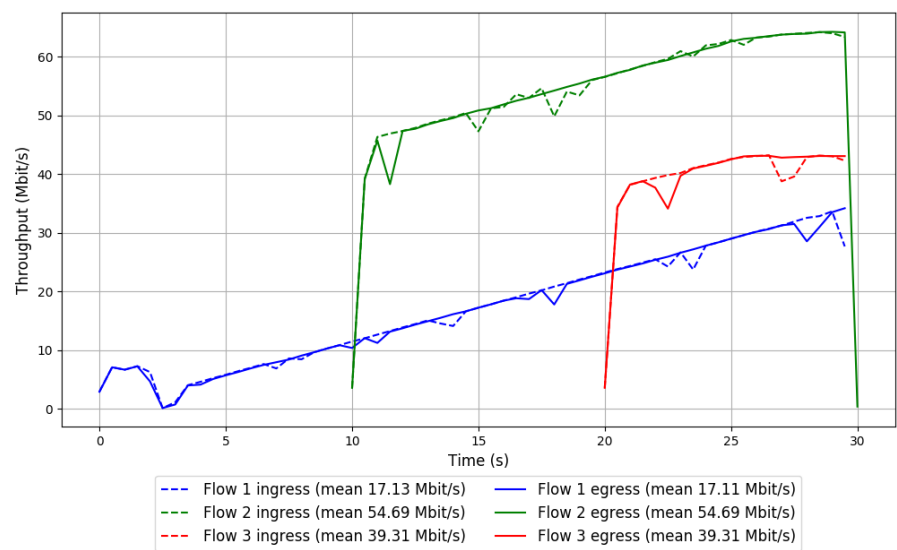
-- Flow 3:

Average throughput: 39.31 Mbit/s

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

Loss rate: 0.00%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2017-12-21 00:20:04

End at: 2017-12-21 00:20:34

Below is generated by plot.py at 2017-12-21 04:09:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 129.63 Mbit/s

95th percentile per-packet one-way delay: 57.424 ms

Loss rate: 0.12%

-- Flow 1:

Average throughput: 30.61 Mbit/s

95th percentile per-packet one-way delay: 53.386 ms

Loss rate: 0.52%

-- Flow 2:

Average throughput: 116.18 Mbit/s

95th percentile per-packet one-way delay: 58.176 ms

Loss rate: 0.00%

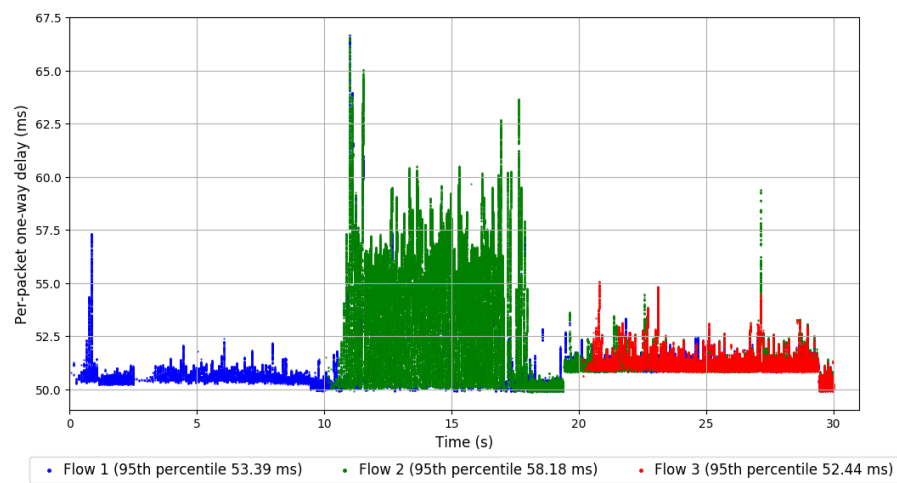
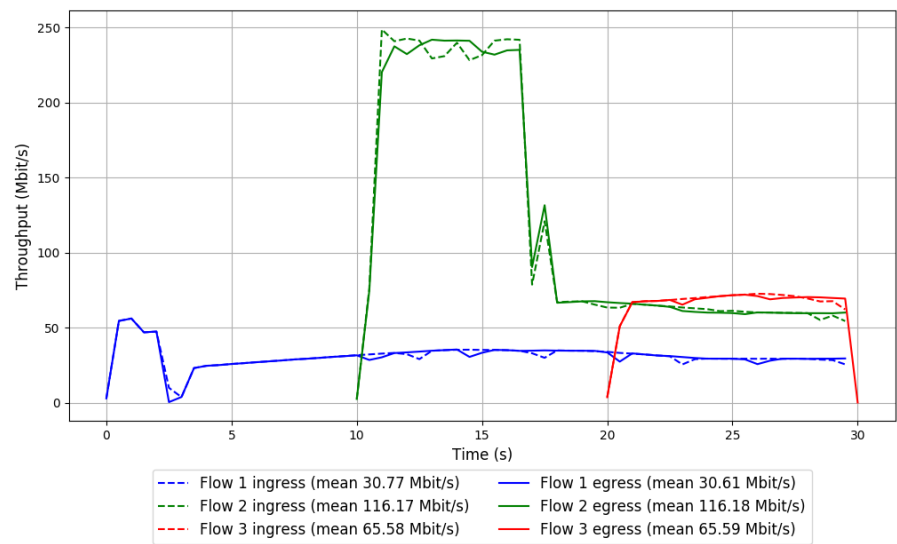
-- Flow 3:

Average throughput: 65.59 Mbit/s

95th percentile per-packet one-way delay: 52.443 ms

Loss rate: 0.00%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2017-12-21 00:33:09

End at: 2017-12-21 00:33:39

Below is generated by plot.py at 2017-12-21 04:09:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 52.81 Mbit/s

95th percentile per-packet one-way delay: 51.572 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 12.73 Mbit/s

95th percentile per-packet one-way delay: 3547.198 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 67.02 Mbit/s

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

Loss rate: 0.00%

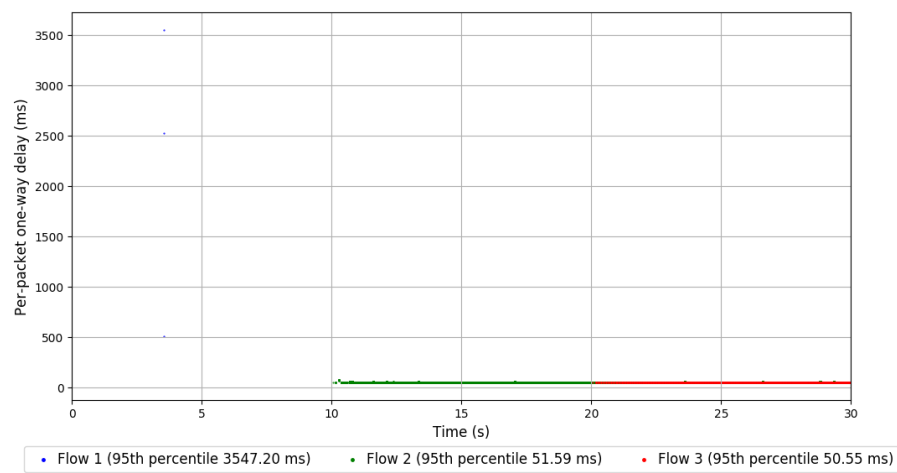
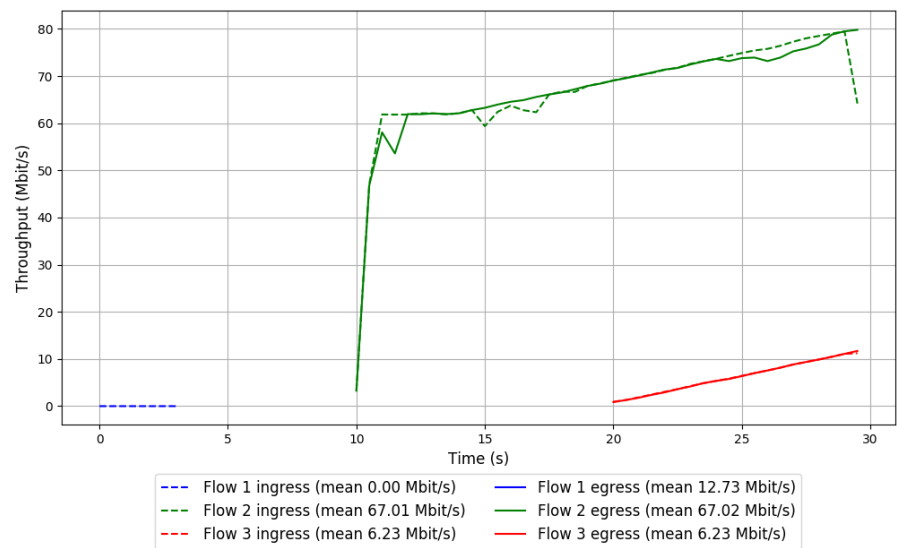
-- Flow 3:

Average throughput: 6.23 Mbit/s

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

Loss rate: 0.04%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2017-12-21 00:46:04

End at: 2017-12-21 00:46:34

Below is generated by plot.py at 2017-12-21 04:09:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.23 Mbit/s

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

Loss rate: 1.00%

-- Flow 1:

Average throughput: 13.02 Mbit/s

95th percentile per-packet one-way delay: 4207.837 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 13.46 Mbit/s

95th percentile per-packet one-way delay: 51.818 ms

Loss rate: 1.43%

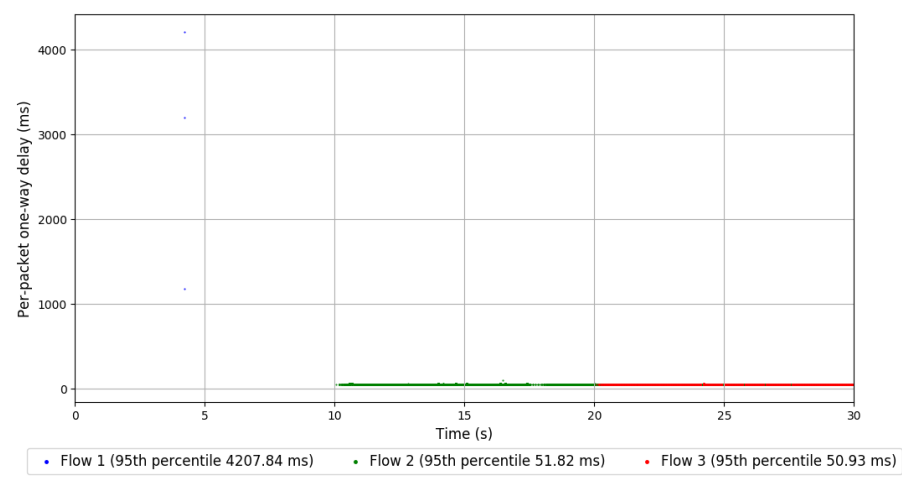
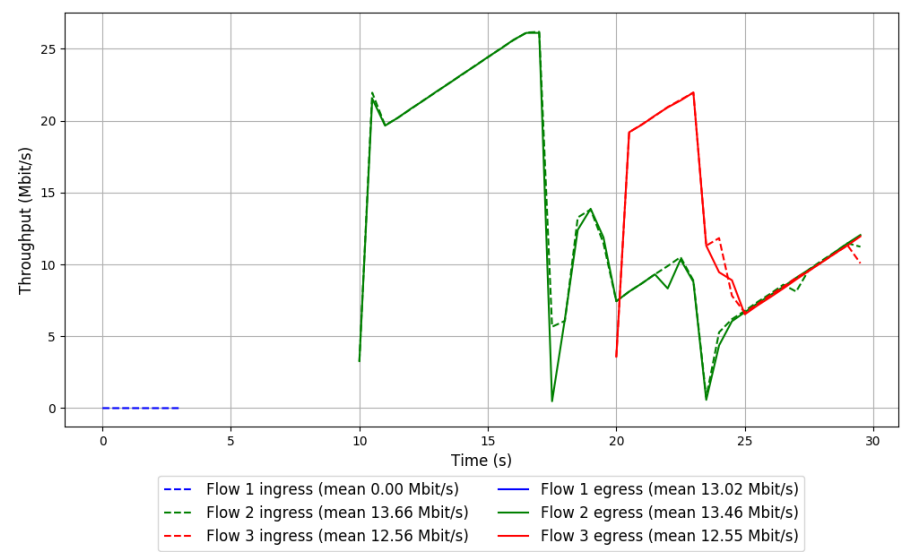
-- Flow 3:

Average throughput: 12.55 Mbit/s

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

Loss rate: 0.05%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2017-12-21 00:59:50

End at: 2017-12-21 01:00:20

Below is generated by plot.py at 2017-12-21 04:09:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 79.28 Mbit/s

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

Loss rate: 0.13%

-- Flow 1:

Average throughput: 51.63 Mbit/s

95th percentile per-packet one-way delay: 53.477 ms

Loss rate: 0.21%

-- Flow 2:

Average throughput: 21.39 Mbit/s

95th percentile per-packet one-way delay: 51.039 ms

Loss rate: 0.00%

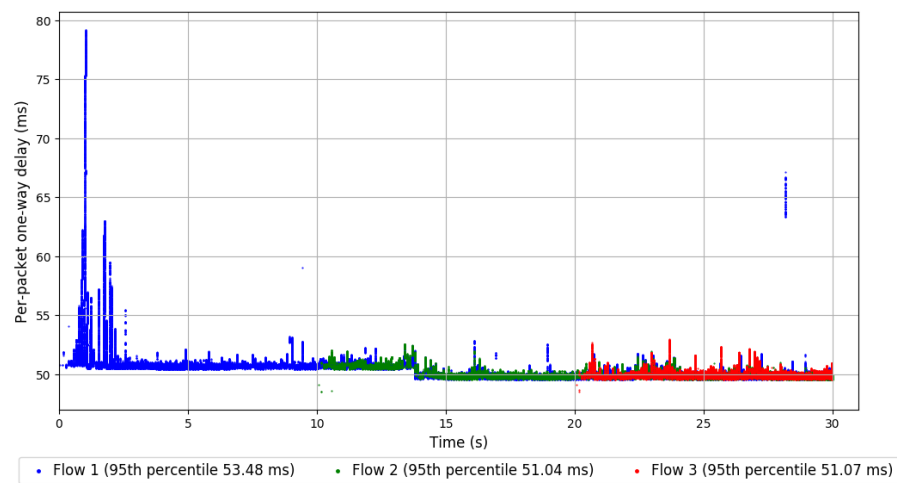
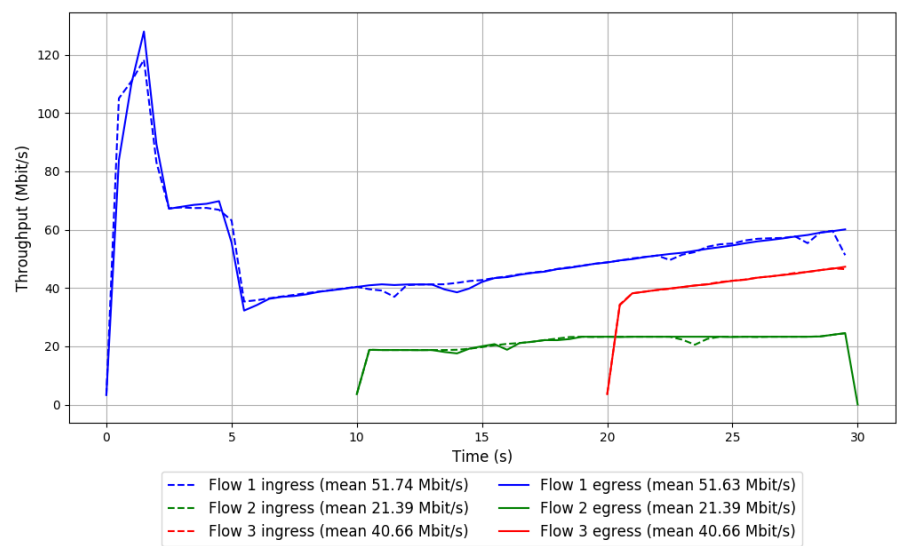
-- Flow 3:

Average throughput: 40.66 Mbit/s

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

Loss rate: 0.00%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2017-12-21 01:12:44

End at: 2017-12-21 01:13:14

Below is generated by plot.py at 2017-12-21 04:09:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 107.20 Mbit/s

95th percentile per-packet one-way delay: 50.884 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 59.65 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 34.26 Mbit/s

95th percentile per-packet one-way delay: 50.732 ms

Loss rate: 0.00%

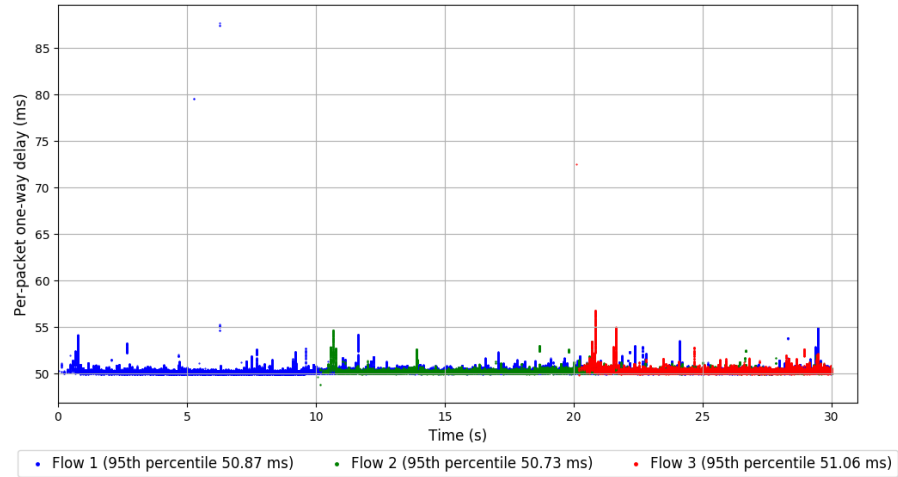
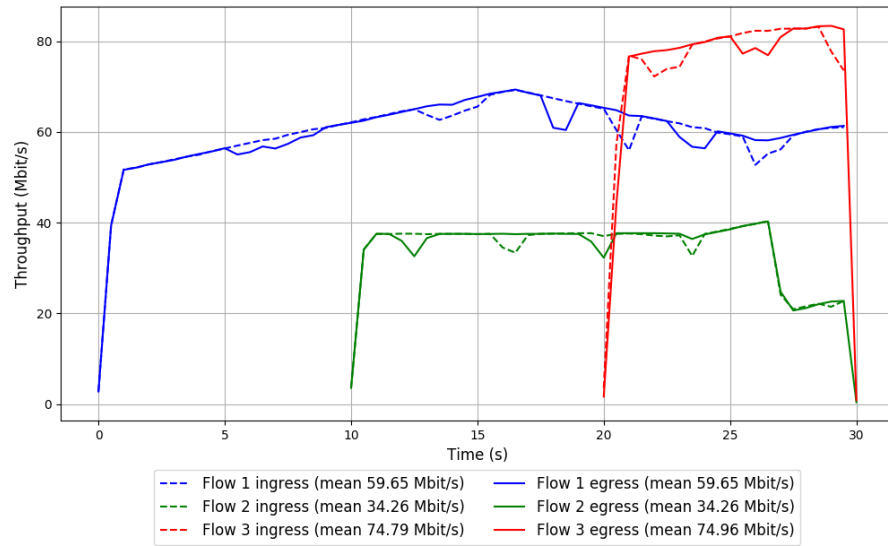
-- Flow 3:

Average throughput: 74.96 Mbit/s

95th percentile per-packet one-way delay: 51.062 ms

Loss rate: 0.00%

Run 9: Report of TCP Vegas — Data Link

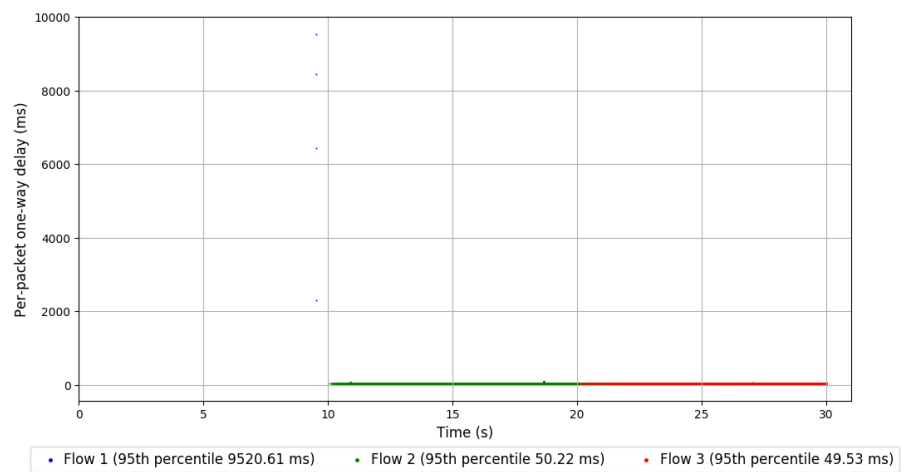
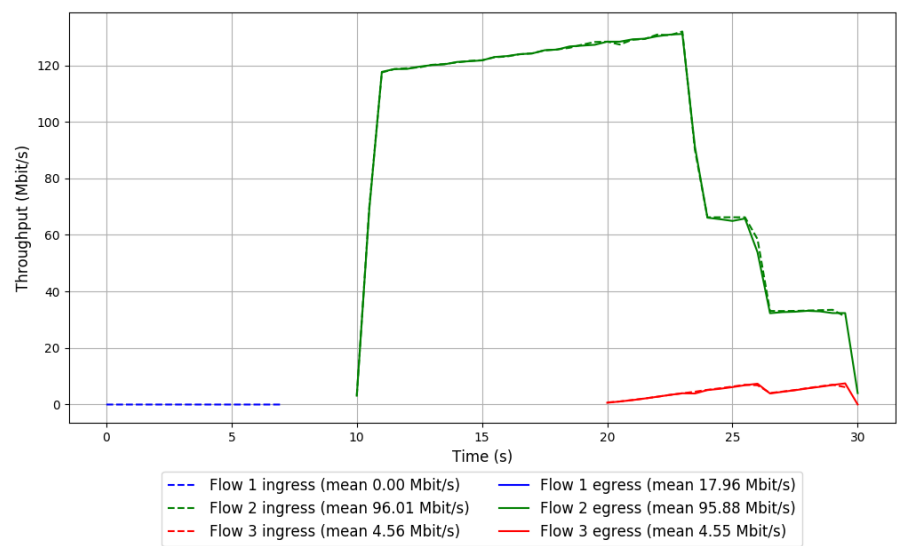


Run 10: Statistics of TCP Vegas

Start at: 2017-12-21 01:25:34

End at: 2017-12-21 01:26:04

Run 10: Report of TCP Vegas — Data Link

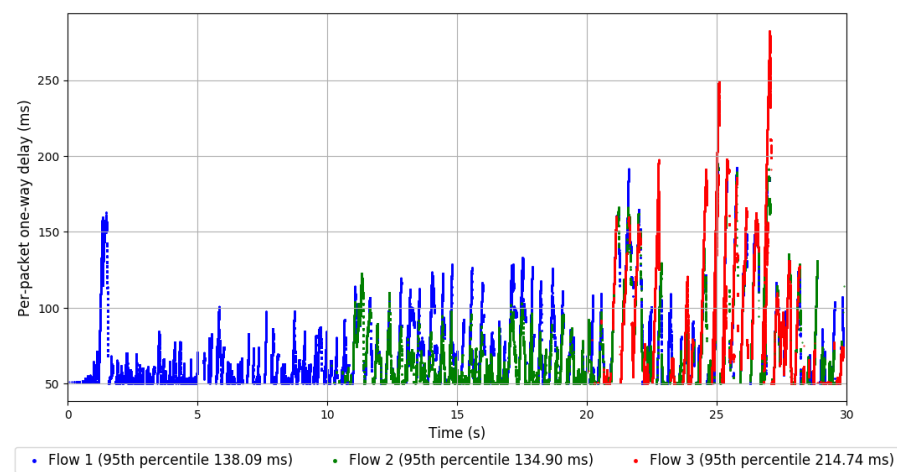
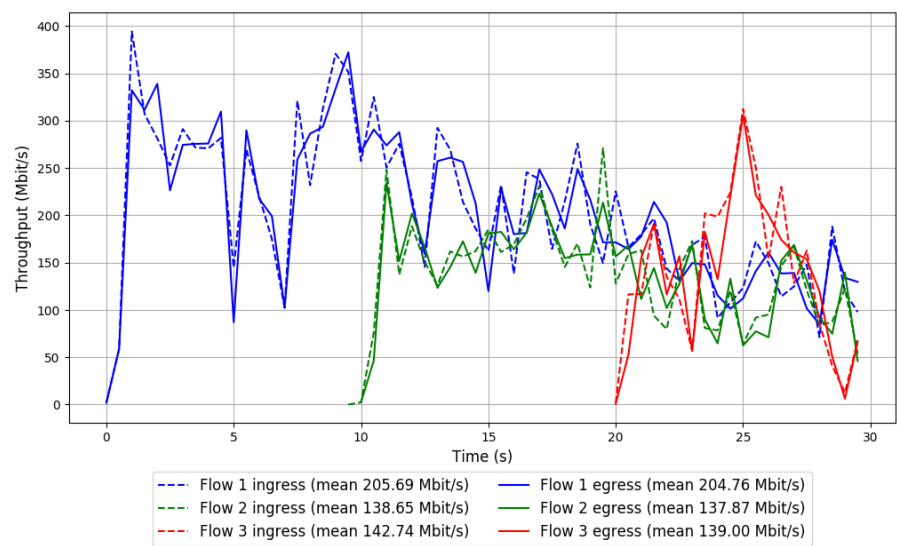


```
Run 1: Statistics of Verus

Start at: 2017-12-20 23:25:52
End at: 2017-12-20 23:26:22

# Below is generated by plot.py at 2017-12-21 04:09:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 342.07 Mbit/s
95th percentile per-packet one-way delay: 154.487 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 204.76 Mbit/s
95th percentile per-packet one-way delay: 138.093 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 137.87 Mbit/s
95th percentile per-packet one-way delay: 134.898 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 139.00 Mbit/s
95th percentile per-packet one-way delay: 214.740 ms
Loss rate: 2.68%
```


Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2017-12-20 23:38:32

End at: 2017-12-20 23:39:02

Below is generated by plot.py at 2017-12-21 04:09:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 330.99 Mbit/s

95th percentile per-packet one-way delay: 202.746 ms

Loss rate: 1.53%

-- Flow 1:

Average throughput: 266.97 Mbit/s

95th percentile per-packet one-way delay: 206.662 ms

Loss rate: 1.76%

-- Flow 2:

Average throughput: 67.18 Mbit/s

95th percentile per-packet one-way delay: 177.063 ms

Loss rate: 0.48%

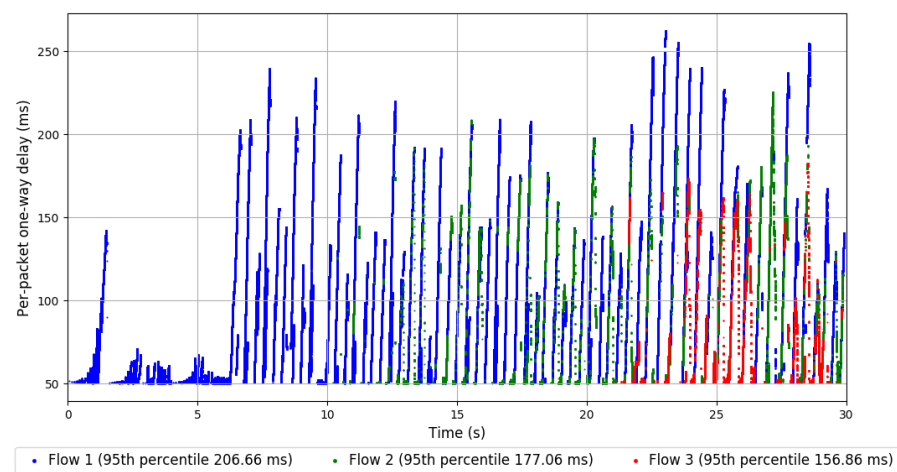
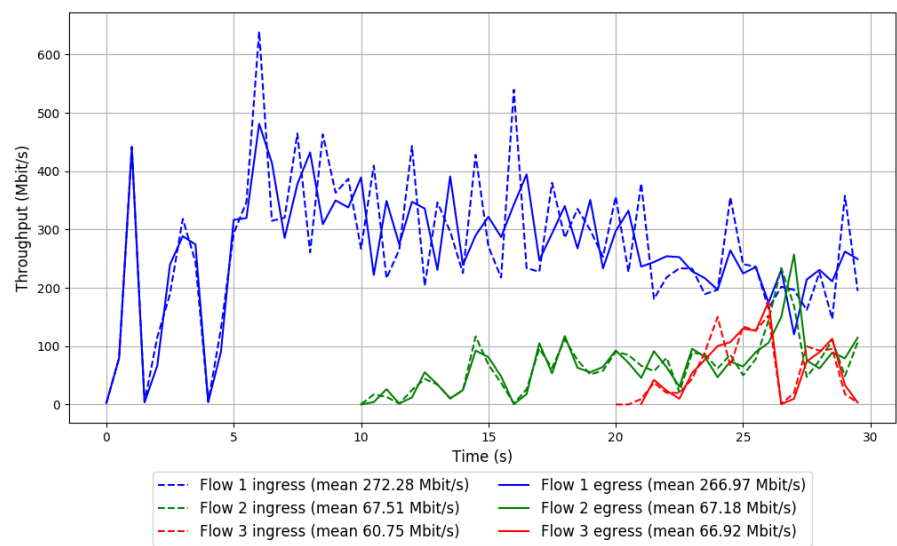
-- Flow 3:

Average throughput: 66.92 Mbit/s

95th percentile per-packet one-way delay: 156.862 ms

Loss rate: 0.68%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2017-12-20 23:51:26

End at: 2017-12-20 23:51:56

Below is generated by plot.py at 2017-12-21 04:09:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 342.28 Mbit/s

95th percentile per-packet one-way delay: 141.344 ms

Loss rate: 0.26%

-- Flow 1:

Average throughput: 187.71 Mbit/s

95th percentile per-packet one-way delay: 135.817 ms

Loss rate: 0.07%

-- Flow 2:

Average throughput: 181.24 Mbit/s

95th percentile per-packet one-way delay: 139.823 ms

Loss rate: 0.26%

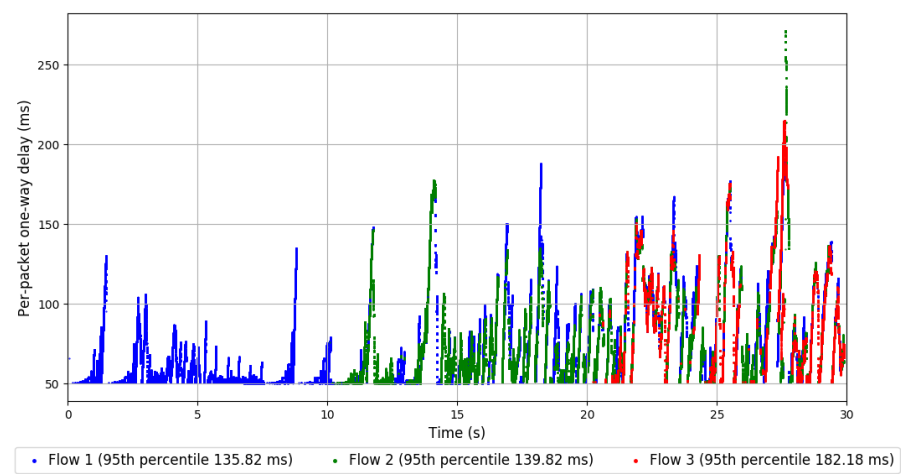
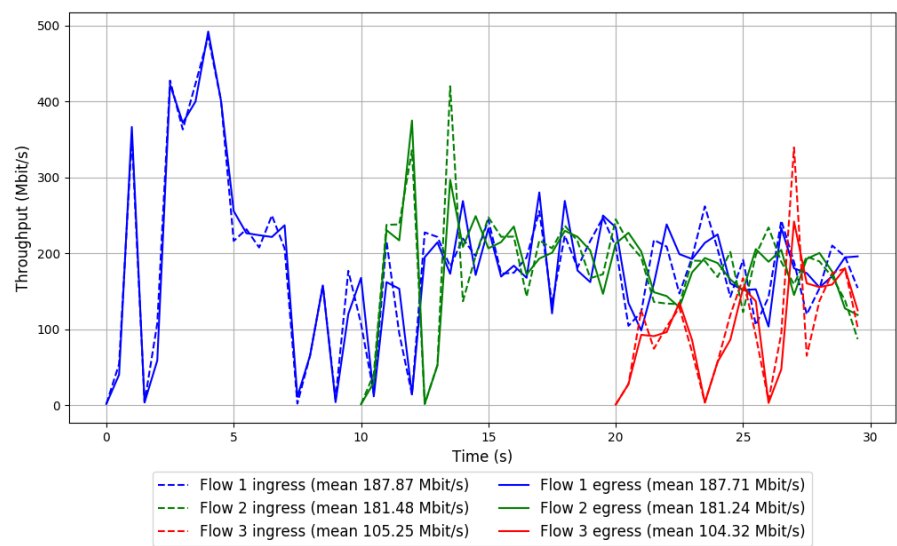
-- Flow 3:

Average throughput: 104.32 Mbit/s

95th percentile per-packet one-way delay: 182.177 ms

Loss rate: 1.29%

Run 3: Report of Verus — Data Link

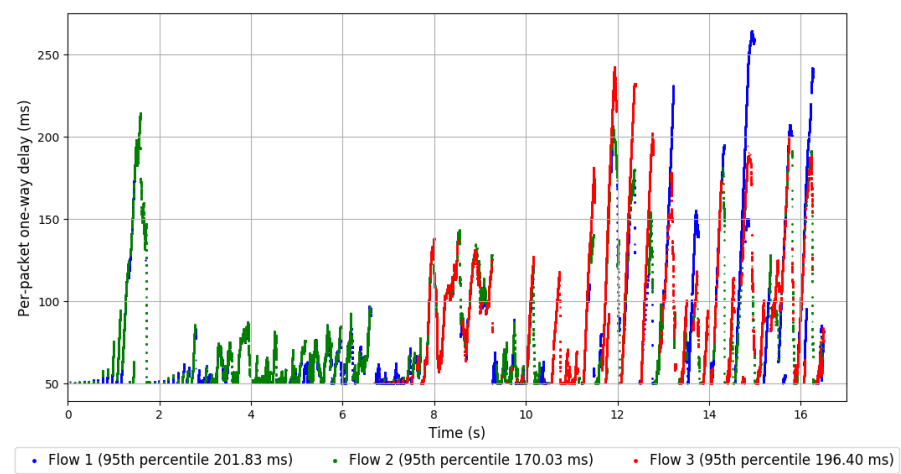
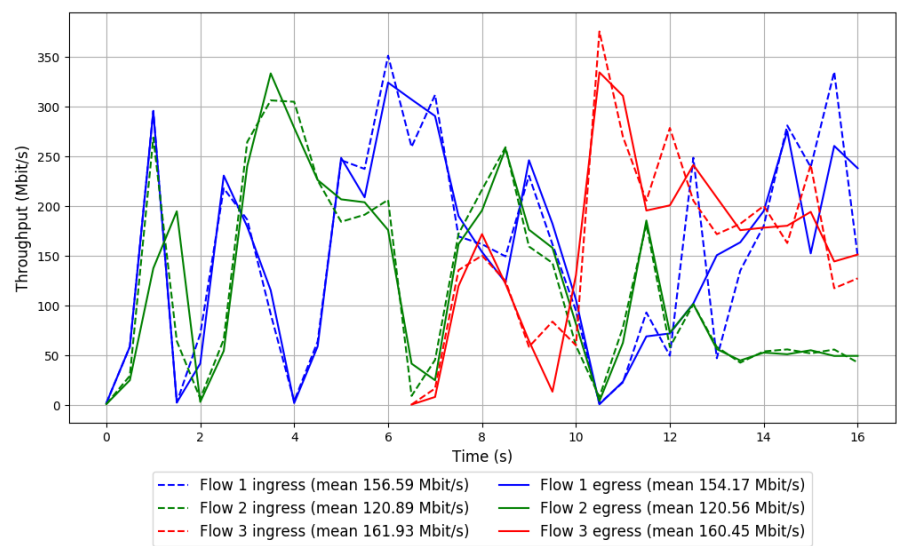


Run 4: Statistics of Verus

Start at: 2017-12-21 00:04:34

End at: 2017-12-21 00:05:04

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2017-12-21 00:17:23

End at: 2017-12-21 00:17:53

Below is generated by plot.py at 2017-12-21 04:09:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 326.23 Mbit/s

95th percentile per-packet one-way delay: 111.862 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 211.35 Mbit/s

95th percentile per-packet one-way delay: 113.200 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 131.91 Mbit/s

95th percentile per-packet one-way delay: 110.988 ms

Loss rate: 0.07%

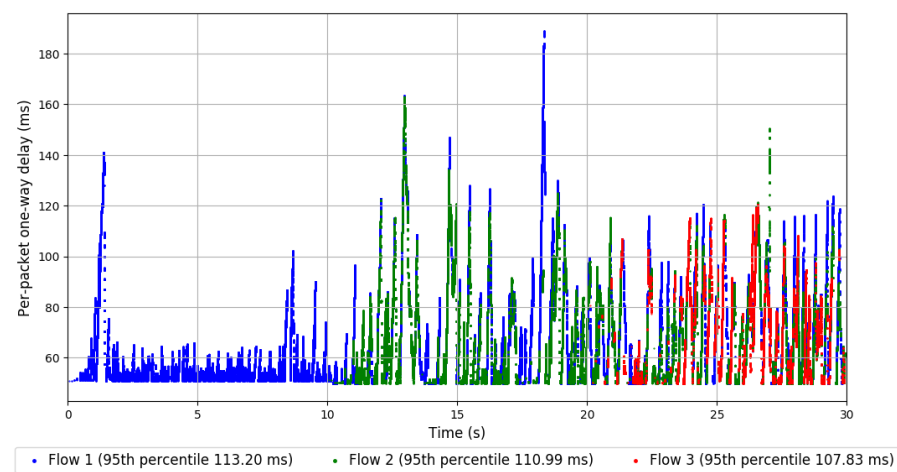
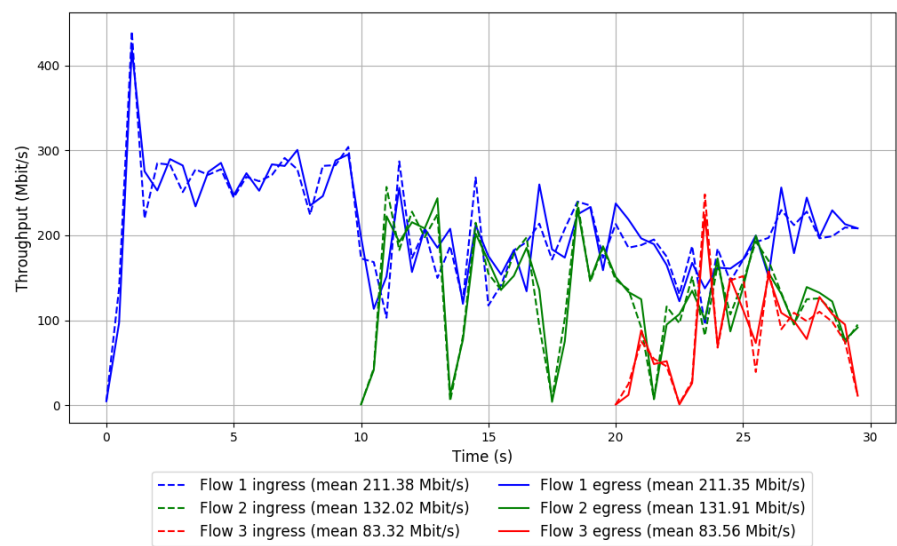
-- Flow 3:

Average throughput: 83.56 Mbit/s

95th percentile per-packet one-way delay: 107.834 ms

Loss rate: 0.00%

Run 5: Report of Verus — Data Link

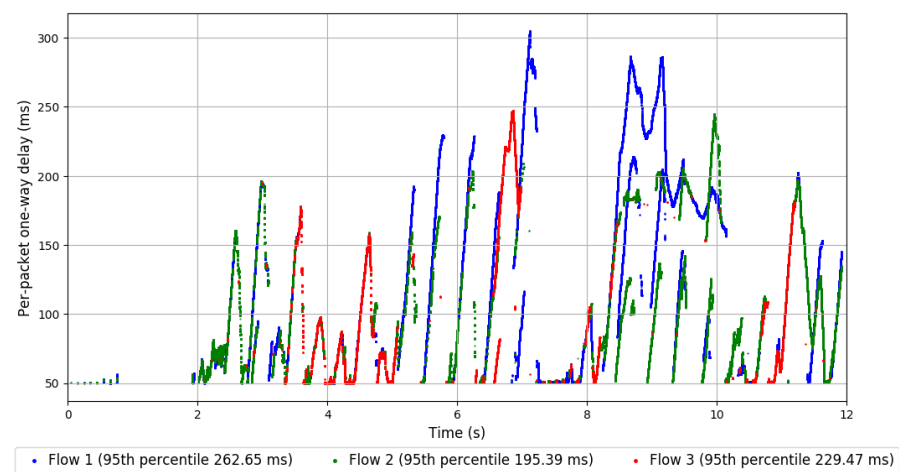
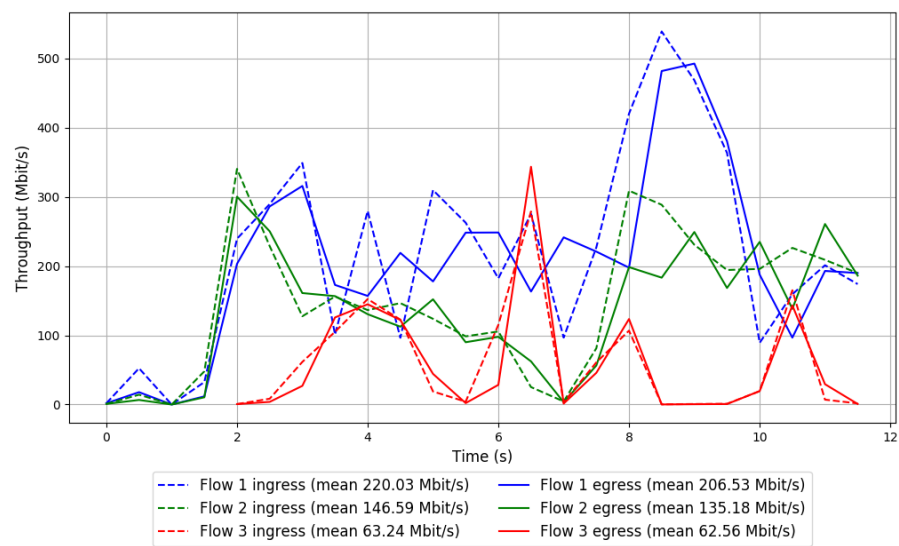


Run 6: Statistics of Verus

Start at: 2017-12-21 00:30:41

End at: 2017-12-21 00:31:11

Run 6: Report of Verus — Data Link

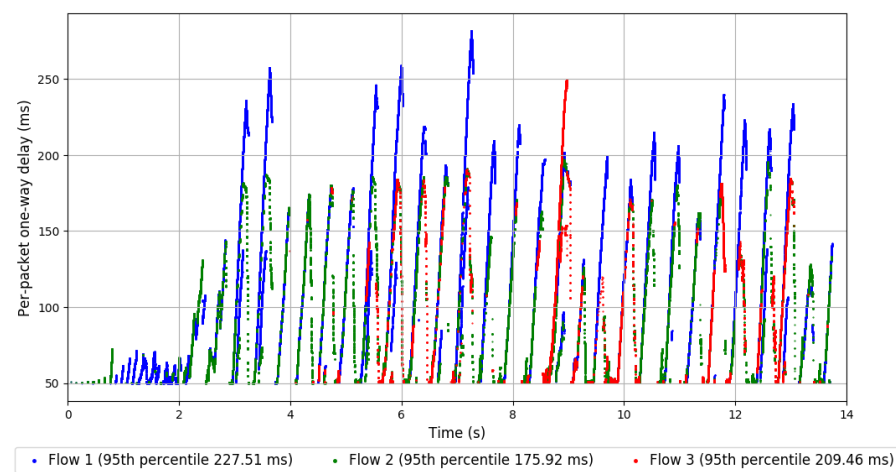
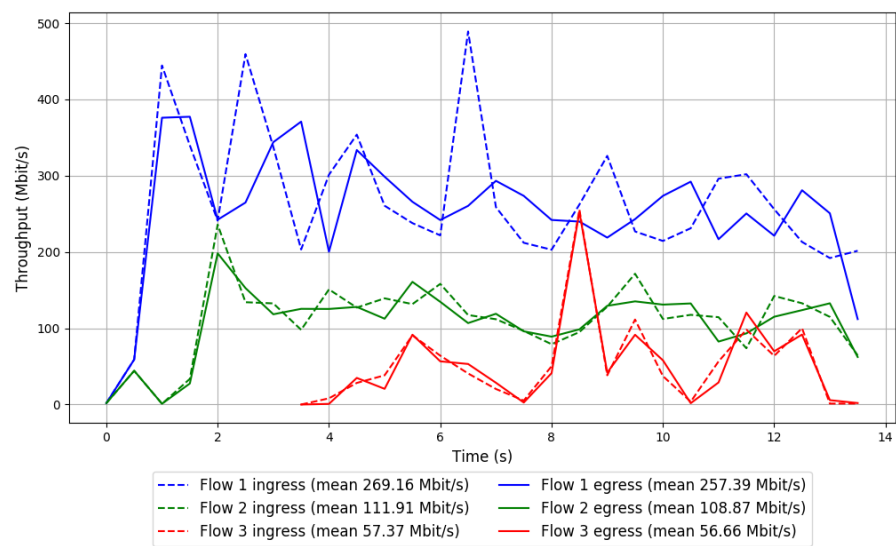


Run 7: Statistics of Verus

Start at: 2017-12-21 00:43:32

End at: 2017-12-21 00:44:02

Run 7: Report of Verus — Data Link

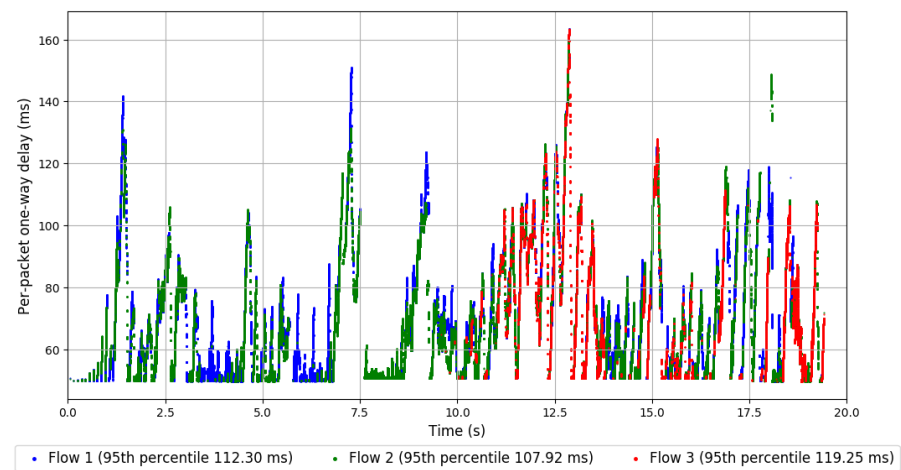
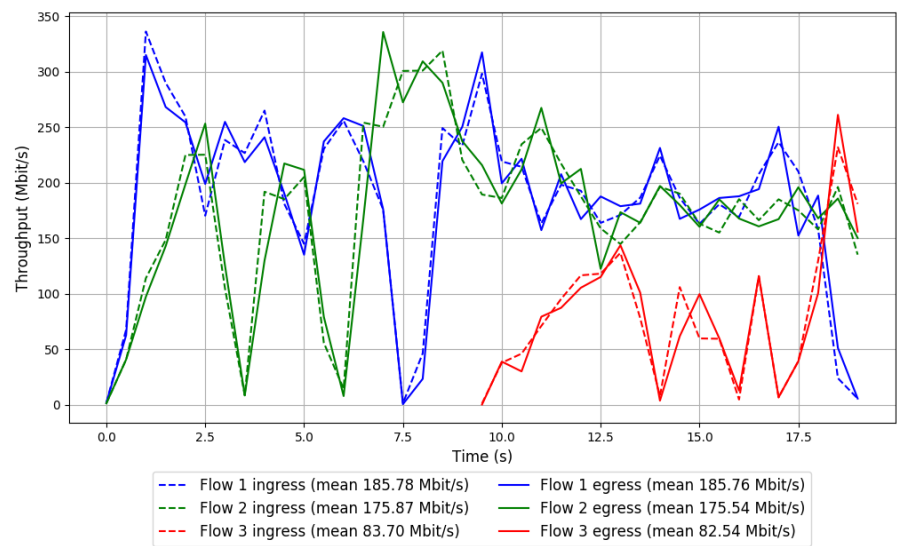


Run 8: Statistics of Verus

Start at: 2017-12-21 00:57:15

End at: 2017-12-21 00:57:45

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

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

End at: 2017-12-21 01:10:31

Below is generated by plot.py at 2017-12-21 04:14:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 354.02 Mbit/s

95th percentile per-packet one-way delay: 117.805 ms

Loss rate: 1.16%

-- Flow 1:

Average throughput: 233.29 Mbit/s

95th percentile per-packet one-way delay: 120.883 ms

Loss rate: 1.73%

-- Flow 2:

Average throughput: 128.79 Mbit/s

95th percentile per-packet one-way delay: 111.040 ms

Loss rate: 0.05%

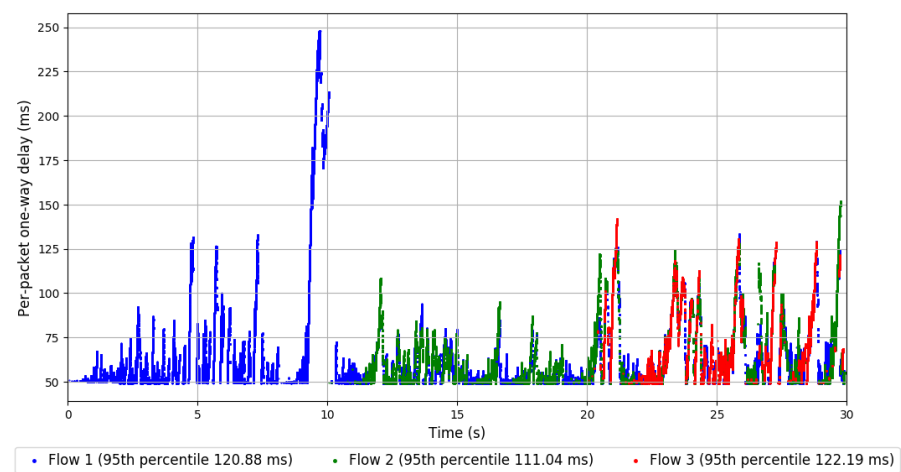
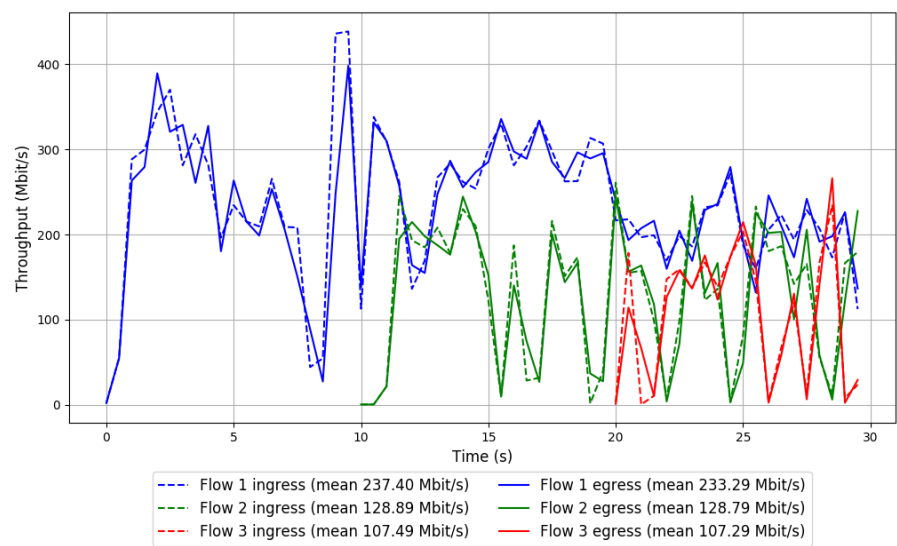
-- Flow 3:

Average throughput: 107.29 Mbit/s

95th percentile per-packet one-way delay: 122.193 ms

Loss rate: 0.01%

Run 9: Report of Verus — Data Link

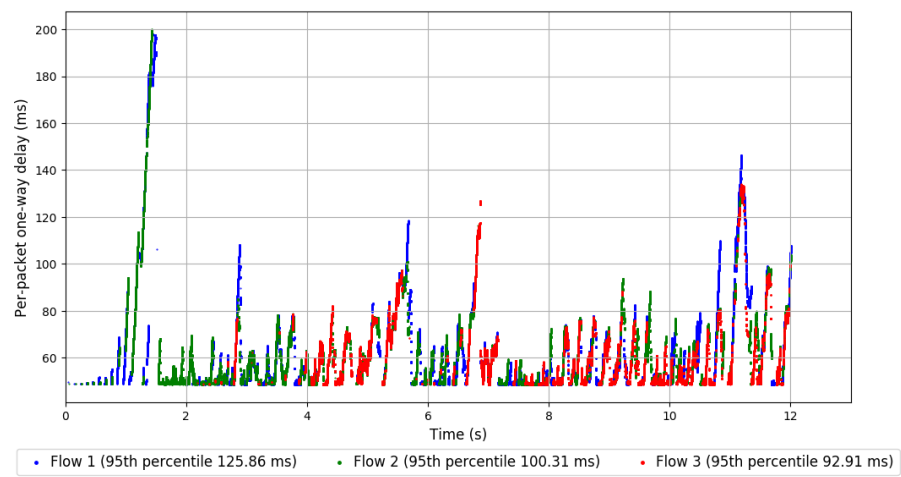
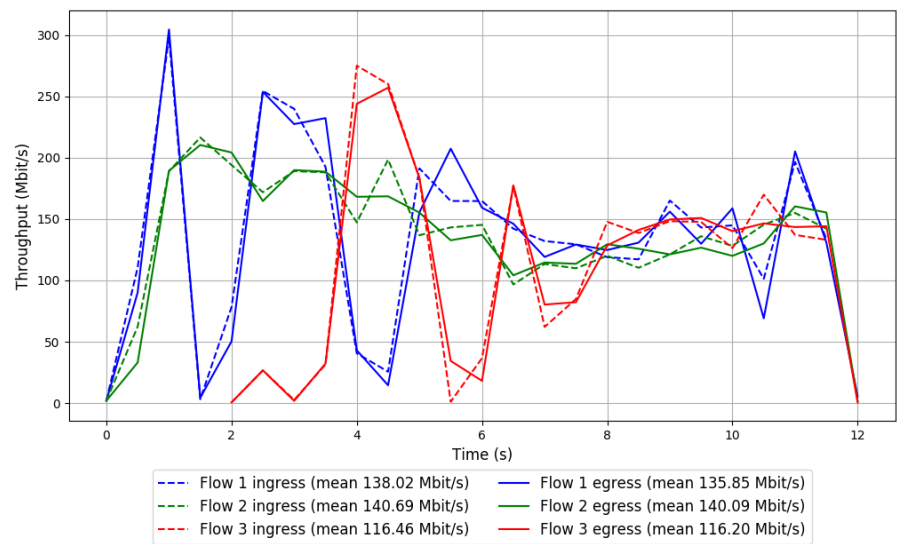


Run 10: Statistics of Verus

Start at: 2017-12-21 01:23:06

End at: 2017-12-21 01:23:36

Run 10: Report of Verus — Data Link



Run 1: Statistics of Copa

Start at: 2017-12-20 23:23:58

End at: 2017-12-20 23:24:28

Below is generated by plot.py at 2017-12-21 04:14:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 133.31 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 77.54 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 64.43 Mbit/s

95th percentile per-packet one-way delay: 51.285 ms

Loss rate: 0.00%

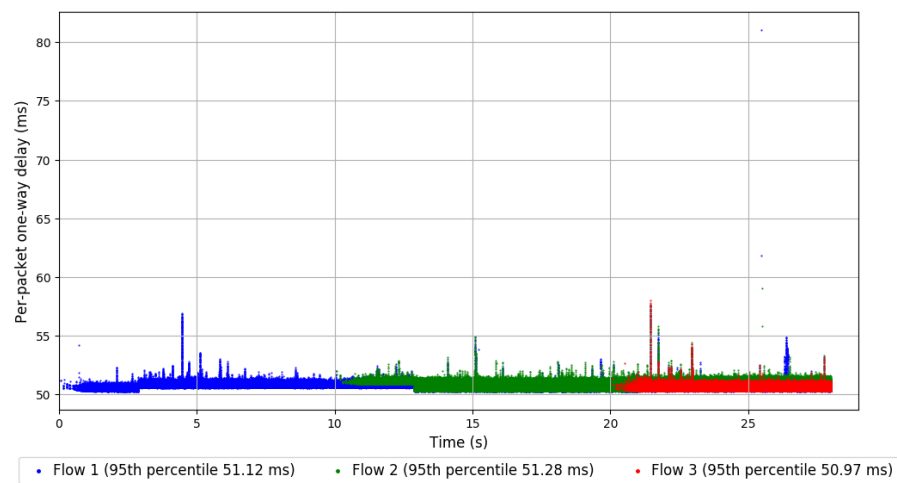
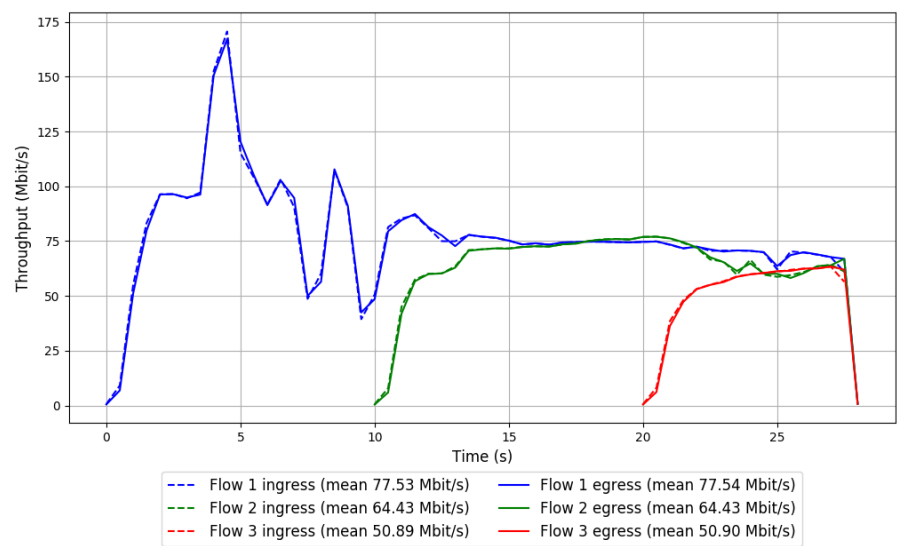
-- Flow 3:

Average throughput: 50.90 Mbit/s

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

Loss rate: 0.00%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2017-12-20 23:36:36

End at: 2017-12-20 23:37:06

Below is generated by plot.py at 2017-12-21 04:14:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 138.42 Mbit/s

95th percentile per-packet one-way delay: 50.927 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 78.90 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 67.47 Mbit/s

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

Loss rate: 0.00%

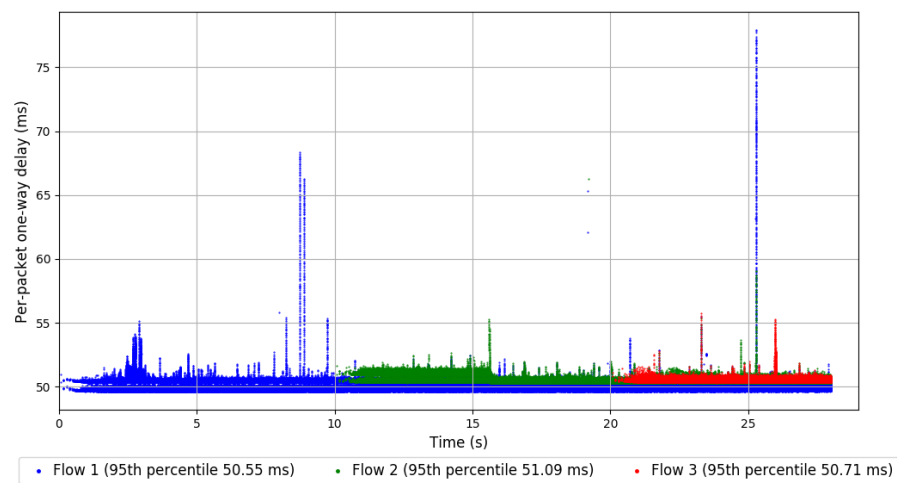
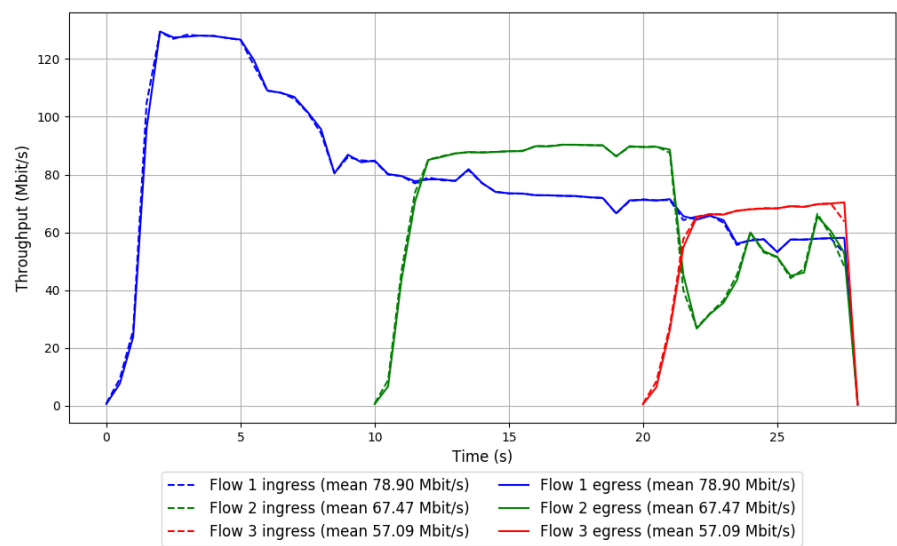
-- Flow 3:

Average throughput: 57.09 Mbit/s

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

Loss rate: 0.00%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2017-12-20 23:49:31

End at: 2017-12-20 23:50:01

Below is generated by plot.py at 2017-12-21 04:14:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 147.82 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 81.17 Mbit/s

95th percentile per-packet one-way delay: 51.089 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 69.60 Mbit/s

95th percentile per-packet one-way delay: 51.153 ms

Loss rate: 0.00%

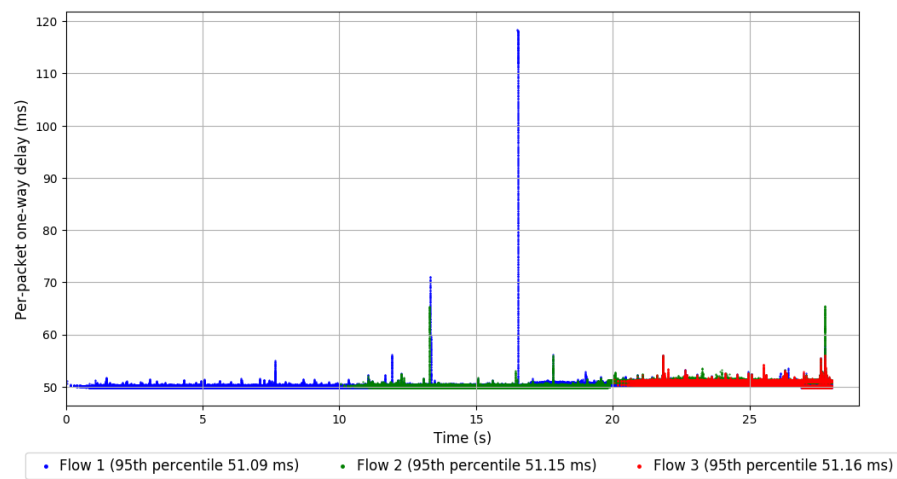
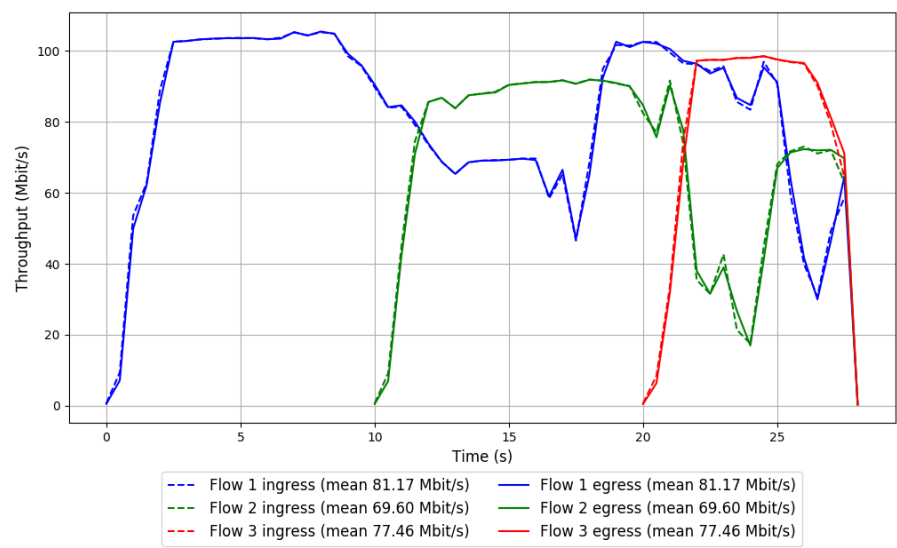
-- Flow 3:

Average throughput: 77.46 Mbit/s

95th percentile per-packet one-way delay: 51.159 ms

Loss rate: 0.00%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2017-12-21 00:02:40

End at: 2017-12-21 00:03:10

Below is generated by plot.py at 2017-12-21 04:14:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 128.54 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 75.23 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 70.96 Mbit/s

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

Loss rate: 0.00%

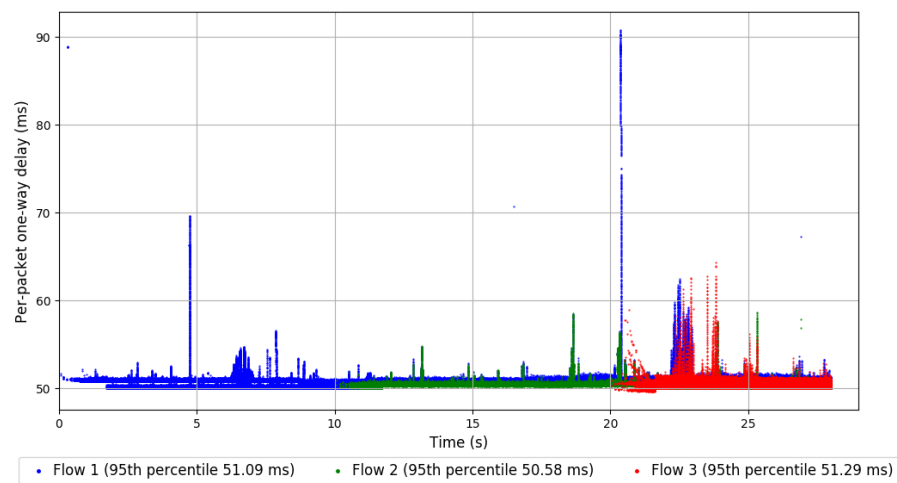
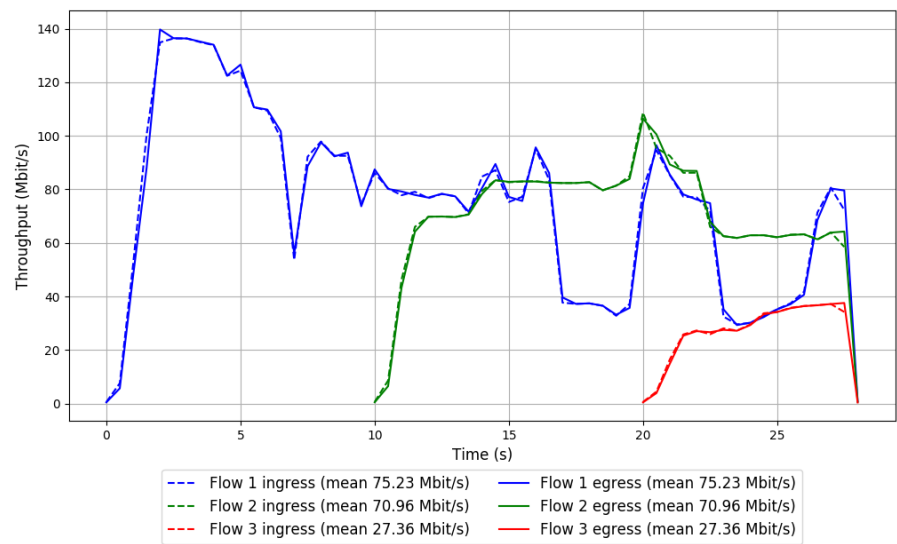
-- Flow 3:

Average throughput: 27.36 Mbit/s

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

Loss rate: 0.01%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2017-12-21 00:15:27

End at: 2017-12-21 00:15:57

Below is generated by plot.py at 2017-12-21 04:14:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 134.82 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 77.42 Mbit/s

95th percentile per-packet one-way delay: 50.958 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 60.38 Mbit/s

95th percentile per-packet one-way delay: 51.084 ms

Loss rate: 0.00%

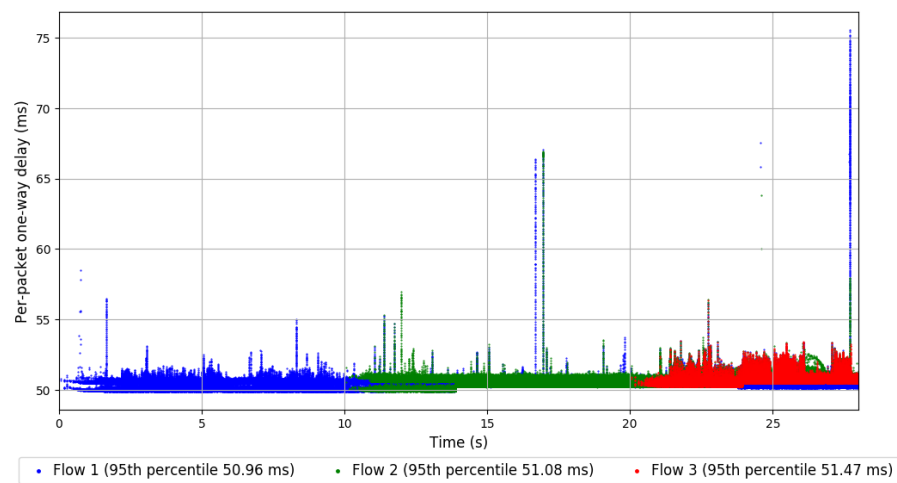
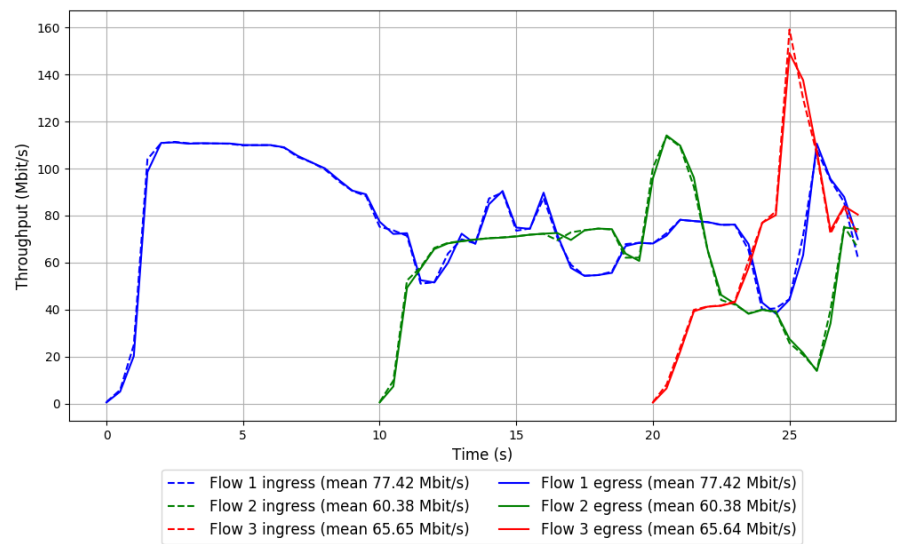
-- Flow 3:

Average throughput: 65.64 Mbit/s

95th percentile per-packet one-way delay: 51.466 ms

Loss rate: 0.00%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2017-12-21 00:28:44

End at: 2017-12-21 00:29:14

Below is generated by plot.py at 2017-12-21 04:15:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 141.39 Mbit/s

95th percentile per-packet one-way delay: 50.935 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 80.91 Mbit/s

95th percentile per-packet one-way delay: 50.932 ms

Loss rate: 0.06%

-- Flow 2:

Average throughput: 64.28 Mbit/s

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

Loss rate: 0.00%

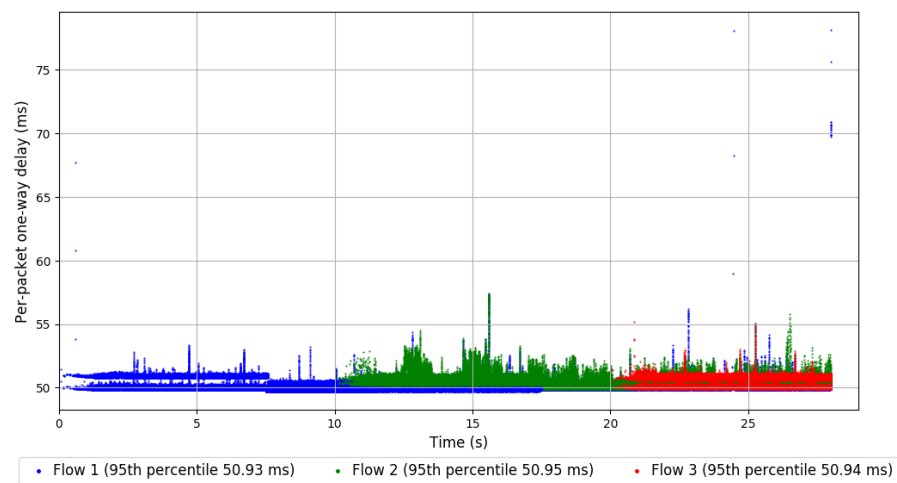
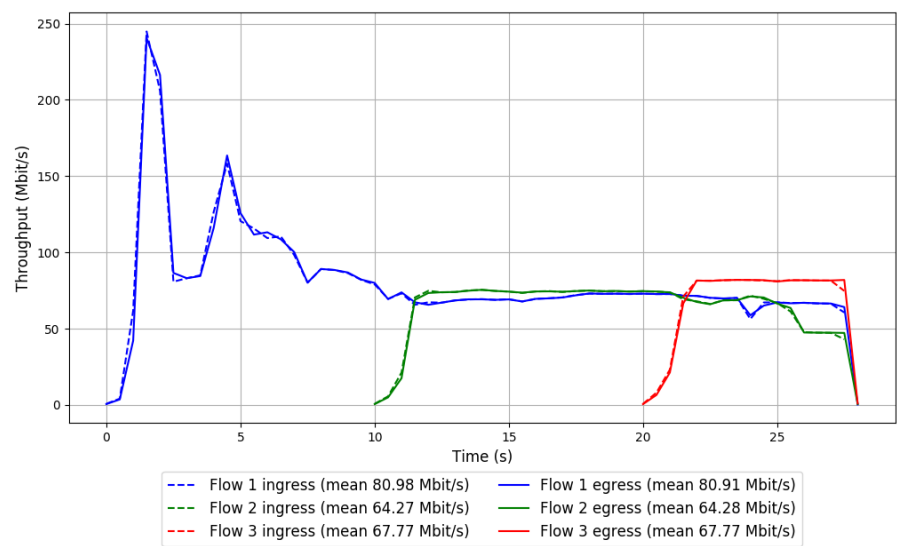
-- Flow 3:

Average throughput: 67.77 Mbit/s

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

Loss rate: 0.00%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2017-12-21 00:41:38

End at: 2017-12-21 00:42:08

Below is generated by plot.py at 2017-12-21 04:16:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 129.57 Mbit/s

95th percentile per-packet one-way delay: 50.505 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 76.20 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 63.45 Mbit/s

95th percentile per-packet one-way delay: 50.446 ms

Loss rate: 0.00%

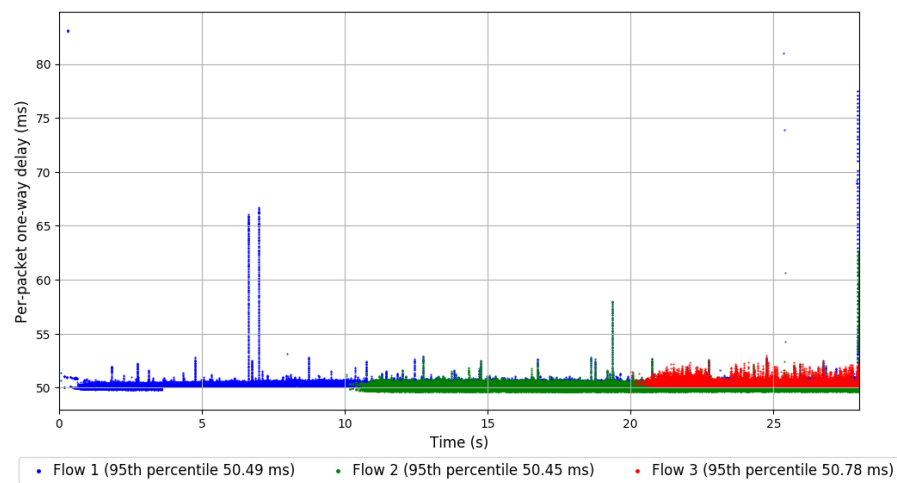
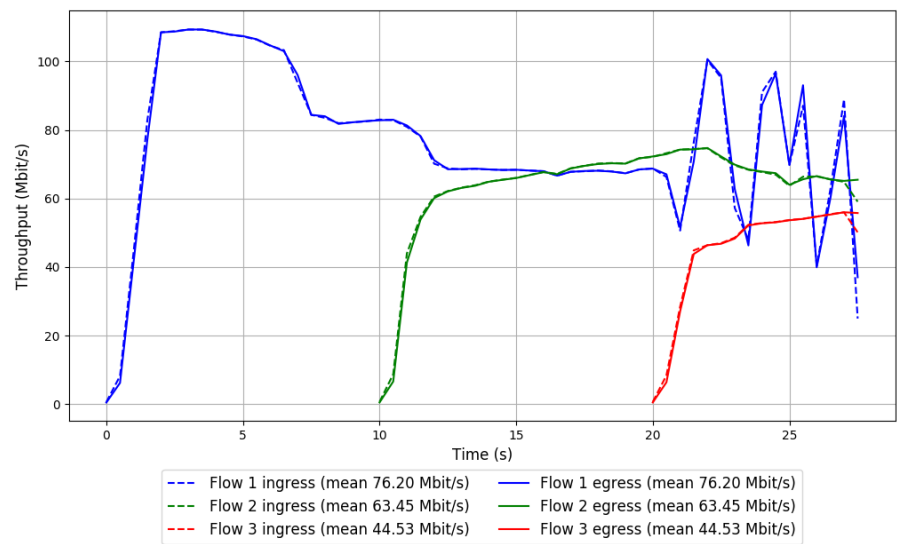
-- Flow 3:

Average throughput: 44.53 Mbit/s

95th percentile per-packet one-way delay: 50.785 ms

Loss rate: 0.00%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2017-12-21 00:55:19

End at: 2017-12-21 00:55:49

Below is generated by plot.py at 2017-12-21 04:17:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 148.98 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 77.91 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 73.63 Mbit/s

95th percentile per-packet one-way delay: 51.150 ms

Loss rate: 0.00%

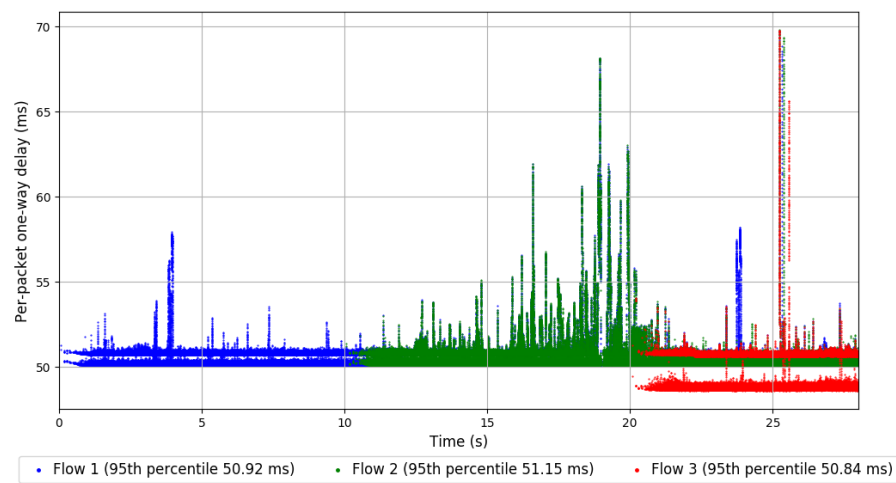
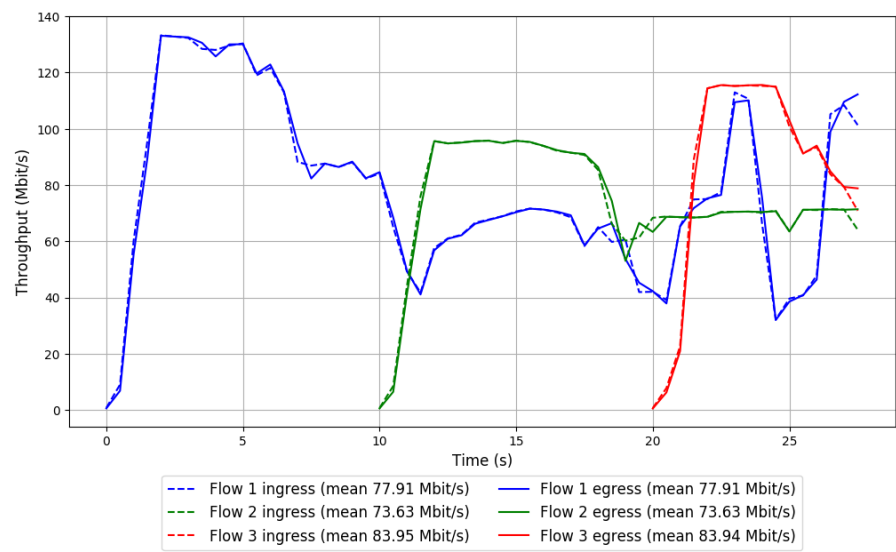
-- Flow 3:

Average throughput: 83.94 Mbit/s

95th percentile per-packet one-way delay: 50.841 ms

Loss rate: 0.00%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2017-12-21 01:08:05

End at: 2017-12-21 01:08:35

Below is generated by plot.py at 2017-12-21 04:18:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 157.29 Mbit/s

95th percentile per-packet one-way delay: 50.304 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 83.46 Mbit/s

95th percentile per-packet one-way delay: 50.305 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 83.66 Mbit/s

95th percentile per-packet one-way delay: 50.309 ms

Loss rate: 0.00%

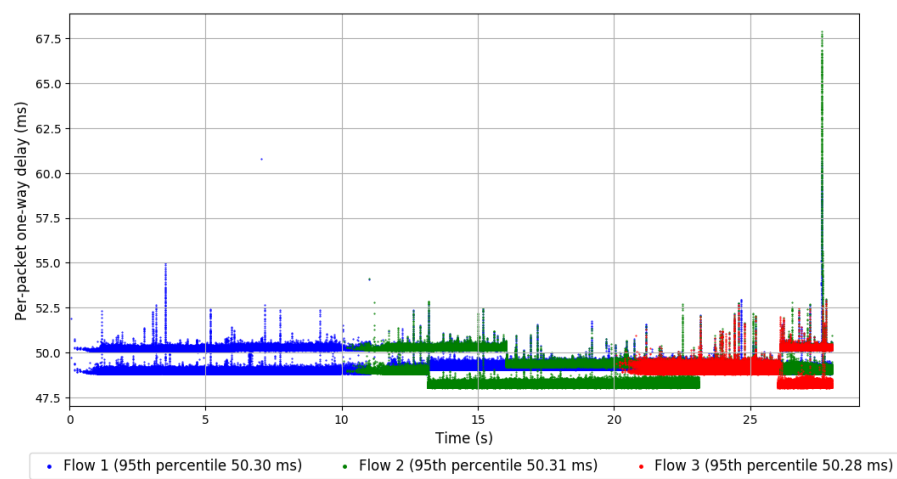
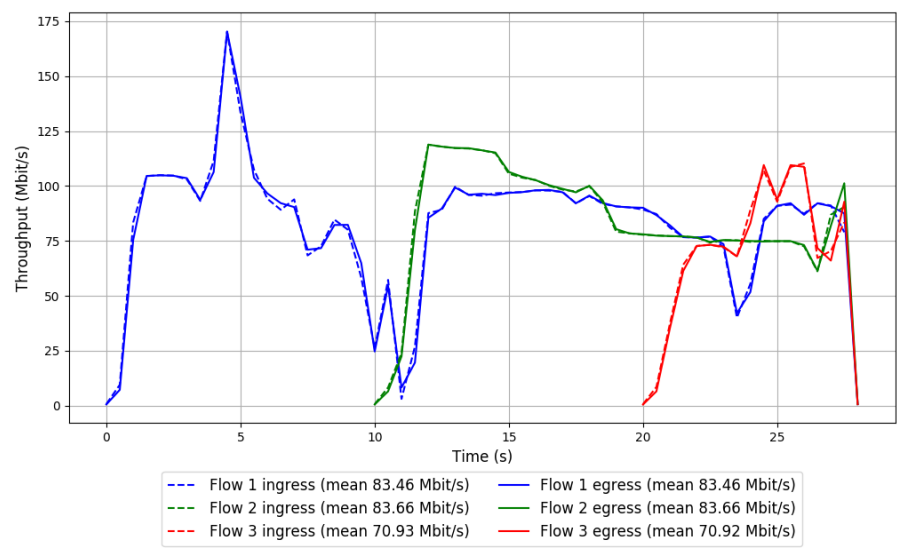
-- Flow 3:

Average throughput: 70.92 Mbit/s

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

Loss rate: 0.00%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

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

End at: 2017-12-21 01:21:42

Below is generated by plot.py at 2017-12-21 04:18:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 137.88 Mbit/s

95th percentile per-packet one-way delay: 49.783 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 72.94 Mbit/s

95th percentile per-packet one-way delay: 49.785 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 68.58 Mbit/s

95th percentile per-packet one-way delay: 49.788 ms

Loss rate: 0.00%

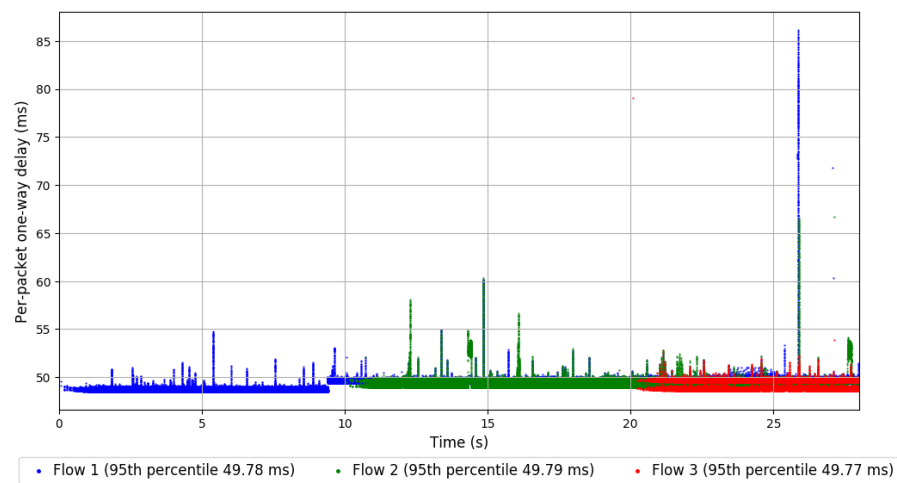
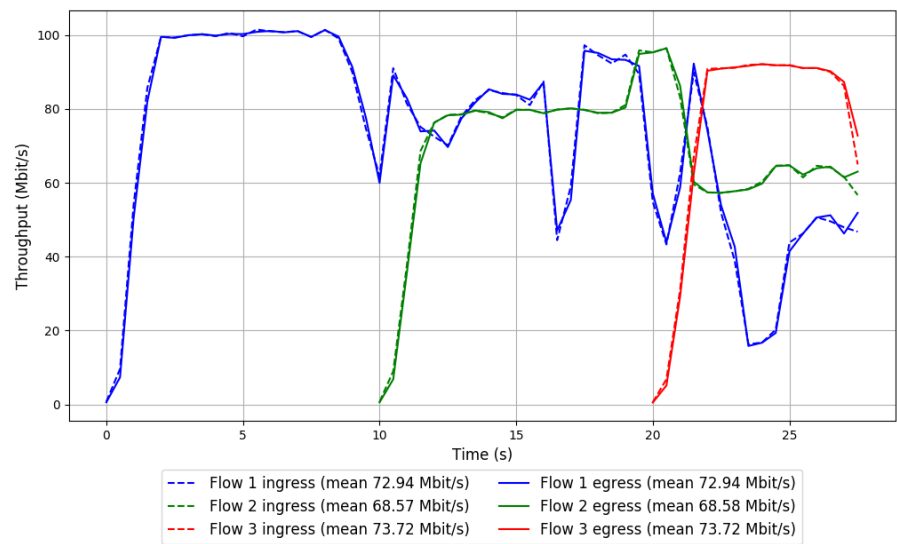
-- Flow 3:

Average throughput: 73.72 Mbit/s

95th percentile per-packet one-way delay: 49.769 ms

Loss rate: 0.00%

Run 10: Report of Copa — Data Link



Run 1: Statistics of FillP

Start at: 2017-12-20 23:31:46

End at: 2017-12-20 23:32:16

Run 1: Report of FillP — Data Link

Figure is missing

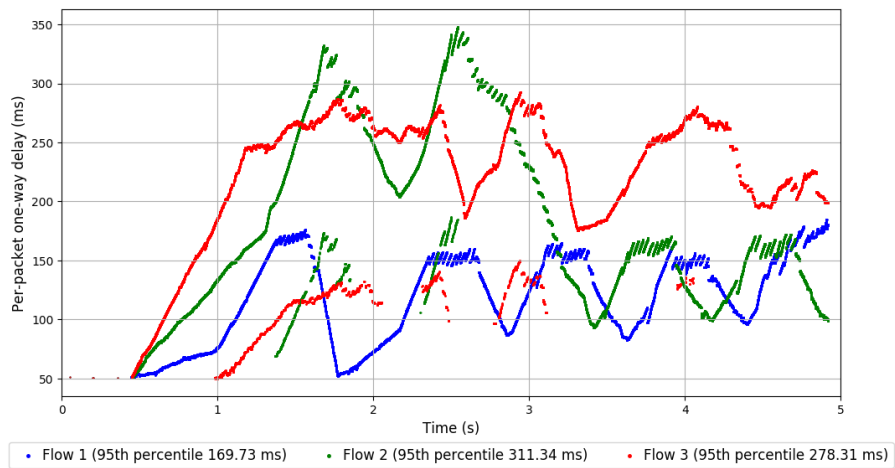
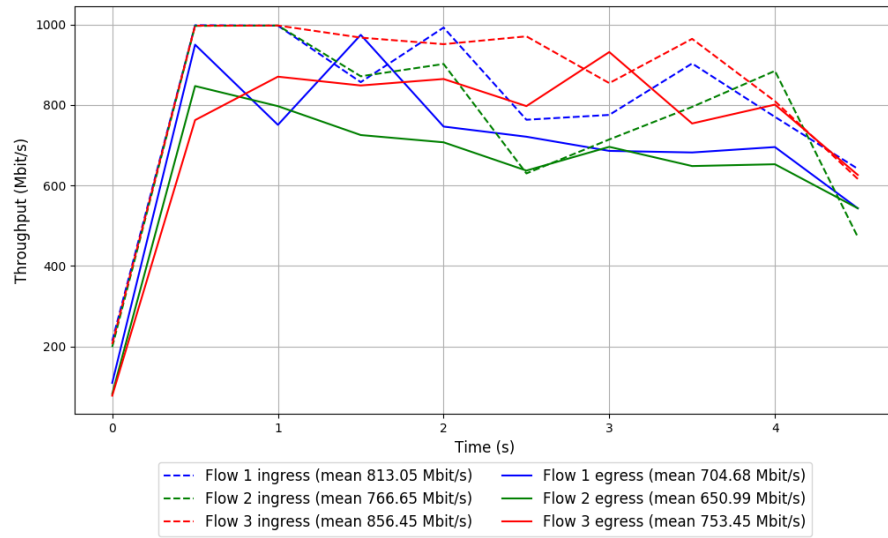
Figure is missing

Run 2: Statistics of FillP

Start at: 2017-12-20 23:44:33

End at: 2017-12-20 23:45:03

Run 2: Report of FillP — Data Link

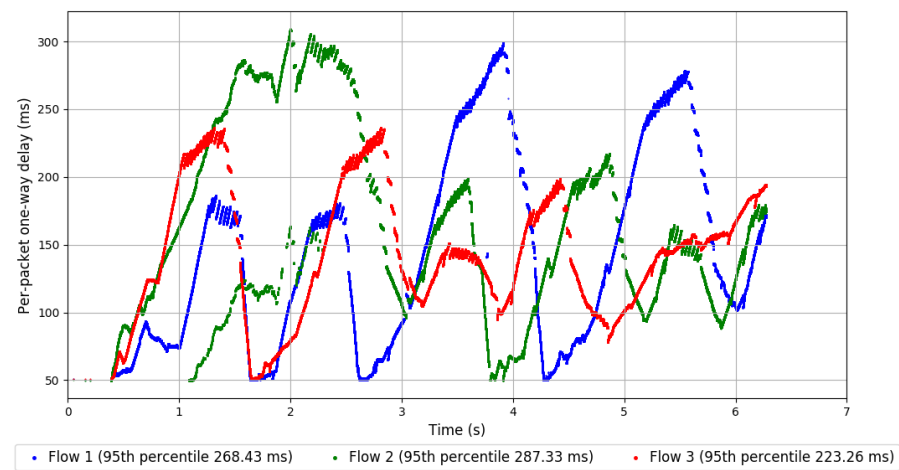
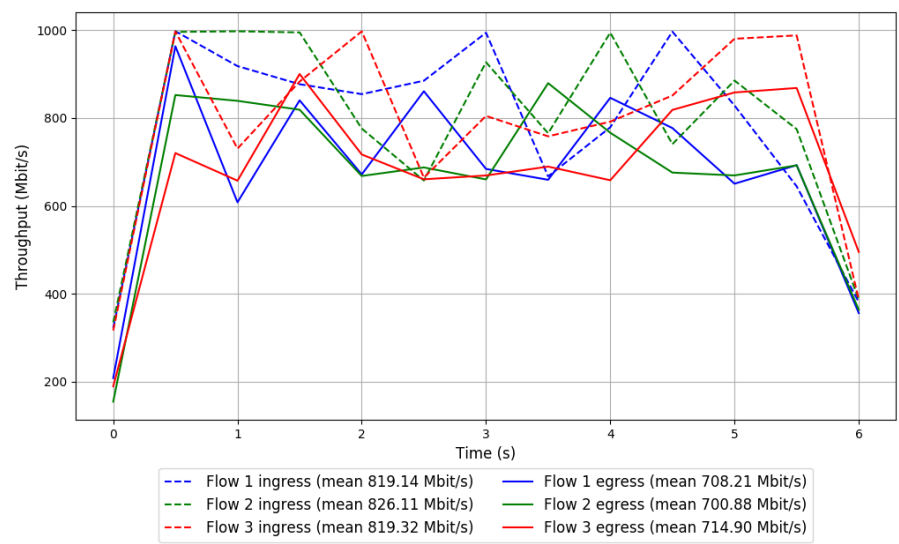


Run 3: Statistics of FillP

Start at: 2017-12-20 23:57:26

End at: 2017-12-20 23:57:56

Run 3: Report of FillP — Data Link

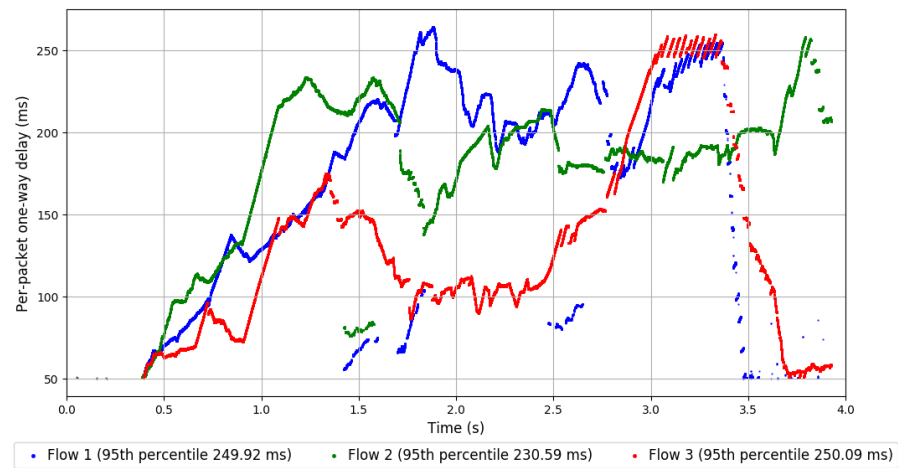
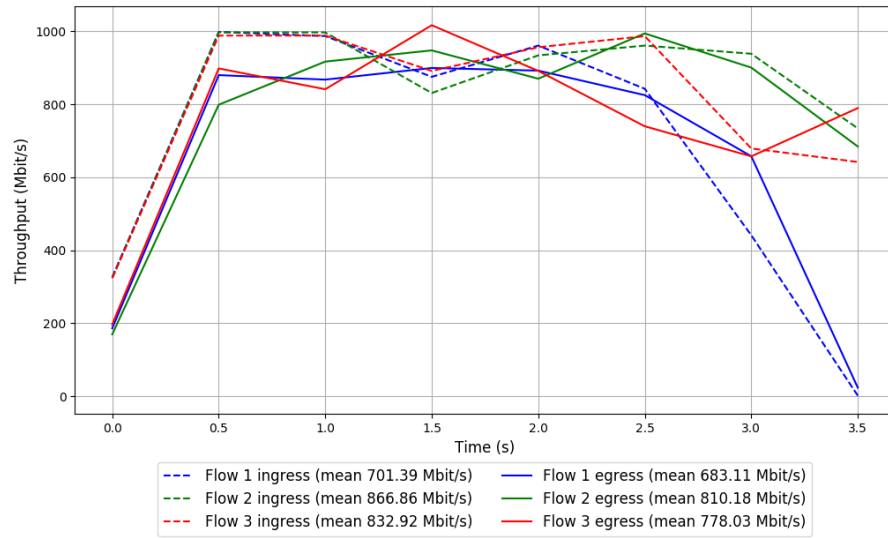


Run 4: Statistics of FillP

Start at: 2017-12-21 00:10:24

End at: 2017-12-21 00:10:54

Run 4: Report of FillP — Data Link

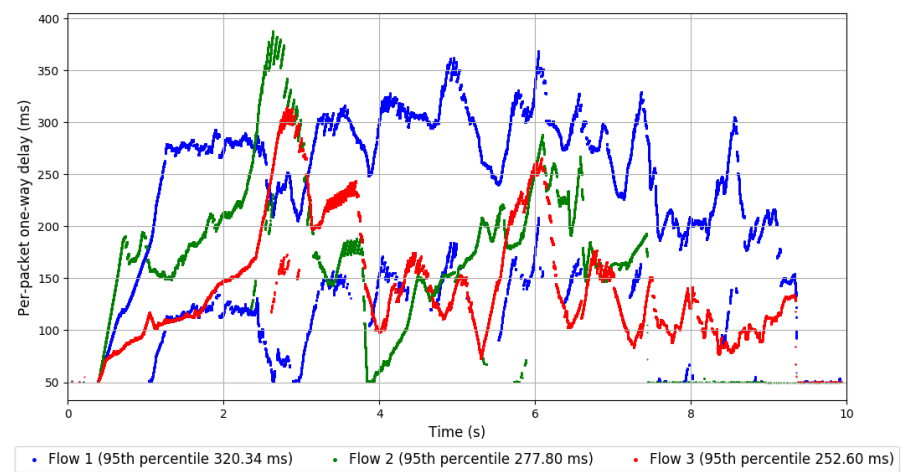
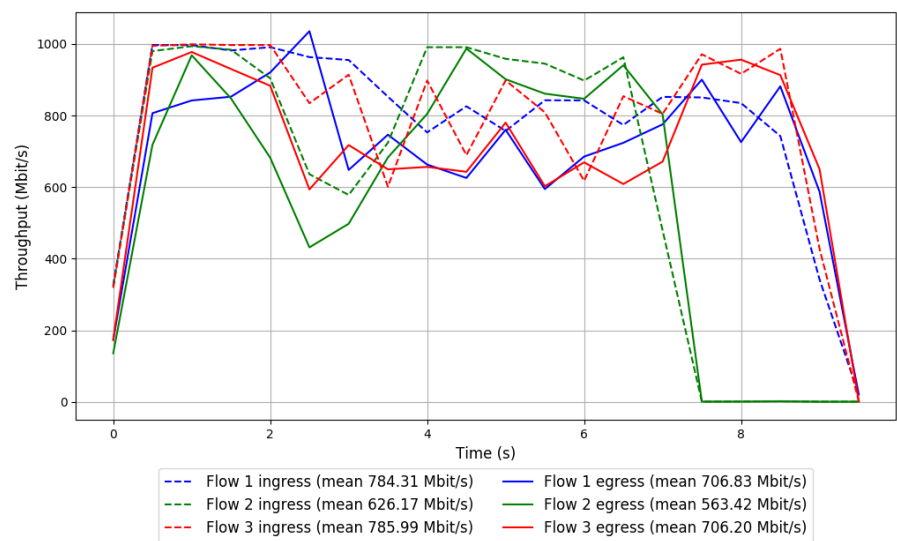


Run 5: Statistics of FillP

Start at: 2017-12-21 00:23:24

End at: 2017-12-21 00:23:54

Run 5: Report of FillP — Data Link

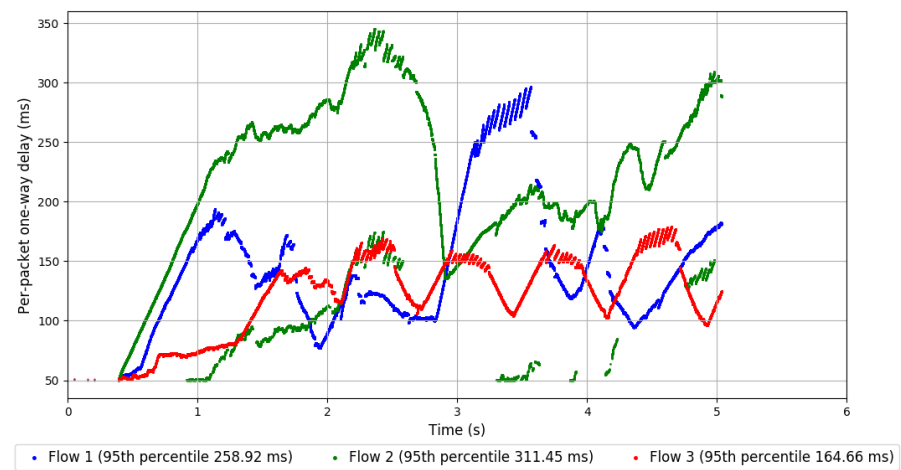
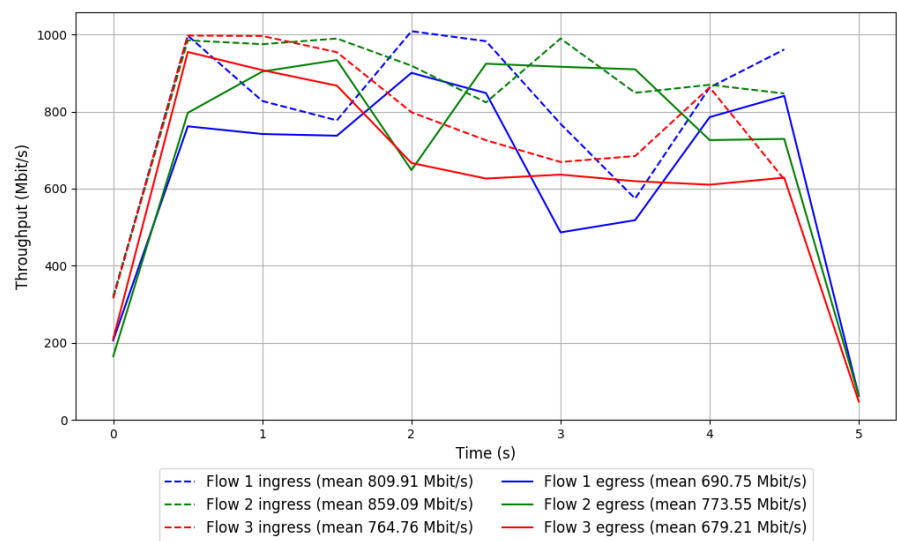


Run 6: Statistics of FillP

Start at: 2017-12-21 00:36:28

End at: 2017-12-21 00:36:58

Run 6: Report of FillP — Data Link



Run 7: Statistics of FillP

Start at: 2017-12-21 00:49:15

End at: 2017-12-21 00:49:45

Below is generated by plot.py at 2017-12-21 04:32:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 1650.46 Mbit/s

95th percentile per-packet one-way delay: 257.269 ms

Loss rate: 8.03%

-- Flow 1:

Average throughput: 925.82 Mbit/s

95th percentile per-packet one-way delay: 253.731 ms

Loss rate: 3.61%

-- Flow 2:

Average throughput: 728.49 Mbit/s

95th percentile per-packet one-way delay: 264.458 ms

Loss rate: 13.39%

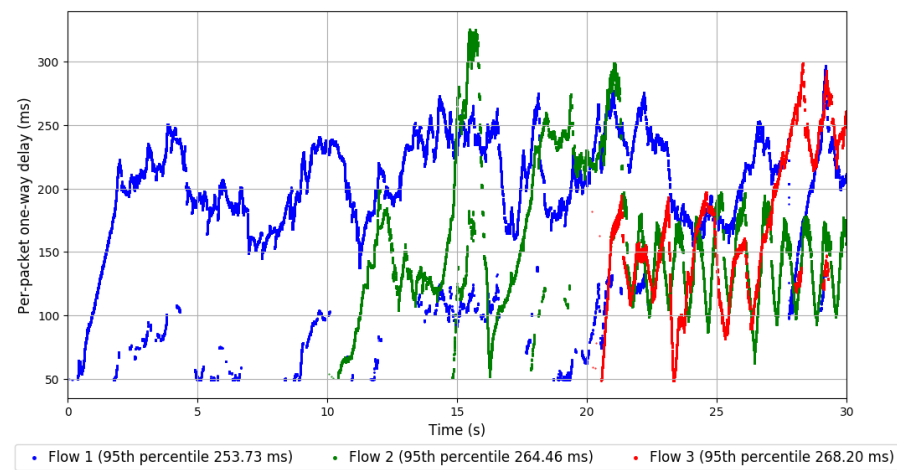
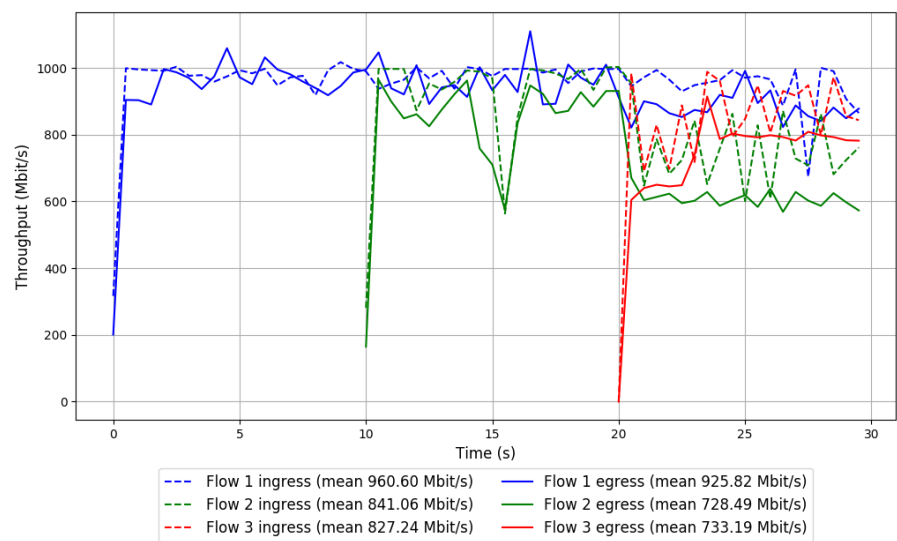
-- Flow 3:

Average throughput: 733.19 Mbit/s

95th percentile per-packet one-way delay: 268.205 ms

Loss rate: 12.53%

Run 7: Report of FillP — Data Link

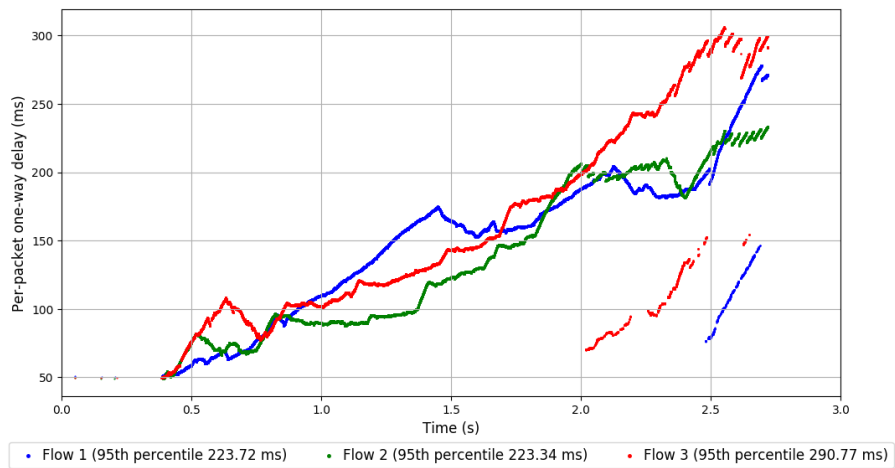
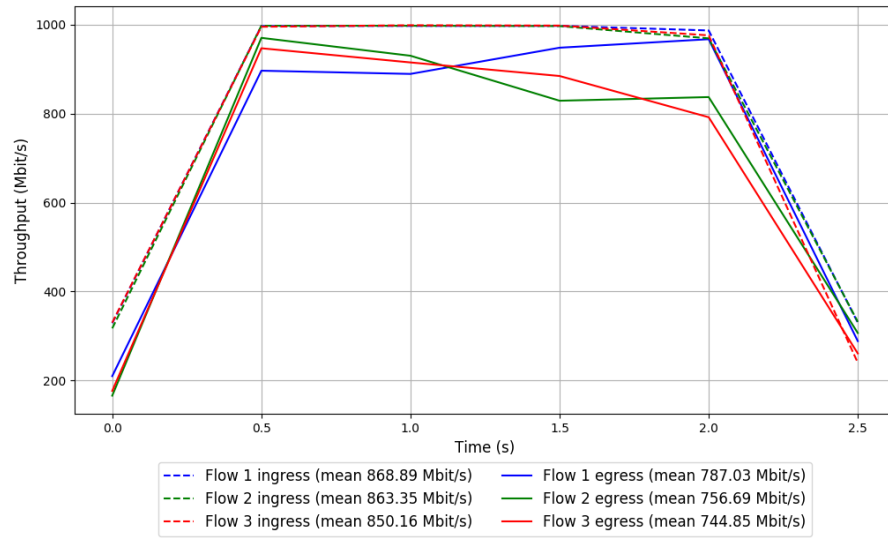


Run 8: Statistics of FillP

Start at: 2017-12-21 01:03:07

End at: 2017-12-21 01:03:37

Run 8: Report of FillP — Data Link

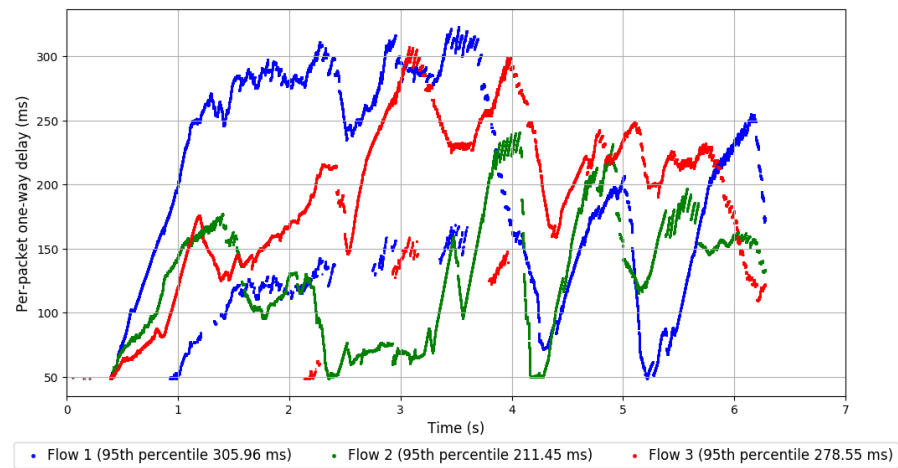
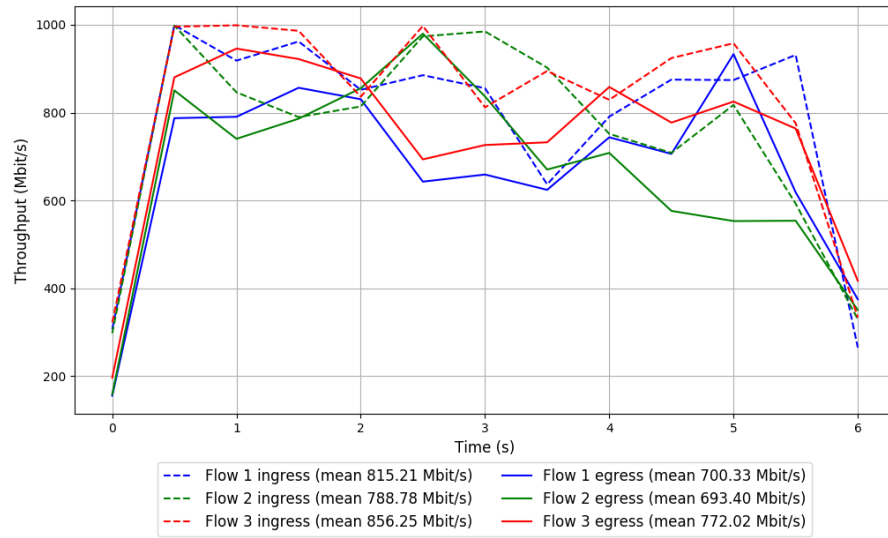


Run 9: Statistics of FillP

Start at: 2017-12-21 01:16:03

End at: 2017-12-21 01:16:33

Run 9: Report of FillP — Data Link

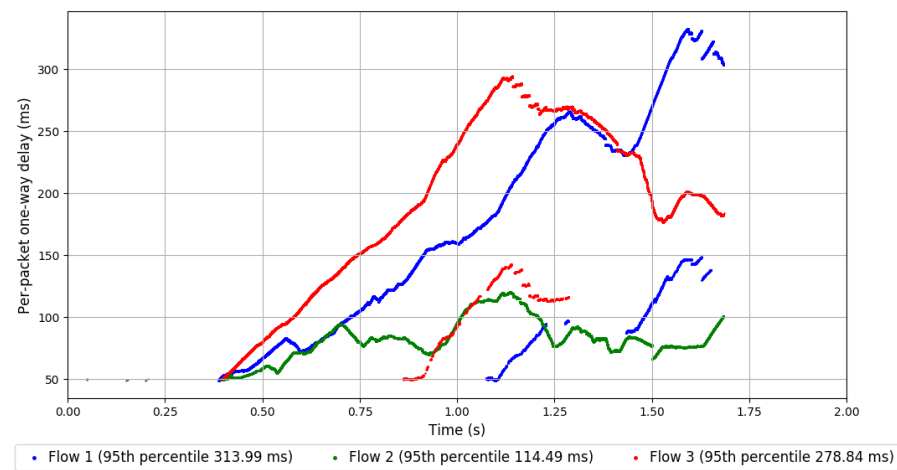
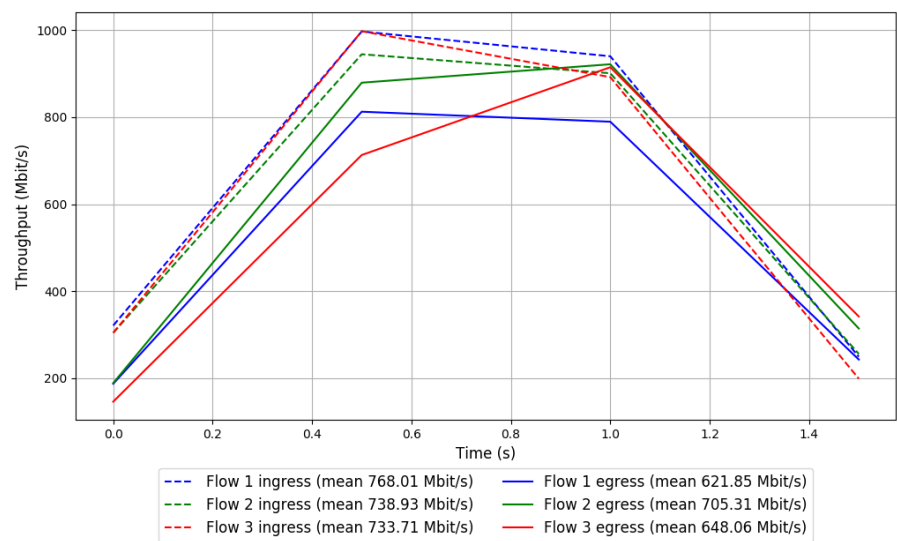


Run 10: Statistics of FillP

Start at: 2017-12-21 01:28:50

End at: 2017-12-21 01:29:20

Run 10: Report of FillP — Data Link

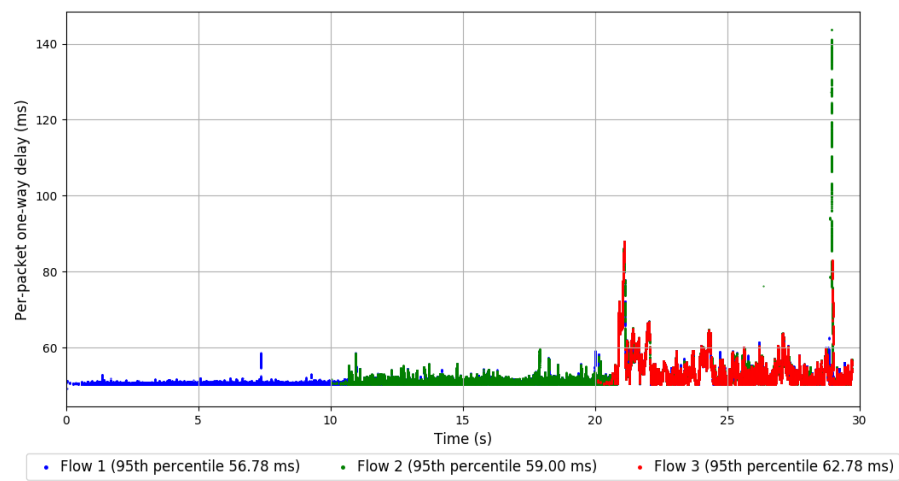
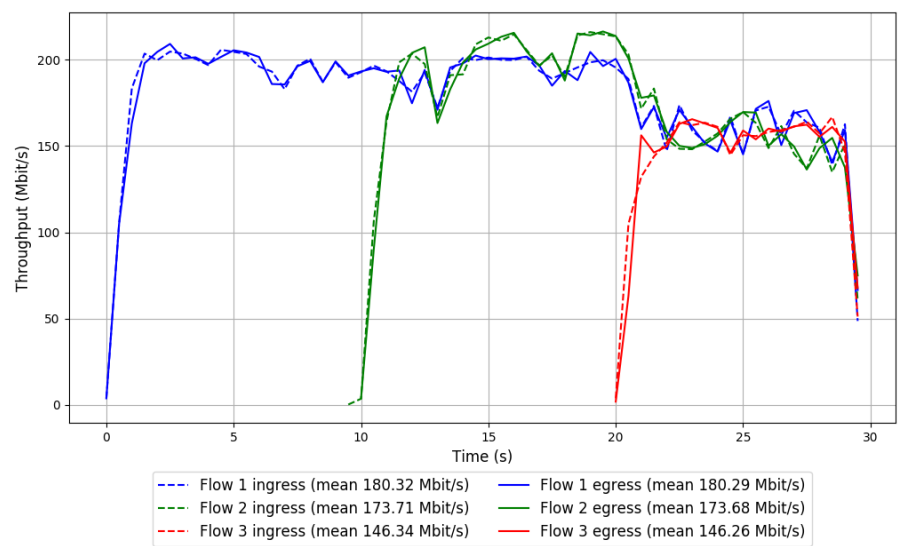


```
Run 1: Statistics of Indigo

Start at: 2017-12-20 23:33:55
End at: 2017-12-20 23:34:25

# Below is generated by plot.py at 2017-12-21 04:32:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 342.84 Mbit/s
95th percentile per-packet one-way delay: 58.538 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 180.29 Mbit/s
95th percentile per-packet one-way delay: 56.779 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 173.68 Mbit/s
95th percentile per-packet one-way delay: 59.003 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 146.26 Mbit/s
95th percentile per-packet one-way delay: 62.779 ms
Loss rate: 0.05%
```

Run 1: Report of Indigo — Data Link

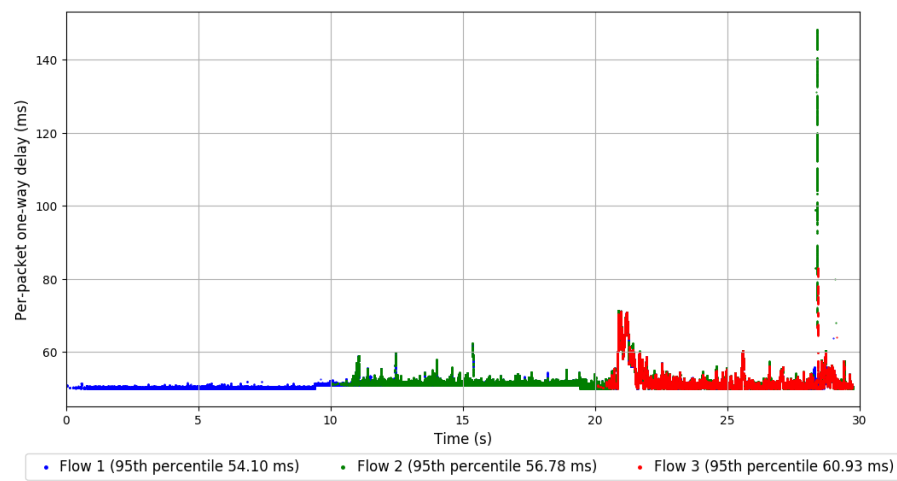
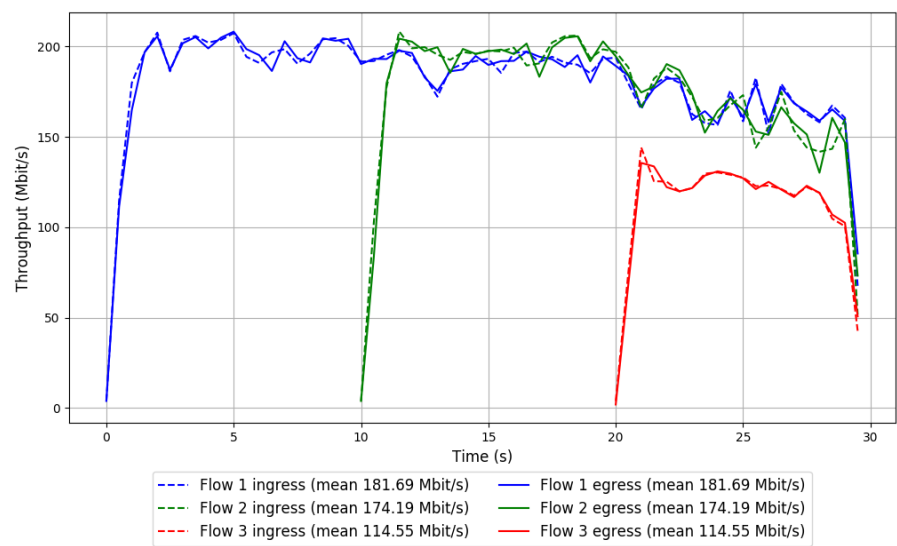


```
Run 2: Statistics of Indigo

Start at: 2017-12-20 23:46:54
End at: 2017-12-20 23:47:24

# Below is generated by plot.py at 2017-12-21 04:32:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 334.26 Mbit/s
95th percentile per-packet one-way delay: 56.062 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 181.69 Mbit/s
95th percentile per-packet one-way delay: 54.096 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 174.19 Mbit/s
95th percentile per-packet one-way delay: 56.782 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 114.55 Mbit/s
95th percentile per-packet one-way delay: 60.934 ms
Loss rate: 0.00%
```

Run 2: Report of Indigo — Data Link

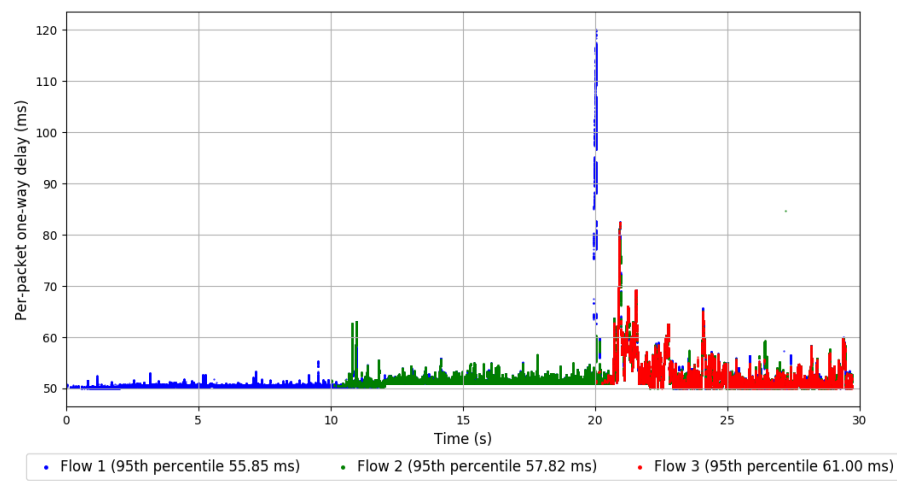
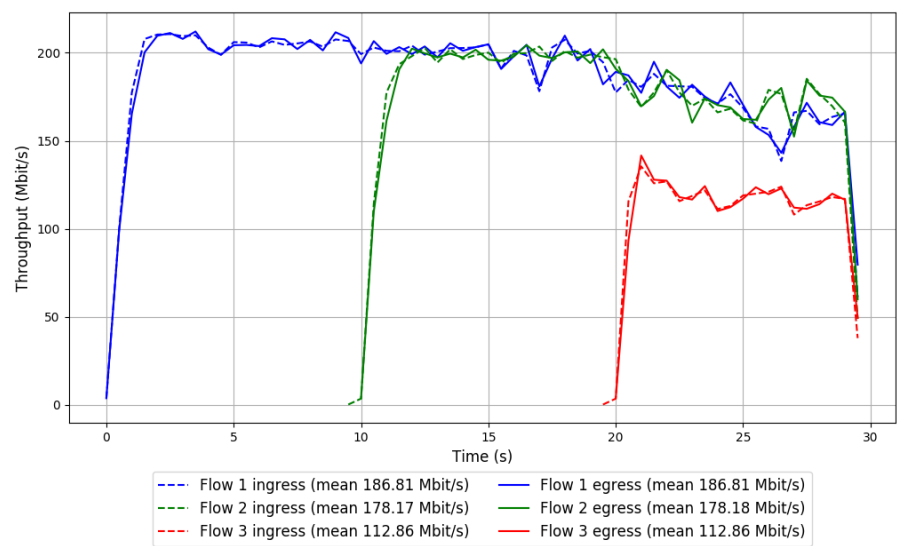


```
Run 3: Statistics of Indigo

Start at: 2017-12-21 00:00:01
End at: 2017-12-21 00:00:31

# Below is generated by plot.py at 2017-12-21 04:32:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 341.73 Mbit/s
95th percentile per-packet one-way delay: 57.691 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 186.81 Mbit/s
95th percentile per-packet one-way delay: 55.853 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 178.18 Mbit/s
95th percentile per-packet one-way delay: 57.820 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 112.86 Mbit/s
95th percentile per-packet one-way delay: 60.996 ms
Loss rate: 0.00%
```


Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2017-12-21 00:12:49

End at: 2017-12-21 00:13:19

Below is generated by plot.py at 2017-12-21 04:32:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 324.14 Mbit/s

95th percentile per-packet one-way delay: 57.864 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 179.04 Mbit/s

95th percentile per-packet one-way delay: 56.310 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 167.50 Mbit/s

95th percentile per-packet one-way delay: 58.264 ms

Loss rate: 0.00%

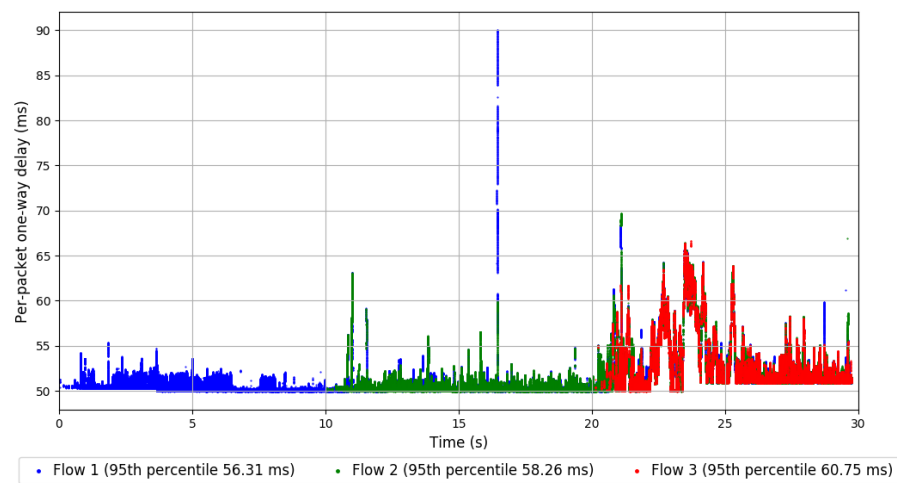
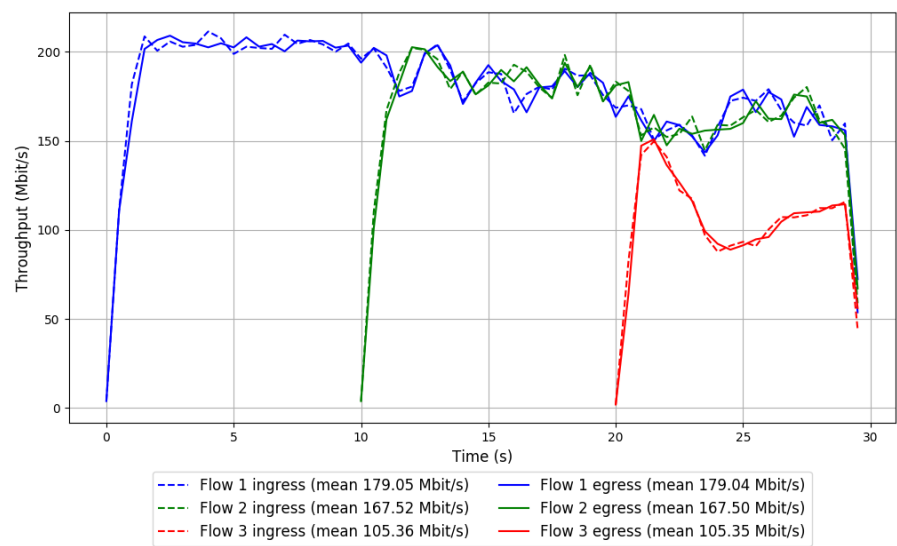
-- Flow 3:

Average throughput: 105.35 Mbit/s

95th percentile per-packet one-way delay: 60.749 ms

Loss rate: 0.00%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2017-12-21 00:26:07

End at: 2017-12-21 00:26:37

Below is generated by plot.py at 2017-12-21 04:32:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 330.31 Mbit/s

95th percentile per-packet one-way delay: 61.775 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 173.89 Mbit/s

95th percentile per-packet one-way delay: 59.318 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 166.69 Mbit/s

95th percentile per-packet one-way delay: 61.996 ms

Loss rate: 0.00%

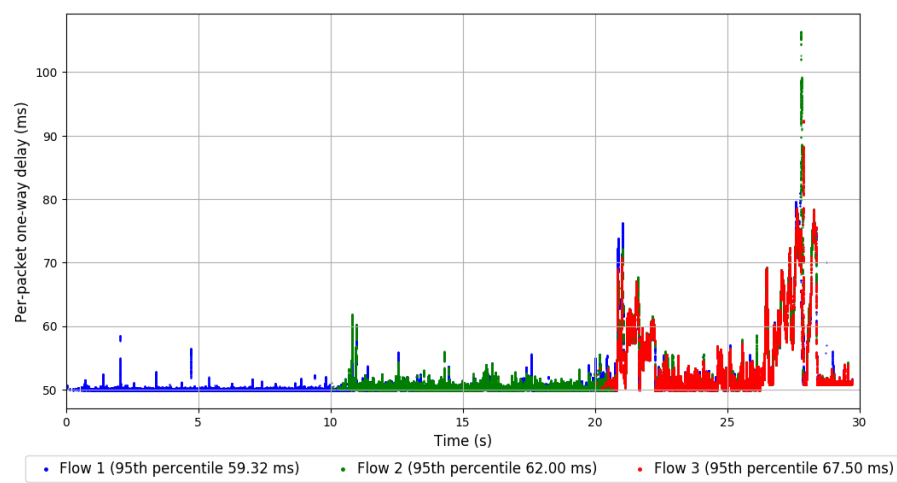
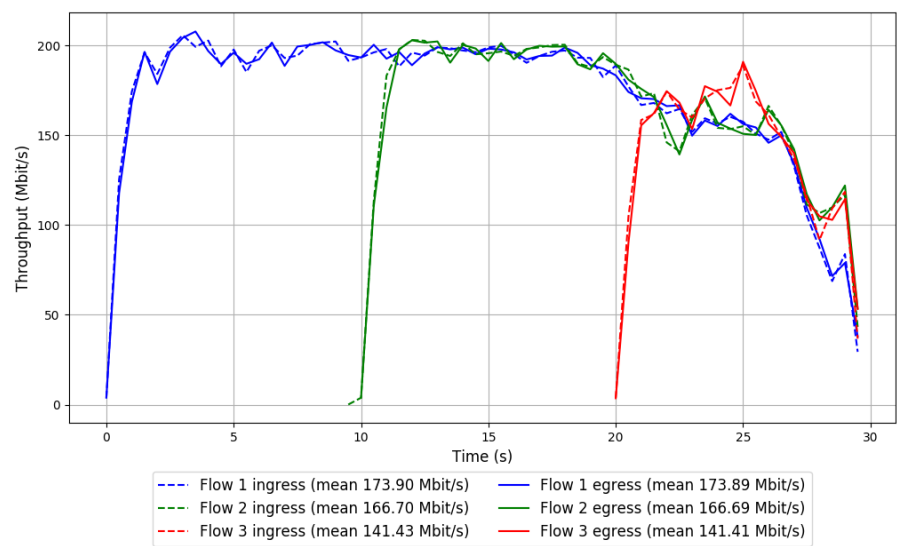
-- Flow 3:

Average throughput: 141.41 Mbit/s

95th percentile per-packet one-way delay: 67.495 ms

Loss rate: 0.01%

Run 5: Report of Indigo — Data Link



Run 6: Statistics of Indigo

Start at: 2017-12-21 00:38:58

End at: 2017-12-21 00:39:28

Below is generated by plot.py at 2017-12-21 04:32:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 332.08 Mbit/s

95th percentile per-packet one-way delay: 59.213 ms

Loss rate: 0.06%

-- Flow 1:

Average throughput: 173.37 Mbit/s

95th percentile per-packet one-way delay: 58.162 ms

Loss rate: 0.06%

-- Flow 2:

Average throughput: 167.37 Mbit/s

95th percentile per-packet one-way delay: 59.237 ms

Loss rate: 0.04%

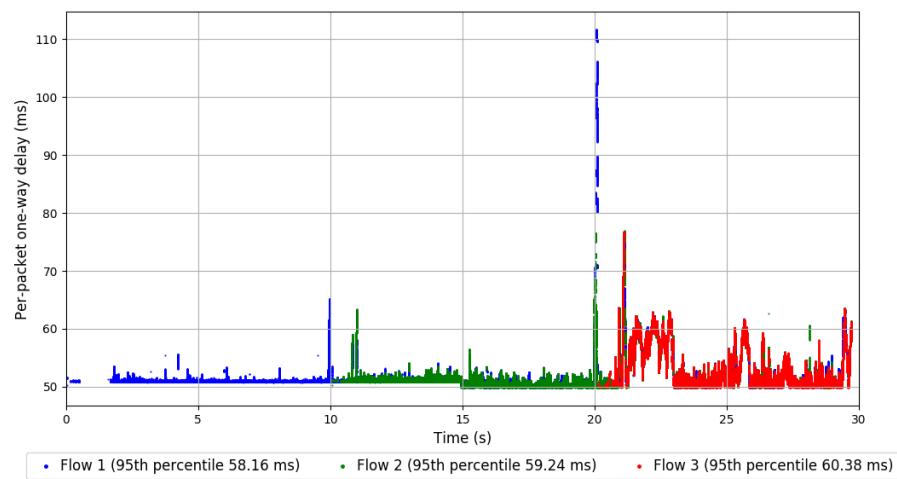
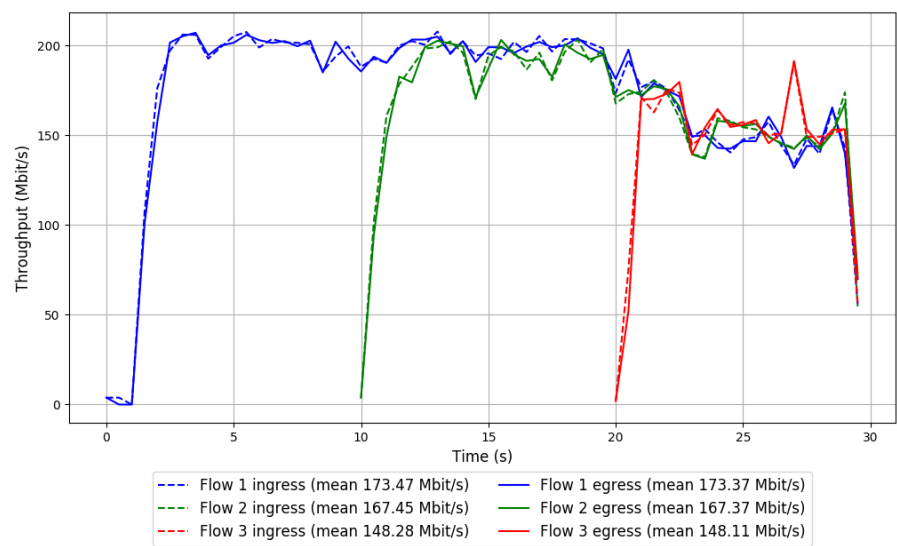
-- Flow 3:

Average throughput: 148.11 Mbit/s

95th percentile per-packet one-way delay: 60.375 ms

Loss rate: 0.08%

Run 6: Report of Indigo — Data Link



Run 7: Statistics of Indigo

Start at: 2017-12-21 00:52:37

End at: 2017-12-21 00:53:07

Below is generated by plot.py at 2017-12-21 04:32:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 333.88 Mbit/s

95th percentile per-packet one-way delay: 58.780 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 179.78 Mbit/s

95th percentile per-packet one-way delay: 56.040 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 181.24 Mbit/s

95th percentile per-packet one-way delay: 59.966 ms

Loss rate: 0.00%

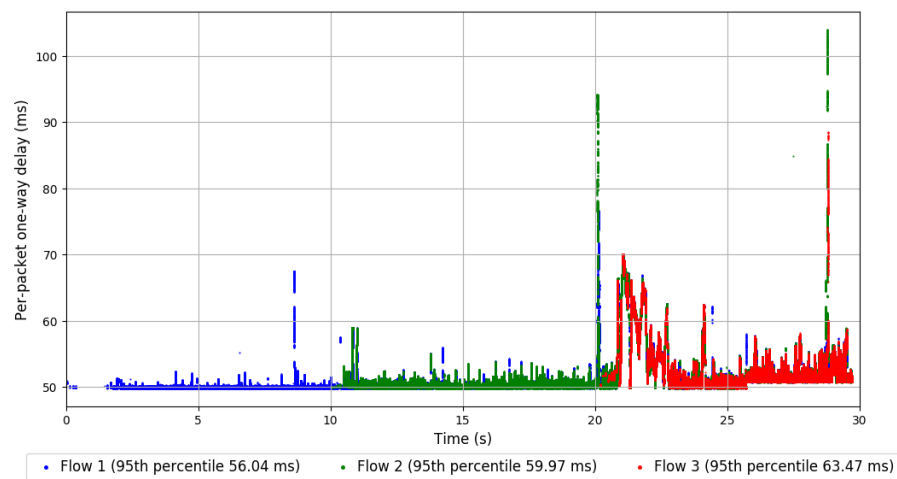
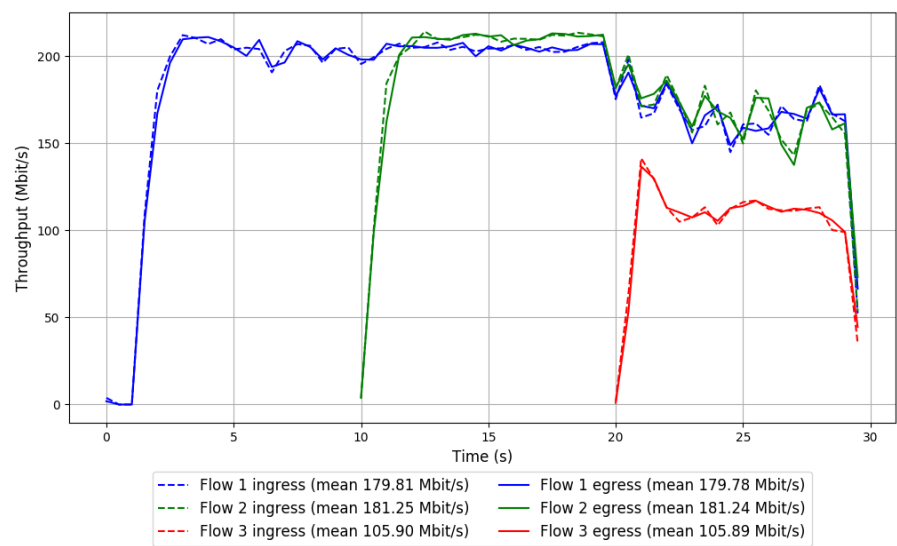
-- Flow 3:

Average throughput: 105.89 Mbit/s

95th percentile per-packet one-way delay: 63.465 ms

Loss rate: 0.00%

Run 7: Report of Indigo — Data Link



Run 8: Statistics of Indigo

Start at: 2017-12-21 01:05:28

End at: 2017-12-21 01:05:58

Below is generated by plot.py at 2017-12-21 04:32:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 328.72 Mbit/s

95th percentile per-packet one-way delay: 61.360 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 172.67 Mbit/s

95th percentile per-packet one-way delay: 58.421 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 172.49 Mbit/s

95th percentile per-packet one-way delay: 62.020 ms

Loss rate: 0.00%

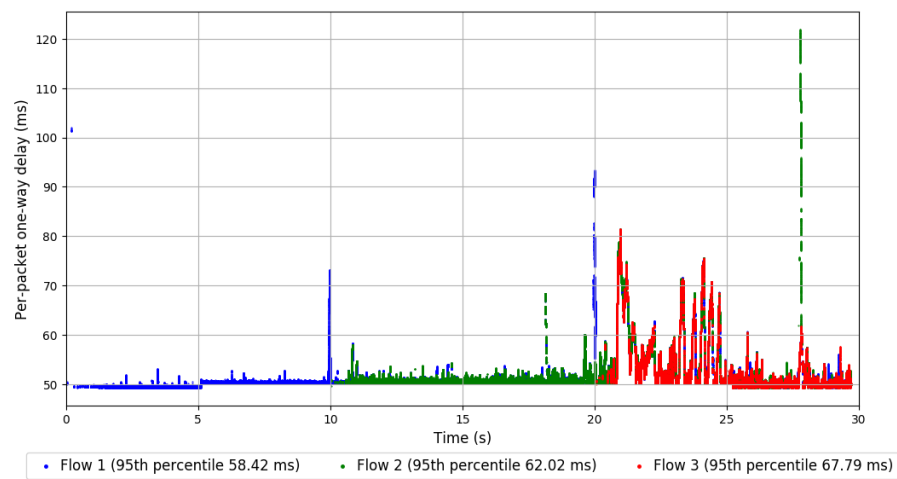
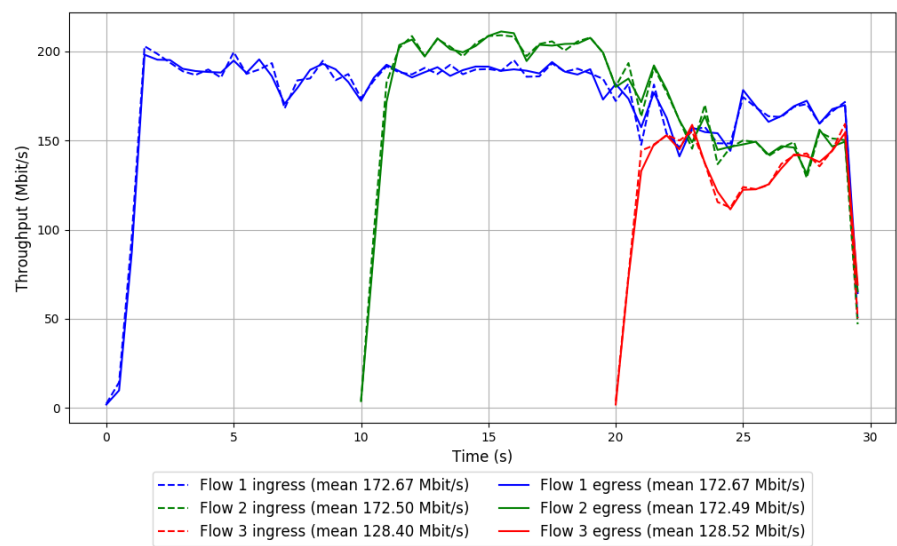
-- Flow 3:

Average throughput: 128.52 Mbit/s

95th percentile per-packet one-way delay: 67.788 ms

Loss rate: 0.00%

Run 8: Report of Indigo — Data Link



Run 9: Statistics of Indigo

Start at: 2017-12-21 01:18:33

End at: 2017-12-21 01:19:03

Below is generated by plot.py at 2017-12-21 04:32:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 336.71 Mbit/s

95th percentile per-packet one-way delay: 61.865 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 173.23 Mbit/s

95th percentile per-packet one-way delay: 59.244 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 175.82 Mbit/s

95th percentile per-packet one-way delay: 62.037 ms

Loss rate: 0.01%

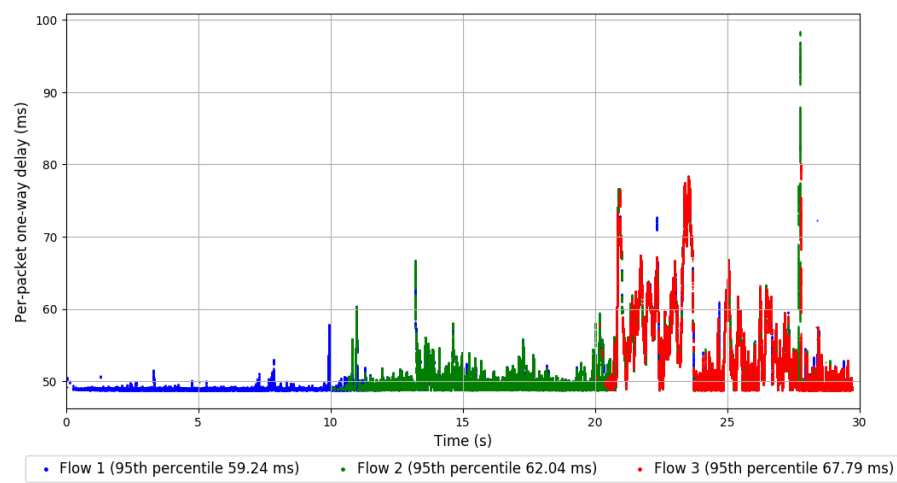
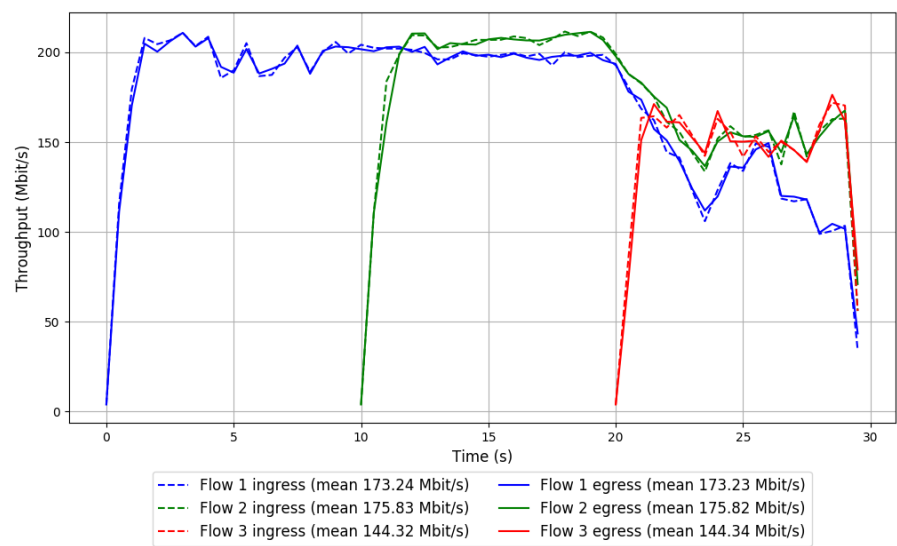
-- Flow 3:

Average throughput: 144.34 Mbit/s

95th percentile per-packet one-way delay: 67.792 ms

Loss rate: 0.00%

Run 9: Report of Indigo — Data Link



Run 10: Statistics of Indigo

Start at: 2017-12-21 01:31:09

End at: 2017-12-21 01:31:39

Below is generated by plot.py at 2017-12-21 04:32:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 327.58 Mbit/s

95th percentile per-packet one-way delay: 51.497 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 180.44 Mbit/s

95th percentile per-packet one-way delay: 50.935 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 165.63 Mbit/s

95th percentile per-packet one-way delay: 51.569 ms

Loss rate: 0.00%

-- Flow 3:

Average throughput: 115.37 Mbit/s

95th percentile per-packet one-way delay: 53.343 ms

Loss rate: 0.00%

Run 10: Report of Indigo — Data Link

