

Pantheon Report

Generated at 2018-04-18 08:44:20 (UTC).

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

Repeated the test of 16 congestion control schemes 10 times.

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

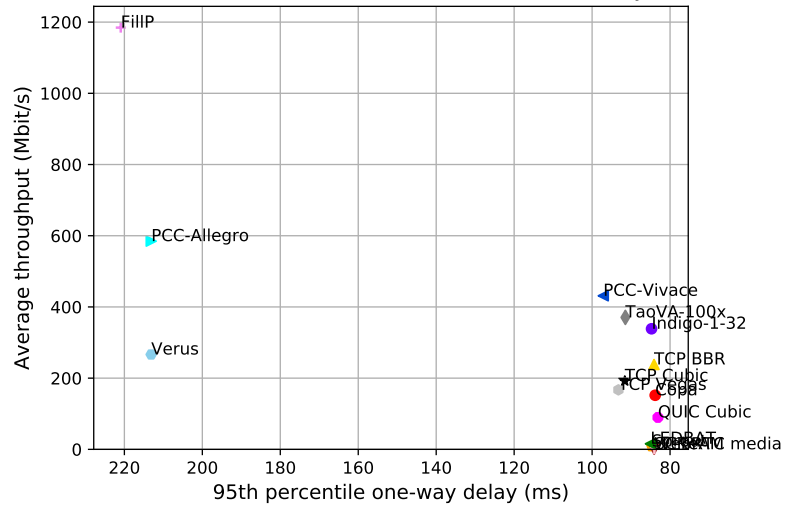
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

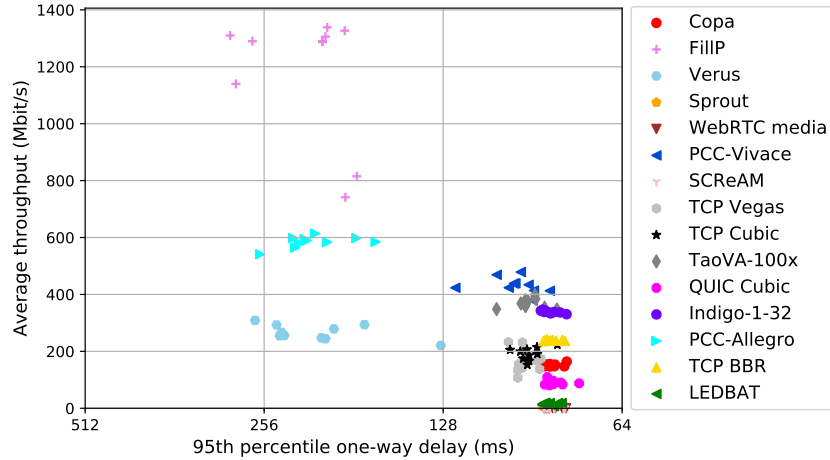
Git summary:

```
branch: master @ b3d6e7098641364fd3a292656a51aa81e316d0b4
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
M datagrump/sender.cc
third_party/fillp @ 11f8c46a2bf1dc797253db7e8ca04076272b2a44
third_party/genericCC @ d223989828276fa83a807da6e0341dc0c7b89aec
third_party/indigo @ a9b2060d39e4da2e8987e893e3eca2a6c7cd0ab9
third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db7484501f82ce8b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b540c0fd3505939528e2a5f
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcf993
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaeab30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 7a4ba531e75b4a6f66f5c4580192120401784ce3
third_party/webrtc @ f271183af822eee5d0031620f4bebf38aedc5581
```

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



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



Run 1: Statistics of TCP BBR

Start at: 2018-04-18 01:32:54

End at: 2018-04-18 01:33:24

Below is generated by plot.py at 2018-04-18 07:08:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 240.21 Mbit/s

95th percentile per-packet one-way delay: 80.670 ms

Loss rate: 0.94%

-- Flow 1:

Average throughput: 121.96 Mbit/s

95th percentile per-packet one-way delay: 80.621 ms

Loss rate: 0.62%

-- Flow 2:

Average throughput: 121.80 Mbit/s

95th percentile per-packet one-way delay: 80.629 ms

Loss rate: 0.96%

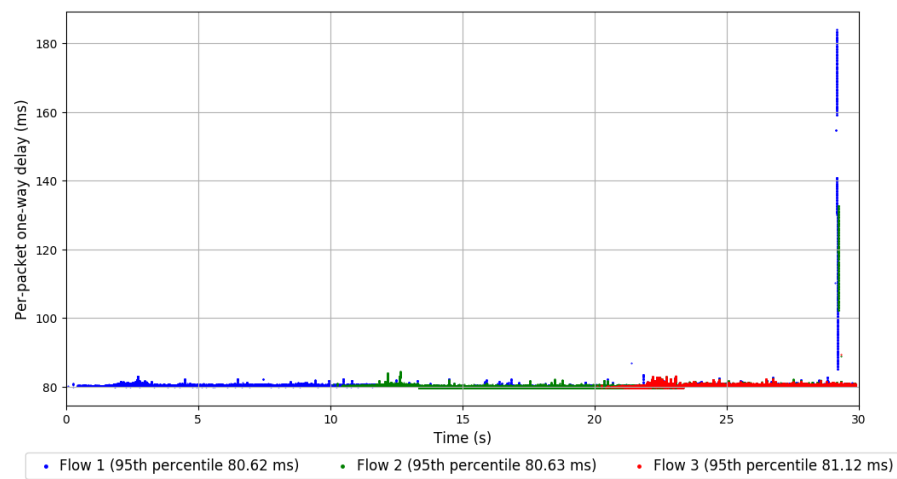
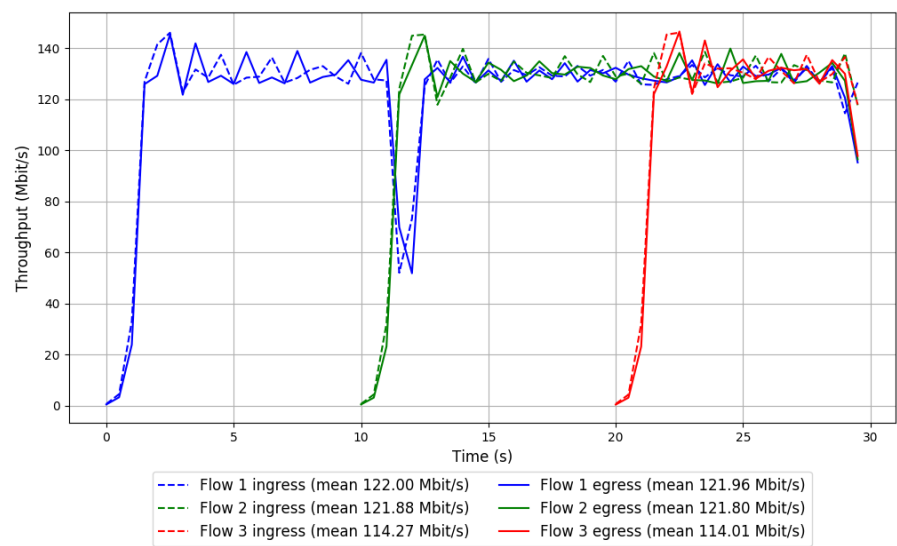
-- Flow 3:

Average throughput: 114.01 Mbit/s

95th percentile per-packet one-way delay: 81.123 ms

Loss rate: 1.96%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

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

End at: 2018-04-18 01:49:48

Below is generated by plot.py at 2018-04-18 07:08:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 236.47 Mbit/s

95th percentile per-packet one-way delay: 79.841 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 120.23 Mbit/s

95th percentile per-packet one-way delay: 79.839 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 119.29 Mbit/s

95th percentile per-packet one-way delay: 79.840 ms

Loss rate: 0.93%

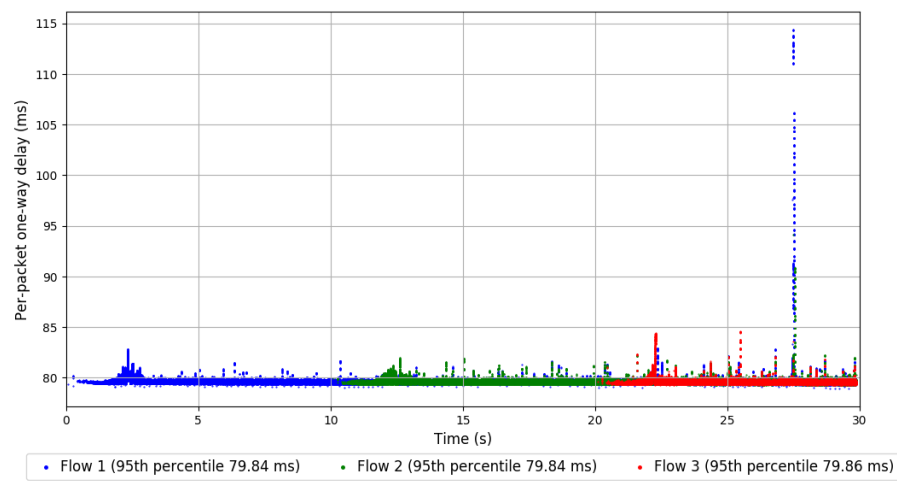
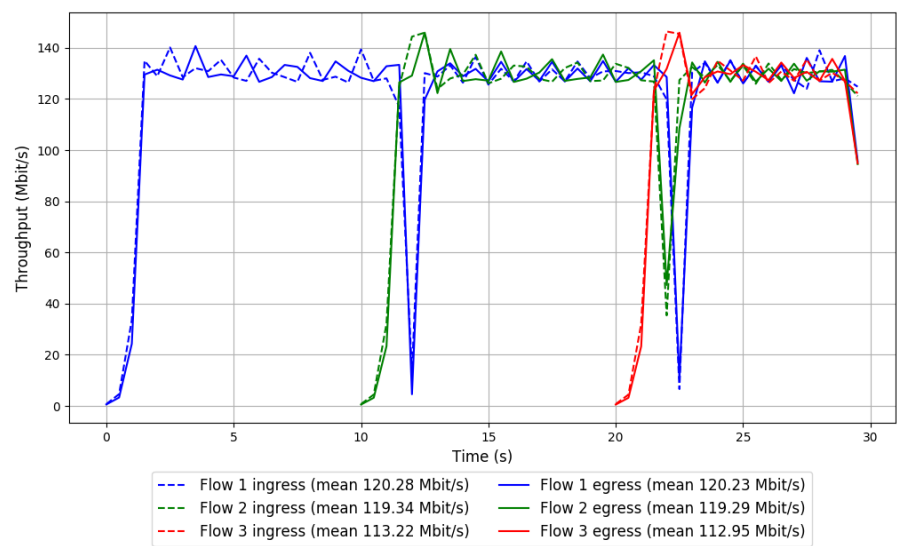
-- Flow 3:

Average throughput: 112.95 Mbit/s

95th percentile per-packet one-way delay: 79.856 ms

Loss rate: 1.97%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

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

End at: 2018-04-18 02:06:48

Below is generated by plot.py at 2018-04-18 07:08:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 240.60 Mbit/s

95th percentile per-packet one-way delay: 83.662 ms

Loss rate: 0.96%

-- Flow 1:

Average throughput: 122.79 Mbit/s

95th percentile per-packet one-way delay: 83.598 ms

Loss rate: 0.61%

-- Flow 2:

Average throughput: 121.78 Mbit/s

95th percentile per-packet one-way delay: 83.986 ms

Loss rate: 1.01%

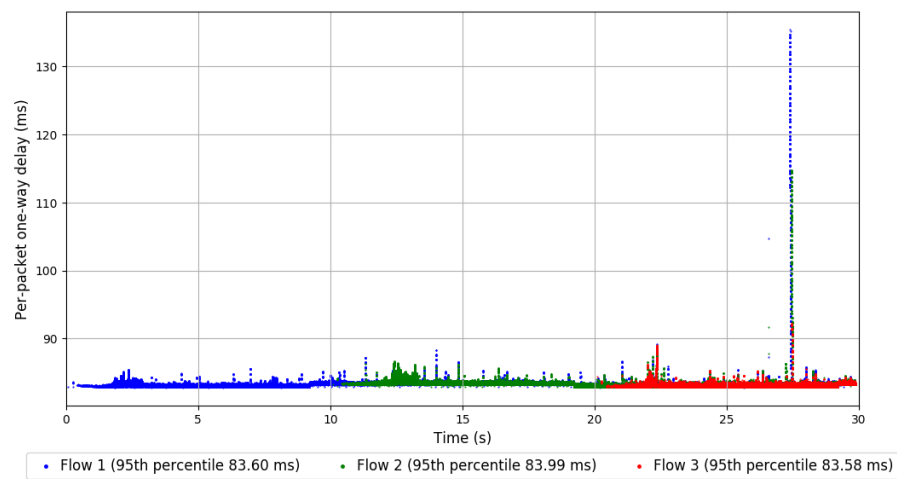
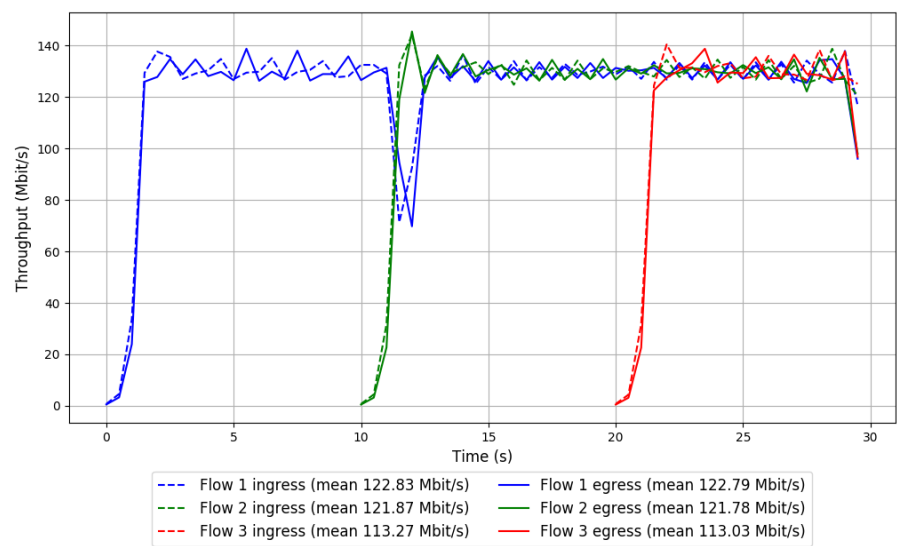
-- Flow 3:

Average throughput: 113.03 Mbit/s

95th percentile per-packet one-way delay: 83.578 ms

Loss rate: 1.96%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-04-18 02:23:20

End at: 2018-04-18 02:23:50

Below is generated by plot.py at 2018-04-18 07:08:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 237.44 Mbit/s

95th percentile per-packet one-way delay: 82.633 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 122.07 Mbit/s

95th percentile per-packet one-way delay: 82.640 ms

Loss rate: 0.61%

-- Flow 2:

Average throughput: 118.15 Mbit/s

95th percentile per-packet one-way delay: 82.603 ms

Loss rate: 0.99%

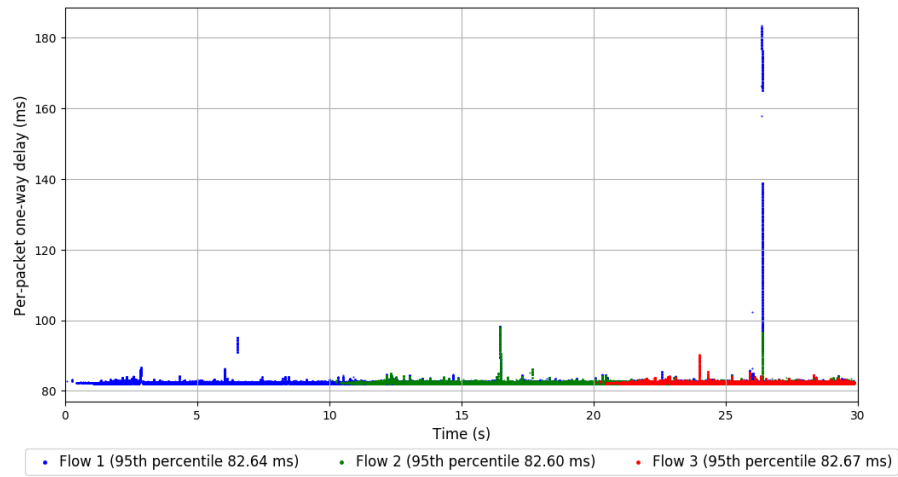
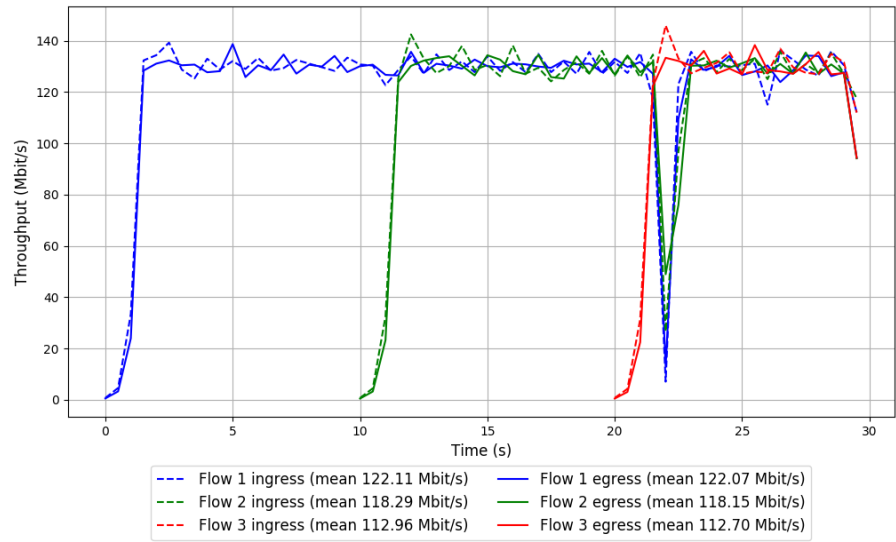
-- Flow 3:

Average throughput: 112.70 Mbit/s

95th percentile per-packet one-way delay: 82.669 ms

Loss rate: 1.98%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-04-18 02:39:58

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

Below is generated by plot.py at 2018-04-18 07:08:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 236.52 Mbit/s

95th percentile per-packet one-way delay: 85.160 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 120.28 Mbit/s

95th percentile per-packet one-way delay: 85.102 ms

Loss rate: 0.62%

-- Flow 2:

Average throughput: 119.37 Mbit/s

95th percentile per-packet one-way delay: 85.233 ms

Loss rate: 0.98%

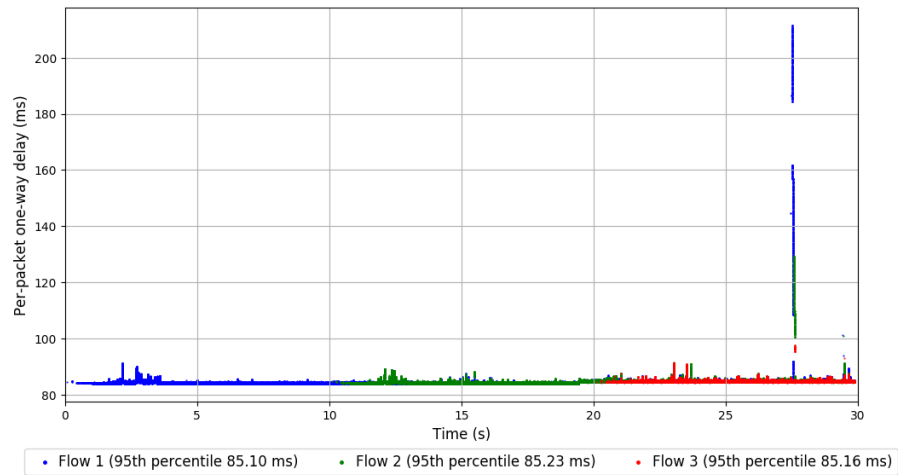
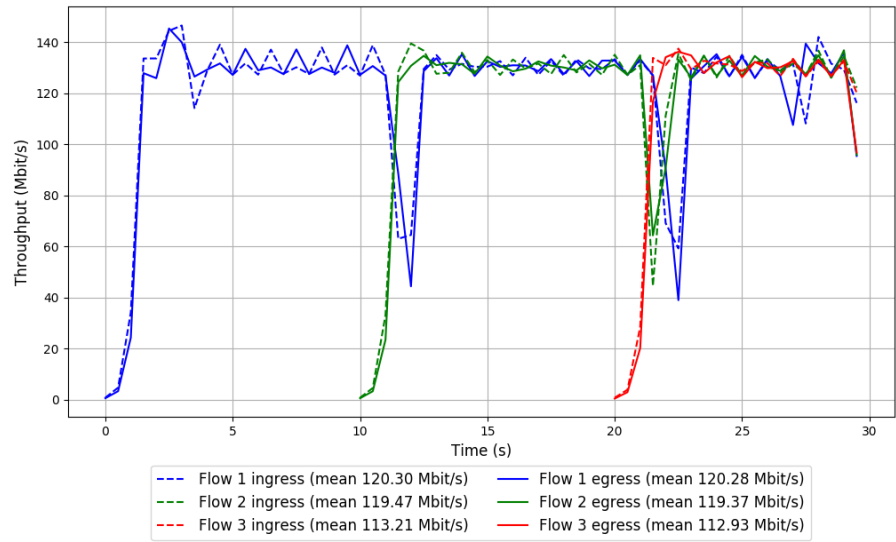
-- Flow 3:

Average throughput: 112.93 Mbit/s

95th percentile per-packet one-way delay: 85.158 ms

Loss rate: 1.97%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2018-04-18 02:56:53

End at: 2018-04-18 02:57:23

Below is generated by plot.py at 2018-04-18 07:08:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 239.05 Mbit/s

95th percentile per-packet one-way delay: 84.514 ms

Loss rate: 0.94%

-- Flow 1:

Average throughput: 122.92 Mbit/s

95th percentile per-packet one-way delay: 84.539 ms

Loss rate: 0.61%

-- Flow 2:

Average throughput: 119.31 Mbit/s

95th percentile per-packet one-way delay: 84.455 ms

Loss rate: 0.95%

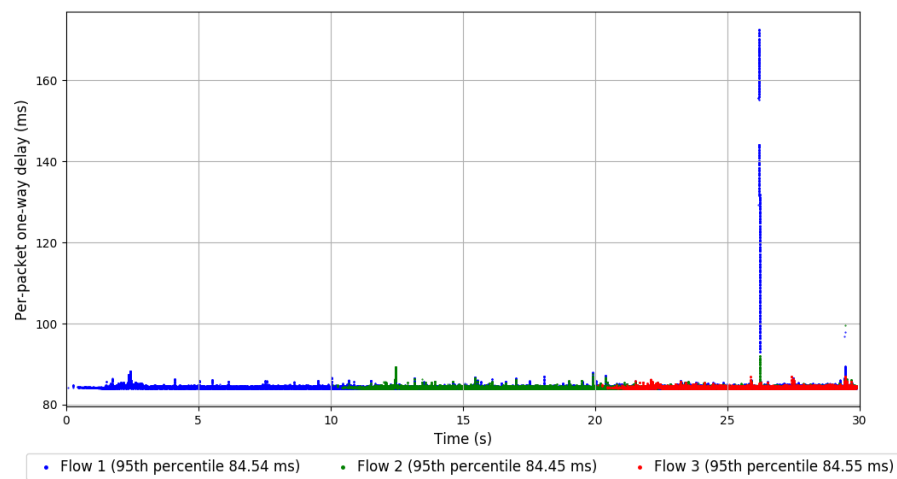
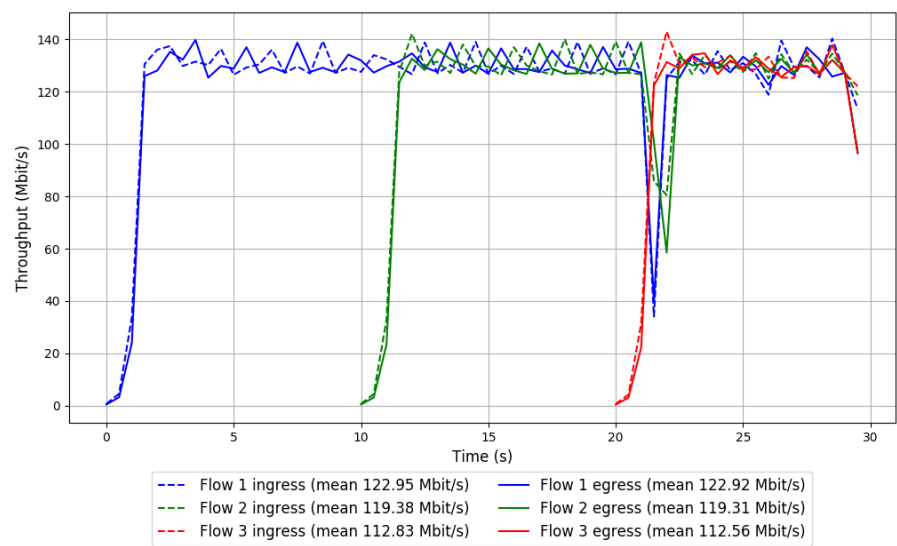
-- Flow 3:

Average throughput: 112.56 Mbit/s

95th percentile per-packet one-way delay: 84.553 ms

Loss rate: 1.99%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2018-04-18 03:13:53

End at: 2018-04-18 03:14:23

Below is generated by plot.py at 2018-04-18 07:08:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 241.73 Mbit/s

95th percentile per-packet one-way delay: 85.634 ms

Loss rate: 0.66%

-- Flow 1:

Average throughput: 123.76 Mbit/s

95th percentile per-packet one-way delay: 85.592 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 121.86 Mbit/s

95th percentile per-packet one-way delay: 85.554 ms

Loss rate: 1.00%

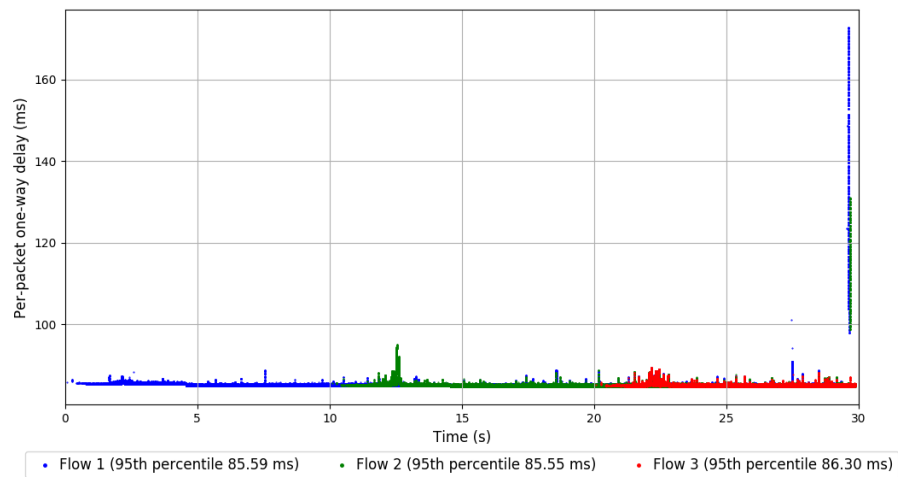
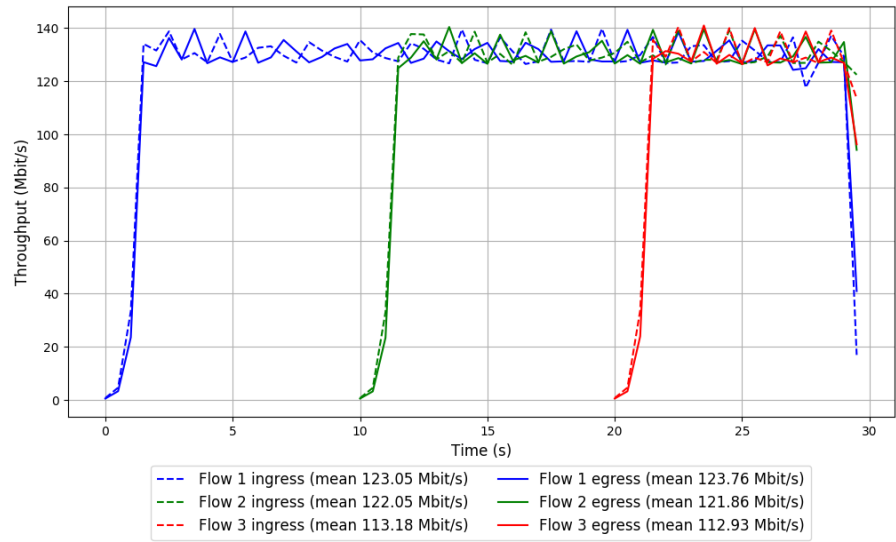
-- Flow 3:

Average throughput: 112.93 Mbit/s

95th percentile per-packet one-way delay: 86.302 ms

Loss rate: 1.96%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2018-04-18 03:30:52

End at: 2018-04-18 03:31:22

Below is generated by plot.py at 2018-04-18 07:08:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 237.98 Mbit/s

95th percentile per-packet one-way delay: 85.806 ms

Loss rate: 0.96%

-- Flow 1:

Average throughput: 122.50 Mbit/s

95th percentile per-packet one-way delay: 85.790 ms

Loss rate: 0.60%

-- Flow 2:

Average throughput: 117.97 Mbit/s

95th percentile per-packet one-way delay: 85.748 ms

Loss rate: 1.04%

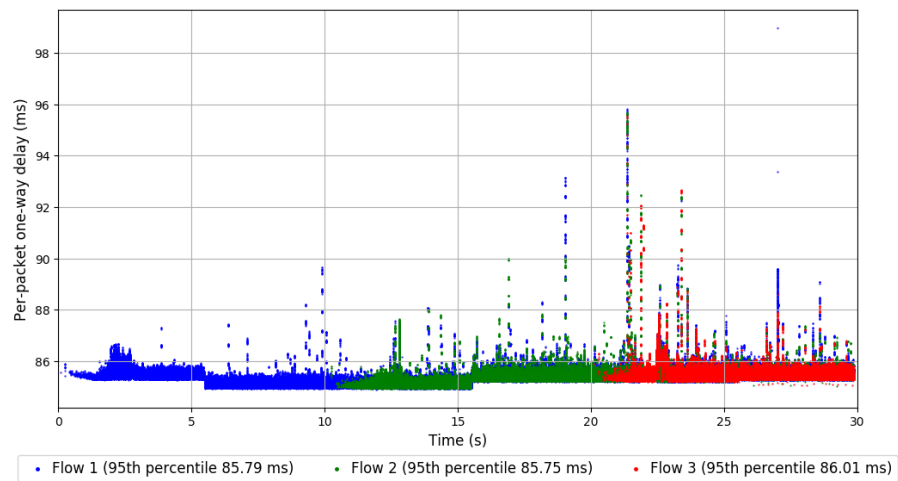
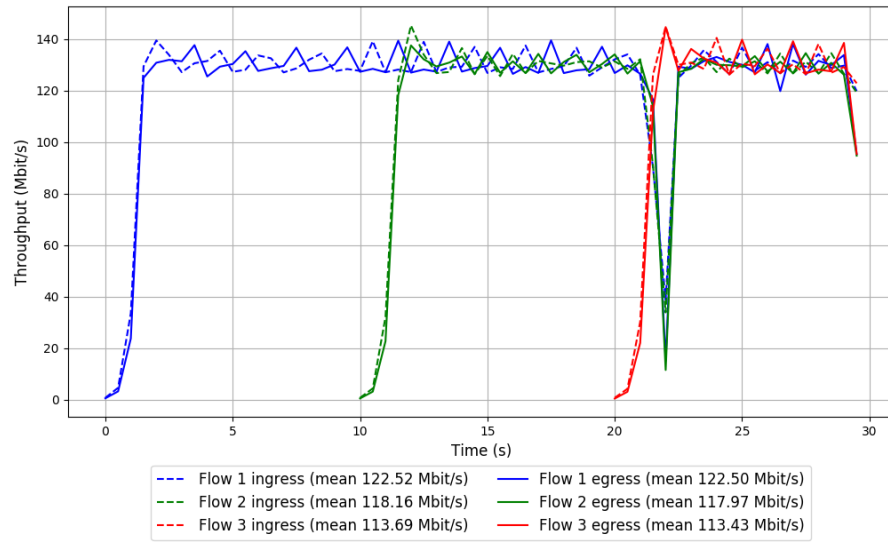
-- Flow 3:

Average throughput: 113.43 Mbit/s

95th percentile per-packet one-way delay: 86.006 ms

Loss rate: 1.98%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2018-04-18 03:47:40

End at: 2018-04-18 03:48:10

Below is generated by plot.py at 2018-04-18 07:12:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 238.93 Mbit/s

95th percentile per-packet one-way delay: 86.343 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 122.53 Mbit/s

95th percentile per-packet one-way delay: 86.343 ms

Loss rate: 0.61%

-- Flow 2:

Average throughput: 119.35 Mbit/s

95th percentile per-packet one-way delay: 86.284 ms

Loss rate: 0.98%

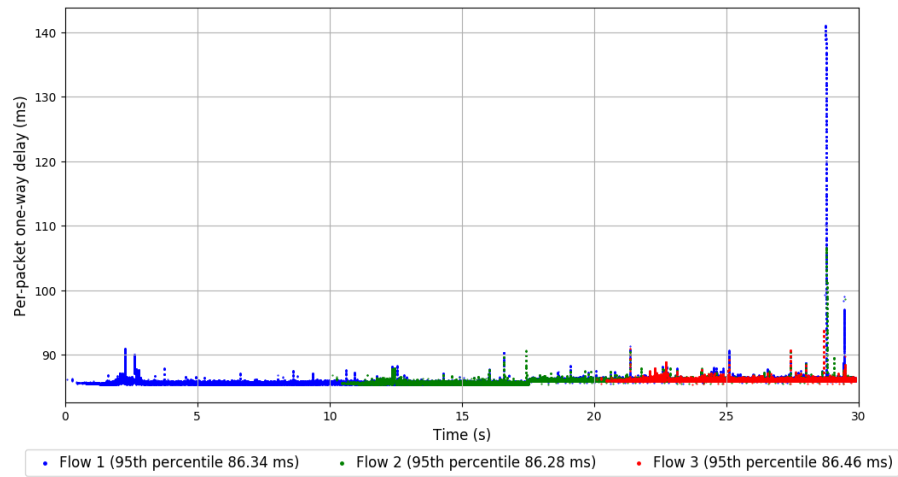
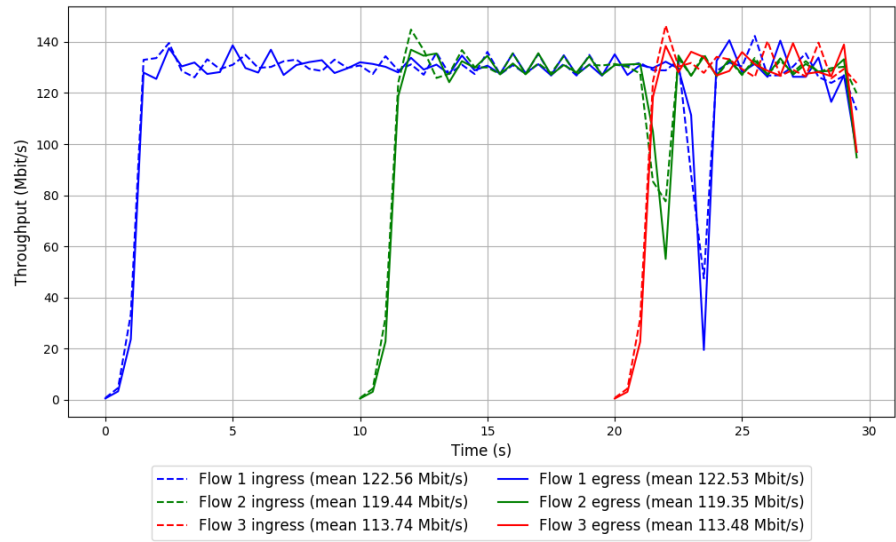
-- Flow 3:

Average throughput: 113.48 Mbit/s

95th percentile per-packet one-way delay: 86.459 ms

Loss rate: 1.97%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

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

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

Below is generated by plot.py at 2018-04-18 07:12:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 235.79 Mbit/s

95th percentile per-packet one-way delay: 86.818 ms

Loss rate: 0.97%

-- Flow 1:

Average throughput: 120.15 Mbit/s

95th percentile per-packet one-way delay: 86.601 ms

Loss rate: 0.67%

-- Flow 2:

Average throughput: 118.28 Mbit/s

95th percentile per-packet one-way delay: 86.716 ms

Loss rate: 0.95%

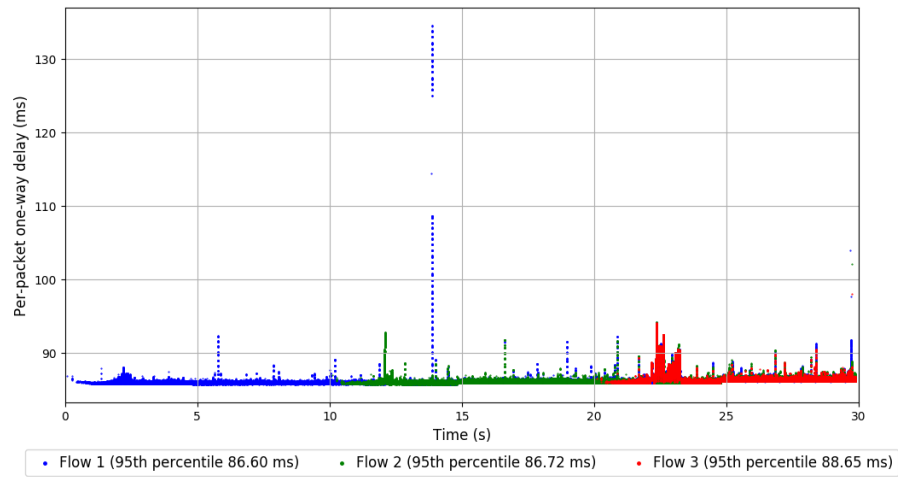
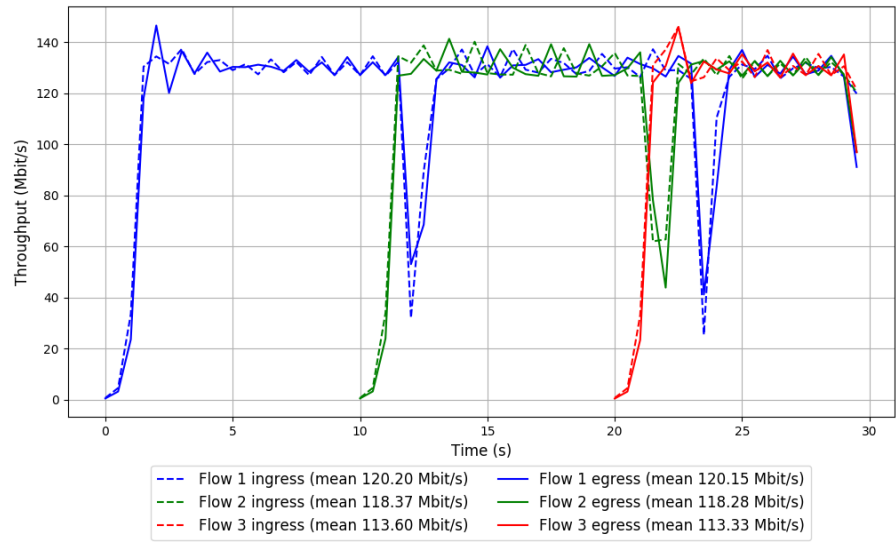
-- Flow 3:

Average throughput: 113.33 Mbit/s

95th percentile per-packet one-way delay: 88.646 ms

Loss rate: 1.97%

Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-04-18 01:19:51

End at: 2018-04-18 01:20:21

Below is generated by plot.py at 2018-04-18 07:12:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 223.30 Mbit/s

95th percentile per-packet one-way delay: 82.237 ms

Loss rate: 1.11%

-- Flow 1:

Average throughput: 98.81 Mbit/s

95th percentile per-packet one-way delay: 80.133 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 128.86 Mbit/s

95th percentile per-packet one-way delay: 82.348 ms

Loss rate: 0.94%

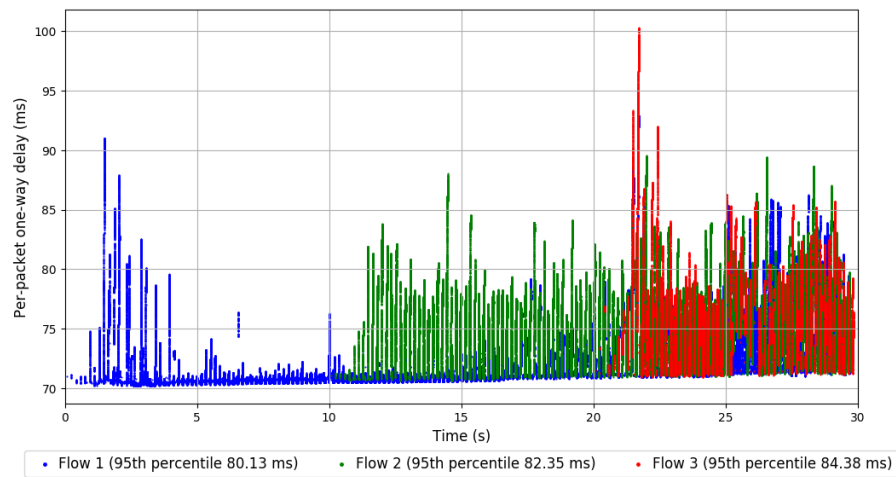
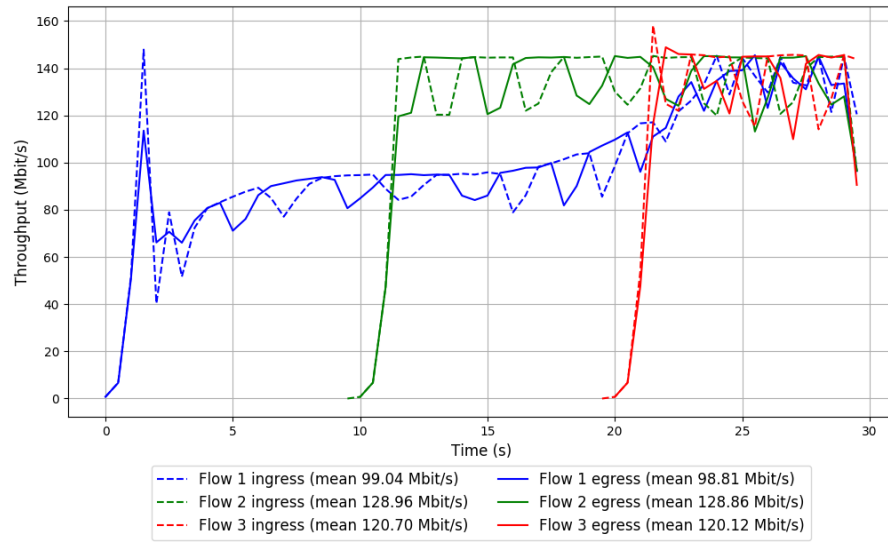
-- Flow 3:

Average throughput: 120.12 Mbit/s

95th percentile per-packet one-way delay: 84.380 ms

Loss rate: 2.22%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-04-18 01:36:46

End at: 2018-04-18 01:37:16

Below is generated by plot.py at 2018-04-18 07:12:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 214.95 Mbit/s

95th percentile per-packet one-way delay: 88.989 ms

Loss rate: 0.53%

-- Flow 1:

Average throughput: 132.39 Mbit/s

95th percentile per-packet one-way delay: 88.727 ms

Loss rate: 0.61%

-- Flow 2:

Average throughput: 123.66 Mbit/s

95th percentile per-packet one-way delay: 89.617 ms

Loss rate: 0.34%

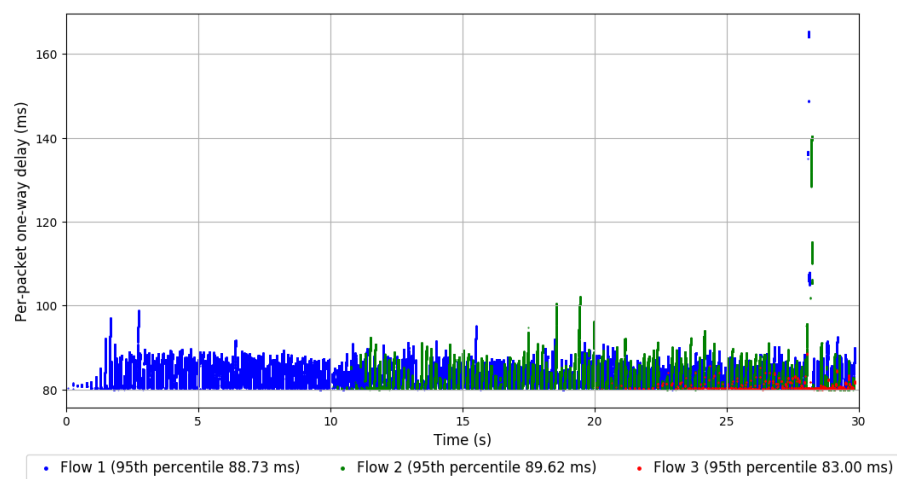
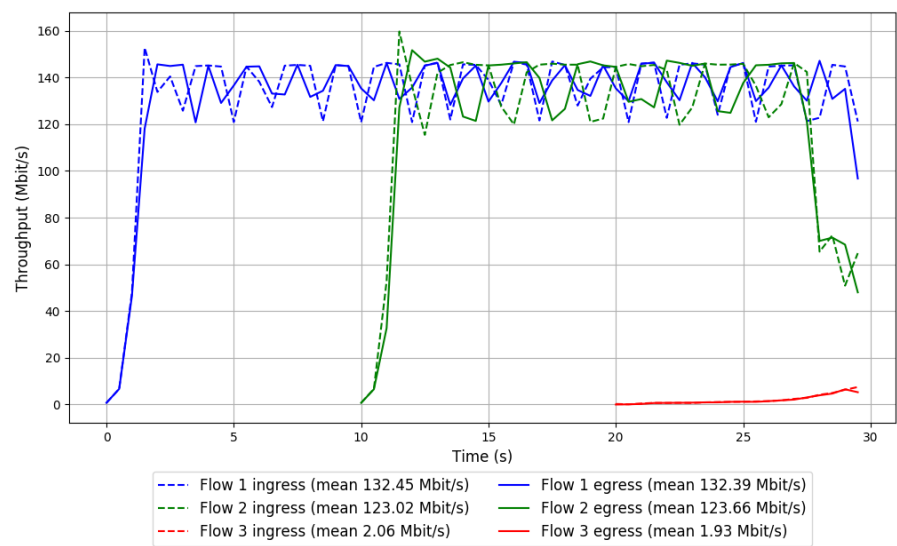
-- Flow 3:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 83.004 ms

Loss rate: 7.77%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-04-18 01:53:10

End at: 2018-04-18 01:53:40

Below is generated by plot.py at 2018-04-18 07:12:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 190.89 Mbit/s

95th percentile per-packet one-way delay: 88.884 ms

Loss rate: 0.85%

-- Flow 1:

Average throughput: 92.64 Mbit/s

95th percentile per-packet one-way delay: 86.329 ms

Loss rate: 0.53%

-- Flow 2:

Average throughput: 109.19 Mbit/s

95th percentile per-packet one-way delay: 90.374 ms

Loss rate: 0.72%

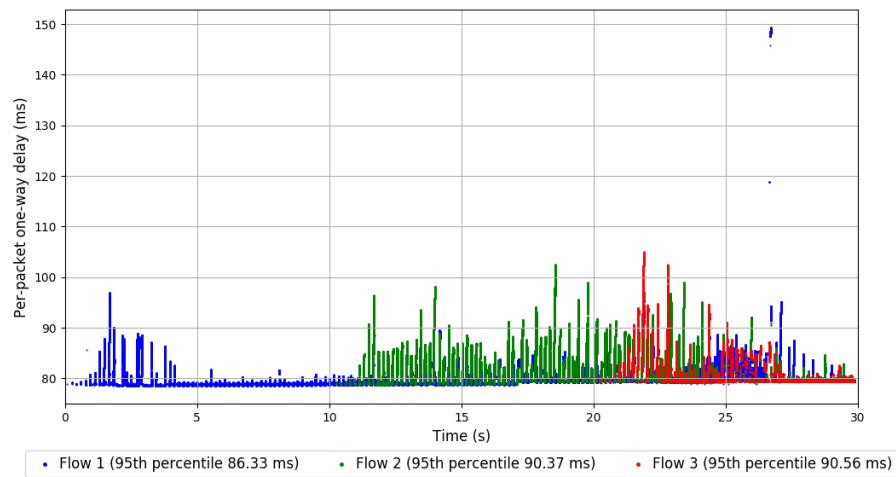
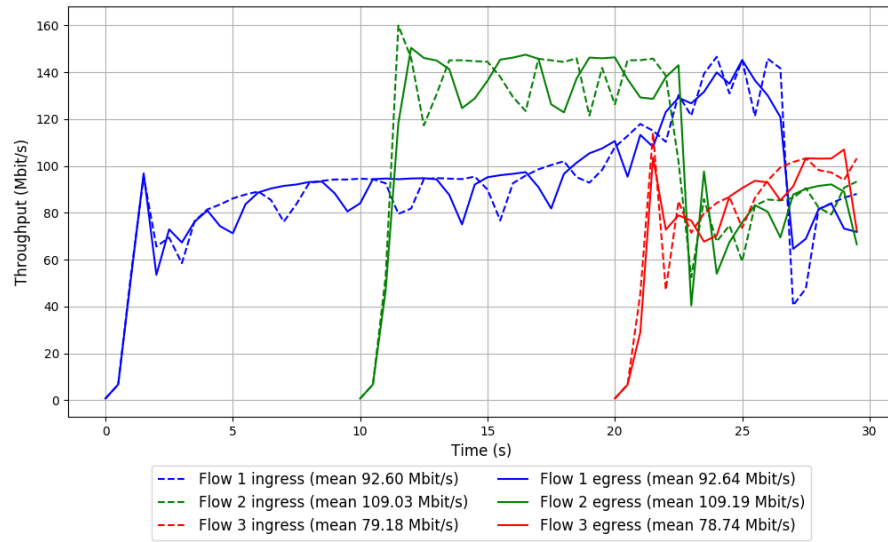
-- Flow 3:

Average throughput: 78.74 Mbit/s

95th percentile per-packet one-way delay: 90.556 ms

Loss rate: 2.29%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-04-18 02:10:11

End at: 2018-04-18 02:10:41

Below is generated by plot.py at 2018-04-18 07:12:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 166.45 Mbit/s

95th percentile per-packet one-way delay: 91.767 ms

Loss rate: 0.80%

-- Flow 1:

Average throughput: 89.49 Mbit/s

95th percentile per-packet one-way delay: 88.237 ms

Loss rate: 0.86%

-- Flow 2:

Average throughput: 114.73 Mbit/s

95th percentile per-packet one-way delay: 93.774 ms

Loss rate: 0.66%

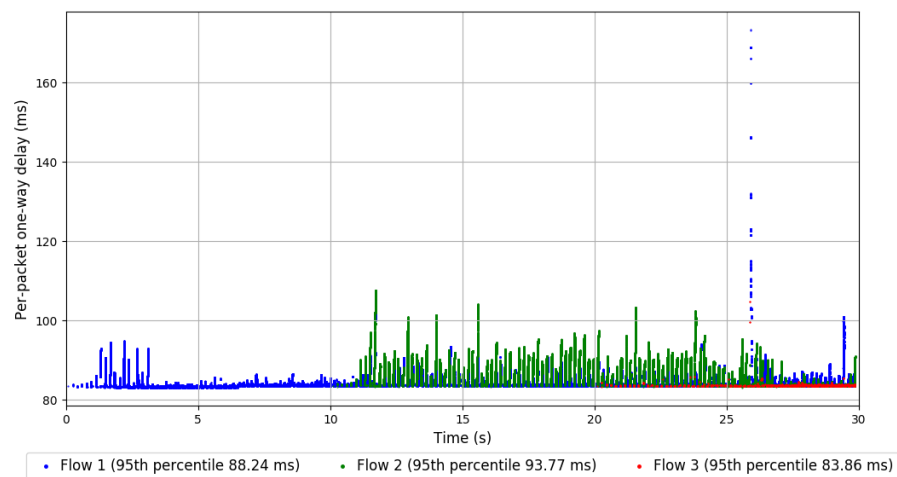
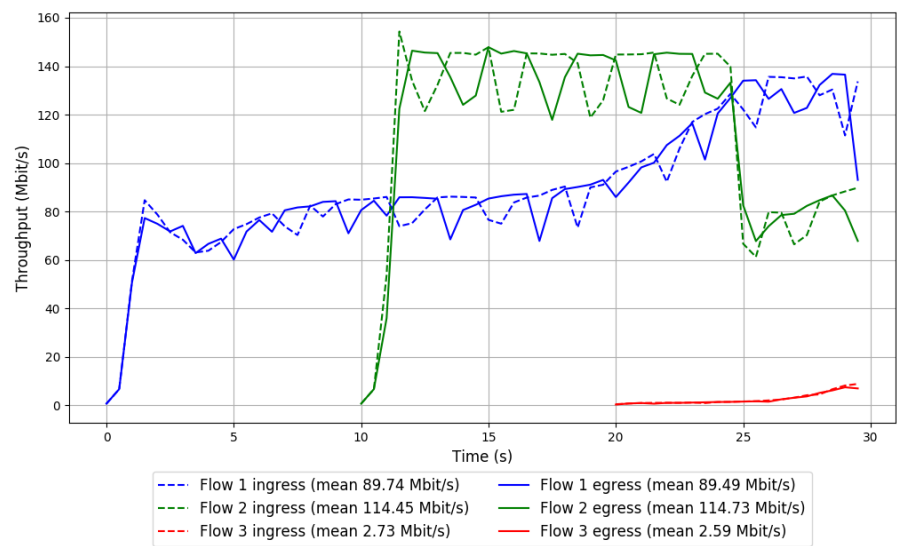
-- Flow 3:

Average throughput: 2.59 Mbit/s

95th percentile per-packet one-way delay: 83.864 ms

Loss rate: 6.79%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-04-18 02:27:12

End at: 2018-04-18 02:27:42

Below is generated by plot.py at 2018-04-18 07:12:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 206.67 Mbit/s

95th percentile per-packet one-way delay: 92.522 ms

Loss rate: 0.88%

-- Flow 1:

Average throughput: 132.26 Mbit/s

95th percentile per-packet one-way delay: 92.878 ms

Loss rate: 0.61%

-- Flow 2:

Average throughput: 82.68 Mbit/s

95th percentile per-packet one-way delay: 91.867 ms

Loss rate: 1.10%

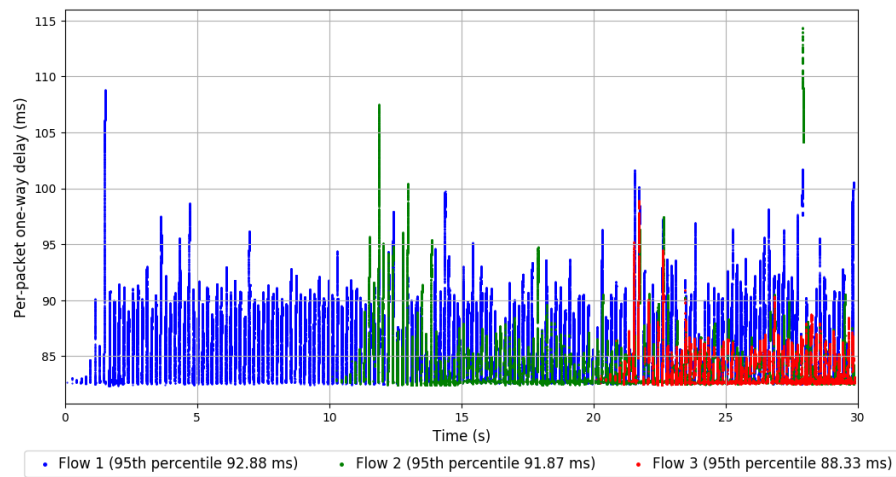
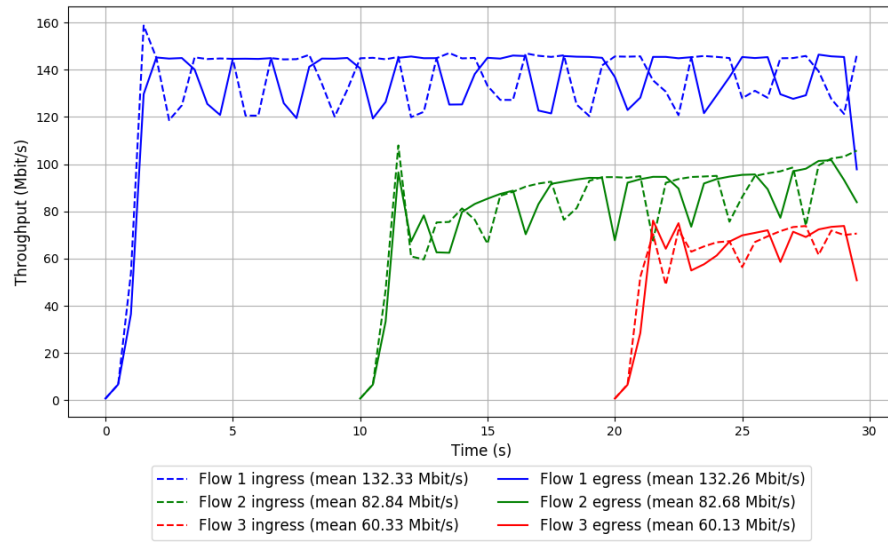
-- Flow 3:

Average throughput: 60.13 Mbit/s

95th percentile per-packet one-way delay: 88.334 ms

Loss rate: 2.07%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2018-04-18 02:43:51

End at: 2018-04-18 02:44:21

Below is generated by plot.py at 2018-04-18 07:12:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 153.01 Mbit/s

95th percentile per-packet one-way delay: 92.382 ms

Loss rate: 0.79%

-- Flow 1:

Average throughput: 89.42 Mbit/s

95th percentile per-packet one-way delay: 93.197 ms

Loss rate: 0.30%

-- Flow 2:

Average throughput: 66.09 Mbit/s

95th percentile per-packet one-way delay: 90.646 ms

Loss rate: 1.20%

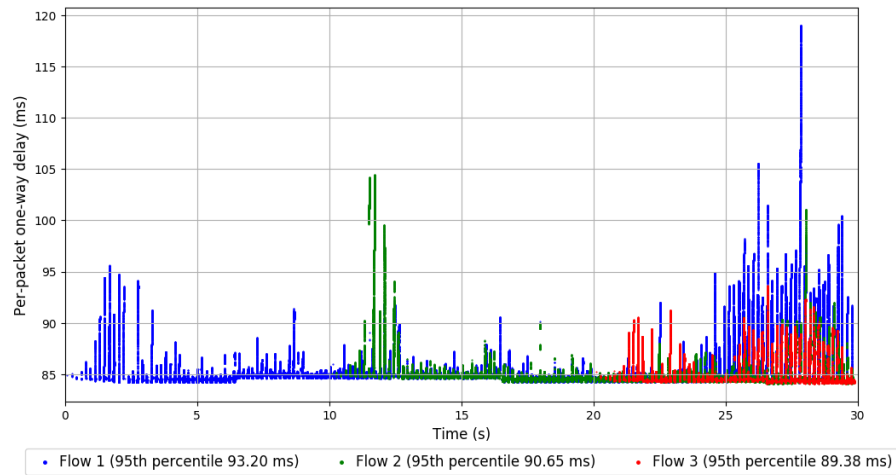
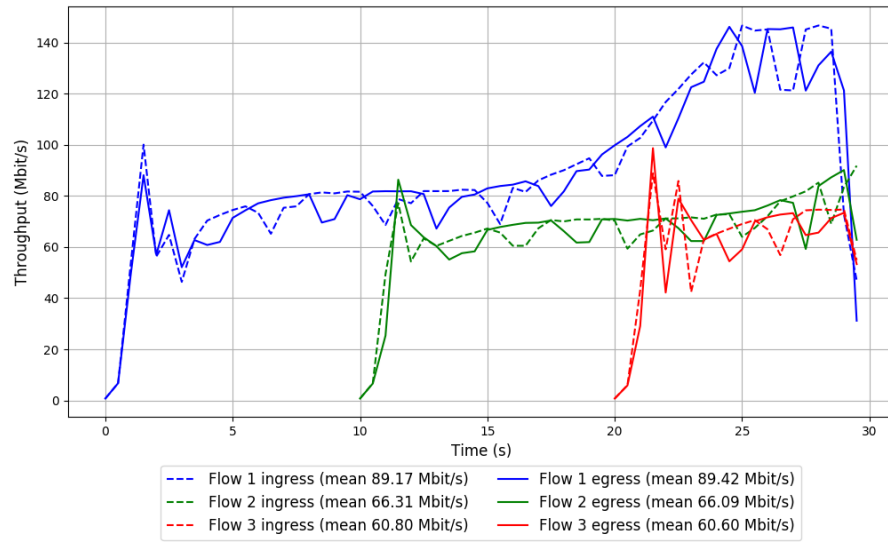
-- Flow 3:

Average throughput: 60.60 Mbit/s

95th percentile per-packet one-way delay: 89.378 ms

Loss rate: 2.08%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2018-04-18 03:00:46

End at: 2018-04-18 03:01:16

Below is generated by plot.py at 2018-04-18 07:13:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 174.63 Mbit/s

95th percentile per-packet one-way delay: 93.903 ms

Loss rate: 1.19%

-- Flow 1:

Average throughput: 132.13 Mbit/s

95th percentile per-packet one-way delay: 94.421 ms

Loss rate: 0.61%

-- Flow 2:

Average throughput: 28.14 Mbit/s

95th percentile per-packet one-way delay: 88.805 ms

Loss rate: 3.94%

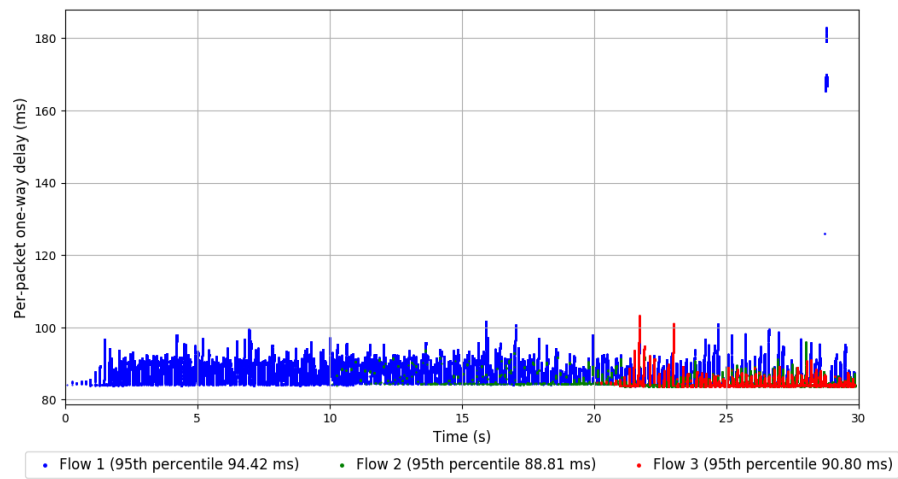
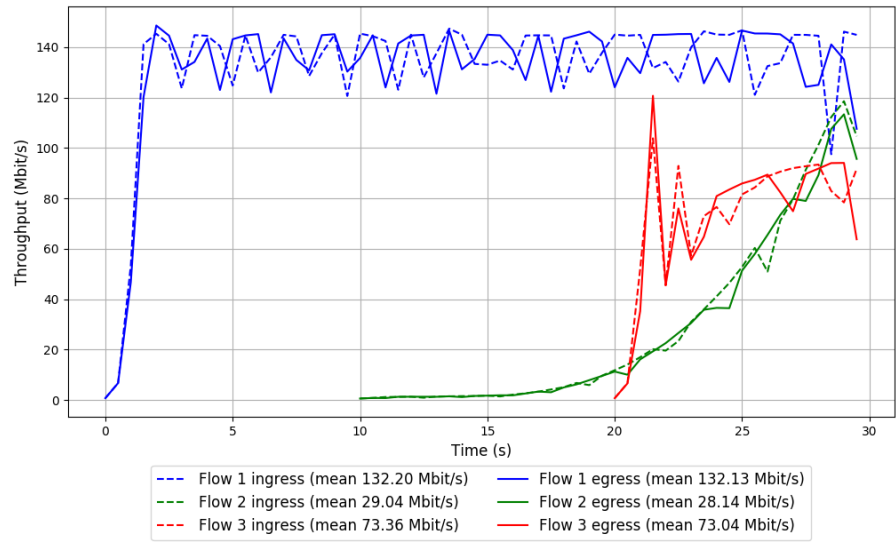
-- Flow 3:

Average throughput: 73.04 Mbit/s

95th percentile per-packet one-way delay: 90.800 ms

Loss rate: 2.17%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

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

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

Below is generated by plot.py at 2018-04-18 07:14:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 185.94 Mbit/s

95th percentile per-packet one-way delay: 91.730 ms

Loss rate: 0.92%

-- Flow 1:

Average throughput: 101.05 Mbit/s

95th percentile per-packet one-way delay: 92.177 ms

Loss rate: 0.50%

-- Flow 2:

Average throughput: 91.31 Mbit/s

95th percentile per-packet one-way delay: 91.051 ms

Loss rate: 1.12%

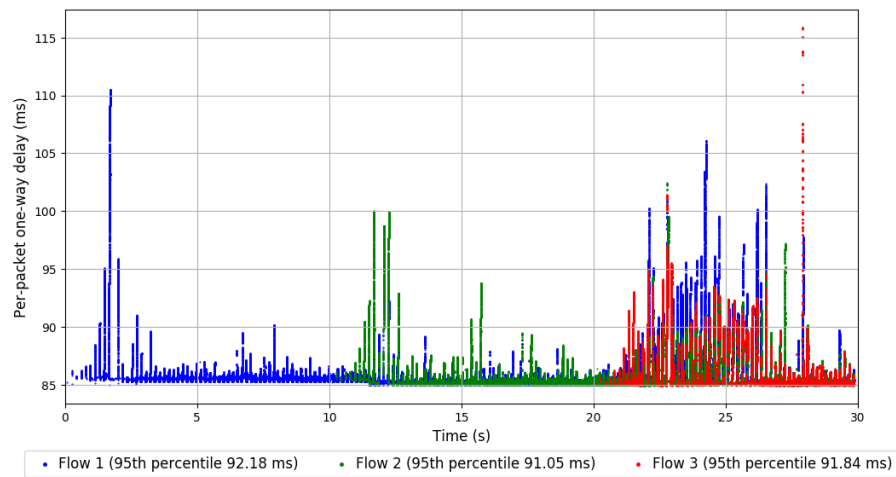
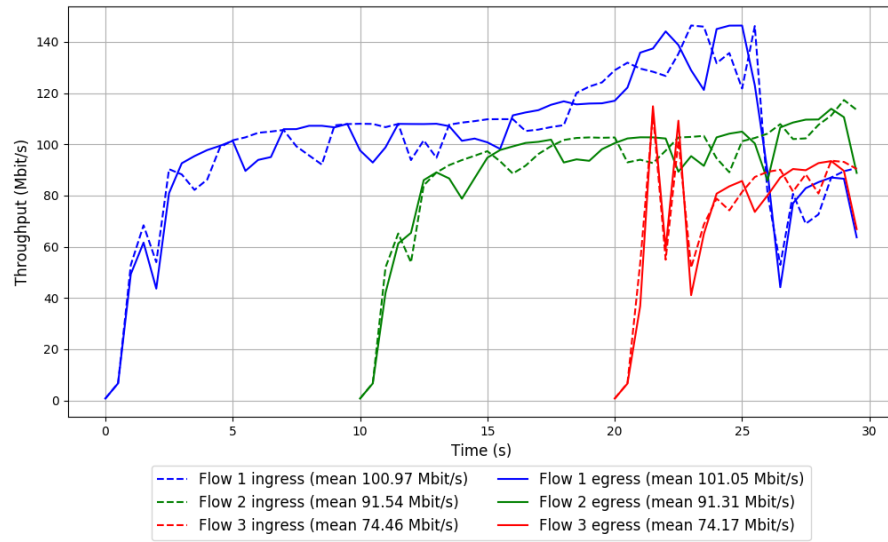
-- Flow 3:

Average throughput: 74.17 Mbit/s

95th percentile per-packet one-way delay: 91.843 ms

Loss rate: 2.12%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2018-04-18 03:34:44

End at: 2018-04-18 03:35:14

Below is generated by plot.py at 2018-04-18 07:14:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 199.39 Mbit/s

95th percentile per-packet one-way delay: 94.921 ms

Loss rate: 0.86%

-- Flow 1:

Average throughput: 132.07 Mbit/s

95th percentile per-packet one-way delay: 95.289 ms

Loss rate: 0.67%

-- Flow 2:

Average throughput: 70.39 Mbit/s

95th percentile per-packet one-way delay: 94.120 ms

Loss rate: 0.89%

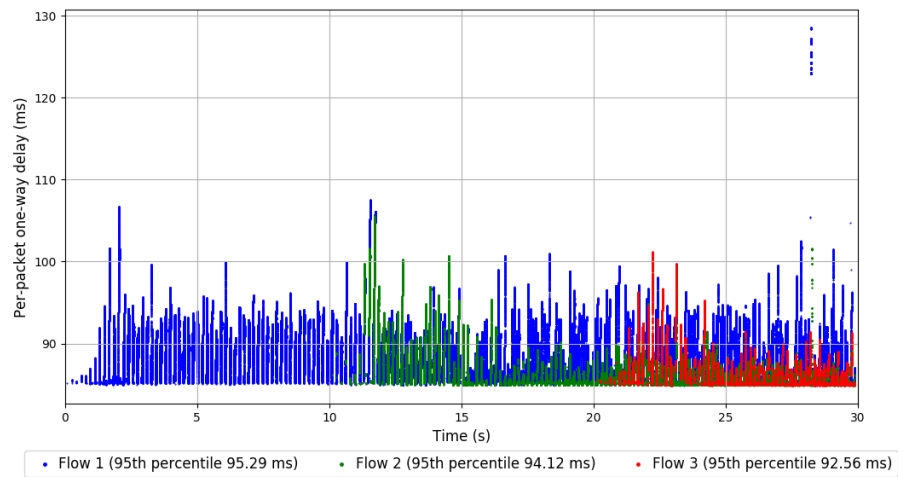
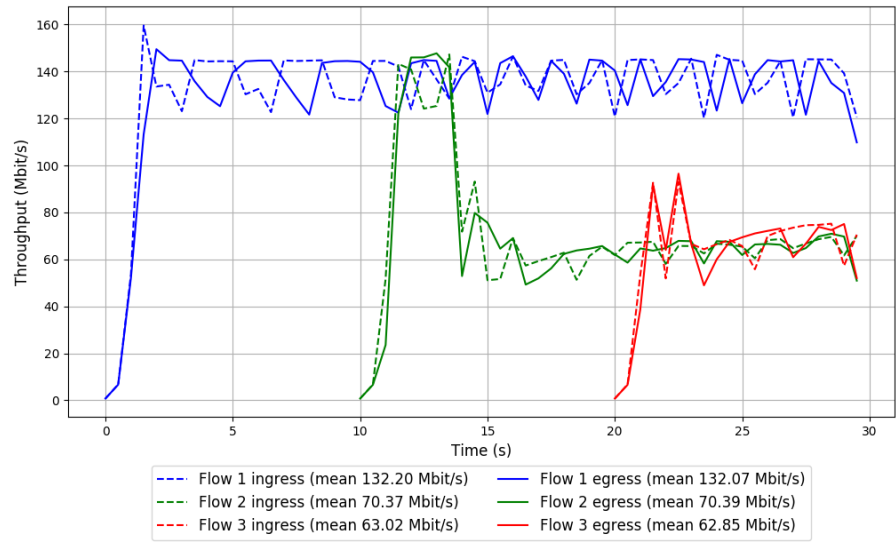
-- Flow 3:

Average throughput: 62.85 Mbit/s

95th percentile per-packet one-way delay: 92.560 ms

Loss rate: 2.01%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2018-04-18 03:51:32

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

Below is generated by plot.py at 2018-04-18 07:15:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 205.34 Mbit/s

95th percentile per-packet one-way delay: 98.766 ms

Loss rate: 0.78%

-- Flow 1:

Average throughput: 127.31 Mbit/s

95th percentile per-packet one-way delay: 99.010 ms

Loss rate: 0.28%

-- Flow 2:

Average throughput: 58.27 Mbit/s

95th percentile per-packet one-way delay: 94.788 ms

Loss rate: 1.15%

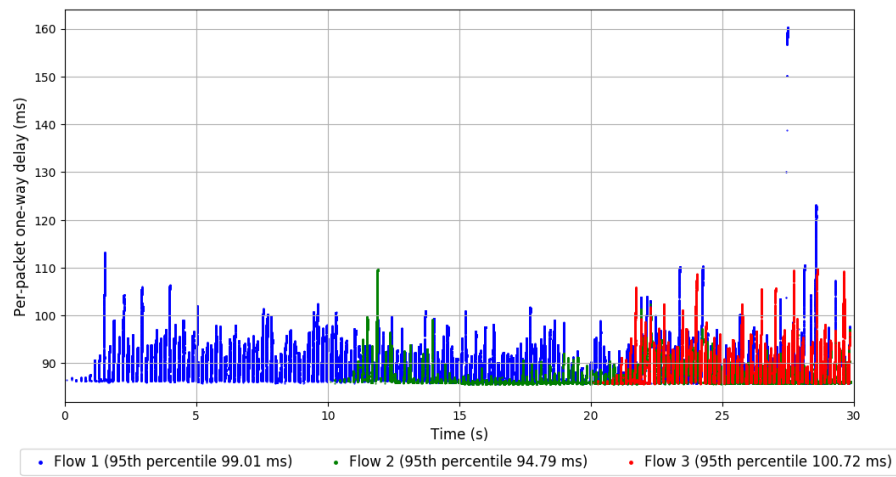
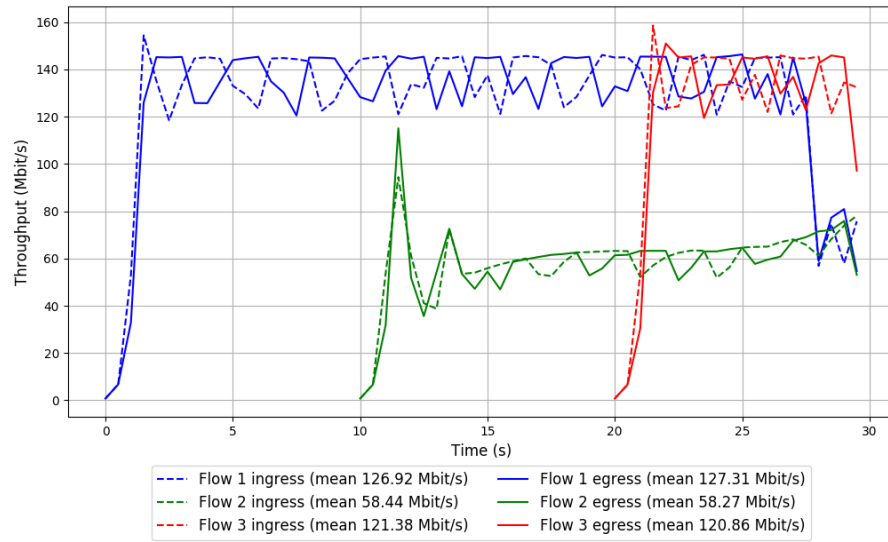
-- Flow 3:

Average throughput: 120.86 Mbit/s

95th percentile per-packet one-way delay: 100.722 ms

Loss rate: 2.03%

Run 10: Report of TCP Cubic — Data Link

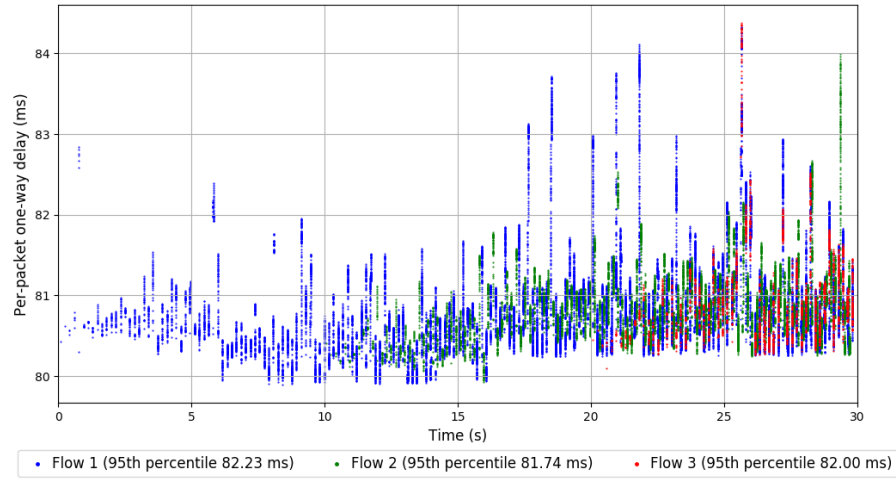
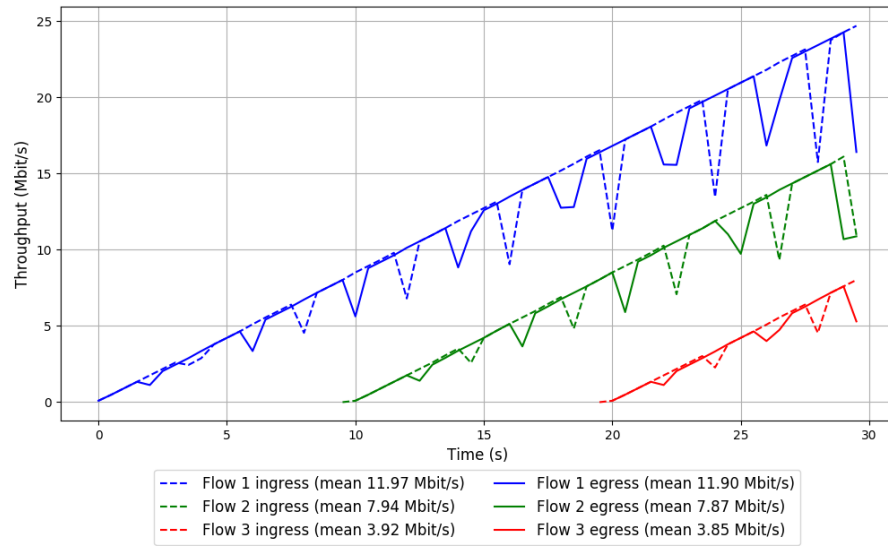


```
Run 1: Statistics of LEDBAT

Start at: 2018-04-18 01:33:51
End at: 2018-04-18 01:34:21

# Below is generated by plot.py at 2018-04-18 07:15:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.36 Mbit/s
95th percentile per-packet one-way delay: 82.069 ms
Loss rate: 1.49%
-- Flow 1:
Average throughput: 11.90 Mbit/s
95th percentile per-packet one-way delay: 82.230 ms
Loss rate: 1.16%
-- Flow 2:
Average throughput: 7.87 Mbit/s
95th percentile per-packet one-way delay: 81.737 ms
Loss rate: 1.75%
-- Flow 3:
Average throughput: 3.85 Mbit/s
95th percentile per-packet one-way delay: 82.001 ms
Loss rate: 3.50%
```


Run 1: Report of LEDBAT — Data Link

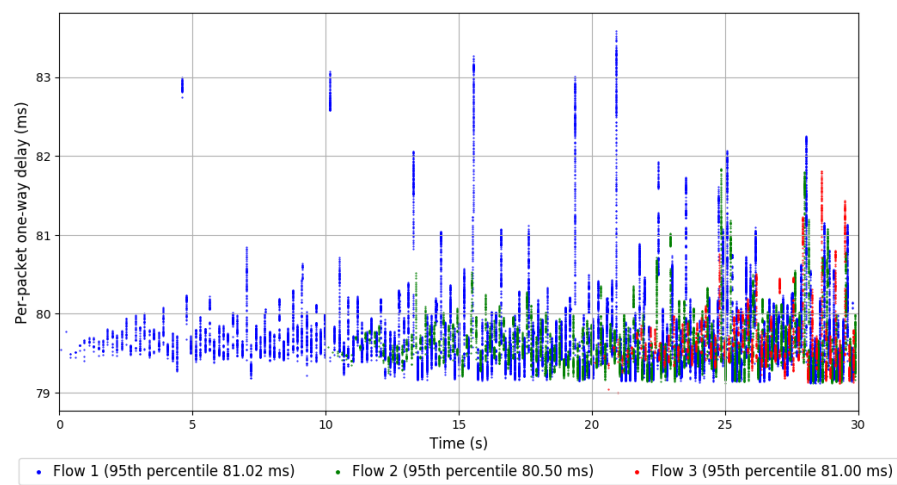
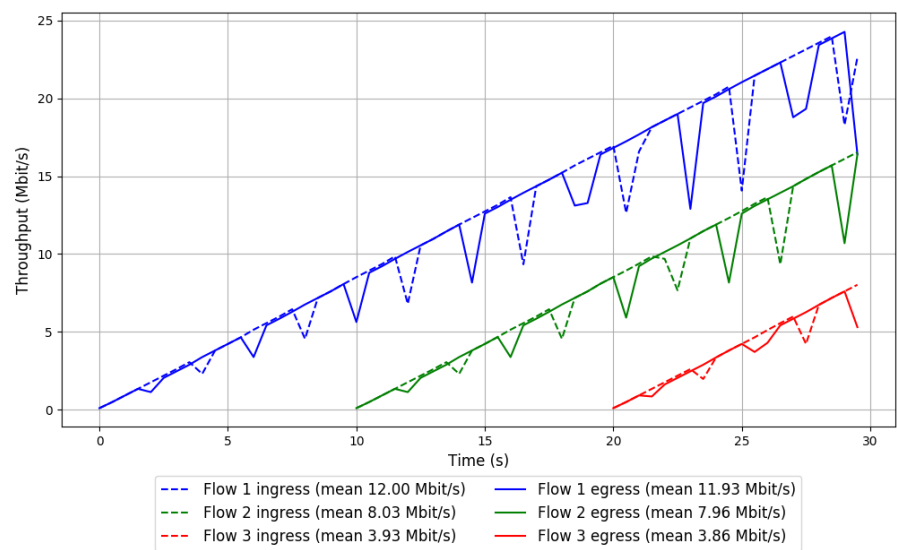


```
Run 2: Statistics of LEDBAT

Start at: 2018-04-18 01:50:15
End at: 2018-04-18 01:50:45

# Below is generated by plot.py at 2018-04-18 07:15:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.44 Mbit/s
95th percentile per-packet one-way delay: 80.899 ms
Loss rate: 1.49%
-- Flow 1:
Average throughput: 11.93 Mbit/s
95th percentile per-packet one-way delay: 81.022 ms
Loss rate: 1.16%
-- Flow 2:
Average throughput: 7.96 Mbit/s
95th percentile per-packet one-way delay: 80.500 ms
Loss rate: 1.73%
-- Flow 3:
Average throughput: 3.86 Mbit/s
95th percentile per-packet one-way delay: 80.995 ms
Loss rate: 3.50%
```

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-04-18 02:07:15

End at: 2018-04-18 02:07:45

Below is generated by plot.py at 2018-04-18 07:15:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 18.19 Mbit/s

95th percentile per-packet one-way delay: 84.712 ms

Loss rate: 1.48%

-- Flow 1:

Average throughput: 11.93 Mbit/s

95th percentile per-packet one-way delay: 84.918 ms

Loss rate: 1.16%

-- Flow 2:

Average throughput: 7.96 Mbit/s

95th percentile per-packet one-way delay: 84.552 ms

Loss rate: 1.74%

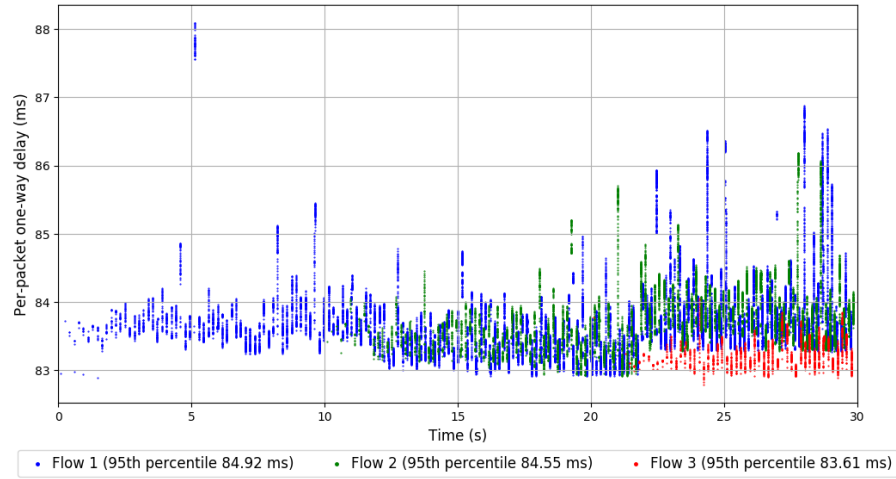
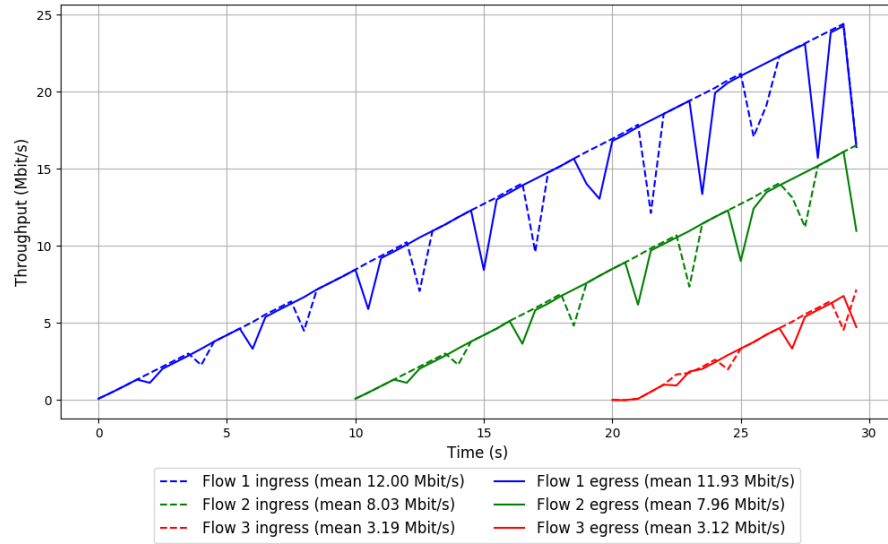
-- Flow 3:

Average throughput: 3.12 Mbit/s

95th percentile per-packet one-way delay: 83.613 ms

Loss rate: 3.93%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-04-18 02:24:17

End at: 2018-04-18 02:24:48

Below is generated by plot.py at 2018-04-18 07:15:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.92 Mbit/s

95th percentile per-packet one-way delay: 83.394 ms

Loss rate: 2.02%

-- Flow 1:

Average throughput: 0.36 Mbit/s

95th percentile per-packet one-way delay: 82.716 ms

Loss rate: 0.74%

-- Flow 2:

Average throughput: 7.98 Mbit/s

95th percentile per-packet one-way delay: 83.393 ms

Loss rate: 1.74%

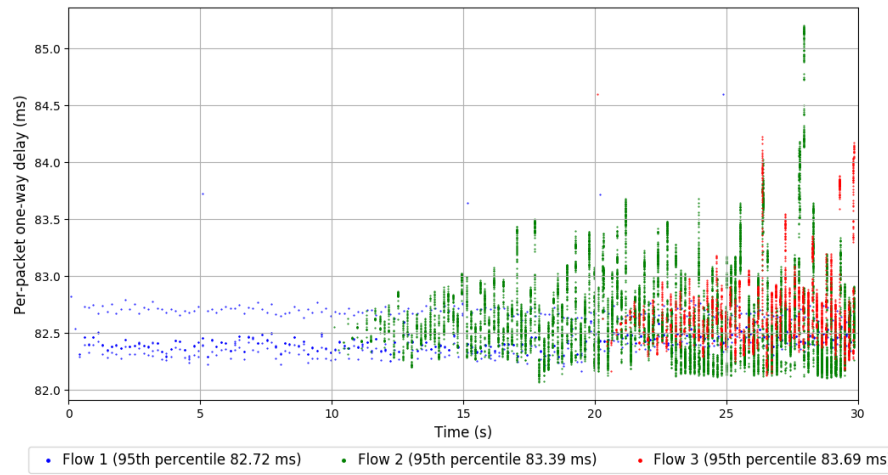
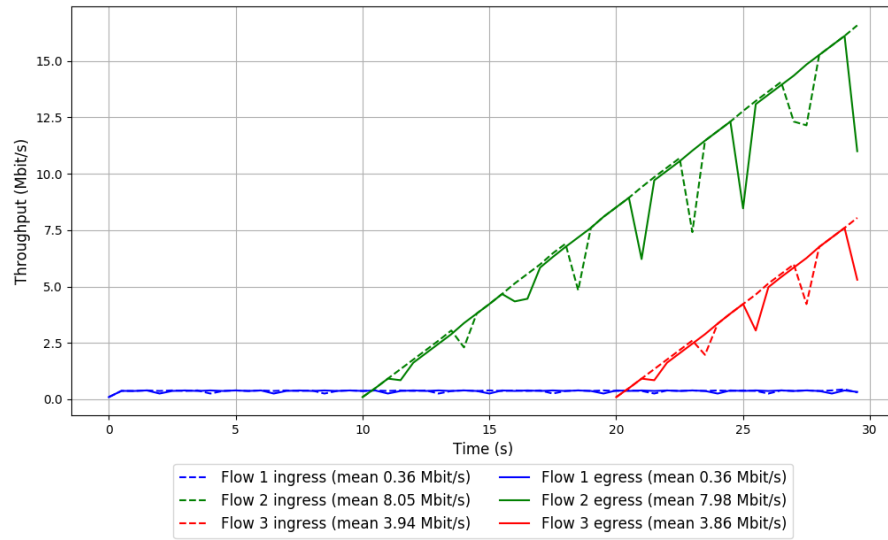
-- Flow 3:

Average throughput: 3.86 Mbit/s

95th percentile per-packet one-way delay: 83.693 ms

Loss rate: 3.53%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-04-18 02:40:56

End at: 2018-04-18 02:41:26

Below is generated by plot.py at 2018-04-18 07:15:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.67 Mbit/s

95th percentile per-packet one-way delay: 86.613 ms

Loss rate: 1.58%

-- Flow 1:

Average throughput: 11.20 Mbit/s

95th percentile per-packet one-way delay: 86.834 ms

Loss rate: 1.19%

-- Flow 2:

Average throughput: 5.20 Mbit/s

95th percentile per-packet one-way delay: 86.177 ms

Loss rate: 2.12%

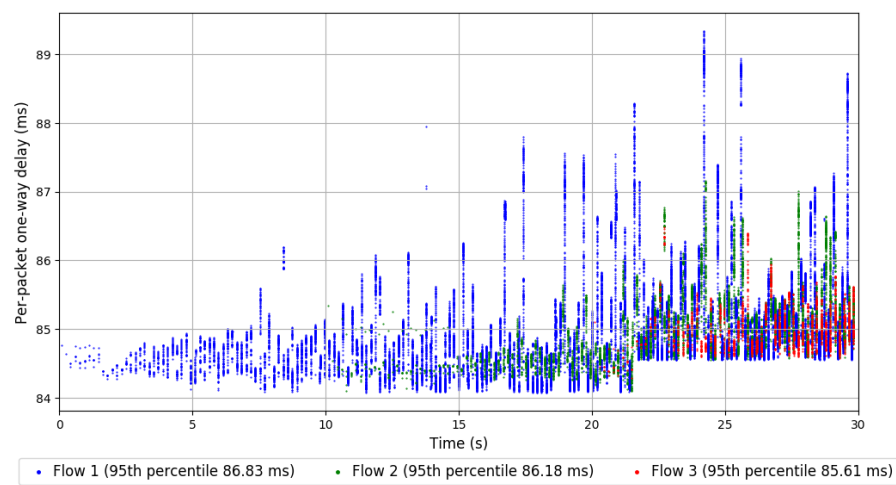
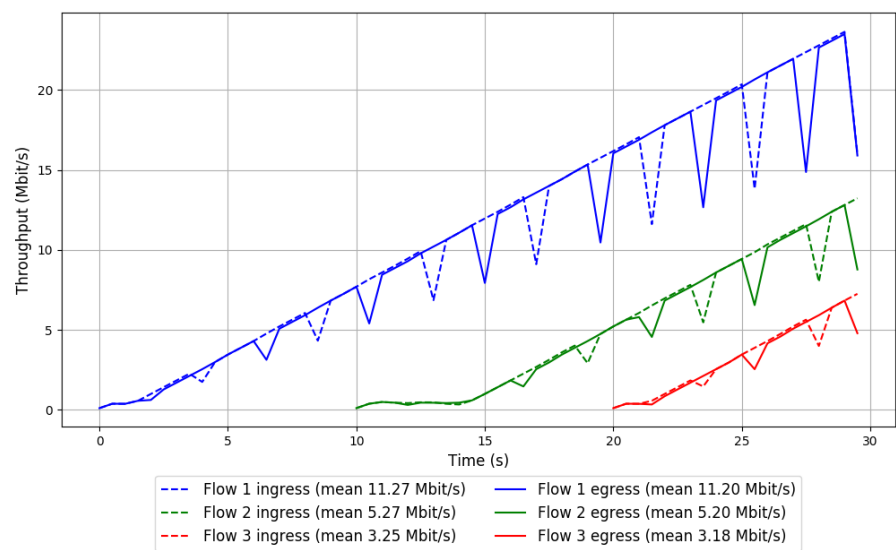
-- Flow 3:

Average throughput: 3.18 Mbit/s

95th percentile per-packet one-way delay: 85.611 ms

Loss rate: 3.84%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2018-04-18 02:57:51

End at: 2018-04-18 02:58:21

Below is generated by plot.py at 2018-04-18 07:15:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 18.17 Mbit/s

95th percentile per-packet one-way delay: 86.020 ms

Loss rate: 1.48%

-- Flow 1:

Average throughput: 11.94 Mbit/s

95th percentile per-packet one-way delay: 86.319 ms

Loss rate: 1.16%

-- Flow 2:

Average throughput: 7.91 Mbit/s

95th percentile per-packet one-way delay: 85.723 ms

Loss rate: 1.74%

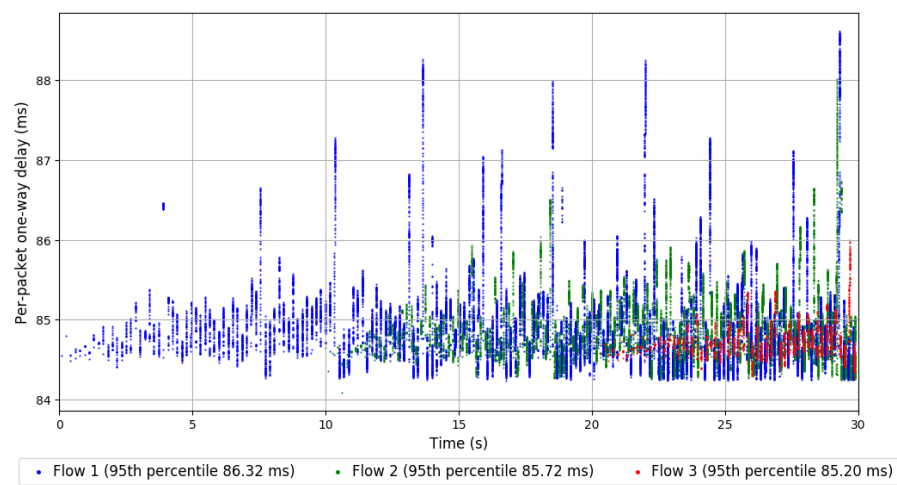
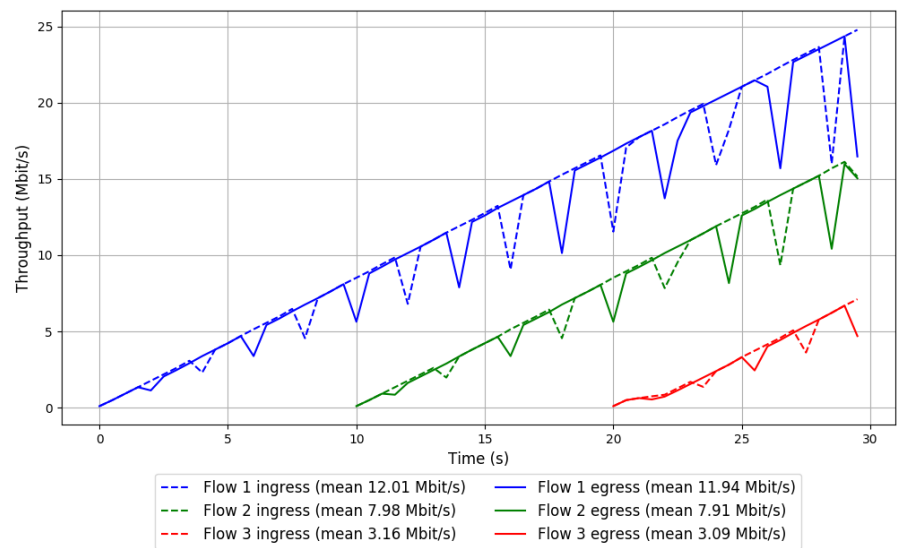
-- Flow 3:

Average throughput: 3.09 Mbit/s

95th percentile per-packet one-way delay: 85.196 ms

Loss rate: 3.86%

Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

Start at: 2018-04-18 03:14:50

End at: 2018-04-18 03:15:20

Below is generated by plot.py at 2018-04-18 07:15:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 18.60 Mbit/s

95th percentile per-packet one-way delay: 86.334 ms

Loss rate: 1.48%

-- Flow 1:

Average throughput: 12.05 Mbit/s

95th percentile per-packet one-way delay: 86.437 ms

Loss rate: 1.15%

-- Flow 2:

Average throughput: 7.97 Mbit/s

95th percentile per-packet one-way delay: 86.163 ms

Loss rate: 1.73%

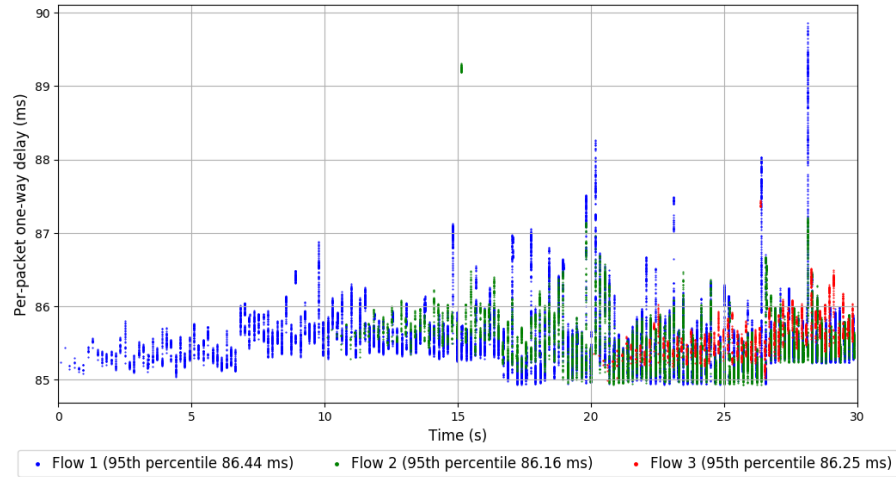
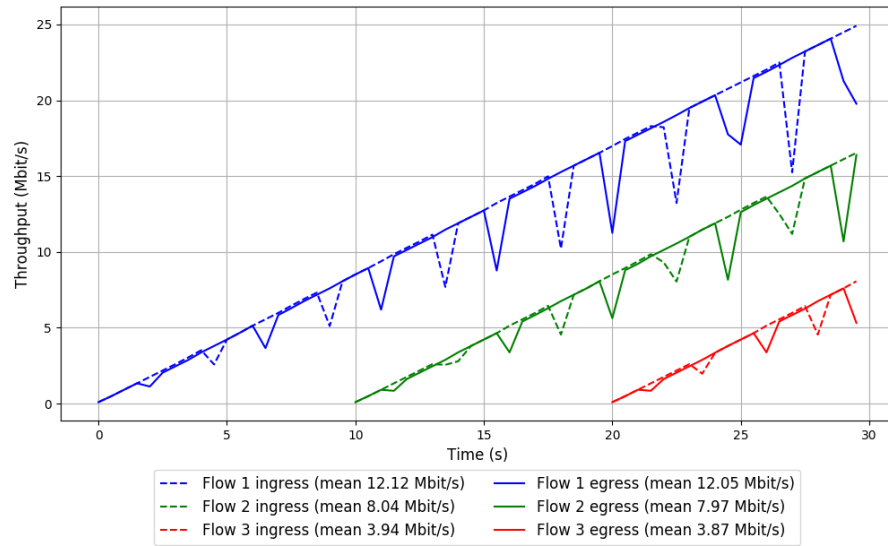
-- Flow 3:

Average throughput: 3.87 Mbit/s

95th percentile per-packet one-way delay: 86.252 ms

Loss rate: 3.52%

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2018-04-18 03:31:49

End at: 2018-04-18 03:32:19

Below is generated by plot.py at 2018-04-18 07:15:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 14.98 Mbit/s

95th percentile per-packet one-way delay: 86.112 ms

Loss rate: 1.52%

-- Flow 1:

Average throughput: 9.98 Mbit/s

95th percentile per-packet one-way delay: 86.181 ms

Loss rate: 1.26%

-- Flow 2:

Average throughput: 7.27 Mbit/s

95th percentile per-packet one-way delay: 85.965 ms

Loss rate: 1.82%

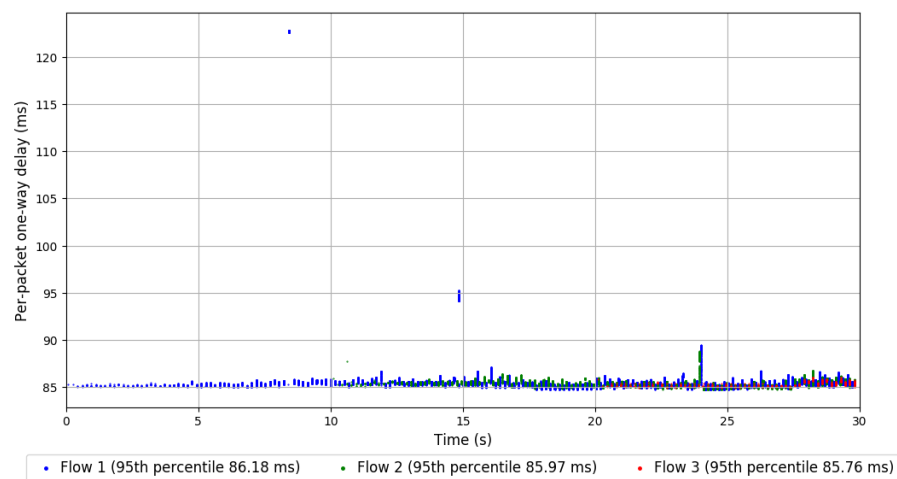
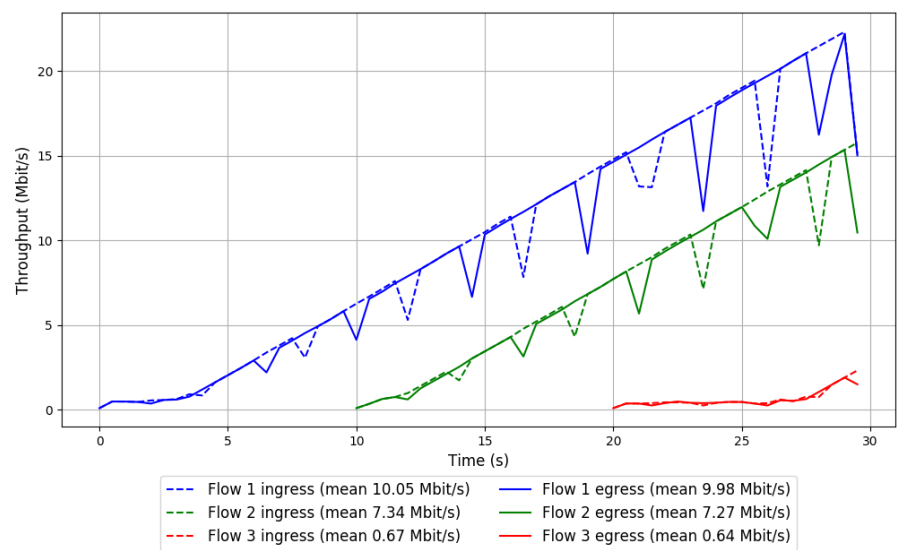
-- Flow 3:

Average throughput: 0.64 Mbit/s

95th percentile per-packet one-way delay: 85.759 ms

Loss rate: 6.23%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

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

End at: 2018-04-18 03:49:07

Below is generated by plot.py at 2018-04-18 07:15:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 14.91 Mbit/s

95th percentile per-packet one-way delay: 87.178 ms

Loss rate: 1.55%

-- Flow 1:

Average throughput: 12.01 Mbit/s

95th percentile per-packet one-way delay: 87.273 ms

Loss rate: 1.14%

-- Flow 2:

Average throughput: 2.48 Mbit/s

95th percentile per-packet one-way delay: 86.863 ms

Loss rate: 2.98%

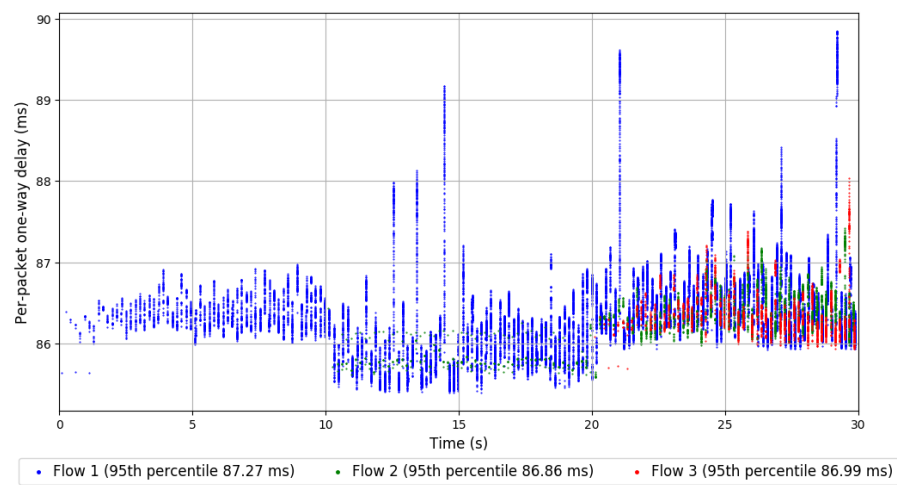
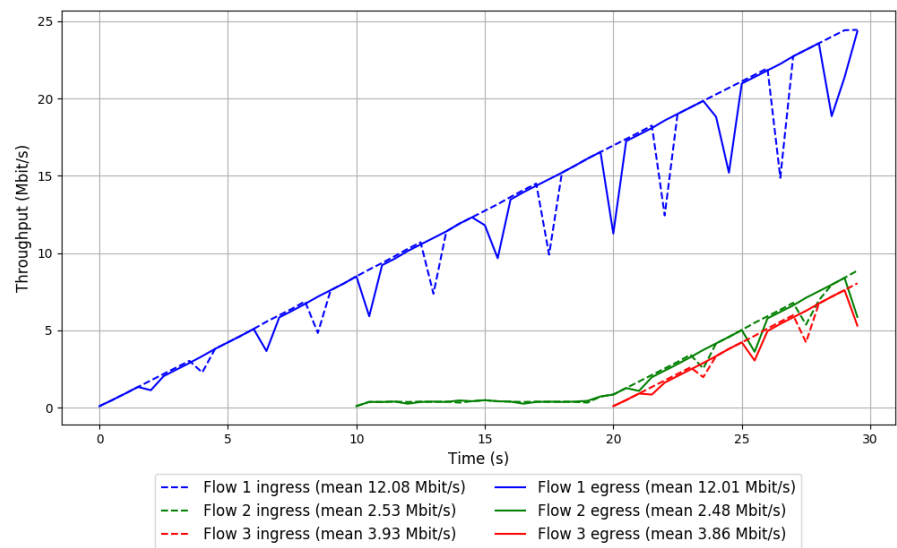
-- Flow 3:

Average throughput: 3.86 Mbit/s

95th percentile per-packet one-way delay: 86.988 ms

Loss rate: 3.53%

Run 9: Report of LEDBAT — Data Link

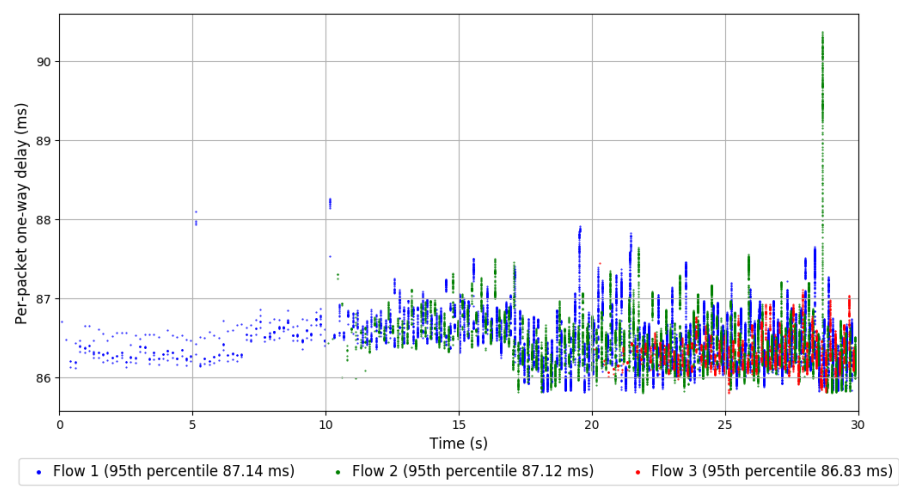
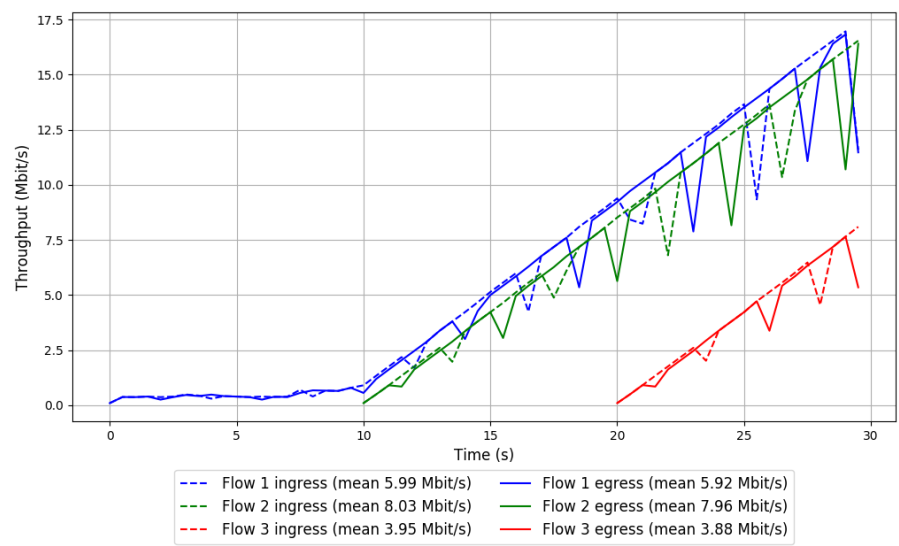


```
Run 10: Statistics of LEDBAT

Start at: 2018-04-18 04:05:40
End at: 2018-04-18 04:06:10

# Below is generated by plot.py at 2018-04-18 07:15:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.45 Mbit/s
95th percentile per-packet one-way delay: 87.098 ms
Loss rate: 1.87%
-- Flow 1:
Average throughput: 5.92 Mbit/s
95th percentile per-packet one-way delay: 87.145 ms
Loss rate: 1.63%
-- Flow 2:
Average throughput: 7.96 Mbit/s
95th percentile per-packet one-way delay: 87.116 ms
Loss rate: 1.74%
-- Flow 3:
Average throughput: 3.88 Mbit/s
95th percentile per-packet one-way delay: 86.825 ms
Loss rate: 3.51%
```

Run 10: Report of LEDBAT — Data Link

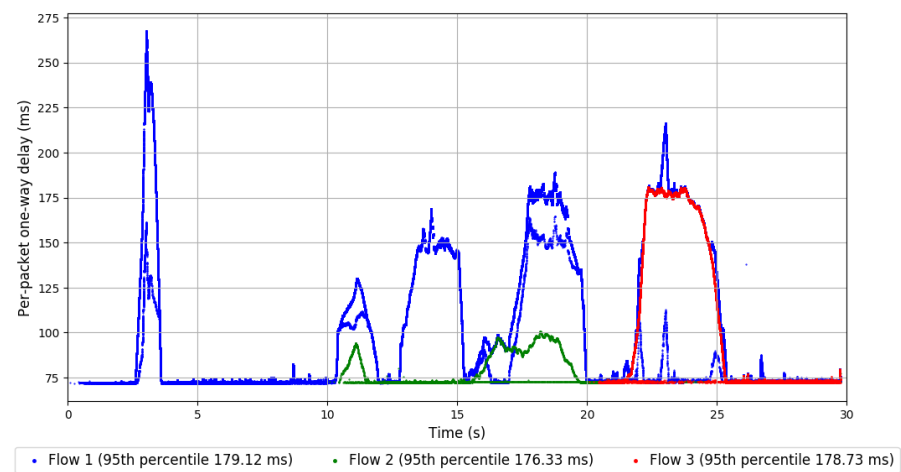
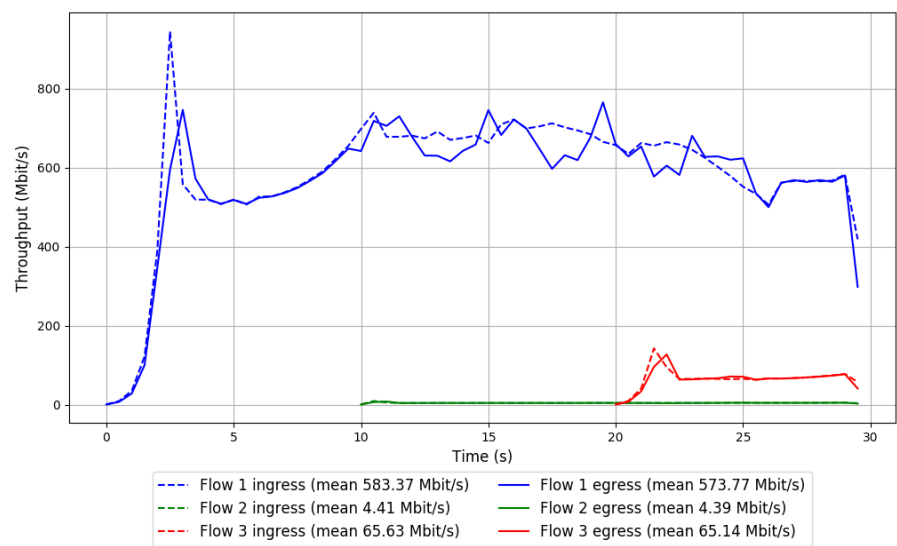


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-04-18 01:20:47
End at: 2018-04-18 01:21:17

# Below is generated by plot.py at 2018-04-18 07:23:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 597.82 Mbit/s
95th percentile per-packet one-way delay: 179.078 ms
Loss rate: 2.22%
-- Flow 1:
Average throughput: 573.77 Mbit/s
95th percentile per-packet one-way delay: 179.121 ms
Loss rate: 2.21%
-- Flow 2:
Average throughput: 4.39 Mbit/s
95th percentile per-packet one-way delay: 176.329 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 65.14 Mbit/s
95th percentile per-packet one-way delay: 178.731 ms
Loss rate: 2.50%
```

Run 1: Report of PCC-Allegro — Data Link

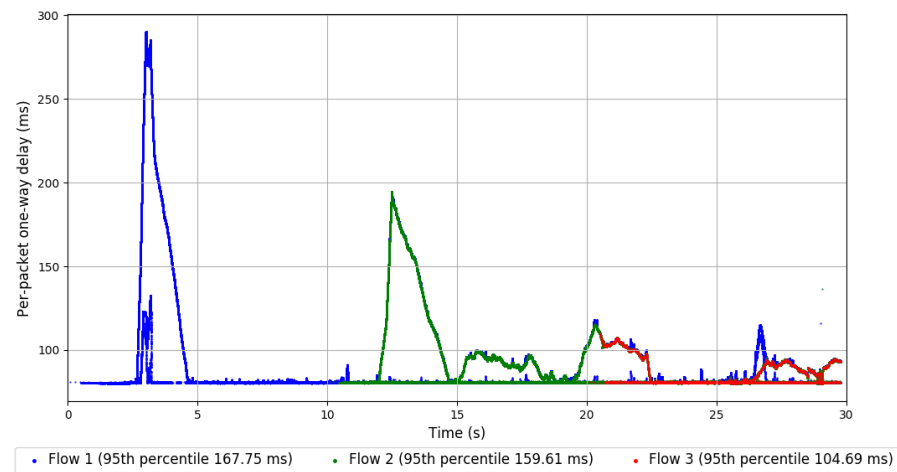
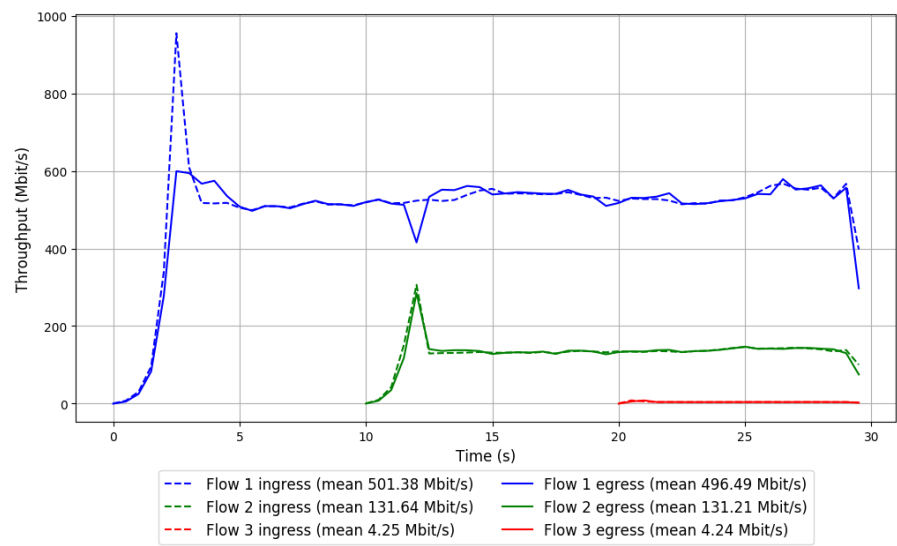


```
Run 2: Statistics of PCC-Allegro

Start at: 2018-04-18 01:37:42
End at: 2018-04-18 01:38:12

# Below is generated by plot.py at 2018-04-18 07:23:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 584.81 Mbit/s
95th percentile per-packet one-way delay: 166.232 ms
Loss rate: 1.50%
-- Flow 1:
Average throughput: 496.49 Mbit/s
95th percentile per-packet one-way delay: 167.749 ms
Loss rate: 1.55%
-- Flow 2:
Average throughput: 131.21 Mbit/s
95th percentile per-packet one-way delay: 159.606 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 4.24 Mbit/s
95th percentile per-packet one-way delay: 104.685 ms
Loss rate: 1.85%
```

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-04-18 01:54:05

End at: 2018-04-18 01:54:35

Below is generated by plot.py at 2018-04-18 07:23:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 589.30 Mbit/s

95th percentile per-packet one-way delay: 217.038 ms

Loss rate: 5.17%

-- Flow 1:

Average throughput: 485.39 Mbit/s

95th percentile per-packet one-way delay: 219.122 ms

Loss rate: 5.02%

-- Flow 2:

Average throughput: 128.21 Mbit/s

95th percentile per-packet one-way delay: 197.898 ms

Loss rate: 4.87%

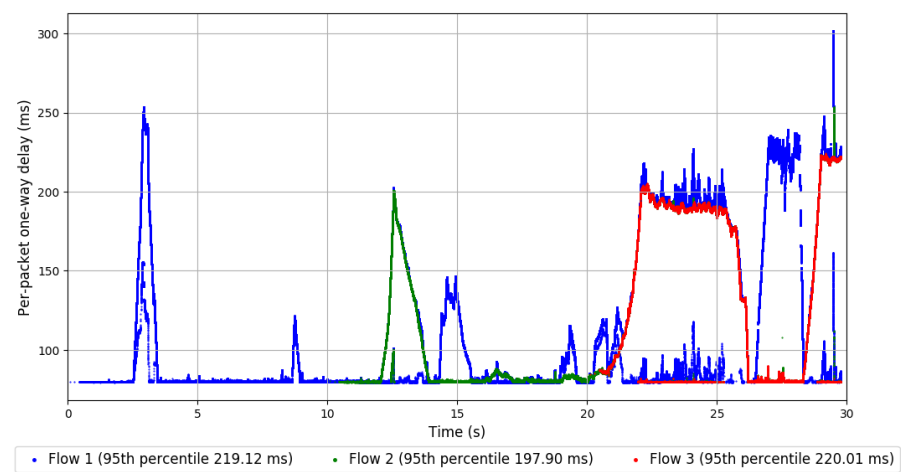
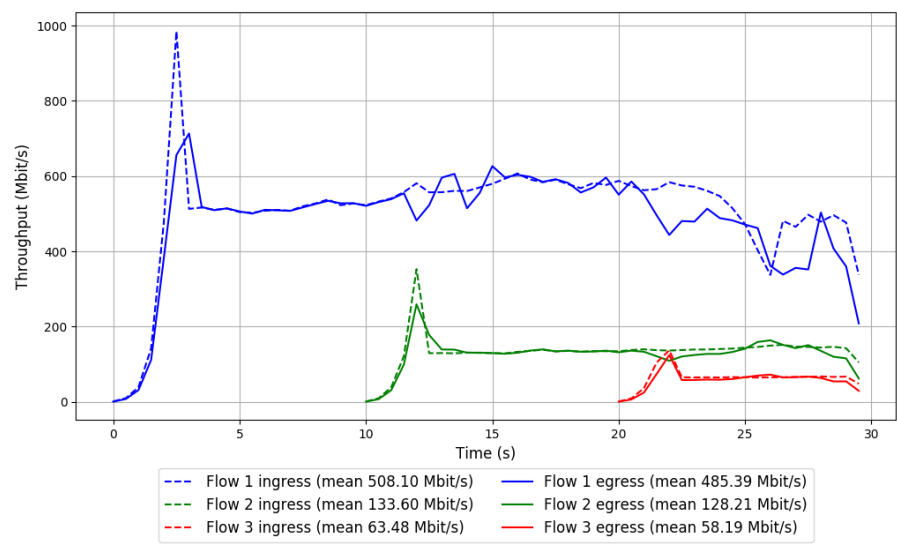
-- Flow 3:

Average throughput: 58.19 Mbit/s

95th percentile per-packet one-way delay: 220.009 ms

Loss rate: 10.00%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

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

End at: 2018-04-18 02:11:34

Below is generated by plot.py at 2018-04-18 07:23:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 613.91 Mbit/s

95th percentile per-packet one-way delay: 210.136 ms

Loss rate: 2.74%

-- Flow 1:

Average throughput: 550.39 Mbit/s

95th percentile per-packet one-way delay: 214.058 ms

Loss rate: 2.69%

-- Flow 2:

Average throughput: 65.11 Mbit/s

95th percentile per-packet one-way delay: 191.953 ms

Loss rate: 2.46%

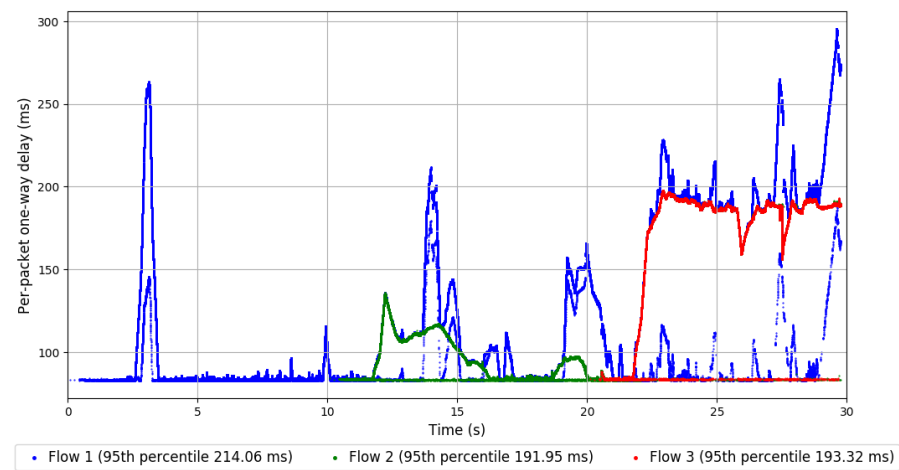
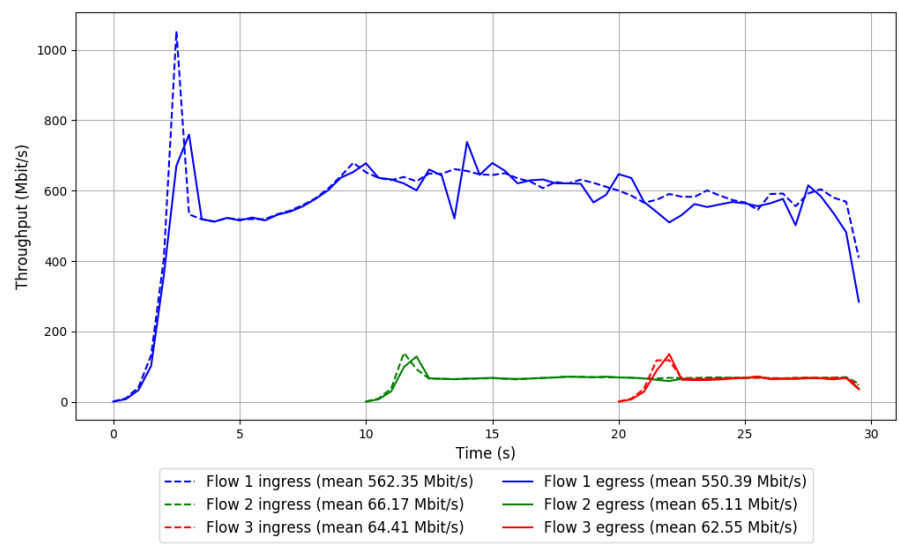
-- Flow 3:

Average throughput: 62.55 Mbit/s

95th percentile per-packet one-way delay: 193.317 ms

Loss rate: 4.60%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-04-18 02:28:08

End at: 2018-04-18 02:28:38

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 579.68 Mbit/s

95th percentile per-packet one-way delay: 223.505 ms

Loss rate: 3.64%

-- Flow 1:

Average throughput: 488.25 Mbit/s

95th percentile per-packet one-way delay: 222.991 ms

Loss rate: 3.49%

-- Flow 2:

Average throughput: 122.59 Mbit/s

95th percentile per-packet one-way delay: 223.670 ms

Loss rate: 4.05%

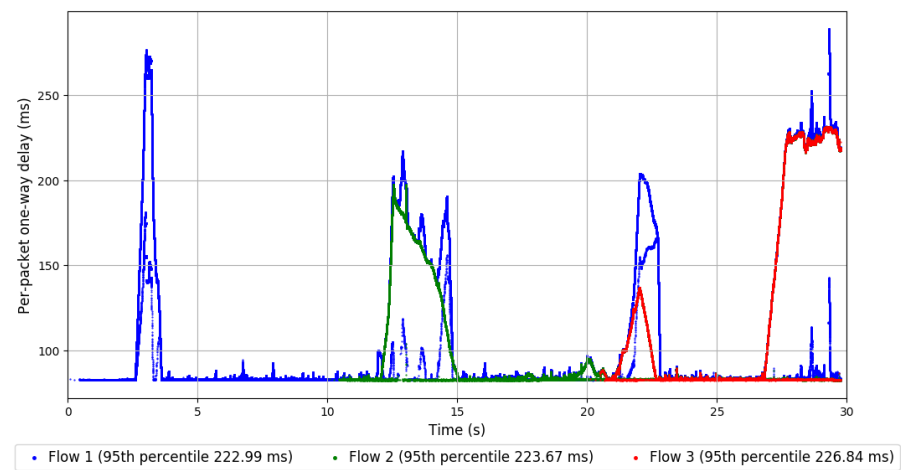
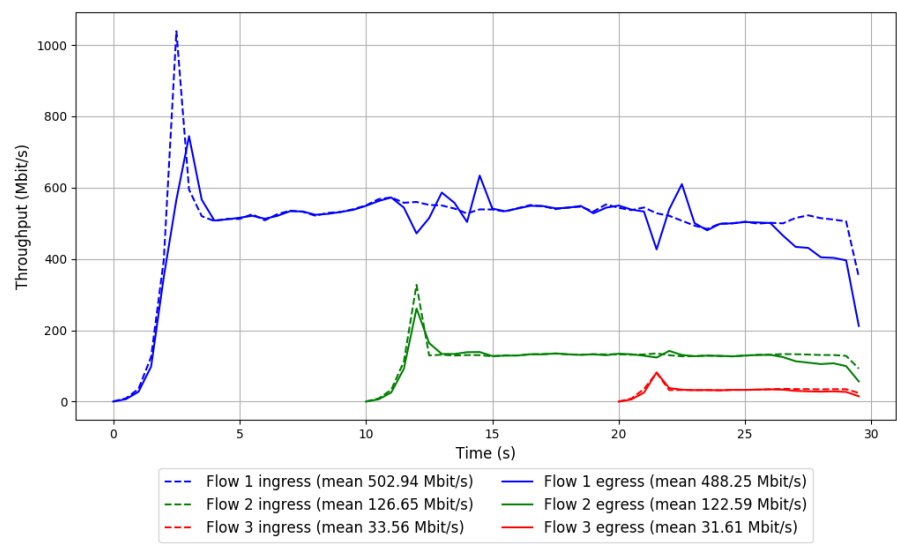
-- Flow 3:

Average throughput: 31.61 Mbit/s

95th percentile per-packet one-way delay: 226.842 ms

Loss rate: 7.42%

Run 5: Report of PCC-Allegro — Data Link



Run 6: Statistics of PCC-Allegro

Start at: 2018-04-18 02:44:43

End at: 2018-04-18 02:45:13

Below is generated by plot.py at 2018-04-18 07:24:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 564.72 Mbit/s

95th percentile per-packet one-way delay: 226.932 ms

Loss rate: 6.08%

-- Flow 1:

Average throughput: 477.66 Mbit/s

95th percentile per-packet one-way delay: 228.956 ms

Loss rate: 6.63%

-- Flow 2:

Average throughput: 129.18 Mbit/s

95th percentile per-packet one-way delay: 194.376 ms

Loss rate: 2.97%

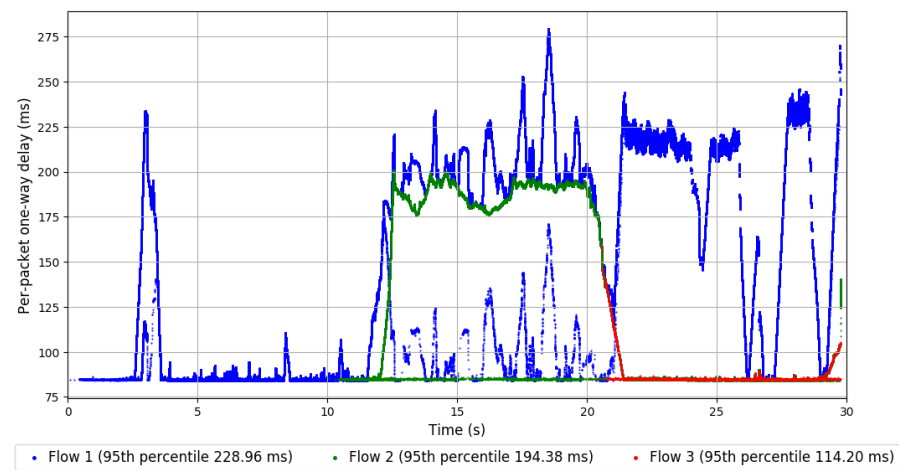
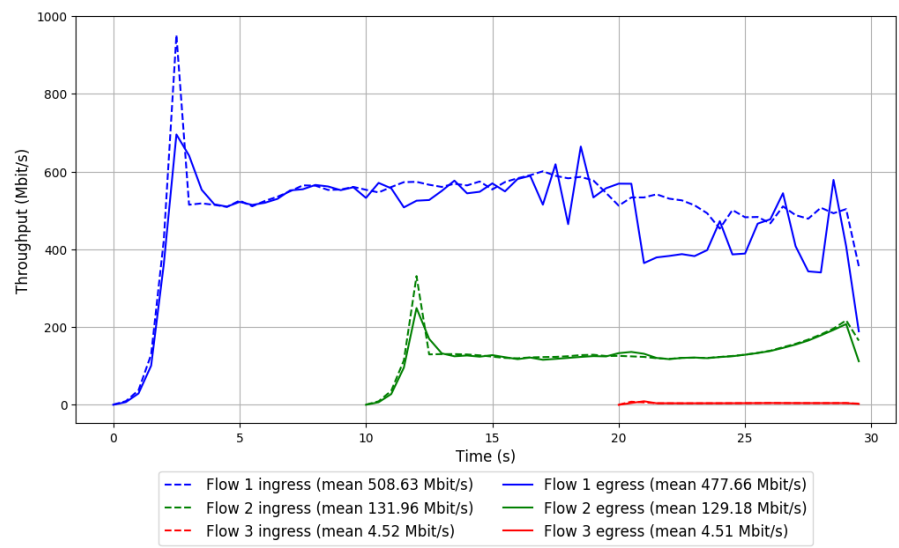
-- Flow 3:

Average throughput: 4.51 Mbit/s

95th percentile per-packet one-way delay: 114.196 ms

Loss rate: 1.96%

Run 6: Report of PCC-Allegro — Data Link



Run 7: Statistics of PCC-Allegro

Start at: 2018-04-18 03:01:40

End at: 2018-04-18 03:02:10

Below is generated by plot.py at 2018-04-18 07:25:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 594.44 Mbit/s

95th percentile per-packet one-way delay: 218.803 ms

Loss rate: 3.64%

-- Flow 1:

Average throughput: 488.13 Mbit/s

95th percentile per-packet one-way delay: 220.660 ms

Loss rate: 4.03%

-- Flow 2:

Average throughput: 128.80 Mbit/s

95th percentile per-packet one-way delay: 188.510 ms

Loss rate: 1.69%

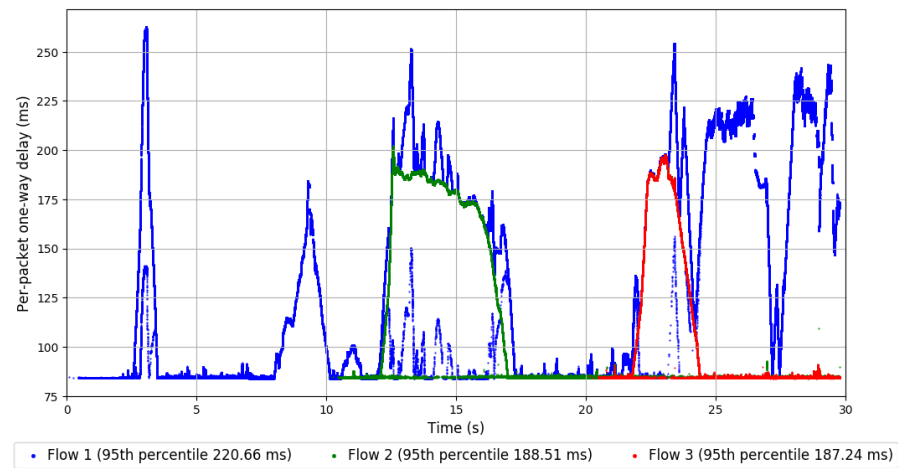
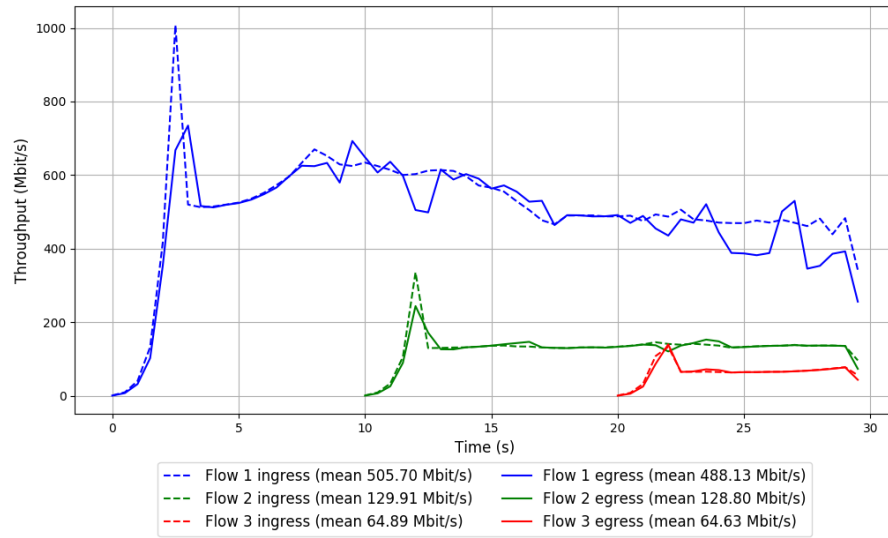
-- Flow 3:

Average throughput: 64.63 Mbit/s

95th percentile per-packet one-way delay: 187.238 ms

Loss rate: 2.15%

Run 7: Report of PCC-Allegro — Data Link



Run 8: Statistics of PCC-Allegro

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

End at: 2018-04-18 03:19:10

Below is generated by plot.py at 2018-04-18 07:25:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 598.18 Mbit/s

95th percentile per-packet one-way delay: 228.774 ms

Loss rate: 3.30%

-- Flow 1:

Average throughput: 493.02 Mbit/s

95th percentile per-packet one-way delay: 237.600 ms

Loss rate: 3.64%

-- Flow 2:

Average throughput: 128.08 Mbit/s

95th percentile per-packet one-way delay: 179.487 ms

Loss rate: 1.59%

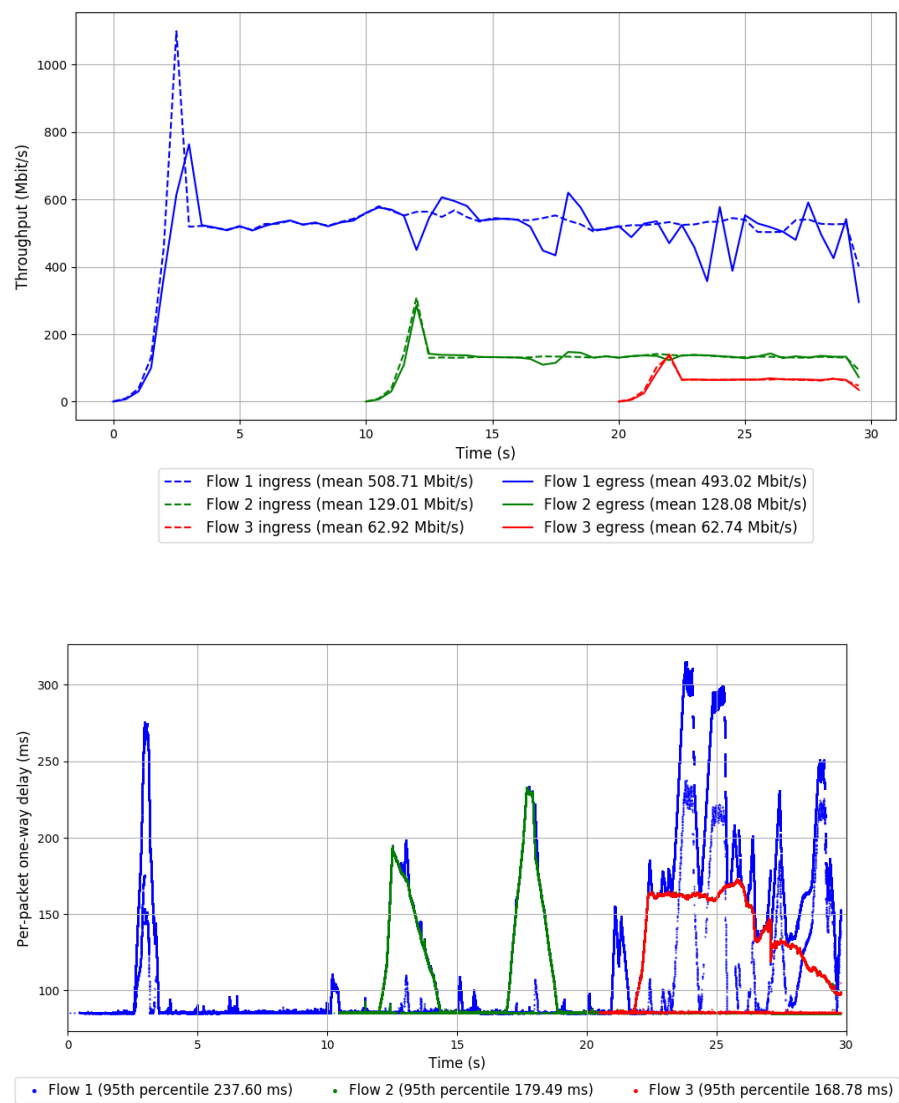
-- Flow 3:

Average throughput: 62.74 Mbit/s

95th percentile per-packet one-way delay: 168.780 ms

Loss rate: 1.98%

Run 8: Report of PCC-Allegro — Data Link



Run 9: Statistics of PCC-Allegro

Start at: 2018-04-18 03:35:40

End at: 2018-04-18 03:36:10

Below is generated by plot.py at 2018-04-18 07:32:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 583.95 Mbit/s

95th percentile per-packet one-way delay: 200.590 ms

Loss rate: 1.86%

-- Flow 1:

Average throughput: 540.15 Mbit/s

95th percentile per-packet one-way delay: 200.816 ms

Loss rate: 1.89%

-- Flow 2:

Average throughput: 63.90 Mbit/s

95th percentile per-packet one-way delay: 199.085 ms

Loss rate: 1.42%

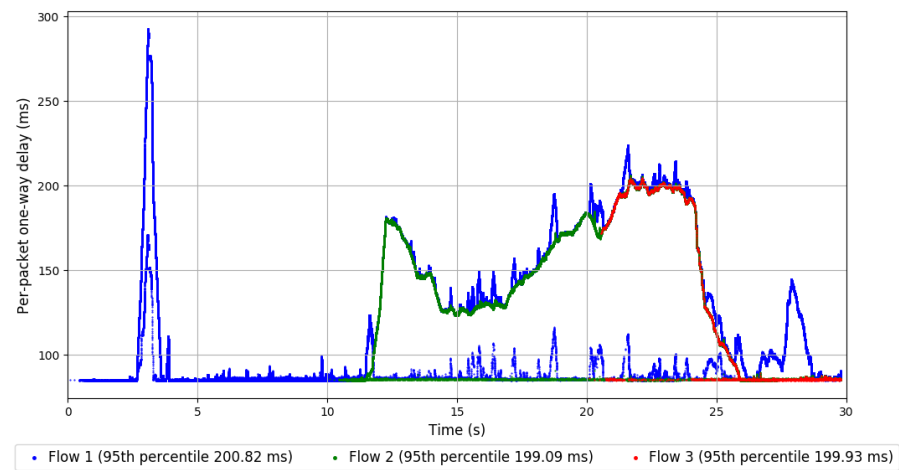
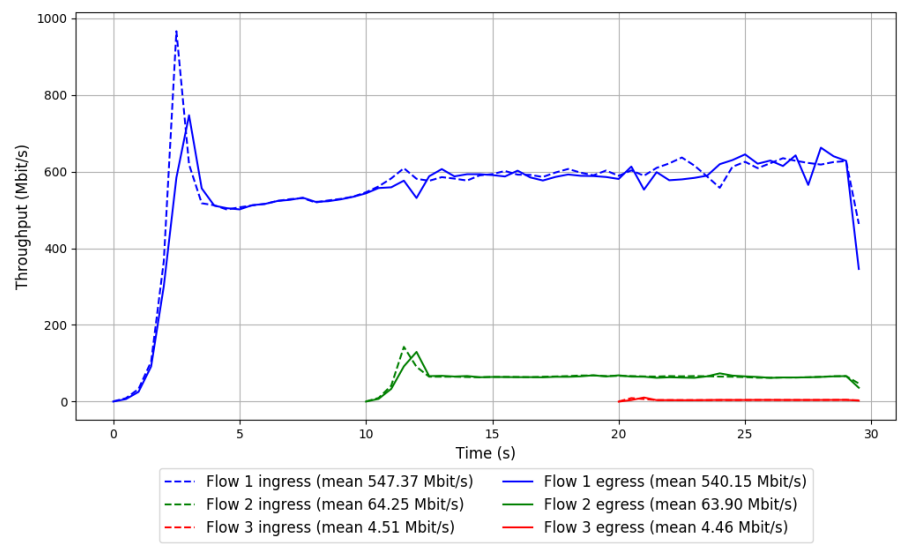
-- Flow 3:

Average throughput: 4.46 Mbit/s

95th percentile per-packet one-way delay: 199.930 ms

Loss rate: 2.90%

Run 9: Report of PCC-Allegro — Data Link

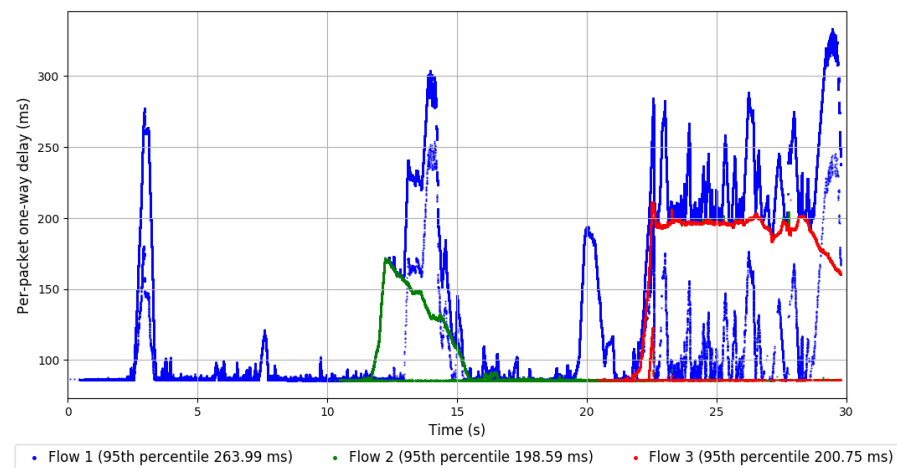
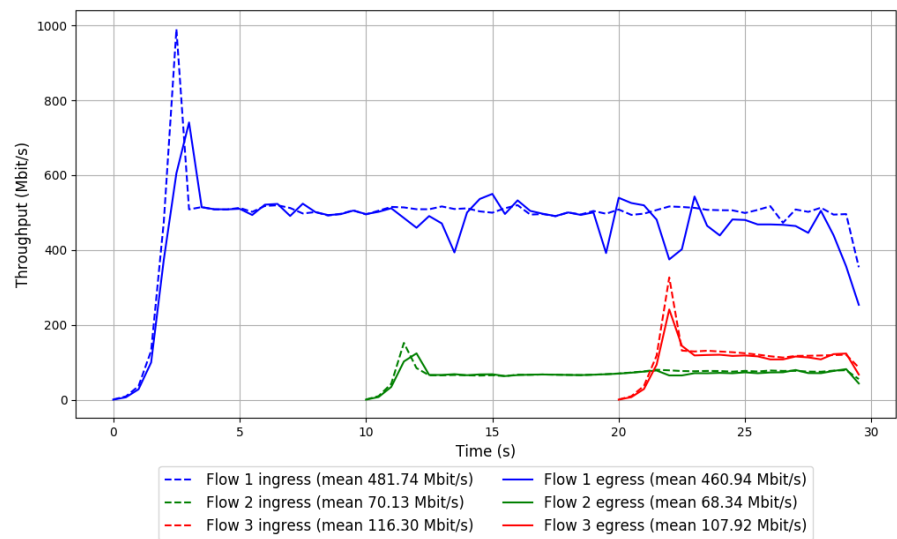


```
Run 10: Statistics of PCC-Allegro

Start at: 2018-04-18 03:52:29
End at: 2018-04-18 03:52:59

# Below is generated by plot.py at 2018-04-18 07:32:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 541.28 Mbit/s
95th percentile per-packet one-way delay: 259.965 ms
Loss rate: 5.02%
-- Flow 1:
Average throughput: 460.94 Mbit/s
95th percentile per-packet one-way delay: 263.991 ms
Loss rate: 4.87%
-- Flow 2:
Average throughput: 68.34 Mbit/s
95th percentile per-packet one-way delay: 198.586 ms
Loss rate: 3.37%
-- Flow 3:
Average throughput: 107.92 Mbit/s
95th percentile per-packet one-way delay: 200.750 ms
Loss rate: 8.83%
```

Run 10: Report of PCC-Allegro — Data Link

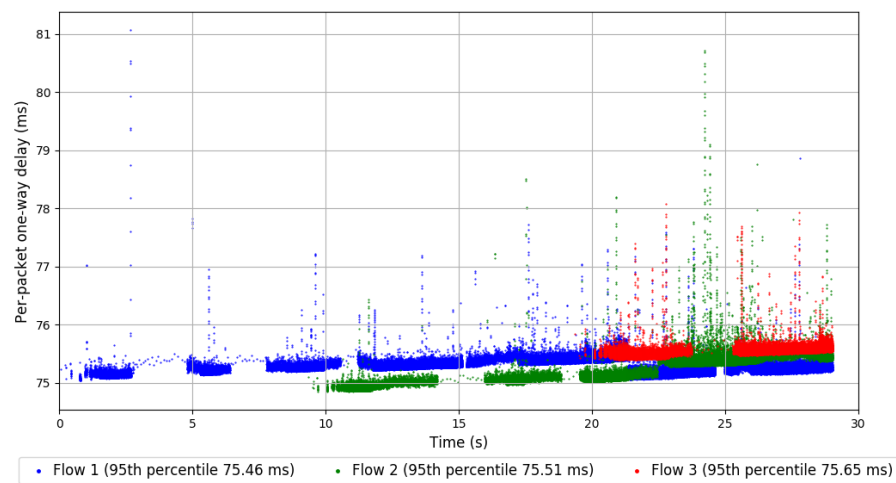
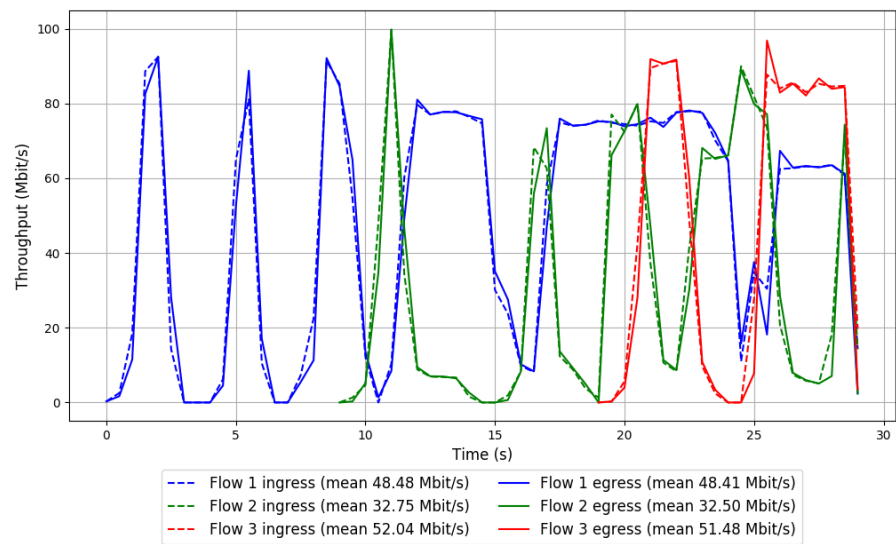


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-04-18 01:23:14
End at: 2018-04-18 01:23:44

# Below is generated by plot.py at 2018-04-18 07:32:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.66 Mbit/s
95th percentile per-packet one-way delay: 75.588 ms
Loss rate: 1.38%
-- Flow 1:
Average throughput: 48.41 Mbit/s
95th percentile per-packet one-way delay: 75.457 ms
Loss rate: 0.74%
-- Flow 2:
Average throughput: 32.50 Mbit/s
95th percentile per-packet one-way delay: 75.509 ms
Loss rate: 1.63%
-- Flow 3:
Average throughput: 51.48 Mbit/s
95th percentile per-packet one-way delay: 75.652 ms
Loss rate: 2.81%
```


Run 1: Report of QUIC Cubic — Data Link

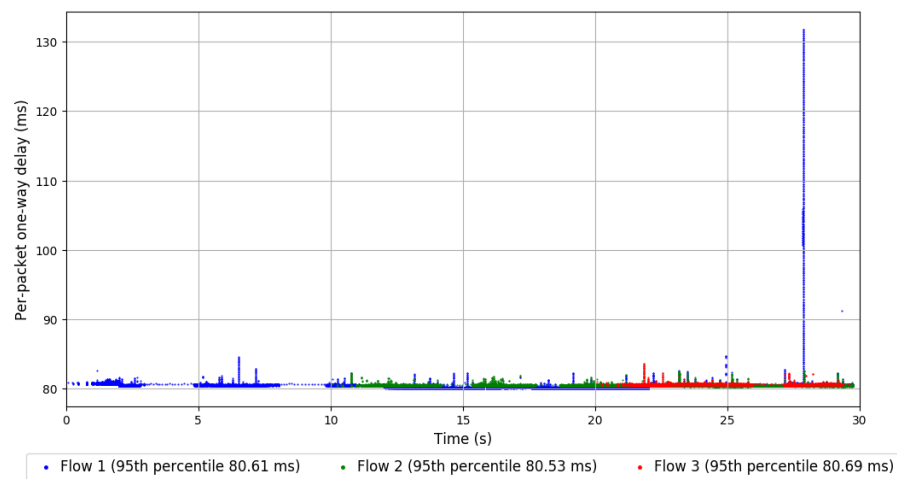
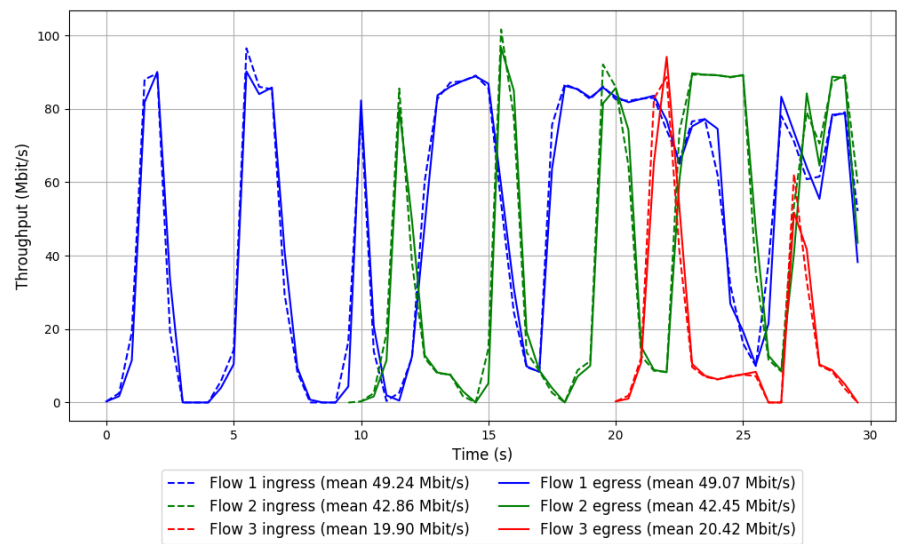


```
Run 2: Statistics of QUIC Cubic

Start at: 2018-04-18 01:40:05
End at: 2018-04-18 01:40:35

# Below is generated by plot.py at 2018-04-18 07:32:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.79 Mbit/s
95th percentile per-packet one-way delay: 80.601 ms
Loss rate: 1.15%
-- Flow 1:
Average throughput: 49.07 Mbit/s
95th percentile per-packet one-way delay: 80.605 ms
Loss rate: 0.92%
-- Flow 2:
Average throughput: 42.45 Mbit/s
95th percentile per-packet one-way delay: 80.525 ms
Loss rate: 1.80%
-- Flow 3:
Average throughput: 20.42 Mbit/s
95th percentile per-packet one-way delay: 80.694 ms
Loss rate: 0.00%
```

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-04-18 01:56:27

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

Below is generated by plot.py at 2018-04-18 07:32:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.46 Mbit/s

95th percentile per-packet one-way delay: 81.155 ms

Loss rate: 1.11%

-- Flow 1:

Average throughput: 47.59 Mbit/s

95th percentile per-packet one-way delay: 81.184 ms

Loss rate: 0.73%

-- Flow 2:

Average throughput: 54.58 Mbit/s

95th percentile per-packet one-way delay: 80.787 ms

Loss rate: 1.32%

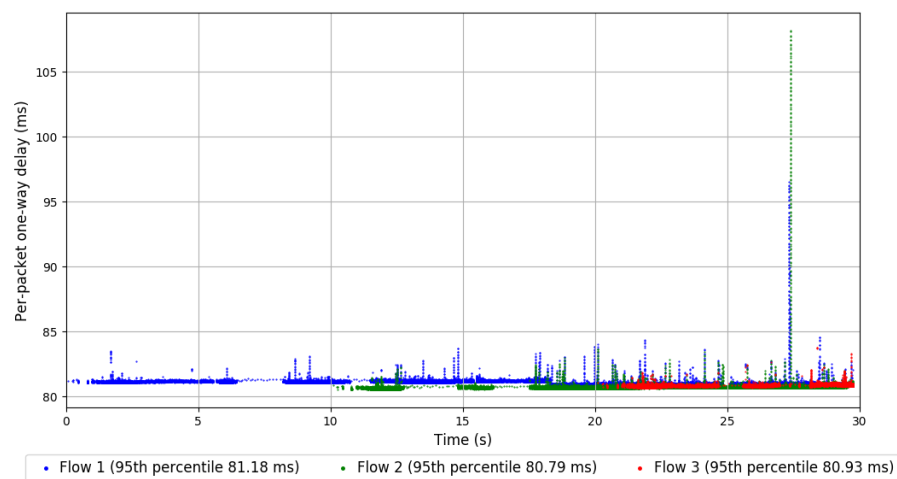
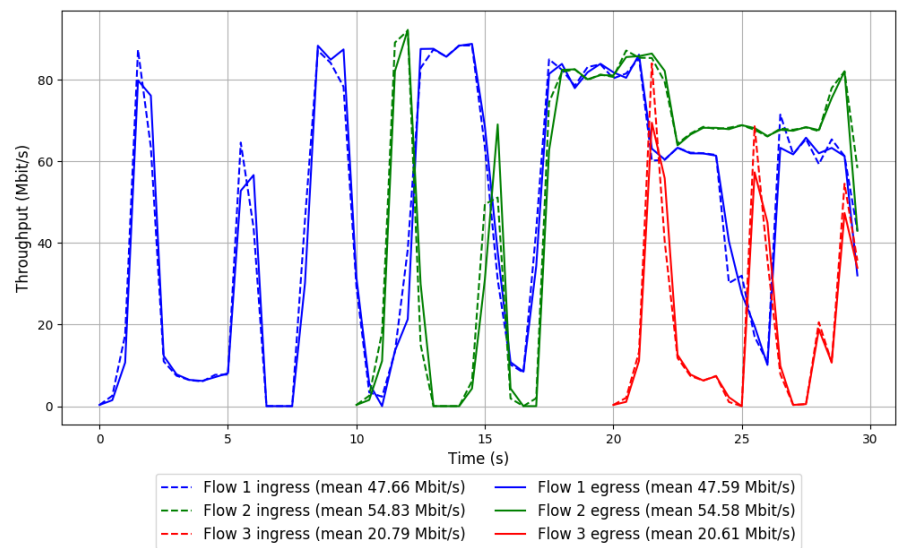
-- Flow 3:

Average throughput: 20.61 Mbit/s

95th percentile per-packet one-way delay: 80.927 ms

Loss rate: 2.61%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-04-18 02:13:30

End at: 2018-04-18 02:14:00

Below is generated by plot.py at 2018-04-18 07:32:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 84.65 Mbit/s

95th percentile per-packet one-way delay: 83.544 ms

Loss rate: 0.91%

-- Flow 1:

Average throughput: 45.62 Mbit/s

95th percentile per-packet one-way delay: 83.572 ms

Loss rate: 0.84%

-- Flow 2:

Average throughput: 50.35 Mbit/s

95th percentile per-packet one-way delay: 83.342 ms

Loss rate: 1.14%

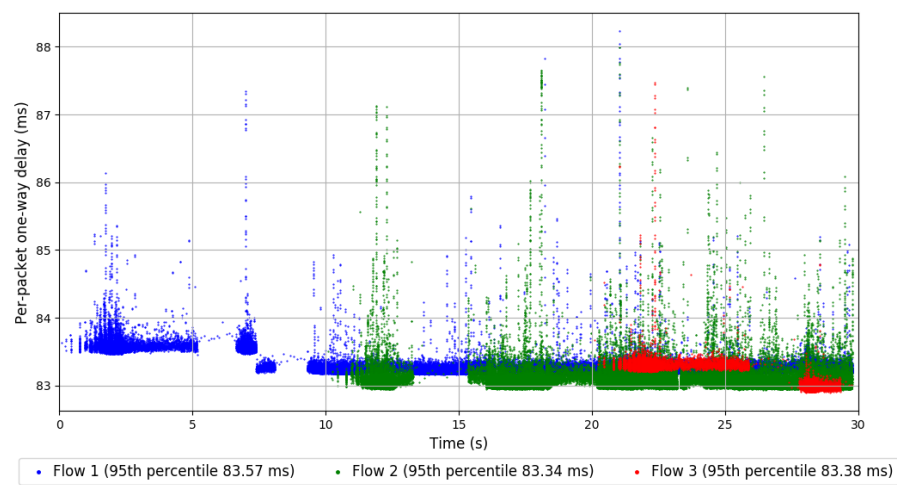
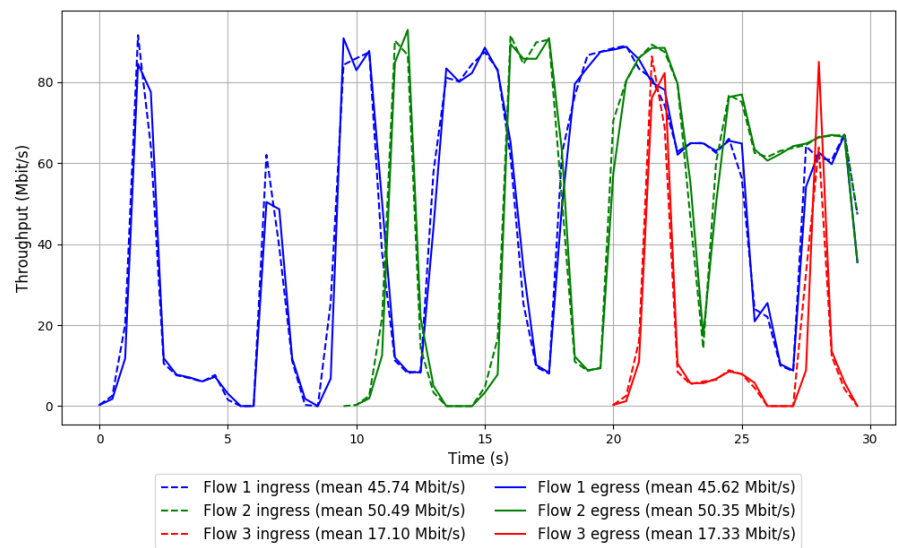
-- Flow 3:

Average throughput: 17.33 Mbit/s

95th percentile per-packet one-way delay: 83.376 ms

Loss rate: 0.00%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-04-18 02:30:34

End at: 2018-04-18 02:31:05

Below is generated by plot.py at 2018-04-18 07:32:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 96.58 Mbit/s

95th percentile per-packet one-way delay: 83.561 ms

Loss rate: 0.94%

-- Flow 1:

Average throughput: 59.99 Mbit/s

95th percentile per-packet one-way delay: 83.517 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 43.94 Mbit/s

95th percentile per-packet one-way delay: 83.553 ms

Loss rate: 1.33%

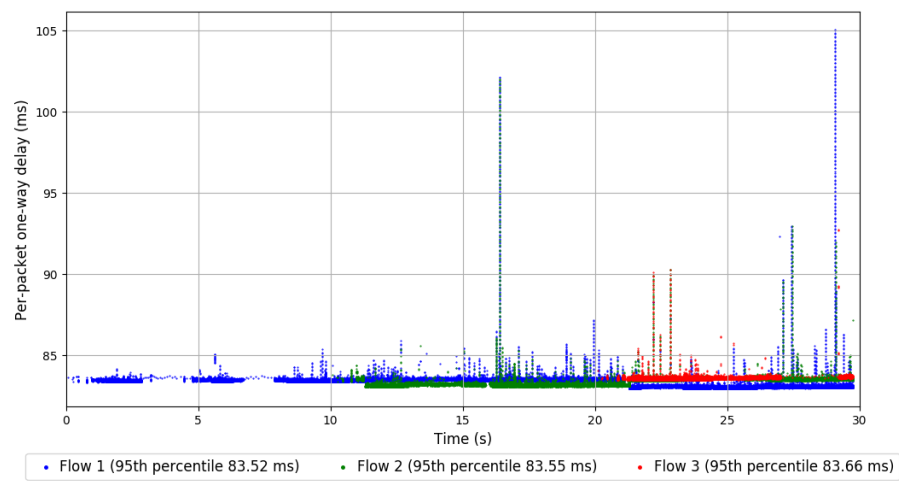
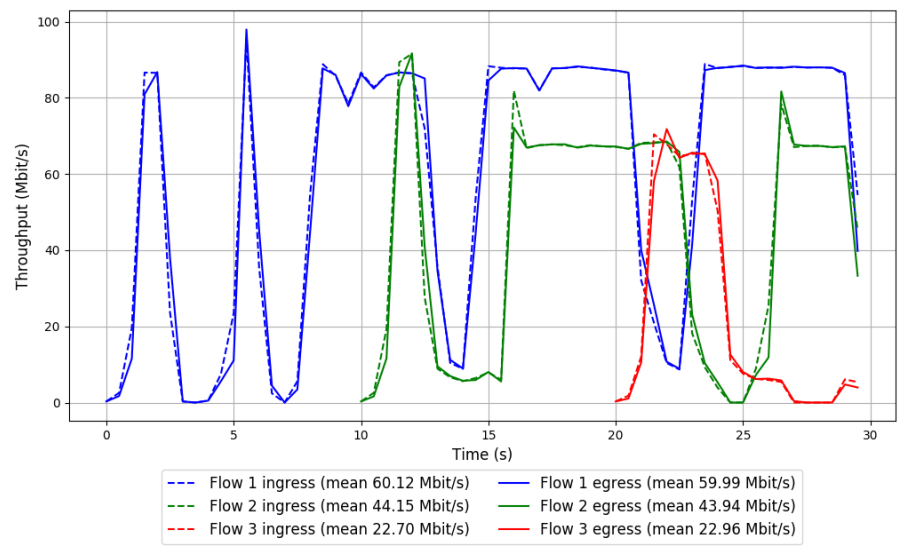
-- Flow 3:

Average throughput: 22.96 Mbit/s

95th percentile per-packet one-way delay: 83.656 ms

Loss rate: 0.62%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2018-04-18 02:47:07

End at: 2018-04-18 02:47:37

Below is generated by plot.py at 2018-04-18 07:32:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 80.76 Mbit/s

95th percentile per-packet one-way delay: 84.723 ms

Loss rate: 1.06%

-- Flow 1:

Average throughput: 42.61 Mbit/s

95th percentile per-packet one-way delay: 84.664 ms

Loss rate: 0.75%

-- Flow 2:

Average throughput: 40.38 Mbit/s

95th percentile per-packet one-way delay: 84.757 ms

Loss rate: 1.87%

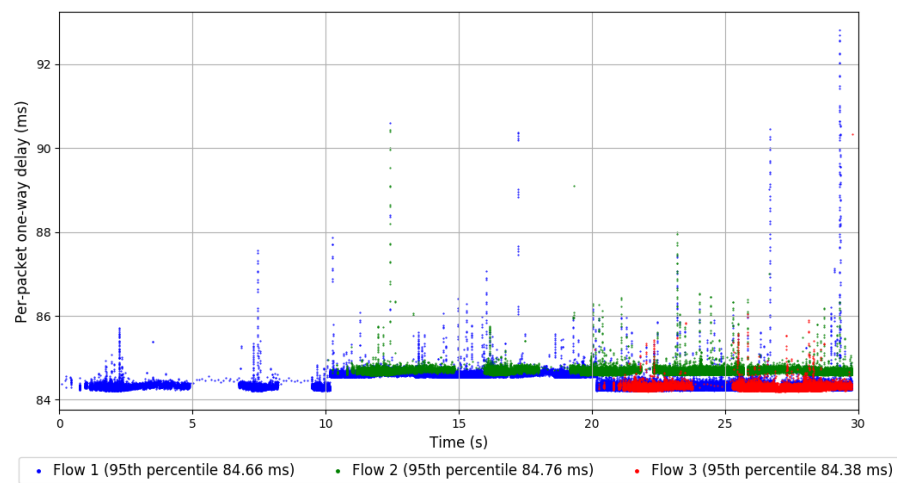
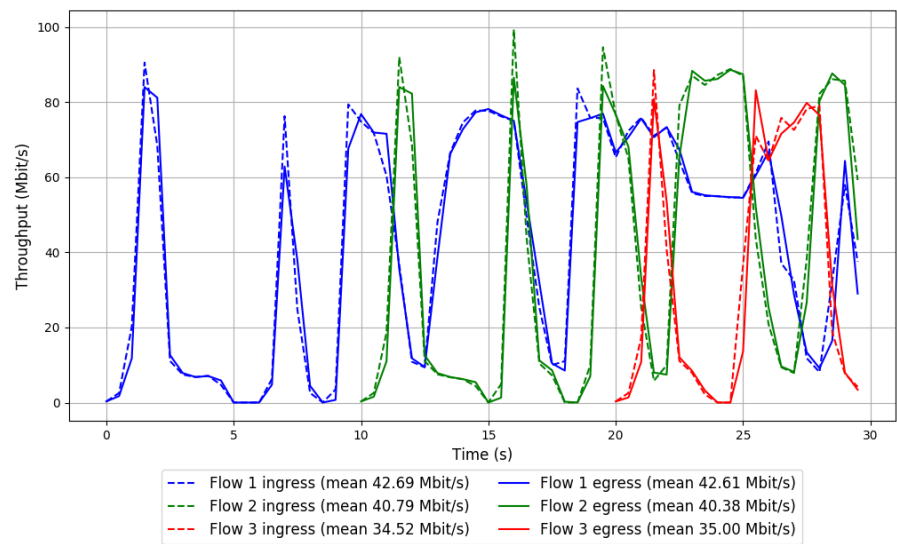
-- Flow 3:

Average throughput: 35.00 Mbit/s

95th percentile per-packet one-way delay: 84.381 ms

Loss rate: 0.29%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

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

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

Below is generated by plot.py at 2018-04-18 07:32:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 93.07 Mbit/s

95th percentile per-packet one-way delay: 84.609 ms

Loss rate: 1.09%

-- Flow 1:

Average throughput: 50.62 Mbit/s

95th percentile per-packet one-way delay: 84.269 ms

Loss rate: 1.04%

-- Flow 2:

Average throughput: 56.68 Mbit/s

95th percentile per-packet one-way delay: 84.539 ms

Loss rate: 1.30%

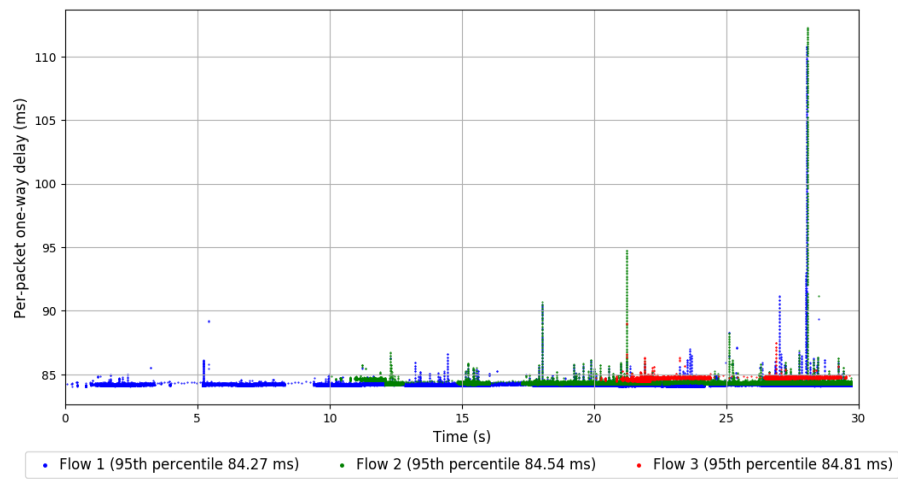
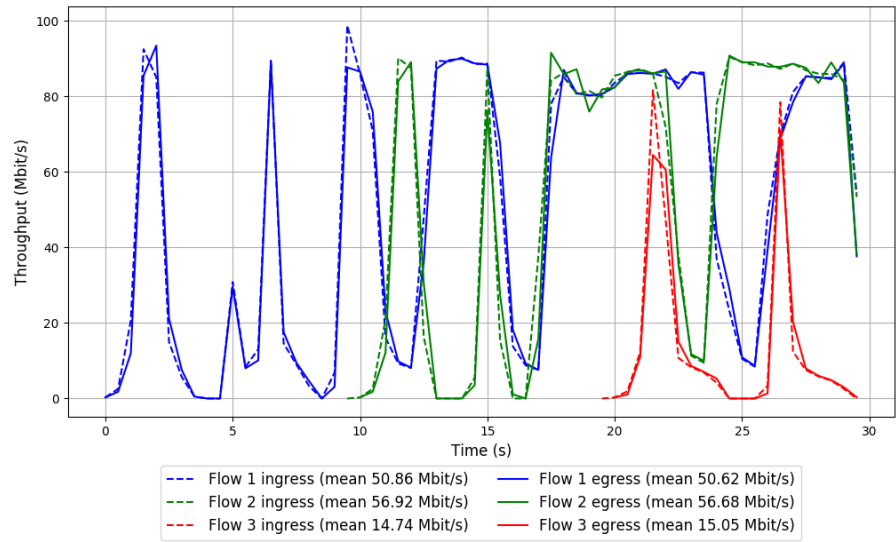
-- Flow 3:

Average throughput: 15.05 Mbit/s

95th percentile per-packet one-way delay: 84.812 ms

Loss rate: 0.00%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2018-04-18 03:21:02

End at: 2018-04-18 03:21:32

Below is generated by plot.py at 2018-04-18 07:32:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 87.13 Mbit/s

95th percentile per-packet one-way delay: 85.499 ms

Loss rate: 1.02%

-- Flow 1:

Average throughput: 55.88 Mbit/s

95th percentile per-packet one-way delay: 85.428 ms

Loss rate: 0.67%

-- Flow 2:

Average throughput: 38.04 Mbit/s

95th percentile per-packet one-way delay: 85.525 ms

Loss rate: 1.57%

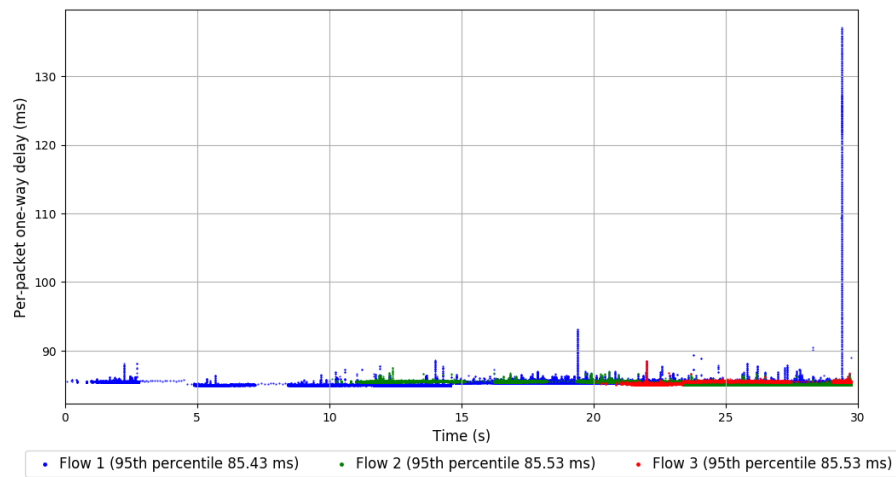
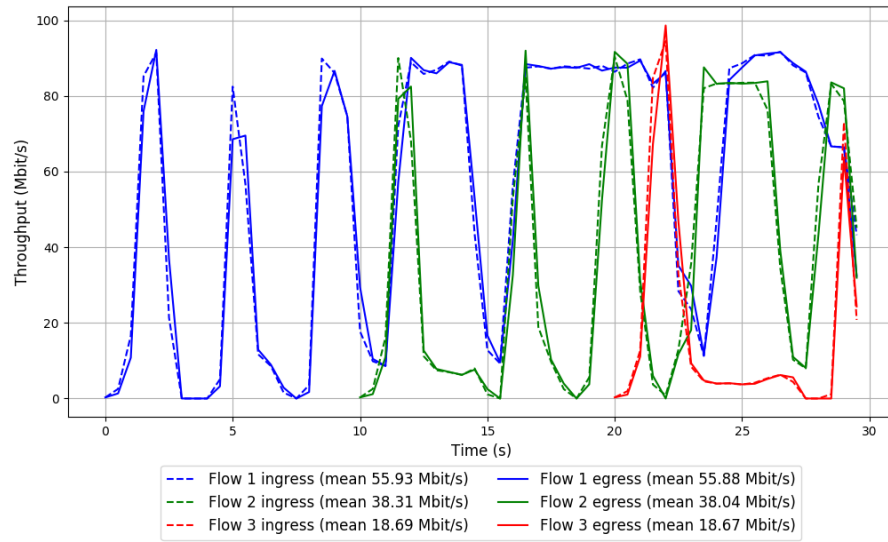
-- Flow 3:

Average throughput: 18.67 Mbit/s

95th percentile per-packet one-way delay: 85.528 ms

Loss rate: 1.88%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

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

End at: 2018-04-18 03:38:33

Below is generated by plot.py at 2018-04-18 07:32:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 109.71 Mbit/s

95th percentile per-packet one-way delay: 85.527 ms

Loss rate: 0.93%

-- Flow 1:

Average throughput: 59.29 Mbit/s

95th percentile per-packet one-way delay: 85.520 ms

Loss rate: 0.91%

-- Flow 2:

Average throughput: 56.79 Mbit/s

95th percentile per-packet one-way delay: 85.550 ms

Loss rate: 1.28%

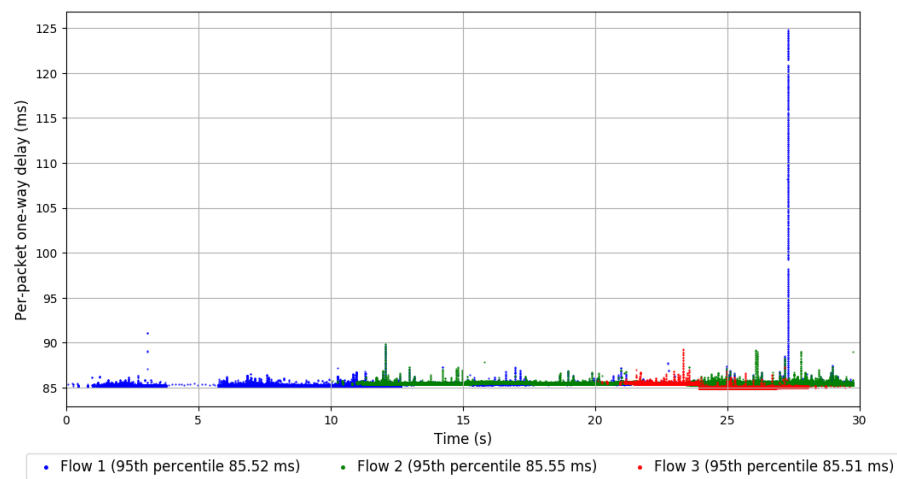
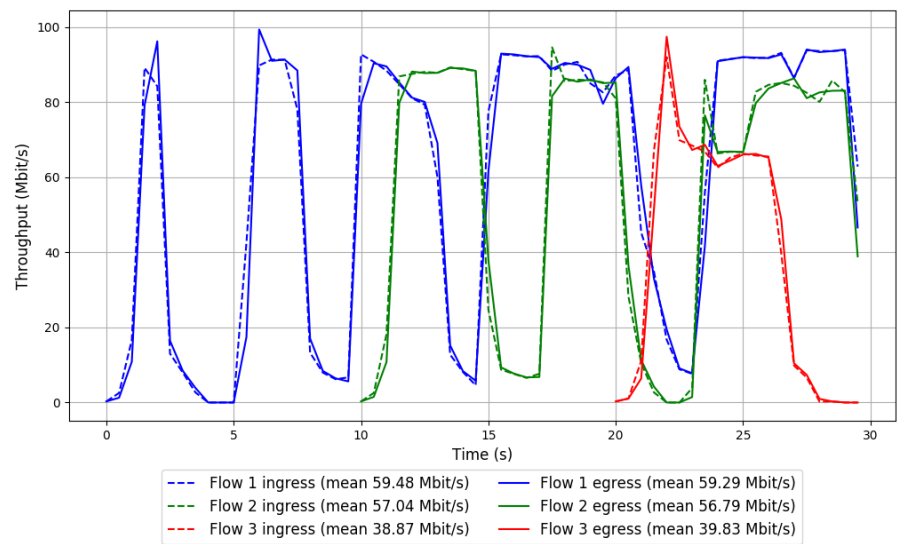
-- Flow 3:

Average throughput: 39.83 Mbit/s

95th percentile per-packet one-way delay: 85.506 ms

Loss rate: 0.00%

Run 9: Report of QUIC Cubic — Data Link

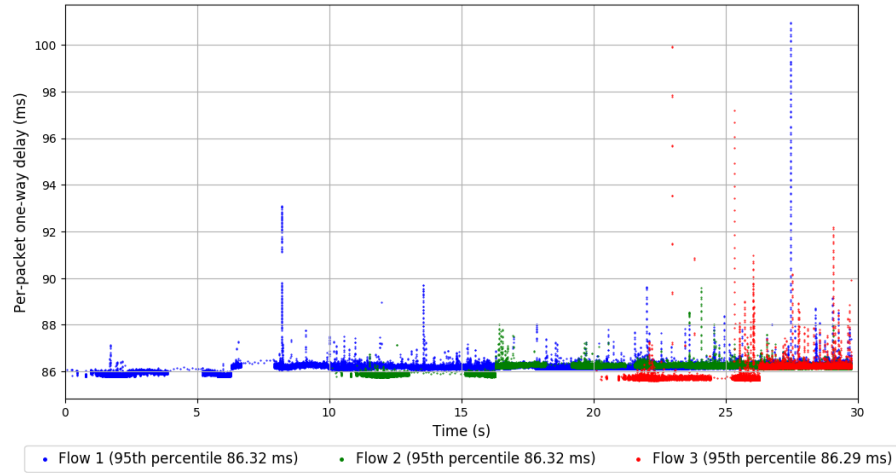
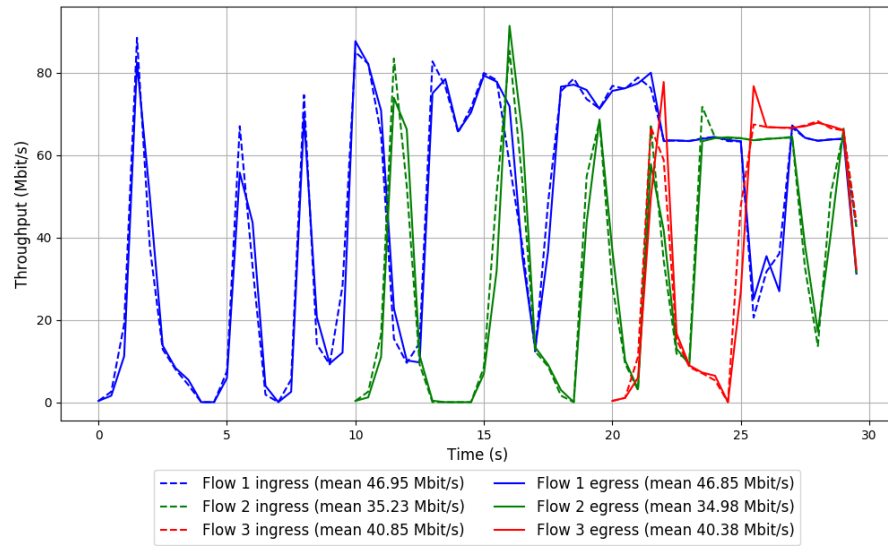


```
Run 10: Statistics of QUIC Cubic

Start at: 2018-04-18 03:54:50
End at: 2018-04-18 03:55:20

# Below is generated by plot.py at 2018-04-18 07:32:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.13 Mbit/s
95th percentile per-packet one-way delay: 86.317 ms
Loss rate: 1.34%
-- Flow 1:
Average throughput: 46.85 Mbit/s
95th percentile per-packet one-way delay: 86.321 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 34.98 Mbit/s
95th percentile per-packet one-way delay: 86.320 ms
Loss rate: 1.58%
-- Flow 3:
Average throughput: 40.38 Mbit/s
95th percentile per-packet one-way delay: 86.288 ms
Loss rate: 2.85%
```

Run 10: Report of QUIC Cubic — Data Link

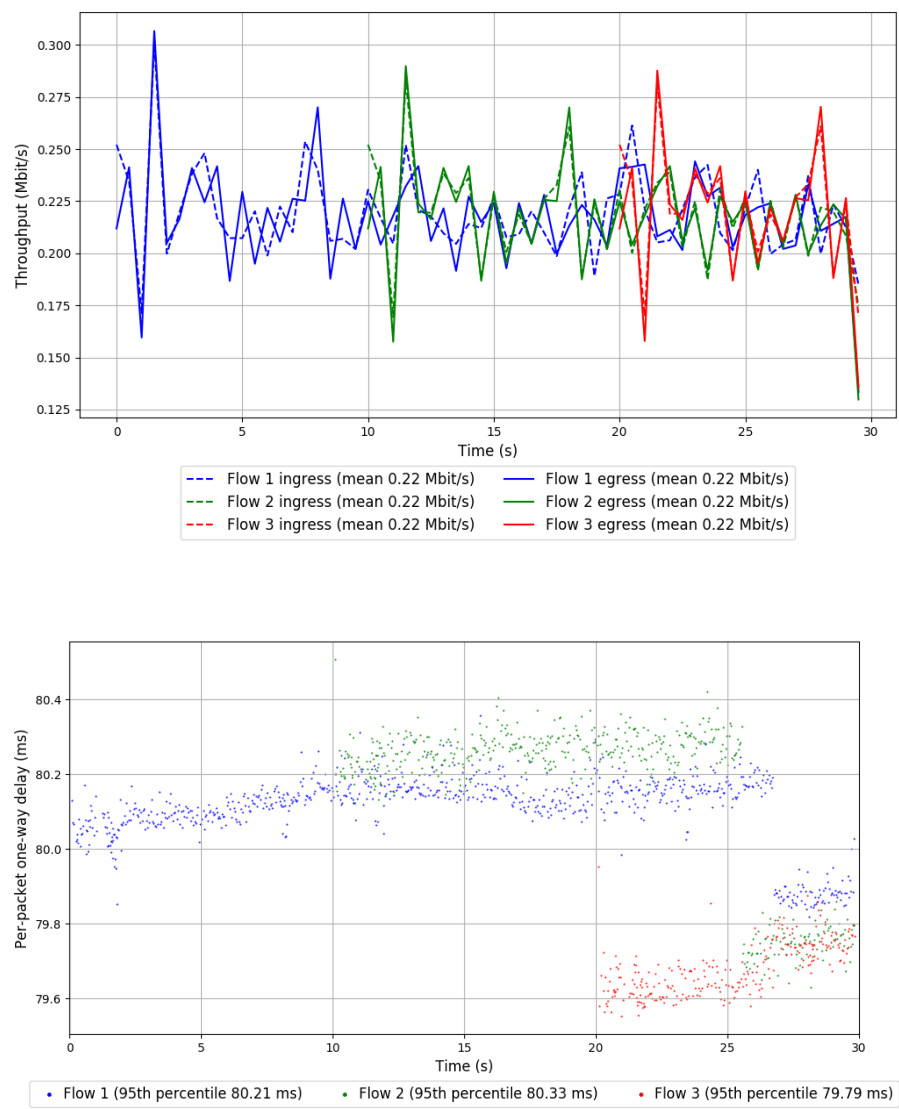


```
Run 1: Statistics of SCReAM

Start at: 2018-04-18 01:32:10
End at: 2018-04-18 01:32:40

# Below is generated by plot.py at 2018-04-18 07:32:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 80.304 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 80.213 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 80.332 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 79.792 ms
Loss rate: 1.51%
```

Run 1: Report of SReAM — Data Link

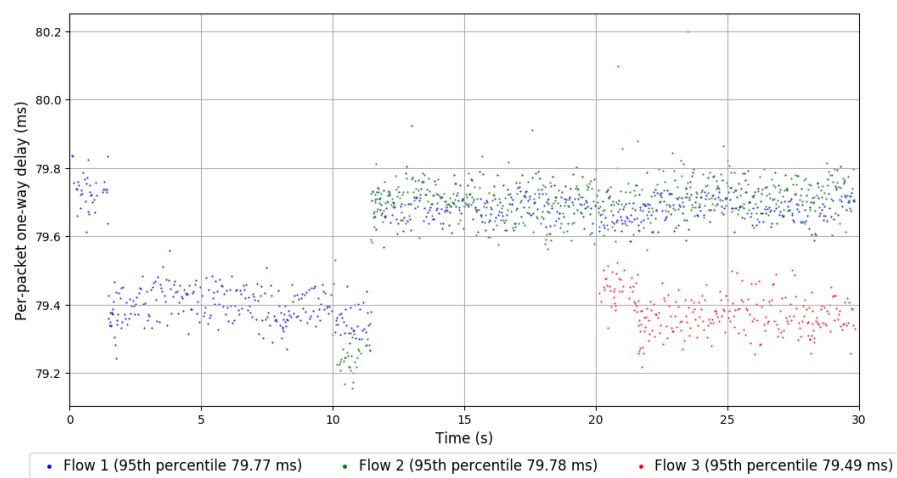
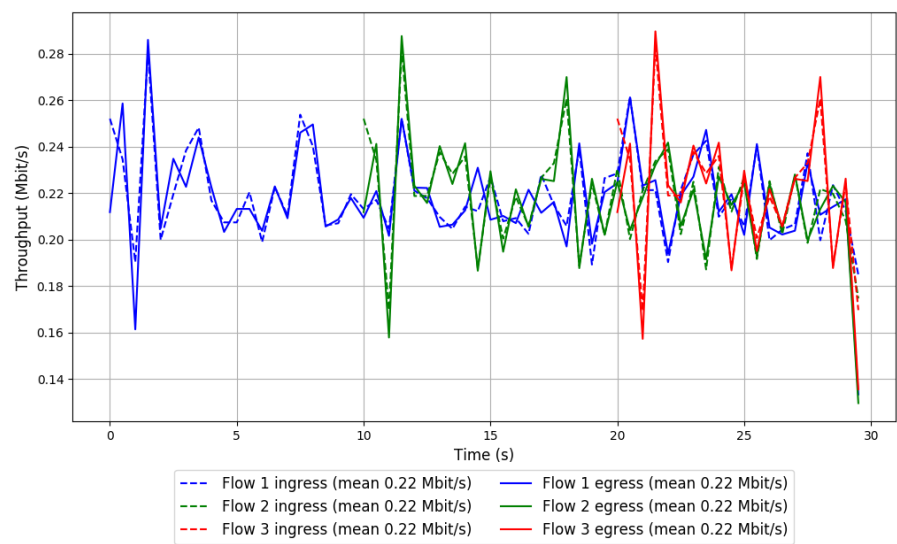


```
Run 2: Statistics of SCReAM

Start at: 2018-04-18 01:48:34
End at: 2018-04-18 01:49:04

# Below is generated by plot.py at 2018-04-18 07:32:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 79.771 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 79.768 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 79.785 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 79.486 ms
Loss rate: 1.50%
```

Run 2: Report of SReAM — Data Link

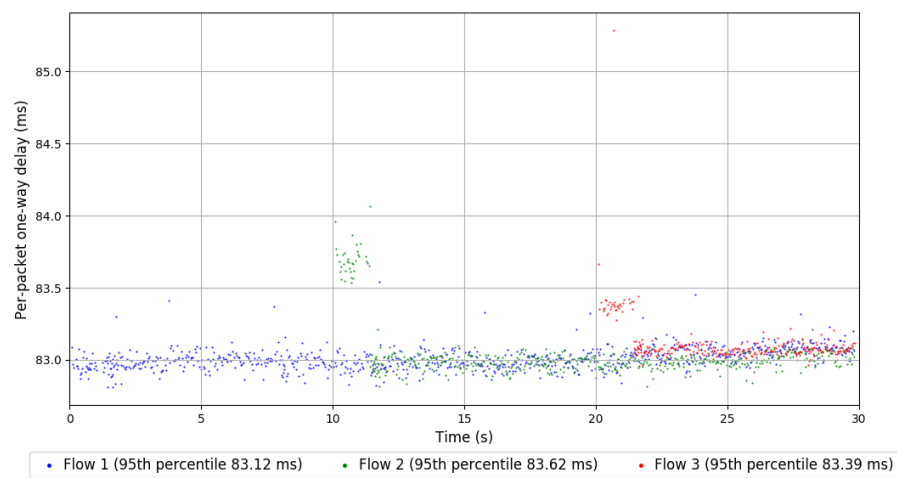
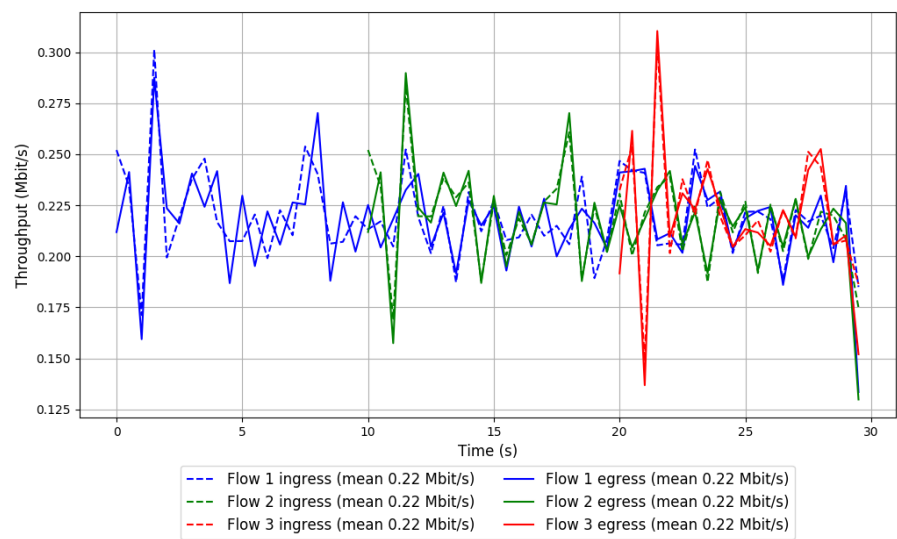


```
Run 3: Statistics of SCReAM

Start at: 2018-04-18 02:05:34
End at: 2018-04-18 02:06:04

# Below is generated by plot.py at 2018-04-18 07:32:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 83.293 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 83.120 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 83.618 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 83.393 ms
Loss rate: 1.50%
```


Run 3: Report of SReAM — Data Link

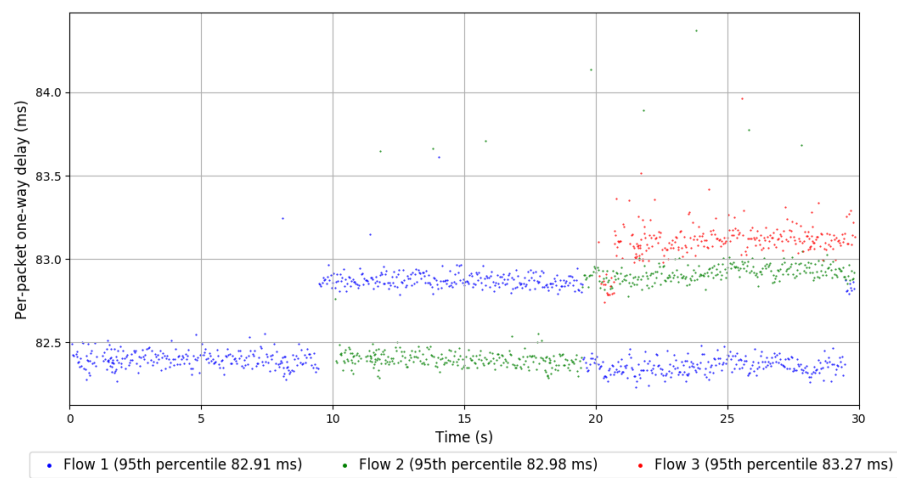
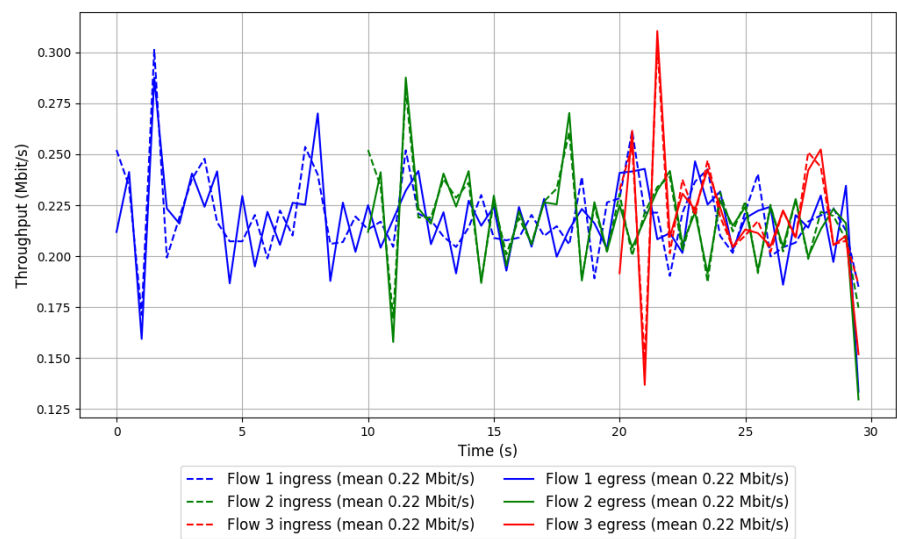


```
Run 4: Statistics of SCReAM

Start at: 2018-04-18 02:22:36
End at: 2018-04-18 02:23:06

# Below is generated by plot.py at 2018-04-18 07:32:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 83.146 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 82.913 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 82.979 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 83.268 ms
Loss rate: 1.50%
```

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2018-04-18 02:39:14

End at: 2018-04-18 02:39:44

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 84.814 ms

Loss rate: 0.85%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 84.699 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 84.818 ms

Loss rate: 0.85%

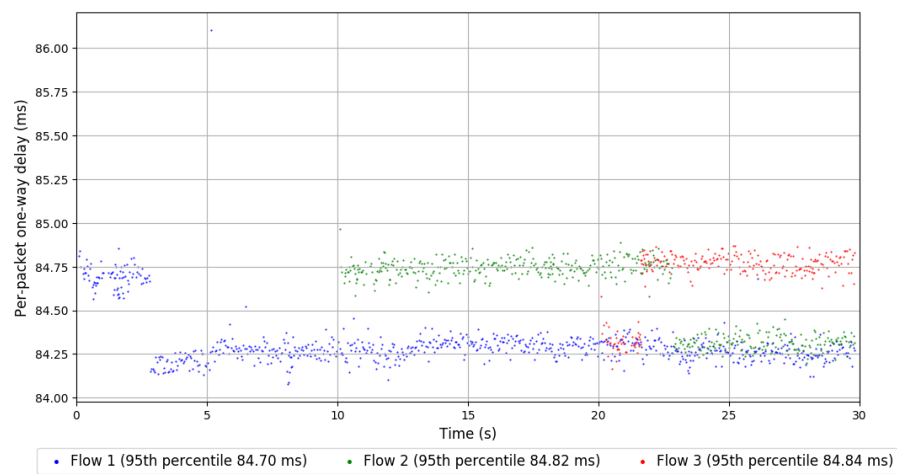
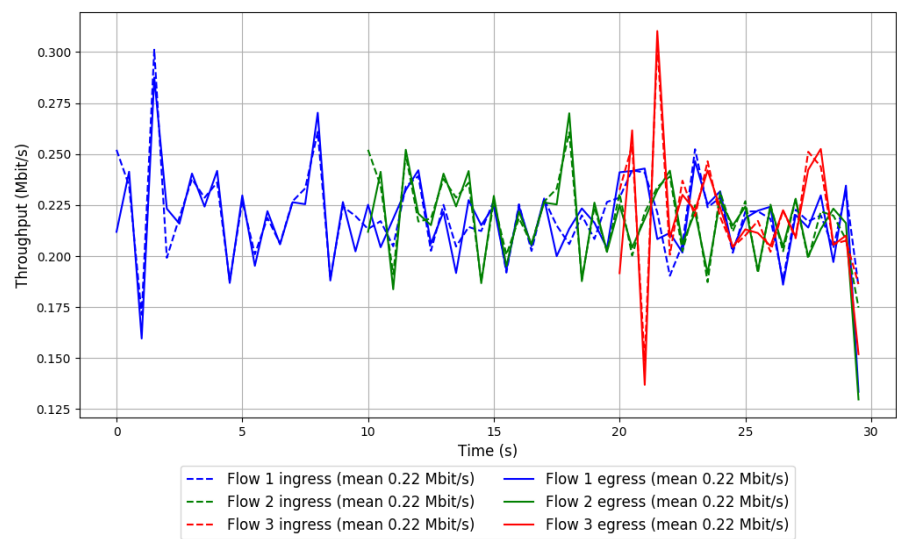
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 84.841 ms

Loss rate: 1.50%

Run 5: Report of SReAM — Data Link



Run 6: Statistics of SReAM

Start at: 2018-04-18 02:56:09

End at: 2018-04-18 02:56:39

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 84.658 ms

Loss rate: 0.85%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 84.683 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 84.517 ms

Loss rate: 0.85%

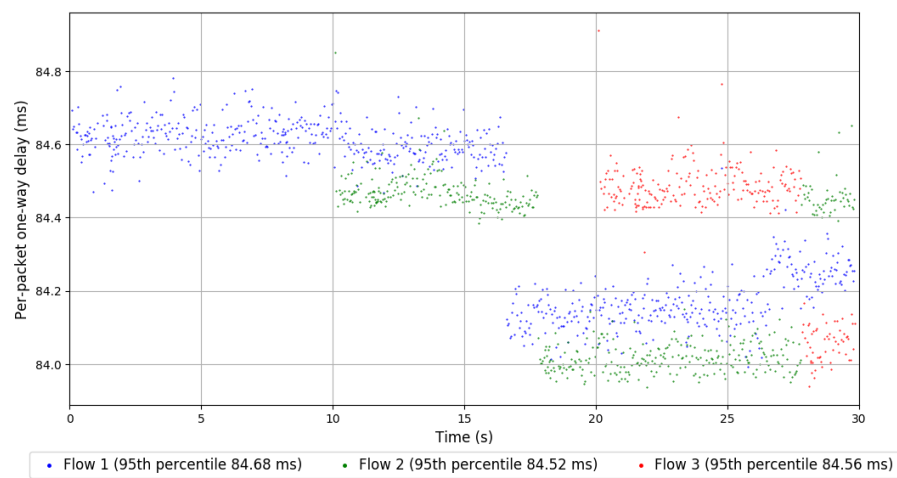
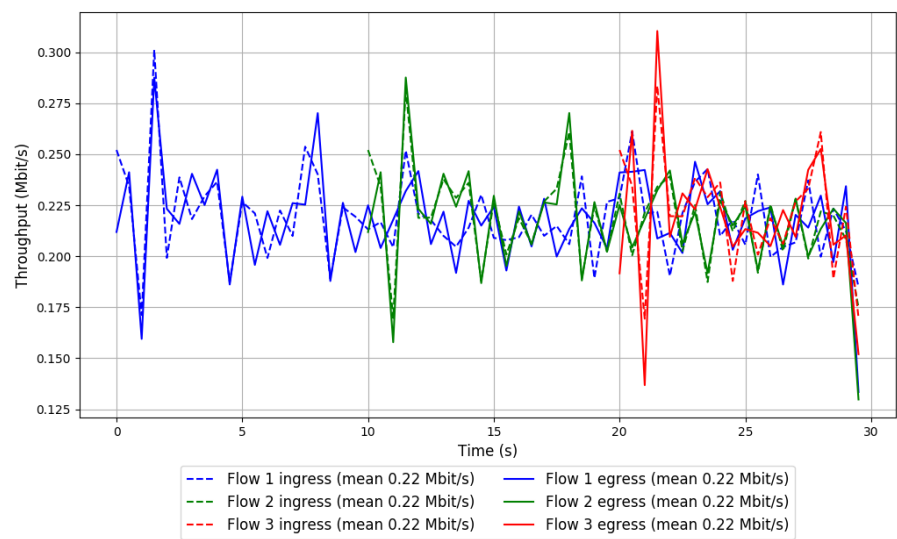
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 84.565 ms

Loss rate: 1.50%

Run 6: Report of SReAM — Data Link



Run 7: Statistics of SReAM

Start at: 2018-04-18 03:13:09

End at: 2018-04-18 03:13:39

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 85.474 ms

Loss rate: 0.79%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 85.420 ms

Loss rate: 0.52%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 85.505 ms

Loss rate: 0.85%

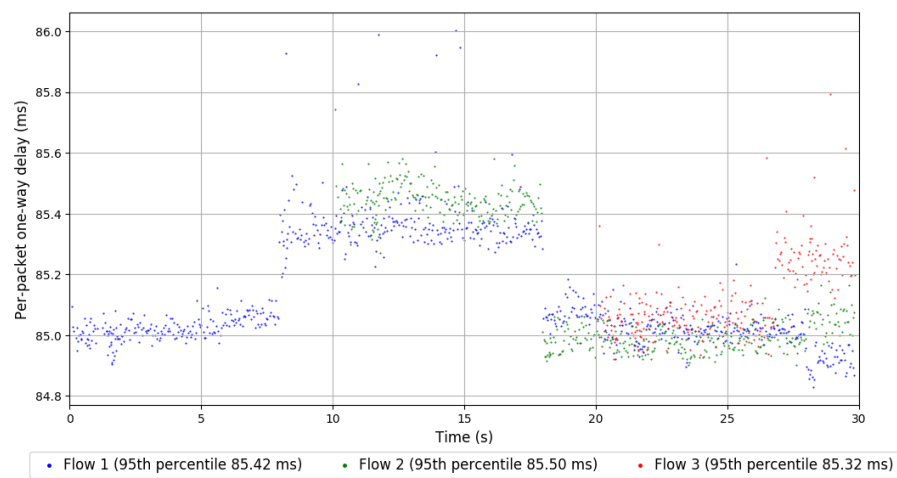
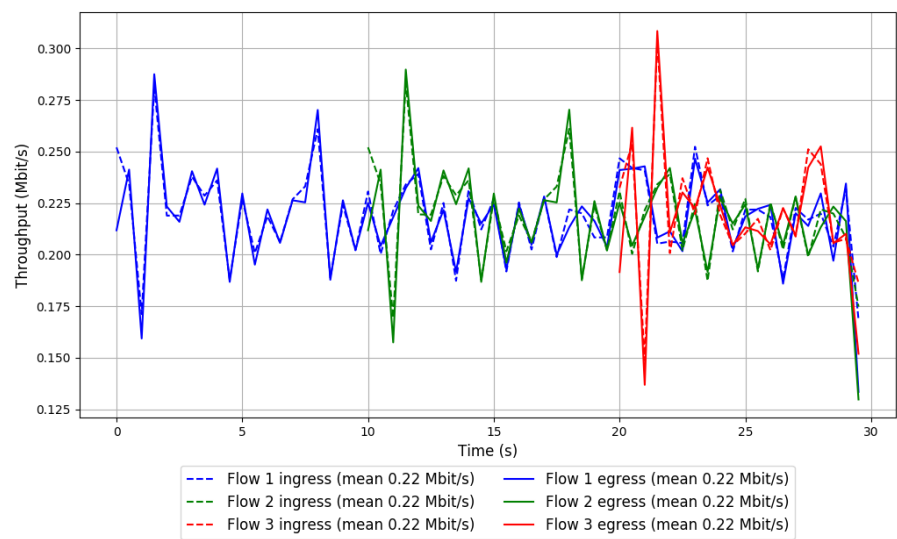
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 85.319 ms

Loss rate: 1.50%

Run 7: Report of SReAM — Data Link



Run 8: Statistics of SCReAM

Start at: 2018-04-18 03:30:08

End at: 2018-04-18 03:30:38

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 85.547 ms

Loss rate: 0.85%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 85.568 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 85.508 ms

Loss rate: 0.85%

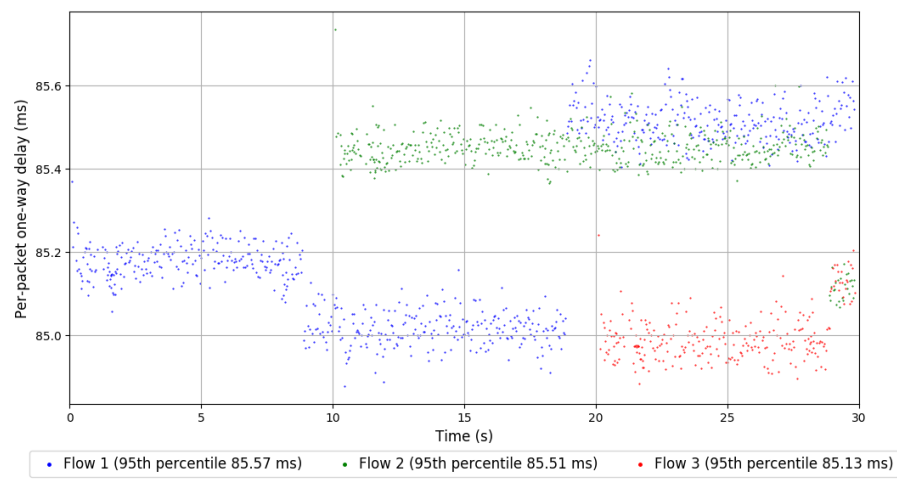
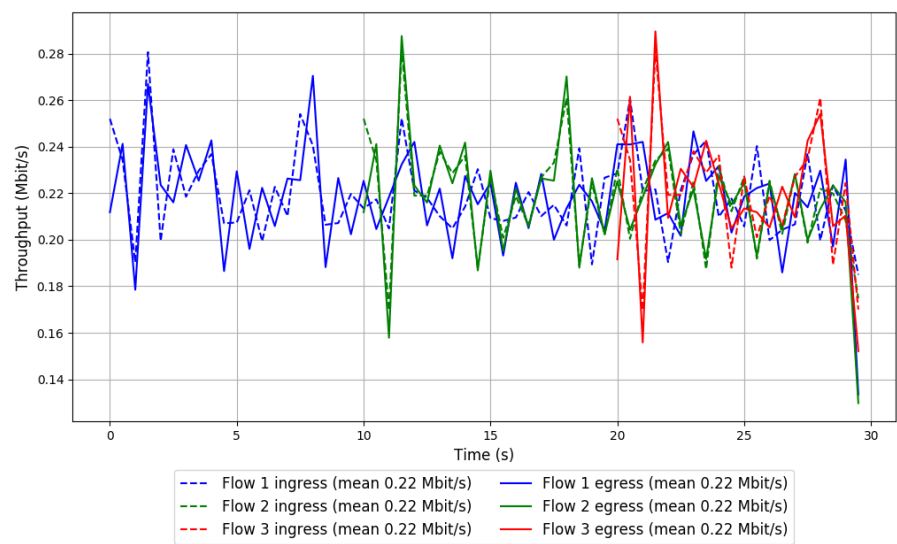
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 85.129 ms

Loss rate: 1.50%

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SReAM

Start at: 2018-04-18 03:46:56

End at: 2018-04-18 03:47:26

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 86.361 ms

Loss rate: 0.85%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 86.394 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 86.166 ms

Loss rate: 0.85%

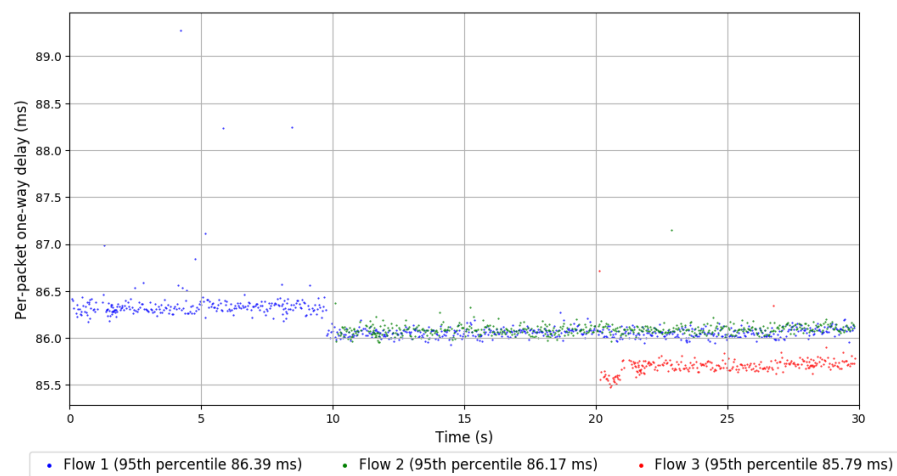
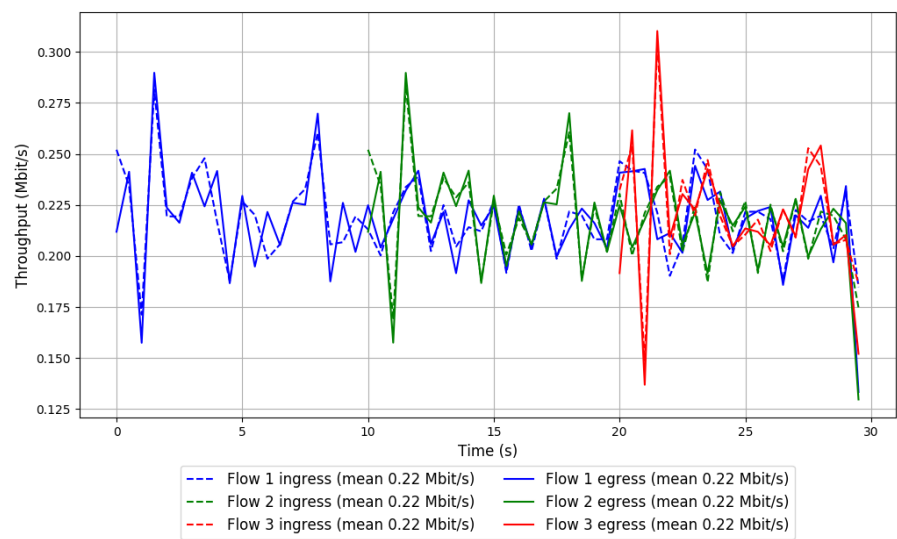
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 85.791 ms

Loss rate: 1.50%

Run 9: Report of SReAM — Data Link

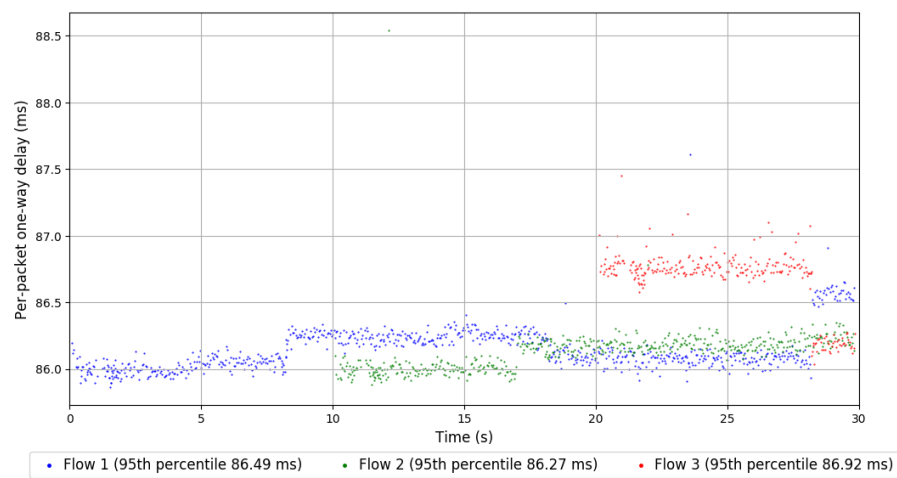
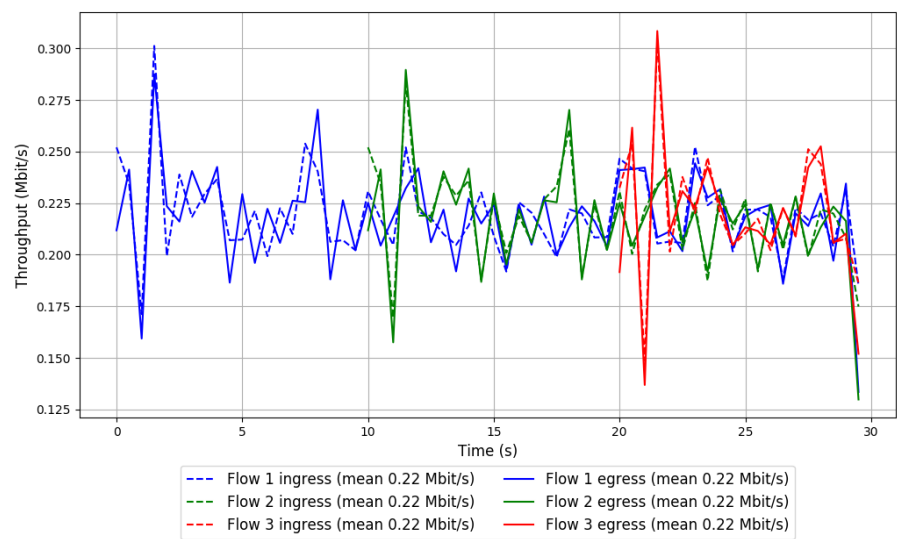


```
Run 10: Statistics of SReAM

Start at: 2018-04-18 04:03:59
End at: 2018-04-18 04:04:29

# Below is generated by plot.py at 2018-04-18 07:32:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 86.781 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.493 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.269 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.923 ms
Loss rate: 1.50%
```

Run 10: Report of SReAM — Data Link

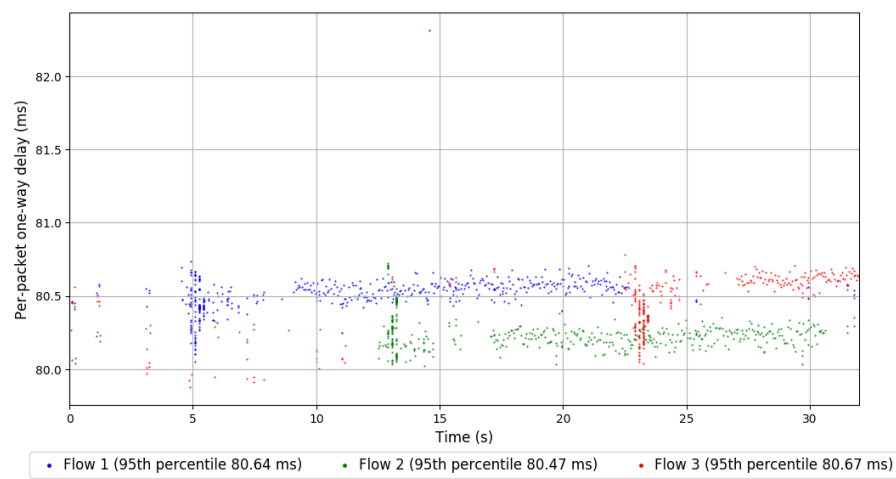
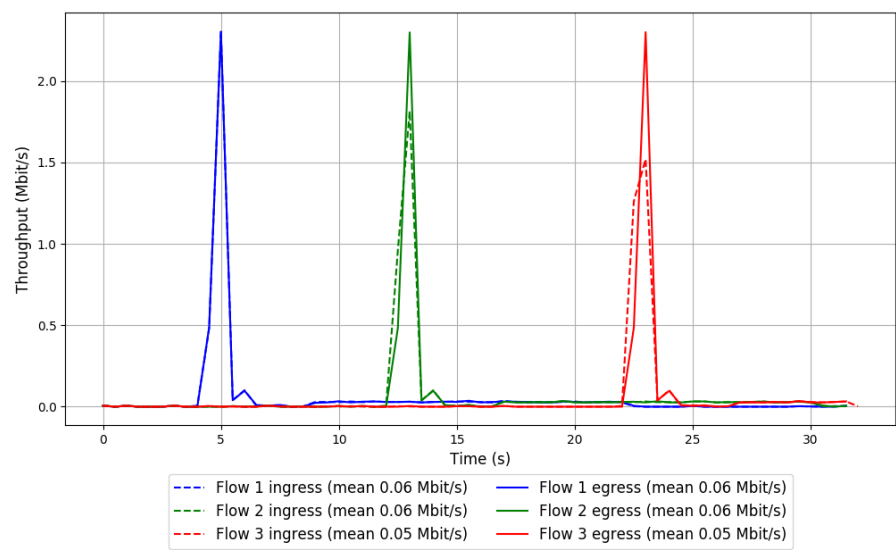


```
Run 1: Statistics of WebRTC media

Start at: 2018-04-18 01:34:36
End at: 2018-04-18 01:35:06

# Below is generated by plot.py at 2018-04-18 07:32:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 80.648 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 80.642 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 80.466 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 80.670 ms
Loss rate: 0.24%
```


Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-04-18 01:50:59

End at: 2018-04-18 01:51:30

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 79.550 ms

Loss rate: 0.10%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 79.503 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 79.570 ms

Loss rate: 0.00%

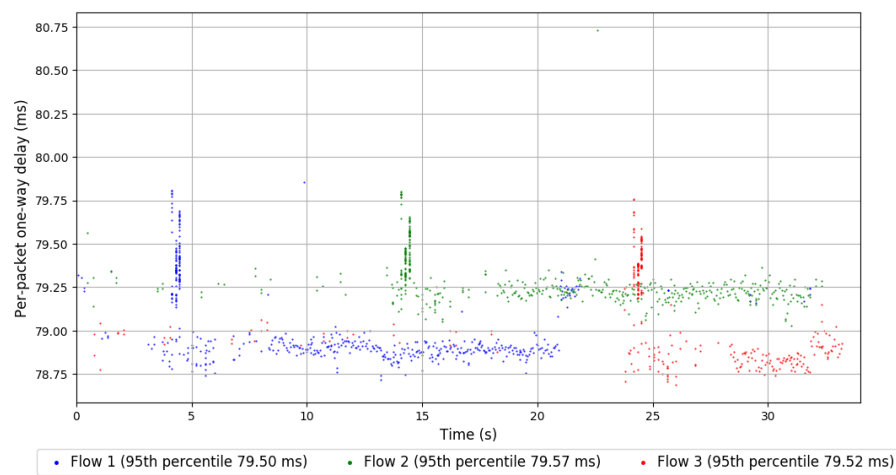
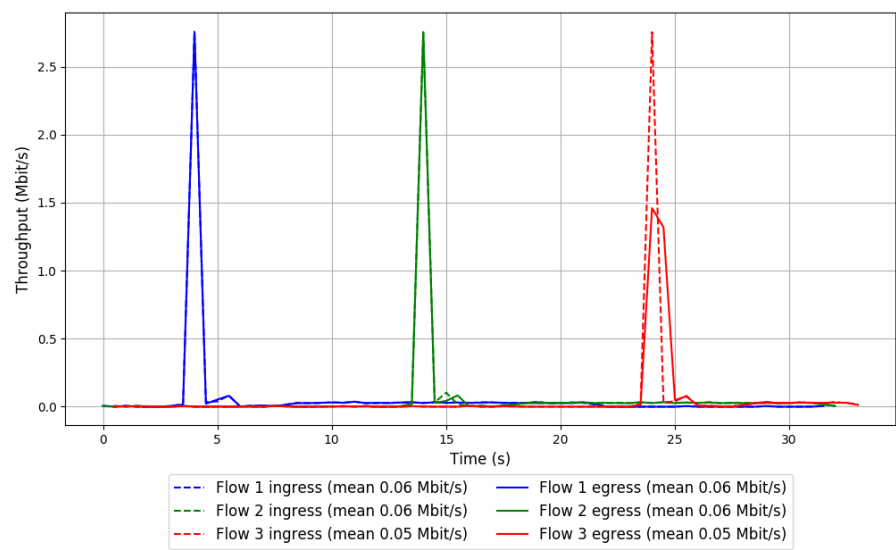
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 79.522 ms

Loss rate: 0.32%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-04-18 02:08:00

End at: 2018-04-18 02:08:30

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 83.676 ms

Loss rate: 0.09%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 83.646 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 83.732 ms

Loss rate: 0.00%

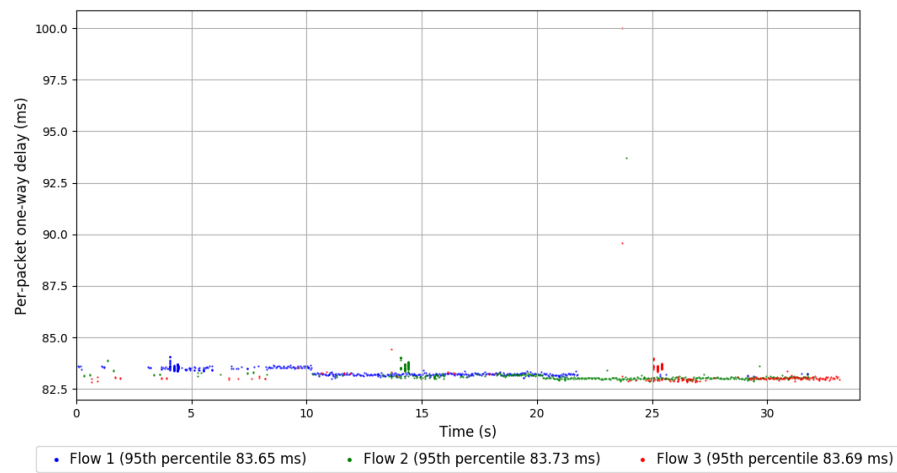
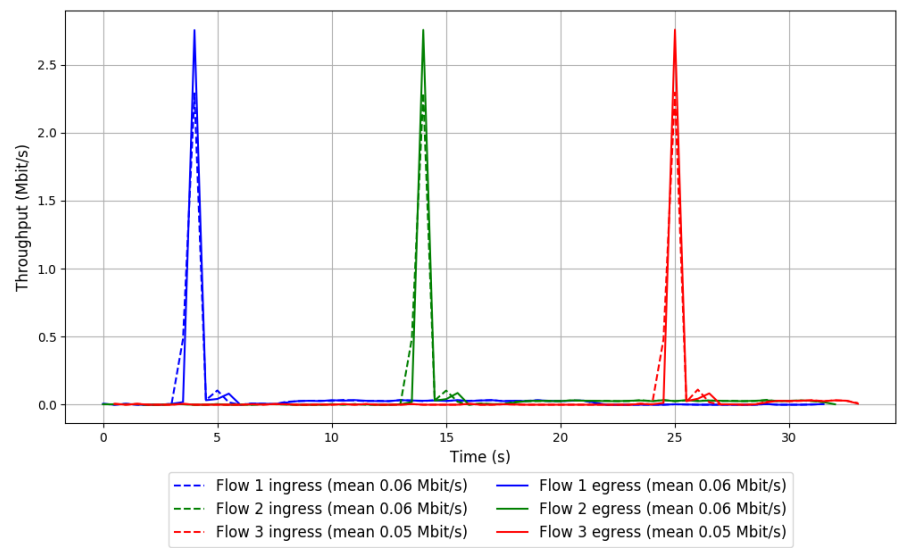
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 83.685 ms

Loss rate: 0.29%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-04-18 02:25:01

End at: 2018-04-18 02:25:31

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 82.908 ms

Loss rate: 0.07%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 82.799 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 82.763 ms

Loss rate: 0.00%

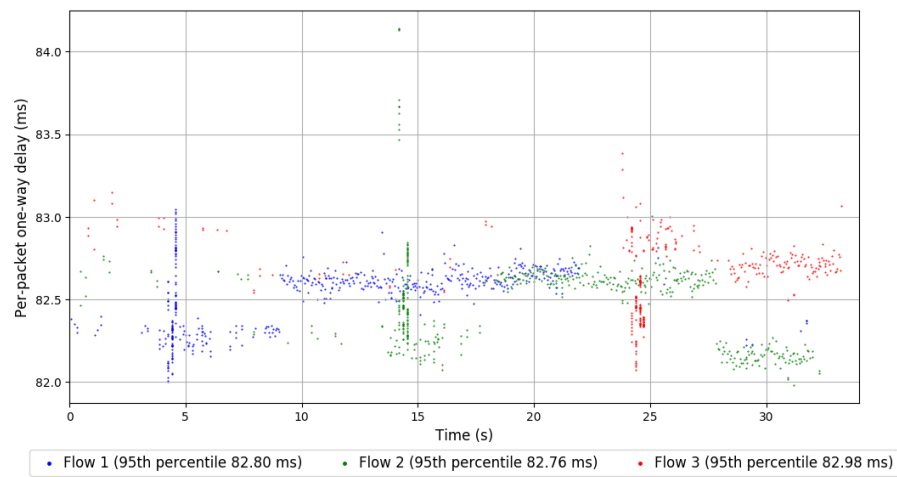
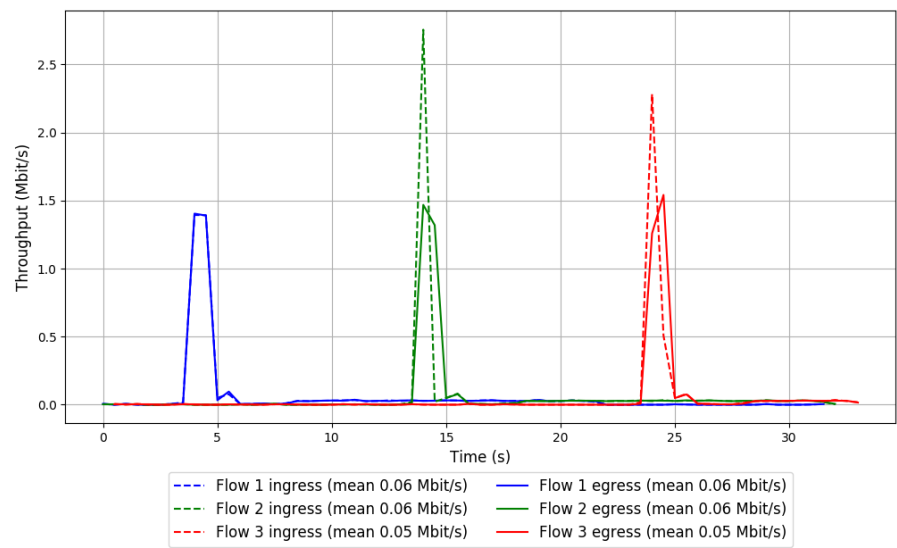
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 82.977 ms

Loss rate: 0.24%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-04-18 02:41:40

End at: 2018-04-18 02:42:10

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 85.009 ms

Loss rate: 0.07%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 85.061 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 84.485 ms

Loss rate: 0.00%

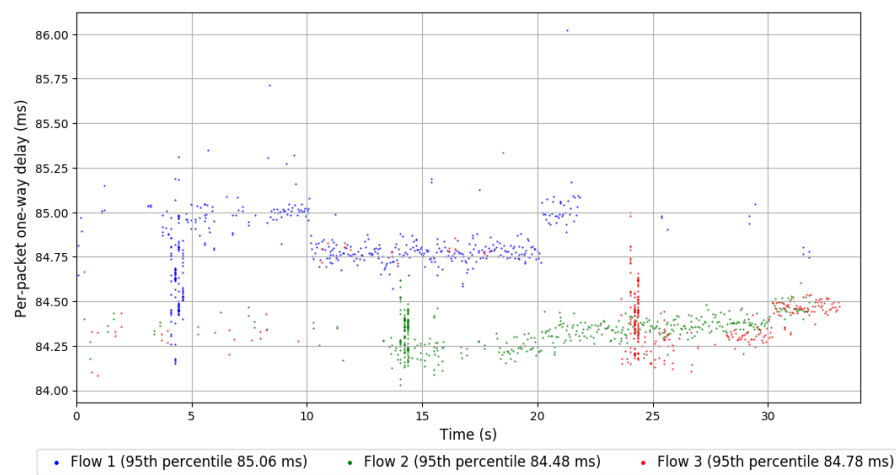
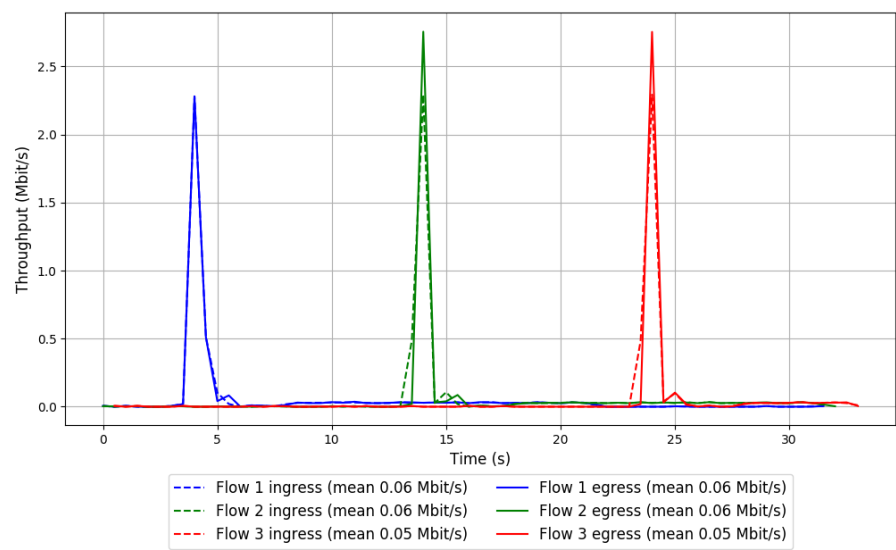
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 84.780 ms

Loss rate: 0.24%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2018-04-18 02:58:36

End at: 2018-04-18 02:59:06

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 84.830 ms

Loss rate: 0.10%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 84.455 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 84.262 ms

Loss rate: 0.00%

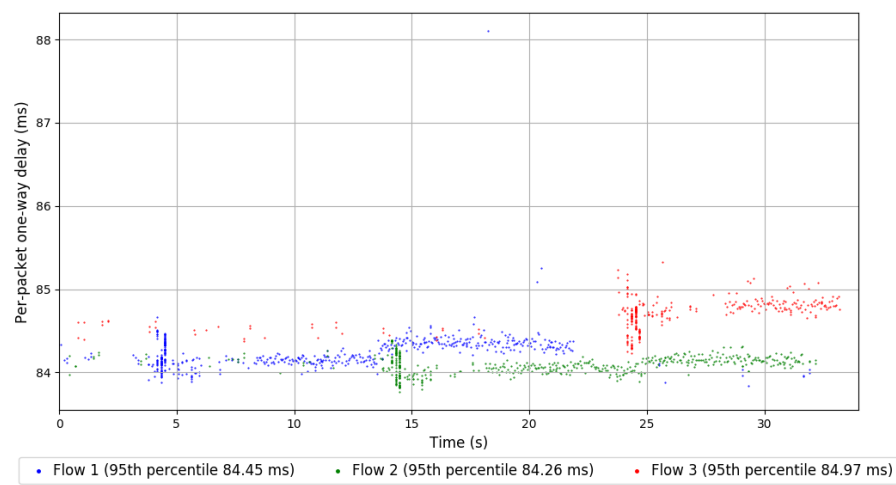
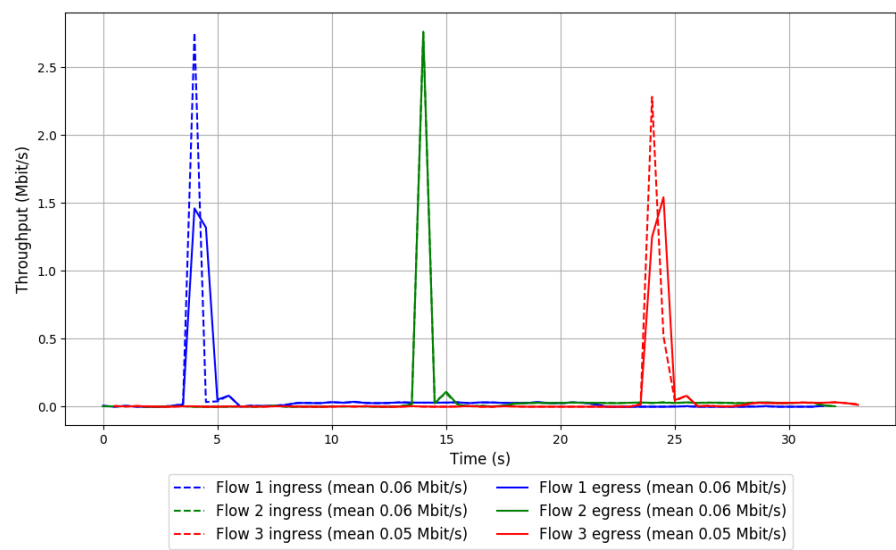
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 84.967 ms

Loss rate: 0.32%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2018-04-18 03:15:35

End at: 2018-04-18 03:16:05

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 85.694 ms

Loss rate: 0.11%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 85.644 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 85.757 ms

Loss rate: 0.00%

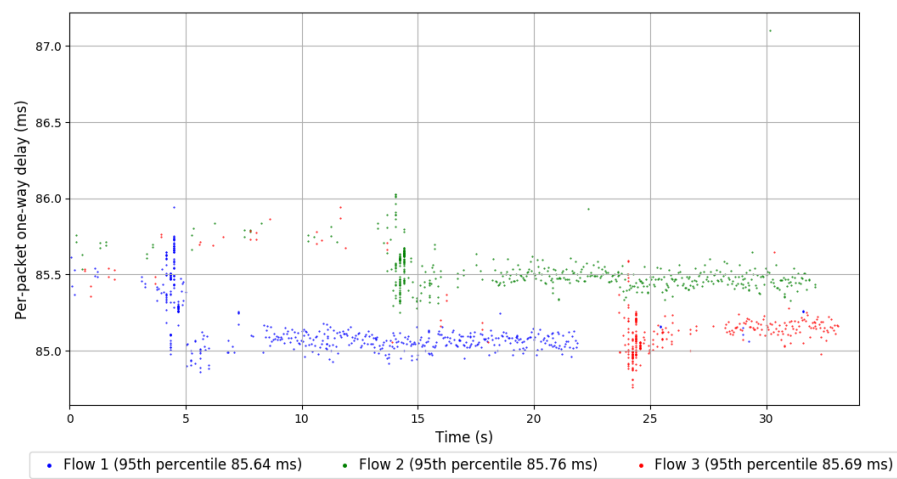
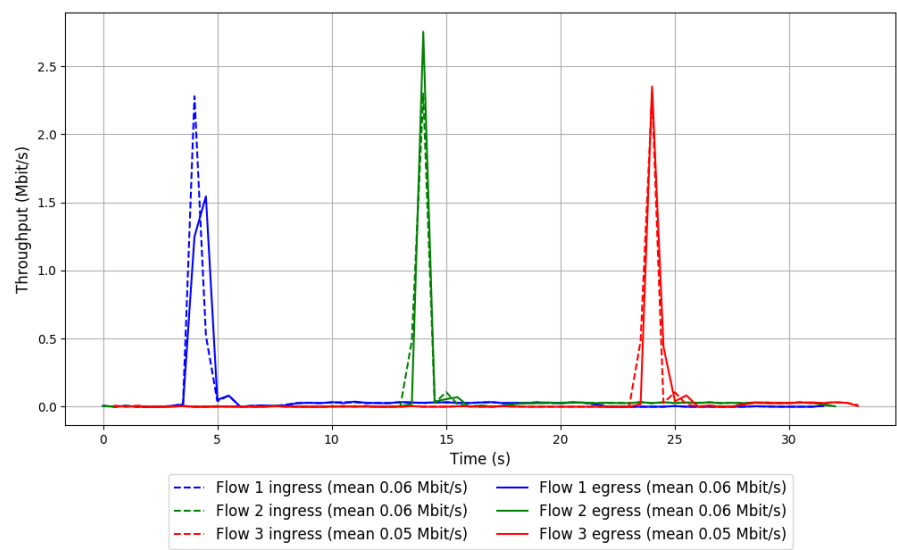
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 85.692 ms

Loss rate: 0.36%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2018-04-18 03:32:34

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

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 85.605 ms

Loss rate: 0.07%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 85.578 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 85.610 ms

Loss rate: 0.00%

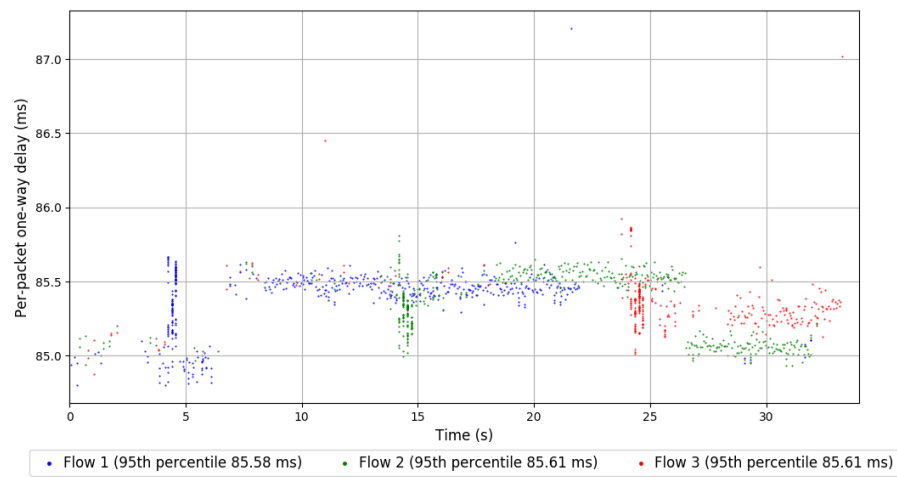
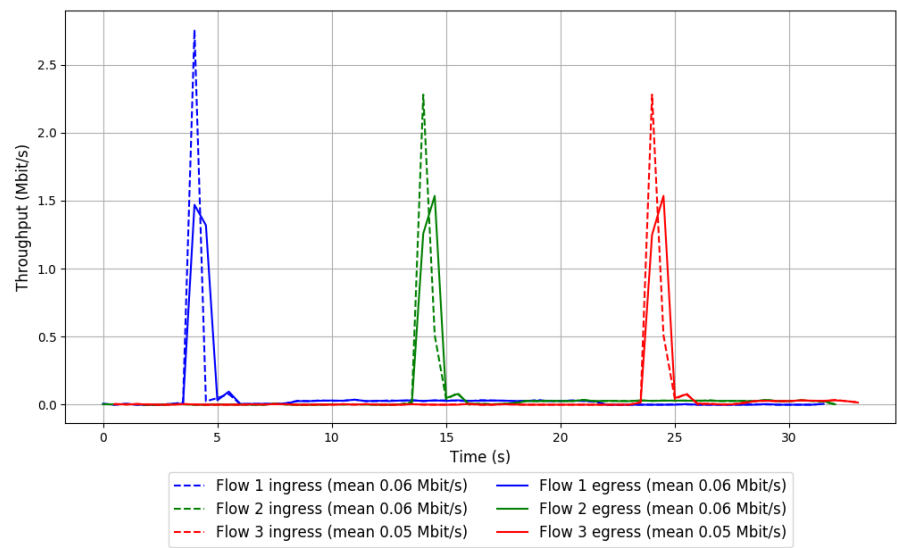
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 85.613 ms

Loss rate: 0.24%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2018-04-18 03:49:22

End at: 2018-04-18 03:49:52

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 86.300 ms

Loss rate: 0.07%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 86.246 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 86.351 ms

Loss rate: 0.00%

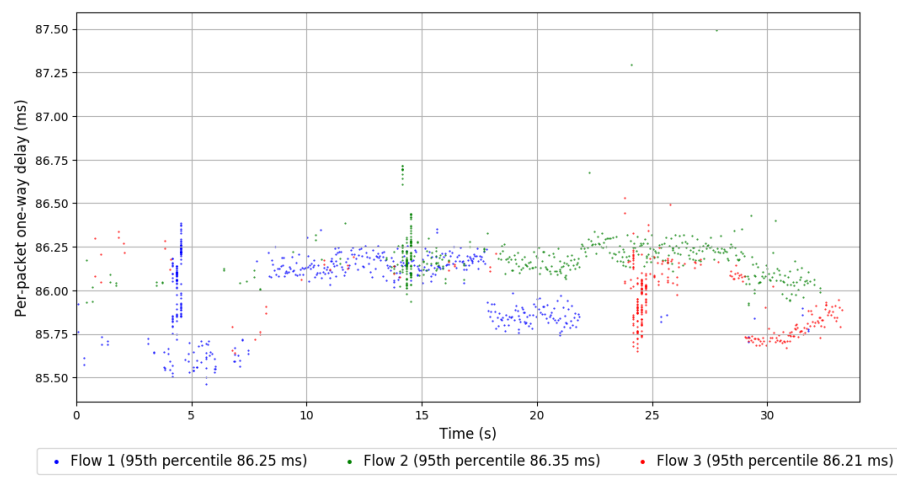
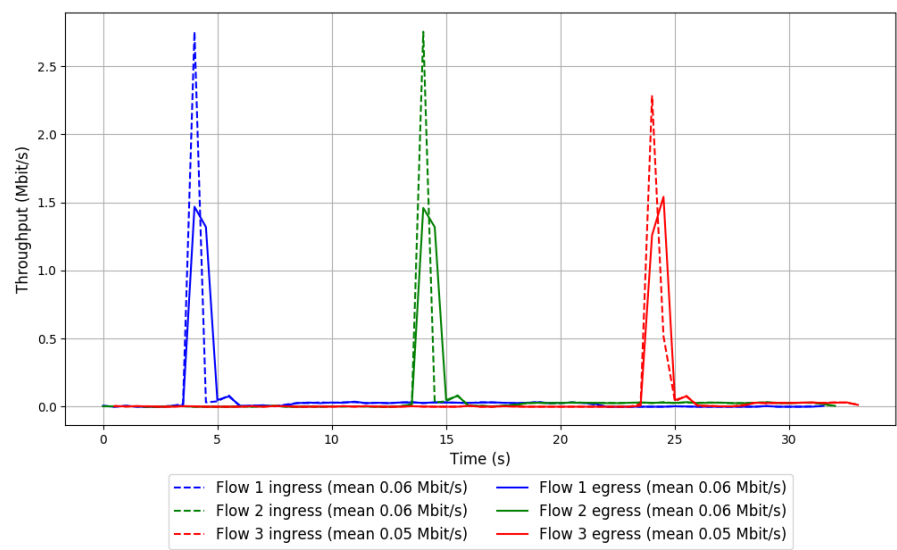
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 86.214 ms

Loss rate: 0.24%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2018-04-18 04:06:25

End at: 2018-04-18 04:06:55

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 86.617 ms

Loss rate: 0.10%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 86.659 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 86.591 ms

Loss rate: 0.00%

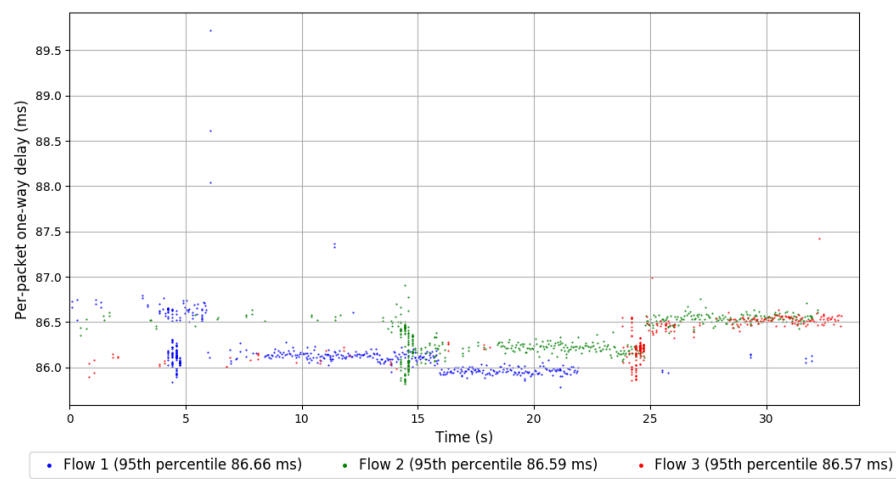
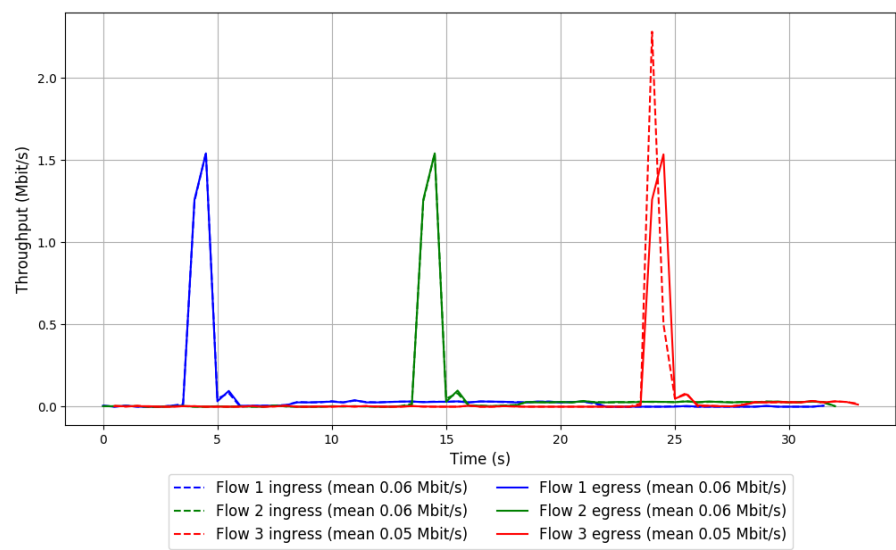
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 86.569 ms

Loss rate: 0.32%

Run 10: Report of WebRTC media — Data Link

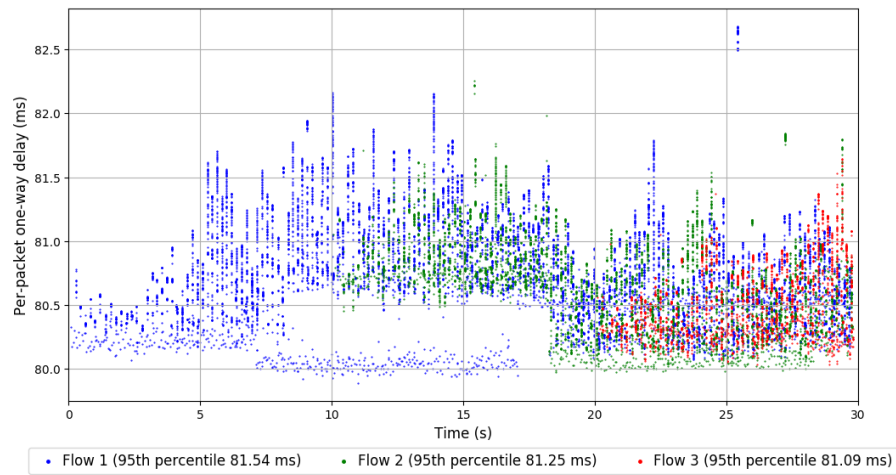
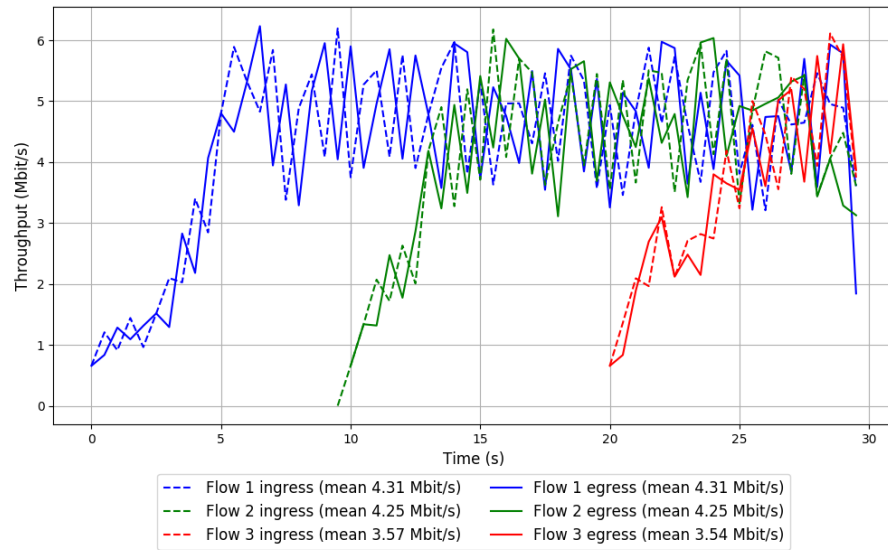


```
Run 1: Statistics of Sprout

Start at: 2018-04-18 01:35:19
End at: 2018-04-18 01:35:49

# Below is generated by plot.py at 2018-04-18 07:32:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.27 Mbit/s
95th percentile per-packet one-way delay: 81.408 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 4.31 Mbit/s
95th percentile per-packet one-way delay: 81.539 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 4.25 Mbit/s
95th percentile per-packet one-way delay: 81.250 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 3.54 Mbit/s
95th percentile per-packet one-way delay: 81.094 ms
Loss rate: 2.32%
```

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2018-04-18 01:51:42

End at: 2018-04-18 01:52:12

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.51 Mbit/s

95th percentile per-packet one-way delay: 79.948 ms

Loss rate: 0.99%

-- Flow 1:

Average throughput: 4.54 Mbit/s

95th percentile per-packet one-way delay: 80.091 ms

Loss rate: 0.55%

-- Flow 2:

Average throughput: 4.01 Mbit/s

95th percentile per-packet one-way delay: 79.742 ms

Loss rate: 1.00%

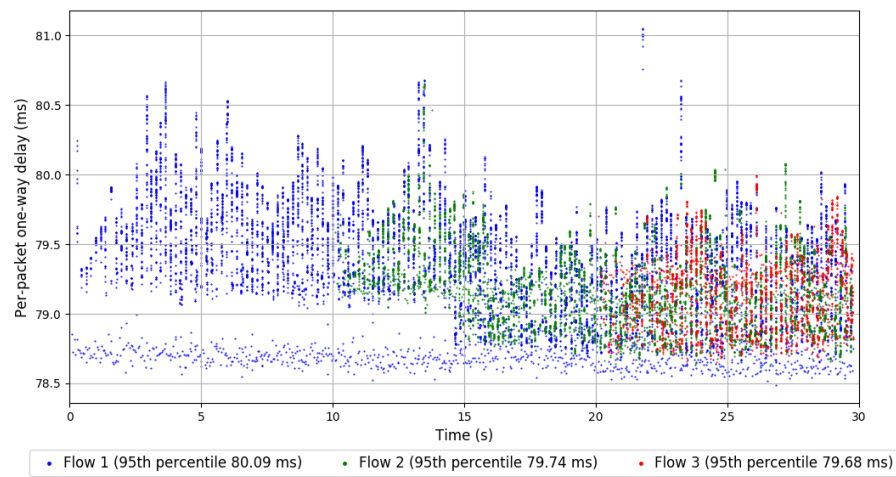
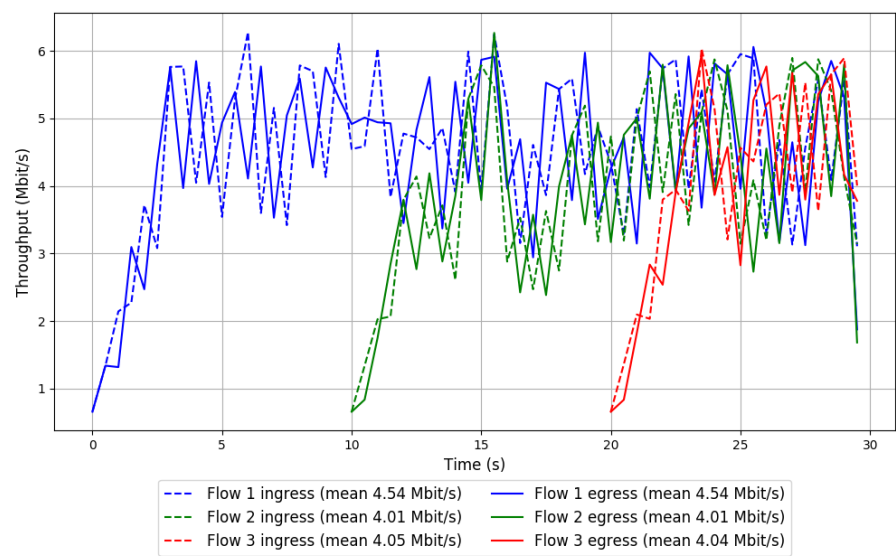
-- Flow 3:

Average throughput: 4.04 Mbit/s

95th percentile per-packet one-way delay: 79.679 ms

Loss rate: 2.44%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2018-04-18 02:08:43

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

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.54 Mbit/s

95th percentile per-packet one-way delay: 84.465 ms

Loss rate: 1.27%

-- Flow 1:

Average throughput: 4.23 Mbit/s

95th percentile per-packet one-way delay: 84.486 ms

Loss rate: 0.88%

-- Flow 2:

Average throughput: 3.91 Mbit/s

95th percentile per-packet one-way delay: 84.434 ms

Loss rate: 1.26%

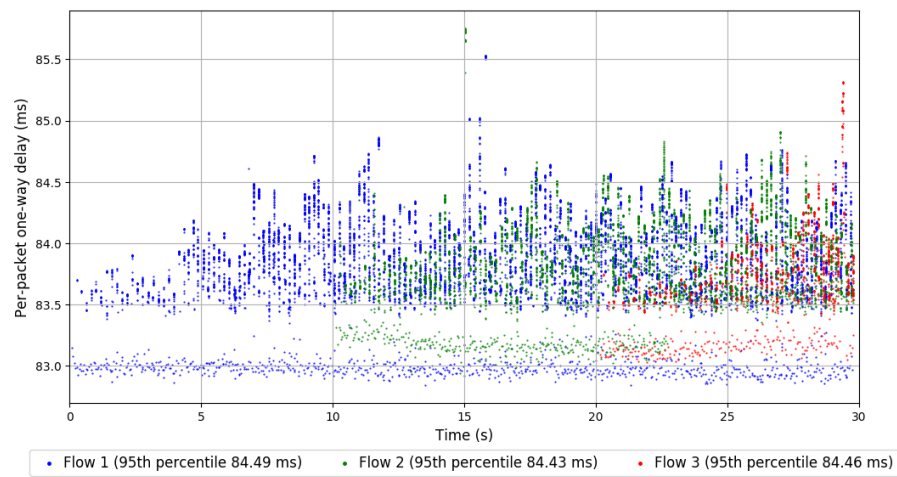
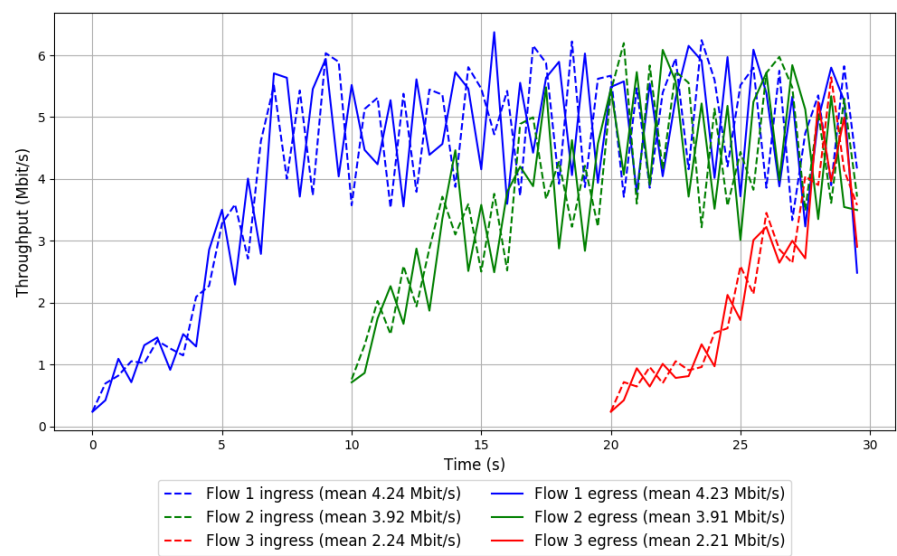
-- Flow 3:

Average throughput: 2.21 Mbit/s

95th percentile per-packet one-way delay: 84.464 ms

Loss rate: 3.55%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2018-04-18 02:25:44

End at: 2018-04-18 02:26:14

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.69 Mbit/s

95th percentile per-packet one-way delay: 83.345 ms

Loss rate: 0.91%

-- Flow 1:

Average throughput: 4.37 Mbit/s

95th percentile per-packet one-way delay: 83.357 ms

Loss rate: 0.09%

-- Flow 2:

Average throughput: 3.54 Mbit/s

95th percentile per-packet one-way delay: 83.264 ms

Loss rate: 1.42%

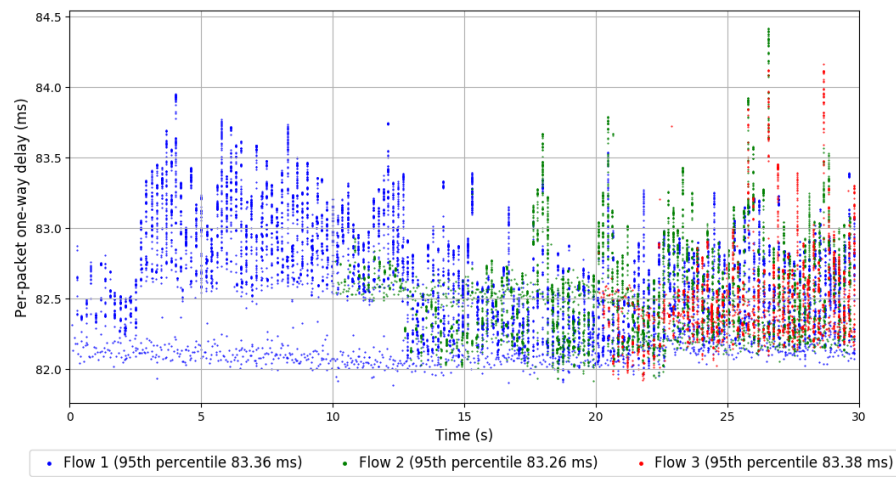
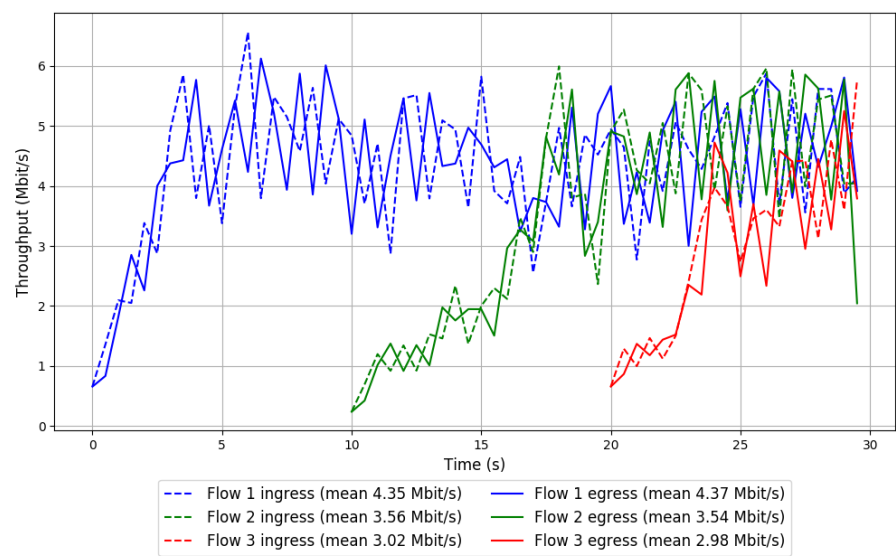
-- Flow 3:

Average throughput: 2.98 Mbit/s

95th percentile per-packet one-way delay: 83.377 ms

Loss rate: 3.31%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2018-04-18 02:42:23

End at: 2018-04-18 02:42:53

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.77 Mbit/s

95th percentile per-packet one-way delay: 85.804 ms

Loss rate: 0.91%

-- Flow 1:

Average throughput: 4.31 Mbit/s

95th percentile per-packet one-way delay: 85.782 ms

Loss rate: 0.60%

-- Flow 2:

Average throughput: 3.63 Mbit/s

95th percentile per-packet one-way delay: 85.851 ms

Loss rate: 0.92%

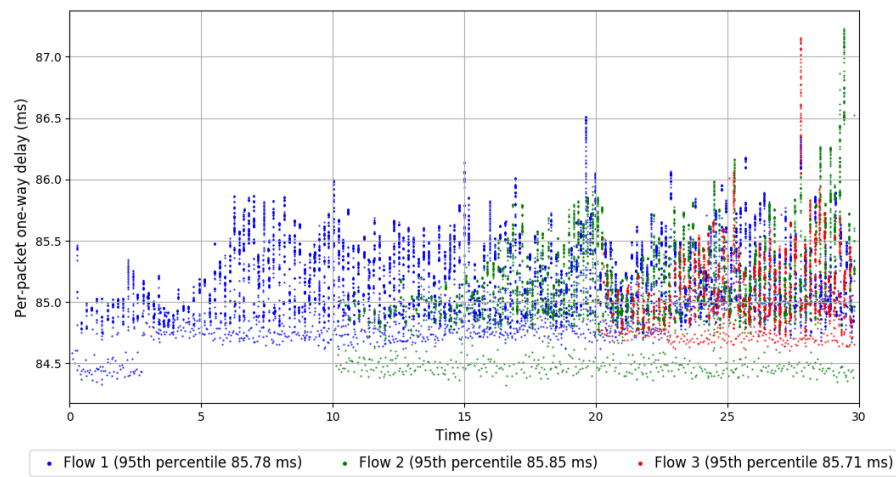
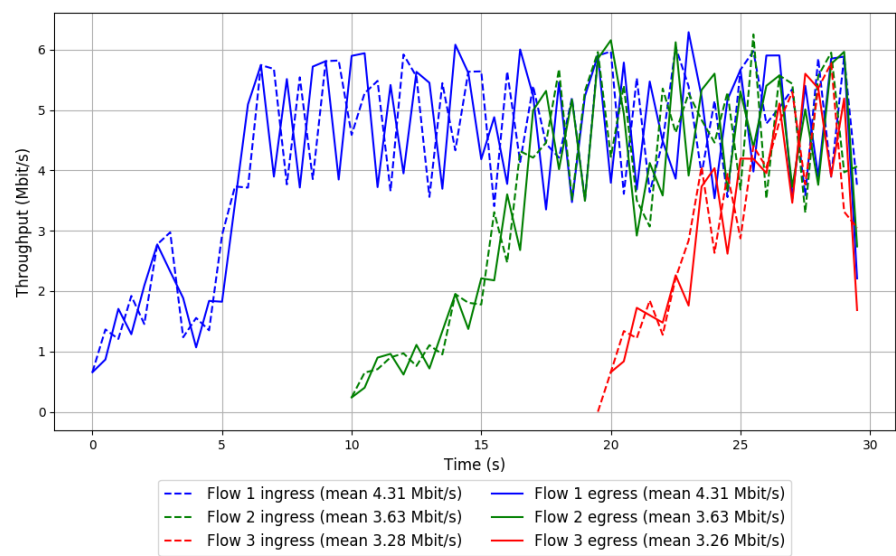
-- Flow 3:

Average throughput: 3.26 Mbit/s

95th percentile per-packet one-way delay: 85.710 ms

Loss rate: 2.11%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2018-04-18 02:59:19

End at: 2018-04-18 02:59:49

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.57 Mbit/s

95th percentile per-packet one-way delay: 85.291 ms

Loss rate: 1.20%

-- Flow 1:

Average throughput: 4.33 Mbit/s

95th percentile per-packet one-way delay: 85.275 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 3.69 Mbit/s

95th percentile per-packet one-way delay: 85.366 ms

Loss rate: 1.23%

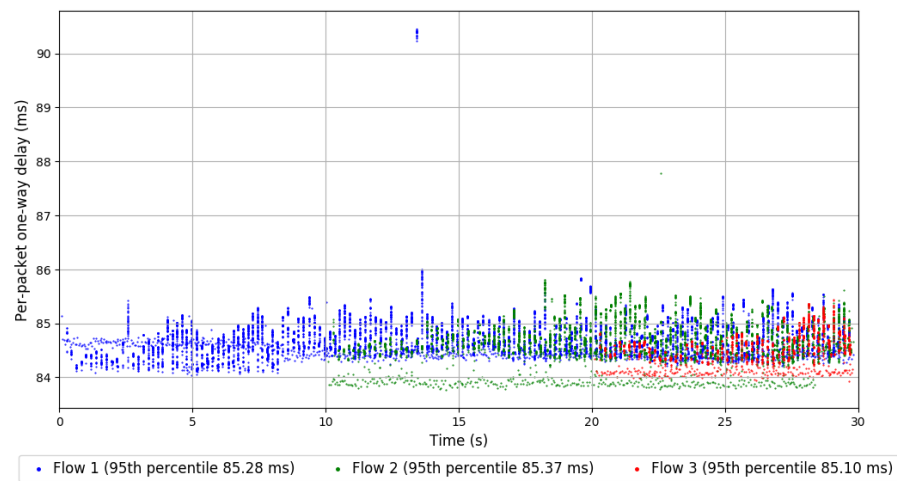
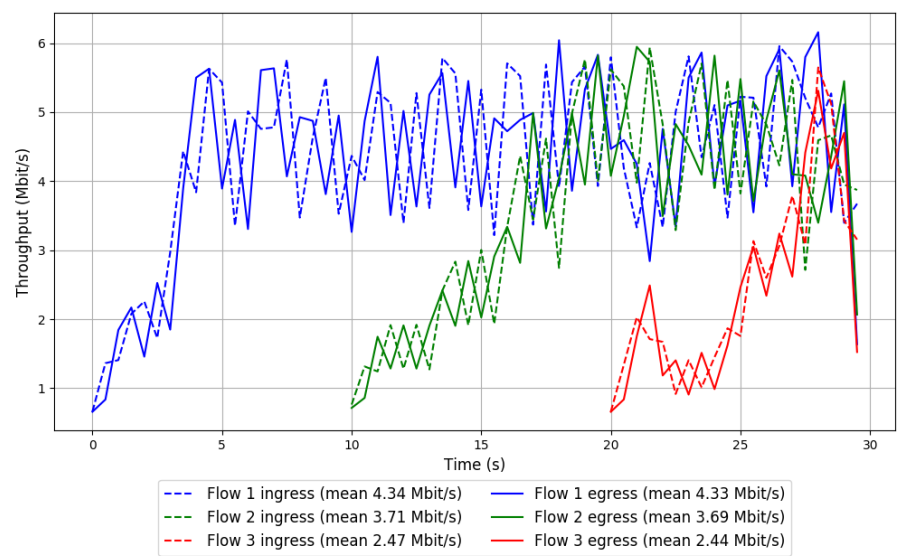
-- Flow 3:

Average throughput: 2.44 Mbit/s

95th percentile per-packet one-way delay: 85.097 ms

Loss rate: 3.34%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2018-04-18 03:16:18

End at: 2018-04-18 03:16:48

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.63 Mbit/s

95th percentile per-packet one-way delay: 86.323 ms

Loss rate: 1.11%

-- Flow 1:

Average throughput: 3.80 Mbit/s

95th percentile per-packet one-way delay: 86.319 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 4.25 Mbit/s

95th percentile per-packet one-way delay: 86.235 ms

Loss rate: 0.78%

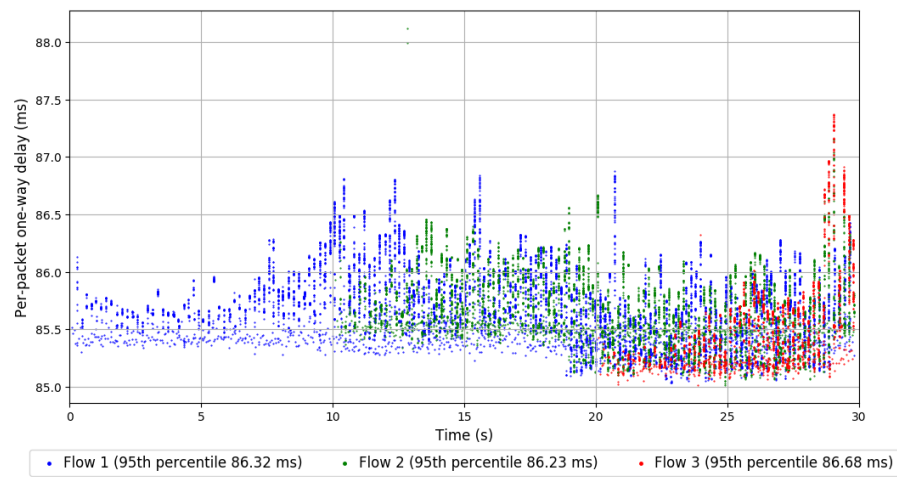
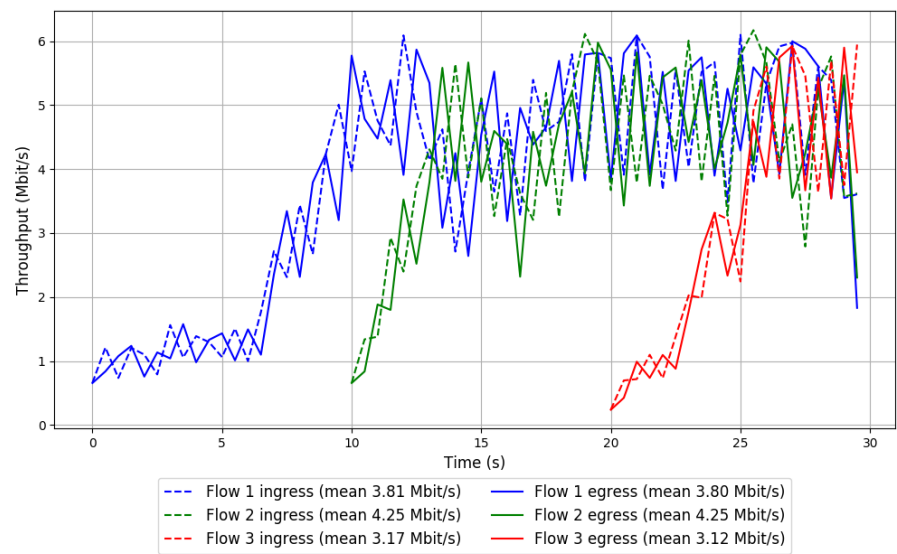
-- Flow 3:

Average throughput: 3.12 Mbit/s

95th percentile per-packet one-way delay: 86.681 ms

Loss rate: 3.20%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2018-04-18 03:33:17

End at: 2018-04-18 03:33:47

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.01 Mbit/s

95th percentile per-packet one-way delay: 86.176 ms

Loss rate: 1.02%

-- Flow 1:

Average throughput: 4.29 Mbit/s

95th percentile per-packet one-way delay: 86.198 ms

Loss rate: 0.59%

-- Flow 2:

Average throughput: 3.86 Mbit/s

95th percentile per-packet one-way delay: 86.095 ms

Loss rate: 1.08%

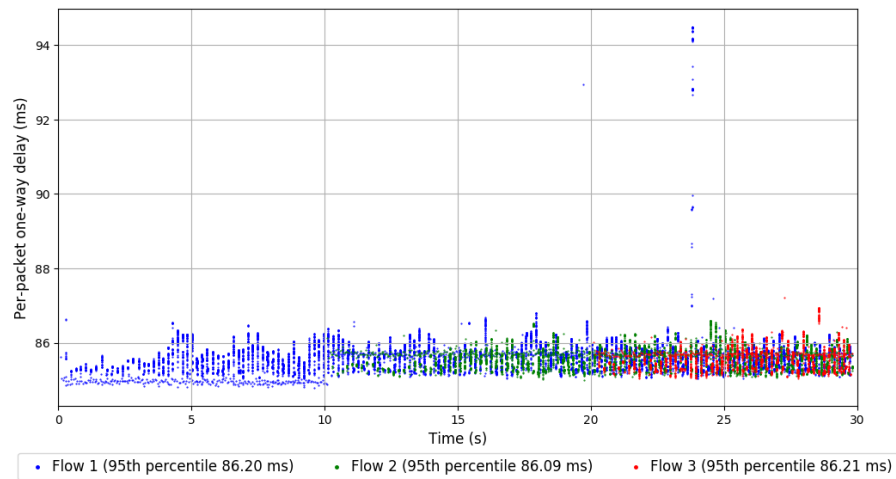
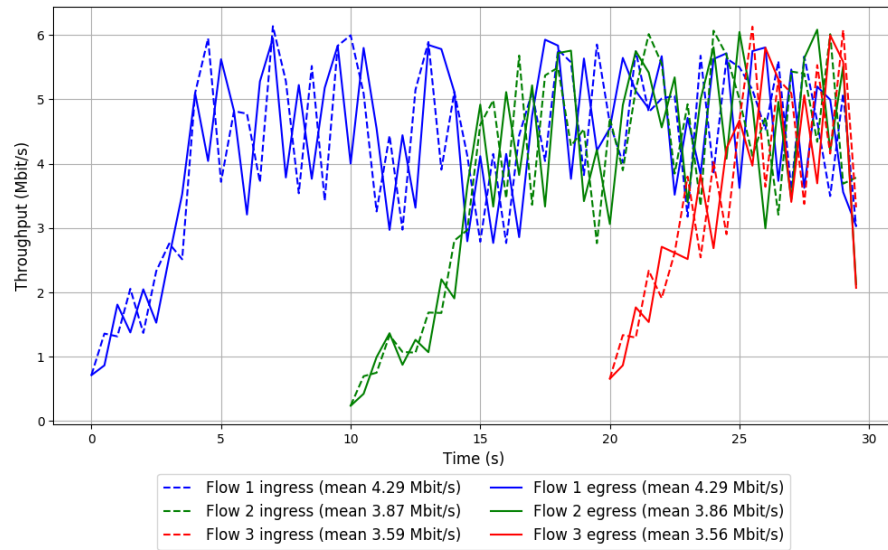
-- Flow 3:

Average throughput: 3.56 Mbit/s

95th percentile per-packet one-way delay: 86.214 ms

Loss rate: 2.46%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

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

End at: 2018-04-18 03:50:34

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.34 Mbit/s

95th percentile per-packet one-way delay: 87.247 ms

Loss rate: 0.94%

-- Flow 1:

Average throughput: 4.42 Mbit/s

95th percentile per-packet one-way delay: 87.314 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 4.17 Mbit/s

95th percentile per-packet one-way delay: 87.161 ms

Loss rate: 1.08%

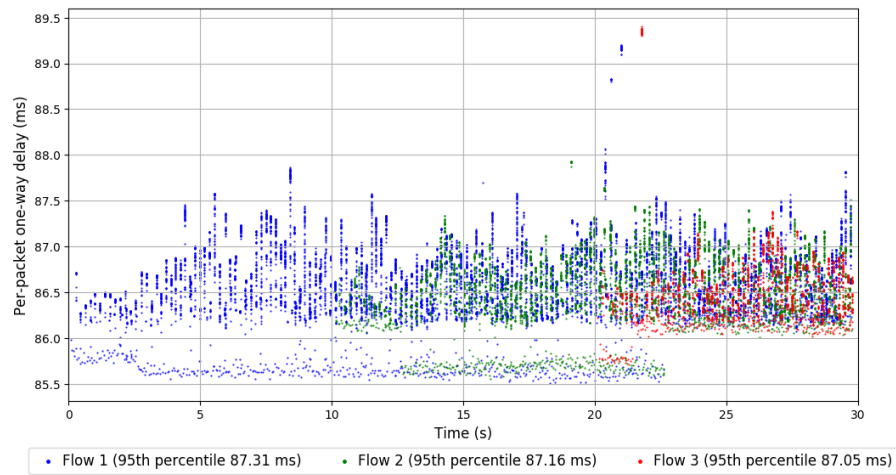
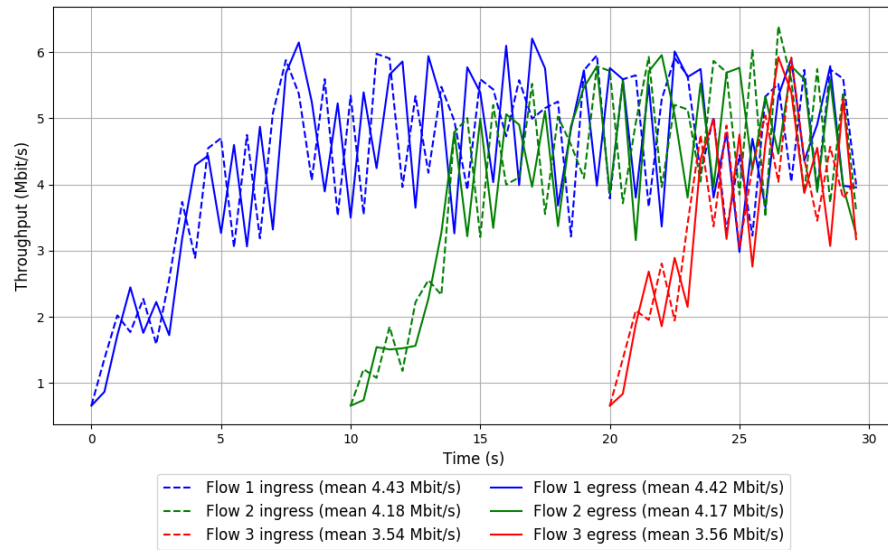
-- Flow 3:

Average throughput: 3.56 Mbit/s

95th percentile per-packet one-way delay: 87.050 ms

Loss rate: 1.28%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

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

End at: 2018-04-18 04:07:37

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.12 Mbit/s

95th percentile per-packet one-way delay: 87.129 ms

Loss rate: 0.78%

-- Flow 1:

Average throughput: 4.15 Mbit/s

95th percentile per-packet one-way delay: 87.157 ms

Loss rate: 0.50%

-- Flow 2:

Average throughput: 4.35 Mbit/s

95th percentile per-packet one-way delay: 87.142 ms

Loss rate: 0.95%

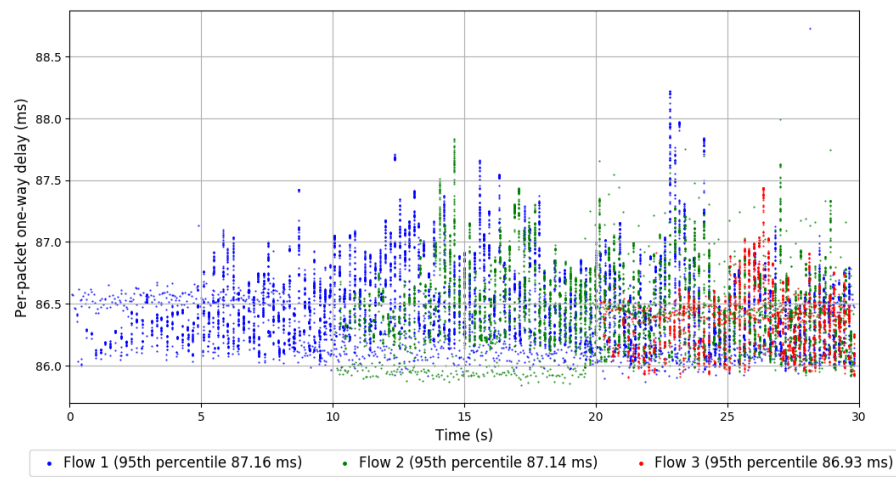
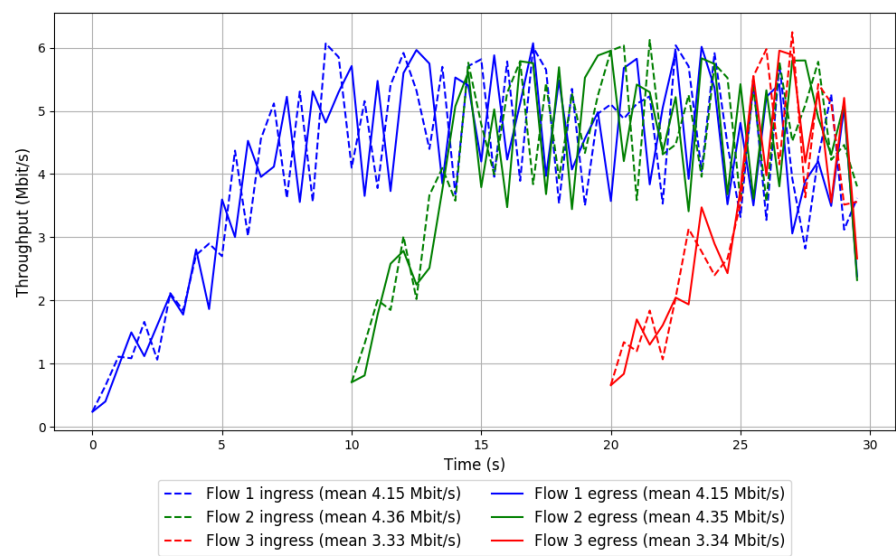
-- Flow 3:

Average throughput: 3.34 Mbit/s

95th percentile per-packet one-way delay: 86.931 ms

Loss rate: 1.36%

Run 10: Report of Sprout — Data Link

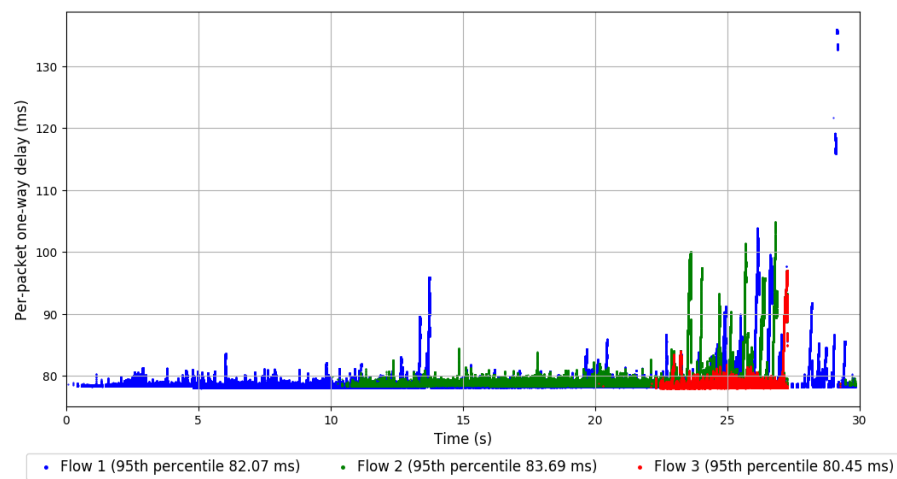
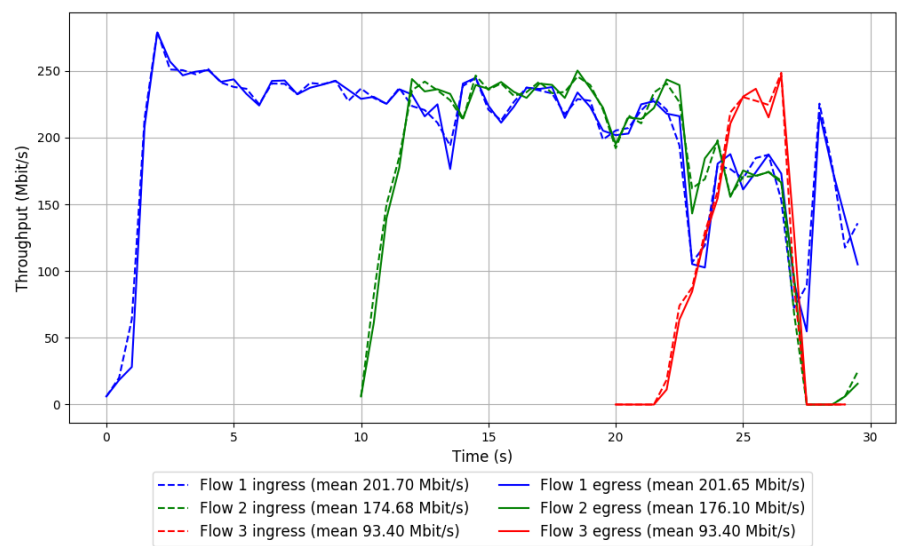


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-04-18 01:27:41
End at: 2018-04-18 01:28:11

# Below is generated by plot.py at 2018-04-18 07:37:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 347.20 Mbit/s
95th percentile per-packet one-way delay: 82.373 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 201.65 Mbit/s
95th percentile per-packet one-way delay: 82.072 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 176.10 Mbit/s
95th percentile per-packet one-way delay: 83.689 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 93.40 Mbit/s
95th percentile per-packet one-way delay: 80.447 ms
Loss rate: 0.00%
```


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

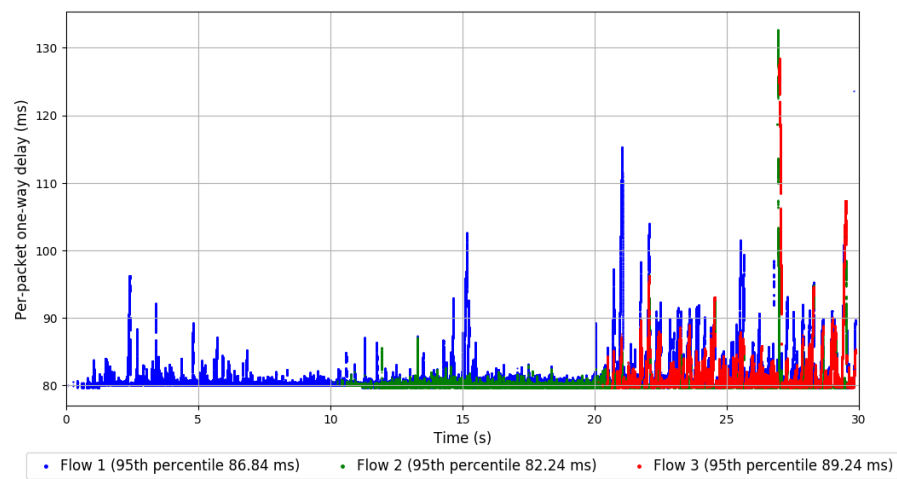
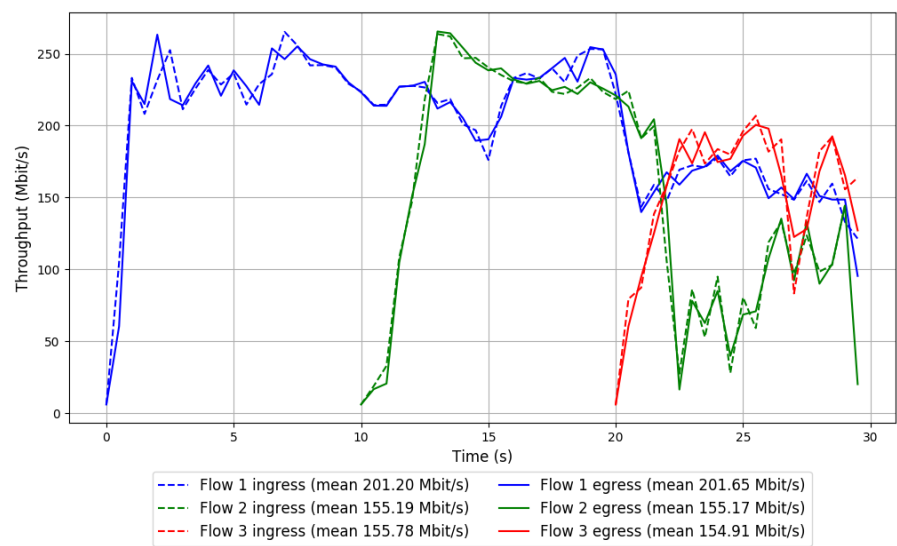


```
Run 2: Statistics of TaoVA-100x

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 07:38:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 353.64 Mbit/s
95th percentile per-packet one-way delay: 86.421 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 201.65 Mbit/s
95th percentile per-packet one-way delay: 86.843 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 155.17 Mbit/s
95th percentile per-packet one-way delay: 82.242 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 154.91 Mbit/s
95th percentile per-packet one-way delay: 89.239 ms
Loss rate: 1.92%
```

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-04-18 02:00:58

End at: 2018-04-18 02:01:28

Below is generated by plot.py at 2018-04-18 07:39:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 384.20 Mbit/s

95th percentile per-packet one-way delay: 89.379 ms

Loss rate: 0.75%

-- Flow 1:

Average throughput: 205.38 Mbit/s

95th percentile per-packet one-way delay: 88.536 ms

Loss rate: 0.52%

-- Flow 2:

Average throughput: 189.81 Mbit/s

95th percentile per-packet one-way delay: 87.252 ms

Loss rate: 0.76%

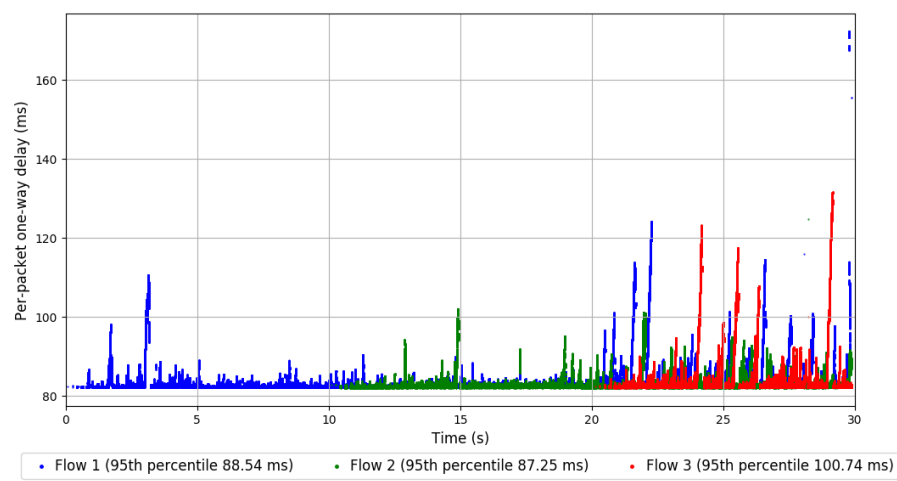
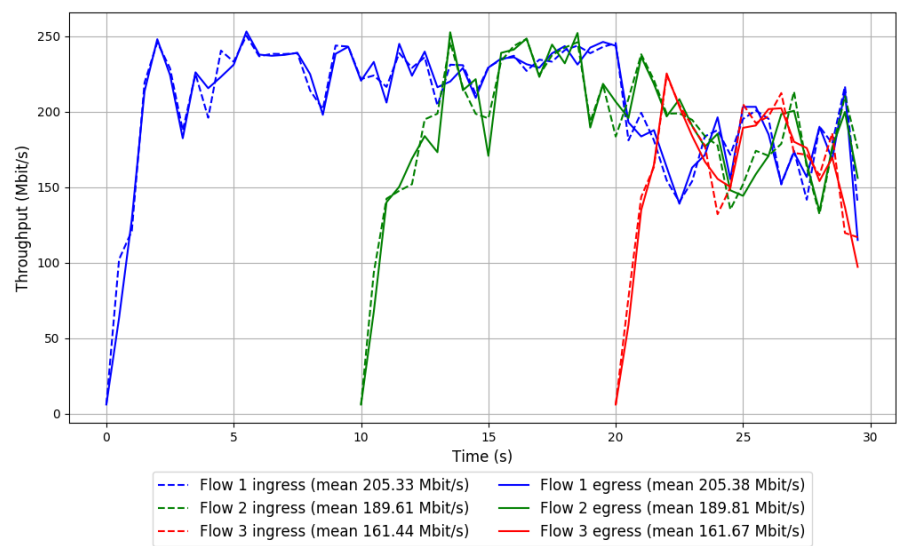
-- Flow 3:

Average throughput: 161.67 Mbit/s

95th percentile per-packet one-way delay: 100.736 ms

Loss rate: 1.61%

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-04-18 02:17:58

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

Below is generated by plot.py at 2018-04-18 07:39:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 398.03 Mbit/s

95th percentile per-packet one-way delay: 89.686 ms

Loss rate: 0.61%

-- Flow 1:

Average throughput: 209.86 Mbit/s

95th percentile per-packet one-way delay: 88.880 ms

Loss rate: 0.33%

-- Flow 2:

Average throughput: 192.81 Mbit/s

95th percentile per-packet one-way delay: 90.804 ms

Loss rate: 0.49%

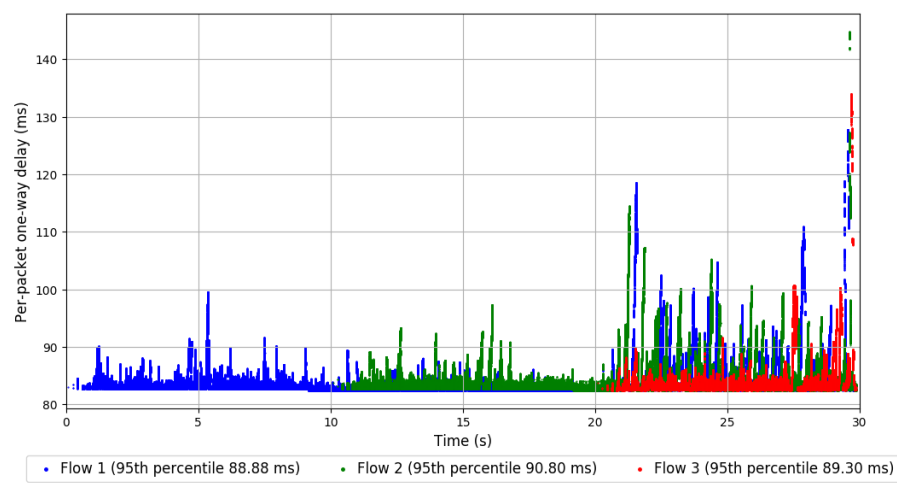
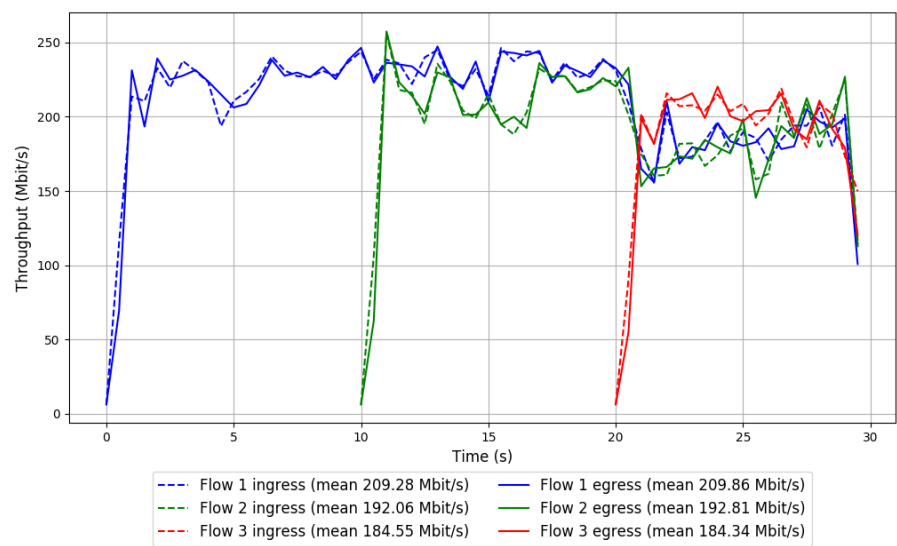
-- Flow 3:

Average throughput: 184.34 Mbit/s

95th percentile per-packet one-way delay: 89.301 ms

Loss rate: 1.83%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-04-18 02:34:41

End at: 2018-04-18 02:35:11

Below is generated by plot.py at 2018-04-18 07:39:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 375.82 Mbit/s

95th percentile per-packet one-way delay: 92.193 ms

Loss rate: 0.83%

-- Flow 1:

Average throughput: 200.22 Mbit/s

95th percentile per-packet one-way delay: 91.546 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 179.09 Mbit/s

95th percentile per-packet one-way delay: 95.676 ms

Loss rate: 1.01%

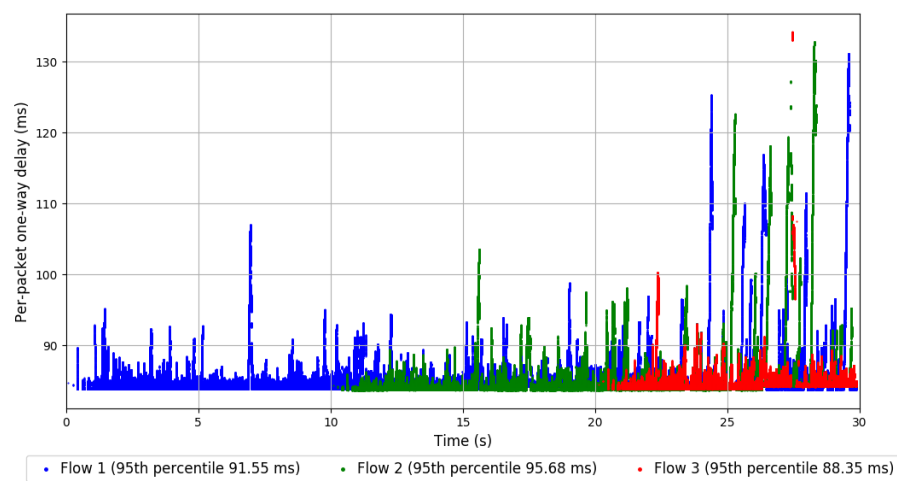
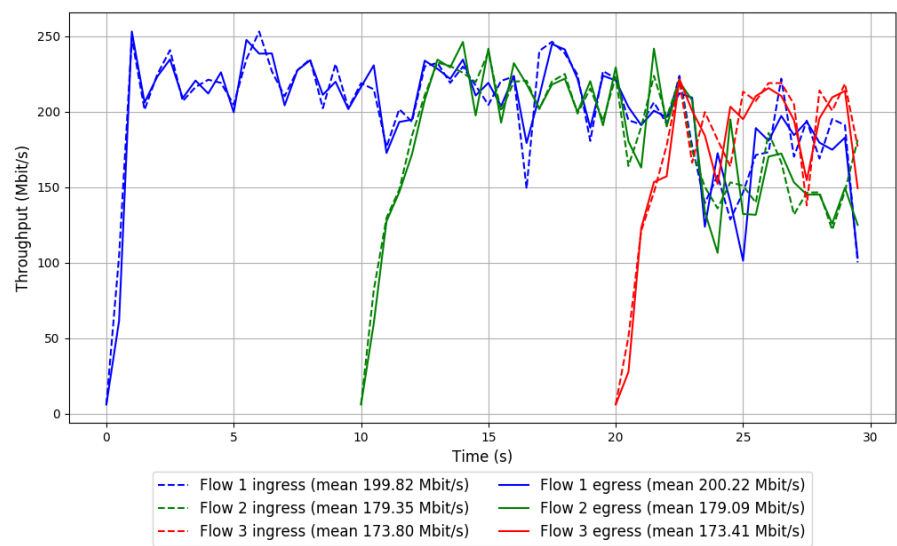
-- Flow 3:

Average throughput: 173.41 Mbit/s

95th percentile per-packet one-way delay: 88.353 ms

Loss rate: 1.97%

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



Run 6: Statistics of TaoVA-100x

Start at: 2018-04-18 02:51:36

End at: 2018-04-18 02:52:06

Below is generated by plot.py at 2018-04-18 07:39:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 368.36 Mbit/s

95th percentile per-packet one-way delay: 94.719 ms

Loss rate: 0.85%

-- Flow 1:

Average throughput: 193.70 Mbit/s

95th percentile per-packet one-way delay: 91.642 ms

Loss rate: 0.63%

-- Flow 2:

Average throughput: 177.71 Mbit/s

95th percentile per-packet one-way delay: 95.751 ms

Loss rate: 0.83%

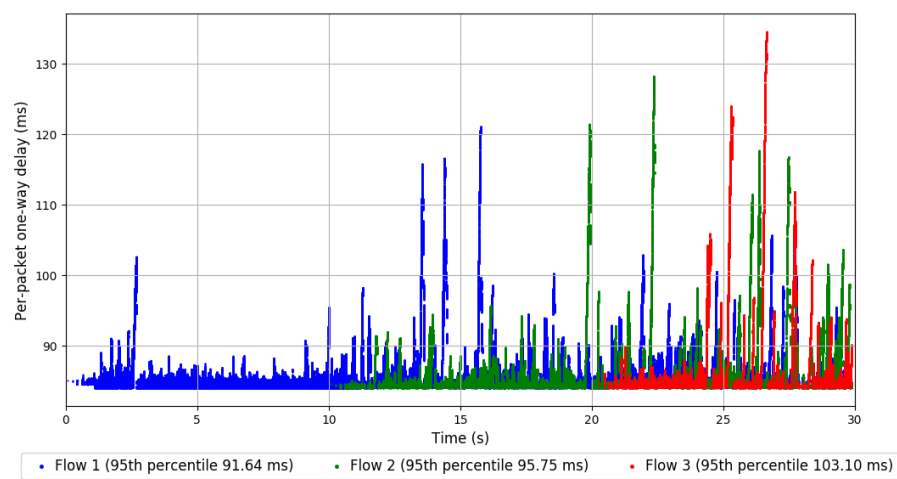
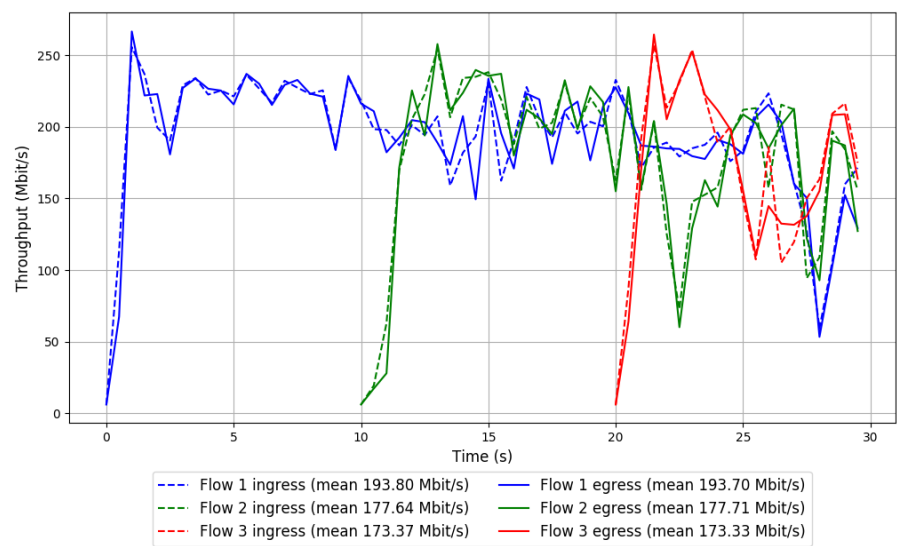
-- Flow 3:

Average throughput: 173.33 Mbit/s

95th percentile per-packet one-way delay: 103.101 ms

Loss rate: 1.66%

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

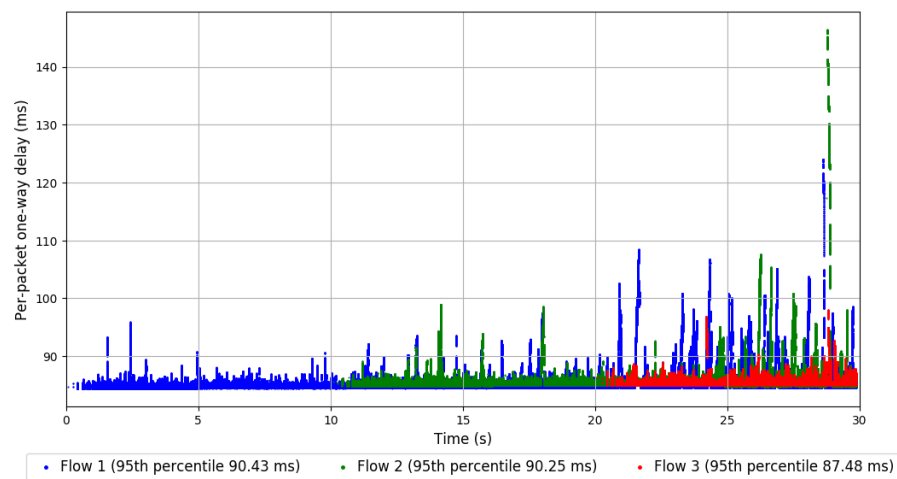
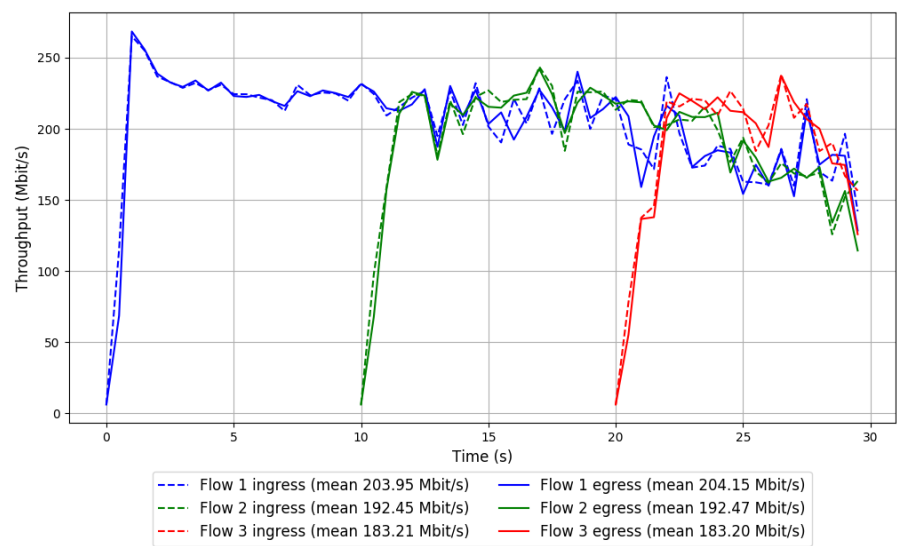


```
Run 7: Statistics of TaoVA-100x

Start at: 2018-04-18 03:08:31
End at: 2018-04-18 03:09:01

# Below is generated by plot.py at 2018-04-18 07:45:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 392.02 Mbit/s
95th percentile per-packet one-way delay: 89.743 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 204.15 Mbit/s
95th percentile per-packet one-way delay: 90.434 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 192.47 Mbit/s
95th percentile per-packet one-way delay: 90.252 ms
Loss rate: 0.86%
-- Flow 3:
Average throughput: 183.20 Mbit/s
95th percentile per-packet one-way delay: 87.477 ms
Loss rate: 1.74%
```

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



Run 8: Statistics of TaoVA-100x

Start at: 2018-04-18 03:25:35

End at: 2018-04-18 03:26:05

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 379.99 Mbit/s

95th percentile per-packet one-way delay: 93.040 ms

Loss rate: 0.92%

-- Flow 1:

Average throughput: 197.98 Mbit/s

95th percentile per-packet one-way delay: 92.415 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 201.28 Mbit/s

95th percentile per-packet one-way delay: 91.727 ms

Loss rate: 0.78%

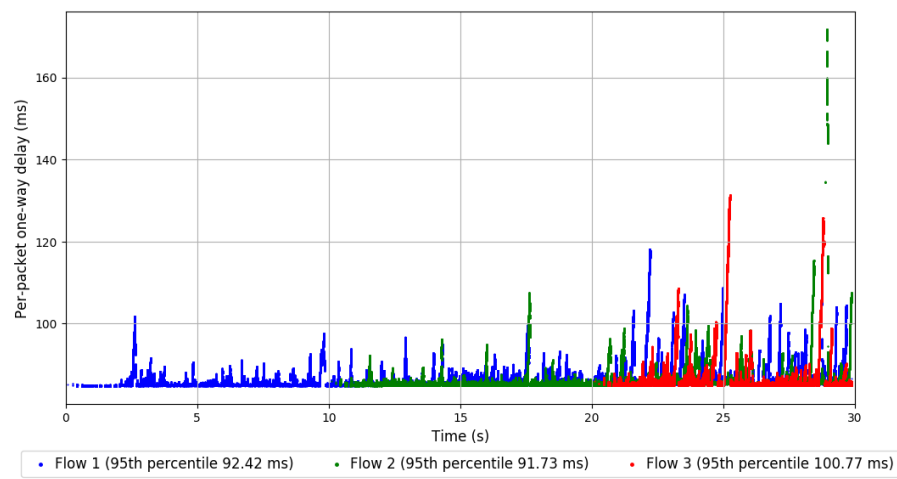
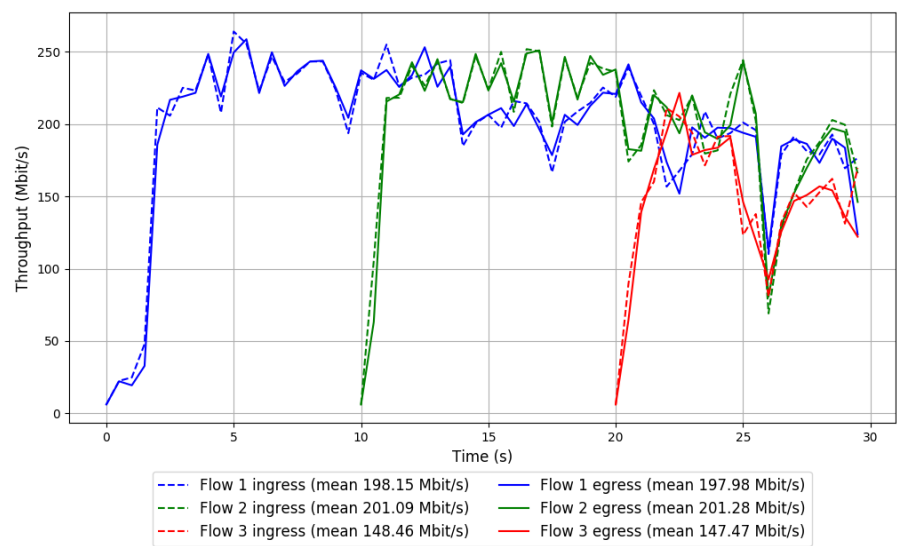
-- Flow 3:

Average throughput: 147.47 Mbit/s

95th percentile per-packet one-way delay: 100.767 ms

Loss rate: 2.40%

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



Run 9: Statistics of TaoVA-100x

Start at: 2018-04-18 03:42:29

End at: 2018-04-18 03:42:59

Below is generated by plot.py at 2018-04-18 07:49:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 358.51 Mbit/s

95th percentile per-packet one-way delay: 93.055 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 190.41 Mbit/s

95th percentile per-packet one-way delay: 91.593 ms

Loss rate: 0.26%

-- Flow 2:

Average throughput: 173.52 Mbit/s

95th percentile per-packet one-way delay: 92.499 ms

Loss rate: 0.46%

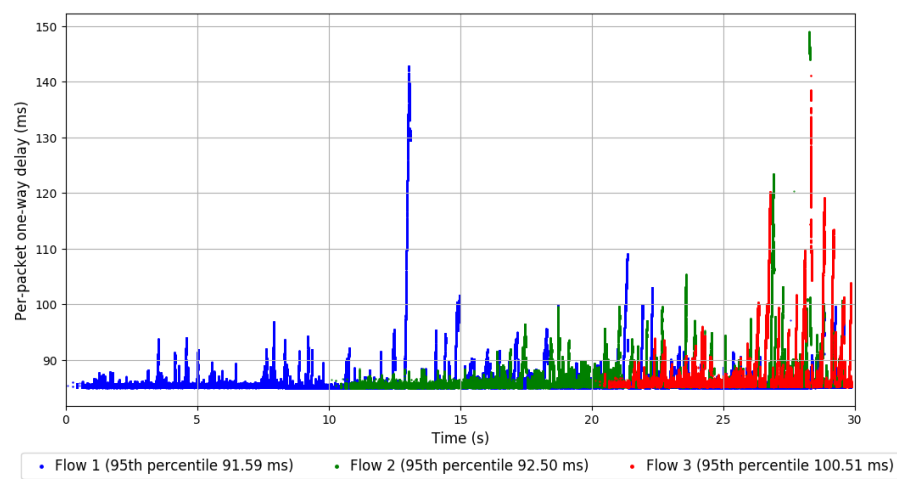
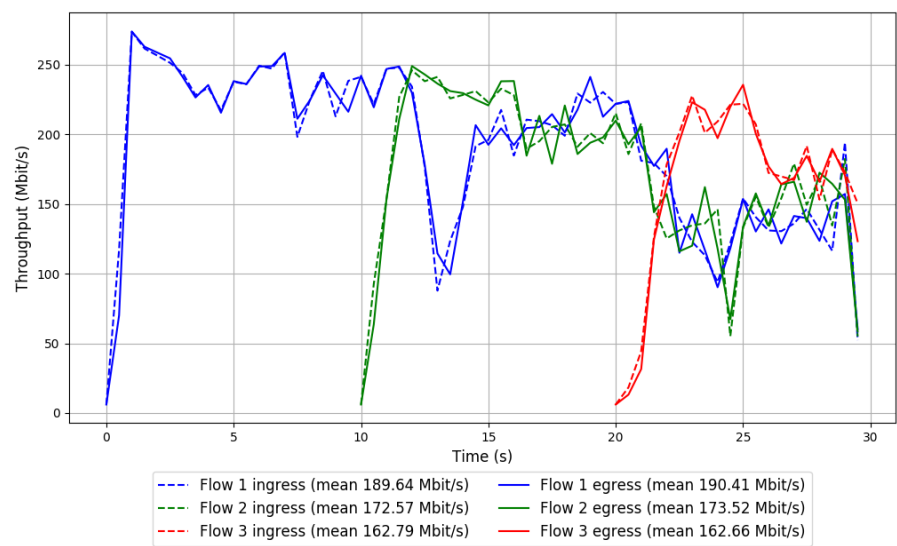
-- Flow 3:

Average throughput: 162.66 Mbit/s

95th percentile per-packet one-way delay: 100.514 ms

Loss rate: 1.82%

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

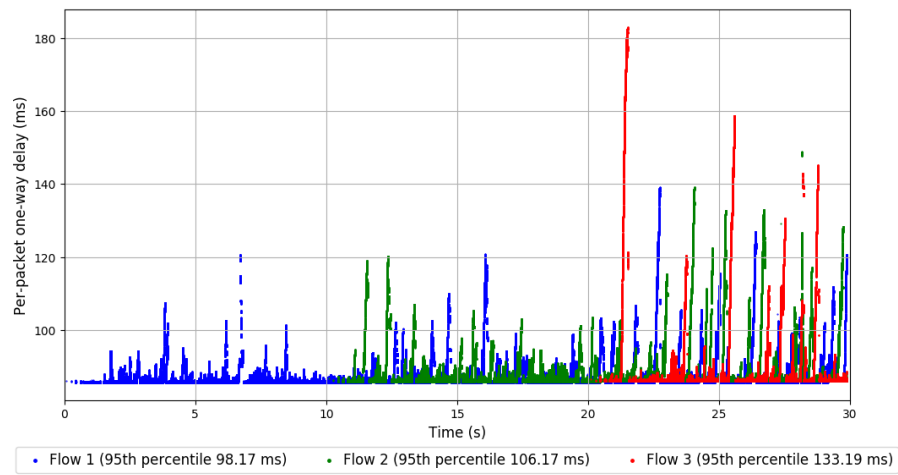
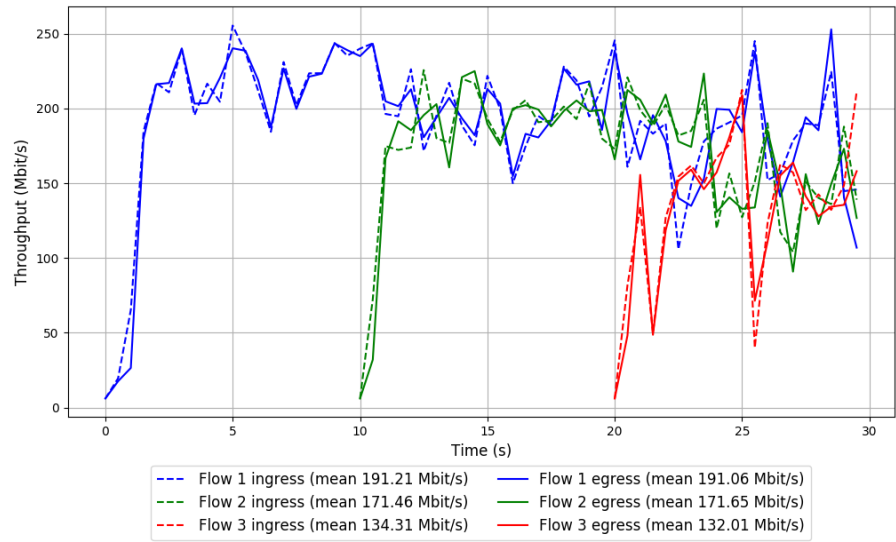


```
Run 10: Statistics of TaoVA-100x

Start at: 2018-04-18 03:59:27
End at: 2018-04-18 03:59:57

# Below is generated by plot.py at 2018-04-18 07:49:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 348.30 Mbit/s
95th percentile per-packet one-way delay: 104.053 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 191.06 Mbit/s
95th percentile per-packet one-way delay: 98.167 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 171.65 Mbit/s
95th percentile per-packet one-way delay: 106.171 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 132.01 Mbit/s
95th percentile per-packet one-way delay: 133.190 ms
Loss rate: 3.42%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2018-04-18 01:25:39

End at: 2018-04-18 01:26:09

Below is generated by plot.py at 2018-04-18 07:49:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 174.20 Mbit/s

95th percentile per-packet one-way delay: 87.676 ms

Loss rate: 0.82%

-- Flow 1:

Average throughput: 132.55 Mbit/s

95th percentile per-packet one-way delay: 87.963 ms

Loss rate: 0.62%

-- Flow 2:

Average throughput: 33.60 Mbit/s

95th percentile per-packet one-way delay: 85.325 ms

Loss rate: 0.91%

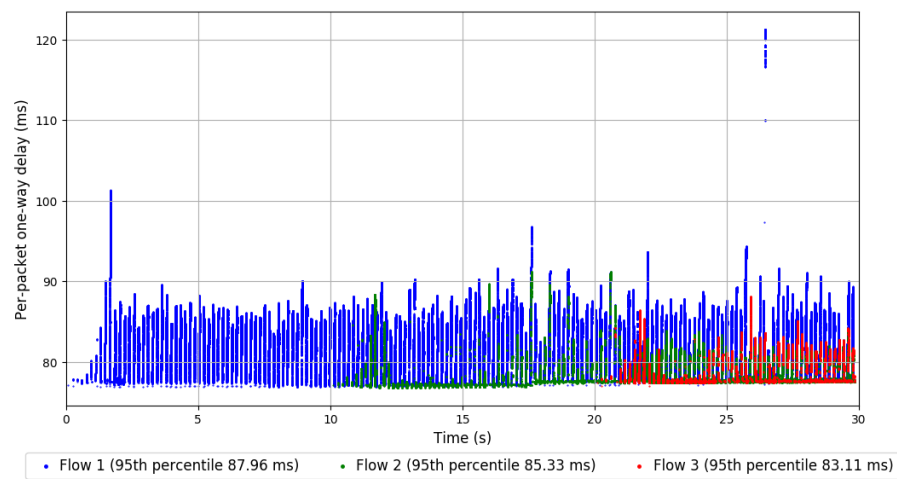
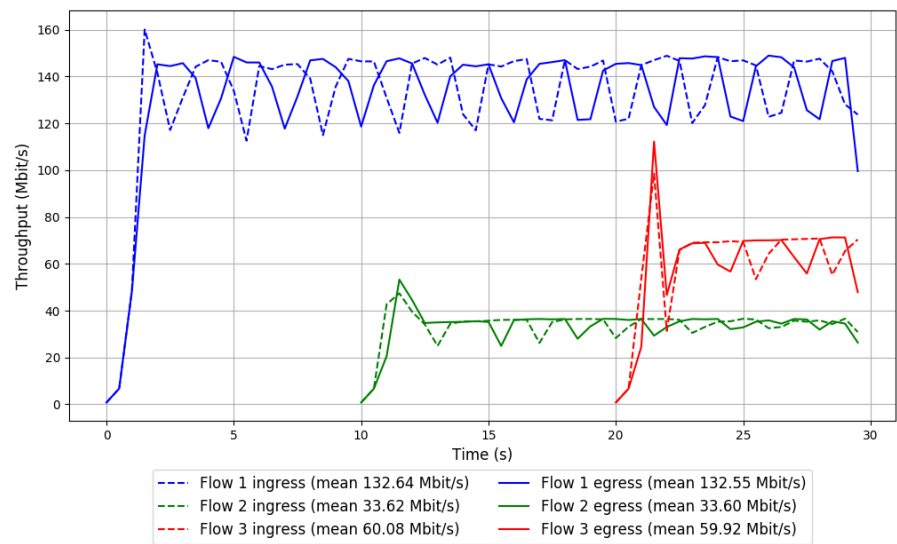
-- Flow 3:

Average throughput: 59.92 Mbit/s

95th percentile per-packet one-way delay: 83.110 ms

Loss rate: 2.00%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-04-18 01:42:06

End at: 2018-04-18 01:42:36

Below is generated by plot.py at 2018-04-18 07:49:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 137.37 Mbit/s

95th percentile per-packet one-way delay: 88.070 ms

Loss rate: 0.72%

-- Flow 1:

Average throughput: 93.73 Mbit/s

95th percentile per-packet one-way delay: 88.231 ms

Loss rate: 0.46%

-- Flow 2:

Average throughput: 37.83 Mbit/s

95th percentile per-packet one-way delay: 87.764 ms

Loss rate: 0.84%

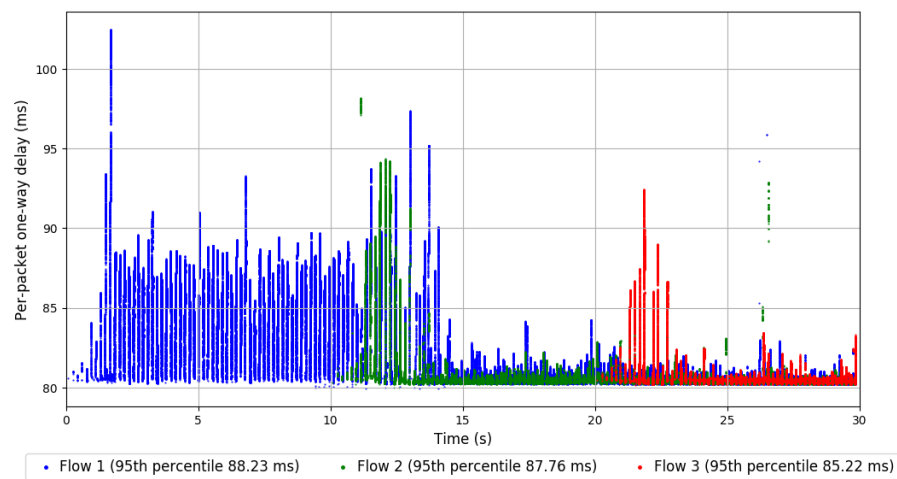
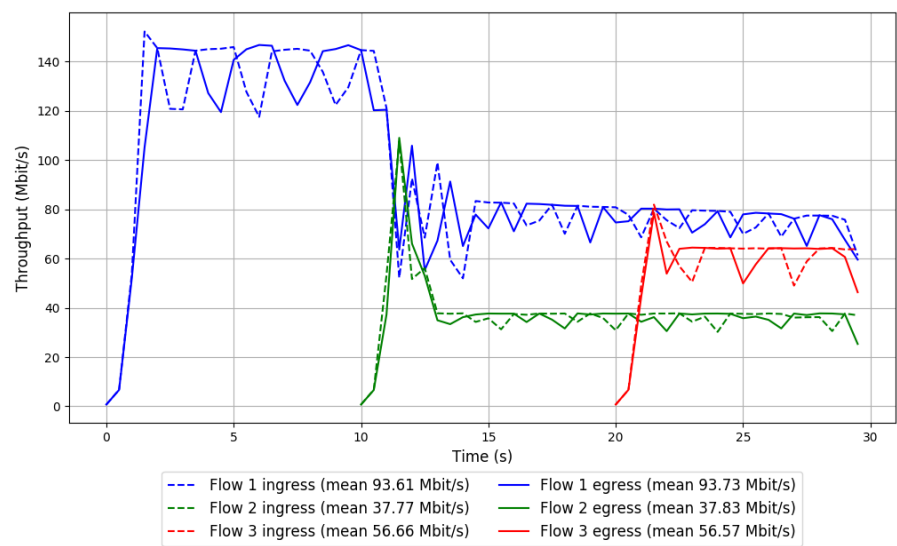
-- Flow 3:

Average throughput: 56.57 Mbit/s

95th percentile per-packet one-way delay: 85.219 ms

Loss rate: 1.90%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-04-18 01:58:55

End at: 2018-04-18 01:59:25

Below is generated by plot.py at 2018-04-18 07:49:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 190.18 Mbit/s

95th percentile per-packet one-way delay: 92.459 ms

Loss rate: 0.93%

-- Flow 1:

Average throughput: 131.89 Mbit/s

95th percentile per-packet one-way delay: 93.556 ms

Loss rate: 0.61%

-- Flow 2:

Average throughput: 32.65 Mbit/s

95th percentile per-packet one-way delay: 89.350 ms

Loss rate: 0.91%

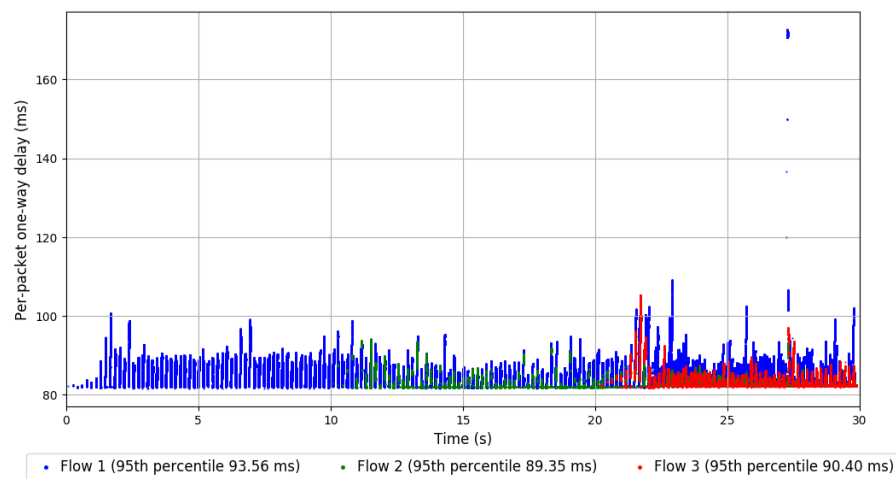
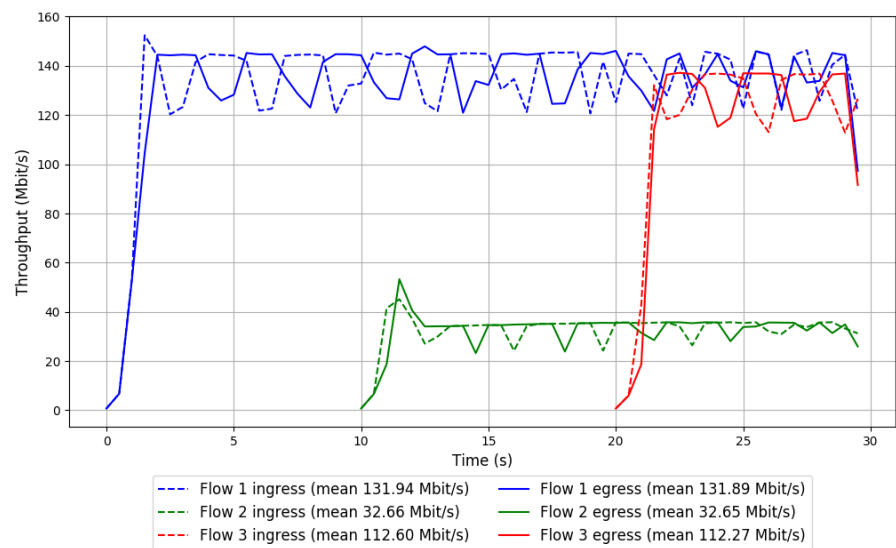
-- Flow 3:

Average throughput: 112.27 Mbit/s

95th percentile per-packet one-way delay: 90.401 ms

Loss rate: 2.03%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2018-04-18 02:15:56

End at: 2018-04-18 02:16:26

Below is generated by plot.py at 2018-04-18 07:49:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 167.31 Mbit/s

95th percentile per-packet one-way delay: 89.250 ms

Loss rate: 0.82%

-- Flow 1:

Average throughput: 89.94 Mbit/s

95th percentile per-packet one-way delay: 86.649 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 88.01 Mbit/s

95th percentile per-packet one-way delay: 91.546 ms

Loss rate: 0.74%

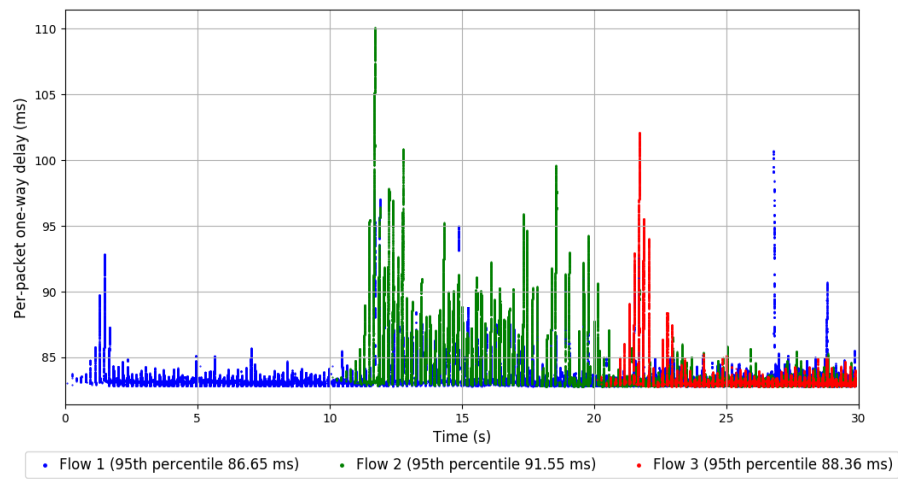
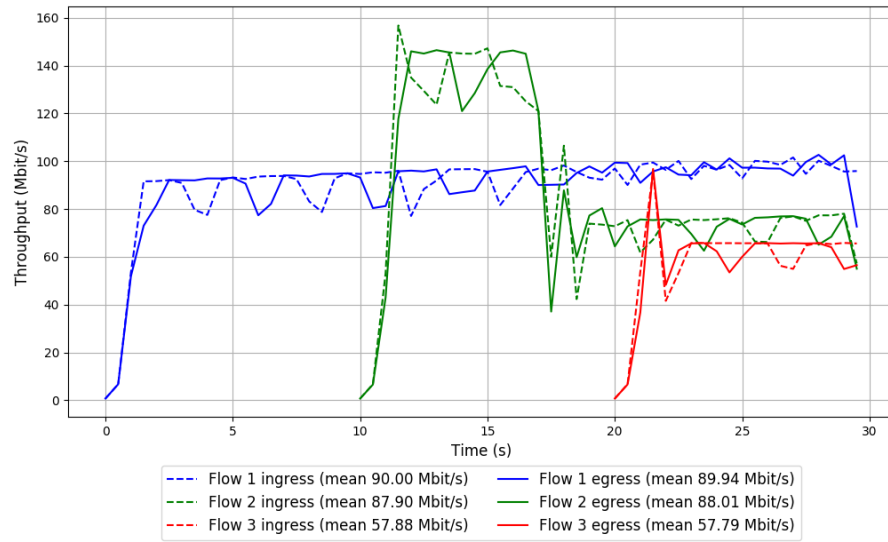
-- Flow 3:

Average throughput: 57.79 Mbit/s

95th percentile per-packet one-way delay: 88.363 ms

Loss rate: 1.90%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-04-18 02:32:41

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

Below is generated by plot.py at 2018-04-18 07:49:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 141.45 Mbit/s

95th percentile per-packet one-way delay: 94.220 ms

Loss rate: 0.91%

-- Flow 1:

Average throughput: 43.47 Mbit/s

95th percentile per-packet one-way delay: 90.010 ms

Loss rate: 0.59%

-- Flow 2:

Average throughput: 129.25 Mbit/s

95th percentile per-packet one-way delay: 94.978 ms

Loss rate: 0.94%

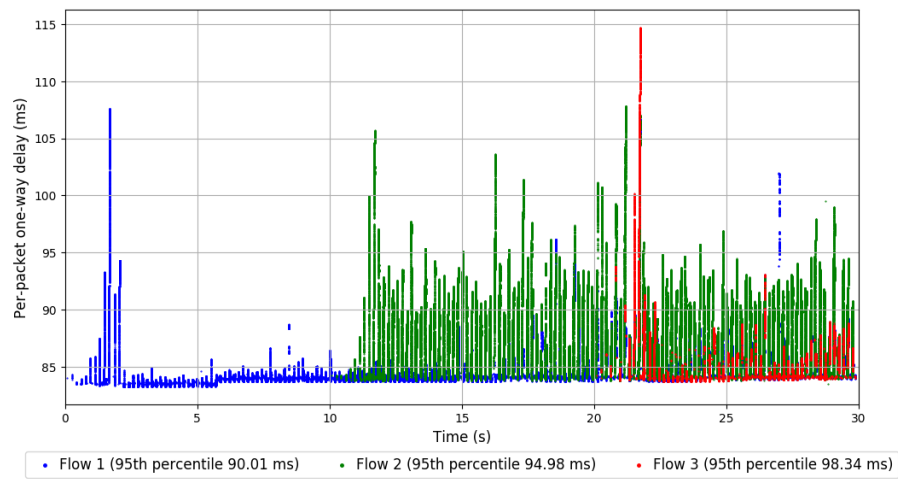
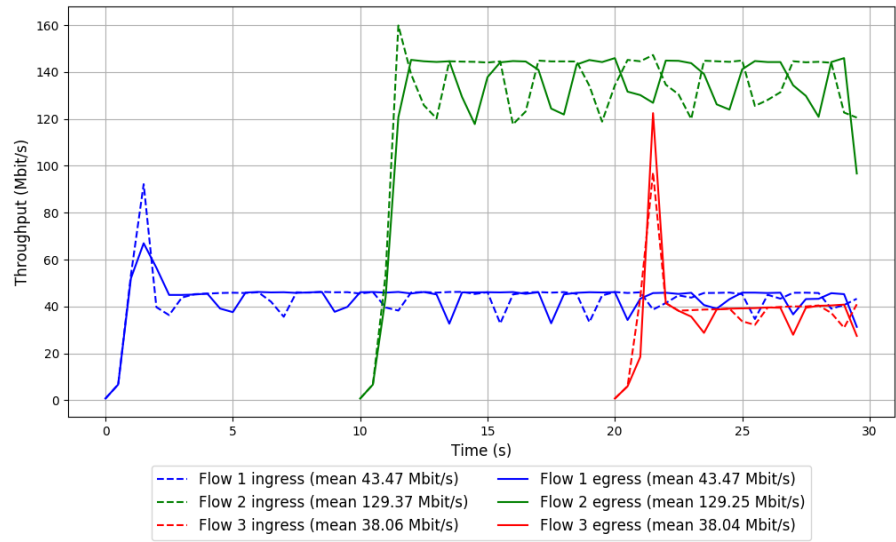
-- Flow 3:

Average throughput: 38.04 Mbit/s

95th percentile per-packet one-way delay: 98.341 ms

Loss rate: 1.80%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

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

End at: 2018-04-18 02:50:05

Below is generated by plot.py at 2018-04-18 07:49:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 155.17 Mbit/s

95th percentile per-packet one-way delay: 95.520 ms

Loss rate: 0.36%

-- Flow 1:

Average throughput: 119.30 Mbit/s

95th percentile per-packet one-way delay: 95.914 ms

Loss rate: 0.17%

-- Flow 2:

Average throughput: 36.84 Mbit/s

95th percentile per-packet one-way delay: 94.036 ms

Loss rate: 0.56%

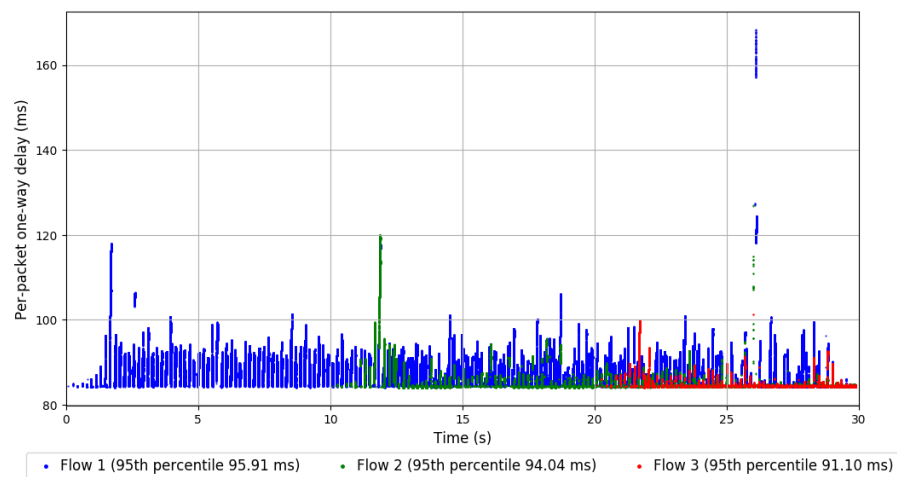
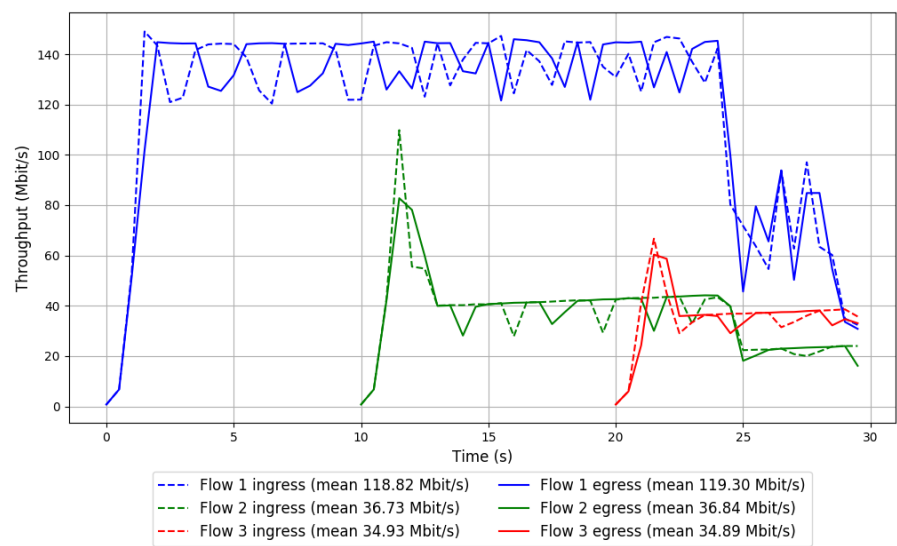
-- Flow 3:

Average throughput: 34.89 Mbit/s

95th percentile per-packet one-way delay: 91.098 ms

Loss rate: 1.85%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2018-04-18 03:06:31

End at: 2018-04-18 03:07:01

Below is generated by plot.py at 2018-04-18 07:49:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 134.36 Mbit/s

95th percentile per-packet one-way delay: 95.882 ms

Loss rate: 0.65%

-- Flow 1:

Average throughput: 131.15 Mbit/s

95th percentile per-packet one-way delay: 95.945 ms

Loss rate: 0.61%

-- Flow 2:

Average throughput: 3.95 Mbit/s

95th percentile per-packet one-way delay: 90.765 ms

Loss rate: 1.83%

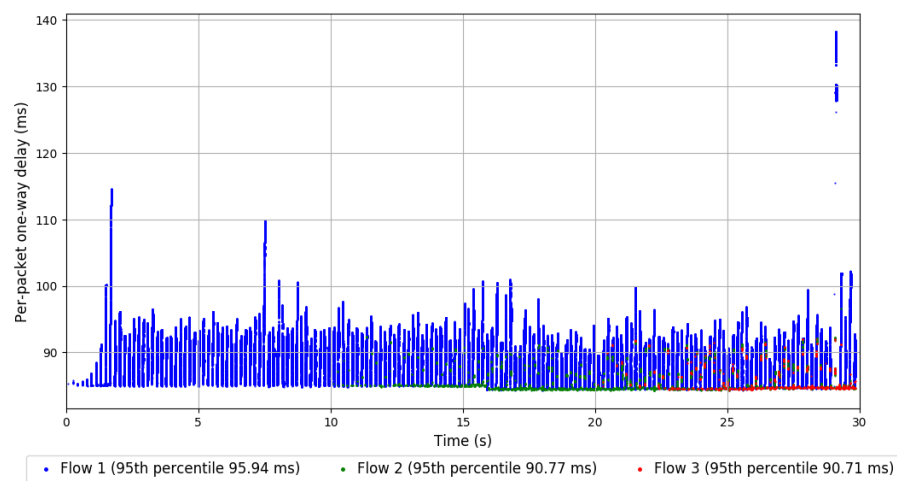
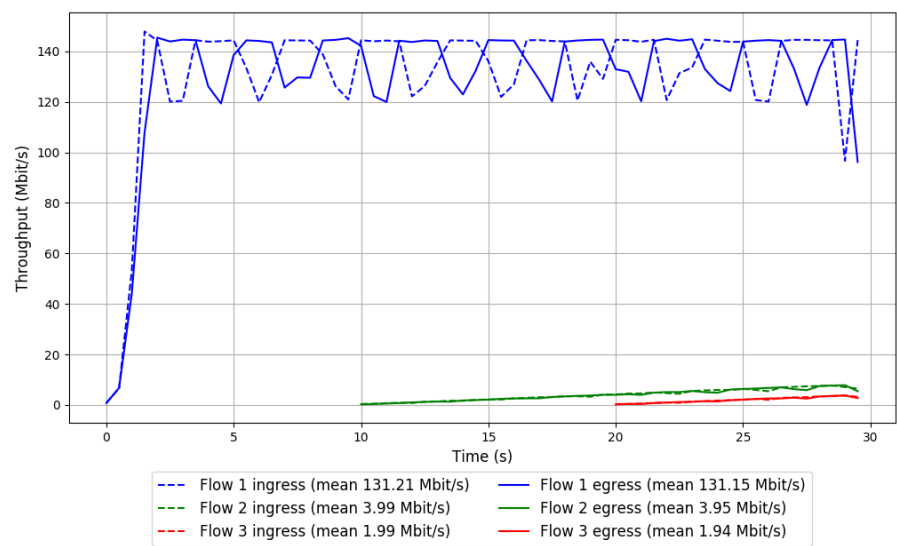
-- Flow 3:

Average throughput: 1.94 Mbit/s

95th percentile per-packet one-way delay: 90.709 ms

Loss rate: 3.96%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2018-04-18 03:23:29

End at: 2018-04-18 03:23:59

Below is generated by plot.py at 2018-04-18 07:49:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 231.33 Mbit/s

95th percentile per-packet one-way delay: 94.154 ms

Loss rate: 0.85%

-- Flow 1:

Average throughput: 132.21 Mbit/s

95th percentile per-packet one-way delay: 94.283 ms

Loss rate: 0.67%

-- Flow 2:

Average throughput: 129.26 Mbit/s

95th percentile per-packet one-way delay: 94.122 ms

Loss rate: 0.95%

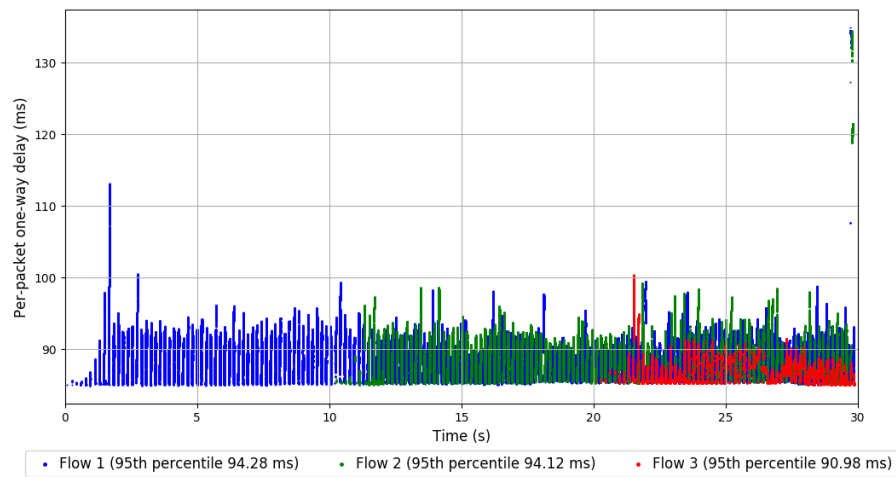
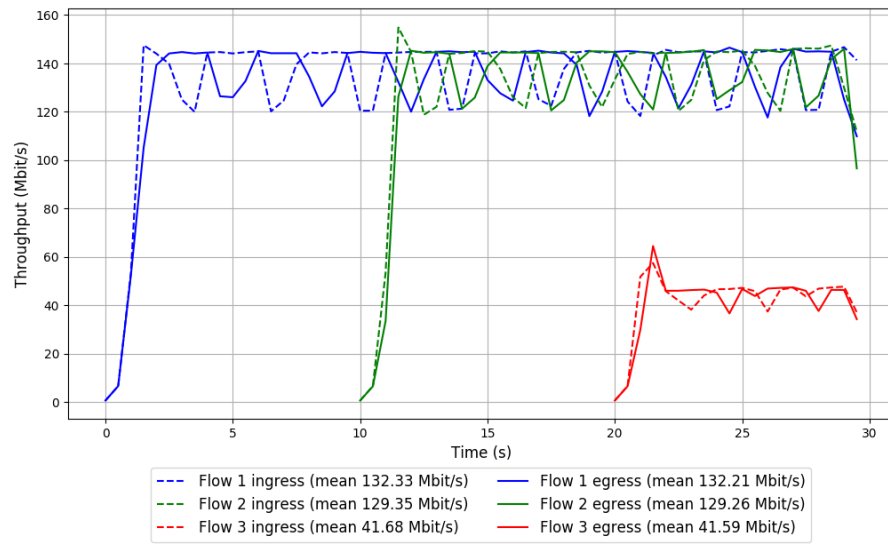
-- Flow 3:

Average throughput: 41.59 Mbit/s

95th percentile per-packet one-way delay: 90.976 ms

Loss rate: 1.94%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

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

End at: 2018-04-18 03:41:00

Below is generated by plot.py at 2018-04-18 07:49:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 107.07 Mbit/s

95th percentile per-packet one-way delay: 95.858 ms

Loss rate: 0.63%

-- Flow 1:

Average throughput: 56.01 Mbit/s

95th percentile per-packet one-way delay: 95.530 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 59.68 Mbit/s

95th percentile per-packet one-way delay: 97.414 ms

Loss rate: 0.65%

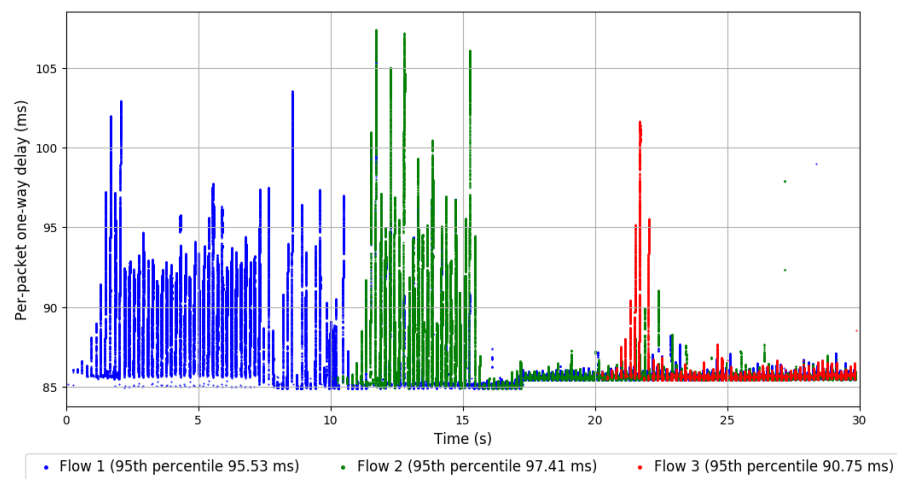
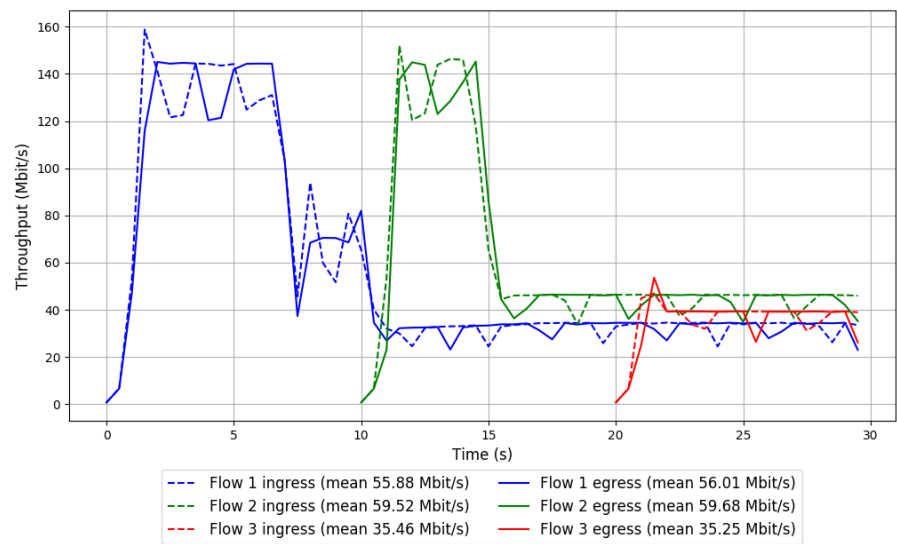
-- Flow 3:

Average throughput: 35.25 Mbit/s

95th percentile per-packet one-way delay: 90.745 ms

Loss rate: 1.86%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2018-04-18 03:57:20

End at: 2018-04-18 03:57:50

Below is generated by plot.py at 2018-04-18 07:49:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 232.46 Mbit/s

95th percentile per-packet one-way delay: 99.391 ms

Loss rate: 0.83%

-- Flow 1:

Average throughput: 131.27 Mbit/s

95th percentile per-packet one-way delay: 99.033 ms

Loss rate: 0.61%

-- Flow 2:

Average throughput: 128.94 Mbit/s

95th percentile per-packet one-way delay: 100.505 ms

Loss rate: 0.94%

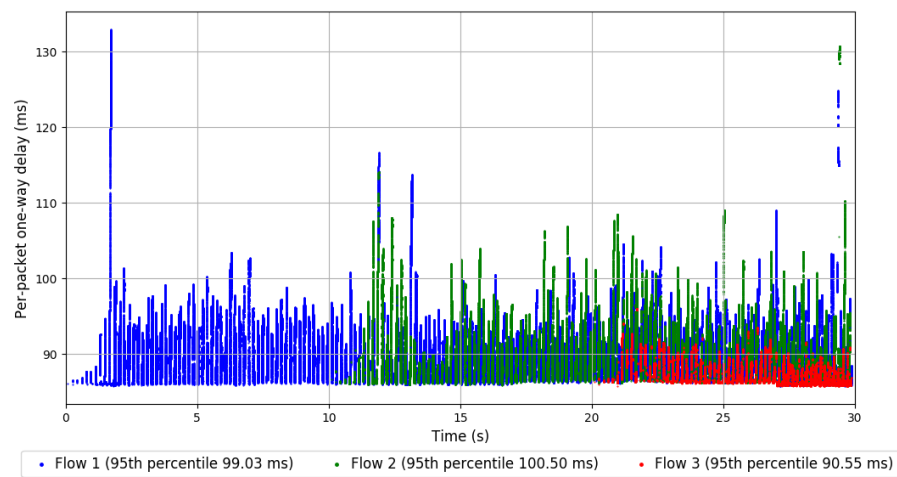
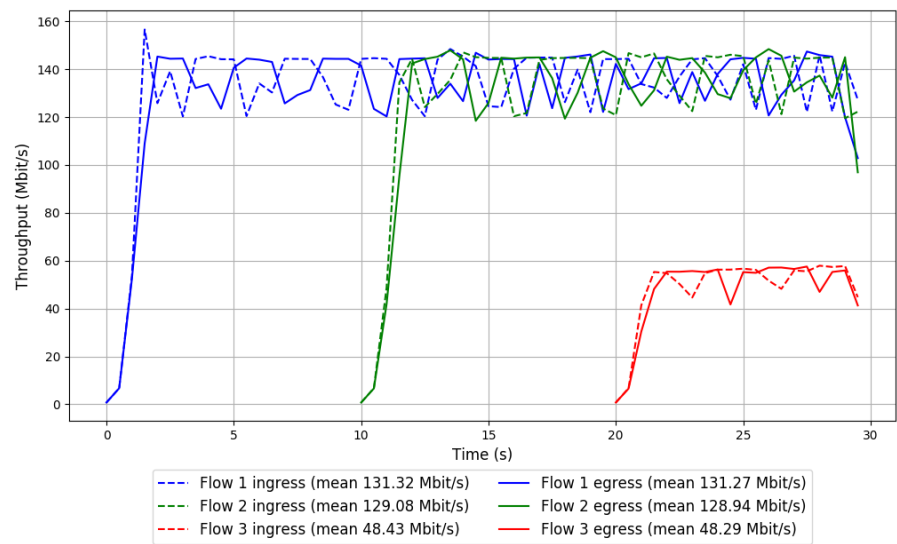
-- Flow 3:

Average throughput: 48.29 Mbit/s

95th percentile per-packet one-way delay: 90.551 ms

Loss rate: 2.03%

Run 10: Report of TCP Vegas — Data Link

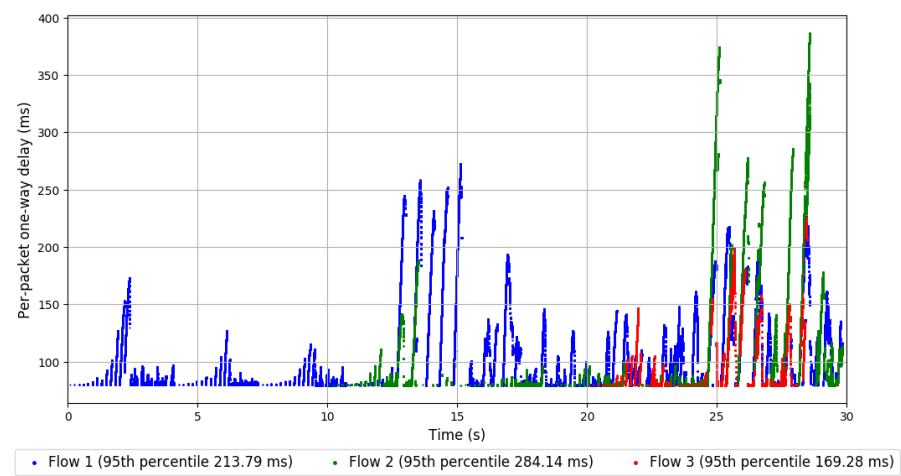
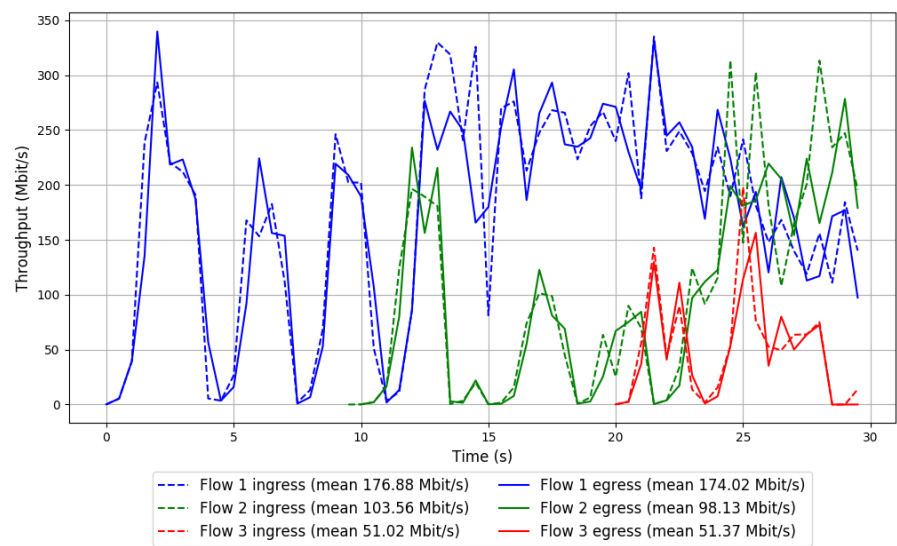


```
Run 1: Statistics of Verus

Start at: 2018-04-18 01:31:08
End at: 2018-04-18 01:31:38

# Below is generated by plot.py at 2018-04-18 07:49:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 255.72 Mbit/s
95th percentile per-packet one-way delay: 236.718 ms
Loss rate: 3.08%
-- Flow 1:
Average throughput: 174.02 Mbit/s
95th percentile per-packet one-way delay: 213.792 ms
Loss rate: 2.17%
-- Flow 2:
Average throughput: 98.13 Mbit/s
95th percentile per-packet one-way delay: 284.139 ms
Loss rate: 5.44%
-- Flow 3:
Average throughput: 51.37 Mbit/s
95th percentile per-packet one-way delay: 169.275 ms
Loss rate: 2.94%
```


Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-04-18 01:47:32

End at: 2018-04-18 01:48:02

Below is generated by plot.py at 2018-04-18 07:50:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 254.74 Mbit/s

95th percentile per-packet one-way delay: 241.154 ms

Loss rate: 3.59%

-- Flow 1:

Average throughput: 174.52 Mbit/s

95th percentile per-packet one-way delay: 250.951 ms

Loss rate: 4.42%

-- Flow 2:

Average throughput: 78.63 Mbit/s

95th percentile per-packet one-way delay: 142.529 ms

Loss rate: 0.31%

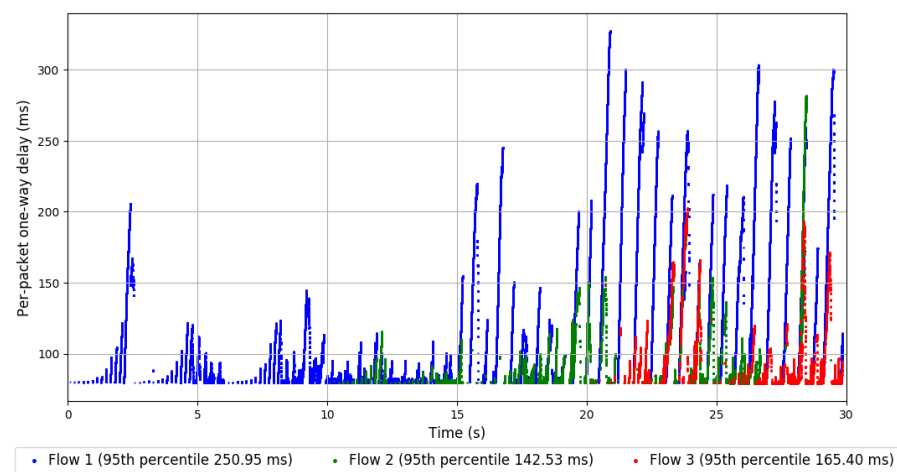
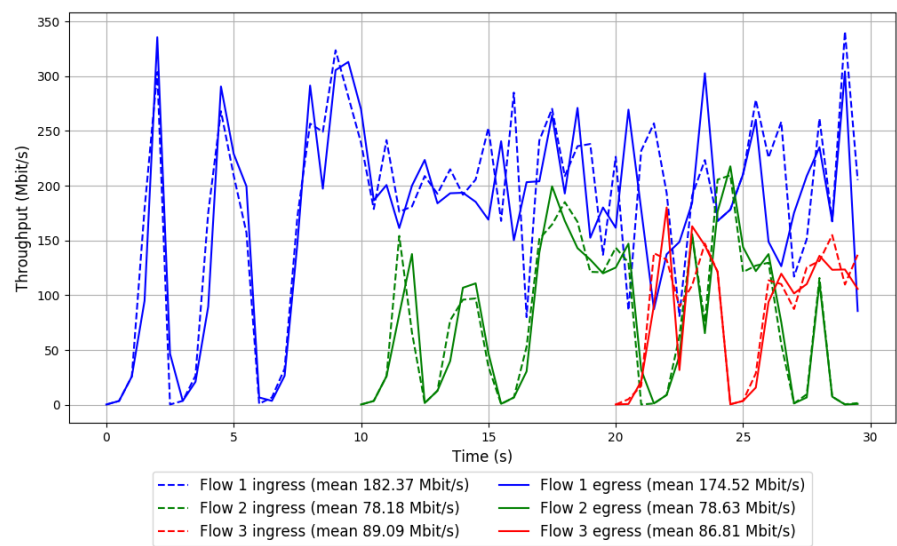
-- Flow 3:

Average throughput: 86.81 Mbit/s

95th percentile per-packet one-way delay: 165.398 ms

Loss rate: 4.22%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

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

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

Below is generated by plot.py at 2018-04-18 07:51:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 293.96 Mbit/s

95th percentile per-packet one-way delay: 173.578 ms

Loss rate: 2.17%

-- Flow 1:

Average throughput: 199.10 Mbit/s

95th percentile per-packet one-way delay: 151.573 ms

Loss rate: 0.75%

-- Flow 2:

Average throughput: 104.08 Mbit/s

95th percentile per-packet one-way delay: 275.616 ms

Loss rate: 6.66%

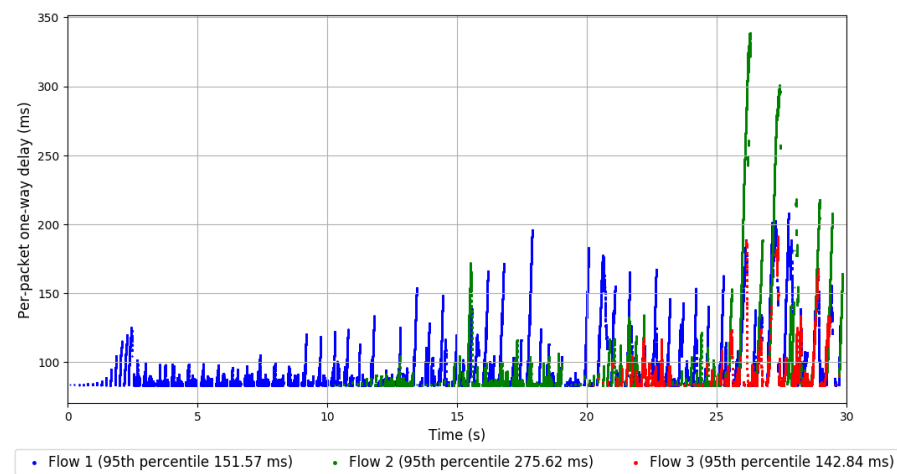
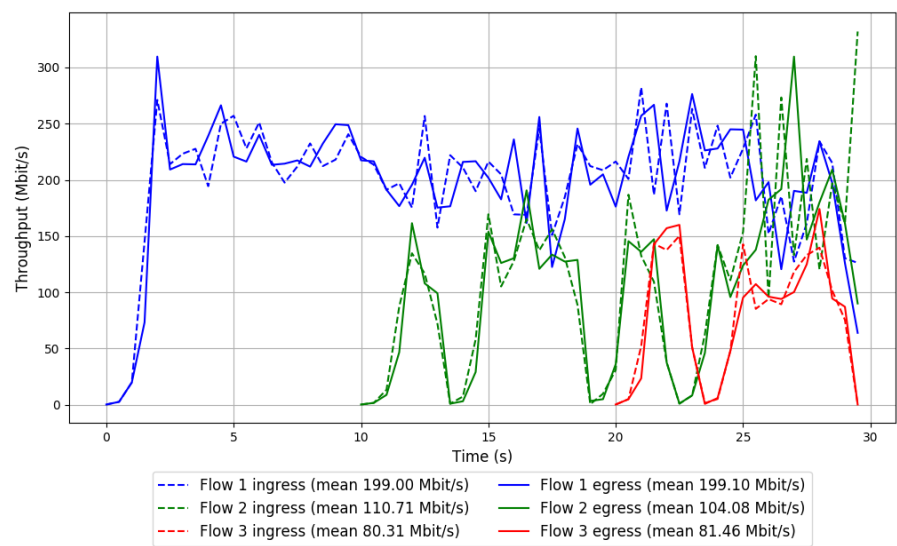
-- Flow 3:

Average throughput: 81.46 Mbit/s

95th percentile per-packet one-way delay: 142.837 ms

Loss rate: 0.37%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

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 07:51:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 308.71 Mbit/s

95th percentile per-packet one-way delay: 265.128 ms

Loss rate: 5.01%

-- Flow 1:

Average throughput: 148.10 Mbit/s

95th percentile per-packet one-way delay: 168.162 ms

Loss rate: 1.80%

-- Flow 2:

Average throughput: 213.13 Mbit/s

95th percentile per-packet one-way delay: 302.263 ms

Loss rate: 8.10%

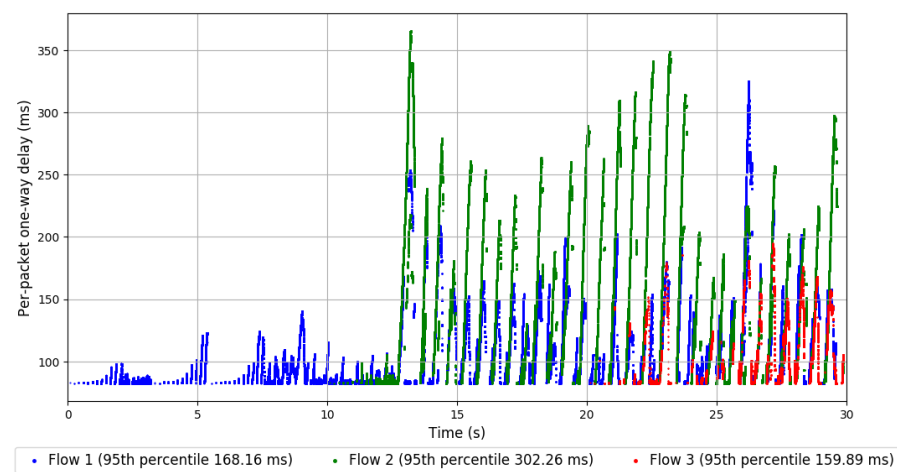
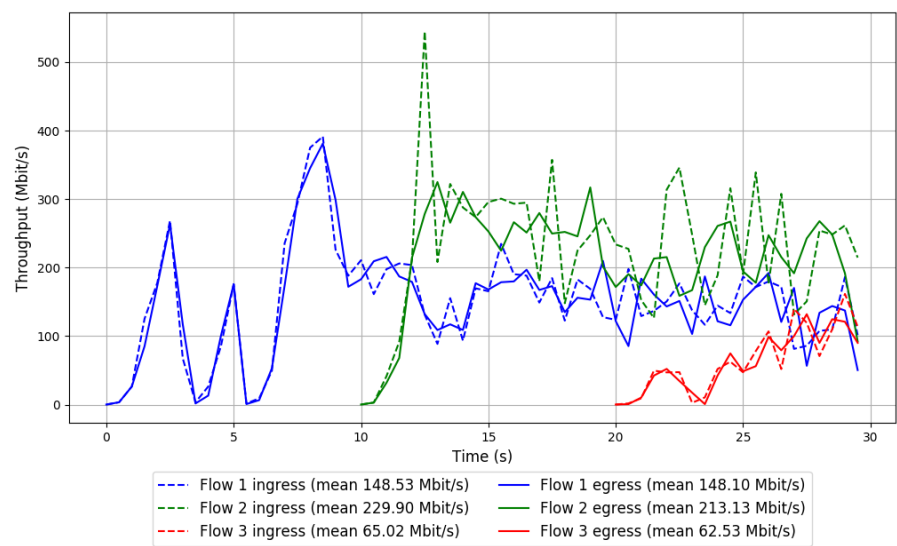
-- Flow 3:

Average throughput: 62.53 Mbit/s

95th percentile per-packet one-way delay: 159.887 ms

Loss rate: 5.14%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-04-18 02:38:10

End at: 2018-04-18 02:38:40

Below is generated by plot.py at 2018-04-18 07:51:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 266.92 Mbit/s

95th percentile per-packet one-way delay: 239.260 ms

Loss rate: 2.61%

-- Flow 1:

Average throughput: 130.45 Mbit/s

95th percentile per-packet one-way delay: 218.174 ms

Loss rate: 0.41%

-- Flow 2:

Average throughput: 185.50 Mbit/s

95th percentile per-packet one-way delay: 250.407 ms

Loss rate: 4.88%

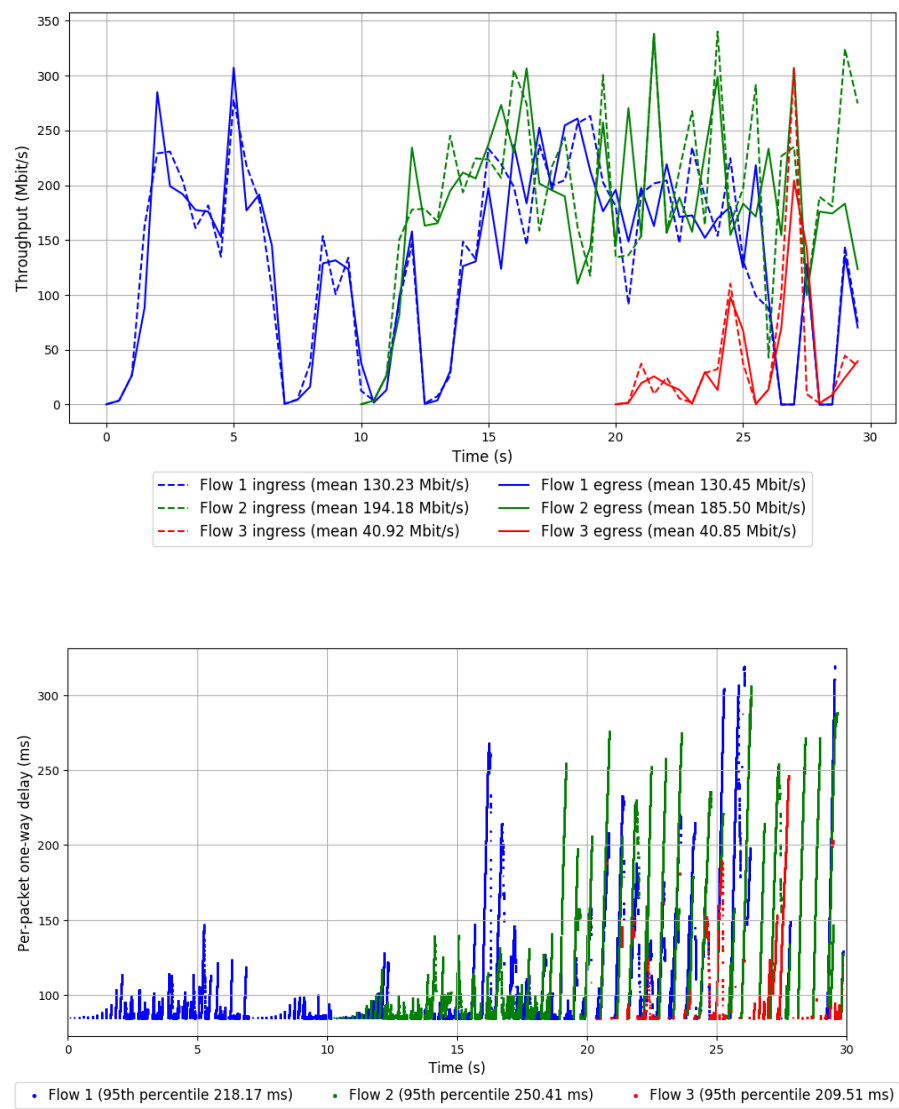
-- Flow 3:

Average throughput: 40.85 Mbit/s

95th percentile per-packet one-way delay: 209.511 ms

Loss rate: 2.12%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2018-04-18 02:55:06

End at: 2018-04-18 02:55:36

Below is generated by plot.py at 2018-04-18 07:53:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 244.26 Mbit/s

95th percentile per-packet one-way delay: 201.882 ms

Loss rate: 3.26%

-- Flow 1:

Average throughput: 160.13 Mbit/s

95th percentile per-packet one-way delay: 223.032 ms

Loss rate: 3.45%

-- Flow 2:

Average throughput: 72.65 Mbit/s

95th percentile per-packet one-way delay: 145.258 ms

Loss rate: 2.43%

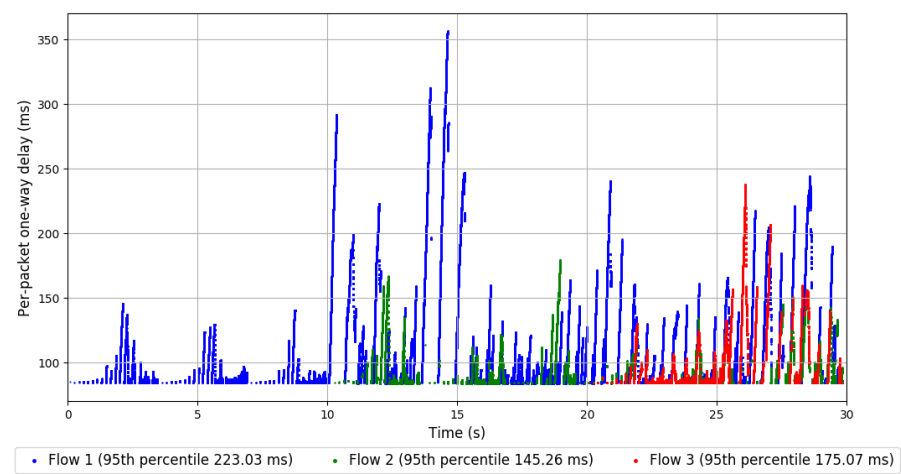
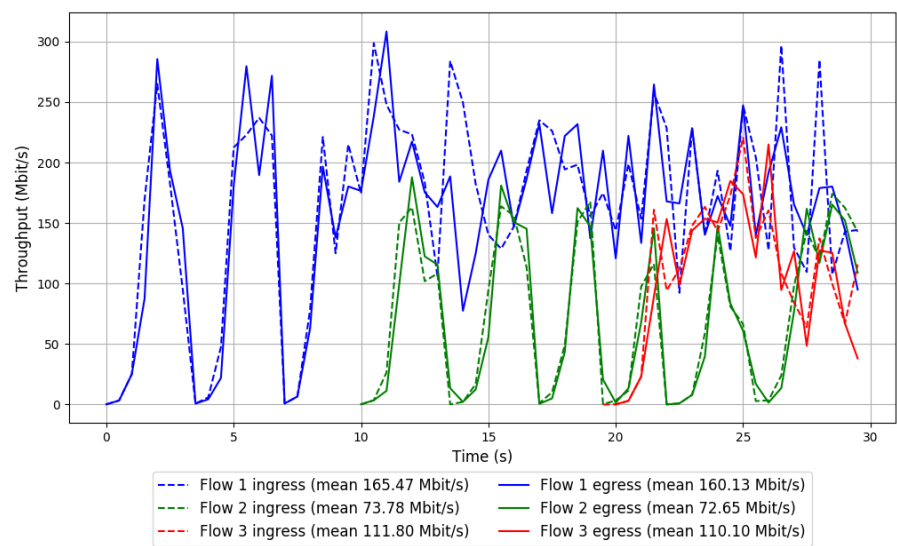
-- Flow 3:

Average throughput: 110.10 Mbit/s

95th percentile per-packet one-way delay: 175.067 ms

Loss rate: 3.51%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

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

End at: 2018-04-18 03:12:33

Below is generated by plot.py at 2018-04-18 07:54:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 292.84 Mbit/s

95th percentile per-packet one-way delay: 243.953 ms

Loss rate: 2.45%

-- Flow 1:

Average throughput: 164.82 Mbit/s

95th percentile per-packet one-way delay: 163.956 ms

Loss rate: 0.29%

-- Flow 2:

Average throughput: 166.16 Mbit/s

95th percentile per-packet one-way delay: 281.325 ms

Loss rate: 4.81%

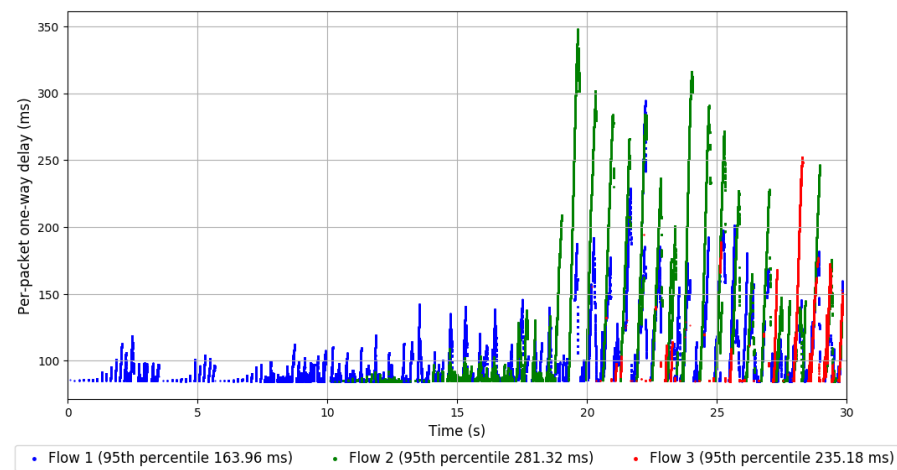
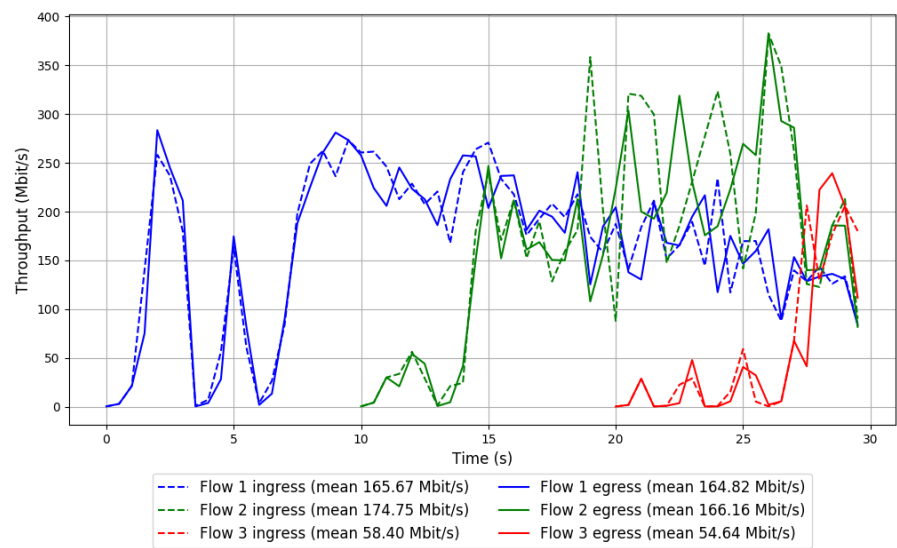
-- Flow 3:

Average throughput: 54.64 Mbit/s

95th percentile per-packet one-way delay: 235.182 ms

Loss rate: 6.87%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2018-04-18 03:29:05

End at: 2018-04-18 03:29:35

Below is generated by plot.py at 2018-04-18 07:54:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 247.64 Mbit/s

95th percentile per-packet one-way delay: 205.065 ms

Loss rate: 3.89%

-- Flow 1:

Average throughput: 104.87 Mbit/s

95th percentile per-packet one-way delay: 124.602 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 153.15 Mbit/s

95th percentile per-packet one-way delay: 170.025 ms

Loss rate: 0.38%

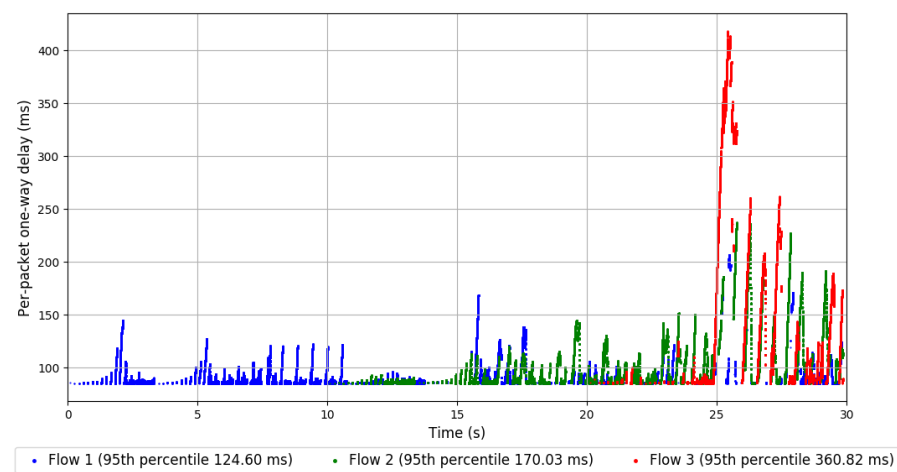
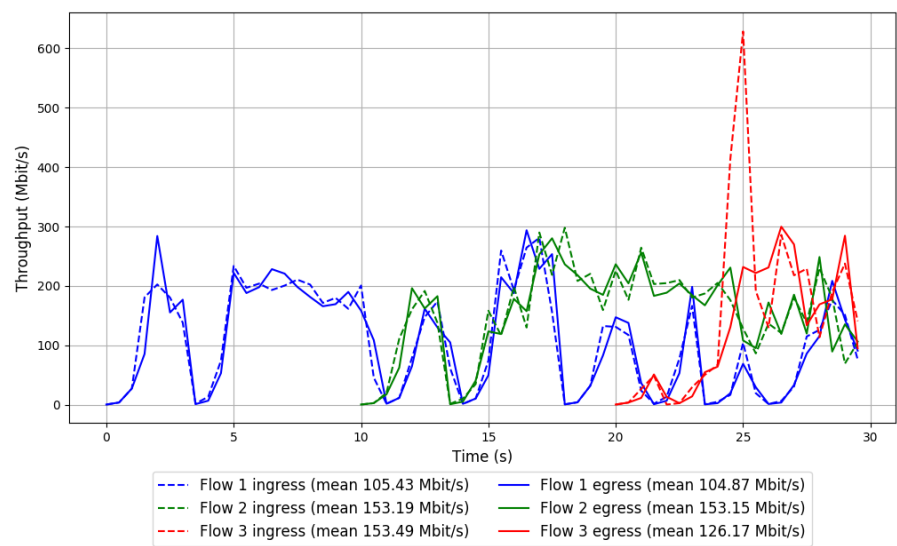
-- Flow 3:

Average throughput: 126.17 Mbit/s

95th percentile per-packet one-way delay: 360.816 ms

Loss rate: 18.24%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2018-04-18 03:45:56

End at: 2018-04-18 03:46:26

Below is generated by plot.py at 2018-04-18 07:54:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 220.65 Mbit/s

95th percentile per-packet one-way delay: 129.187 ms

Loss rate: 2.93%

-- Flow 1:

Average throughput: 148.84 Mbit/s

95th percentile per-packet one-way delay: 143.480 ms

Loss rate: 0.45%

-- Flow 2:

Average throughput: 68.20 Mbit/s

95th percentile per-packet one-way delay: 122.953 ms

Loss rate: 8.47%

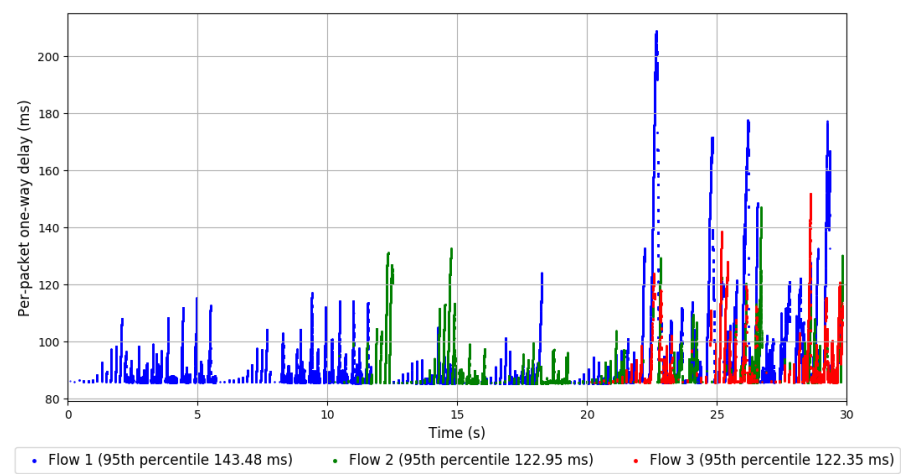
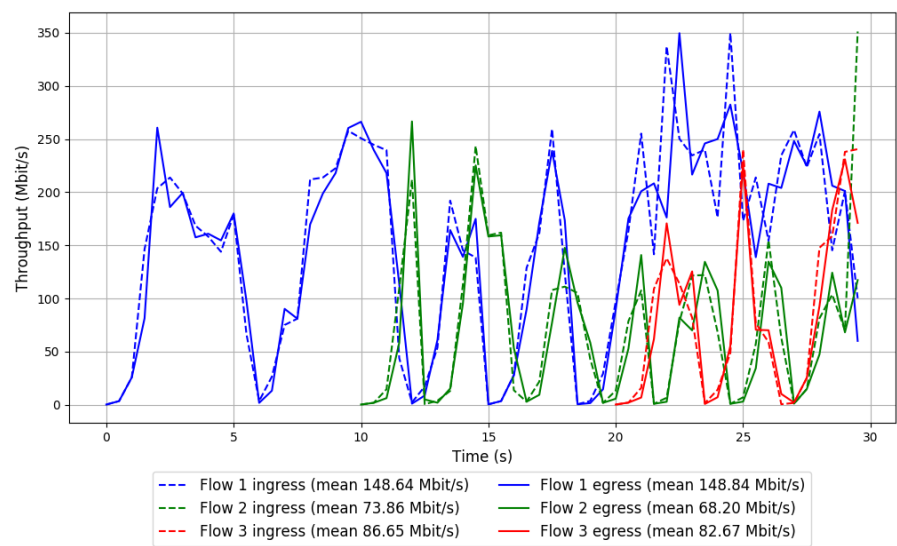
-- Flow 3:

Average throughput: 82.67 Mbit/s

95th percentile per-packet one-way delay: 122.352 ms

Loss rate: 6.23%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

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

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

Below is generated by plot.py at 2018-04-18 07:54:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 278.93 Mbit/s

95th percentile per-packet one-way delay: 195.365 ms

Loss rate: 2.59%

-- Flow 1:

Average throughput: 193.62 Mbit/s

95th percentile per-packet one-way delay: 202.854 ms

Loss rate: 2.55%

-- Flow 2:

Average throughput: 60.75 Mbit/s

95th percentile per-packet one-way delay: 125.541 ms

Loss rate: 3.25%

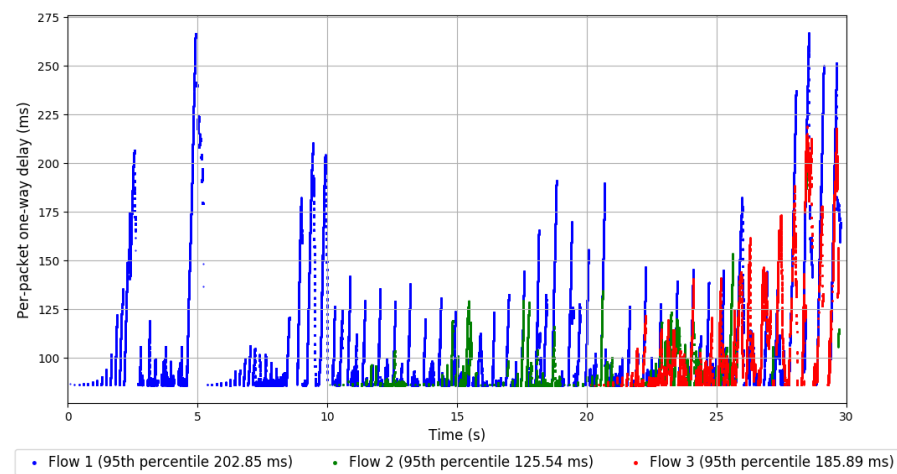
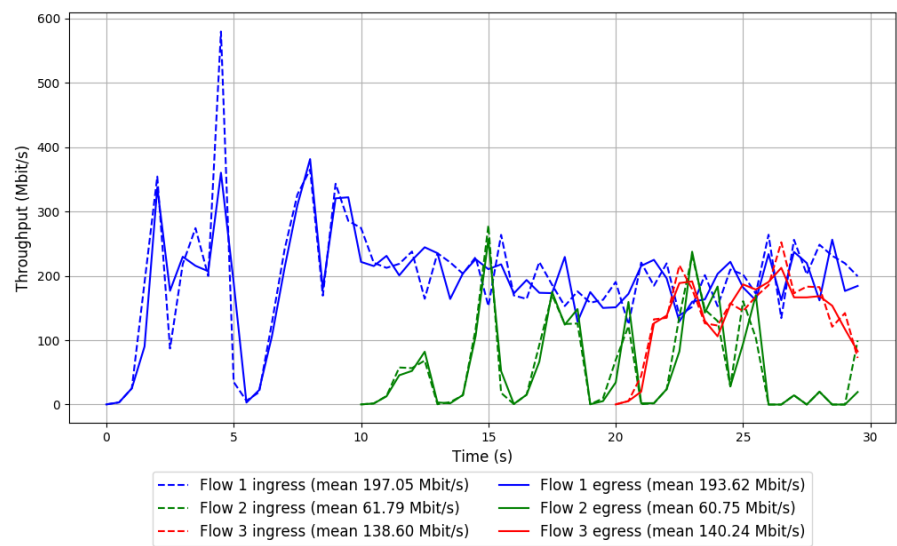
-- Flow 3:

Average throughput: 140.24 Mbit/s

95th percentile per-packet one-way delay: 185.889 ms

Loss rate: 2.15%

Run 10: Report of Verus — Data Link



Run 1: Statistics of Copa

Start at: 2018-04-18 01:28:58

End at: 2018-04-18 01:29:28

Below is generated by plot.py at 2018-04-18 07:56:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 164.08 Mbit/s

95th percentile per-packet one-way delay: 79.319 ms

Loss rate: 0.79%

-- Flow 1:

Average throughput: 86.06 Mbit/s

95th percentile per-packet one-way delay: 79.320 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 79.86 Mbit/s

95th percentile per-packet one-way delay: 79.308 ms

Loss rate: 0.88%

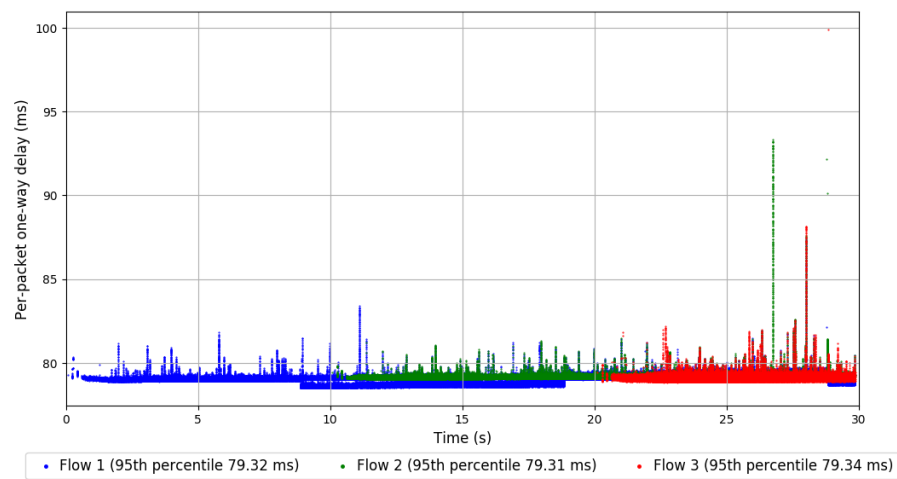
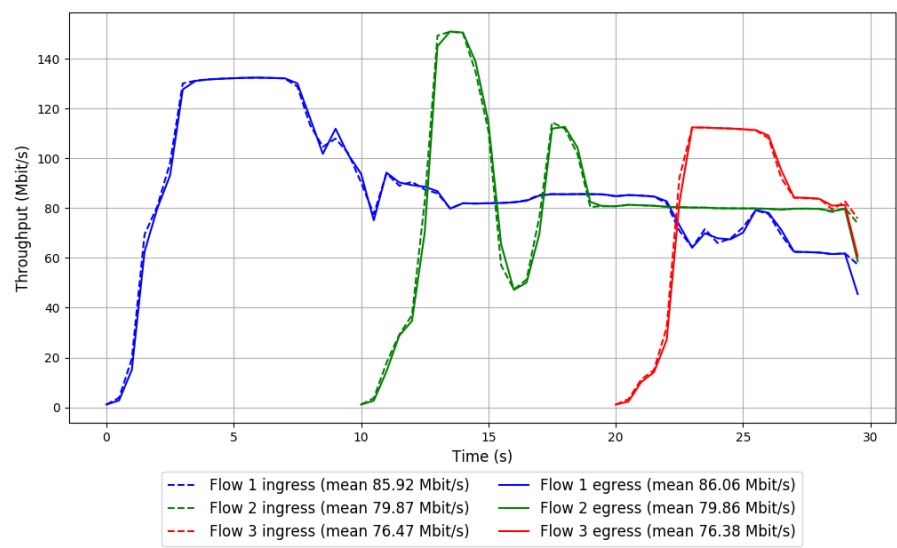
-- Flow 3:

Average throughput: 76.38 Mbit/s

95th percentile per-packet one-way delay: 79.340 ms

Loss rate: 1.87%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-04-18 01:45:24

End at: 2018-04-18 01:45:54

Below is generated by plot.py at 2018-04-18 07:56:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 147.20 Mbit/s

95th percentile per-packet one-way delay: 80.062 ms

Loss rate: 0.64%

-- Flow 1:

Average throughput: 75.49 Mbit/s

95th percentile per-packet one-way delay: 80.001 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 69.62 Mbit/s

95th percentile per-packet one-way delay: 80.125 ms

Loss rate: 0.54%

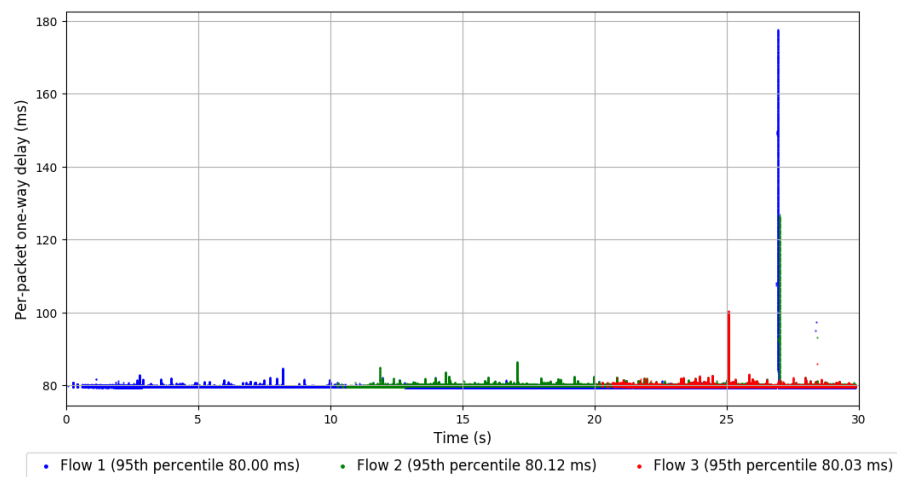
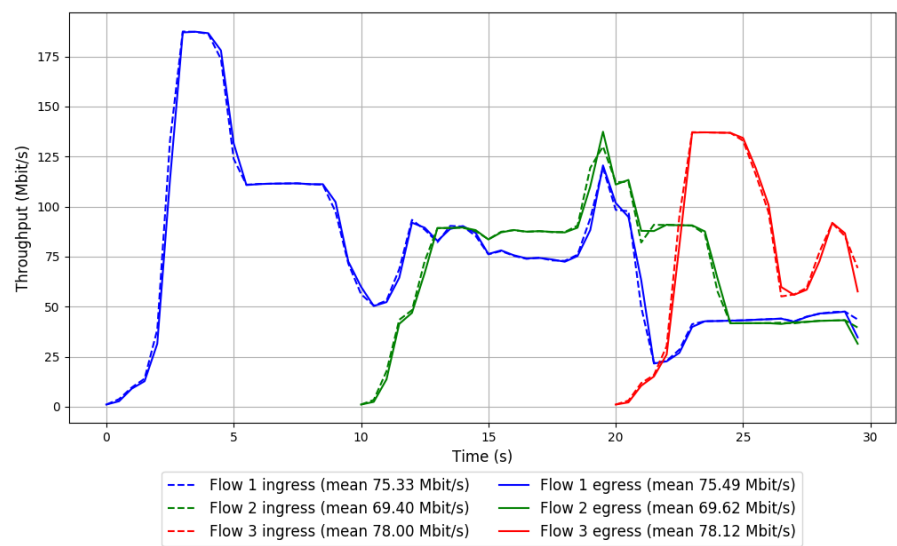
-- Flow 3:

Average throughput: 78.12 Mbit/s

95th percentile per-packet one-way delay: 80.030 ms

Loss rate: 1.60%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

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 07:56:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 153.57 Mbit/s

95th percentile per-packet one-way delay: 83.014 ms

Loss rate: 0.72%

-- Flow 1:

Average throughput: 82.45 Mbit/s

95th percentile per-packet one-way delay: 82.885 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 68.60 Mbit/s

95th percentile per-packet one-way delay: 83.146 ms

Loss rate: 0.70%

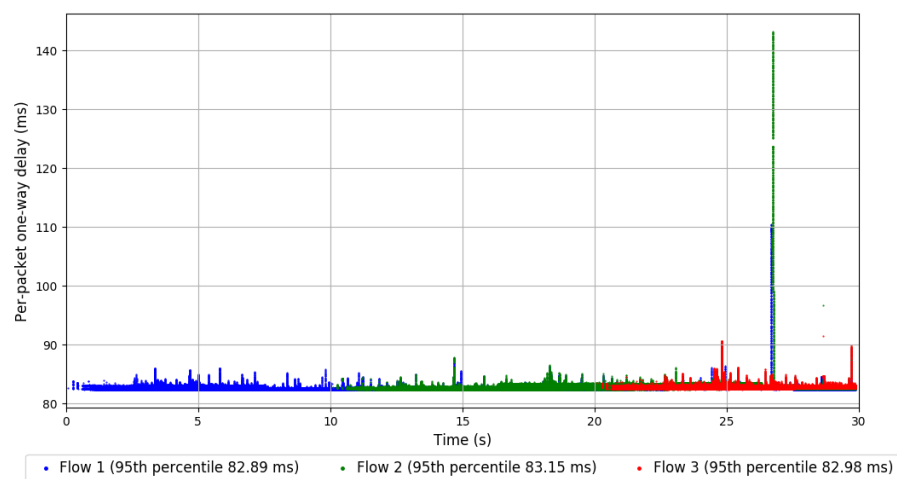
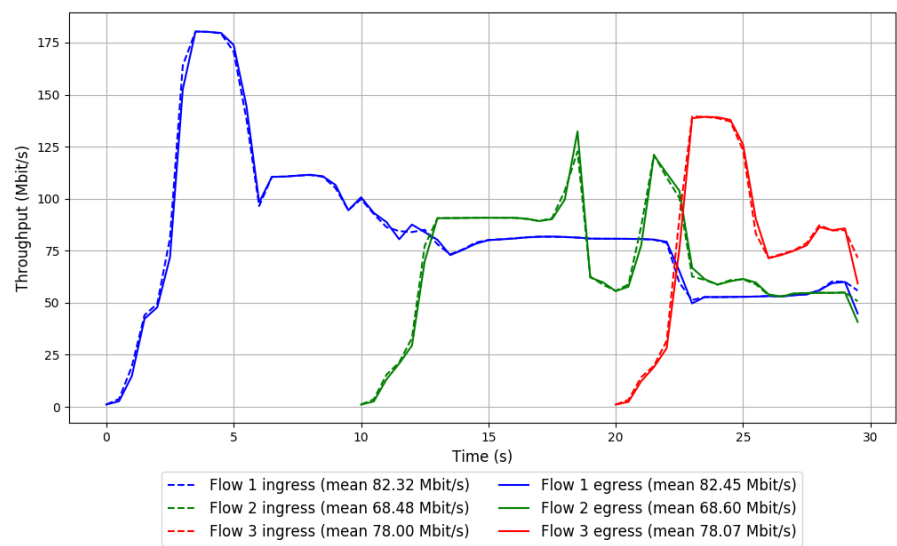
-- Flow 3:

Average throughput: 78.07 Mbit/s

95th percentile per-packet one-way delay: 82.984 ms

Loss rate: 1.67%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2018-04-18 02:19:21

End at: 2018-04-18 02:19:51

Below is generated by plot.py at 2018-04-18 07:58:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 147.77 Mbit/s

95th percentile per-packet one-way delay: 83.196 ms

Loss rate: 0.77%

-- Flow 1:

Average throughput: 87.58 Mbit/s

95th percentile per-packet one-way delay: 83.119 ms

Loss rate: 0.53%

-- Flow 2:

Average throughput: 66.71 Mbit/s

95th percentile per-packet one-way delay: 83.263 ms

Loss rate: 0.71%

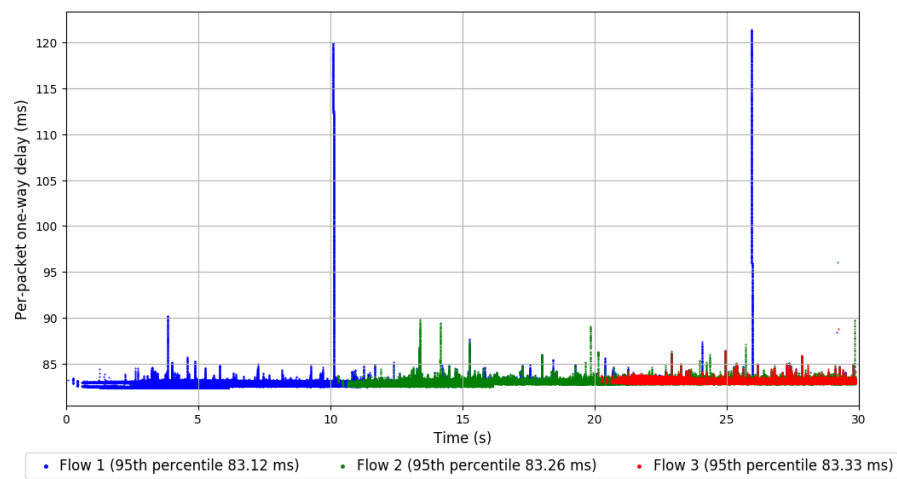
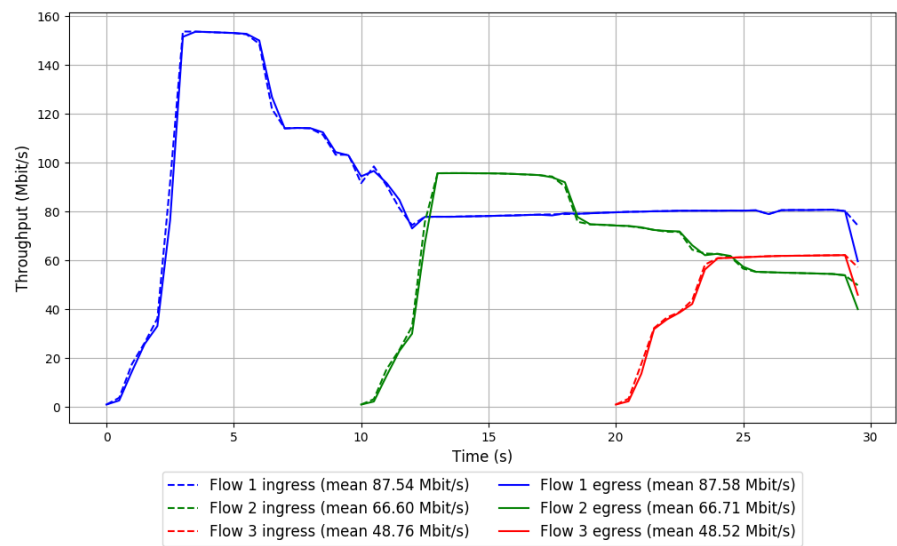
-- Flow 3:

Average throughput: 48.52 Mbit/s

95th percentile per-packet one-way delay: 83.332 ms

Loss rate: 2.23%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

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

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

Below is generated by plot.py at 2018-04-18 07:58:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 146.53 Mbit/s

95th percentile per-packet one-way delay: 84.602 ms

Loss rate: 0.93%

-- Flow 1:

Average throughput: 76.94 Mbit/s

95th percentile per-packet one-way delay: 84.414 ms

Loss rate: 0.57%

-- Flow 2:

Average throughput: 72.79 Mbit/s

95th percentile per-packet one-way delay: 84.785 ms

Loss rate: 0.93%

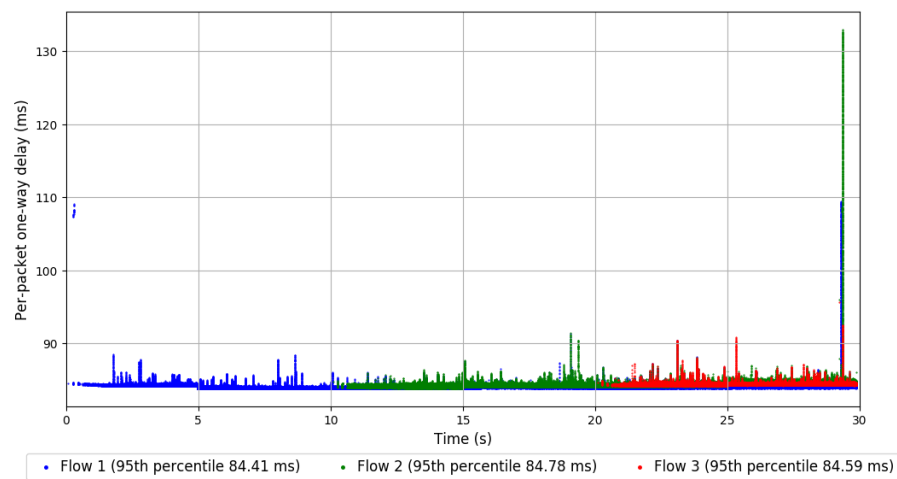
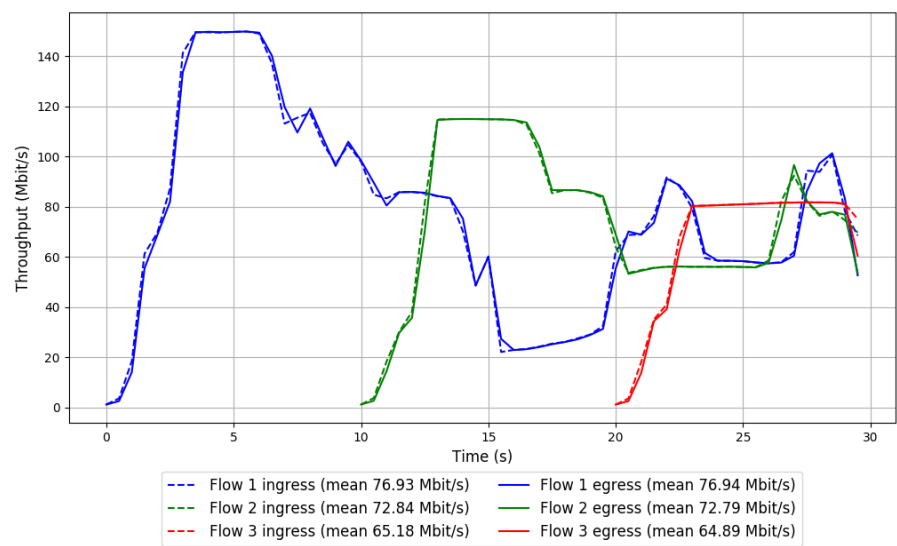
-- Flow 3:

Average throughput: 64.89 Mbit/s

95th percentile per-packet one-way delay: 84.594 ms

Loss rate: 2.18%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2018-04-18 02:52:56

End at: 2018-04-18 02:53:26

Below is generated by plot.py at 2018-04-18 07:58:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 155.37 Mbit/s

95th percentile per-packet one-way delay: 84.721 ms

Loss rate: 0.81%

-- Flow 1:

Average throughput: 85.66 Mbit/s

95th percentile per-packet one-way delay: 84.755 ms

Loss rate: 0.46%

-- Flow 2:

Average throughput: 61.36 Mbit/s

95th percentile per-packet one-way delay: 84.668 ms

Loss rate: 0.66%

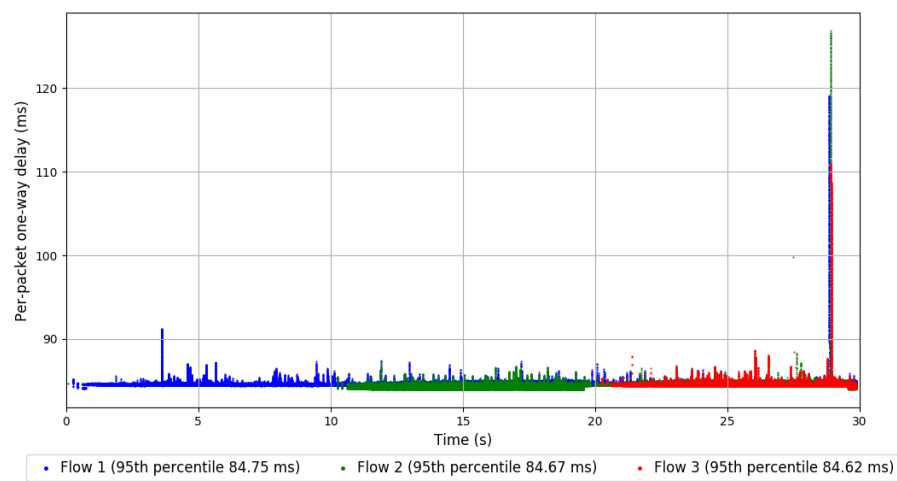
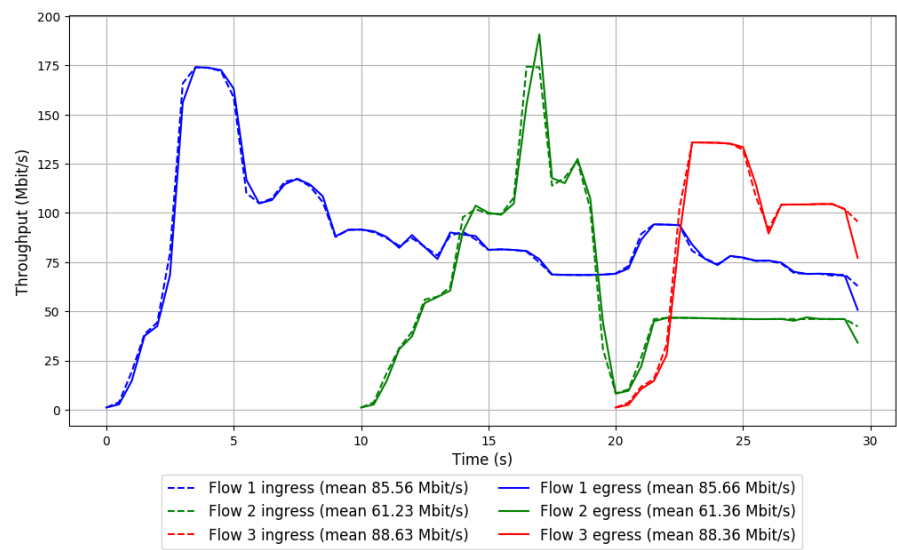
-- Flow 3:

Average throughput: 88.36 Mbit/s

95th percentile per-packet one-way delay: 84.623 ms

Loss rate: 2.05%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2018-04-18 03:09:54

End at: 2018-04-18 03:10:24

Below is generated by plot.py at 2018-04-18 07:59:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 152.05 Mbit/s

95th percentile per-packet one-way delay: 85.327 ms

Loss rate: 0.70%

-- Flow 1:

Average throughput: 81.34 Mbit/s

95th percentile per-packet one-way delay: 85.388 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 67.09 Mbit/s

95th percentile per-packet one-way delay: 85.261 ms

Loss rate: 0.71%

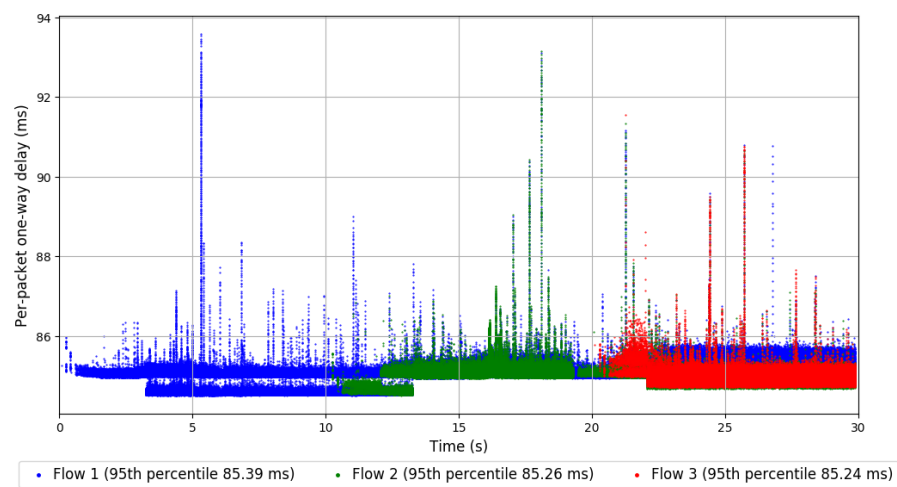
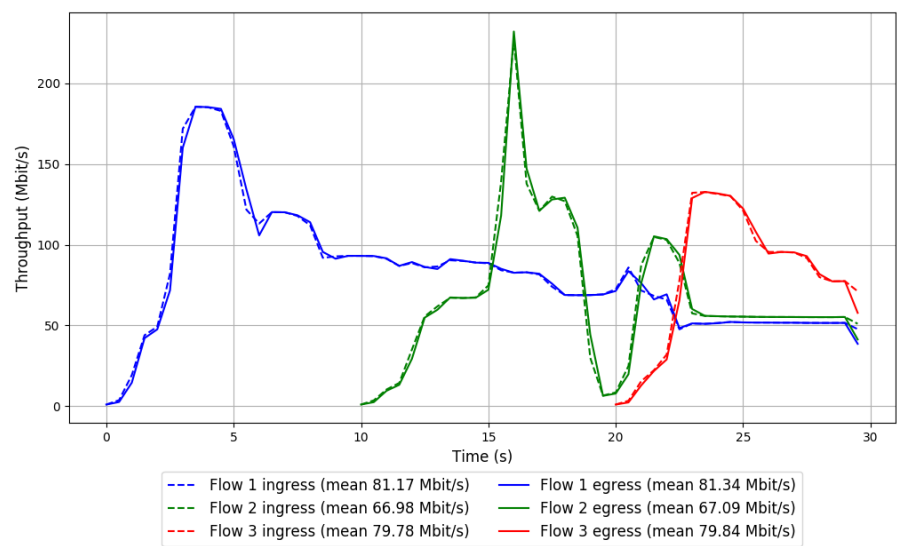
-- Flow 3:

Average throughput: 79.84 Mbit/s

95th percentile per-packet one-way delay: 85.237 ms

Loss rate: 1.67%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2018-04-18 03:26:56

End at: 2018-04-18 03:27:26

Below is generated by plot.py at 2018-04-18 08:00:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 152.08 Mbit/s

95th percentile per-packet one-way delay: 85.677 ms

Loss rate: 0.86%

-- Flow 1:

Average throughput: 75.70 Mbit/s

95th percentile per-packet one-way delay: 85.578 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 72.07 Mbit/s

95th percentile per-packet one-way delay: 85.745 ms

Loss rate: 0.82%

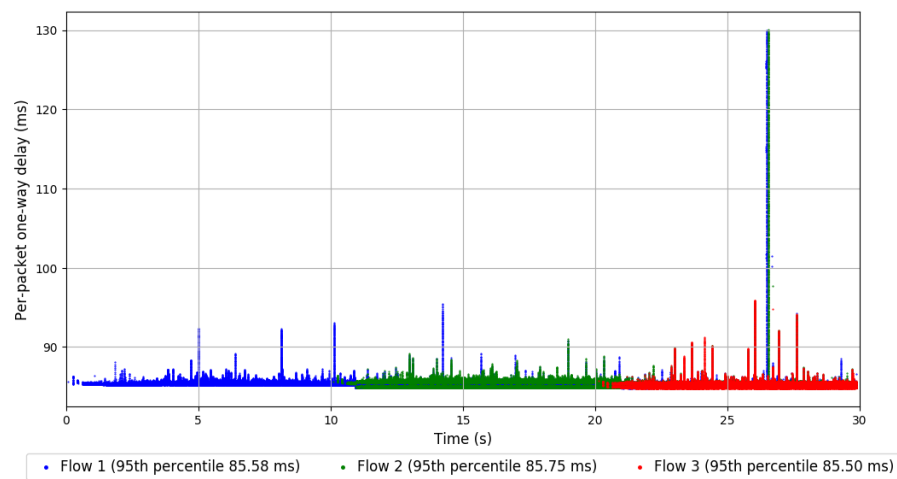
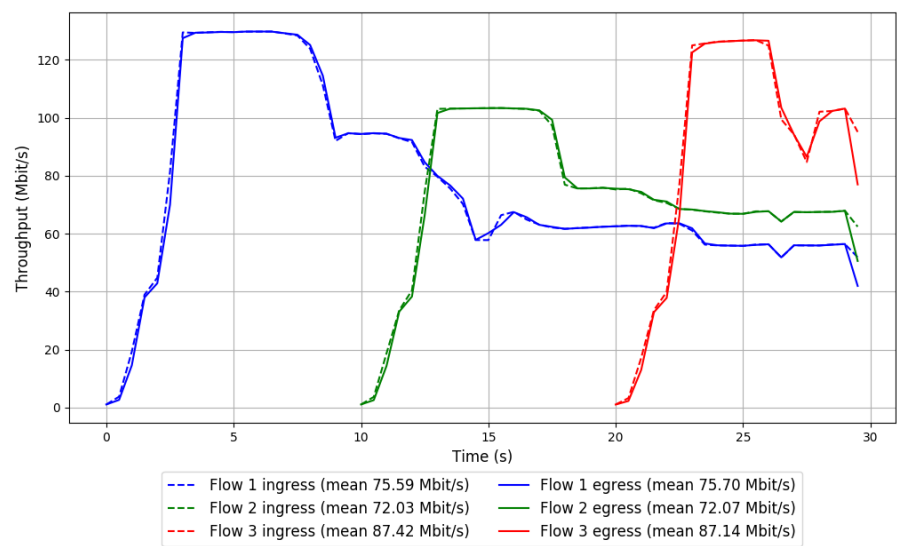
-- Flow 3:

Average throughput: 87.14 Mbit/s

95th percentile per-packet one-way delay: 85.495 ms

Loss rate: 2.06%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2018-04-18 03:43:47

End at: 2018-04-18 03:44:17

Below is generated by plot.py at 2018-04-18 08:01:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 153.02 Mbit/s

95th percentile per-packet one-way delay: 85.825 ms

Loss rate: 0.88%

-- Flow 1:

Average throughput: 80.86 Mbit/s

95th percentile per-packet one-way delay: 85.787 ms

Loss rate: 0.47%

-- Flow 2:

Average throughput: 69.94 Mbit/s

95th percentile per-packet one-way delay: 85.846 ms

Loss rate: 0.89%

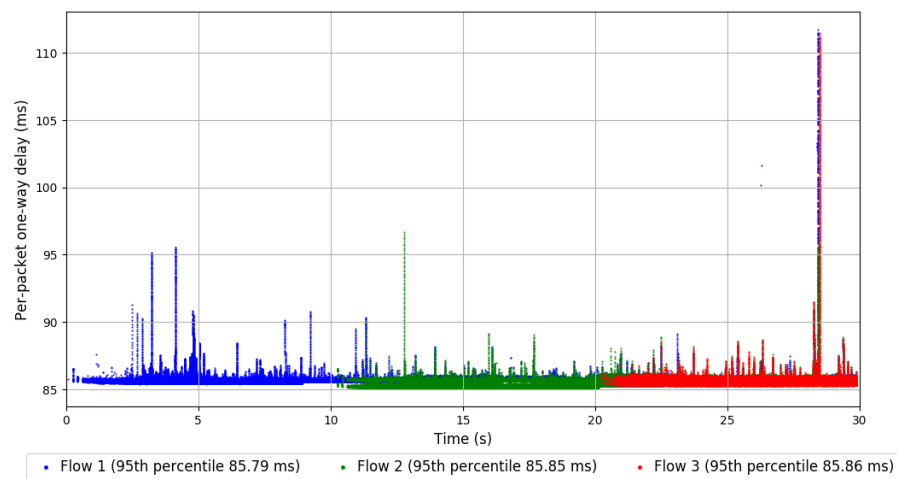
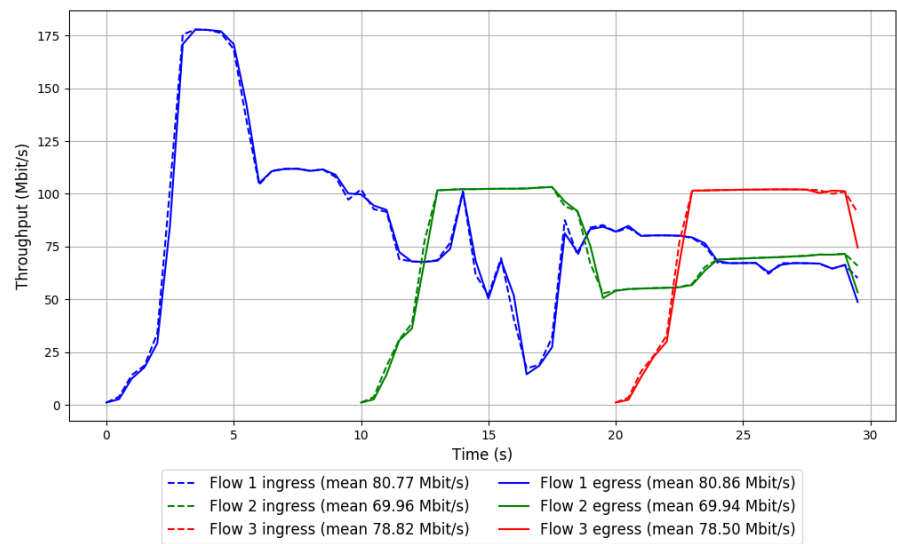
-- Flow 3:

Average throughput: 78.50 Mbit/s

95th percentile per-packet one-way delay: 85.861 ms

Loss rate: 2.15%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2018-04-18 04:00:47

End at: 2018-04-18 04:01:17

Below is generated by plot.py at 2018-04-18 08:01:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 147.56 Mbit/s

95th percentile per-packet one-way delay: 86.413 ms

Loss rate: 0.61%

-- Flow 1:

Average throughput: 75.73 Mbit/s

95th percentile per-packet one-way delay: 86.359 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 71.30 Mbit/s

95th percentile per-packet one-way delay: 86.495 ms

Loss rate: 0.44%

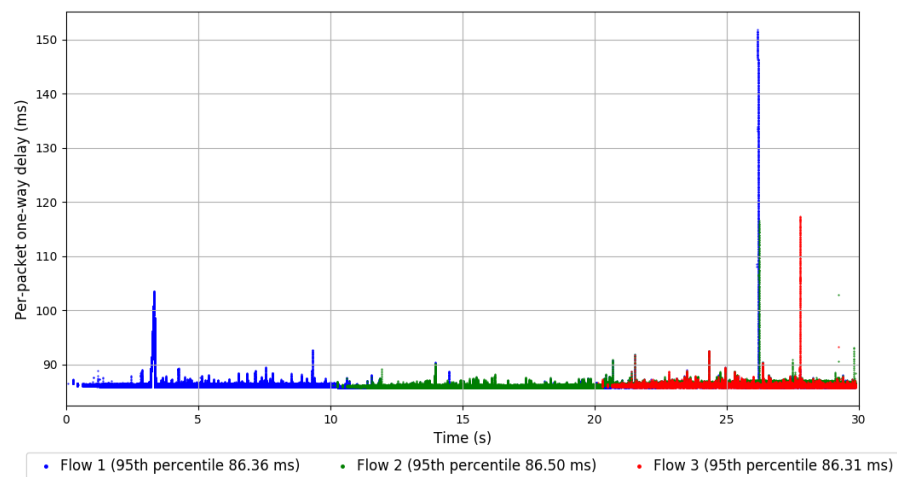
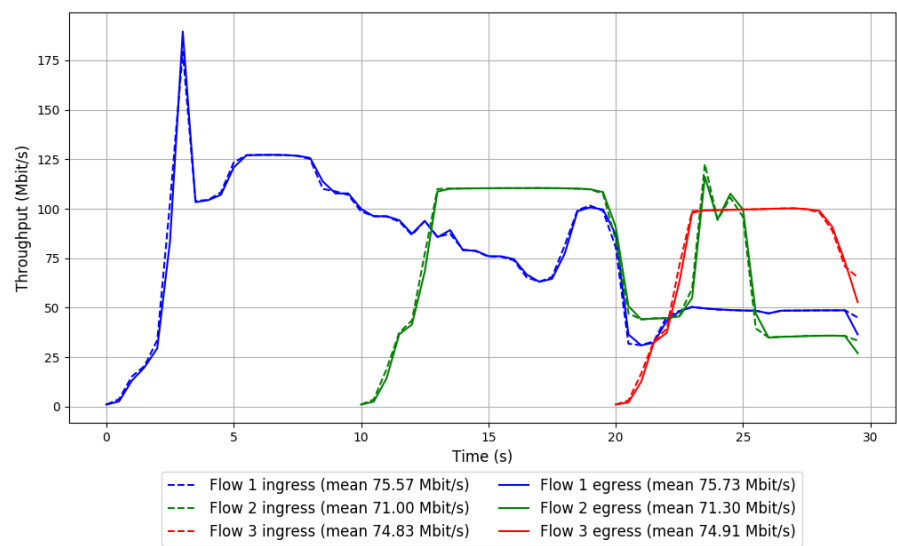
-- Flow 3:

Average throughput: 74.91 Mbit/s

95th percentile per-packet one-way delay: 86.312 ms

Loss rate: 1.65%

Run 10: Report of Copa — Data Link

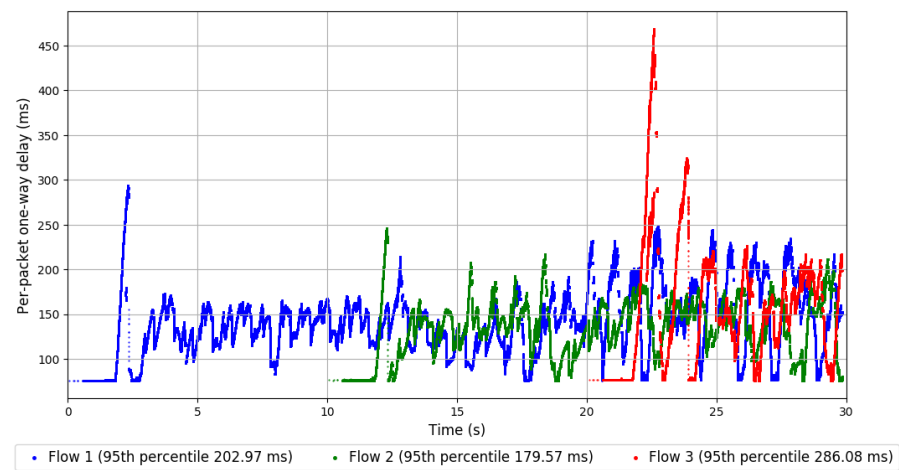
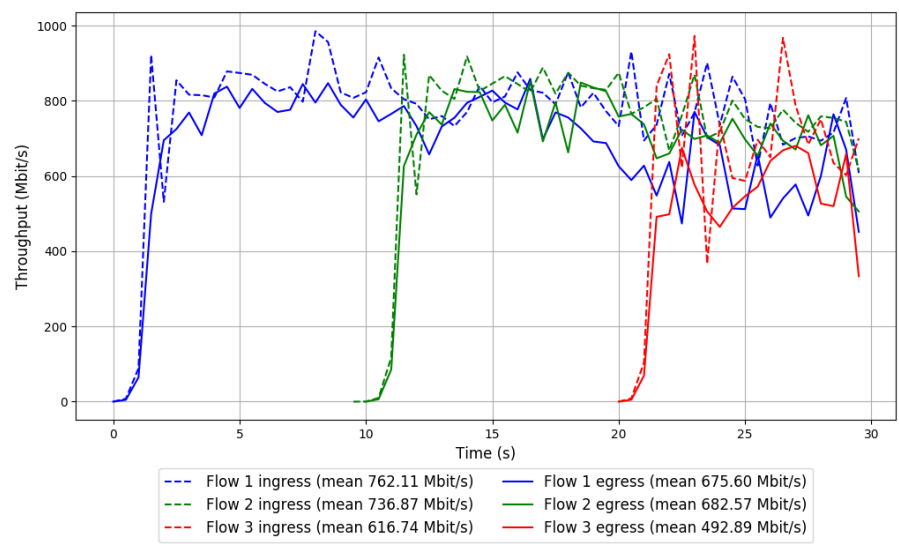


```
Run 1: Statistics of FillP

Start at: 2018-04-18 01:24:02
End at: 2018-04-18 01:24:32

# Below is generated by plot.py at 2018-04-18 08:20:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1290.23 Mbit/s
95th percentile per-packet one-way delay: 204.187 ms
Loss rate: 11.97%
-- Flow 1:
Average throughput: 675.60 Mbit/s
95th percentile per-packet one-way delay: 202.974 ms
Loss rate: 11.86%
-- Flow 2:
Average throughput: 682.57 Mbit/s
95th percentile per-packet one-way delay: 179.572 ms
Loss rate: 8.17%
-- Flow 3:
Average throughput: 492.89 Mbit/s
95th percentile per-packet one-way delay: 286.079 ms
Loss rate: 21.48%
```


Run 1: Report of FillP — Data Link

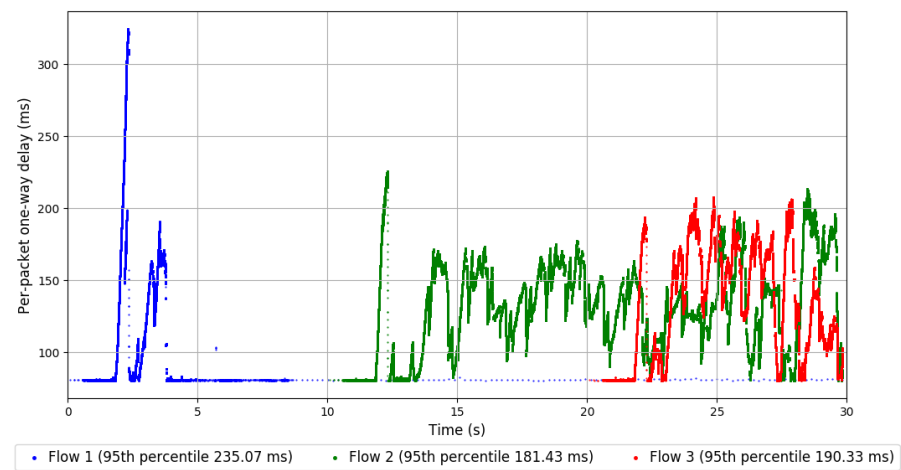
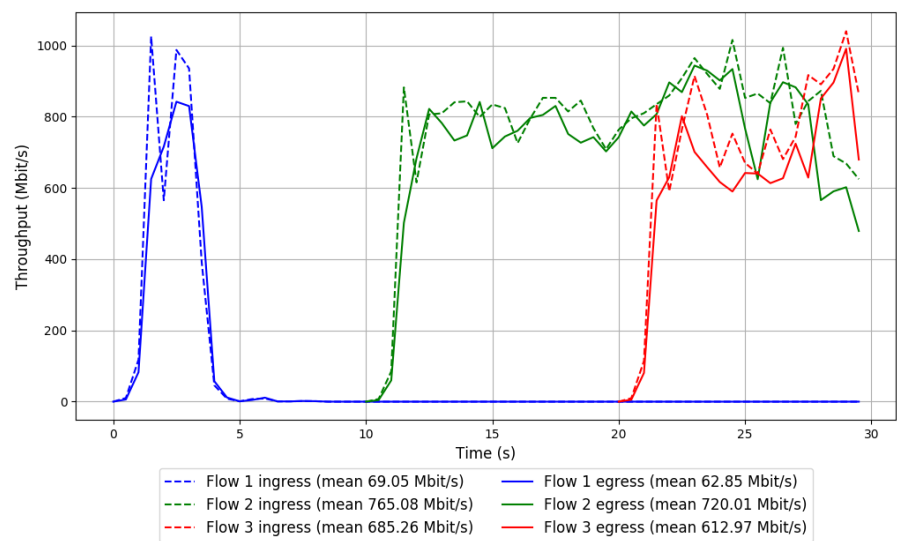


```
Run 2: Statistics of FillP

Start at: 2018-04-18 01:40:53
End at: 2018-04-18 01:41:23

# Below is generated by plot.py at 2018-04-18 08:20:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 741.34 Mbit/s
95th percentile per-packet one-way delay: 186.927 ms
Loss rate: 8.43%
-- Flow 1:
Average throughput: 62.85 Mbit/s
95th percentile per-packet one-way delay: 235.066 ms
Loss rate: 8.98%
-- Flow 2:
Average throughput: 720.01 Mbit/s
95th percentile per-packet one-way delay: 181.430 ms
Loss rate: 6.71%
-- Flow 3:
Average throughput: 612.97 Mbit/s
95th percentile per-packet one-way delay: 190.334 ms
Loss rate: 12.12%
```

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-04-18 01:57:16

End at: 2018-04-18 01:57:46

Below is generated by plot.py at 2018-04-18 08:21:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 1289.90 Mbit/s

95th percentile per-packet one-way delay: 267.898 ms

Loss rate: 8.80%

-- Flow 1:

Average throughput: 680.78 Mbit/s

95th percentile per-packet one-way delay: 186.731 ms

Loss rate: 9.59%

-- Flow 2:

Average throughput: 661.46 Mbit/s

95th percentile per-packet one-way delay: 278.832 ms

Loss rate: 7.91%

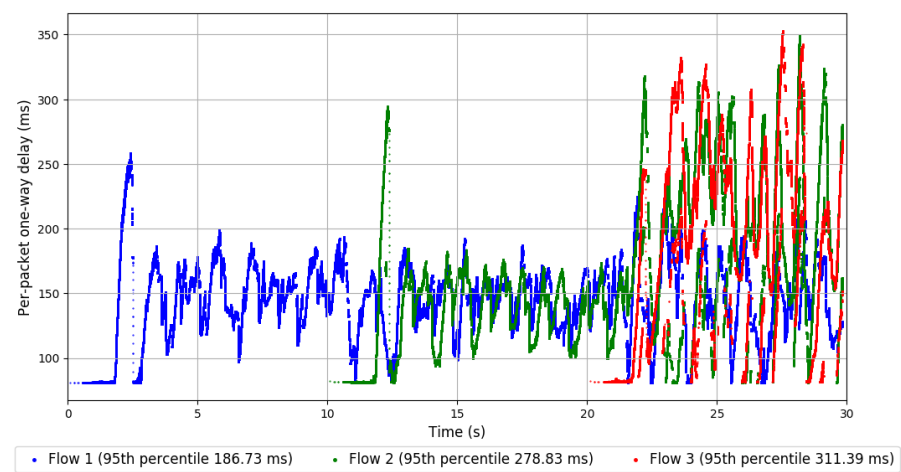
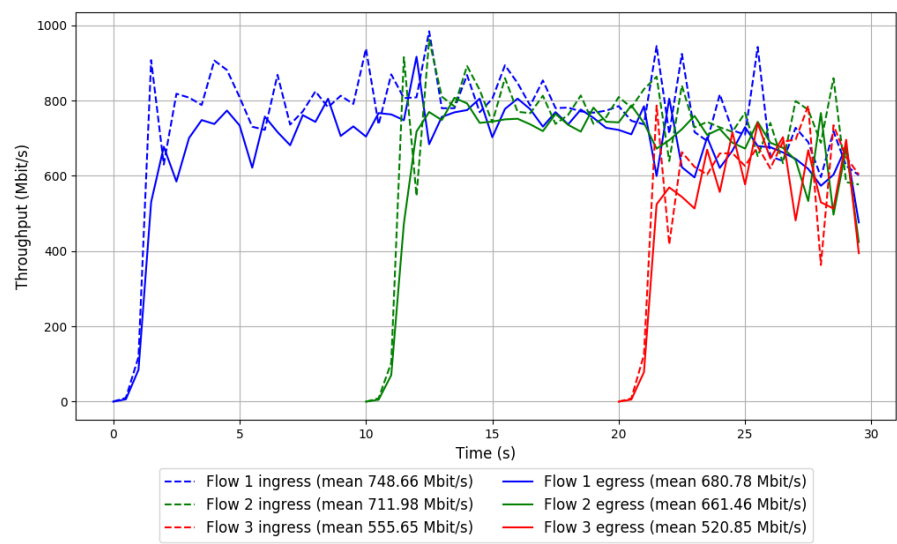
-- Flow 3:

Average throughput: 520.85 Mbit/s

95th percentile per-packet one-way delay: 311.393 ms

Loss rate: 7.91%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

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

End at: 2018-04-18 02:14:48

Below is generated by plot.py at 2018-04-18 08:22:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 1287.35 Mbit/s

95th percentile per-packet one-way delay: 204.250 ms

Loss rate: 10.35%

-- Flow 1:

Average throughput: 712.51 Mbit/s

95th percentile per-packet one-way delay: 189.131 ms

Loss rate: 8.69%

-- Flow 2:

Average throughput: 584.19 Mbit/s

95th percentile per-packet one-way delay: 208.366 ms

Loss rate: 11.93%

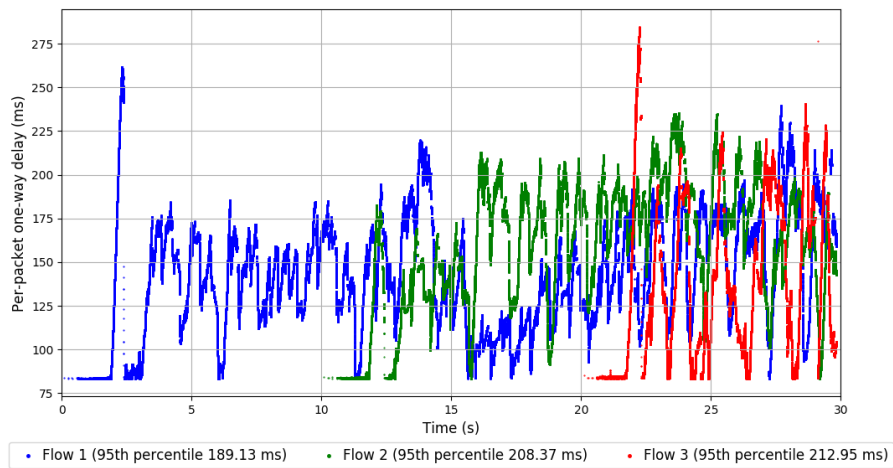
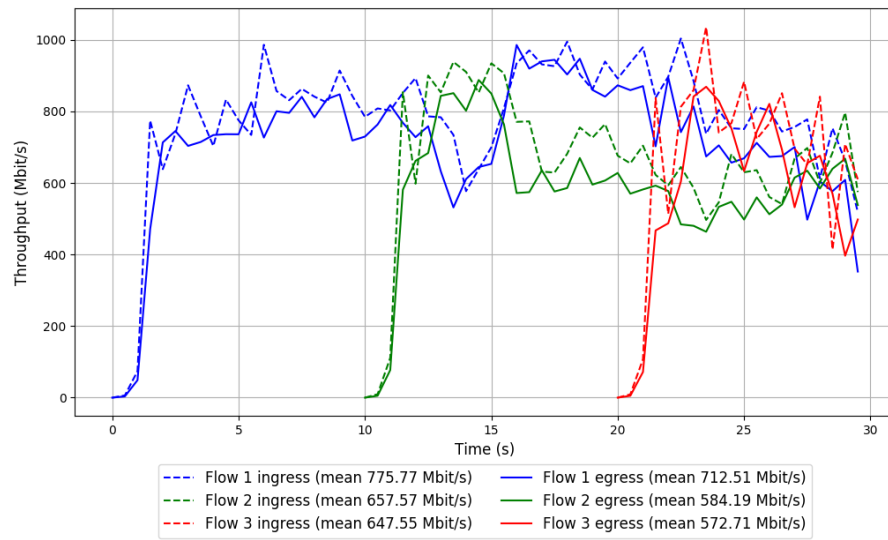
-- Flow 3:

Average throughput: 572.71 Mbit/s

95th percentile per-packet one-way delay: 212.951 ms

Loss rate: 13.12%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-04-18 02:31:23

End at: 2018-04-18 02:31:54

Below is generated by plot.py at 2018-04-18 08:22:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 815.38 Mbit/s

95th percentile per-packet one-way delay: 178.788 ms

Loss rate: 9.58%

-- Flow 1:

Average throughput: 76.44 Mbit/s

95th percentile per-packet one-way delay: 328.448 ms

Loss rate: 18.69%

-- Flow 2:

Average throughput: 820.11 Mbit/s

95th percentile per-packet one-way delay: 165.576 ms

Loss rate: 7.07%

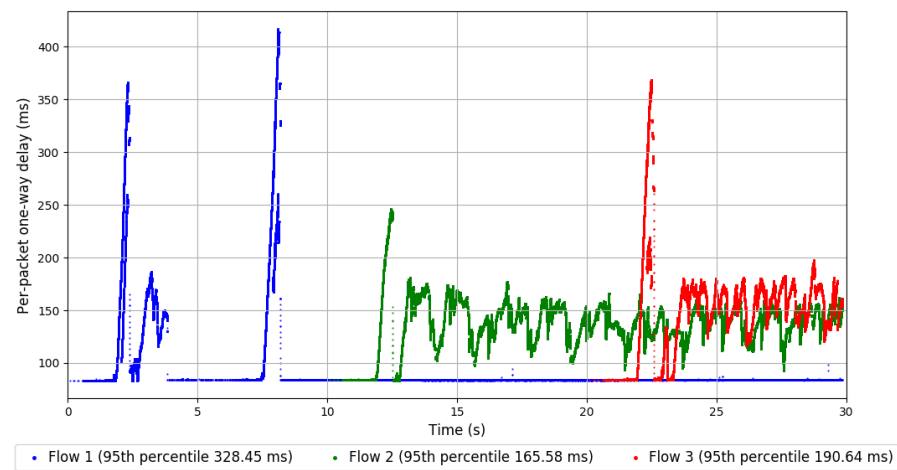
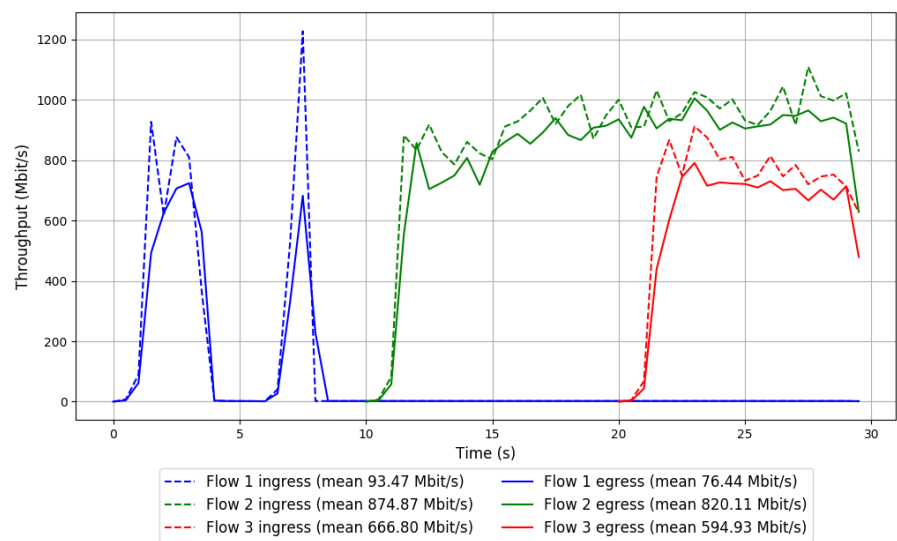
-- Flow 3:

Average throughput: 594.93 Mbit/s

95th percentile per-packet one-way delay: 190.636 ms

Loss rate: 12.34%

Run 5: Report of FillP — Data Link



Run 6: Statistics of FillP

Start at: 2018-04-18 02:47:55

End at: 2018-04-18 02:48:25

Below is generated by plot.py at 2018-04-18 08:23:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 1309.88 Mbit/s

95th percentile per-packet one-way delay: 291.972 ms

Loss rate: 11.53%

-- Flow 1:

Average throughput: 710.75 Mbit/s

95th percentile per-packet one-way delay: 190.859 ms

Loss rate: 9.56%

-- Flow 2:

Average throughput: 664.47 Mbit/s

95th percentile per-packet one-way delay: 299.079 ms

Loss rate: 11.33%

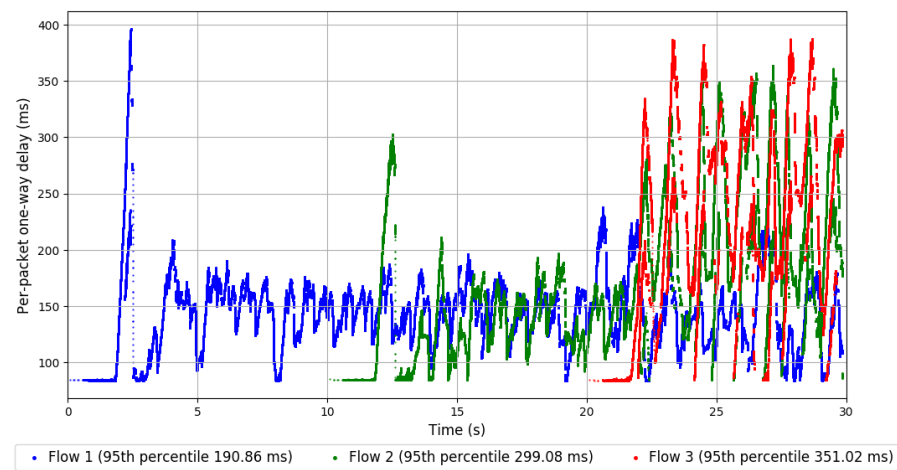
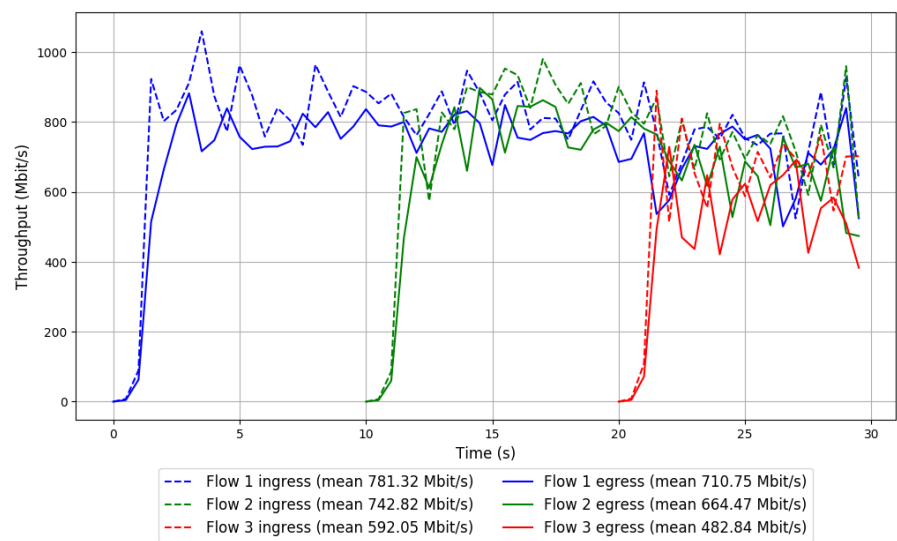
-- Flow 3:

Average throughput: 482.84 Mbit/s

95th percentile per-packet one-way delay: 351.020 ms

Loss rate: 19.88%

Run 6: Report of FillP — Data Link



Run 7: Statistics of FillP

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

End at: 2018-04-18 03:05:23

Below is generated by plot.py at 2018-04-18 08:23:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 1139.73 Mbit/s

95th percentile per-packet one-way delay: 285.571 ms

Loss rate: 10.00%

-- Flow 1:

Average throughput: 732.96 Mbit/s

95th percentile per-packet one-way delay: 260.980 ms

Loss rate: 9.60%

-- Flow 2:

Average throughput: 305.78 Mbit/s

95th percentile per-packet one-way delay: 321.917 ms

Loss rate: 12.57%

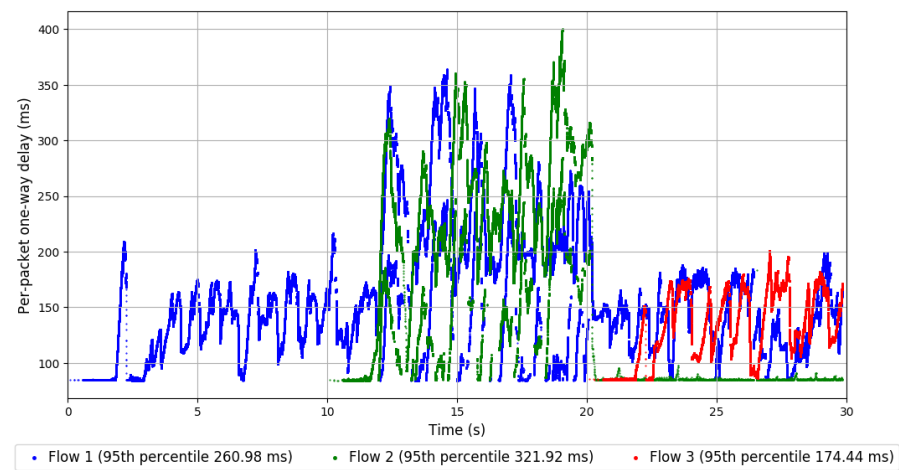
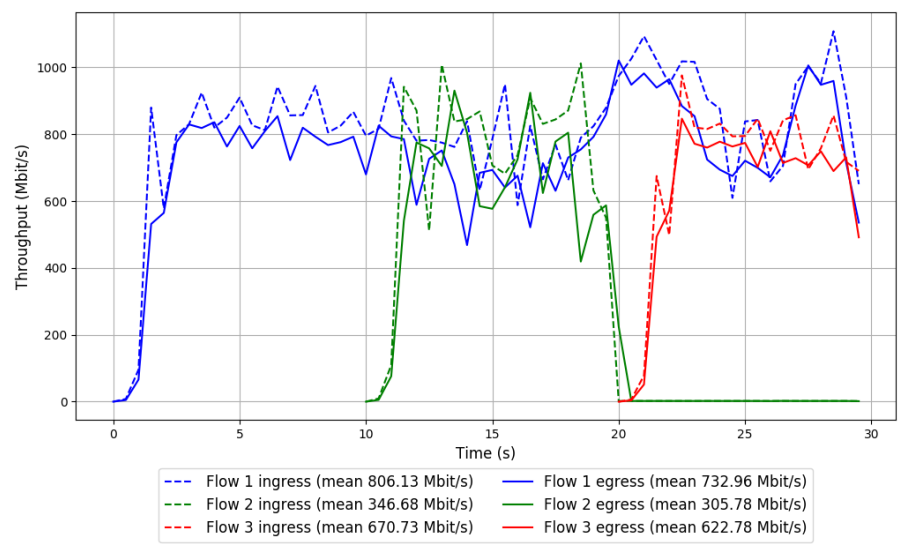
-- Flow 3:

Average throughput: 622.78 Mbit/s

95th percentile per-packet one-way delay: 174.441 ms

Loss rate: 8.78%

Run 7: Report of FillP — Data Link



Run 8: Statistics of FillP

Start at: 2018-04-18 03:21:51

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

Below is generated by plot.py at 2018-04-18 08:26:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 1338.46 Mbit/s

95th percentile per-packet one-way delay: 200.480 ms

Loss rate: 9.69%

-- Flow 1:

Average throughput: 682.91 Mbit/s

95th percentile per-packet one-way delay: 192.528 ms

Loss rate: 9.20%

-- Flow 2:

Average throughput: 764.51 Mbit/s

95th percentile per-packet one-way delay: 182.631 ms

Loss rate: 6.96%

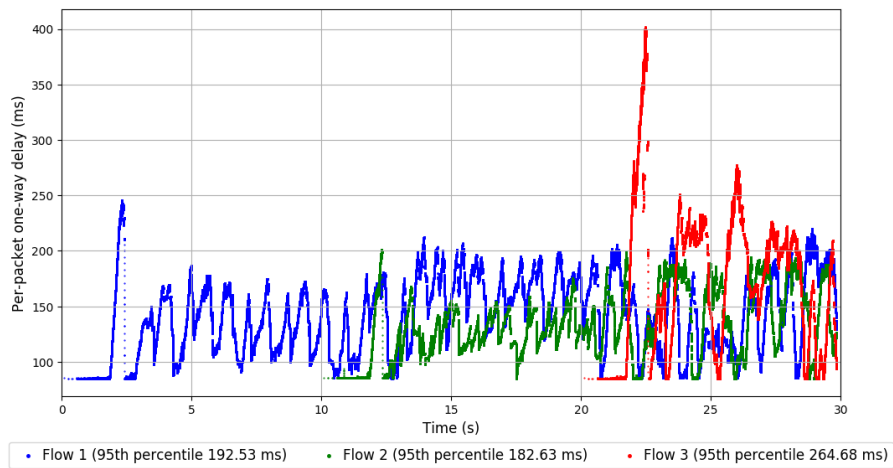
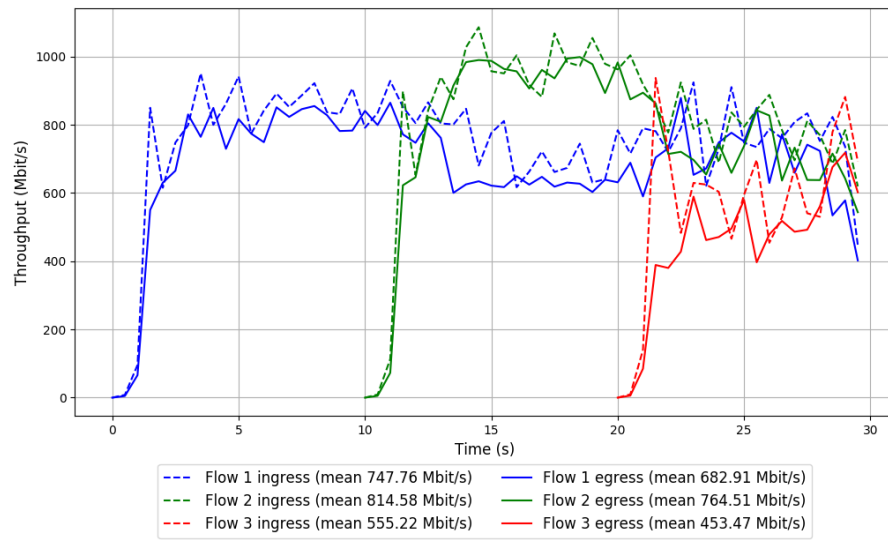
-- Flow 3:

Average throughput: 453.47 Mbit/s

95th percentile per-packet one-way delay: 264.678 ms

Loss rate: 19.77%

Run 8: Report of FillP — Data Link



Run 9: Statistics of FillP

Start at: 2018-04-18 03:38:53

End at: 2018-04-18 03:39:23

Below is generated by plot.py at 2018-04-18 08:37:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 1306.03 Mbit/s

95th percentile per-packet one-way delay: 201.851 ms

Loss rate: 8.52%

-- Flow 1:

Average throughput: 743.71 Mbit/s

95th percentile per-packet one-way delay: 184.776 ms

Loss rate: 6.73%

-- Flow 2:

Average throughput: 532.74 Mbit/s

95th percentile per-packet one-way delay: 216.118 ms

Loss rate: 9.49%

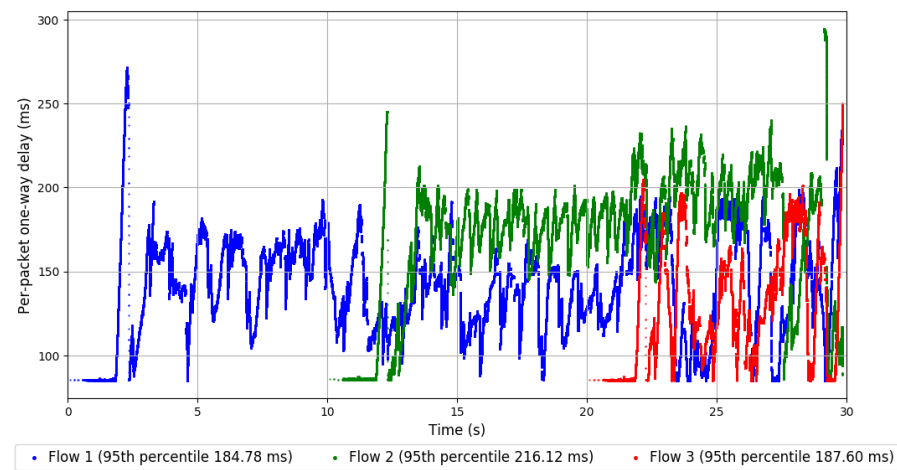
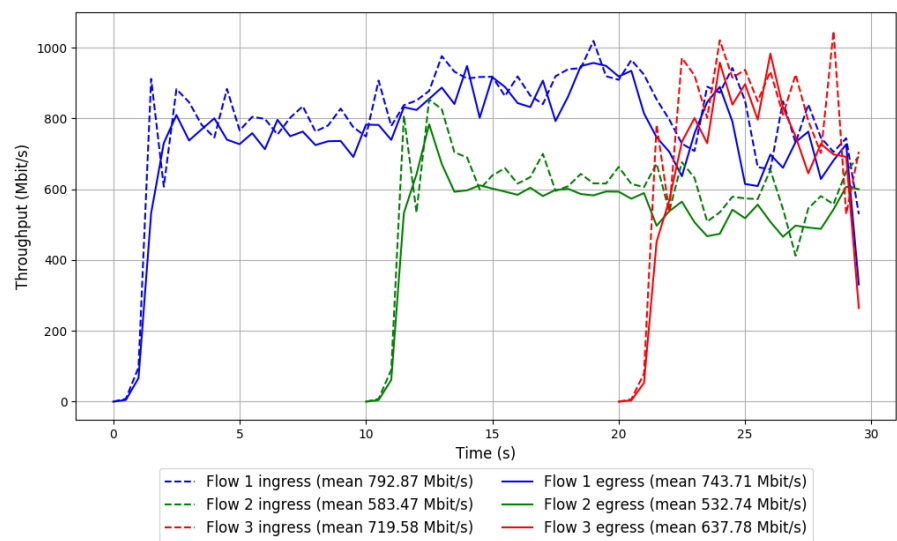
-- Flow 3:

Average throughput: 637.78 Mbit/s

95th percentile per-packet one-way delay: 187.604 ms

Loss rate: 12.92%

Run 9: Report of FillP — Data Link

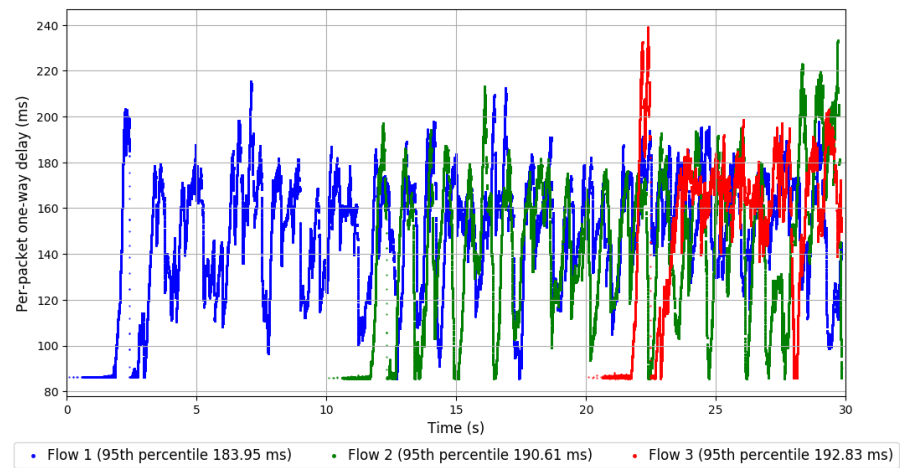
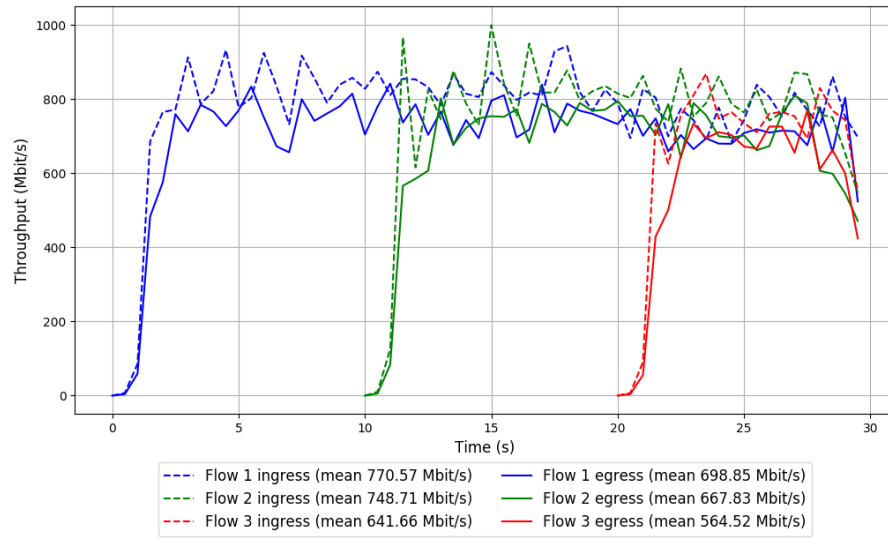


```
Run 10: Statistics of FillP

Start at: 2018-04-18 03:55:38
End at: 2018-04-18 03:56:08

# Below is generated by plot.py at 2018-04-18 08:41:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1326.77 Mbit/s
95th percentile per-packet one-way delay: 187.374 ms
Loss rate: 10.95%
-- Flow 1:
Average throughput: 698.85 Mbit/s
95th percentile per-packet one-way delay: 183.948 ms
Loss rate: 9.83%
-- Flow 2:
Average throughput: 667.83 Mbit/s
95th percentile per-packet one-way delay: 190.614 ms
Loss rate: 11.55%
-- Flow 3:
Average throughput: 564.52 Mbit/s
95th percentile per-packet one-way delay: 192.831 ms
Loss rate: 13.56%
```

Run 10: Report of FillP — Data Link

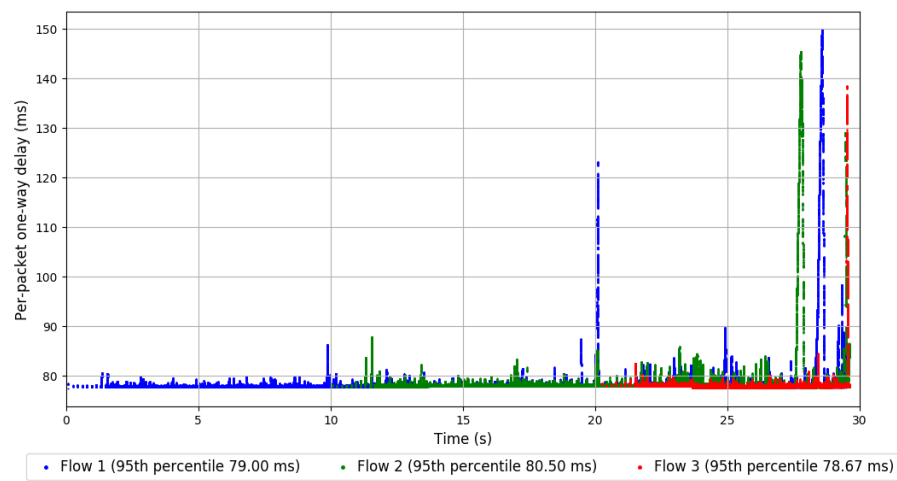
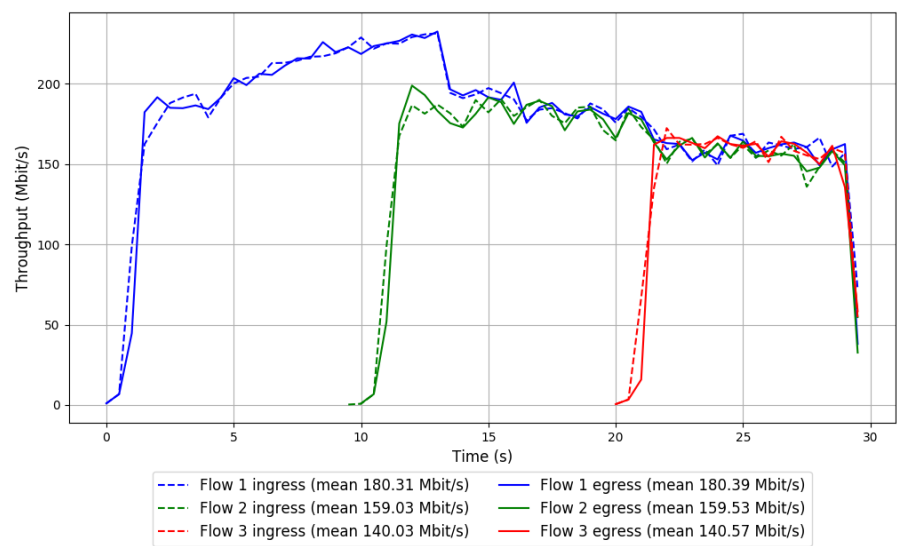


```
Run 1: Statistics of Indigo-1-32

Start at: 2018-04-18 01:26:33
End at: 2018-04-18 01:27:03

# Below is generated by plot.py at 2018-04-18 08:41:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 330.46 Mbit/s
95th percentile per-packet one-way delay: 79.362 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 180.39 Mbit/s
95th percentile per-packet one-way delay: 79.001 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 159.53 Mbit/s
95th percentile per-packet one-way delay: 80.500 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 140.57 Mbit/s
95th percentile per-packet one-way delay: 78.665 ms
Loss rate: 1.43%
```

Run 1: Report of Indigo-1-32 — Data Link

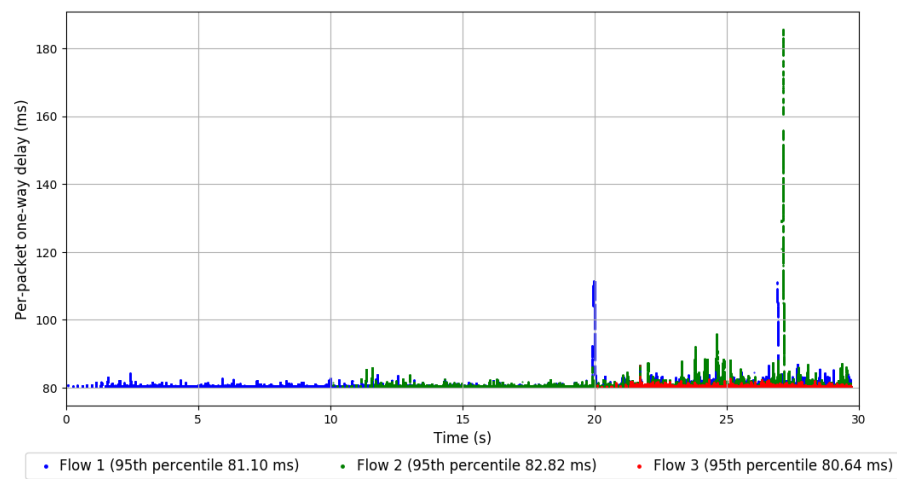
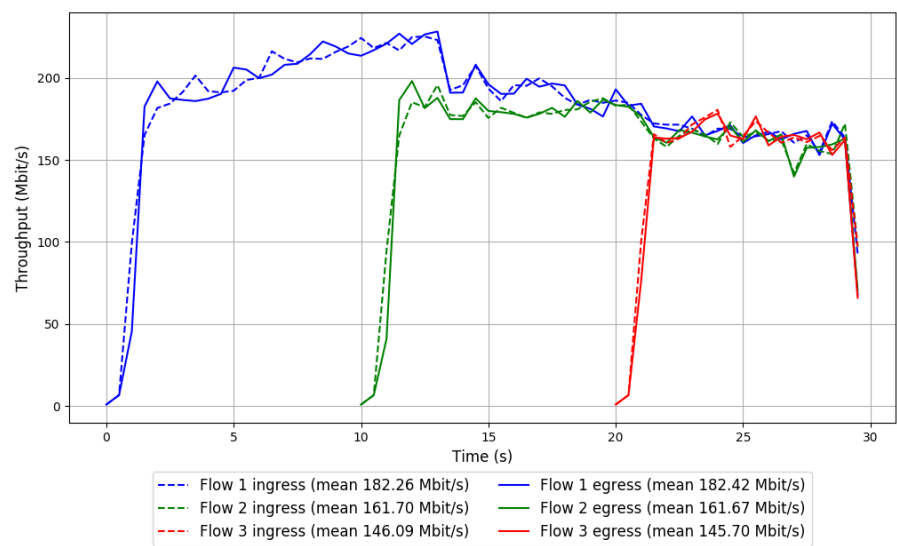


```
Run 2: Statistics of Indigo-1-32

Start at: 2018-04-18 01:42:58
End at: 2018-04-18 01:43:28

# Below is generated by plot.py at 2018-04-18 08:41:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 336.65 Mbit/s
95th percentile per-packet one-way delay: 81.356 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 182.42 Mbit/s
95th percentile per-packet one-way delay: 81.102 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 161.67 Mbit/s
95th percentile per-packet one-way delay: 82.816 ms
Loss rate: 0.90%
-- Flow 3:
Average throughput: 145.70 Mbit/s
95th percentile per-packet one-way delay: 80.642 ms
Loss rate: 2.03%
```

Run 2: Report of Indigo-1-32 — Data Link



Run 3: Statistics of Indigo-1-32

Start at: 2018-04-18 01:59:49

End at: 2018-04-18 02:00:19

Below is generated by plot.py at 2018-04-18 08:41:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 338.35 Mbit/s

95th percentile per-packet one-way delay: 83.263 ms

Loss rate: 0.86%

-- Flow 1:

Average throughput: 183.17 Mbit/s

95th percentile per-packet one-way delay: 82.998 ms

Loss rate: 0.52%

-- Flow 2:

Average throughput: 169.08 Mbit/s

95th percentile per-packet one-way delay: 84.182 ms

Loss rate: 0.91%

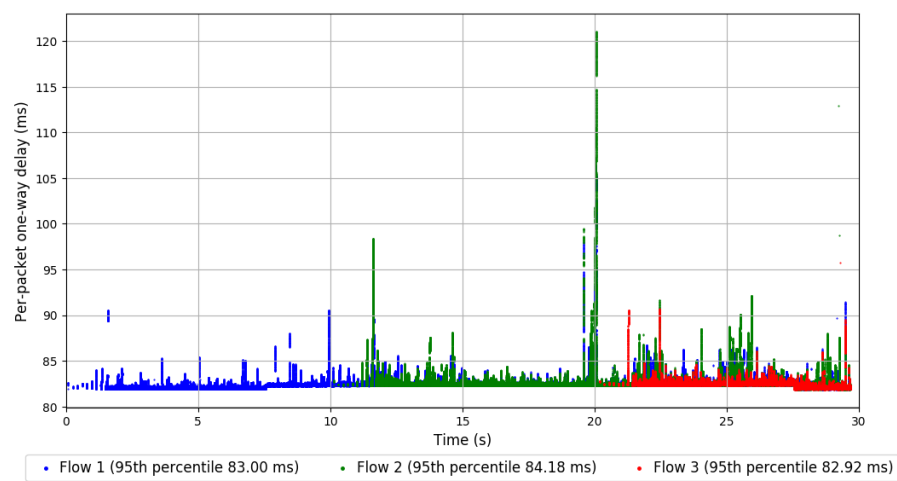
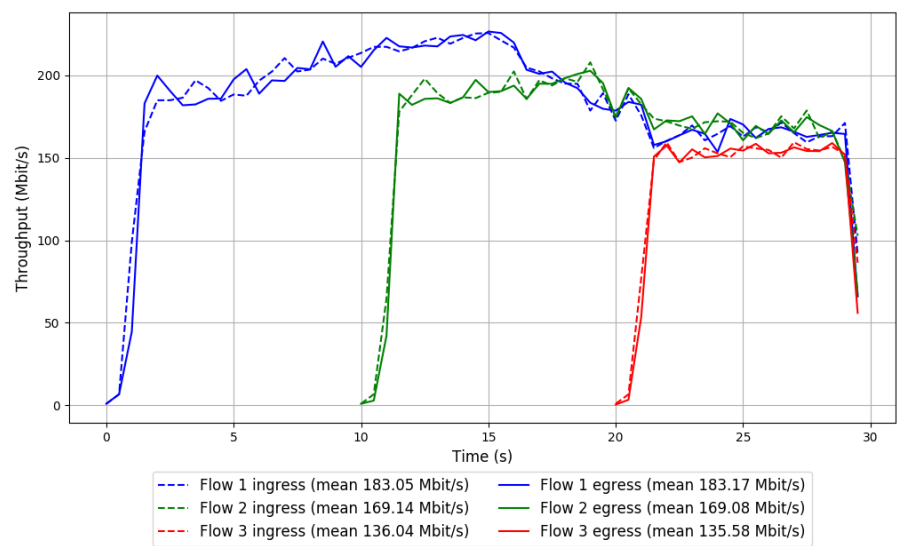
-- Flow 3:

Average throughput: 135.58 Mbit/s

95th percentile per-packet one-way delay: 82.919 ms

Loss rate: 2.13%

Run 3: Report of Indigo-1-32 — Data Link



Run 4: Statistics of Indigo-1-32

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

End at: 2018-04-18 02:17:19

Below is generated by plot.py at 2018-04-18 08:41:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 333.28 Mbit/s

95th percentile per-packet one-way delay: 84.387 ms

Loss rate: 0.84%

-- Flow 1:

Average throughput: 183.00 Mbit/s

95th percentile per-packet one-way delay: 84.317 ms

Loss rate: 0.50%

-- Flow 2:

Average throughput: 162.48 Mbit/s

95th percentile per-packet one-way delay: 85.006 ms

Loss rate: 0.90%

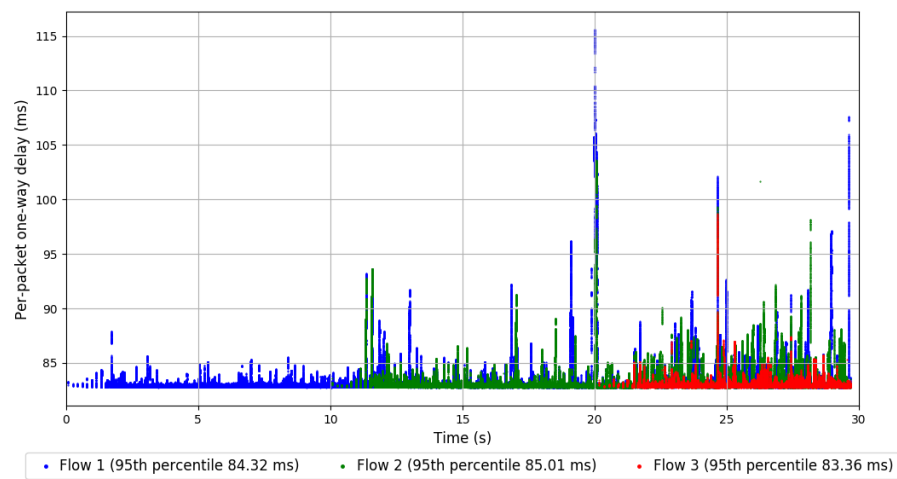
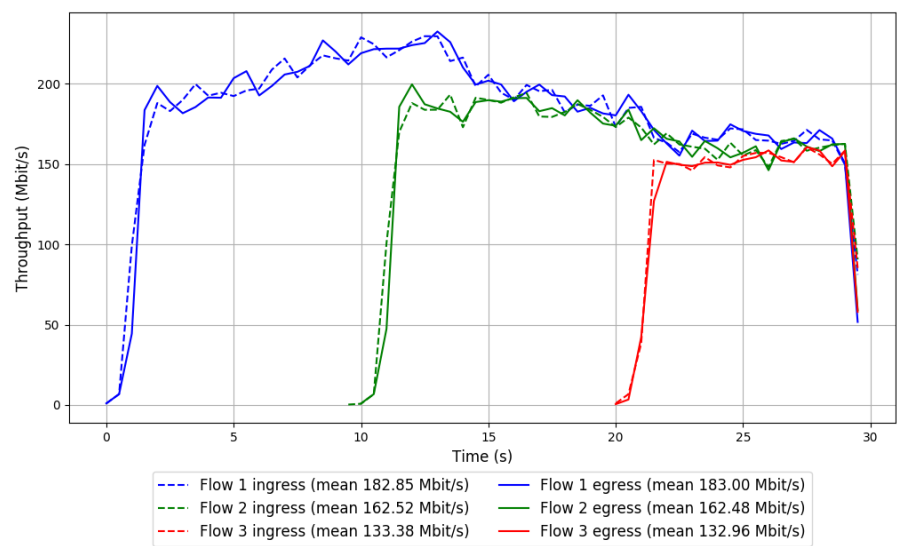
-- Flow 3:

Average throughput: 132.96 Mbit/s

95th percentile per-packet one-way delay: 83.358 ms

Loss rate: 2.10%

Run 4: Report of Indigo-1-32 — Data Link



Run 5: Statistics of Indigo-1-32

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

End at: 2018-04-18 02:34:03

Below is generated by plot.py at 2018-04-18 08:41:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 337.65 Mbit/s

95th percentile per-packet one-way delay: 85.099 ms

Loss rate: 0.81%

-- Flow 1:

Average throughput: 184.86 Mbit/s

95th percentile per-packet one-way delay: 85.320 ms

Loss rate: 0.49%

-- Flow 2:

Average throughput: 159.36 Mbit/s

95th percentile per-packet one-way delay: 85.143 ms

Loss rate: 0.87%

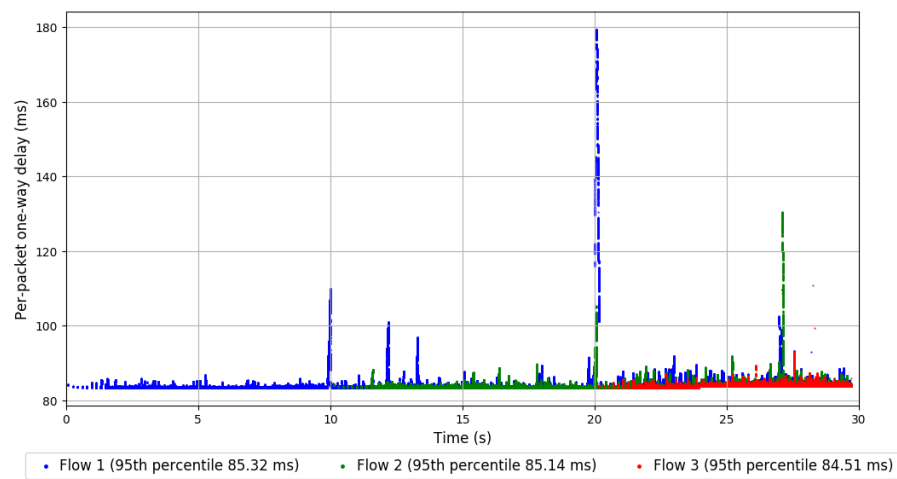
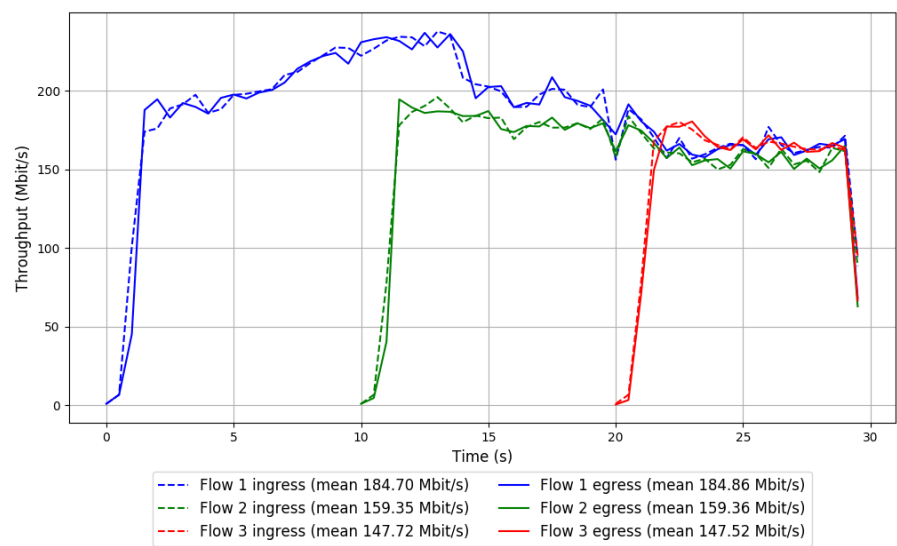
-- Flow 3:

Average throughput: 147.52 Mbit/s

95th percentile per-packet one-way delay: 84.512 ms

Loss rate: 1.89%

Run 5: Report of Indigo-1-32 — Data Link



Run 6: Statistics of Indigo-1-32

Start at: 2018-04-18 02:50:28

End at: 2018-04-18 02:50:58

Below is generated by plot.py at 2018-04-18 08:41:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 338.25 Mbit/s

95th percentile per-packet one-way delay: 86.487 ms

Loss rate: 0.89%

-- Flow 1:

Average throughput: 178.64 Mbit/s

95th percentile per-packet one-way delay: 86.136 ms

Loss rate: 0.58%

-- Flow 2:

Average throughput: 172.17 Mbit/s

95th percentile per-packet one-way delay: 87.946 ms

Loss rate: 0.85%

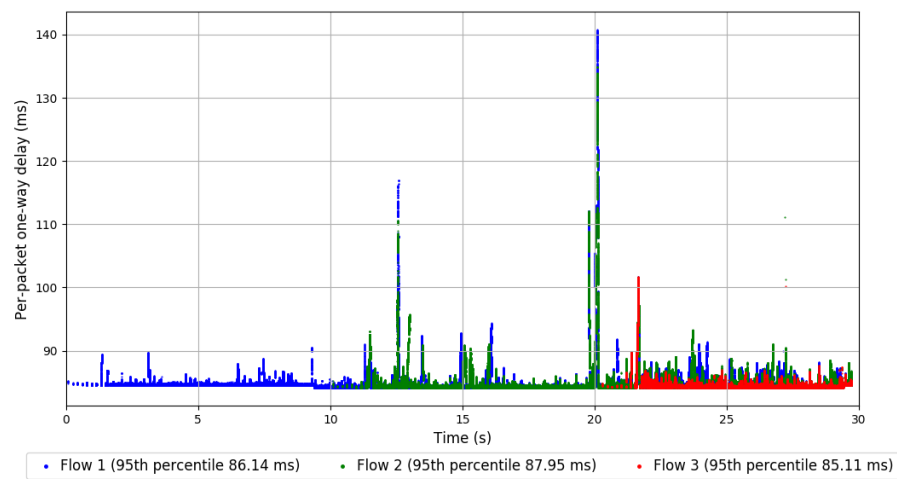
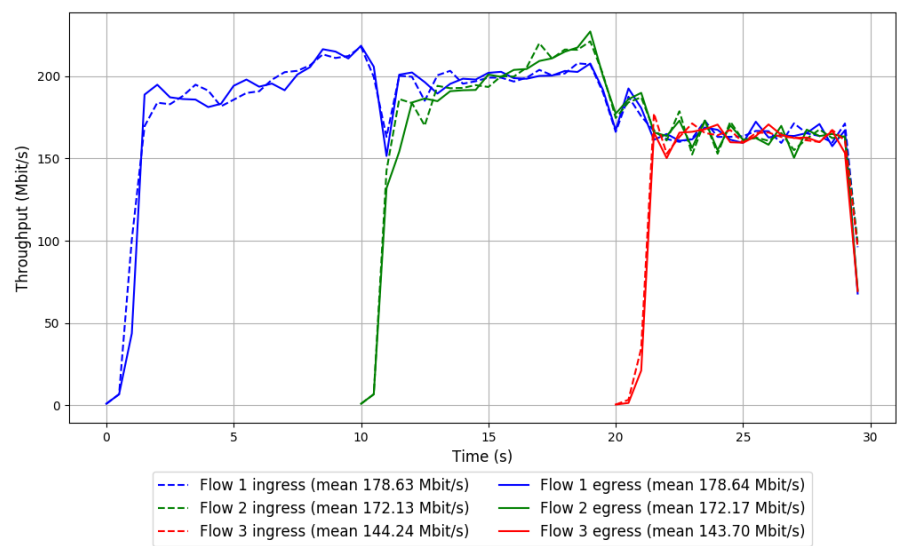
-- Flow 3:

Average throughput: 143.70 Mbit/s

95th percentile per-packet one-way delay: 85.113 ms

Loss rate: 2.18%

Run 6: Report of Indigo-1-32 — Data Link



Run 7: Statistics of Indigo-1-32

Start at: 2018-04-18 03:07:23

End at: 2018-04-18 03:07:53

Below is generated by plot.py at 2018-04-18 08:41:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 340.39 Mbit/s

95th percentile per-packet one-way delay: 86.613 ms

Loss rate: 0.84%

-- Flow 1:

Average throughput: 182.78 Mbit/s

95th percentile per-packet one-way delay: 86.049 ms

Loss rate: 0.54%

-- Flow 2:

Average throughput: 168.73 Mbit/s

95th percentile per-packet one-way delay: 88.031 ms

Loss rate: 0.84%

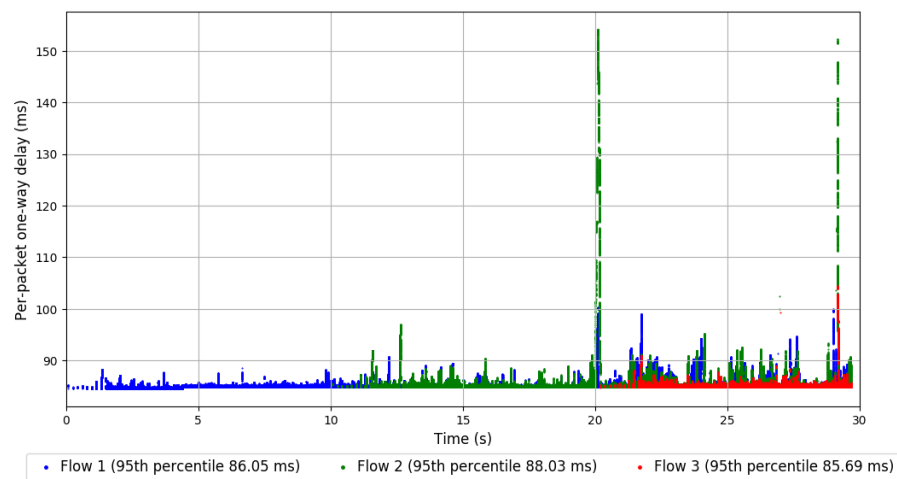
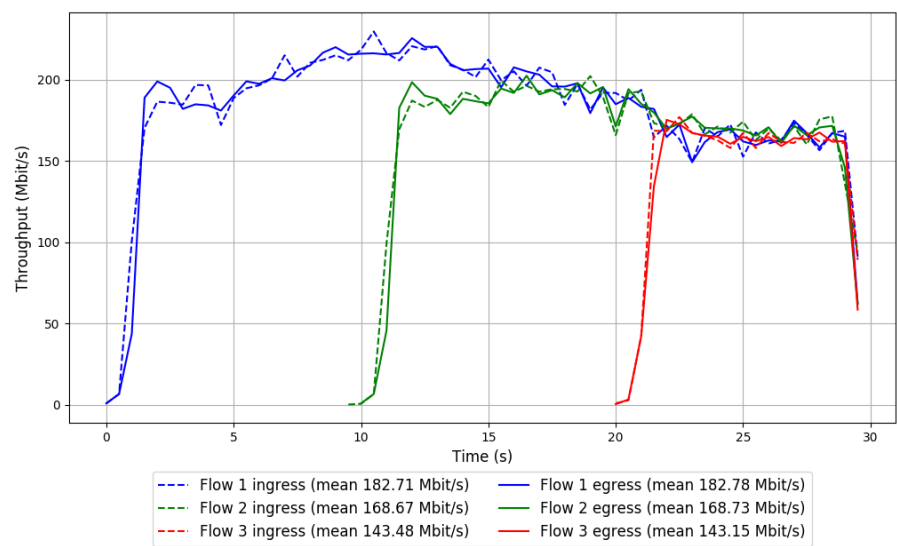
-- Flow 3:

Average throughput: 143.15 Mbit/s

95th percentile per-packet one-way delay: 85.685 ms

Loss rate: 2.02%

Run 7: Report of Indigo-1-32 — Data Link



Run 8: Statistics of Indigo-1-32

Start at: 2018-04-18 03:24:26

End at: 2018-04-18 03:24:56

Below is generated by plot.py at 2018-04-18 08:41:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 342.01 Mbit/s

95th percentile per-packet one-way delay: 86.216 ms

Loss rate: 0.88%

-- Flow 1:

Average throughput: 184.72 Mbit/s

95th percentile per-packet one-way delay: 85.897 ms

Loss rate: 0.55%

-- Flow 2:

Average throughput: 168.77 Mbit/s

95th percentile per-packet one-way delay: 87.265 ms

Loss rate: 0.91%

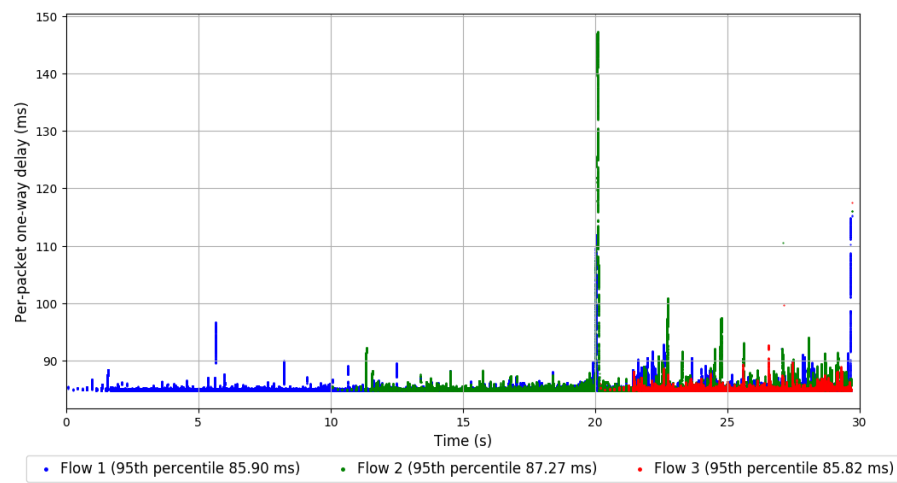
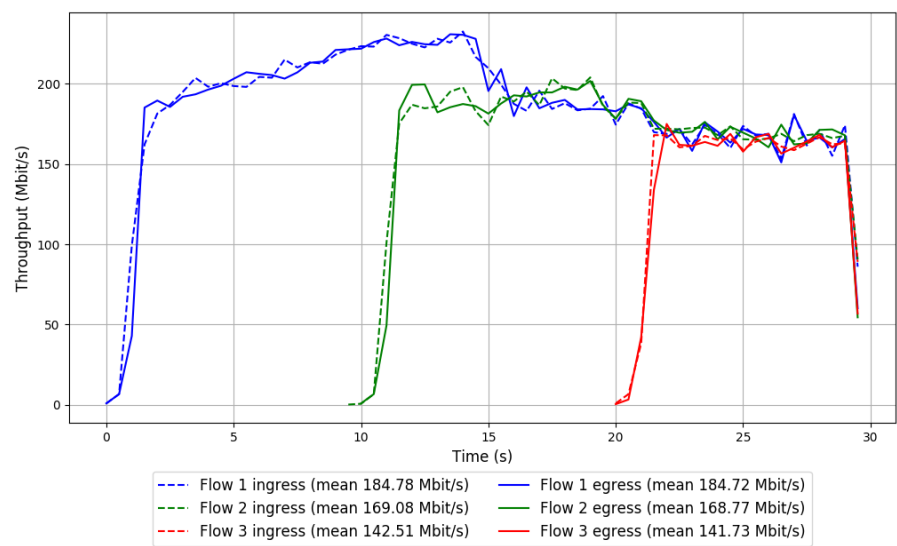
-- Flow 3:

Average throughput: 141.73 Mbit/s

95th percentile per-packet one-way delay: 85.821 ms

Loss rate: 2.12%

Run 8: Report of Indigo-1-32 — Data Link



Run 9: Statistics of Indigo-1-32

Start at: 2018-04-18 03:41:20

End at: 2018-04-18 03:41:50

Below is generated by plot.py at 2018-04-18 08:41:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 346.55 Mbit/s

95th percentile per-packet one-way delay: 87.040 ms

Loss rate: 0.73%

-- Flow 1:

Average throughput: 187.22 Mbit/s

95th percentile per-packet one-way delay: 87.043 ms

Loss rate: 0.45%

-- Flow 2:

Average throughput: 169.10 Mbit/s

95th percentile per-packet one-way delay: 87.491 ms

Loss rate: 0.60%

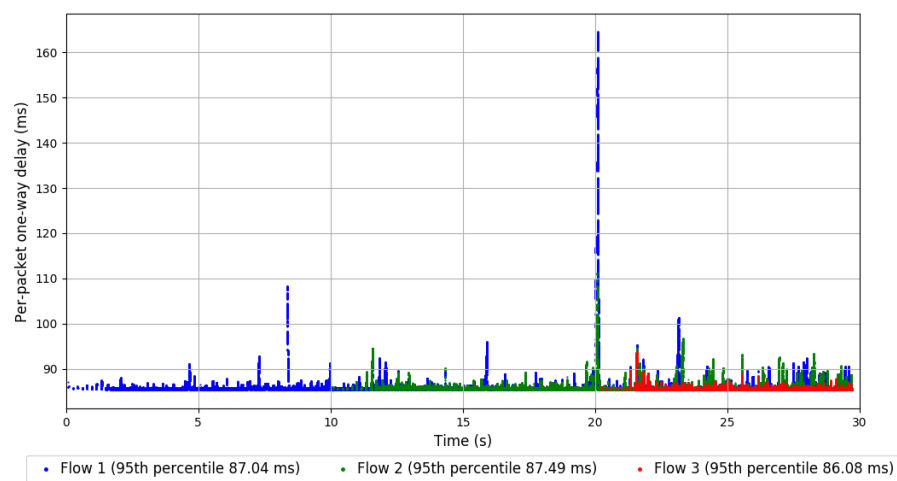
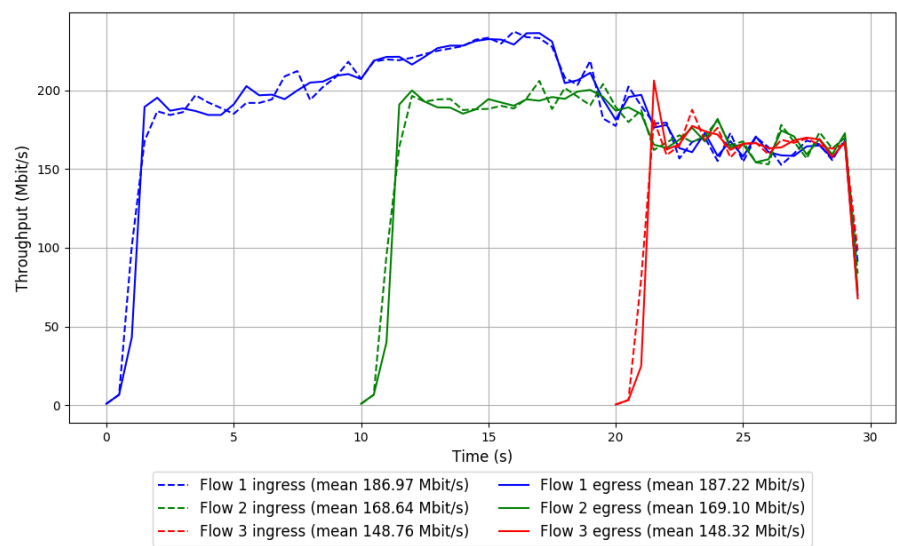
-- Flow 3:

Average throughput: 148.32 Mbit/s

95th percentile per-packet one-way delay: 86.085 ms

Loss rate: 2.08%

Run 9: Report of Indigo-1-32 — Data Link



Run 10: Statistics of Indigo-1-32

Start at: 2018-04-18 03:58:17

End at: 2018-04-18 03:58:47

Below is generated by plot.py at 2018-04-18 08:41:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 342.87 Mbit/s

95th percentile per-packet one-way delay: 87.690 ms

Loss rate: 0.79%

-- Flow 1:

Average throughput: 187.26 Mbit/s

95th percentile per-packet one-way delay: 87.641 ms

Loss rate: 0.50%

-- Flow 2:

Average throughput: 167.88 Mbit/s

95th percentile per-packet one-way delay: 88.374 ms

Loss rate: 0.83%

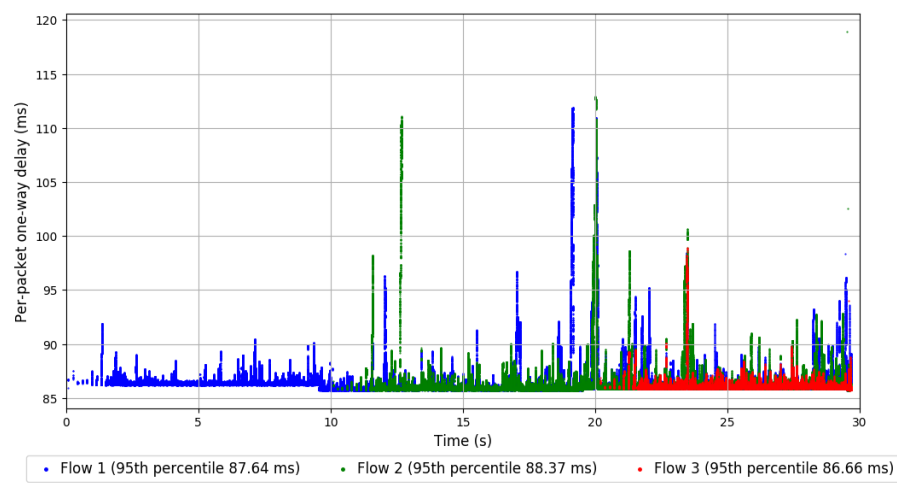
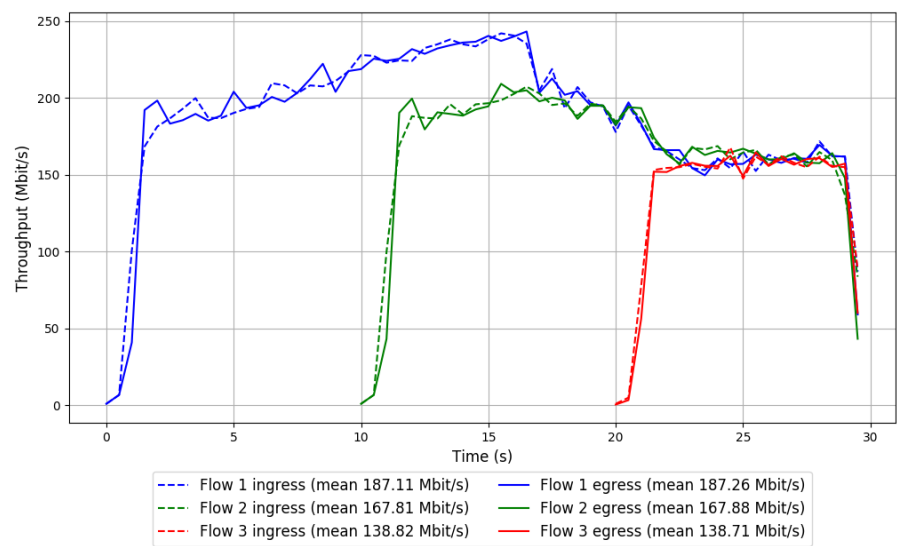
-- Flow 3:

Average throughput: 138.71 Mbit/s

95th percentile per-packet one-way delay: 86.661 ms

Loss rate: 1.88%

Run 10: Report of Indigo-1-32 — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2018-04-18 01:21:54

End at: 2018-04-18 01:22:24

Below is generated by plot.py at 2018-04-18 08:41:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 478.77 Mbit/s

95th percentile per-packet one-way delay: 94.749 ms

Loss rate: 0.96%

-- Flow 1:

Average throughput: 288.87 Mbit/s

95th percentile per-packet one-way delay: 96.760 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 217.19 Mbit/s

95th percentile per-packet one-way delay: 86.652 ms

Loss rate: 0.77%

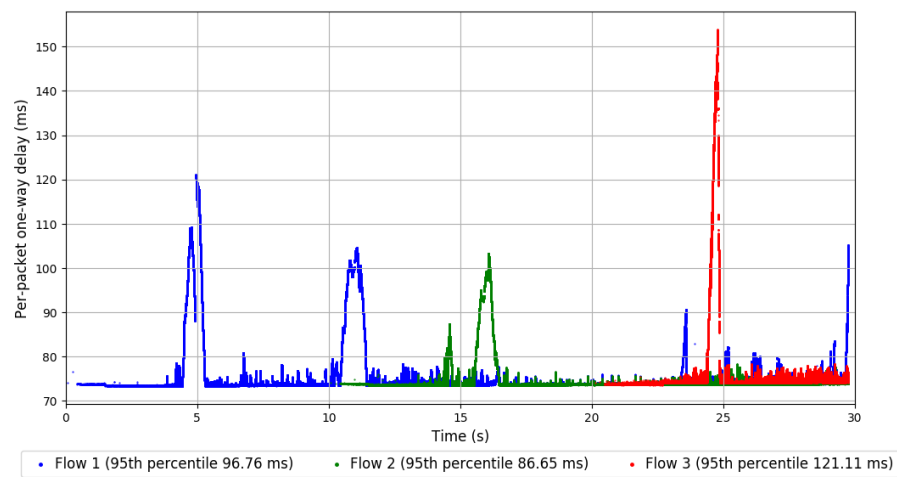
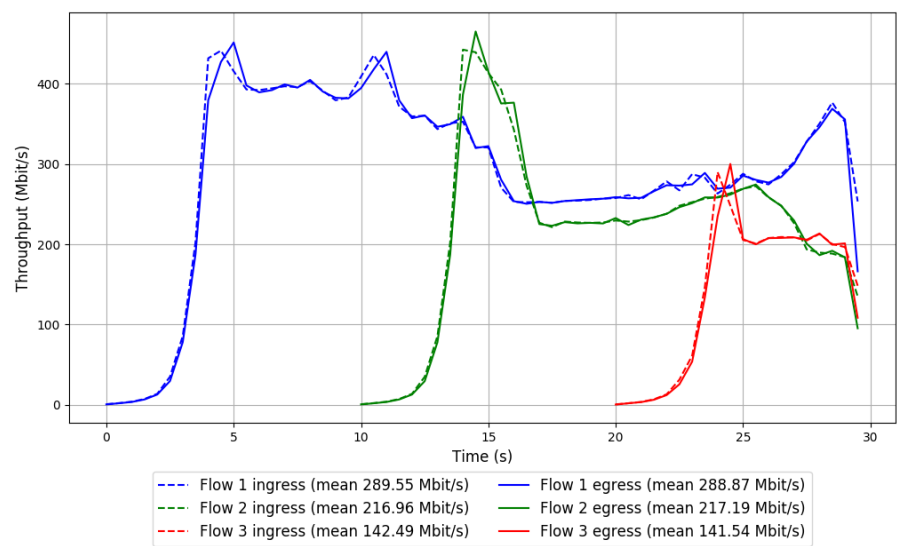
-- Flow 3:

Average throughput: 141.54 Mbit/s

95th percentile per-packet one-way delay: 121.108 ms

Loss rate: 2.41%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2018-04-18 01:38:49

End at: 2018-04-18 01:39:19

Below is generated by plot.py at 2018-04-18 08:41:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 433.93 Mbit/s

95th percentile per-packet one-way delay: 91.939 ms

Loss rate: 0.84%

-- Flow 1:

Average throughput: 270.97 Mbit/s

95th percentile per-packet one-way delay: 93.711 ms

Loss rate: 0.58%

-- Flow 2:

Average throughput: 225.80 Mbit/s

95th percentile per-packet one-way delay: 85.437 ms

Loss rate: 1.16%

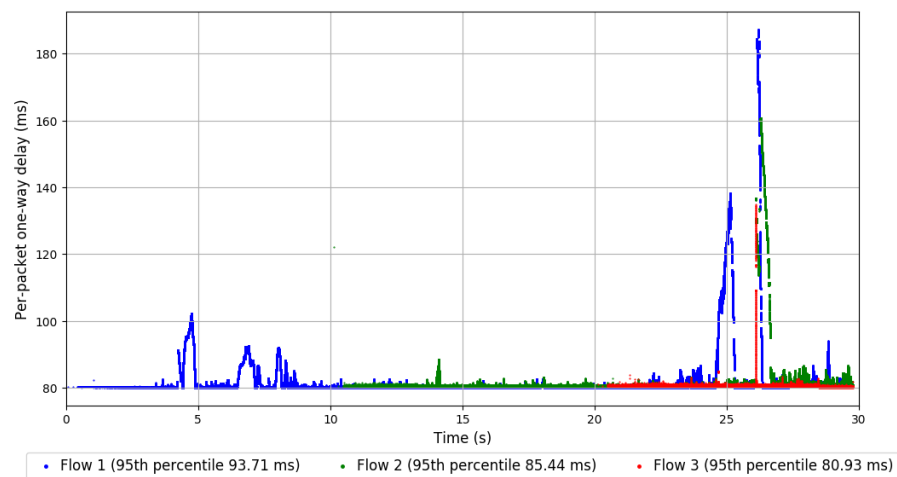
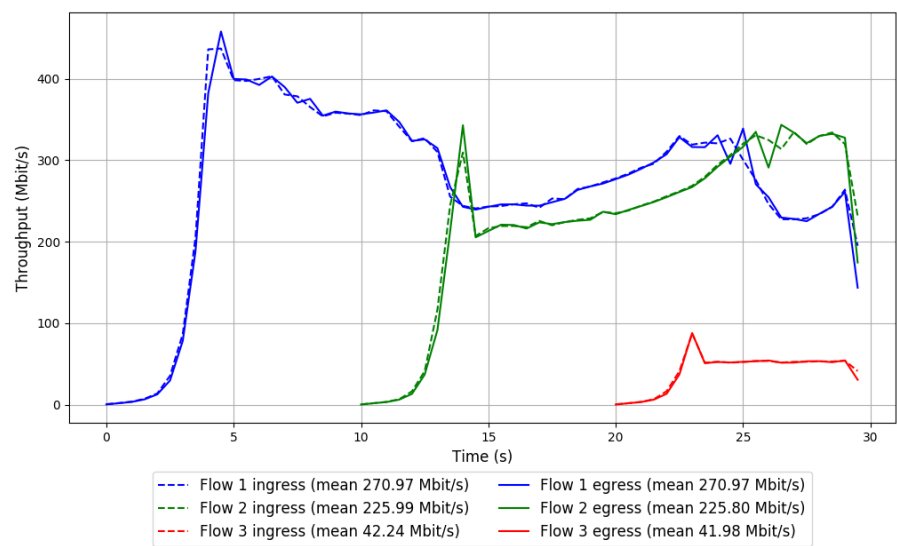
-- Flow 3:

Average throughput: 41.98 Mbit/s

95th percentile per-packet one-way delay: 80.930 ms

Loss rate: 2.34%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

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 08:41:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 412.83 Mbit/s

95th percentile per-packet one-way delay: 84.671 ms

Loss rate: 0.86%

-- Flow 1:

Average throughput: 239.96 Mbit/s

95th percentile per-packet one-way delay: 88.083 ms

Loss rate: 0.48%

-- Flow 2:

Average throughput: 184.47 Mbit/s

95th percentile per-packet one-way delay: 82.432 ms

Loss rate: 0.98%

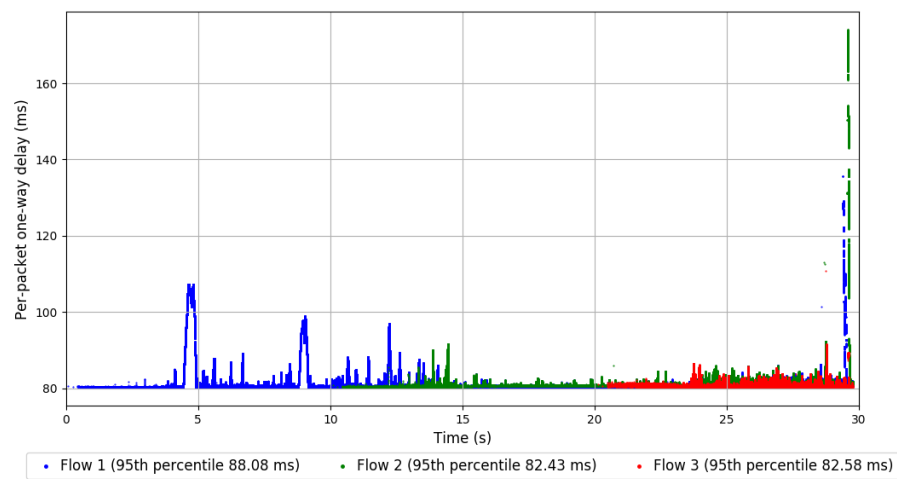
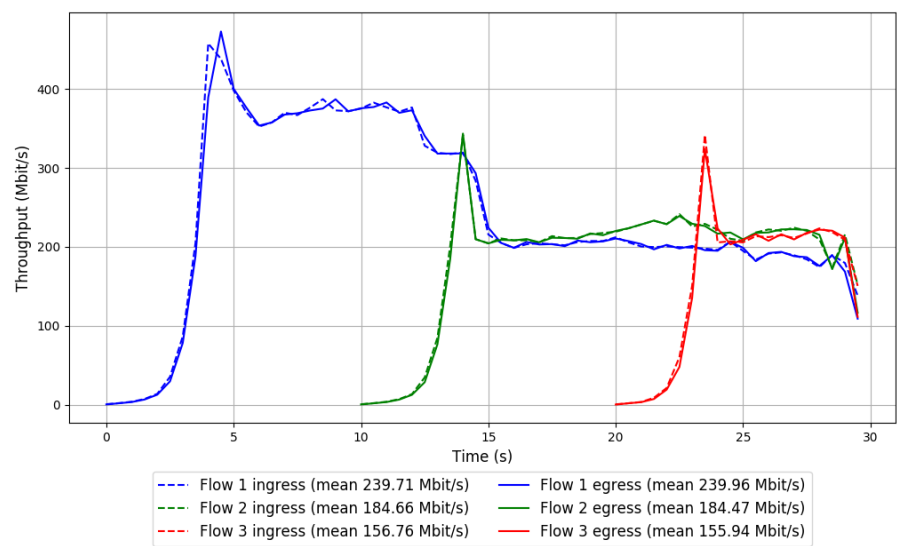
-- Flow 3:

Average throughput: 155.94 Mbit/s

95th percentile per-packet one-way delay: 82.581 ms

Loss rate: 2.31%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2018-04-18 02:12:13

End at: 2018-04-18 02:12:43

Below is generated by plot.py at 2018-04-18 08:41:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 423.76 Mbit/s

95th percentile per-packet one-way delay: 99.292 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 248.99 Mbit/s

95th percentile per-packet one-way delay: 118.217 ms

Loss rate: 0.73%

-- Flow 2:

Average throughput: 193.65 Mbit/s

95th percentile per-packet one-way delay: 85.281 ms

Loss rate: 0.87%

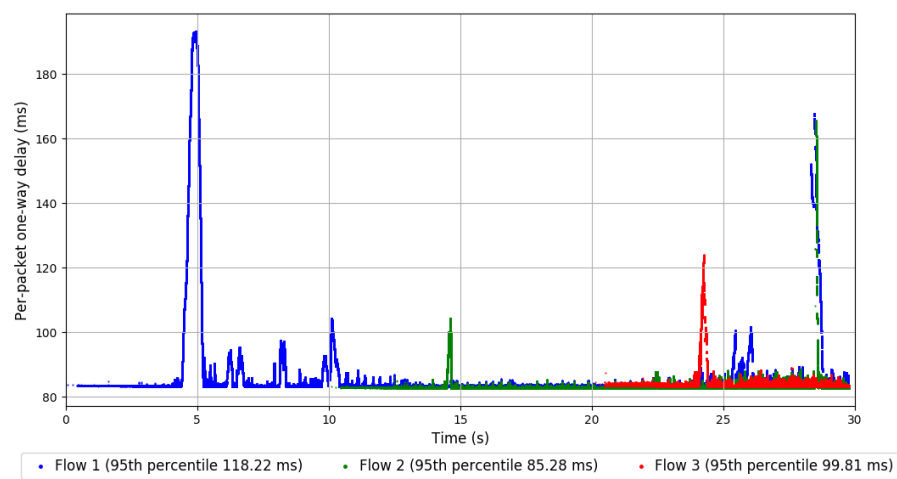
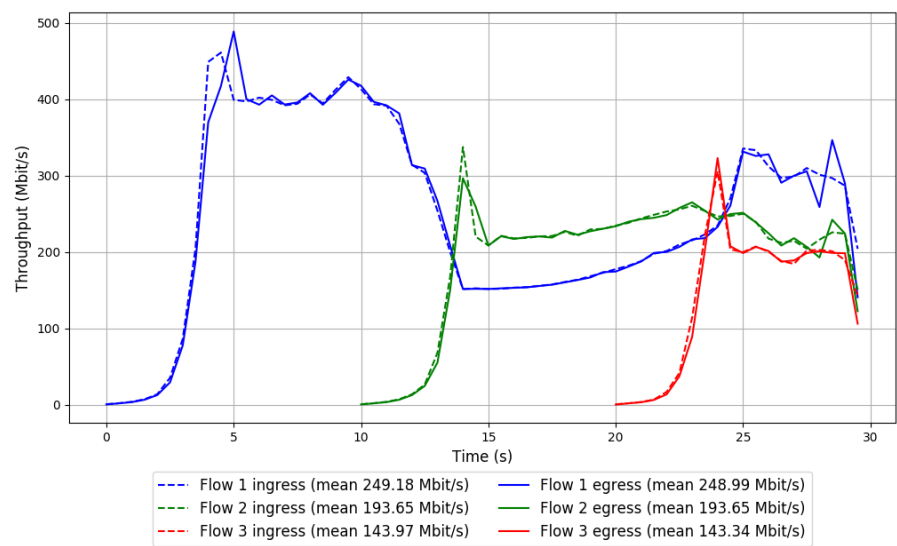
-- Flow 3:

Average throughput: 143.34 Mbit/s

95th percentile per-packet one-way delay: 99.814 ms

Loss rate: 2.26%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2018-04-18 02:29:15

End at: 2018-04-18 02:29:45

Below is generated by plot.py at 2018-04-18 08:42:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 469.09 Mbit/s

95th percentile per-packet one-way delay: 104.035 ms

Loss rate: 0.84%

-- Flow 1:

Average throughput: 286.52 Mbit/s

95th percentile per-packet one-way delay: 114.415 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 197.88 Mbit/s

95th percentile per-packet one-way delay: 86.350 ms

Loss rate: 1.23%

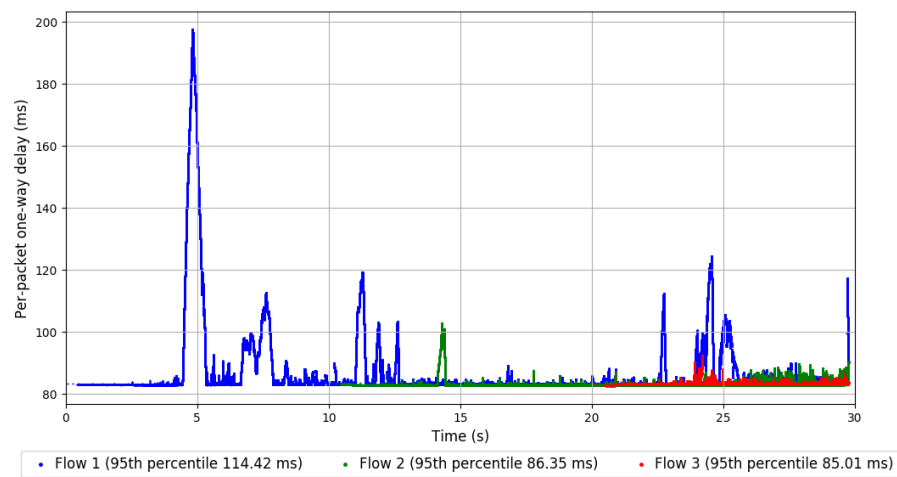
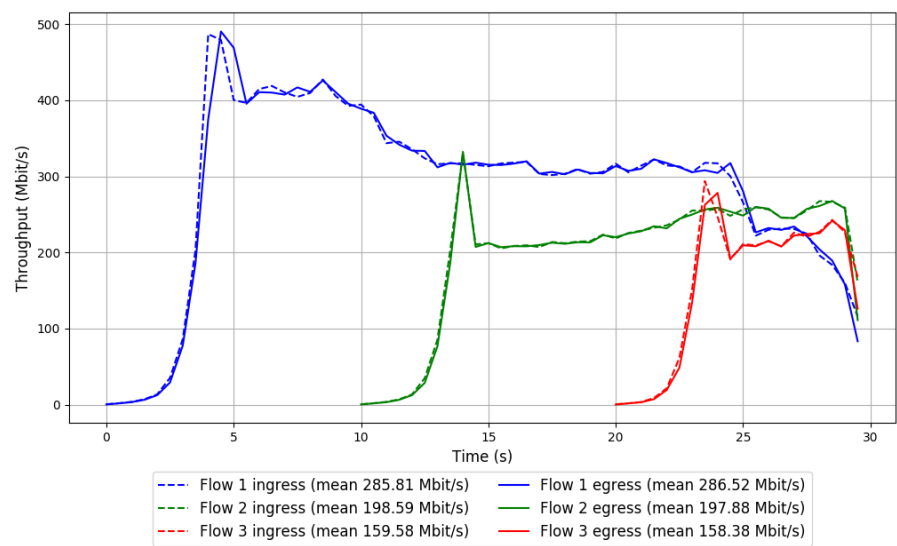
-- Flow 3:

Average throughput: 158.38 Mbit/s

95th percentile per-packet one-way delay: 85.009 ms

Loss rate: 2.50%

Run 5: Report of PCC-Vivace — Data Link



Run 6: Statistics of PCC-Vivace

Start at: 2018-04-18 02:45:51

End at: 2018-04-18 02:46:21

Below is generated by plot.py at 2018-04-18 08:42:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 423.43 Mbit/s

95th percentile per-packet one-way delay: 122.076 ms

Loss rate: 0.86%

-- Flow 1:

Average throughput: 259.15 Mbit/s

95th percentile per-packet one-way delay: 134.316 ms

Loss rate: 0.50%

-- Flow 2:

Average throughput: 209.23 Mbit/s

95th percentile per-packet one-way delay: 86.329 ms

Loss rate: 1.18%

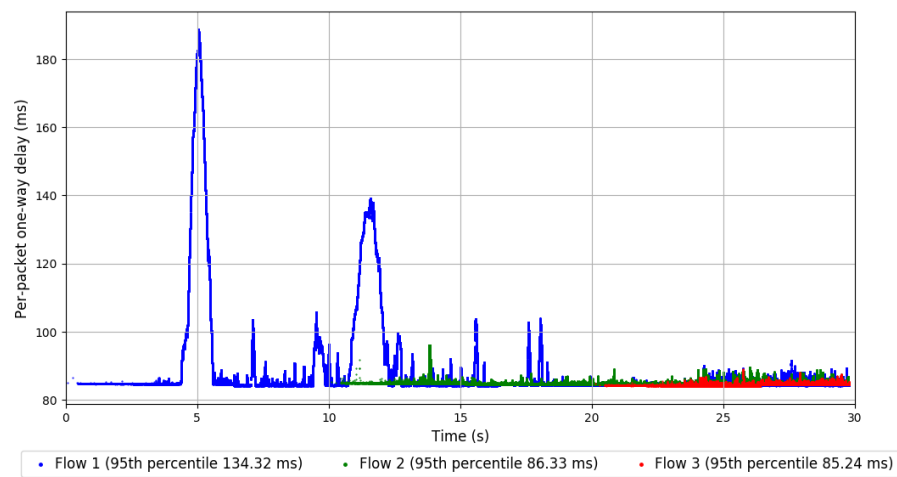
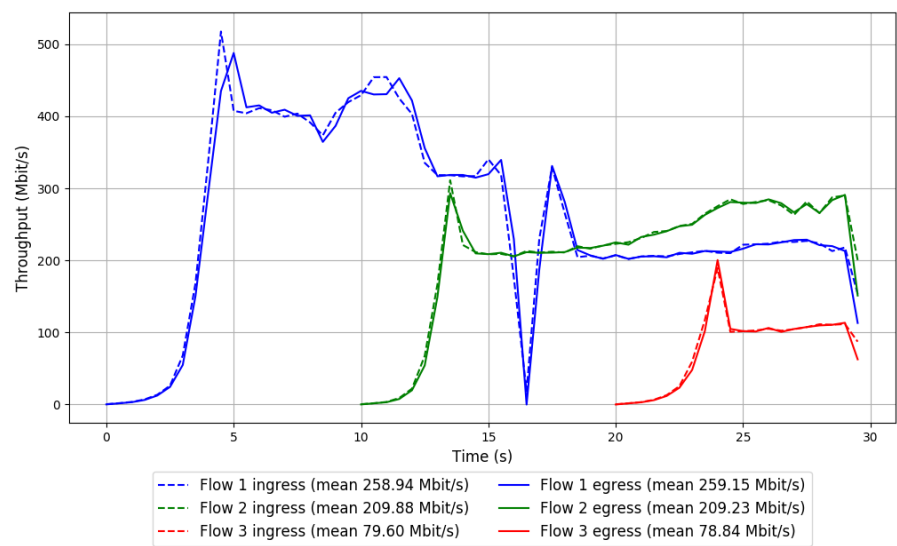
-- Flow 3:

Average throughput: 78.84 Mbit/s

95th percentile per-packet one-way delay: 85.238 ms

Loss rate: 2.71%

Run 6: Report of PCC-Vivace — Data Link



Run 7: Statistics of PCC-Vivace

Start at: 2018-04-18 03:02:48

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

Below is generated by plot.py at 2018-04-18 08:43:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 439.02 Mbit/s

95th percentile per-packet one-way delay: 96.755 ms

Loss rate: 0.69%

-- Flow 1:

Average throughput: 288.91 Mbit/s

95th percentile per-packet one-way delay: 114.014 ms

Loss rate: 0.60%

-- Flow 2:

Average throughput: 187.49 Mbit/s

95th percentile per-packet one-way delay: 88.839 ms

Loss rate: 0.53%

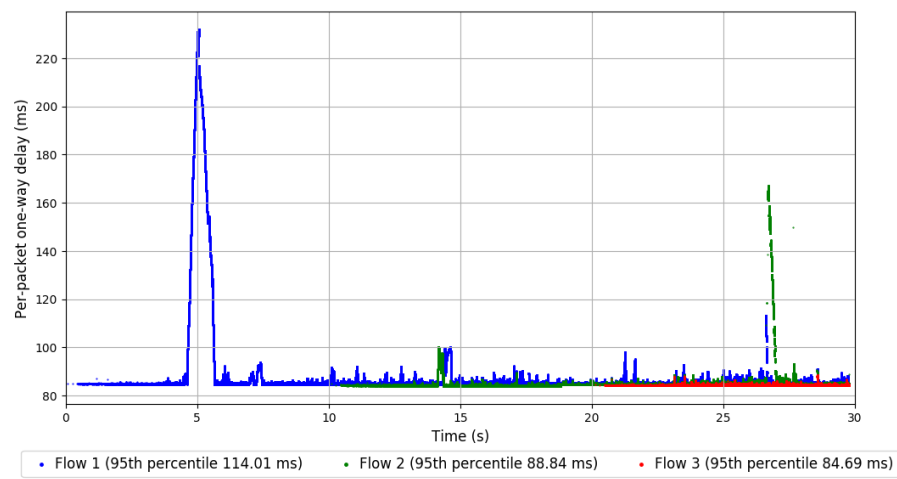
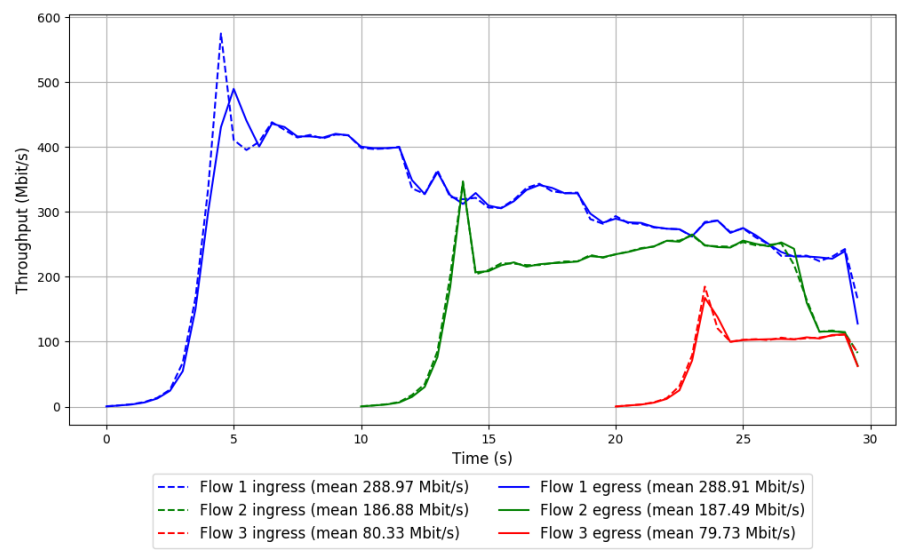
-- Flow 3:

Average throughput: 79.73 Mbit/s

95th percentile per-packet one-way delay: 84.695 ms

Loss rate: 2.50%

Run 7: Report of PCC-Vivace — Data Link



Run 8: Statistics of PCC-Vivace

Start at: 2018-04-18 03:19:47

End at: 2018-04-18 03:20:17

Below is generated by plot.py at 2018-04-18 08:44:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 413.92 Mbit/s

95th percentile per-packet one-way delay: 90.053 ms

Loss rate: 0.92%

-- Flow 1:

Average throughput: 231.35 Mbit/s

95th percentile per-packet one-way delay: 88.084 ms

Loss rate: 0.69%

-- Flow 2:

Average throughput: 195.14 Mbit/s

95th percentile per-packet one-way delay: 90.632 ms

Loss rate: 0.69%

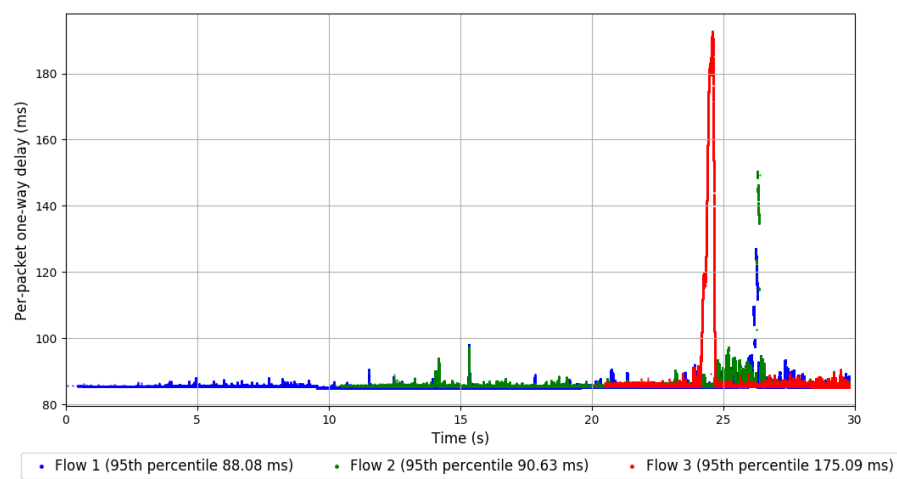
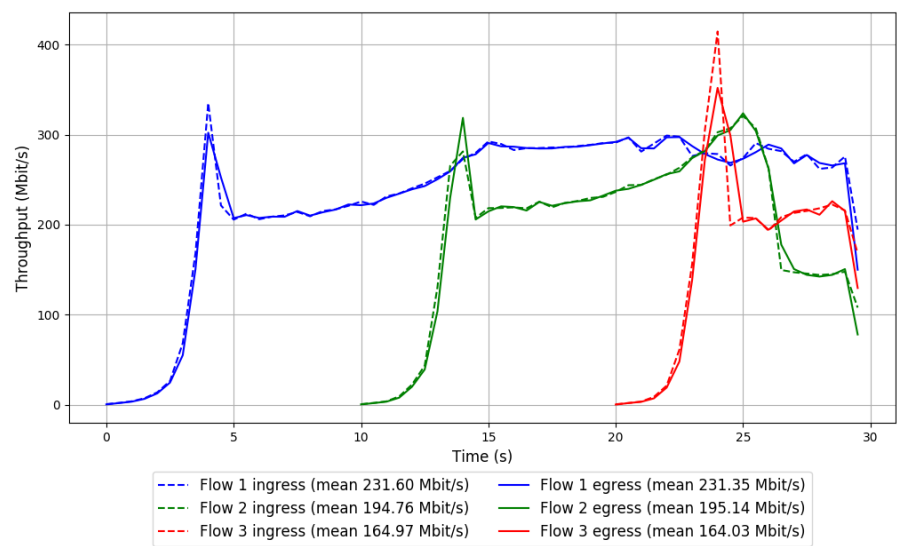
-- Flow 3:

Average throughput: 164.03 Mbit/s

95th percentile per-packet one-way delay: 175.091 ms

Loss rate: 2.41%

Run 8: Report of PCC-Vivace — Data Link



Run 9: Statistics of PCC-Vivace

Start at: 2018-04-18 03:36:46

End at: 2018-04-18 03:37:16

Below is generated by plot.py at 2018-04-18 08:44:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 438.32 Mbit/s

95th percentile per-packet one-way delay: 97.360 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 264.90 Mbit/s

95th percentile per-packet one-way delay: 148.727 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 186.11 Mbit/s

95th percentile per-packet one-way delay: 86.472 ms

Loss rate: 1.01%

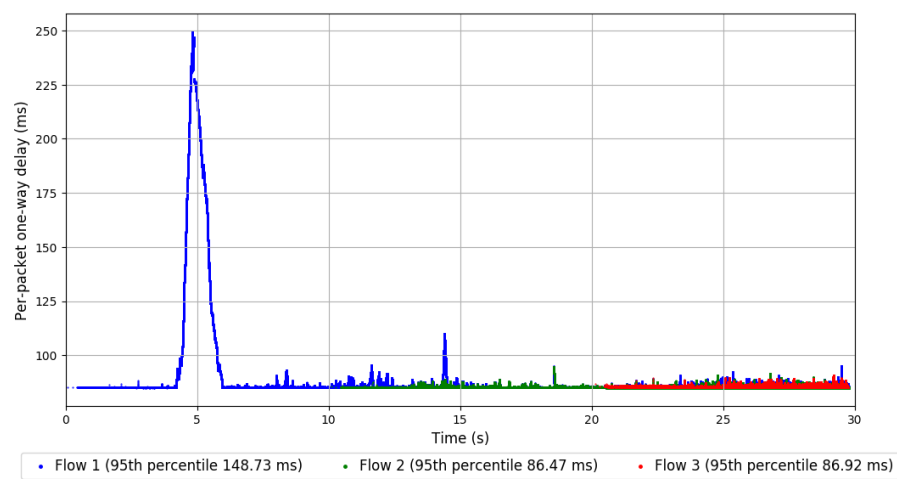
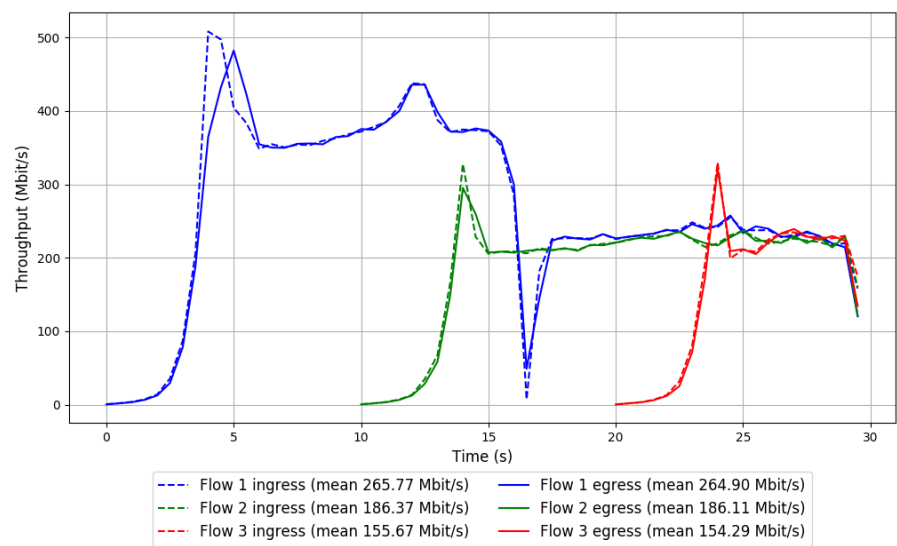
-- Flow 3:

Average throughput: 154.29 Mbit/s

95th percentile per-packet one-way delay: 86.919 ms

Loss rate: 2.75%

Run 9: Report of PCC-Vivace — Data Link



Run 10: Statistics of PCC-Vivace

Start at: 2018-04-18 03:53:35

End at: 2018-04-18 03:54:05

Below is generated by plot.py at 2018-04-18 08:44:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 379.43 Mbit/s

95th percentile per-packet one-way delay: 90.468 ms

Loss rate: 0.92%

-- Flow 1:

Average throughput: 229.06 Mbit/s

95th percentile per-packet one-way delay: 88.260 ms

Loss rate: 0.66%

-- Flow 2:

Average throughput: 220.17 Mbit/s

95th percentile per-packet one-way delay: 95.181 ms

Loss rate: 1.12%

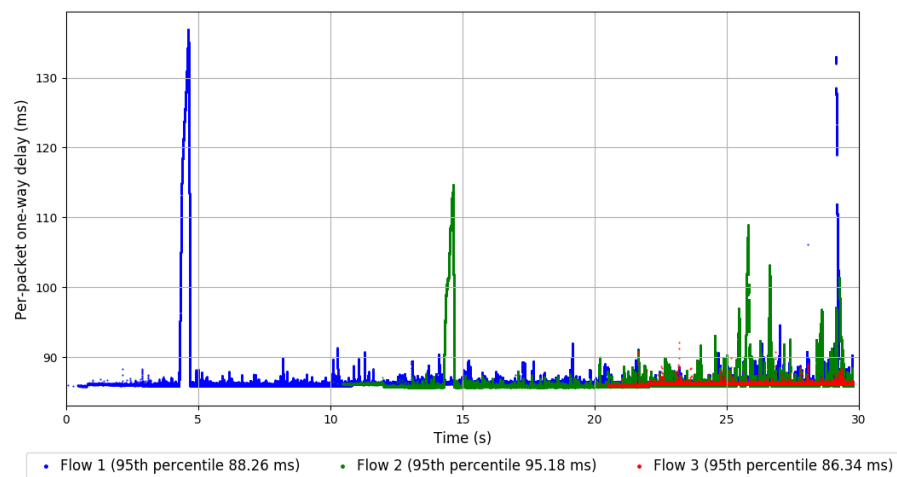
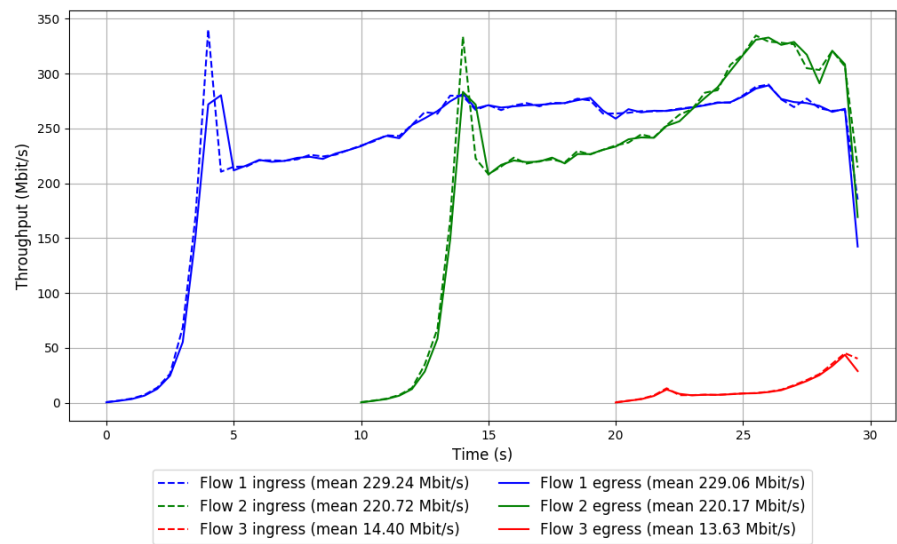
-- Flow 3:

Average throughput: 13.63 Mbit/s

95th percentile per-packet one-way delay: 86.341 ms

Loss rate: 7.03%

Run 10: Report of PCC-Vivace — Data Link



Run 1: Statistics of PCC-Expr

Start at: 2018-04-18 01:36:03

End at: 2018-04-18 01:36:33

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 01:52:26

End at: 2018-04-18 01:52:56

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 02:09:27

End at: 2018-04-18 02:09:57

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 02:26:28

End at: 2018-04-18 02:26:58

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 02:43:07

End at: 2018-04-18 02:43:37

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 03:00:03

End at: 2018-04-18 03:00:33

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 03:17:02

End at: 2018-04-18 03:17:32

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 03:34:01

End at: 2018-04-18 03:34:31

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 03:50:48

End at: 2018-04-18 03:51:18

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 04:07:51

End at: 2018-04-18 04:08:21

Run 10: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing