

Pantheon Report

Generated at 2018-04-19 03:11:55 (UTC).

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

Repeated the test of 16 congestion control schemes 10 times.

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

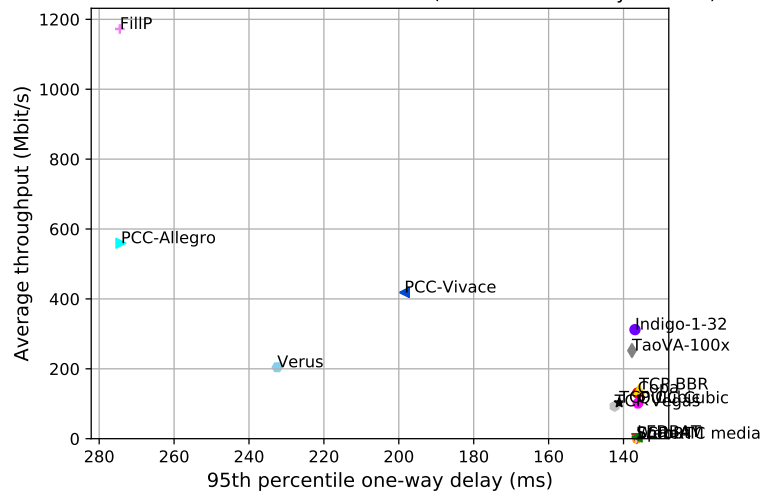
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

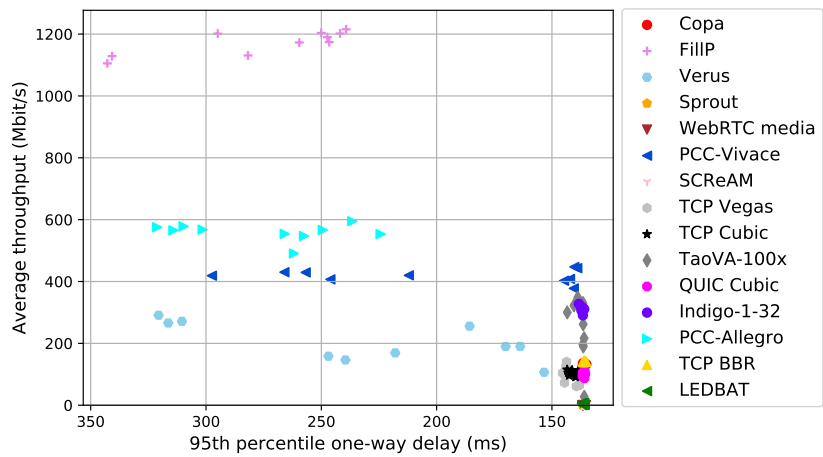
Git summary:

```
branch: master @ b3d6e7098641364fd3a292656a51aa81e316d0b4
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/fillp @ 11f8c46a2bf1dc797253db7e8ca04076272b2a44
third_party/genericCC @ d223989828276fa83a807da6e0341dc0c7b89aec
third_party/indigo @ a9b2060d39e4da2e8987e893e3eca2a6c7cd0ab9
third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db7484501f82ce8b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b540c0fd3505939528e2a5f
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
  M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcf993
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ 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 London Ethernet to GCE Sydney Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)



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



Run 1: Statistics of TCP BBR

Start at: 2018-04-18 19:53:39

End at: 2018-04-18 19:54:09

Below is generated by plot.py at 2018-04-19 01:51:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 139.79 Mbit/s

95th percentile per-packet one-way delay: 135.311 ms

Loss rate: 1.58%

-- Flow 1:

Average throughput: 72.31 Mbit/s

95th percentile per-packet one-way delay: 135.302 ms

Loss rate: 1.11%

-- Flow 2:

Average throughput: 70.54 Mbit/s

95th percentile per-packet one-way delay: 135.314 ms

Loss rate: 1.52%

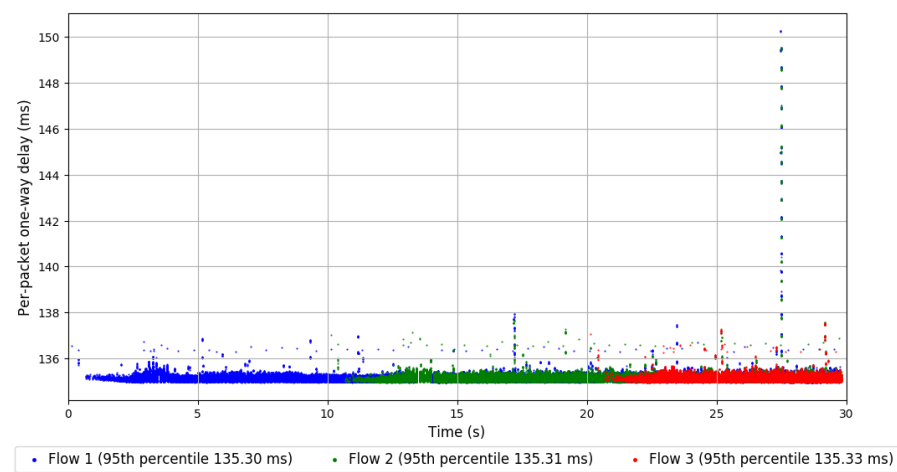
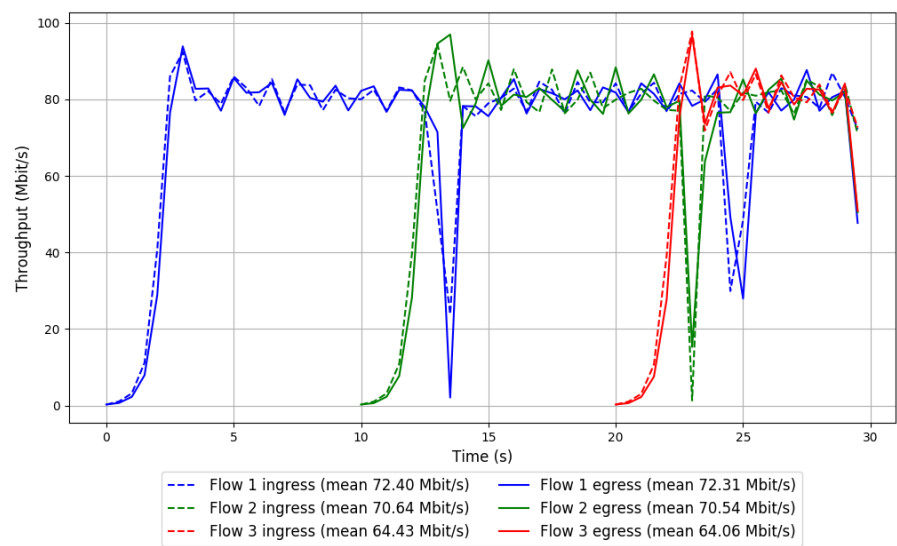
-- Flow 3:

Average throughput: 64.06 Mbit/s

95th percentile per-packet one-way delay: 135.328 ms

Loss rate: 3.31%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-04-18 20:11:46

End at: 2018-04-18 20:12:16

Below is generated by plot.py at 2018-04-19 01:51:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 140.05 Mbit/s

95th percentile per-packet one-way delay: 136.172 ms

Loss rate: 1.52%

-- Flow 1:

Average throughput: 72.42 Mbit/s

95th percentile per-packet one-way delay: 136.148 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 70.74 Mbit/s

95th percentile per-packet one-way delay: 136.152 ms

Loss rate: 1.52%

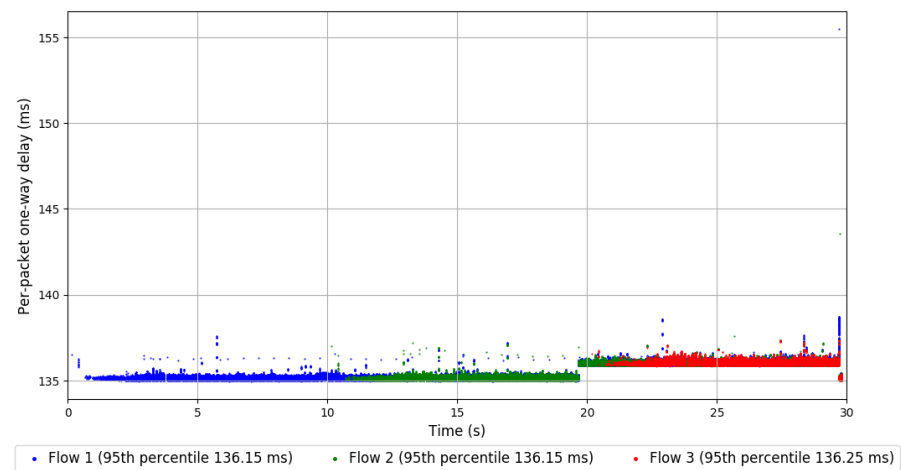
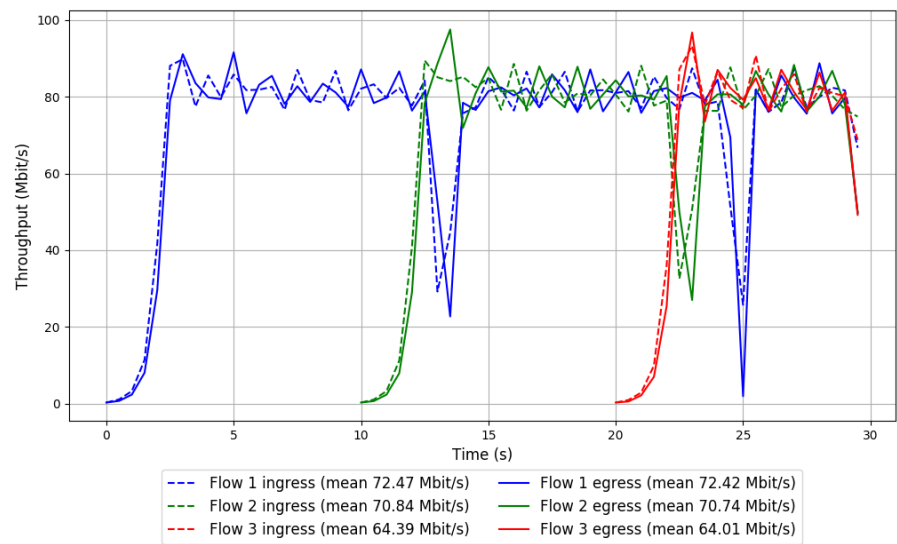
-- Flow 3:

Average throughput: 64.01 Mbit/s

95th percentile per-packet one-way delay: 136.250 ms

Loss rate: 3.34%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-04-18 20:29:36

End at: 2018-04-18 20:30:06

Below is generated by plot.py at 2018-04-19 01:51:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 141.76 Mbit/s

95th percentile per-packet one-way delay: 135.312 ms

Loss rate: 1.55%

-- Flow 1:

Average throughput: 73.91 Mbit/s

95th percentile per-packet one-way delay: 135.294 ms

Loss rate: 1.06%

-- Flow 2:

Average throughput: 70.88 Mbit/s

95th percentile per-packet one-way delay: 135.317 ms

Loss rate: 1.52%

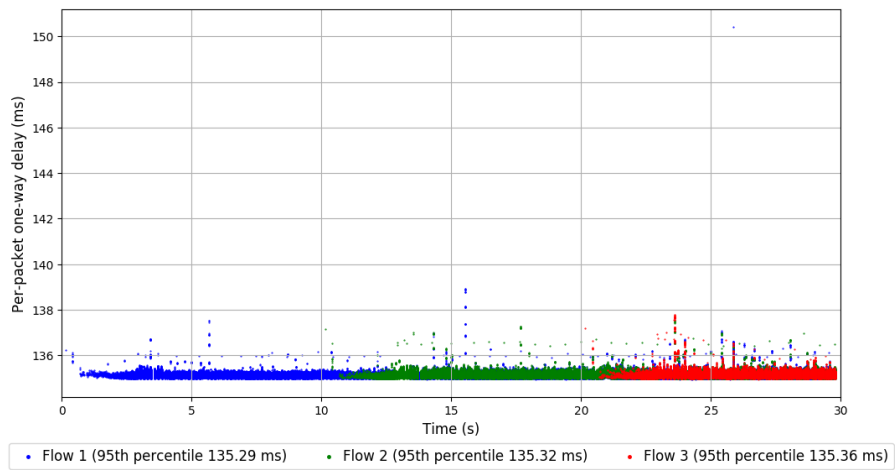
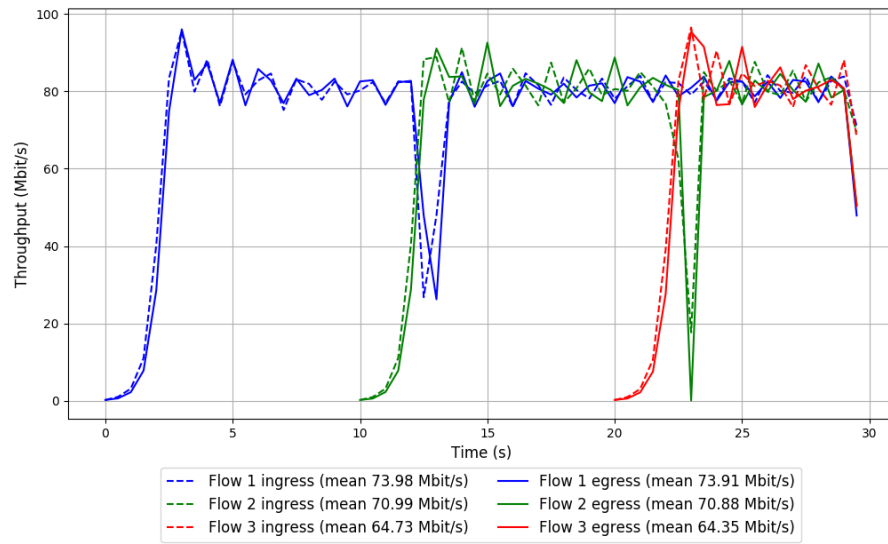
-- Flow 3:

Average throughput: 64.35 Mbit/s

95th percentile per-packet one-way delay: 135.356 ms

Loss rate: 3.32%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-04-18 20:47:41

End at: 2018-04-18 20:48:11

Below is generated by plot.py at 2018-04-19 01:51:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 141.56 Mbit/s

95th percentile per-packet one-way delay: 135.285 ms

Loss rate: 1.50%

-- Flow 1:

Average throughput: 74.15 Mbit/s

95th percentile per-packet one-way delay: 135.288 ms

Loss rate: 0.96%

-- Flow 2:

Average throughput: 70.27 Mbit/s

95th percentile per-packet one-way delay: 135.273 ms

Loss rate: 1.53%

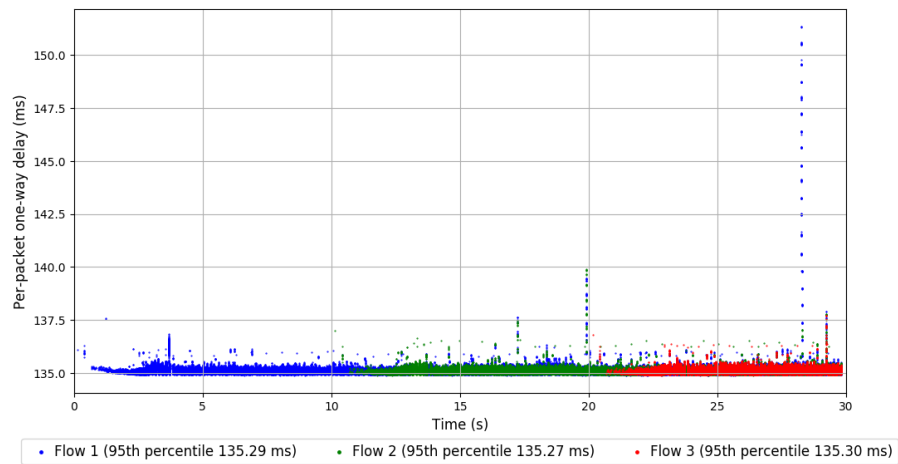
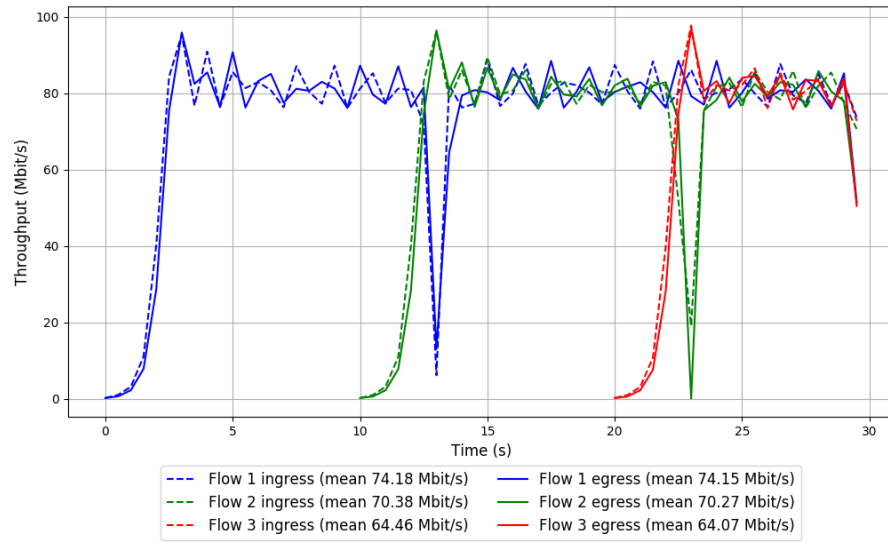
-- Flow 3:

Average throughput: 64.07 Mbit/s

95th percentile per-packet one-way delay: 135.302 ms

Loss rate: 3.34%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-04-18 21:06:00

End at: 2018-04-18 21:06:30

Below is generated by plot.py at 2018-04-19 01:51:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 141.66 Mbit/s

95th percentile per-packet one-way delay: 136.088 ms

Loss rate: 1.50%

-- Flow 1:

Average throughput: 72.59 Mbit/s

95th percentile per-packet one-way delay: 136.064 ms

Loss rate: 0.99%

-- Flow 2:

Average throughput: 72.63 Mbit/s

95th percentile per-packet one-way delay: 136.089 ms

Loss rate: 1.46%

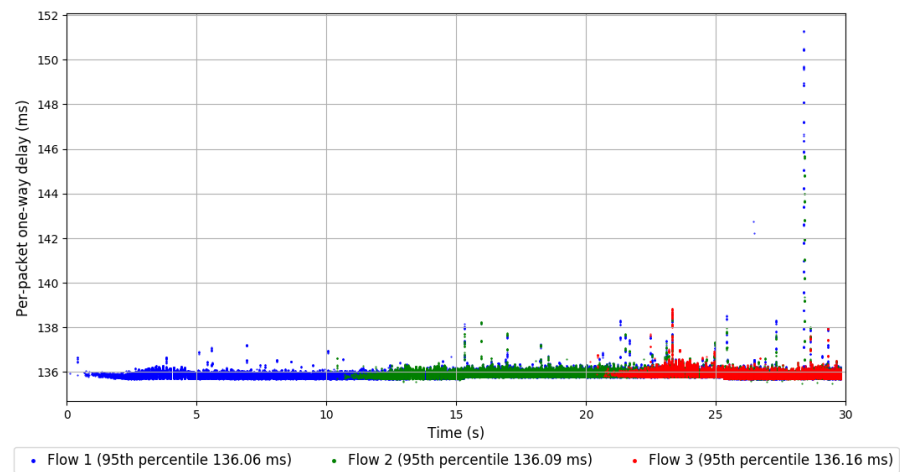
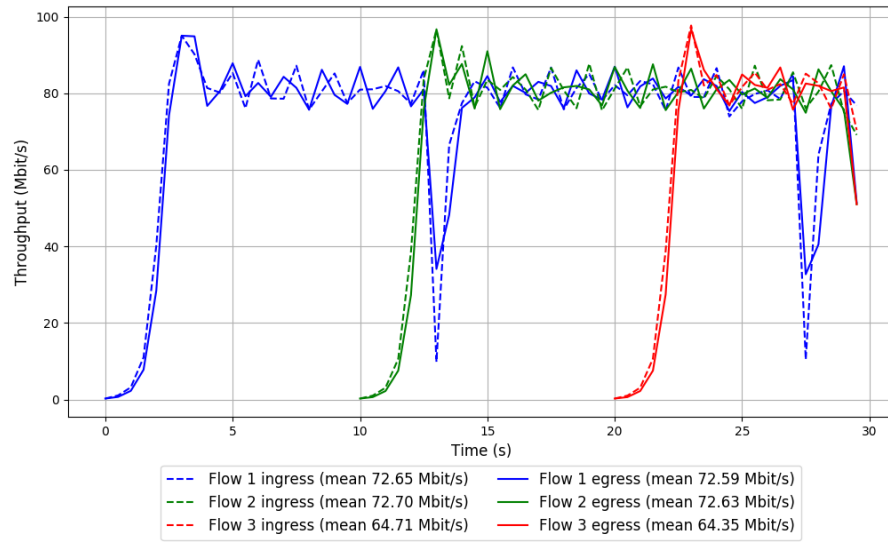
-- Flow 3:

Average throughput: 64.35 Mbit/s

95th percentile per-packet one-way delay: 136.162 ms

Loss rate: 3.29%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2018-04-18 21:24:17

End at: 2018-04-18 21:24:47

Below is generated by plot.py at 2018-04-19 01:51:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 143.22 Mbit/s

95th percentile per-packet one-way delay: 136.144 ms

Loss rate: 1.49%

-- Flow 1:

Average throughput: 75.69 Mbit/s

95th percentile per-packet one-way delay: 136.148 ms

Loss rate: 0.95%

-- Flow 2:

Average throughput: 70.50 Mbit/s

95th percentile per-packet one-way delay: 136.119 ms

Loss rate: 1.52%

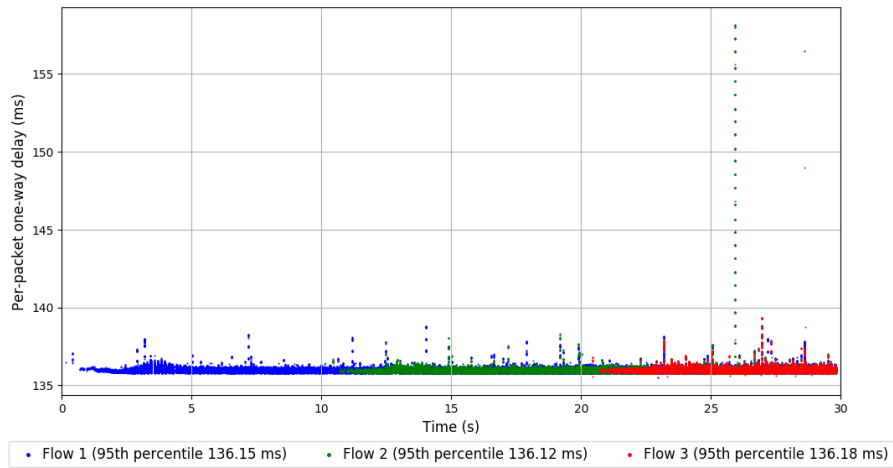
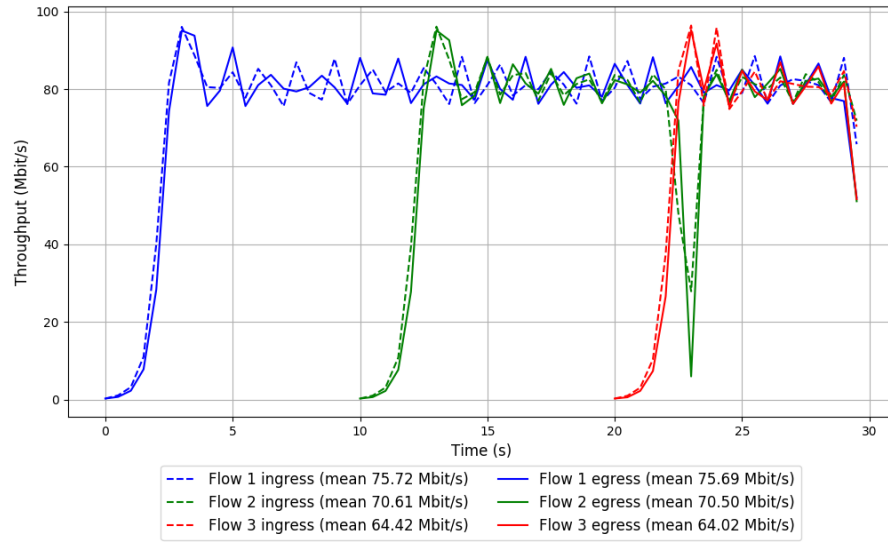
-- Flow 3:

Average throughput: 64.02 Mbit/s

95th percentile per-packet one-way delay: 136.180 ms

Loss rate: 3.35%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2018-04-18 21:42:19

End at: 2018-04-18 21:42:49

Below is generated by plot.py at 2018-04-19 01:51:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 139.64 Mbit/s

95th percentile per-packet one-way delay: 136.201 ms

Loss rate: 1.53%

-- Flow 1:

Average throughput: 72.41 Mbit/s

95th percentile per-packet one-way delay: 136.195 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 70.10 Mbit/s

95th percentile per-packet one-way delay: 136.189 ms

Loss rate: 1.55%

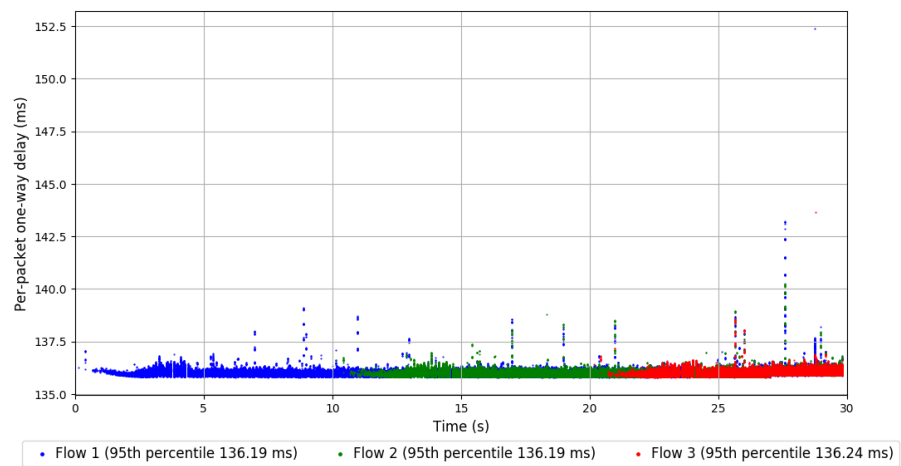
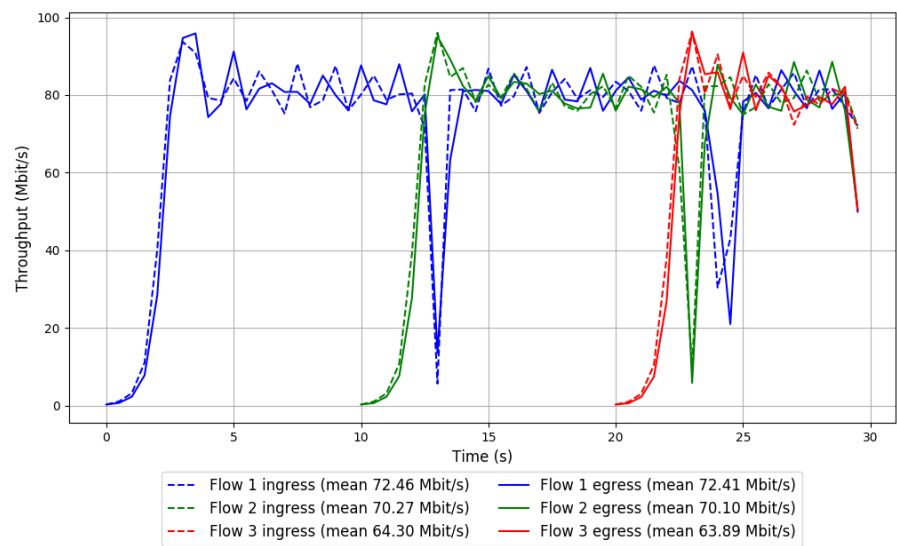
-- Flow 3:

Average throughput: 63.89 Mbit/s

95th percentile per-packet one-way delay: 136.243 ms

Loss rate: 3.36%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2018-04-18 22:00:08

End at: 2018-04-18 22:00:38

Below is generated by plot.py at 2018-04-19 01:51:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 140.04 Mbit/s

95th percentile per-packet one-way delay: 136.077 ms

Loss rate: 1.58%

-- Flow 1:

Average throughput: 72.91 Mbit/s

95th percentile per-packet one-way delay: 136.072 ms

Loss rate: 0.99%

-- Flow 2:

Average throughput: 70.18 Mbit/s

95th percentile per-packet one-way delay: 136.074 ms

Loss rate: 1.70%

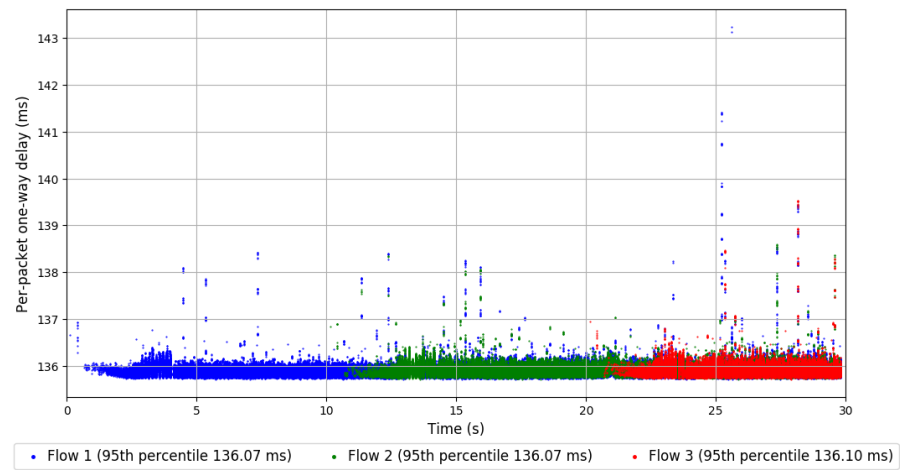
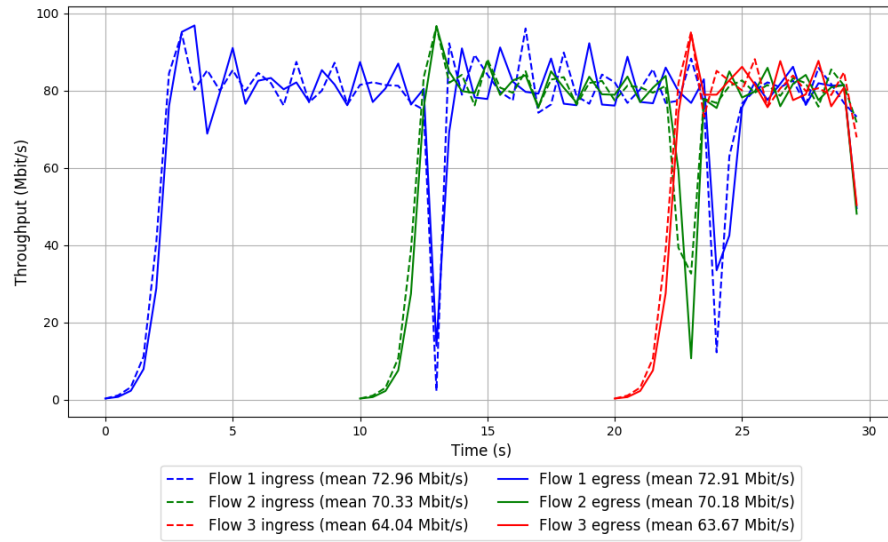
-- Flow 3:

Average throughput: 63.67 Mbit/s

95th percentile per-packet one-way delay: 136.100 ms

Loss rate: 3.32%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

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

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

Below is generated by plot.py at 2018-04-19 01:54:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 140.14 Mbit/s

95th percentile per-packet one-way delay: 135.273 ms

Loss rate: 1.52%

-- Flow 1:

Average throughput: 72.44 Mbit/s

95th percentile per-packet one-way delay: 135.256 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 70.65 Mbit/s

95th percentile per-packet one-way delay: 135.267 ms

Loss rate: 1.52%

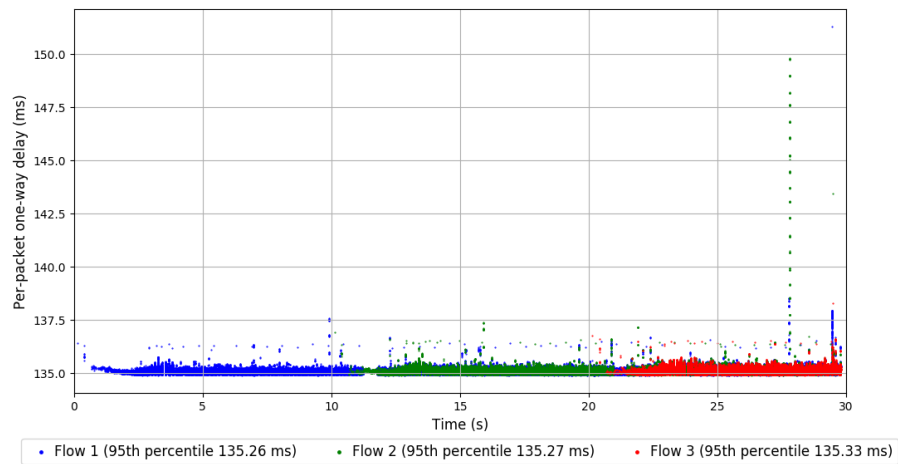
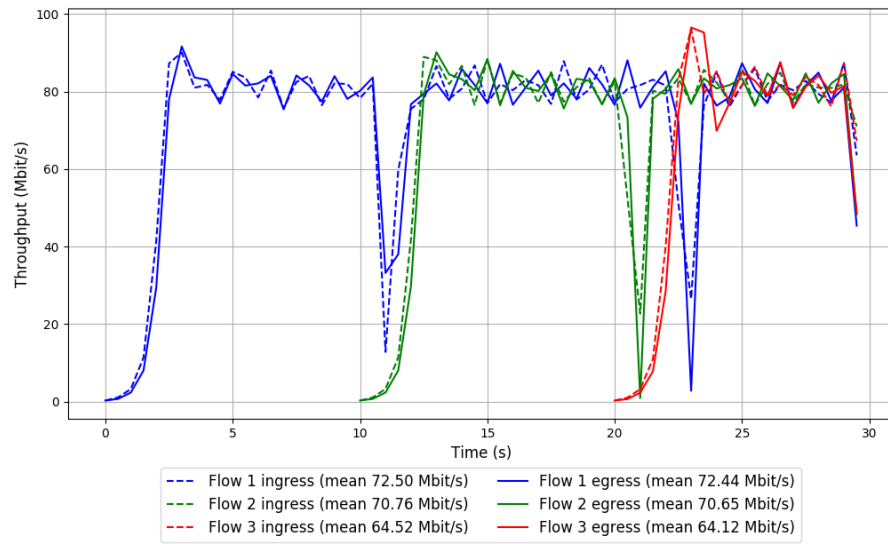
-- Flow 3:

Average throughput: 64.12 Mbit/s

95th percentile per-packet one-way delay: 135.326 ms

Loss rate: 3.34%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2018-04-18 22:35:48

End at: 2018-04-18 22:36:18

Below is generated by plot.py at 2018-04-19 01:54:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 139.65 Mbit/s

95th percentile per-packet one-way delay: 136.691 ms

Loss rate: 1.54%

-- Flow 1:

Average throughput: 72.56 Mbit/s

95th percentile per-packet one-way delay: 136.684 ms

Loss rate: 0.99%

-- Flow 2:

Average throughput: 69.66 Mbit/s

95th percentile per-packet one-way delay: 136.678 ms

Loss rate: 1.55%

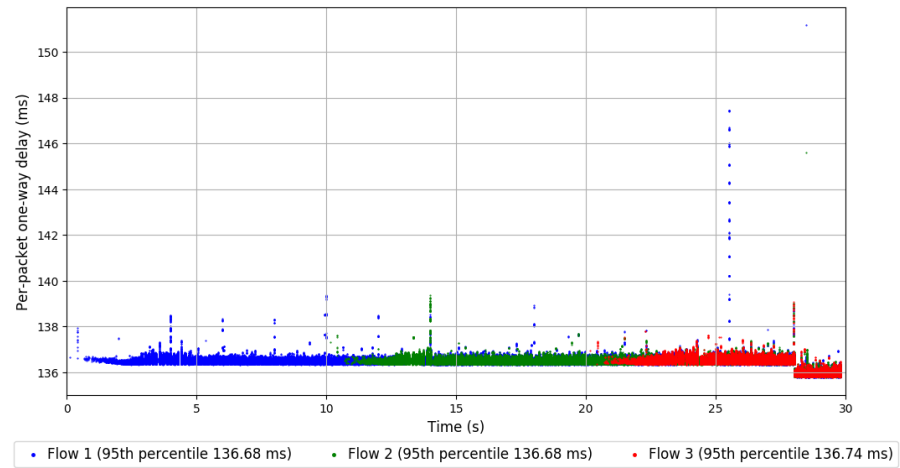
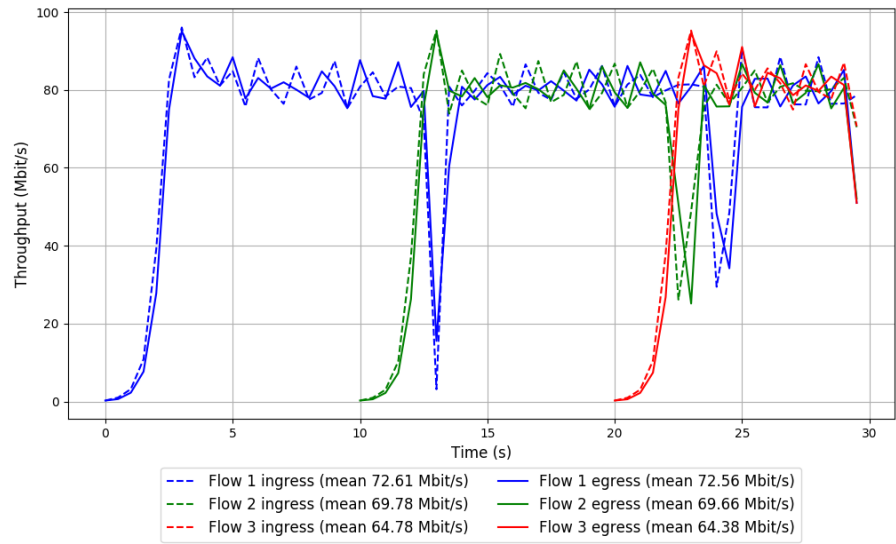
-- Flow 3:

Average throughput: 64.38 Mbit/s

95th percentile per-packet one-way delay: 136.739 ms

Loss rate: 3.40%

Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-04-18 19:44:11

End at: 2018-04-18 19:44:41

Below is generated by plot.py at 2018-04-19 01:54:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 96.55 Mbit/s

95th percentile per-packet one-way delay: 139.737 ms

Loss rate: 1.64%

-- Flow 1:

Average throughput: 48.09 Mbit/s

95th percentile per-packet one-way delay: 139.667 ms

Loss rate: 1.04%

-- Flow 2:

Average throughput: 54.01 Mbit/s

95th percentile per-packet one-way delay: 138.117 ms

Loss rate: 1.73%

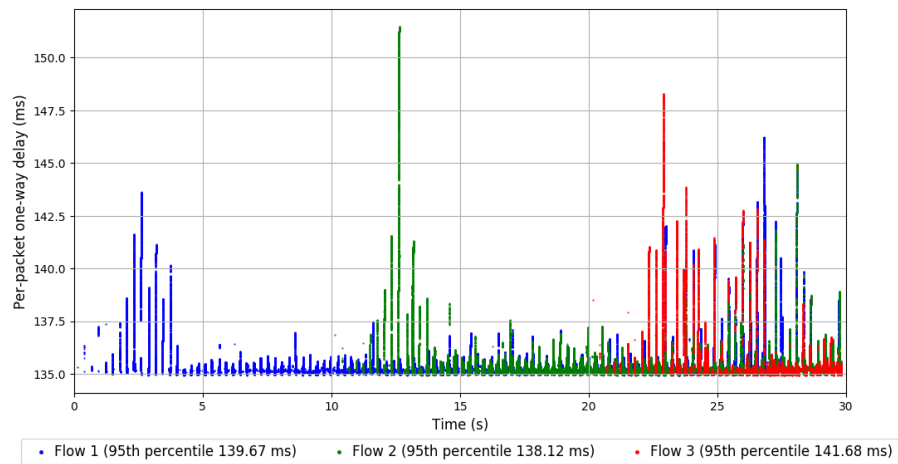
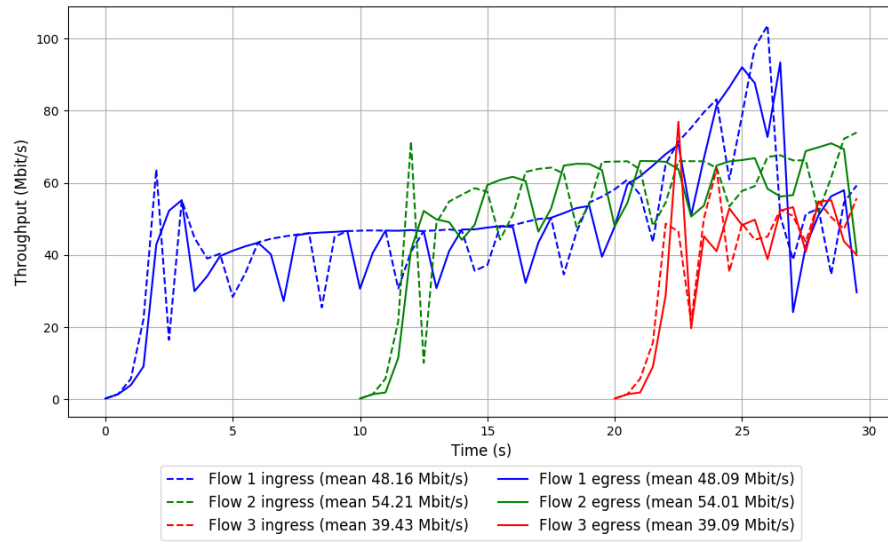
-- Flow 3:

Average throughput: 39.09 Mbit/s

95th percentile per-packet one-way delay: 141.677 ms

Loss rate: 3.59%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-04-18 20:02:26

End at: 2018-04-18 20:02:56

Below is generated by plot.py at 2018-04-19 01:54:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 114.95 Mbit/s

95th percentile per-packet one-way delay: 143.385 ms

Loss rate: 1.03%

-- Flow 1:

Average throughput: 77.94 Mbit/s

95th percentile per-packet one-way delay: 143.648 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 38.83 Mbit/s

95th percentile per-packet one-way delay: 139.658 ms

Loss rate: 1.79%

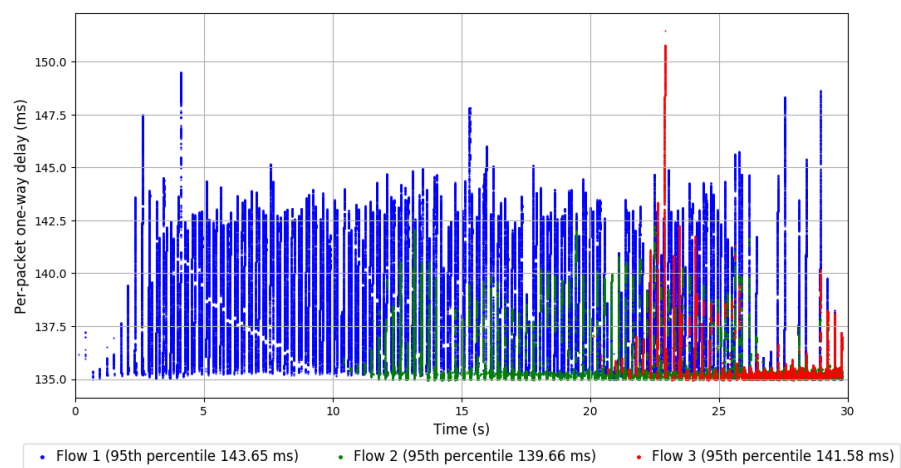
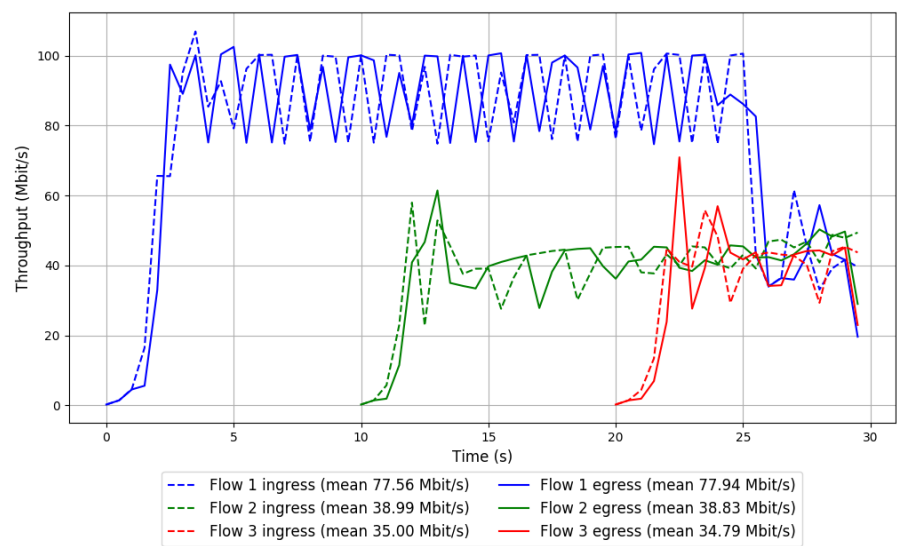
-- Flow 3:

Average throughput: 34.79 Mbit/s

95th percentile per-packet one-way delay: 141.579 ms

Loss rate: 3.35%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

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

End at: 2018-04-18 20:20:43

Below is generated by plot.py at 2018-04-19 01:54:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 93.94 Mbit/s

95th percentile per-packet one-way delay: 139.222 ms

Loss rate: 1.70%

-- Flow 1:

Average throughput: 56.96 Mbit/s

95th percentile per-packet one-way delay: 137.243 ms

Loss rate: 1.32%

-- Flow 2:

Average throughput: 38.53 Mbit/s

95th percentile per-packet one-way delay: 141.790 ms

Loss rate: 1.68%

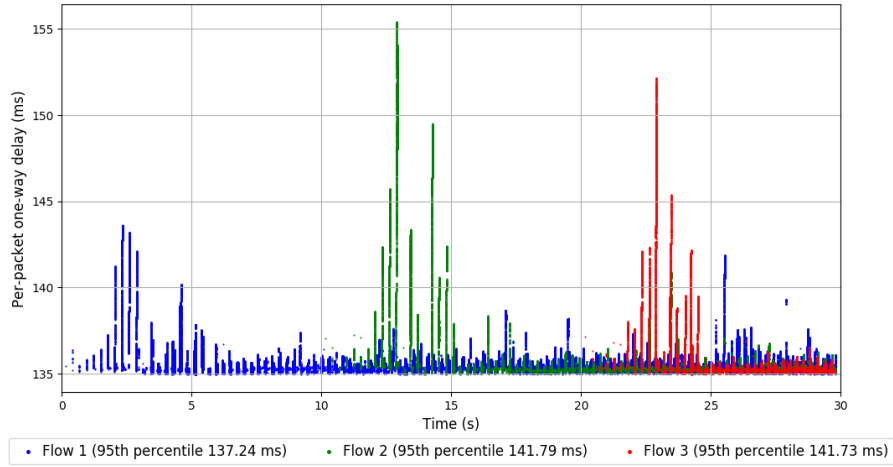
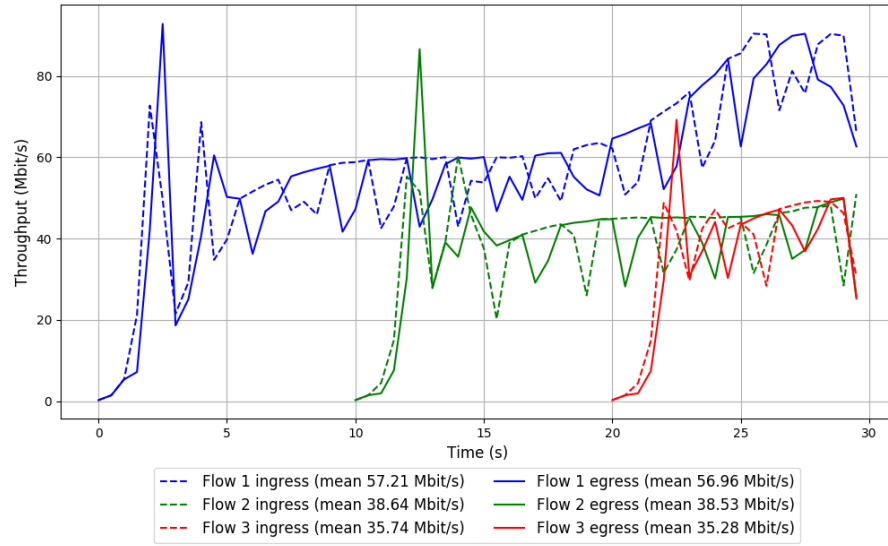
-- Flow 3:

Average throughput: 35.28 Mbit/s

95th percentile per-packet one-way delay: 141.730 ms

Loss rate: 3.58%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-04-18 20:38:05

End at: 2018-04-18 20:38:35

Below is generated by plot.py at 2018-04-19 01:54:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.93 Mbit/s

95th percentile per-packet one-way delay: 139.786 ms

Loss rate: 1.50%

-- Flow 1:

Average throughput: 51.14 Mbit/s

95th percentile per-packet one-way delay: 139.453 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 39.17 Mbit/s

95th percentile per-packet one-way delay: 139.738 ms

Loss rate: 1.78%

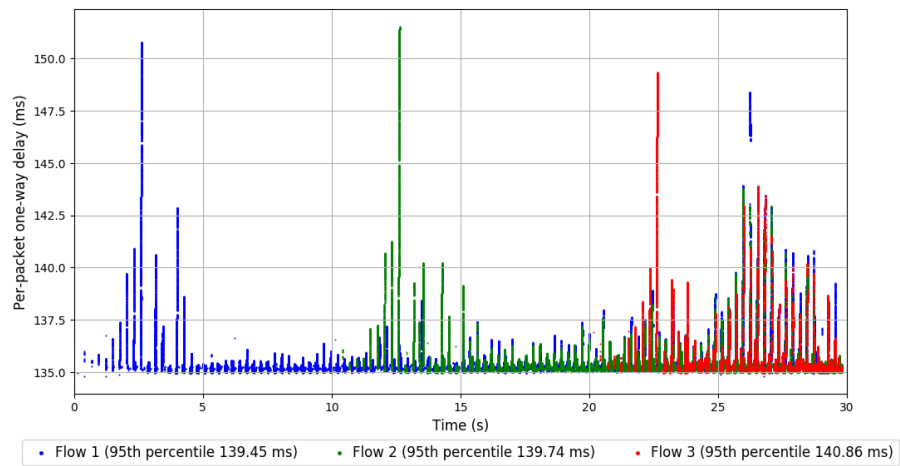
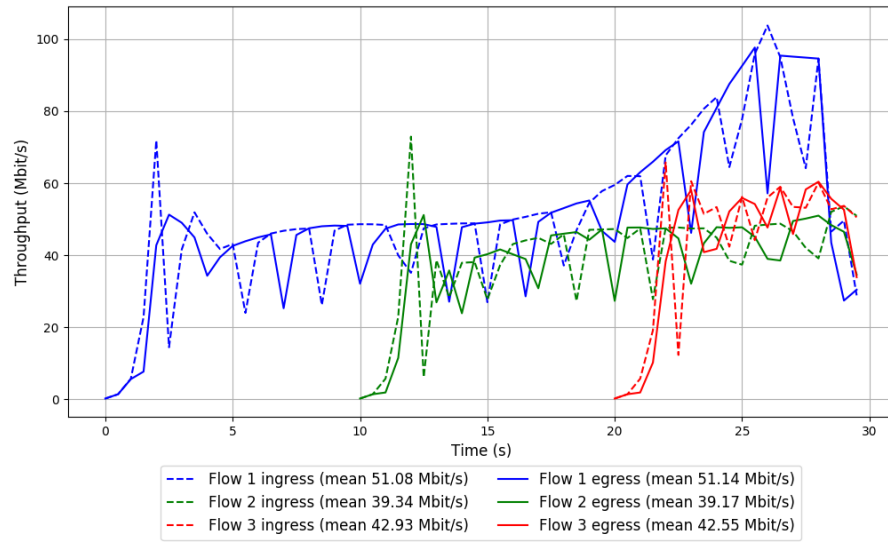
-- Flow 3:

Average throughput: 42.55 Mbit/s

95th percentile per-packet one-way delay: 140.864 ms

Loss rate: 3.62%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-04-18 20:56:21

End at: 2018-04-18 20:56:51

Below is generated by plot.py at 2018-04-19 01:54:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 113.39 Mbit/s

95th percentile per-packet one-way delay: 141.260 ms

Loss rate: 1.62%

-- Flow 1:

Average throughput: 66.68 Mbit/s

95th percentile per-packet one-way delay: 140.971 ms

Loss rate: 1.19%

-- Flow 2:

Average throughput: 52.17 Mbit/s

95th percentile per-packet one-way delay: 139.413 ms

Loss rate: 1.76%

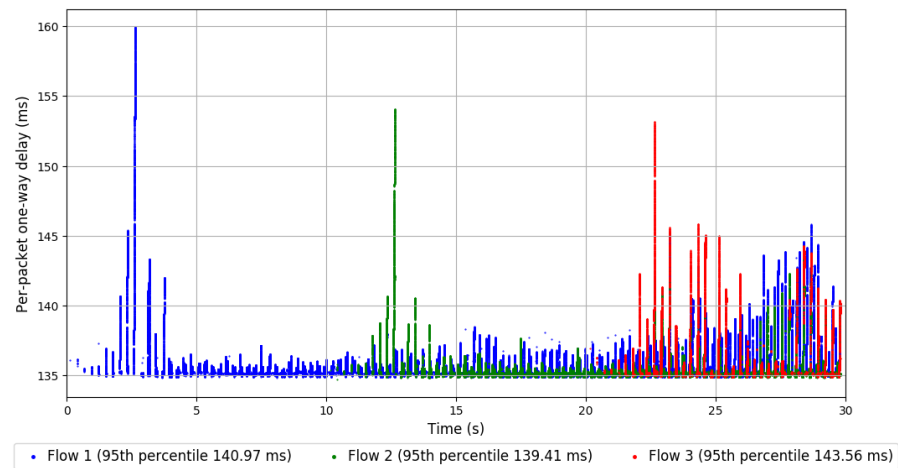
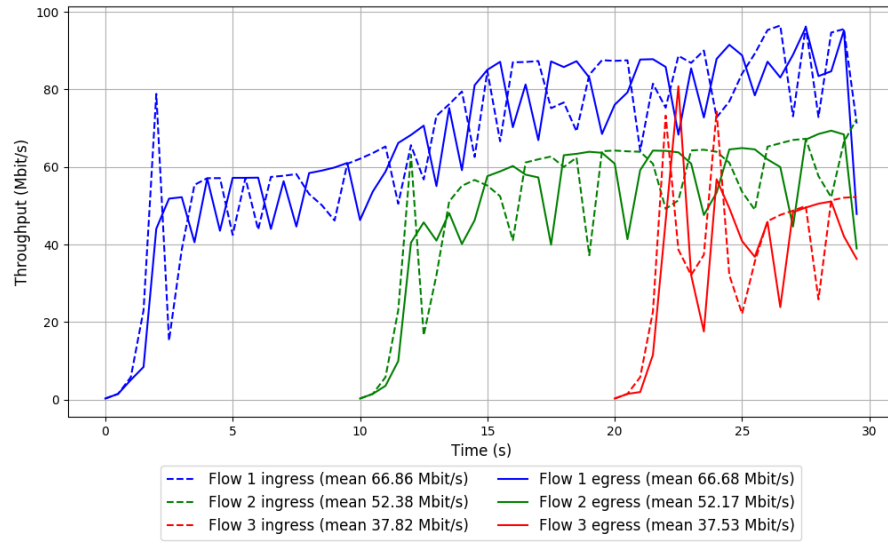
-- Flow 3:

Average throughput: 37.53 Mbit/s

95th percentile per-packet one-way delay: 143.563 ms

Loss rate: 3.52%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2018-04-18 21:14:42

End at: 2018-04-18 21:15:12

Below is generated by plot.py at 2018-04-19 01:54:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 96.23 Mbit/s

95th percentile per-packet one-way delay: 142.552 ms

Loss rate: 1.34%

-- Flow 1:

Average throughput: 58.77 Mbit/s

95th percentile per-packet one-way delay: 143.557 ms

Loss rate: 0.70%

-- Flow 2:

Average throughput: 39.77 Mbit/s

95th percentile per-packet one-way delay: 139.910 ms

Loss rate: 1.77%

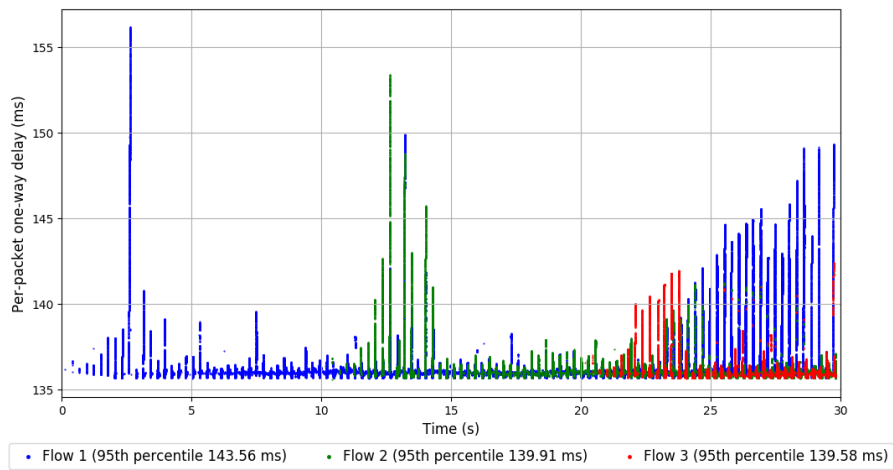
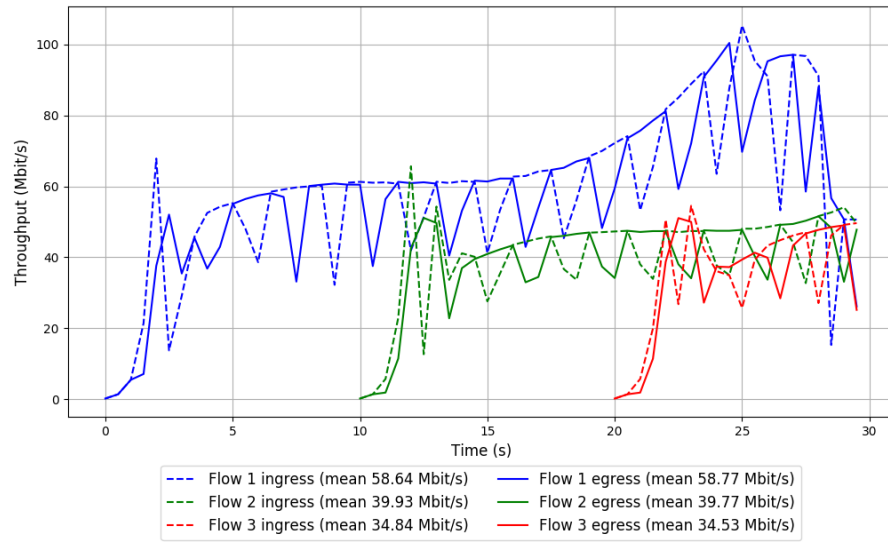
-- Flow 3:

Average throughput: 34.53 Mbit/s

95th percentile per-packet one-way delay: 139.578 ms

Loss rate: 3.62%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2018-04-18 21:32:55

End at: 2018-04-18 21:33:25

Below is generated by plot.py at 2018-04-19 01:55:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 109.86 Mbit/s

95th percentile per-packet one-way delay: 141.639 ms

Loss rate: 1.58%

-- Flow 1:

Average throughput: 63.00 Mbit/s

95th percentile per-packet one-way delay: 142.234 ms

Loss rate: 0.91%

-- Flow 2:

Average throughput: 43.17 Mbit/s

95th percentile per-packet one-way delay: 140.594 ms

Loss rate: 1.68%

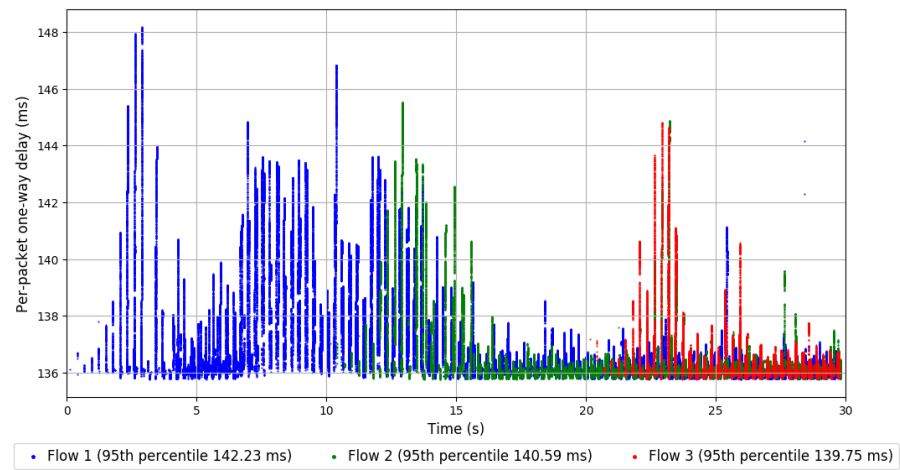
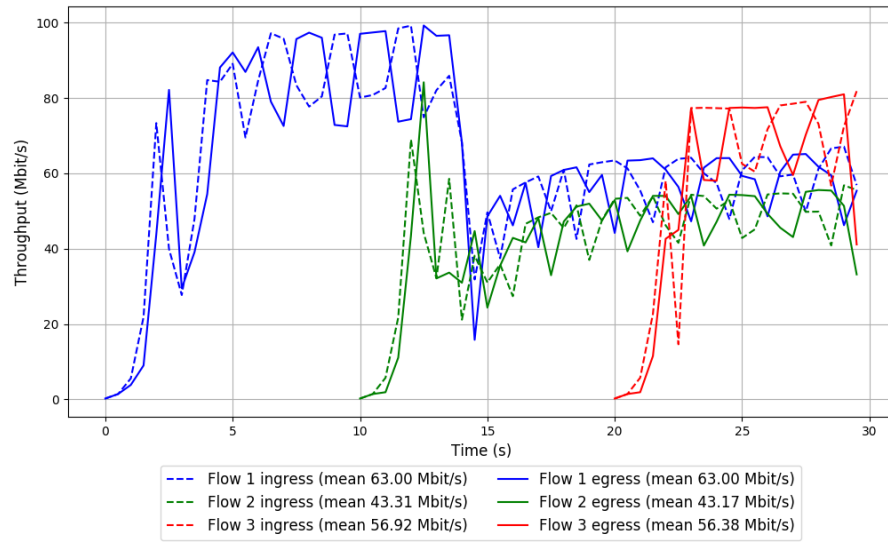
-- Flow 3:

Average throughput: 56.38 Mbit/s

95th percentile per-packet one-way delay: 139.748 ms

Loss rate: 3.68%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2018-04-18 21:50:46

End at: 2018-04-18 21:51:16

Below is generated by plot.py at 2018-04-19 01:55:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.61 Mbit/s

95th percentile per-packet one-way delay: 142.455 ms

Loss rate: 1.07%

-- Flow 1:

Average throughput: 52.52 Mbit/s

95th percentile per-packet one-way delay: 142.415 ms

Loss rate: 0.16%

-- Flow 2:

Average throughput: 50.63 Mbit/s

95th percentile per-packet one-way delay: 141.427 ms

Loss rate: 1.67%

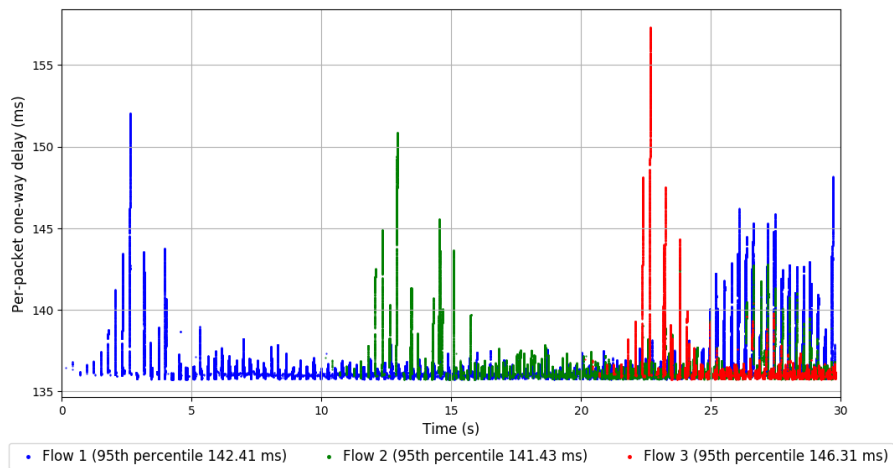
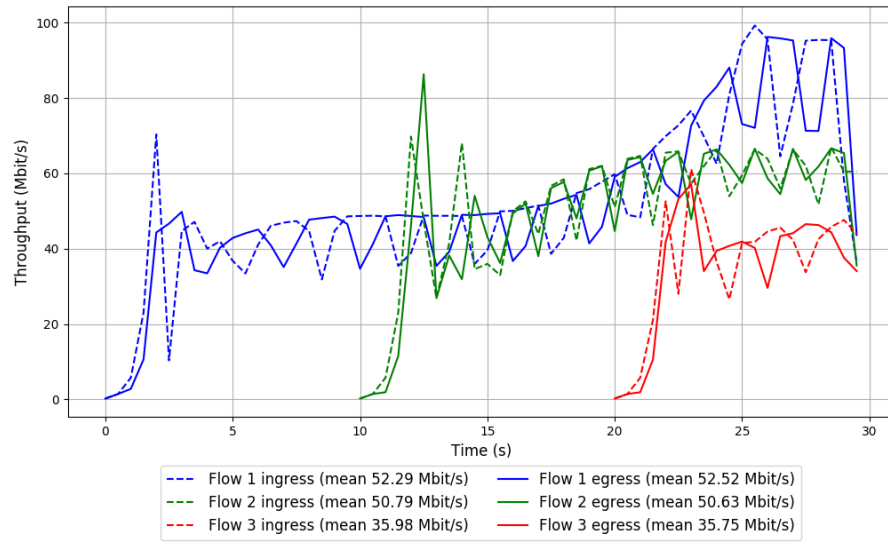
-- Flow 3:

Average throughput: 35.75 Mbit/s

95th percentile per-packet one-way delay: 146.315 ms

Loss rate: 3.37%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2018-04-18 22:08:36

End at: 2018-04-18 22:09:06

Below is generated by plot.py at 2018-04-19 01:55:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 111.69 Mbit/s

95th percentile per-packet one-way delay: 138.637 ms

Loss rate: 1.27%

-- Flow 1:

Average throughput: 61.23 Mbit/s

95th percentile per-packet one-way delay: 137.897 ms

Loss rate: 0.58%

-- Flow 2:

Average throughput: 59.32 Mbit/s

95th percentile per-packet one-way delay: 138.700 ms

Loss rate: 1.69%

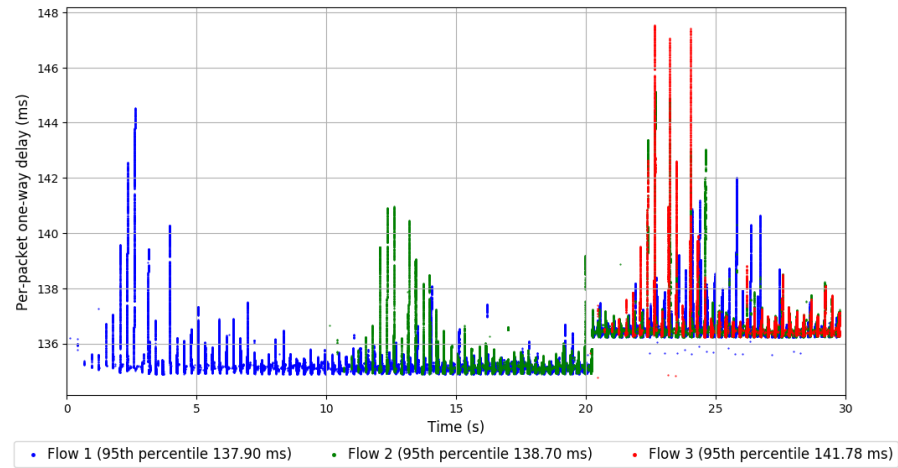
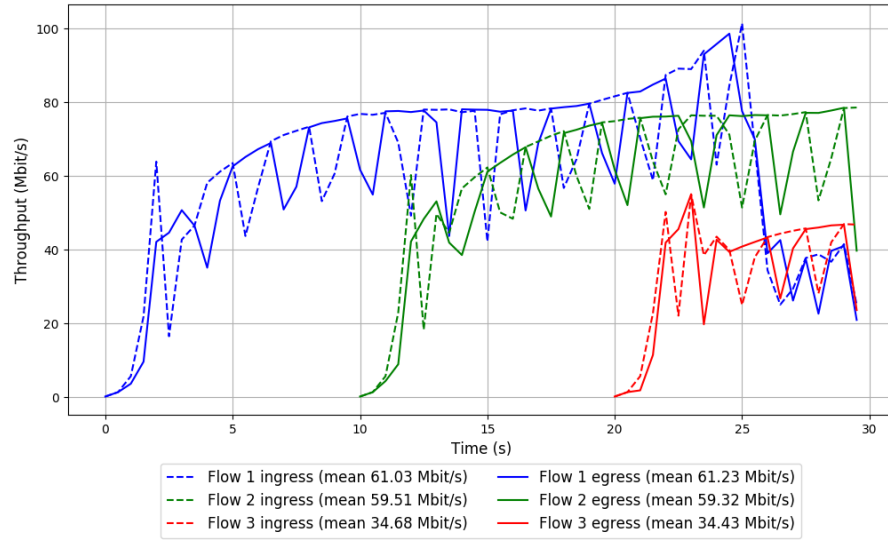
-- Flow 3:

Average throughput: 34.43 Mbit/s

95th percentile per-packet one-way delay: 141.784 ms

Loss rate: 3.44%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

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

End at: 2018-04-18 22:26:43

Below is generated by plot.py at 2018-04-19 01:55:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 105.34 Mbit/s

95th percentile per-packet one-way delay: 142.932 ms

Loss rate: 1.54%

-- Flow 1:

Average throughput: 41.78 Mbit/s

95th percentile per-packet one-way delay: 142.707 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 67.40 Mbit/s

95th percentile per-packet one-way delay: 143.482 ms

Loss rate: 1.15%

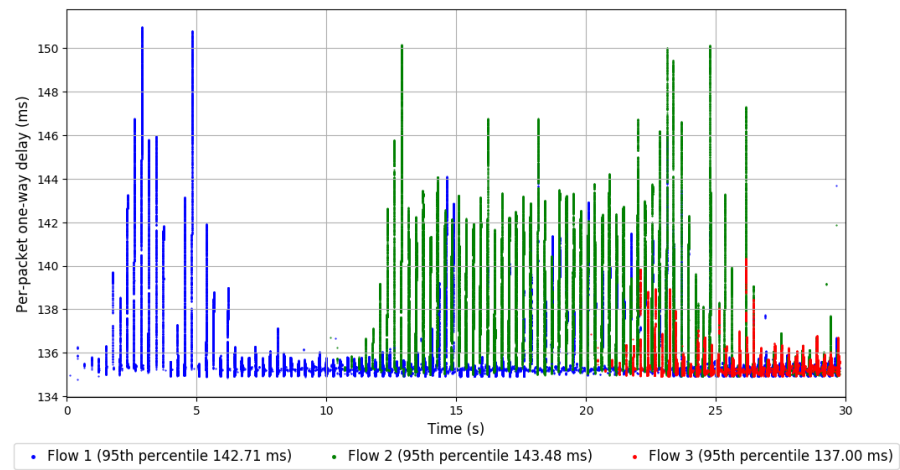
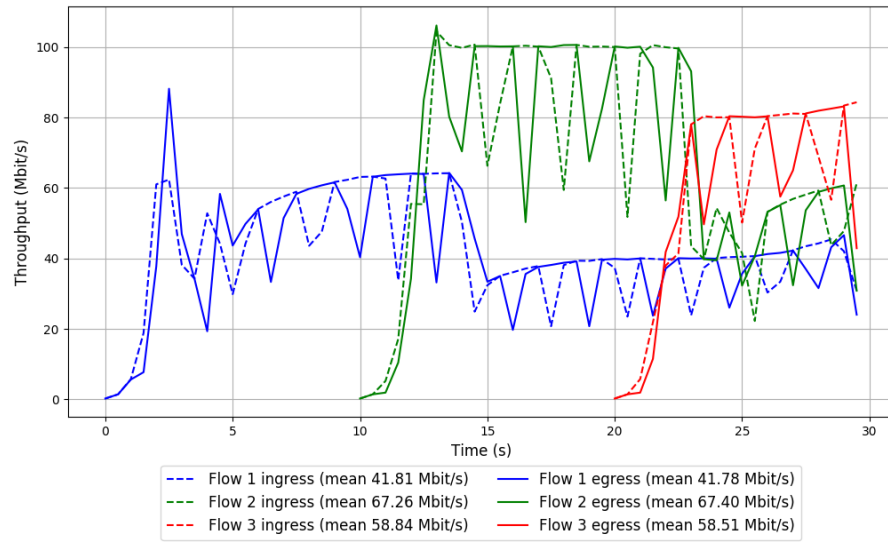
-- Flow 3:

Average throughput: 58.51 Mbit/s

95th percentile per-packet one-way delay: 137.005 ms

Loss rate: 3.66%

Run 10: Report of TCP Cubic — Data Link

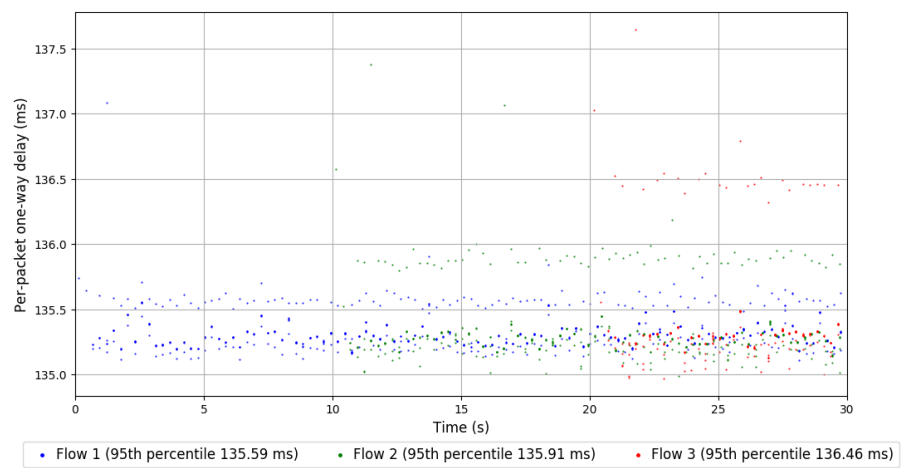
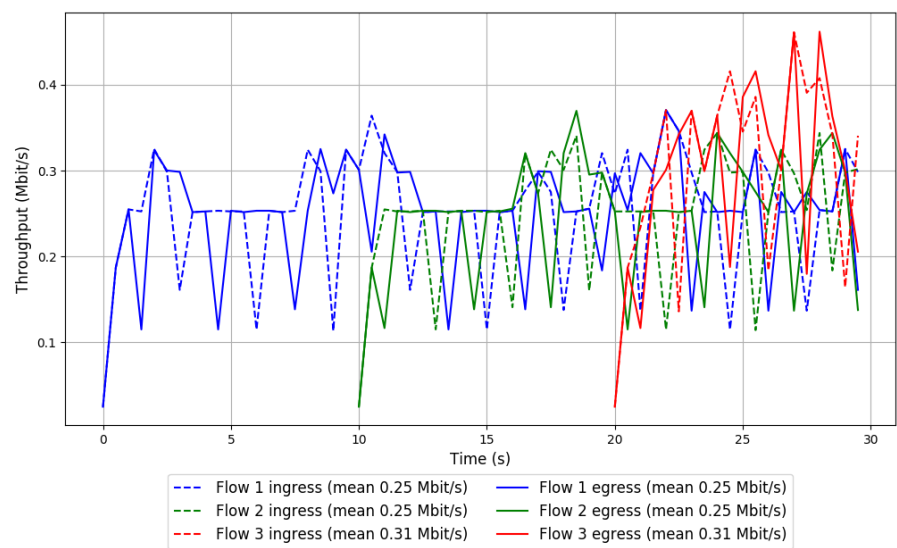


```
Run 1: Statistics of LEDBAT

Start at: 2018-04-18 19:38:16
End at: 2018-04-18 19:38:46

# Below is generated by plot.py at 2018-04-19 01:55:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 135.873 ms
Loss rate: 1.40%
-- Flow 1:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 135.588 ms
Loss rate: 0.91%
-- Flow 2:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 135.913 ms
Loss rate: 1.64%
-- Flow 3:
Average throughput: 0.31 Mbit/s
95th percentile per-packet one-way delay: 136.458 ms
Loss rate: 2.24%
```


Run 1: Report of LEDBAT — Data Link

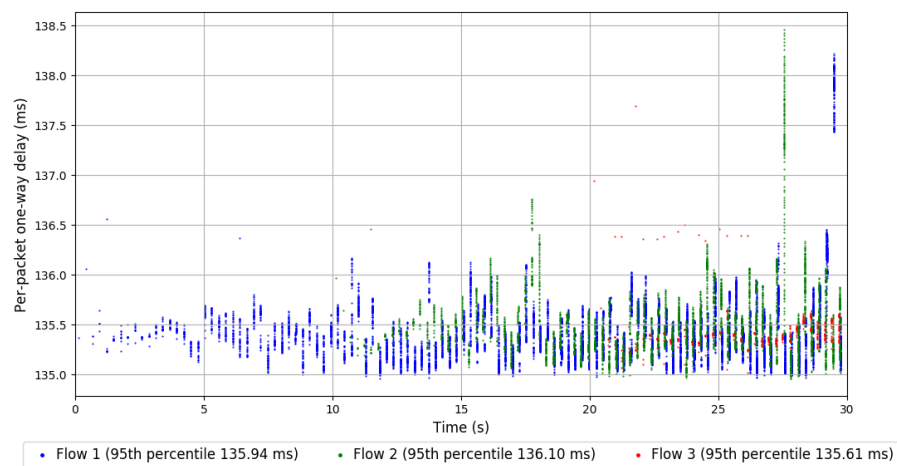
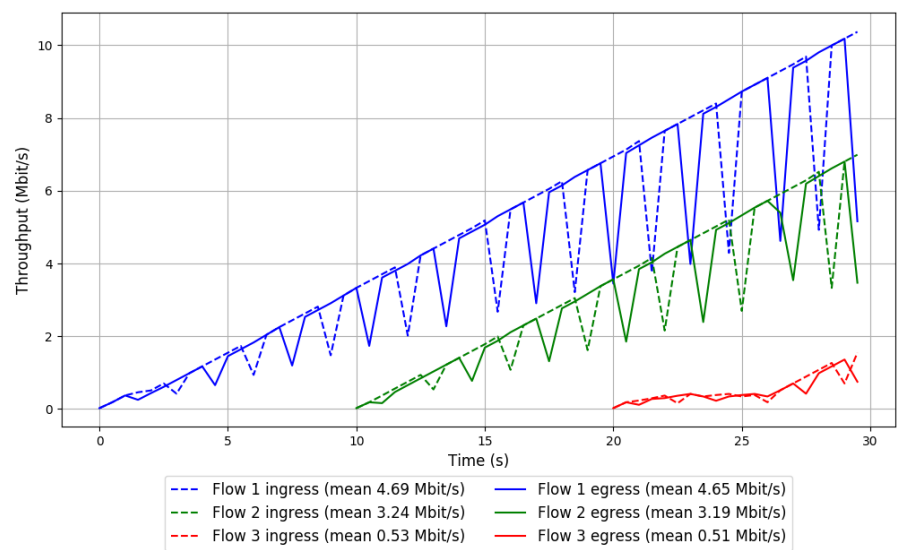


```
Run 2: Statistics of LEDBAT

Start at: 2018-04-18 19:56:24
End at: 2018-04-18 19:56:54

# Below is generated by plot.py at 2018-04-19 01:55:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.92 Mbit/s
95th percentile per-packet one-way delay: 136.021 ms
Loss rate: 2.27%
-- Flow 1:
Average throughput: 4.65 Mbit/s
95th percentile per-packet one-way delay: 135.935 ms
Loss rate: 1.86%
-- Flow 2:
Average throughput: 3.19 Mbit/s
95th percentile per-packet one-way delay: 136.098 ms
Loss rate: 2.74%
-- Flow 3:
Average throughput: 0.51 Mbit/s
95th percentile per-packet one-way delay: 135.612 ms
Loss rate: 7.62%
```

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

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

End at: 2018-04-18 20:14:59

Below is generated by plot.py at 2018-04-19 01:55:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.55 Mbit/s

95th percentile per-packet one-way delay: 136.079 ms

Loss rate: 2.20%

-- Flow 1:

Average throughput: 4.40 Mbit/s

95th percentile per-packet one-way delay: 136.022 ms

Loss rate: 1.91%

-- Flow 2:

Average throughput: 3.15 Mbit/s

95th percentile per-packet one-way delay: 136.137 ms

Loss rate: 2.76%

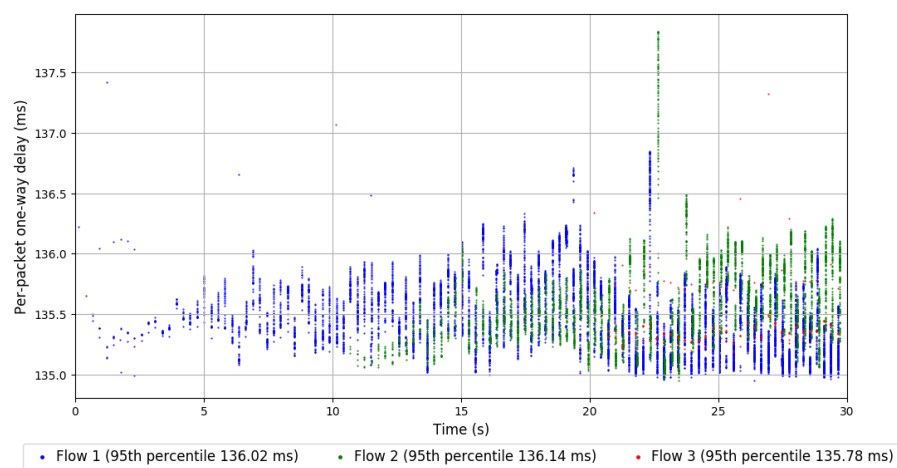
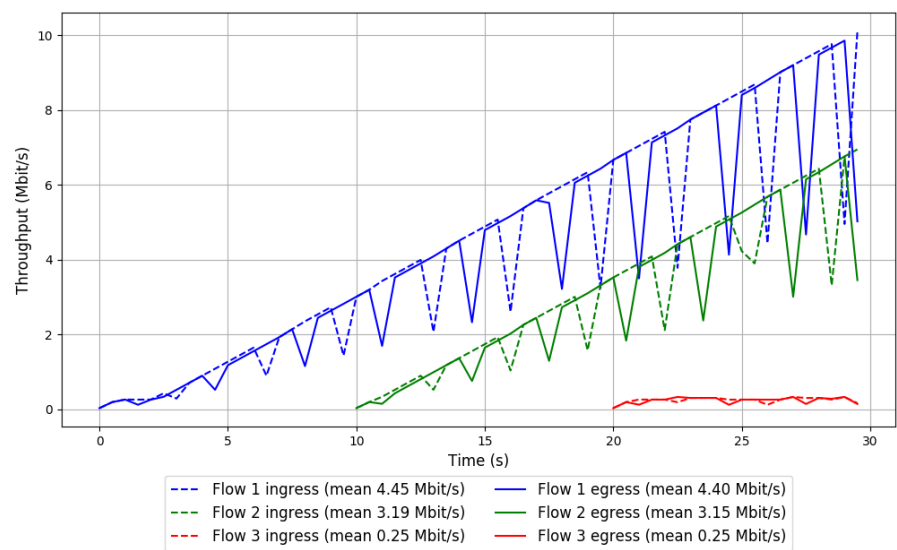
-- Flow 3:

Average throughput: 0.25 Mbit/s

95th percentile per-packet one-way delay: 135.777 ms

Loss rate: 3.32%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-04-18 20:32:16

End at: 2018-04-18 20:32:46

Below is generated by plot.py at 2018-04-19 01:55:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.62 Mbit/s

95th percentile per-packet one-way delay: 135.986 ms

Loss rate: 3.75%

-- Flow 1:

Average throughput: 1.28 Mbit/s

95th percentile per-packet one-way delay: 136.033 ms

Loss rate: 3.31%

-- Flow 2:

Average throughput: 1.73 Mbit/s

95th percentile per-packet one-way delay: 135.954 ms

Loss rate: 3.61%

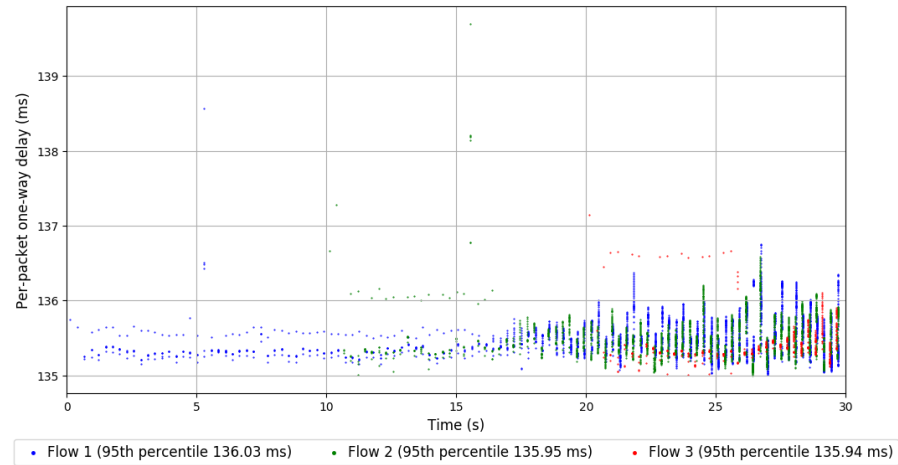
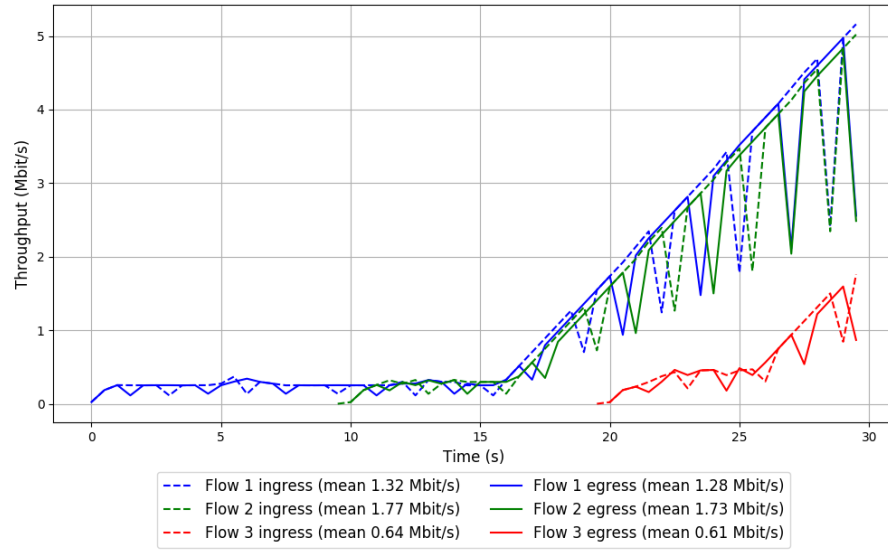
-- Flow 3:

Average throughput: 0.61 Mbit/s

95th percentile per-packet one-way delay: 135.937 ms

Loss rate: 7.30%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-04-18 20:50:23

End at: 2018-04-18 20:50:53

Below is generated by plot.py at 2018-04-19 01:55:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.53 Mbit/s

95th percentile per-packet one-way delay: 136.218 ms

Loss rate: 2.36%

-- Flow 1:

Average throughput: 4.87 Mbit/s

95th percentile per-packet one-way delay: 136.236 ms

Loss rate: 1.82%

-- Flow 2:

Average throughput: 2.11 Mbit/s

95th percentile per-packet one-way delay: 136.108 ms

Loss rate: 3.29%

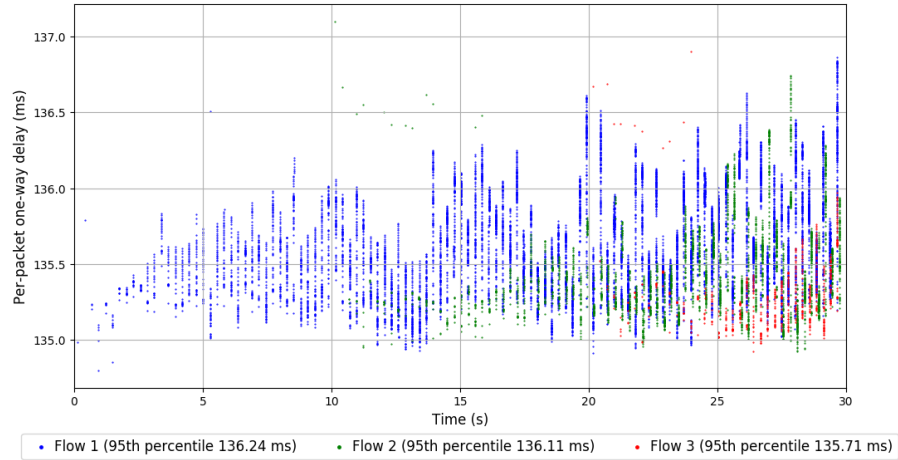
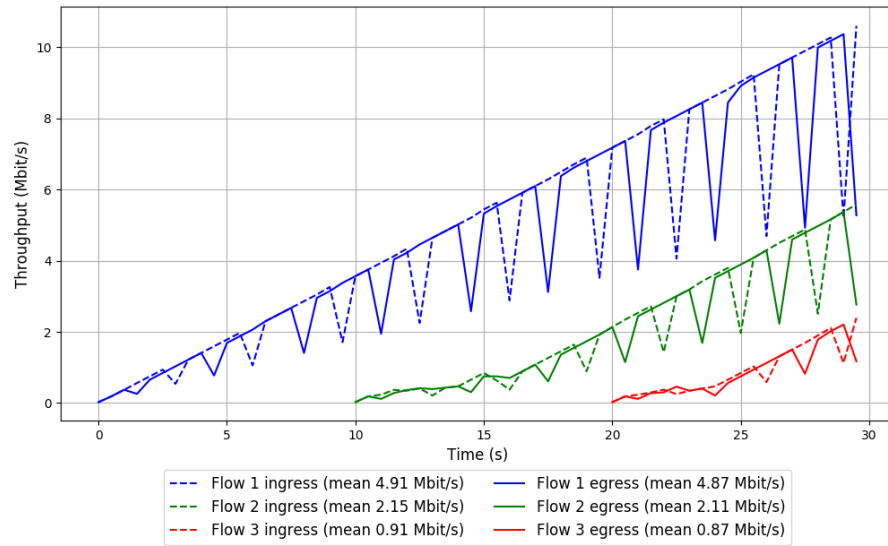
-- Flow 3:

Average throughput: 0.87 Mbit/s

95th percentile per-packet one-way delay: 135.710 ms

Loss rate: 6.87%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2018-04-18 21:08:44

End at: 2018-04-18 21:09:14

Below is generated by plot.py at 2018-04-19 01:55:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.51 Mbit/s

95th percentile per-packet one-way delay: 136.705 ms

Loss rate: 1.59%

-- Flow 1:

Average throughput: 0.26 Mbit/s

95th percentile per-packet one-way delay: 136.295 ms

Loss rate: 1.03%

-- Flow 2:

Average throughput: 0.25 Mbit/s

95th percentile per-packet one-way delay: 136.728 ms

Loss rate: 1.40%

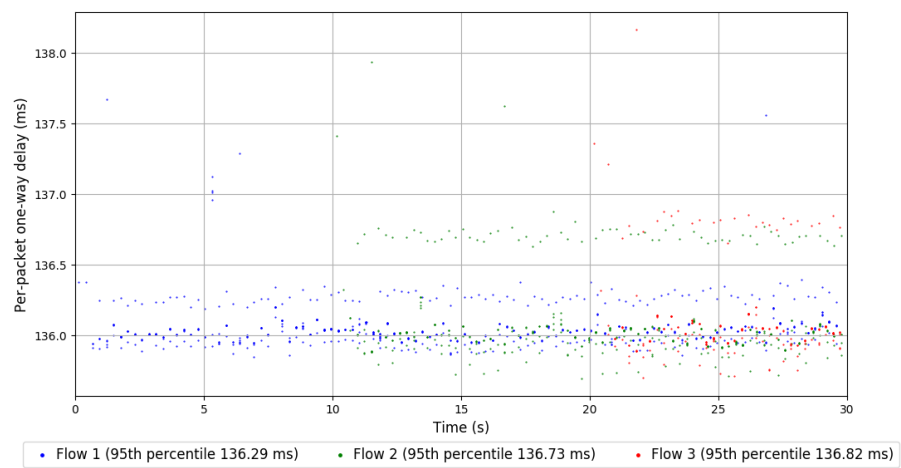
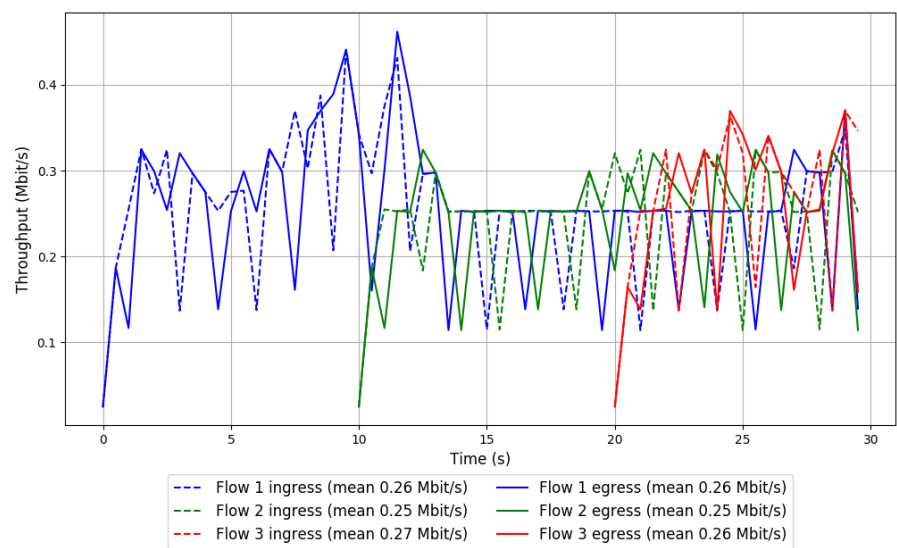
-- Flow 3:

Average throughput: 0.26 Mbit/s

95th percentile per-packet one-way delay: 136.816 ms

Loss rate: 3.58%

Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

Start at: 2018-04-18 21:26:57

End at: 2018-04-18 21:27:27

Below is generated by plot.py at 2018-04-19 01:55:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.38 Mbit/s

95th percentile per-packet one-way delay: 136.899 ms

Loss rate: 2.45%

-- Flow 1:

Average throughput: 4.80 Mbit/s

95th percentile per-packet one-way delay: 136.978 ms

Loss rate: 1.83%

-- Flow 2:

Average throughput: 1.69 Mbit/s

95th percentile per-packet one-way delay: 136.321 ms

Loss rate: 3.65%

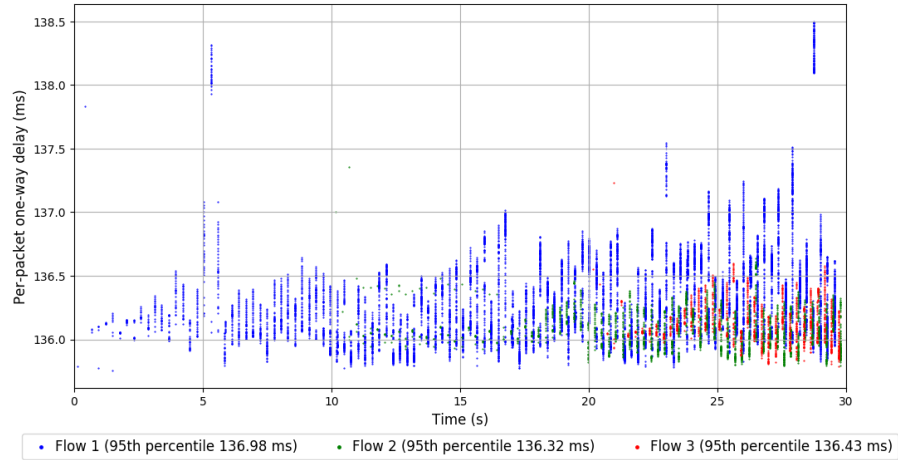
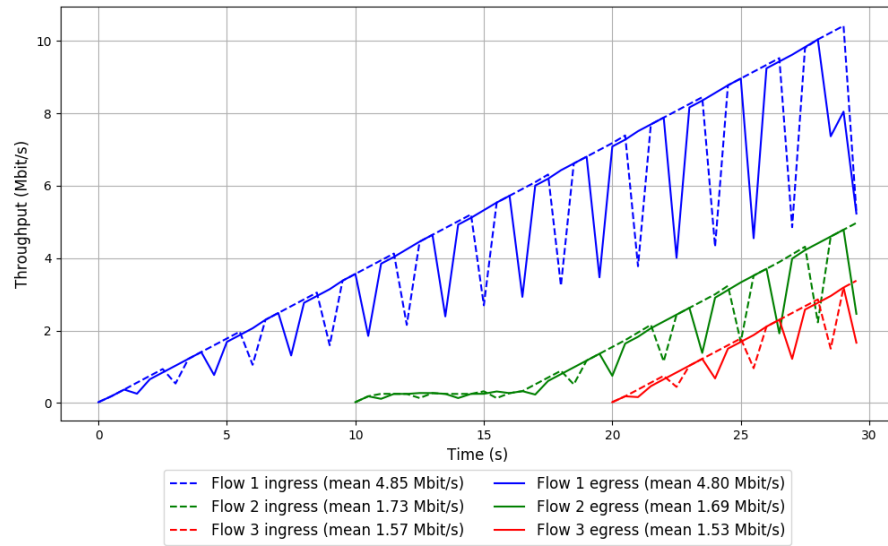
-- Flow 3:

Average throughput: 1.53 Mbit/s

95th percentile per-packet one-way delay: 136.425 ms

Loss rate: 5.55%

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2018-04-18 21:45:01

End at: 2018-04-18 21:45:31

Below is generated by plot.py at 2018-04-19 01:55:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.13 Mbit/s

95th percentile per-packet one-way delay: 137.052 ms

Loss rate: 2.39%

-- Flow 1:

Average throughput: 4.59 Mbit/s

95th percentile per-packet one-way delay: 137.077 ms

Loss rate: 1.87%

-- Flow 2:

Average throughput: 3.19 Mbit/s

95th percentile per-packet one-way delay: 137.015 ms

Loss rate: 2.74%

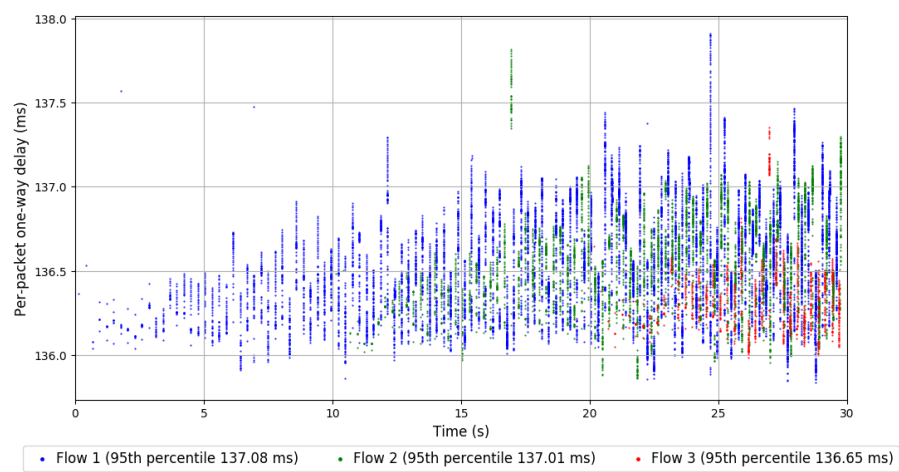
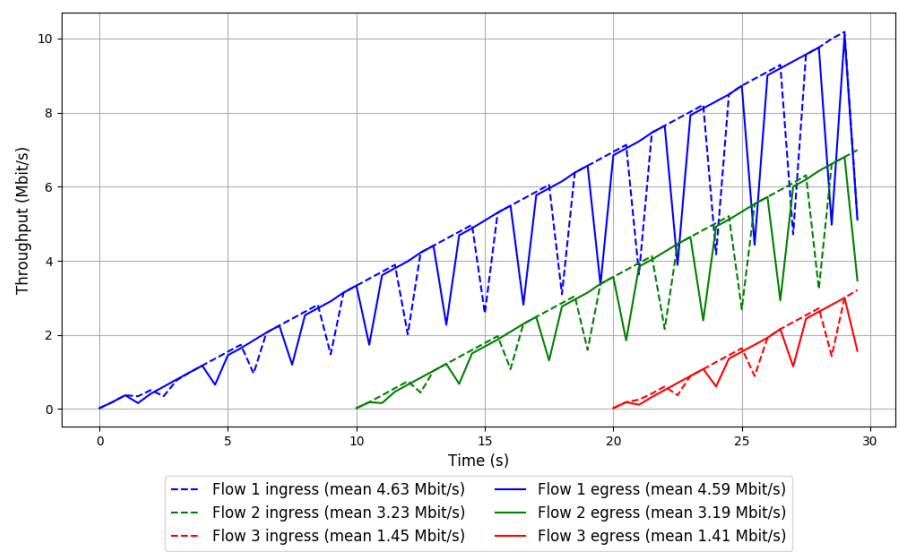
-- Flow 3:

Average throughput: 1.41 Mbit/s

95th percentile per-packet one-way delay: 136.653 ms

Loss rate: 5.78%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2018-04-18 22:02:49

End at: 2018-04-18 22:03:19

Below is generated by plot.py at 2018-04-19 01:55:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.59 Mbit/s

95th percentile per-packet one-way delay: 136.731 ms

Loss rate: 2.33%

-- Flow 1:

Average throughput: 4.86 Mbit/s

95th percentile per-packet one-way delay: 136.645 ms

Loss rate: 1.82%

-- Flow 2:

Average throughput: 2.26 Mbit/s

95th percentile per-packet one-way delay: 136.818 ms

Loss rate: 3.20%

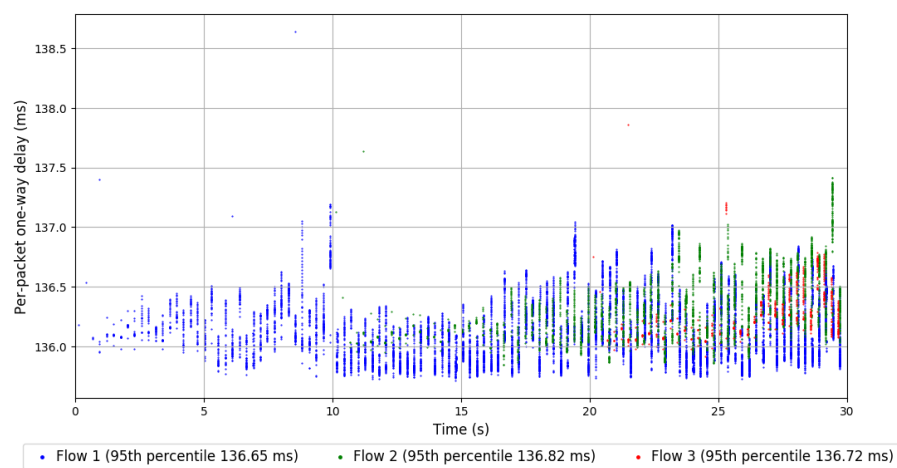
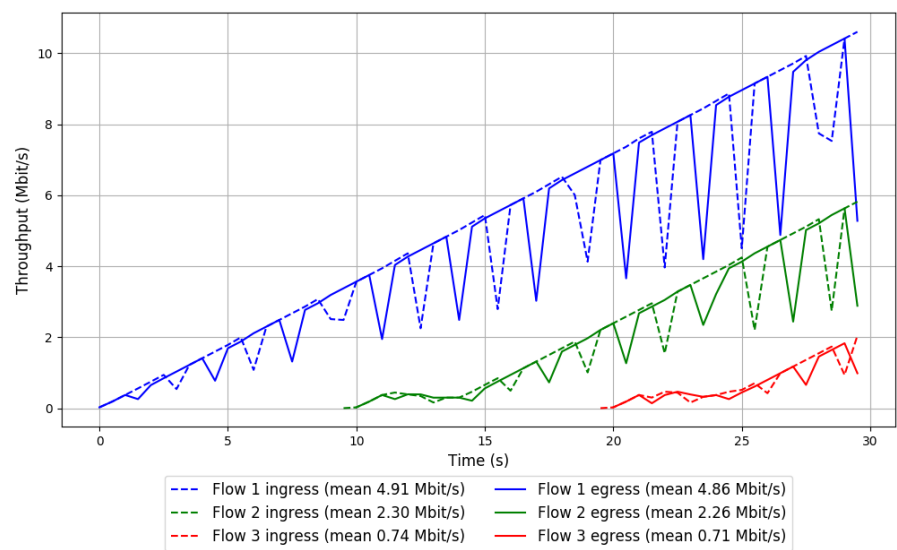
-- Flow 3:

Average throughput: 0.71 Mbit/s

95th percentile per-packet one-way delay: 136.718 ms

Loss rate: 7.27%

Run 9: Report of LEDBAT — Data Link

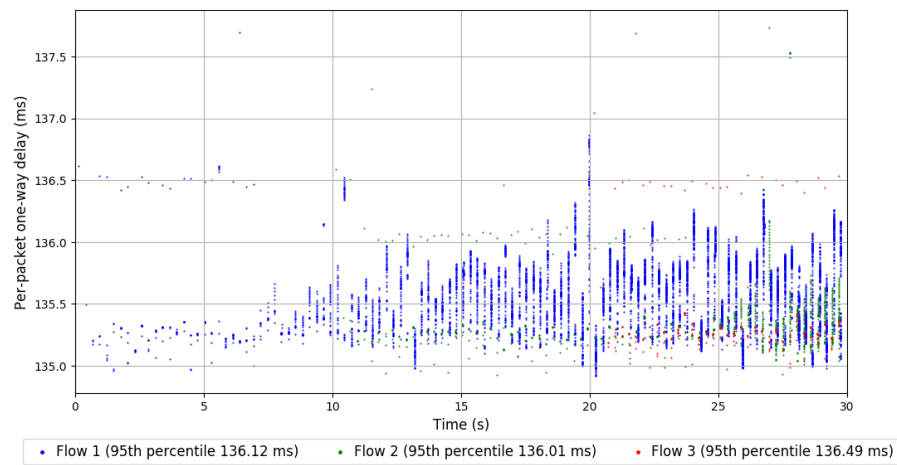
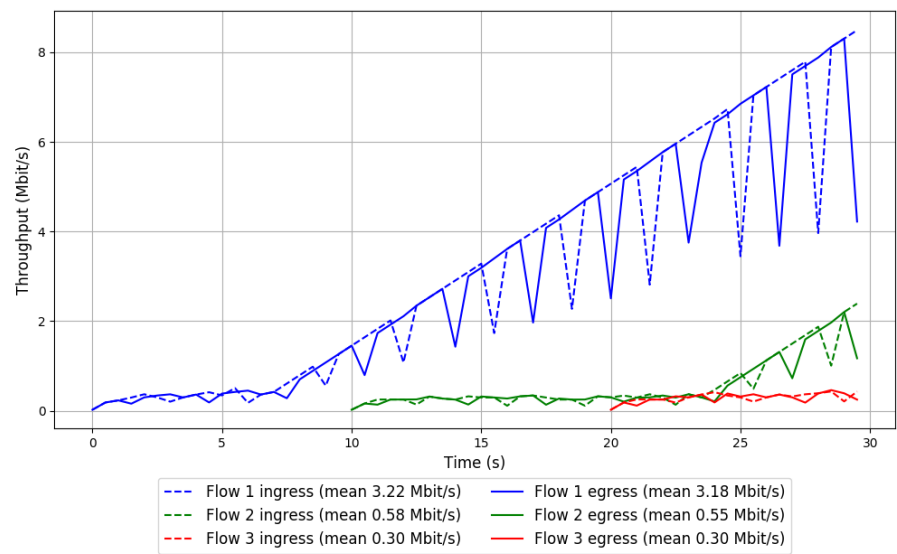


```
Run 10: Statistics of LEDBAT

Start at: 2018-04-18 22:20:44
End at: 2018-04-18 22:21:14

# Below is generated by plot.py at 2018-04-19 01:55:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.64 Mbit/s
95th percentile per-packet one-way delay: 136.120 ms
Loss rate: 2.56%
-- Flow 1:
Average throughput: 3.18 Mbit/s
95th percentile per-packet one-way delay: 136.125 ms
Loss rate: 2.22%
-- Flow 2:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 136.009 ms
Loss rate: 5.33%
-- Flow 3:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 136.489 ms
Loss rate: 3.05%
```

Run 10: Report of LEDBAT — Data Link

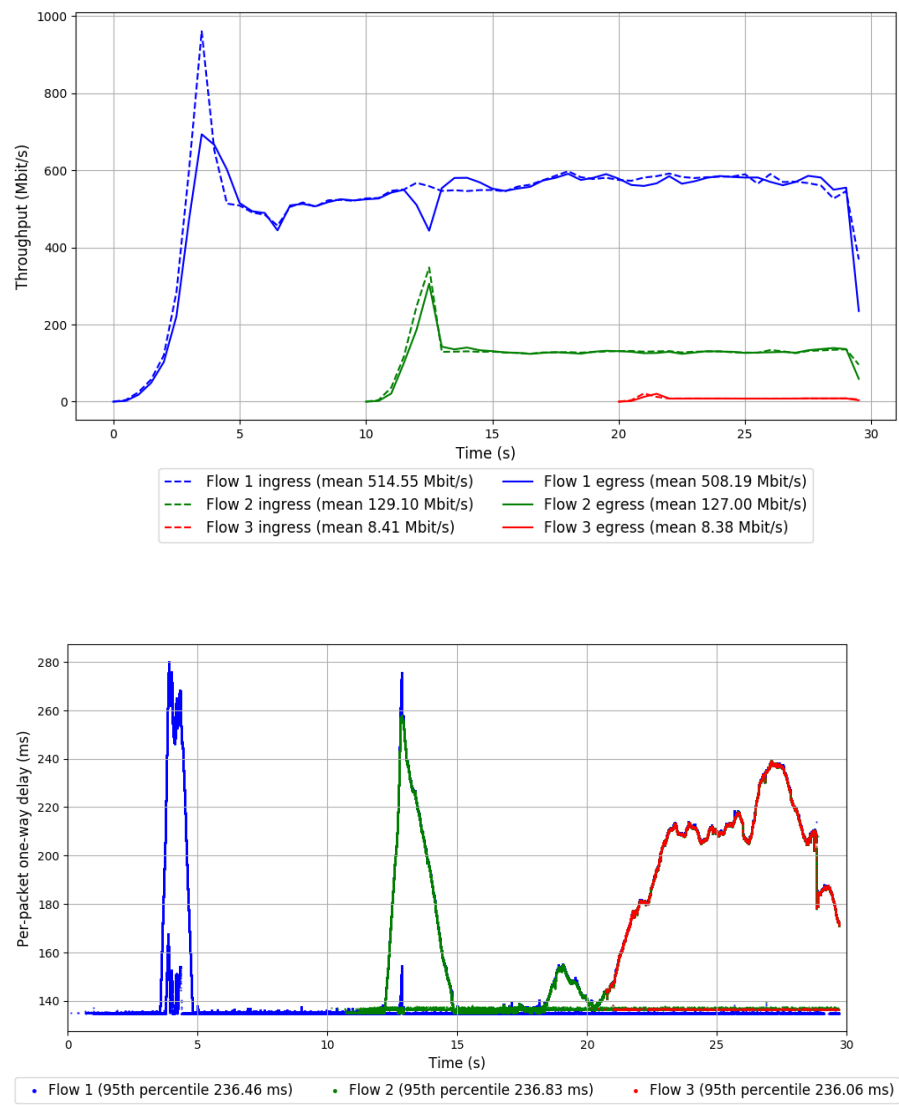


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-04-18 19:50:15
End at: 2018-04-18 19:50:45

# Below is generated by plot.py at 2018-04-19 02:03:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 594.93 Mbit/s
95th percentile per-packet one-way delay: 236.551 ms
Loss rate: 2.26%
-- Flow 1:
Average throughput: 508.19 Mbit/s
95th percentile per-packet one-way delay: 236.457 ms
Loss rate: 2.13%
-- Flow 2:
Average throughput: 127.00 Mbit/s
95th percentile per-packet one-way delay: 236.831 ms
Loss rate: 2.99%
-- Flow 3:
Average throughput: 8.38 Mbit/s
95th percentile per-packet one-way delay: 236.065 ms
Loss rate: 3.14%
```

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-04-18 20:08:24

End at: 2018-04-18 20:08:54

Below is generated by plot.py at 2018-04-19 02:03:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 554.04 Mbit/s

95th percentile per-packet one-way delay: 265.864 ms

Loss rate: 4.97%

-- Flow 1:

Average throughput: 434.27 Mbit/s

95th percentile per-packet one-way delay: 271.634 ms

Loss rate: 4.61%

-- Flow 2:

Average throughput: 124.90 Mbit/s

95th percentile per-packet one-way delay: 256.191 ms

Loss rate: 4.97%

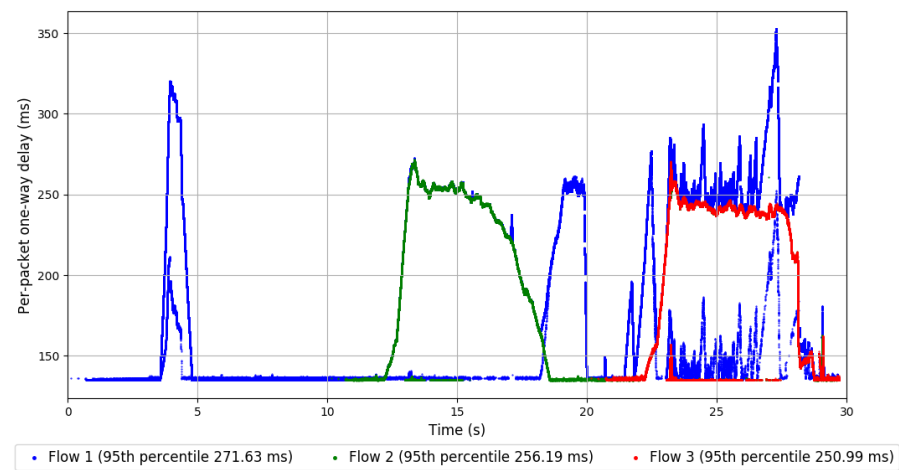
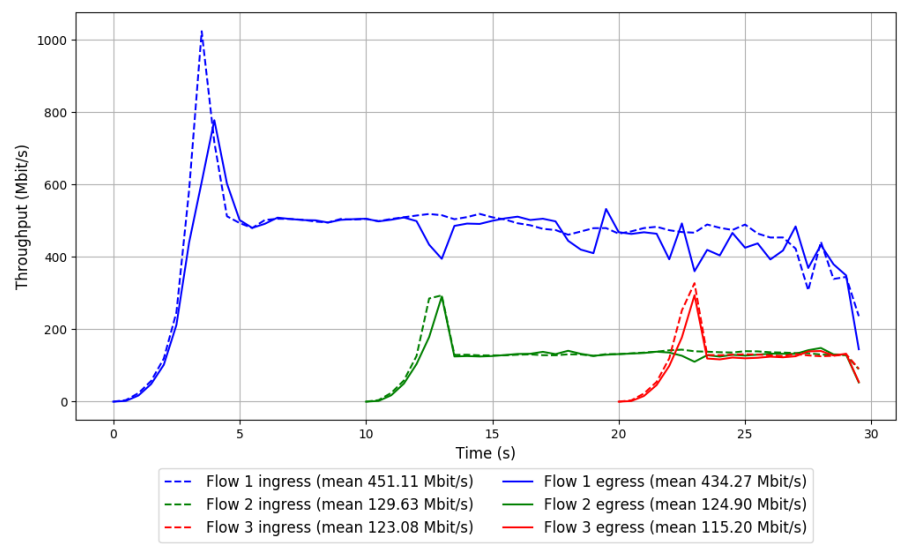
-- Flow 3:

Average throughput: 115.20 Mbit/s

95th percentile per-packet one-way delay: 250.991 ms

Loss rate: 8.99%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-04-18 20:26:15

End at: 2018-04-18 20:26:45

Below is generated by plot.py at 2018-04-19 02:03:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 490.71 Mbit/s

95th percentile per-packet one-way delay: 261.874 ms

Loss rate: 7.40%

-- Flow 1:

Average throughput: 315.29 Mbit/s

95th percentile per-packet one-way delay: 272.891 ms

Loss rate: 5.36%

-- Flow 2:

Average throughput: 132.97 Mbit/s

95th percentile per-packet one-way delay: 251.554 ms

Loss rate: 5.76%

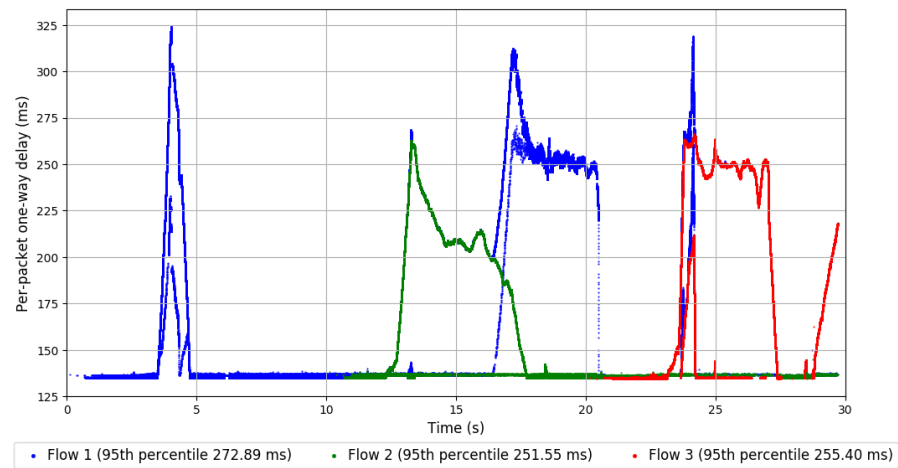
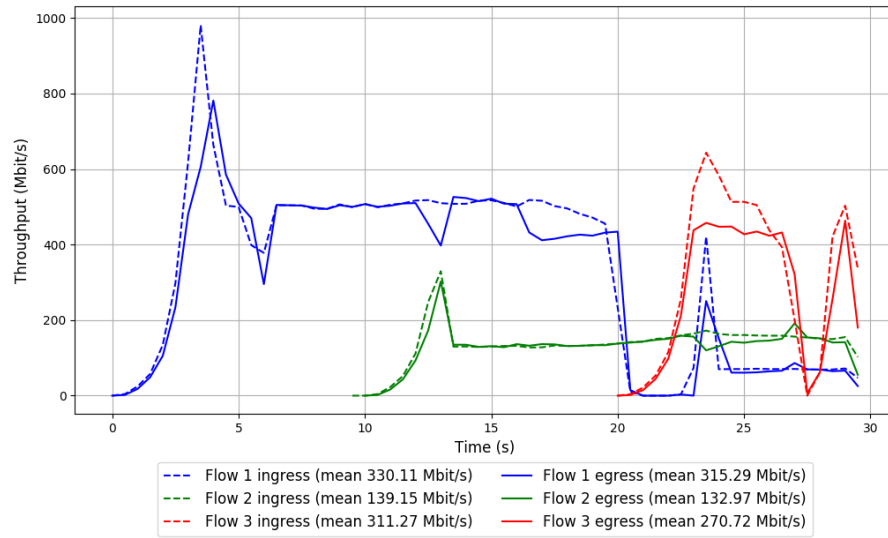
-- Flow 3:

Average throughput: 270.72 Mbit/s

95th percentile per-packet one-way delay: 255.403 ms

Loss rate: 15.43%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-04-18 20:44:18

End at: 2018-04-18 20:44:48

Below is generated by plot.py at 2018-04-19 02:03:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 578.59 Mbit/s

95th percentile per-packet one-way delay: 309.721 ms

Loss rate: 3.34%

-- Flow 1:

Average throughput: 515.65 Mbit/s

95th percentile per-packet one-way delay: 315.573 ms

Loss rate: 3.25%

-- Flow 2:

Average throughput: 64.74 Mbit/s

95th percentile per-packet one-way delay: 247.167 ms

Loss rate: 3.25%

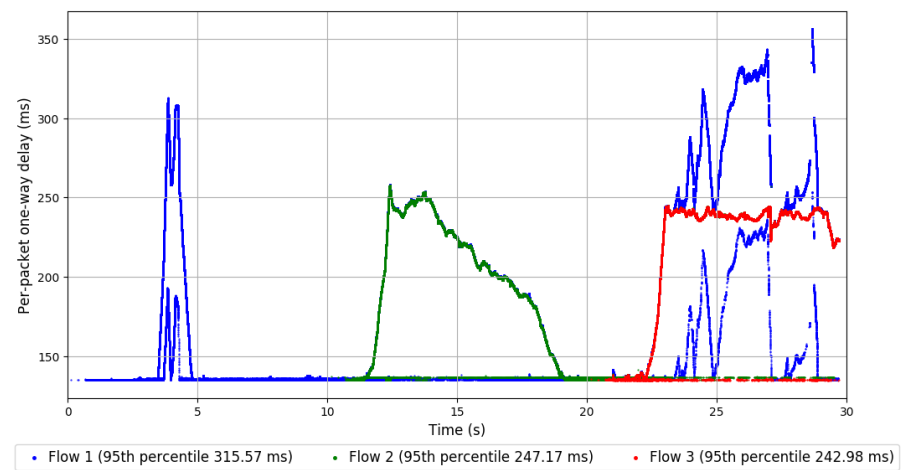
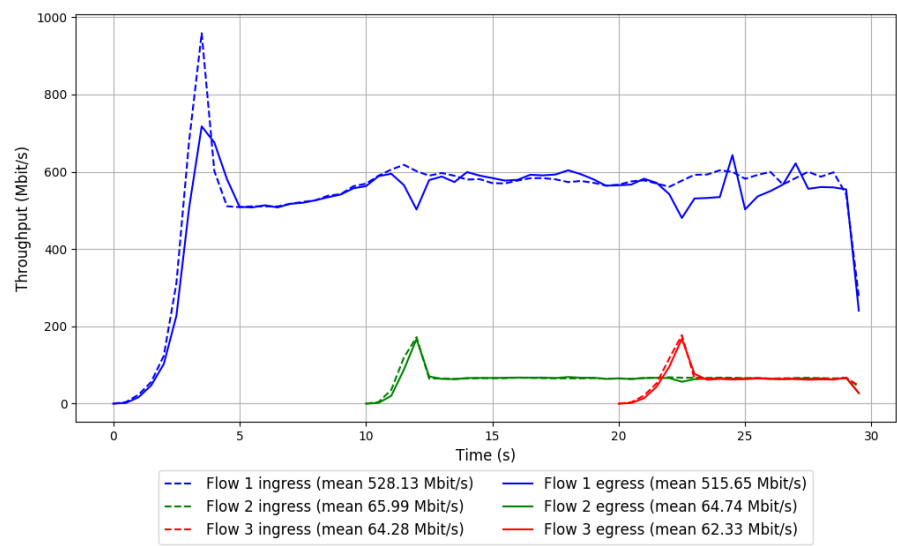
-- Flow 3:

Average throughput: 62.33 Mbit/s

95th percentile per-packet one-way delay: 242.984 ms

Loss rate: 5.71%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-04-18 21:02:38

End at: 2018-04-18 21:03:08

Below is generated by plot.py at 2018-04-19 02:04:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 575.49 Mbit/s

95th percentile per-packet one-way delay: 321.192 ms

Loss rate: 4.62%

-- Flow 1:

Average throughput: 474.39 Mbit/s

95th percentile per-packet one-way delay: 339.949 ms

Loss rate: 4.81%

-- Flow 2:

Average throughput: 123.27 Mbit/s

95th percentile per-packet one-way delay: 241.718 ms

Loss rate: 3.40%

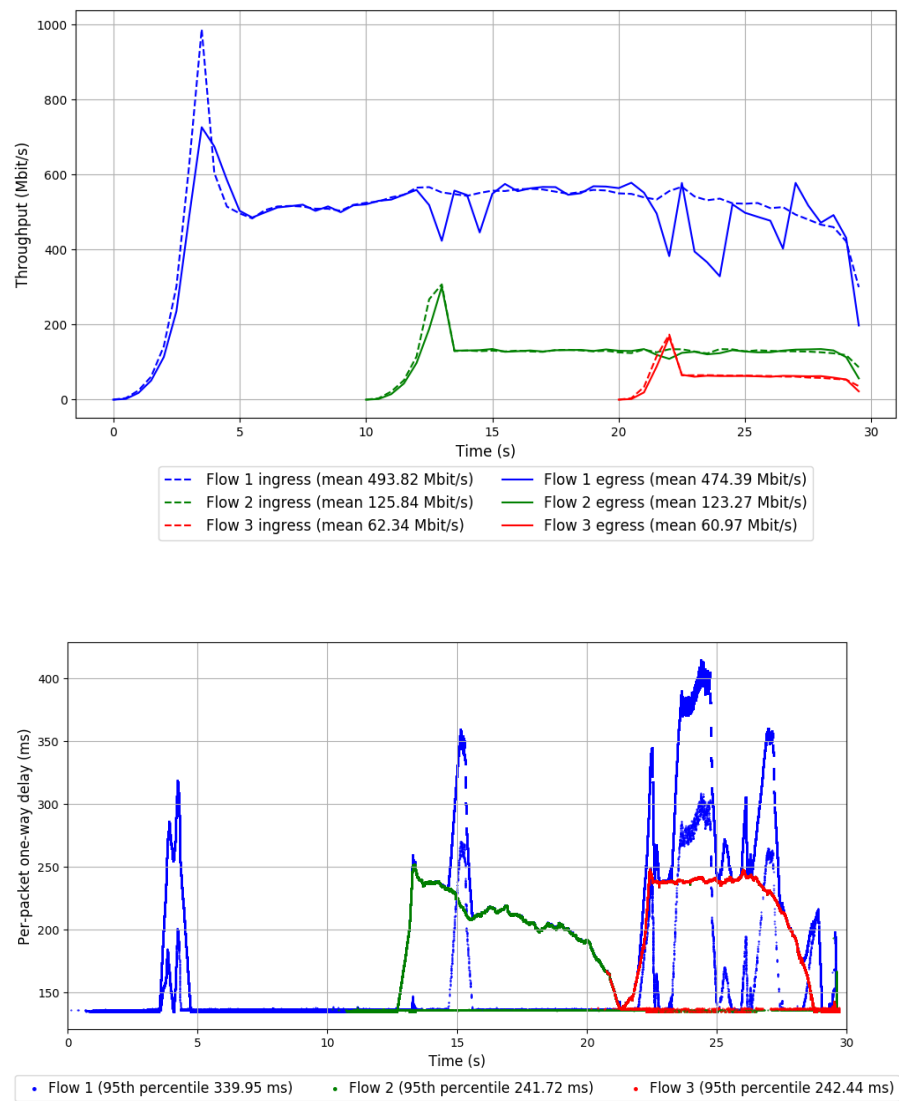
-- Flow 3:

Average throughput: 60.97 Mbit/s

95th percentile per-packet one-way delay: 242.435 ms

Loss rate: 4.90%

Run 5: Report of PCC-Allegro — Data Link



Run 6: Statistics of PCC-Allegro

Start at: 2018-04-18 21:20:54

End at: 2018-04-18 21:21:24

Below is generated by plot.py at 2018-04-19 02:04:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 567.63 Mbit/s

95th percentile per-packet one-way delay: 301.443 ms

Loss rate: 4.56%

-- Flow 1:

Average throughput: 520.64 Mbit/s

95th percentile per-packet one-way delay: 302.861 ms

Loss rate: 4.70%

-- Flow 2:

Average throughput: 62.88 Mbit/s

95th percentile per-packet one-way delay: 248.981 ms

Loss rate: 2.78%

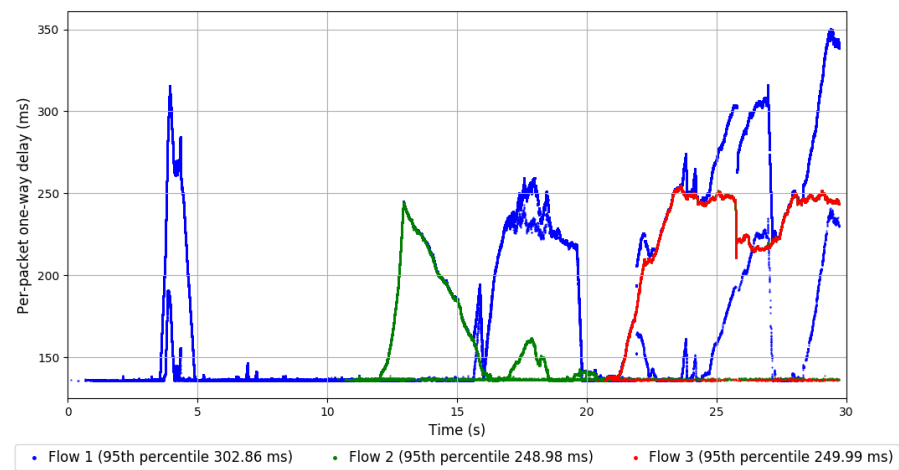
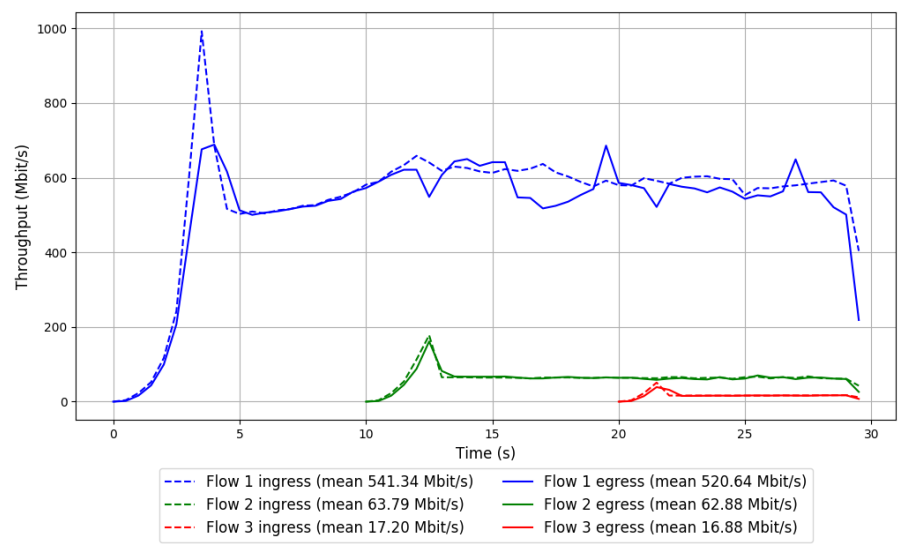
-- Flow 3:

Average throughput: 16.88 Mbit/s

95th percentile per-packet one-way delay: 249.992 ms

Loss rate: 4.59%

Run 6: Report of PCC-Allegro — Data Link



Run 7: Statistics of PCC-Allegro

Start at: 2018-04-18 21:38:57

End at: 2018-04-18 21:39:27

Below is generated by plot.py at 2018-04-19 02:04:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 553.12 Mbit/s

95th percentile per-packet one-way delay: 224.306 ms

Loss rate: 2.33%

-- Flow 1:

Average throughput: 469.39 Mbit/s

95th percentile per-packet one-way delay: 224.024 ms

Loss rate: 2.32%

-- Flow 2:

Average throughput: 124.37 Mbit/s

95th percentile per-packet one-way delay: 225.538 ms

Loss rate: 2.38%

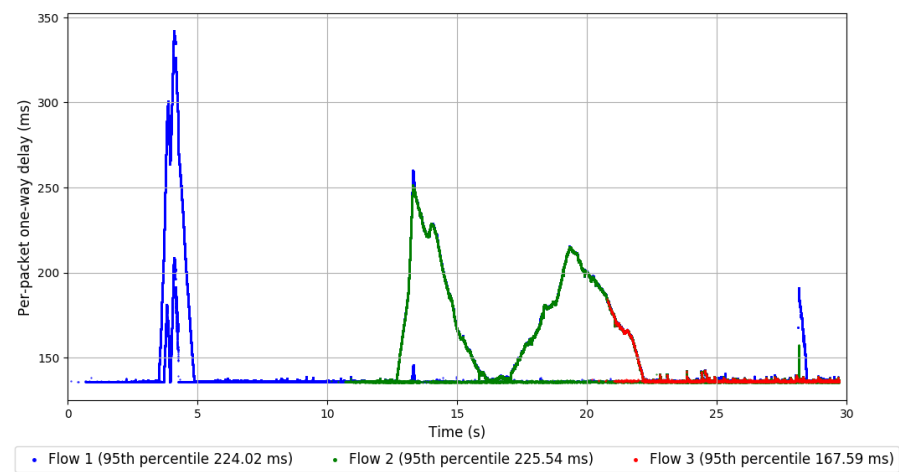
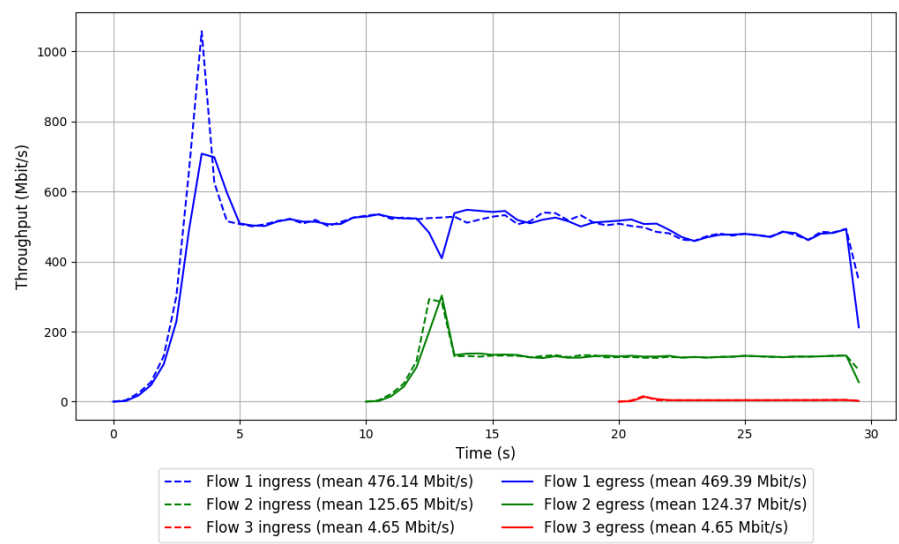
-- Flow 3:

Average throughput: 4.65 Mbit/s

95th percentile per-packet one-way delay: 167.595 ms

Loss rate: 2.64%

Run 7: Report of PCC-Allegro — Data Link



Run 8: Statistics of PCC-Allegro

Start at: 2018-04-18 21:56:48

End at: 2018-04-18 21:57:18

Below is generated by plot.py at 2018-04-19 02:04:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 547.19 Mbit/s

95th percentile per-packet one-way delay: 257.498 ms

Loss rate: 2.43%

-- Flow 1:

Average throughput: 503.51 Mbit/s

95th percentile per-packet one-way delay: 261.830 ms

Loss rate: 2.43%

-- Flow 2:

Average throughput: 63.89 Mbit/s

95th percentile per-packet one-way delay: 248.922 ms

Loss rate: 2.33%

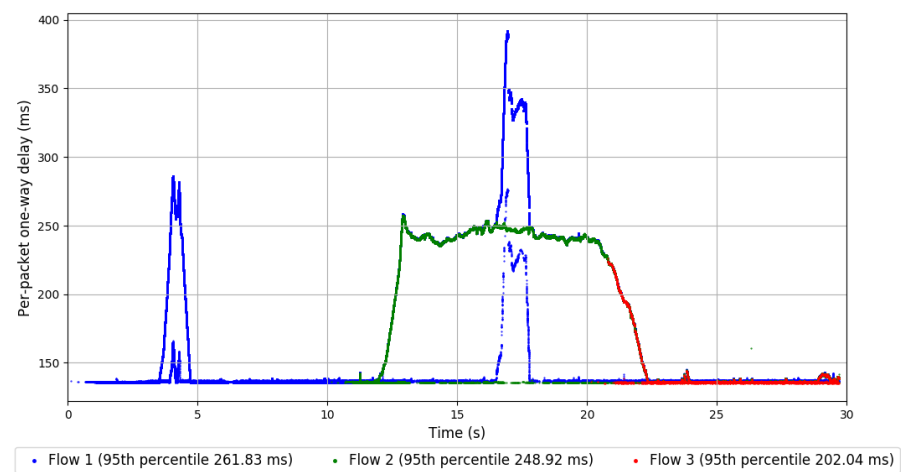
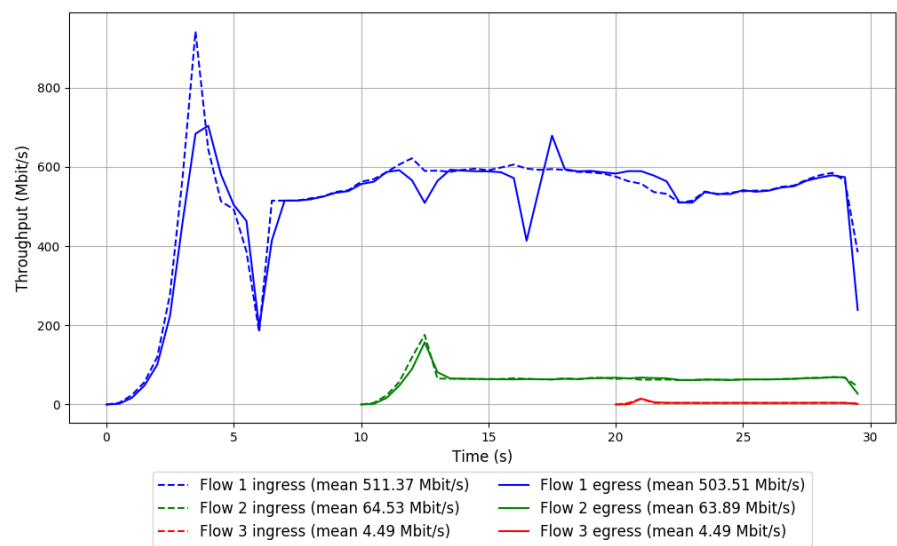
-- Flow 3:

Average throughput: 4.49 Mbit/s

95th percentile per-packet one-way delay: 202.045 ms

Loss rate: 2.62%

Run 8: Report of PCC-Allegro — Data Link



Run 9: Statistics of PCC-Allegro

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

End at: 2018-04-18 22:15:11

Below is generated by plot.py at 2018-04-19 02:11:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 566.55 Mbit/s

95th percentile per-packet one-way delay: 249.339 ms

Loss rate: 3.07%

-- Flow 1:

Average throughput: 481.54 Mbit/s

95th percentile per-packet one-way delay: 249.247 ms

Loss rate: 2.93%

-- Flow 2:

Average throughput: 126.52 Mbit/s

95th percentile per-packet one-way delay: 249.603 ms

Loss rate: 3.87%

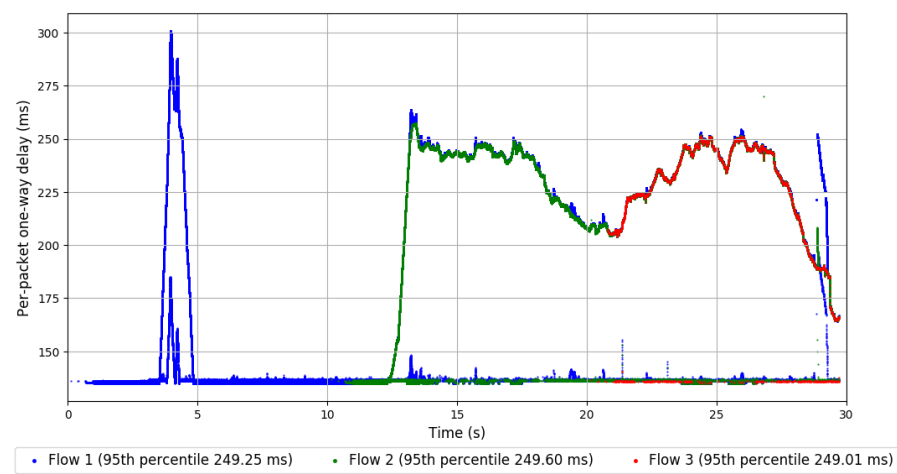
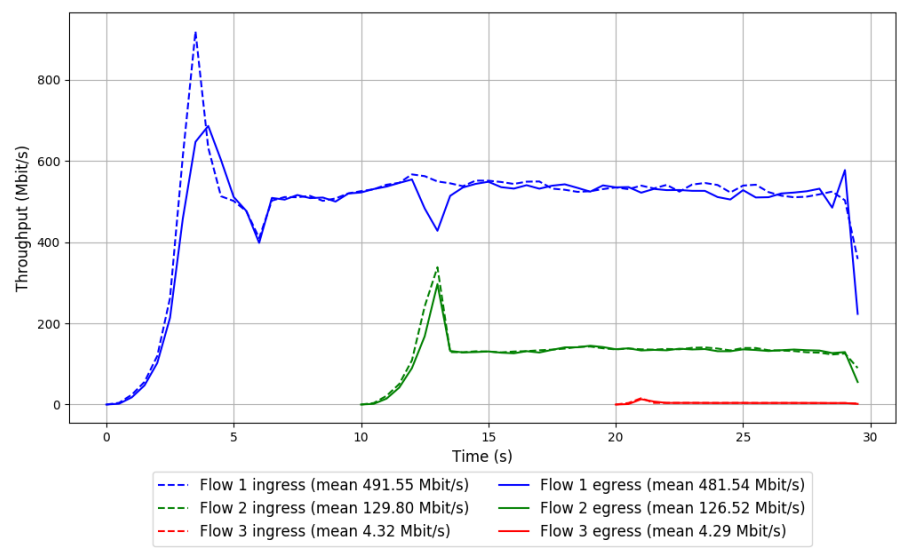
-- Flow 3:

Average throughput: 4.29 Mbit/s

95th percentile per-packet one-way delay: 249.010 ms

Loss rate: 3.53%

Run 9: Report of PCC-Allegro — Data Link

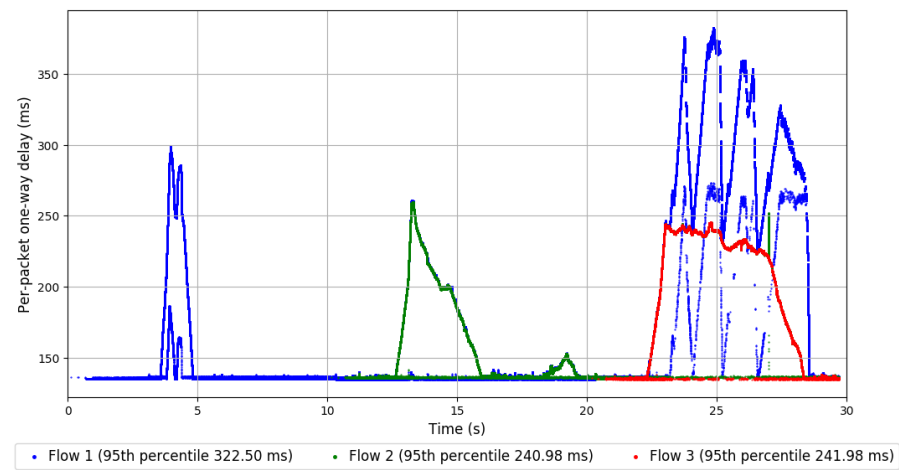
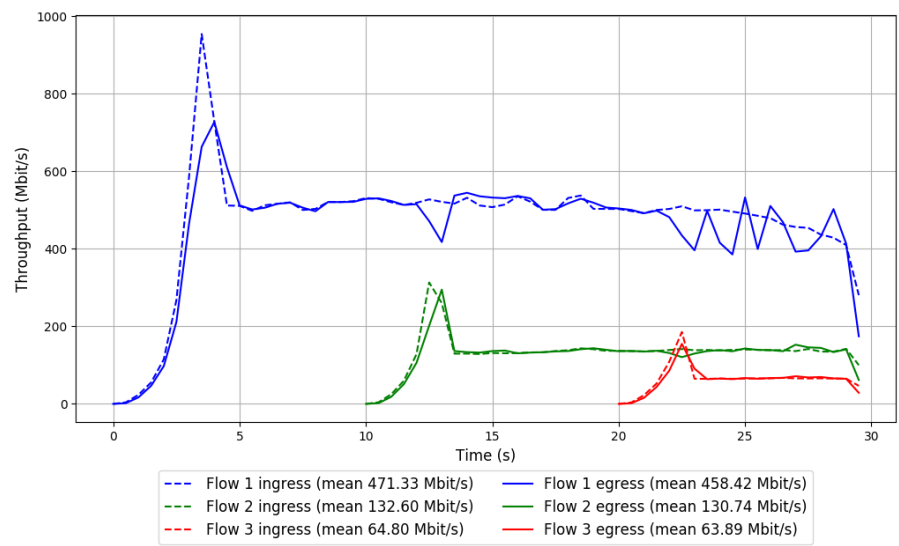


```
Run 10: Statistics of PCC-Allegro

Start at: 2018-04-18 22:32:25
End at: 2018-04-18 22:32:55

# Below is generated by plot.py at 2018-04-19 02:13:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 565.53 Mbit/s
95th percentile per-packet one-way delay: 314.139 ms
Loss rate: 3.51%
-- Flow 1:
Average throughput: 458.42 Mbit/s
95th percentile per-packet one-way delay: 322.500 ms
Loss rate: 3.62%
-- Flow 2:
Average throughput: 130.74 Mbit/s
95th percentile per-packet one-way delay: 240.982 ms
Loss rate: 2.76%
-- Flow 3:
Average throughput: 63.89 Mbit/s
95th percentile per-packet one-way delay: 241.982 ms
Loss rate: 4.13%
```

Run 10: Report of PCC-Allegro — Data Link

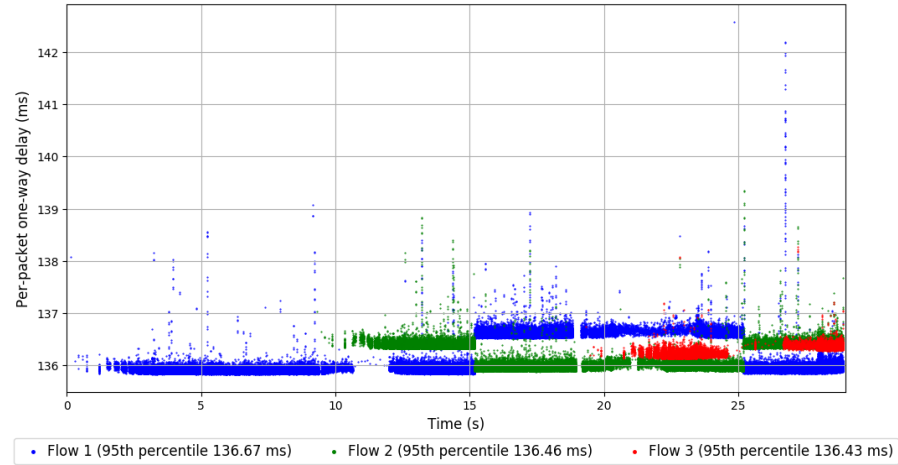
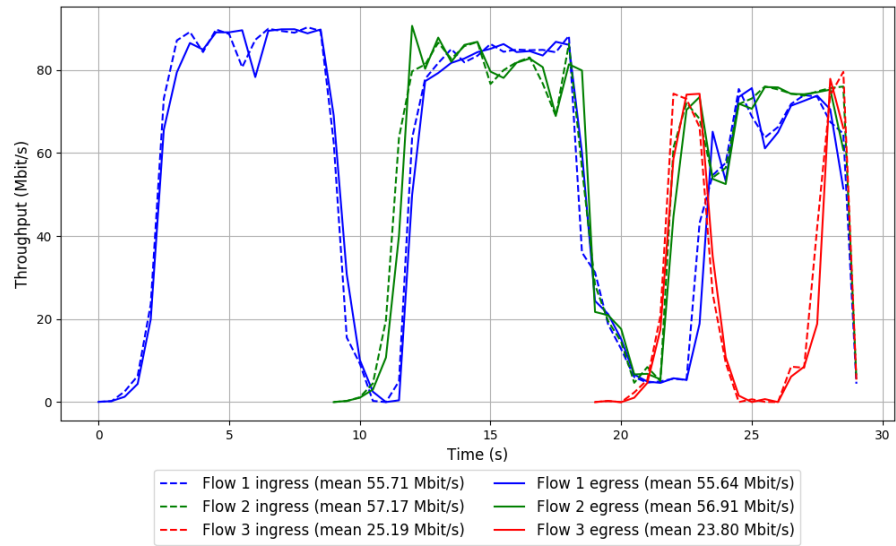


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-04-18 19:51:30
End at: 2018-04-18 19:52:00

# Below is generated by plot.py at 2018-04-19 02:13:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 102.31 Mbit/s
95th percentile per-packet one-way delay: 136.642 ms
Loss rate: 1.95%
-- Flow 1:
Average throughput: 55.64 Mbit/s
95th percentile per-packet one-way delay: 136.672 ms
Loss rate: 1.07%
-- Flow 2:
Average throughput: 56.91 Mbit/s
95th percentile per-packet one-way delay: 136.464 ms
Loss rate: 1.83%
-- Flow 3:
Average throughput: 23.80 Mbit/s
95th percentile per-packet one-way delay: 136.427 ms
Loss rate: 8.16%
```


Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-04-18 20:09:38

End at: 2018-04-18 20:10:08

Below is generated by plot.py at 2018-04-19 02:13:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.00 Mbit/s

95th percentile per-packet one-way delay: 136.758 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 42.00 Mbit/s

95th percentile per-packet one-way delay: 136.674 ms

Loss rate: 1.60%

-- Flow 2:

Average throughput: 61.25 Mbit/s

95th percentile per-packet one-way delay: 135.885 ms

Loss rate: 0.40%

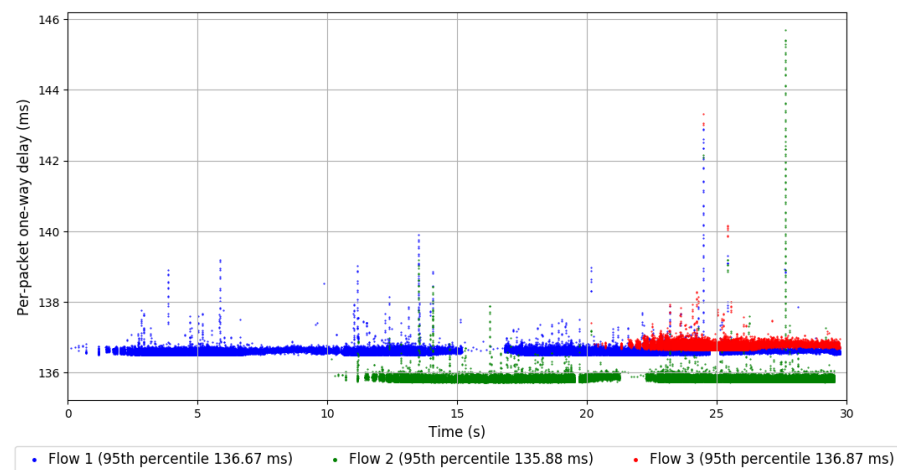
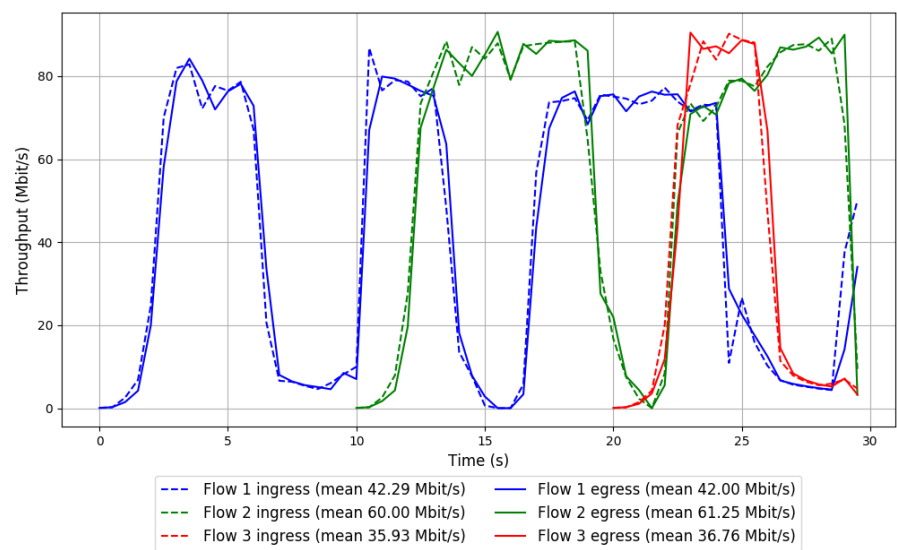
-- Flow 3:

Average throughput: 36.76 Mbit/s

95th percentile per-packet one-way delay: 136.870 ms

Loss rate: 0.47%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-04-18 20:27:27

End at: 2018-04-18 20:27:57

Below is generated by plot.py at 2018-04-19 02:13:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 109.00 Mbit/s

95th percentile per-packet one-way delay: 135.965 ms

Loss rate: 1.80%

-- Flow 1:

Average throughput: 60.00 Mbit/s

95th percentile per-packet one-way delay: 135.982 ms

Loss rate: 1.18%

-- Flow 2:

Average throughput: 57.50 Mbit/s

95th percentile per-packet one-way delay: 135.160 ms

Loss rate: 1.50%

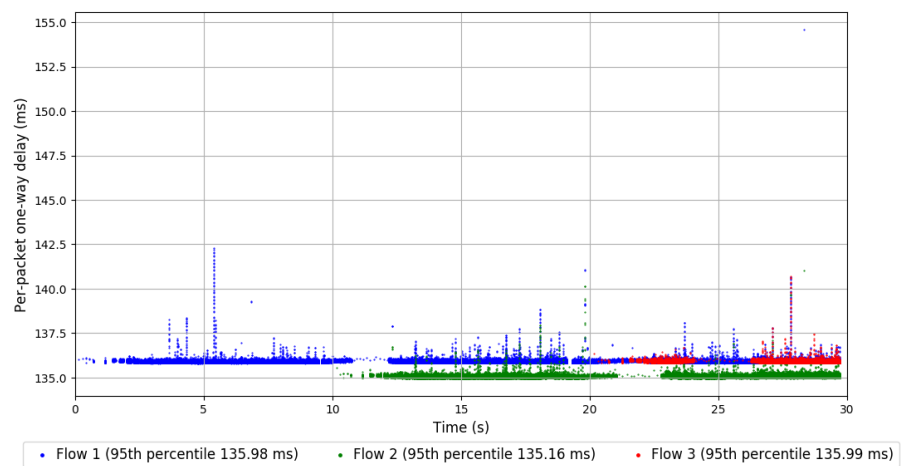
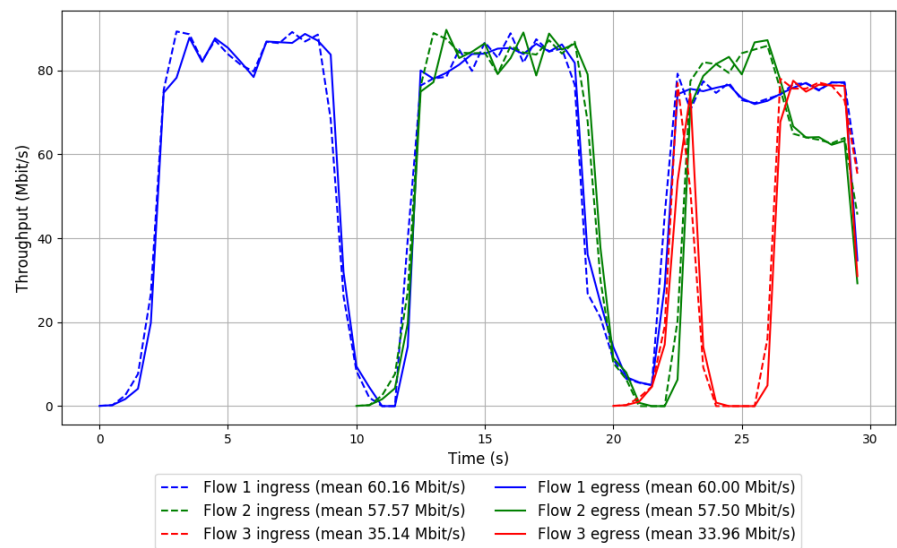
-- Flow 3:

Average throughput: 33.96 Mbit/s

95th percentile per-packet one-way delay: 135.991 ms

Loss rate: 6.03%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-04-18 20:45:33

End at: 2018-04-18 20:46:03

Below is generated by plot.py at 2018-04-19 02:13:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 100.54 Mbit/s

95th percentile per-packet one-way delay: 136.284 ms

Loss rate: 1.88%

-- Flow 1:

Average throughput: 52.38 Mbit/s

95th percentile per-packet one-way delay: 136.287 ms

Loss rate: 1.20%

-- Flow 2:

Average throughput: 58.05 Mbit/s

95th percentile per-packet one-way delay: 136.288 ms

Loss rate: 1.81%

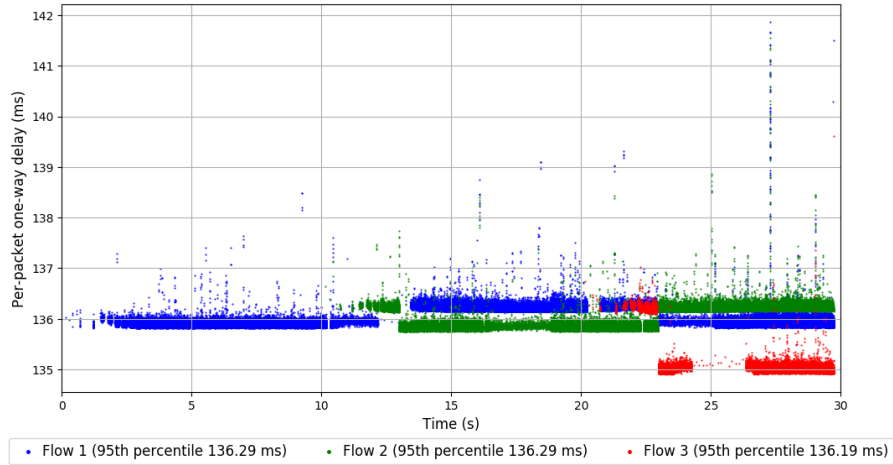
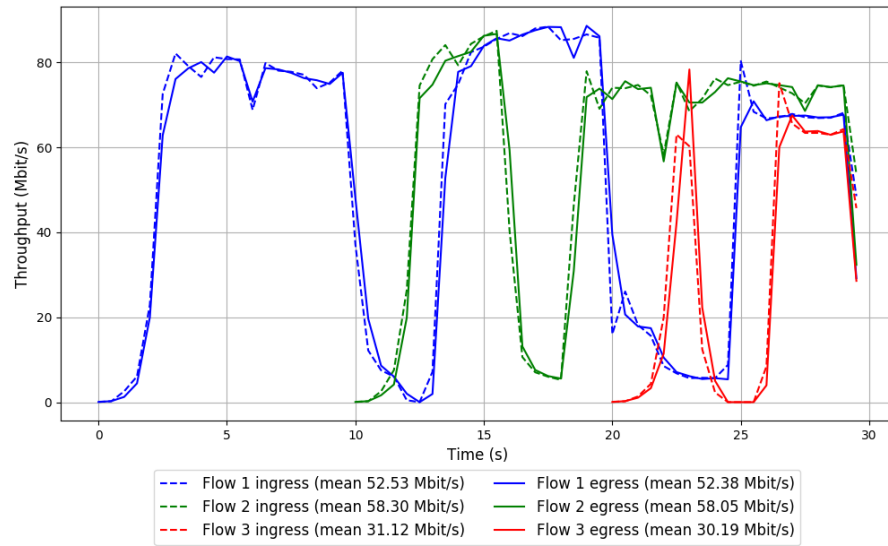
-- Flow 3:

Average throughput: 30.19 Mbit/s

95th percentile per-packet one-way delay: 136.193 ms

Loss rate: 5.64%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-04-18 21:03:52

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

Below is generated by plot.py at 2018-04-19 02:13:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 101.12 Mbit/s

95th percentile per-packet one-way delay: 135.517 ms

Loss rate: 1.85%

-- Flow 1:

Average throughput: 54.69 Mbit/s

95th percentile per-packet one-way delay: 135.540 ms

Loss rate: 1.14%

-- Flow 2:

Average throughput: 41.80 Mbit/s

95th percentile per-packet one-way delay: 134.741 ms

Loss rate: 1.96%

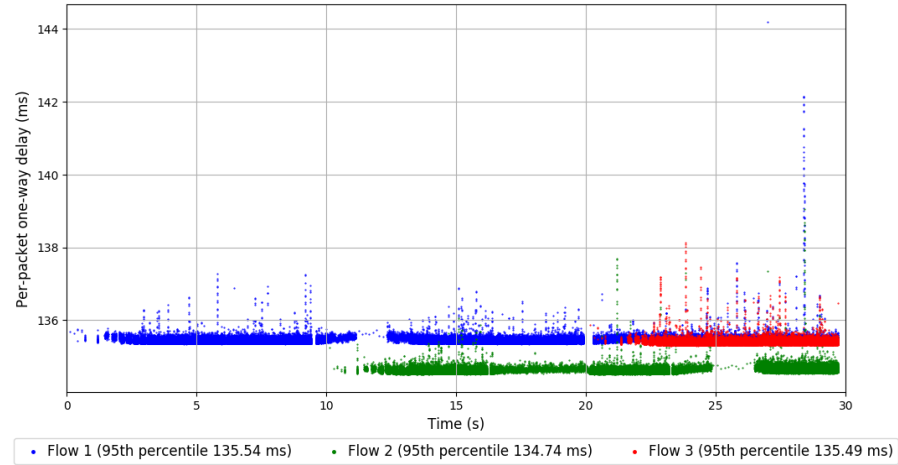
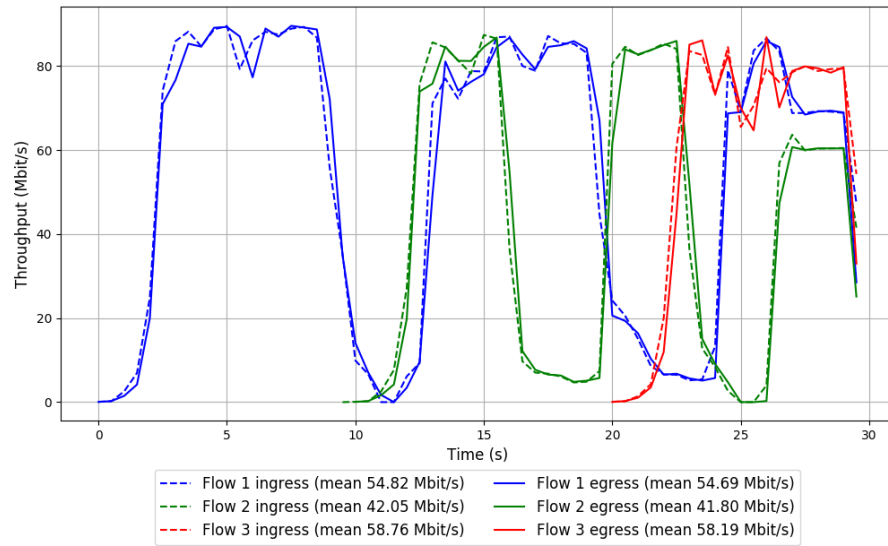
-- Flow 3:

Average throughput: 58.19 Mbit/s

95th percentile per-packet one-way delay: 135.494 ms

Loss rate: 3.71%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2018-04-18 21:22:08

End at: 2018-04-18 21:22:38

Below is generated by plot.py at 2018-04-19 02:13:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 104.49 Mbit/s

95th percentile per-packet one-way delay: 135.964 ms

Loss rate: 1.78%

-- Flow 1:

Average throughput: 56.84 Mbit/s

95th percentile per-packet one-way delay: 135.520 ms

Loss rate: 1.01%

-- Flow 2:

Average throughput: 43.04 Mbit/s

95th percentile per-packet one-way delay: 136.014 ms

Loss rate: 2.06%

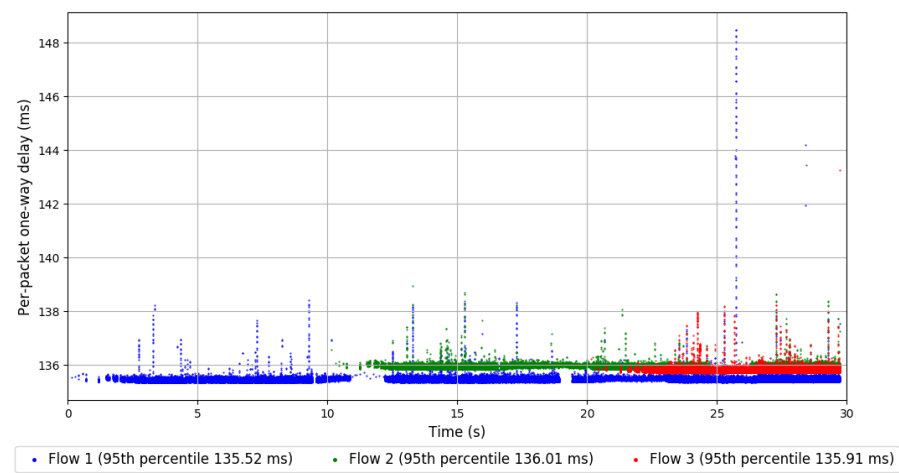
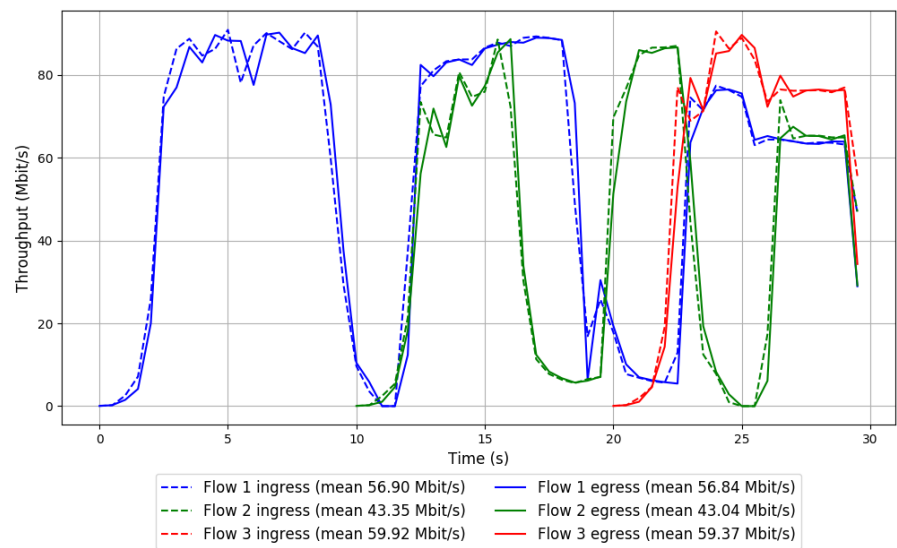
-- Flow 3:

Average throughput: 59.37 Mbit/s

95th percentile per-packet one-way delay: 135.909 ms

Loss rate: 3.58%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2018-04-18 21:40:10

End at: 2018-04-18 21:40:40

Below is generated by plot.py at 2018-04-19 02:13:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 99.89 Mbit/s

95th percentile per-packet one-way delay: 136.072 ms

Loss rate: 1.84%

-- Flow 1:

Average throughput: 56.34 Mbit/s

95th percentile per-packet one-way delay: 136.063 ms

Loss rate: 1.04%

-- Flow 2:

Average throughput: 36.66 Mbit/s

95th percentile per-packet one-way delay: 134.853 ms

Loss rate: 2.44%

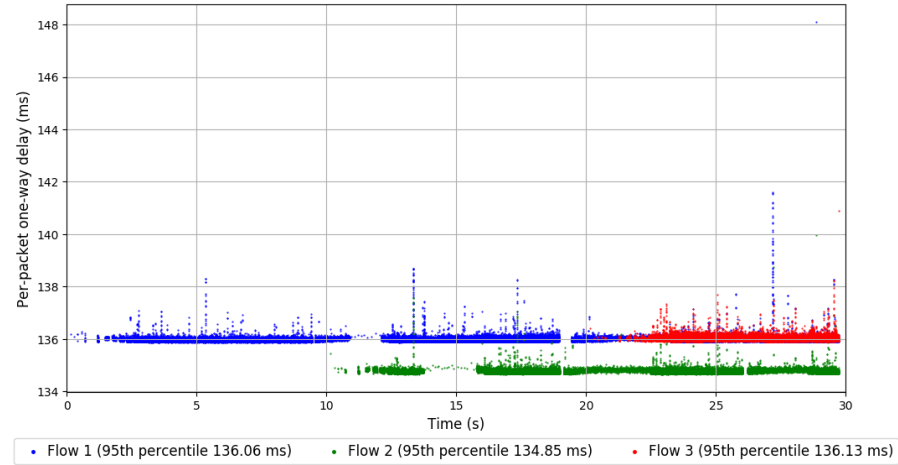
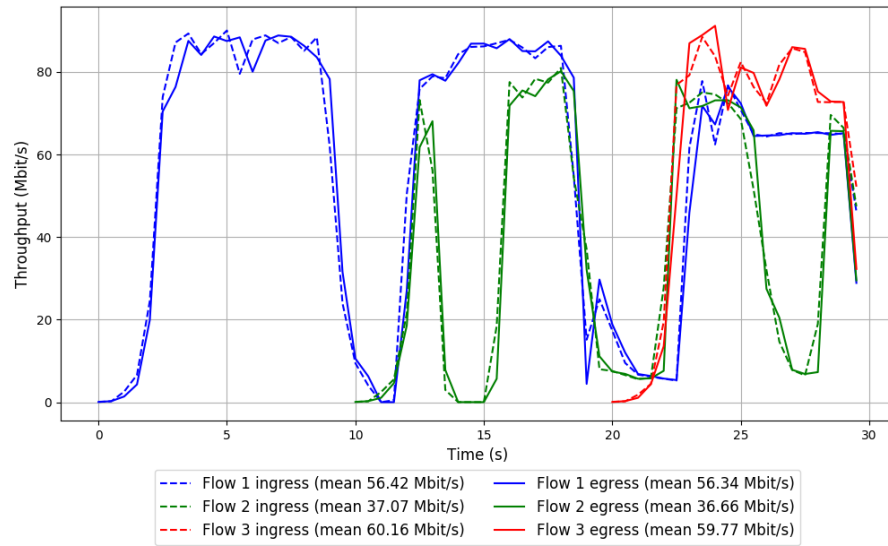
-- Flow 3:

Average throughput: 59.77 Mbit/s

95th percentile per-packet one-way delay: 136.135 ms

Loss rate: 3.37%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2018-04-18 21:58:01

End at: 2018-04-18 21:58:31

Below is generated by plot.py at 2018-04-19 02:13:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 87.09 Mbit/s

95th percentile per-packet one-way delay: 135.908 ms

Loss rate: 2.36%

-- Flow 1:

Average throughput: 45.38 Mbit/s

95th percentile per-packet one-way delay: 135.533 ms

Loss rate: 1.30%

-- Flow 2:

Average throughput: 46.98 Mbit/s

95th percentile per-packet one-way delay: 135.950 ms

Loss rate: 2.44%

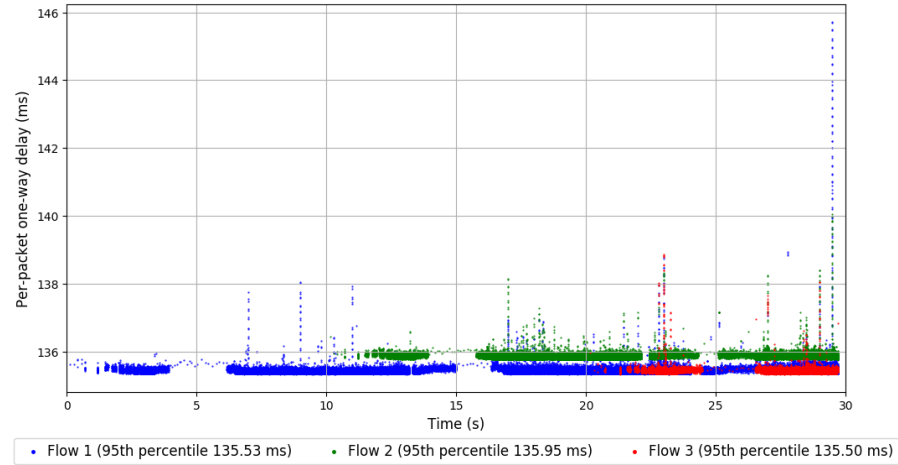
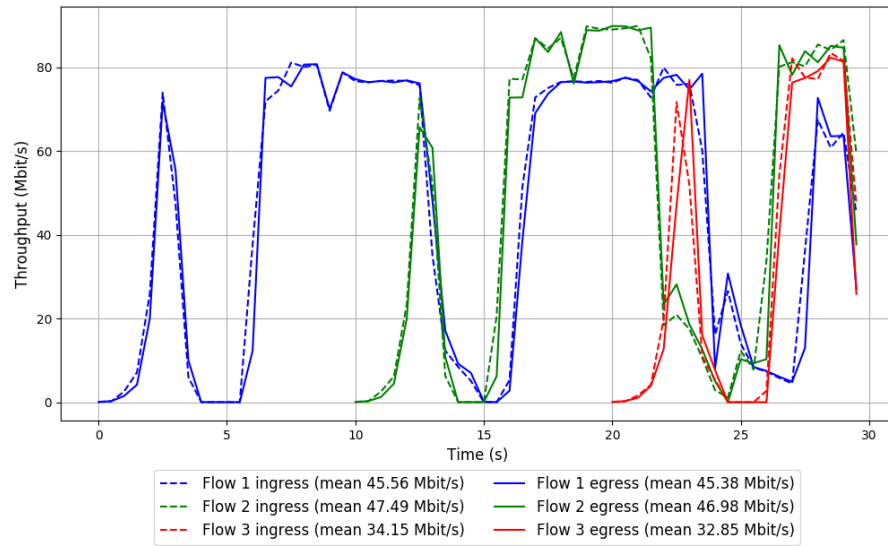
-- Flow 3:

Average throughput: 32.85 Mbit/s

95th percentile per-packet one-way delay: 135.505 ms

Loss rate: 6.45%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2018-04-18 22:15:55

End at: 2018-04-18 22:16:25

Below is generated by plot.py at 2018-04-19 02:13:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 109.54 Mbit/s

95th percentile per-packet one-way delay: 135.808 ms

Loss rate: 0.76%

-- Flow 1:

Average throughput: 58.01 Mbit/s

95th percentile per-packet one-way delay: 135.563 ms

Loss rate: 1.29%

-- Flow 2:

Average throughput: 60.19 Mbit/s

95th percentile per-packet one-way delay: 134.761 ms

Loss rate: 0.09%

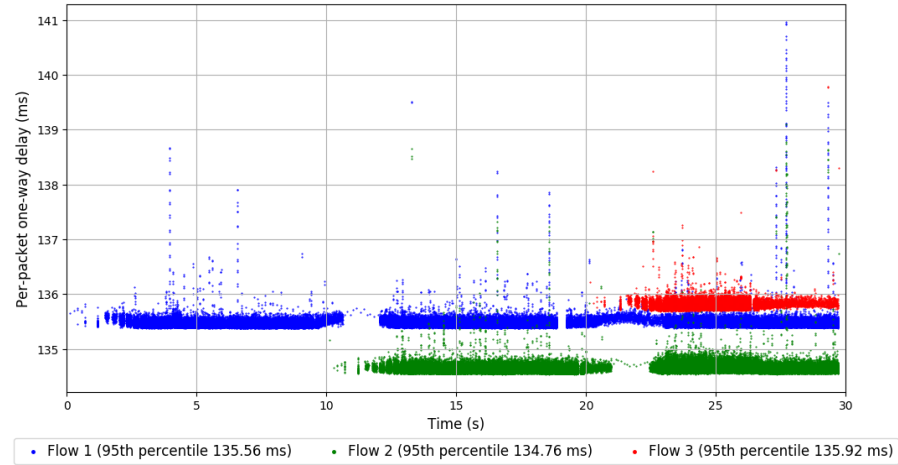
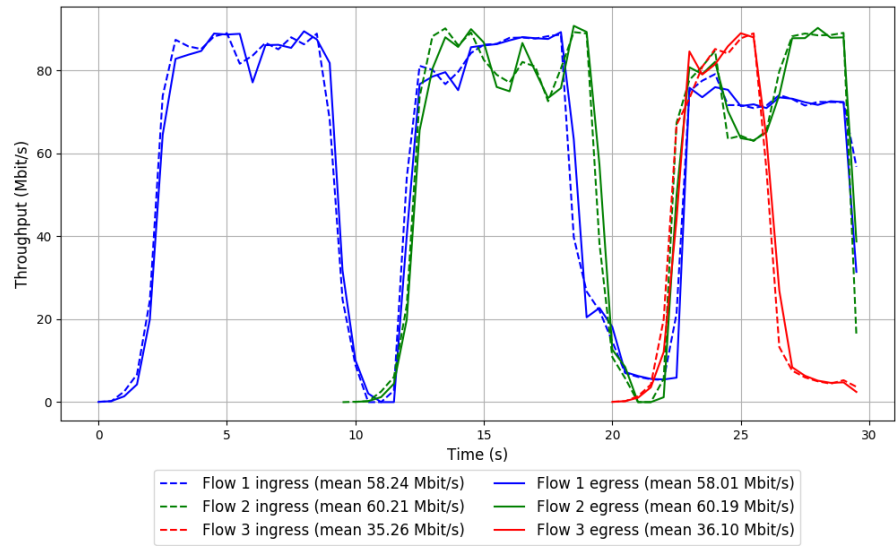
-- Flow 3:

Average throughput: 36.10 Mbit/s

95th percentile per-packet one-way delay: 135.916 ms

Loss rate: 0.41%

Run 9: Report of QUIC Cubic — Data Link



Run 10: Statistics of QUIC Cubic

Start at: 2018-04-18 22:33:39

End at: 2018-04-18 22:34:09

Below is generated by plot.py at 2018-04-19 02:13:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 106.11 Mbit/s

95th percentile per-packet one-way delay: 136.642 ms

Loss rate: 1.81%

-- Flow 1:

Average throughput: 57.36 Mbit/s

95th percentile per-packet one-way delay: 136.667 ms

Loss rate: 1.19%

-- Flow 2:

Average throughput: 57.04 Mbit/s

95th percentile per-packet one-way delay: 135.090 ms

Loss rate: 1.76%

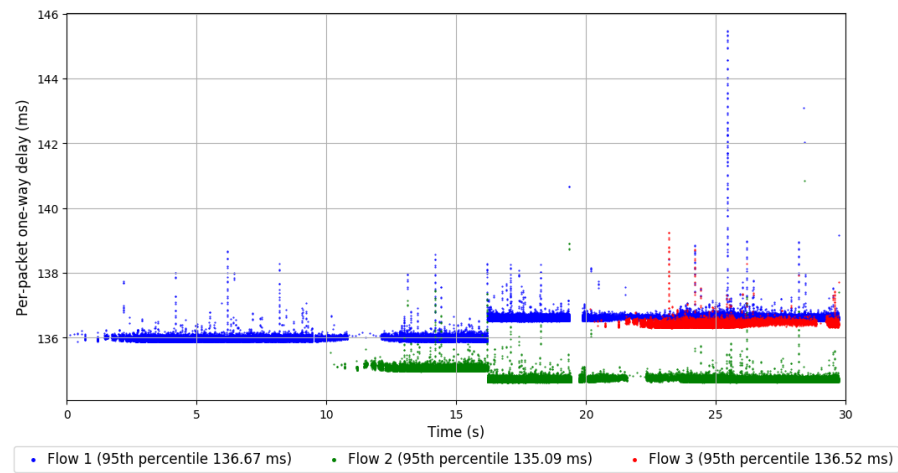
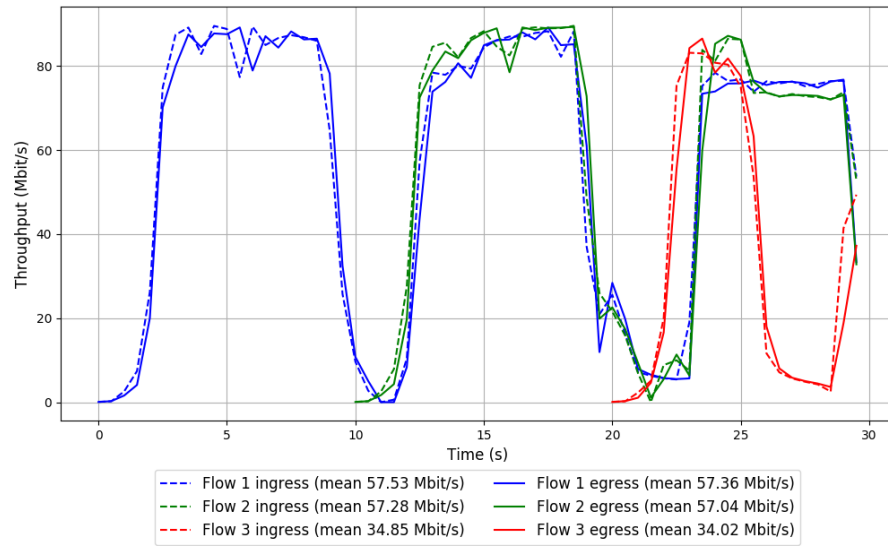
-- Flow 3:

Average throughput: 34.02 Mbit/s

95th percentile per-packet one-way delay: 136.520 ms

Loss rate: 5.07%

Run 10: Report of QUIC Cubic — Data Link

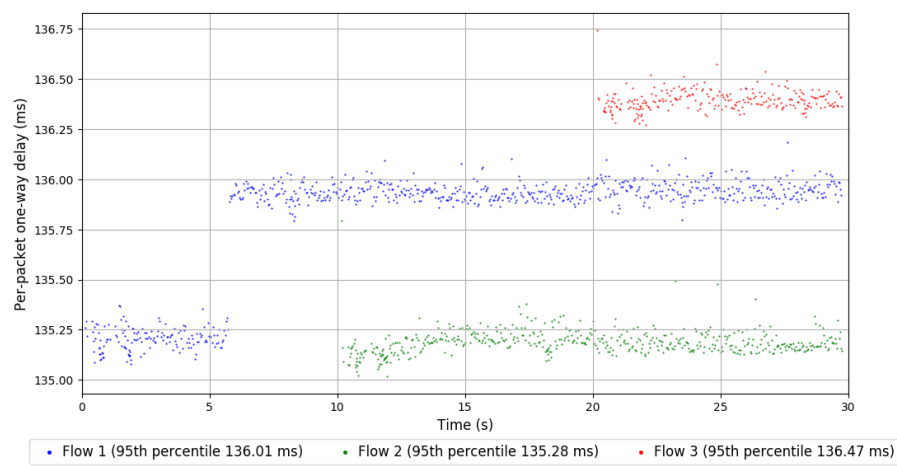
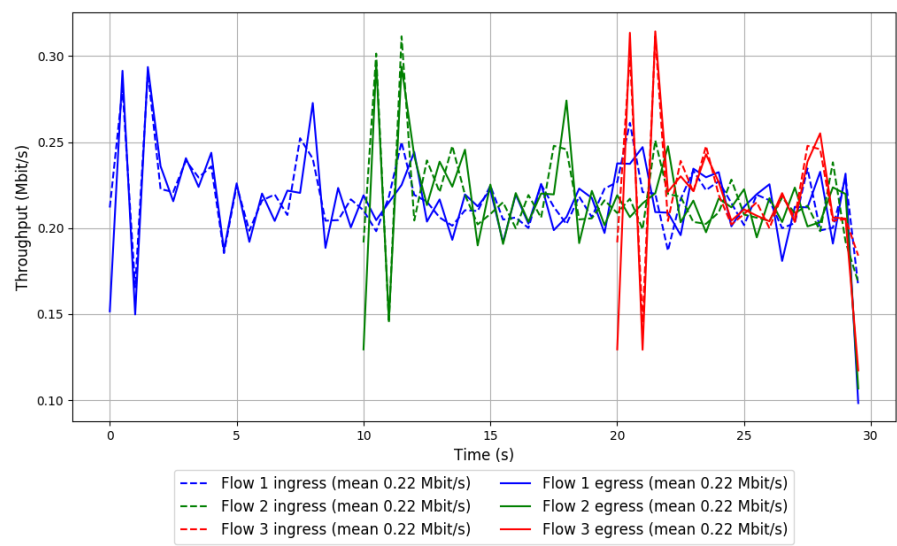


```
Run 1: Statistics of SReAM

Start at: 2018-04-18 19:46:30
End at: 2018-04-18 19:47:00

# Below is generated by plot.py at 2018-04-19 02:13:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 136.415 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.015 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.278 ms
Loss rate: 1.22%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.467 ms
Loss rate: 2.63%
```

Run 1: Report of SReAM — Data Link

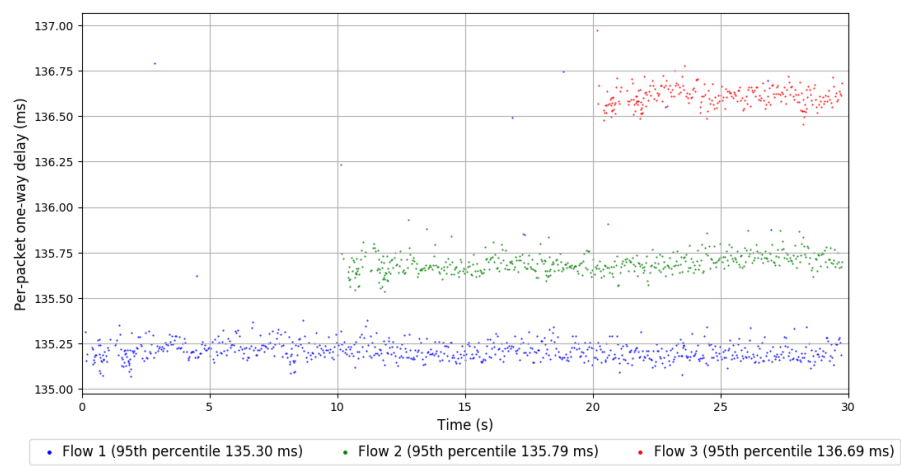
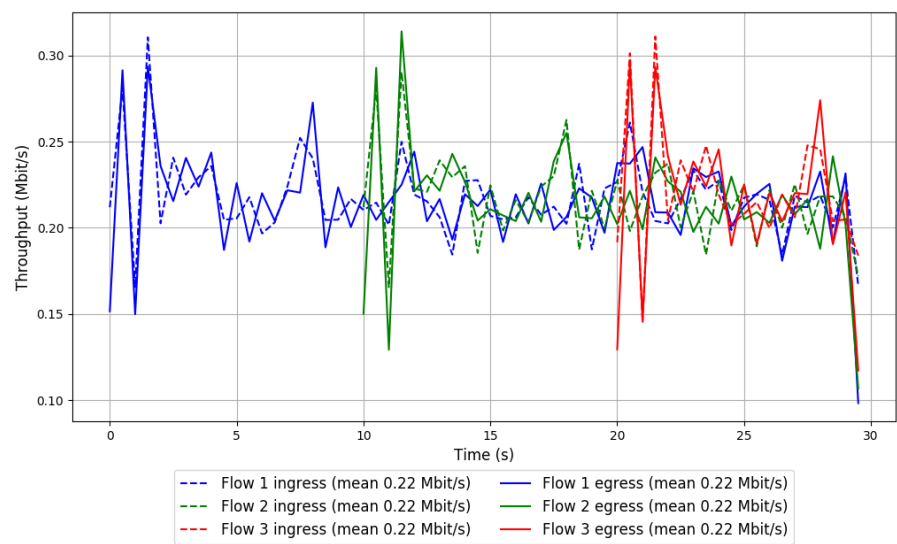


```
Run 2: Statistics of SReAM

Start at: 2018-04-18 20:04:45
End at: 2018-04-18 20:05:15

# Below is generated by plot.py at 2018-04-19 02:13:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 136.640 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.303 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.791 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.695 ms
Loss rate: 2.63%
```

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SReAM

Start at: 2018-04-18 20:22:29

End at: 2018-04-18 20:22:59

Below is generated by plot.py at 2018-04-19 02:13:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 136.942 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 135.707 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.981 ms

Loss rate: 1.42%

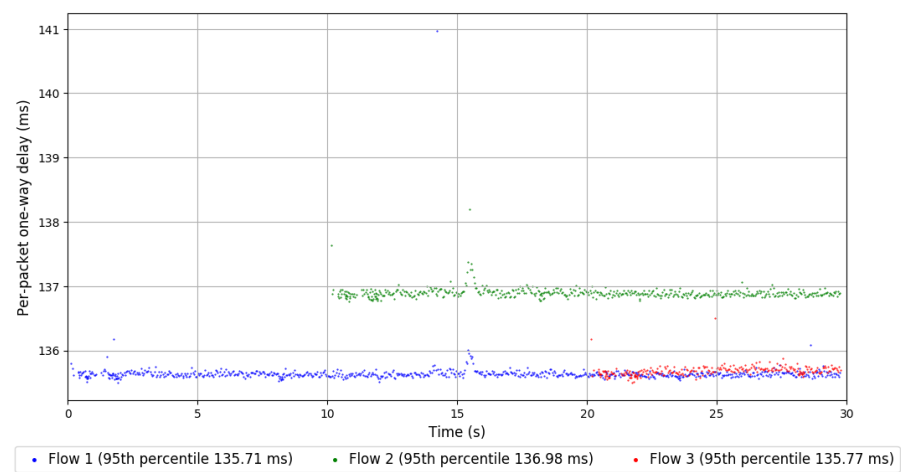
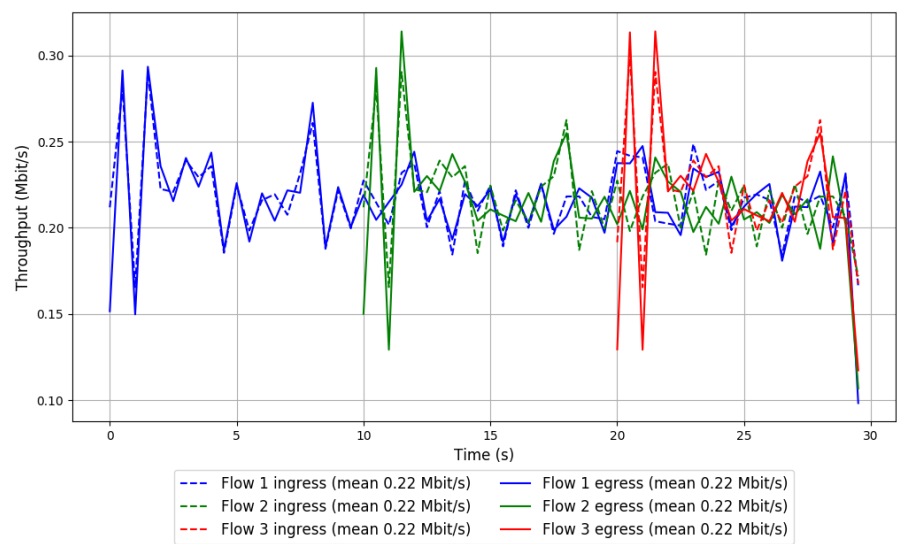
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 135.770 ms

Loss rate: 2.63%

Run 3: Report of SCRaM — Data Link



Run 4: Statistics of SCReAM

Start at: 2018-04-18 20:40:26

End at: 2018-04-18 20:40:56

Below is generated by plot.py at 2018-04-19 02:13:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 136.430 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 135.264 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 135.640 ms

Loss rate: 1.42%

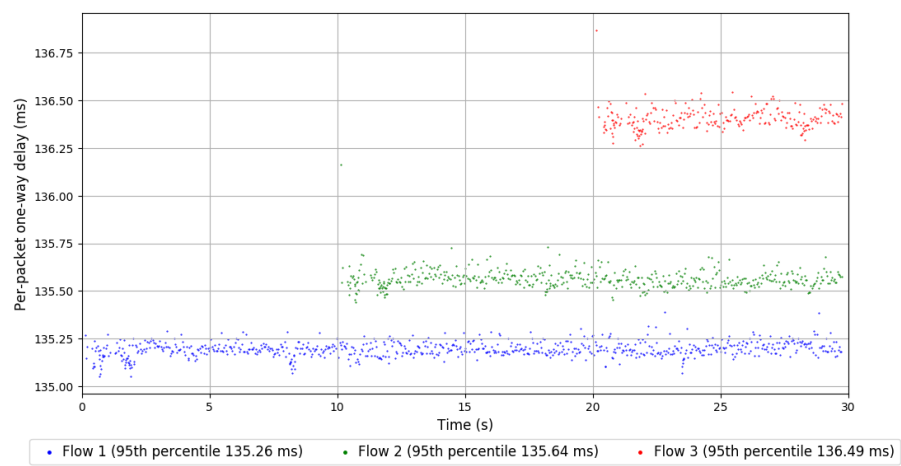
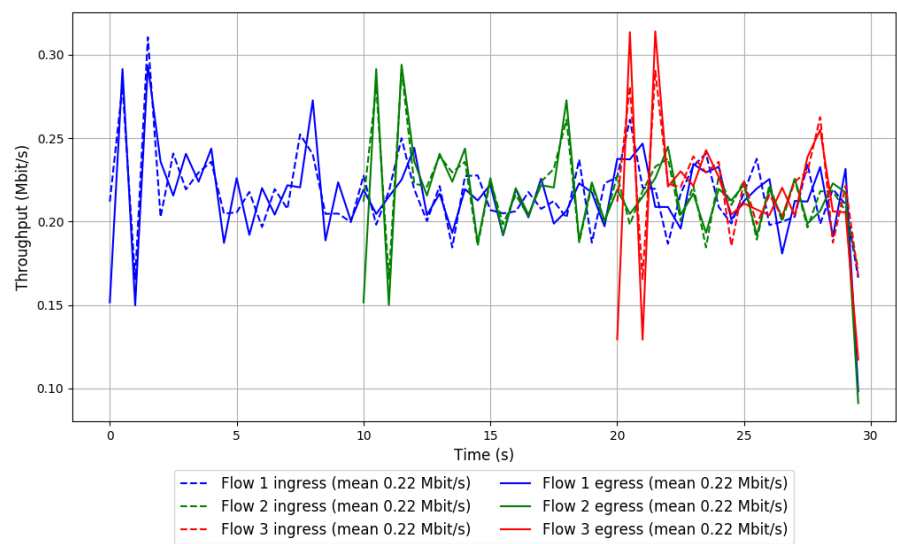
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.489 ms

Loss rate: 2.63%

Run 4: Report of SCSReAM — Data Link

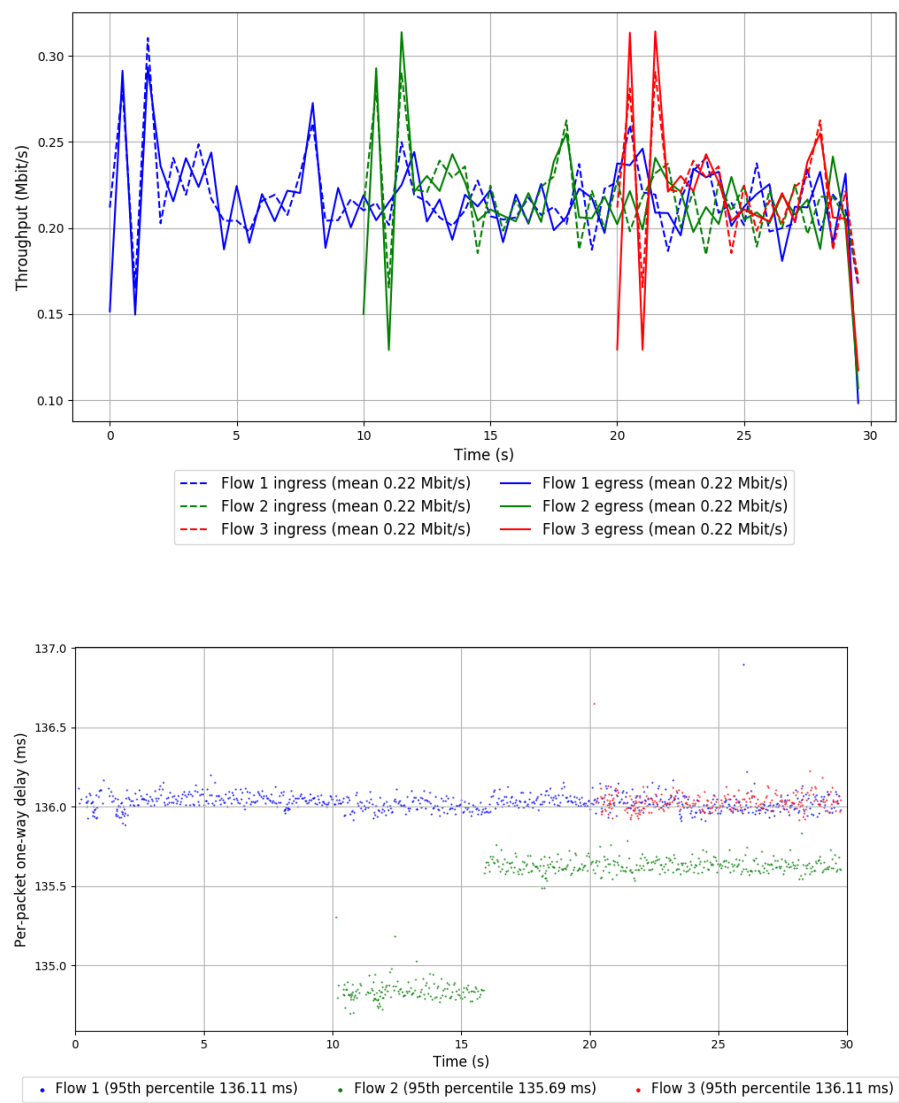


```
Run 5: Statistics of SReAM

Start at: 2018-04-18 20:58:43
End at: 2018-04-18 20:59:13

# Below is generated by plot.py at 2018-04-19 02:13:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 136.100 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.109 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.692 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.114 ms
Loss rate: 2.63%
```

Run 5: Report of SReAM — Data Link



Run 6: Statistics of SReAM

Start at: 2018-04-18 21:17:02

End at: 2018-04-18 21:17:32

Below is generated by plot.py at 2018-04-19 02:13:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 136.840 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.235 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.522 ms

Loss rate: 1.42%

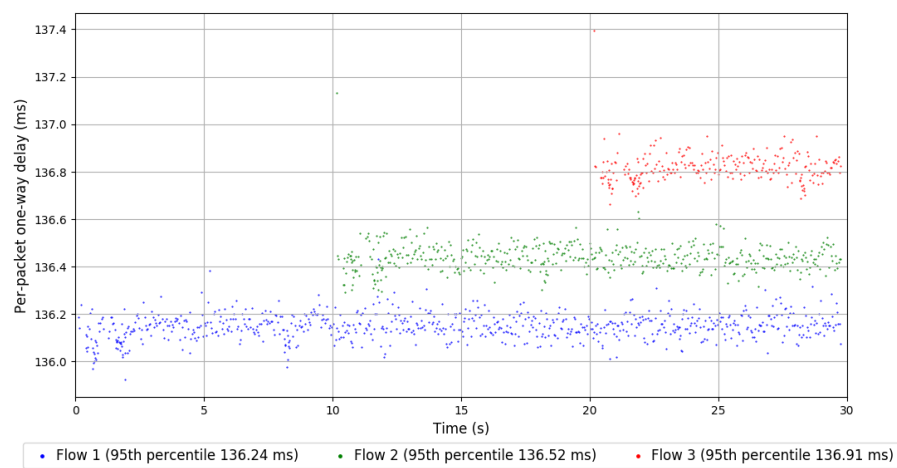
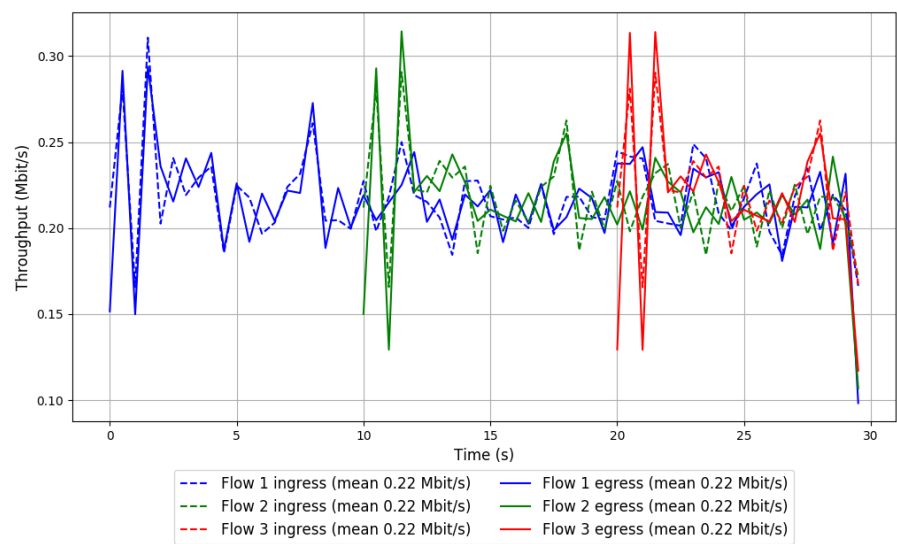
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.905 ms

Loss rate: 2.63%

Run 6: Report of SReAM — Data Link

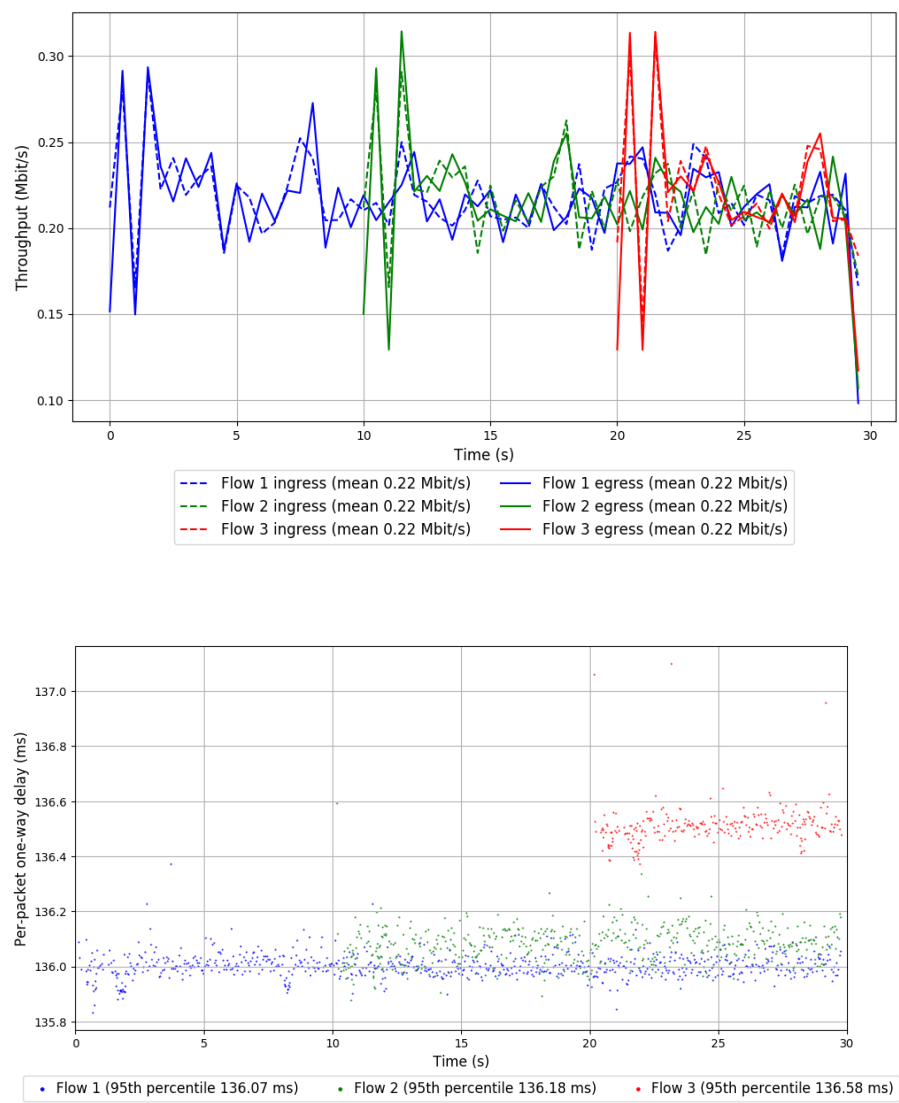


```
Run 7: Statistics of SReAM

Start at: 2018-04-18 21:35:15
End at: 2018-04-18 21:35:45

# Below is generated by plot.py at 2018-04-19 02:13:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 136.526 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.075 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.179 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.581 ms
Loss rate: 2.63%
```


Run 7: Report of SReAM — Data Link

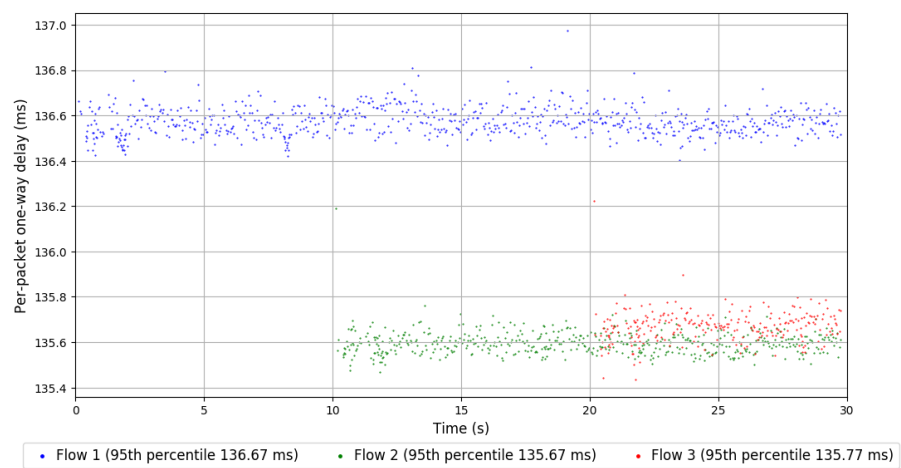
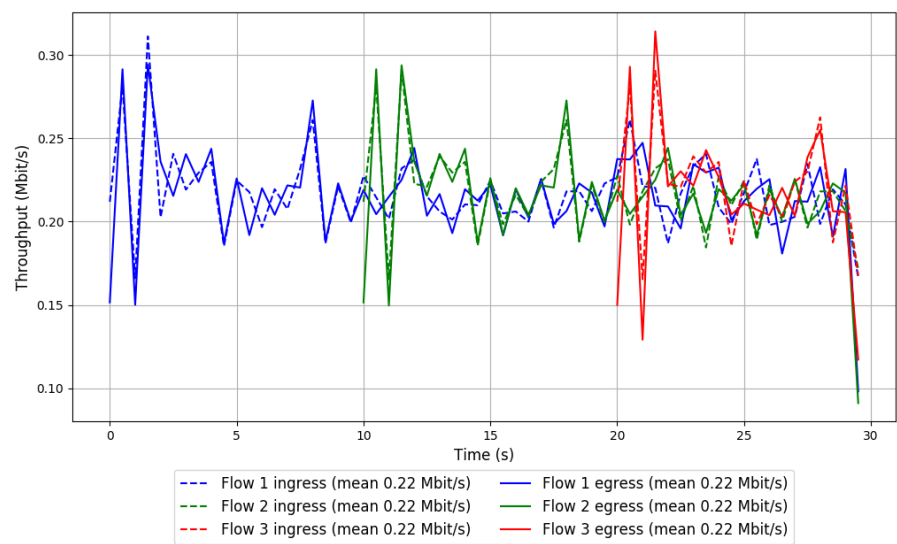


```
Run 8: Statistics of SReAM

Start at: 2018-04-18 21:53:06
End at: 2018-04-18 21:53:36

# Below is generated by plot.py at 2018-04-19 02:13:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 136.651 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.674 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.674 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.767 ms
Loss rate: 2.63%
```

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SCReAM

Start at: 2018-04-18 22:10:56

End at: 2018-04-18 22:11:26

Below is generated by plot.py at 2018-04-19 02:13:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 136.780 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 135.256 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.814 ms

Loss rate: 1.42%

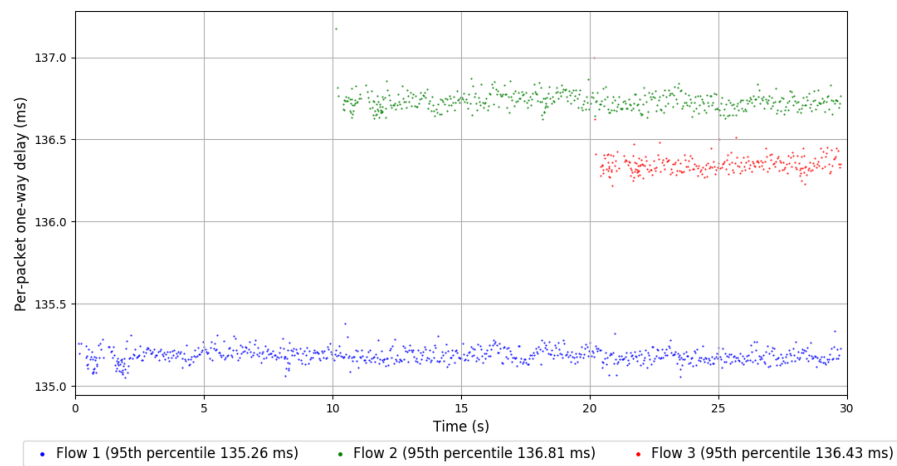
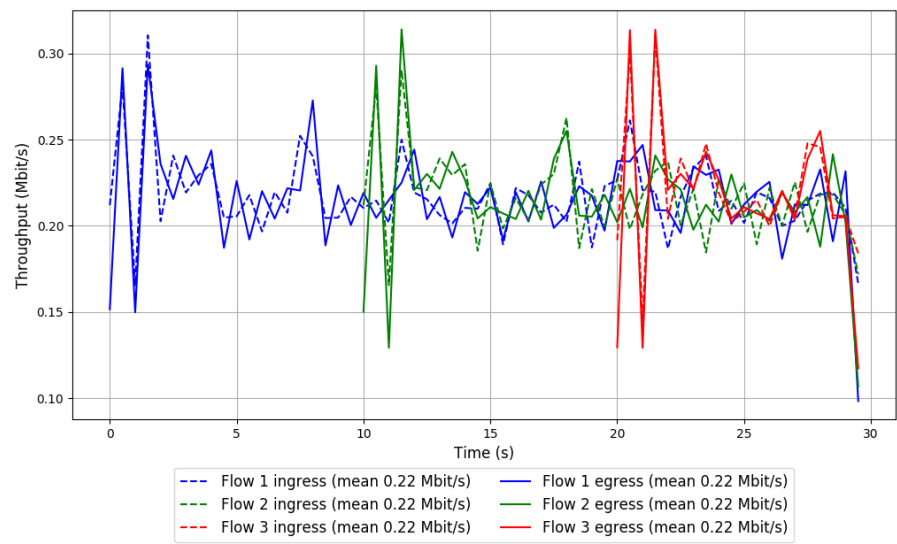
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.431 ms

Loss rate: 2.63%

Run 9: Report of SReAM — Data Link

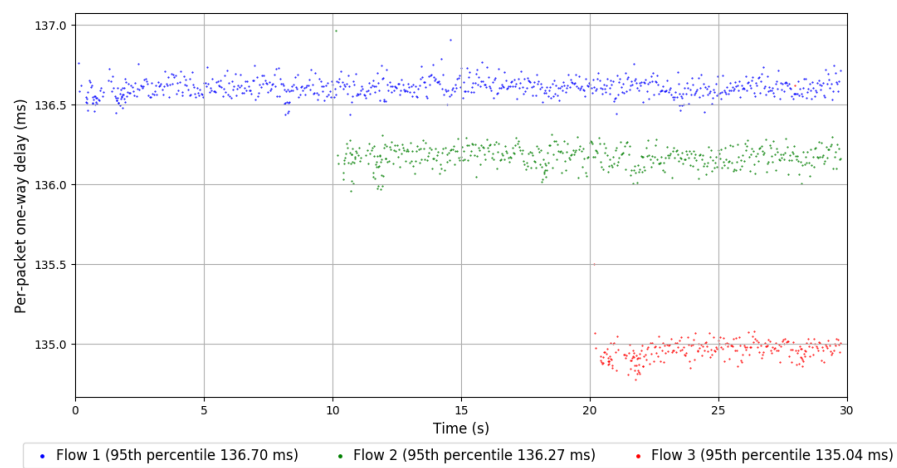
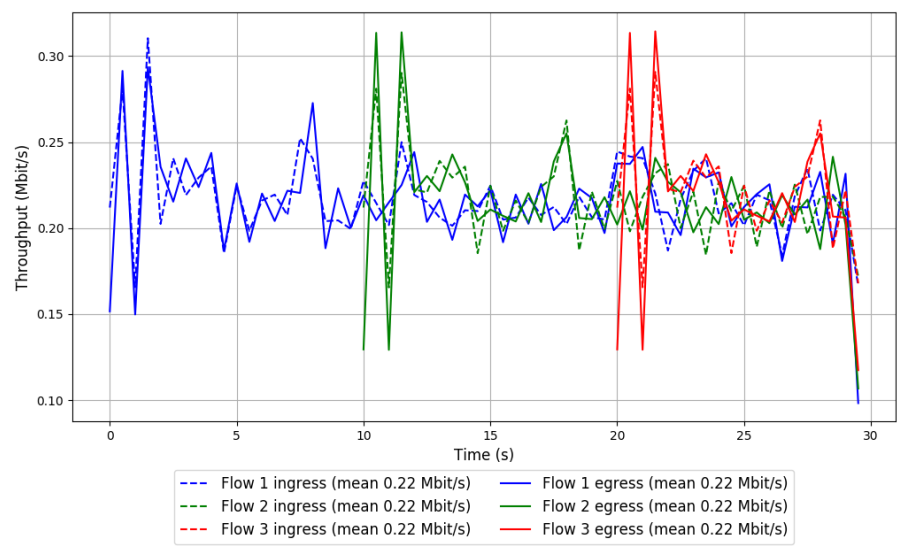


```
Run 10: Statistics of SReAM

Start at: 2018-04-18 22:28:34
End at: 2018-04-18 22:29:04

# Below is generated by plot.py at 2018-04-19 02:13:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 136.676 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.700 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.267 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.040 ms
Loss rate: 2.63%
```

Run 10: Report of SReAM — Data Link

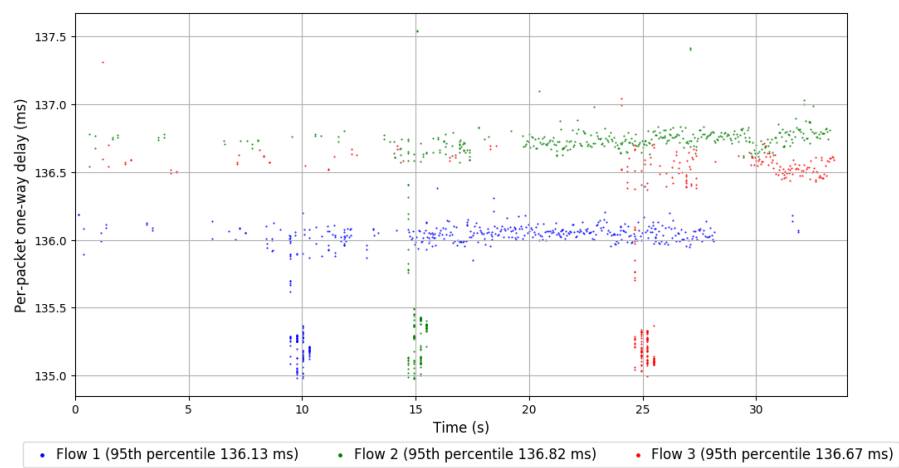
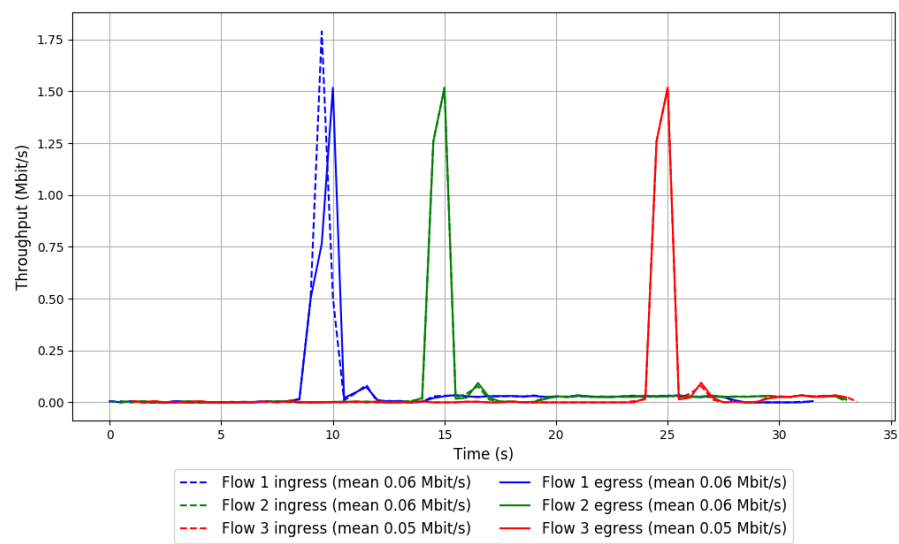


```
Run 1: Statistics of WebRTC media

Start at: 2018-04-18 19:49:26
End at: 2018-04-18 19:49:56

# Below is generated by plot.py at 2018-04-19 02:13:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 136.796 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 136.135 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 136.825 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 136.670 ms
Loss rate: 0.40%
```


Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-04-18 20:07:35

End at: 2018-04-18 20:08:05

Below is generated by plot.py at 2018-04-19 02:13:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 136.678 ms

Loss rate: 0.12%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 135.829 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 135.481 ms

Loss rate: 0.00%

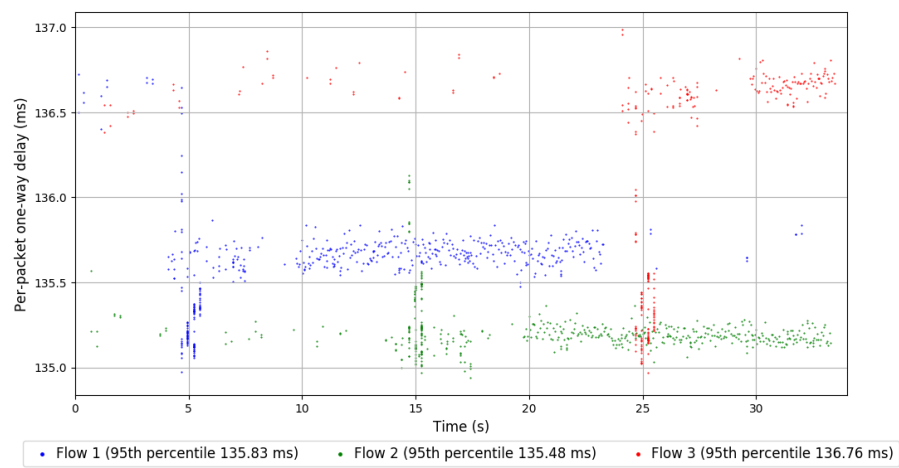
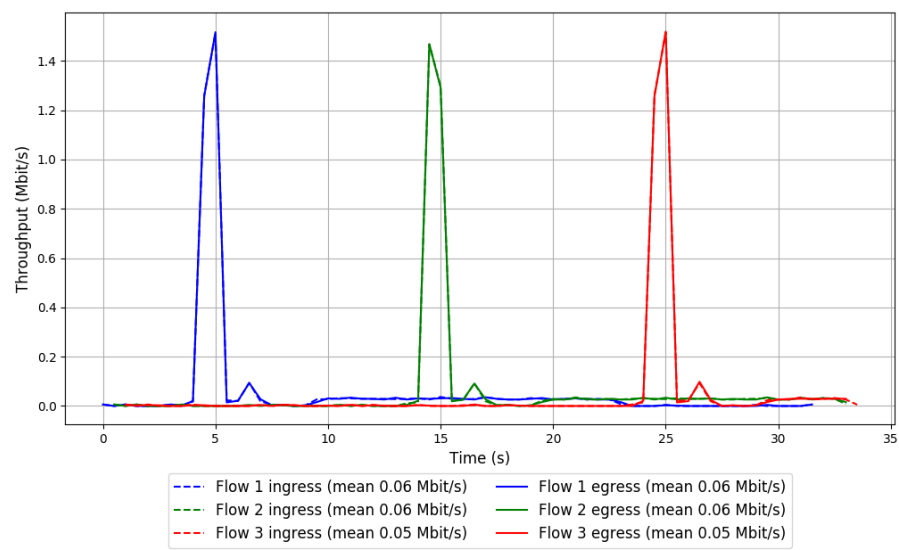
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 136.758 ms

Loss rate: 0.40%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-04-18 20:25:27

End at: 2018-04-18 20:25:57

Below is generated by plot.py at 2018-04-19 02:13:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 136.621 ms

Loss rate: 0.12%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 136.634 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 136.615 ms

Loss rate: 0.00%

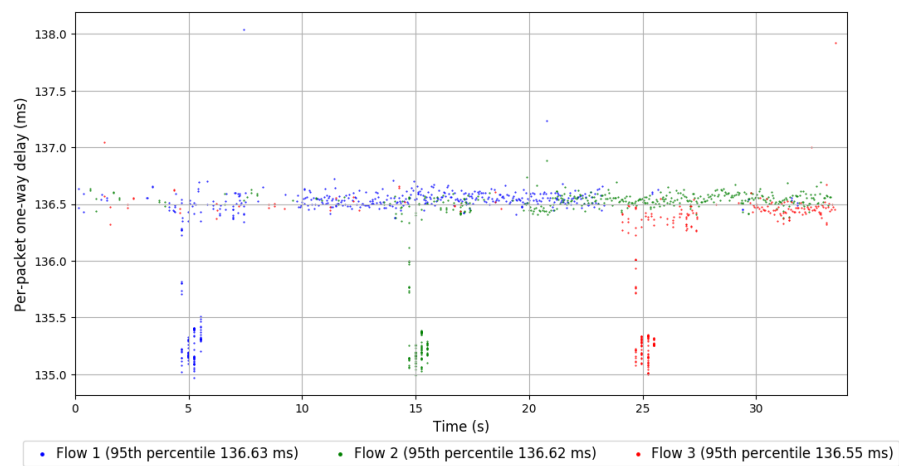
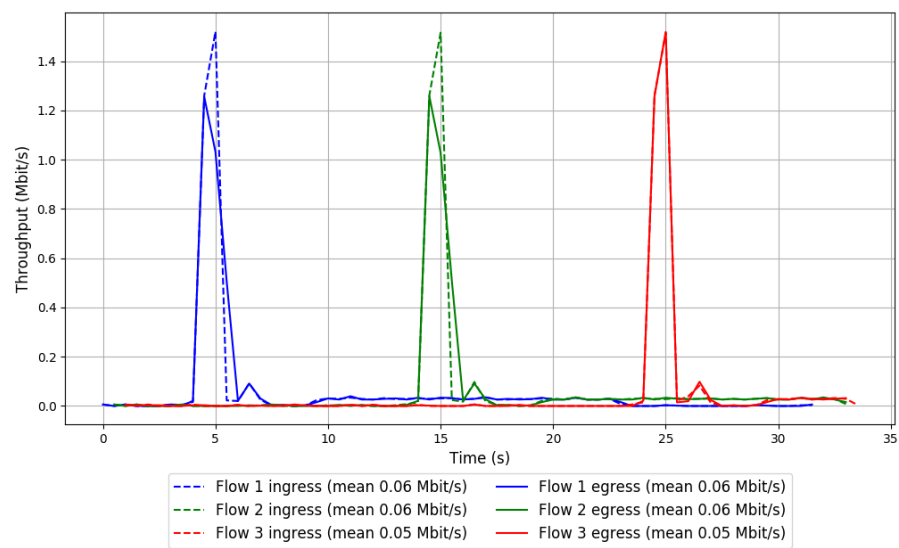
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 136.551 ms

Loss rate: 0.40%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-04-18 20:43:30

End at: 2018-04-18 20:44:00

Below is generated by plot.py at 2018-04-19 02:13:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 135.298 ms

Loss rate: 0.15%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 135.342 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 135.276 ms

Loss rate: 0.00%

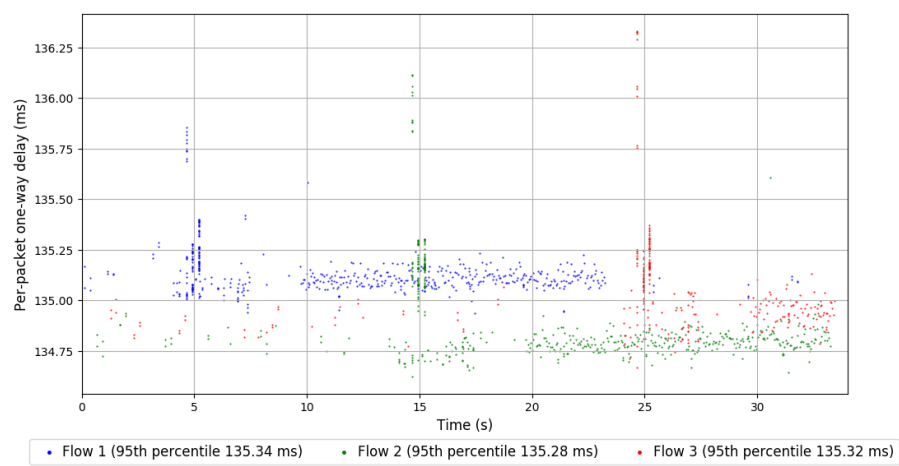
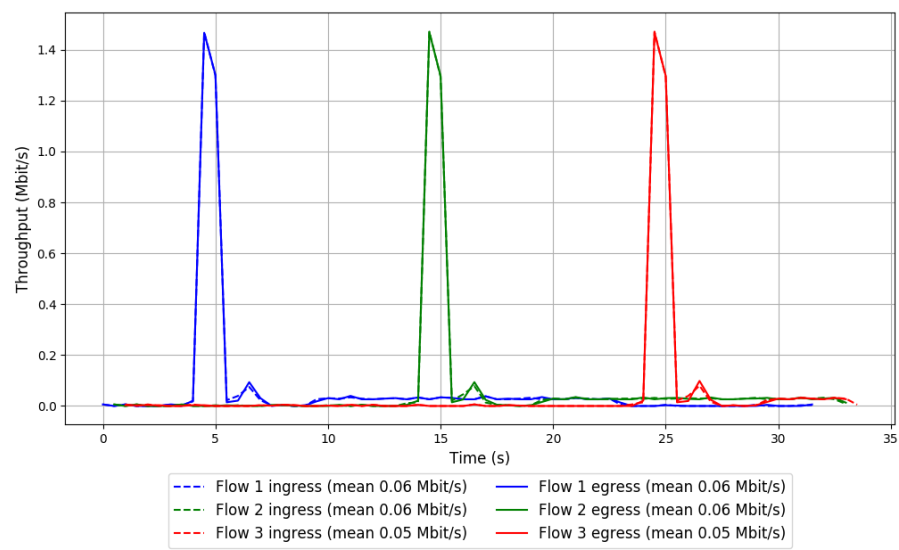
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 135.324 ms

Loss rate: 0.49%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-04-18 21:01:49

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

Below is generated by plot.py at 2018-04-19 02:13:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 136.472 ms

Loss rate: 0.15%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 136.476 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 135.226 ms

Loss rate: 0.00%

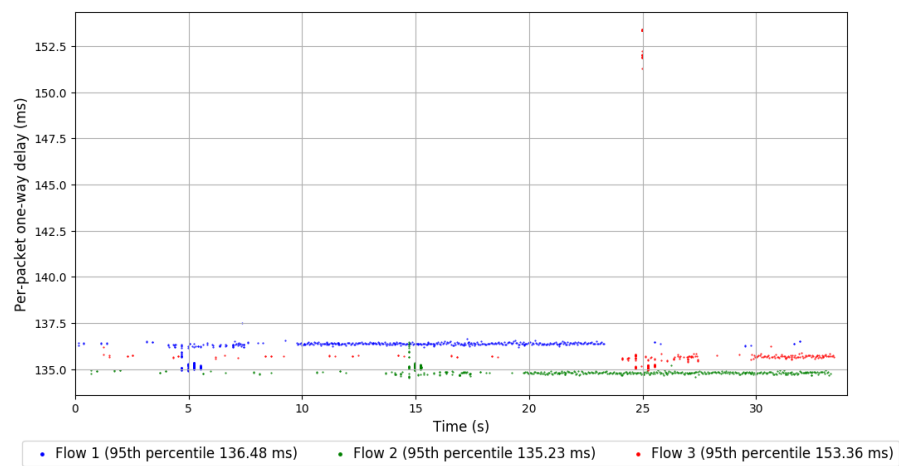
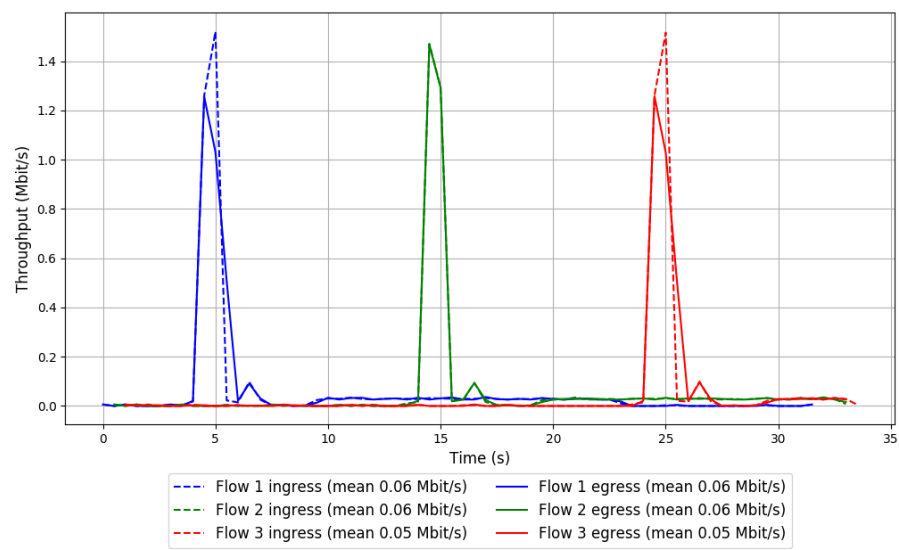
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 153.364 ms

Loss rate: 0.49%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2018-04-18 21:20:06

End at: 2018-04-18 21:20:36

Below is generated by plot.py at 2018-04-19 02:13:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 136.662 ms

Loss rate: 0.15%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 136.559 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 136.052 ms

Loss rate: 0.00%

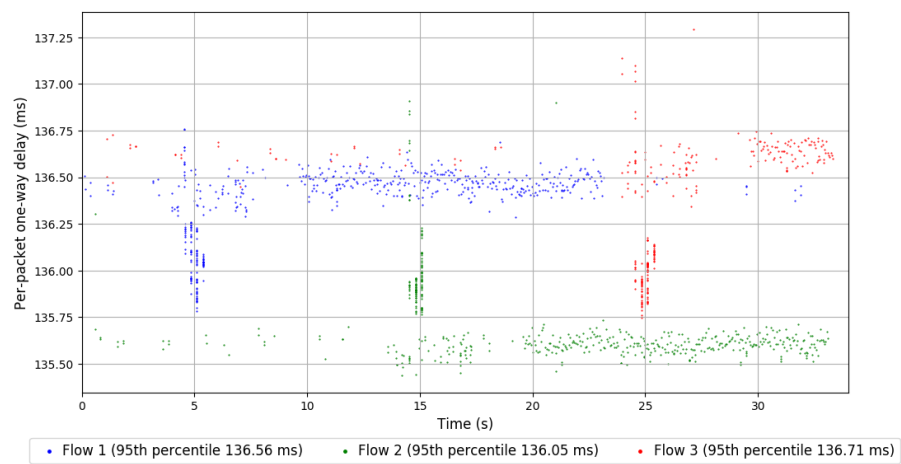
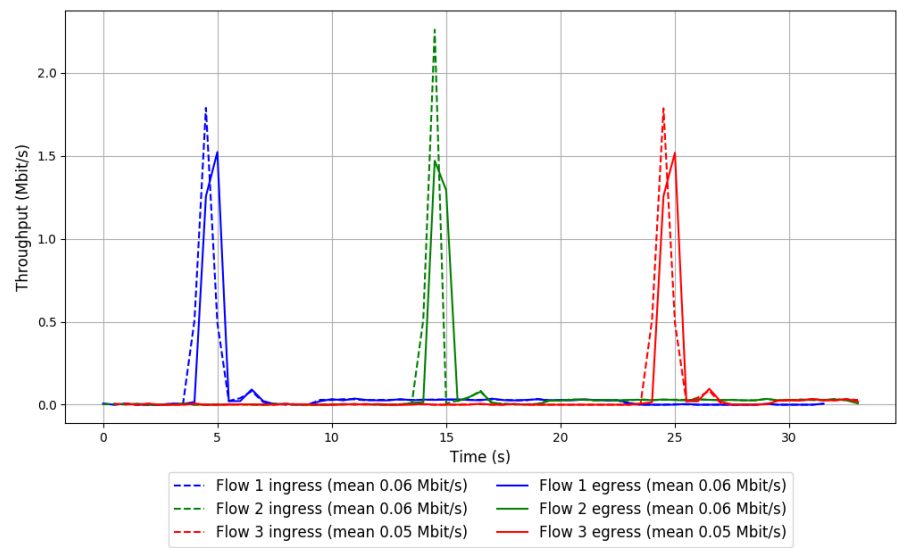
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 136.708 ms

Loss rate: 0.48%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2018-04-18 21:38:09

End at: 2018-04-18 21:38:39

Below is generated by plot.py at 2018-04-19 02:13:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 136.201 ms

Loss rate: 0.12%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 136.142 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 136.205 ms

Loss rate: 0.00%

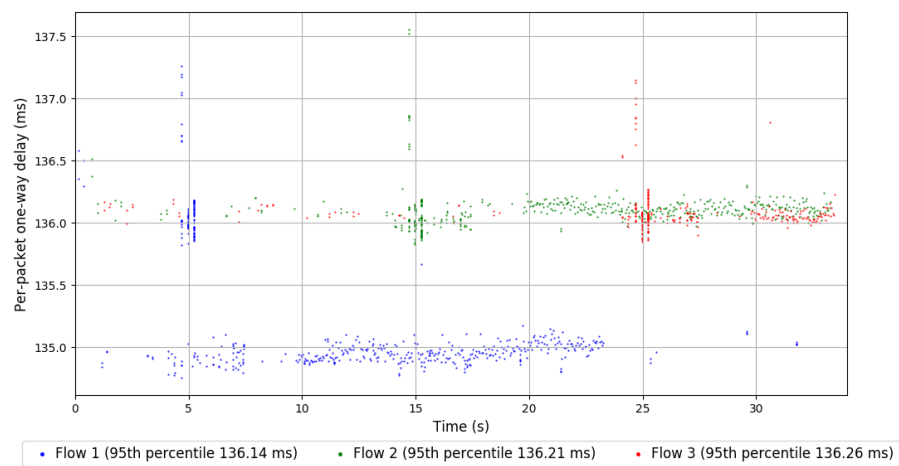
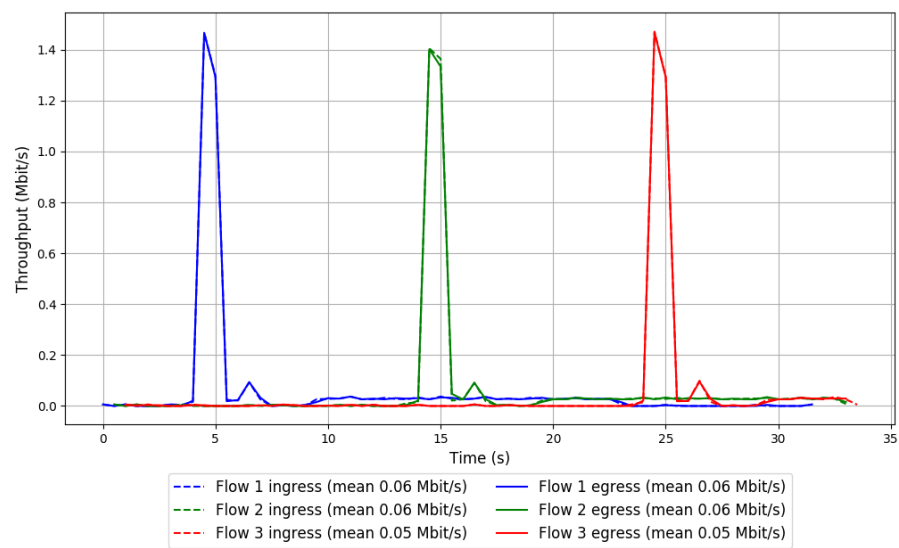
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 136.260 ms

Loss rate: 0.41%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2018-04-18 21:56:00

End at: 2018-04-18 21:56:30

Below is generated by plot.py at 2018-04-19 02:13:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 136.627 ms

Loss rate: 0.15%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 136.650 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 136.533 ms

Loss rate: 0.00%

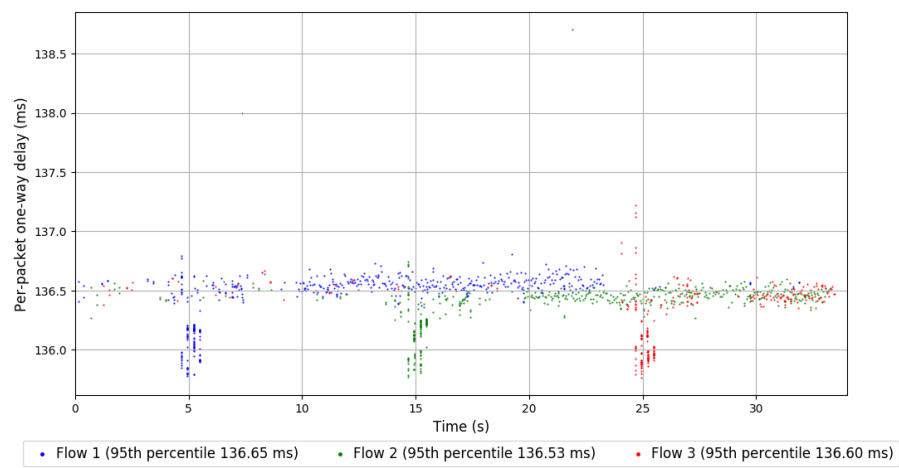
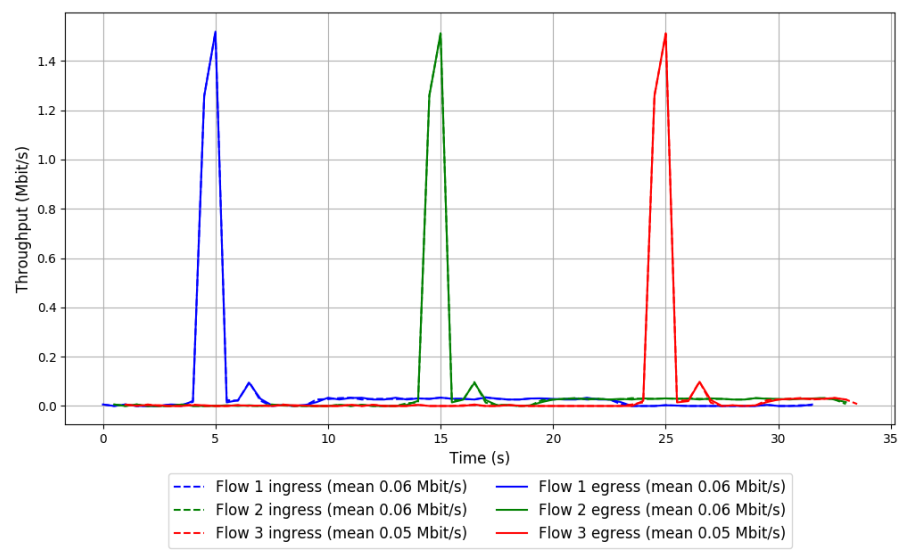
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 136.605 ms

Loss rate: 0.49%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2018-04-18 22:13:53

End at: 2018-04-18 22:14:23

Below is generated by plot.py at 2018-04-19 02:13:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 136.579 ms

Loss rate: 0.15%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 136.585 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 136.057 ms

Loss rate: 0.00%

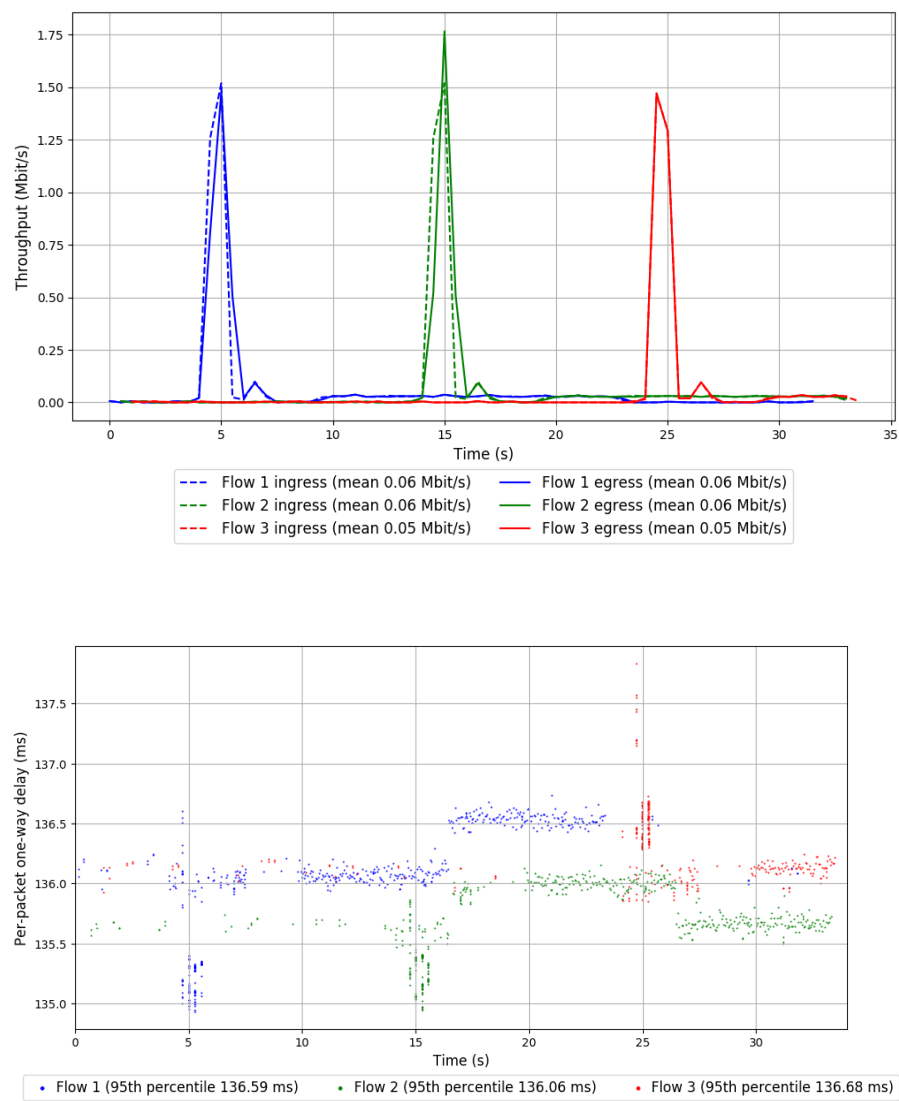
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 136.675 ms

Loss rate: 0.49%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2018-04-18 22:31:37

End at: 2018-04-18 22:32:07

Below is generated by plot.py at 2018-04-19 02:13:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 136.749 ms

Loss rate: 0.15%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 136.808 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 136.212 ms

Loss rate: 0.00%

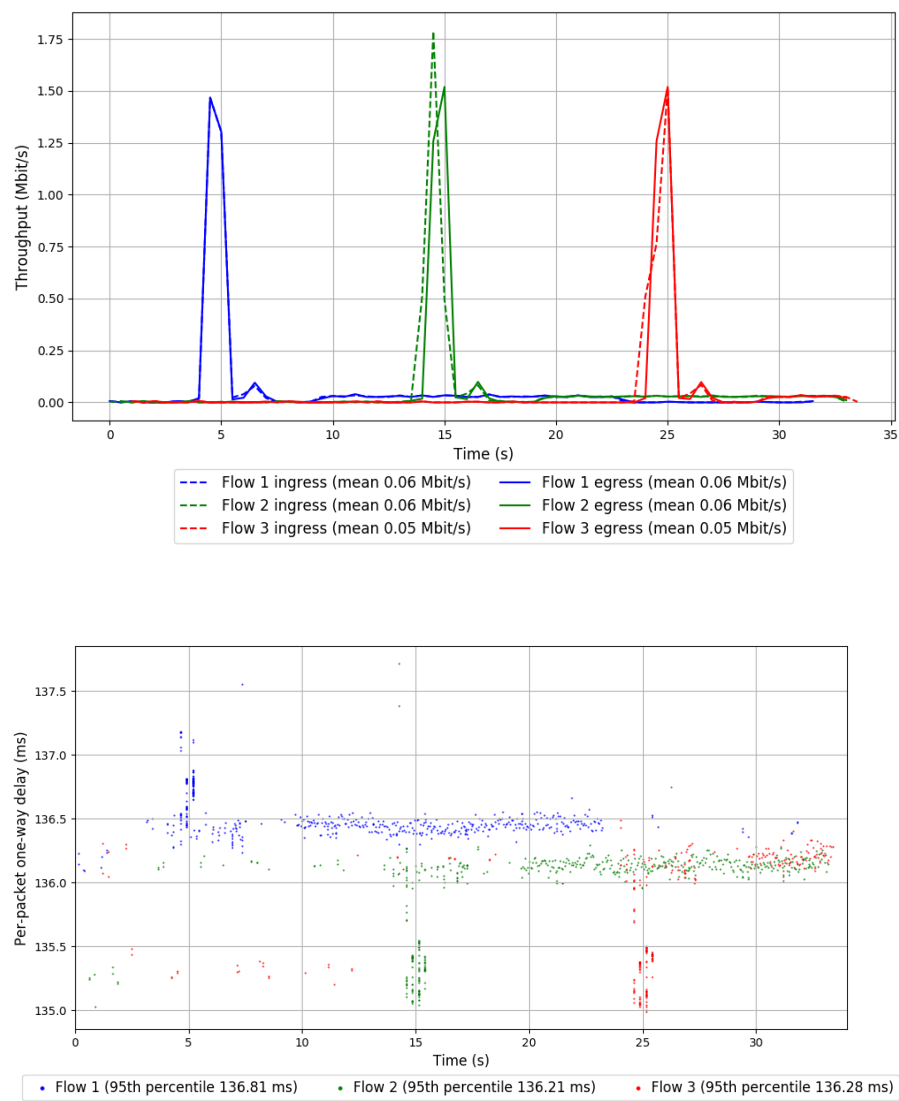
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 136.284 ms

Loss rate: 0.48%

Run 10: Report of WebRTC media — Data Link

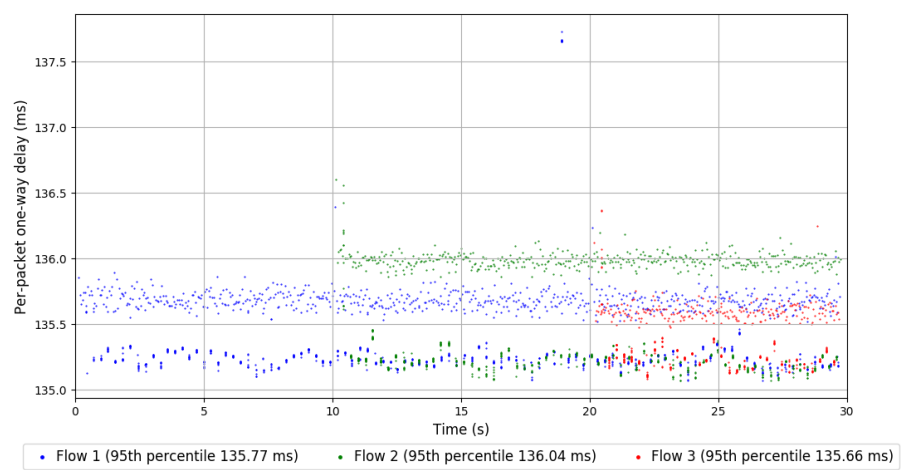
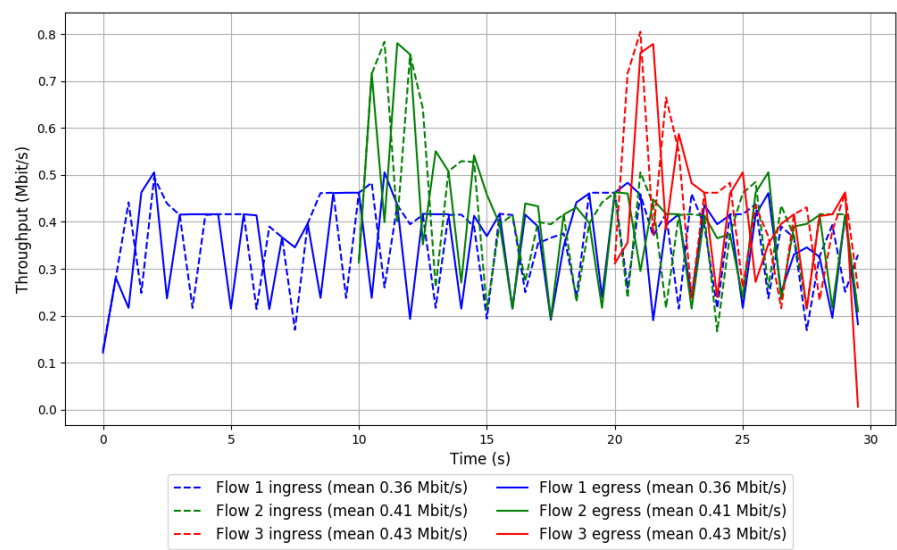


```
Run 1: Statistics of Sprout

Start at: 2018-04-18 19:54:37
End at: 2018-04-18 19:55:07

# Below is generated by plot.py at 2018-04-19 02:13:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.77 Mbit/s
95th percentile per-packet one-way delay: 136.008 ms
Loss rate: 1.40%
-- Flow 1:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 135.766 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 136.042 ms
Loss rate: 1.26%
-- Flow 3:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 135.665 ms
Loss rate: 2.99%
```

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2018-04-18 20:12:44

End at: 2018-04-18 20:13:14

Below is generated by plot.py at 2018-04-19 02:13:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.77 Mbit/s

95th percentile per-packet one-way delay: 136.379 ms

Loss rate: 1.44%

-- Flow 1:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 135.350 ms

Loss rate: 1.01%

-- Flow 2:

Average throughput: 0.35 Mbit/s

95th percentile per-packet one-way delay: 136.081 ms

Loss rate: 1.32%

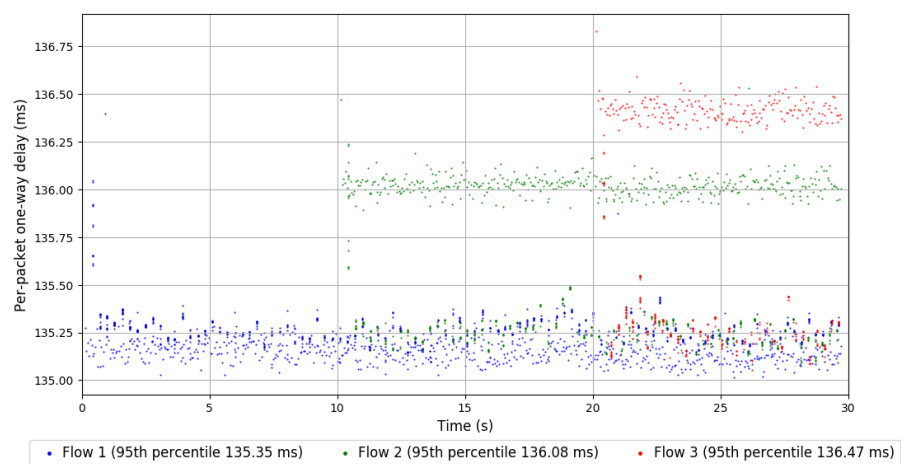
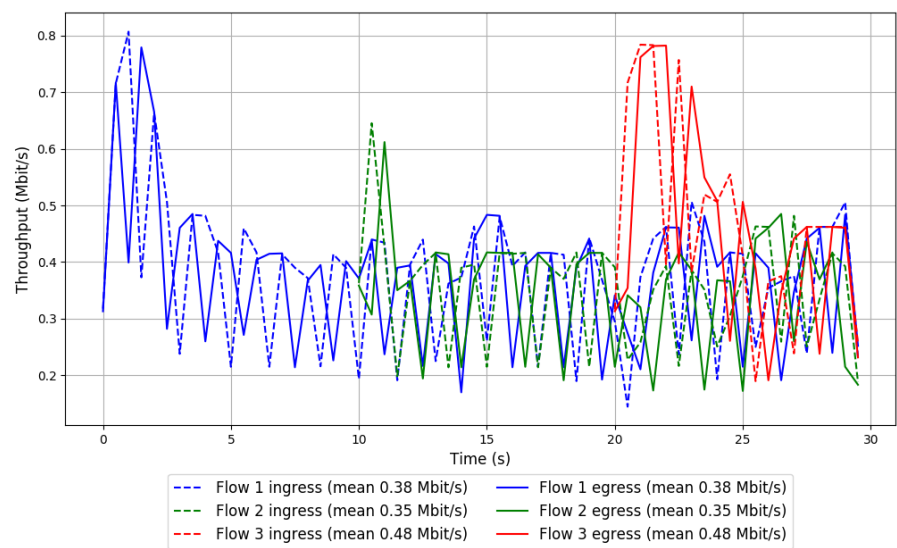
-- Flow 3:

Average throughput: 0.48 Mbit/s

95th percentile per-packet one-way delay: 136.473 ms

Loss rate: 2.69%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2018-04-18 20:30:34

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

Below is generated by plot.py at 2018-04-19 02:13:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.77 Mbit/s

95th percentile per-packet one-way delay: 136.608 ms

Loss rate: 1.20%

-- Flow 1:

Average throughput: 0.35 Mbit/s

95th percentile per-packet one-way delay: 136.629 ms

Loss rate: 0.99%

-- Flow 2:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 136.600 ms

Loss rate: 1.05%

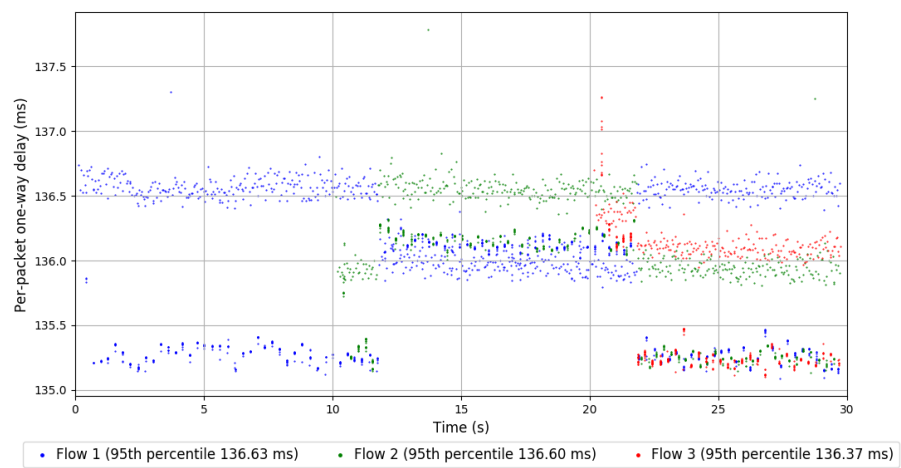
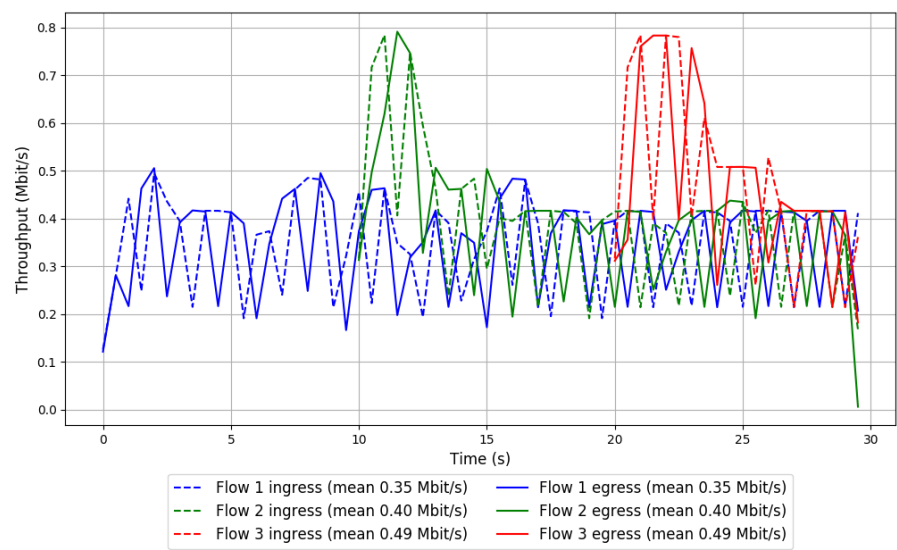
-- Flow 3:

Average throughput: 0.49 Mbit/s

95th percentile per-packet one-way delay: 136.370 ms

Loss rate: 1.92%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2018-04-18 20:48:38

End at: 2018-04-18 20:49:08

Below is generated by plot.py at 2018-04-19 02:13:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.91 Mbit/s

95th percentile per-packet one-way delay: 136.379 ms

Loss rate: 1.55%

-- Flow 1:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 136.412 ms

Loss rate: 0.96%

-- Flow 2:

Average throughput: 0.50 Mbit/s

95th percentile per-packet one-way delay: 135.557 ms

Loss rate: 1.85%

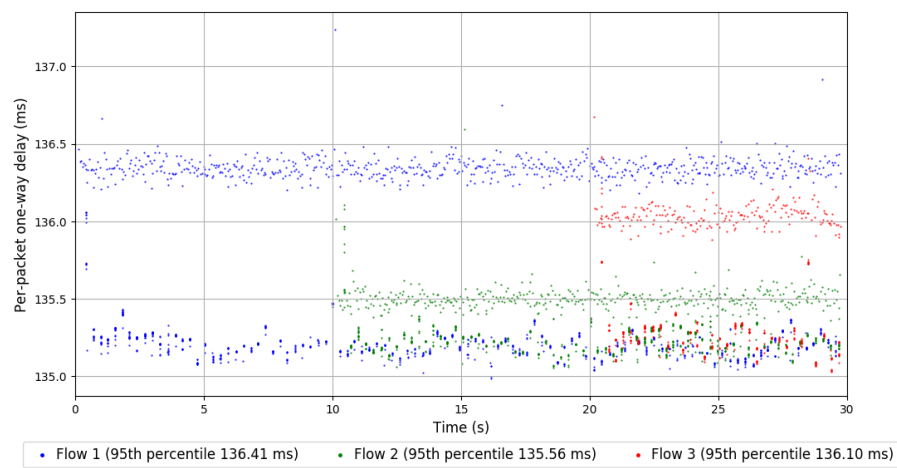
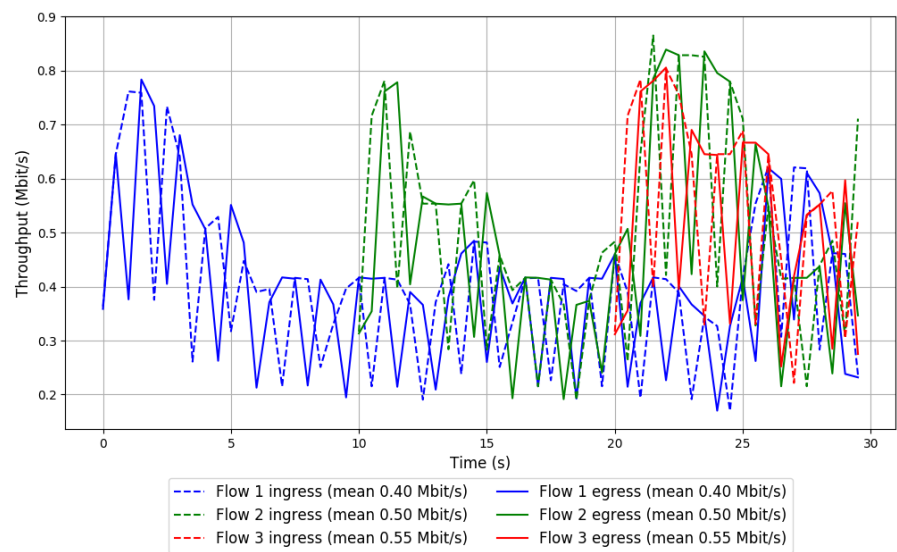
-- Flow 3:

Average throughput: 0.55 Mbit/s

95th percentile per-packet one-way delay: 136.102 ms

Loss rate: 2.31%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2018-04-18 21:06:58

End at: 2018-04-18 21:07:28

Below is generated by plot.py at 2018-04-19 02:13:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.81 Mbit/s

95th percentile per-packet one-way delay: 136.719 ms

Loss rate: 0.92%

-- Flow 1:

Average throughput: 0.37 Mbit/s

95th percentile per-packet one-way delay: 136.750 ms

Loss rate: 1.02%

-- Flow 2:

Average throughput: 0.41 Mbit/s

95th percentile per-packet one-way delay: 136.502 ms

Loss rate: 1.28%

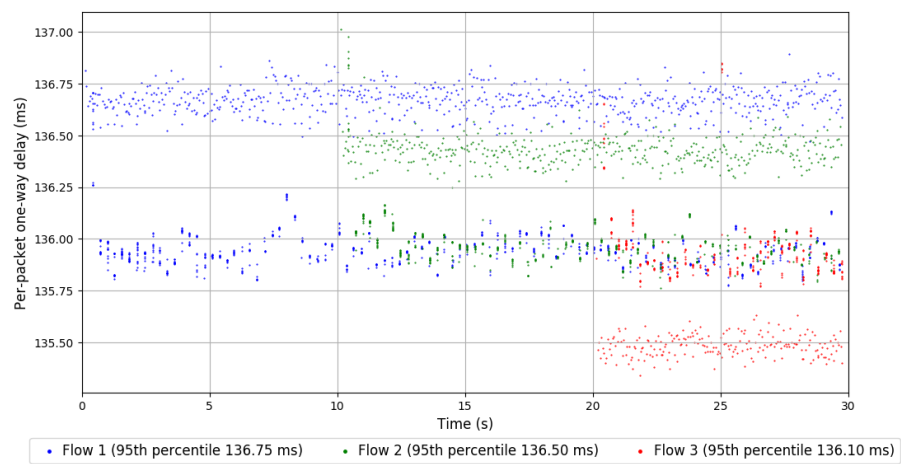
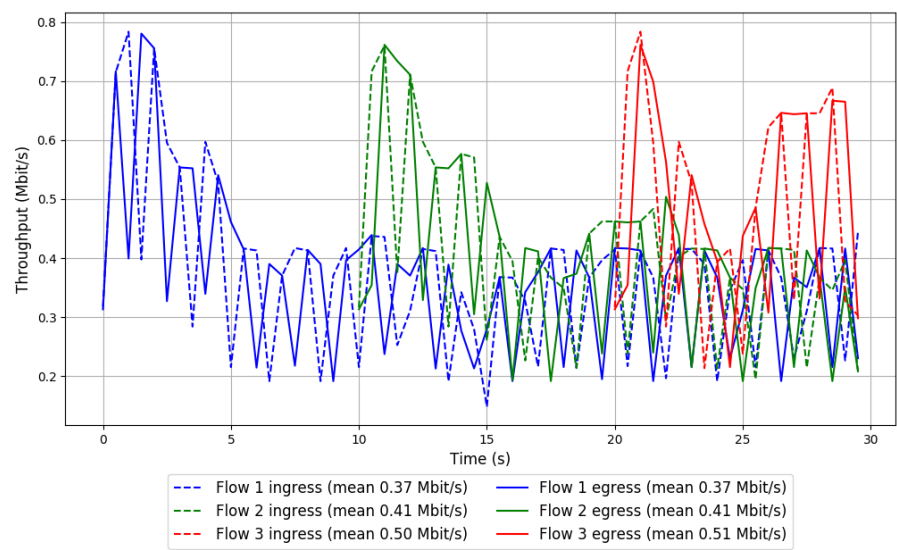
-- Flow 3:

Average throughput: 0.51 Mbit/s

95th percentile per-packet one-way delay: 136.096 ms

Loss rate: 0.08%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2018-04-18 21:25:14

End at: 2018-04-18 21:25:44

Below is generated by plot.py at 2018-04-19 02:13:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.87 Mbit/s

95th percentile per-packet one-way delay: 136.460 ms

Loss rate: 1.20%

-- Flow 1:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 136.164 ms

Loss rate: 0.93%

-- Flow 2:

Average throughput: 0.53 Mbit/s

95th percentile per-packet one-way delay: 136.125 ms

Loss rate: 1.24%

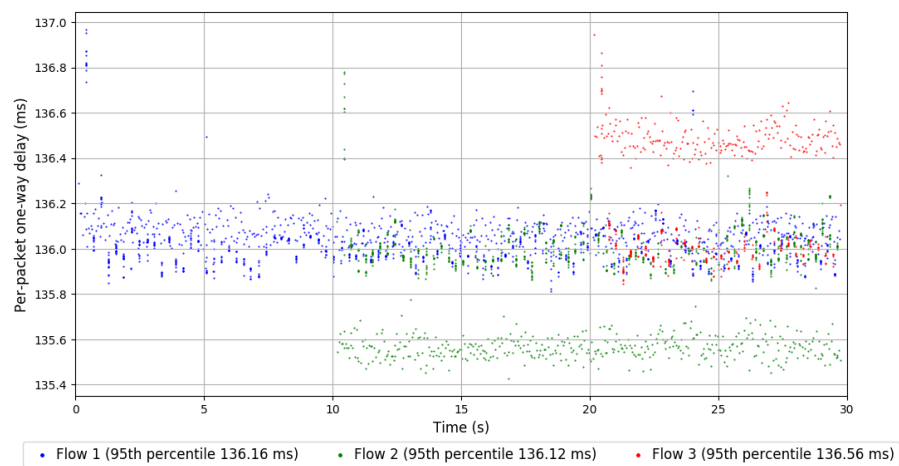
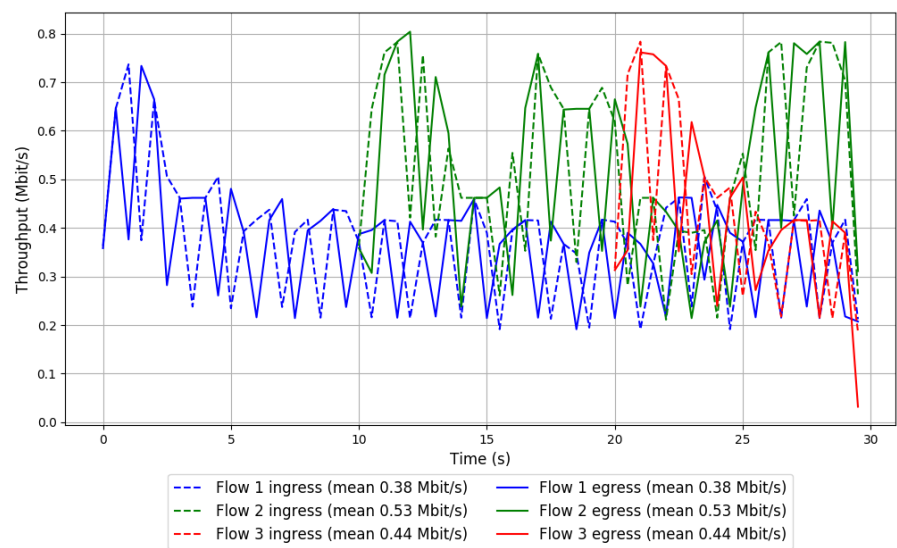
-- Flow 3:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 136.564 ms

Loss rate: 1.84%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2018-04-18 21:43:16

End at: 2018-04-18 21:43:46

Below is generated by plot.py at 2018-04-19 02:13:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.80 Mbit/s

95th percentile per-packet one-way delay: 136.605 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 0.37 Mbit/s

95th percentile per-packet one-way delay: 136.639 ms

Loss rate: 0.93%

-- Flow 2:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 136.441 ms

Loss rate: 1.53%

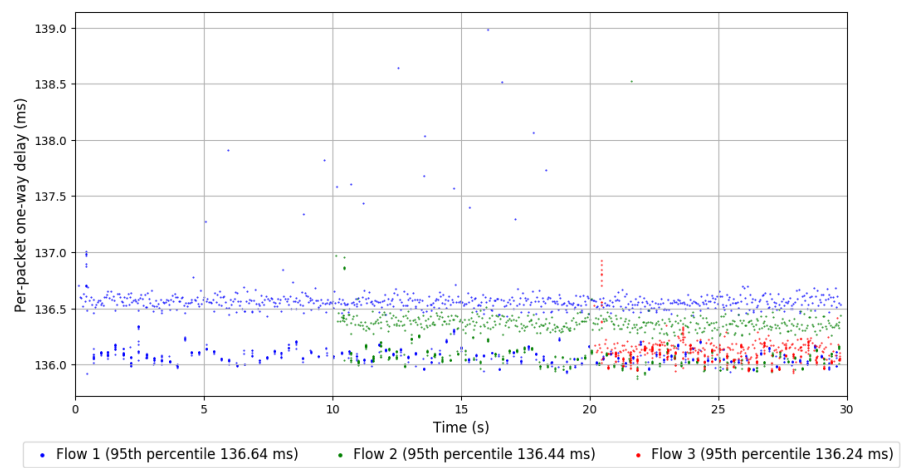
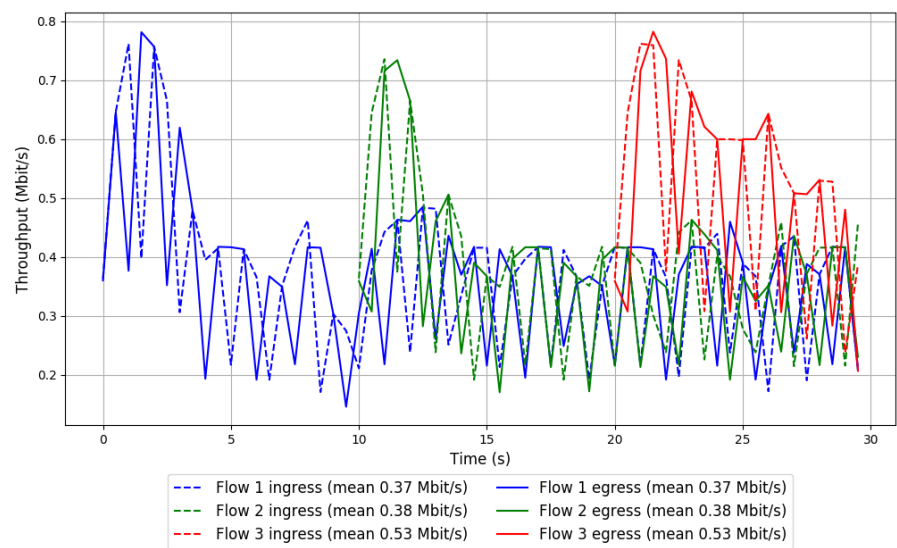
-- Flow 3:

Average throughput: 0.53 Mbit/s

95th percentile per-packet one-way delay: 136.239 ms

Loss rate: 1.79%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2018-04-18 22:01:06

End at: 2018-04-18 22:01:36

Below is generated by plot.py at 2018-04-19 02:13:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.80 Mbit/s

95th percentile per-packet one-way delay: 136.475 ms

Loss rate: 1.35%

-- Flow 1:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 136.469 ms

Loss rate: 1.13%

-- Flow 2:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 136.172 ms

Loss rate: 1.24%

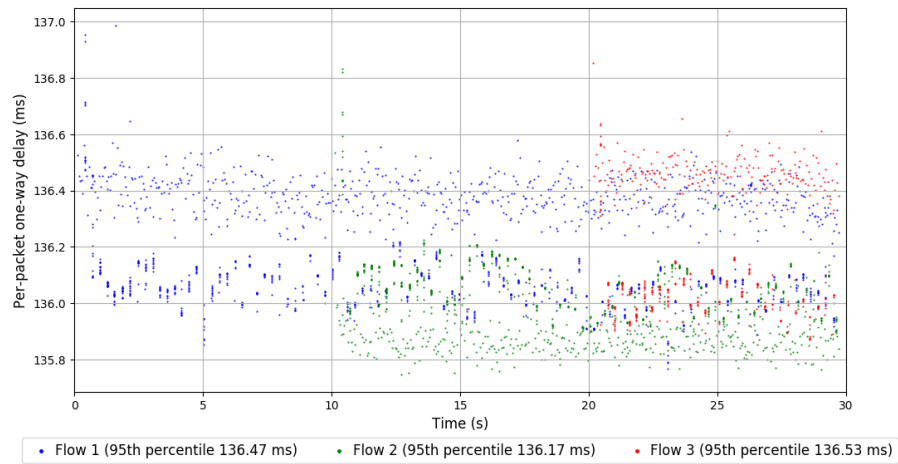
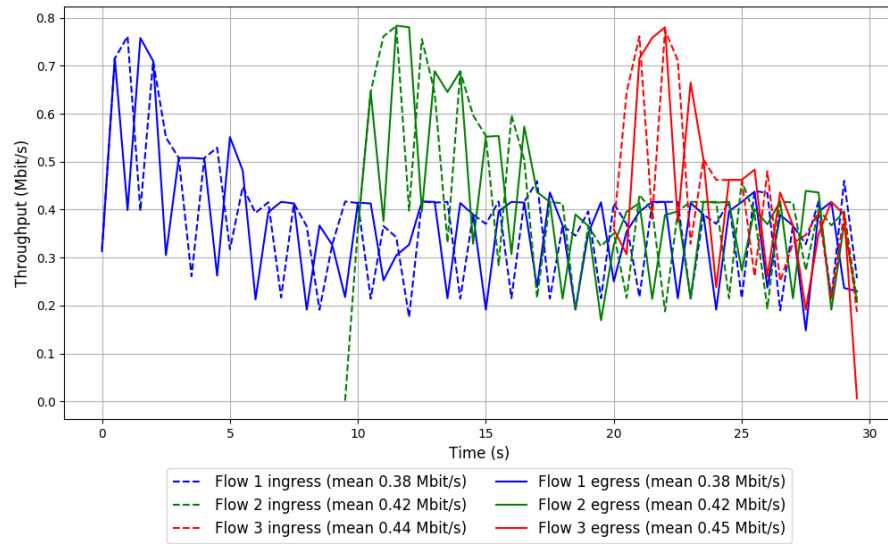
-- Flow 3:

Average throughput: 0.45 Mbit/s

95th percentile per-packet one-way delay: 136.529 ms

Loss rate: 2.11%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2018-04-18 22:19:01

End at: 2018-04-18 22:19:31

Below is generated by plot.py at 2018-04-19 02:13:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.81 Mbit/s

95th percentile per-packet one-way delay: 136.465 ms

Loss rate: 0.49%

-- Flow 1:

Average throughput: 0.39 Mbit/s

95th percentile per-packet one-way delay: 136.156 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 0.41 Mbit/s

95th percentile per-packet one-way delay: 136.513 ms

Loss rate: 1.28%

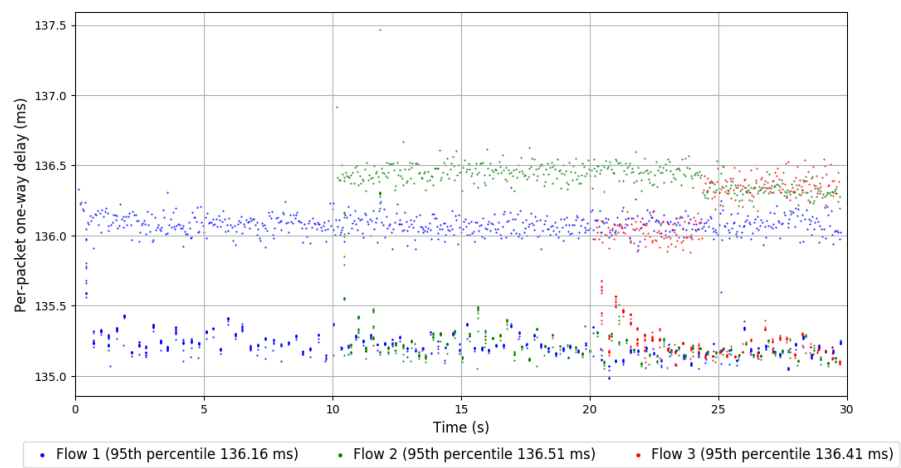
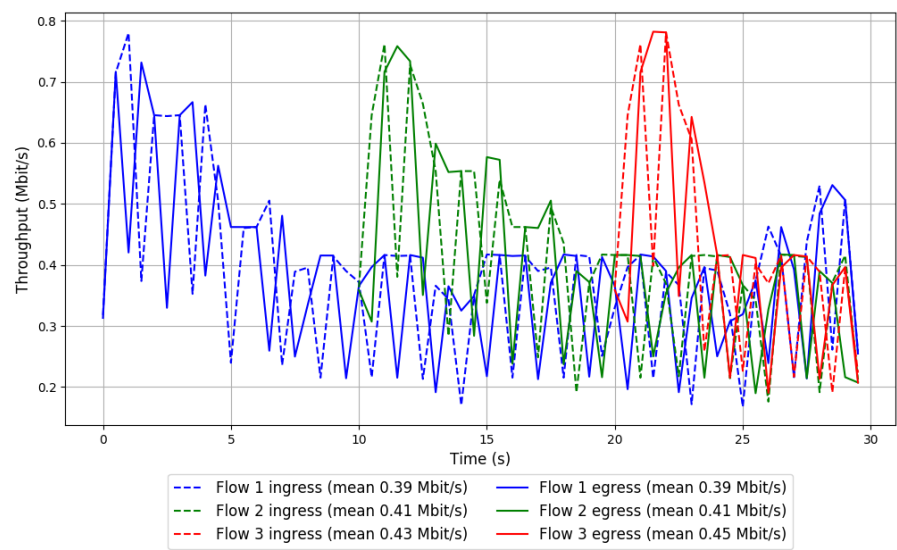
-- Flow 3:

Average throughput: 0.45 Mbit/s

95th percentile per-packet one-way delay: 136.409 ms

Loss rate: 0.22%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2018-04-18 22:36:45

End at: 2018-04-18 22:37:15

Below is generated by plot.py at 2018-04-19 02:13:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.80 Mbit/s

95th percentile per-packet one-way delay: 136.702 ms

Loss rate: 1.26%

-- Flow 1:

Average throughput: 0.34 Mbit/s

95th percentile per-packet one-way delay: 136.650 ms

Loss rate: 1.26%

-- Flow 2:

Average throughput: 0.47 Mbit/s

95th percentile per-packet one-way delay: 136.714 ms

Loss rate: 1.65%

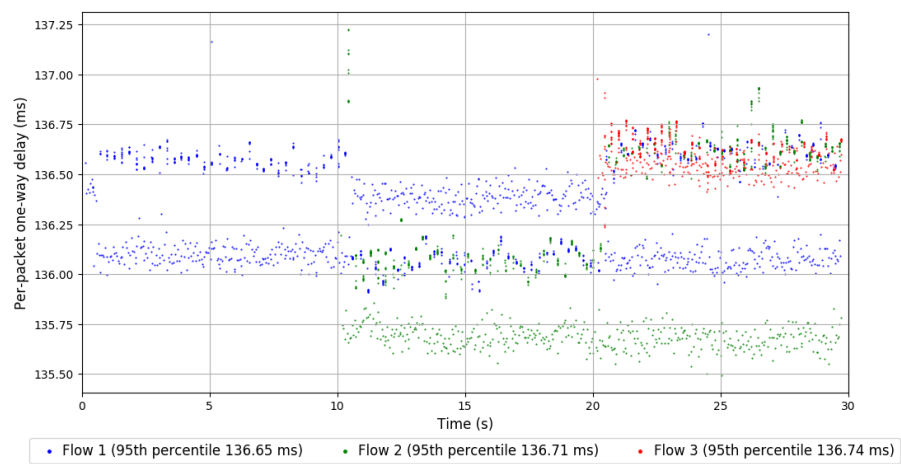
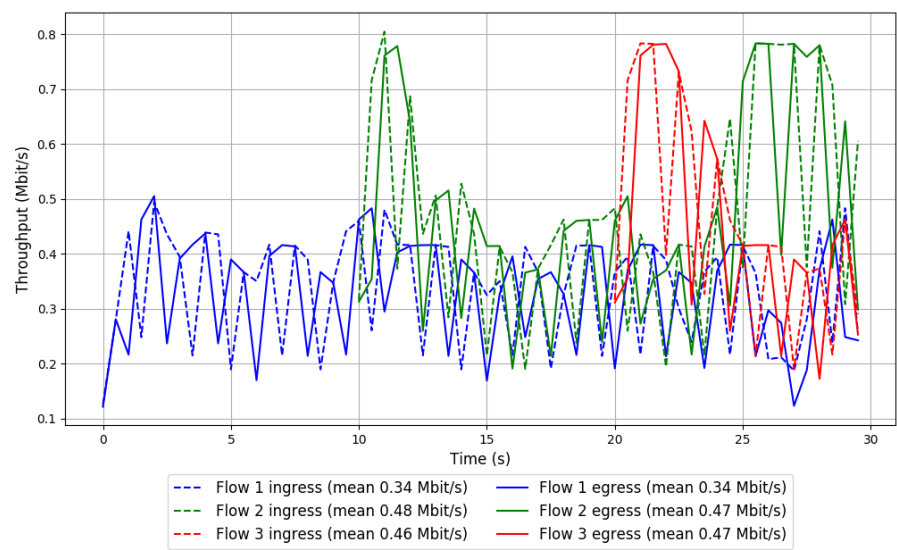
-- Flow 3:

Average throughput: 0.47 Mbit/s

95th percentile per-packet one-way delay: 136.744 ms

Loss rate: 0.46%

Run 10: Report of Sprout — Data Link

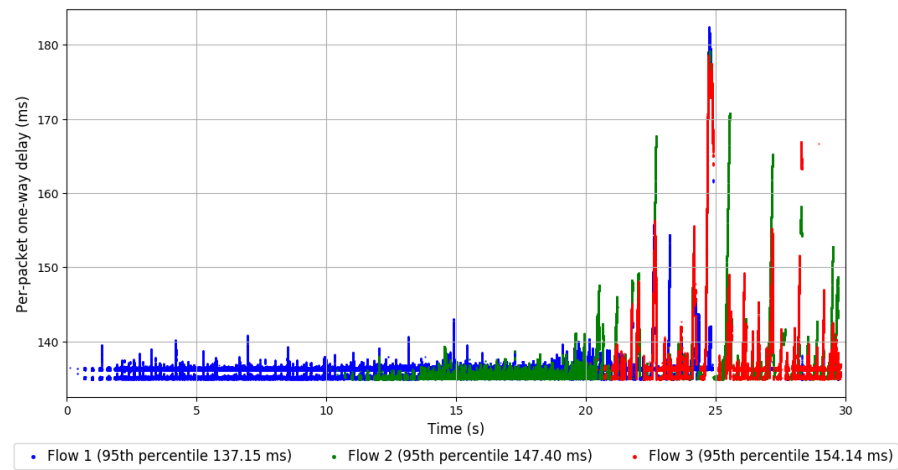
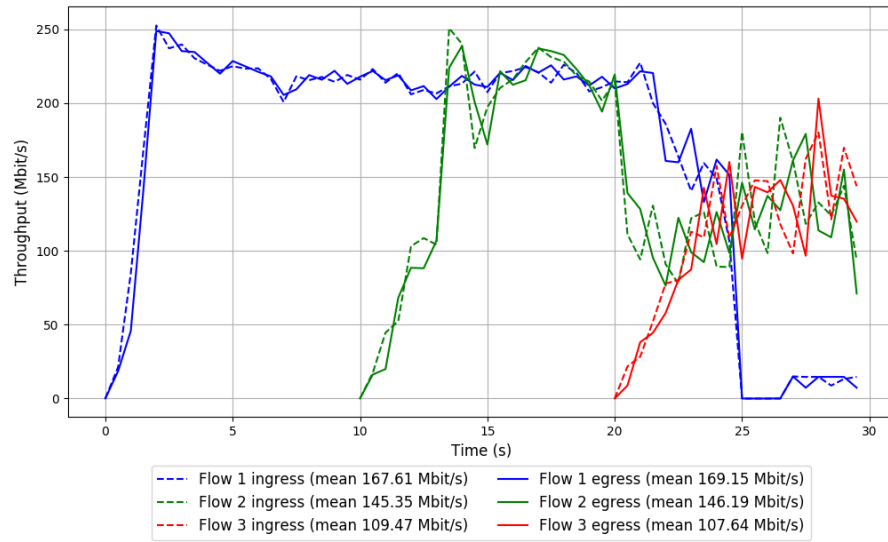


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-04-18 19:42:48
End at: 2018-04-18 19:43:19

# Below is generated by plot.py at 2018-04-19 02:15:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 300.10 Mbit/s
95th percentile per-packet one-way delay: 143.355 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 169.15 Mbit/s
95th percentile per-packet one-way delay: 137.148 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 146.19 Mbit/s
95th percentile per-packet one-way delay: 147.401 ms
Loss rate: 1.09%
-- Flow 3:
Average throughput: 107.64 Mbit/s
95th percentile per-packet one-way delay: 154.139 ms
Loss rate: 4.39%
```


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



Run 2: Statistics of TaoVA-100x

Start at: 2018-04-18 20:00:59

End at: 2018-04-18 20:01:29

Below is generated by plot.py at 2018-04-19 02:17:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 347.83 Mbit/s

95th percentile per-packet one-way delay: 138.816 ms

Loss rate: 1.19%

-- Flow 1:

Average throughput: 188.16 Mbit/s

95th percentile per-packet one-way delay: 138.030 ms

Loss rate: 0.83%

-- Flow 2:

Average throughput: 179.07 Mbit/s

95th percentile per-packet one-way delay: 140.729 ms

Loss rate: 1.00%

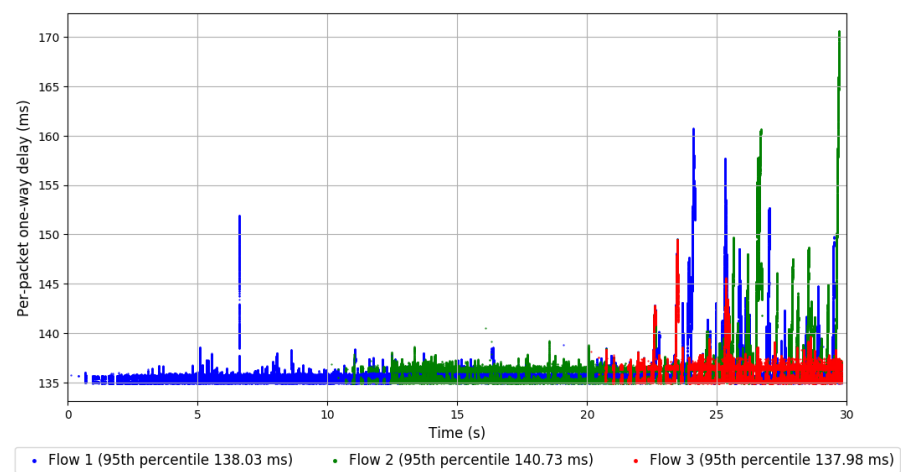
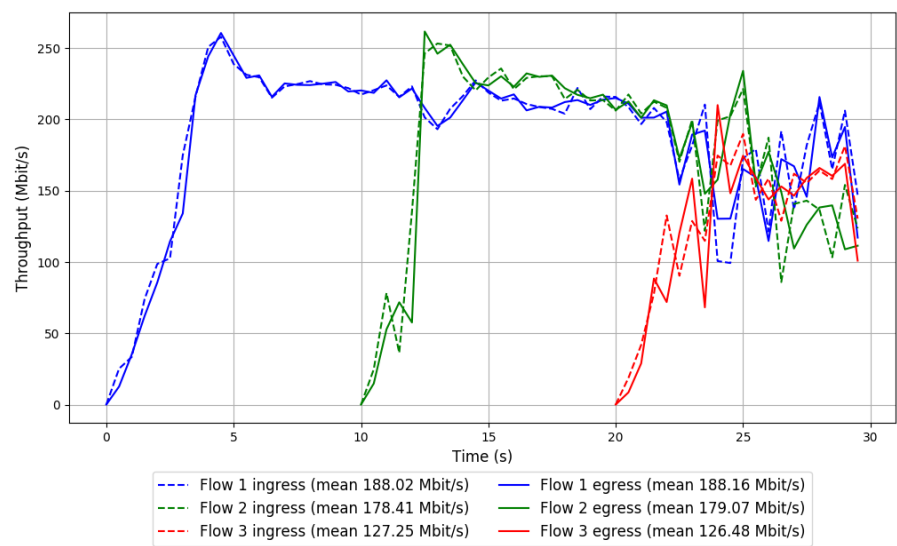
-- Flow 3:

Average throughput: 126.48 Mbit/s

95th percentile per-packet one-way delay: 137.978 ms

Loss rate: 3.36%

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

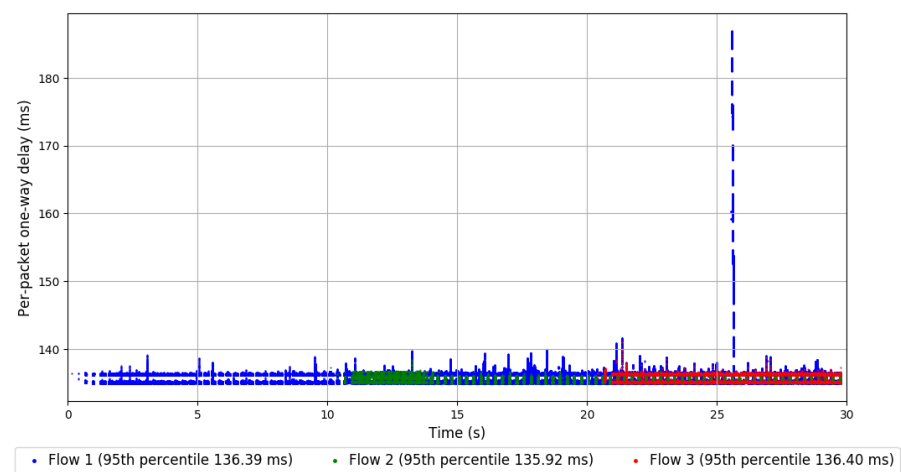
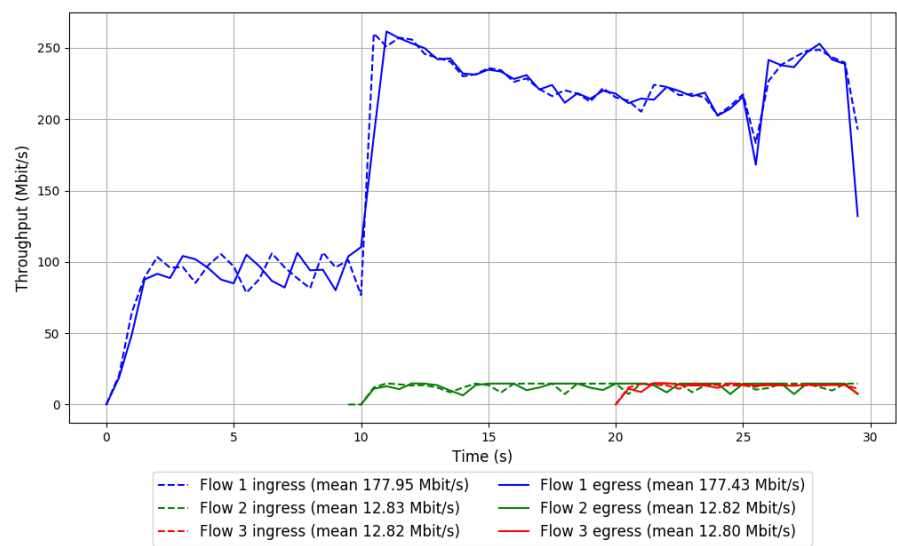


```
Run 3: Statistics of TaoVA-100x

Start at: 2018-04-18 20:19:03
End at: 2018-04-18 20:19:33

# Below is generated by plot.py at 2018-04-19 02:17:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 190.08 Mbit/s
95th percentile per-packet one-way delay: 136.389 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 177.43 Mbit/s
95th percentile per-packet one-way delay: 136.393 ms
Loss rate: 1.20%
-- Flow 2:
Average throughput: 12.82 Mbit/s
95th percentile per-packet one-way delay: 135.918 ms
Loss rate: 1.44%
-- Flow 3:
Average throughput: 12.80 Mbit/s
95th percentile per-packet one-way delay: 136.401 ms
Loss rate: 2.87%
```

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-04-18 20:36:48

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

Below is generated by plot.py at 2018-04-19 02:17:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 261.63 Mbit/s

95th percentile per-packet one-way delay: 136.444 ms

Loss rate: 1.04%

-- Flow 1:

Average throughput: 202.19 Mbit/s

95th percentile per-packet one-way delay: 136.329 ms

Loss rate: 0.56%

-- Flow 2:

Average throughput: 13.20 Mbit/s

95th percentile per-packet one-way delay: 136.560 ms

Loss rate: 1.31%

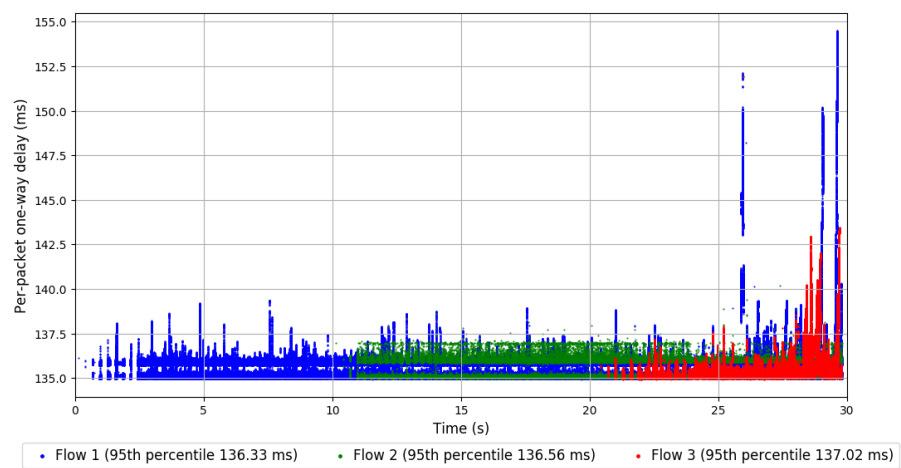
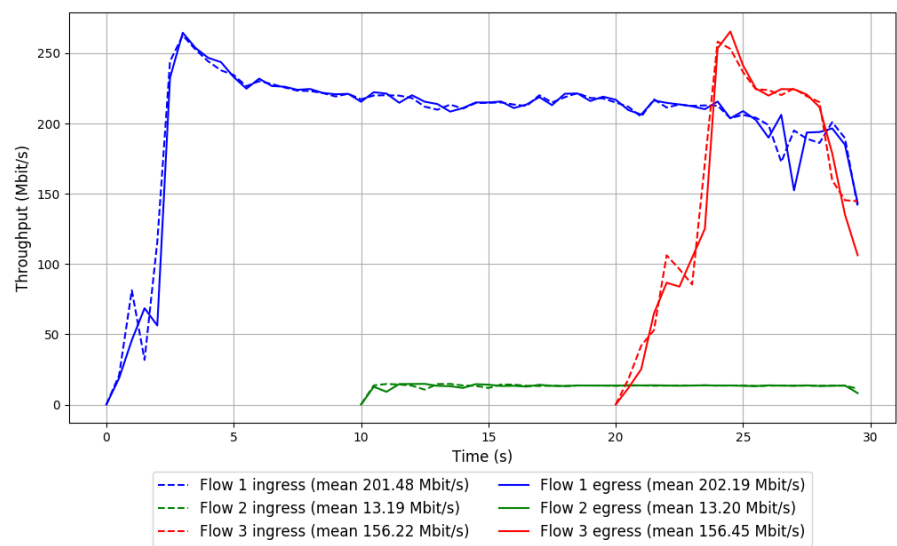
-- Flow 3:

Average throughput: 156.45 Mbit/s

95th percentile per-packet one-way delay: 137.022 ms

Loss rate: 2.90%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-04-18 20:54:56

End at: 2018-04-18 20:55:26

Below is generated by plot.py at 2018-04-19 02:18:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 330.23 Mbit/s

95th percentile per-packet one-way delay: 136.541 ms

Loss rate: 1.33%

-- Flow 1:

Average throughput: 205.83 Mbit/s

95th percentile per-packet one-way delay: 136.802 ms

Loss rate: 1.10%

-- Flow 2:

Average throughput: 181.68 Mbit/s

95th percentile per-packet one-way delay: 135.953 ms

Loss rate: 1.66%

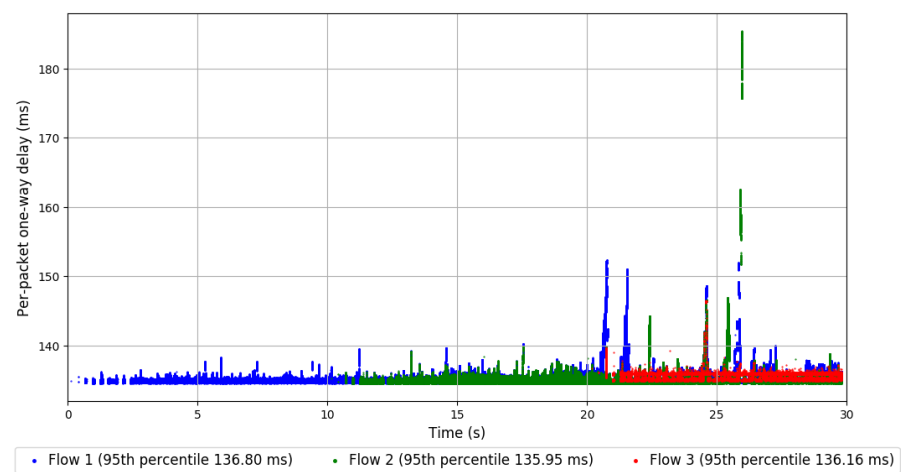
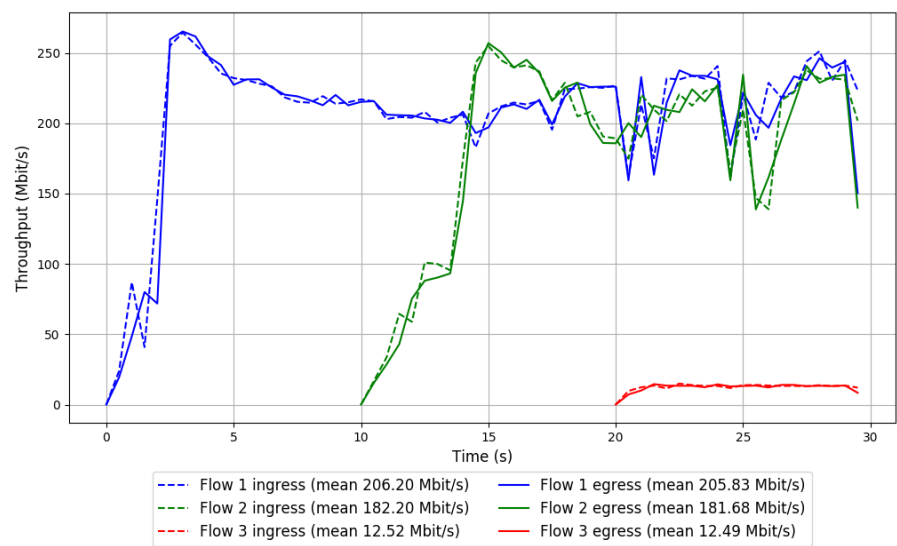
-- Flow 3:

Average throughput: 12.49 Mbit/s

95th percentile per-packet one-way delay: 136.164 ms

Loss rate: 3.01%

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



Run 6: Statistics of TaoVA-100x

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

End at: 2018-04-18 21:13:48

Below is generated by plot.py at 2018-04-19 02:18:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 322.76 Mbit/s

95th percentile per-packet one-way delay: 140.452 ms

Loss rate: 1.17%

-- Flow 1:

Average throughput: 172.79 Mbit/s

95th percentile per-packet one-way delay: 139.026 ms

Loss rate: 0.51%

-- Flow 2:

Average throughput: 162.26 Mbit/s

95th percentile per-packet one-way delay: 142.884 ms

Loss rate: 0.76%

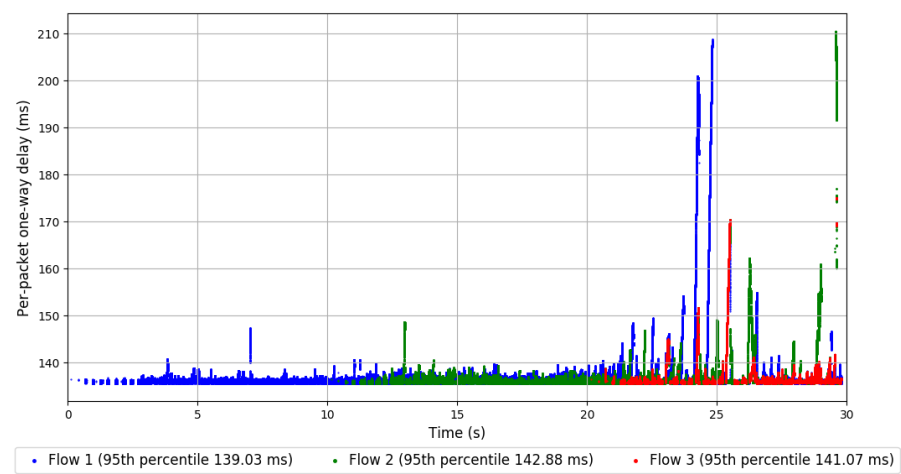
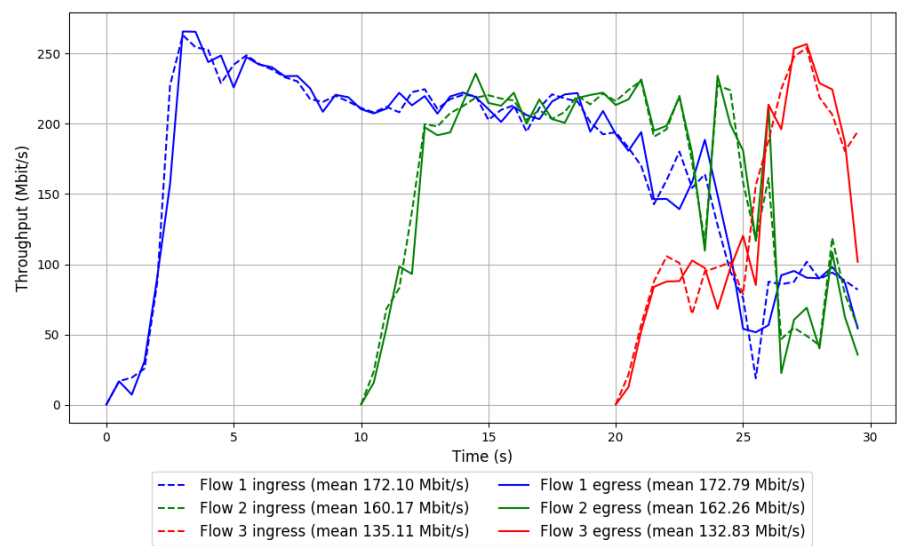
-- Flow 3:

Average throughput: 132.83 Mbit/s

95th percentile per-packet one-way delay: 141.066 ms

Loss rate: 4.64%

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



Run 7: Statistics of TaoVA-100x

Start at: 2018-04-18 21:31:31

End at: 2018-04-18 21:32:01

Below is generated by plot.py at 2018-04-19 02:23:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 328.17 Mbit/s

95th percentile per-packet one-way delay: 136.838 ms

Loss rate: 1.17%

-- Flow 1:

Average throughput: 194.61 Mbit/s

95th percentile per-packet one-way delay: 136.798 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 195.58 Mbit/s

95th percentile per-packet one-way delay: 136.920 ms

Loss rate: 1.64%

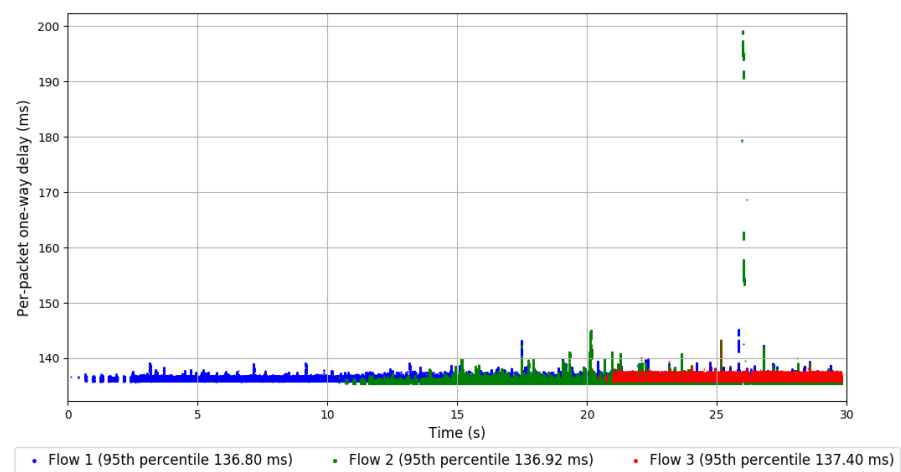
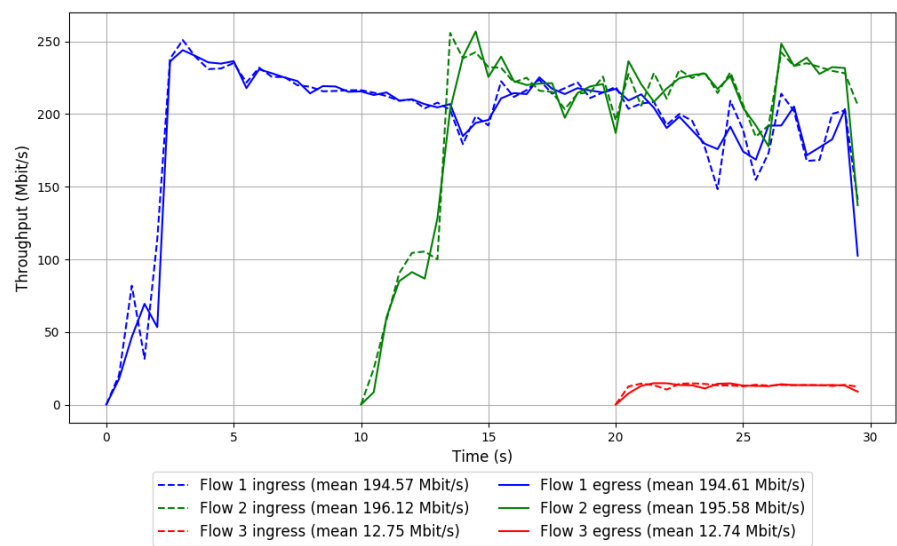
-- Flow 3:

Average throughput: 12.74 Mbit/s

95th percentile per-packet one-way delay: 137.404 ms

Loss rate: 2.82%

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



Run 8: Statistics of TaoVA-100x

Start at: 2018-04-18 21:49:35

End at: 2018-04-18 21:50:05

Below is generated by plot.py at 2018-04-19 02:23:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 196.89 Mbit/s

95th percentile per-packet one-way delay: 136.594 ms

Loss rate: 2.04%

-- Flow 1:

Average throughput: 13.22 Mbit/s

95th percentile per-packet one-way delay: 136.035 ms

Loss rate: 0.93%

-- Flow 2:

Average throughput: 193.02 Mbit/s

95th percentile per-packet one-way delay: 136.535 ms

Loss rate: 1.33%

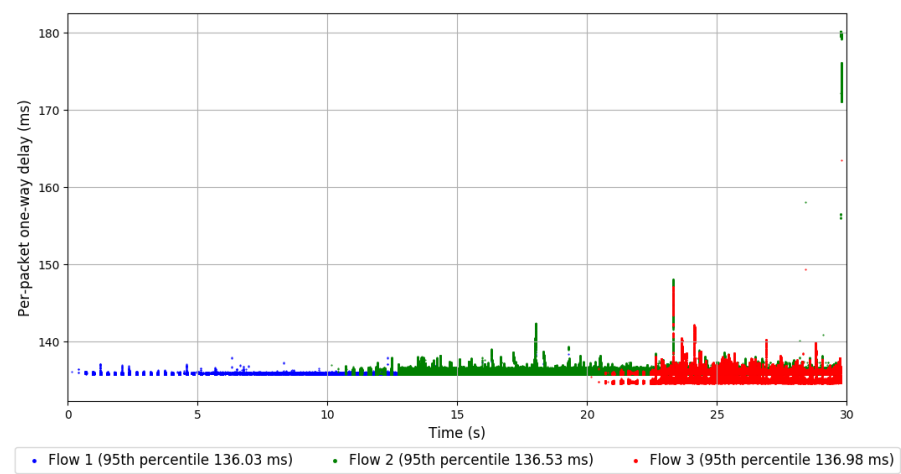
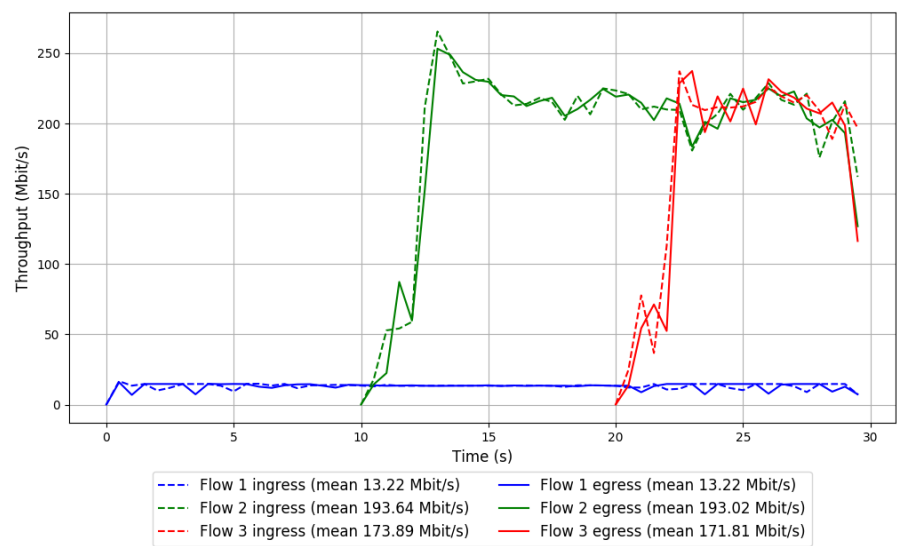
-- Flow 3:

Average throughput: 171.81 Mbit/s

95th percentile per-packet one-way delay: 136.977 ms

Loss rate: 3.89%

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



Run 9: Statistics of TaoVA-100x

Start at: 2018-04-18 22:07:23

End at: 2018-04-18 22:07:53

Below is generated by plot.py at 2018-04-19 02:23:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 216.70 Mbit/s

95th percentile per-packet one-way delay: 136.049 ms

Loss rate: 1.07%

-- Flow 1:

Average throughput: 203.88 Mbit/s

95th percentile per-packet one-way delay: 136.032 ms

Loss rate: 1.02%

-- Flow 2:

Average throughput: 13.10 Mbit/s

95th percentile per-packet one-way delay: 136.680 ms

Loss rate: 1.39%

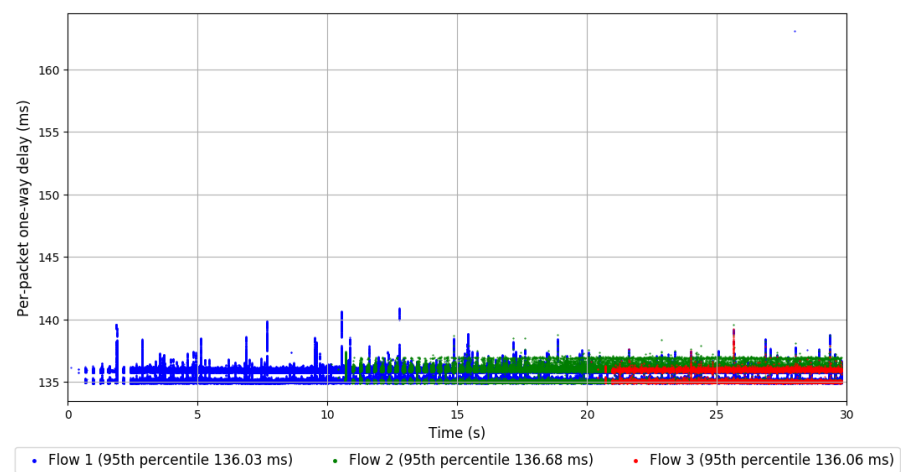
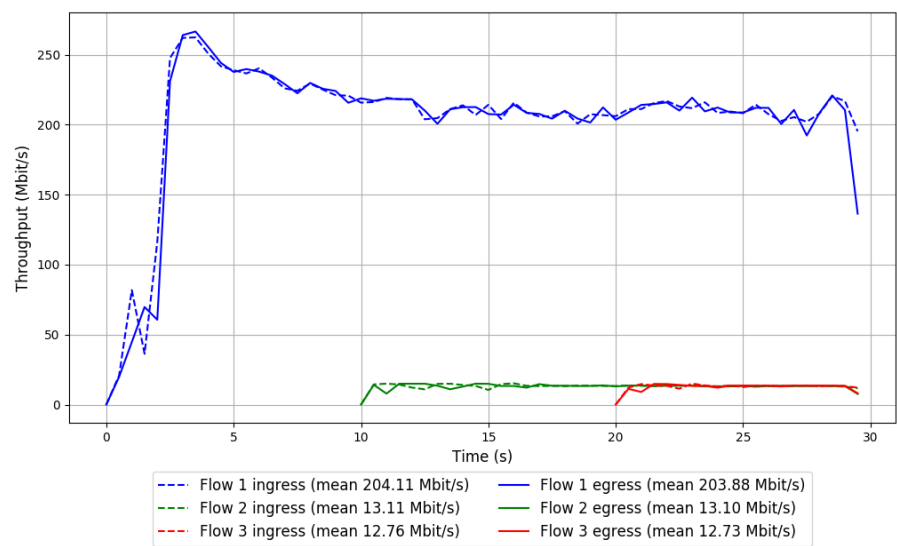
-- Flow 3:

Average throughput: 12.73 Mbit/s

95th percentile per-packet one-way delay: 136.058 ms

Loss rate: 2.92%

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

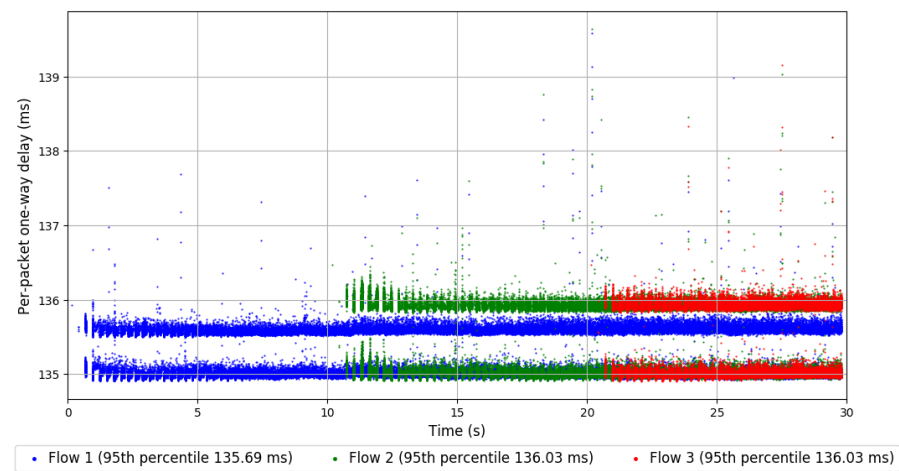
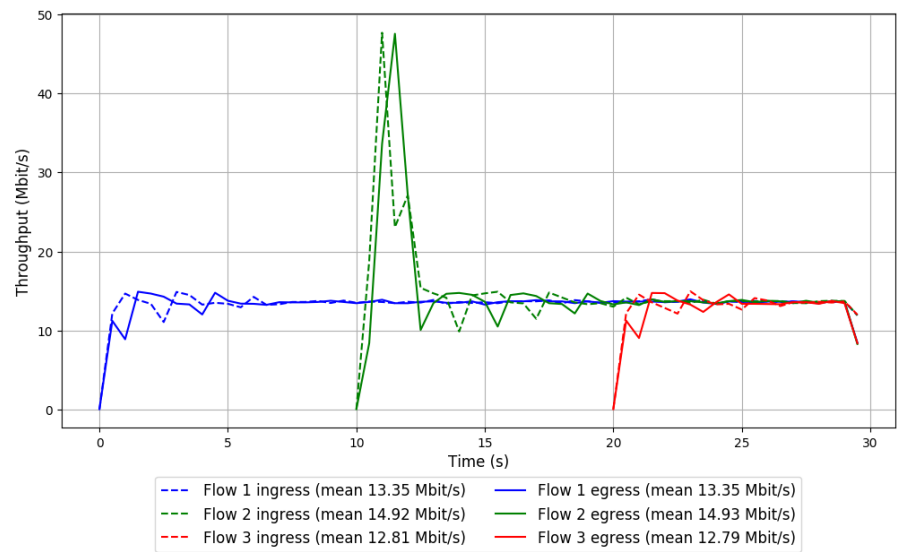


```
Run 10: Statistics of TaoVA-100x

Start at: 2018-04-18 22:25:20
End at: 2018-04-18 22:25:50

# Below is generated by plot.py at 2018-04-19 02:23:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 27.39 Mbit/s
95th percentile per-packet one-way delay: 135.996 ms
Loss rate: 1.34%
-- Flow 1:
Average throughput: 13.35 Mbit/s
95th percentile per-packet one-way delay: 135.688 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 14.93 Mbit/s
95th percentile per-packet one-way delay: 136.029 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 12.79 Mbit/s
95th percentile per-packet one-way delay: 136.029 ms
Loss rate: 2.92%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2018-04-18 19:37:20

End at: 2018-04-18 19:37:50

Below is generated by plot.py at 2018-04-19 02:23:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 96.22 Mbit/s

95th percentile per-packet one-way delay: 144.297 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 82.49 Mbit/s

95th percentile per-packet one-way delay: 144.283 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 20.65 Mbit/s

95th percentile per-packet one-way delay: 144.812 ms

Loss rate: 1.35%

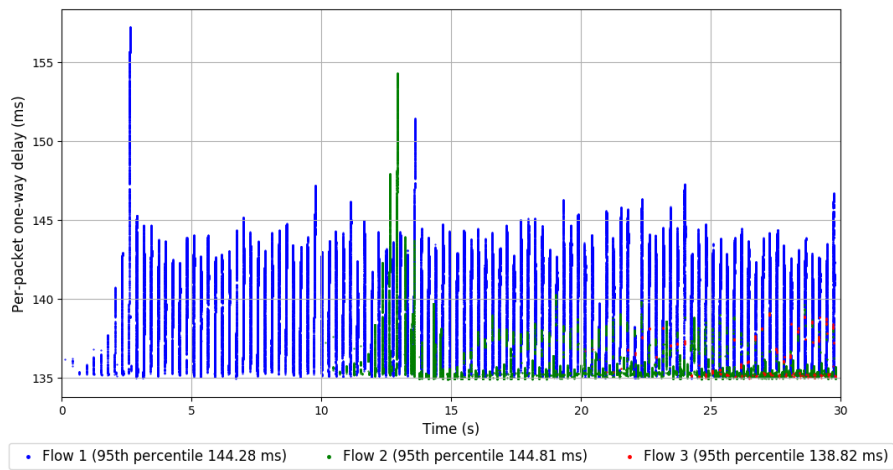
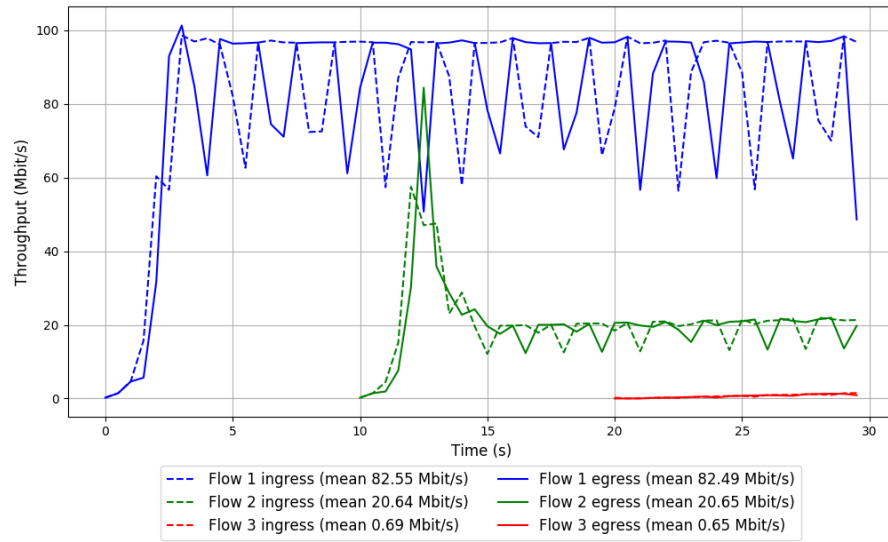
-- Flow 3:

Average throughput: 0.65 Mbit/s

95th percentile per-packet one-way delay: 138.825 ms

Loss rate: 7.41%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-04-18 19:55:26

End at: 2018-04-18 19:55:56

Below is generated by plot.py at 2018-04-19 02:23:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 140.60 Mbit/s

95th percentile per-packet one-way delay: 143.655 ms

Loss rate: 1.16%

-- Flow 1:

Average throughput: 84.07 Mbit/s

95th percentile per-packet one-way delay: 143.891 ms

Loss rate: 0.99%

-- Flow 2:

Average throughput: 70.74 Mbit/s

95th percentile per-packet one-way delay: 143.229 ms

Loss rate: 1.02%

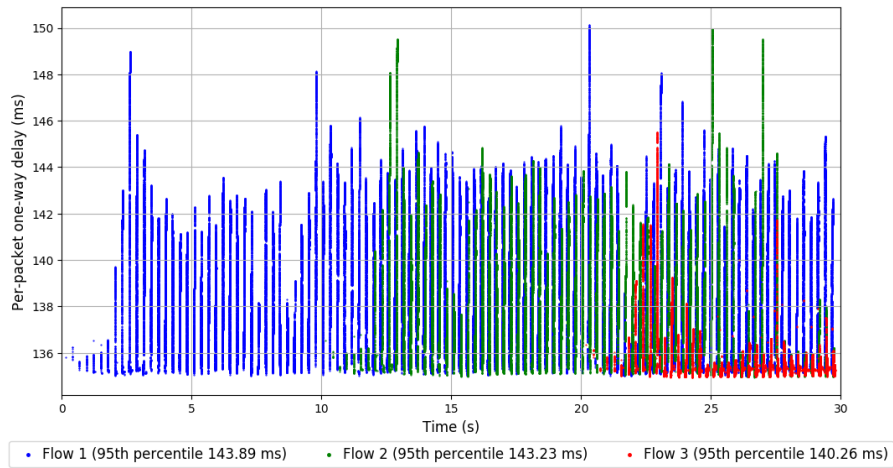
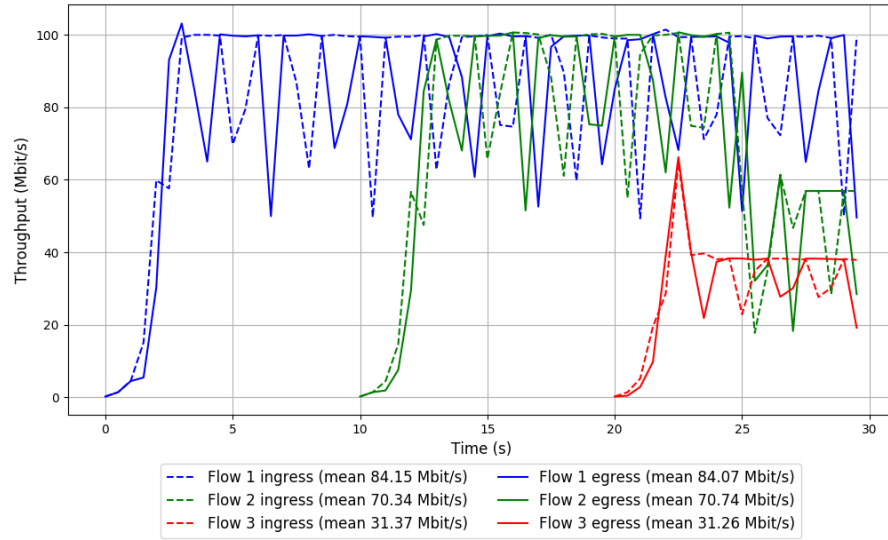
-- Flow 3:

Average throughput: 31.26 Mbit/s

95th percentile per-packet one-way delay: 140.256 ms

Loss rate: 3.09%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-04-18 20:13:33

End at: 2018-04-18 20:14:03

Below is generated by plot.py at 2018-04-19 02:23:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 104.13 Mbit/s

95th percentile per-packet one-way delay: 145.423 ms

Loss rate: 1.28%

-- Flow 1:

Average throughput: 31.58 Mbit/s

95th percentile per-packet one-way delay: 142.142 ms

Loss rate: 0.95%

-- Flow 2:

Average throughput: 79.85 Mbit/s

95th percentile per-packet one-way delay: 145.068 ms

Loss rate: 1.48%

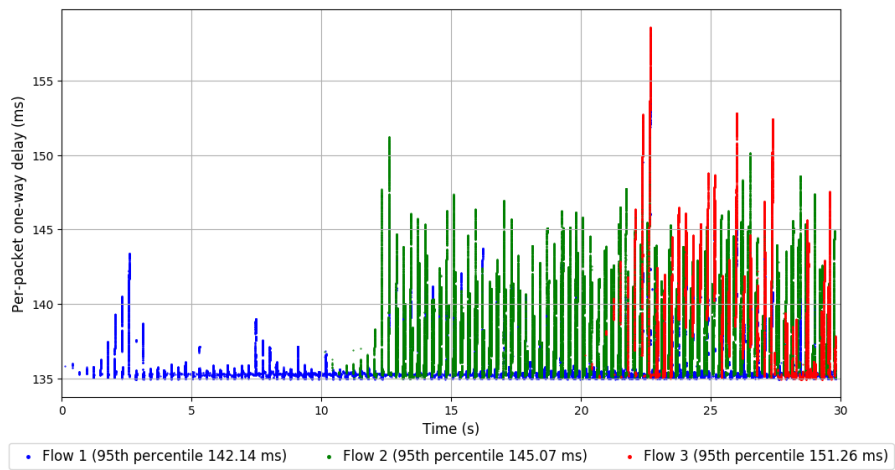
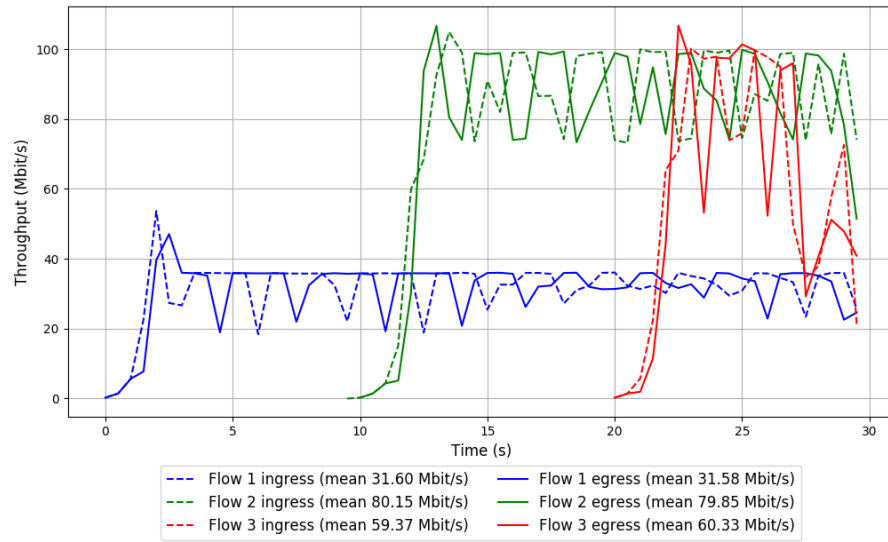
-- Flow 3:

Average throughput: 60.33 Mbit/s

95th percentile per-packet one-way delay: 151.261 ms

Loss rate: 1.24%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2018-04-18 20:31:23

End at: 2018-04-18 20:31:53

Below is generated by plot.py at 2018-04-19 02:23:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 61.10 Mbit/s

95th percentile per-packet one-way delay: 139.415 ms

Loss rate: 1.42%

-- Flow 1:

Average throughput: 33.76 Mbit/s

95th percentile per-packet one-way delay: 138.890 ms

Loss rate: 0.91%

-- Flow 2:

Average throughput: 27.67 Mbit/s

95th percentile per-packet one-way delay: 143.724 ms

Loss rate: 1.47%

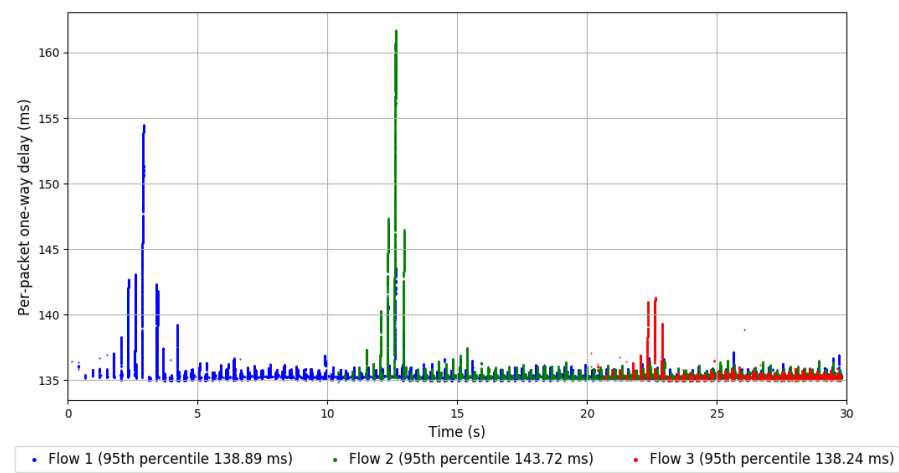
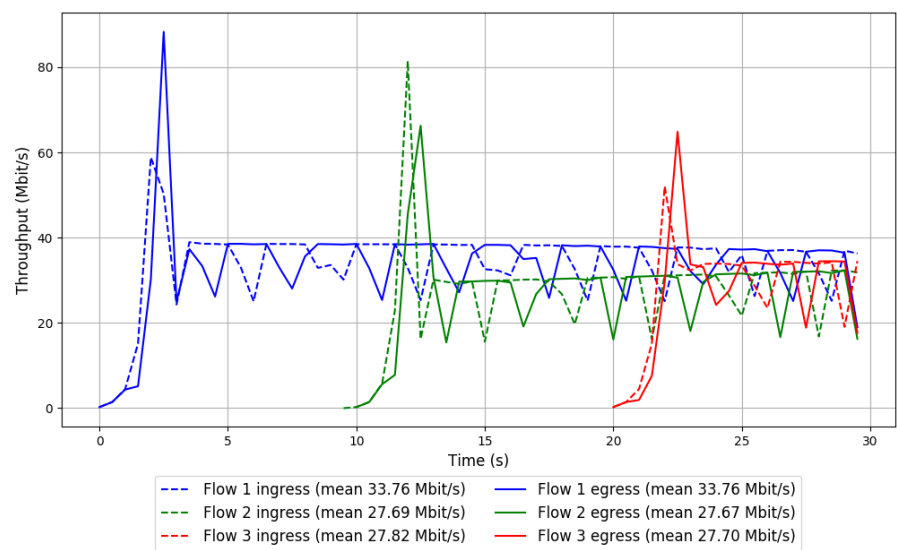
-- Flow 3:

Average throughput: 27.70 Mbit/s

95th percentile per-packet one-way delay: 138.240 ms

Loss rate: 3.17%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-04-18 20:49:28

End at: 2018-04-18 20:49:58

Below is generated by plot.py at 2018-04-19 02:23:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 102.08 Mbit/s

95th percentile per-packet one-way delay: 142.596 ms

Loss rate: 1.07%

-- Flow 1:

Average throughput: 62.24 Mbit/s

95th percentile per-packet one-way delay: 142.849 ms

Loss rate: 0.54%

-- Flow 2:

Average throughput: 46.84 Mbit/s

95th percentile per-packet one-way delay: 141.885 ms

Loss rate: 1.52%

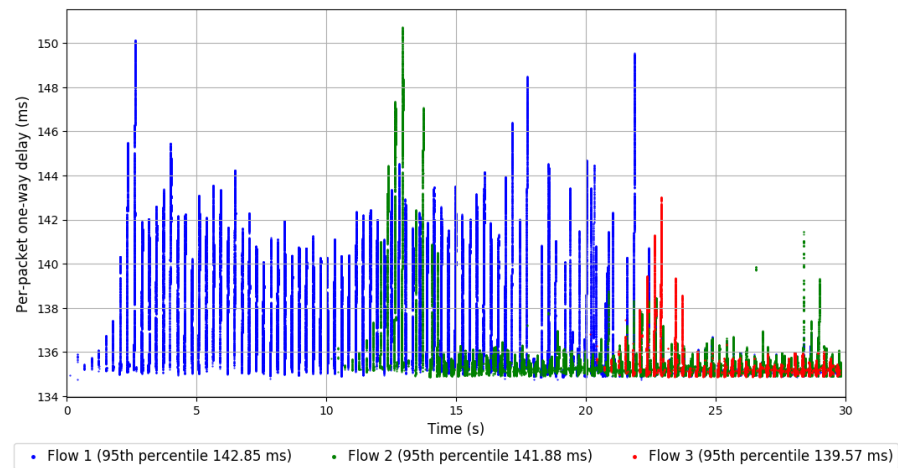
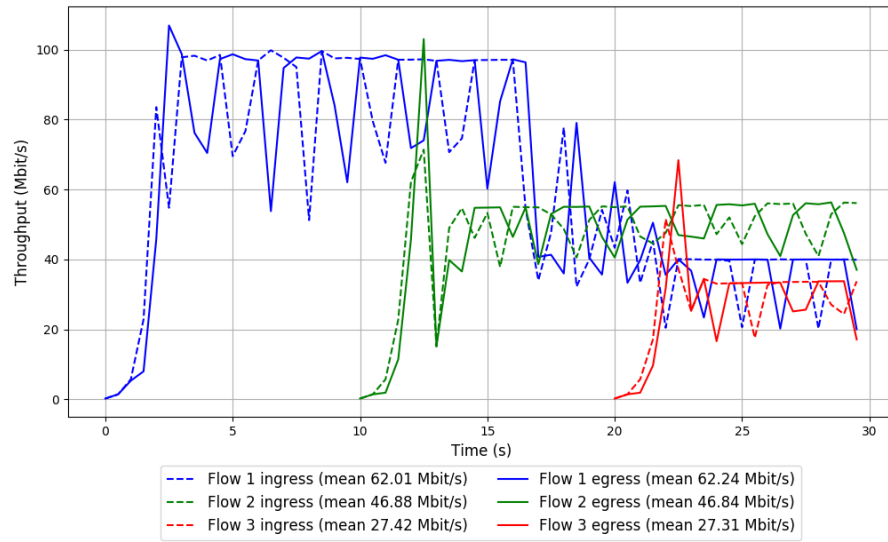
-- Flow 3:

Average throughput: 27.31 Mbit/s

95th percentile per-packet one-way delay: 139.570 ms

Loss rate: 3.14%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2018-04-18 21:07:48

End at: 2018-04-18 21:08:18

Below is generated by plot.py at 2018-04-19 02:23:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 124.71 Mbit/s

95th percentile per-packet one-way delay: 143.988 ms

Loss rate: 1.09%

-- Flow 1:

Average throughput: 84.68 Mbit/s

95th percentile per-packet one-way delay: 143.951 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 31.23 Mbit/s

95th percentile per-packet one-way delay: 141.037 ms

Loss rate: 1.52%

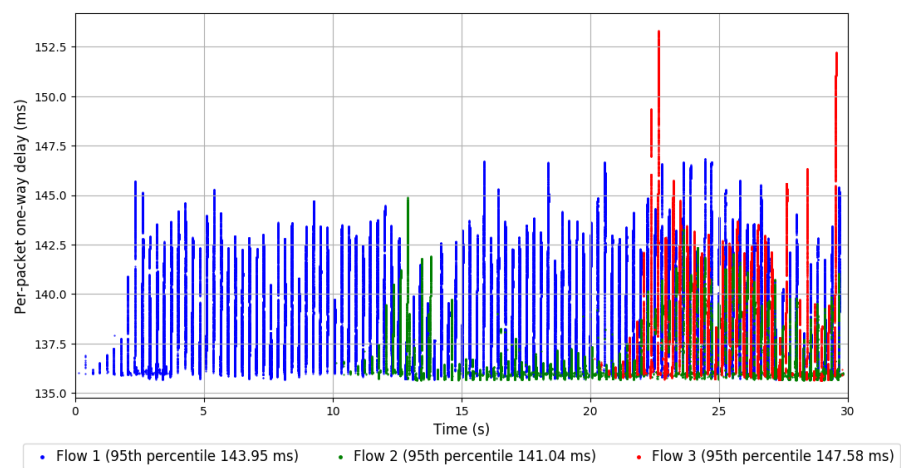
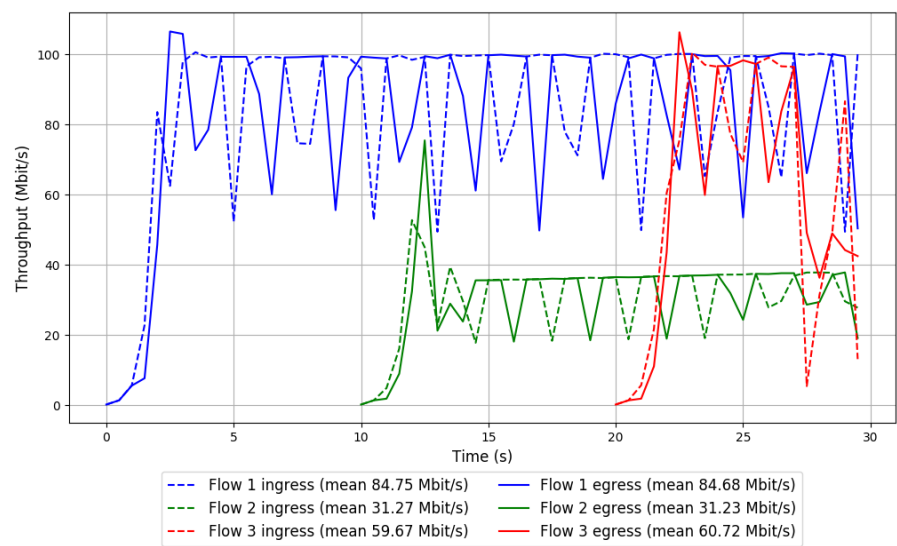
-- Flow 3:

Average throughput: 60.72 Mbit/s

95th percentile per-packet one-way delay: 147.581 ms

Loss rate: 1.11%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2018-04-18 21:26:04

End at: 2018-04-18 21:26:34

Below is generated by plot.py at 2018-04-19 02:23:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 65.18 Mbit/s

95th percentile per-packet one-way delay: 138.171 ms

Loss rate: 1.59%

-- Flow 1:

Average throughput: 24.94 Mbit/s

95th percentile per-packet one-way delay: 137.497 ms

Loss rate: 1.00%

-- Flow 2:

Average throughput: 45.11 Mbit/s

95th percentile per-packet one-way delay: 136.856 ms

Loss rate: 1.53%

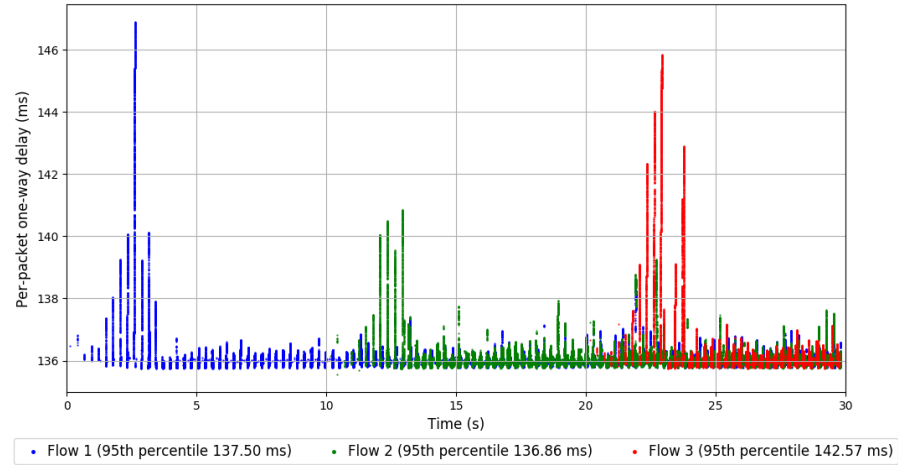
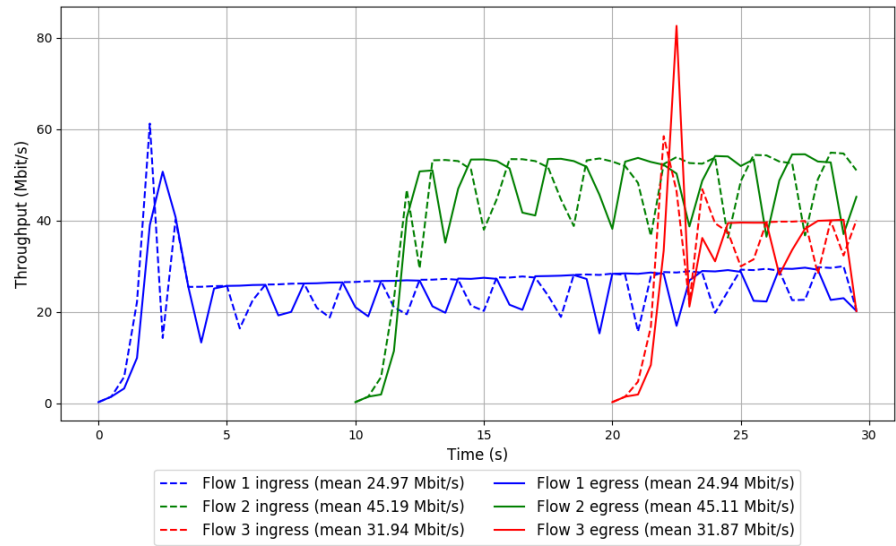
-- Flow 3:

Average throughput: 31.87 Mbit/s

95th percentile per-packet one-way delay: 142.566 ms

Loss rate: 3.18%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2018-04-18 21:44:06

End at: 2018-04-18 21:44:36

Below is generated by plot.py at 2018-04-19 02:23:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 96.08 Mbit/s

95th percentile per-packet one-way delay: 143.570 ms

Loss rate: 1.63%

-- Flow 1:

Average throughput: 28.20 Mbit/s

95th percentile per-packet one-way delay: 141.985 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 81.19 Mbit/s

95th percentile per-packet one-way delay: 144.225 ms

Loss rate: 1.51%

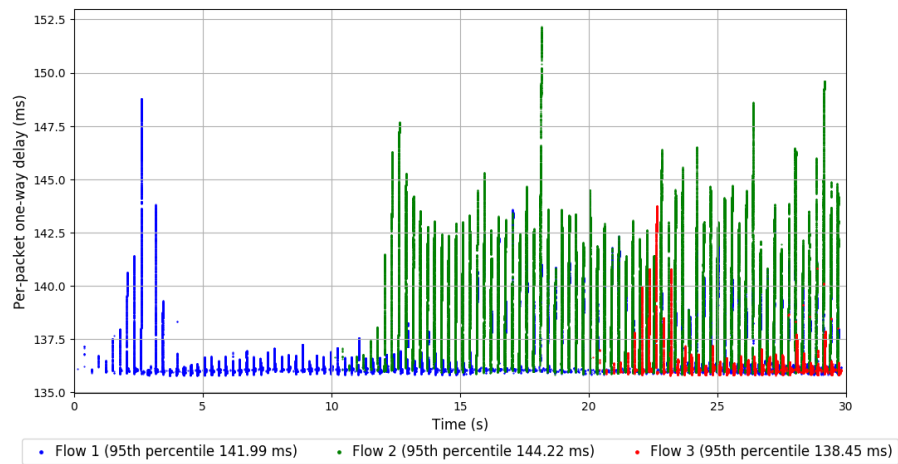
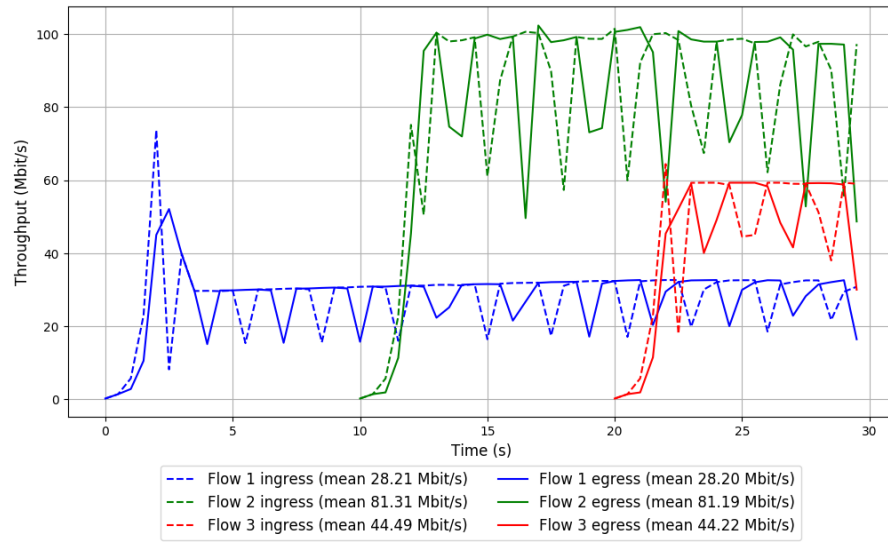
-- Flow 3:

Average throughput: 44.22 Mbit/s

95th percentile per-packet one-way delay: 138.448 ms

Loss rate: 3.35%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2018-04-18 22:01:56

End at: 2018-04-18 22:02:26

Below is generated by plot.py at 2018-04-19 02:23:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 72.56 Mbit/s

95th percentile per-packet one-way delay: 144.555 ms

Loss rate: 1.99%

-- Flow 1:

Average throughput: 25.44 Mbit/s

95th percentile per-packet one-way delay: 143.592 ms

Loss rate: 0.89%

-- Flow 2:

Average throughput: 37.32 Mbit/s

95th percentile per-packet one-way delay: 140.299 ms

Loss rate: 1.52%

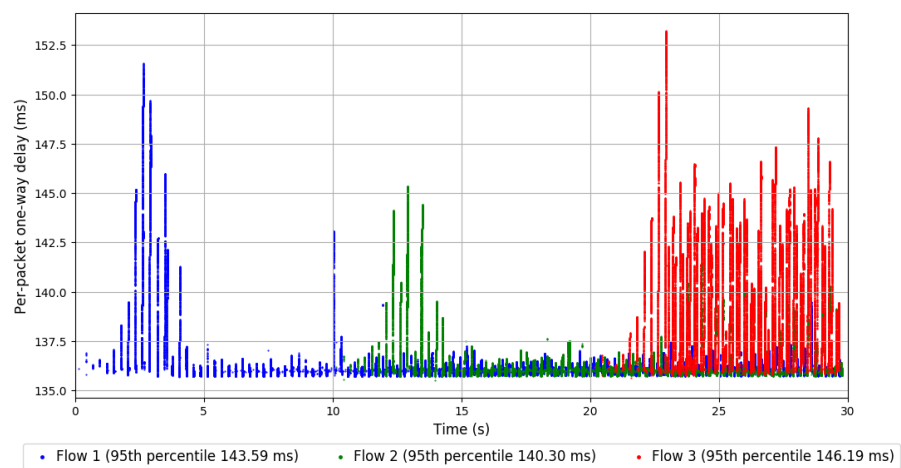
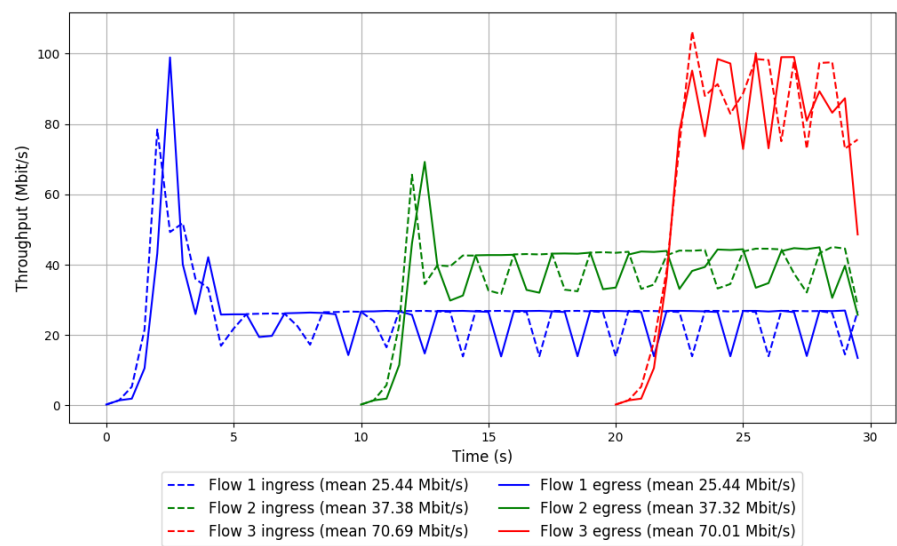
-- Flow 3:

Average throughput: 70.01 Mbit/s

95th percentile per-packet one-way delay: 146.193 ms

Loss rate: 3.72%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2018-04-18 22:19:51

End at: 2018-04-18 22:20:21

Below is generated by plot.py at 2018-04-19 02:23:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 64.36 Mbit/s

95th percentile per-packet one-way delay: 138.121 ms

Loss rate: 1.59%

-- Flow 1:

Average throughput: 28.13 Mbit/s

95th percentile per-packet one-way delay: 138.531 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 37.98 Mbit/s

95th percentile per-packet one-way delay: 137.347 ms

Loss rate: 1.49%

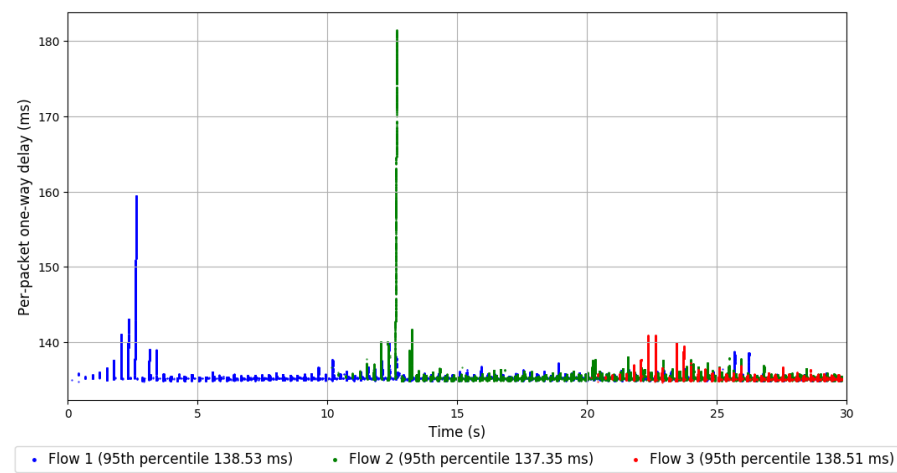
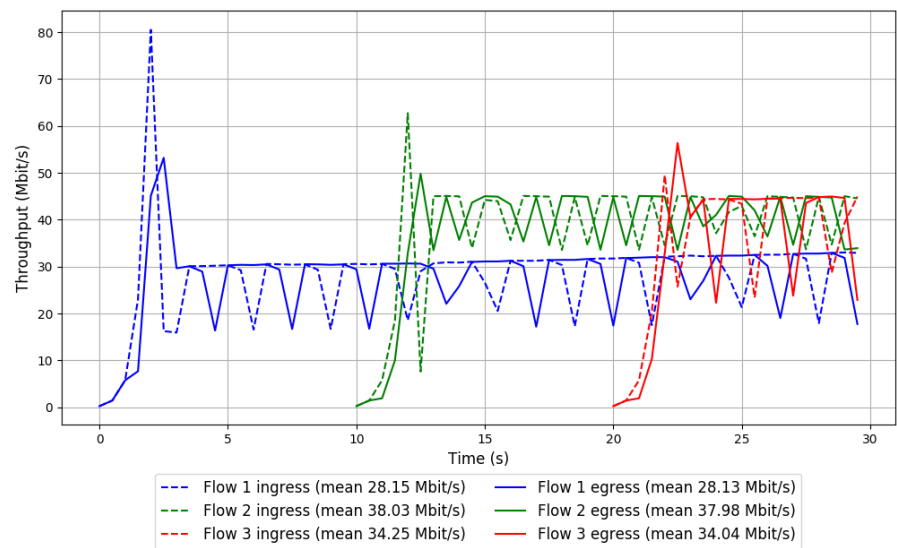
-- Flow 3:

Average throughput: 34.04 Mbit/s

95th percentile per-packet one-way delay: 138.515 ms

Loss rate: 3.32%

Run 10: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2018-04-18 19:48:23

End at: 2018-04-18 19:48:53

Below is generated by plot.py at 2018-04-19 02:23:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 169.33 Mbit/s

95th percentile per-packet one-way delay: 217.969 ms

Loss rate: 0.88%

-- Flow 1:

Average throughput: 69.77 Mbit/s

95th percentile per-packet one-way delay: 210.161 ms

Loss rate: 1.94%

-- Flow 2:

Average throughput: 121.41 Mbit/s

95th percentile per-packet one-way delay: 195.750 ms

Loss rate: 0.12%

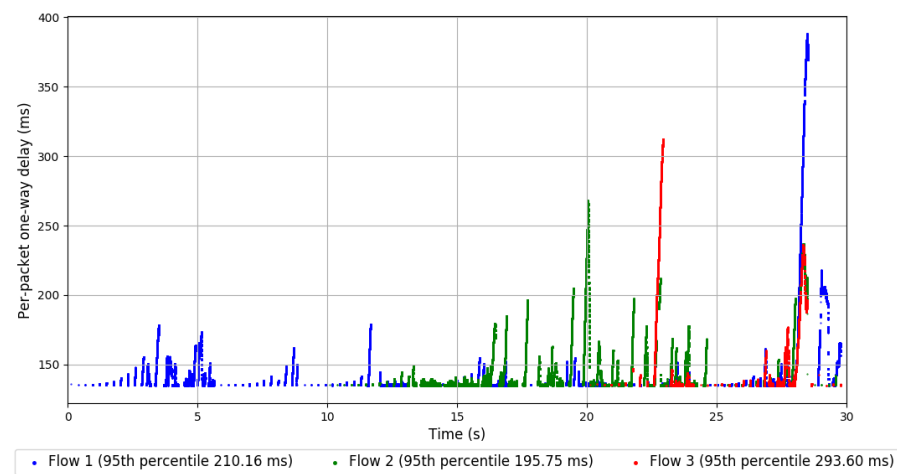
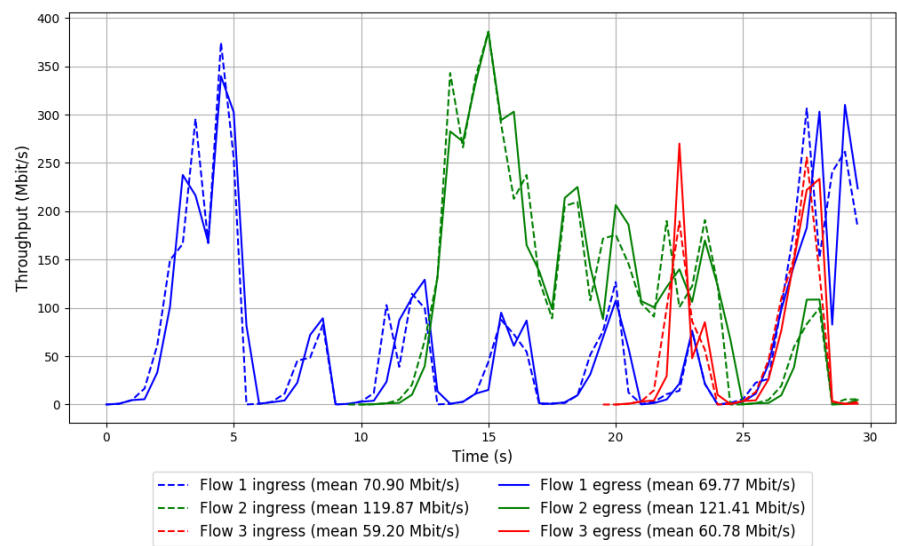
-- Flow 3:

Average throughput: 60.78 Mbit/s

95th percentile per-packet one-way delay: 293.595 ms

Loss rate: 0.15%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-04-18 20:06:38

End at: 2018-04-18 20:07:08

Below is generated by plot.py at 2018-04-19 02:23:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 106.41 Mbit/s

95th percentile per-packet one-way delay: 153.381 ms

Loss rate: 2.19%

-- Flow 1:

Average throughput: 56.17 Mbit/s

95th percentile per-packet one-way delay: 159.360 ms

Loss rate: 1.08%

-- Flow 2:

Average throughput: 62.46 Mbit/s

95th percentile per-packet one-way delay: 144.253 ms

Loss rate: 2.37%

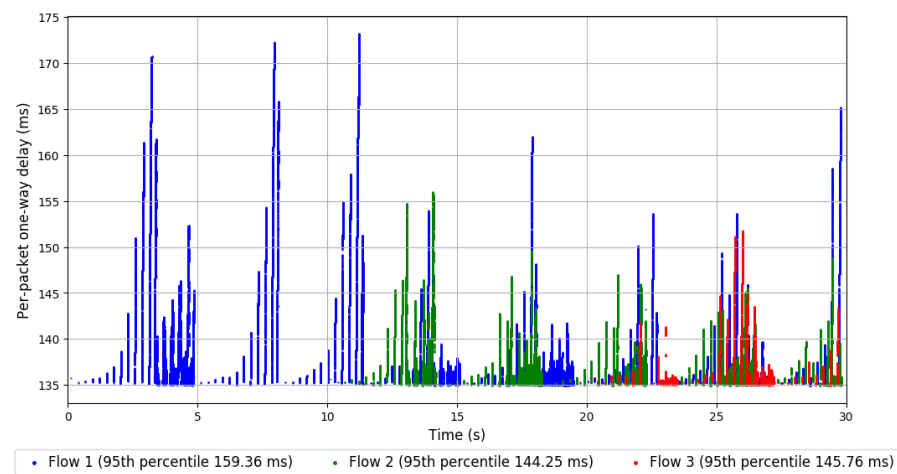
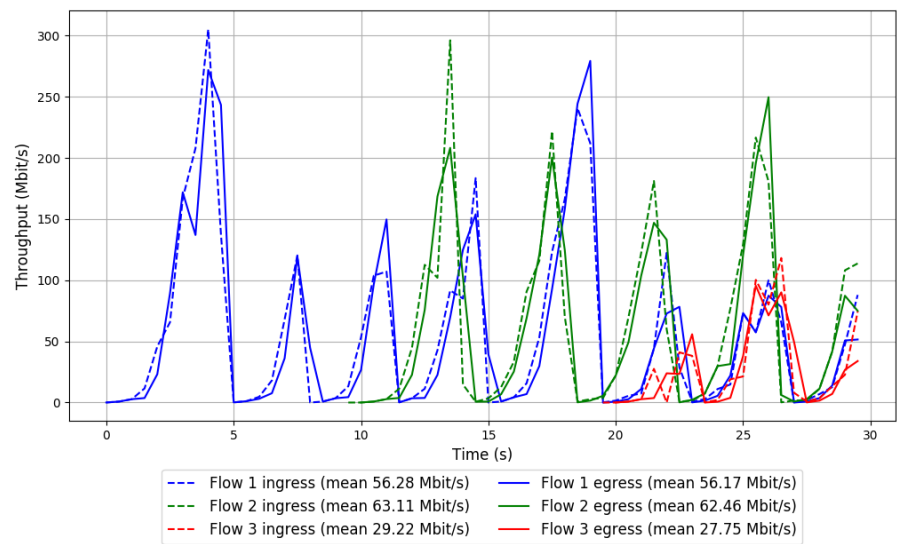
-- Flow 3:

Average throughput: 27.75 Mbit/s

95th percentile per-packet one-way delay: 145.756 ms

Loss rate: 7.87%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-04-18 20:24:22

End at: 2018-04-18 20:24:52

Below is generated by plot.py at 2018-04-19 02:23:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 190.27 Mbit/s

95th percentile per-packet one-way delay: 163.755 ms

Loss rate: 1.67%

-- Flow 1:

Average throughput: 132.54 Mbit/s

95th percentile per-packet one-way delay: 166.346 ms

Loss rate: 1.30%

-- Flow 2:

Average throughput: 76.17 Mbit/s

95th percentile per-packet one-way delay: 158.982 ms

Loss rate: 0.07%

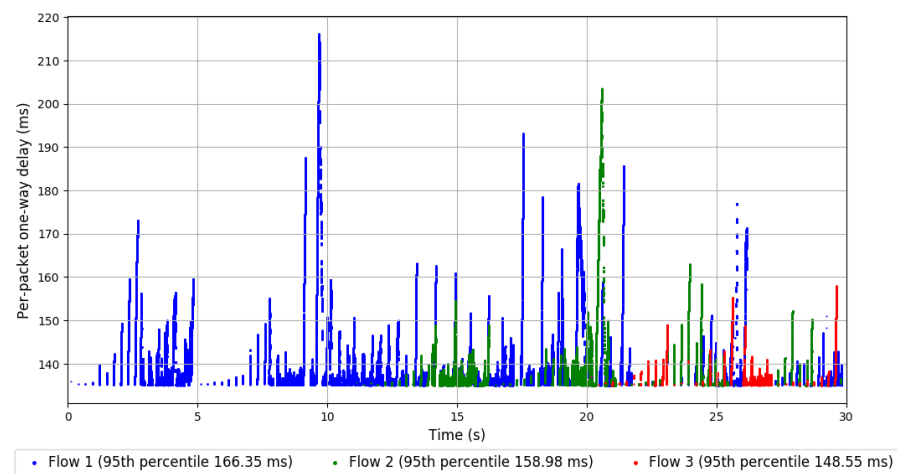
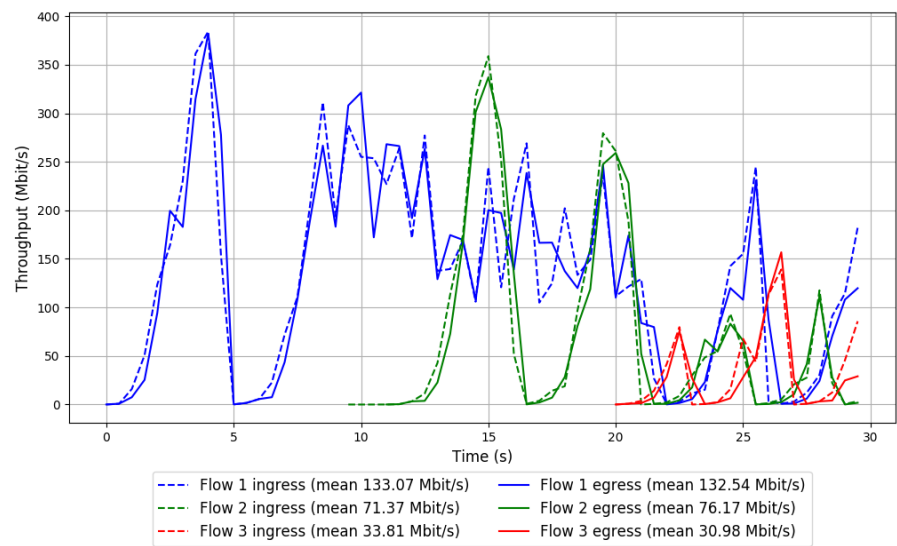
-- Flow 3:

Average throughput: 30.98 Mbit/s

95th percentile per-packet one-way delay: 148.550 ms

Loss rate: 12.79%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-04-18 20:42:19

End at: 2018-04-18 20:42:49

Below is generated by plot.py at 2018-04-19 02:25:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 265.88 Mbit/s

95th percentile per-packet one-way delay: 316.374 ms

Loss rate: 7.60%

-- Flow 1:

Average throughput: 160.96 Mbit/s

95th percentile per-packet one-way delay: 338.370 ms

Loss rate: 7.46%

-- Flow 2:

Average throughput: 135.23 Mbit/s

95th percentile per-packet one-way delay: 275.271 ms

Loss rate: 5.17%

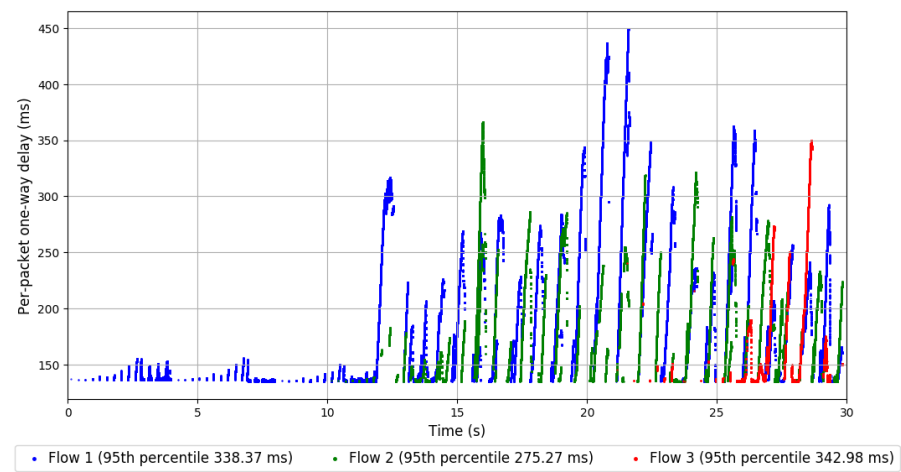
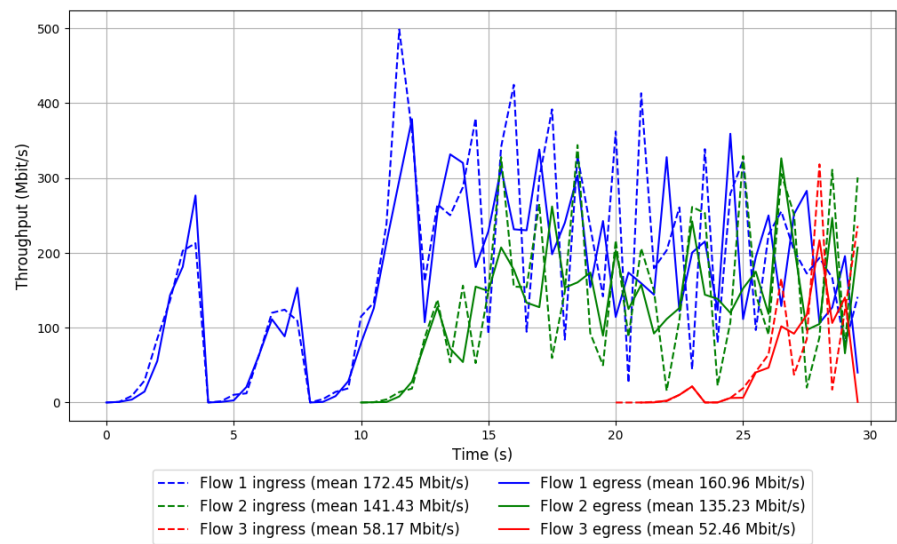
-- Flow 3:

Average throughput: 52.46 Mbit/s

95th percentile per-packet one-way delay: 342.978 ms

Loss rate: 20.75%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-04-18 21:00:35

End at: 2018-04-18 21:01:05

Below is generated by plot.py at 2018-04-19 02:25:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 291.00 Mbit/s

95th percentile per-packet one-way delay: 320.566 ms

Loss rate: 5.04%

-- Flow 1:

Average throughput: 151.67 Mbit/s

95th percentile per-packet one-way delay: 251.392 ms

Loss rate: 2.07%

-- Flow 2:

Average throughput: 176.74 Mbit/s

95th percentile per-packet one-way delay: 378.884 ms

Loss rate: 8.77%

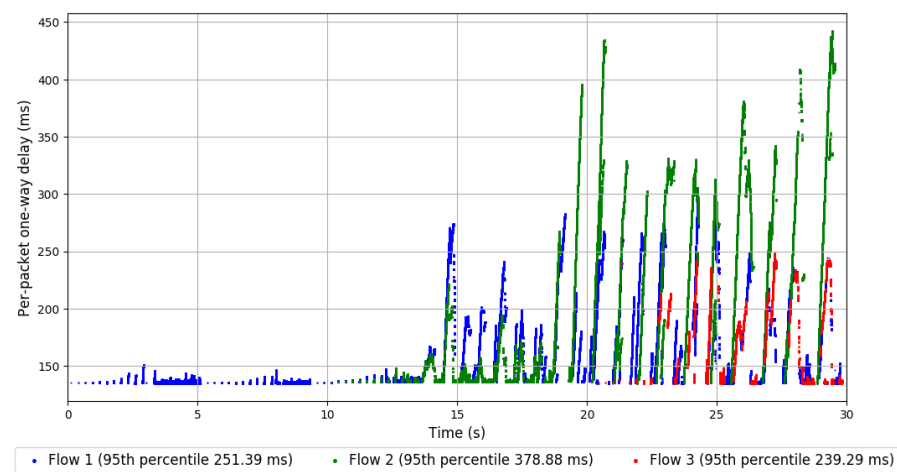
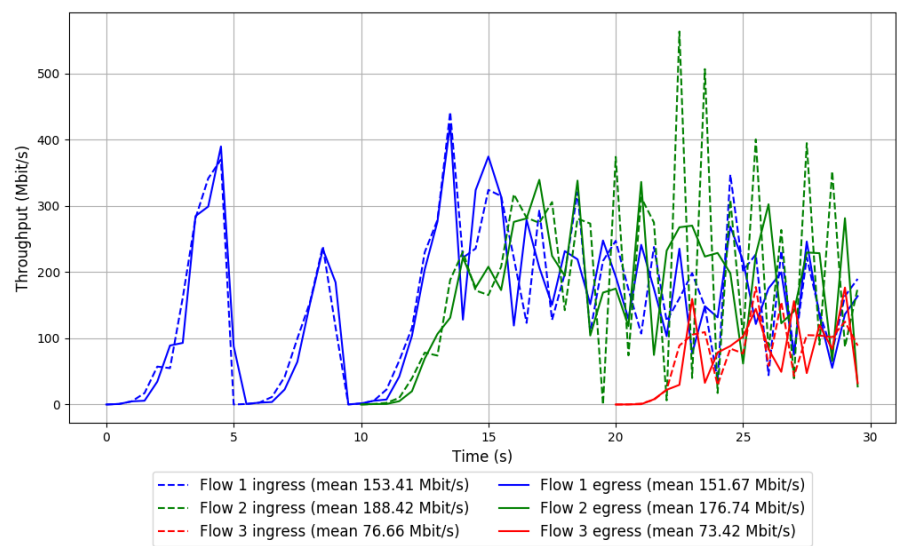
-- Flow 3:

Average throughput: 73.42 Mbit/s

95th percentile per-packet one-way delay: 239.286 ms

Loss rate: 4.60%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

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

End at: 2018-04-18 21:19:24

Below is generated by plot.py at 2018-04-19 02:25:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 271.22 Mbit/s

95th percentile per-packet one-way delay: 310.433 ms

Loss rate: 4.02%

-- Flow 1:

Average throughput: 146.97 Mbit/s

95th percentile per-packet one-way delay: 217.846 ms

Loss rate: 1.26%

-- Flow 2:

Average throughput: 157.20 Mbit/s

95th percentile per-packet one-way delay: 368.228 ms

Loss rate: 7.22%

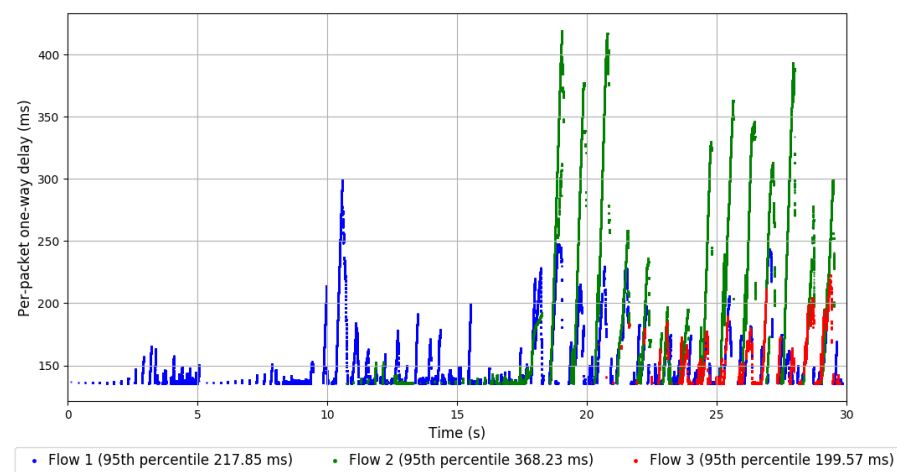
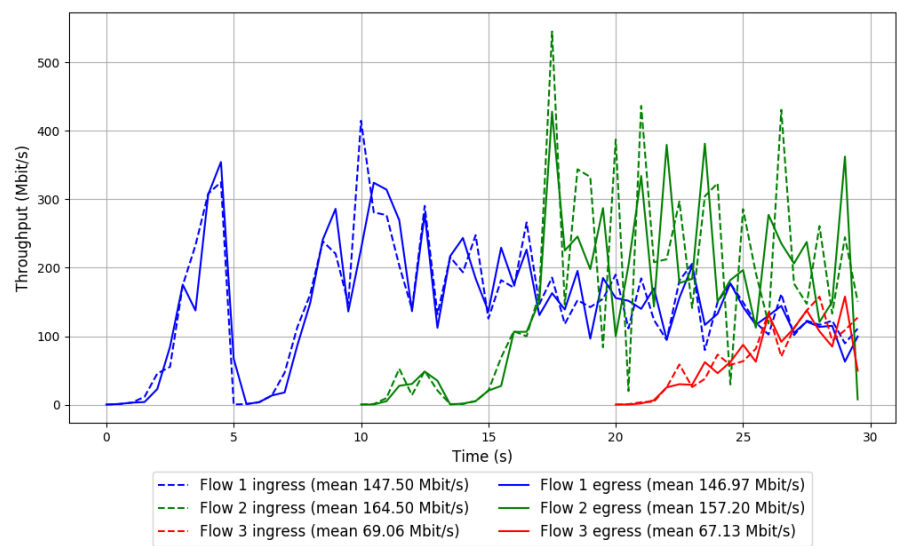
-- Flow 3:

Average throughput: 67.13 Mbit/s

95th percentile per-packet one-way delay: 199.572 ms

Loss rate: 6.39%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2018-04-18 21:37:08

End at: 2018-04-18 21:37:38

Below is generated by plot.py at 2018-04-19 02:25:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 146.33 Mbit/s

95th percentile per-packet one-way delay: 239.539 ms

Loss rate: 3.47%

-- Flow 1:

Average throughput: 66.75 Mbit/s

95th percentile per-packet one-way delay: 148.513 ms

Loss rate: 0.06%

-- Flow 2:

Average throughput: 71.27 Mbit/s

95th percentile per-packet one-way delay: 264.456 ms

Loss rate: 2.41%

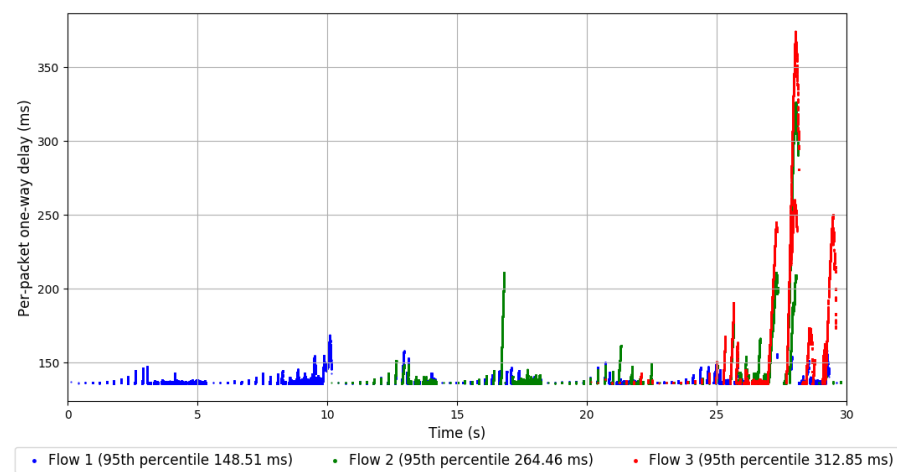
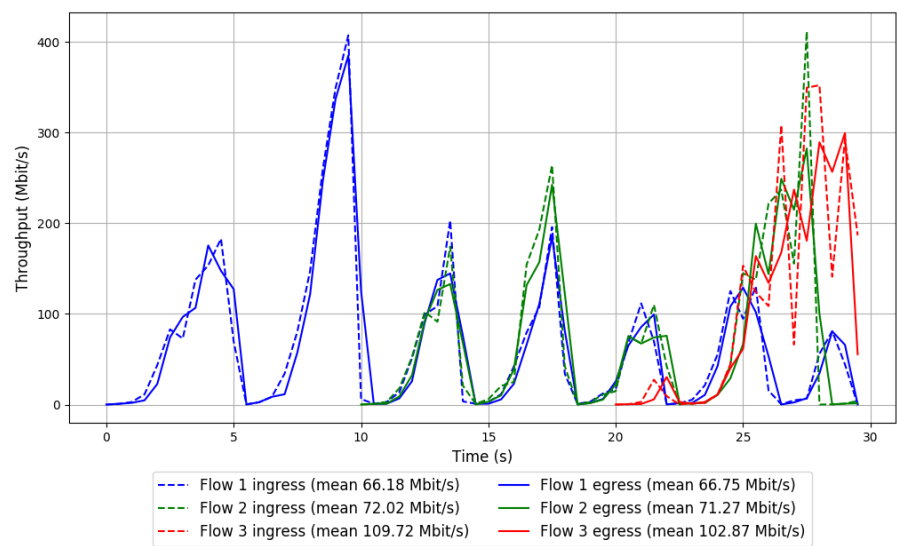
-- Flow 3:

Average throughput: 102.87 Mbit/s

95th percentile per-packet one-way delay: 312.852 ms

Loss rate: 11.03%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2018-04-18 21:54:57

End at: 2018-04-18 21:55:27

Below is generated by plot.py at 2018-04-19 02:25:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 158.38 Mbit/s

95th percentile per-packet one-way delay: 246.920 ms

Loss rate: 2.27%

-- Flow 1:

Average throughput: 102.86 Mbit/s

95th percentile per-packet one-way delay: 182.269 ms

Loss rate: 1.69%

-- Flow 2:

Average throughput: 56.38 Mbit/s

95th percentile per-packet one-way delay: 156.298 ms

Loss rate: 1.15%

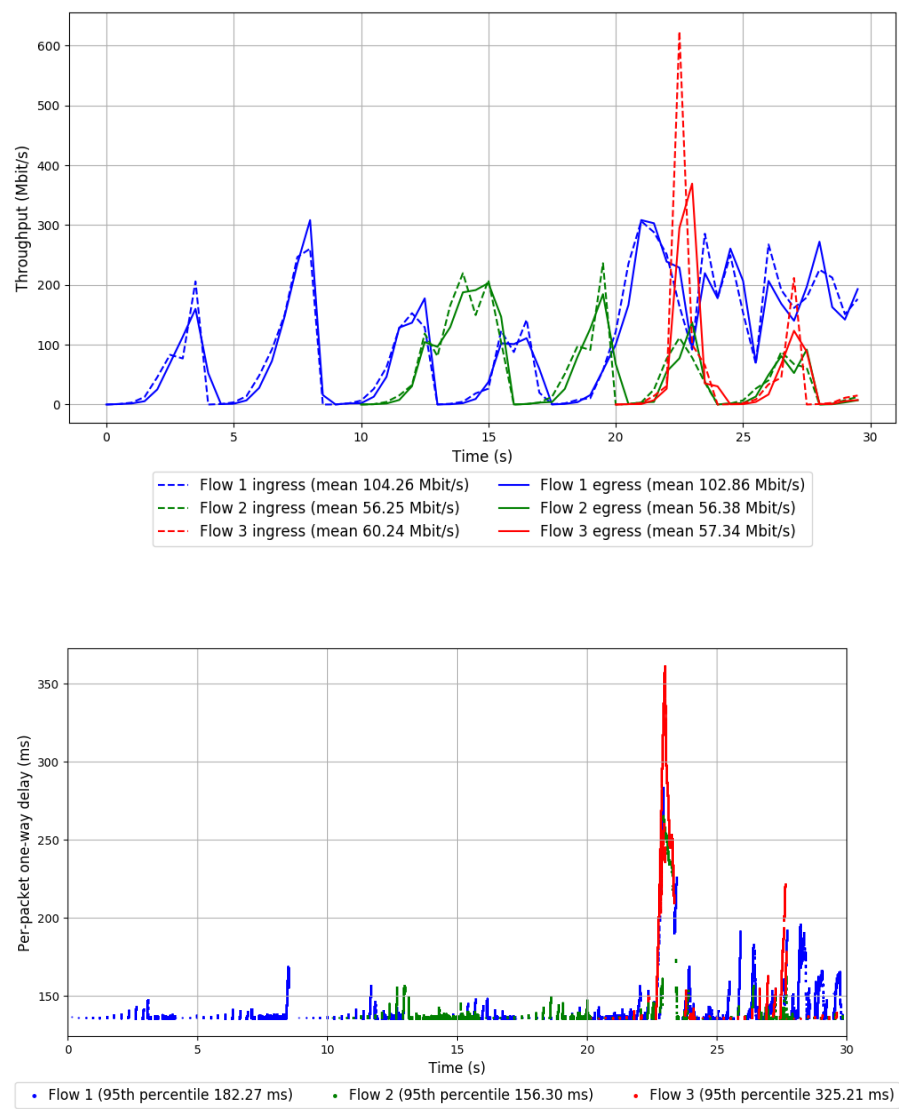
-- Flow 3:

Average throughput: 57.34 Mbit/s

95th percentile per-packet one-way delay: 325.206 ms

Loss rate: 7.53%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2018-04-18 22:12:48

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

Below is generated by plot.py at 2018-04-19 02:26:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 190.08 Mbit/s

95th percentile per-packet one-way delay: 170.067 ms

Loss rate: 2.16%

-- Flow 1:

Average throughput: 148.38 Mbit/s

95th percentile per-packet one-way delay: 166.363 ms

Loss rate: 0.69%

-- Flow 2:

Average throughput: 49.20 Mbit/s

95th percentile per-packet one-way delay: 163.287 ms

Loss rate: 6.62%

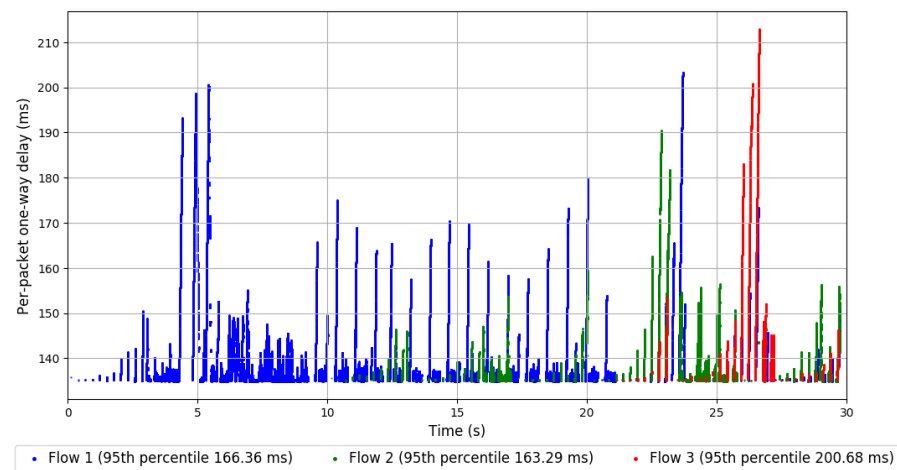
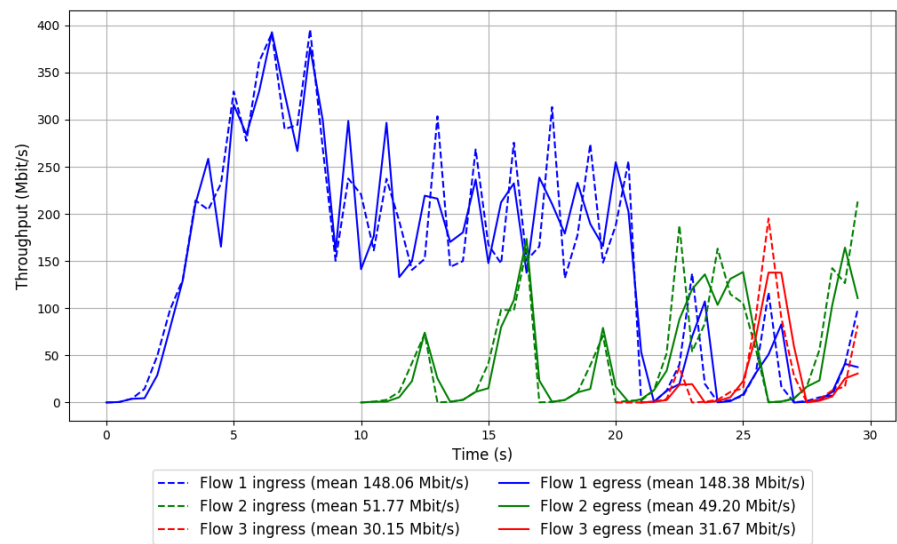
-- Flow 3:

Average throughput: 31.67 Mbit/s

95th percentile per-packet one-way delay: 200.681 ms

Loss rate: 8.64%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2018-04-18 22:30:27

End at: 2018-04-18 22:30:58

Below is generated by plot.py at 2018-04-19 02:27:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 255.54 Mbit/s

95th percentile per-packet one-way delay: 185.709 ms

Loss rate: 1.13%

-- Flow 1:

Average throughput: 193.21 Mbit/s

95th percentile per-packet one-way delay: 191.982 ms

Loss rate: 1.42%

-- Flow 2:

Average throughput: 77.98 Mbit/s

95th percentile per-packet one-way delay: 167.627 ms

Loss rate: 0.20%

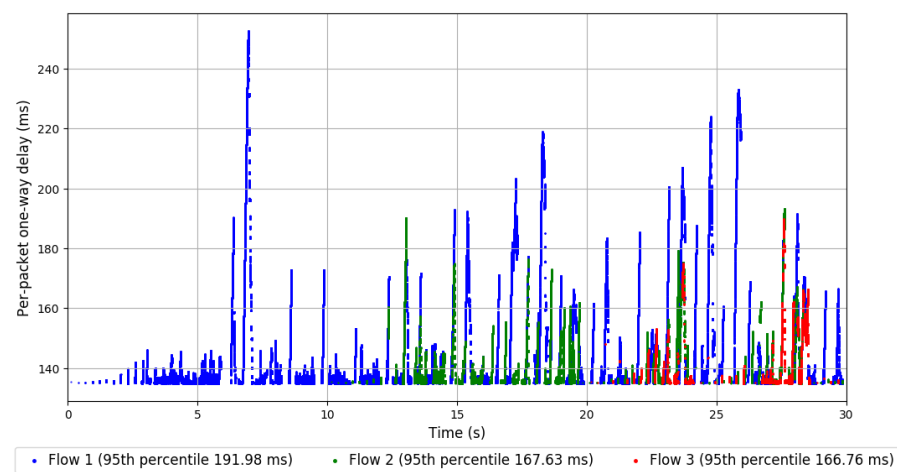
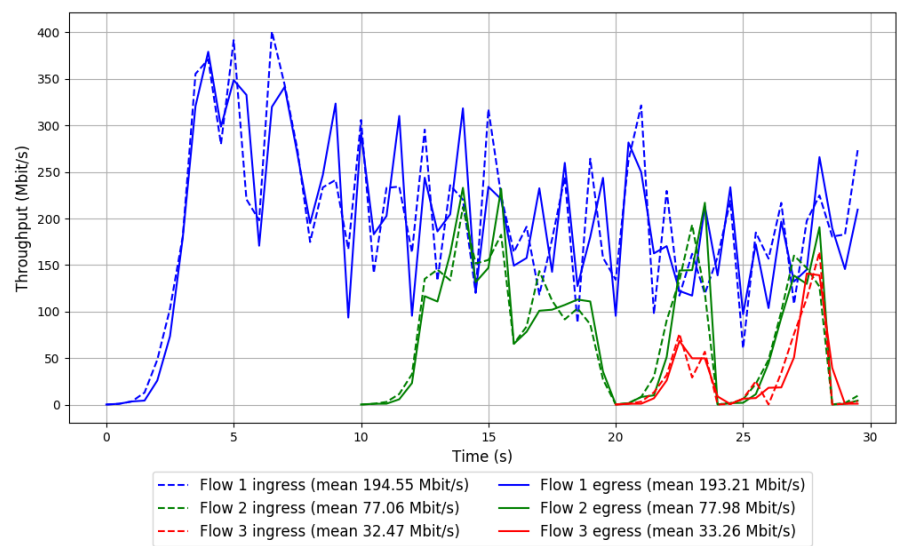
-- Flow 3:

Average throughput: 33.26 Mbit/s

95th percentile per-packet one-way delay: 166.760 ms

Loss rate: 0.40%

Run 10: Report of Verus — Data Link



Run 1: Statistics of Copa

Start at: 2018-04-18 19:47:19

End at: 2018-04-18 19:47:49

Below is generated by plot.py at 2018-04-19 02:27:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 132.03 Mbit/s

95th percentile per-packet one-way delay: 136.382 ms

Loss rate: 1.57%

-- Flow 1:

Average throughput: 73.17 Mbit/s

95th percentile per-packet one-way delay: 136.324 ms

Loss rate: 0.95%

-- Flow 2:

Average throughput: 68.66 Mbit/s

95th percentile per-packet one-way delay: 136.383 ms

Loss rate: 1.76%

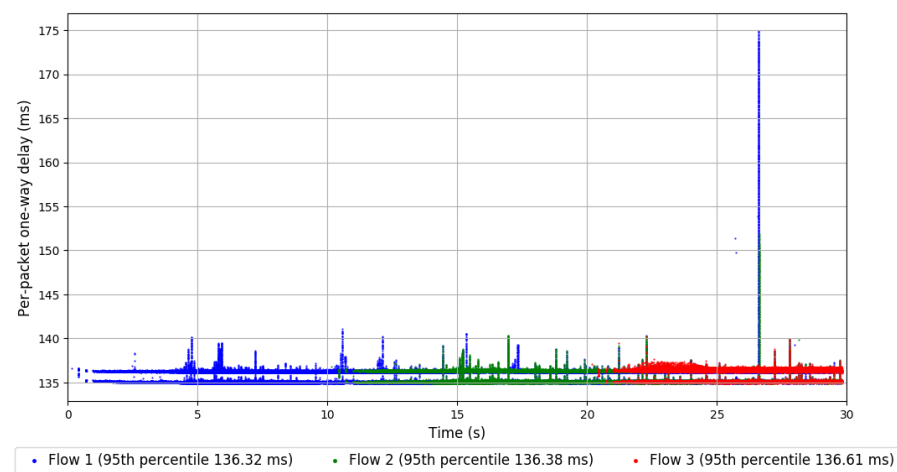
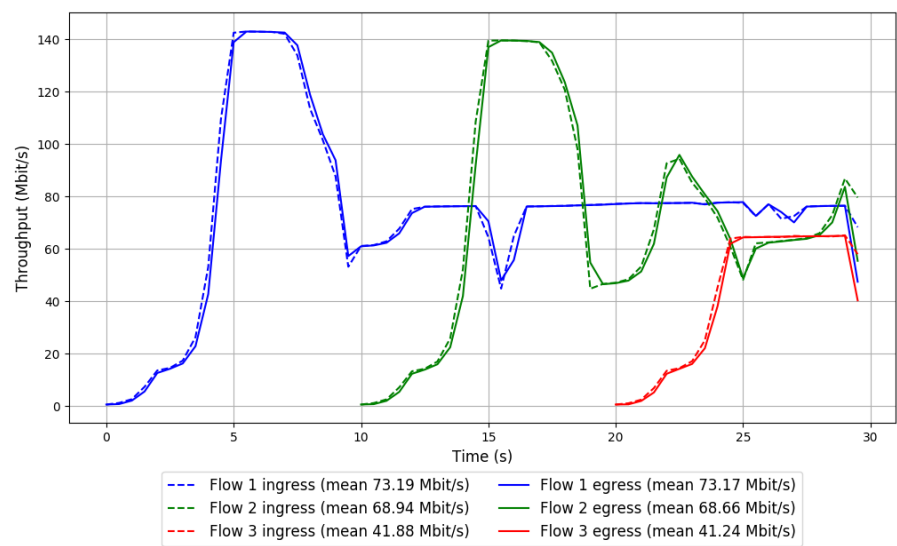
-- Flow 3:

Average throughput: 41.24 Mbit/s

95th percentile per-packet one-way delay: 136.614 ms

Loss rate: 4.24%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-04-18 20:05:33

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

Below is generated by plot.py at 2018-04-19 02:27:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 128.63 Mbit/s

95th percentile per-packet one-way delay: 136.432 ms

Loss rate: 0.97%

-- Flow 1:

Average throughput: 63.21 Mbit/s

95th percentile per-packet one-way delay: 136.114 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 72.08 Mbit/s

95th percentile per-packet one-way delay: 136.458 ms

Loss rate: 1.48%

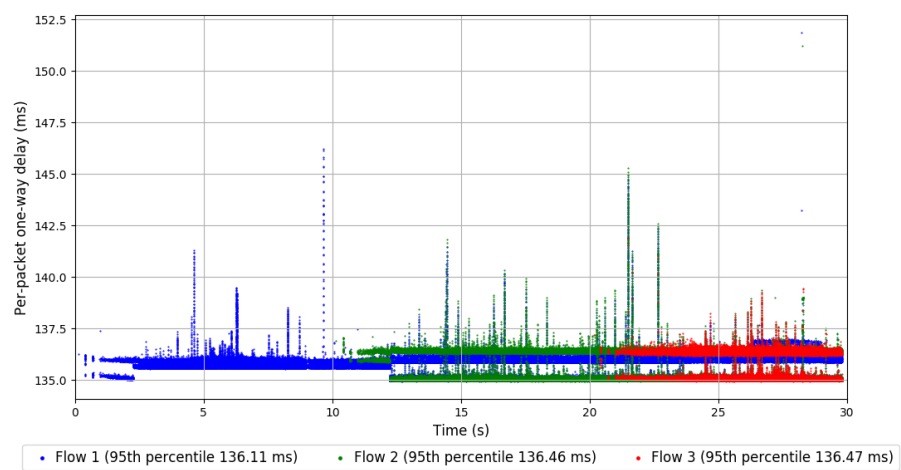
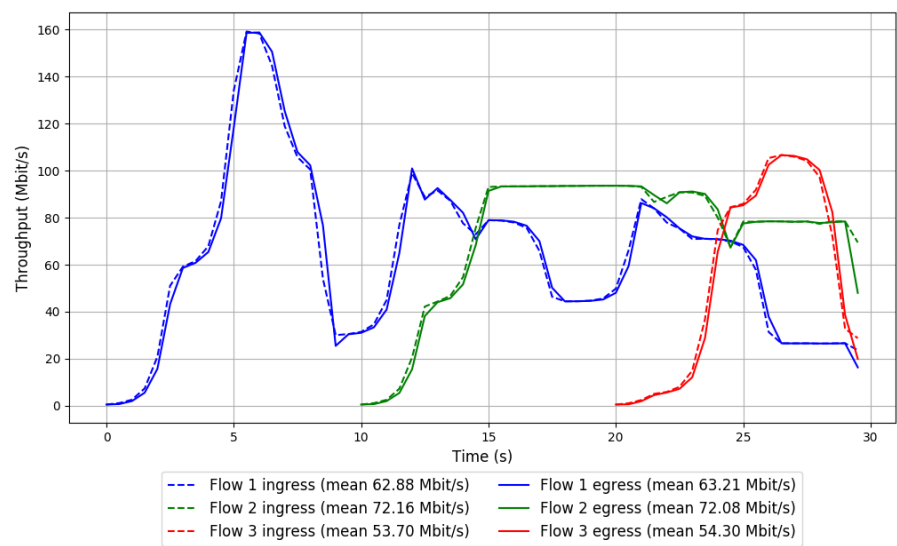
-- Flow 3:

Average throughput: 54.30 Mbit/s

95th percentile per-packet one-way delay: 136.473 ms

Loss rate: 1.66%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-04-18 20:23:17

End at: 2018-04-18 20:23:47

Below is generated by plot.py at 2018-04-19 02:28:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 135.88 Mbit/s

95th percentile per-packet one-way delay: 136.504 ms

Loss rate: 1.71%

-- Flow 1:

Average throughput: 72.91 Mbit/s

95th percentile per-packet one-way delay: 136.511 ms

Loss rate: 1.03%

-- Flow 2:

Average throughput: 64.10 Mbit/s

95th percentile per-packet one-way delay: 135.994 ms

Loss rate: 1.51%

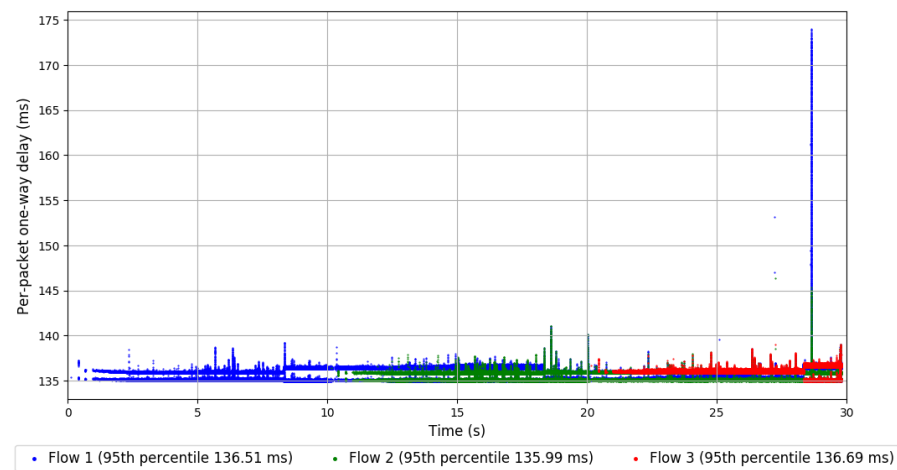
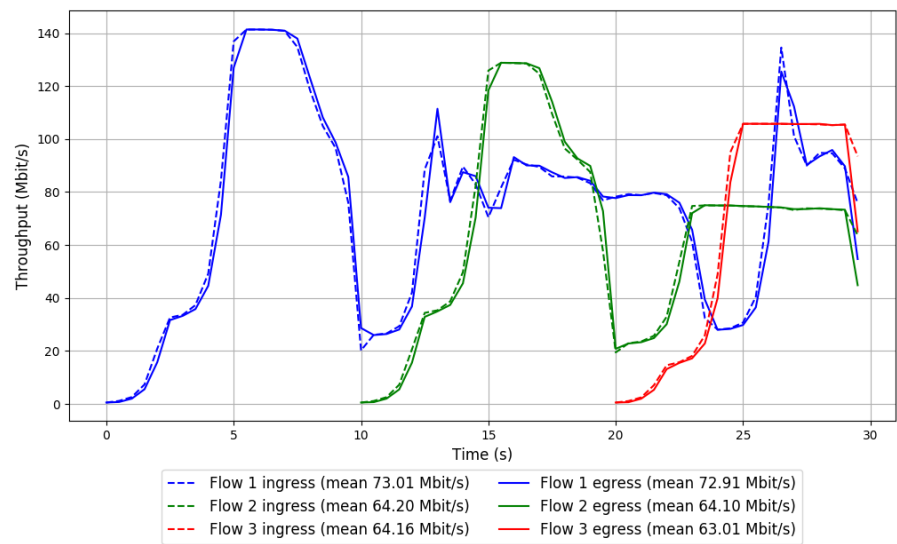
-- Flow 3:

Average throughput: 63.01 Mbit/s

95th percentile per-packet one-way delay: 136.695 ms

Loss rate: 4.47%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2018-04-18 20:41:15

End at: 2018-04-18 20:41:45

Below is generated by plot.py at 2018-04-19 02:29:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 129.55 Mbit/s

95th percentile per-packet one-way delay: 136.028 ms

Loss rate: 1.03%

-- Flow 1:

Average throughput: 58.64 Mbit/s

95th percentile per-packet one-way delay: 135.099 ms

Loss rate: 0.68%

-- Flow 2:

Average throughput: 74.95 Mbit/s

95th percentile per-packet one-way delay: 136.104 ms

Loss rate: 1.29%

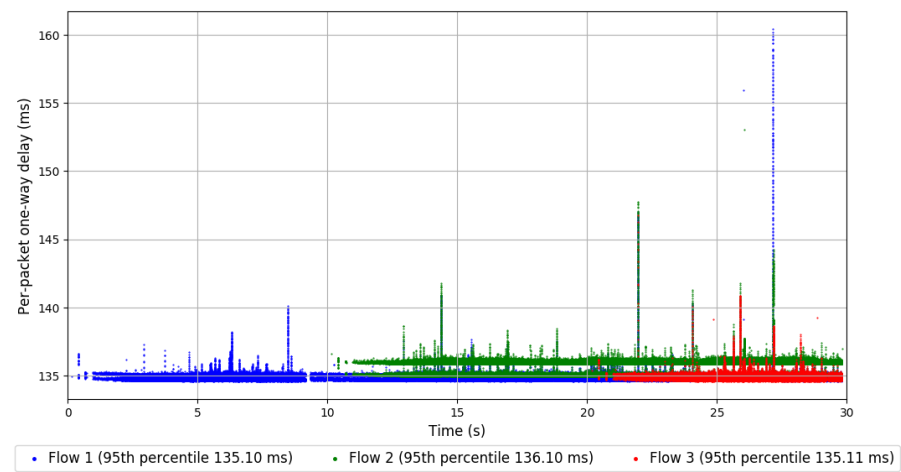
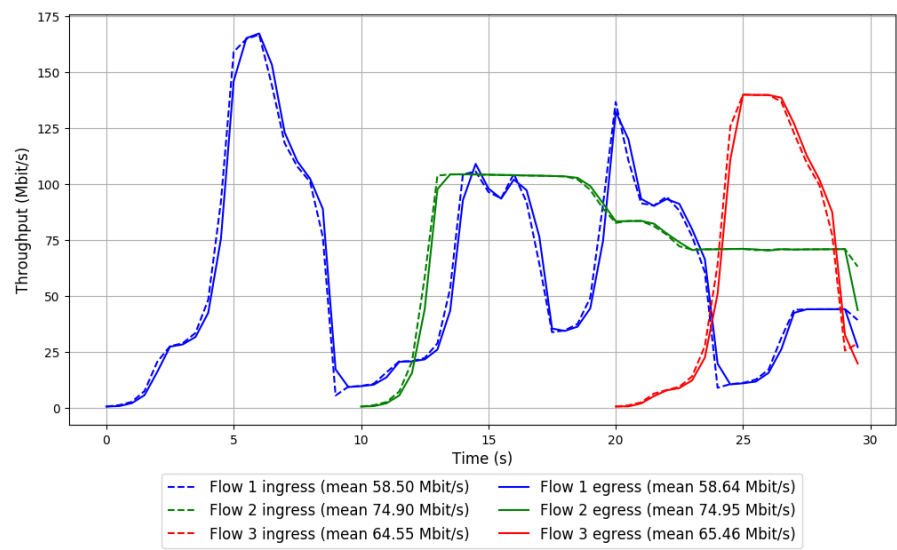
-- Flow 3:

Average throughput: 65.46 Mbit/s

95th percentile per-packet one-way delay: 135.108 ms

Loss rate: 1.38%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2018-04-18 20:59:31

End at: 2018-04-18 21:00:01

Below is generated by plot.py at 2018-04-19 02:29:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 134.60 Mbit/s

95th percentile per-packet one-way delay: 136.404 ms

Loss rate: 1.40%

-- Flow 1:

Average throughput: 70.99 Mbit/s

95th percentile per-packet one-way delay: 135.985 ms

Loss rate: 0.61%

-- Flow 2:

Average throughput: 68.30 Mbit/s

95th percentile per-packet one-way delay: 136.485 ms

Loss rate: 1.41%

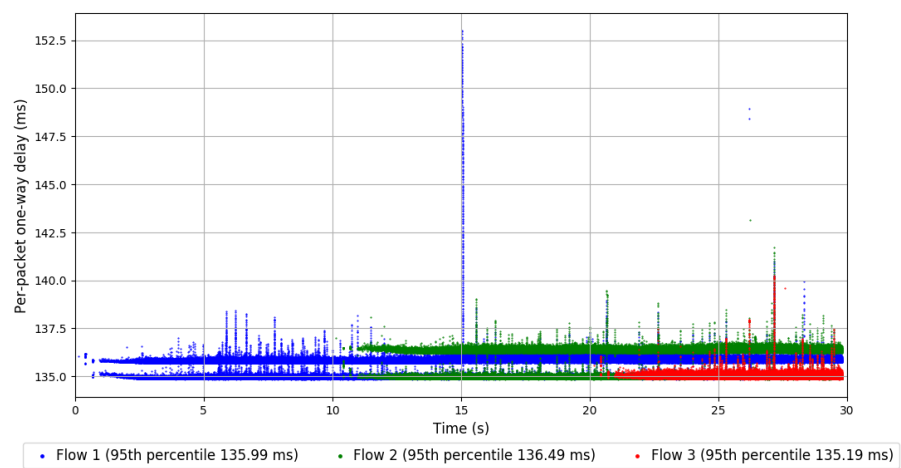
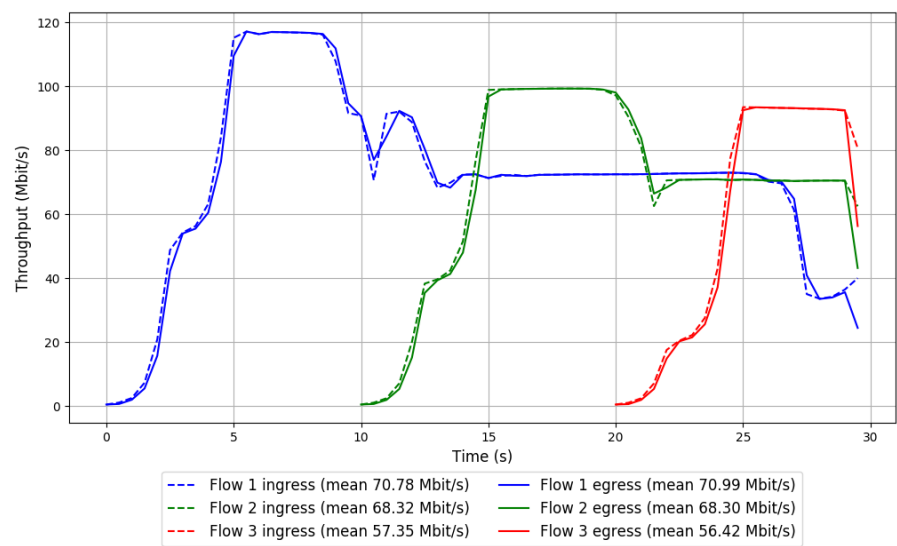
-- Flow 3:

Average throughput: 56.42 Mbit/s

95th percentile per-packet one-way delay: 135.191 ms

Loss rate: 4.33%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2018-04-18 21:17:50

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

Below is generated by plot.py at 2018-04-19 02:29:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 129.67 Mbit/s

95th percentile per-packet one-way delay: 136.614 ms

Loss rate: 1.45%

-- Flow 1:

Average throughput: 73.84 Mbit/s

95th percentile per-packet one-way delay: 136.636 ms

Loss rate: 0.89%

-- Flow 2:

Average throughput: 65.44 Mbit/s

95th percentile per-packet one-way delay: 135.909 ms

Loss rate: 1.60%

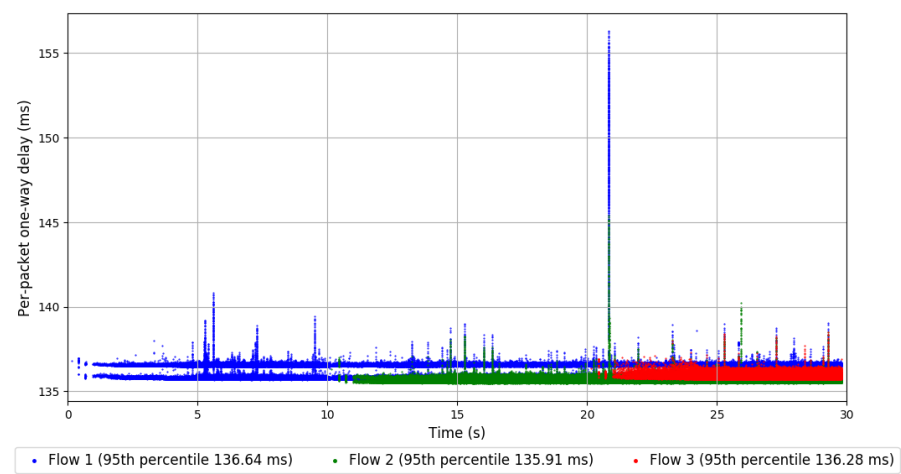
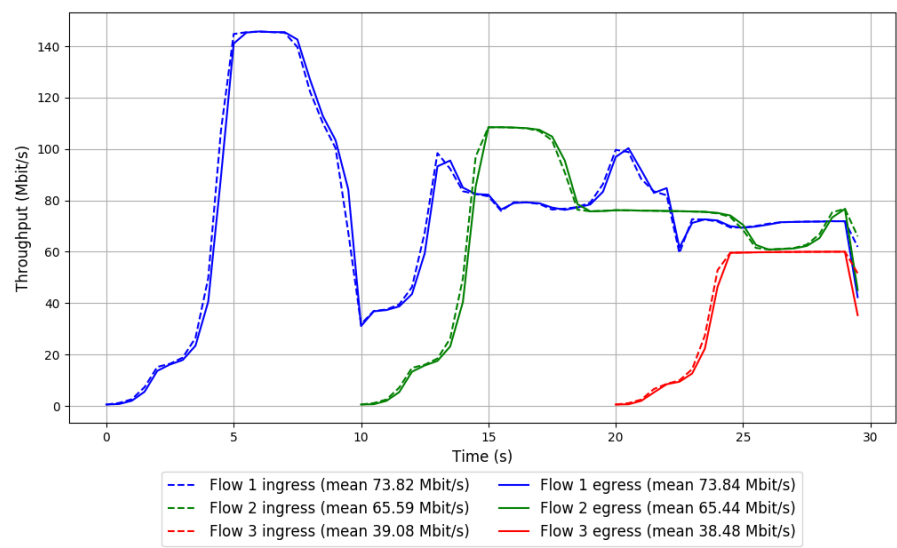
-- Flow 3:

Average throughput: 38.48 Mbit/s

95th percentile per-packet one-way delay: 136.285 ms

Loss rate: 4.21%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2018-04-18 21:36:03

End at: 2018-04-18 21:36:33

Below is generated by plot.py at 2018-04-19 02:30:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 137.31 Mbit/s

95th percentile per-packet one-way delay: 136.017 ms

Loss rate: 1.54%

-- Flow 1:

Average throughput: 75.70 Mbit/s

95th percentile per-packet one-way delay: 135.942 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 67.40 Mbit/s

95th percentile per-packet one-way delay: 136.085 ms

Loss rate: 1.44%

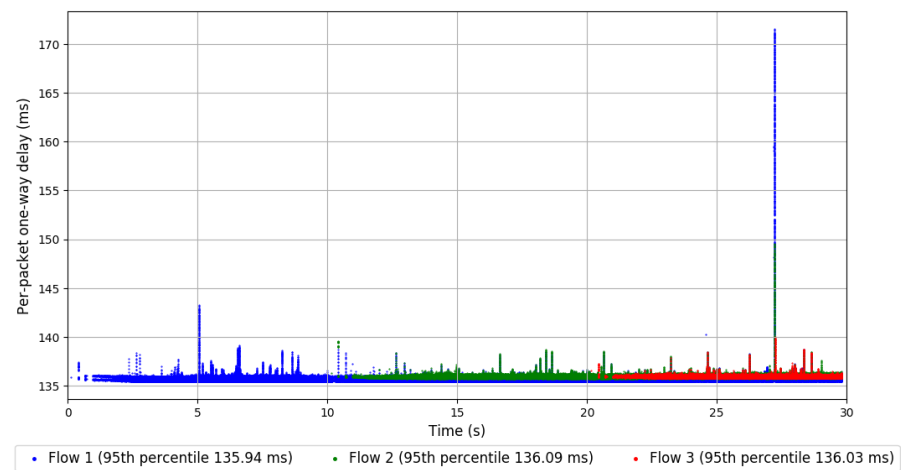
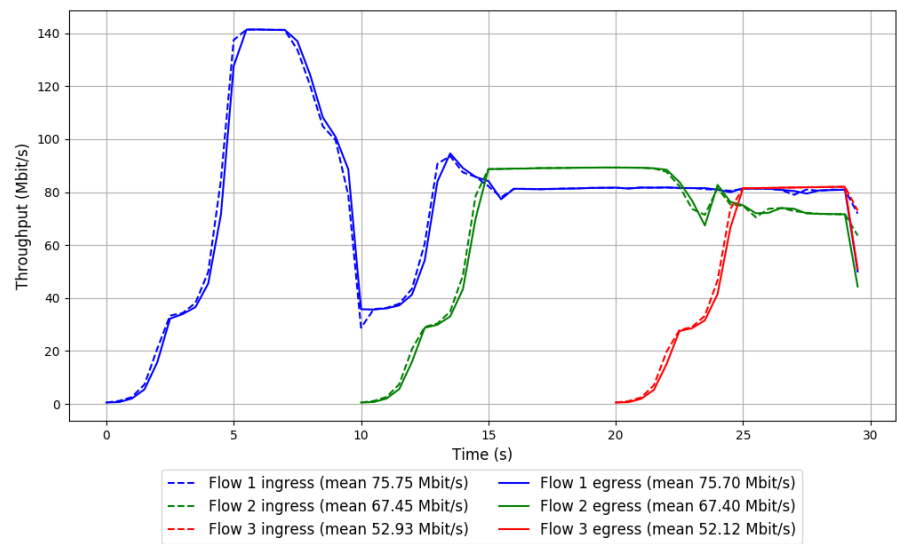
-- Flow 3:

Average throughput: 52.12 Mbit/s

95th percentile per-packet one-way delay: 136.033 ms

Loss rate: 4.24%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2018-04-18 21:53:54

End at: 2018-04-18 21:54:24

Below is generated by plot.py at 2018-04-19 02:31:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 124.47 Mbit/s

95th percentile per-packet one-way delay: 136.283 ms

Loss rate: 1.61%

-- Flow 1:

Average throughput: 65.69 Mbit/s

95th percentile per-packet one-way delay: 135.897 ms

Loss rate: 1.12%

-- Flow 2:

Average throughput: 66.53 Mbit/s

95th percentile per-packet one-way delay: 135.905 ms

Loss rate: 1.44%

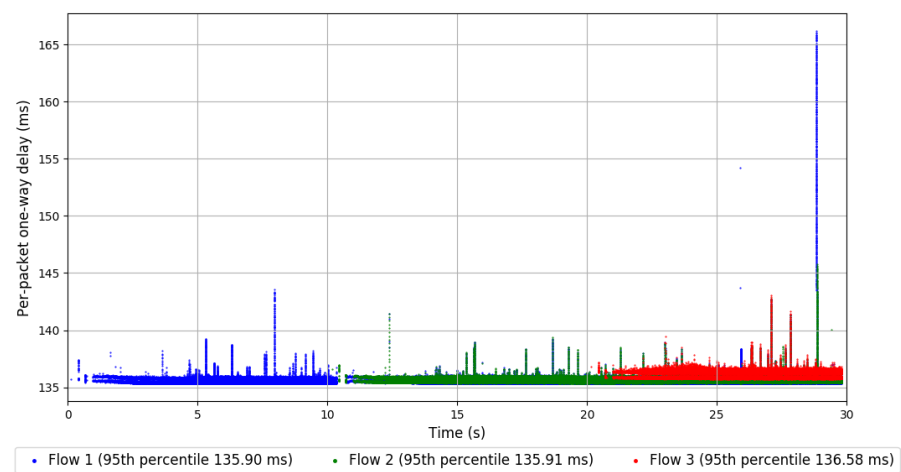
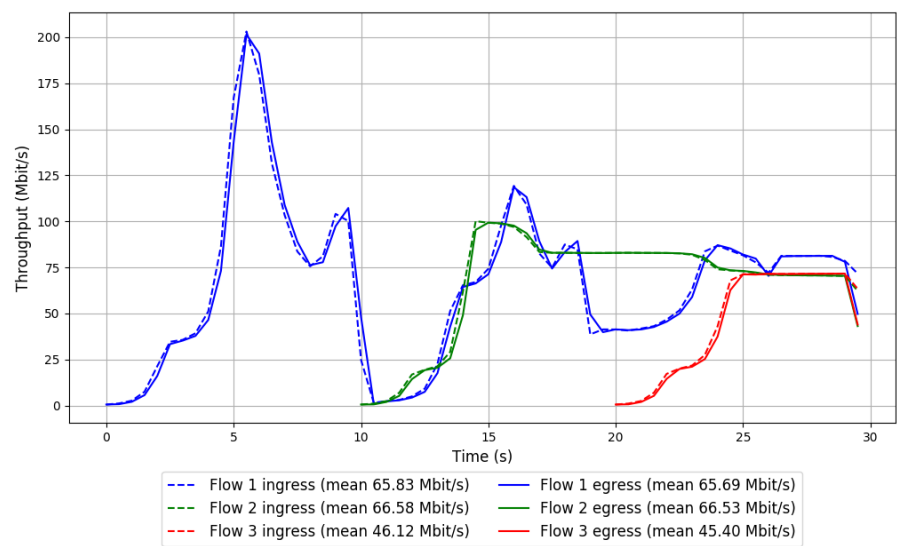
-- Flow 3:

Average throughput: 45.40 Mbit/s

95th percentile per-packet one-way delay: 136.576 ms

Loss rate: 4.25%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2018-04-18 22:11:45

End at: 2018-04-18 22:12:15

Below is generated by plot.py at 2018-04-19 02:31:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 123.59 Mbit/s

95th percentile per-packet one-way delay: 136.360 ms

Loss rate: 1.41%

-- Flow 1:

Average throughput: 69.72 Mbit/s

95th percentile per-packet one-way delay: 136.353 ms

Loss rate: 1.01%

-- Flow 2:

Average throughput: 65.30 Mbit/s

95th percentile per-packet one-way delay: 135.261 ms

Loss rate: 1.40%

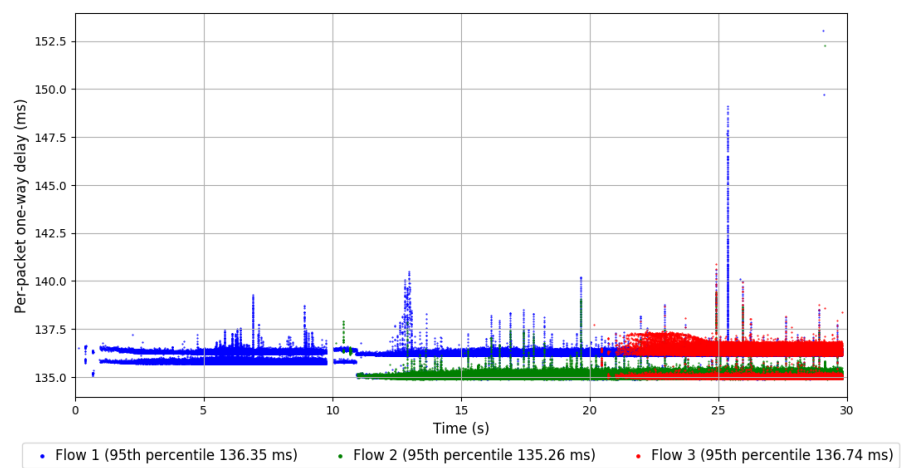
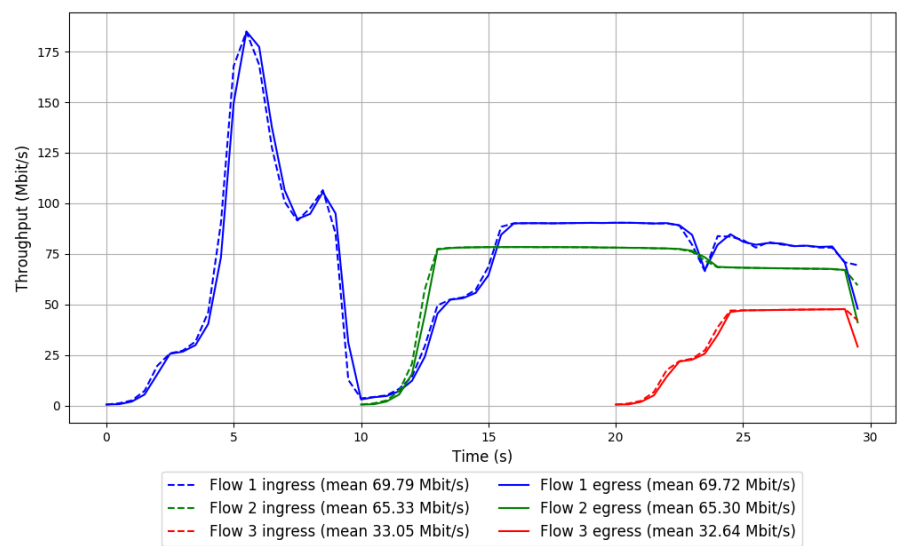
-- Flow 3:

Average throughput: 32.64 Mbit/s

95th percentile per-packet one-way delay: 136.744 ms

Loss rate: 3.95%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2018-04-18 22:29:23

End at: 2018-04-18 22:29:53

Below is generated by plot.py at 2018-04-19 02:31:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 132.05 Mbit/s

95th percentile per-packet one-way delay: 135.107 ms

Loss rate: 1.35%

-- Flow 1:

Average throughput: 76.61 Mbit/s

95th percentile per-packet one-way delay: 135.100 ms

Loss rate: 0.87%

-- Flow 2:

Average throughput: 70.56 Mbit/s

95th percentile per-packet one-way delay: 135.113 ms

Loss rate: 1.42%

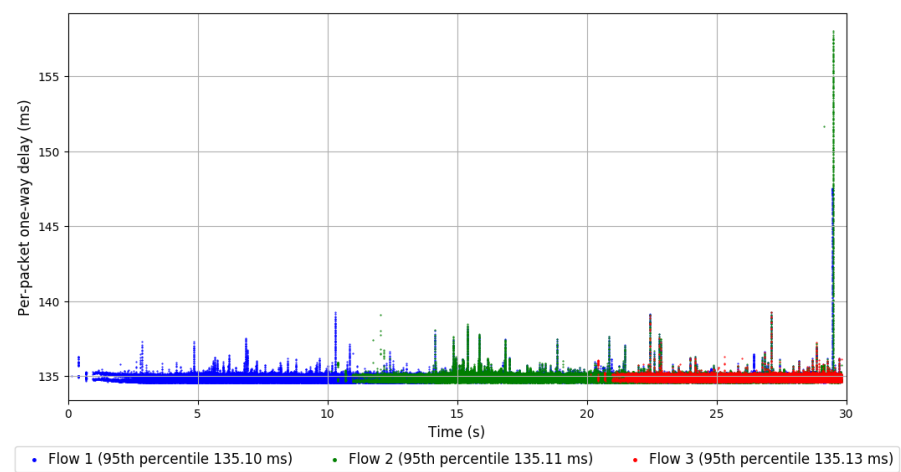
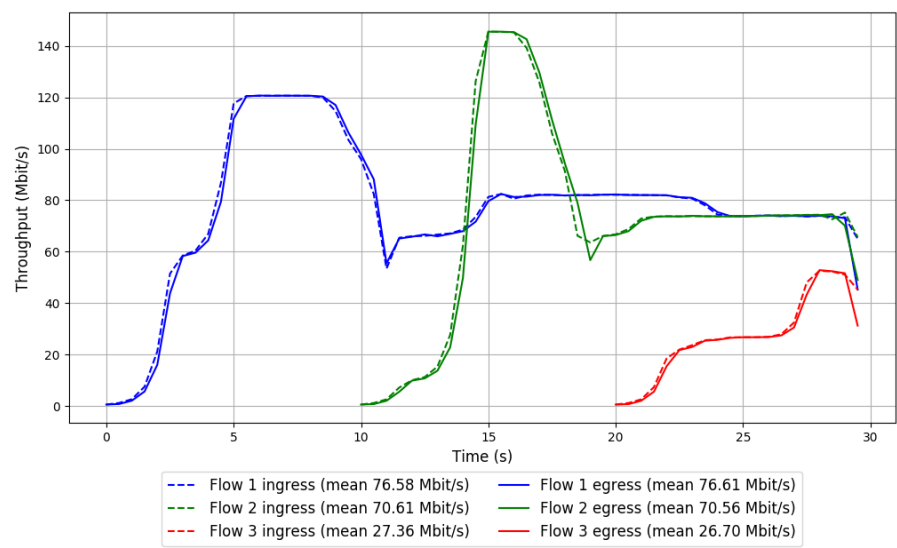
-- Flow 3:

Average throughput: 26.70 Mbit/s

95th percentile per-packet one-way delay: 135.126 ms

Loss rate: 5.07%

Run 10: Report of Copa — Data Link

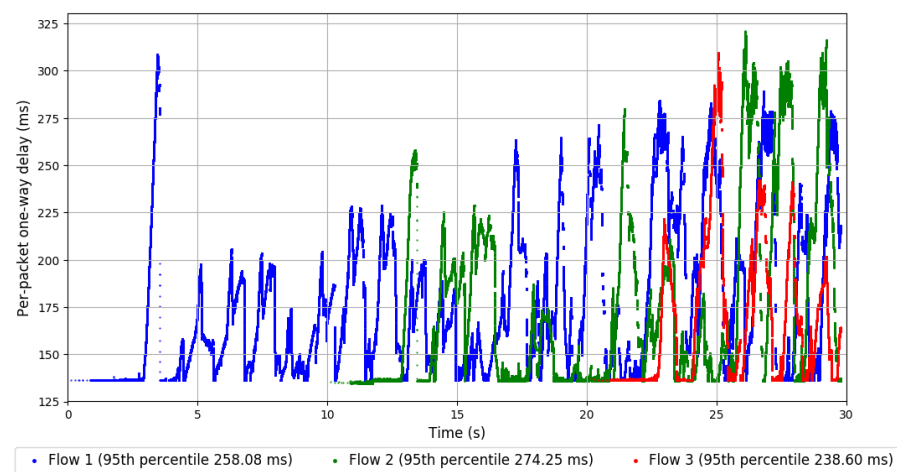
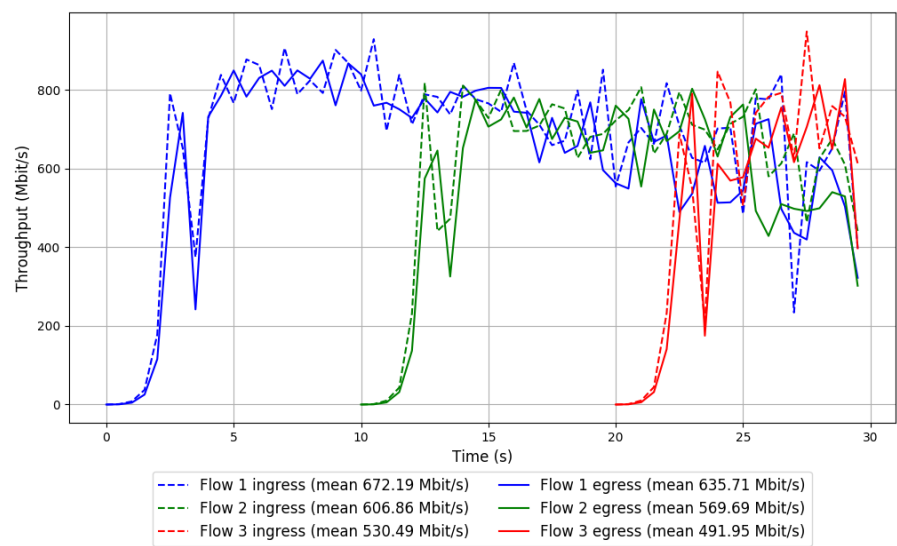


```
Run 1: Statistics of FillP

Start at: 2018-04-18 19:39:04
End at: 2018-04-18 19:39:34

# Below is generated by plot.py at 2018-04-19 02:49:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1172.79 Mbit/s
95th percentile per-packet one-way delay: 259.548 ms
Loss rate: 7.16%
-- Flow 1:
Average throughput: 635.71 Mbit/s
95th percentile per-packet one-way delay: 258.085 ms
Loss rate: 6.29%
-- Flow 2:
Average throughput: 569.69 Mbit/s
95th percentile per-packet one-way delay: 274.253 ms
Loss rate: 7.44%
-- Flow 3:
Average throughput: 491.95 Mbit/s
95th percentile per-packet one-way delay: 238.603 ms
Loss rate: 9.83%
```


Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-04-18 19:57:14

End at: 2018-04-18 19:57:44

Below is generated by plot.py at 2018-04-19 02:49:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 1201.62 Mbit/s

95th percentile per-packet one-way delay: 294.911 ms

Loss rate: 4.88%

-- Flow 1:

Average throughput: 628.88 Mbit/s

95th percentile per-packet one-way delay: 288.868 ms

Loss rate: 4.96%

-- Flow 2:

Average throughput: 635.19 Mbit/s

95th percentile per-packet one-way delay: 242.169 ms

Loss rate: 4.13%

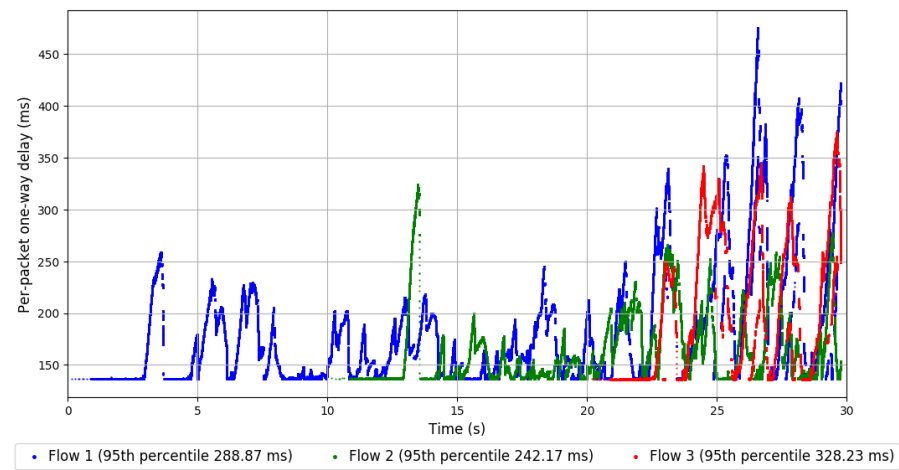
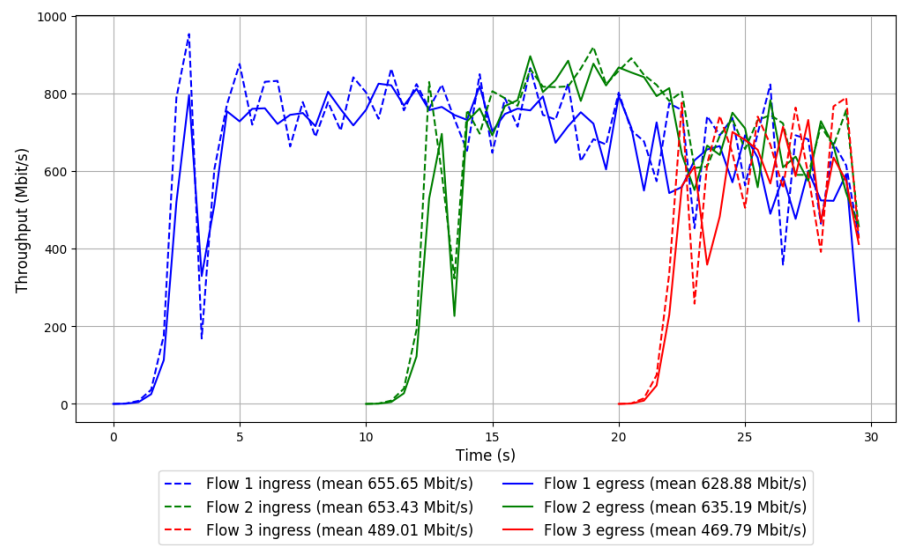
-- Flow 3:

Average throughput: 469.79 Mbit/s

95th percentile per-packet one-way delay: 328.233 ms

Loss rate: 6.58%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

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

End at: 2018-04-18 20:15:48

Below is generated by plot.py at 2018-04-19 02:49:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 1128.72 Mbit/s

95th percentile per-packet one-way delay: 340.737 ms

Loss rate: 5.96%

-- Flow 1:

Average throughput: 605.04 Mbit/s

95th percentile per-packet one-way delay: 337.911 ms

Loss rate: 5.50%

-- Flow 2:

Average throughput: 559.72 Mbit/s

95th percentile per-packet one-way delay: 349.986 ms

Loss rate: 6.40%

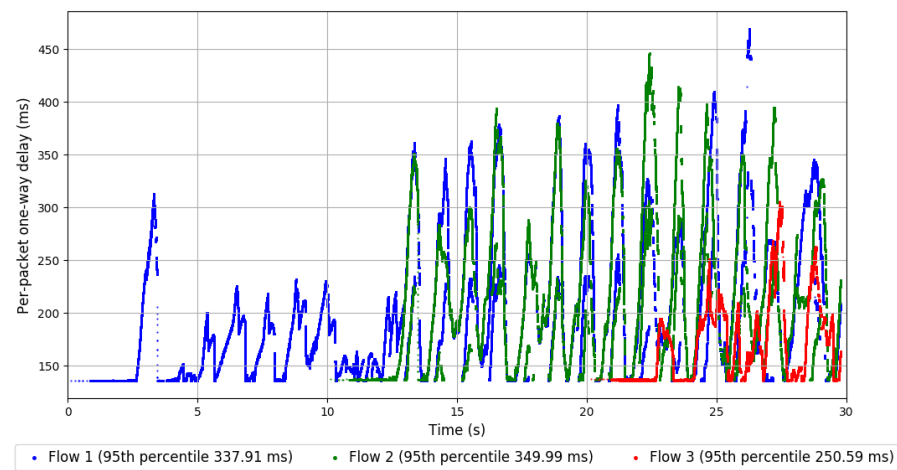
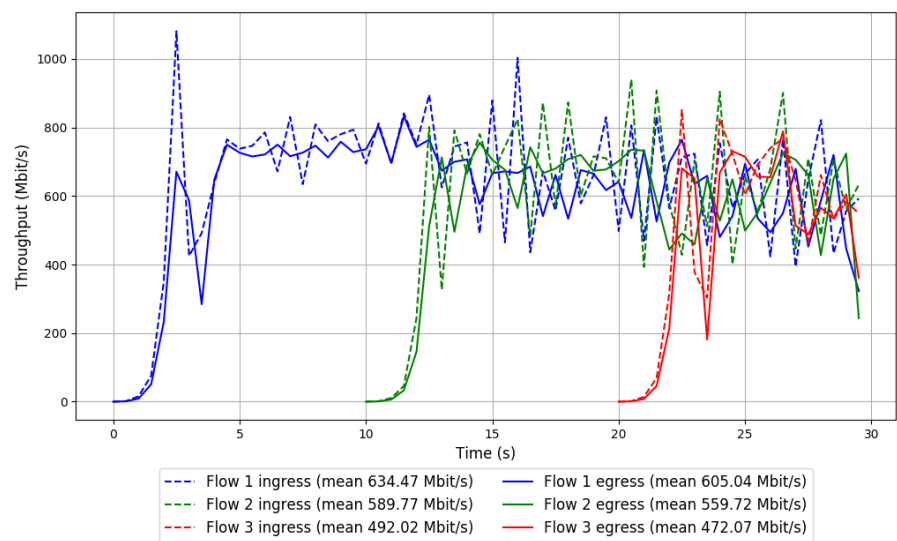
-- Flow 3:

Average throughput: 472.07 Mbit/s

95th percentile per-packet one-way delay: 250.587 ms

Loss rate: 6.72%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-04-18 20:33:05

End at: 2018-04-18 20:33:35

Below is generated by plot.py at 2018-04-19 02:49:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 1105.32 Mbit/s

95th percentile per-packet one-way delay: 342.787 ms

Loss rate: 7.60%

-- Flow 1:

Average throughput: 587.35 Mbit/s

95th percentile per-packet one-way delay: 355.823 ms

Loss rate: 7.77%

-- Flow 2:

Average throughput: 567.94 Mbit/s

95th percentile per-packet one-way delay: 335.115 ms

Loss rate: 4.88%

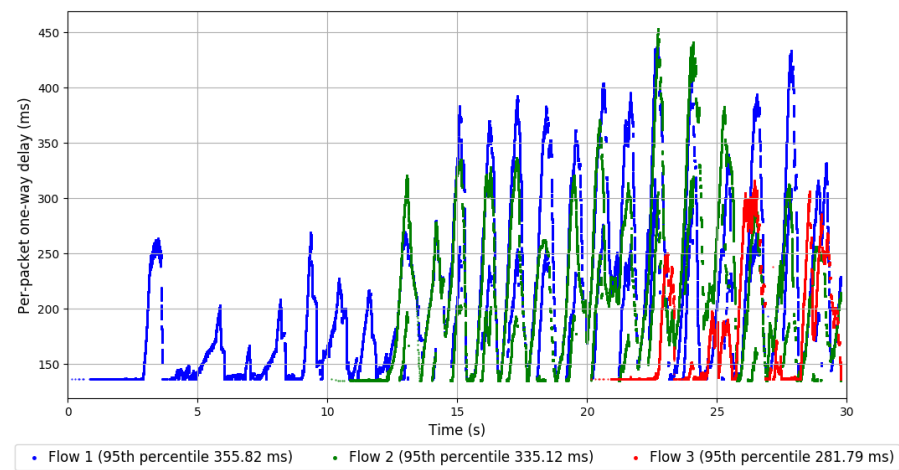
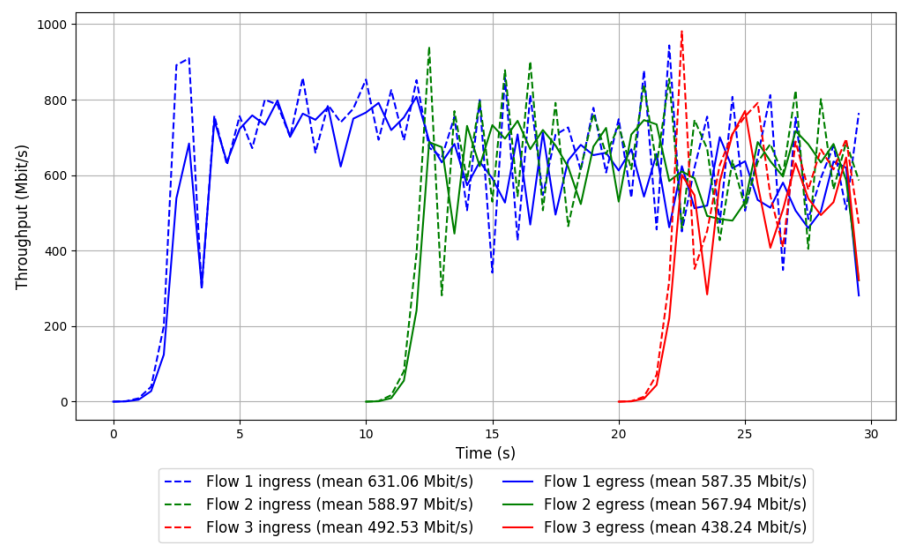
-- Flow 3:

Average throughput: 438.24 Mbit/s

95th percentile per-packet one-way delay: 281.792 ms

Loss rate: 13.48%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-04-18 20:51:13

End at: 2018-04-18 20:51:43

Below is generated by plot.py at 2018-04-19 02:51:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 1173.95 Mbit/s

95th percentile per-packet one-way delay: 246.570 ms

Loss rate: 7.18%

-- Flow 1:

Average throughput: 643.85 Mbit/s

95th percentile per-packet one-way delay: 243.203 ms

Loss rate: 6.60%

-- Flow 2:

Average throughput: 588.63 Mbit/s

95th percentile per-packet one-way delay: 246.691 ms

Loss rate: 6.07%

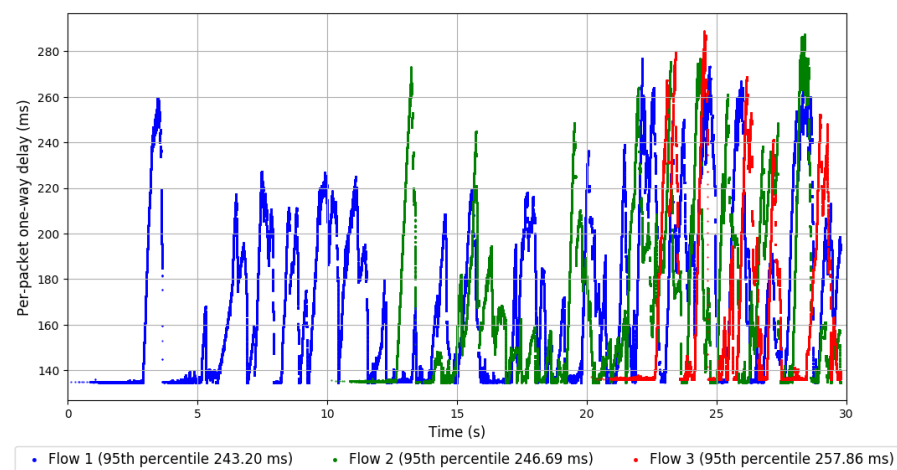
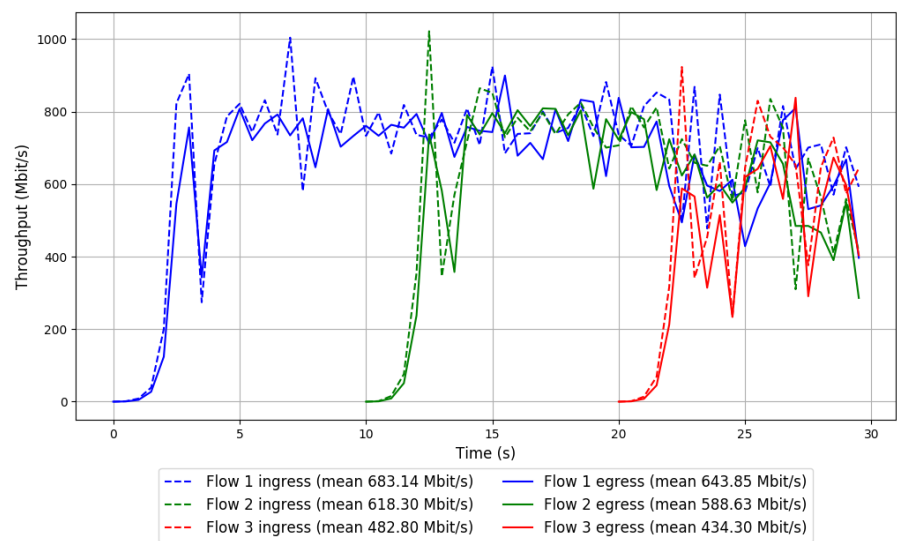
-- Flow 3:

Average throughput: 434.30 Mbit/s

95th percentile per-packet one-way delay: 257.858 ms

Loss rate: 12.53%

Run 5: Report of FillP — Data Link



Run 6: Statistics of FillP

Start at: 2018-04-18 21:09:33

End at: 2018-04-18 21:10:03

Below is generated by plot.py at 2018-04-19 02:52:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 1201.87 Mbit/s

95th percentile per-packet one-way delay: 241.883 ms

Loss rate: 6.42%

-- Flow 1:

Average throughput: 648.40 Mbit/s

95th percentile per-packet one-way delay: 232.240 ms

Loss rate: 5.33%

-- Flow 2:

Average throughput: 598.08 Mbit/s

95th percentile per-packet one-way delay: 246.286 ms

Loss rate: 7.23%

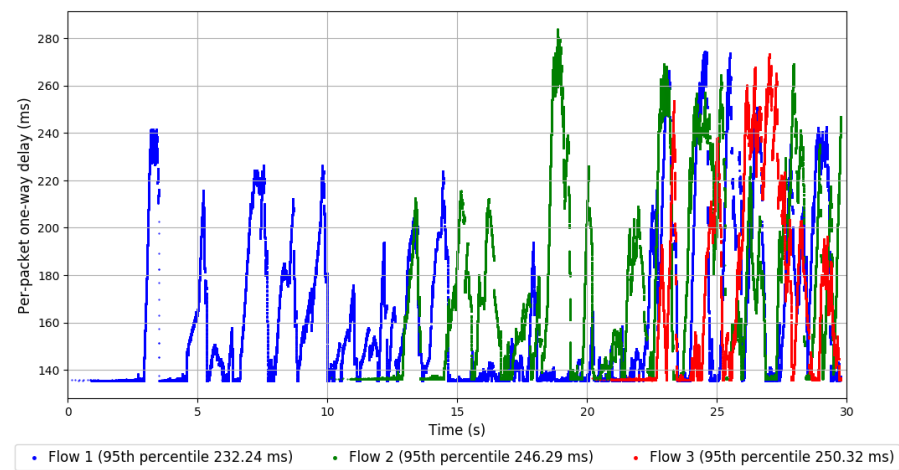
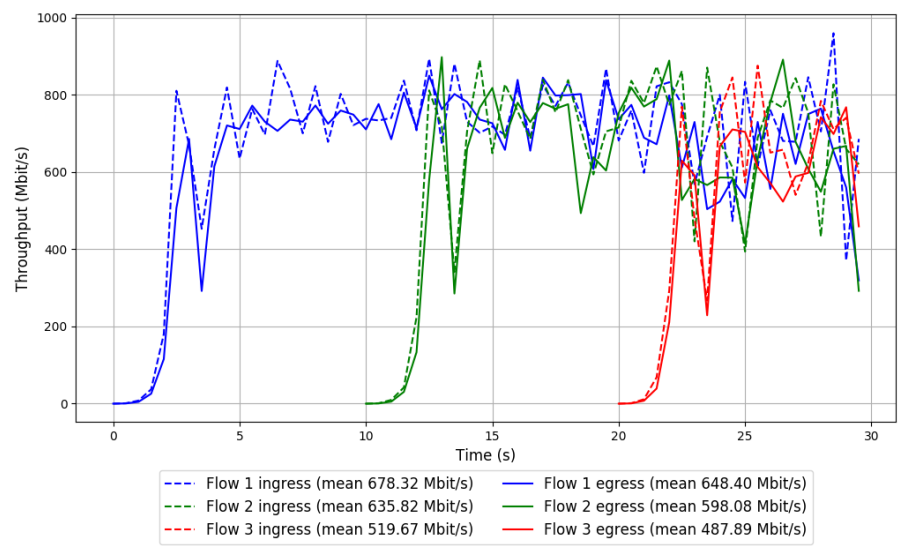
-- Flow 3:

Average throughput: 487.89 Mbit/s

95th percentile per-packet one-way delay: 250.319 ms

Loss rate: 8.71%

Run 6: Report of FillP — Data Link



Run 7: Statistics of FillP

Start at: 2018-04-18 21:27:47

End at: 2018-04-18 21:28:17

Below is generated by plot.py at 2018-04-19 02:52:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 1130.78 Mbit/s

95th percentile per-packet one-way delay: 281.807 ms

Loss rate: 6.38%

-- Flow 1:

Average throughput: 617.73 Mbit/s

95th percentile per-packet one-way delay: 239.280 ms

Loss rate: 4.97%

-- Flow 2:

Average throughput: 569.82 Mbit/s

95th percentile per-packet one-way delay: 286.395 ms

Loss rate: 6.79%

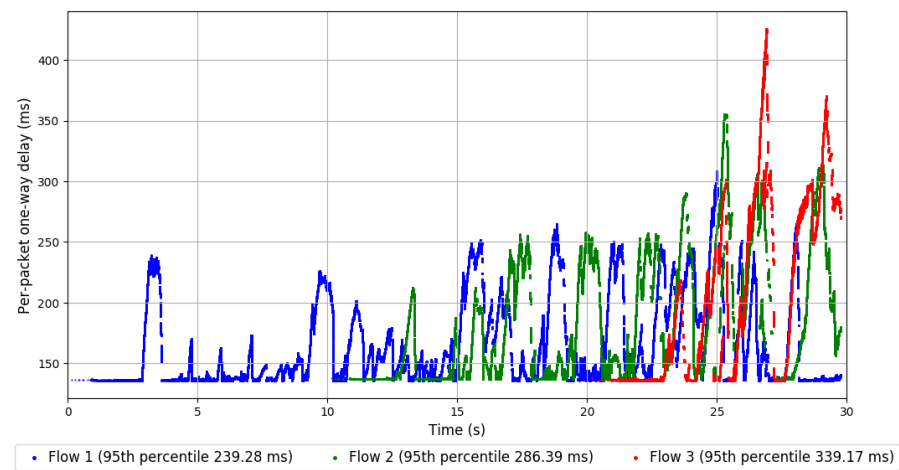
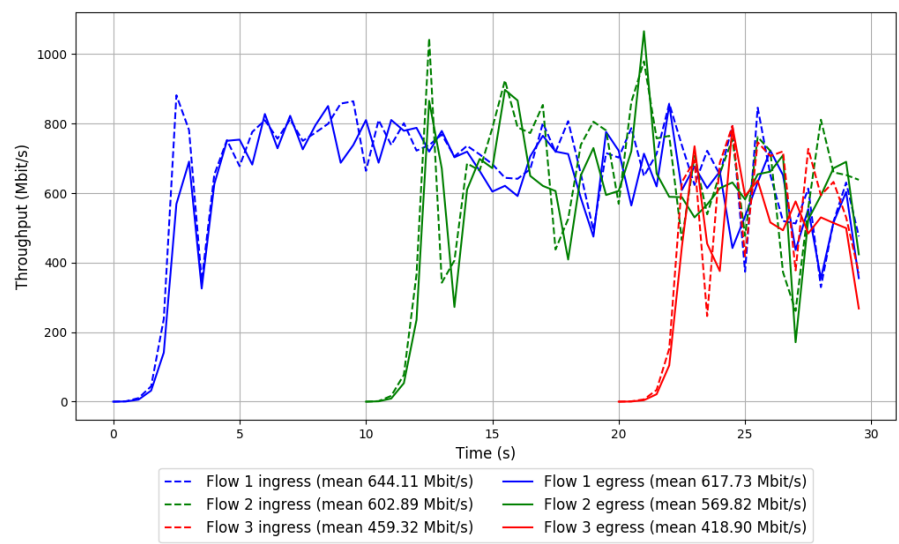
-- Flow 3:

Average throughput: 418.90 Mbit/s

95th percentile per-packet one-way delay: 339.166 ms

Loss rate: 11.33%

Run 7: Report of FillP — Data Link



Run 8: Statistics of FillP

Start at: 2018-04-18 21:45:50

End at: 2018-04-18 21:46:20

Below is generated by plot.py at 2018-04-19 02:53:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 1190.09 Mbit/s

95th percentile per-packet one-way delay: 247.383 ms

Loss rate: 8.04%

-- Flow 1:

Average throughput: 674.58 Mbit/s

95th percentile per-packet one-way delay: 235.675 ms

Loss rate: 5.79%

-- Flow 2:

Average throughput: 549.30 Mbit/s

95th percentile per-packet one-way delay: 264.430 ms

Loss rate: 10.60%

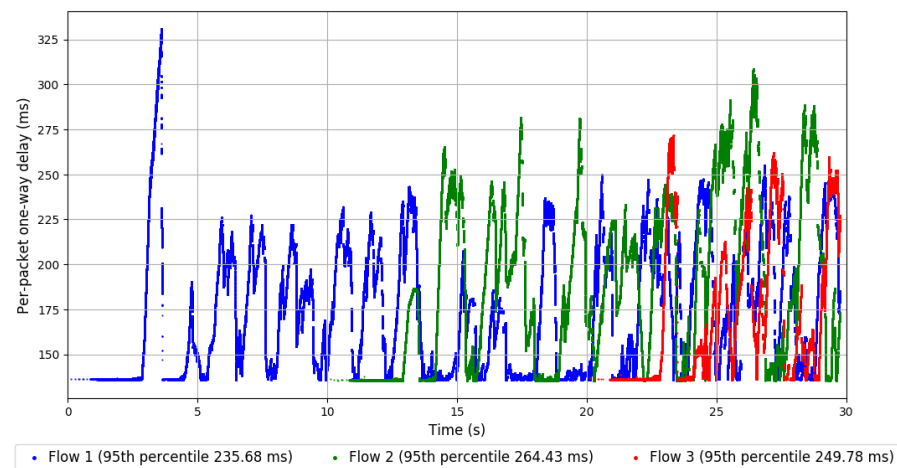
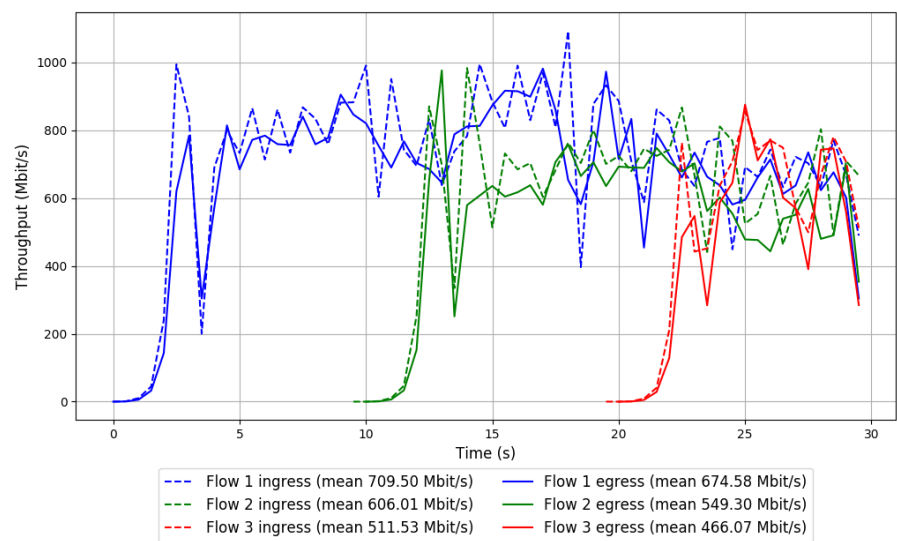
-- Flow 3:

Average throughput: 466.07 Mbit/s

95th percentile per-packet one-way delay: 249.780 ms

Loss rate: 11.40%

Run 8: Report of FillP — Data Link



Run 9: Statistics of FillP

Start at: 2018-04-18 22:03:39

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

Below is generated by plot.py at 2018-04-19 03:10:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 1203.70 Mbit/s

95th percentile per-packet one-way delay: 250.045 ms

Loss rate: 6.77%

-- Flow 1:

Average throughput: 644.17 Mbit/s

95th percentile per-packet one-way delay: 245.655 ms

Loss rate: 5.43%

-- Flow 2:

Average throughput: 604.10 Mbit/s

95th percentile per-packet one-way delay: 258.201 ms

Loss rate: 8.43%

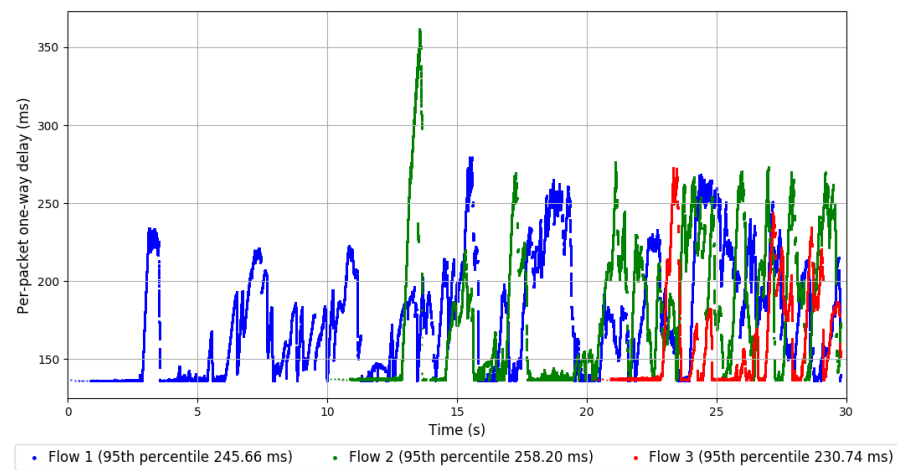
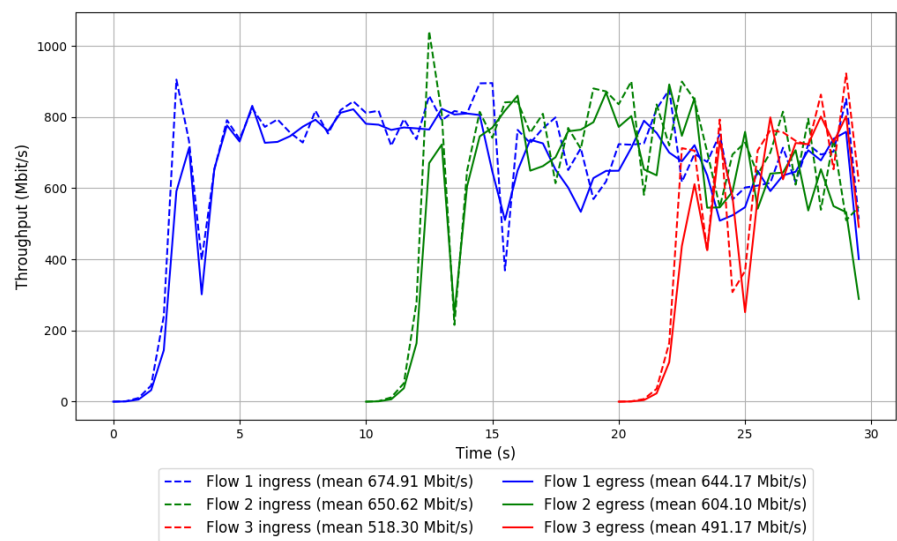
-- Flow 3:

Average throughput: 491.17 Mbit/s

95th percentile per-packet one-way delay: 230.738 ms

Loss rate: 7.88%

Run 9: Report of FillP — Data Link



Run 10: Statistics of FillP

Start at: 2018-04-18 22:21:33

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

Below is generated by plot.py at 2018-04-19 03:10:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 1215.44 Mbit/s

95th percentile per-packet one-way delay: 239.235 ms

Loss rate: 6.35%

-- Flow 1:

Average throughput: 662.17 Mbit/s

95th percentile per-packet one-way delay: 233.829 ms

Loss rate: 5.69%

-- Flow 2:

Average throughput: 625.27 Mbit/s

95th percentile per-packet one-way delay: 237.231 ms

Loss rate: 5.69%

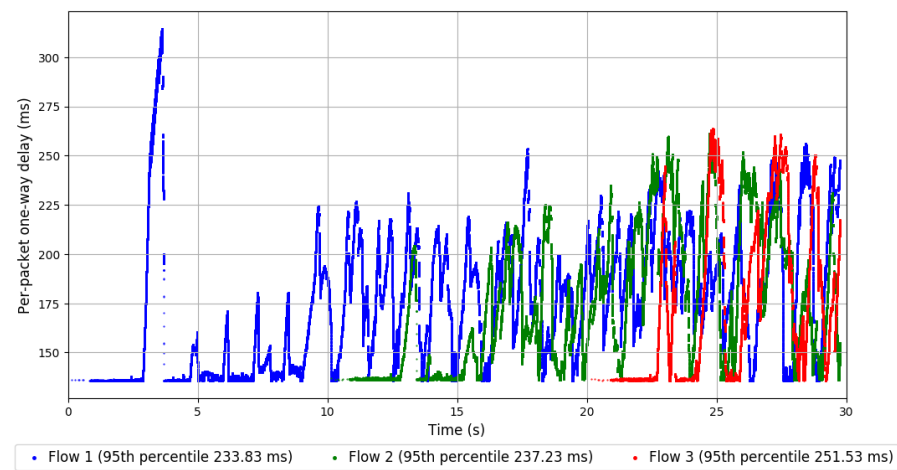
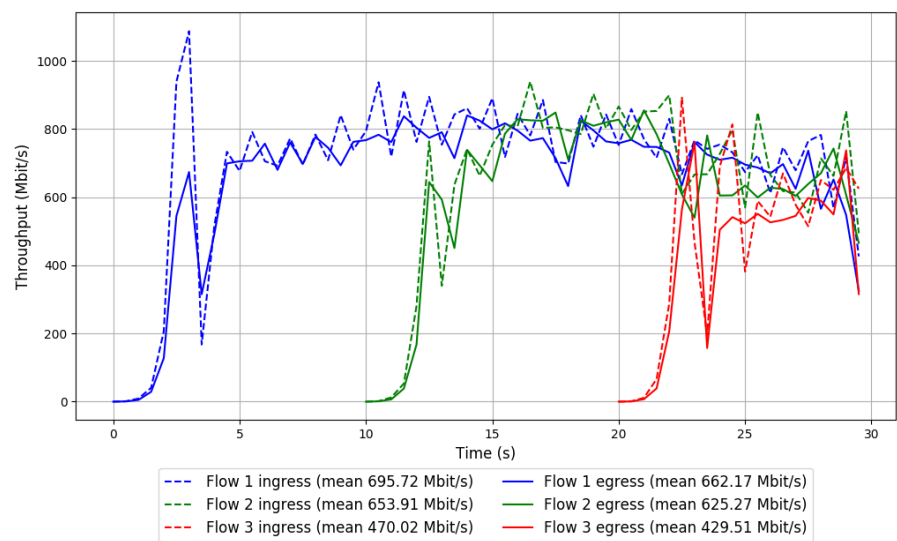
-- Flow 3:

Average throughput: 429.51 Mbit/s

95th percentile per-packet one-way delay: 251.531 ms

Loss rate: 11.15%

Run 10: Report of FillP — Data Link

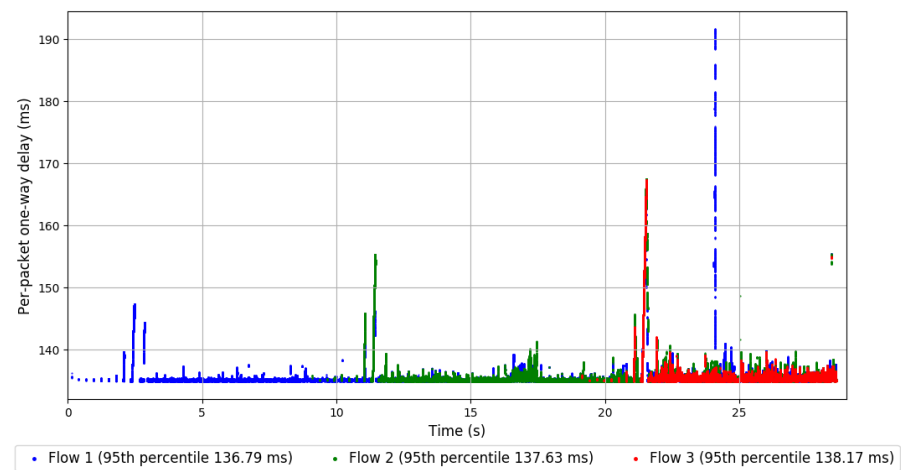
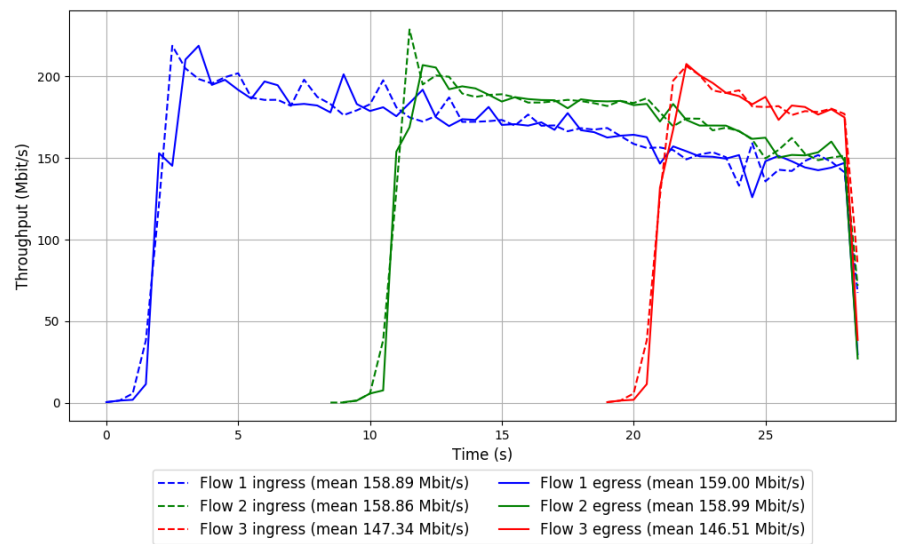


```
Run 1: Statistics of Indigo-1-32

Start at: 2018-04-18 19:41:34
End at: 2018-04-18 19:42:04

# Below is generated by plot.py at 2018-04-19 03:10:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 316.66 Mbit/s
95th percentile per-packet one-way delay: 137.267 ms
Loss rate: 1.40%
-- Flow 1:
Average throughput: 159.00 Mbit/s
95th percentile per-packet one-way delay: 136.793 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 158.99 Mbit/s
95th percentile per-packet one-way delay: 137.628 ms
Loss rate: 1.30%
-- Flow 3:
Average throughput: 146.51 Mbit/s
95th percentile per-packet one-way delay: 138.174 ms
Loss rate: 3.34%
```

Run 1: Report of Indigo-1-32 — Data Link



Run 2: Statistics of Indigo-1-32

Start at: 2018-04-18 19:59:45

End at: 2018-04-18 20:00:15

Below is generated by plot.py at 2018-04-19 03:10:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 311.33 Mbit/s

95th percentile per-packet one-way delay: 136.261 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 160.82 Mbit/s

95th percentile per-packet one-way delay: 135.858 ms

Loss rate: 0.84%

-- Flow 2:

Average throughput: 157.86 Mbit/s

95th percentile per-packet one-way delay: 136.639 ms

Loss rate: 1.31%

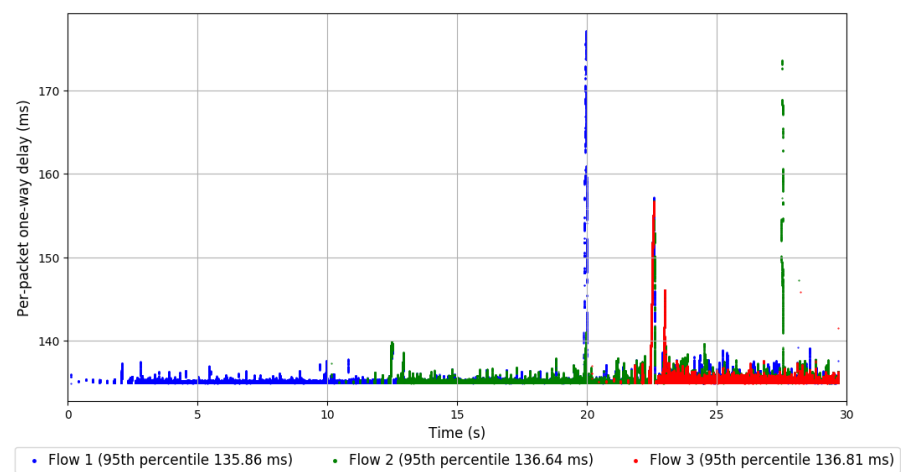
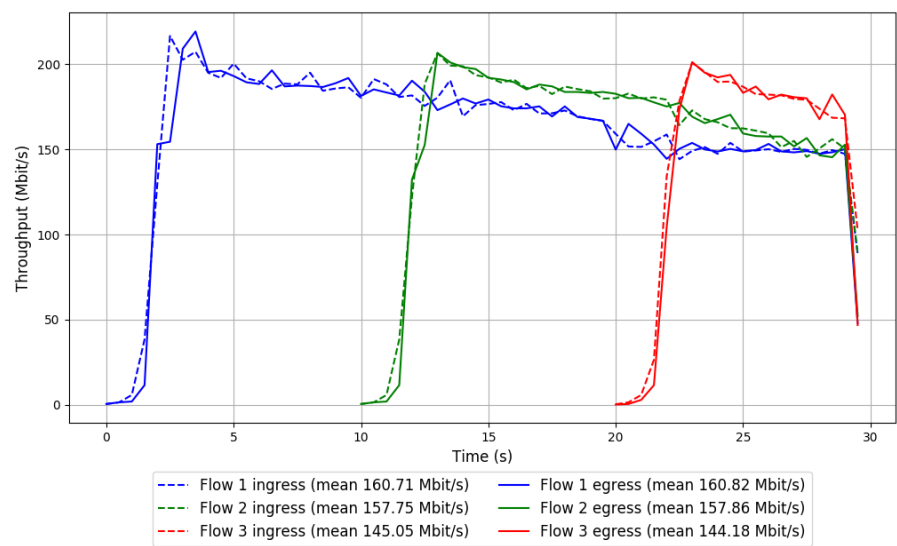
-- Flow 3:

Average throughput: 144.18 Mbit/s

95th percentile per-packet one-way delay: 136.808 ms

Loss rate: 3.28%

Run 2: Report of Indigo-1-32 — Data Link



Run 3: Statistics of Indigo-1-32

Start at: 2018-04-18 20:17:48

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

Below is generated by plot.py at 2018-04-19 03:10:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 314.02 Mbit/s

95th percentile per-packet one-way delay: 136.827 ms

Loss rate: 1.32%

-- Flow 1:

Average throughput: 165.06 Mbit/s

95th percentile per-packet one-way delay: 136.239 ms

Loss rate: 0.82%

-- Flow 2:

Average throughput: 156.08 Mbit/s

95th percentile per-packet one-way delay: 137.747 ms

Loss rate: 1.32%

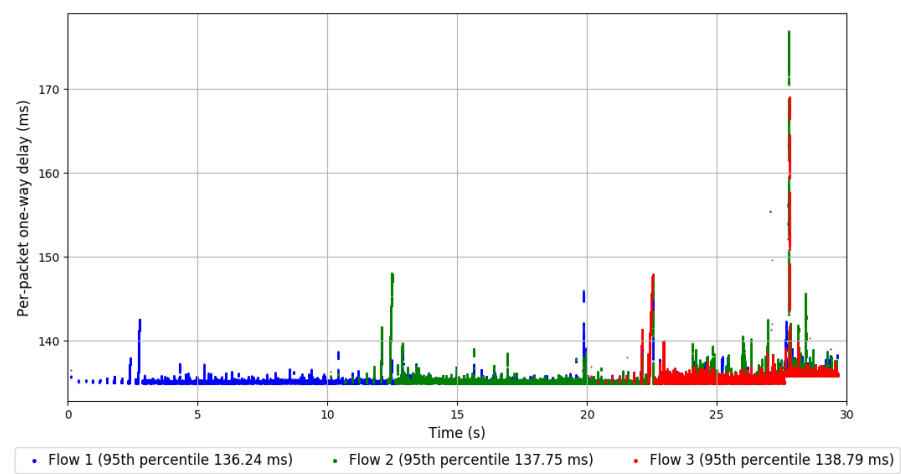
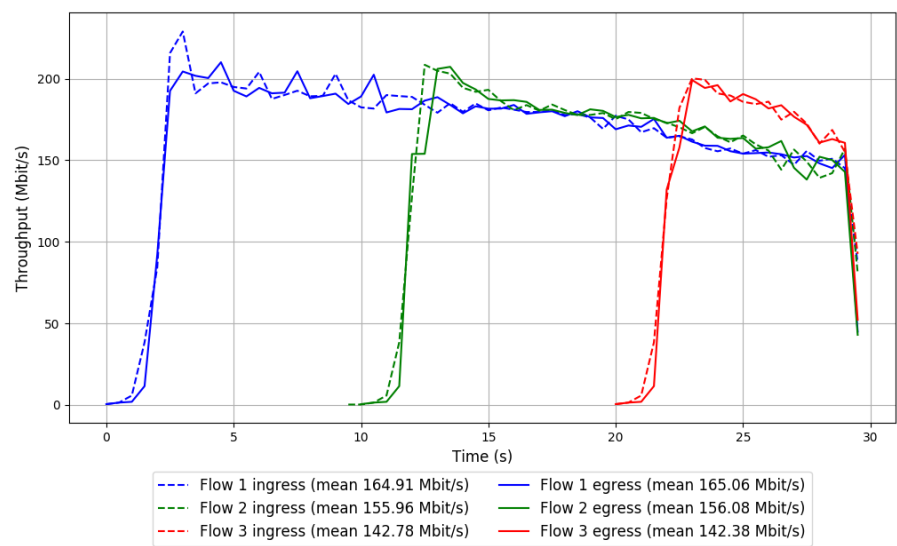
-- Flow 3:

Average throughput: 142.38 Mbit/s

95th percentile per-packet one-way delay: 138.794 ms

Loss rate: 3.05%

Run 3: Report of Indigo-1-32 — Data Link



Run 4: Statistics of Indigo-1-32

Start at: 2018-04-18 20:35:34

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

Below is generated by plot.py at 2018-04-19 03:10:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 310.15 Mbit/s

95th percentile per-packet one-way delay: 136.665 ms

Loss rate: 1.36%

-- Flow 1:

Average throughput: 159.52 Mbit/s

95th percentile per-packet one-way delay: 135.965 ms

Loss rate: 0.84%

-- Flow 2:

Average throughput: 155.96 Mbit/s

95th percentile per-packet one-way delay: 137.703 ms

Loss rate: 1.28%

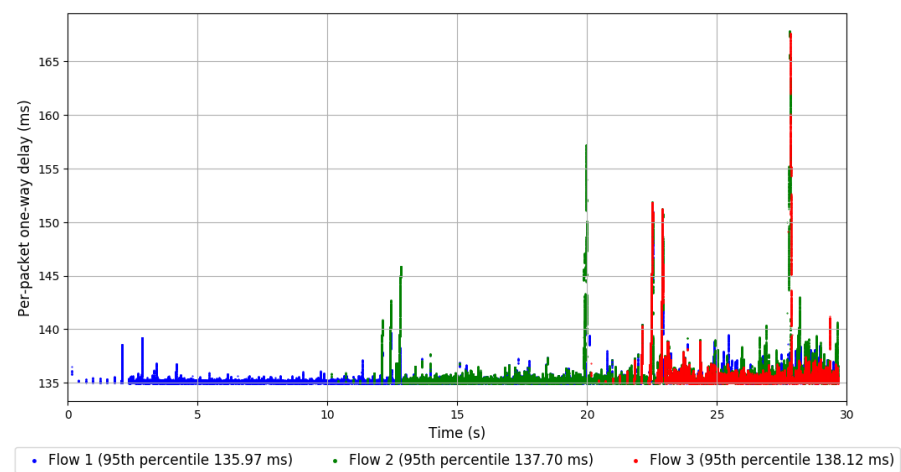
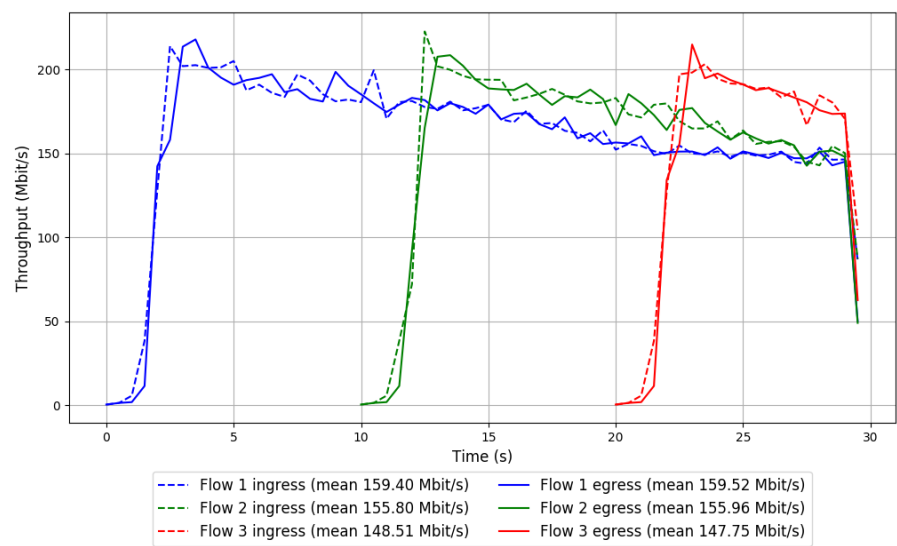
-- Flow 3:

Average throughput: 147.75 Mbit/s

95th percentile per-packet one-way delay: 138.120 ms

Loss rate: 3.25%

Run 4: Report of Indigo-1-32 — Data Link



Run 5: Statistics of Indigo-1-32

Start at: 2018-04-18 20:53:42

End at: 2018-04-18 20:54:12

Below is generated by plot.py at 2018-04-19 03:10:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 310.73 Mbit/s

95th percentile per-packet one-way delay: 136.014 ms

Loss rate: 1.31%

-- Flow 1:

Average throughput: 162.82 Mbit/s

95th percentile per-packet one-way delay: 135.690 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 157.97 Mbit/s

95th percentile per-packet one-way delay: 136.542 ms

Loss rate: 1.32%

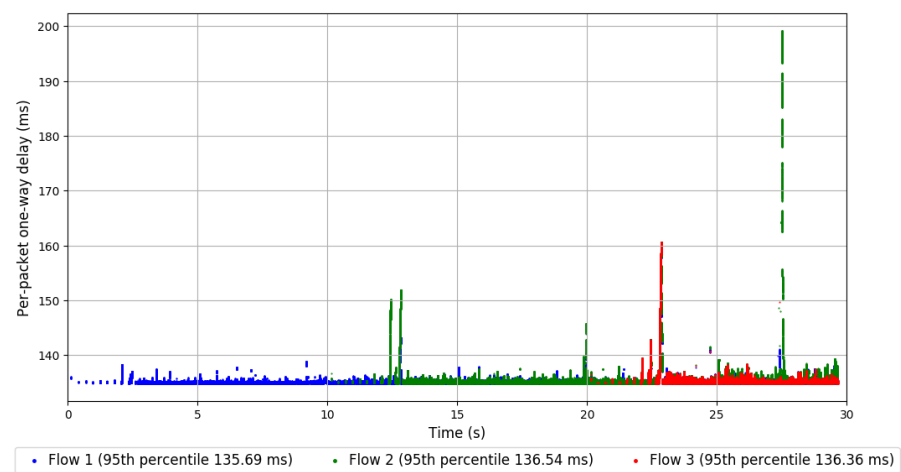
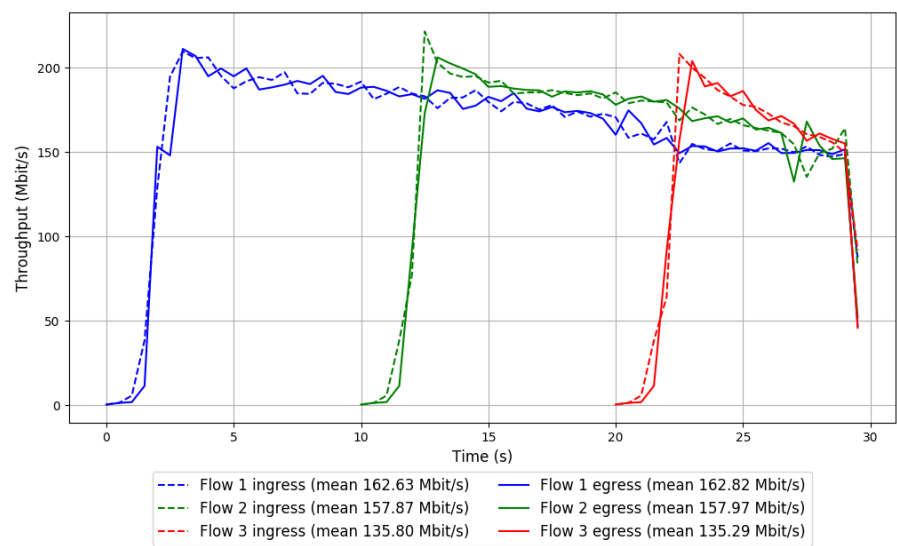
-- Flow 3:

Average throughput: 135.29 Mbit/s

95th percentile per-packet one-way delay: 136.362 ms

Loss rate: 3.14%

Run 5: Report of Indigo-1-32 — Data Link



Run 6: Statistics of Indigo-1-32

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

End at: 2018-04-18 21:12:34

Below is generated by plot.py at 2018-04-19 03:10:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 306.78 Mbit/s

95th percentile per-packet one-way delay: 137.236 ms

Loss rate: 1.41%

-- Flow 1:

Average throughput: 157.64 Mbit/s

95th percentile per-packet one-way delay: 136.742 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 151.95 Mbit/s

95th percentile per-packet one-way delay: 137.874 ms

Loss rate: 1.30%

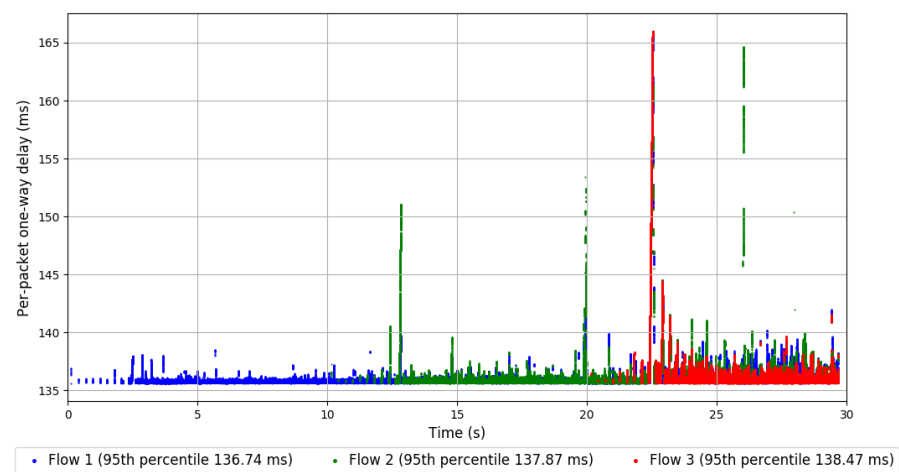
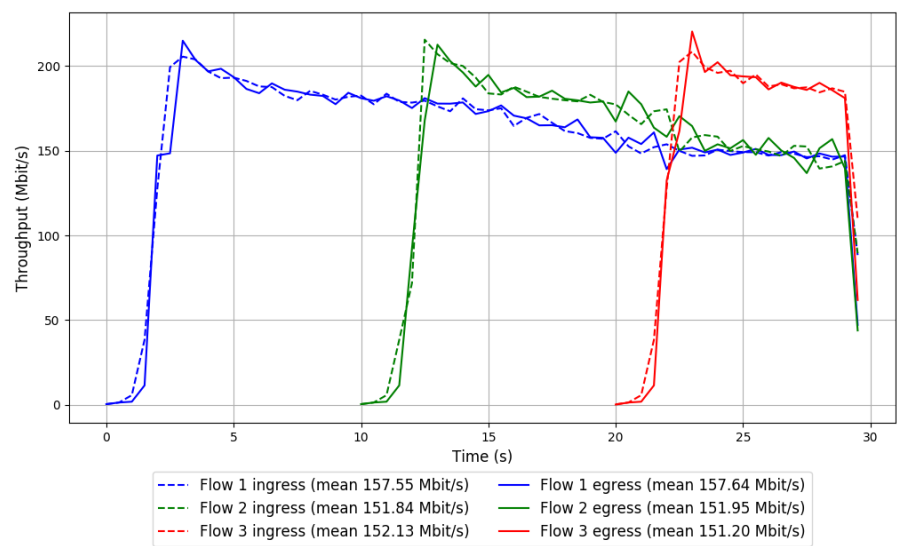
-- Flow 3:

Average throughput: 151.20 Mbit/s

95th percentile per-packet one-way delay: 138.468 ms

Loss rate: 3.37%

Run 6: Report of Indigo-1-32 — Data Link



Run 7: Statistics of Indigo-1-32

Start at: 2018-04-18 21:30:15

End at: 2018-04-18 21:30:45

Below is generated by plot.py at 2018-04-19 03:10:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 327.81 Mbit/s

95th percentile per-packet one-way delay: 138.331 ms

Loss rate: 1.17%

-- Flow 1:

Average throughput: 172.40 Mbit/s

95th percentile per-packet one-way delay: 137.810 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 165.16 Mbit/s

95th percentile per-packet one-way delay: 138.589 ms

Loss rate: 0.90%

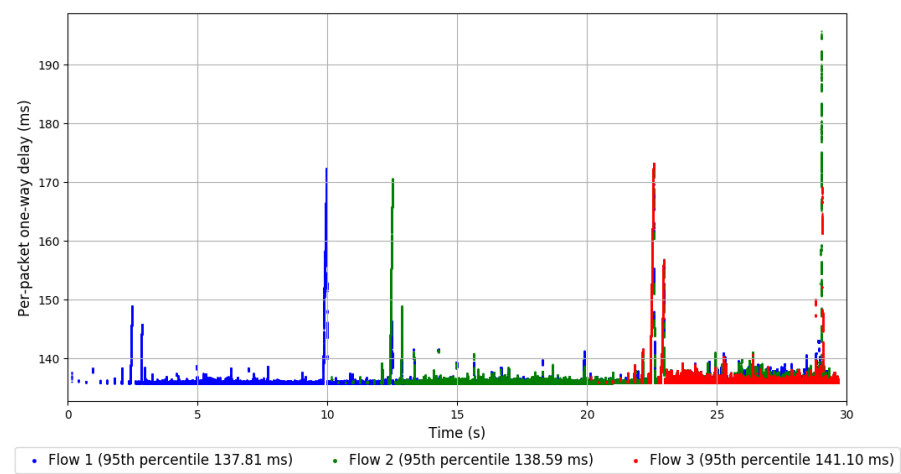
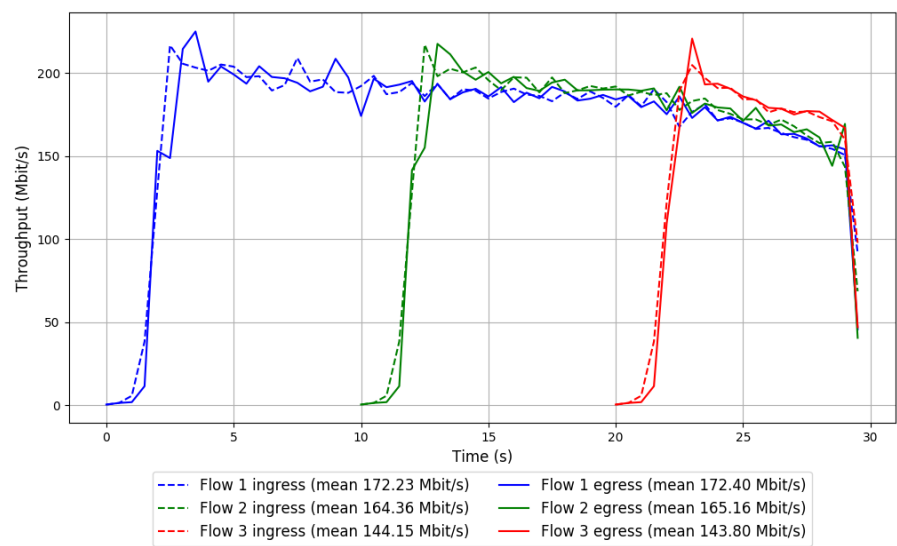
-- Flow 3:

Average throughput: 143.80 Mbit/s

95th percentile per-packet one-way delay: 141.101 ms

Loss rate: 3.14%

Run 7: Report of Indigo-1-32 — Data Link



Run 8: Statistics of Indigo-1-32

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

End at: 2018-04-18 21:48:51

Below is generated by plot.py at 2018-04-19 03:10:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 315.43 Mbit/s

95th percentile per-packet one-way delay: 137.243 ms

Loss rate: 1.31%

-- Flow 1:

Average throughput: 170.26 Mbit/s

95th percentile per-packet one-way delay: 136.807 ms

Loss rate: 0.82%

-- Flow 2:

Average throughput: 152.99 Mbit/s

95th percentile per-packet one-way delay: 138.403 ms

Loss rate: 1.31%

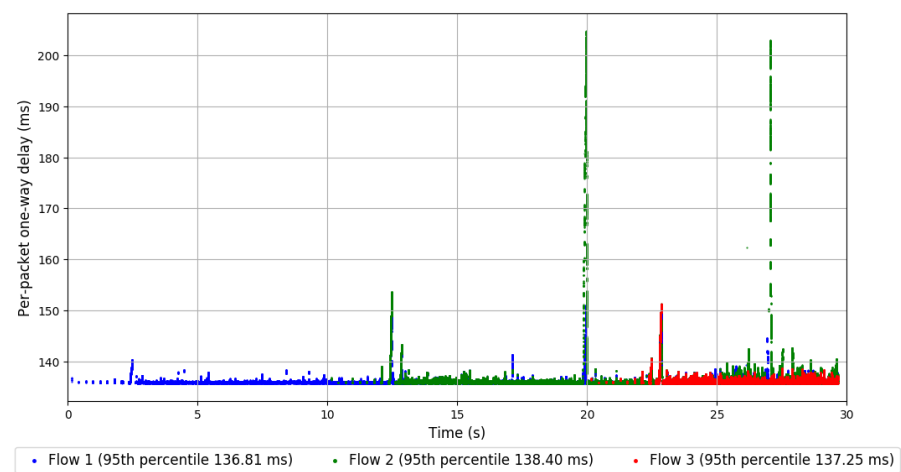
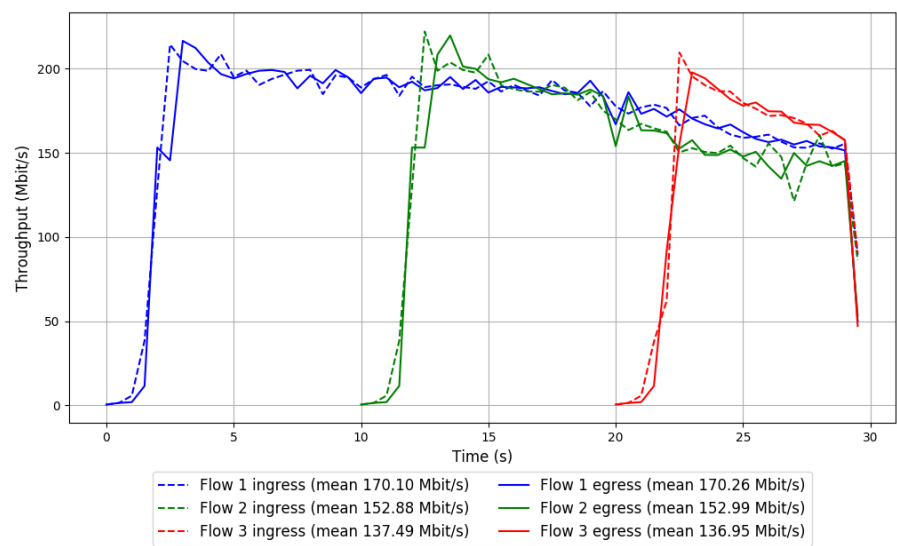
-- Flow 3:

Average throughput: 136.95 Mbit/s

95th percentile per-packet one-way delay: 137.252 ms

Loss rate: 3.17%

Run 8: Report of Indigo-1-32 — Data Link



Run 9: Statistics of Indigo-1-32

Start at: 2018-04-18 22:06:10

End at: 2018-04-18 22:06:40

Below is generated by plot.py at 2018-04-19 03:10:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 290.66 Mbit/s

95th percentile per-packet one-way delay: 136.575 ms

Loss rate: 1.48%

-- Flow 1:

Average throughput: 154.74 Mbit/s

95th percentile per-packet one-way delay: 136.008 ms

Loss rate: 0.86%

-- Flow 2:

Average throughput: 144.48 Mbit/s

95th percentile per-packet one-way delay: 137.247 ms

Loss rate: 1.43%

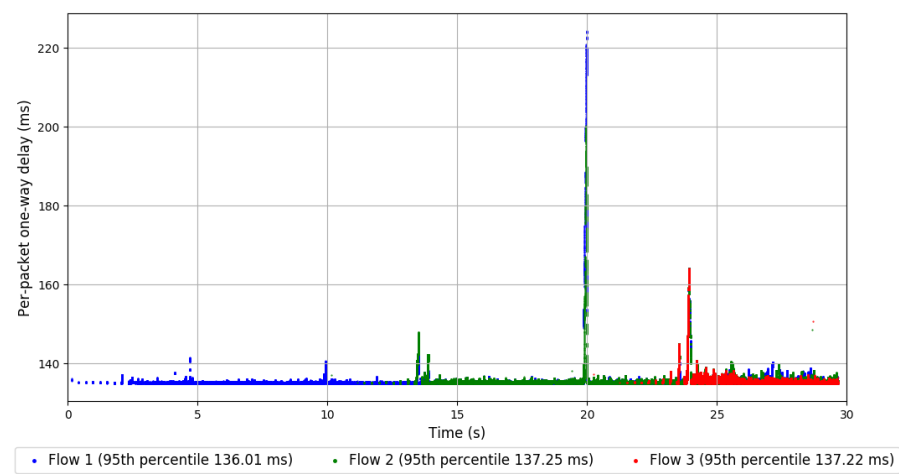
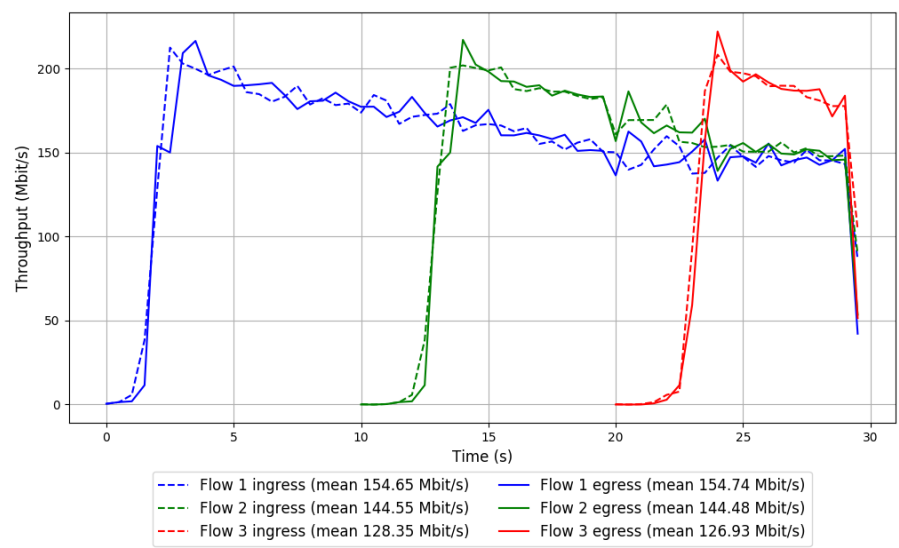
-- Flow 3:

Average throughput: 126.93 Mbit/s

95th percentile per-packet one-way delay: 137.219 ms

Loss rate: 3.89%

Run 9: Report of Indigo-1-32 — Data Link



Run 10: Statistics of Indigo-1-32

Start at: 2018-04-18 22:24:05

End at: 2018-04-18 22:24:35

Below is generated by plot.py at 2018-04-19 03:10:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 316.91 Mbit/s

95th percentile per-packet one-way delay: 136.961 ms

Loss rate: 1.33%

-- Flow 1:

Average throughput: 168.02 Mbit/s

95th percentile per-packet one-way delay: 136.437 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 152.96 Mbit/s

95th percentile per-packet one-way delay: 137.544 ms

Loss rate: 1.29%

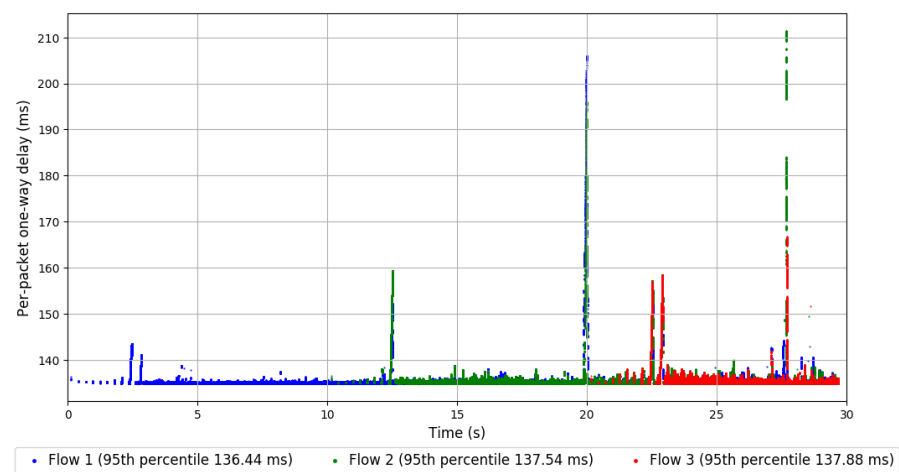
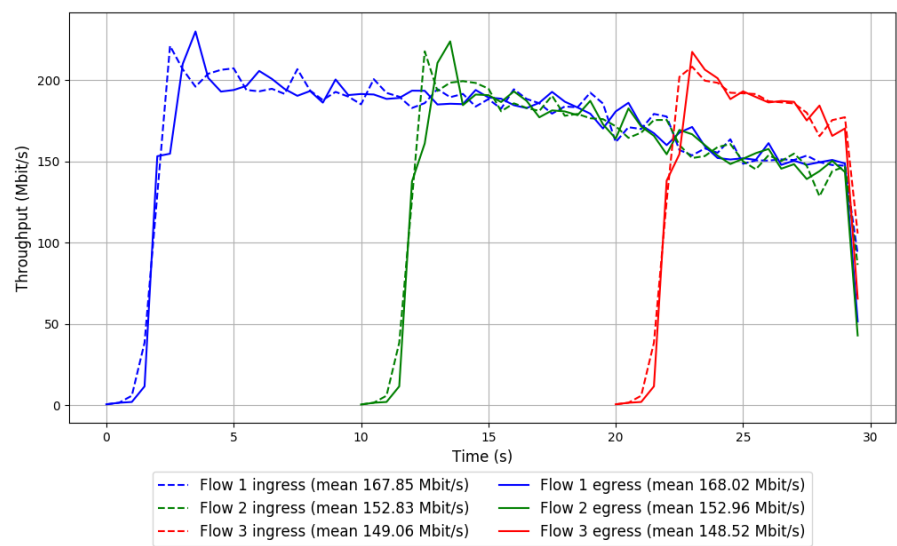
-- Flow 3:

Average throughput: 148.52 Mbit/s

95th percentile per-packet one-way delay: 137.885 ms

Loss rate: 3.20%

Run 10: Report of Indigo-1-32 — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2018-04-18 19:45:06

End at: 2018-04-18 19:45:36

Below is generated by plot.py at 2018-04-19 03:10:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 406.86 Mbit/s

95th percentile per-packet one-way delay: 246.081 ms

Loss rate: 3.62%

-- Flow 1:

Average throughput: 258.79 Mbit/s

95th percentile per-packet one-way delay: 298.281 ms

Loss rate: 4.33%

-- Flow 2:

Average throughput: 178.45 Mbit/s

95th percentile per-packet one-way delay: 137.032 ms

Loss rate: 2.18%

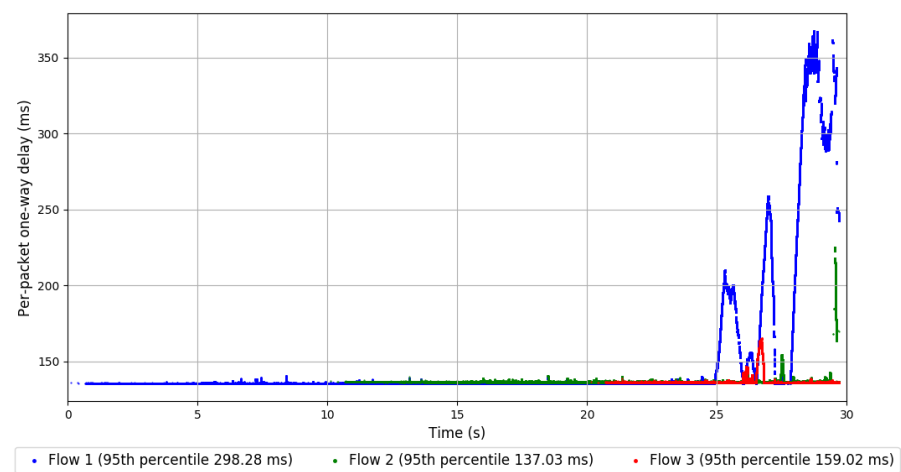
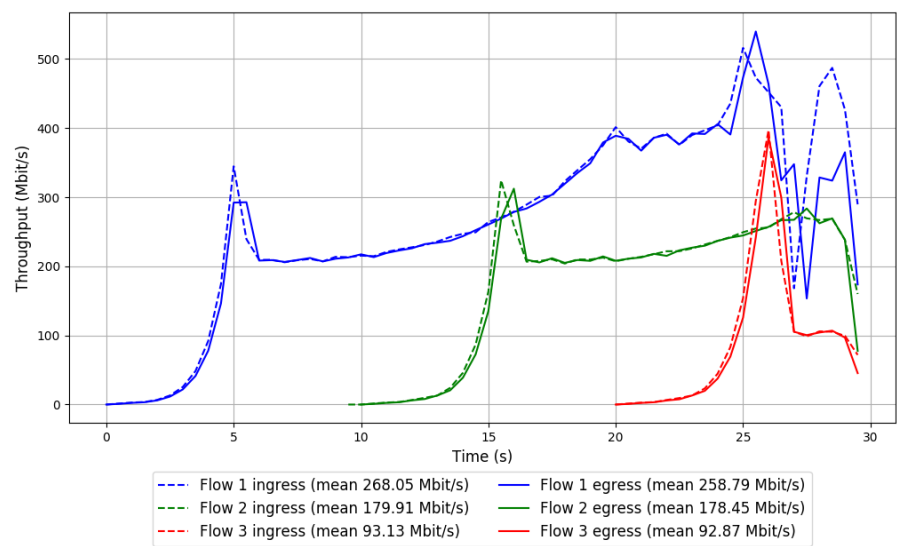
-- Flow 3:

Average throughput: 92.87 Mbit/s

95th percentile per-packet one-way delay: 159.017 ms

Loss rate: 3.05%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2018-04-18 20:03:22

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

Below is generated by plot.py at 2018-04-19 03:10:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 402.46 Mbit/s

95th percentile per-packet one-way delay: 144.761 ms

Loss rate: 1.83%

-- Flow 1:

Average throughput: 233.09 Mbit/s

95th percentile per-packet one-way delay: 142.019 ms

Loss rate: 1.19%

-- Flow 2:

Average throughput: 210.11 Mbit/s

95th percentile per-packet one-way delay: 146.486 ms

Loss rate: 2.61%

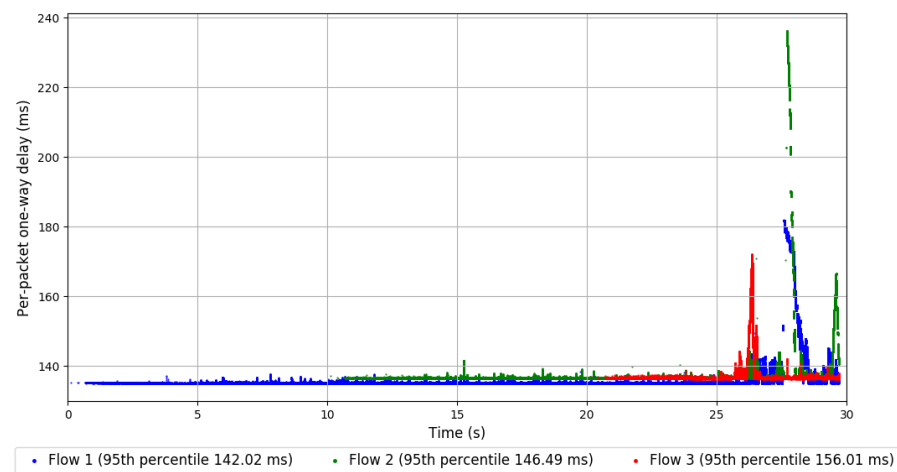
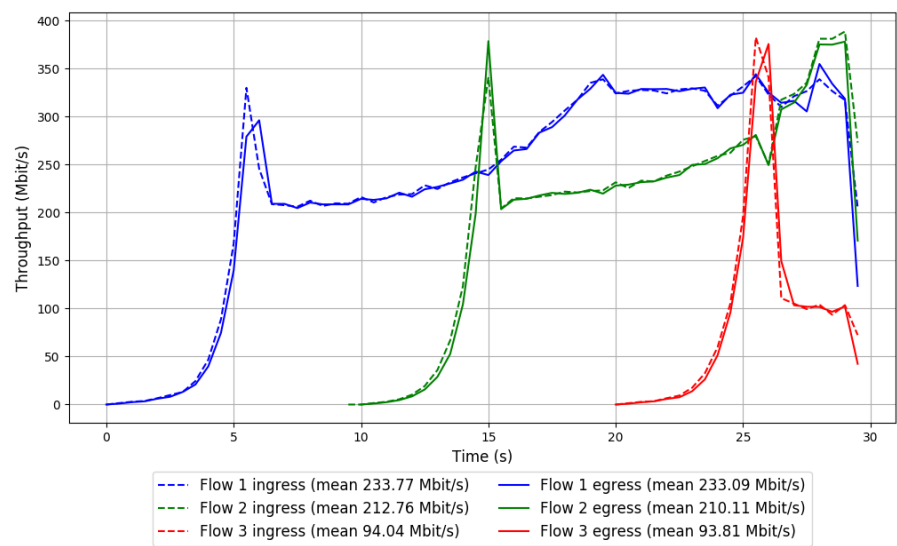
-- Flow 3:

Average throughput: 93.81 Mbit/s

95th percentile per-packet one-way delay: 156.011 ms

Loss rate: 3.09%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2018-04-18 20:21:08

End at: 2018-04-18 20:21:38

Below is generated by plot.py at 2018-04-19 03:10:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 377.71 Mbit/s

95th percentile per-packet one-way delay: 140.544 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 232.69 Mbit/s

95th percentile per-packet one-way delay: 140.569 ms

Loss rate: 0.87%

-- Flow 2:

Average throughput: 186.71 Mbit/s

95th percentile per-packet one-way delay: 142.973 ms

Loss rate: 1.79%

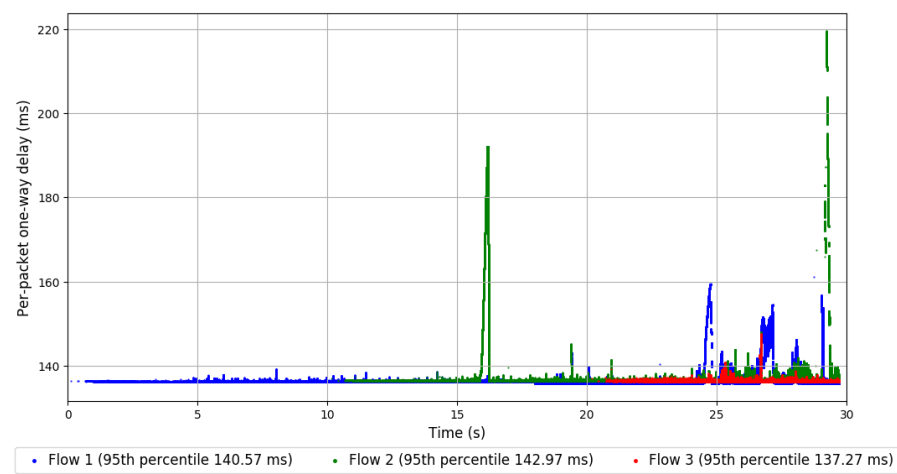
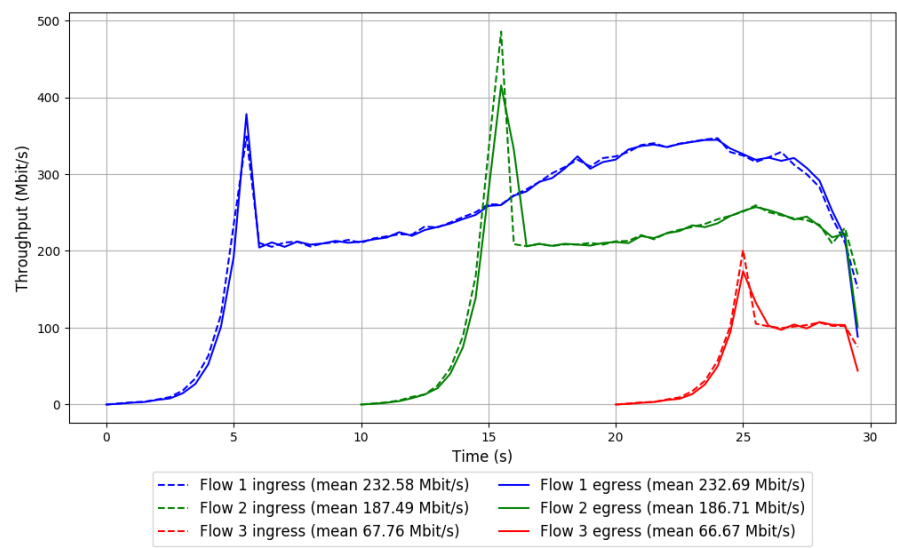
-- Flow 3:

Average throughput: 66.67 Mbit/s

95th percentile per-packet one-way delay: 137.271 ms

Loss rate: 4.34%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2018-04-18 20:39:00

End at: 2018-04-18 20:39:30

Below is generated by plot.py at 2018-04-19 03:10:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 447.17 Mbit/s

95th percentile per-packet one-way delay: 140.279 ms

Loss rate: 1.21%

-- Flow 1:

Average throughput: 277.17 Mbit/s

95th percentile per-packet one-way delay: 138.443 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 199.24 Mbit/s

95th percentile per-packet one-way delay: 171.794 ms

Loss rate: 0.98%

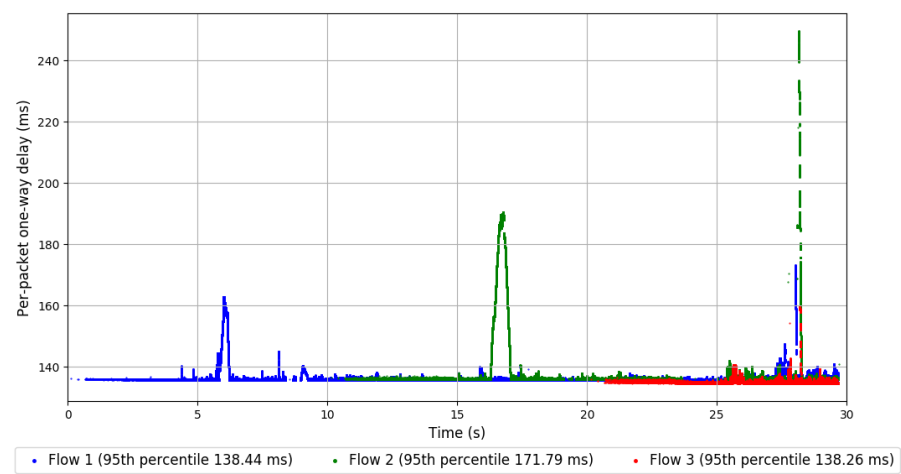
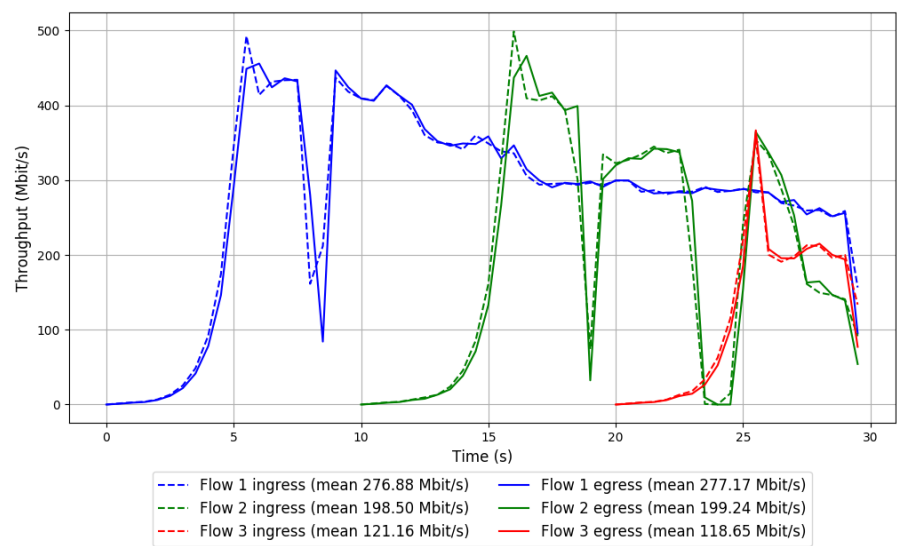
-- Flow 3:

Average throughput: 118.65 Mbit/s

95th percentile per-packet one-way delay: 138.262 ms

Loss rate: 4.79%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2018-04-18 20:57:17

End at: 2018-04-18 20:57:47

Below is generated by plot.py at 2018-04-19 03:10:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 429.40 Mbit/s

95th percentile per-packet one-way delay: 256.809 ms

Loss rate: 2.91%

-- Flow 1:

Average throughput: 273.08 Mbit/s

95th percentile per-packet one-way delay: 332.476 ms

Loss rate: 3.42%

-- Flow 2:

Average throughput: 179.47 Mbit/s

95th percentile per-packet one-way delay: 136.147 ms

Loss rate: 1.25%

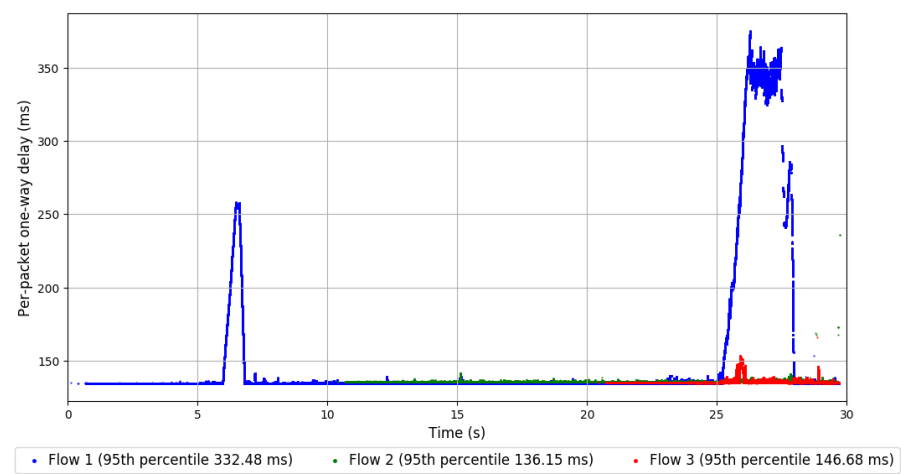
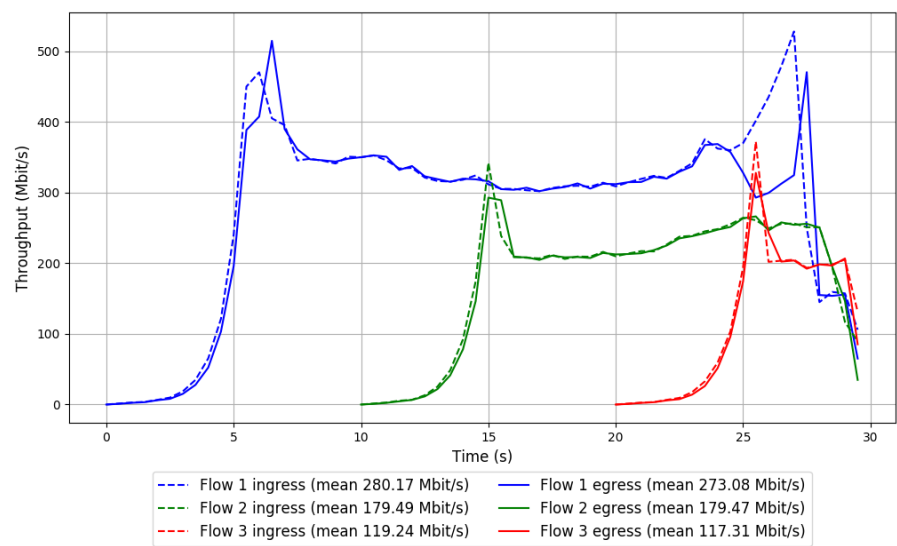
-- Flow 3:

Average throughput: 117.31 Mbit/s

95th percentile per-packet one-way delay: 146.683 ms

Loss rate: 4.34%

Run 5: Report of PCC-Vivace — Data Link



Run 6: Statistics of PCC-Vivace

Start at: 2018-04-18 21:15:38

End at: 2018-04-18 21:16:08

Below is generated by plot.py at 2018-04-19 03:10:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 419.92 Mbit/s

95th percentile per-packet one-way delay: 212.058 ms

Loss rate: 2.02%

-- Flow 1:

Average throughput: 239.00 Mbit/s

95th percentile per-packet one-way delay: 151.980 ms

Loss rate: 1.22%

-- Flow 2:

Average throughput: 192.27 Mbit/s

95th percentile per-packet one-way delay: 137.560 ms

Loss rate: 1.89%

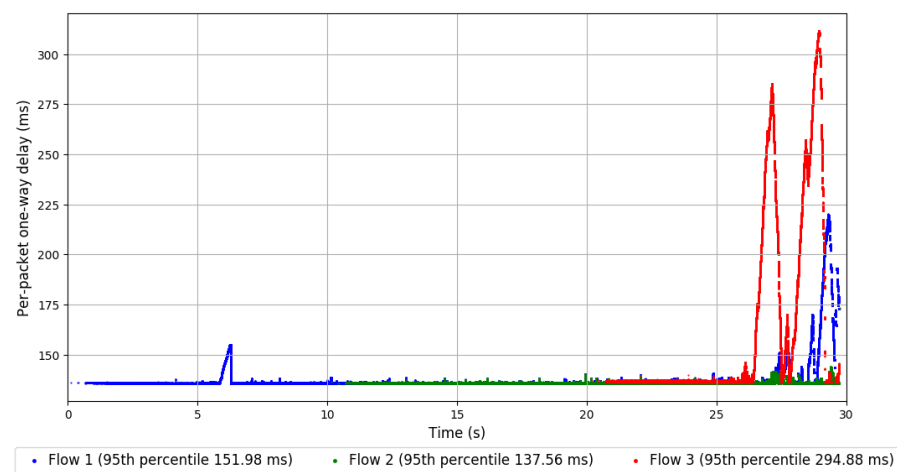
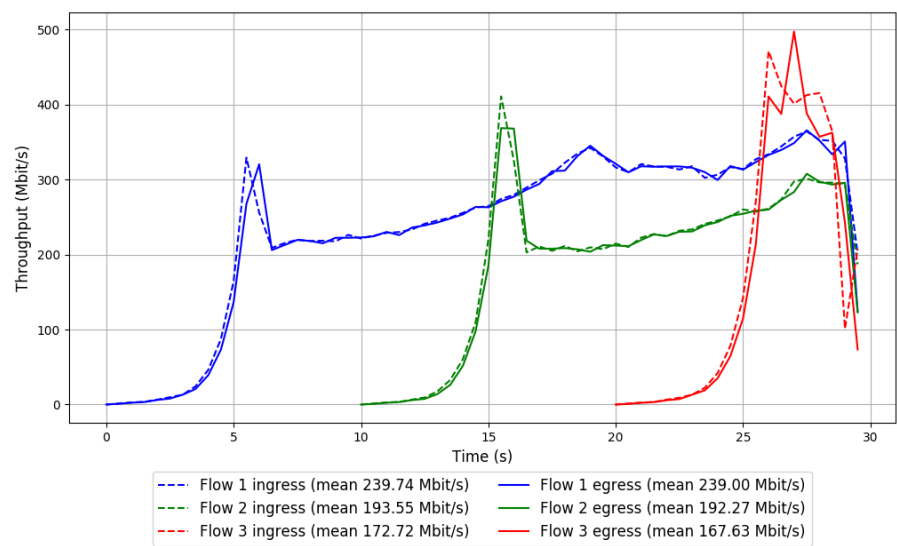
-- Flow 3:

Average throughput: 167.63 Mbit/s

95th percentile per-packet one-way delay: 294.883 ms

Loss rate: 5.65%

Run 6: Report of PCC-Vivace — Data Link



Run 7: Statistics of PCC-Vivace

Start at: 2018-04-18 21:33:51

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

Below is generated by plot.py at 2018-04-19 03:11:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 408.23 Mbit/s

95th percentile per-packet one-way delay: 142.169 ms

Loss rate: 1.65%

-- Flow 1:

Average throughput: 209.68 Mbit/s

95th percentile per-packet one-way delay: 136.244 ms

Loss rate: 1.12%

-- Flow 2:

Average throughput: 244.93 Mbit/s

95th percentile per-packet one-way delay: 151.902 ms

Loss rate: 1.64%

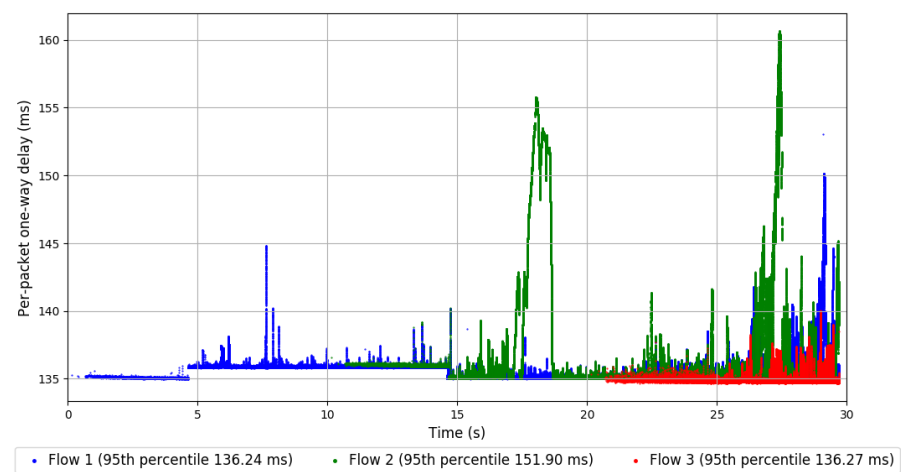
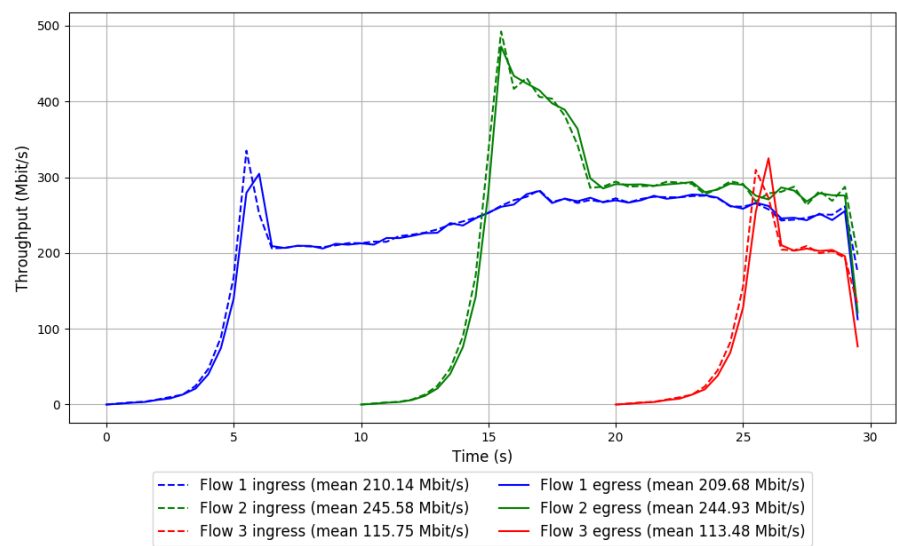
-- Flow 3:

Average throughput: 113.48 Mbit/s

95th percentile per-packet one-way delay: 136.270 ms

Loss rate: 4.63%

Run 7: Report of PCC-Vivace — Data Link



Run 8: Statistics of PCC-Vivace

Start at: 2018-04-18 21:51:41

End at: 2018-04-18 21:52:11

Below is generated by plot.py at 2018-04-19 03:11:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 418.83 Mbit/s

95th percentile per-packet one-way delay: 297.450 ms

Loss rate: 2.85%

-- Flow 1:

Average throughput: 245.62 Mbit/s

95th percentile per-packet one-way delay: 299.493 ms

Loss rate: 2.87%

-- Flow 2:

Average throughput: 183.44 Mbit/s

95th percentile per-packet one-way delay: 140.476 ms

Loss rate: 1.74%

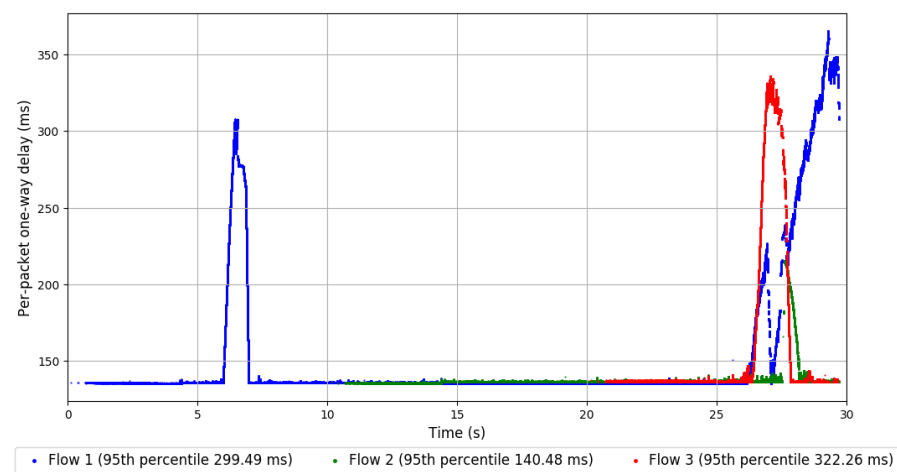
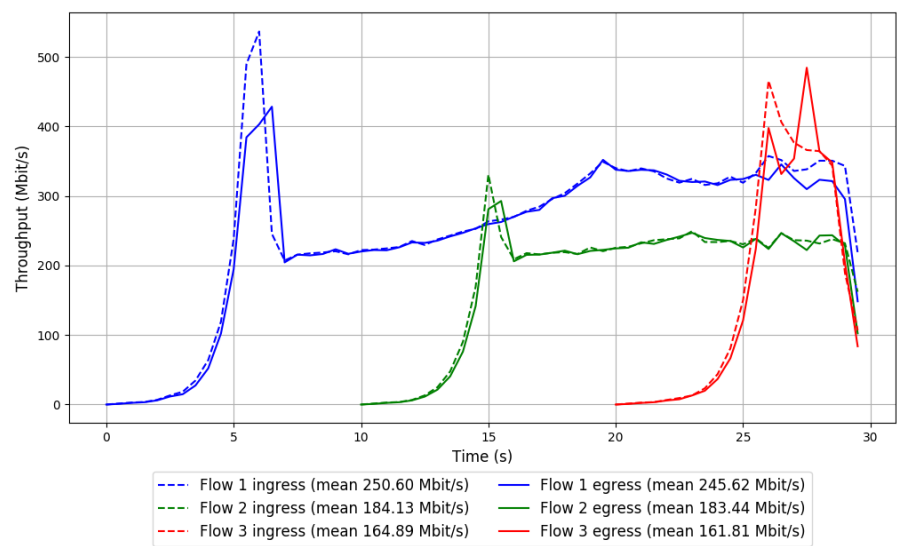
-- Flow 3:

Average throughput: 161.81 Mbit/s

95th percentile per-packet one-way delay: 322.264 ms

Loss rate: 5.23%

Run 8: Report of PCC-Vivace — Data Link



Run 9: Statistics of PCC-Vivace

Start at: 2018-04-18 22:09:31

End at: 2018-04-18 22:10:01

Below is generated by plot.py at 2018-04-19 03:11:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 430.09 Mbit/s

95th percentile per-packet one-way delay: 266.033 ms

Loss rate: 1.66%

-- Flow 1:

Average throughput: 281.43 Mbit/s

95th percentile per-packet one-way delay: 279.835 ms

Loss rate: 1.39%

-- Flow 2:

Average throughput: 175.54 Mbit/s

95th percentile per-packet one-way delay: 138.408 ms

Loss rate: 1.97%

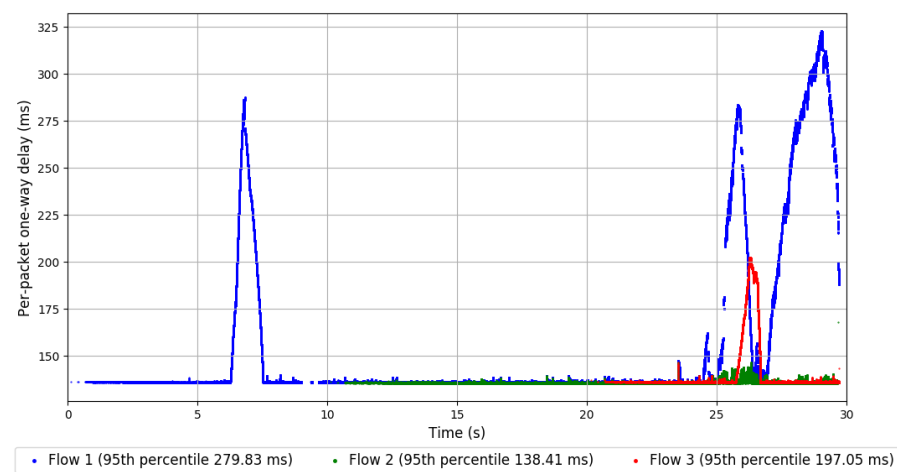
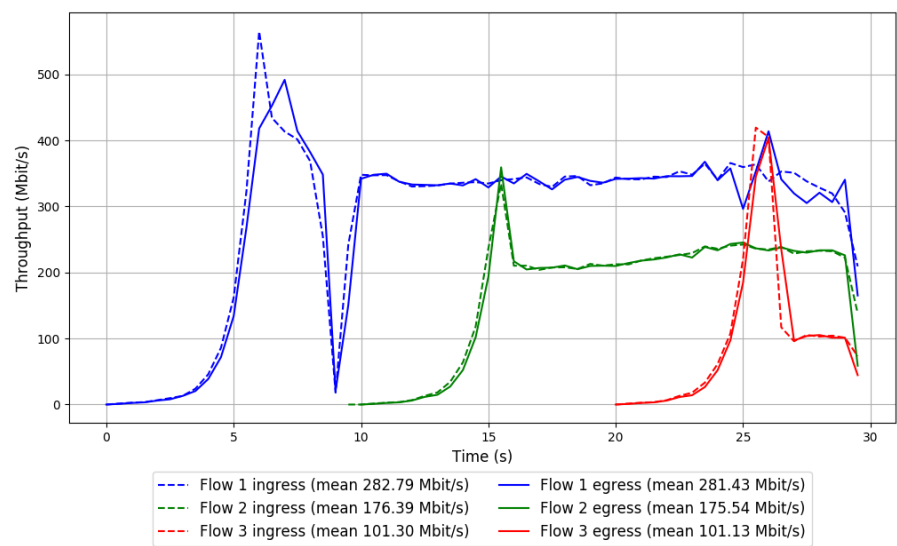
-- Flow 3:

Average throughput: 101.13 Mbit/s

95th percentile per-packet one-way delay: 197.048 ms

Loss rate: 2.87%

Run 9: Report of PCC-Vivace — Data Link



Run 10: Statistics of PCC-Vivace

Start at: 2018-04-18 22:27:08

End at: 2018-04-18 22:27:38

Below is generated by plot.py at 2018-04-19 03:11:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 443.06 Mbit/s

95th percentile per-packet one-way delay: 139.036 ms

Loss rate: 1.33%

-- Flow 1:

Average throughput: 290.65 Mbit/s

95th percentile per-packet one-way delay: 139.604 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 173.96 Mbit/s

95th percentile per-packet one-way delay: 136.424 ms

Loss rate: 1.77%

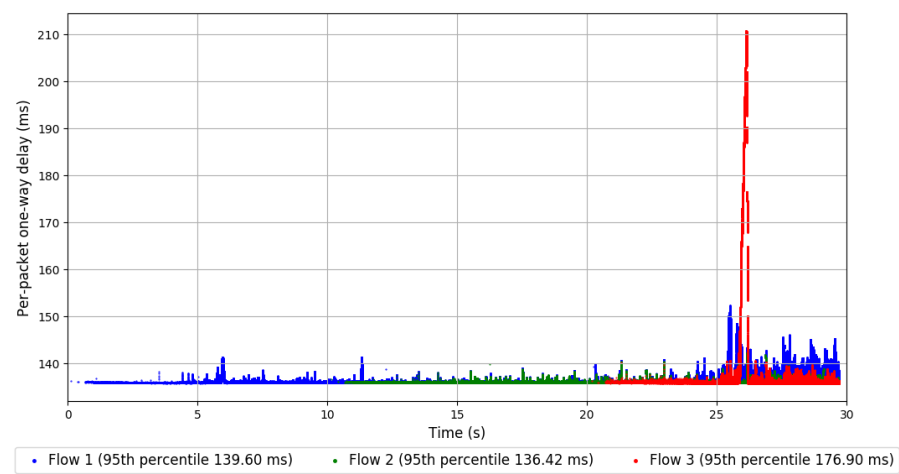
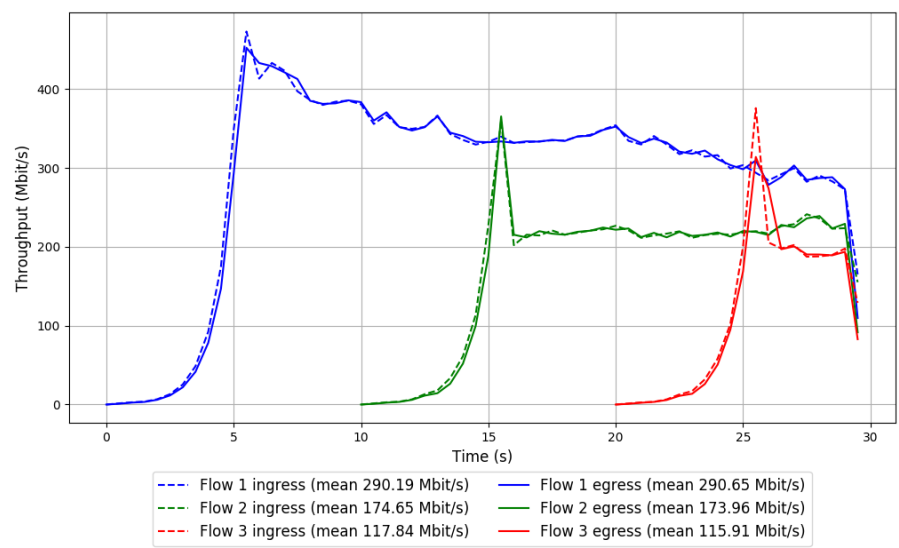
-- Flow 3:

Average throughput: 115.91 Mbit/s

95th percentile per-packet one-way delay: 176.899 ms

Loss rate: 4.37%

Run 10: Report of PCC-Vivace — Data Link



Run 1: Statistics of PCC-Expr

Start at: 2018-04-18 19:40:46

End at: 2018-04-18 19:41:16

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 19:58:57

End at: 2018-04-18 19:59:27

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 20:17:00

End at: 2018-04-18 20:17:30

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 20:34:45

End at: 2018-04-18 20:35:15

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 20:52:54

End at: 2018-04-18 20:53:24

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 21:11:16

End at: 2018-04-18 21:11:46

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 21:29:26

End at: 2018-04-18 21:29:56

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 21:47:32

End at: 2018-04-18 21:48:02

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 22:05:22

End at: 2018-04-18 22:05:52

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 22:23:17

End at: 2018-04-18 22:23:47

Run 10: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing