

Pantheon Report

Generated at 2018-04-18 19:35:11 (UTC).

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

Repeated the test of 16 congestion control schemes 10 times.

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

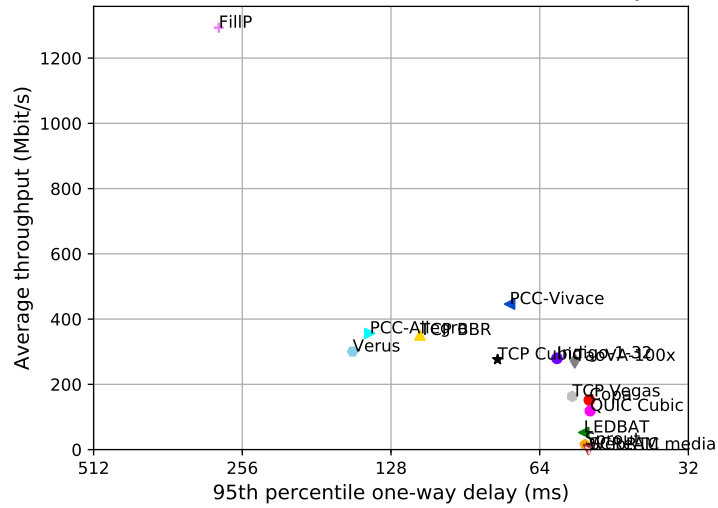
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

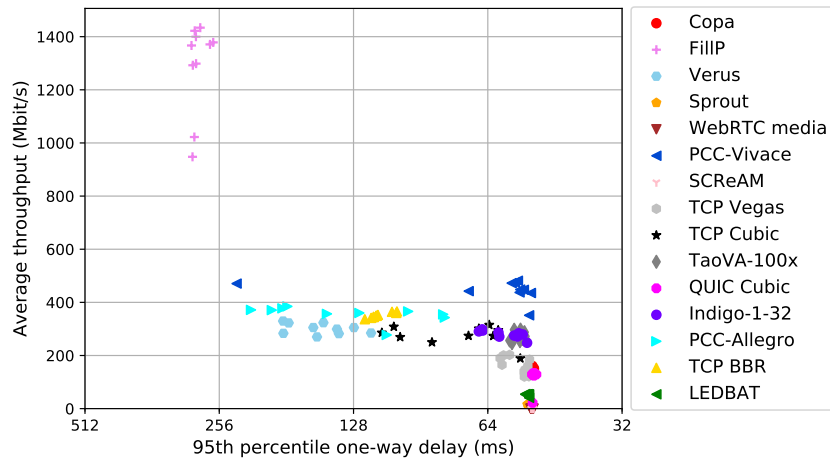
Git summary:

```
branch: master @ b3d6e7098641364fd3a292656a51aa81e316d0b4
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/fillp @ 11f8c46a2bf1dc797253db7e8ca04076272b2a44
third_party/genericCC @ d223989828276fa83a807da6e0341dc0c7b89aec
third_party/indigo @ a9b2060d39e4da2e8987e893e3eca2a6c7cd0ab9
third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db7484501f82ce8b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b540c0fd3505939528e2a5f
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/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaeab30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
  M src/examples/cellsim.cc
  M src/examples/sproutbt2.cc
  M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
  M src/verus.hpp
  M tools/plot.py
third_party/vivace @ 7a4ba531e75b4a6f66f5c4580192120401784ce3
third_party/webrtc @ f271183af822eee5d0031620f4bebf38aedc5581
```

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



[illegible]

Run 1: Statistics of TCP BBR

Start at: 2018-04-18 13:05:31

End at: 2018-04-18 13:06:01

Below is generated by plot.py at 2018-04-18 17:52:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 344.72 Mbit/s

95th percentile per-packet one-way delay: 115.269 ms

Loss rate: 0.14%

-- Flow 1:

Average throughput: 187.97 Mbit/s

95th percentile per-packet one-way delay: 111.106 ms

Loss rate: 0.10%

-- Flow 2:

Average throughput: 167.36 Mbit/s

95th percentile per-packet one-way delay: 114.888 ms

Loss rate: 0.13%

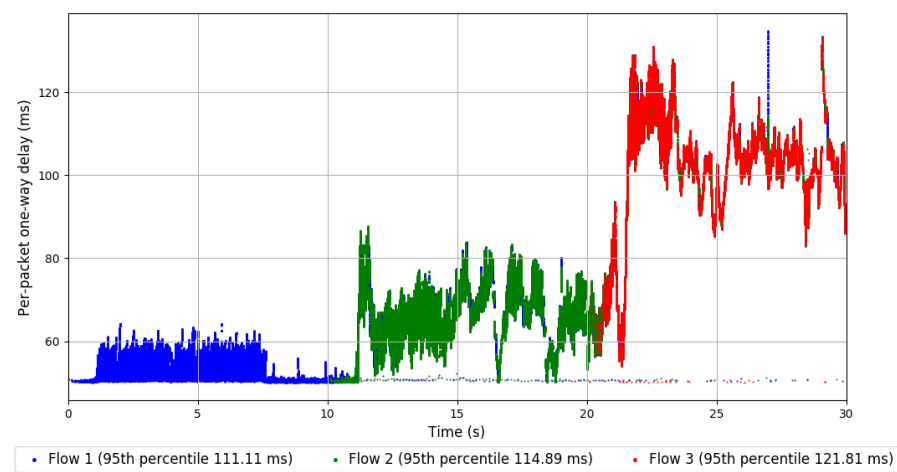
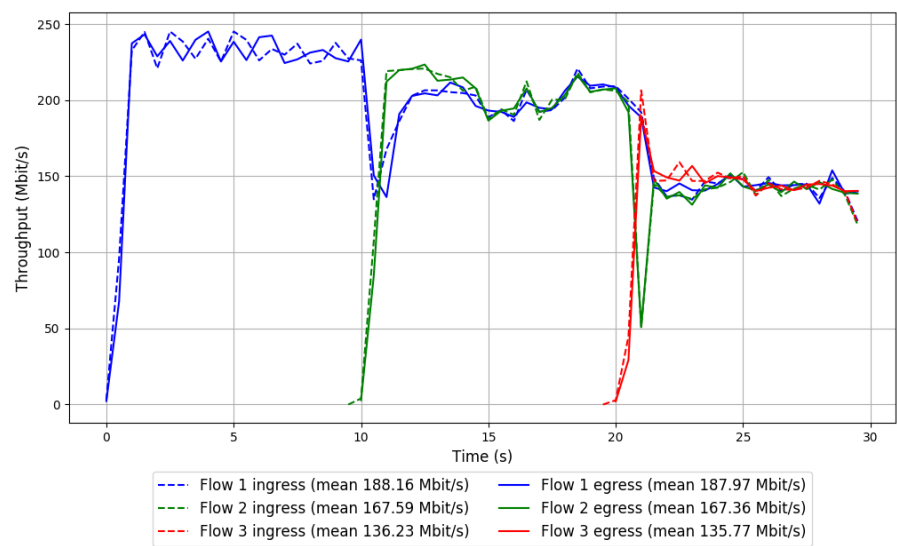
-- Flow 3:

Average throughput: 135.77 Mbit/s

95th percentile per-packet one-way delay: 121.810 ms

Loss rate: 0.32%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-04-18 13:20:58

End at: 2018-04-18 13:21:28

Below is generated by plot.py at 2018-04-18 17:52:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 345.69 Mbit/s

95th percentile per-packet one-way delay: 115.467 ms

Loss rate: 0.24%

-- Flow 1:

Average throughput: 188.13 Mbit/s

95th percentile per-packet one-way delay: 112.322 ms

Loss rate: 0.13%

-- Flow 2:

Average throughput: 171.98 Mbit/s

95th percentile per-packet one-way delay: 115.646 ms

Loss rate: 0.26%

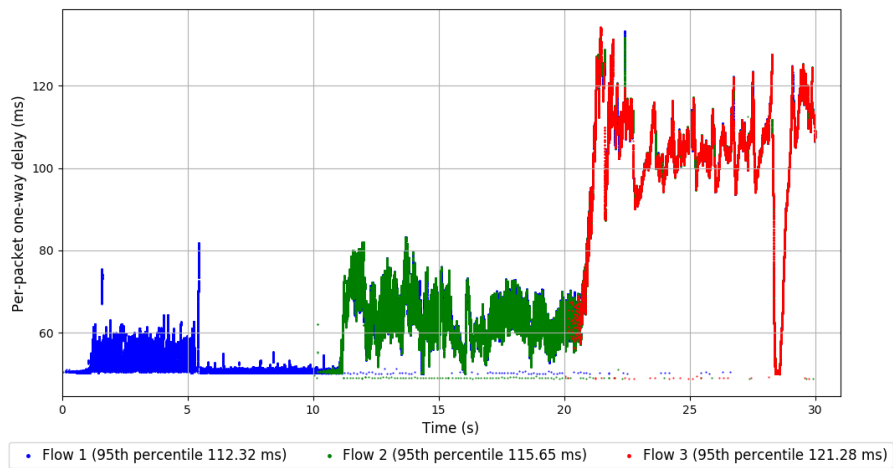
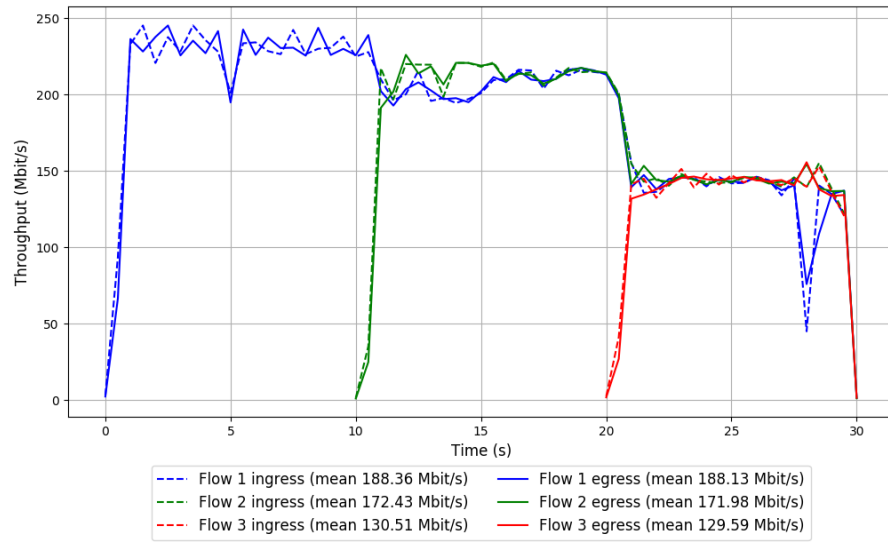
-- Flow 3:

Average throughput: 129.59 Mbit/s

95th percentile per-packet one-way delay: 121.279 ms

Loss rate: 0.69%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-04-18 13:36:27

End at: 2018-04-18 13:36:57

Below is generated by plot.py at 2018-04-18 17:52:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 364.54 Mbit/s

95th percentile per-packet one-way delay: 104.940 ms

Loss rate: 0.17%

-- Flow 1:

Average throughput: 196.77 Mbit/s

95th percentile per-packet one-way delay: 101.323 ms

Loss rate: 0.10%

-- Flow 2:

Average throughput: 181.16 Mbit/s

95th percentile per-packet one-way delay: 104.537 ms

Loss rate: 0.16%

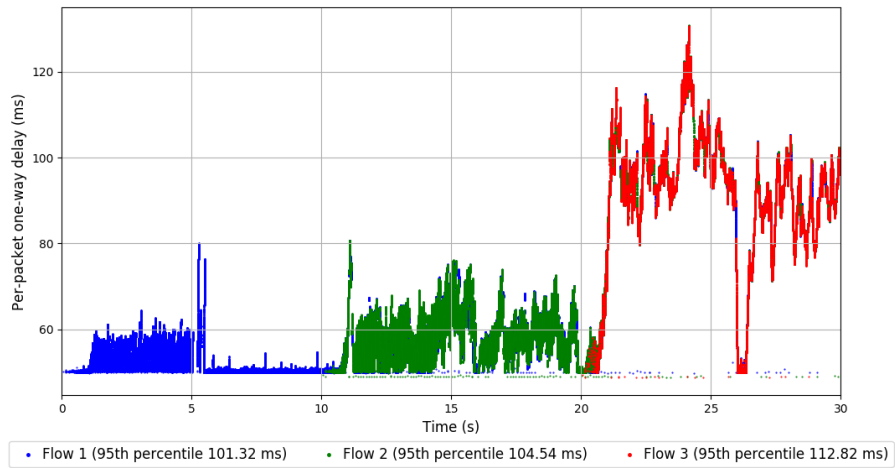
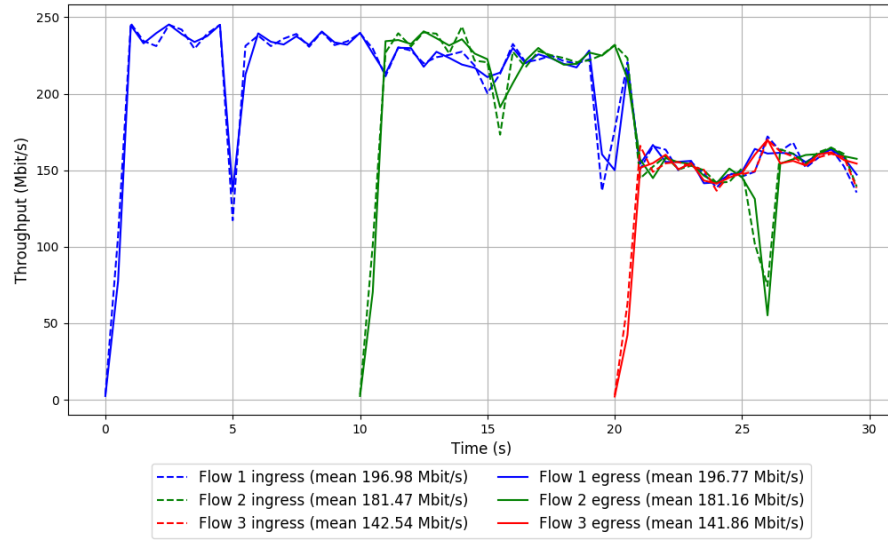
-- Flow 3:

Average throughput: 141.86 Mbit/s

95th percentile per-packet one-way delay: 112.823 ms

Loss rate: 0.46%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-04-18 13:51:55

End at: 2018-04-18 13:52:25

Below is generated by plot.py at 2018-04-18 17:52:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 365.91 Mbit/s

95th percentile per-packet one-way delay: 102.311 ms

Loss rate: 0.11%

-- Flow 1:

Average throughput: 196.25 Mbit/s

95th percentile per-packet one-way delay: 99.298 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 179.68 Mbit/s

95th percentile per-packet one-way delay: 102.102 ms

Loss rate: 0.19%

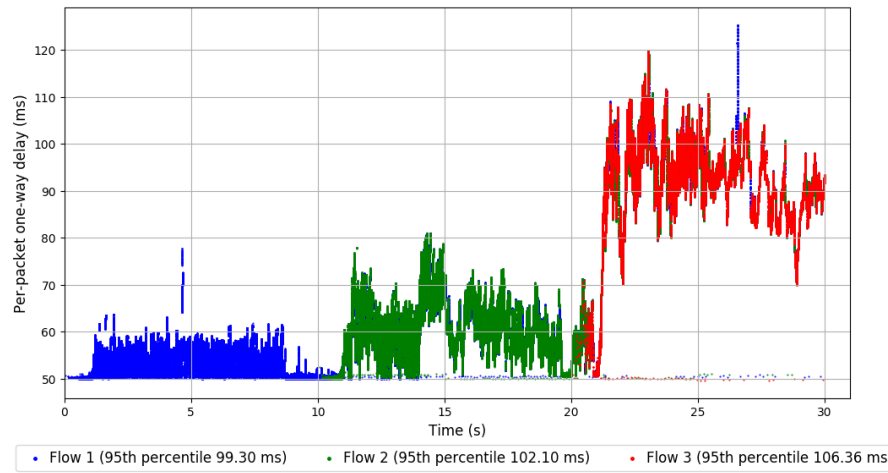
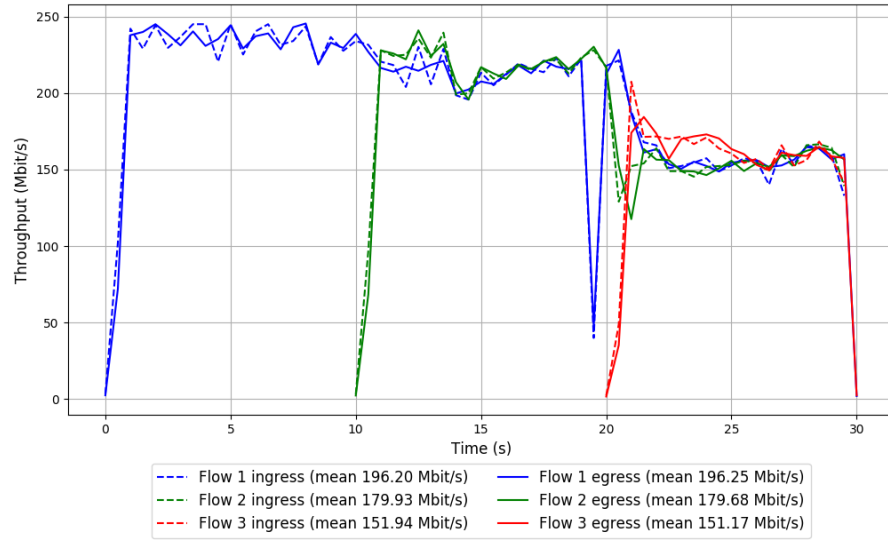
-- Flow 3:

Average throughput: 151.17 Mbit/s

95th percentile per-packet one-way delay: 106.364 ms

Loss rate: 0.29%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-04-18 14:07:18

End at: 2018-04-18 14:07:48

Below is generated by plot.py at 2018-04-18 17:52:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 360.25 Mbit/s

95th percentile per-packet one-way delay: 102.668 ms

Loss rate: 0.17%

-- Flow 1:

Average throughput: 195.11 Mbit/s

95th percentile per-packet one-way delay: 100.686 ms

Loss rate: 0.08%

-- Flow 2:

Average throughput: 178.20 Mbit/s

95th percentile per-packet one-way delay: 102.400 ms

Loss rate: 0.18%

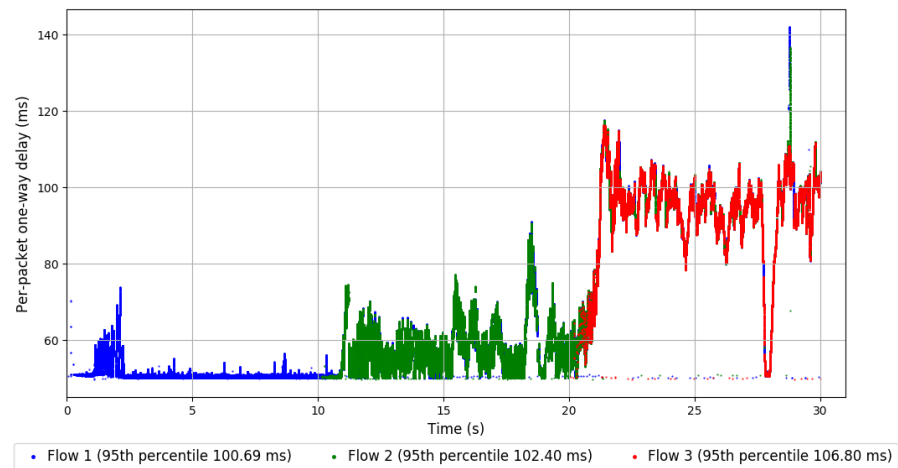
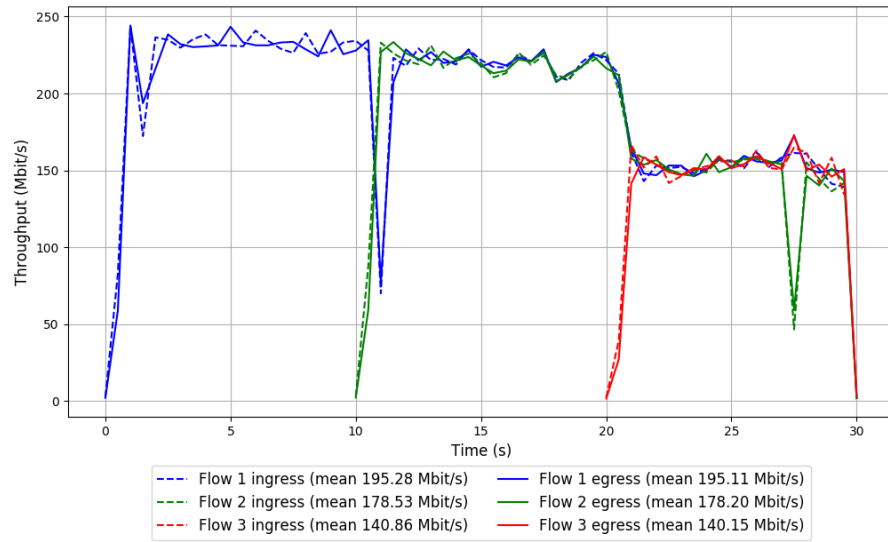
-- Flow 3:

Average throughput: 140.15 Mbit/s

95th percentile per-packet one-way delay: 106.796 ms

Loss rate: 0.50%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2018-04-18 14:22:41

End at: 2018-04-18 14:23:11

Below is generated by plot.py at 2018-04-18 17:52:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 349.21 Mbit/s

95th percentile per-packet one-way delay: 113.564 ms

Loss rate: 0.19%

-- Flow 1:

Average throughput: 190.38 Mbit/s

95th percentile per-packet one-way delay: 111.312 ms

Loss rate: 0.13%

-- Flow 2:

Average throughput: 170.60 Mbit/s

95th percentile per-packet one-way delay: 113.354 ms

Loss rate: 0.19%

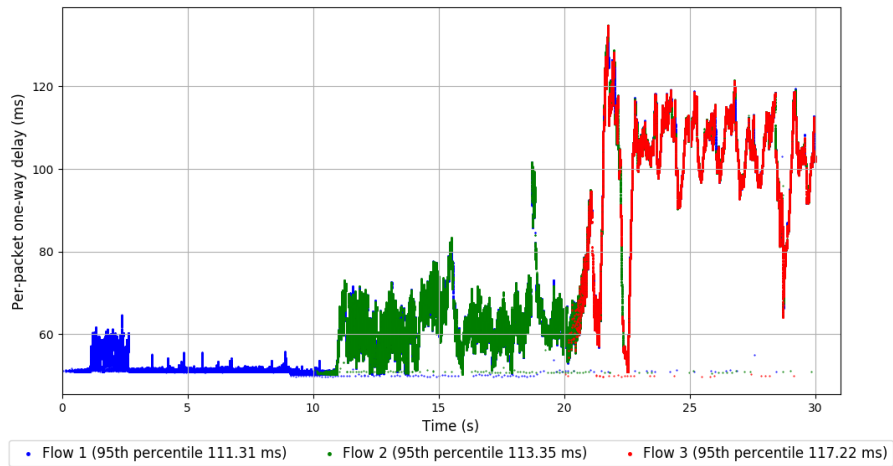
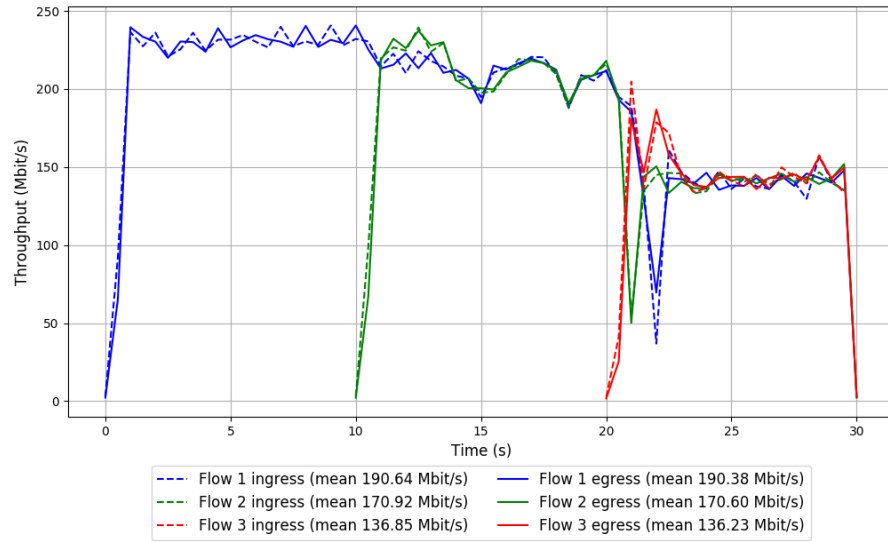
-- Flow 3:

Average throughput: 136.23 Mbit/s

95th percentile per-packet one-way delay: 117.217 ms

Loss rate: 0.44%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2018-04-18 14:37:58

End at: 2018-04-18 14:38:28

Below is generated by plot.py at 2018-04-18 17:52:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 349.88 Mbit/s

95th percentile per-packet one-way delay: 113.893 ms

Loss rate: 0.22%

-- Flow 1:

Average throughput: 189.21 Mbit/s

95th percentile per-packet one-way delay: 109.470 ms

Loss rate: 0.11%

-- Flow 2:

Average throughput: 173.33 Mbit/s

95th percentile per-packet one-way delay: 113.786 ms

Loss rate: 0.21%

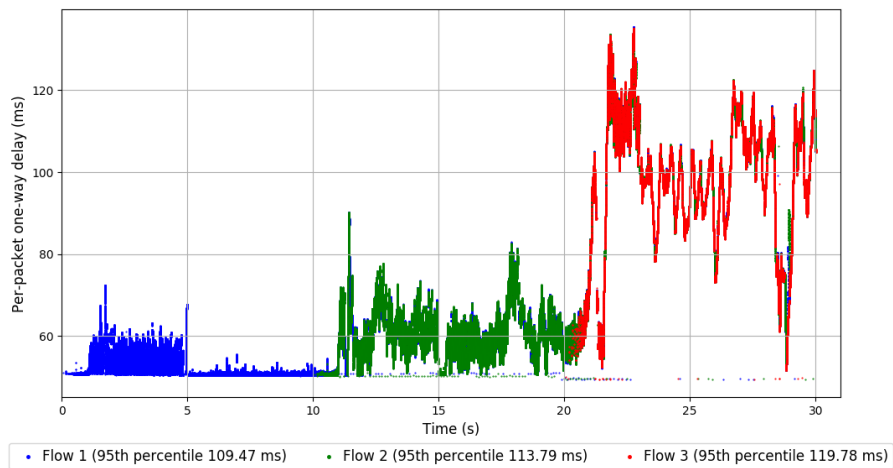
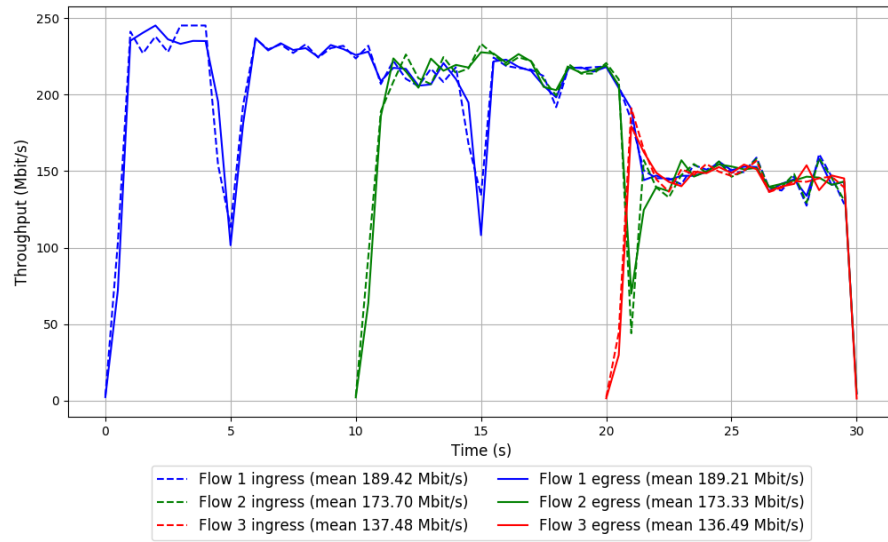
-- Flow 3:

Average throughput: 136.49 Mbit/s

95th percentile per-packet one-way delay: 119.777 ms

Loss rate: 0.70%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2018-04-18 14:53:25

End at: 2018-04-18 14:53:55

Below is generated by plot.py at 2018-04-18 17:52:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 352.72 Mbit/s

95th percentile per-packet one-way delay: 112.876 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 191.73 Mbit/s

95th percentile per-packet one-way delay: 109.977 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 172.15 Mbit/s

95th percentile per-packet one-way delay: 112.706 ms

Loss rate: 0.00%

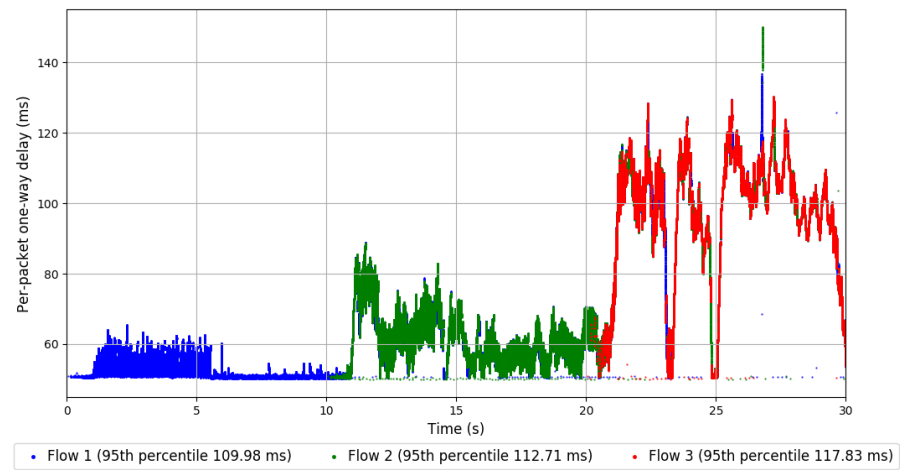
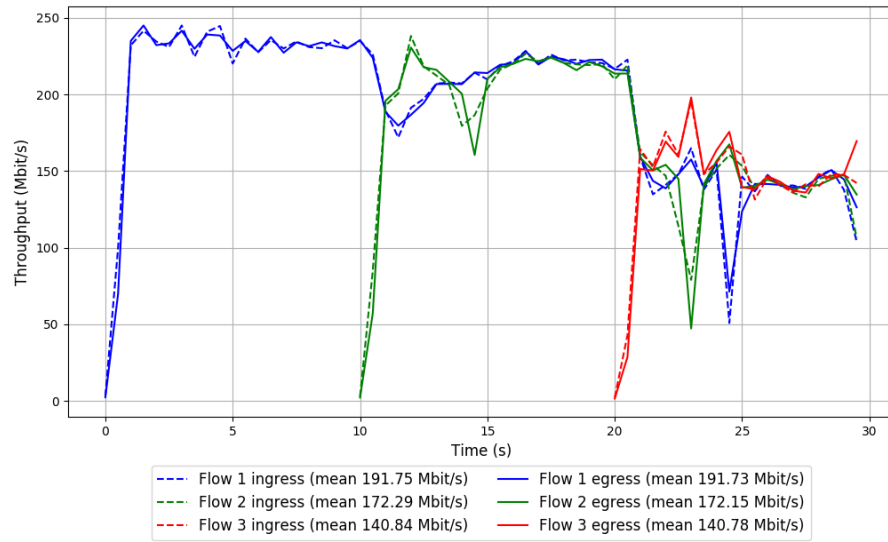
-- Flow 3:

Average throughput: 140.78 Mbit/s

95th percentile per-packet one-way delay: 117.833 ms

Loss rate: 0.04%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2018-04-18 15:08:44

End at: 2018-04-18 15:09:14

Below is generated by plot.py at 2018-04-18 17:58:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 336.56 Mbit/s

95th percentile per-packet one-way delay: 120.773 ms

Loss rate: 0.19%

-- Flow 1:

Average throughput: 184.57 Mbit/s

95th percentile per-packet one-way delay: 118.185 ms

Loss rate: 0.10%

-- Flow 2:

Average throughput: 162.39 Mbit/s

95th percentile per-packet one-way delay: 120.995 ms

Loss rate: 0.18%

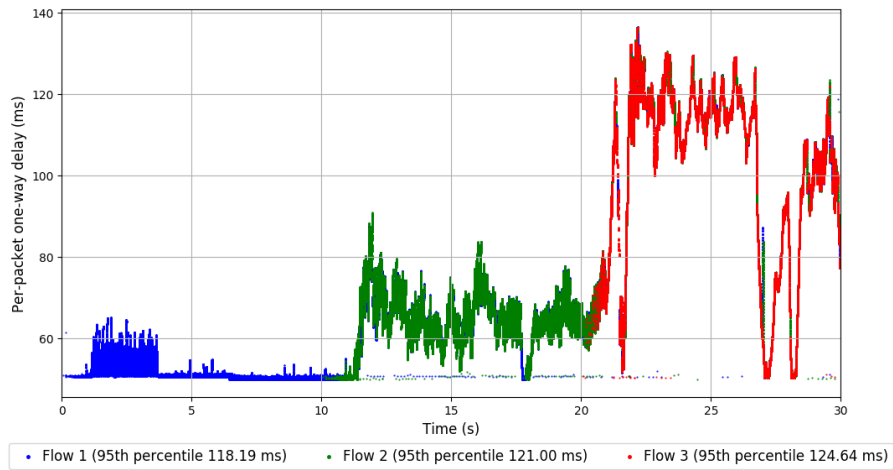
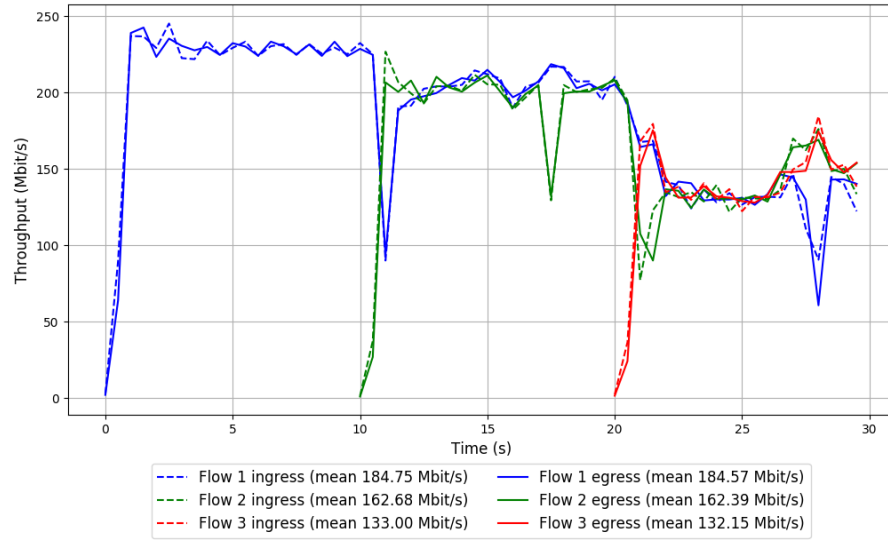
-- Flow 3:

Average throughput: 132.15 Mbit/s

95th percentile per-packet one-way delay: 124.643 ms

Loss rate: 0.64%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2018-04-18 15:23:53

End at: 2018-04-18 15:24:23

Below is generated by plot.py at 2018-04-18 17:58:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 341.62 Mbit/s

95th percentile per-packet one-way delay: 116.858 ms

Loss rate: 0.22%

-- Flow 1:

Average throughput: 186.09 Mbit/s

95th percentile per-packet one-way delay: 112.584 ms

Loss rate: 0.14%

-- Flow 2:

Average throughput: 166.34 Mbit/s

95th percentile per-packet one-way delay: 116.808 ms

Loss rate: 0.22%

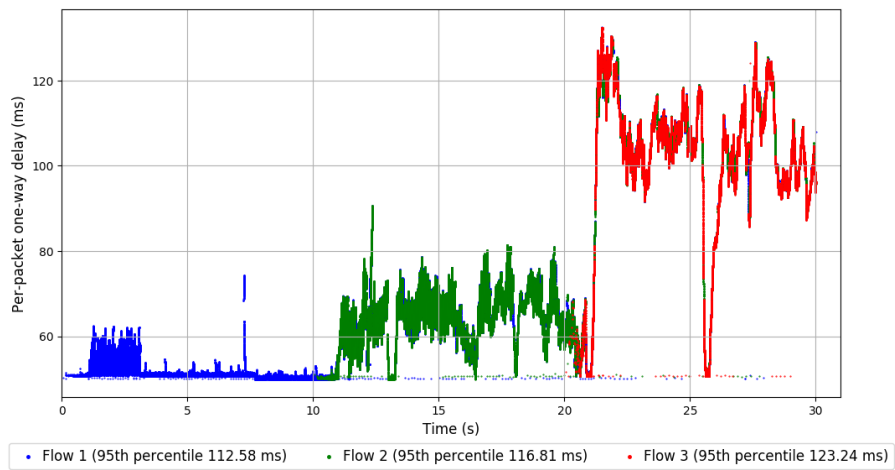
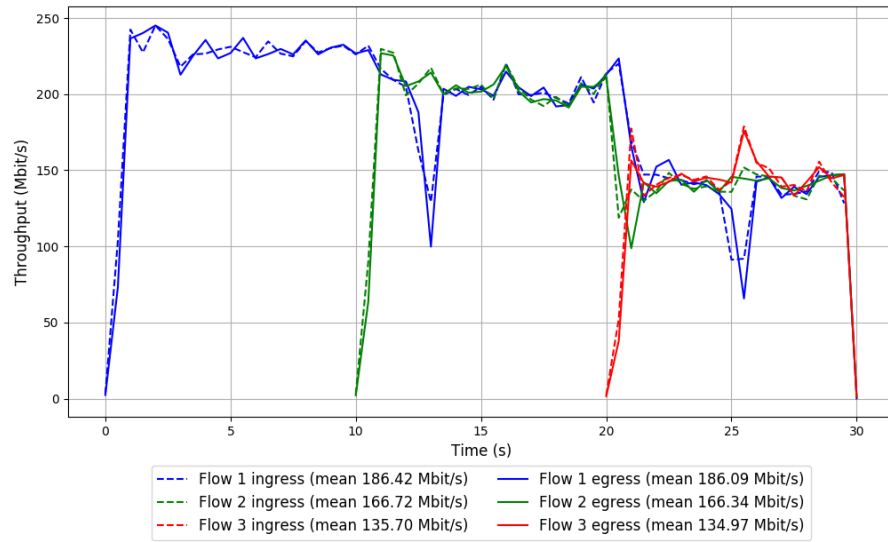
-- Flow 3:

Average throughput: 134.97 Mbit/s

95th percentile per-packet one-way delay: 123.237 ms

Loss rate: 0.54%

Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-04-18 12:58:43

End at: 2018-04-18 12:59:13

Below is generated by plot.py at 2018-04-18 17:58:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 269.34 Mbit/s

95th percentile per-packet one-way delay: 100.620 ms

Loss rate: 0.15%

-- Flow 1:

Average throughput: 140.75 Mbit/s

95th percentile per-packet one-way delay: 100.013 ms

Loss rate: 0.09%

-- Flow 2:

Average throughput: 112.51 Mbit/s

95th percentile per-packet one-way delay: 99.753 ms

Loss rate: 0.18%

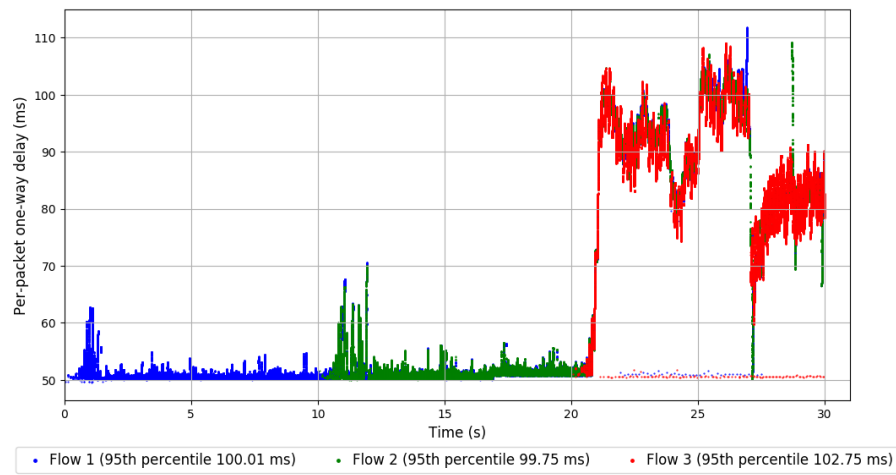
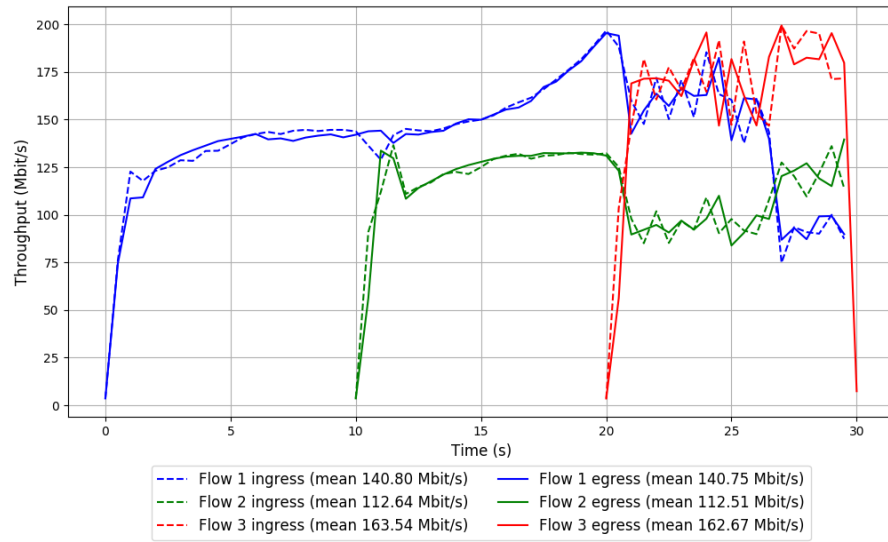
-- Flow 3:

Average throughput: 162.67 Mbit/s

95th percentile per-packet one-way delay: 102.755 ms

Loss rate: 0.28%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-04-18 13:14:10

End at: 2018-04-18 13:14:40

Below is generated by plot.py at 2018-04-18 17:58:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 249.86 Mbit/s

95th percentile per-packet one-way delay: 85.372 ms

Loss rate: 0.13%

-- Flow 1:

Average throughput: 190.20 Mbit/s

95th percentile per-packet one-way delay: 79.850 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 45.70 Mbit/s

95th percentile per-packet one-way delay: 88.779 ms

Loss rate: 0.37%

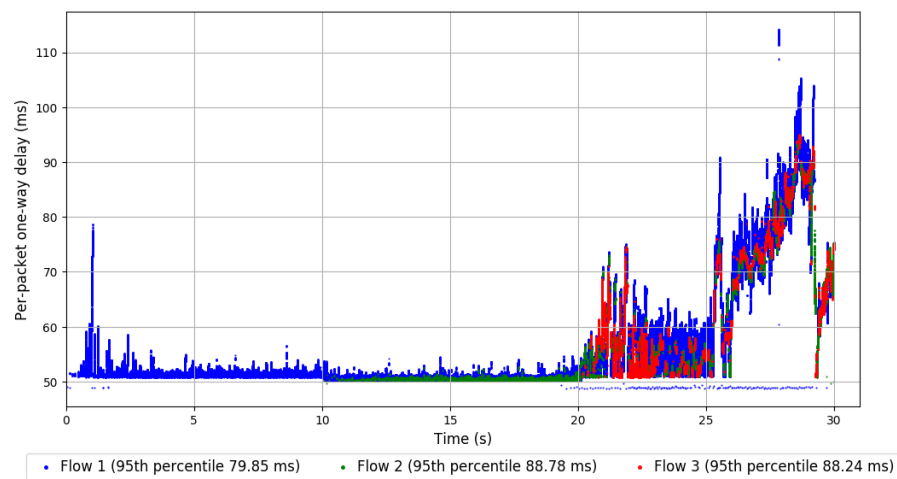
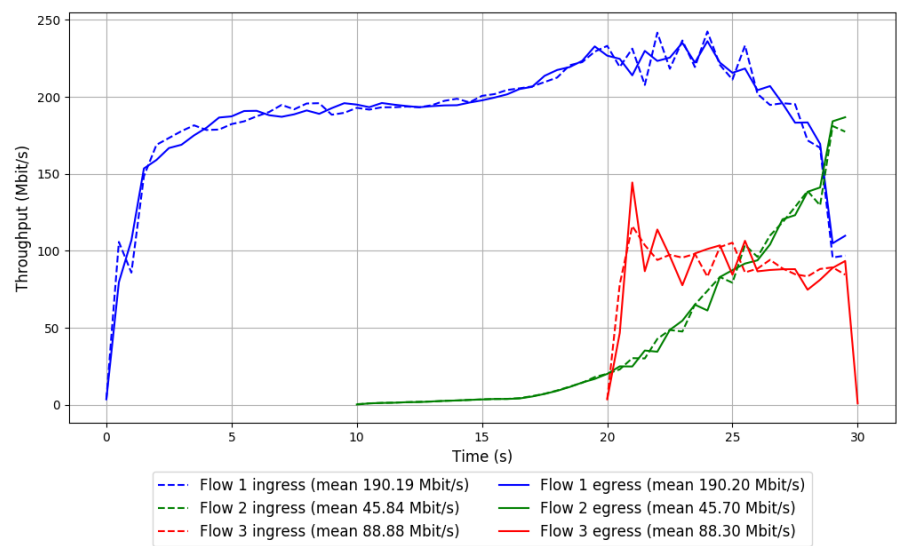
-- Flow 3:

Average throughput: 88.30 Mbit/s

95th percentile per-packet one-way delay: 88.244 ms

Loss rate: 0.68%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-04-18 13:29:33

End at: 2018-04-18 13:30:03

Below is generated by plot.py at 2018-04-18 17:58:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 295.25 Mbit/s

95th percentile per-packet one-way delay: 60.654 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 183.29 Mbit/s

95th percentile per-packet one-way delay: 60.601 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 165.90 Mbit/s

95th percentile per-packet one-way delay: 60.822 ms

Loss rate: 0.00%

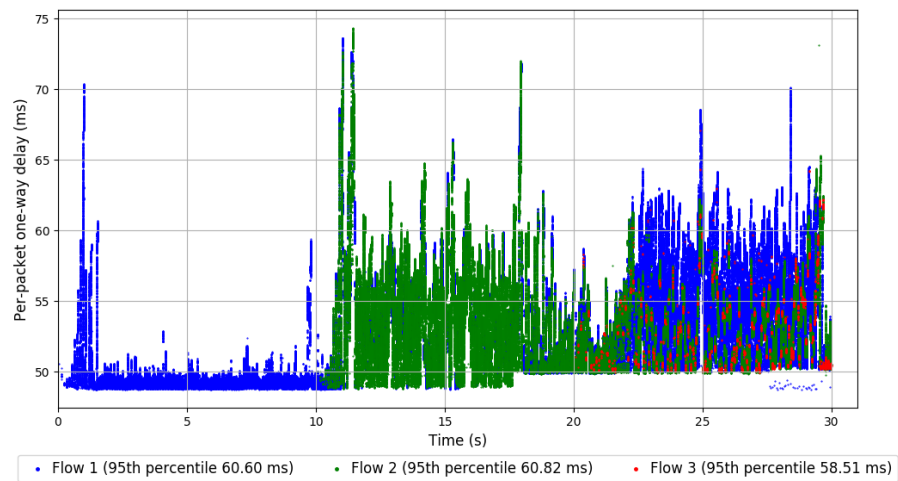
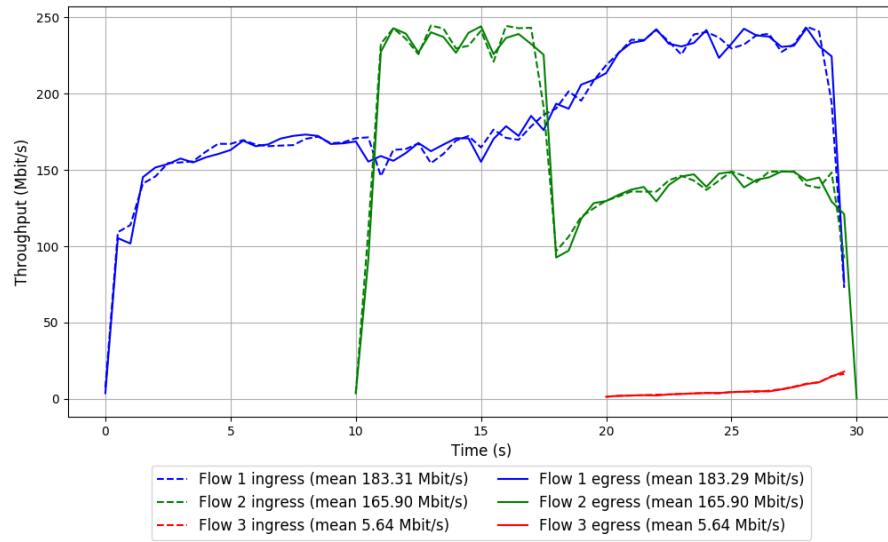
-- Flow 3:

Average throughput: 5.64 Mbit/s

95th percentile per-packet one-way delay: 58.510 ms

Loss rate: 0.02%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-04-18 13:45:07

End at: 2018-04-18 13:45:37

Below is generated by plot.py at 2018-04-18 17:58:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 274.18 Mbit/s

95th percentile per-packet one-way delay: 70.710 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 166.01 Mbit/s

95th percentile per-packet one-way delay: 70.658 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 89.73 Mbit/s

95th percentile per-packet one-way delay: 68.751 ms

Loss rate: 0.00%

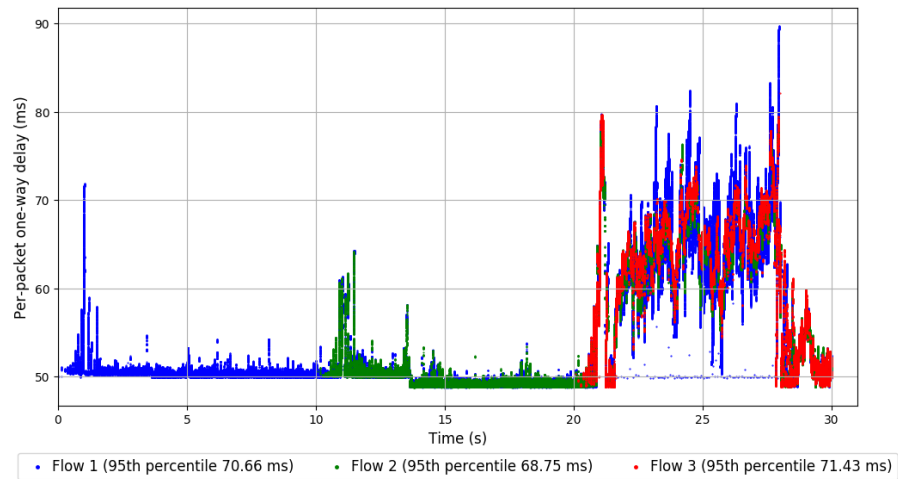
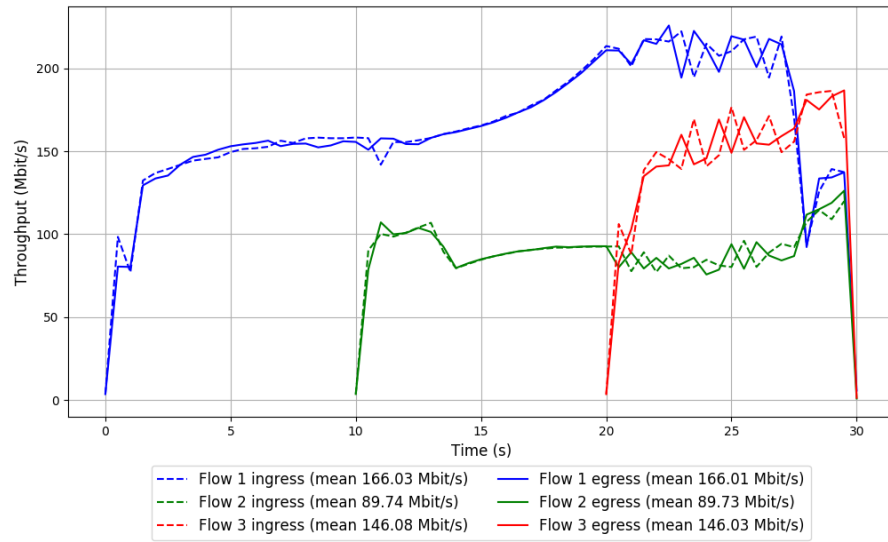
-- Flow 3:

Average throughput: 146.03 Mbit/s

95th percentile per-packet one-way delay: 71.430 ms

Loss rate: 0.03%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-04-18 14:00:28

End at: 2018-04-18 14:00:58

Below is generated by plot.py at 2018-04-18 17:58:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 301.16 Mbit/s

95th percentile per-packet one-way delay: 67.026 ms

Loss rate: 0.10%

-- Flow 1:

Average throughput: 176.30 Mbit/s

95th percentile per-packet one-way delay: 65.058 ms

Loss rate: 0.07%

-- Flow 2:

Average throughput: 138.24 Mbit/s

95th percentile per-packet one-way delay: 67.954 ms

Loss rate: 0.05%

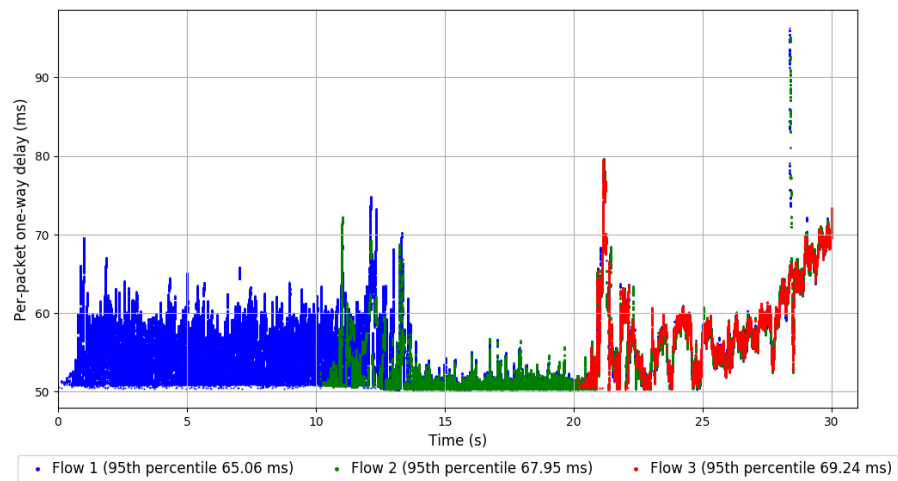
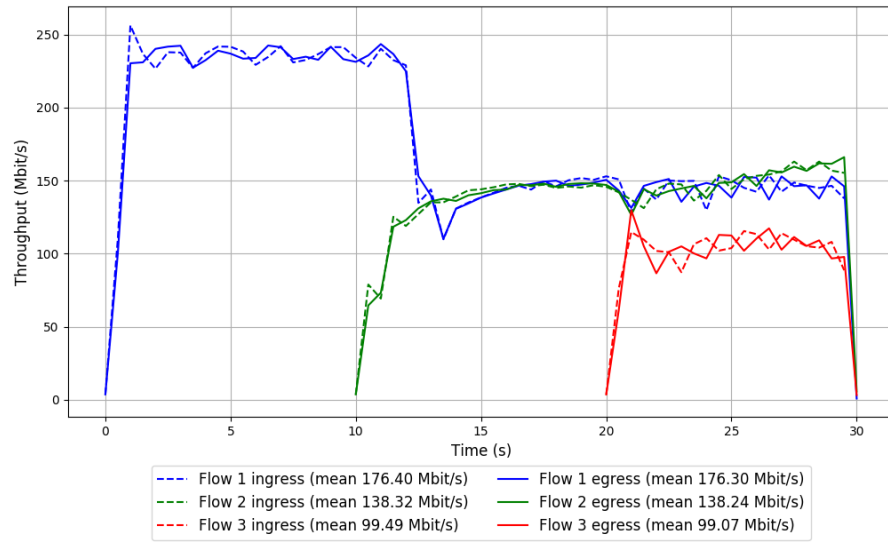
-- Flow 3:

Average throughput: 99.07 Mbit/s

95th percentile per-packet one-way delay: 69.236 ms

Loss rate: 0.40%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2018-04-18 14:15:53

End at: 2018-04-18 14:16:23

Below is generated by plot.py at 2018-04-18 17:58:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 189.13 Mbit/s

95th percentile per-packet one-way delay: 54.109 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 151.76 Mbit/s

95th percentile per-packet one-way delay: 53.727 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 53.52 Mbit/s

95th percentile per-packet one-way delay: 55.587 ms

Loss rate: 0.08%

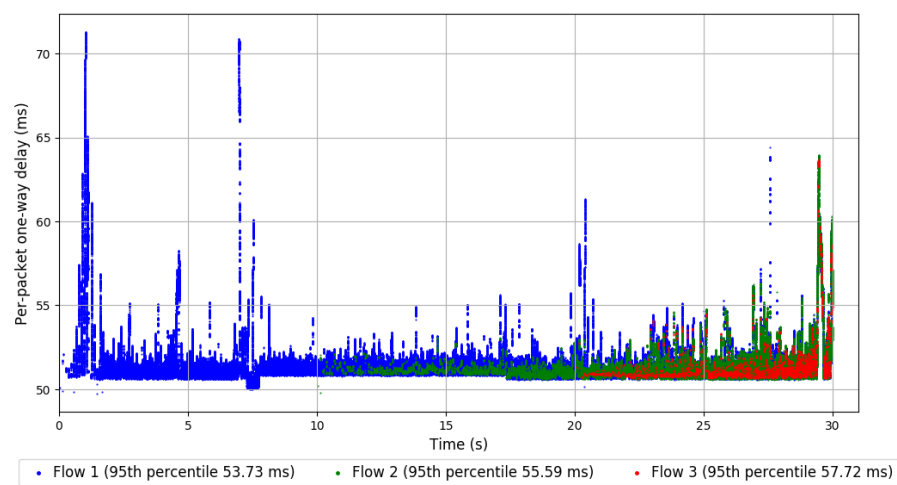
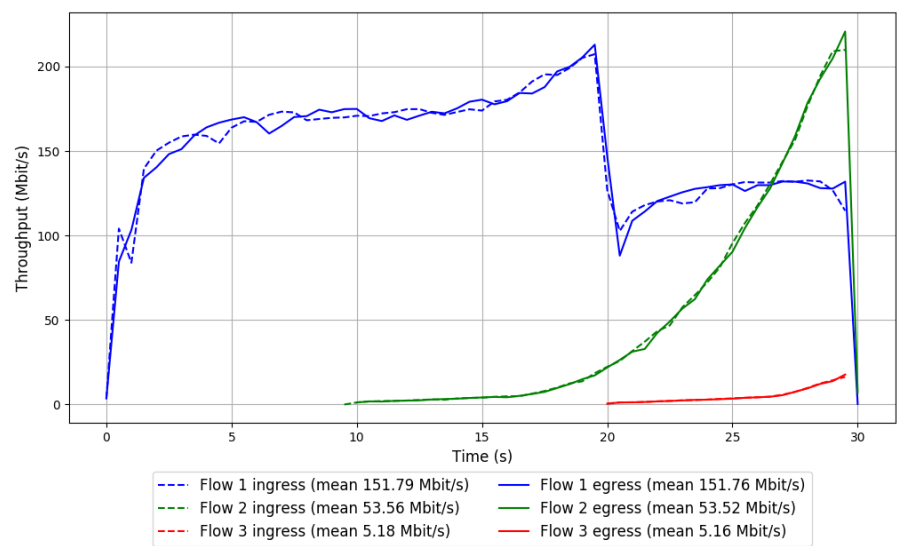
-- Flow 3:

Average throughput: 5.16 Mbit/s

95th percentile per-packet one-way delay: 57.722 ms

Loss rate: 0.56%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2018-04-18 14:31:18

End at: 2018-04-18 14:31:48

Below is generated by plot.py at 2018-04-18 18:02:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 315.22 Mbit/s

95th percentile per-packet one-way delay: 63.529 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 219.44 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 141.77 Mbit/s

95th percentile per-packet one-way delay: 67.317 ms

Loss rate: 0.00%

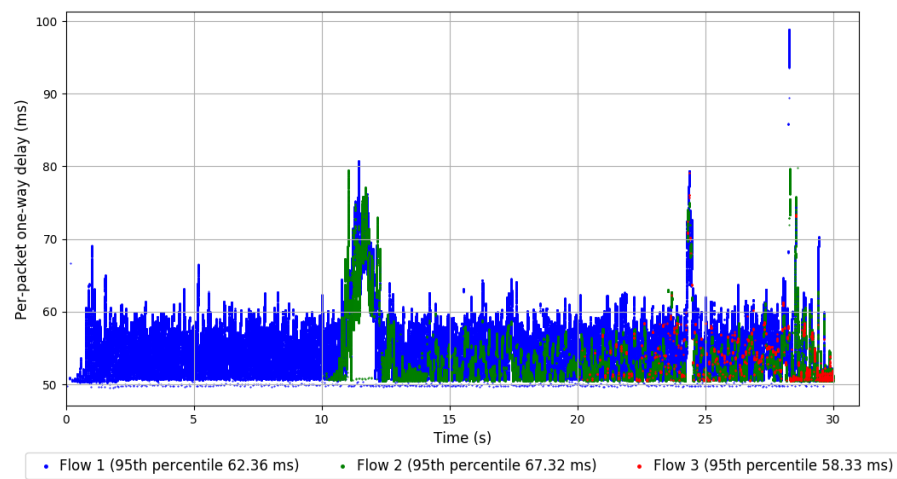
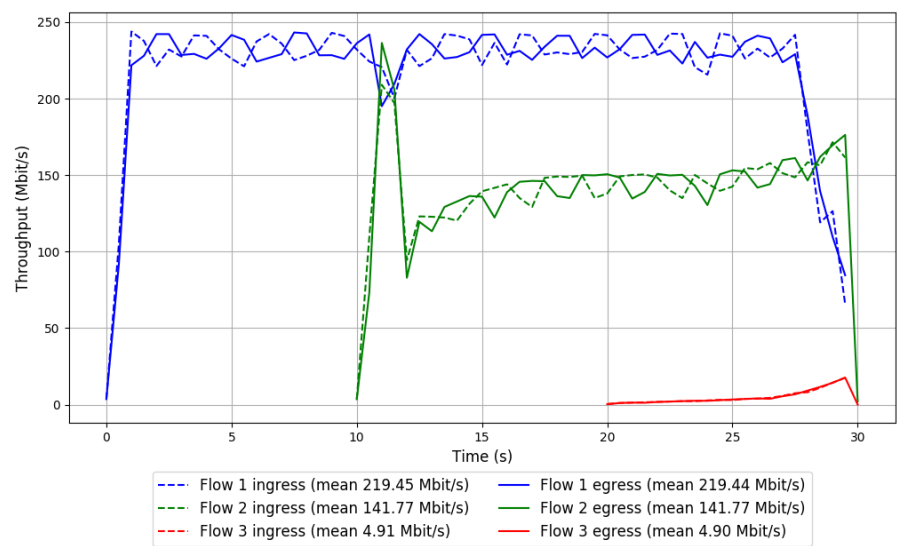
-- Flow 3:

Average throughput: 4.90 Mbit/s

95th percentile per-packet one-way delay: 58.330 ms

Loss rate: 0.22%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2018-04-18 14:46:30

End at: 2018-04-18 14:47:00

Below is generated by plot.py at 2018-04-18 18:02:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 308.33 Mbit/s

95th percentile per-packet one-way delay: 103.969 ms

Loss rate: 0.22%

-- Flow 1:

Average throughput: 145.49 Mbit/s

95th percentile per-packet one-way delay: 97.352 ms

Loss rate: 0.24%

-- Flow 2:

Average throughput: 198.67 Mbit/s

95th percentile per-packet one-way delay: 104.000 ms

Loss rate: 0.21%

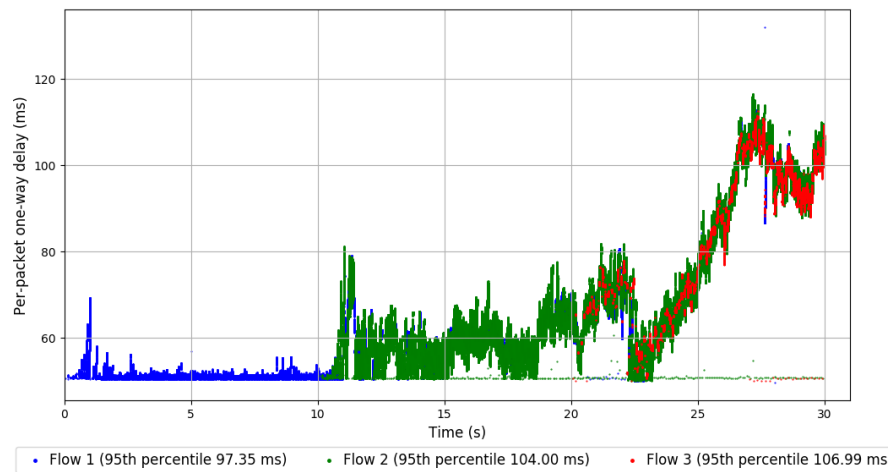
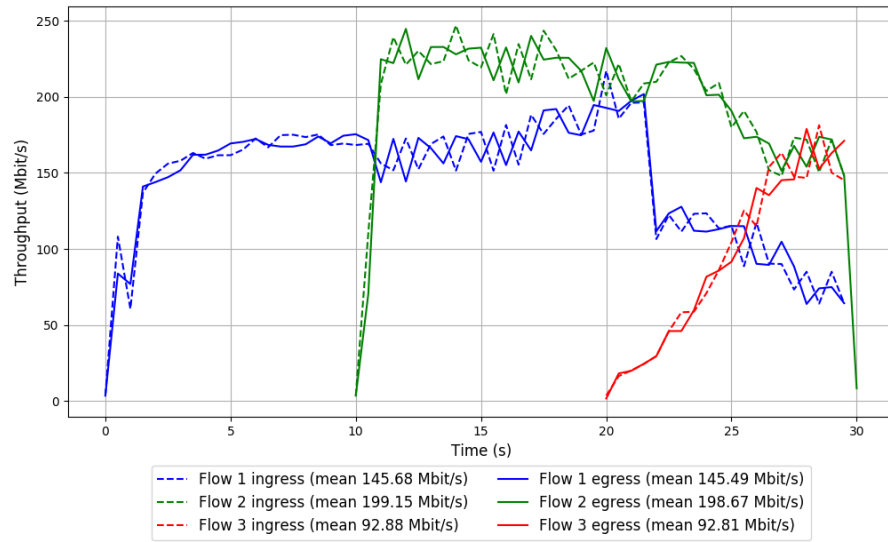
-- Flow 3:

Average throughput: 92.81 Mbit/s

95th percentile per-packet one-way delay: 106.986 ms

Loss rate: 0.18%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2018-04-18 15:01:48

End at: 2018-04-18 15:02:18

Below is generated by plot.py at 2018-04-18 18:02:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 285.69 Mbit/s

95th percentile per-packet one-way delay: 110.609 ms

Loss rate: 0.27%

-- Flow 1:

Average throughput: 150.18 Mbit/s

95th percentile per-packet one-way delay: 108.887 ms

Loss rate: 0.14%

-- Flow 2:

Average throughput: 135.03 Mbit/s

95th percentile per-packet one-way delay: 110.113 ms

Loss rate: 0.18%

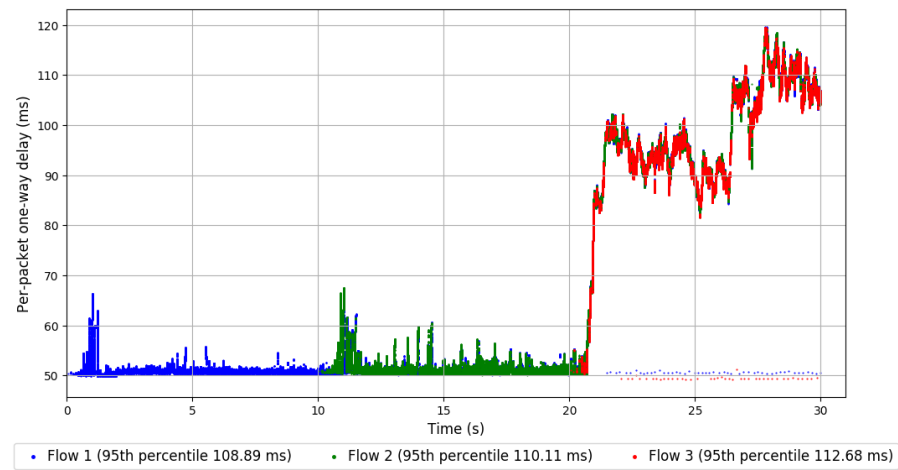
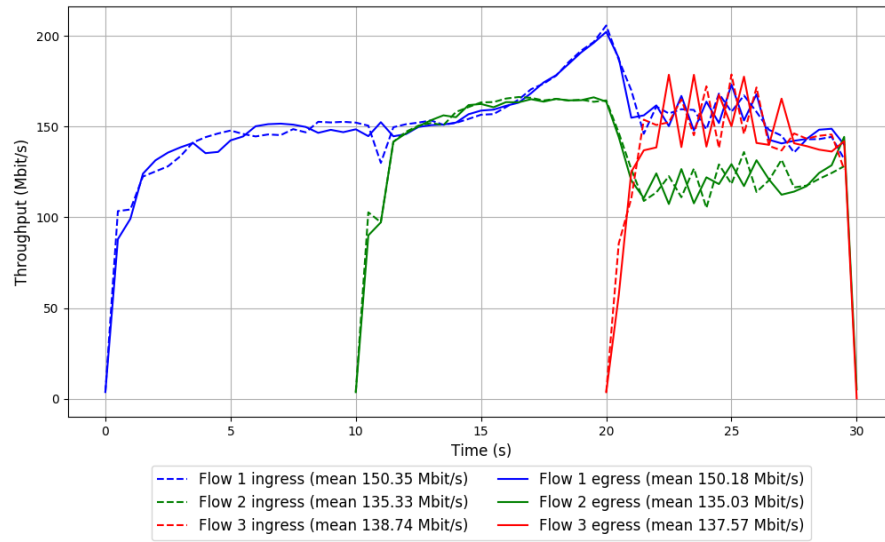
-- Flow 3:

Average throughput: 137.57 Mbit/s

95th percentile per-packet one-way delay: 112.683 ms

Loss rate: 0.84%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2018-04-18 15:17:17

End at: 2018-04-18 15:17:47

Below is generated by plot.py at 2018-04-18 18:02:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 273.75 Mbit/s

95th percentile per-packet one-way delay: 62.208 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 152.12 Mbit/s

95th percentile per-packet one-way delay: 60.697 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 133.25 Mbit/s

95th percentile per-packet one-way delay: 62.745 ms

Loss rate: 0.02%

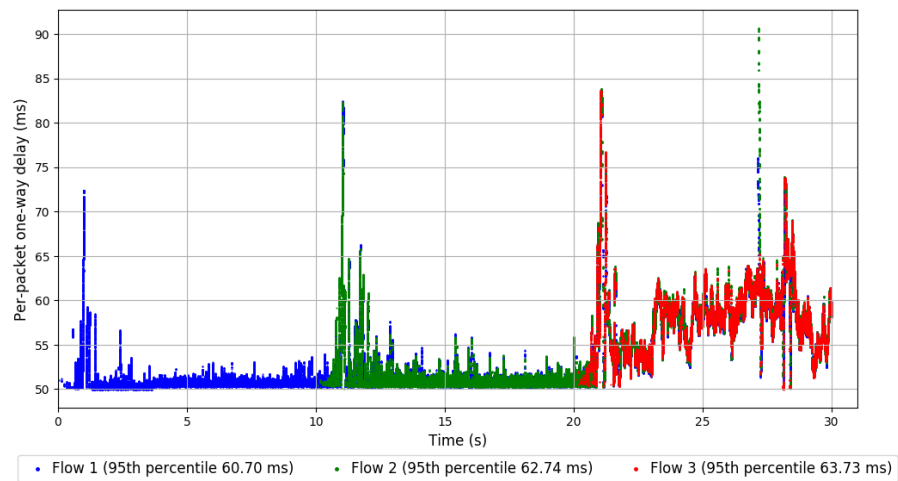
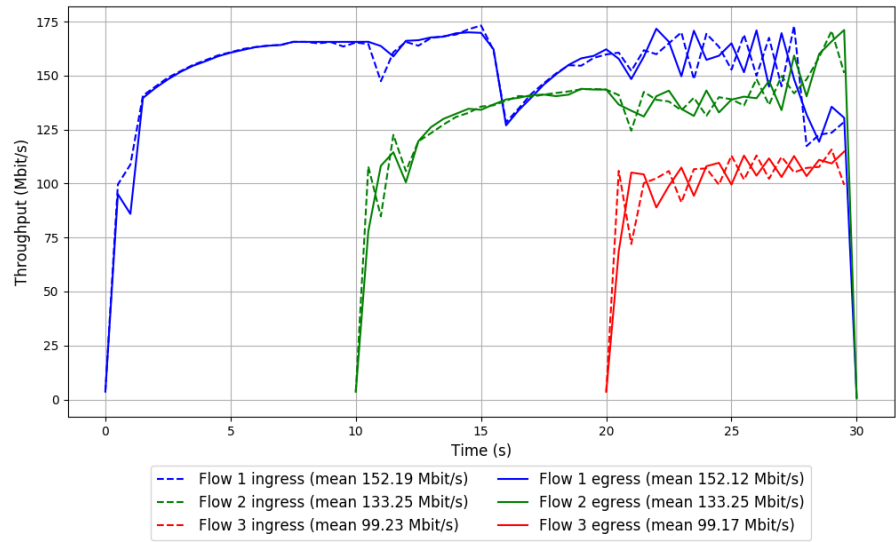
-- Flow 3:

Average throughput: 99.17 Mbit/s

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

Loss rate: 0.06%

Run 10: Report of TCP Cubic — Data Link

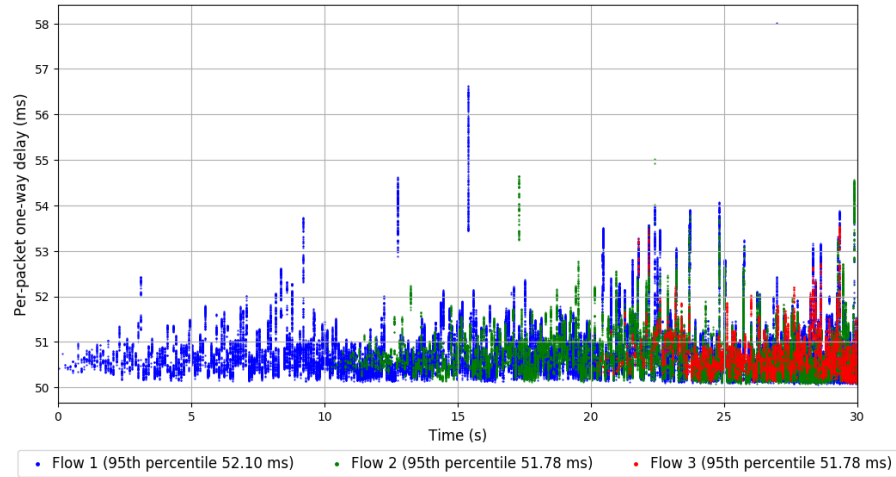
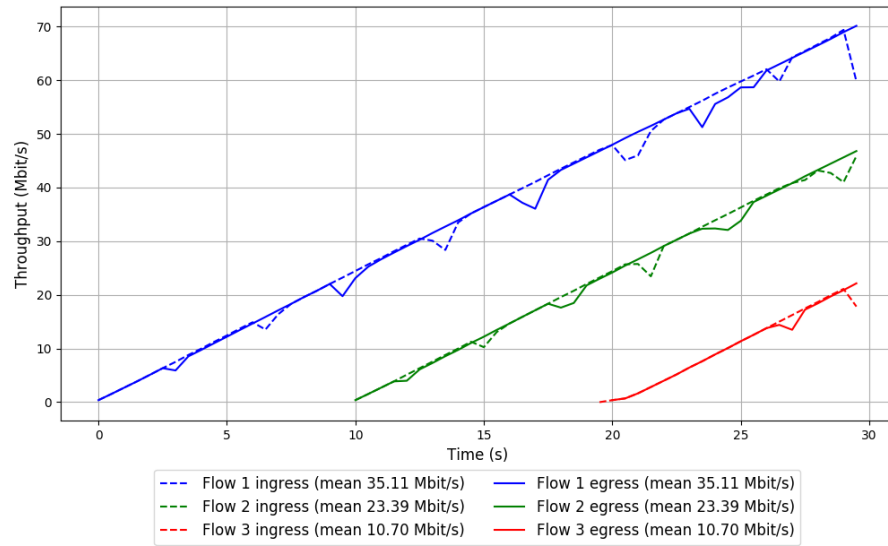


```
Run 1: Statistics of LEDBAT

Start at: 2018-04-18 13:08:18
End at: 2018-04-18 13:08:48

# Below is generated by plot.py at 2018-04-18 18:02:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 54.19 Mbit/s
95th percentile per-packet one-way delay: 51.984 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 35.11 Mbit/s
95th percentile per-packet one-way delay: 52.100 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 23.39 Mbit/s
95th percentile per-packet one-way delay: 51.778 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.70 Mbit/s
95th percentile per-packet one-way delay: 51.779 ms
Loss rate: 0.00%
```


Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2018-04-18 13:23:46

End at: 2018-04-18 13:24:16

Below is generated by plot.py at 2018-04-18 18:02:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 40.88 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 23.60 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 20.12 Mbit/s

95th percentile per-packet one-way delay: 51.750 ms

Loss rate: 0.00%

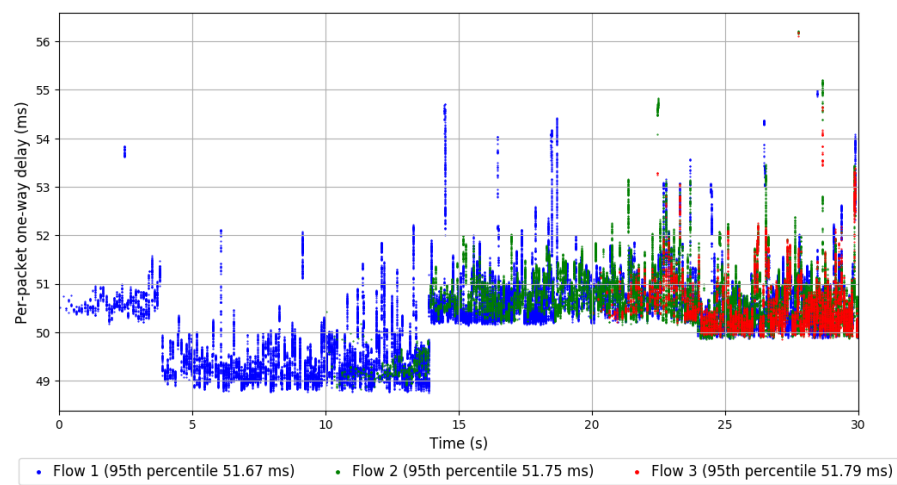
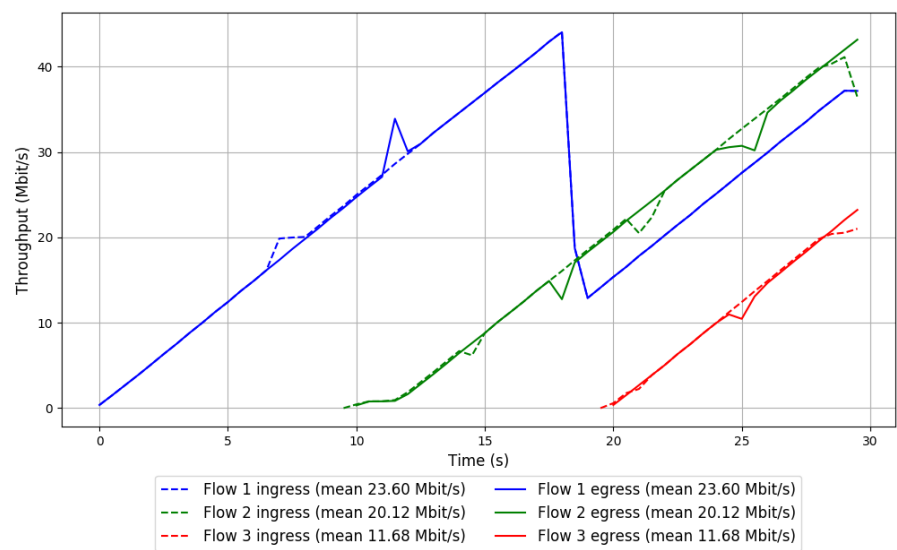
-- Flow 3:

Average throughput: 11.68 Mbit/s

95th percentile per-packet one-way delay: 51.788 ms

Loss rate: 0.00%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-04-18 13:39:15

End at: 2018-04-18 13:39:45

Below is generated by plot.py at 2018-04-18 18:02:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 52.83 Mbit/s

95th percentile per-packet one-way delay: 51.823 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 34.45 Mbit/s

95th percentile per-packet one-way delay: 51.792 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 21.84 Mbit/s

95th percentile per-packet one-way delay: 51.894 ms

Loss rate: 0.00%

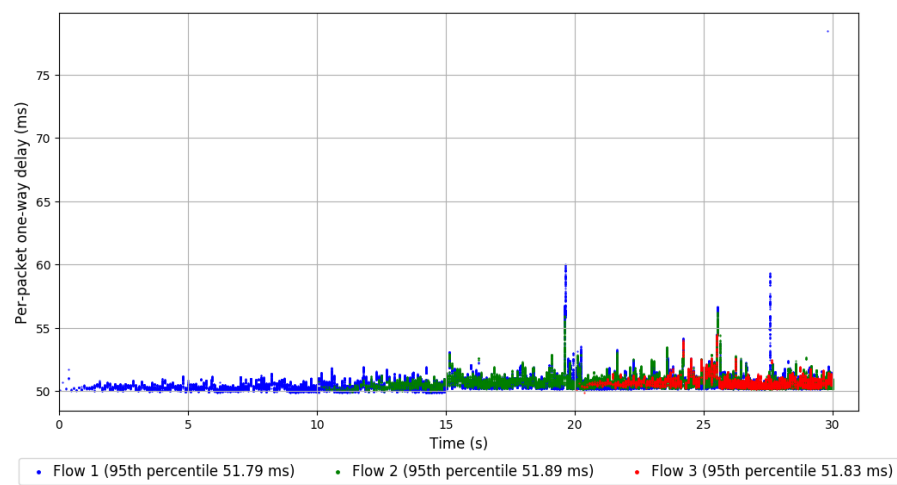
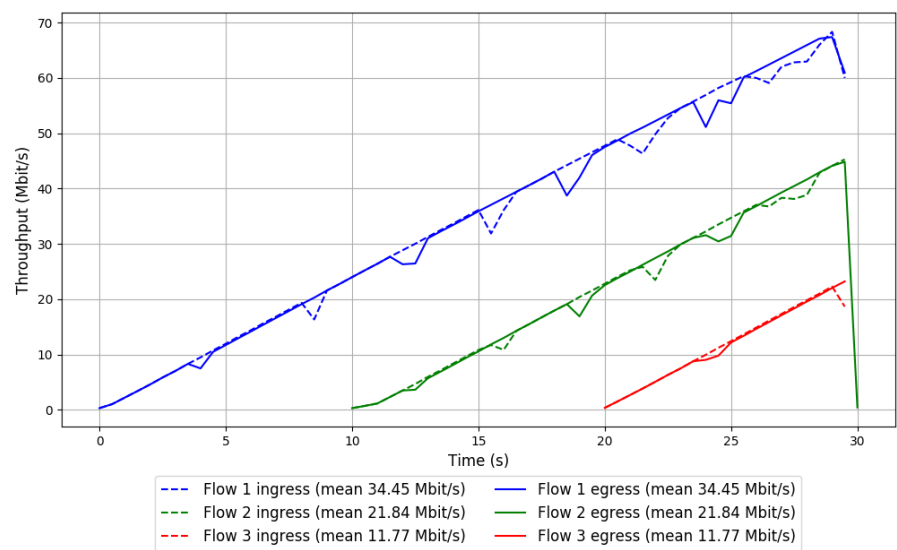
-- Flow 3:

Average throughput: 11.77 Mbit/s

95th percentile per-packet one-way delay: 51.829 ms

Loss rate: 0.00%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-04-18 13:54:43

End at: 2018-04-18 13:55:13

Below is generated by plot.py at 2018-04-18 18:02:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 54.76 Mbit/s

95th percentile per-packet one-way delay: 52.052 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 35.24 Mbit/s

95th percentile per-packet one-way delay: 52.032 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 23.57 Mbit/s

95th percentile per-packet one-way delay: 52.107 ms

Loss rate: 0.00%

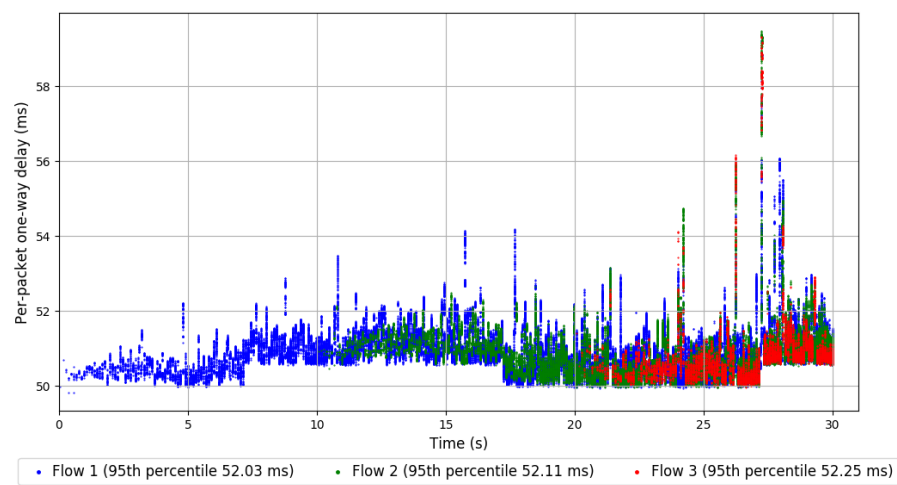
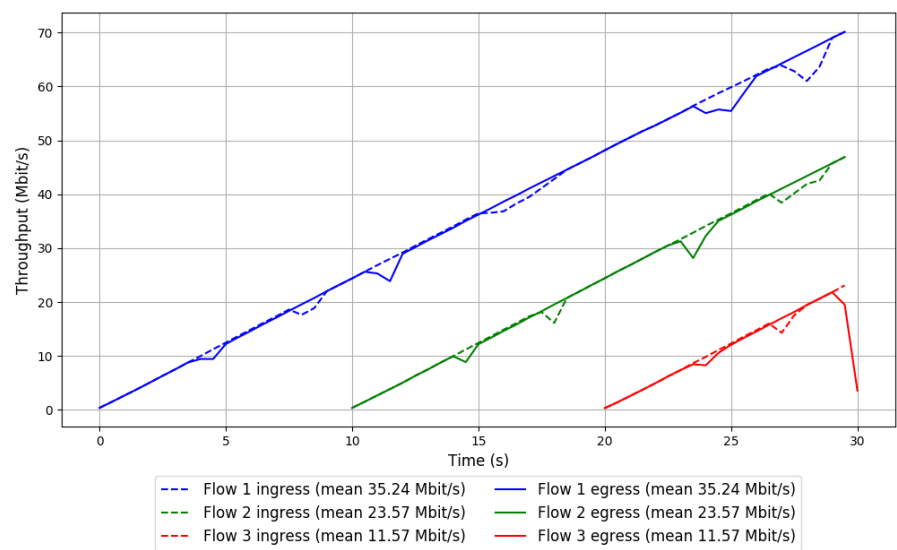
-- Flow 3:

Average throughput: 11.57 Mbit/s

95th percentile per-packet one-way delay: 52.254 ms

Loss rate: 0.00%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-04-18 14:10:07

End at: 2018-04-18 14:10:37

Below is generated by plot.py at 2018-04-18 18:02:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 55.00 Mbit/s

95th percentile per-packet one-way delay: 52.709 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 35.68 Mbit/s

95th percentile per-packet one-way delay: 52.952 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 23.38 Mbit/s

95th percentile per-packet one-way delay: 52.521 ms

Loss rate: 0.00%

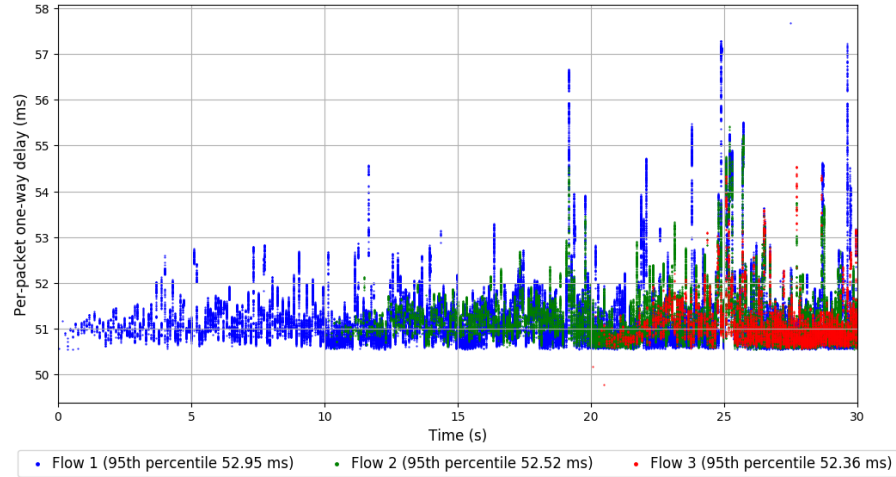
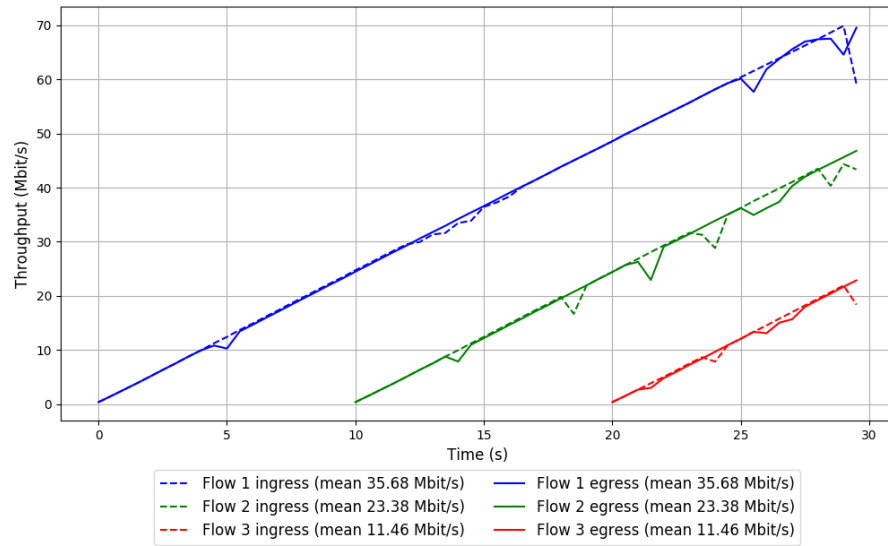
-- Flow 3:

Average throughput: 11.46 Mbit/s

95th percentile per-packet one-way delay: 52.358 ms

Loss rate: 0.00%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2018-04-18 14:25:30

End at: 2018-04-18 14:26:00

Below is generated by plot.py at 2018-04-18 18:02:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 54.50 Mbit/s

95th percentile per-packet one-way delay: 52.229 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 35.17 Mbit/s

95th percentile per-packet one-way delay: 52.176 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 23.50 Mbit/s

95th percentile per-packet one-way delay: 52.357 ms

Loss rate: 0.00%

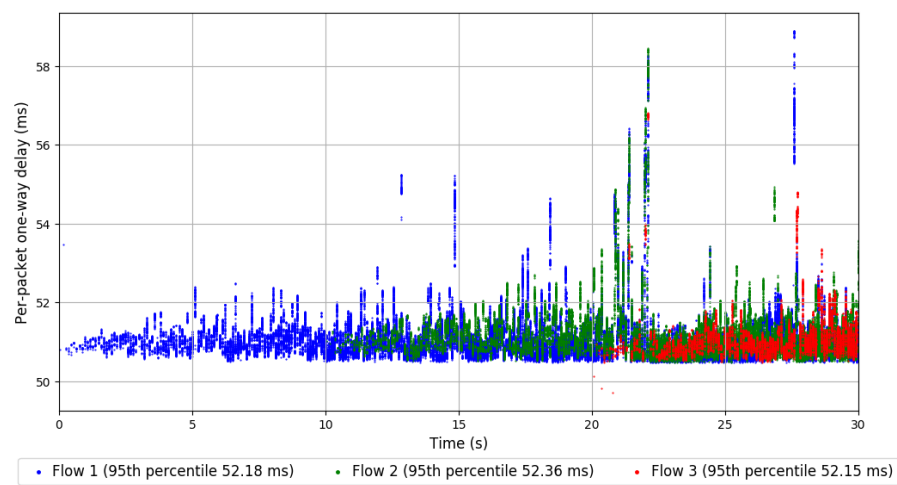
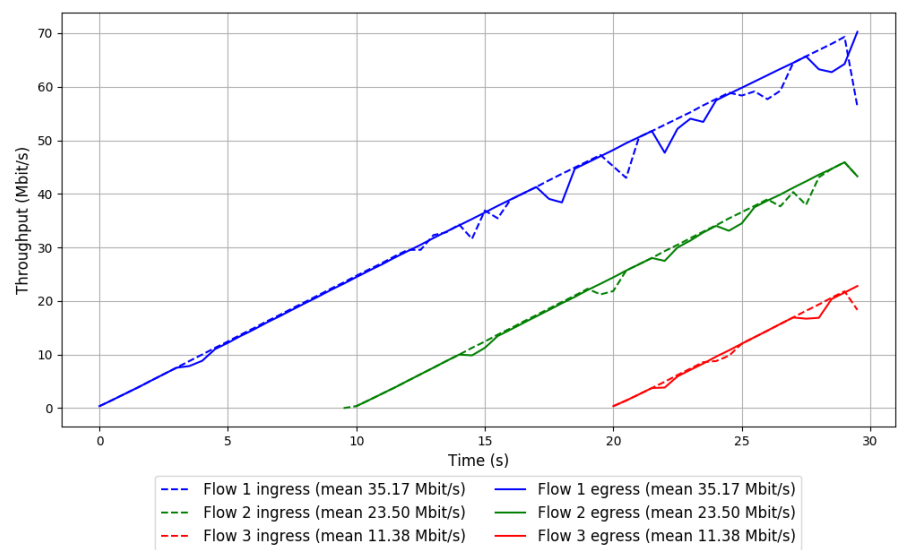
-- Flow 3:

Average throughput: 11.38 Mbit/s

95th percentile per-packet one-way delay: 52.147 ms

Loss rate: 0.00%

Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

Start at: 2018-04-18 14:40:46

End at: 2018-04-18 14:41:16

Below is generated by plot.py at 2018-04-18 18:02:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 53.84 Mbit/s

95th percentile per-packet one-way delay: 51.708 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 34.72 Mbit/s

95th percentile per-packet one-way delay: 51.893 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 23.64 Mbit/s

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

Loss rate: 0.00%

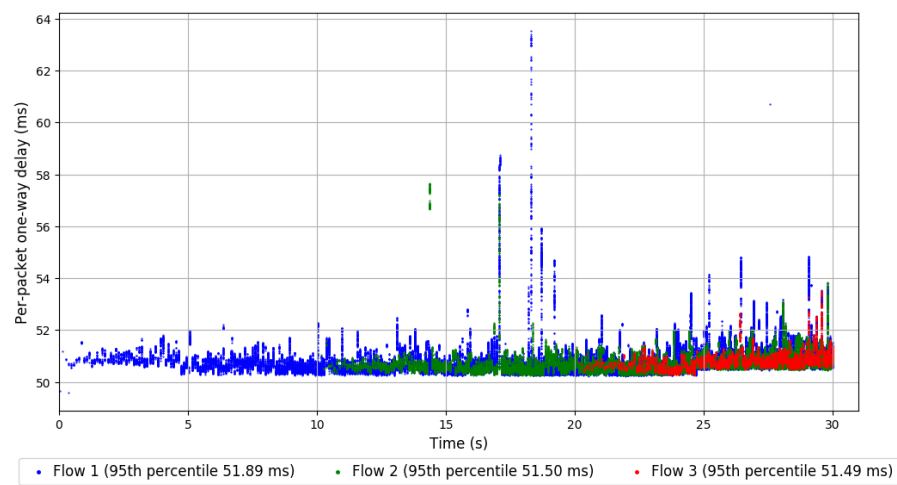
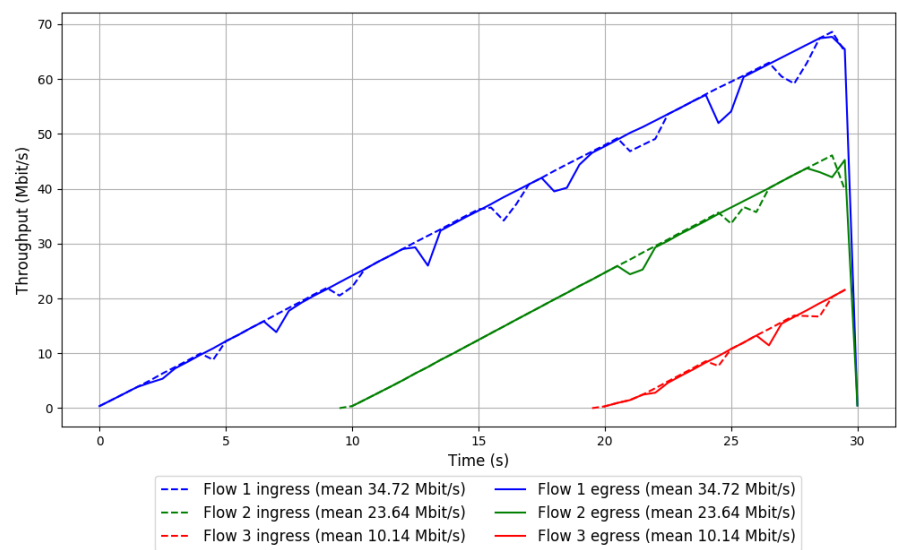
-- Flow 3:

Average throughput: 10.14 Mbit/s

95th percentile per-packet one-way delay: 51.491 ms

Loss rate: 0.00%

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2018-04-18 14:56:09

End at: 2018-04-18 14:56:39

Below is generated by plot.py at 2018-04-18 18:02:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 53.77 Mbit/s

95th percentile per-packet one-way delay: 51.954 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 34.13 Mbit/s

95th percentile per-packet one-way delay: 51.864 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 23.84 Mbit/s

95th percentile per-packet one-way delay: 52.153 ms

Loss rate: 0.00%

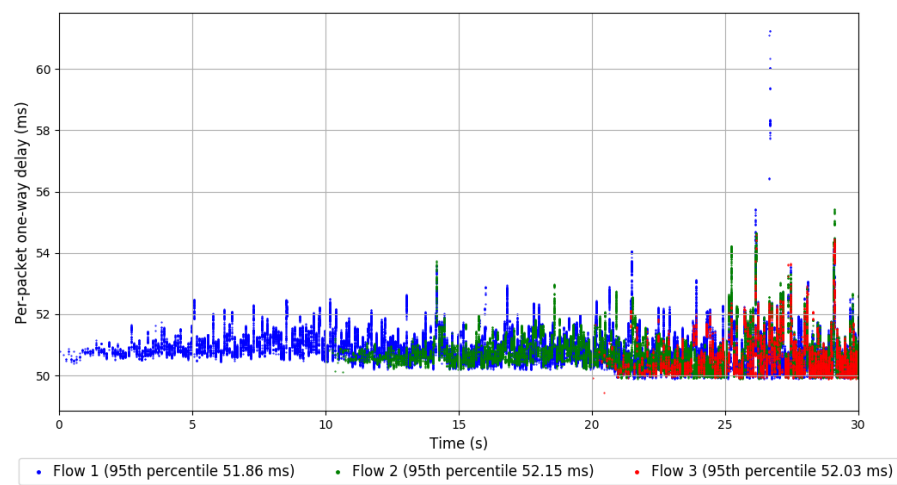
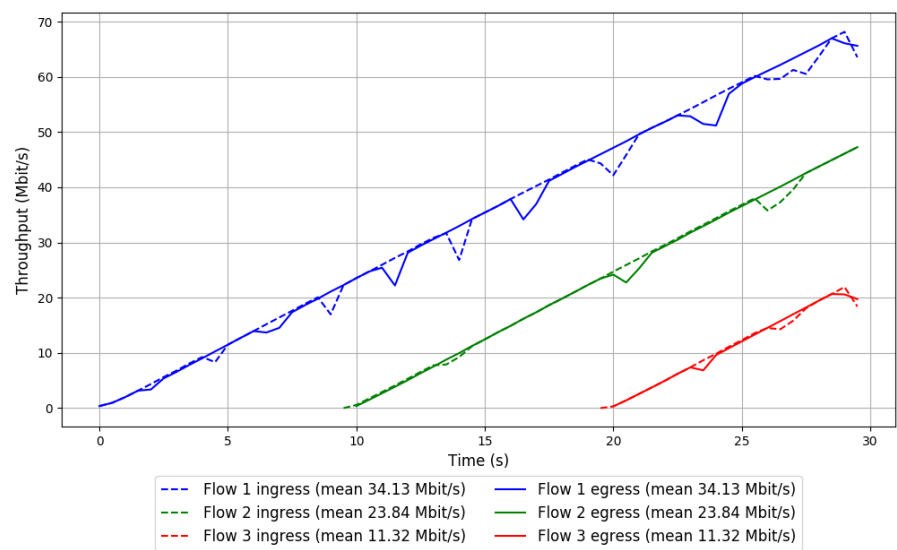
-- Flow 3:

Average throughput: 11.32 Mbit/s

95th percentile per-packet one-way delay: 52.034 ms

Loss rate: 0.00%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2018-04-18 15:11:32

End at: 2018-04-18 15:12:02

Below is generated by plot.py at 2018-04-18 18:02:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 50.24 Mbit/s

95th percentile per-packet one-way delay: 52.230 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 31.08 Mbit/s

95th percentile per-packet one-way delay: 52.398 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 23.12 Mbit/s

95th percentile per-packet one-way delay: 52.094 ms

Loss rate: 0.00%

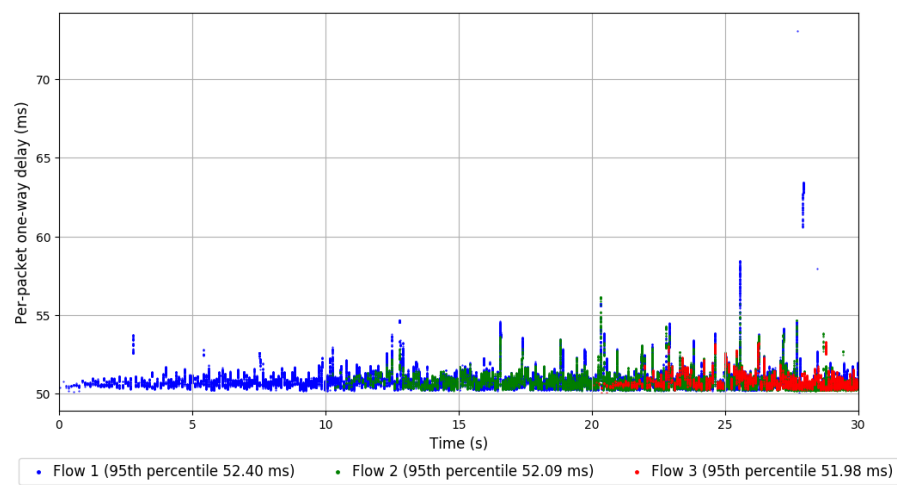
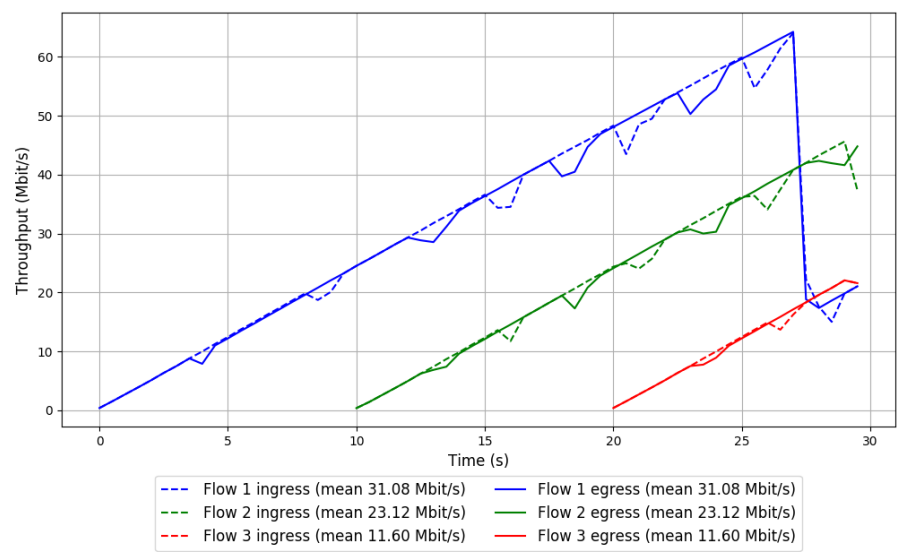
-- Flow 3:

Average throughput: 11.60 Mbit/s

95th percentile per-packet one-way delay: 51.981 ms

Loss rate: 0.00%

Run 9: Report of LEDBAT — Data Link



Run 10: Statistics of LEDBAT

Start at: 2018-04-18 15:26:38

End at: 2018-04-18 15:27:08

Below is generated by plot.py at 2018-04-18 18:02:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 53.81 Mbit/s

95th percentile per-packet one-way delay: 52.760 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 34.45 Mbit/s

95th percentile per-packet one-way delay: 52.472 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 23.43 Mbit/s

95th percentile per-packet one-way delay: 53.188 ms

Loss rate: 0.00%

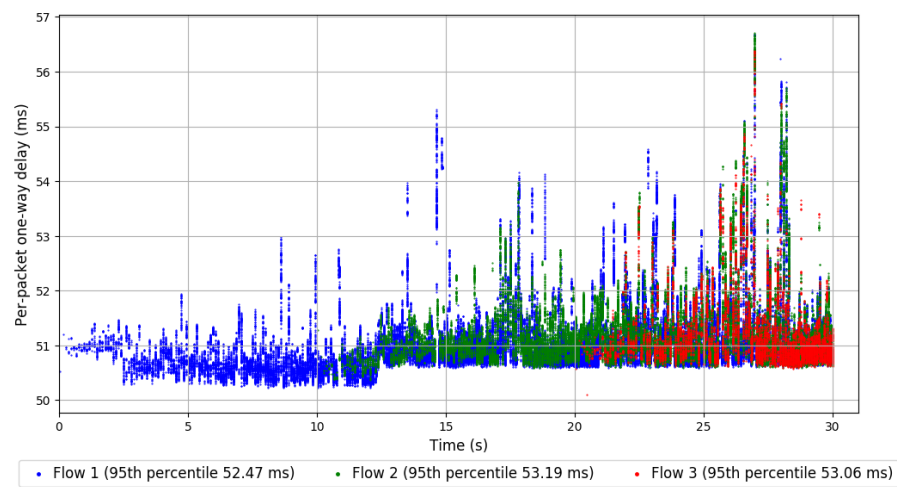
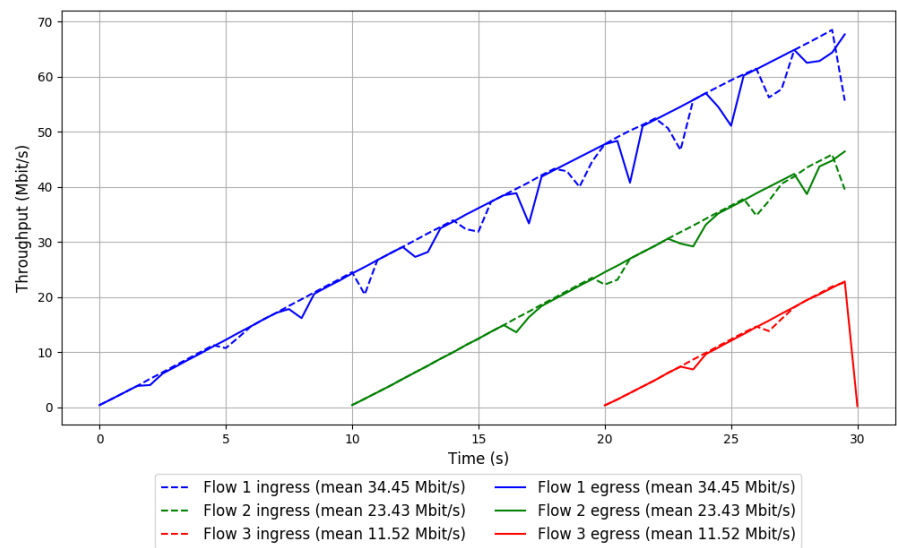
-- Flow 3:

Average throughput: 11.52 Mbit/s

95th percentile per-packet one-way delay: 53.056 ms

Loss rate: 0.00%

Run 10: Report of LEDBAT — Data Link

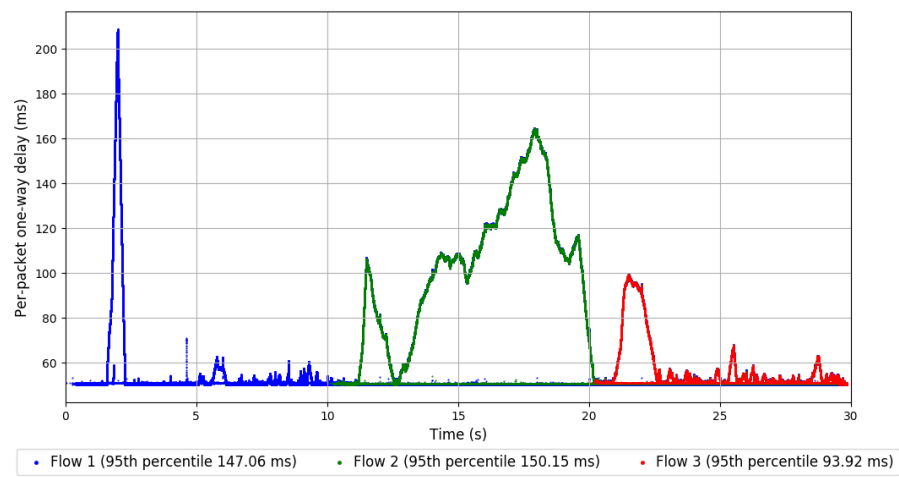
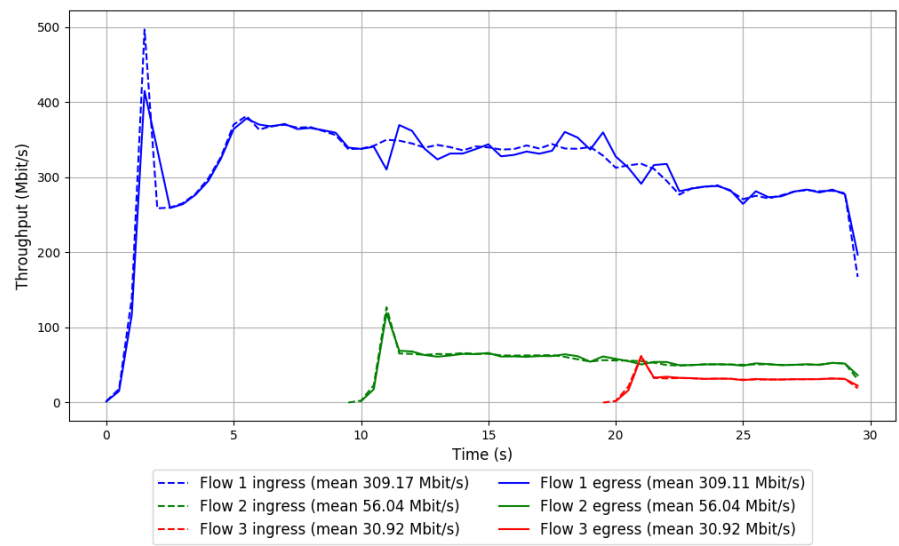


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-04-18 12:57:51
End at: 2018-04-18 12:58:21

# Below is generated by plot.py at 2018-04-18 18:07:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 356.65 Mbit/s
95th percentile per-packet one-way delay: 146.824 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 309.11 Mbit/s
95th percentile per-packet one-way delay: 147.065 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 56.04 Mbit/s
95th percentile per-packet one-way delay: 150.151 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 30.92 Mbit/s
95th percentile per-packet one-way delay: 93.920 ms
Loss rate: 0.01%
```

Run 1: Report of PCC-Allegro — Data Link

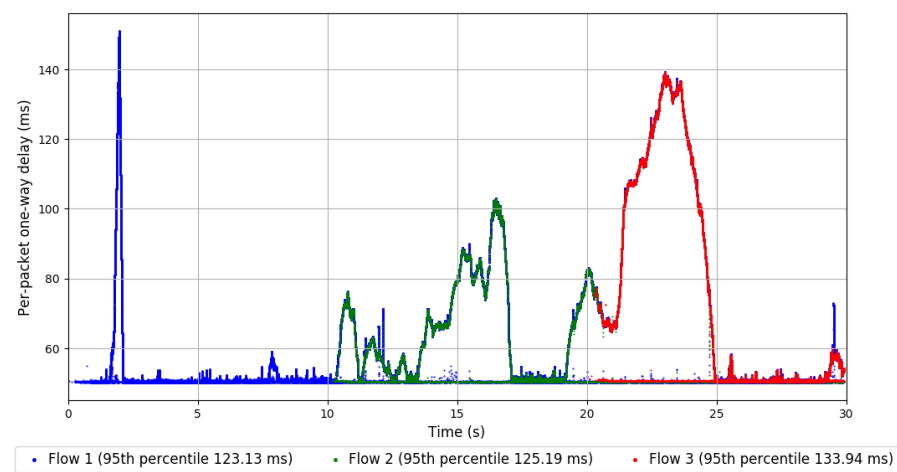
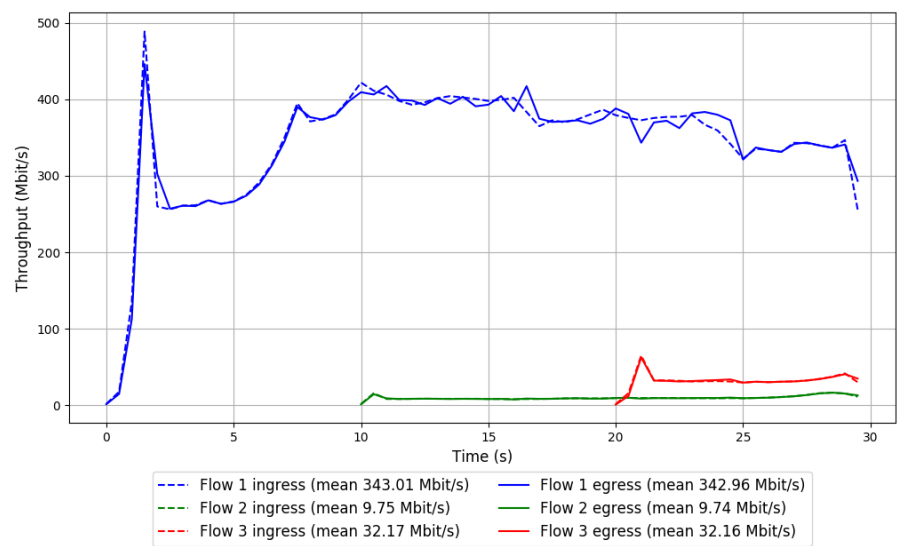


```
Run 2: Statistics of PCC-Allegro

Start at: 2018-04-18 13:13:17
End at: 2018-04-18 13:13:47

# Below is generated by plot.py at 2018-04-18 18:08:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 360.03 Mbit/s
95th percentile per-packet one-way delay: 124.200 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 342.96 Mbit/s
95th percentile per-packet one-way delay: 123.128 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 9.74 Mbit/s
95th percentile per-packet one-way delay: 125.185 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 32.16 Mbit/s
95th percentile per-packet one-way delay: 133.936 ms
Loss rate: 0.05%
```

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-04-18 13:28:40

End at: 2018-04-18 13:29:10

Below is generated by plot.py at 2018-04-18 18:08:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 370.87 Mbit/s

95th percentile per-packet one-way delay: 195.154 ms

Loss rate: 0.15%

-- Flow 1:

Average throughput: 349.56 Mbit/s

95th percentile per-packet one-way delay: 194.218 ms

Loss rate: 0.14%

-- Flow 2:

Average throughput: 30.97 Mbit/s

95th percentile per-packet one-way delay: 219.046 ms

Loss rate: 0.25%

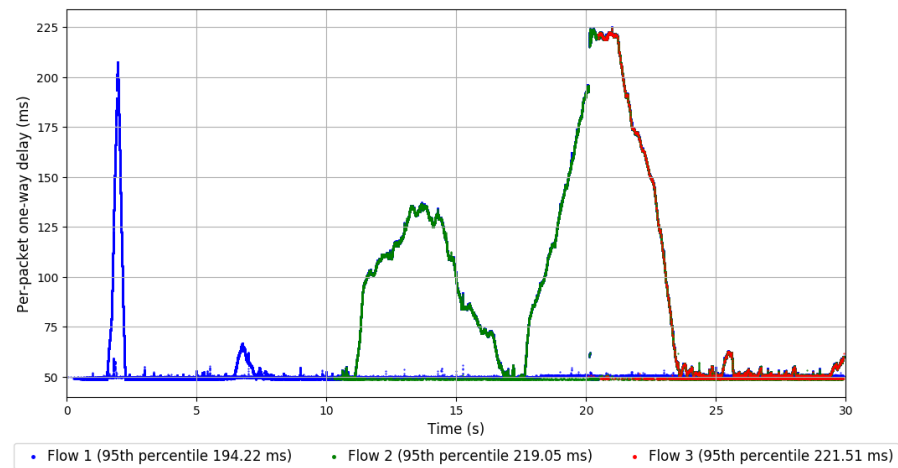
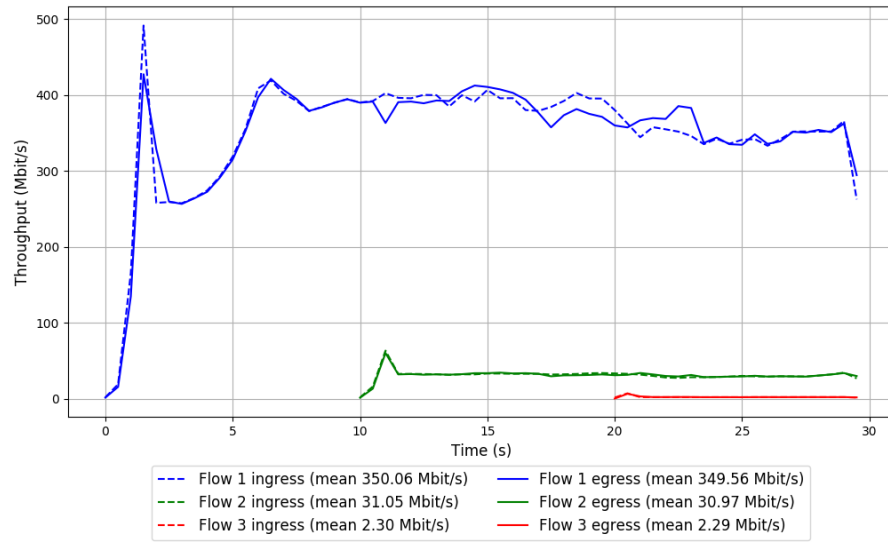
-- Flow 3:

Average throughput: 2.29 Mbit/s

95th percentile per-packet one-way delay: 221.512 ms

Loss rate: 0.37%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-04-18 13:44:13

End at: 2018-04-18 13:44:43

Below is generated by plot.py at 2018-04-18 18:08:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 384.78 Mbit/s

95th percentile per-packet one-way delay: 180.061 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 338.14 Mbit/s

95th percentile per-packet one-way delay: 179.383 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 62.00 Mbit/s

95th percentile per-packet one-way delay: 186.500 ms

Loss rate: 0.01%

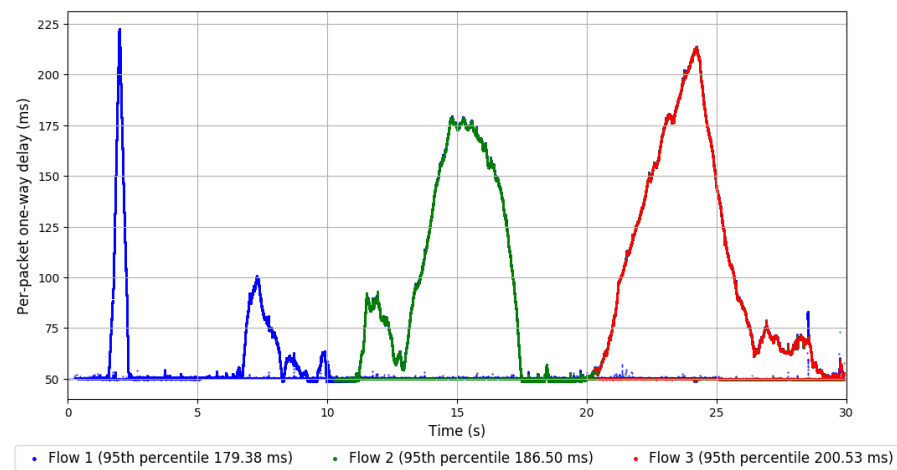
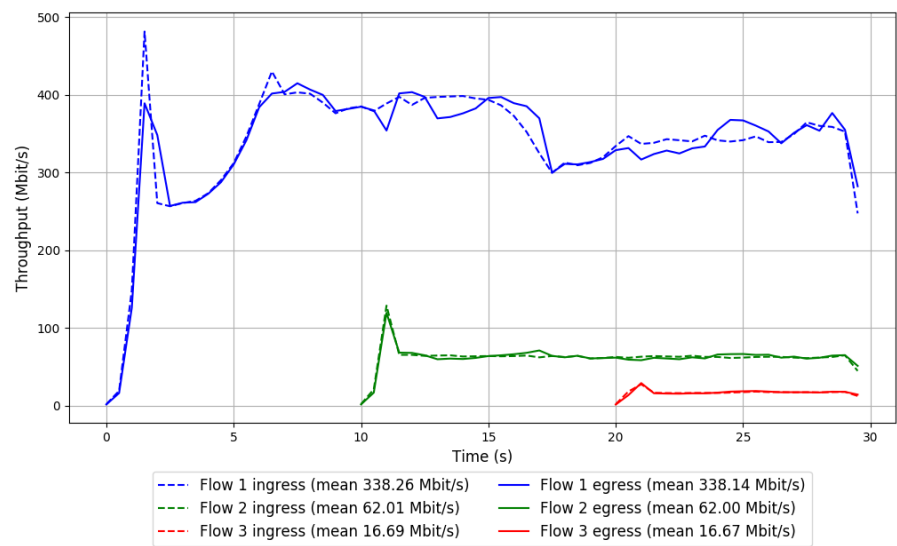
-- Flow 3:

Average throughput: 16.67 Mbit/s

95th percentile per-packet one-way delay: 200.525 ms

Loss rate: 0.05%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-04-18 13:59:38

End at: 2018-04-18 14:00:08

Below is generated by plot.py at 2018-04-18 18:08:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 277.28 Mbit/s

95th percentile per-packet one-way delay: 107.837 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 245.77 Mbit/s

95th percentile per-packet one-way delay: 107.150 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 32.59 Mbit/s

95th percentile per-packet one-way delay: 106.890 ms

Loss rate: 0.01%

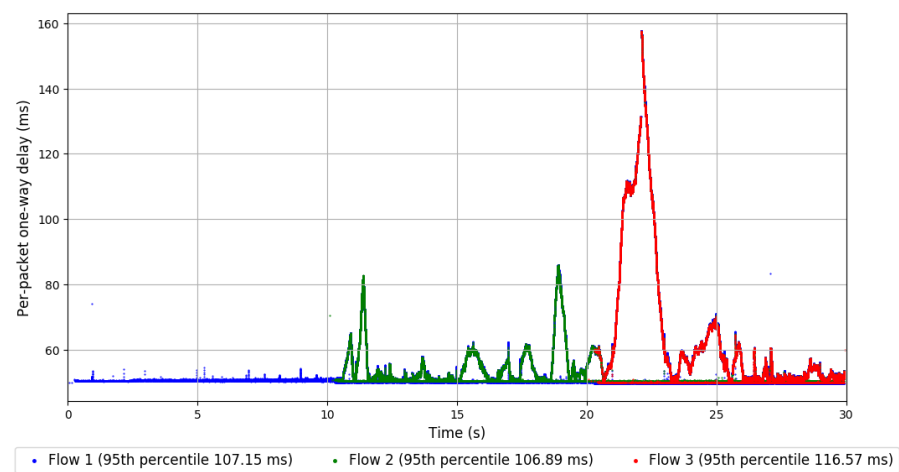
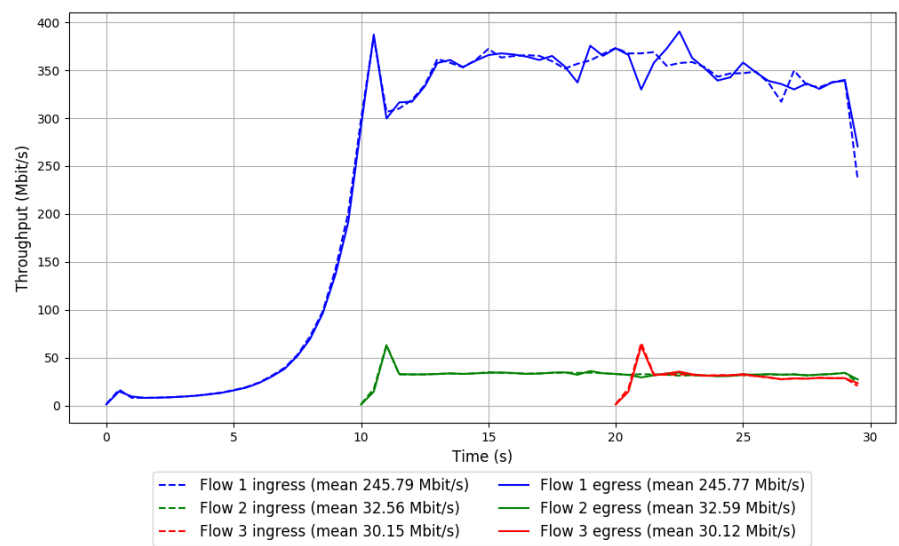
-- Flow 3:

Average throughput: 30.12 Mbit/s

95th percentile per-packet one-way delay: 116.566 ms

Loss rate: 0.02%

Run 5: Report of PCC-Allegro — Data Link



Run 6: Statistics of PCC-Allegro

Start at: 2018-04-18 14:15:00

End at: 2018-04-18 14:15:30

Below is generated by plot.py at 2018-04-18 18:09:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 371.66 Mbit/s

95th percentile per-packet one-way delay: 217.286 ms

Loss rate: 0.51%

-- Flow 1:

Average throughput: 348.60 Mbit/s

95th percentile per-packet one-way delay: 216.988 ms

Loss rate: 0.48%

-- Flow 2:

Average throughput: 4.34 Mbit/s

95th percentile per-packet one-way delay: 217.569 ms

Loss rate: 0.62%

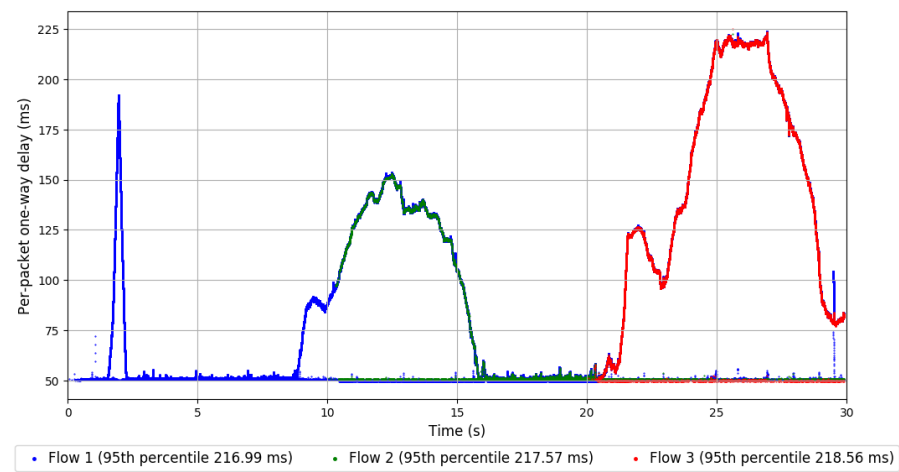
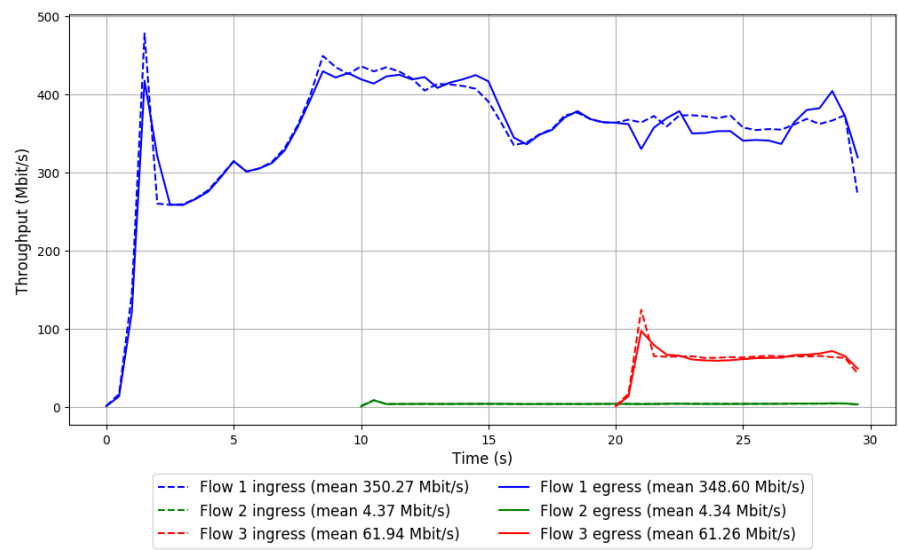
-- Flow 3:

Average throughput: 61.26 Mbit/s

95th percentile per-packet one-way delay: 218.561 ms

Loss rate: 1.11%

Run 6: Report of PCC-Allegro — Data Link



Run 7: Statistics of PCC-Allegro

Start at: 2018-04-18 14:30:25

End at: 2018-04-18 14:30:55

Below is generated by plot.py at 2018-04-18 18:10:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 377.43 Mbit/s

95th percentile per-packet one-way delay: 184.748 ms

Loss rate: 0.18%

-- Flow 1:

Average throughput: 361.34 Mbit/s

95th percentile per-packet one-way delay: 184.405 ms

Loss rate: 0.17%

-- Flow 2:

Average throughput: 7.99 Mbit/s

95th percentile per-packet one-way delay: 185.018 ms

Loss rate: 0.22%

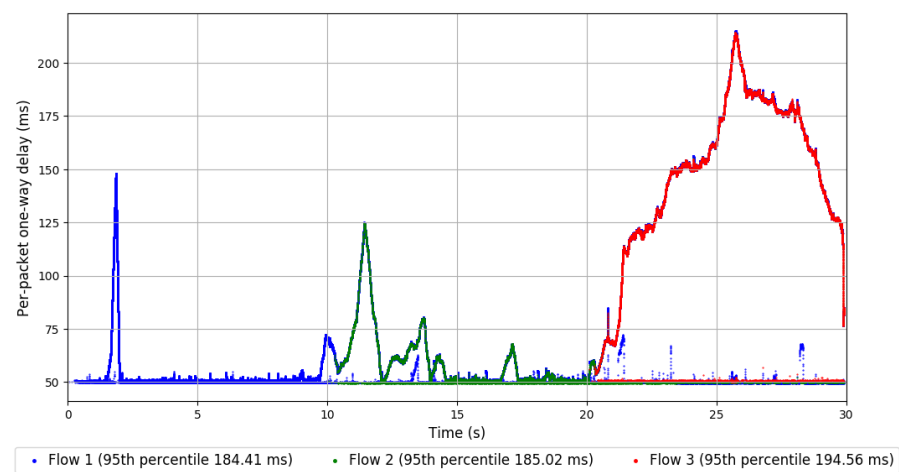
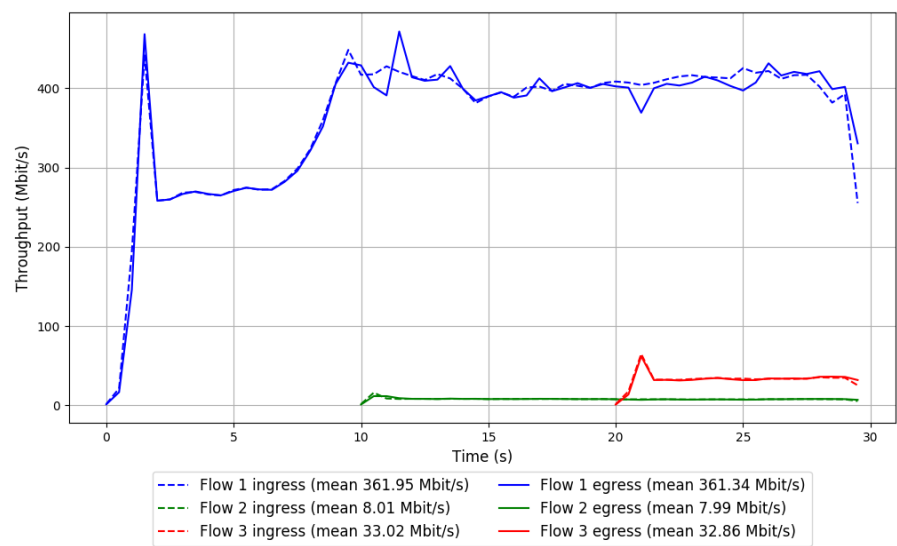
-- Flow 3:

Average throughput: 32.86 Mbit/s

95th percentile per-packet one-way delay: 194.555 ms

Loss rate: 0.52%

Run 7: Report of PCC-Allegro — Data Link



Run 8: Statistics of PCC-Allegro

Start at: 2018-04-18 14:45:37

End at: 2018-04-18 14:46:07

Below is generated by plot.py at 2018-04-18 18:10:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 354.75 Mbit/s

95th percentile per-packet one-way delay: 80.572 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 340.63 Mbit/s

95th percentile per-packet one-way delay: 80.559 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 17.11 Mbit/s

95th percentile per-packet one-way delay: 80.161 ms

Loss rate: 0.01%

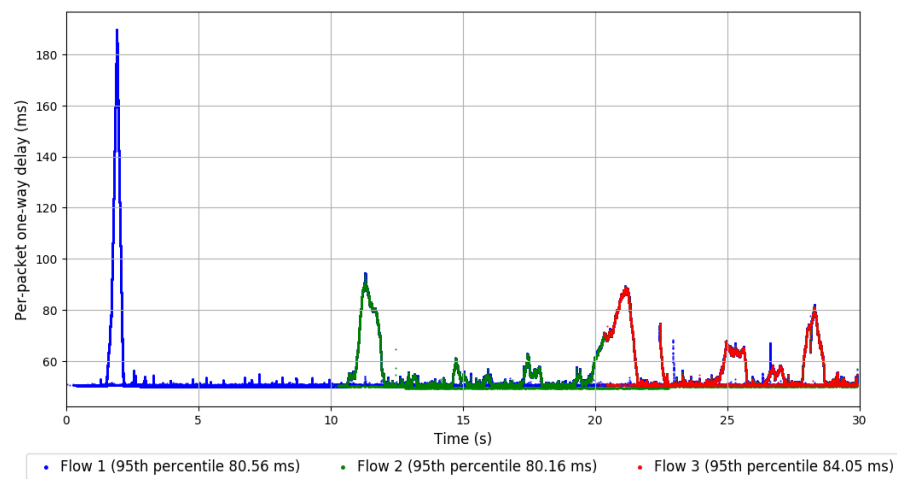
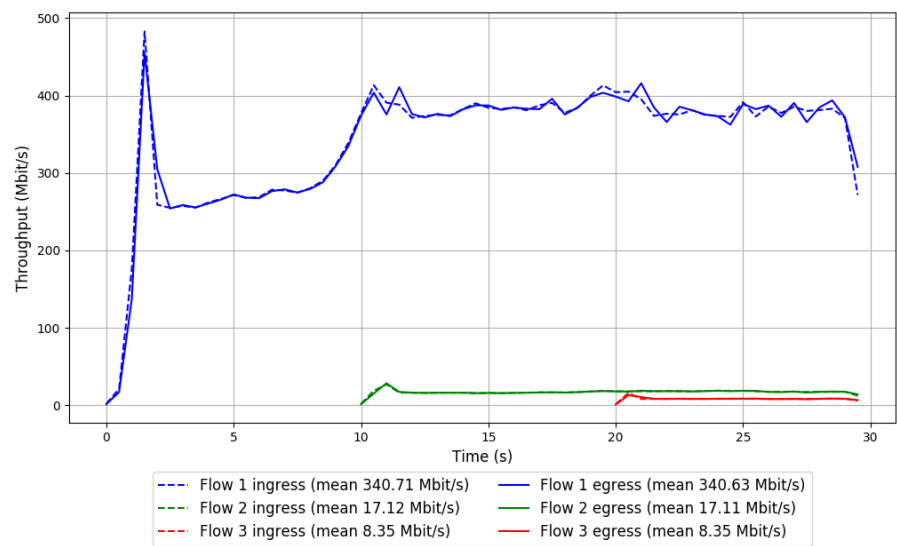
-- Flow 3:

Average throughput: 8.35 Mbit/s

95th percentile per-packet one-way delay: 84.051 ms

Loss rate: 0.03%

Run 8: Report of PCC-Allegro — Data Link



Run 9: Statistics of PCC-Allegro

Start at: 2018-04-18 15:00:55

End at: 2018-04-18 15:01:25

Below is generated by plot.py at 2018-04-18 18:15:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 365.96 Mbit/s

95th percentile per-packet one-way delay: 96.533 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 337.21 Mbit/s

95th percentile per-packet one-way delay: 96.900 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 35.23 Mbit/s

95th percentile per-packet one-way delay: 95.197 ms

Loss rate: 0.00%

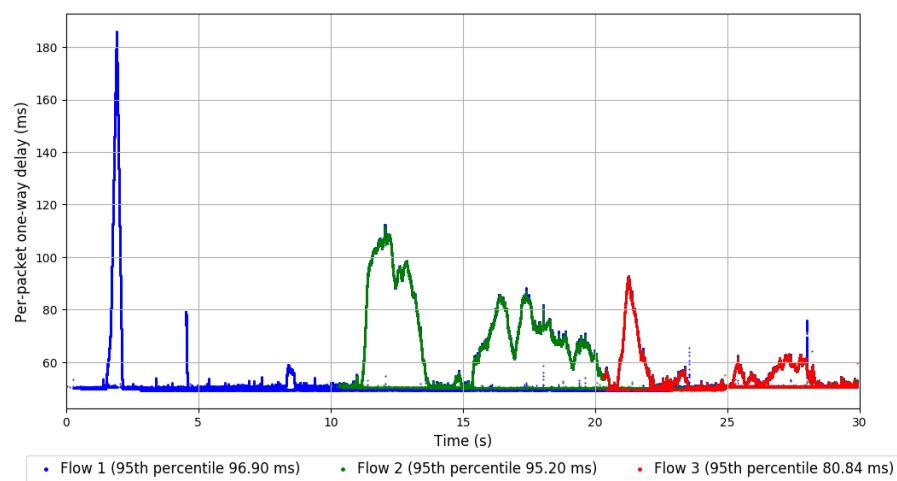
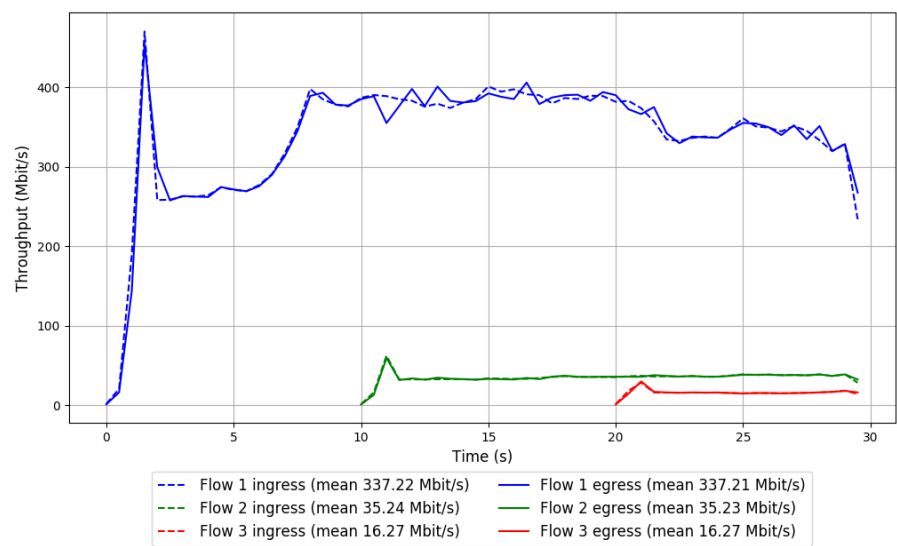
-- Flow 3:

Average throughput: 16.27 Mbit/s

95th percentile per-packet one-way delay: 80.841 ms

Loss rate: 0.00%

Run 9: Report of PCC-Allegro — Data Link



Run 10: Statistics of PCC-Allegro

Start at: 2018-04-18 15:16:24

End at: 2018-04-18 15:16:54

Below is generated by plot.py at 2018-04-18 18:15:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 342.75 Mbit/s

95th percentile per-packet one-way delay: 79.908 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 312.22 Mbit/s

95th percentile per-packet one-way delay: 79.049 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 31.03 Mbit/s

95th percentile per-packet one-way delay: 81.000 ms

Loss rate: 0.04%

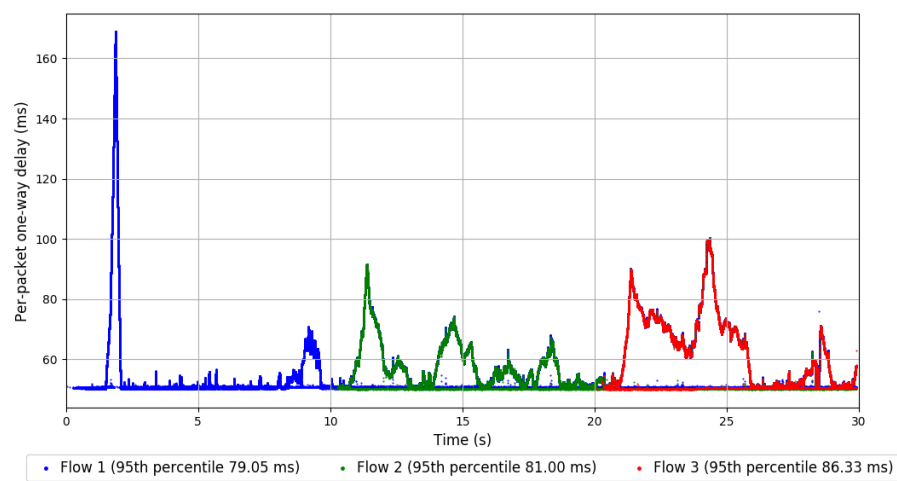
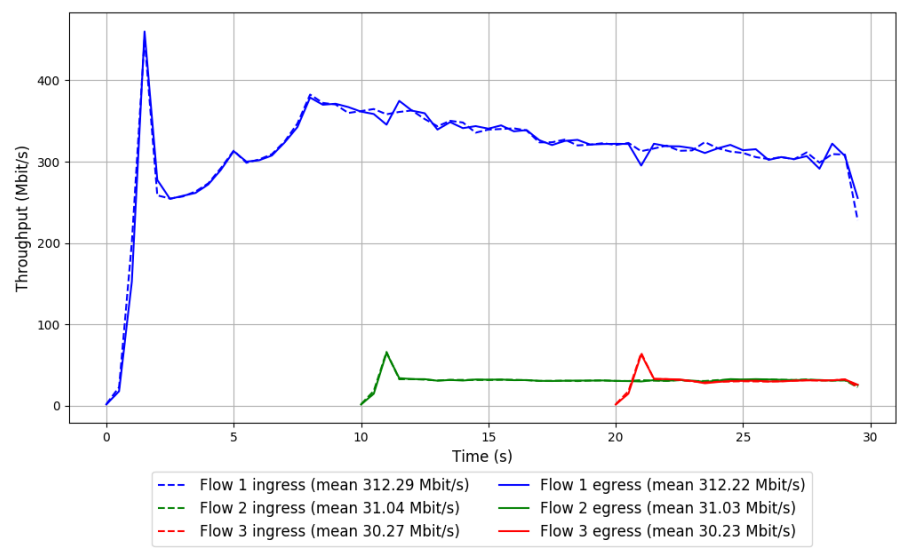
-- Flow 3:

Average throughput: 30.23 Mbit/s

95th percentile per-packet one-way delay: 86.331 ms

Loss rate: 0.07%

Run 10: Report of PCC-Allegro — Data Link

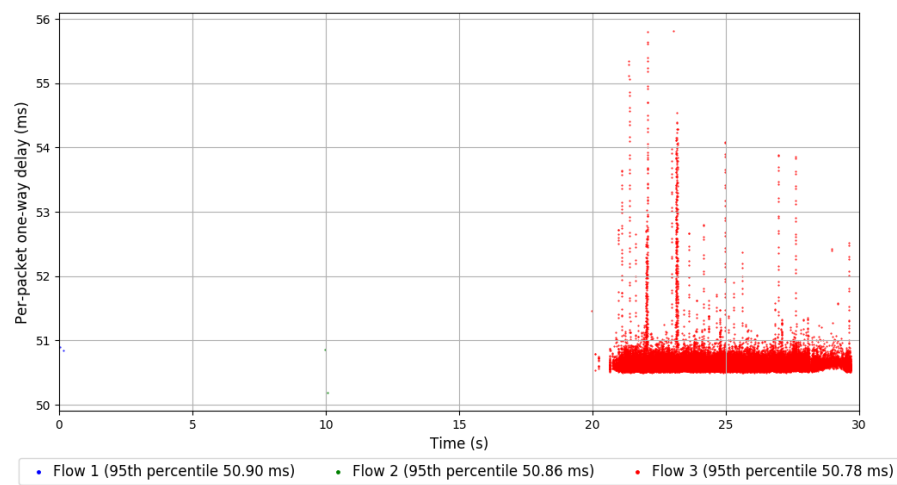
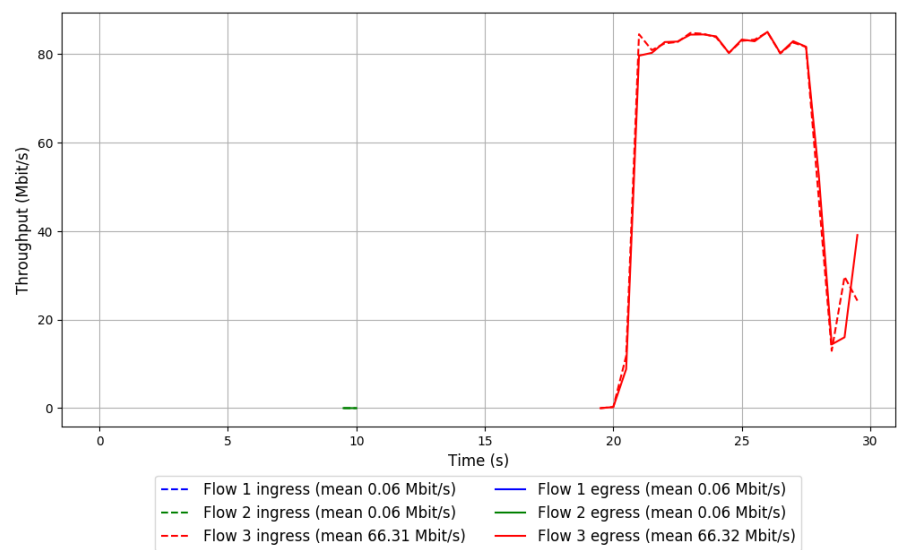


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-04-18 13:01:19
End at: 2018-04-18 13:01:49

# Below is generated by plot.py at 2018-04-18 18:15:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.71 Mbit/s
95th percentile per-packet one-way delay: 50.783 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 50.903 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 50.861 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 66.32 Mbit/s
95th percentile per-packet one-way delay: 50.783 ms
Loss rate: 0.00%
```


Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-04-18 13:16:44

End at: 2018-04-18 13:17:14

Below is generated by plot.py at 2018-04-18 18:15:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 134.06 Mbit/s

95th percentile per-packet one-way delay: 50.337 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 71.24 Mbit/s

95th percentile per-packet one-way delay: 50.329 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 66.18 Mbit/s

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

Loss rate: 0.02%

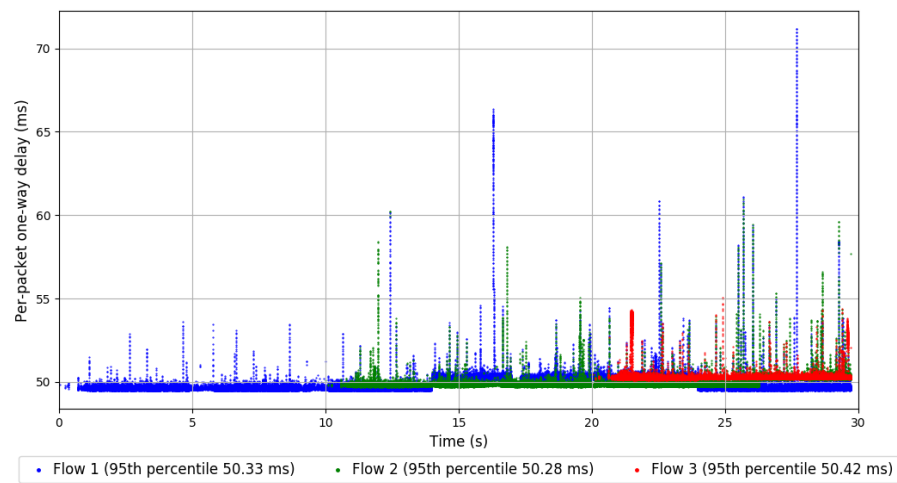
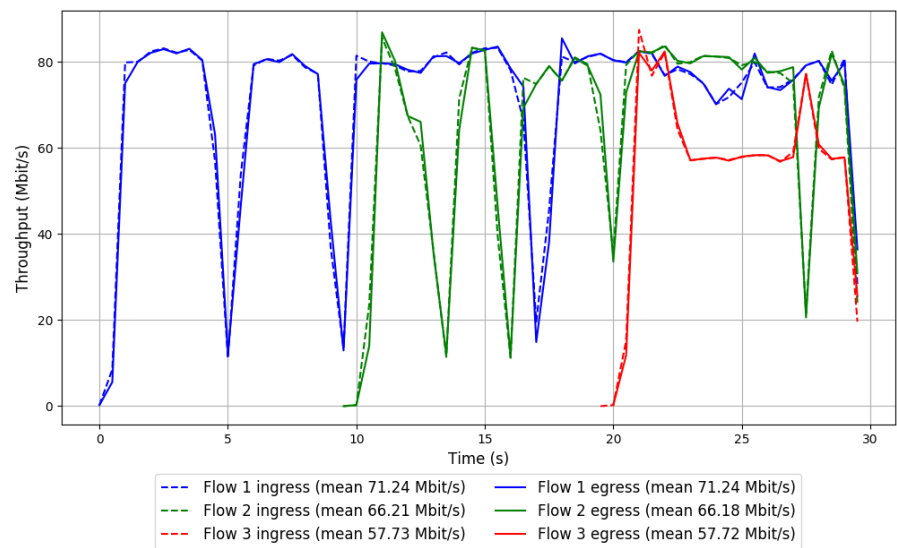
-- Flow 3:

Average throughput: 57.72 Mbit/s

95th percentile per-packet one-way delay: 50.416 ms

Loss rate: 0.00%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-04-18 13:32:10

End at: 2018-04-18 13:32:40

Below is generated by plot.py at 2018-04-18 18:15:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 124.12 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 66.59 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 59.86 Mbit/s

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

Loss rate: 0.00%

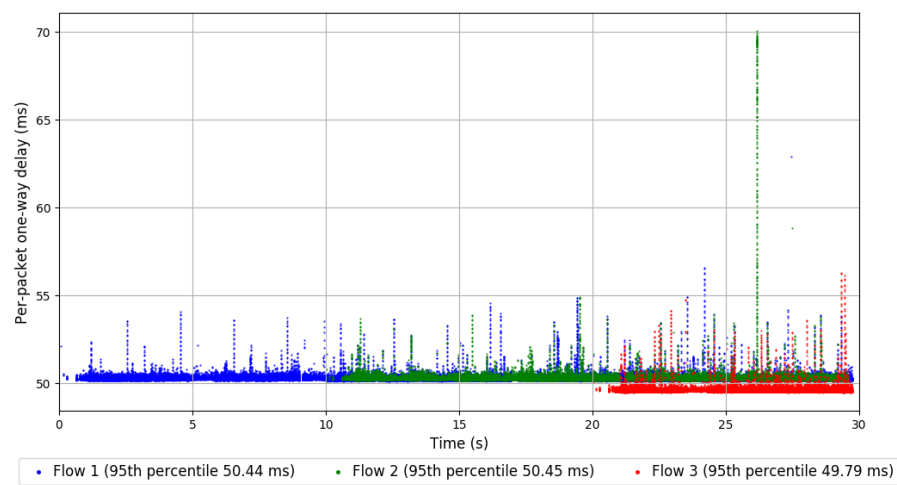
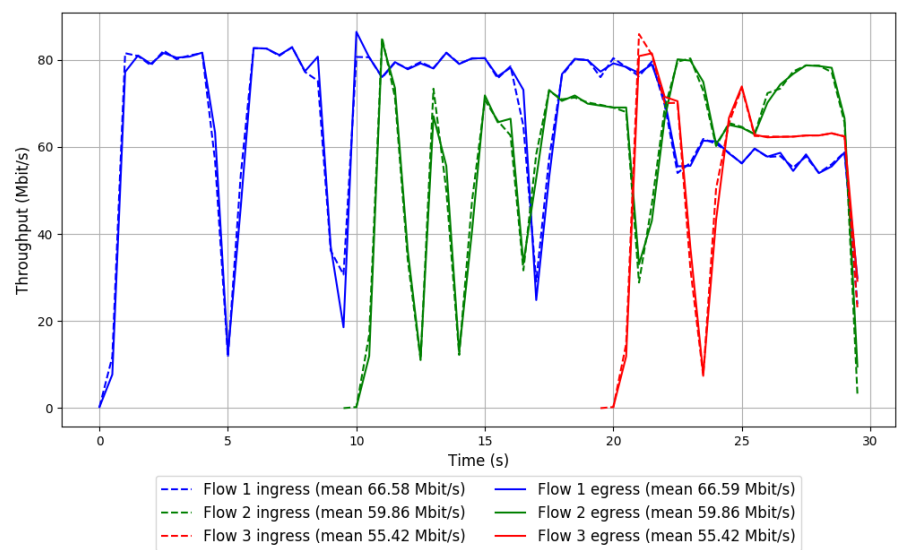
-- Flow 3:

Average throughput: 55.42 Mbit/s

95th percentile per-packet one-way delay: 49.793 ms

Loss rate: 0.00%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-04-18 13:47:39

End at: 2018-04-18 13:48:09

Below is generated by plot.py at 2018-04-18 18:15:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 128.81 Mbit/s

95th percentile per-packet one-way delay: 49.804 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 67.06 Mbit/s

95th percentile per-packet one-way delay: 49.814 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 66.02 Mbit/s

95th percentile per-packet one-way delay: 49.797 ms

Loss rate: 0.00%

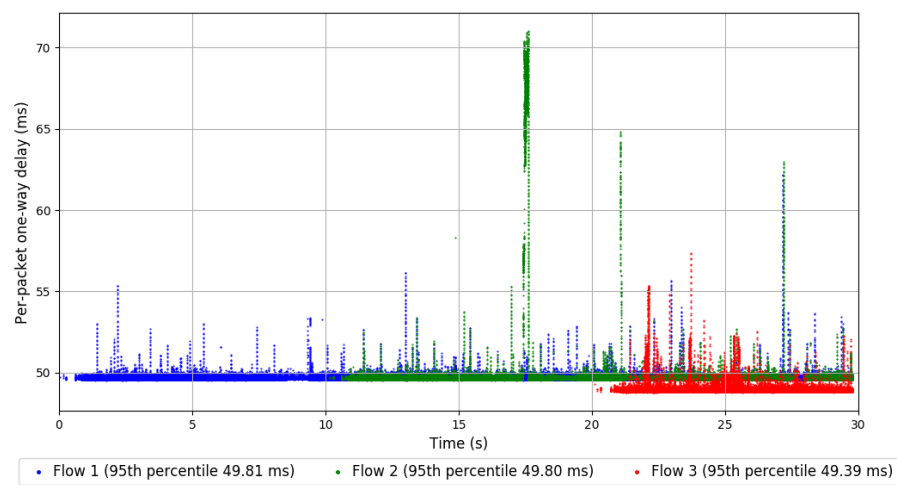
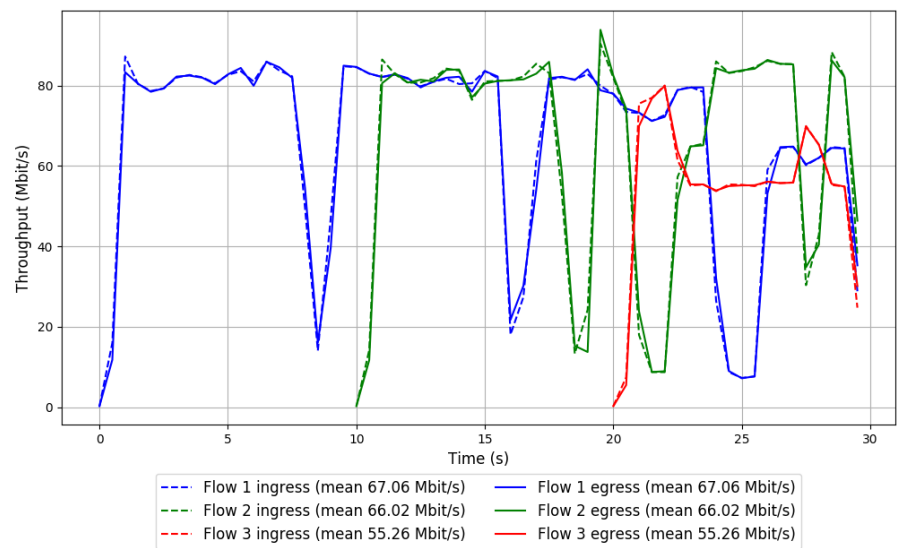
-- Flow 3:

Average throughput: 55.26 Mbit/s

95th percentile per-packet one-way delay: 49.394 ms

Loss rate: 0.00%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-04-18 14:03:04

End at: 2018-04-18 14:03:34

Below is generated by plot.py at 2018-04-18 18:15:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 127.38 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 70.72 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 67.50 Mbit/s

95th percentile per-packet one-way delay: 51.538 ms

Loss rate: 0.00%

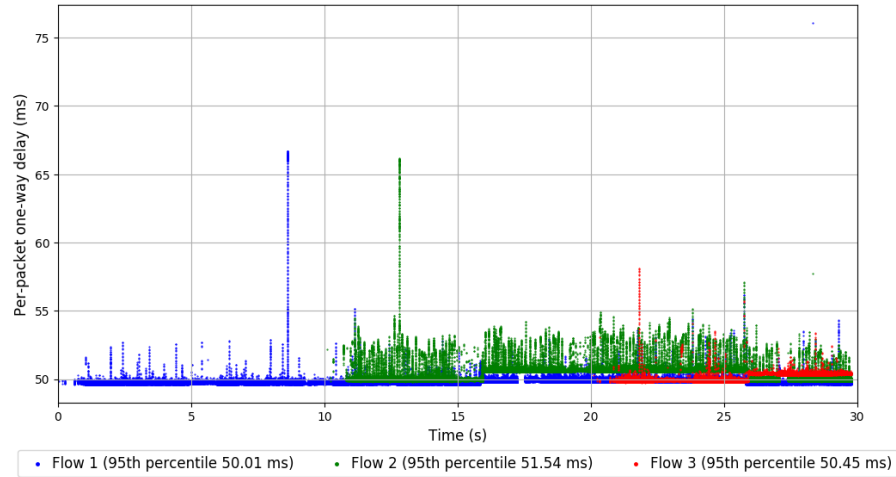
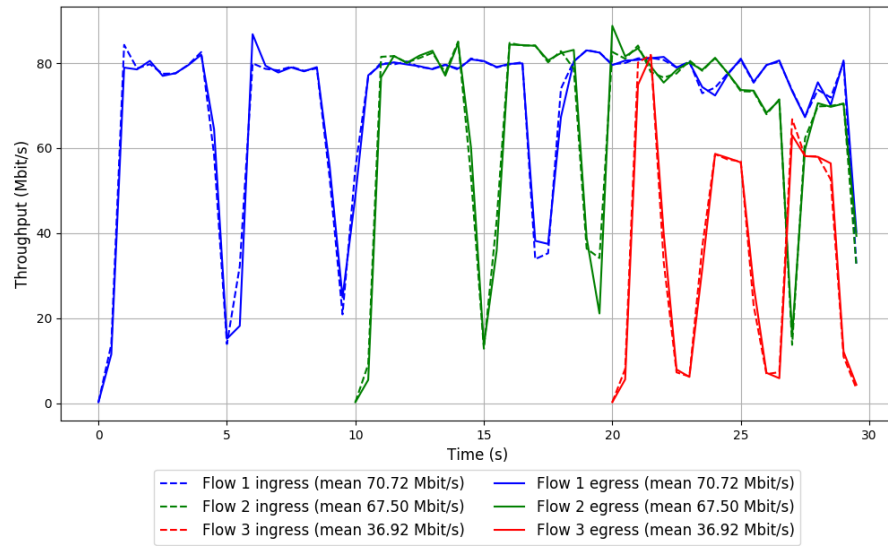
-- Flow 3:

Average throughput: 36.92 Mbit/s

95th percentile per-packet one-way delay: 50.451 ms

Loss rate: 0.01%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2018-04-18 14:18:23

End at: 2018-04-18 14:18:53

Below is generated by plot.py at 2018-04-18 18:15:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 128.44 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 66.24 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 66.39 Mbit/s

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

Loss rate: 0.00%

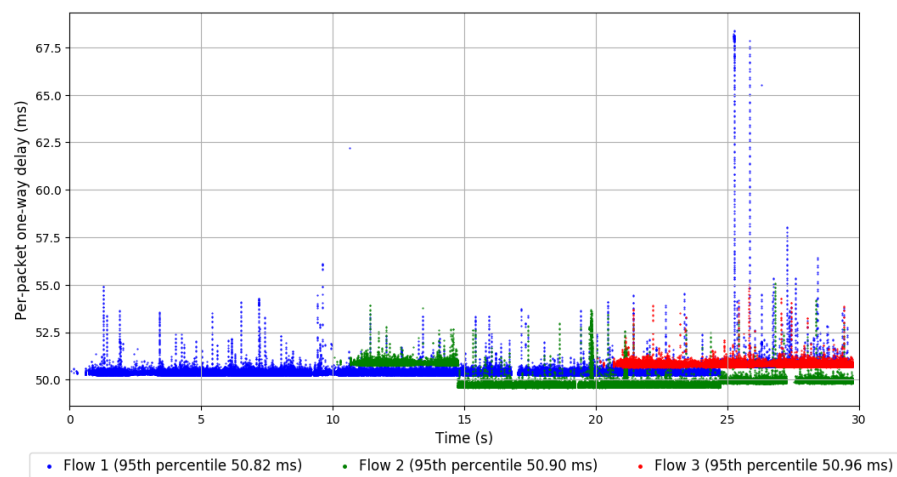
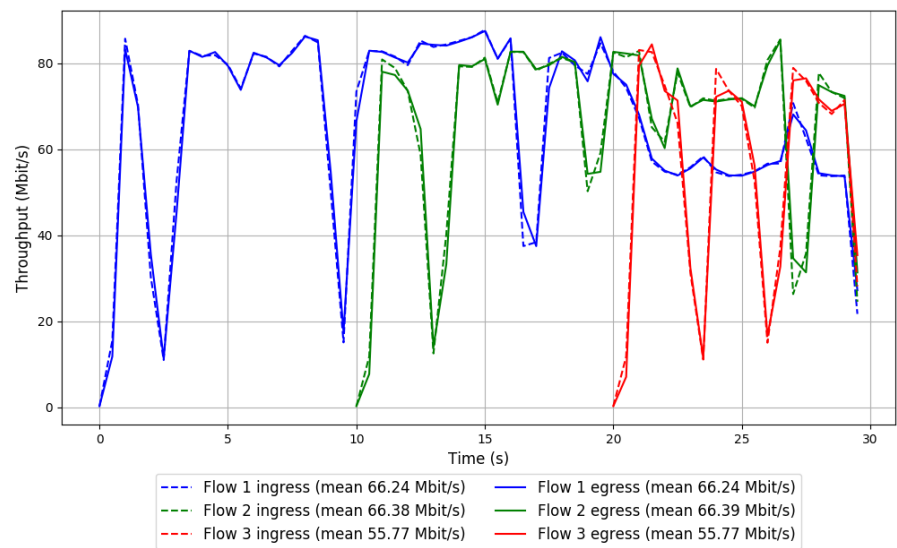
-- Flow 3:

Average throughput: 55.77 Mbit/s

95th percentile per-packet one-way delay: 50.964 ms

Loss rate: 0.00%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2018-04-18 14:33:54

End at: 2018-04-18 14:34:24

Below is generated by plot.py at 2018-04-18 18:15:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 130.17 Mbit/s

95th percentile per-packet one-way delay: 50.878 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 71.25 Mbit/s

95th percentile per-packet one-way delay: 50.875 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 64.62 Mbit/s

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

Loss rate: 0.00%

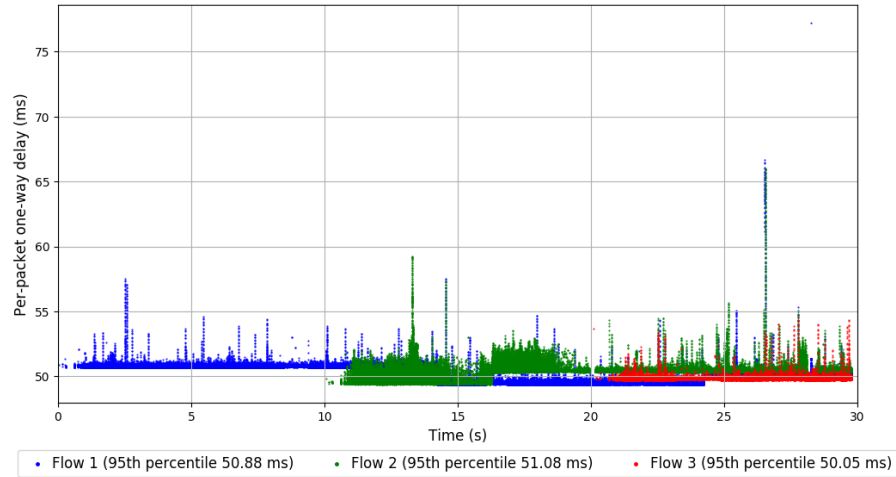
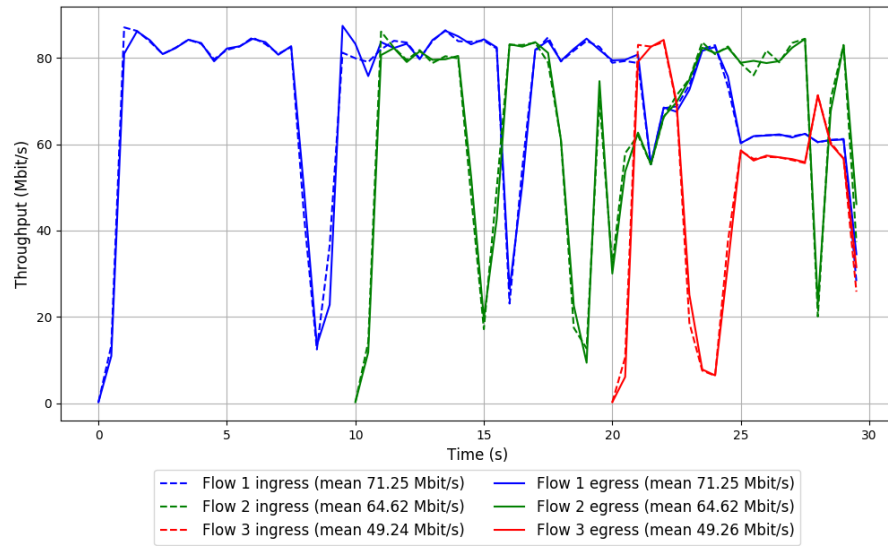
-- Flow 3:

Average throughput: 49.26 Mbit/s

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

Loss rate: 0.00%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2018-04-18 14:49:06

End at: 2018-04-18 14:49:36

Below is generated by plot.py at 2018-04-18 18:15:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 127.35 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 70.73 Mbit/s

95th percentile per-packet one-way delay: 50.779 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 59.63 Mbit/s

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

Loss rate: 0.00%

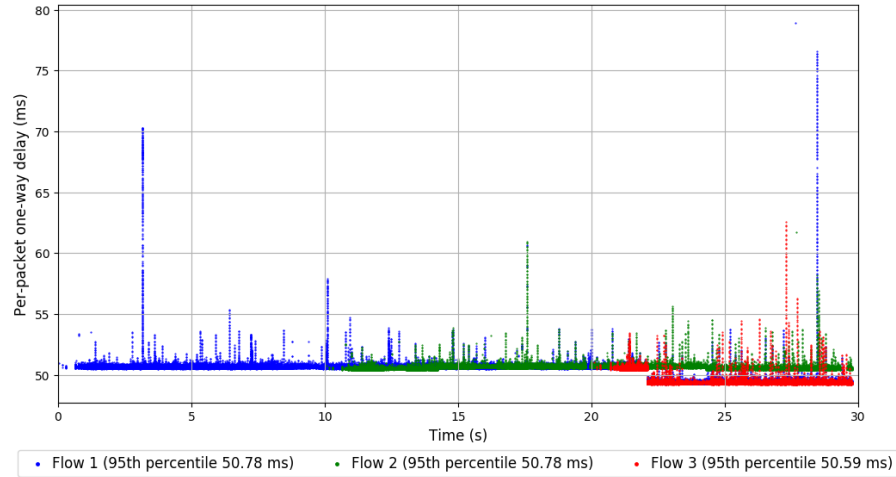
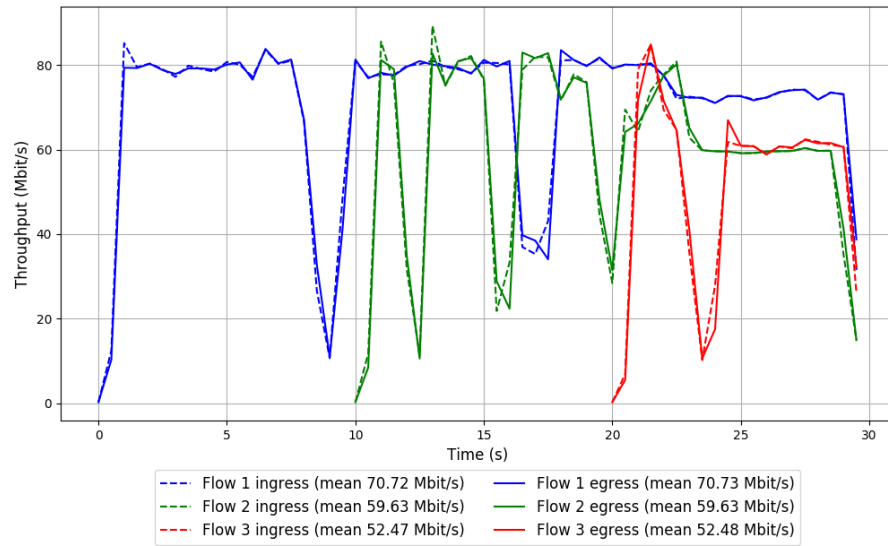
-- Flow 3:

Average throughput: 52.48 Mbit/s

95th percentile per-packet one-way delay: 50.595 ms

Loss rate: 0.00%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2018-04-18 15:04:24

End at: 2018-04-18 15:04:54

Below is generated by plot.py at 2018-04-18 18:15:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 132.45 Mbit/s

95th percentile per-packet one-way delay: 50.699 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 69.73 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 62.40 Mbit/s

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

Loss rate: 0.00%

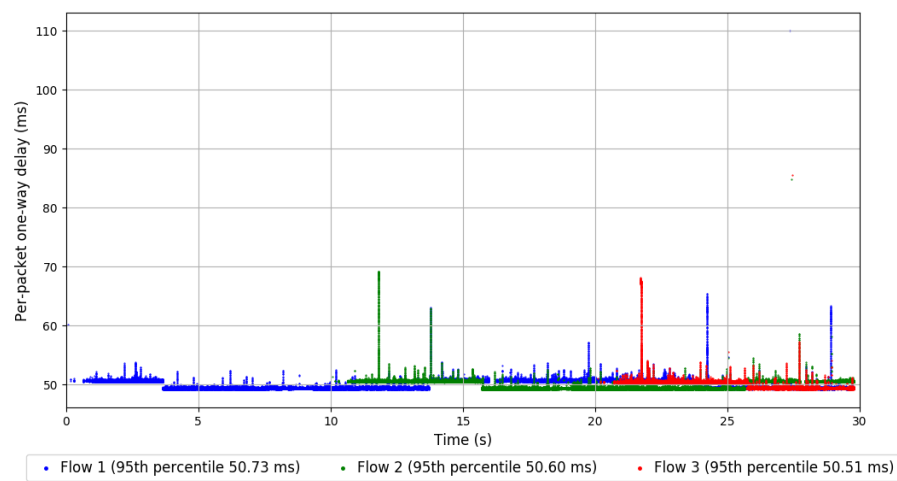
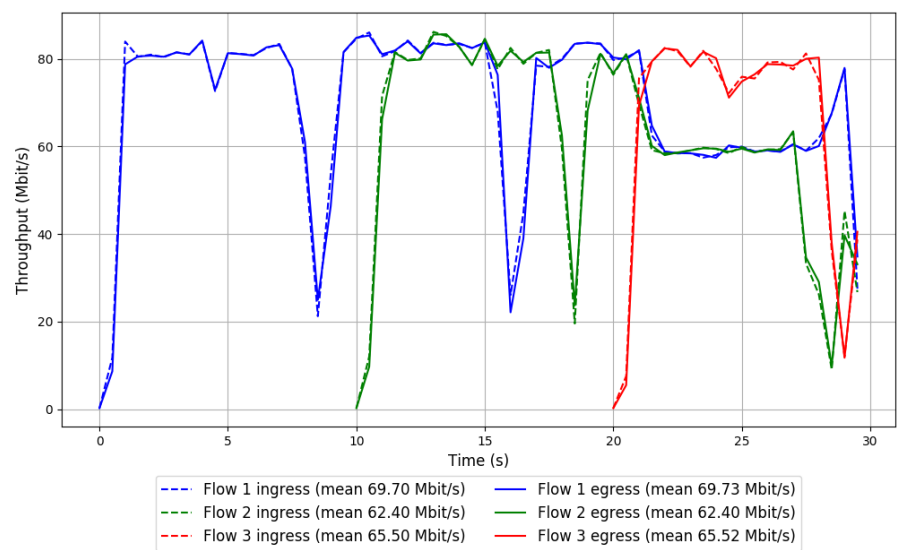
-- Flow 3:

Average throughput: 65.52 Mbit/s

95th percentile per-packet one-way delay: 50.510 ms

Loss rate: 0.00%

Run 9: Report of QUIC Cubic — Data Link



Run 10: Statistics of QUIC Cubic

Start at: 2018-04-18 15:19:51

End at: 2018-04-18 15:20:21

Below is generated by plot.py at 2018-04-18 18:15:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 131.65 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 74.25 Mbit/s

95th percentile per-packet one-way delay: 50.641 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 59.30 Mbit/s

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

Loss rate: 0.00%

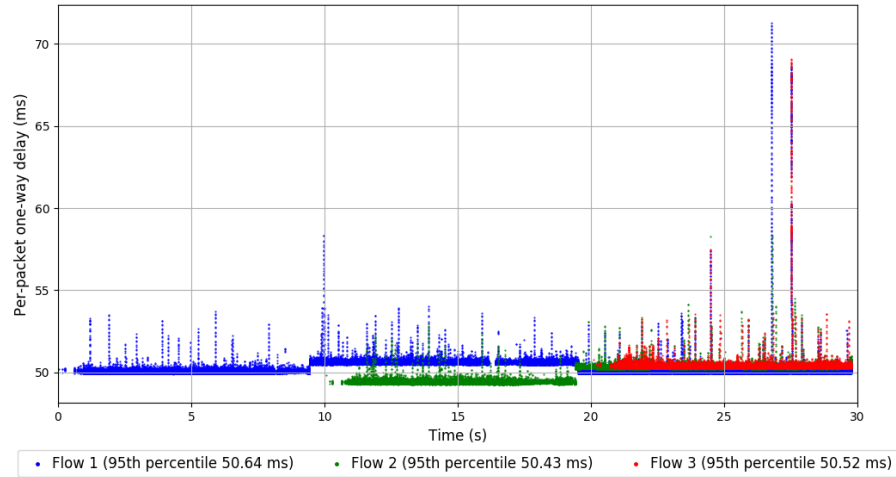
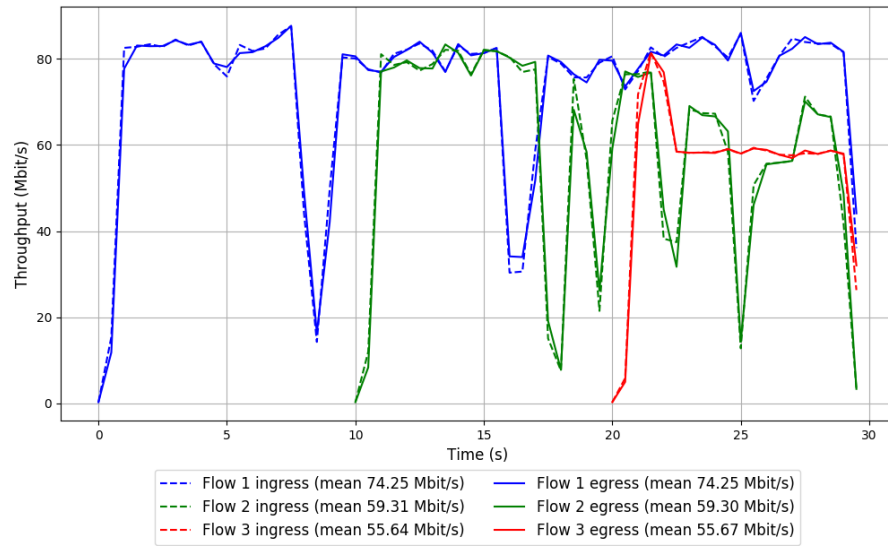
-- Flow 3:

Average throughput: 55.67 Mbit/s

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

Loss rate: 0.00%

Run 10: Report of QUIC Cubic — Data Link

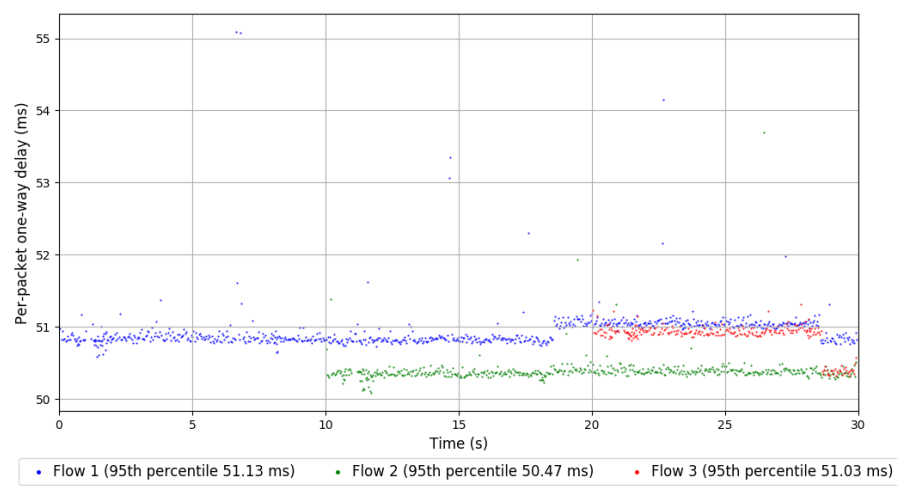
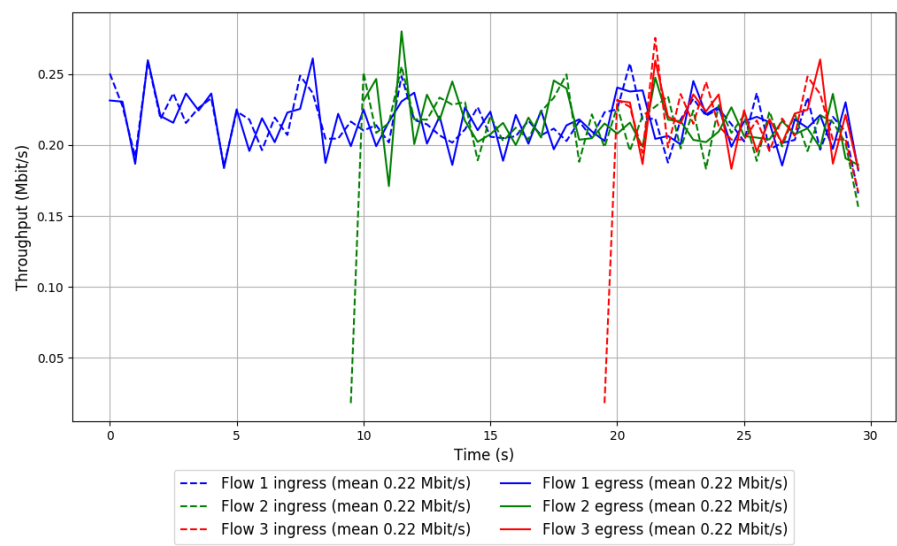


```
Run 1: Statistics of SCReAM

Start at: 2018-04-18 13:02:39
End at: 2018-04-18 13:03:09

# Below is generated by plot.py at 2018-04-18 18:15:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 51.085 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.126 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.467 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.034 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link

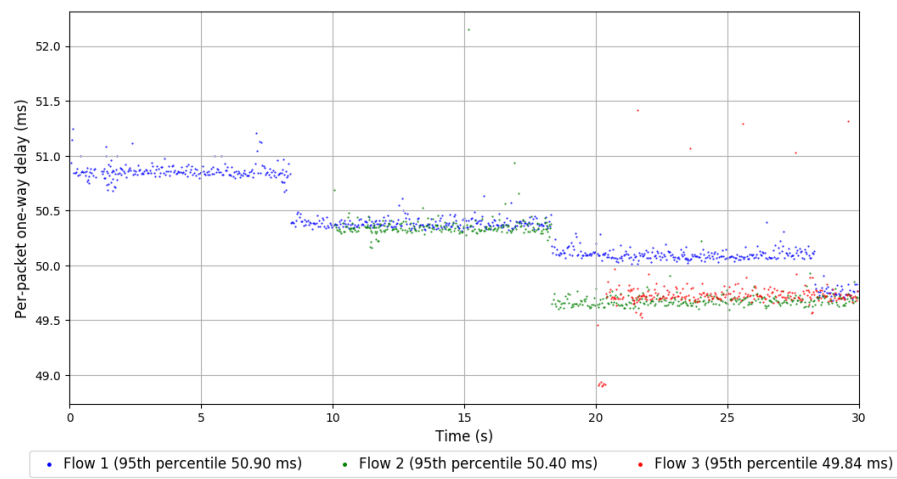
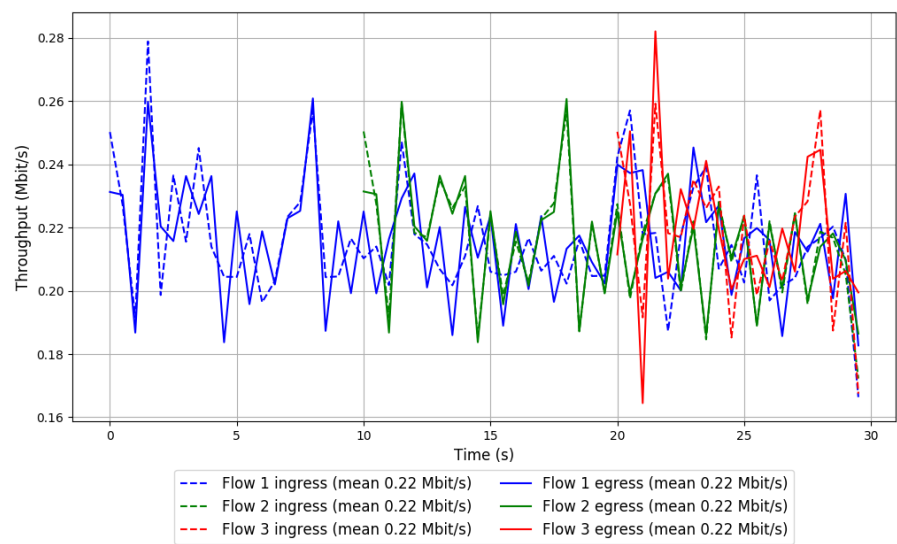


```
Run 2: Statistics of SReAM

Start at: 2018-04-18 13:18:10
End at: 2018-04-18 13:18:40

# Below is generated by plot.py at 2018-04-18 18:15:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.867 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: 50.398 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.835 ms
Loss rate: 0.00%
```

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SReAM

Start at: 2018-04-18 13:33:35

End at: 2018-04-18 13:34:05

Below is generated by plot.py at 2018-04-18 18:15:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.554 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 49.845 ms

Loss rate: 0.00%

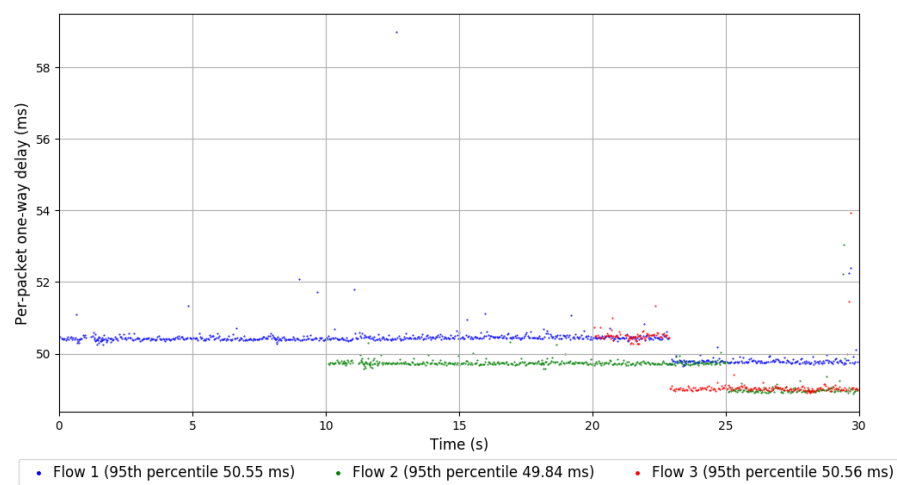
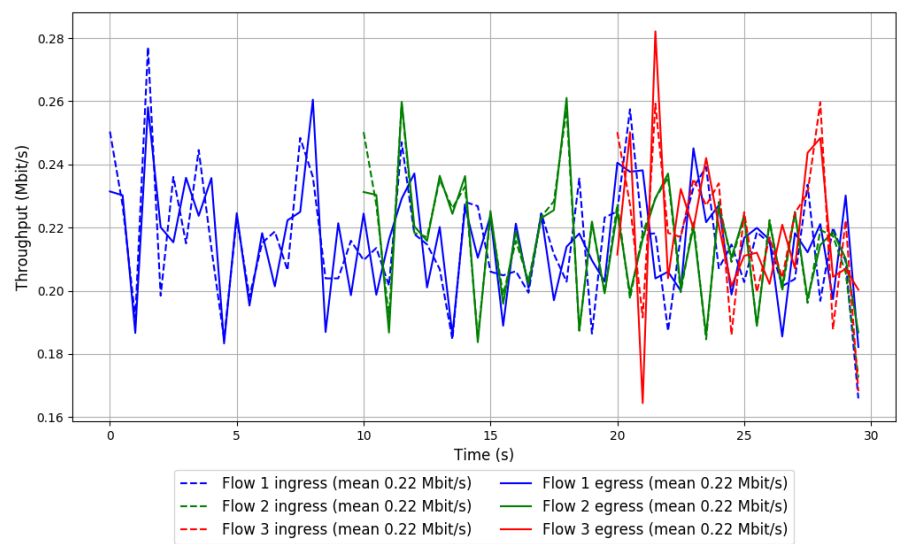
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.558 ms

Loss rate: 0.00%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SReAM

Start at: 2018-04-18 13:49:05

End at: 2018-04-18 13:49:35

Below is generated by plot.py at 2018-04-18 18:15:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.521 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

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

Loss rate: 0.00%

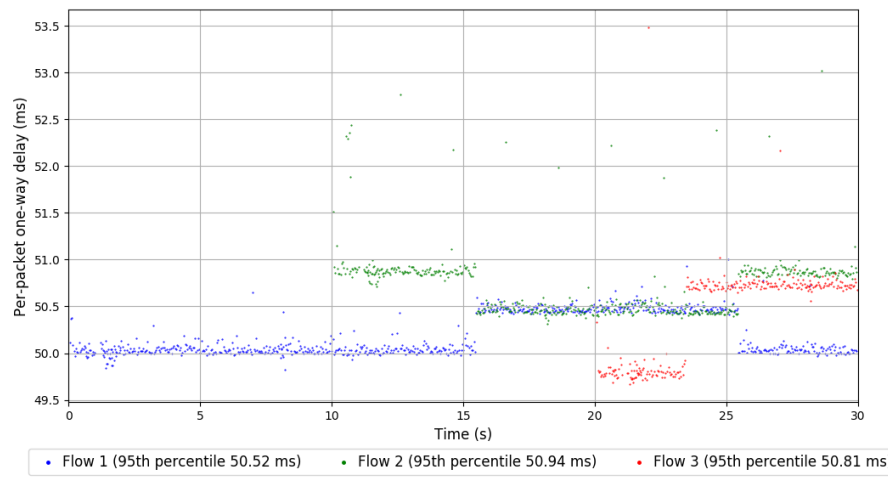
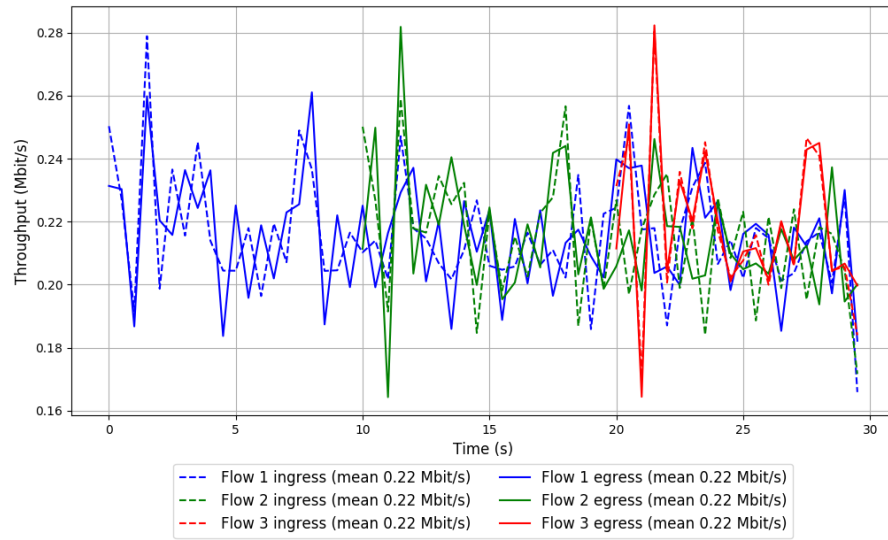
-- Flow 3:

Average throughput: 0.22 Mbit/s

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

Loss rate: 0.00%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2018-04-18 14:04:30

End at: 2018-04-18 14:05:00

Below is generated by plot.py at 2018-04-18 18:15:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.588 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

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

Loss rate: 0.00%

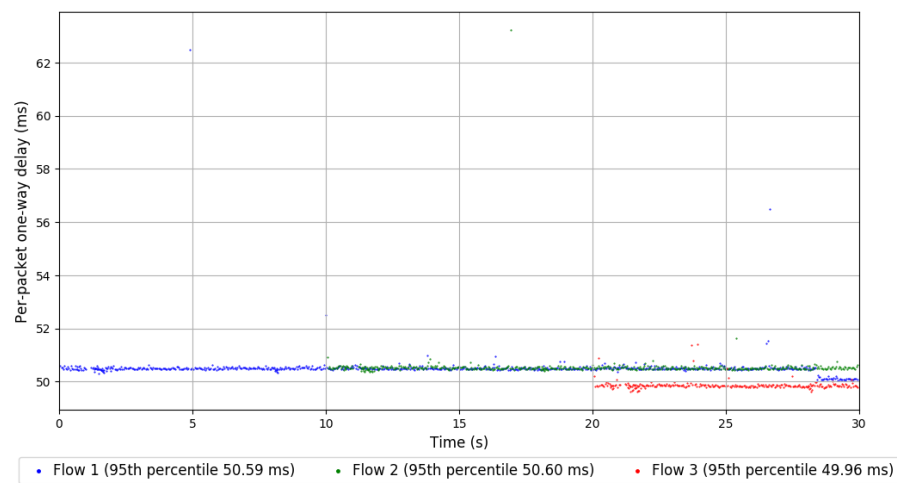
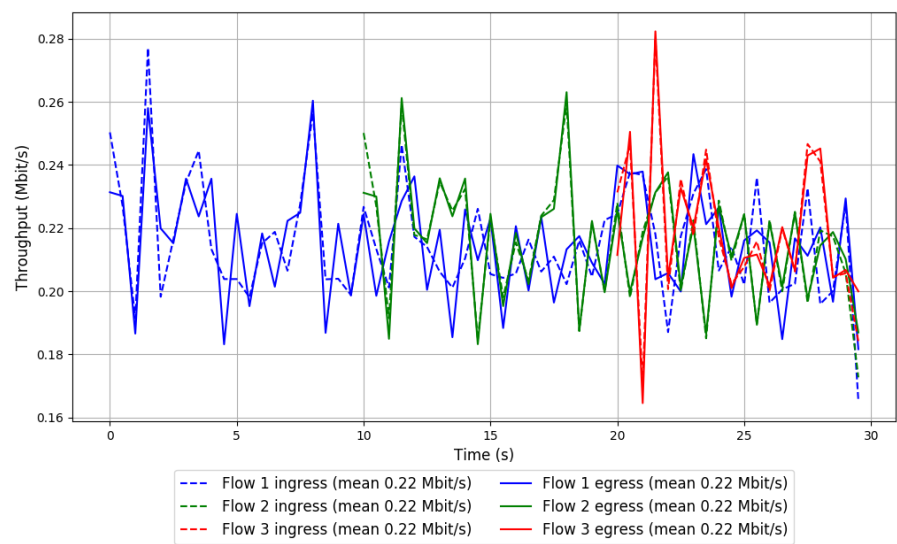
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 49.962 ms

Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



Run 6: Statistics of SCReAM

Start at: 2018-04-18 14:19:49

End at: 2018-04-18 14:20:19

Below is generated by plot.py at 2018-04-18 18:15:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 51.140 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.130 ms

Loss rate: 0.00%

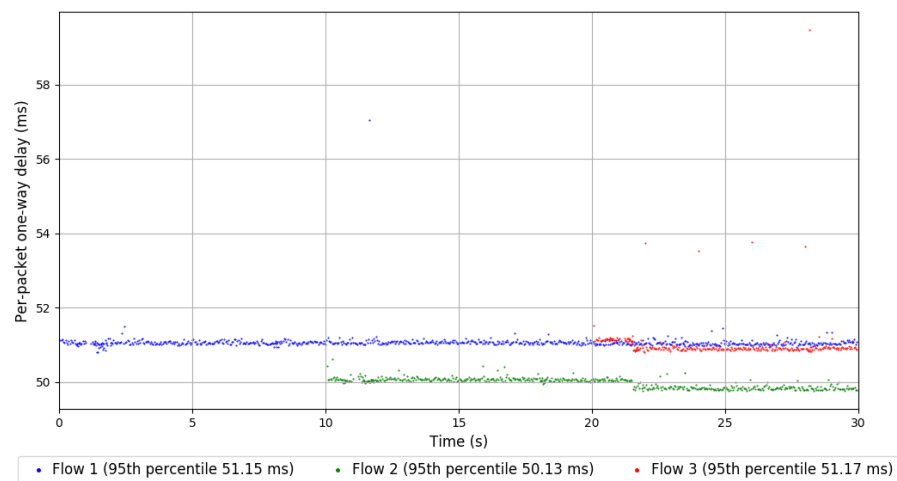
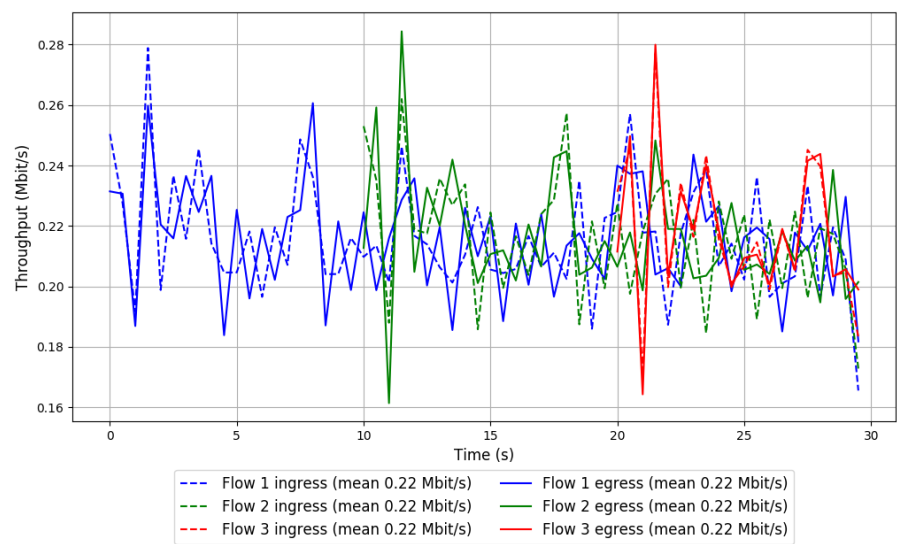
-- Flow 3:

Average throughput: 0.22 Mbit/s

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

Loss rate: 0.00%

Run 6: Report of SReAM — Data Link



Run 7: Statistics of SReAM

Start at: 2018-04-18 14:35:20

End at: 2018-04-18 14:35:50

Below is generated by plot.py at 2018-04-18 18:15:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 50.849 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.864 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.015 ms

Loss rate: 0.00%

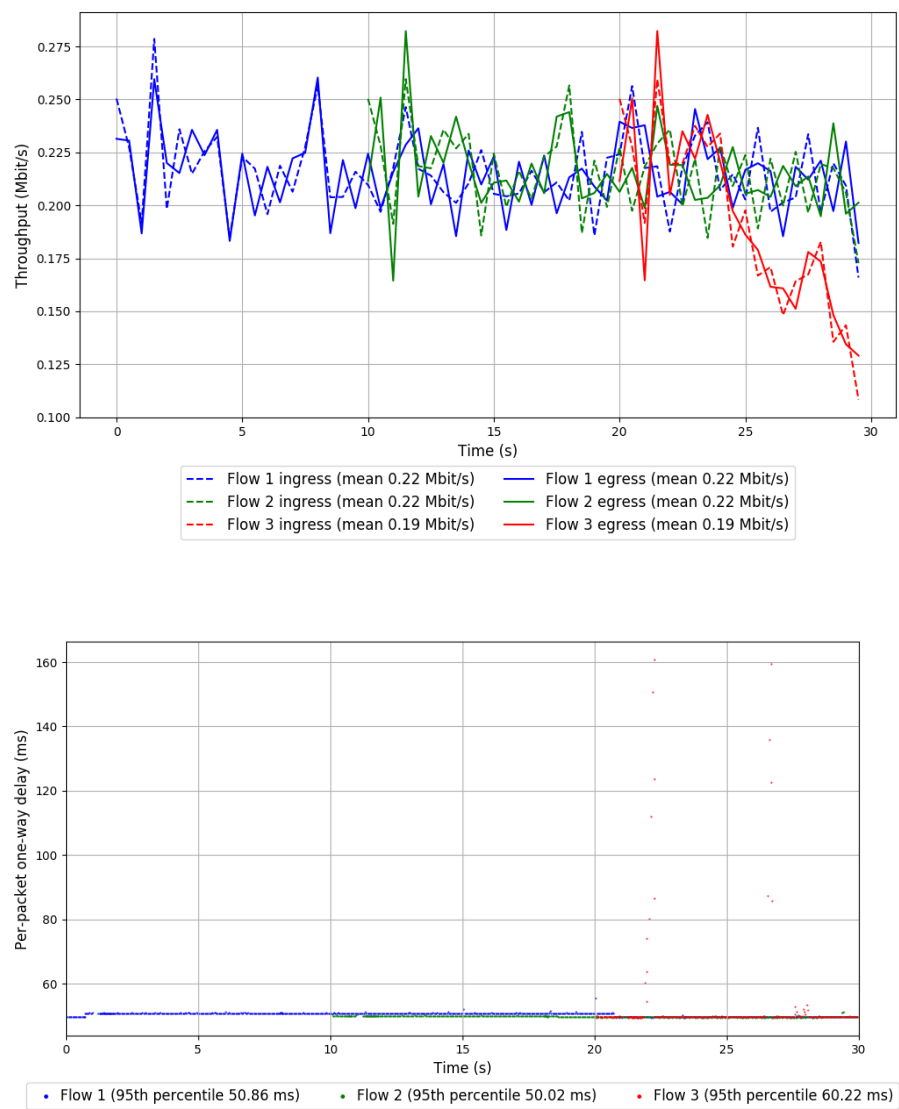
-- Flow 3:

Average throughput: 0.19 Mbit/s

95th percentile per-packet one-way delay: 60.224 ms

Loss rate: 0.00%

Run 7: Report of SReAM — Data Link



Run 8: Statistics of SReAM

Start at: 2018-04-18 14:50:31

End at: 2018-04-18 14:51:01

Below is generated by plot.py at 2018-04-18 18:15:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

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

Loss rate: 0.00%

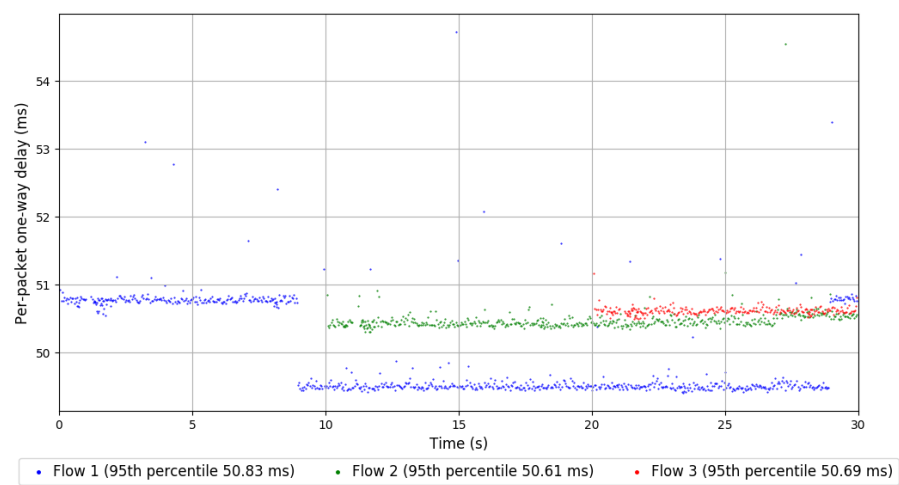
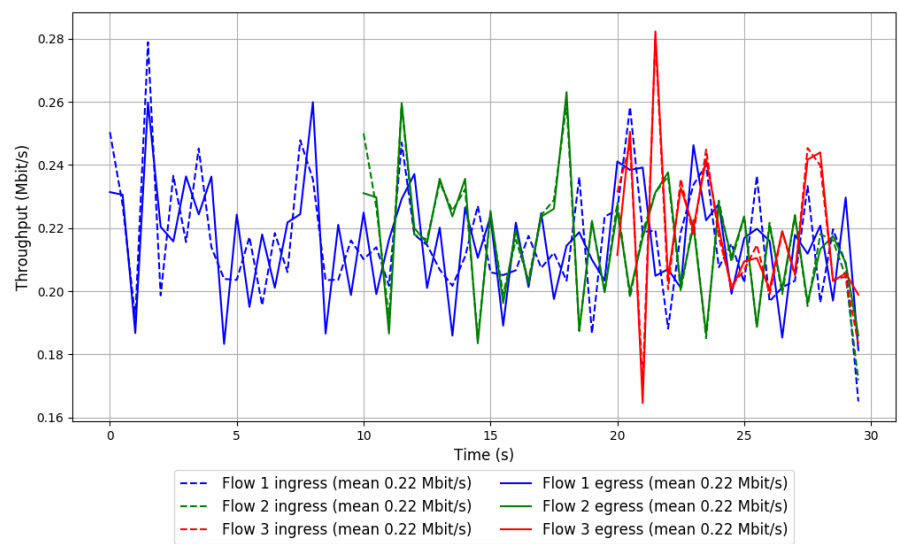
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.686 ms

Loss rate: 0.00%

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SCReAM

Start at: 2018-04-18 15:05:50

End at: 2018-04-18 15:06:20

Below is generated by plot.py at 2018-04-18 18:15:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.247 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.792 ms

Loss rate: 0.00%

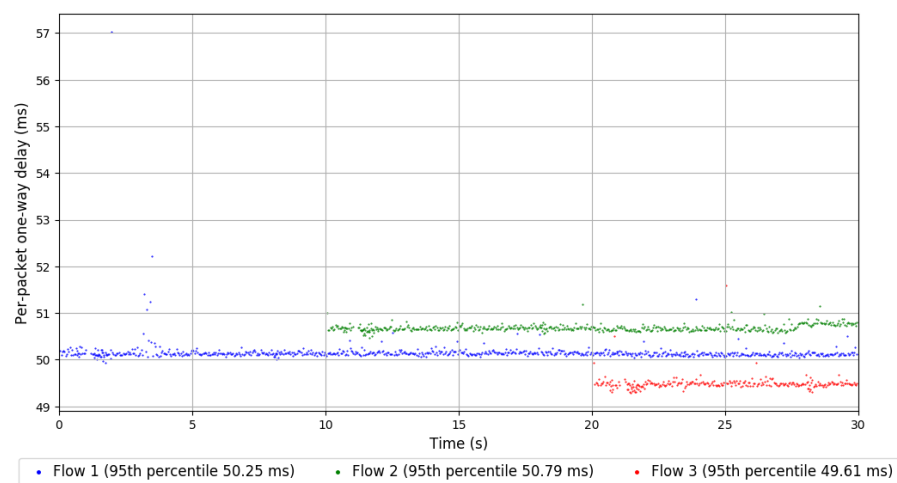
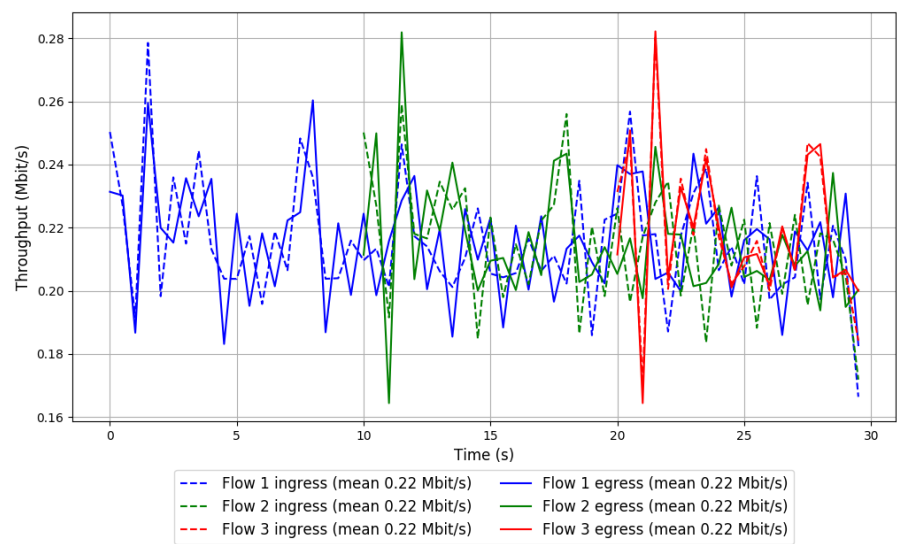
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 49.606 ms

Loss rate: 0.00%

Run 9: Report of SReAM — Data Link

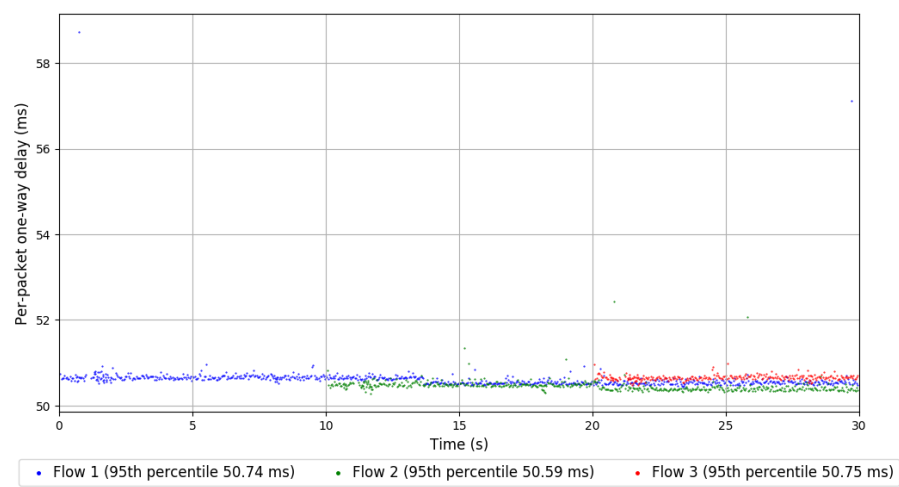
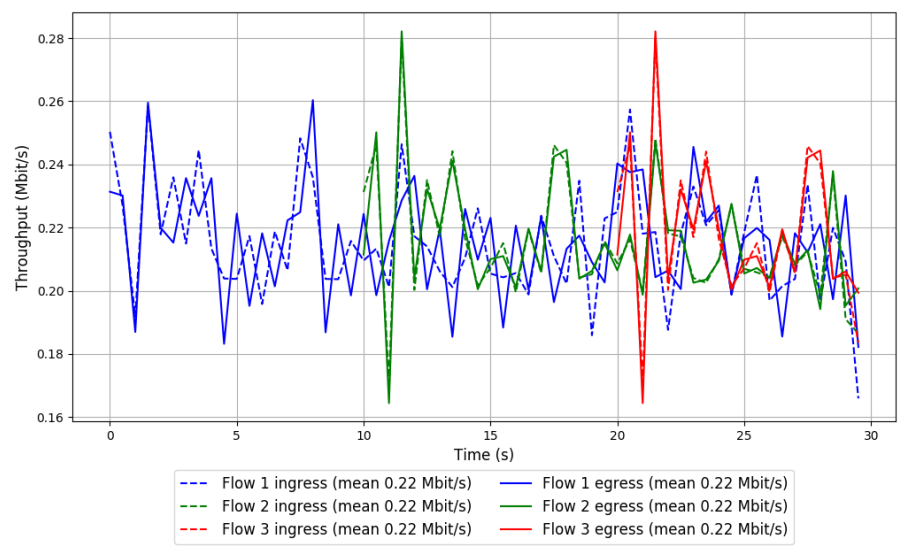


```
Run 10: Statistics of SReAM

Start at: 2018-04-18 15:21:17
End at: 2018-04-18 15:21:47

# Below is generated by plot.py at 2018-04-18 18:15:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.720 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.737 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.594 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.749 ms
Loss rate: 0.00%
```

Run 10: Report of SReAM — Data Link

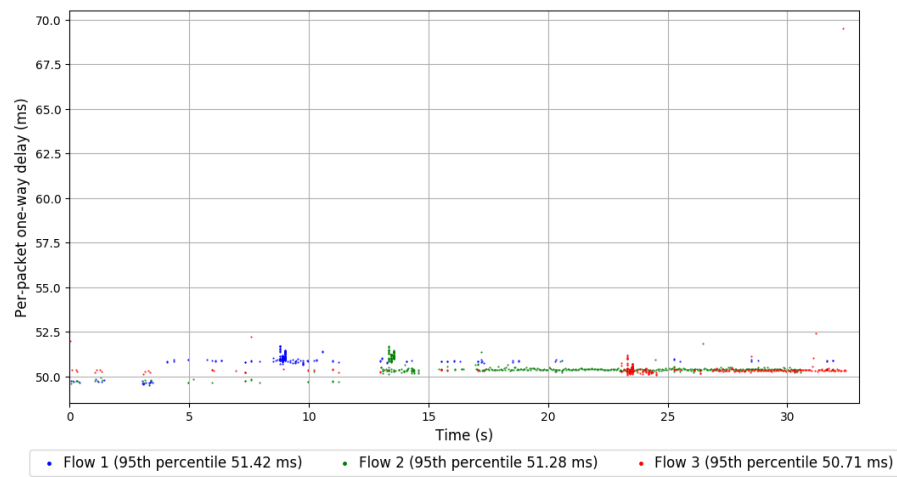
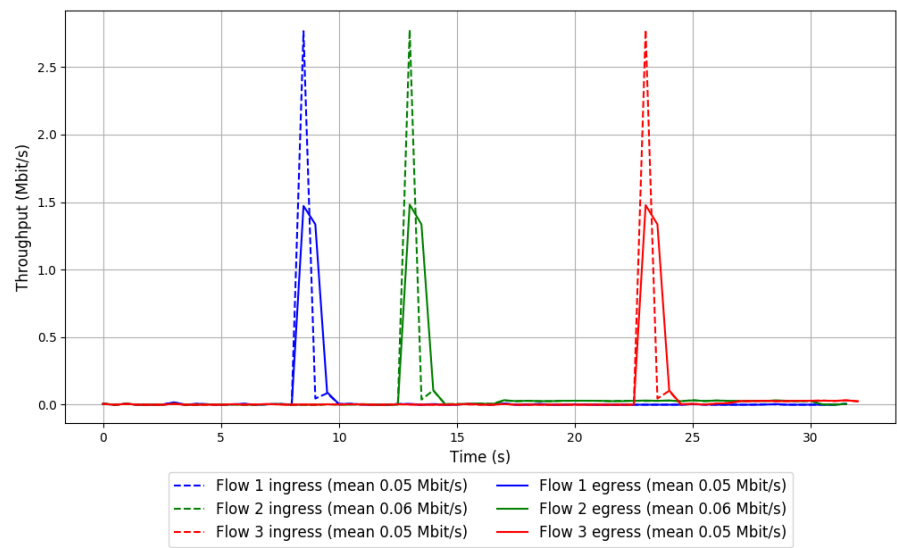


```
Run 1: Statistics of WebRTC media

Start at: 2018-04-18 13:03:19
End at: 2018-04-18 13:03:49

# Below is generated by plot.py at 2018-04-18 18:15:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 51.318 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 51.425 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 51.276 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 50.707 ms
Loss rate: 0.00%
```


Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-04-18 13:18:49

End at: 2018-04-18 13:19:19

Below is generated by plot.py at 2018-04-18 18:15:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.18 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.07 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.07 Mbit/s

95th percentile per-packet one-way delay: 58.836 ms

Loss rate: 0.00%

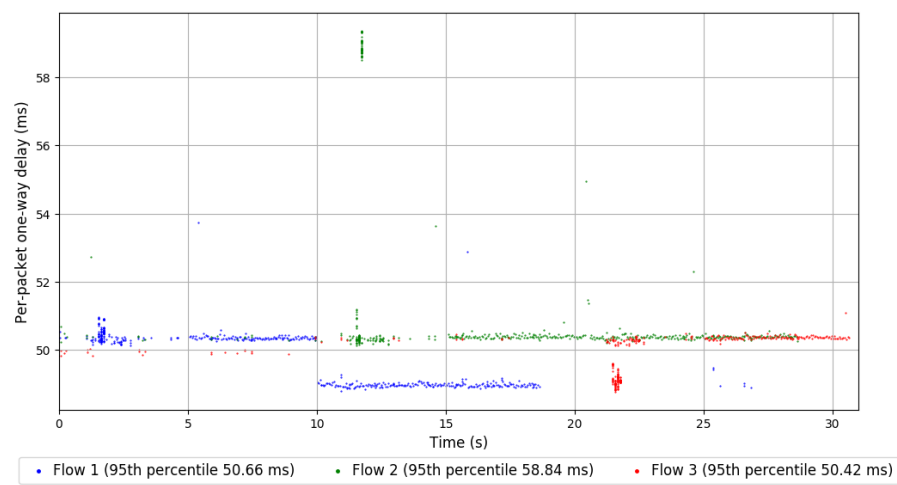
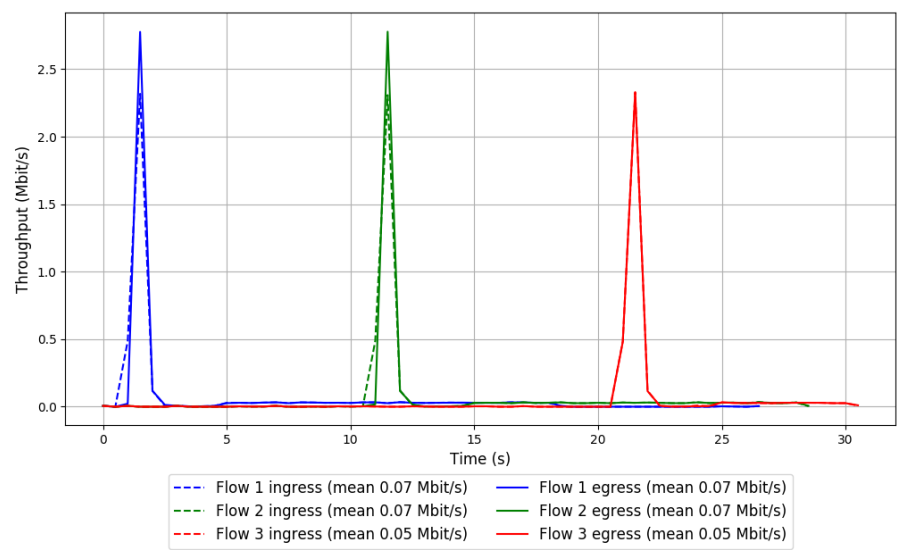
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 50.423 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-04-18 13:34:14

End at: 2018-04-18 13:34:44

Below is generated by plot.py at 2018-04-18 18:15:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.17 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.463 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.382 ms

Loss rate: 0.00%

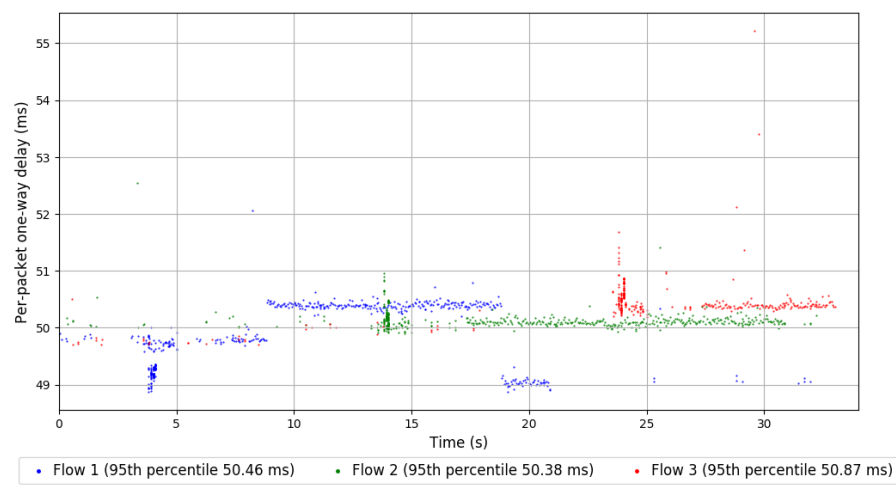
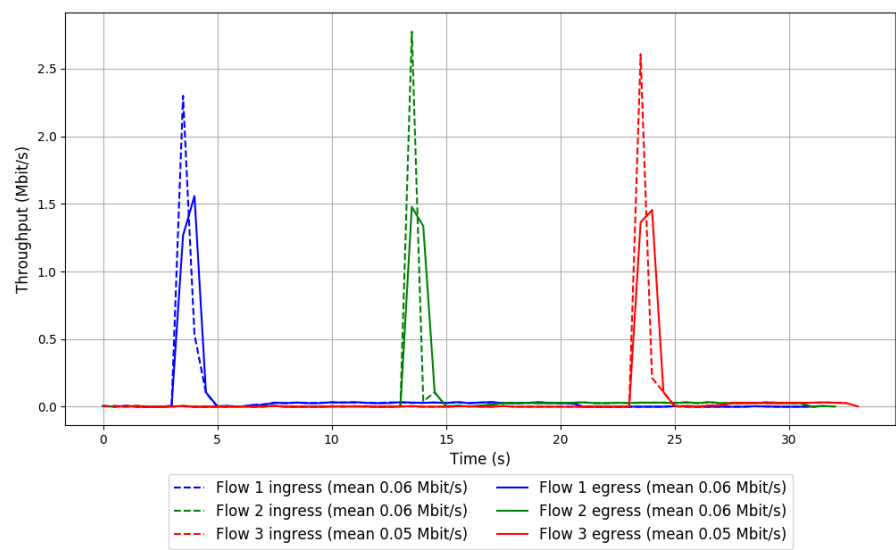
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 50.870 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-04-18 13:49:44

End at: 2018-04-18 13:50:14

Below is generated by plot.py at 2018-04-18 18:15:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 50.576 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.535 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.589 ms

Loss rate: 0.00%

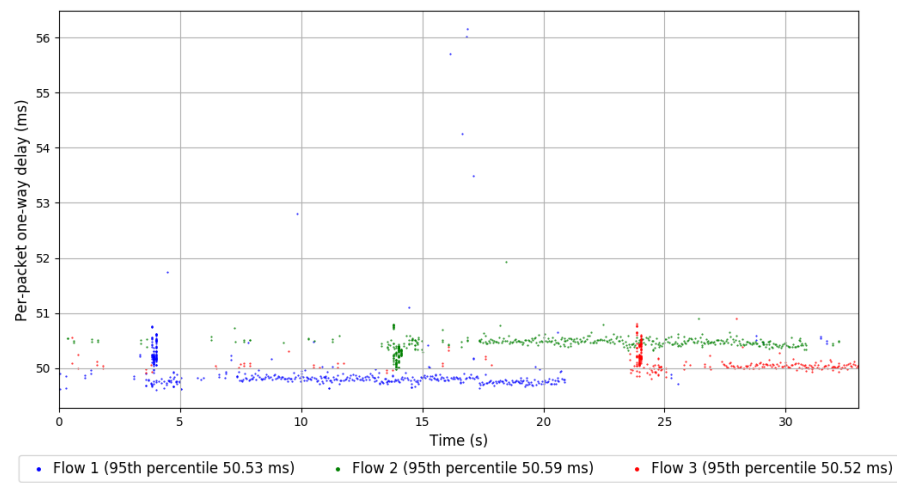
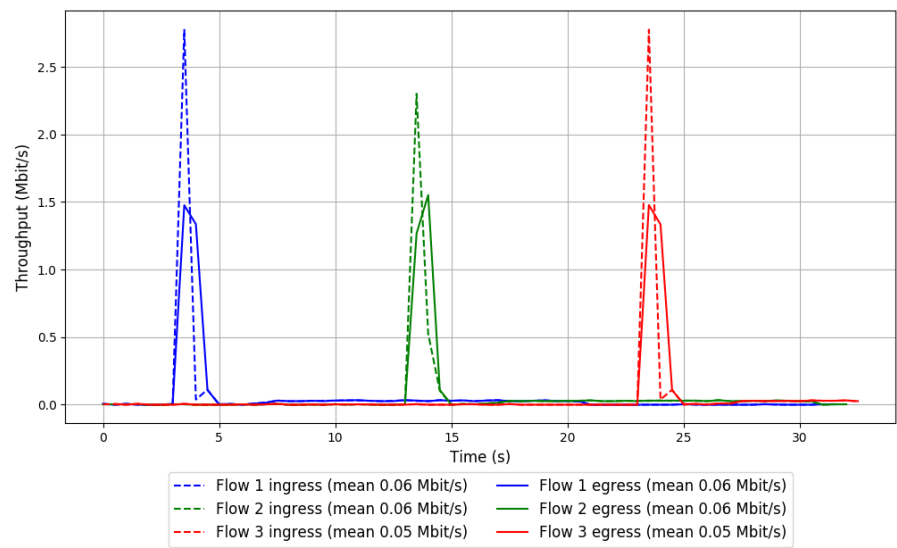
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 50.525 ms

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-04-18 14:05:09

End at: 2018-04-18 14:05:39

Below is generated by plot.py at 2018-04-18 18:15:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 51.255 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 51.423 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 51.051 ms

Loss rate: 0.00%

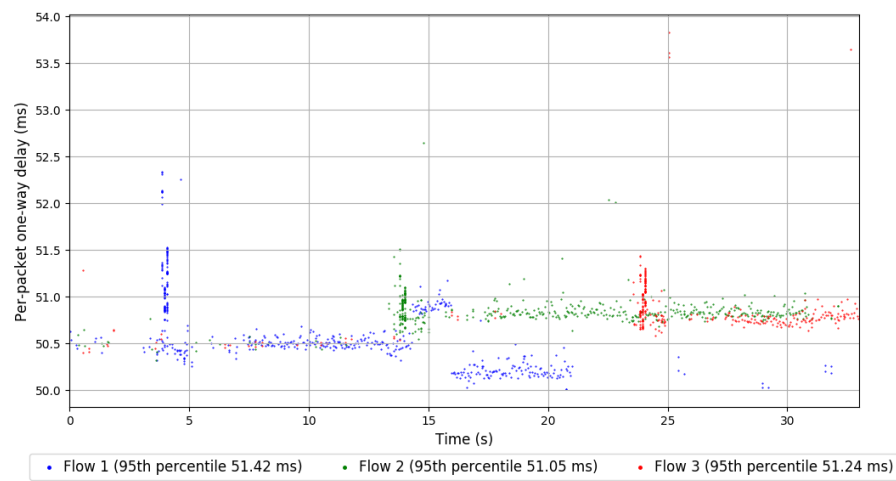
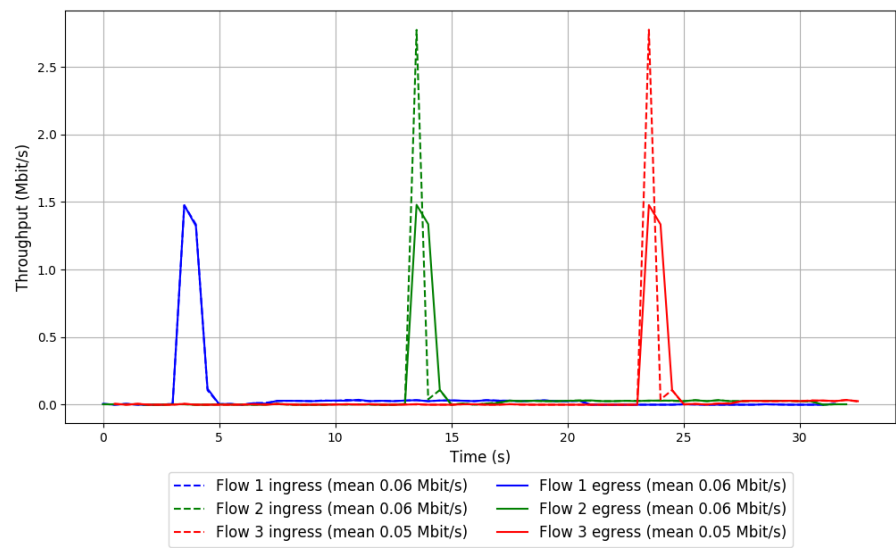
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 51.237 ms

Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2018-04-18 14:20:28

End at: 2018-04-18 14:20:58

Below is generated by plot.py at 2018-04-18 18:15:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 51.229 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 51.124 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 51.262 ms

Loss rate: 0.00%

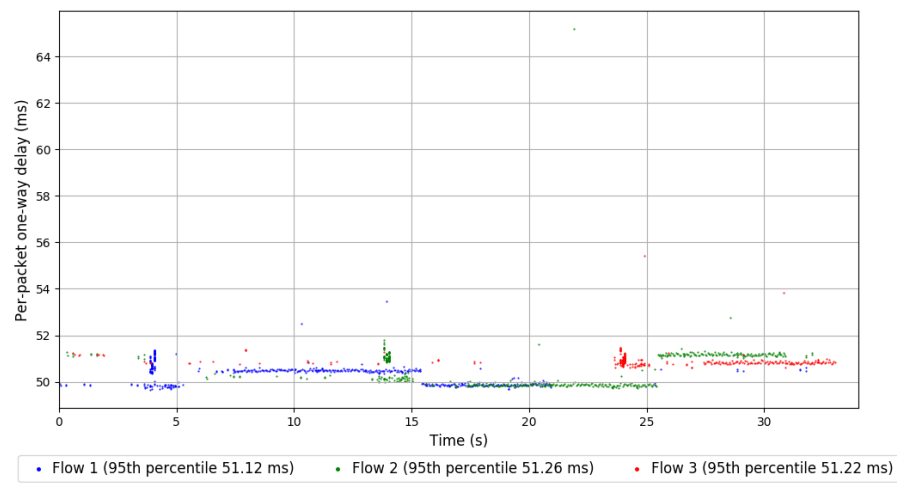
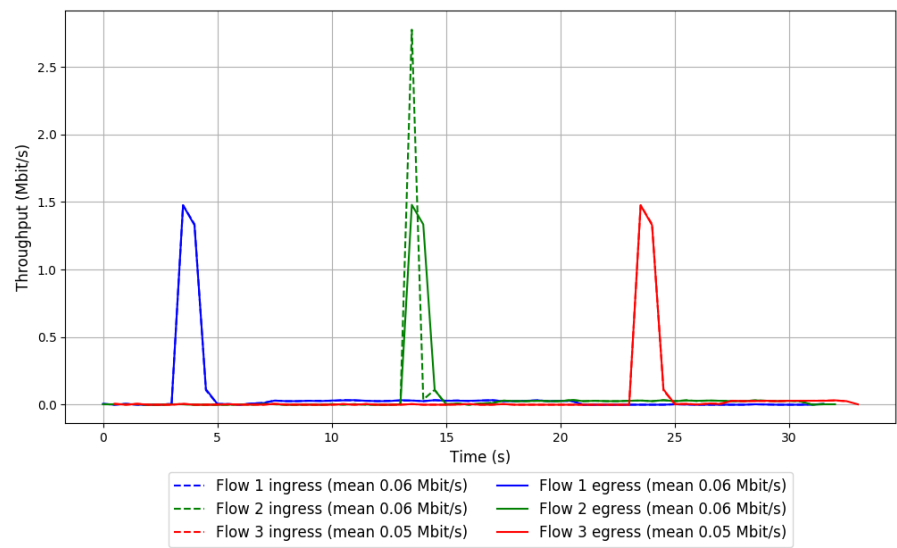
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 51.224 ms

Loss rate: 0.00%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2018-04-18 14:35:59

End at: 2018-04-18 14:36:29

Below is generated by plot.py at 2018-04-18 18:15:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.744 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

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

Loss rate: 0.00%

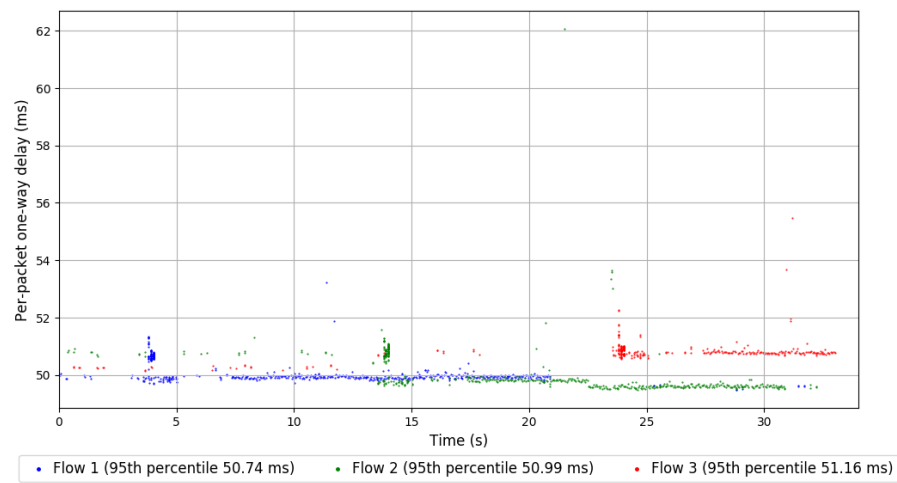
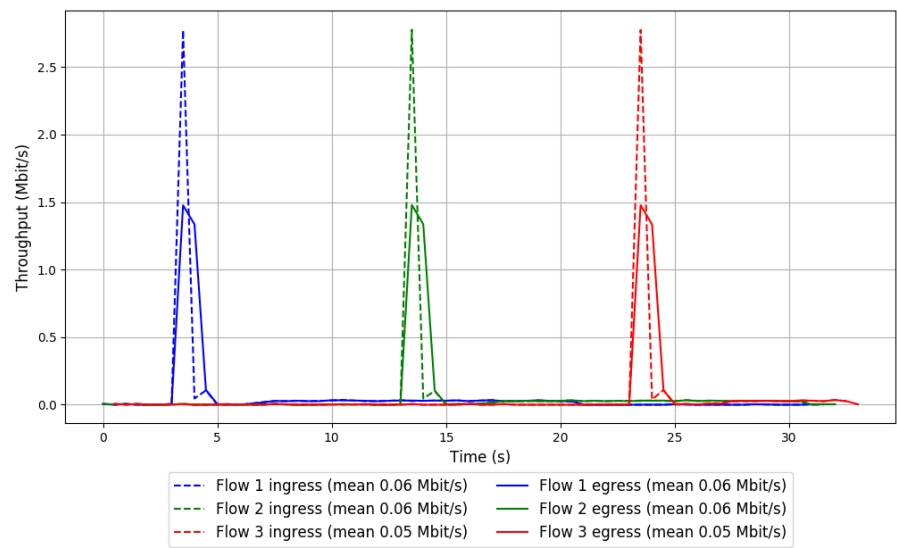
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 51.155 ms

Loss rate: 0.00%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2018-04-18 14:51:11

End at: 2018-04-18 14:51:41

Below is generated by plot.py at 2018-04-18 18:15:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 51.182 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.961 ms

Loss rate: 0.00%

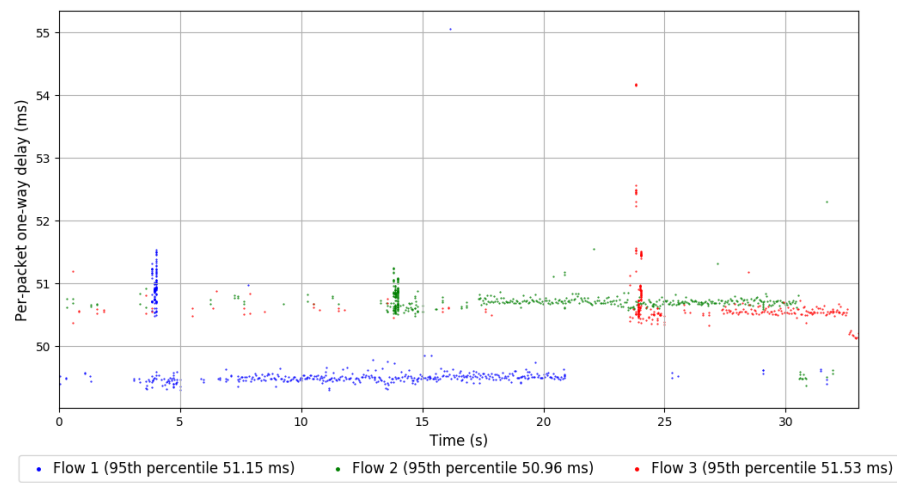
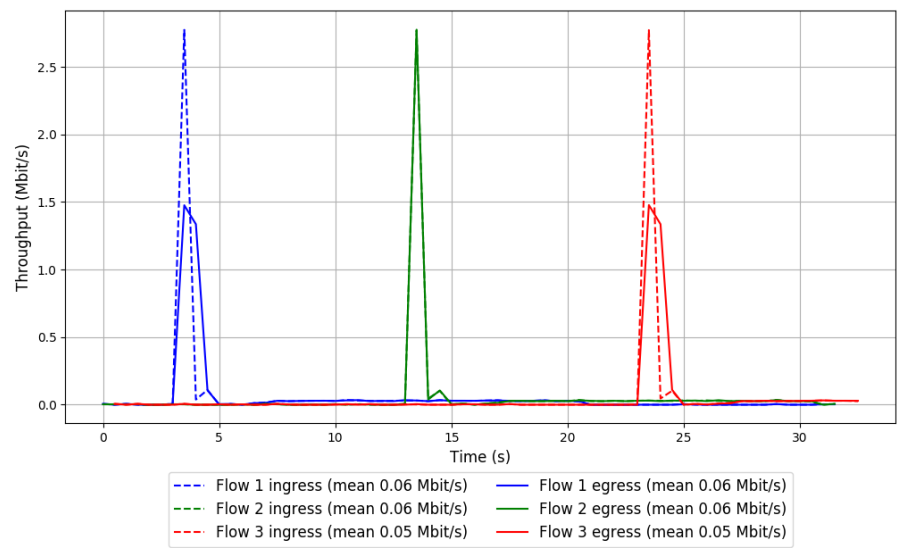
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 51.529 ms

Loss rate: 0.00%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2018-04-18 15:06:30

End at: 2018-04-18 15:07:00

Below is generated by plot.py at 2018-04-18 18:15:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 50.918 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 51.016 ms

Loss rate: 0.00%

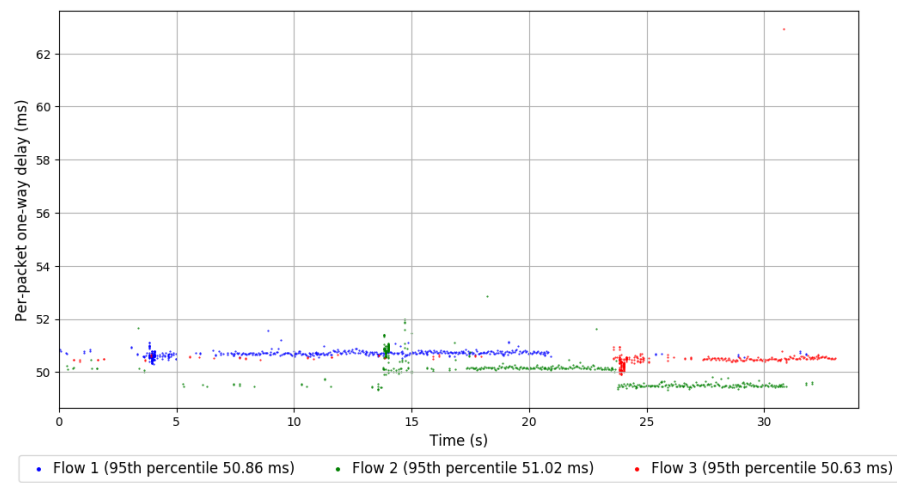
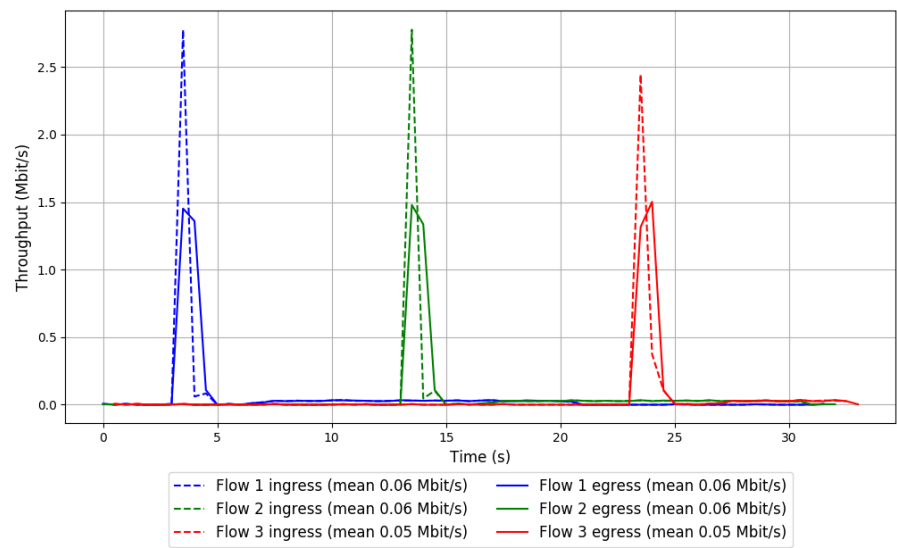
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 50.631 ms

Loss rate: 0.00%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2018-04-18 15:21:56

End at: 2018-04-18 15:22:26

Below is generated by plot.py at 2018-04-18 18:15:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

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

Loss rate: 0.00%

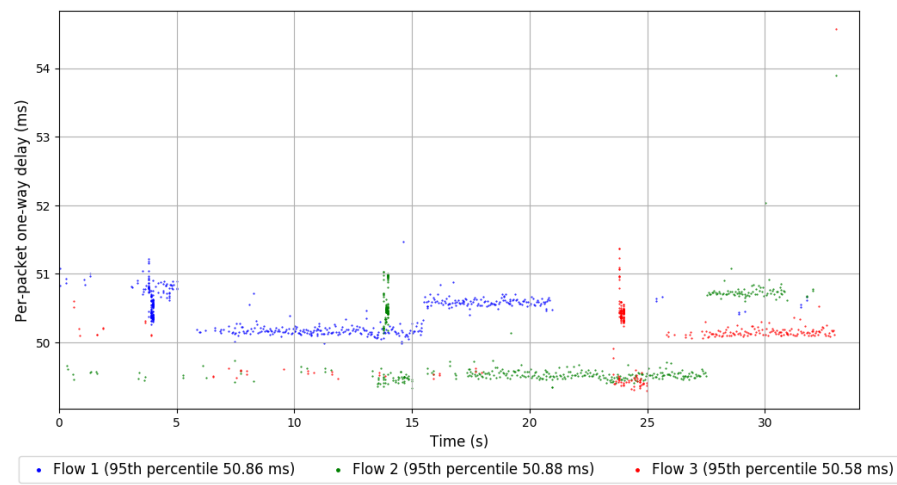
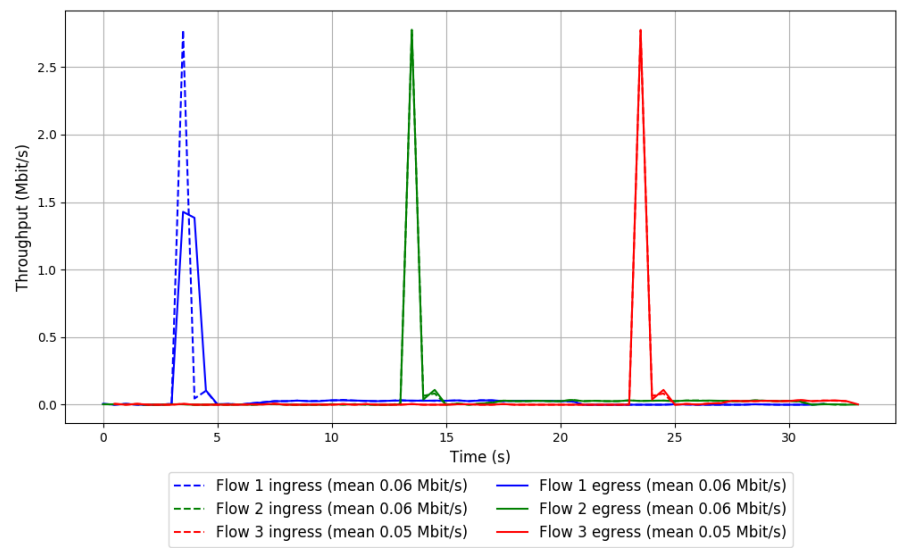
-- Flow 3:

Average throughput: 0.05 Mbit/s

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

Loss rate: 0.00%

Run 10: Report of WebRTC media — Data Link



Run 1: Statistics of Sprout

Start at: 2018-04-18 12:59:38

End at: 2018-04-18 13:00:08

Below is generated by plot.py at 2018-04-18 18:15:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.60 Mbit/s

95th percentile per-packet one-way delay: 52.139 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 7.92 Mbit/s

95th percentile per-packet one-way delay: 52.095 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.84 Mbit/s

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

Loss rate: 0.00%

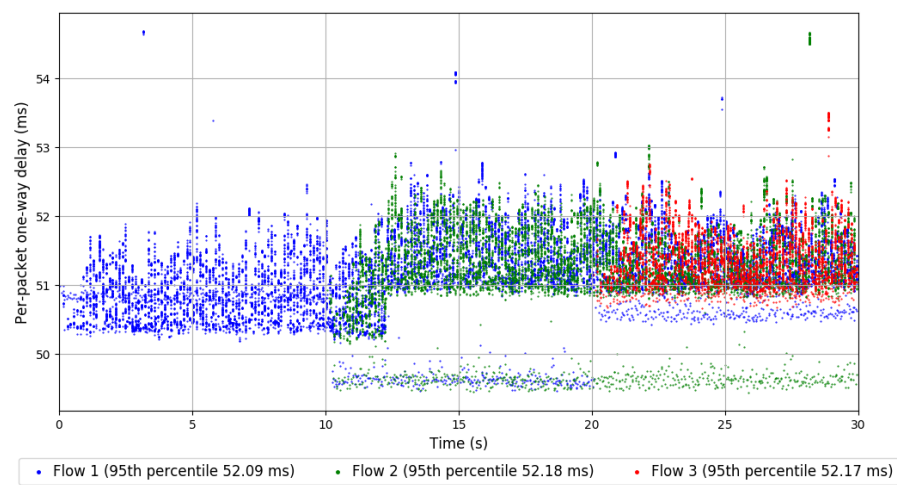
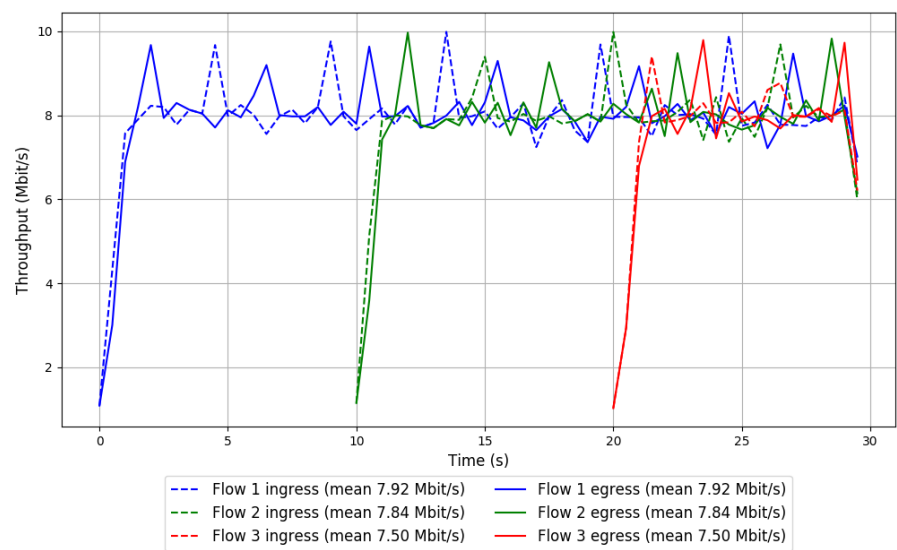
-- Flow 3:

Average throughput: 7.50 Mbit/s

95th percentile per-packet one-way delay: 52.166 ms

Loss rate: 0.00%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2018-04-18 13:15:03

End at: 2018-04-18 13:15:33

Below is generated by plot.py at 2018-04-18 18:15:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.55 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 7.89 Mbit/s

95th percentile per-packet one-way delay: 51.781 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.80 Mbit/s

95th percentile per-packet one-way delay: 51.869 ms

Loss rate: 0.00%

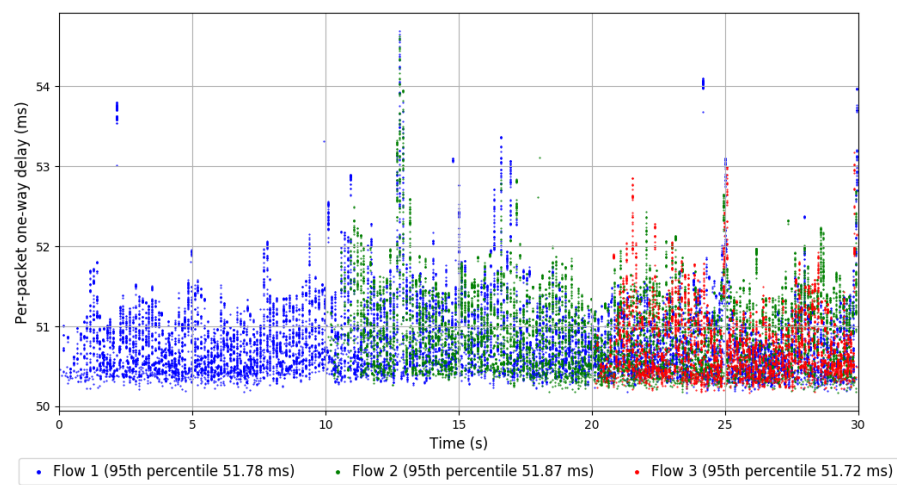
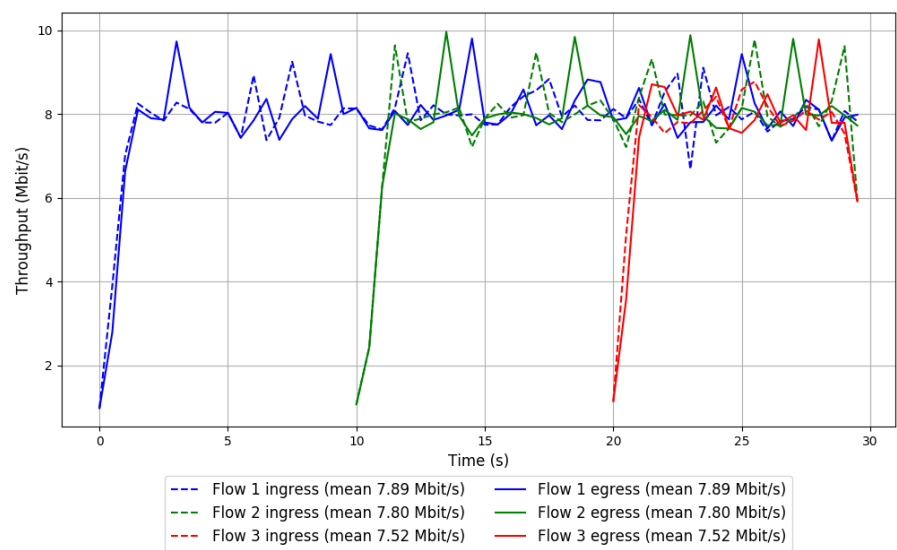
-- Flow 3:

Average throughput: 7.52 Mbit/s

95th percentile per-packet one-way delay: 51.721 ms

Loss rate: 0.00%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2018-04-18 13:30:28

End at: 2018-04-18 13:30:58

Below is generated by plot.py at 2018-04-18 18:15:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.70 Mbit/s

95th percentile per-packet one-way delay: 51.468 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 7.95 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.90 Mbit/s

95th percentile per-packet one-way delay: 51.509 ms

Loss rate: 0.00%

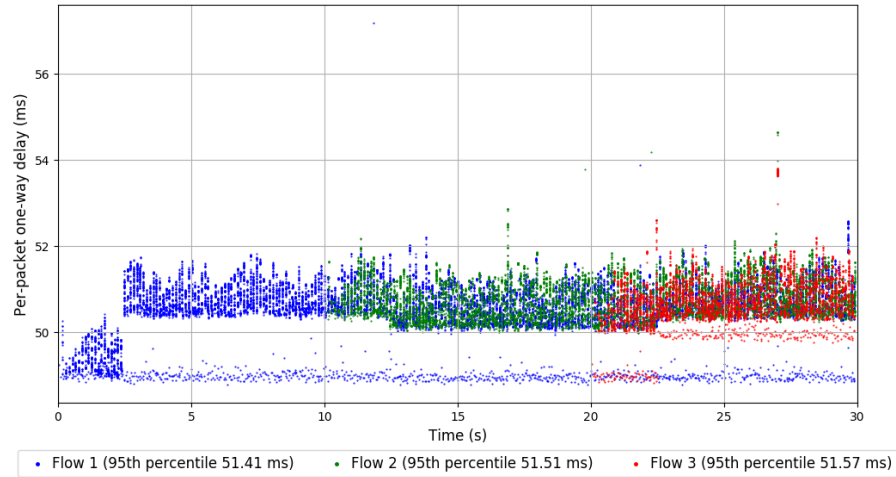
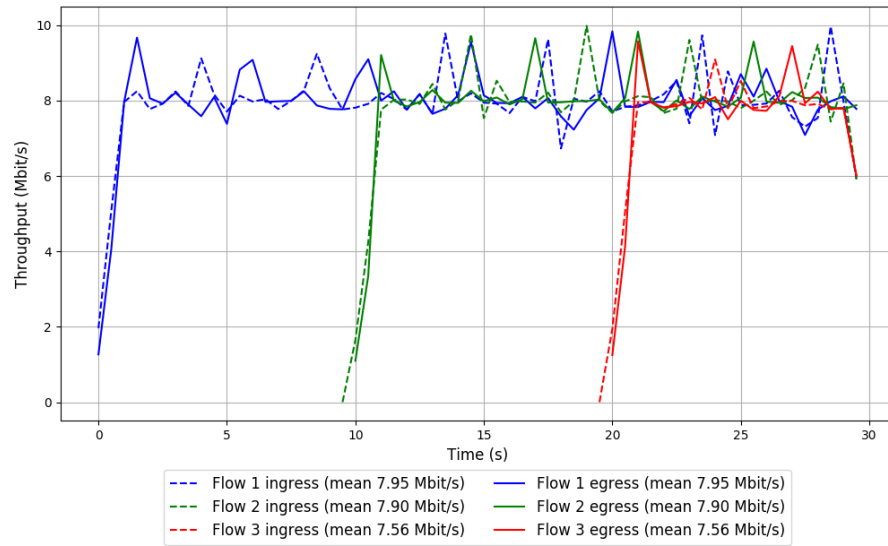
-- Flow 3:

Average throughput: 7.56 Mbit/s

95th percentile per-packet one-way delay: 51.573 ms

Loss rate: 0.00%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2018-04-18 13:46:01

End at: 2018-04-18 13:46:31

Below is generated by plot.py at 2018-04-18 18:15:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.57 Mbit/s

95th percentile per-packet one-way delay: 51.665 ms

Loss rate: 0.07%

-- Flow 1:

Average throughput: 7.94 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.84 Mbit/s

95th percentile per-packet one-way delay: 51.522 ms

Loss rate: 0.20%

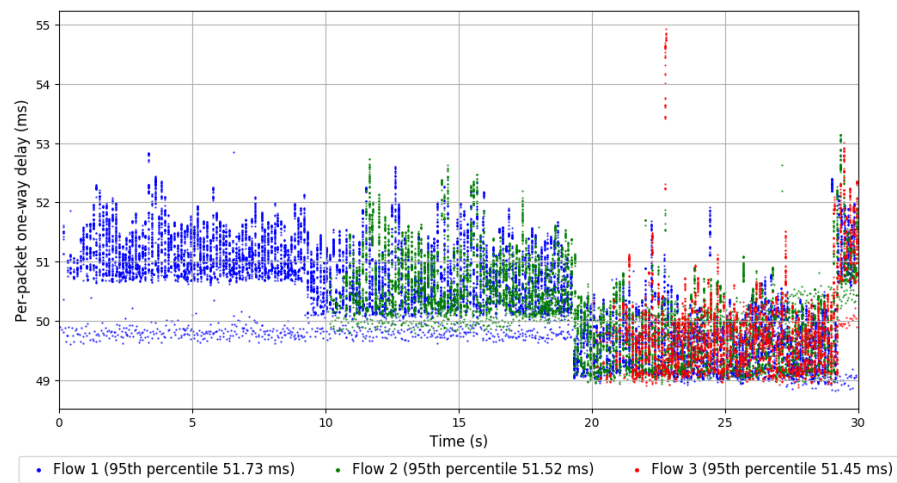
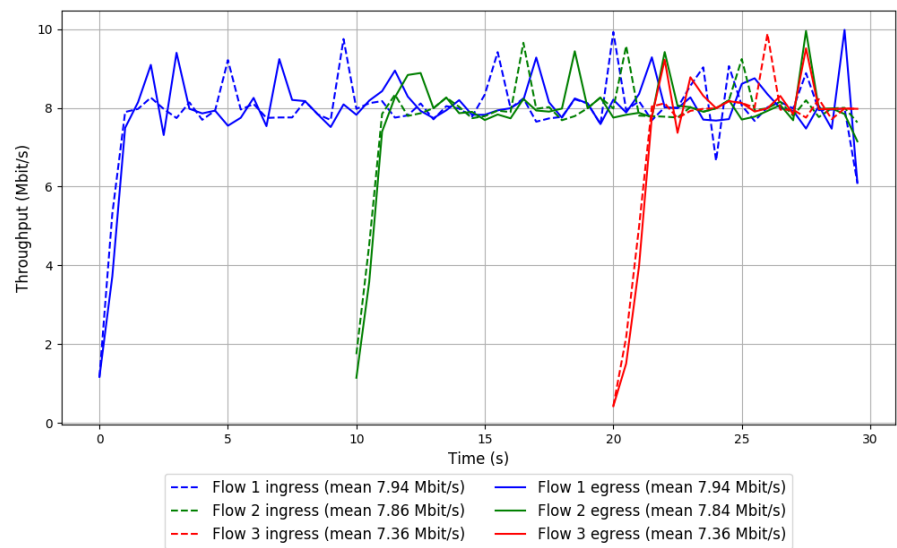
-- Flow 3:

Average throughput: 7.36 Mbit/s

95th percentile per-packet one-way delay: 51.452 ms

Loss rate: 0.00%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2018-04-18 14:01:24

End at: 2018-04-18 14:01:54

Below is generated by plot.py at 2018-04-18 18:15:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.46 Mbit/s

95th percentile per-packet one-way delay: 51.912 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 7.76 Mbit/s

95th percentile per-packet one-way delay: 51.942 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.78 Mbit/s

95th percentile per-packet one-way delay: 51.864 ms

Loss rate: 0.00%

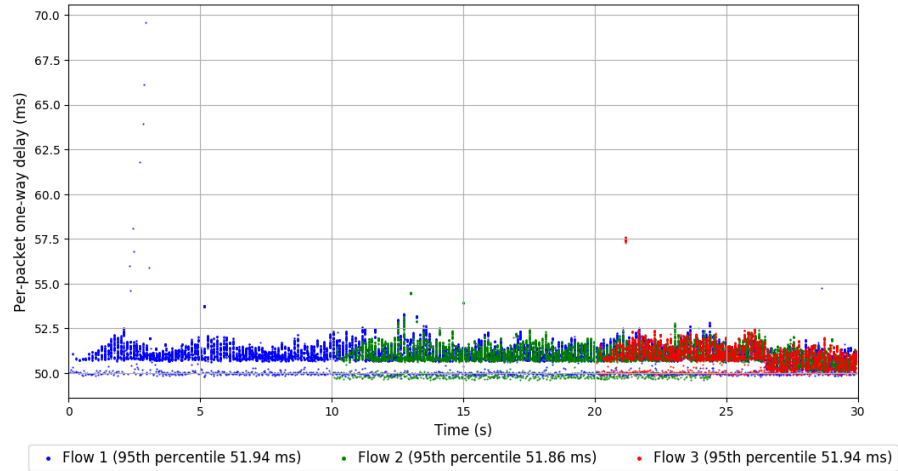
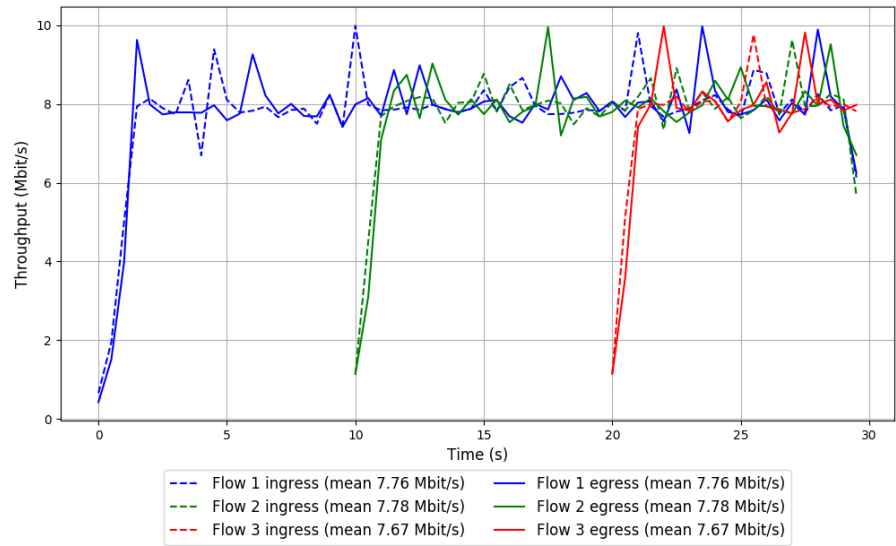
-- Flow 3:

Average throughput: 7.67 Mbit/s

95th percentile per-packet one-way delay: 51.942 ms

Loss rate: 0.00%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2018-04-18 14:16:42

End at: 2018-04-18 14:17:12

Below is generated by plot.py at 2018-04-18 18:15:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.23 Mbit/s

95th percentile per-packet one-way delay: 51.965 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 7.75 Mbit/s

95th percentile per-packet one-way delay: 51.895 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.71 Mbit/s

95th percentile per-packet one-way delay: 52.081 ms

Loss rate: 0.00%

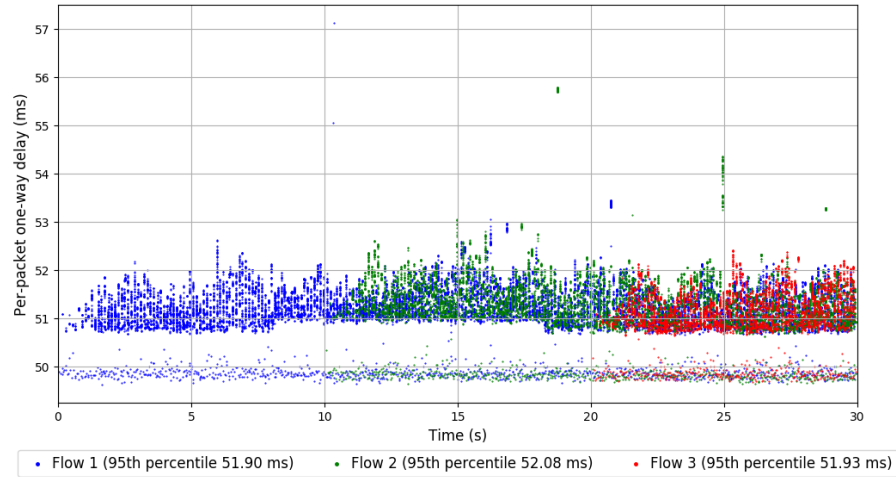
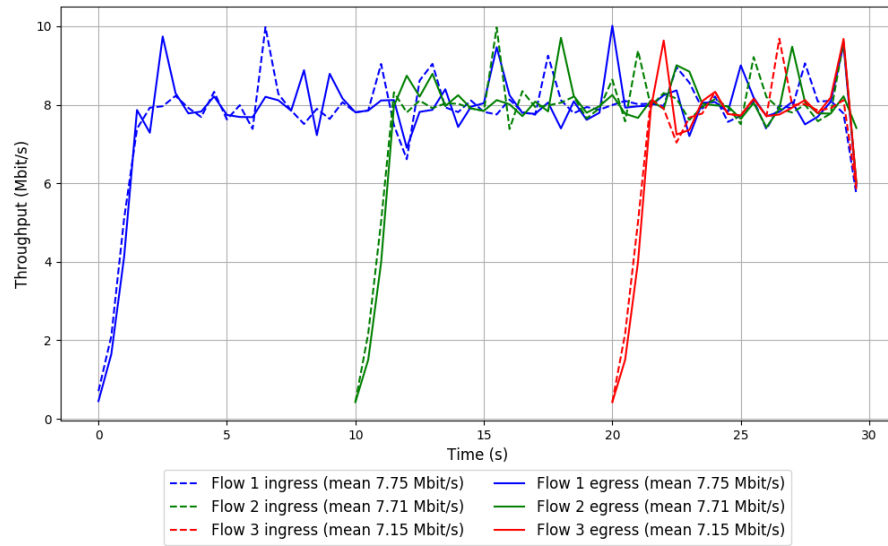
-- Flow 3:

Average throughput: 7.15 Mbit/s

95th percentile per-packet one-way delay: 51.929 ms

Loss rate: 0.00%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2018-04-18 14:32:15

End at: 2018-04-18 14:32:45

Below is generated by plot.py at 2018-04-18 18:15:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.57 Mbit/s

95th percentile per-packet one-way delay: 51.860 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 7.88 Mbit/s

95th percentile per-packet one-way delay: 51.850 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.80 Mbit/s

95th percentile per-packet one-way delay: 51.791 ms

Loss rate: 0.00%

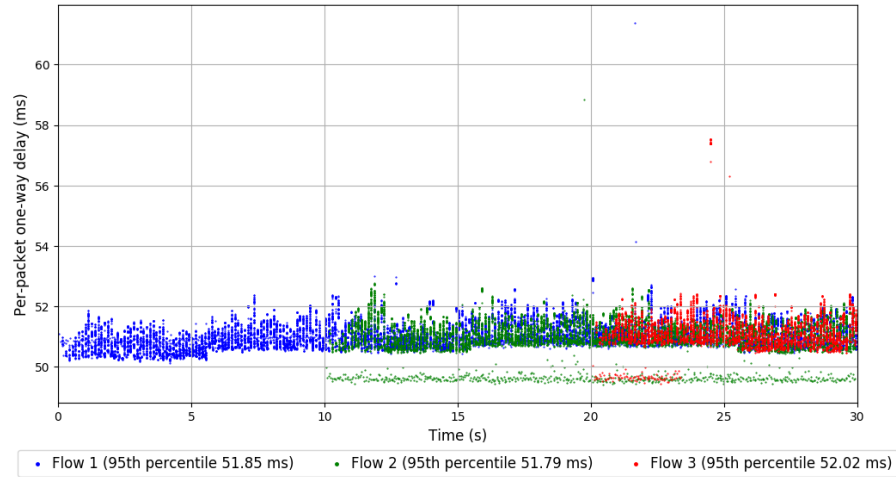
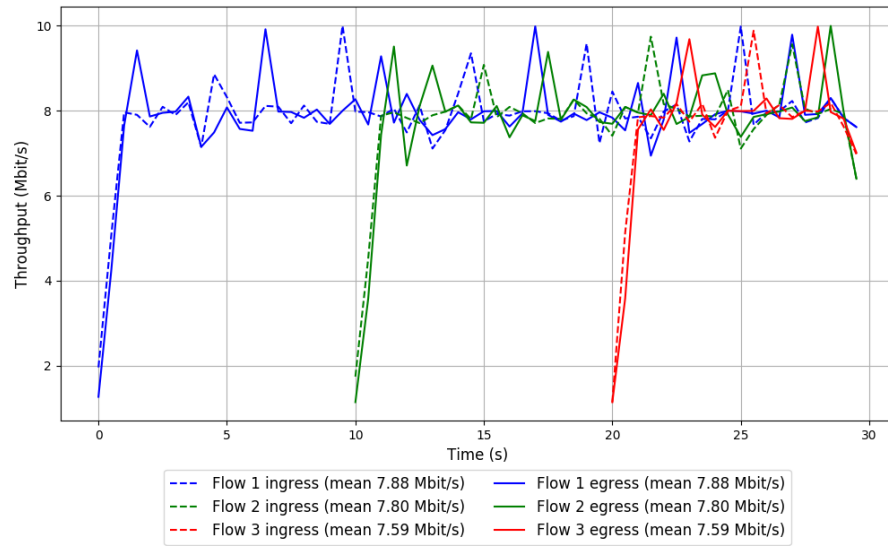
-- Flow 3:

Average throughput: 7.59 Mbit/s

95th percentile per-packet one-way delay: 52.022 ms

Loss rate: 0.00%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2018-04-18 14:47:27

End at: 2018-04-18 14:47:57

Below is generated by plot.py at 2018-04-18 18:15:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.61 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 7.93 Mbit/s

95th percentile per-packet one-way delay: 51.625 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.78 Mbit/s

95th percentile per-packet one-way delay: 51.608 ms

Loss rate: 0.00%

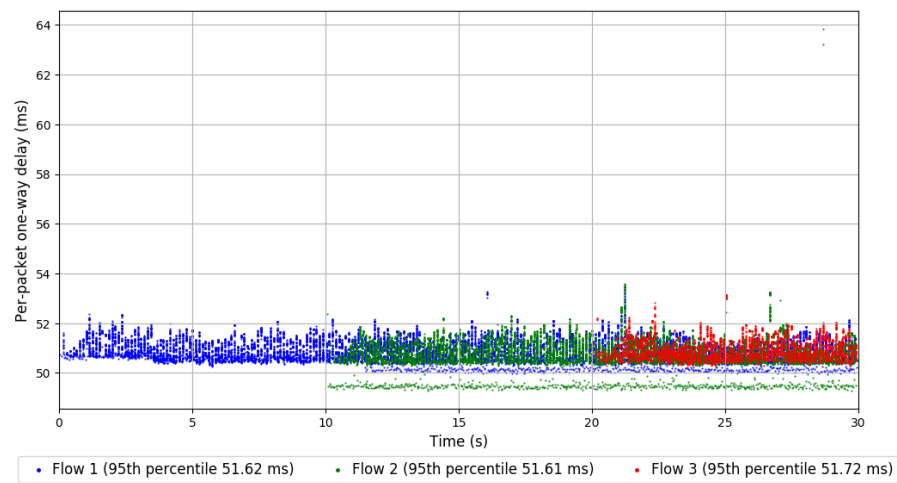
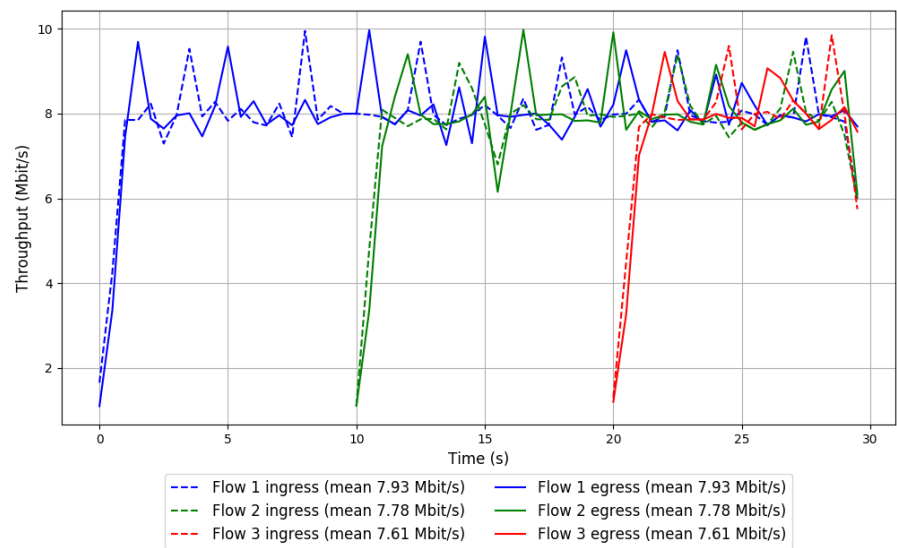
-- Flow 3:

Average throughput: 7.61 Mbit/s

95th percentile per-packet one-way delay: 51.715 ms

Loss rate: 0.00%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2018-04-18 15:02:44

End at: 2018-04-18 15:03:14

Below is generated by plot.py at 2018-04-18 18:15:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.57 Mbit/s

95th percentile per-packet one-way delay: 51.684 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 7.93 Mbit/s

95th percentile per-packet one-way delay: 51.691 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.88 Mbit/s

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

Loss rate: 0.00%

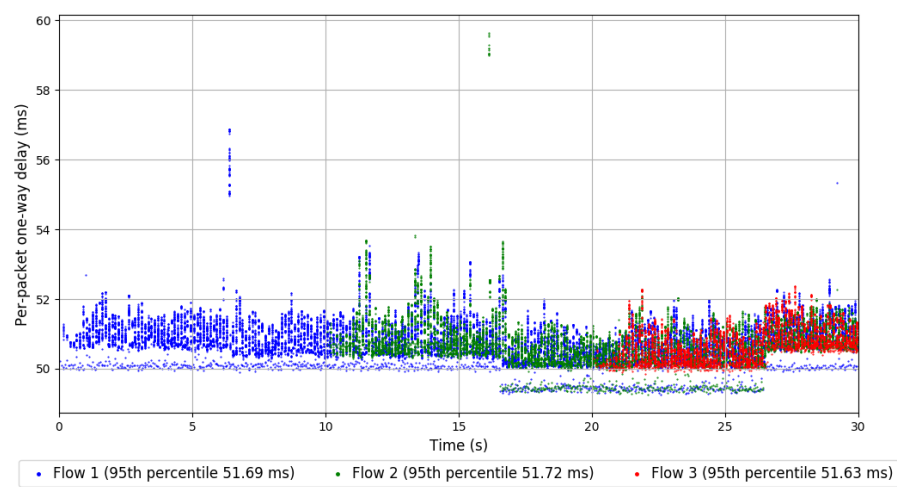
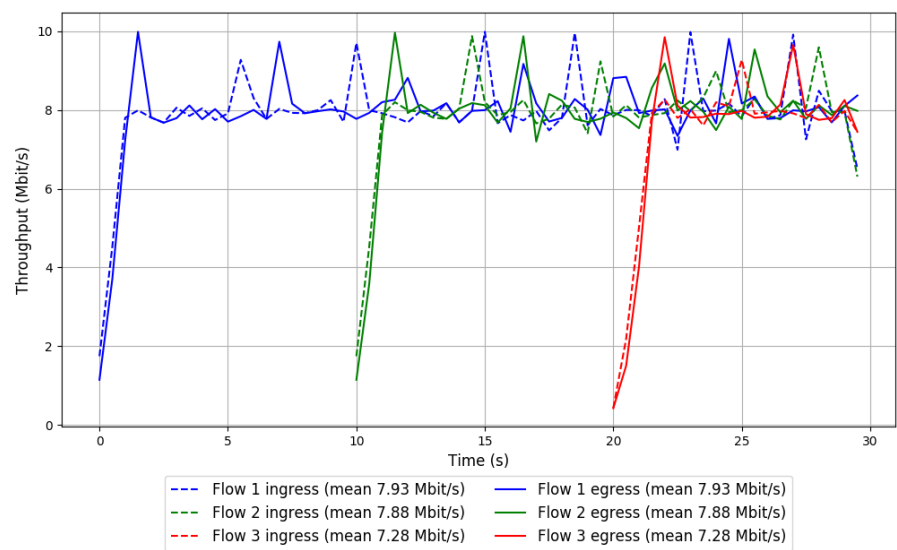
-- Flow 3:

Average throughput: 7.28 Mbit/s

95th percentile per-packet one-way delay: 51.631 ms

Loss rate: 0.00%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2018-04-18 15:18:12

End at: 2018-04-18 15:18:42

Below is generated by plot.py at 2018-04-18 18:15:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.54 Mbit/s

95th percentile per-packet one-way delay: 52.136 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 7.92 Mbit/s

95th percentile per-packet one-way delay: 52.053 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.66 Mbit/s

95th percentile per-packet one-way delay: 52.305 ms

Loss rate: 0.00%

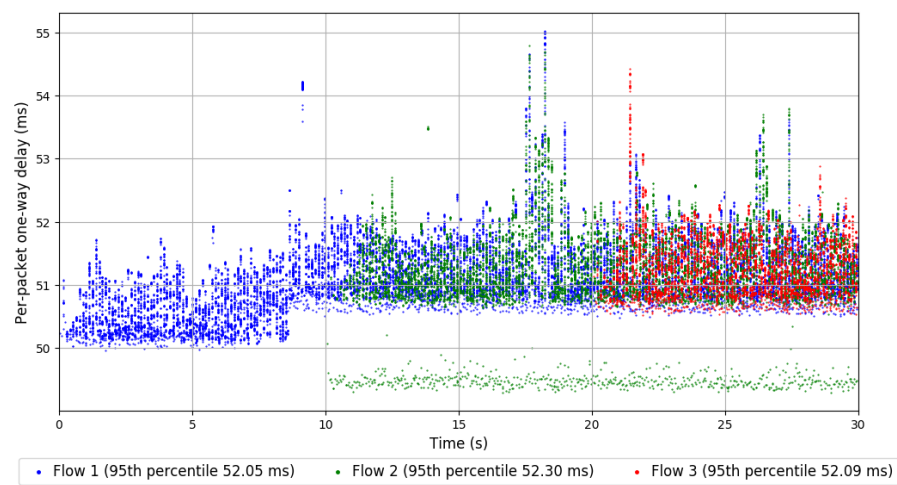
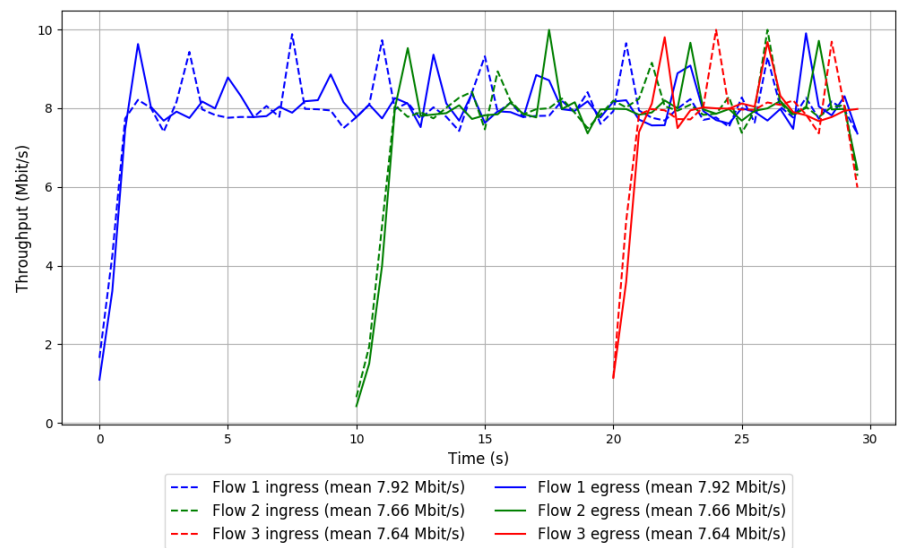
-- Flow 3:

Average throughput: 7.64 Mbit/s

95th percentile per-packet one-way delay: 52.093 ms

Loss rate: 0.00%

Run 10: Report of Sprout — Data Link

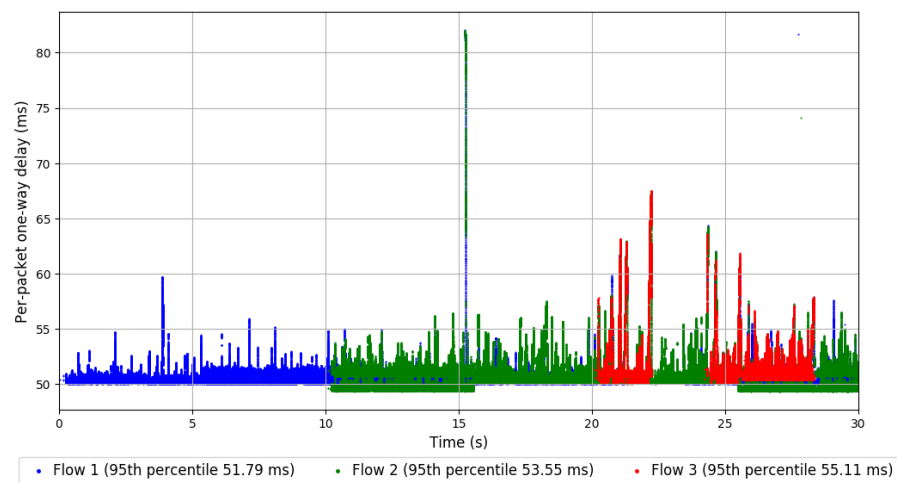
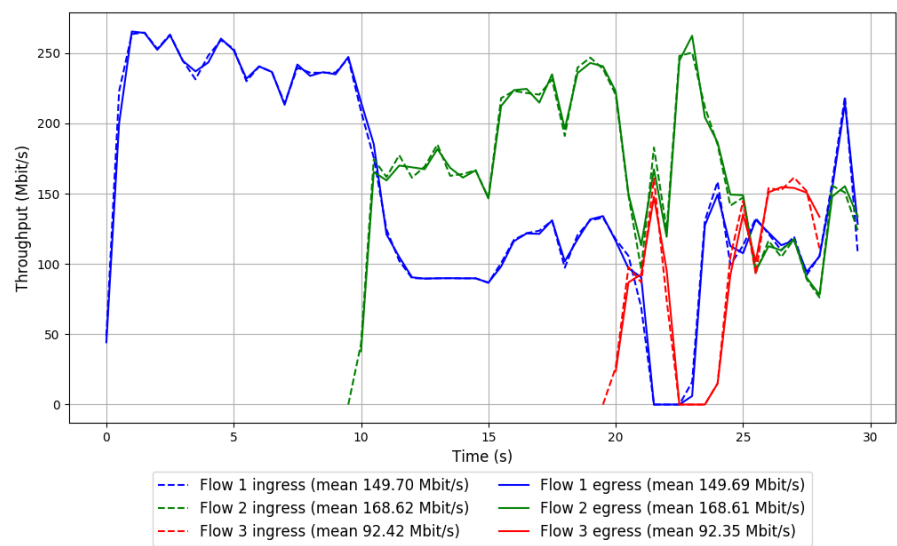


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-04-18 12:54:45
End at: 2018-04-18 12:55:15

# Below is generated by plot.py at 2018-04-18 18:24:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 287.78 Mbit/s
95th percentile per-packet one-way delay: 52.969 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 149.69 Mbit/s
95th percentile per-packet one-way delay: 51.793 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 168.61 Mbit/s
95th percentile per-packet one-way delay: 53.552 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 92.35 Mbit/s
95th percentile per-packet one-way delay: 55.110 ms
Loss rate: 0.00%
```


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

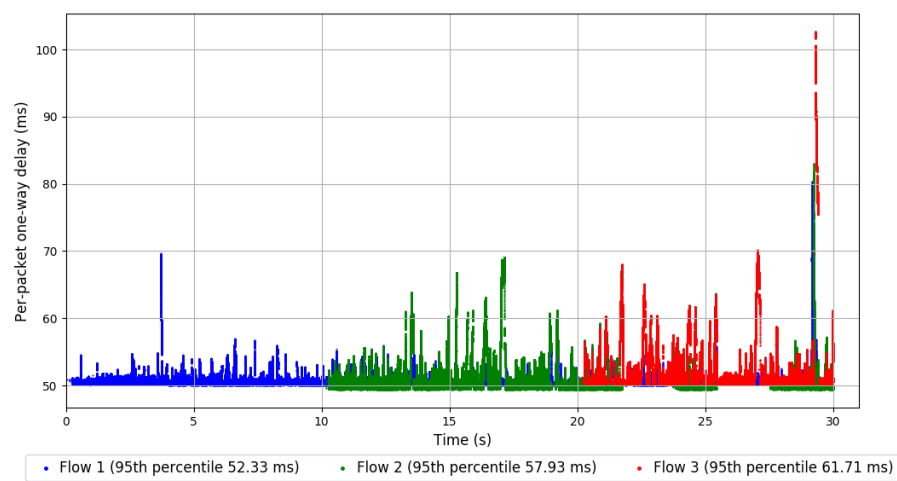
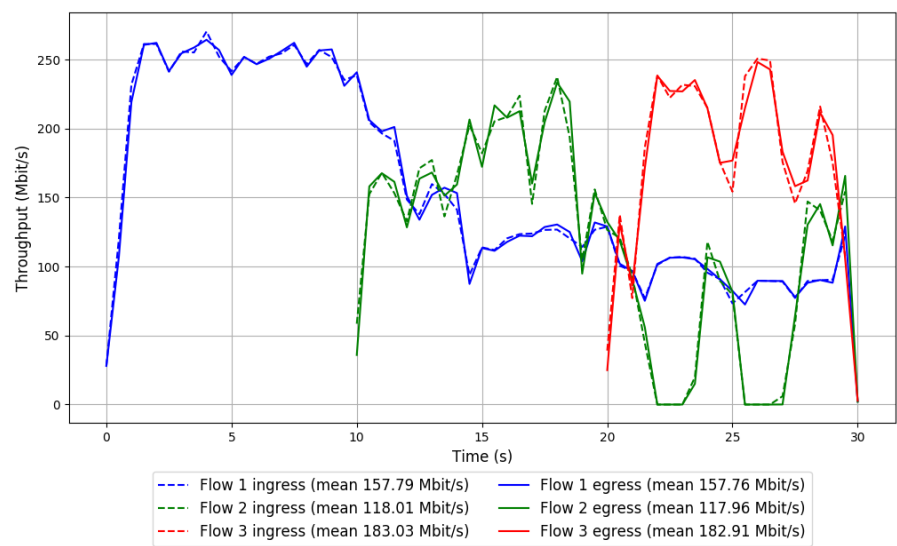


```
Run 2: Statistics of TaoVA-100x

Start at: 2018-04-18 13:09:56
End at: 2018-04-18 13:10:26

# Below is generated by plot.py at 2018-04-18 18:24:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 296.95 Mbit/s
95th percentile per-packet one-way delay: 55.844 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 157.76 Mbit/s
95th percentile per-packet one-way delay: 52.333 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 117.96 Mbit/s
95th percentile per-packet one-way delay: 57.929 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 182.91 Mbit/s
95th percentile per-packet one-way delay: 61.713 ms
Loss rate: 0.08%
```

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

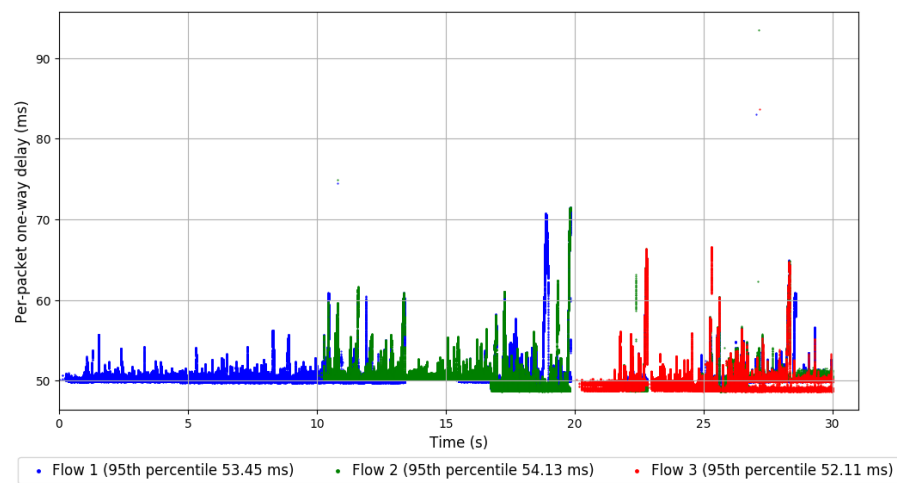
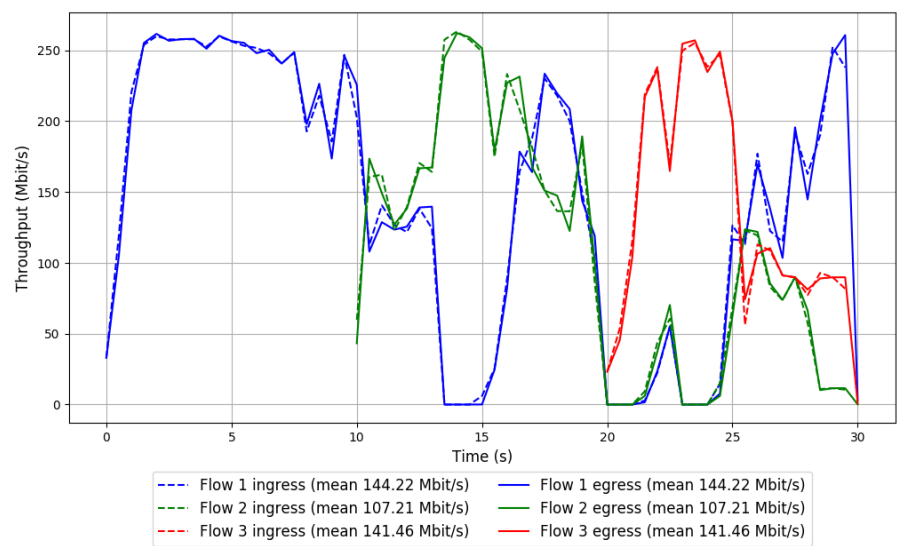


```
Run 3: Statistics of TaoVA-100x

Start at: 2018-04-18 13:25:23
End at: 2018-04-18 13:25:53

# Below is generated by plot.py at 2018-04-18 18:24:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 262.50 Mbit/s
95th percentile per-packet one-way delay: 53.527 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 144.22 Mbit/s
95th percentile per-packet one-way delay: 53.452 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 107.21 Mbit/s
95th percentile per-packet one-way delay: 54.127 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 141.46 Mbit/s
95th percentile per-packet one-way delay: 52.113 ms
Loss rate: 0.00%
```

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-04-18 13:40:53

End at: 2018-04-18 13:41:23

Below is generated by plot.py at 2018-04-18 18:24:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 297.48 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 162.67 Mbit/s

95th percentile per-packet one-way delay: 52.133 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 106.95 Mbit/s

95th percentile per-packet one-way delay: 58.740 ms

Loss rate: 0.00%

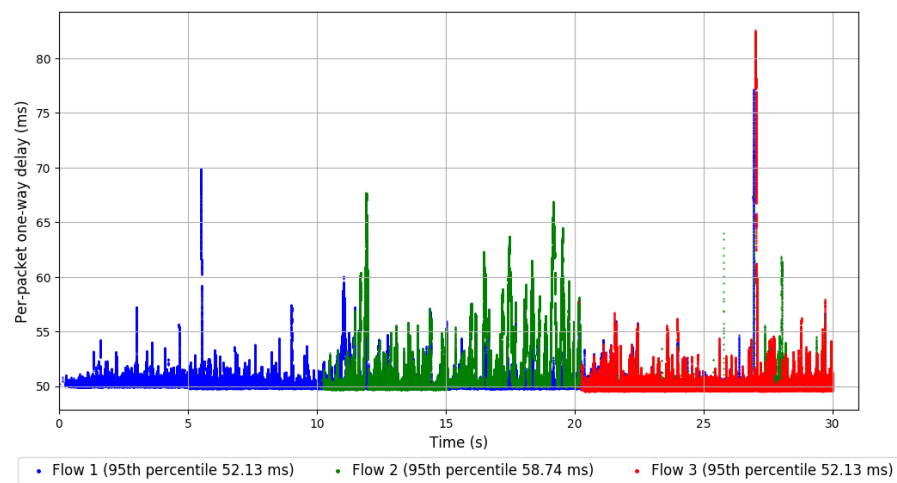
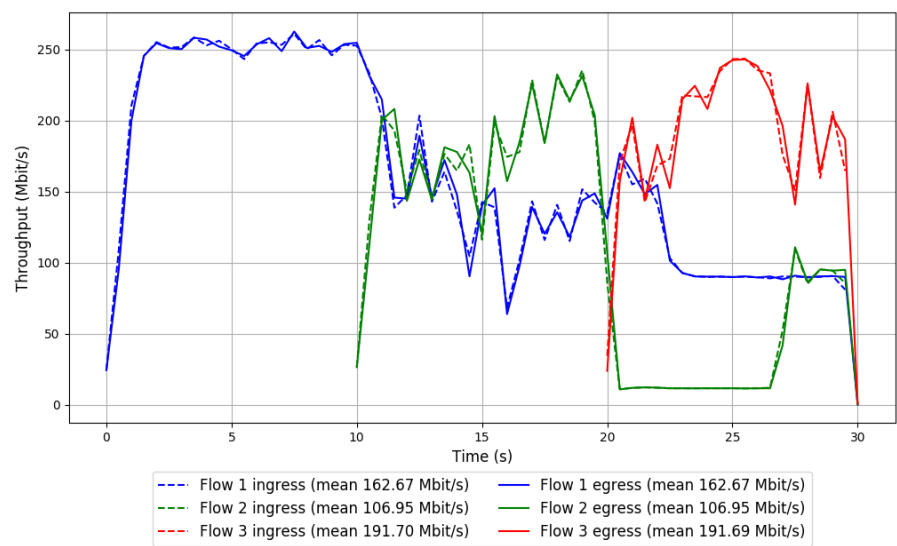
-- Flow 3:

Average throughput: 191.69 Mbit/s

95th percentile per-packet one-way delay: 52.129 ms

Loss rate: 0.00%

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

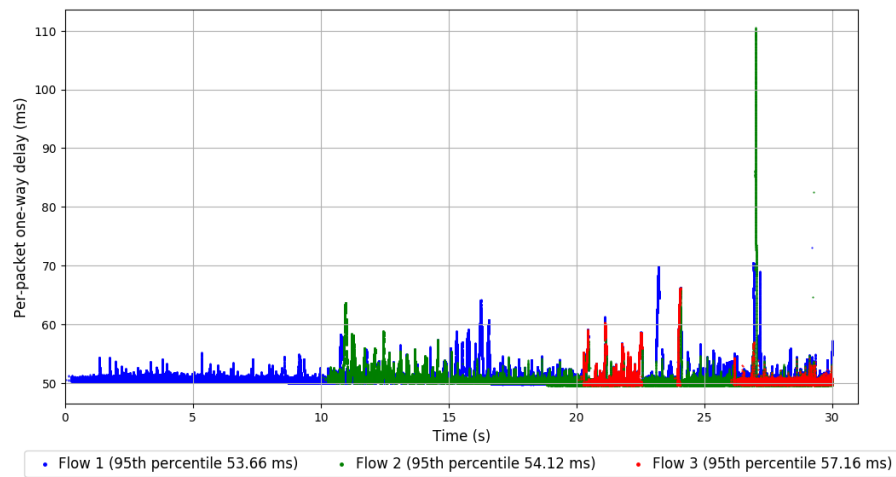
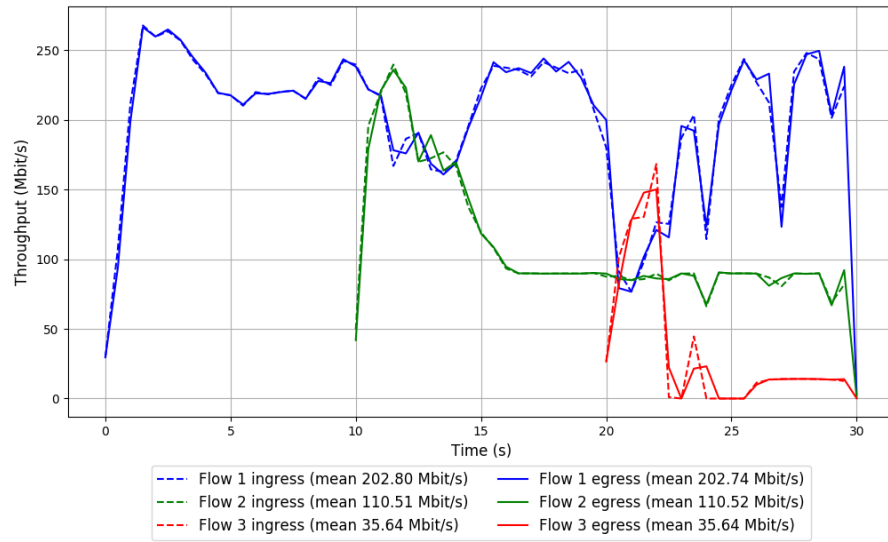


```
Run 5: Statistics of TaoVA-100x

Start at: 2018-04-18 13:56:21
End at: 2018-04-18 13:56:51

# Below is generated by plot.py at 2018-04-18 18:24:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 288.14 Mbit/s
95th percentile per-packet one-way delay: 53.957 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 202.74 Mbit/s
95th percentile per-packet one-way delay: 53.662 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 110.52 Mbit/s
95th percentile per-packet one-way delay: 54.116 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 35.64 Mbit/s
95th percentile per-packet one-way delay: 57.162 ms
Loss rate: 0.00%
```


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



Run 6: Statistics of TaoVA-100x

Start at: 2018-04-18 14:11:46

End at: 2018-04-18 14:12:16

Below is generated by plot.py at 2018-04-18 18:24:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 256.45 Mbit/s

95th percentile per-packet one-way delay: 57.177 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 167.20 Mbit/s

95th percentile per-packet one-way delay: 53.248 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 104.91 Mbit/s

95th percentile per-packet one-way delay: 60.397 ms

Loss rate: 0.00%

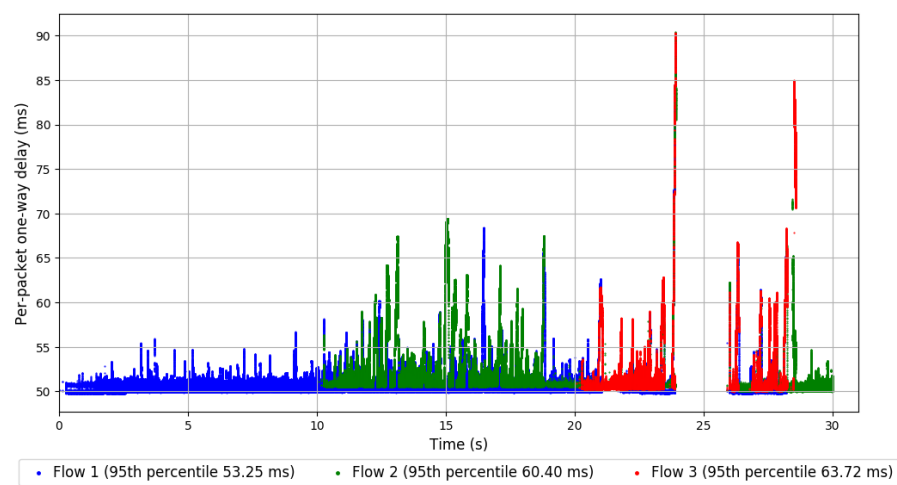
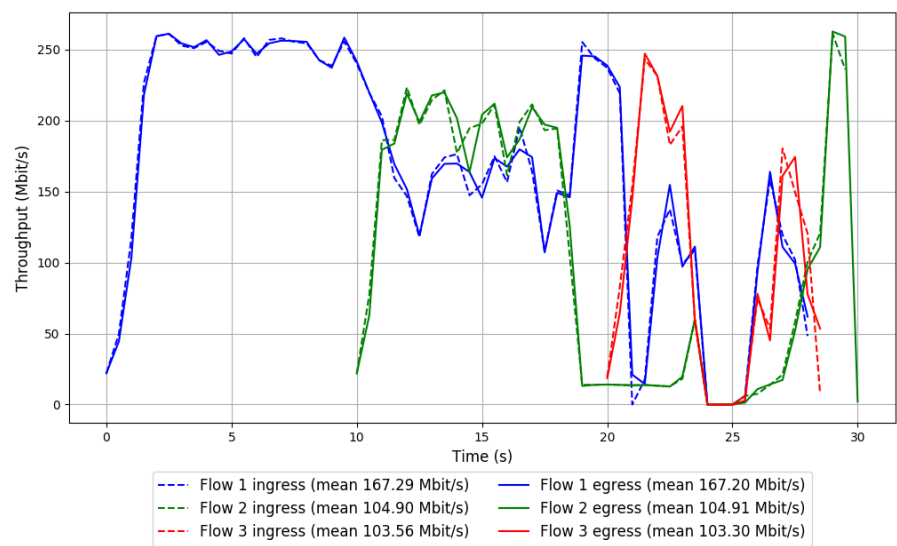
-- Flow 3:

Average throughput: 103.30 Mbit/s

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

Loss rate: 0.00%

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



Run 7: Statistics of TaoVA-100x

Start at: 2018-04-18 14:27:09

End at: 2018-04-18 14:27:39

Below is generated by plot.py at 2018-04-18 18:24:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 254.05 Mbit/s

95th percentile per-packet one-way delay: 54.210 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 133.39 Mbit/s

95th percentile per-packet one-way delay: 53.414 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 105.35 Mbit/s

95th percentile per-packet one-way delay: 56.166 ms

Loss rate: 0.03%

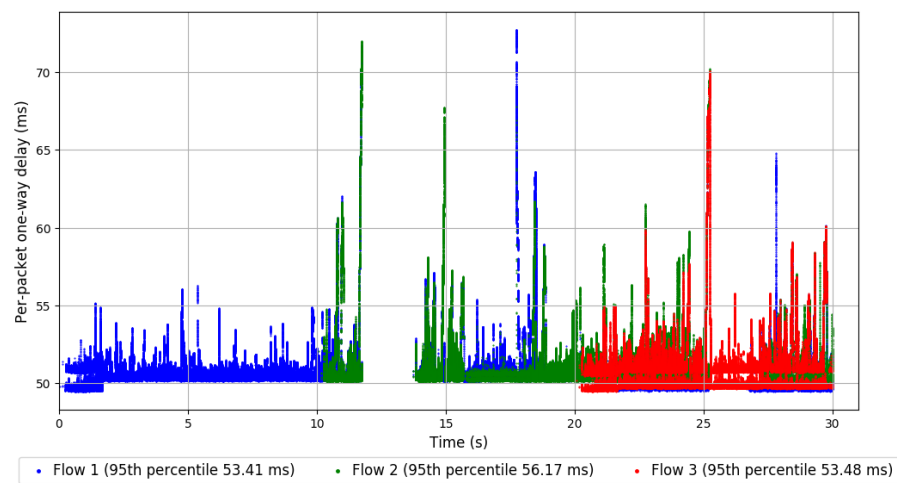
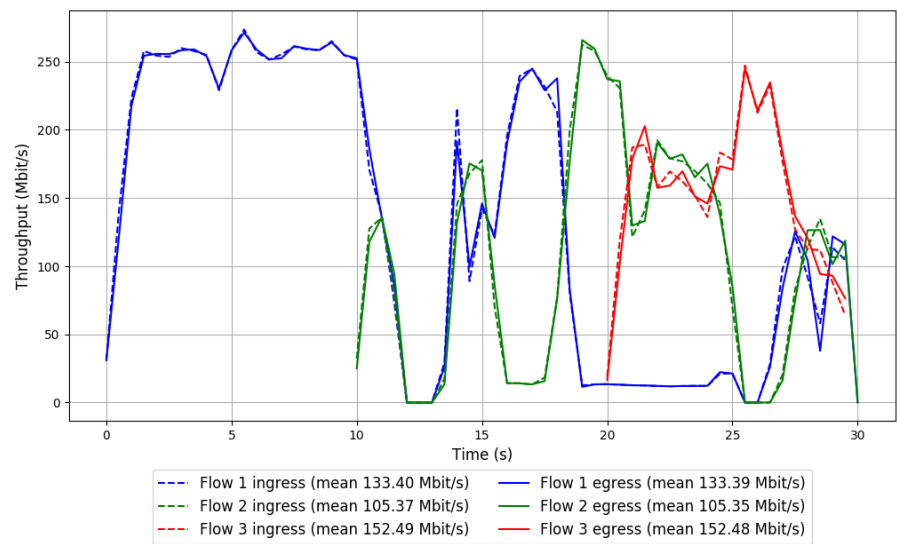
-- Flow 3:

Average throughput: 152.48 Mbit/s

95th percentile per-packet one-way delay: 53.482 ms

Loss rate: 0.00%

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



Run 8: Statistics of TaoVA-100x

Start at: 2018-04-18 14:42:23

End at: 2018-04-18 14:42:53

Below is generated by plot.py at 2018-04-18 18:24:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 246.59 Mbit/s

95th percentile per-packet one-way delay: 56.478 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 158.09 Mbit/s

95th percentile per-packet one-way delay: 52.823 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 36.23 Mbit/s

95th percentile per-packet one-way delay: 55.672 ms

Loss rate: 0.00%

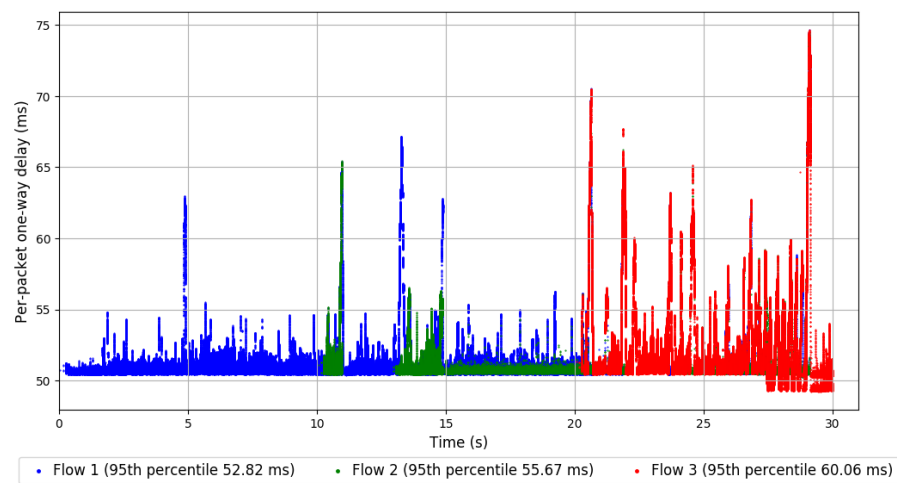
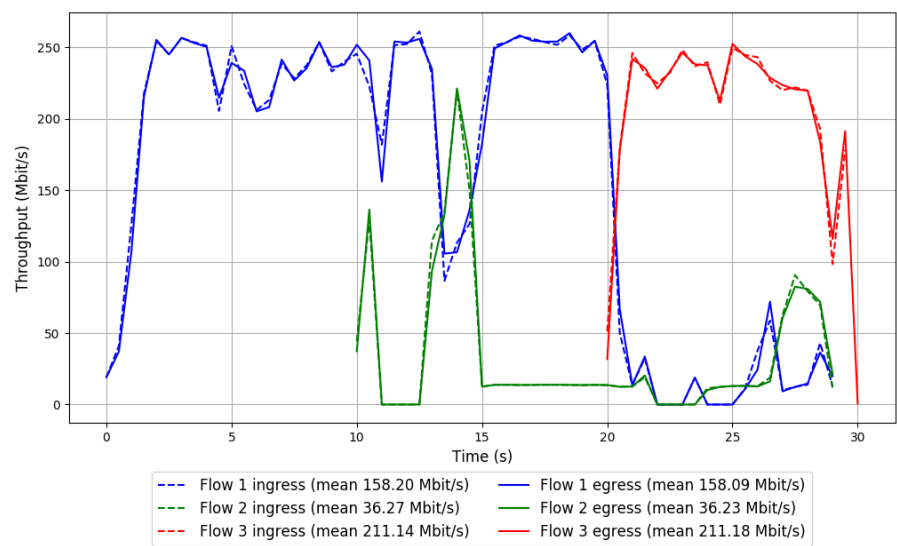
-- Flow 3:

Average throughput: 211.18 Mbit/s

95th percentile per-packet one-way delay: 60.058 ms

Loss rate: 0.00%

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



Run 9: Statistics of TaoVA-100x

Start at: 2018-04-18 14:57:46

End at: 2018-04-18 14:58:16

Below is generated by plot.py at 2018-04-18 18:32:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 272.14 Mbit/s

95th percentile per-packet one-way delay: 52.750 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 167.41 Mbit/s

95th percentile per-packet one-way delay: 52.549 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 143.83 Mbit/s

95th percentile per-packet one-way delay: 52.199 ms

Loss rate: 0.00%

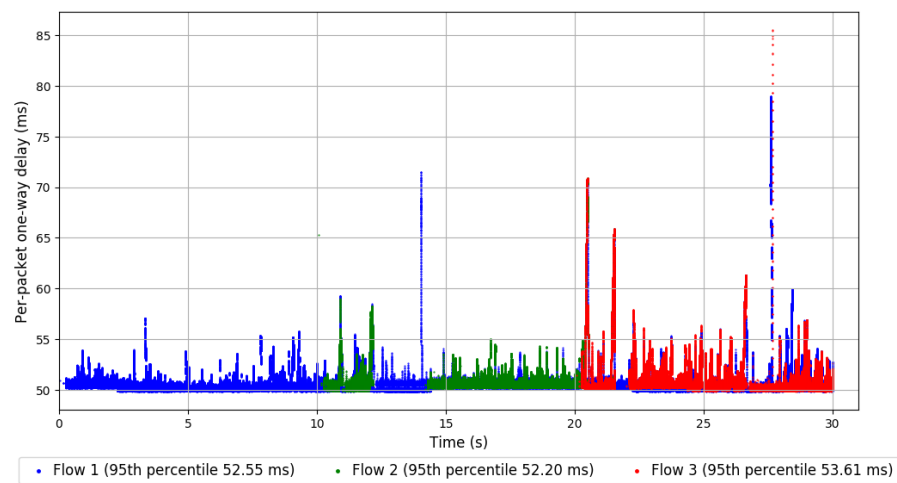
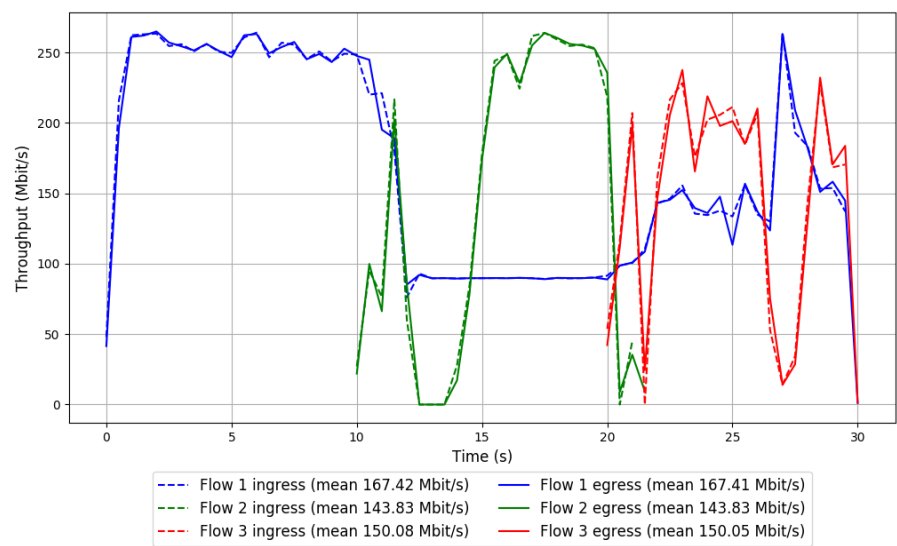
-- Flow 3:

Average throughput: 150.05 Mbit/s

95th percentile per-packet one-way delay: 53.608 ms

Loss rate: 0.02%

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

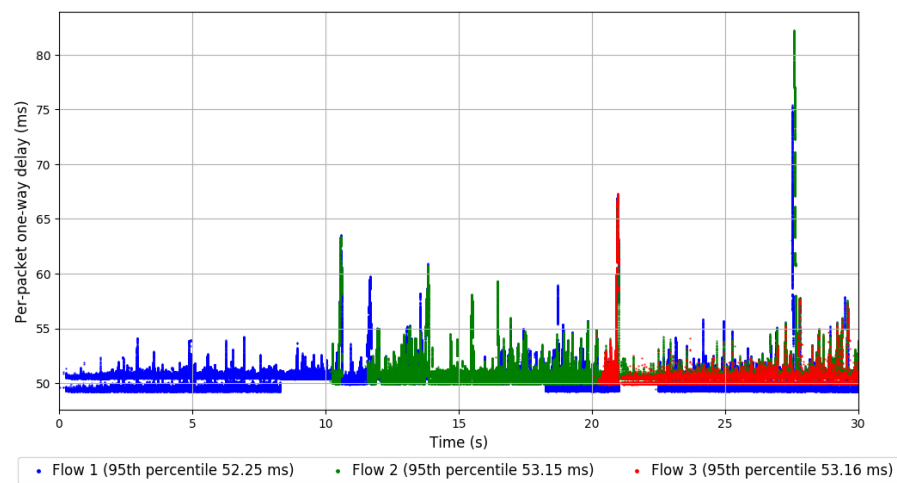
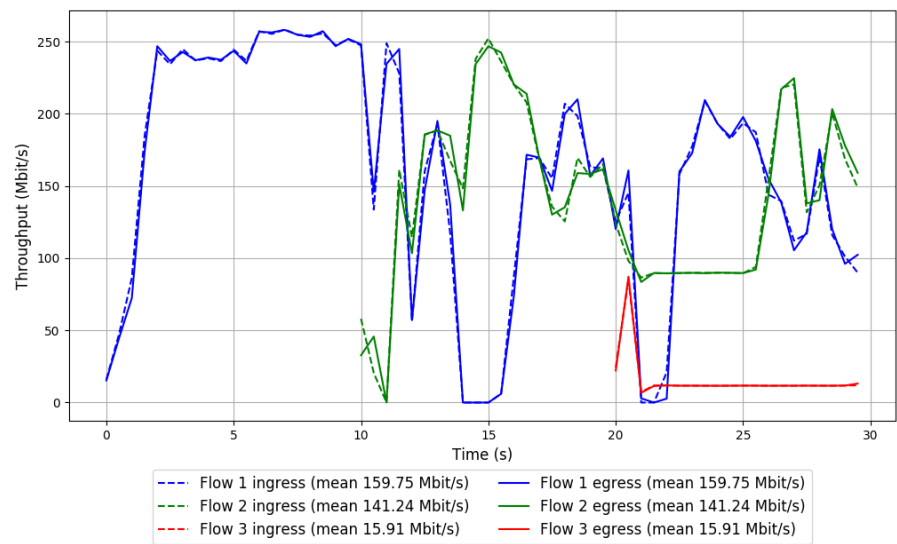


```
Run 10: Statistics of TaoVA-100x

Start at: 2018-04-18 15:13:10
End at: 2018-04-18 15:13:40

# Below is generated by plot.py at 2018-04-18 18:32:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 259.06 Mbit/s
95th percentile per-packet one-way delay: 52.593 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 159.75 Mbit/s
95th percentile per-packet one-way delay: 52.253 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 141.24 Mbit/s
95th percentile per-packet one-way delay: 53.150 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 15.91 Mbit/s
95th percentile per-packet one-way delay: 53.160 ms
Loss rate: 0.00%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2018-04-18 13:06:30

End at: 2018-04-18 13:07:00

Below is generated by plot.py at 2018-04-18 18:32:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 146.85 Mbit/s

95th percentile per-packet one-way delay: 52.756 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 76.32 Mbit/s

95th percentile per-packet one-way delay: 52.026 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 67.31 Mbit/s

95th percentile per-packet one-way delay: 55.527 ms

Loss rate: 0.01%

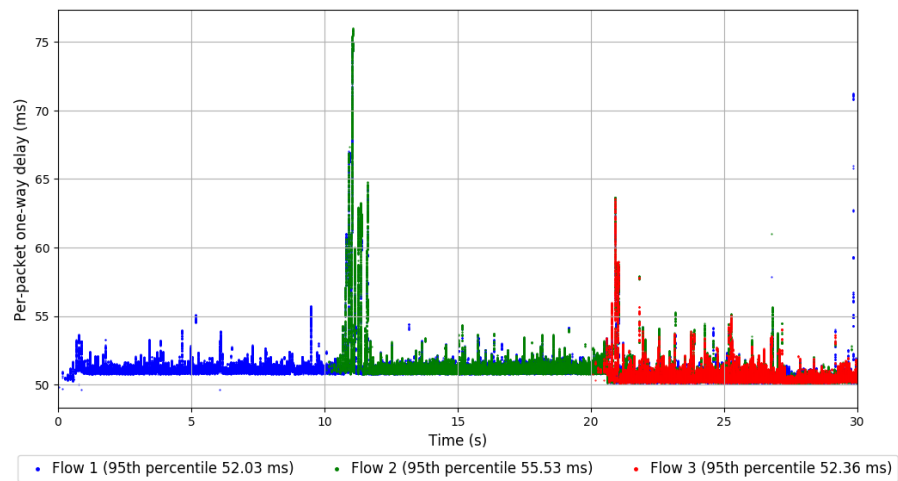
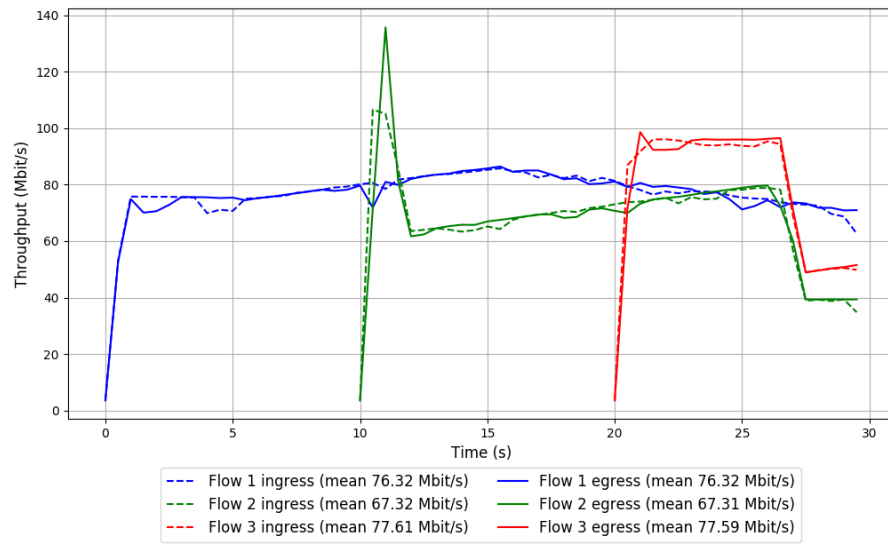
-- Flow 3:

Average throughput: 77.59 Mbit/s

95th percentile per-packet one-way delay: 52.361 ms

Loss rate: 0.02%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-04-18 13:21:56

End at: 2018-04-18 13:22:26

Below is generated by plot.py at 2018-04-18 18:32:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 160.23 Mbit/s

95th percentile per-packet one-way delay: 52.044 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 55.79 Mbit/s

95th percentile per-packet one-way delay: 52.003 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 153.65 Mbit/s

95th percentile per-packet one-way delay: 52.089 ms

Loss rate: 0.00%

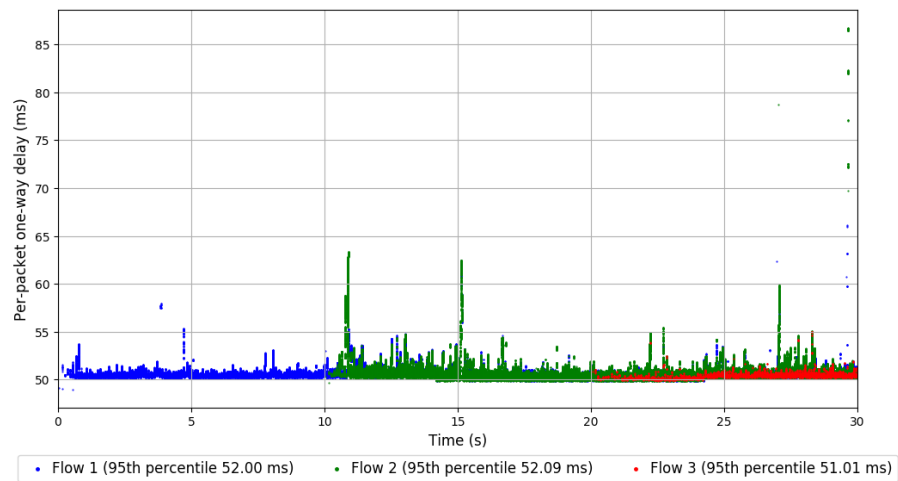
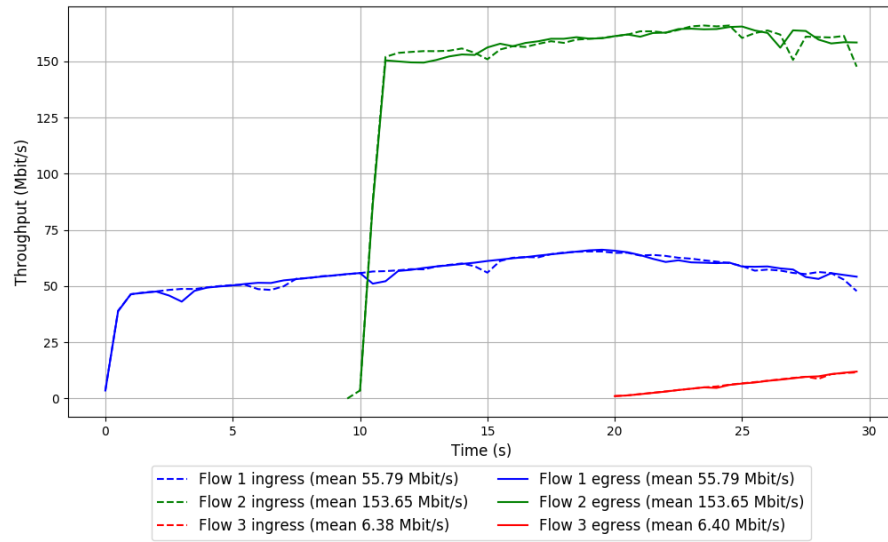
-- Flow 3:

Average throughput: 6.40 Mbit/s

95th percentile per-packet one-way delay: 51.011 ms

Loss rate: 0.04%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-04-18 13:37:26

End at: 2018-04-18 13:37:56

Below is generated by plot.py at 2018-04-18 18:32:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 184.30 Mbit/s

95th percentile per-packet one-way delay: 51.600 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 79.03 Mbit/s

95th percentile per-packet one-way delay: 51.757 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 155.26 Mbit/s

95th percentile per-packet one-way delay: 51.511 ms

Loss rate: 0.00%

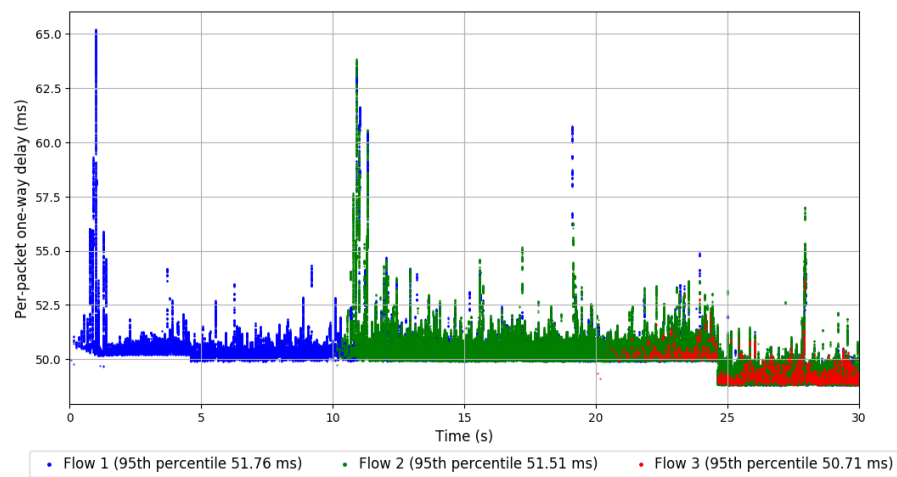
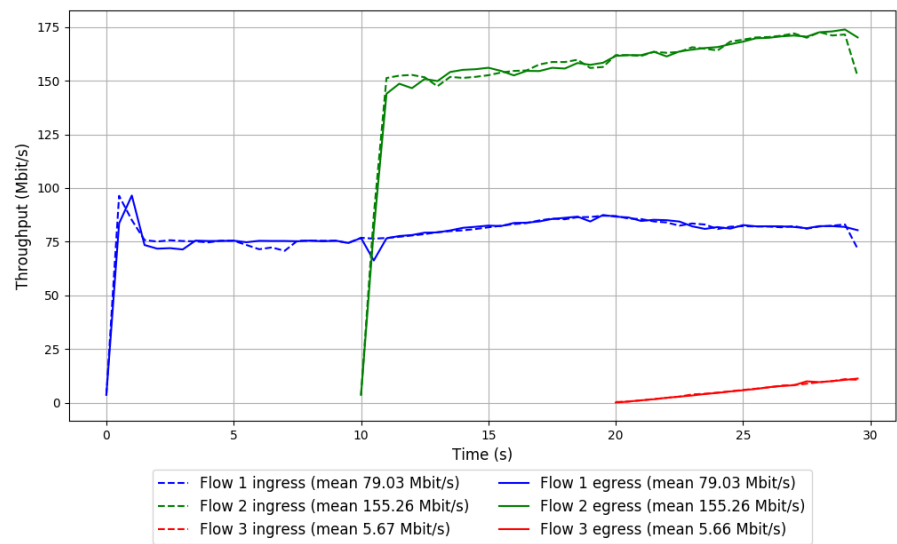
-- Flow 3:

Average throughput: 5.66 Mbit/s

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

Loss rate: 0.21%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2018-04-18 13:52:54

End at: 2018-04-18 13:53:24

Below is generated by plot.py at 2018-04-18 18:32:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 190.00 Mbit/s

95th percentile per-packet one-way delay: 60.059 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 75.17 Mbit/s

95th percentile per-packet one-way delay: 59.843 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 85.09 Mbit/s

95th percentile per-packet one-way delay: 56.023 ms

Loss rate: 0.01%

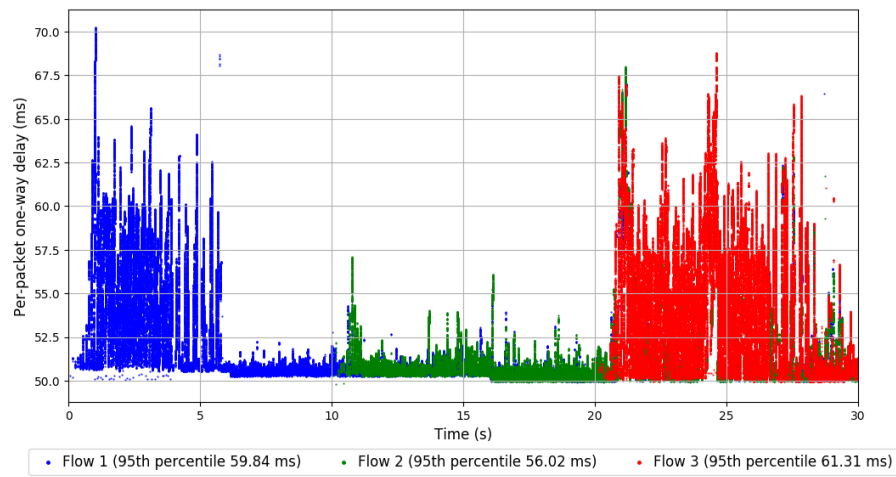
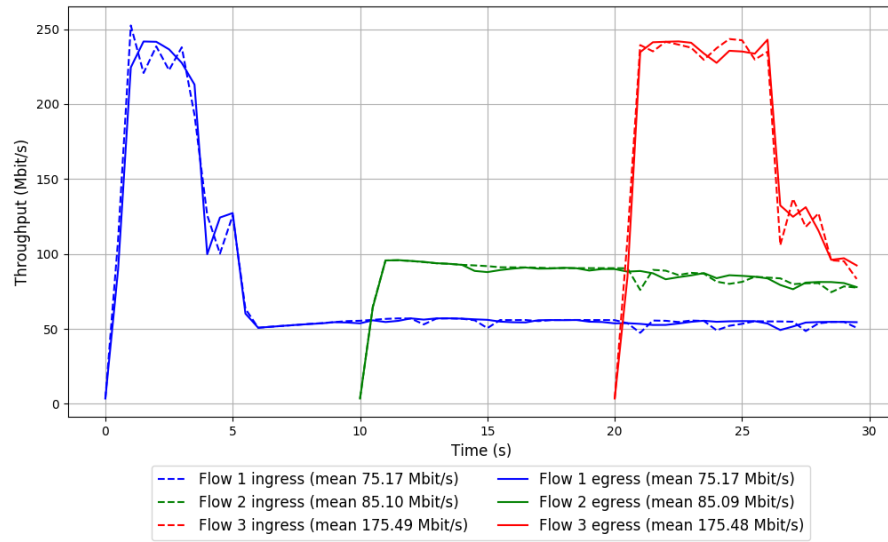
-- Flow 3:

Average throughput: 175.48 Mbit/s

95th percentile per-packet one-way delay: 61.310 ms

Loss rate: 0.01%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-04-18 14:08:18

End at: 2018-04-18 14:08:48

Below is generated by plot.py at 2018-04-18 18:32:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 165.08 Mbit/s

95th percentile per-packet one-way delay: 59.467 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 132.97 Mbit/s

95th percentile per-packet one-way delay: 59.750 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 10.17 Mbit/s

95th percentile per-packet one-way delay: 51.662 ms

Loss rate: 0.07%

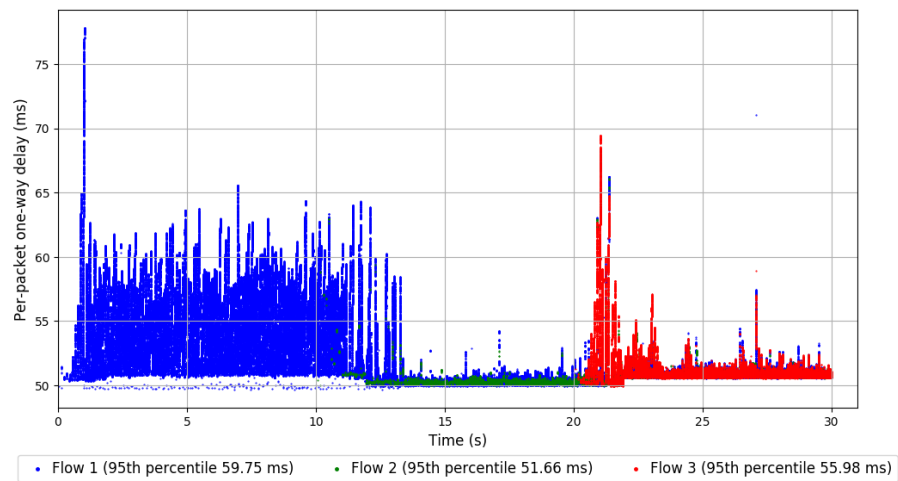
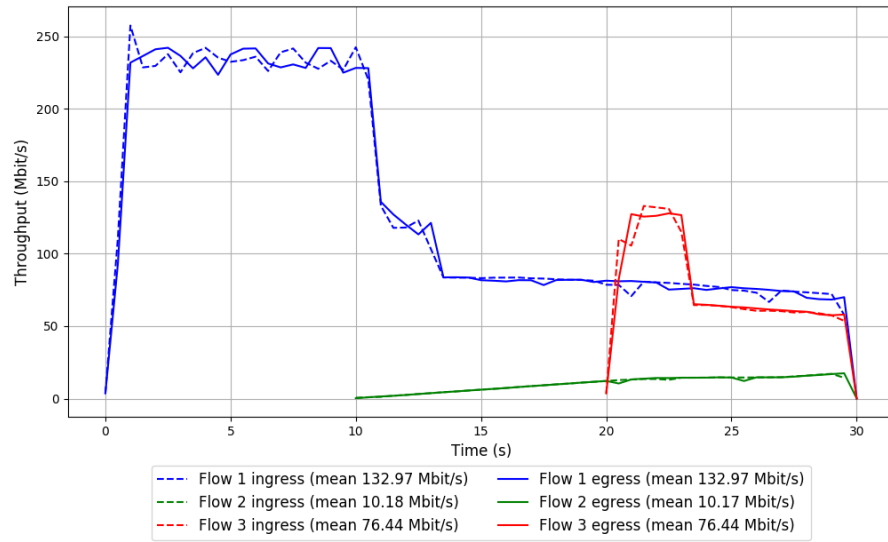
-- Flow 3:

Average throughput: 76.44 Mbit/s

95th percentile per-packet one-way delay: 55.976 ms

Loss rate: 0.00%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2018-04-18 14:23:39

End at: 2018-04-18 14:24:09

Below is generated by plot.py at 2018-04-18 18:32:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 202.44 Mbit/s

95th percentile per-packet one-way delay: 57.203 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 95.13 Mbit/s

95th percentile per-packet one-way delay: 55.002 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 121.05 Mbit/s

95th percentile per-packet one-way delay: 54.339 ms

Loss rate: 0.00%

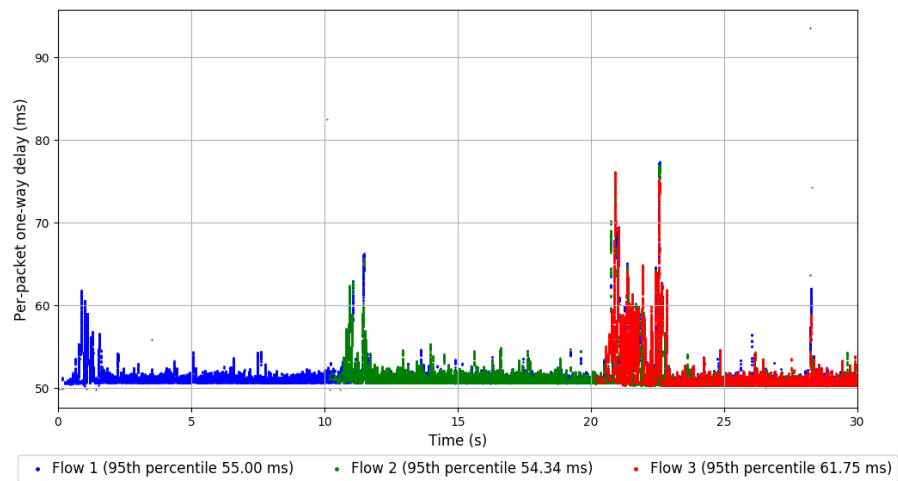
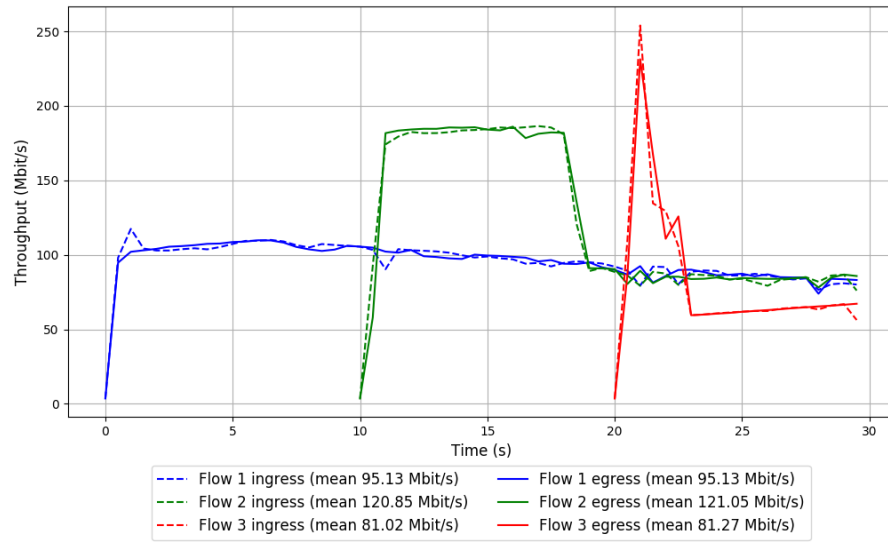
-- Flow 3:

Average throughput: 81.27 Mbit/s

95th percentile per-packet one-way delay: 61.754 ms

Loss rate: 0.00%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2018-04-18 14:38:57

End at: 2018-04-18 14:39:27

Below is generated by plot.py at 2018-04-18 18:32:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 200.46 Mbit/s

95th percentile per-packet one-way delay: 59.010 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 149.91 Mbit/s

95th percentile per-packet one-way delay: 59.778 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 73.17 Mbit/s

95th percentile per-packet one-way delay: 52.877 ms

Loss rate: 0.00%

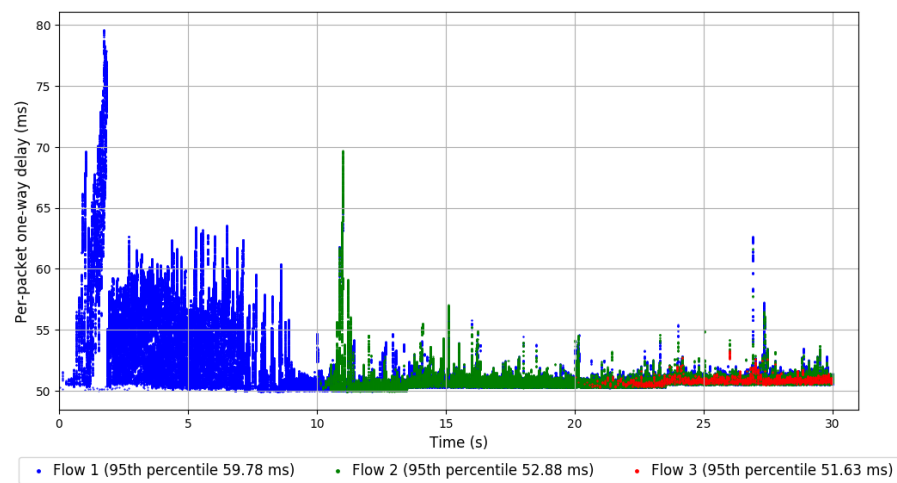
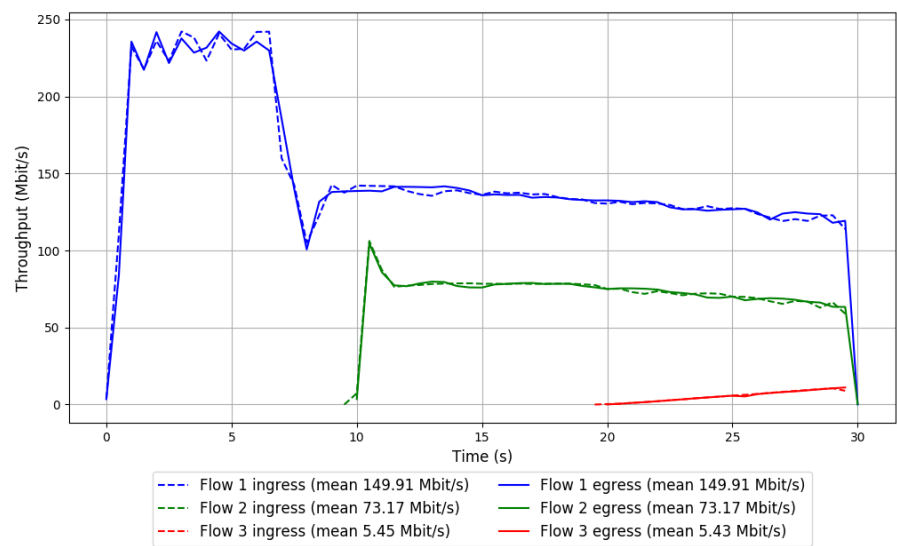
-- Flow 3:

Average throughput: 5.43 Mbit/s

95th percentile per-packet one-way delay: 51.631 ms

Loss rate: 0.22%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2018-04-18 14:54:24

End at: 2018-04-18 14:54:54

Below is generated by plot.py at 2018-04-18 18:32:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 120.50 Mbit/s

95th percentile per-packet one-way delay: 52.997 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 90.81 Mbit/s

95th percentile per-packet one-way delay: 52.230 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 11.70 Mbit/s

95th percentile per-packet one-way delay: 51.882 ms

Loss rate: 0.02%

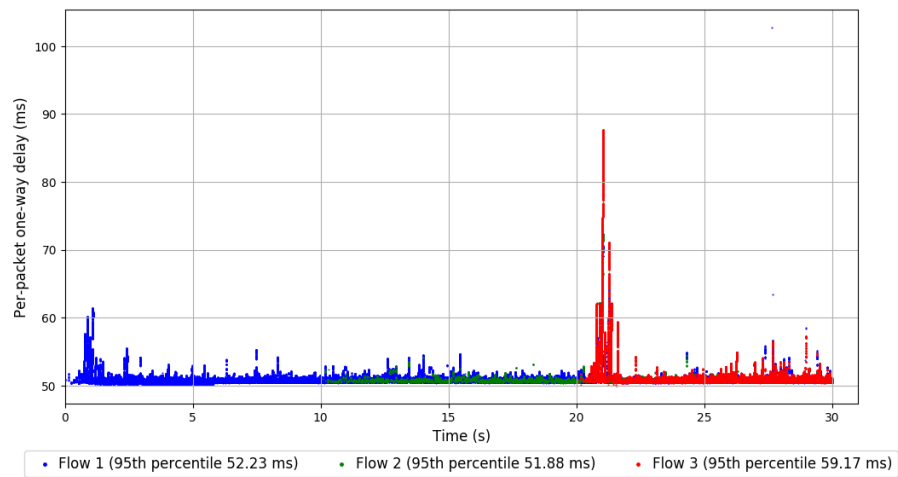
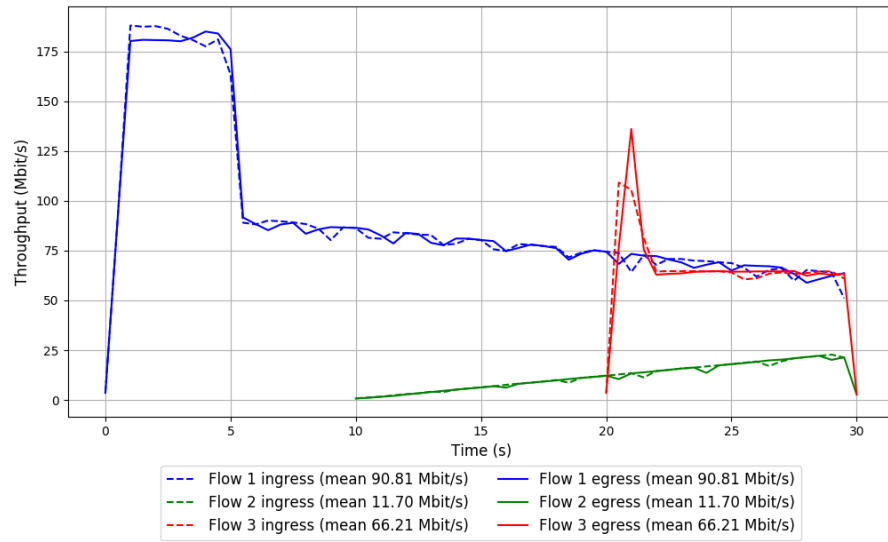
-- Flow 3:

Average throughput: 66.21 Mbit/s

95th percentile per-packet one-way delay: 59.171 ms

Loss rate: 0.00%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2018-04-18 15:09:42

End at: 2018-04-18 15:10:13

Below is generated by plot.py at 2018-04-18 18:32:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 121.50 Mbit/s

95th percentile per-packet one-way delay: 51.775 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 75.51 Mbit/s

95th percentile per-packet one-way delay: 51.996 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 66.40 Mbit/s

95th percentile per-packet one-way delay: 51.532 ms

Loss rate: 0.01%

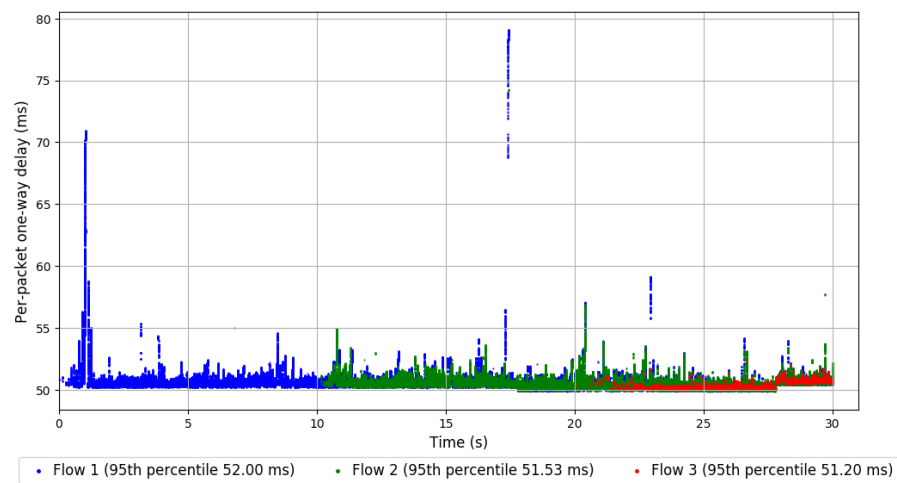
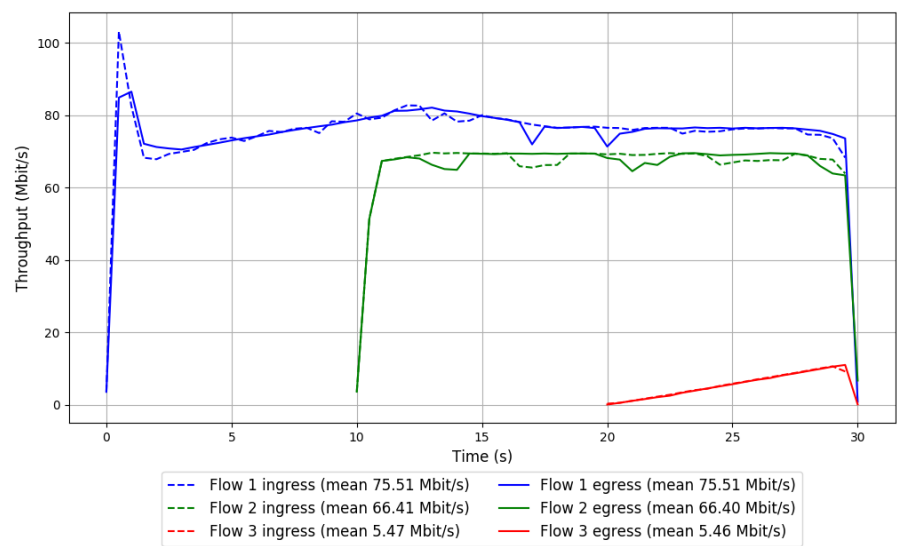
-- Flow 3:

Average throughput: 5.46 Mbit/s

95th percentile per-packet one-way delay: 51.202 ms

Loss rate: 0.24%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2018-04-18 15:24:51

End at: 2018-04-18 15:25:21

Below is generated by plot.py at 2018-04-18 18:32:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 139.11 Mbit/s

95th percentile per-packet one-way delay: 53.070 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 89.14 Mbit/s

95th percentile per-packet one-way delay: 53.053 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 71.89 Mbit/s

95th percentile per-packet one-way delay: 53.196 ms

Loss rate: 0.00%

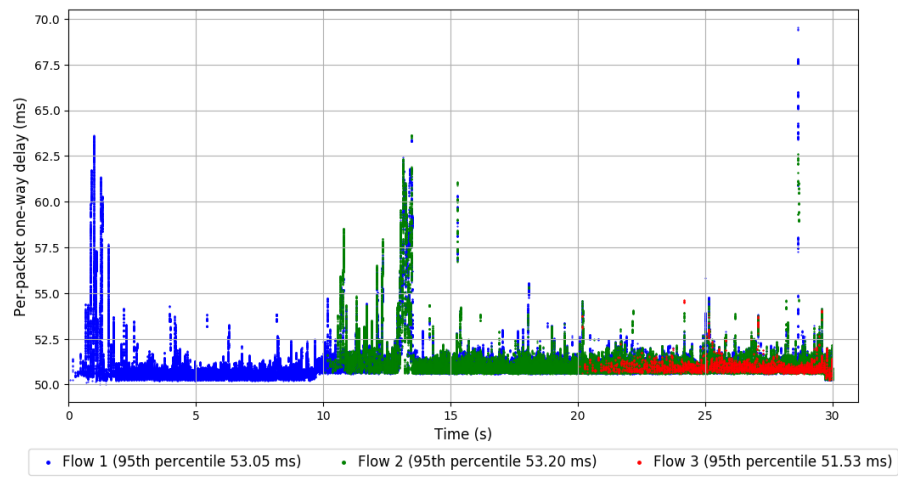
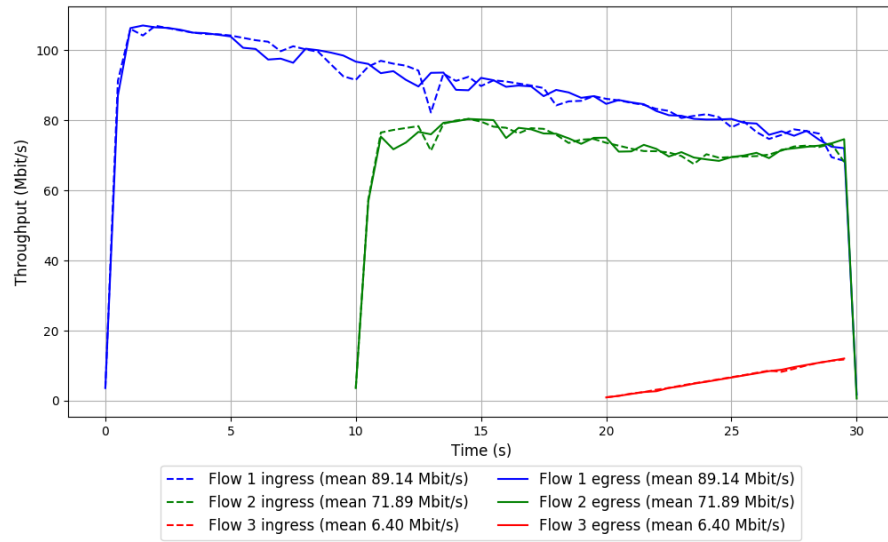
-- Flow 3:

Average throughput: 6.40 Mbit/s

95th percentile per-packet one-way delay: 51.532 ms

Loss rate: 0.04%

Run 10: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2018-04-18 13:00:18

End at: 2018-04-18 13:00:48

Below is generated by plot.py at 2018-04-18 18:33:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 305.27 Mbit/s

95th percentile per-packet one-way delay: 157.540 ms

Loss rate: 0.07%

-- Flow 1:

Average throughput: 182.54 Mbit/s

95th percentile per-packet one-way delay: 149.428 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 137.65 Mbit/s

95th percentile per-packet one-way delay: 174.107 ms

Loss rate: 0.08%

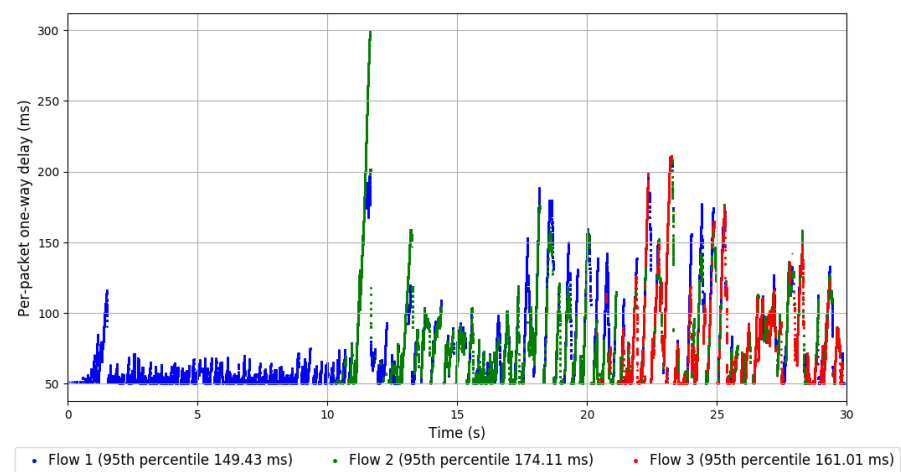
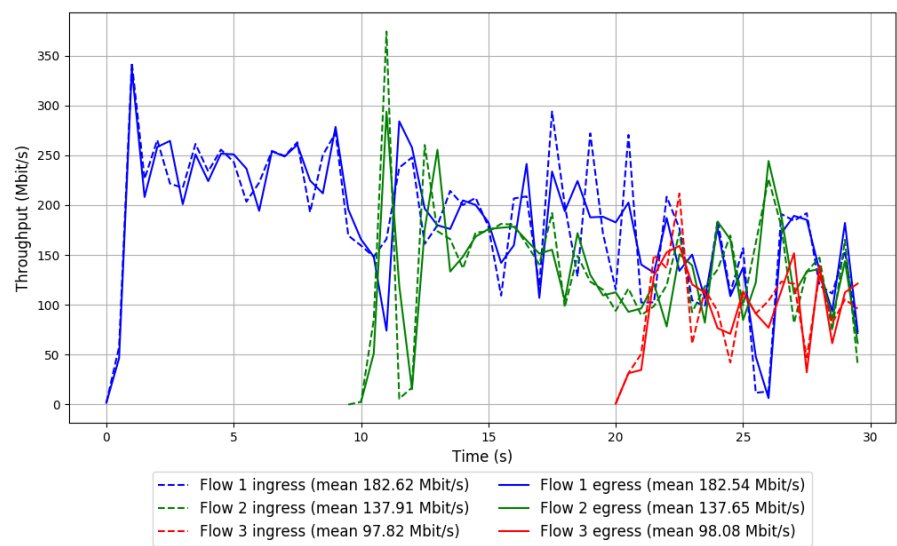
-- Flow 3:

Average throughput: 98.08 Mbit/s

95th percentile per-packet one-way delay: 161.007 ms

Loss rate: 0.22%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-04-18 13:15:42

End at: 2018-04-18 13:16:12

Below is generated by plot.py at 2018-04-18 18:34:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 323.46 Mbit/s

95th percentile per-packet one-way delay: 149.524 ms

Loss rate: 0.15%

-- Flow 1:

Average throughput: 191.17 Mbit/s

95th percentile per-packet one-way delay: 136.170 ms

Loss rate: 0.11%

-- Flow 2:

Average throughput: 159.02 Mbit/s

95th percentile per-packet one-way delay: 150.989 ms

Loss rate: 0.25%

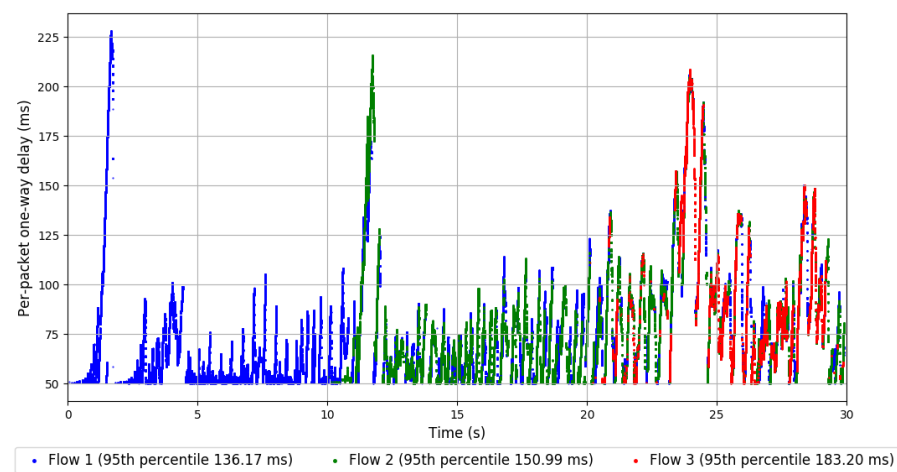
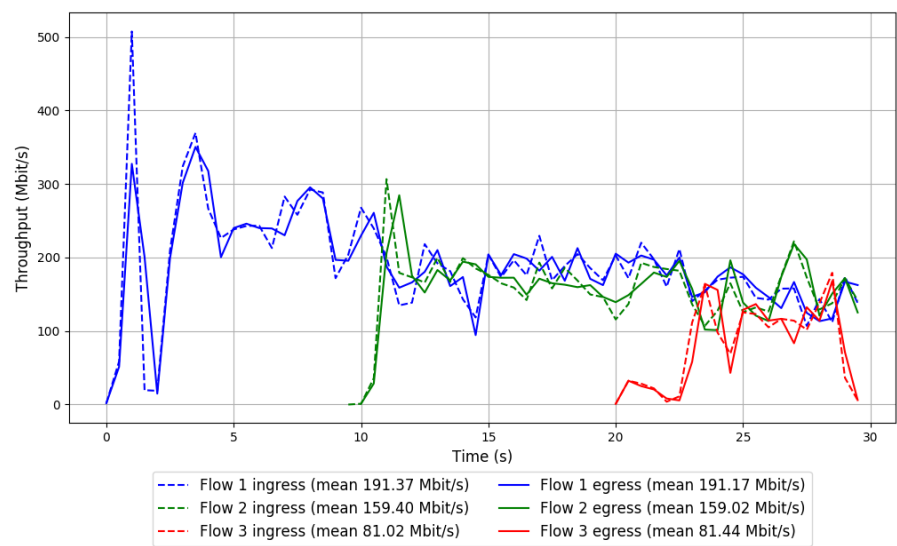
-- Flow 3:

Average throughput: 81.44 Mbit/s

95th percentile per-packet one-way delay: 183.202 ms

Loss rate: 0.00%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-04-18 13:31:08

End at: 2018-04-18 13:31:38

Below is generated by plot.py at 2018-04-18 18:35:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 329.66 Mbit/s

95th percentile per-packet one-way delay: 184.142 ms

Loss rate: 1.20%

-- Flow 1:

Average throughput: 176.85 Mbit/s

95th percentile per-packet one-way delay: 162.554 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 145.36 Mbit/s

95th percentile per-packet one-way delay: 172.744 ms

Loss rate: 0.43%

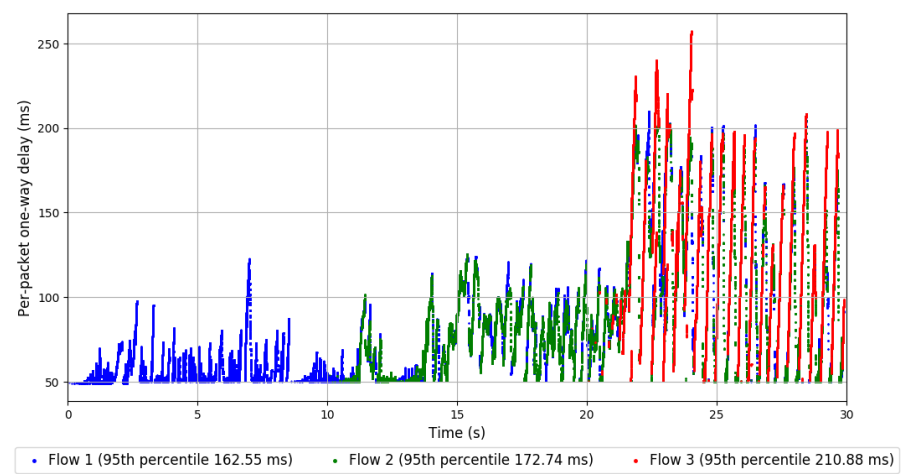
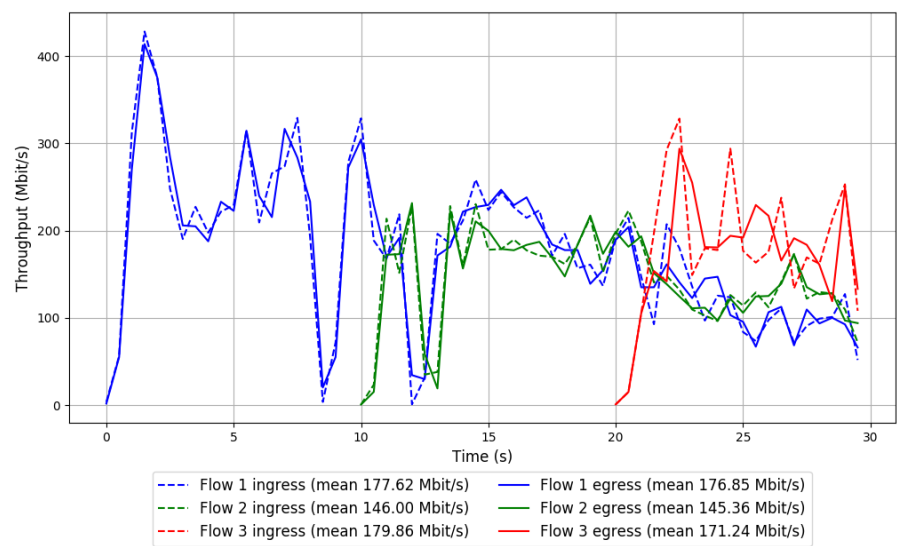
-- Flow 3:

Average throughput: 171.24 Mbit/s

95th percentile per-packet one-way delay: 210.876 ms

Loss rate: 4.79%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-04-18 13:46:41

End at: 2018-04-18 13:47:11

Below is generated by plot.py at 2018-04-18 18:35:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 270.01 Mbit/s

95th percentile per-packet one-way delay: 154.564 ms

Loss rate: 0.61%

-- Flow 1:

Average throughput: 153.65 Mbit/s

95th percentile per-packet one-way delay: 120.430 ms

Loss rate: 0.28%

-- Flow 2:

Average throughput: 124.93 Mbit/s

95th percentile per-packet one-way delay: 259.753 ms

Loss rate: 1.13%

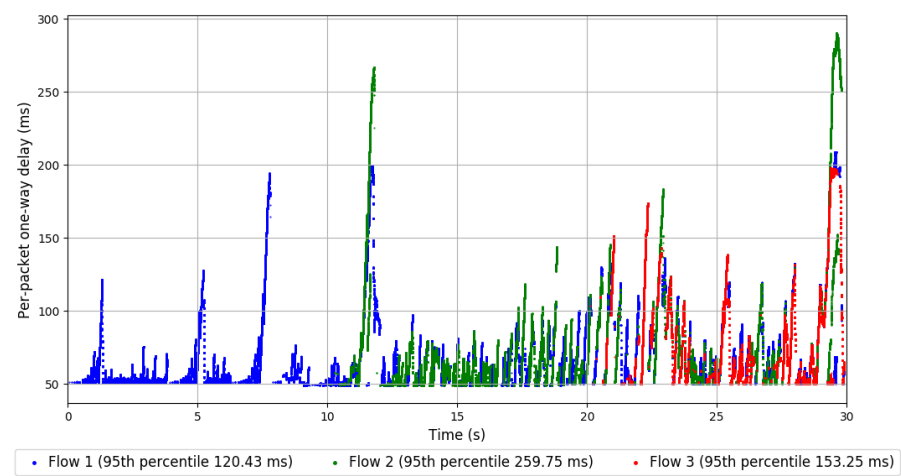
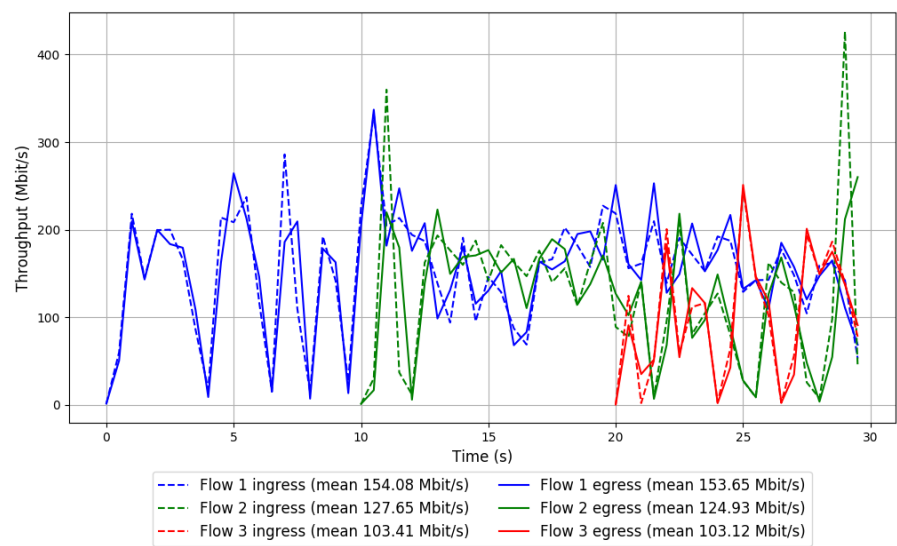
-- Flow 3:

Average throughput: 103.12 Mbit/s

95th percentile per-packet one-way delay: 153.252 ms

Loss rate: 0.80%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-04-18 14:02:04

End at: 2018-04-18 14:02:34

Below is generated by plot.py at 2018-04-18 18:35:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 305.12 Mbit/s

95th percentile per-packet one-way delay: 127.739 ms

Loss rate: 0.60%

-- Flow 1:

Average throughput: 191.63 Mbit/s

95th percentile per-packet one-way delay: 134.003 ms

Loss rate: 0.93%

-- Flow 2:

Average throughput: 139.08 Mbit/s

95th percentile per-packet one-way delay: 121.545 ms

Loss rate: 0.04%

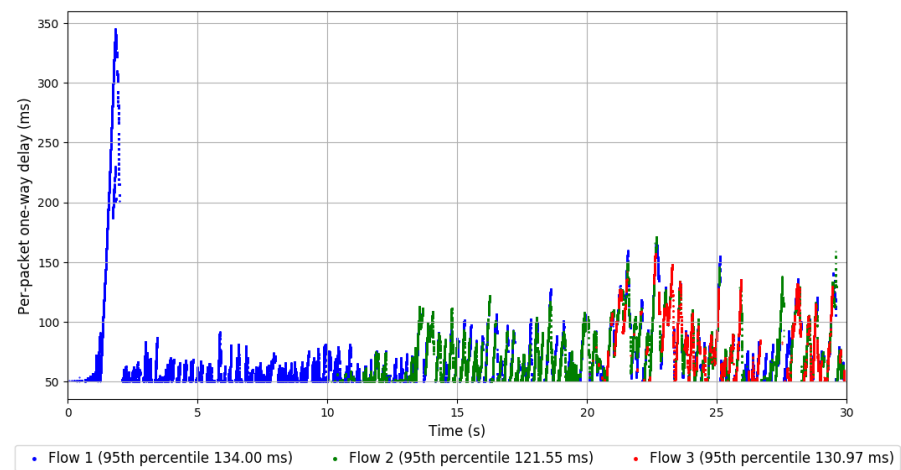
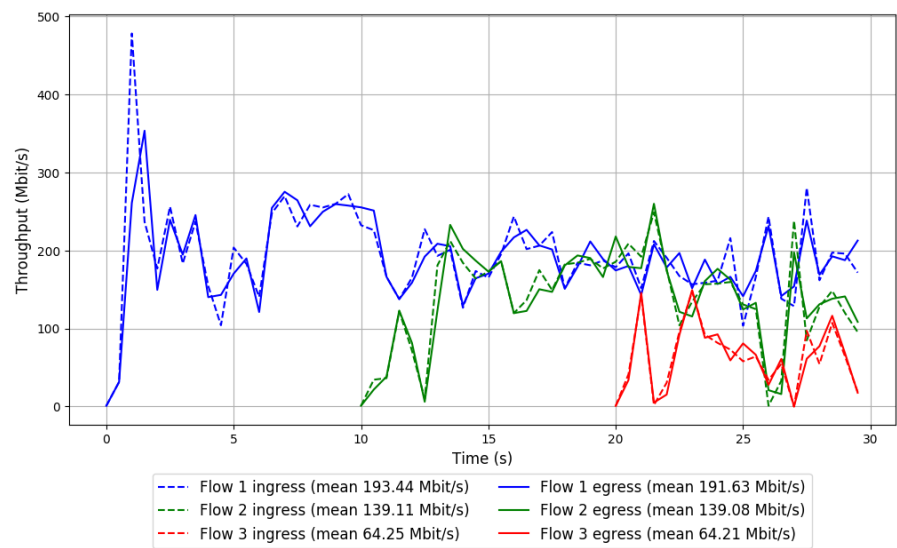
-- Flow 3:

Average throughput: 64.21 Mbit/s

95th percentile per-packet one-way delay: 130.970 ms

Loss rate: 0.08%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2018-04-18 14:17:22

End at: 2018-04-18 14:17:52

Below is generated by plot.py at 2018-04-18 18:36:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 322.65 Mbit/s

95th percentile per-packet one-way delay: 178.869 ms

Loss rate: 0.39%

-- Flow 1:

Average throughput: 191.62 Mbit/s

95th percentile per-packet one-way delay: 174.759 ms

Loss rate: 0.17%

-- Flow 2:

Average throughput: 158.67 Mbit/s

95th percentile per-packet one-way delay: 183.361 ms

Loss rate: 0.36%

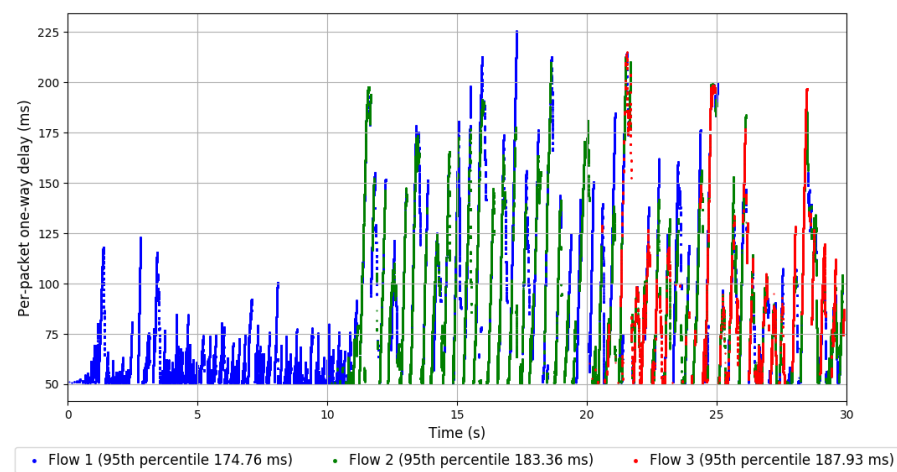
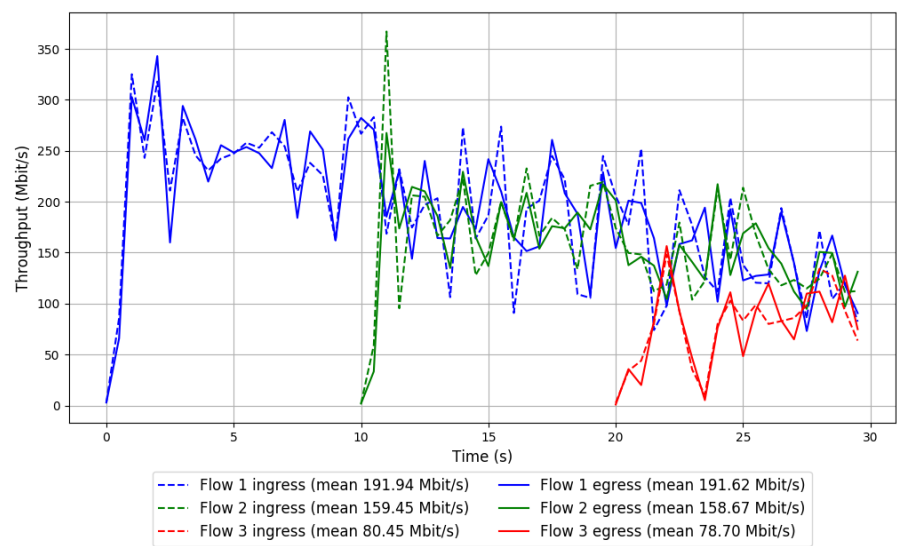
-- Flow 3:

Average throughput: 78.70 Mbit/s

95th percentile per-packet one-way delay: 187.934 ms

Loss rate: 2.16%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2018-04-18 14:32:55

End at: 2018-04-18 14:33:25

Below is generated by plot.py at 2018-04-18 18:37:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 284.65 Mbit/s

95th percentile per-packet one-way delay: 116.918 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 170.57 Mbit/s

95th percentile per-packet one-way delay: 113.904 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 113.20 Mbit/s

95th percentile per-packet one-way delay: 113.542 ms

Loss rate: 0.00%

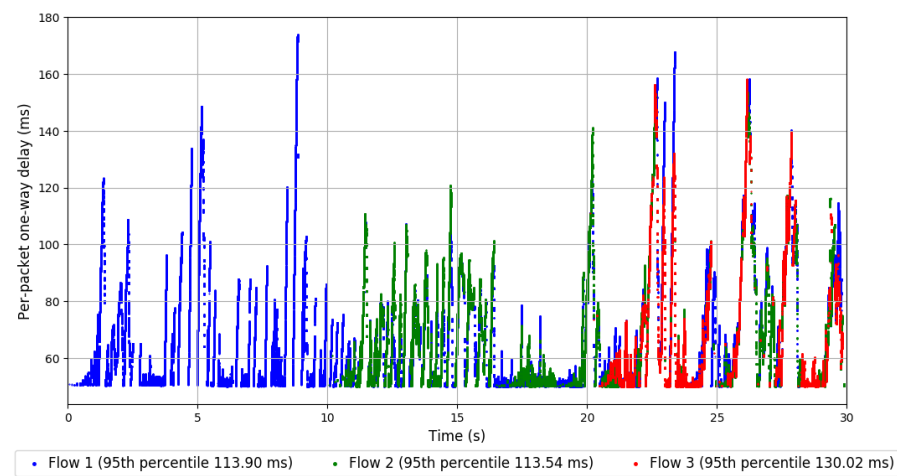
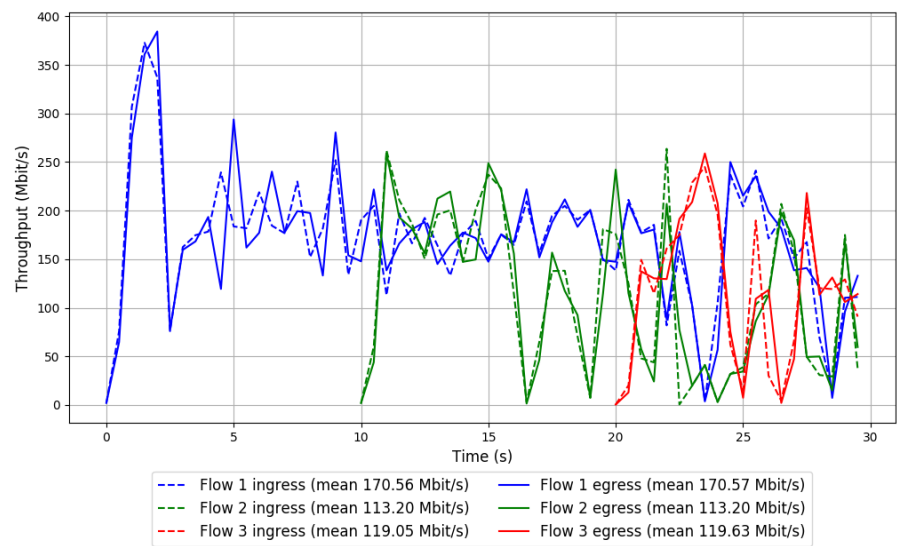
-- Flow 3:

Average throughput: 119.63 Mbit/s

95th percentile per-packet one-way delay: 130.021 ms

Loss rate: 0.00%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2018-04-18 14:48:07

End at: 2018-04-18 14:48:37

Below is generated by plot.py at 2018-04-18 18:38:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 283.48 Mbit/s

95th percentile per-packet one-way delay: 183.862 ms

Loss rate: 1.29%

-- Flow 1:

Average throughput: 142.79 Mbit/s

95th percentile per-packet one-way delay: 134.893 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 154.09 Mbit/s

95th percentile per-packet one-way delay: 145.654 ms

Loss rate: 0.76%

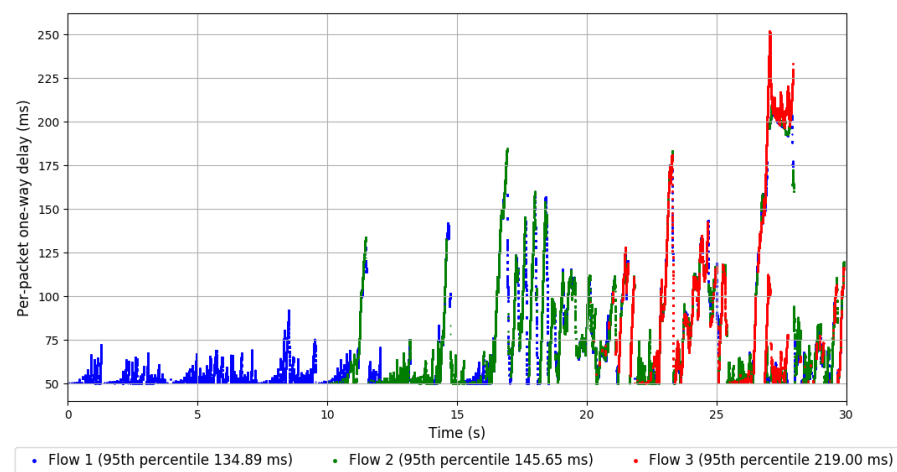
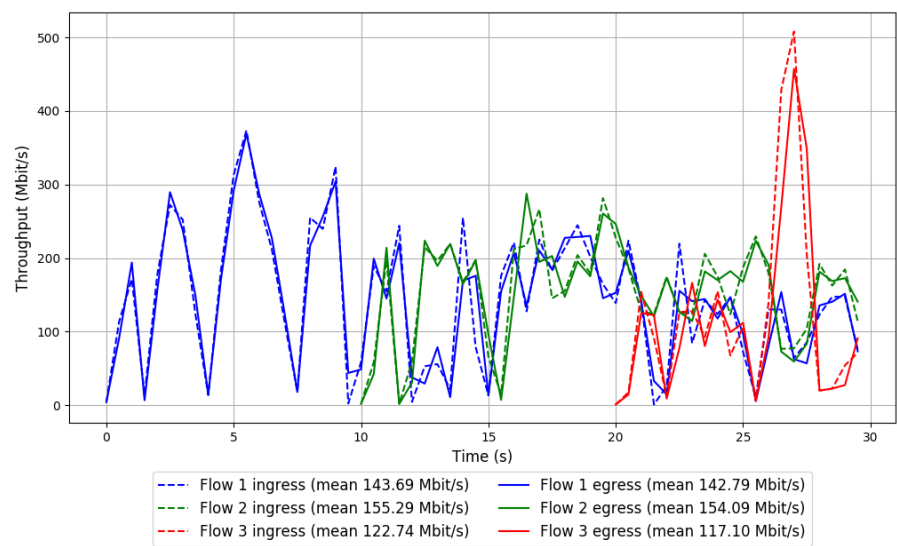
-- Flow 3:

Average throughput: 117.10 Mbit/s

95th percentile per-packet one-way delay: 219.001 ms

Loss rate: 5.01%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2018-04-18 15:03:24

End at: 2018-04-18 15:03:54

Below is generated by plot.py at 2018-04-18 18:39:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 299.28 Mbit/s

95th percentile per-packet one-way delay: 139.455 ms

Loss rate: 0.10%

-- Flow 1:

Average throughput: 203.50 Mbit/s

95th percentile per-packet one-way delay: 132.551 ms

Loss rate: 0.08%

-- Flow 2:

Average throughput: 110.19 Mbit/s

95th percentile per-packet one-way delay: 152.493 ms

Loss rate: 0.00%

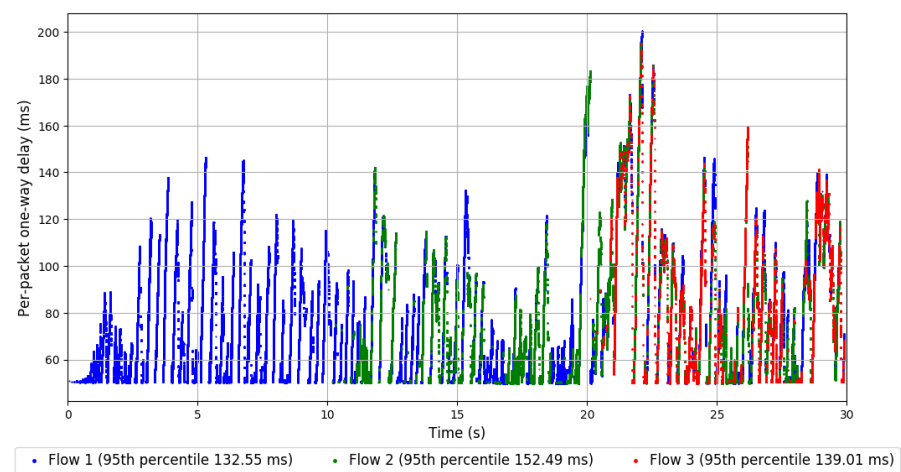
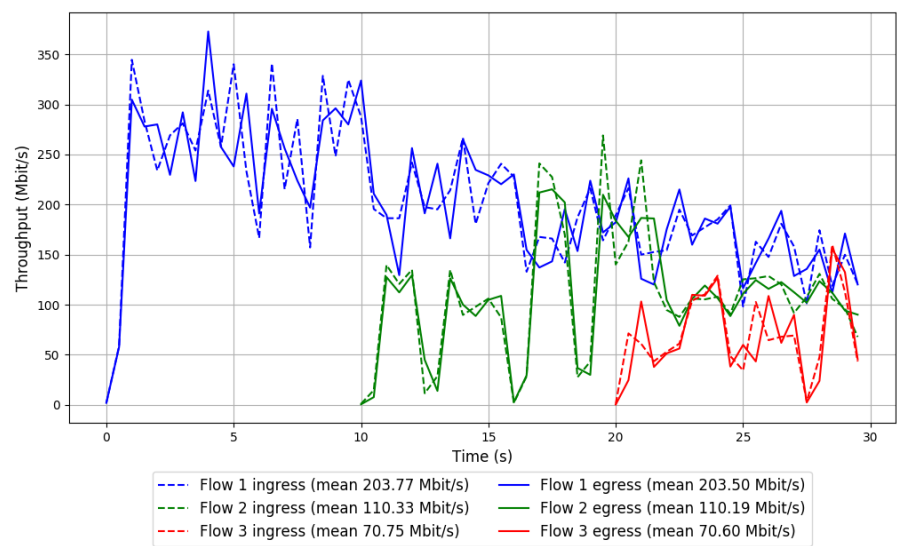
-- Flow 3:

Average throughput: 70.60 Mbit/s

95th percentile per-packet one-way delay: 139.012 ms

Loss rate: 0.54%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2018-04-18 15:18:52

End at: 2018-04-18 15:19:22

Below is generated by plot.py at 2018-04-18 18:40:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 282.31 Mbit/s

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

Loss rate: 0.28%

-- Flow 1:

Average throughput: 170.75 Mbit/s

95th percentile per-packet one-way delay: 120.180 ms

Loss rate: 0.12%

-- Flow 2:

Average throughput: 113.17 Mbit/s

95th percentile per-packet one-way delay: 143.884 ms

Loss rate: 0.22%

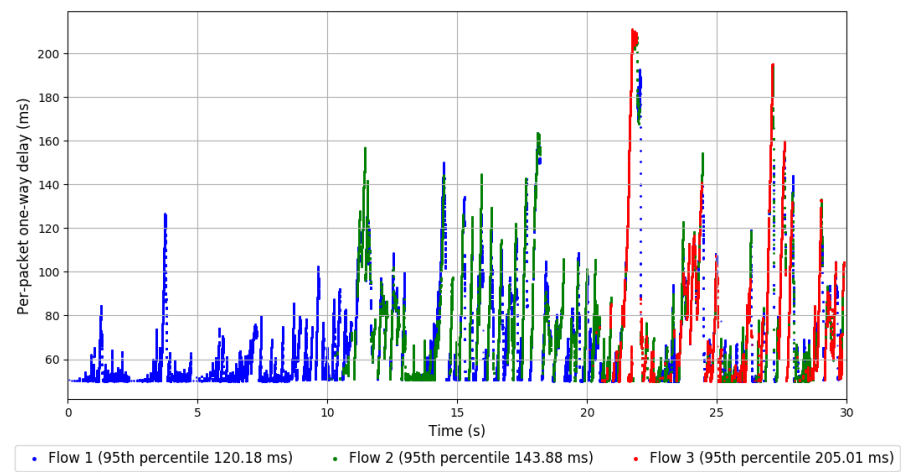
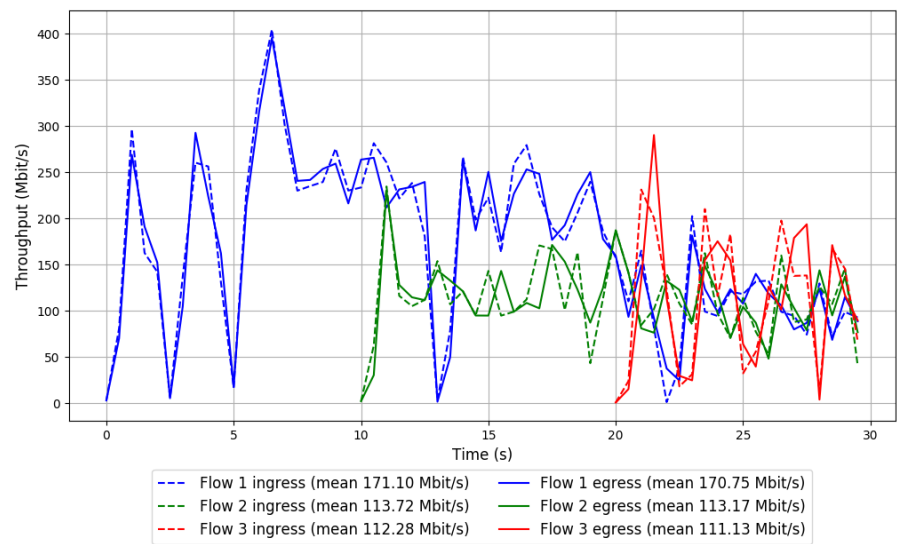
-- Flow 3:

Average throughput: 111.13 Mbit/s

95th percentile per-packet one-way delay: 205.012 ms

Loss rate: 1.16%

Run 10: Report of Verus — Data Link

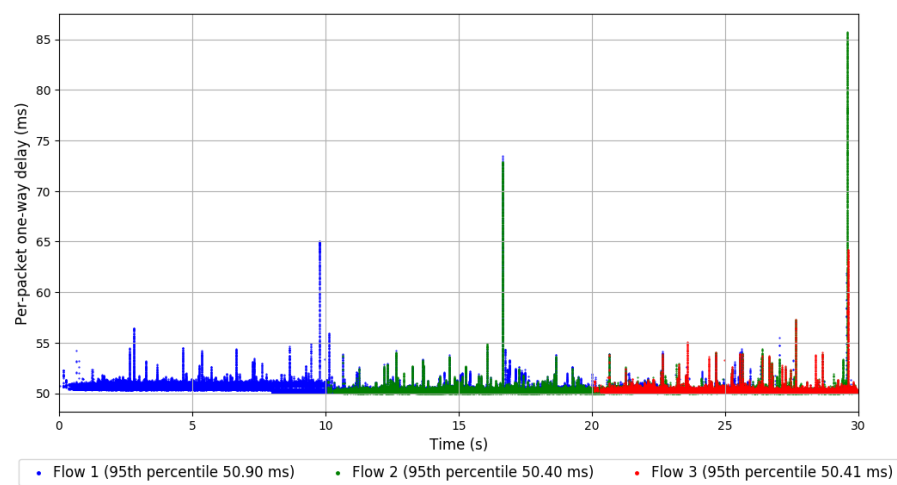
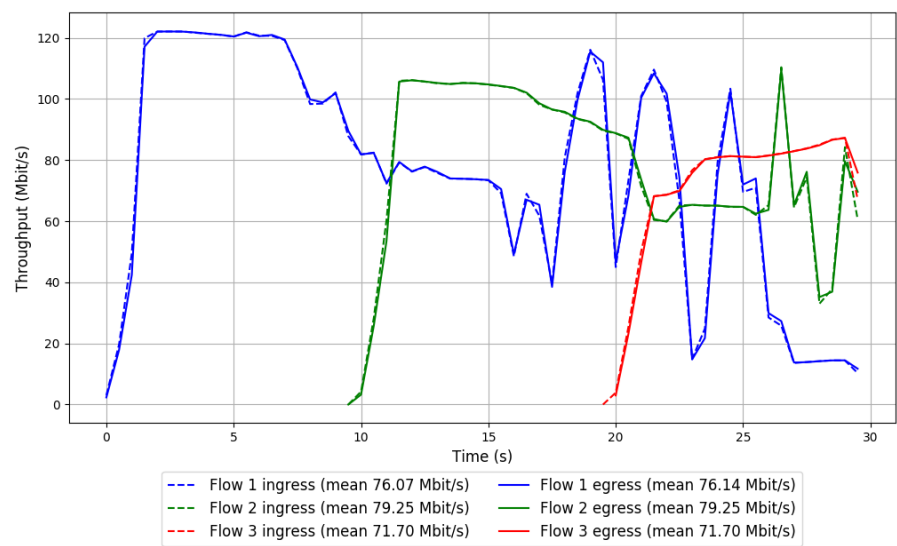


```
Run 1: Statistics of Copa

Start at: 2018-04-18 12:53:50
End at: 2018-04-18 12:54:20

# Below is generated by plot.py at 2018-04-18 18:40:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 152.79 Mbit/s
95th percentile per-packet one-way delay: 50.849 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 76.14 Mbit/s
95th percentile per-packet one-way delay: 50.898 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 79.25 Mbit/s
95th percentile per-packet one-way delay: 50.401 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 71.70 Mbit/s
95th percentile per-packet one-way delay: 50.407 ms
Loss rate: 0.00%
```

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-04-18 13:09:02

End at: 2018-04-18 13:09:32

Below is generated by plot.py at 2018-04-18 18:40:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 149.14 Mbit/s

95th percentile per-packet one-way delay: 50.998 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 82.03 Mbit/s

95th percentile per-packet one-way delay: 50.994 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 74.99 Mbit/s

95th percentile per-packet one-way delay: 51.016 ms

Loss rate: 0.00%

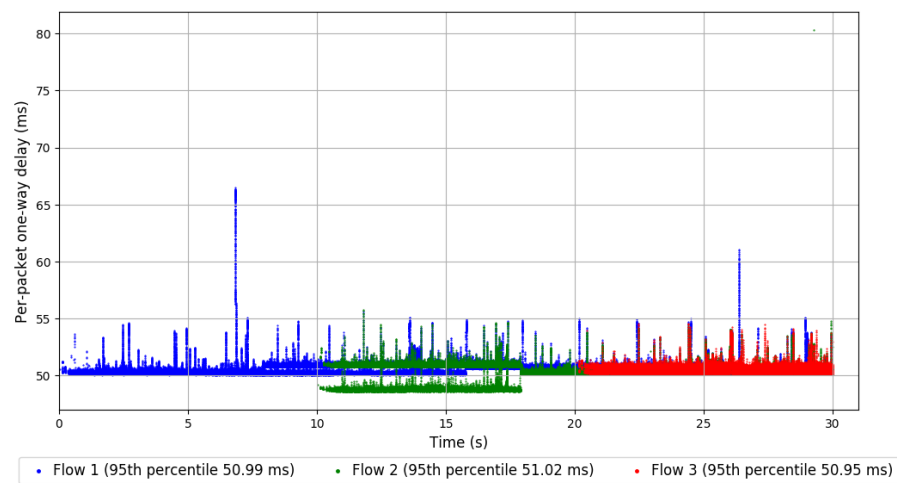
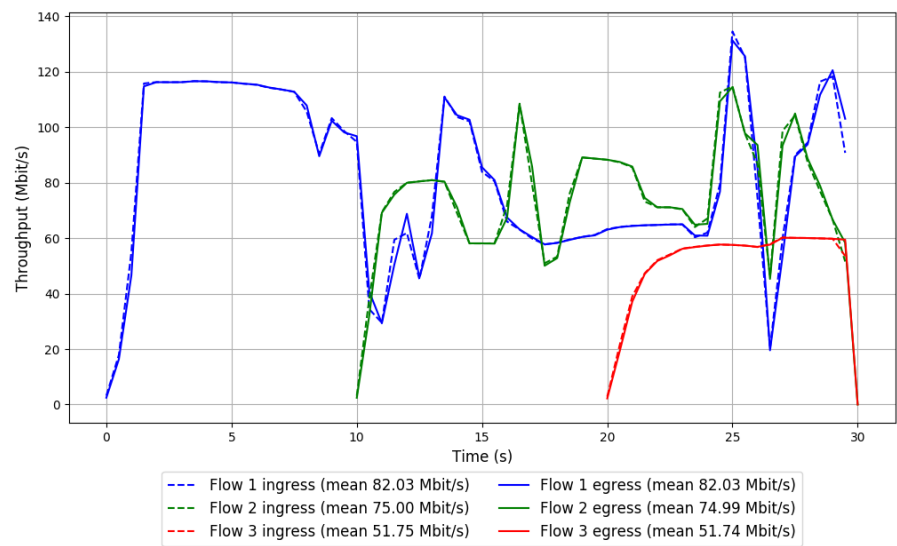
-- Flow 3:

Average throughput: 51.74 Mbit/s

95th percentile per-packet one-way delay: 50.954 ms

Loss rate: 0.02%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-04-18 13:24:29

End at: 2018-04-18 13:24:59

Below is generated by plot.py at 2018-04-18 18:41:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 150.38 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 78.57 Mbit/s

95th percentile per-packet one-way delay: 50.488 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 68.32 Mbit/s

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

Loss rate: 0.00%

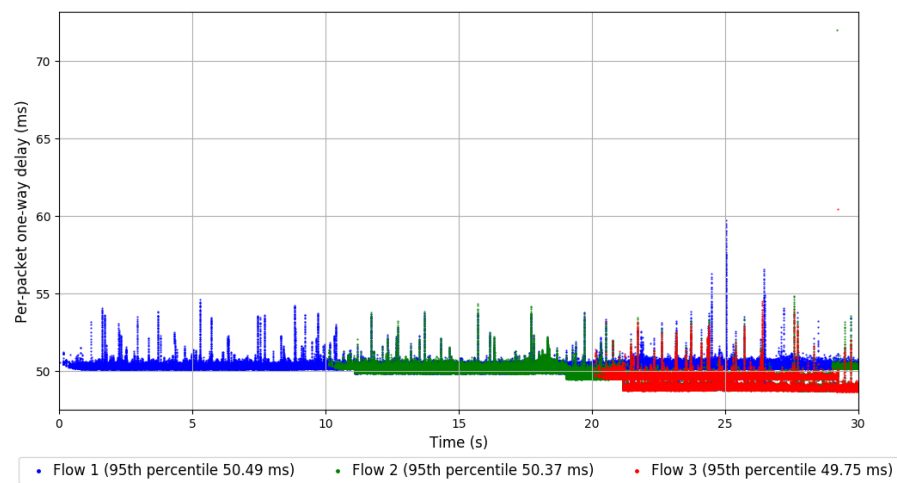
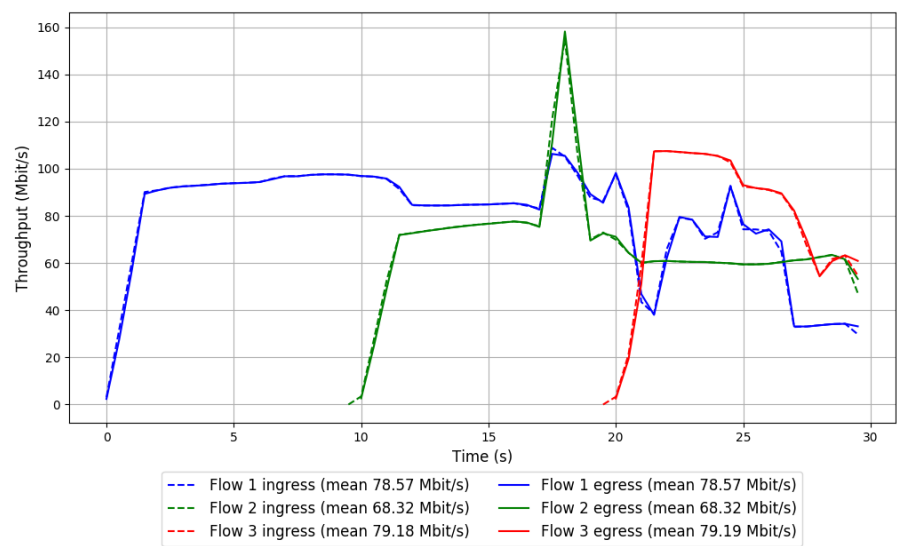
-- Flow 3:

Average throughput: 79.19 Mbit/s

95th percentile per-packet one-way delay: 49.753 ms

Loss rate: 0.00%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2018-04-18 13:39:59

End at: 2018-04-18 13:40:29

Below is generated by plot.py at 2018-04-18 18:42:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 151.89 Mbit/s

95th percentile per-packet one-way delay: 50.496 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 77.91 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 73.08 Mbit/s

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

Loss rate: 0.00%

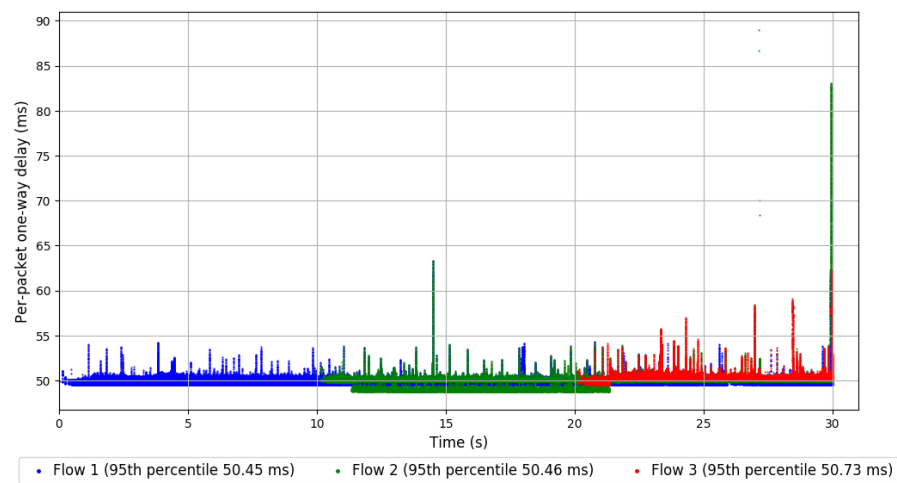
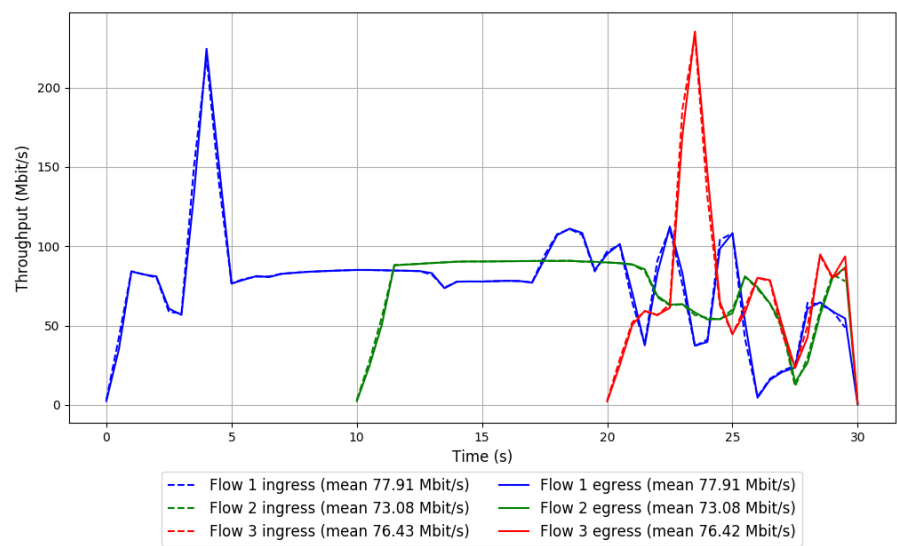
-- Flow 3:

Average throughput: 76.42 Mbit/s

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

Loss rate: 0.00%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2018-04-18 13:55:27

End at: 2018-04-18 13:55:57

Below is generated by plot.py at 2018-04-18 18:43:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 154.42 Mbit/s

95th percentile per-packet one-way delay: 50.845 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 86.95 Mbit/s

95th percentile per-packet one-way delay: 50.747 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 71.90 Mbit/s

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

Loss rate: 0.00%

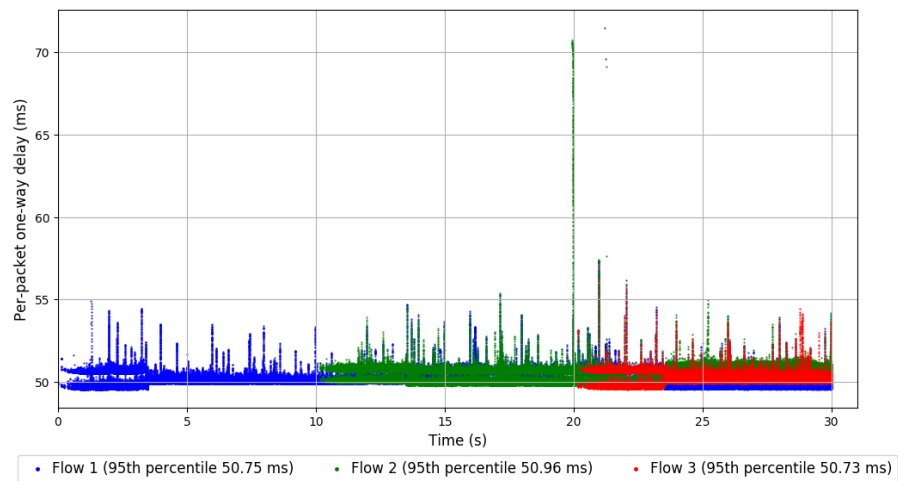
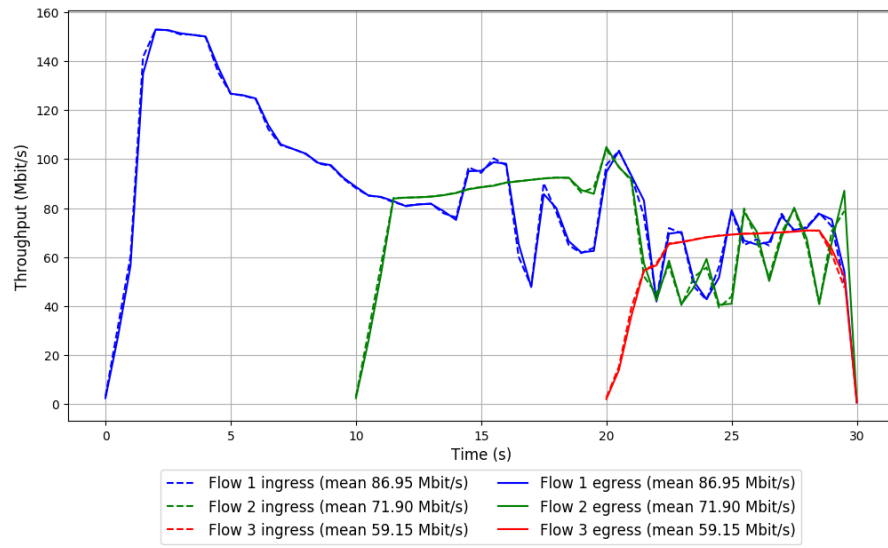
-- Flow 3:

Average throughput: 59.15 Mbit/s

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

Loss rate: 0.00%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2018-04-18 14:10:51

End at: 2018-04-18 14:11:21

Below is generated by plot.py at 2018-04-18 18:44:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 160.75 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 82.14 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 79.02 Mbit/s

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

Loss rate: 0.00%

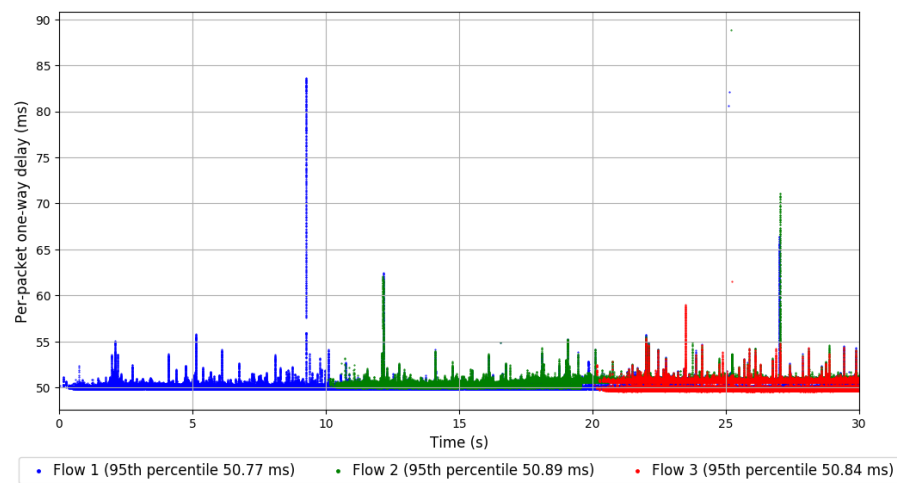
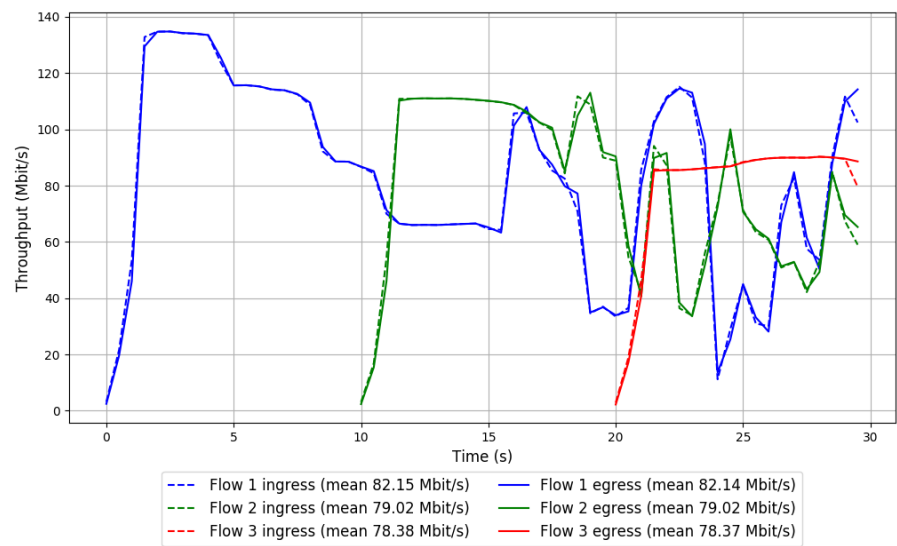
-- Flow 3:

Average throughput: 78.37 Mbit/s

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

Loss rate: 0.00%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2018-04-18 14:26:13

End at: 2018-04-18 14:26:43

Below is generated by plot.py at 2018-04-18 18:45:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 157.90 Mbit/s

95th percentile per-packet one-way delay: 51.056 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 83.19 Mbit/s

95th percentile per-packet one-way delay: 51.034 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 75.69 Mbit/s

95th percentile per-packet one-way delay: 51.031 ms

Loss rate: 0.00%

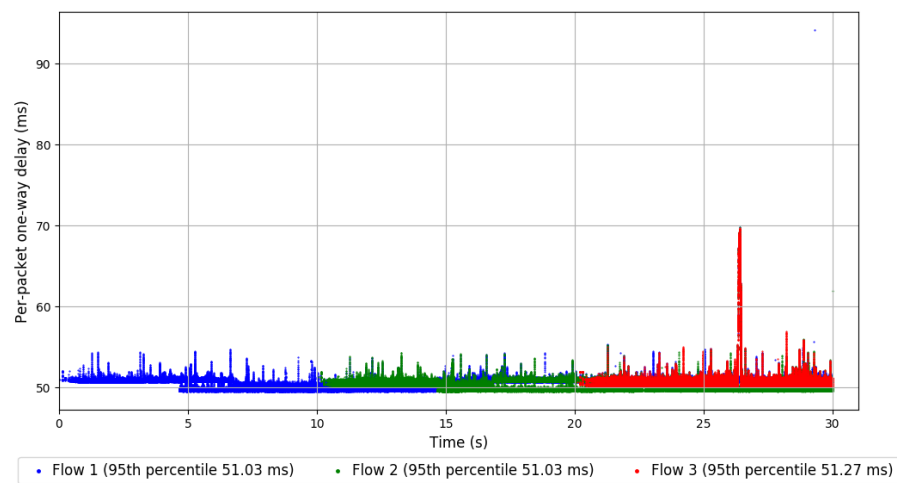
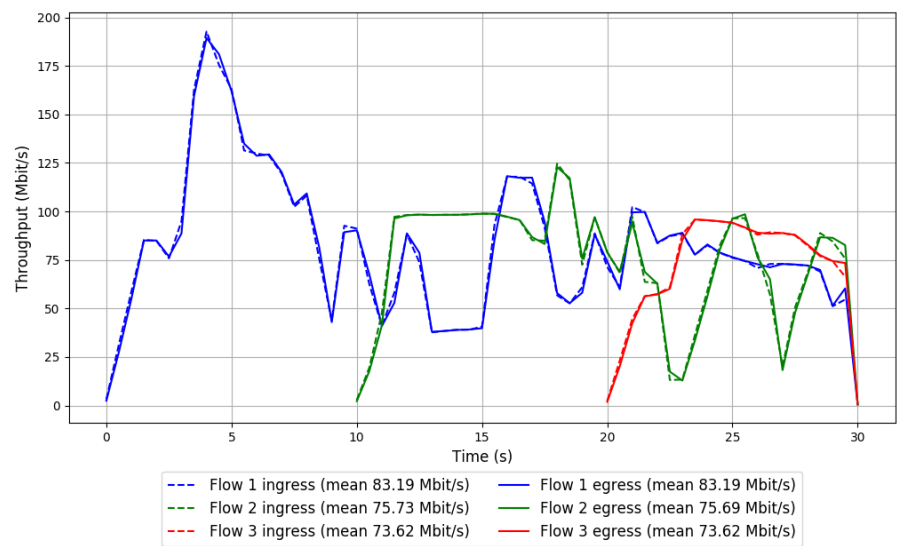
-- Flow 3:

Average throughput: 73.62 Mbit/s

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

Loss rate: 0.00%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2018-04-18 14:41:29

End at: 2018-04-18 14:41:59

Below is generated by plot.py at 2018-04-18 18:45:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 147.75 Mbit/s

95th percentile per-packet one-way delay: 50.767 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 69.06 Mbit/s

95th percentile per-packet one-way delay: 50.767 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 78.98 Mbit/s

95th percentile per-packet one-way delay: 50.343 ms

Loss rate: 0.00%

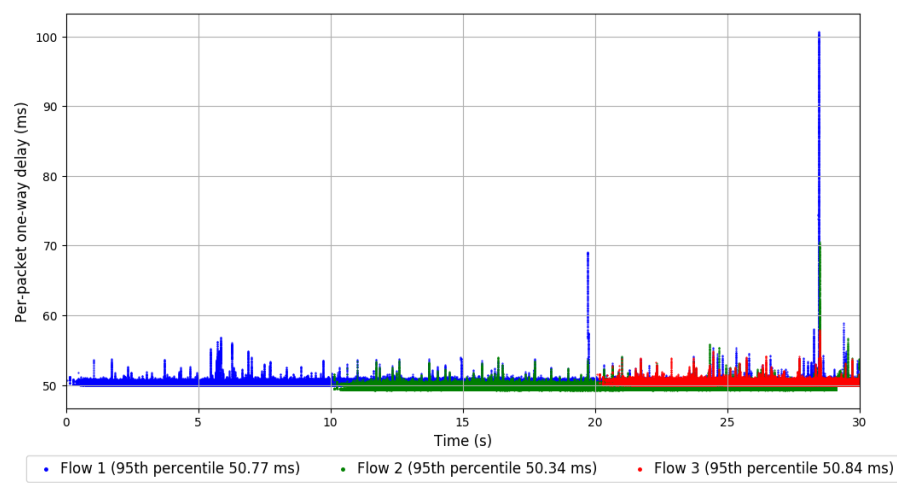
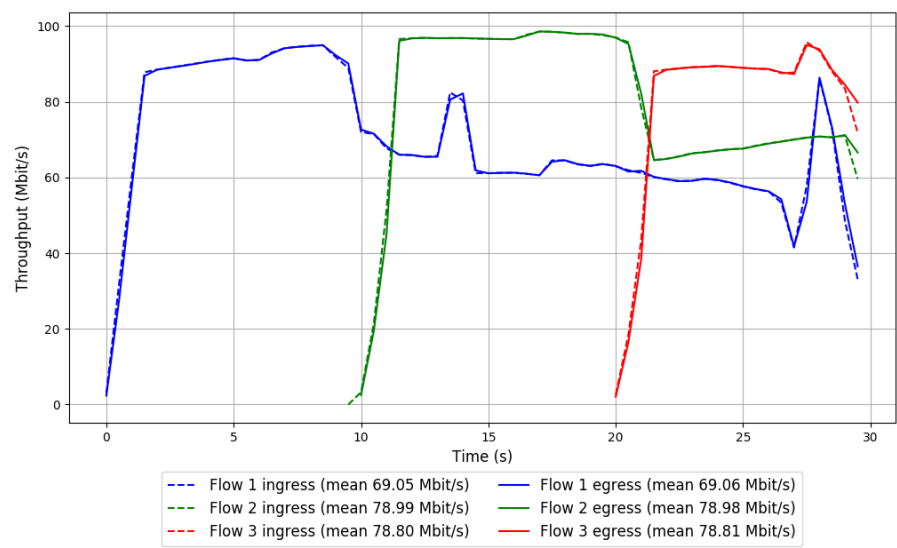
-- Flow 3:

Average throughput: 78.81 Mbit/s

95th percentile per-packet one-way delay: 50.844 ms

Loss rate: 0.00%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2018-04-18 14:56:53

End at: 2018-04-18 14:57:23

Below is generated by plot.py at 2018-04-18 18:45:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 140.36 Mbit/s

95th percentile per-packet one-way delay: 50.617 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 72.33 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 68.84 Mbit/s

95th percentile per-packet one-way delay: 50.615 ms

Loss rate: 0.00%

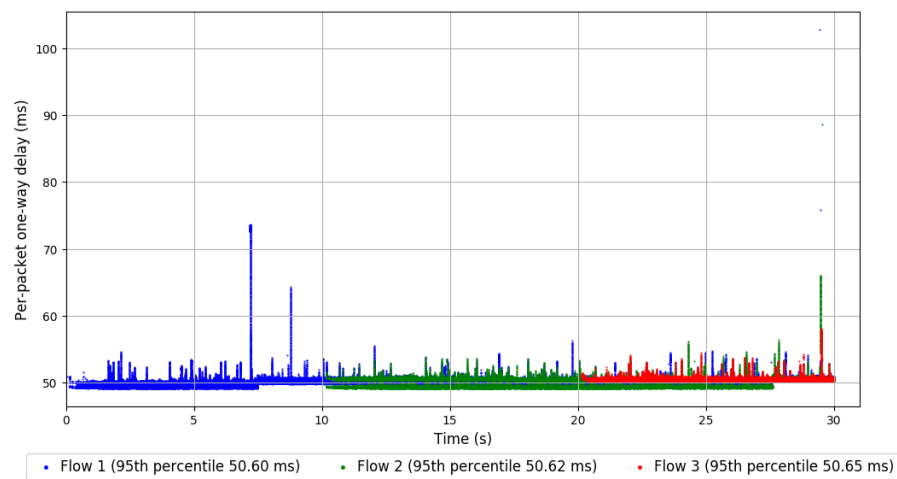
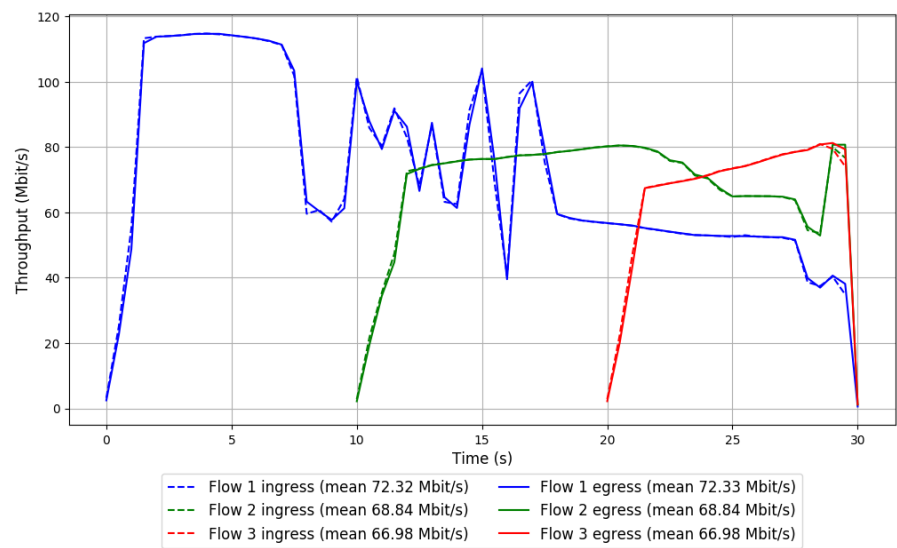
-- Flow 3:

Average throughput: 66.98 Mbit/s

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

Loss rate: 0.00%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2018-04-18 15:12:15

End at: 2018-04-18 15:12:45

Below is generated by plot.py at 2018-04-18 18:45:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 153.92 Mbit/s

95th percentile per-packet one-way delay: 50.859 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 85.83 Mbit/s

95th percentile per-packet one-way delay: 50.845 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 57.18 Mbit/s

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

Loss rate: 0.00%

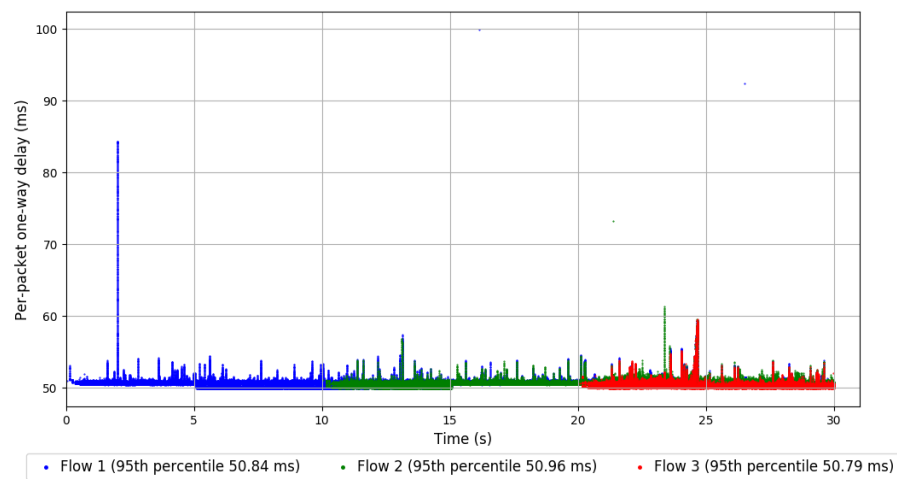
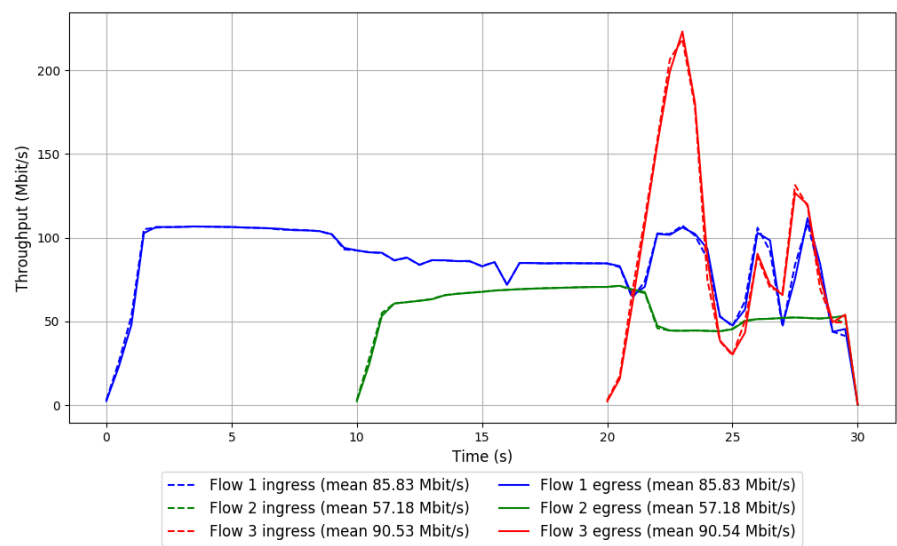
-- Flow 3:

Average throughput: 90.54 Mbit/s

95th percentile per-packet one-way delay: 50.794 ms

Loss rate: 0.00%

Run 10: Report of Copa — Data Link

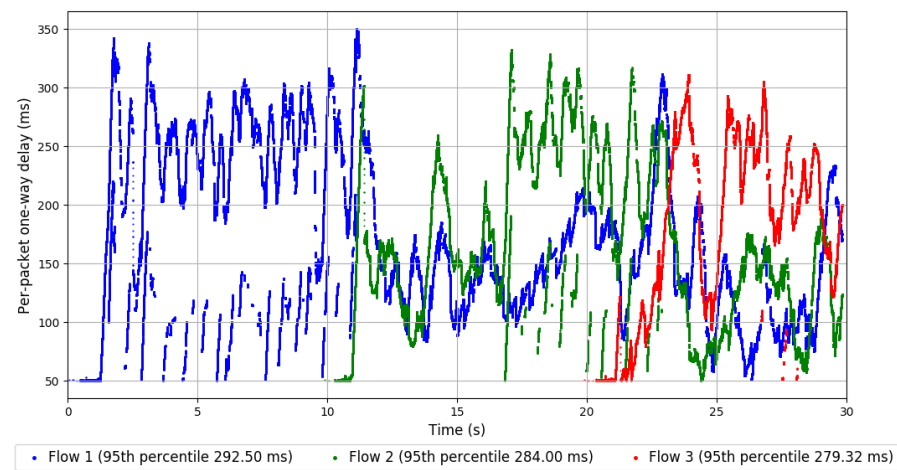
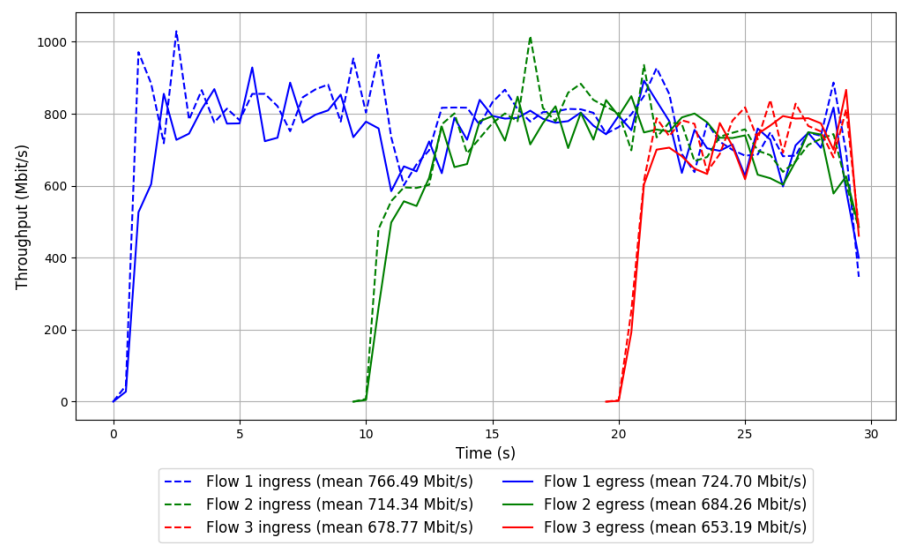


```
Run 1: Statistics of FillP

Start at: 2018-04-18 13:03:58
End at: 2018-04-18 13:04:28

# Below is generated by plot.py at 2018-04-18 19:09:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1399.94 Mbit/s
95th percentile per-packet one-way delay: 288.760 ms
Loss rate: 4.78%
-- Flow 1:
Average throughput: 724.70 Mbit/s
95th percentile per-packet one-way delay: 292.504 ms
Loss rate: 5.45%
-- Flow 2:
Average throughput: 684.26 Mbit/s
95th percentile per-packet one-way delay: 284.004 ms
Loss rate: 4.20%
-- Flow 3:
Average throughput: 653.19 Mbit/s
95th percentile per-packet one-way delay: 279.321 ms
Loss rate: 3.76%
```


Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-04-18 13:19:28

End at: 2018-04-18 13:19:58

Below is generated by plot.py at 2018-04-18 19:09:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 1298.53 Mbit/s

95th percentile per-packet one-way delay: 288.565 ms

Loss rate: 5.43%

-- Flow 1:

Average throughput: 639.88 Mbit/s

95th percentile per-packet one-way delay: 290.124 ms

Loss rate: 5.04%

-- Flow 2:

Average throughput: 662.07 Mbit/s

95th percentile per-packet one-way delay: 294.642 ms

Loss rate: 6.16%

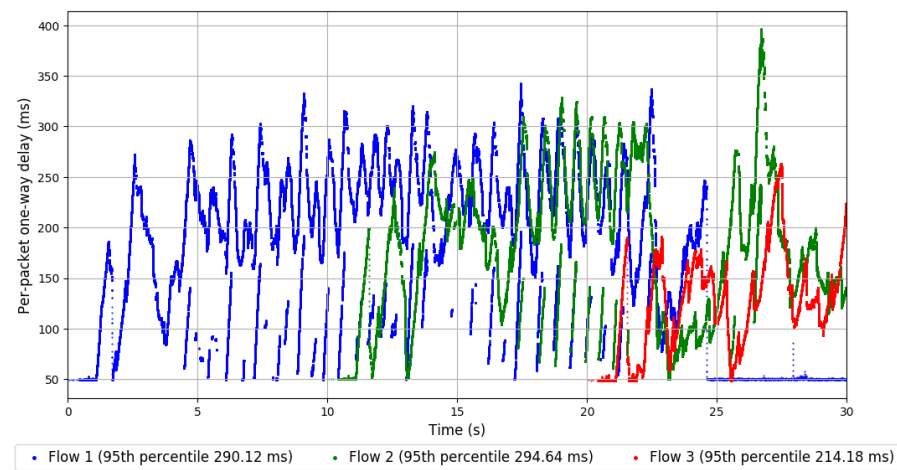
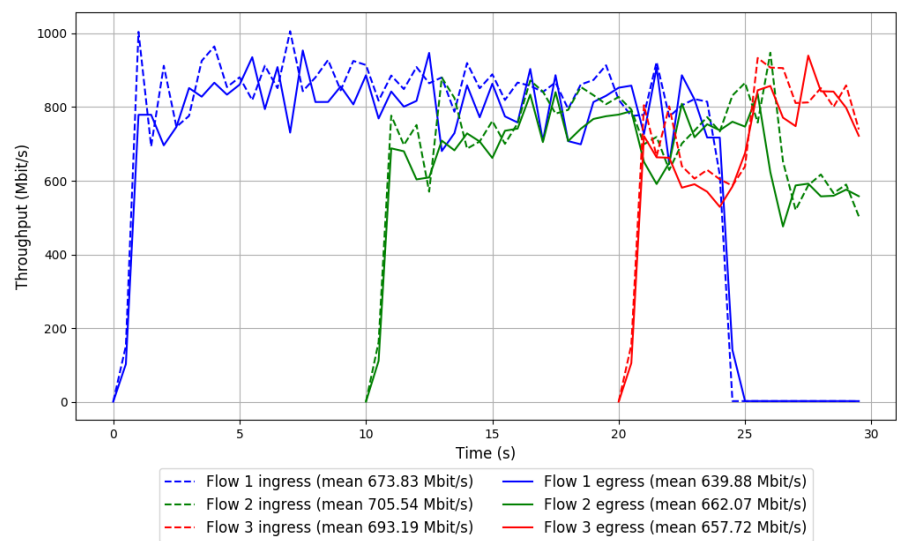
-- Flow 3:

Average throughput: 657.72 Mbit/s

95th percentile per-packet one-way delay: 214.180 ms

Loss rate: 5.11%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-04-18 13:34:53

End at: 2018-04-18 13:35:23

Below is generated by plot.py at 2018-04-18 19:11:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 1370.95 Mbit/s

95th percentile per-packet one-way delay: 268.544 ms

Loss rate: 4.25%

-- Flow 1:

Average throughput: 710.85 Mbit/s

95th percentile per-packet one-way delay: 285.873 ms

Loss rate: 5.78%

-- Flow 2:

Average throughput: 676.92 Mbit/s

95th percentile per-packet one-way delay: 167.561 ms

Loss rate: 3.30%

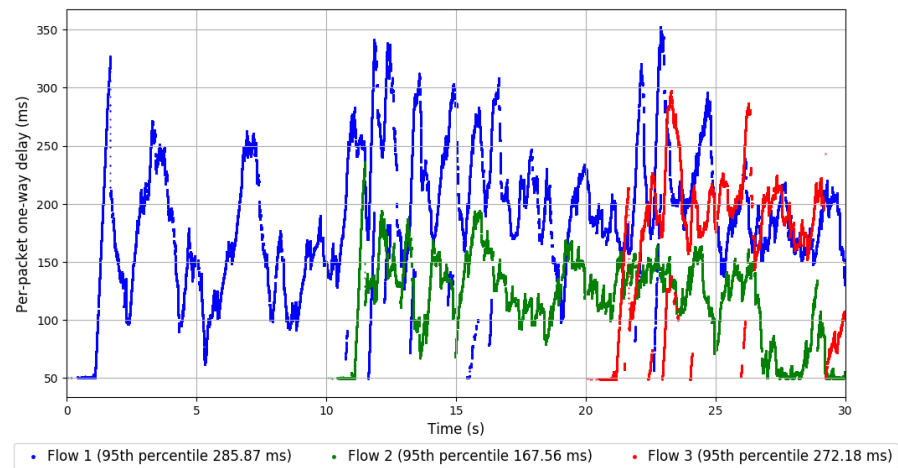
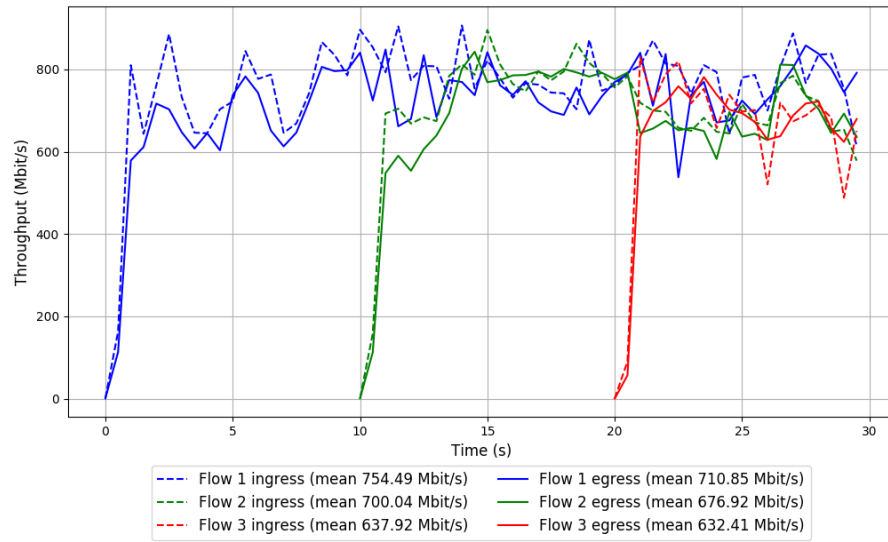
-- Flow 3:

Average throughput: 632.41 Mbit/s

95th percentile per-packet one-way delay: 272.182 ms

Loss rate: 0.84%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-04-18 13:50:23

End at: 2018-04-18 13:50:53

Below is generated by plot.py at 2018-04-18 19:12:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 1378.48 Mbit/s

95th percentile per-packet one-way delay: 264.111 ms

Loss rate: 4.77%

-- Flow 1:

Average throughput: 732.72 Mbit/s

95th percentile per-packet one-way delay: 276.170 ms

Loss rate: 4.14%

-- Flow 2:

Average throughput: 678.88 Mbit/s

95th percentile per-packet one-way delay: 171.224 ms

Loss rate: 4.32%

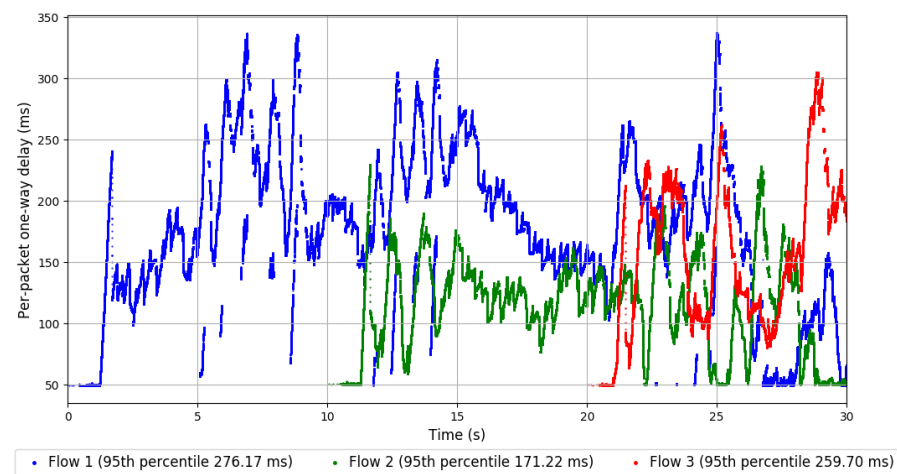
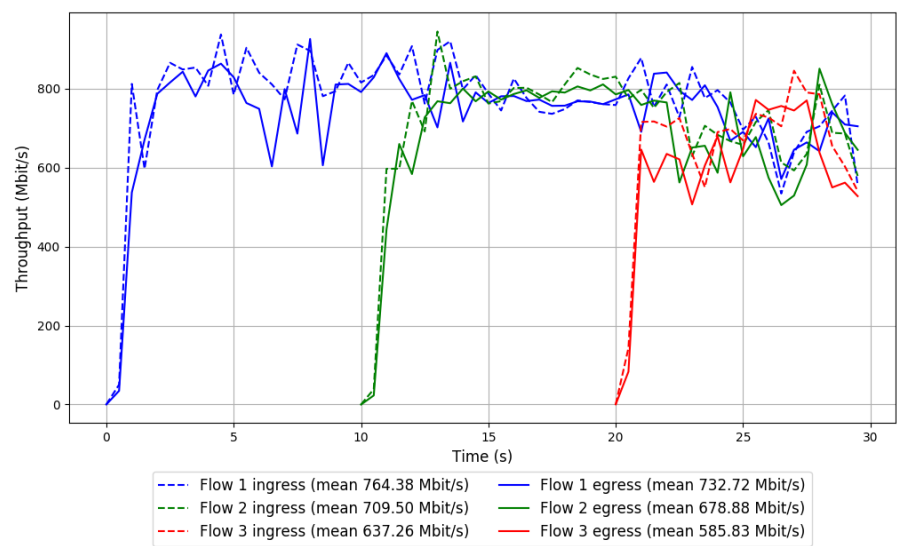
-- Flow 3:

Average throughput: 585.83 Mbit/s

95th percentile per-packet one-way delay: 259.697 ms

Loss rate: 8.06%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-04-18 14:05:48

End at: 2018-04-18 14:06:18

Below is generated by plot.py at 2018-04-18 19:12:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 1292.41 Mbit/s

95th percentile per-packet one-way delay: 293.406 ms

Loss rate: 4.94%

-- Flow 1:

Average throughput: 733.29 Mbit/s

95th percentile per-packet one-way delay: 293.774 ms

Loss rate: 5.35%

-- Flow 2:

Average throughput: 518.98 Mbit/s

95th percentile per-packet one-way delay: 297.571 ms

Loss rate: 3.94%

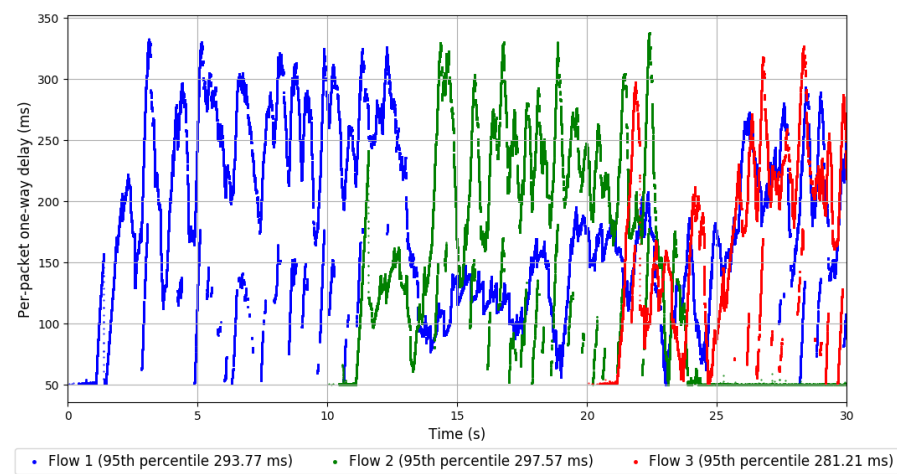
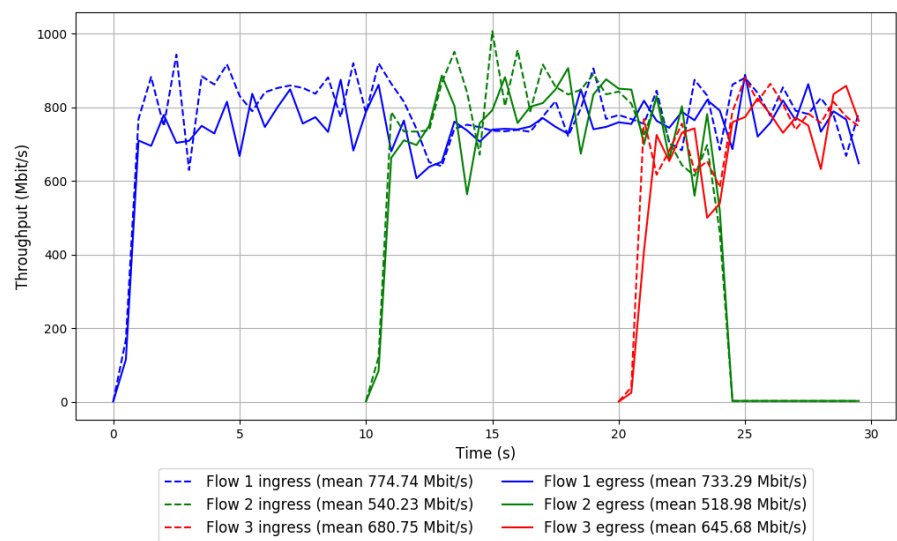
-- Flow 3:

Average throughput: 645.68 Mbit/s

95th percentile per-packet one-way delay: 281.213 ms

Loss rate: 5.16%

Run 5: Report of FillP — Data Link



Run 6: Statistics of FillP

Start at: 2018-04-18 14:21:07

End at: 2018-04-18 14:21:37

Below is generated by plot.py at 2018-04-18 19:13:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 1366.87 Mbit/s

95th percentile per-packet one-way delay: 295.447 ms

Loss rate: 6.90%

-- Flow 1:

Average throughput: 697.86 Mbit/s

95th percentile per-packet one-way delay: 303.973 ms

Loss rate: 7.48%

-- Flow 2:

Average throughput: 664.17 Mbit/s

95th percentile per-packet one-way delay: 280.451 ms

Loss rate: 6.57%

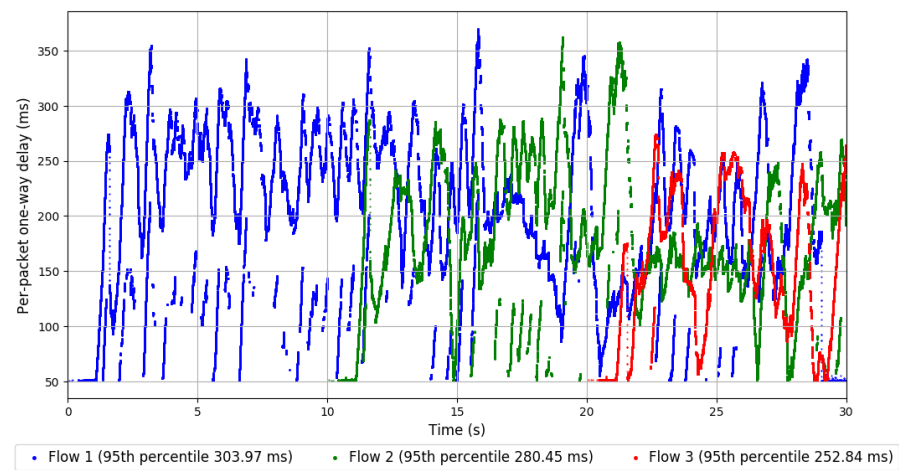
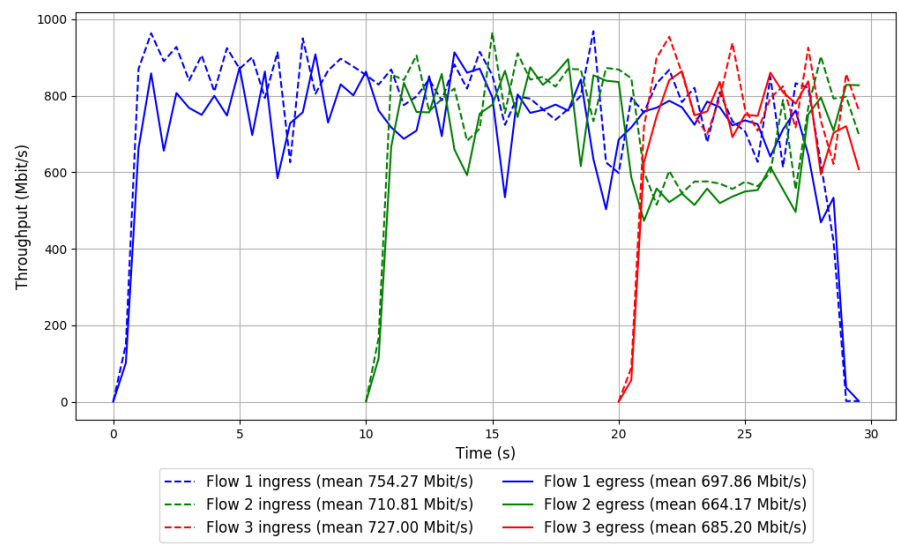
-- Flow 3:

Average throughput: 685.20 Mbit/s

95th percentile per-packet one-way delay: 252.837 ms

Loss rate: 5.76%

Run 6: Report of FillP — Data Link



Run 7: Statistics of FillP

Start at: 2018-04-18 14:36:38

End at: 2018-04-18 14:37:08

Below is generated by plot.py at 2018-04-18 19:13:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 1022.30 Mbit/s

95th percentile per-packet one-way delay: 291.103 ms

Loss rate: 5.97%

-- Flow 1:

Average throughput: 594.28 Mbit/s

95th percentile per-packet one-way delay: 287.827 ms

Loss rate: 5.98%

-- Flow 2:

Average throughput: 281.01 Mbit/s

95th percentile per-packet one-way delay: 292.033 ms

Loss rate: 2.91%

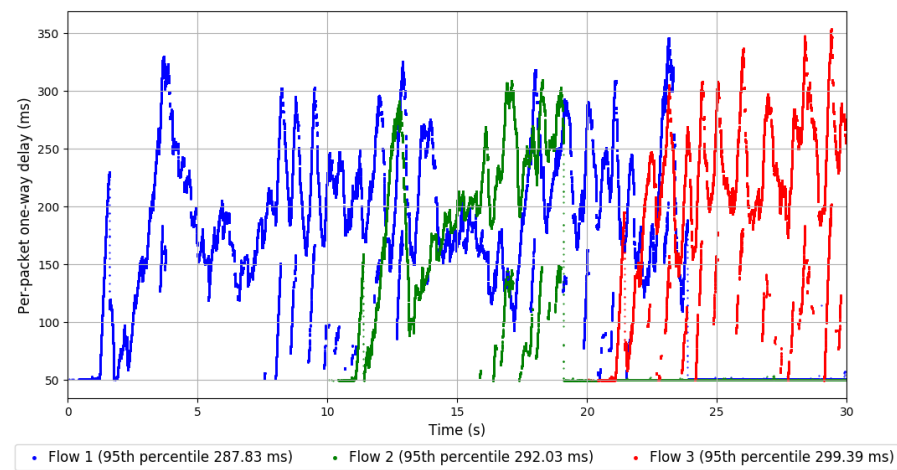
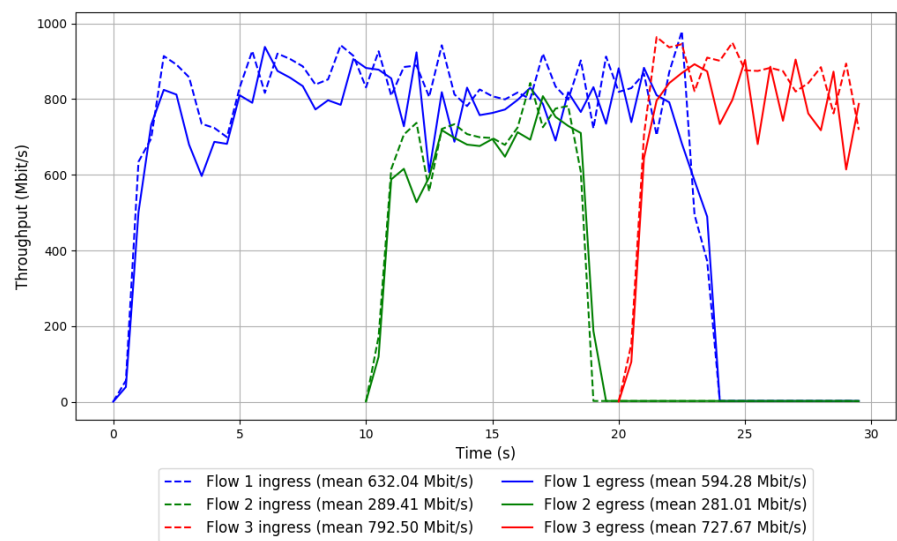
-- Flow 3:

Average throughput: 727.67 Mbit/s

95th percentile per-packet one-way delay: 299.392 ms

Loss rate: 8.18%

Run 7: Report of FillP — Data Link



Run 8: Statistics of FillP

Start at: 2018-04-18 14:51:50

End at: 2018-04-18 14:52:20

Below is generated by plot.py at 2018-04-18 19:15:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 1433.82 Mbit/s

95th percentile per-packet one-way delay: 282.406 ms

Loss rate: 3.95%

-- Flow 1:

Average throughput: 740.17 Mbit/s

95th percentile per-packet one-way delay: 291.774 ms

Loss rate: 4.46%

-- Flow 2:

Average throughput: 705.11 Mbit/s

95th percentile per-packet one-way delay: 185.446 ms

Loss rate: 2.80%

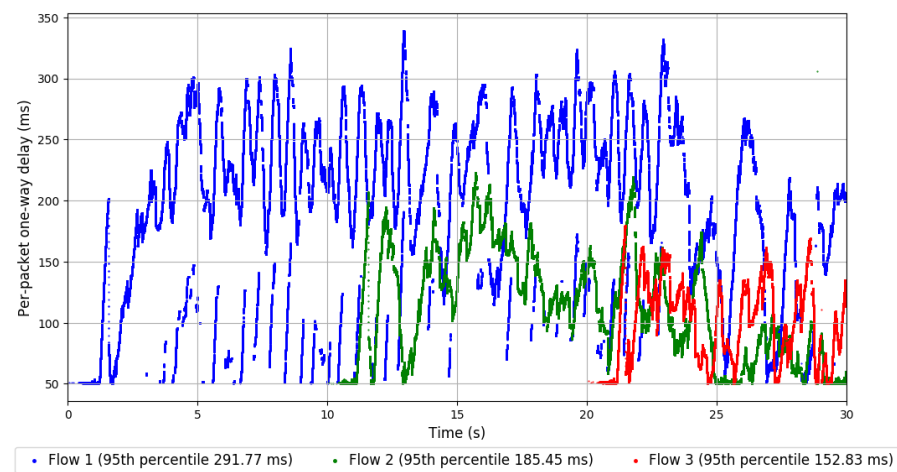
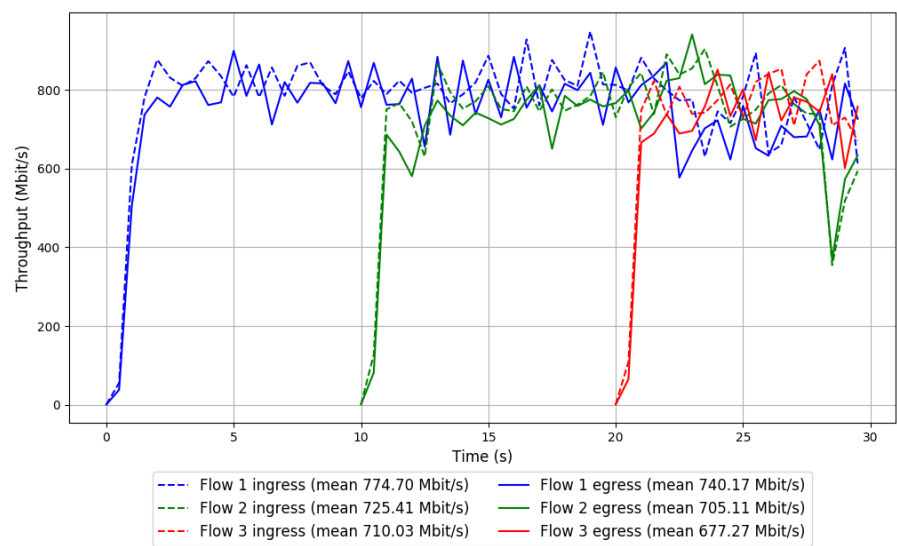
-- Flow 3:

Average throughput: 677.27 Mbit/s

95th percentile per-packet one-way delay: 152.829 ms

Loss rate: 4.63%

Run 8: Report of FillP — Data Link



Run 9: Statistics of FillP

Start at: 2018-04-18 15:07:09

End at: 2018-04-18 15:07:39

Below is generated by plot.py at 2018-04-18 19:34:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 1422.09 Mbit/s

95th percentile per-packet one-way delay: 290.526 ms

Loss rate: 6.47%

-- Flow 1:

Average throughput: 727.57 Mbit/s

95th percentile per-packet one-way delay: 285.775 ms

Loss rate: 7.62%

-- Flow 2:

Average throughput: 703.21 Mbit/s

95th percentile per-packet one-way delay: 298.931 ms

Loss rate: 5.19%

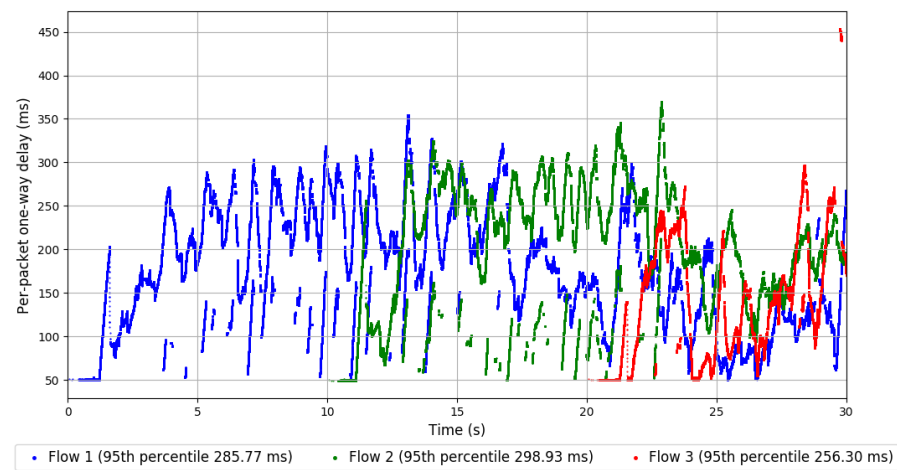
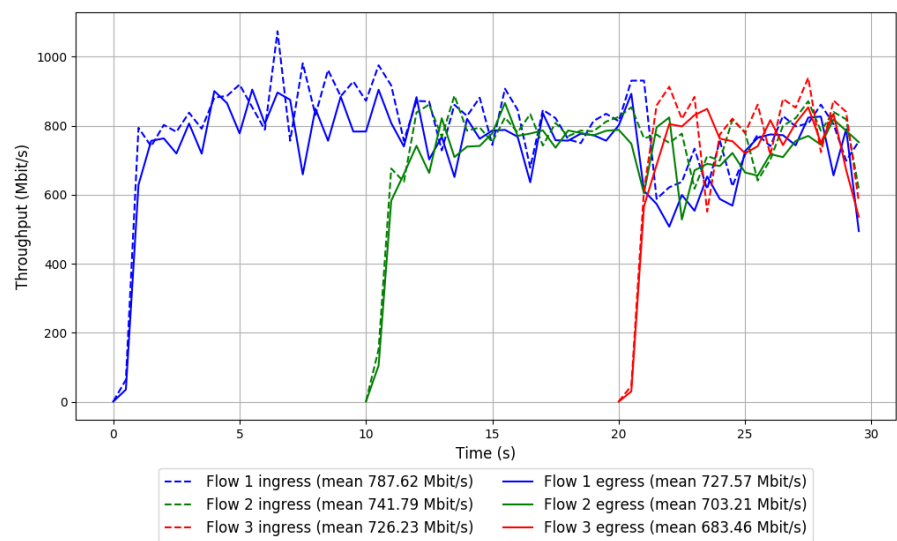
-- Flow 3:

Average throughput: 683.46 Mbit/s

95th percentile per-packet one-way delay: 256.299 ms

Loss rate: 5.34%

Run 9: Report of FillP — Data Link



Run 10: Statistics of FillP

Start at: 2018-04-18 15:22:35

End at: 2018-04-18 15:23:05

Below is generated by plot.py at 2018-04-18 19:34:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 947.80 Mbit/s

95th percentile per-packet one-way delay: 293.908 ms

Loss rate: 5.19%

-- Flow 1:

Average throughput: 234.36 Mbit/s

95th percentile per-packet one-way delay: 295.974 ms

Loss rate: 5.37%

-- Flow 2:

Average throughput: 763.42 Mbit/s

95th percentile per-packet one-way delay: 280.302 ms

Loss rate: 2.54%

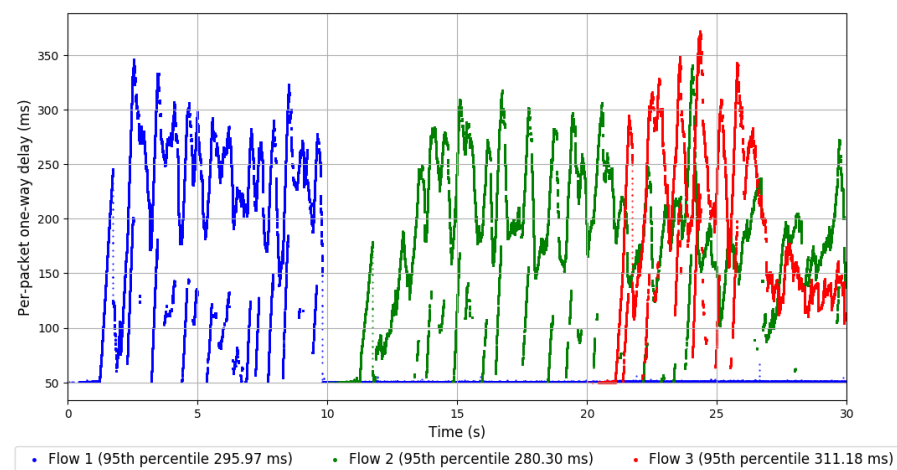
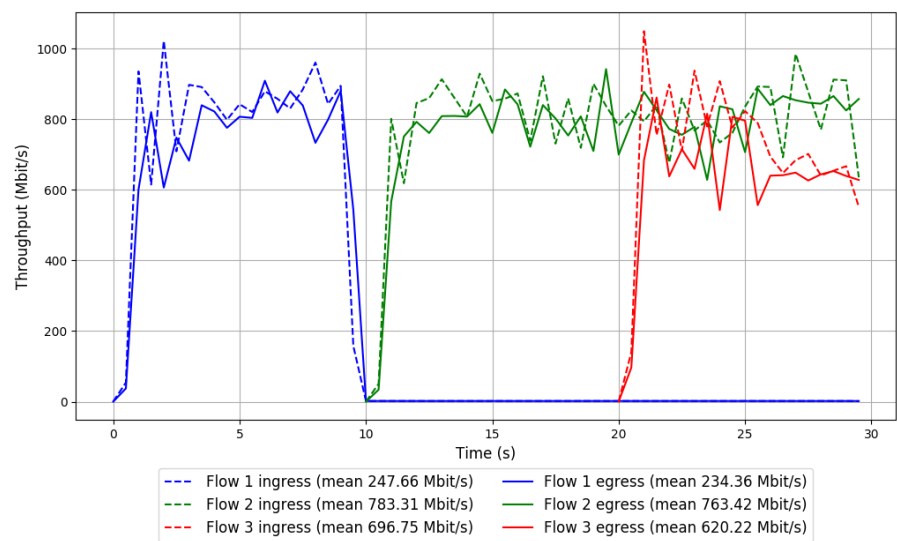
-- Flow 3:

Average throughput: 620.22 Mbit/s

95th percentile per-packet one-way delay: 311.179 ms

Loss rate: 10.98%

Run 10: Report of FillP — Data Link

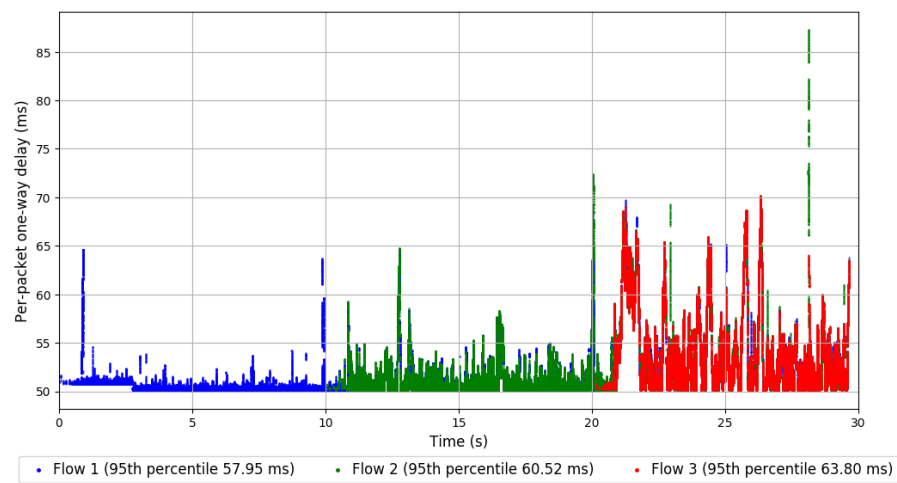
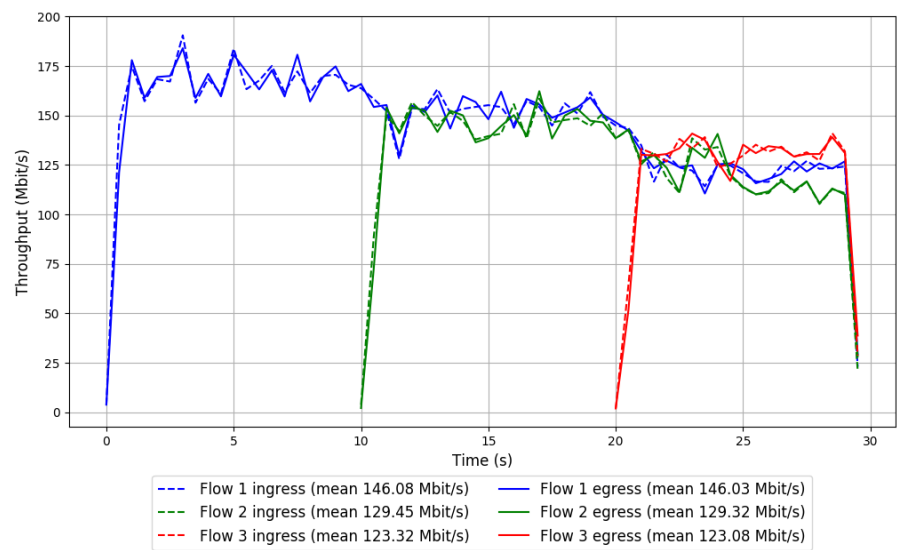


```
Run 1: Statistics of Indigo-1-32

Start at: 2018-04-18 13:07:17
End at: 2018-04-18 13:07:47

# Below is generated by plot.py at 2018-04-18 19:34:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 270.96 Mbit/s
95th percentile per-packet one-way delay: 60.309 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 146.03 Mbit/s
95th percentile per-packet one-way delay: 57.945 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 129.32 Mbit/s
95th percentile per-packet one-way delay: 60.515 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 123.08 Mbit/s
95th percentile per-packet one-way delay: 63.800 ms
Loss rate: 0.19%
```

Run 1: Report of Indigo-1-32 — Data Link

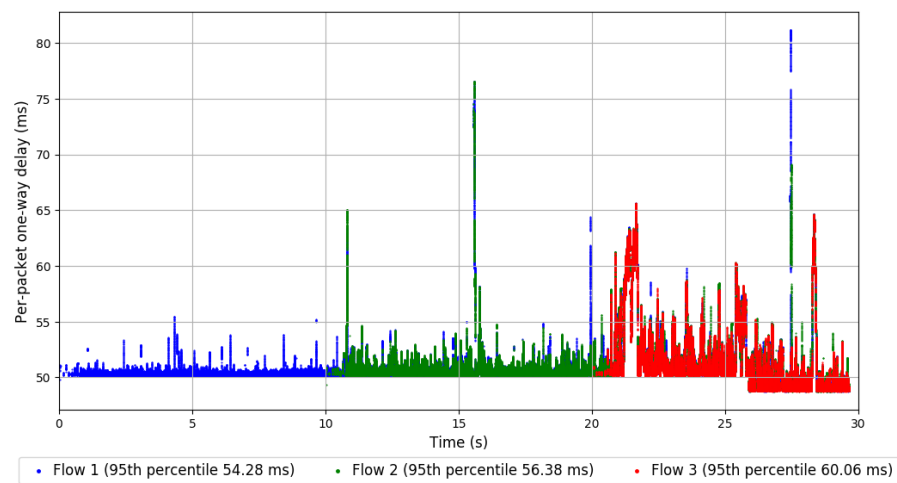
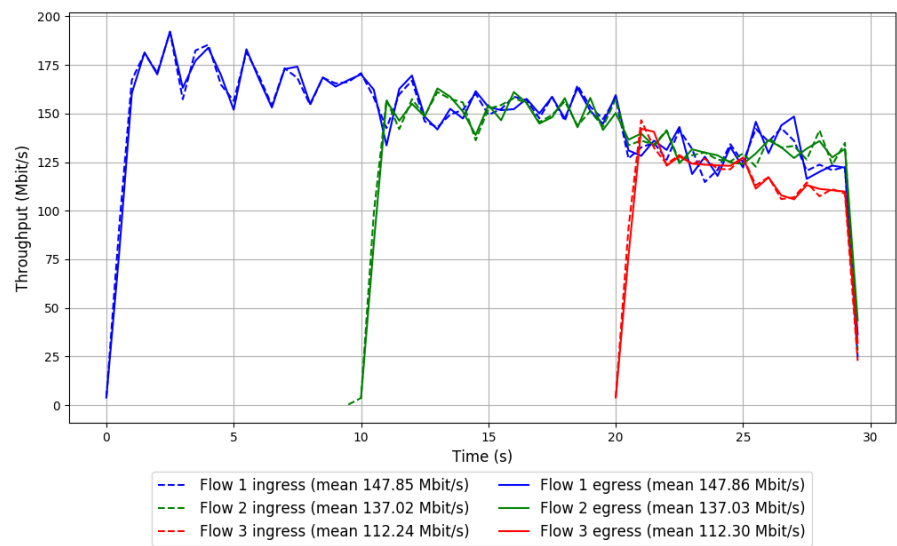


```
Run 2: Statistics of Indigo-1-32

Start at: 2018-04-18 13:22:44
End at: 2018-04-18 13:23:14

# Below is generated by plot.py at 2018-04-18 19:34:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 275.08 Mbit/s
95th percentile per-packet one-way delay: 55.869 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 147.86 Mbit/s
95th percentile per-packet one-way delay: 54.276 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 137.03 Mbit/s
95th percentile per-packet one-way delay: 56.376 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 112.30 Mbit/s
95th percentile per-packet one-way delay: 60.056 ms
Loss rate: 0.00%
```

Run 2: Report of Indigo-1-32 — Data Link



Run 3: Statistics of Indigo-1-32

Start at: 2018-04-18 13:38:16

End at: 2018-04-18 13:38:46

Below is generated by plot.py at 2018-04-18 19:34:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 247.86 Mbit/s

95th percentile per-packet one-way delay: 52.252 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 135.16 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 122.05 Mbit/s

95th percentile per-packet one-way delay: 52.423 ms

Loss rate: 0.00%

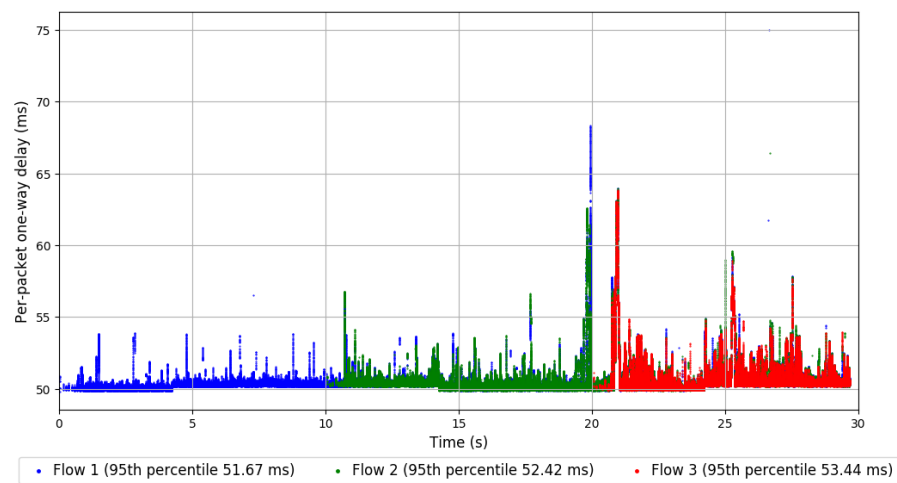
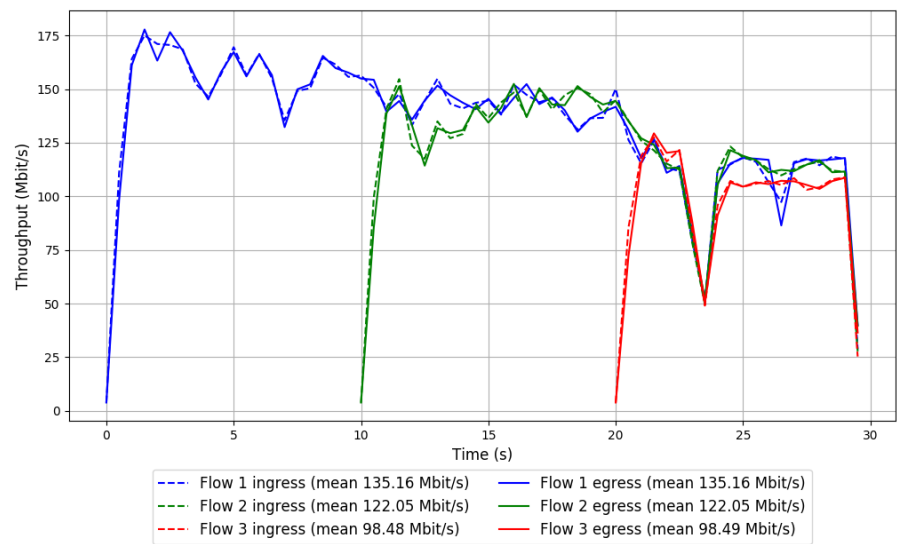
-- Flow 3:

Average throughput: 98.49 Mbit/s

95th percentile per-packet one-way delay: 53.436 ms

Loss rate: 0.00%

Run 3: Report of Indigo-1-32 — Data Link



Run 4: Statistics of Indigo-1-32

Start at: 2018-04-18 13:53:44

End at: 2018-04-18 13:54:14

Below is generated by plot.py at 2018-04-18 19:34:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 293.86 Mbit/s

95th percentile per-packet one-way delay: 65.682 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 155.77 Mbit/s

95th percentile per-packet one-way delay: 62.172 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 147.33 Mbit/s

95th percentile per-packet one-way delay: 65.371 ms

Loss rate: 0.00%

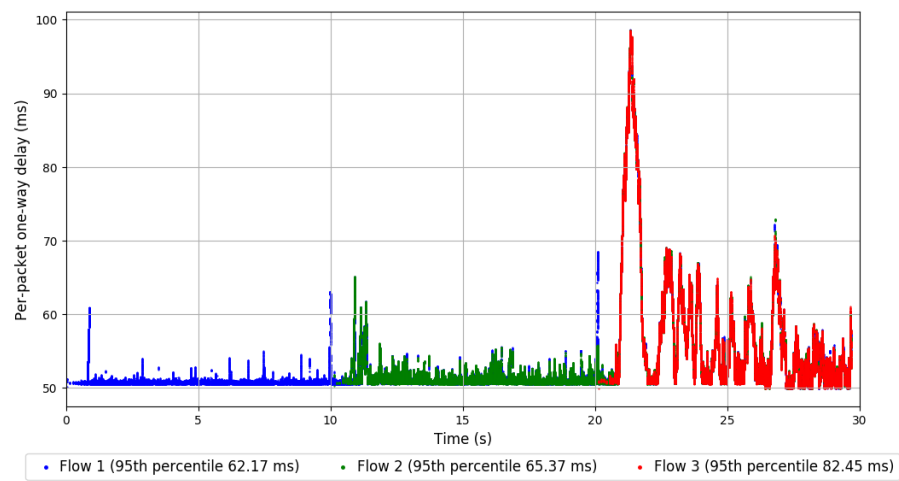
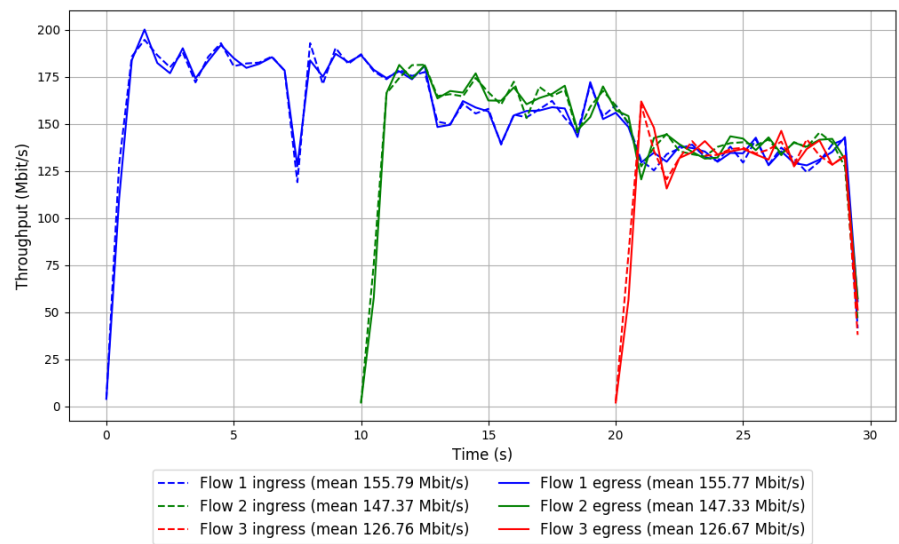
-- Flow 3:

Average throughput: 126.67 Mbit/s

95th percentile per-packet one-way delay: 82.446 ms

Loss rate: 0.01%

Run 4: Report of Indigo-1-32 — Data Link



Run 5: Statistics of Indigo-1-32

Start at: 2018-04-18 14:09:07

End at: 2018-04-18 14:09:37

Below is generated by plot.py at 2018-04-18 19:34:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 283.61 Mbit/s

95th percentile per-packet one-way delay: 54.545 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 153.53 Mbit/s

95th percentile per-packet one-way delay: 53.649 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 138.89 Mbit/s

95th percentile per-packet one-way delay: 54.789 ms

Loss rate: 0.00%

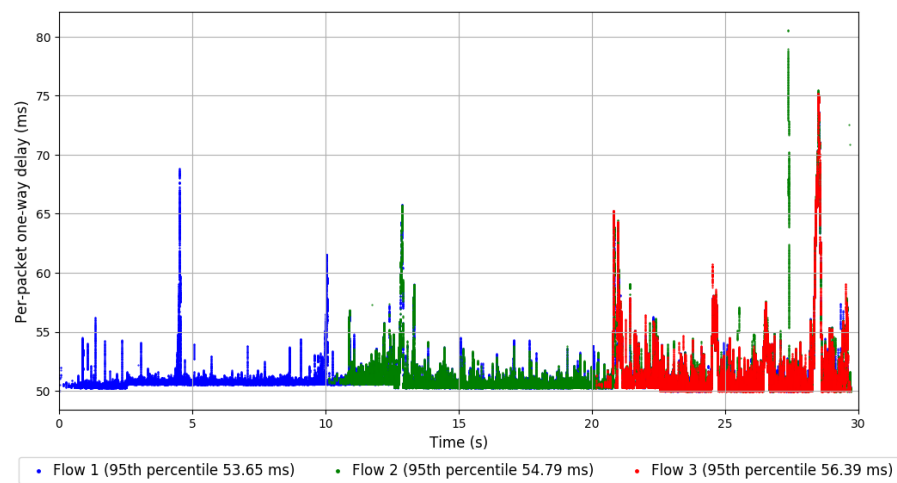
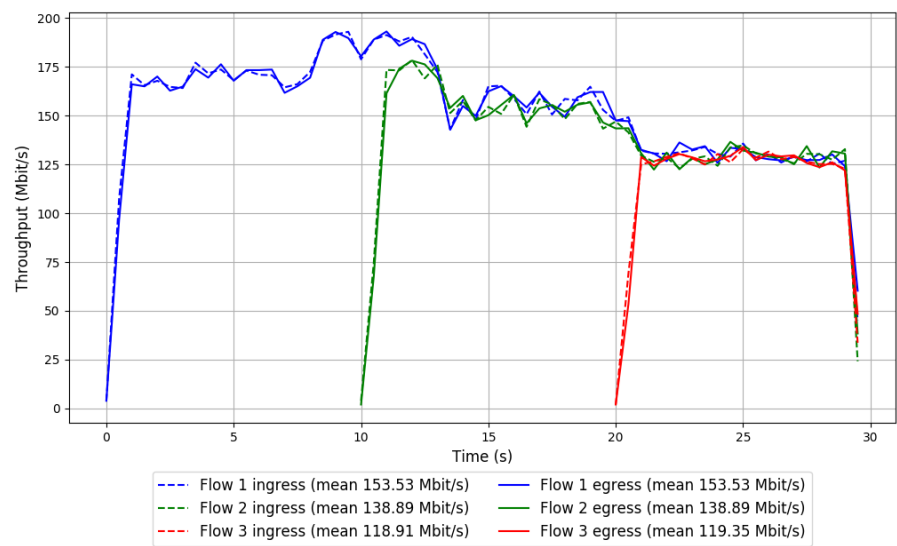
-- Flow 3:

Average throughput: 119.35 Mbit/s

95th percentile per-packet one-way delay: 56.389 ms

Loss rate: 0.00%

Run 5: Report of Indigo-1-32 — Data Link



Run 6: Statistics of Indigo-1-32

Start at: 2018-04-18 14:24:29

End at: 2018-04-18 14:24:59

Below is generated by plot.py at 2018-04-18 19:34:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 298.42 Mbit/s

95th percentile per-packet one-way delay: 65.889 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 163.56 Mbit/s

95th percentile per-packet one-way delay: 64.140 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 143.05 Mbit/s

95th percentile per-packet one-way delay: 66.030 ms

Loss rate: 0.00%

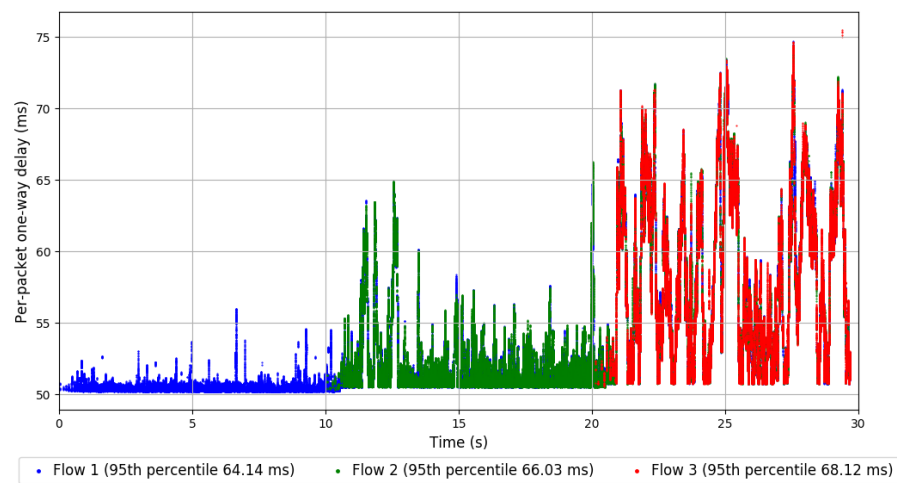
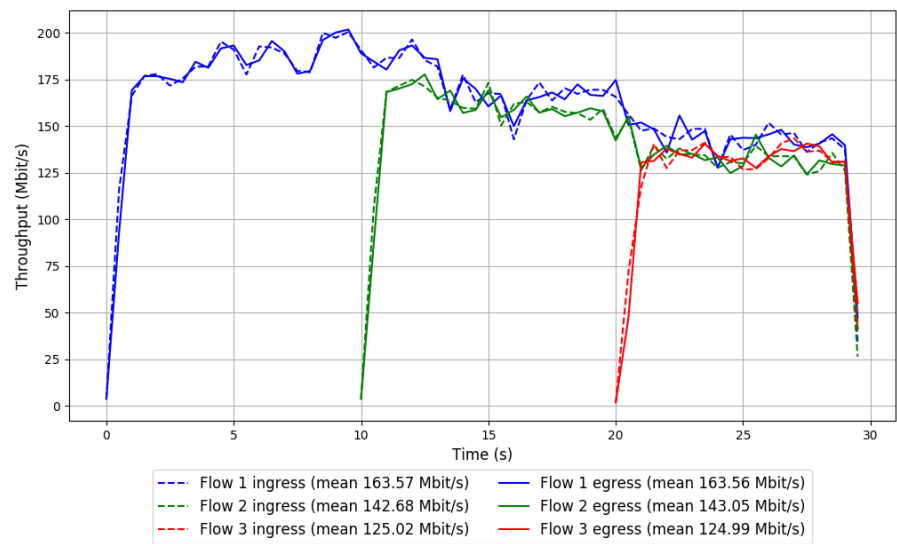
-- Flow 3:

Average throughput: 124.99 Mbit/s

95th percentile per-packet one-way delay: 68.116 ms

Loss rate: 0.01%

Run 6: Report of Indigo-1-32 — Data Link



Run 7: Statistics of Indigo-1-32

Start at: 2018-04-18 14:39:47

End at: 2018-04-18 14:40:17

Below is generated by plot.py at 2018-04-18 19:34:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 279.20 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 149.19 Mbit/s

95th percentile per-packet one-way delay: 52.713 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 136.86 Mbit/s

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

Loss rate: 0.00%

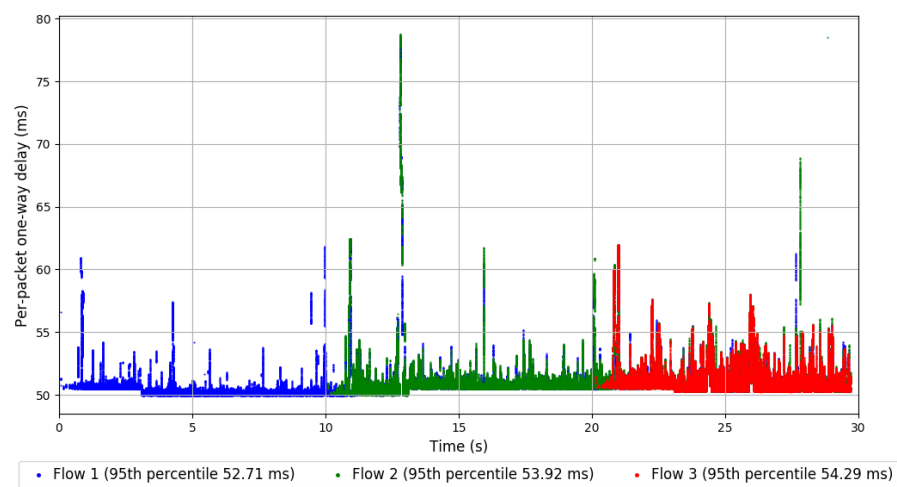
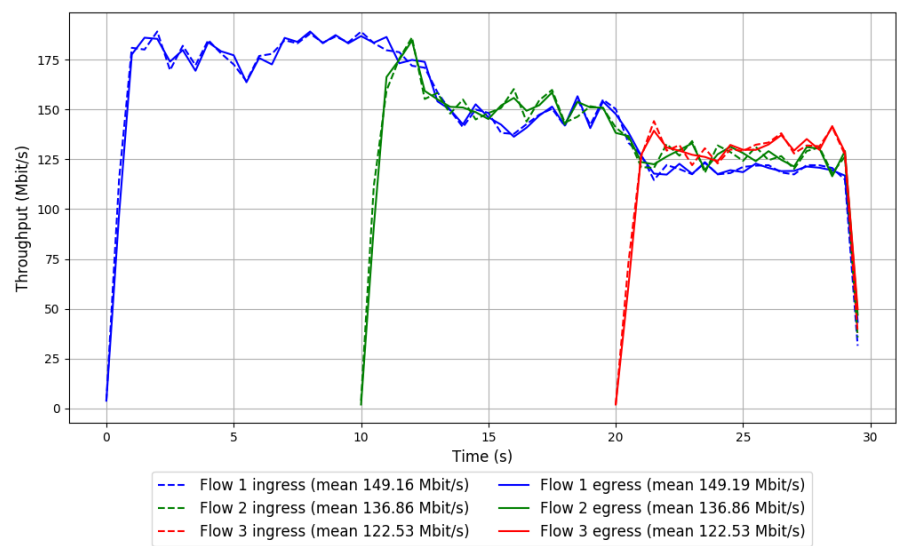
-- Flow 3:

Average throughput: 122.53 Mbit/s

95th percentile per-packet one-way delay: 54.291 ms

Loss rate: 0.00%

Run 7: Report of Indigo-1-32 — Data Link



Run 8: Statistics of Indigo-1-32

Start at: 2018-04-18 14:55:11

End at: 2018-04-18 14:55:41

Below is generated by plot.py at 2018-04-18 19:34:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 271.57 Mbit/s

95th percentile per-packet one-way delay: 54.927 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 144.23 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 134.66 Mbit/s

95th percentile per-packet one-way delay: 55.448 ms

Loss rate: 0.00%

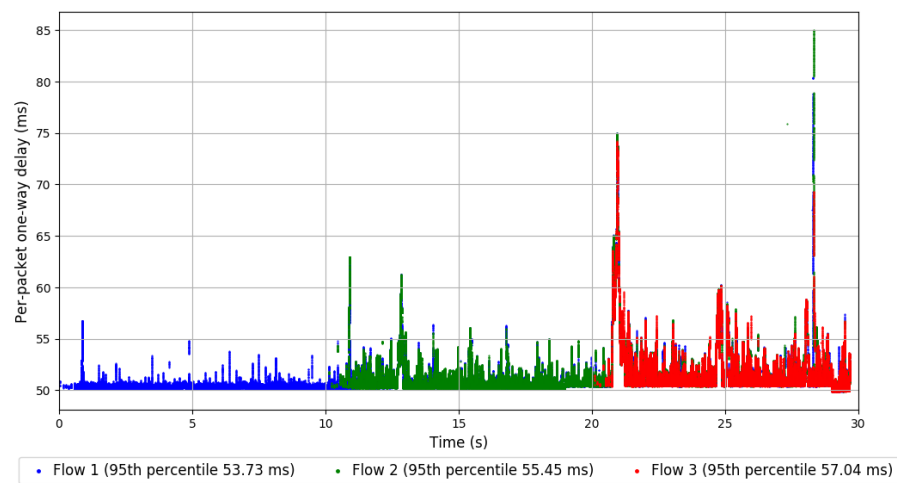
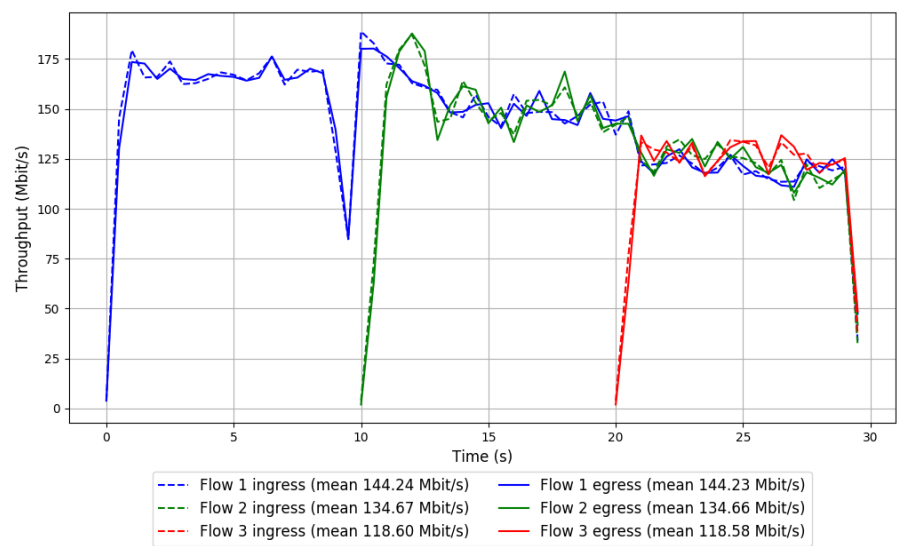
-- Flow 3:

Average throughput: 118.58 Mbit/s

95th percentile per-packet one-way delay: 57.037 ms

Loss rate: 0.00%

Run 8: Report of Indigo-1-32 — Data Link



Run 9: Statistics of Indigo-1-32

Start at: 2018-04-18 15:10:29

End at: 2018-04-18 15:10:59

Below is generated by plot.py at 2018-04-18 19:34:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 286.39 Mbit/s

95th percentile per-packet one-way delay: 60.569 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 159.80 Mbit/s

95th percentile per-packet one-way delay: 58.089 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 135.06 Mbit/s

95th percentile per-packet one-way delay: 61.107 ms

Loss rate: 0.00%

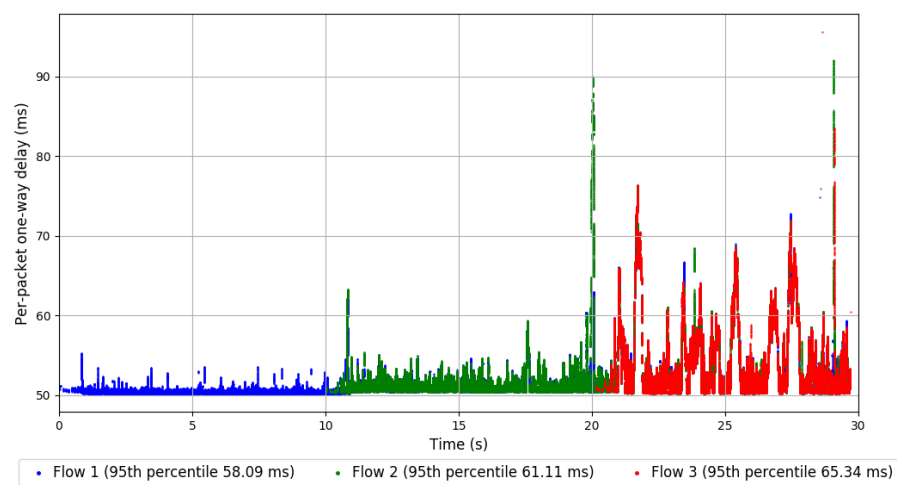
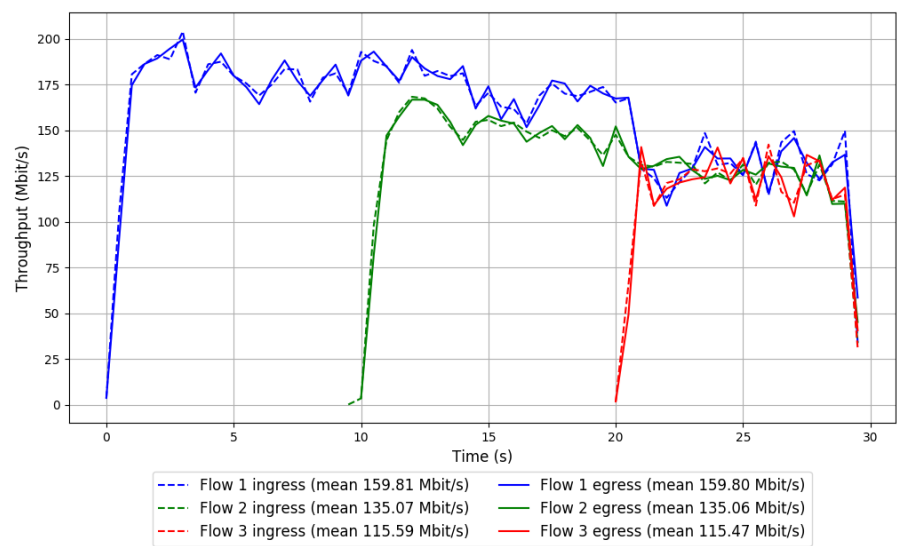
-- Flow 3:

Average throughput: 115.47 Mbit/s

95th percentile per-packet one-way delay: 65.343 ms

Loss rate: 0.01%

Run 9: Report of Indigo-1-32 — Data Link



Run 10: Statistics of Indigo-1-32

Start at: 2018-04-18 15:25:38

End at: 2018-04-18 15:26:08

Below is generated by plot.py at 2018-04-18 19:34:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 290.61 Mbit/s

95th percentile per-packet one-way delay: 67.033 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 158.00 Mbit/s

95th percentile per-packet one-way delay: 65.940 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 144.37 Mbit/s

95th percentile per-packet one-way delay: 67.946 ms

Loss rate: 0.01%

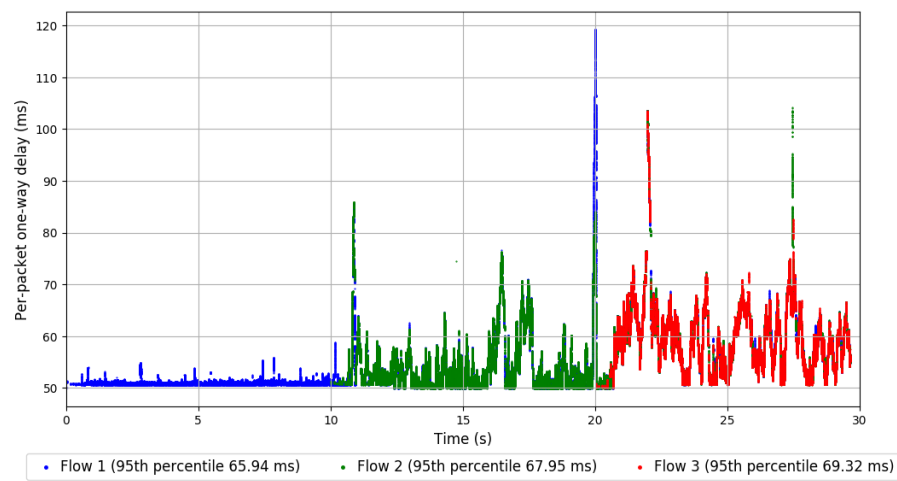
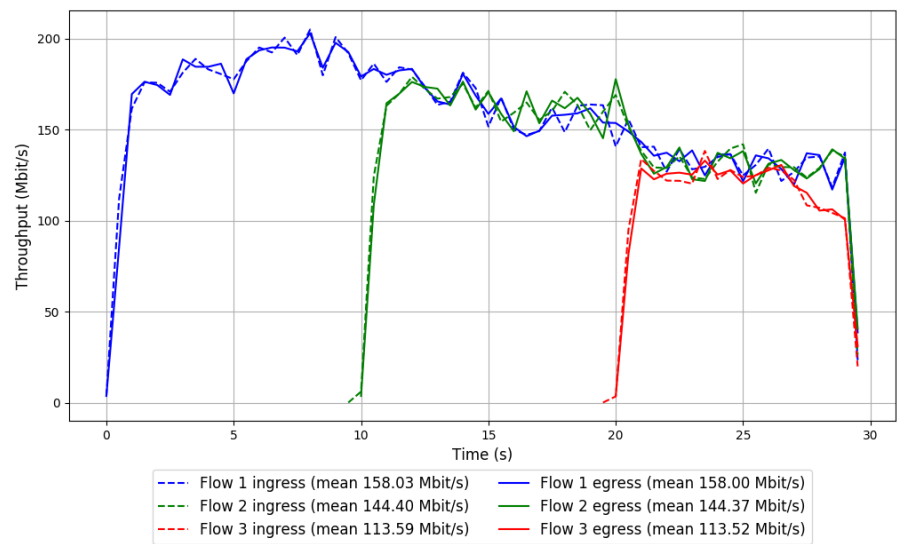
-- Flow 3:

Average throughput: 113.52 Mbit/s

95th percentile per-packet one-way delay: 69.324 ms

Loss rate: 0.01%

Run 10: Report of Indigo-1-32 — Data Link

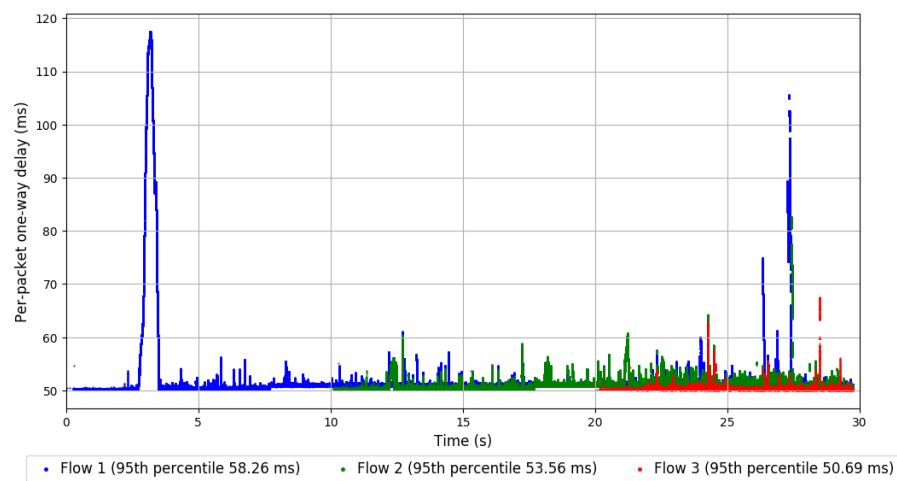
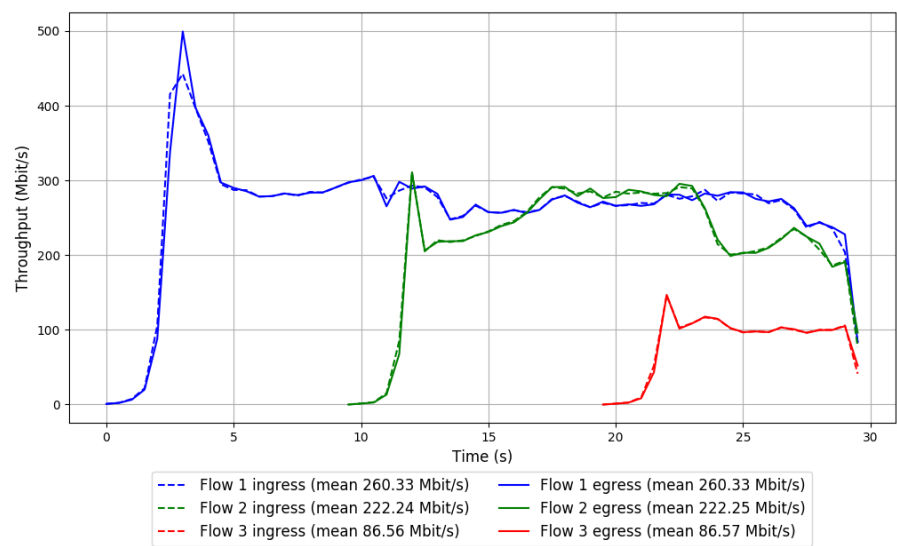


```
Run 1: Statistics of PCC-Vivace

Start at: 2018-04-18 12:55:50
End at: 2018-04-18 12:56:20

# Below is generated by plot.py at 2018-04-18 19:34:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 437.38 Mbit/s
95th percentile per-packet one-way delay: 54.337 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 260.33 Mbit/s
95th percentile per-packet one-way delay: 58.256 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 222.25 Mbit/s
95th percentile per-packet one-way delay: 53.556 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 86.57 Mbit/s
95th percentile per-packet one-way delay: 50.692 ms
Loss rate: 0.00%
```


Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2018-04-18 13:11:03

End at: 2018-04-18 13:11:33

Below is generated by plot.py at 2018-04-18 19:34:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 481.38 Mbit/s

95th percentile per-packet one-way delay: 54.793 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 288.52 Mbit/s

95th percentile per-packet one-way delay: 59.556 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 244.23 Mbit/s

95th percentile per-packet one-way delay: 53.876 ms

Loss rate: 0.00%

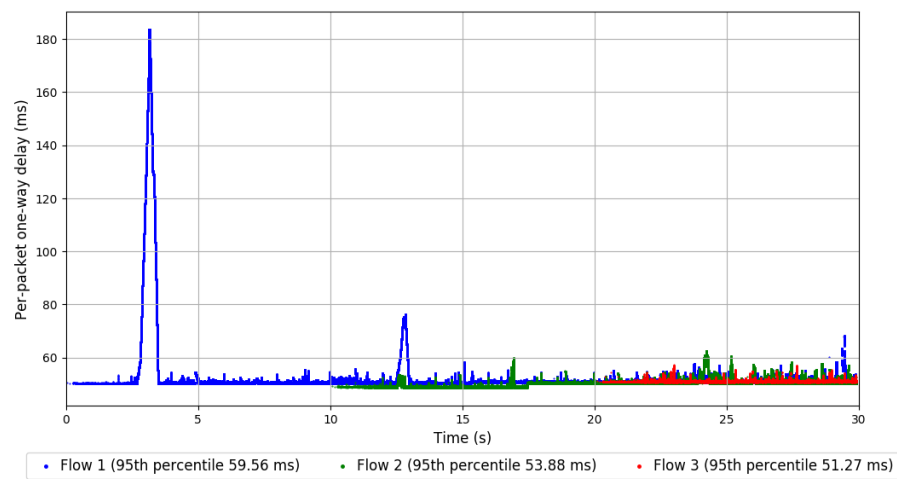
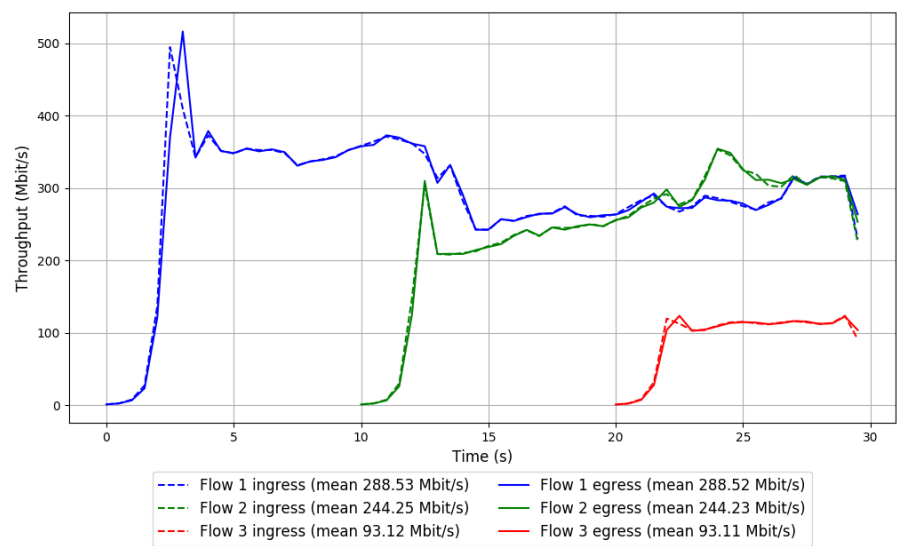
-- Flow 3:

Average throughput: 93.11 Mbit/s

95th percentile per-packet one-way delay: 51.269 ms

Loss rate: 0.00%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2018-04-18 13:26:27

End at: 2018-04-18 13:26:57

Below is generated by plot.py at 2018-04-18 19:34:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 472.46 Mbit/s

95th percentile per-packet one-way delay: 56.595 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 235.72 Mbit/s

95th percentile per-packet one-way delay: 54.799 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 266.06 Mbit/s

95th percentile per-packet one-way delay: 76.301 ms

Loss rate: 0.00%

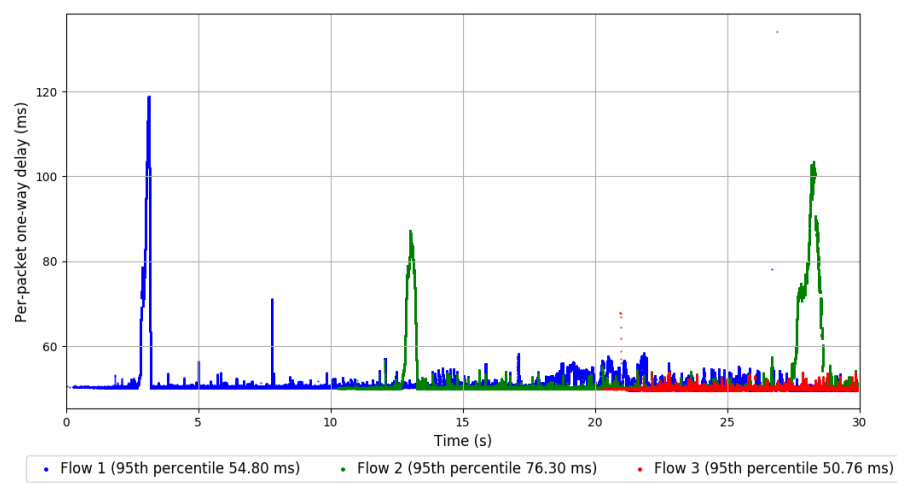
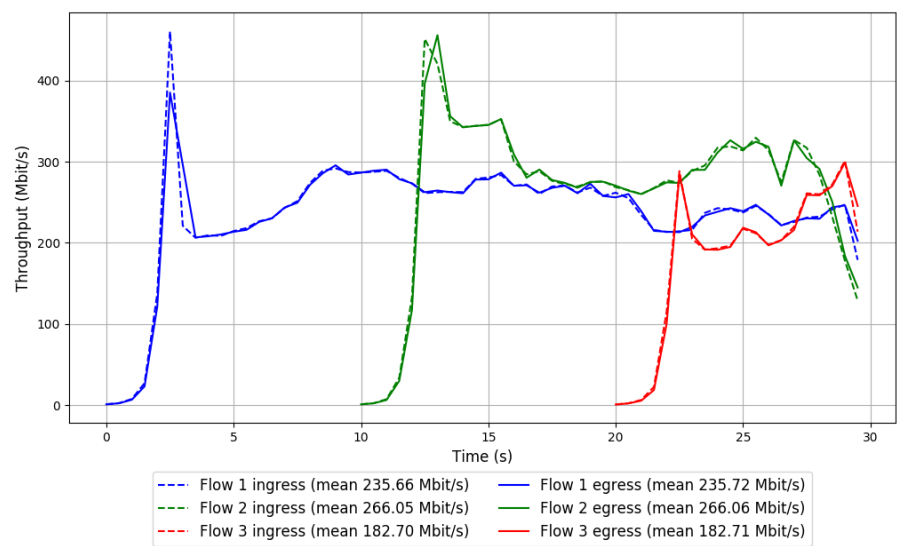
-- Flow 3:

Average throughput: 182.71 Mbit/s

95th percentile per-packet one-way delay: 50.759 ms

Loss rate: 0.00%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2018-04-18 13:42:00

End at: 2018-04-18 13:42:30

Below is generated by plot.py at 2018-04-18 19:34:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 474.88 Mbit/s

95th percentile per-packet one-way delay: 55.664 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 244.46 Mbit/s

95th percentile per-packet one-way delay: 62.600 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 259.02 Mbit/s

95th percentile per-packet one-way delay: 51.117 ms

Loss rate: 0.00%

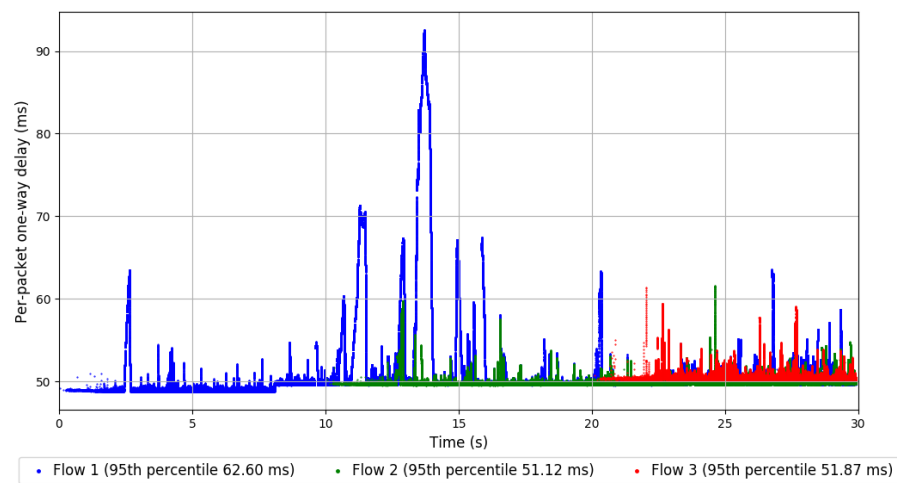
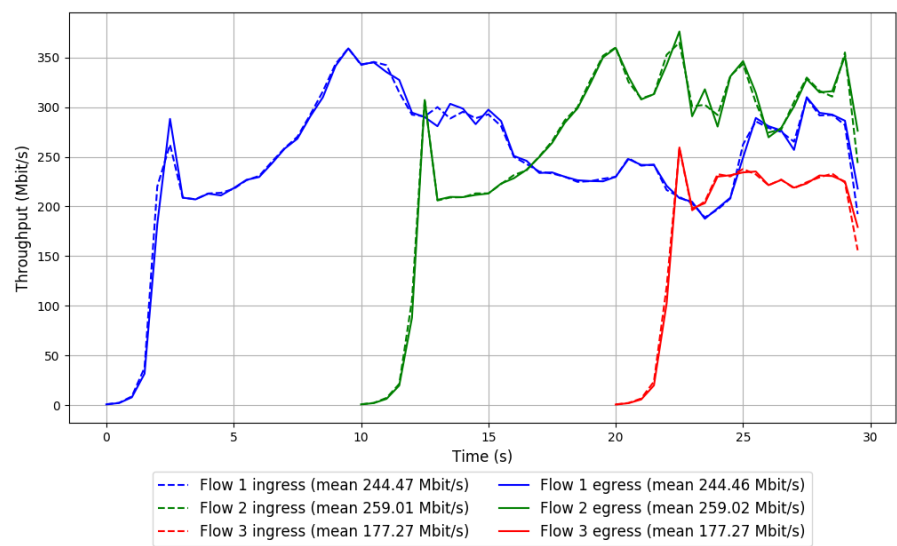
-- Flow 3:

Average throughput: 177.27 Mbit/s

95th percentile per-packet one-way delay: 51.867 ms

Loss rate: 0.00%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2018-04-18 13:57:27

End at: 2018-04-18 13:57:57

Below is generated by plot.py at 2018-04-18 19:34:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 442.22 Mbit/s

95th percentile per-packet one-way delay: 70.642 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 283.63 Mbit/s

95th percentile per-packet one-way delay: 72.878 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 223.37 Mbit/s

95th percentile per-packet one-way delay: 52.013 ms

Loss rate: 0.00%

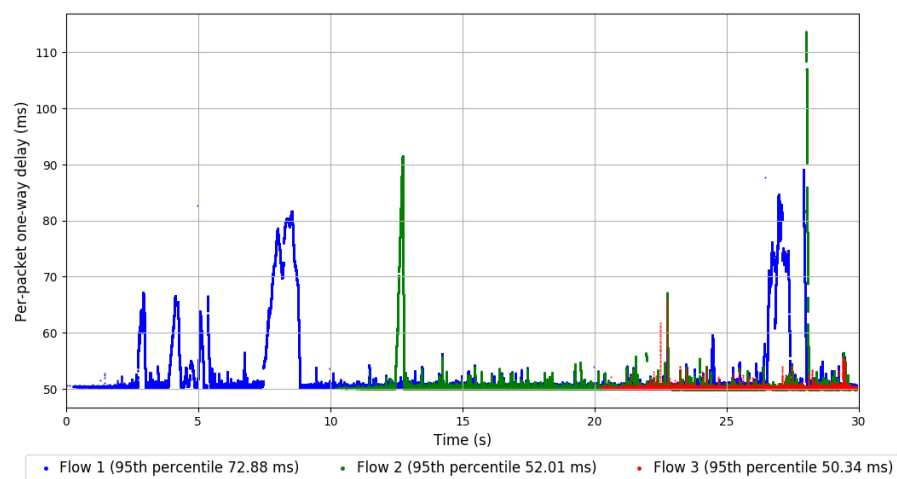
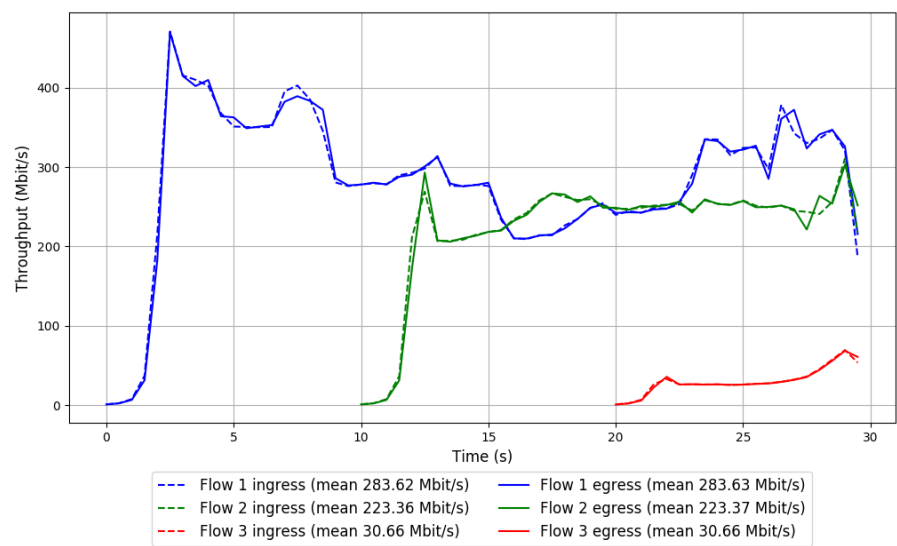
-- Flow 3:

Average throughput: 30.66 Mbit/s

95th percentile per-packet one-way delay: 50.341 ms

Loss rate: 0.00%

Run 5: Report of PCC-Vivace — Data Link



Run 6: Statistics of PCC-Vivace

Start at: 2018-04-18 14:12:48

End at: 2018-04-18 14:13:18

Below is generated by plot.py at 2018-04-18 19:34:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 448.16 Mbit/s

95th percentile per-packet one-way delay: 54.157 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 254.77 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 250.16 Mbit/s

95th percentile per-packet one-way delay: 53.316 ms

Loss rate: 0.00%

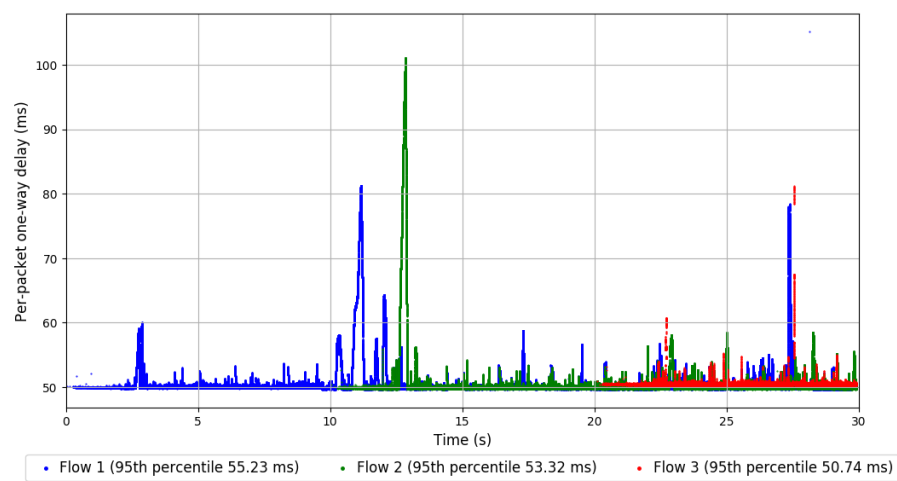
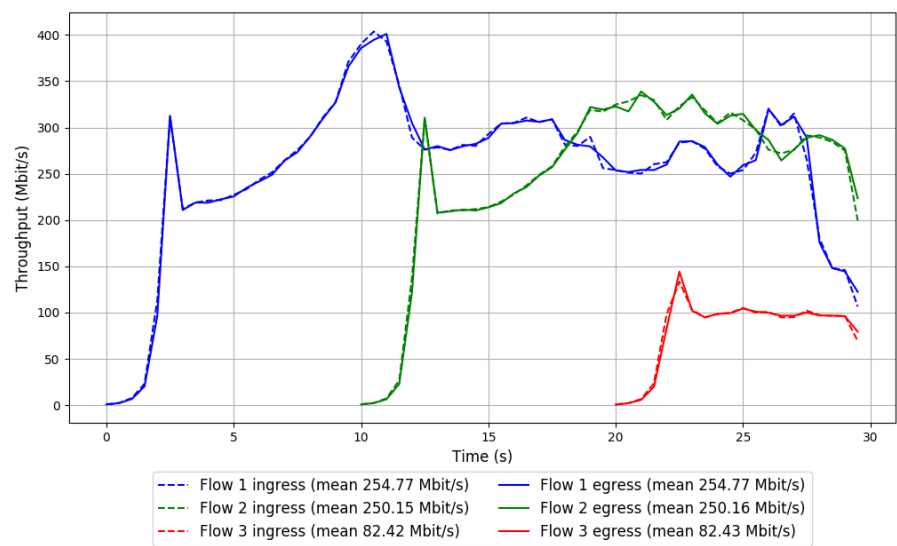
-- Flow 3:

Average throughput: 82.43 Mbit/s

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

Loss rate: 0.00%

Run 6: Report of PCC-Vivace — Data Link



Run 7: Statistics of PCC-Vivace

Start at: 2018-04-18 14:28:11

End at: 2018-04-18 14:28:41

Below is generated by plot.py at 2018-04-18 19:34:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 470.64 Mbit/s

95th percentile per-packet one-way delay: 234.117 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 278.63 Mbit/s

95th percentile per-packet one-way delay: 239.381 ms

Loss rate: 2.04%

-- Flow 2:

Average throughput: 204.05 Mbit/s

95th percentile per-packet one-way delay: 50.968 ms

Loss rate: 0.00%

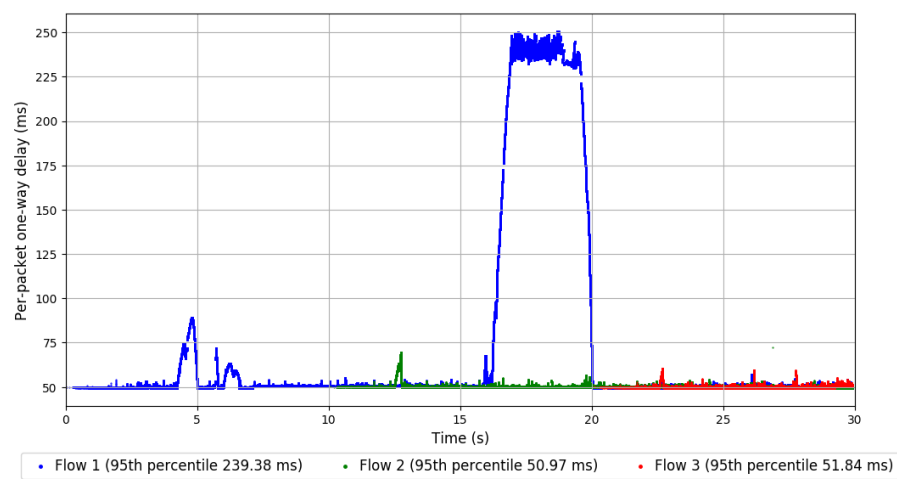
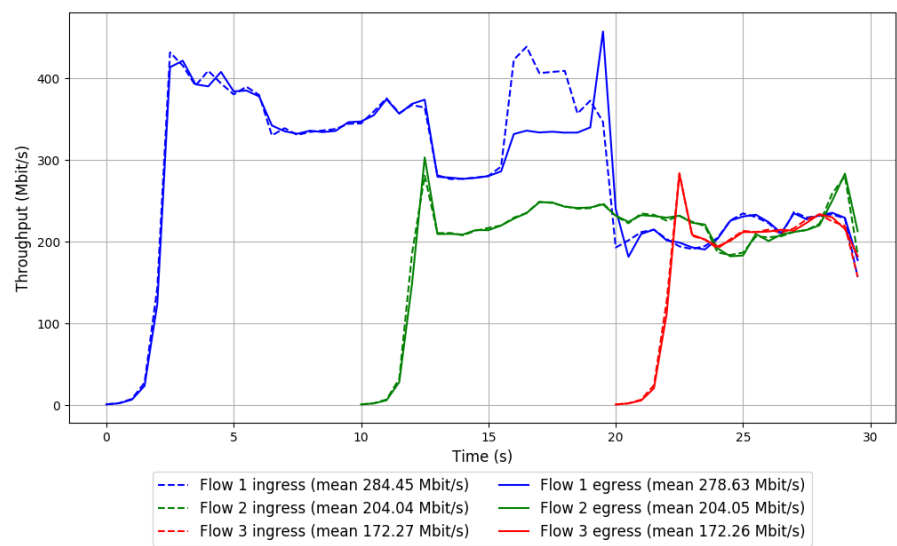
-- Flow 3:

Average throughput: 172.26 Mbit/s

95th percentile per-packet one-way delay: 51.843 ms

Loss rate: 0.00%

Run 7: Report of PCC-Vivace — Data Link



Run 8: Statistics of PCC-Vivace

Start at: 2018-04-18 14:43:25

End at: 2018-04-18 14:43:55

Below is generated by plot.py at 2018-04-18 19:35:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 447.20 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 252.94 Mbit/s

95th percentile per-packet one-way delay: 51.262 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 241.41 Mbit/s

95th percentile per-packet one-way delay: 68.232 ms

Loss rate: 0.00%

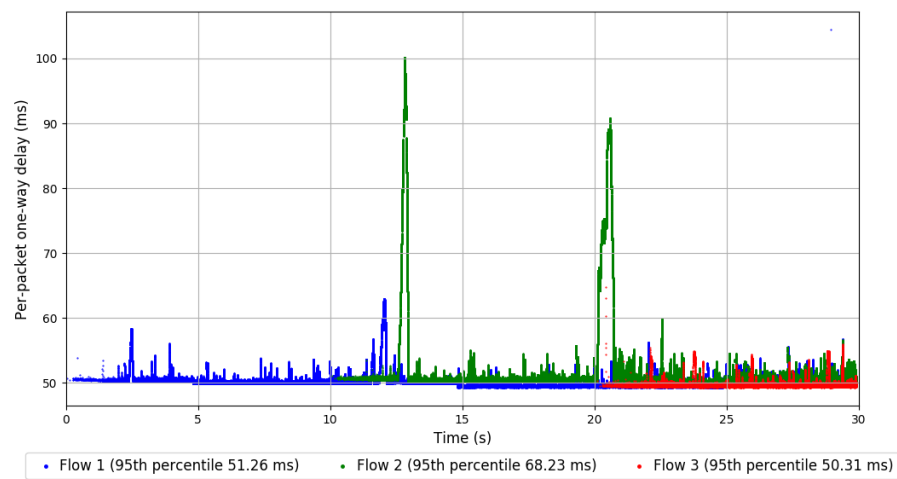
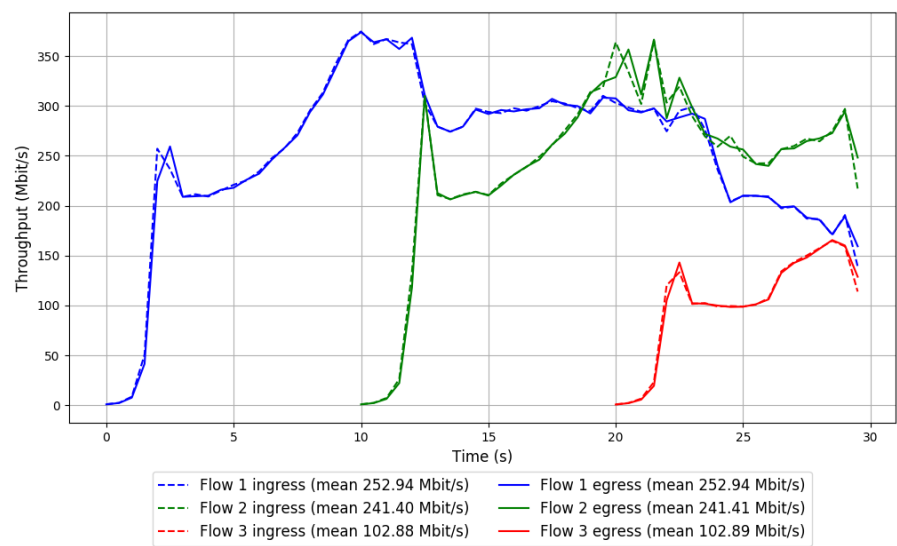
-- Flow 3:

Average throughput: 102.89 Mbit/s

95th percentile per-packet one-way delay: 50.307 ms

Loss rate: 0.00%

Run 8: Report of PCC-Vivace — Data Link



Run 9: Statistics of PCC-Vivace

Start at: 2018-04-18 14:58:51

End at: 2018-04-18 14:59:21

Below is generated by plot.py at 2018-04-18 19:35:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 351.24 Mbit/s

95th percentile per-packet one-way delay: 51.709 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 240.93 Mbit/s

95th percentile per-packet one-way delay: 51.444 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 121.76 Mbit/s

95th percentile per-packet one-way delay: 52.532 ms

Loss rate: 0.00%

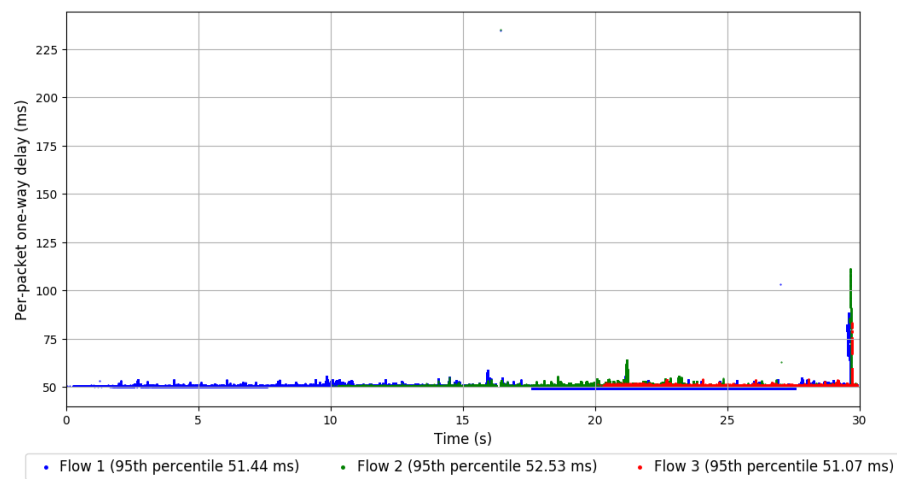
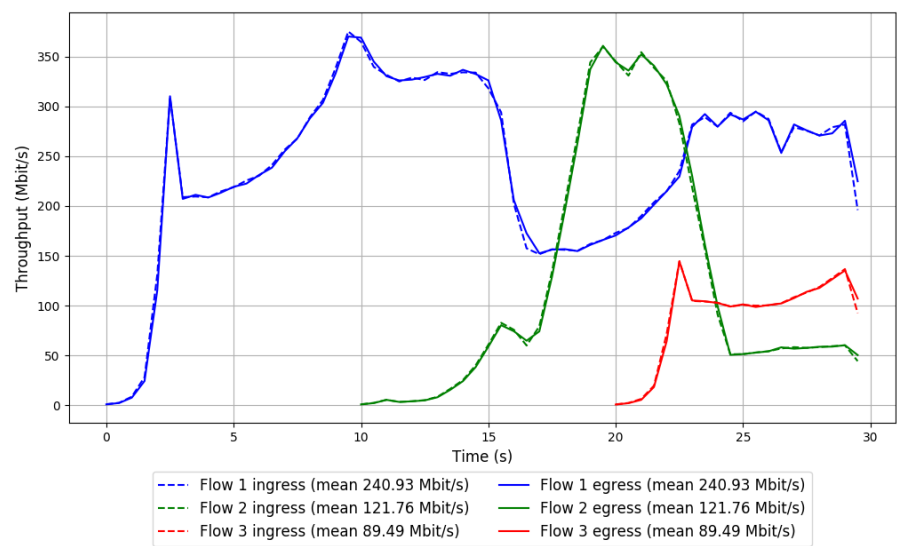
-- Flow 3:

Average throughput: 89.49 Mbit/s

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

Loss rate: 0.00%

Run 9: Report of PCC-Vivace — Data Link



Run 10: Statistics of PCC-Vivace

Start at: 2018-04-18 15:14:13

End at: 2018-04-18 15:14:43

Below is generated by plot.py at 2018-04-18 19:35:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 435.26 Mbit/s

95th percentile per-packet one-way delay: 51.229 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 250.68 Mbit/s

95th percentile per-packet one-way delay: 51.229 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 225.71 Mbit/s

95th percentile per-packet one-way delay: 51.243 ms

Loss rate: 0.00%

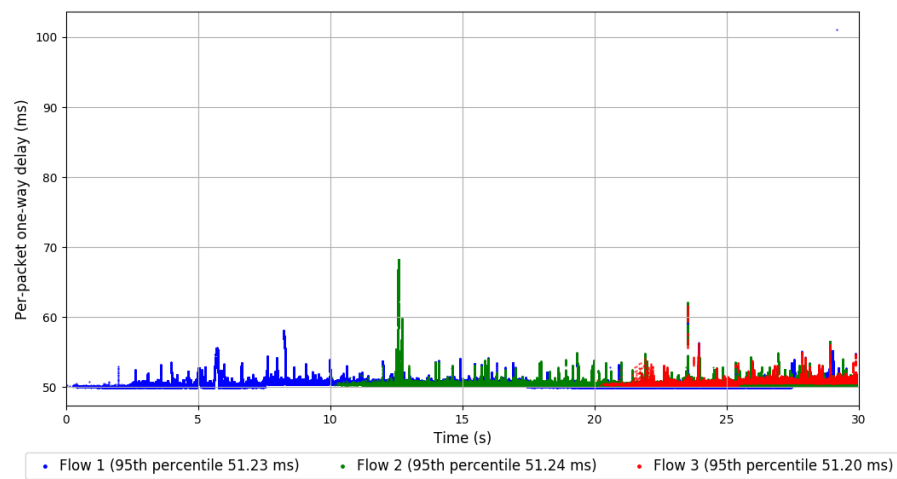
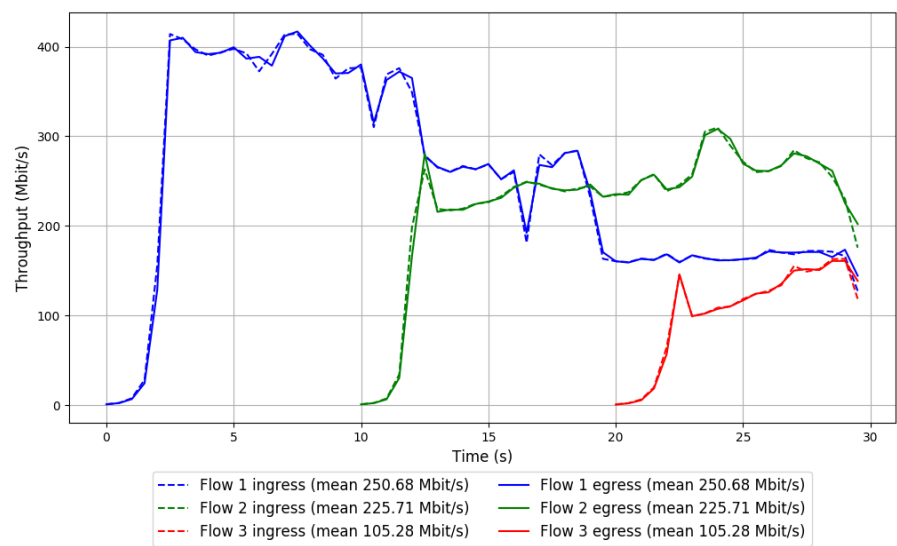
-- Flow 3:

Average throughput: 105.28 Mbit/s

95th percentile per-packet one-way delay: 51.201 ms

Loss rate: 0.00%

Run 10: Report of PCC-Vivace — Data Link



Run 1: Statistics of PCC-Expr

Start at: 2018-04-18 13:02:00

End at: 2018-04-18 13:02:30

Run 1: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 2: Statistics of PCC-Expr

Start at: 2018-04-18 13:17:31

End at: 2018-04-18 13:18:01

Run 2: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 3: Statistics of PCC-Expr

Start at: 2018-04-18 13:32:56

End at: 2018-04-18 13:33:26

Run 3: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 4: Statistics of PCC-Expr

Start at: 2018-04-18 13:48:26

End at: 2018-04-18 13:48:56

Run 4: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 5: Statistics of PCC-Expr

Start at: 2018-04-18 14:03:51

End at: 2018-04-18 14:04:21

Run 5: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 6: Statistics of PCC-Expr

Start at: 2018-04-18 14:19:10

End at: 2018-04-18 14:19:40

Run 6: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 7: Statistics of PCC-Expr

Start at: 2018-04-18 14:34:40

End at: 2018-04-18 14:35:10

Run 7: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 8: Statistics of PCC-Expr

Start at: 2018-04-18 14:49:52

End at: 2018-04-18 14:50:22

Run 8: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 9: Statistics of PCC-Expr

Start at: 2018-04-18 15:05:11

End at: 2018-04-18 15:05:41

Run 9: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 10: Statistics of PCC-Expr

Start at: 2018-04-18 15:20:38

End at: 2018-04-18 15:21:08

Run 10: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing