

Pantheon Report

Generated at 2018-04-18 19:02:27 (UTC).

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

Repeated the test of 16 congestion control schemes 10 times.

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

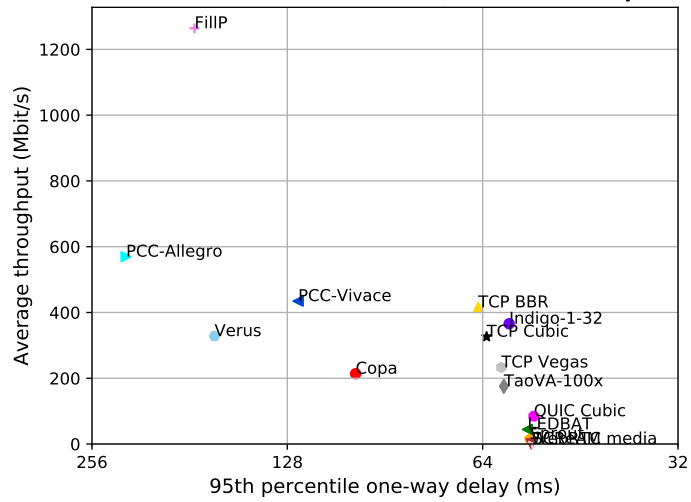
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

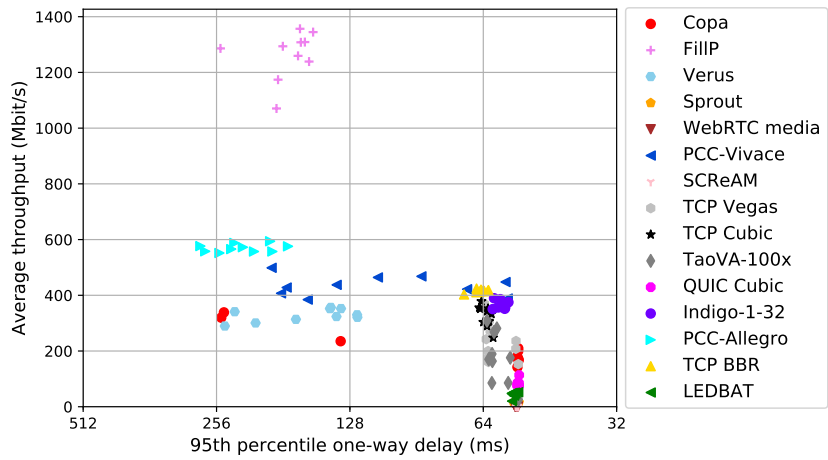
Git summary:

```
branch: master @ b3d6e7098641364fd3a292656a51aa81e316d0b4
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
M datagrump/sender.cc
third_party/fillp @ 11f8c46a2bf1dc797253db7e8ca04076272b2a44
third_party/genericCC @ d223989828276fa83a807da6e0341dc0c7b89aec
third_party/indigo @ a9b2060d39e4da2e8987e893e3eca2a6c7cd0ab9
third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db7484501f82ce8b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b540c0fd3505939528e2a5f
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcf993
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaaeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 7a4ba531e75b4a6f66f5c4580192120401784ce3
third_party/webrtc @ f271183af822eee5d0031620f4bebf38aedc5581
```

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

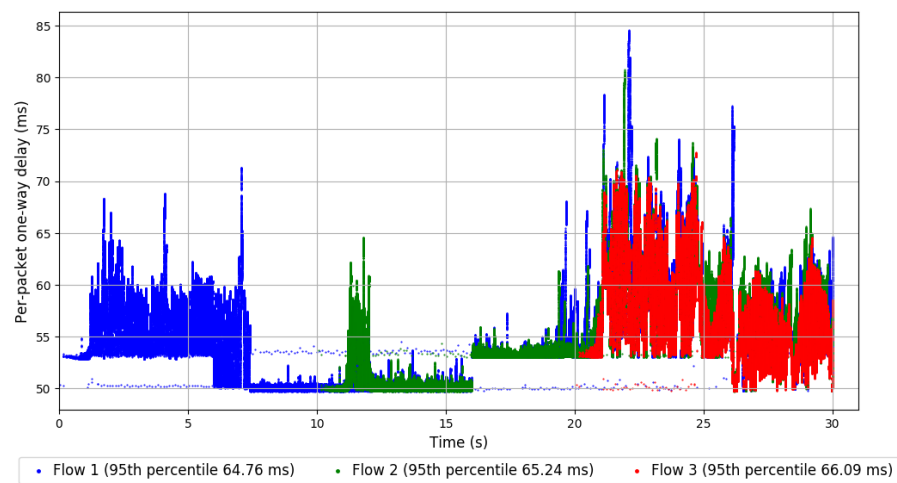
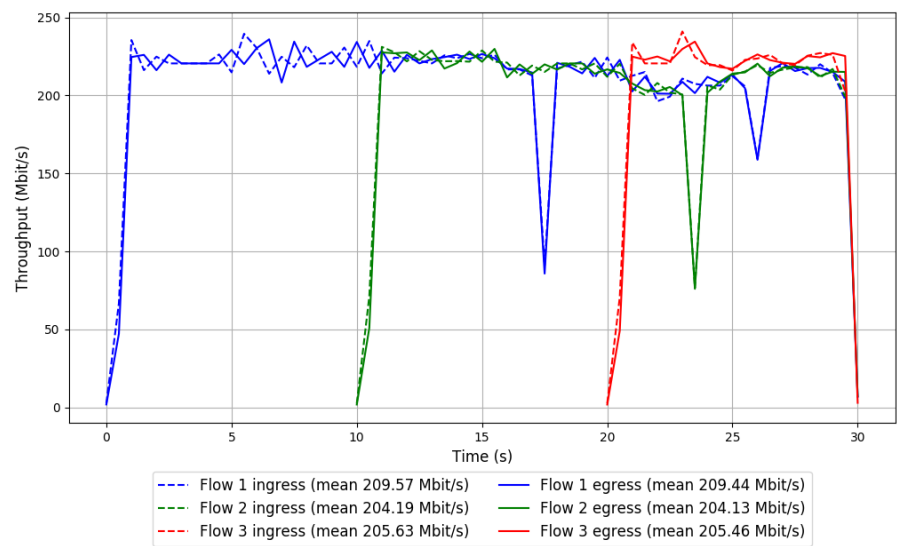



```
Run 1: Statistics of TCP BBR

Start at: 2018-04-18 12:49:11
End at: 2018-04-18 12:49:41

# Below is generated by plot.py at 2018-04-18 17:21:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 413.48 Mbit/s
95th percentile per-packet one-way delay: 65.309 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 209.44 Mbit/s
95th percentile per-packet one-way delay: 64.756 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 204.13 Mbit/s
95th percentile per-packet one-way delay: 65.243 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 205.46 Mbit/s
95th percentile per-packet one-way delay: 66.088 ms
Loss rate: 0.00%
```


Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

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

End at: 2018-04-18 13:05:23

Below is generated by plot.py at 2018-04-18 17:21:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 420.38 Mbit/s

95th percentile per-packet one-way delay: 64.767 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 214.48 Mbit/s

95th percentile per-packet one-way delay: 62.705 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 209.63 Mbit/s

95th percentile per-packet one-way delay: 63.820 ms

Loss rate: 0.00%

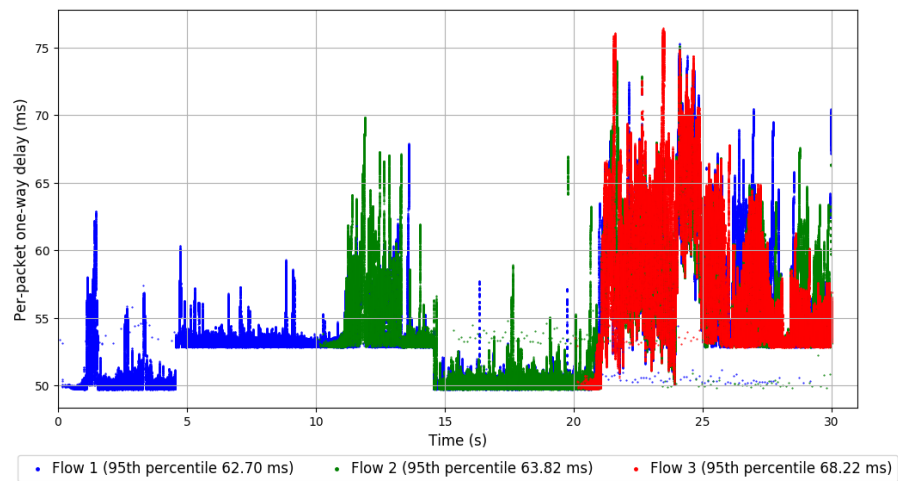
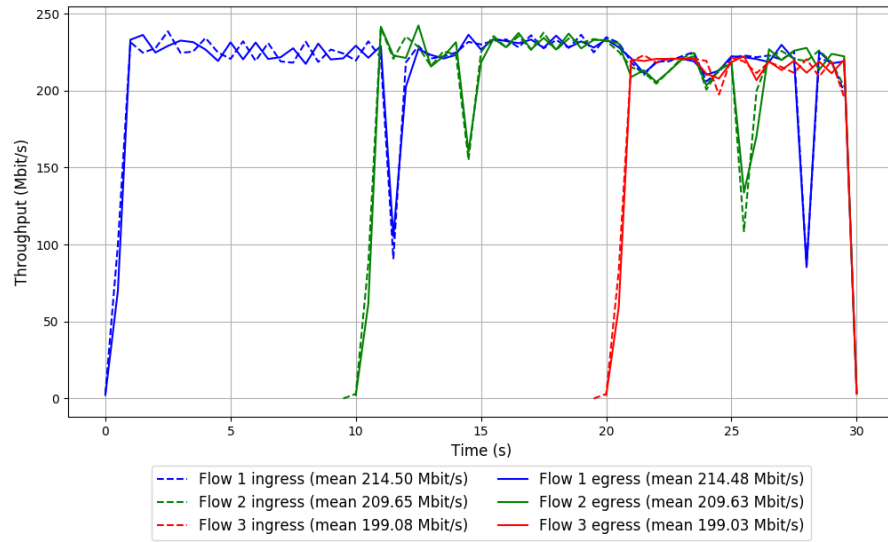
-- Flow 3:

Average throughput: 199.03 Mbit/s

95th percentile per-packet one-way delay: 68.225 ms

Loss rate: 0.00%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-04-18 13:20:07

End at: 2018-04-18 13:20:37

Below is generated by plot.py at 2018-04-18 17:22:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 424.35 Mbit/s

95th percentile per-packet one-way delay: 66.282 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 216.87 Mbit/s

95th percentile per-packet one-way delay: 63.988 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 212.98 Mbit/s

95th percentile per-packet one-way delay: 65.266 ms

Loss rate: 0.04%

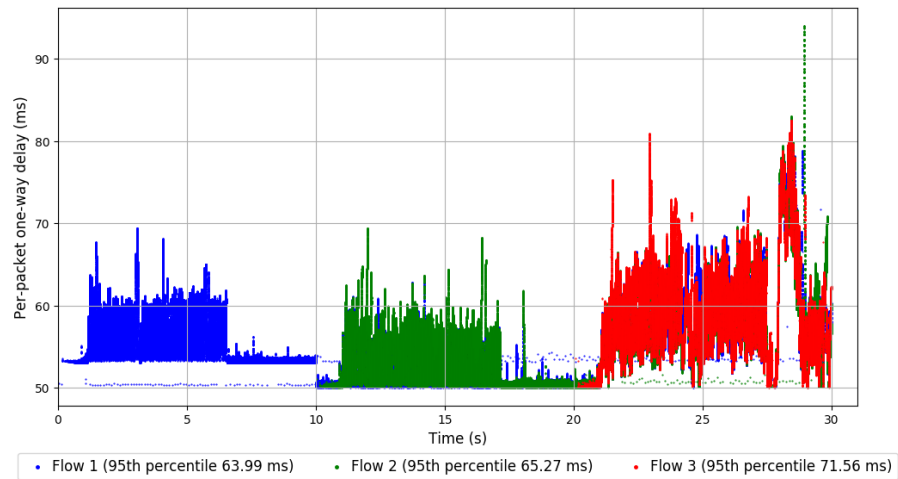
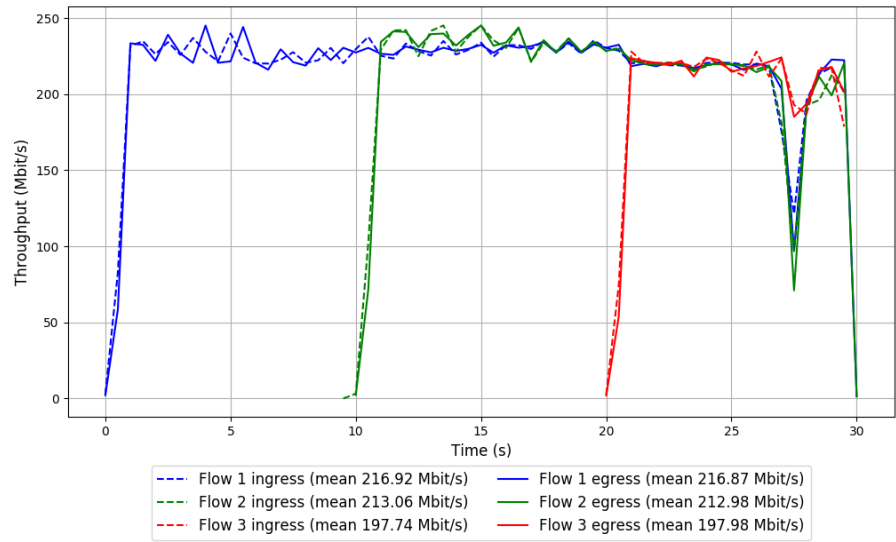
-- Flow 3:

Average throughput: 197.98 Mbit/s

95th percentile per-packet one-way delay: 71.565 ms

Loss rate: 0.06%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-04-18 13:35:20

End at: 2018-04-18 13:35:50

Below is generated by plot.py at 2018-04-18 17:22:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 416.05 Mbit/s

95th percentile per-packet one-way delay: 62.473 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 208.48 Mbit/s

95th percentile per-packet one-way delay: 60.901 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 213.41 Mbit/s

95th percentile per-packet one-way delay: 63.362 ms

Loss rate: 0.00%

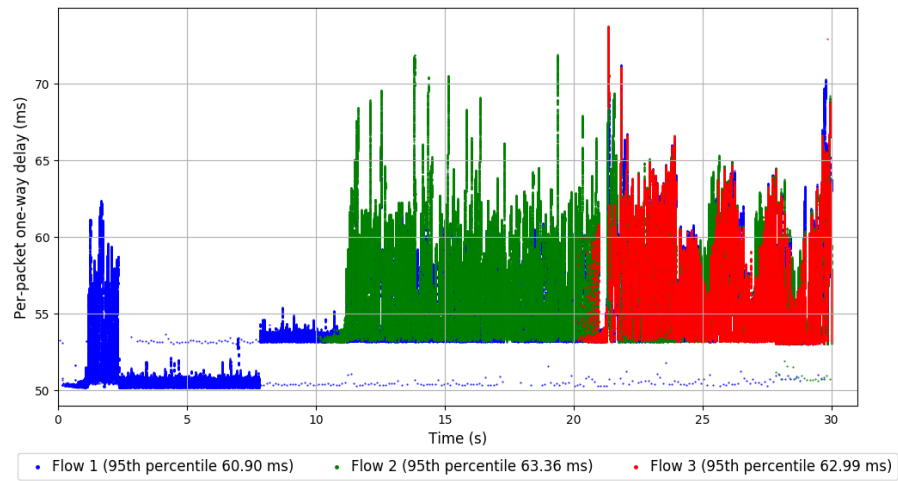
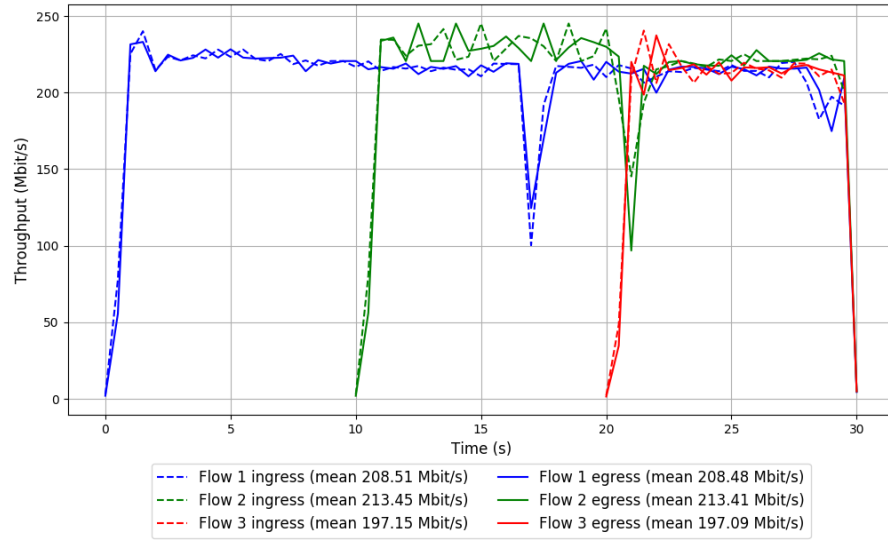
-- Flow 3:

Average throughput: 197.09 Mbit/s

95th percentile per-packet one-way delay: 62.994 ms

Loss rate: 0.00%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-04-18 13:50:47

End at: 2018-04-18 13:51:17

Below is generated by plot.py at 2018-04-18 17:22:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 410.95 Mbit/s

95th percentile per-packet one-way delay: 66.320 ms

Loss rate: 0.06%

-- Flow 1:

Average throughput: 209.23 Mbit/s

95th percentile per-packet one-way delay: 64.977 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 203.49 Mbit/s

95th percentile per-packet one-way delay: 66.469 ms

Loss rate: 0.11%

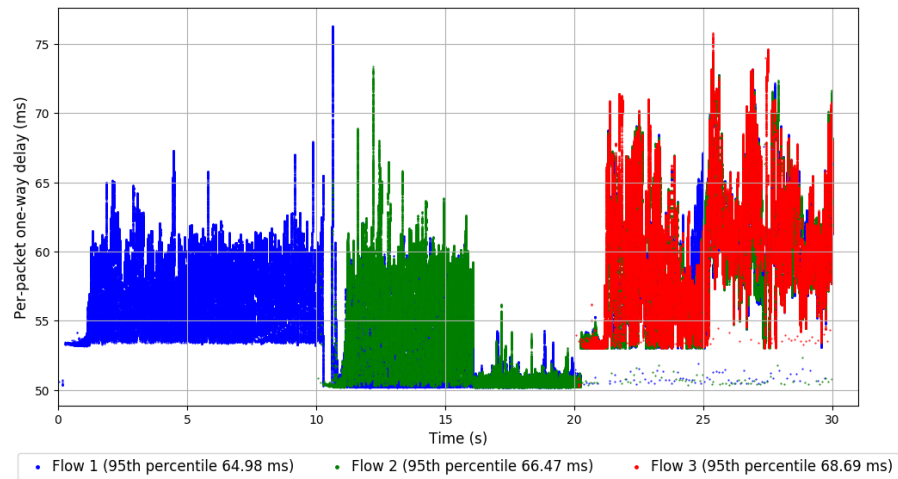
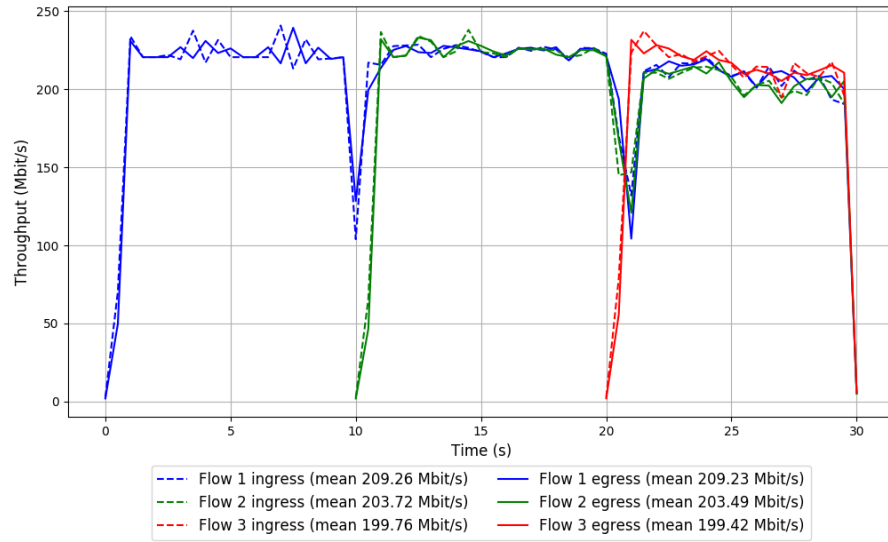
-- Flow 3:

Average throughput: 199.42 Mbit/s

95th percentile per-packet one-way delay: 68.687 ms

Loss rate: 0.11%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

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

End at: 2018-04-18 14:06:48

Below is generated by plot.py at 2018-04-18 17:22:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 414.66 Mbit/s

95th percentile per-packet one-way delay: 63.687 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 207.51 Mbit/s

95th percentile per-packet one-way delay: 63.816 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 207.32 Mbit/s

95th percentile per-packet one-way delay: 62.847 ms

Loss rate: 0.05%

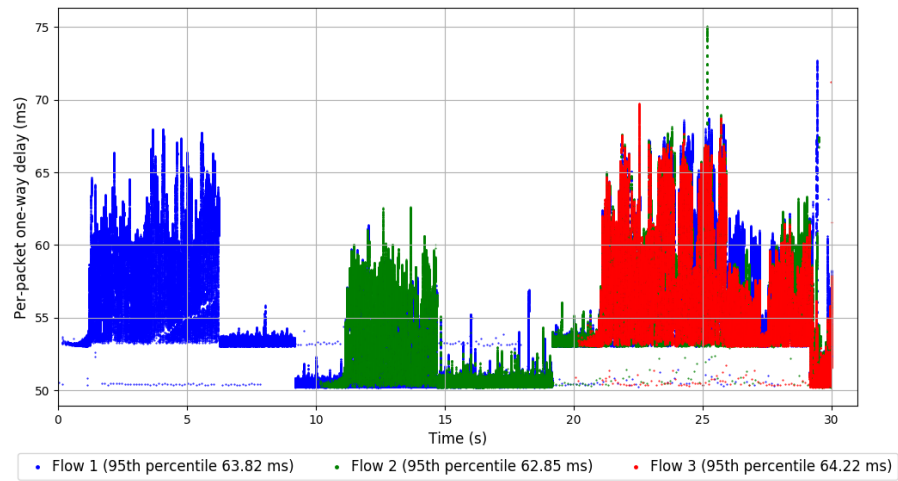
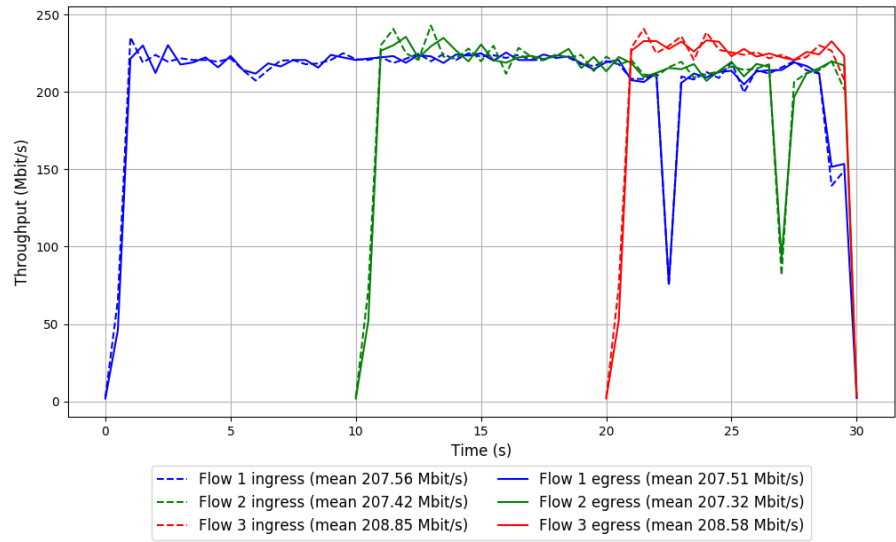
-- Flow 3:

Average throughput: 208.58 Mbit/s

95th percentile per-packet one-way delay: 64.223 ms

Loss rate: 0.06%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2018-04-18 14:21:45

End at: 2018-04-18 14:22:15

Below is generated by plot.py at 2018-04-18 17:22:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 415.03 Mbit/s

95th percentile per-packet one-way delay: 64.539 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 209.87 Mbit/s

95th percentile per-packet one-way delay: 63.710 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 203.34 Mbit/s

95th percentile per-packet one-way delay: 65.025 ms

Loss rate: 0.06%

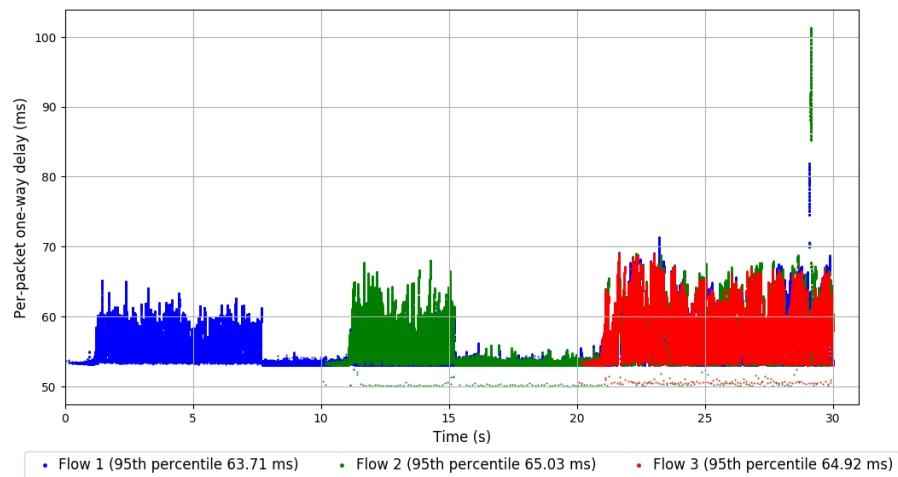
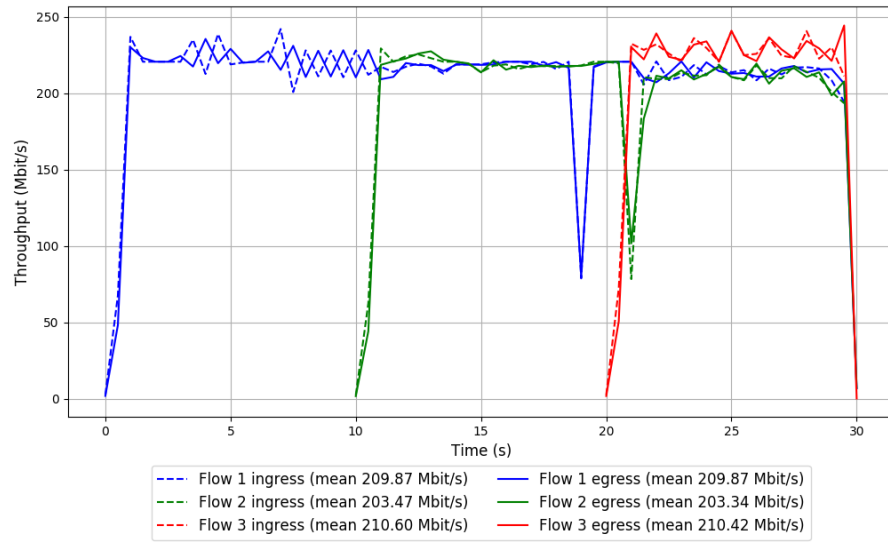
-- Flow 3:

Average throughput: 210.42 Mbit/s

95th percentile per-packet one-way delay: 64.922 ms

Loss rate: 0.00%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2018-04-18 14:37:16

End at: 2018-04-18 14:37:46

Below is generated by plot.py at 2018-04-18 17:22:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 417.64 Mbit/s

95th percentile per-packet one-way delay: 63.940 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 210.36 Mbit/s

95th percentile per-packet one-way delay: 63.106 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 211.18 Mbit/s

95th percentile per-packet one-way delay: 64.255 ms

Loss rate: 0.01%

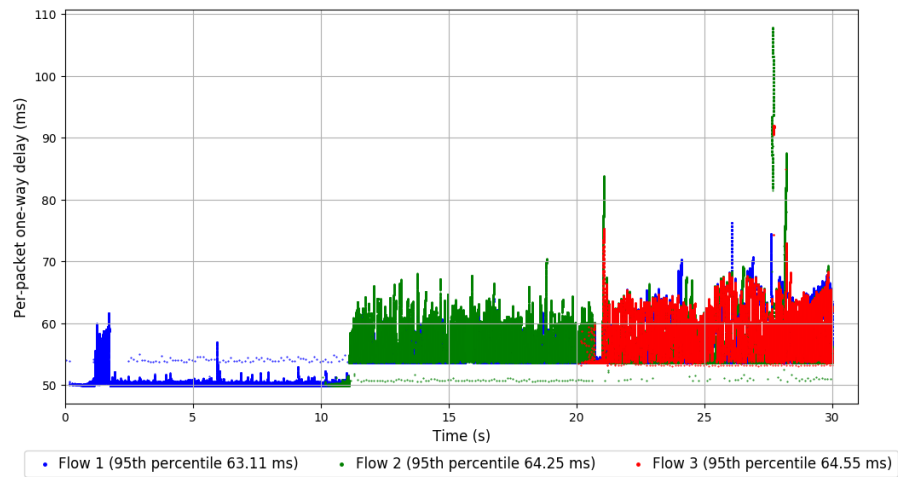
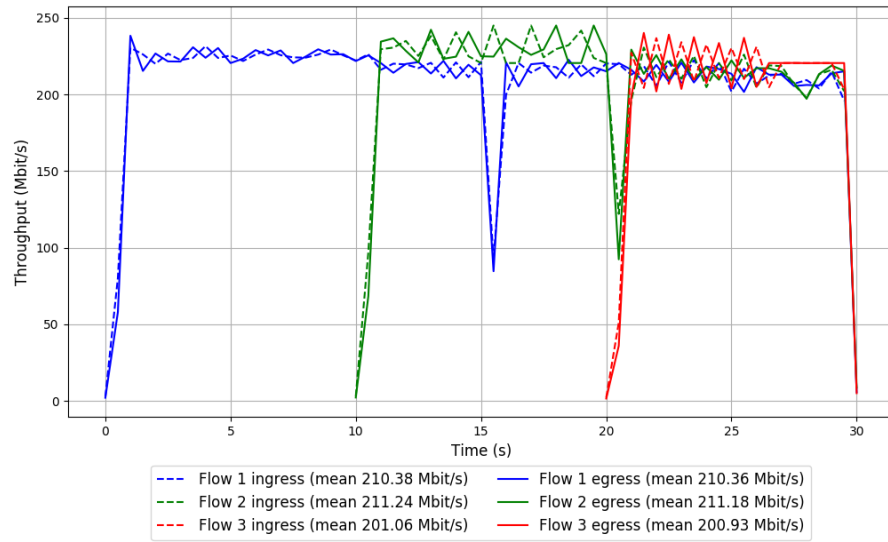
-- Flow 3:

Average throughput: 200.93 Mbit/s

95th percentile per-packet one-way delay: 64.552 ms

Loss rate: 0.06%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2018-04-18 14:53:03

End at: 2018-04-18 14:53:33

Below is generated by plot.py at 2018-04-18 17:28:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 403.05 Mbit/s

95th percentile per-packet one-way delay: 70.723 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 204.90 Mbit/s

95th percentile per-packet one-way delay: 69.629 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 205.42 Mbit/s

95th percentile per-packet one-way delay: 69.960 ms

Loss rate: 0.13%

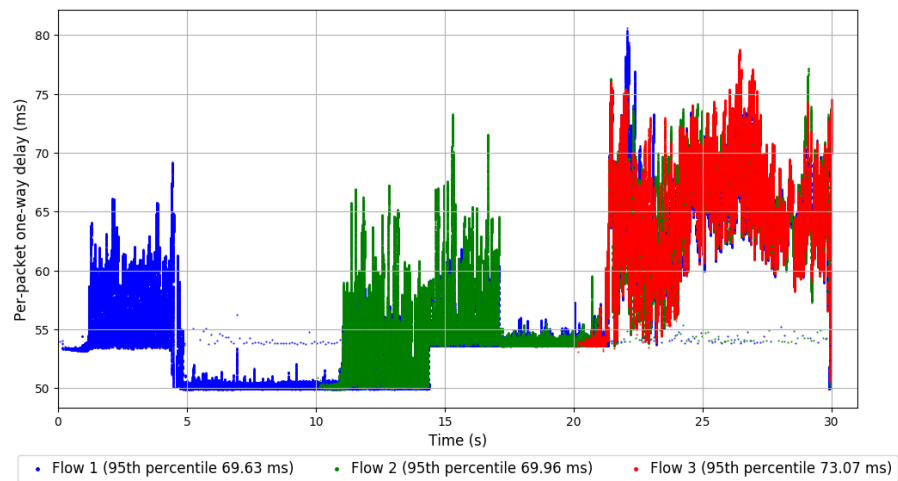
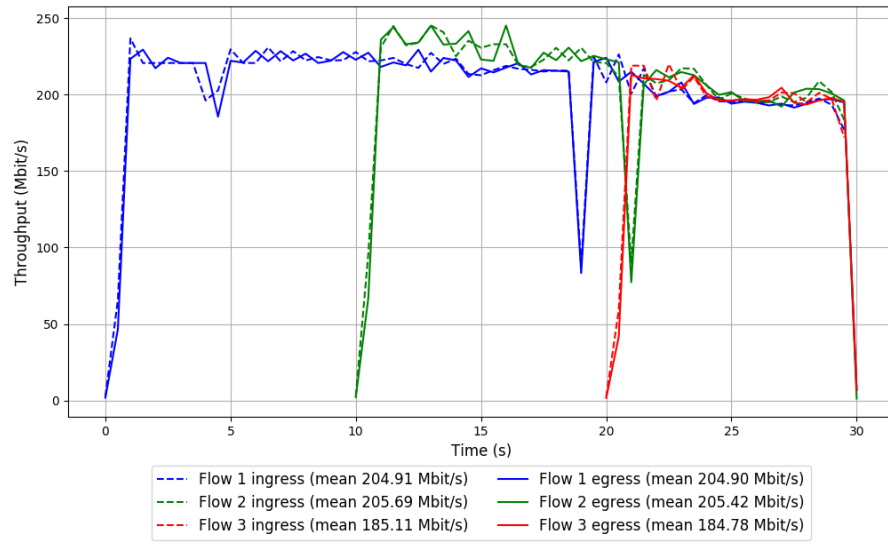
-- Flow 3:

Average throughput: 184.78 Mbit/s

95th percentile per-packet one-way delay: 73.071 ms

Loss rate: 0.00%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2018-04-18 15:08:16

End at: 2018-04-18 15:08:46

Below is generated by plot.py at 2018-04-18 17:28:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 418.67 Mbit/s

95th percentile per-packet one-way delay: 62.311 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 209.44 Mbit/s

95th percentile per-packet one-way delay: 60.667 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 211.50 Mbit/s

95th percentile per-packet one-way delay: 62.603 ms

Loss rate: 0.01%

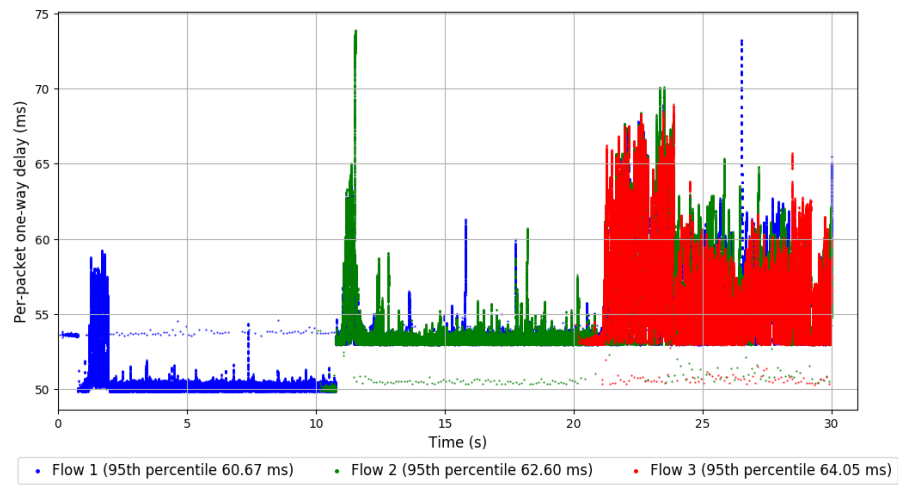
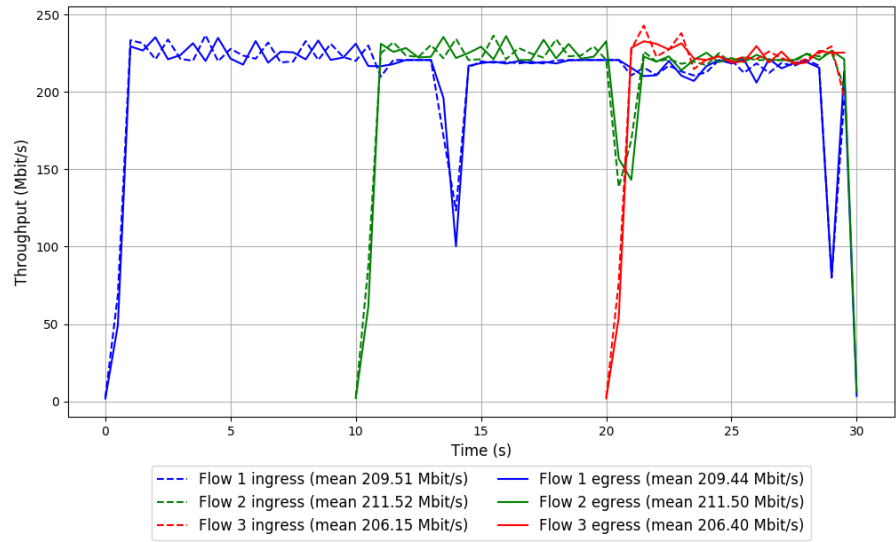
-- Flow 3:

Average throughput: 206.40 Mbit/s

95th percentile per-packet one-way delay: 64.049 ms

Loss rate: 0.00%

Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-04-18 12:53:56

End at: 2018-04-18 12:54:26

Below is generated by plot.py at 2018-04-18 17:28:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 355.97 Mbit/s

95th percentile per-packet one-way delay: 65.361 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 213.60 Mbit/s

95th percentile per-packet one-way delay: 65.076 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 211.56 Mbit/s

95th percentile per-packet one-way delay: 66.004 ms

Loss rate: 0.00%

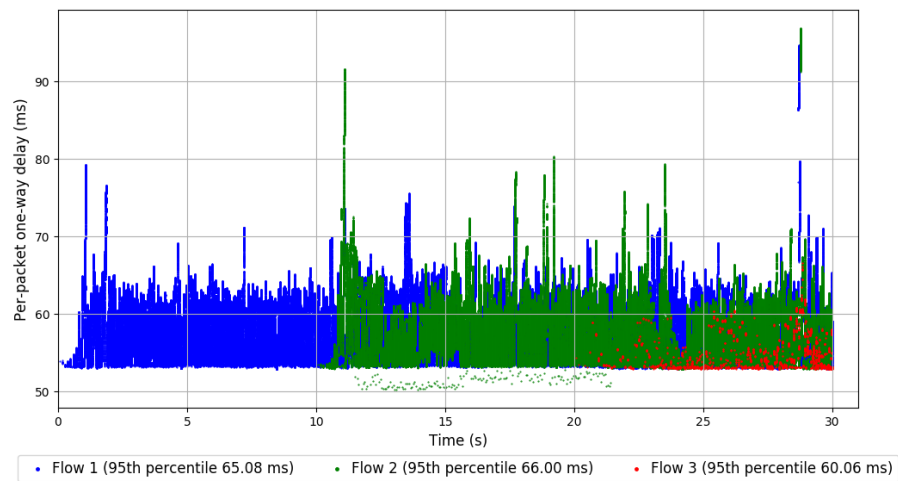
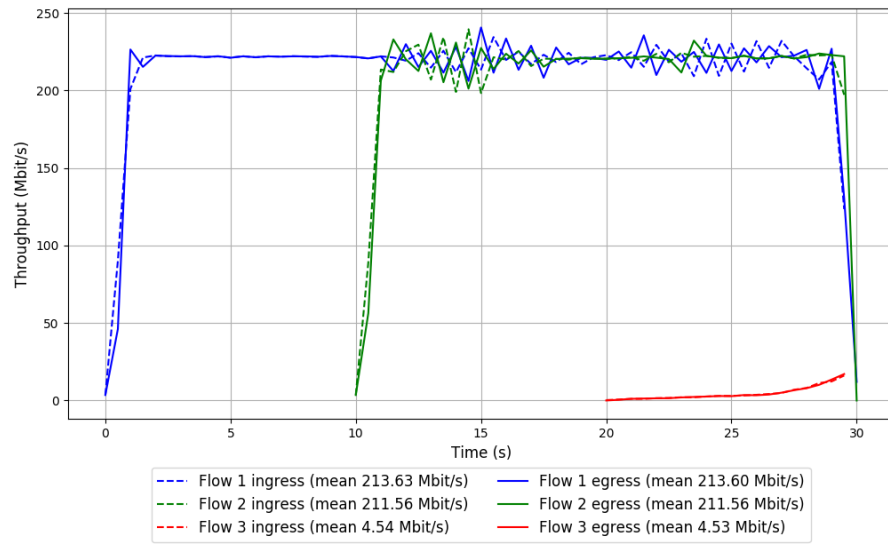
-- Flow 3:

Average throughput: 4.53 Mbit/s

95th percentile per-packet one-way delay: 60.060 ms

Loss rate: 0.27%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-04-18 13:09:10

End at: 2018-04-18 13:09:40

Below is generated by plot.py at 2018-04-18 17:28:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 378.33 Mbit/s

95th percentile per-packet one-way delay: 64.617 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 189.58 Mbit/s

95th percentile per-packet one-way delay: 65.131 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 201.26 Mbit/s

95th percentile per-packet one-way delay: 64.571 ms

Loss rate: 0.00%

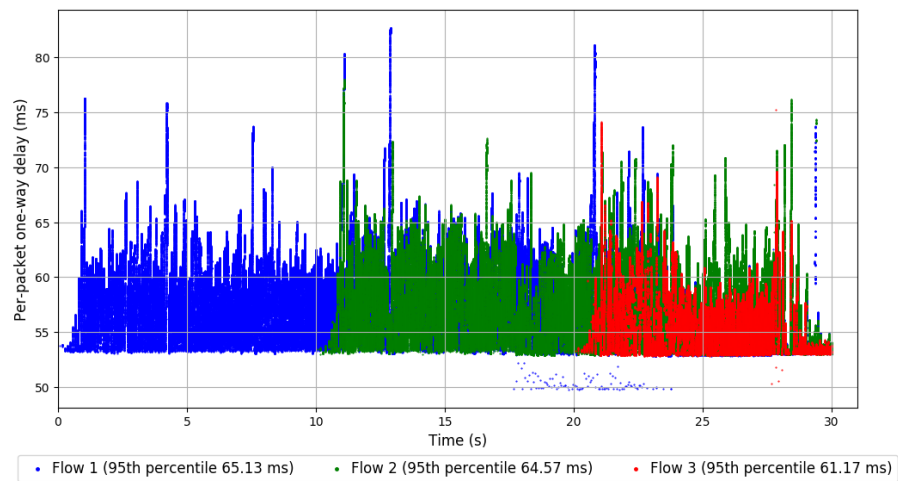
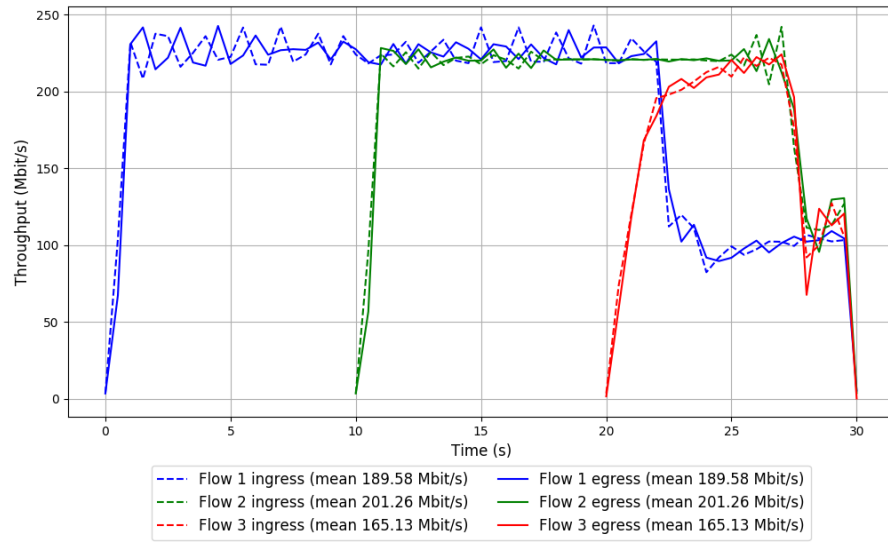
-- Flow 3:

Average throughput: 165.13 Mbit/s

95th percentile per-packet one-way delay: 61.173 ms

Loss rate: 0.00%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-04-18 13:24:35

End at: 2018-04-18 13:25:05

Below is generated by plot.py at 2018-04-18 17:28:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 247.83 Mbit/s

95th percentile per-packet one-way delay: 60.796 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 173.44 Mbit/s

95th percentile per-packet one-way delay: 61.363 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 51.34 Mbit/s

95th percentile per-packet one-way delay: 51.755 ms

Loss rate: 0.01%

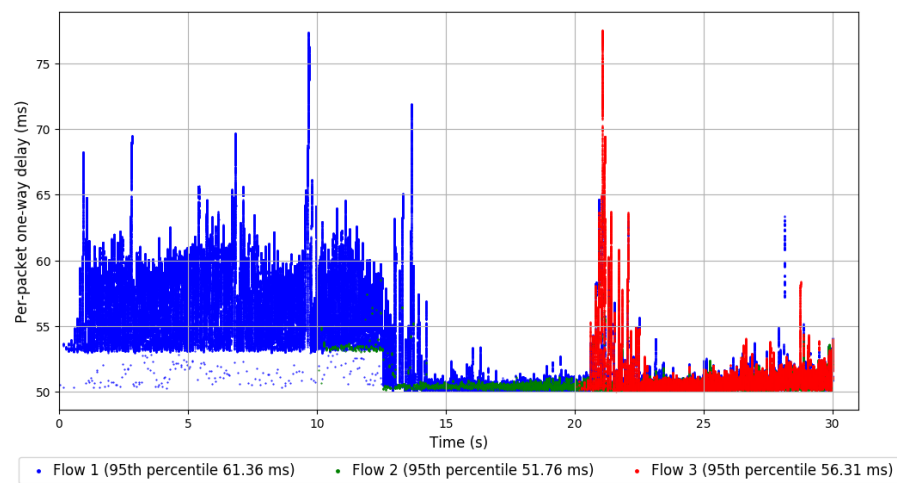
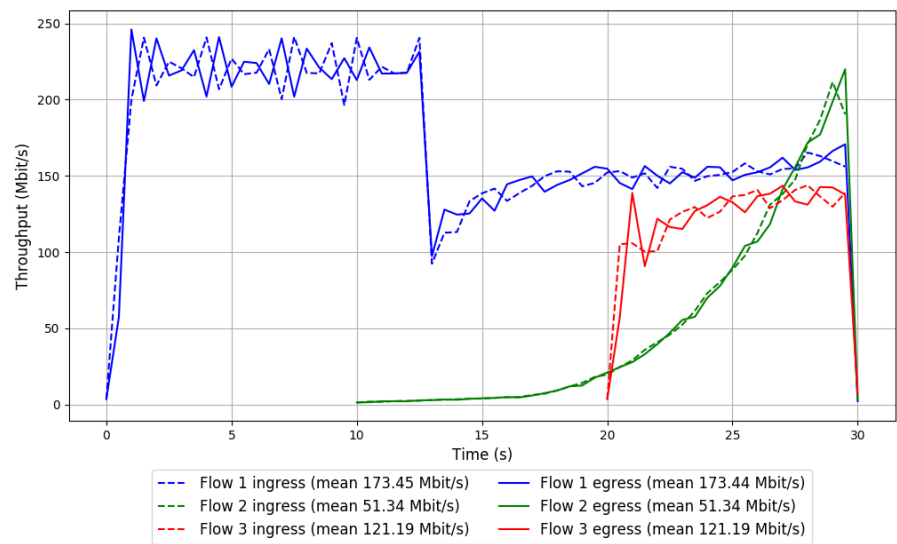
-- Flow 3:

Average throughput: 121.19 Mbit/s

95th percentile per-packet one-way delay: 56.313 ms

Loss rate: 0.00%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-04-18 13:39:33

End at: 2018-04-18 13:40:03

Below is generated by plot.py at 2018-04-18 17:28:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 303.87 Mbit/s

95th percentile per-packet one-way delay: 63.981 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 165.22 Mbit/s

95th percentile per-packet one-way delay: 63.575 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 108.25 Mbit/s

95th percentile per-packet one-way delay: 61.756 ms

Loss rate: 0.00%

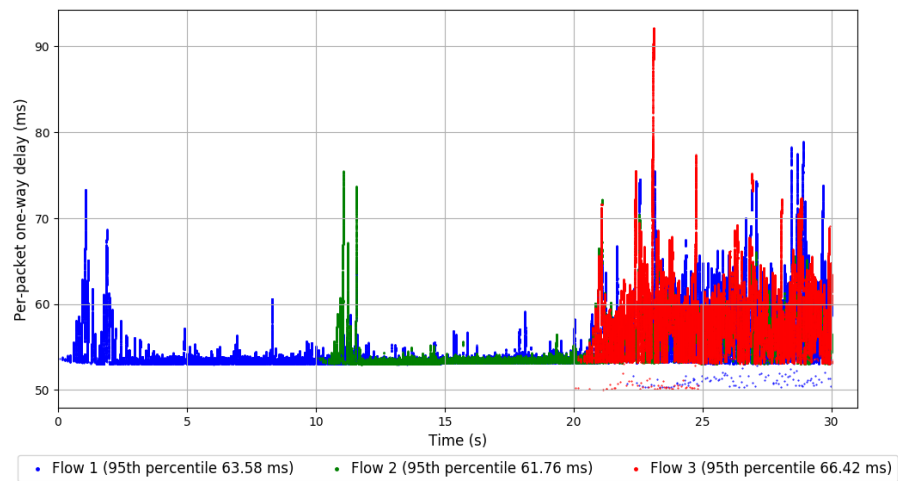
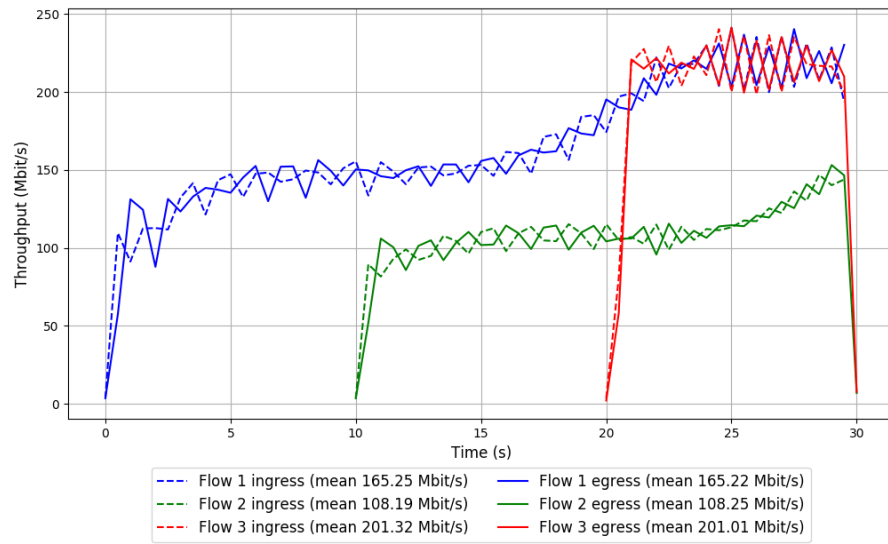
-- Flow 3:

Average throughput: 201.01 Mbit/s

95th percentile per-packet one-way delay: 66.421 ms

Loss rate: 0.15%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-04-18 13:55:21

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

Below is generated by plot.py at 2018-04-18 17:28:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 333.22 Mbit/s

95th percentile per-packet one-way delay: 61.338 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 206.57 Mbit/s

95th percentile per-packet one-way delay: 62.227 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 140.93 Mbit/s

95th percentile per-packet one-way delay: 57.522 ms

Loss rate: 0.02%

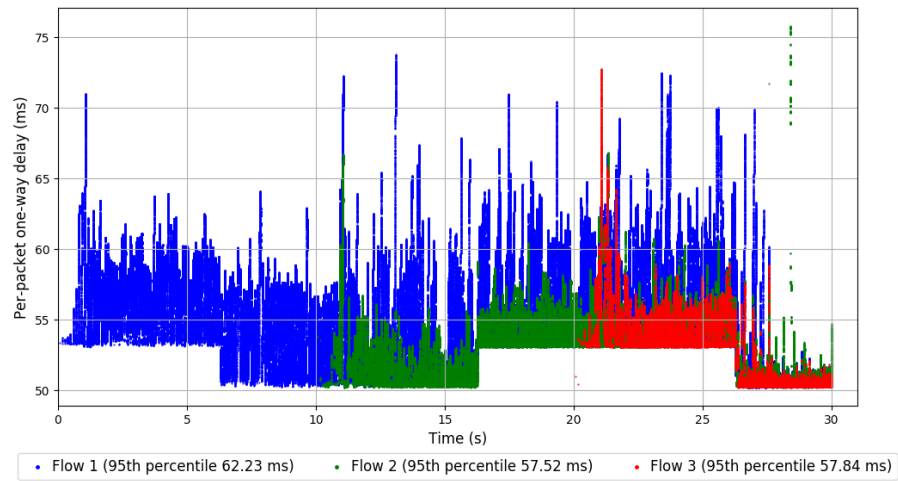
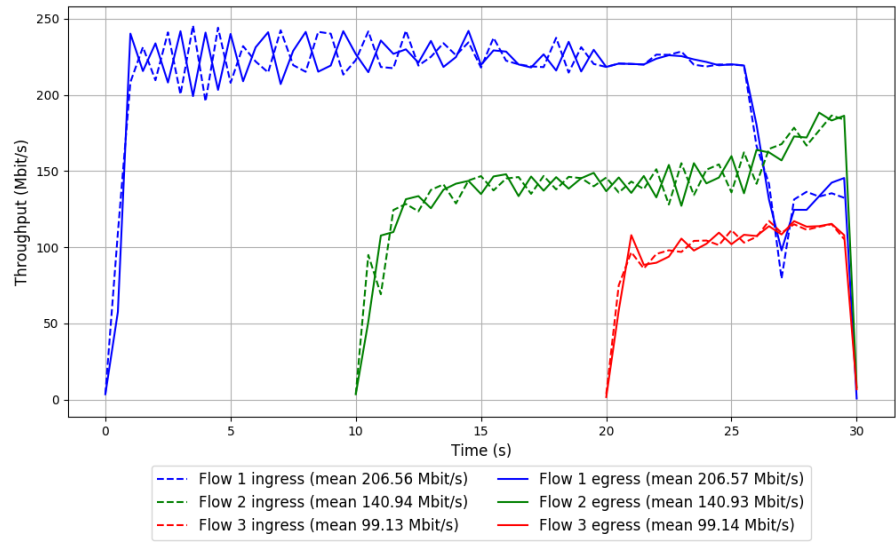
-- Flow 3:

Average throughput: 99.14 Mbit/s

95th percentile per-packet one-way delay: 57.844 ms

Loss rate: 0.00%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2018-04-18 14:10:47

End at: 2018-04-18 14:11:17

Below is generated by plot.py at 2018-04-18 17:28:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 306.62 Mbit/s

95th percentile per-packet one-way delay: 62.097 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 183.45 Mbit/s

95th percentile per-packet one-way delay: 62.990 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 120.07 Mbit/s

95th percentile per-packet one-way delay: 57.485 ms

Loss rate: 0.00%

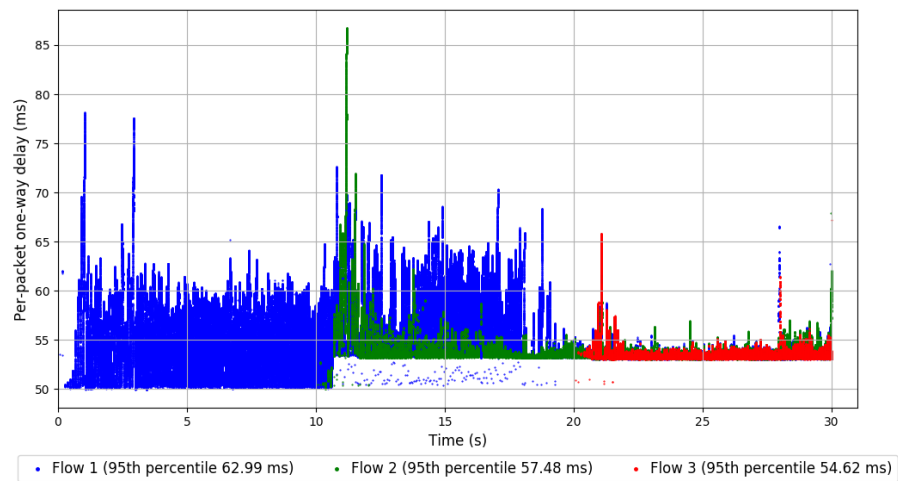
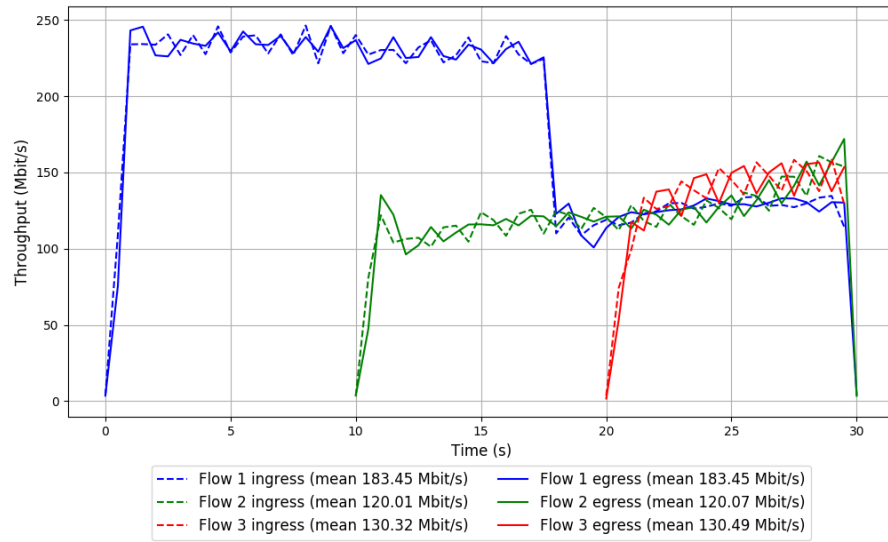
-- Flow 3:

Average throughput: 130.49 Mbit/s

95th percentile per-packet one-way delay: 54.624 ms

Loss rate: 0.00%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2018-04-18 14:26:16

End at: 2018-04-18 14:26:46

Below is generated by plot.py at 2018-04-18 17:32:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 342.71 Mbit/s

95th percentile per-packet one-way delay: 62.739 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 218.59 Mbit/s

95th percentile per-packet one-way delay: 62.733 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 183.79 Mbit/s

95th percentile per-packet one-way delay: 62.792 ms

Loss rate: 0.02%

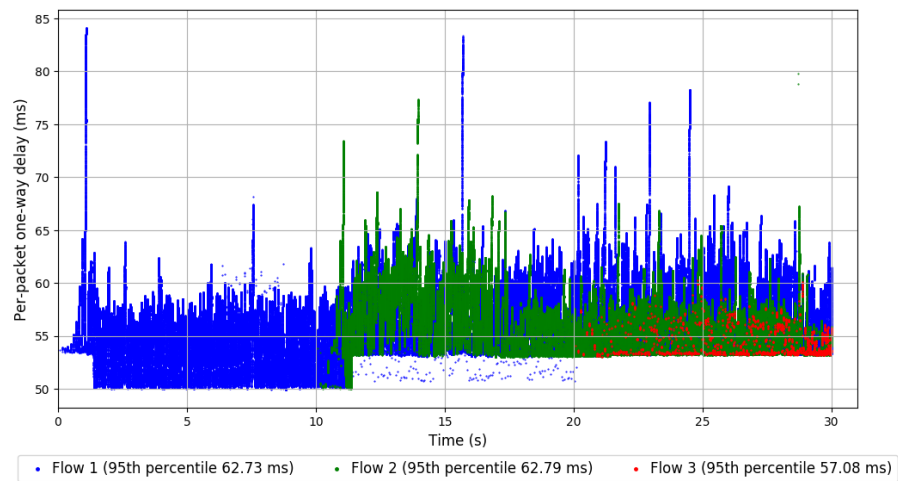
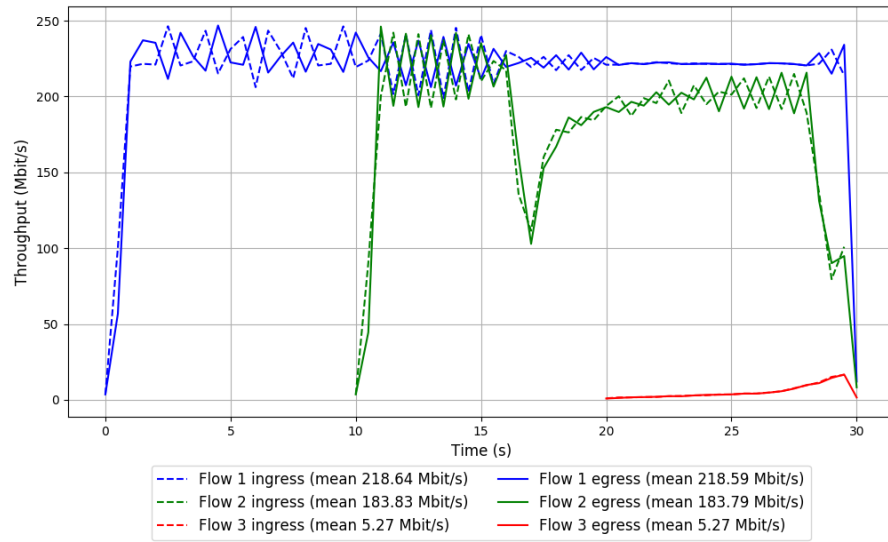
-- Flow 3:

Average throughput: 5.27 Mbit/s

95th percentile per-packet one-way delay: 57.078 ms

Loss rate: 0.11%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2018-04-18 14:41:54

End at: 2018-04-18 14:42:24

Below is generated by plot.py at 2018-04-18 17:32:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 352.44 Mbit/s

95th percentile per-packet one-way delay: 62.434 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 223.95 Mbit/s

95th percentile per-packet one-way delay: 63.131 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 139.85 Mbit/s

95th percentile per-packet one-way delay: 57.747 ms

Loss rate: 0.00%

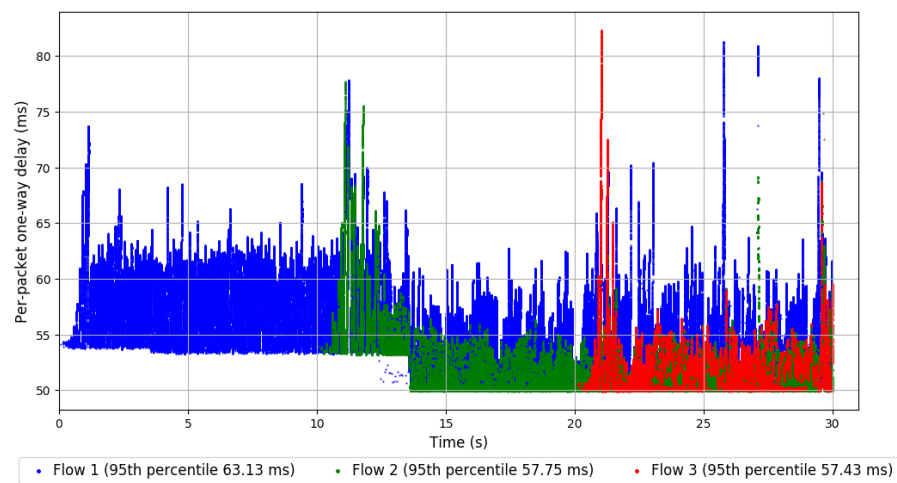
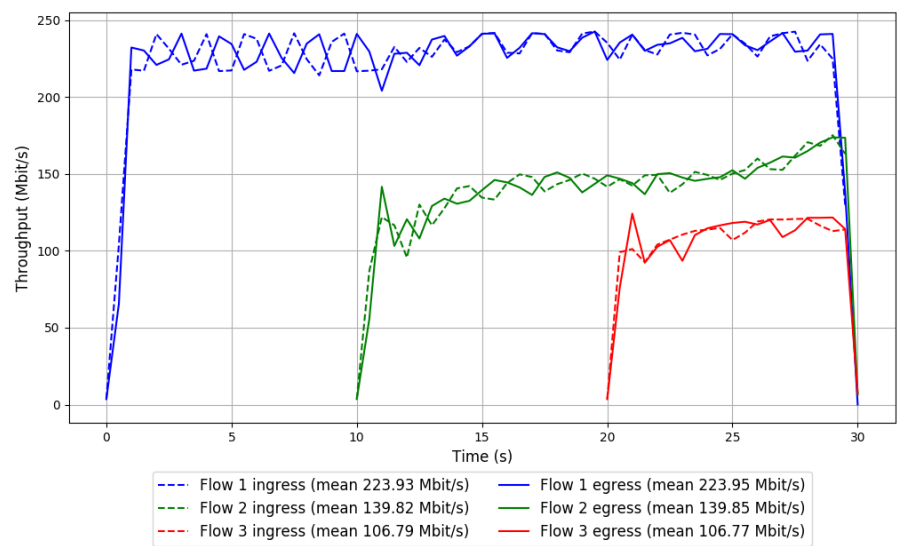
-- Flow 3:

Average throughput: 106.77 Mbit/s

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

Loss rate: 0.00%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2018-04-18 14:57:31

End at: 2018-04-18 14:58:01

Below is generated by plot.py at 2018-04-18 17:32:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 289.75 Mbit/s

95th percentile per-packet one-way delay: 62.774 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 188.11 Mbit/s

95th percentile per-packet one-way delay: 62.038 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 50.07 Mbit/s

95th percentile per-packet one-way delay: 59.641 ms

Loss rate: 0.05%

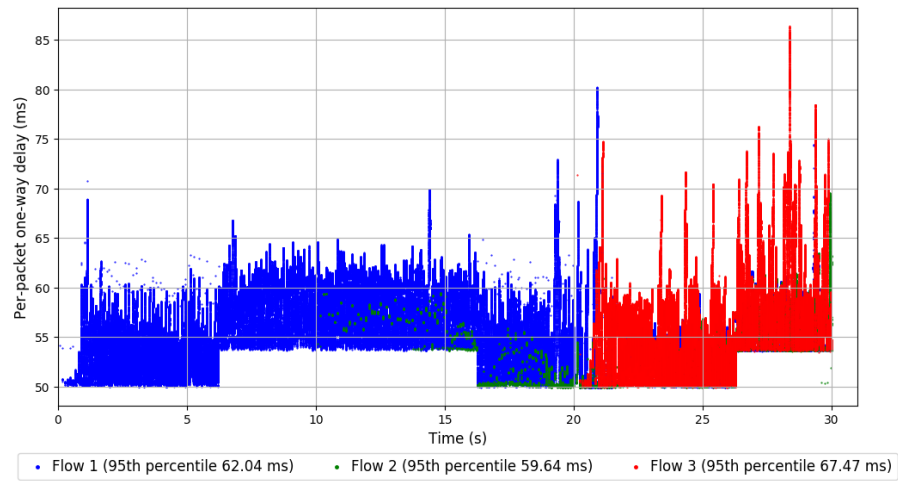
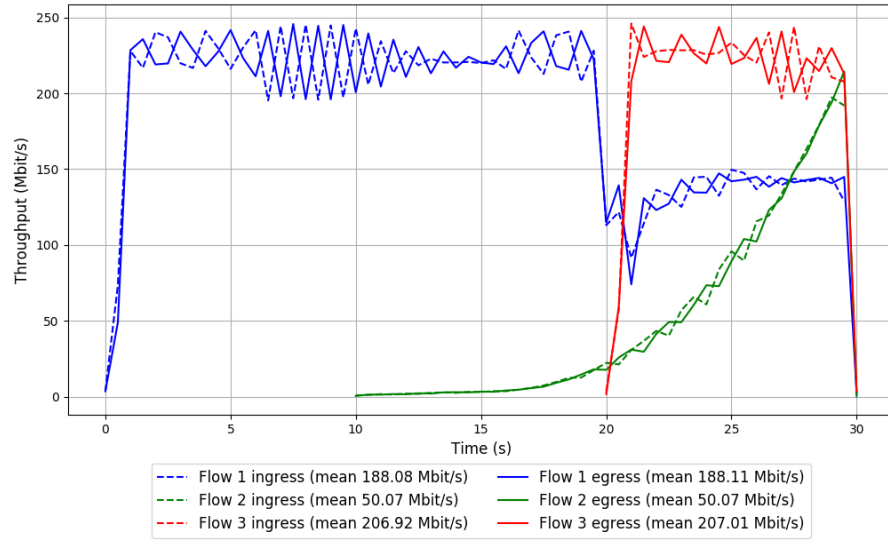
-- Flow 3:

Average throughput: 207.01 Mbit/s

95th percentile per-packet one-way delay: 67.471 ms

Loss rate: 0.17%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2018-04-18 15:12:49

End at: 2018-04-18 15:13:19

Below is generated by plot.py at 2018-04-18 17:33:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 351.48 Mbit/s

95th percentile per-packet one-way delay: 65.038 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 205.47 Mbit/s

95th percentile per-packet one-way delay: 65.037 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 216.95 Mbit/s

95th percentile per-packet one-way delay: 65.062 ms

Loss rate: 0.00%

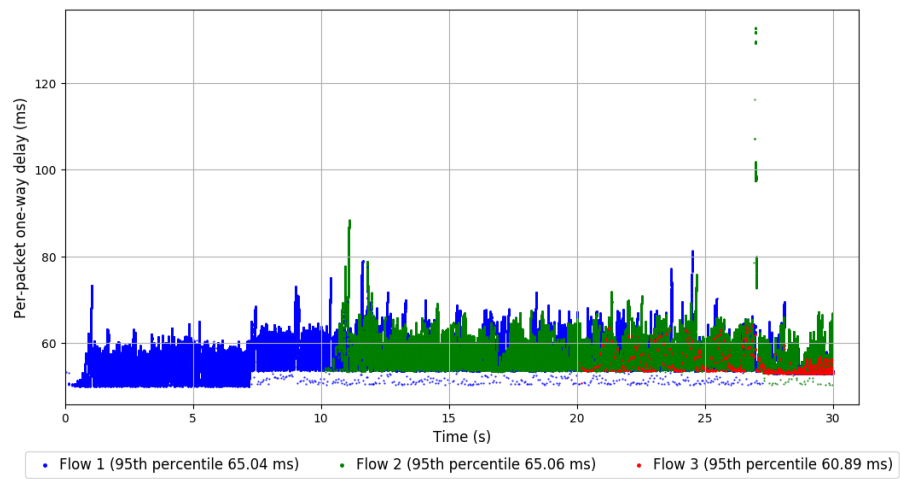
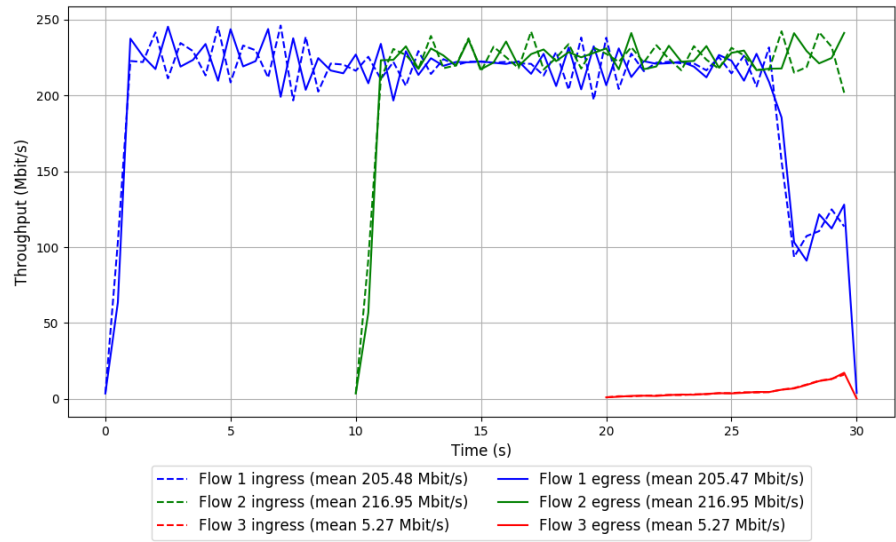
-- Flow 3:

Average throughput: 5.27 Mbit/s

95th percentile per-packet one-way delay: 60.893 ms

Loss rate: 0.05%

Run 10: Report of TCP Cubic — Data Link

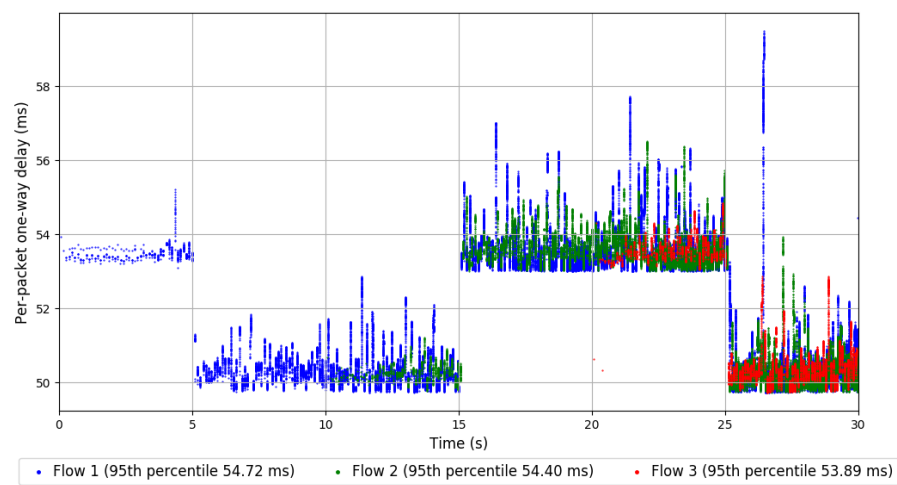
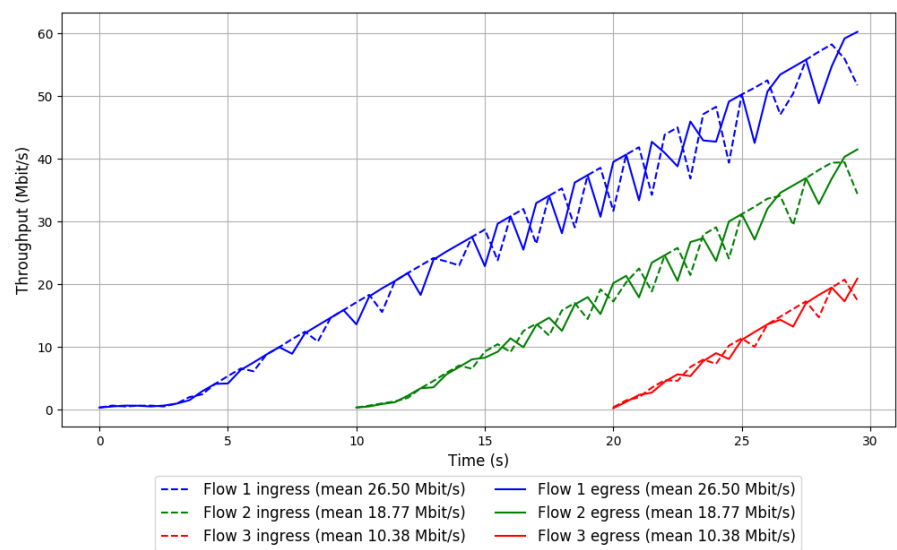


```
Run 1: Statistics of LEDBAT

Start at: 2018-04-18 12:58:42
End at: 2018-04-18 12:59:12

# Below is generated by plot.py at 2018-04-18 17:33:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 42.40 Mbit/s
95th percentile per-packet one-way delay: 54.543 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 26.50 Mbit/s
95th percentile per-packet one-way delay: 54.721 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 18.77 Mbit/s
95th percentile per-packet one-way delay: 54.401 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.38 Mbit/s
95th percentile per-packet one-way delay: 53.889 ms
Loss rate: 0.00%
```


Run 1: Report of LEDBAT — Data Link

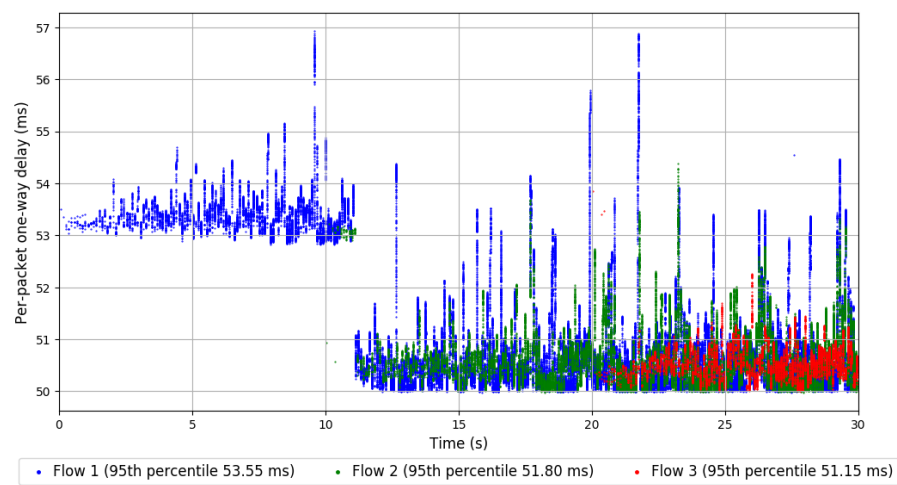
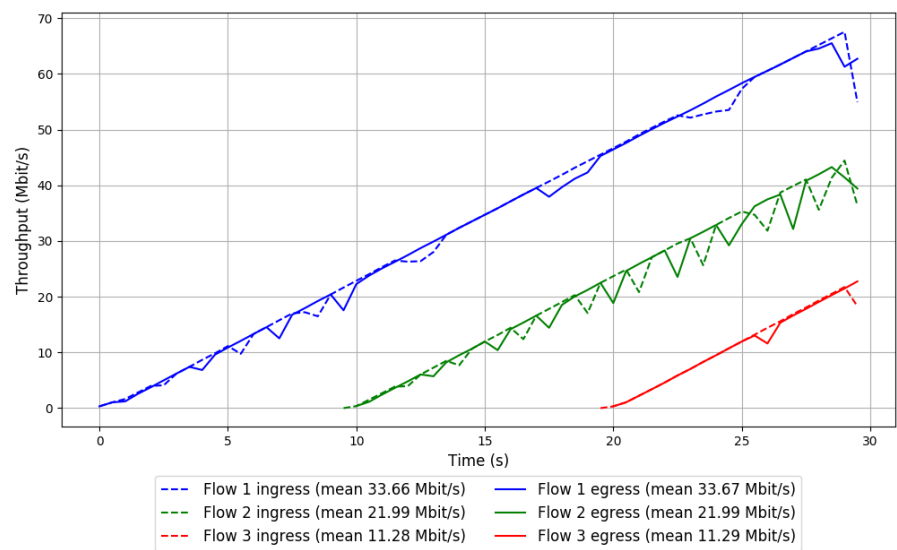


```
Run 2: Statistics of LEDBAT

Start at: 2018-04-18 13:13:56
End at: 2018-04-18 13:14:26

# Below is generated by plot.py at 2018-04-18 17:33:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 52.02 Mbit/s
95th percentile per-packet one-way delay: 53.383 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 33.67 Mbit/s
95th percentile per-packet one-way delay: 53.553 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 21.99 Mbit/s
95th percentile per-packet one-way delay: 51.796 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.29 Mbit/s
95th percentile per-packet one-way delay: 51.147 ms
Loss rate: 0.00%
```

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-04-18 13:29:06

End at: 2018-04-18 13:29:36

Below is generated by plot.py at 2018-04-18 17:33:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 47.40 Mbit/s

95th percentile per-packet one-way delay: 54.159 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 31.01 Mbit/s

95th percentile per-packet one-way delay: 54.304 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 19.12 Mbit/s

95th percentile per-packet one-way delay: 53.926 ms

Loss rate: 0.00%

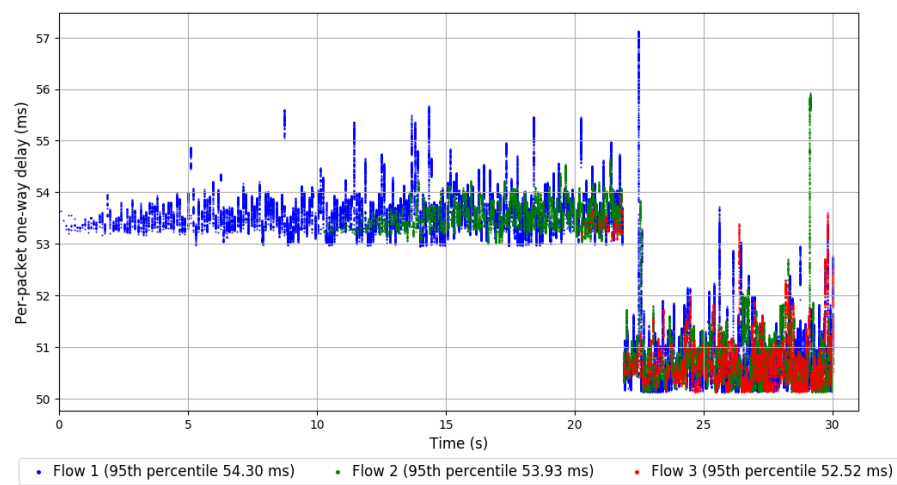
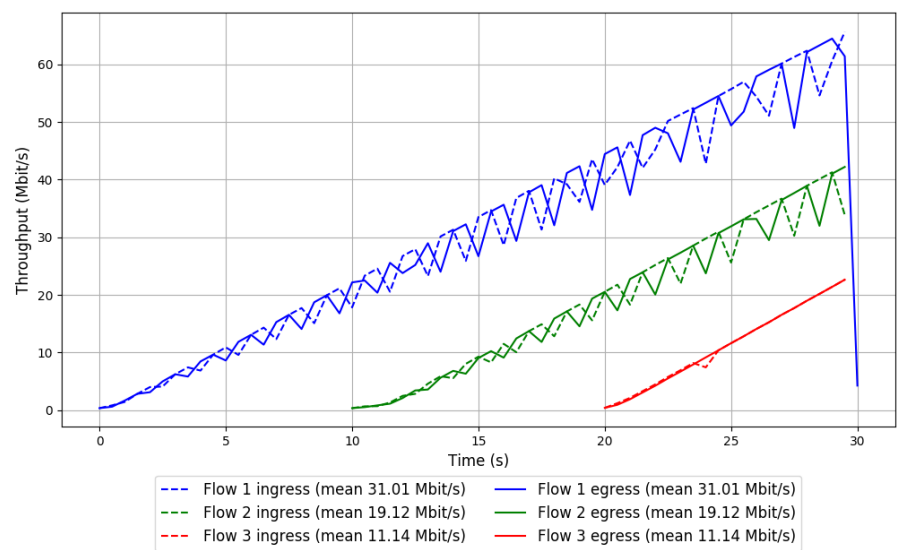
-- Flow 3:

Average throughput: 11.14 Mbit/s

95th percentile per-packet one-way delay: 52.524 ms

Loss rate: 0.00%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

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

End at: 2018-04-18 13:44:46

Below is generated by plot.py at 2018-04-18 17:33:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 39.88 Mbit/s

95th percentile per-packet one-way delay: 54.552 ms

Loss rate: 0.10%

-- Flow 1:

Average throughput: 22.17 Mbit/s

95th percentile per-packet one-way delay: 54.596 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 21.31 Mbit/s

95th percentile per-packet one-way delay: 54.462 ms

Loss rate: 0.00%

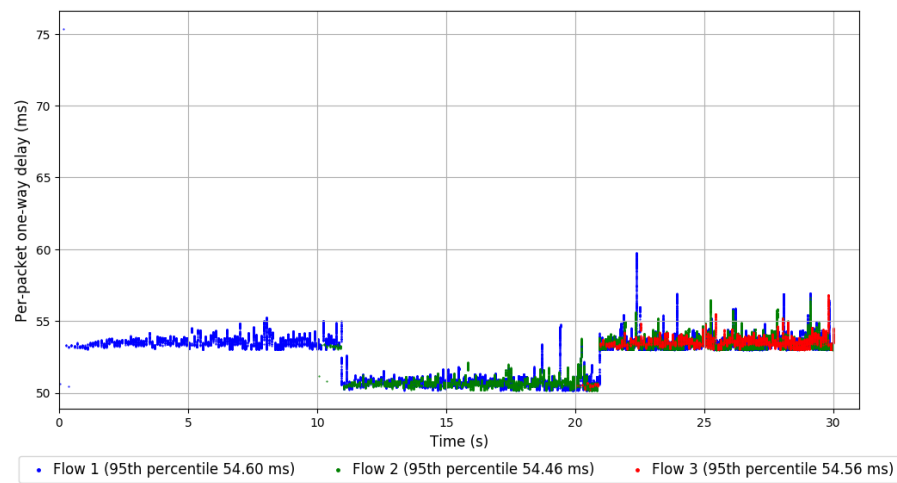
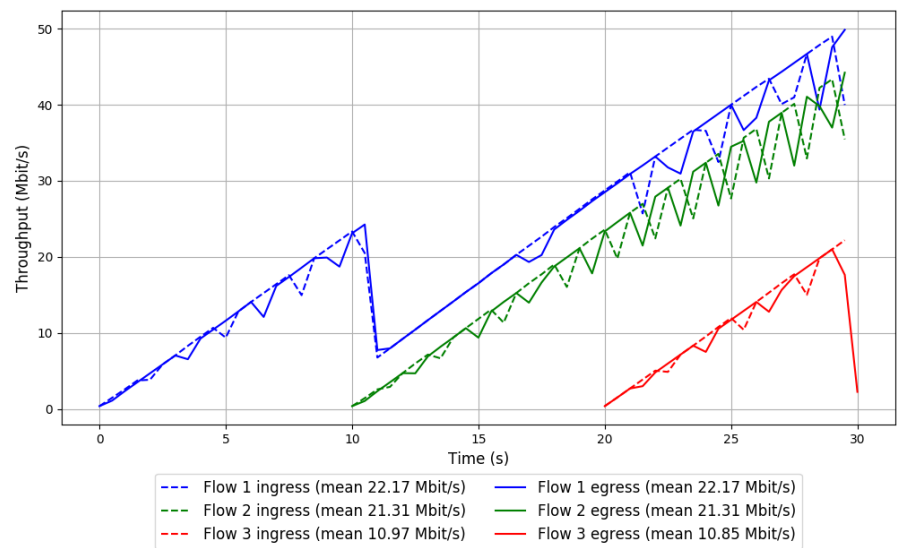
-- Flow 3:

Average throughput: 10.85 Mbit/s

95th percentile per-packet one-way delay: 54.557 ms

Loss rate: 1.05%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

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

End at: 2018-04-18 14:00:34

Below is generated by plot.py at 2018-04-18 17:33:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 49.22 Mbit/s

95th percentile per-packet one-way delay: 54.948 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 31.70 Mbit/s

95th percentile per-packet one-way delay: 54.945 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 21.24 Mbit/s

95th percentile per-packet one-way delay: 55.016 ms

Loss rate: 0.00%

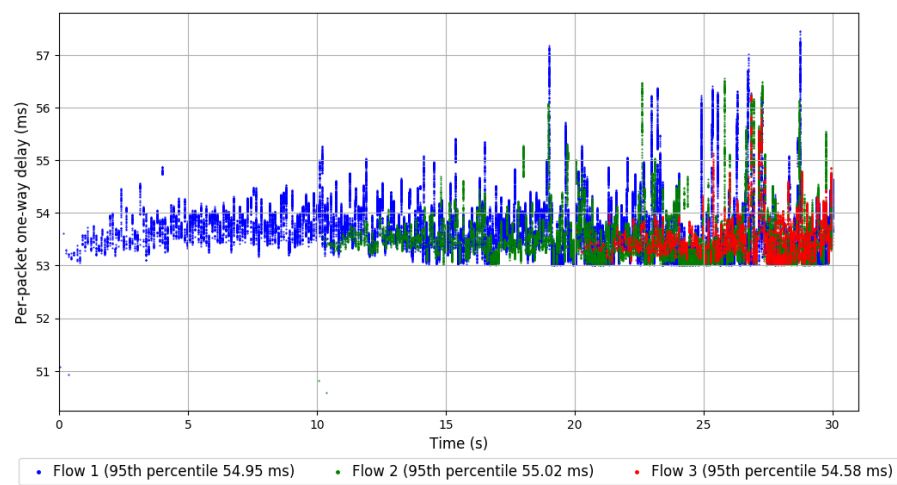
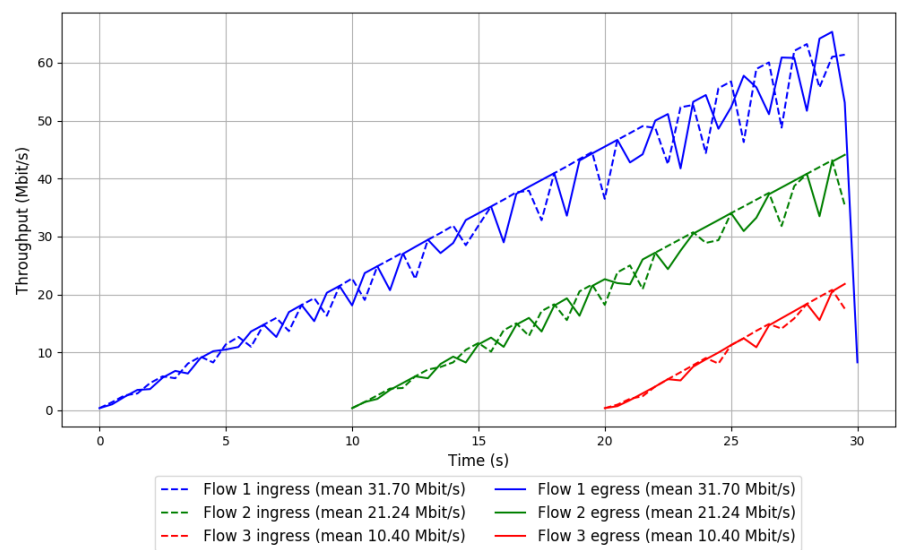
-- Flow 3:

Average throughput: 10.40 Mbit/s

95th percentile per-packet one-way delay: 54.580 ms

Loss rate: 0.00%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

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

End at: 2018-04-18 14:16:00

Below is generated by plot.py at 2018-04-18 17:33:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 44.23 Mbit/s

95th percentile per-packet one-way delay: 54.924 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 27.02 Mbit/s

95th percentile per-packet one-way delay: 54.974 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 20.87 Mbit/s

95th percentile per-packet one-way delay: 54.959 ms

Loss rate: 0.00%

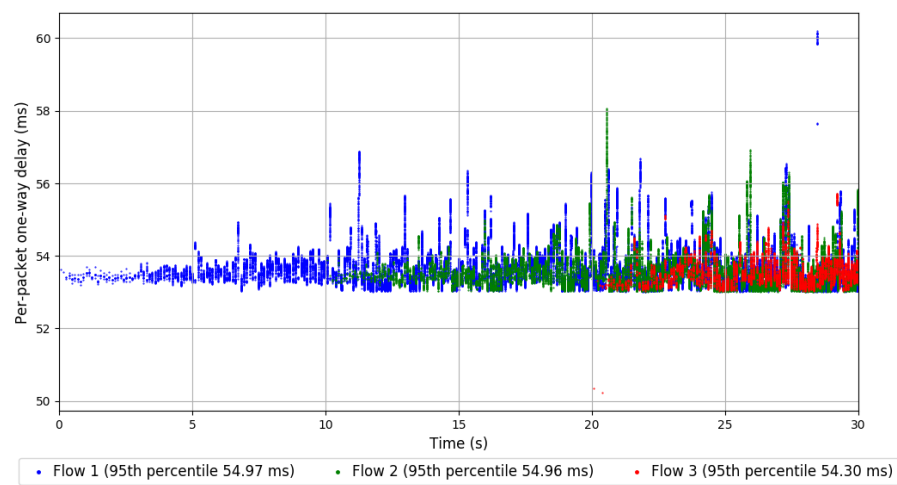
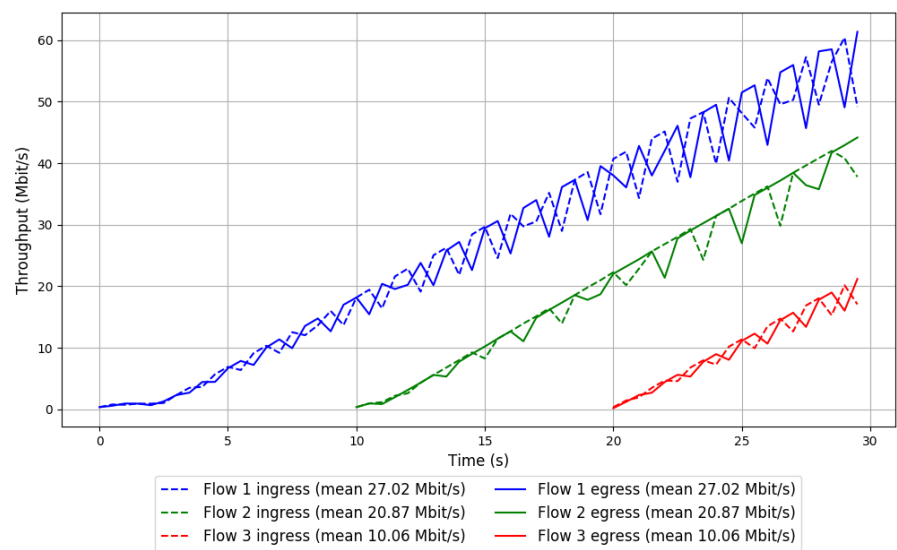
-- Flow 3:

Average throughput: 10.06 Mbit/s

95th percentile per-packet one-way delay: 54.300 ms

Loss rate: 0.00%

Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

Start at: 2018-04-18 14:30:57

End at: 2018-04-18 14:31:27

Below is generated by plot.py at 2018-04-18 17:33:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 49.16 Mbit/s

95th percentile per-packet one-way delay: 54.849 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 32.00 Mbit/s

95th percentile per-packet one-way delay: 54.966 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 20.46 Mbit/s

95th percentile per-packet one-way delay: 54.654 ms

Loss rate: 0.00%

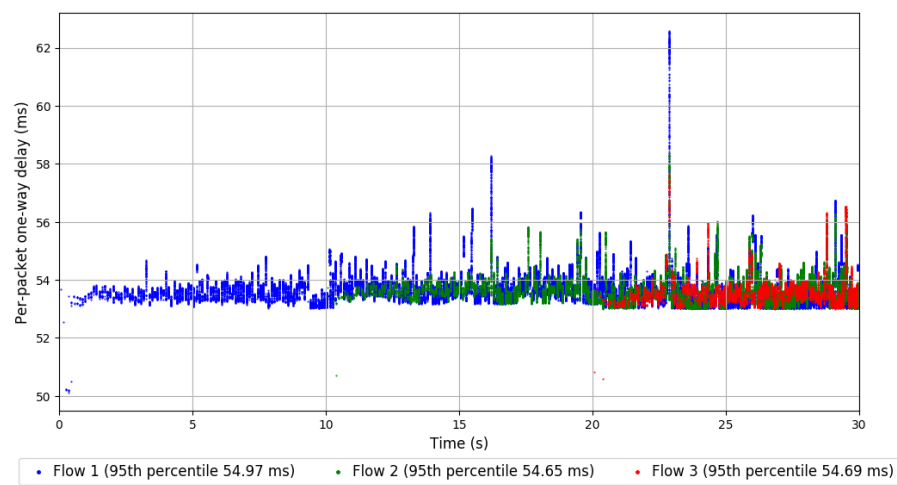
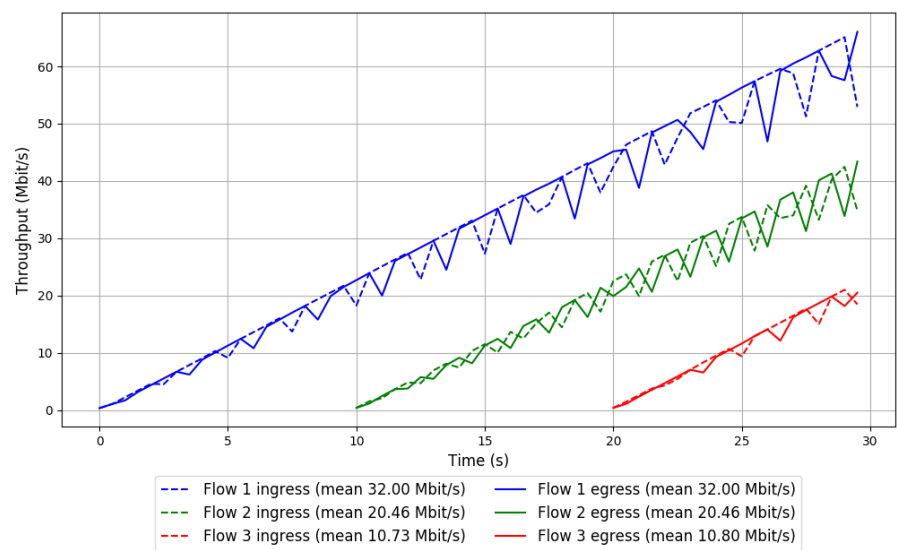
-- Flow 3:

Average throughput: 10.80 Mbit/s

95th percentile per-packet one-way delay: 54.691 ms

Loss rate: 0.38%

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2018-04-18 14:46:38

End at: 2018-04-18 14:47:08

Below is generated by plot.py at 2018-04-18 17:33:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 47.67 Mbit/s

95th percentile per-packet one-way delay: 55.219 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 31.13 Mbit/s

95th percentile per-packet one-way delay: 55.146 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 19.61 Mbit/s

95th percentile per-packet one-way delay: 55.466 ms

Loss rate: 0.00%

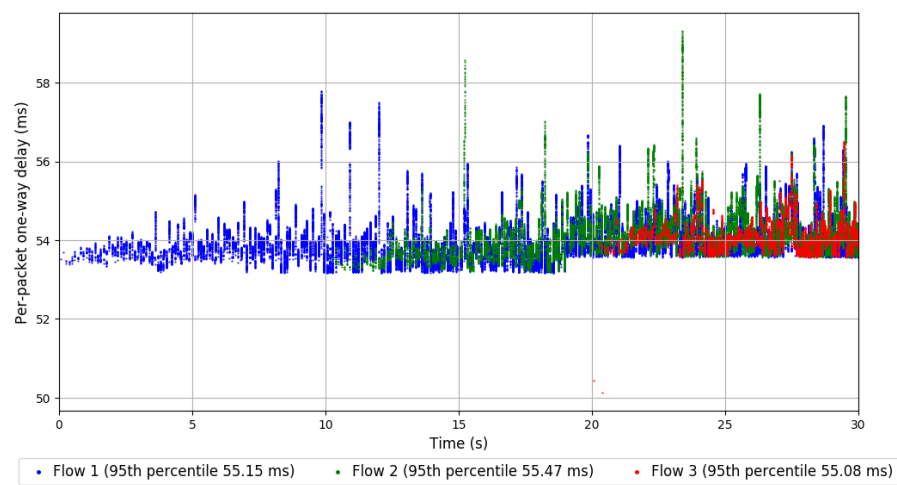
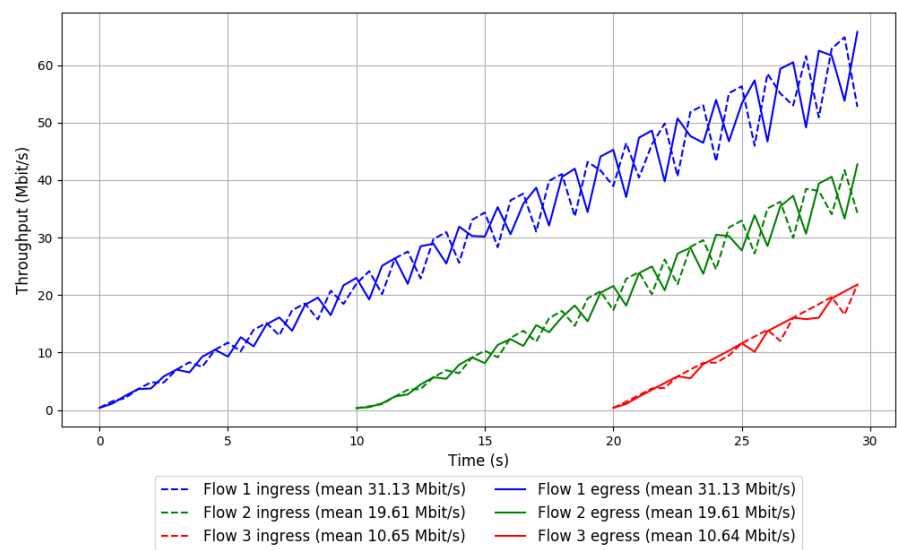
-- Flow 3:

Average throughput: 10.64 Mbit/s

95th percentile per-packet one-way delay: 55.082 ms

Loss rate: 0.00%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2018-04-18 15:02:06

End at: 2018-04-18 15:02:36

Below is generated by plot.py at 2018-04-18 17:33:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 50.63 Mbit/s

95th percentile per-packet one-way delay: 54.311 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 32.01 Mbit/s

95th percentile per-packet one-way delay: 54.324 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 22.55 Mbit/s

95th percentile per-packet one-way delay: 54.327 ms

Loss rate: 0.00%

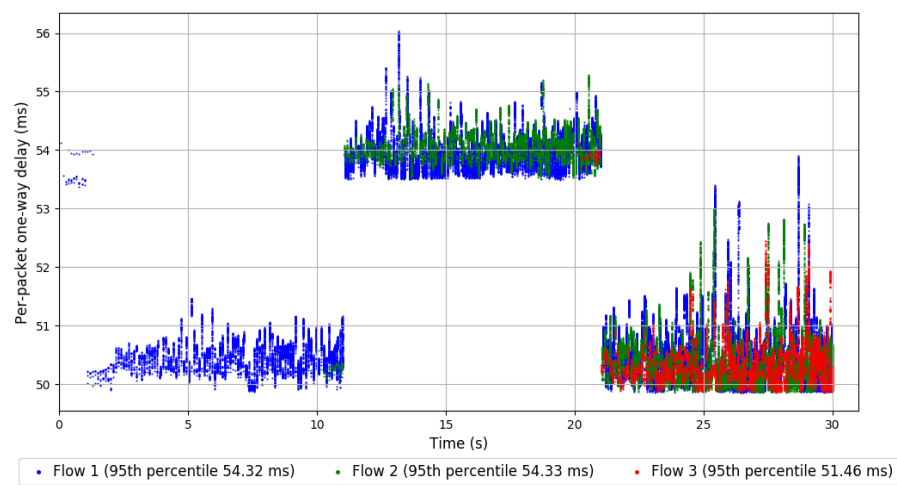
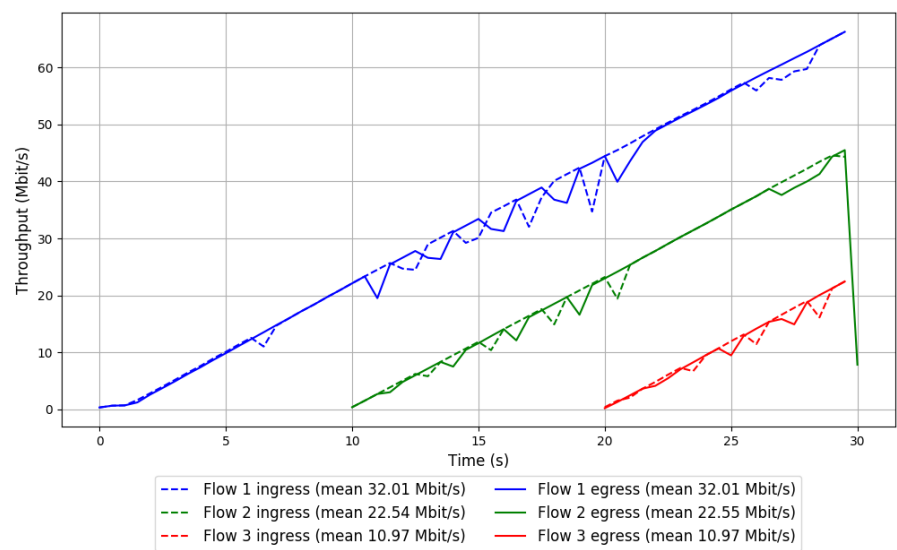
-- Flow 3:

Average throughput: 10.97 Mbit/s

95th percentile per-packet one-way delay: 51.463 ms

Loss rate: 0.00%

Run 9: Report of LEDBAT — Data Link



Run 10: Statistics of LEDBAT

Start at: 2018-04-18 15:17:33

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

Below is generated by plot.py at 2018-04-18 17:33:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 20.23 Mbit/s

95th percentile per-packet one-way delay: 55.116 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.19 Mbit/s

95th percentile per-packet one-way delay: 54.587 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 22.05 Mbit/s

95th percentile per-packet one-way delay: 55.262 ms

Loss rate: 0.00%

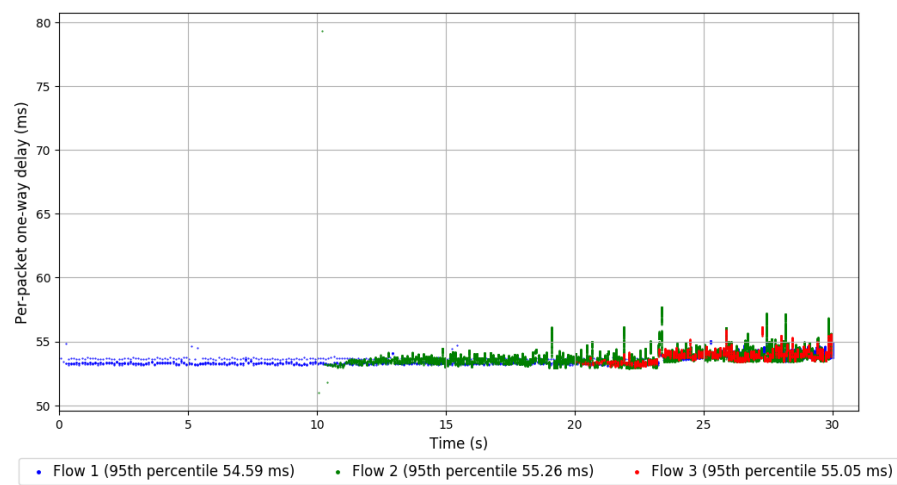
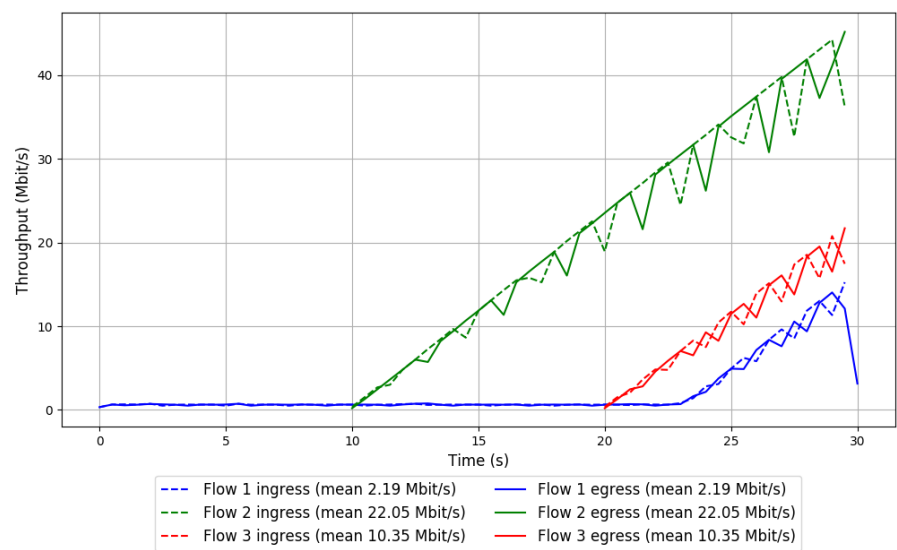
-- Flow 3:

Average throughput: 10.35 Mbit/s

95th percentile per-packet one-way delay: 55.049 ms

Loss rate: 0.00%

Run 10: Report of LEDBAT — Data Link

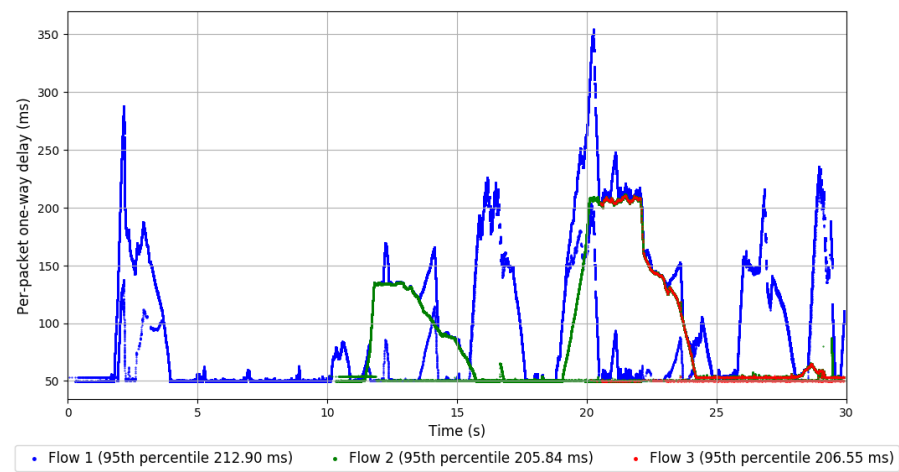
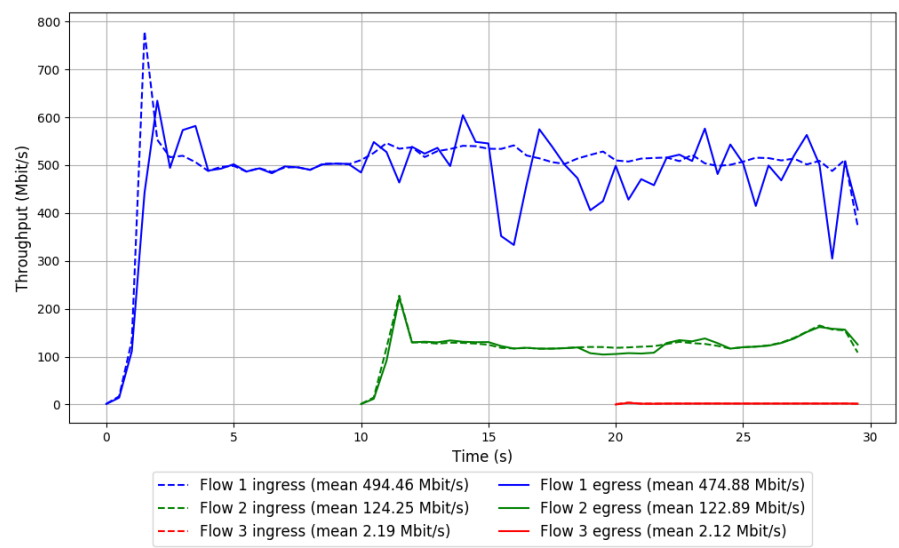


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-04-18 12:59:24
End at: 2018-04-18 12:59:54

# Below is generated by plot.py at 2018-04-18 17:39:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 557.15 Mbit/s
95th percentile per-packet one-way delay: 210.685 ms
Loss rate: 3.55%
-- Flow 1:
Average throughput: 474.88 Mbit/s
95th percentile per-packet one-way delay: 212.901 ms
Loss rate: 3.96%
-- Flow 2:
Average throughput: 122.89 Mbit/s
95th percentile per-packet one-way delay: 205.835 ms
Loss rate: 1.10%
-- Flow 3:
Average throughput: 2.12 Mbit/s
95th percentile per-packet one-way delay: 206.548 ms
Loss rate: 3.20%
```

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-04-18 13:14:39

End at: 2018-04-18 13:15:09

Below is generated by plot.py at 2018-04-18 17:39:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 565.74 Mbit/s

95th percentile per-packet one-way delay: 237.159 ms

Loss rate: 1.42%

-- Flow 1:

Average throughput: 471.37 Mbit/s

95th percentile per-packet one-way delay: 238.601 ms

Loss rate: 1.68%

-- Flow 2:

Average throughput: 139.96 Mbit/s

95th percentile per-packet one-way delay: 162.211 ms

Loss rate: 0.10%

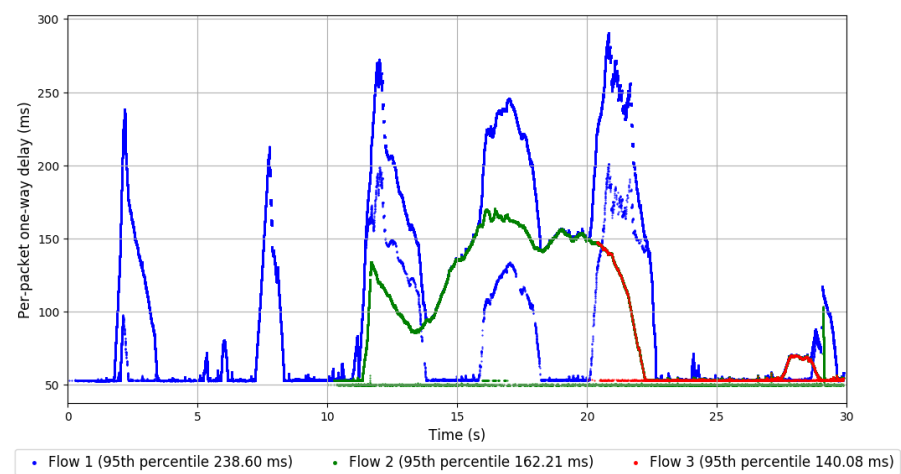
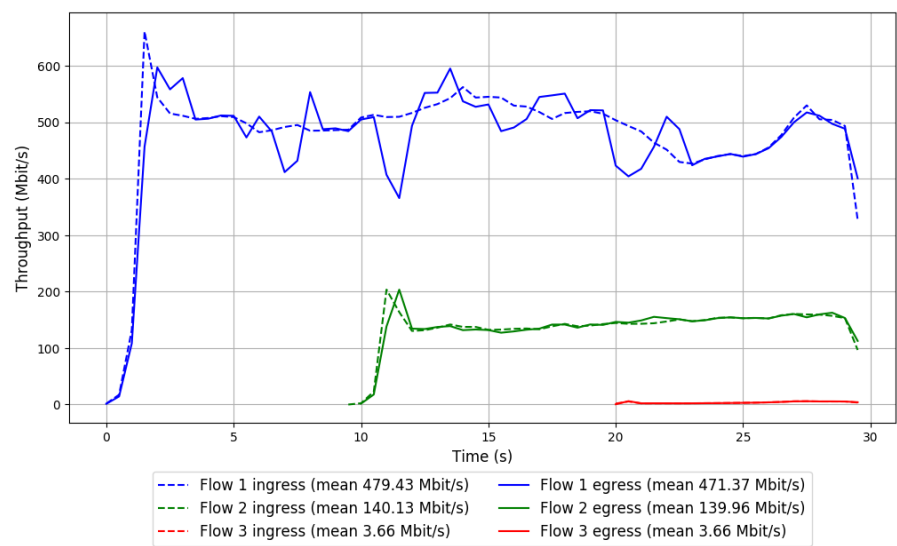
-- Flow 3:

Average throughput: 3.66 Mbit/s

95th percentile per-packet one-way delay: 140.079 ms

Loss rate: 0.00%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-04-18 13:29:48

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

Below is generated by plot.py at 2018-04-18 17:40:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 572.57 Mbit/s

95th percentile per-packet one-way delay: 223.226 ms

Loss rate: 4.81%

-- Flow 1:

Average throughput: 471.75 Mbit/s

95th percentile per-packet one-way delay: 233.450 ms

Loss rate: 5.53%

-- Flow 2:

Average throughput: 136.37 Mbit/s

95th percentile per-packet one-way delay: 167.507 ms

Loss rate: 1.17%

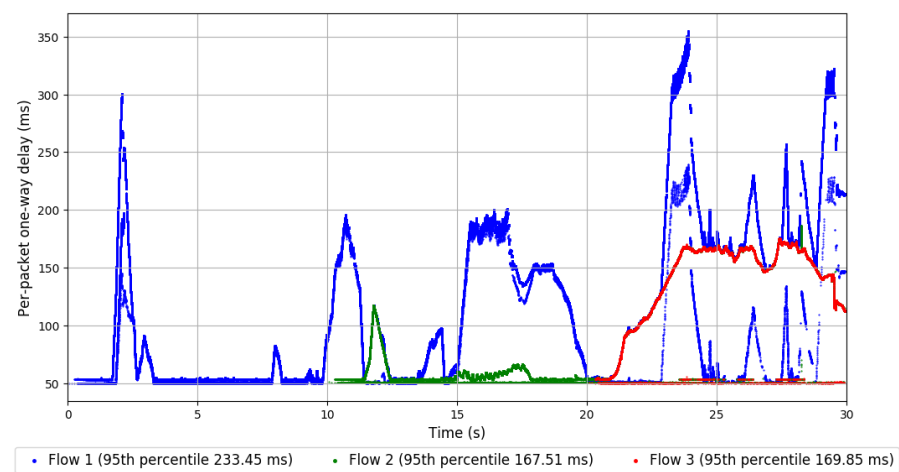
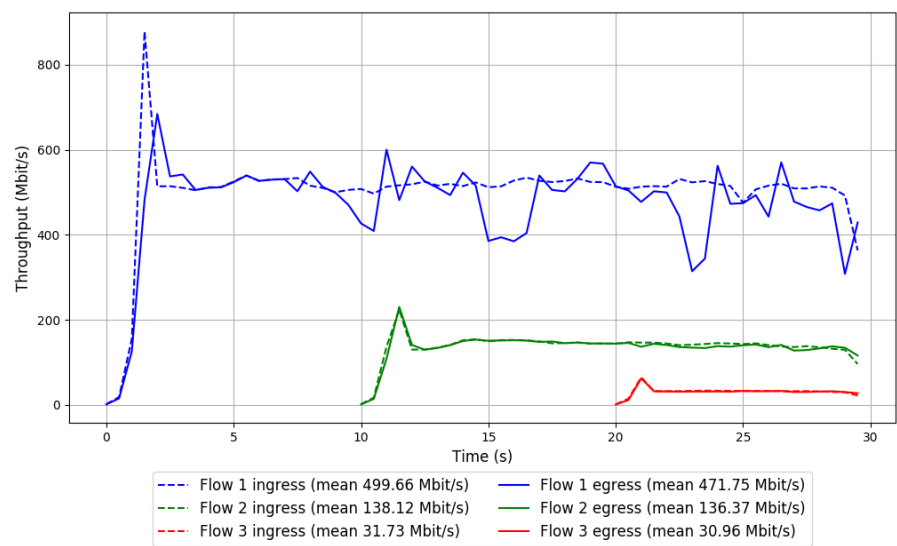
-- Flow 3:

Average throughput: 30.96 Mbit/s

95th percentile per-packet one-way delay: 169.848 ms

Loss rate: 2.28%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-04-18 13:44:58

End at: 2018-04-18 13:45:28

Below is generated by plot.py at 2018-04-18 17:40:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 575.75 Mbit/s

95th percentile per-packet one-way delay: 176.535 ms

Loss rate: 2.21%

-- Flow 1:

Average throughput: 499.09 Mbit/s

95th percentile per-packet one-way delay: 180.466 ms

Loss rate: 2.50%

-- Flow 2:

Average throughput: 113.41 Mbit/s

95th percentile per-packet one-way delay: 165.038 ms

Loss rate: 0.30%

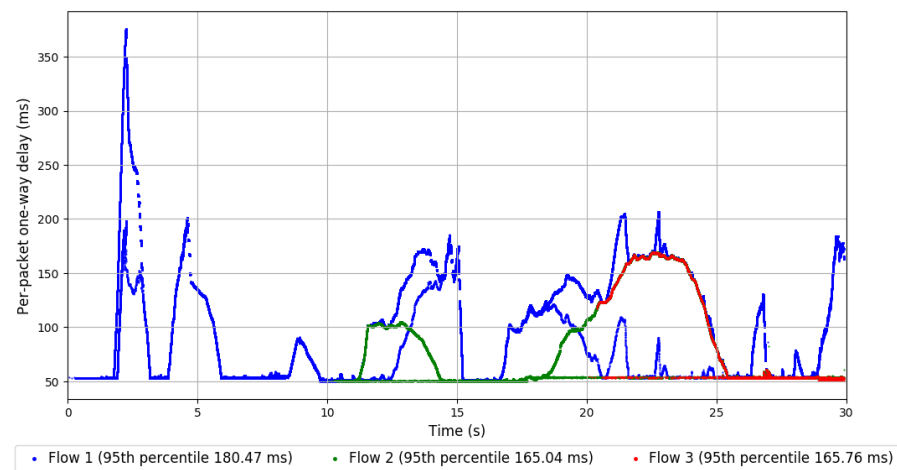
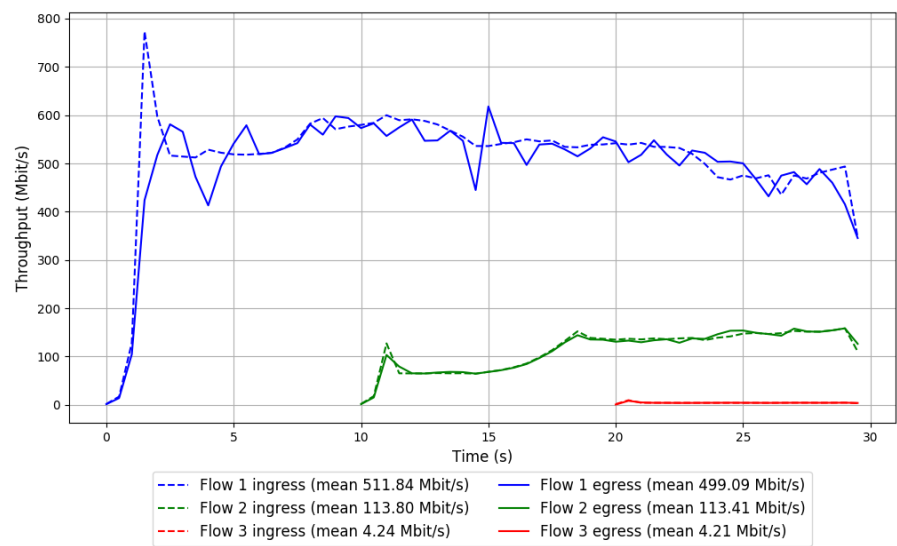
-- Flow 3:

Average throughput: 4.21 Mbit/s

95th percentile per-packet one-way delay: 165.758 ms

Loss rate: 0.75%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-04-18 14:00:46

End at: 2018-04-18 14:01:16

Below is generated by plot.py at 2018-04-18 17:42:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 587.97 Mbit/s

95th percentile per-packet one-way delay: 233.337 ms

Loss rate: 5.80%

-- Flow 1:

Average throughput: 434.59 Mbit/s

95th percentile per-packet one-way delay: 251.491 ms

Loss rate: 5.92%

-- Flow 2:

Average throughput: 222.59 Mbit/s

95th percentile per-packet one-way delay: 167.520 ms

Loss rate: 5.55%

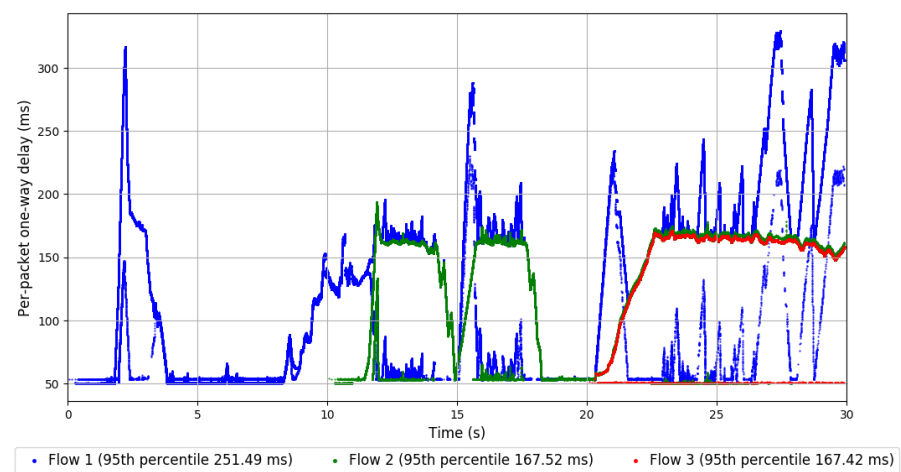
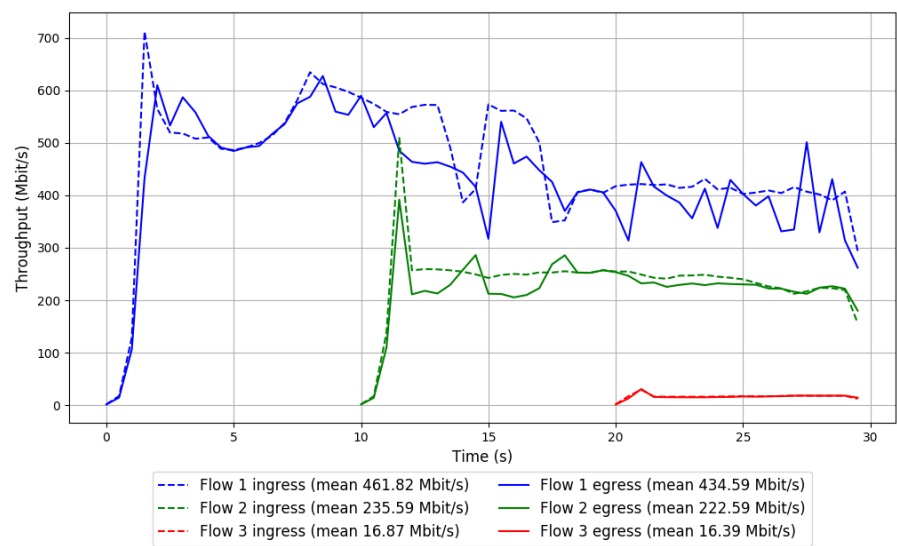
-- Flow 3:

Average throughput: 16.39 Mbit/s

95th percentile per-packet one-way delay: 167.416 ms

Loss rate: 2.91%

Run 5: Report of PCC-Allegro — Data Link



Run 6: Statistics of PCC-Allegro

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

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

Below is generated by plot.py at 2018-04-18 17:42:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 551.81 Mbit/s

95th percentile per-packet one-way delay: 252.173 ms

Loss rate: 9.12%

-- Flow 1:

Average throughput: 447.02 Mbit/s

95th percentile per-packet one-way delay: 266.616 ms

Loss rate: 10.84%

-- Flow 2:

Average throughput: 126.87 Mbit/s

95th percentile per-packet one-way delay: 161.381 ms

Loss rate: 0.82%

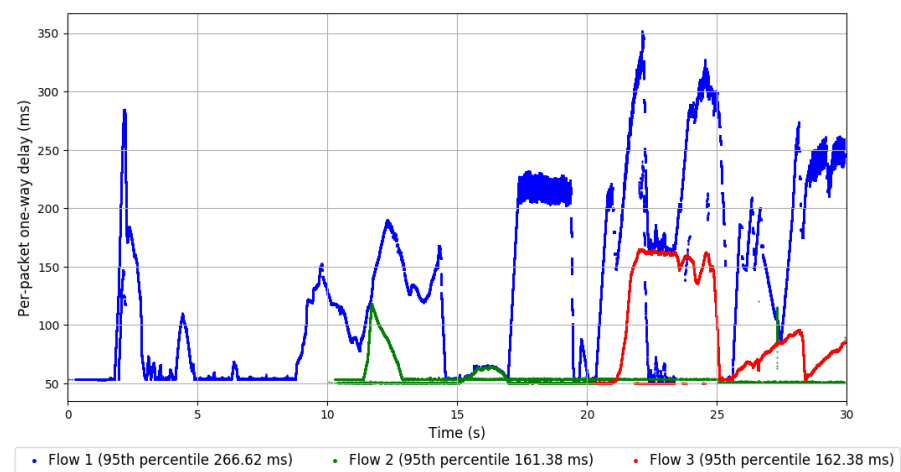
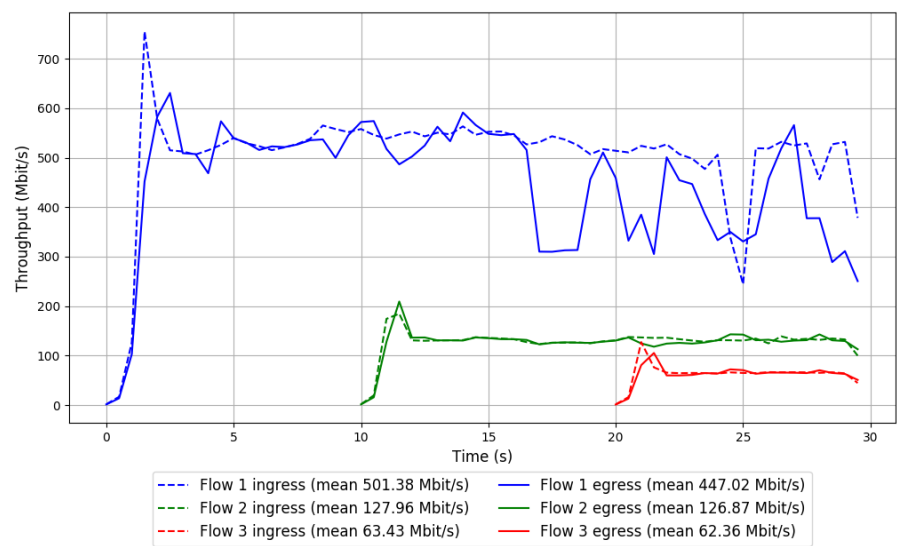
-- Flow 3:

Average throughput: 62.36 Mbit/s

95th percentile per-packet one-way delay: 162.383 ms

Loss rate: 1.60%

Run 6: Report of PCC-Allegro — Data Link



Run 7: Statistics of PCC-Allegro

Start at: 2018-04-18 14:31:40

End at: 2018-04-18 14:32:10

Below is generated by plot.py at 2018-04-18 17:43:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 576.62 Mbit/s

95th percentile per-packet one-way delay: 278.403 ms

Loss rate: 5.03%

-- Flow 1:

Average throughput: 461.73 Mbit/s

95th percentile per-packet one-way delay: 298.505 ms

Loss rate: 5.44%

-- Flow 2:

Average throughput: 142.66 Mbit/s

95th percentile per-packet one-way delay: 168.956 ms

Loss rate: 2.94%

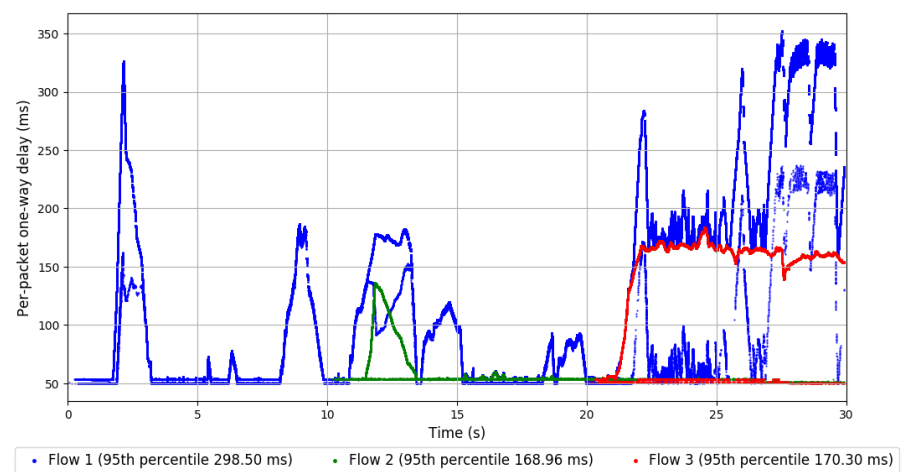
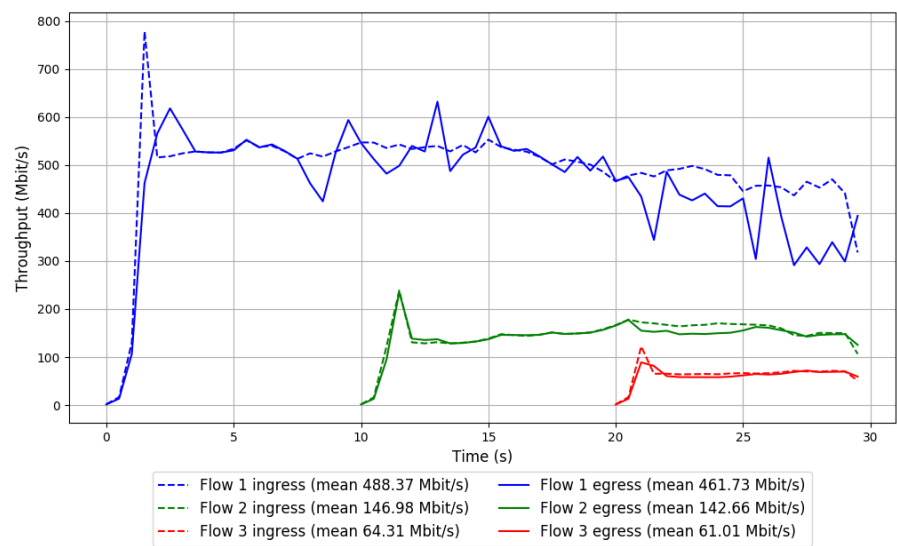
-- Flow 3:

Average throughput: 61.01 Mbit/s

95th percentile per-packet one-way delay: 170.303 ms

Loss rate: 5.10%

Run 7: Report of PCC-Allegro — Data Link



Run 8: Statistics of PCC-Allegro

Start at: 2018-04-18 14:47:21

End at: 2018-04-18 14:47:51

Below is generated by plot.py at 2018-04-18 17:44:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 593.98 Mbit/s

95th percentile per-packet one-way delay: 193.751 ms

Loss rate: 2.56%

-- Flow 1:

Average throughput: 516.25 Mbit/s

95th percentile per-packet one-way delay: 197.699 ms

Loss rate: 2.70%

-- Flow 2:

Average throughput: 115.91 Mbit/s

95th percentile per-packet one-way delay: 170.435 ms

Loss rate: 1.57%

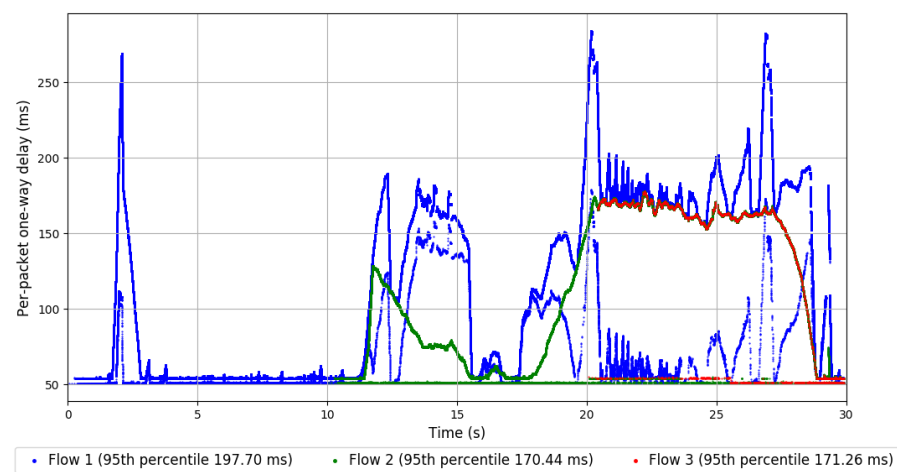
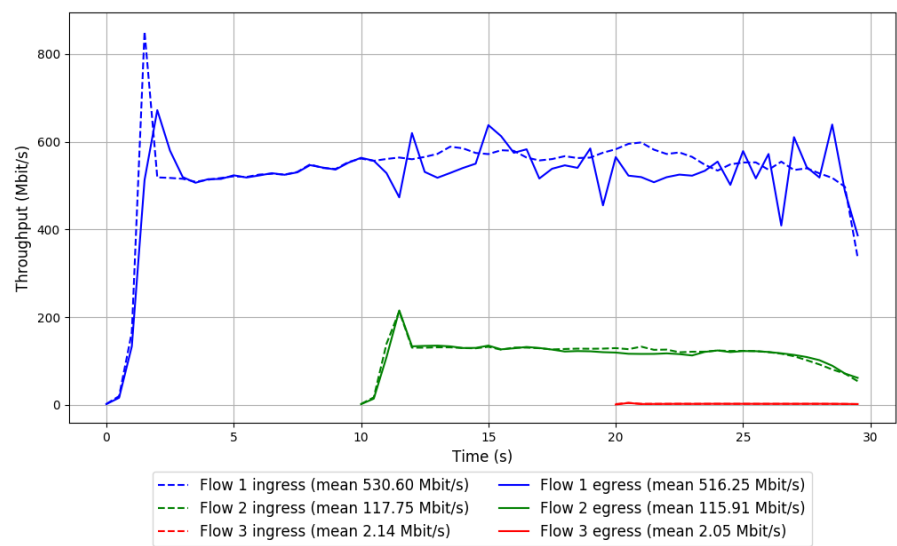
-- Flow 3:

Average throughput: 2.05 Mbit/s

95th percentile per-packet one-way delay: 171.261 ms

Loss rate: 4.34%

Run 8: Report of PCC-Allegro — Data Link



Run 9: Statistics of PCC-Allegro

Start at: 2018-04-18 15:02:49

End at: 2018-04-18 15:03:19

Below is generated by plot.py at 2018-04-18 17:50:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 557.21 Mbit/s

95th percentile per-packet one-way delay: 191.489 ms

Loss rate: 5.52%

-- Flow 1:

Average throughput: 476.61 Mbit/s

95th percentile per-packet one-way delay: 192.216 ms

Loss rate: 5.51%

-- Flow 2:

Average throughput: 117.50 Mbit/s

95th percentile per-packet one-way delay: 188.412 ms

Loss rate: 5.55%

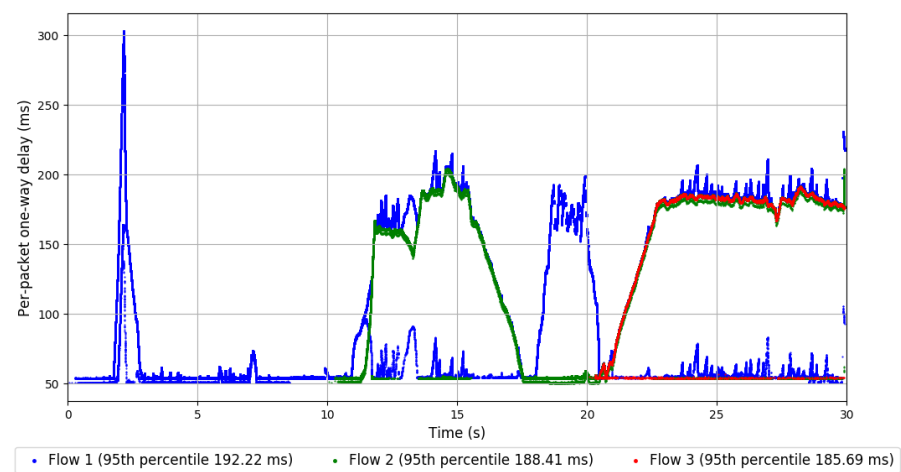
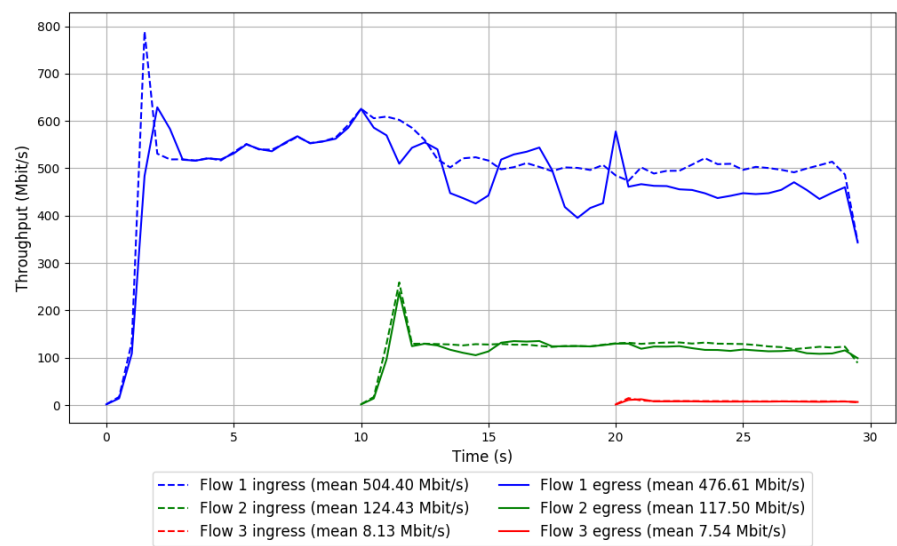
-- Flow 3:

Average throughput: 7.54 Mbit/s

95th percentile per-packet one-way delay: 185.695 ms

Loss rate: 7.18%

Run 9: Report of PCC-Allegro — Data Link



Run 10: Statistics of PCC-Allegro

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

End at: 2018-04-18 15:18:44

Below is generated by plot.py at 2018-04-18 17:50:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 557.79 Mbit/s

95th percentile per-packet one-way delay: 271.488 ms

Loss rate: 2.93%

-- Flow 1:

Average throughput: 439.29 Mbit/s

95th percentile per-packet one-way delay: 285.962 ms

Loss rate: 3.64%

-- Flow 2:

Average throughput: 162.42 Mbit/s

95th percentile per-packet one-way delay: 167.679 ms

Loss rate: 0.21%

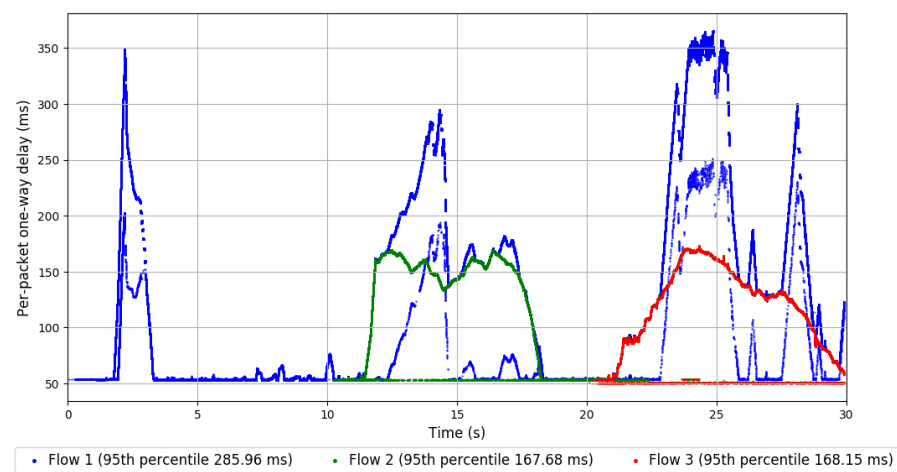
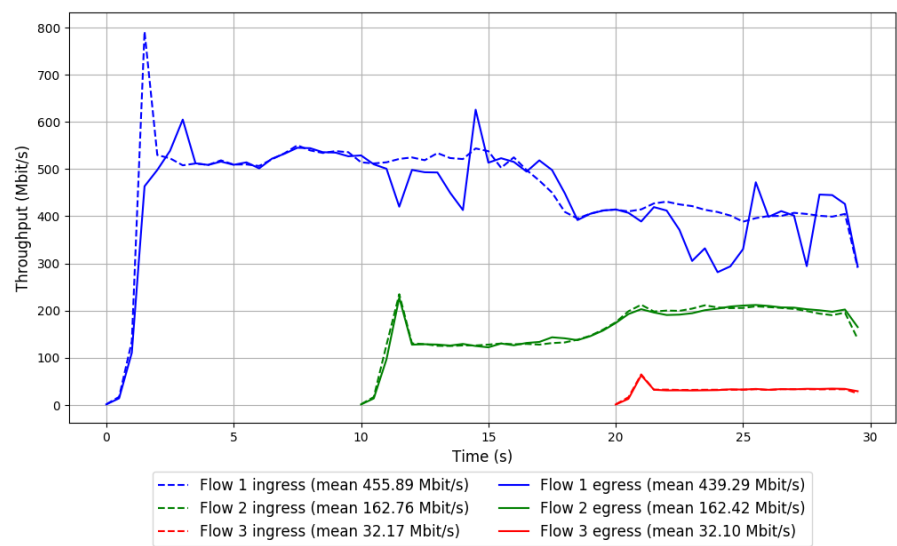
-- Flow 3:

Average throughput: 32.10 Mbit/s

95th percentile per-packet one-way delay: 168.152 ms

Loss rate: 0.19%

Run 10: Report of PCC-Allegro — Data Link

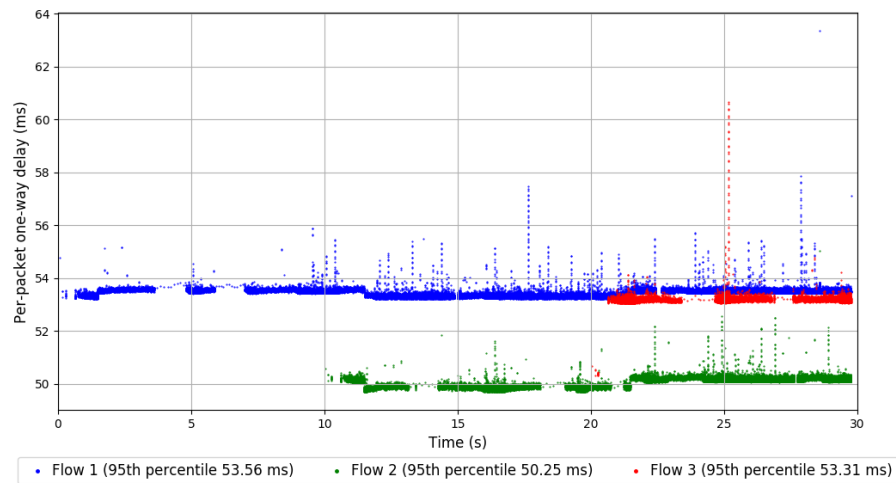
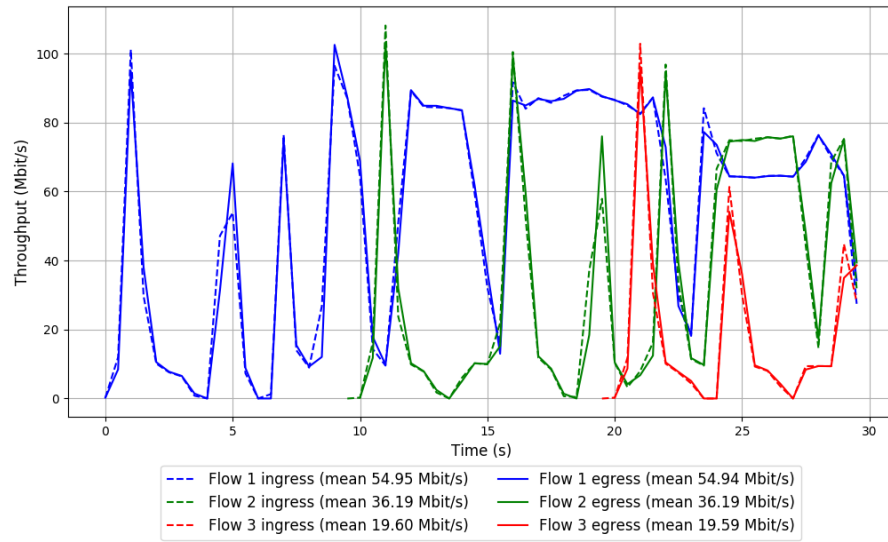


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-04-18 13:02:26
End at: 2018-04-18 13:02:56

# Below is generated by plot.py at 2018-04-18 17:50:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.37 Mbit/s
95th percentile per-packet one-way delay: 53.545 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 54.94 Mbit/s
95th percentile per-packet one-way delay: 53.565 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 36.19 Mbit/s
95th percentile per-packet one-way delay: 50.254 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 19.59 Mbit/s
95th percentile per-packet one-way delay: 53.309 ms
Loss rate: 0.05%
```


Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-04-18 13:17:41

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

Below is generated by plot.py at 2018-04-18 17:50:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 74.05 Mbit/s

95th percentile per-packet one-way delay: 53.425 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 43.77 Mbit/s

95th percentile per-packet one-way delay: 53.215 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 35.80 Mbit/s

95th percentile per-packet one-way delay: 53.483 ms

Loss rate: 0.02%

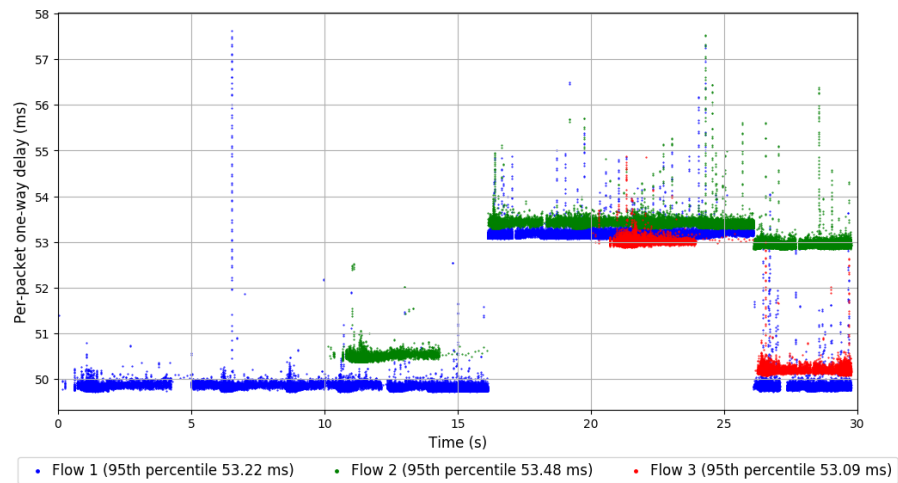
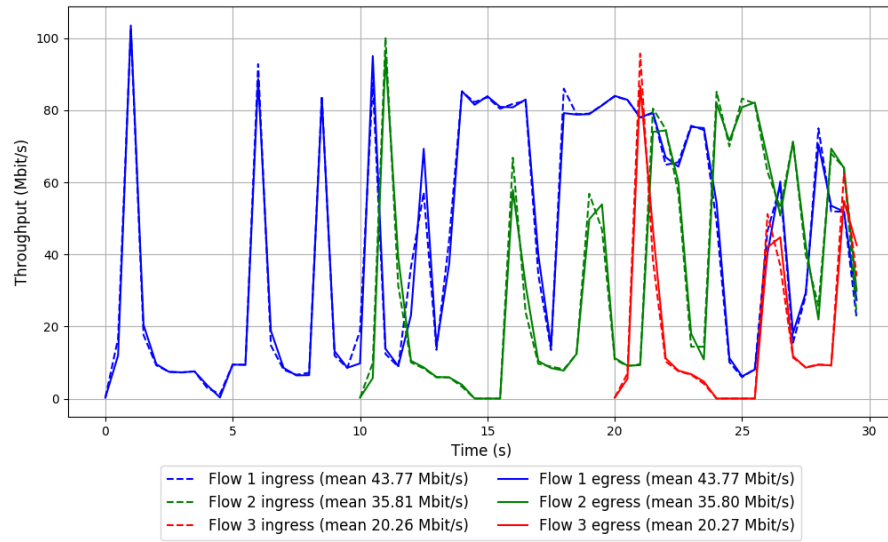
-- Flow 3:

Average throughput: 20.27 Mbit/s

95th percentile per-packet one-way delay: 53.089 ms

Loss rate: 0.00%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-04-18 13:32:54

End at: 2018-04-18 13:33:24

Below is generated by plot.py at 2018-04-18 17:50:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 76.25 Mbit/s

95th percentile per-packet one-way delay: 53.131 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 49.43 Mbit/s

95th percentile per-packet one-way delay: 50.645 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 23.29 Mbit/s

95th percentile per-packet one-way delay: 53.166 ms

Loss rate: 0.03%

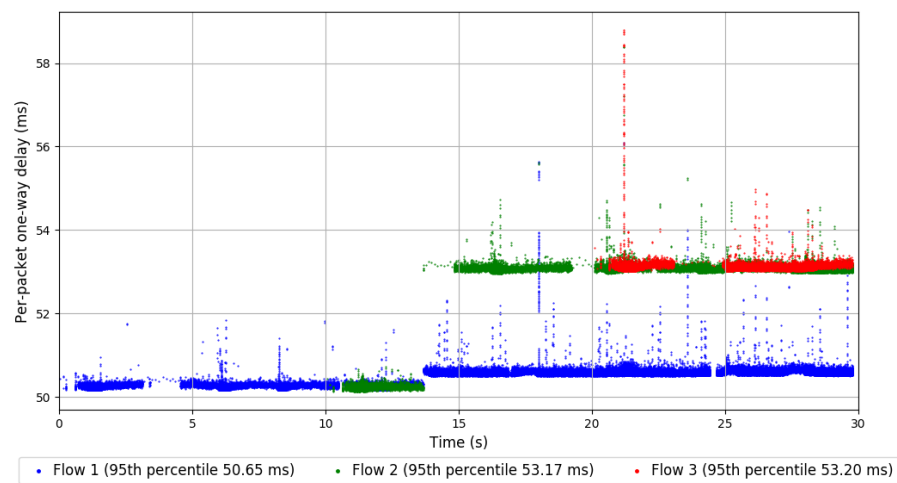
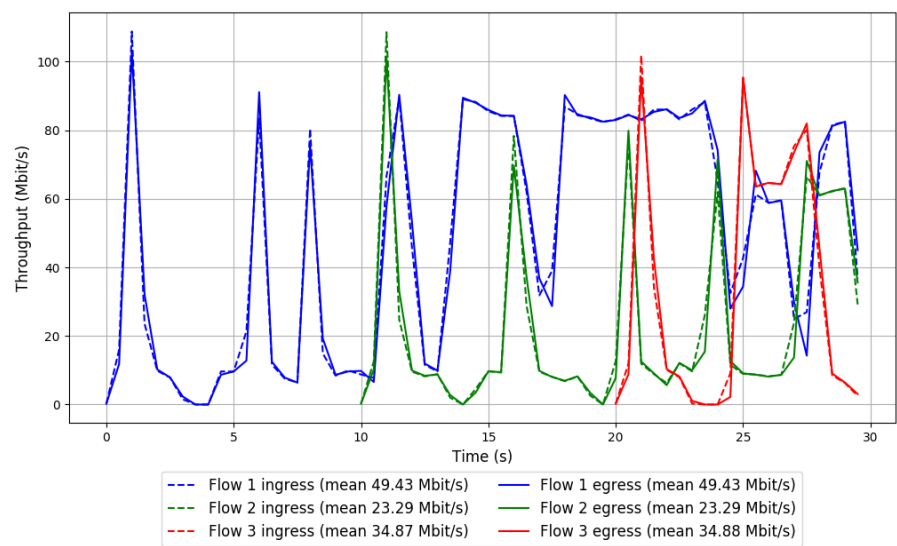
-- Flow 3:

Average throughput: 34.88 Mbit/s

95th percentile per-packet one-way delay: 53.197 ms

Loss rate: 0.01%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-04-18 13:48:19

End at: 2018-04-18 13:48:49

Below is generated by plot.py at 2018-04-18 17:50:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 87.40 Mbit/s

95th percentile per-packet one-way delay: 53.483 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 51.68 Mbit/s

95th percentile per-packet one-way delay: 53.538 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 43.60 Mbit/s

95th percentile per-packet one-way delay: 50.651 ms

Loss rate: 0.00%

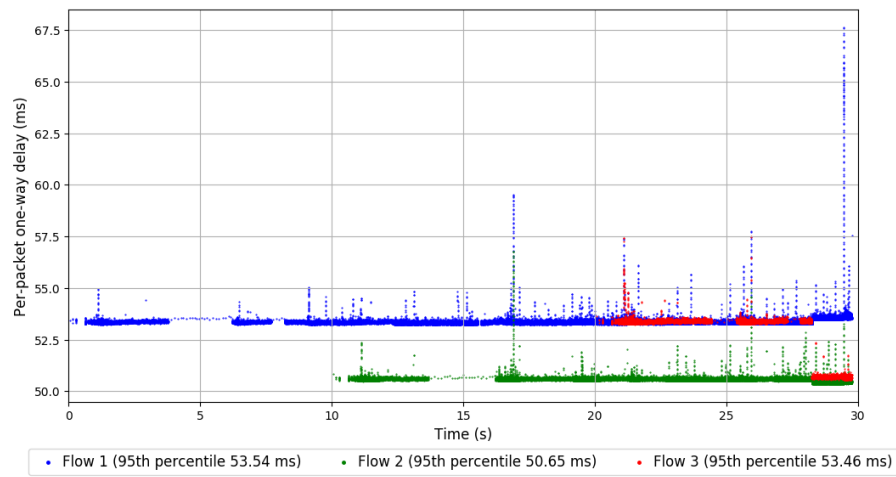
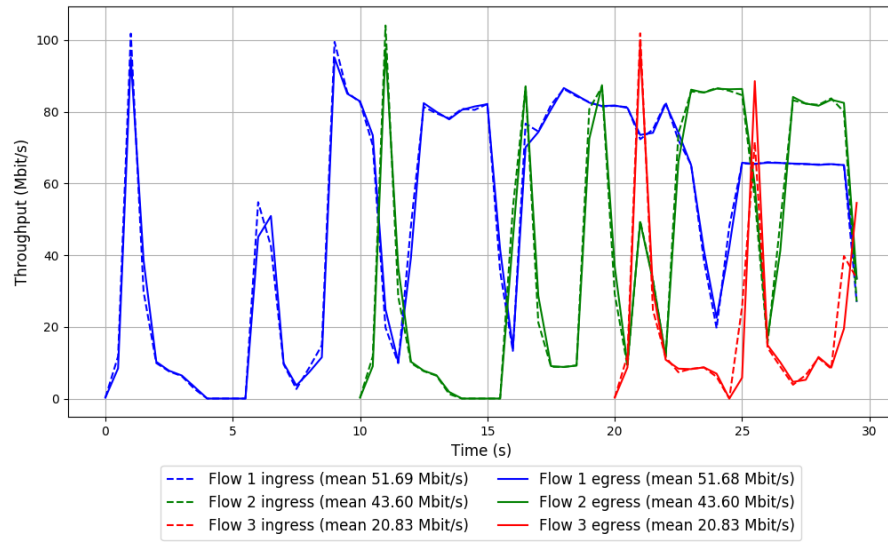
-- Flow 3:

Average throughput: 20.83 Mbit/s

95th percentile per-packet one-way delay: 53.464 ms

Loss rate: 0.00%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

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

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

Below is generated by plot.py at 2018-04-18 17:50:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 84.47 Mbit/s

95th percentile per-packet one-way delay: 53.198 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 33.23 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 69.43 Mbit/s

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

Loss rate: 0.01%

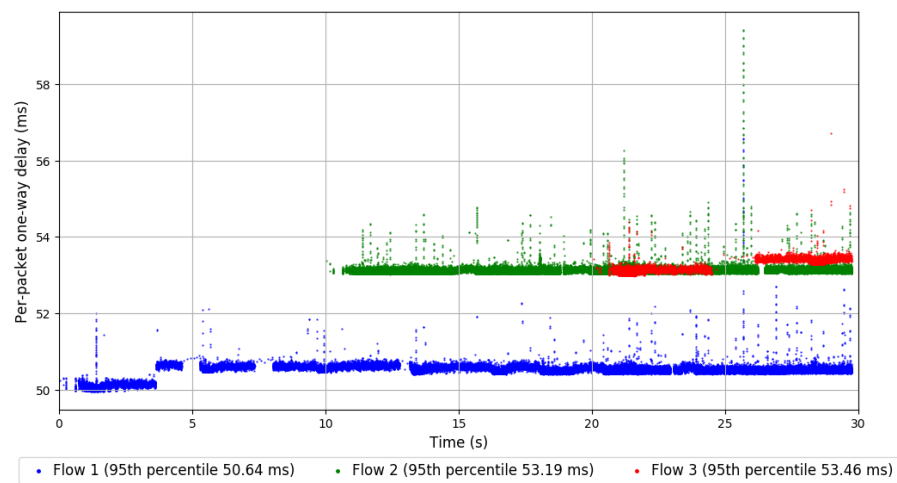
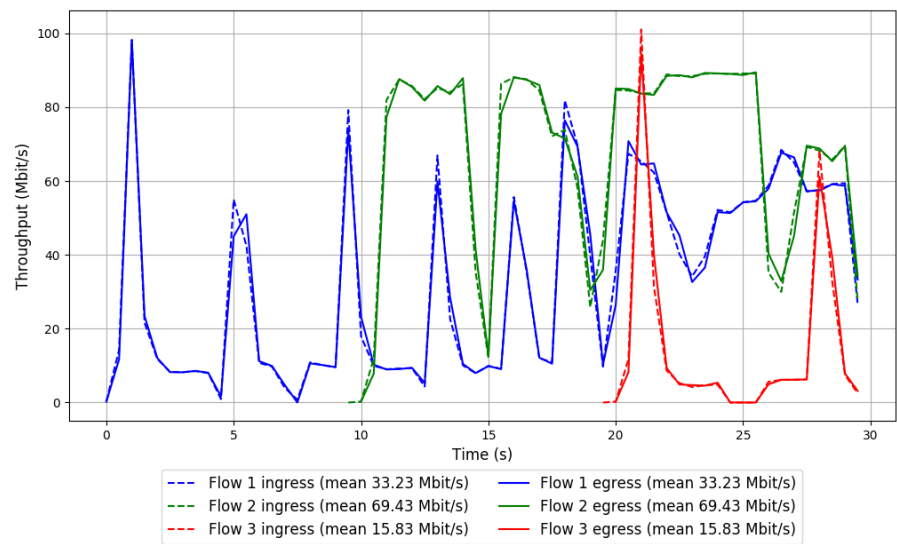
-- Flow 3:

Average throughput: 15.83 Mbit/s

95th percentile per-packet one-way delay: 53.464 ms

Loss rate: 0.01%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2018-04-18 14:19:17

End at: 2018-04-18 14:19:47

Below is generated by plot.py at 2018-04-18 17:50:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 80.42 Mbit/s

95th percentile per-packet one-way delay: 53.432 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 49.46 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 36.98 Mbit/s

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

Loss rate: 0.00%

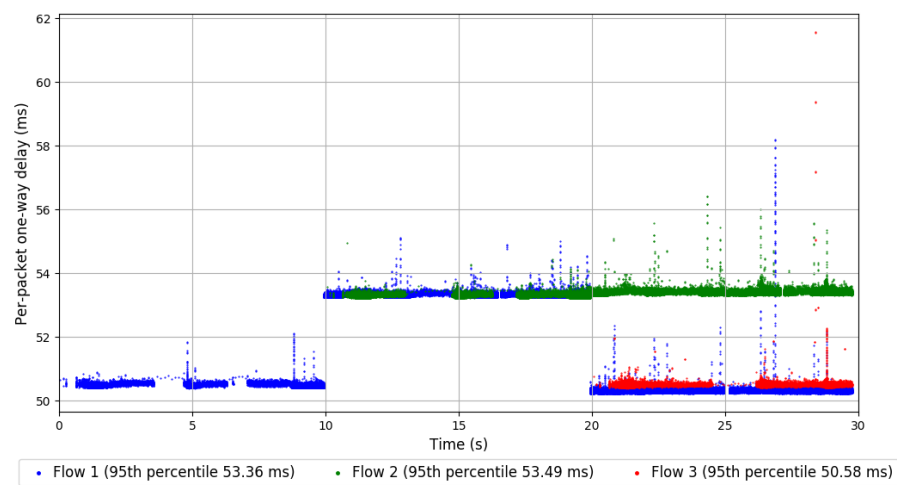
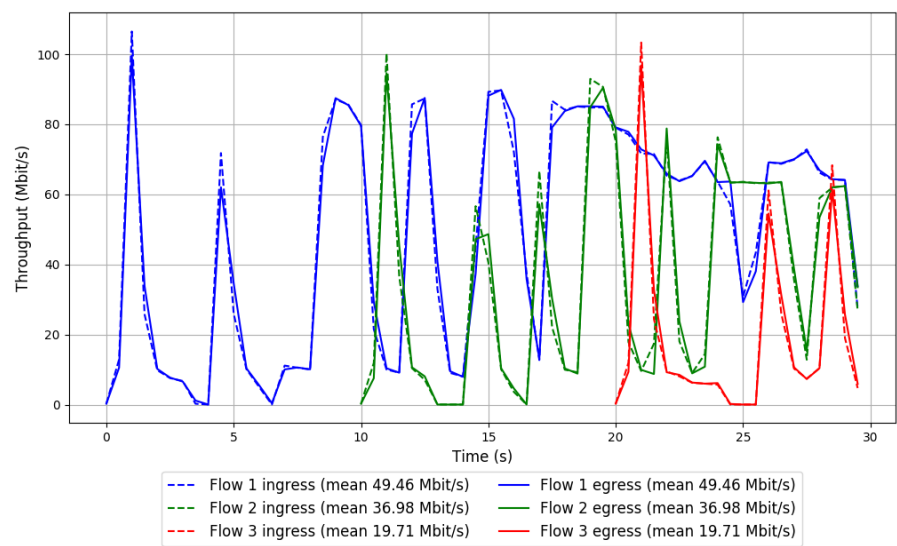
-- Flow 3:

Average throughput: 19.71 Mbit/s

95th percentile per-packet one-way delay: 50.580 ms

Loss rate: 0.00%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2018-04-18 14:34:50

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

Below is generated by plot.py at 2018-04-18 17:50:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 80.14 Mbit/s

95th percentile per-packet one-way delay: 53.515 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 55.54 Mbit/s

95th percentile per-packet one-way delay: 53.206 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 29.43 Mbit/s

95th percentile per-packet one-way delay: 53.569 ms

Loss rate: 0.00%

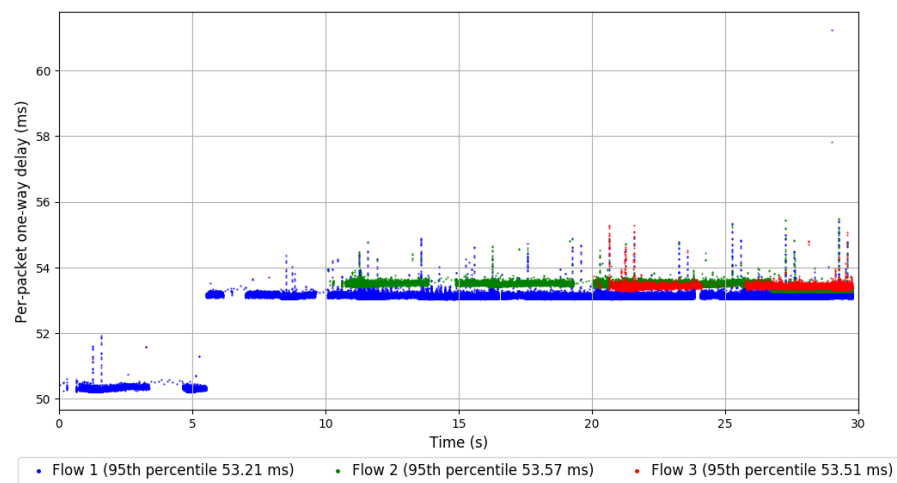
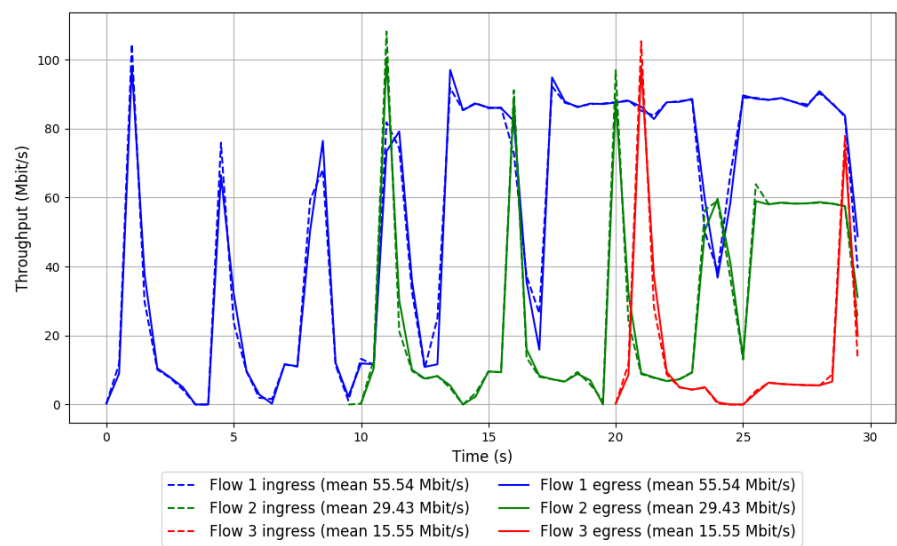
-- Flow 3:

Average throughput: 15.55 Mbit/s

95th percentile per-packet one-way delay: 53.508 ms

Loss rate: 0.00%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2018-04-18 14:50:37

End at: 2018-04-18 14:51:07

Below is generated by plot.py at 2018-04-18 17:50:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 76.97 Mbit/s

95th percentile per-packet one-way delay: 53.705 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 52.58 Mbit/s

95th percentile per-packet one-way delay: 53.720 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 29.58 Mbit/s

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

Loss rate: 0.03%

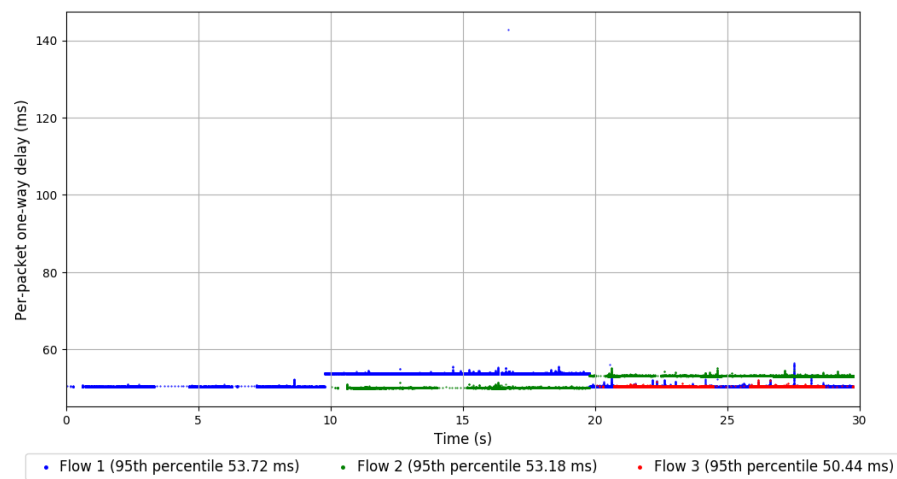
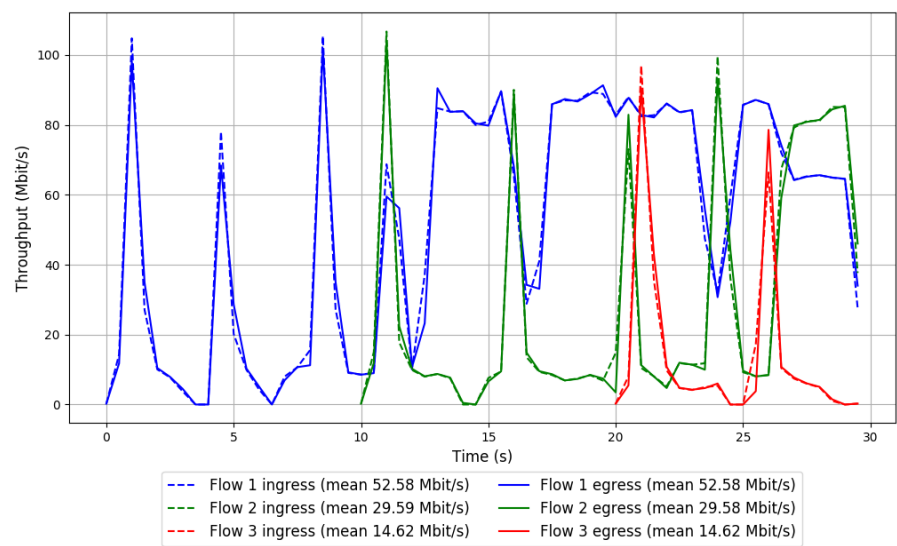
-- Flow 3:

Average throughput: 14.62 Mbit/s

95th percentile per-packet one-way delay: 50.439 ms

Loss rate: 0.00%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2018-04-18 15:05:47

End at: 2018-04-18 15:06:17

Below is generated by plot.py at 2018-04-18 17:50:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 113.60 Mbit/s

95th percentile per-packet one-way delay: 53.107 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 77.58 Mbit/s

95th percentile per-packet one-way delay: 50.294 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 45.73 Mbit/s

95th percentile per-packet one-way delay: 53.153 ms

Loss rate: 0.02%

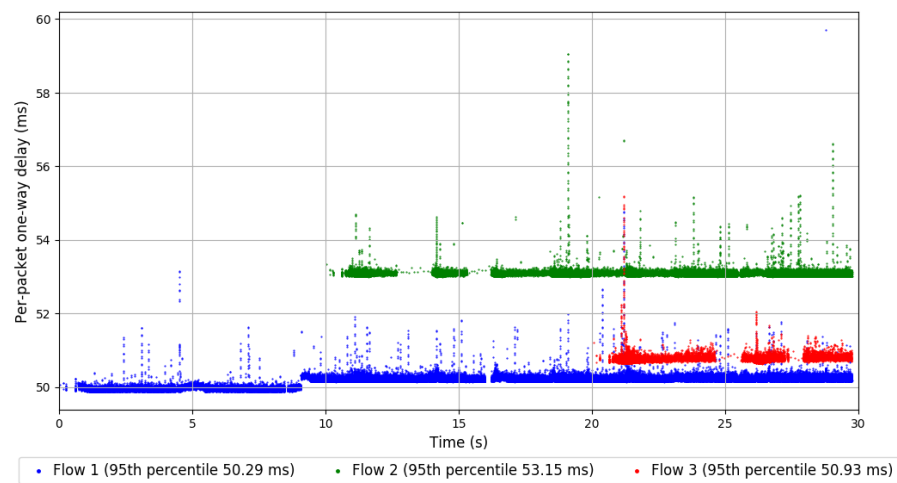
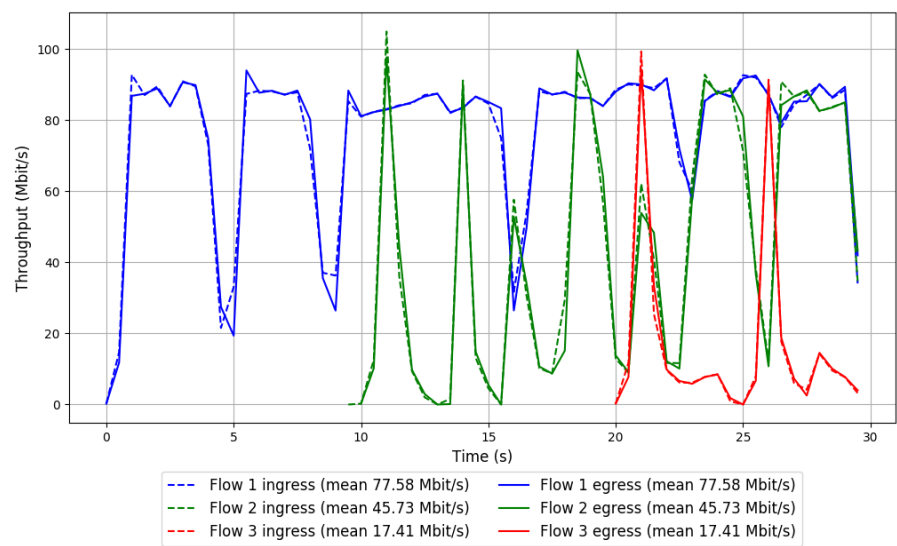
-- Flow 3:

Average throughput: 17.41 Mbit/s

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

Loss rate: 0.01%

Run 9: Report of QUIC Cubic — Data Link



Run 10: Statistics of QUIC Cubic

Start at: 2018-04-18 15:21:16

End at: 2018-04-18 15:21:46

Below is generated by plot.py at 2018-04-18 17:50:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 86.84 Mbit/s

95th percentile per-packet one-way delay: 53.310 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 57.21 Mbit/s

95th percentile per-packet one-way delay: 53.203 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 36.16 Mbit/s

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

Loss rate: 0.03%

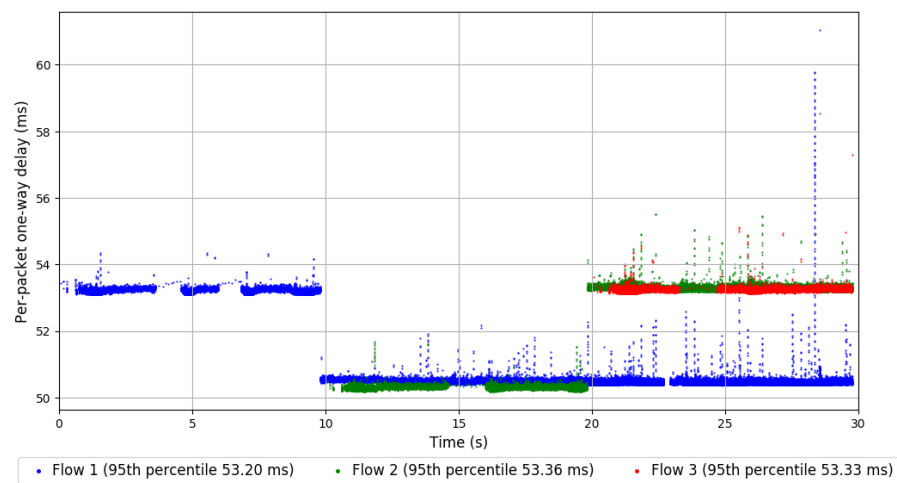
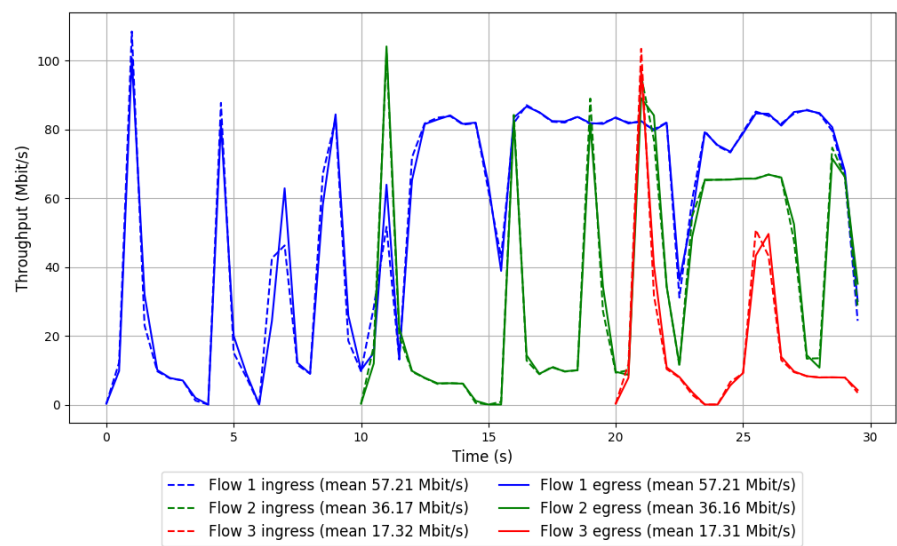
-- Flow 3:

Average throughput: 17.31 Mbit/s

95th percentile per-packet one-way delay: 53.330 ms

Loss rate: 0.01%

Run 10: Report of QUIC Cubic — Data Link

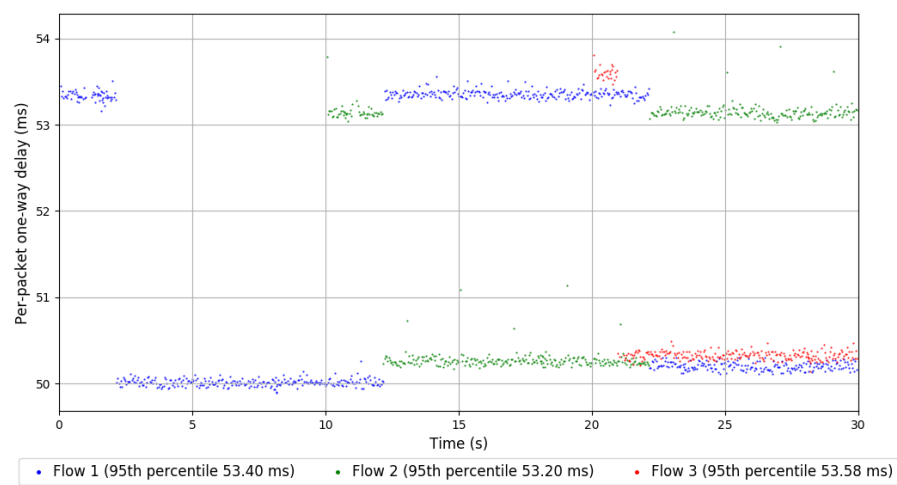
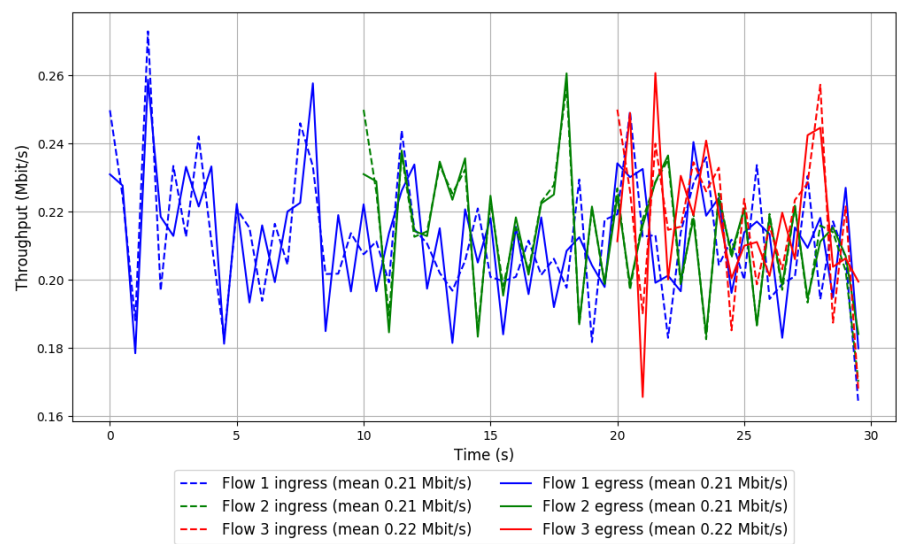


```
Run 1: Statistics of SCReAM

Start at: 2018-04-18 12:56:35
End at: 2018-04-18 12:57:05

# Below is generated by plot.py at 2018-04-18 17:50:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.391 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.398 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.205 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.584 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link

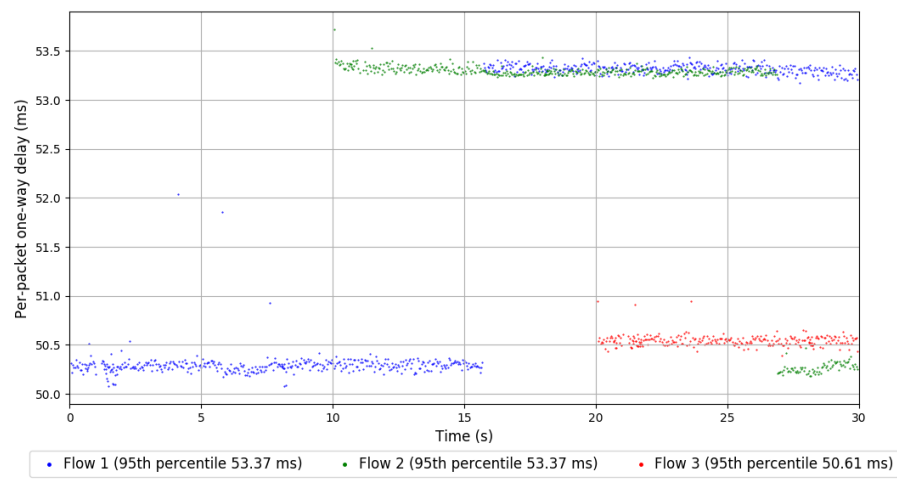
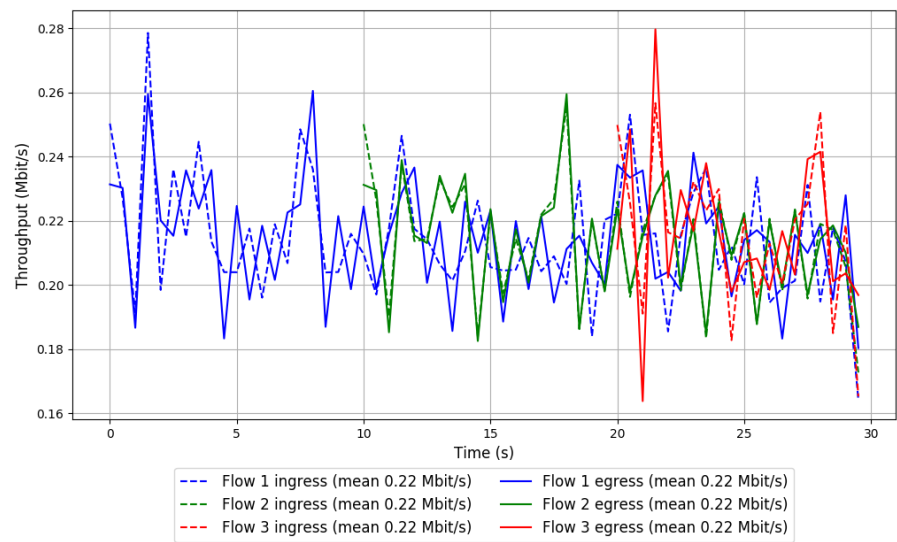


```
Run 2: Statistics of SCReAM

Start at: 2018-04-18 13:11:50
End at: 2018-04-18 13:12:20

# Below is generated by plot.py at 2018-04-18 17:50:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.367 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.371 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.369 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.607 ms
Loss rate: 0.00%
```

Run 2: Report of SReAM — Data Link

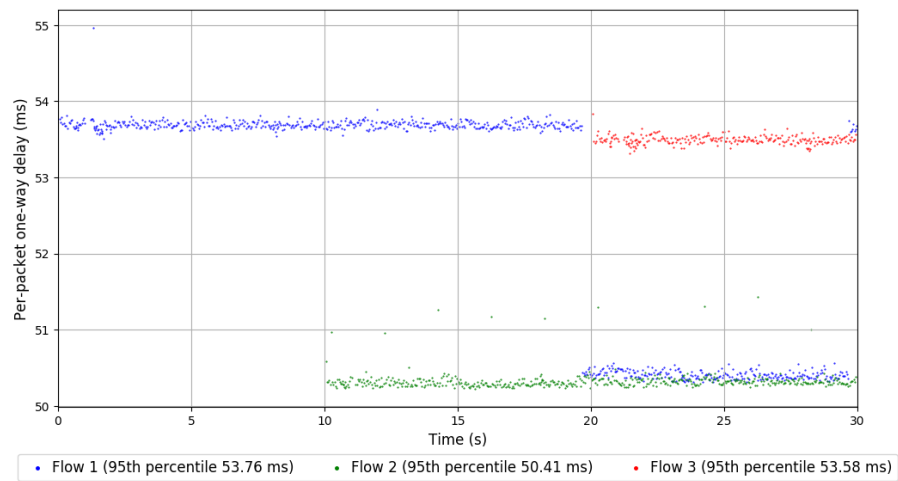
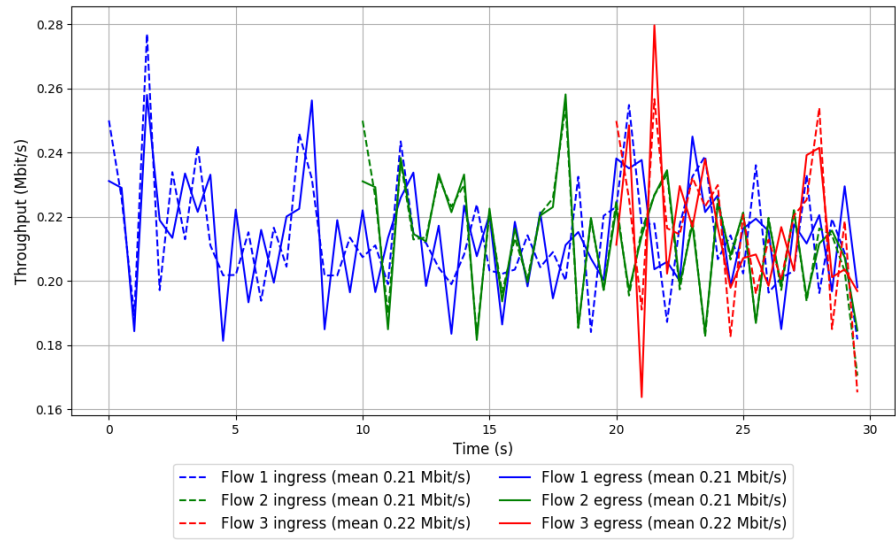


```
Run 3: Statistics of SReAM

Start at: 2018-04-18 13:27:08
End at: 2018-04-18 13:27:38

# Below is generated by plot.py at 2018-04-18 17:50:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.739 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.758 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 50.409 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.583 ms
Loss rate: 0.00%
```


Run 3: Report of SReAM — Data Link

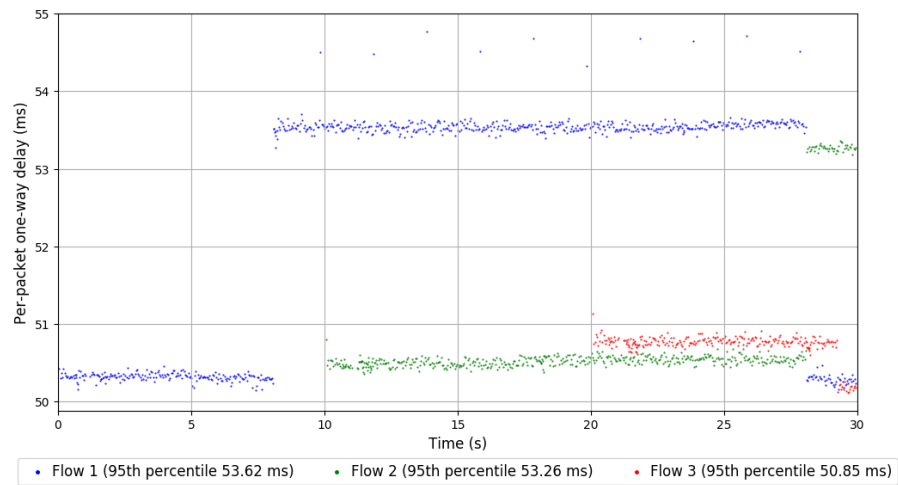
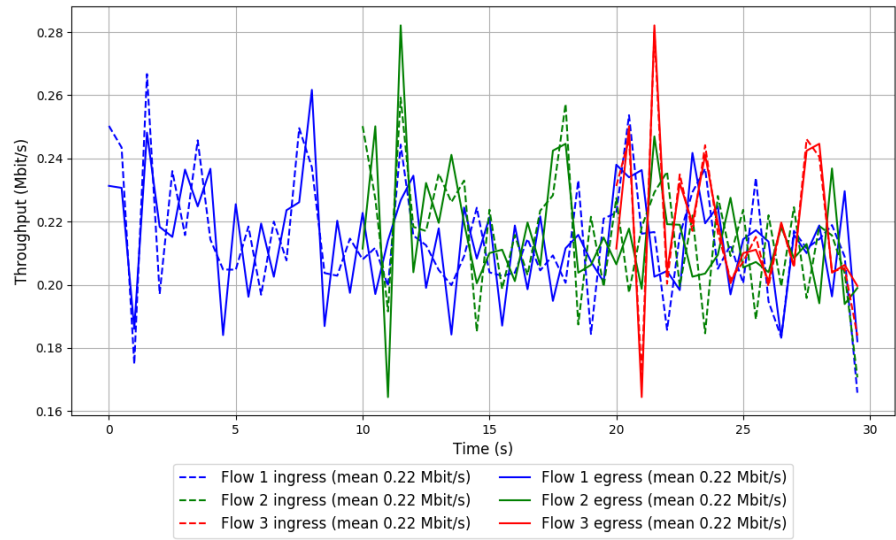


```
Run 4: Statistics of SReAM

Start at: 2018-04-18 13:42:08
End at: 2018-04-18 13:42:38

# Below is generated by plot.py at 2018-04-18 17:50:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.600 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.619 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.263 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.855 ms
Loss rate: 0.00%
```

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2018-04-18 13:57:58

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

Below is generated by plot.py at 2018-04-18 17:50:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.689 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.706 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.818 ms

Loss rate: 0.00%

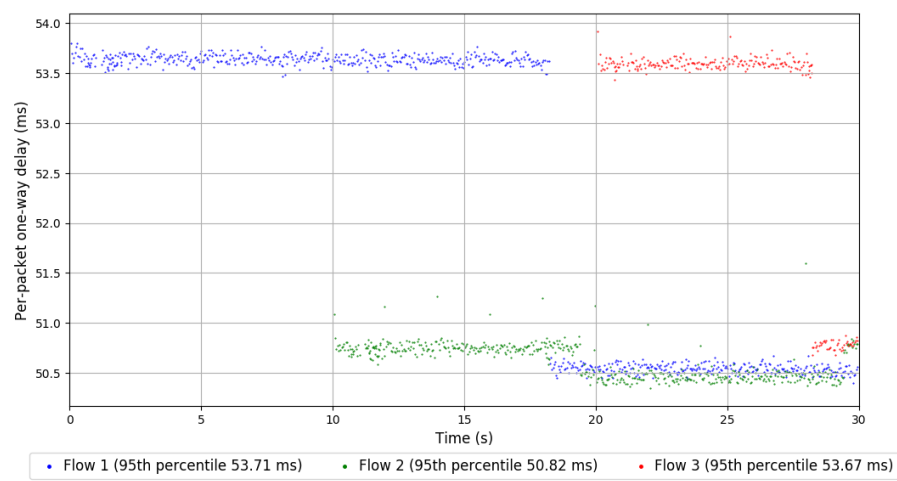
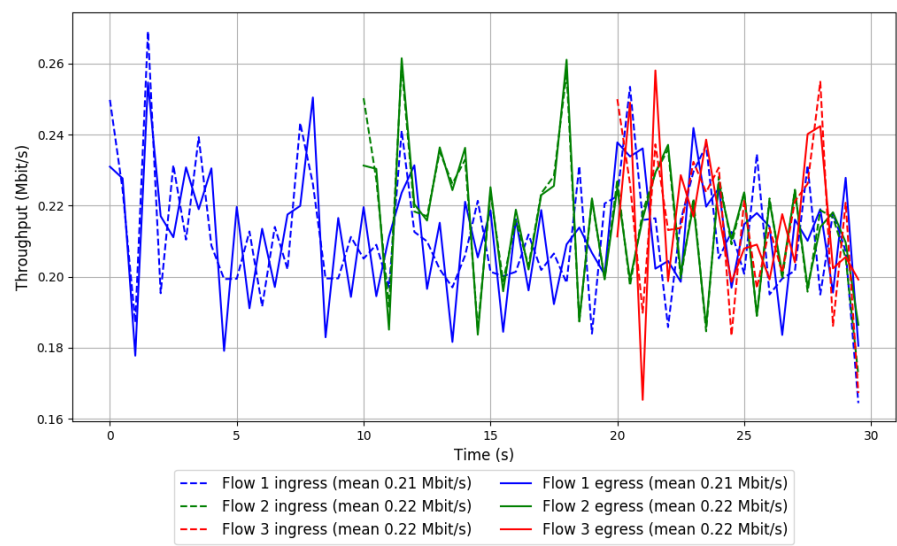
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 53.667 ms

Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



Run 6: Statistics of SCReAM

Start at: 2018-04-18 14:13:22

End at: 2018-04-18 14:13:52

Below is generated by plot.py at 2018-04-18 17:50:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.630 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.765 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.658 ms

Loss rate: 0.00%

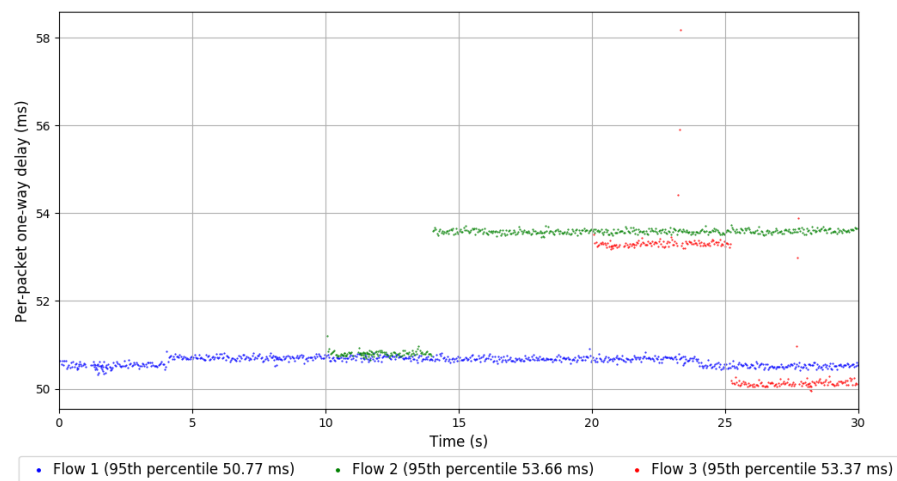
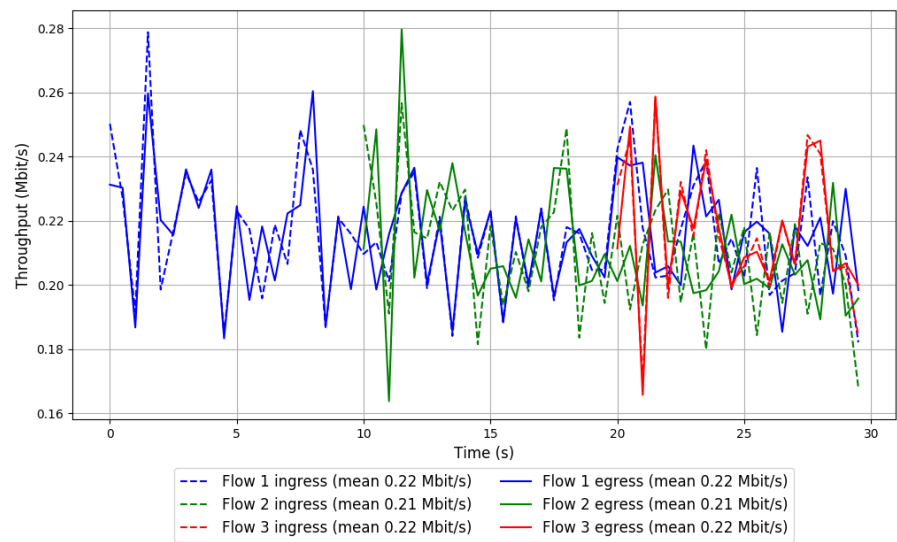
-- Flow 3:

Average throughput: 0.22 Mbit/s

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

Loss rate: 0.00%

Run 6: Report of SReAM — Data Link

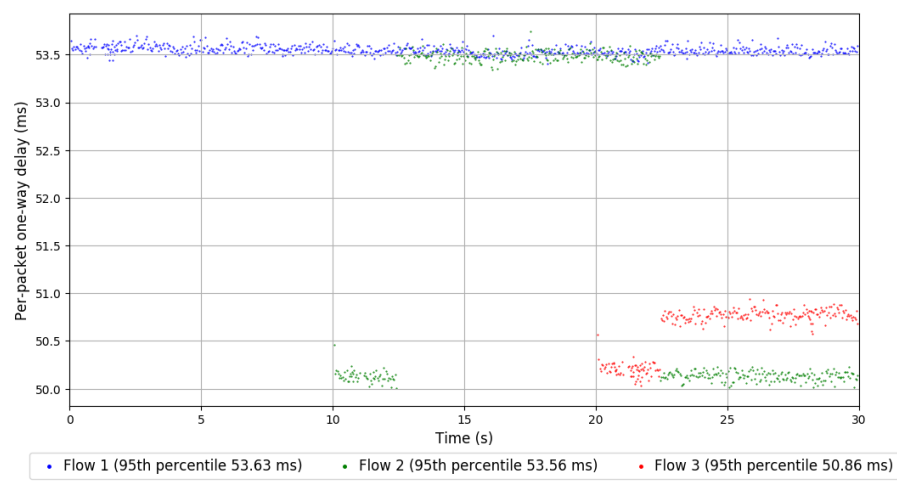
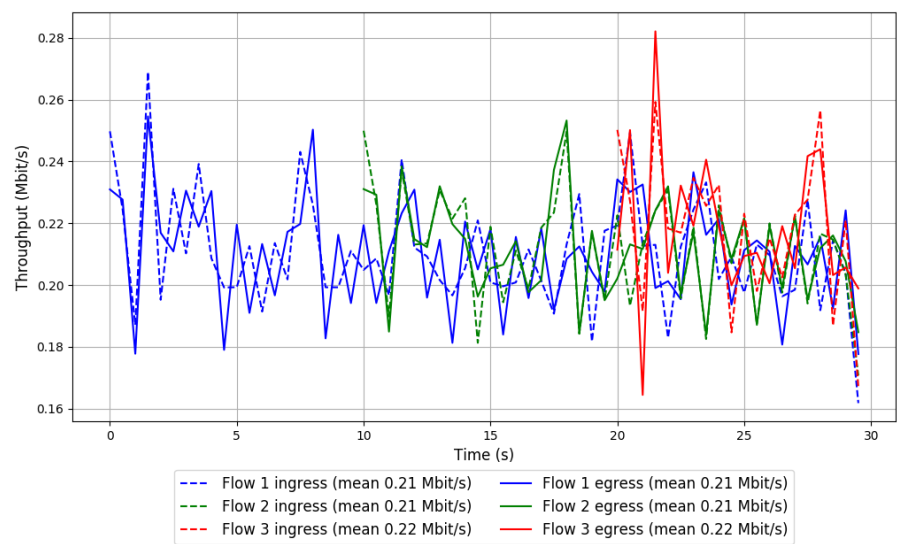


```
Run 7: Statistics of SCReAM

Start at: 2018-04-18 14:28:54
End at: 2018-04-18 14:29:24

# Below is generated by plot.py at 2018-04-18 17:50:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.607 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.627 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.558 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.859 ms
Loss rate: 0.00%
```


Run 7: Report of SReAM — Data Link



Run 8: Statistics of SCReAM

Start at: 2018-04-18 14:44:32

End at: 2018-04-18 14:45:02

Below is generated by plot.py at 2018-04-18 17:50:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 54.058 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 53.371 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 54.098 ms

Loss rate: 0.00%

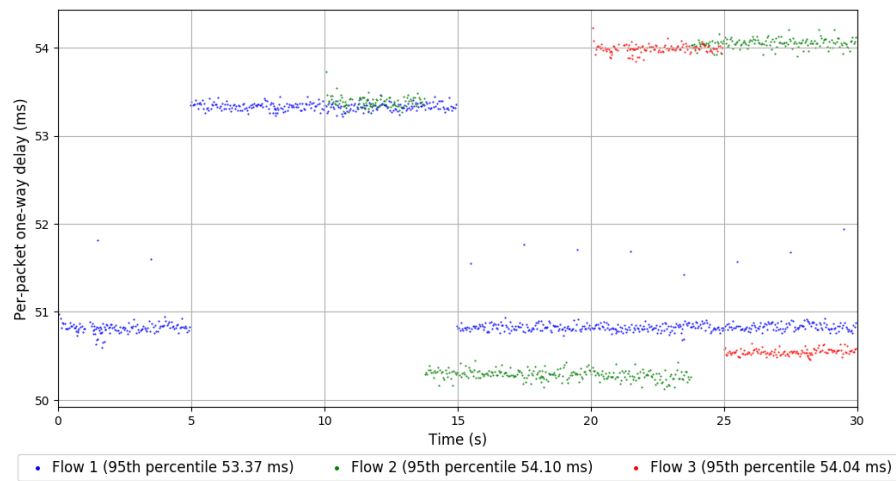
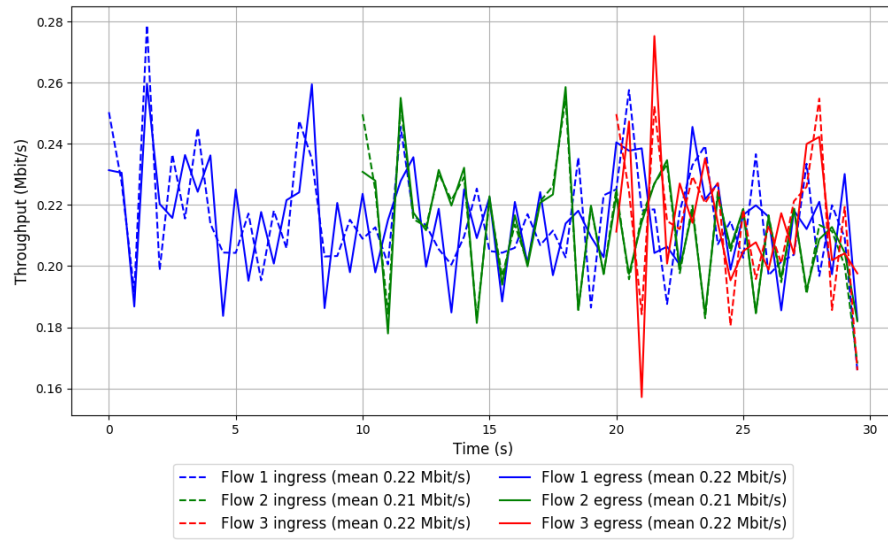
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 54.038 ms

Loss rate: 0.00%

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SCReAM

Start at: 2018-04-18 15:00:05

End at: 2018-04-18 15:00:35

Below is generated by plot.py at 2018-04-18 17:50:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.990 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.907 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 54.031 ms

Loss rate: 0.00%

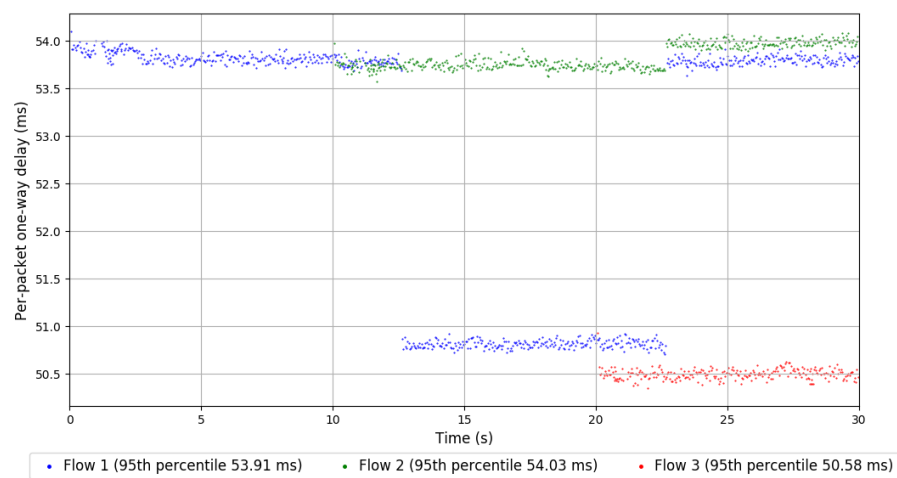
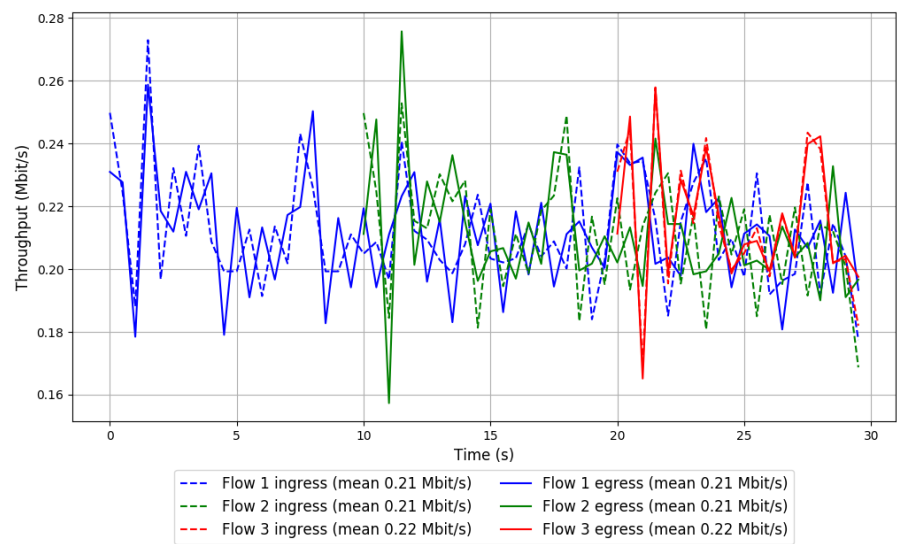
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.581 ms

Loss rate: 0.00%

Run 9: Report of SReAM — Data Link

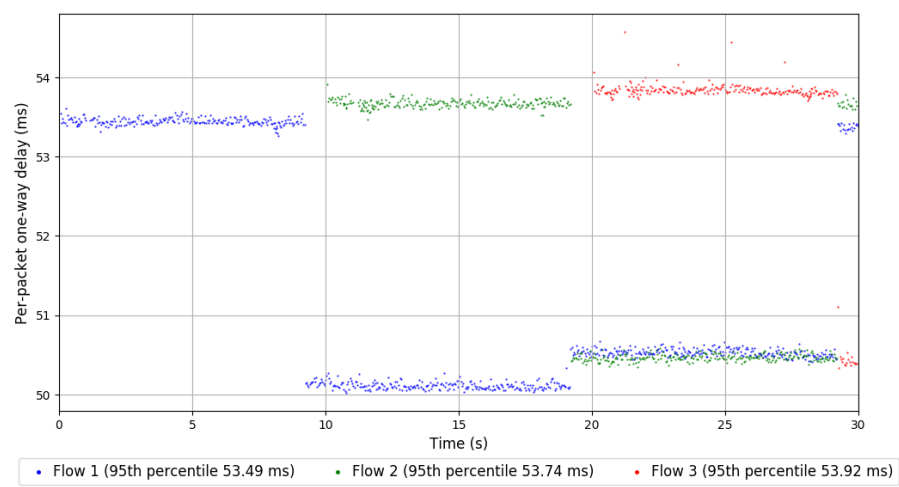
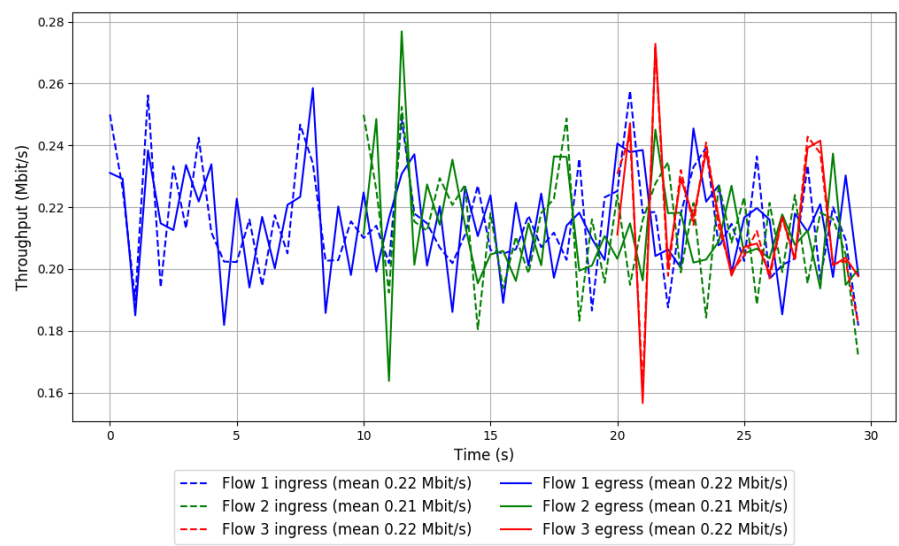


```
Run 10: Statistics of SReAM

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

# Below is generated by plot.py at 2018-04-18 17:50:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.852 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.495 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.739 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.916 ms
Loss rate: 0.00%
```

Run 10: Report of SReAM — Data Link

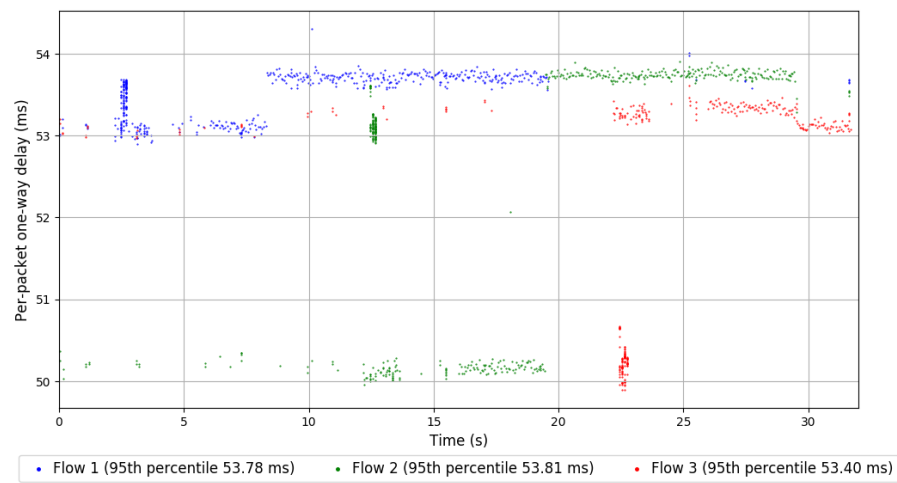
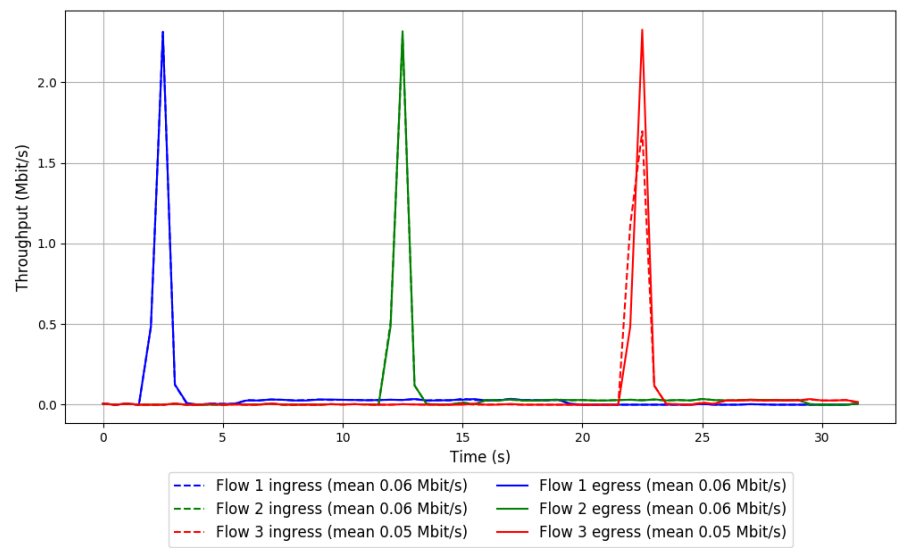


```
Run 1: Statistics of WebRTC media

Start at: 2018-04-18 13:03:10
End at: 2018-04-18 13:03:40

# Below is generated by plot.py at 2018-04-18 17:50:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 53.788 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 53.781 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 53.807 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 53.400 ms
Loss rate: 0.00%
```


Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

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

End at: 2018-04-18 13:18:54

Below is generated by plot.py at 2018-04-18 17:50:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.17 Mbit/s

95th percentile per-packet one-way delay: 53.471 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 53.448 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 53.496 ms

Loss rate: 0.00%

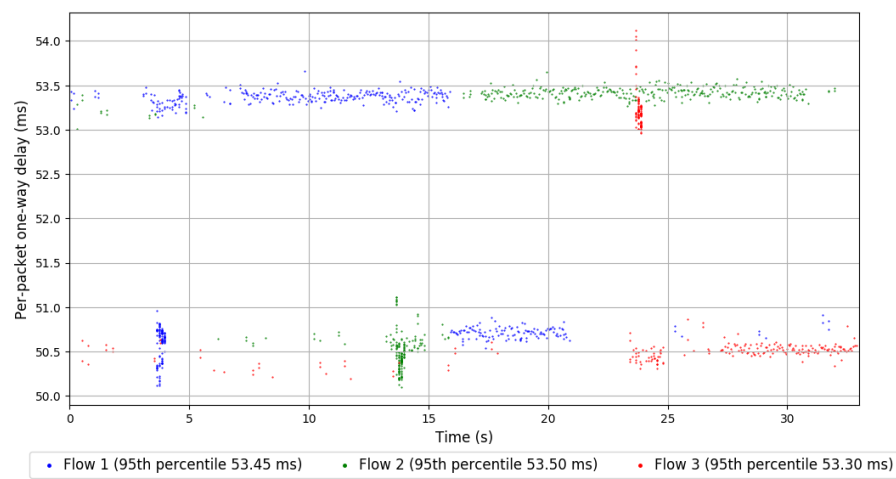
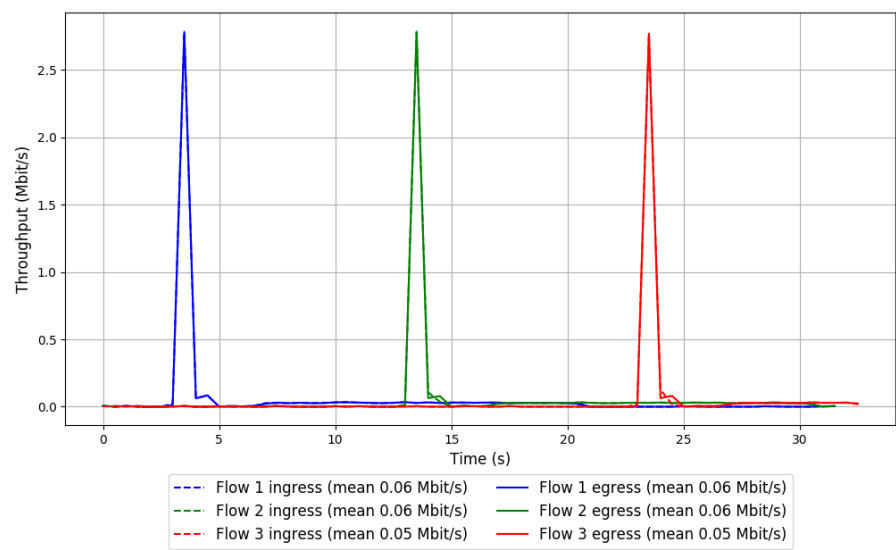
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 53.296 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-04-18 13:33:37

End at: 2018-04-18 13:34:07

Below is generated by plot.py at 2018-04-18 17:50:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 53.859 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 53.747 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 54.123 ms

Loss rate: 0.00%

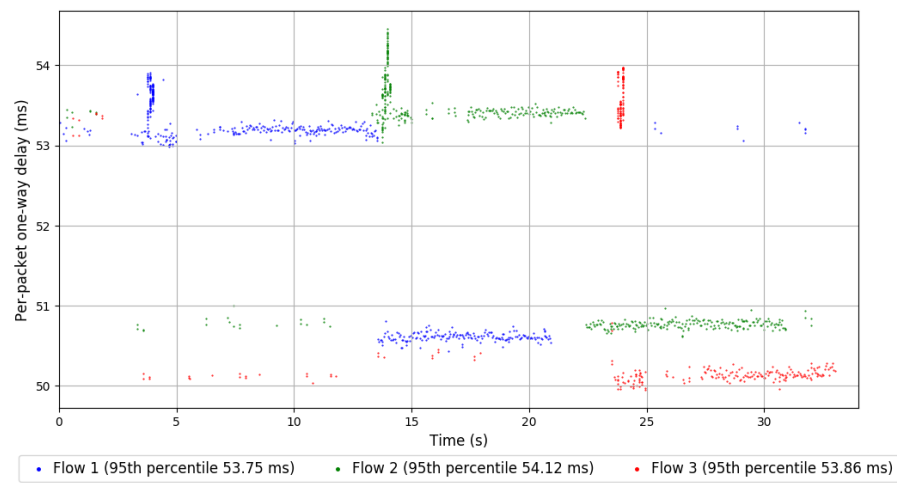
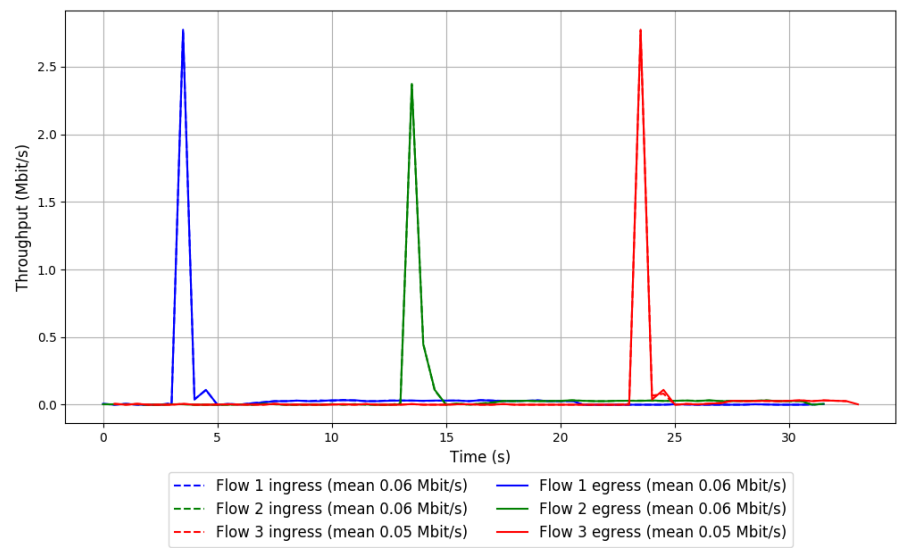
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 53.860 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

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

End at: 2018-04-18 13:49:33

Below is generated by plot.py at 2018-04-18 17:50:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.17 Mbit/s

95th percentile per-packet one-way delay: 53.584 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 53.601 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 53.442 ms

Loss rate: 0.00%

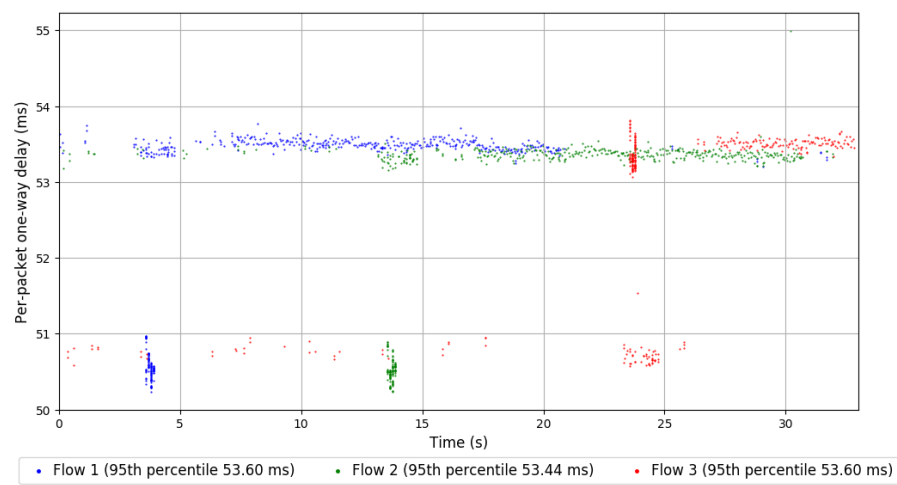
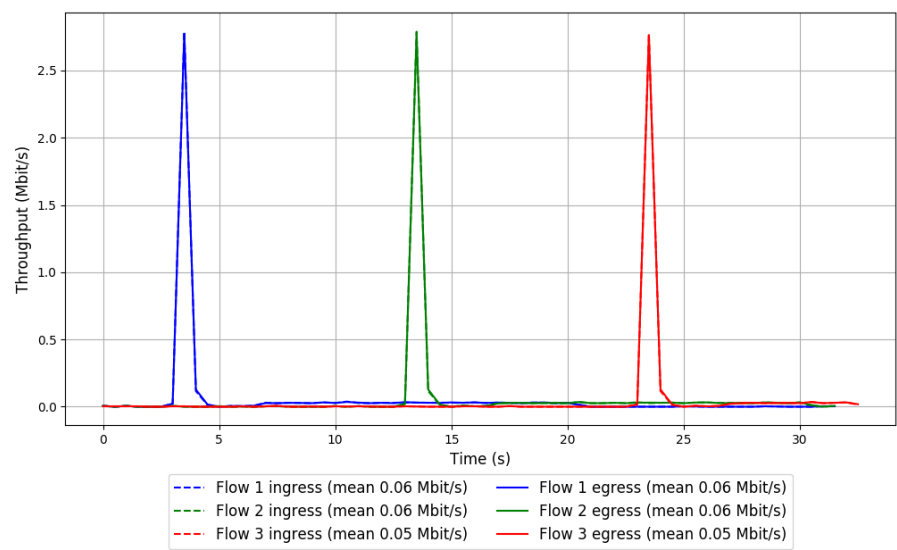
-- Flow 3:

Average throughput: 0.05 Mbit/s

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

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

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

End at: 2018-04-18 14:05:06

Below is generated by plot.py at 2018-04-18 17:50:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.17 Mbit/s

95th percentile per-packet one-way delay: 53.570 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 53.340 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 53.468 ms

Loss rate: 0.00%

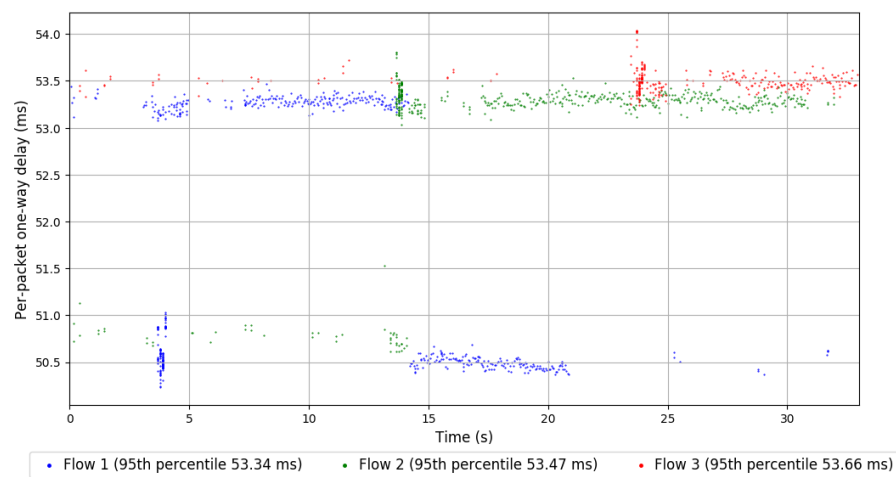
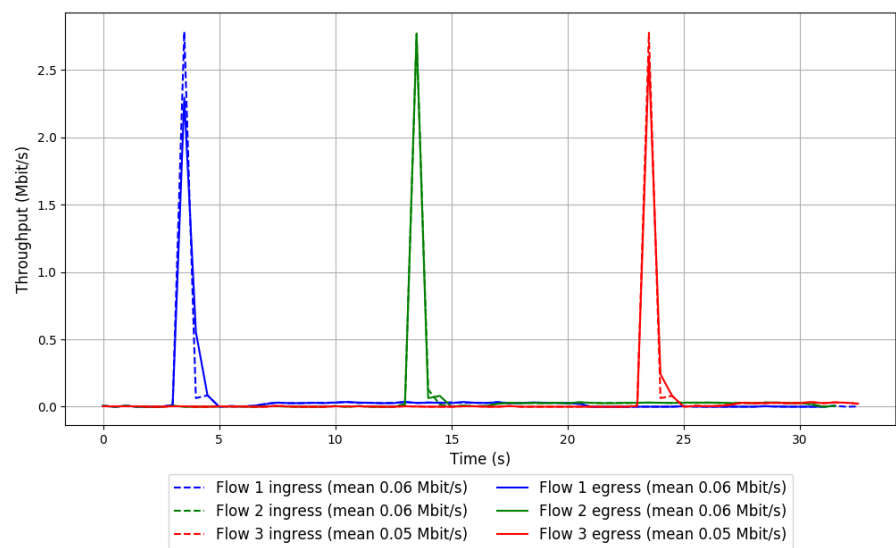
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 53.665 ms

Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2018-04-18 14:20:01

End at: 2018-04-18 14:20:31

Below is generated by plot.py at 2018-04-18 17:50:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.17 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 53.828 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

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

Loss rate: 0.00%

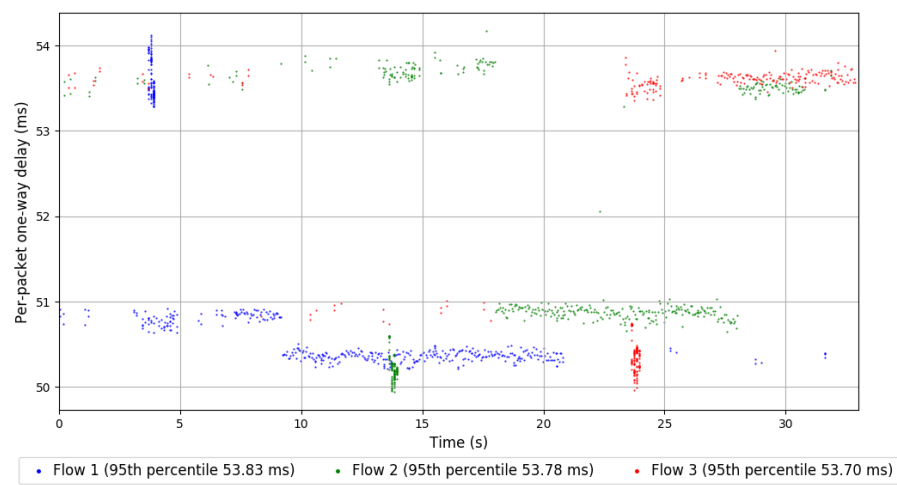
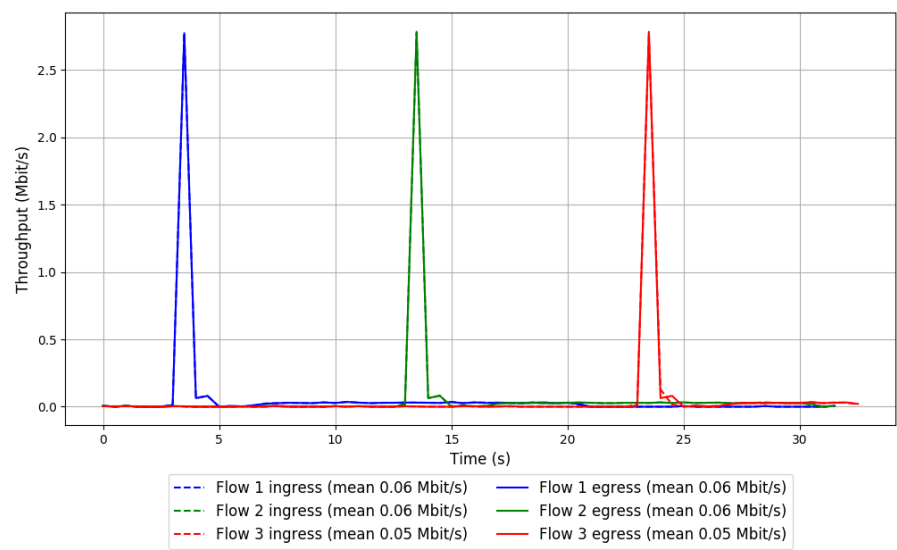
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 53.700 ms

Loss rate: 0.00%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2018-04-18 14:35:34

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

Below is generated by plot.py at 2018-04-18 17:50:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.17 Mbit/s

95th percentile per-packet one-way delay: 54.193 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 54.535 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 54.183 ms

Loss rate: 0.00%

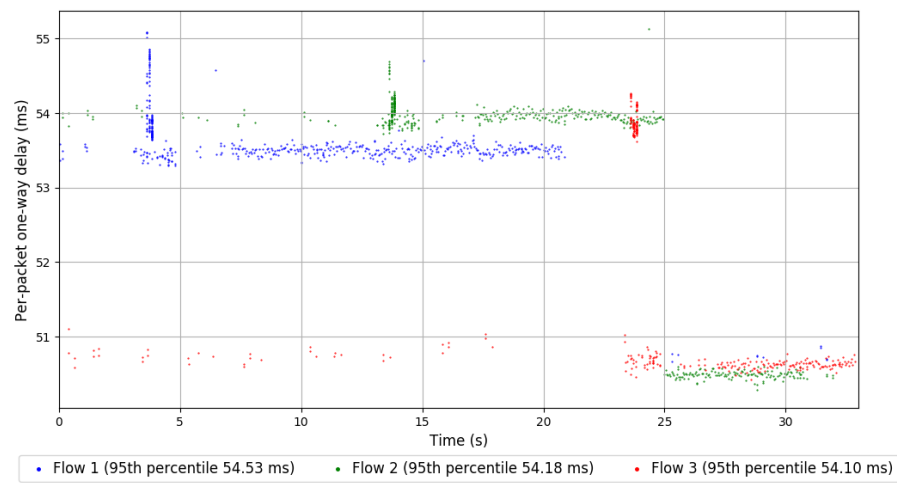
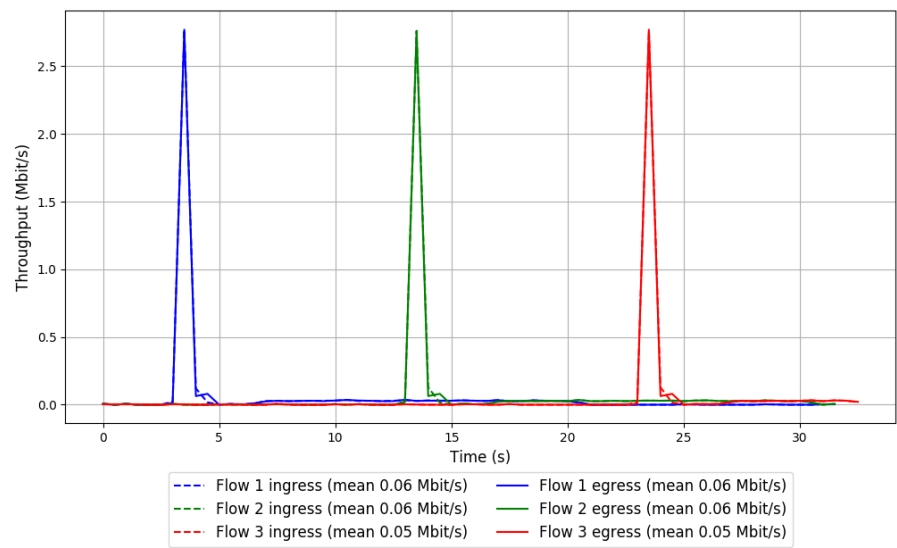
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 54.105 ms

Loss rate: 0.00%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2018-04-18 14:51:21

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

Below is generated by plot.py at 2018-04-18 17:50:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.17 Mbit/s

95th percentile per-packet one-way delay: 54.154 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 53.882 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 54.435 ms

Loss rate: 0.00%

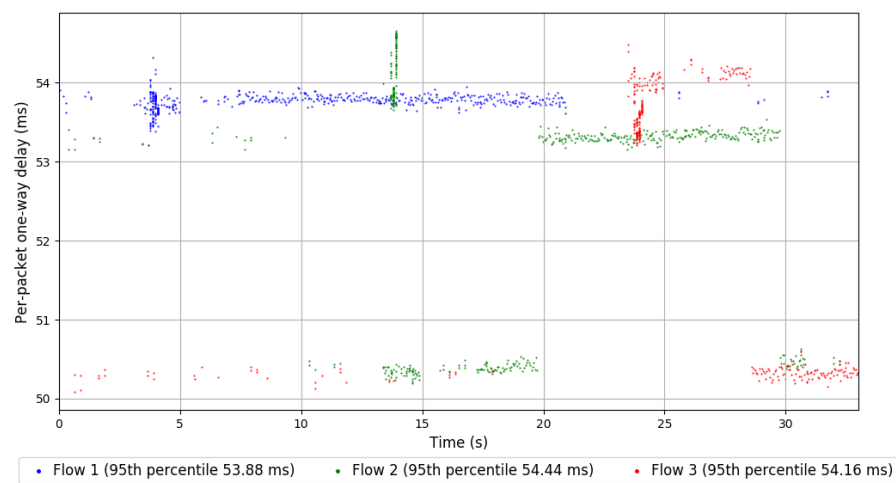
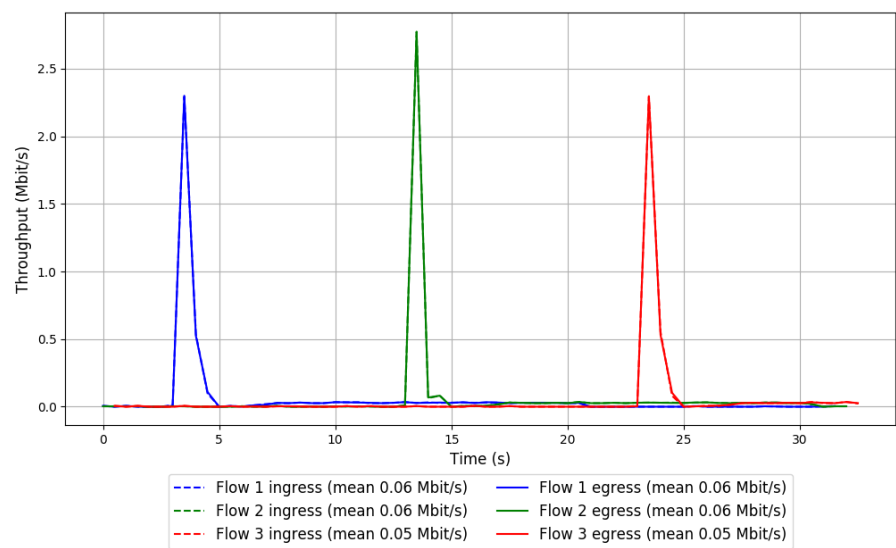
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 54.155 ms

Loss rate: 0.00%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2018-04-18 15:06:32

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

Below is generated by plot.py at 2018-04-18 17:50:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 54.194 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 54.253 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 53.302 ms

Loss rate: 0.00%

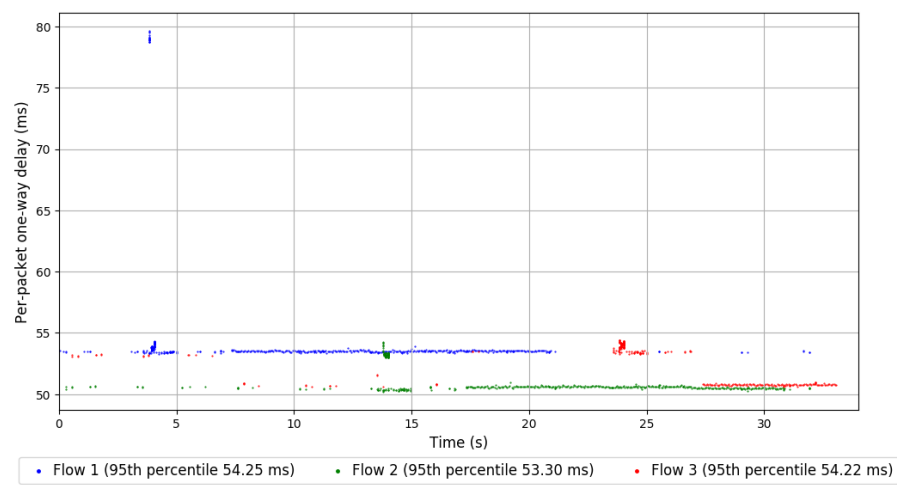
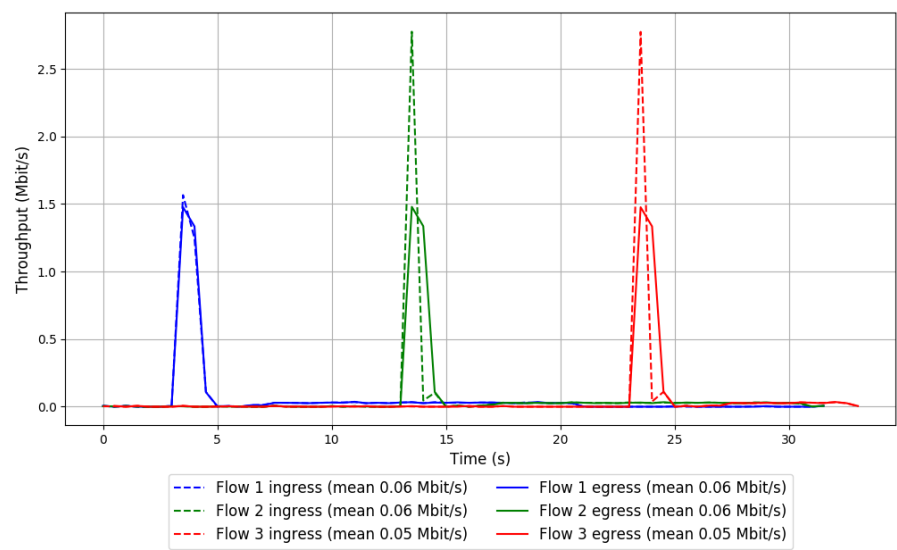
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 54.217 ms

Loss rate: 0.00%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2018-04-18 15:22:00

End at: 2018-04-18 15:22:30

Below is generated by plot.py at 2018-04-18 17:50:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.17 Mbit/s

95th percentile per-packet one-way delay: 53.876 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 53.905 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 53.631 ms

Loss rate: 0.00%

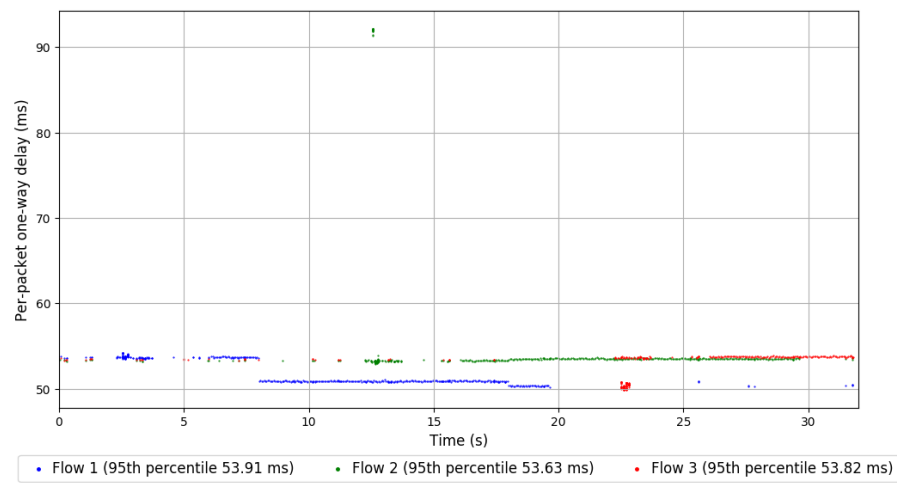
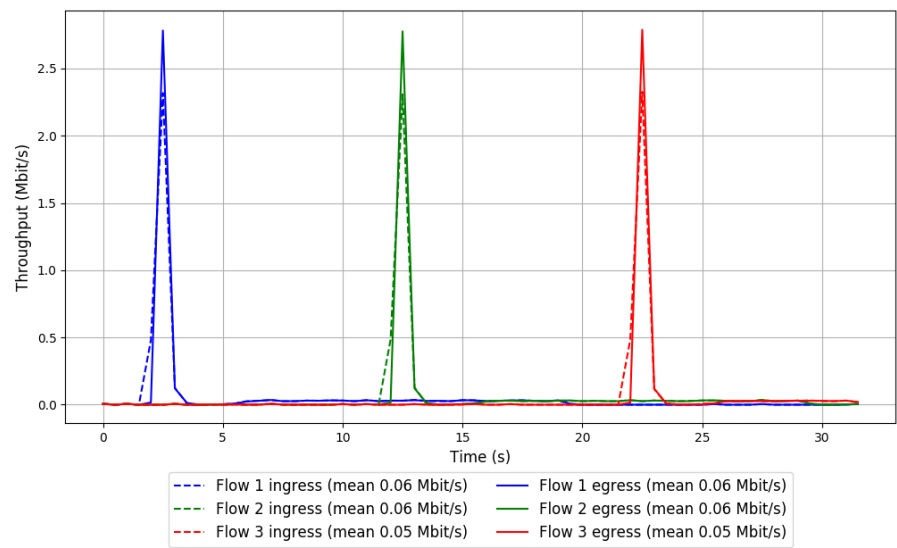
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 53.820 ms

Loss rate: 0.00%

Run 10: Report of WebRTC media — Data Link



Run 1: Statistics of Sprout

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

End at: 2018-04-18 12:56:25

Below is generated by plot.py at 2018-04-18 17:50:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.49 Mbit/s

95th percentile per-packet one-way delay: 53.159 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 7.84 Mbit/s

95th percentile per-packet one-way delay: 53.276 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.81 Mbit/s

95th percentile per-packet one-way delay: 51.961 ms

Loss rate: 0.00%

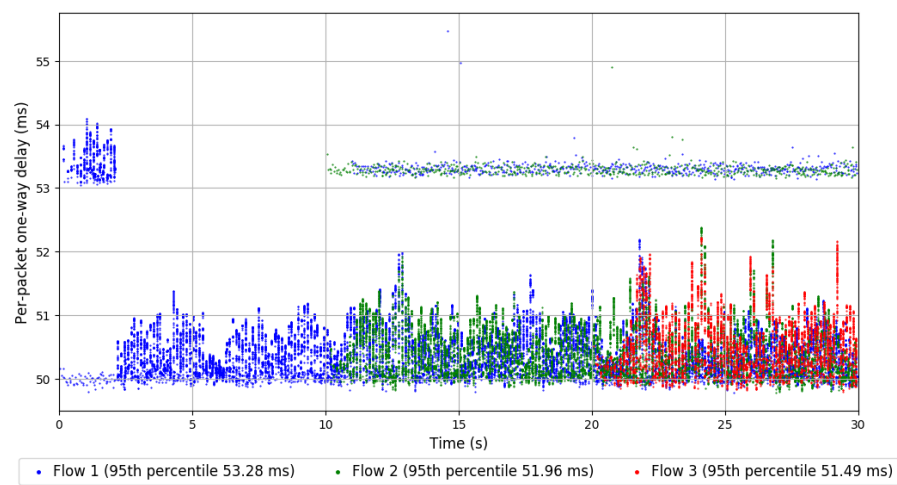
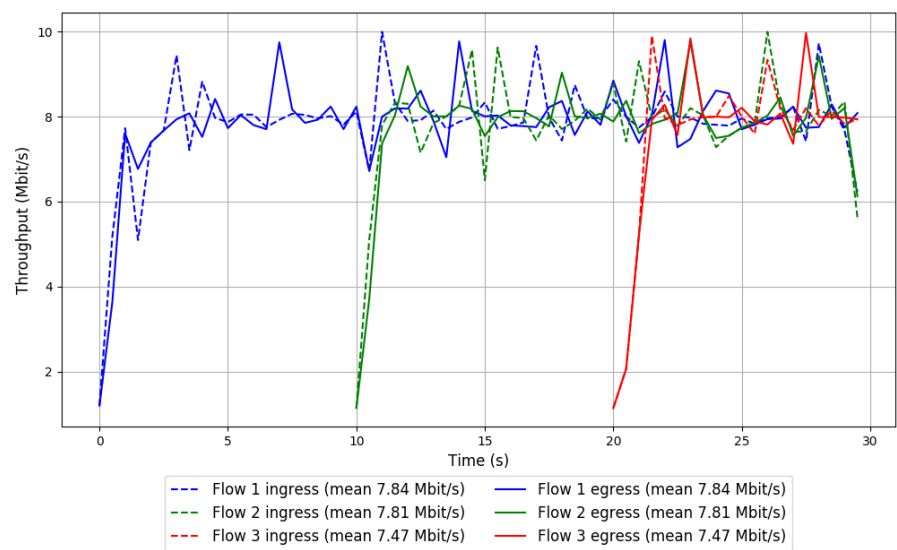
-- Flow 3:

Average throughput: 7.47 Mbit/s

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

Loss rate: 0.00%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

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

End at: 2018-04-18 13:11:41

Below is generated by plot.py at 2018-04-18 17:50:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.23 Mbit/s

95th percentile per-packet one-way delay: 54.249 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 7.70 Mbit/s

95th percentile per-packet one-way delay: 54.180 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.59 Mbit/s

95th percentile per-packet one-way delay: 54.273 ms

Loss rate: 0.00%

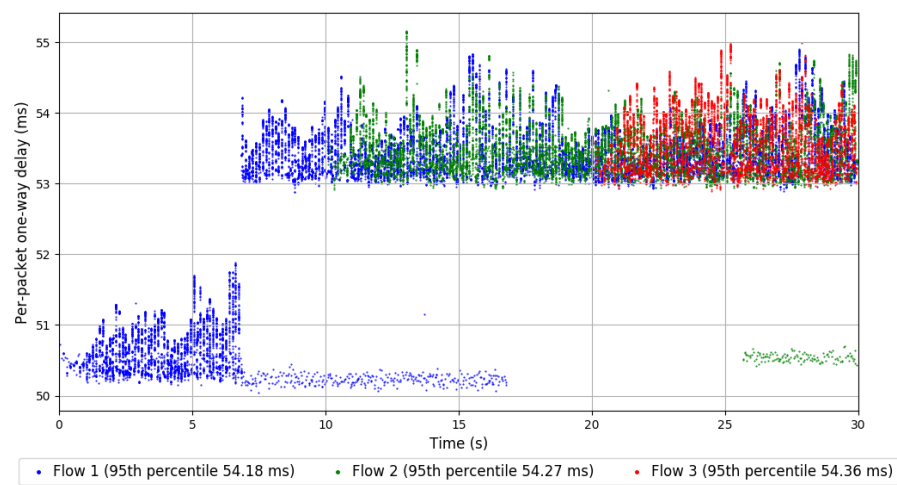
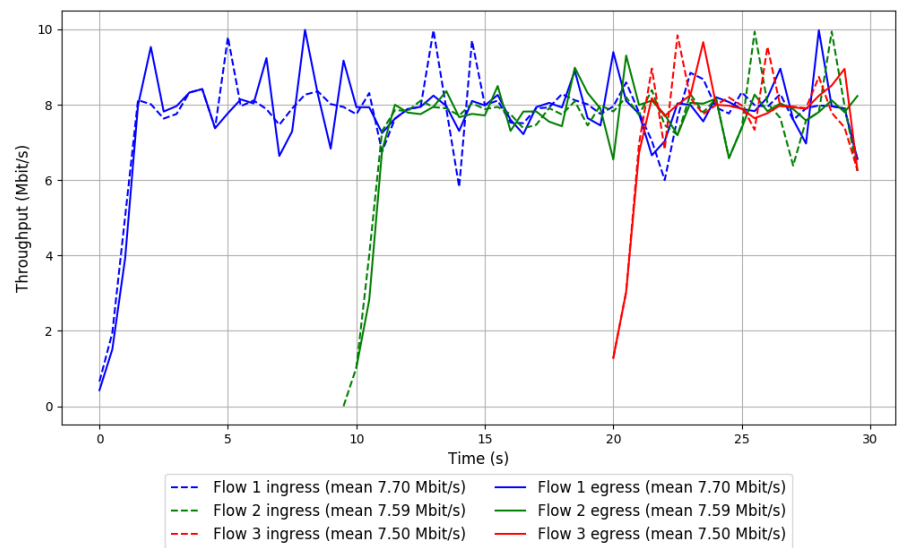
-- Flow 3:

Average throughput: 7.50 Mbit/s

95th percentile per-packet one-way delay: 54.360 ms

Loss rate: 0.00%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2018-04-18 13:26:28

End at: 2018-04-18 13:26:58

Below is generated by plot.py at 2018-04-18 17:50:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.41 Mbit/s

95th percentile per-packet one-way delay: 53.885 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 7.70 Mbit/s

95th percentile per-packet one-way delay: 53.908 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.80 Mbit/s

95th percentile per-packet one-way delay: 53.892 ms

Loss rate: 0.00%

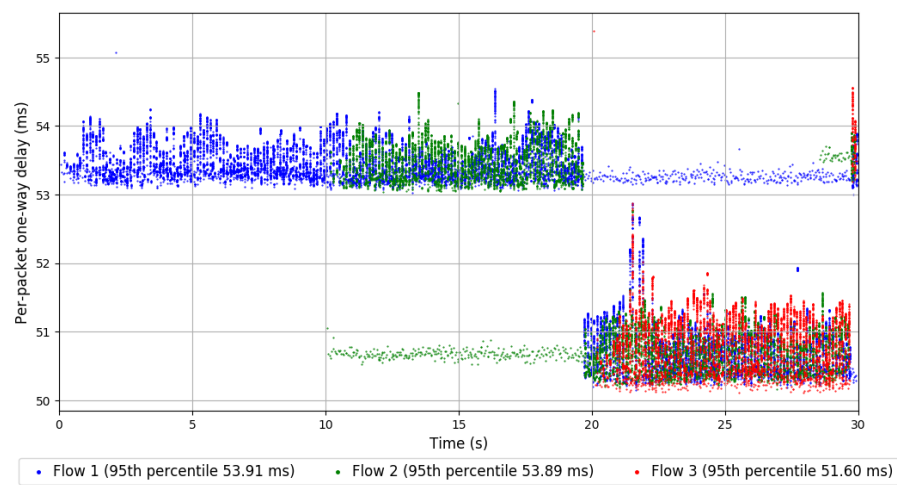
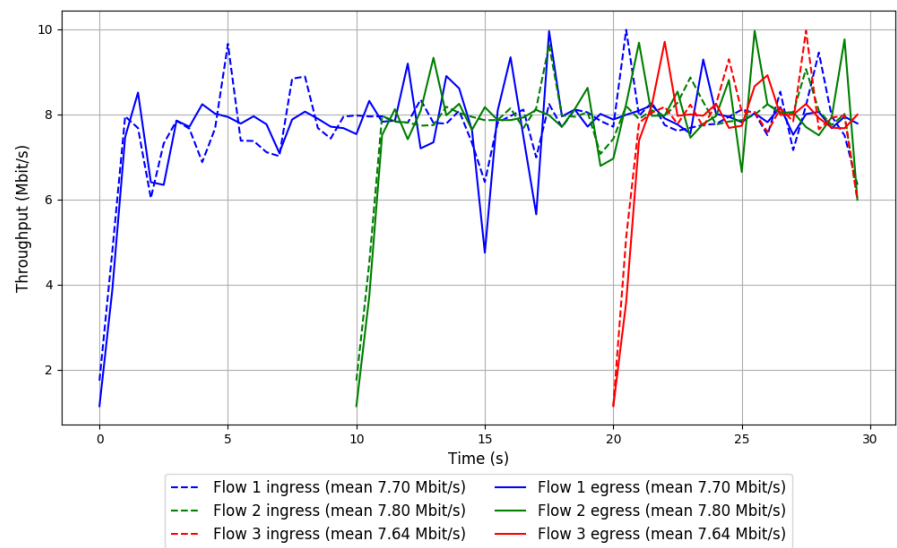
-- Flow 3:

Average throughput: 7.64 Mbit/s

95th percentile per-packet one-way delay: 51.599 ms

Loss rate: 0.00%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2018-04-18 13:41:28

End at: 2018-04-18 13:41:58

Below is generated by plot.py at 2018-04-18 17:50:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.52 Mbit/s

95th percentile per-packet one-way delay: 54.349 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 7.90 Mbit/s

95th percentile per-packet one-way delay: 54.321 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.76 Mbit/s

95th percentile per-packet one-way delay: 54.378 ms

Loss rate: 0.00%

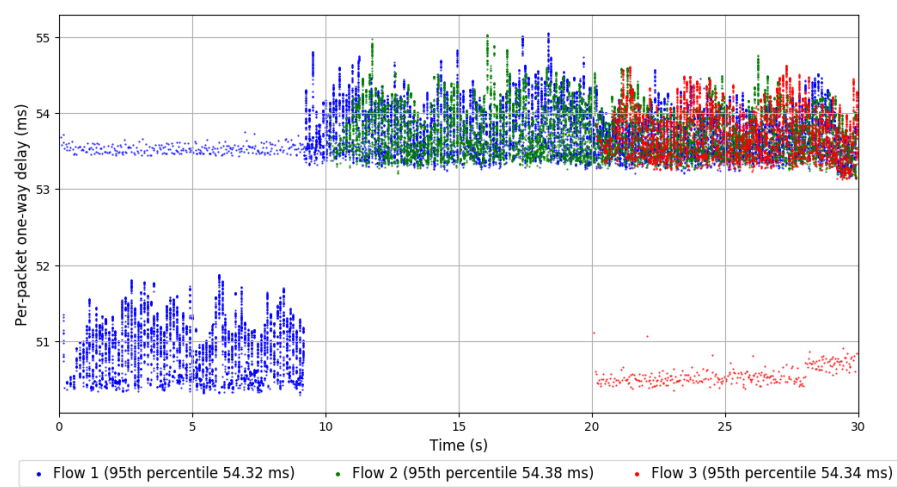
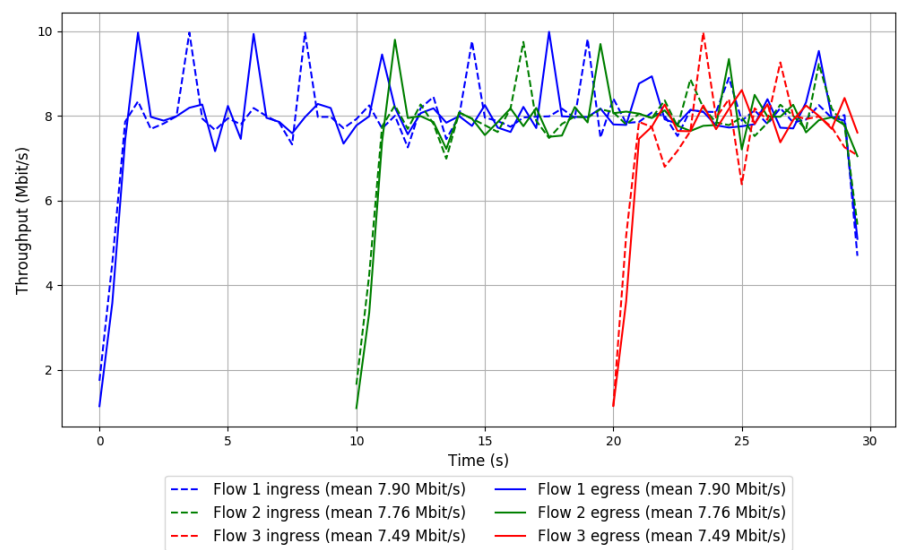
-- Flow 3:

Average throughput: 7.49 Mbit/s

95th percentile per-packet one-way delay: 54.342 ms

Loss rate: 0.00%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2018-04-18 13:57:18

End at: 2018-04-18 13:57:48

Below is generated by plot.py at 2018-04-18 17:50:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.41 Mbit/s

95th percentile per-packet one-way delay: 54.364 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 7.87 Mbit/s

95th percentile per-packet one-way delay: 54.382 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.81 Mbit/s

95th percentile per-packet one-way delay: 54.407 ms

Loss rate: 0.00%

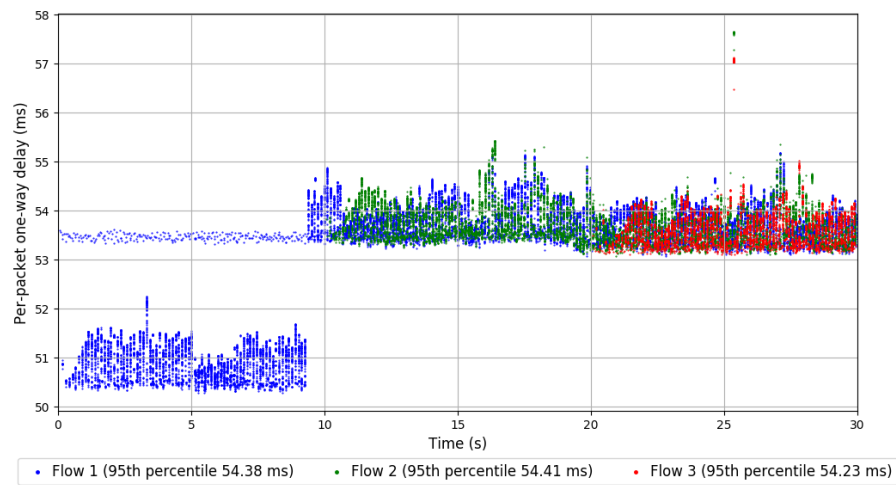
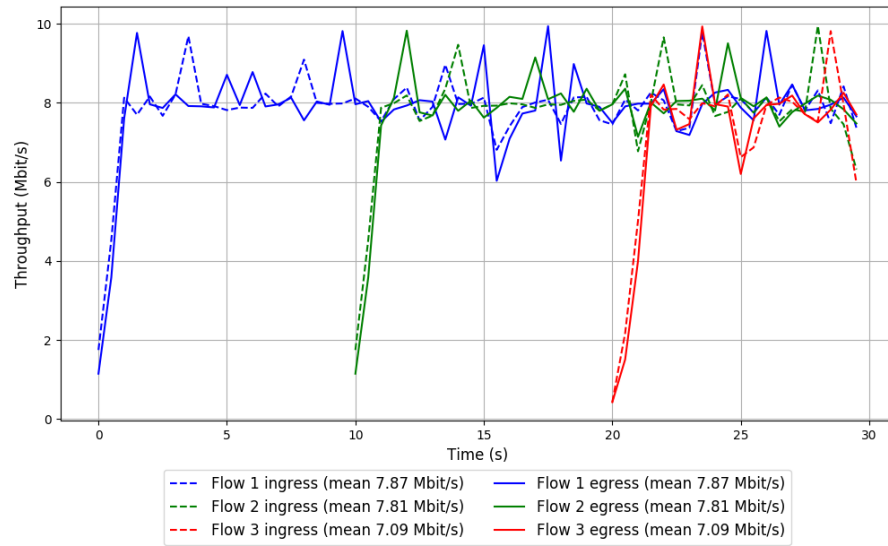
-- Flow 3:

Average throughput: 7.09 Mbit/s

95th percentile per-packet one-way delay: 54.226 ms

Loss rate: 0.00%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2018-04-18 14:12:42

End at: 2018-04-18 14:13:12

Below is generated by plot.py at 2018-04-18 17:50:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.57 Mbit/s

95th percentile per-packet one-way delay: 54.124 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 7.94 Mbit/s

95th percentile per-packet one-way delay: 54.098 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.76 Mbit/s

95th percentile per-packet one-way delay: 54.135 ms

Loss rate: 0.00%

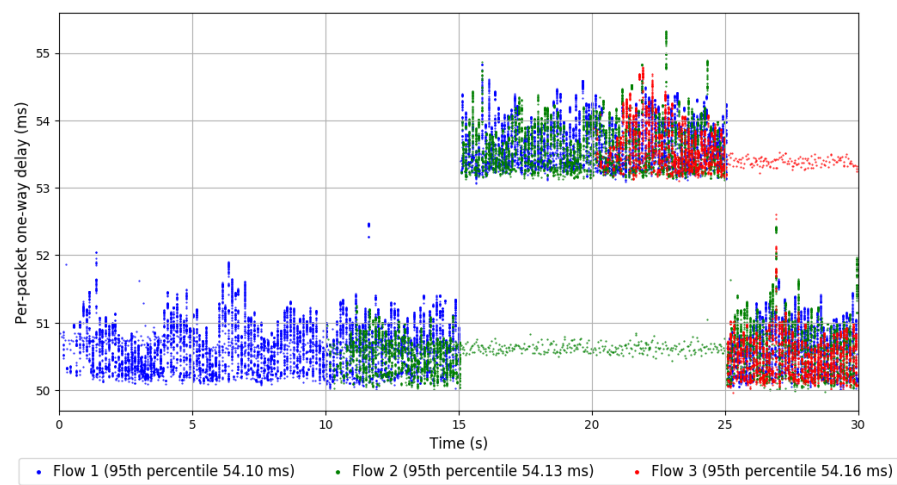
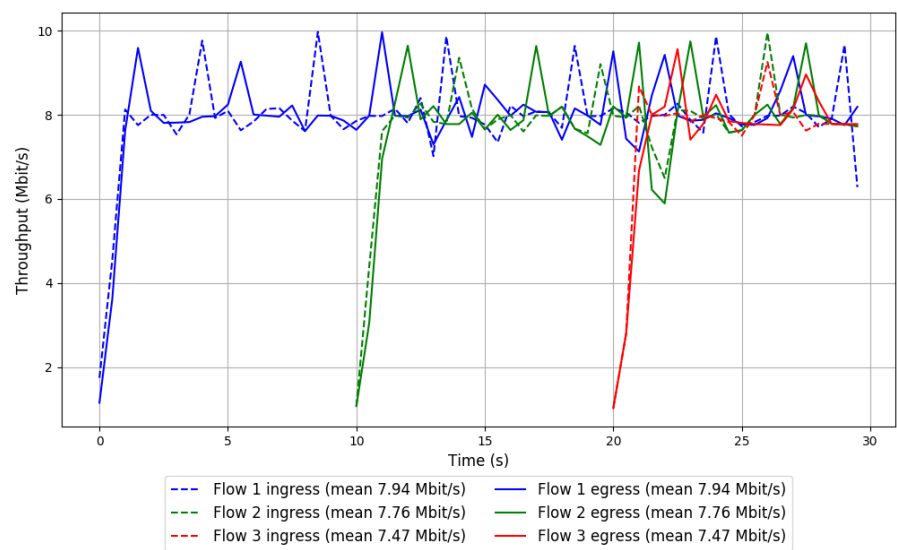
-- Flow 3:

Average throughput: 7.47 Mbit/s

95th percentile per-packet one-way delay: 54.158 ms

Loss rate: 0.00%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

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

End at: 2018-04-18 14:28:44

Below is generated by plot.py at 2018-04-18 17:50:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.39 Mbit/s

95th percentile per-packet one-way delay: 54.316 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 7.75 Mbit/s

95th percentile per-packet one-way delay: 54.344 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.74 Mbit/s

95th percentile per-packet one-way delay: 54.246 ms

Loss rate: 0.00%

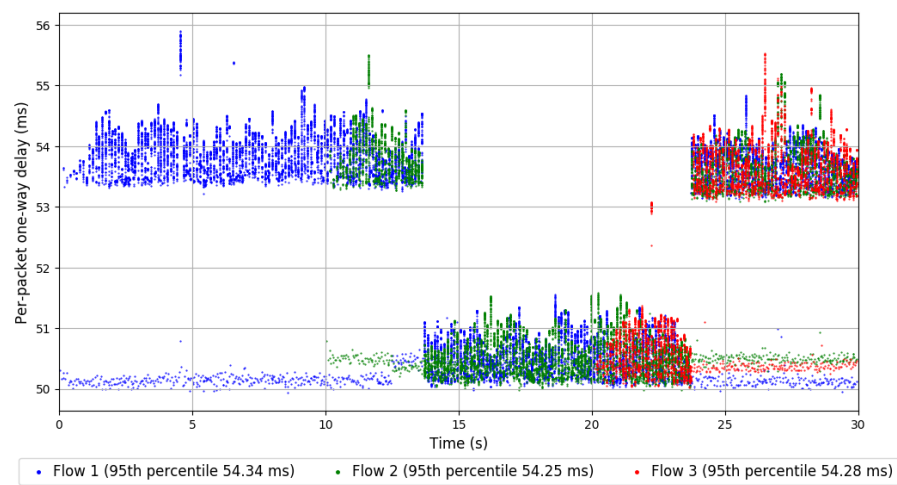
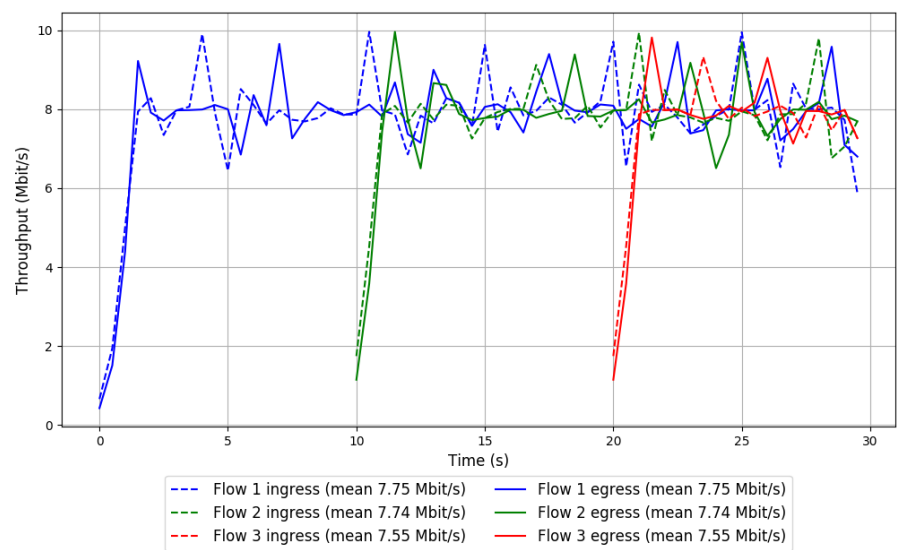
-- Flow 3:

Average throughput: 7.55 Mbit/s

95th percentile per-packet one-way delay: 54.284 ms

Loss rate: 0.00%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2018-04-18 14:43:52

End at: 2018-04-18 14:44:22

Below is generated by plot.py at 2018-04-18 17:50:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.61 Mbit/s

95th percentile per-packet one-way delay: 54.561 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 7.92 Mbit/s

95th percentile per-packet one-way delay: 54.545 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.87 Mbit/s

95th percentile per-packet one-way delay: 54.603 ms

Loss rate: 0.00%

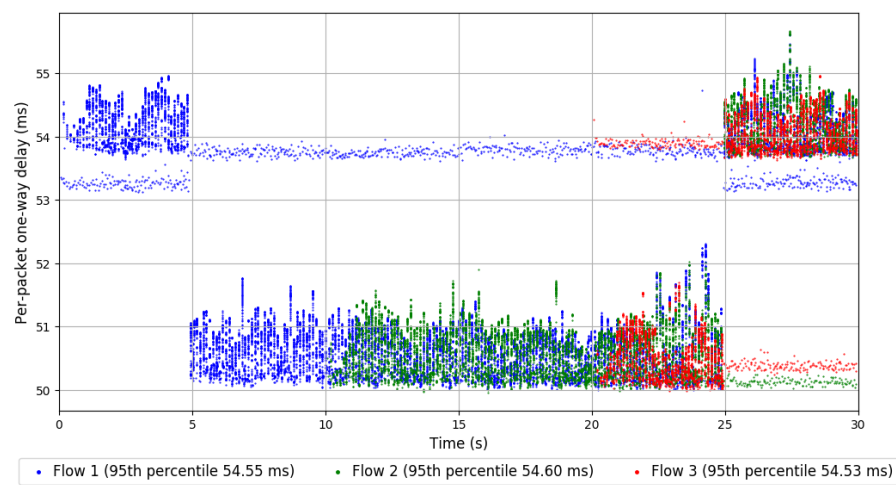
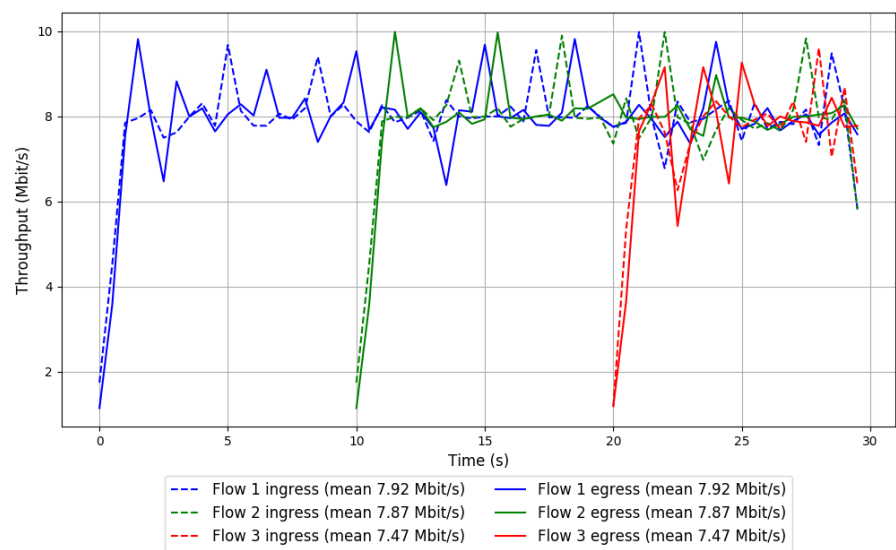
-- Flow 3:

Average throughput: 7.47 Mbit/s

95th percentile per-packet one-way delay: 54.535 ms

Loss rate: 0.00%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2018-04-18 14:59:25

End at: 2018-04-18 14:59:55

Below is generated by plot.py at 2018-04-18 17:50:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.48 Mbit/s

95th percentile per-packet one-way delay: 54.692 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 7.81 Mbit/s

95th percentile per-packet one-way delay: 54.677 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.81 Mbit/s

95th percentile per-packet one-way delay: 54.608 ms

Loss rate: 0.00%

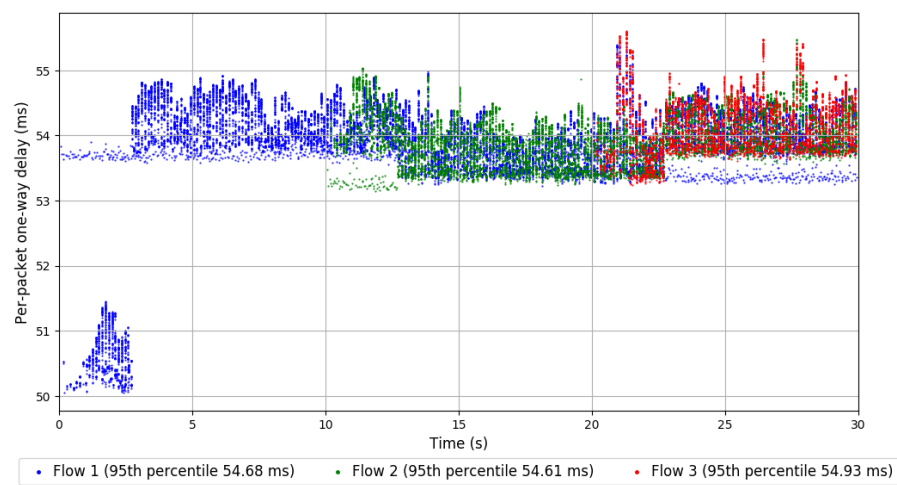
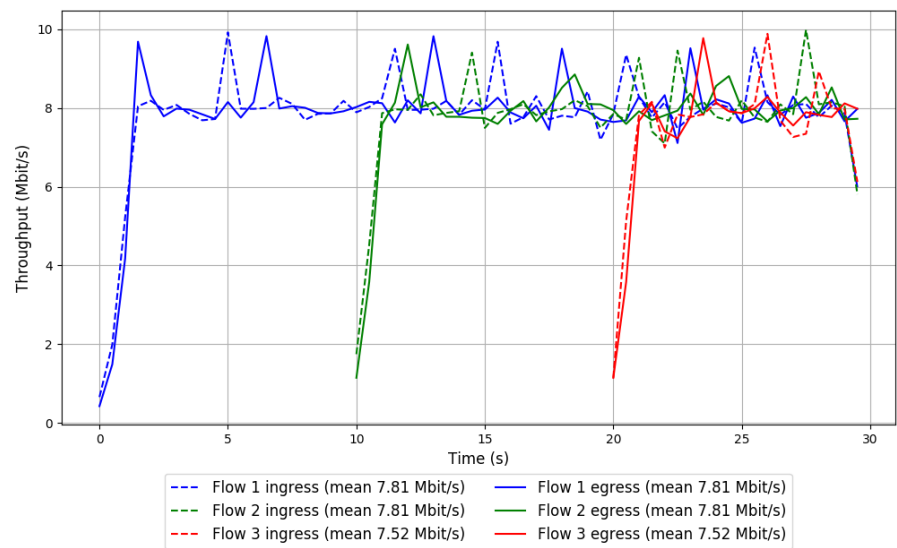
-- Flow 3:

Average throughput: 7.52 Mbit/s

95th percentile per-packet one-way delay: 54.932 ms

Loss rate: 0.00%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2018-04-18 15:14:47

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

Below is generated by plot.py at 2018-04-18 17:50:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.26 Mbit/s

95th percentile per-packet one-way delay: 54.286 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 7.68 Mbit/s

95th percentile per-packet one-way delay: 54.443 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.74 Mbit/s

95th percentile per-packet one-way delay: 54.043 ms

Loss rate: 0.00%

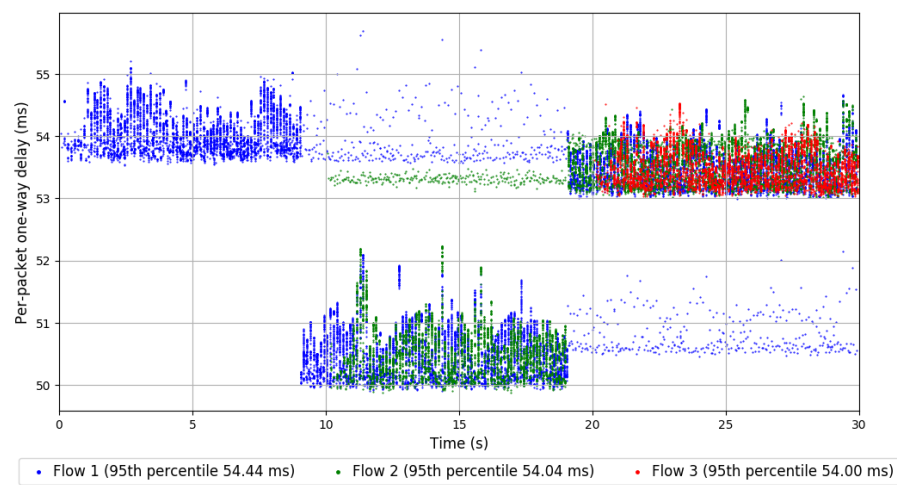
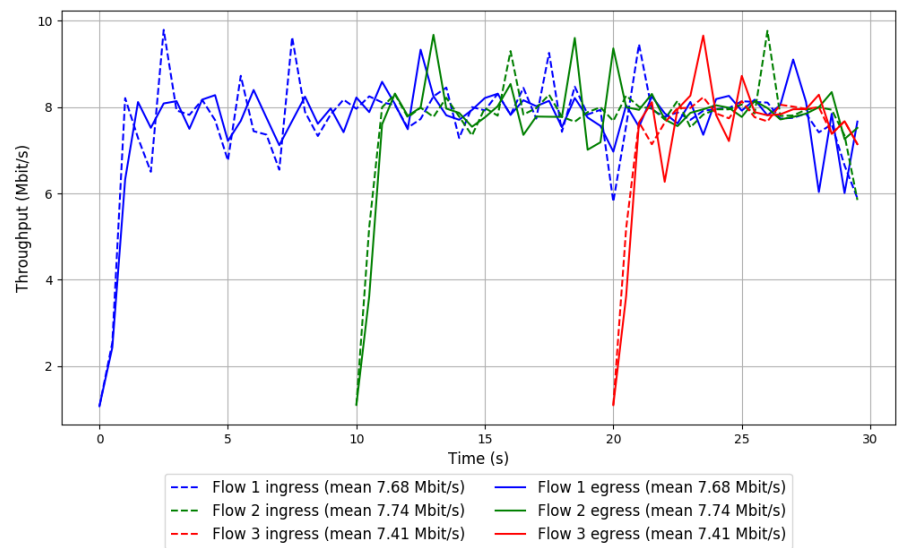
-- Flow 3:

Average throughput: 7.41 Mbit/s

95th percentile per-packet one-way delay: 54.001 ms

Loss rate: 0.00%

Run 10: Report of Sprout — Data Link

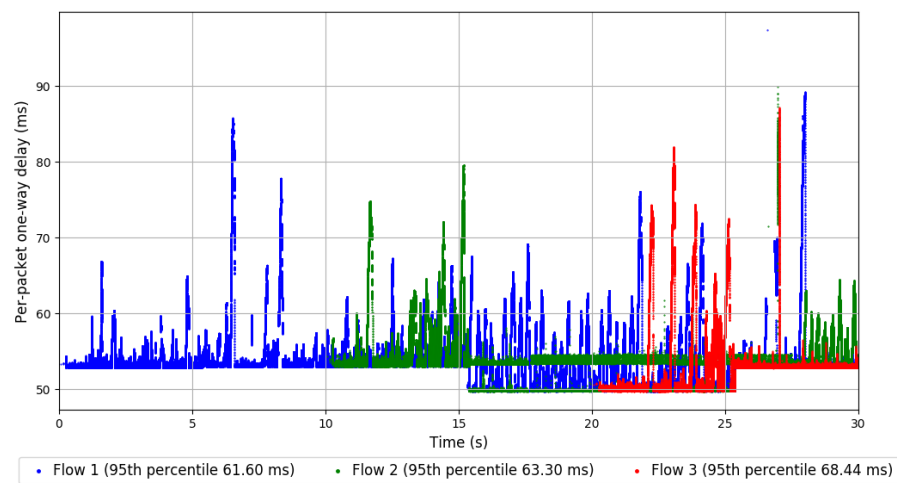
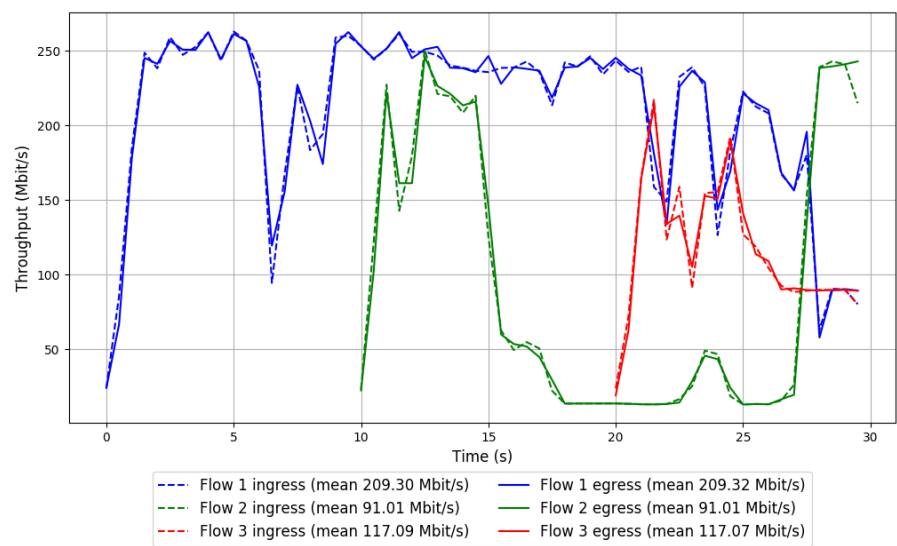


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-04-18 12:50:12
End at: 2018-04-18 12:50:42

# Below is generated by plot.py at 2018-04-18 17:55:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 308.74 Mbit/s
95th percentile per-packet one-way delay: 62.777 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 209.32 Mbit/s
95th percentile per-packet one-way delay: 61.596 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 91.01 Mbit/s
95th percentile per-packet one-way delay: 63.302 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 117.07 Mbit/s
95th percentile per-packet one-way delay: 68.440 ms
Loss rate: 0.02%
```


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

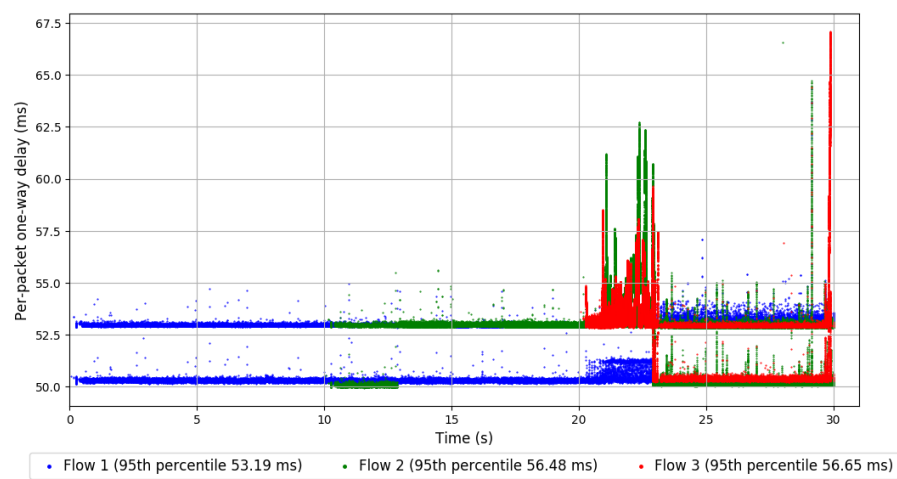
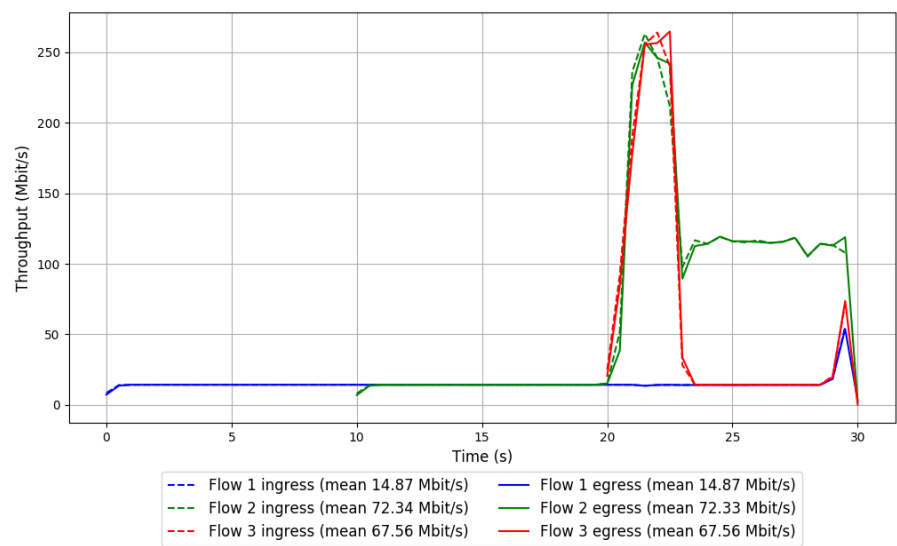


```
Run 2: Statistics of TaoVA-100x

Start at: 2018-04-18 13:05:53
End at: 2018-04-18 13:06:23

# Below is generated by plot.py at 2018-04-18 17:55:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.46 Mbit/s
95th percentile per-packet one-way delay: 56.221 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 14.87 Mbit/s
95th percentile per-packet one-way delay: 53.189 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 72.33 Mbit/s
95th percentile per-packet one-way delay: 56.477 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 67.56 Mbit/s
95th percentile per-packet one-way delay: 56.646 ms
Loss rate: 0.00%
```

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

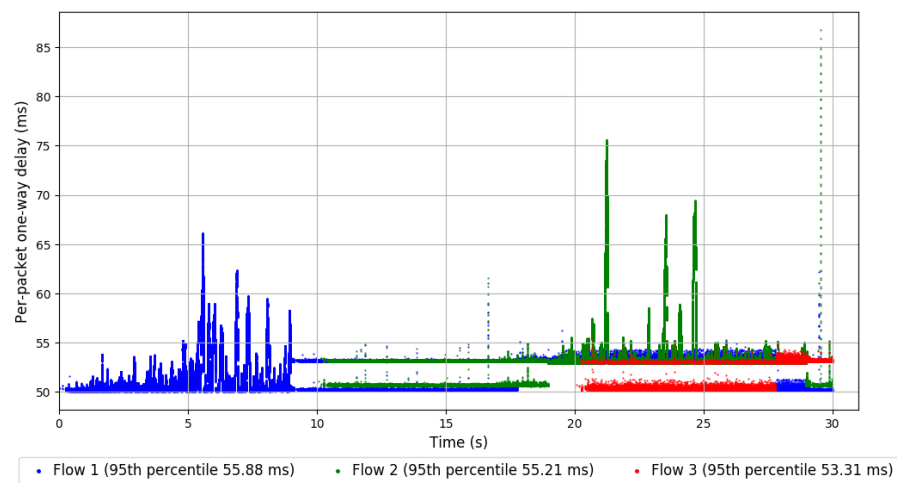
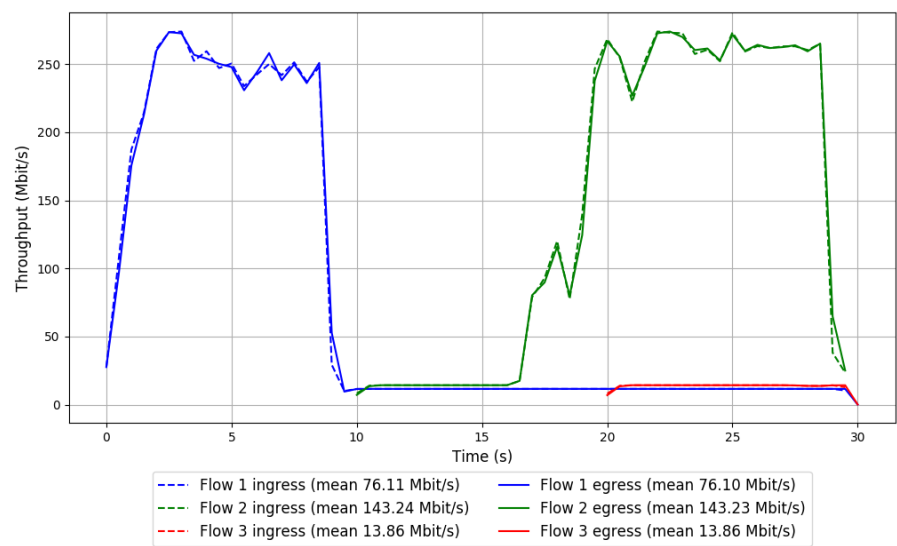


```
Run 3: Statistics of TaoVA-100x

Start at: 2018-04-18 13:21:08
End at: 2018-04-18 13:21:38

# Below is generated by plot.py at 2018-04-18 17:55:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 176.01 Mbit/s
95th percentile per-packet one-way delay: 55.618 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 76.10 Mbit/s
95th percentile per-packet one-way delay: 55.885 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 143.23 Mbit/s
95th percentile per-packet one-way delay: 55.212 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 13.86 Mbit/s
95th percentile per-packet one-way delay: 53.313 ms
Loss rate: 0.00%
```

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-04-18 13:36:20

End at: 2018-04-18 13:36:50

Below is generated by plot.py at 2018-04-18 17:55:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 26.02 Mbit/s

95th percentile per-packet one-way delay: 53.273 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 13.00 Mbit/s

95th percentile per-packet one-way delay: 53.265 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 12.39 Mbit/s

95th percentile per-packet one-way delay: 53.266 ms

Loss rate: 0.00%

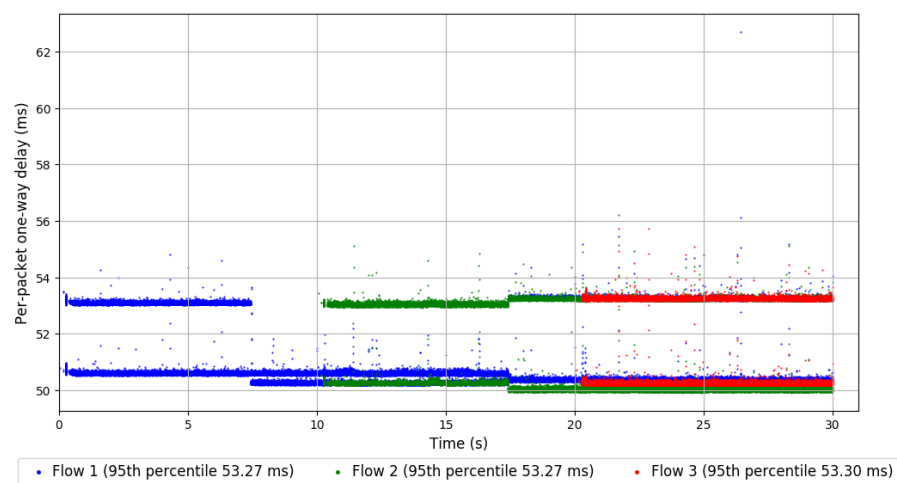
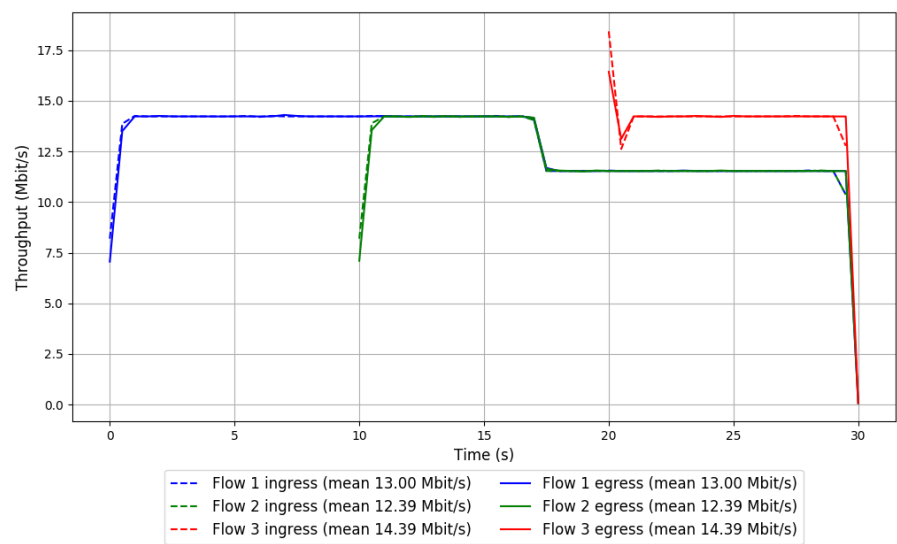
-- Flow 3:

Average throughput: 14.39 Mbit/s

95th percentile per-packet one-way delay: 53.299 ms

Loss rate: 0.00%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-04-18 13:51:47

End at: 2018-04-18 13:52:17

Below is generated by plot.py at 2018-04-18 17:55:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 170.13 Mbit/s

95th percentile per-packet one-way delay: 62.232 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 156.06 Mbit/s

95th percentile per-packet one-way delay: 63.101 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 14.15 Mbit/s

95th percentile per-packet one-way delay: 53.323 ms

Loss rate: 0.00%

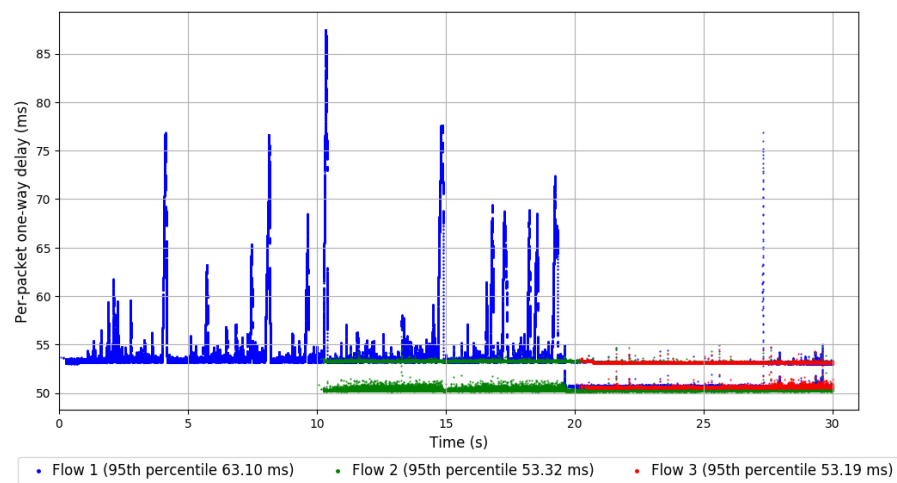
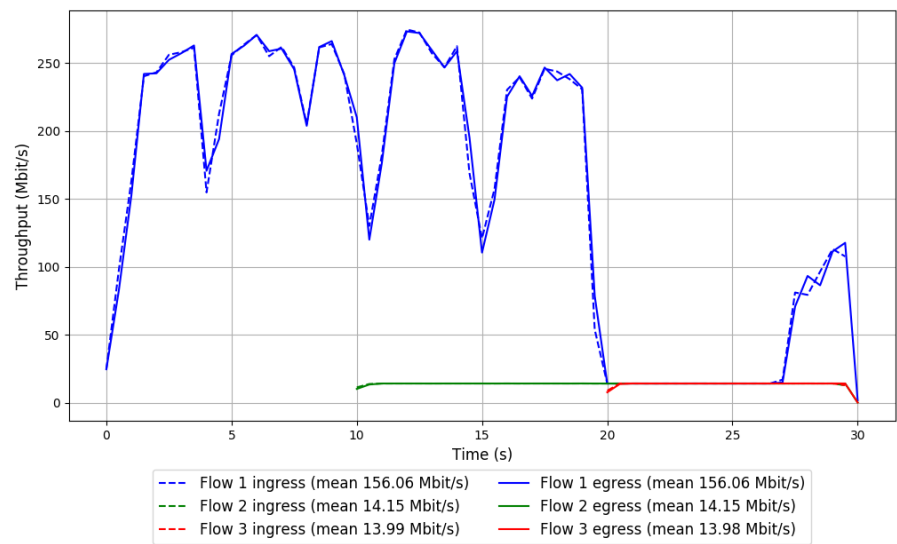
-- Flow 3:

Average throughput: 13.98 Mbit/s

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

Loss rate: 0.00%

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



Run 6: Statistics of TaoVA-100x

Start at: 2018-04-18 14:07:20

End at: 2018-04-18 14:07:50

Below is generated by plot.py at 2018-04-18 17:55:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 85.22 Mbit/s

95th percentile per-packet one-way delay: 61.207 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 68.04 Mbit/s

95th percentile per-packet one-way delay: 63.586 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 18.93 Mbit/s

95th percentile per-packet one-way delay: 53.606 ms

Loss rate: 0.01%

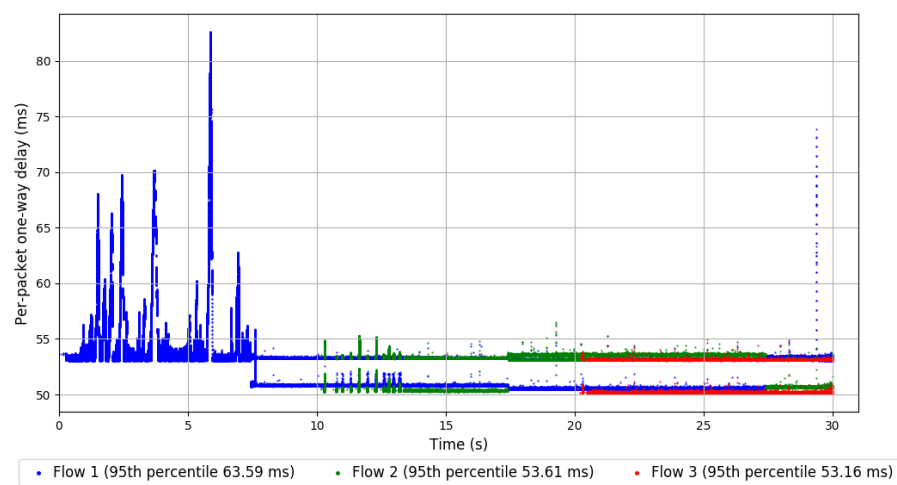
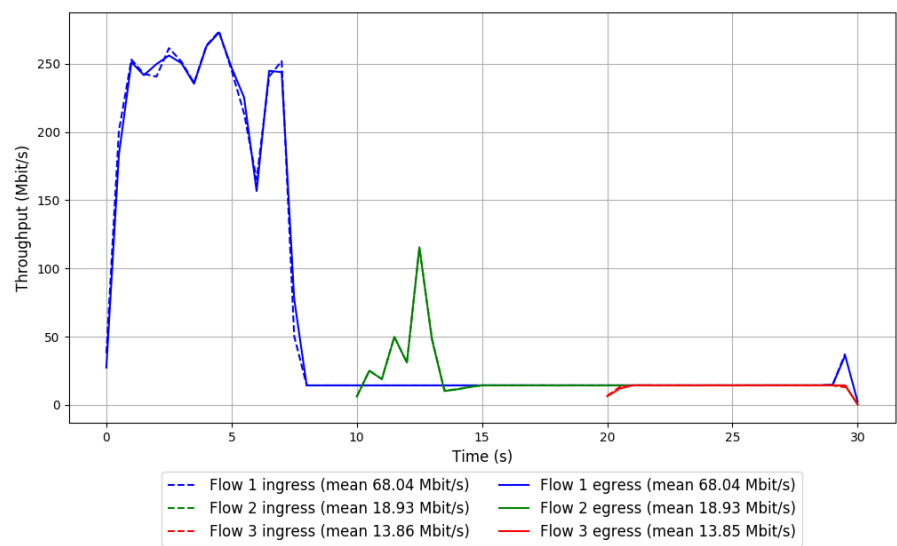
-- Flow 3:

Average throughput: 13.85 Mbit/s

95th percentile per-packet one-way delay: 53.159 ms

Loss rate: 0.03%

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



Run 7: Statistics of TaoVA-100x

Start at: 2018-04-18 14:22:46

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

Below is generated by plot.py at 2018-04-18 17:55:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 189.37 Mbit/s

95th percentile per-packet one-way delay: 61.123 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 105.00 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 22.78 Mbit/s

95th percentile per-packet one-way delay: 53.572 ms

Loss rate: 0.00%

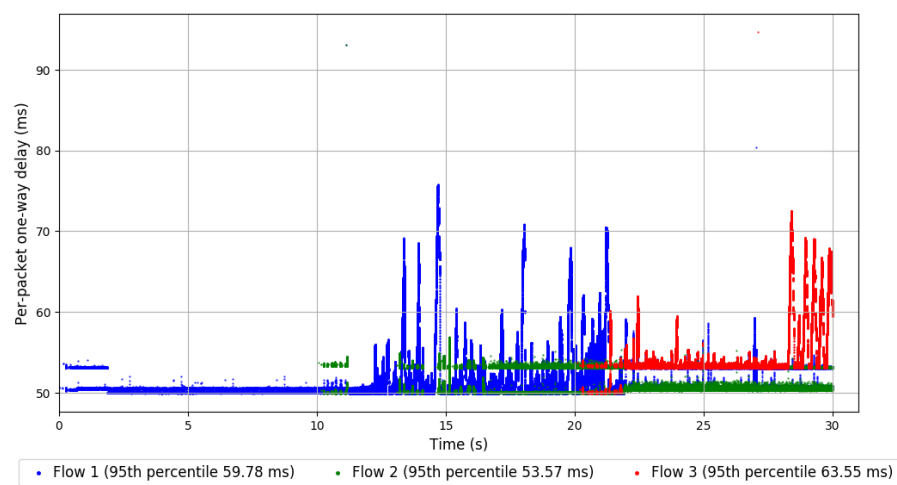
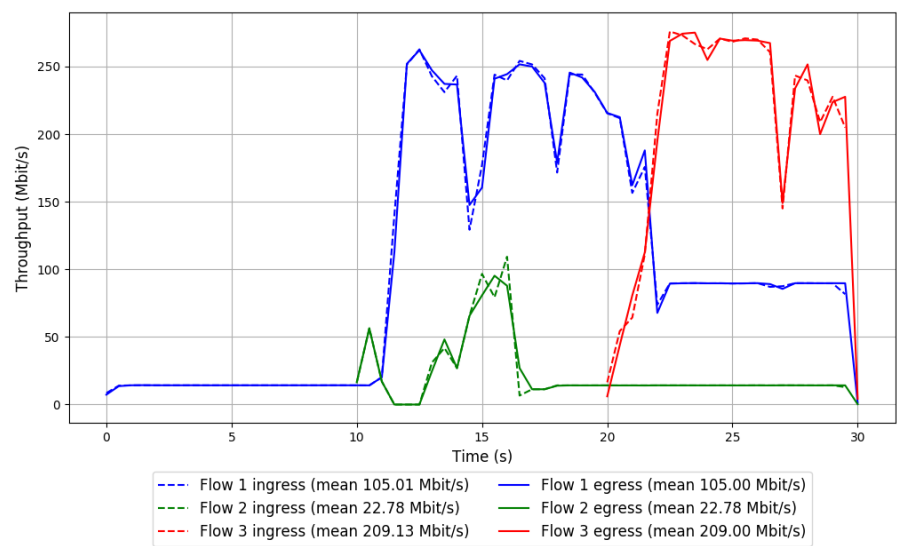
-- Flow 3:

Average throughput: 209.00 Mbit/s

95th percentile per-packet one-way delay: 63.547 ms

Loss rate: 0.06%

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



Run 8: Statistics of TaoVA-100x

Start at: 2018-04-18 14:38:17

End at: 2018-04-18 14:38:47

Below is generated by plot.py at 2018-04-18 17:56:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 268.35 Mbit/s

95th percentile per-packet one-way delay: 60.536 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 204.23 Mbit/s

95th percentile per-packet one-way delay: 55.945 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 14.33 Mbit/s

95th percentile per-packet one-way delay: 53.750 ms

Loss rate: 0.00%

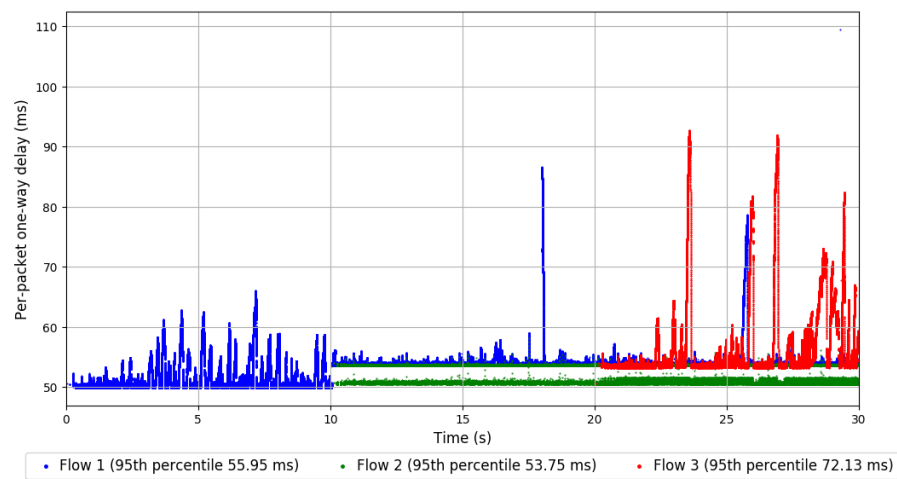
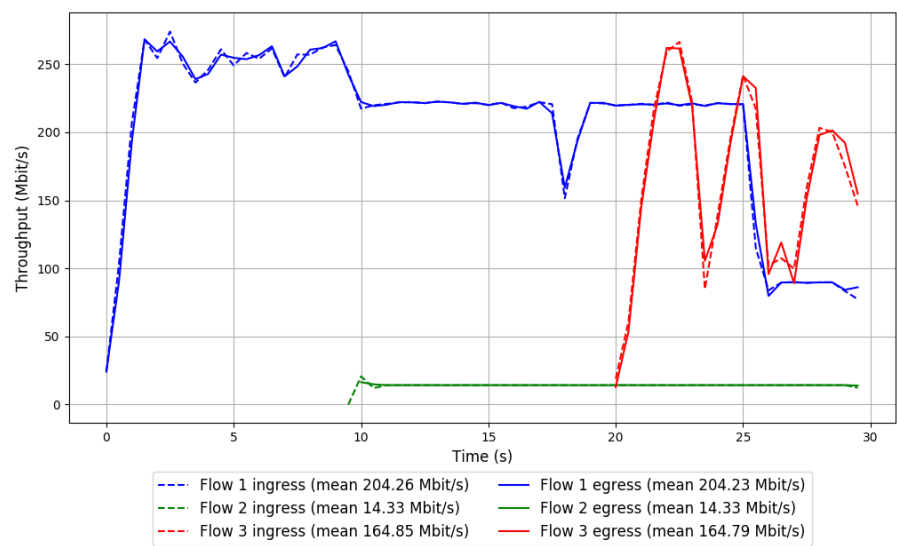
-- Flow 3:

Average throughput: 164.79 Mbit/s

95th percentile per-packet one-way delay: 72.129 ms

Loss rate: 0.00%

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

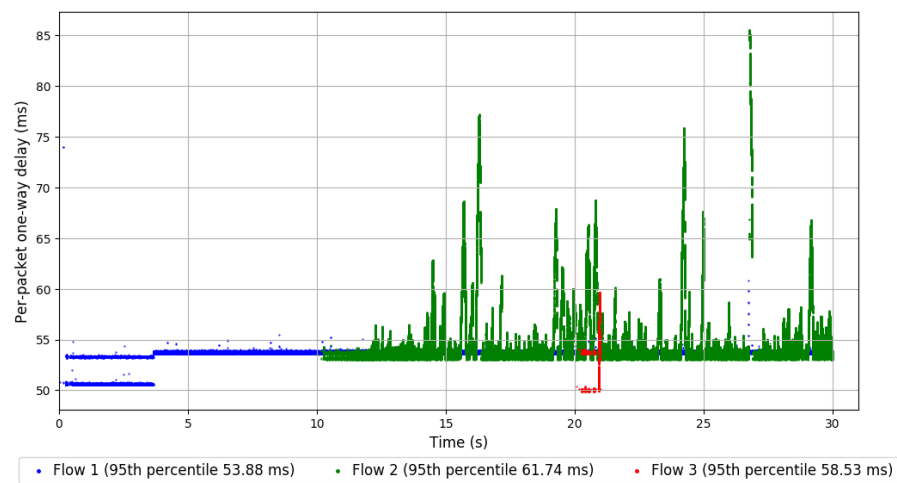
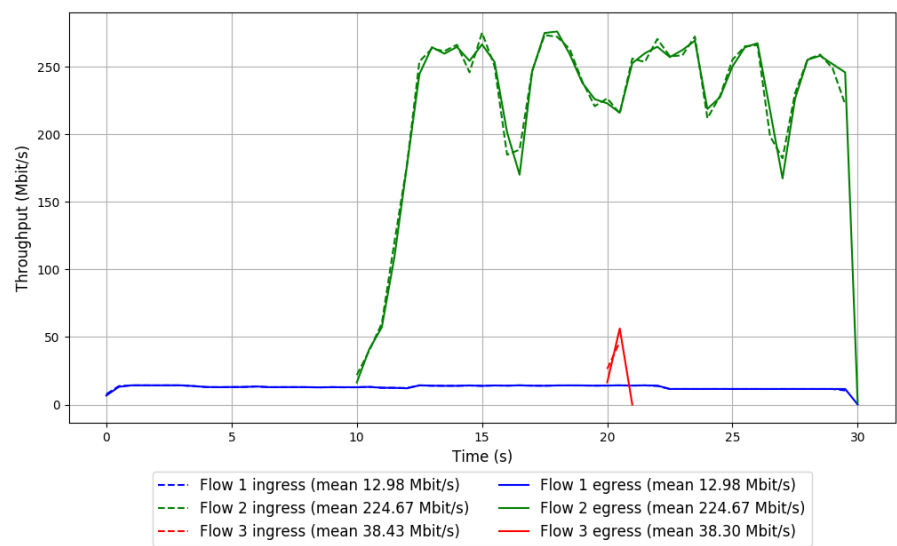


```
Run 9: Statistics of TaoVA-100x

Start at: 2018-04-18 14:54:04
End at: 2018-04-18 14:54:34

# Below is generated by plot.py at 2018-04-18 17:56:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 163.79 Mbit/s
95th percentile per-packet one-way delay: 61.039 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 12.98 Mbit/s
95th percentile per-packet one-way delay: 53.885 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 224.67 Mbit/s
95th percentile per-packet one-way delay: 61.743 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 38.30 Mbit/s
95th percentile per-packet one-way delay: 58.529 ms
Loss rate: 0.00%
```


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

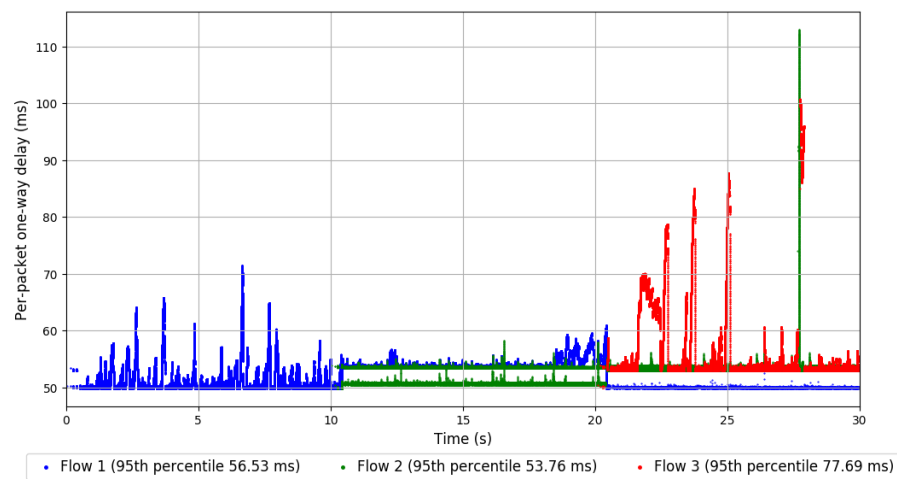
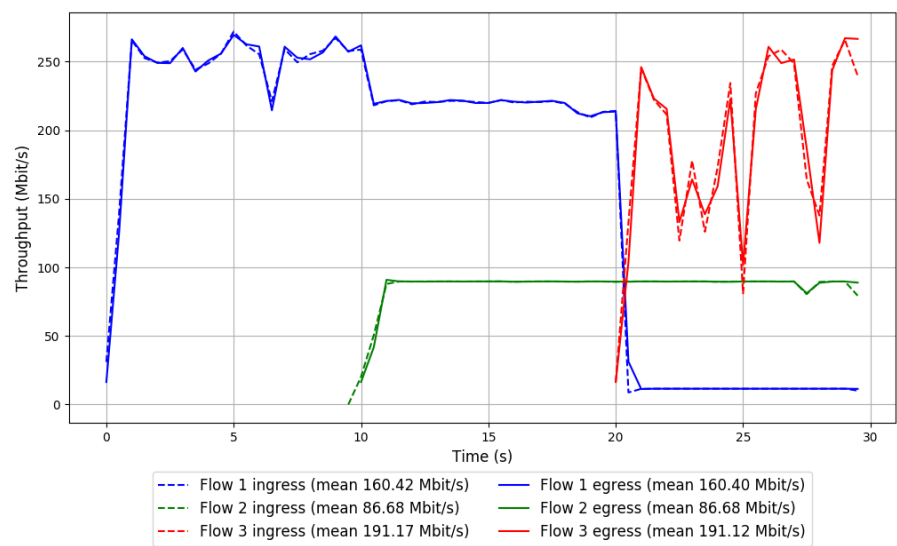


```
Run 10: Statistics of TaoVA-100x

Start at: 2018-04-18 15:09:16
End at: 2018-04-18 15:09:46

# Below is generated by plot.py at 2018-04-18 17:59:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 281.30 Mbit/s
95th percentile per-packet one-way delay: 59.634 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 160.40 Mbit/s
95th percentile per-packet one-way delay: 56.533 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 86.68 Mbit/s
95th percentile per-packet one-way delay: 53.758 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 191.12 Mbit/s
95th percentile per-packet one-way delay: 77.687 ms
Loss rate: 0.00%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2018-04-18 12:51:23

End at: 2018-04-18 12:51:53

Below is generated by plot.py at 2018-04-18 17:59:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 207.71 Mbit/s

95th percentile per-packet one-way delay: 54.041 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 99.14 Mbit/s

95th percentile per-packet one-way delay: 54.123 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 134.21 Mbit/s

95th percentile per-packet one-way delay: 53.908 ms

Loss rate: 0.00%

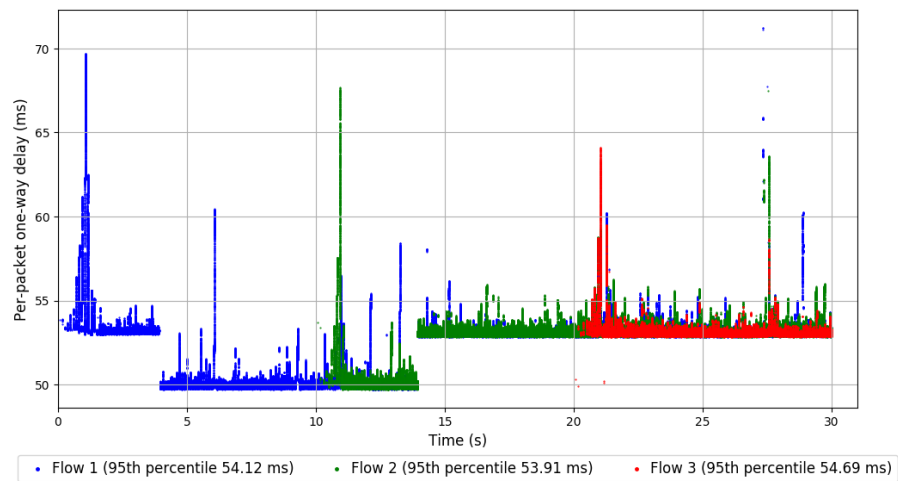
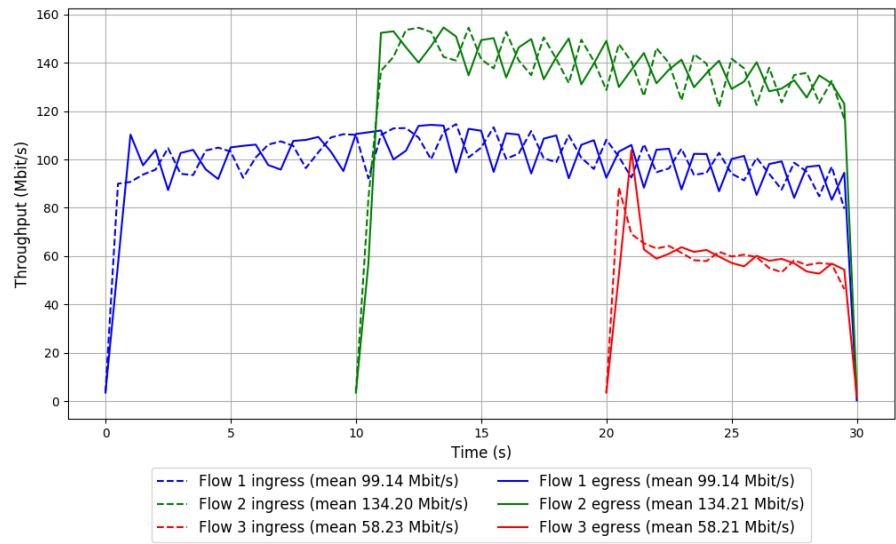
-- Flow 3:

Average throughput: 58.21 Mbit/s

95th percentile per-packet one-way delay: 54.686 ms

Loss rate: 0.00%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-04-18 13:06:43

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

Below is generated by plot.py at 2018-04-18 17:59:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 152.89 Mbit/s

95th percentile per-packet one-way delay: 53.359 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 70.03 Mbit/s

95th percentile per-packet one-way delay: 53.356 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 62.62 Mbit/s

95th percentile per-packet one-way delay: 53.356 ms

Loss rate: 0.00%

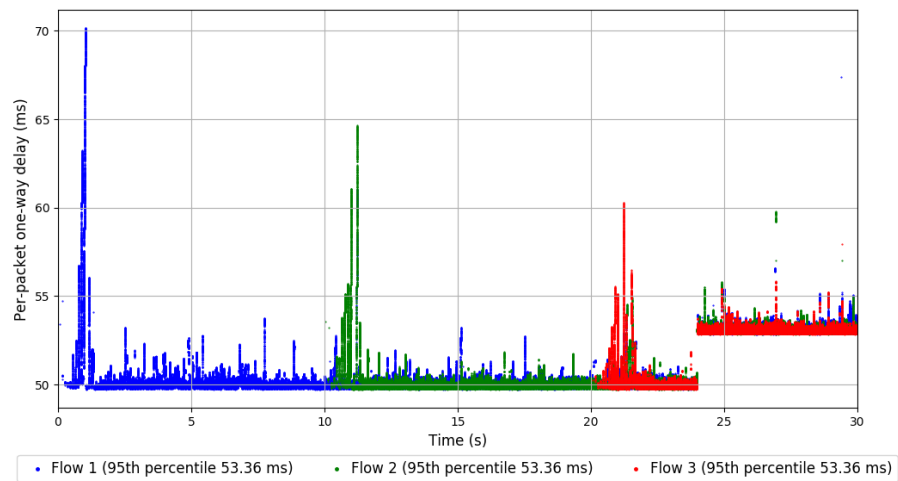
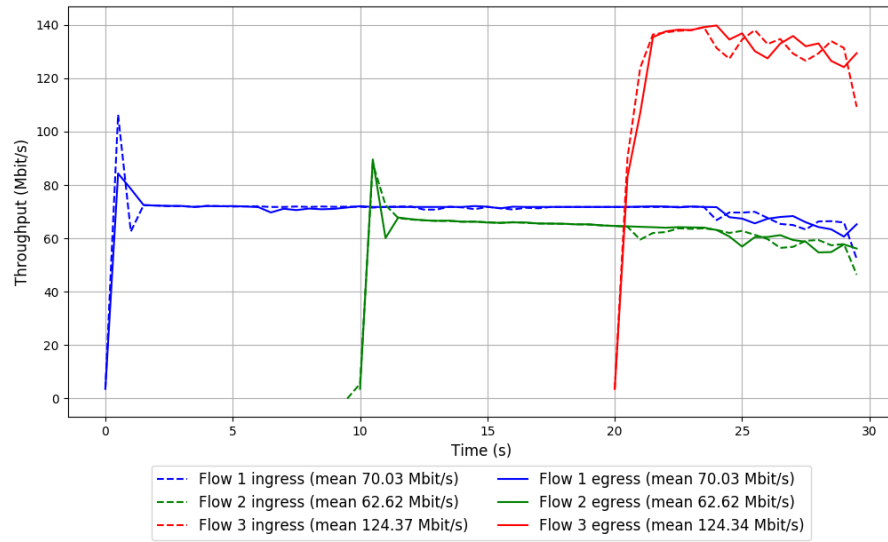
-- Flow 3:

Average throughput: 124.34 Mbit/s

95th percentile per-packet one-way delay: 53.364 ms

Loss rate: 0.00%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-04-18 13:22:04

End at: 2018-04-18 13:22:34

Below is generated by plot.py at 2018-04-18 17:59:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 236.08 Mbit/s

95th percentile per-packet one-way delay: 53.987 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 209.94 Mbit/s

95th percentile per-packet one-way delay: 54.000 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 10.62 Mbit/s

95th percentile per-packet one-way delay: 53.541 ms

Loss rate: 0.02%

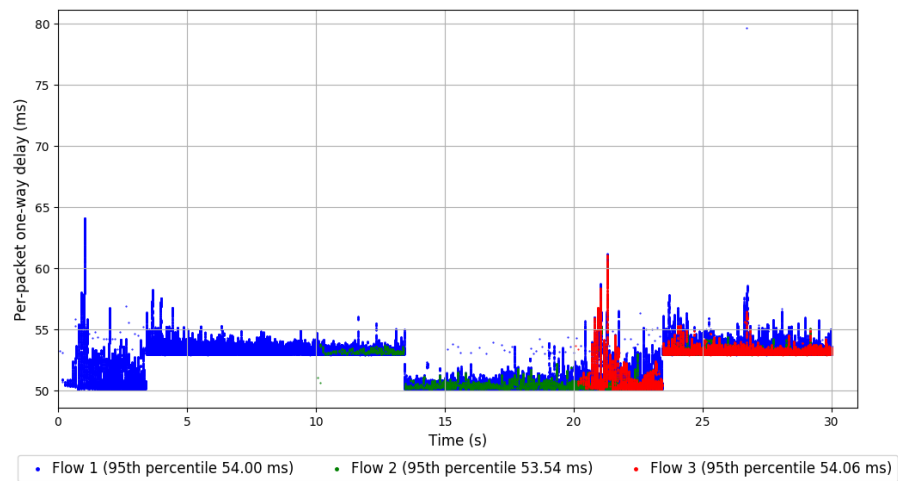
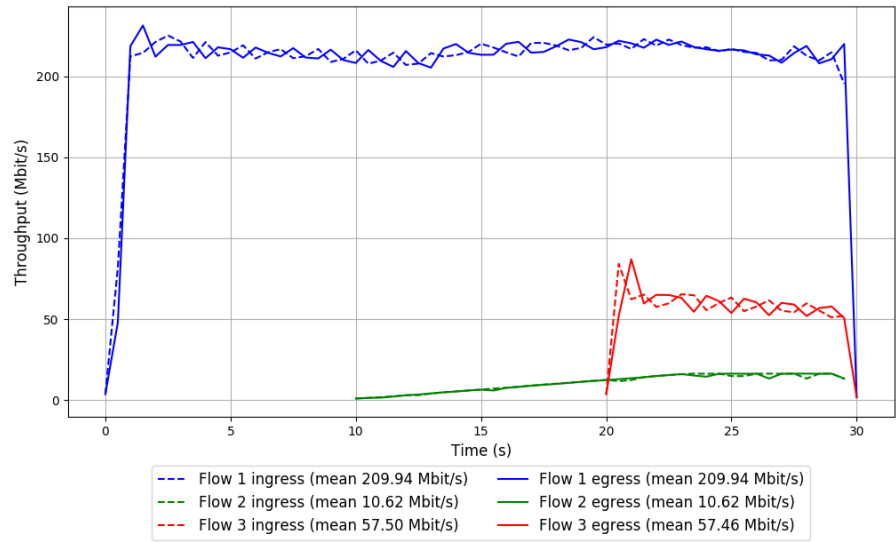
-- Flow 3:

Average throughput: 57.46 Mbit/s

95th percentile per-packet one-way delay: 54.058 ms

Loss rate: 0.08%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2018-04-18 13:37:02

End at: 2018-04-18 13:37:32

Below is generated by plot.py at 2018-04-18 17:59:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 176.52 Mbit/s

95th percentile per-packet one-way delay: 62.450 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 76.60 Mbit/s

95th percentile per-packet one-way delay: 59.143 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 56.35 Mbit/s

95th percentile per-packet one-way delay: 59.651 ms

Loss rate: 0.00%

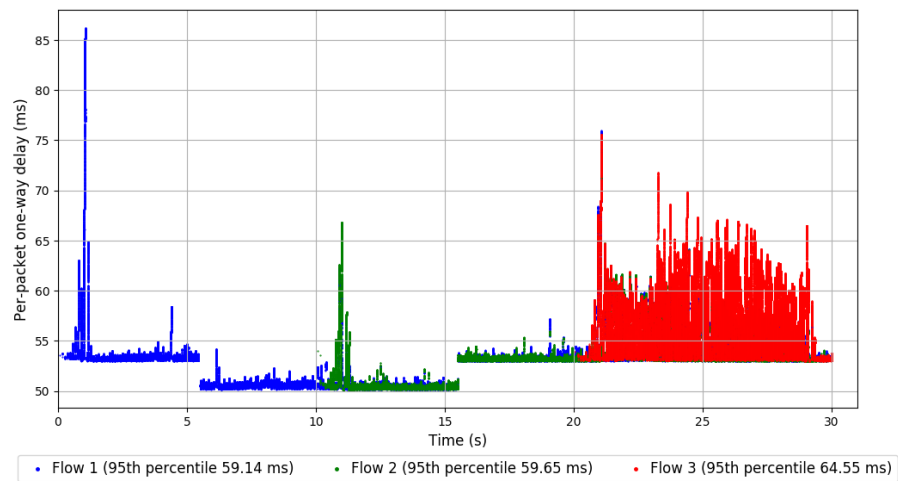
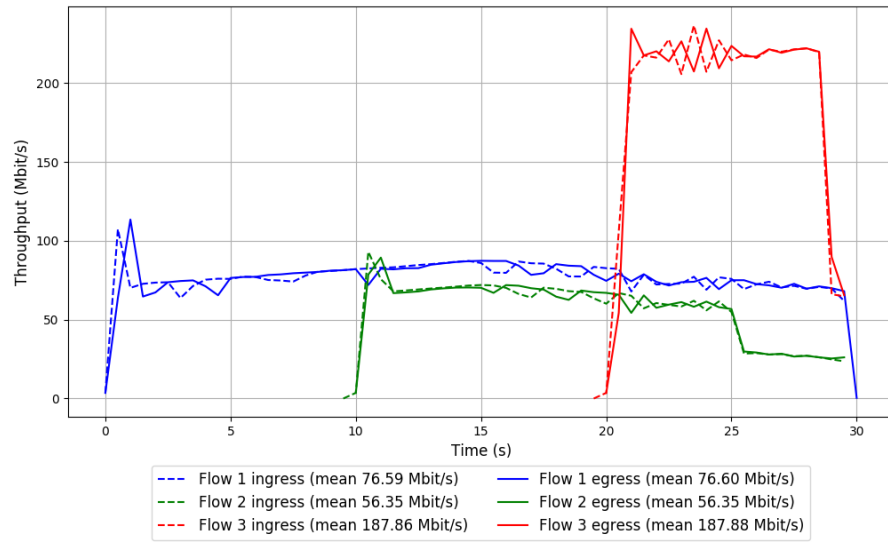
-- Flow 3:

Average throughput: 187.88 Mbit/s

95th percentile per-packet one-way delay: 64.554 ms

Loss rate: 0.00%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-04-18 13:52:43

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

Below is generated by plot.py at 2018-04-18 18:00:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 368.99 Mbit/s

95th percentile per-packet one-way delay: 63.637 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 225.26 Mbit/s

95th percentile per-packet one-way delay: 64.868 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 182.27 Mbit/s

95th percentile per-packet one-way delay: 59.273 ms

Loss rate: 0.01%

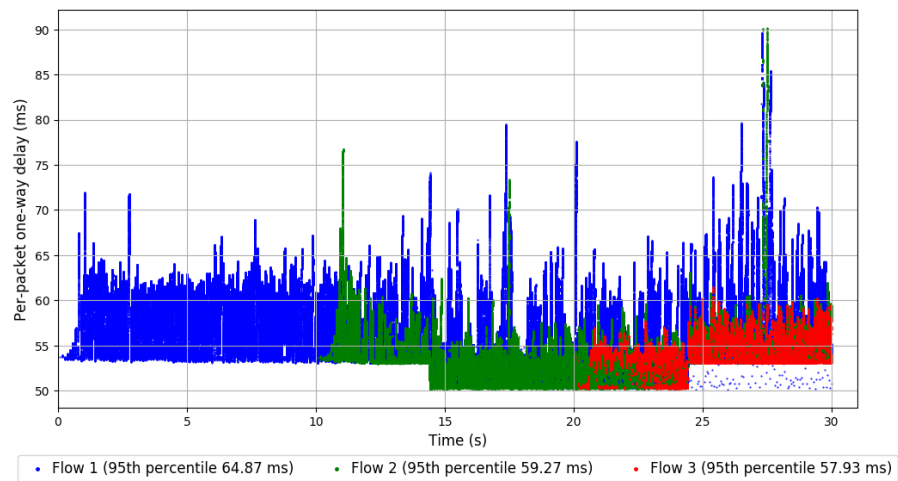
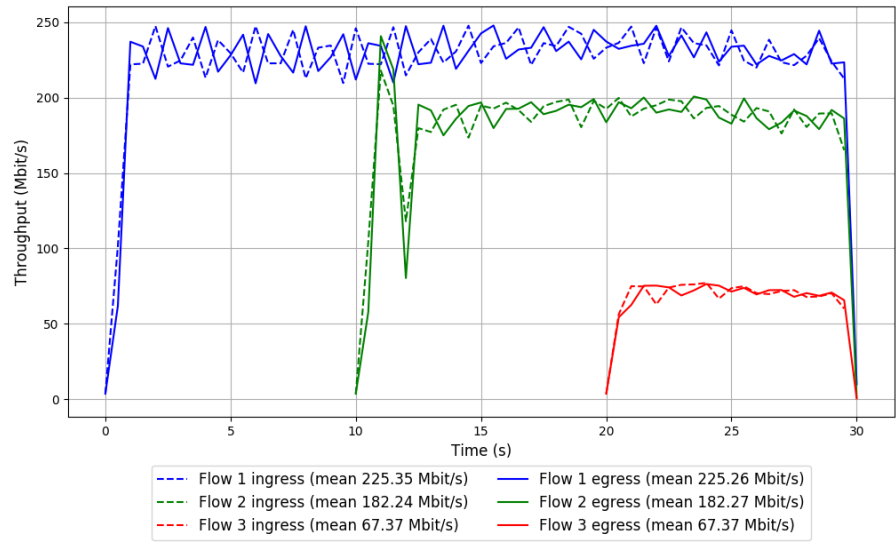
-- Flow 3:

Average throughput: 67.37 Mbit/s

95th percentile per-packet one-way delay: 57.932 ms

Loss rate: 0.04%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2018-04-18 14:08:09

End at: 2018-04-18 14:08:39

Below is generated by plot.py at 2018-04-18 18:00:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 308.95 Mbit/s

95th percentile per-packet one-way delay: 62.065 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 133.97 Mbit/s

95th percentile per-packet one-way delay: 61.462 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 155.03 Mbit/s

95th percentile per-packet one-way delay: 61.905 ms

Loss rate: 0.00%

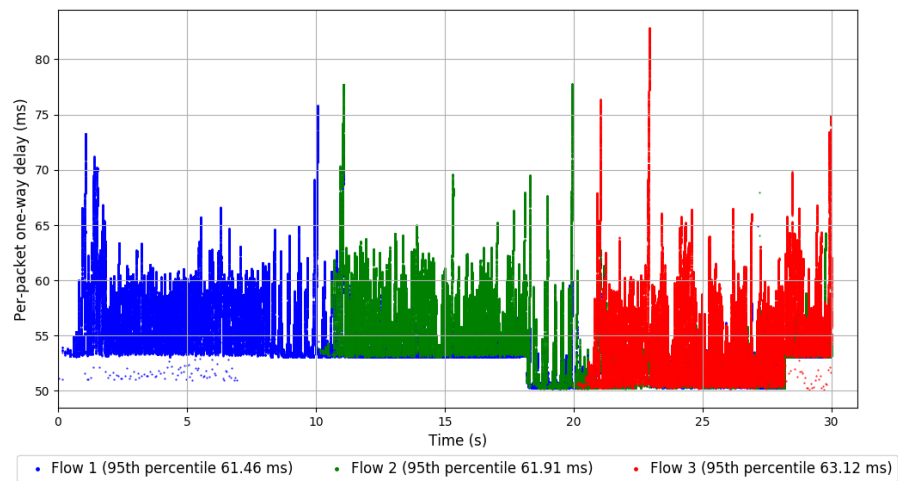
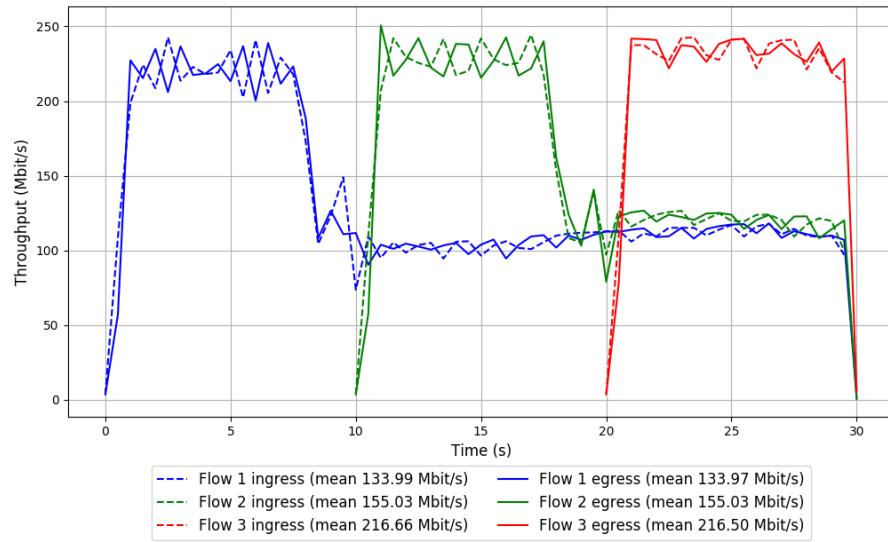
-- Flow 3:

Average throughput: 216.50 Mbit/s

95th percentile per-packet one-way delay: 63.123 ms

Loss rate: 0.07%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

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

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

Below is generated by plot.py at 2018-04-18 18:00:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 199.87 Mbit/s

95th percentile per-packet one-way delay: 62.400 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 136.15 Mbit/s

95th percentile per-packet one-way delay: 63.221 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 64.01 Mbit/s

95th percentile per-packet one-way delay: 55.018 ms

Loss rate: 0.00%

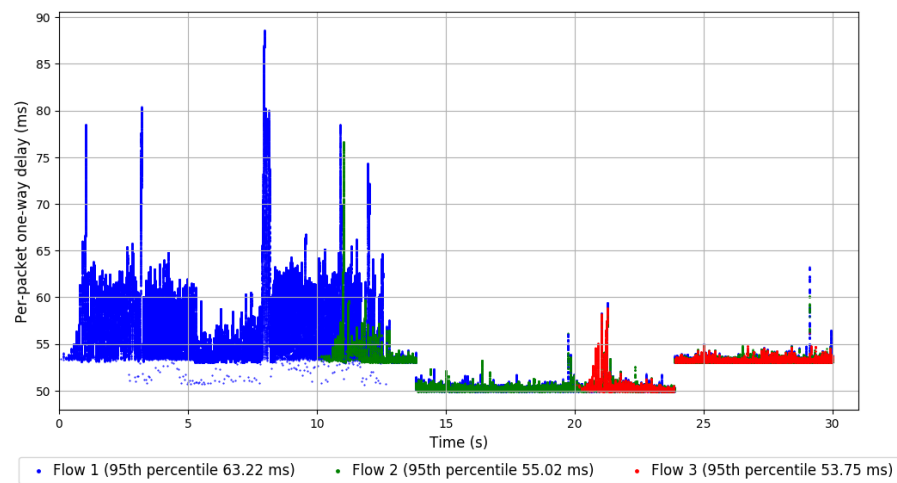
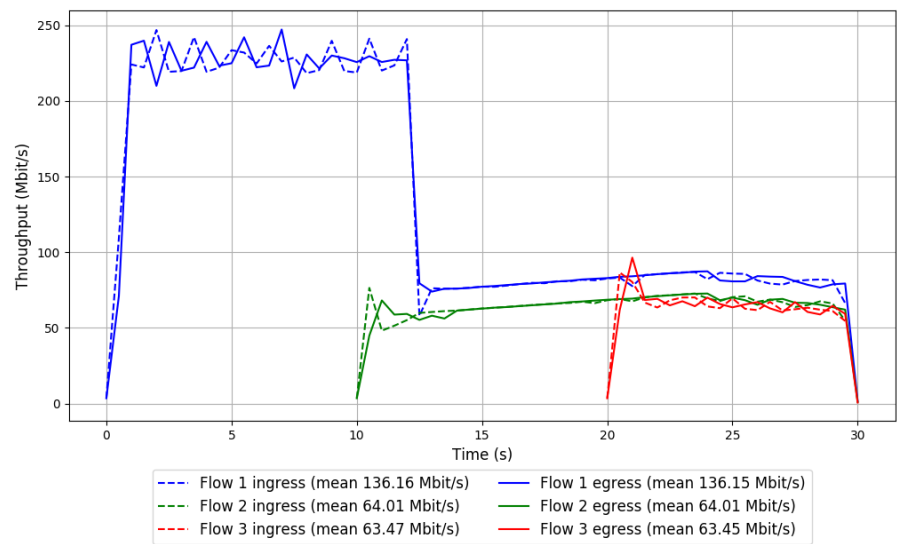
-- Flow 3:

Average throughput: 63.45 Mbit/s

95th percentile per-packet one-way delay: 53.754 ms

Loss rate: 0.00%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

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

End at: 2018-04-18 14:39:53

Below is generated by plot.py at 2018-04-18 18:00:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 242.34 Mbit/s

95th percentile per-packet one-way delay: 63.021 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 157.01 Mbit/s

95th percentile per-packet one-way delay: 63.533 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 93.93 Mbit/s

95th percentile per-packet one-way delay: 62.104 ms

Loss rate: 0.00%

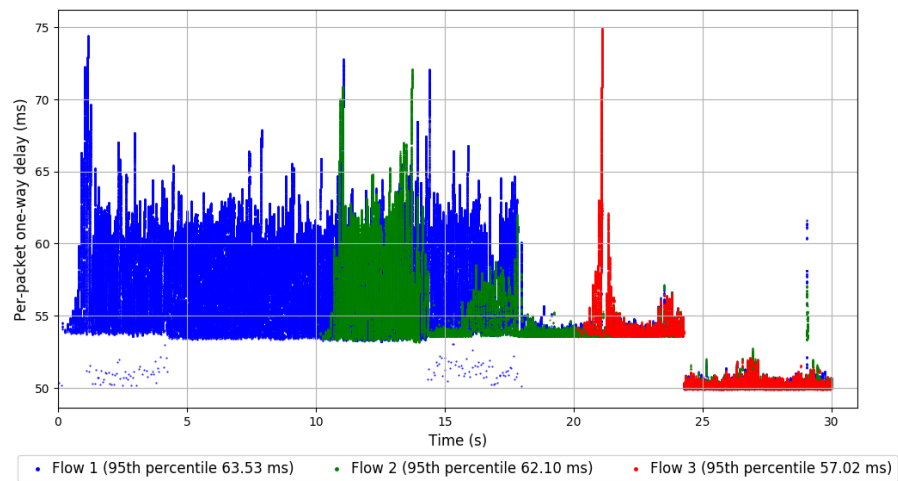
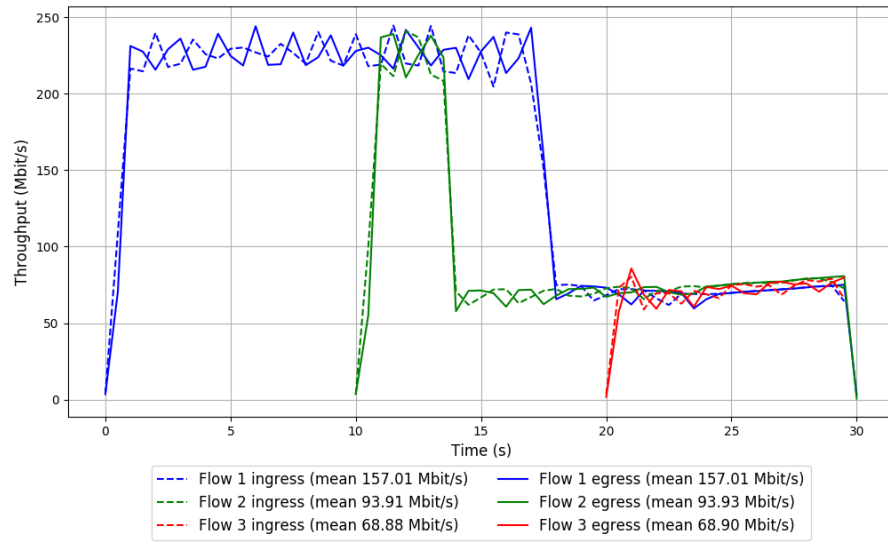
-- Flow 3:

Average throughput: 68.90 Mbit/s

95th percentile per-packet one-way delay: 57.020 ms

Loss rate: 0.00%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2018-04-18 14:54:58

End at: 2018-04-18 14:55:28

Below is generated by plot.py at 2018-04-18 18:00:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 273.07 Mbit/s

95th percentile per-packet one-way delay: 61.764 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 124.98 Mbit/s

95th percentile per-packet one-way delay: 56.761 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 219.50 Mbit/s

95th percentile per-packet one-way delay: 63.379 ms

Loss rate: 0.00%

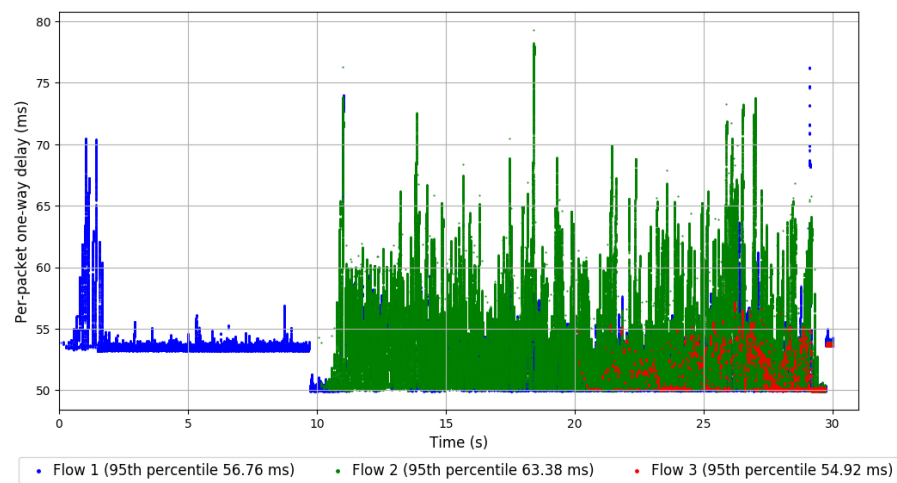
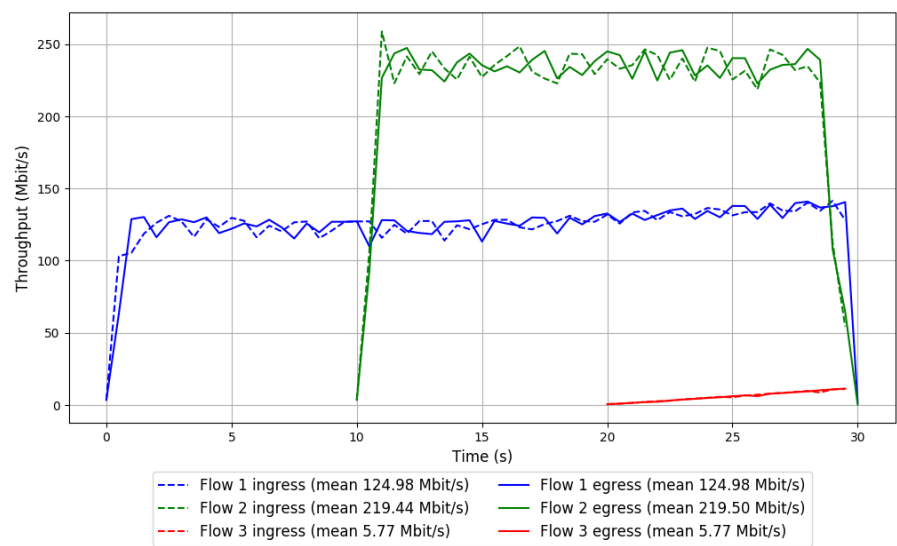
-- Flow 3:

Average throughput: 5.77 Mbit/s

95th percentile per-packet one-way delay: 54.924 ms

Loss rate: 0.17%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2018-04-18 15:10:22

End at: 2018-04-18 15:10:52

Below is generated by plot.py at 2018-04-18 18:00:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 160.49 Mbit/s

95th percentile per-packet one-way delay: 62.312 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 23.39 Mbit/s

95th percentile per-packet one-way delay: 56.851 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 103.80 Mbit/s

95th percentile per-packet one-way delay: 60.296 ms

Loss rate: 0.00%

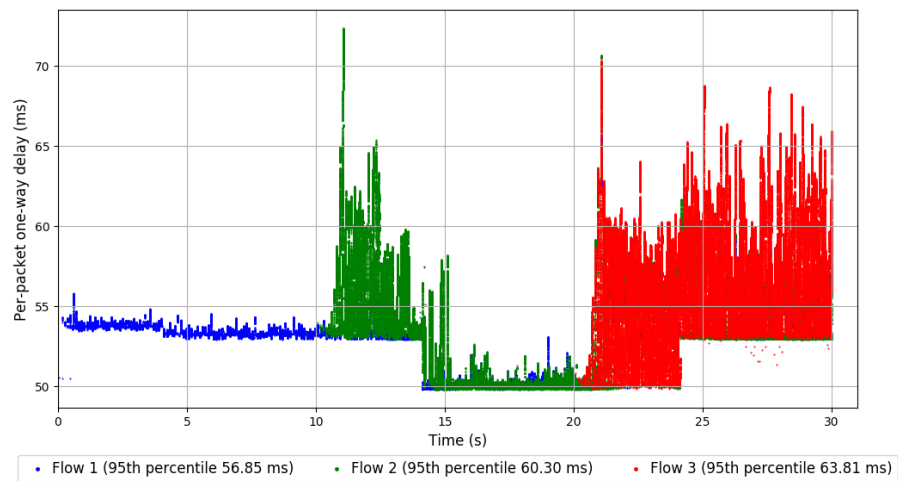
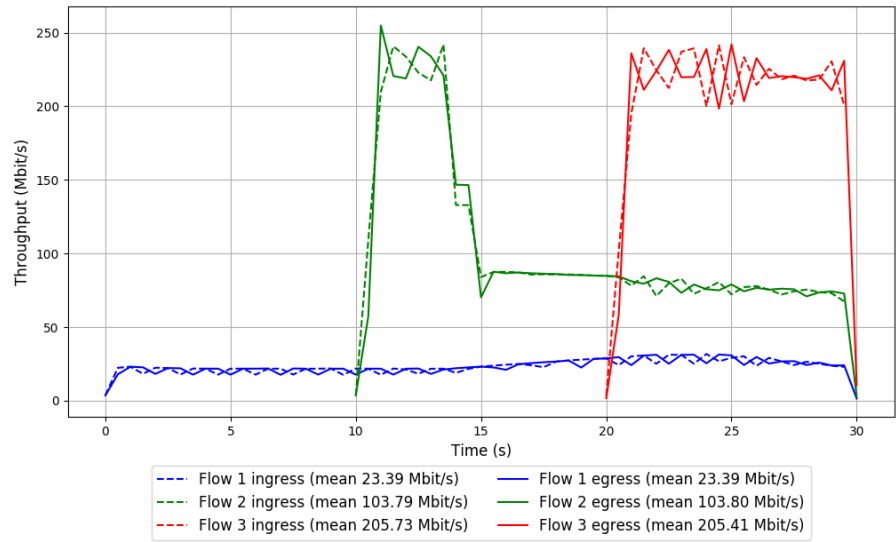
-- Flow 3:

Average throughput: 205.41 Mbit/s

95th percentile per-packet one-way delay: 63.810 ms

Loss rate: 0.00%

Run 10: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2018-04-18 12:52:53

End at: 2018-04-18 12:53:23

Below is generated by plot.py at 2018-04-18 18:03:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 352.33 Mbit/s

95th percentile per-packet one-way delay: 134.056 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 228.91 Mbit/s

95th percentile per-packet one-way delay: 128.991 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 123.72 Mbit/s

95th percentile per-packet one-way delay: 133.721 ms

Loss rate: 0.00%

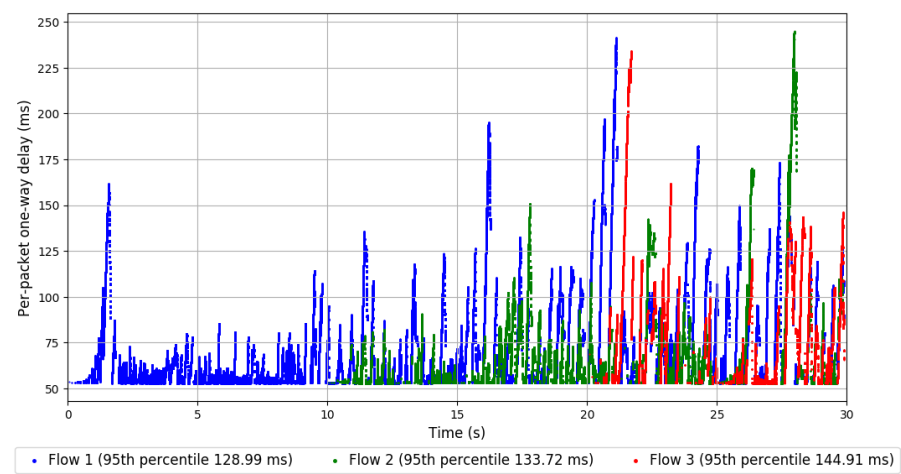
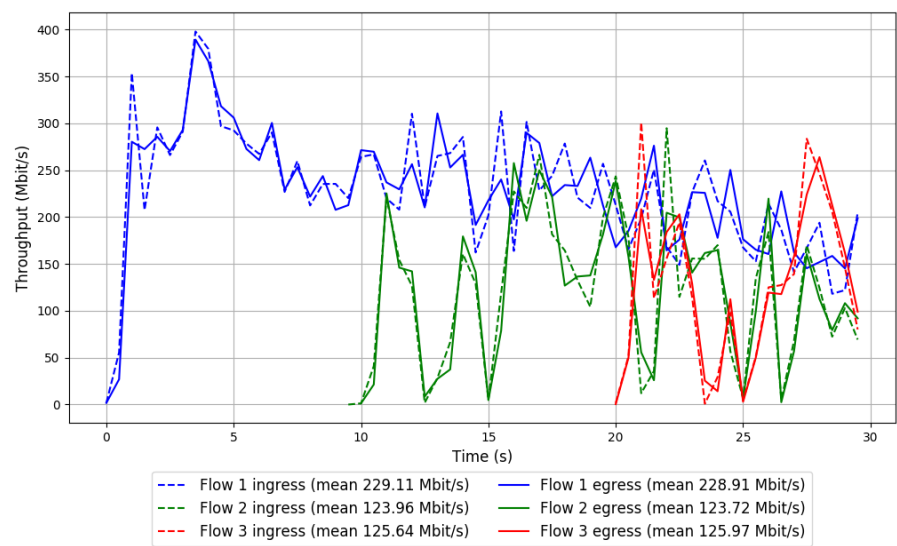
-- Flow 3:

Average throughput: 125.97 Mbit/s

95th percentile per-packet one-way delay: 144.915 ms

Loss rate: 0.00%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-04-18 13:08:10

End at: 2018-04-18 13:08:40

Below is generated by plot.py at 2018-04-18 18:03:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 300.73 Mbit/s

95th percentile per-packet one-way delay: 208.969 ms

Loss rate: 2.68%

-- Flow 1:

Average throughput: 185.06 Mbit/s

95th percentile per-packet one-way delay: 177.197 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 127.77 Mbit/s

95th percentile per-packet one-way delay: 274.973 ms

Loss rate: 8.15%

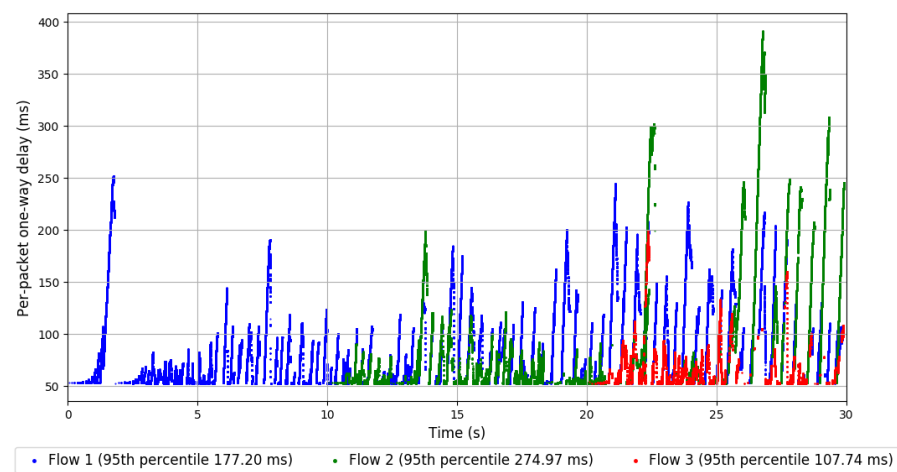
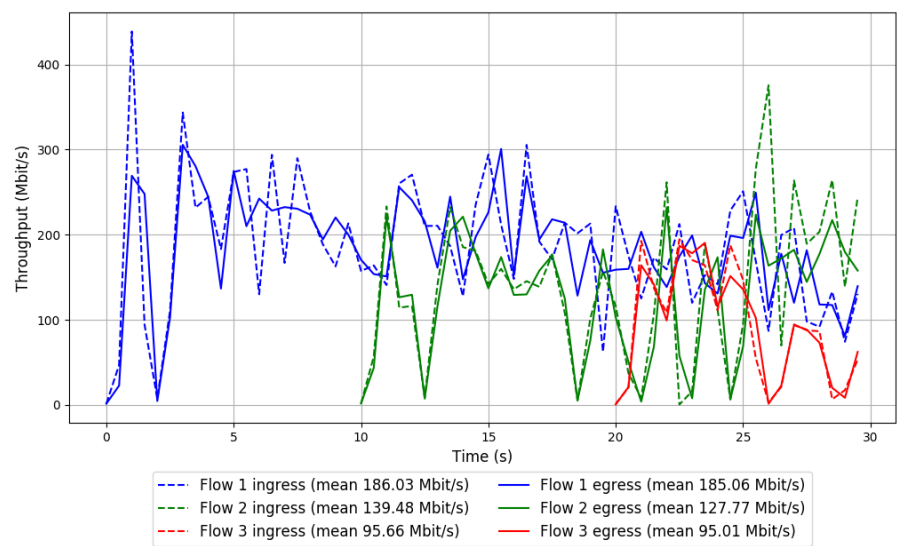
-- Flow 3:

Average throughput: 95.01 Mbit/s

95th percentile per-packet one-way delay: 107.742 ms

Loss rate: 0.13%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-04-18 13:23:34

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

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 320.98 Mbit/s

95th percentile per-packet one-way delay: 123.111 ms

Loss rate: 0.25%

-- Flow 1:

Average throughput: 194.27 Mbit/s

95th percentile per-packet one-way delay: 118.729 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 140.89 Mbit/s

95th percentile per-packet one-way delay: 133.242 ms

Loss rate: 0.84%

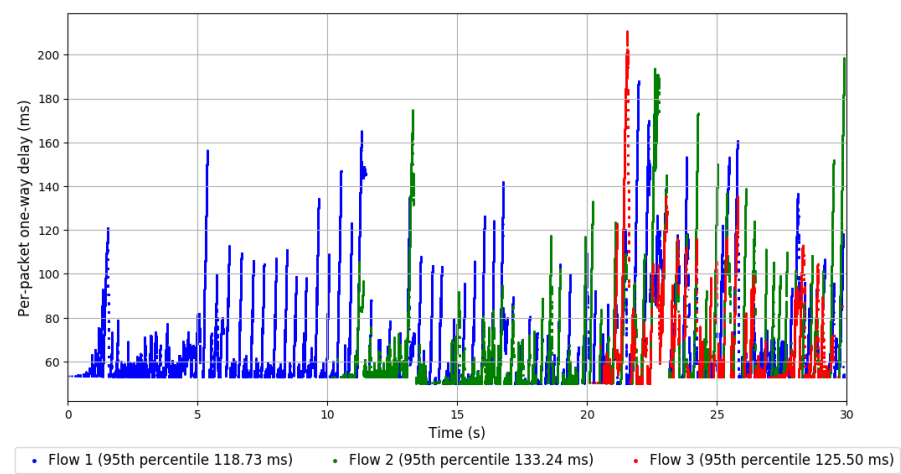
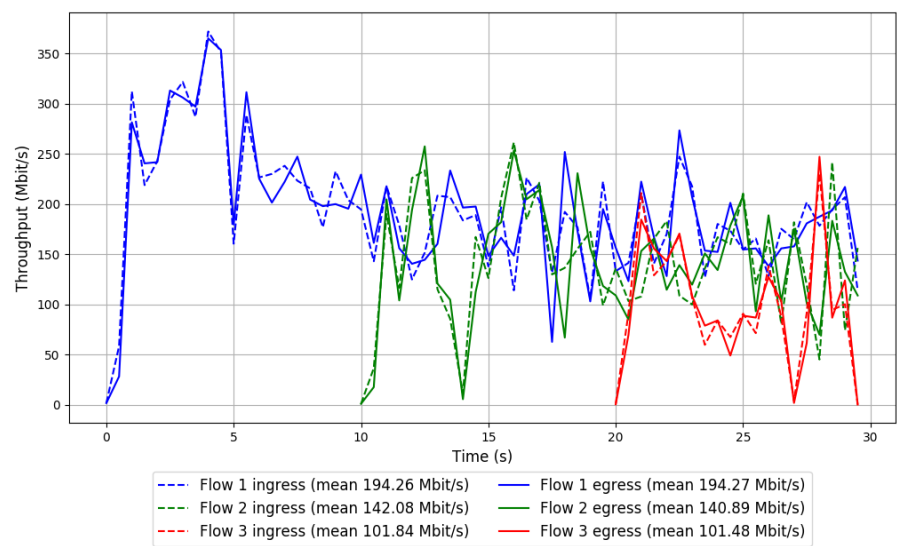
-- Flow 3:

Average throughput: 101.48 Mbit/s

95th percentile per-packet one-way delay: 125.499 ms

Loss rate: 0.00%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

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

End at: 2018-04-18 13:39:01

Below is generated by plot.py at 2018-04-18 18:05:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 341.10 Mbit/s

95th percentile per-packet one-way delay: 232.950 ms

Loss rate: 1.36%

-- Flow 1:

Average throughput: 169.00 Mbit/s

95th percentile per-packet one-way delay: 128.300 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 207.20 Mbit/s

95th percentile per-packet one-way delay: 278.775 ms

Loss rate: 3.19%

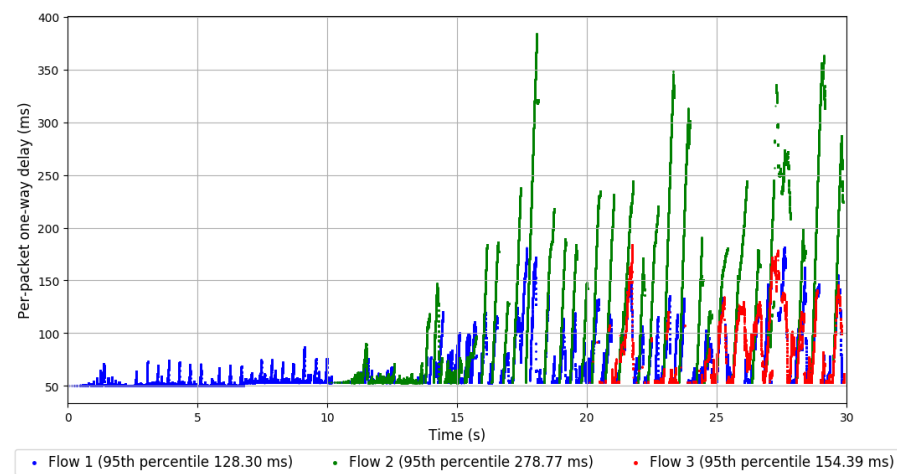
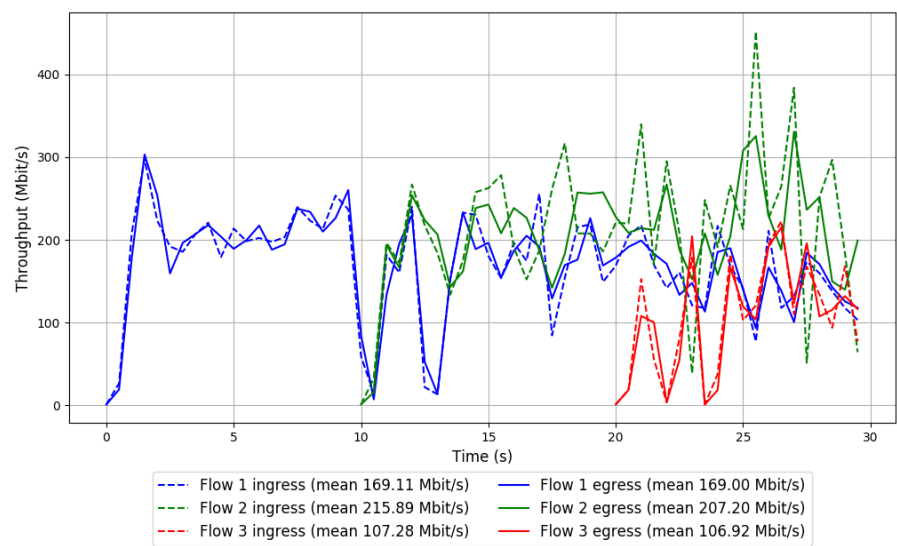
-- Flow 3:

Average throughput: 106.92 Mbit/s

95th percentile per-packet one-way delay: 154.392 ms

Loss rate: 0.26%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-04-18 13:54:20

End at: 2018-04-18 13:54:50

Below is generated by plot.py at 2018-04-18 18:05:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 323.82 Mbit/s

95th percentile per-packet one-way delay: 137.245 ms

Loss rate: 0.37%

-- Flow 1:

Average throughput: 195.37 Mbit/s

95th percentile per-packet one-way delay: 102.359 ms

Loss rate: 0.18%

-- Flow 2:

Average throughput: 135.01 Mbit/s

95th percentile per-packet one-way delay: 192.945 ms

Loss rate: 0.53%

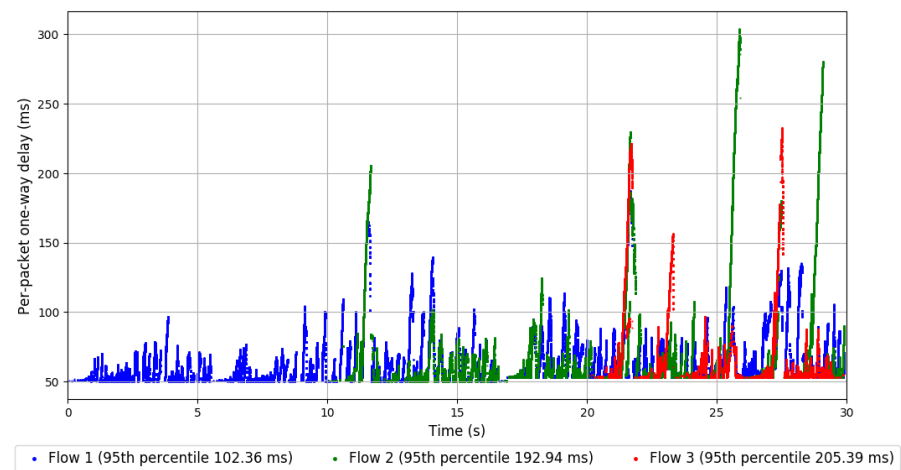
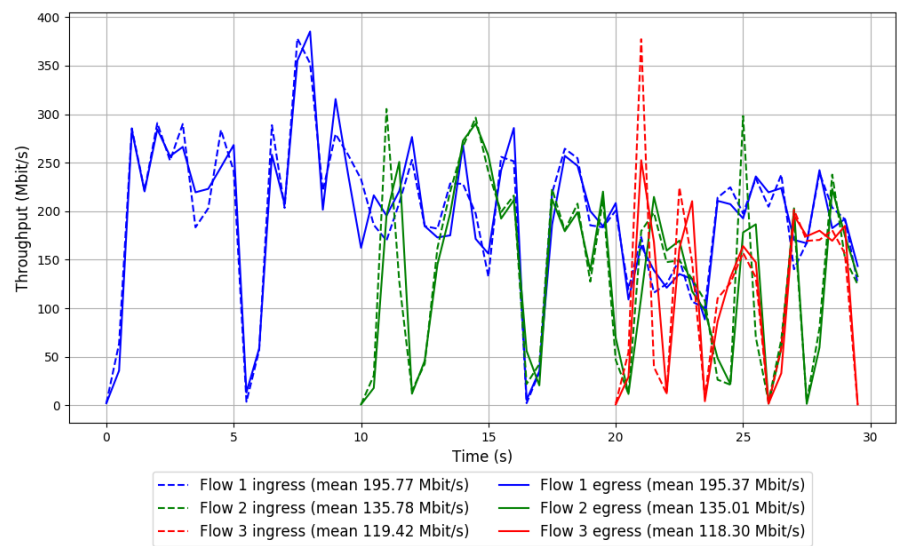
-- Flow 3:

Average throughput: 118.30 Mbit/s

95th percentile per-packet one-way delay: 205.392 ms

Loss rate: 0.93%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2018-04-18 14:09:44

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

Below is generated by plot.py at 2018-04-18 18:05:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 352.16 Mbit/s

95th percentile per-packet one-way delay: 141.990 ms

Loss rate: 1.70%

-- Flow 1:

Average throughput: 199.46 Mbit/s

95th percentile per-packet one-way delay: 117.480 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 170.10 Mbit/s

95th percentile per-packet one-way delay: 111.419 ms

Loss rate: 0.23%

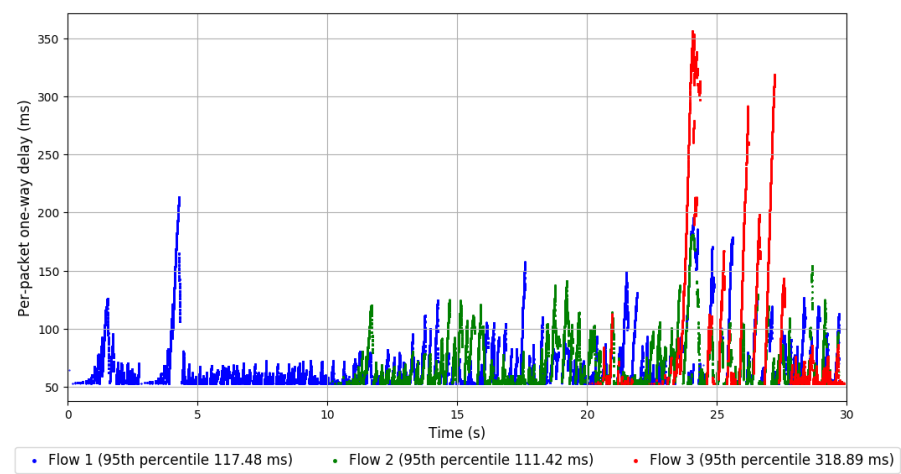
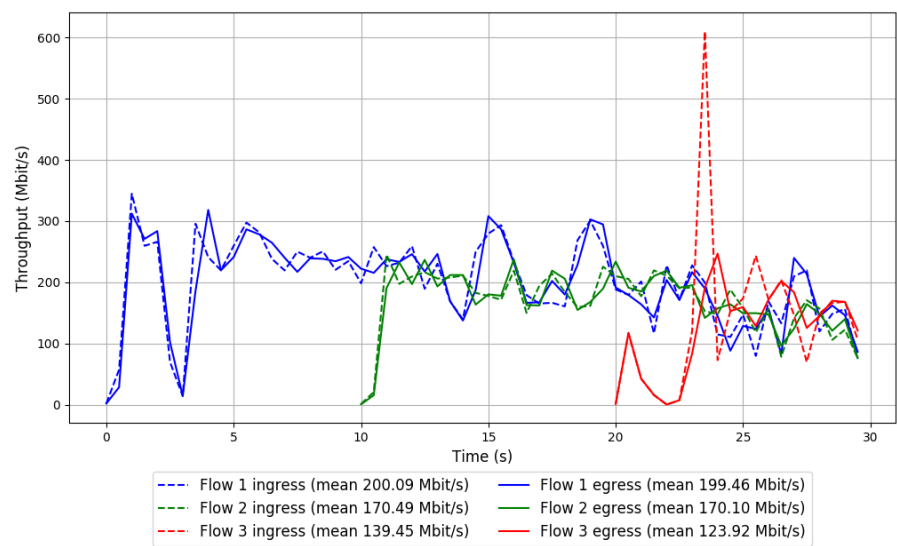
-- Flow 3:

Average throughput: 123.92 Mbit/s

95th percentile per-packet one-way delay: 318.887 ms

Loss rate: 11.15%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2018-04-18 14:25:13

End at: 2018-04-18 14:25:43

Below is generated by plot.py at 2018-04-18 18:06:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 356.54 Mbit/s

95th percentile per-packet one-way delay: 141.339 ms

Loss rate: 0.82%

-- Flow 1:

Average throughput: 221.58 Mbit/s

95th percentile per-packet one-way delay: 128.891 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 156.02 Mbit/s

95th percentile per-packet one-way delay: 162.855 ms

Loss rate: 1.25%

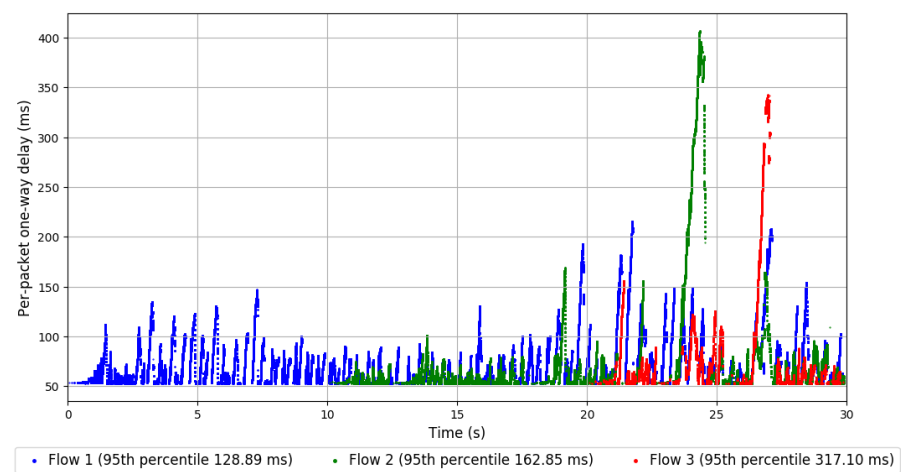
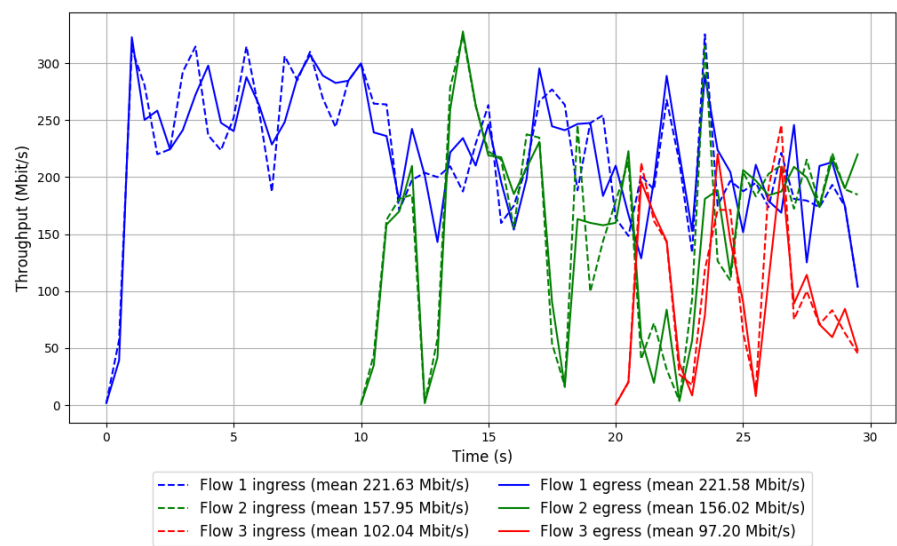
-- Flow 3:

Average throughput: 97.20 Mbit/s

95th percentile per-packet one-way delay: 317.102 ms

Loss rate: 4.74%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2018-04-18 14:40:55

End at: 2018-04-18 14:41:25

Below is generated by plot.py at 2018-04-18 18:06:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 289.70 Mbit/s

95th percentile per-packet one-way delay: 245.205 ms

Loss rate: 2.28%

-- Flow 1:

Average throughput: 190.47 Mbit/s

95th percentile per-packet one-way delay: 234.751 ms

Loss rate: 1.00%

-- Flow 2:

Average throughput: 101.47 Mbit/s

95th percentile per-packet one-way delay: 301.452 ms

Loss rate: 6.71%

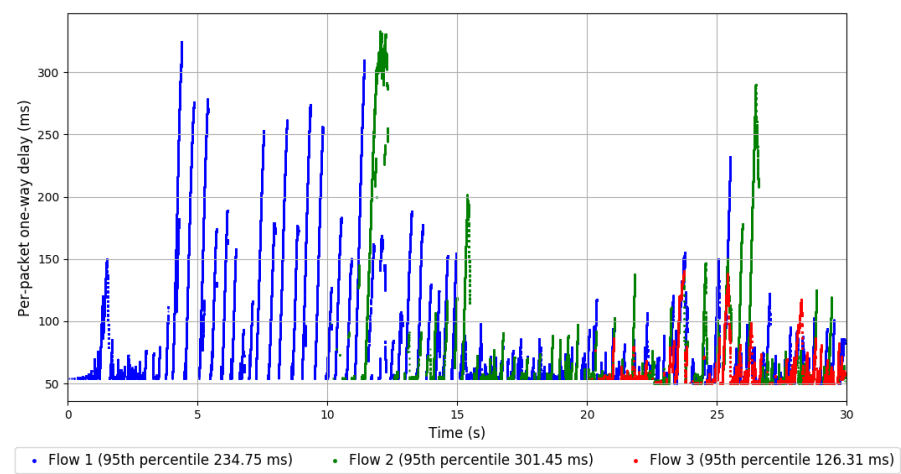
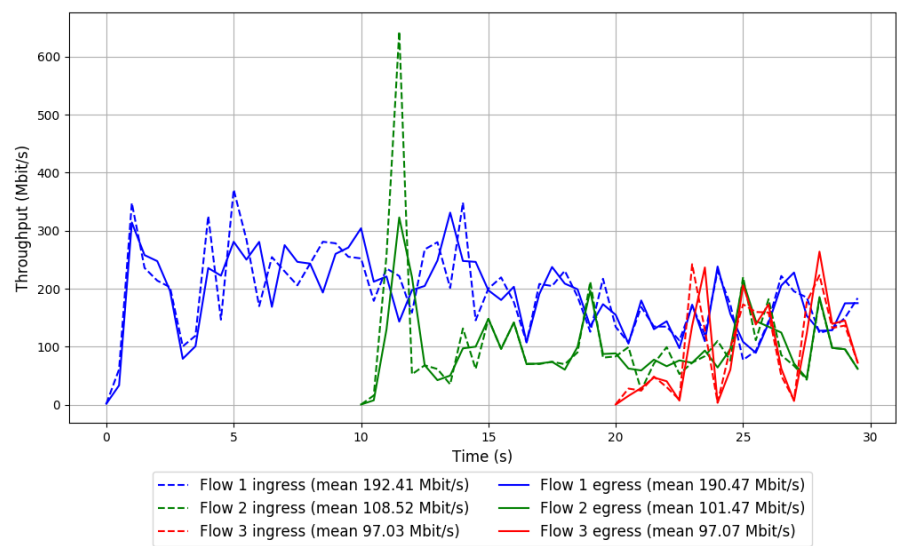
-- Flow 3:

Average throughput: 97.07 Mbit/s

95th percentile per-packet one-way delay: 126.312 ms

Loss rate: 0.01%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2018-04-18 14:56:30

End at: 2018-04-18 14:57:00

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 330.05 Mbit/s

95th percentile per-packet one-way delay: 123.290 ms

Loss rate: 0.09%

-- Flow 1:

Average throughput: 184.00 Mbit/s

95th percentile per-packet one-way delay: 119.691 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 167.54 Mbit/s

95th percentile per-packet one-way delay: 129.693 ms

Loss rate: 0.26%

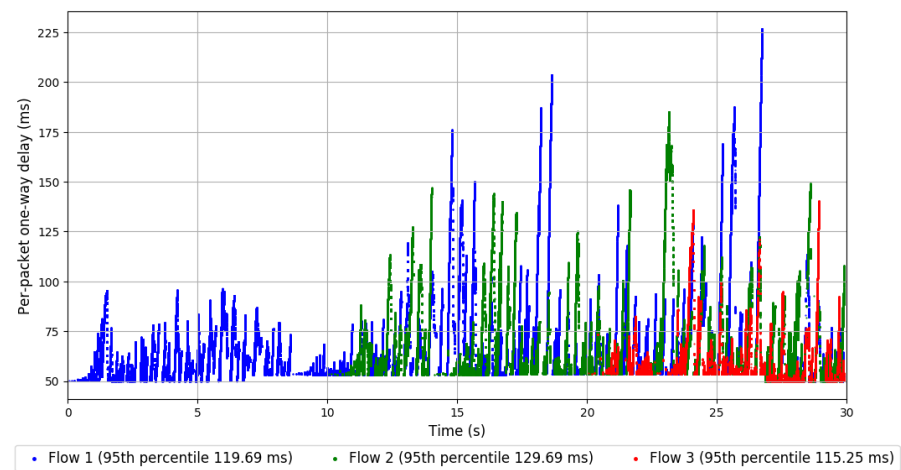
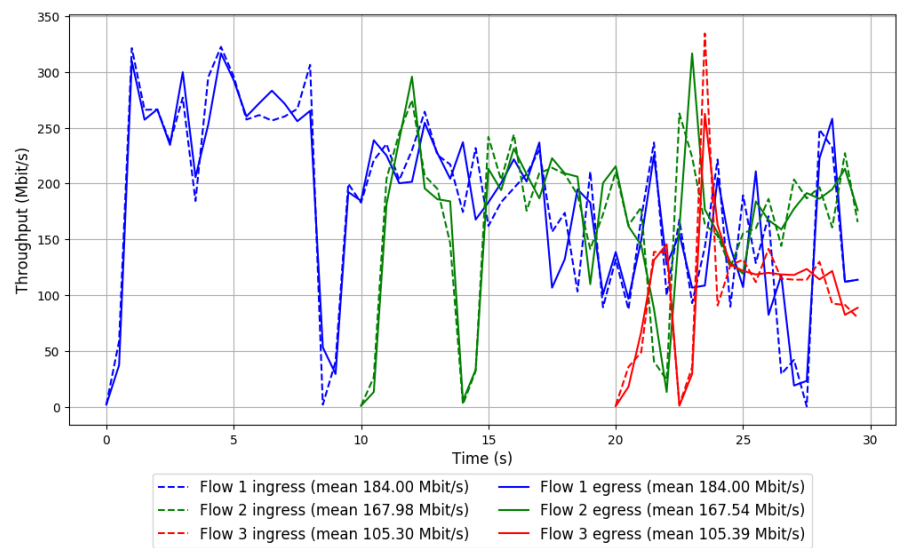
-- Flow 3:

Average throughput: 105.39 Mbit/s

95th percentile per-packet one-way delay: 115.250 ms

Loss rate: 0.00%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2018-04-18 15:11:49

End at: 2018-04-18 15:12:19

Below is generated by plot.py at 2018-04-18 18:08:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 313.70 Mbit/s

95th percentile per-packet one-way delay: 169.455 ms

Loss rate: 1.62%

-- Flow 1:

Average throughput: 207.04 Mbit/s

95th percentile per-packet one-way delay: 136.638 ms

Loss rate: 1.95%

-- Flow 2:

Average throughput: 93.04 Mbit/s

95th percentile per-packet one-way delay: 176.998 ms

Loss rate: 0.00%

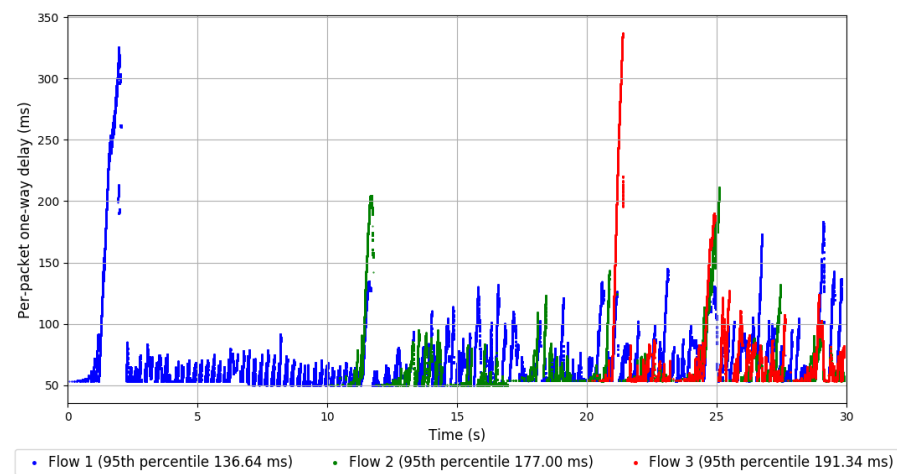
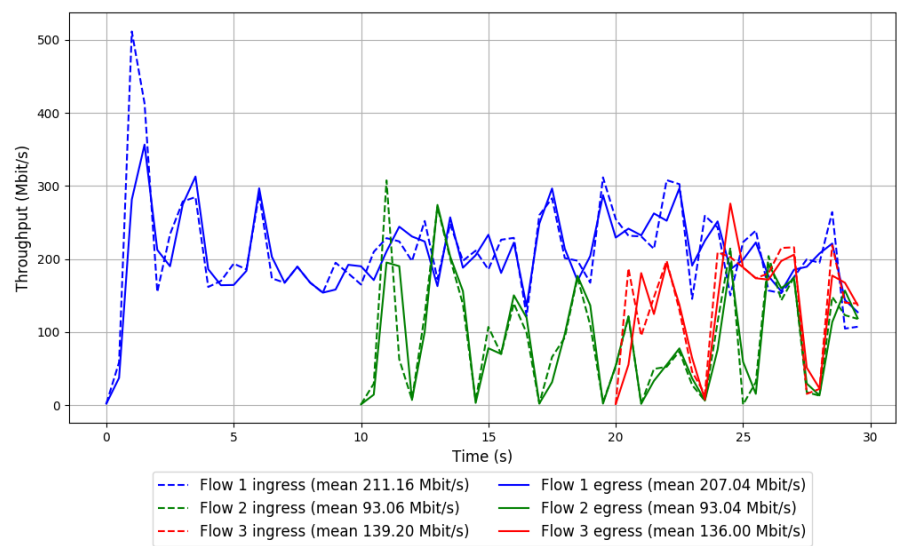
-- Flow 3:

Average throughput: 136.00 Mbit/s

95th percentile per-packet one-way delay: 191.344 ms

Loss rate: 2.28%

Run 10: Report of Verus — Data Link



Run 1: Statistics of Copa

Start at: 2018-04-18 13:01:31

End at: 2018-04-18 13:02:01

Below is generated by plot.py at 2018-04-18 18:09:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 169.95 Mbit/s

95th percentile per-packet one-way delay: 53.295 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 97.88 Mbit/s

95th percentile per-packet one-way delay: 53.020 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 84.33 Mbit/s

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

Loss rate: 0.01%

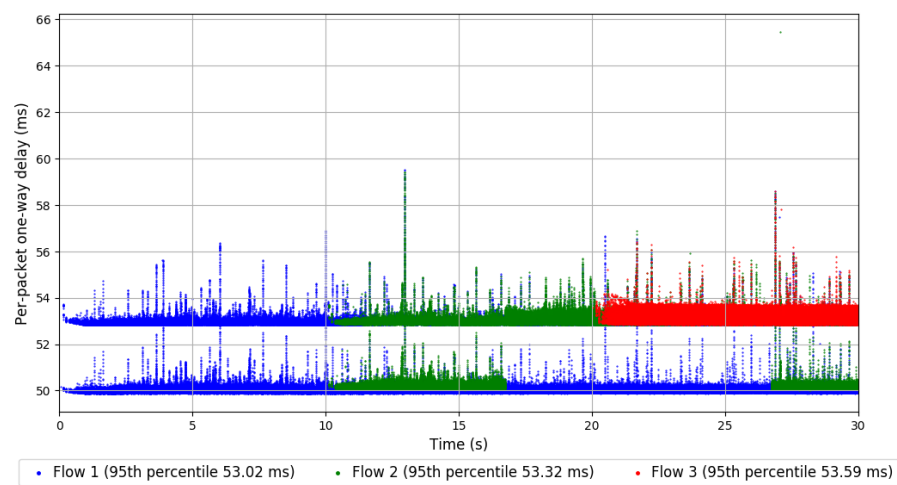
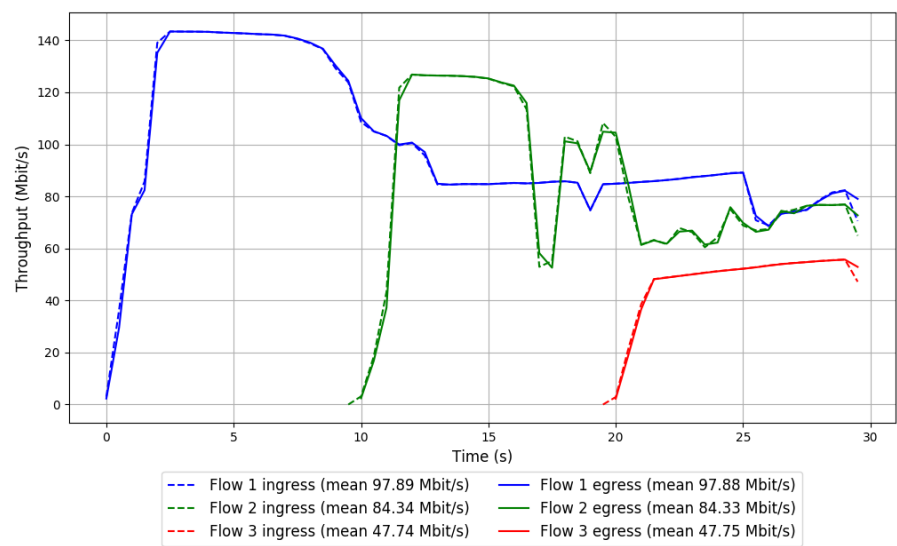
-- Flow 3:

Average throughput: 47.75 Mbit/s

95th percentile per-packet one-way delay: 53.593 ms

Loss rate: 0.03%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-04-18 13:16:46

End at: 2018-04-18 13:17:16

Below is generated by plot.py at 2018-04-18 18:10:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 166.54 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 91.60 Mbit/s

95th percentile per-packet one-way delay: 53.275 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 85.53 Mbit/s

95th percentile per-packet one-way delay: 53.172 ms

Loss rate: 0.00%

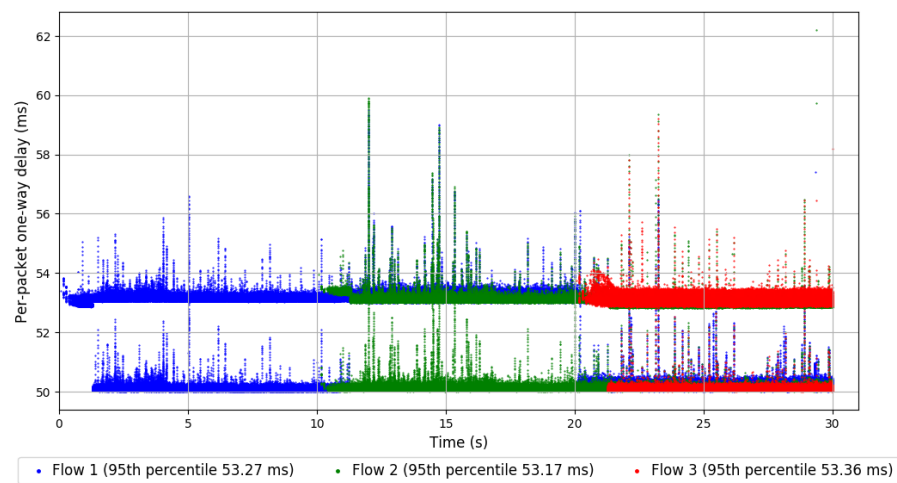
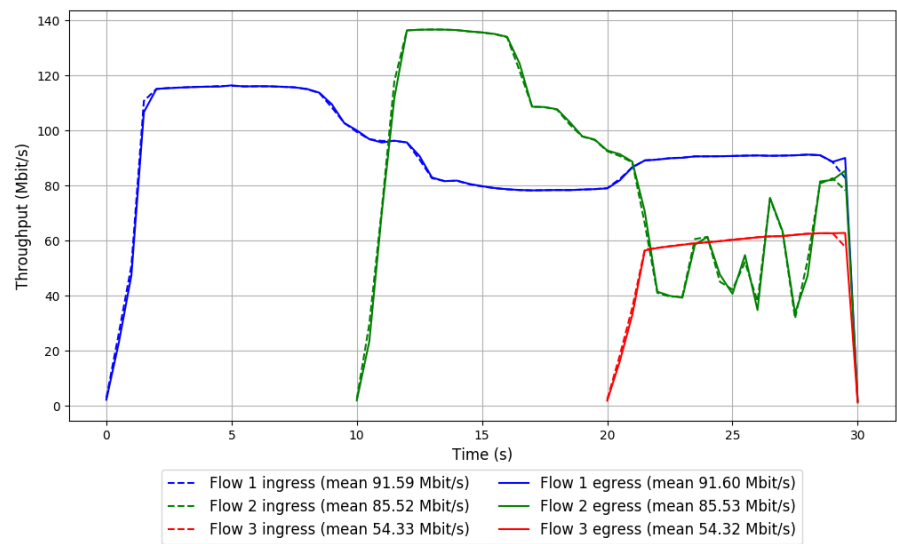
-- Flow 3:

Average throughput: 54.32 Mbit/s

95th percentile per-packet one-way delay: 53.364 ms

Loss rate: 0.00%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-04-18 13:31:59

End at: 2018-04-18 13:32:29

Below is generated by plot.py at 2018-04-18 18:10:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 175.41 Mbit/s

95th percentile per-packet one-way delay: 53.559 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 83.08 Mbit/s

95th percentile per-packet one-way delay: 53.524 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 94.25 Mbit/s

95th percentile per-packet one-way delay: 53.629 ms

Loss rate: 0.00%

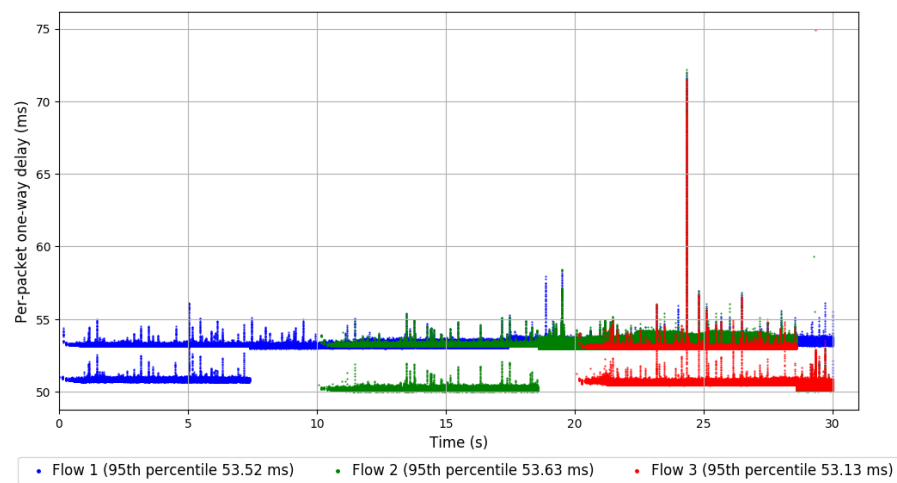
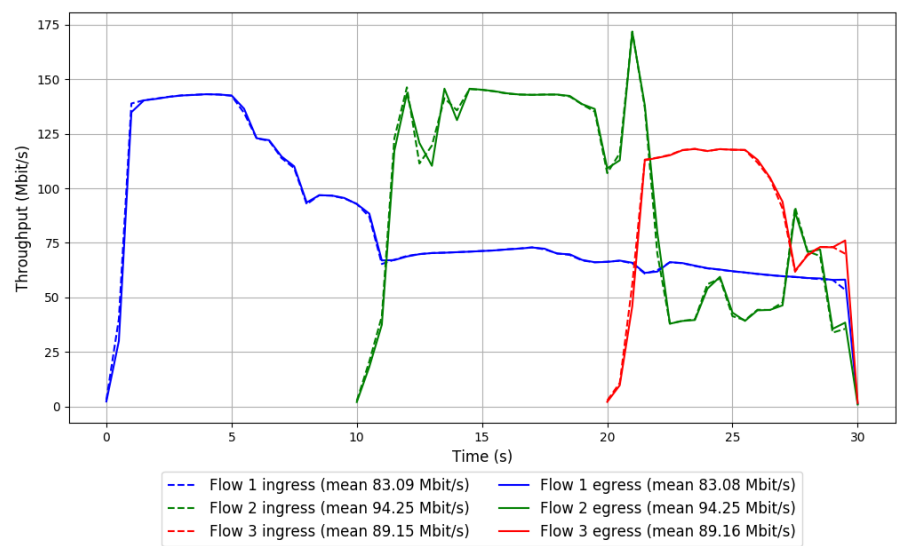
-- Flow 3:

Average throughput: 89.16 Mbit/s

95th percentile per-packet one-way delay: 53.129 ms

Loss rate: 0.00%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

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

End at: 2018-04-18 13:47:42

Below is generated by plot.py at 2018-04-18 18:17:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 319.69 Mbit/s

95th percentile per-packet one-way delay: 249.820 ms

Loss rate: 40.22%

-- Flow 1:

Average throughput: 59.74 Mbit/s

95th percentile per-packet one-way delay: 161.097 ms

Loss rate: 1.42%

-- Flow 2:

Average throughput: 319.17 Mbit/s

95th percentile per-packet one-way delay: 253.433 ms

Loss rate: 48.45%

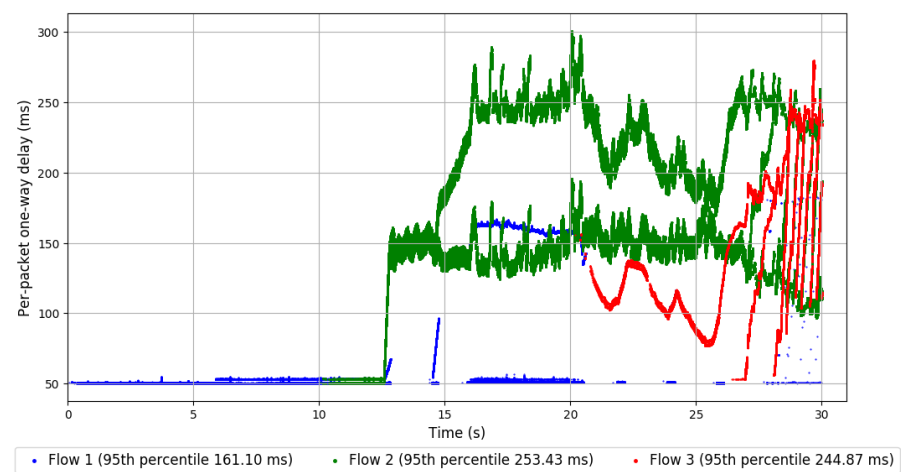
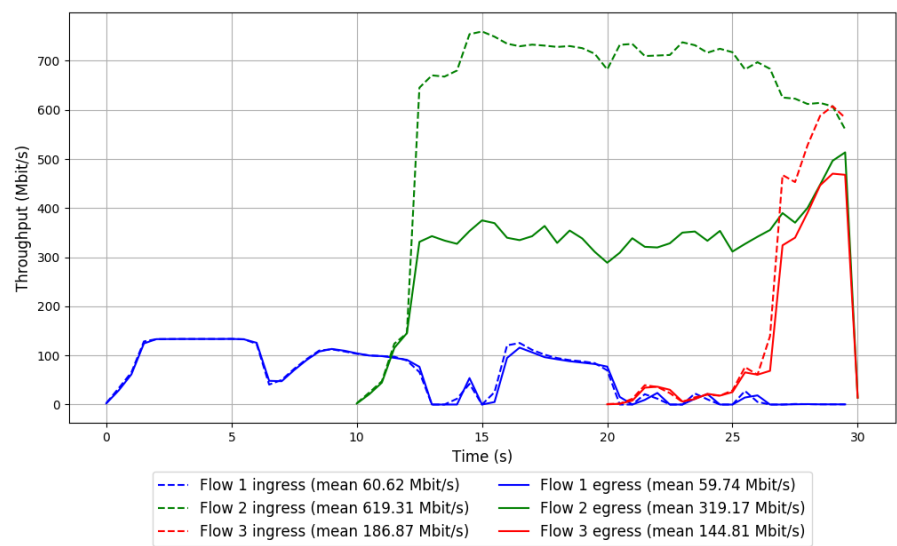
-- Flow 3:

Average throughput: 144.81 Mbit/s

95th percentile per-packet one-way delay: 244.873 ms

Loss rate: 23.29%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2018-04-18 14:02:56

End at: 2018-04-18 14:03:26

Below is generated by plot.py at 2018-04-18 18:17:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 209.61 Mbit/s

95th percentile per-packet one-way delay: 53.364 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 100.11 Mbit/s

95th percentile per-packet one-way delay: 53.393 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 115.94 Mbit/s

95th percentile per-packet one-way delay: 53.299 ms

Loss rate: 0.00%

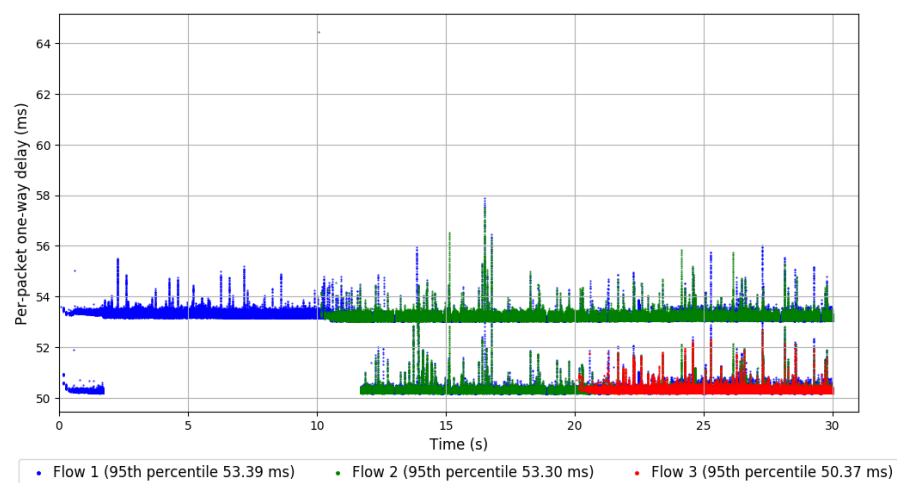
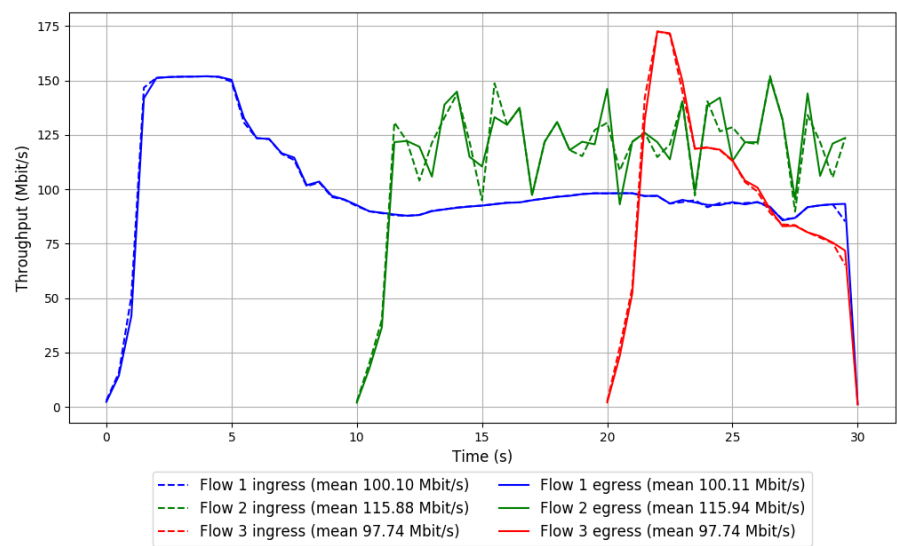
-- Flow 3:

Average throughput: 97.74 Mbit/s

95th percentile per-packet one-way delay: 50.369 ms

Loss rate: 0.00%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2018-04-18 14:18:21

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

Below is generated by plot.py at 2018-04-18 18:17:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 200.15 Mbit/s

95th percentile per-packet one-way delay: 53.371 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 98.01 Mbit/s

95th percentile per-packet one-way delay: 53.366 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 110.41 Mbit/s

95th percentile per-packet one-way delay: 53.402 ms

Loss rate: 0.00%

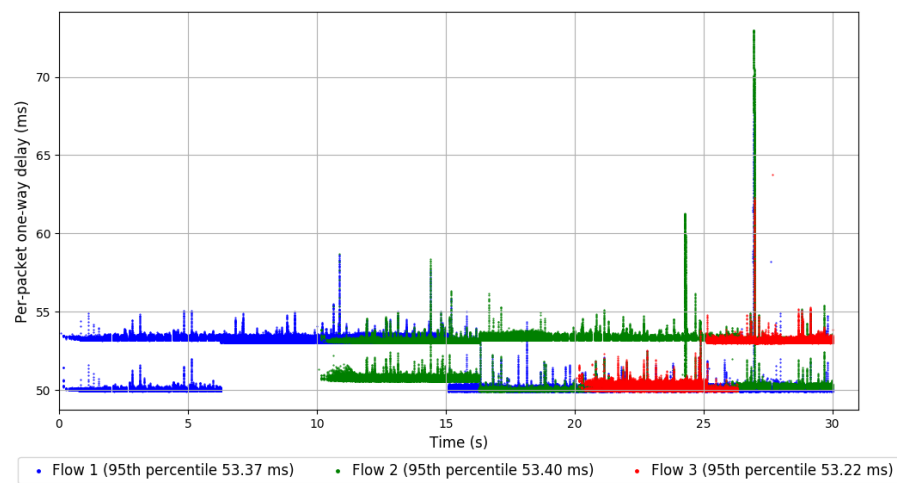
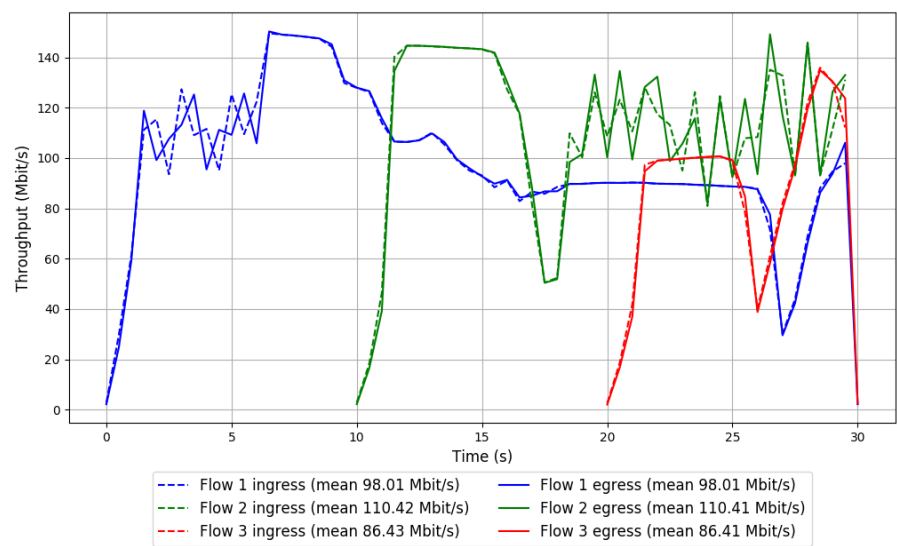
-- Flow 3:

Average throughput: 86.41 Mbit/s

95th percentile per-packet one-way delay: 53.219 ms

Loss rate: 0.03%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2018-04-18 14:33:51

End at: 2018-04-18 14:34:21

Below is generated by plot.py at 2018-04-18 18:17:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 235.18 Mbit/s

95th percentile per-packet one-way delay: 134.310 ms

Loss rate: 10.02%

-- Flow 1:

Average throughput: 109.32 Mbit/s

95th percentile per-packet one-way delay: 53.326 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 87.43 Mbit/s

95th percentile per-packet one-way delay: 53.117 ms

Loss rate: 0.01%

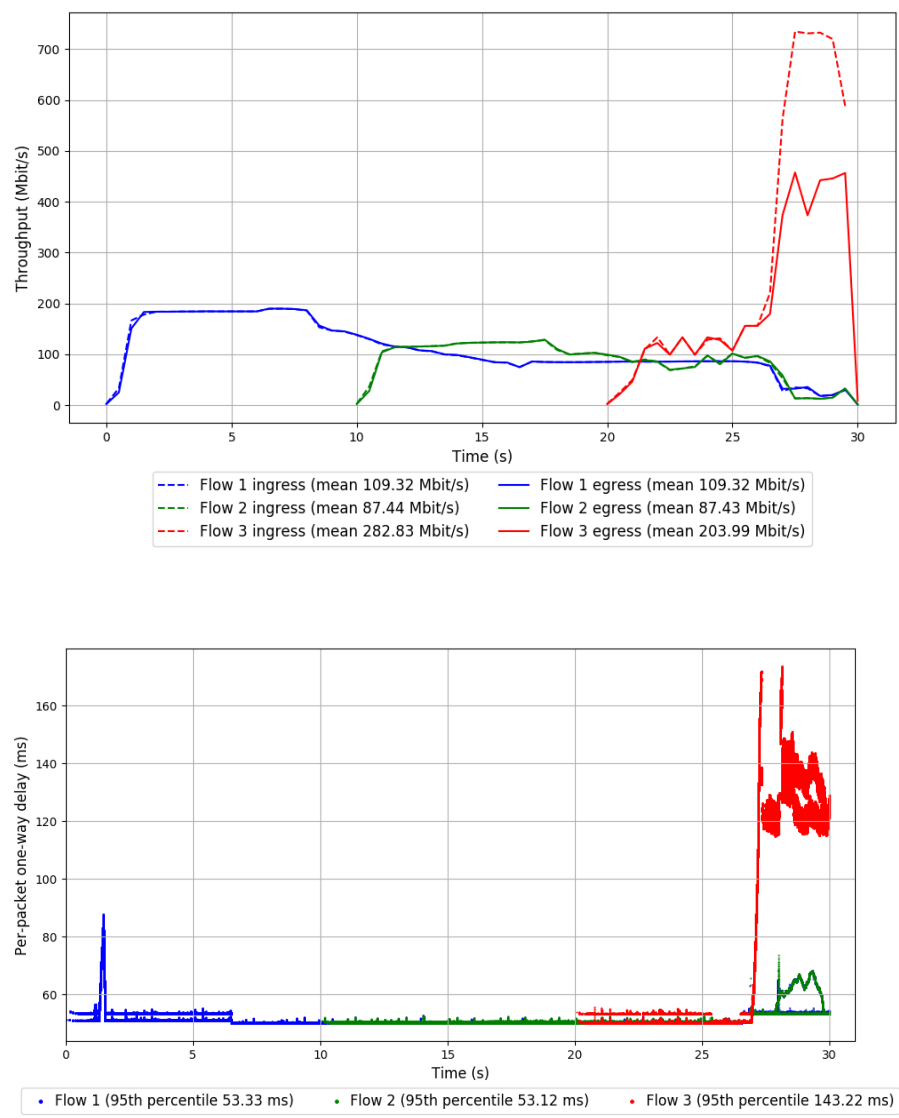
-- Flow 3:

Average throughput: 203.99 Mbit/s

95th percentile per-packet one-way delay: 143.218 ms

Loss rate: 27.90%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2018-04-18 14:49:31

End at: 2018-04-18 14:50:01

Below is generated by plot.py at 2018-04-18 18:20:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 338.72 Mbit/s

95th percentile per-packet one-way delay: 246.344 ms

Loss rate: 34.83%

-- Flow 1:

Average throughput: 140.37 Mbit/s

95th percentile per-packet one-way delay: 194.039 ms

Loss rate: 17.02%

-- Flow 2:

Average throughput: 297.70 Mbit/s

95th percentile per-packet one-way delay: 250.154 ms

Loss rate: 43.43%

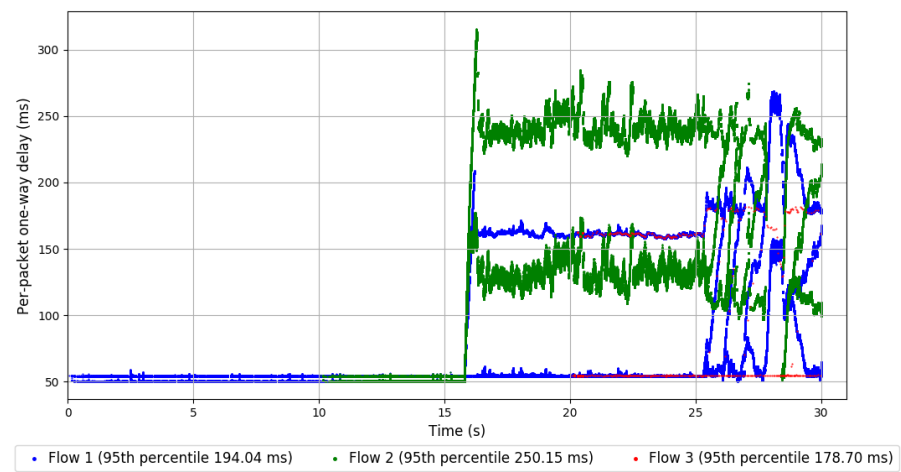
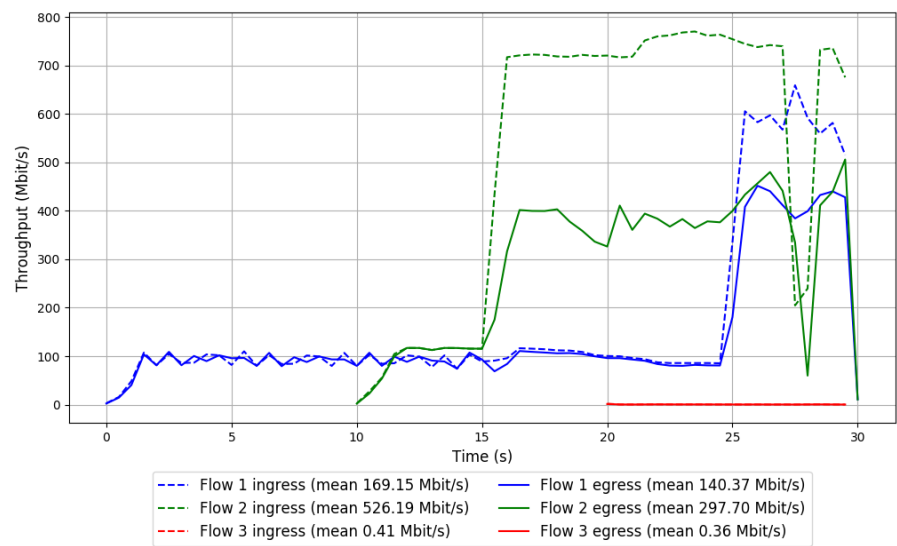
-- Flow 3:

Average throughput: 0.36 Mbit/s

95th percentile per-packet one-way delay: 178.701 ms

Loss rate: 13.21%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

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

End at: 2018-04-18 15:05:25

Below is generated by plot.py at 2018-04-18 18:20:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 142.36 Mbit/s

95th percentile per-packet one-way delay: 53.589 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 78.47 Mbit/s

95th percentile per-packet one-way delay: 53.607 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 64.85 Mbit/s

95th percentile per-packet one-way delay: 53.409 ms

Loss rate: 0.00%

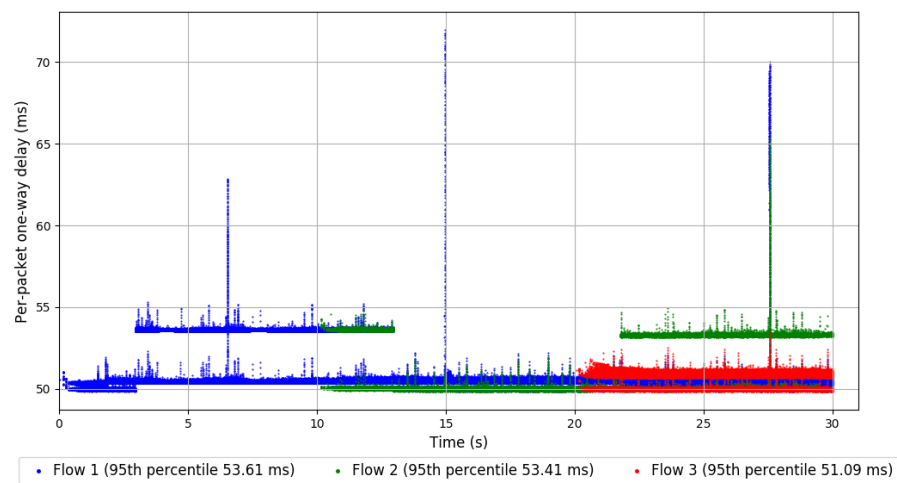
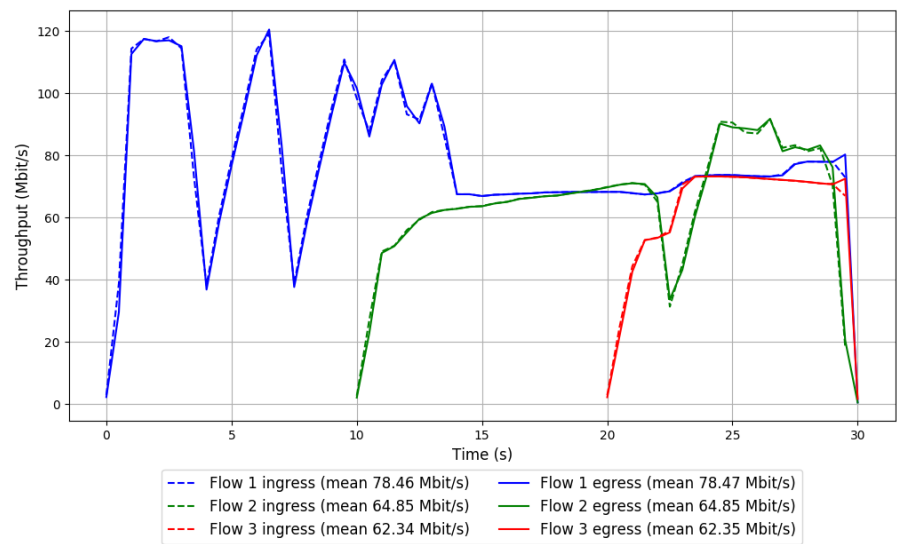
-- Flow 3:

Average throughput: 62.35 Mbit/s

95th percentile per-packet one-way delay: 51.091 ms

Loss rate: 0.00%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2018-04-18 15:20:22

End at: 2018-04-18 15:20:52

Below is generated by plot.py at 2018-04-18 18:20:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 179.73 Mbit/s

95th percentile per-packet one-way delay: 53.634 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 103.80 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 94.07 Mbit/s

95th percentile per-packet one-way delay: 53.607 ms

Loss rate: 0.00%

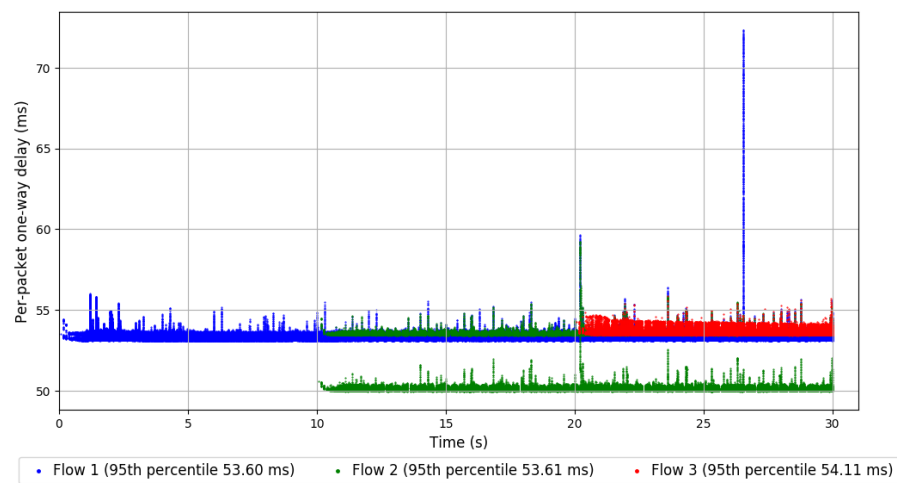
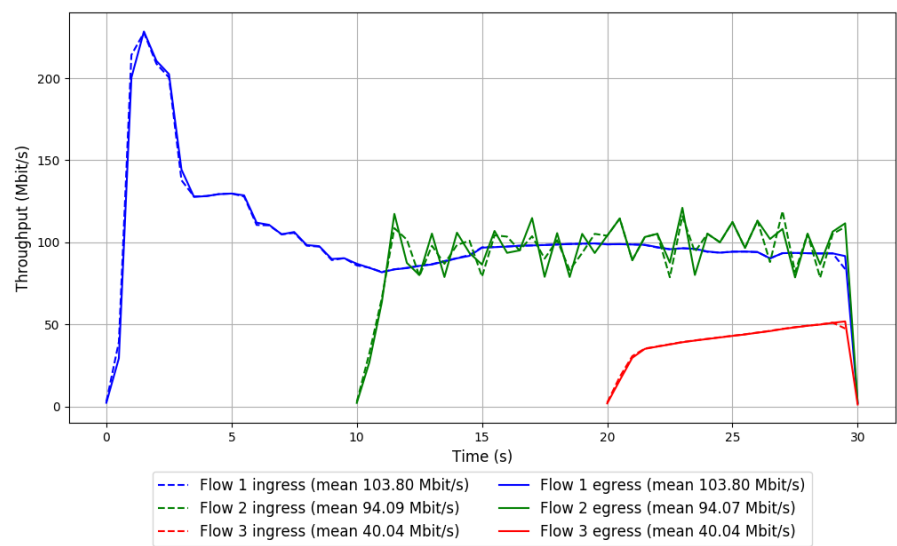
-- Flow 3:

Average throughput: 40.04 Mbit/s

95th percentile per-packet one-way delay: 54.113 ms

Loss rate: 0.00%

Run 10: Report of Copa — Data Link

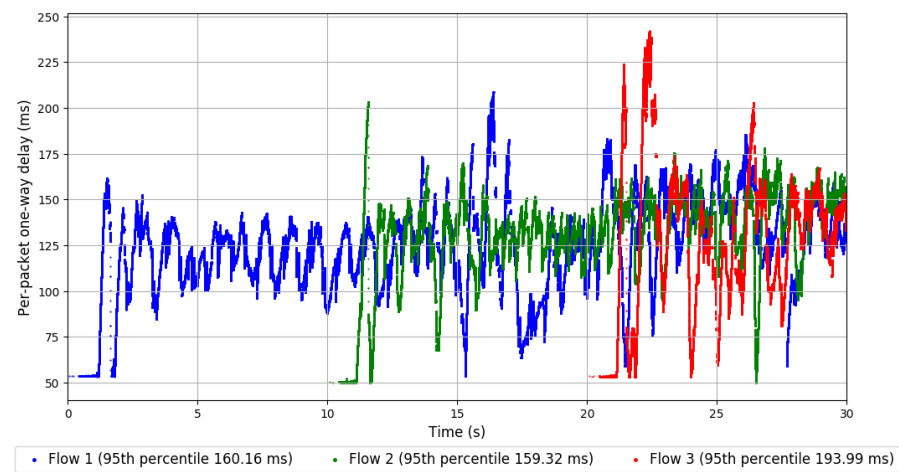
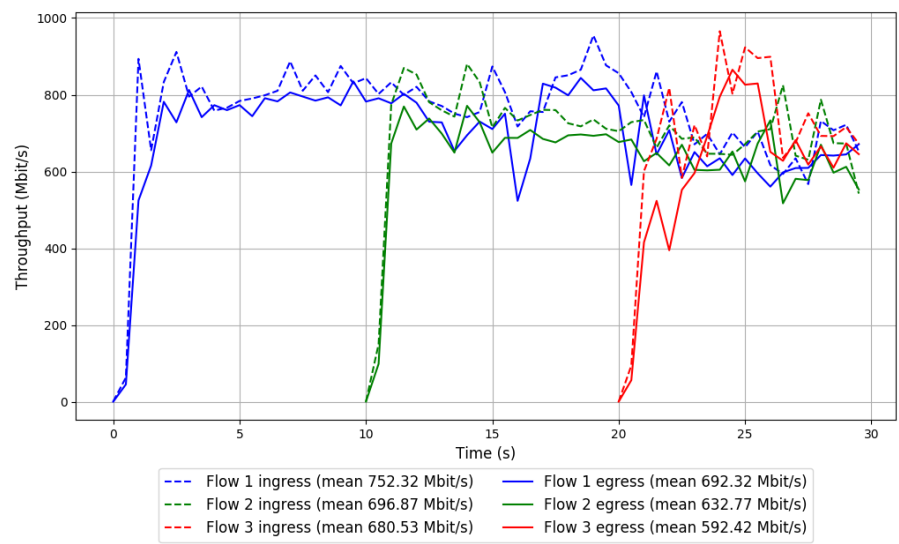


```
Run 1: Statistics of FillP

Start at: 2018-04-18 12:57:14
End at: 2018-04-18 12:57:44

# Below is generated by plot.py at 2018-04-18 18:34:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1308.96 Mbit/s
95th percentile per-packet one-way delay: 161.761 ms
Loss rate: 9.15%
-- Flow 1:
Average throughput: 692.32 Mbit/s
95th percentile per-packet one-way delay: 160.158 ms
Loss rate: 7.99%
-- Flow 2:
Average throughput: 632.77 Mbit/s
95th percentile per-packet one-way delay: 159.325 ms
Loss rate: 9.20%
-- Flow 3:
Average throughput: 592.42 Mbit/s
95th percentile per-packet one-way delay: 193.989 ms
Loss rate: 12.97%
```


Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-04-18 13:12:30

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

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 1259.47 Mbit/s

95th percentile per-packet one-way delay: 167.599 ms

Loss rate: 9.20%

-- Flow 1:

Average throughput: 658.22 Mbit/s

95th percentile per-packet one-way delay: 158.001 ms

Loss rate: 5.50%

-- Flow 2:

Average throughput: 651.58 Mbit/s

95th percentile per-packet one-way delay: 170.773 ms

Loss rate: 13.25%

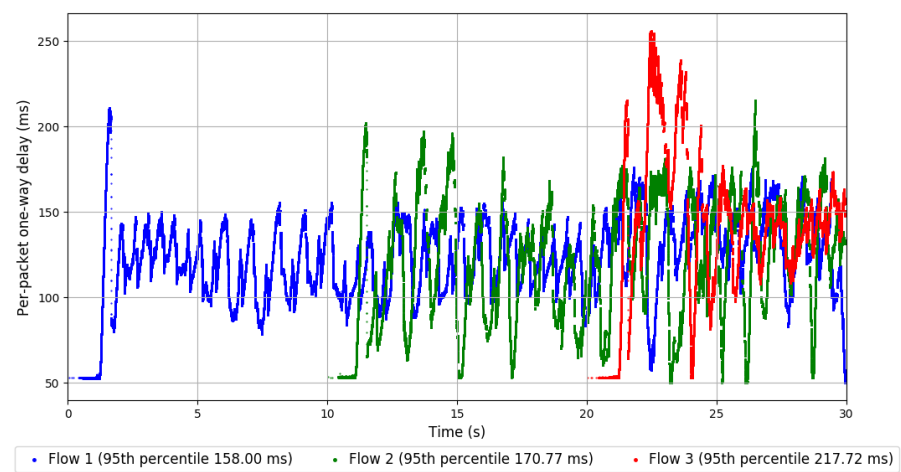
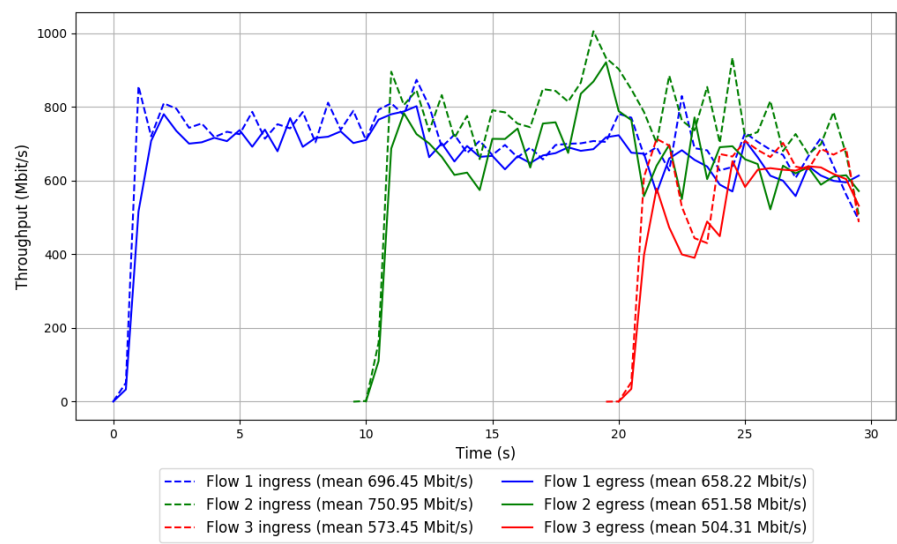
-- Flow 3:

Average throughput: 504.31 Mbit/s

95th percentile per-packet one-way delay: 217.720 ms

Loss rate: 12.08%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-04-18 13:27:47

End at: 2018-04-18 13:28:17

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 1070.57 Mbit/s

95th percentile per-packet one-way delay: 187.464 ms

Loss rate: 8.82%

-- Flow 1:

Average throughput: 573.56 Mbit/s

95th percentile per-packet one-way delay: 192.724 ms

Loss rate: 8.50%

-- Flow 2:

Average throughput: 639.85 Mbit/s

95th percentile per-packet one-way delay: 152.318 ms

Loss rate: 5.63%

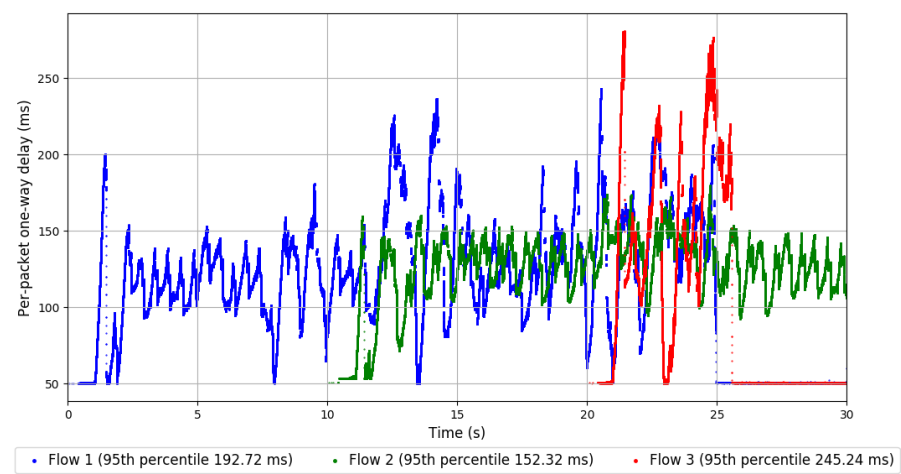
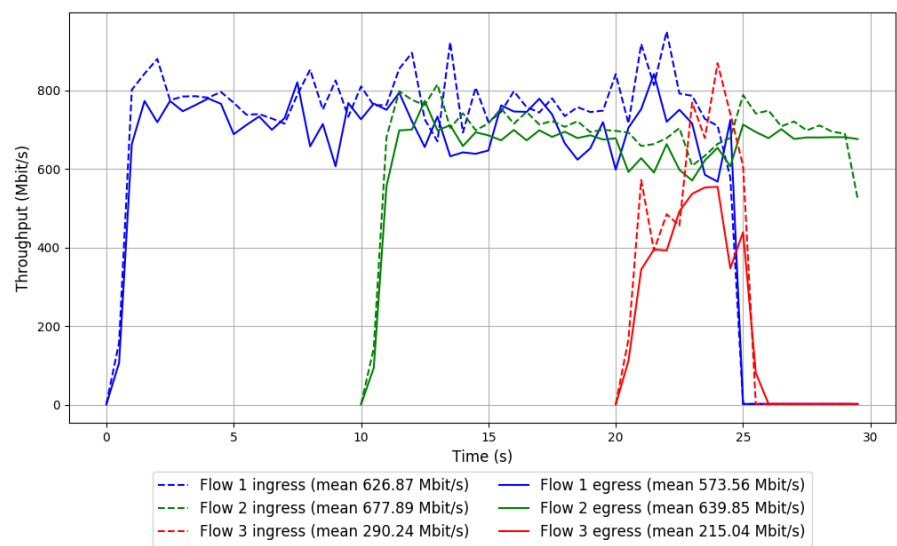
-- Flow 3:

Average throughput: 215.04 Mbit/s

95th percentile per-packet one-way delay: 245.243 ms

Loss rate: 25.91%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-04-18 13:42:47

End at: 2018-04-18 13:43:17

Below is generated by plot.py at 2018-04-18 18:38:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 1356.63 Mbit/s

95th percentile per-packet one-way delay: 165.926 ms

Loss rate: 10.19%

-- Flow 1:

Average throughput: 730.70 Mbit/s

95th percentile per-packet one-way delay: 153.328 ms

Loss rate: 7.77%

-- Flow 2:

Average throughput: 652.78 Mbit/s

95th percentile per-packet one-way delay: 185.124 ms

Loss rate: 14.39%

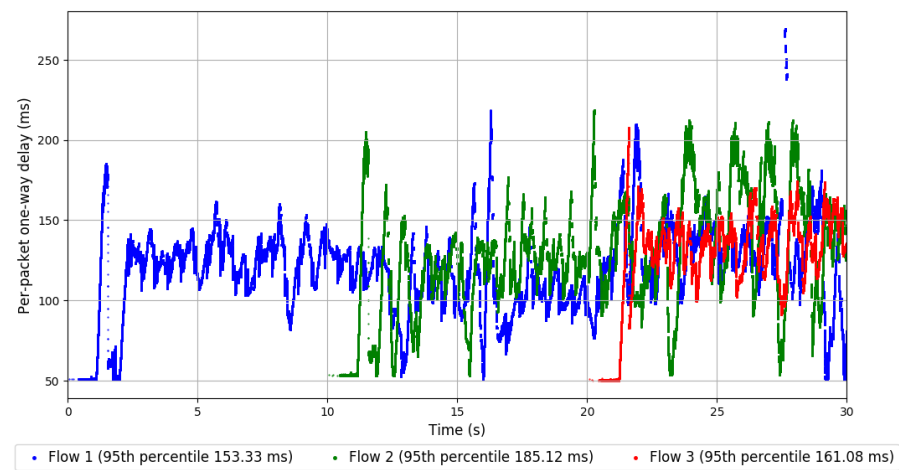
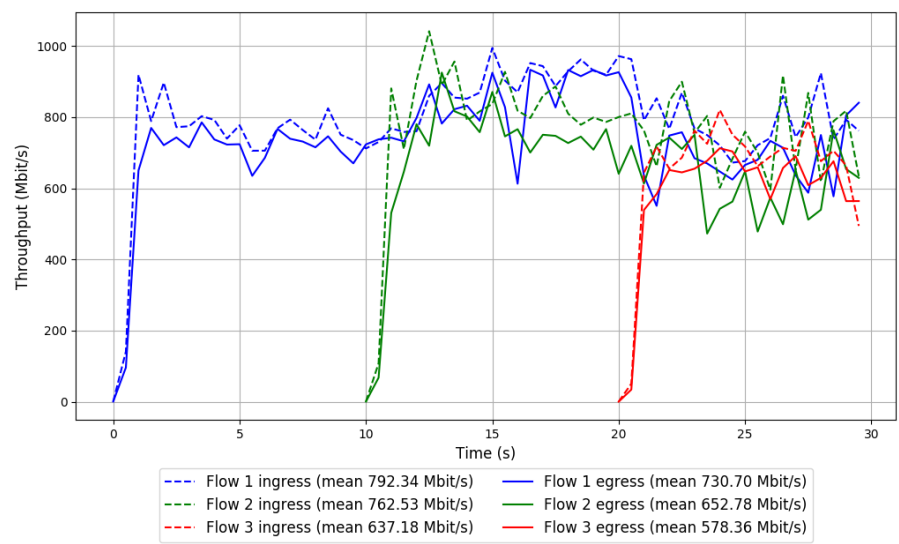
-- Flow 3:

Average throughput: 578.36 Mbit/s

95th percentile per-packet one-way delay: 161.084 ms

Loss rate: 9.20%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-04-18 13:58:37

End at: 2018-04-18 13:59:07

Below is generated by plot.py at 2018-04-18 18:39:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 1293.81 Mbit/s

95th percentile per-packet one-way delay: 181.384 ms

Loss rate: 9.85%

-- Flow 1:

Average throughput: 690.56 Mbit/s

95th percentile per-packet one-way delay: 157.039 ms

Loss rate: 8.36%

-- Flow 2:

Average throughput: 612.60 Mbit/s

95th percentile per-packet one-way delay: 189.242 ms

Loss rate: 11.52%

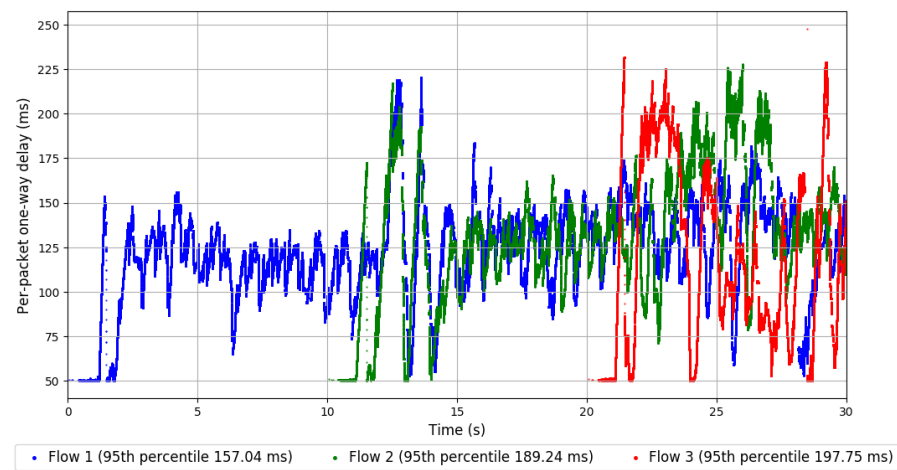
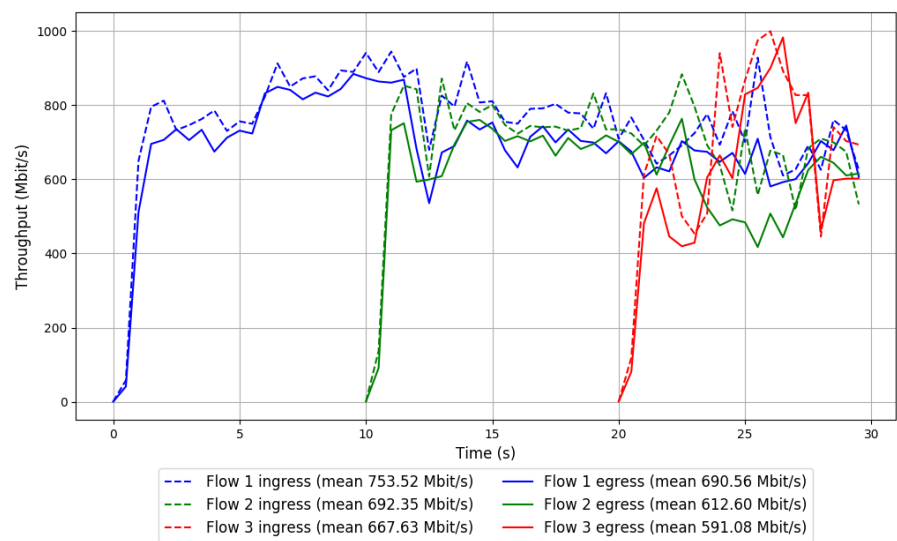
-- Flow 3:

Average throughput: 591.08 Mbit/s

95th percentile per-packet one-way delay: 197.750 ms

Loss rate: 11.47%

Run 5: Report of FillP — Data Link



Run 6: Statistics of FillP

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

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

Below is generated by plot.py at 2018-04-18 18:40:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 1344.72 Mbit/s

95th percentile per-packet one-way delay: 154.977 ms

Loss rate: 9.42%

-- Flow 1:

Average throughput: 703.38 Mbit/s

95th percentile per-packet one-way delay: 151.602 ms

Loss rate: 8.93%

-- Flow 2:

Average throughput: 662.81 Mbit/s

95th percentile per-packet one-way delay: 155.122 ms

Loss rate: 9.07%

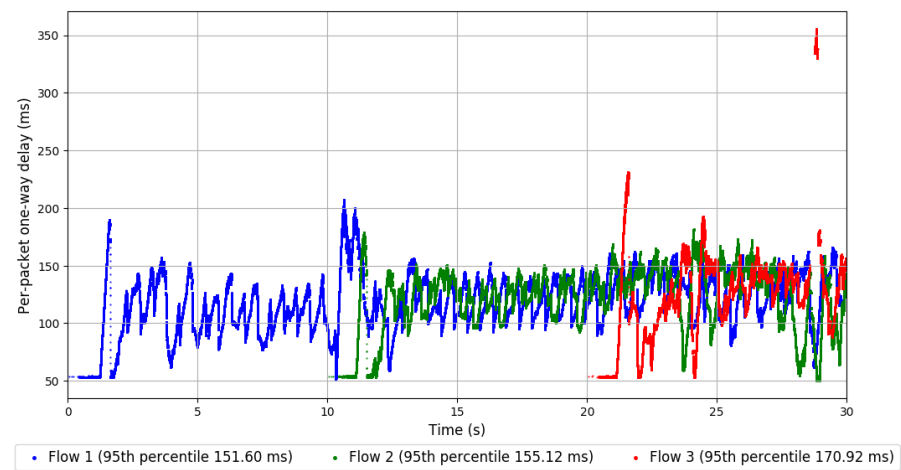
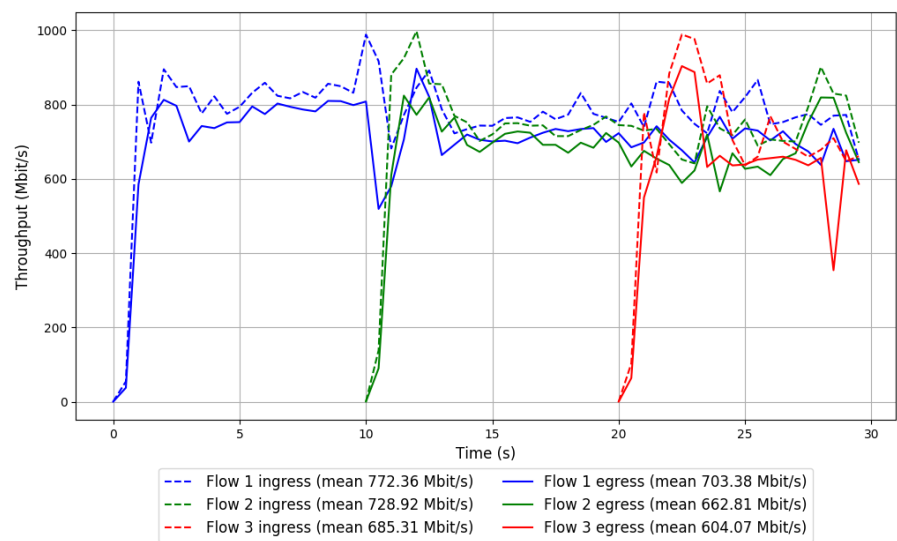
-- Flow 3:

Average throughput: 604.07 Mbit/s

95th percentile per-packet one-way delay: 170.922 ms

Loss rate: 11.85%

Run 6: Report of FillP — Data Link



Run 7: Statistics of FillP

Start at: 2018-04-18 14:29:33

End at: 2018-04-18 14:30:03

Below is generated by plot.py at 2018-04-18 18:40:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 1238.97 Mbit/s

95th percentile per-packet one-way delay: 158.273 ms

Loss rate: 8.52%

-- Flow 1:

Average throughput: 703.67 Mbit/s

95th percentile per-packet one-way delay: 153.390 ms

Loss rate: 8.39%

-- Flow 2:

Average throughput: 681.44 Mbit/s

95th percentile per-packet one-way delay: 158.259 ms

Loss rate: 6.46%

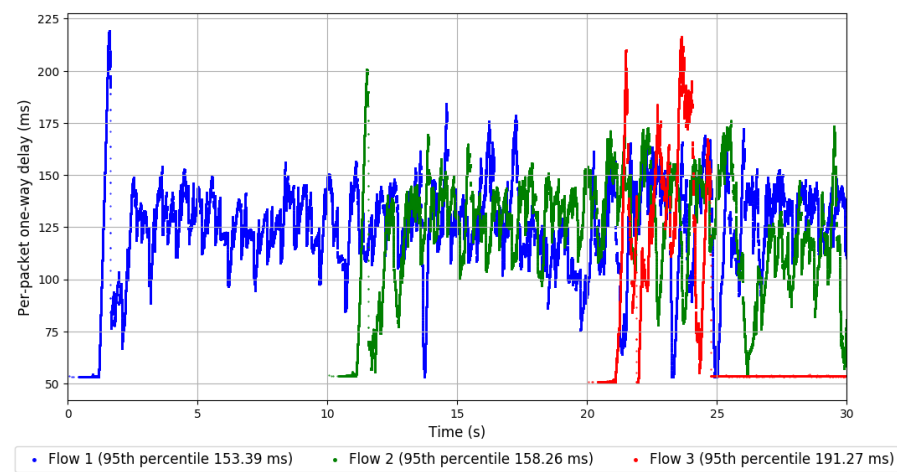
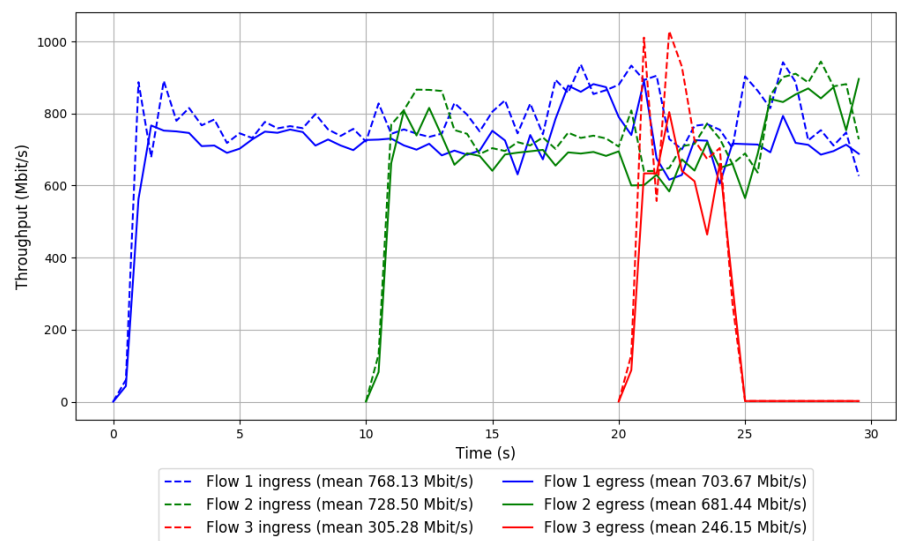
-- Flow 3:

Average throughput: 246.15 Mbit/s

95th percentile per-packet one-way delay: 191.268 ms

Loss rate: 19.35%

Run 7: Report of FillP — Data Link



Run 8: Statistics of FillP

Start at: 2018-04-18 14:45:12

End at: 2018-04-18 14:45:42

Below is generated by plot.py at 2018-04-18 18:46:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 1286.17 Mbit/s

95th percentile per-packet one-way delay: 250.833 ms

Loss rate: 7.41%

-- Flow 1:

Average throughput: 607.22 Mbit/s

95th percentile per-packet one-way delay: 252.018 ms

Loss rate: 5.38%

-- Flow 2:

Average throughput: 710.97 Mbit/s

95th percentile per-packet one-way delay: 150.724 ms

Loss rate: 7.32%

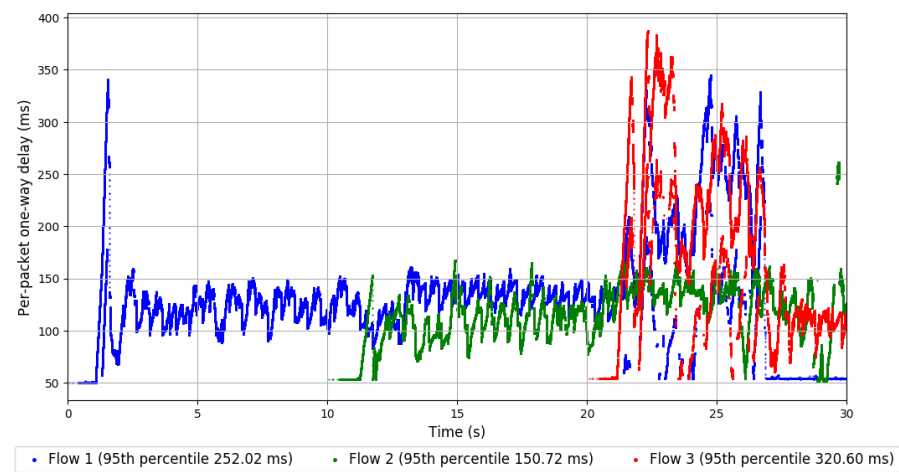
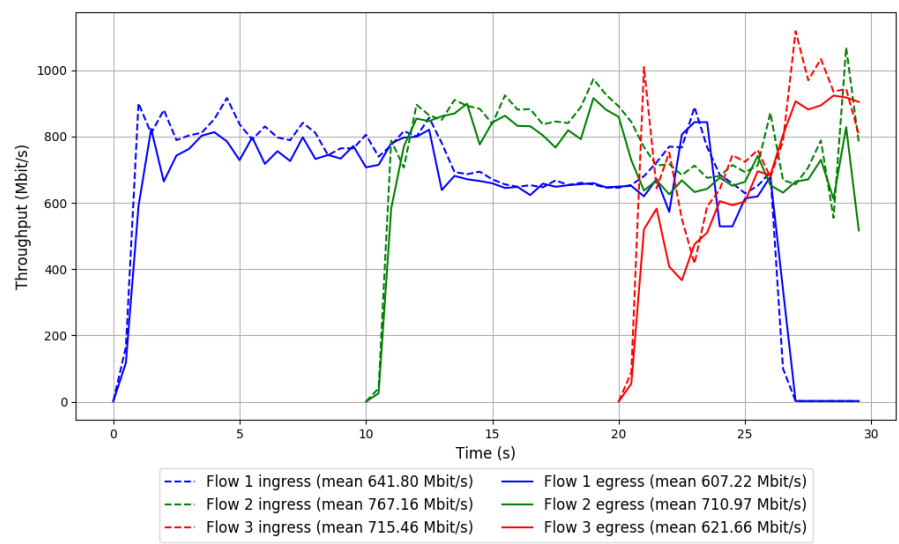
-- Flow 3:

Average throughput: 621.66 Mbit/s

95th percentile per-packet one-way delay: 320.597 ms

Loss rate: 13.11%

Run 8: Report of FillP — Data Link



Run 9: Statistics of FillP

Start at: 2018-04-18 15:00:44

End at: 2018-04-18 15:01:14

Below is generated by plot.py at 2018-04-18 18:55:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 1173.94 Mbit/s

95th percentile per-packet one-way delay: 185.960 ms

Loss rate: 9.97%

-- Flow 1:

Average throughput: 624.87 Mbit/s

95th percentile per-packet one-way delay: 174.615 ms

Loss rate: 8.62%

-- Flow 2:

Average throughput: 504.49 Mbit/s

95th percentile per-packet one-way delay: 200.083 ms

Loss rate: 11.68%

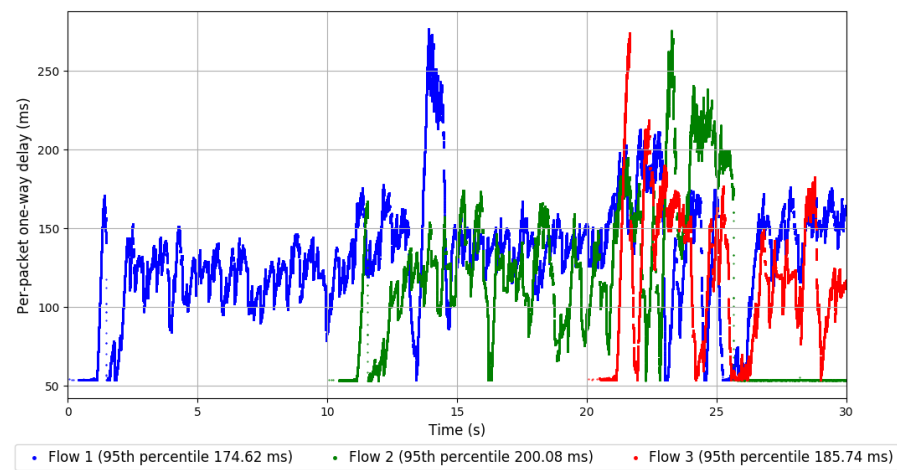
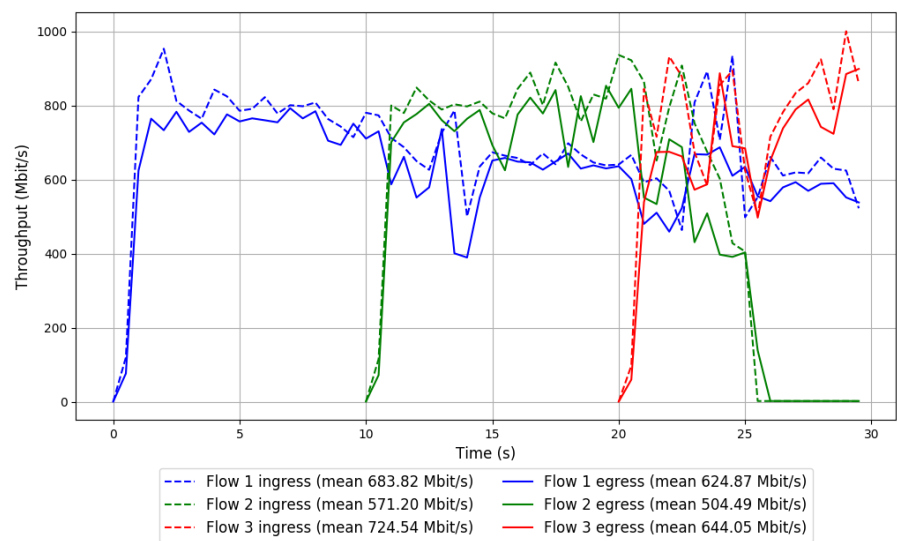
-- Flow 3:

Average throughput: 644.05 Mbit/s

95th percentile per-packet one-way delay: 185.740 ms

Loss rate: 11.11%

Run 9: Report of FillP — Data Link



Run 10: Statistics of FillP

Start at: 2018-04-18 15:16:06

End at: 2018-04-18 15:16:36

Below is generated by plot.py at 2018-04-18 19:00:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 1308.09 Mbit/s

95th percentile per-packet one-way delay: 165.171 ms

Loss rate: 9.98%

-- Flow 1:

Average throughput: 698.88 Mbit/s

95th percentile per-packet one-way delay: 158.928 ms

Loss rate: 7.70%

-- Flow 2:

Average throughput: 630.93 Mbit/s

95th percentile per-packet one-way delay: 161.526 ms

Loss rate: 10.28%

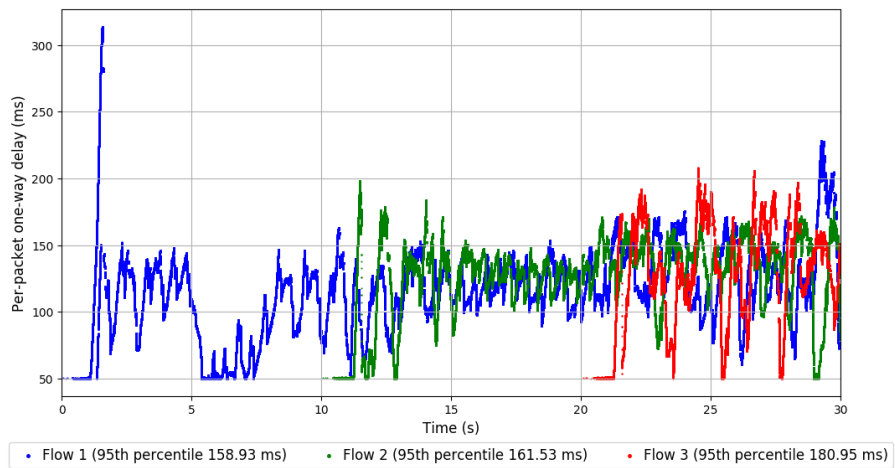
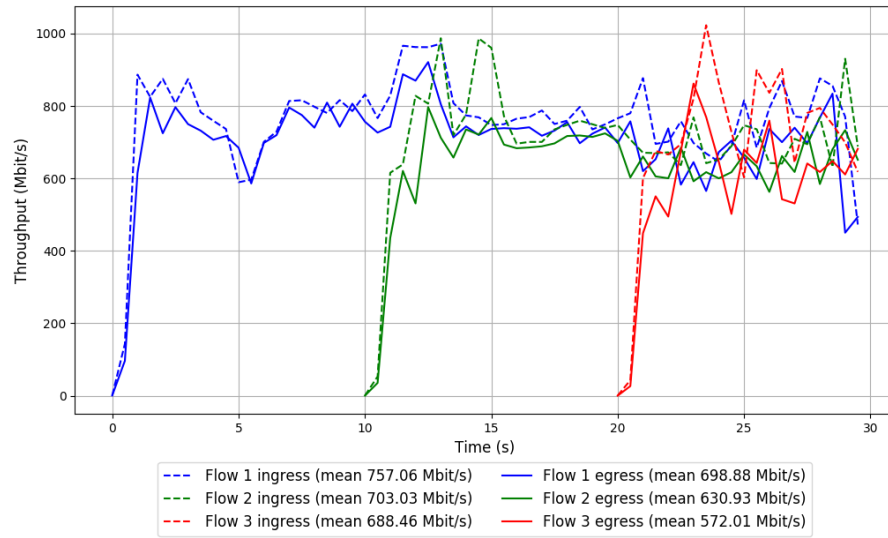
-- Flow 3:

Average throughput: 572.01 Mbit/s

95th percentile per-packet one-way delay: 180.950 ms

Loss rate: 16.95%

Run 10: Report of FillP — Data Link

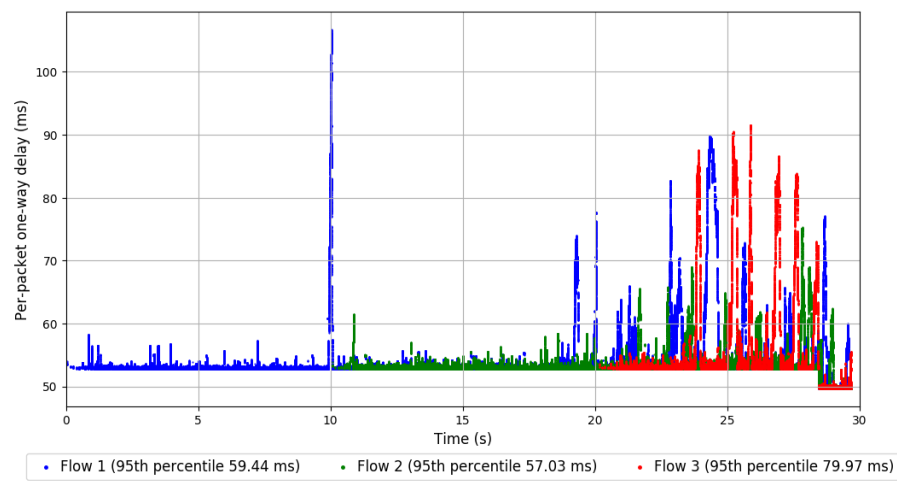
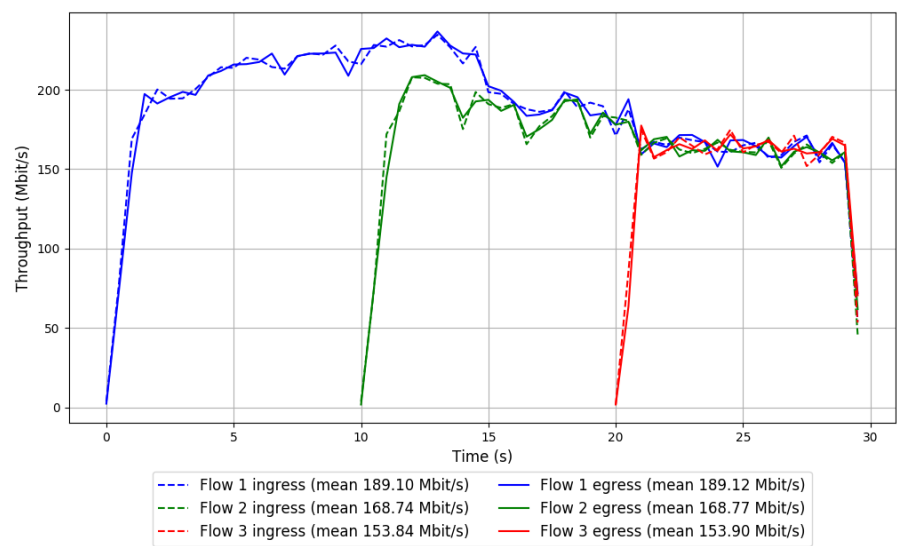


```
Run 1: Statistics of Indigo-1-32

Start at: 2018-04-18 12:48:09
End at: 2018-04-18 12:48:39

# Below is generated by plot.py at 2018-04-18 19:00:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 350.40 Mbit/s
95th percentile per-packet one-way delay: 60.950 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 189.12 Mbit/s
95th percentile per-packet one-way delay: 59.440 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 168.77 Mbit/s
95th percentile per-packet one-way delay: 57.035 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 153.90 Mbit/s
95th percentile per-packet one-way delay: 79.975 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo-1-32 — Data Link

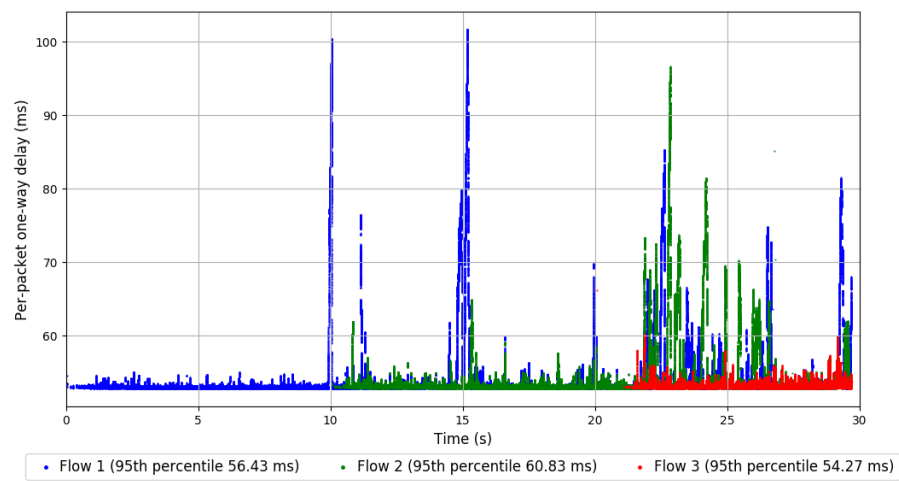
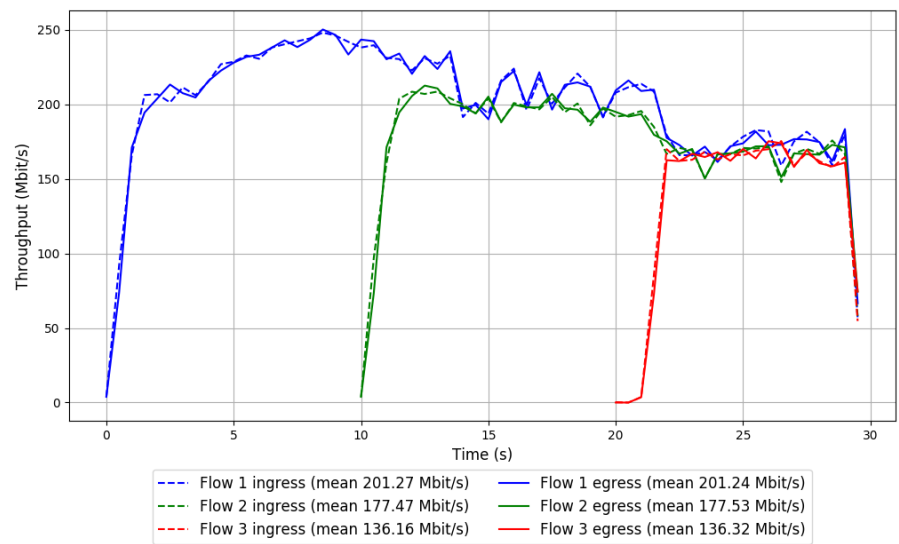


```
Run 2: Statistics of Indigo-1-32

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

# Below is generated by plot.py at 2018-04-18 19:00:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 363.14 Mbit/s
95th percentile per-packet one-way delay: 57.190 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 201.24 Mbit/s
95th percentile per-packet one-way delay: 56.429 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 177.53 Mbit/s
95th percentile per-packet one-way delay: 60.830 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 136.32 Mbit/s
95th percentile per-packet one-way delay: 54.269 ms
Loss rate: 0.03%
```

Run 2: Report of Indigo-1-32 — Data Link



Run 3: Statistics of Indigo-1-32

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

End at: 2018-04-18 13:19:34

Below is generated by plot.py at 2018-04-18 19:00:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 372.06 Mbit/s

95th percentile per-packet one-way delay: 56.618 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 202.66 Mbit/s

95th percentile per-packet one-way delay: 54.020 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 176.97 Mbit/s

95th percentile per-packet one-way delay: 66.270 ms

Loss rate: 0.00%

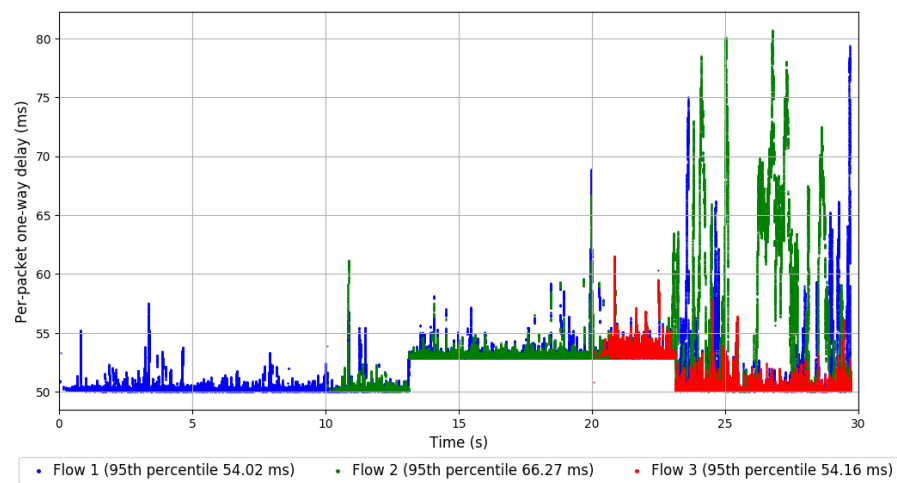
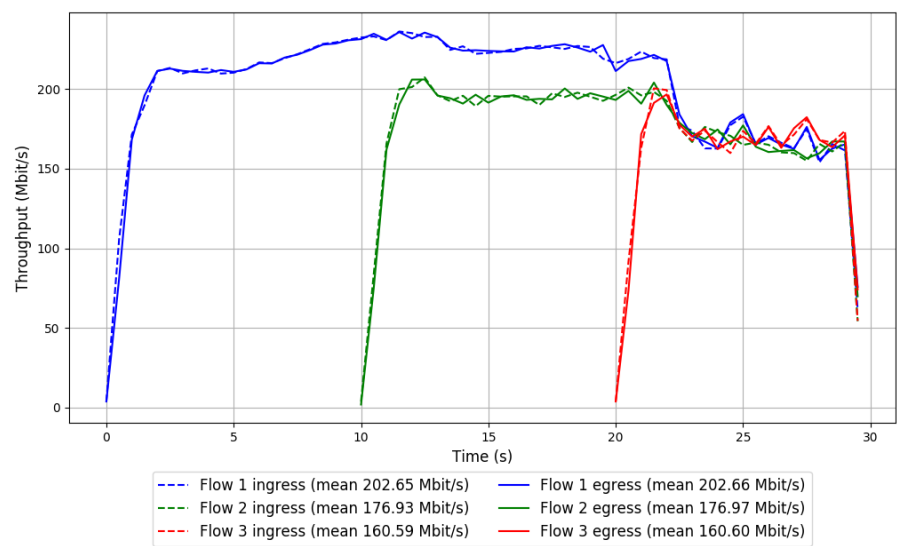
-- Flow 3:

Average throughput: 160.60 Mbit/s

95th percentile per-packet one-way delay: 54.158 ms

Loss rate: 0.00%

Run 3: Report of Indigo-1-32 — Data Link



Run 4: Statistics of Indigo-1-32

Start at: 2018-04-18 13:34:16

End at: 2018-04-18 13:34:46

Below is generated by plot.py at 2018-04-18 19:00:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 354.97 Mbit/s

95th percentile per-packet one-way delay: 57.117 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 186.35 Mbit/s

95th percentile per-packet one-way delay: 54.394 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 183.02 Mbit/s

95th percentile per-packet one-way delay: 67.208 ms

Loss rate: 0.00%

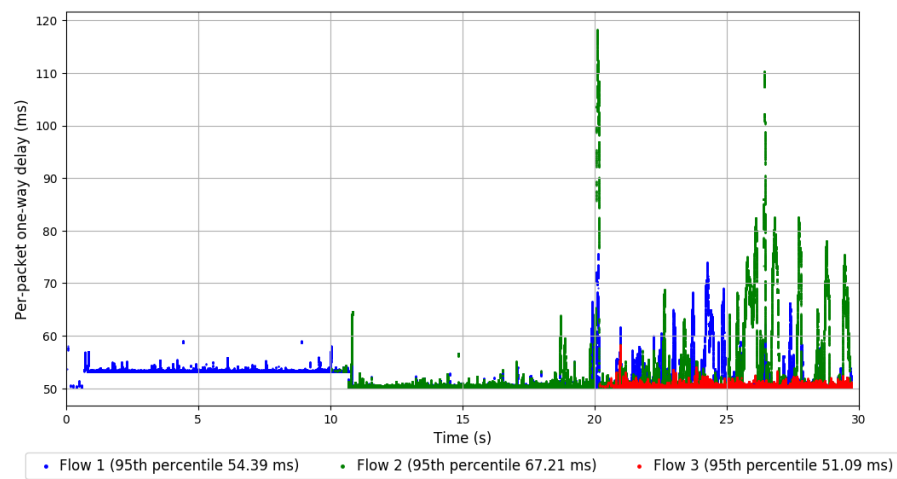
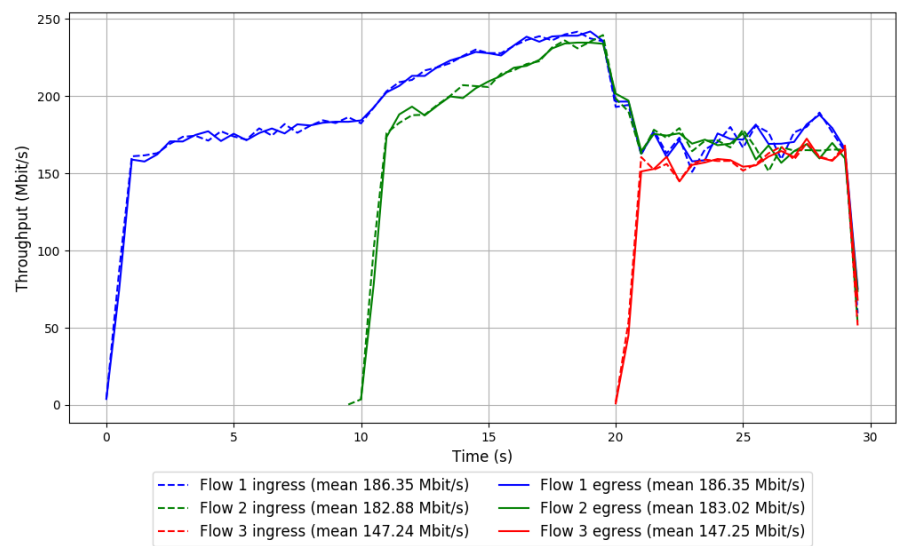
-- Flow 3:

Average throughput: 147.25 Mbit/s

95th percentile per-packet one-way delay: 51.093 ms

Loss rate: 0.00%

Run 4: Report of Indigo-1-32 — Data Link



Run 5: Statistics of Indigo-1-32

Start at: 2018-04-18 13:49:43

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

Below is generated by plot.py at 2018-04-18 19:00:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 386.18 Mbit/s

95th percentile per-packet one-way delay: 58.568 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 210.31 Mbit/s

95th percentile per-packet one-way delay: 55.391 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 194.31 Mbit/s

95th percentile per-packet one-way delay: 63.705 ms

Loss rate: 0.00%

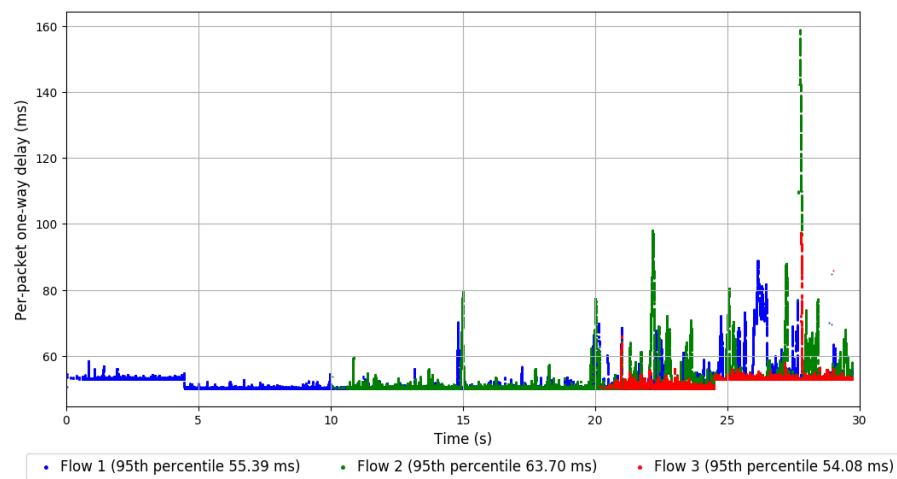
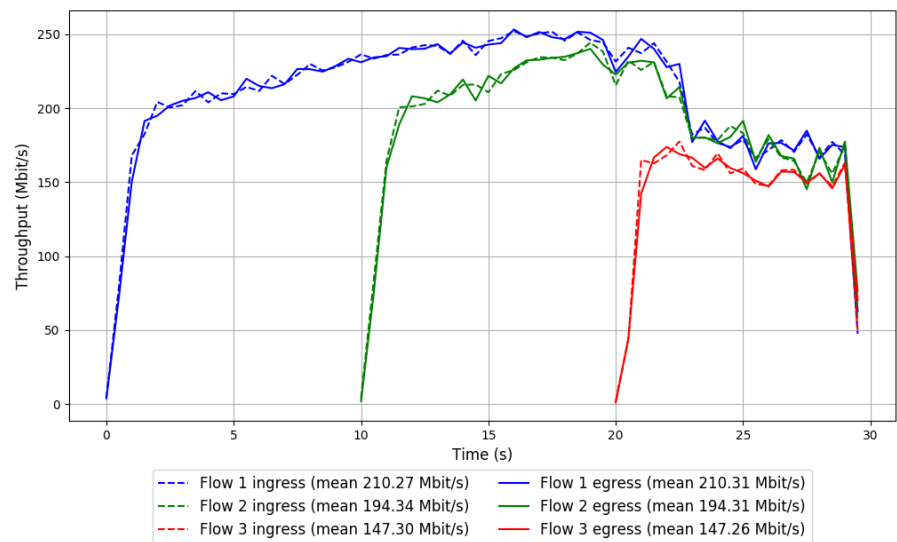
-- Flow 3:

Average throughput: 147.26 Mbit/s

95th percentile per-packet one-way delay: 54.082 ms

Loss rate: 0.00%

Run 5: Report of Indigo-1-32 — Data Link



Run 6: Statistics of Indigo-1-32

Start at: 2018-04-18 14:05:16

End at: 2018-04-18 14:05:46

Below is generated by plot.py at 2018-04-18 19:00:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 351.48 Mbit/s

95th percentile per-packet one-way delay: 57.248 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 185.37 Mbit/s

95th percentile per-packet one-way delay: 58.629 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 170.12 Mbit/s

95th percentile per-packet one-way delay: 56.378 ms

Loss rate: 0.00%

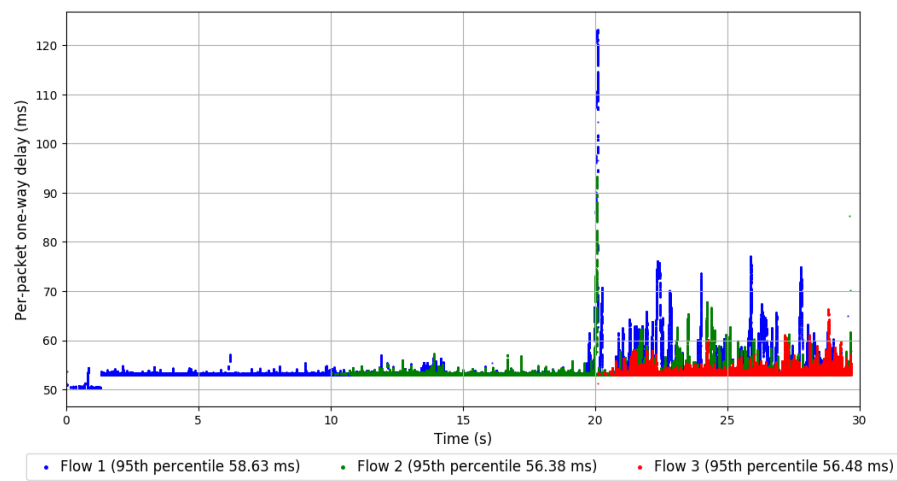
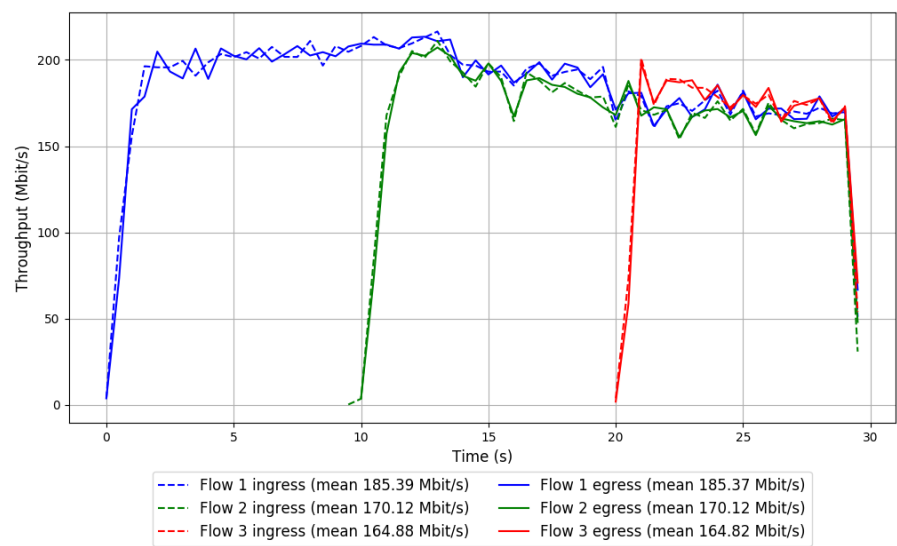
-- Flow 3:

Average throughput: 164.82 Mbit/s

95th percentile per-packet one-way delay: 56.476 ms

Loss rate: 0.01%

Run 6: Report of Indigo-1-32 — Data Link



Run 7: Statistics of Indigo-1-32

Start at: 2018-04-18 14:20:41

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

Below is generated by plot.py at 2018-04-18 19:00:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 389.61 Mbit/s

95th percentile per-packet one-way delay: 60.529 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 212.64 Mbit/s

95th percentile per-packet one-way delay: 57.789 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 190.91 Mbit/s

95th percentile per-packet one-way delay: 61.583 ms

Loss rate: 0.01%

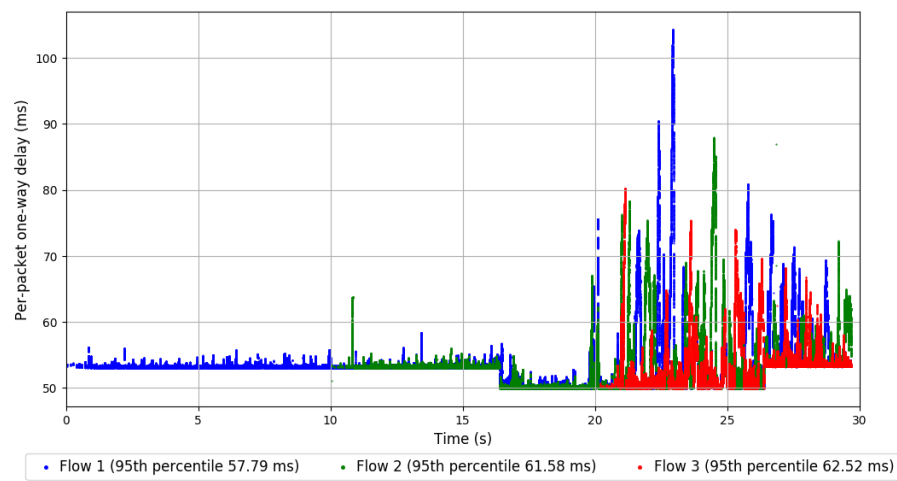
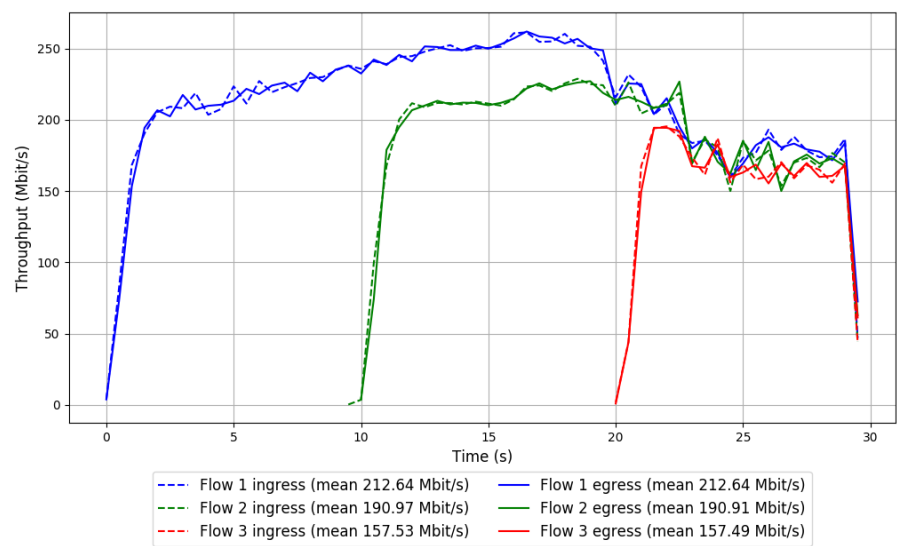
-- Flow 3:

Average throughput: 157.49 Mbit/s

95th percentile per-packet one-way delay: 62.524 ms

Loss rate: 0.00%

Run 7: Report of Indigo-1-32 — Data Link



Run 8: Statistics of Indigo-1-32

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

End at: 2018-04-18 14:36:44

Below is generated by plot.py at 2018-04-18 19:00:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 356.49 Mbit/s

95th percentile per-packet one-way delay: 59.414 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 182.80 Mbit/s

95th percentile per-packet one-way delay: 56.163 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 188.08 Mbit/s

95th percentile per-packet one-way delay: 72.813 ms

Loss rate: 0.00%

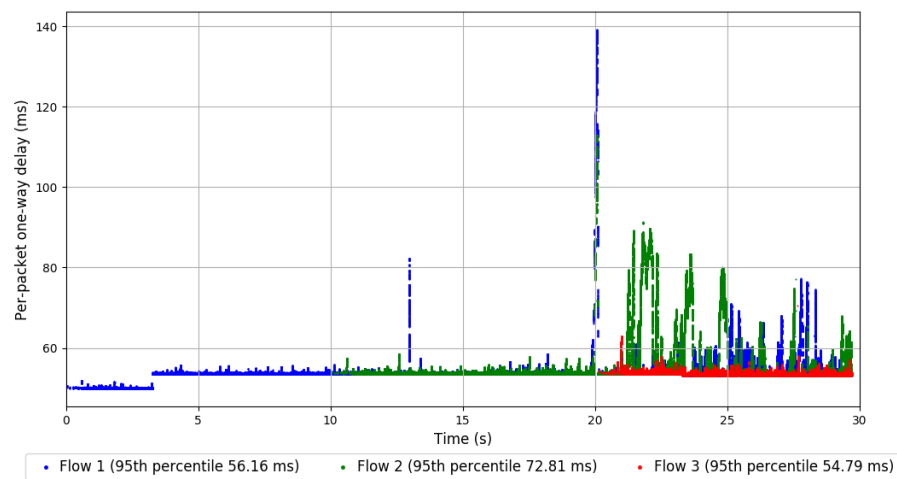
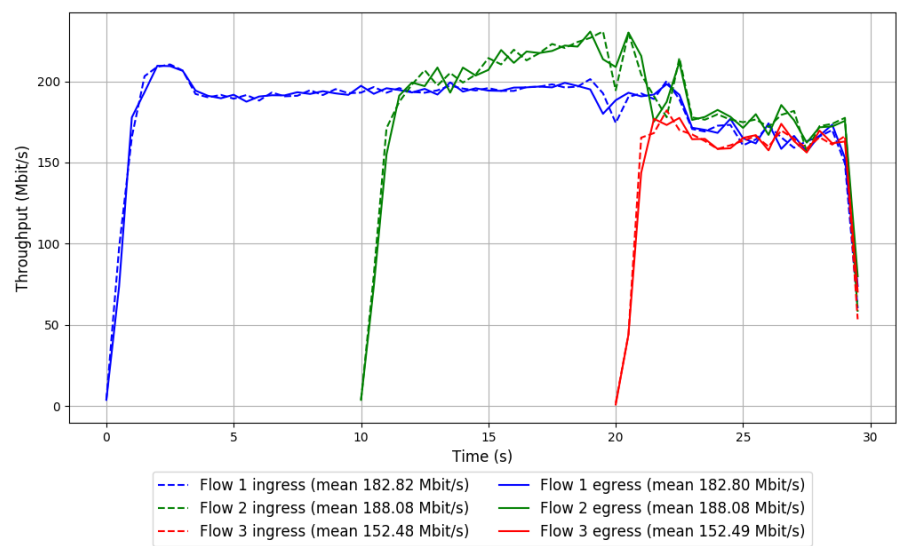
-- Flow 3:

Average throughput: 152.49 Mbit/s

95th percentile per-packet one-way delay: 54.793 ms

Loss rate: 0.00%

Run 8: Report of Indigo-1-32 — Data Link



Run 9: Statistics of Indigo-1-32

Start at: 2018-04-18 14:52:00

End at: 2018-04-18 14:52:30

Below is generated by plot.py at 2018-04-18 19:00:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 357.40 Mbit/s

95th percentile per-packet one-way delay: 58.818 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 193.89 Mbit/s

95th percentile per-packet one-way delay: 59.820 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 172.00 Mbit/s

95th percentile per-packet one-way delay: 60.515 ms

Loss rate: 0.02%

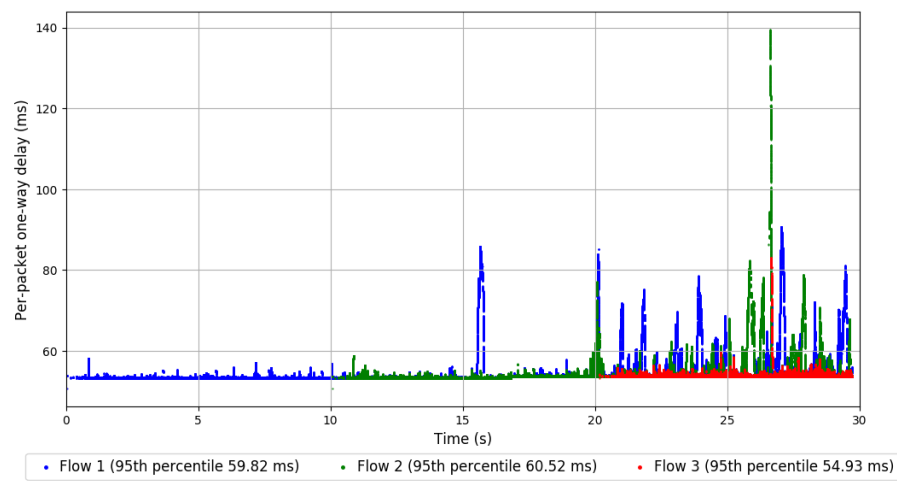
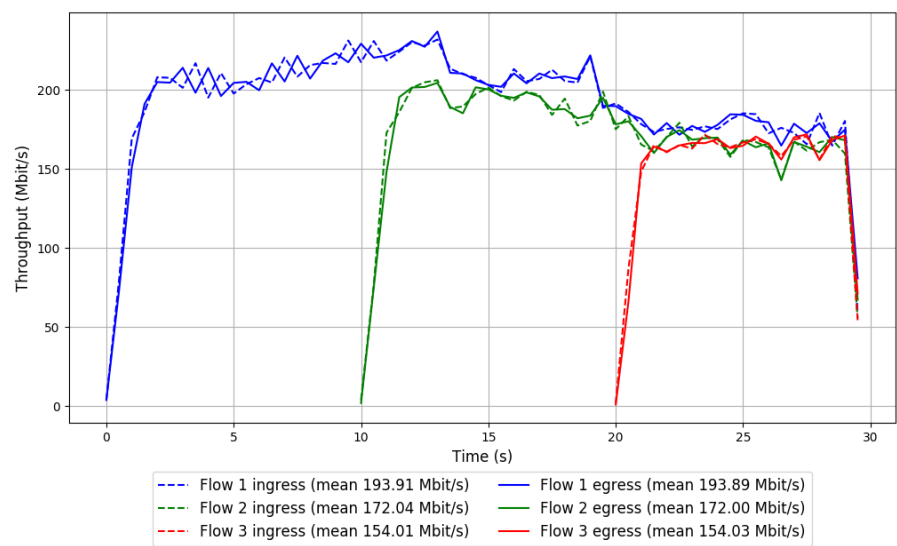
-- Flow 3:

Average throughput: 154.03 Mbit/s

95th percentile per-packet one-way delay: 54.933 ms

Loss rate: 0.01%

Run 9: Report of Indigo-1-32 — Data Link



Run 10: Statistics of Indigo-1-32

Start at: 2018-04-18 15:07:12

End at: 2018-04-18 15:07:42

Below is generated by plot.py at 2018-04-18 19:00:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 375.09 Mbit/s

95th percentile per-packet one-way delay: 56.153 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 202.31 Mbit/s

95th percentile per-packet one-way delay: 56.476 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 181.37 Mbit/s

95th percentile per-packet one-way delay: 56.924 ms

Loss rate: 0.01%

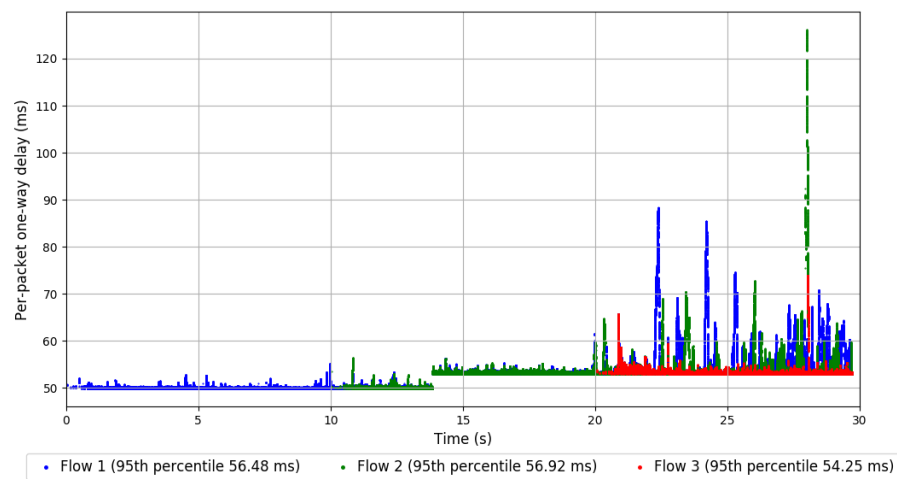
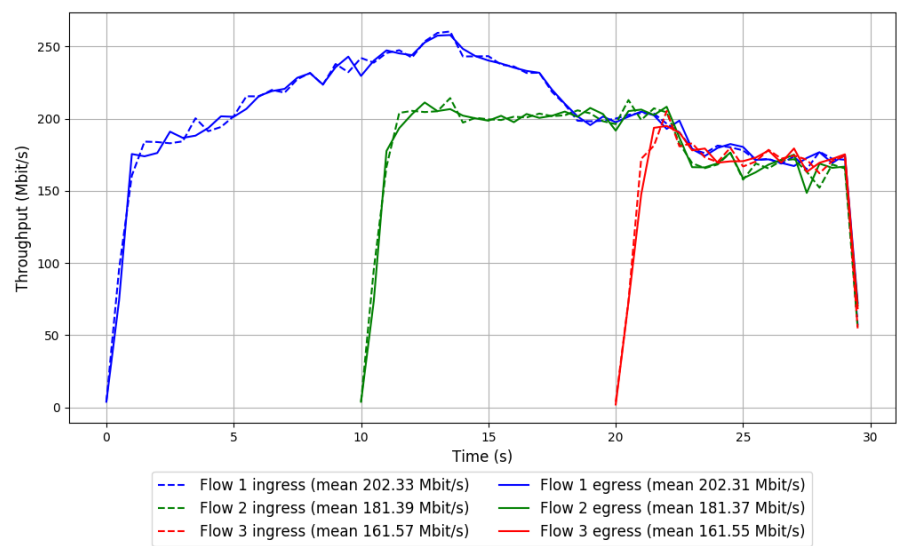
-- Flow 3:

Average throughput: 161.55 Mbit/s

95th percentile per-packet one-way delay: 54.247 ms

Loss rate: 0.04%

Run 10: Report of Indigo-1-32 — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2018-04-18 13:00:24

End at: 2018-04-18 13:00:54

Below is generated by plot.py at 2018-04-18 19:00:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 384.47 Mbit/s

95th percentile per-packet one-way delay: 159.384 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 214.04 Mbit/s

95th percentile per-packet one-way delay: 111.268 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 172.32 Mbit/s

95th percentile per-packet one-way delay: 284.266 ms

Loss rate: 3.12%

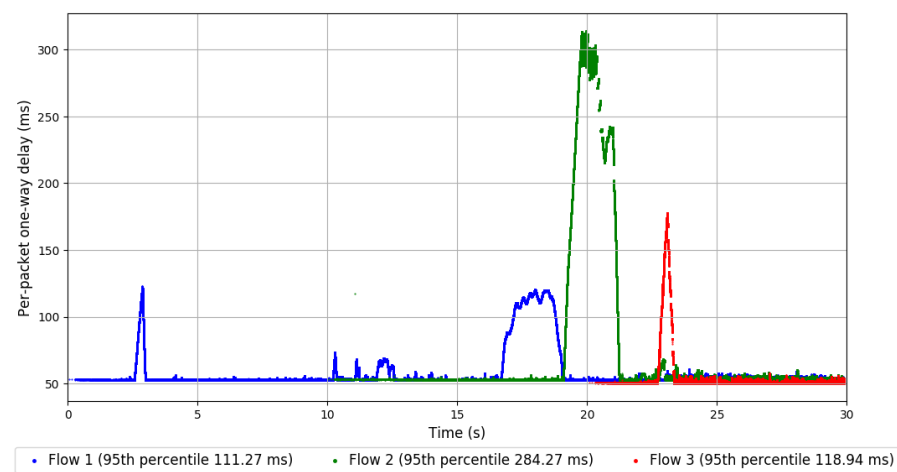
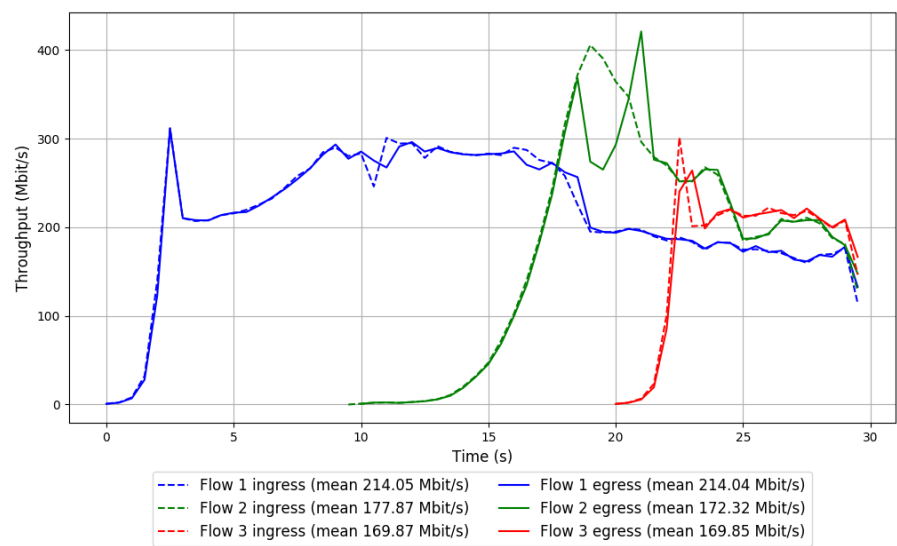
-- Flow 3:

Average throughput: 169.85 Mbit/s

95th percentile per-packet one-way delay: 118.945 ms

Loss rate: 0.00%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2018-04-18 13:15:38

End at: 2018-04-18 13:16:08

Below is generated by plot.py at 2018-04-18 19:00:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 407.02 Mbit/s

95th percentile per-packet one-way delay: 183.120 ms

Loss rate: 0.15%

-- Flow 1:

Average throughput: 249.12 Mbit/s

95th percentile per-packet one-way delay: 210.997 ms

Loss rate: 0.24%

-- Flow 2:

Average throughput: 223.12 Mbit/s

95th percentile per-packet one-way delay: 73.426 ms

Loss rate: 0.01%

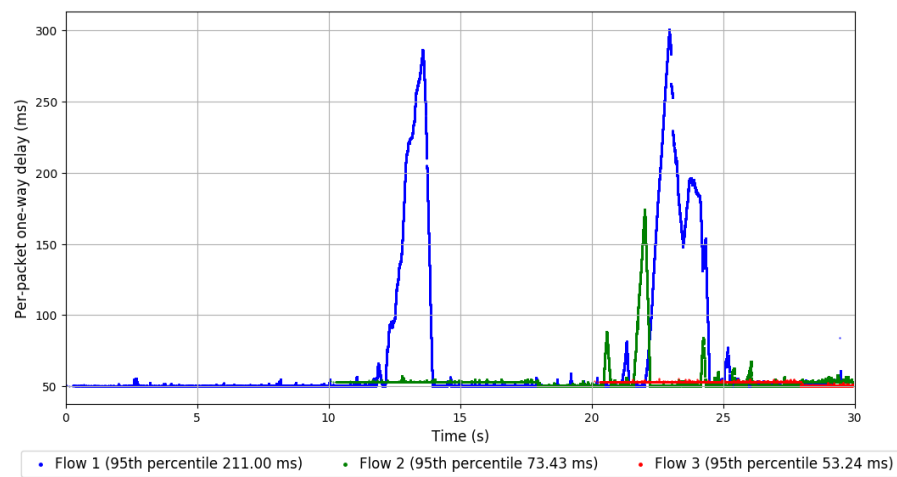
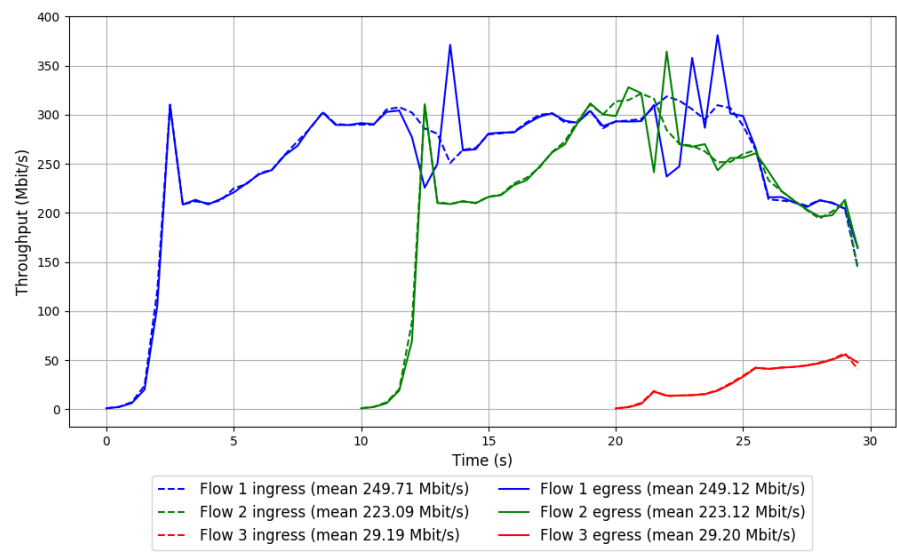
-- Flow 3:

Average throughput: 29.20 Mbit/s

95th percentile per-packet one-way delay: 53.240 ms

Loss rate: 0.03%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2018-04-18 13:30:48

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

Below is generated by plot.py at 2018-04-18 19:00:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 464.12 Mbit/s

95th percentile per-packet one-way delay: 110.688 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 244.49 Mbit/s

95th percentile per-packet one-way delay: 155.410 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 228.06 Mbit/s

95th percentile per-packet one-way delay: 79.747 ms

Loss rate: 0.00%

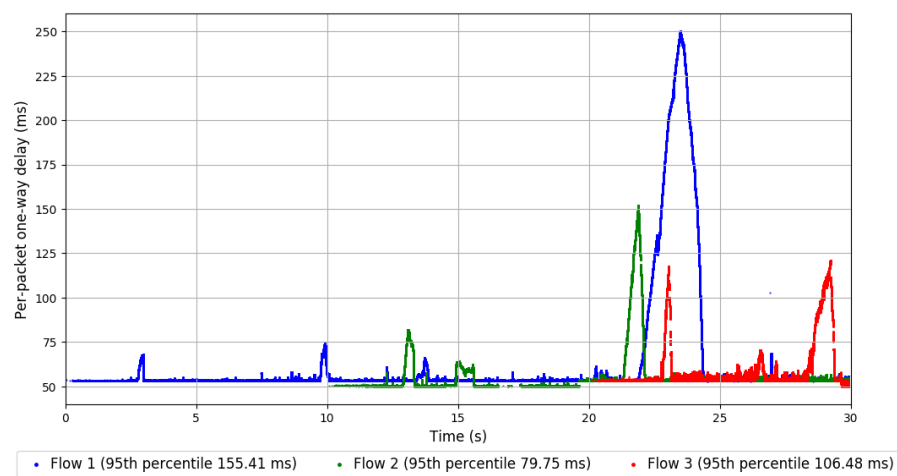
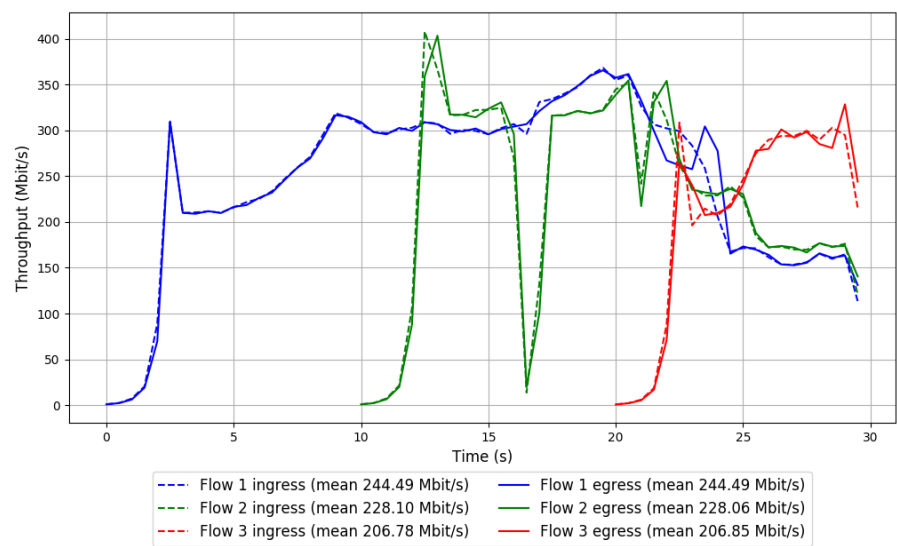
-- Flow 3:

Average throughput: 206.85 Mbit/s

95th percentile per-packet one-way delay: 106.477 ms

Loss rate: 0.00%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2018-04-18 13:45:59

End at: 2018-04-18 13:46:29

Below is generated by plot.py at 2018-04-18 19:01:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 498.67 Mbit/s

95th percentile per-packet one-way delay: 192.311 ms

Loss rate: 0.83%

-- Flow 1:

Average throughput: 277.49 Mbit/s

95th percentile per-packet one-way delay: 148.286 ms

Loss rate: 0.30%

-- Flow 2:

Average throughput: 230.05 Mbit/s

95th percentile per-packet one-way delay: 253.795 ms

Loss rate: 2.12%

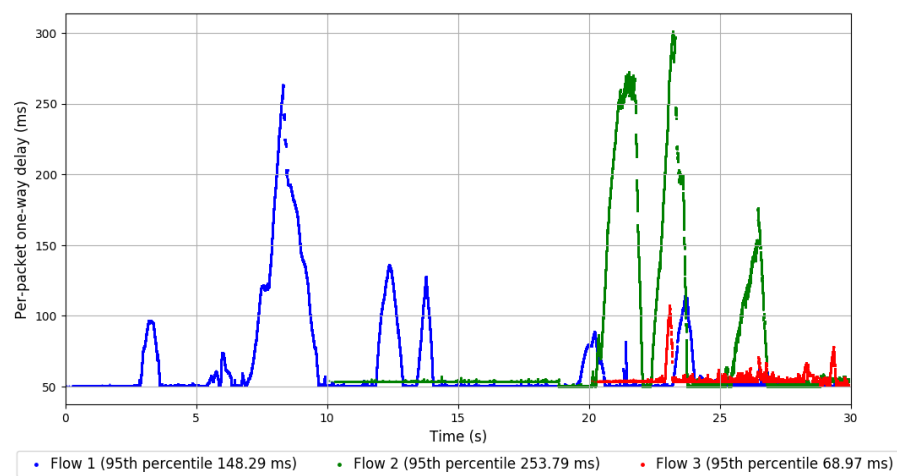
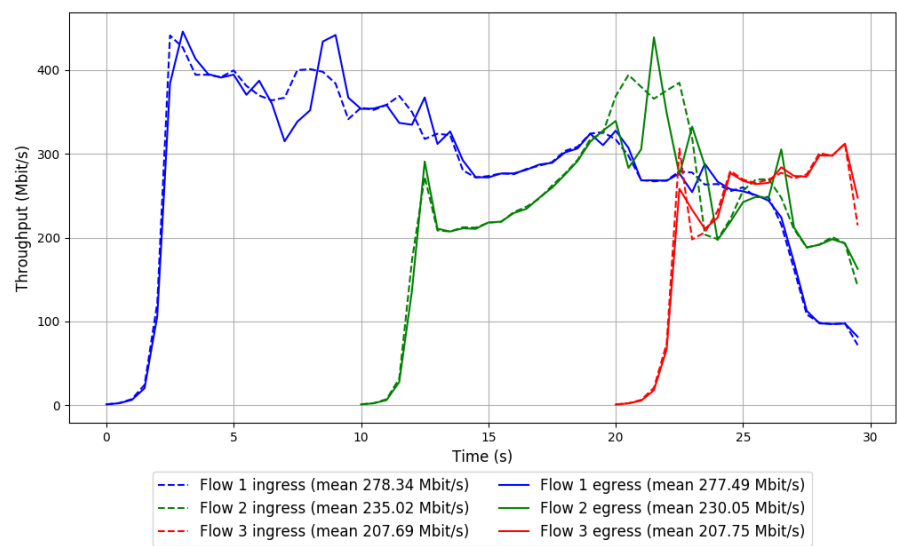
-- Flow 3:

Average throughput: 207.75 Mbit/s

95th percentile per-packet one-way delay: 68.973 ms

Loss rate: 0.00%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2018-04-18 14:01:47

End at: 2018-04-18 14:02:17

Below is generated by plot.py at 2018-04-18 19:01:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 421.80 Mbit/s

95th percentile per-packet one-way delay: 69.626 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 231.97 Mbit/s

95th percentile per-packet one-way delay: 75.782 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 217.71 Mbit/s

95th percentile per-packet one-way delay: 57.515 ms

Loss rate: 0.02%

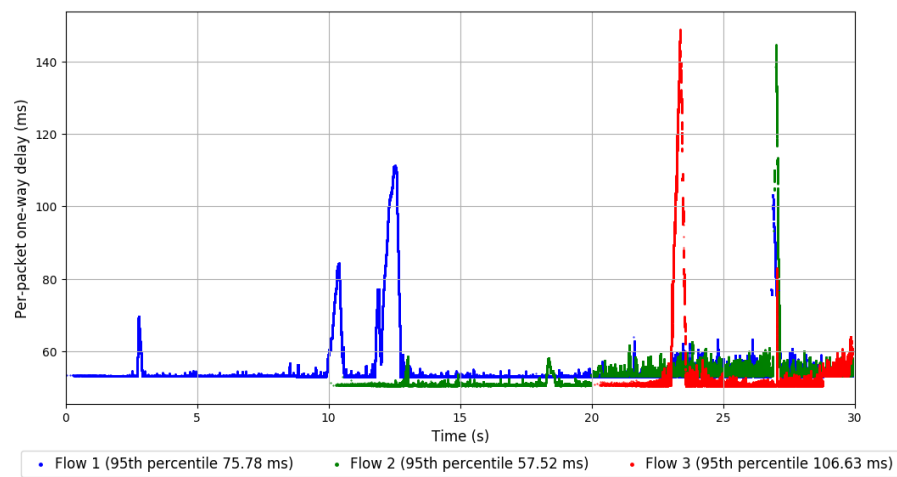
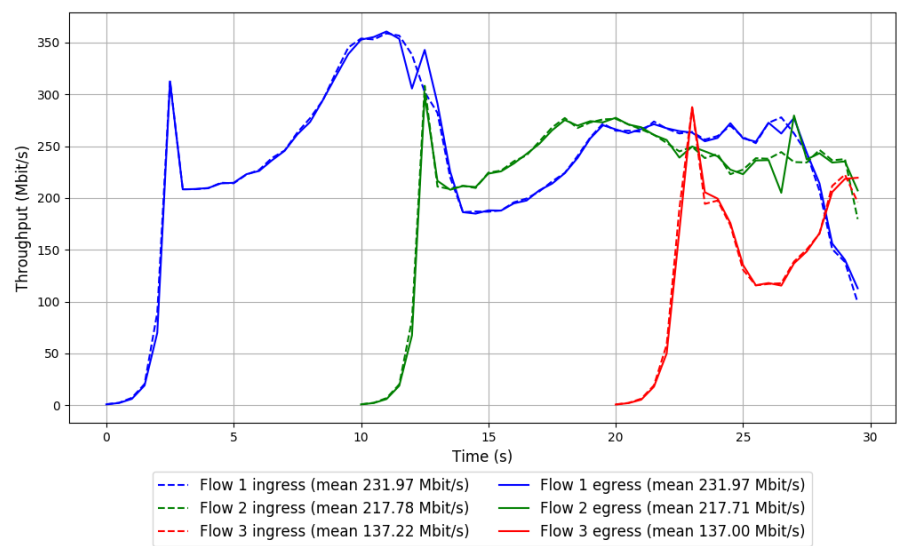
-- Flow 3:

Average throughput: 137.00 Mbit/s

95th percentile per-packet one-way delay: 106.633 ms

Loss rate: 0.12%

Run 5: Report of PCC-Vivace — Data Link



Run 6: Statistics of PCC-Vivace

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

End at: 2018-04-18 14:17:42

Below is generated by plot.py at 2018-04-18 19:01:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 437.51 Mbit/s

95th percentile per-packet one-way delay: 137.161 ms

Loss rate: 0.16%

-- Flow 1:

Average throughput: 284.99 Mbit/s

95th percentile per-packet one-way delay: 150.924 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 212.83 Mbit/s

95th percentile per-packet one-way delay: 57.006 ms

Loss rate: 0.00%

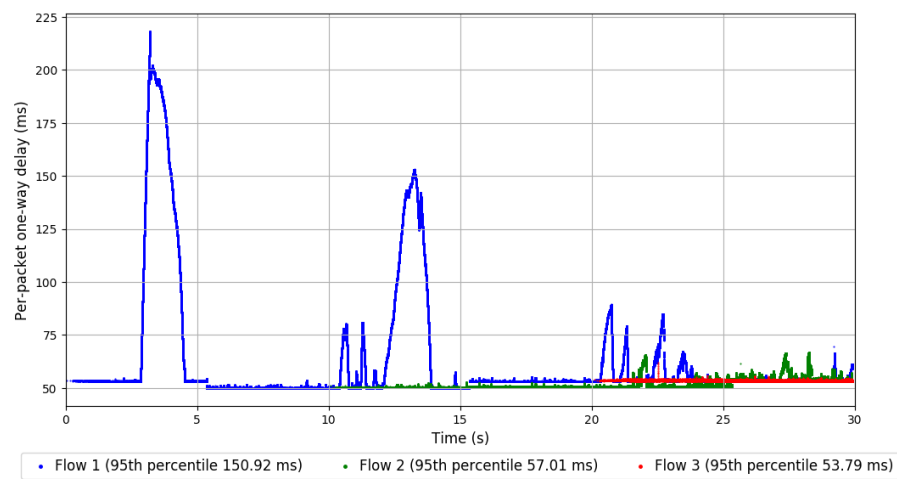
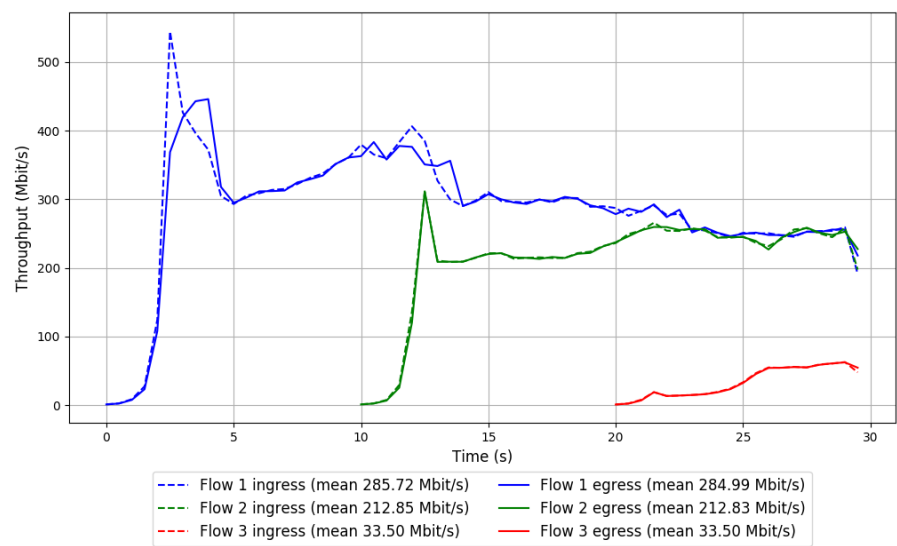
-- Flow 3:

Average throughput: 33.50 Mbit/s

95th percentile per-packet one-way delay: 53.788 ms

Loss rate: 0.00%

Run 6: Report of PCC-Vivace — Data Link



Run 7: Statistics of PCC-Vivace

Start at: 2018-04-18 14:32:40

End at: 2018-04-18 14:33:10

Below is generated by plot.py at 2018-04-18 19:01:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 467.95 Mbit/s

95th percentile per-packet one-way delay: 88.283 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 266.65 Mbit/s

95th percentile per-packet one-way delay: 126.007 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 203.32 Mbit/s

95th percentile per-packet one-way delay: 53.720 ms

Loss rate: 0.00%

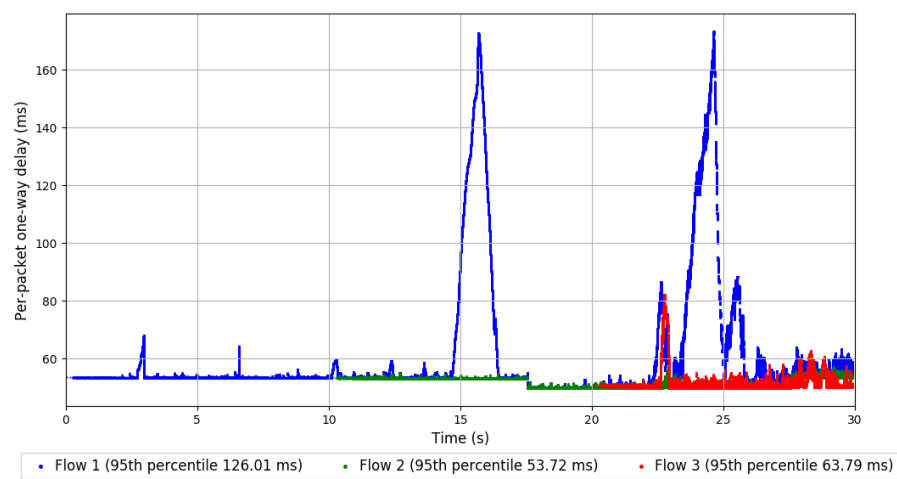
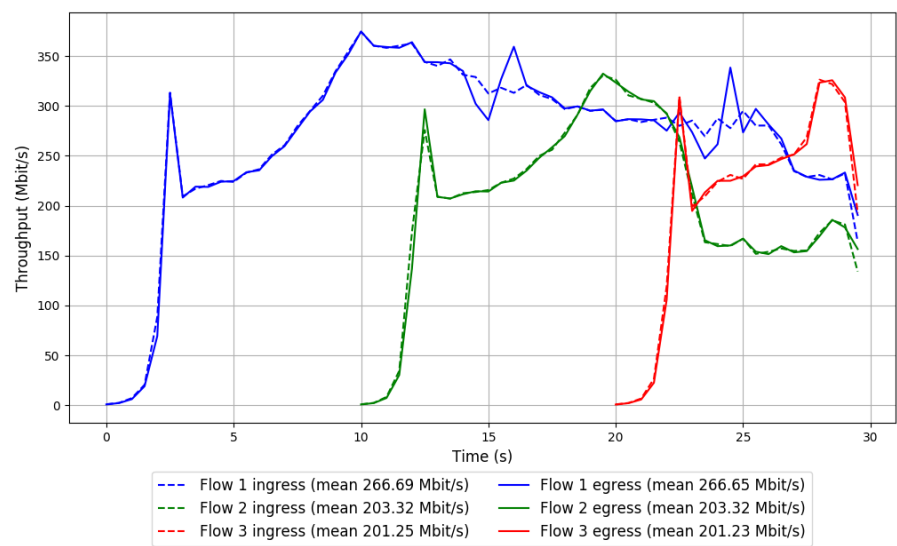
-- Flow 3:

Average throughput: 201.23 Mbit/s

95th percentile per-packet one-way delay: 63.790 ms

Loss rate: 0.00%

Run 7: Report of PCC-Vivace — Data Link



Run 8: Statistics of PCC-Vivace

Start at: 2018-04-18 14:48:21

End at: 2018-04-18 14:48:51

Below is generated by plot.py at 2018-04-18 19:02:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 447.66 Mbit/s

95th percentile per-packet one-way delay: 57.020 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 268.33 Mbit/s

95th percentile per-packet one-way delay: 54.839 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 219.86 Mbit/s

95th percentile per-packet one-way delay: 97.827 ms

Loss rate: 0.04%

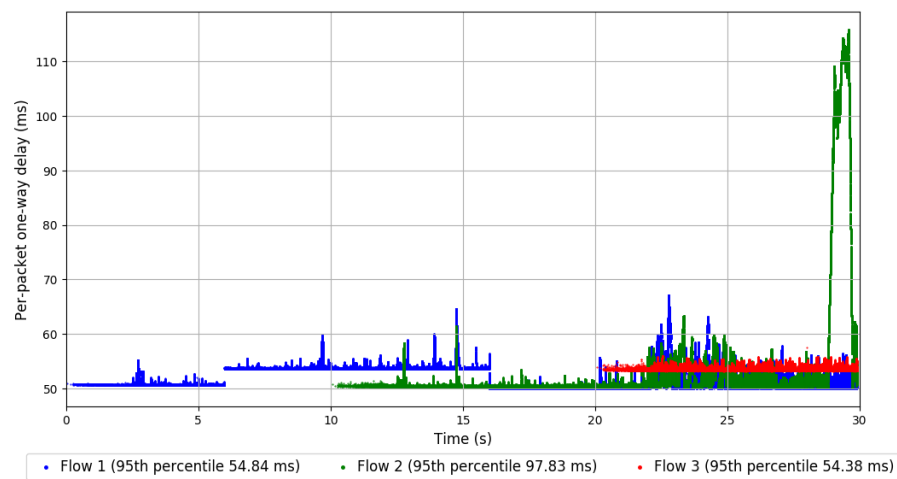
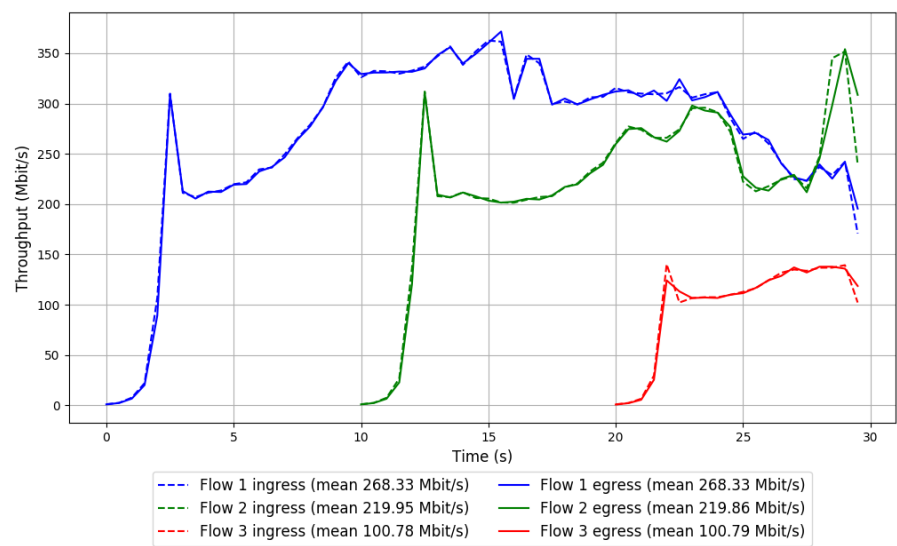
-- Flow 3:

Average throughput: 100.79 Mbit/s

95th percentile per-packet one-way delay: 54.381 ms

Loss rate: 0.02%

Run 8: Report of PCC-Vivace — Data Link



Run 9: Statistics of PCC-Vivace

Start at: 2018-04-18 15:03:49

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

Below is generated by plot.py at 2018-04-18 19:02:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 388.40 Mbit/s

95th percentile per-packet one-way delay: 56.367 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 228.19 Mbit/s

95th percentile per-packet one-way delay: 62.090 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 225.23 Mbit/s

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

Loss rate: 0.00%

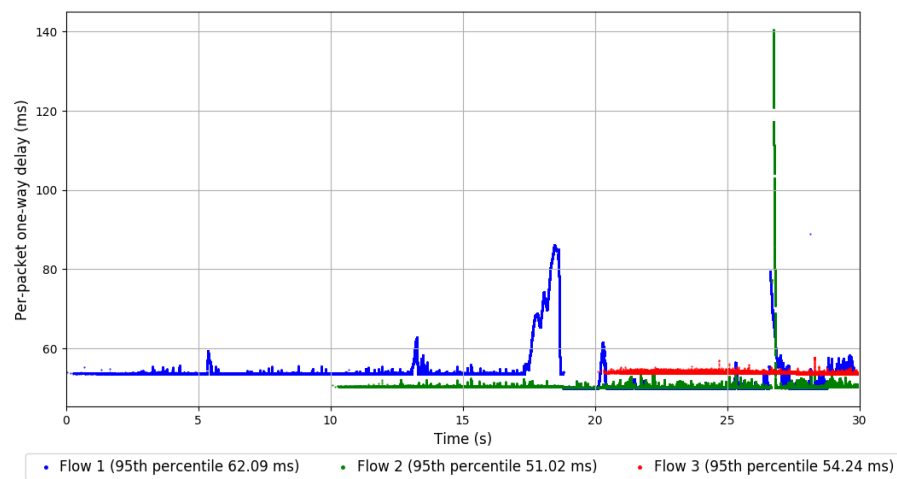
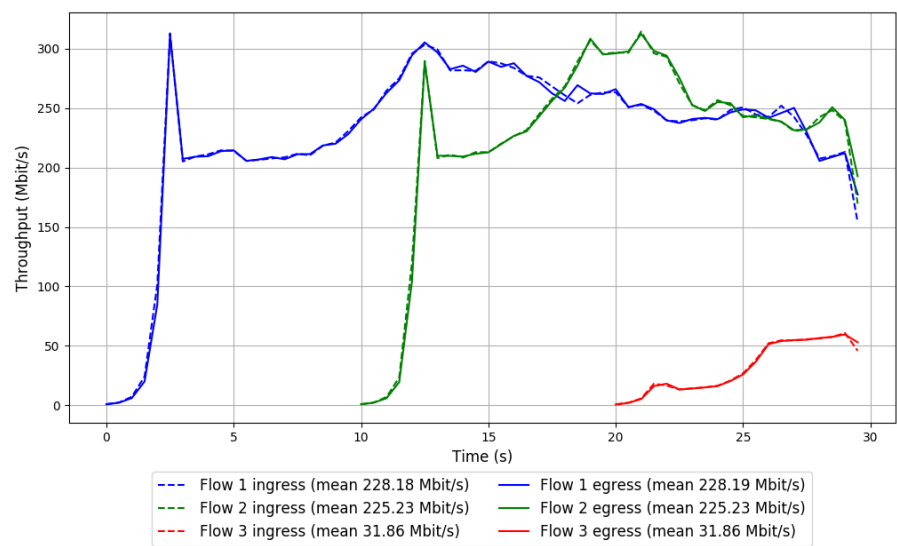
-- Flow 3:

Average throughput: 31.86 Mbit/s

95th percentile per-packet one-way delay: 54.242 ms

Loss rate: 0.00%

Run 9: Report of PCC-Vivace — Data Link



Run 10: Statistics of PCC-Vivace

Start at: 2018-04-18 15:19:13

End at: 2018-04-18 15:19:43

Below is generated by plot.py at 2018-04-18 19:02:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 427.87 Mbit/s

95th percentile per-packet one-way delay: 177.862 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 272.59 Mbit/s

95th percentile per-packet one-way delay: 229.769 ms

Loss rate: 0.91%

-- Flow 2:

Average throughput: 189.86 Mbit/s

95th percentile per-packet one-way delay: 60.332 ms

Loss rate: 0.00%

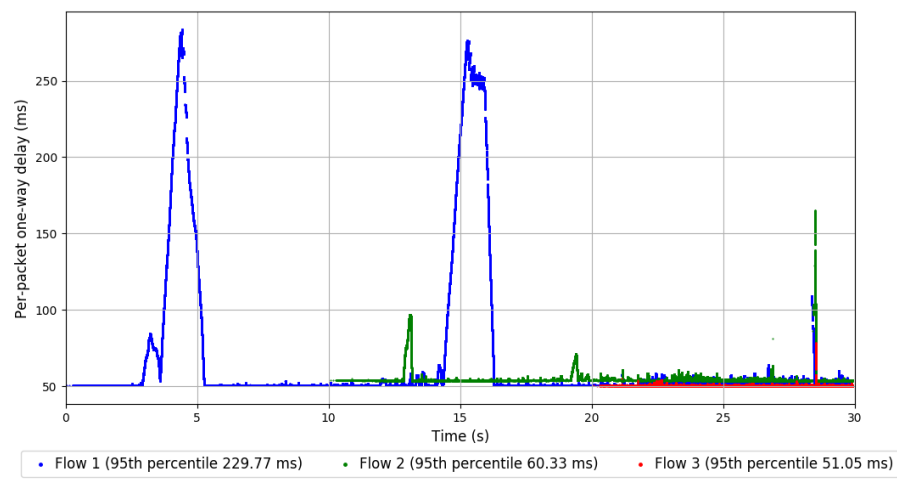
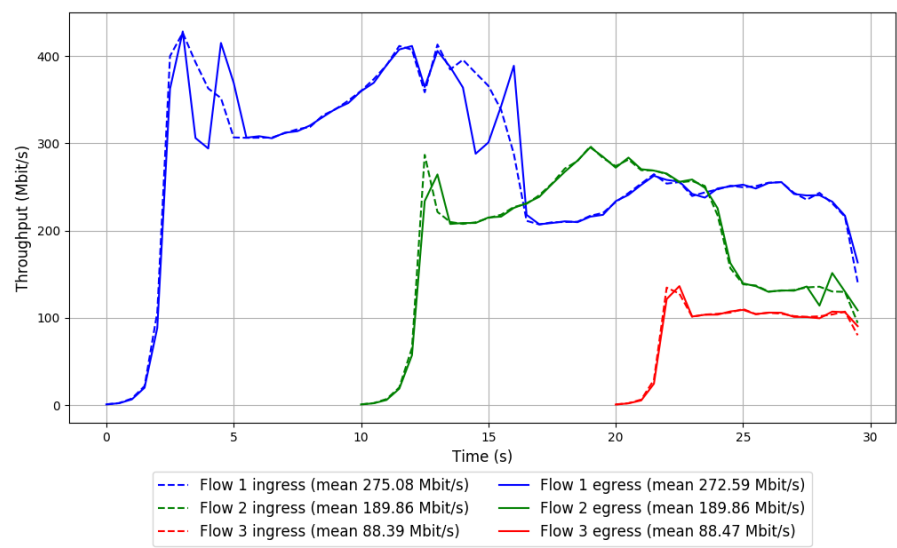
-- Flow 3:

Average throughput: 88.47 Mbit/s

95th percentile per-packet one-way delay: 51.054 ms

Loss rate: 0.00%

Run 10: Report of PCC-Vivace — Data Link



Run 1: Statistics of PCC-Expr

Start at: 2018-04-18 12:52:14

End at: 2018-04-18 12:52:44

Run 1: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 2: Statistics of PCC-Expr

Start at: 2018-04-18 13:07:31

End at: 2018-04-18 13:08:01

Run 2: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 3: Statistics of PCC-Expr

Start at: 2018-04-18 13:22:55

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

Run 3: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 4: Statistics of PCC-Expr

Start at: 2018-04-18 13:37:52

End at: 2018-04-18 13:38:22

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 13:53:41

End at: 2018-04-18 13:54:11

Run 5: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 6: Statistics of PCC-Expr

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

End at: 2018-04-18 14:09:35

Run 6: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 7: Statistics of PCC-Expr

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

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

Run 7: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 8: Statistics of PCC-Expr

Start at: 2018-04-18 14:40:16

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

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 14:55:51

End at: 2018-04-18 14:56:21

Run 9: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 10: Statistics of PCC-Expr

Start at: 2018-04-18 15:11:10

End at: 2018-04-18 15:11:40

Run 10: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing