

Pantheon Report

Generated at 2018-04-18 08:46:13 (UTC).

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

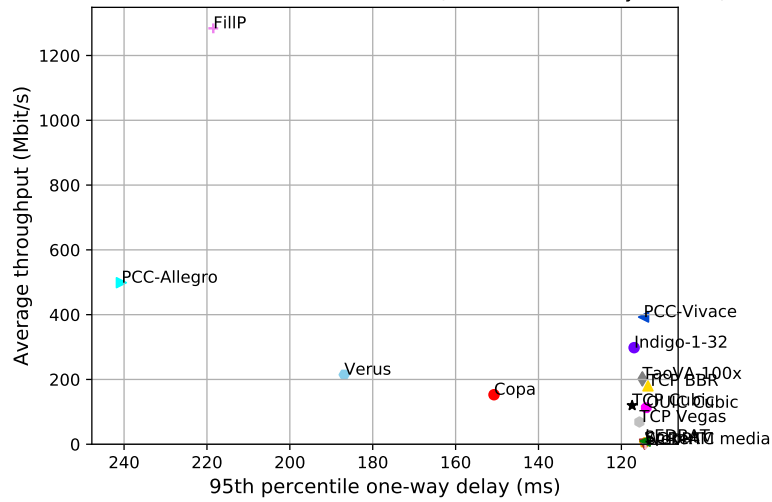
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

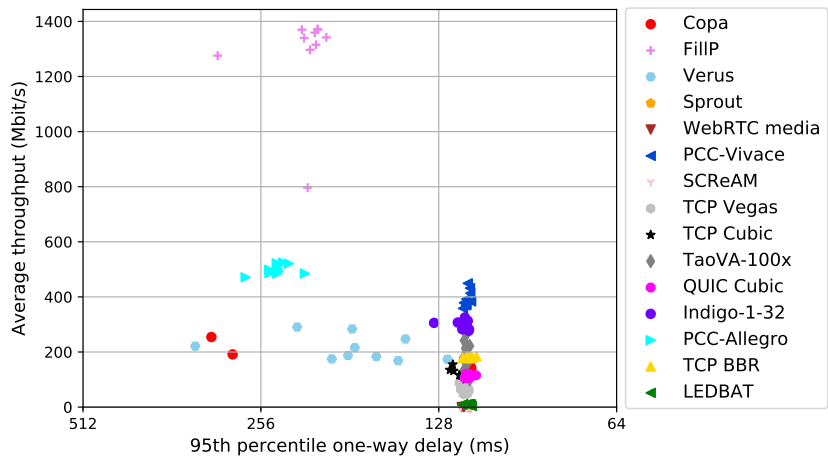
Git summary:

```
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 @ f1a14bffe749737437f61b1eaaeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 7a4ba531e75b4a6f66f5c4580192120401784ce3
third_party/webrtc @ f271183af822eee5d0031620f4bebf38aedc5581
```

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



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



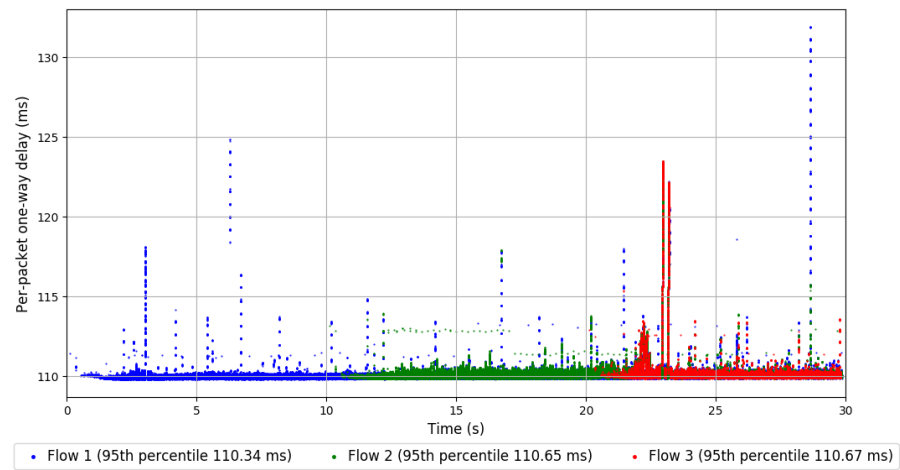
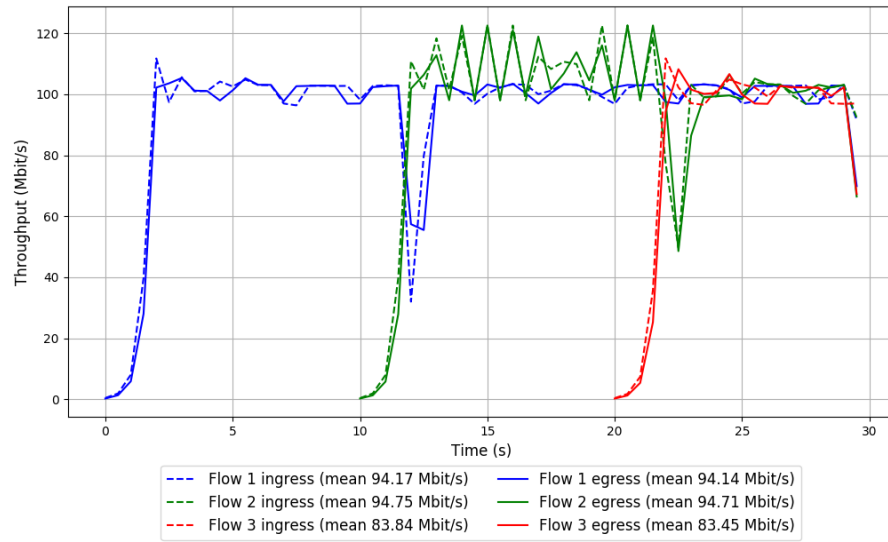
[illegible]

```
Run 1: Statistics of TCP BBR

Start at: 2018-04-18 01:32:50
End at: 2018-04-18 01:33:20

# Below is generated by plot.py at 2018-04-18 07:18:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 184.12 Mbit/s
95th percentile per-packet one-way delay: 110.477 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 94.14 Mbit/s
95th percentile per-packet one-way delay: 110.345 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 94.71 Mbit/s
95th percentile per-packet one-way delay: 110.654 ms
Loss rate: 1.16%
-- Flow 3:
Average throughput: 83.45 Mbit/s
95th percentile per-packet one-way delay: 110.673 ms
Loss rate: 2.91%
```


Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-04-18 01:50:11

End at: 2018-04-18 01:50:41

Below is generated by plot.py at 2018-04-18 07:18:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 178.15 Mbit/s

95th percentile per-packet one-way delay: 116.562 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 91.67 Mbit/s

95th percentile per-packet one-way delay: 116.526 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 89.63 Mbit/s

95th percentile per-packet one-way delay: 116.573 ms

Loss rate: 1.24%

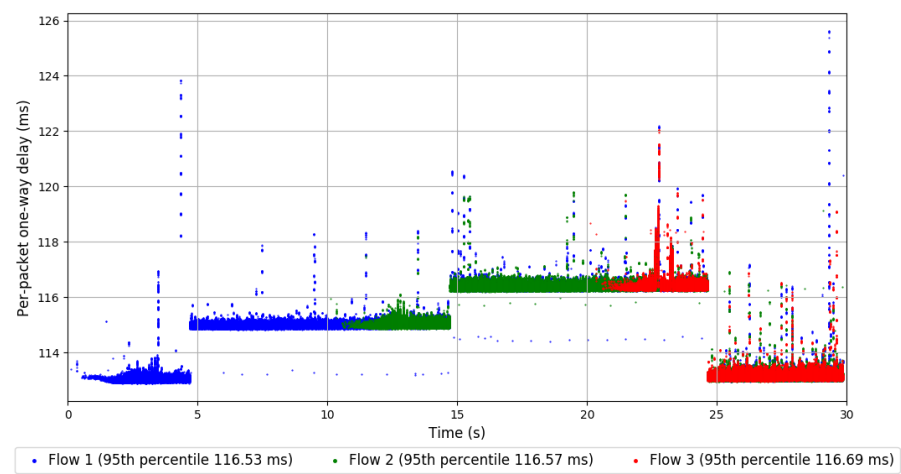
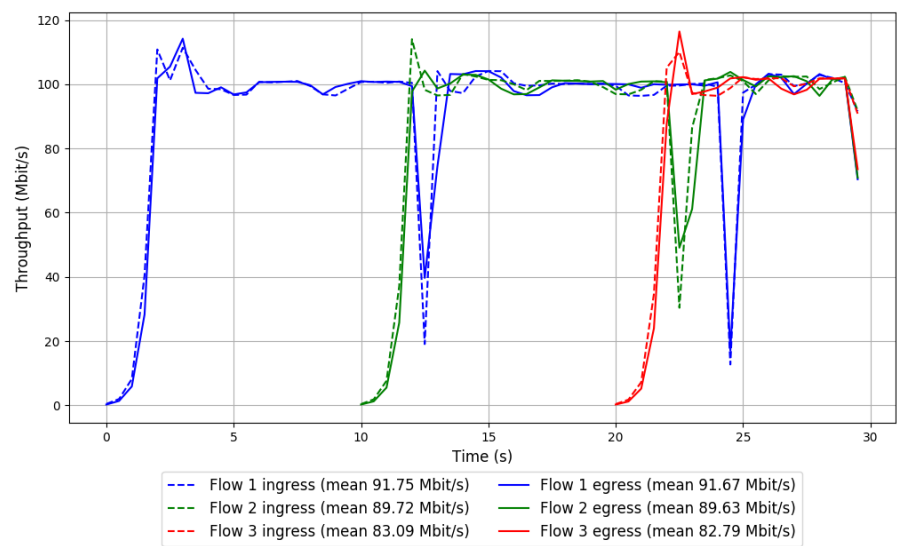
-- Flow 3:

Average throughput: 82.79 Mbit/s

95th percentile per-packet one-way delay: 116.688 ms

Loss rate: 2.65%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-04-18 02:07:20

End at: 2018-04-18 02:07:50

Below is generated by plot.py at 2018-04-18 07:18:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 179.76 Mbit/s

95th percentile per-packet one-way delay: 115.185 ms

Loss rate: 1.26%

-- Flow 1:

Average throughput: 93.70 Mbit/s

95th percentile per-packet one-way delay: 115.174 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 89.31 Mbit/s

95th percentile per-packet one-way delay: 115.156 ms

Loss rate: 1.35%

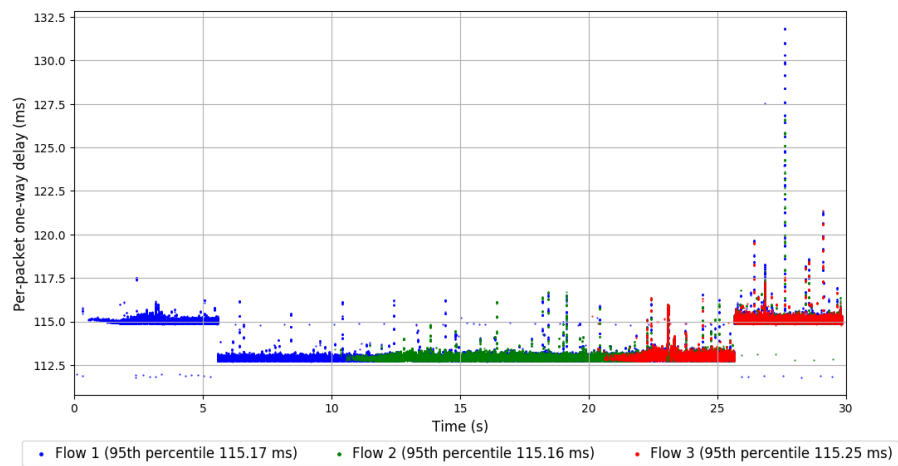
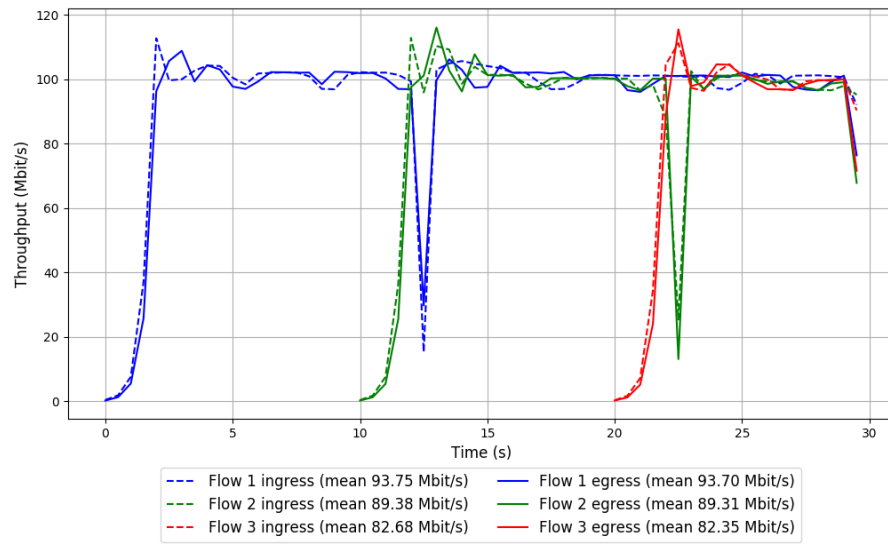
-- Flow 3:

Average throughput: 82.35 Mbit/s

95th percentile per-packet one-way delay: 115.245 ms

Loss rate: 2.65%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-04-18 02:24:29

End at: 2018-04-18 02:24:59

Below is generated by plot.py at 2018-04-18 07:18:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 181.03 Mbit/s

95th percentile per-packet one-way delay: 114.424 ms

Loss rate: 1.19%

-- Flow 1:

Average throughput: 93.40 Mbit/s

95th percentile per-packet one-way delay: 114.412 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 91.67 Mbit/s

95th percentile per-packet one-way delay: 114.410 ms

Loss rate: 1.19%

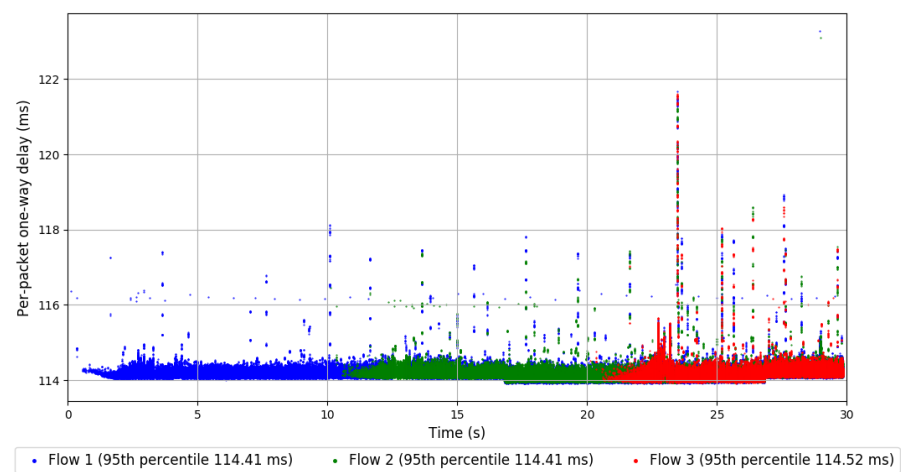
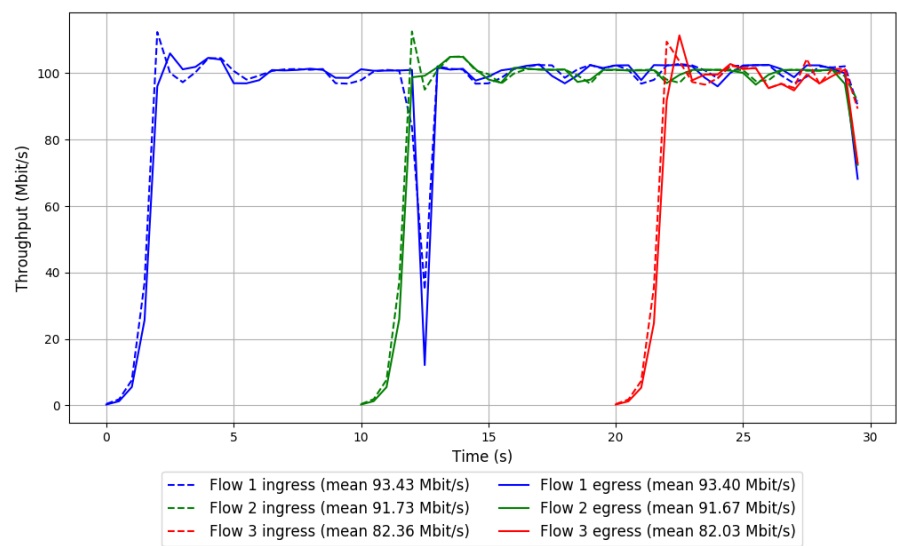
-- Flow 3:

Average throughput: 82.03 Mbit/s

95th percentile per-packet one-way delay: 114.522 ms

Loss rate: 2.61%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-04-18 02:41:44

End at: 2018-04-18 02:42:14

Below is generated by plot.py at 2018-04-18 07:18:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 179.81 Mbit/s

95th percentile per-packet one-way delay: 112.181 ms

Loss rate: 1.24%

-- Flow 1:

Average throughput: 93.24 Mbit/s

95th percentile per-packet one-way delay: 112.181 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 89.54 Mbit/s

95th percentile per-packet one-way delay: 112.201 ms

Loss rate: 1.21%

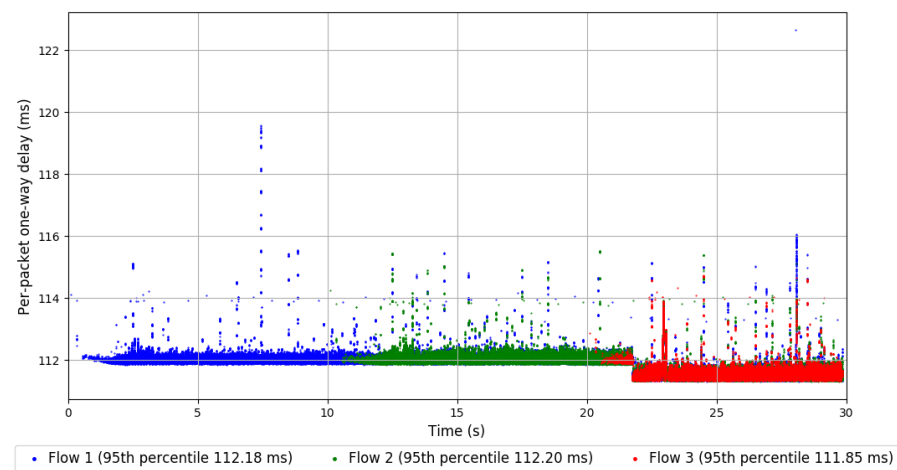
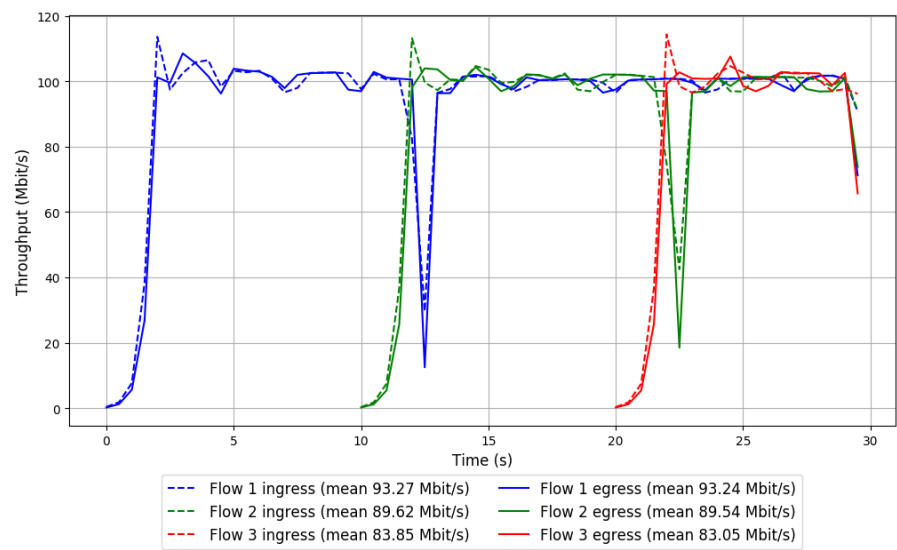
-- Flow 3:

Average throughput: 83.05 Mbit/s

95th percentile per-packet one-way delay: 111.852 ms

Loss rate: 2.88%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2018-04-18 02:58:56

End at: 2018-04-18 02:59:26

Below is generated by plot.py at 2018-04-18 07:18:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 179.79 Mbit/s

95th percentile per-packet one-way delay: 113.915 ms

Loss rate: 1.34%

-- Flow 1:

Average throughput: 92.37 Mbit/s

95th percentile per-packet one-way delay: 113.921 ms

Loss rate: 0.86%

-- Flow 2:

Average throughput: 91.00 Mbit/s

95th percentile per-packet one-way delay: 113.935 ms

Loss rate: 1.34%

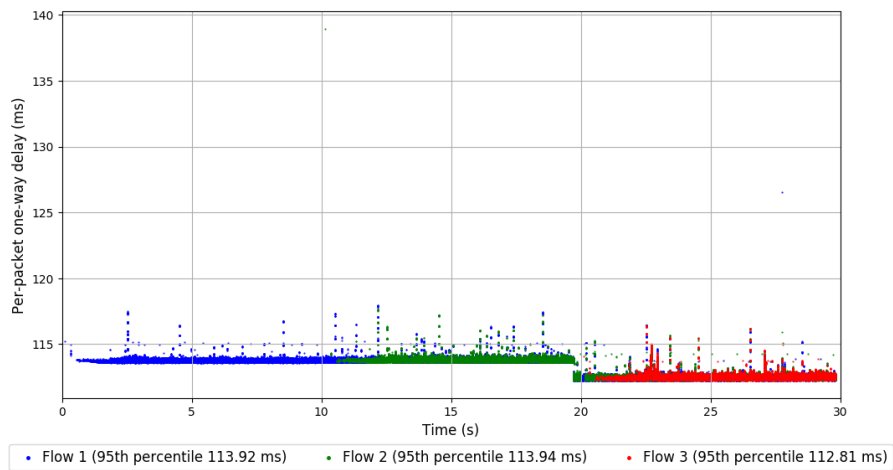
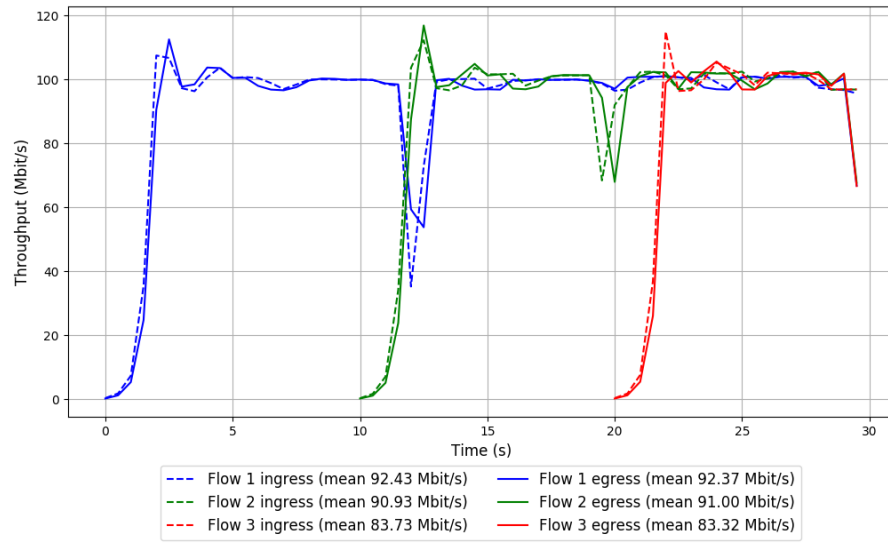
-- Flow 3:

Average throughput: 83.32 Mbit/s

95th percentile per-packet one-way delay: 112.807 ms

Loss rate: 2.92%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2018-04-18 03:15:55

End at: 2018-04-18 03:16:25

Below is generated by plot.py at 2018-04-18 07:18:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 178.75 Mbit/s

95th percentile per-packet one-way delay: 113.159 ms

Loss rate: 1.21%

-- Flow 1:

Average throughput: 92.49 Mbit/s

95th percentile per-packet one-way delay: 113.125 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 89.10 Mbit/s

95th percentile per-packet one-way delay: 113.145 ms

Loss rate: 1.20%

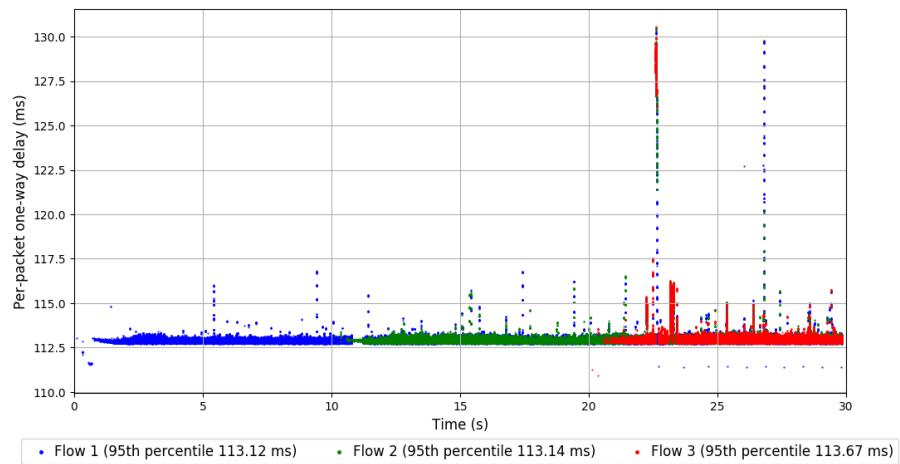
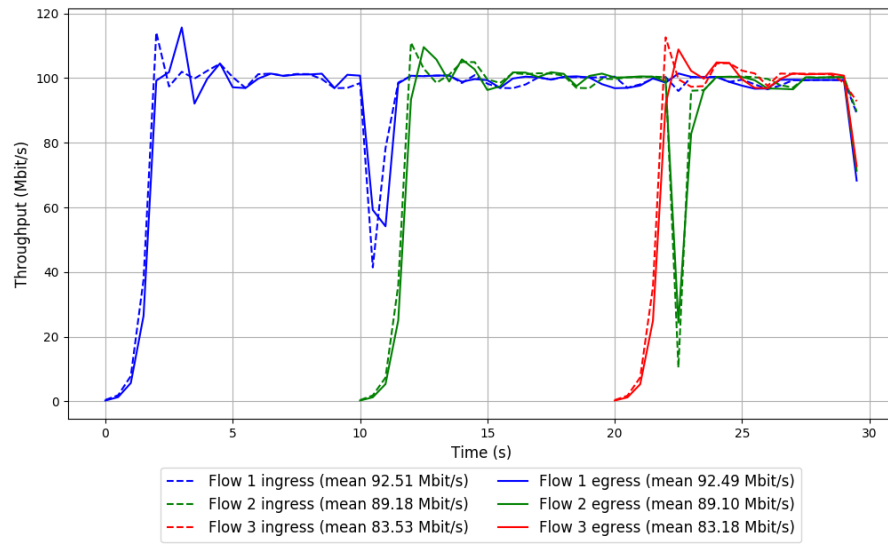
-- Flow 3:

Average throughput: 83.18 Mbit/s

95th percentile per-packet one-way delay: 113.674 ms

Loss rate: 2.67%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2018-04-18 03:33:06

End at: 2018-04-18 03:33:36

Below is generated by plot.py at 2018-04-18 07:18:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 178.64 Mbit/s

95th percentile per-packet one-way delay: 113.411 ms

Loss rate: 1.25%

-- Flow 1:

Average throughput: 91.55 Mbit/s

95th percentile per-packet one-way delay: 113.369 ms

Loss rate: 0.83%

-- Flow 2:

Average throughput: 90.25 Mbit/s

95th percentile per-packet one-way delay: 113.383 ms

Loss rate: 1.21%

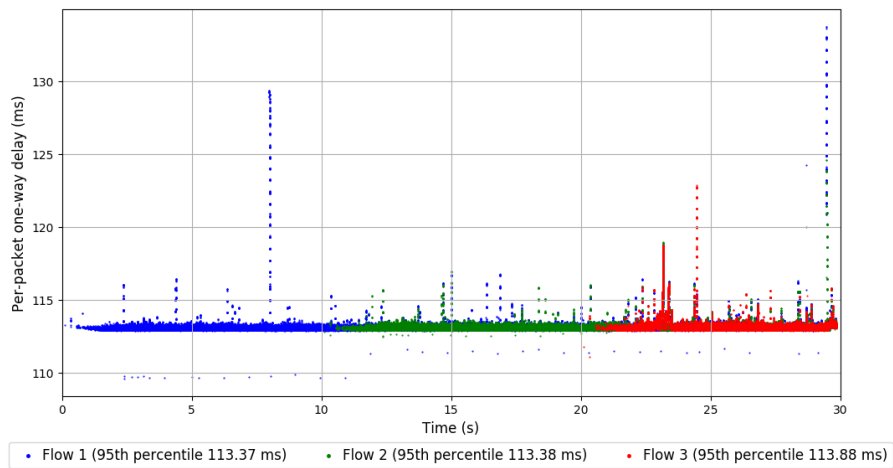
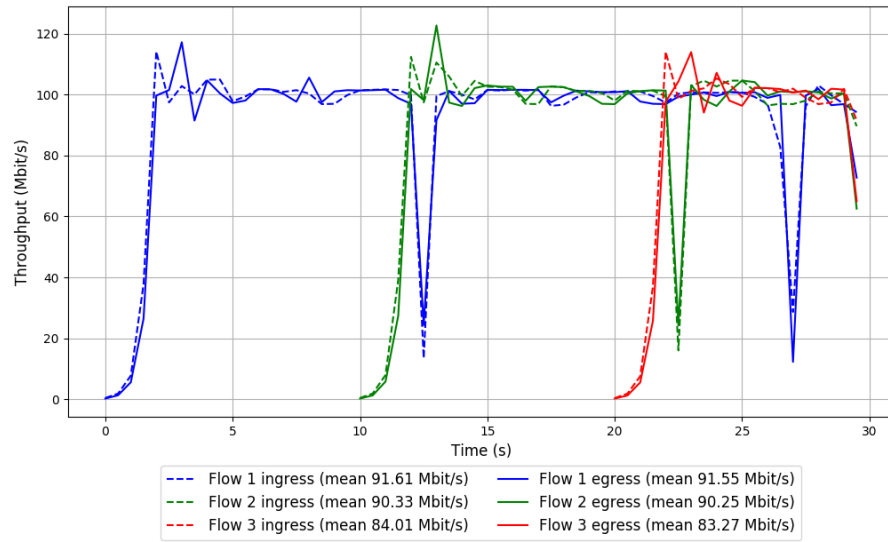
-- Flow 3:

Average throughput: 83.27 Mbit/s

95th percentile per-packet one-way delay: 113.884 ms

Loss rate: 2.70%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2018-04-18 03:50:07

End at: 2018-04-18 03:50:37

Below is generated by plot.py at 2018-04-18 07:21:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 184.52 Mbit/s

95th percentile per-packet one-way delay: 113.038 ms

Loss rate: 1.25%

-- Flow 1:

Average throughput: 96.16 Mbit/s

95th percentile per-packet one-way delay: 113.103 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 92.26 Mbit/s

95th percentile per-packet one-way delay: 112.967 ms

Loss rate: 1.22%

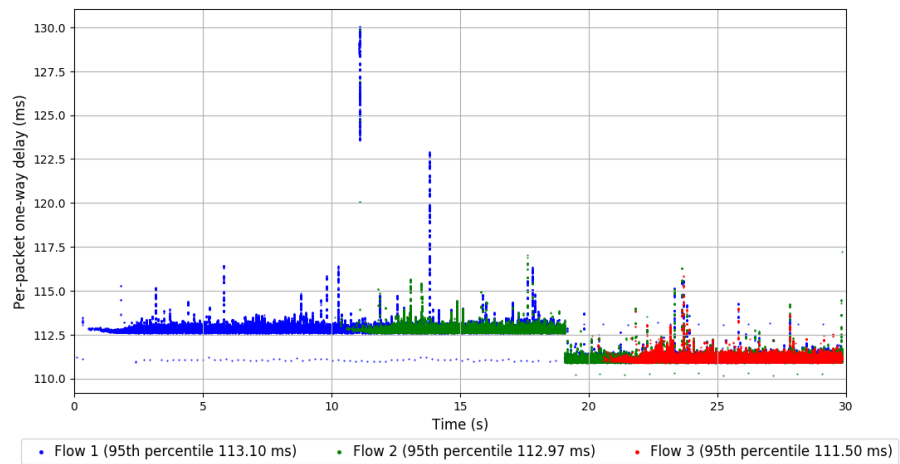
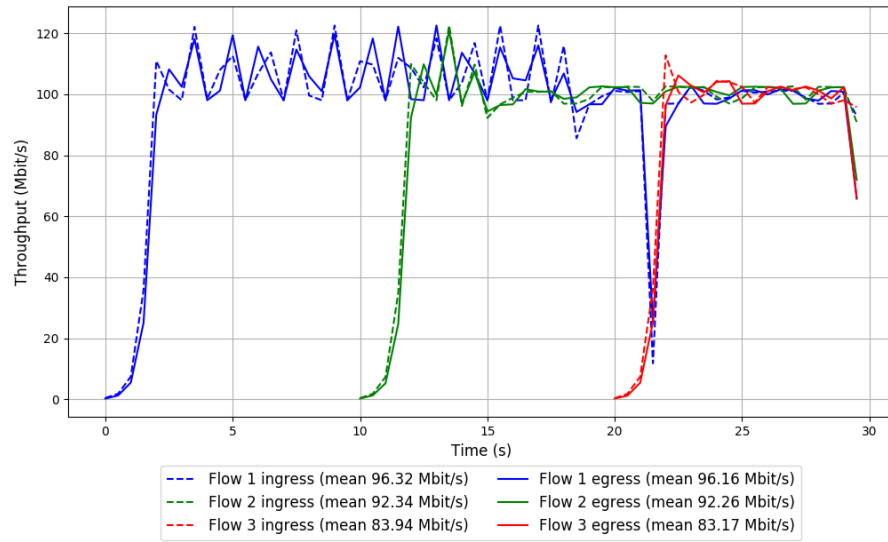
-- Flow 3:

Average throughput: 83.17 Mbit/s

95th percentile per-packet one-way delay: 111.497 ms

Loss rate: 2.88%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

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

End at: 2018-04-18 04:07:42

Below is generated by plot.py at 2018-04-18 07:21:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 177.41 Mbit/s

95th percentile per-packet one-way delay: 113.504 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 91.24 Mbit/s

95th percentile per-packet one-way delay: 113.465 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 89.10 Mbit/s

95th percentile per-packet one-way delay: 113.511 ms

Loss rate: 1.23%

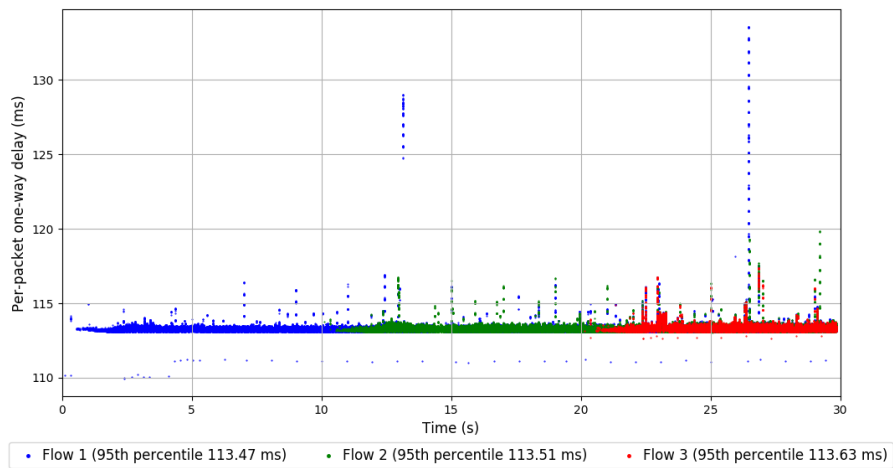
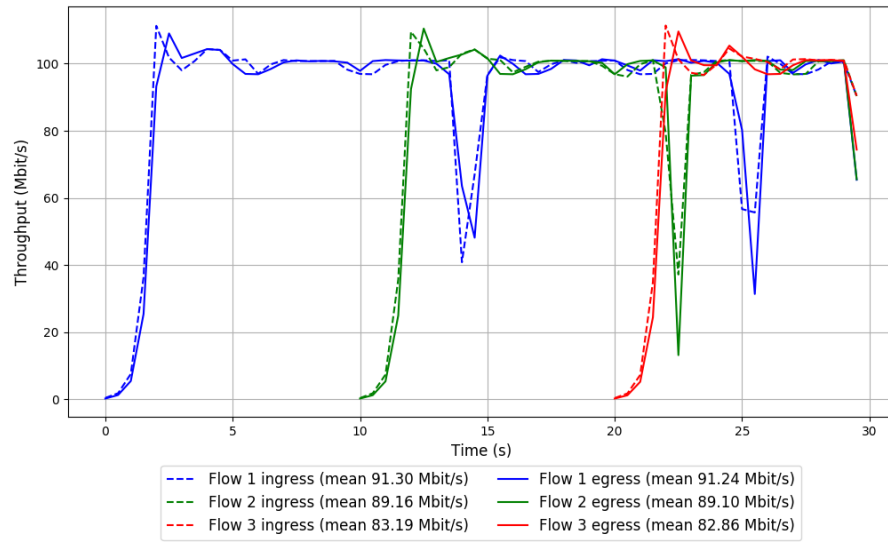
-- Flow 3:

Average throughput: 82.86 Mbit/s

95th percentile per-packet one-way delay: 113.631 ms

Loss rate: 2.65%

Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-04-18 01:20:39

End at: 2018-04-18 01:21:09

Below is generated by plot.py at 2018-04-18 07:21:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 109.91 Mbit/s

95th percentile per-packet one-way delay: 113.927 ms

Loss rate: 1.33%

-- Flow 1:

Average throughput: 62.69 Mbit/s

95th percentile per-packet one-way delay: 113.760 ms

Loss rate: 0.82%

-- Flow 2:

Average throughput: 46.51 Mbit/s

95th percentile per-packet one-way delay: 114.369 ms

Loss rate: 1.55%

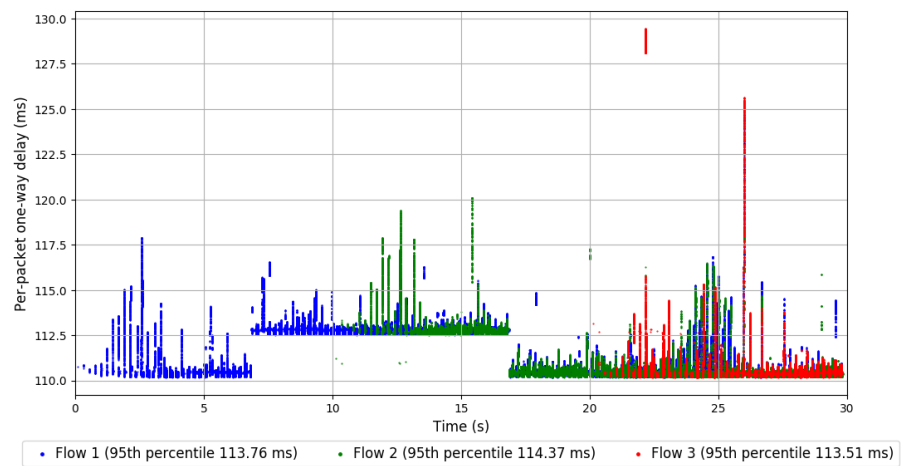
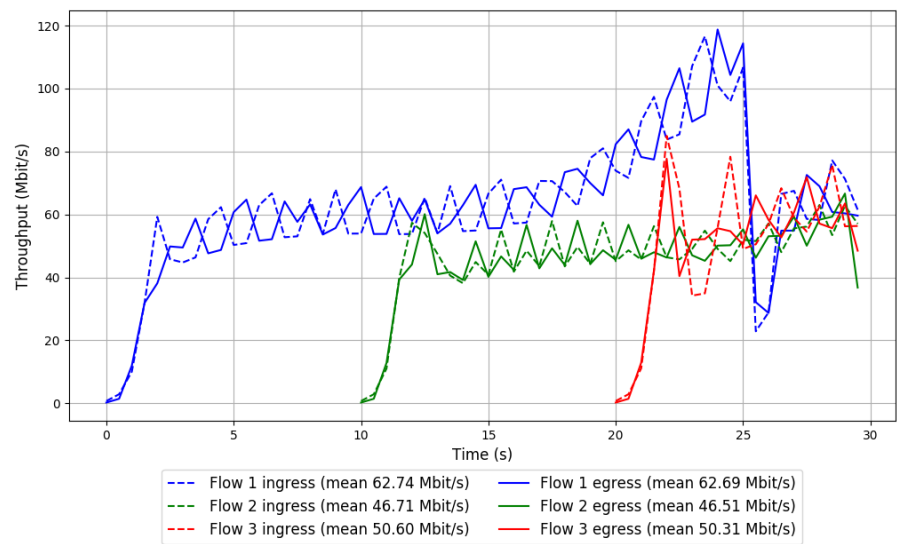
-- Flow 3:

Average throughput: 50.31 Mbit/s

95th percentile per-packet one-way delay: 113.510 ms

Loss rate: 2.82%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-04-18 01:37:48

End at: 2018-04-18 01:38:18

Below is generated by plot.py at 2018-04-18 07:21:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 135.18 Mbit/s

95th percentile per-packet one-way delay: 122.527 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 63.19 Mbit/s

95th percentile per-packet one-way delay: 120.825 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 64.20 Mbit/s

95th percentile per-packet one-way delay: 123.276 ms

Loss rate: 1.05%

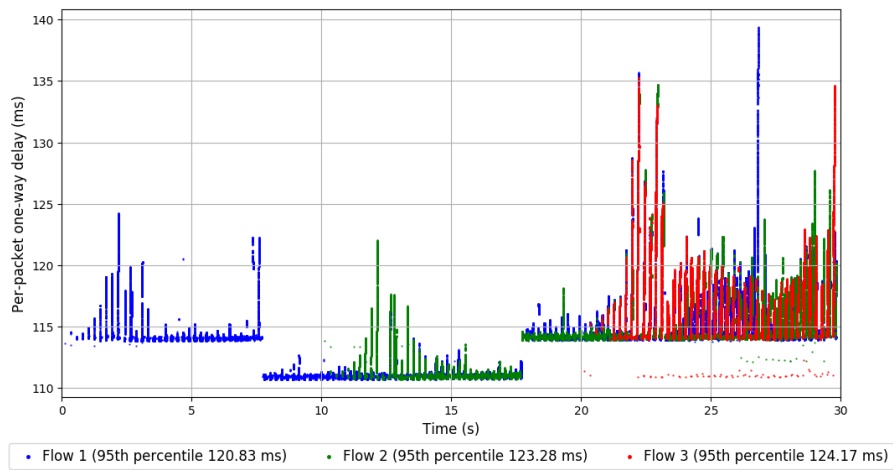
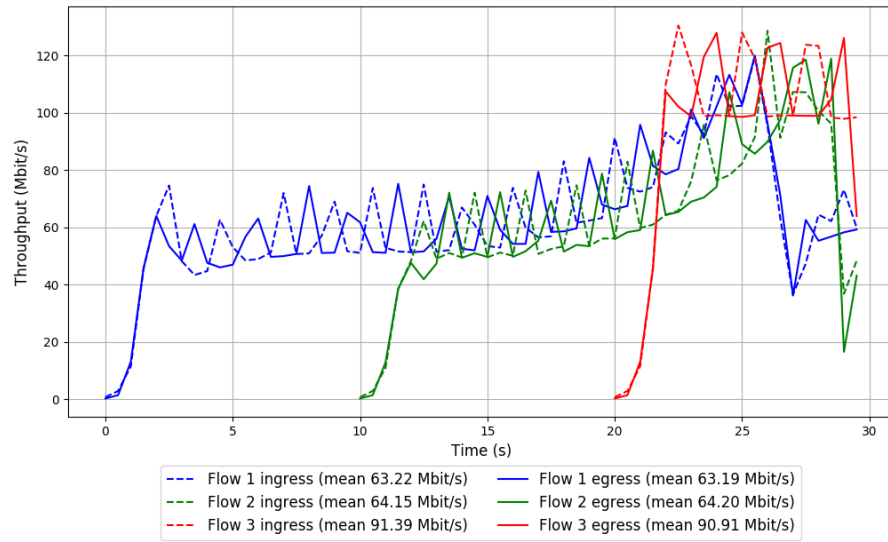
-- Flow 3:

Average throughput: 90.91 Mbit/s

95th percentile per-packet one-way delay: 124.174 ms

Loss rate: 2.73%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-04-18 01:55:12

End at: 2018-04-18 01:55:42

Below is generated by plot.py at 2018-04-18 07:21:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 131.53 Mbit/s

95th percentile per-packet one-way delay: 120.824 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 74.53 Mbit/s

95th percentile per-packet one-way delay: 120.642 ms

Loss rate: 0.53%

-- Flow 2:

Average throughput: 63.52 Mbit/s

95th percentile per-packet one-way delay: 121.889 ms

Loss rate: 1.36%

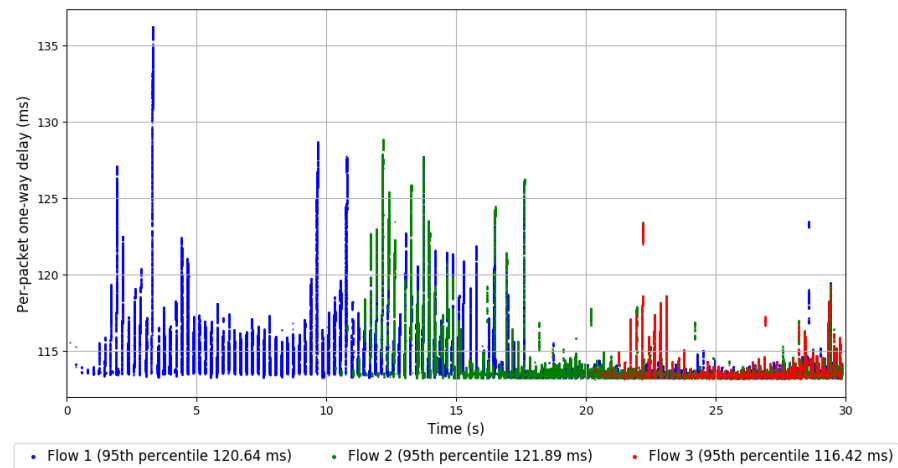
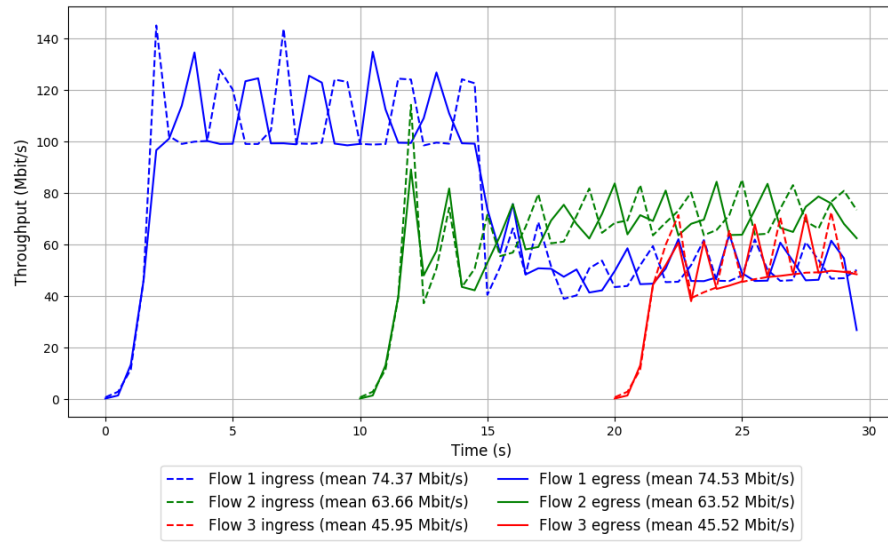
-- Flow 3:

Average throughput: 45.52 Mbit/s

95th percentile per-packet one-way delay: 116.425 ms

Loss rate: 2.72%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

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

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

Below is generated by plot.py at 2018-04-18 07:21:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 115.92 Mbit/s

95th percentile per-packet one-way delay: 118.126 ms

Loss rate: 1.47%

-- Flow 1:

Average throughput: 68.18 Mbit/s

95th percentile per-packet one-way delay: 118.497 ms

Loss rate: 1.17%

-- Flow 2:

Average throughput: 51.17 Mbit/s

95th percentile per-packet one-way delay: 117.042 ms

Loss rate: 1.49%

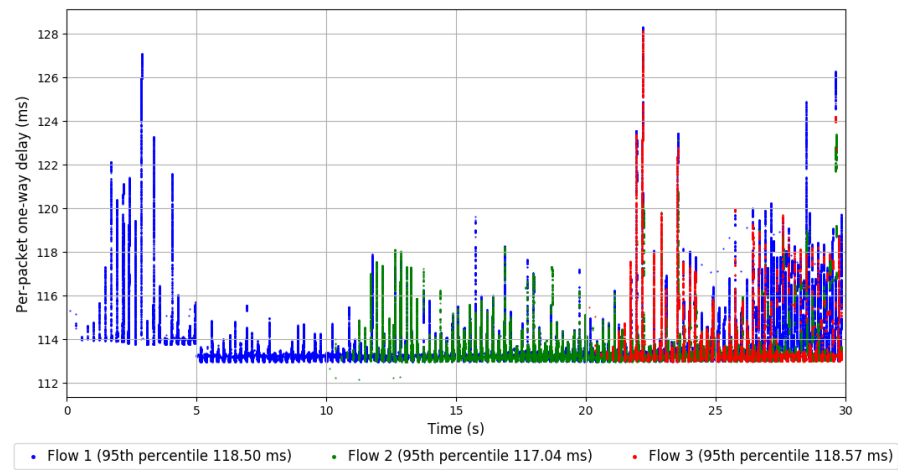
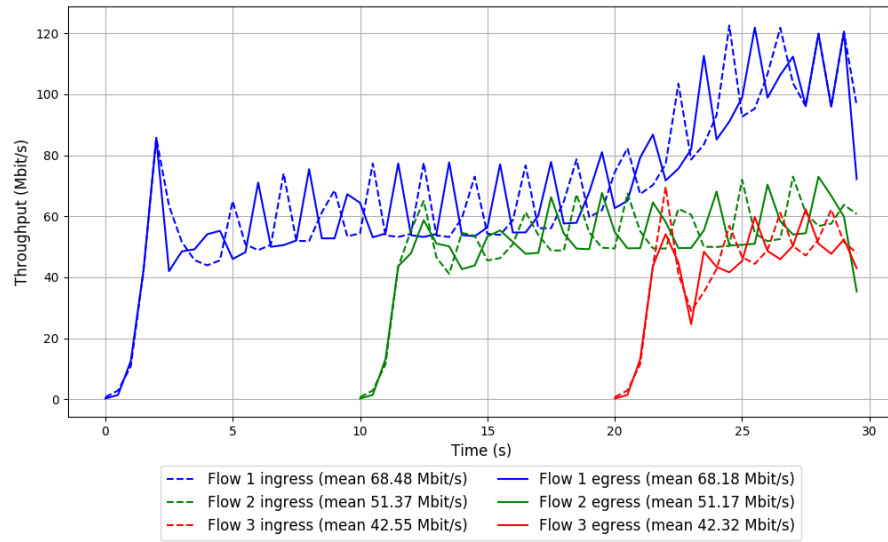
-- Flow 3:

Average throughput: 42.32 Mbit/s

95th percentile per-packet one-way delay: 118.571 ms

Loss rate: 2.84%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-04-18 02:29:27

End at: 2018-04-18 02:29:57

Below is generated by plot.py at 2018-04-18 07:21:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 154.53 Mbit/s

95th percentile per-packet one-way delay: 121.177 ms

Loss rate: 0.90%

-- Flow 1:

Average throughput: 83.81 Mbit/s

95th percentile per-packet one-way delay: 119.045 ms

Loss rate: 0.60%

-- Flow 2:

Average throughput: 64.59 Mbit/s

95th percentile per-packet one-way delay: 122.150 ms

Loss rate: 1.44%

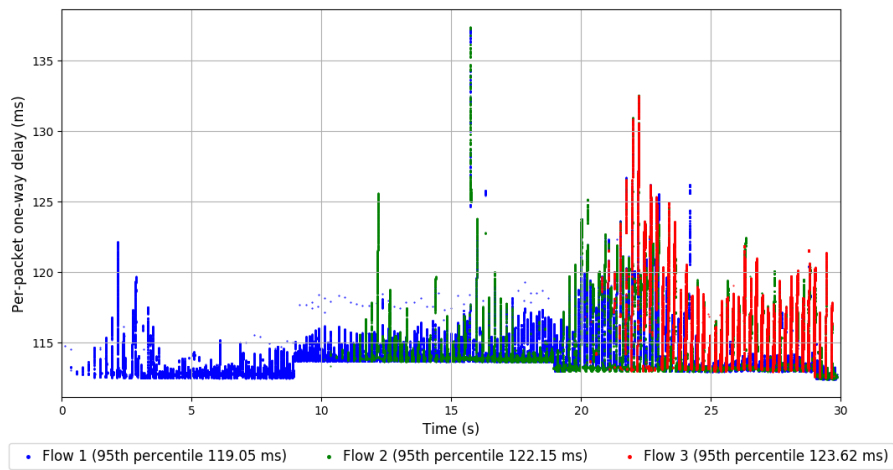
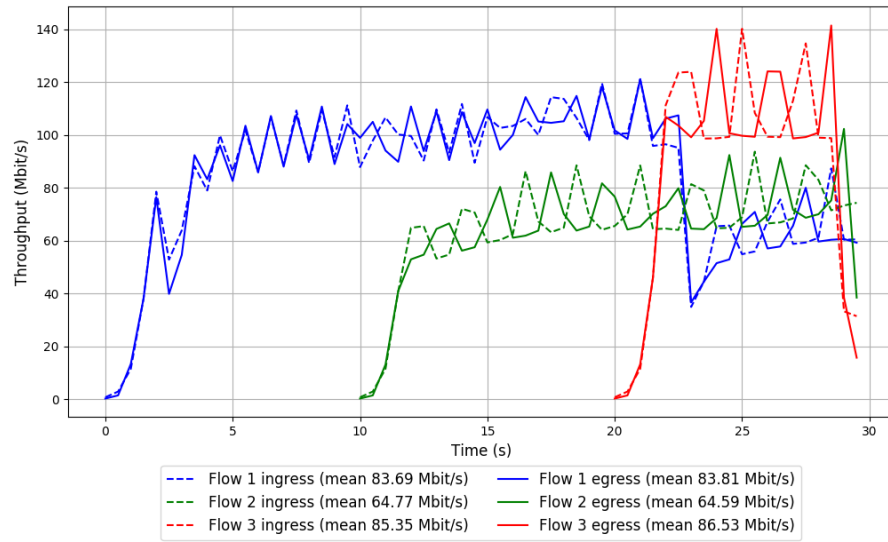
-- Flow 3:

Average throughput: 86.53 Mbit/s

95th percentile per-packet one-way delay: 123.618 ms

Loss rate: 0.94%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2018-04-18 02:46:43

End at: 2018-04-18 02:47:13

Below is generated by plot.py at 2018-04-18 07:21:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 101.19 Mbit/s

95th percentile per-packet one-way delay: 115.190 ms

Loss rate: 1.00%

-- Flow 1:

Average throughput: 68.25 Mbit/s

95th percentile per-packet one-way delay: 115.494 ms

Loss rate: 0.68%

-- Flow 2:

Average throughput: 48.78 Mbit/s

95th percentile per-packet one-way delay: 114.170 ms

Loss rate: 1.50%

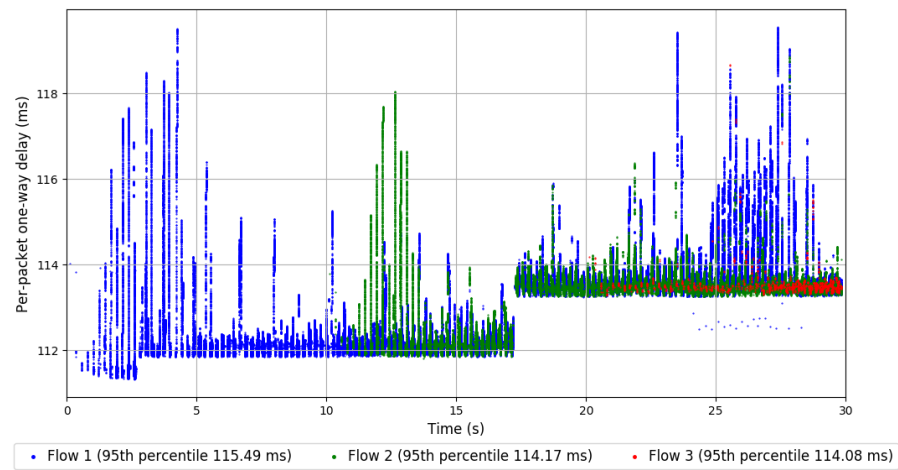
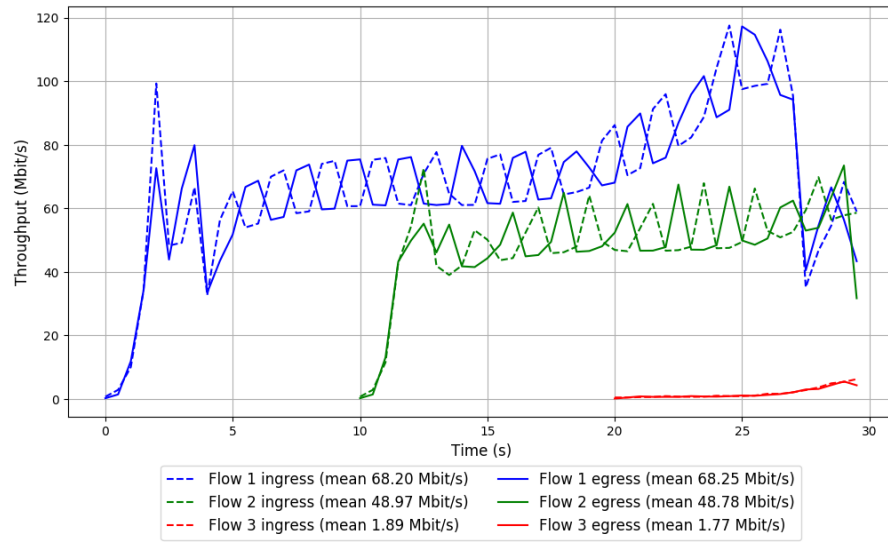
-- Flow 3:

Average throughput: 1.77 Mbit/s

95th percentile per-packet one-way delay: 114.079 ms

Loss rate: 8.99%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2018-04-18 03:03:56

End at: 2018-04-18 03:04:26

Below is generated by plot.py at 2018-04-18 07:22:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 116.33 Mbit/s

95th percentile per-packet one-way delay: 116.513 ms

Loss rate: 1.25%

-- Flow 1:

Average throughput: 64.81 Mbit/s

95th percentile per-packet one-way delay: 116.100 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 53.47 Mbit/s

95th percentile per-packet one-way delay: 116.026 ms

Loss rate: 1.39%

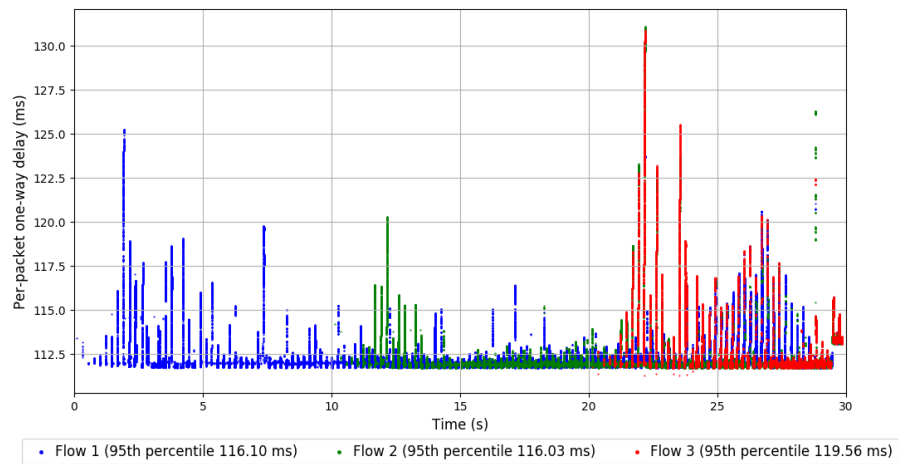
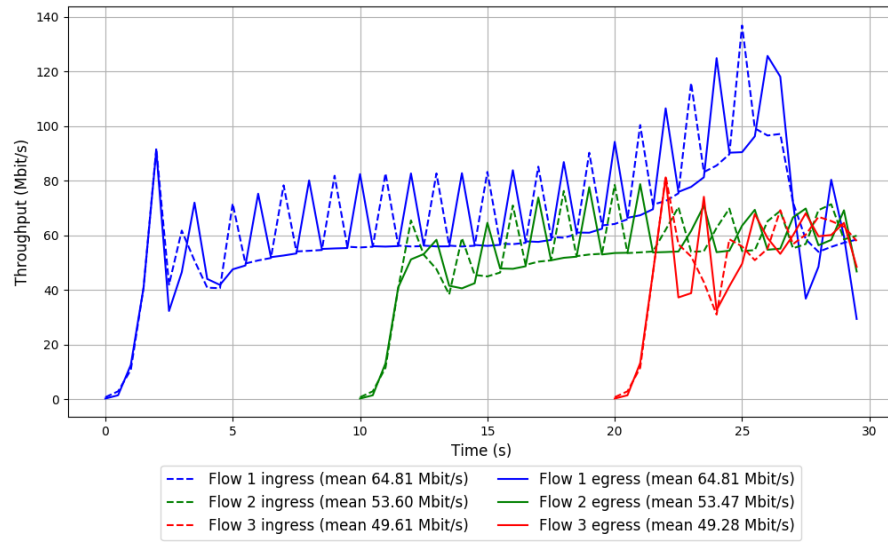
-- Flow 3:

Average throughput: 49.28 Mbit/s

95th percentile per-packet one-way delay: 119.560 ms

Loss rate: 2.89%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2018-04-18 03:20:52

End at: 2018-04-18 03:21:22

Below is generated by plot.py at 2018-04-18 07:22:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 109.30 Mbit/s

95th percentile per-packet one-way delay: 114.328 ms

Loss rate: 1.41%

-- Flow 1:

Average throughput: 68.00 Mbit/s

95th percentile per-packet one-way delay: 114.139 ms

Loss rate: 1.06%

-- Flow 2:

Average throughput: 40.29 Mbit/s

95th percentile per-packet one-way delay: 115.248 ms

Loss rate: 1.50%

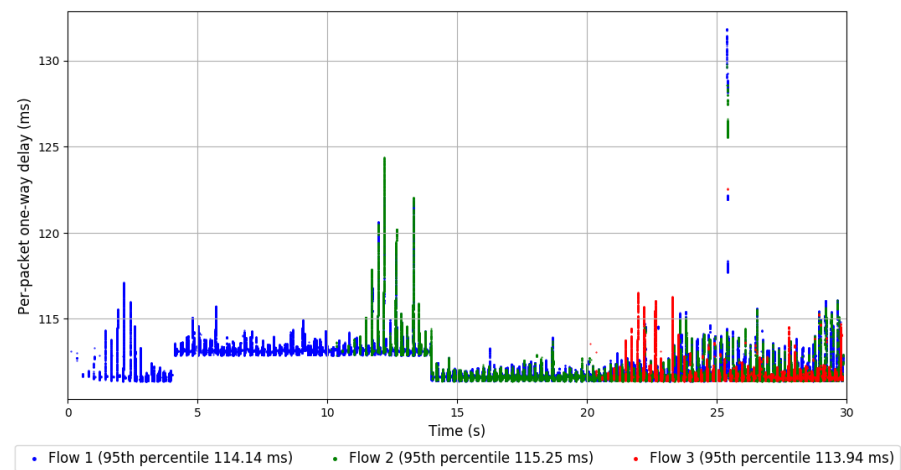
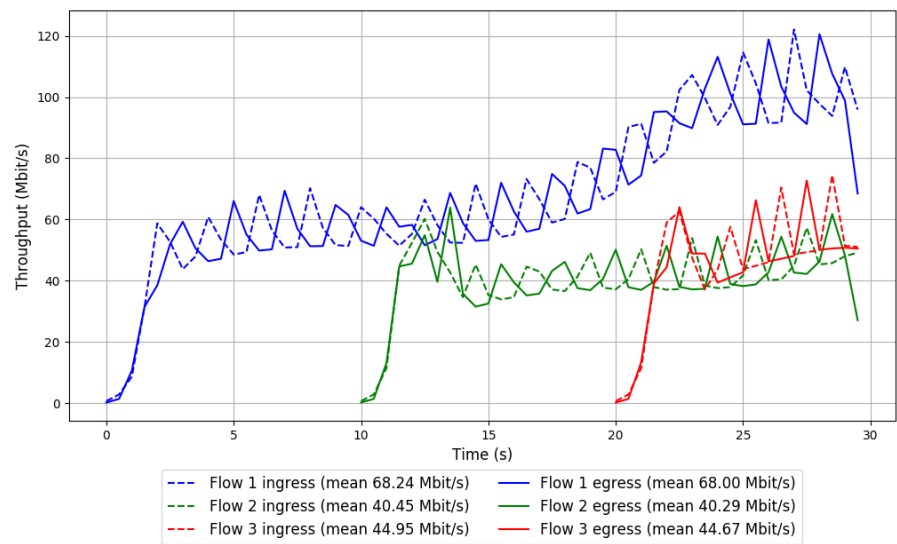
-- Flow 3:

Average throughput: 44.67 Mbit/s

95th percentile per-packet one-way delay: 113.937 ms

Loss rate: 2.87%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2018-04-18 03:38:05

End at: 2018-04-18 03:38:35

Below is generated by plot.py at 2018-04-18 07:22:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 107.25 Mbit/s

95th percentile per-packet one-way delay: 114.343 ms

Loss rate: 1.03%

-- Flow 1:

Average throughput: 71.65 Mbit/s

95th percentile per-packet one-way delay: 114.518 ms

Loss rate: 0.74%

-- Flow 2:

Average throughput: 52.85 Mbit/s

95th percentile per-packet one-way delay: 113.894 ms

Loss rate: 1.48%

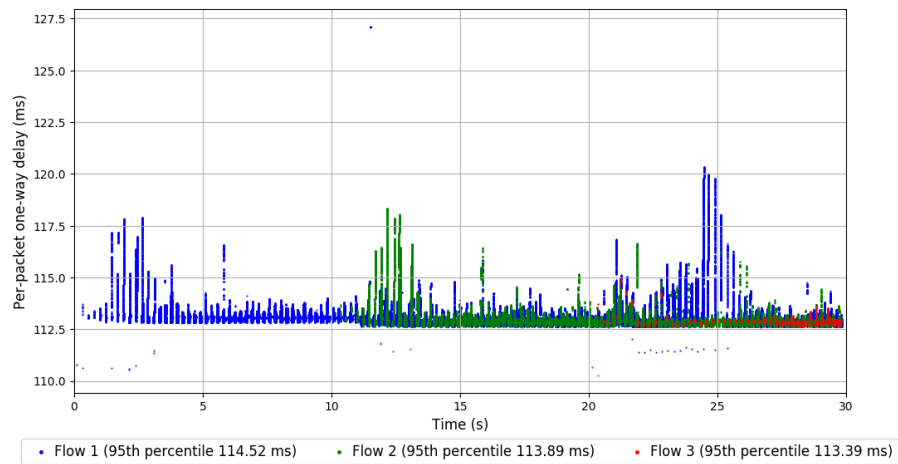
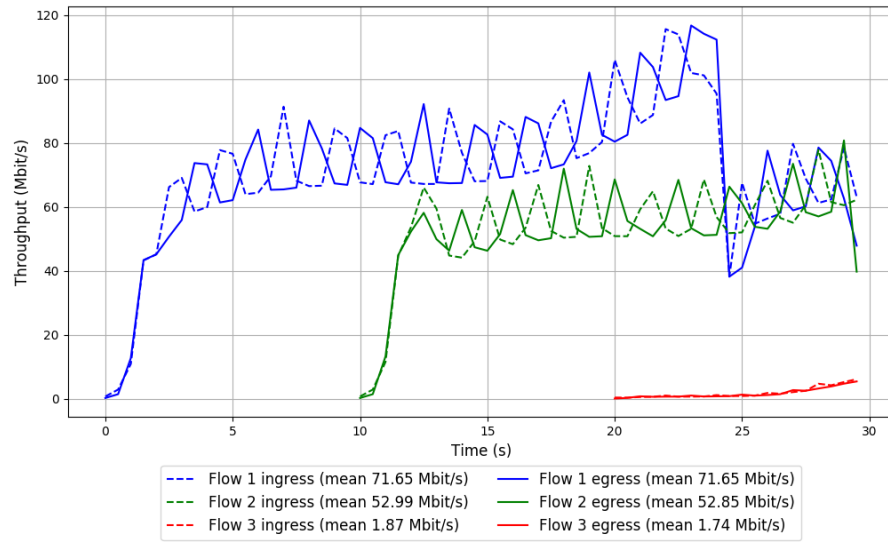
-- Flow 3:

Average throughput: 1.74 Mbit/s

95th percentile per-packet one-way delay: 113.393 ms

Loss rate: 9.05%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2018-04-18 03:55:04

End at: 2018-04-18 03:55:34

Below is generated by plot.py at 2018-04-18 07:22:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 114.04 Mbit/s

95th percentile per-packet one-way delay: 117.103 ms

Loss rate: 1.34%

-- Flow 1:

Average throughput: 63.65 Mbit/s

95th percentile per-packet one-way delay: 116.074 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 50.41 Mbit/s

95th percentile per-packet one-way delay: 118.156 ms

Loss rate: 1.50%

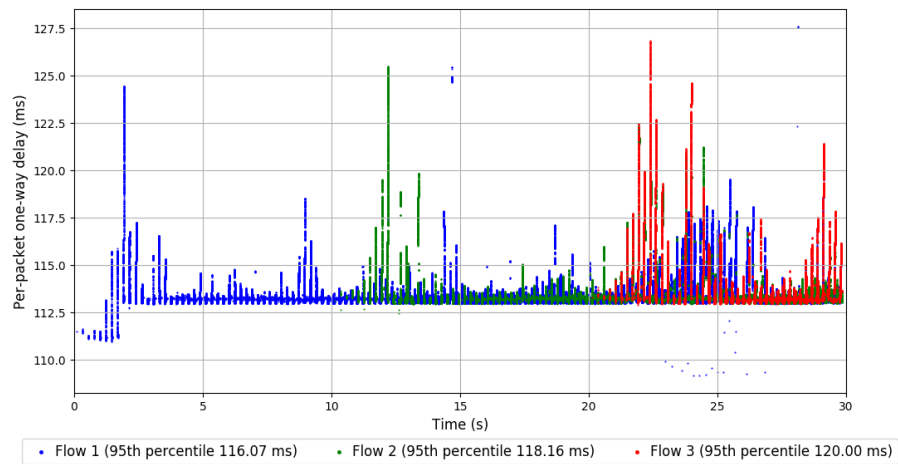
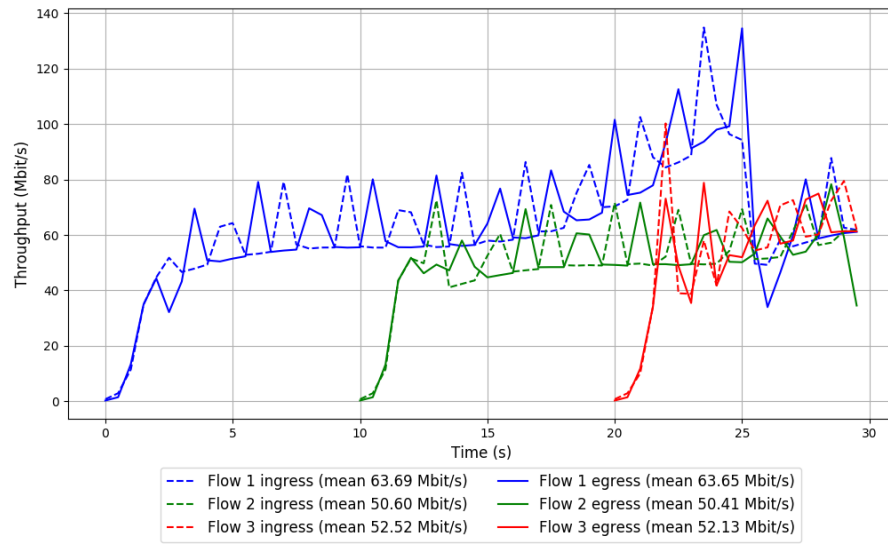
-- Flow 3:

Average throughput: 52.13 Mbit/s

95th percentile per-packet one-way delay: 120.003 ms

Loss rate: 2.96%

Run 10: Report of TCP Cubic — Data Link

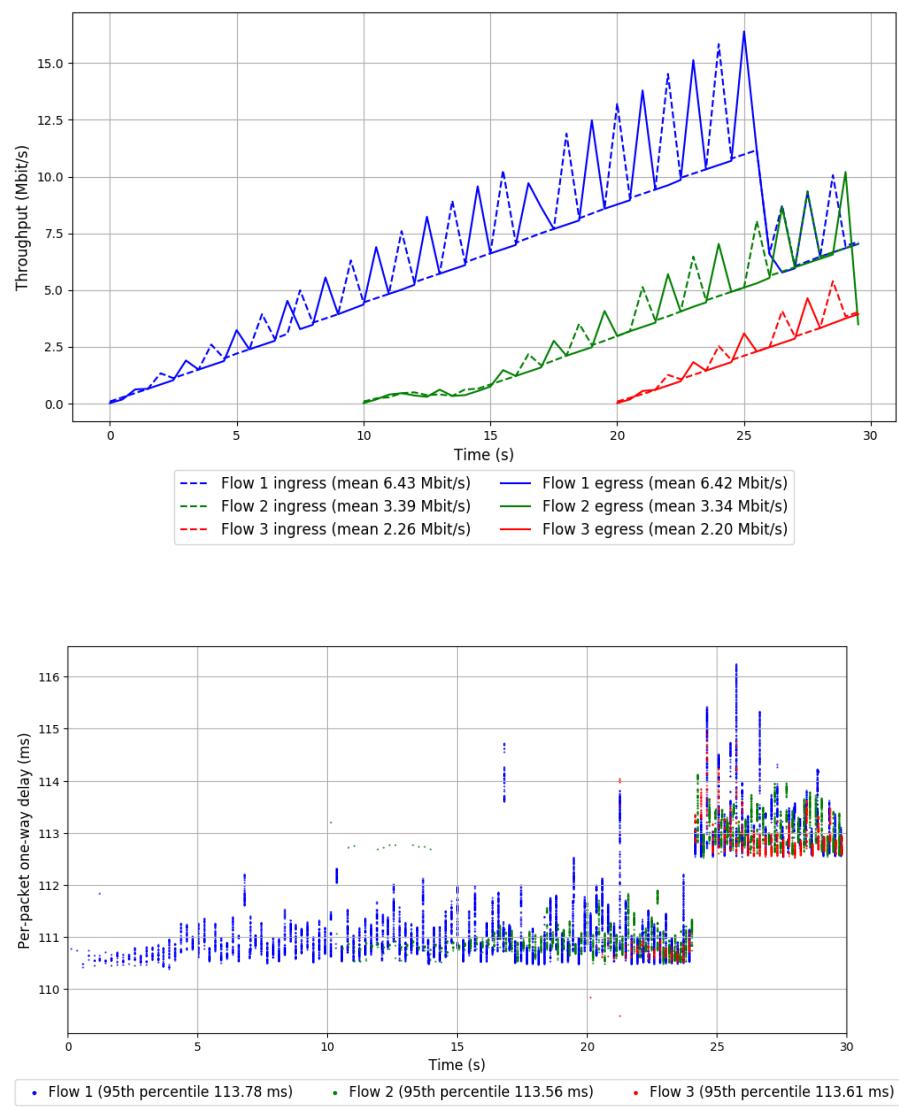


```
Run 1: Statistics of LEDBAT

Start at: 2018-04-18 01:19:52
End at: 2018-04-18 01:20:22

# Below is generated by plot.py at 2018-04-18 07:22:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 9.34 Mbit/s
95th percentile per-packet one-way delay: 113.644 ms
Loss rate: 1.63%
-- Flow 1:
Average throughput: 6.42 Mbit/s
95th percentile per-packet one-way delay: 113.779 ms
Loss rate: 0.94%
-- Flow 2:
Average throughput: 3.34 Mbit/s
95th percentile per-packet one-way delay: 113.561 ms
Loss rate: 2.64%
-- Flow 3:
Average throughput: 2.20 Mbit/s
95th percentile per-packet one-way delay: 113.605 ms
Loss rate: 4.58%
```


Run 1: Report of LEDBAT — Data Link

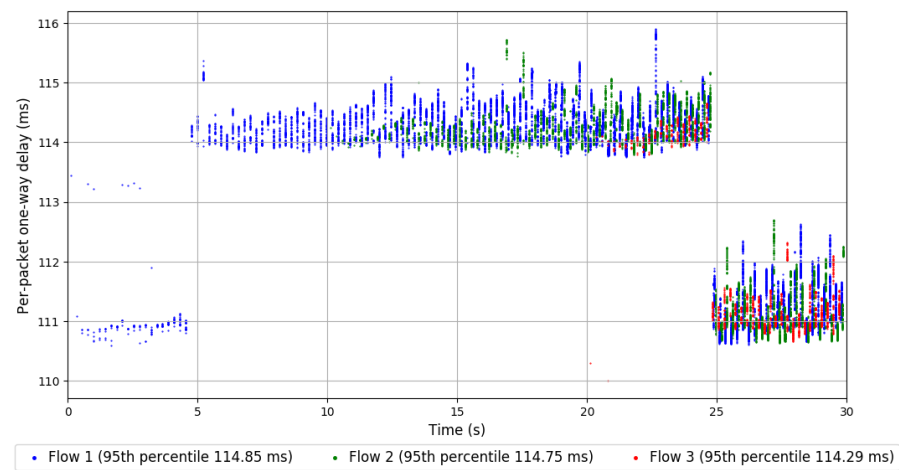
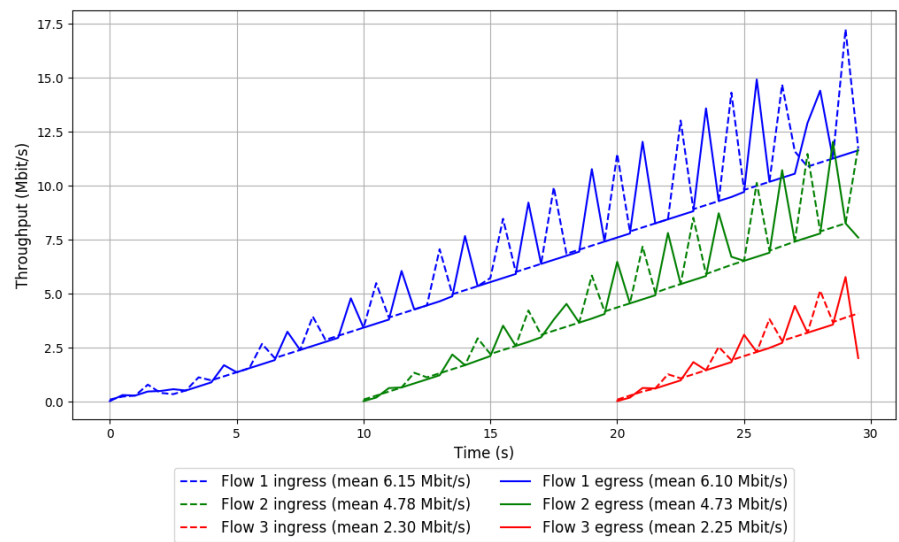


```
Run 2: Statistics of LEDBAT

Start at: 2018-04-18 01:37:01
End at: 2018-04-18 01:37:31

# Below is generated by plot.py at 2018-04-18 07:22:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 9.94 Mbit/s
95th percentile per-packet one-way delay: 114.801 ms
Loss rate: 2.01%
-- Flow 1:
Average throughput: 6.10 Mbit/s
95th percentile per-packet one-way delay: 114.847 ms
Loss rate: 1.60%
-- Flow 2:
Average throughput: 4.73 Mbit/s
95th percentile per-packet one-way delay: 114.754 ms
Loss rate: 2.20%
-- Flow 3:
Average throughput: 2.25 Mbit/s
95th percentile per-packet one-way delay: 114.286 ms
Loss rate: 4.59%
```

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-04-18 01:54:25

End at: 2018-04-18 01:54:55

Below is generated by plot.py at 2018-04-18 07:22:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.64 Mbit/s

95th percentile per-packet one-way delay: 116.905 ms

Loss rate: 2.01%

-- Flow 1:

Average throughput: 6.99 Mbit/s

95th percentile per-packet one-way delay: 116.961 ms

Loss rate: 1.50%

-- Flow 2:

Average throughput: 1.43 Mbit/s

95th percentile per-packet one-way delay: 116.335 ms

Loss rate: 3.69%

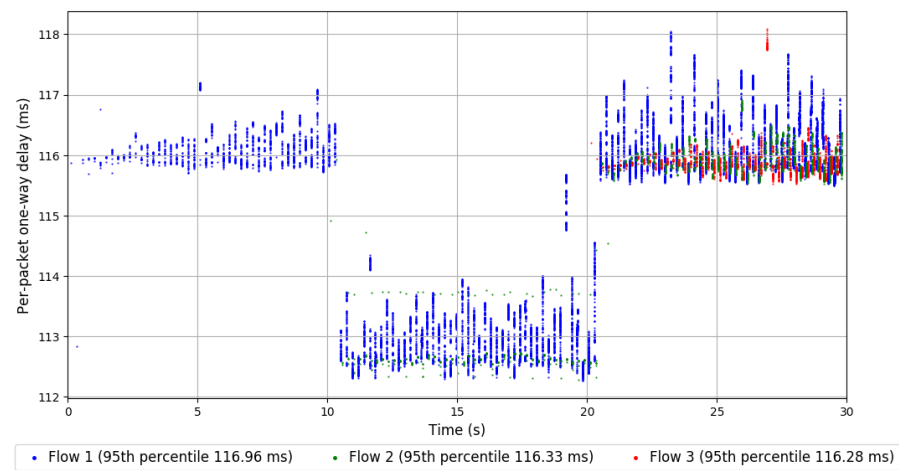
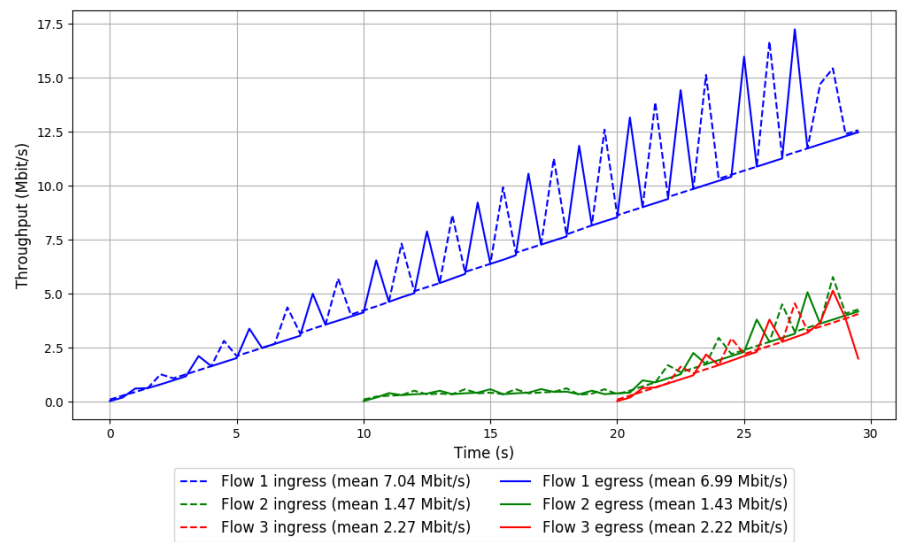
-- Flow 3:

Average throughput: 2.22 Mbit/s

95th percentile per-packet one-way delay: 116.285 ms

Loss rate: 4.67%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-04-18 02:11:33

End at: 2018-04-18 02:12:03

Below is generated by plot.py at 2018-04-18 07:22:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 10.81 Mbit/s

95th percentile per-packet one-way delay: 116.365 ms

Loss rate: 1.94%

-- Flow 1:

Average throughput: 7.00 Mbit/s

95th percentile per-packet one-way delay: 116.415 ms

Loss rate: 1.50%

-- Flow 2:

Average throughput: 4.68 Mbit/s

95th percentile per-packet one-way delay: 116.324 ms

Loss rate: 2.28%

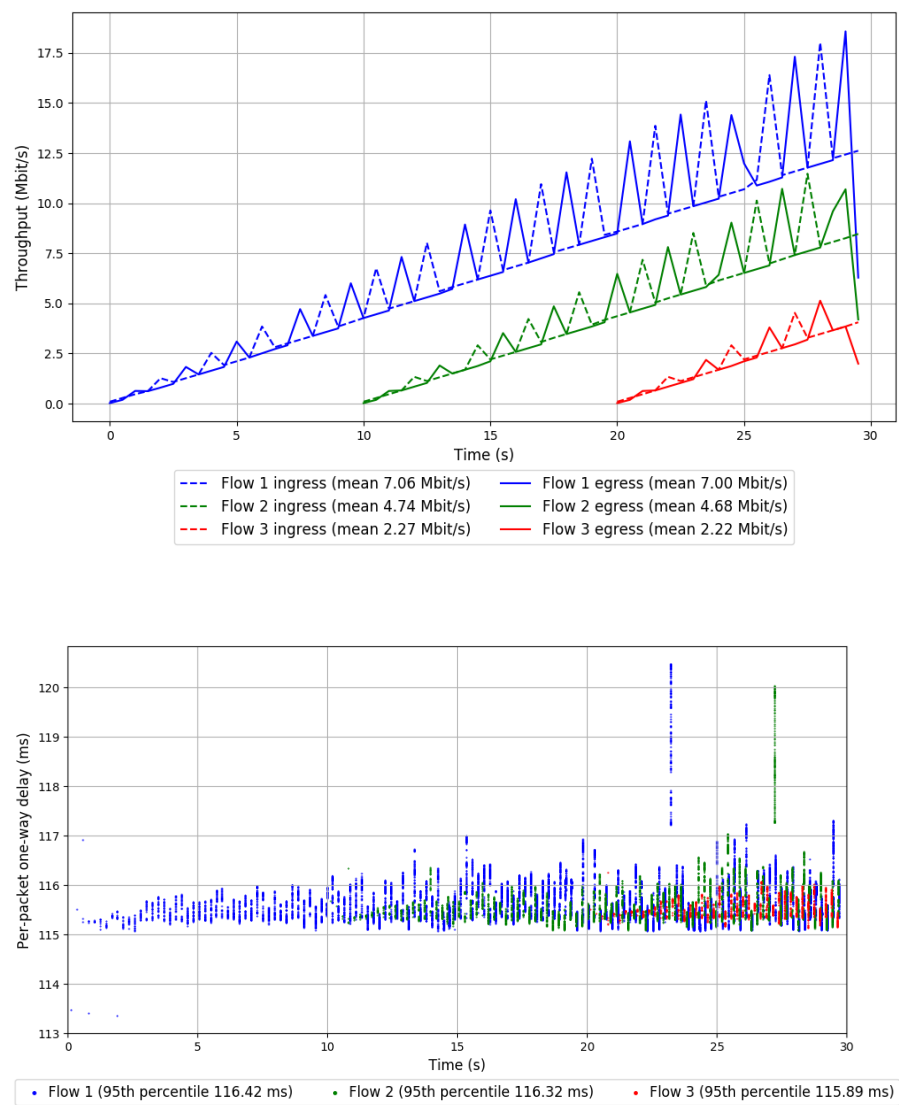
-- Flow 3:

Average throughput: 2.22 Mbit/s

95th percentile per-packet one-way delay: 115.893 ms

Loss rate: 4.67%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-04-18 02:28:40

End at: 2018-04-18 02:29:10

Below is generated by plot.py at 2018-04-18 07:22:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 9.23 Mbit/s

95th percentile per-packet one-way delay: 114.308 ms

Loss rate: 2.04%

-- Flow 1:

Average throughput: 6.79 Mbit/s

95th percentile per-packet one-way delay: 114.339 ms

Loss rate: 1.53%

-- Flow 2:

Average throughput: 2.77 Mbit/s

95th percentile per-packet one-way delay: 114.062 ms

Loss rate: 2.88%

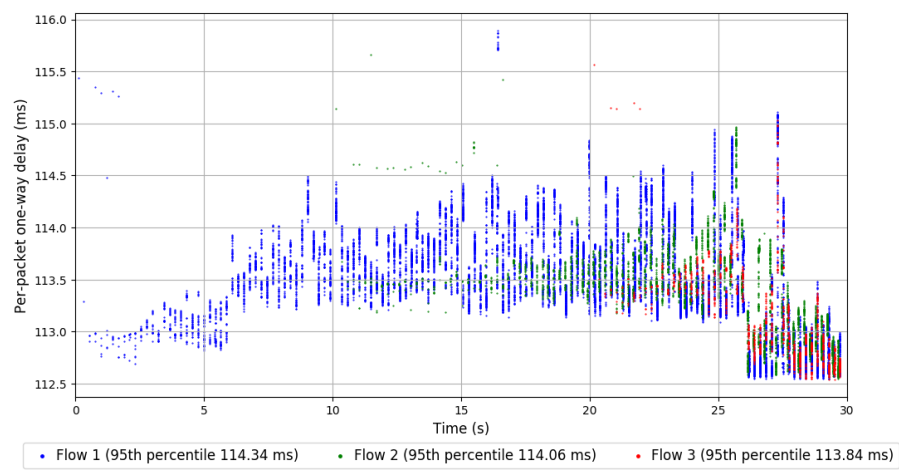
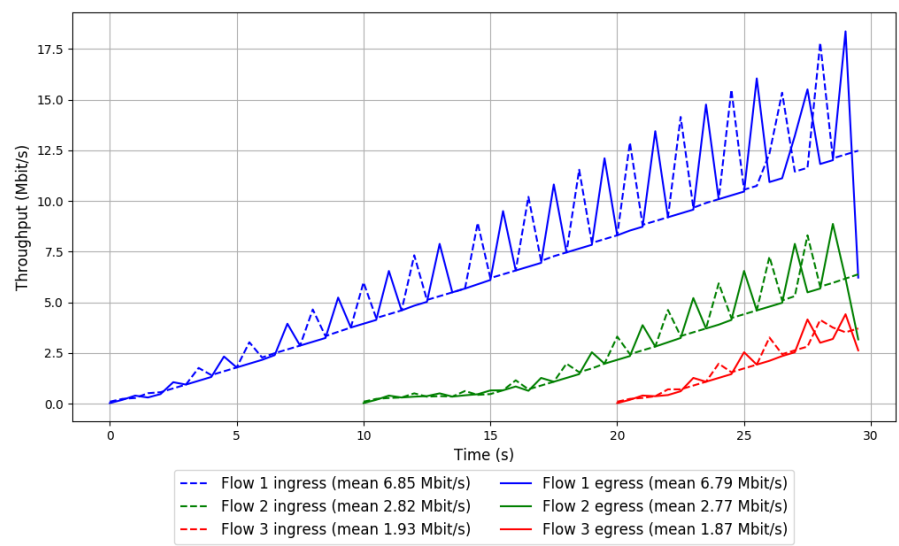
-- Flow 3:

Average throughput: 1.87 Mbit/s

95th percentile per-packet one-way delay: 113.838 ms

Loss rate: 4.97%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2018-04-18 02:45:56

End at: 2018-04-18 02:46:26

Below is generated by plot.py at 2018-04-18 07:22:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 10.64 Mbit/s

95th percentile per-packet one-way delay: 113.046 ms

Loss rate: 1.94%

-- Flow 1:

Average throughput: 7.23 Mbit/s

95th percentile per-packet one-way delay: 113.080 ms

Loss rate: 1.49%

-- Flow 2:

Average throughput: 4.05 Mbit/s

95th percentile per-packet one-way delay: 113.027 ms

Loss rate: 2.42%

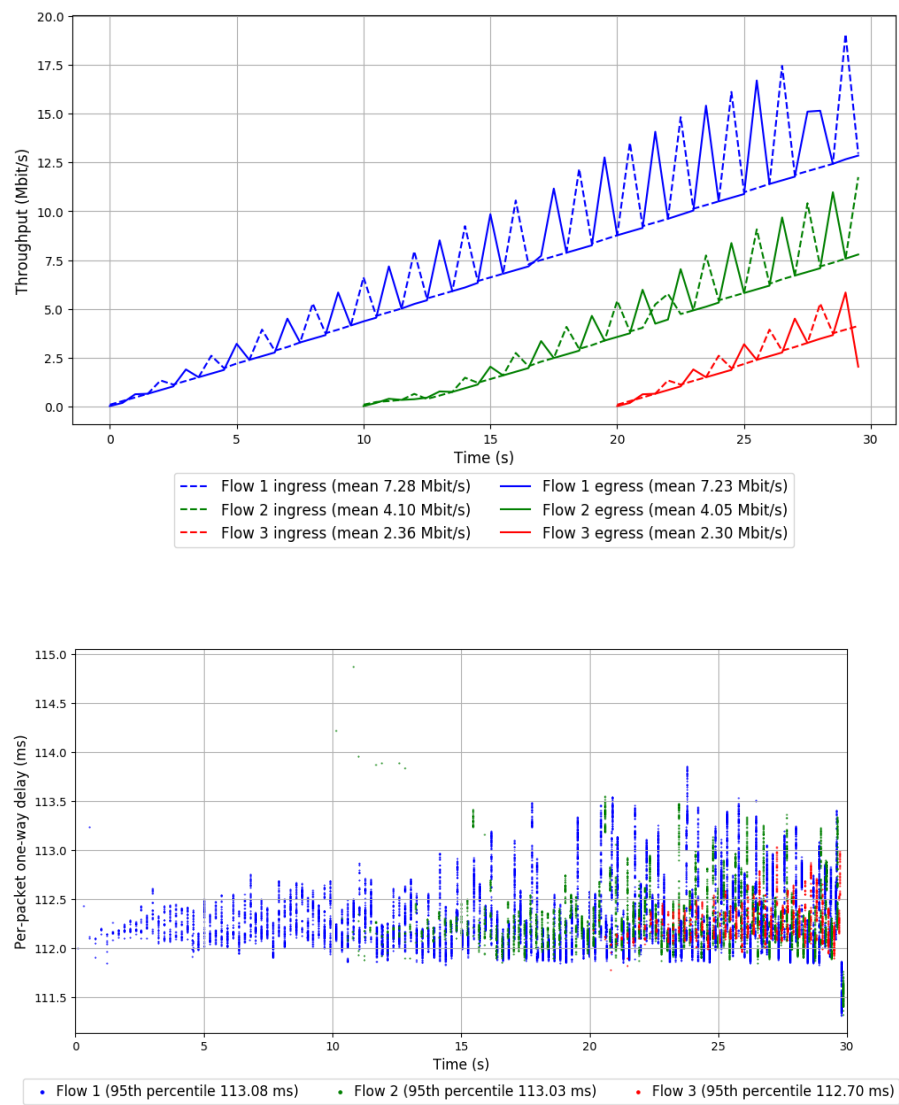
-- Flow 3:

Average throughput: 2.30 Mbit/s

95th percentile per-packet one-way delay: 112.702 ms

Loss rate: 4.53%

Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

Start at: 2018-04-18 03:03:09

End at: 2018-04-18 03:03:39

Below is generated by plot.py at 2018-04-18 07:22:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 10.60 Mbit/s

95th percentile per-packet one-way delay: 113.936 ms

Loss rate: 1.94%

-- Flow 1:

Average throughput: 7.23 Mbit/s

95th percentile per-packet one-way delay: 113.888 ms

Loss rate: 1.49%

-- Flow 2:

Average throughput: 3.98 Mbit/s

95th percentile per-packet one-way delay: 114.016 ms

Loss rate: 2.44%

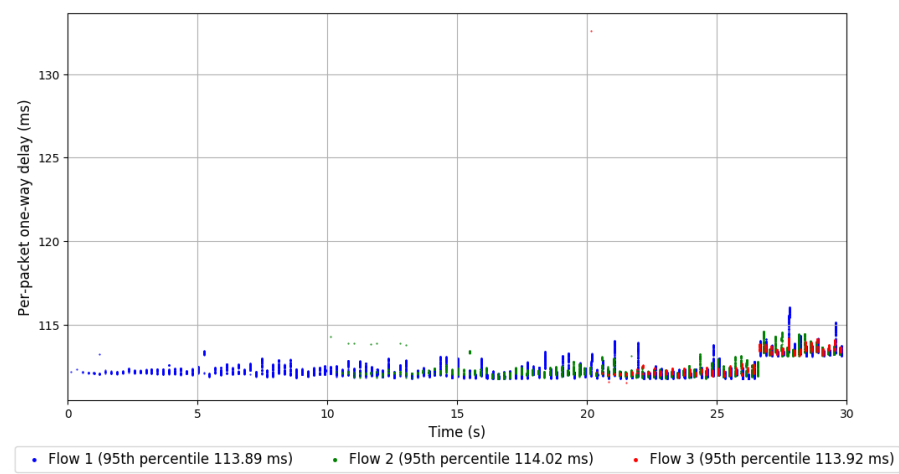
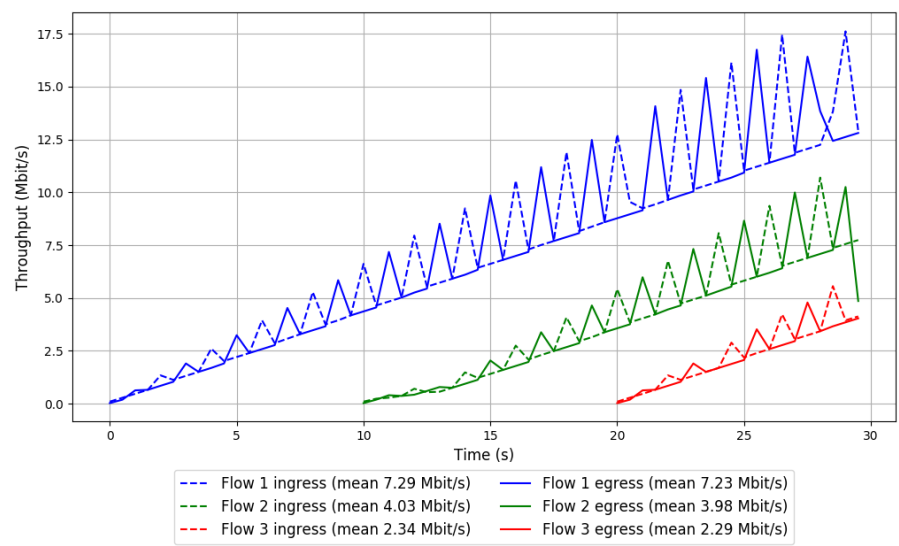
-- Flow 3:

Average throughput: 2.29 Mbit/s

95th percentile per-packet one-way delay: 113.919 ms

Loss rate: 4.53%

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2018-04-18 03:20:06

End at: 2018-04-18 03:20:36

Below is generated by plot.py at 2018-04-18 07:22:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.58 Mbit/s

95th percentile per-packet one-way delay: 112.523 ms

Loss rate: 3.12%

-- Flow 1:

Average throughput: 2.52 Mbit/s

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

Loss rate: 2.46%

-- Flow 2:

Average throughput: 1.14 Mbit/s

95th percentile per-packet one-way delay: 112.106 ms

Loss rate: 3.99%

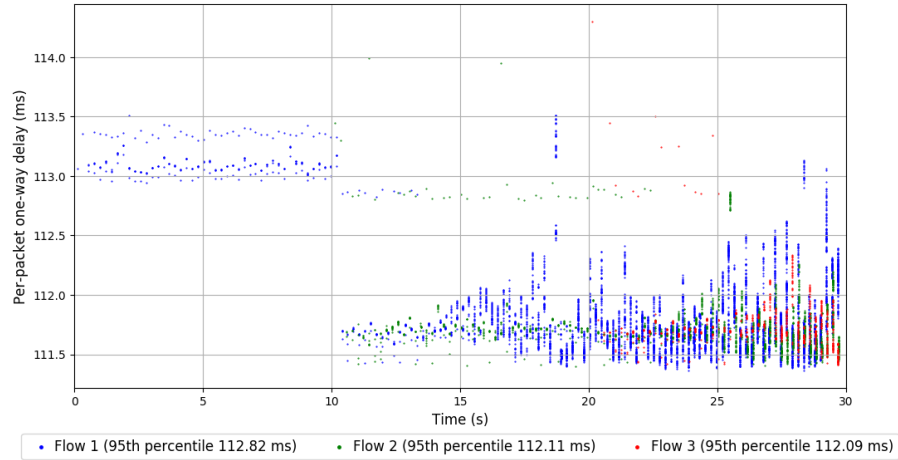
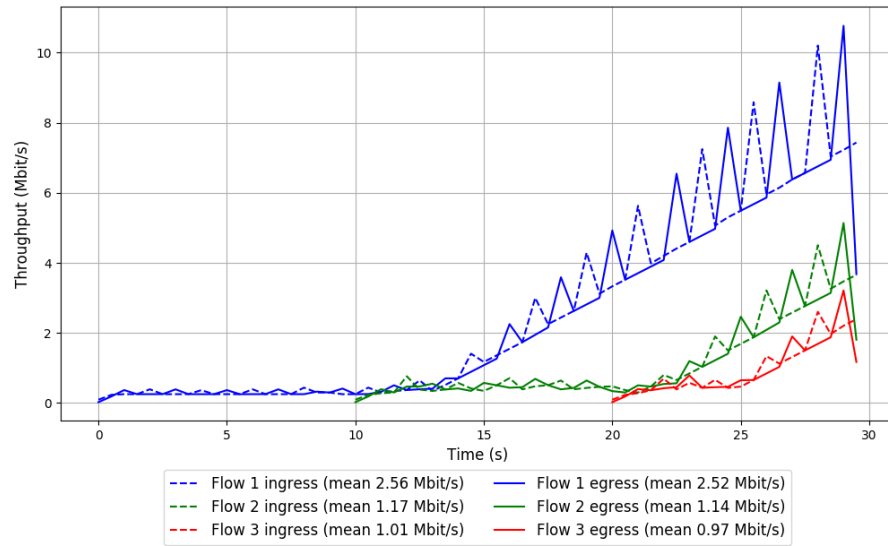
-- Flow 3:

Average throughput: 0.97 Mbit/s

95th percentile per-packet one-way delay: 112.088 ms

Loss rate: 6.18%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2018-04-18 03:37:18

End at: 2018-04-18 03:37:48

Below is generated by plot.py at 2018-04-18 07:22:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 10.92 Mbit/s

95th percentile per-packet one-way delay: 113.712 ms

Loss rate: 1.93%

-- Flow 1:

Average throughput: 7.13 Mbit/s

95th percentile per-packet one-way delay: 113.887 ms

Loss rate: 1.50%

-- Flow 2:

Average throughput: 4.66 Mbit/s

95th percentile per-packet one-way delay: 113.588 ms

Loss rate: 2.28%

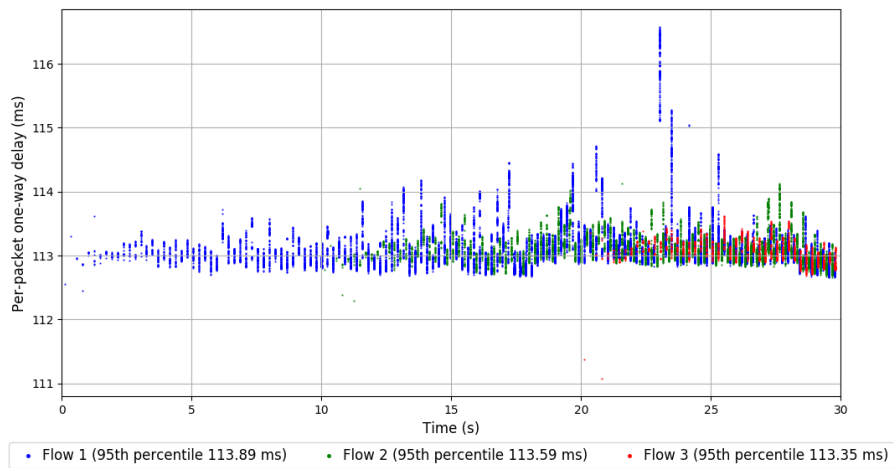
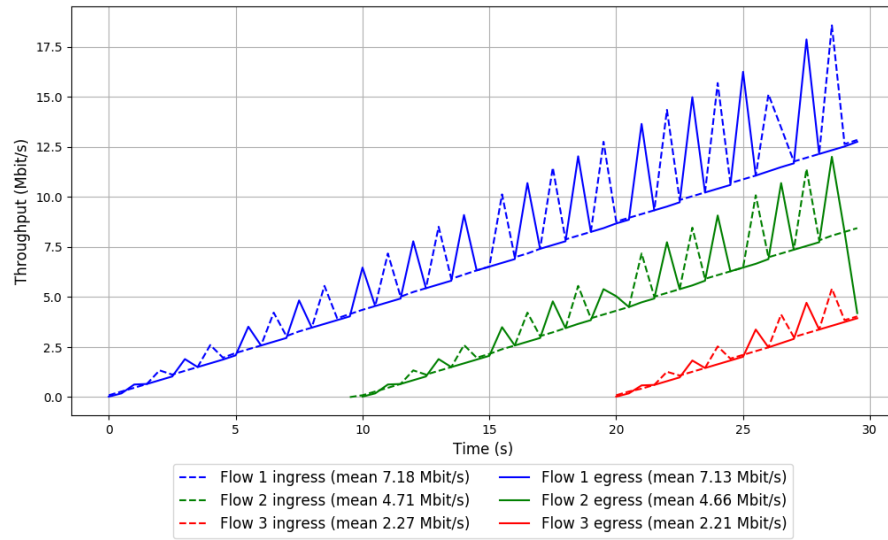
-- Flow 3:

Average throughput: 2.21 Mbit/s

95th percentile per-packet one-way delay: 113.351 ms

Loss rate: 4.55%

Run 9: Report of LEDBAT — Data Link



Run 10: Statistics of LEDBAT

Start at: 2018-04-18 03:54:17

End at: 2018-04-18 03:54:47

Below is generated by plot.py at 2018-04-18 07:22:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 10.03 Mbit/s

95th percentile per-packet one-way delay: 113.573 ms

Loss rate: 1.77%

-- Flow 1:

Average throughput: 6.88 Mbit/s

95th percentile per-packet one-way delay: 113.583 ms

Loss rate: 1.53%

-- Flow 2:

Average throughput: 4.62 Mbit/s

95th percentile per-packet one-way delay: 113.549 ms

Loss rate: 2.28%

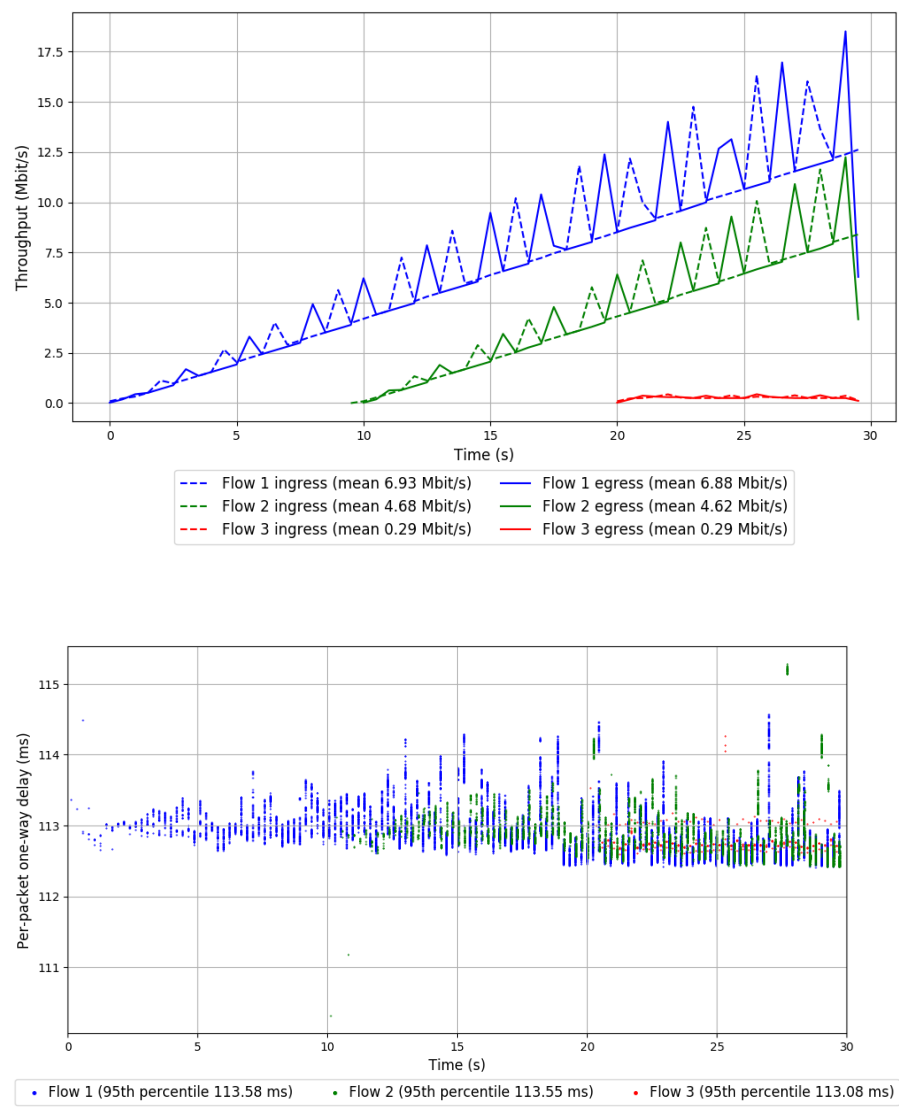
-- Flow 3:

Average throughput: 0.29 Mbit/s

95th percentile per-packet one-way delay: 113.084 ms

Loss rate: 2.48%

Run 10: Report of LEDBAT — Data Link

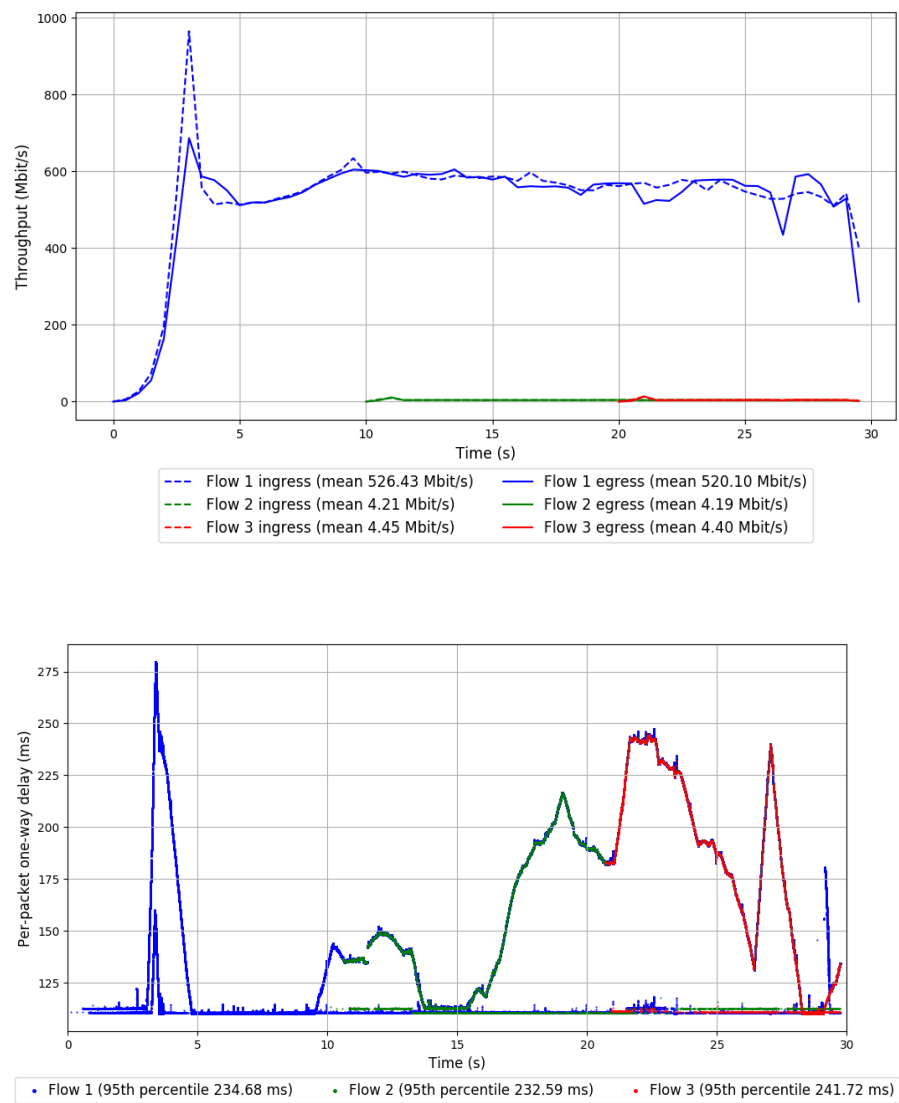


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-04-18 01:22:43
End at: 2018-04-18 01:23:13

# Below is generated by plot.py at 2018-04-18 07:30:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 524.30 Mbit/s
95th percentile per-packet one-way delay: 234.742 ms
Loss rate: 1.94%
-- Flow 1:
Average throughput: 520.10 Mbit/s
95th percentile per-packet one-way delay: 234.677 ms
Loss rate: 1.94%
-- Flow 2:
Average throughput: 4.19 Mbit/s
95th percentile per-packet one-way delay: 232.594 ms
Loss rate: 1.66%
-- Flow 3:
Average throughput: 4.40 Mbit/s
95th percentile per-packet one-way delay: 241.716 ms
Loss rate: 3.37%
```

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-04-18 01:39:55

End at: 2018-04-18 01:40:25

Below is generated by plot.py at 2018-04-18 07:30:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 498.55 Mbit/s

95th percentile per-packet one-way delay: 247.707 ms

Loss rate: 2.95%

-- Flow 1:

Average throughput: 476.06 Mbit/s

95th percentile per-packet one-way delay: 248.008 ms

Loss rate: 2.96%

-- Flow 2:

Average throughput: 31.87 Mbit/s

95th percentile per-packet one-way delay: 243.750 ms

Loss rate: 2.75%

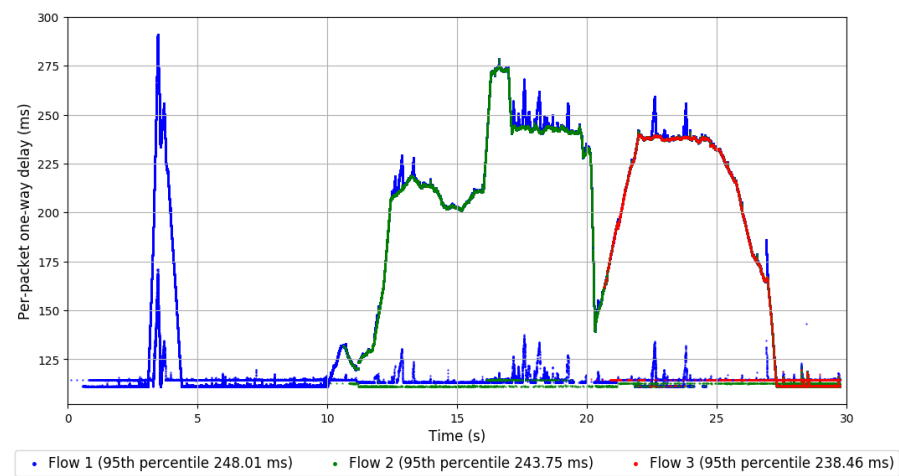
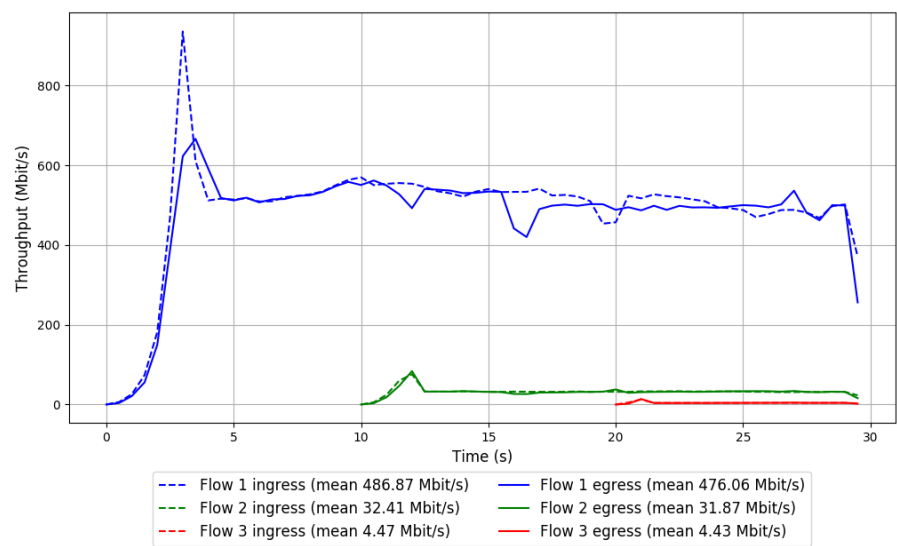
-- Flow 3:

Average throughput: 4.43 Mbit/s

95th percentile per-packet one-way delay: 238.457 ms

Loss rate: 3.12%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-04-18 01:57:18

End at: 2018-04-18 01:57:48

Below is generated by plot.py at 2018-04-18 07:31:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 521.95 Mbit/s

95th percentile per-packet one-way delay: 240.647 ms

Loss rate: 3.13%

-- Flow 1:

Average throughput: 518.49 Mbit/s

95th percentile per-packet one-way delay: 240.664 ms

Loss rate: 3.13%

-- Flow 2:

Average throughput: 4.08 Mbit/s

95th percentile per-packet one-way delay: 240.288 ms

Loss rate: 3.17%

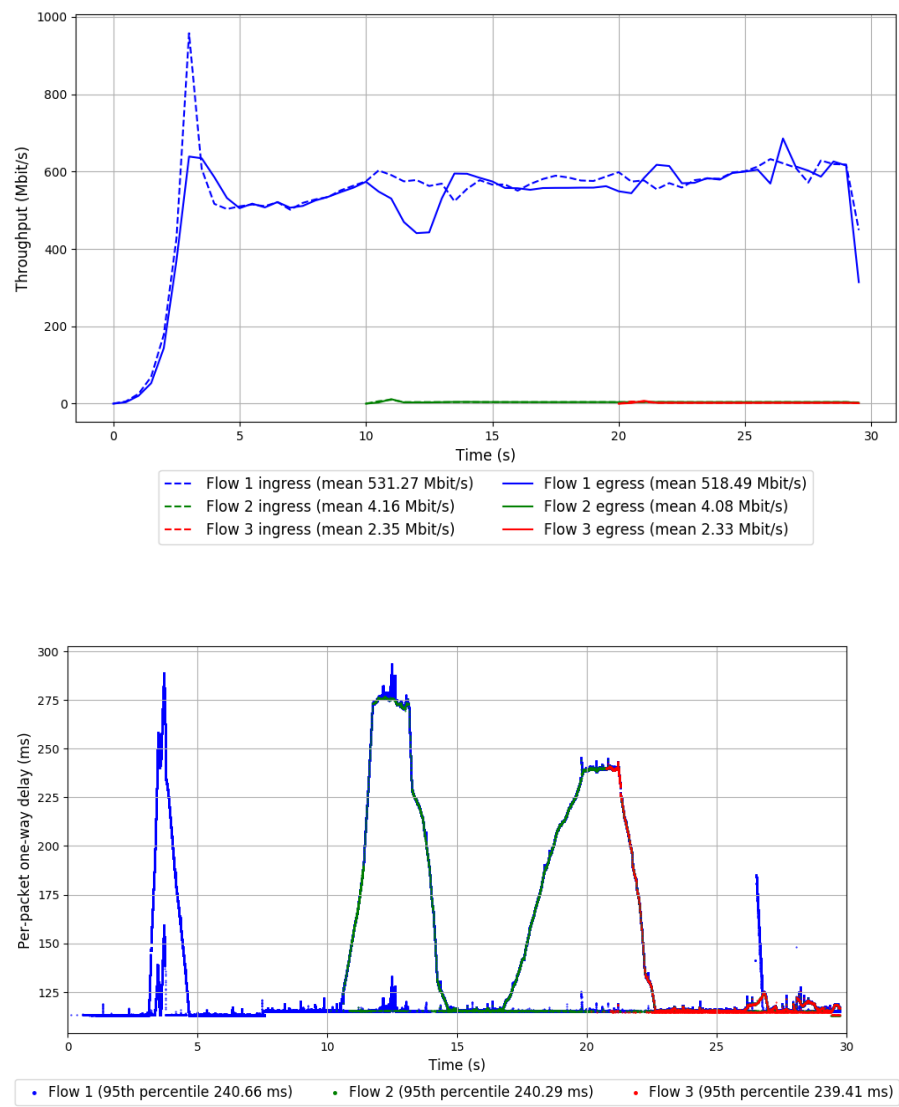
-- Flow 3:

Average throughput: 2.33 Mbit/s

95th percentile per-packet one-way delay: 239.415 ms

Loss rate: 3.15%

Run 3: Report of PCC-Allegro — Data Link

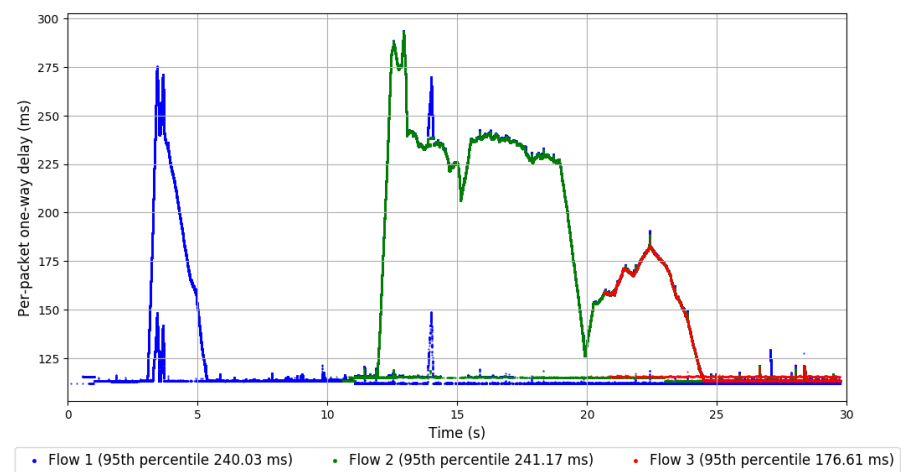
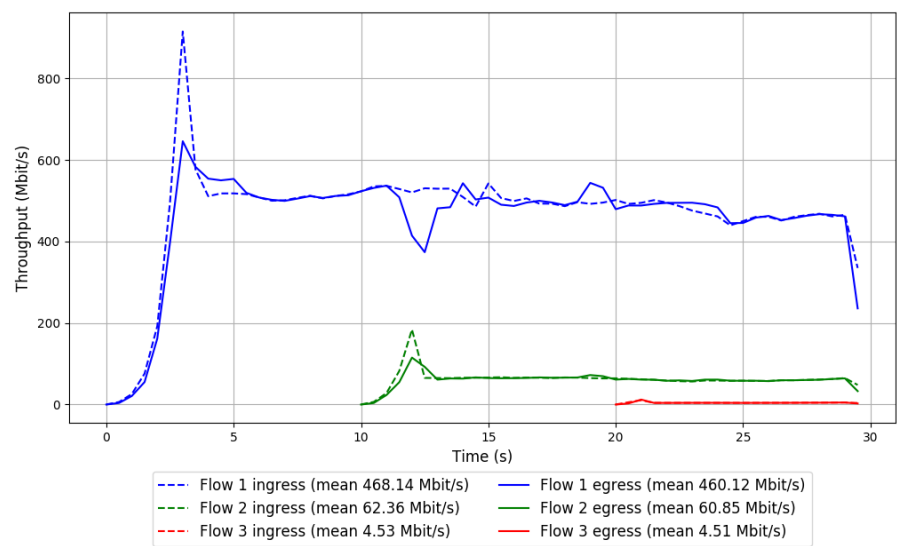


```
Run 4: Statistics of PCC-Allegro

Start at: 2018-04-18 02:14:25
End at: 2018-04-18 02:14:55

# Below is generated by plot.py at 2018-04-18 07:31:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 501.83 Mbit/s
95th percentile per-packet one-way delay: 240.077 ms
Loss rate: 2.54%
-- Flow 1:
Average throughput: 460.12 Mbit/s
95th percentile per-packet one-way delay: 240.034 ms
Loss rate: 2.45%
-- Flow 2:
Average throughput: 60.85 Mbit/s
95th percentile per-packet one-way delay: 241.166 ms
Loss rate: 3.53%
-- Flow 3:
Average throughput: 4.51 Mbit/s
95th percentile per-packet one-way delay: 176.613 ms
Loss rate: 2.64%
```

Run 4: Report of PCC-Allegro — Data Link

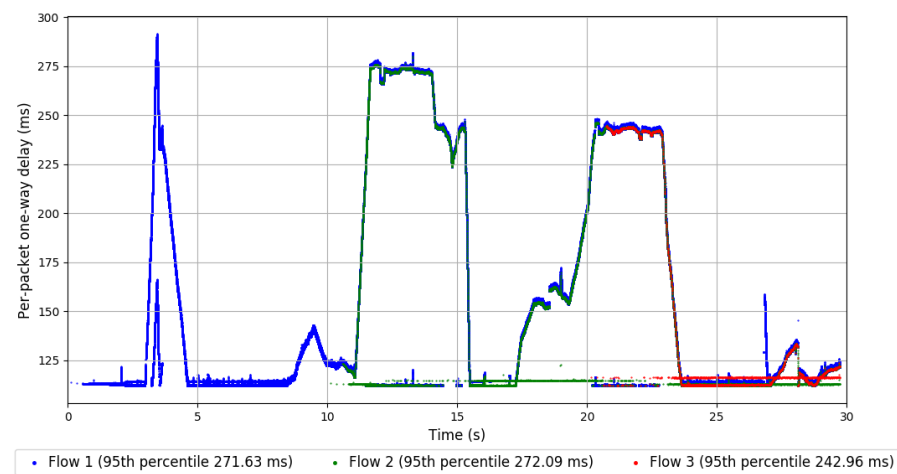
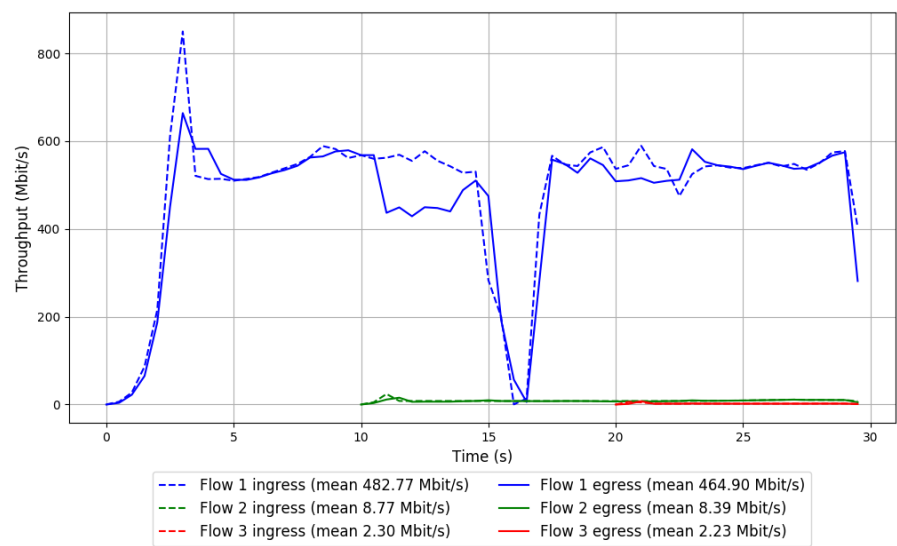


```
Run 5: Statistics of PCC-Allegro

Start at: 2018-04-18 02:31:34
End at: 2018-04-18 02:32:04

# Below is generated by plot.py at 2018-04-18 07:31:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 471.18 Mbit/s
95th percentile per-packet one-way delay: 271.629 ms
Loss rate: 4.44%
-- Flow 1:
Average throughput: 464.90 Mbit/s
95th percentile per-packet one-way delay: 271.627 ms
Loss rate: 4.43%
-- Flow 2:
Average throughput: 8.39 Mbit/s
95th percentile per-packet one-way delay: 272.086 ms
Loss rate: 5.41%
-- Flow 3:
Average throughput: 2.23 Mbit/s
95th percentile per-packet one-way delay: 242.957 ms
Loss rate: 5.25%
```

Run 5: Report of PCC-Allegro — Data Link



Run 6: Statistics of PCC-Allegro

Start at: 2018-04-18 02:48:46

End at: 2018-04-18 02:49:16

Below is generated by plot.py at 2018-04-18 07:31:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 521.13 Mbit/s

95th percentile per-packet one-way delay: 229.597 ms

Loss rate: 2.14%

-- Flow 1:

Average throughput: 460.24 Mbit/s

95th percentile per-packet one-way delay: 229.682 ms

Loss rate: 2.14%

-- Flow 2:

Average throughput: 60.98 Mbit/s

95th percentile per-packet one-way delay: 229.339 ms

Loss rate: 1.95%

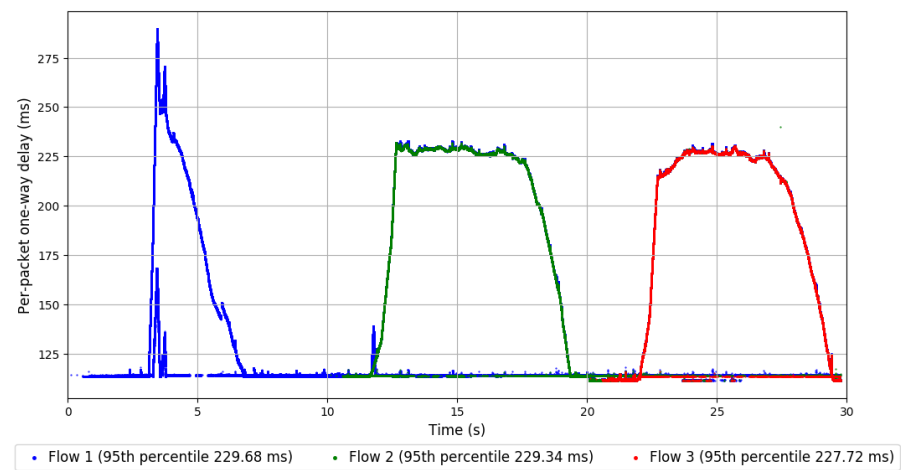
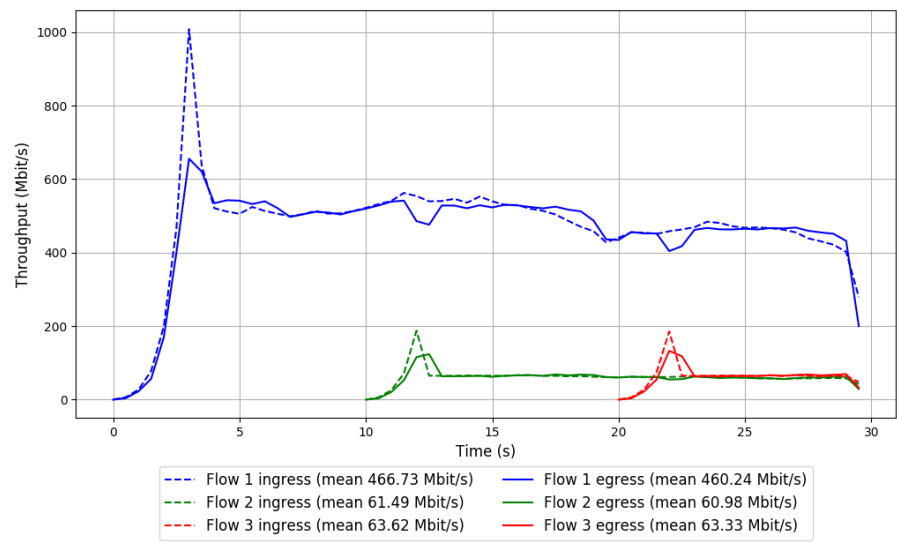
-- Flow 3:

Average throughput: 63.33 Mbit/s

95th percentile per-packet one-way delay: 227.720 ms

Loss rate: 2.72%

Run 6: Report of PCC-Allegro — Data Link



Run 7: Statistics of PCC-Allegro

Start at: 2018-04-18 03:05:59

End at: 2018-04-18 03:06:29

Below is generated by plot.py at 2018-04-18 07:31:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 486.14 Mbit/s

95th percentile per-packet one-way delay: 247.486 ms

Loss rate: 2.69%

-- Flow 1:

Average throughput: 472.55 Mbit/s

95th percentile per-packet one-way delay: 247.770 ms

Loss rate: 2.69%

-- Flow 2:

Average throughput: 4.40 Mbit/s

95th percentile per-packet one-way delay: 236.783 ms

Loss rate: 1.50%

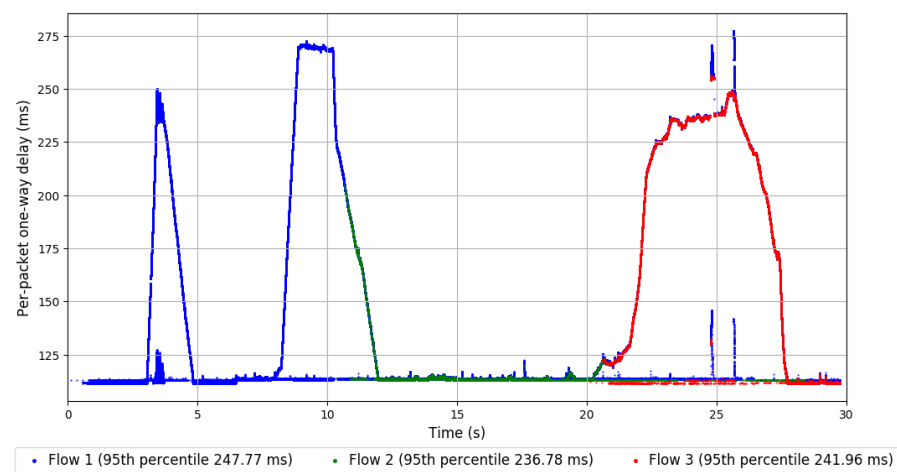
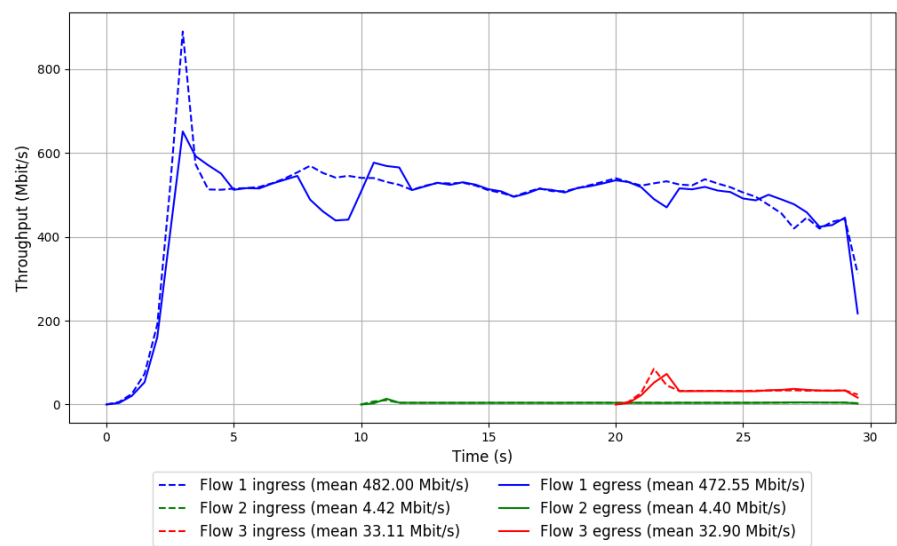
-- Flow 3:

Average throughput: 32.90 Mbit/s

95th percentile per-packet one-way delay: 241.955 ms

Loss rate: 2.85%

Run 7: Report of PCC-Allegro — Data Link



Run 8: Statistics of PCC-Allegro

Start at: 2018-04-18 03:22:55

End at: 2018-04-18 03:23:25

Below is generated by plot.py at 2018-04-18 07:31:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 484.68 Mbit/s

95th percentile per-packet one-way delay: 215.655 ms

Loss rate: 1.75%

-- Flow 1:

Average throughput: 460.66 Mbit/s

95th percentile per-packet one-way delay: 215.499 ms

Loss rate: 1.72%

-- Flow 2:

Average throughput: 5.73 Mbit/s

95th percentile per-packet one-way delay: 215.157 ms

Loss rate: 1.42%

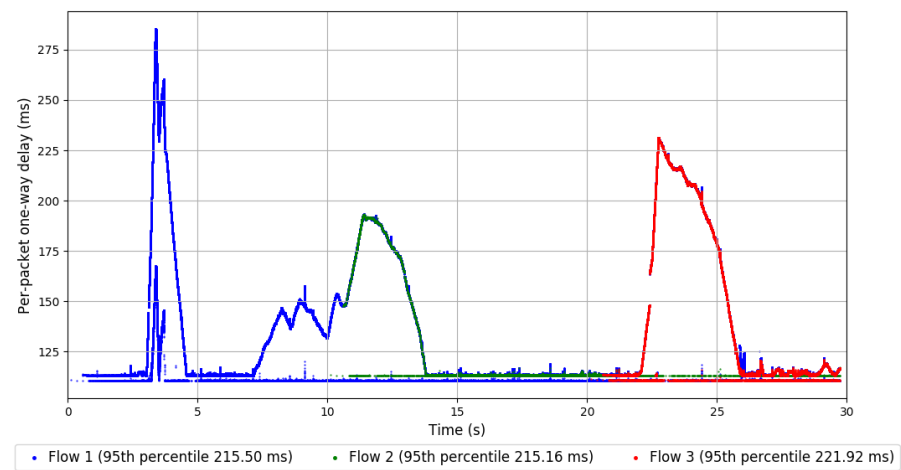
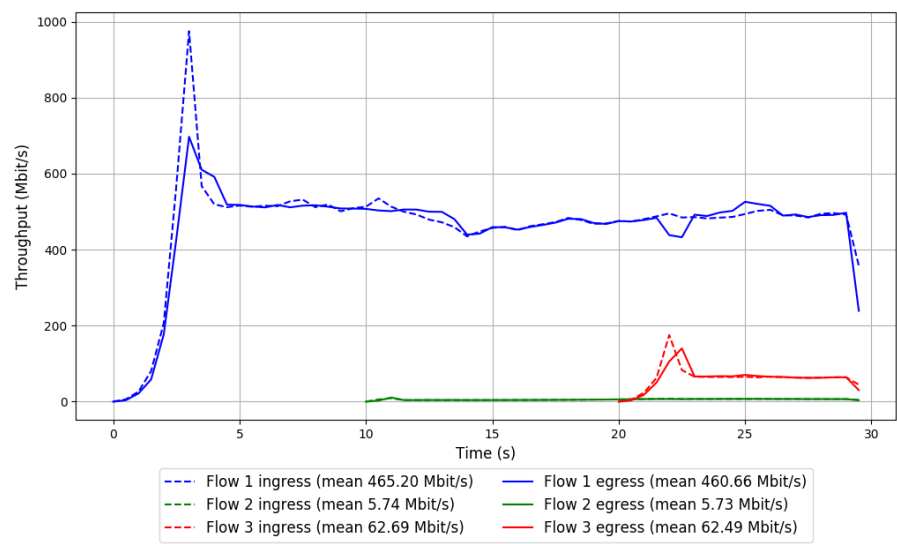
-- Flow 3:

Average throughput: 62.49 Mbit/s

95th percentile per-packet one-way delay: 221.917 ms

Loss rate: 2.58%

Run 8: Report of PCC-Allegro — Data Link



Run 9: Statistics of PCC-Allegro

Start at: 2018-04-18 03:40:08

End at: 2018-04-18 03:40:38

Below is generated by plot.py at 2018-04-18 07:39:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 484.57 Mbit/s

95th percentile per-packet one-way delay: 240.064 ms

Loss rate: 1.87%

-- Flow 1:

Average throughput: 450.87 Mbit/s

95th percentile per-packet one-way delay: 240.115 ms

Loss rate: 1.88%

-- Flow 2:

Average throughput: 34.27 Mbit/s

95th percentile per-packet one-way delay: 240.054 ms

Loss rate: 1.38%

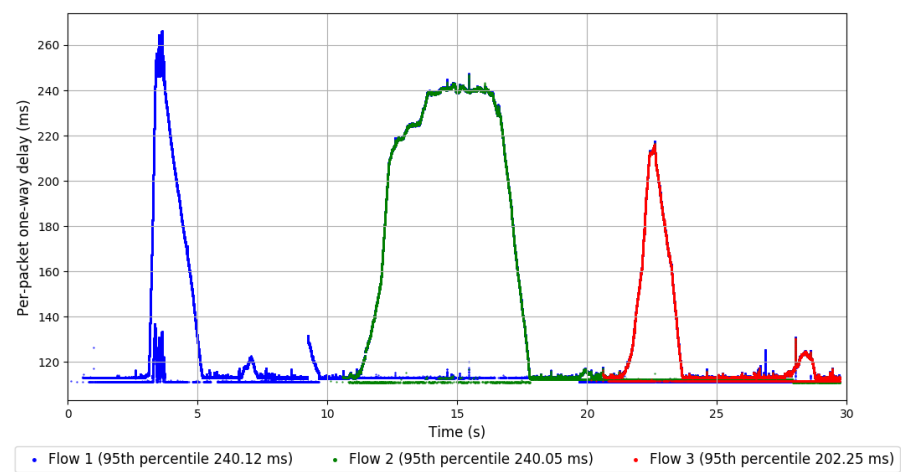
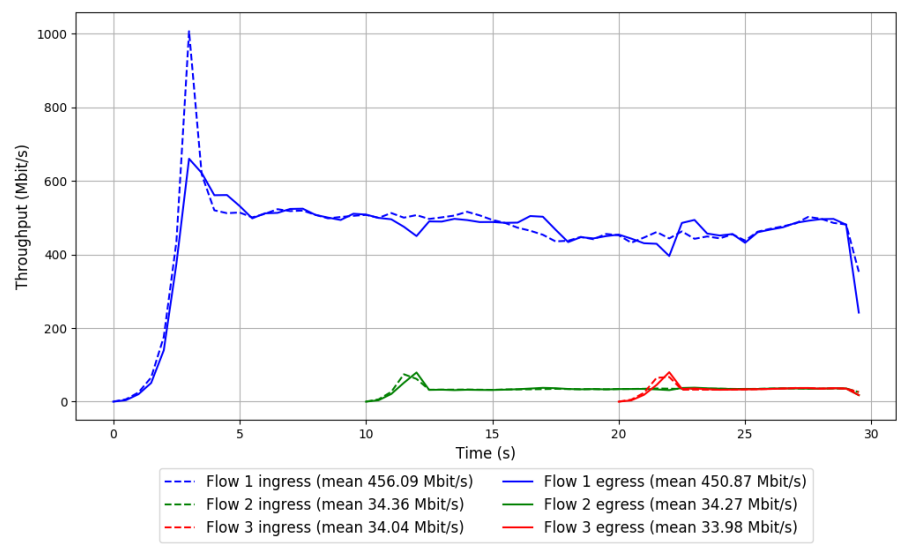
-- Flow 3:

Average throughput: 33.98 Mbit/s

95th percentile per-packet one-way delay: 202.251 ms

Loss rate: 2.43%

Run 9: Report of PCC-Allegro — Data Link



Run 10: Statistics of PCC-Allegro

Start at: 2018-04-18 03:57:06

End at: 2018-04-18 03:57:36

Below is generated by plot.py at 2018-04-18 07:39:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 492.57 Mbit/s

95th percentile per-packet one-way delay: 238.829 ms

Loss rate: 1.94%

-- Flow 1:

Average throughput: 453.37 Mbit/s

95th percentile per-packet one-way delay: 239.089 ms

Loss rate: 1.76%

-- Flow 2:

Average throughput: 2.42 Mbit/s

95th percentile per-packet one-way delay: 238.876 ms

Loss rate: 1.53%

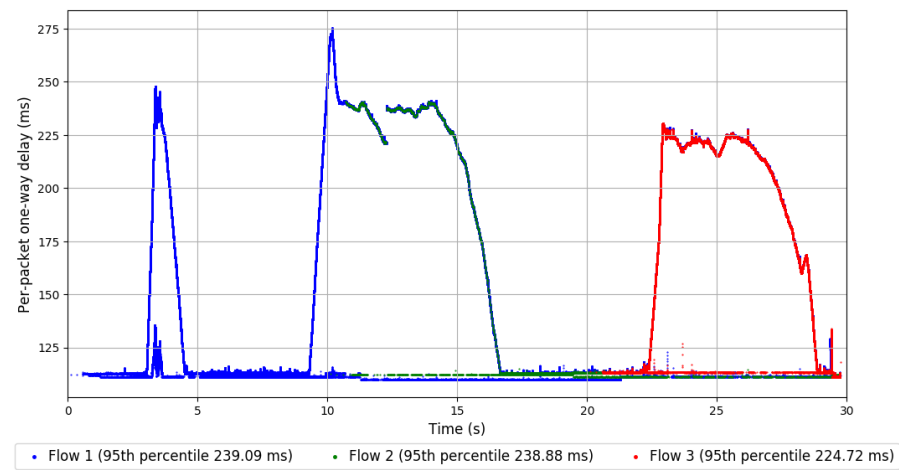
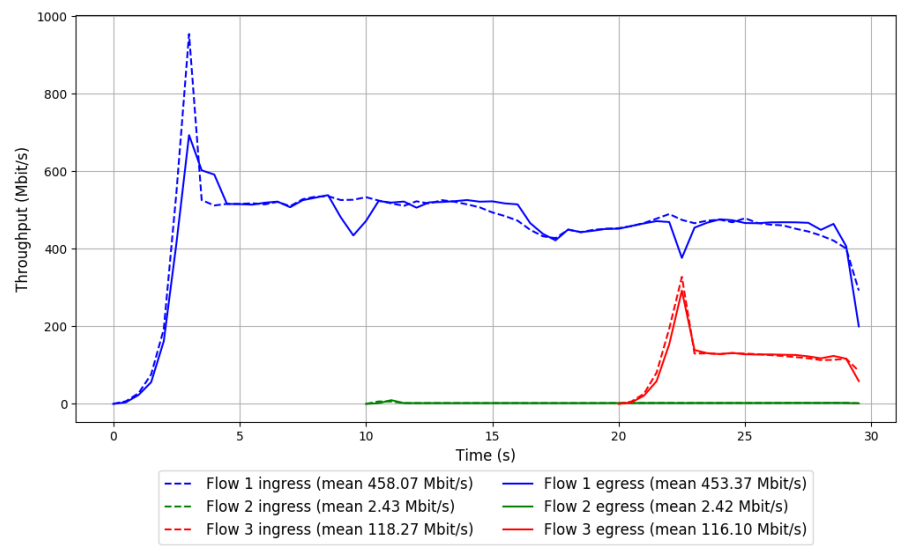
-- Flow 3:

Average throughput: 116.10 Mbit/s

95th percentile per-packet one-way delay: 224.715 ms

Loss rate: 4.01%

Run 10: Report of PCC-Allegro — Data Link

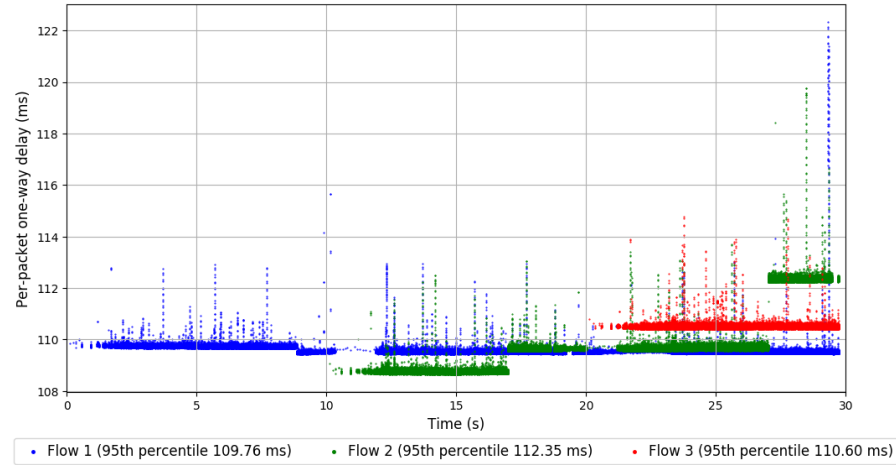
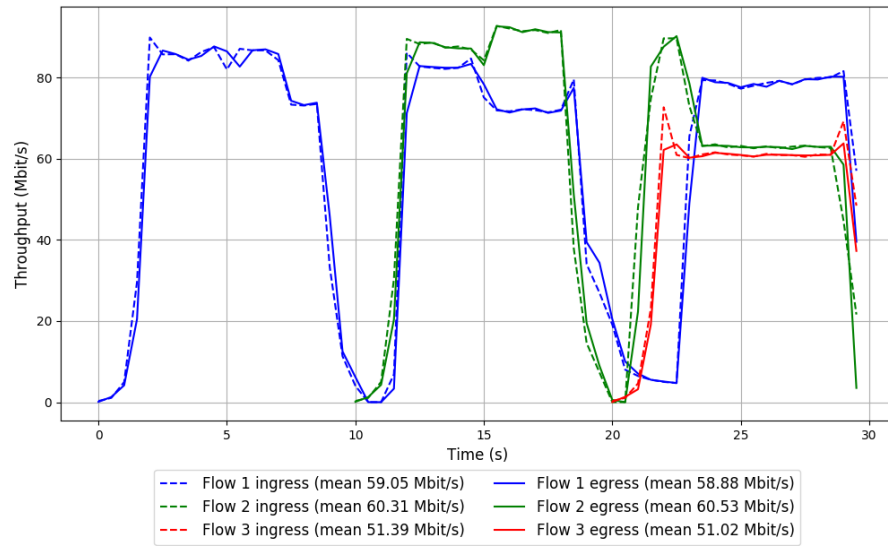


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-04-18 01:29:09
End at: 2018-04-18 01:29:39

# Below is generated by plot.py at 2018-04-18 07:39:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 115.52 Mbit/s
95th percentile per-packet one-way delay: 110.697 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 58.88 Mbit/s
95th percentile per-packet one-way delay: 109.757 ms
Loss rate: 1.03%
-- Flow 2:
Average throughput: 60.53 Mbit/s
95th percentile per-packet one-way delay: 112.349 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 51.02 Mbit/s
95th percentile per-packet one-way delay: 110.604 ms
Loss rate: 2.96%
```


Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-04-18 01:46:09

End at: 2018-04-18 01:46:39

Below is generated by plot.py at 2018-04-18 07:39:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 113.73 Mbit/s

95th percentile per-packet one-way delay: 114.935 ms

Loss rate: 0.81%

-- Flow 1:

Average throughput: 67.69 Mbit/s

95th percentile per-packet one-way delay: 114.928 ms

Loss rate: 1.02%

-- Flow 2:

Average throughput: 59.87 Mbit/s

95th percentile per-packet one-way delay: 114.953 ms

Loss rate: 0.59%

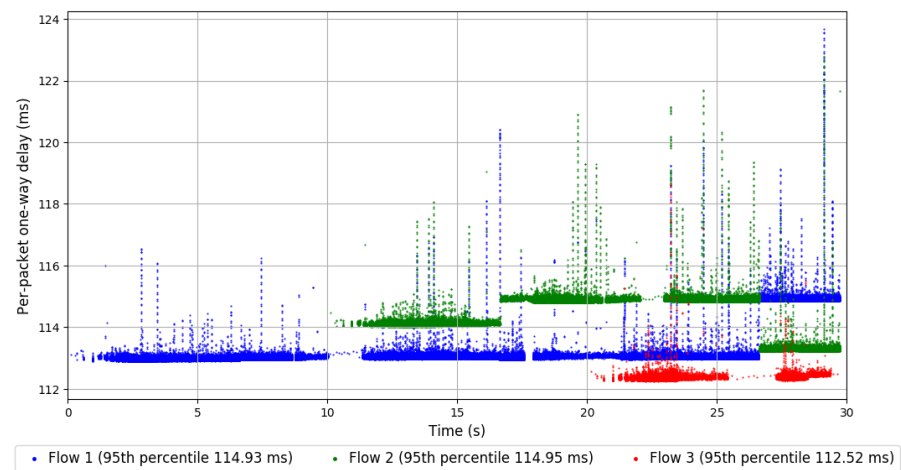
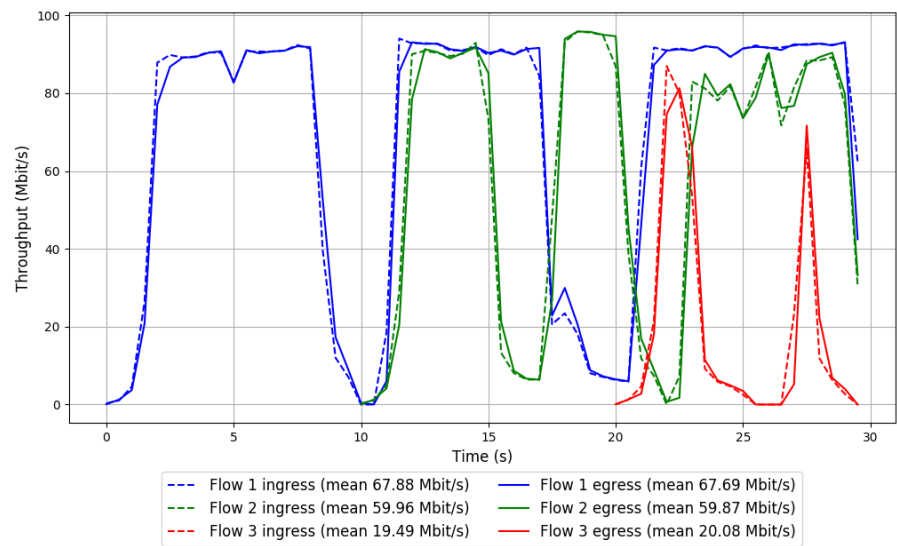
-- Flow 3:

Average throughput: 20.08 Mbit/s

95th percentile per-packet one-way delay: 112.522 ms

Loss rate: 0.00%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-04-18 02:03:30

End at: 2018-04-18 02:04:00

Below is generated by plot.py at 2018-04-18 07:39:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 114.56 Mbit/s

95th percentile per-packet one-way delay: 114.925 ms

Loss rate: 1.01%

-- Flow 1:

Average throughput: 65.98 Mbit/s

95th percentile per-packet one-way delay: 114.945 ms

Loss rate: 0.82%

-- Flow 2:

Average throughput: 57.53 Mbit/s

95th percentile per-packet one-way delay: 114.829 ms

Loss rate: 1.47%

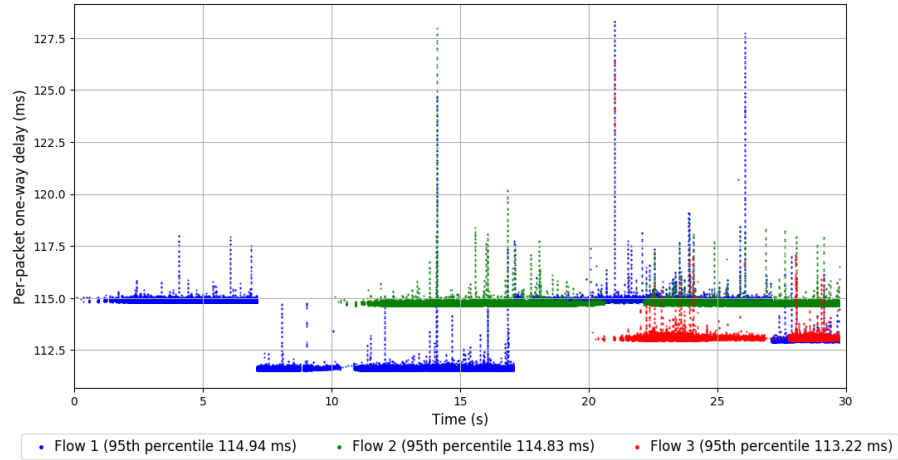
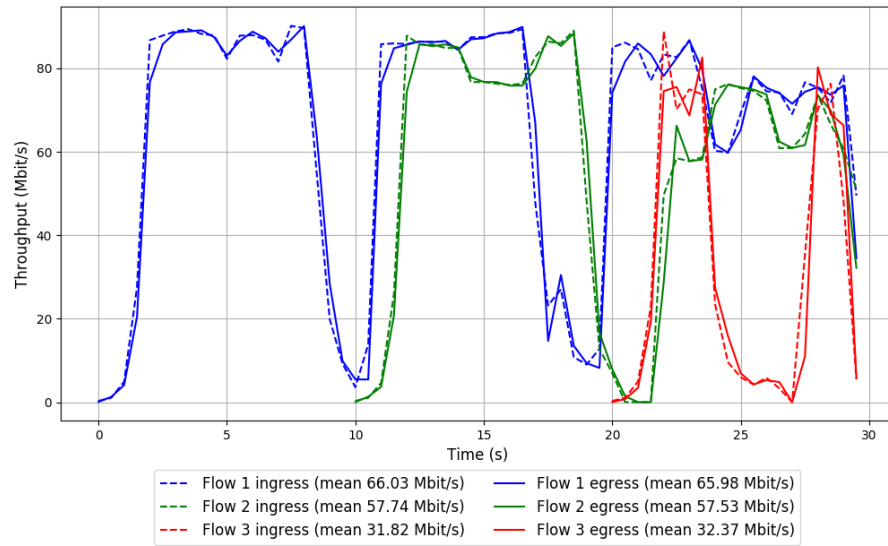
-- Flow 3:

Average throughput: 32.37 Mbit/s

95th percentile per-packet one-way delay: 113.216 ms

Loss rate: 0.54%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-04-18 02:20:36

End at: 2018-04-18 02:21:06

Below is generated by plot.py at 2018-04-18 07:39:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 105.95 Mbit/s

95th percentile per-packet one-way delay: 115.762 ms

Loss rate: 1.44%

-- Flow 1:

Average throughput: 58.45 Mbit/s

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

Loss rate: 0.80%

-- Flow 2:

Average throughput: 50.83 Mbit/s

95th percentile per-packet one-way delay: 115.784 ms

Loss rate: 1.45%

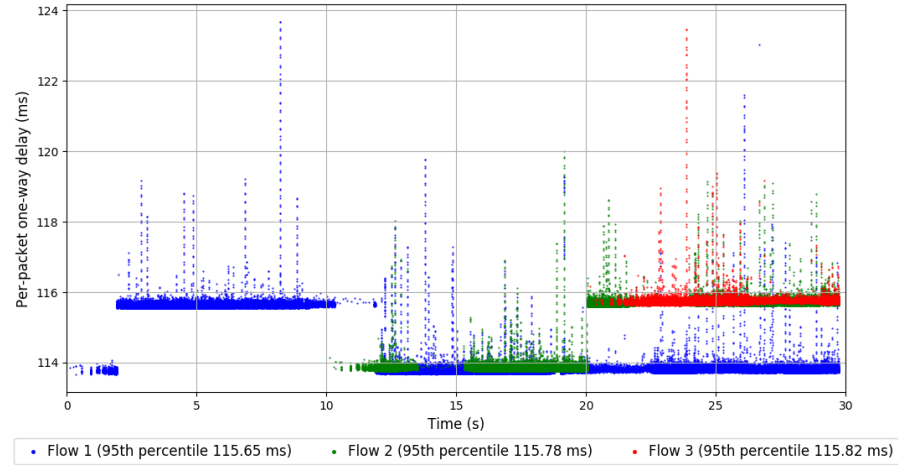
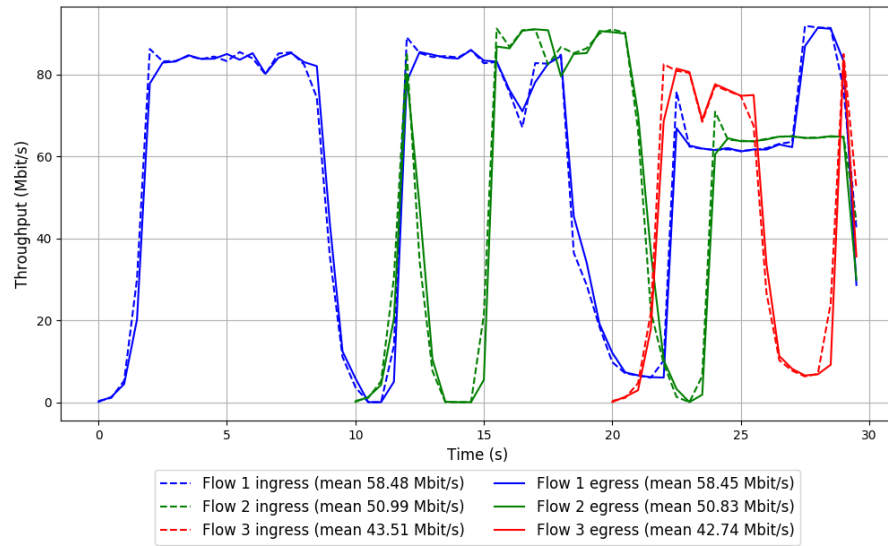
-- Flow 3:

Average throughput: 42.74 Mbit/s

95th percentile per-packet one-way delay: 115.824 ms

Loss rate: 4.03%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-04-18 02:37:49

End at: 2018-04-18 02:38:19

Below is generated by plot.py at 2018-04-18 07:39:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 105.53 Mbit/s

95th percentile per-packet one-way delay: 114.317 ms

Loss rate: 1.03%

-- Flow 1:

Average throughput: 58.51 Mbit/s

95th percentile per-packet one-way delay: 114.472 ms

Loss rate: 0.82%

-- Flow 2:

Average throughput: 54.04 Mbit/s

95th percentile per-packet one-way delay: 112.713 ms

Loss rate: 1.50%

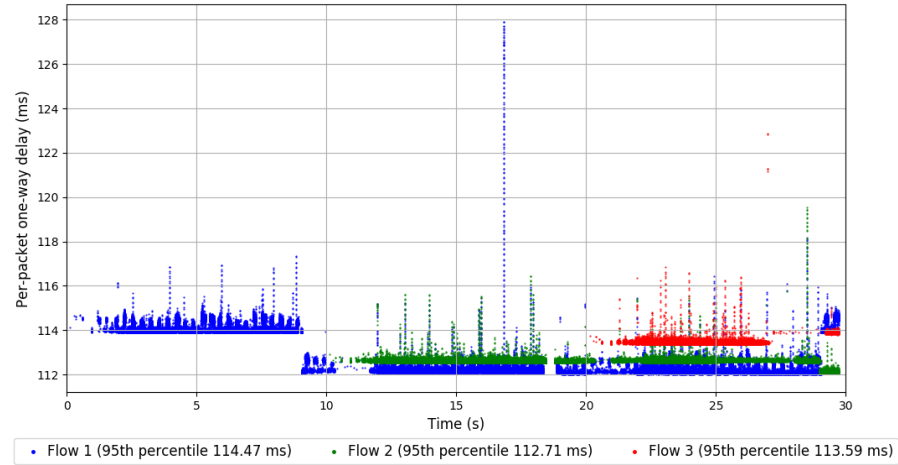
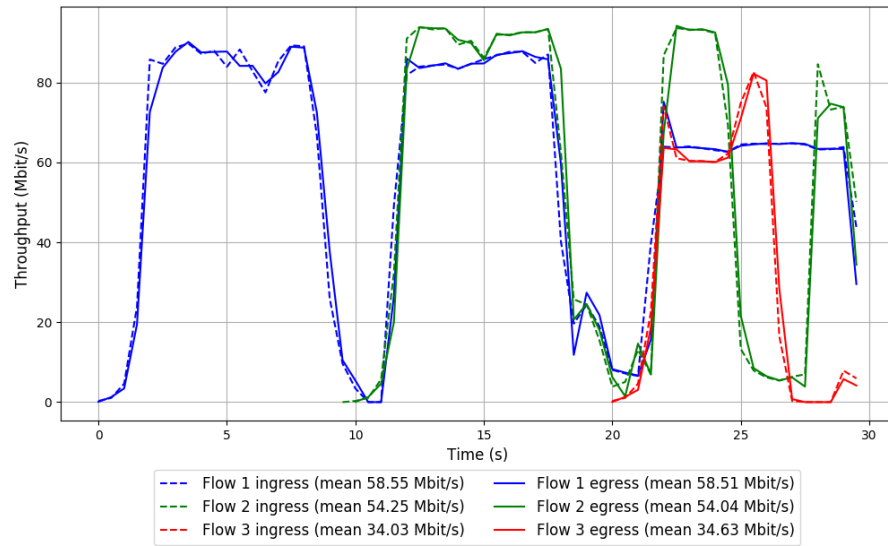
-- Flow 3:

Average throughput: 34.63 Mbit/s

95th percentile per-packet one-way delay: 113.595 ms

Loss rate: 0.58%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2018-04-18 02:55:05

End at: 2018-04-18 02:55:35

Below is generated by plot.py at 2018-04-18 07:39:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 114.47 Mbit/s

95th percentile per-packet one-way delay: 114.098 ms

Loss rate: 1.03%

-- Flow 1:

Average throughput: 58.95 Mbit/s

95th percentile per-packet one-way delay: 112.024 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 61.93 Mbit/s

95th percentile per-packet one-way delay: 114.138 ms

Loss rate: 0.38%

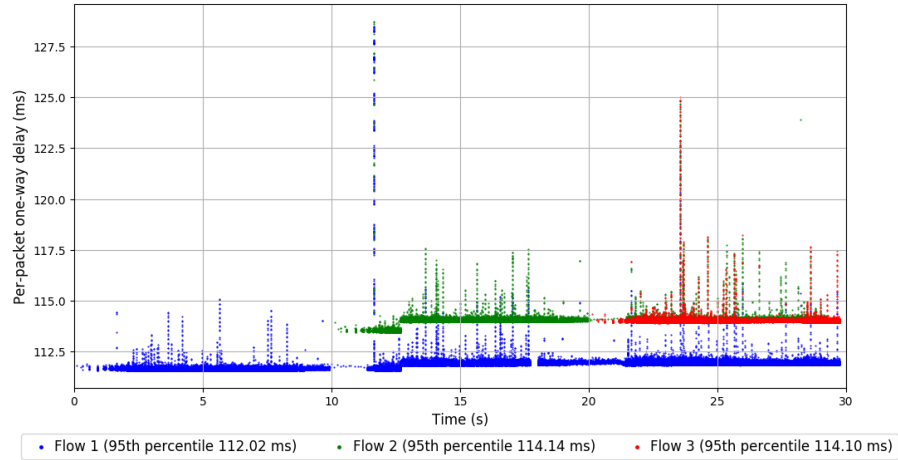
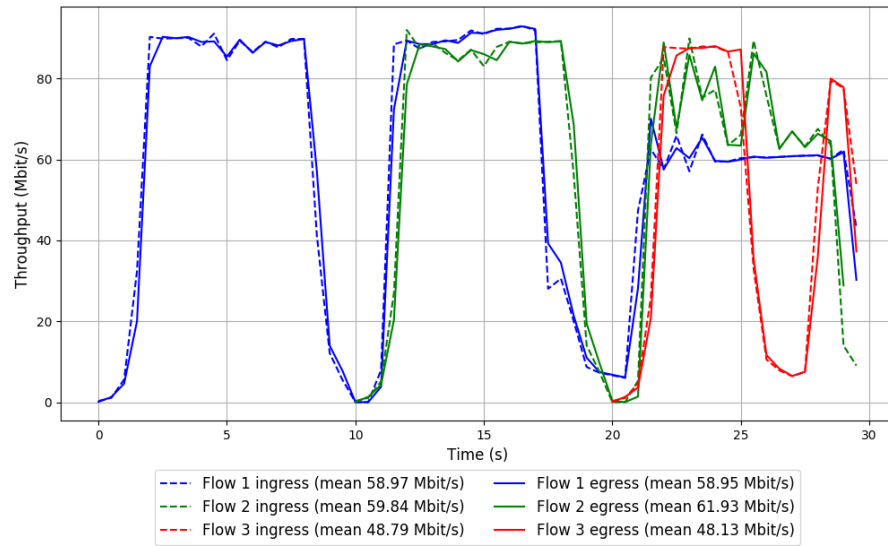
-- Flow 3:

Average throughput: 48.13 Mbit/s

95th percentile per-packet one-way delay: 114.098 ms

Loss rate: 3.59%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2018-04-18 03:12:13

End at: 2018-04-18 03:12:43

Below is generated by plot.py at 2018-04-18 07:39:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 119.98 Mbit/s

95th percentile per-packet one-way delay: 113.470 ms

Loss rate: 1.17%

-- Flow 1:

Average throughput: 60.57 Mbit/s

95th percentile per-packet one-way delay: 113.503 ms

Loss rate: 1.11%

-- Flow 2:

Average throughput: 61.36 Mbit/s

95th percentile per-packet one-way delay: 112.923 ms

Loss rate: 0.39%

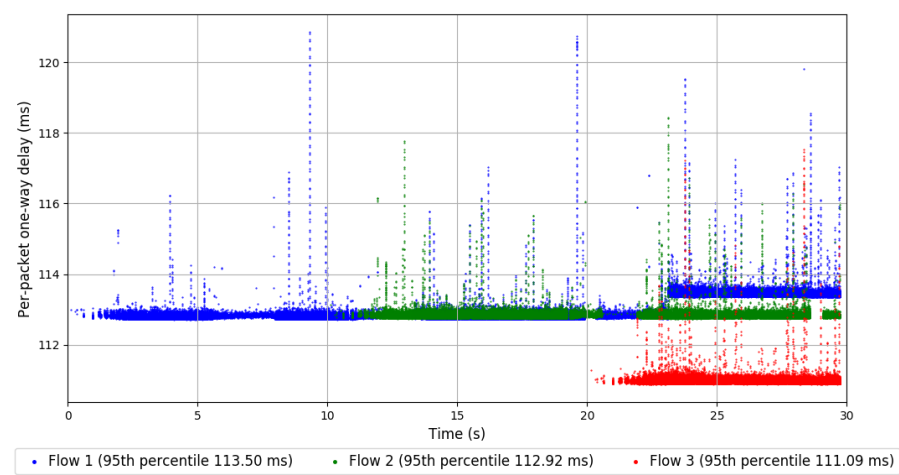
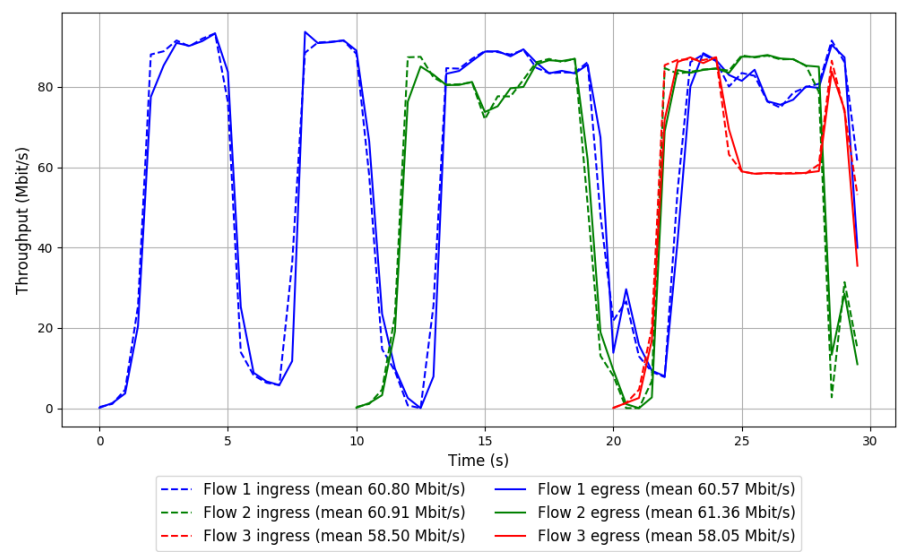
-- Flow 3:

Average throughput: 58.05 Mbit/s

95th percentile per-packet one-way delay: 111.095 ms

Loss rate: 3.01%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2018-04-18 03:29:17

End at: 2018-04-18 03:29:47

Below is generated by plot.py at 2018-04-18 07:39:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 109.80 Mbit/s

95th percentile per-packet one-way delay: 113.585 ms

Loss rate: 0.99%

-- Flow 1:

Average throughput: 61.35 Mbit/s

95th percentile per-packet one-way delay: 113.567 ms

Loss rate: 0.94%

-- Flow 2:

Average throughput: 55.74 Mbit/s

95th percentile per-packet one-way delay: 112.448 ms

Loss rate: 1.28%

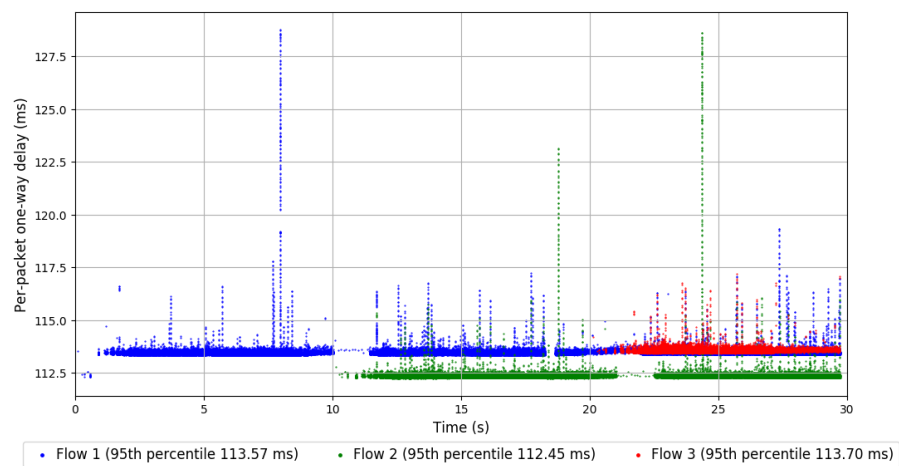
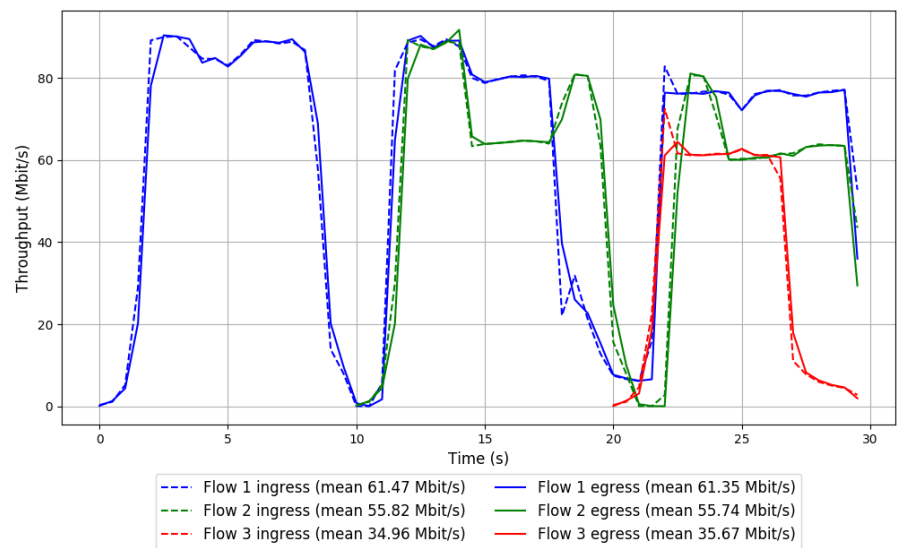
-- Flow 3:

Average throughput: 35.67 Mbit/s

95th percentile per-packet one-way delay: 113.703 ms

Loss rate: 0.26%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2018-04-18 03:46:17

End at: 2018-04-18 03:46:47

Below is generated by plot.py at 2018-04-18 07:39:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 121.11 Mbit/s

95th percentile per-packet one-way delay: 115.073 ms

Loss rate: 1.25%

-- Flow 1:

Average throughput: 63.24 Mbit/s

95th percentile per-packet one-way delay: 111.678 ms

Loss rate: 0.89%

-- Flow 2:

Average throughput: 58.36 Mbit/s

95th percentile per-packet one-way delay: 110.824 ms

Loss rate: 1.14%

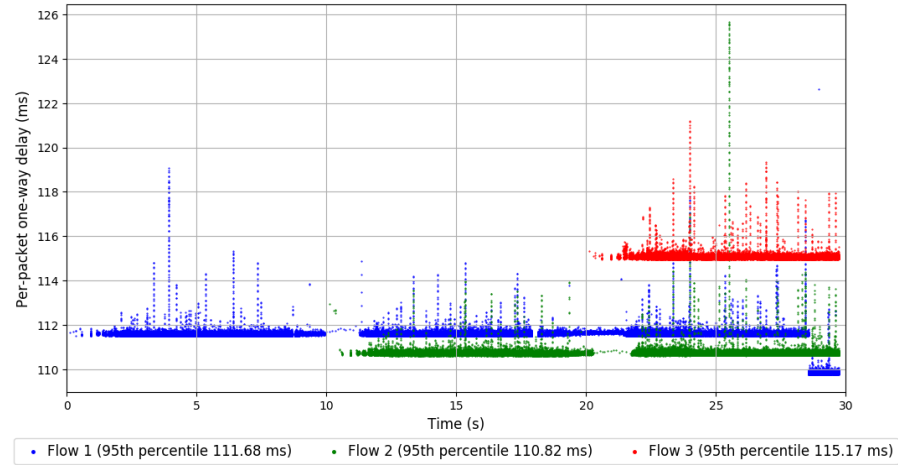
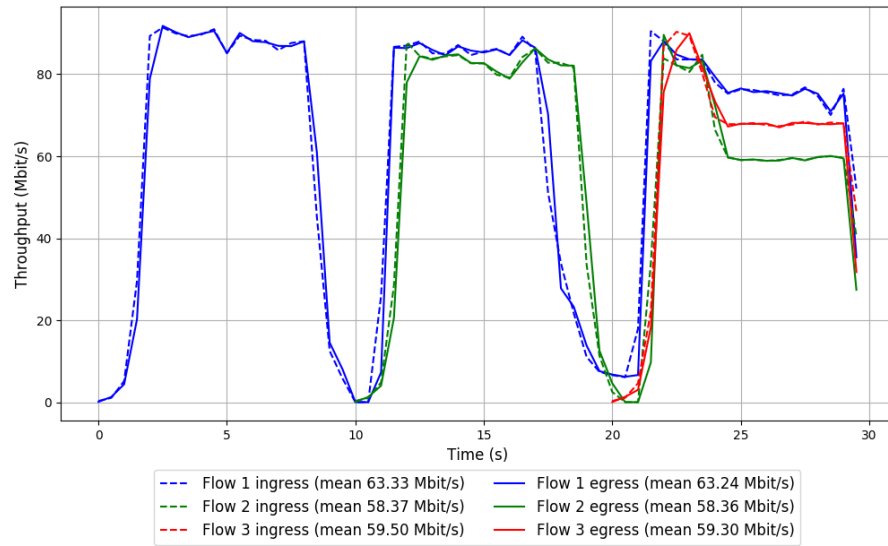
-- Flow 3:

Average throughput: 59.30 Mbit/s

95th percentile per-packet one-way delay: 115.173 ms

Loss rate: 2.62%

Run 9: Report of QUIC Cubic — Data Link



Run 10: Statistics of QUIC Cubic

Start at: 2018-04-18 04:03:19

End at: 2018-04-18 04:03:49

Below is generated by plot.py at 2018-04-18 07:39:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 106.81 Mbit/s

95th percentile per-packet one-way delay: 113.233 ms

Loss rate: 1.04%

-- Flow 1:

Average throughput: 58.79 Mbit/s

95th percentile per-packet one-way delay: 113.260 ms

Loss rate: 0.75%

-- Flow 2:

Average throughput: 55.04 Mbit/s

95th percentile per-packet one-way delay: 112.668 ms

Loss rate: 1.71%

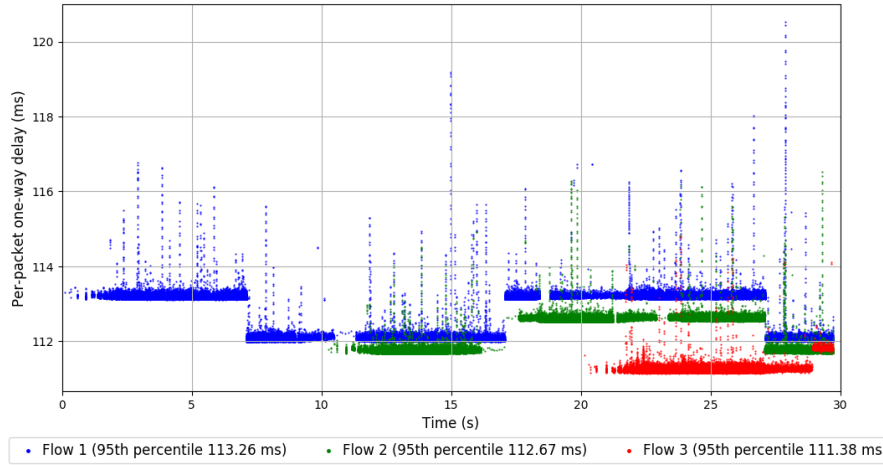
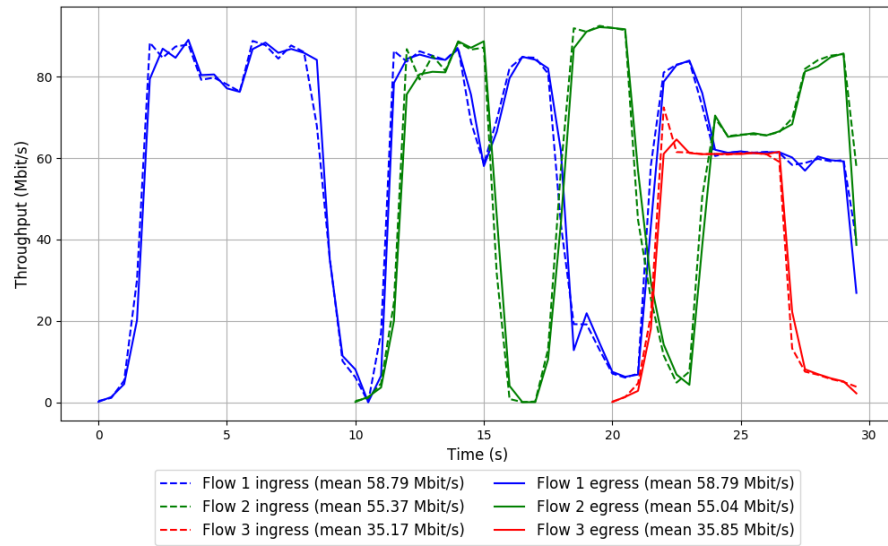
-- Flow 3:

Average throughput: 35.85 Mbit/s

95th percentile per-packet one-way delay: 111.377 ms

Loss rate: 0.39%

Run 10: Report of QUIC Cubic — Data Link

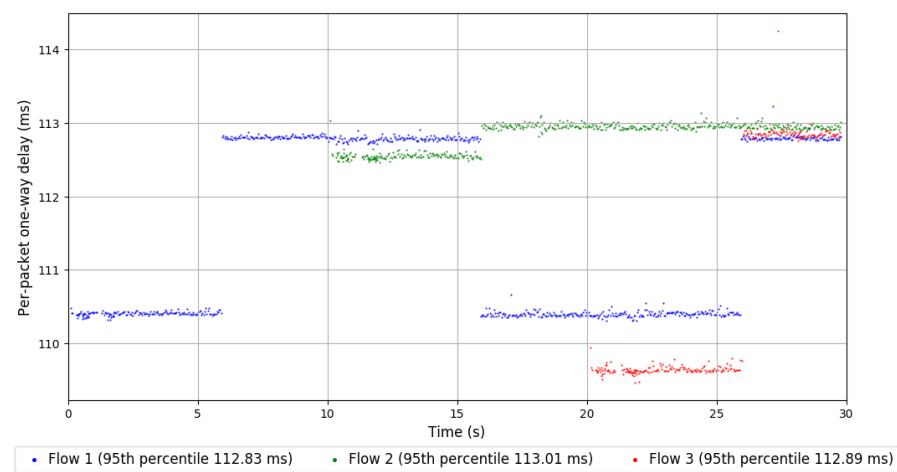
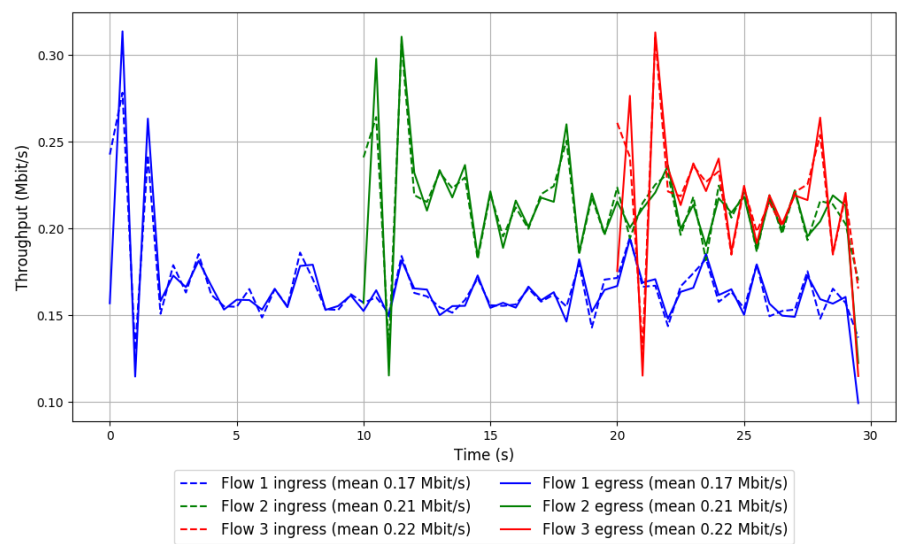


```
Run 1: Statistics of SCReAM

Start at: 2018-04-18 01:24:52
End at: 2018-04-18 01:25:22

# Below is generated by plot.py at 2018-04-18 07:39:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 112.981 ms
Loss rate: 1.15%
-- Flow 1:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 112.827 ms
Loss rate: 0.75%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 113.011 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.888 ms
Loss rate: 2.24%
```

Run 1: Report of SReAM — Data Link

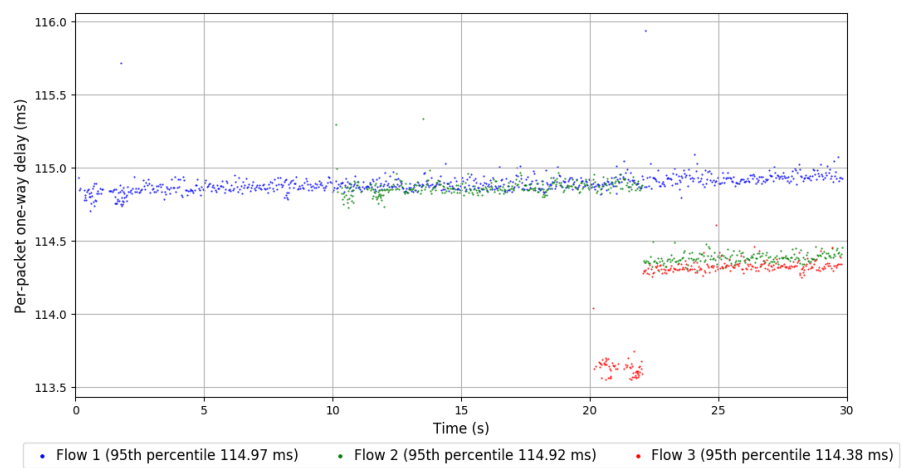
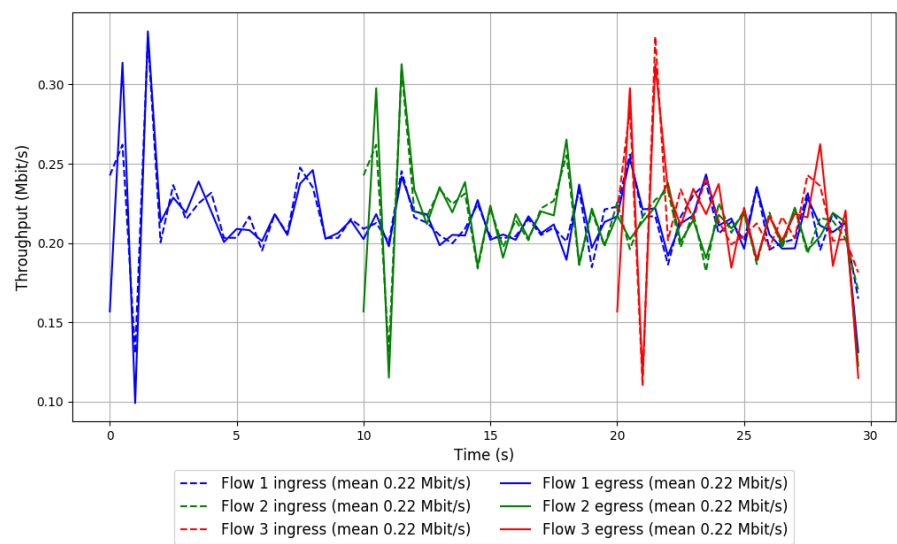


```
Run 2: Statistics of SCReAM

Start at: 2018-04-18 01:42:04
End at: 2018-04-18 01:42:34

# Below is generated by plot.py at 2018-04-18 07:39:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 114.951 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 114.972 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 114.919 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 114.377 ms
Loss rate: 2.25%
```

Run 2: Report of SReAM — Data Link

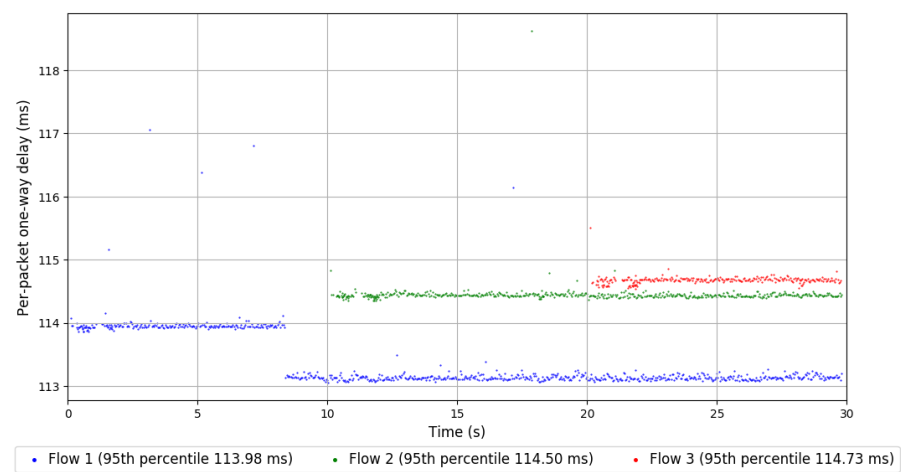
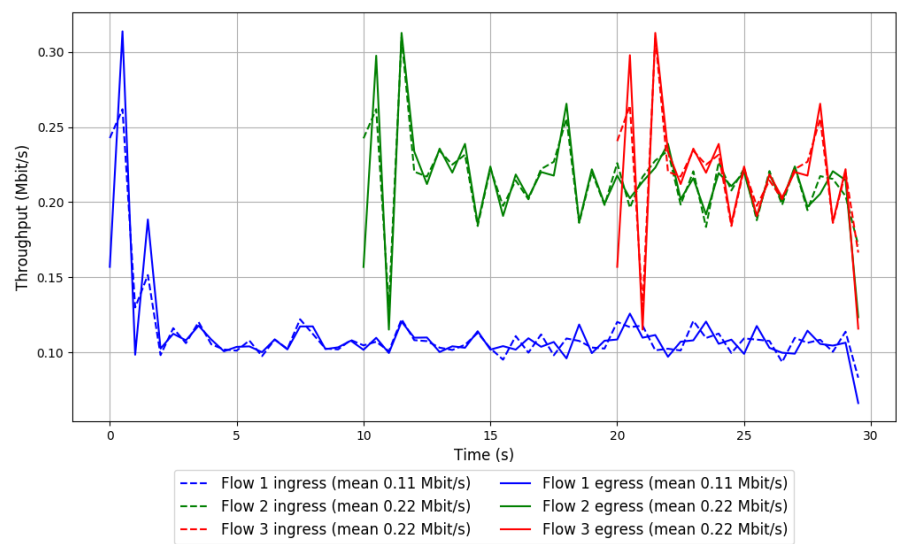


```
Run 3: Statistics of SCReAM

Start at: 2018-04-18 01:59:27
End at: 2018-04-18 01:59:57

# Below is generated by plot.py at 2018-04-18 07:39:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 114.697 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 113.976 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 114.495 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 114.734 ms
Loss rate: 2.25%
```


Run 3: Report of SCReAM — Data Link

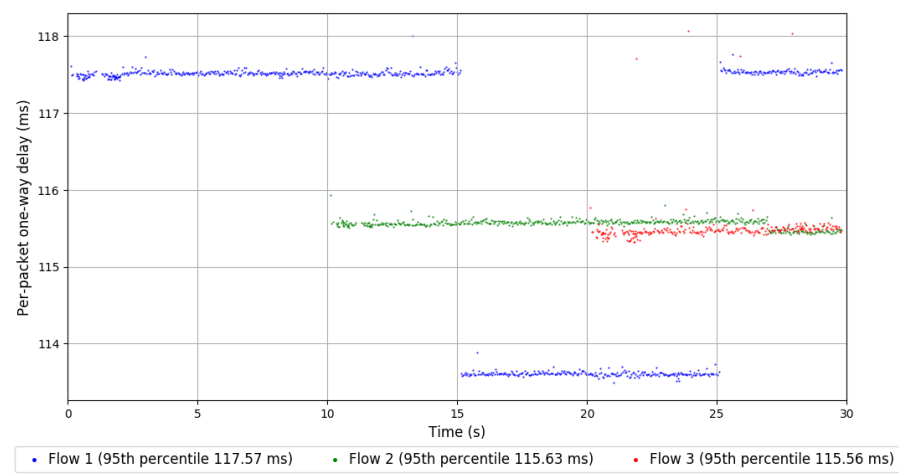
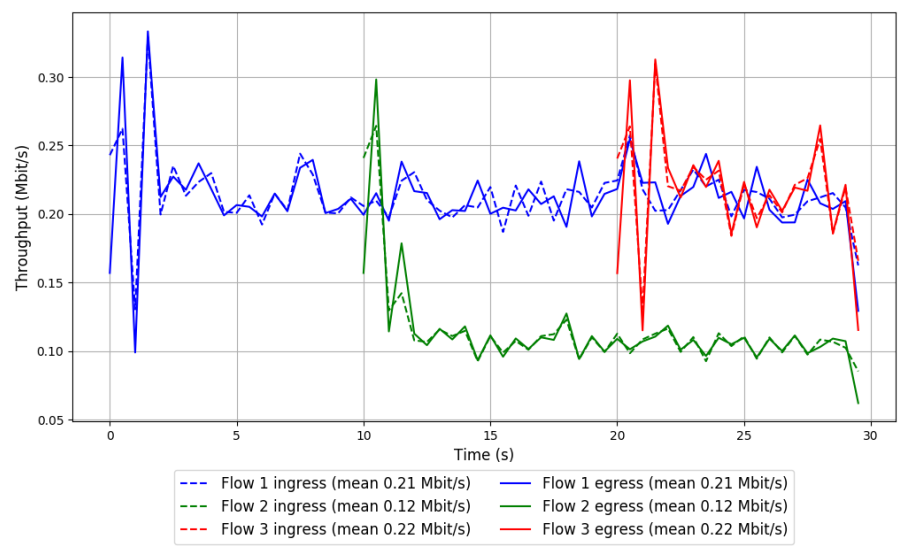


```
Run 4: Statistics of SCReAM

Start at: 2018-04-18 02:16:31
End at: 2018-04-18 02:17:01

# Below is generated by plot.py at 2018-04-18 07:39:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 117.551 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 117.567 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 115.628 ms
Loss rate: 0.98%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 115.562 ms
Loss rate: 2.25%
```

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2018-04-18 02:33:45

End at: 2018-04-18 02:34:15

Below is generated by plot.py at 2018-04-18 07:39:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 114.480 ms

Loss rate: 1.08%

-- Flow 1:

Average throughput: 0.19 Mbit/s

95th percentile per-packet one-way delay: 114.497 ms

Loss rate: 0.63%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 110.518 ms

Loss rate: 1.06%

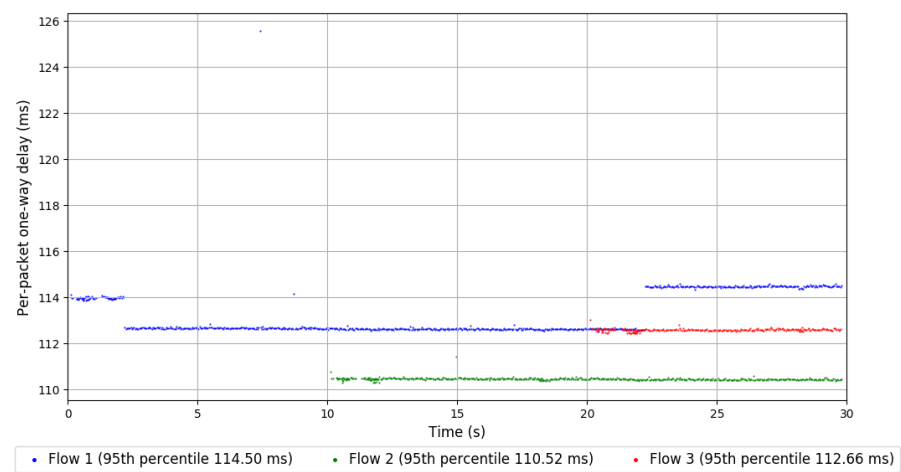
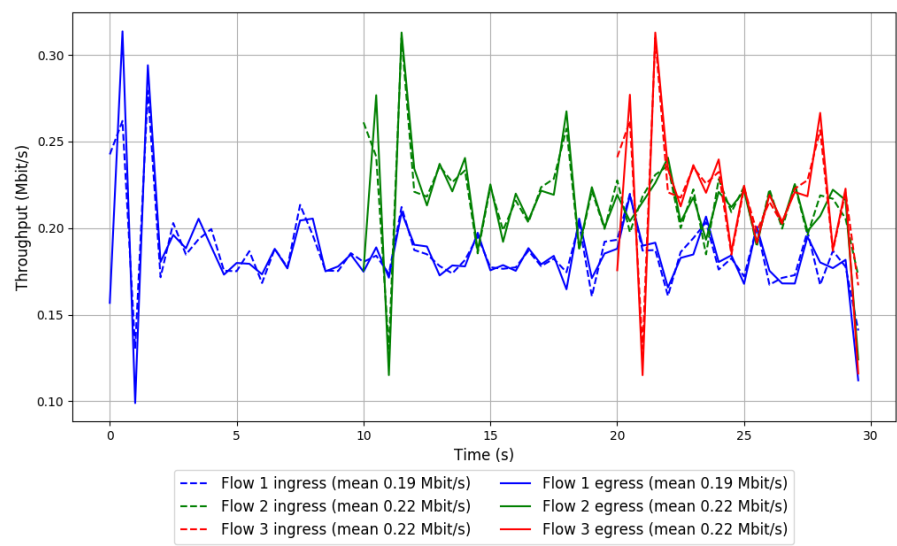
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.659 ms

Loss rate: 2.26%

Run 5: Report of SCSReAM — Data Link



Run 6: Statistics of SReAM

Start at: 2018-04-18 02:50:57

End at: 2018-04-18 02:51:27

Below is generated by plot.py at 2018-04-18 07:39:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 114.074 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 111.800 ms

Loss rate: 0.63%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 114.088 ms

Loss rate: 1.06%

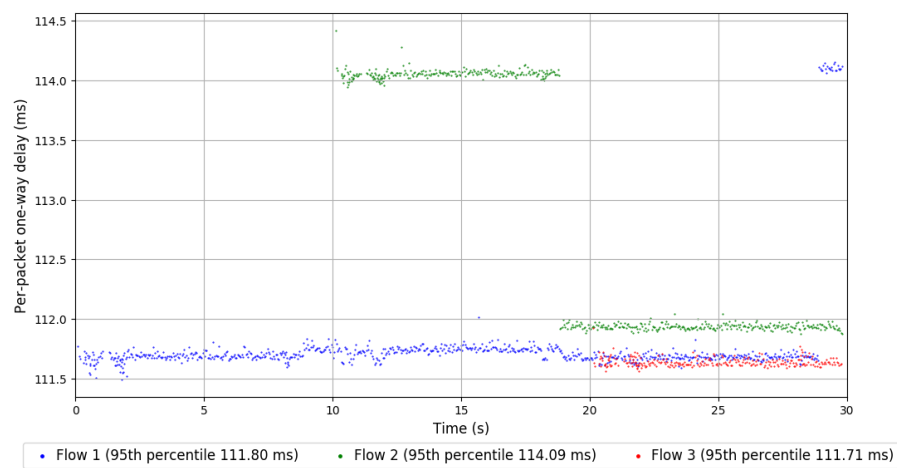
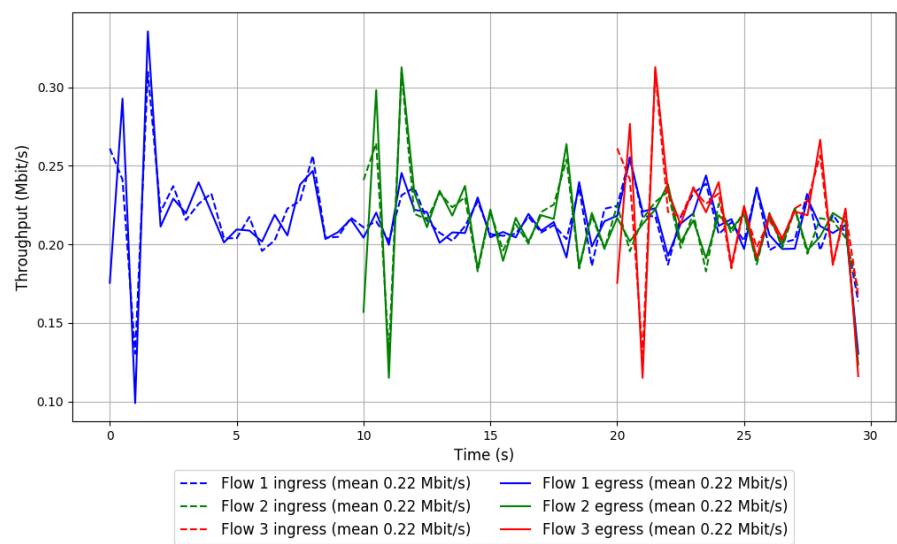
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 111.710 ms

Loss rate: 2.26%

Run 6: Report of SReAM — Data Link

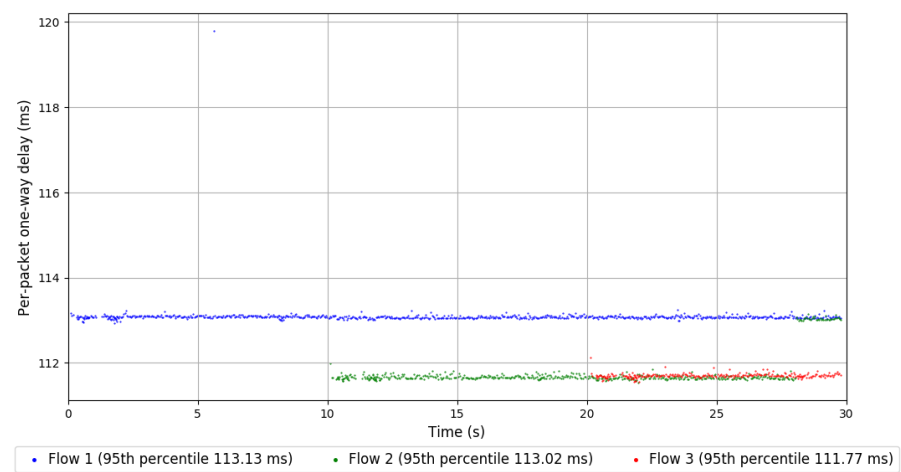
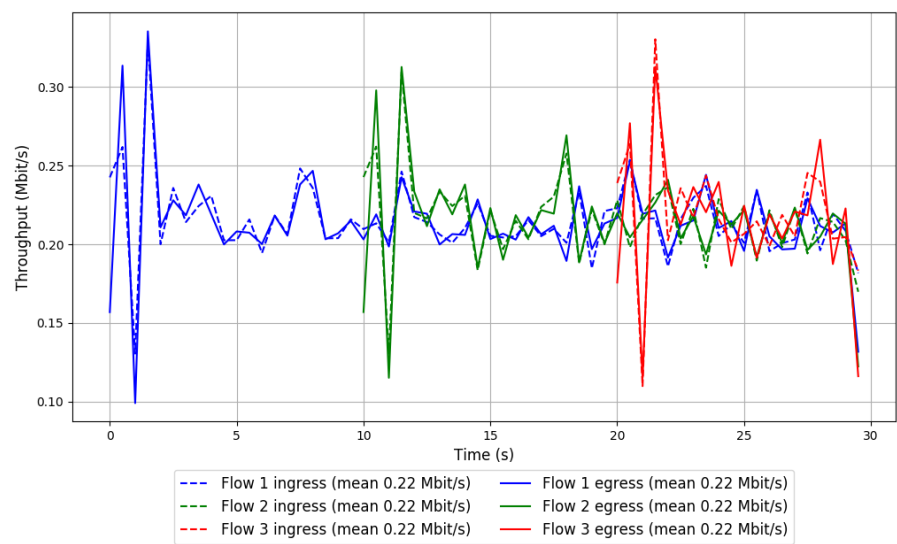


```
Run 7: Statistics of SReAM

Start at: 2018-04-18 03:08:10
End at: 2018-04-18 03:08:40

# Below is generated by plot.py at 2018-04-18 07:39:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 113.113 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 113.128 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 113.020 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 111.771 ms
Loss rate: 2.26%
```


Run 7: Report of SReAM — Data Link



Run 8: Statistics of SReAM

Start at: 2018-04-18 03:25:11

End at: 2018-04-18 03:25:41

Below is generated by plot.py at 2018-04-18 07:39:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 113.552 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 113.582 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 113.068 ms

Loss rate: 1.06%

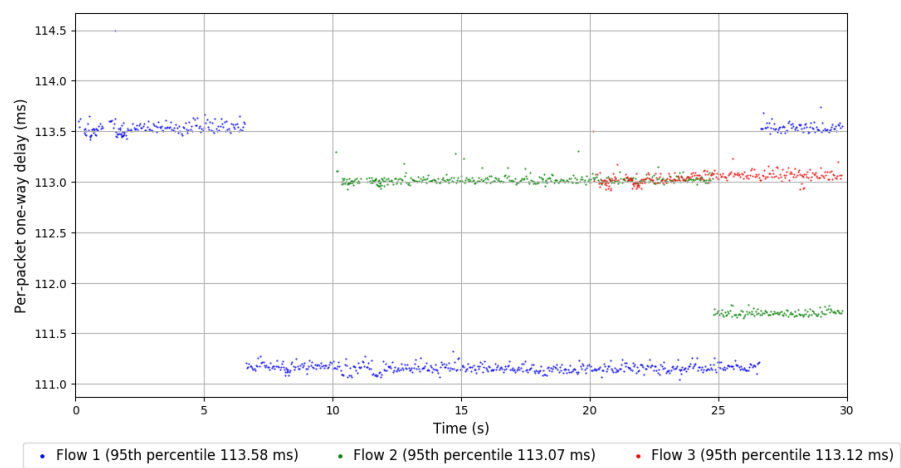
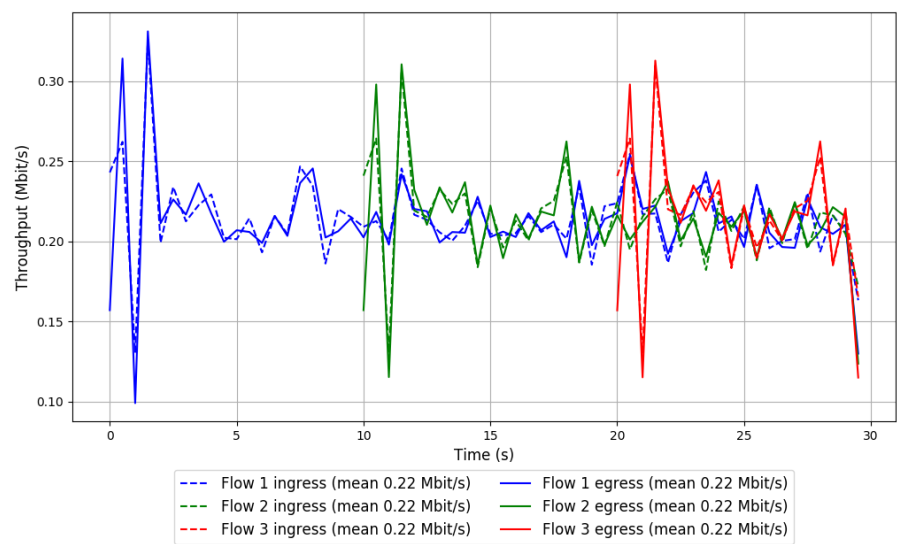
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 113.120 ms

Loss rate: 2.25%

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SReAM

Start at: 2018-04-18 03:42:17

End at: 2018-04-18 03:42:47

Below is generated by plot.py at 2018-04-18 07:39:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 112.763 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 111.934 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 111.103 ms

Loss rate: 1.06%

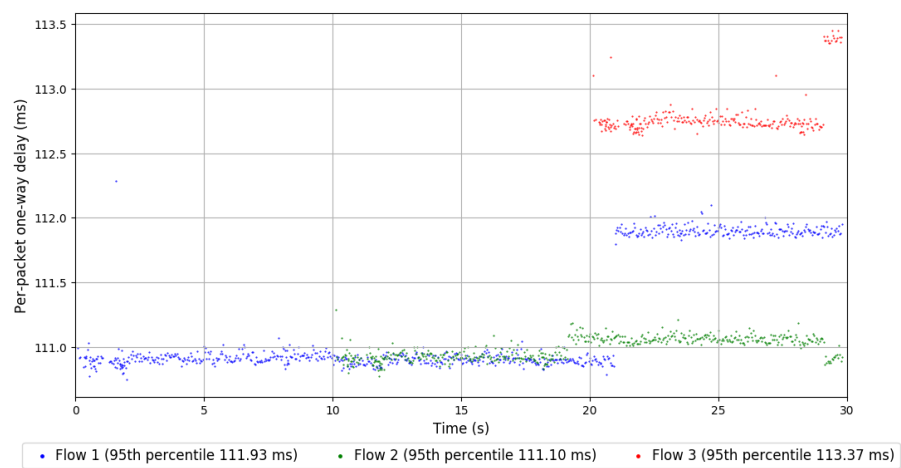
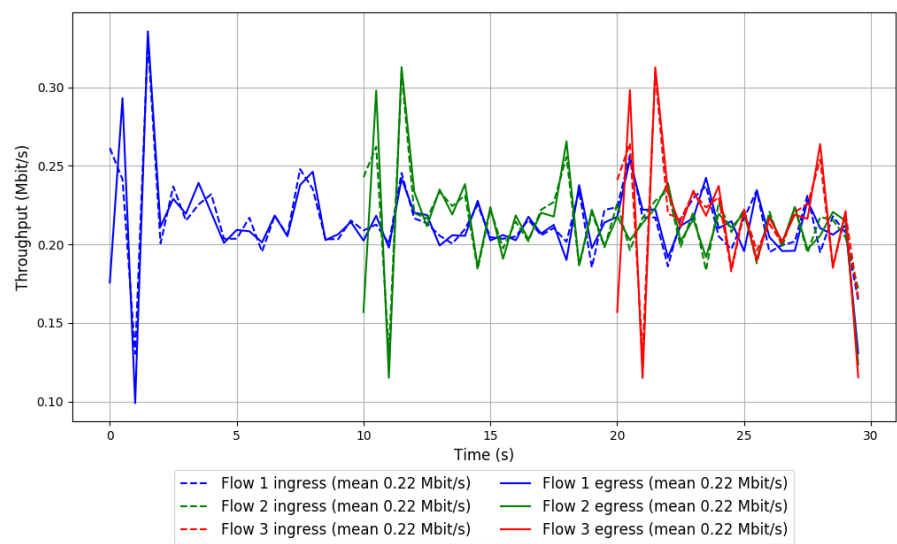
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 113.370 ms

Loss rate: 2.26%

Run 9: Report of SReAM — Data Link

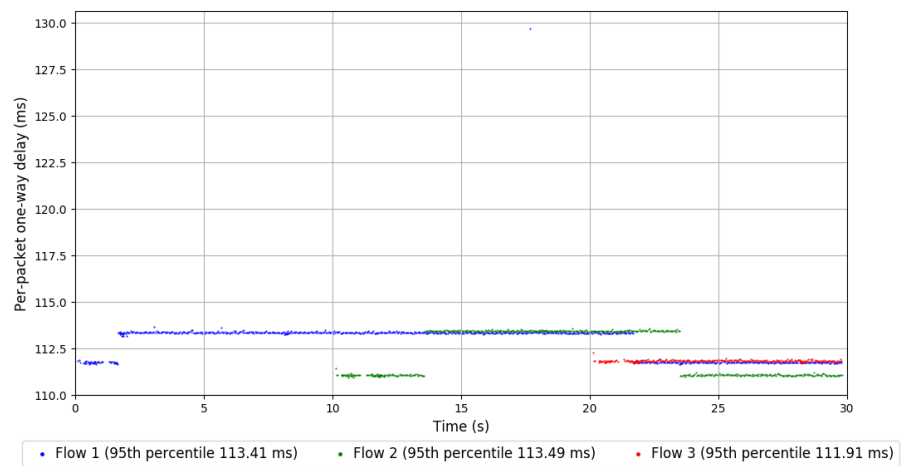
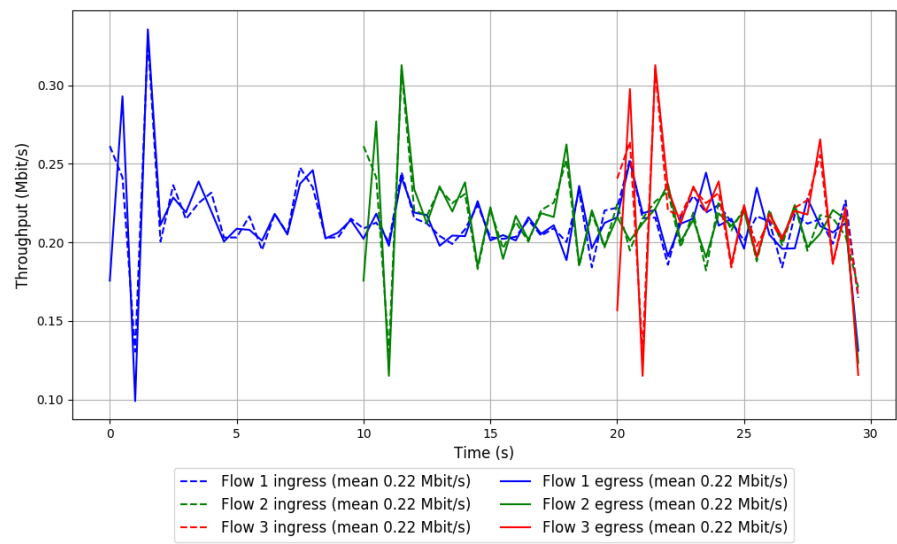


```
Run 10: Statistics of SReAM

Start at: 2018-04-18 03:59:14
End at: 2018-04-18 03:59:44

# Below is generated by plot.py at 2018-04-18 07:39:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 113.463 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 113.409 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 113.486 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 111.910 ms
Loss rate: 2.25%
```

Run 10: Report of SCReAM — Data Link

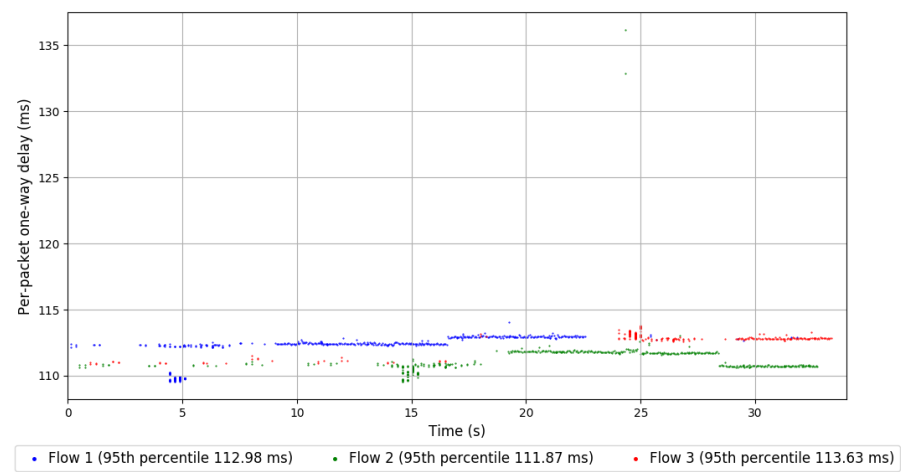
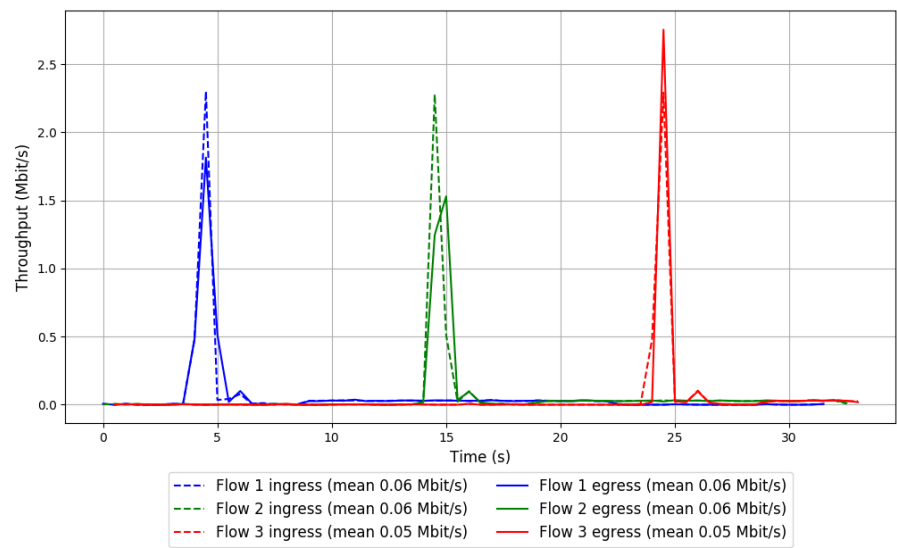


```
Run 1: Statistics of WebRTC media

Start at: 2018-04-18 01:30:03
End at: 2018-04-18 01:30:33

# Below is generated by plot.py at 2018-04-18 07:39:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 113.109 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 112.982 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 111.871 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 113.626 ms
Loss rate: 0.40%
```


Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-04-18 01:47:09

End at: 2018-04-18 01:47:39

Below is generated by plot.py at 2018-04-18 07:39:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 115.955 ms

Loss rate: 0.10%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 115.259 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 116.150 ms

Loss rate: 0.00%

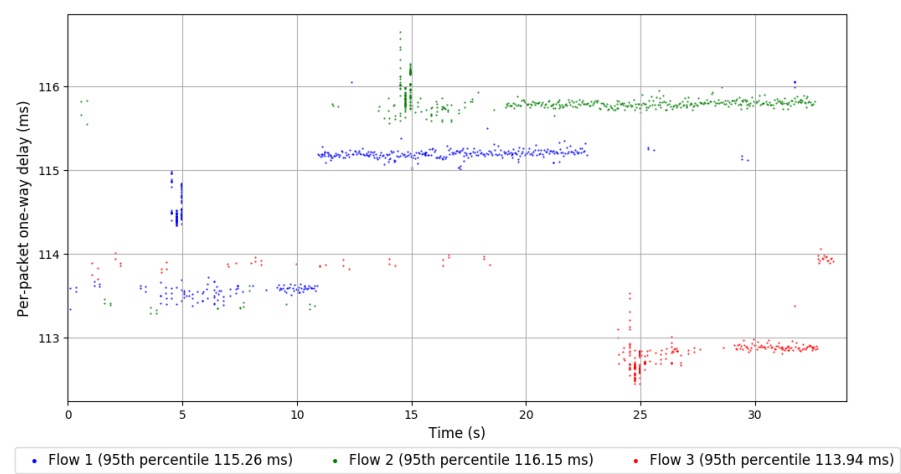
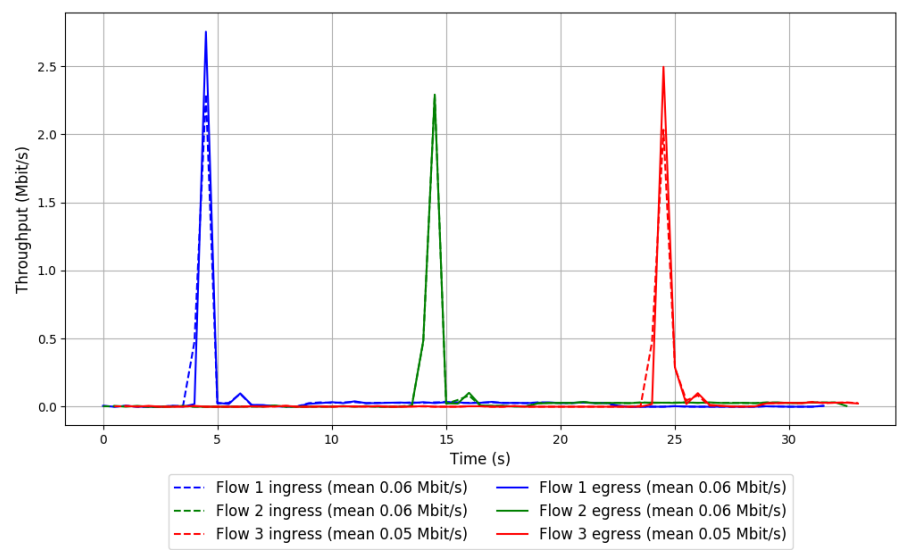
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 113.939 ms

Loss rate: 0.32%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-04-18 02:04:24

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

Below is generated by plot.py at 2018-04-18 07:39:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 117.070 ms

Loss rate: 0.12%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 117.114 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 113.676 ms

Loss rate: 0.00%

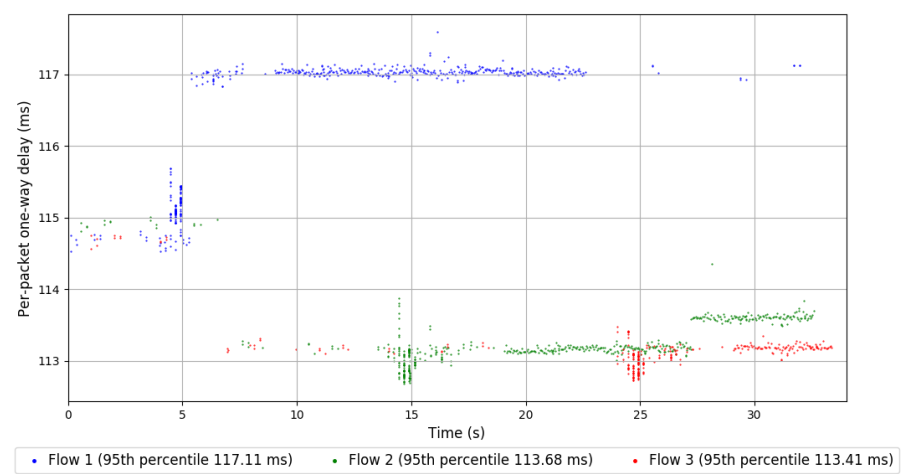
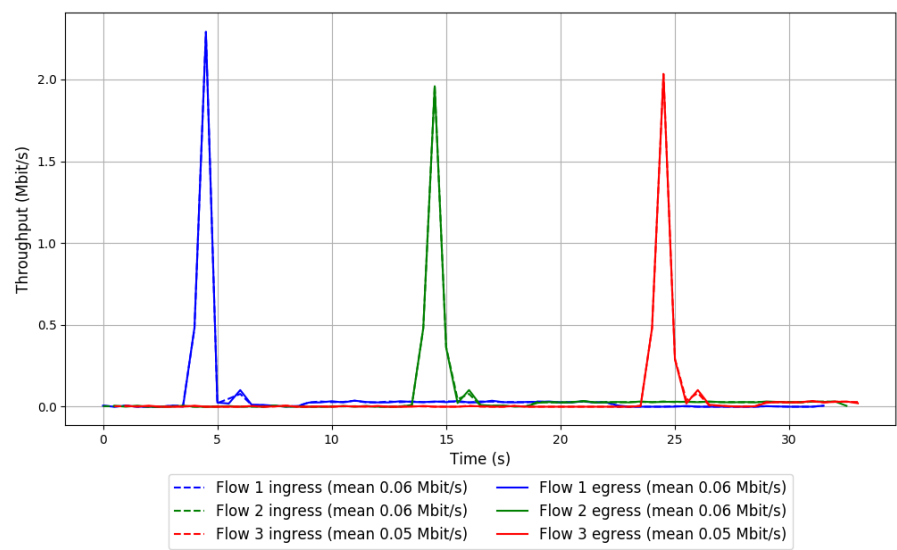
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 113.406 ms

Loss rate: 0.40%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-04-18 02:21:29

End at: 2018-04-18 02:21:59

Below is generated by plot.py at 2018-04-18 07:39:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 116.079 ms

Loss rate: 0.12%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 114.634 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 116.095 ms

Loss rate: 0.00%

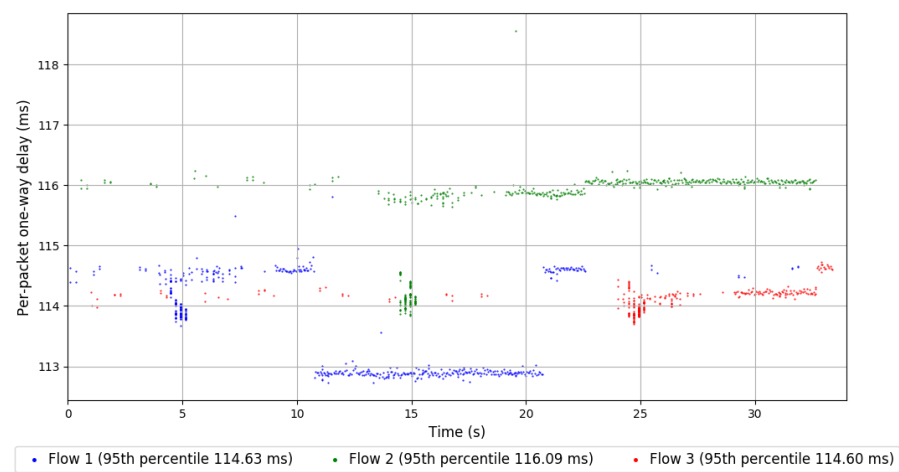
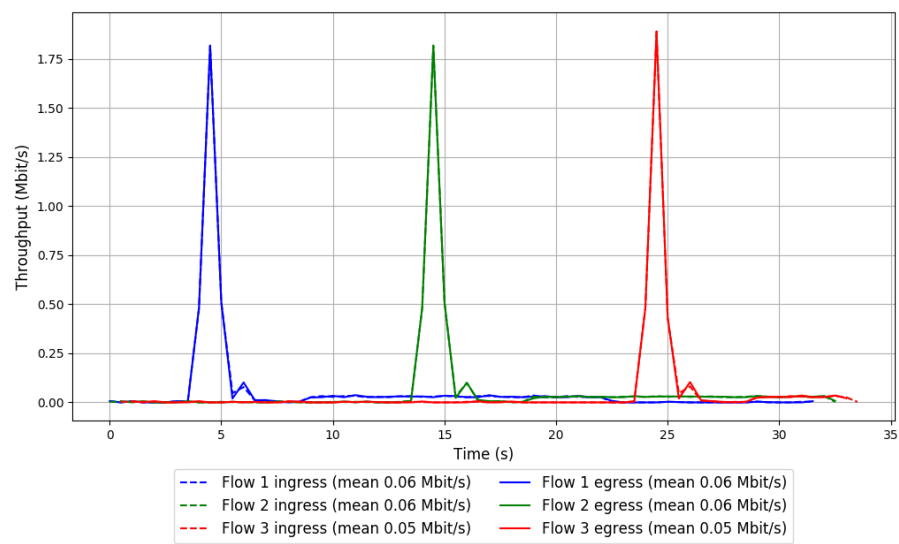
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 114.603 ms

Loss rate: 0.40%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-04-18 02:38:42

End at: 2018-04-18 02:39:12

Below is generated by plot.py at 2018-04-18 07:39:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 114.085 ms

Loss rate: 0.10%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 114.027 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 114.054 ms

Loss rate: 0.00%

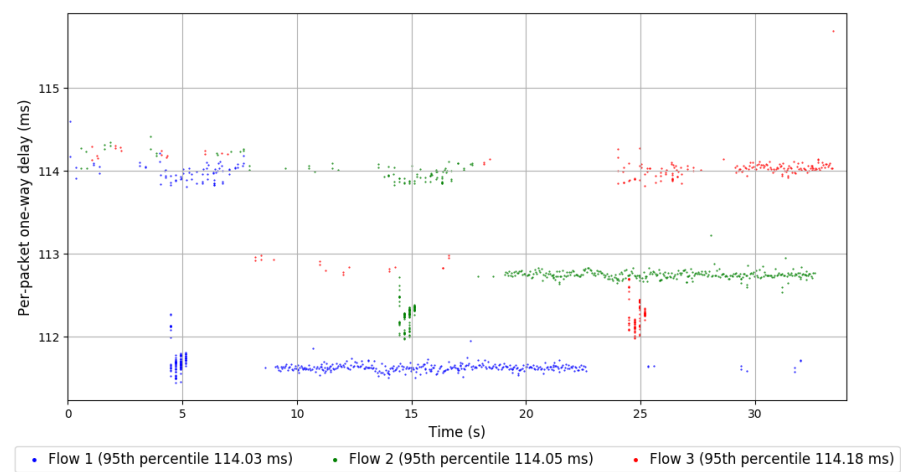
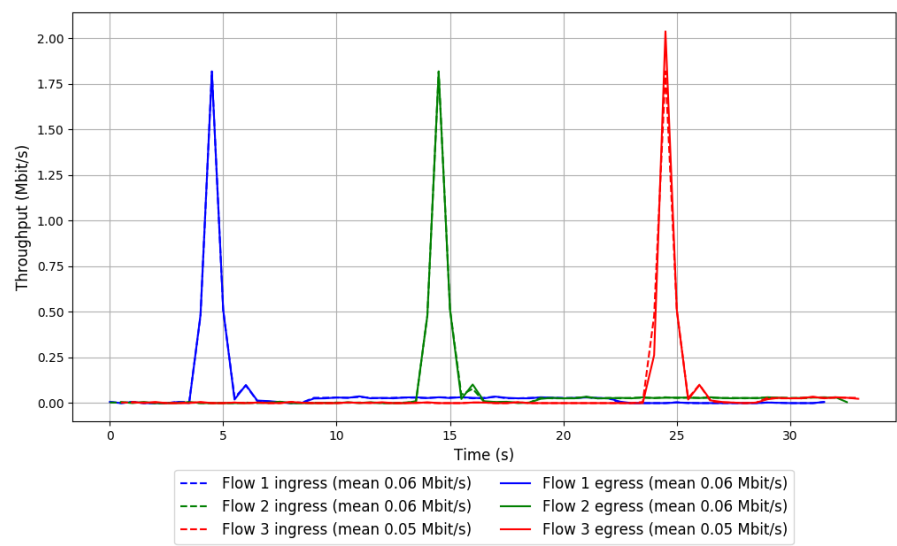
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 114.180 ms

Loss rate: 0.32%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2018-04-18 02:55:59

End at: 2018-04-18 02:56:29

Below is generated by plot.py at 2018-04-18 07:39:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 114.153 ms

Loss rate: 0.10%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 112.444 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 113.720 ms

Loss rate: 0.00%

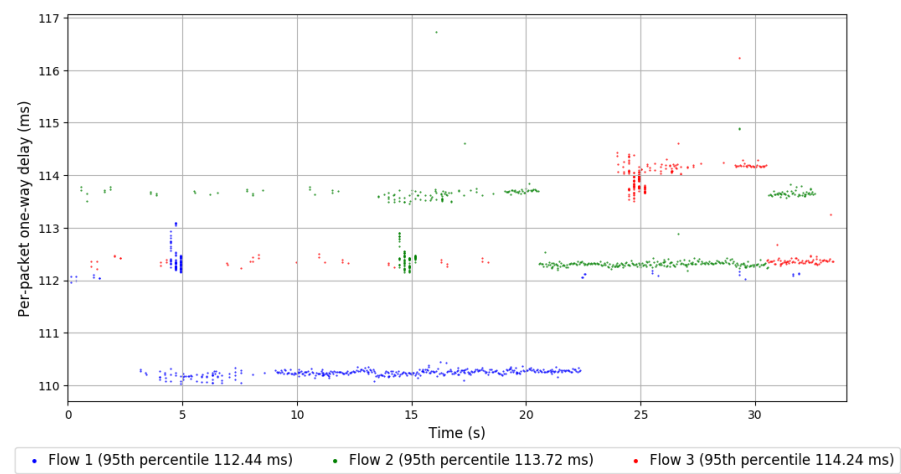
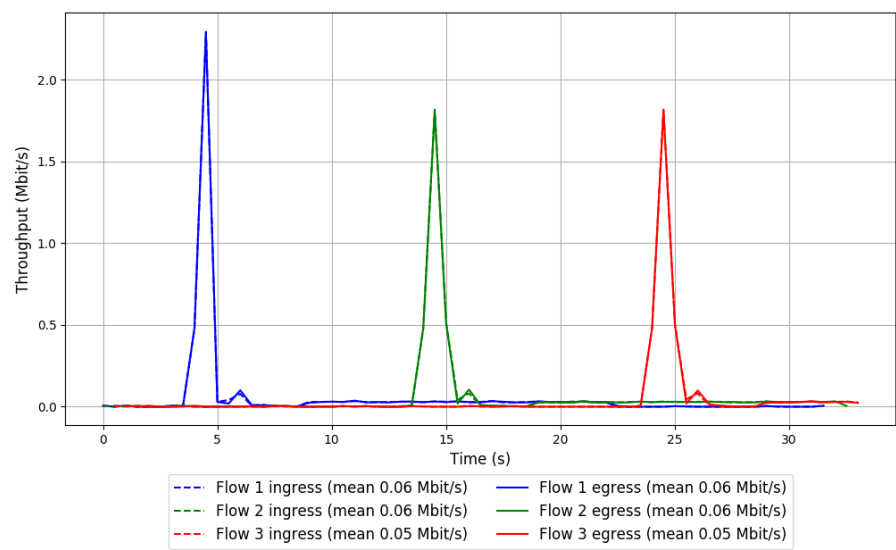
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 114.242 ms

Loss rate: 0.32%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2018-04-18 03:13:07

End at: 2018-04-18 03:13:37

Below is generated by plot.py at 2018-04-18 07:39:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 113.149 ms

Loss rate: 0.12%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 113.160 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 112.963 ms

Loss rate: 0.00%

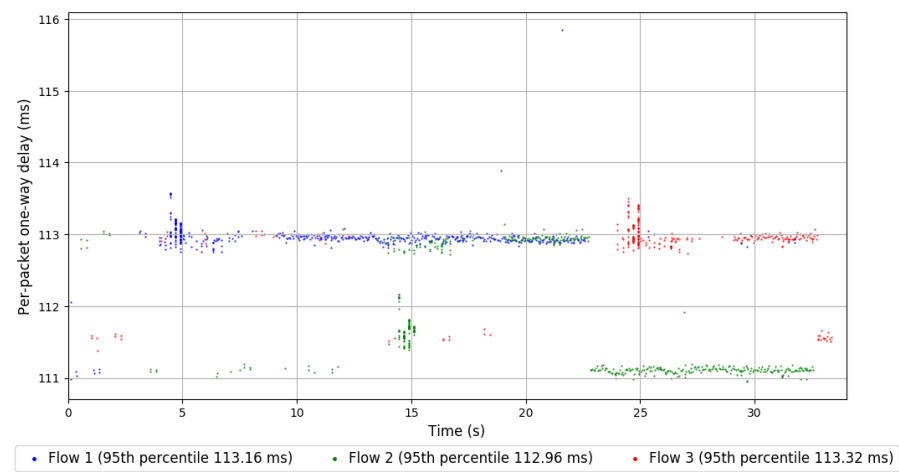
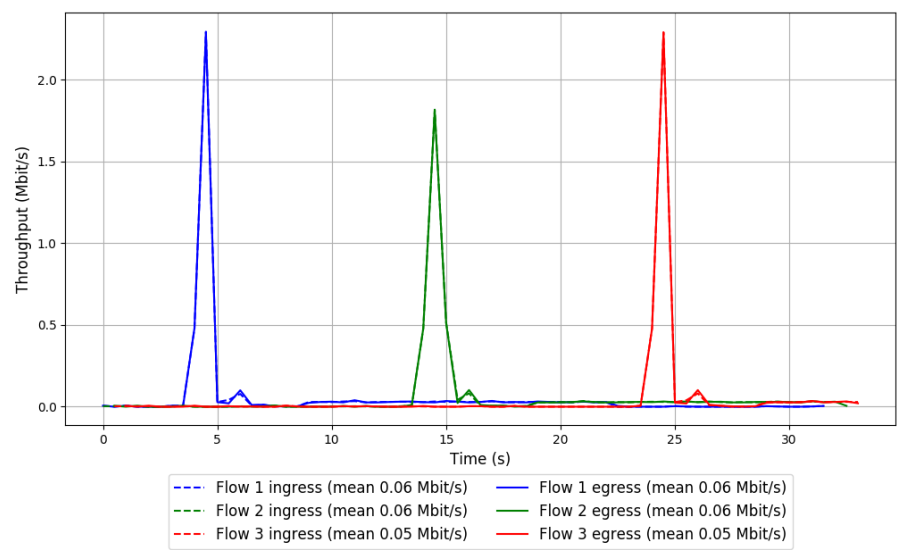
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 113.322 ms

Loss rate: 0.40%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2018-04-18 03:30:10

End at: 2018-04-18 03:30:40

Below is generated by plot.py at 2018-04-18 07:39:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 113.794 ms

Loss rate: 0.10%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 113.660 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 113.503 ms

Loss rate: 0.00%

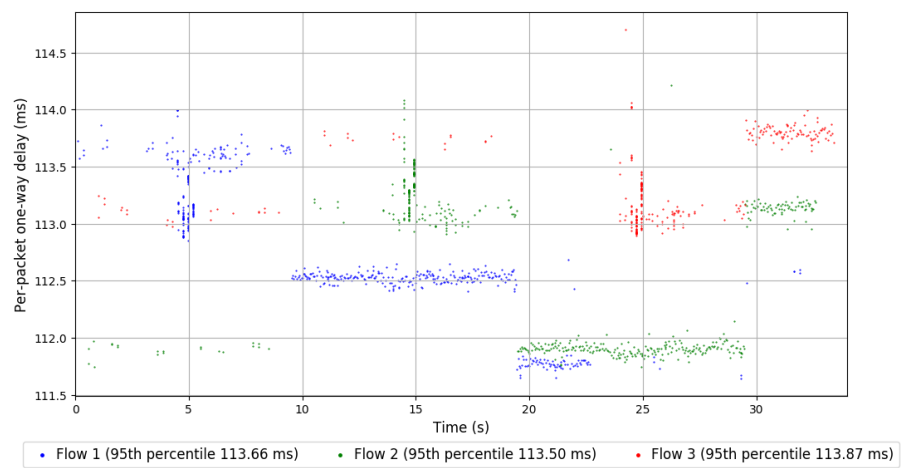
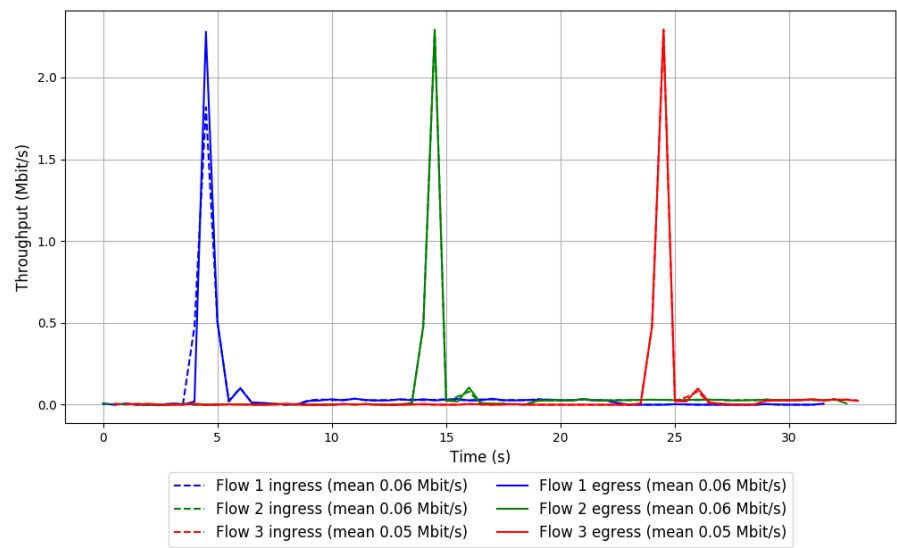
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 113.870 ms

Loss rate: 0.32%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2018-04-18 03:47:11

End at: 2018-04-18 03:47:41

Below is generated by plot.py at 2018-04-18 07:39:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 113.026 ms

Loss rate: 0.12%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 112.768 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 113.120 ms

Loss rate: 0.00%

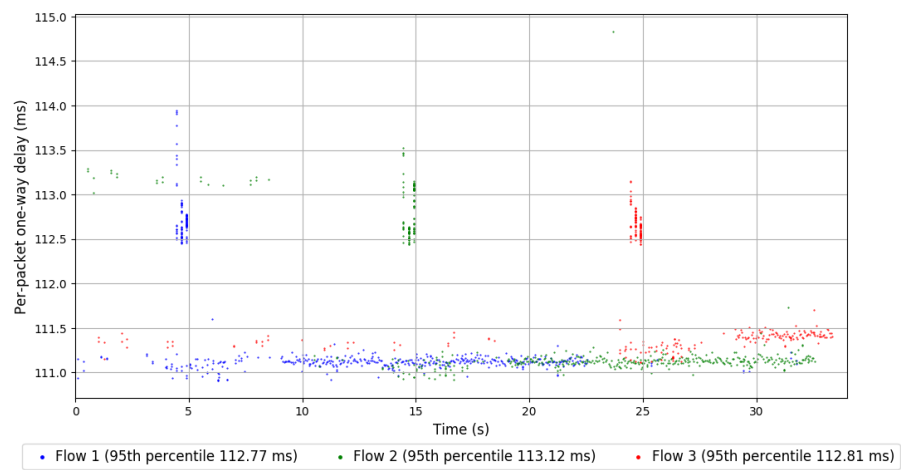
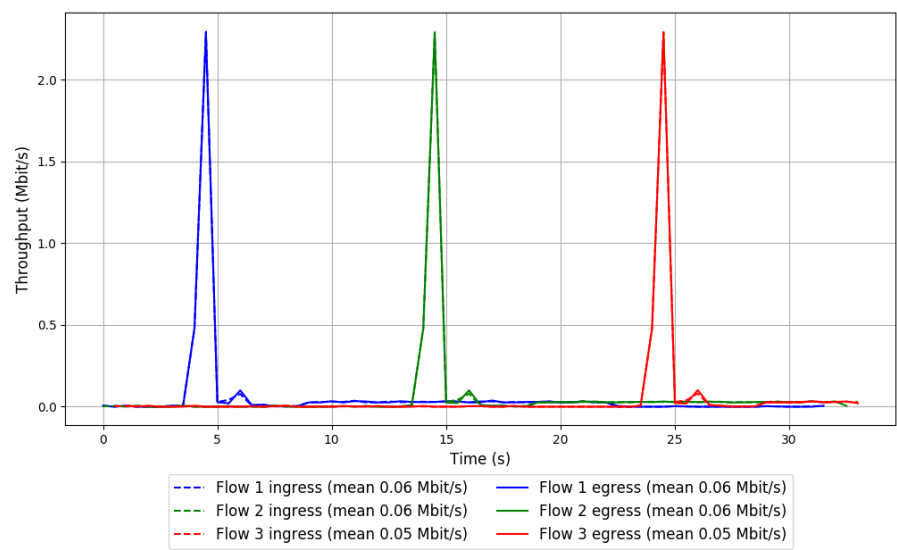
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 112.810 ms

Loss rate: 0.40%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

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

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

Below is generated by plot.py at 2018-04-18 07:39:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 113.615 ms

Loss rate: 0.13%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 113.683 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 113.441 ms

Loss rate: 0.00%

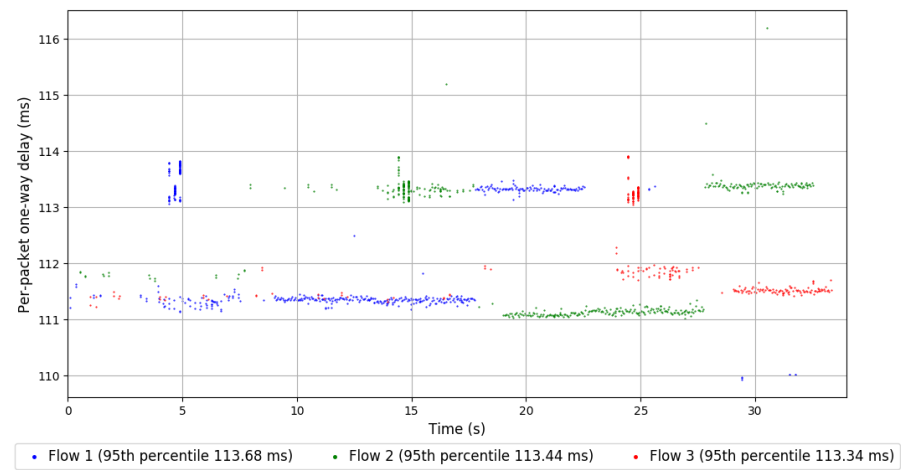
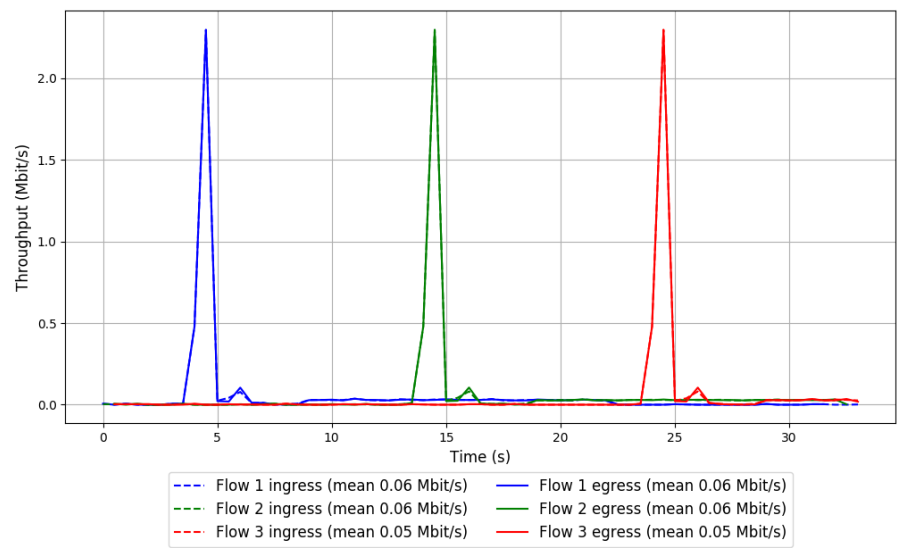
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 113.345 ms

Loss rate: 0.40%

Run 10: Report of WebRTC media — Data Link



Run 1: Statistics of Sprout

Start at: 2018-04-18 01:36:14

End at: 2018-04-18 01:36:44

Below is generated by plot.py at 2018-04-18 07:39:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.67 Mbit/s

95th percentile per-packet one-way delay: 114.211 ms

Loss rate: 1.76%

-- Flow 1:

Average throughput: 2.45 Mbit/s

95th percentile per-packet one-way delay: 114.263 ms

Loss rate: 1.26%

-- Flow 2:

Average throughput: 2.33 Mbit/s

95th percentile per-packet one-way delay: 113.882 ms

Loss rate: 2.02%

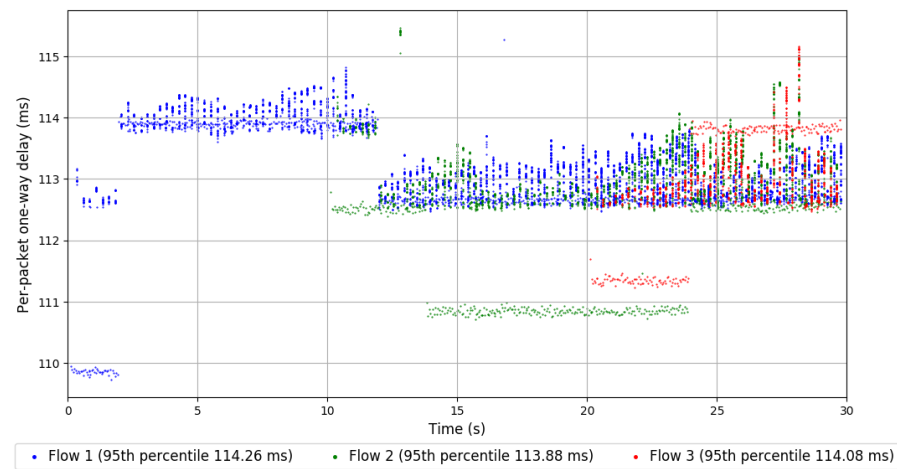
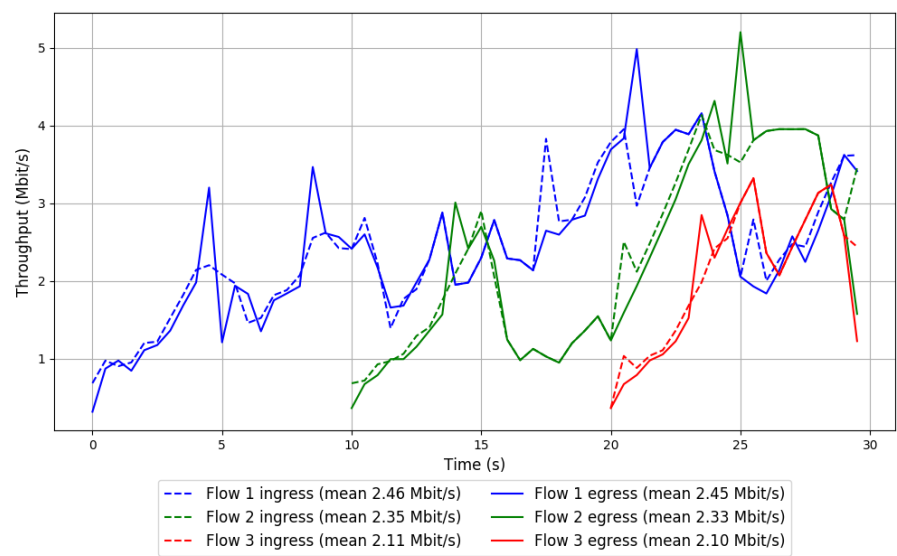
-- Flow 3:

Average throughput: 2.10 Mbit/s

95th percentile per-packet one-way delay: 114.084 ms

Loss rate: 2.91%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2018-04-18 01:53:38

End at: 2018-04-18 01:54:08

Below is generated by plot.py at 2018-04-18 07:39:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.13 Mbit/s

95th percentile per-packet one-way delay: 116.603 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 2.13 Mbit/s

95th percentile per-packet one-way delay: 116.572 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 2.10 Mbit/s

95th percentile per-packet one-way delay: 116.627 ms

Loss rate: 1.06%

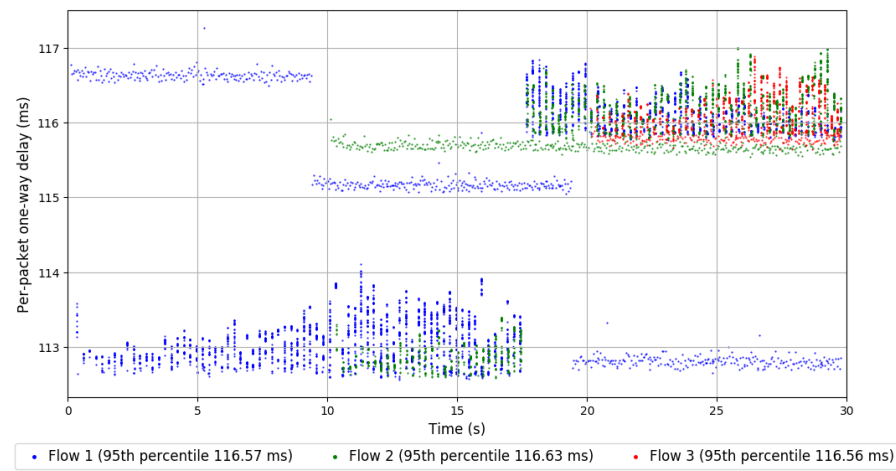
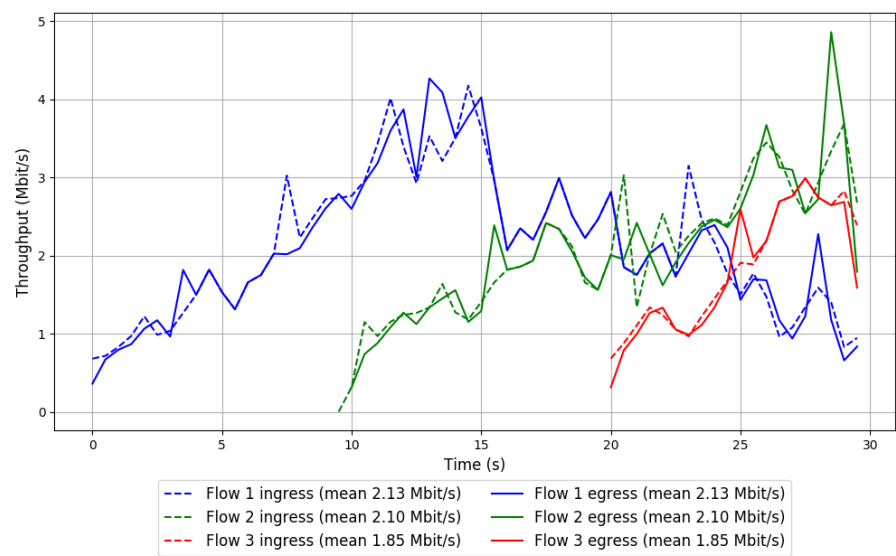
-- Flow 3:

Average throughput: 1.85 Mbit/s

95th percentile per-packet one-way delay: 116.560 ms

Loss rate: 2.57%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2018-04-18 02:10:46

End at: 2018-04-18 02:11:16

Below is generated by plot.py at 2018-04-18 07:39:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.00 Mbit/s

95th percentile per-packet one-way delay: 115.722 ms

Loss rate: 2.28%

-- Flow 1:

Average throughput: 2.08 Mbit/s

95th percentile per-packet one-way delay: 115.887 ms

Loss rate: 1.76%

-- Flow 2:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 115.437 ms

Loss rate: 2.51%

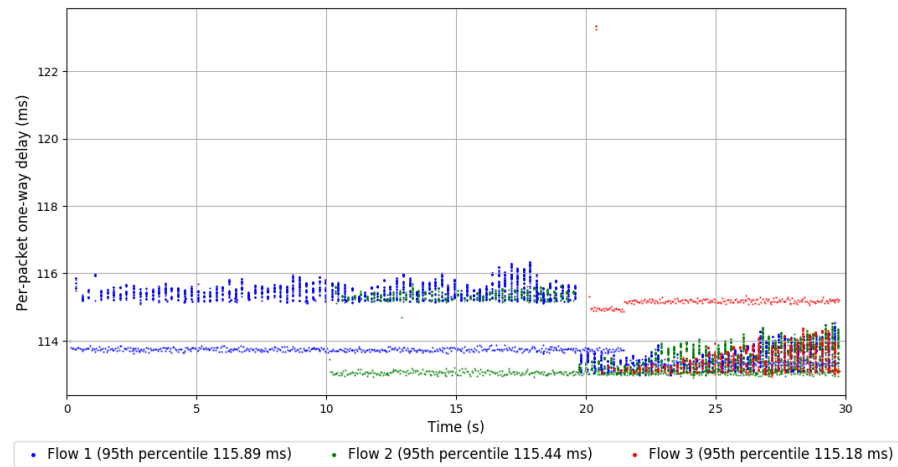
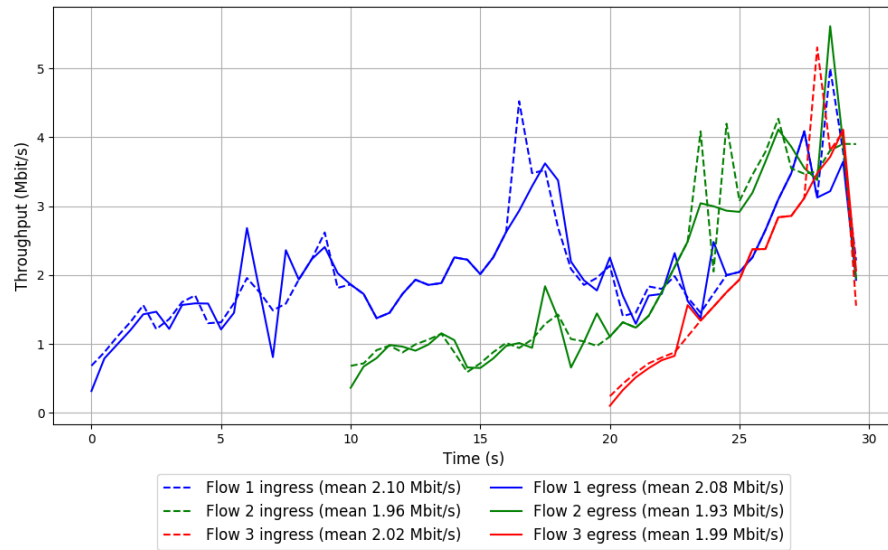
-- Flow 3:

Average throughput: 1.99 Mbit/s

95th percentile per-packet one-way delay: 115.180 ms

Loss rate: 3.50%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2018-04-18 02:27:53

End at: 2018-04-18 02:28:23

Below is generated by plot.py at 2018-04-18 07:39:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.49 Mbit/s

95th percentile per-packet one-way delay: 114.656 ms

Loss rate: 1.35%

-- Flow 1:

Average throughput: 3.08 Mbit/s

95th percentile per-packet one-way delay: 114.564 ms

Loss rate: 0.86%

-- Flow 2:

Average throughput: 2.84 Mbit/s

95th percentile per-packet one-way delay: 114.691 ms

Loss rate: 1.53%

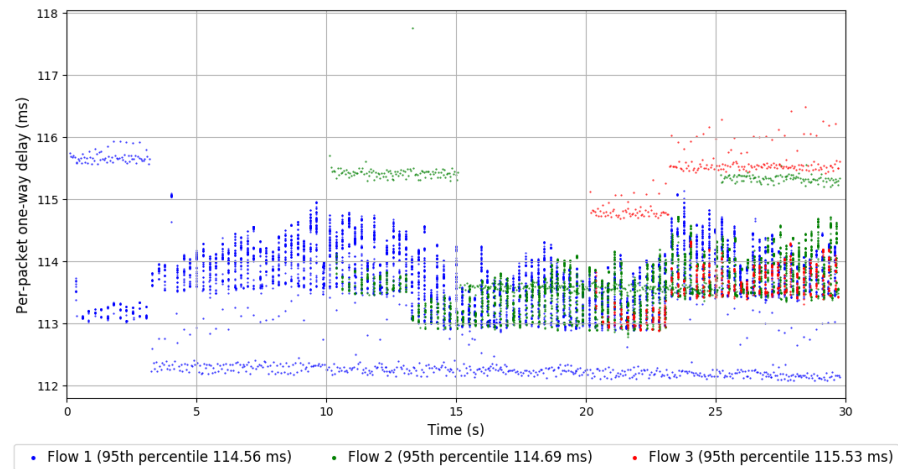
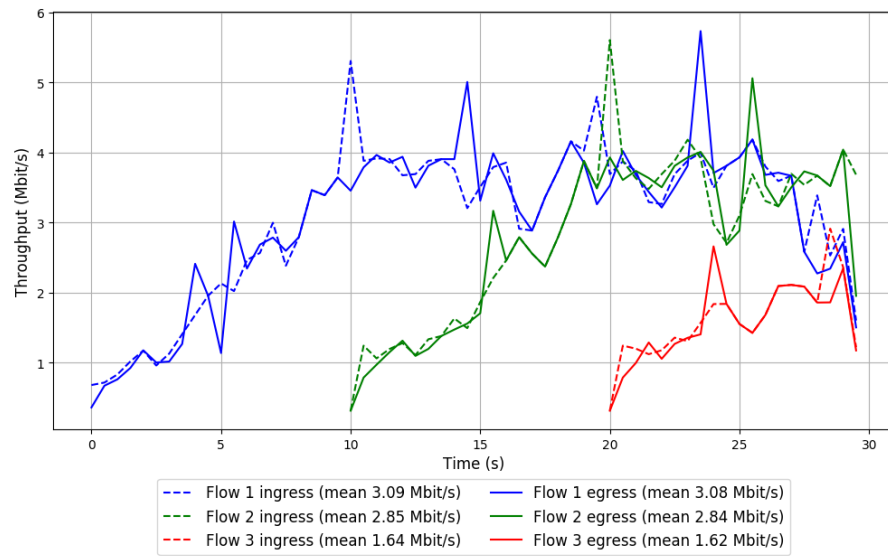
-- Flow 3:

Average throughput: 1.62 Mbit/s

95th percentile per-packet one-way delay: 115.535 ms

Loss rate: 3.47%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2018-04-18 02:45:09

End at: 2018-04-18 02:45:39

Below is generated by plot.py at 2018-04-18 07:39:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.02 Mbit/s

95th percentile per-packet one-way delay: 113.896 ms

Loss rate: 1.74%

-- Flow 1:

Average throughput: 2.64 Mbit/s

95th percentile per-packet one-way delay: 113.944 ms

Loss rate: 1.23%

-- Flow 2:

Average throughput: 2.75 Mbit/s

95th percentile per-packet one-way delay: 113.992 ms

Loss rate: 1.65%

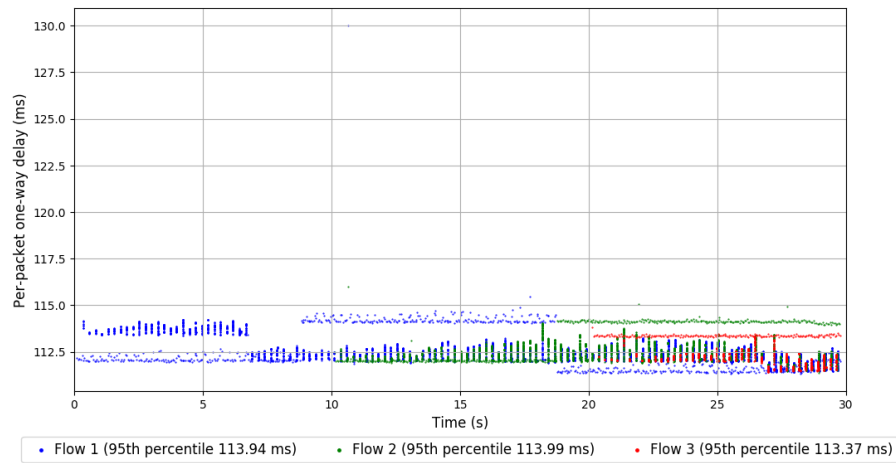
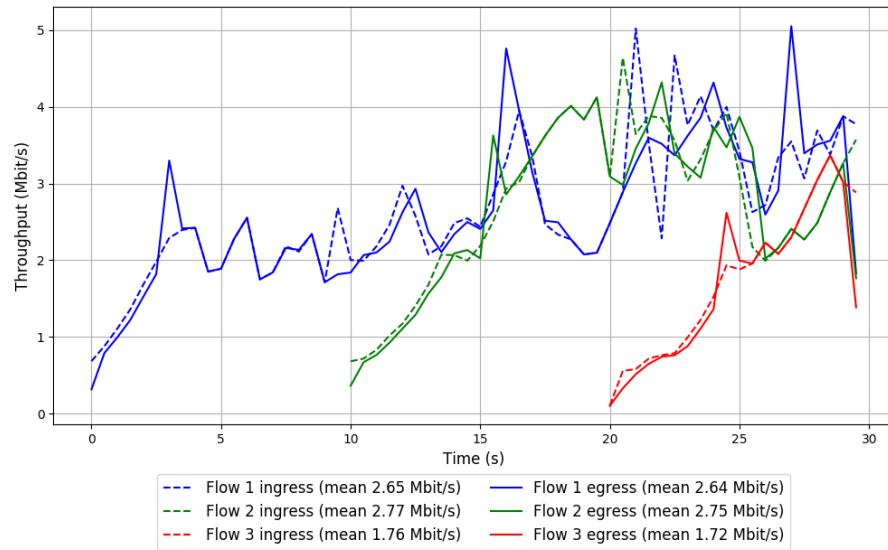
-- Flow 3:

Average throughput: 1.72 Mbit/s

95th percentile per-packet one-way delay: 113.366 ms

Loss rate: 4.34%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2018-04-18 03:02:22

End at: 2018-04-18 03:02:52

Below is generated by plot.py at 2018-04-18 07:39:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.23 Mbit/s

95th percentile per-packet one-way delay: 114.400 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 2.96 Mbit/s

95th percentile per-packet one-way delay: 114.459 ms

Loss rate: 0.47%

-- Flow 2:

Average throughput: 2.56 Mbit/s

95th percentile per-packet one-way delay: 114.358 ms

Loss rate: 1.53%

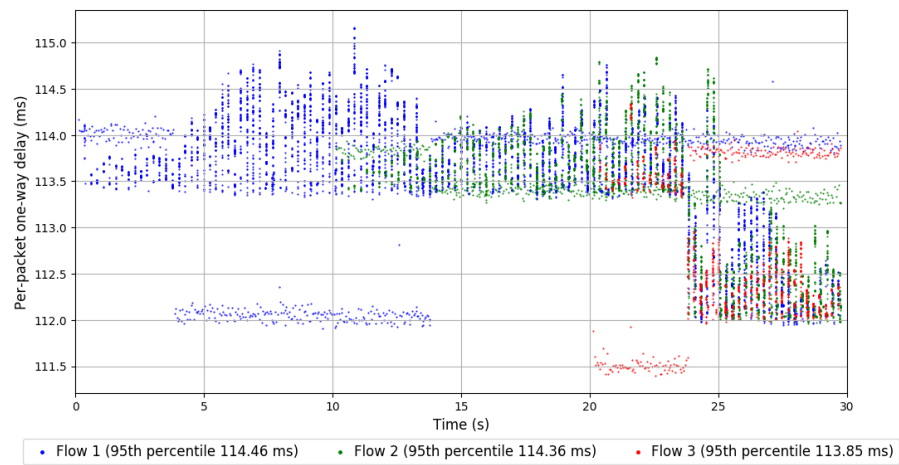
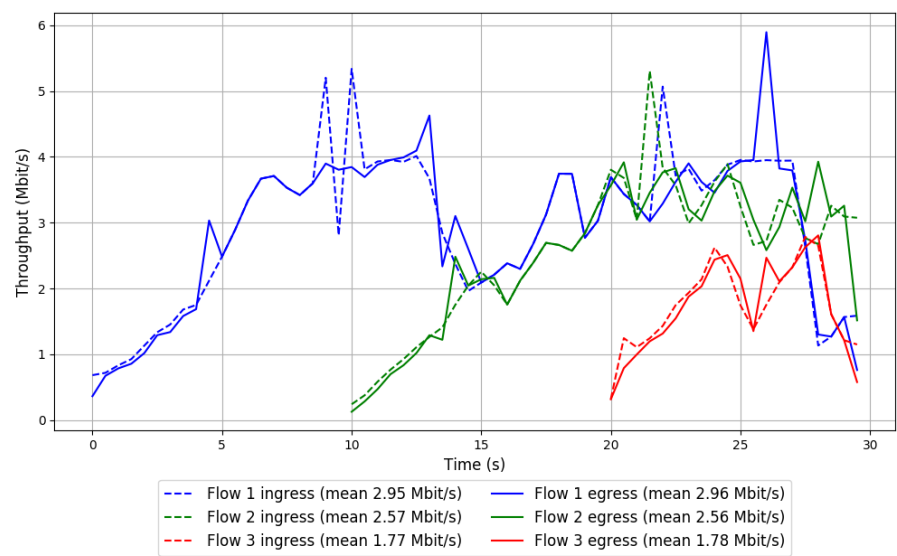
-- Flow 3:

Average throughput: 1.78 Mbit/s

95th percentile per-packet one-way delay: 113.849 ms

Loss rate: 1.65%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2018-04-18 03:19:18

End at: 2018-04-18 03:19:48

Below is generated by plot.py at 2018-04-18 07:39:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.33 Mbit/s

95th percentile per-packet one-way delay: 113.336 ms

Loss rate: 1.09%

-- Flow 1:

Average throughput: 3.13 Mbit/s

95th percentile per-packet one-way delay: 113.282 ms

Loss rate: 0.62%

-- Flow 2:

Average throughput: 2.53 Mbit/s

95th percentile per-packet one-way delay: 113.420 ms

Loss rate: 1.21%

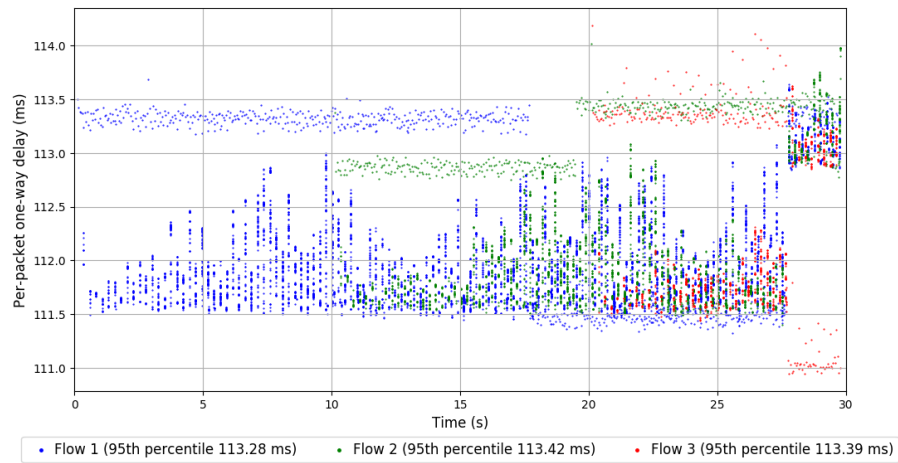
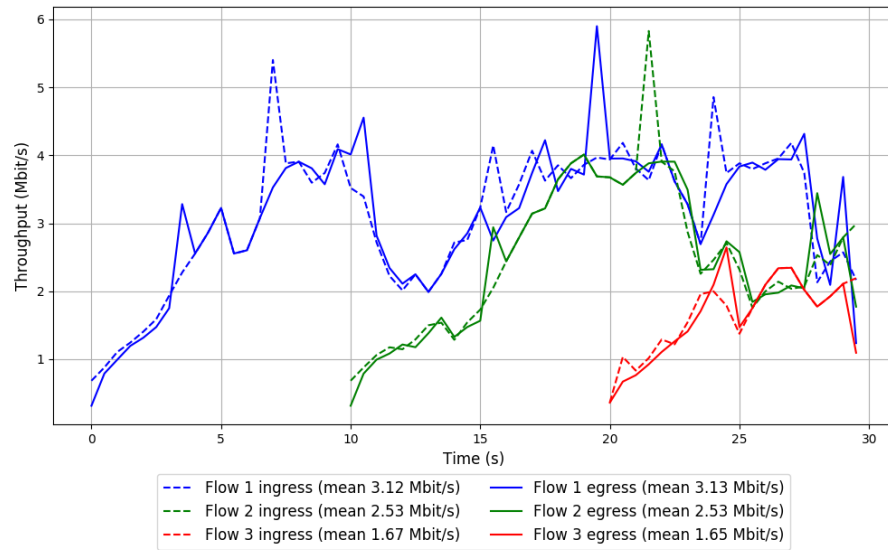
-- Flow 3:

Average throughput: 1.65 Mbit/s

95th percentile per-packet one-way delay: 113.386 ms

Loss rate: 3.34%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2018-04-18 03:36:30

End at: 2018-04-18 03:37:00

Below is generated by plot.py at 2018-04-18 07:39:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.47 Mbit/s

95th percentile per-packet one-way delay: 113.873 ms

Loss rate: 1.28%

-- Flow 1:

Average throughput: 2.72 Mbit/s

95th percentile per-packet one-way delay: 113.856 ms

Loss rate: 0.52%

-- Flow 2:

Average throughput: 2.96 Mbit/s

95th percentile per-packet one-way delay: 113.942 ms

Loss rate: 1.17%

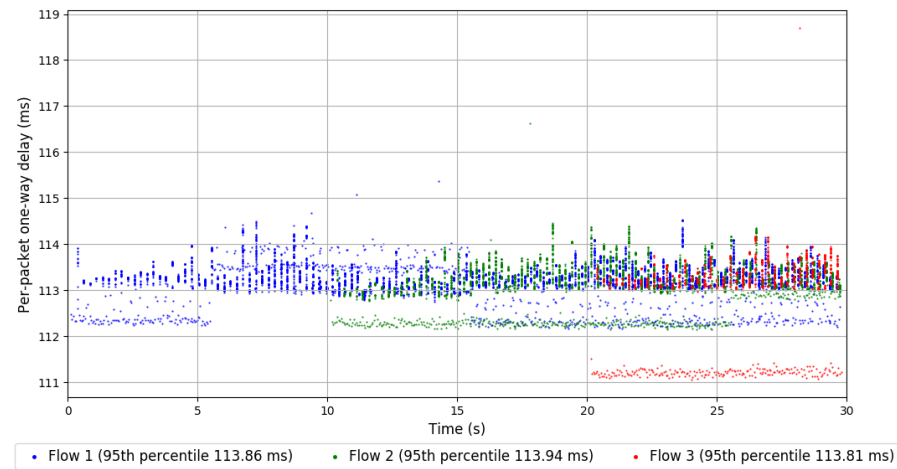
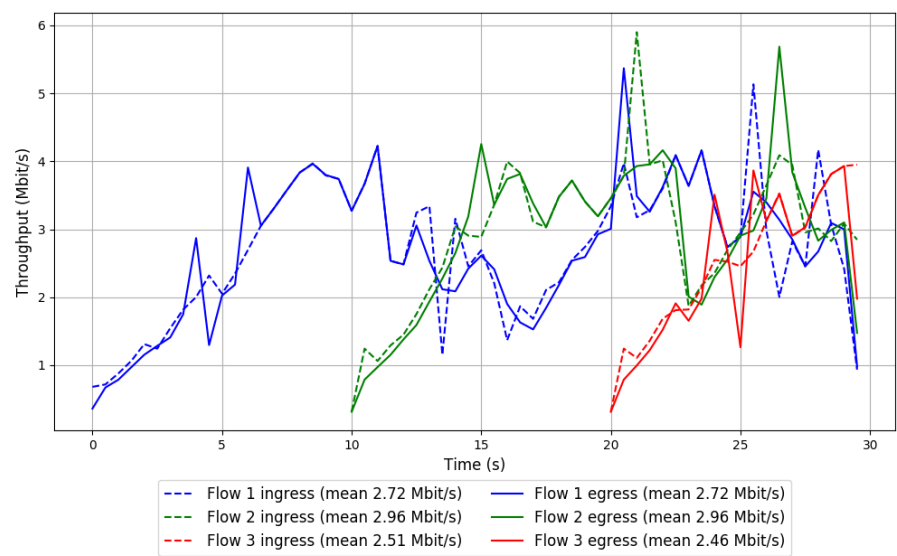
-- Flow 3:

Average throughput: 2.46 Mbit/s

95th percentile per-packet one-way delay: 113.805 ms

Loss rate: 3.99%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2018-04-18 03:53:30

End at: 2018-04-18 03:54:00

Below is generated by plot.py at 2018-04-18 07:39:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.16 Mbit/s

95th percentile per-packet one-way delay: 113.556 ms

Loss rate: 1.66%

-- Flow 1:

Average throughput: 2.65 Mbit/s

95th percentile per-packet one-way delay: 113.560 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 2.88 Mbit/s

95th percentile per-packet one-way delay: 113.558 ms

Loss rate: 1.76%

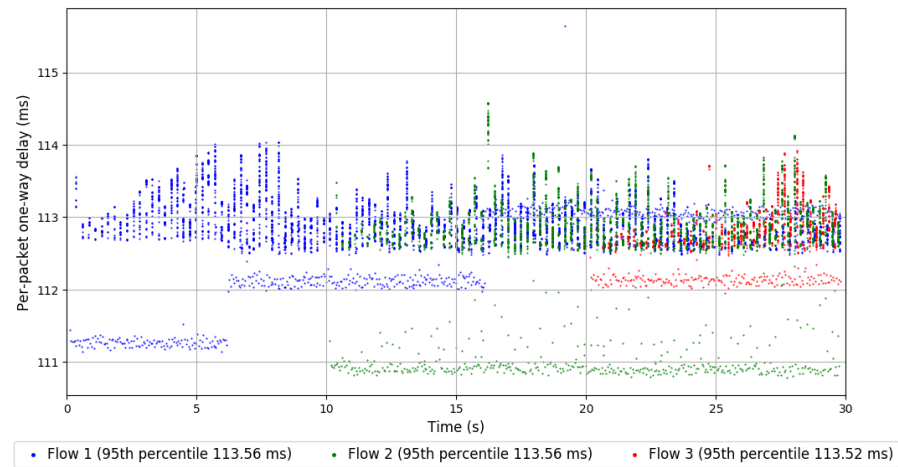
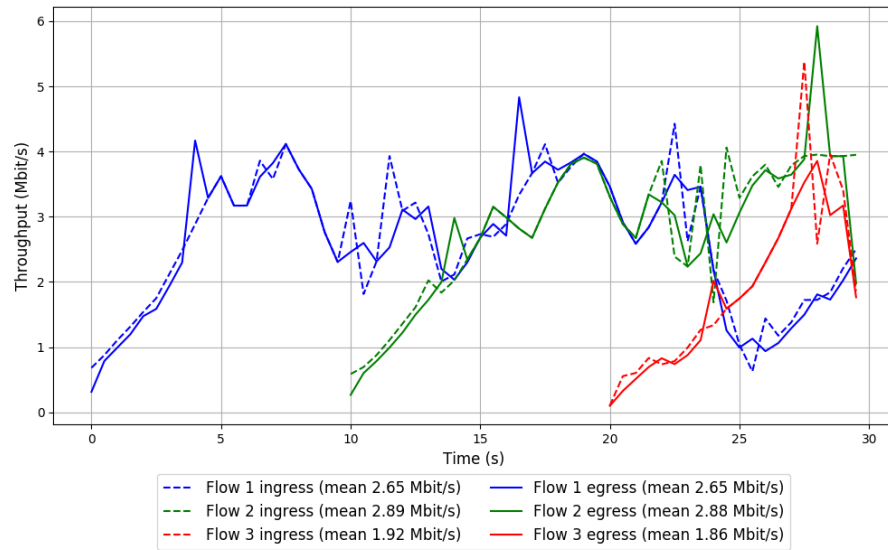
-- Flow 3:

Average throughput: 1.86 Mbit/s

95th percentile per-packet one-way delay: 113.521 ms

Loss rate: 4.91%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

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

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

Below is generated by plot.py at 2018-04-18 07:39:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.26 Mbit/s

95th percentile per-packet one-way delay: 114.288 ms

Loss rate: 1.21%

-- Flow 1:

Average throughput: 2.99 Mbit/s

95th percentile per-packet one-way delay: 114.311 ms

Loss rate: 0.83%

-- Flow 2:

Average throughput: 2.27 Mbit/s

95th percentile per-packet one-way delay: 114.302 ms

Loss rate: 0.92%

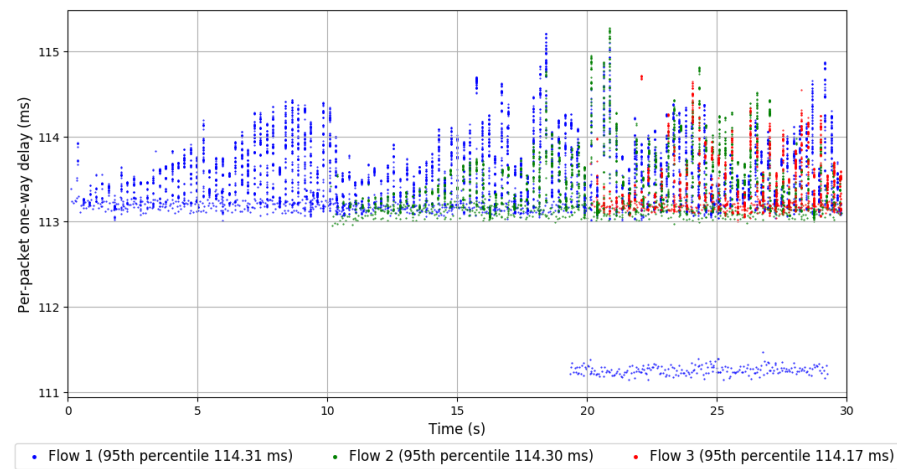
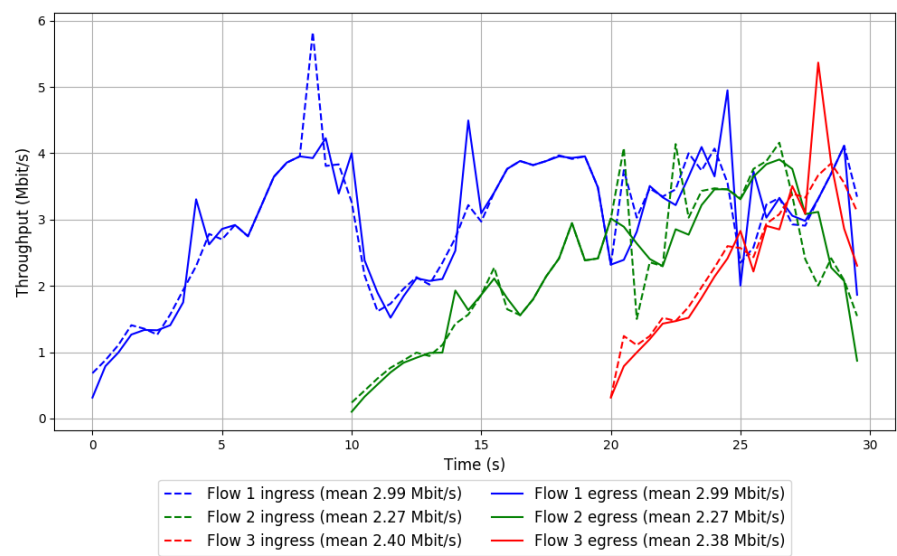
-- Flow 3:

Average throughput: 2.38 Mbit/s

95th percentile per-packet one-way delay: 114.168 ms

Loss rate: 3.19%

Run 10: Report of Sprout — Data Link

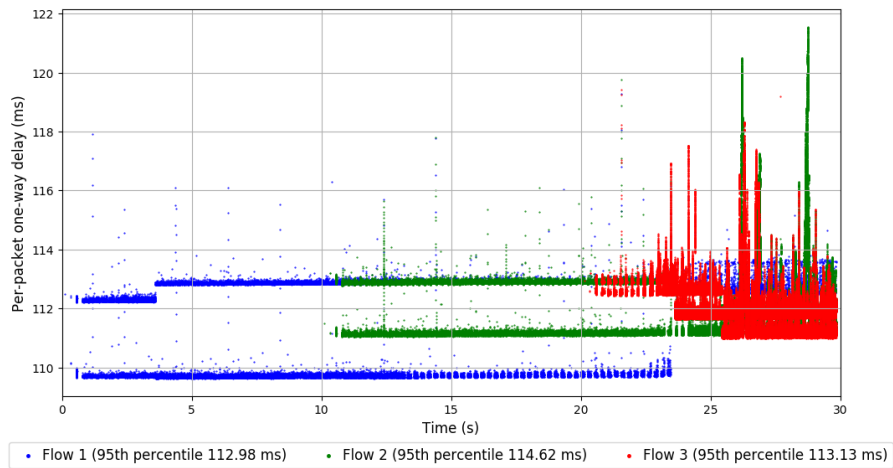
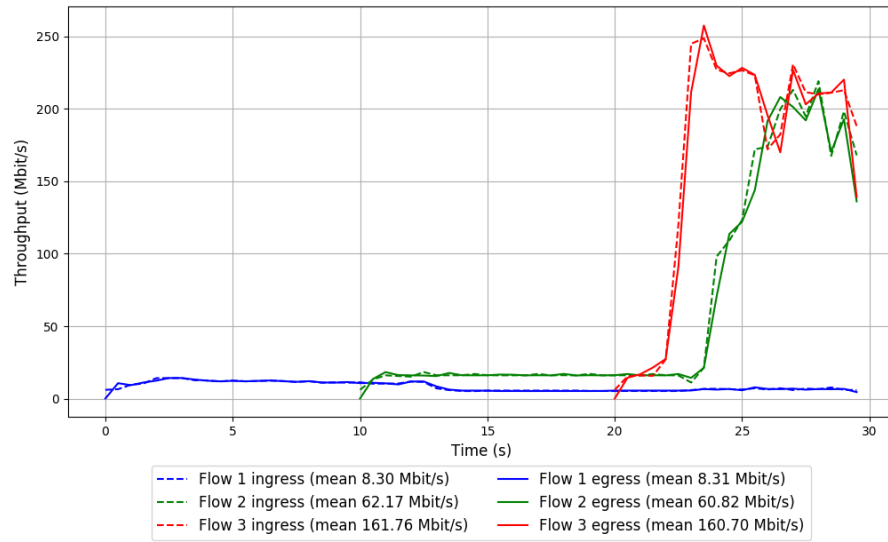


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-04-18 01:31:52
End at: 2018-04-18 01:32:22

# Below is generated by plot.py at 2018-04-18 07:39:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 101.16 Mbit/s
95th percentile per-packet one-way delay: 113.464 ms
Loss rate: 2.86%
-- Flow 1:
Average throughput: 8.31 Mbit/s
95th percentile per-packet one-way delay: 112.976 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 60.82 Mbit/s
95th percentile per-packet one-way delay: 114.623 ms
Loss rate: 3.26%
-- Flow 3:
Average throughput: 160.70 Mbit/s
95th percentile per-packet one-way delay: 113.133 ms
Loss rate: 2.90%
```


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

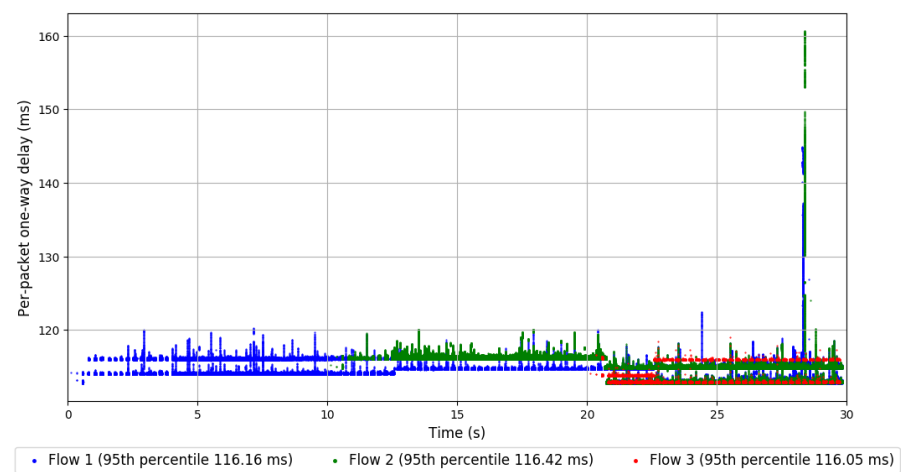
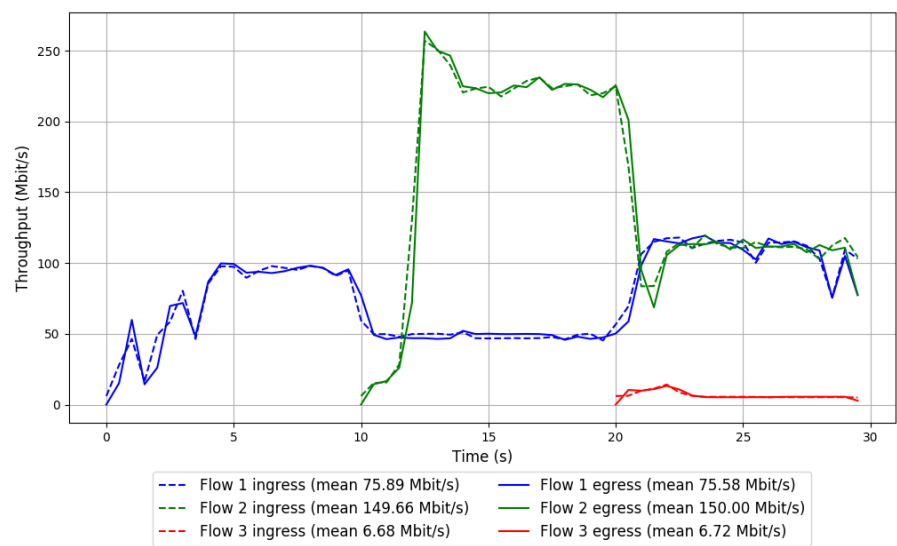


```
Run 2: Statistics of TaoVA-100x

Start at: 2018-04-18 01:49:05
End at: 2018-04-18 01:49:35

# Below is generated by plot.py at 2018-04-18 07:40:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 177.26 Mbit/s
95th percentile per-packet one-way delay: 116.359 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 75.58 Mbit/s
95th percentile per-packet one-way delay: 116.159 ms
Loss rate: 1.14%
-- Flow 2:
Average throughput: 150.00 Mbit/s
95th percentile per-packet one-way delay: 116.417 ms
Loss rate: 0.90%
-- Flow 3:
Average throughput: 6.72 Mbit/s
95th percentile per-packet one-way delay: 116.050 ms
Loss rate: 2.11%
```

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-04-18 02:06:11

End at: 2018-04-18 02:06:41

Below is generated by plot.py at 2018-04-18 07:42:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 213.34 Mbit/s

95th percentile per-packet one-way delay: 115.377 ms

Loss rate: 0.85%

-- Flow 1:

Average throughput: 196.73 Mbit/s

95th percentile per-packet one-way delay: 115.216 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 16.40 Mbit/s

95th percentile per-packet one-way delay: 116.867 ms

Loss rate: 1.11%

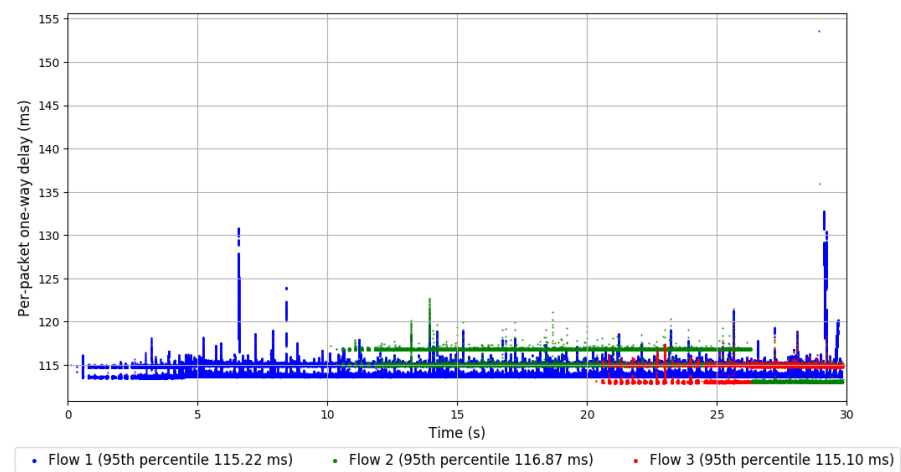
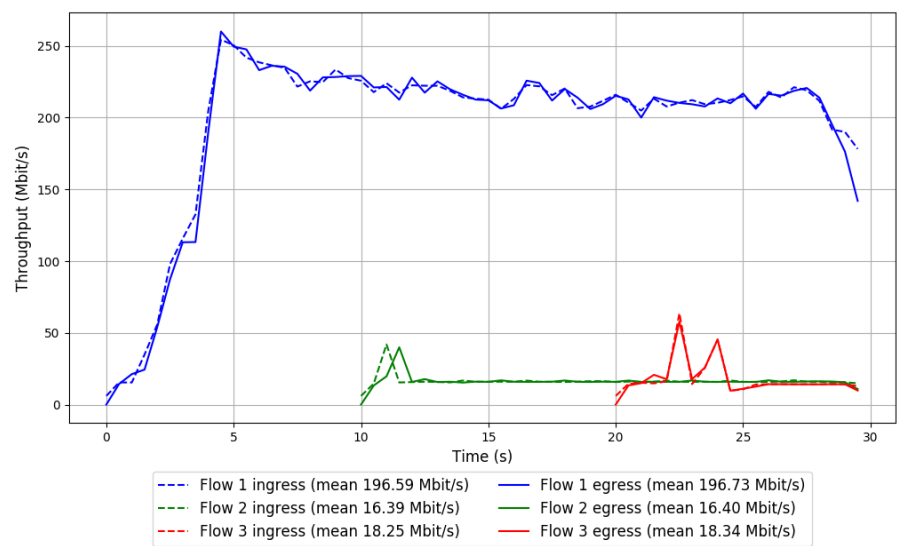
-- Flow 3:

Average throughput: 18.34 Mbit/s

95th percentile per-packet one-way delay: 115.098 ms

Loss rate: 1.76%

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-04-18 02:23:15

End at: 2018-04-18 02:23:45

Below is generated by plot.py at 2018-04-18 07:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 263.57 Mbit/s

95th percentile per-packet one-way delay: 114.929 ms

Loss rate: 1.32%

-- Flow 1:

Average throughput: 205.35 Mbit/s

95th percentile per-packet one-way delay: 114.522 ms

Loss rate: 0.84%

-- Flow 2:

Average throughput: 3.57 Mbit/s

95th percentile per-packet one-way delay: 118.586 ms

Loss rate: 1.06%

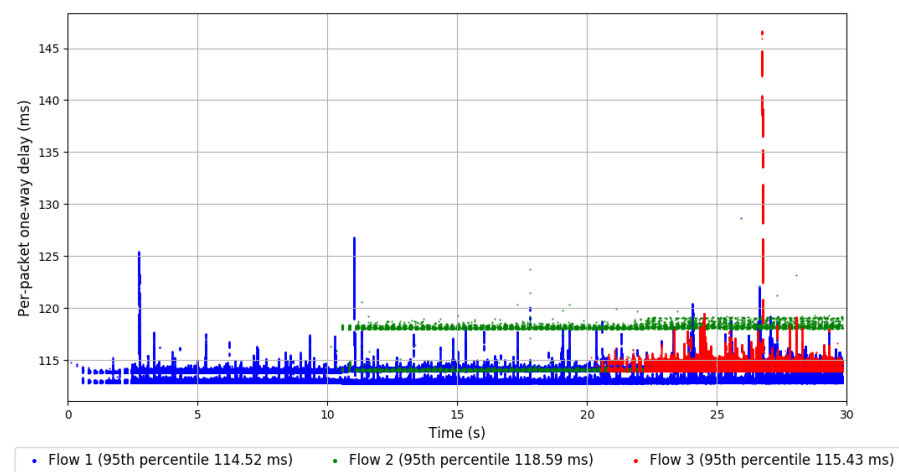
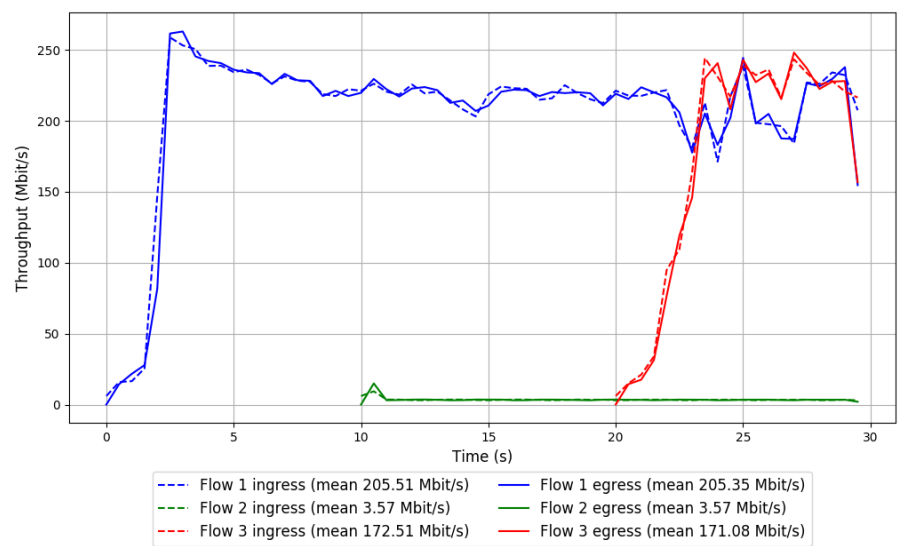
-- Flow 3:

Average throughput: 171.08 Mbit/s

95th percentile per-packet one-way delay: 115.432 ms

Loss rate: 3.07%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-04-18 02:40:27

End at: 2018-04-18 02:40:57

Below is generated by plot.py at 2018-04-18 07:45:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 303.02 Mbit/s

95th percentile per-packet one-way delay: 114.876 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 181.81 Mbit/s

95th percentile per-packet one-way delay: 113.915 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 149.88 Mbit/s

95th percentile per-packet one-way delay: 115.094 ms

Loss rate: 0.00%

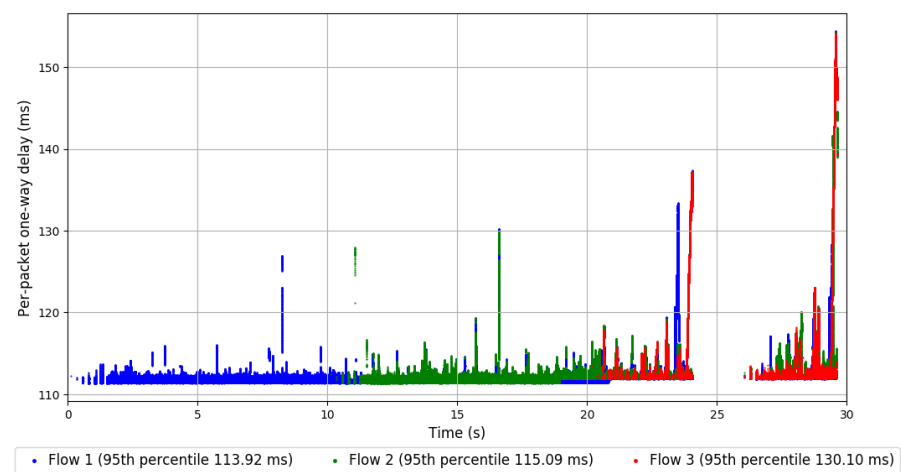
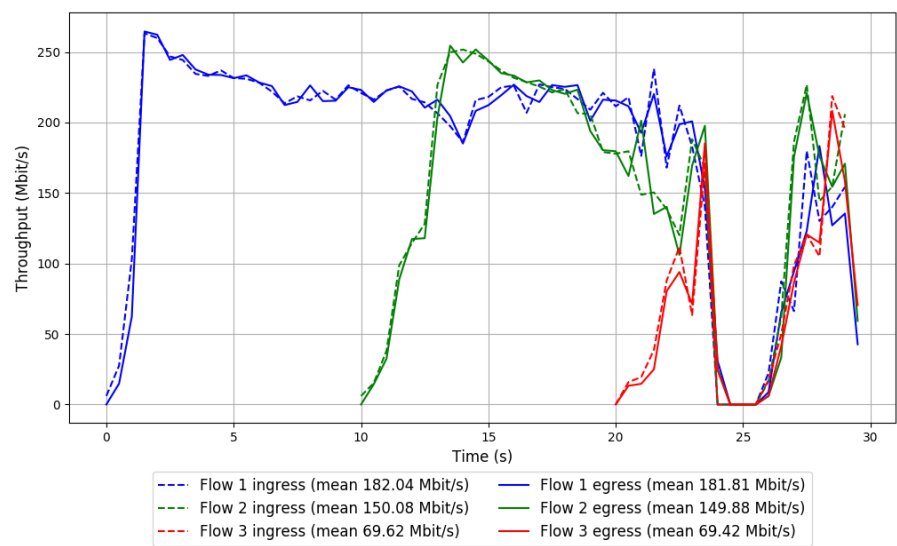
-- Flow 3:

Average throughput: 69.42 Mbit/s

95th percentile per-packet one-way delay: 130.098 ms

Loss rate: 0.00%

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



Run 6: Statistics of TaoVA-100x

Start at: 2018-04-18 02:57:45

End at: 2018-04-18 02:58:15

Below is generated by plot.py at 2018-04-18 07:45:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 241.56 Mbit/s

95th percentile per-packet one-way delay: 115.950 ms

Loss rate: 0.66%

-- Flow 1:

Average throughput: 169.93 Mbit/s

95th percentile per-packet one-way delay: 114.390 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 22.97 Mbit/s

95th percentile per-packet one-way delay: 113.888 ms

Loss rate: 0.40%

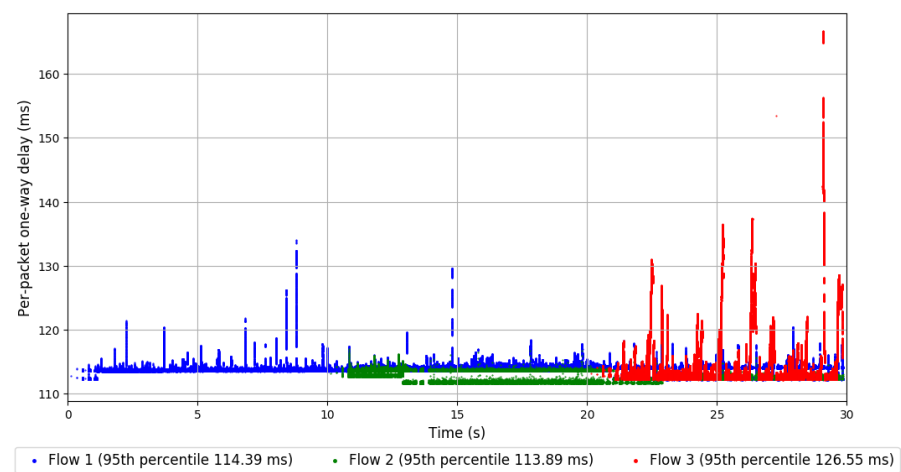
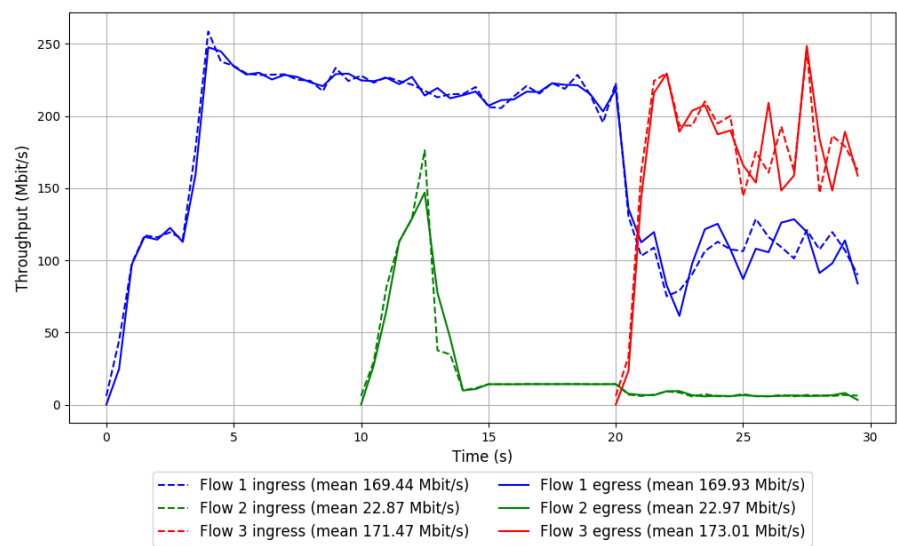
-- Flow 3:

Average throughput: 173.01 Mbit/s

95th percentile per-packet one-way delay: 126.550 ms

Loss rate: 1.38%

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



Run 7: Statistics of TaoVA-100x

Start at: 2018-04-18 03:14:52

End at: 2018-04-18 03:15:22

Below is generated by plot.py at 2018-04-18 07:45:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 160.56 Mbit/s

95th percentile per-packet one-way delay: 114.294 ms

Loss rate: 1.34%

-- Flow 1:

Average throughput: 31.74 Mbit/s

95th percentile per-packet one-way delay: 113.956 ms

Loss rate: 1.99%

-- Flow 2:

Average throughput: 149.42 Mbit/s

95th percentile per-packet one-way delay: 114.387 ms

Loss rate: 0.73%

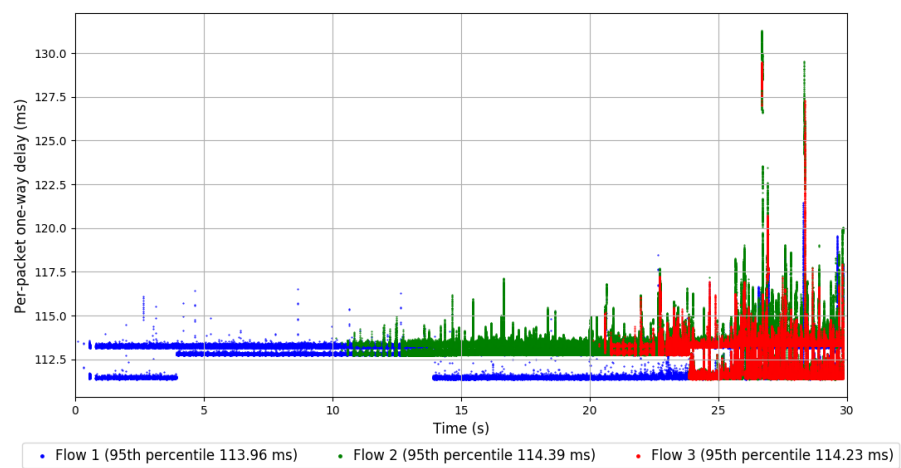
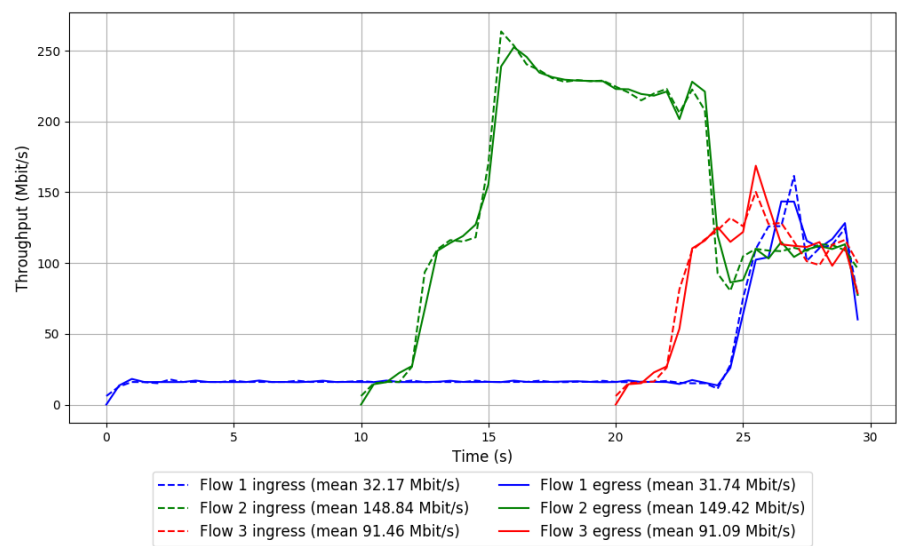
-- Flow 3:

Average throughput: 91.09 Mbit/s

95th percentile per-packet one-way delay: 114.226 ms

Loss rate: 2.63%

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



Run 8: Statistics of TaoVA-100x

Start at: 2018-04-18 03:31:59

End at: 2018-04-18 03:32:29

Below is generated by plot.py at 2018-04-18 07:46:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 198.78 Mbit/s

95th percentile per-packet one-way delay: 114.813 ms

Loss rate: 1.09%

-- Flow 1:

Average throughput: 146.51 Mbit/s

95th percentile per-packet one-way delay: 114.514 ms

Loss rate: 1.31%

-- Flow 2:

Average throughput: 38.86 Mbit/s

95th percentile per-packet one-way delay: 121.012 ms

Loss rate: 0.45%

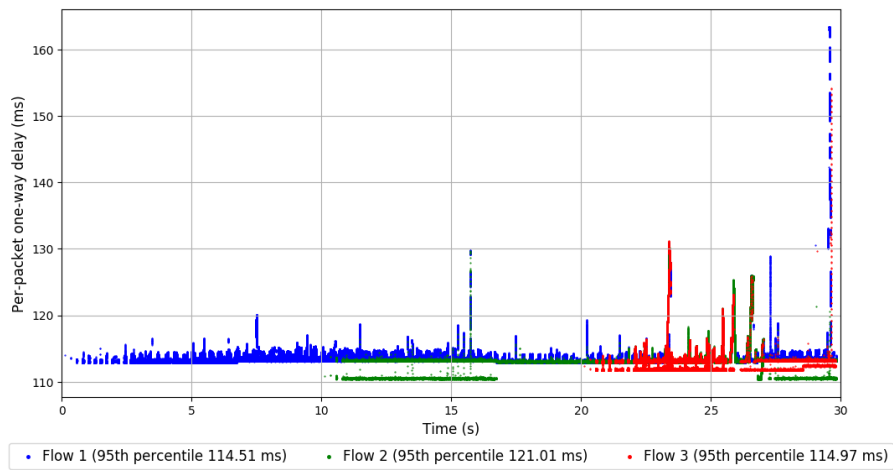
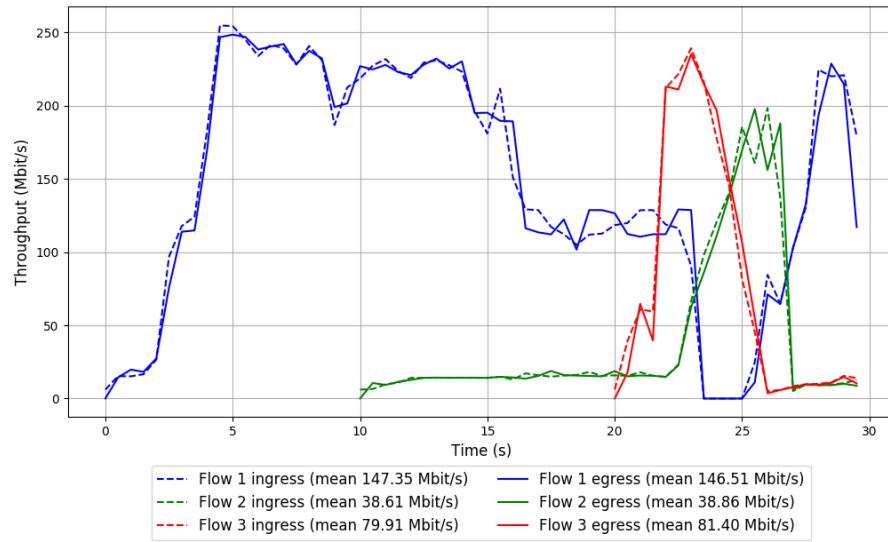
-- Flow 3:

Average throughput: 81.40 Mbit/s

95th percentile per-packet one-way delay: 114.970 ms

Loss rate: 0.47%

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

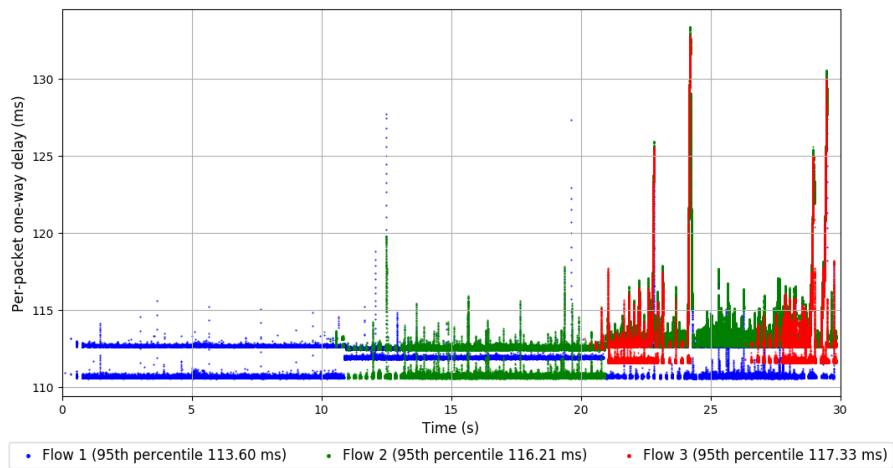
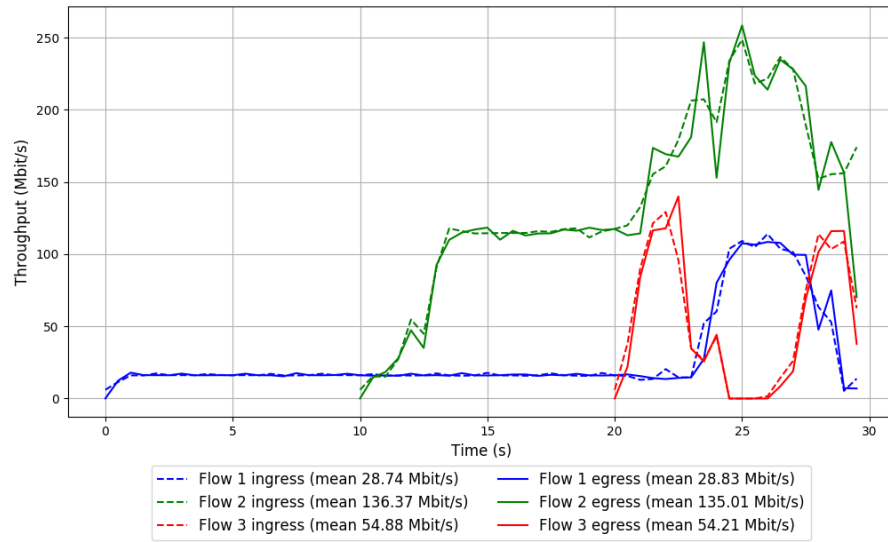


```
Run 9: Statistics of TaoVA-100x

Start at: 2018-04-18 03:49:05
End at: 2018-04-18 03:49:35

# Below is generated by plot.py at 2018-04-18 07:46:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 136.01 Mbit/s
95th percentile per-packet one-way delay: 115.879 ms
Loss rate: 1.93%
-- Flow 1:
Average throughput: 28.83 Mbit/s
95th percentile per-packet one-way delay: 113.598 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 135.01 Mbit/s
95th percentile per-packet one-way delay: 116.213 ms
Loss rate: 2.11%
-- Flow 3:
Average throughput: 54.21 Mbit/s
95th percentile per-packet one-way delay: 117.335 ms
Loss rate: 3.43%
```


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

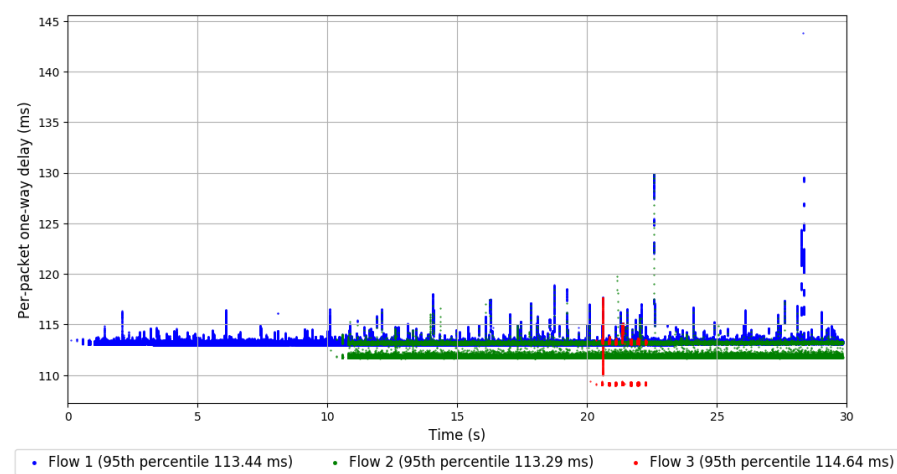
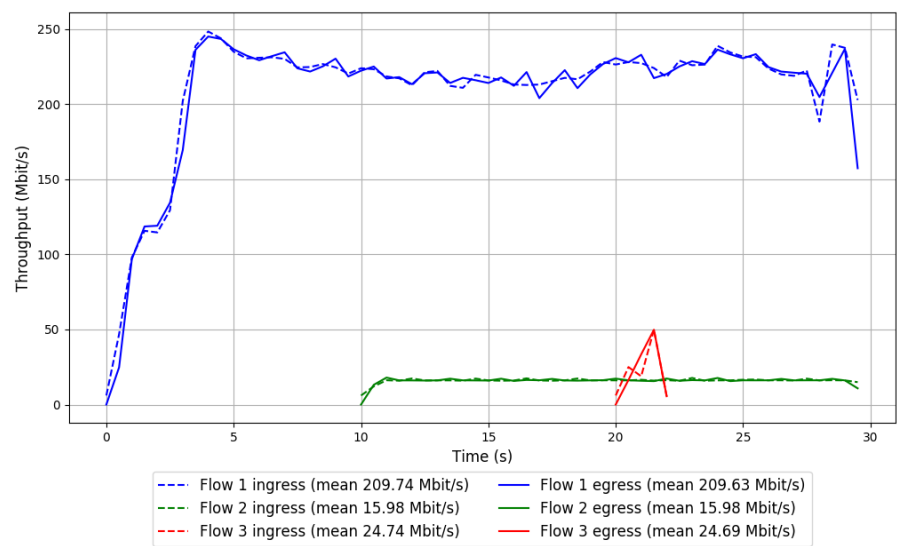


```
Run 10: Statistics of TaoVA-100x

Start at: 2018-04-18 04:06:03
End at: 2018-04-18 04:06:33

# Below is generated by plot.py at 2018-04-18 07:48:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 221.99 Mbit/s
95th percentile per-packet one-way delay: 113.434 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 209.63 Mbit/s
95th percentile per-packet one-way delay: 113.438 ms
Loss rate: 0.79%
-- Flow 2:
Average throughput: 15.98 Mbit/s
95th percentile per-packet one-way delay: 113.287 ms
Loss rate: 1.15%
-- Flow 3:
Average throughput: 24.69 Mbit/s
95th percentile per-packet one-way delay: 114.644 ms
Loss rate: 0.00%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2018-04-18 01:26:59

End at: 2018-04-18 01:27:29

Below is generated by plot.py at 2018-04-18 07:48:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 60.30 Mbit/s

95th percentile per-packet one-way delay: 113.783 ms

Loss rate: 1.12%

-- Flow 1:

Average throughput: 31.47 Mbit/s

95th percentile per-packet one-way delay: 113.859 ms

Loss rate: 0.73%

-- Flow 2:

Average throughput: 28.79 Mbit/s

95th percentile per-packet one-way delay: 113.376 ms

Loss rate: 1.08%

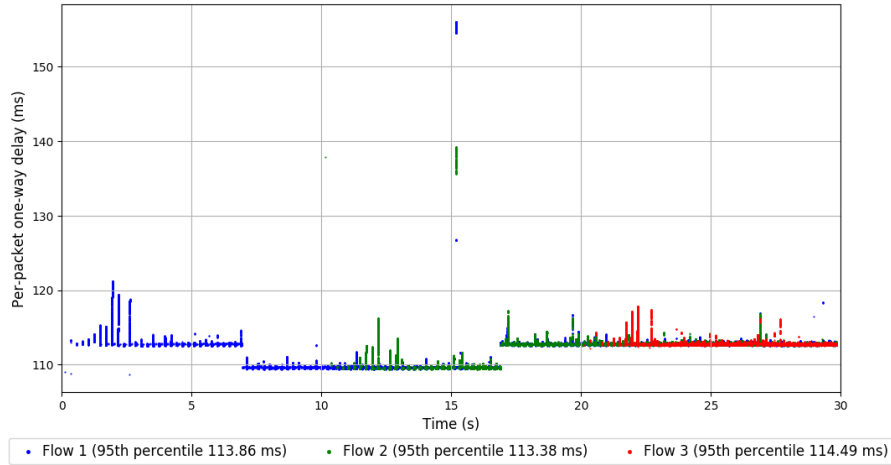
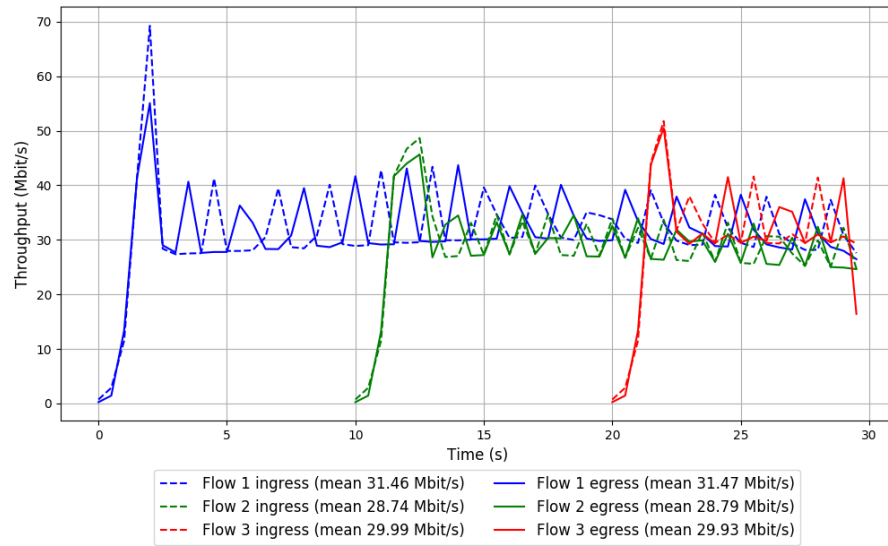
-- Flow 3:

Average throughput: 29.93 Mbit/s

95th percentile per-packet one-way delay: 114.488 ms

Loss rate: 2.46%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-04-18 01:44:06

End at: 2018-04-18 01:44:36

Below is generated by plot.py at 2018-04-18 07:48:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 69.39 Mbit/s

95th percentile per-packet one-way delay: 115.872 ms

Loss rate: 1.16%

-- Flow 1:

Average throughput: 41.48 Mbit/s

95th percentile per-packet one-way delay: 116.198 ms

Loss rate: 0.84%

-- Flow 2:

Average throughput: 27.66 Mbit/s

95th percentile per-packet one-way delay: 114.176 ms

Loss rate: 1.26%

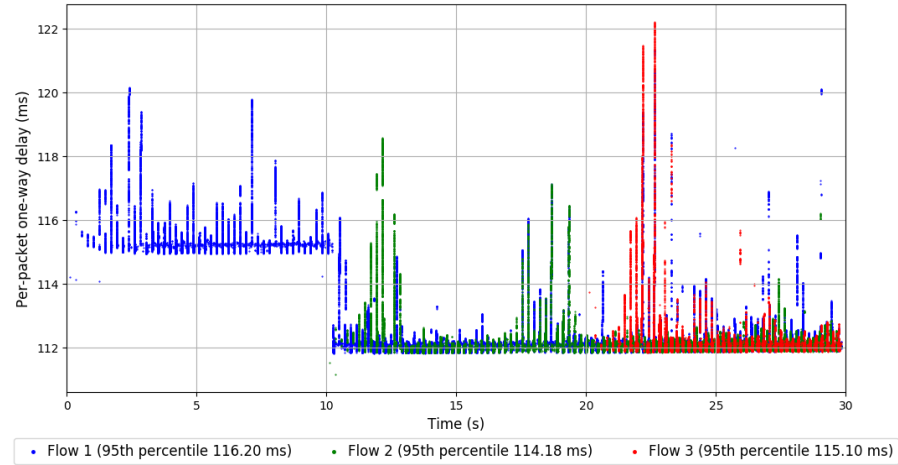
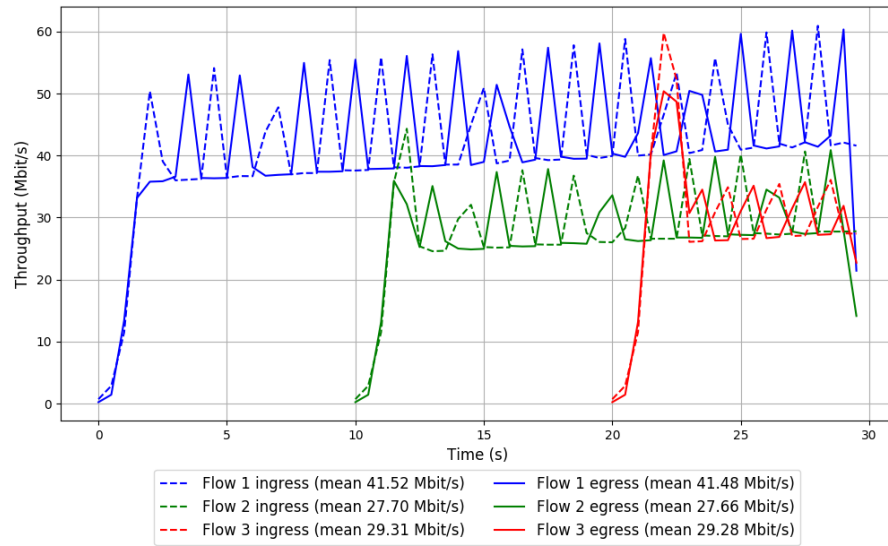
-- Flow 3:

Average throughput: 29.28 Mbit/s

95th percentile per-packet one-way delay: 115.098 ms

Loss rate: 2.35%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-04-18 02:01:30

End at: 2018-04-18 02:02:00

Below is generated by plot.py at 2018-04-18 07:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 64.27 Mbit/s

95th percentile per-packet one-way delay: 117.514 ms

Loss rate: 1.07%

-- Flow 1:

Average throughput: 36.66 Mbit/s

95th percentile per-packet one-way delay: 117.393 ms

Loss rate: 0.71%

-- Flow 2:

Average throughput: 26.28 Mbit/s

95th percentile per-packet one-way delay: 117.648 ms

Loss rate: 1.11%

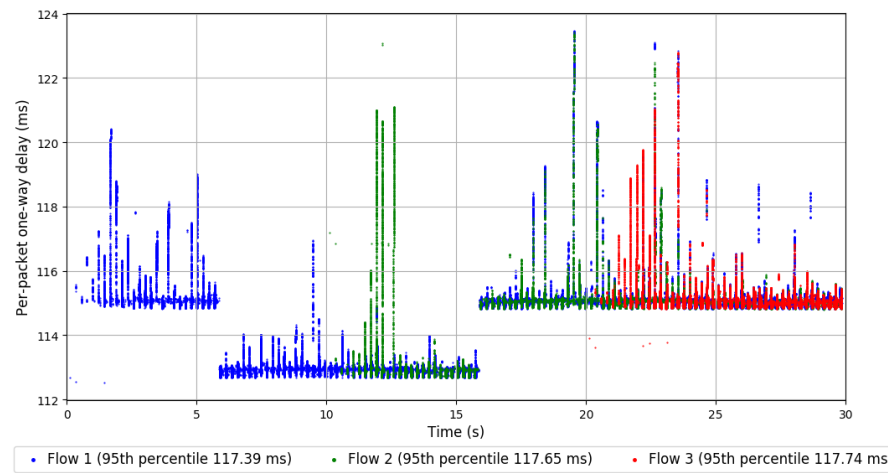
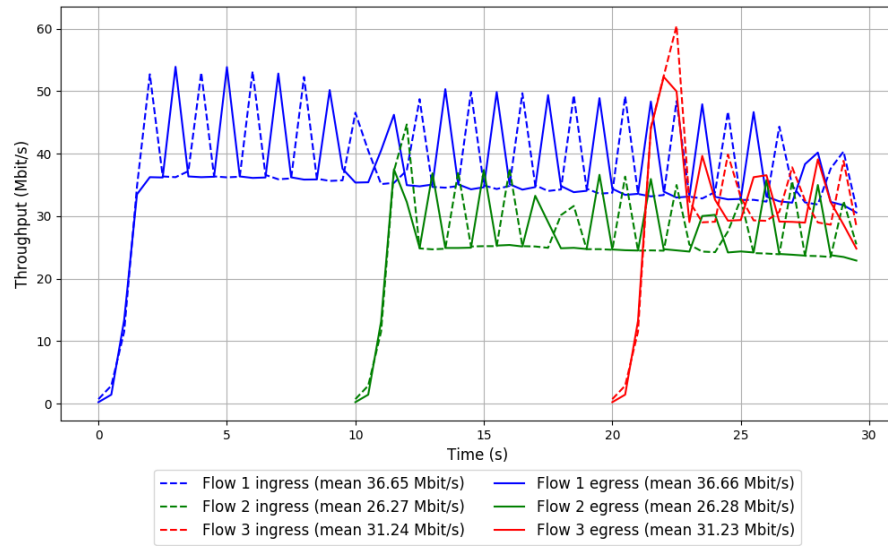
-- Flow 3:

Average throughput: 31.23 Mbit/s

95th percentile per-packet one-way delay: 117.744 ms

Loss rate: 2.29%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2018-04-18 02:18:34

End at: 2018-04-18 02:19:04

Below is generated by plot.py at 2018-04-18 07:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 87.45 Mbit/s

95th percentile per-packet one-way delay: 118.140 ms

Loss rate: 1.06%

-- Flow 1:

Average throughput: 55.33 Mbit/s

95th percentile per-packet one-way delay: 118.973 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 32.79 Mbit/s

95th percentile per-packet one-way delay: 115.935 ms

Loss rate: 1.12%

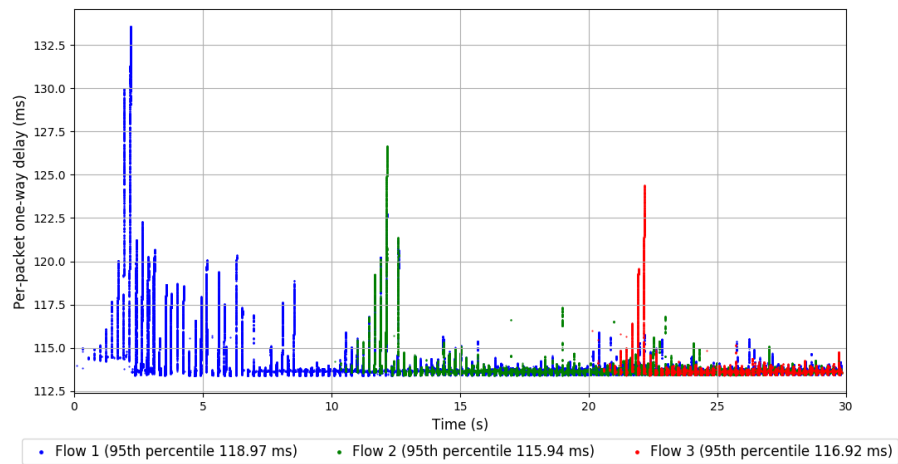
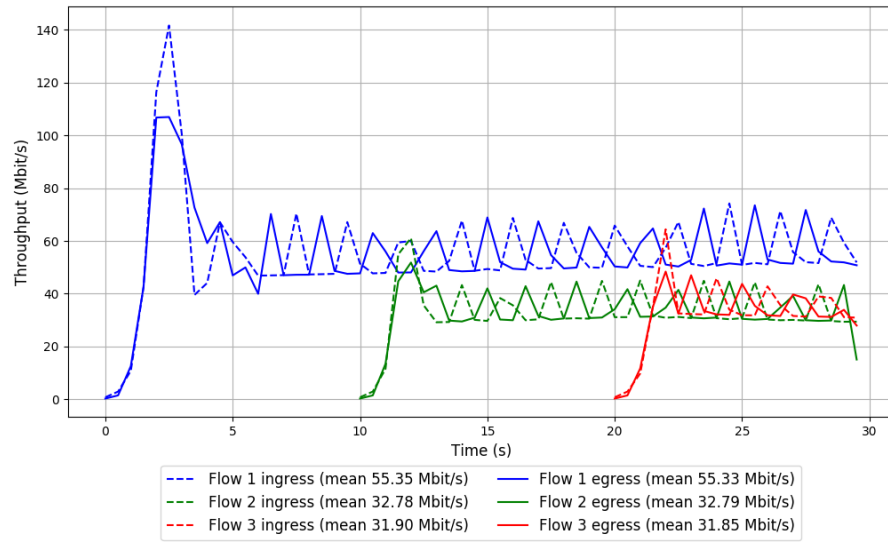
-- Flow 3:

Average throughput: 31.85 Mbit/s

95th percentile per-packet one-way delay: 116.924 ms

Loss rate: 2.43%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-04-18 02:35:49

End at: 2018-04-18 02:36:19

Below is generated by plot.py at 2018-04-18 07:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 75.46 Mbit/s

95th percentile per-packet one-way delay: 115.860 ms

Loss rate: 1.39%

-- Flow 1:

Average throughput: 50.25 Mbit/s

95th percentile per-packet one-way delay: 116.419 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 2.56 Mbit/s

95th percentile per-packet one-way delay: 112.910 ms

Loss rate: 2.25%

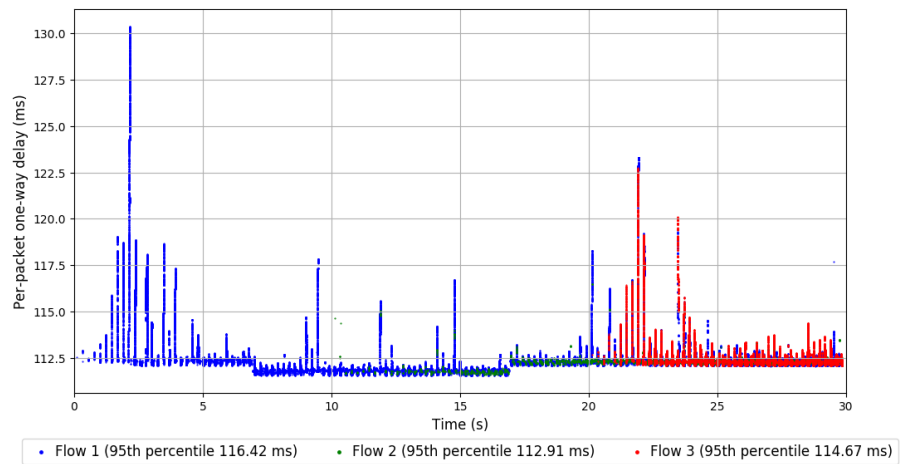
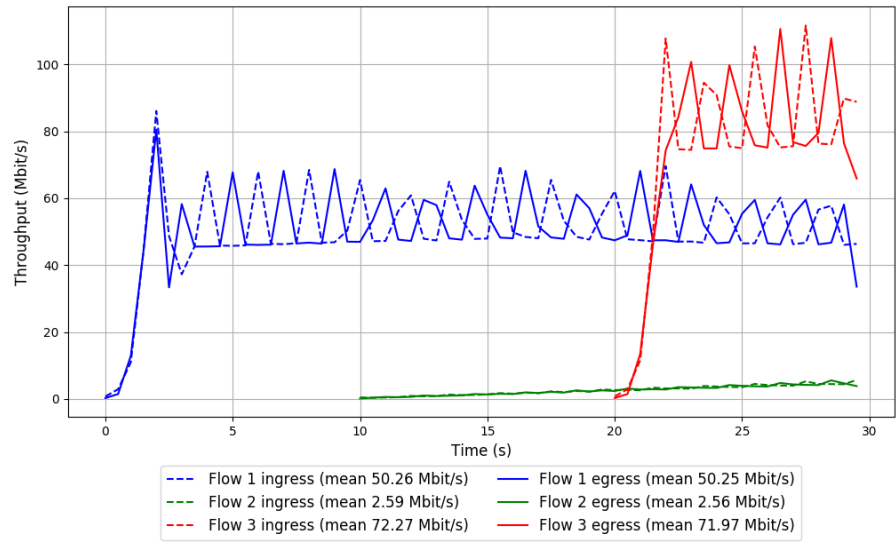
-- Flow 3:

Average throughput: 71.97 Mbit/s

95th percentile per-packet one-way delay: 114.671 ms

Loss rate: 2.63%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2018-04-18 02:53:04

End at: 2018-04-18 02:53:34

Below is generated by plot.py at 2018-04-18 07:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 47.41 Mbit/s

95th percentile per-packet one-way delay: 114.559 ms

Loss rate: 1.25%

-- Flow 1:

Average throughput: 18.86 Mbit/s

95th percentile per-packet one-way delay: 114.744 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 29.20 Mbit/s

95th percentile per-packet one-way delay: 114.545 ms

Loss rate: 1.07%

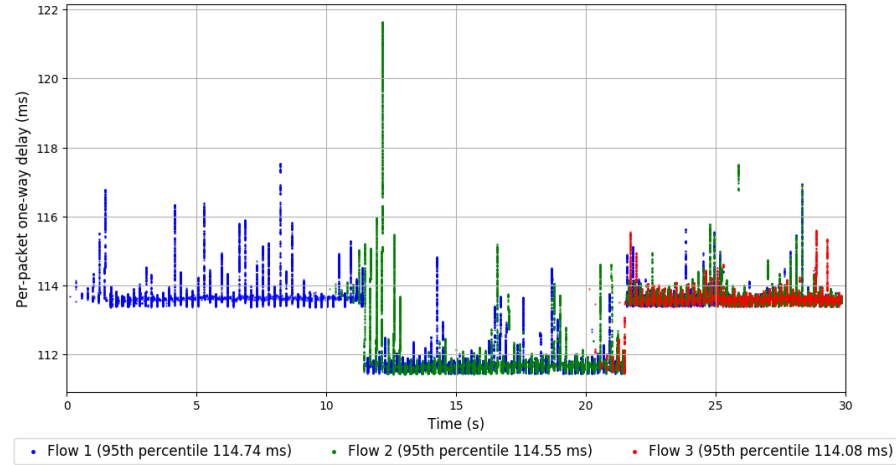
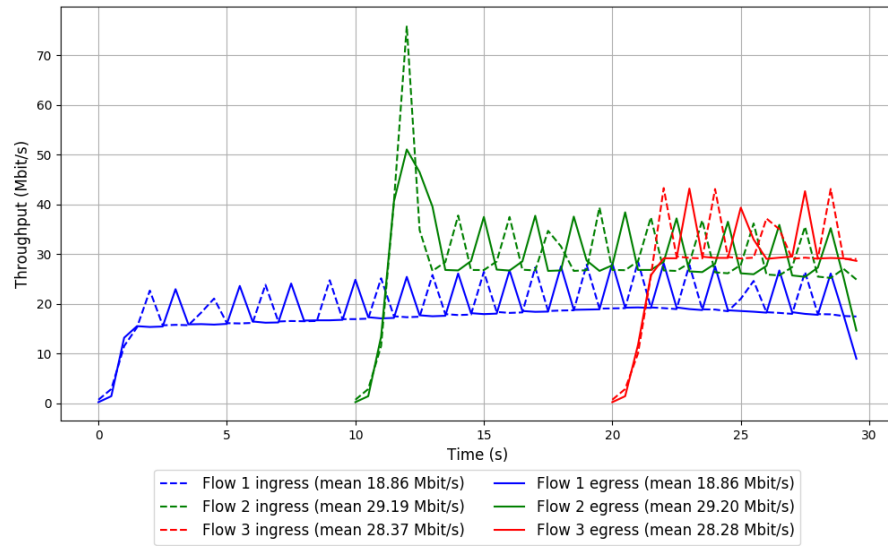
-- Flow 3:

Average throughput: 28.28 Mbit/s

95th percentile per-packet one-way delay: 114.079 ms

Loss rate: 2.58%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2018-04-18 03:10:12

End at: 2018-04-18 03:10:42

Below is generated by plot.py at 2018-04-18 07:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 106.60 Mbit/s

95th percentile per-packet one-way delay: 115.005 ms

Loss rate: 1.20%

-- Flow 1:

Average throughput: 57.27 Mbit/s

95th percentile per-packet one-way delay: 114.206 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 48.80 Mbit/s

95th percentile per-packet one-way delay: 115.658 ms

Loss rate: 1.22%

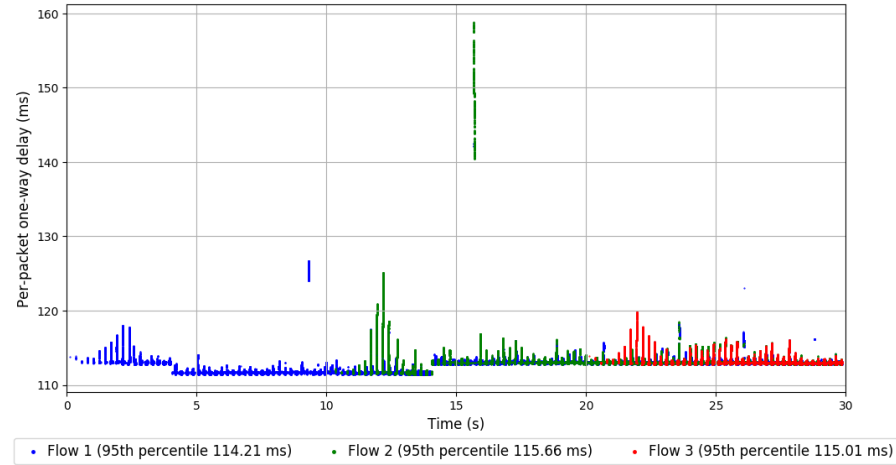
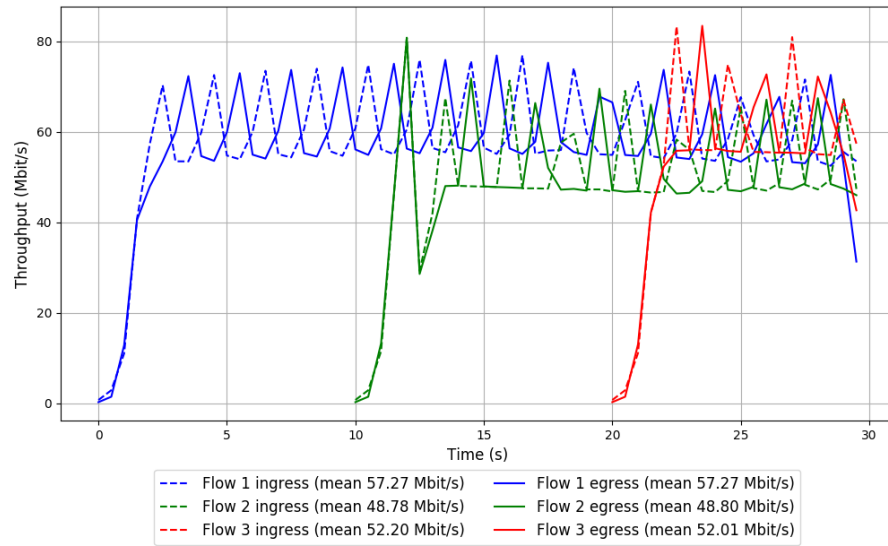
-- Flow 3:

Average throughput: 52.01 Mbit/s

95th percentile per-packet one-way delay: 115.012 ms

Loss rate: 2.63%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2018-04-18 03:27:18

End at: 2018-04-18 03:27:48

Below is generated by plot.py at 2018-04-18 07:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 46.78 Mbit/s

95th percentile per-packet one-way delay: 116.302 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 19.80 Mbit/s

95th percentile per-packet one-way delay: 114.591 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 26.89 Mbit/s

95th percentile per-packet one-way delay: 118.426 ms

Loss rate: 1.15%

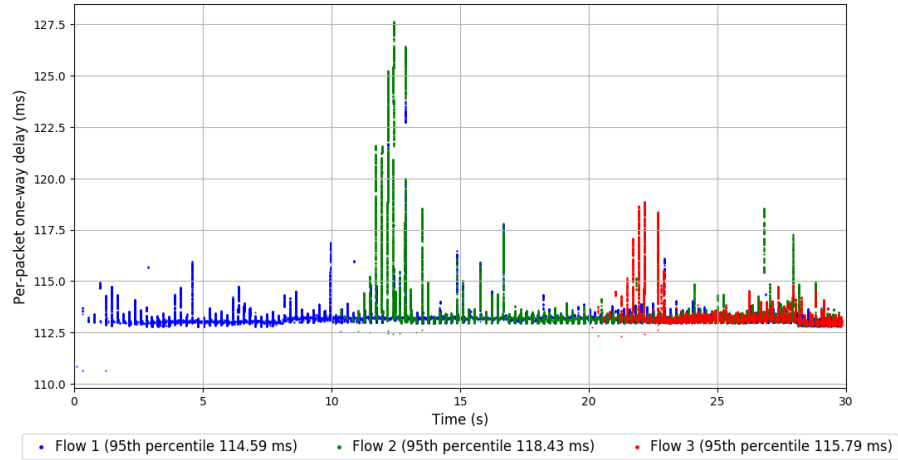
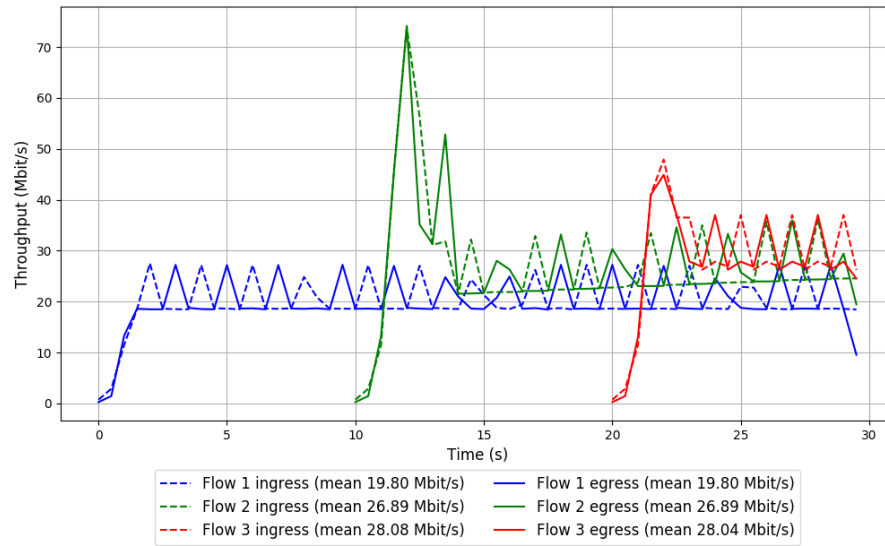
-- Flow 3:

Average throughput: 28.04 Mbit/s

95th percentile per-packet one-way delay: 115.793 ms

Loss rate: 2.35%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2018-04-18 03:44:18

End at: 2018-04-18 03:44:48

Below is generated by plot.py at 2018-04-18 07:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 68.90 Mbit/s

95th percentile per-packet one-way delay: 114.210 ms

Loss rate: 1.29%

-- Flow 1:

Average throughput: 30.95 Mbit/s

95th percentile per-packet one-way delay: 114.788 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 39.43 Mbit/s

95th percentile per-packet one-way delay: 113.963 ms

Loss rate: 1.25%

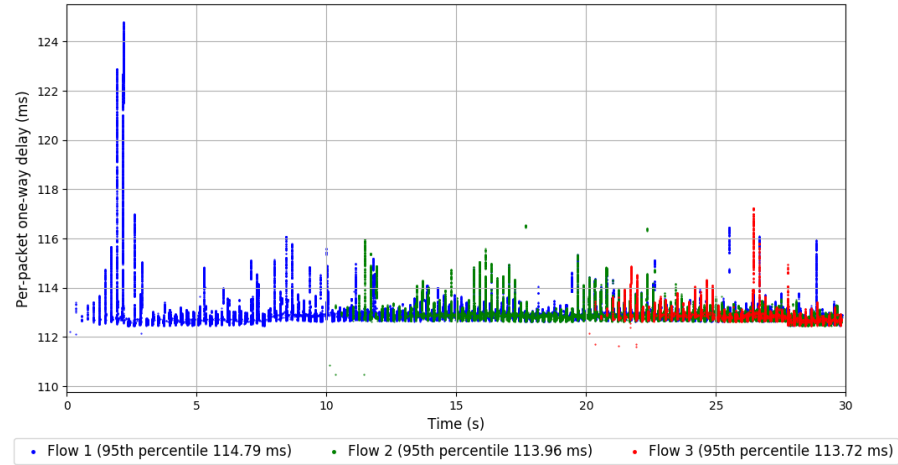
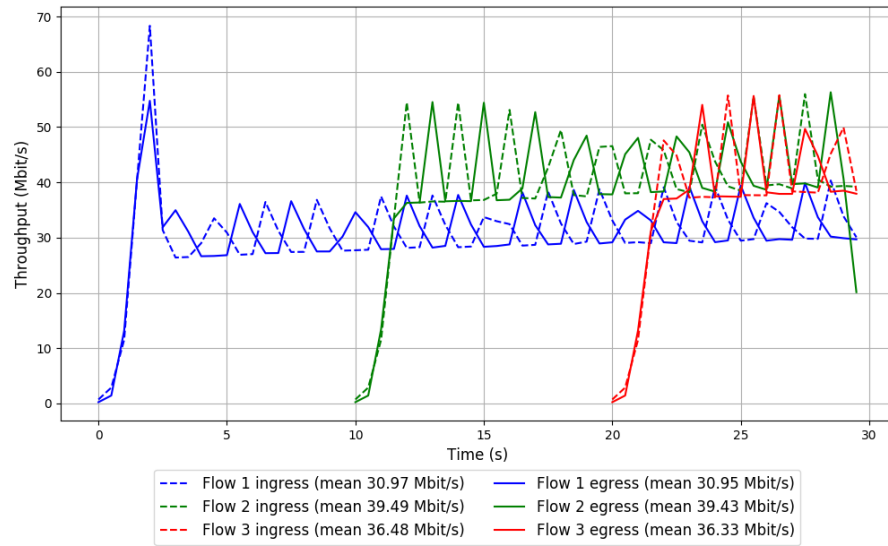
-- Flow 3:

Average throughput: 36.33 Mbit/s

95th percentile per-packet one-way delay: 113.716 ms

Loss rate: 2.66%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2018-04-18 04:01:19

End at: 2018-04-18 04:01:49

Below is generated by plot.py at 2018-04-18 07:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 60.39 Mbit/s

95th percentile per-packet one-way delay: 115.287 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 33.92 Mbit/s

95th percentile per-packet one-way delay: 114.441 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 24.70 Mbit/s

95th percentile per-packet one-way delay: 114.727 ms

Loss rate: 1.17%

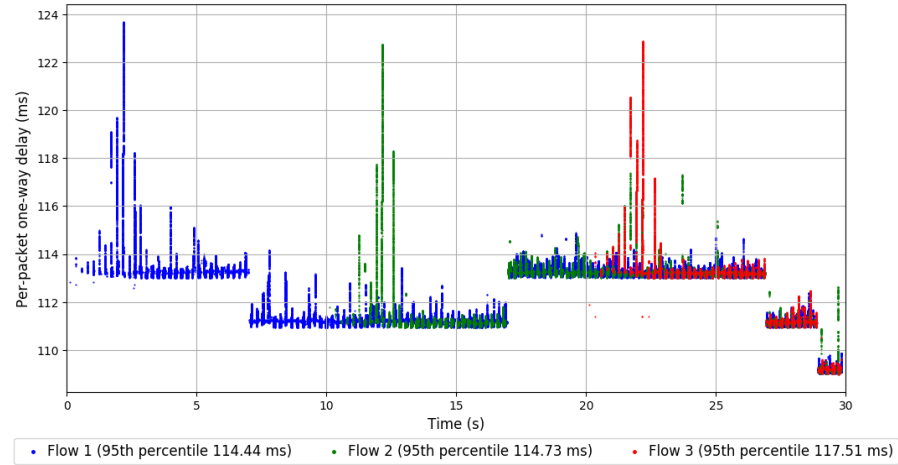
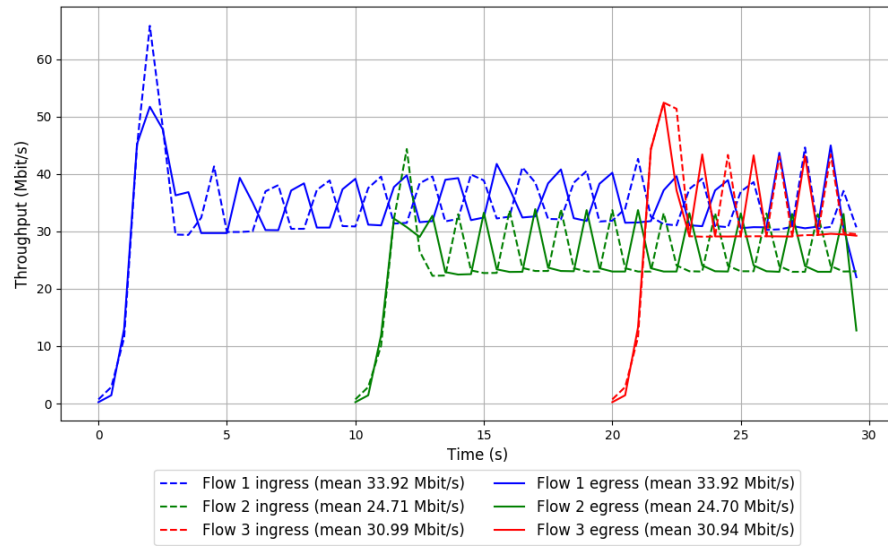
-- Flow 3:

Average throughput: 30.94 Mbit/s

95th percentile per-packet one-way delay: 117.511 ms

Loss rate: 2.40%

Run 10: Report of TCP Vegas — Data Link

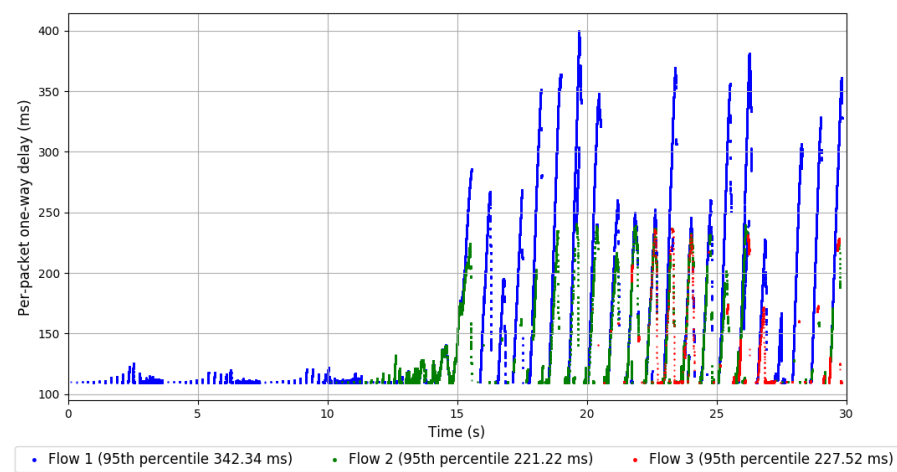
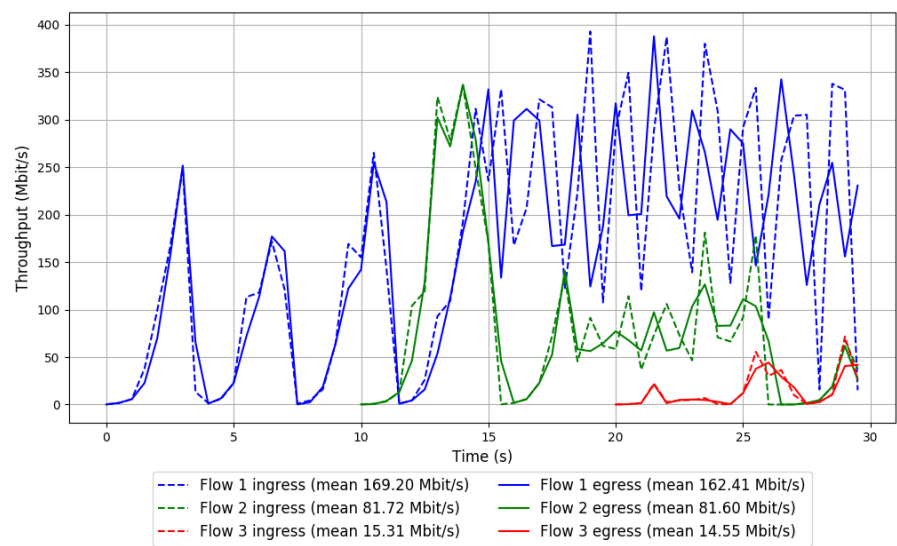


```
Run 1: Statistics of Verus

Start at: 2018-04-18 01:30:49
End at: 2018-04-18 01:31:19

# Below is generated by plot.py at 2018-04-18 07:50:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 221.06 Mbit/s
95th percentile per-packet one-way delay: 330.602 ms
Loss rate: 3.07%
-- Flow 1:
Average throughput: 162.41 Mbit/s
95th percentile per-packet one-way delay: 342.343 ms
Loss rate: 3.45%
-- Flow 2:
Average throughput: 81.60 Mbit/s
95th percentile per-packet one-way delay: 221.224 ms
Loss rate: 1.61%
-- Flow 3:
Average throughput: 14.55 Mbit/s
95th percentile per-packet one-way delay: 227.516 ms
Loss rate: 6.32%
```


Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-04-18 01:47:54

End at: 2018-04-18 01:48:24

Below is generated by plot.py at 2018-04-18 07:51:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 290.60 Mbit/s

95th percentile per-packet one-way delay: 222.231 ms

Loss rate: 1.19%

-- Flow 1:

Average throughput: 186.61 Mbit/s

95th percentile per-packet one-way delay: 217.101 ms

Loss rate: 0.56%

-- Flow 2:

Average throughput: 131.82 Mbit/s

95th percentile per-packet one-way delay: 227.112 ms

Loss rate: 1.93%

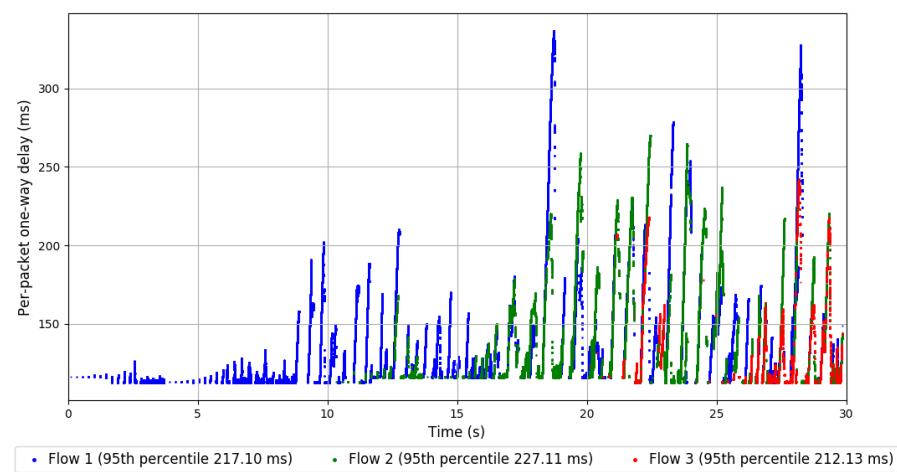
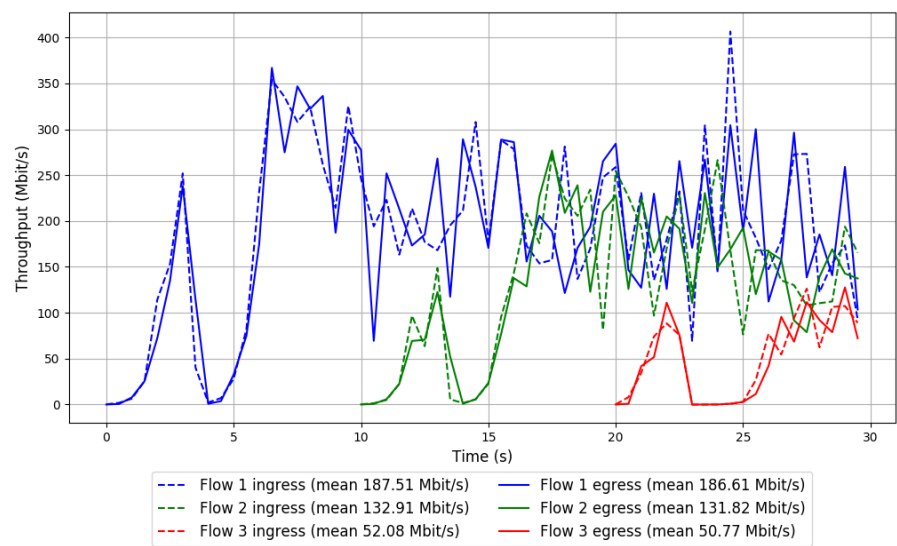
-- Flow 3:

Average throughput: 50.77 Mbit/s

95th percentile per-packet one-way delay: 212.127 ms

Loss rate: 4.29%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-04-18 02:05:10

End at: 2018-04-18 02:05:40

Below is generated by plot.py at 2018-04-18 07:51:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 187.41 Mbit/s

95th percentile per-packet one-way delay: 182.298 ms

Loss rate: 0.19%

-- Flow 1:

Average throughput: 78.14 Mbit/s

95th percentile per-packet one-way delay: 146.987 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 148.66 Mbit/s

95th percentile per-packet one-way delay: 242.122 ms

Loss rate: 0.22%

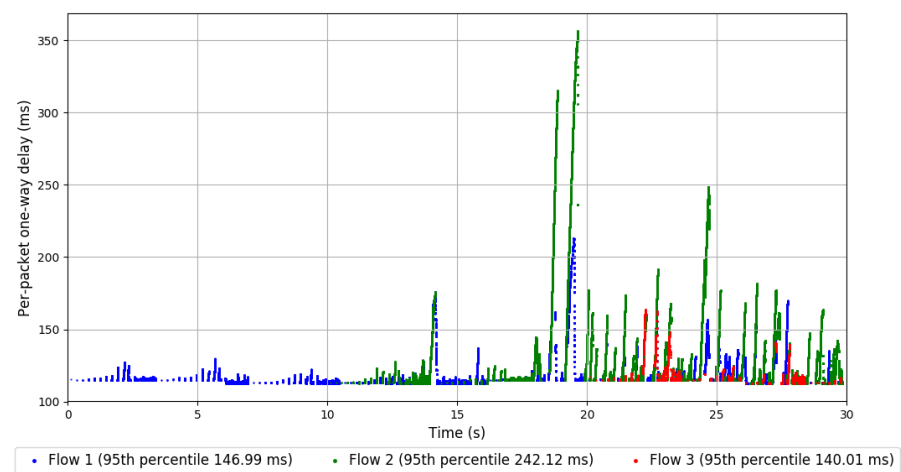
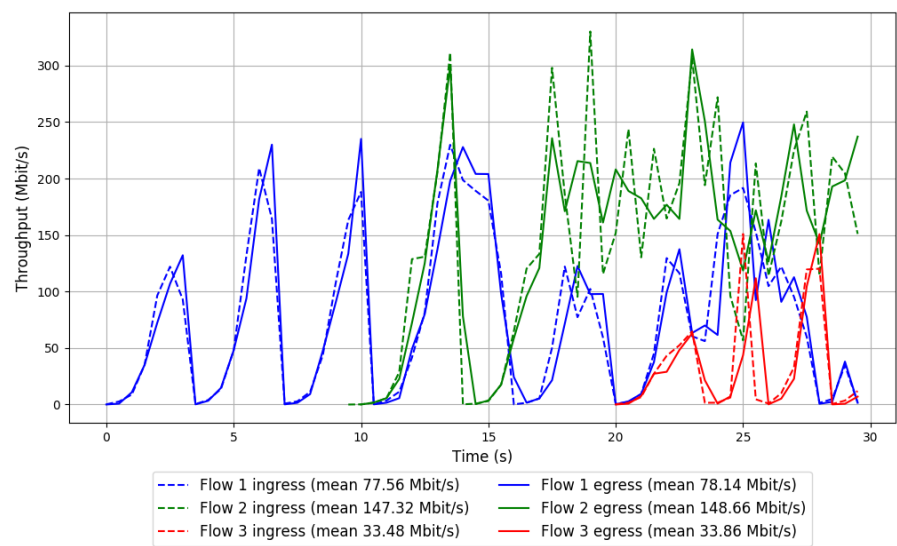
-- Flow 3:

Average throughput: 33.86 Mbit/s

95th percentile per-packet one-way delay: 140.007 ms

Loss rate: 1.21%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-04-18 02:22:14

End at: 2018-04-18 02:22:44

Below is generated by plot.py at 2018-04-18 07:51:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 183.37 Mbit/s

95th percentile per-packet one-way delay: 163.255 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 122.99 Mbit/s

95th percentile per-packet one-way delay: 167.804 ms

Loss rate: 0.66%

-- Flow 2:

Average throughput: 65.12 Mbit/s

95th percentile per-packet one-way delay: 154.645 ms

Loss rate: 0.03%

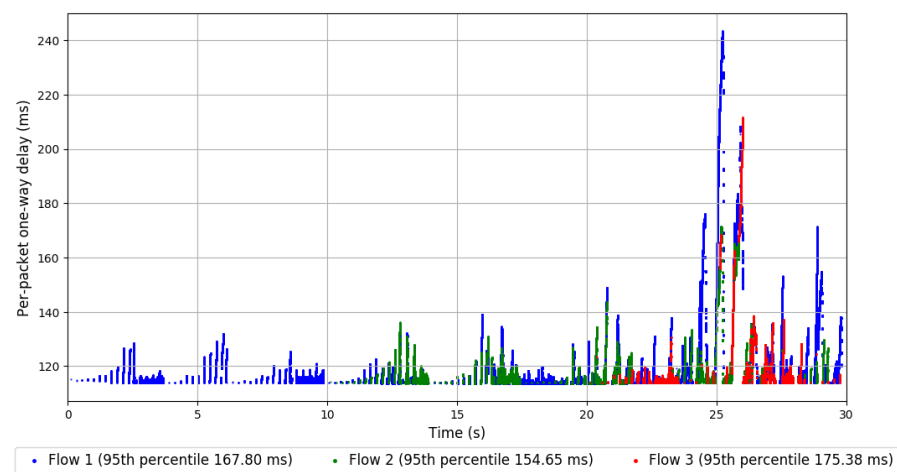
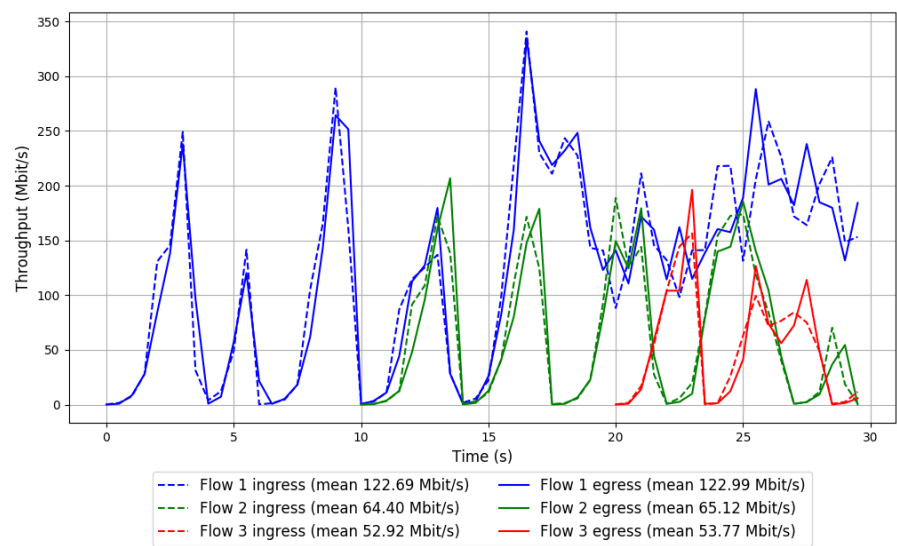
-- Flow 3:

Average throughput: 53.77 Mbit/s

95th percentile per-packet one-way delay: 175.375 ms

Loss rate: 0.72%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-04-18 02:39:27

End at: 2018-04-18 02:39:57

Below is generated by plot.py at 2018-04-18 07:51:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 173.76 Mbit/s

95th percentile per-packet one-way delay: 123.741 ms

Loss rate: 2.27%

-- Flow 1:

Average throughput: 118.20 Mbit/s

95th percentile per-packet one-way delay: 122.489 ms

Loss rate: 1.57%

-- Flow 2:

Average throughput: 42.11 Mbit/s

95th percentile per-packet one-way delay: 123.923 ms

Loss rate: 2.46%

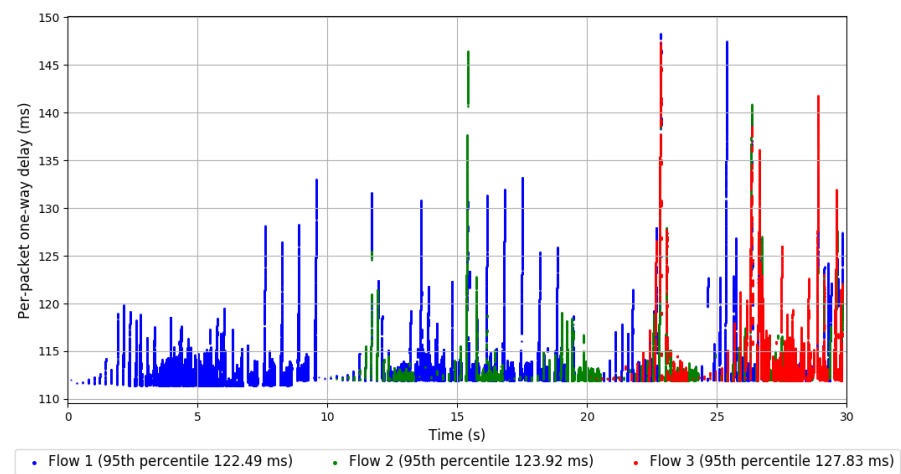
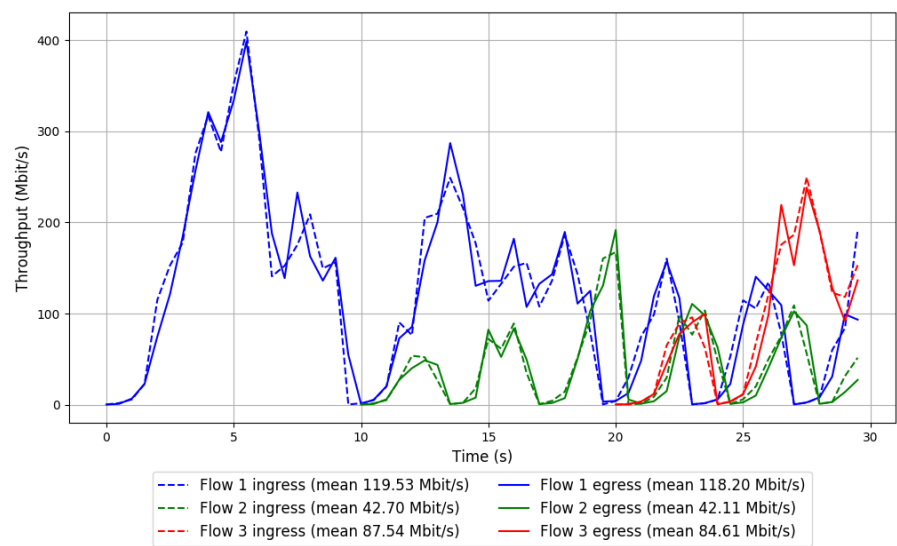
-- Flow 3:

Average throughput: 84.61 Mbit/s

95th percentile per-packet one-way delay: 127.830 ms

Loss rate: 4.98%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2018-04-18 02:56:45

End at: 2018-04-18 02:57:15

Below is generated by plot.py at 2018-04-18 07:51:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 174.88 Mbit/s

95th percentile per-packet one-way delay: 194.150 ms

Loss rate: 1.48%

-- Flow 1:

Average throughput: 116.04 Mbit/s

95th percentile per-packet one-way delay: 200.142 ms

Loss rate: 1.57%

-- Flow 2:

Average throughput: 60.27 Mbit/s

95th percentile per-packet one-way delay: 149.781 ms

Loss rate: 1.74%

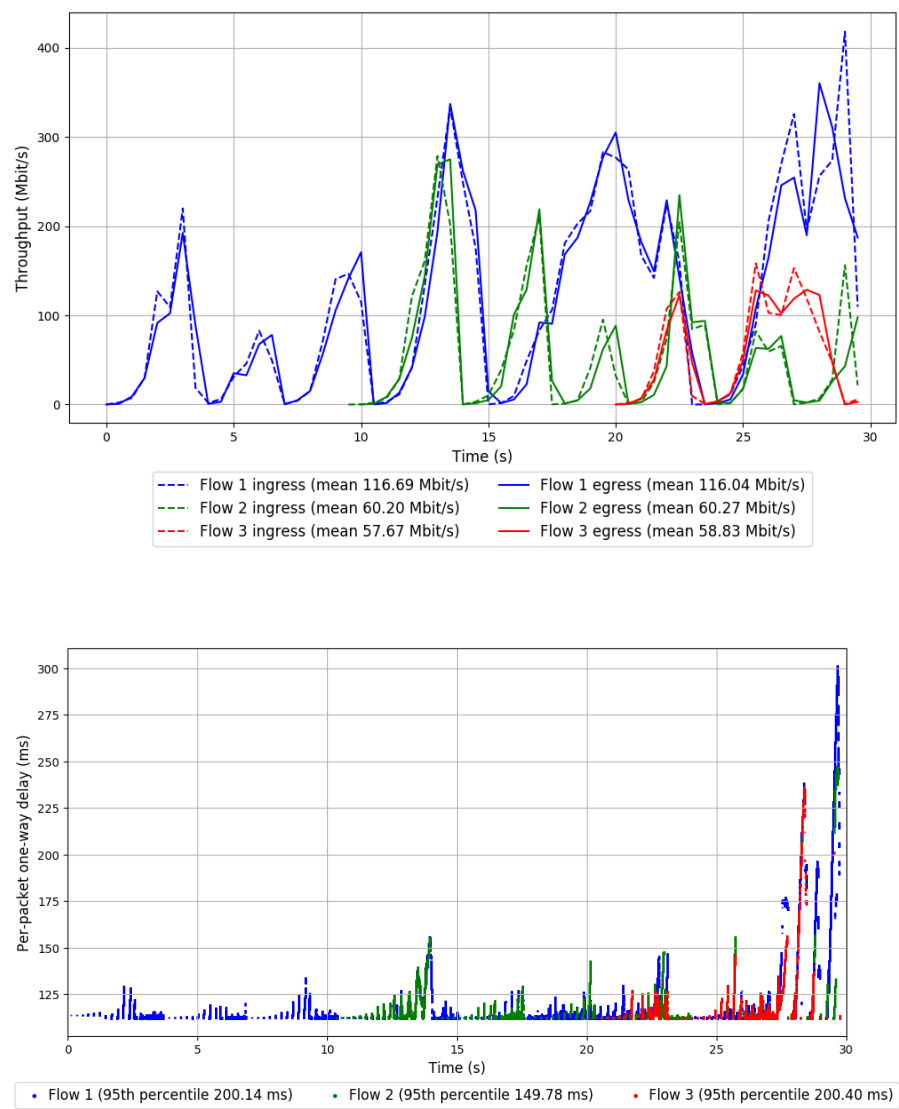
-- Flow 3:

Average throughput: 58.83 Mbit/s

95th percentile per-packet one-way delay: 200.403 ms

Loss rate: 0.32%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2018-04-18 03:13:52

End at: 2018-04-18 03:14:22

Below is generated by plot.py at 2018-04-18 07:51:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 168.57 Mbit/s

95th percentile per-packet one-way delay: 149.962 ms

Loss rate: 1.53%

-- Flow 1:

Average throughput: 94.89 Mbit/s

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

Loss rate: 0.43%

-- Flow 2:

Average throughput: 76.11 Mbit/s

95th percentile per-packet one-way delay: 155.141 ms

Loss rate: 1.61%

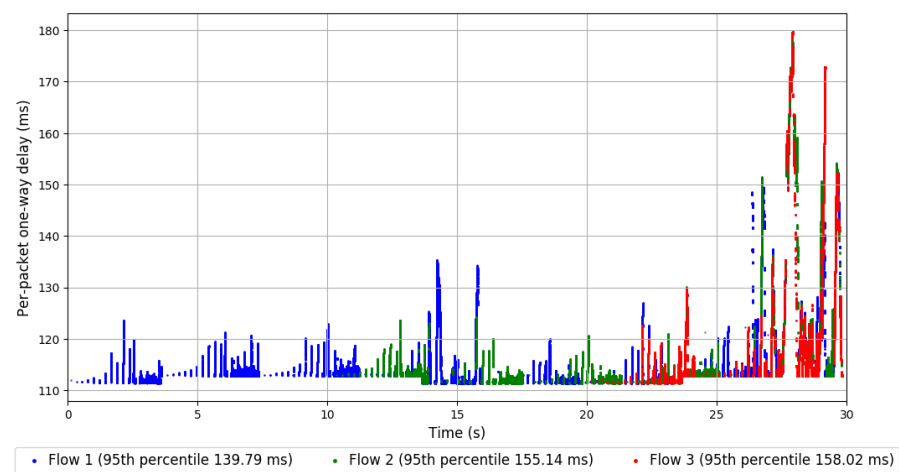
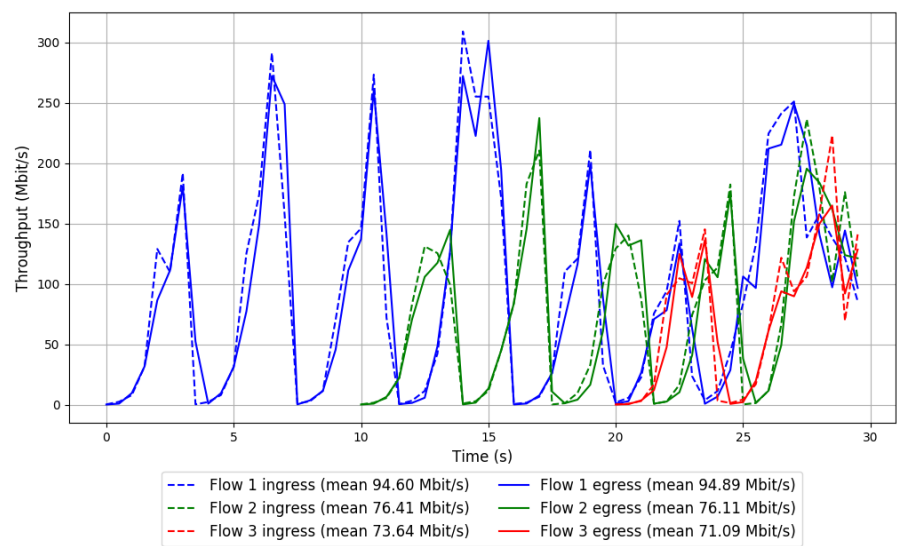
-- Flow 3:

Average throughput: 71.09 Mbit/s

95th percentile per-packet one-way delay: 158.017 ms

Loss rate: 5.61%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2018-04-18 03:30:56

End at: 2018-04-18 03:31:26

Below is generated by plot.py at 2018-04-18 07:52:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 215.82 Mbit/s

95th percentile per-packet one-way delay: 177.541 ms

Loss rate: 1.54%

-- Flow 1:

Average throughput: 64.82 Mbit/s

95th percentile per-packet one-way delay: 148.768 ms

Loss rate: 1.11%

-- Flow 2:

Average throughput: 206.62 Mbit/s

95th percentile per-packet one-way delay: 178.051 ms

Loss rate: 1.70%

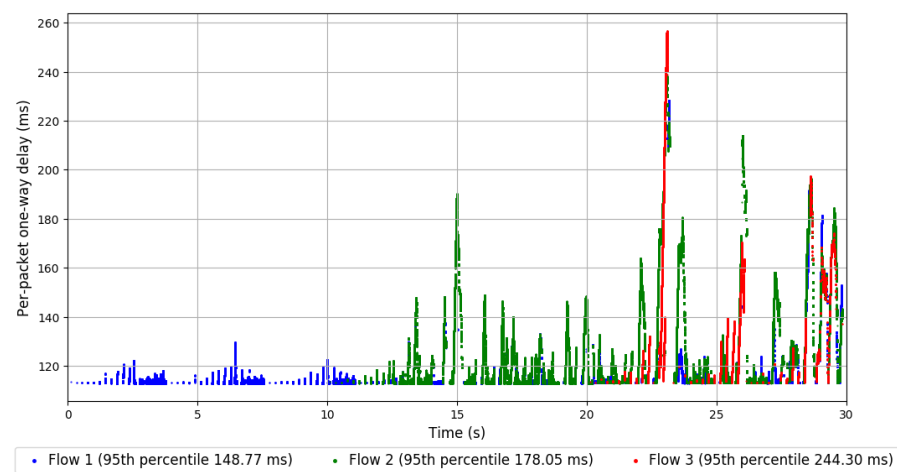
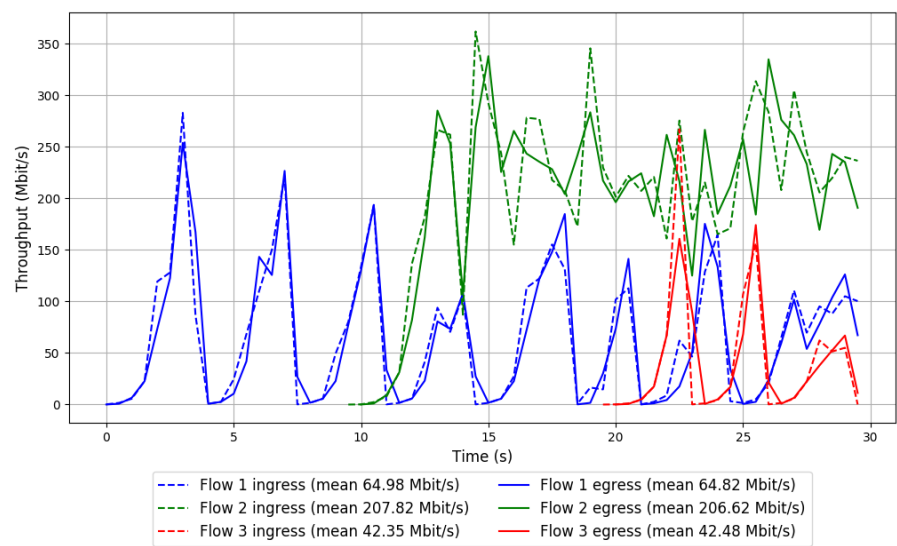
-- Flow 3:

Average throughput: 42.48 Mbit/s

95th percentile per-packet one-way delay: 244.296 ms

Loss rate: 1.97%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2018-04-18 03:47:57

End at: 2018-04-18 03:48:27

Below is generated by plot.py at 2018-04-18 07:54:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 283.59 Mbit/s

95th percentile per-packet one-way delay: 179.359 ms

Loss rate: 1.77%

-- Flow 1:

Average throughput: 200.58 Mbit/s

95th percentile per-packet one-way delay: 174.890 ms

Loss rate: 1.19%

-- Flow 2:

Average throughput: 94.67 Mbit/s

95th percentile per-packet one-way delay: 165.541 ms

Loss rate: 1.92%

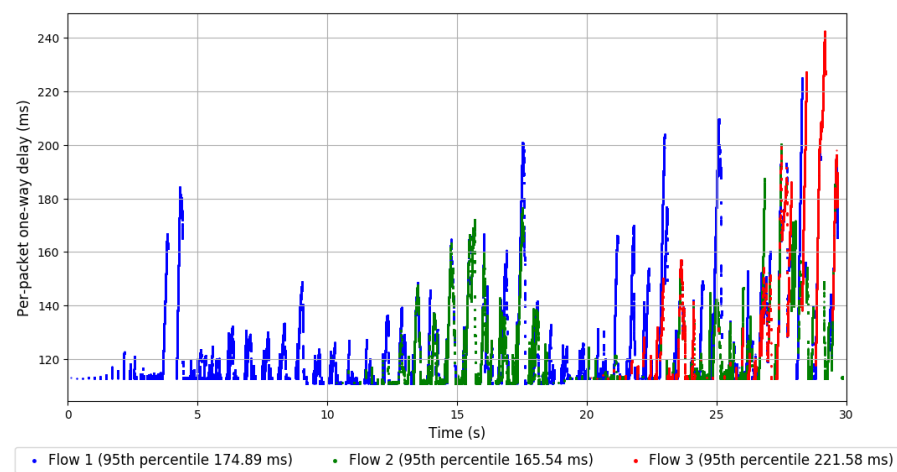
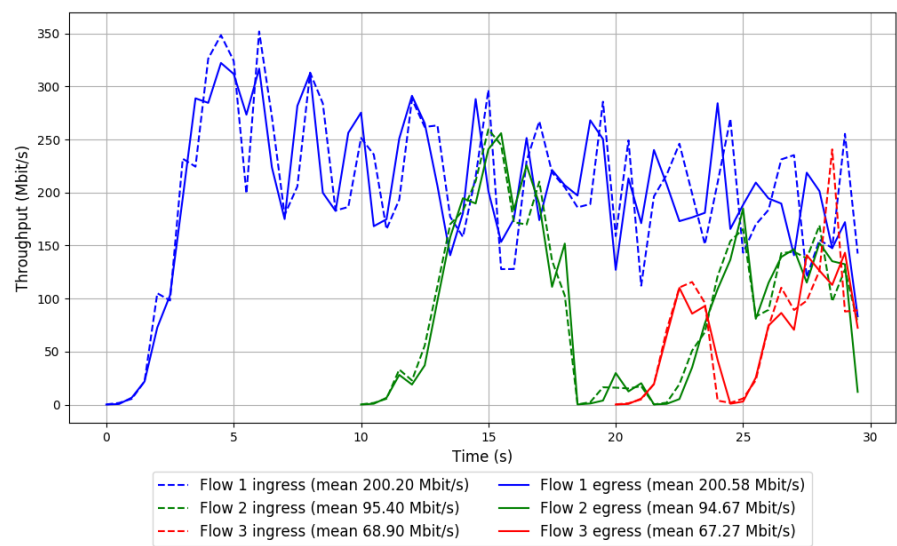
-- Flow 3:

Average throughput: 67.27 Mbit/s

95th percentile per-packet one-way delay: 221.581 ms

Loss rate: 6.50%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

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

End at: 2018-04-18 04:05:27

Below is generated by plot.py at 2018-04-18 07:54:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 247.40 Mbit/s

95th percentile per-packet one-way delay: 145.696 ms

Loss rate: 0.94%

-- Flow 1:

Average throughput: 181.72 Mbit/s

95th percentile per-packet one-way delay: 141.444 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 56.79 Mbit/s

95th percentile per-packet one-way delay: 164.318 ms

Loss rate: 2.42%

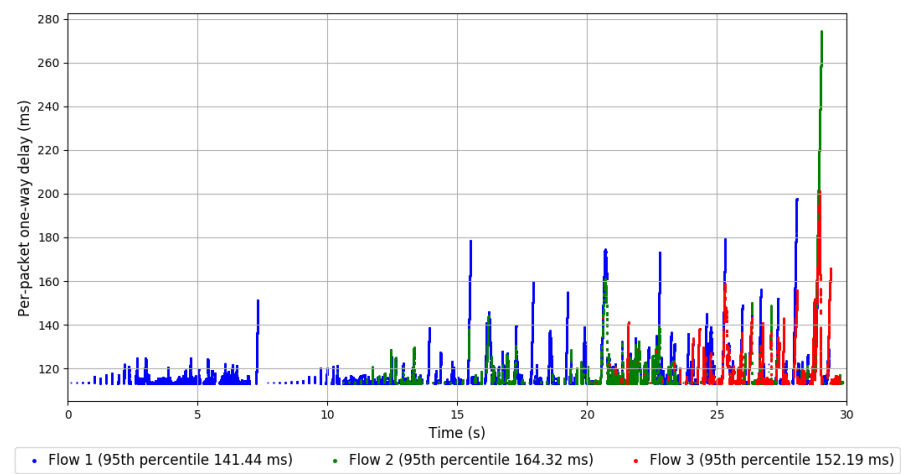
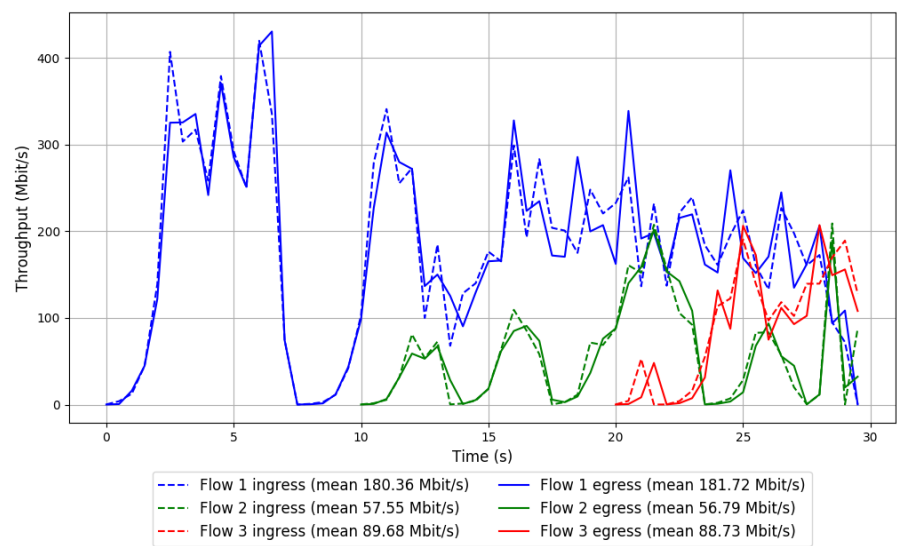
-- Flow 3:

Average throughput: 88.73 Mbit/s

95th percentile per-packet one-way delay: 152.185 ms

Loss rate: 4.69%

Run 10: Report of Verus — Data Link

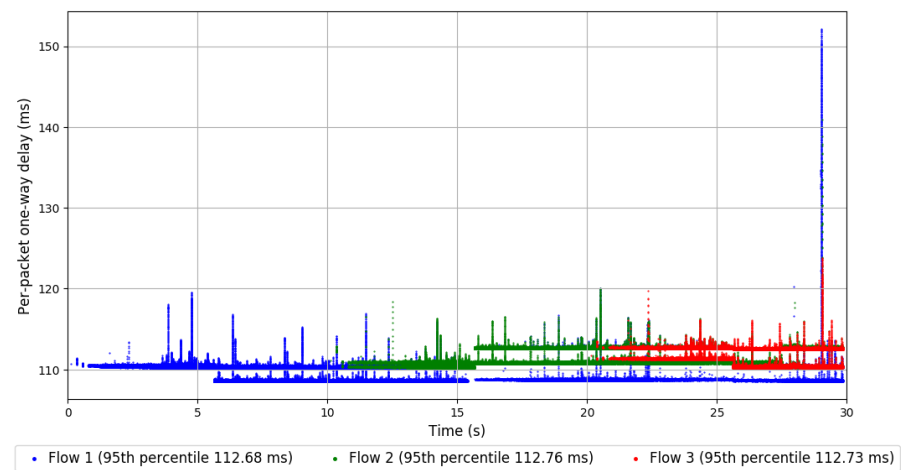
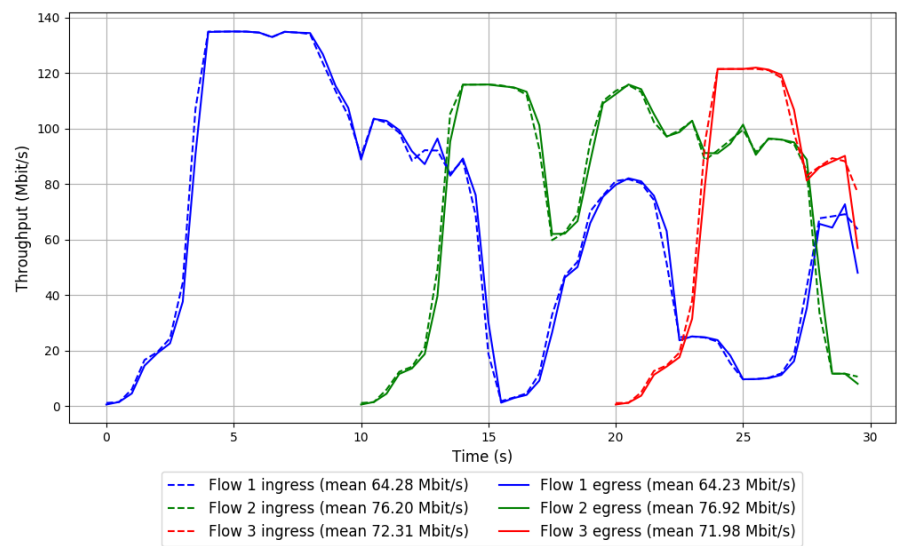


```
Run 1: Statistics of Copa

Start at: 2018-04-18 01:23:50
End at: 2018-04-18 01:24:20

# Below is generated by plot.py at 2018-04-18 07:54:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 138.72 Mbit/s
95th percentile per-packet one-way delay: 112.732 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 64.23 Mbit/s
95th percentile per-packet one-way delay: 112.681 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 76.92 Mbit/s
95th percentile per-packet one-way delay: 112.764 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 71.98 Mbit/s
95th percentile per-packet one-way delay: 112.734 ms
Loss rate: 2.69%
```

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-04-18 01:41:03

End at: 2018-04-18 01:41:33

Below is generated by plot.py at 2018-04-18 07:54:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 121.26 Mbit/s

95th percentile per-packet one-way delay: 114.669 ms

Loss rate: 0.94%

-- Flow 1:

Average throughput: 74.25 Mbit/s

95th percentile per-packet one-way delay: 114.589 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 34.48 Mbit/s

95th percentile per-packet one-way delay: 114.672 ms

Loss rate: 0.57%

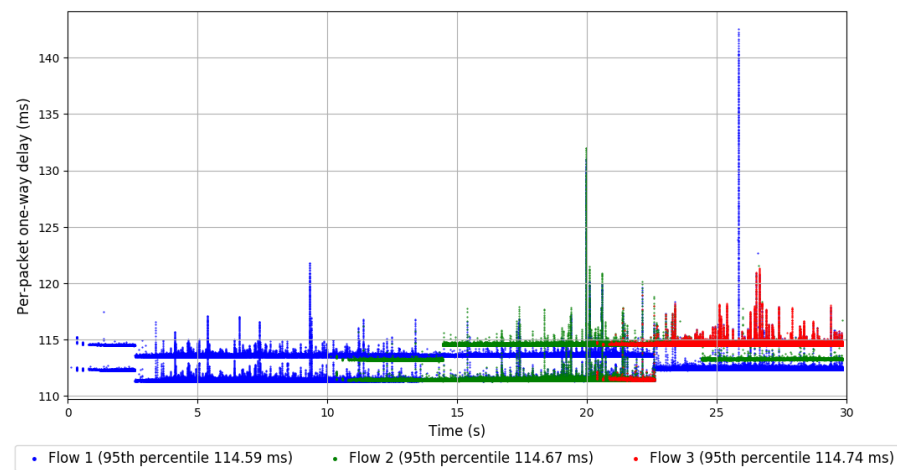
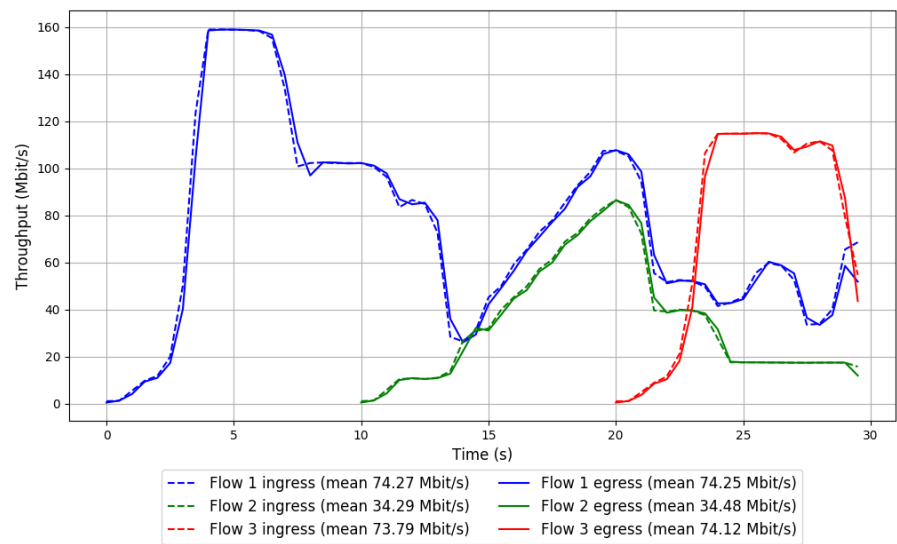
-- Flow 3:

Average throughput: 74.12 Mbit/s

95th percentile per-packet one-way delay: 114.742 ms

Loss rate: 1.81%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-04-18 01:58:26

End at: 2018-04-18 01:58:56

Below is generated by plot.py at 2018-04-18 07:54:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 131.44 Mbit/s

95th percentile per-packet one-way delay: 115.167 ms

Loss rate: 0.93%

-- Flow 1:

Average throughput: 65.09 Mbit/s

95th percentile per-packet one-way delay: 115.141 ms

Loss rate: 0.17%

-- Flow 2:

Average throughput: 64.41 Mbit/s

95th percentile per-packet one-way delay: 115.165 ms

Loss rate: 1.03%

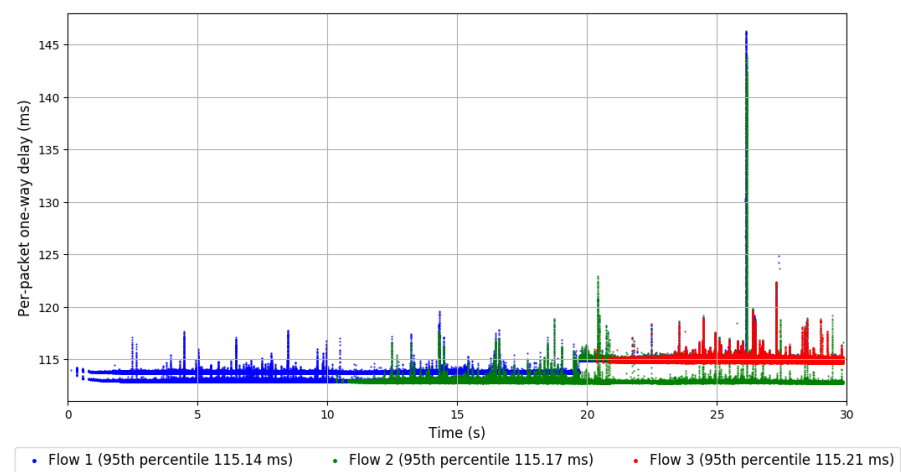
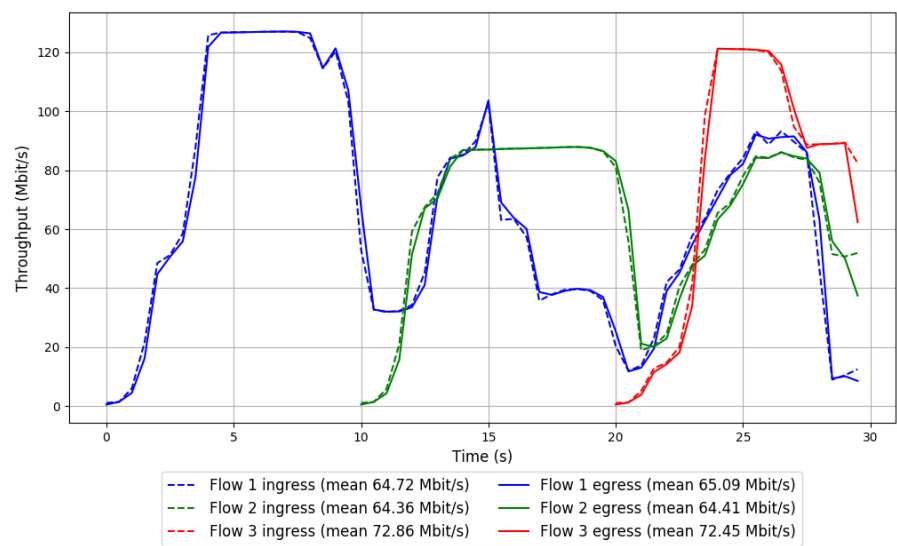
-- Flow 3:

Average throughput: 72.45 Mbit/s

95th percentile per-packet one-way delay: 115.211 ms

Loss rate: 2.81%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2018-04-18 02:15:33

End at: 2018-04-18 02:16:03

Below is generated by plot.py at 2018-04-18 07:54:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 106.12 Mbit/s

95th percentile per-packet one-way delay: 115.461 ms

Loss rate: 1.38%

-- Flow 1:

Average throughput: 37.04 Mbit/s

95th percentile per-packet one-way delay: 115.445 ms

Loss rate: 0.21%

-- Flow 2:

Average throughput: 64.80 Mbit/s

95th percentile per-packet one-way delay: 115.478 ms

Loss rate: 1.26%

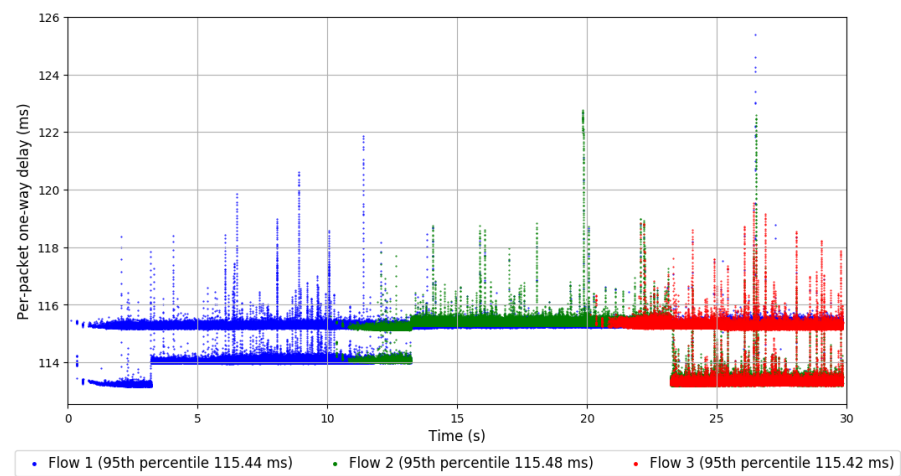
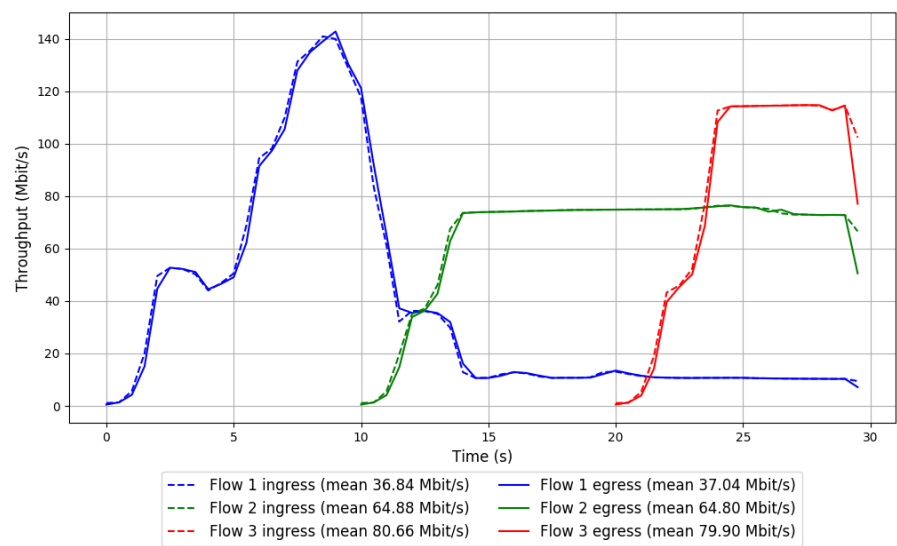
-- Flow 3:

Average throughput: 79.90 Mbit/s

95th percentile per-packet one-way delay: 115.417 ms

Loss rate: 3.19%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2018-04-18 02:32:40

End at: 2018-04-18 02:33:10

Below is generated by plot.py at 2018-04-18 07:58:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 191.26 Mbit/s

95th percentile per-packet one-way delay: 285.802 ms

Loss rate: 11.74%

-- Flow 1:

Average throughput: 76.68 Mbit/s

95th percentile per-packet one-way delay: 114.411 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 140.75 Mbit/s

95th percentile per-packet one-way delay: 289.617 ms

Loss rate: 19.94%

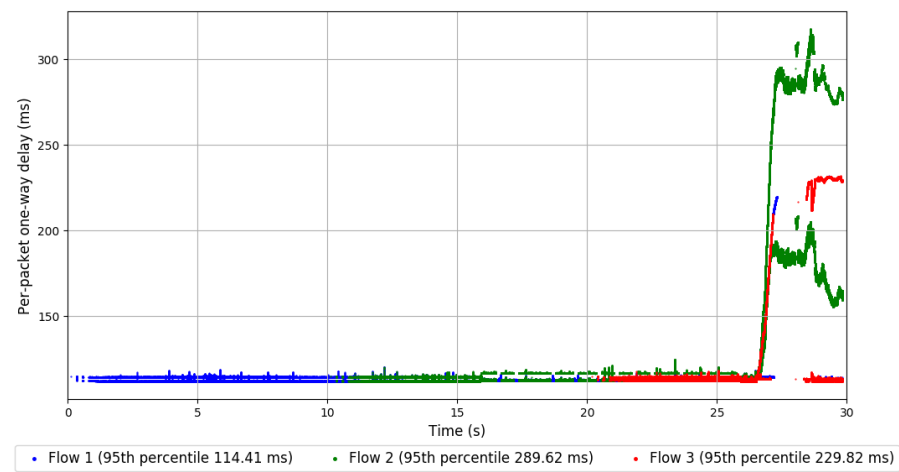
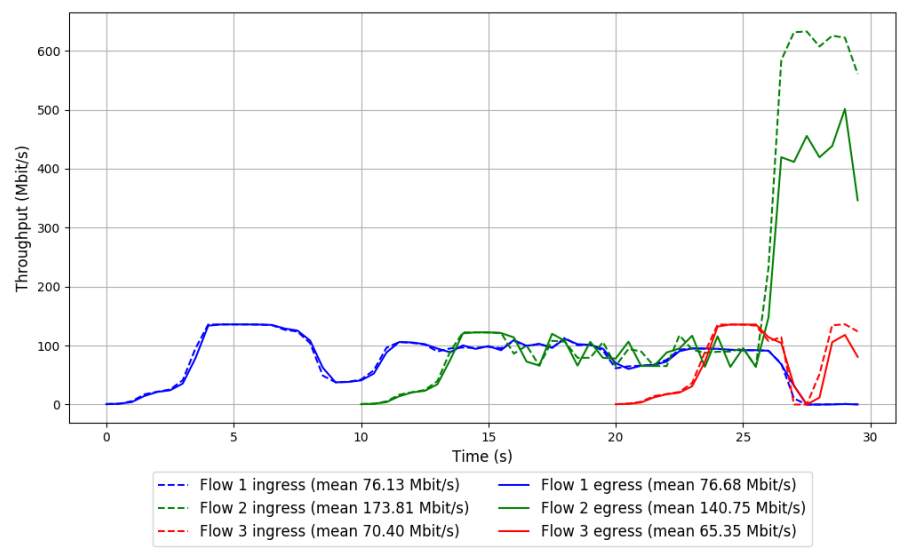
-- Flow 3:

Average throughput: 65.35 Mbit/s

95th percentile per-packet one-way delay: 229.821 ms

Loss rate: 9.28%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2018-04-18 02:49:54

End at: 2018-04-18 02:50:24

Below is generated by plot.py at 2018-04-18 07:58:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 148.91 Mbit/s

95th percentile per-packet one-way delay: 113.526 ms

Loss rate: 0.81%

-- Flow 1:

Average throughput: 72.93 Mbit/s

95th percentile per-packet one-way delay: 113.512 ms

Loss rate: 0.49%

-- Flow 2:

Average throughput: 76.34 Mbit/s

95th percentile per-packet one-way delay: 113.502 ms

Loss rate: 0.47%

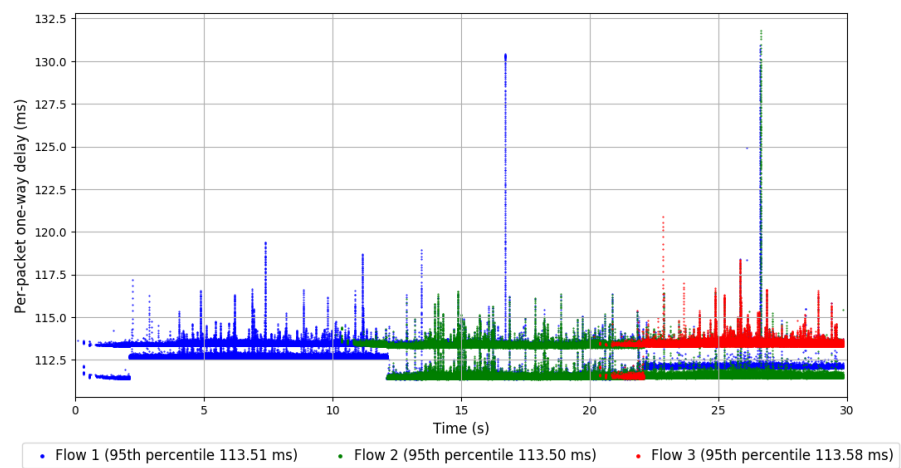
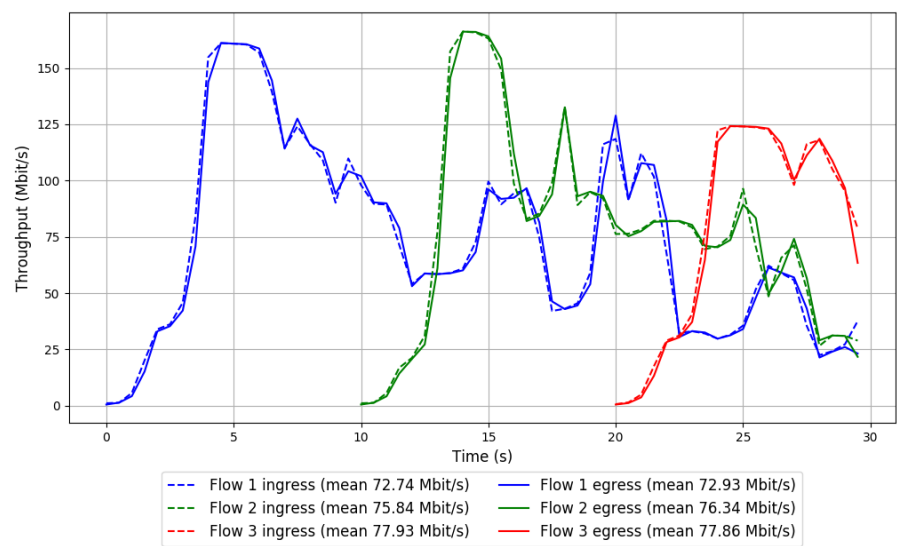
-- Flow 3:

Average throughput: 77.86 Mbit/s

95th percentile per-packet one-way delay: 113.578 ms

Loss rate: 2.36%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2018-04-18 03:07:06

End at: 2018-04-18 03:07:36

Below is generated by plot.py at 2018-04-18 07:58:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 157.26 Mbit/s

95th percentile per-packet one-way delay: 113.487 ms

Loss rate: 1.36%

-- Flow 1:

Average throughput: 80.51 Mbit/s

95th percentile per-packet one-way delay: 113.541 ms

Loss rate: 0.91%

-- Flow 2:

Average throughput: 85.25 Mbit/s

95th percentile per-packet one-way delay: 113.142 ms

Loss rate: 1.33%

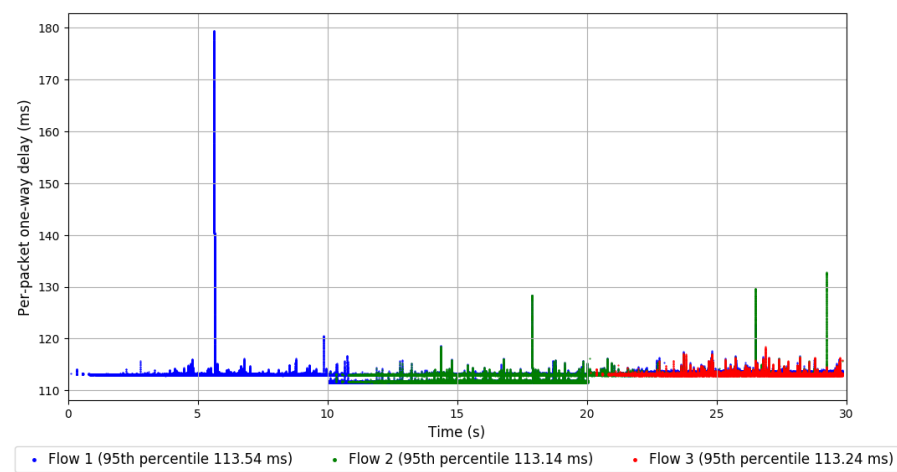
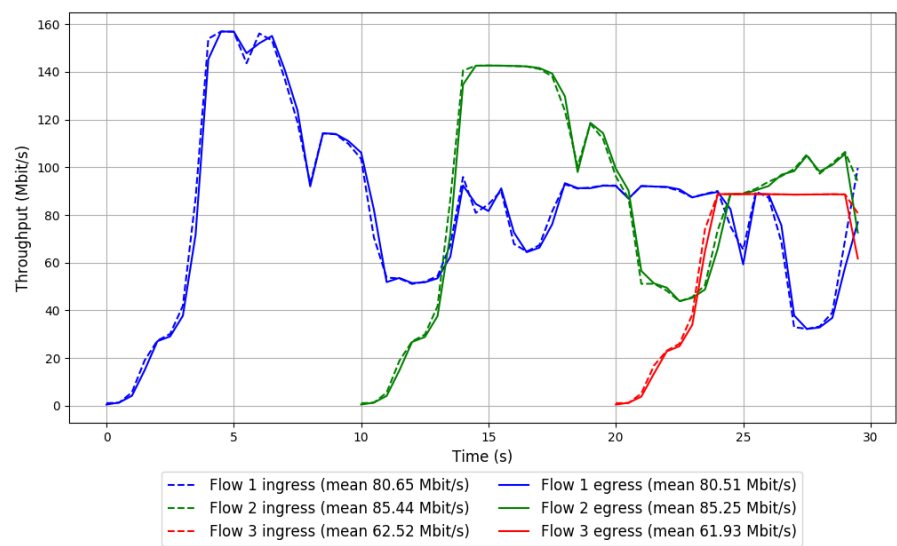
-- Flow 3:

Average throughput: 61.93 Mbit/s

95th percentile per-packet one-way delay: 113.239 ms

Loss rate: 3.14%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2018-04-18 03:24:01

End at: 2018-04-18 03:24:31

Below is generated by plot.py at 2018-04-18 08:02:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 254.42 Mbit/s

95th percentile per-packet one-way delay: 310.461 ms

Loss rate: 23.51%

-- Flow 1:

Average throughput: 221.55 Mbit/s

95th percentile per-packet one-way delay: 311.109 ms

Loss rate: 25.74%

-- Flow 2:

Average throughput: 49.36 Mbit/s

95th percentile per-packet one-way delay: 244.034 ms

Loss rate: 4.08%

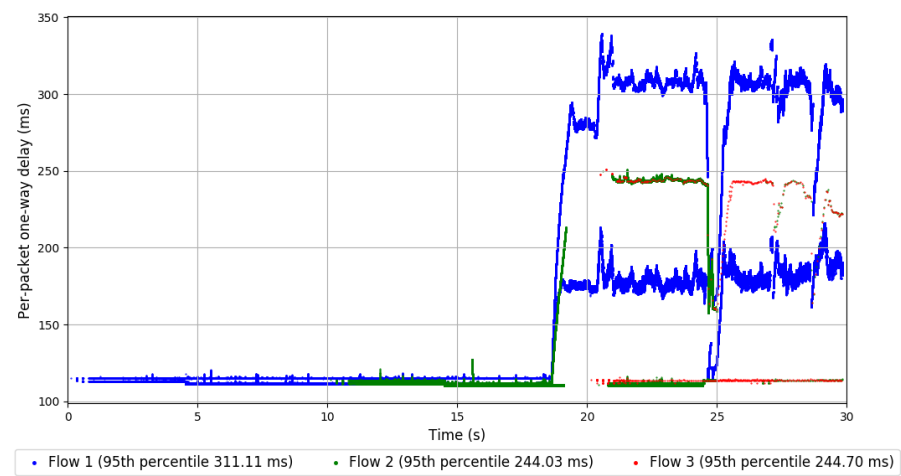
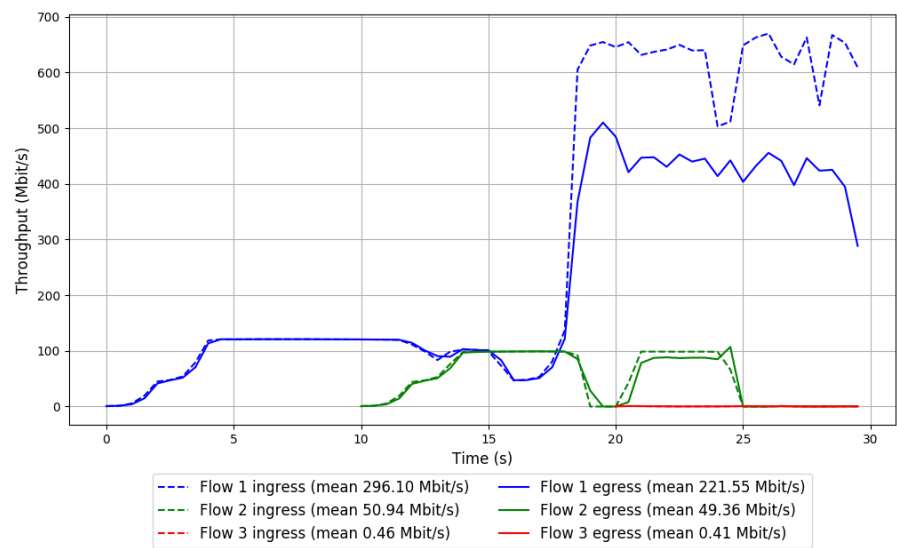
-- Flow 3:

Average throughput: 0.41 Mbit/s

95th percentile per-packet one-way delay: 244.698 ms

Loss rate: 14.23%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2018-04-18 03:41:14

End at: 2018-04-18 03:41:44

Below is generated by plot.py at 2018-04-18 08:02:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 144.27 Mbit/s

95th percentile per-packet one-way delay: 112.872 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 79.27 Mbit/s

95th percentile per-packet one-way delay: 112.859 ms

Loss rate: 0.53%

-- Flow 2:

Average throughput: 67.31 Mbit/s

95th percentile per-packet one-way delay: 112.871 ms

Loss rate: 0.64%

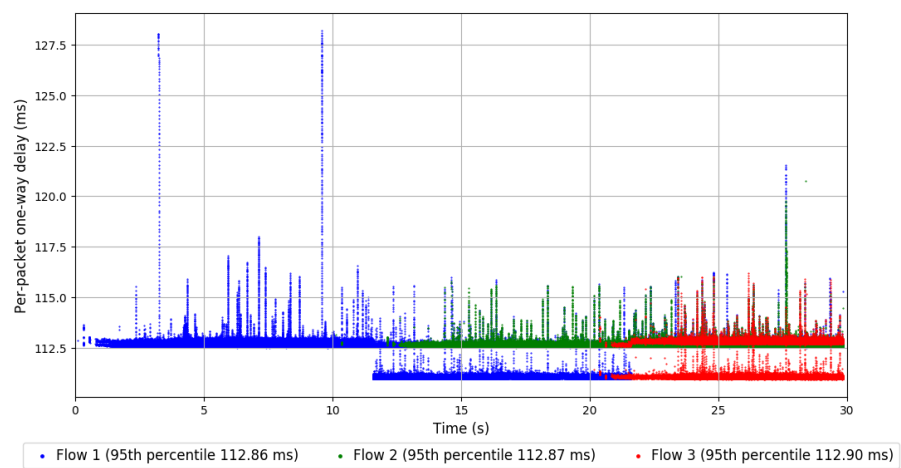
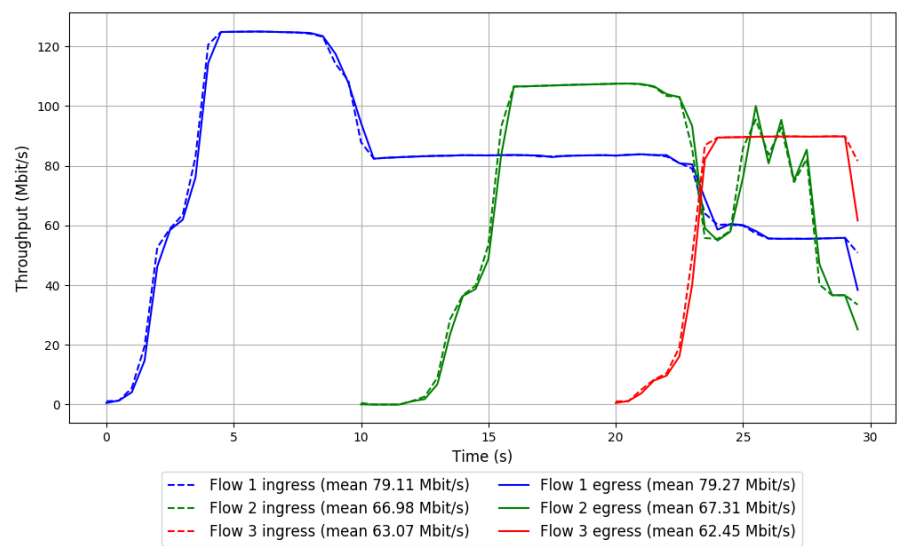
-- Flow 3:

Average throughput: 62.45 Mbit/s

95th percentile per-packet one-way delay: 112.901 ms

Loss rate: 3.21%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

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

End at: 2018-04-18 03:58:43

Below is generated by plot.py at 2018-04-18 08:02:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 134.62 Mbit/s

95th percentile per-packet one-way delay: 113.183 ms

Loss rate: 0.83%

-- Flow 1:

Average throughput: 67.95 Mbit/s

95th percentile per-packet one-way delay: 113.160 ms

Loss rate: 0.12%

-- Flow 2:

Average throughput: 68.01 Mbit/s

95th percentile per-packet one-way delay: 113.217 ms

Loss rate: 0.68%

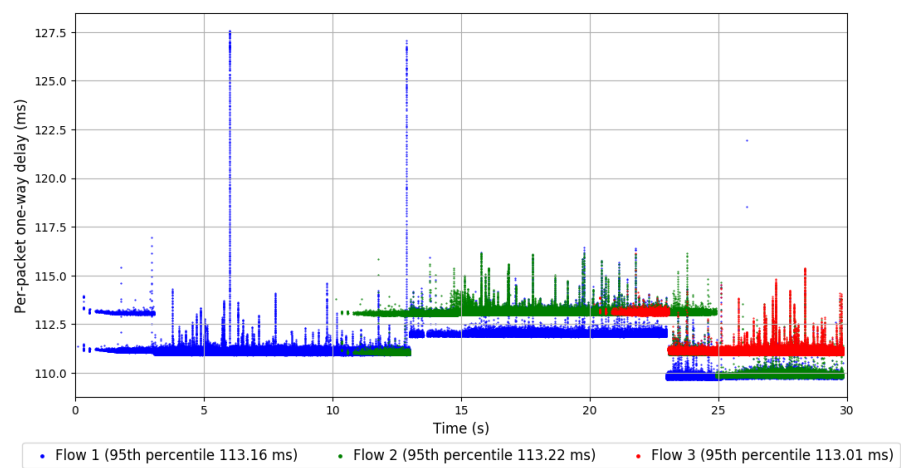
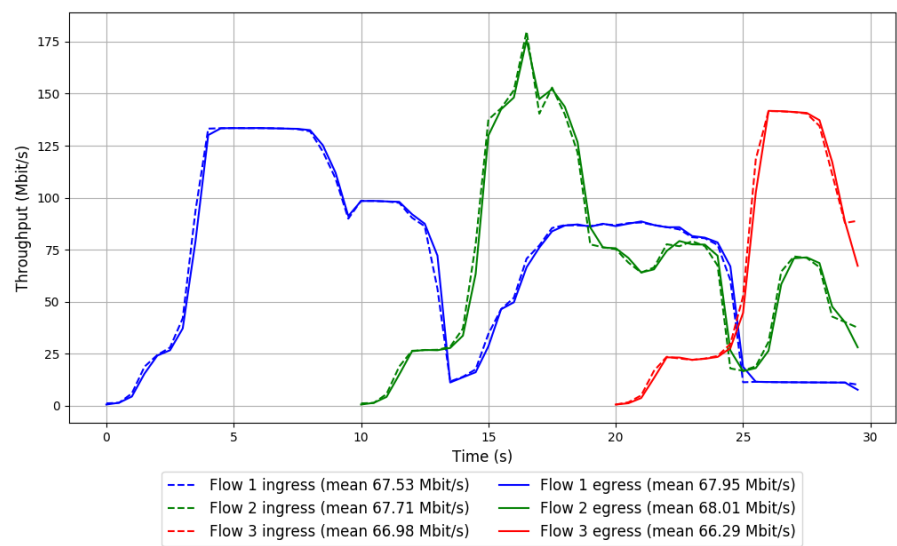
-- Flow 3:

Average throughput: 66.29 Mbit/s

95th percentile per-packet one-way delay: 113.007 ms

Loss rate: 3.27%

Run 10: Report of Copa — Data Link

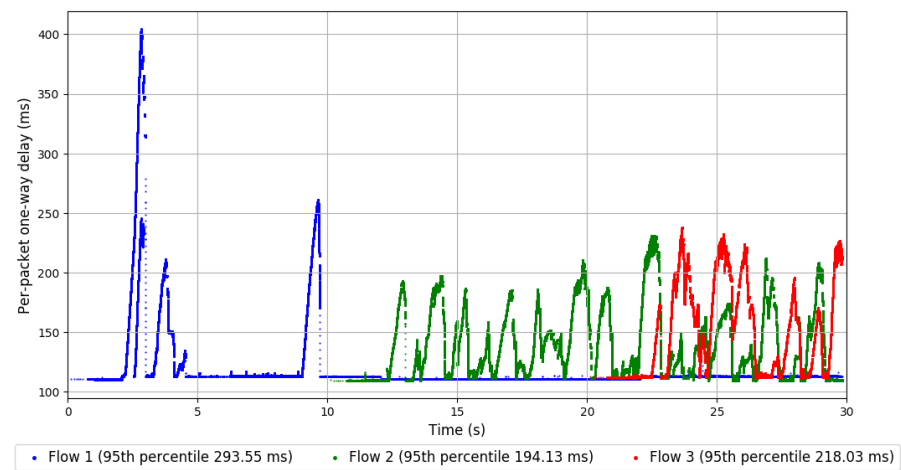
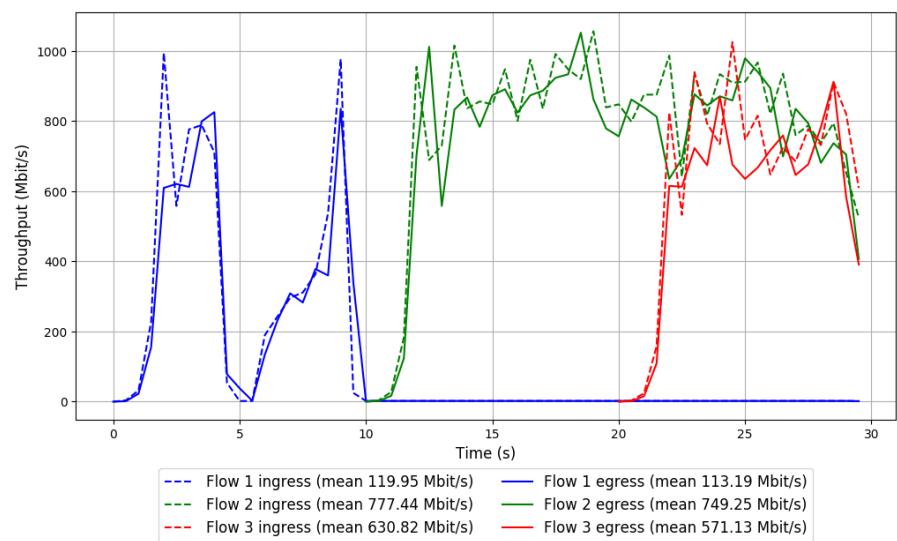


```
Run 1: Statistics of FillP

Start at: 2018-04-18 01:34:34
End at: 2018-04-18 01:35:04

# Below is generated by plot.py at 2018-04-18 08:07:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 796.54 Mbit/s
95th percentile per-packet one-way delay: 213.326 ms
Loss rate: 6.60%
-- Flow 1:
Average throughput: 113.19 Mbit/s
95th percentile per-packet one-way delay: 293.554 ms
Loss rate: 6.34%
-- Flow 2:
Average throughput: 749.25 Mbit/s
95th percentile per-packet one-way delay: 194.134 ms
Loss rate: 4.69%
-- Flow 3:
Average throughput: 571.13 Mbit/s
95th percentile per-packet one-way delay: 218.026 ms
Loss rate: 11.49%
```


Run 1: Report of FillP — Data Link

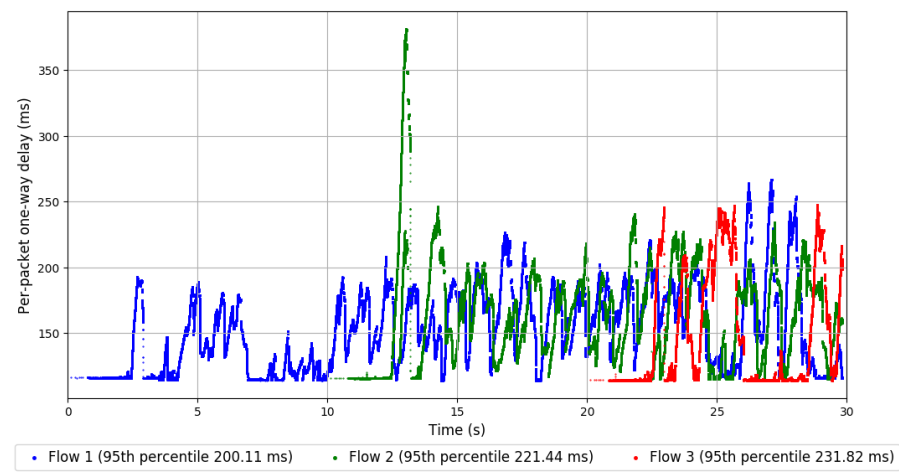
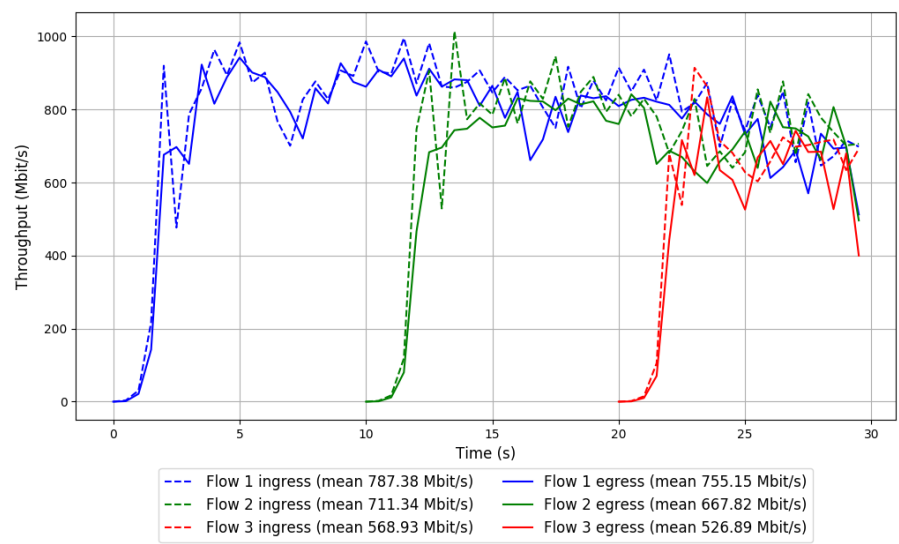


```
Run 2: Statistics of FillP

Start at: 2018-04-18 01:51:54
End at: 2018-04-18 01:52:24

# Below is generated by plot.py at 2018-04-18 08:21:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1369.85 Mbit/s
95th percentile per-packet one-way delay: 218.144 ms
Loss rate: 6.19%
-- Flow 1:
Average throughput: 755.15 Mbit/s
95th percentile per-packet one-way delay: 200.106 ms
Loss rate: 4.82%
-- Flow 2:
Average throughput: 667.82 Mbit/s
95th percentile per-packet one-way delay: 221.438 ms
Loss rate: 7.18%
-- Flow 3:
Average throughput: 526.89 Mbit/s
95th percentile per-packet one-way delay: 231.817 ms
Loss rate: 9.48%
```

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-04-18 02:09:03

End at: 2018-04-18 02:09:33

Below is generated by plot.py at 2018-04-18 08:22:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 1339.88 Mbit/s

95th percentile per-packet one-way delay: 216.233 ms

Loss rate: 4.55%

-- Flow 1:

Average throughput: 716.03 Mbit/s

95th percentile per-packet one-way delay: 207.420 ms

Loss rate: 3.45%

-- Flow 2:

Average throughput: 682.05 Mbit/s

95th percentile per-packet one-way delay: 209.887 ms

Loss rate: 4.15%

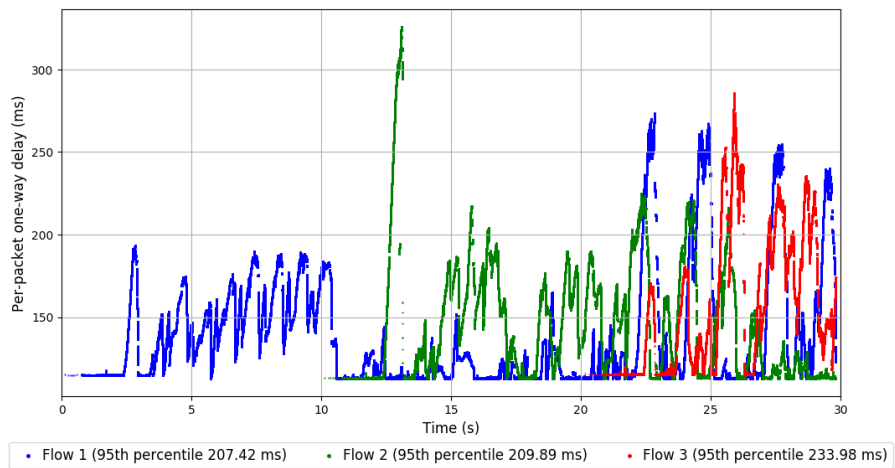
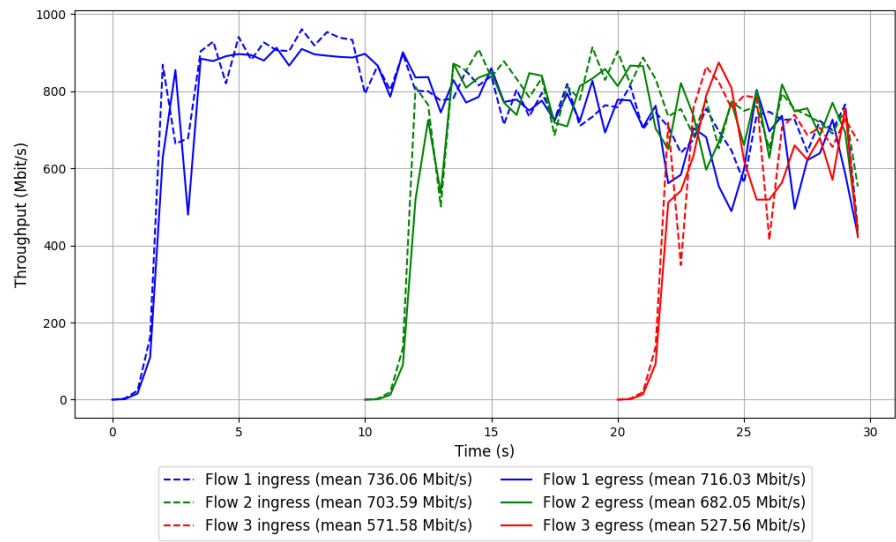
-- Flow 3:

Average throughput: 527.56 Mbit/s

95th percentile per-packet one-way delay: 233.982 ms

Loss rate: 9.81%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-04-18 02:26:12

End at: 2018-04-18 02:26:42

Below is generated by plot.py at 2018-04-18 08:23:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 1342.19 Mbit/s

95th percentile per-packet one-way delay: 198.378 ms

Loss rate: 2.34%

-- Flow 1:

Average throughput: 726.01 Mbit/s

95th percentile per-packet one-way delay: 202.006 ms

Loss rate: 1.98%

-- Flow 2:

Average throughput: 655.11 Mbit/s

95th percentile per-packet one-way delay: 191.767 ms

Loss rate: 2.19%

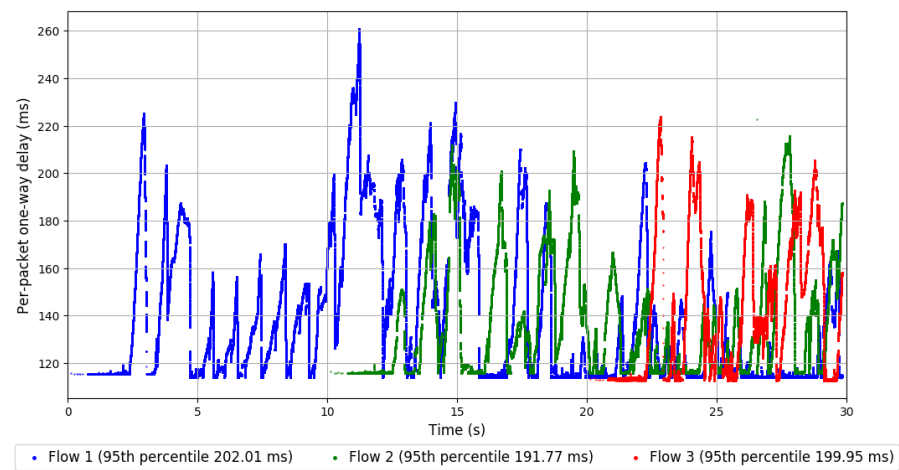
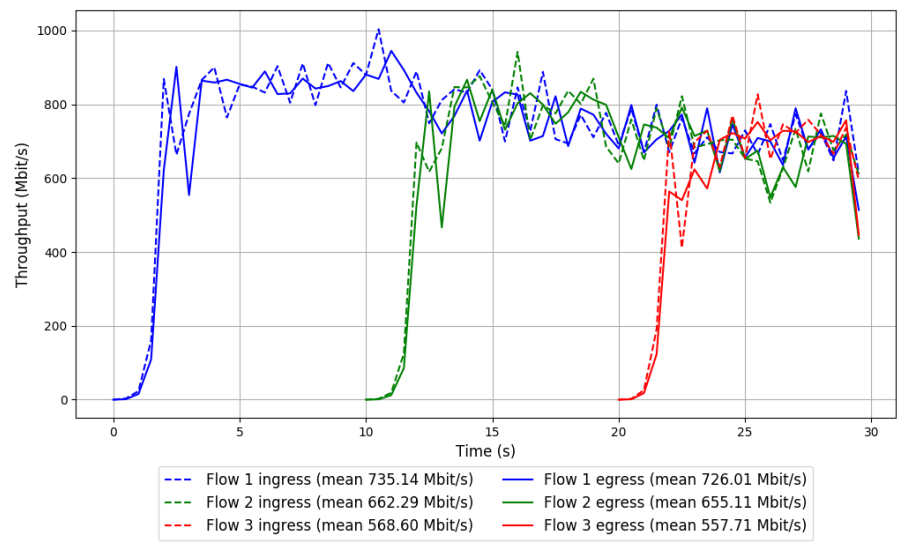
-- Flow 3:

Average throughput: 557.71 Mbit/s

95th percentile per-packet one-way delay: 199.948 ms

Loss rate: 4.10%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-04-18 02:43:27

End at: 2018-04-18 02:43:57

Below is generated by plot.py at 2018-04-18 08:23:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 1370.07 Mbit/s

95th percentile per-packet one-way delay: 204.983 ms

Loss rate: 4.01%

-- Flow 1:

Average throughput: 746.41 Mbit/s

95th percentile per-packet one-way delay: 202.289 ms

Loss rate: 4.16%

-- Flow 2:

Average throughput: 677.26 Mbit/s

95th percentile per-packet one-way delay: 205.126 ms

Loss rate: 2.91%

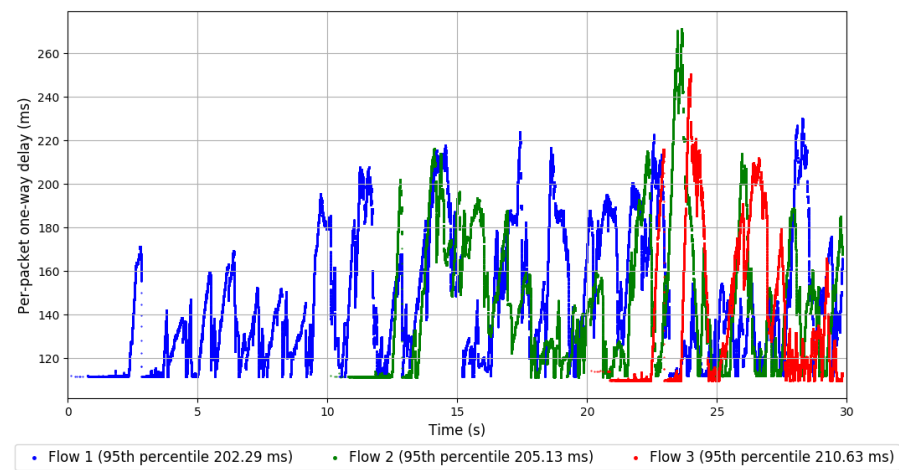
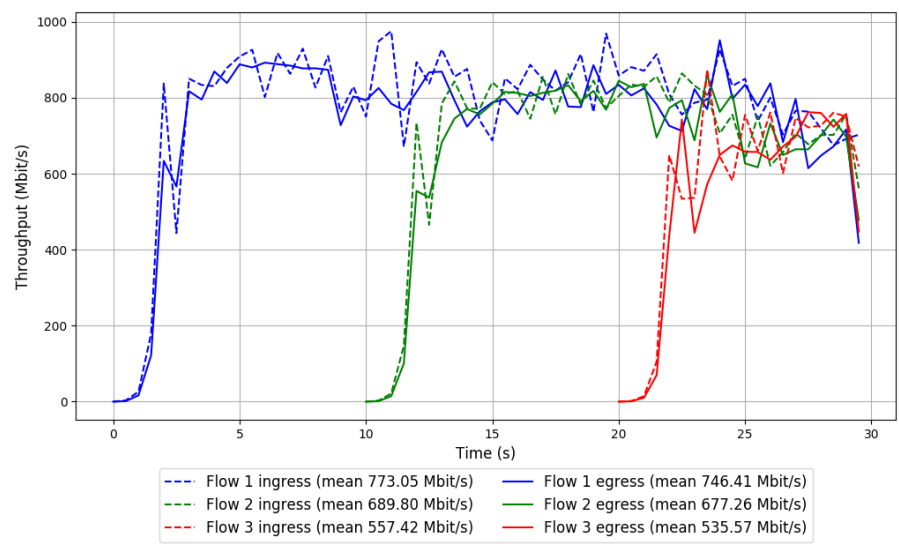
-- Flow 3:

Average throughput: 535.57 Mbit/s

95th percentile per-packet one-way delay: 210.634 ms

Loss rate: 6.09%

Run 5: Report of FillP — Data Link



Run 6: Statistics of FillP

Start at: 2018-04-18 03:00:39

End at: 2018-04-18 03:01:09

Below is generated by plot.py at 2018-04-18 08:24:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 1372.70 Mbit/s

95th percentile per-packet one-way delay: 205.317 ms

Loss rate: 3.08%

-- Flow 1:

Average throughput: 745.72 Mbit/s

95th percentile per-packet one-way delay: 189.690 ms

Loss rate: 2.09%

-- Flow 2:

Average throughput: 695.83 Mbit/s

95th percentile per-packet one-way delay: 213.177 ms

Loss rate: 4.55%

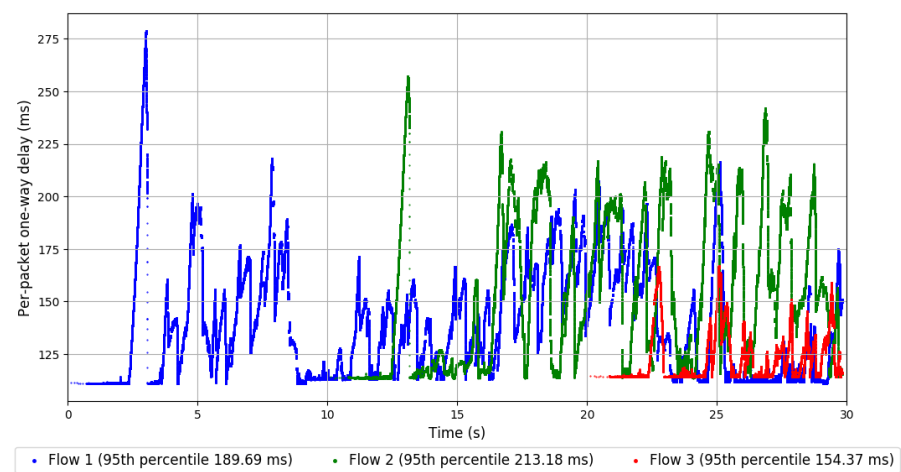
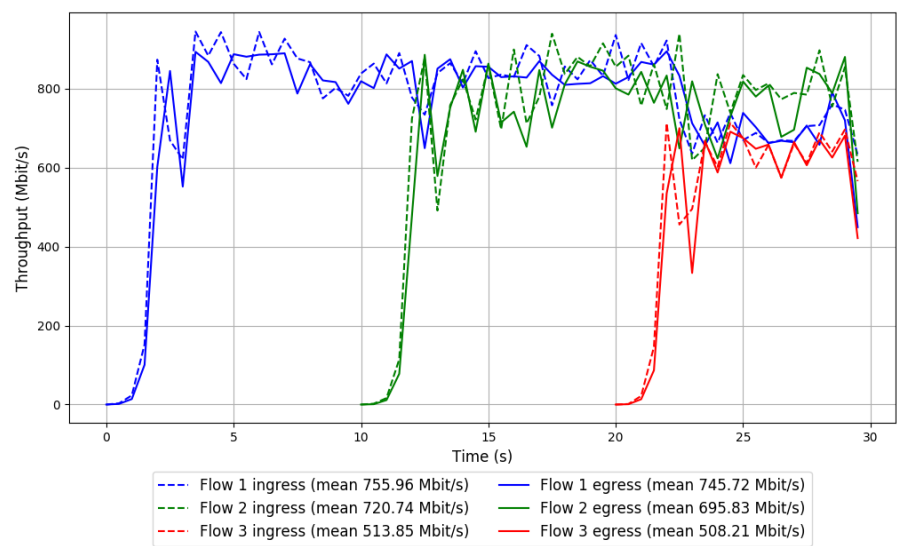
-- Flow 3:

Average throughput: 508.21 Mbit/s

95th percentile per-packet one-way delay: 154.371 ms

Loss rate: 3.36%

Run 6: Report of FillP — Data Link



Run 7: Statistics of FillP

Start at: 2018-04-18 03:17:38

End at: 2018-04-18 03:18:08

Below is generated by plot.py at 2018-04-18 08:24:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 1315.36 Mbit/s

95th percentile per-packet one-way delay: 206.560 ms

Loss rate: 3.69%

-- Flow 1:

Average throughput: 722.29 Mbit/s

95th percentile per-packet one-way delay: 186.160 ms

Loss rate: 1.17%

-- Flow 2:

Average throughput: 647.65 Mbit/s

95th percentile per-packet one-way delay: 219.595 ms

Loss rate: 5.47%

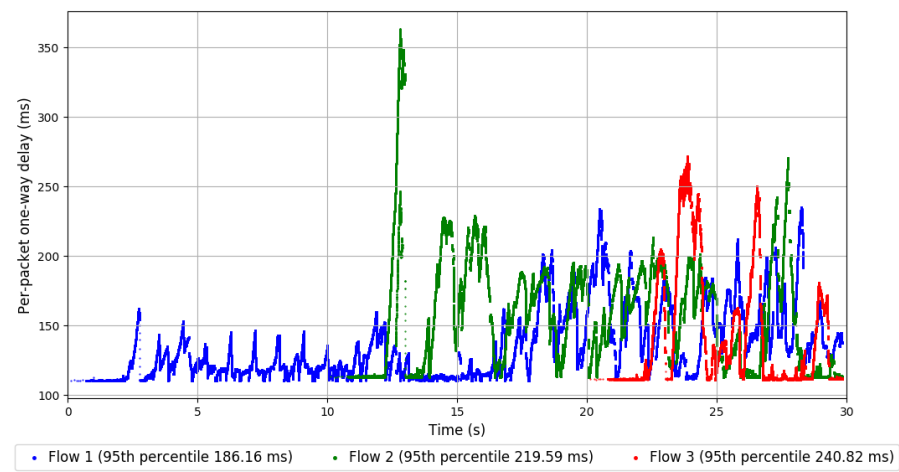
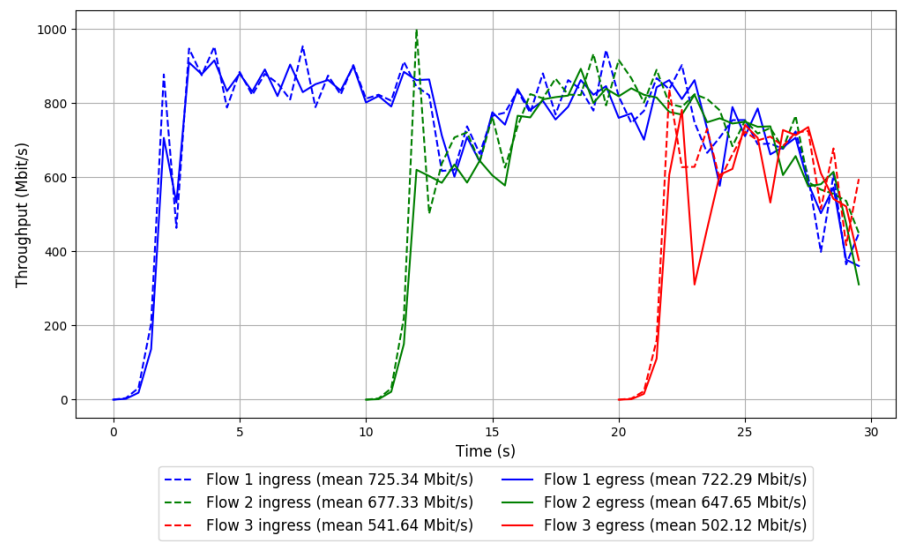
-- Flow 3:

Average throughput: 502.12 Mbit/s

95th percentile per-packet one-way delay: 240.821 ms

Loss rate: 9.40%

Run 7: Report of FillP — Data Link



Run 8: Statistics of FillP

Start at: 2018-04-18 03:34:49

End at: 2018-04-18 03:35:19

Below is generated by plot.py at 2018-04-18 08:28:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 1275.79 Mbit/s

95th percentile per-packet one-way delay: 302.962 ms

Loss rate: 4.46%

-- Flow 1:

Average throughput: 690.40 Mbit/s

95th percentile per-packet one-way delay: 311.590 ms

Loss rate: 3.79%

-- Flow 2:

Average throughput: 681.69 Mbit/s

95th percentile per-packet one-way delay: 207.312 ms

Loss rate: 5.50%

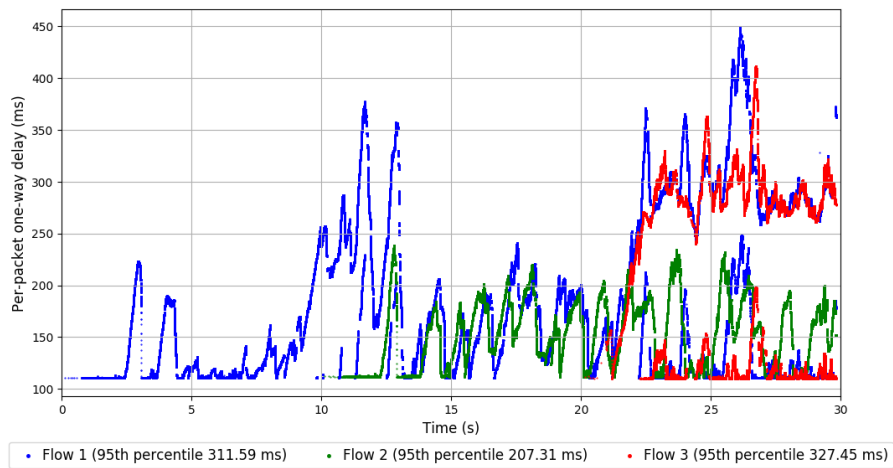
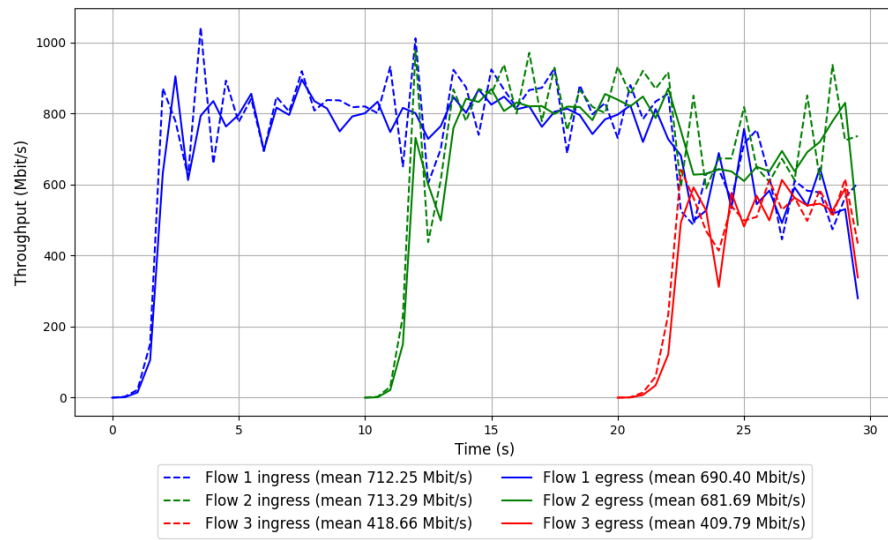
-- Flow 3:

Average throughput: 409.79 Mbit/s

95th percentile per-packet one-way delay: 327.454 ms

Loss rate: 4.32%

Run 8: Report of FillP — Data Link



Run 9: Statistics of FillP

Start at: 2018-04-18 03:51:50

End at: 2018-04-18 03:52:20

Below is generated by plot.py at 2018-04-18 08:36:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 1296.84 Mbit/s

95th percentile per-packet one-way delay: 211.350 ms

Loss rate: 3.66%

-- Flow 1:

Average throughput: 679.91 Mbit/s

95th percentile per-packet one-way delay: 227.528 ms

Loss rate: 4.97%

-- Flow 2:

Average throughput: 665.85 Mbit/s

95th percentile per-packet one-way delay: 181.095 ms

Loss rate: 1.88%

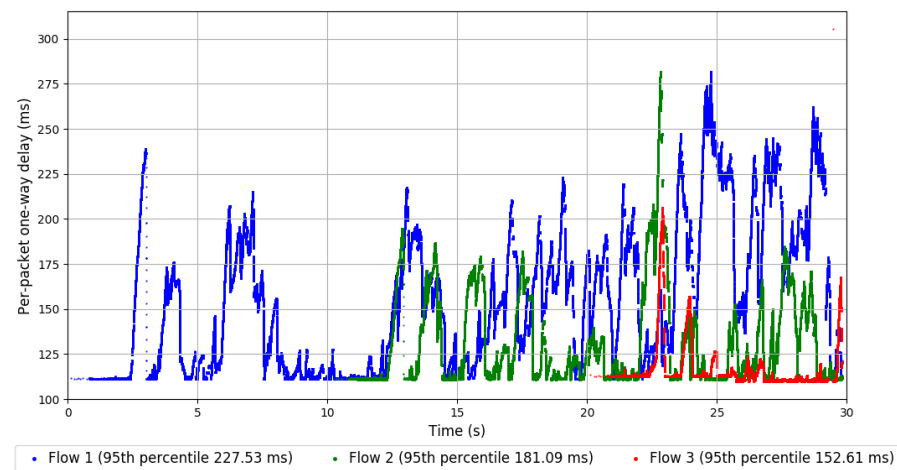
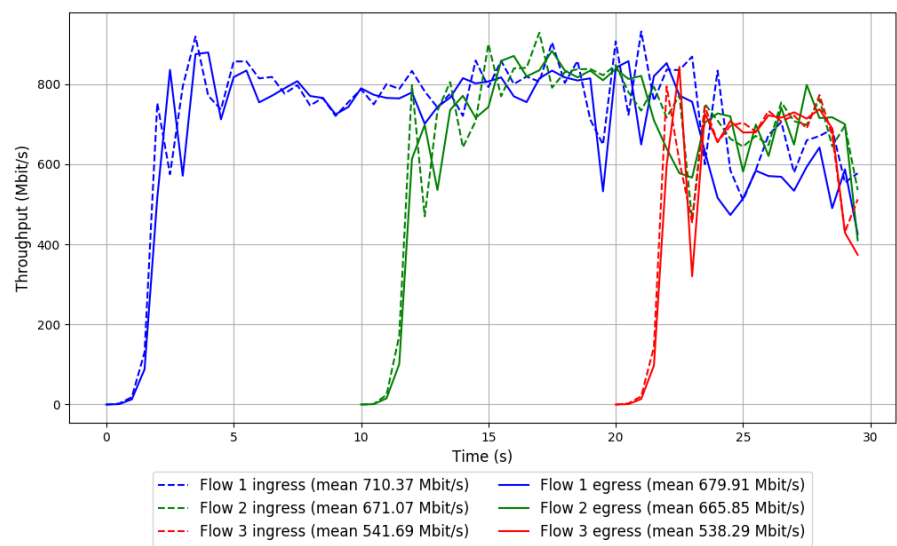
-- Flow 3:

Average throughput: 538.29 Mbit/s

95th percentile per-packet one-way delay: 152.606 ms

Loss rate: 2.87%

Run 9: Report of FillP — Data Link

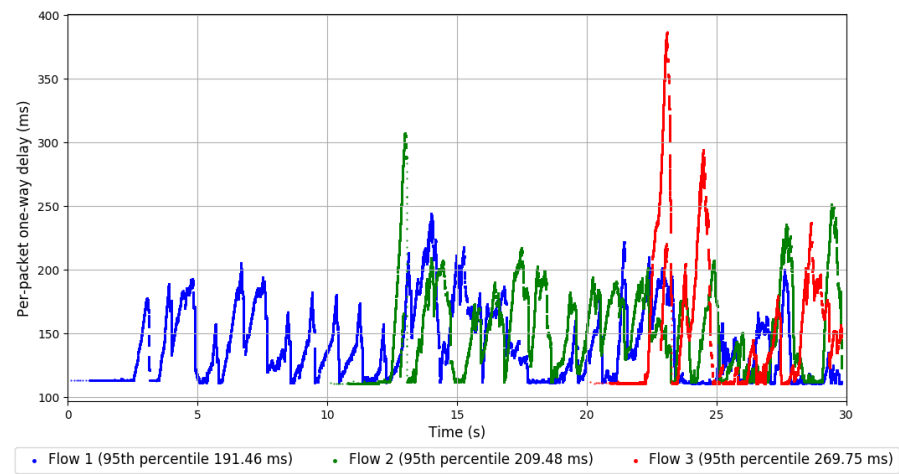
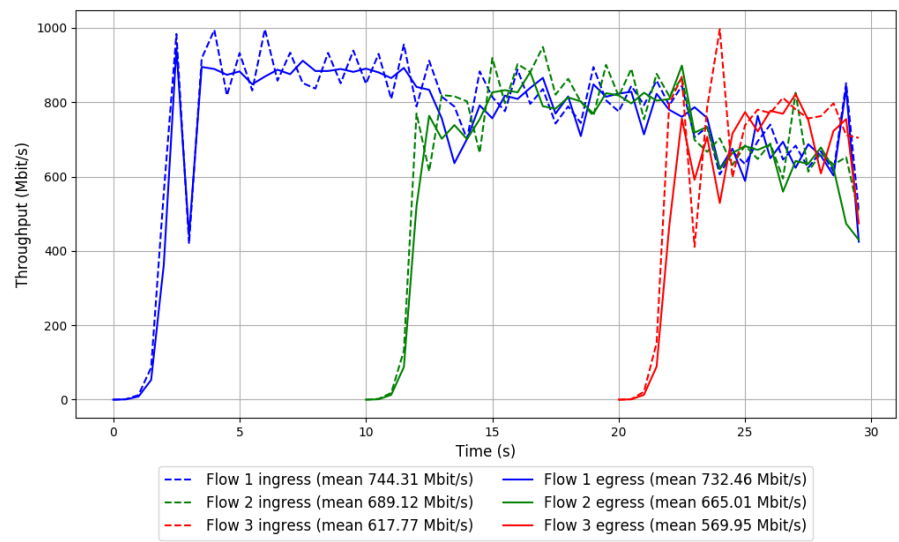


```
Run 10: Statistics of FillP

Start at: 2018-04-18 04:08:54
End at: 2018-04-18 04:09:24

# Below is generated by plot.py at 2018-04-18 08:46:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1359.34 Mbit/s
95th percentile per-packet one-way delay: 207.490 ms
Loss rate: 4.15%
-- Flow 1:
Average throughput: 732.46 Mbit/s
95th percentile per-packet one-way delay: 191.457 ms
Loss rate: 2.32%
-- Flow 2:
Average throughput: 665.01 Mbit/s
95th percentile per-packet one-way delay: 209.479 ms
Loss rate: 4.58%
-- Flow 3:
Average throughput: 569.95 Mbit/s
95th percentile per-packet one-way delay: 269.751 ms
Loss rate: 9.81%
```

Run 10: Report of FillP — Data Link

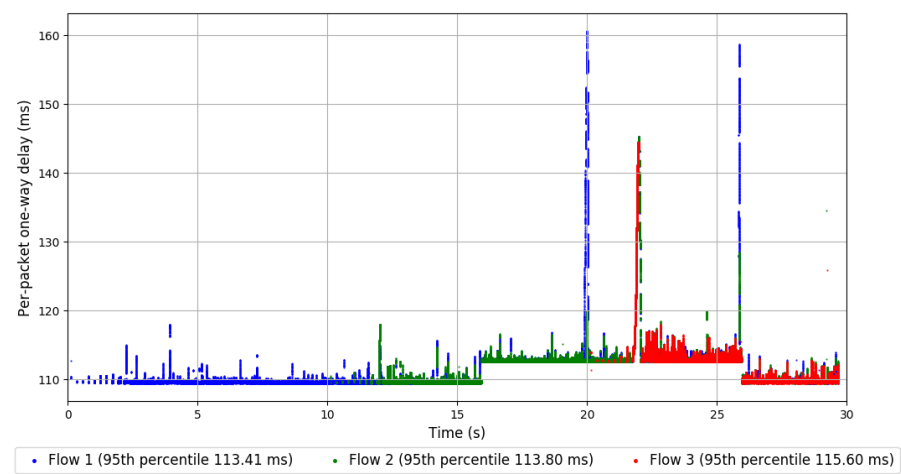
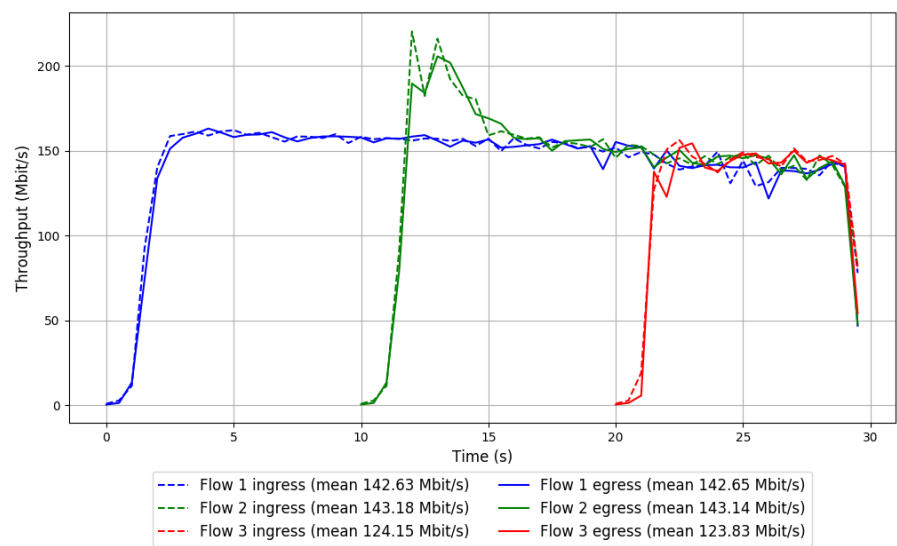


```
Run 1: Statistics of Indigo-1-32

Start at: 2018-04-18 01:27:50
End at: 2018-04-18 01:28:20

# Below is generated by plot.py at 2018-04-18 08:46:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 277.26 Mbit/s
95th percentile per-packet one-way delay: 113.888 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 142.65 Mbit/s
95th percentile per-packet one-way delay: 113.409 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 143.14 Mbit/s
95th percentile per-packet one-way delay: 113.795 ms
Loss rate: 1.15%
-- Flow 3:
Average throughput: 123.83 Mbit/s
95th percentile per-packet one-way delay: 115.600 ms
Loss rate: 2.54%
```

Run 1: Report of Indigo-1-32 — Data Link

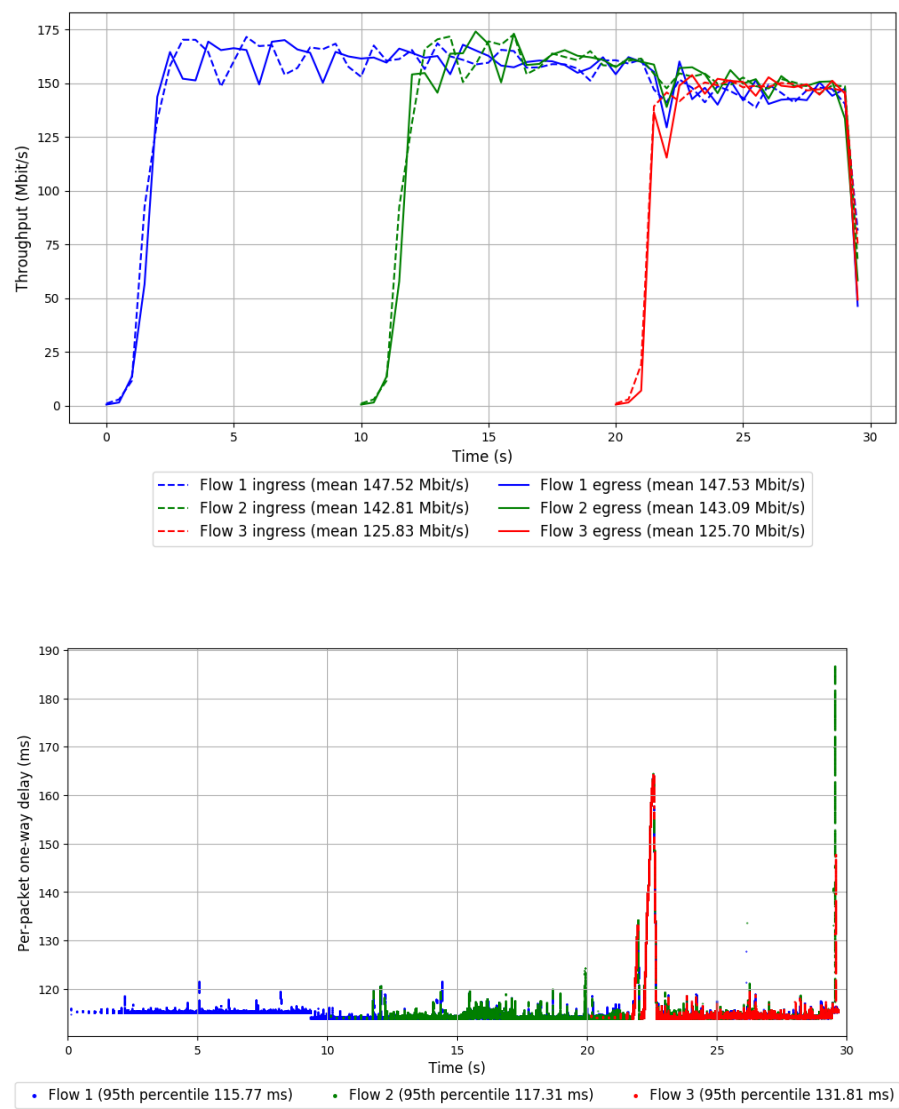


```
Run 2: Statistics of Indigo-1-32

Start at: 2018-04-18 01:44:56
End at: 2018-04-18 01:45:26

# Below is generated by plot.py at 2018-04-18 08:46:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 282.69 Mbit/s
95th percentile per-packet one-way delay: 116.794 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 147.53 Mbit/s
95th percentile per-packet one-way delay: 115.766 ms
Loss rate: 0.75%
-- Flow 2:
Average throughput: 143.09 Mbit/s
95th percentile per-packet one-way delay: 117.314 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 125.70 Mbit/s
95th percentile per-packet one-way delay: 131.810 ms
Loss rate: 2.40%
```

Run 2: Report of Indigo-1-32 — Data Link

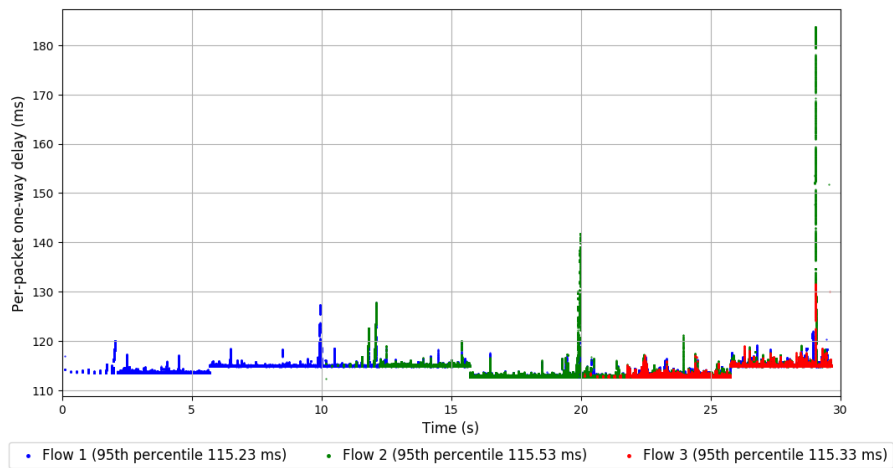
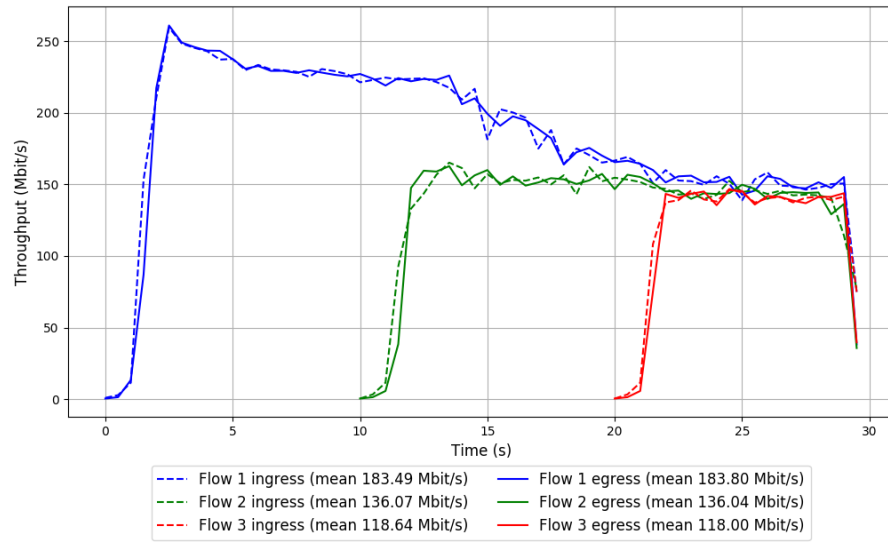


```
Run 3: Statistics of Indigo-1-32

Start at: 2018-04-18 02:02:20
End at: 2018-04-18 02:02:50

# Below is generated by plot.py at 2018-04-18 08:46:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 311.43 Mbit/s
95th percentile per-packet one-way delay: 115.328 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 183.80 Mbit/s
95th percentile per-packet one-way delay: 115.226 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 136.04 Mbit/s
95th percentile per-packet one-way delay: 115.530 ms
Loss rate: 1.15%
-- Flow 3:
Average throughput: 118.00 Mbit/s
95th percentile per-packet one-way delay: 115.335 ms
Loss rate: 2.82%
```


Run 3: Report of Indigo-1-32 — Data Link



Run 4: Statistics of Indigo-1-32

Start at: 2018-04-18 02:19:25

End at: 2018-04-18 02:19:55

Below is generated by plot.py at 2018-04-18 08:46:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 307.07 Mbit/s

95th percentile per-packet one-way delay: 118.849 ms

Loss rate: 1.06%

-- Flow 1:

Average throughput: 173.81 Mbit/s

95th percentile per-packet one-way delay: 116.316 ms

Loss rate: 0.60%

-- Flow 2:

Average throughput: 140.04 Mbit/s

95th percentile per-packet one-way delay: 118.738 ms

Loss rate: 1.21%

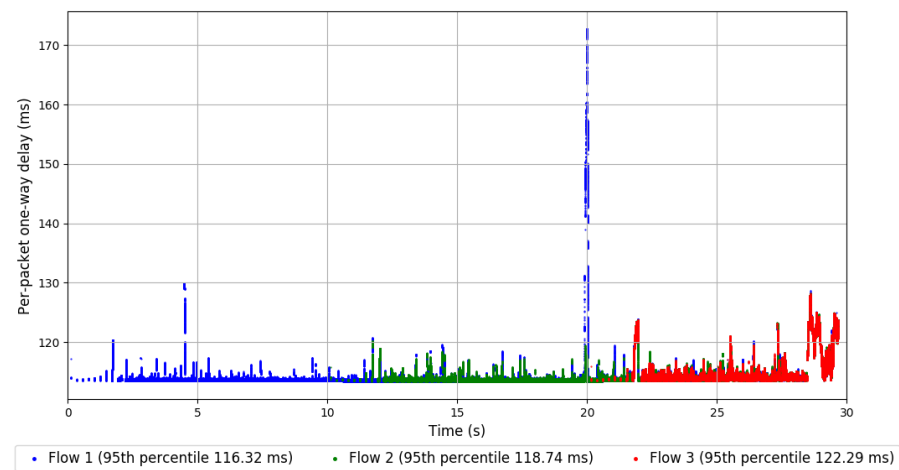
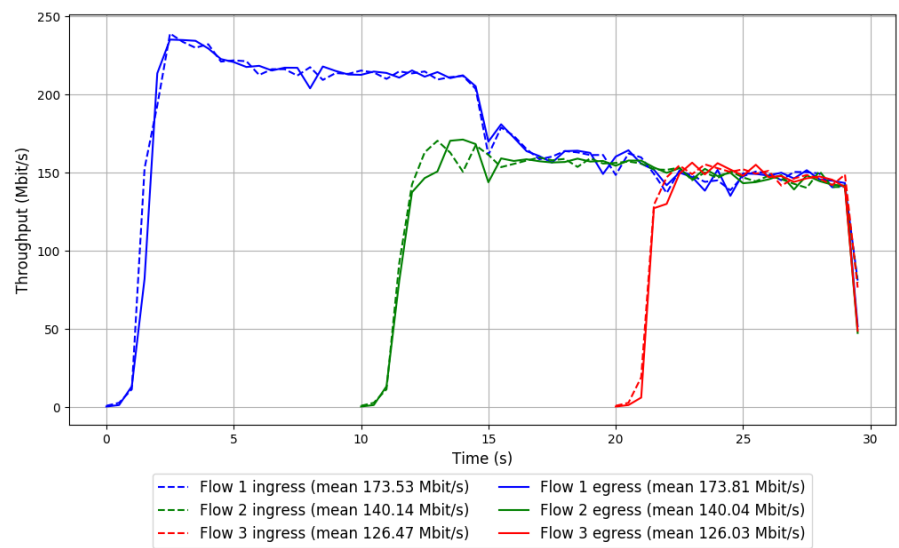
-- Flow 3:

Average throughput: 126.03 Mbit/s

95th percentile per-packet one-way delay: 122.291 ms

Loss rate: 2.64%

Run 4: Report of Indigo-1-32 — Data Link



Run 5: Statistics of Indigo-1-32

Start at: 2018-04-18 02:36:40

End at: 2018-04-18 02:37:10

Below is generated by plot.py at 2018-04-18 08:46:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 290.41 Mbit/s

95th percentile per-packet one-way delay: 114.575 ms

Loss rate: 1.06%

-- Flow 1:

Average throughput: 149.49 Mbit/s

95th percentile per-packet one-way delay: 113.231 ms

Loss rate: 0.71%

-- Flow 2:

Average throughput: 152.73 Mbit/s

95th percentile per-packet one-way delay: 115.231 ms

Loss rate: 0.87%

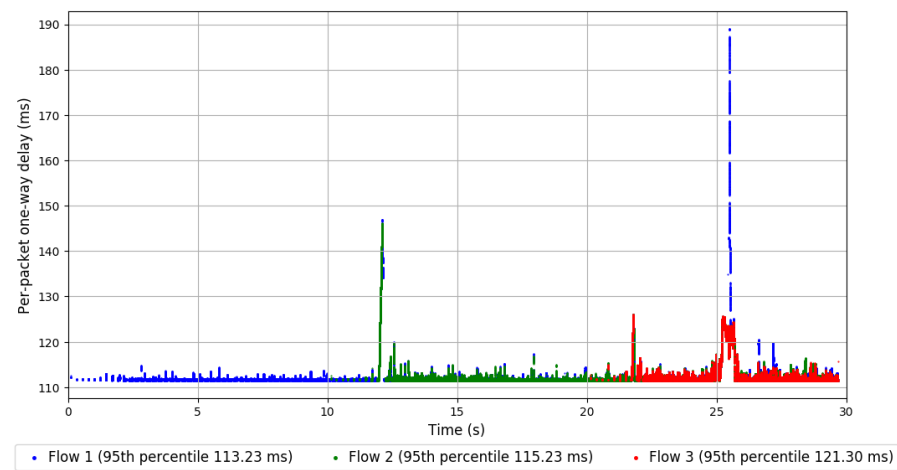
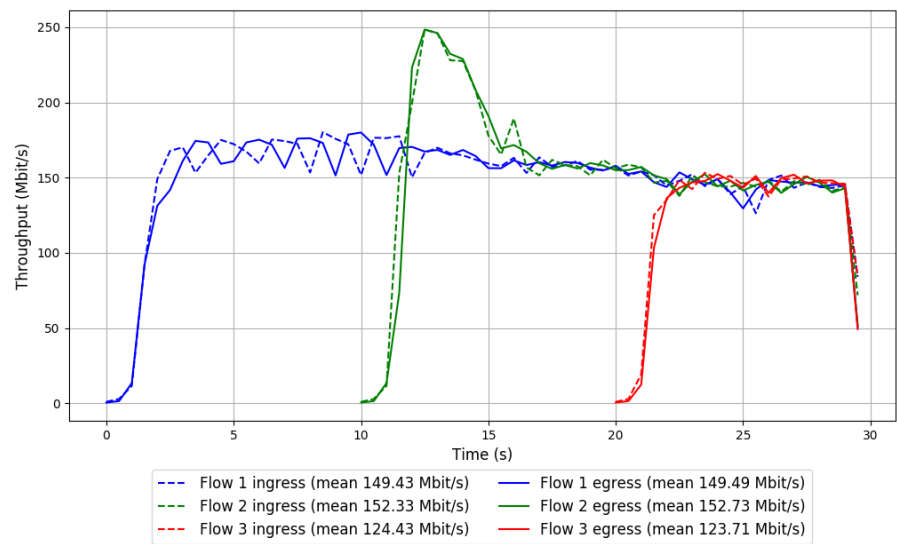
-- Flow 3:

Average throughput: 123.71 Mbit/s

95th percentile per-packet one-way delay: 121.297 ms

Loss rate: 2.79%

Run 5: Report of Indigo-1-32 — Data Link



Run 6: Statistics of Indigo-1-32

Start at: 2018-04-18 02:53:54

End at: 2018-04-18 02:54:24

Below is generated by plot.py at 2018-04-18 08:46:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 325.45 Mbit/s

95th percentile per-packet one-way delay: 115.592 ms

Loss rate: 0.99%

-- Flow 1:

Average throughput: 174.66 Mbit/s

95th percentile per-packet one-way delay: 114.155 ms

Loss rate: 0.62%

-- Flow 2:

Average throughput: 162.70 Mbit/s

95th percentile per-packet one-way delay: 121.338 ms

Loss rate: 0.97%

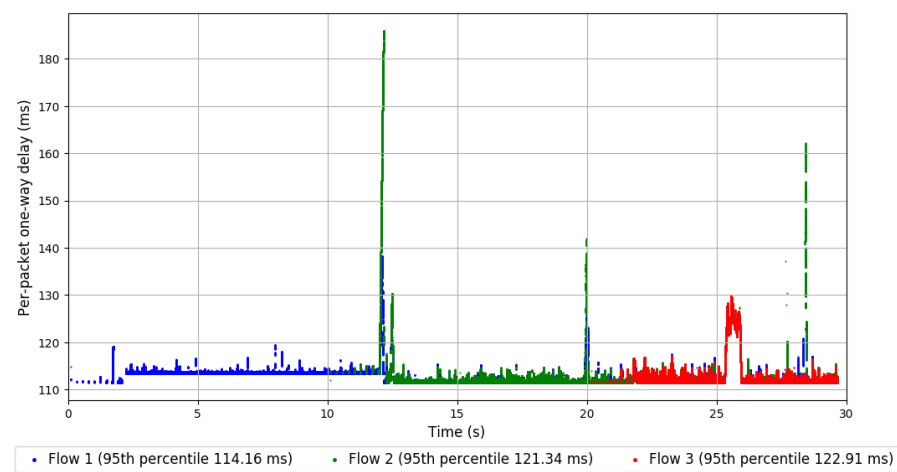
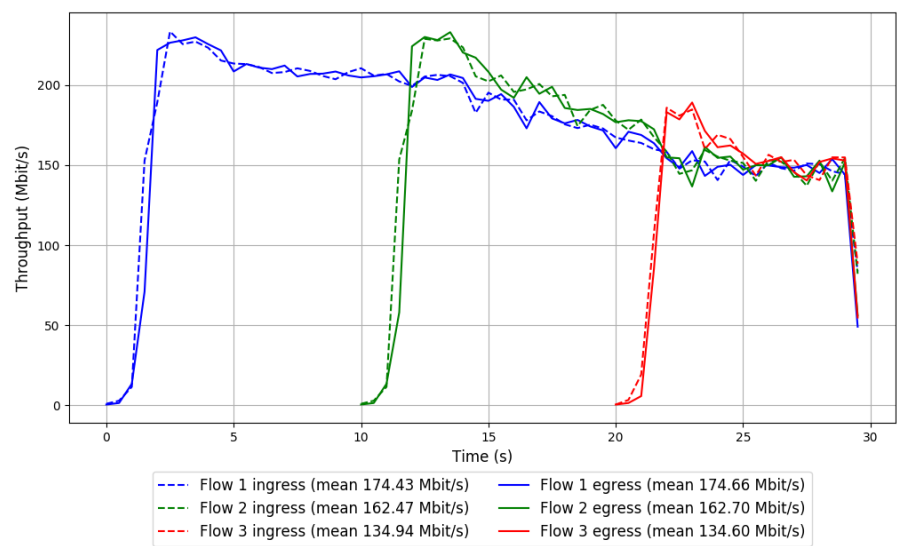
-- Flow 3:

Average throughput: 134.60 Mbit/s

95th percentile per-packet one-way delay: 122.912 ms

Loss rate: 2.53%

Run 6: Report of Indigo-1-32 — Data Link



Run 7: Statistics of Indigo-1-32

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

End at: 2018-04-18 03:11:34

Below is generated by plot.py at 2018-04-18 08:46:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 285.25 Mbit/s

95th percentile per-packet one-way delay: 115.818 ms

Loss rate: 1.19%

-- Flow 1:

Average throughput: 151.95 Mbit/s

95th percentile per-packet one-way delay: 114.370 ms

Loss rate: 0.75%

-- Flow 2:

Average throughput: 142.42 Mbit/s

95th percentile per-packet one-way delay: 116.880 ms

Loss rate: 1.23%

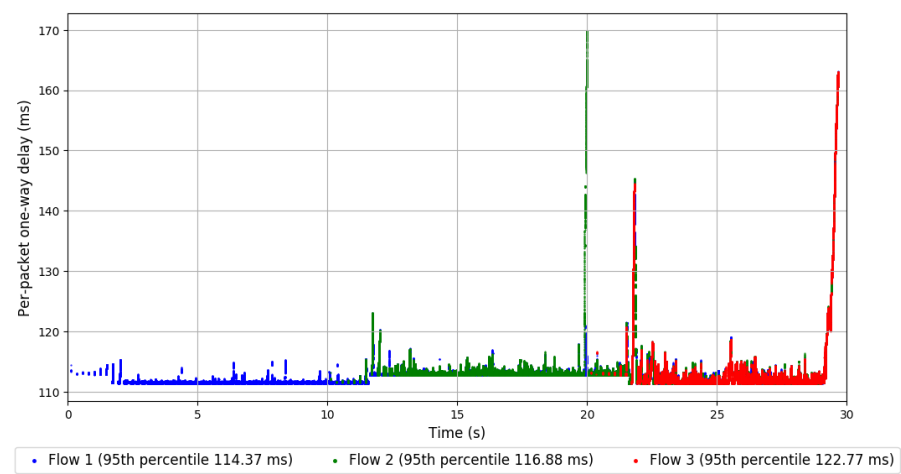
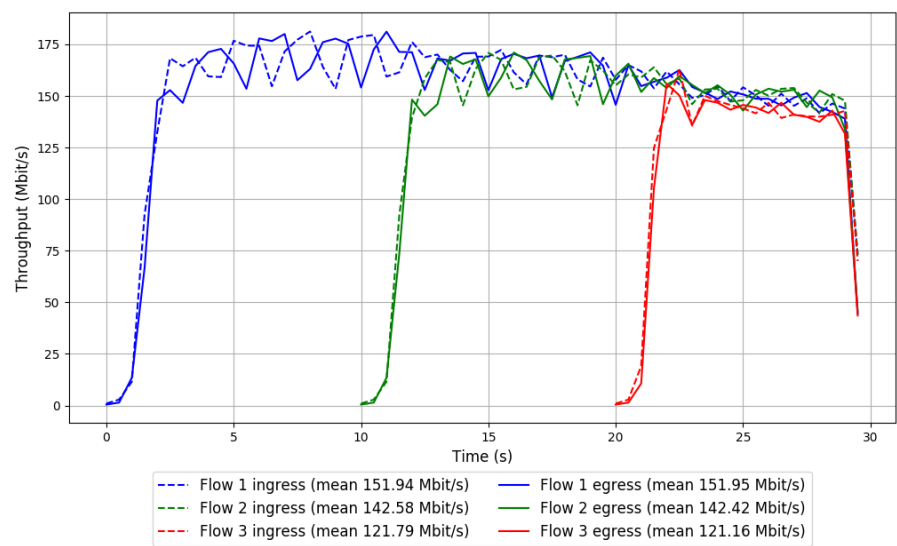
-- Flow 3:

Average throughput: 121.16 Mbit/s

95th percentile per-packet one-way delay: 122.773 ms

Loss rate: 2.80%

Run 7: Report of Indigo-1-32 — Data Link



Run 8: Statistics of Indigo-1-32

Start at: 2018-04-18 03:28:07

End at: 2018-04-18 03:28:37

Below is generated by plot.py at 2018-04-18 08:46:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 305.85 Mbit/s

95th percentile per-packet one-way delay: 130.375 ms

Loss rate: 1.06%

-- Flow 1:

Average throughput: 176.47 Mbit/s

95th percentile per-packet one-way delay: 126.185 ms

Loss rate: 0.58%

-- Flow 2:

Average throughput: 135.36 Mbit/s

95th percentile per-packet one-way delay: 130.981 ms

Loss rate: 1.22%

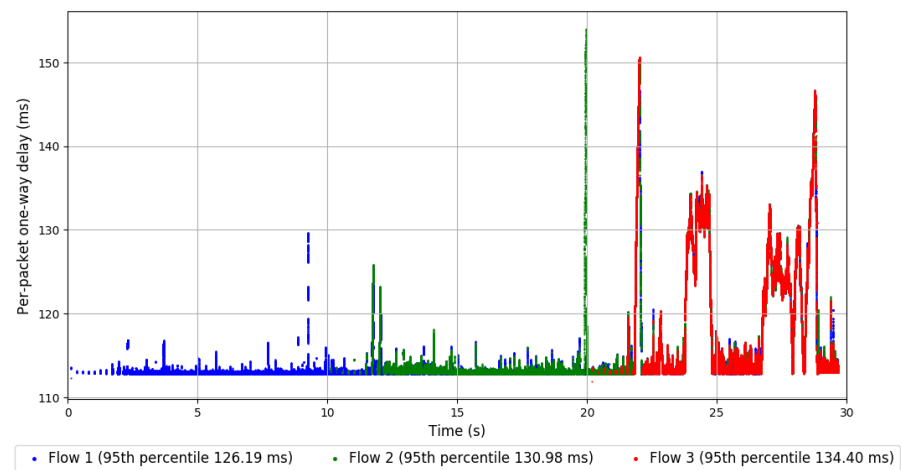
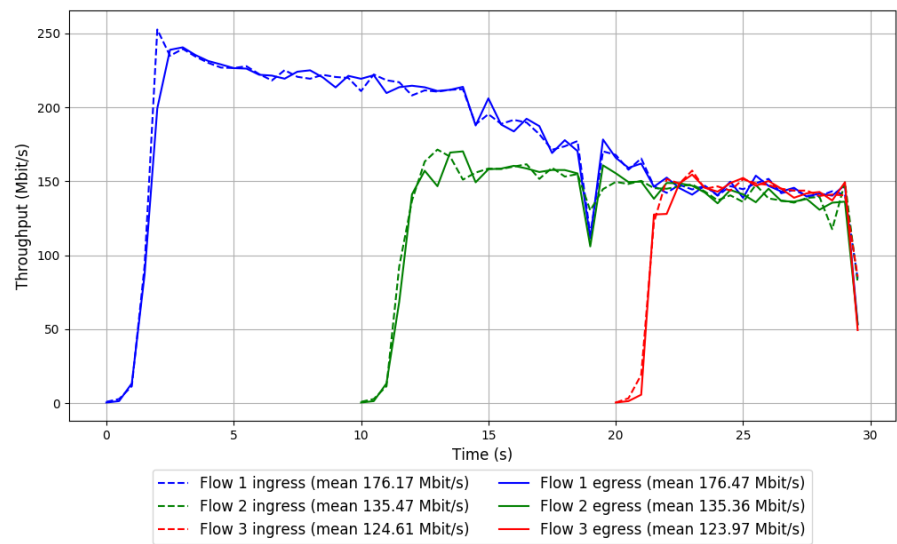
-- Flow 3:

Average throughput: 123.97 Mbit/s

95th percentile per-packet one-way delay: 134.399 ms

Loss rate: 2.78%

Run 8: Report of Indigo-1-32 — Data Link



Run 9: Statistics of Indigo-1-32

Start at: 2018-04-18 03:45:09

End at: 2018-04-18 03:45:39

Below is generated by plot.py at 2018-04-18 08:46:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 282.25 Mbit/s

95th percentile per-packet one-way delay: 113.758 ms

Loss rate: 1.12%

-- Flow 1:

Average throughput: 148.96 Mbit/s

95th percentile per-packet one-way delay: 113.303 ms

Loss rate: 0.75%

-- Flow 2:

Average throughput: 142.11 Mbit/s

95th percentile per-packet one-way delay: 114.019 ms

Loss rate: 1.01%

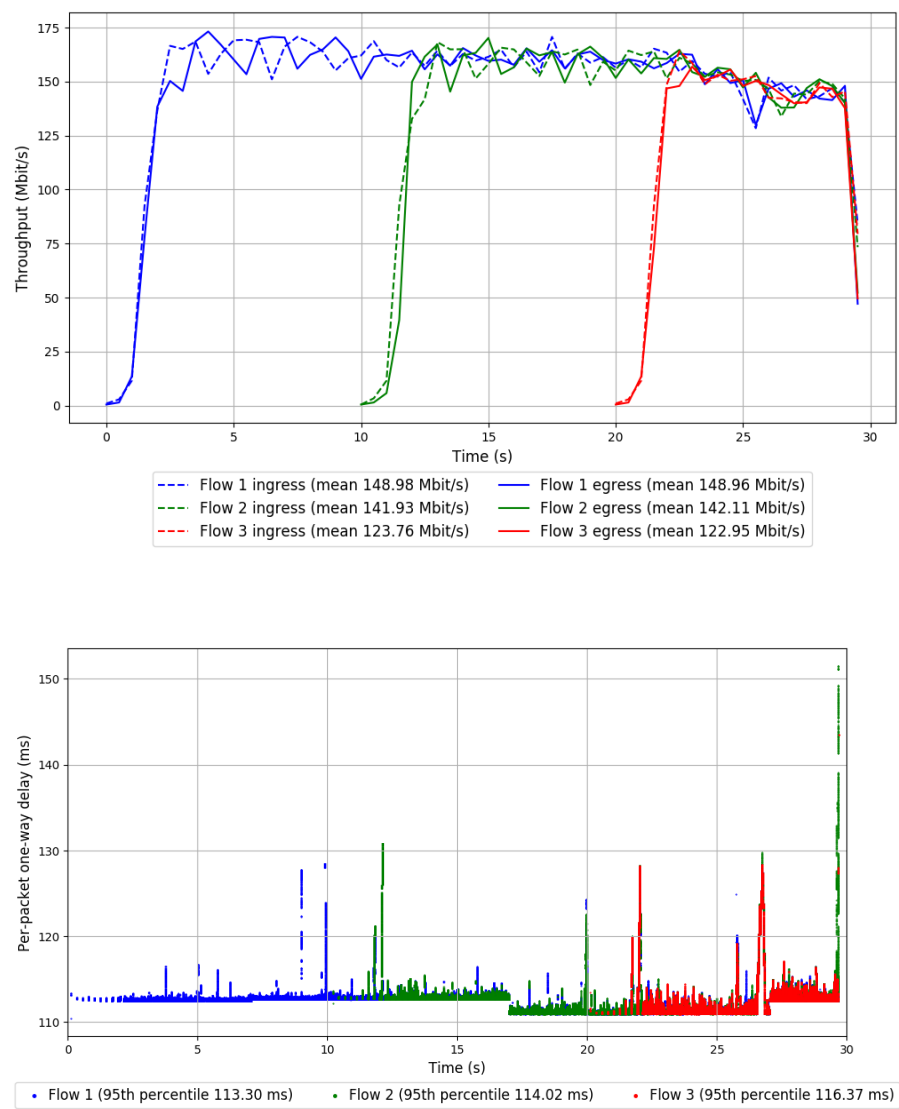
-- Flow 3:

Average throughput: 122.95 Mbit/s

95th percentile per-packet one-way delay: 116.367 ms

Loss rate: 2.74%

Run 9: Report of Indigo-1-32 — Data Link



Run 10: Statistics of Indigo-1-32

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

End at: 2018-04-18 04:02:39

Below is generated by plot.py at 2018-04-18 08:46:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 313.15 Mbit/s

95th percentile per-packet one-way delay: 114.311 ms

Loss rate: 1.06%

-- Flow 1:

Average throughput: 182.08 Mbit/s

95th percentile per-packet one-way delay: 113.889 ms

Loss rate: 0.63%

-- Flow 2:

Average throughput: 138.43 Mbit/s

95th percentile per-packet one-way delay: 114.720 ms

Loss rate: 1.20%

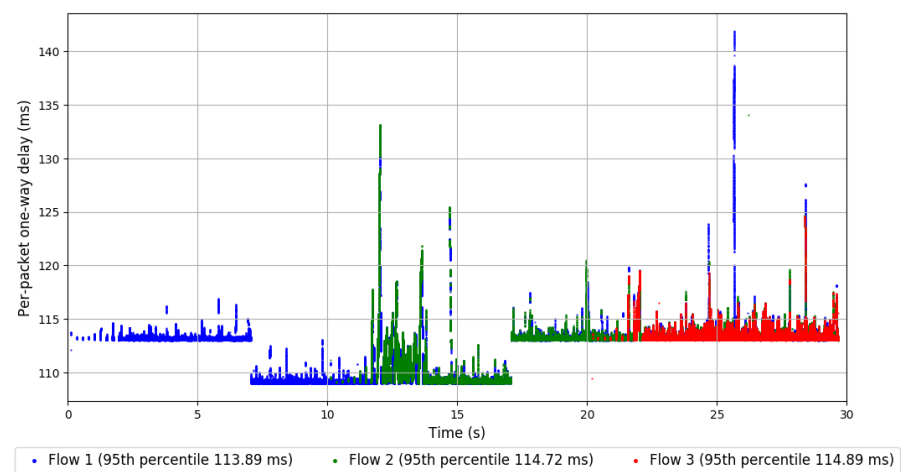
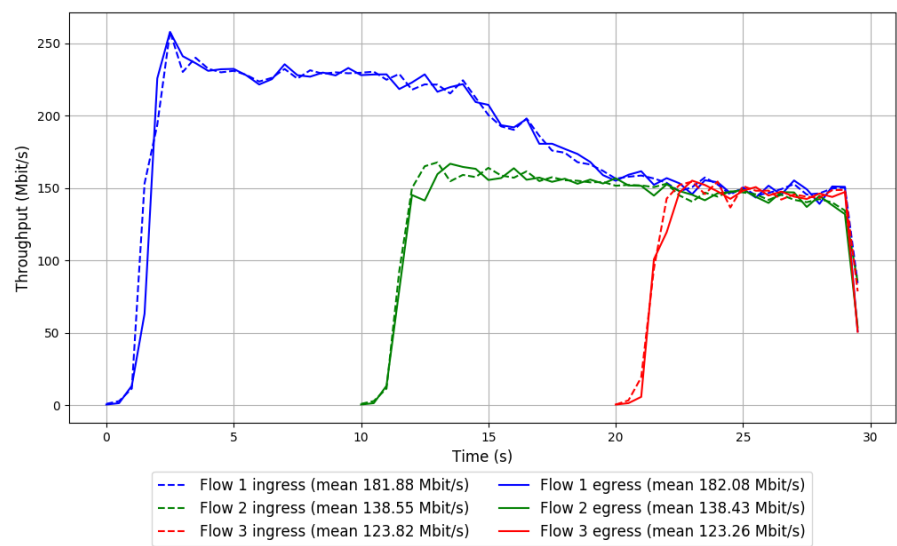
-- Flow 3:

Average throughput: 123.26 Mbit/s

95th percentile per-packet one-way delay: 114.894 ms

Loss rate: 2.66%

Run 10: Report of Indigo-1-32 — Data Link

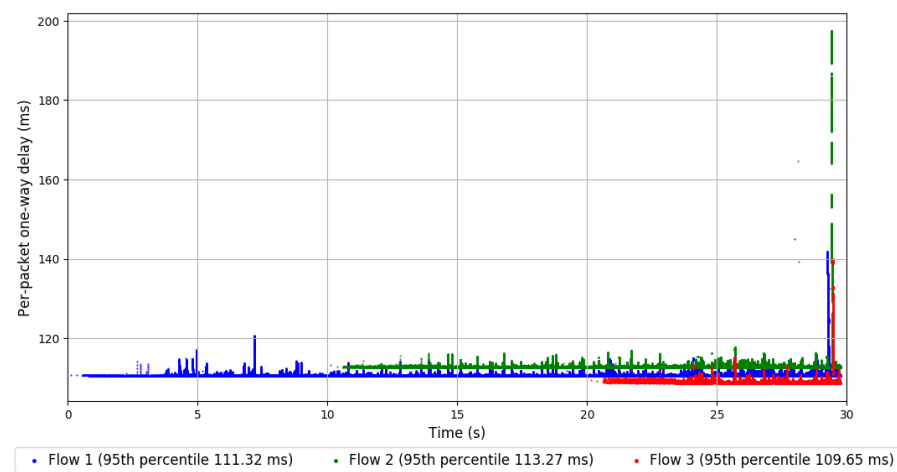
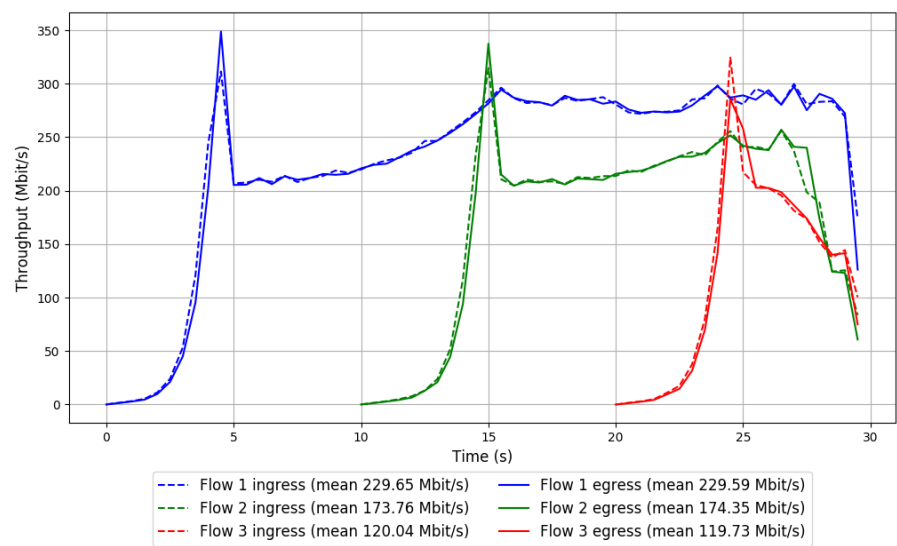


```
Run 1: Statistics of PCC-Vivace

Start at: 2018-04-18 01:25:38
End at: 2018-04-18 01:26:08

# Below is generated by plot.py at 2018-04-18 08:46:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 383.68 Mbit/s
95th percentile per-packet one-way delay: 112.842 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 229.59 Mbit/s
95th percentile per-packet one-way delay: 111.319 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 174.35 Mbit/s
95th percentile per-packet one-way delay: 113.268 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 119.73 Mbit/s
95th percentile per-packet one-way delay: 109.648 ms
Loss rate: 2.49%
```


Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2018-04-18 01:42:50

End at: 2018-04-18 01:43:20

Below is generated by plot.py at 2018-04-18 08:46:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 358.37 Mbit/s

95th percentile per-packet one-way delay: 116.463 ms

Loss rate: 1.07%

-- Flow 1:

Average throughput: 223.33 Mbit/s

95th percentile per-packet one-way delay: 116.509 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 169.15 Mbit/s

95th percentile per-packet one-way delay: 114.792 ms

Loss rate: 1.11%

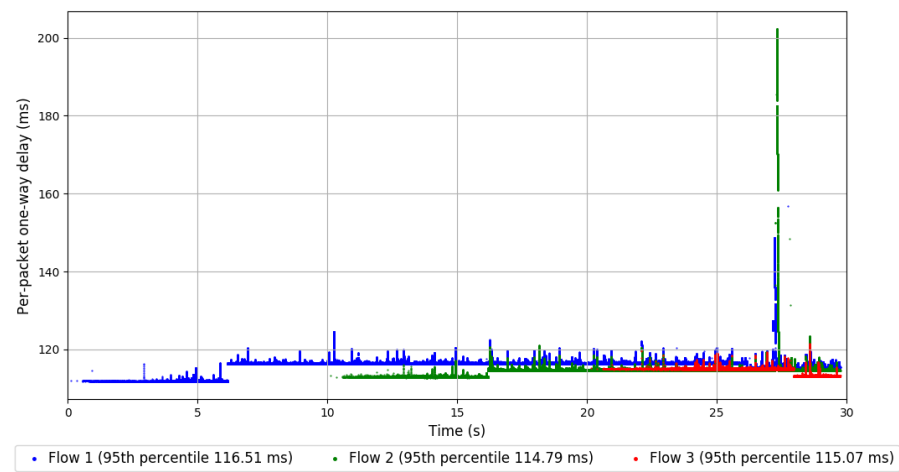
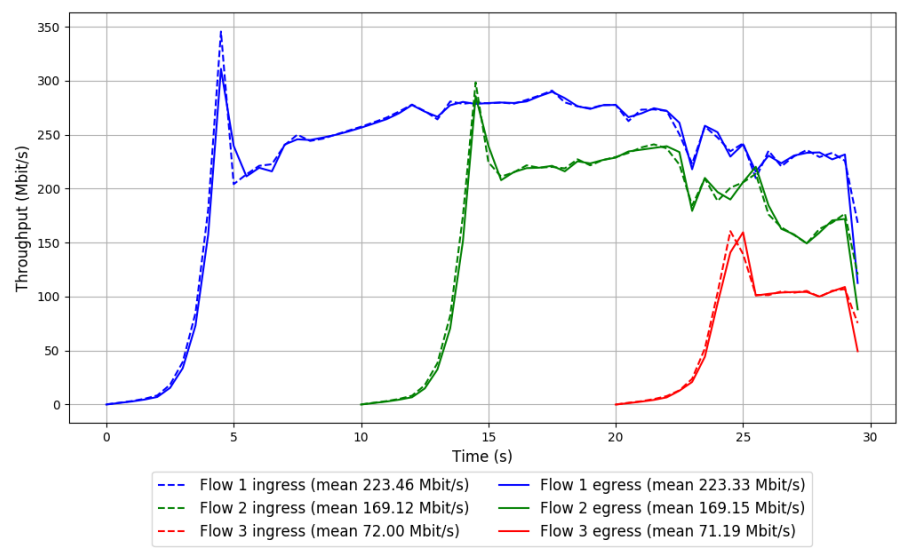
-- Flow 3:

Average throughput: 71.19 Mbit/s

95th percentile per-packet one-way delay: 115.073 ms

Loss rate: 3.41%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2018-04-18 02:00:13

End at: 2018-04-18 02:00:43

Below is generated by plot.py at 2018-04-18 08:46:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 372.68 Mbit/s

95th percentile per-packet one-way delay: 114.877 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 211.97 Mbit/s

95th percentile per-packet one-way delay: 114.925 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 174.64 Mbit/s

95th percentile per-packet one-way delay: 113.531 ms

Loss rate: 1.31%

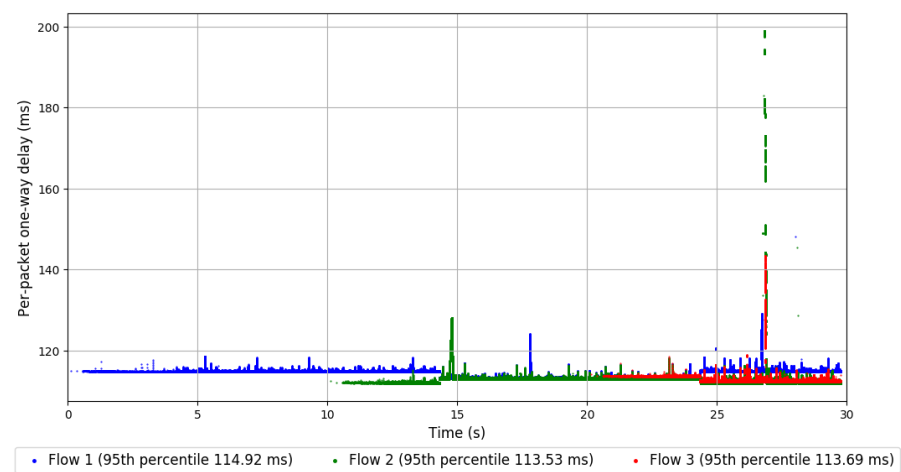
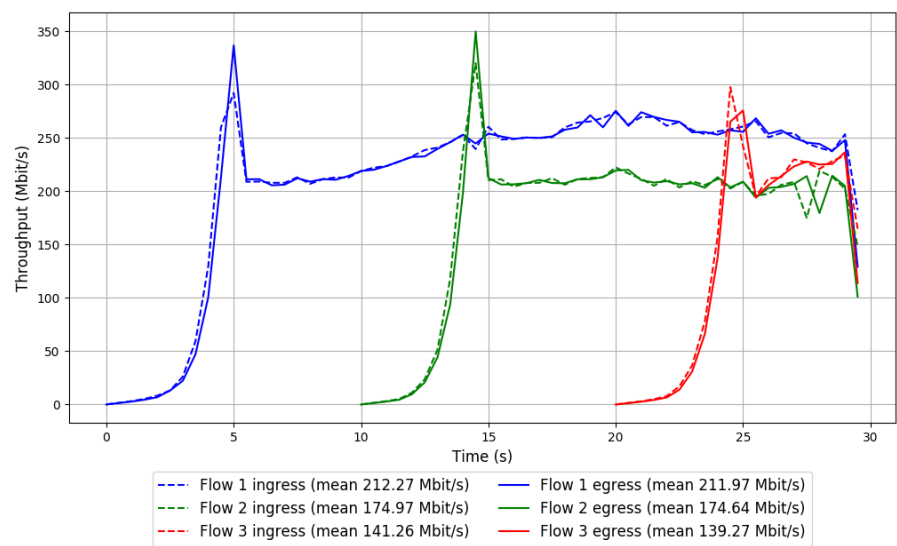
-- Flow 3:

Average throughput: 139.27 Mbit/s

95th percentile per-packet one-way delay: 113.692 ms

Loss rate: 3.63%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2018-04-18 02:17:16

End at: 2018-04-18 02:17:46

Below is generated by plot.py at 2018-04-18 08:46:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 378.81 Mbit/s

95th percentile per-packet one-way delay: 116.076 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 211.62 Mbit/s

95th percentile per-packet one-way delay: 116.351 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 191.29 Mbit/s

95th percentile per-packet one-way delay: 114.424 ms

Loss rate: 1.34%

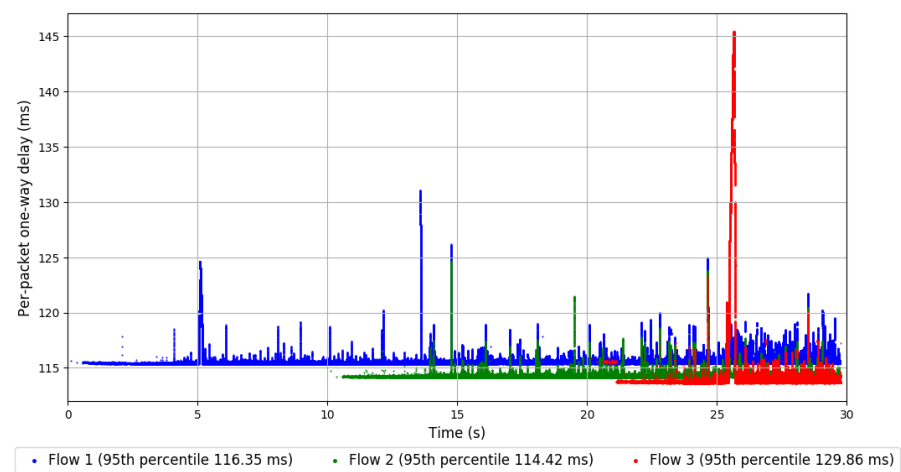
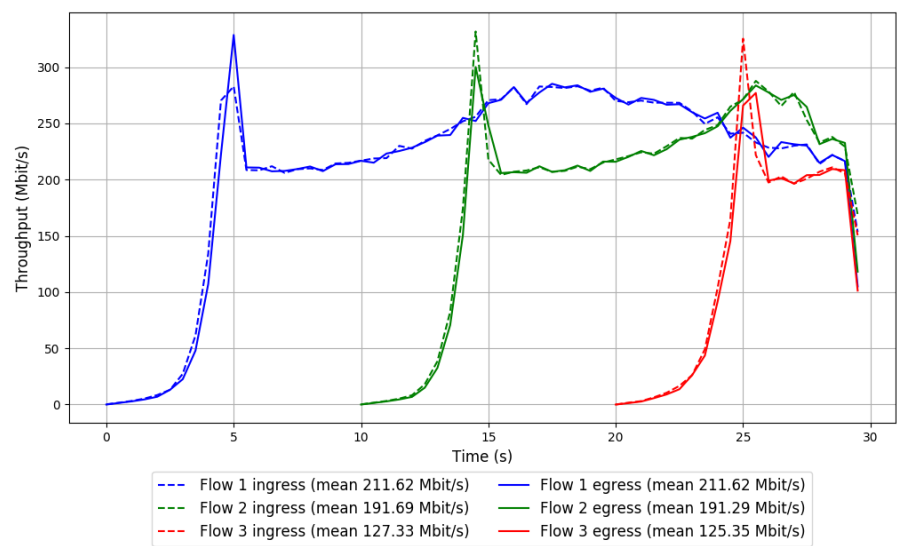
-- Flow 3:

Average throughput: 125.35 Mbit/s

95th percentile per-packet one-way delay: 129.858 ms

Loss rate: 3.78%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2018-04-18 02:34:31

End at: 2018-04-18 02:35:02

Below is generated by plot.py at 2018-04-18 08:46:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 391.94 Mbit/s

95th percentile per-packet one-way delay: 115.031 ms

Loss rate: 1.19%

-- Flow 1:

Average throughput: 221.92 Mbit/s

95th percentile per-packet one-way delay: 115.051 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 190.86 Mbit/s

95th percentile per-packet one-way delay: 114.146 ms

Loss rate: 1.05%

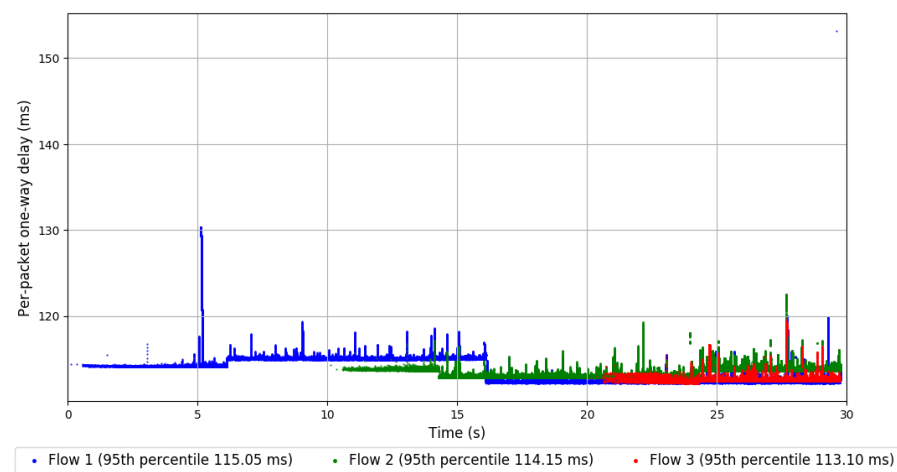
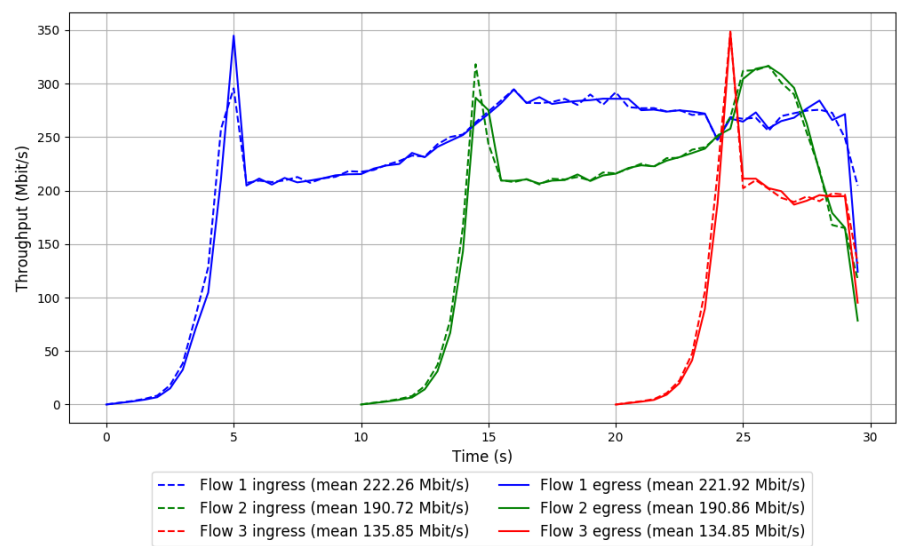
-- Flow 3:

Average throughput: 134.85 Mbit/s

95th percentile per-packet one-way delay: 113.097 ms

Loss rate: 3.06%

Run 5: Report of PCC-Vivace — Data Link



Run 6: Statistics of PCC-Vivace

Start at: 2018-04-18 02:51:43

End at: 2018-04-18 02:52:13

Below is generated by plot.py at 2018-04-18 08:46:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 449.37 Mbit/s

95th percentile per-packet one-way delay: 114.328 ms

Loss rate: 1.24%

-- Flow 1:

Average throughput: 273.68 Mbit/s

95th percentile per-packet one-way delay: 114.443 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 201.80 Mbit/s

95th percentile per-packet one-way delay: 113.508 ms

Loss rate: 1.34%

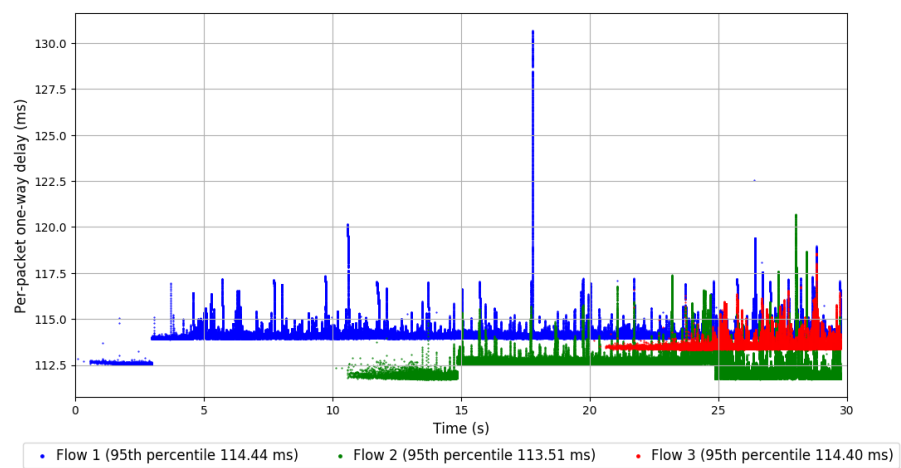
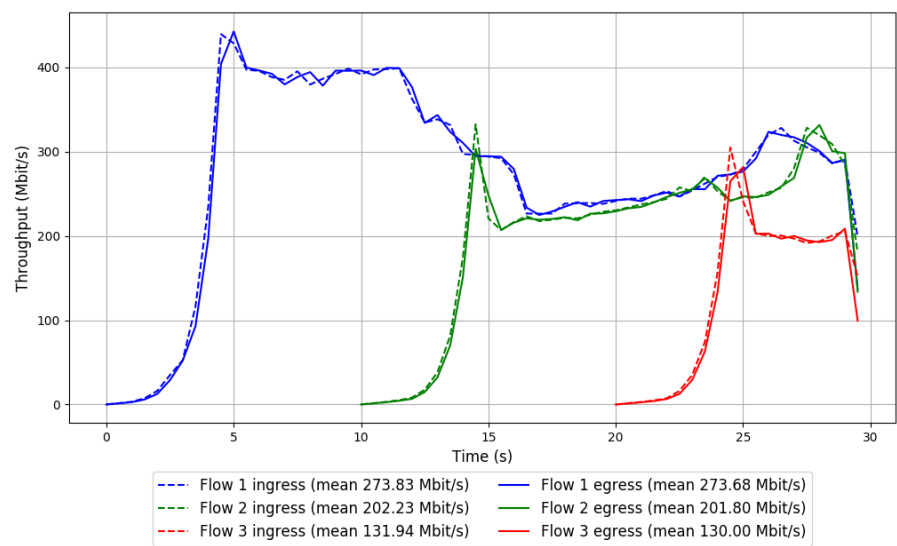
-- Flow 3:

Average throughput: 130.00 Mbit/s

95th percentile per-packet one-way delay: 114.402 ms

Loss rate: 3.74%

Run 6: Report of PCC-Vivace — Data Link



Run 7: Statistics of PCC-Vivace

Start at: 2018-04-18 03:08:56

End at: 2018-04-18 03:09:26

Below is generated by plot.py at 2018-04-18 08:46:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 376.76 Mbit/s

95th percentile per-packet one-way delay: 115.139 ms

Loss rate: 0.93%

-- Flow 1:

Average throughput: 193.24 Mbit/s

95th percentile per-packet one-way delay: 113.650 ms

Loss rate: 0.75%

-- Flow 2:

Average throughput: 217.17 Mbit/s

95th percentile per-packet one-way delay: 147.317 ms

Loss rate: 0.42%

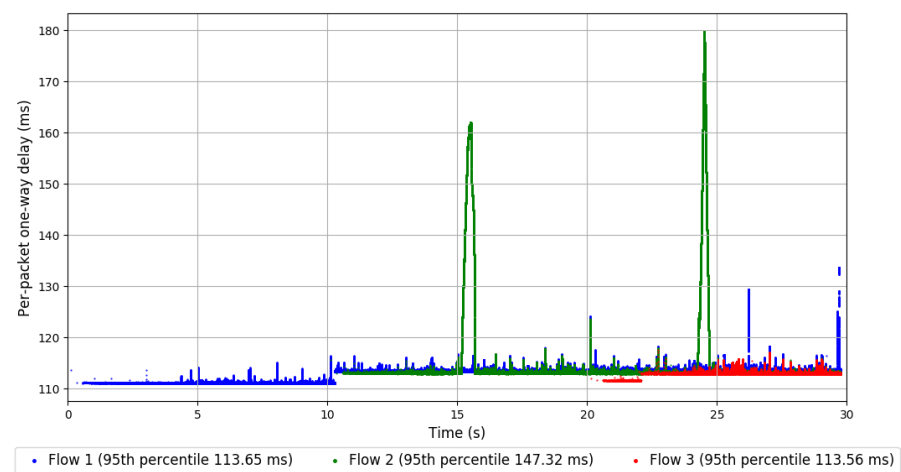
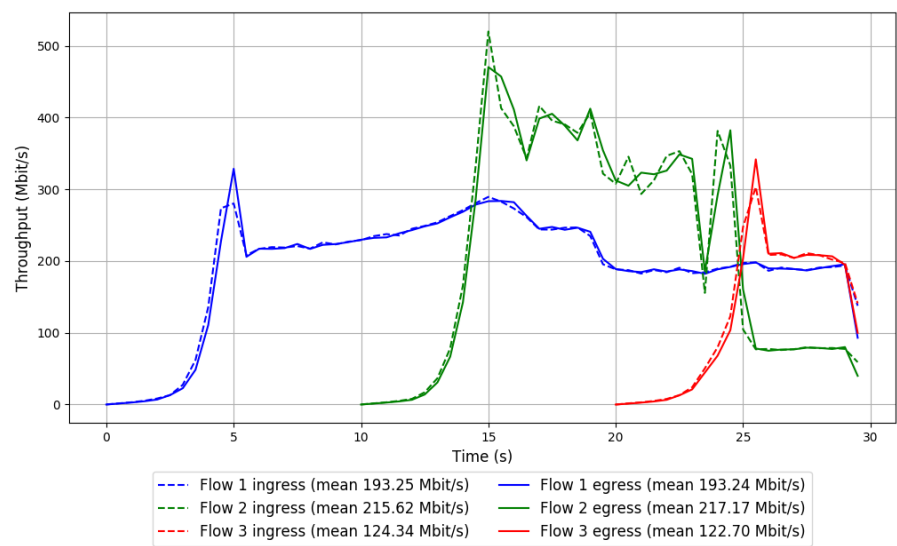
-- Flow 3:

Average throughput: 122.70 Mbit/s

95th percentile per-packet one-way delay: 113.563 ms

Loss rate: 3.54%

Run 7: Report of PCC-Vivace — Data Link



Run 8: Statistics of PCC-Vivace

Start at: 2018-04-18 03:25:57

End at: 2018-04-18 03:26:27

Below is generated by plot.py at 2018-04-18 08:46:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 431.88 Mbit/s

95th percentile per-packet one-way delay: 113.352 ms

Loss rate: 1.28%

-- Flow 1:

Average throughput: 250.29 Mbit/s

95th percentile per-packet one-way delay: 113.136 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 210.37 Mbit/s

95th percentile per-packet one-way delay: 112.961 ms

Loss rate: 1.54%

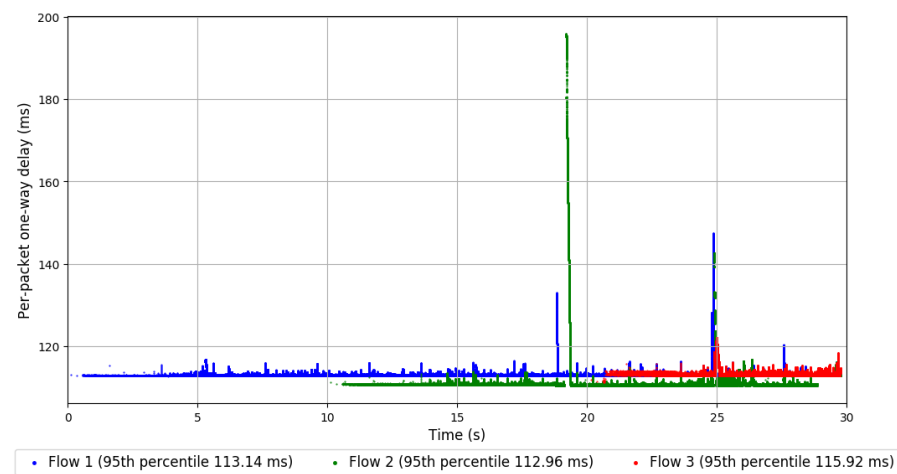
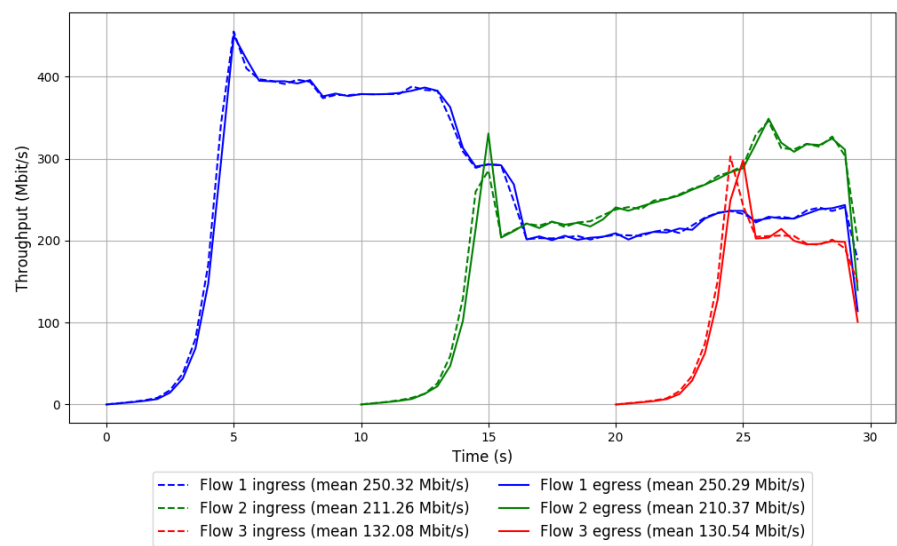
-- Flow 3:

Average throughput: 130.54 Mbit/s

95th percentile per-packet one-way delay: 115.923 ms

Loss rate: 3.42%

Run 8: Report of PCC-Vivace — Data Link



Run 9: Statistics of PCC-Vivace

Start at: 2018-04-18 03:43:03

End at: 2018-04-18 03:43:33

Below is generated by plot.py at 2018-04-18 08:46:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 369.16 Mbit/s

95th percentile per-packet one-way delay: 115.166 ms

Loss rate: 1.24%

-- Flow 1:

Average throughput: 171.44 Mbit/s

95th percentile per-packet one-way delay: 113.303 ms

Loss rate: 0.95%

-- Flow 2:

Average throughput: 262.59 Mbit/s

95th percentile per-packet one-way delay: 119.342 ms

Loss rate: 1.24%

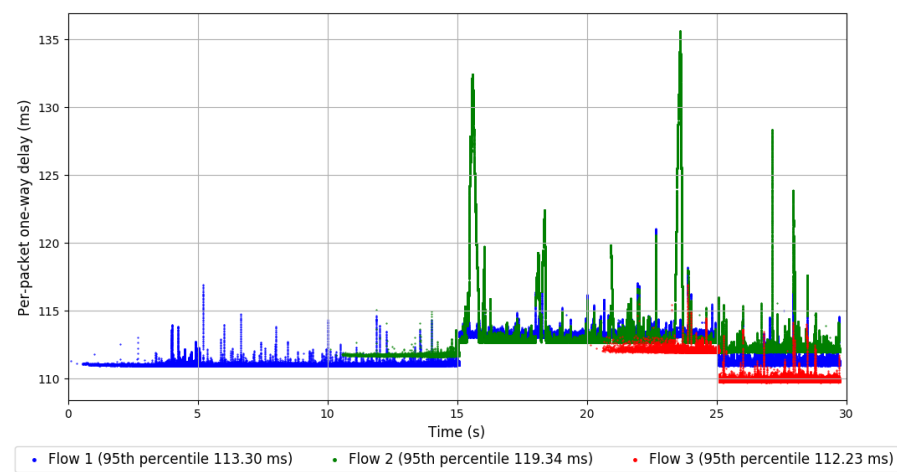
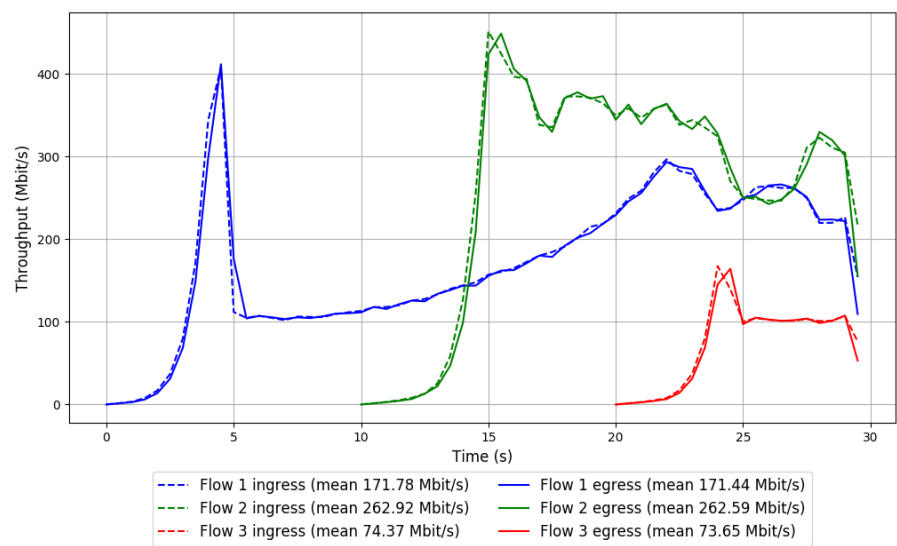
-- Flow 3:

Average throughput: 73.65 Mbit/s

95th percentile per-packet one-way delay: 112.227 ms

Loss rate: 3.22%

Run 9: Report of PCC-Vivace — Data Link

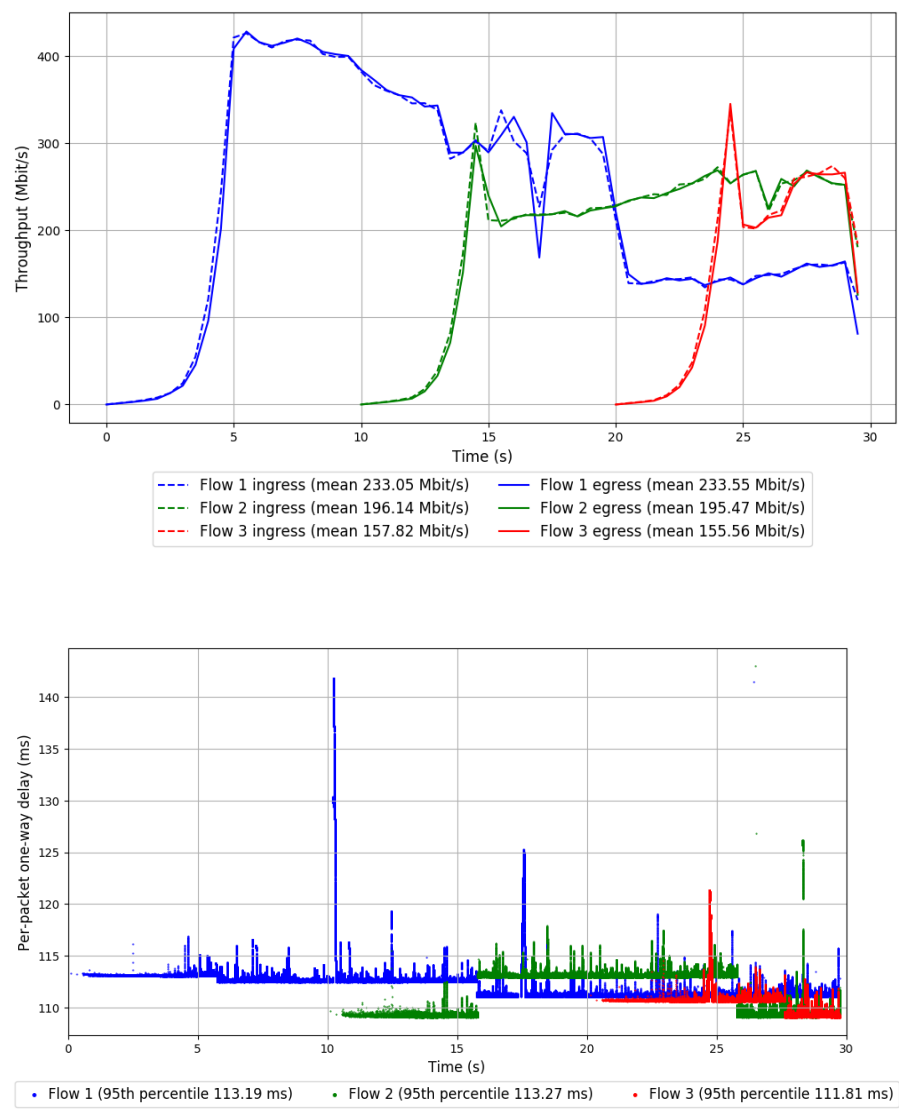


```
Run 10: Statistics of PCC-Vivace

Start at: 2018-04-18 04:00:00
End at: 2018-04-18 04:00:30

# Below is generated by plot.py at 2018-04-18 08:46:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 413.43 Mbit/s
95th percentile per-packet one-way delay: 113.220 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 233.55 Mbit/s
95th percentile per-packet one-way delay: 113.191 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 195.47 Mbit/s
95th percentile per-packet one-way delay: 113.266 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 155.56 Mbit/s
95th percentile per-packet one-way delay: 111.806 ms
Loss rate: 3.65%
```

Run 10: Report of PCC-Vivace — Data Link



Run 1: Statistics of PCC-Expr

Start at: 2018-04-18 01:33:48

End at: 2018-04-18 01:34:18

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 01:51:09

End at: 2018-04-18 01:51:39

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 02:08:17

End at: 2018-04-18 02:08:47

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 02:25:26

End at: 2018-04-18 02:25:56

Run 4: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 5: Statistics of PCC-Expr

Start at: 2018-04-18 02:42:41

End at: 2018-04-18 02:43:11

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 02:59:53

End at: 2018-04-18 03:00:23

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 03:16:52

End at: 2018-04-18 03:17:22

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 03:34:03

End at: 2018-04-18 03:34:33

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 03:51:05

End at: 2018-04-18 03:51:35

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 04:08:08

End at: 2018-04-18 04:08:38

Run 10: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing