

Pantheon Report

Generated at 2018-04-18 17:14:19 (UTC).

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

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.

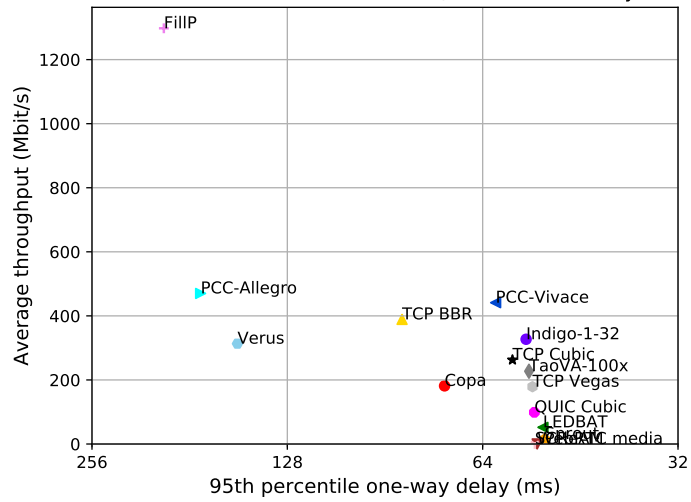
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

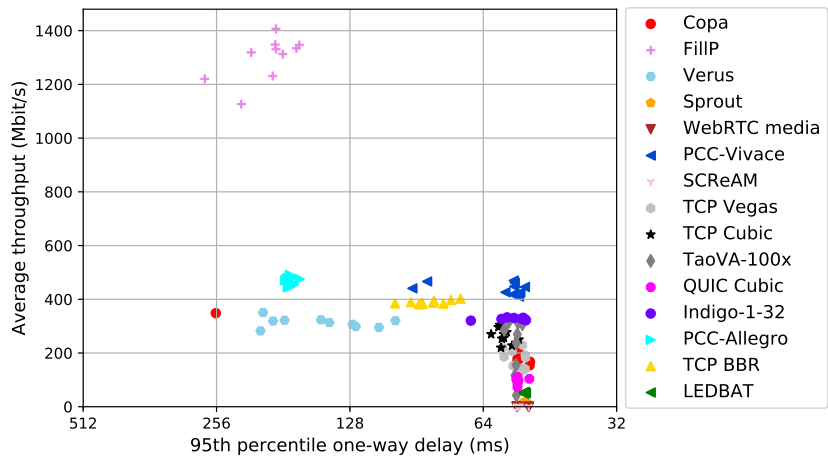
Git summary:

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



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

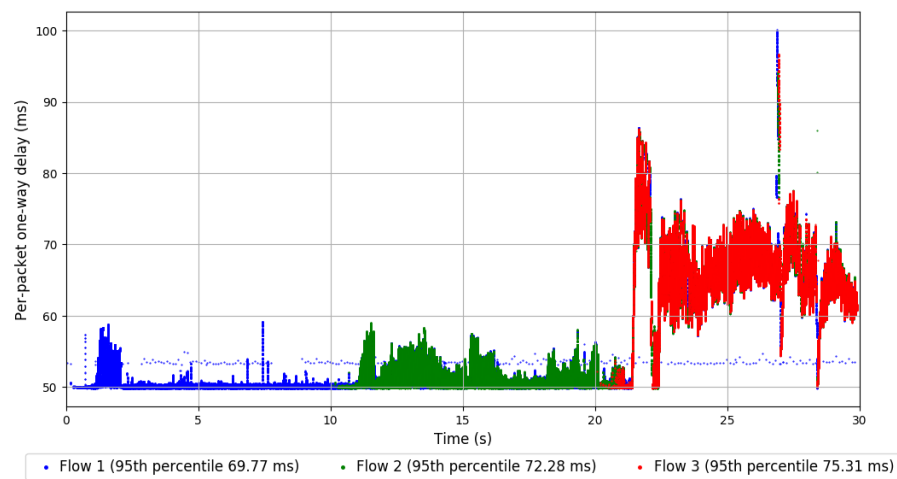
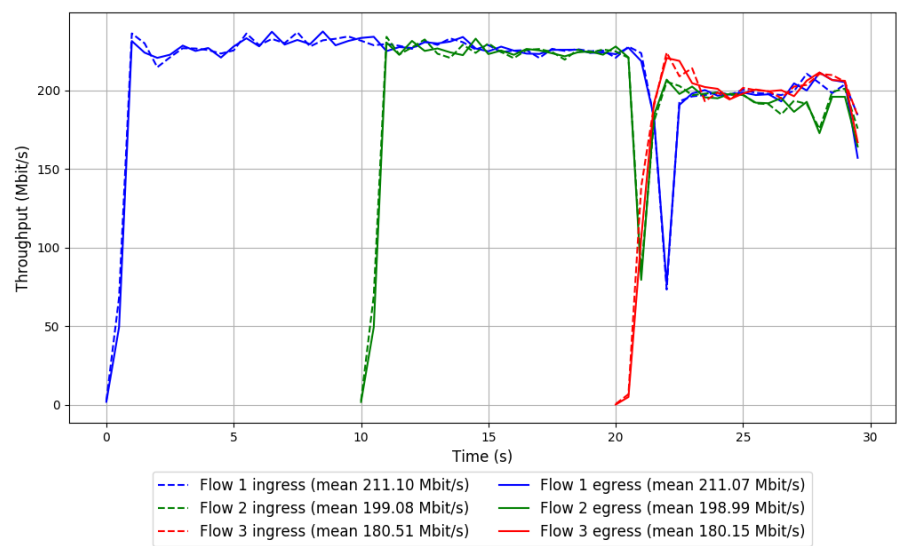



```
Run 1: Statistics of TCP BBR

Start at: 2018-04-18 10:17:21
End at: 2018-04-18 10:17:51

# Below is generated by plot.py at 2018-04-18 15:41:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 402.39 Mbit/s
95th percentile per-packet one-way delay: 72.029 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 211.07 Mbit/s
95th percentile per-packet one-way delay: 69.767 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 198.99 Mbit/s
95th percentile per-packet one-way delay: 72.283 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 180.15 Mbit/s
95th percentile per-packet one-way delay: 75.308 ms
Loss rate: 1.23%
```


Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-04-18 10:32:12

End at: 2018-04-18 10:32:42

Below is generated by plot.py at 2018-04-18 15:41:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 387.47 Mbit/s

95th percentile per-packet one-way delay: 83.100 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 205.44 Mbit/s

95th percentile per-packet one-way delay: 81.497 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 191.68 Mbit/s

95th percentile per-packet one-way delay: 83.098 ms

Loss rate: 0.59%

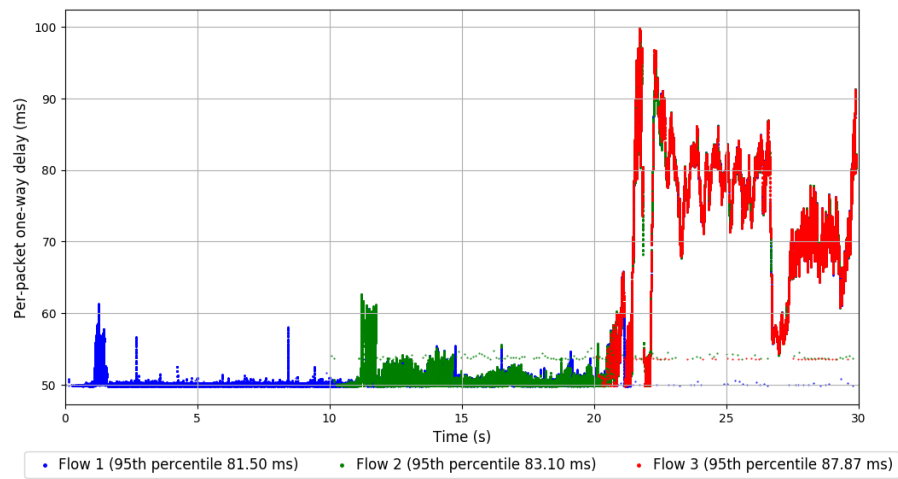
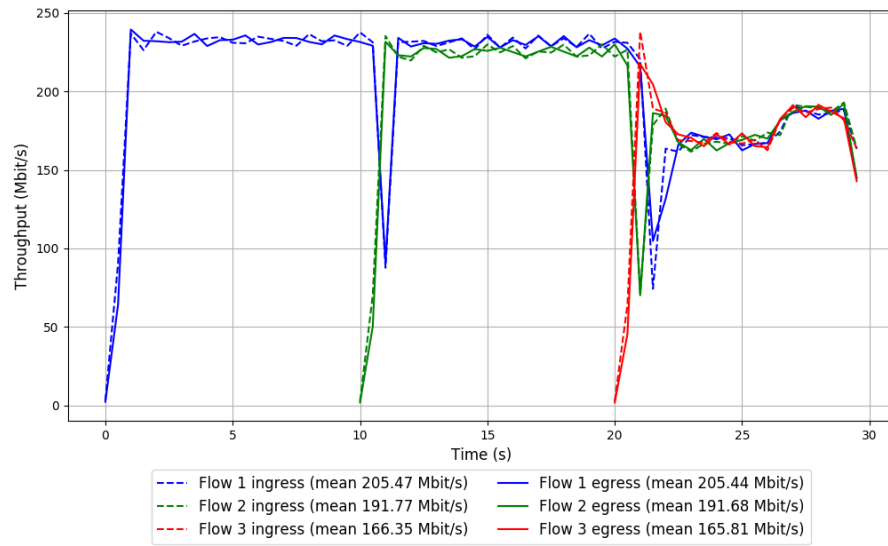
-- Flow 3:

Average throughput: 165.81 Mbit/s

95th percentile per-packet one-way delay: 87.871 ms

Loss rate: 1.40%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-04-18 10:47:42

End at: 2018-04-18 10:48:12

Below is generated by plot.py at 2018-04-18 15:41:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 397.08 Mbit/s

95th percentile per-packet one-way delay: 75.716 ms

Loss rate: 0.57%

-- Flow 1:

Average throughput: 210.65 Mbit/s

95th percentile per-packet one-way delay: 73.726 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 194.62 Mbit/s

95th percentile per-packet one-way delay: 75.707 ms

Loss rate: 0.57%

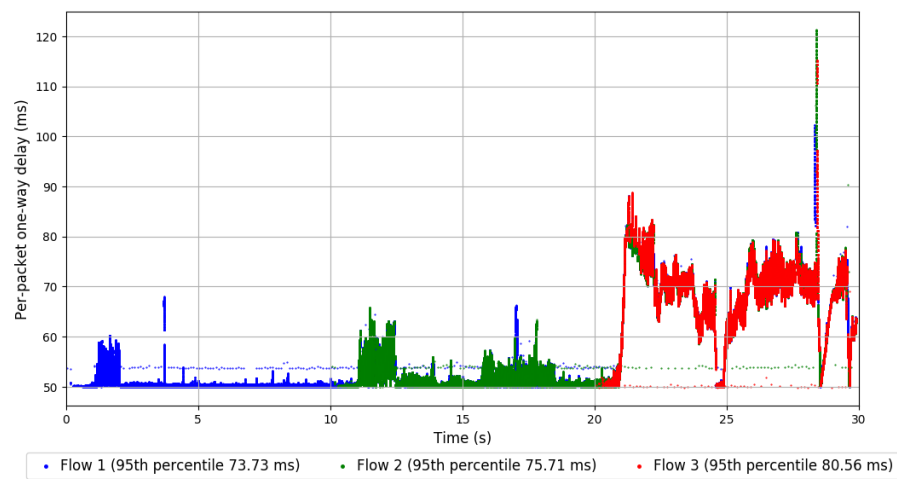
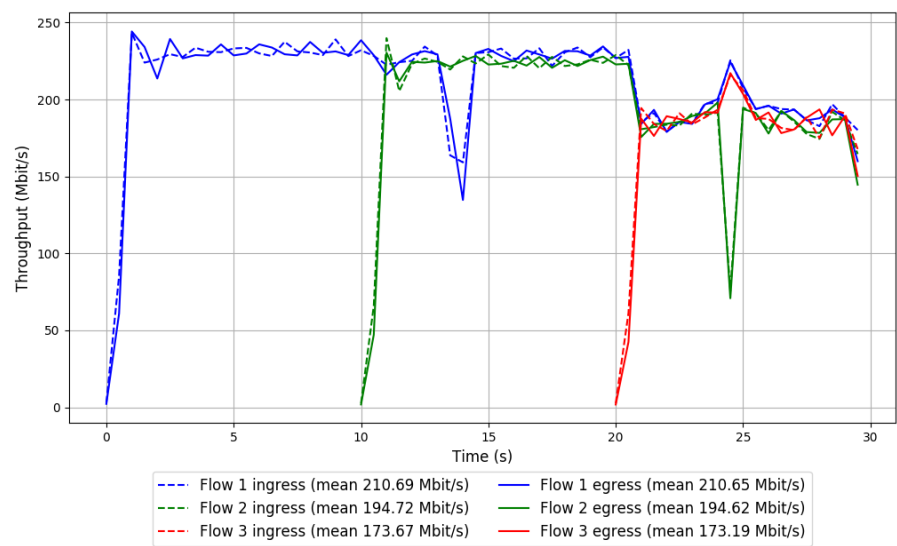
-- Flow 3:

Average throughput: 173.19 Mbit/s

95th percentile per-packet one-way delay: 80.562 ms

Loss rate: 1.29%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-04-18 11:03:13

End at: 2018-04-18 11:03:43

Below is generated by plot.py at 2018-04-18 15:41:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 394.45 Mbit/s

95th percentile per-packet one-way delay: 82.682 ms

Loss rate: 0.60%

-- Flow 1:

Average throughput: 205.30 Mbit/s

95th percentile per-packet one-way delay: 79.860 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 193.97 Mbit/s

95th percentile per-packet one-way delay: 82.847 ms

Loss rate: 0.61%

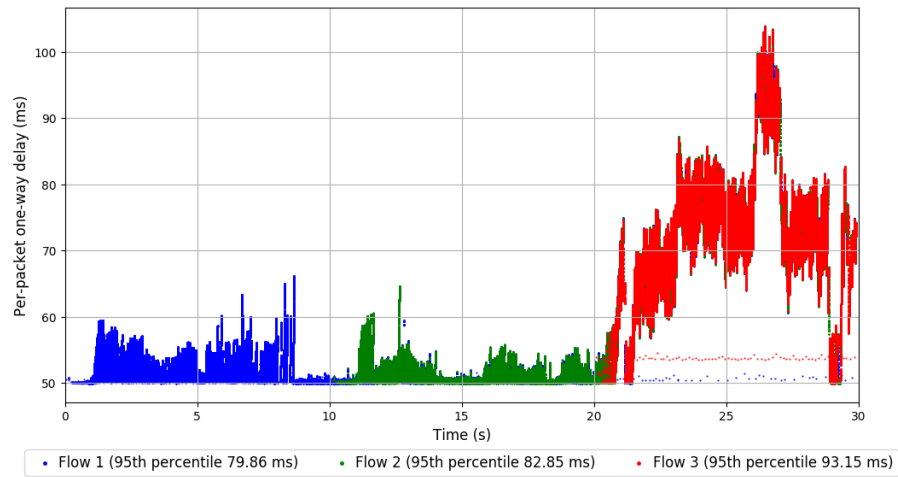
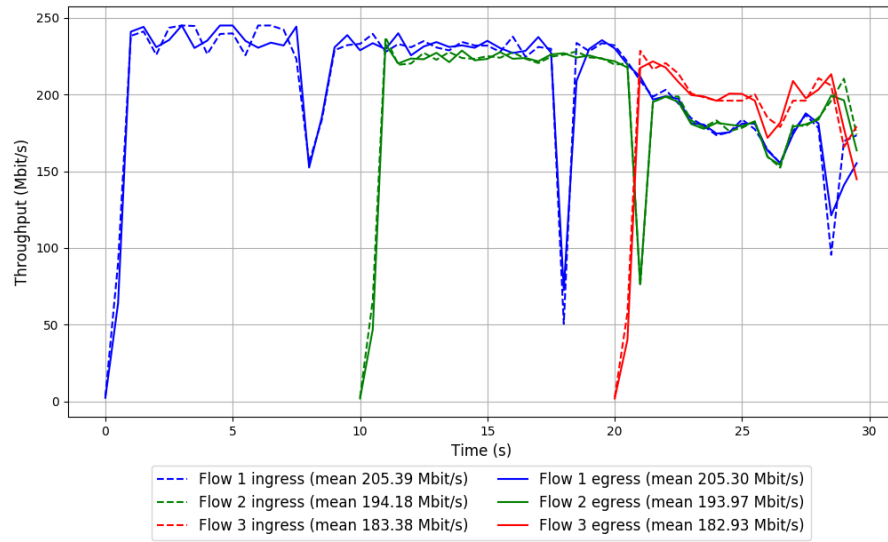
-- Flow 3:

Average throughput: 182.93 Mbit/s

95th percentile per-packet one-way delay: 93.154 ms

Loss rate: 1.29%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-04-18 11:18:28

End at: 2018-04-18 11:18:58

Below is generated by plot.py at 2018-04-18 15:41:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 381.85 Mbit/s

95th percentile per-packet one-way delay: 89.374 ms

Loss rate: 0.62%

-- Flow 1:

Average throughput: 202.36 Mbit/s

95th percentile per-packet one-way delay: 87.610 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 191.46 Mbit/s

95th percentile per-packet one-way delay: 89.535 ms

Loss rate: 0.60%

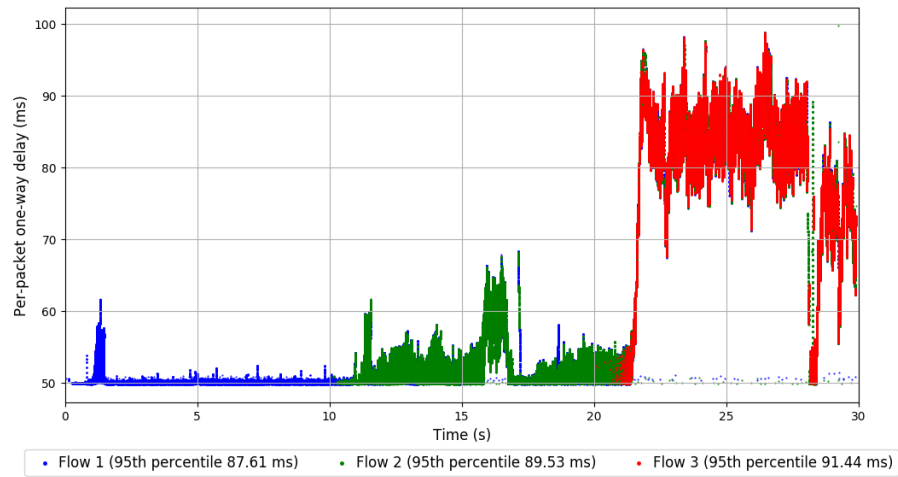
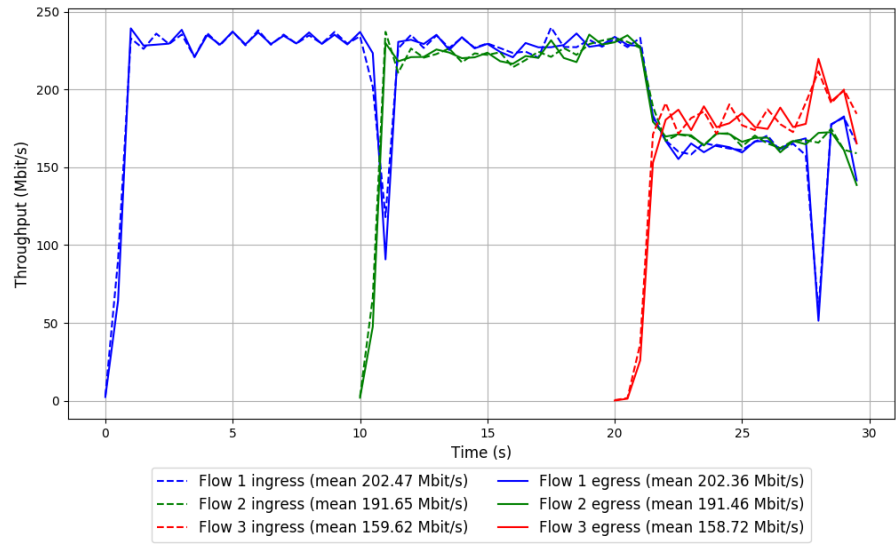
-- Flow 3:

Average throughput: 158.72 Mbit/s

95th percentile per-packet one-way delay: 91.440 ms

Loss rate: 1.57%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2018-04-18 11:33:37

End at: 2018-04-18 11:34:07

Below is generated by plot.py at 2018-04-18 15:41:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 389.16 Mbit/s

95th percentile per-packet one-way delay: 93.223 ms

Loss rate: 0.54%

-- Flow 1:

Average throughput: 205.01 Mbit/s

95th percentile per-packet one-way delay: 90.007 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 191.34 Mbit/s

95th percentile per-packet one-way delay: 92.775 ms

Loss rate: 0.47%

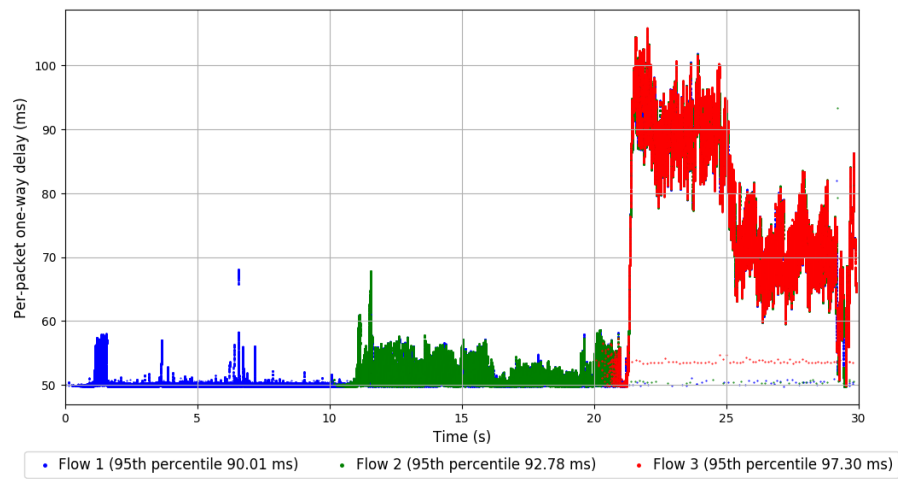
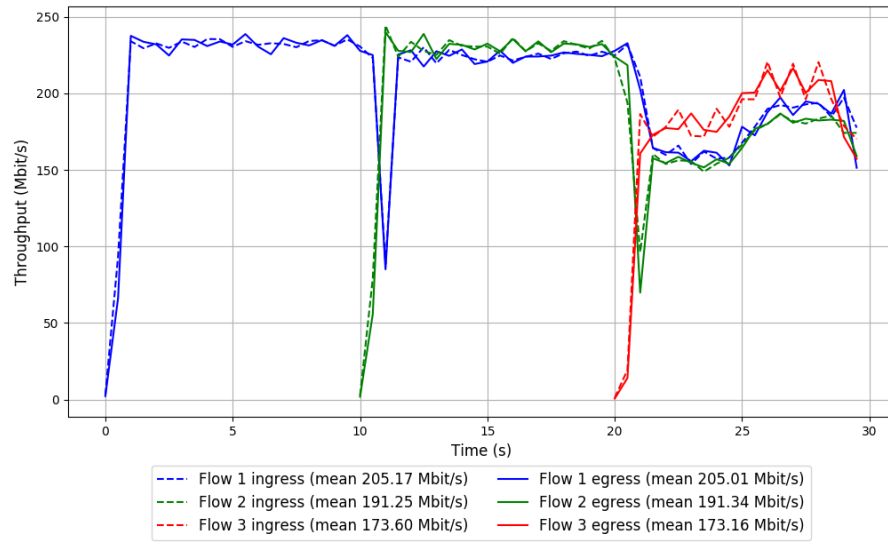
-- Flow 3:

Average throughput: 173.16 Mbit/s

95th percentile per-packet one-way delay: 97.299 ms

Loss rate: 1.30%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2018-04-18 11:49:18

End at: 2018-04-18 11:49:48

Below is generated by plot.py at 2018-04-18 15:41:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 383.71 Mbit/s

95th percentile per-packet one-way delay: 78.728 ms

Loss rate: 0.60%

-- Flow 1:

Average throughput: 200.57 Mbit/s

95th percentile per-packet one-way delay: 77.116 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 192.22 Mbit/s

95th percentile per-packet one-way delay: 79.167 ms

Loss rate: 0.59%

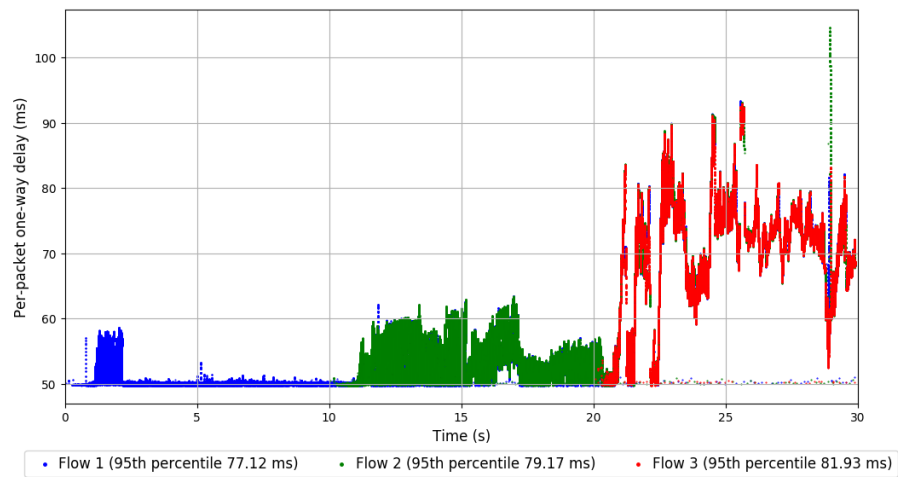
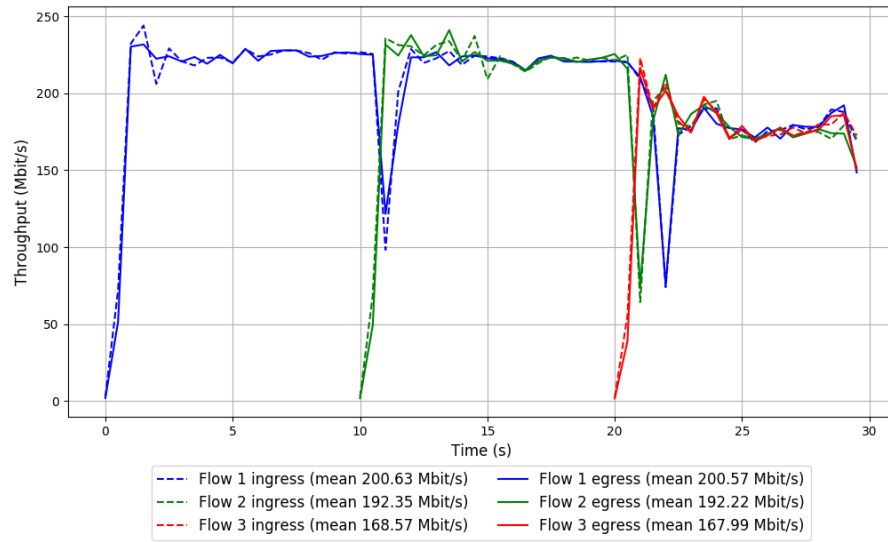
-- Flow 3:

Average throughput: 167.99 Mbit/s

95th percentile per-packet one-way delay: 81.928 ms

Loss rate: 1.40%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

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

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

Below is generated by plot.py at 2018-04-18 15:41:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 384.66 Mbit/s

95th percentile per-packet one-way delay: 101.229 ms

Loss rate: 0.49%

-- Flow 1:

Average throughput: 202.17 Mbit/s

95th percentile per-packet one-way delay: 97.196 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 189.16 Mbit/s

95th percentile per-packet one-way delay: 101.390 ms

Loss rate: 0.37%

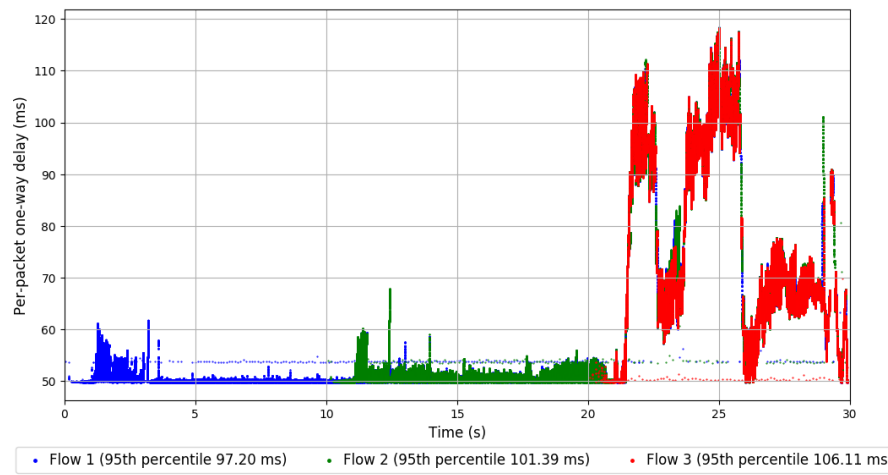
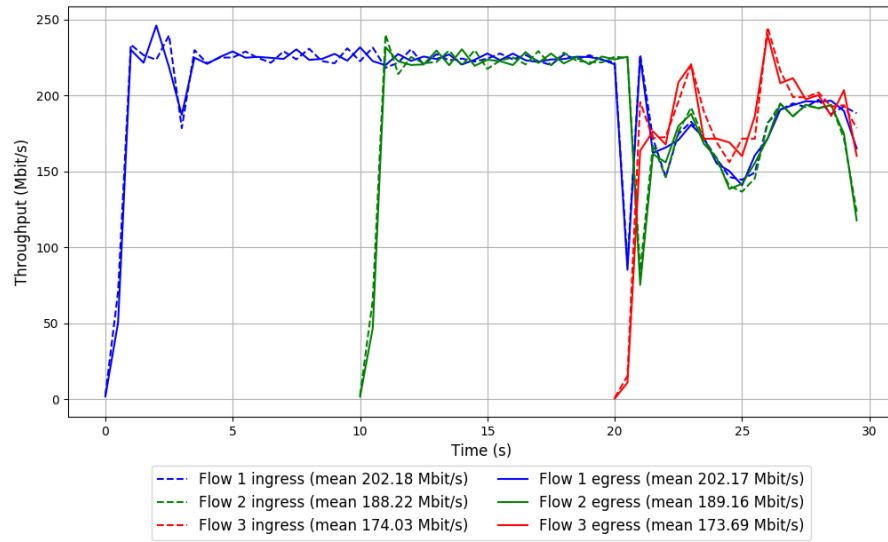
-- Flow 3:

Average throughput: 173.69 Mbit/s

95th percentile per-packet one-way delay: 106.108 ms

Loss rate: 1.22%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2018-04-18 12:19:19

End at: 2018-04-18 12:19:49

Below is generated by plot.py at 2018-04-18 15:47:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 387.50 Mbit/s

95th percentile per-packet one-way delay: 87.994 ms

Loss rate: 0.55%

-- Flow 1:

Average throughput: 206.37 Mbit/s

95th percentile per-packet one-way delay: 84.112 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 188.95 Mbit/s

95th percentile per-packet one-way delay: 87.867 ms

Loss rate: 0.53%

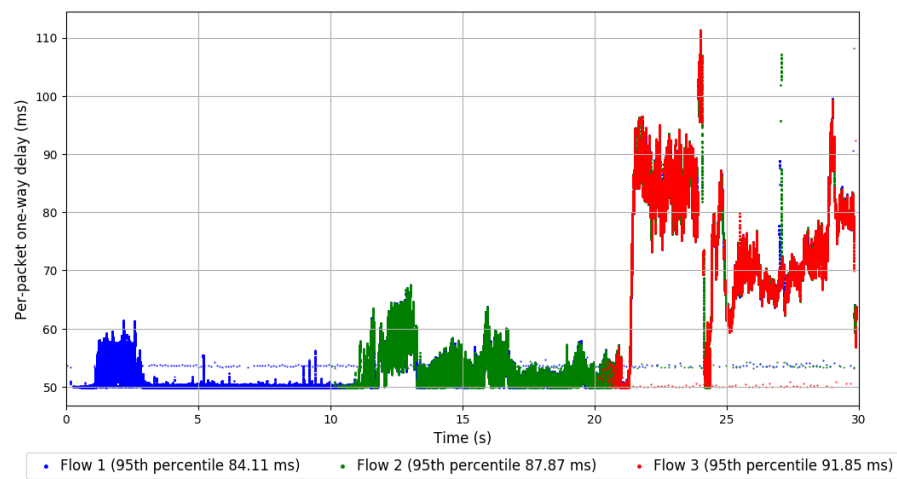
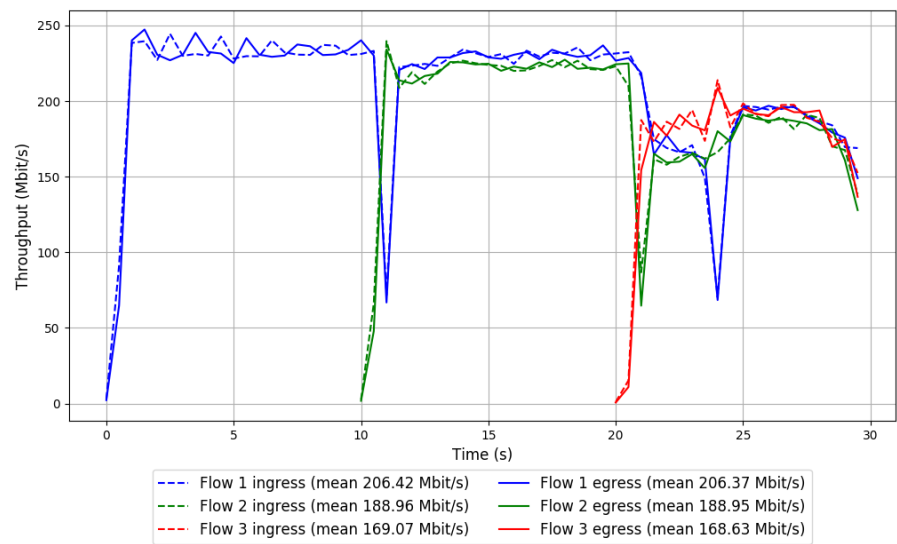
-- Flow 3:

Average throughput: 168.63 Mbit/s

95th percentile per-packet one-way delay: 91.846 ms

Loss rate: 1.27%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2018-04-18 12:34:42

End at: 2018-04-18 12:35:12

Below is generated by plot.py at 2018-04-18 15:47:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 382.31 Mbit/s

95th percentile per-packet one-way delay: 87.835 ms

Loss rate: 0.57%

-- Flow 1:

Average throughput: 202.80 Mbit/s

95th percentile per-packet one-way delay: 85.819 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 187.13 Mbit/s

95th percentile per-packet one-way delay: 88.253 ms

Loss rate: 0.61%

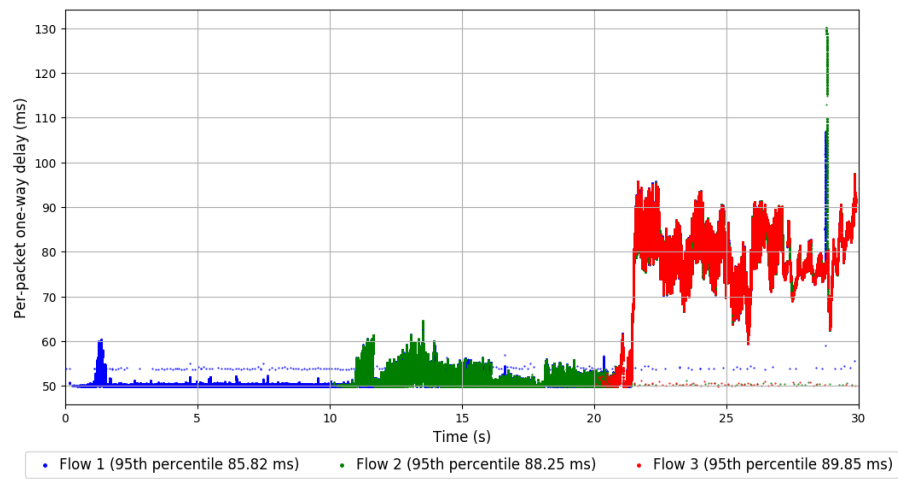
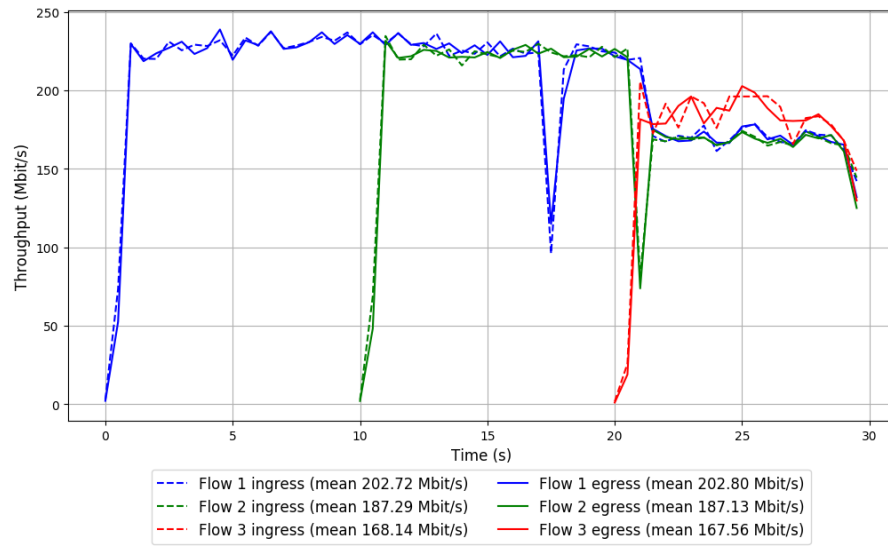
-- Flow 3:

Average throughput: 167.56 Mbit/s

95th percentile per-packet one-way delay: 89.850 ms

Loss rate: 1.38%

Run 10: Report of TCP BBR — Data Link

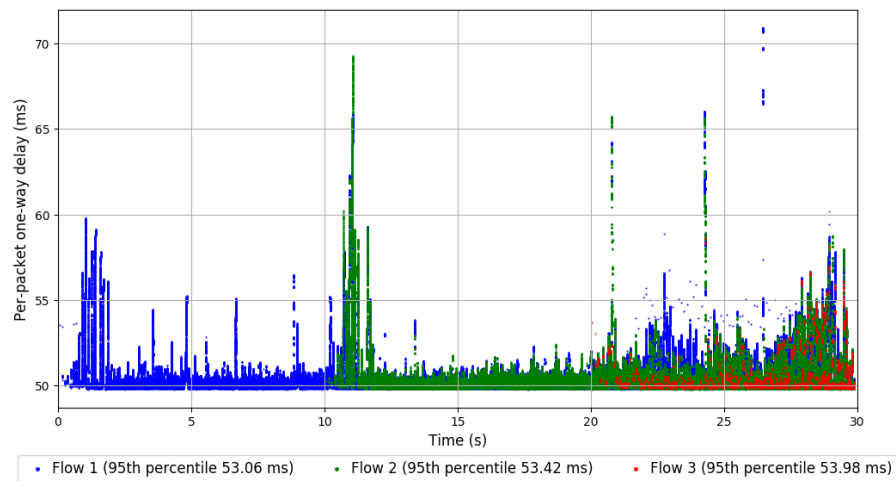
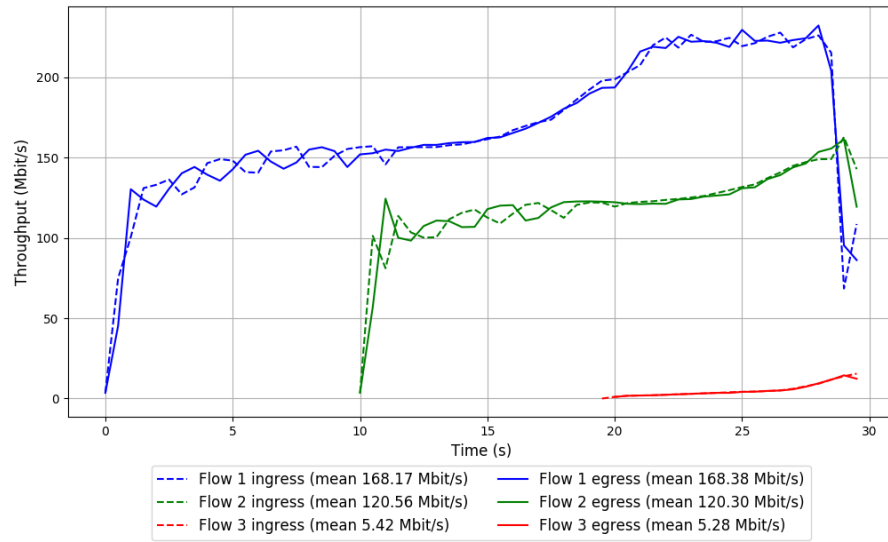


```
Run 1: Statistics of TCP Cubic

Start at: 2018-04-18 10:15:27
End at: 2018-04-18 10:15:57

# Below is generated by plot.py at 2018-04-18 15:47:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 250.05 Mbit/s
95th percentile per-packet one-way delay: 53.201 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 168.38 Mbit/s
95th percentile per-packet one-way delay: 53.064 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 120.30 Mbit/s
95th percentile per-packet one-way delay: 53.417 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 5.28 Mbit/s
95th percentile per-packet one-way delay: 53.984 ms
Loss rate: 3.54%
```

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-04-18 10:30:21

End at: 2018-04-18 10:30:51

Below is generated by plot.py at 2018-04-18 15:47:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 227.77 Mbit/s

95th percentile per-packet one-way delay: 55.097 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 135.79 Mbit/s

95th percentile per-packet one-way delay: 55.612 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 135.86 Mbit/s

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

Loss rate: 0.65%

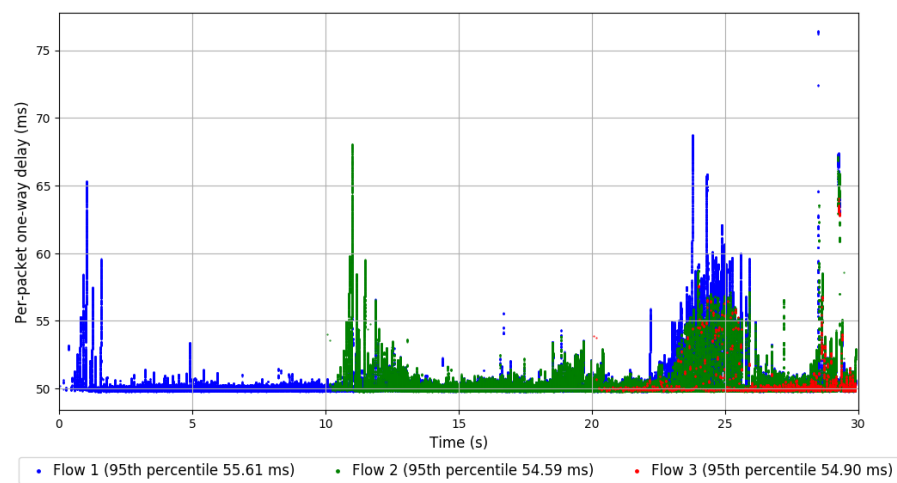
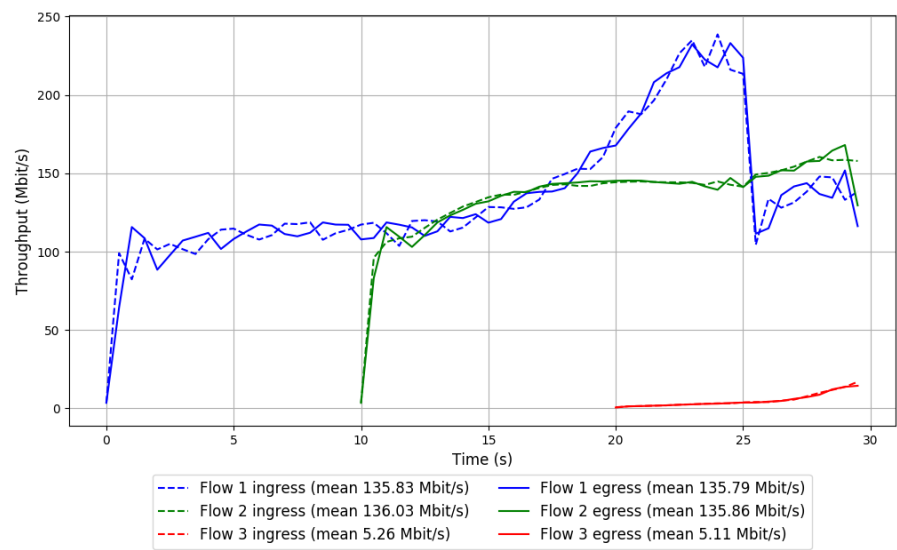
-- Flow 3:

Average throughput: 5.11 Mbit/s

95th percentile per-packet one-way delay: 54.903 ms

Loss rate: 3.99%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-04-18 10:45:48

End at: 2018-04-18 10:46:18

Below is generated by plot.py at 2018-04-18 15:47:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 256.64 Mbit/s

95th percentile per-packet one-way delay: 57.492 ms

Loss rate: 0.73%

-- Flow 1:

Average throughput: 142.57 Mbit/s

95th percentile per-packet one-way delay: 58.005 ms

Loss rate: 0.57%

-- Flow 2:

Average throughput: 111.48 Mbit/s

95th percentile per-packet one-way delay: 55.908 ms

Loss rate: 0.77%

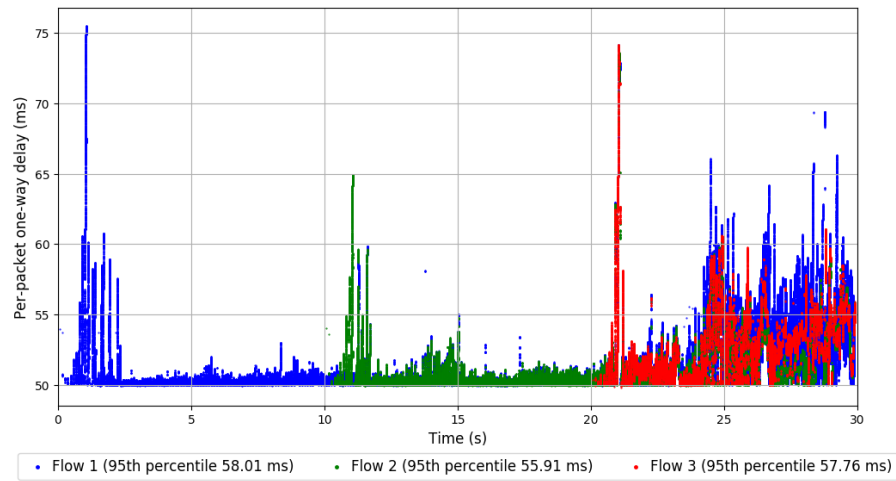
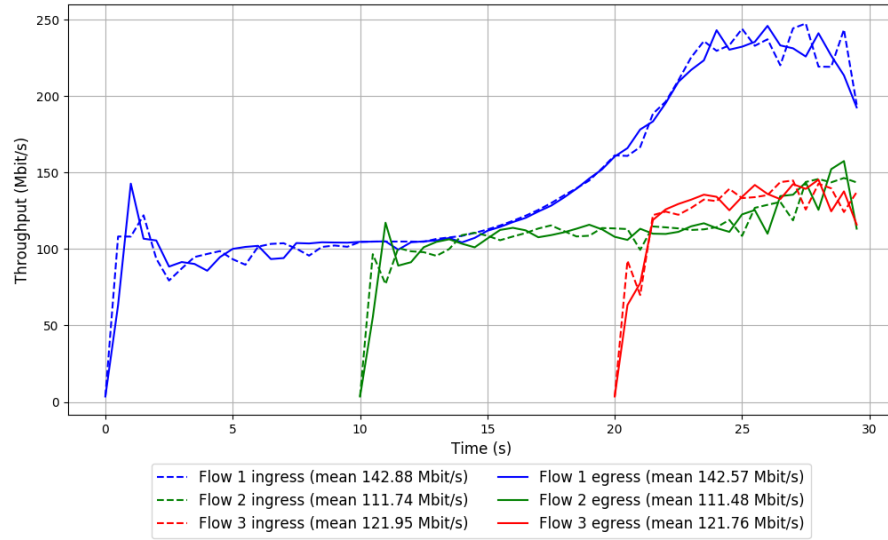
-- Flow 3:

Average throughput: 121.76 Mbit/s

95th percentile per-packet one-way delay: 57.759 ms

Loss rate: 1.20%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-04-18 11:01:16

End at: 2018-04-18 11:01:46

Below is generated by plot.py at 2018-04-18 15:47:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 304.59 Mbit/s

95th percentile per-packet one-way delay: 58.743 ms

Loss rate: 0.53%

-- Flow 1:

Average throughput: 160.06 Mbit/s

95th percentile per-packet one-way delay: 57.132 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 146.59 Mbit/s

95th percentile per-packet one-way delay: 59.607 ms

Loss rate: 0.54%

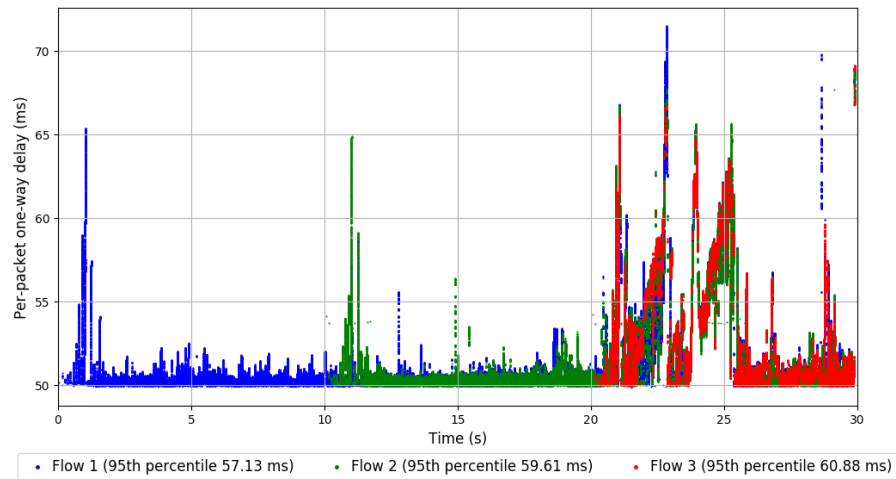
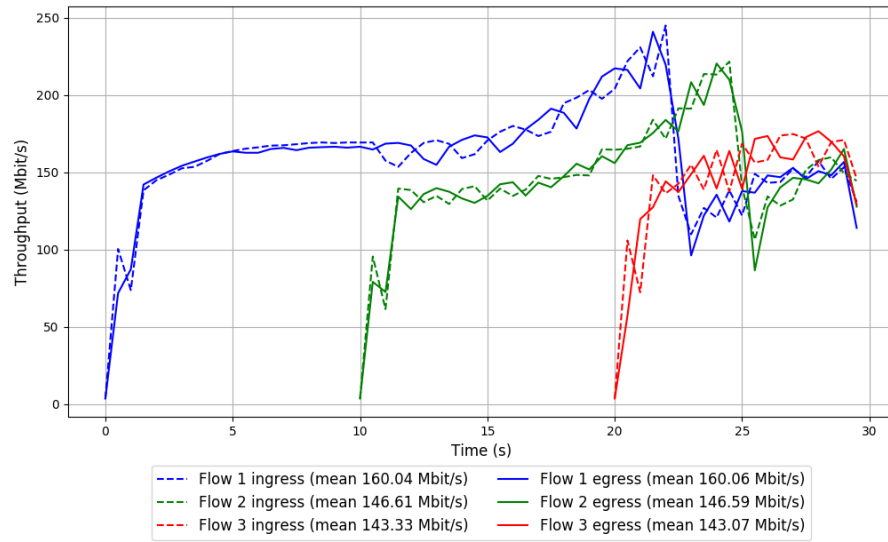
-- Flow 3:

Average throughput: 143.07 Mbit/s

95th percentile per-packet one-way delay: 60.885 ms

Loss rate: 1.23%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-04-18 11:16:35

End at: 2018-04-18 11:17:05

Below is generated by plot.py at 2018-04-18 15:47:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 253.39 Mbit/s

95th percentile per-packet one-way delay: 58.077 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 159.50 Mbit/s

95th percentile per-packet one-way delay: 57.867 ms

Loss rate: 0.50%

-- Flow 2:

Average throughput: 138.75 Mbit/s

95th percentile per-packet one-way delay: 58.304 ms

Loss rate: 0.68%

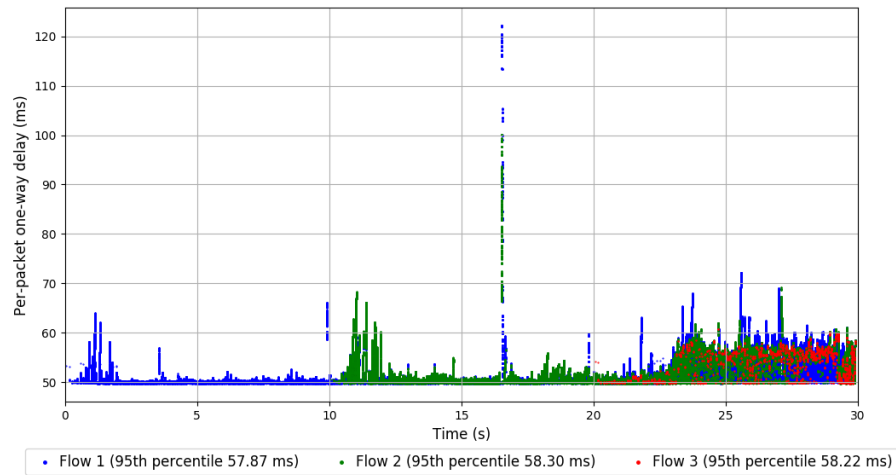
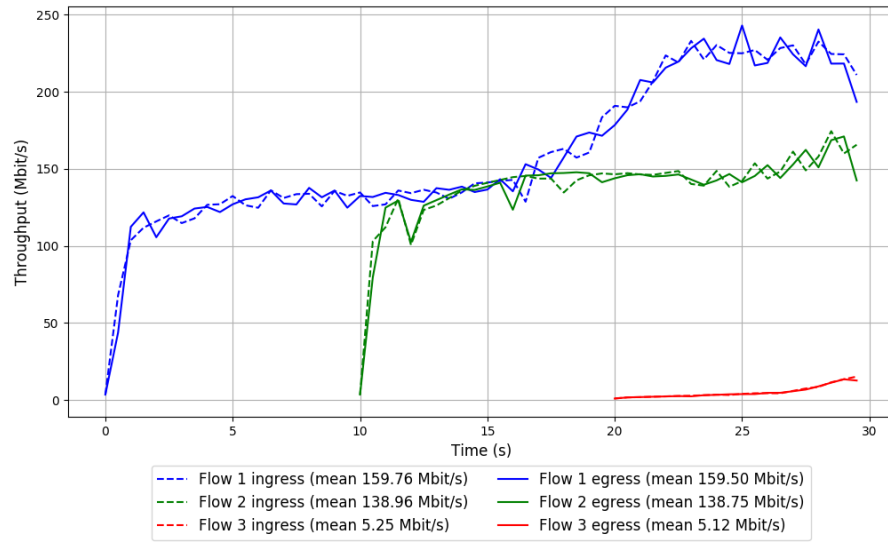
-- Flow 3:

Average throughput: 5.12 Mbit/s

95th percentile per-packet one-way delay: 58.219 ms

Loss rate: 3.66%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2018-04-18 11:31:42

End at: 2018-04-18 11:32:12

Below is generated by plot.py at 2018-04-18 15:47:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 277.77 Mbit/s

95th percentile per-packet one-way delay: 56.664 ms

Loss rate: 0.54%

-- Flow 1:

Average throughput: 141.10 Mbit/s

95th percentile per-packet one-way delay: 56.456 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 152.20 Mbit/s

95th percentile per-packet one-way delay: 56.470 ms

Loss rate: 0.55%

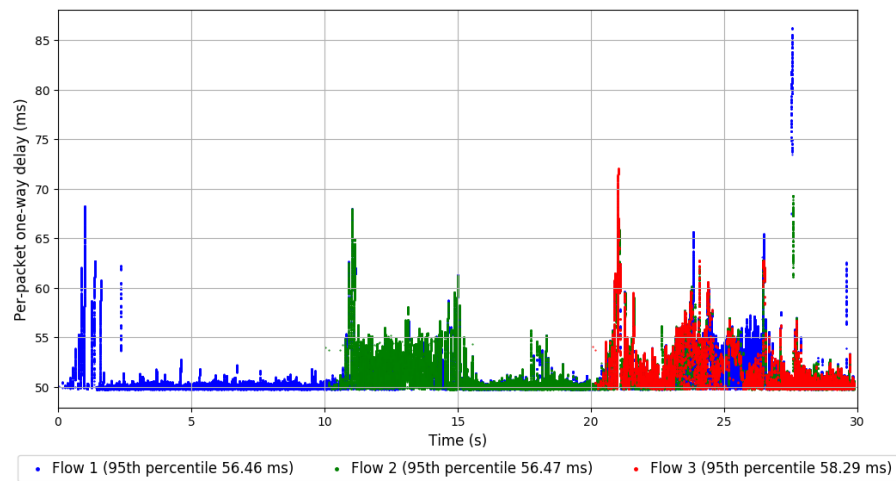
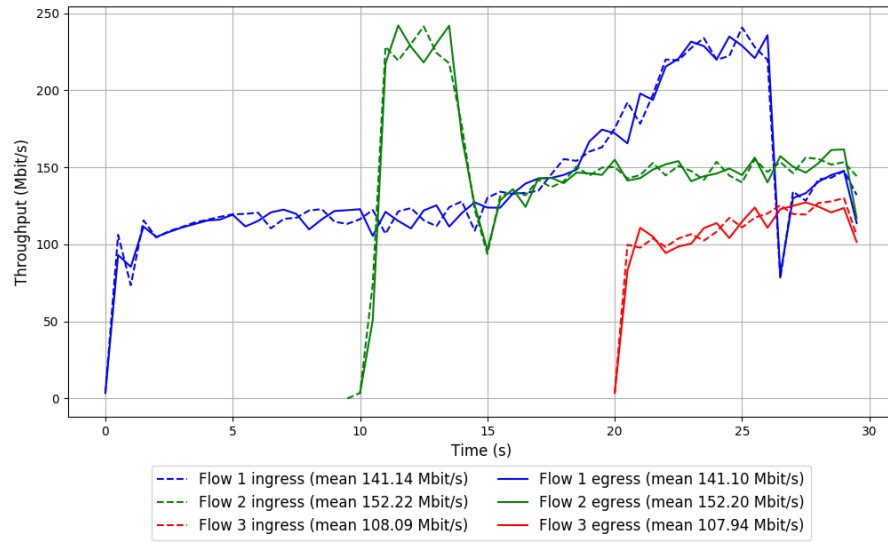
-- Flow 3:

Average throughput: 107.94 Mbit/s

95th percentile per-packet one-way delay: 58.294 ms

Loss rate: 1.22%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2018-04-18 11:47:23

End at: 2018-04-18 11:47:53

Below is generated by plot.py at 2018-04-18 15:49:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 270.08 Mbit/s

95th percentile per-packet one-way delay: 57.504 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 149.38 Mbit/s

95th percentile per-packet one-way delay: 57.045 ms

Loss rate: 0.30%

-- Flow 2:

Average throughput: 119.03 Mbit/s

95th percentile per-packet one-way delay: 58.231 ms

Loss rate: 0.73%

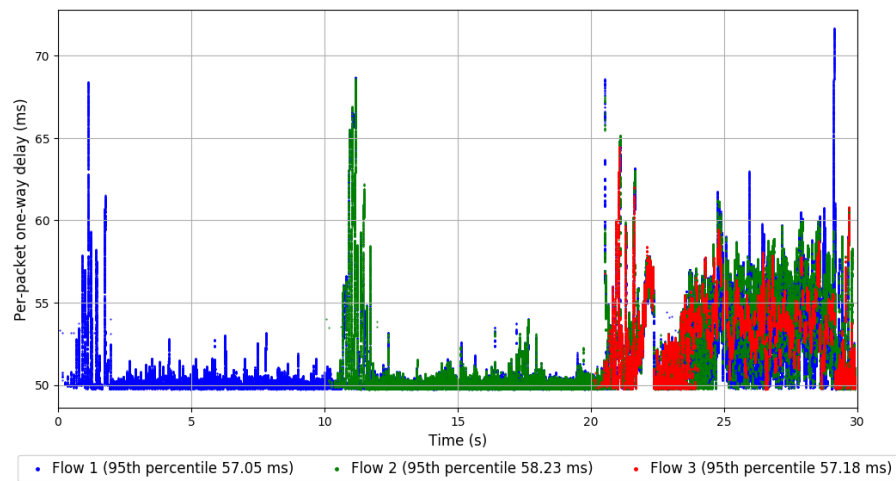
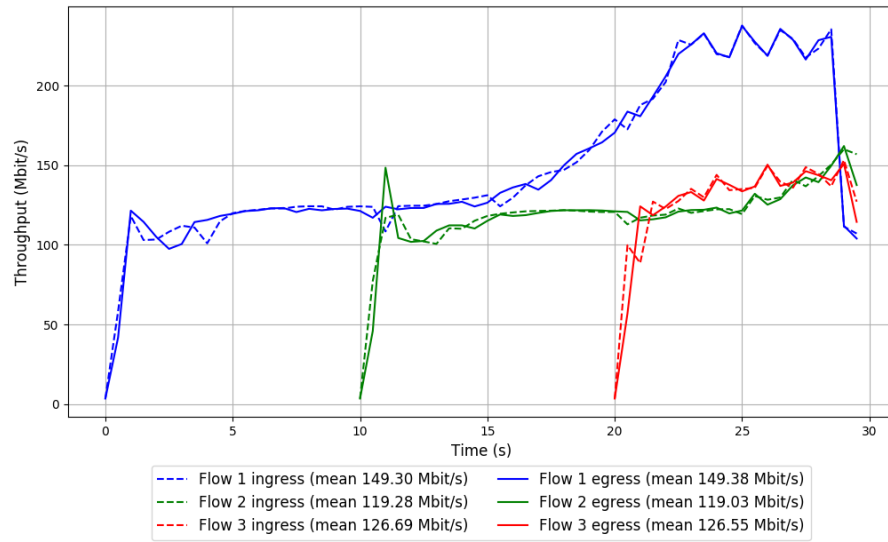
-- Flow 3:

Average throughput: 126.55 Mbit/s

95th percentile per-packet one-way delay: 57.180 ms

Loss rate: 1.12%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2018-04-18 12:02:21

End at: 2018-04-18 12:02:51

Below is generated by plot.py at 2018-04-18 15:49:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 269.89 Mbit/s

95th percentile per-packet one-way delay: 61.443 ms

Loss rate: 0.49%

-- Flow 1:

Average throughput: 164.47 Mbit/s

95th percentile per-packet one-way delay: 60.871 ms

Loss rate: 0.47%

-- Flow 2:

Average throughput: 156.10 Mbit/s

95th percentile per-packet one-way delay: 62.213 ms

Loss rate: 0.47%

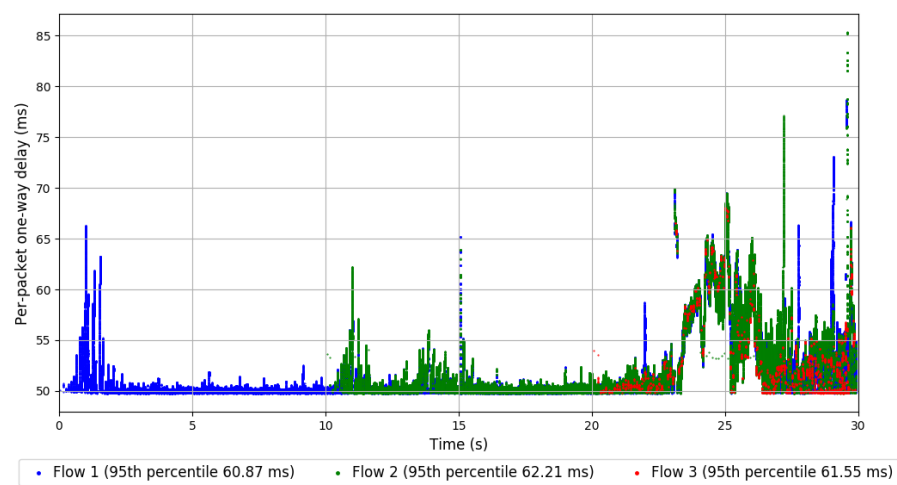
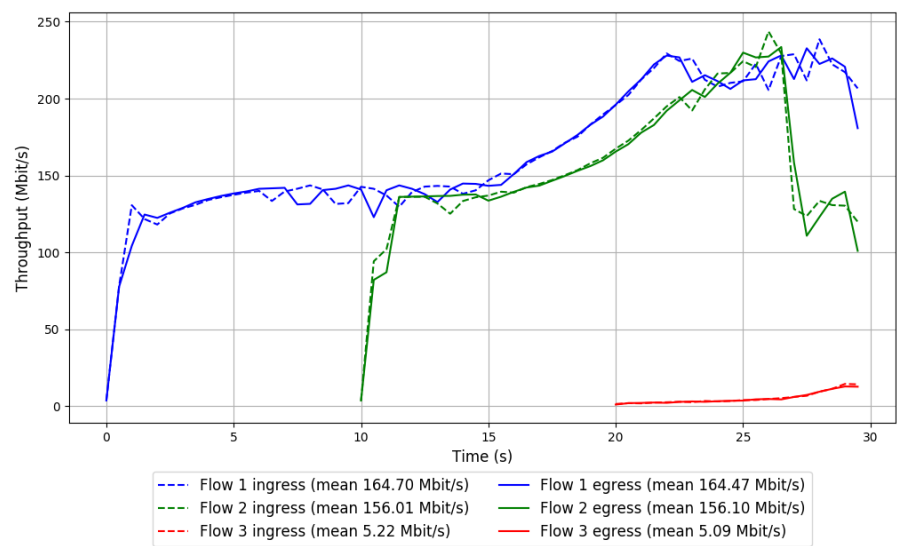
-- Flow 3:

Average throughput: 5.09 Mbit/s

95th percentile per-packet one-way delay: 61.545 ms

Loss rate: 3.64%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2018-04-18 12:17:26

End at: 2018-04-18 12:17:56

Below is generated by plot.py at 2018-04-18 15:49:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 219.79 Mbit/s

95th percentile per-packet one-way delay: 58.383 ms

Loss rate: 0.79%

-- Flow 1:

Average throughput: 149.56 Mbit/s

95th percentile per-packet one-way delay: 56.961 ms

Loss rate: 0.34%

-- Flow 2:

Average throughput: 53.03 Mbit/s

95th percentile per-packet one-way delay: 60.616 ms

Loss rate: 2.30%

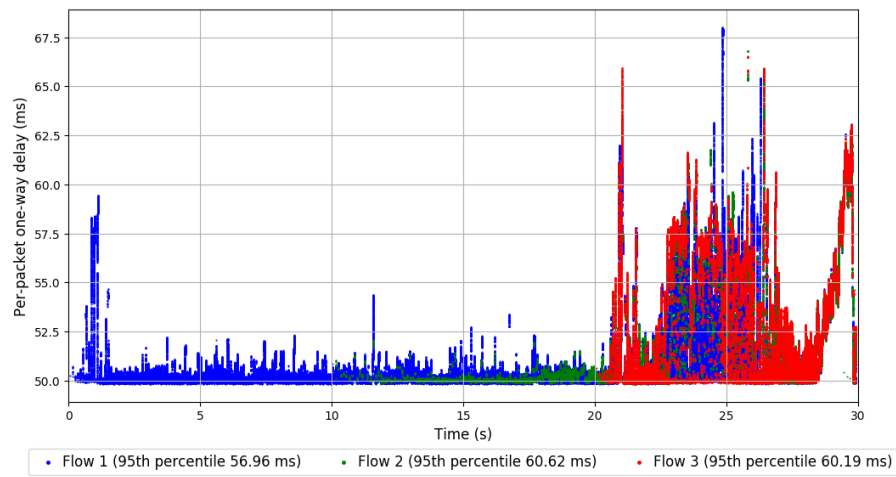
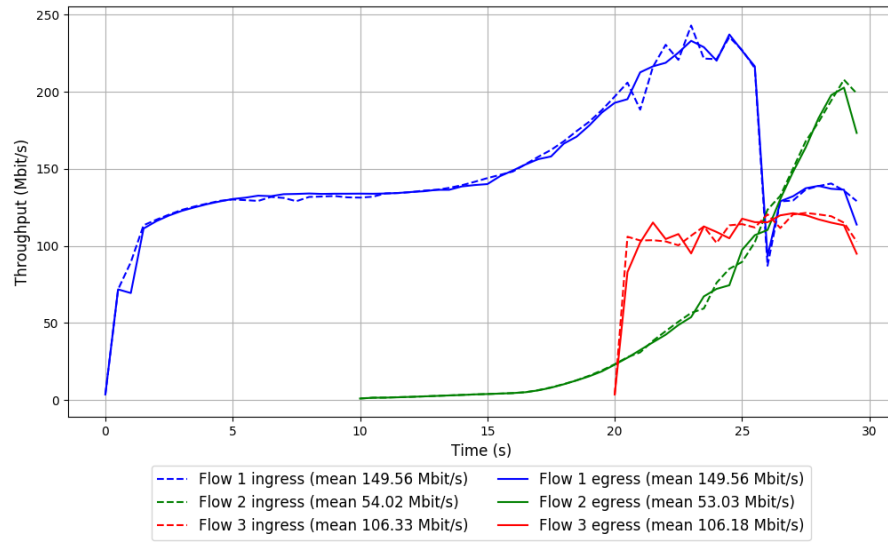
-- Flow 3:

Average throughput: 106.18 Mbit/s

95th percentile per-packet one-way delay: 60.189 ms

Loss rate: 1.15%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2018-04-18 12:32:46

End at: 2018-04-18 12:33:16

Below is generated by plot.py at 2018-04-18 15:50:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 296.44 Mbit/s

95th percentile per-packet one-way delay: 59.178 ms

Loss rate: 0.55%

-- Flow 1:

Average throughput: 158.80 Mbit/s

95th percentile per-packet one-way delay: 57.951 ms

Loss rate: 0.29%

-- Flow 2:

Average throughput: 135.37 Mbit/s

95th percentile per-packet one-way delay: 59.053 ms

Loss rate: 0.64%

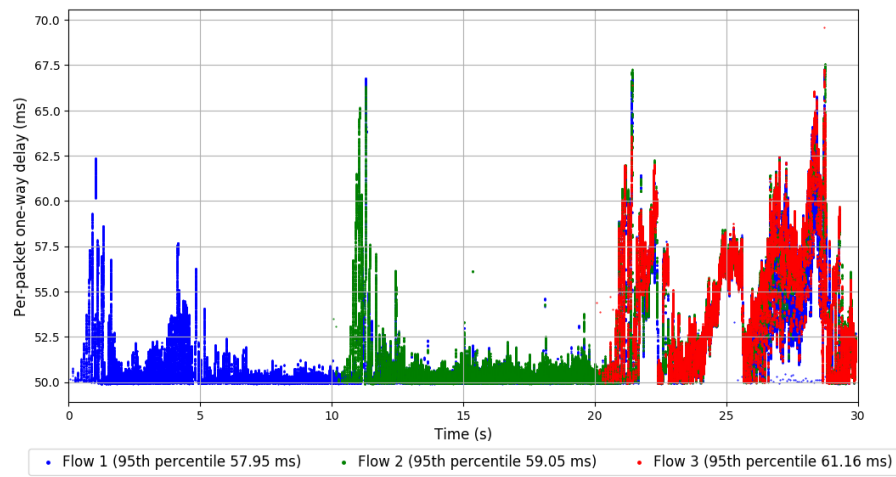
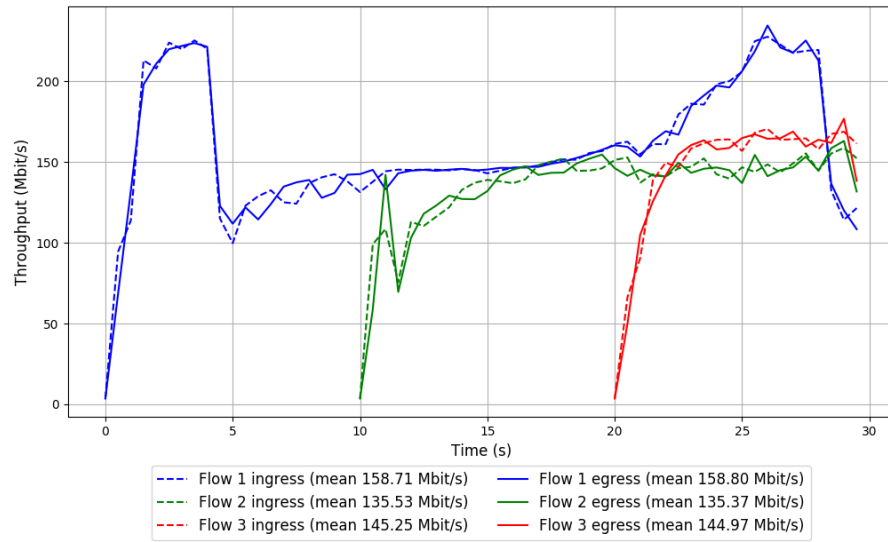
-- Flow 3:

Average throughput: 144.97 Mbit/s

95th percentile per-packet one-way delay: 61.156 ms

Loss rate: 1.23%

Run 10: Report of TCP Cubic — Data Link

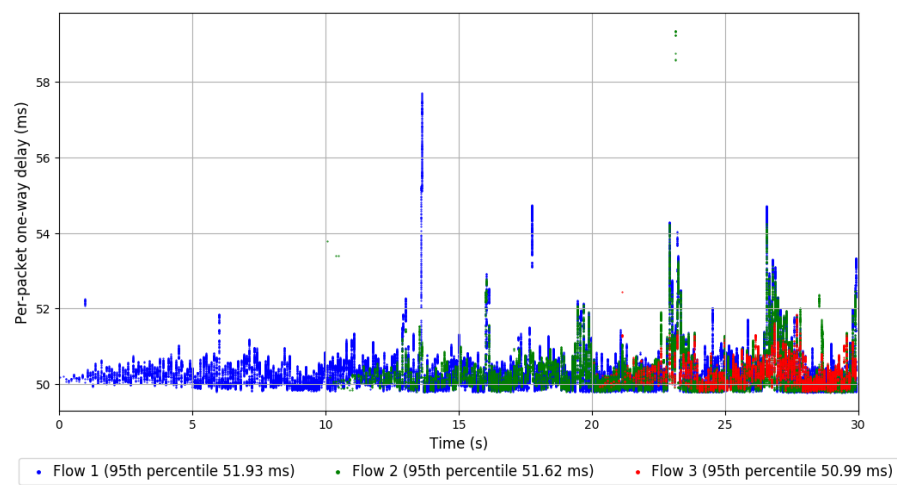
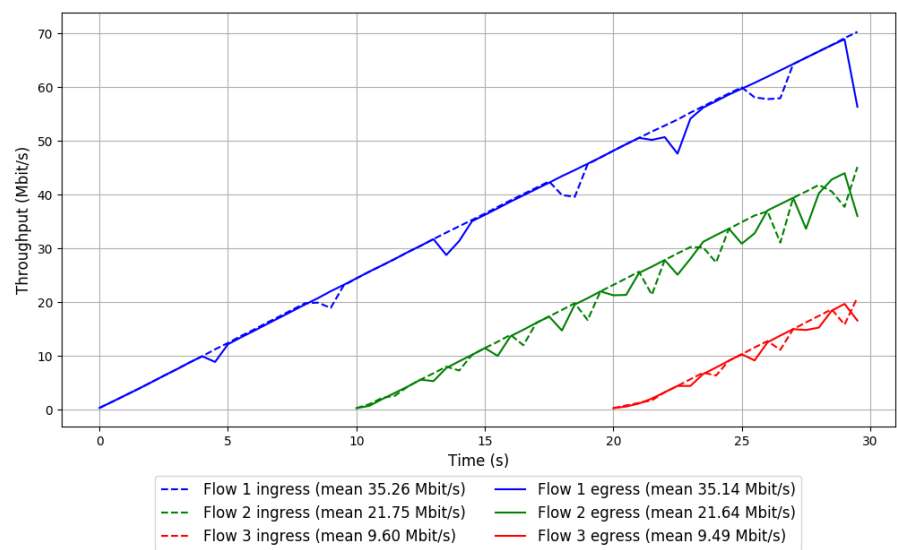


```
Run 1: Statistics of LEDBAT

Start at: 2018-04-18 10:20:28
End at: 2018-04-18 10:20:58

# Below is generated by plot.py at 2018-04-18 15:50:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 52.62 Mbit/s
95th percentile per-packet one-way delay: 51.789 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 35.14 Mbit/s
95th percentile per-packet one-way delay: 51.930 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 21.64 Mbit/s
95th percentile per-packet one-way delay: 51.619 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 9.49 Mbit/s
95th percentile per-packet one-way delay: 50.995 ms
Loss rate: 2.24%
```


Run 1: Report of LEDBAT — Data Link

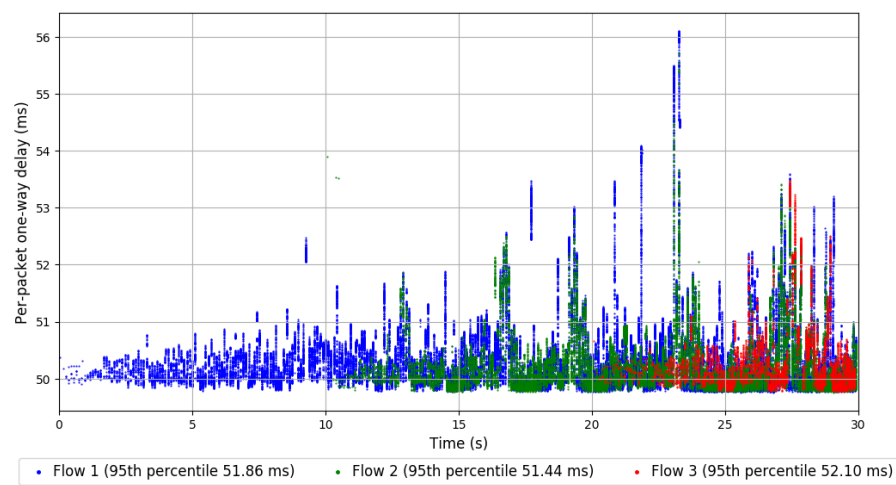
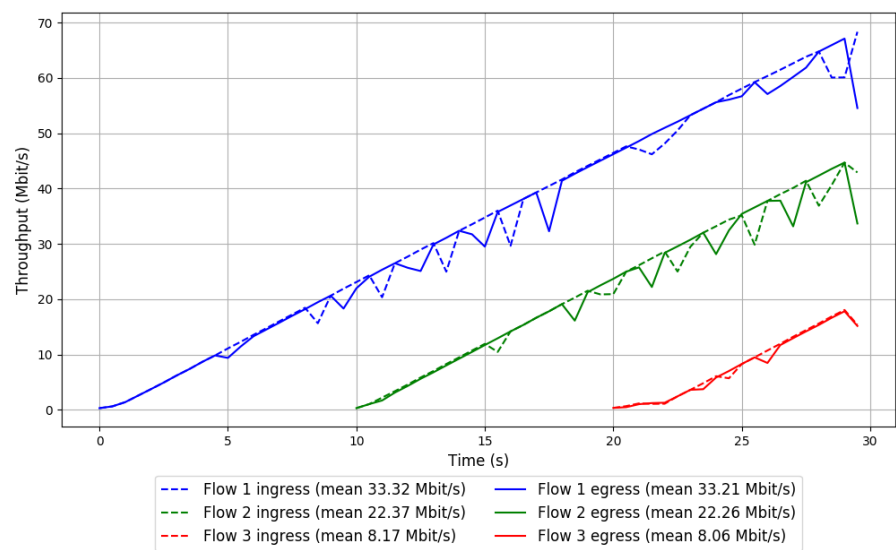


```
Run 2: Statistics of LEDBAT

Start at: 2018-04-18 10:35:19
End at: 2018-04-18 10:35:49

# Below is generated by plot.py at 2018-04-18 15:50:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 50.62 Mbit/s
95th percentile per-packet one-way delay: 51.737 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 33.21 Mbit/s
95th percentile per-packet one-way delay: 51.860 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 22.26 Mbit/s
95th percentile per-packet one-way delay: 51.442 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 8.06 Mbit/s
95th percentile per-packet one-way delay: 52.099 ms
Loss rate: 2.43%
```

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-04-18 10:50:47

End at: 2018-04-18 10:51:17

Below is generated by plot.py at 2018-04-18 15:50:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 54.14 Mbit/s

95th percentile per-packet one-way delay: 51.796 ms

Loss rate: 0.86%

-- Flow 1:

Average throughput: 34.92 Mbit/s

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

Loss rate: 0.67%

-- Flow 2:

Average throughput: 23.44 Mbit/s

95th percentile per-packet one-way delay: 52.343 ms

Loss rate: 1.00%

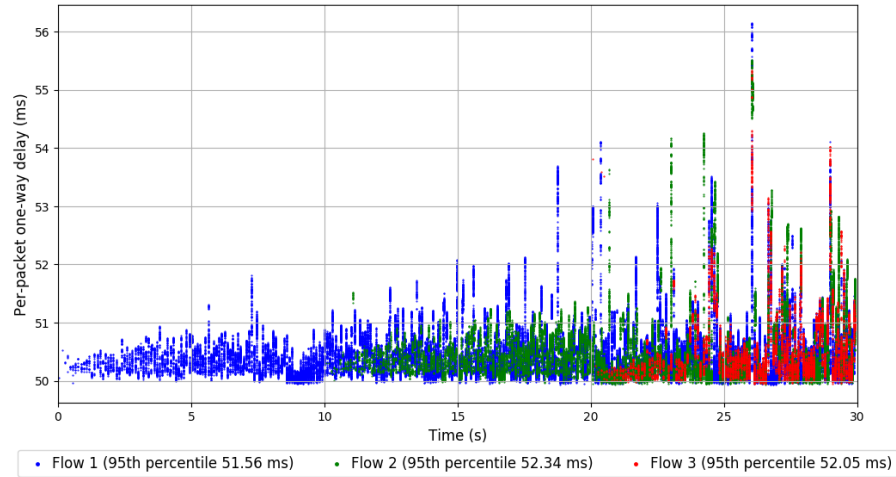
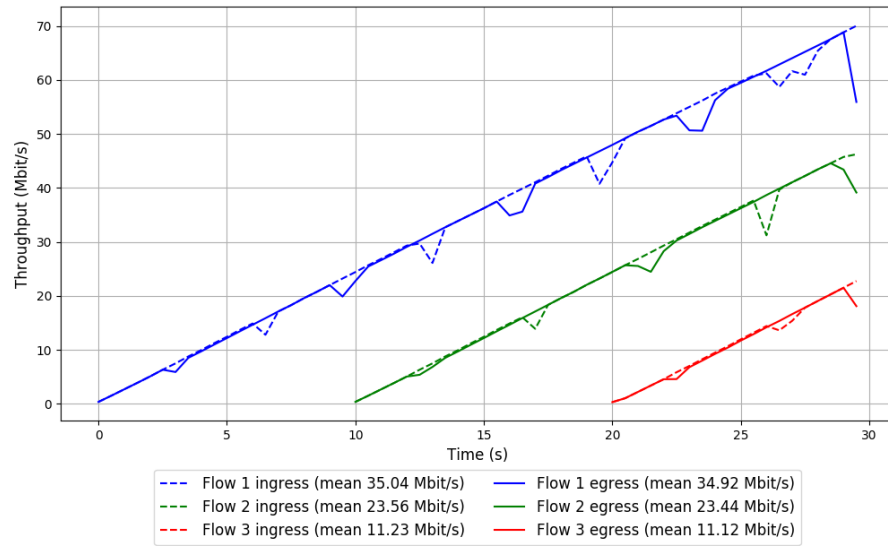
-- Flow 3:

Average throughput: 11.12 Mbit/s

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

Loss rate: 2.08%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-04-18 11:06:20

End at: 2018-04-18 11:06:50

Below is generated by plot.py at 2018-04-18 15:50:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 51.52 Mbit/s

95th percentile per-packet one-way delay: 51.648 ms

Loss rate: 0.86%

-- Flow 1:

Average throughput: 33.79 Mbit/s

95th percentile per-packet one-way delay: 51.506 ms

Loss rate: 0.66%

-- Flow 2:

Average throughput: 21.50 Mbit/s

95th percentile per-packet one-way delay: 52.099 ms

Loss rate: 1.04%

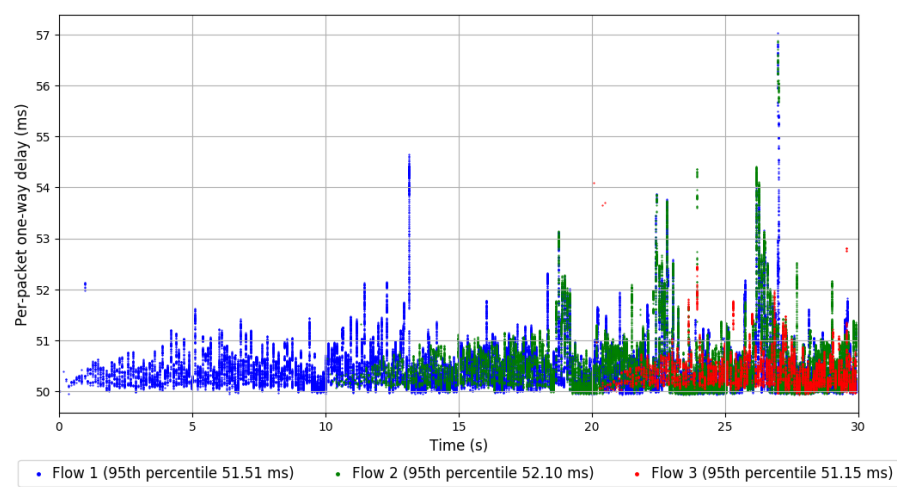
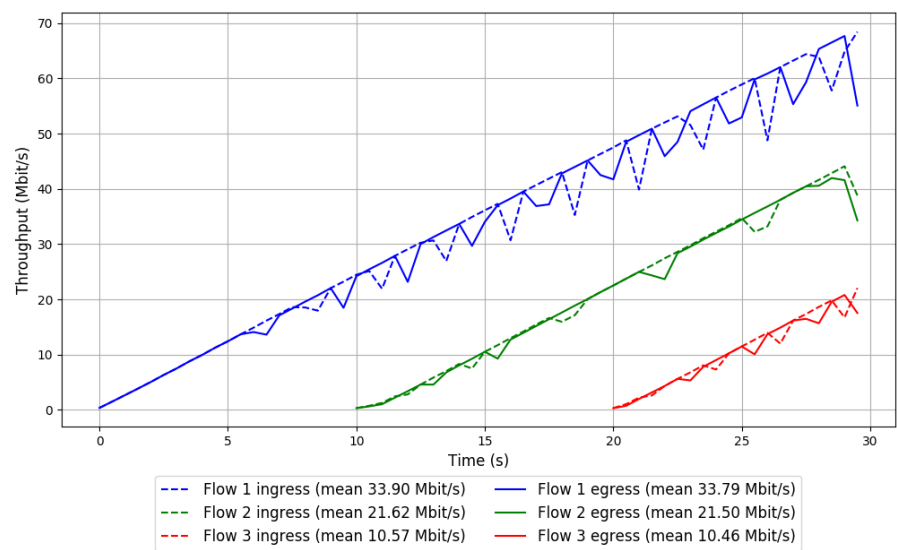
-- Flow 3:

Average throughput: 10.46 Mbit/s

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

Loss rate: 2.15%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-04-18 11:21:34

End at: 2018-04-18 11:22:04

Below is generated by plot.py at 2018-04-18 15:50:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 52.56 Mbit/s

95th percentile per-packet one-way delay: 51.874 ms

Loss rate: 0.88%

-- Flow 1:

Average throughput: 34.05 Mbit/s

95th percentile per-packet one-way delay: 52.137 ms

Loss rate: 0.68%

-- Flow 2:

Average throughput: 22.11 Mbit/s

95th percentile per-packet one-way delay: 51.547 ms

Loss rate: 1.04%

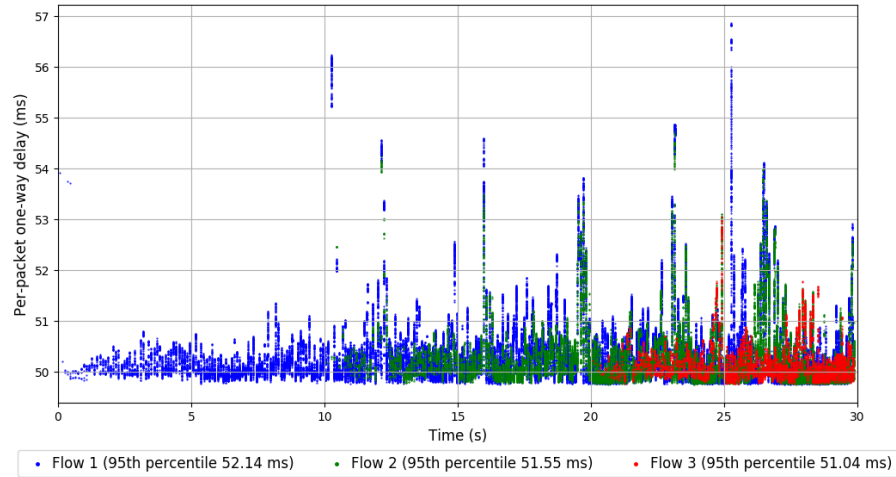
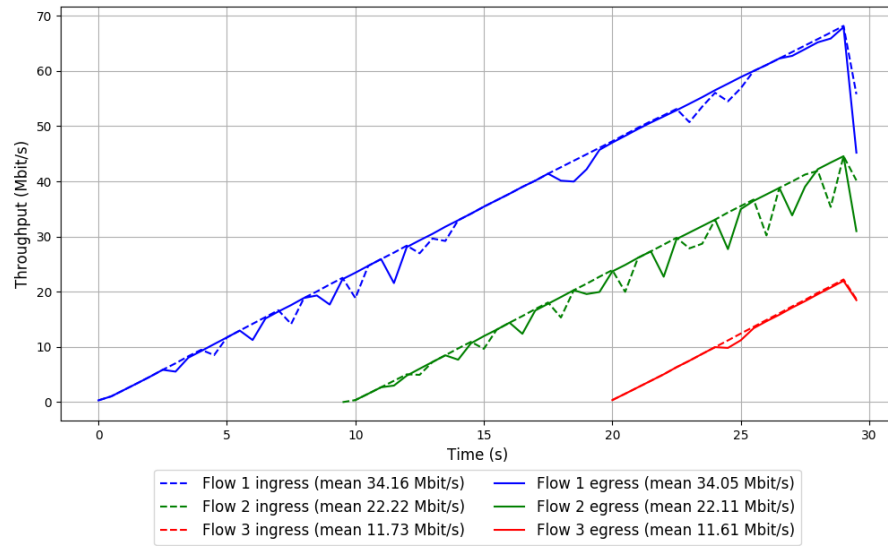
-- Flow 3:

Average throughput: 11.61 Mbit/s

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

Loss rate: 2.04%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2018-04-18 11:36:47

End at: 2018-04-18 11:37:17

Below is generated by plot.py at 2018-04-18 15:50:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 54.43 Mbit/s

95th percentile per-packet one-way delay: 51.549 ms

Loss rate: 0.86%

-- Flow 1:

Average throughput: 35.42 Mbit/s

95th percentile per-packet one-way delay: 51.649 ms

Loss rate: 0.67%

-- Flow 2:

Average throughput: 23.32 Mbit/s

95th percentile per-packet one-way delay: 51.107 ms

Loss rate: 1.02%

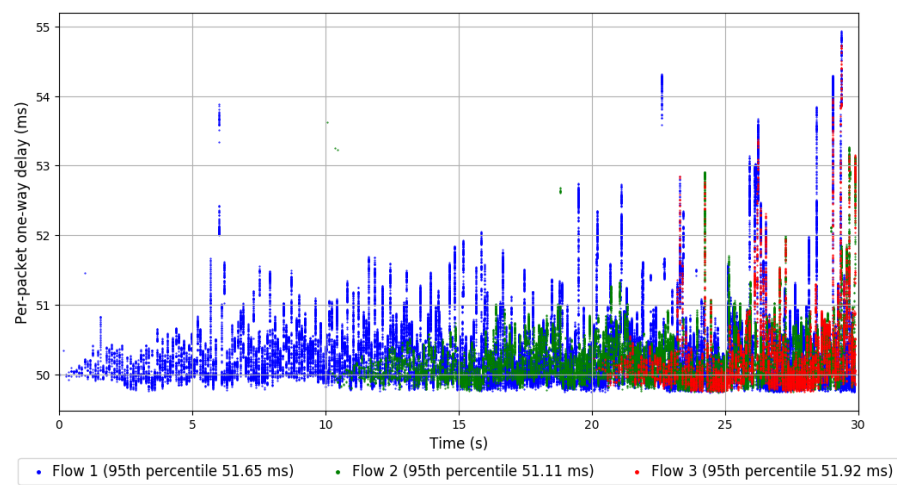
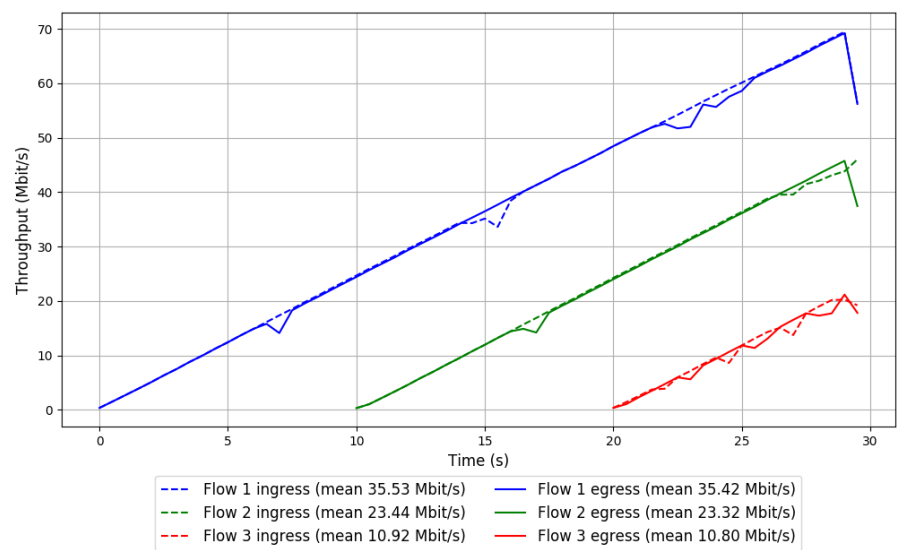
-- Flow 3:

Average throughput: 10.80 Mbit/s

95th percentile per-packet one-way delay: 51.918 ms

Loss rate: 2.11%

Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

Start at: 2018-04-18 11:52:24

End at: 2018-04-18 11:52:54

Below is generated by plot.py at 2018-04-18 15:50:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 48.29 Mbit/s

95th percentile per-packet one-way delay: 51.769 ms

Loss rate: 0.91%

-- Flow 1:

Average throughput: 33.33 Mbit/s

95th percentile per-packet one-way delay: 51.774 ms

Loss rate: 0.69%

-- Flow 2:

Average throughput: 17.16 Mbit/s

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

Loss rate: 1.18%

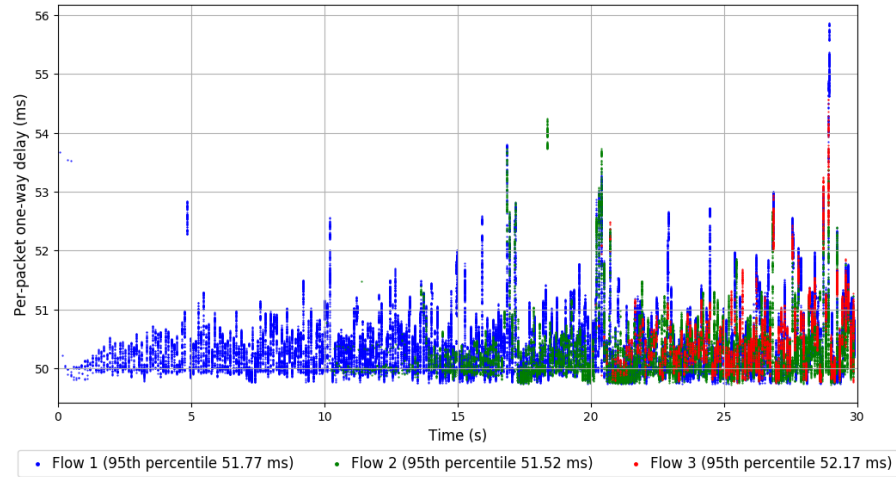
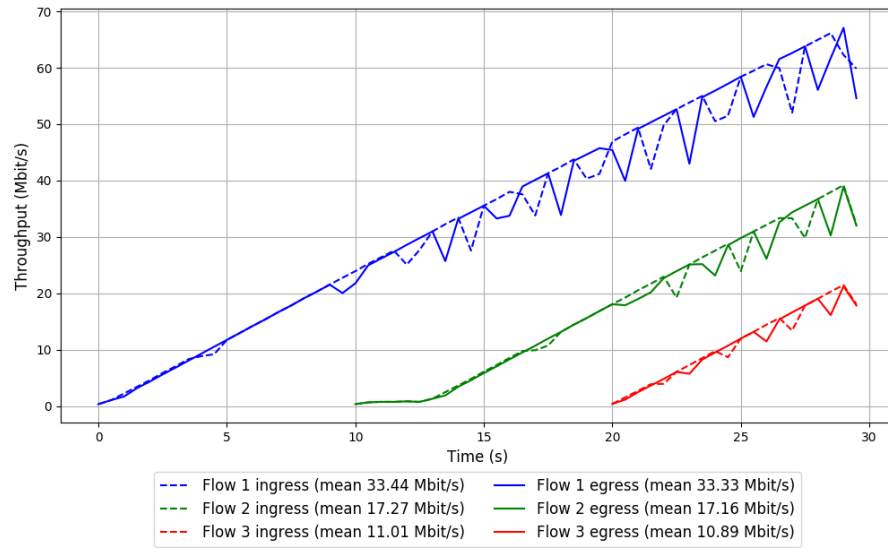
-- Flow 3:

Average throughput: 10.89 Mbit/s

95th percentile per-packet one-way delay: 52.174 ms

Loss rate: 2.11%

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2018-04-18 12:07:18

End at: 2018-04-18 12:07:48

Below is generated by plot.py at 2018-04-18 15:50:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 50.95 Mbit/s

95th percentile per-packet one-way delay: 51.286 ms

Loss rate: 0.89%

-- Flow 1:

Average throughput: 33.12 Mbit/s

95th percentile per-packet one-way delay: 51.286 ms

Loss rate: 0.68%

-- Flow 2:

Average throughput: 21.68 Mbit/s

95th percentile per-packet one-way delay: 51.186 ms

Loss rate: 1.05%

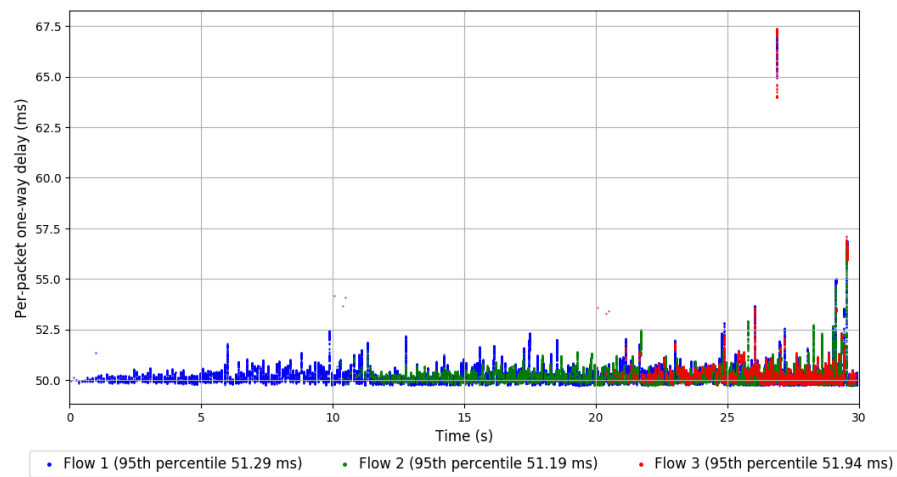
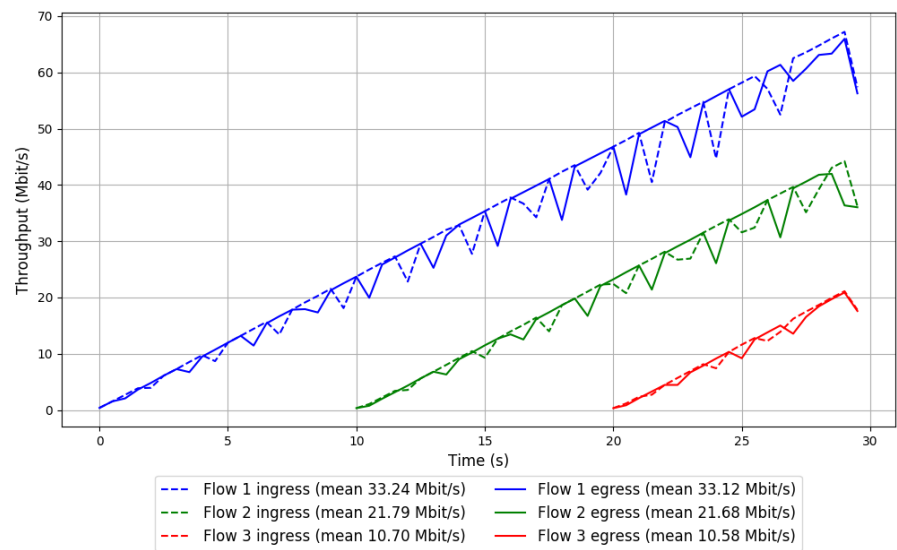
-- Flow 3:

Average throughput: 10.58 Mbit/s

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

Loss rate: 2.14%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2018-04-18 12:22:28

End at: 2018-04-18 12:22:58

Below is generated by plot.py at 2018-04-18 15:50:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 53.42 Mbit/s

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

Loss rate: 0.87%

-- Flow 1:

Average throughput: 34.72 Mbit/s

95th percentile per-packet one-way delay: 51.927 ms

Loss rate: 0.67%

-- Flow 2:

Average throughput: 22.70 Mbit/s

95th percentile per-packet one-way delay: 51.583 ms

Loss rate: 1.03%

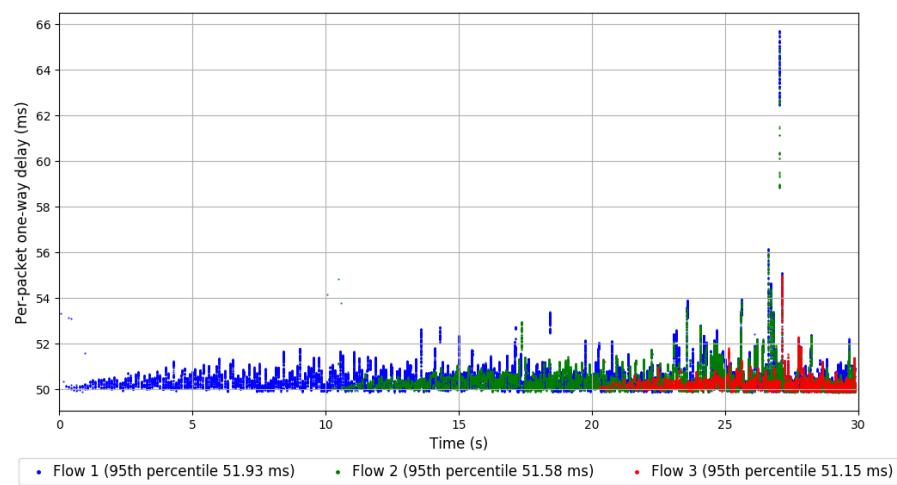
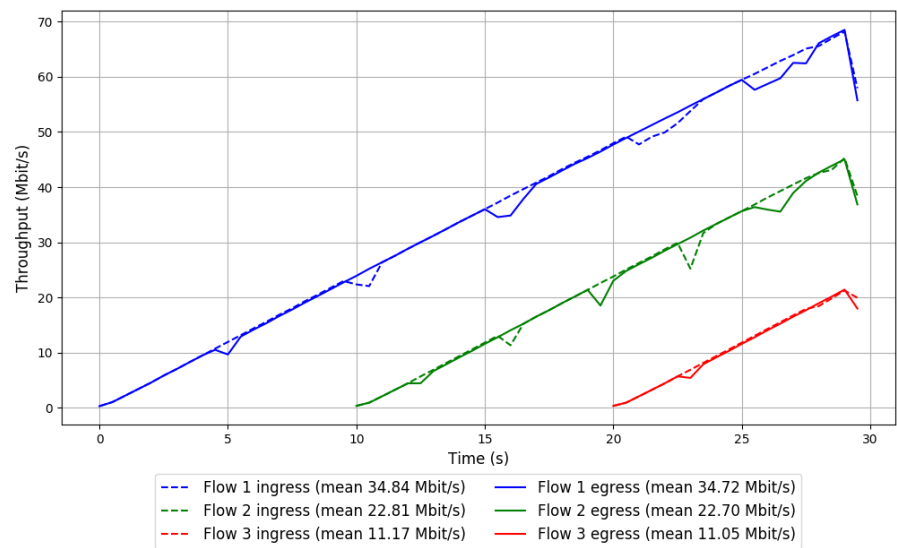
-- Flow 3:

Average throughput: 11.05 Mbit/s

95th percentile per-packet one-way delay: 51.151 ms

Loss rate: 2.09%

Run 9: Report of LEDBAT — Data Link



Run 10: Statistics of LEDBAT

Start at: 2018-04-18 12:37:45

End at: 2018-04-18 12:38:15

Below is generated by plot.py at 2018-04-18 15:50:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 51.16 Mbit/s

95th percentile per-packet one-way delay: 51.602 ms

Loss rate: 0.89%

-- Flow 1:

Average throughput: 32.77 Mbit/s

95th percentile per-packet one-way delay: 51.591 ms

Loss rate: 0.69%

-- Flow 2:

Average throughput: 22.30 Mbit/s

95th percentile per-packet one-way delay: 51.664 ms

Loss rate: 1.03%

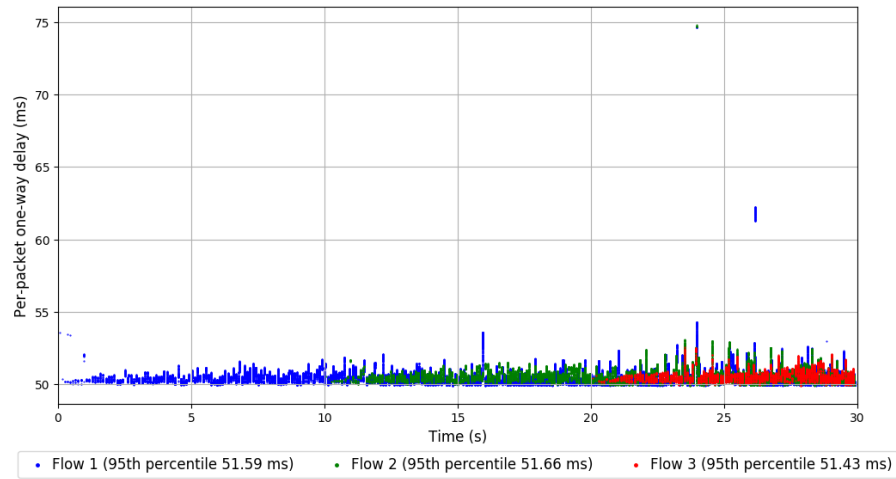
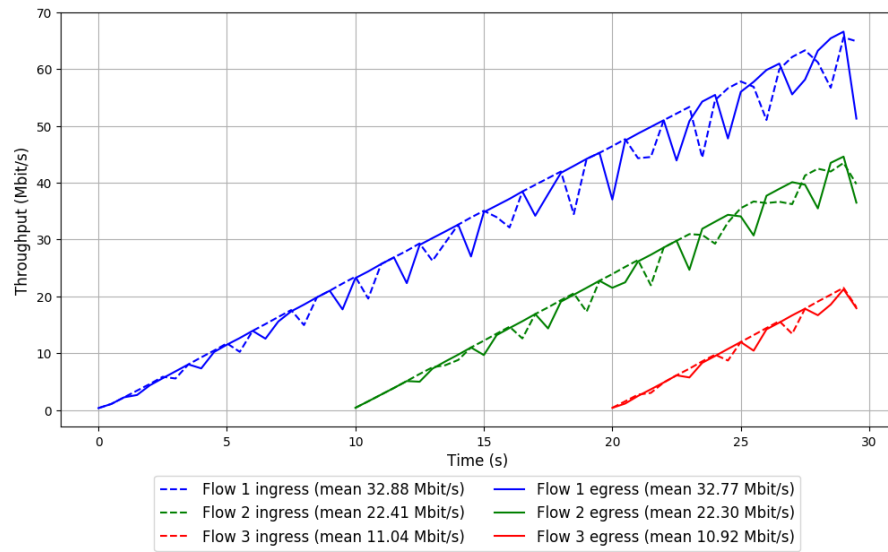
-- Flow 3:

Average throughput: 10.92 Mbit/s

95th percentile per-packet one-way delay: 51.428 ms

Loss rate: 2.11%

Run 10: Report of LEDBAT — Data Link

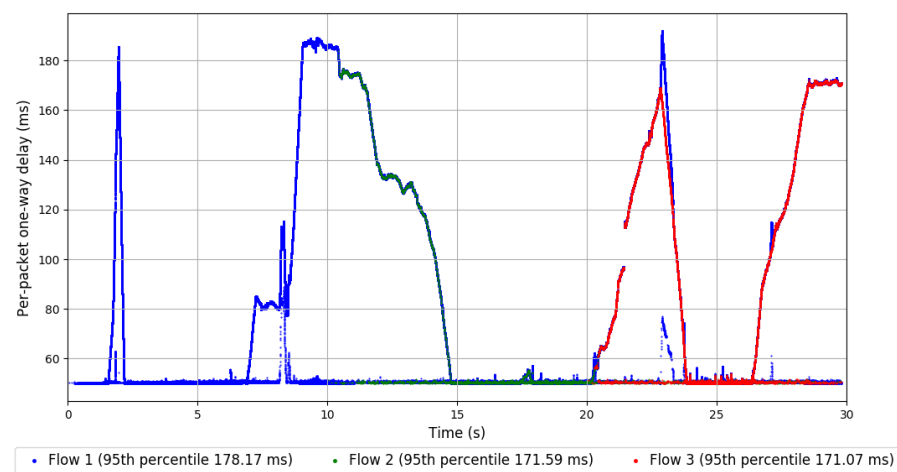
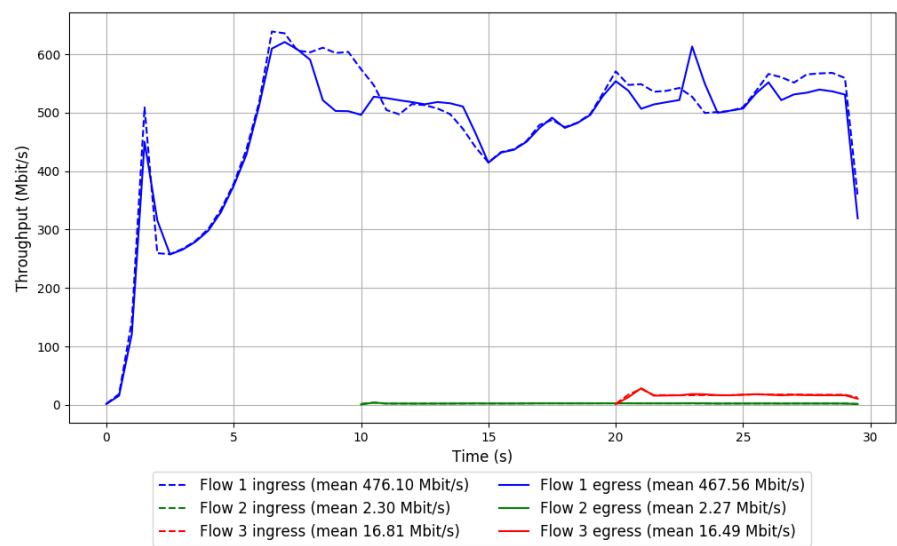


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-04-18 10:23:29
End at: 2018-04-18 10:24:00

# Below is generated by plot.py at 2018-04-18 15:56:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 474.46 Mbit/s
95th percentile per-packet one-way delay: 177.000 ms
Loss rate: 2.13%
-- Flow 1:
Average throughput: 467.56 Mbit/s
95th percentile per-packet one-way delay: 178.167 ms
Loss rate: 2.13%
-- Flow 2:
Average throughput: 2.27 Mbit/s
95th percentile per-packet one-way delay: 171.587 ms
Loss rate: 1.63%
-- Flow 3:
Average throughput: 16.49 Mbit/s
95th percentile per-packet one-way delay: 171.069 ms
Loss rate: 2.87%
```

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-04-18 10:38:49

End at: 2018-04-18 10:39:19

Below is generated by plot.py at 2018-04-18 15:57:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 490.91 Mbit/s

95th percentile per-packet one-way delay: 174.877 ms

Loss rate: 0.61%

-- Flow 1:

Average throughput: 469.14 Mbit/s

95th percentile per-packet one-way delay: 174.968 ms

Loss rate: 0.59%

-- Flow 2:

Average throughput: 2.49 Mbit/s

95th percentile per-packet one-way delay: 175.232 ms

Loss rate: 1.39%

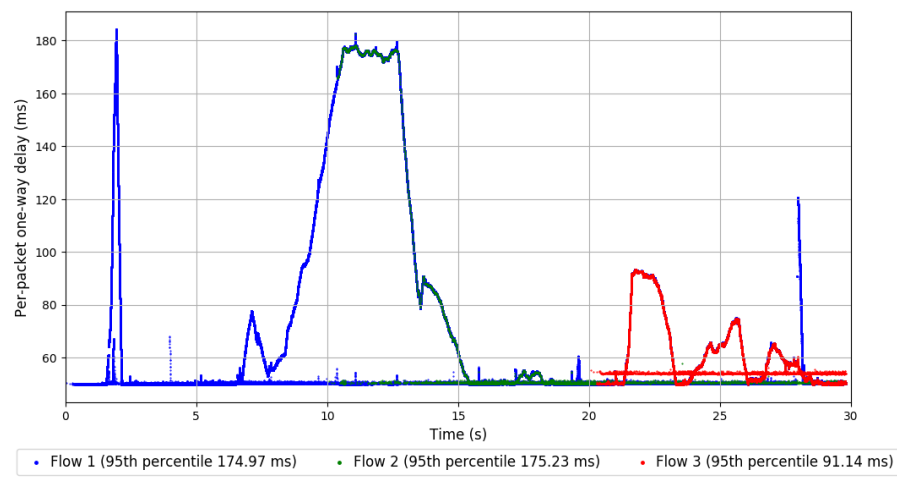
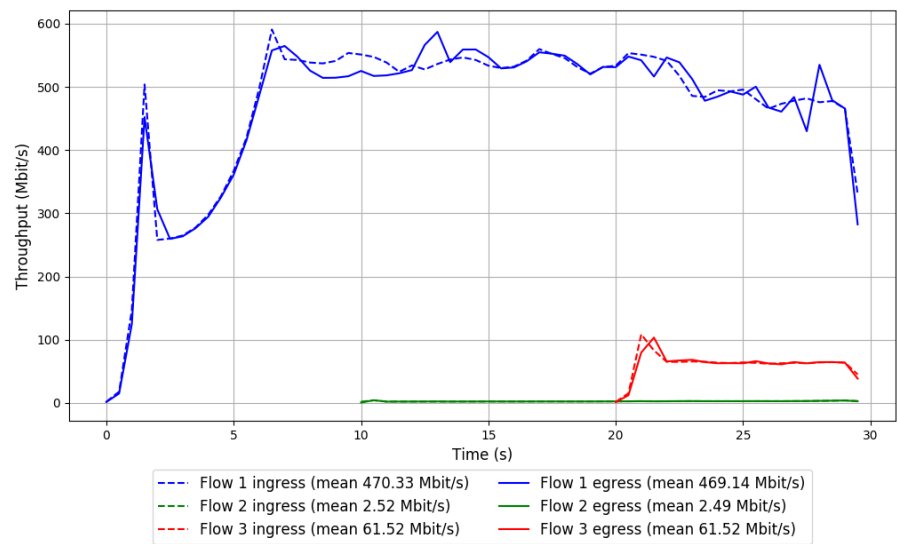
-- Flow 3:

Average throughput: 61.52 Mbit/s

95th percentile per-packet one-way delay: 91.137 ms

Loss rate: 1.07%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-04-18 10:54:17

End at: 2018-04-18 10:54:47

Below is generated by plot.py at 2018-04-18 15:57:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 480.04 Mbit/s

95th percentile per-packet one-way delay: 174.109 ms

Loss rate: 2.10%

-- Flow 1:

Average throughput: 438.40 Mbit/s

95th percentile per-packet one-way delay: 174.316 ms

Loss rate: 2.08%

-- Flow 2:

Average throughput: 60.78 Mbit/s

95th percentile per-packet one-way delay: 173.090 ms

Loss rate: 2.29%

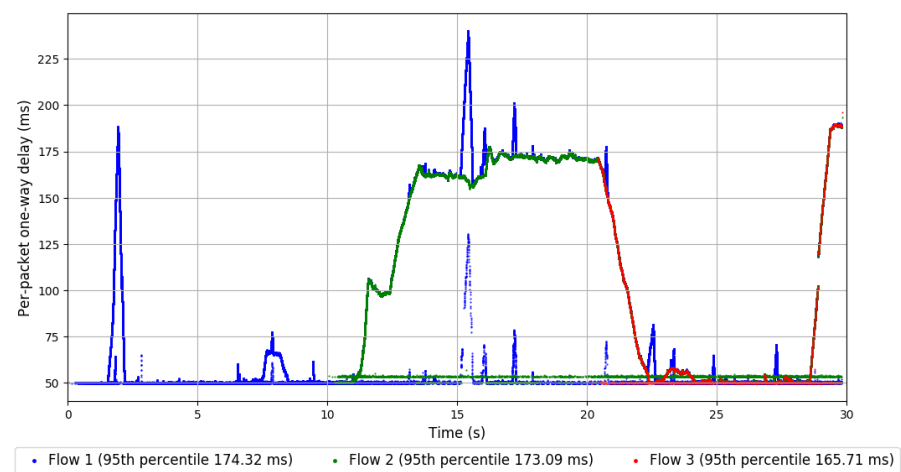
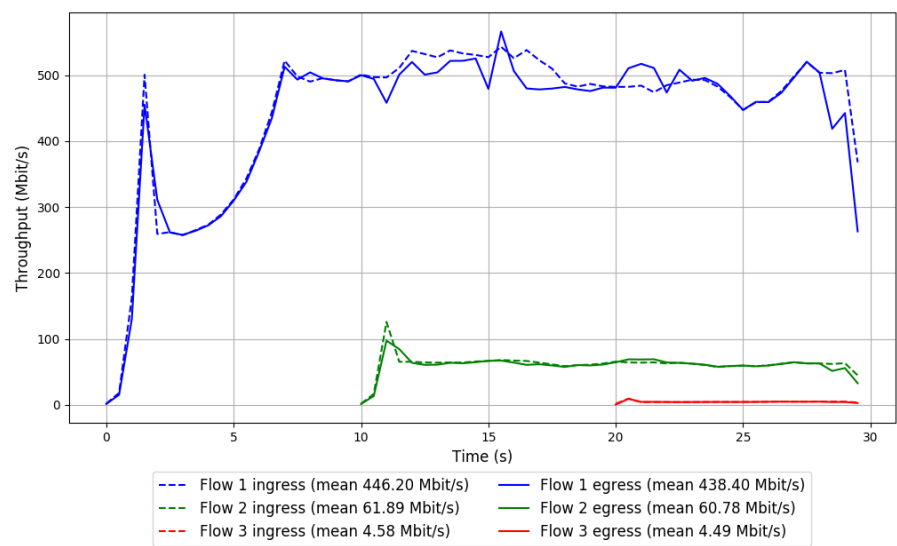
-- Flow 3:

Average throughput: 4.49 Mbit/s

95th percentile per-packet one-way delay: 165.713 ms

Loss rate: 2.89%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-04-18 11:09:36

End at: 2018-04-18 11:10:06

Below is generated by plot.py at 2018-04-18 15:57:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 475.77 Mbit/s

95th percentile per-packet one-way delay: 166.116 ms

Loss rate: 0.83%

-- Flow 1:

Average throughput: 398.92 Mbit/s

95th percentile per-packet one-way delay: 166.279 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 84.41 Mbit/s

95th percentile per-packet one-way delay: 165.795 ms

Loss rate: 0.90%

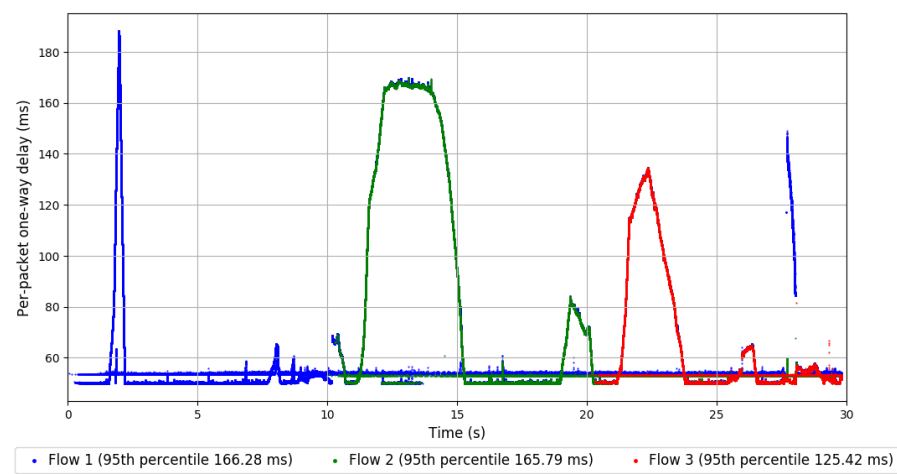
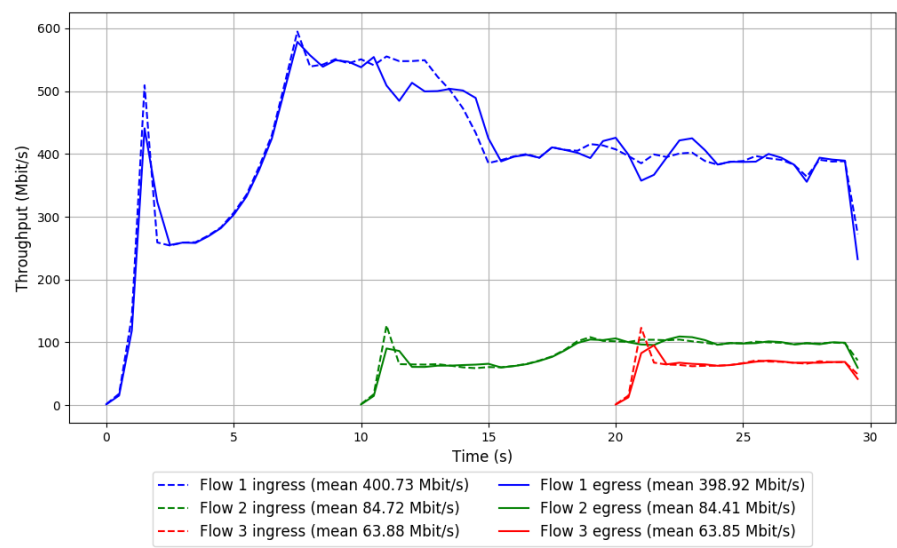
-- Flow 3:

Average throughput: 63.85 Mbit/s

95th percentile per-packet one-way delay: 125.421 ms

Loss rate: 1.14%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-04-18 11:24:48

End at: 2018-04-18 11:25:18

Below is generated by plot.py at 2018-04-18 15:57:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 447.98 Mbit/s

95th percentile per-packet one-way delay: 173.823 ms

Loss rate: 0.74%

-- Flow 1:

Average throughput: 406.46 Mbit/s

95th percentile per-packet one-way delay: 174.661 ms

Loss rate: 0.67%

-- Flow 2:

Average throughput: 32.71 Mbit/s

95th percentile per-packet one-way delay: 175.494 ms

Loss rate: 0.97%

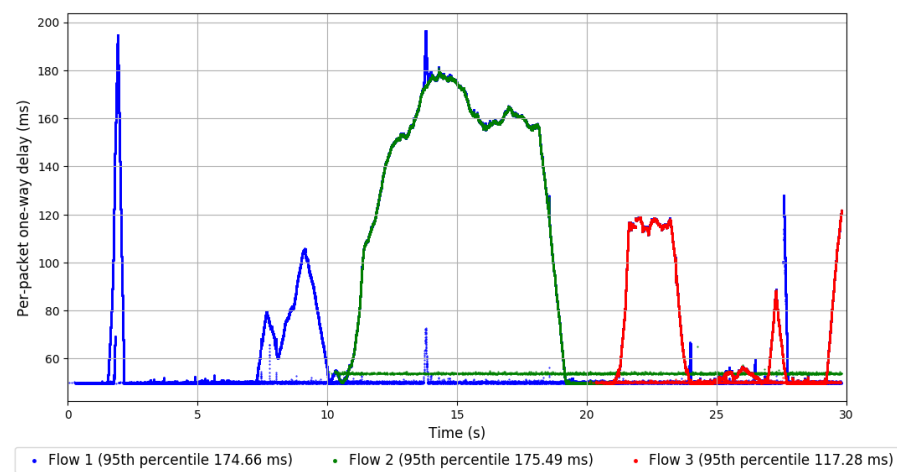
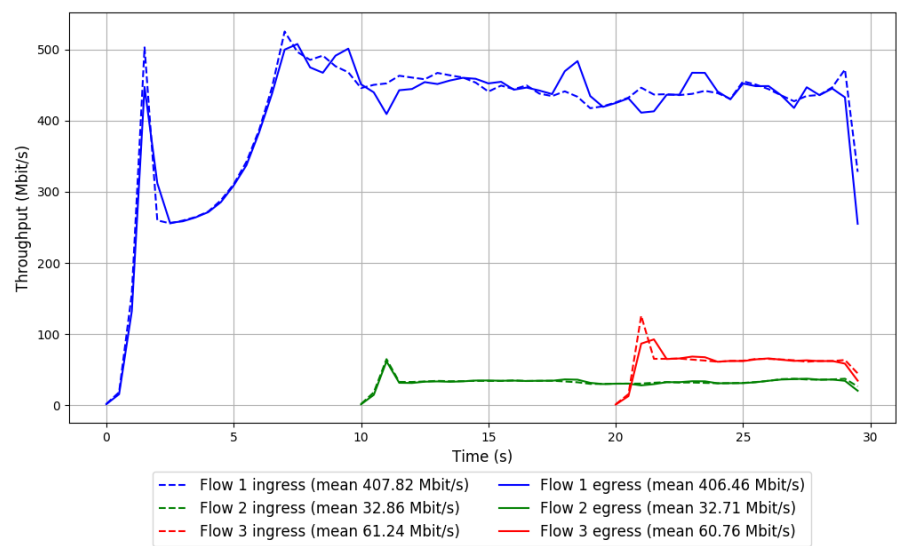
-- Flow 3:

Average throughput: 60.76 Mbit/s

95th percentile per-packet one-way delay: 117.276 ms

Loss rate: 1.80%

Run 5: Report of PCC-Allegro — Data Link



Run 6: Statistics of PCC-Allegro

Start at: 2018-04-18 11:40:27

End at: 2018-04-18 11:40:57

Below is generated by plot.py at 2018-04-18 15:57:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 482.31 Mbit/s

95th percentile per-packet one-way delay: 171.220 ms

Loss rate: 2.91%

-- Flow 1:

Average throughput: 368.09 Mbit/s

95th percentile per-packet one-way delay: 170.240 ms

Loss rate: 2.52%

-- Flow 2:

Average throughput: 143.49 Mbit/s

95th percentile per-packet one-way delay: 171.548 ms

Loss rate: 3.82%

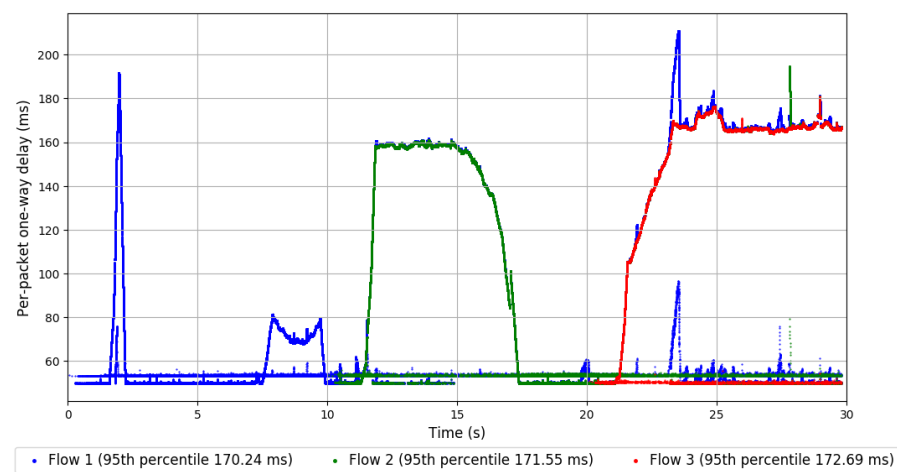
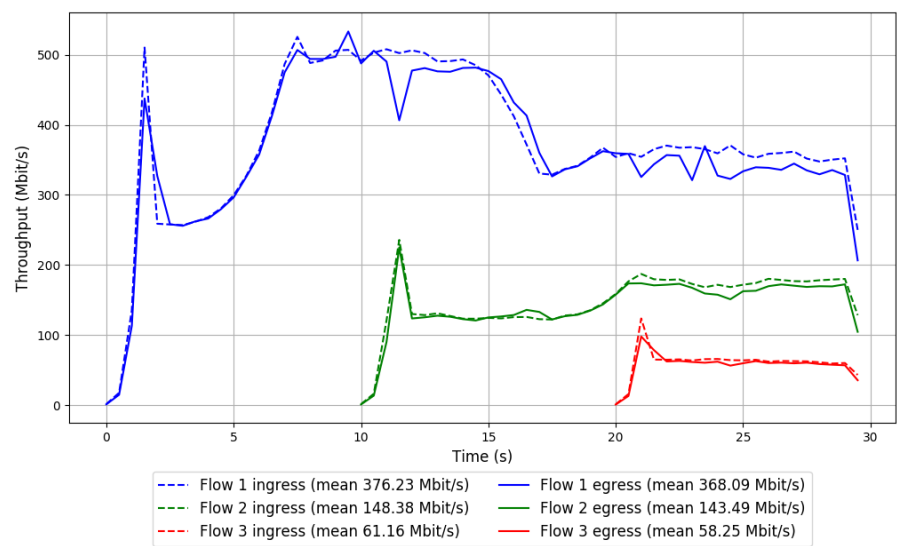
-- Flow 3:

Average throughput: 58.25 Mbit/s

95th percentile per-packet one-way delay: 172.686 ms

Loss rate: 5.76%

Run 6: Report of PCC-Allegro — Data Link



Run 7: Statistics of PCC-Allegro

Start at: 2018-04-18 11:55:27

End at: 2018-04-18 11:55:57

Below is generated by plot.py at 2018-04-18 15:57:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 455.66 Mbit/s

95th percentile per-packet one-way delay: 170.733 ms

Loss rate: 1.45%

-- Flow 1:

Average throughput: 451.15 Mbit/s

95th percentile per-packet one-way delay: 170.809 ms

Loss rate: 1.46%

-- Flow 2:

Average throughput: 4.76 Mbit/s

95th percentile per-packet one-way delay: 163.516 ms

Loss rate: 0.84%

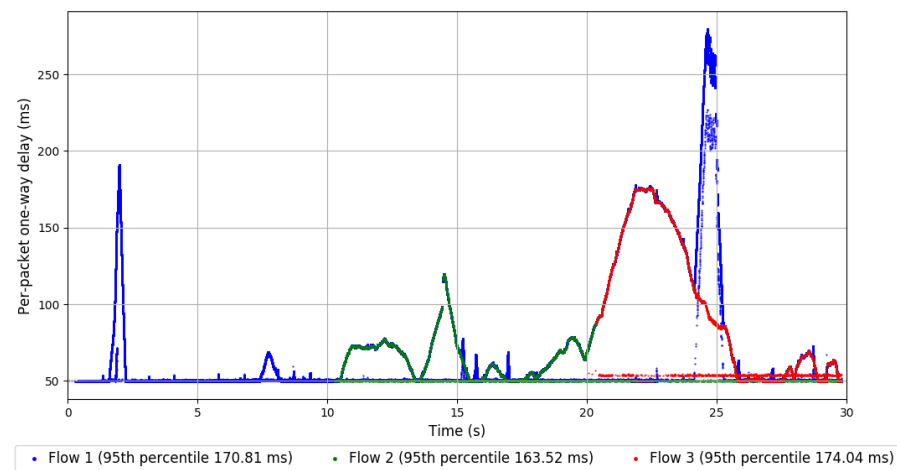
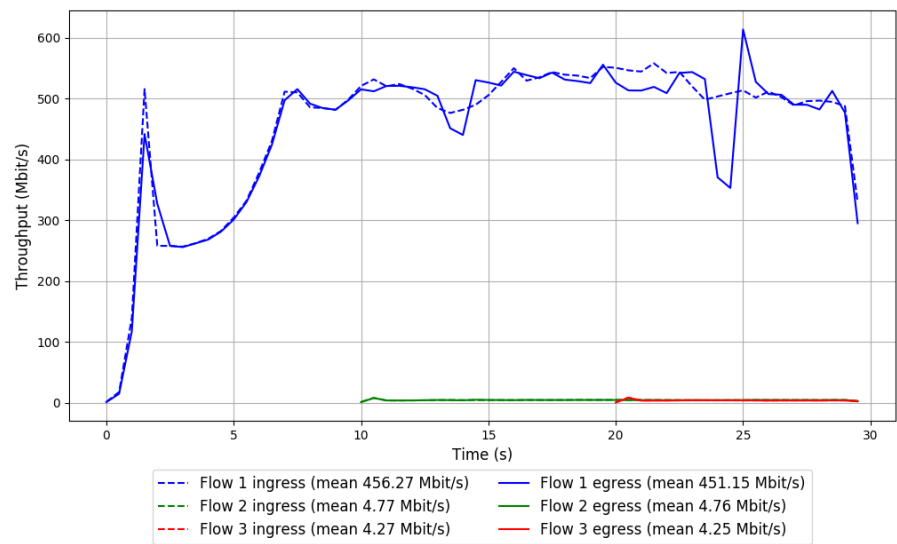
-- Flow 3:

Average throughput: 4.25 Mbit/s

95th percentile per-packet one-way delay: 174.040 ms

Loss rate: 1.32%

Run 7: Report of PCC-Allegro — Data Link



Run 8: Statistics of PCC-Allegro

Start at: 2018-04-18 12:10:31

End at: 2018-04-18 12:11:01

Below is generated by plot.py at 2018-04-18 15:59:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 470.52 Mbit/s

95th percentile per-packet one-way delay: 179.200 ms

Loss rate: 2.01%

-- Flow 1:

Average throughput: 404.31 Mbit/s

95th percentile per-packet one-way delay: 179.675 ms

Loss rate: 2.02%

-- Flow 2:

Average throughput: 70.20 Mbit/s

95th percentile per-packet one-way delay: 173.820 ms

Loss rate: 1.67%

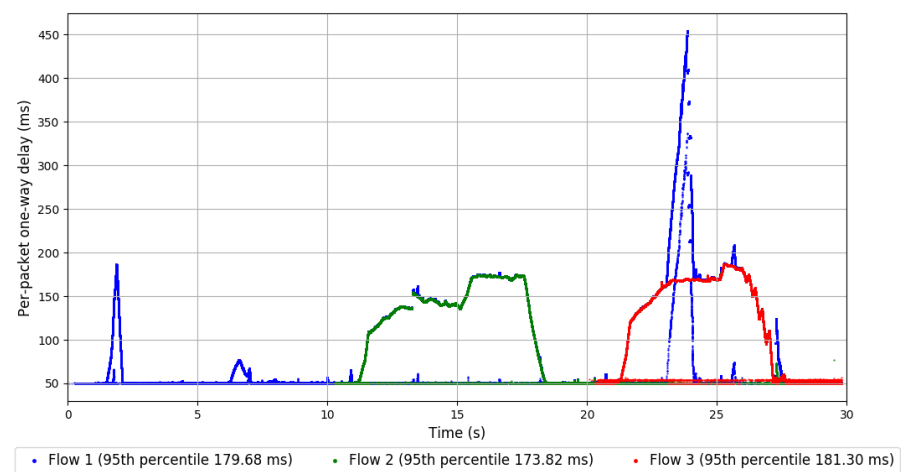
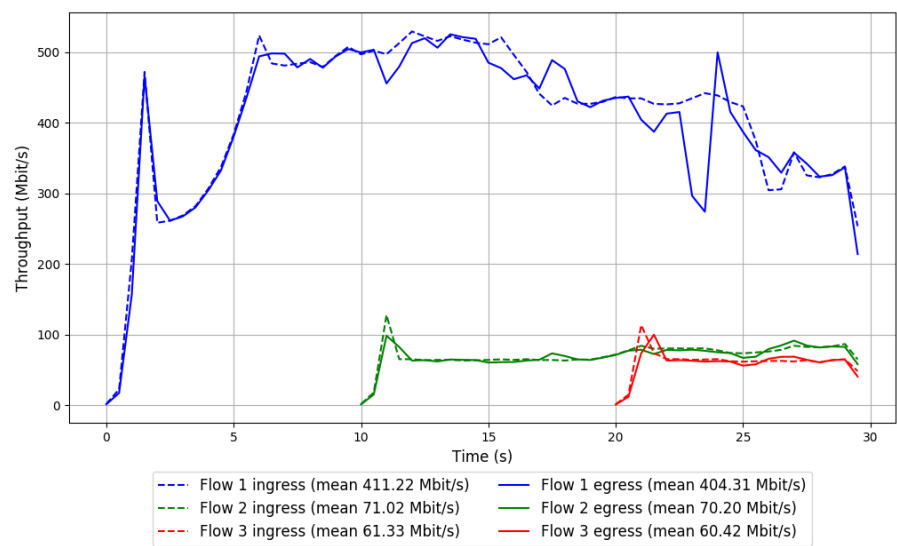
-- Flow 3:

Average throughput: 60.42 Mbit/s

95th percentile per-packet one-way delay: 181.304 ms

Loss rate: 2.49%

Run 8: Report of PCC-Allegro — Data Link



Run 9: Statistics of PCC-Allegro

Start at: 2018-04-18 12:25:49

End at: 2018-04-18 12:26:19

Below is generated by plot.py at 2018-04-18 16:04:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 444.31 Mbit/s

95th percentile per-packet one-way delay: 176.787 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 434.98 Mbit/s

95th percentile per-packet one-way delay: 176.882 ms

Loss rate: 1.22%

-- Flow 2:

Average throughput: 5.95 Mbit/s

95th percentile per-packet one-way delay: 171.260 ms

Loss rate: 1.13%

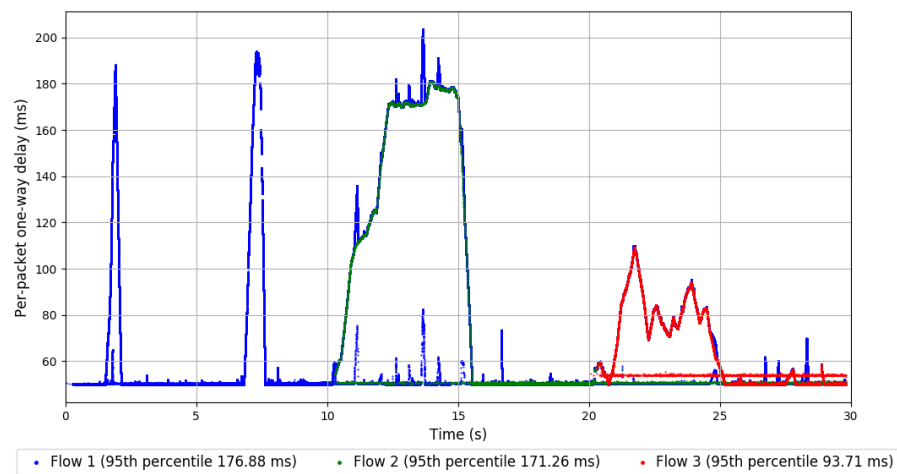
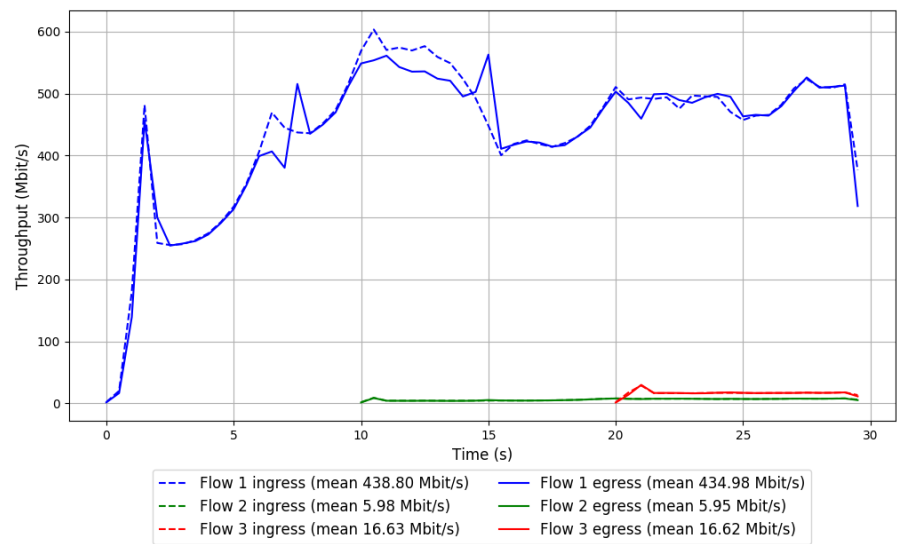
-- Flow 3:

Average throughput: 16.62 Mbit/s

95th percentile per-packet one-way delay: 93.708 ms

Loss rate: 1.17%

Run 9: Report of PCC-Allegro — Data Link

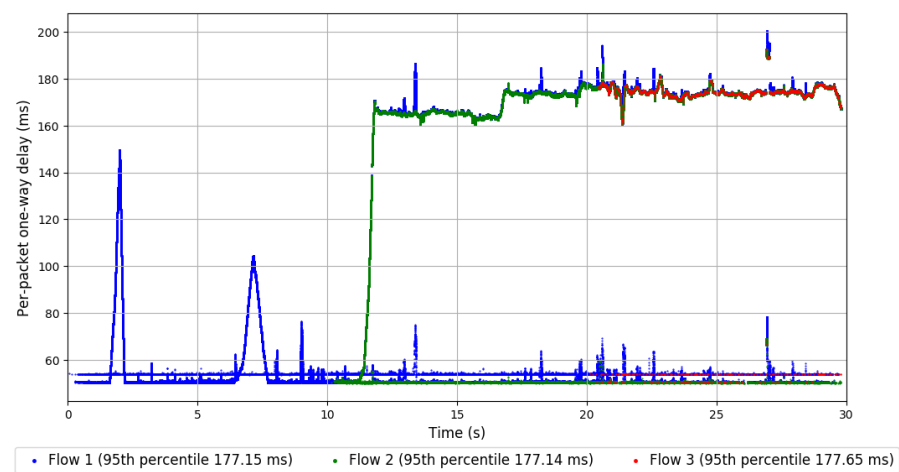
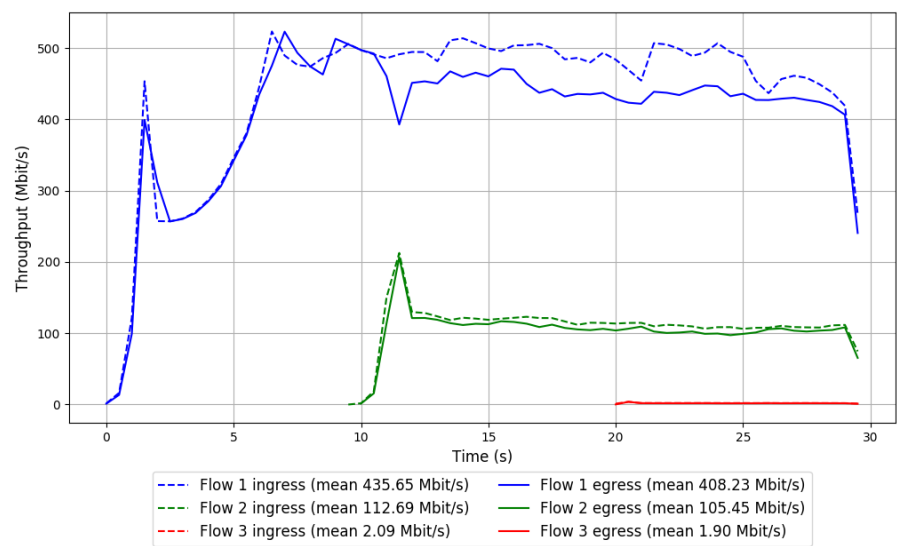


```
Run 10: Statistics of PCC-Allegro

Start at: 2018-04-18 12:41:14
End at: 2018-04-18 12:41:44

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 478.84 Mbit/s
95th percentile per-packet one-way delay: 177.152 ms
Loss rate: 6.67%
-- Flow 1:
Average throughput: 408.23 Mbit/s
95th percentile per-packet one-way delay: 177.153 ms
Loss rate: 6.62%
-- Flow 2:
Average throughput: 105.45 Mbit/s
95th percentile per-packet one-way delay: 177.140 ms
Loss rate: 6.91%
-- Flow 3:
Average throughput: 1.90 Mbit/s
95th percentile per-packet one-way delay: 177.653 ms
Loss rate: 10.12%
```

Run 10: Report of PCC-Allegro — Data Link

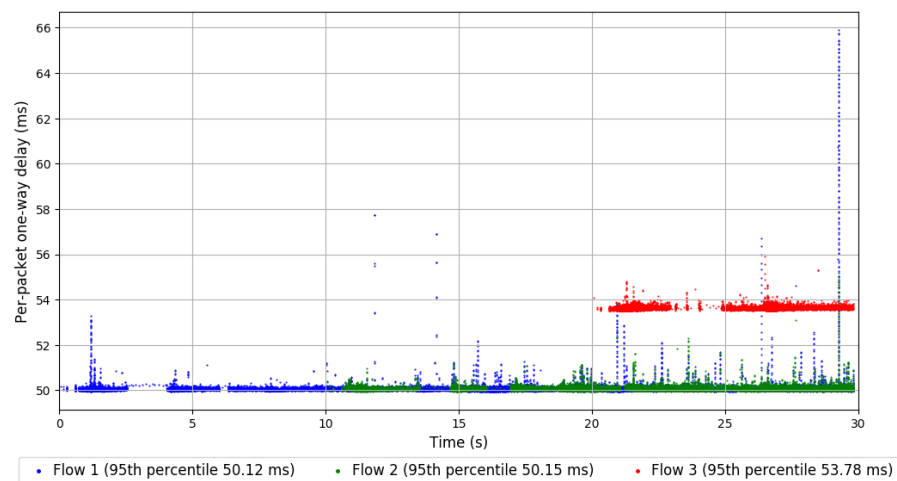
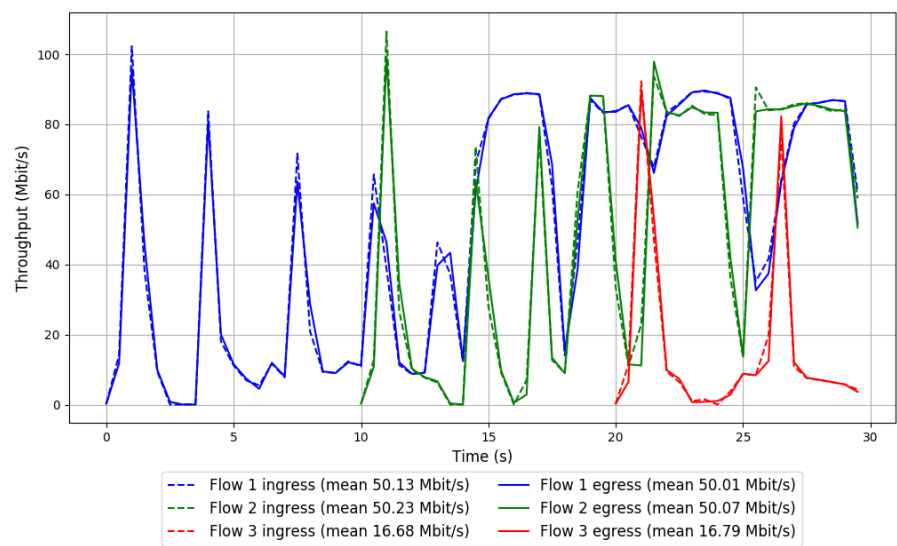


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-04-18 10:22:46
End at: 2018-04-18 10:23:16

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.70 Mbit/s
95th percentile per-packet one-way delay: 53.572 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 50.01 Mbit/s
95th percentile per-packet one-way delay: 50.116 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 50.07 Mbit/s
95th percentile per-packet one-way delay: 50.151 ms
Loss rate: 0.86%
-- Flow 3:
Average throughput: 16.79 Mbit/s
95th percentile per-packet one-way delay: 53.776 ms
Loss rate: 0.39%
```


Run 1: Report of QUIC Cubic — Data Link

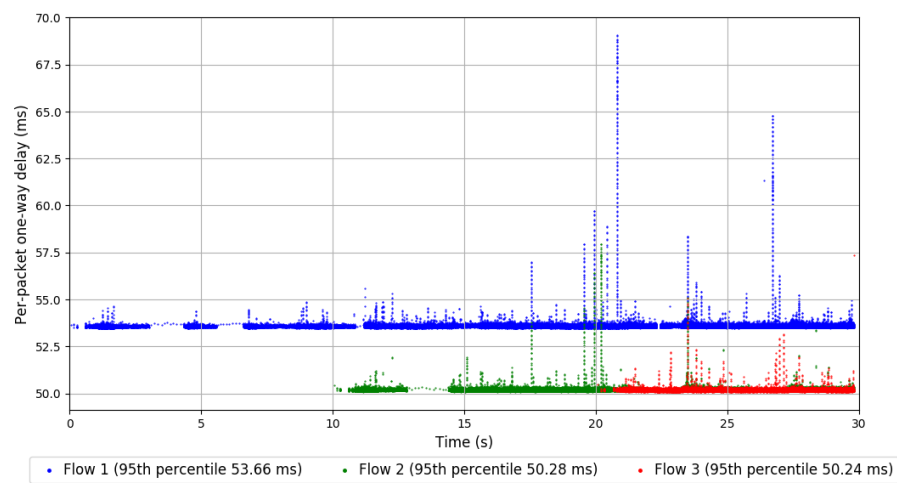
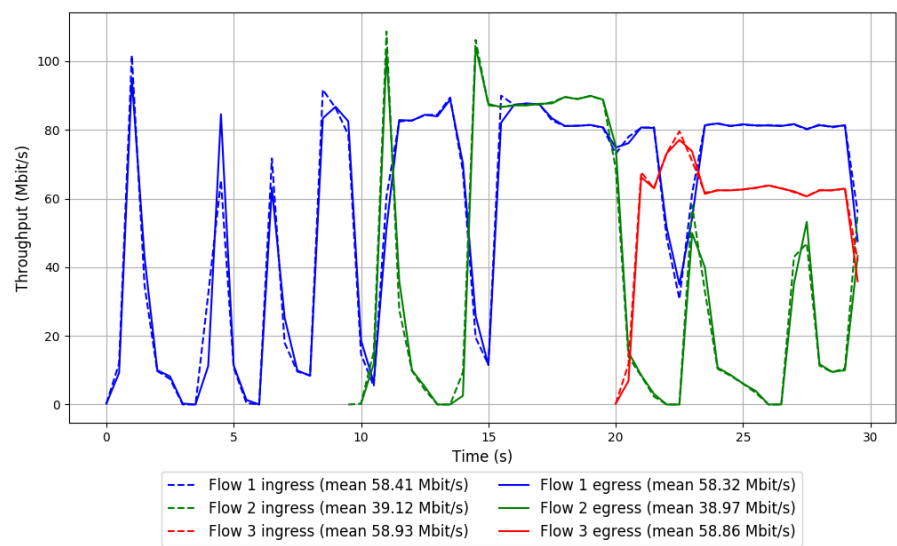


```
Run 2: Statistics of QUIC Cubic

Start at: 2018-04-18 10:38:04
End at: 2018-04-18 10:38:34

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 103.43 Mbit/s
95th percentile per-packet one-way delay: 53.635 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 58.32 Mbit/s
95th percentile per-packet one-way delay: 53.663 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 38.97 Mbit/s
95th percentile per-packet one-way delay: 50.278 ms
Loss rate: 0.89%
-- Flow 3:
Average throughput: 58.86 Mbit/s
95th percentile per-packet one-way delay: 50.243 ms
Loss rate: 1.06%
```

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-04-18 10:53:32

End at: 2018-04-18 10:54:02

Below is generated by plot.py at 2018-04-18 16:05:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 111.09 Mbit/s

95th percentile per-packet one-way delay: 53.603 ms

Loss rate: 0.64%

-- Flow 1:

Average throughput: 76.30 Mbit/s

95th percentile per-packet one-way delay: 53.609 ms

Loss rate: 0.34%

-- Flow 2:

Average throughput: 42.30 Mbit/s

95th percentile per-packet one-way delay: 53.587 ms

Loss rate: 0.82%

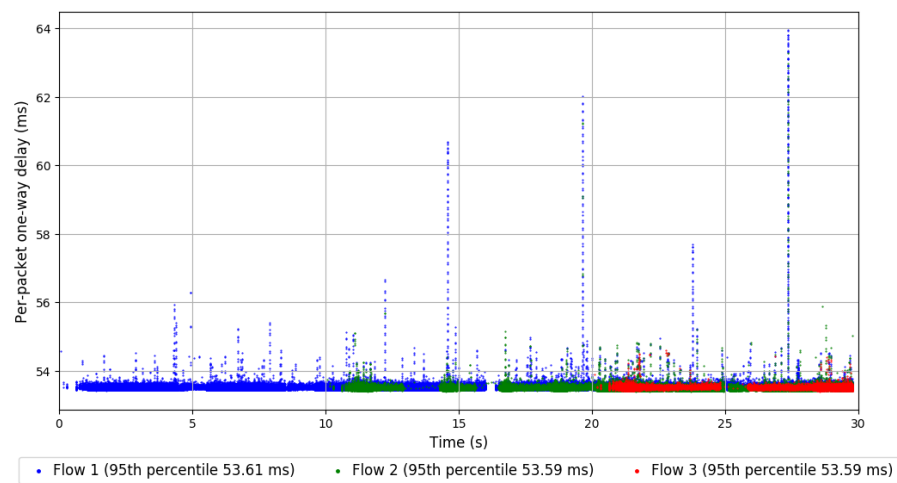
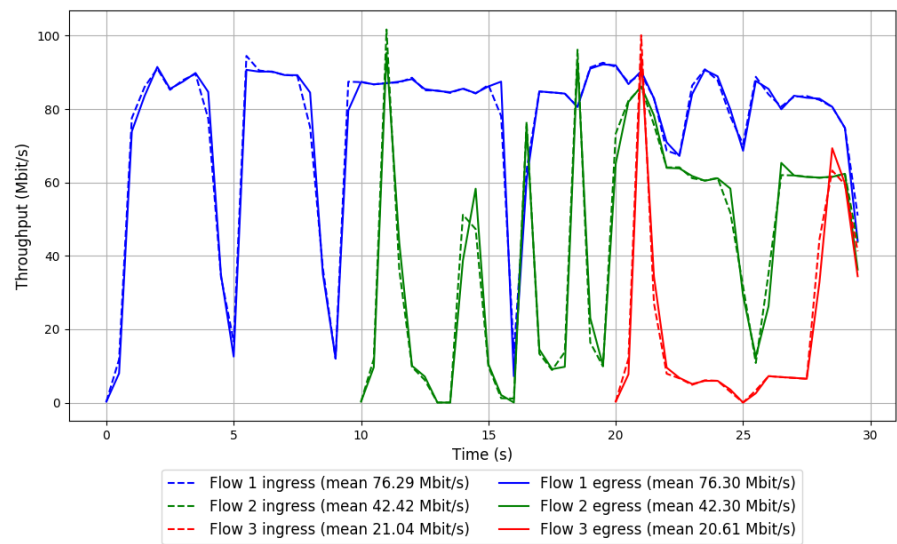
-- Flow 3:

Average throughput: 20.61 Mbit/s

95th percentile per-packet one-way delay: 53.592 ms

Loss rate: 3.13%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-04-18 11:08:52

End at: 2018-04-18 11:09:22

Below is generated by plot.py at 2018-04-18 16:05:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 73.20 Mbit/s

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

Loss rate: 0.68%

-- Flow 1:

Average throughput: 38.26 Mbit/s

95th percentile per-packet one-way delay: 50.109 ms

Loss rate: 0.71%

-- Flow 2:

Average throughput: 39.94 Mbit/s

95th percentile per-packet one-way delay: 49.952 ms

Loss rate: 0.73%

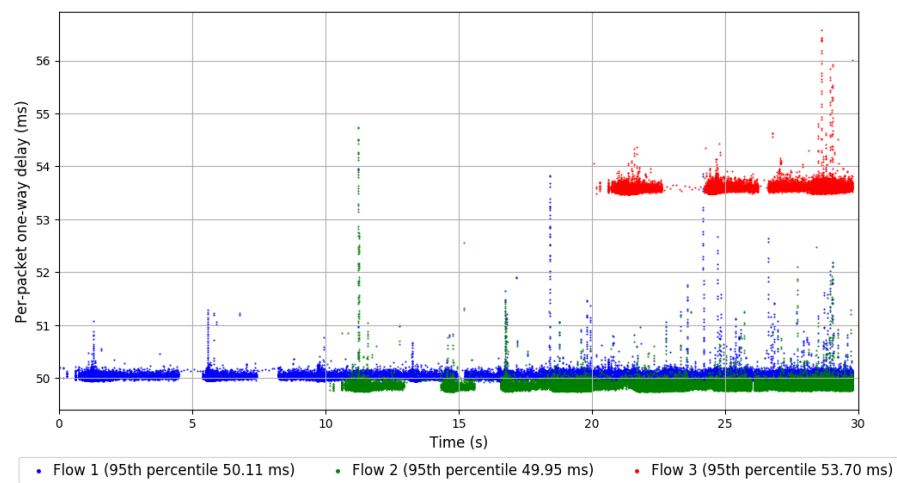
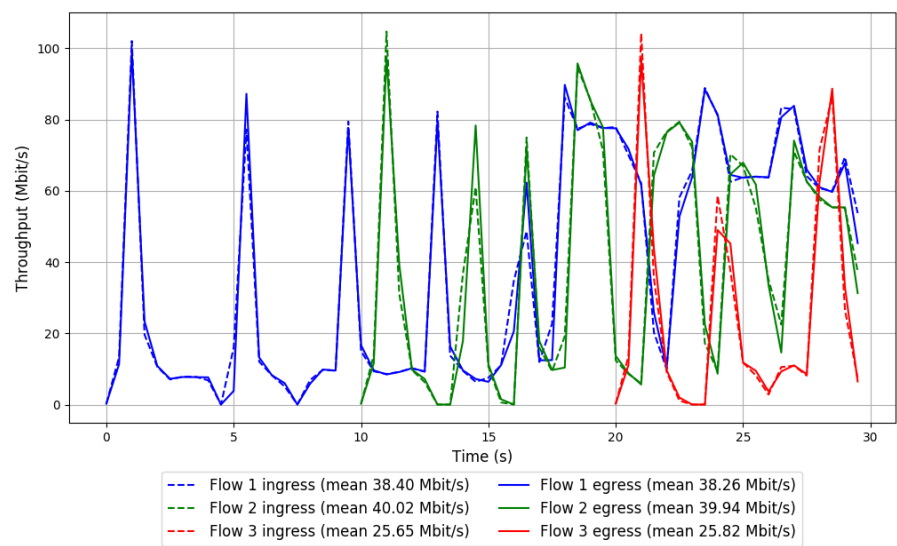
-- Flow 3:

Average throughput: 25.82 Mbit/s

95th percentile per-packet one-way delay: 53.703 ms

Loss rate: 0.42%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-04-18 11:24:03

End at: 2018-04-18 11:24:33

Below is generated by plot.py at 2018-04-18 16:05:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 100.14 Mbit/s

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

Loss rate: 0.58%

-- Flow 1:

Average throughput: 51.54 Mbit/s

95th percentile per-packet one-way delay: 53.655 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 46.66 Mbit/s

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

Loss rate: 1.07%

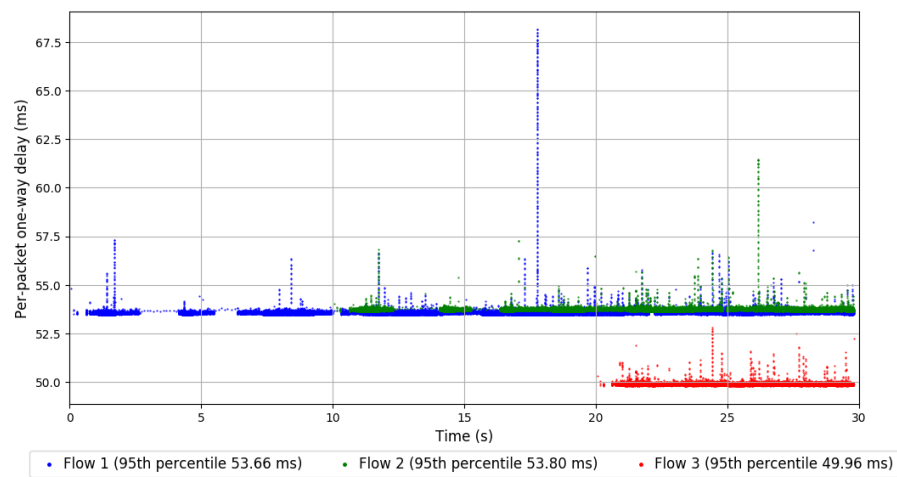
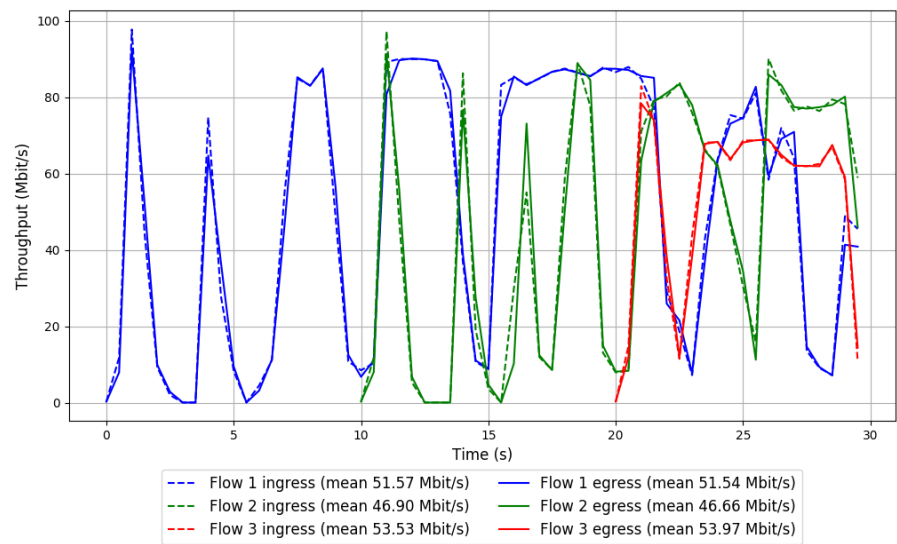
-- Flow 3:

Average throughput: 53.97 Mbit/s

95th percentile per-packet one-way delay: 49.956 ms

Loss rate: 0.20%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2018-04-18 11:39:42

End at: 2018-04-18 11:40:12

Below is generated by plot.py at 2018-04-18 16:05:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.49 Mbit/s

95th percentile per-packet one-way delay: 53.291 ms

Loss rate: 0.70%

-- Flow 1:

Average throughput: 48.10 Mbit/s

95th percentile per-packet one-way delay: 53.320 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 48.24 Mbit/s

95th percentile per-packet one-way delay: 49.930 ms

Loss rate: 0.84%

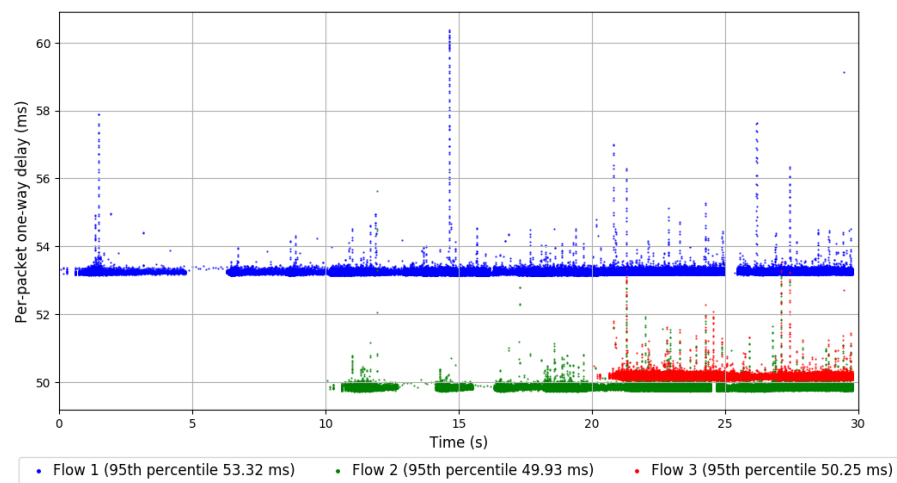
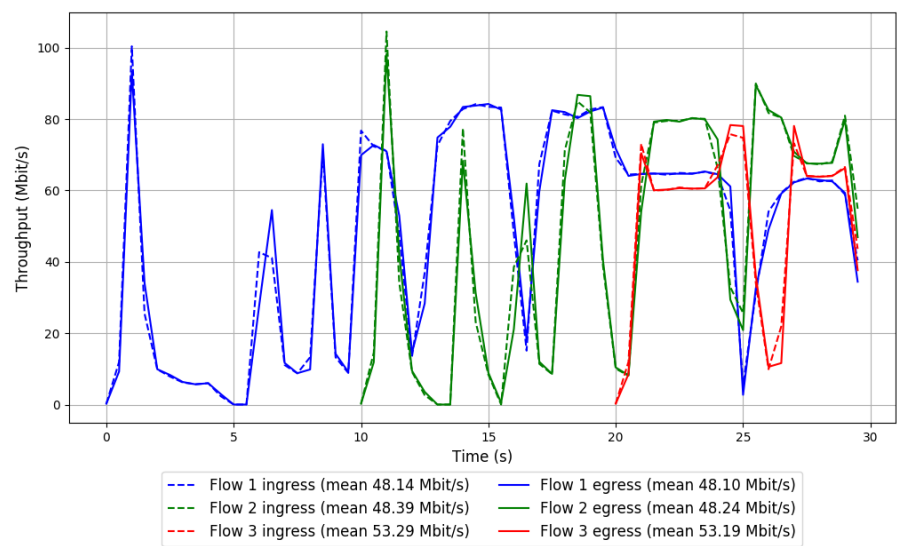
-- Flow 3:

Average throughput: 53.19 Mbit/s

95th percentile per-packet one-way delay: 50.251 ms

Loss rate: 1.22%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2018-04-18 11:54:43

End at: 2018-04-18 11:55:13

Below is generated by plot.py at 2018-04-18 16:05:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 98.58 Mbit/s

95th percentile per-packet one-way delay: 53.502 ms

Loss rate: 0.65%

-- Flow 1:

Average throughput: 53.85 Mbit/s

95th percentile per-packet one-way delay: 49.920 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 43.89 Mbit/s

95th percentile per-packet one-way delay: 53.557 ms

Loss rate: 0.74%

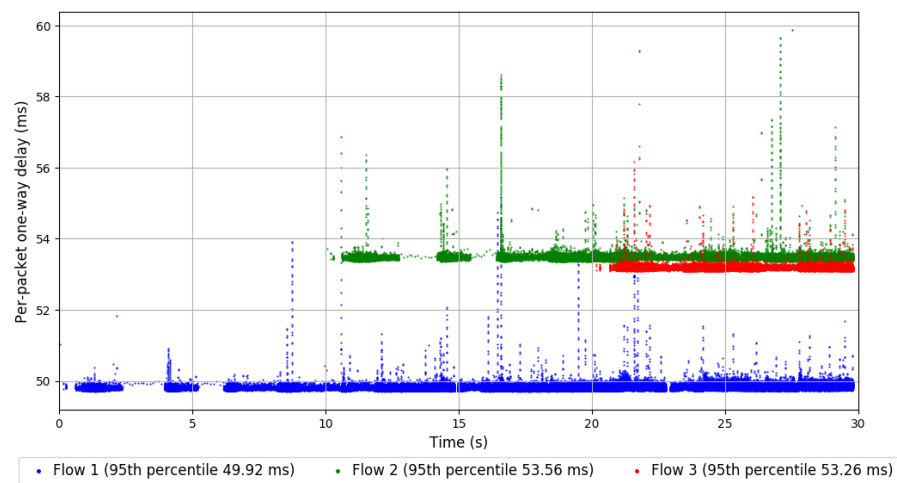
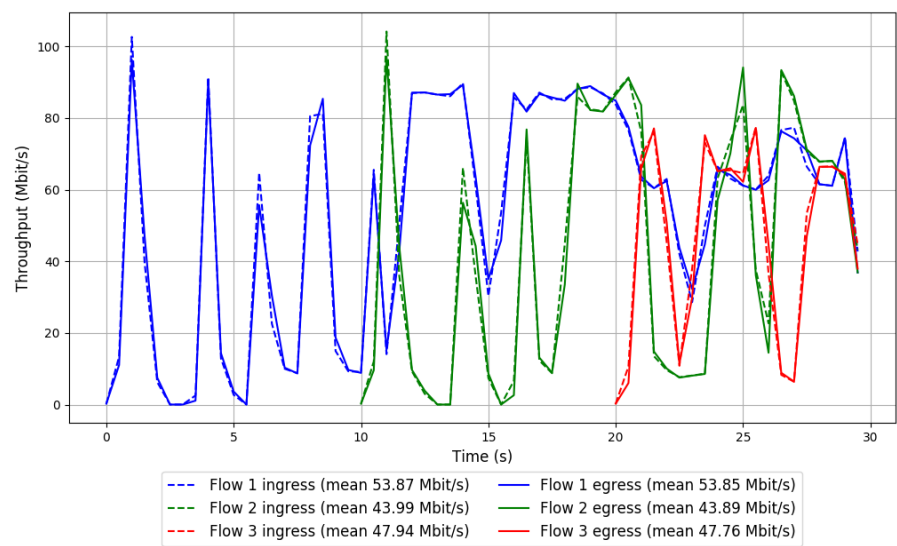
-- Flow 3:

Average throughput: 47.76 Mbit/s

95th percentile per-packet one-way delay: 53.264 ms

Loss rate: 1.42%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2018-04-18 12:09:45

End at: 2018-04-18 12:10:15

Below is generated by plot.py at 2018-04-18 16:05:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 108.10 Mbit/s

95th percentile per-packet one-way delay: 53.553 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 71.83 Mbit/s

95th percentile per-packet one-way delay: 49.924 ms

Loss rate: 0.29%

-- Flow 2:

Average throughput: 42.10 Mbit/s

95th percentile per-packet one-way delay: 53.615 ms

Loss rate: 0.80%

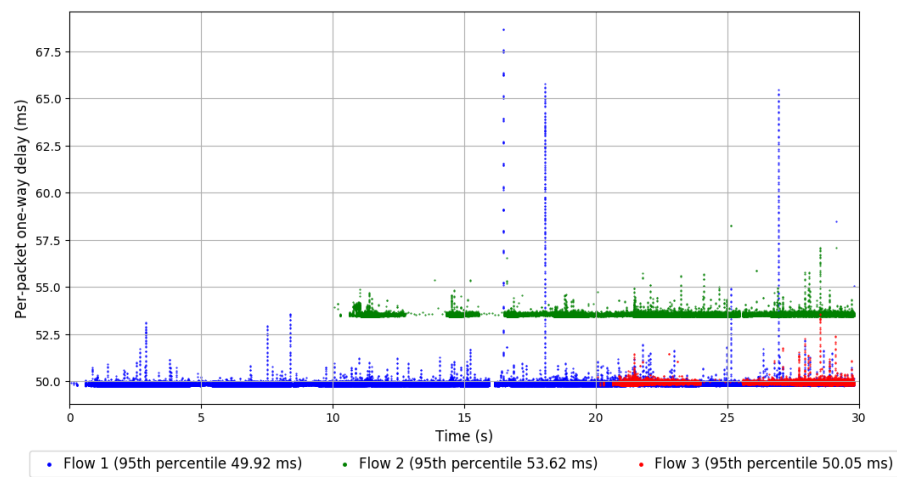
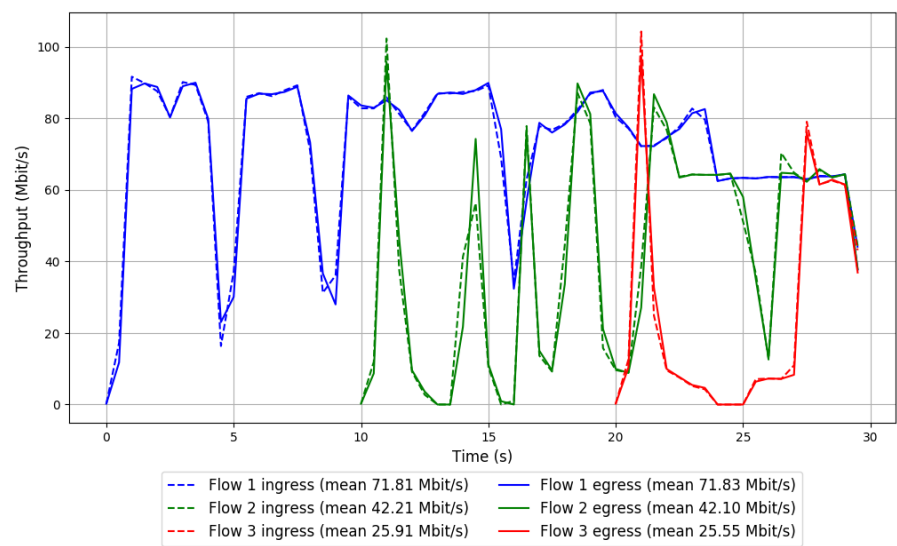
-- Flow 3:

Average throughput: 25.55 Mbit/s

95th percentile per-packet one-way delay: 50.049 ms

Loss rate: 2.42%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2018-04-18 12:25:04

End at: 2018-04-18 12:25:34

Below is generated by plot.py at 2018-04-18 16:05:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 103.94 Mbit/s

95th percentile per-packet one-way delay: 50.370 ms

Loss rate: 0.49%

-- Flow 1:

Average throughput: 45.85 Mbit/s

95th percentile per-packet one-way delay: 50.079 ms

Loss rate: 0.56%

-- Flow 2:

Average throughput: 61.11 Mbit/s

95th percentile per-packet one-way delay: 50.035 ms

Loss rate: 0.08%

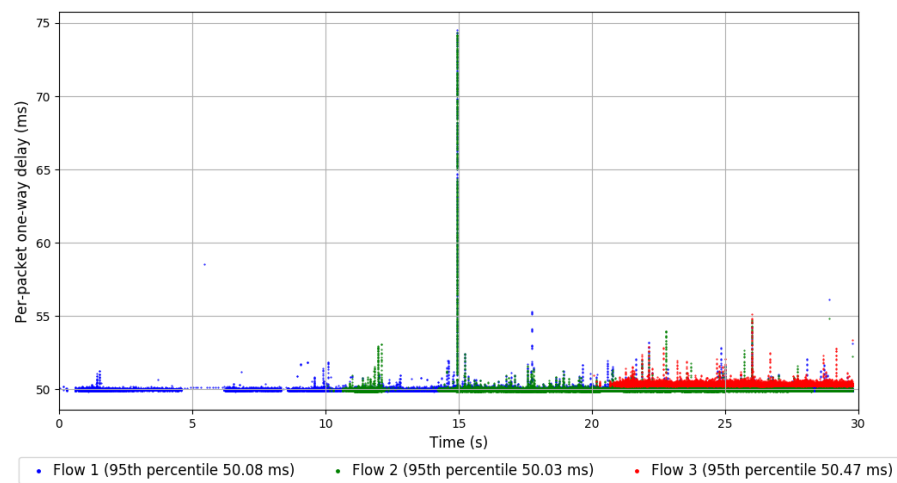
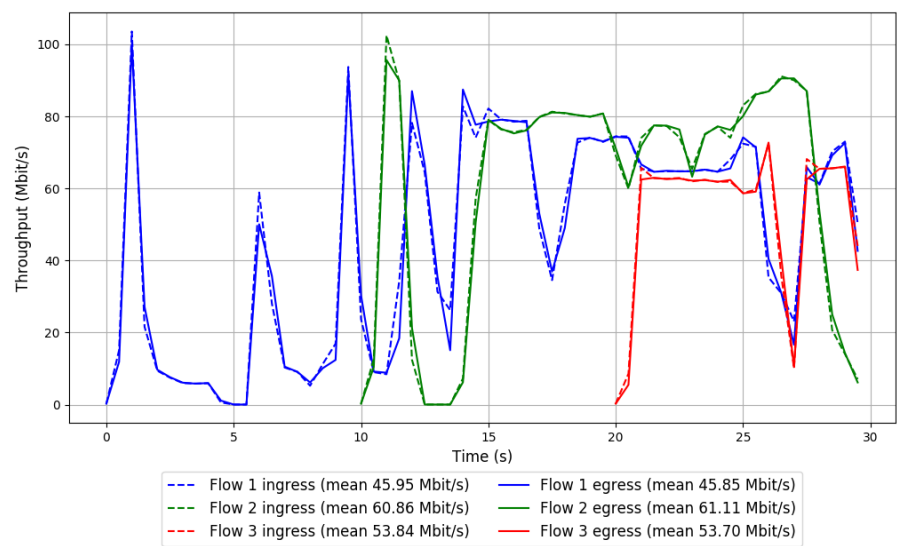
-- Flow 3:

Average throughput: 53.70 Mbit/s

95th percentile per-packet one-way delay: 50.471 ms

Loss rate: 1.25%

Run 9: Report of QUIC Cubic — Data Link

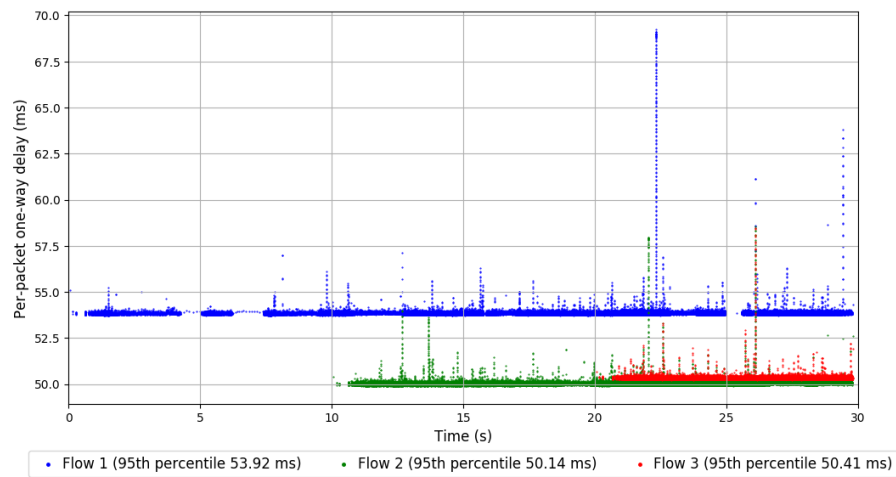
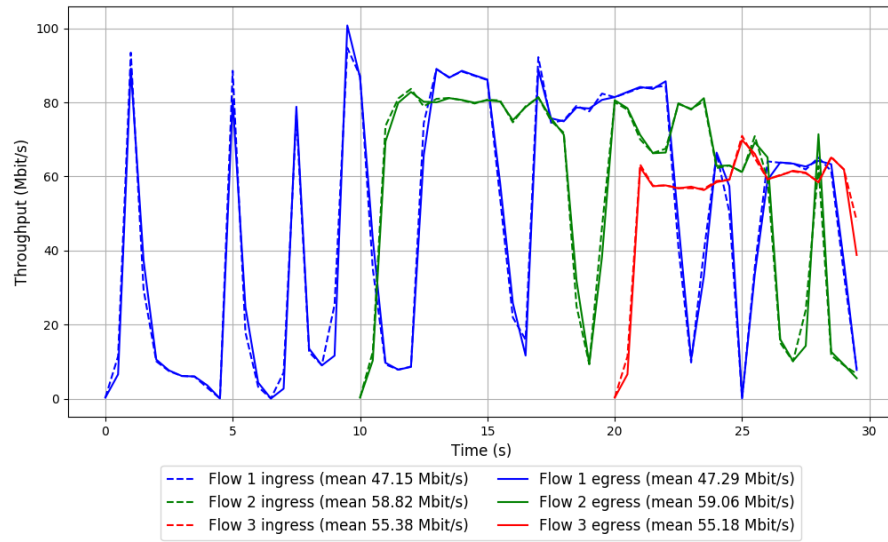


```
Run 10: Statistics of QUIC Cubic

Start at: 2018-04-18 12:40:29
End at: 2018-04-18 12:40:59

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 104.51 Mbit/s
95th percentile per-packet one-way delay: 53.885 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 47.29 Mbit/s
95th percentile per-packet one-way delay: 53.921 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 59.06 Mbit/s
95th percentile per-packet one-way delay: 50.137 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 55.18 Mbit/s
95th percentile per-packet one-way delay: 50.411 ms
Loss rate: 1.41%
```

Run 10: Report of QUIC Cubic — Data Link

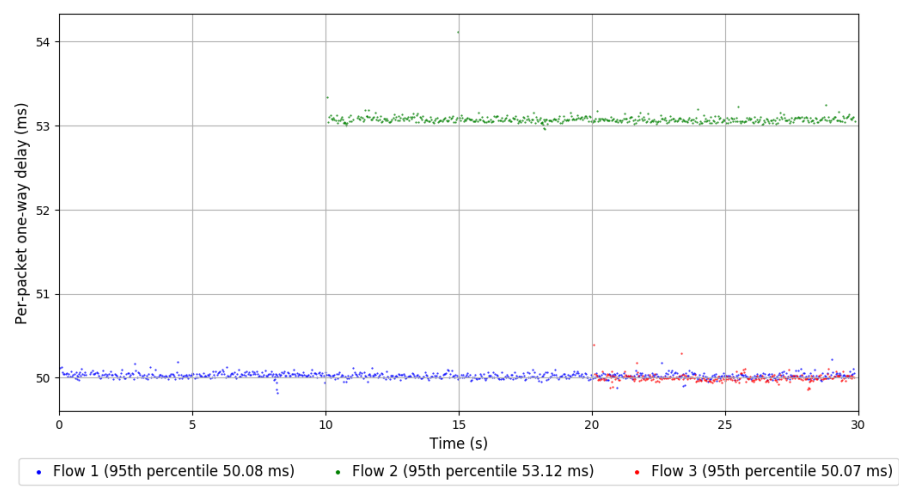
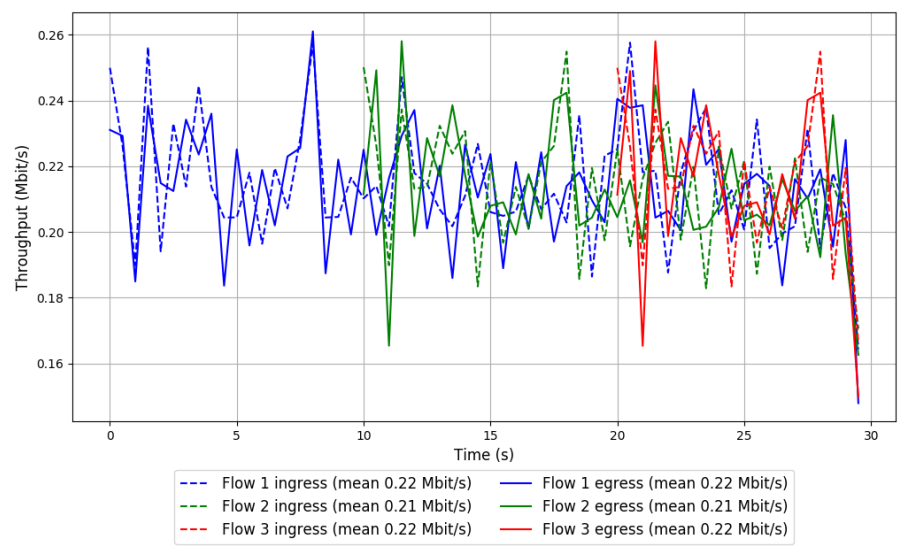


```
Run 1: Statistics of SCReAM

Start at: 2018-04-18 10:28:33
End at: 2018-04-18 10:29:03

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.103 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.076 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.125 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.071 ms
Loss rate: 1.11%
```

Run 1: Report of SReAM — Data Link

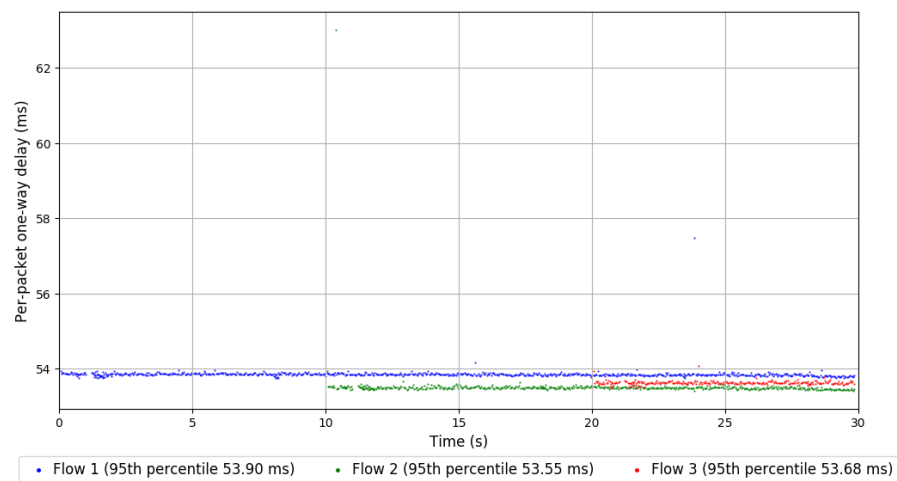
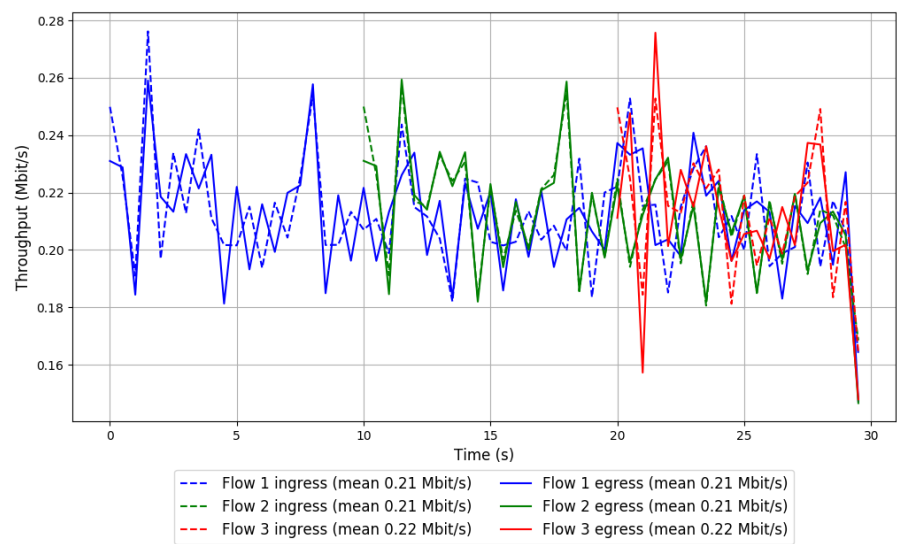


```
Run 2: Statistics of SCReAM

Start at: 2018-04-18 10:43:57
End at: 2018-04-18 10:44:27

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.887 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.900 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.551 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.683 ms
Loss rate: 1.11%
```

Run 2: Report of SReAM — Data Link

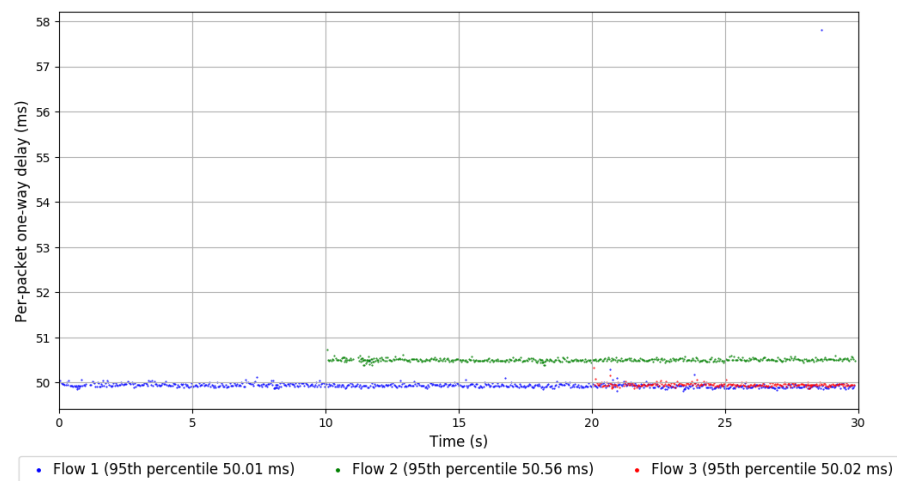
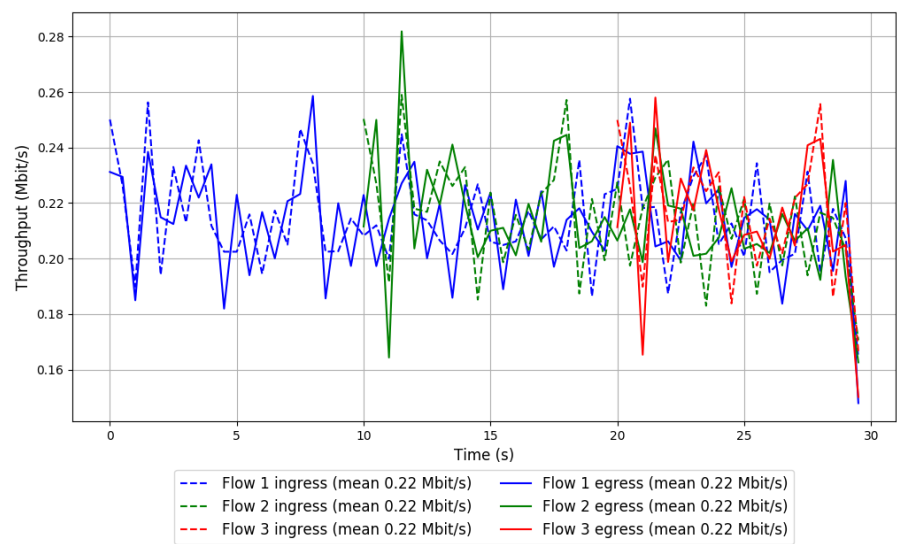


```
Run 3: Statistics of SReAM

Start at: 2018-04-18 10:59:25
End at: 2018-04-18 10:59:55

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.537 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.008 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.565 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.017 ms
Loss rate: 1.11%
```


Run 3: Report of SReAM — Data Link

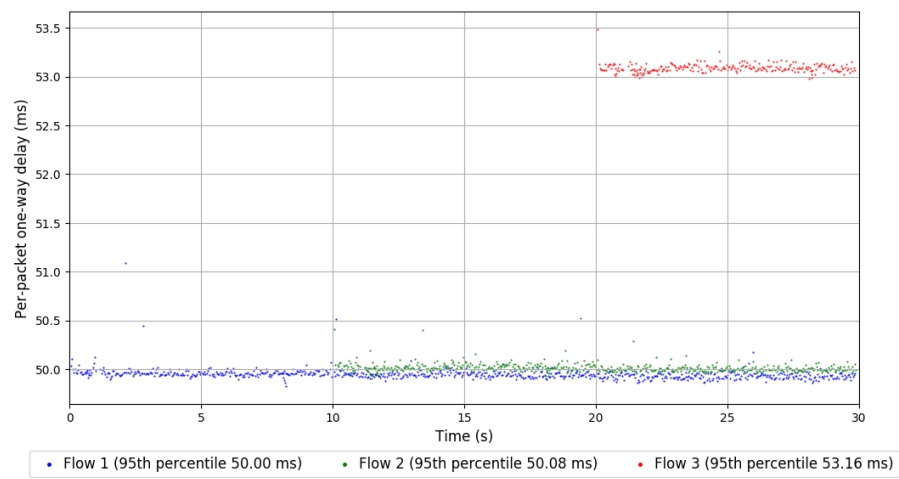
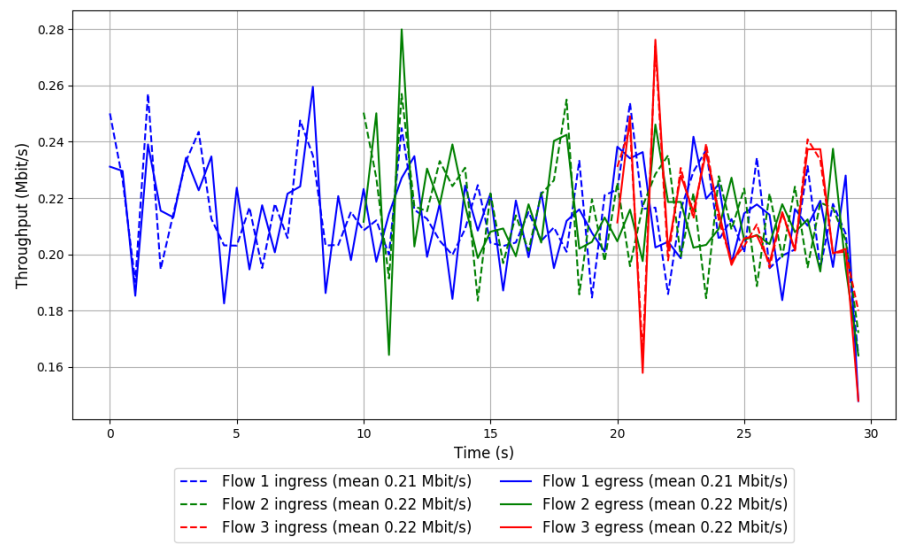


```
Run 4: Statistics of SReAM

Start at: 2018-04-18 11:14:47
End at: 2018-04-18 11:15:17

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.105 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 50.001 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.082 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.155 ms
Loss rate: 1.11%
```

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SReAM

Start at: 2018-04-18 11:29:53

End at: 2018-04-18 11:30:23

Below is generated by plot.py at 2018-04-18 16:05:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

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

Loss rate: 0.45%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.064 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 0.22 Mbit/s

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

Loss rate: 0.43%

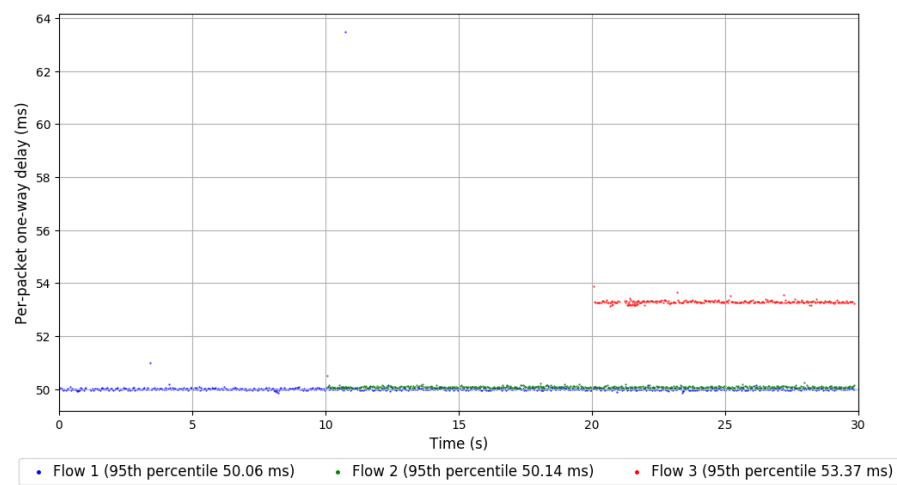
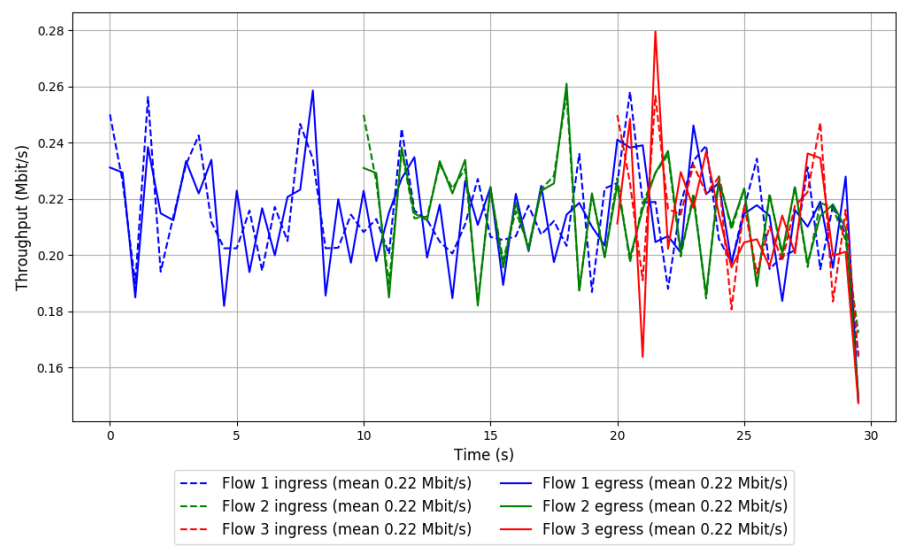
-- Flow 3:

Average throughput: 0.22 Mbit/s

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

Loss rate: 1.10%

Run 5: Report of SReAM — Data Link



Run 6: Statistics of SCReAM

Start at: 2018-04-18 11:45:33

End at: 2018-04-18 11:46:03

Below is generated by plot.py at 2018-04-18 16:05:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.497 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.509 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.468 ms

Loss rate: 0.42%

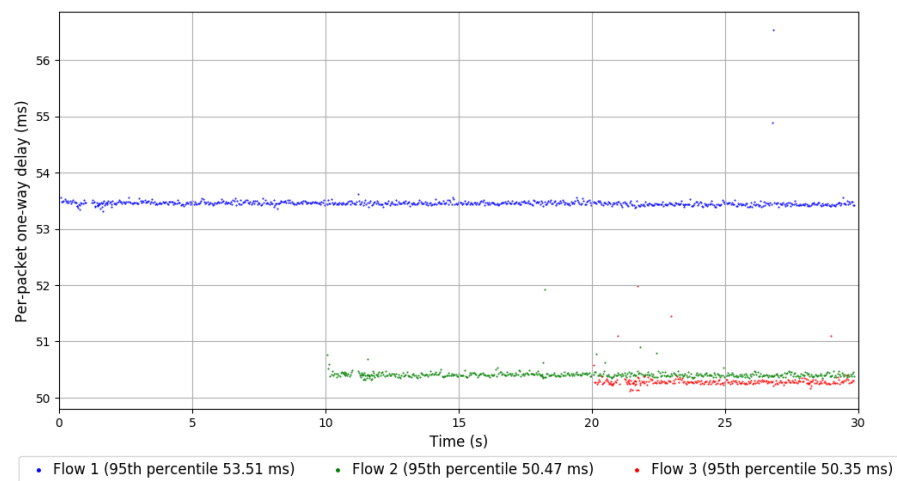
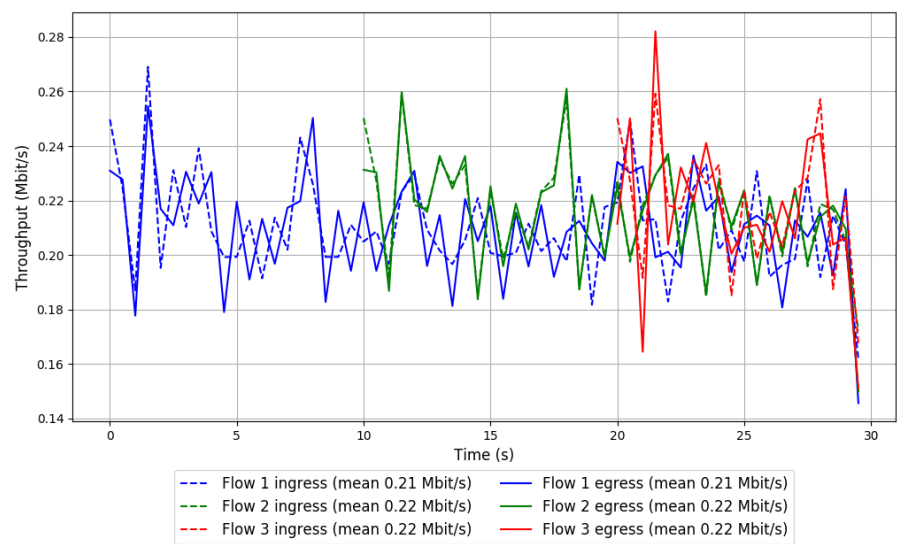
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.352 ms

Loss rate: 1.11%

Run 6: Report of SReAM — Data Link

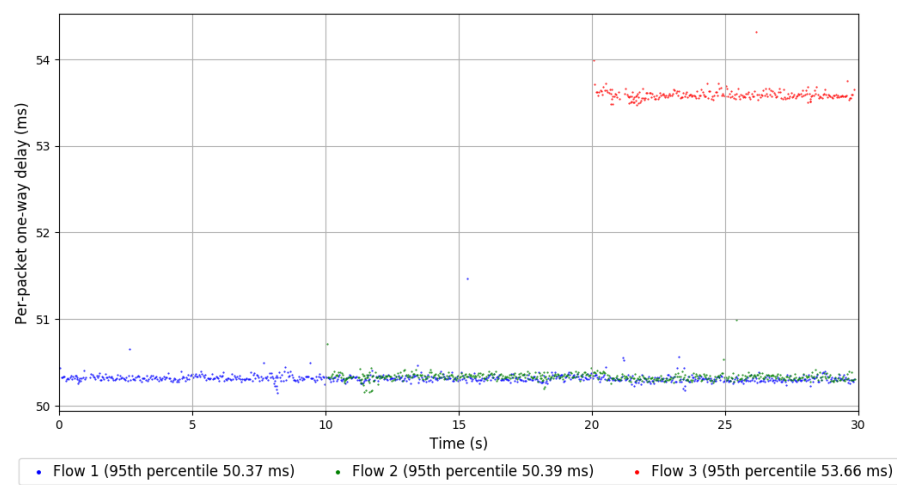
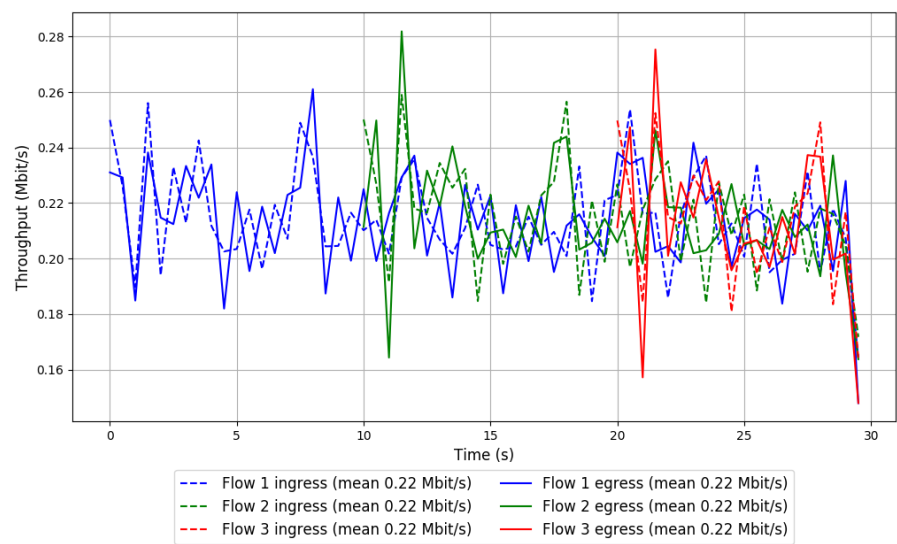


```
Run 7: Statistics of SCReAM

Start at: 2018-04-18 12:00:33
End at: 2018-04-18 12:01:03

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.602 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.374 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.387 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.663 ms
Loss rate: 1.11%
```


Run 7: Report of SReAM — Data Link



Run 8: Statistics of SCReAM

Start at: 2018-04-18 12:15:34

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

Below is generated by plot.py at 2018-04-18 16:05:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

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

Loss rate: 0.45%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.509 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.440 ms

Loss rate: 0.42%

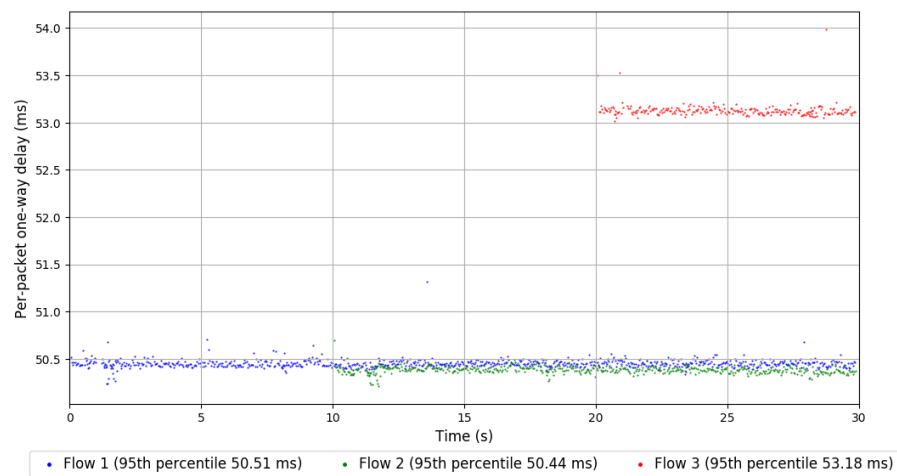
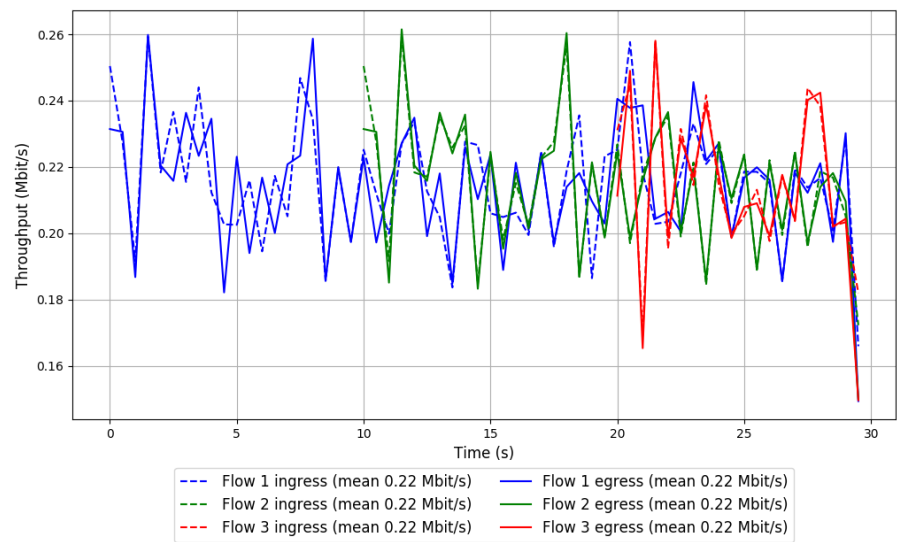
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 53.179 ms

Loss rate: 1.11%

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SCReAM

Start at: 2018-04-18 12:30:54

End at: 2018-04-18 12:31:24

Below is generated by plot.py at 2018-04-18 16:05:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.814 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 0.22 Mbit/s

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

Loss rate: 0.25%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.845 ms

Loss rate: 0.63%

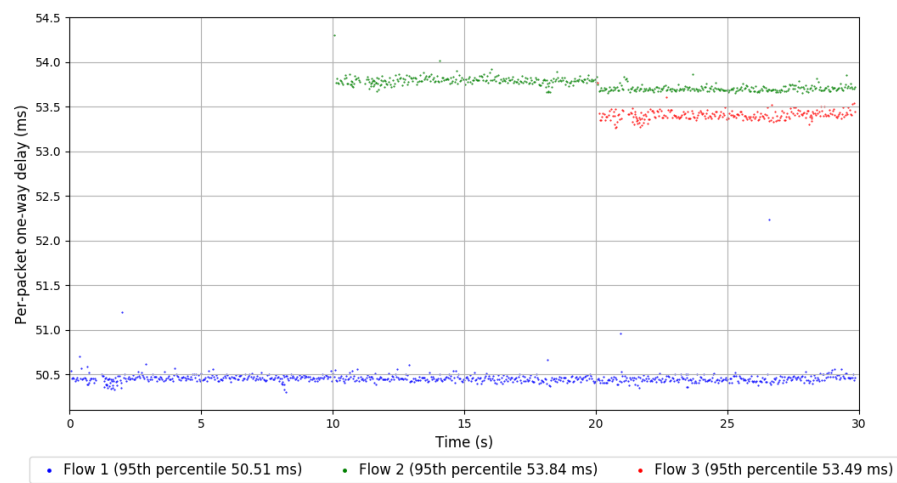
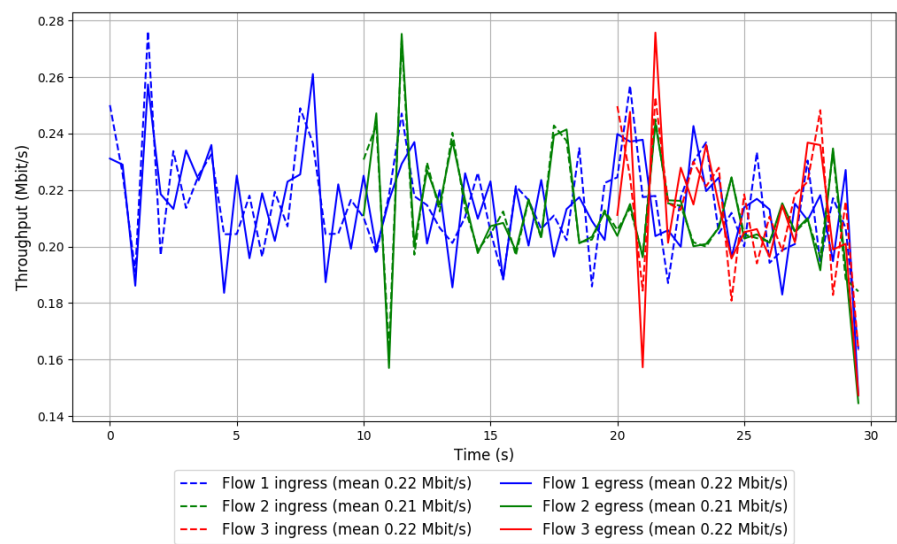
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 53.487 ms

Loss rate: 1.10%

Run 9: Report of SReAM — Data Link

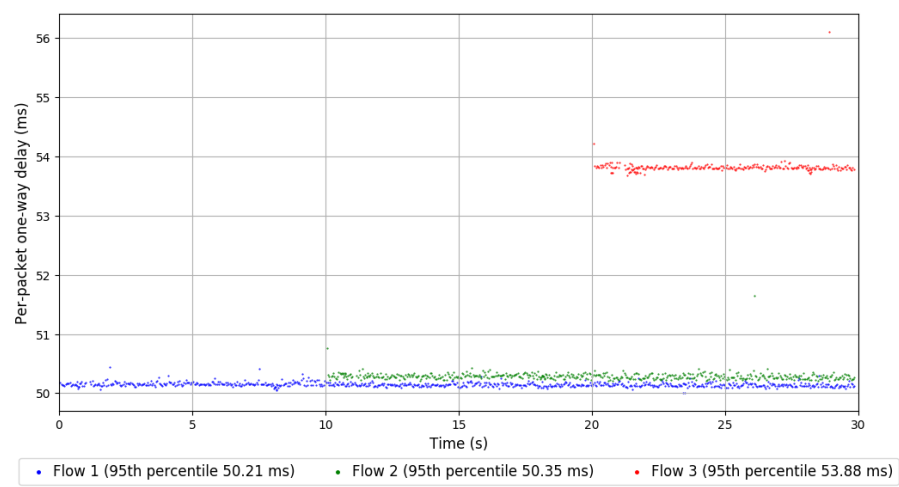
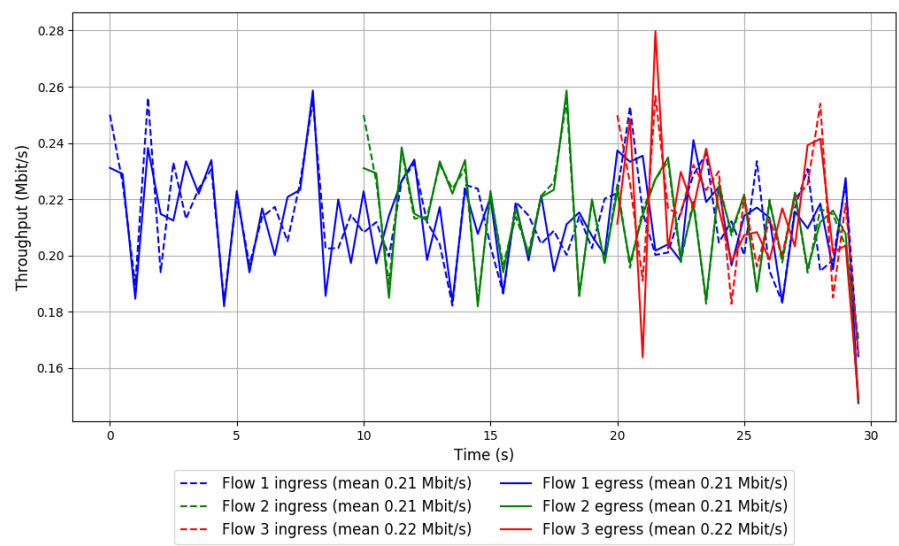


```
Run 10: Statistics of SReAM

Start at: 2018-04-18 12:46:16
End at: 2018-04-18 12:46:46

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.830 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 50.208 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 50.353 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.881 ms
Loss rate: 1.10%
```

Run 10: Report of SReAM — Data Link

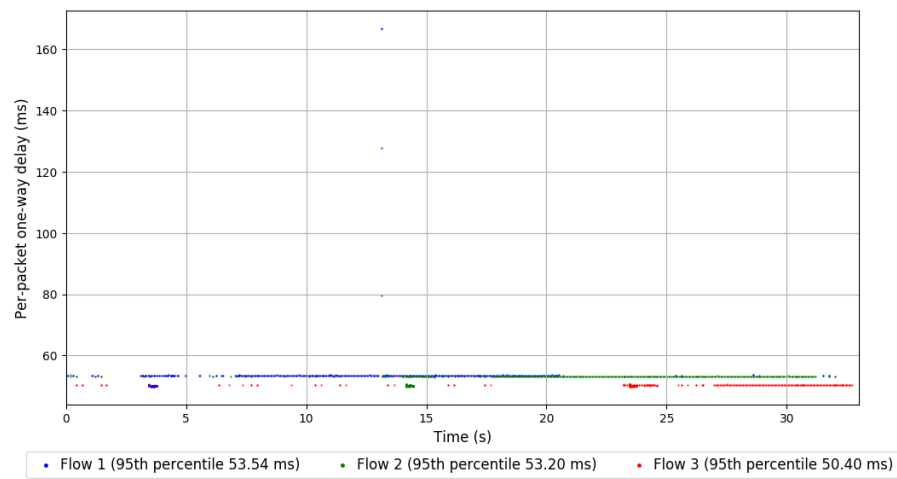
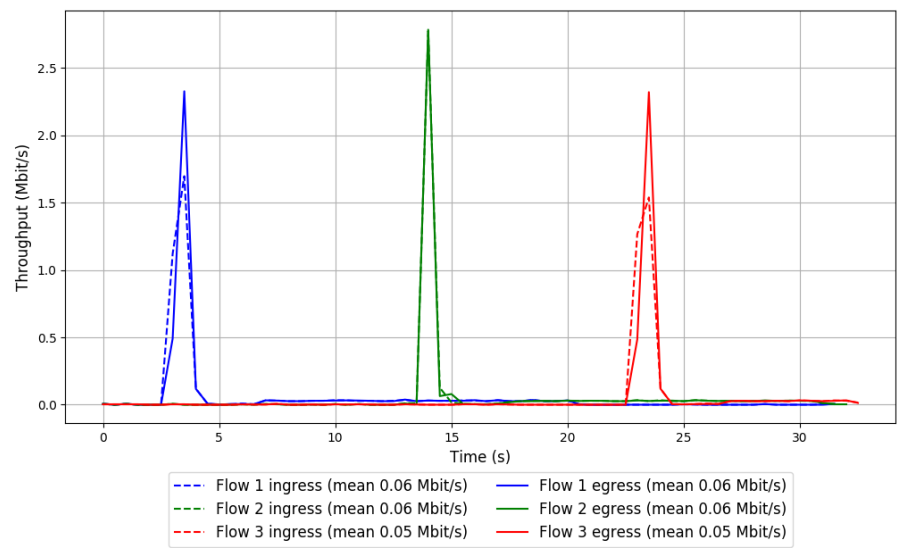


```
Run 1: Statistics of WebRTC media

Start at: 2018-04-18 10:19:49
End at: 2018-04-18 10:20:19

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 53.510 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 53.537 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 53.204 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 50.401 ms
Loss rate: 0.16%
```


Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-04-18 10:34:40

End at: 2018-04-18 10:35:10

Below is generated by plot.py at 2018-04-18 16:05:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.17 Mbit/s

95th percentile per-packet one-way delay: 53.801 ms

Loss rate: 0.09%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 53.740 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.358 ms

Loss rate: 0.00%

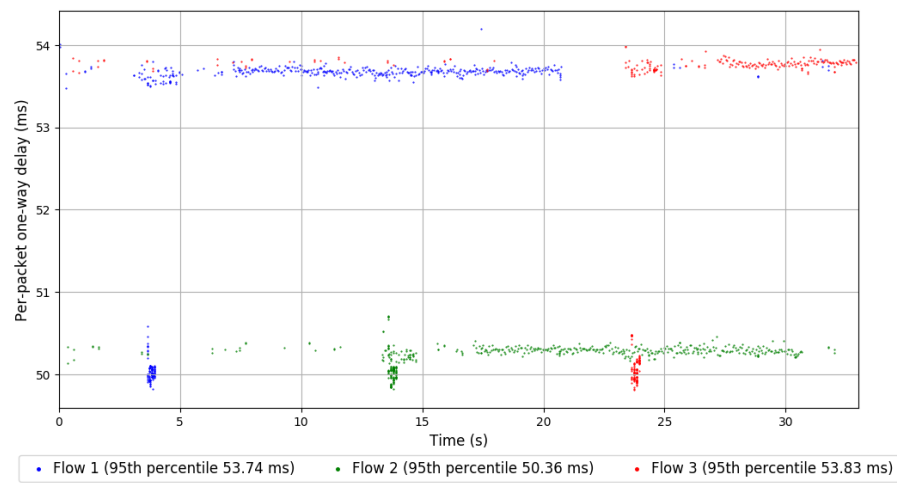
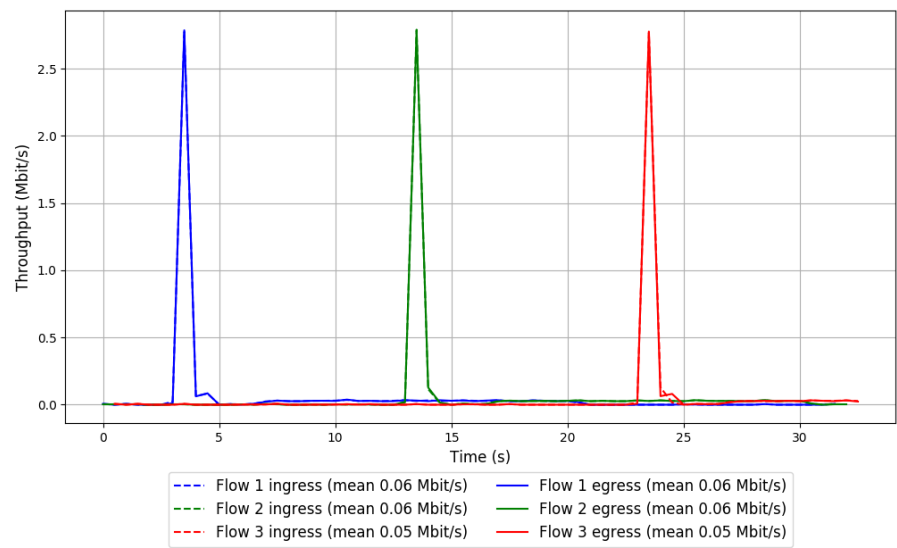
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 53.829 ms

Loss rate: 0.28%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-04-18 10:50:08

End at: 2018-04-18 10:50:38

Below is generated by plot.py at 2018-04-18 16:05:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.17 Mbit/s

95th percentile per-packet one-way delay: 53.771 ms

Loss rate: 0.09%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.470 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 53.789 ms

Loss rate: 0.00%

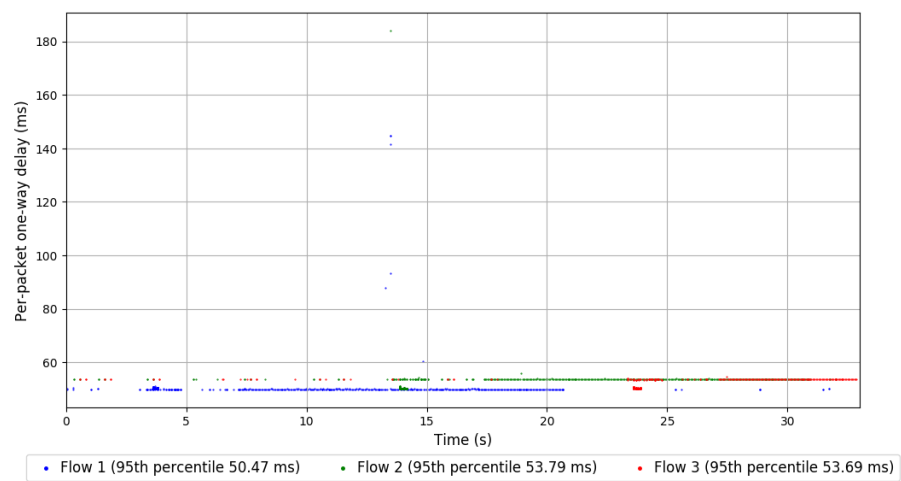
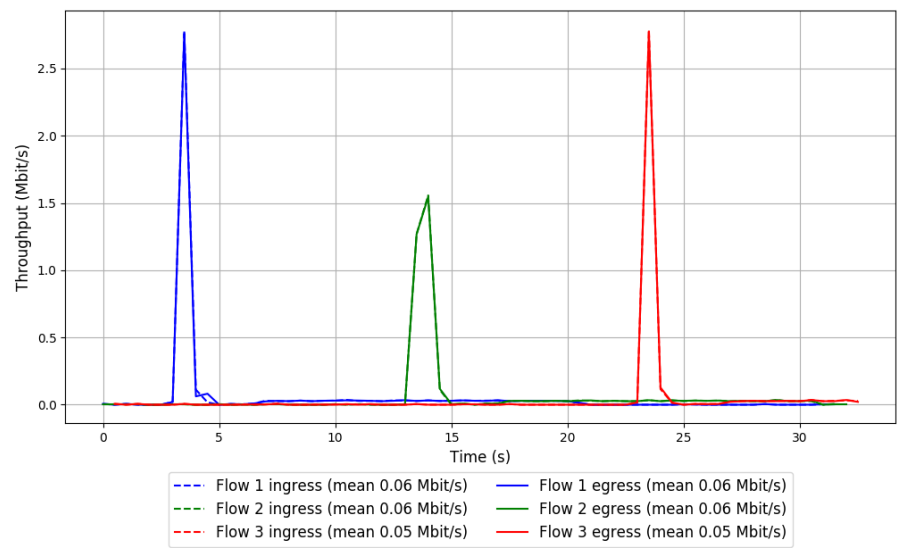
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 53.691 ms

Loss rate: 0.28%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-04-18 11:05:41

End at: 2018-04-18 11:06:11

Below is generated by plot.py at 2018-04-18 16:05:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.17 Mbit/s

95th percentile per-packet one-way delay: 53.797 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 0.06 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.355 ms

Loss rate: 0.00%

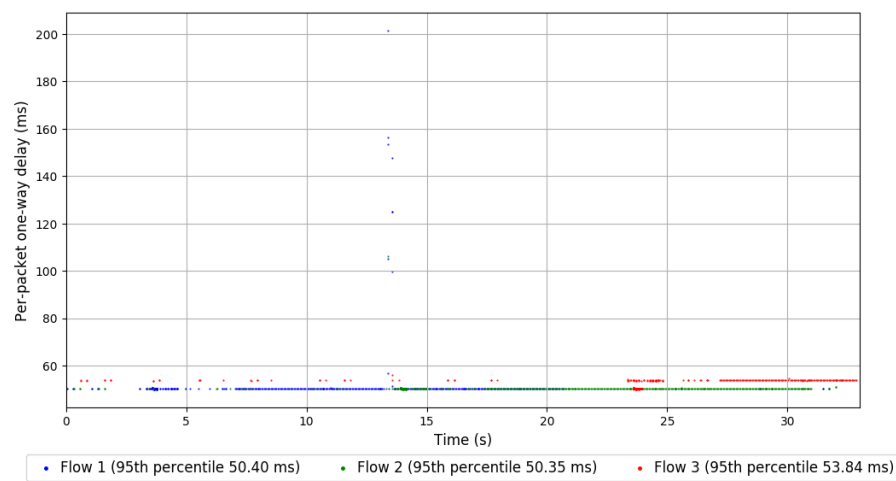
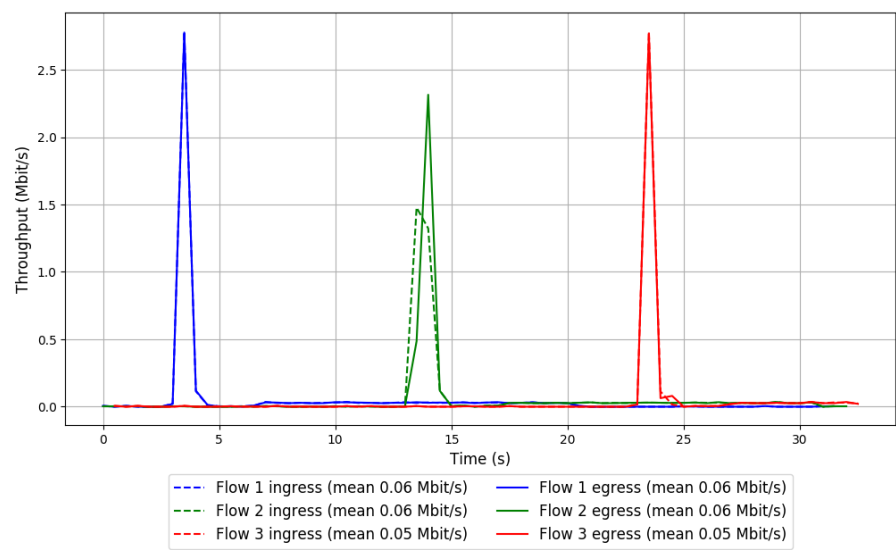
-- Flow 3:

Average throughput: 0.05 Mbit/s

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

Loss rate: 0.16%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-04-18 11:20:55

End at: 2018-04-18 11:21:25

Below is generated by plot.py at 2018-04-18 16:05:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.17 Mbit/s

95th percentile per-packet one-way delay: 53.656 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 53.695 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.287 ms

Loss rate: 0.00%

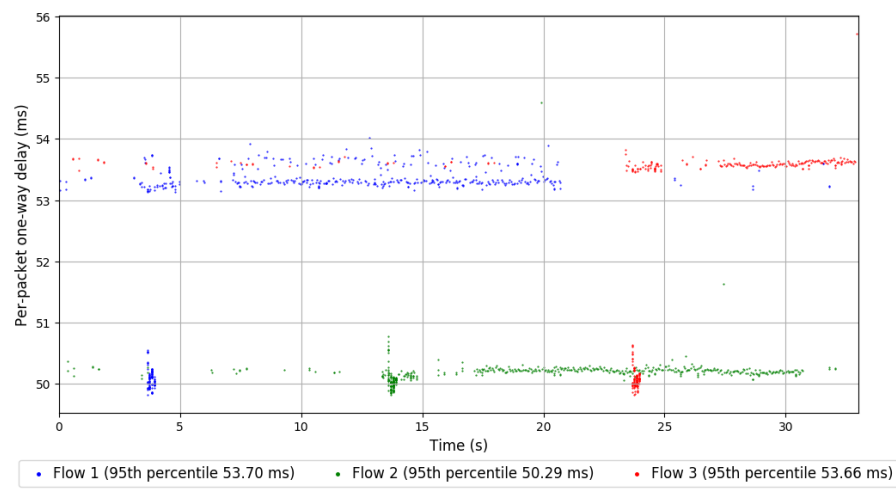
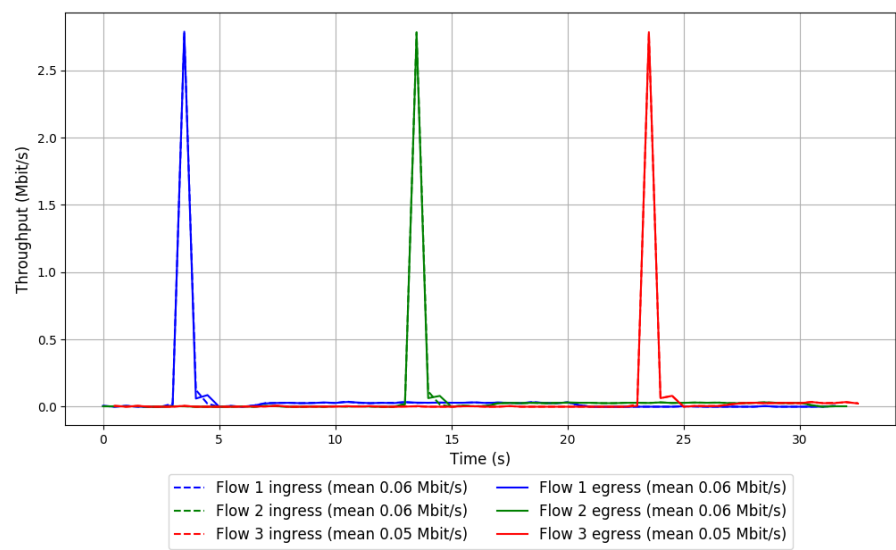
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 53.661 ms

Loss rate: 0.16%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2018-04-18 11:36:08

End at: 2018-04-18 11:36:38

Below is generated by plot.py at 2018-04-18 16:05:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.17 Mbit/s

95th percentile per-packet one-way delay: 53.678 ms

Loss rate: 0.07%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 53.711 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 53.331 ms

Loss rate: 0.00%

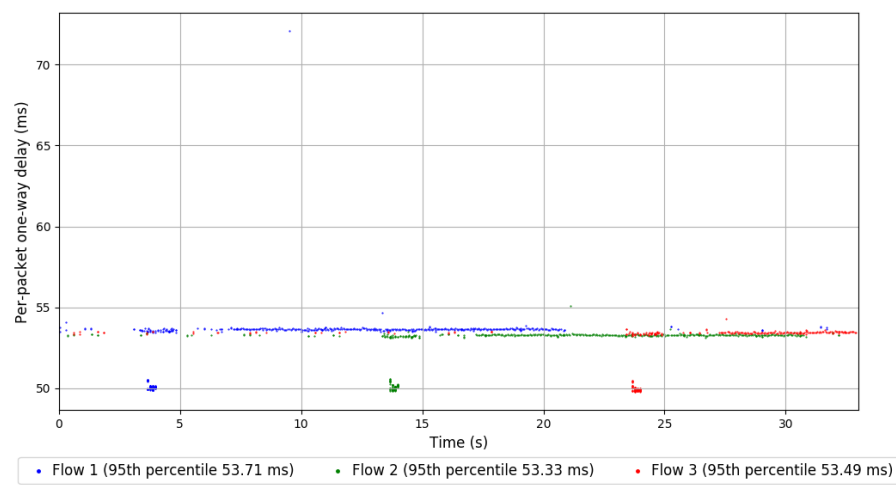
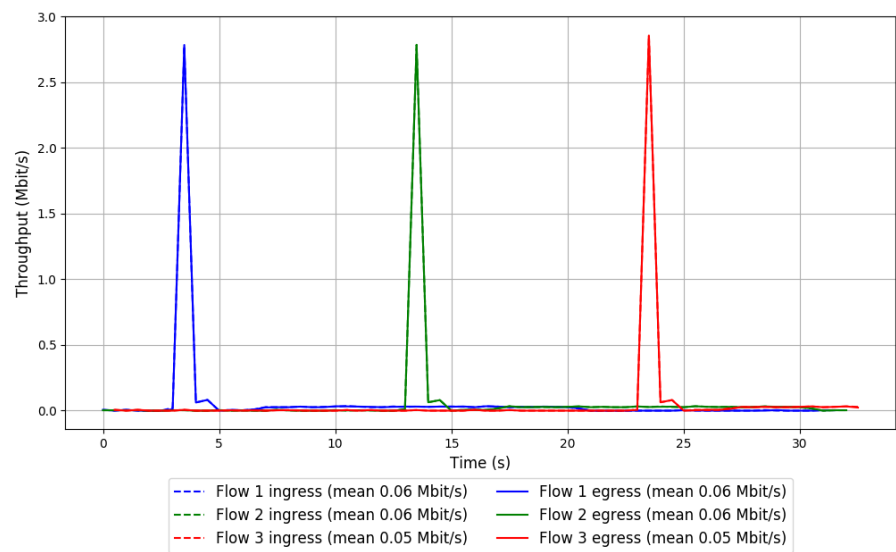
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 53.492 ms

Loss rate: 0.23%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2018-04-18 11:51:45

End at: 2018-04-18 11:52:15

Below is generated by plot.py at 2018-04-18 16:05:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.17 Mbit/s

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

Loss rate: 0.05%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.547 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.111 ms

Loss rate: 0.00%

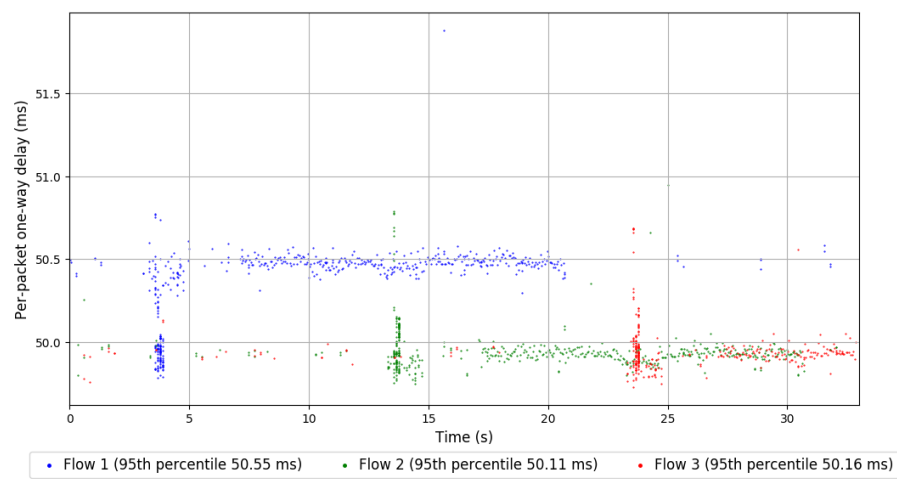
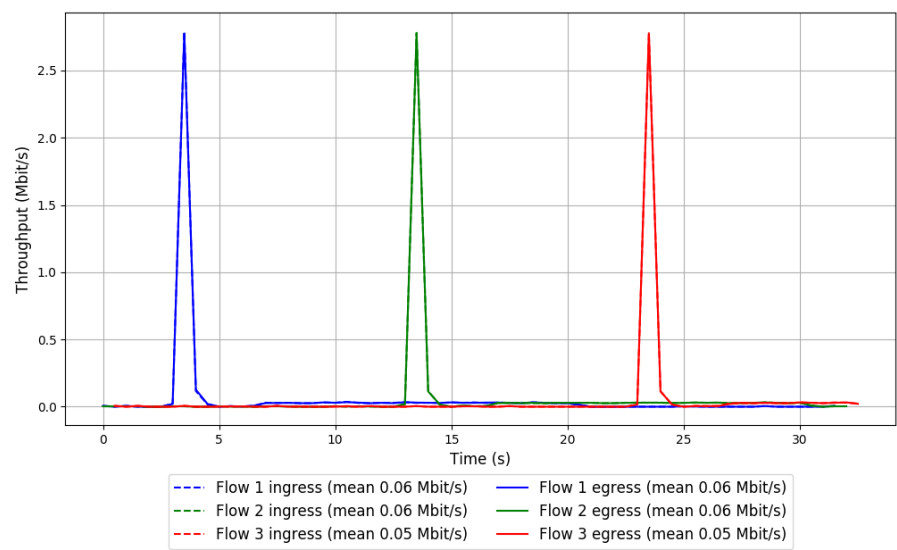
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 50.163 ms

Loss rate: 0.16%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2018-04-18 12:06:39

End at: 2018-04-18 12:07:09

Below is generated by plot.py at 2018-04-18 16:05:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.17 Mbit/s

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

Loss rate: 0.05%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 53.324 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 53.632 ms

Loss rate: 0.00%

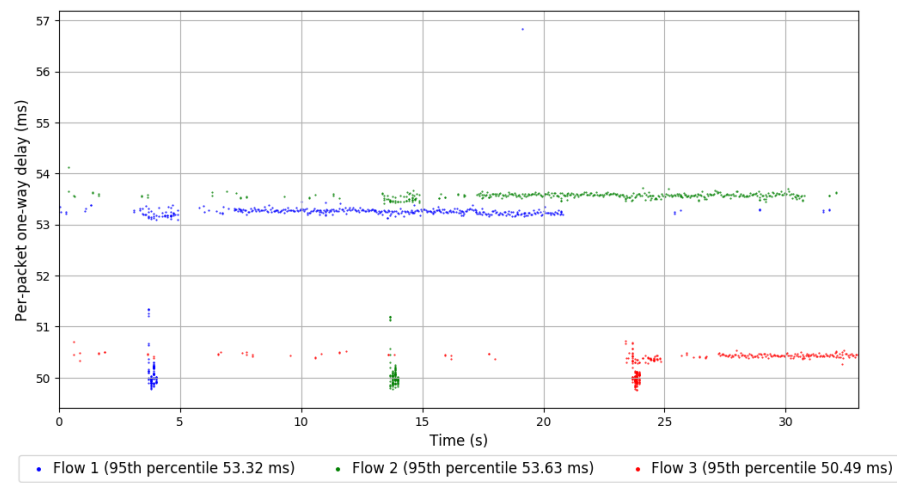
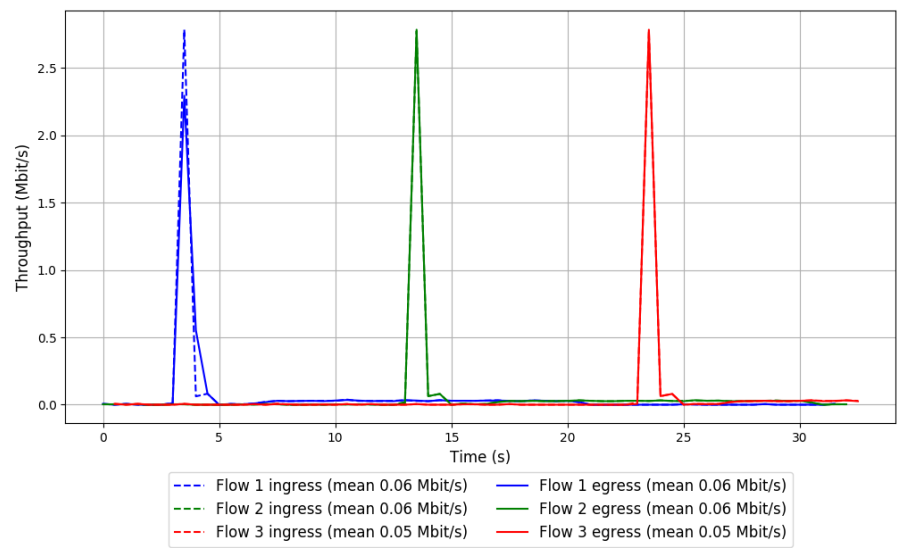
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 50.494 ms

Loss rate: 0.16%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2018-04-18 12:21:48

End at: 2018-04-18 12:22:18

Below is generated by plot.py at 2018-04-18 16:05:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.17 Mbit/s

95th percentile per-packet one-way delay: 50.443 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.476 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.413 ms

Loss rate: 0.00%

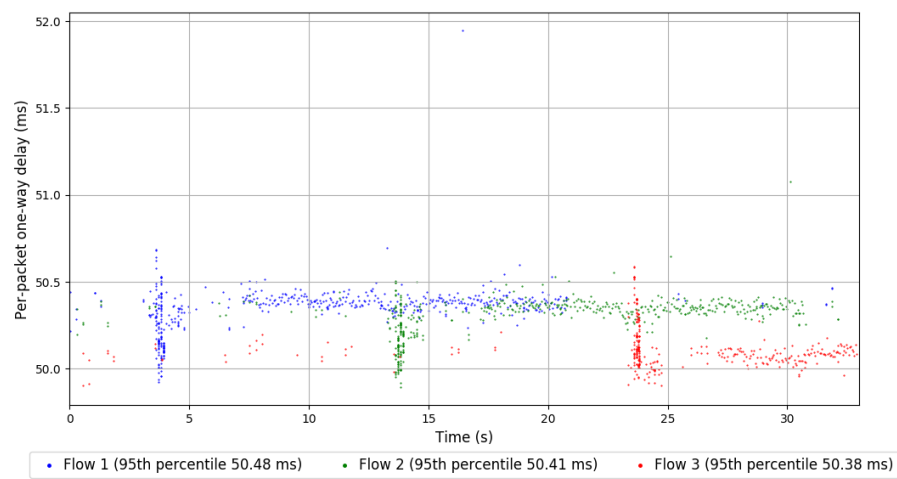
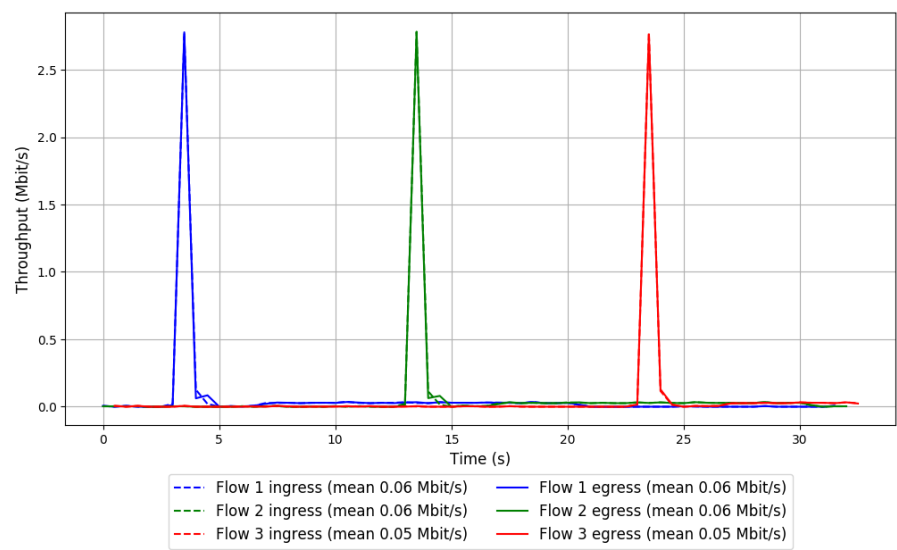
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 50.378 ms

Loss rate: 0.16%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2018-04-18 12:37:06

End at: 2018-04-18 12:37:36

Below is generated by plot.py at 2018-04-18 16:05:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.17 Mbit/s

95th percentile per-packet one-way delay: 50.689 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.396 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.380 ms

Loss rate: 0.00%

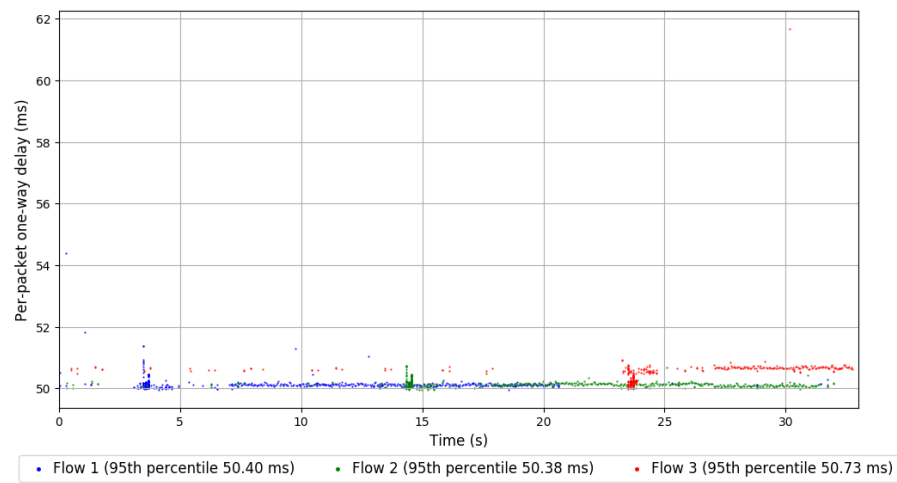
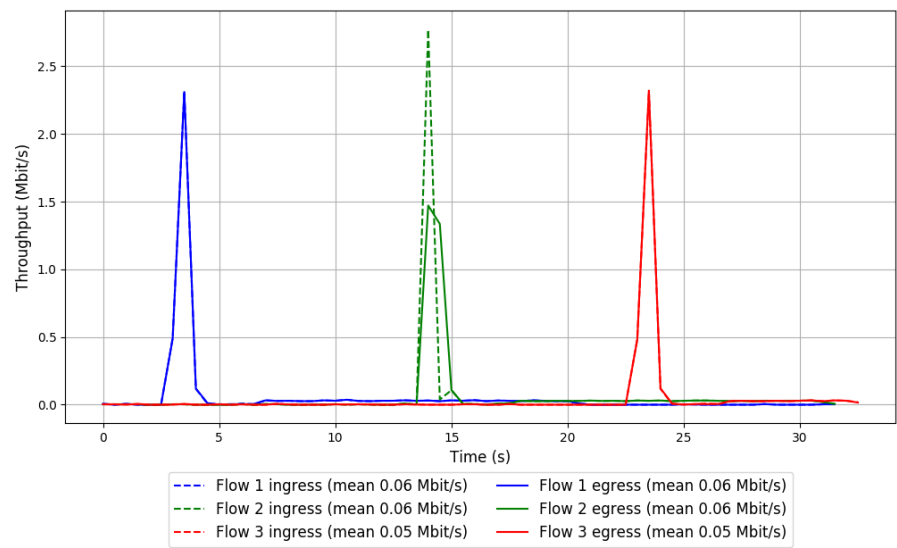
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 50.731 ms

Loss rate: 0.16%

Run 10: Report of WebRTC media — Data Link



Run 1: Statistics of Sprout

Start at: 2018-04-18 10:25:05

End at: 2018-04-18 10:25:35

Below is generated by plot.py at 2018-04-18 16:05:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.41 Mbit/s

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

Loss rate: 0.62%

-- Flow 1:

Average throughput: 7.76 Mbit/s

95th percentile per-packet one-way delay: 51.797 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 7.89 Mbit/s

95th percentile per-packet one-way delay: 51.484 ms

Loss rate: 0.56%

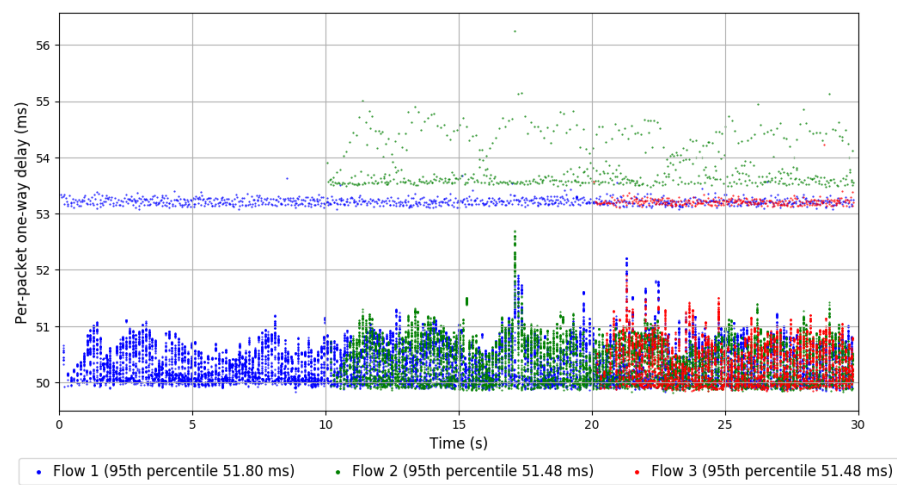
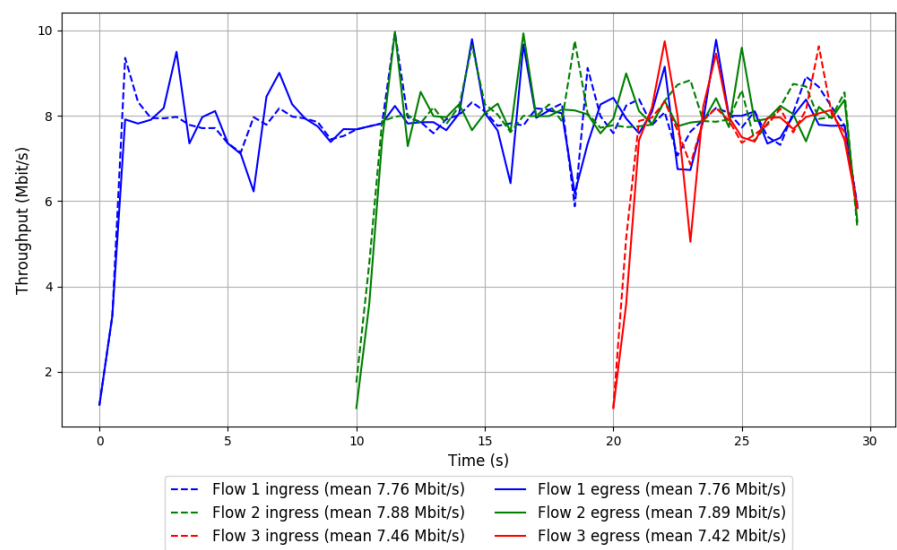
-- Flow 3:

Average throughput: 7.42 Mbit/s

95th percentile per-packet one-way delay: 51.481 ms

Loss rate: 1.32%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2018-04-18 10:40:25

End at: 2018-04-18 10:40:55

Below is generated by plot.py at 2018-04-18 16:05:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.61 Mbit/s

95th percentile per-packet one-way delay: 52.087 ms

Loss rate: 0.63%

-- Flow 1:

Average throughput: 7.98 Mbit/s

95th percentile per-packet one-way delay: 51.767 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 7.72 Mbit/s

95th percentile per-packet one-way delay: 52.278 ms

Loss rate: 0.59%

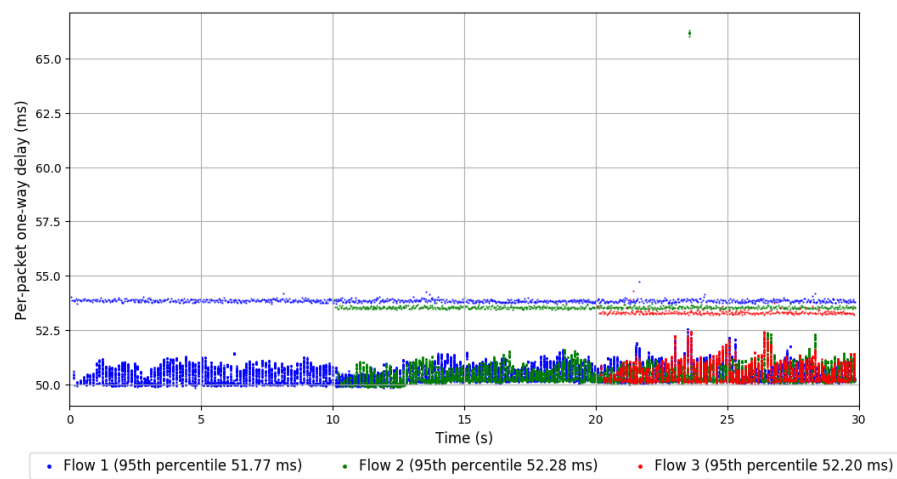
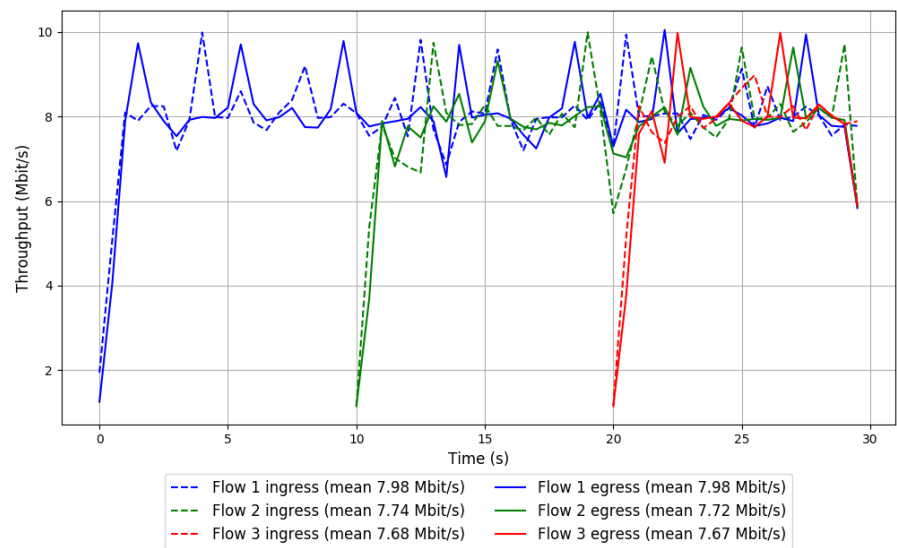
-- Flow 3:

Average throughput: 7.67 Mbit/s

95th percentile per-packet one-way delay: 52.196 ms

Loss rate: 1.32%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2018-04-18 10:55:54

End at: 2018-04-18 10:56:24

Below is generated by plot.py at 2018-04-18 16:05:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.59 Mbit/s

95th percentile per-packet one-way delay: 51.495 ms

Loss rate: 0.07%

-- Flow 1:

Average throughput: 8.01 Mbit/s

95th percentile per-packet one-way delay: 51.280 ms

Loss rate: 0.07%

-- Flow 2:

Average throughput: 7.70 Mbit/s

95th percentile per-packet one-way delay: 51.872 ms

Loss rate: 0.03%

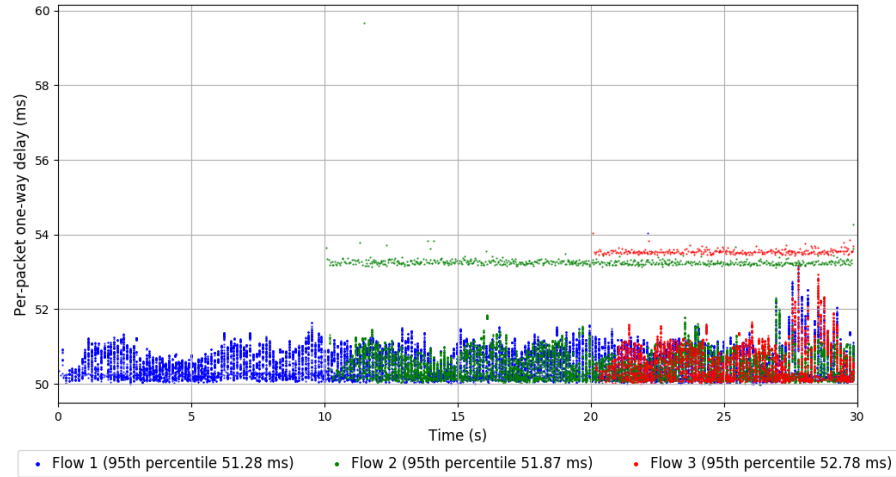
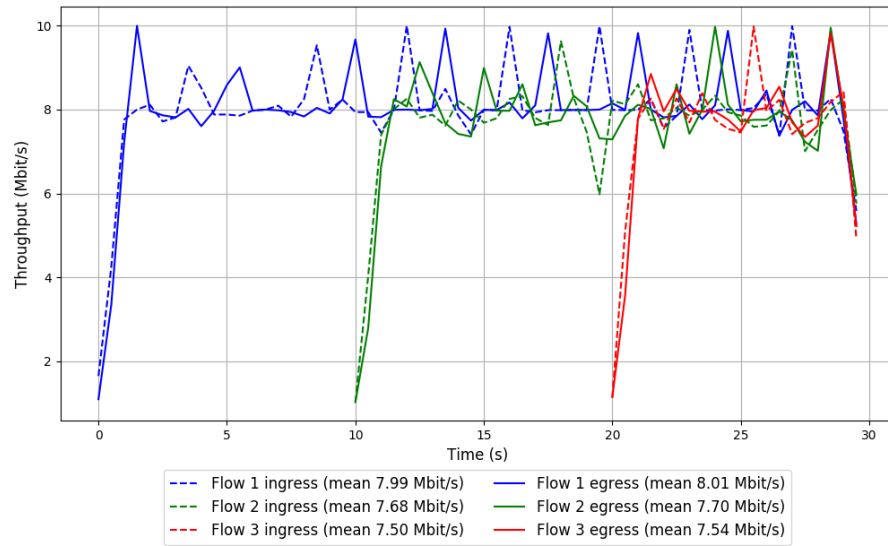
-- Flow 3:

Average throughput: 7.54 Mbit/s

95th percentile per-packet one-way delay: 52.776 ms

Loss rate: 0.18%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

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

End at: 2018-04-18 11:11:41

Below is generated by plot.py at 2018-04-18 16:05:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.59 Mbit/s

95th percentile per-packet one-way delay: 51.235 ms

Loss rate: 0.40%

-- Flow 1:

Average throughput: 7.91 Mbit/s

95th percentile per-packet one-way delay: 51.075 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 7.84 Mbit/s

95th percentile per-packet one-way delay: 51.595 ms

Loss rate: 0.65%

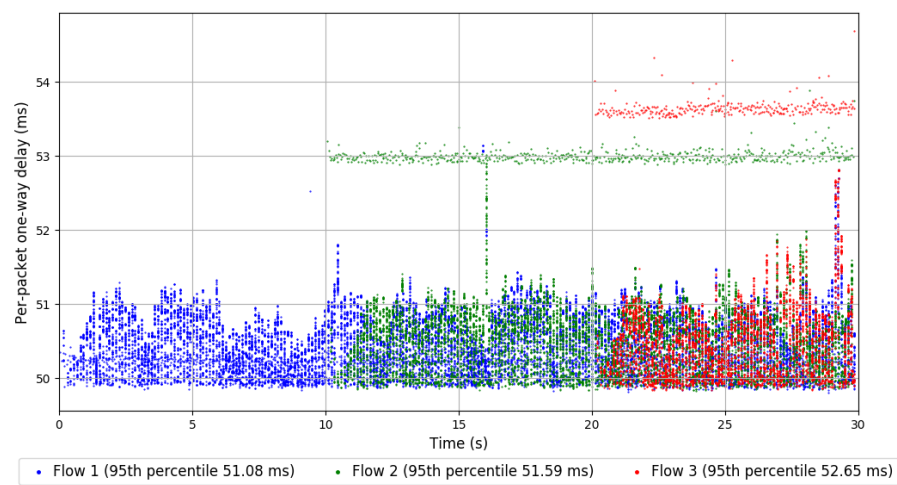
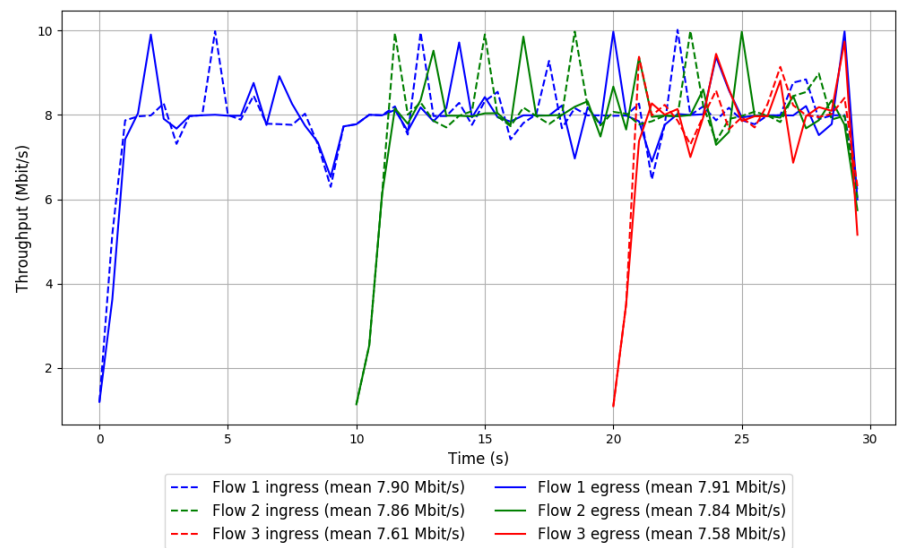
-- Flow 3:

Average throughput: 7.58 Mbit/s

95th percentile per-packet one-way delay: 52.645 ms

Loss rate: 1.01%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2018-04-18 11:26:23

End at: 2018-04-18 11:26:53

Below is generated by plot.py at 2018-04-18 16:05:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.48 Mbit/s

95th percentile per-packet one-way delay: 51.154 ms

Loss rate: 0.64%

-- Flow 1:

Average throughput: 7.81 Mbit/s

95th percentile per-packet one-way delay: 51.306 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 7.85 Mbit/s

95th percentile per-packet one-way delay: 51.103 ms

Loss rate: 0.64%

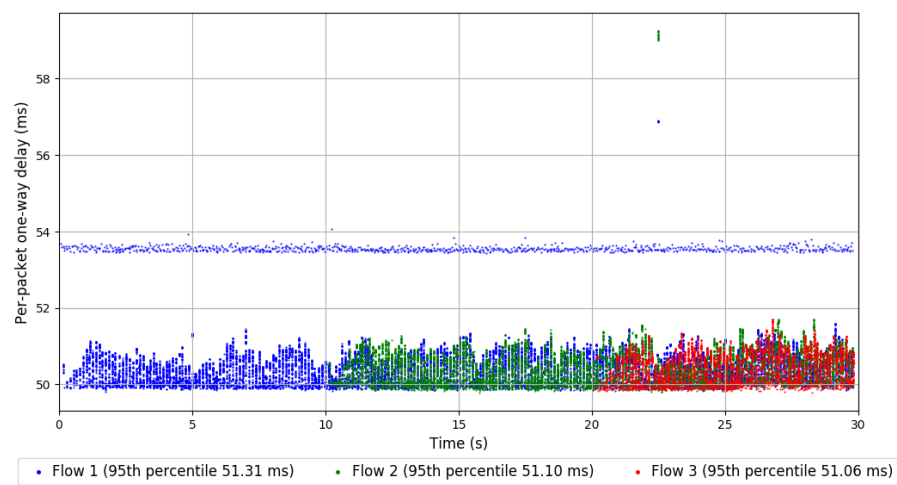
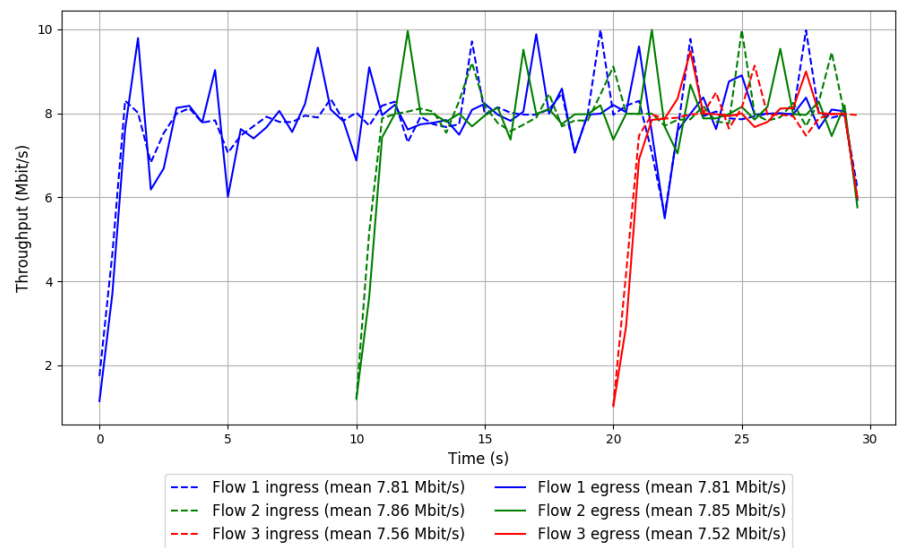
-- Flow 3:

Average throughput: 7.52 Mbit/s

95th percentile per-packet one-way delay: 51.060 ms

Loss rate: 1.32%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2018-04-18 11:42:03

End at: 2018-04-18 11:42:33

Below is generated by plot.py at 2018-04-18 16:05:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.43 Mbit/s

95th percentile per-packet one-way delay: 51.063 ms

Loss rate: 0.49%

-- Flow 1:

Average throughput: 7.81 Mbit/s

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

Loss rate: 0.35%

-- Flow 2:

Average throughput: 7.76 Mbit/s

95th percentile per-packet one-way delay: 51.009 ms

Loss rate: 0.33%

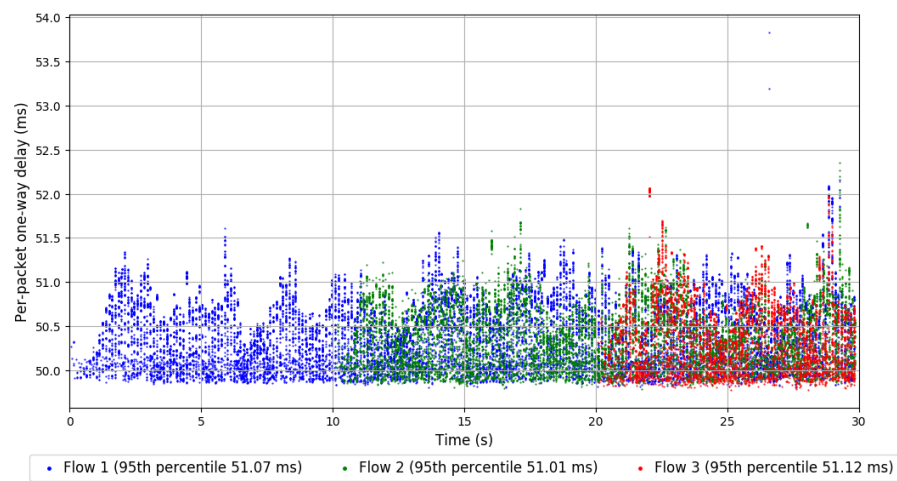
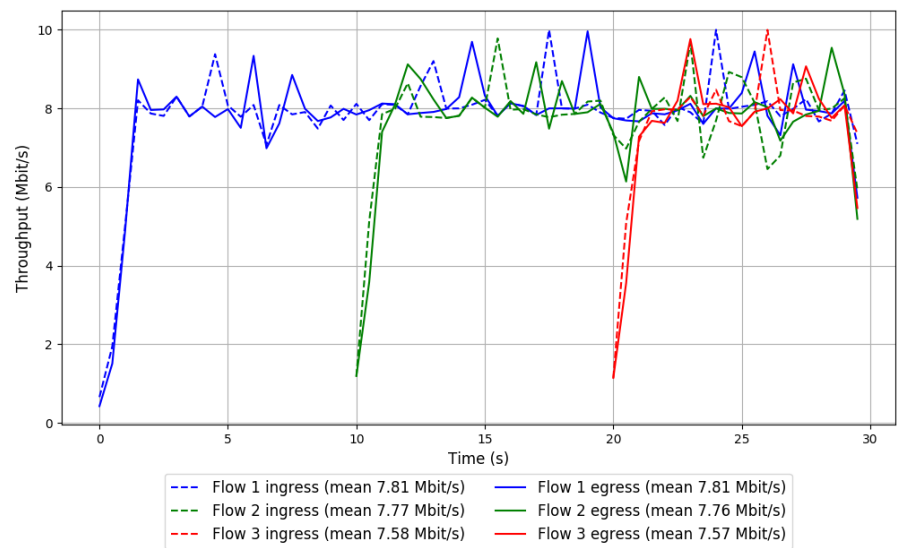
-- Flow 3:

Average throughput: 7.57 Mbit/s

95th percentile per-packet one-way delay: 51.121 ms

Loss rate: 1.27%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2018-04-18 11:57:02

End at: 2018-04-18 11:57:32

Below is generated by plot.py at 2018-04-18 16:05:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.34 Mbit/s

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

Loss rate: 0.25%

-- Flow 1:

Average throughput: 7.91 Mbit/s

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

Loss rate: 0.41%

-- Flow 2:

Average throughput: 7.48 Mbit/s

95th percentile per-packet one-way delay: 52.116 ms

Loss rate: 0.02%

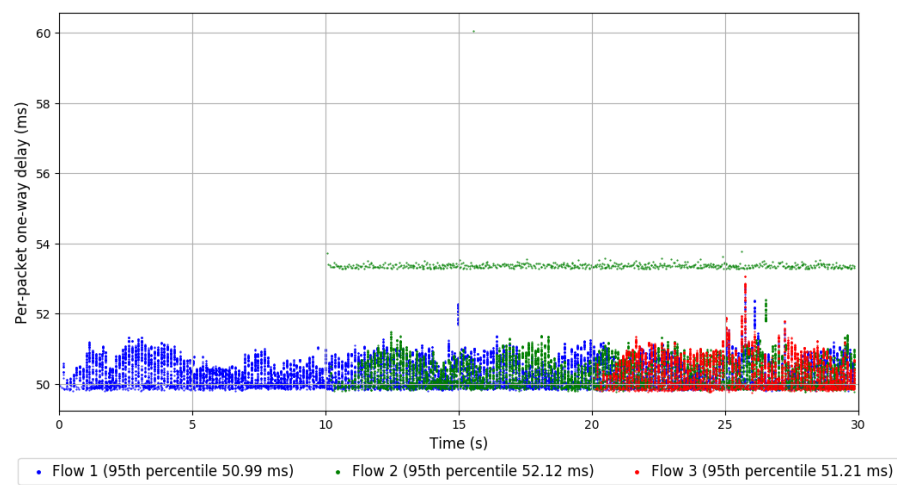
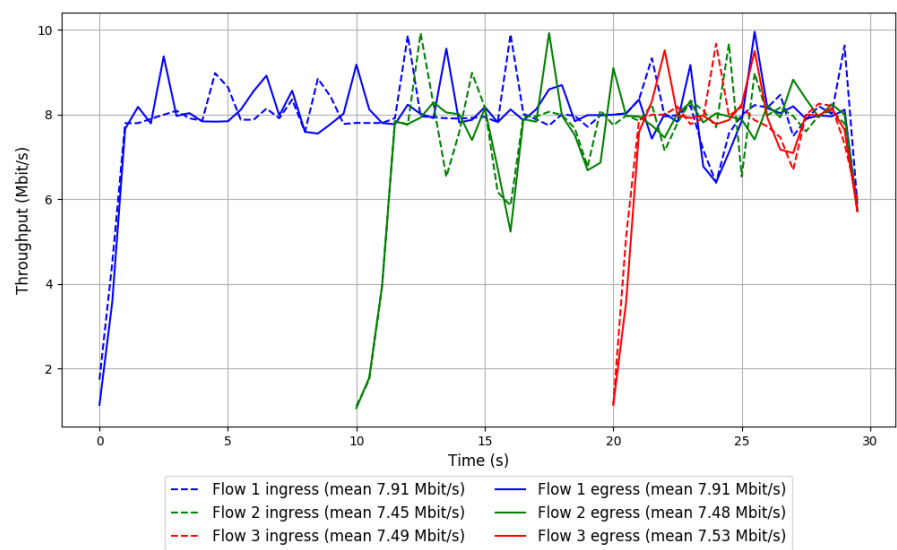
-- Flow 3:

Average throughput: 7.53 Mbit/s

95th percentile per-packet one-way delay: 51.208 ms

Loss rate: 0.21%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2018-04-18 12:12:06

End at: 2018-04-18 12:12:36

Below is generated by plot.py at 2018-04-18 16:05:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.52 Mbit/s

95th percentile per-packet one-way delay: 51.105 ms

Loss rate: 0.63%

-- Flow 1:

Average throughput: 7.95 Mbit/s

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

Loss rate: 0.42%

-- Flow 2:

Average throughput: 7.68 Mbit/s

95th percentile per-packet one-way delay: 51.330 ms

Loss rate: 0.66%

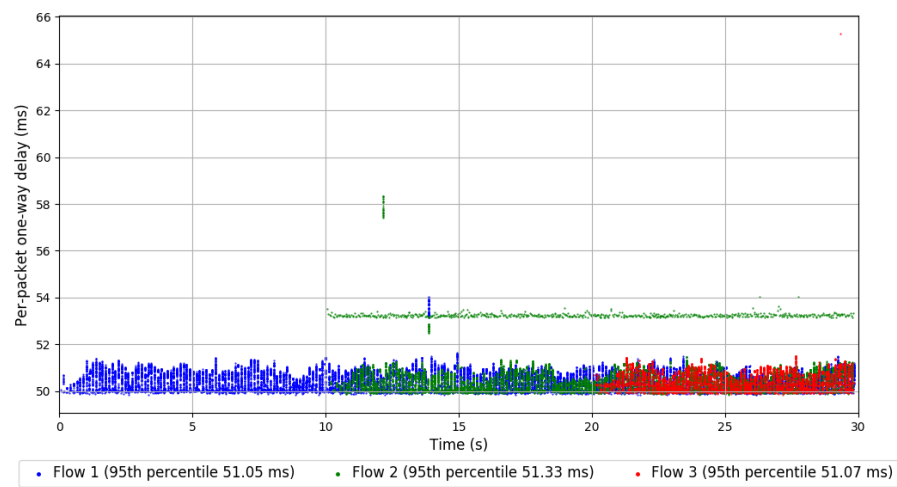
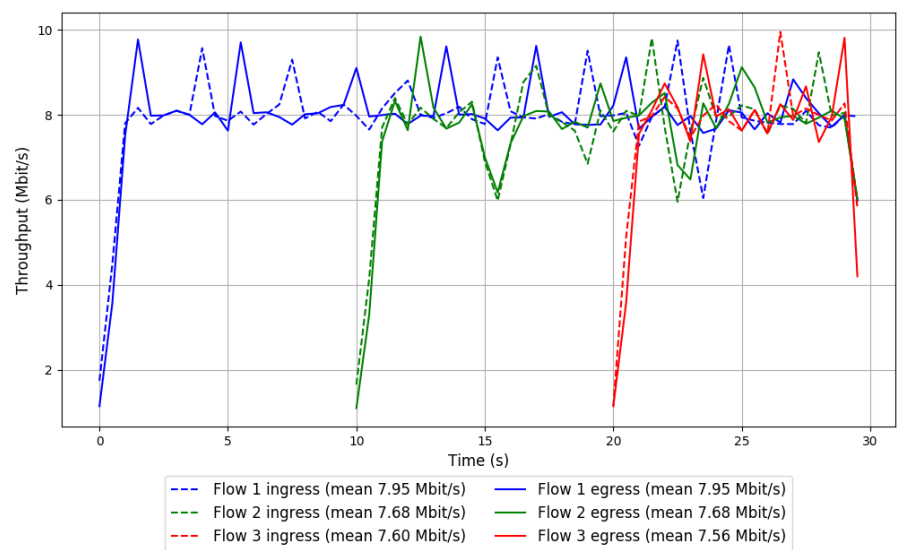
-- Flow 3:

Average throughput: 7.56 Mbit/s

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

Loss rate: 1.27%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2018-04-18 12:27:24

End at: 2018-04-18 12:27:54

Below is generated by plot.py at 2018-04-18 16:05:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.60 Mbit/s

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

Loss rate: 0.09%

-- Flow 1:

Average throughput: 7.91 Mbit/s

95th percentile per-packet one-way delay: 51.474 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.86 Mbit/s

95th percentile per-packet one-way delay: 51.189 ms

Loss rate: 0.13%

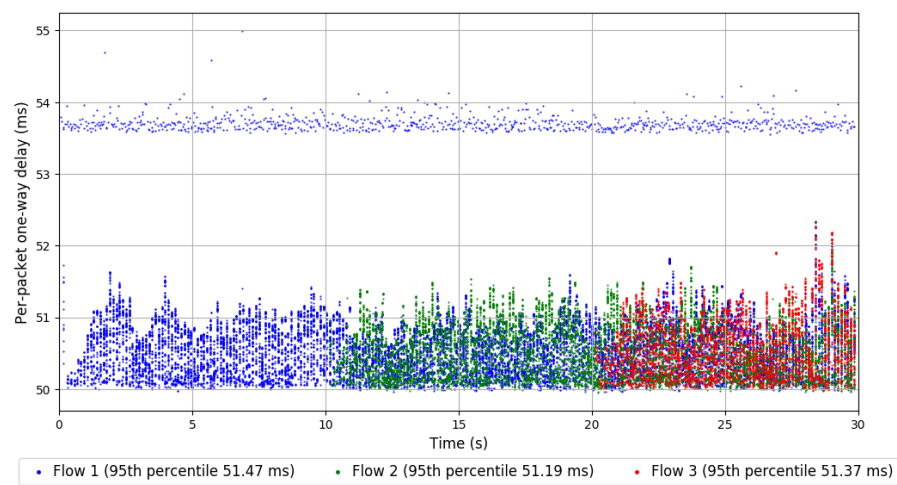
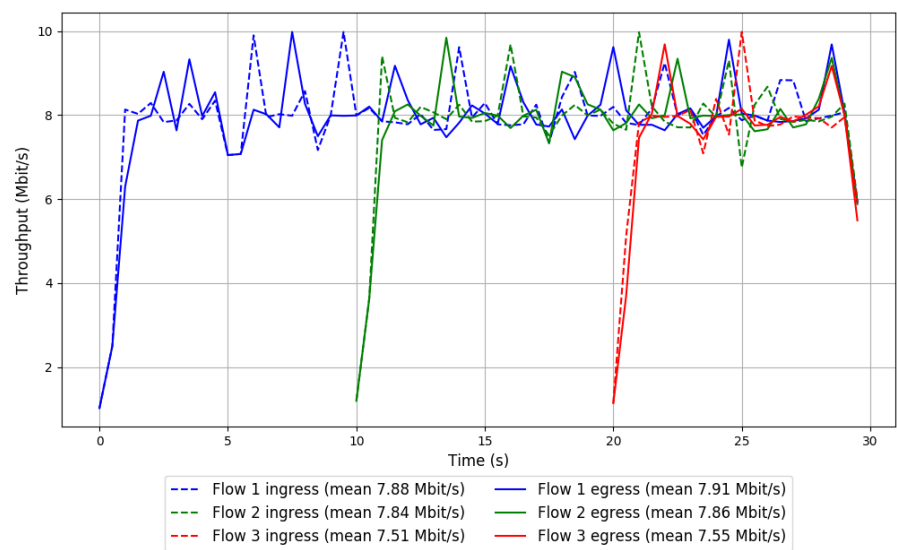
-- Flow 3:

Average throughput: 7.55 Mbit/s

95th percentile per-packet one-way delay: 51.369 ms

Loss rate: 0.29%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2018-04-18 12:42:51

End at: 2018-04-18 12:43:21

Below is generated by plot.py at 2018-04-18 16:05:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.64 Mbit/s

95th percentile per-packet one-way delay: 51.542 ms

Loss rate: 0.62%

-- Flow 1:

Average throughput: 7.91 Mbit/s

95th percentile per-packet one-way delay: 51.469 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 7.87 Mbit/s

95th percentile per-packet one-way delay: 51.787 ms

Loss rate: 0.62%

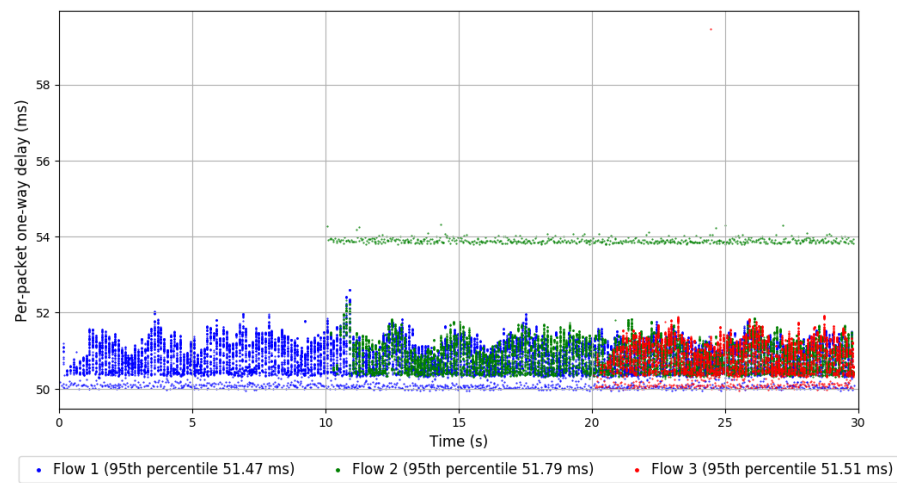
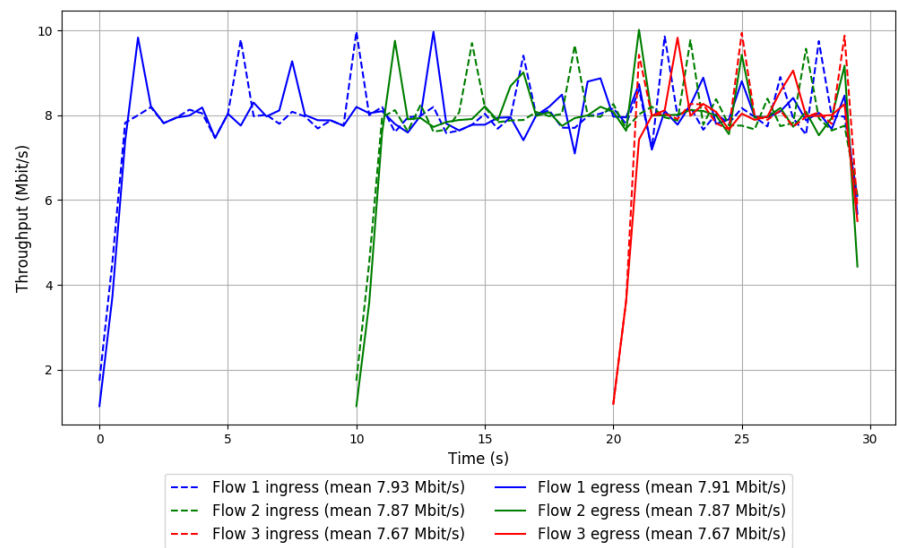
-- Flow 3:

Average throughput: 7.67 Mbit/s

95th percentile per-packet one-way delay: 51.507 ms

Loss rate: 1.29%

Run 10: Report of Sprout — Data Link

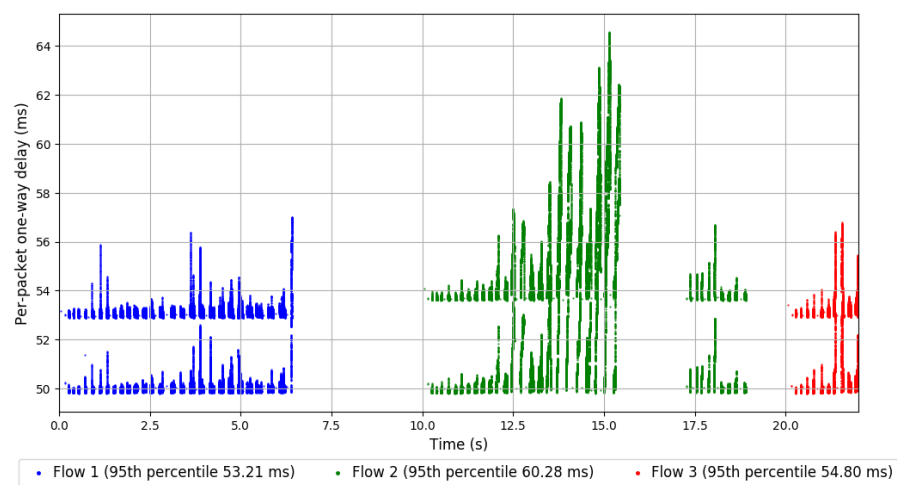
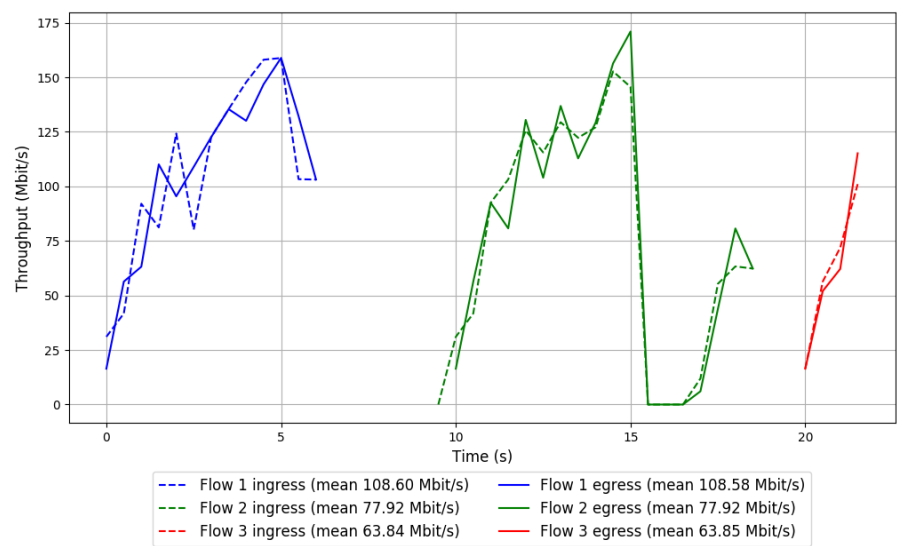


Run 1: Statistics of TaoVA-100x

Start at: 2018-04-18 10:21:11

End at: 2018-04-18 10:21:41

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

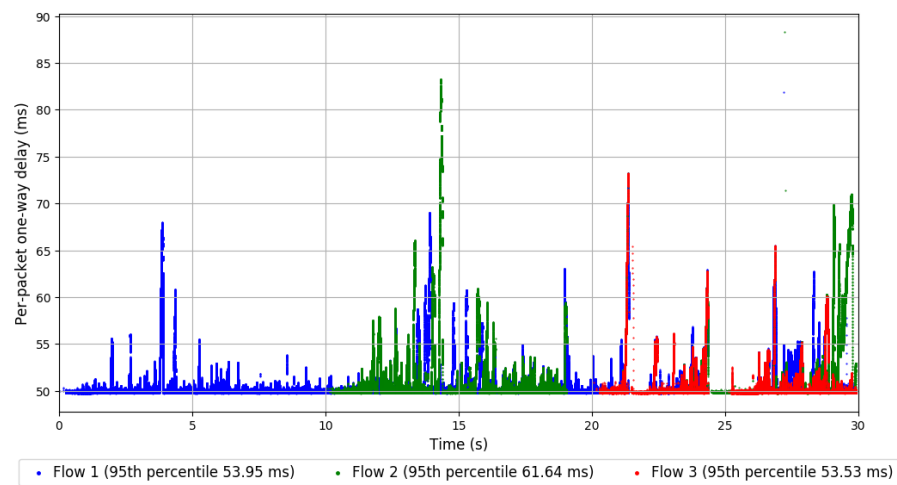
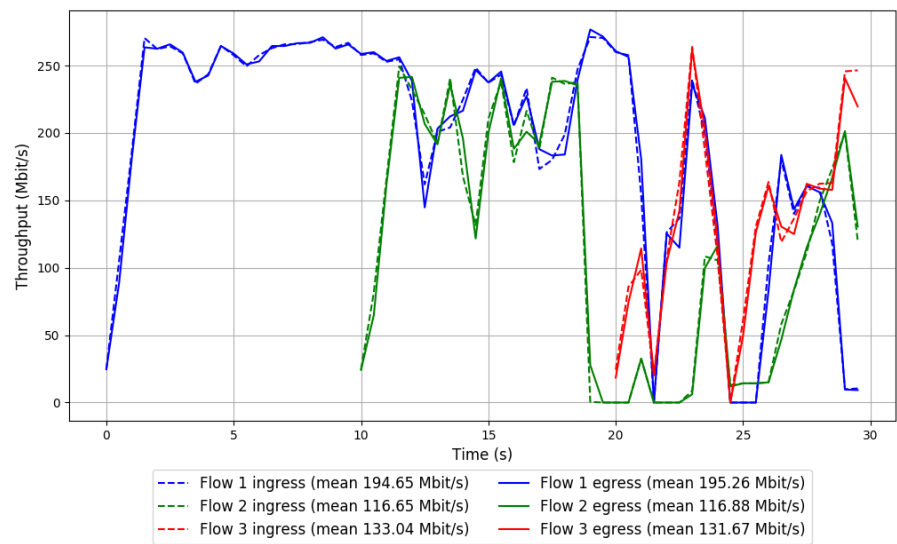


```
Run 2: Statistics of TaoVA-100x

Start at: 2018-04-18 10:36:02
End at: 2018-04-18 10:36:32

# Below is generated by plot.py at 2018-04-18 16:11:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 316.31 Mbit/s
95th percentile per-packet one-way delay: 56.042 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 195.26 Mbit/s
95th percentile per-packet one-way delay: 53.951 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 116.88 Mbit/s
95th percentile per-packet one-way delay: 61.638 ms
Loss rate: 0.31%
-- Flow 3:
Average throughput: 131.67 Mbit/s
95th percentile per-packet one-way delay: 53.533 ms
Loss rate: 2.04%
```

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-04-18 10:51:29

End at: 2018-04-18 10:51:59

Below is generated by plot.py at 2018-04-18 16:11:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 307.44 Mbit/s

95th percentile per-packet one-way delay: 52.225 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 227.51 Mbit/s

95th percentile per-packet one-way delay: 50.694 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 16.06 Mbit/s

95th percentile per-packet one-way delay: 53.777 ms

Loss rate: 0.45%

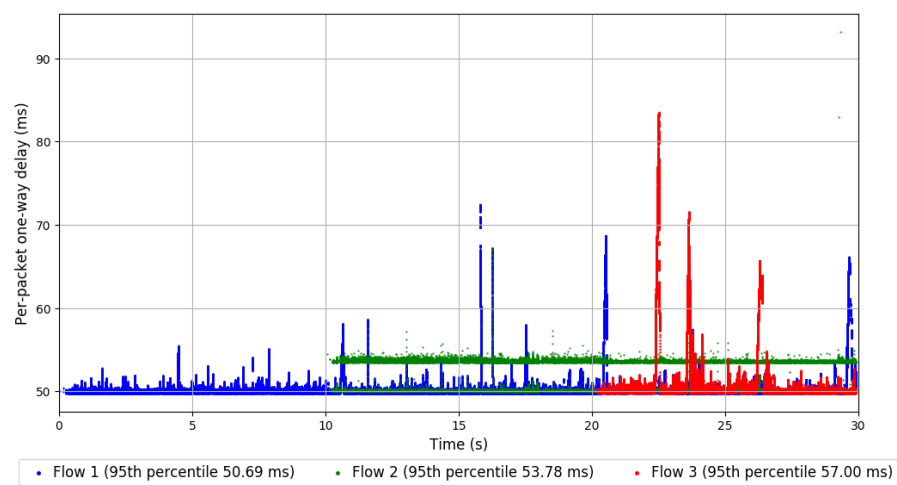
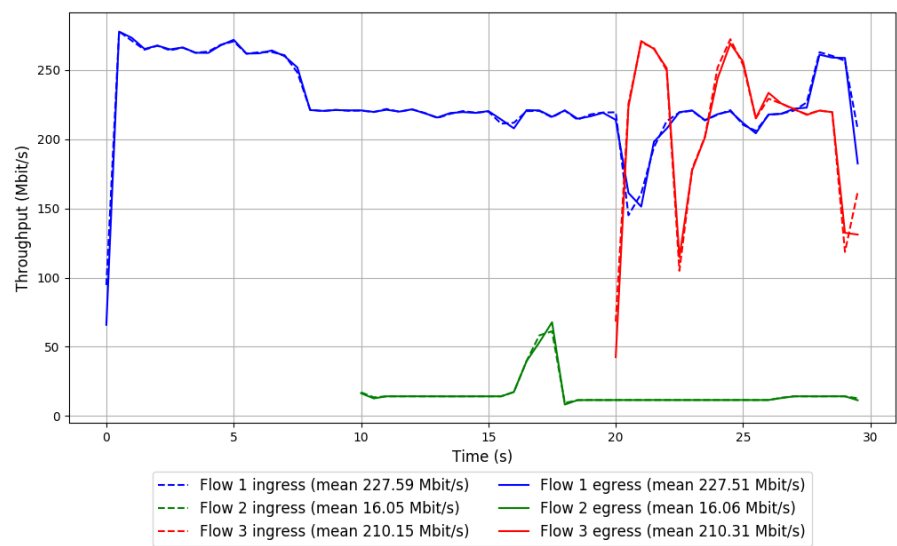
-- Flow 3:

Average throughput: 210.31 Mbit/s

95th percentile per-packet one-way delay: 57.004 ms

Loss rate: 0.94%

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-04-18 11:07:03

End at: 2018-04-18 11:07:33

Below is generated by plot.py at 2018-04-18 16:11:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 269.70 Mbit/s

95th percentile per-packet one-way delay: 53.627 ms

Loss rate: 0.31%

-- Flow 1:

Average throughput: 240.92 Mbit/s

95th percentile per-packet one-way delay: 53.577 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 25.82 Mbit/s

95th percentile per-packet one-way delay: 53.609 ms

Loss rate: 0.28%

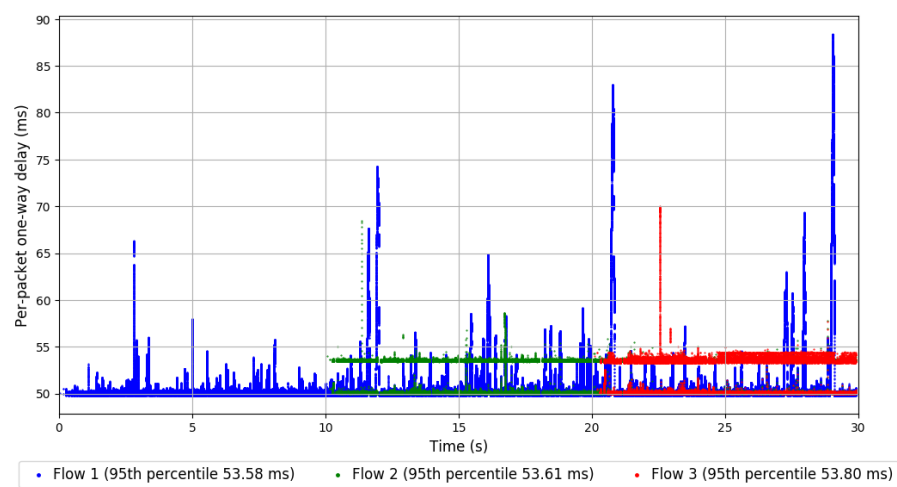
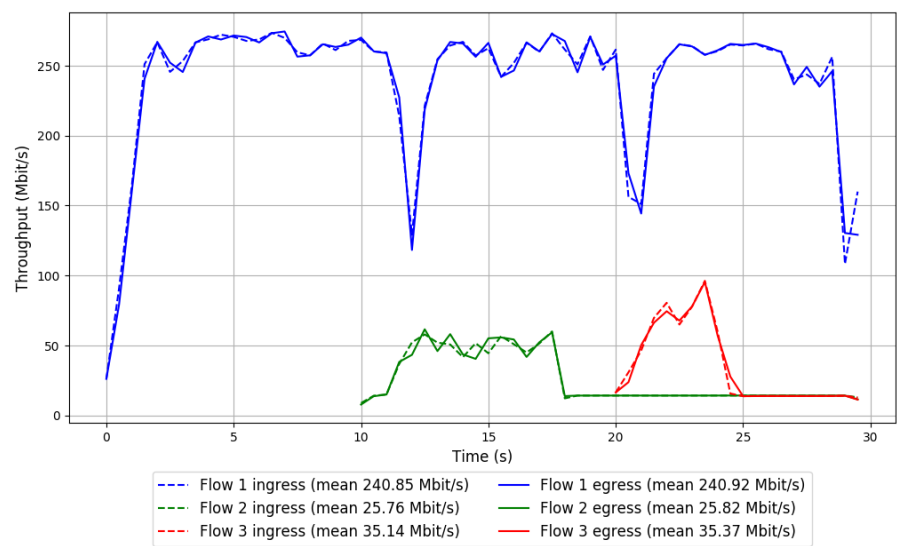
-- Flow 3:

Average throughput: 35.37 Mbit/s

95th percentile per-packet one-way delay: 53.801 ms

Loss rate: 0.41%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-04-18 11:22:17

End at: 2018-04-18 11:22:47

Below is generated by plot.py at 2018-04-18 16:11:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 155.58 Mbit/s

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

Loss rate: 0.68%

-- Flow 1:

Average throughput: 34.94 Mbit/s

95th percentile per-packet one-way delay: 53.543 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 75.09 Mbit/s

95th percentile per-packet one-way delay: 55.308 ms

Loss rate: 0.75%

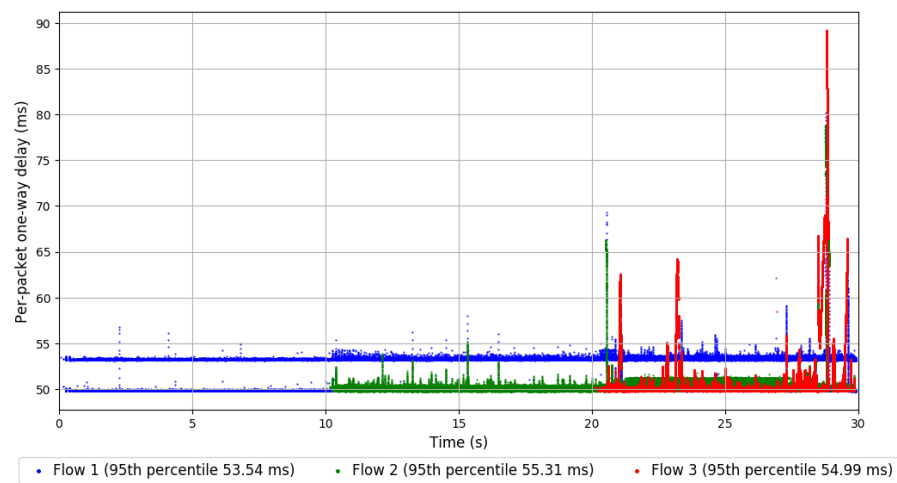
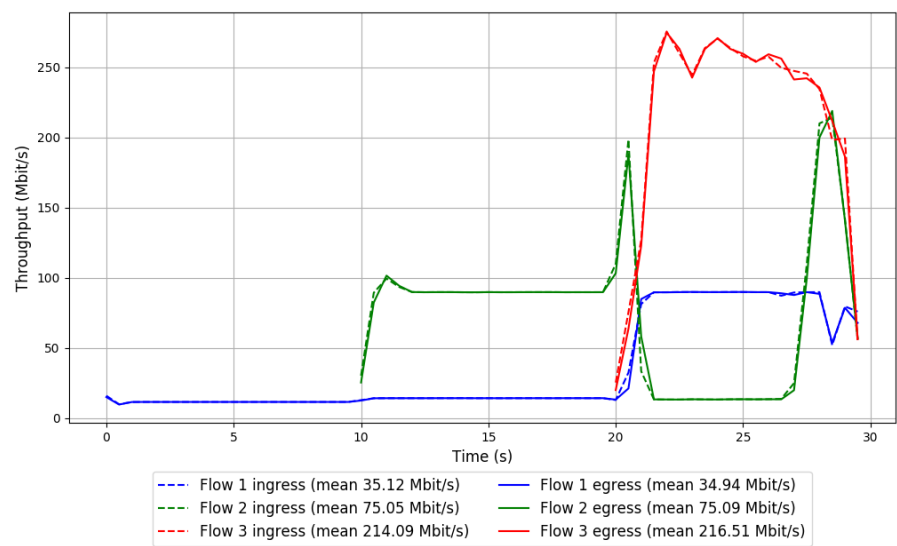
-- Flow 3:

Average throughput: 216.51 Mbit/s

95th percentile per-packet one-way delay: 54.990 ms

Loss rate: 0.55%

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



Run 6: Statistics of TaoVA-100x

Start at: 2018-04-18 11:37:30

End at: 2018-04-18 11:38:00

Below is generated by plot.py at 2018-04-18 16:11:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 286.79 Mbit/s

95th percentile per-packet one-way delay: 57.369 ms

Loss rate: 0.42%

-- Flow 1:

Average throughput: 125.50 Mbit/s

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

Loss rate: 0.25%

-- Flow 2:

Average throughput: 227.74 Mbit/s

95th percentile per-packet one-way delay: 59.460 ms

Loss rate: 0.56%

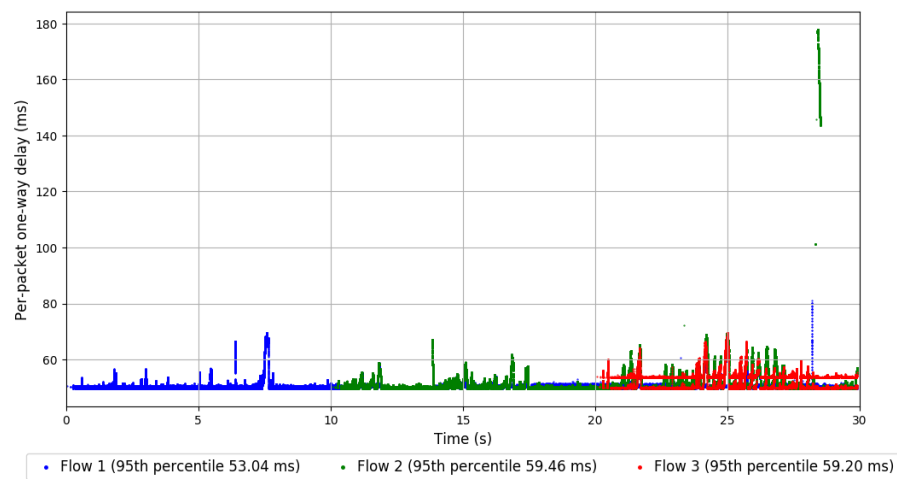
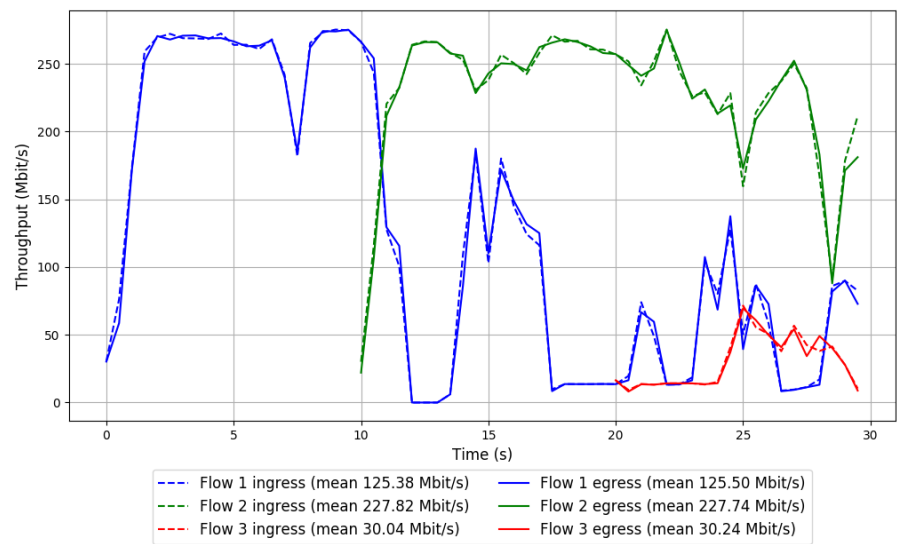
-- Flow 3:

Average throughput: 30.24 Mbit/s

95th percentile per-packet one-way delay: 59.201 ms

Loss rate: 0.40%

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



Run 7: Statistics of TaoVA-100x

Start at: 2018-04-18 11:53:07

End at: 2018-04-18 11:53:37

Below is generated by plot.py at 2018-04-18 16:11:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 42.54 Mbit/s

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

Loss rate: 0.22%

-- Flow 1:

Average throughput: 89.75 Mbit/s

95th percentile per-packet one-way delay: 53.973 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 22.34 Mbit/s

95th percentile per-packet one-way delay: 53.469 ms

Loss rate: 0.32%

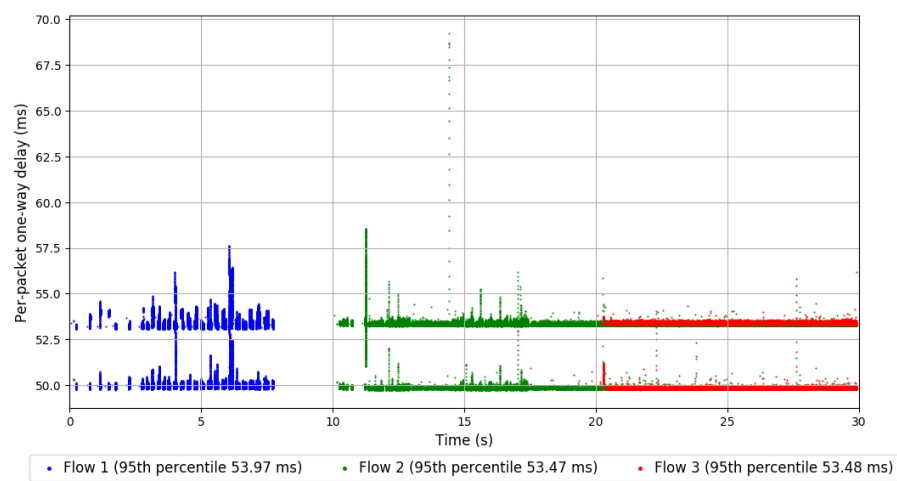
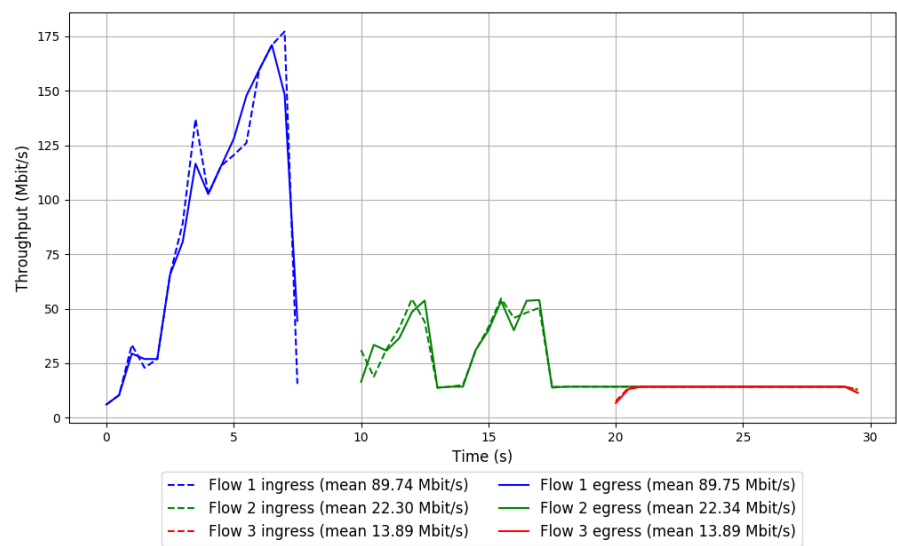
-- Flow 3:

Average throughput: 13.89 Mbit/s

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

Loss rate: 1.04%

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



Run 8: Statistics of TaoVA-100x

Start at: 2018-04-18 12:08:01

End at: 2018-04-18 12:08:31

Below is generated by plot.py at 2018-04-18 16:11:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 116.32 Mbit/s

95th percentile per-packet one-way delay: 54.291 ms

Loss rate: 0.81%

-- Flow 1:

Average throughput: 19.26 Mbit/s

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

Loss rate: 0.24%

-- Flow 2:

Average throughput: 92.02 Mbit/s

95th percentile per-packet one-way delay: 55.398 ms

Loss rate: 0.00%

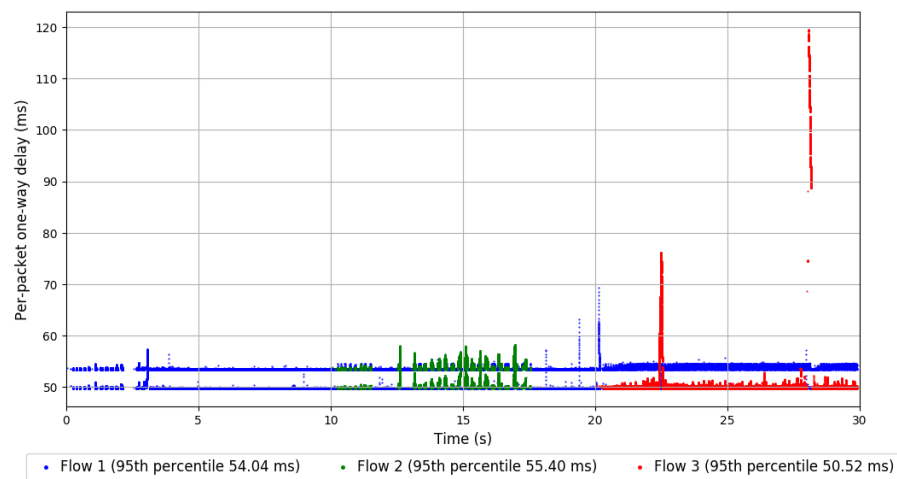
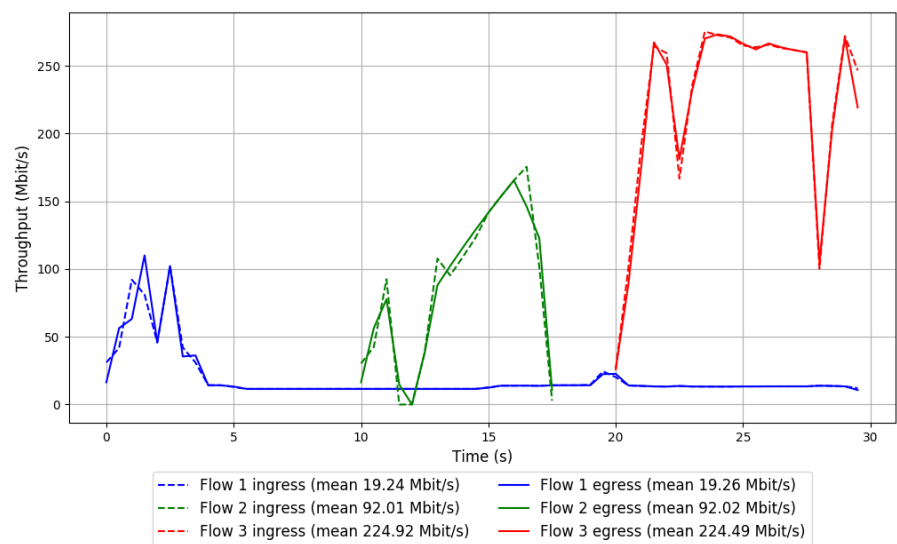
-- Flow 3:

Average throughput: 224.49 Mbit/s

95th percentile per-packet one-way delay: 50.517 ms

Loss rate: 1.20%

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

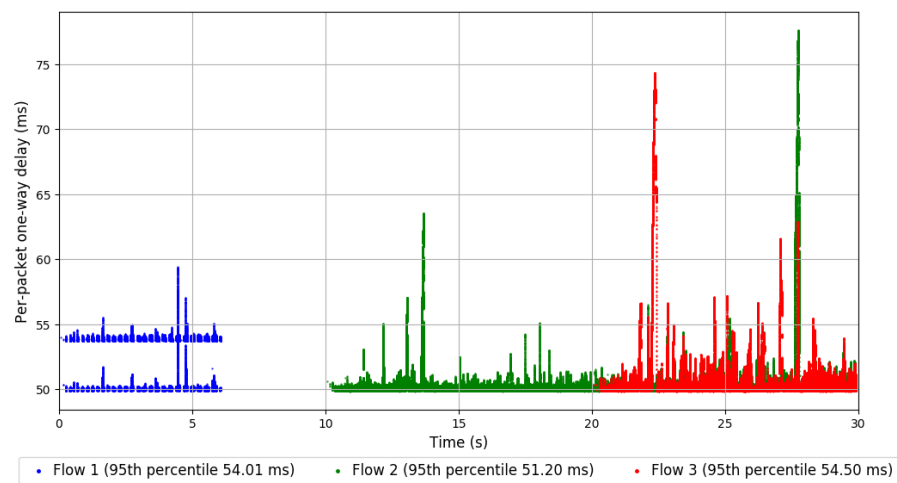
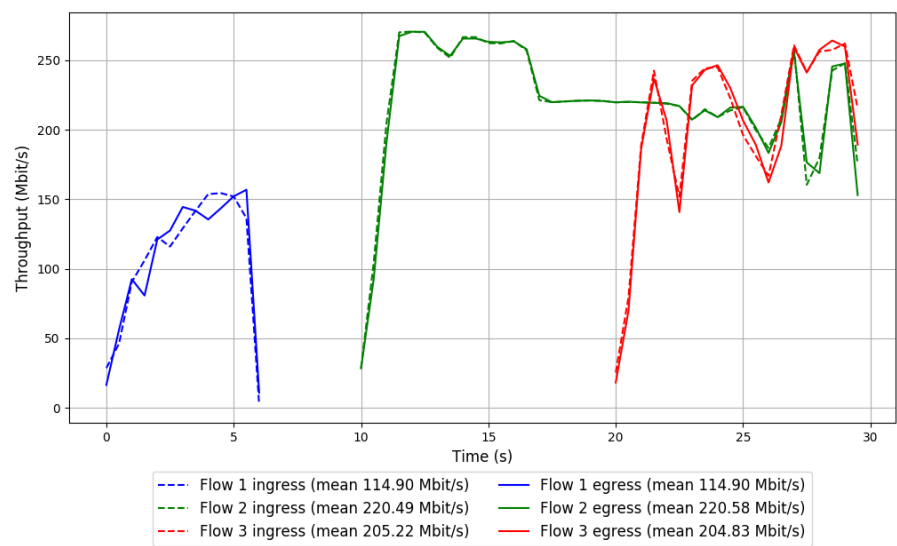


```
Run 9: Statistics of TaoVA-100x

Start at: 2018-04-18 12:23:10
End at: 2018-04-18 12:23:40

# Below is generated by plot.py at 2018-04-18 16:12:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 237.21 Mbit/s
95th percentile per-packet one-way delay: 53.903 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 114.90 Mbit/s
95th percentile per-packet one-way delay: 54.009 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 220.58 Mbit/s
95th percentile per-packet one-way delay: 51.198 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 204.83 Mbit/s
95th percentile per-packet one-way delay: 54.498 ms
Loss rate: 1.20%
```


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

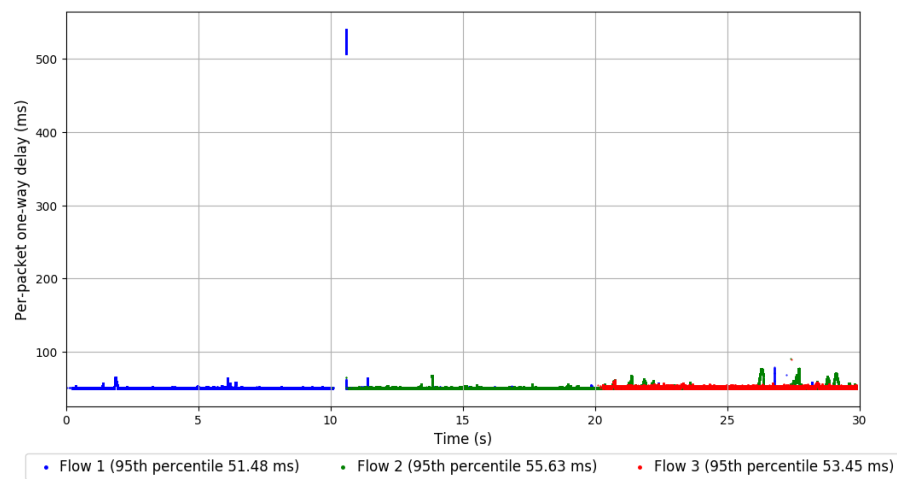
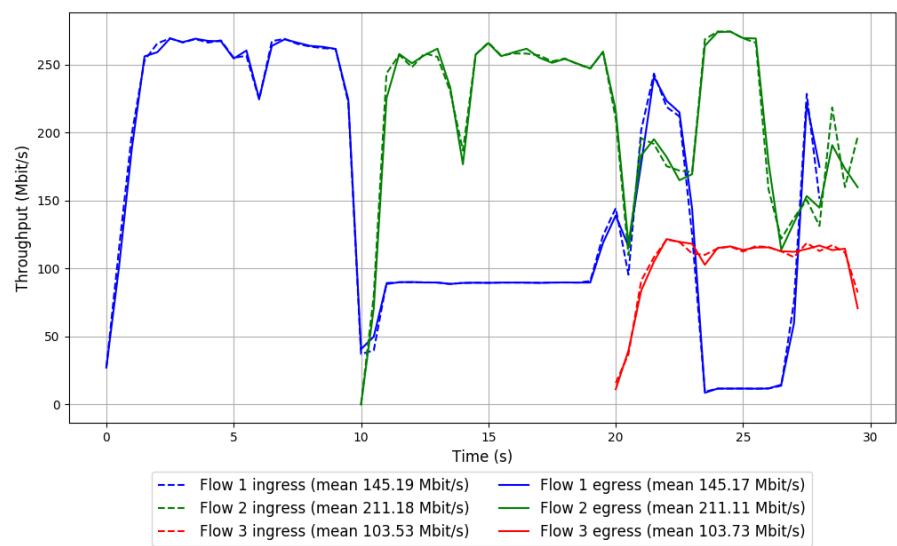


```
Run 10: Statistics of TaoVA-100x

Start at: 2018-04-18 12:38:28
End at: 2018-04-18 12:38:58

# Below is generated by plot.py at 2018-04-18 16:15:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 312.56 Mbit/s
95th percentile per-packet one-way delay: 53.433 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 145.17 Mbit/s
95th percentile per-packet one-way delay: 51.477 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 211.11 Mbit/s
95th percentile per-packet one-way delay: 55.635 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 103.73 Mbit/s
95th percentile per-packet one-way delay: 53.451 ms
Loss rate: 1.00%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2018-04-18 10:27:47

End at: 2018-04-18 10:28:17

Below is generated by plot.py at 2018-04-18 16:15:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 140.80 Mbit/s

95th percentile per-packet one-way delay: 51.504 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 67.94 Mbit/s

95th percentile per-packet one-way delay: 51.384 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 78.66 Mbit/s

95th percentile per-packet one-way delay: 51.969 ms

Loss rate: 0.48%

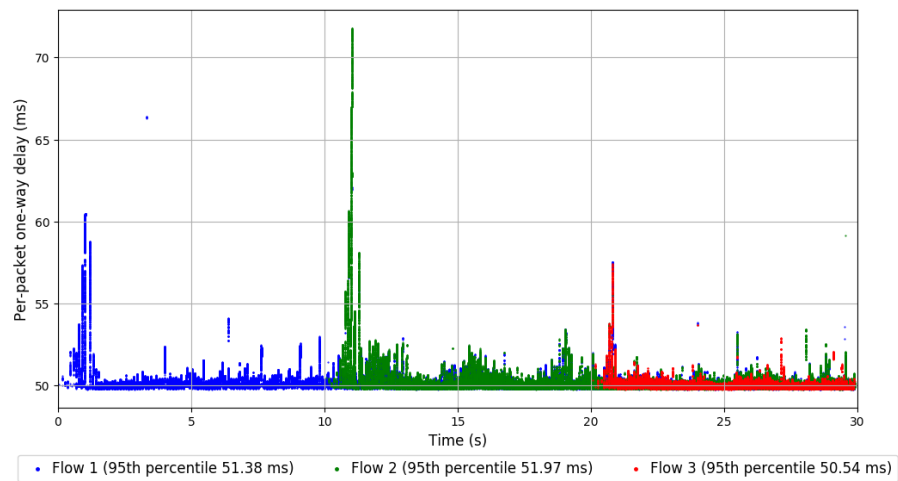
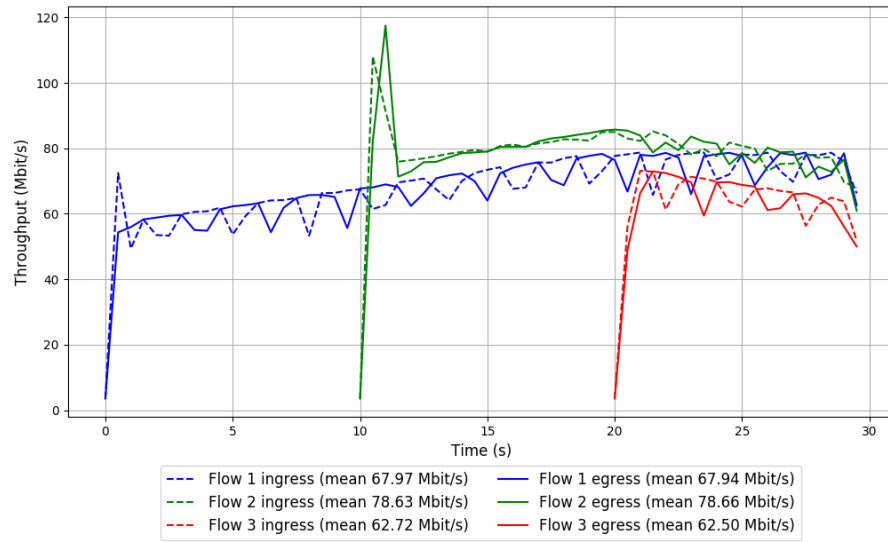
-- Flow 3:

Average throughput: 62.50 Mbit/s

95th percentile per-packet one-way delay: 50.544 ms

Loss rate: 1.02%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-04-18 10:43:06

End at: 2018-04-18 10:43:36

Below is generated by plot.py at 2018-04-18 16:15:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 229.51 Mbit/s

95th percentile per-packet one-way delay: 52.208 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 72.55 Mbit/s

95th percentile per-packet one-way delay: 52.413 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 187.70 Mbit/s

95th percentile per-packet one-way delay: 52.124 ms

Loss rate: 0.56%

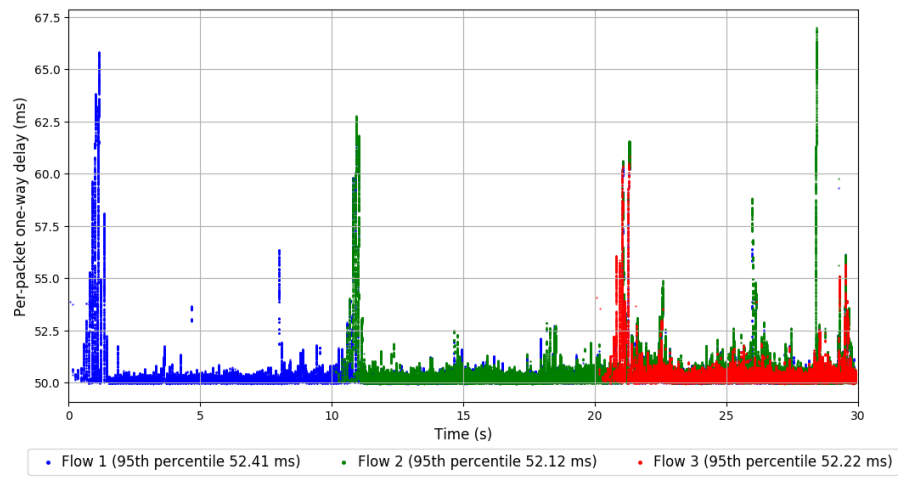
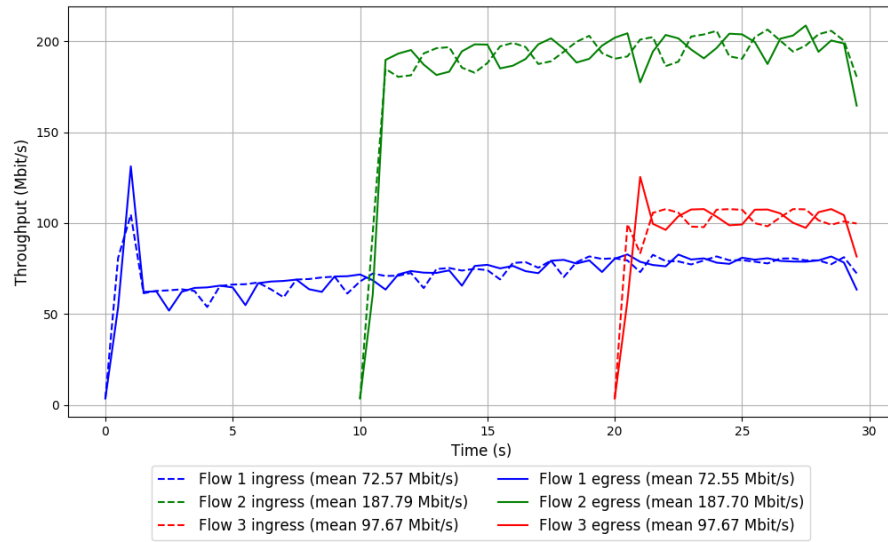
-- Flow 3:

Average throughput: 97.67 Mbit/s

95th percentile per-packet one-way delay: 52.219 ms

Loss rate: 1.11%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-04-18 10:58:36

End at: 2018-04-18 10:59:06

Below is generated by plot.py at 2018-04-18 16:15:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 182.72 Mbit/s

95th percentile per-packet one-way delay: 51.376 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 65.06 Mbit/s

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

Loss rate: 0.34%

-- Flow 2:

Average throughput: 174.15 Mbit/s

95th percentile per-packet one-way delay: 51.320 ms

Loss rate: 0.57%

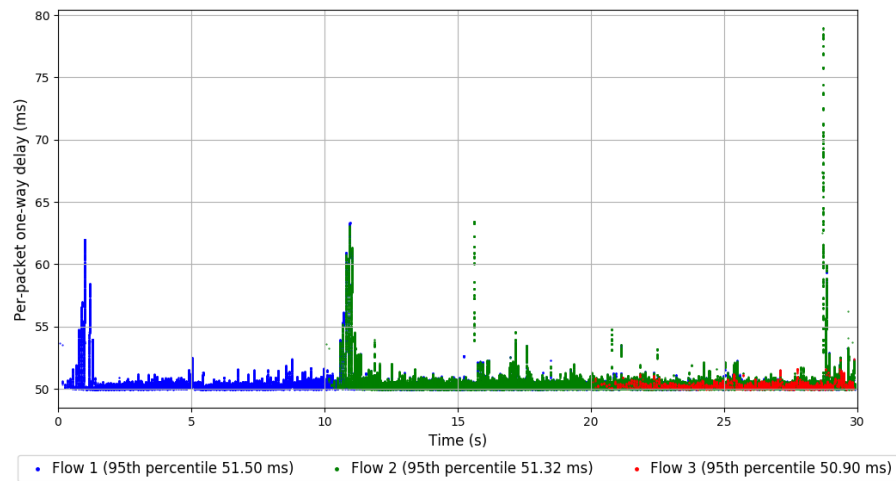
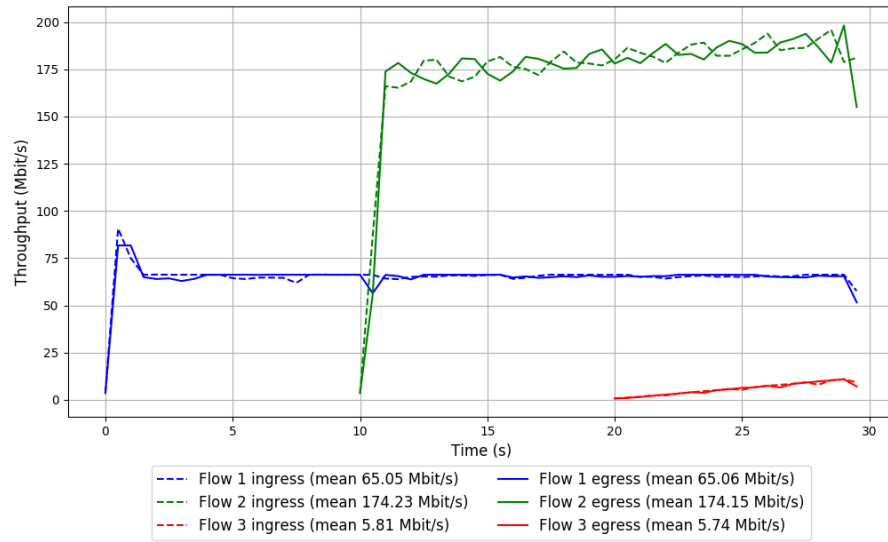
-- Flow 3:

Average throughput: 5.74 Mbit/s

95th percentile per-packet one-way delay: 50.900 ms

Loss rate: 2.14%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2018-04-18 11:13:55

End at: 2018-04-18 11:14:25

Below is generated by plot.py at 2018-04-18 16:15:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 220.56 Mbit/s

95th percentile per-packet one-way delay: 57.825 ms

Loss rate: 0.37%

-- Flow 1:

Average throughput: 107.35 Mbit/s

95th percentile per-packet one-way delay: 57.913 ms

Loss rate: 0.19%

-- Flow 2:

Average throughput: 111.76 Mbit/s

95th percentile per-packet one-way delay: 56.026 ms

Loss rate: 0.51%

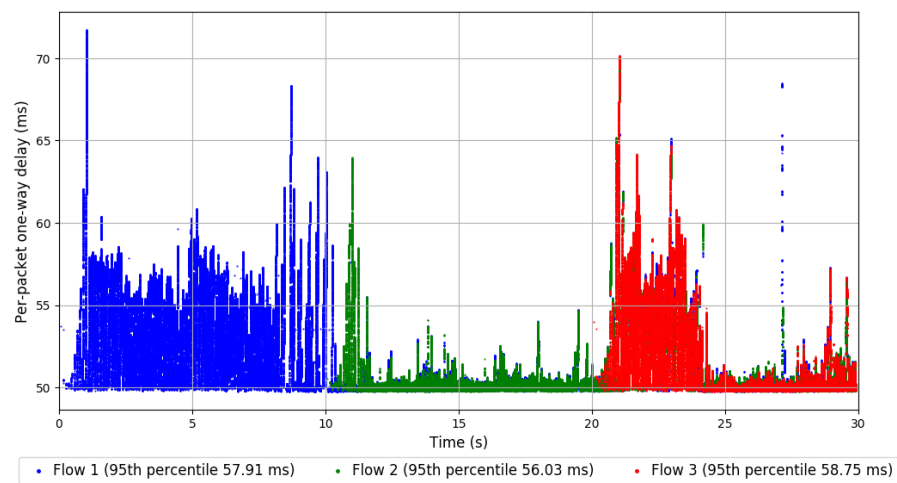
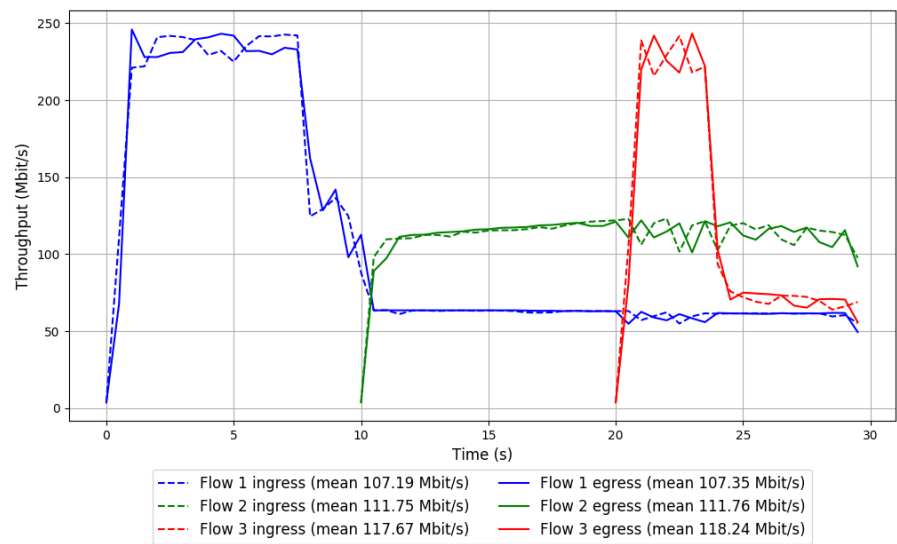
-- Flow 3:

Average throughput: 118.24 Mbit/s

95th percentile per-packet one-way delay: 58.751 ms

Loss rate: 0.60%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-04-18 11:29:03

End at: 2018-04-18 11:29:33

Below is generated by plot.py at 2018-04-18 16:15:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 206.53 Mbit/s

95th percentile per-packet one-way delay: 55.059 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 67.18 Mbit/s

95th percentile per-packet one-way delay: 57.528 ms

Loss rate: 0.26%

-- Flow 2:

Average throughput: 172.28 Mbit/s

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

Loss rate: 0.51%

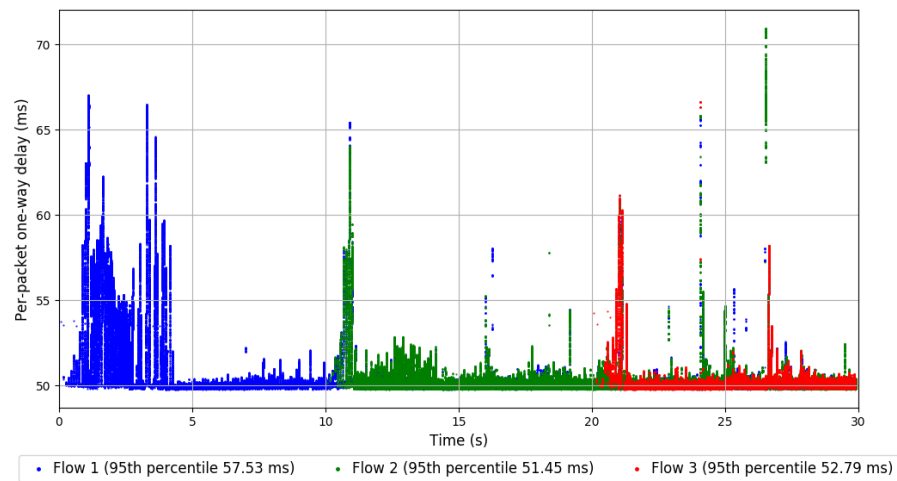
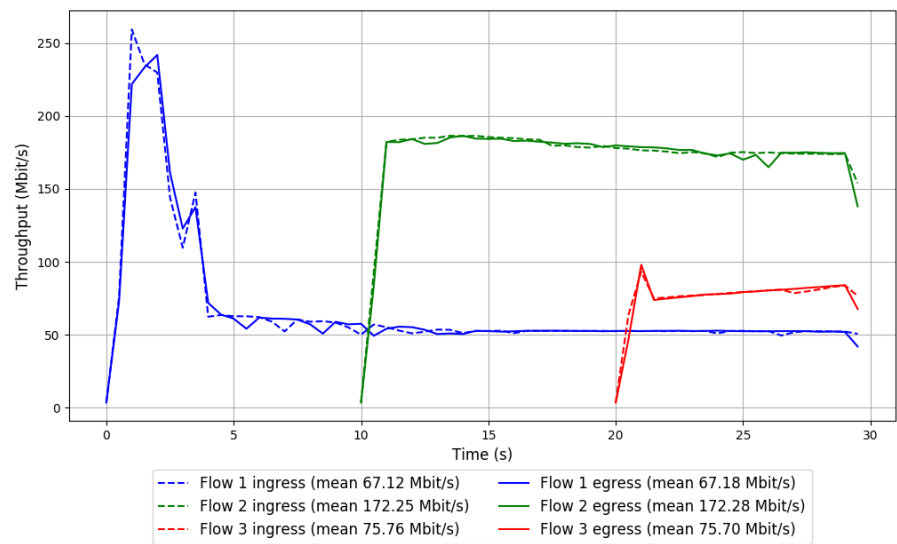
-- Flow 3:

Average throughput: 75.70 Mbit/s

95th percentile per-packet one-way delay: 52.790 ms

Loss rate: 1.14%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2018-04-18 11:44:45

End at: 2018-04-18 11:45:15

Below is generated by plot.py at 2018-04-18 16:15:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 152.44 Mbit/s

95th percentile per-packet one-way delay: 54.815 ms

Loss rate: 0.57%

-- Flow 1:

Average throughput: 78.00 Mbit/s

95th percentile per-packet one-way delay: 53.653 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 56.05 Mbit/s

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

Loss rate: 0.42%

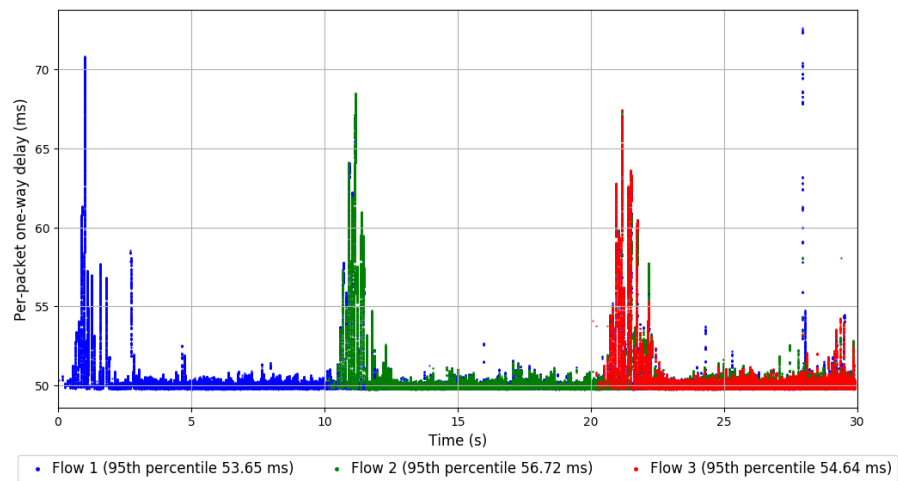
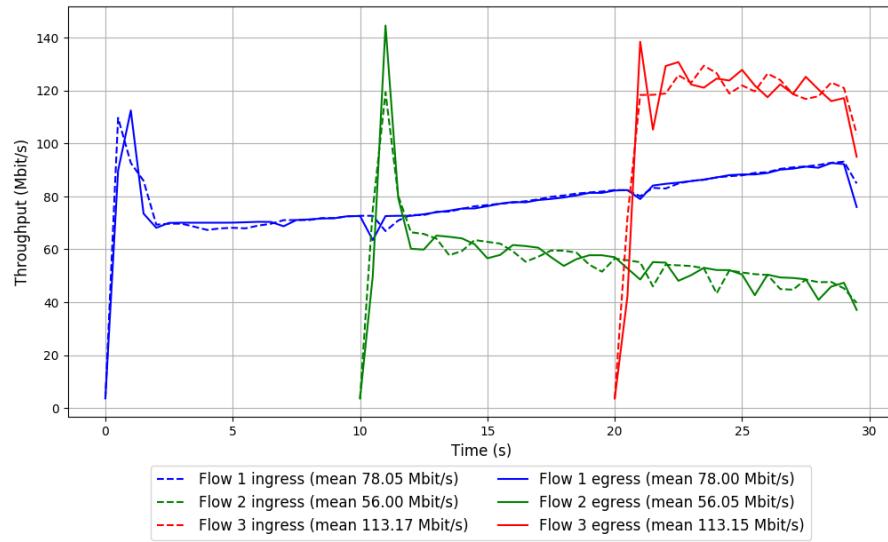
-- Flow 3:

Average throughput: 113.15 Mbit/s

95th percentile per-packet one-way delay: 54.639 ms

Loss rate: 1.09%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2018-04-18 11:59:43

End at: 2018-04-18 12:00:13

Below is generated by plot.py at 2018-04-18 16:15:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 191.83 Mbit/s

95th percentile per-packet one-way delay: 51.431 ms

Loss rate: 0.54%

-- Flow 1:

Average throughput: 65.10 Mbit/s

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

Loss rate: 0.35%

-- Flow 2:

Average throughput: 156.05 Mbit/s

95th percentile per-packet one-way delay: 51.343 ms

Loss rate: 0.51%

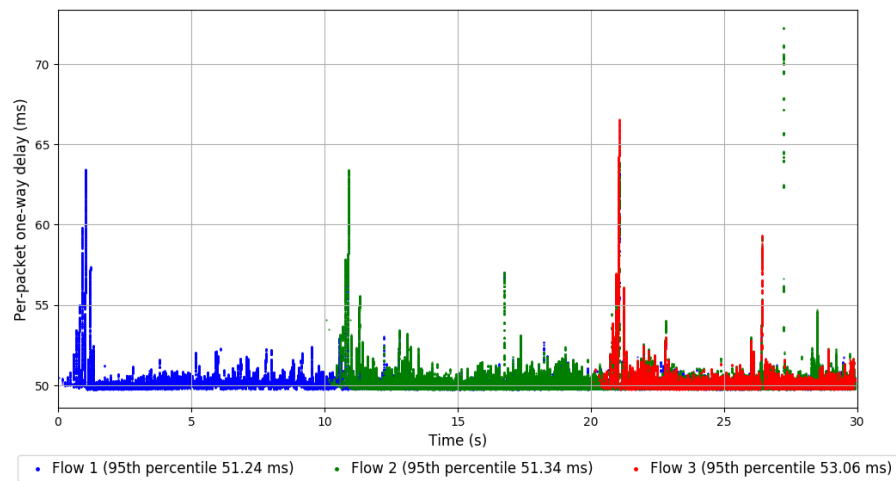
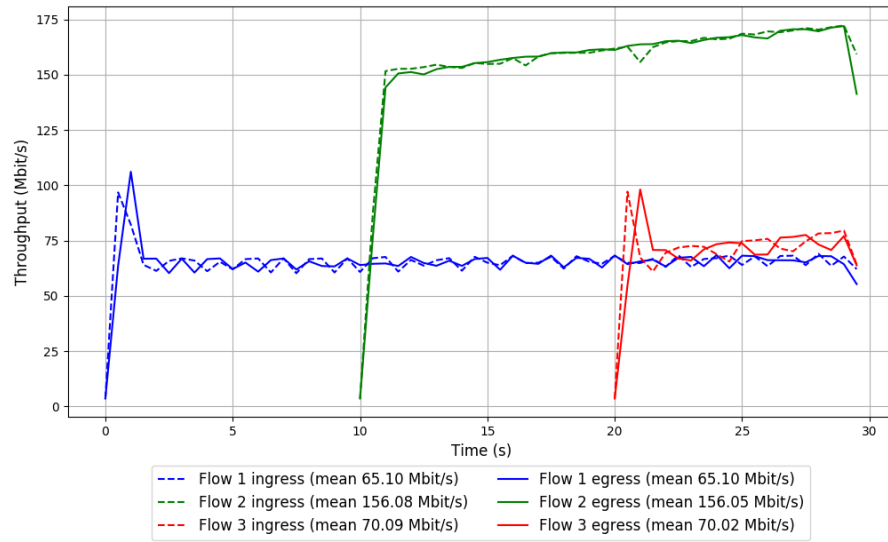
-- Flow 3:

Average throughput: 70.02 Mbit/s

95th percentile per-packet one-way delay: 53.057 ms

Loss rate: 1.15%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2018-04-18 12:14:47

End at: 2018-04-18 12:15:17

Below is generated by plot.py at 2018-04-18 16:15:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 142.42 Mbit/s

95th percentile per-packet one-way delay: 52.518 ms

Loss rate: 0.55%

-- Flow 1:

Average throughput: 75.65 Mbit/s

95th percentile per-packet one-way delay: 52.636 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 66.14 Mbit/s

95th percentile per-packet one-way delay: 52.102 ms

Loss rate: 0.51%

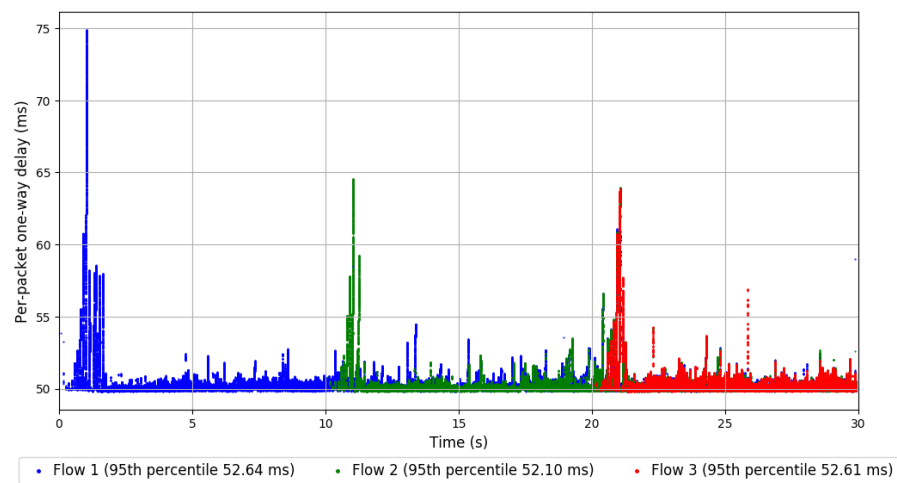
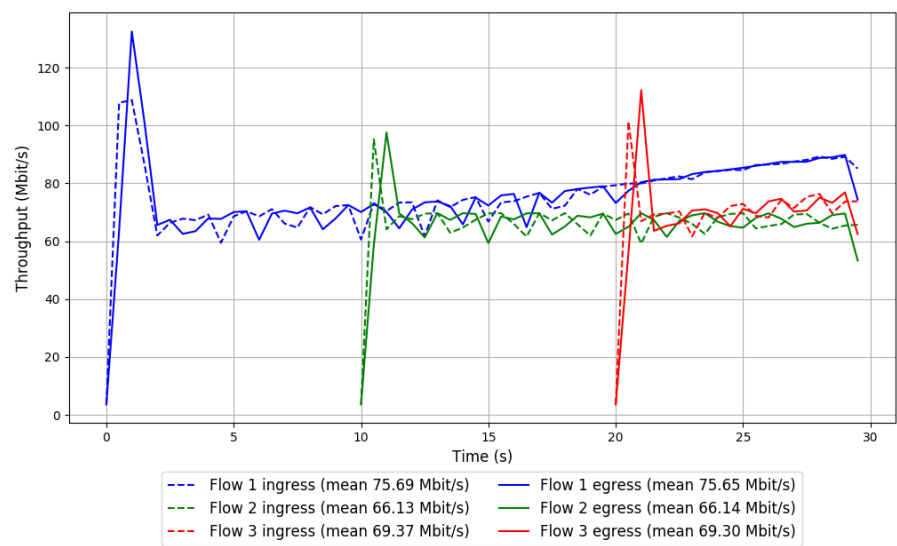
-- Flow 3:

Average throughput: 69.30 Mbit/s

95th percentile per-packet one-way delay: 52.613 ms

Loss rate: 1.14%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2018-04-18 12:30:05

End at: 2018-04-18 12:30:35

Below is generated by plot.py at 2018-04-18 16:15:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 185.85 Mbit/s

95th percentile per-packet one-way delay: 57.432 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 80.42 Mbit/s

95th percentile per-packet one-way delay: 55.674 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 95.70 Mbit/s

95th percentile per-packet one-way delay: 58.693 ms

Loss rate: 0.31%

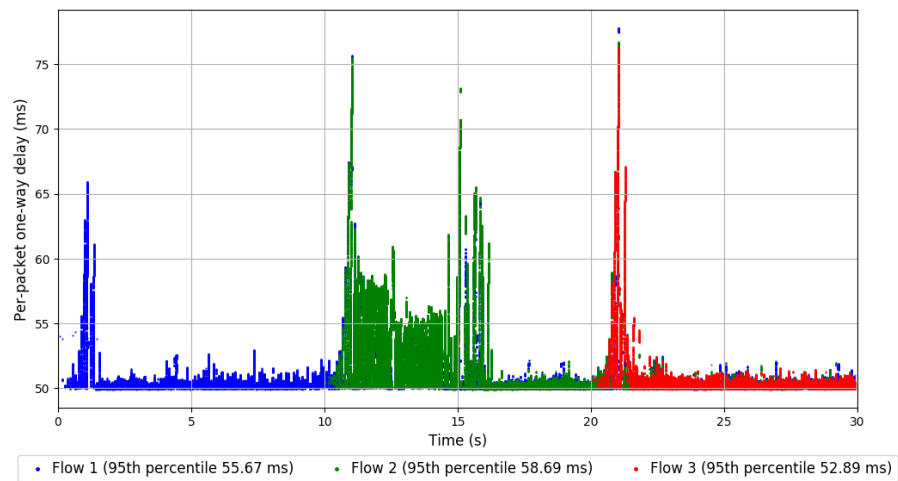
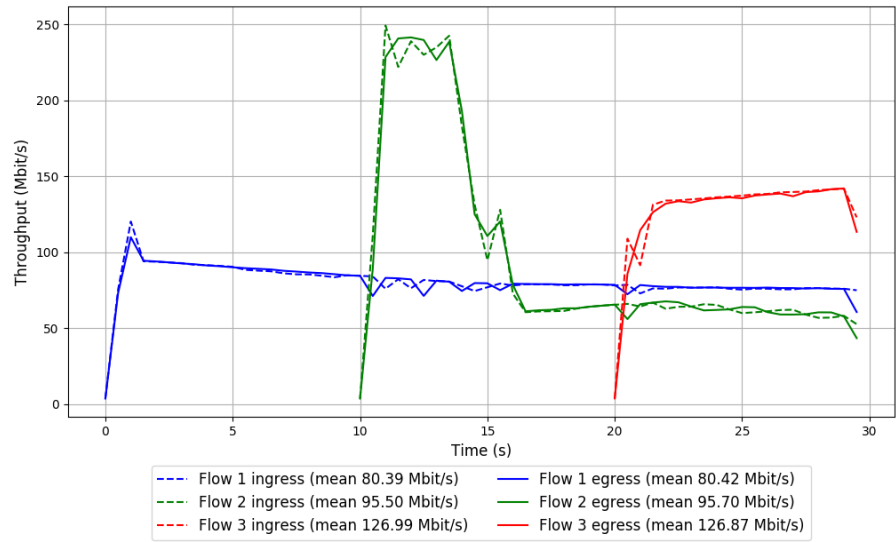
-- Flow 3:

Average throughput: 126.87 Mbit/s

95th percentile per-packet one-way delay: 52.887 ms

Loss rate: 1.13%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2018-04-18 12:45:30

End at: 2018-04-18 12:46:00

Below is generated by plot.py at 2018-04-18 16:15:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 135.75 Mbit/s

95th percentile per-packet one-way delay: 52.149 ms

Loss rate: 0.51%

-- Flow 1:

Average throughput: 63.09 Mbit/s

95th percentile per-packet one-way delay: 51.796 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 73.34 Mbit/s

95th percentile per-packet one-way delay: 52.743 ms

Loss rate: 0.52%

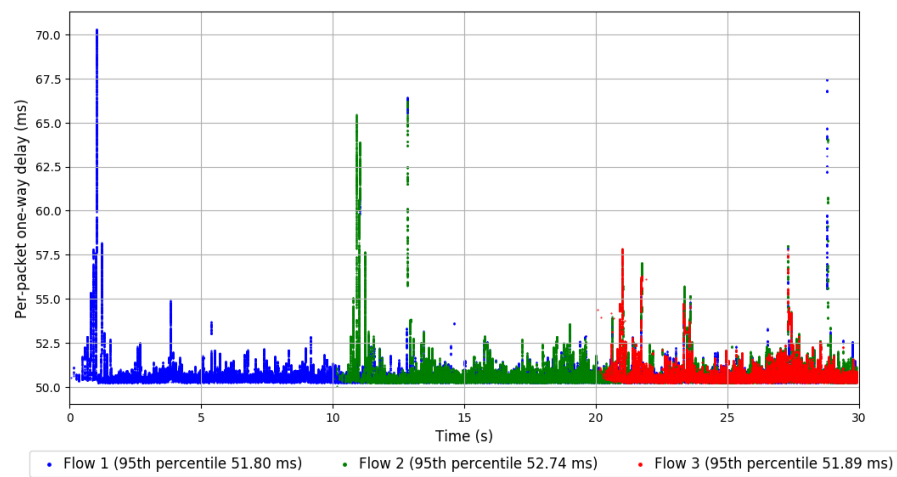
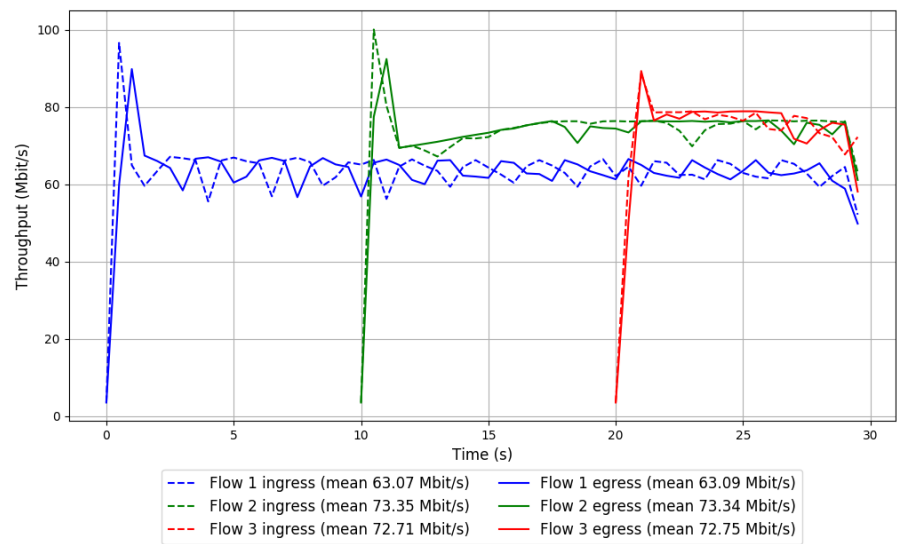
-- Flow 3:

Average throughput: 72.75 Mbit/s

95th percentile per-packet one-way delay: 51.889 ms

Loss rate: 1.00%

Run 10: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2018-04-18 10:26:46

End at: 2018-04-18 10:27:16

Below is generated by plot.py at 2018-04-18 16:19:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 323.78 Mbit/s

95th percentile per-packet one-way delay: 148.776 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 223.31 Mbit/s

95th percentile per-packet one-way delay: 155.694 ms

Loss rate: 1.17%

-- Flow 2:

Average throughput: 130.14 Mbit/s

95th percentile per-packet one-way delay: 128.570 ms

Loss rate: 0.97%

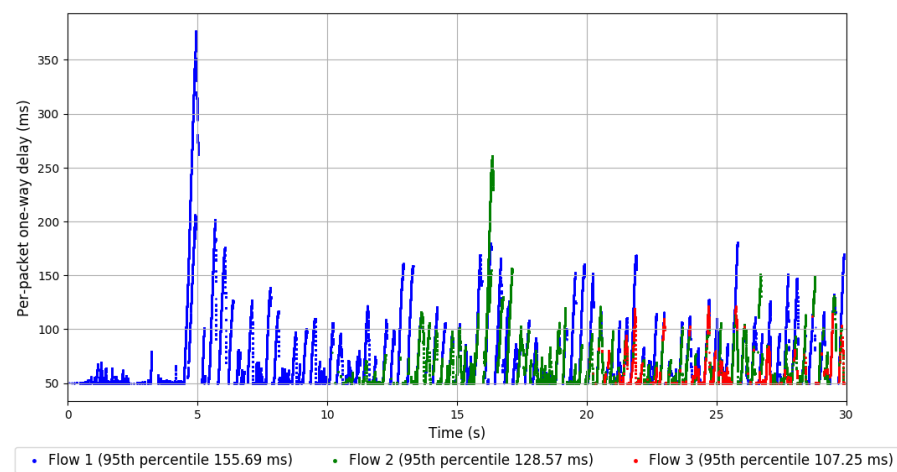
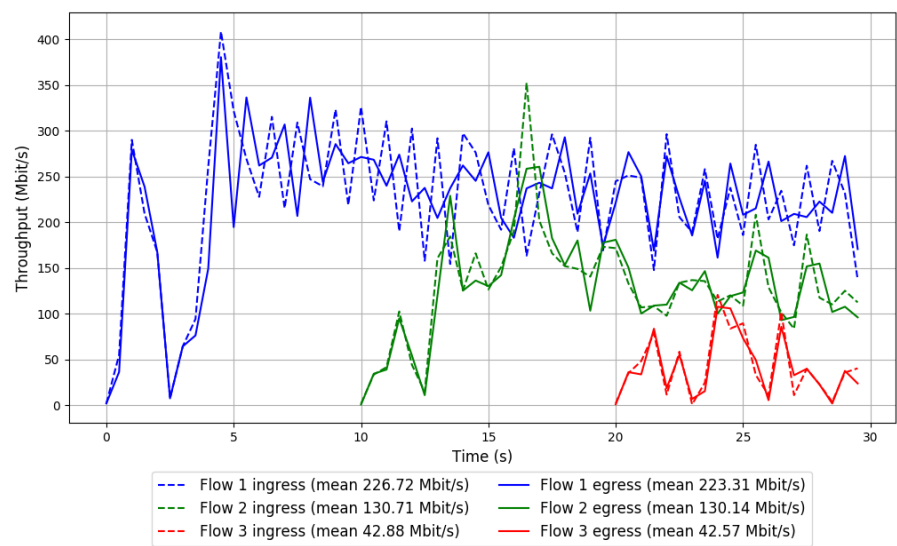
-- Flow 3:

Average throughput: 42.57 Mbit/s

95th percentile per-packet one-way delay: 107.253 ms

Loss rate: 1.95%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-04-18 10:42:06

End at: 2018-04-18 10:42:36

Below is generated by plot.py at 2018-04-18 16:19:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 306.80 Mbit/s

95th percentile per-packet one-way delay: 126.269 ms

Loss rate: 0.90%

-- Flow 1:

Average throughput: 178.08 Mbit/s

95th percentile per-packet one-way delay: 108.010 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 140.43 Mbit/s

95th percentile per-packet one-way delay: 144.564 ms

Loss rate: 1.21%

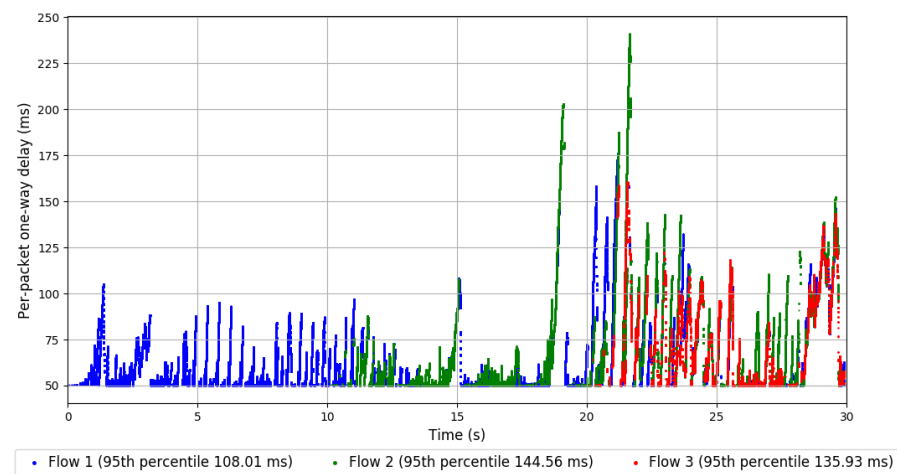
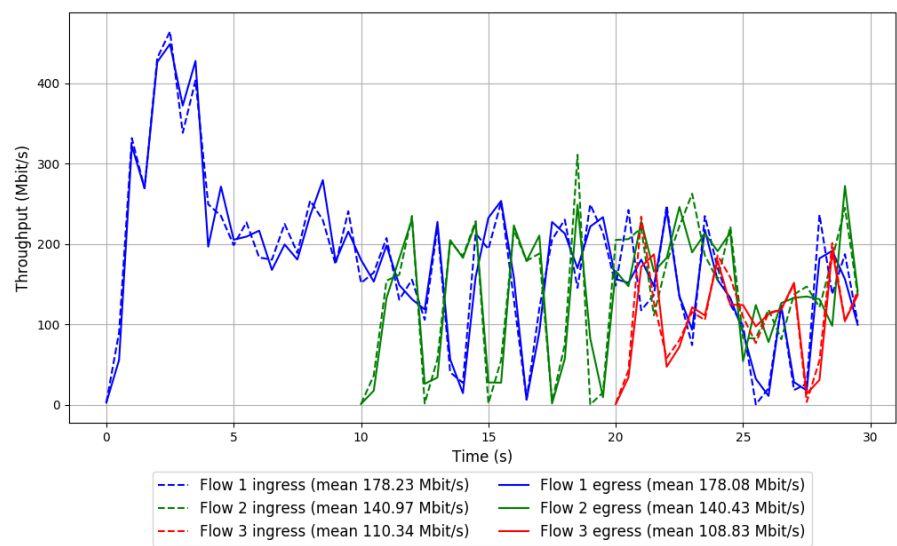
-- Flow 3:

Average throughput: 108.83 Mbit/s

95th percentile per-packet one-way delay: 135.927 ms

Loss rate: 2.39%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-04-18 10:57:35

End at: 2018-04-18 10:58:05

Below is generated by plot.py at 2018-04-18 16:19:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 320.41 Mbit/s

95th percentile per-packet one-way delay: 101.057 ms

Loss rate: 0.31%

-- Flow 1:

Average throughput: 170.29 Mbit/s

95th percentile per-packet one-way delay: 102.449 ms

Loss rate: 0.23%

-- Flow 2:

Average throughput: 156.34 Mbit/s

95th percentile per-packet one-way delay: 103.850 ms

Loss rate: 0.40%

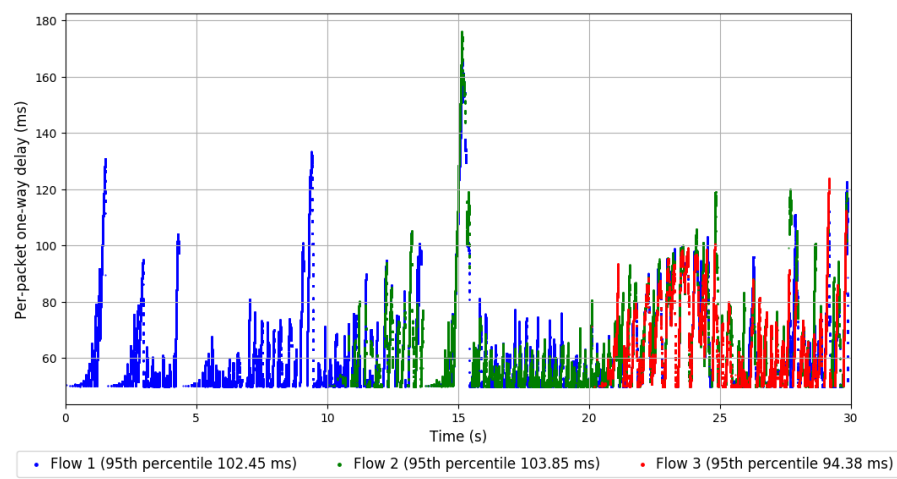
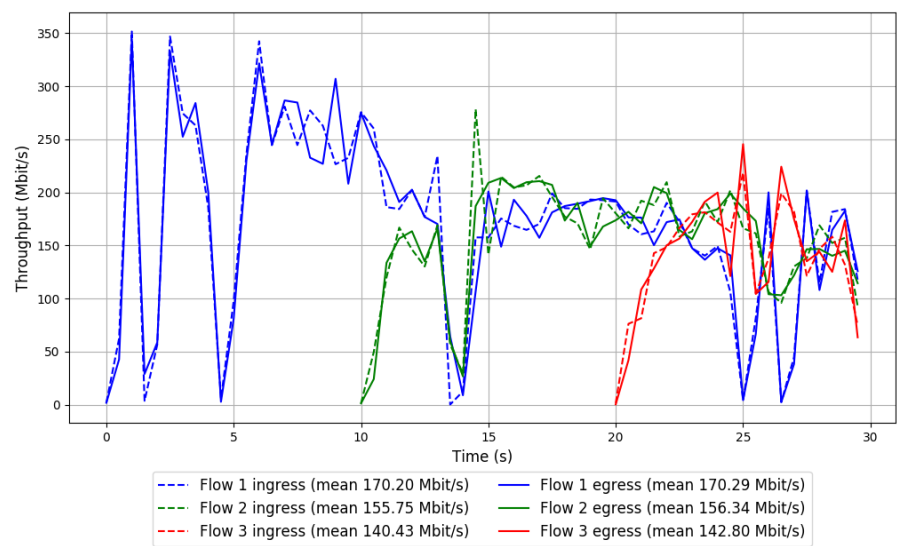
-- Flow 3:

Average throughput: 142.80 Mbit/s

95th percentile per-packet one-way delay: 94.383 ms

Loss rate: 0.40%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-04-18 11:12:52

End at: 2018-04-18 11:13:22

Below is generated by plot.py at 2018-04-18 16:20:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 350.69 Mbit/s

95th percentile per-packet one-way delay: 201.036 ms

Loss rate: 0.83%

-- Flow 1:

Average throughput: 204.37 Mbit/s

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

Loss rate: 0.31%

-- Flow 2:

Average throughput: 189.56 Mbit/s

95th percentile per-packet one-way delay: 243.645 ms

Loss rate: 1.72%

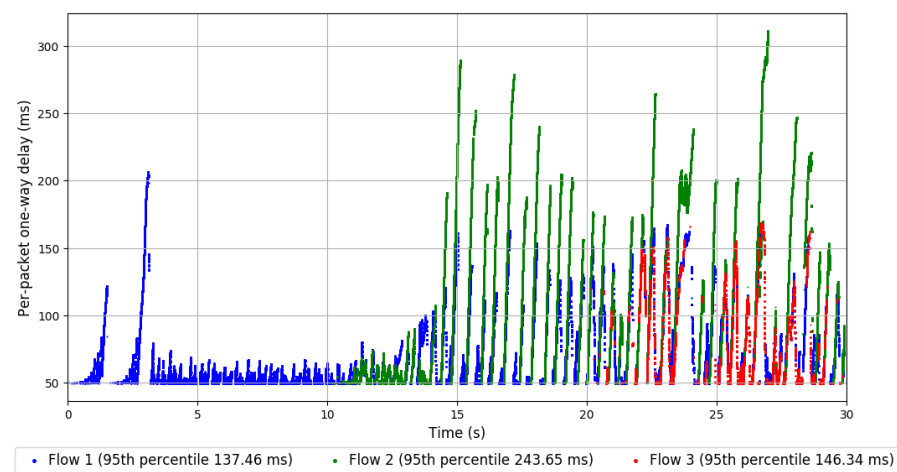
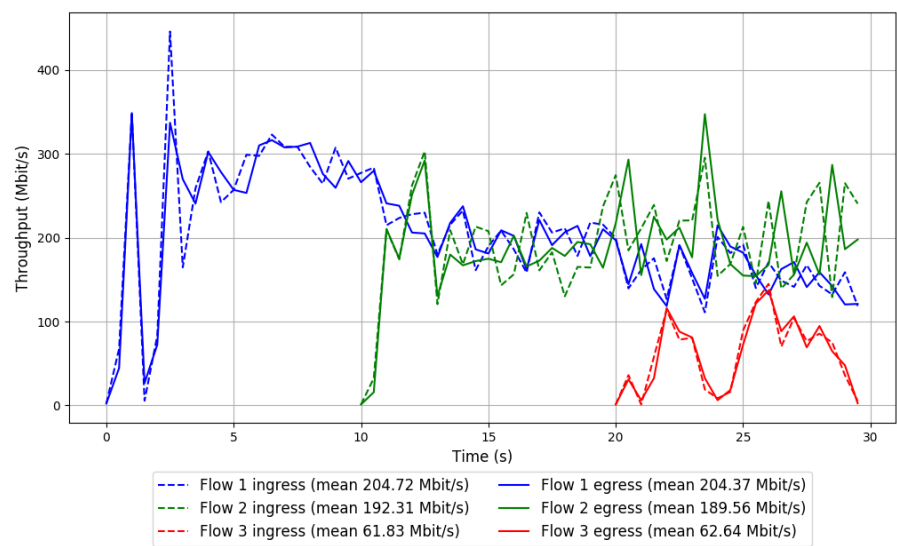
-- Flow 3:

Average throughput: 62.64 Mbit/s

95th percentile per-packet one-way delay: 146.338 ms

Loss rate: 0.49%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-04-18 11:28:03

End at: 2018-04-18 11:28:33

Below is generated by plot.py at 2018-04-18 16:20:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 295.23 Mbit/s

95th percentile per-packet one-way delay: 110.043 ms

Loss rate: 0.54%

-- Flow 1:

Average throughput: 157.16 Mbit/s

95th percentile per-packet one-way delay: 102.024 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 145.72 Mbit/s

95th percentile per-packet one-way delay: 117.377 ms

Loss rate: 0.49%

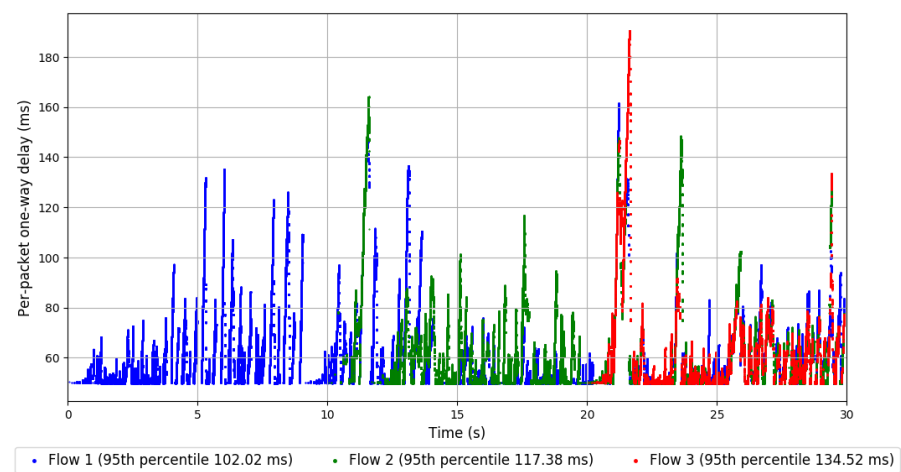
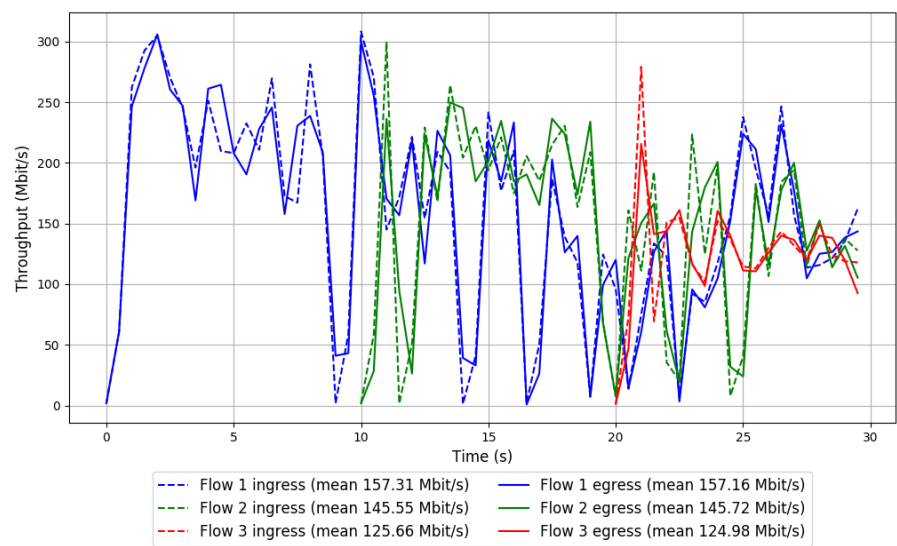
-- Flow 3:

Average throughput: 124.98 Mbit/s

95th percentile per-packet one-way delay: 134.521 ms

Loss rate: 1.53%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2018-04-18 11:43:44

End at: 2018-04-18 11:44:14

Below is generated by plot.py at 2018-04-18 16:20:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 313.45 Mbit/s

95th percentile per-packet one-way delay: 142.390 ms

Loss rate: 1.14%

-- Flow 1:

Average throughput: 200.94 Mbit/s

95th percentile per-packet one-way delay: 161.695 ms

Loss rate: 1.37%

-- Flow 2:

Average throughput: 125.48 Mbit/s

95th percentile per-packet one-way delay: 124.005 ms

Loss rate: 0.28%

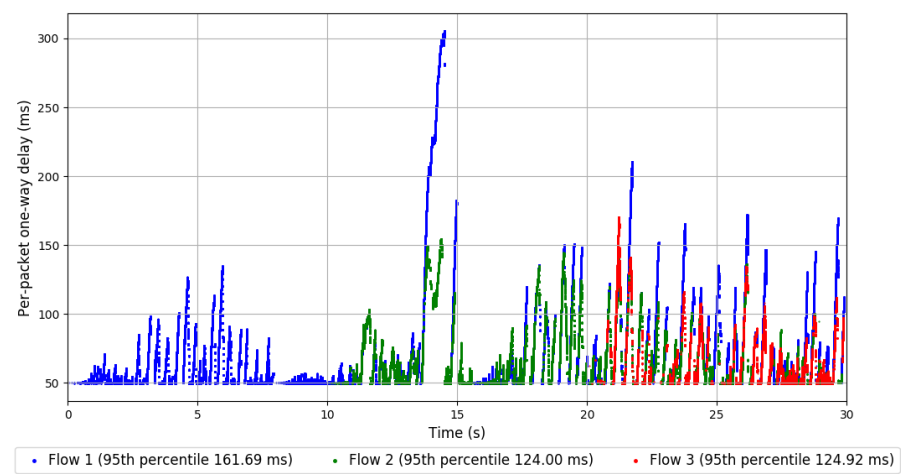
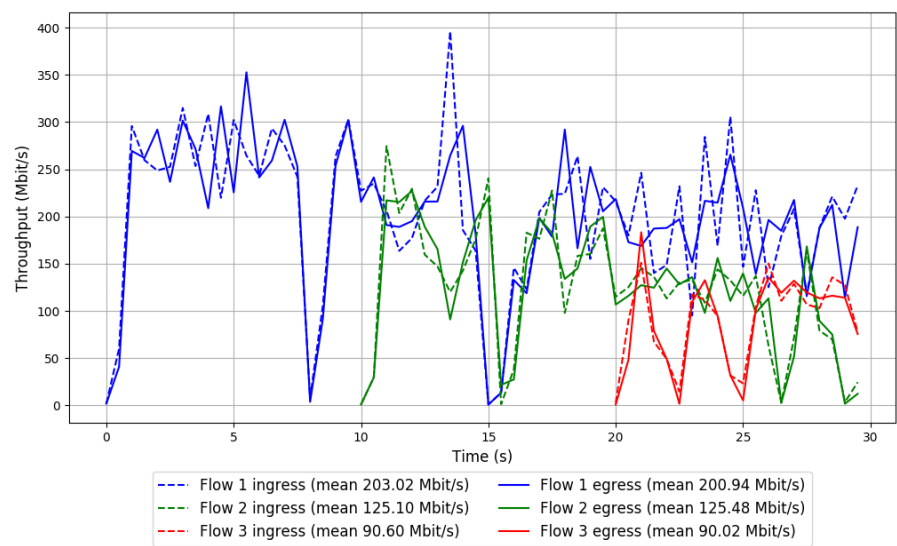
-- Flow 3:

Average throughput: 90.02 Mbit/s

95th percentile per-packet one-way delay: 124.923 ms

Loss rate: 1.93%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2018-04-18 11:58:43

End at: 2018-04-18 11:59:13

Below is generated by plot.py at 2018-04-18 16:20:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 298.66 Mbit/s

95th percentile per-packet one-way delay: 124.113 ms

Loss rate: 0.92%

-- Flow 1:

Average throughput: 180.07 Mbit/s

95th percentile per-packet one-way delay: 116.650 ms

Loss rate: 0.68%

-- Flow 2:

Average throughput: 126.61 Mbit/s

95th percentile per-packet one-way delay: 139.182 ms

Loss rate: 0.86%

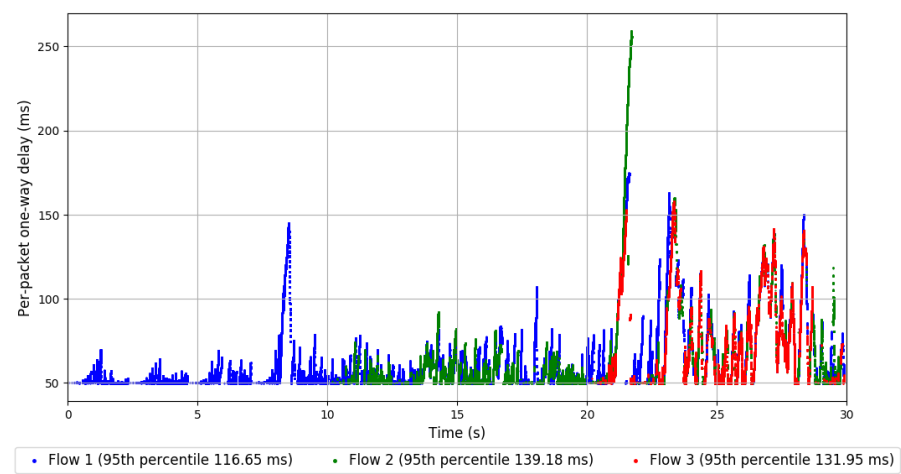
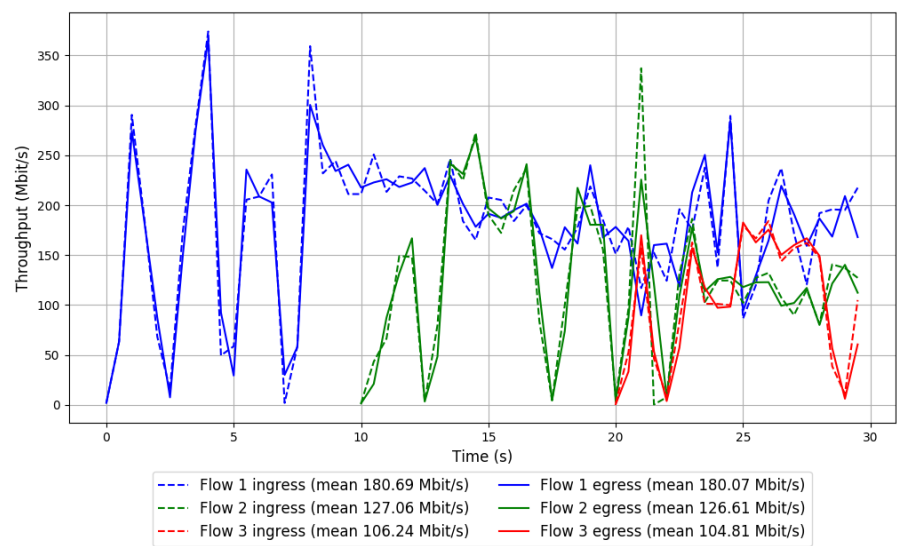
-- Flow 3:

Average throughput: 104.81 Mbit/s

95th percentile per-packet one-way delay: 131.954 ms

Loss rate: 2.35%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2018-04-18 12:13:47

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

Below is generated by plot.py at 2018-04-18 16:21:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 322.01 Mbit/s

95th percentile per-packet one-way delay: 179.737 ms

Loss rate: 1.42%

-- Flow 1:

Average throughput: 174.53 Mbit/s

95th percentile per-packet one-way delay: 131.697 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 190.06 Mbit/s

95th percentile per-packet one-way delay: 216.085 ms

Loss rate: 2.36%

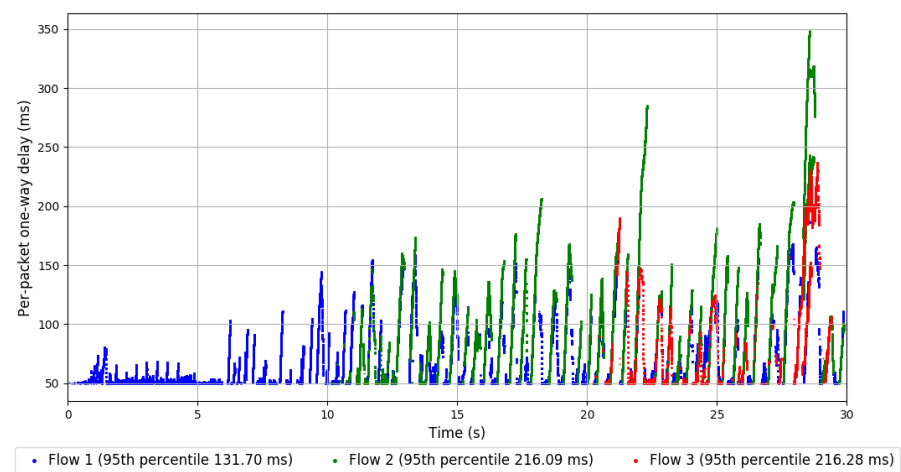
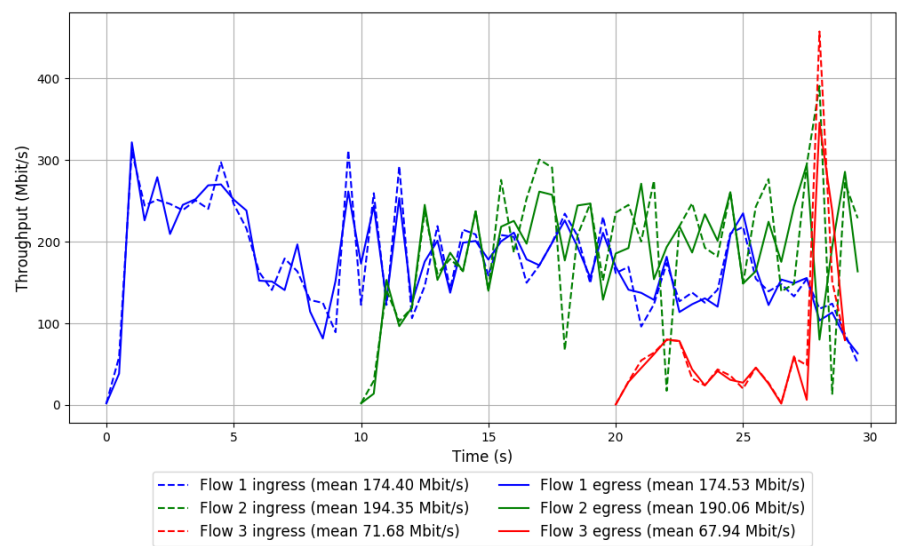
-- Flow 3:

Average throughput: 67.94 Mbit/s

95th percentile per-packet one-way delay: 216.285 ms

Loss rate: 5.07%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2018-04-18 12:29:05

End at: 2018-04-18 12:29:35

Below is generated by plot.py at 2018-04-18 16:24:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 318.96 Mbit/s

95th percentile per-packet one-way delay: 190.849 ms

Loss rate: 0.99%

-- Flow 1:

Average throughput: 235.74 Mbit/s

95th percentile per-packet one-way delay: 198.177 ms

Loss rate: 0.70%

-- Flow 2:

Average throughput: 91.79 Mbit/s

95th percentile per-packet one-way delay: 137.589 ms

Loss rate: 1.79%

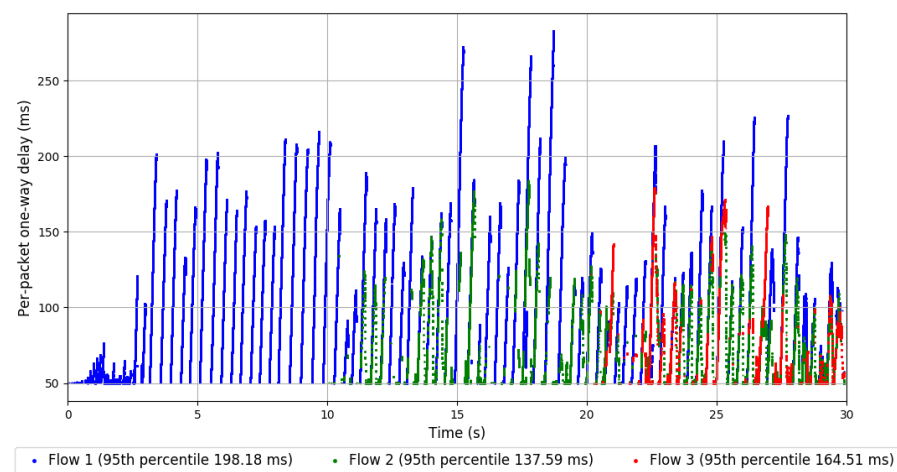
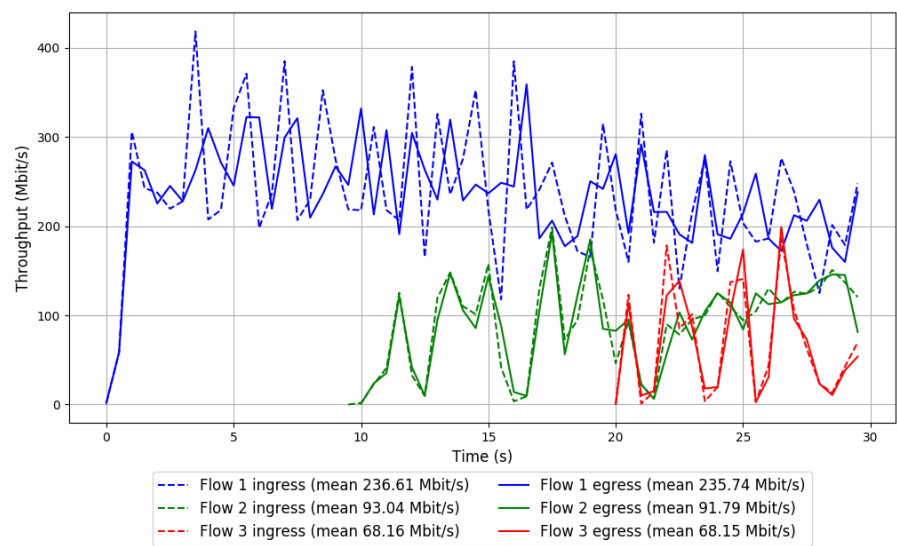
-- Flow 3:

Average throughput: 68.15 Mbit/s

95th percentile per-packet one-way delay: 164.508 ms

Loss rate: 1.85%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2018-04-18 12:44:32

End at: 2018-04-18 12:45:02

Below is generated by plot.py at 2018-04-18 16:24:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 282.47 Mbit/s

95th percentile per-packet one-way delay: 203.721 ms

Loss rate: 1.18%

-- Flow 1:

Average throughput: 205.86 Mbit/s

95th percentile per-packet one-way delay: 190.999 ms

Loss rate: 0.91%

-- Flow 2:

Average throughput: 70.04 Mbit/s

95th percentile per-packet one-way delay: 271.516 ms

Loss rate: 1.44%

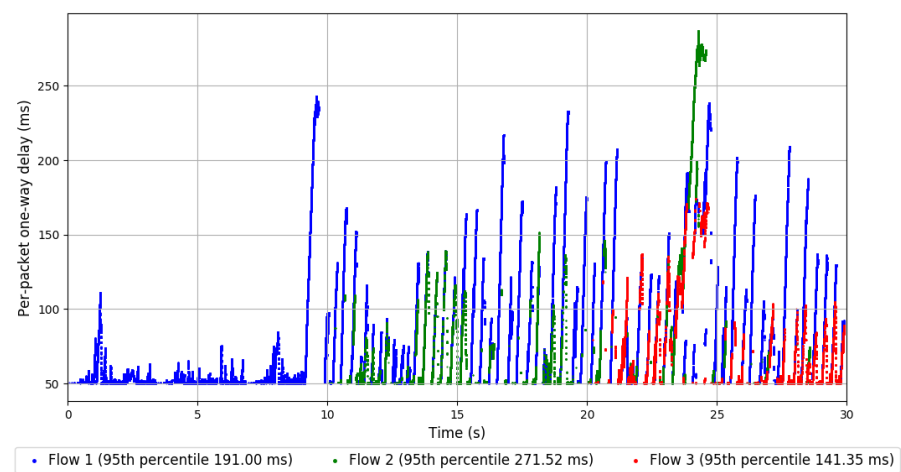
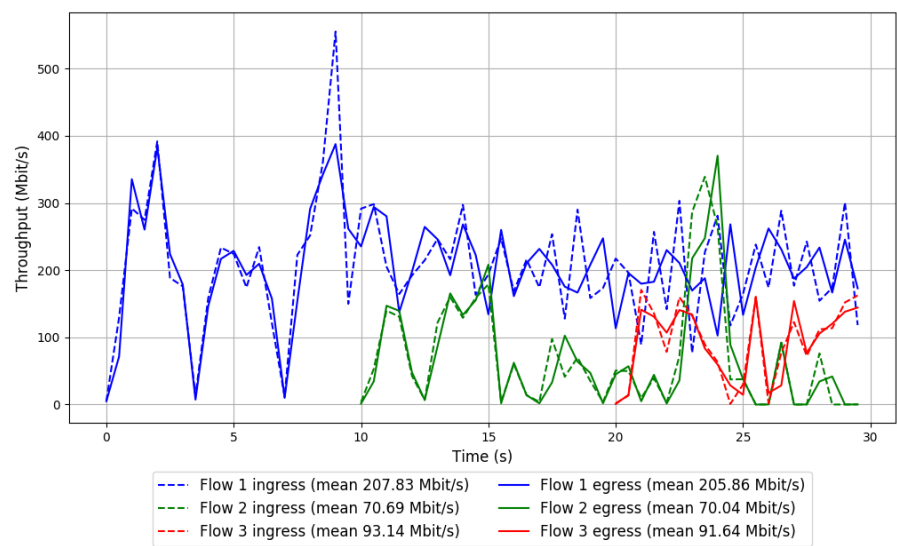
-- Flow 3:

Average throughput: 91.64 Mbit/s

95th percentile per-packet one-way delay: 141.349 ms

Loss rate: 2.65%

Run 10: Report of Verus — Data Link



Run 1: Statistics of Copa

Start at: 2018-04-18 10:21:54

End at: 2018-04-18 10:22:24

Below is generated by plot.py at 2018-04-18 16:24:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 152.81 Mbit/s

95th percentile per-packet one-way delay: 53.927 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 82.42 Mbit/s

95th percentile per-packet one-way delay: 53.972 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 83.30 Mbit/s

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

Loss rate: 0.47%

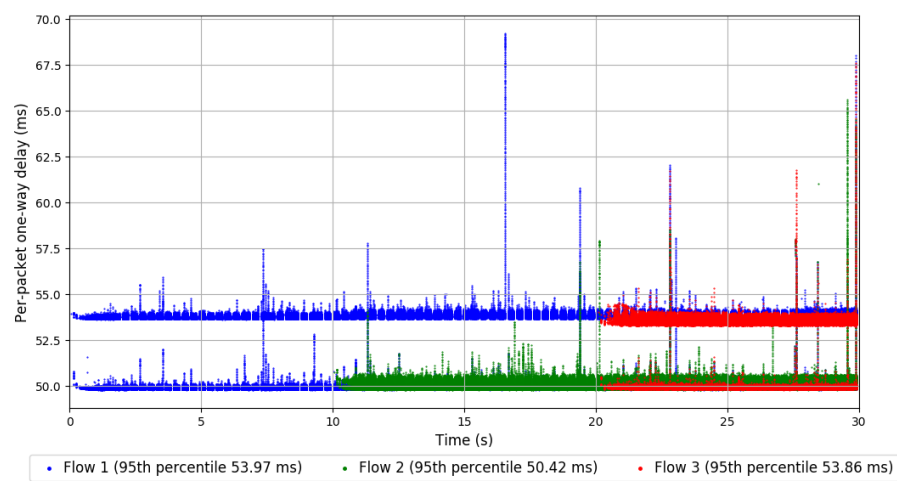
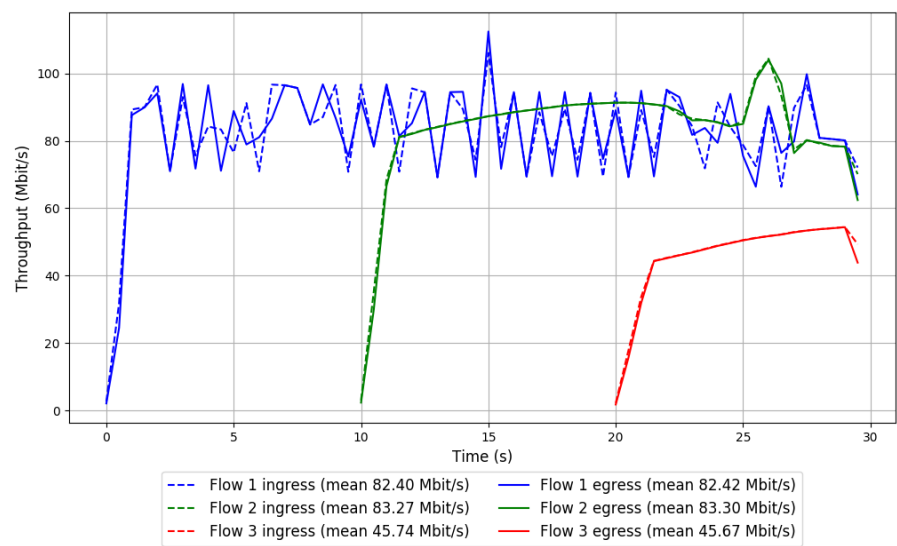
-- Flow 3:

Average throughput: 45.67 Mbit/s

95th percentile per-packet one-way delay: 53.858 ms

Loss rate: 1.20%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-04-18 10:37:09

End at: 2018-04-18 10:37:39

Below is generated by plot.py at 2018-04-18 16:25:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 203.43 Mbit/s

95th percentile per-packet one-way delay: 53.283 ms

Loss rate: 0.47%

-- Flow 1:

Average throughput: 110.57 Mbit/s

95th percentile per-packet one-way delay: 53.324 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 93.94 Mbit/s

95th percentile per-packet one-way delay: 50.006 ms

Loss rate: 0.41%

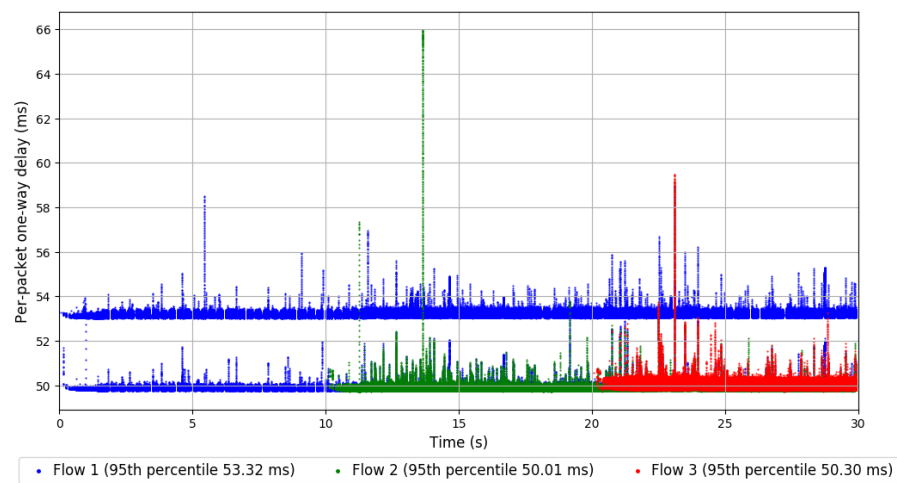
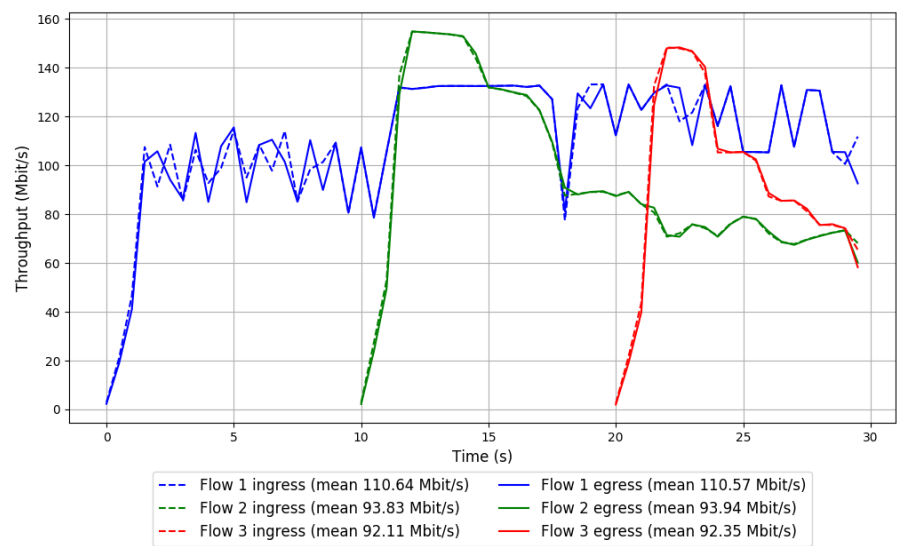
-- Flow 3:

Average throughput: 92.35 Mbit/s

95th percentile per-packet one-way delay: 50.299 ms

Loss rate: 0.79%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-04-18 10:52:37

End at: 2018-04-18 10:53:07

Below is generated by plot.py at 2018-04-18 16:25:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 175.76 Mbit/s

95th percentile per-packet one-way delay: 53.360 ms

Loss rate: 0.45%

-- Flow 1:

Average throughput: 85.21 Mbit/s

95th percentile per-packet one-way delay: 53.462 ms

Loss rate: 0.27%

-- Flow 2:

Average throughput: 96.51 Mbit/s

95th percentile per-packet one-way delay: 50.155 ms

Loss rate: 0.46%

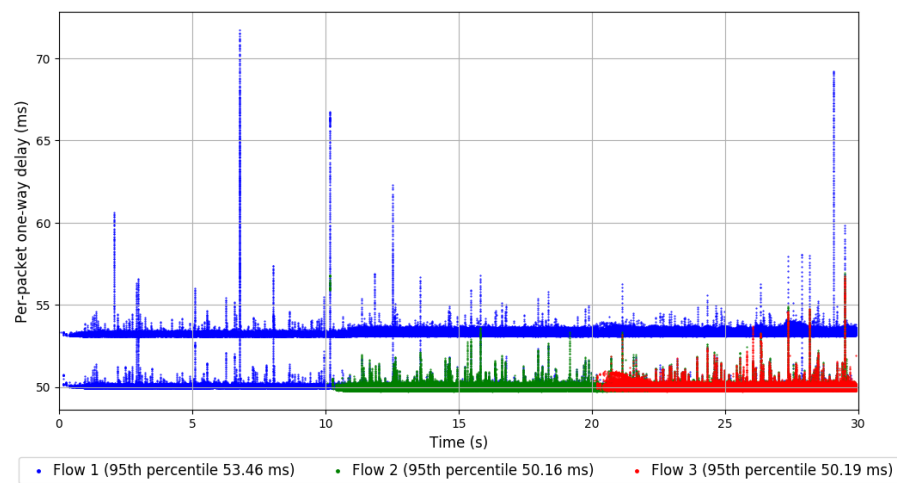
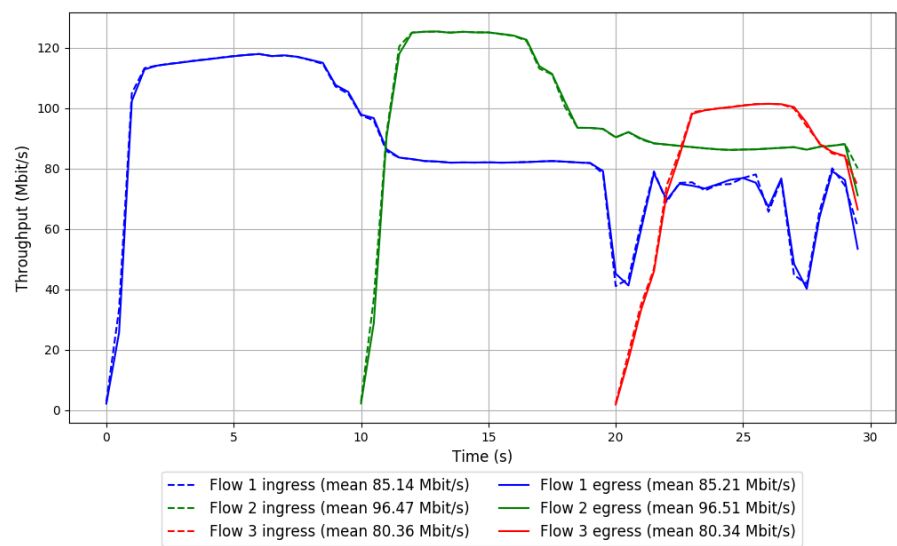
-- Flow 3:

Average throughput: 80.34 Mbit/s

95th percentile per-packet one-way delay: 50.188 ms

Loss rate: 1.02%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2018-04-18 11:08:06

End at: 2018-04-18 11:08:36

Below is generated by plot.py at 2018-04-18 16:25:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 100.90 Mbit/s

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

Loss rate: 0.44%

-- Flow 1:

Average throughput: 5.05 Mbit/s

95th percentile per-packet one-way delay: 53.598 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 99.84 Mbit/s

95th percentile per-packet one-way delay: 53.659 ms

Loss rate: 0.04%

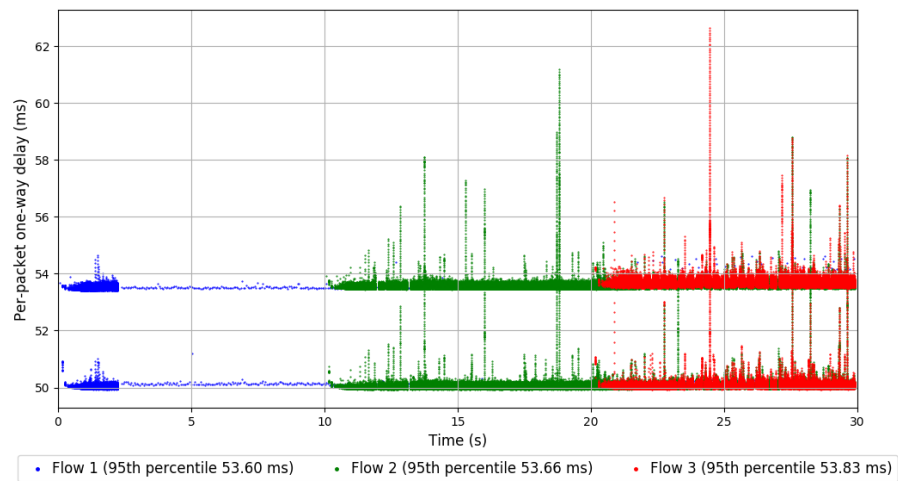
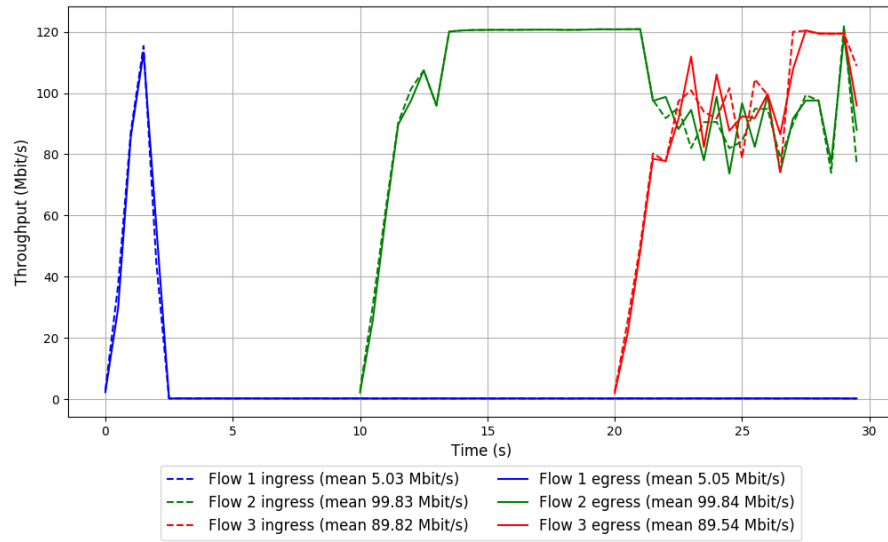
-- Flow 3:

Average throughput: 89.54 Mbit/s

95th percentile per-packet one-way delay: 53.829 ms

Loss rate: 1.39%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2018-04-18 11:23:10

End at: 2018-04-18 11:23:40

Below is generated by plot.py at 2018-04-18 16:25:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 174.09 Mbit/s

95th percentile per-packet one-way delay: 53.346 ms

Loss rate: 0.61%

-- Flow 1:

Average throughput: 101.91 Mbit/s

95th percentile per-packet one-way delay: 53.277 ms

Loss rate: 0.50%

-- Flow 2:

Average throughput: 58.24 Mbit/s

95th percentile per-packet one-way delay: 53.543 ms

Loss rate: 0.80%

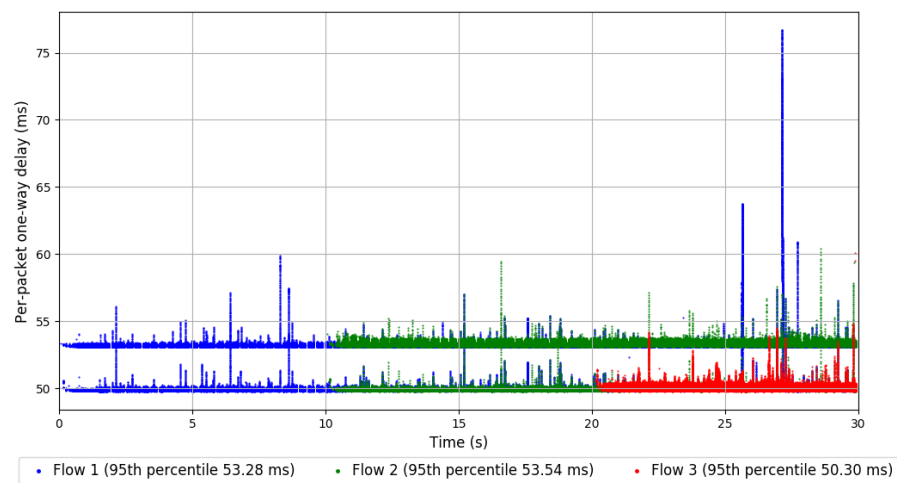
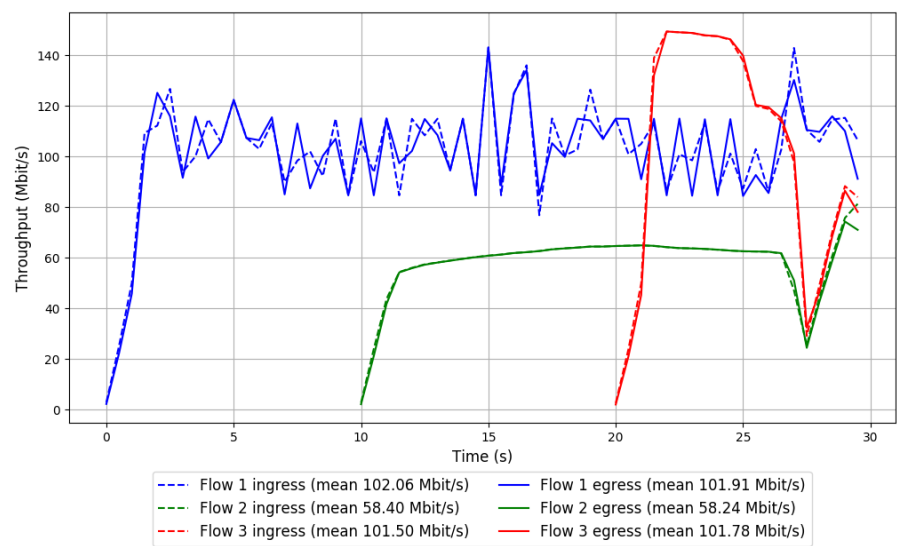
-- Flow 3:

Average throughput: 101.78 Mbit/s

95th percentile per-packet one-way delay: 50.300 ms

Loss rate: 0.76%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2018-04-18 11:38:35

End at: 2018-04-18 11:39:05

Below is generated by plot.py at 2018-04-18 16:33:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 348.28 Mbit/s

95th percentile per-packet one-way delay: 256.974 ms

Loss rate: 30.92%

-- Flow 1:

Average throughput: 347.65 Mbit/s

95th percentile per-packet one-way delay: 256.998 ms

Loss rate: 30.95%

-- Flow 2:

Average throughput: 0.78 Mbit/s

95th percentile per-packet one-way delay: 180.073 ms

Loss rate: 5.69%

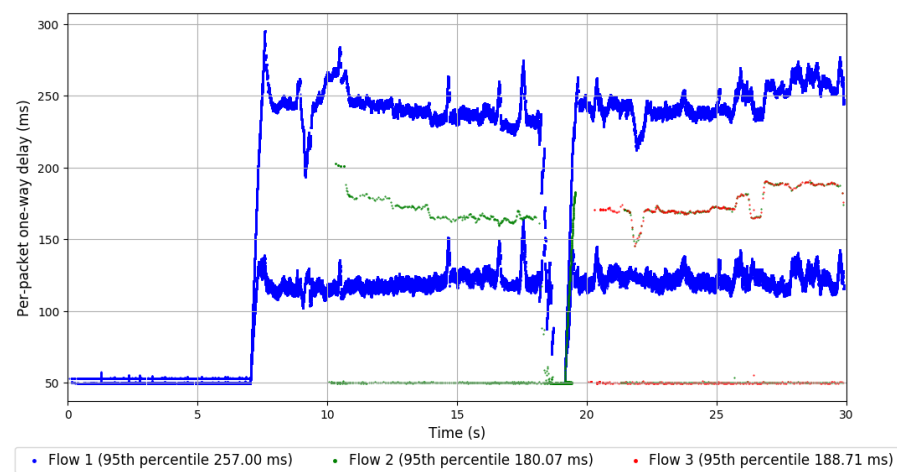
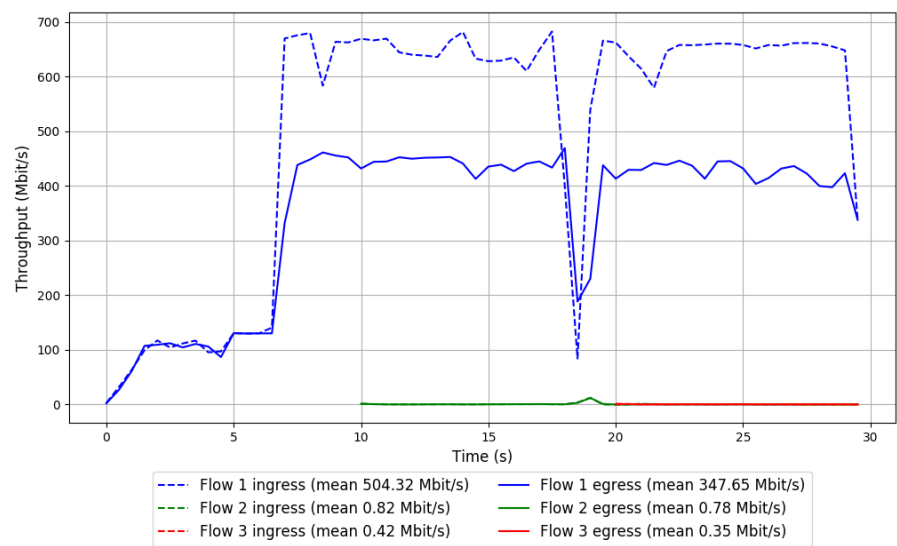
-- Flow 3:

Average throughput: 0.35 Mbit/s

95th percentile per-packet one-way delay: 188.705 ms

Loss rate: 17.21%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2018-04-18 11:53:49

End at: 2018-04-18 11:54:19

Below is generated by plot.py at 2018-04-18 16:33:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 178.86 Mbit/s

95th percentile per-packet one-way delay: 53.551 ms

Loss rate: 0.43%

-- Flow 1:

Average throughput: 98.50 Mbit/s

95th percentile per-packet one-way delay: 53.579 ms

Loss rate: 0.28%

-- Flow 2:

Average throughput: 80.87 Mbit/s

95th percentile per-packet one-way delay: 50.066 ms

Loss rate: 0.46%

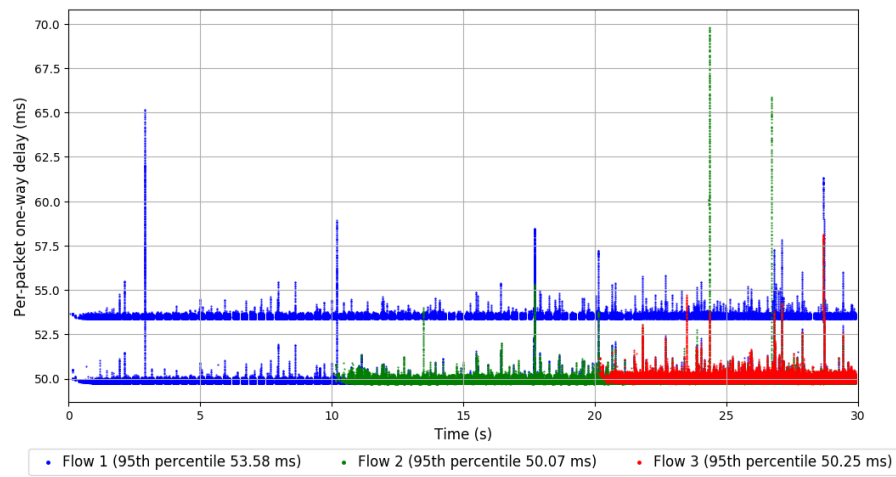
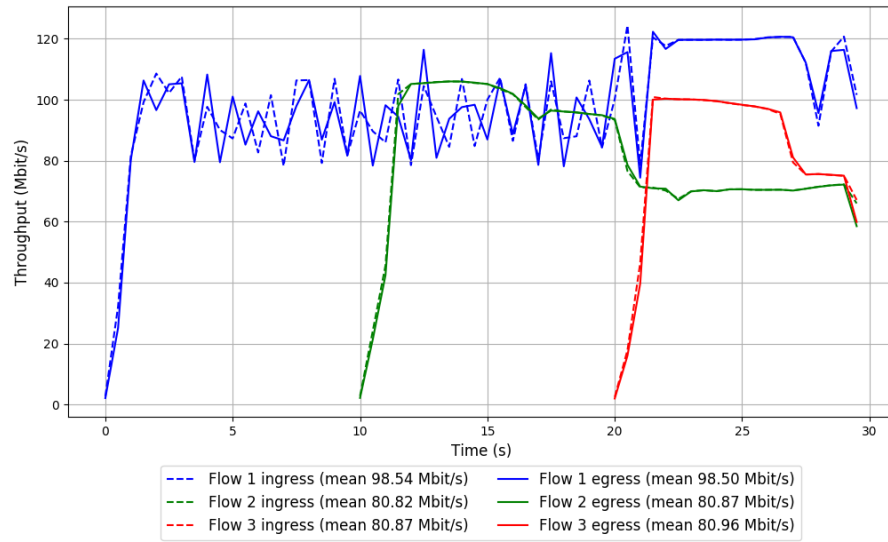
-- Flow 3:

Average throughput: 80.96 Mbit/s

95th percentile per-packet one-way delay: 50.246 ms

Loss rate: 0.92%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2018-04-18 12:08:50

End at: 2018-04-18 12:09:20

Below is generated by plot.py at 2018-04-18 16:33:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 167.37 Mbit/s

95th percentile per-packet one-way delay: 50.208 ms

Loss rate: 0.49%

-- Flow 1:

Average throughput: 86.78 Mbit/s

95th percentile per-packet one-way delay: 50.094 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 77.70 Mbit/s

95th percentile per-packet one-way delay: 50.250 ms

Loss rate: 0.56%

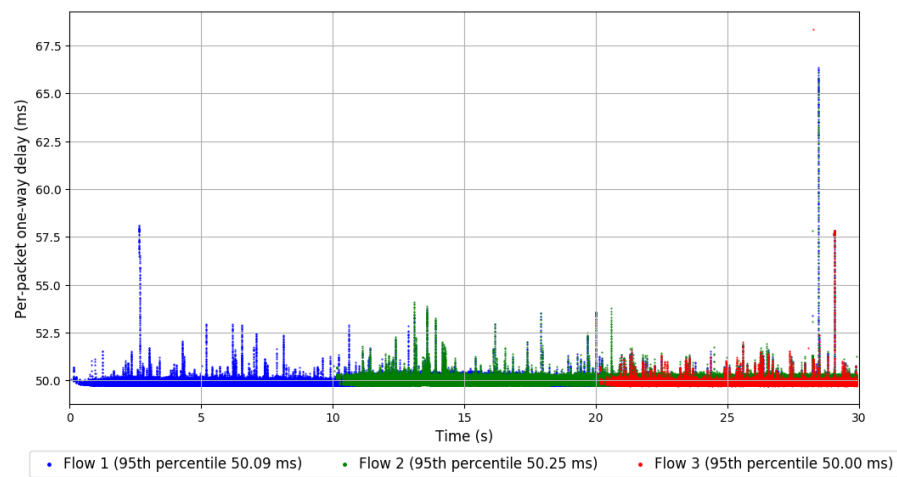
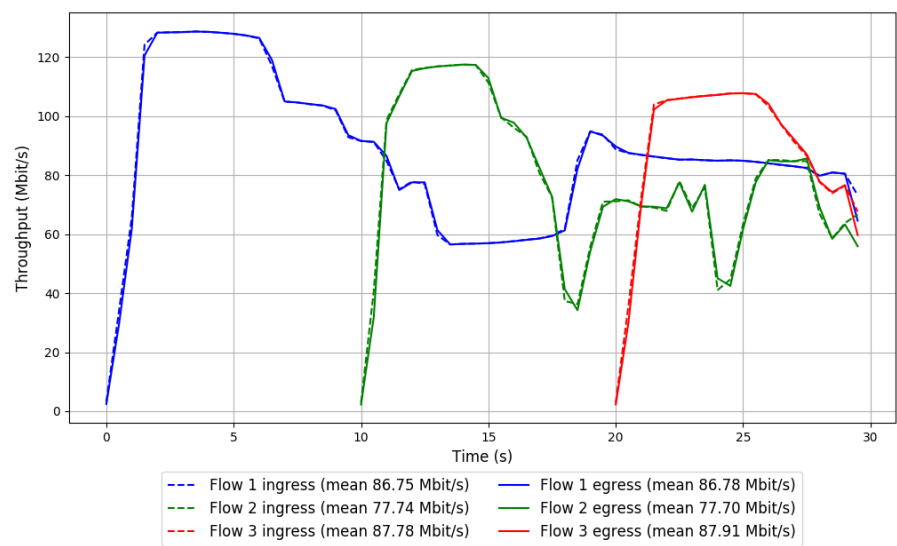
-- Flow 3:

Average throughput: 87.91 Mbit/s

95th percentile per-packet one-way delay: 50.000 ms

Loss rate: 0.89%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2018-04-18 12:24:10

End at: 2018-04-18 12:24:40

Below is generated by plot.py at 2018-04-18 16:33:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 154.13 Mbit/s

95th percentile per-packet one-way delay: 50.306 ms

Loss rate: 0.53%

-- Flow 1:

Average throughput: 81.67 Mbit/s

95th percentile per-packet one-way delay: 50.264 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 75.05 Mbit/s

95th percentile per-packet one-way delay: 50.171 ms

Loss rate: 0.40%

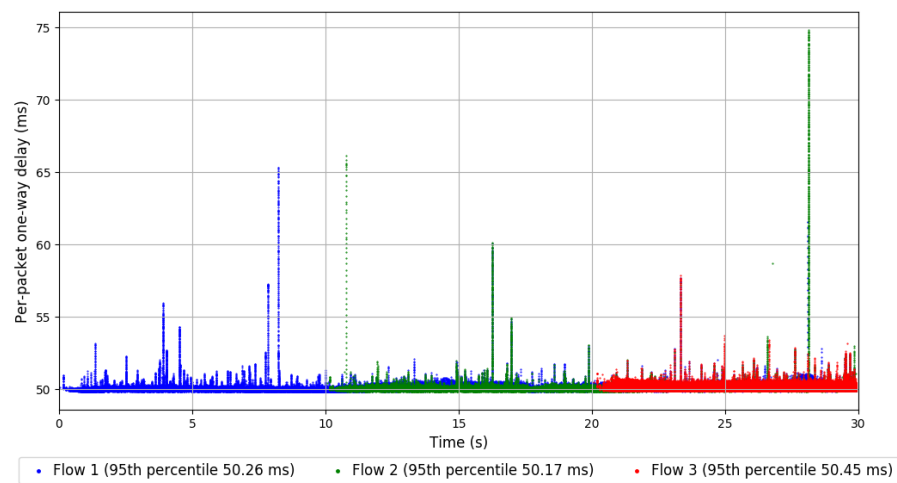
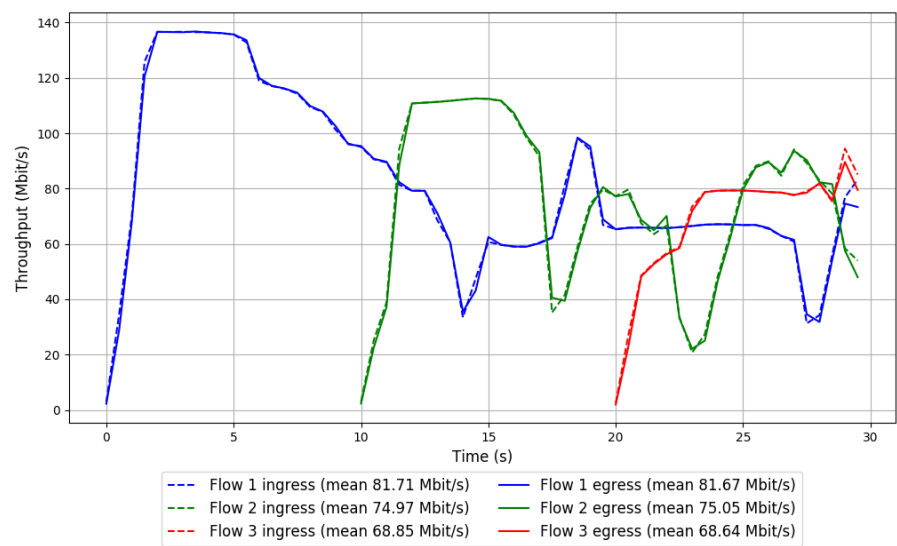
-- Flow 3:

Average throughput: 68.64 Mbit/s

95th percentile per-packet one-way delay: 50.453 ms

Loss rate: 1.31%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2018-04-18 12:39:35

End at: 2018-04-18 12:40:05

Below is generated by plot.py at 2018-04-18 16:33:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 159.27 Mbit/s

95th percentile per-packet one-way delay: 53.959 ms

Loss rate: 0.43%

-- Flow 1:

Average throughput: 80.59 Mbit/s

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

Loss rate: 0.25%

-- Flow 2:

Average throughput: 71.36 Mbit/s

95th percentile per-packet one-way delay: 54.081 ms

Loss rate: 0.51%

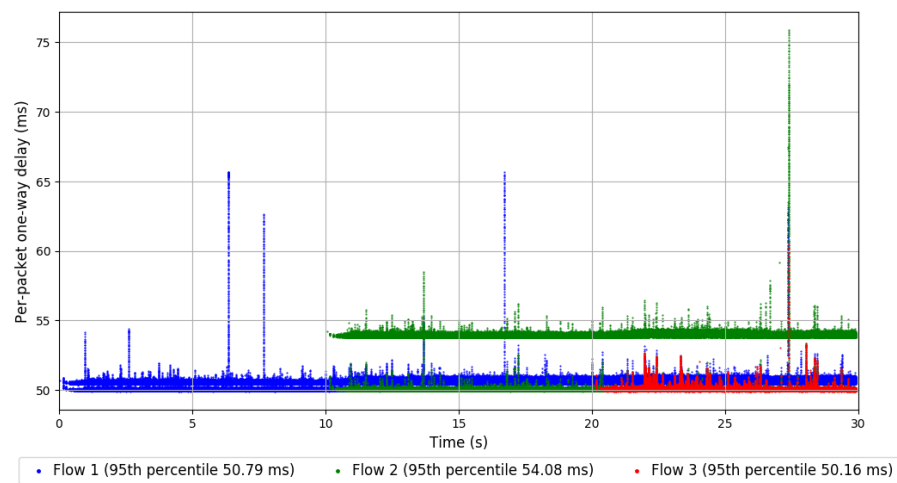
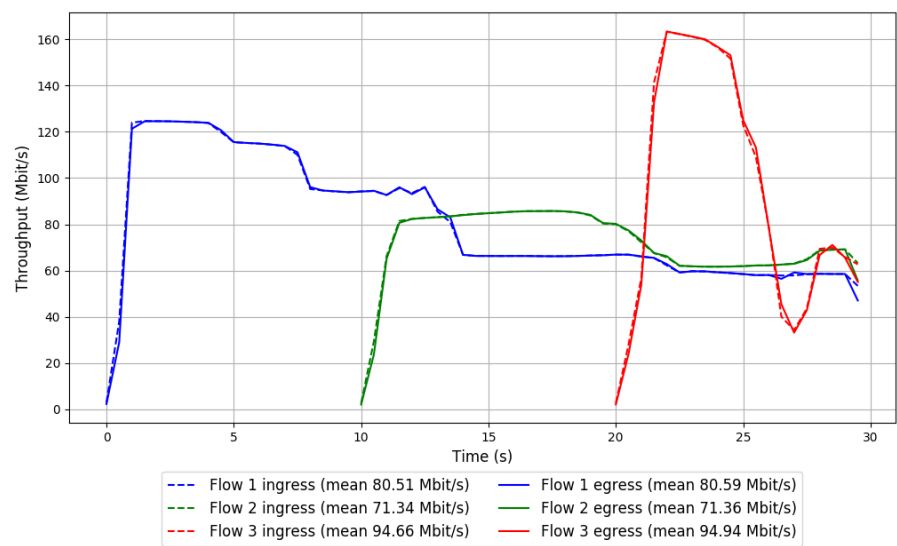
-- Flow 3:

Average throughput: 94.94 Mbit/s

95th percentile per-packet one-way delay: 50.157 ms

Loss rate: 0.76%

Run 10: Report of Copa — Data Link

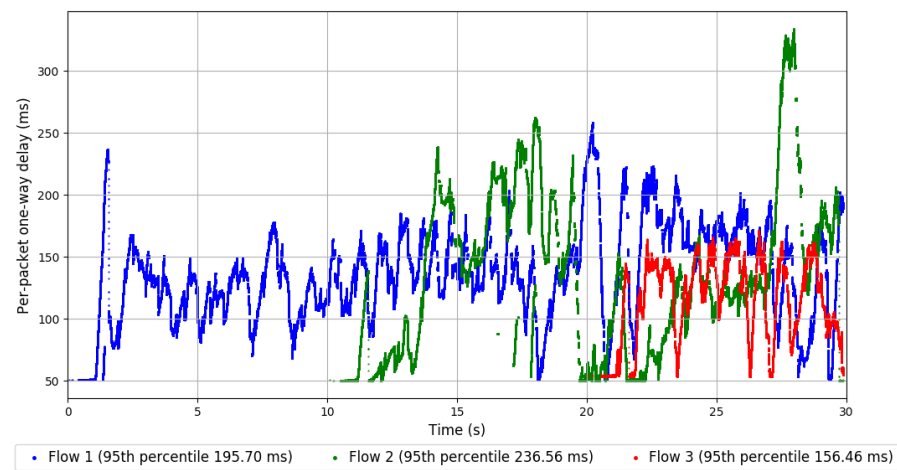
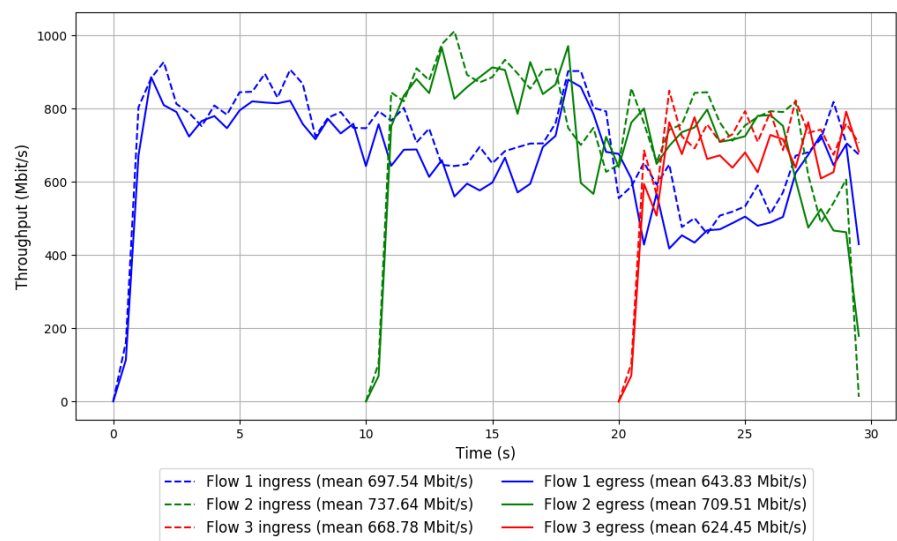


```
Run 1: Statistics of FillP

Start at: 2018-04-18 10:18:21
End at: 2018-04-18 10:18:51

# Below is generated by plot.py at 2018-04-18 16:47:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1319.15 Mbit/s
95th percentile per-packet one-way delay: 213.785 ms
Loss rate: 6.68%
-- Flow 1:
Average throughput: 643.83 Mbit/s
95th percentile per-packet one-way delay: 195.698 ms
Loss rate: 8.02%
-- Flow 2:
Average throughput: 709.51 Mbit/s
95th percentile per-packet one-way delay: 236.556 ms
Loss rate: 4.33%
-- Flow 3:
Average throughput: 624.45 Mbit/s
95th percentile per-packet one-way delay: 156.460 ms
Loss rate: 7.64%
```


Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-04-18 10:33:11

End at: 2018-04-18 10:33:41

Below is generated by plot.py at 2018-04-18 16:49:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 1330.89 Mbit/s

95th percentile per-packet one-way delay: 187.937 ms

Loss rate: 8.18%

-- Flow 1:

Average throughput: 761.89 Mbit/s

95th percentile per-packet one-way delay: 159.108 ms

Loss rate: 5.67%

-- Flow 2:

Average throughput: 596.45 Mbit/s

95th percentile per-packet one-way delay: 197.669 ms

Loss rate: 11.14%

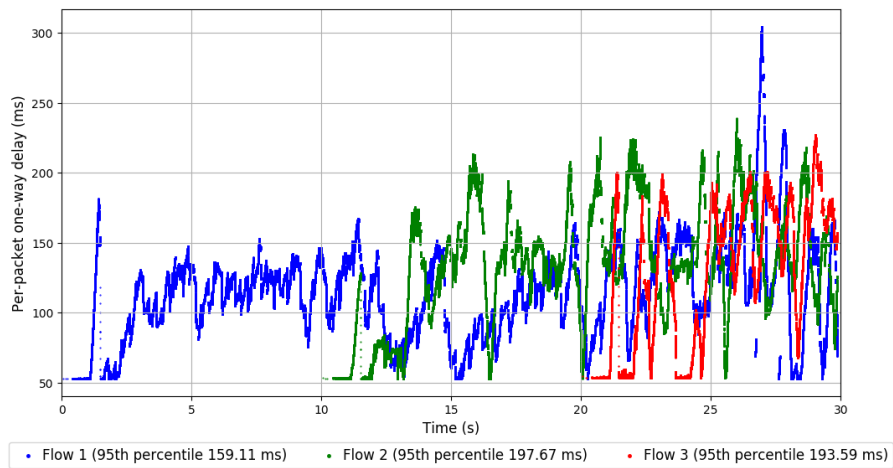
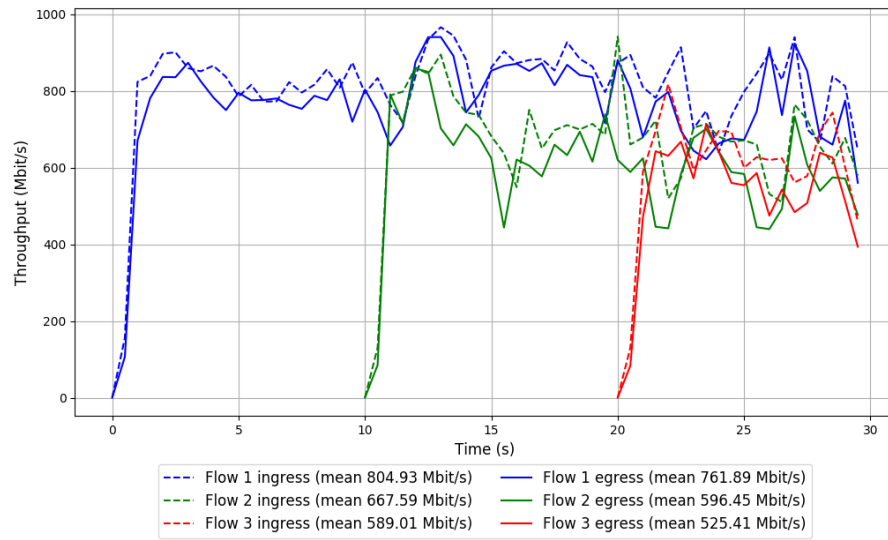
-- Flow 3:

Average throughput: 525.41 Mbit/s

95th percentile per-packet one-way delay: 193.587 ms

Loss rate: 11.75%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-04-18 10:48:42

End at: 2018-04-18 10:49:12

Below is generated by plot.py at 2018-04-18 16:49:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 1220.51 Mbit/s

95th percentile per-packet one-way delay: 272.145 ms

Loss rate: 4.31%

-- Flow 1:

Average throughput: 609.16 Mbit/s

95th percentile per-packet one-way delay: 238.754 ms

Loss rate: 3.86%

-- Flow 2:

Average throughput: 622.35 Mbit/s

95th percentile per-packet one-way delay: 284.445 ms

Loss rate: 5.85%

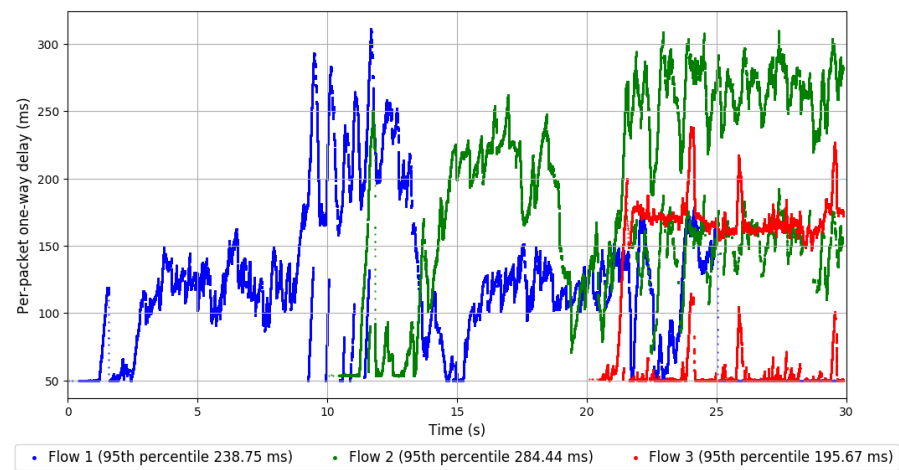
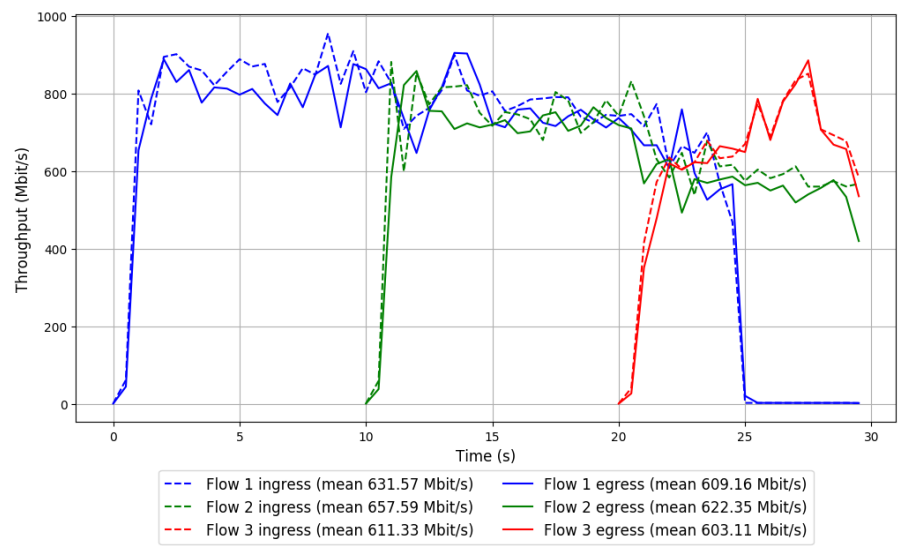
-- Flow 3:

Average throughput: 603.11 Mbit/s

95th percentile per-packet one-way delay: 195.672 ms

Loss rate: 2.36%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-04-18 11:04:12

End at: 2018-04-18 11:04:43

Below is generated by plot.py at 2018-04-18 16:52:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 1346.87 Mbit/s

95th percentile per-packet one-way delay: 166.504 ms

Loss rate: 5.75%

-- Flow 1:

Average throughput: 772.11 Mbit/s

95th percentile per-packet one-way delay: 154.739 ms

Loss rate: 4.20%

-- Flow 2:

Average throughput: 576.74 Mbit/s

95th percentile per-packet one-way delay: 170.884 ms

Loss rate: 6.56%

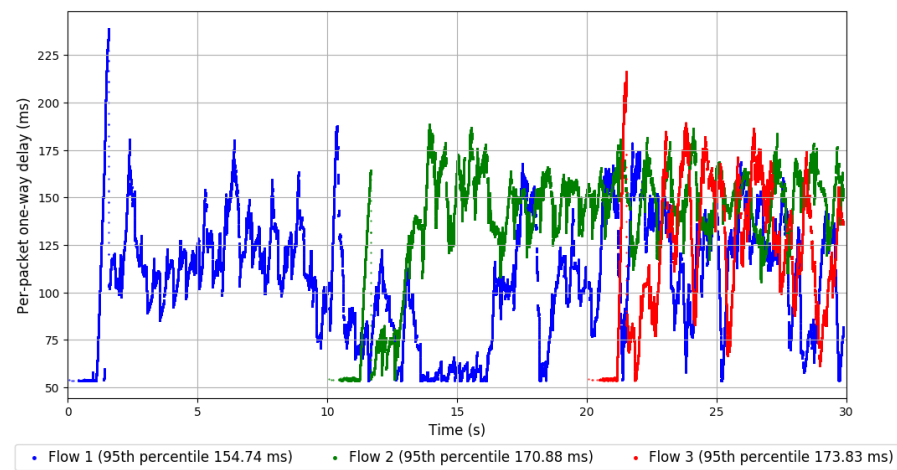
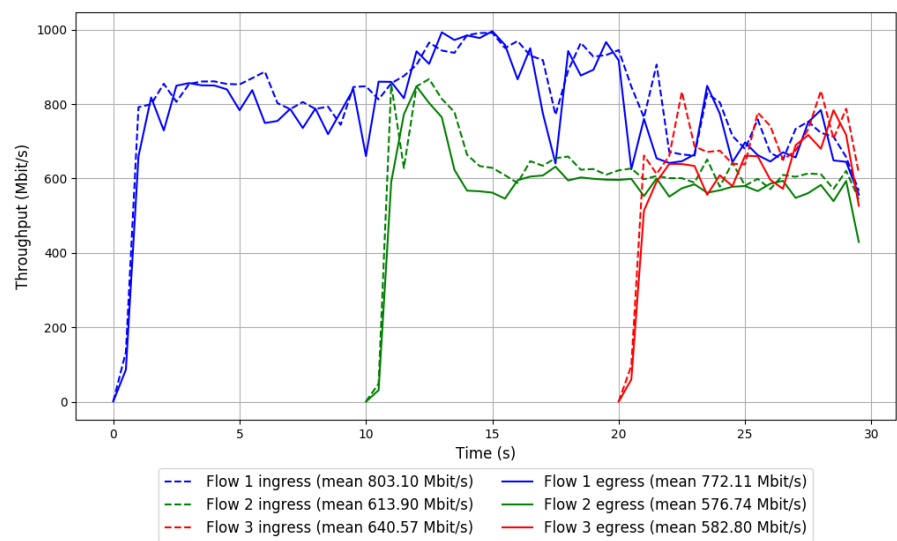
-- Flow 3:

Average throughput: 582.80 Mbit/s

95th percentile per-packet one-way delay: 173.828 ms

Loss rate: 10.01%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-04-18 11:19:27

End at: 2018-04-18 11:19:57

Below is generated by plot.py at 2018-04-18 16:52:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 1313.02 Mbit/s

95th percentile per-packet one-way delay: 181.436 ms

Loss rate: 5.93%

-- Flow 1:

Average throughput: 751.72 Mbit/s

95th percentile per-packet one-way delay: 166.445 ms

Loss rate: 6.36%

-- Flow 2:

Average throughput: 672.29 Mbit/s

95th percentile per-packet one-way delay: 254.550 ms

Loss rate: 5.37%

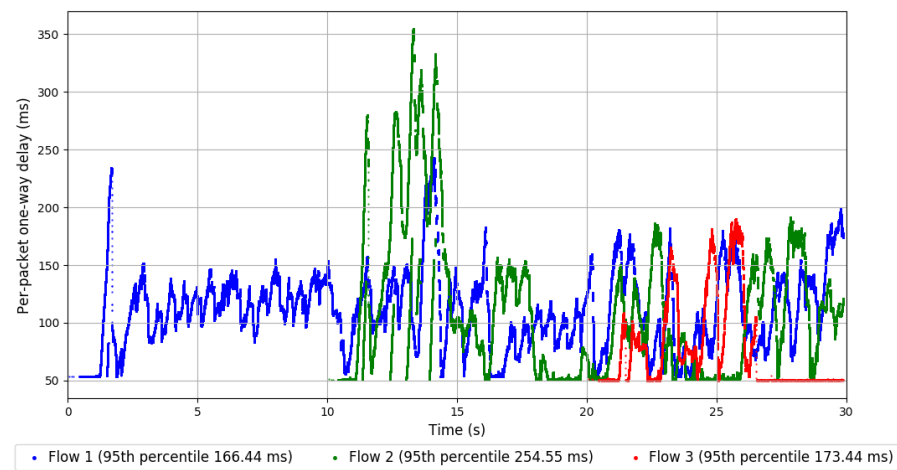
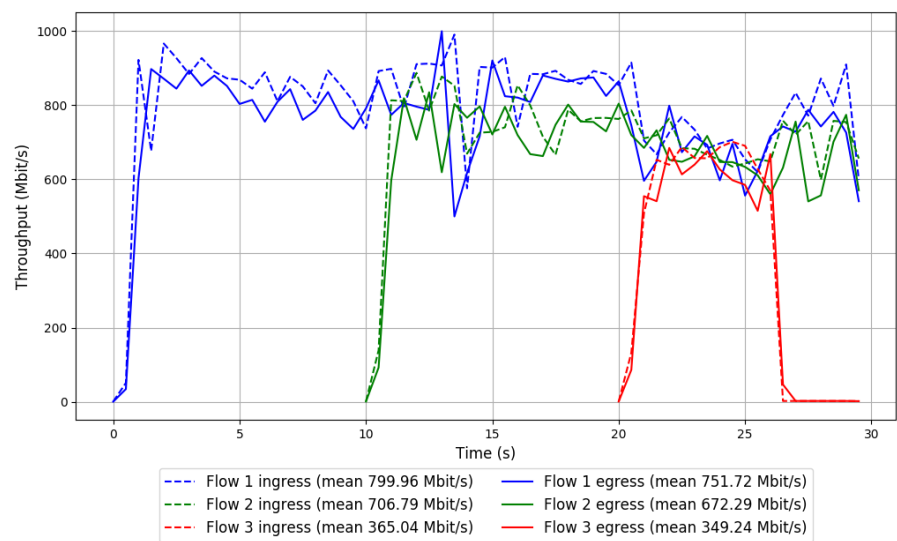
-- Flow 3:

Average throughput: 349.24 Mbit/s

95th percentile per-packet one-way delay: 173.439 ms

Loss rate: 5.23%

Run 5: Report of FillP — Data Link



Run 6: Statistics of FillP

Start at: 2018-04-18 11:34:36

End at: 2018-04-18 11:35:06

Below is generated by plot.py at 2018-04-18 16:54:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 1406.63 Mbit/s

95th percentile per-packet one-way delay: 187.974 ms

Loss rate: 7.06%

-- Flow 1:

Average throughput: 741.15 Mbit/s

95th percentile per-packet one-way delay: 198.970 ms

Loss rate: 6.45%

-- Flow 2:

Average throughput: 701.32 Mbit/s

95th percentile per-packet one-way delay: 155.495 ms

Loss rate: 6.78%

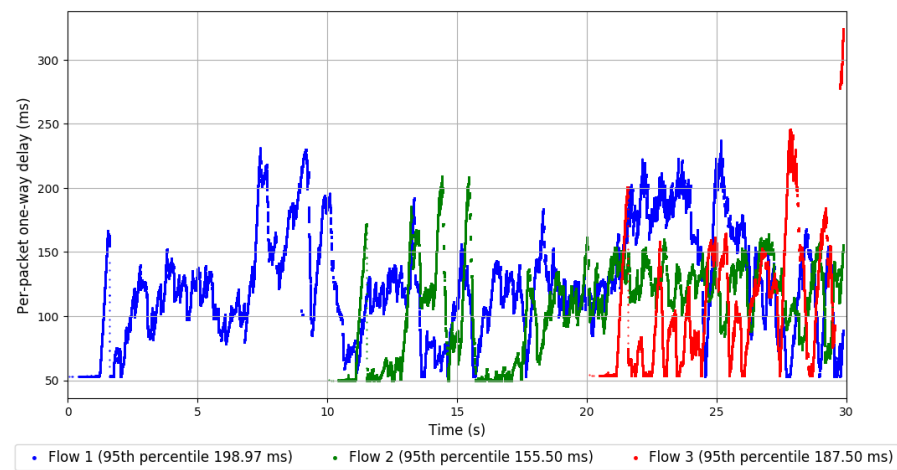
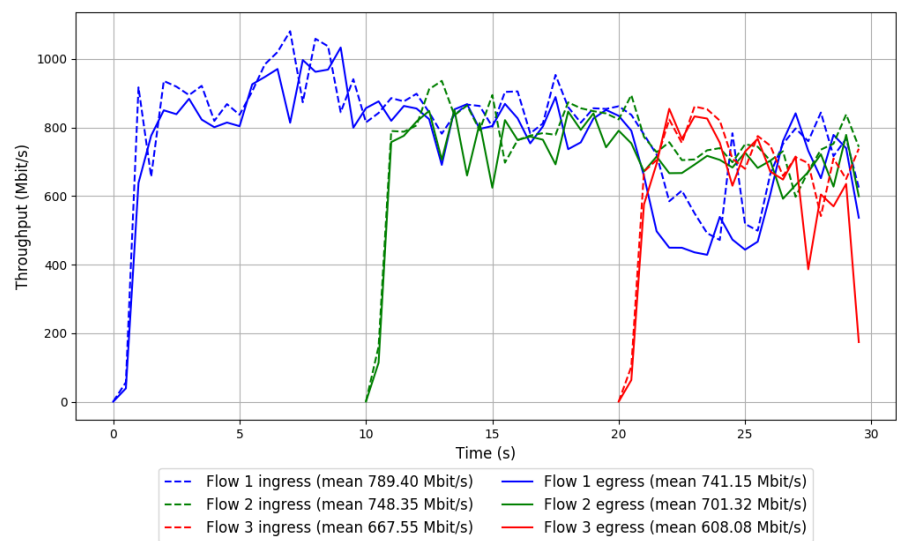
-- Flow 3:

Average throughput: 608.08 Mbit/s

95th percentile per-packet one-way delay: 187.495 ms

Loss rate: 9.91%

Run 6: Report of FillP — Data Link



Run 7: Statistics of FillP

Start at: 2018-04-18 11:50:16

End at: 2018-04-18 11:50:46

Below is generated by plot.py at 2018-04-18 16:54:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 1334.34 Mbit/s

95th percentile per-packet one-way delay: 169.062 ms

Loss rate: 5.93%

-- Flow 1:

Average throughput: 703.86 Mbit/s

95th percentile per-packet one-way delay: 145.911 ms

Loss rate: 3.87%

-- Flow 2:

Average throughput: 676.64 Mbit/s

95th percentile per-packet one-way delay: 196.230 ms

Loss rate: 7.94%

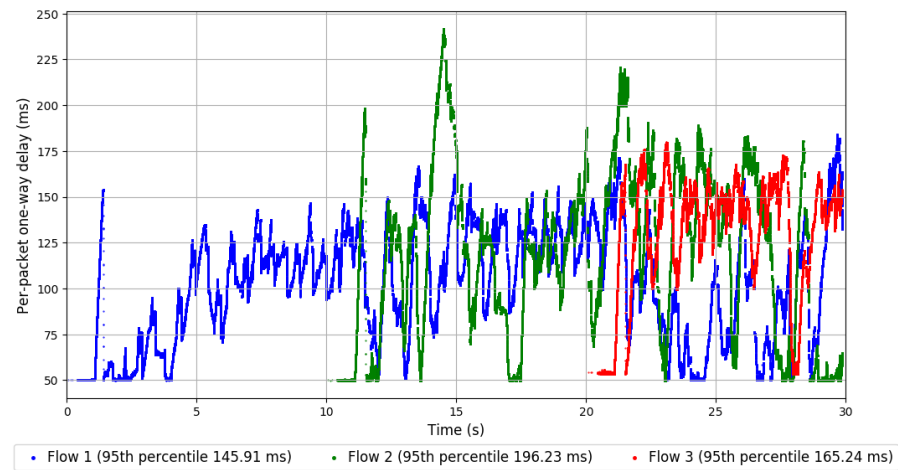
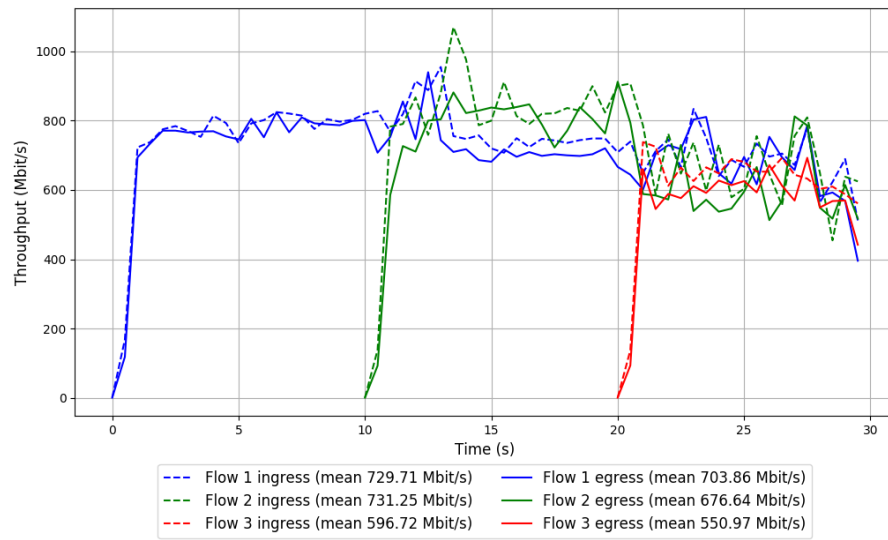
-- Flow 3:

Average throughput: 550.97 Mbit/s

95th percentile per-packet one-way delay: 165.236 ms

Loss rate: 8.64%

Run 7: Report of FillP — Data Link



Run 8: Statistics of FillP

Start at: 2018-04-18 12:05:15

End at: 2018-04-18 12:05:45

Below is generated by plot.py at 2018-04-18 16:55:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 1126.70 Mbit/s

95th percentile per-packet one-way delay: 225.105 ms

Loss rate: 3.69%

-- Flow 1:

Average throughput: 539.03 Mbit/s

95th percentile per-packet one-way delay: 261.496 ms

Loss rate: 2.47%

-- Flow 2:

Average throughput: 596.83 Mbit/s

95th percentile per-packet one-way delay: 200.607 ms

Loss rate: 1.26%

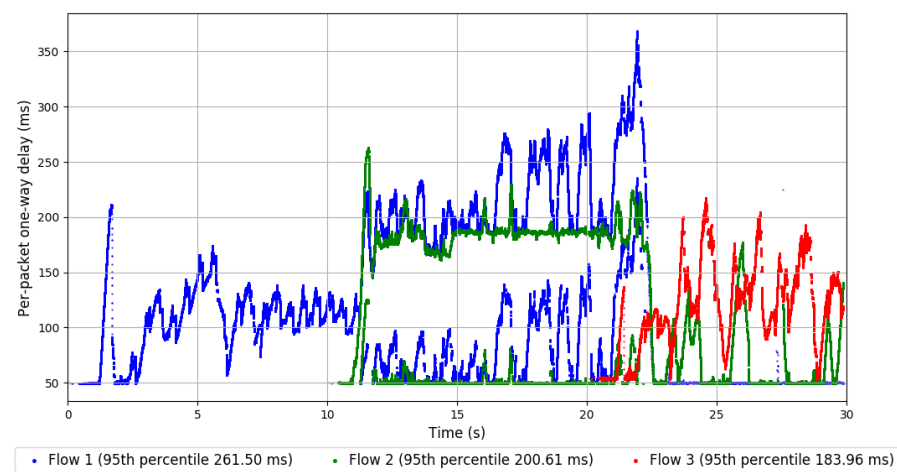
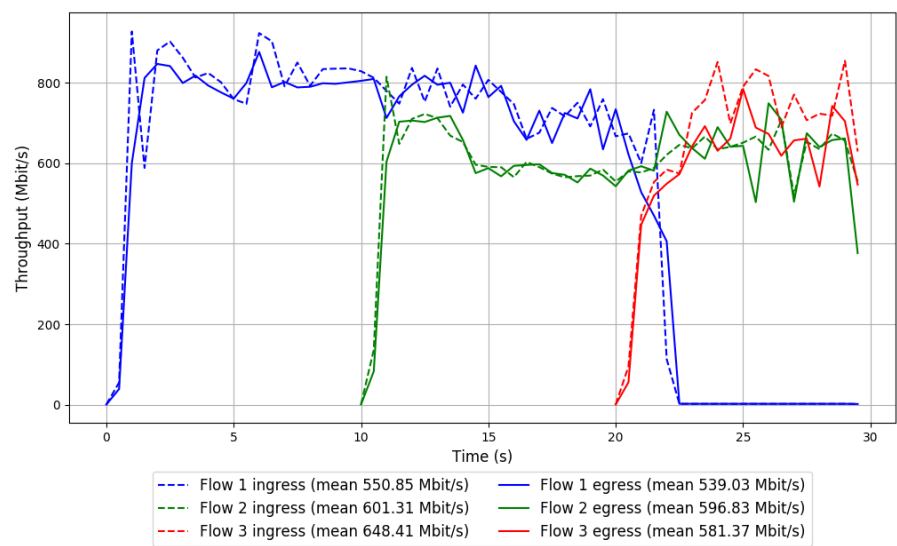
-- Flow 3:

Average throughput: 581.37 Mbit/s

95th percentile per-packet one-way delay: 183.960 ms

Loss rate: 11.32%

Run 8: Report of FillP — Data Link



Run 9: Statistics of FillP

Start at: 2018-04-18 12:20:18

End at: 2018-04-18 12:20:48

Below is generated by plot.py at 2018-04-18 17:12:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 1348.33 Mbit/s

95th percentile per-packet one-way delay: 188.660 ms

Loss rate: 5.81%

-- Flow 1:

Average throughput: 705.19 Mbit/s

95th percentile per-packet one-way delay: 164.599 ms

Loss rate: 4.17%

-- Flow 2:

Average throughput: 654.68 Mbit/s

95th percentile per-packet one-way delay: 210.662 ms

Loss rate: 7.59%

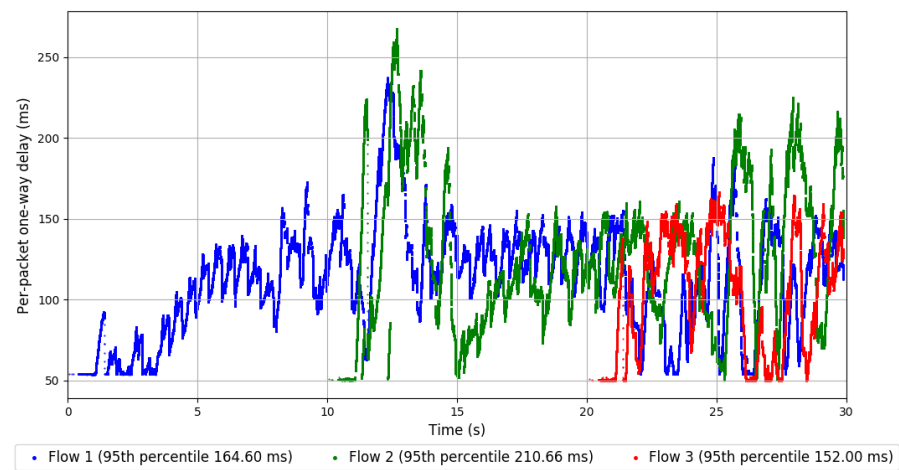
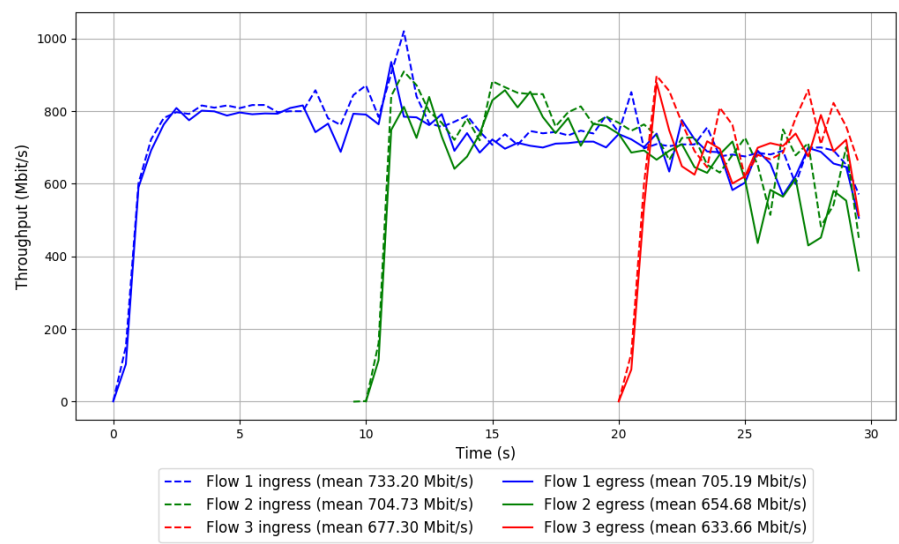
-- Flow 3:

Average throughput: 633.66 Mbit/s

95th percentile per-packet one-way delay: 151.999 ms

Loss rate: 7.43%

Run 9: Report of FillP — Data Link



Run 10: Statistics of FillP

Start at: 2018-04-18 12:35:41

End at: 2018-04-18 12:36:11

Below is generated by plot.py at 2018-04-18 17:12:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 1231.32 Mbit/s

95th percentile per-packet one-way delay: 191.180 ms

Loss rate: 7.89%

-- Flow 1:

Average throughput: 727.11 Mbit/s

95th percentile per-packet one-way delay: 173.119 ms

Loss rate: 5.80%

-- Flow 2:

Average throughput: 659.56 Mbit/s

95th percentile per-packet one-way delay: 215.031 ms

Loss rate: 10.55%

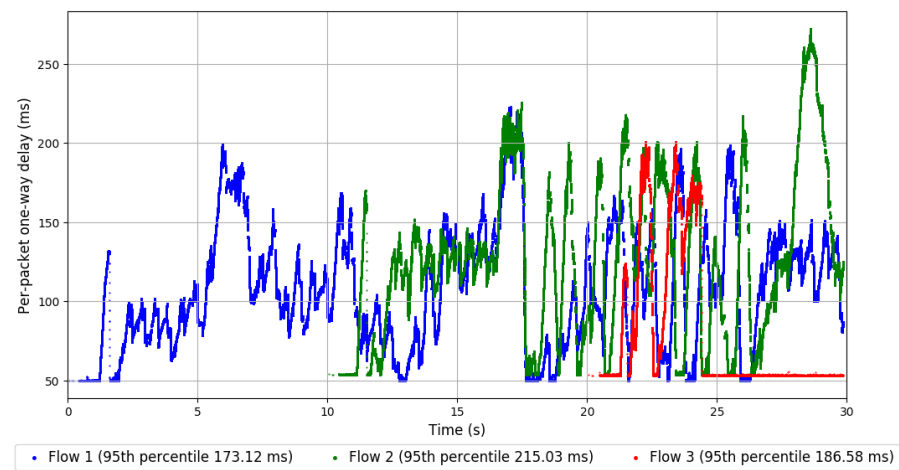
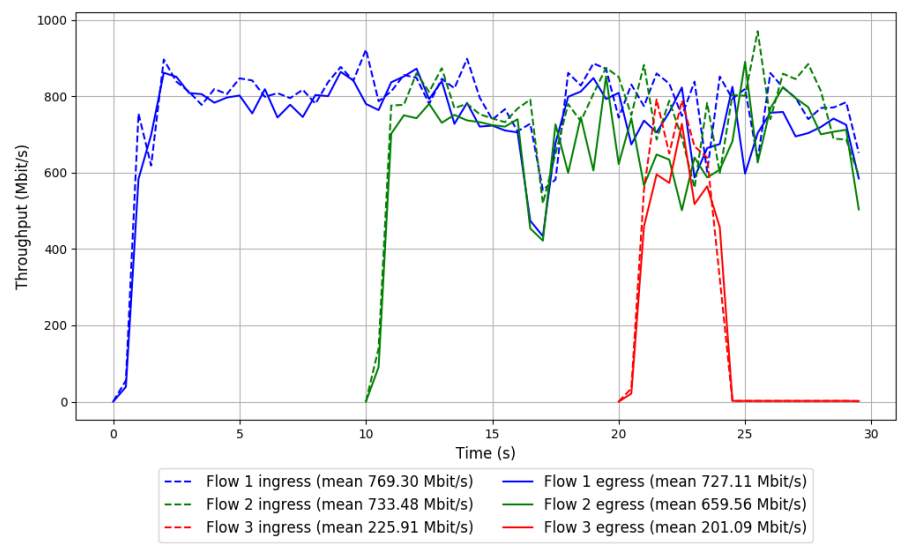
-- Flow 3:

Average throughput: 201.09 Mbit/s

95th percentile per-packet one-way delay: 186.583 ms

Loss rate: 11.95%

Run 10: Report of FillP — Data Link

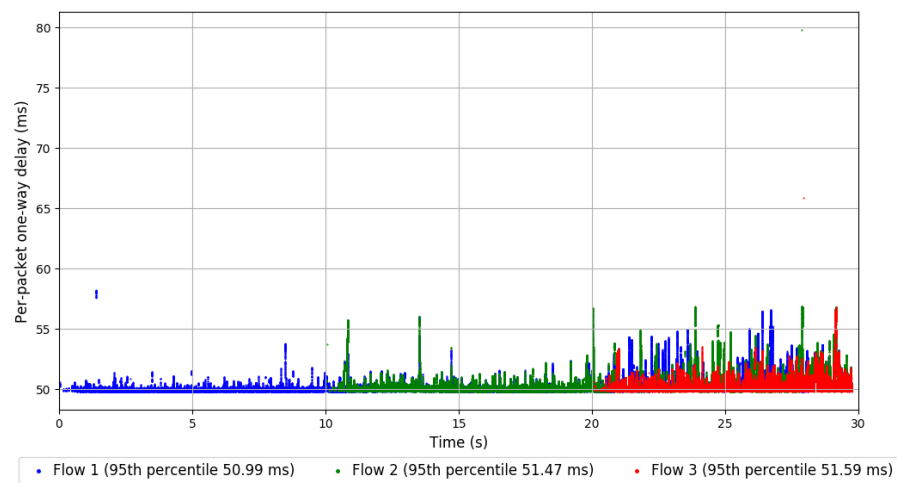
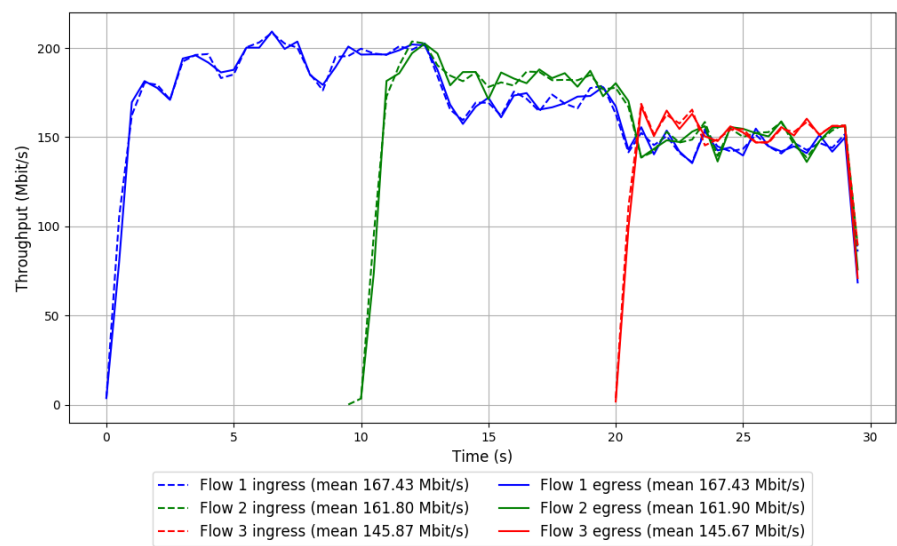


```
Run 1: Statistics of Indigo-1-32

Start at: 2018-04-18 10:16:20
End at: 2018-04-18 10:16:50

# Below is generated by plot.py at 2018-04-18 17:12:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 322.03 Mbit/s
95th percentile per-packet one-way delay: 51.279 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 167.43 Mbit/s
95th percentile per-packet one-way delay: 50.987 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 161.90 Mbit/s
95th percentile per-packet one-way delay: 51.468 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 145.67 Mbit/s
95th percentile per-packet one-way delay: 51.594 ms
Loss rate: 1.16%
```

Run 1: Report of Indigo-1-32 — Data Link

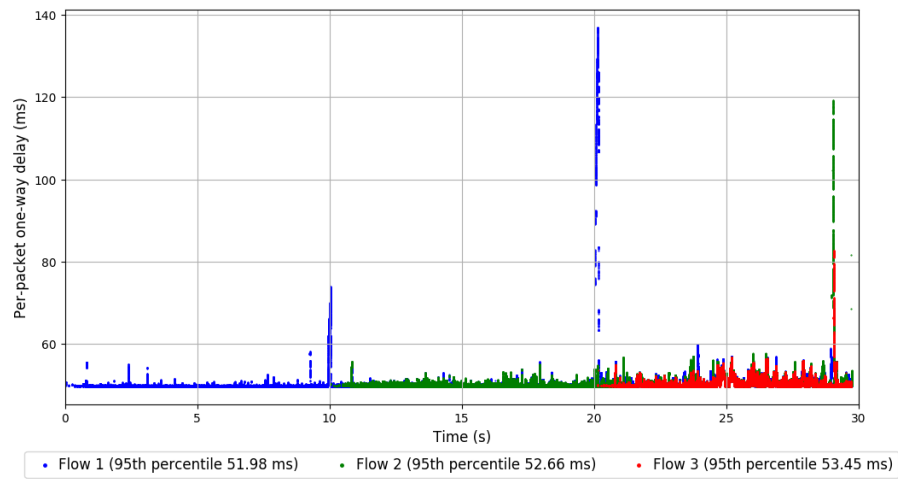
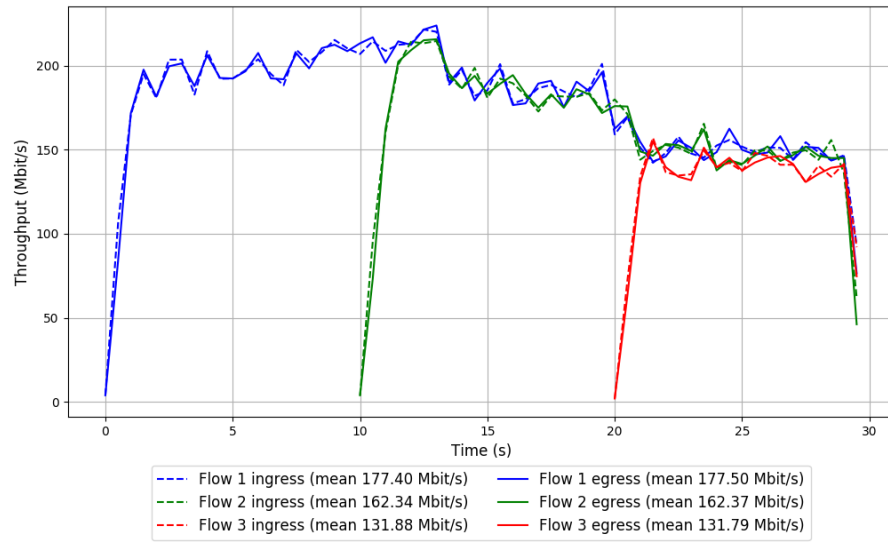


```
Run 2: Statistics of Indigo-1-32

Start at: 2018-04-18 10:31:11
End at: 2018-04-18 10:31:41

# Below is generated by plot.py at 2018-04-18 17:12:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 327.67 Mbit/s
95th percentile per-packet one-way delay: 52.495 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 177.50 Mbit/s
95th percentile per-packet one-way delay: 51.985 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 162.37 Mbit/s
95th percentile per-packet one-way delay: 52.656 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 131.79 Mbit/s
95th percentile per-packet one-way delay: 53.449 ms
Loss rate: 1.19%
```

Run 2: Report of Indigo-1-32 — Data Link



Run 3: Statistics of Indigo-1-32

Start at: 2018-04-18 10:46:41

End at: 2018-04-18 10:47:11

Below is generated by plot.py at 2018-04-18 17:12:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 324.17 Mbit/s

95th percentile per-packet one-way delay: 51.398 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 180.64 Mbit/s

95th percentile per-packet one-way delay: 51.218 ms

Loss rate: 0.29%

-- Flow 2:

Average throughput: 149.34 Mbit/s

95th percentile per-packet one-way delay: 51.486 ms

Loss rate: 0.58%

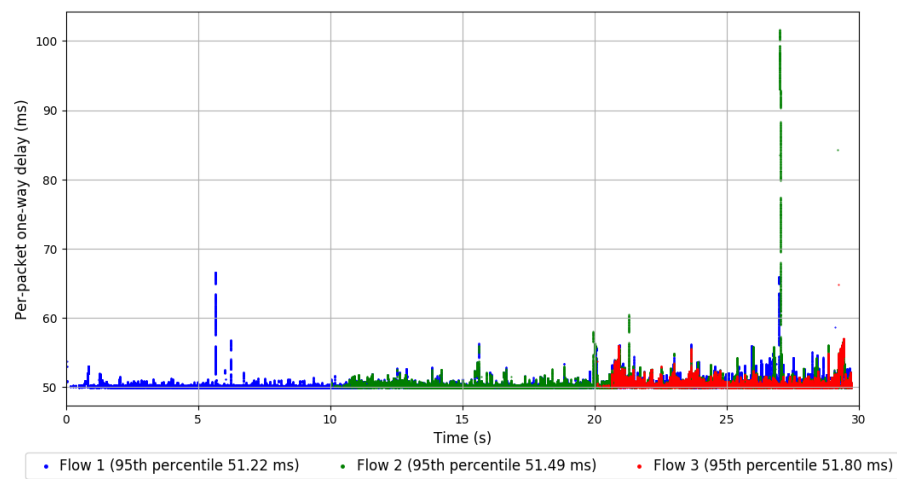
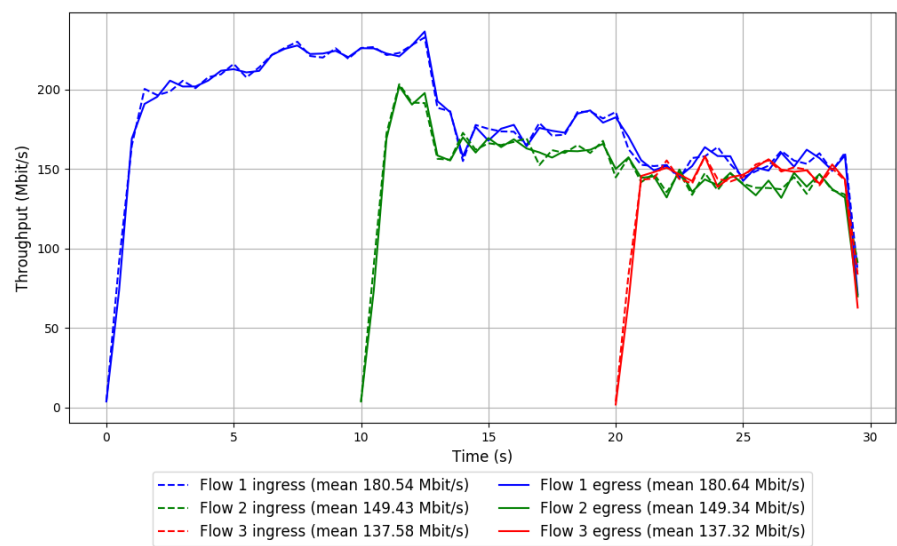
-- Flow 3:

Average throughput: 137.32 Mbit/s

95th percentile per-packet one-way delay: 51.802 ms

Loss rate: 1.25%

Run 3: Report of Indigo-1-32 — Data Link



Run 4: Statistics of Indigo-1-32

Start at: 2018-04-18 11:02:11

End at: 2018-04-18 11:02:41

Below is generated by plot.py at 2018-04-18 17:12:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 330.81 Mbit/s

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

Loss rate: 0.46%

-- Flow 1:

Average throughput: 179.19 Mbit/s

95th percentile per-packet one-way delay: 51.841 ms

Loss rate: 0.30%

-- Flow 2:

Average throughput: 161.31 Mbit/s

95th percentile per-packet one-way delay: 51.969 ms

Loss rate: 0.45%

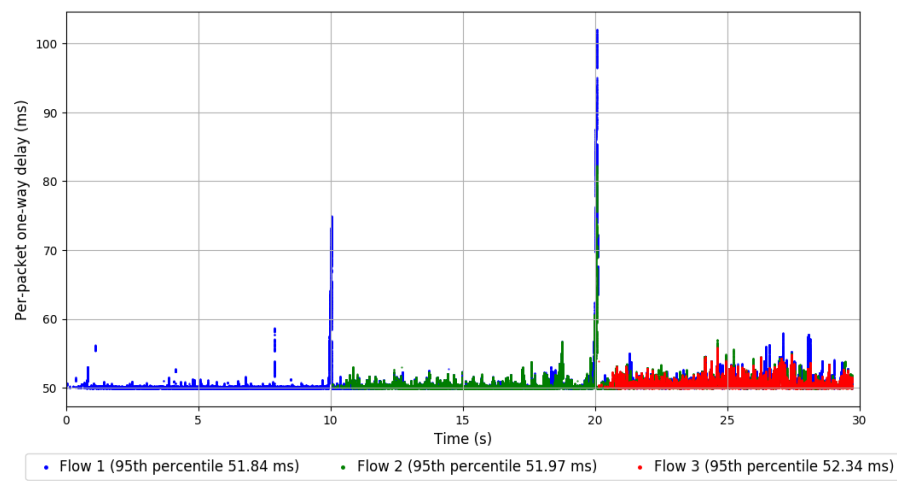
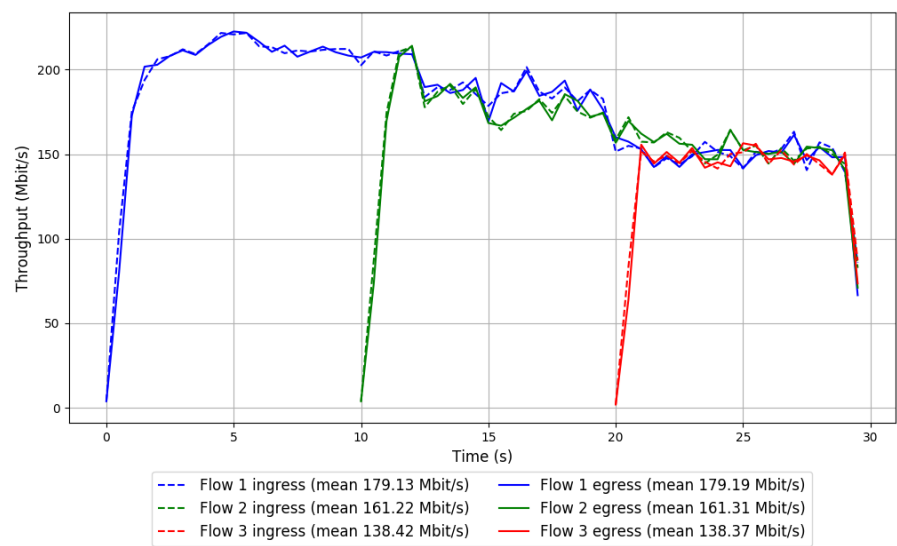
-- Flow 3:

Average throughput: 138.37 Mbit/s

95th percentile per-packet one-way delay: 52.341 ms

Loss rate: 1.08%

Run 4: Report of Indigo-1-32 — Data Link



Run 5: Statistics of Indigo-1-32

Start at: 2018-04-18 11:17:27

End at: 2018-04-18 11:17:57

Below is generated by plot.py at 2018-04-18 17:12:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 330.13 Mbit/s

95th percentile per-packet one-way delay: 52.066 ms

Loss rate: 0.43%

-- Flow 1:

Average throughput: 183.34 Mbit/s

95th percentile per-packet one-way delay: 51.762 ms

Loss rate: 0.24%

-- Flow 2:

Average throughput: 151.82 Mbit/s

95th percentile per-packet one-way delay: 52.187 ms

Loss rate: 0.54%

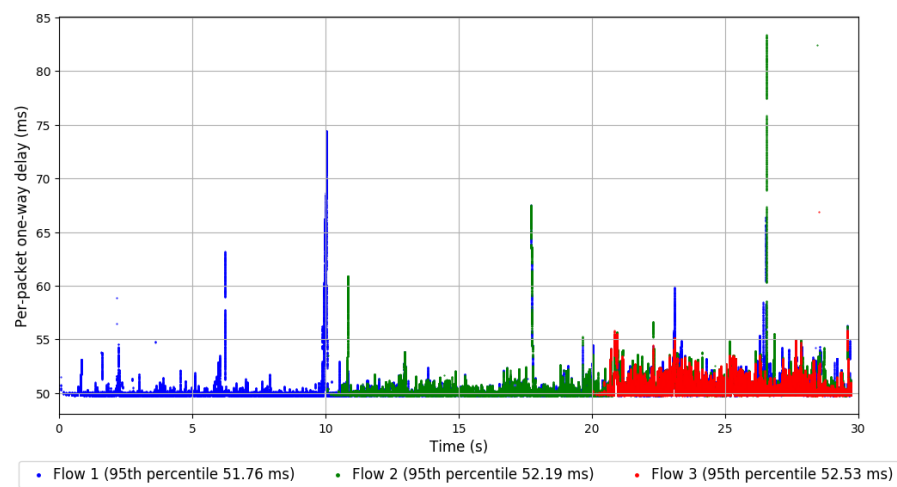
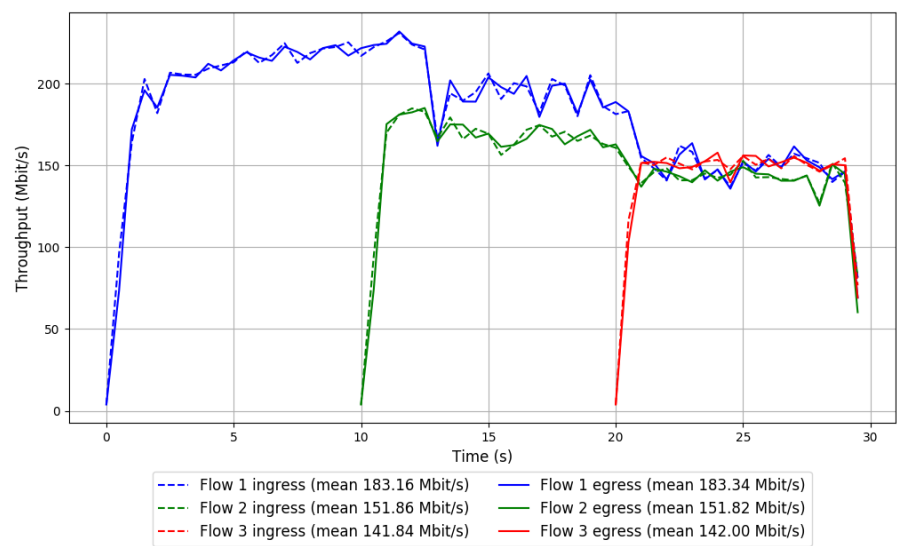
-- Flow 3:

Average throughput: 142.00 Mbit/s

95th percentile per-packet one-way delay: 52.528 ms

Loss rate: 0.92%

Run 5: Report of Indigo-1-32 — Data Link



Run 6: Statistics of Indigo-1-32

Start at: 2018-04-18 11:32:36

End at: 2018-04-18 11:33:06

Below is generated by plot.py at 2018-04-18 17:12:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 324.99 Mbit/s

95th percentile per-packet one-way delay: 51.779 ms

Loss rate: 0.51%

-- Flow 1:

Average throughput: 173.44 Mbit/s

95th percentile per-packet one-way delay: 51.454 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 161.33 Mbit/s

95th percentile per-packet one-way delay: 52.212 ms

Loss rate: 0.50%

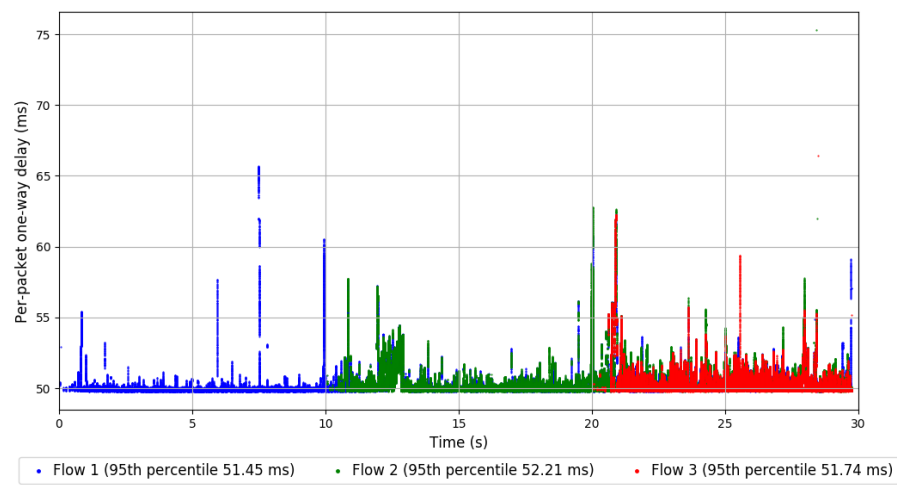
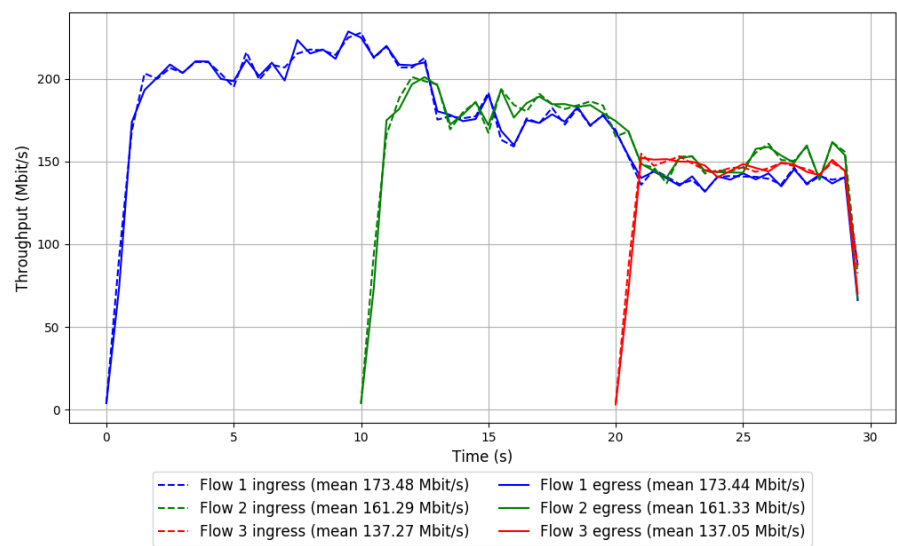
-- Flow 3:

Average throughput: 137.05 Mbit/s

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

Loss rate: 1.16%

Run 6: Report of Indigo-1-32 — Data Link



Run 7: Statistics of Indigo-1-32

Start at: 2018-04-18 11:48:16

End at: 2018-04-18 11:48:46

Below is generated by plot.py at 2018-04-18 17:12:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 326.74 Mbit/s

95th percentile per-packet one-way delay: 58.228 ms

Loss rate: 0.42%

-- Flow 1:

Average throughput: 172.42 Mbit/s

95th percentile per-packet one-way delay: 55.933 ms

Loss rate: 0.23%

-- Flow 2:

Average throughput: 164.59 Mbit/s

95th percentile per-packet one-way delay: 58.419 ms

Loss rate: 0.52%

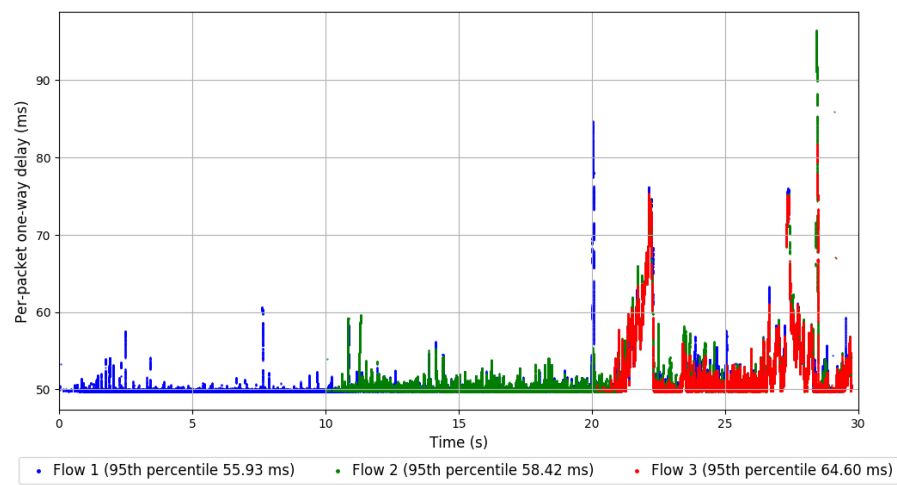
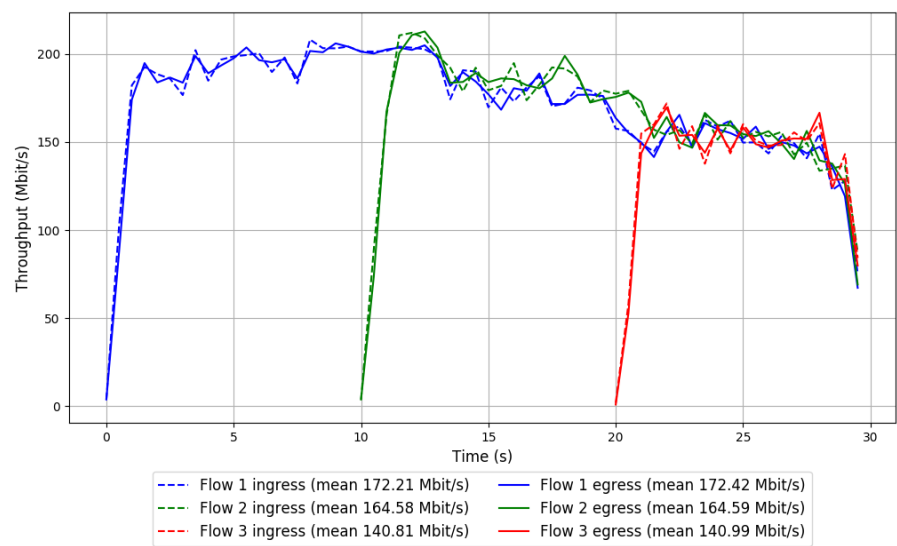
-- Flow 3:

Average throughput: 140.99 Mbit/s

95th percentile per-packet one-way delay: 64.598 ms

Loss rate: 0.91%

Run 7: Report of Indigo-1-32 — Data Link



Run 8: Statistics of Indigo-1-32

Start at: 2018-04-18 12:03:14

End at: 2018-04-18 12:03:44

Below is generated by plot.py at 2018-04-18 17:12:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 332.71 Mbit/s

95th percentile per-packet one-way delay: 56.559 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 179.99 Mbit/s

95th percentile per-packet one-way delay: 55.698 ms

Loss rate: 0.30%

-- Flow 2:

Average throughput: 163.90 Mbit/s

95th percentile per-packet one-way delay: 56.777 ms

Loss rate: 0.47%

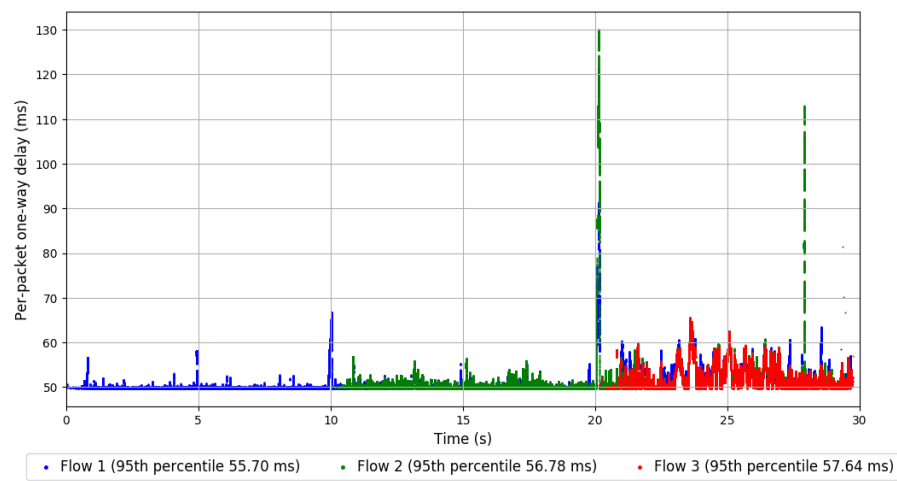
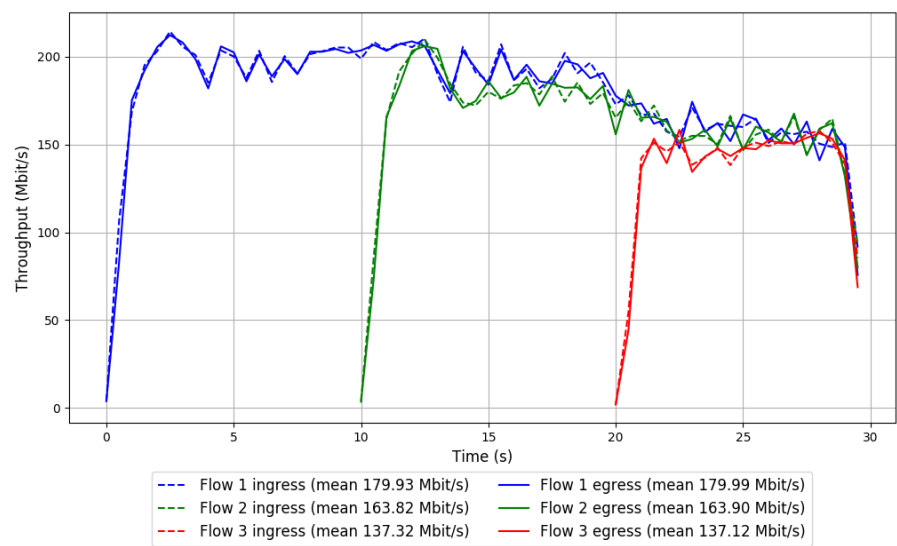
-- Flow 3:

Average throughput: 137.12 Mbit/s

95th percentile per-packet one-way delay: 57.644 ms

Loss rate: 1.12%

Run 8: Report of Indigo-1-32 — Data Link



Run 9: Statistics of Indigo-1-32

Start at: 2018-04-18 12:18:17

End at: 2018-04-18 12:18:47

Below is generated by plot.py at 2018-04-18 17:12:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 330.66 Mbit/s

95th percentile per-packet one-way delay: 54.552 ms

Loss rate: 0.45%

-- Flow 1:

Average throughput: 180.99 Mbit/s

95th percentile per-packet one-way delay: 52.640 ms

Loss rate: 0.29%

-- Flow 2:

Average throughput: 160.73 Mbit/s

95th percentile per-packet one-way delay: 55.141 ms

Loss rate: 0.44%

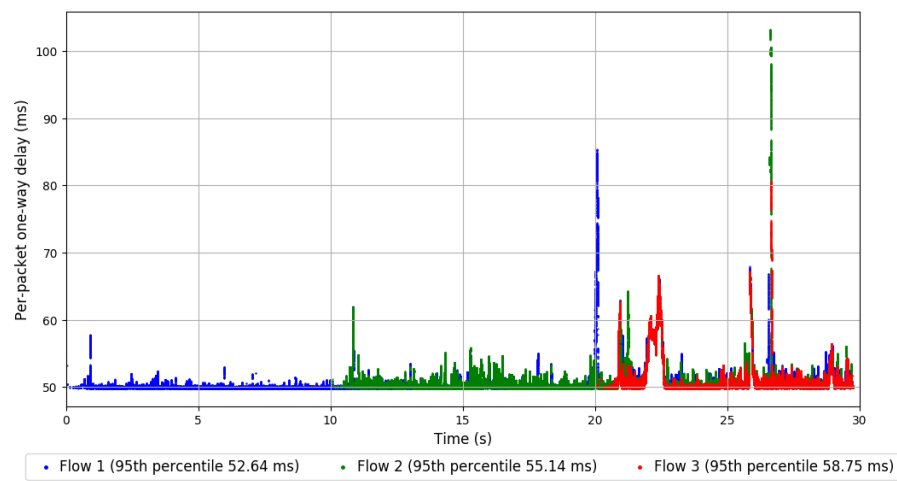
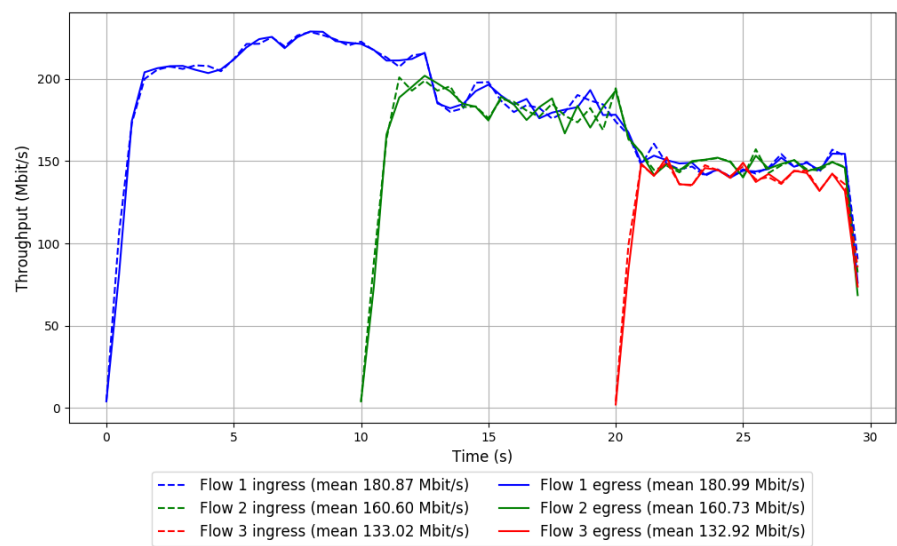
-- Flow 3:

Average throughput: 132.92 Mbit/s

95th percentile per-packet one-way delay: 58.751 ms

Loss rate: 1.15%

Run 9: Report of Indigo-1-32 — Data Link



Run 10: Statistics of Indigo-1-32

Start at: 2018-04-18 12:33:41

End at: 2018-04-18 12:34:11

Below is generated by plot.py at 2018-04-18 17:12:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 320.34 Mbit/s

95th percentile per-packet one-way delay: 68.259 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 173.05 Mbit/s

95th percentile per-packet one-way delay: 61.677 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 154.56 Mbit/s

95th percentile per-packet one-way delay: 69.300 ms

Loss rate: 0.53%

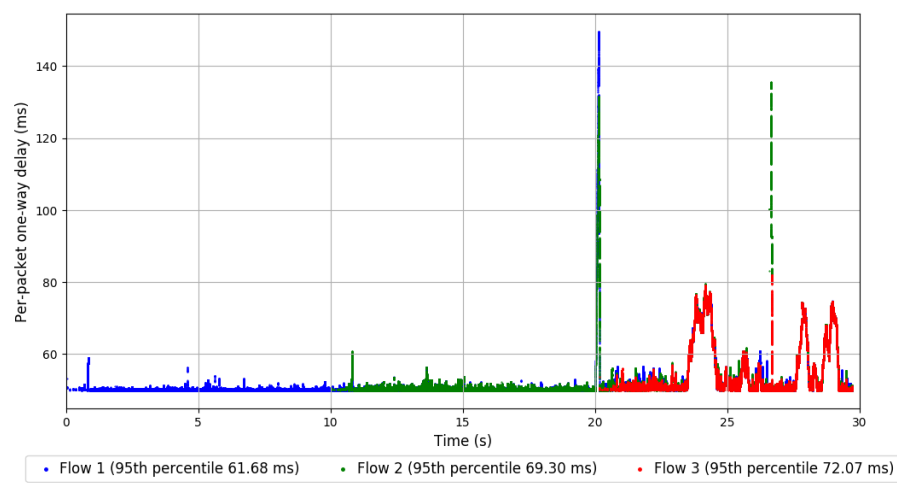
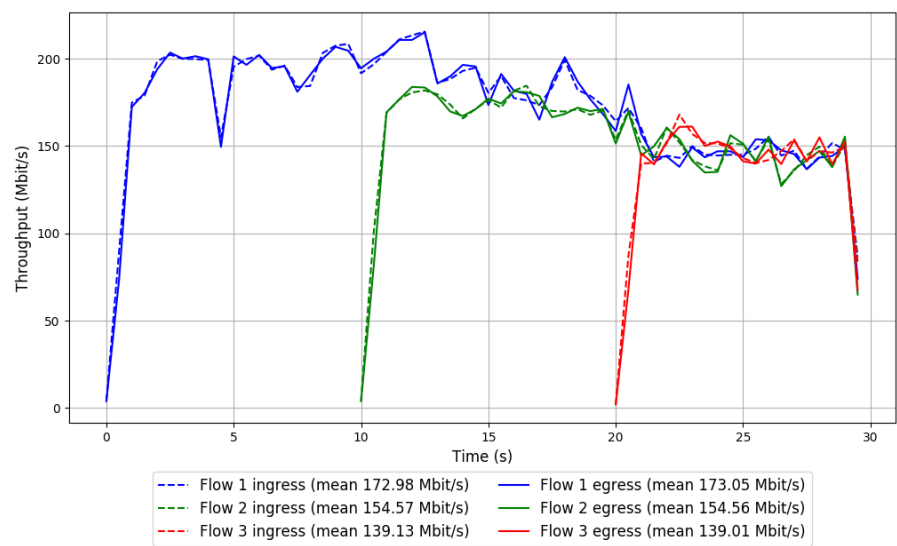
-- Flow 3:

Average throughput: 139.01 Mbit/s

95th percentile per-packet one-way delay: 72.066 ms

Loss rate: 1.16%

Run 10: Report of Indigo-1-32 — Data Link

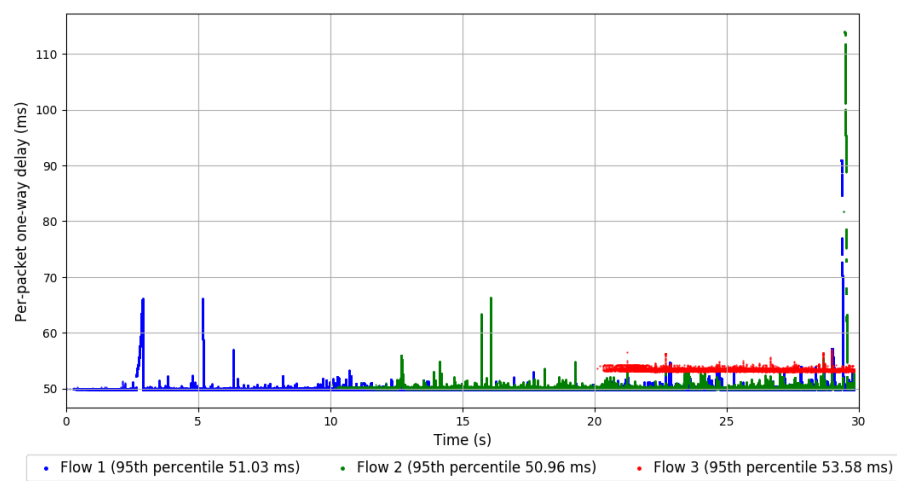
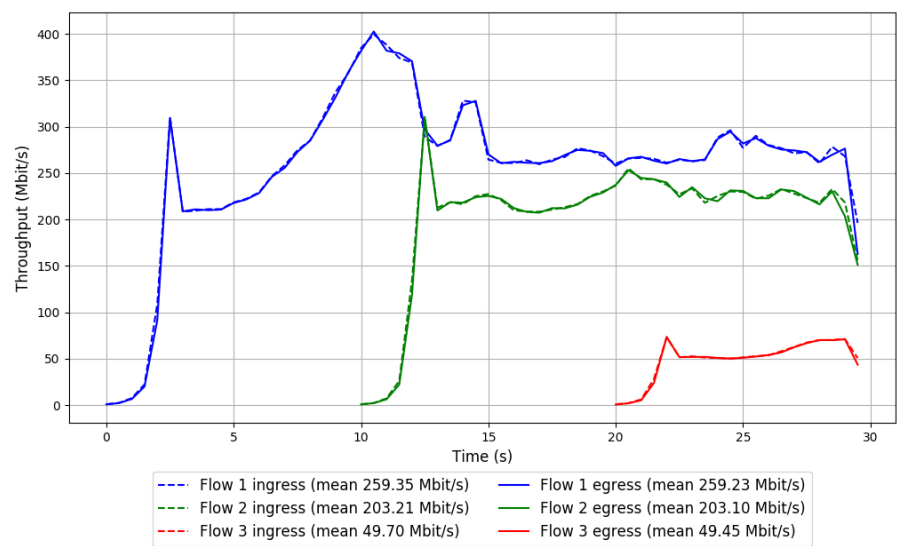


```
Run 1: Statistics of PCC-Vivace

Start at: 2018-04-18 10:29:12
End at: 2018-04-18 10:29:42

# Below is generated by plot.py at 2018-04-18 17:12:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 410.10 Mbit/s
95th percentile per-packet one-way delay: 53.171 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 259.23 Mbit/s
95th percentile per-packet one-way delay: 51.033 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 203.10 Mbit/s
95th percentile per-packet one-way delay: 50.958 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 49.45 Mbit/s
95th percentile per-packet one-way delay: 53.577 ms
Loss rate: 1.55%
```


Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2018-04-18 10:44:37

End at: 2018-04-18 10:45:07

Below is generated by plot.py at 2018-04-18 17:12:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 448.19 Mbit/s

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

Loss rate: 0.50%

-- Flow 1:

Average throughput: 249.66 Mbit/s

95th percentile per-packet one-way delay: 55.734 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 243.24 Mbit/s

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

Loss rate: 0.59%

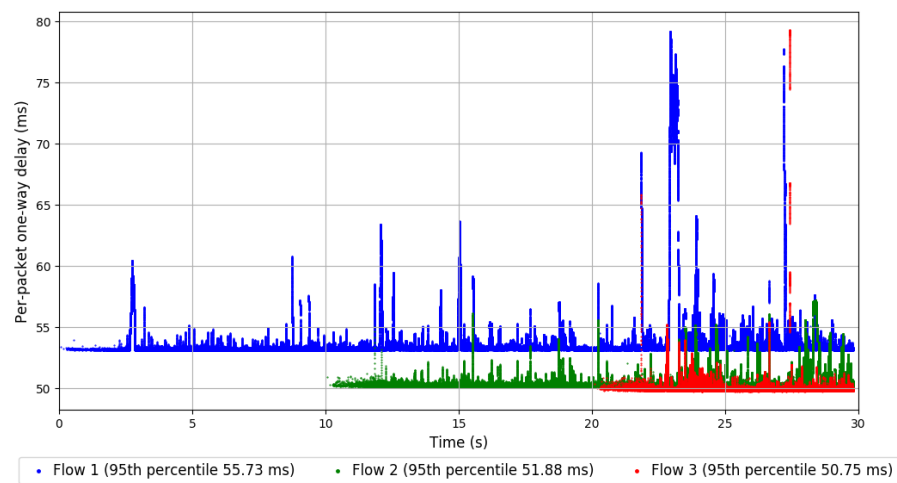
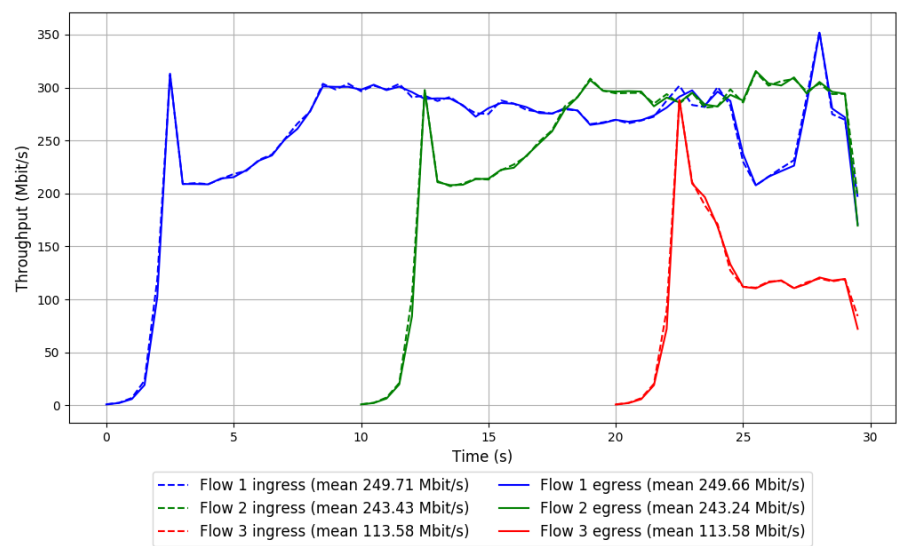
-- Flow 3:

Average throughput: 113.58 Mbit/s

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

Loss rate: 1.04%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2018-04-18 11:00:04

End at: 2018-04-18 11:00:34

Below is generated by plot.py at 2018-04-18 17:12:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 466.24 Mbit/s

95th percentile per-packet one-way delay: 85.712 ms

Loss rate: 0.49%

-- Flow 1:

Average throughput: 305.27 Mbit/s

95th percentile per-packet one-way delay: 93.229 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 235.39 Mbit/s

95th percentile per-packet one-way delay: 53.869 ms

Loss rate: 0.67%

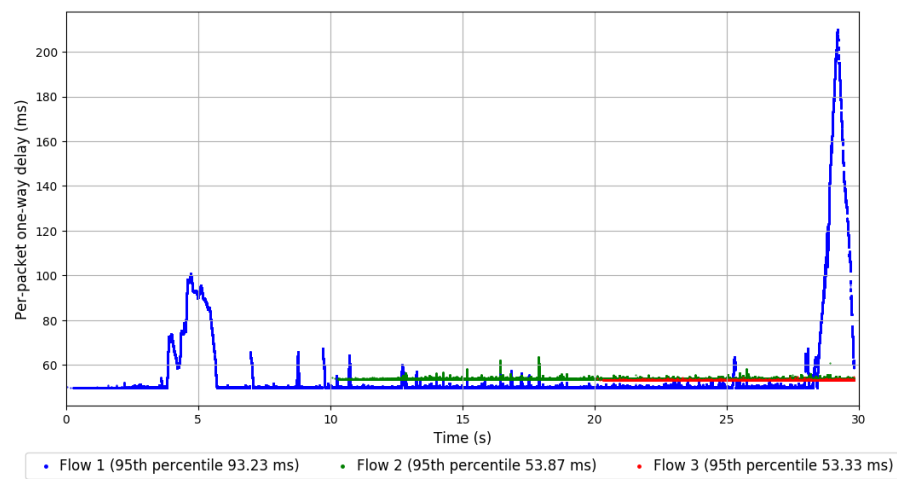
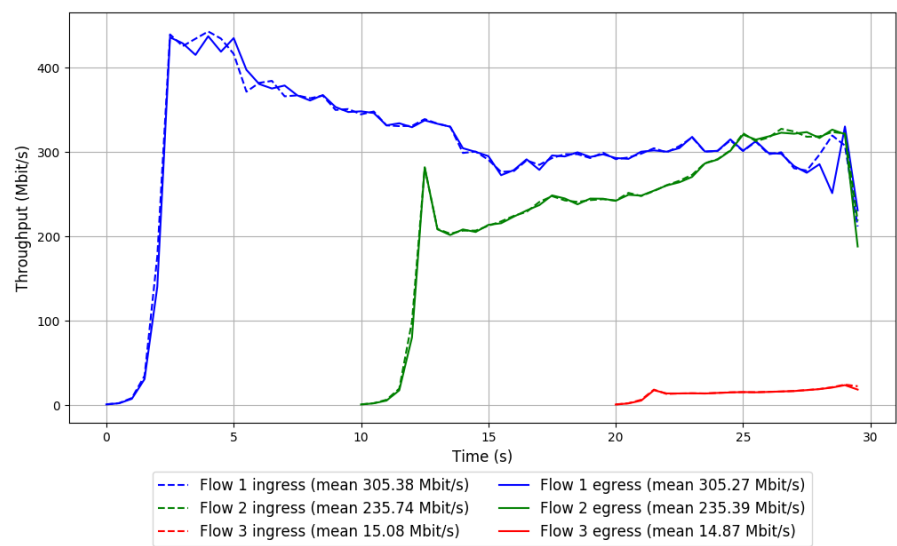
-- Flow 3:

Average throughput: 14.87 Mbit/s

95th percentile per-packet one-way delay: 53.331 ms

Loss rate: 2.39%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2018-04-18 11:15:26

End at: 2018-04-18 11:15:56

Below is generated by plot.py at 2018-04-18 17:12:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 425.48 Mbit/s

95th percentile per-packet one-way delay: 52.804 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 256.94 Mbit/s

95th percentile per-packet one-way delay: 53.705 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 228.00 Mbit/s

95th percentile per-packet one-way delay: 51.797 ms

Loss rate: 0.65%

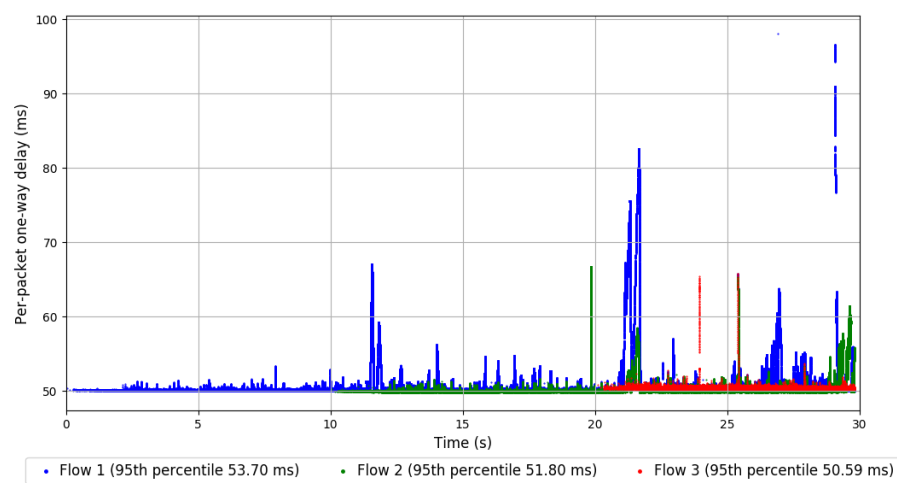
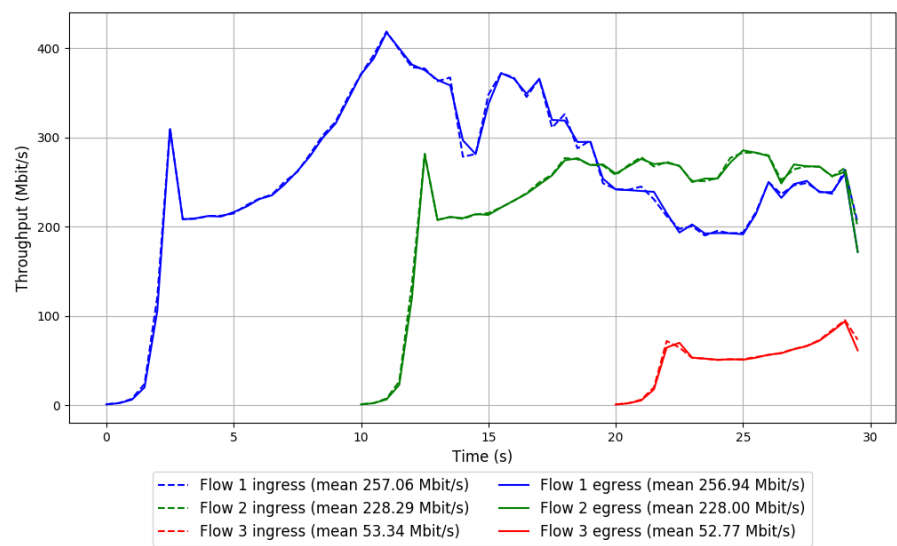
-- Flow 3:

Average throughput: 52.77 Mbit/s

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

Loss rate: 2.11%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2018-04-18 11:30:32

End at: 2018-04-18 11:31:02

Below is generated by plot.py at 2018-04-18 17:12:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 426.03 Mbit/s

95th percentile per-packet one-way delay: 57.041 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 219.95 Mbit/s

95th percentile per-packet one-way delay: 52.950 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 236.17 Mbit/s

95th percentile per-packet one-way delay: 60.219 ms

Loss rate: 0.65%

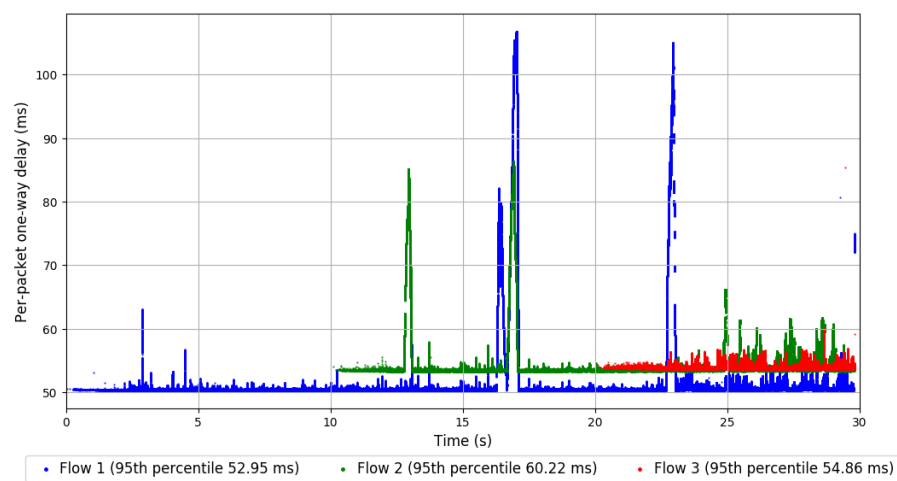
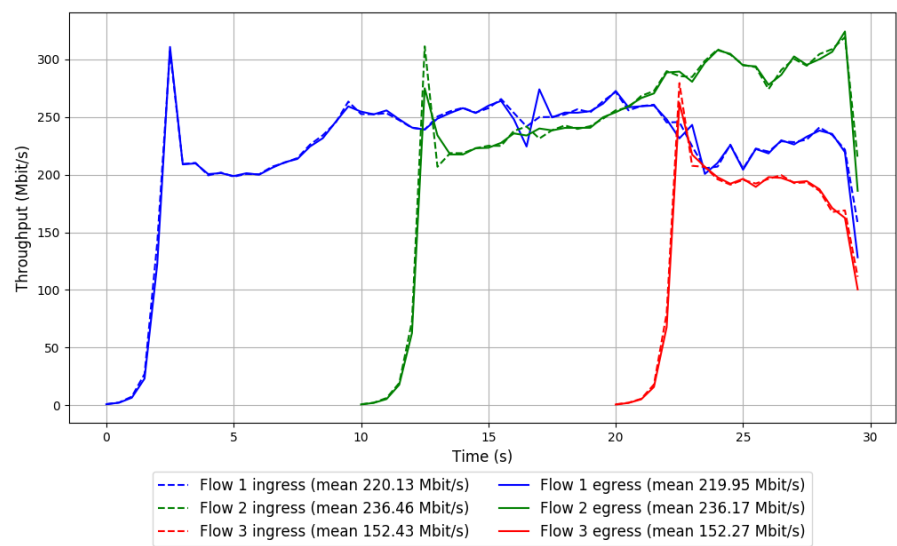
-- Flow 3:

Average throughput: 152.27 Mbit/s

95th percentile per-packet one-way delay: 54.864 ms

Loss rate: 1.12%

Run 5: Report of PCC-Vivace — Data Link



Run 6: Statistics of PCC-Vivace

Start at: 2018-04-18 11:46:12

End at: 2018-04-18 11:46:42

Below is generated by plot.py at 2018-04-18 17:12:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 440.57 Mbit/s

95th percentile per-packet one-way delay: 92.546 ms

Loss rate: 0.45%

-- Flow 1:

Average throughput: 283.89 Mbit/s

95th percentile per-packet one-way delay: 125.010 ms

Loss rate: 0.33%

-- Flow 2:

Average throughput: 211.21 Mbit/s

95th percentile per-packet one-way delay: 50.780 ms

Loss rate: 0.50%

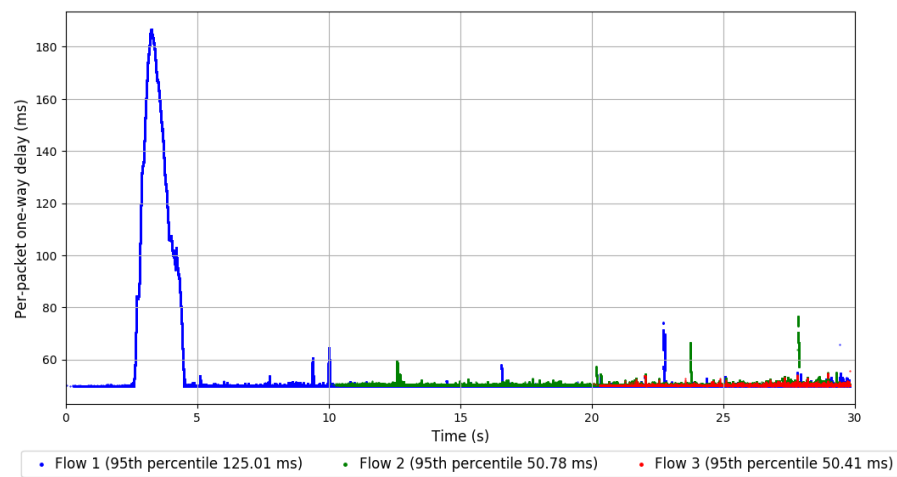
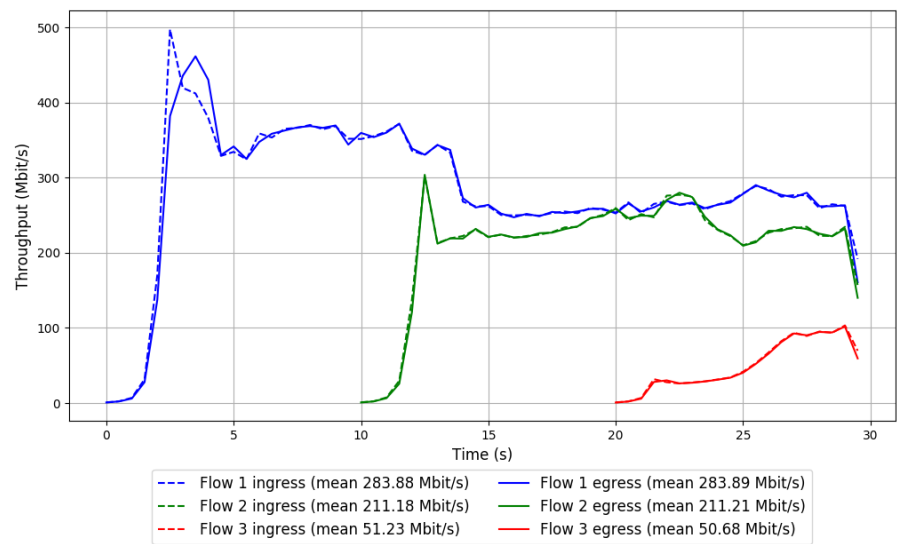
-- Flow 3:

Average throughput: 50.68 Mbit/s

95th percentile per-packet one-way delay: 50.405 ms

Loss rate: 2.02%

Run 6: Report of PCC-Vivace — Data Link



Run 7: Statistics of PCC-Vivace

Start at: 2018-04-18 12:01:12

End at: 2018-04-18 12:01:42

Below is generated by plot.py at 2018-04-18 17:13:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 418.20 Mbit/s

95th percentile per-packet one-way delay: 54.919 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 250.64 Mbit/s

95th percentile per-packet one-way delay: 53.460 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 240.72 Mbit/s

95th percentile per-packet one-way delay: 59.543 ms

Loss rate: 0.54%

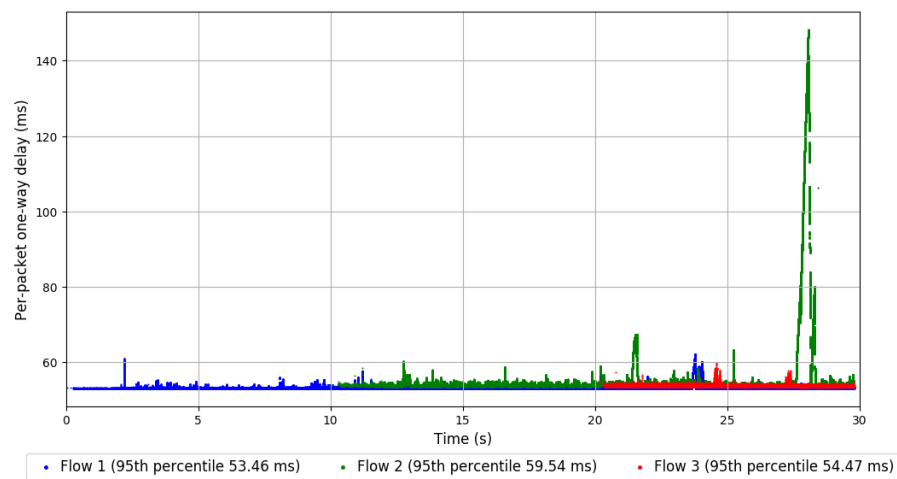
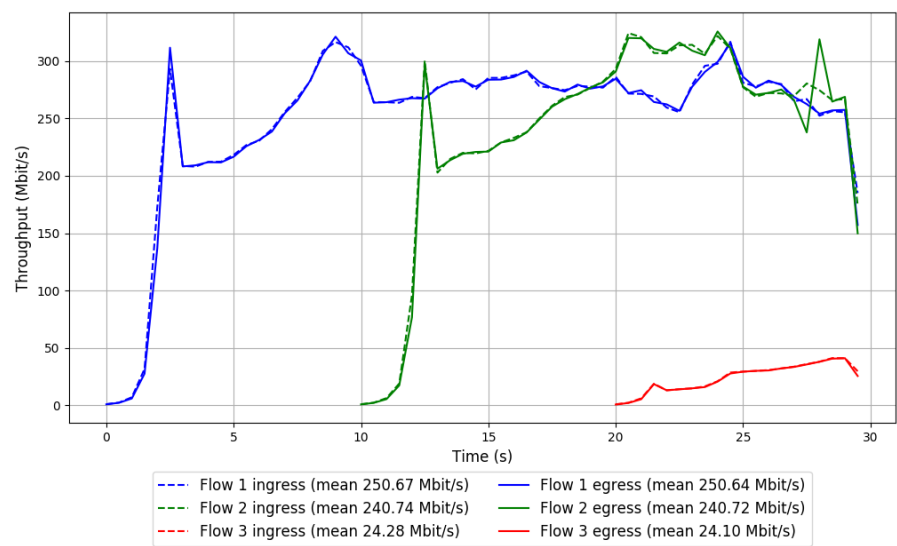
-- Flow 3:

Average throughput: 24.10 Mbit/s

95th percentile per-packet one-way delay: 54.467 ms

Loss rate: 1.83%

Run 7: Report of PCC-Vivace — Data Link



Run 8: Statistics of PCC-Vivace

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

End at: 2018-04-18 12:16:43

Below is generated by plot.py at 2018-04-18 17:13:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 461.48 Mbit/s

95th percentile per-packet one-way delay: 54.369 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 264.87 Mbit/s

95th percentile per-packet one-way delay: 51.433 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 217.80 Mbit/s

95th percentile per-packet one-way delay: 55.120 ms

Loss rate: 0.48%

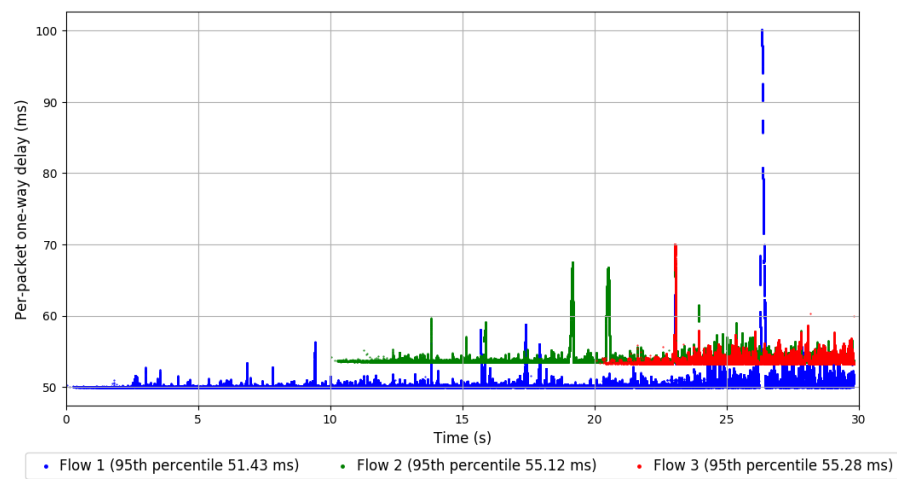
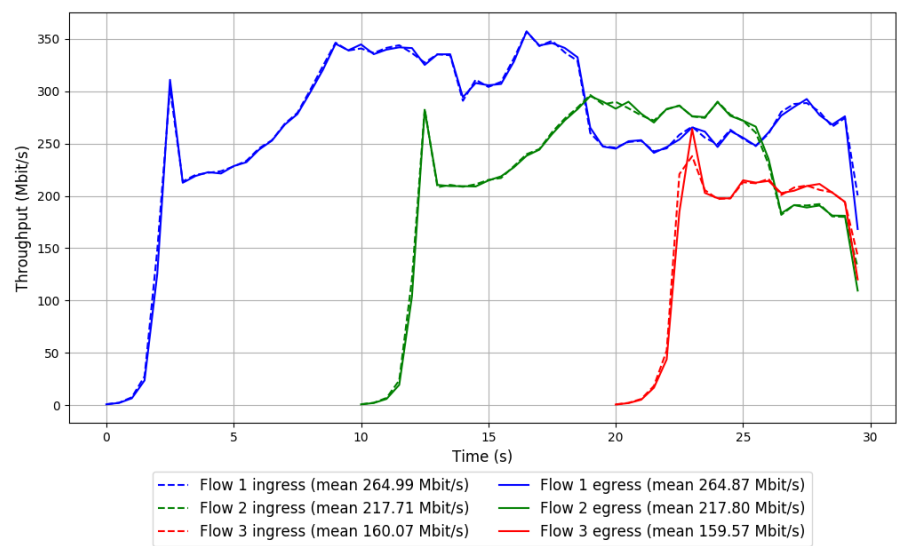
-- Flow 3:

Average throughput: 159.57 Mbit/s

95th percentile per-packet one-way delay: 55.276 ms

Loss rate: 1.30%

Run 8: Report of PCC-Vivace — Data Link



Run 9: Statistics of PCC-Vivace

Start at: 2018-04-18 12:31:34

End at: 2018-04-18 12:32:04

Below is generated by plot.py at 2018-04-18 17:14:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 469.70 Mbit/s

95th percentile per-packet one-way delay: 54.656 ms

Loss rate: 0.49%

-- Flow 1:

Average throughput: 279.22 Mbit/s

95th percentile per-packet one-way delay: 54.879 ms

Loss rate: 0.28%

-- Flow 2:

Average throughput: 201.84 Mbit/s

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

Loss rate: 0.54%

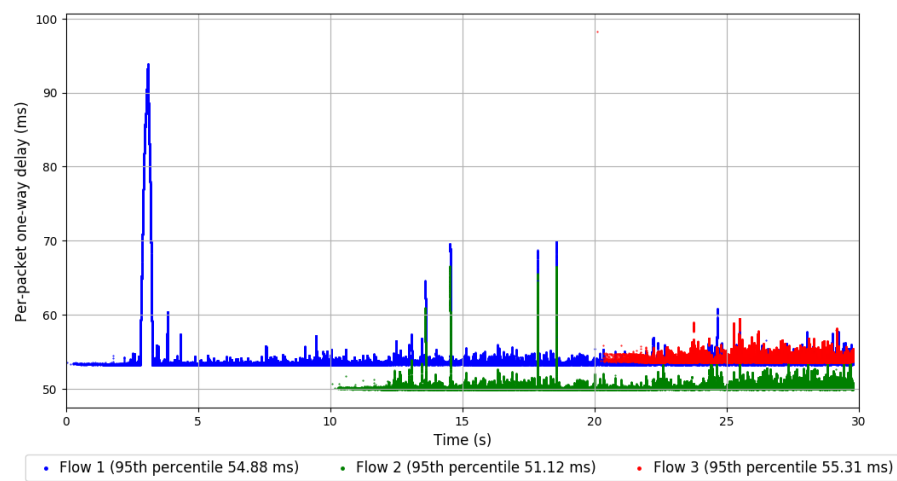
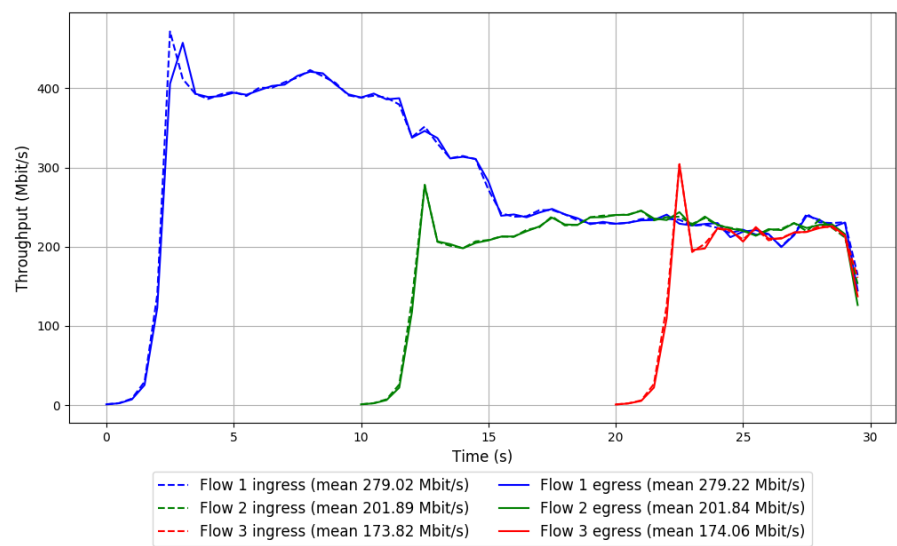
-- Flow 3:

Average throughput: 174.06 Mbit/s

95th percentile per-packet one-way delay: 55.309 ms

Loss rate: 1.38%

Run 9: Report of PCC-Vivace — Data Link



Run 10: Statistics of PCC-Vivace

Start at: 2018-04-18 12:46:56

End at: 2018-04-18 12:47:26

Below is generated by plot.py at 2018-04-18 17:14:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 445.92 Mbit/s

95th percentile per-packet one-way delay: 51.561 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 243.04 Mbit/s

95th percentile per-packet one-way delay: 51.012 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 232.21 Mbit/s

95th percentile per-packet one-way delay: 52.352 ms

Loss rate: 0.55%

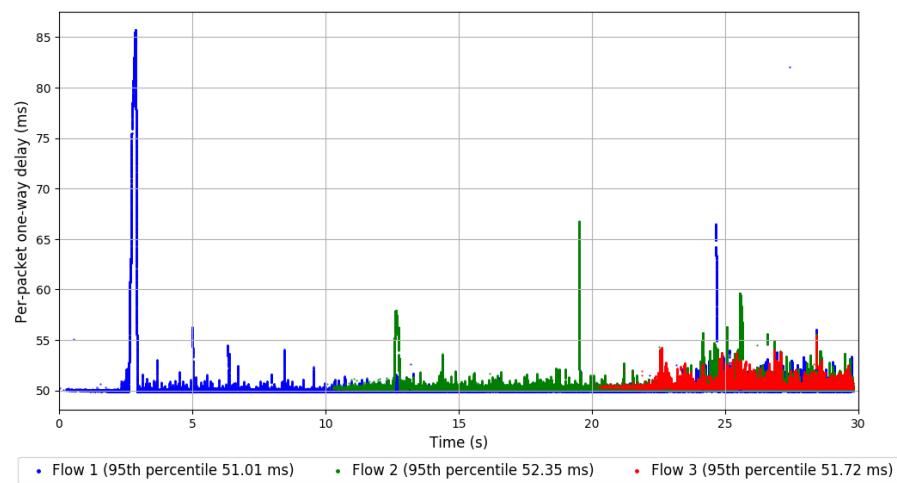
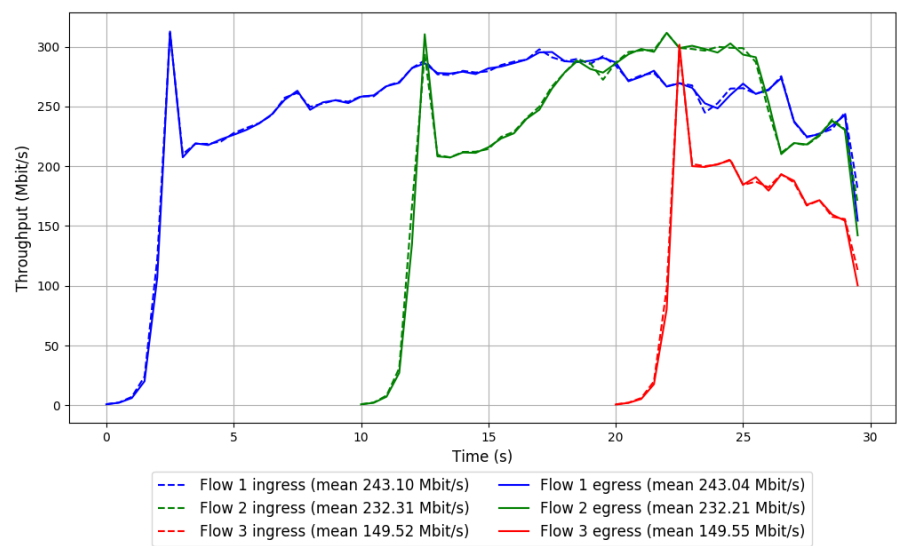
-- Flow 3:

Average throughput: 149.55 Mbit/s

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

Loss rate: 1.01%

Run 10: Report of PCC-Vivace — Data Link



Run 1: Statistics of PCC-Expr

Start at: 2018-04-18 10:24:26

End at: 2018-04-18 10:24:56

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 10:39:46

End at: 2018-04-18 10:40:16

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 10:55:14

End at: 2018-04-18 10:55:44

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 11:10:32

End at: 2018-04-18 11:11:02

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 11:25:43

End at: 2018-04-18 11:26:13

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 11:41:24

End at: 2018-04-18 11:41:54

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 11:56:23

End at: 2018-04-18 11:56:53

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 12:11:27

End at: 2018-04-18 12:11:57

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 12:26:45

End at: 2018-04-18 12:27:15

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 12:42:12

End at: 2018-04-18 12:42:42

Run 10: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing