

Pantheon Report

Generated at 2018-04-19 02:54:45 (UTC).

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

Repeated the test of 16 congestion control schemes 10 times.

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

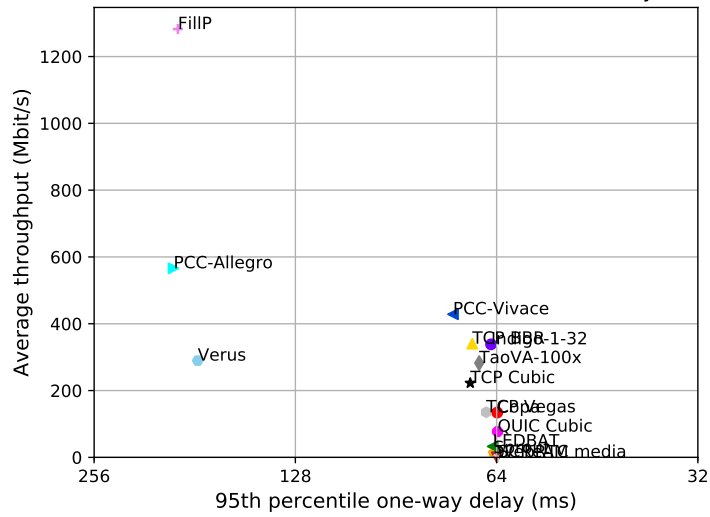
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

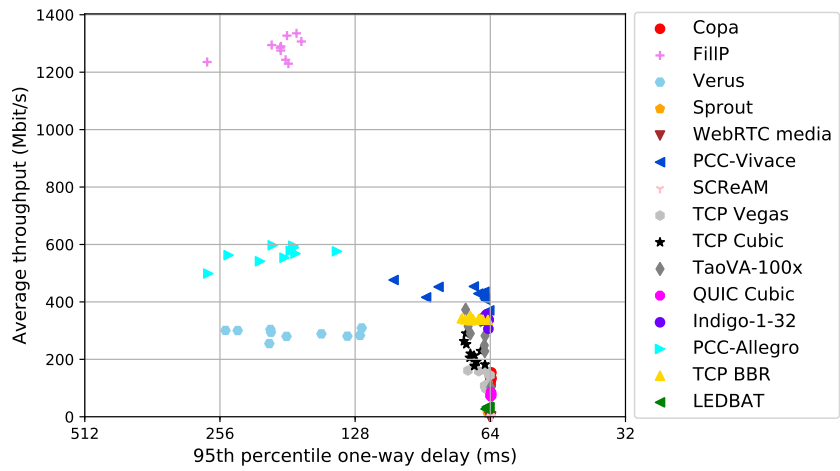
Git summary:

```
branch: master @ b3d6e7098641364fd3a292656a51aa81e316d0b4
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/fillp @ 11f8c46a2bf1dc797253db7e8ca04076272b2a44
third_party/genericCC @ d223989828276fa83a807da6e0341dc0c7b89aec
third_party/indigo @ a9b2060d39e4da2e8987e893e3eca2a6c7cd0ab9
third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db7484501f82ce8b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
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 @ f1a14bffe749737437f61b1eae30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
  M src/examples/cellsim.cc
  M src/examples/sproutbt2.cc
  M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
  M src/verus.hpp
  M tools/plot.py
third_party/vivace @ 7a4ba531e75b4a6f66f5c4580192120401784ce3
third_party/webrtc @ f271183af822eee5d0031620f4bebf38aedc5581
```

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



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

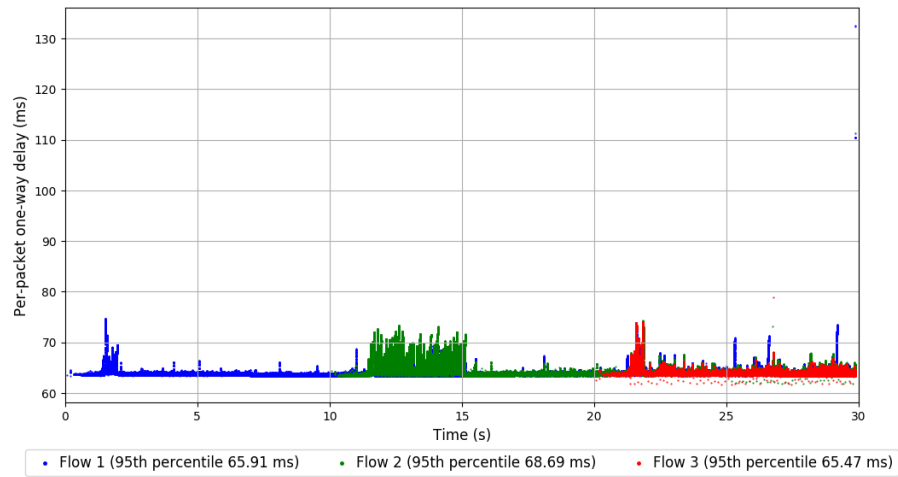
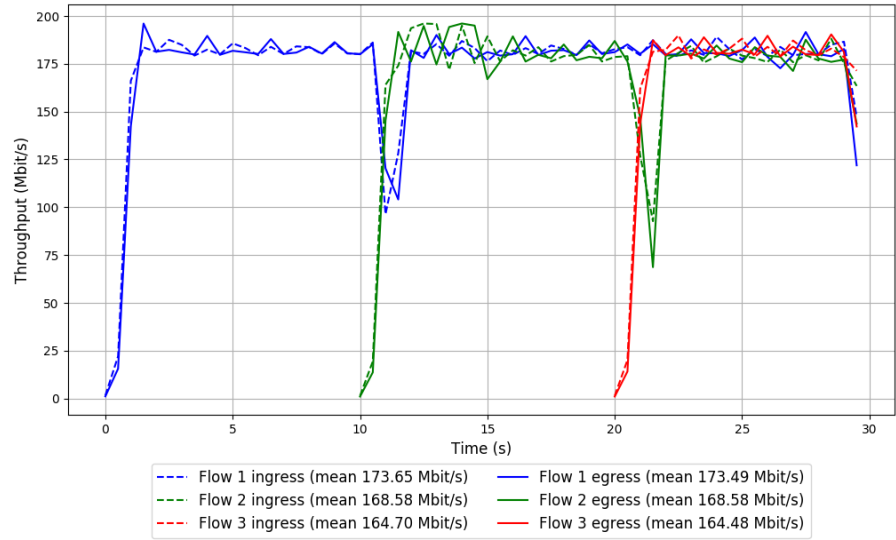



```
Run 1: Statistics of TCP BBR

Start at: 2018-04-18 19:45:31
End at: 2018-04-18 19:46:01

# Below is generated by plot.py at 2018-04-19 01:10:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 339.48 Mbit/s
95th percentile per-packet one-way delay: 67.112 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 173.49 Mbit/s
95th percentile per-packet one-way delay: 65.909 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 168.58 Mbit/s
95th percentile per-packet one-way delay: 68.695 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 164.48 Mbit/s
95th percentile per-packet one-way delay: 65.473 ms
Loss rate: 1.39%
```


Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-04-18 20:01:26

End at: 2018-04-18 20:01:56

Below is generated by plot.py at 2018-04-19 01:11:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 338.19 Mbit/s

95th percentile per-packet one-way delay: 66.509 ms

Loss rate: 0.67%

-- Flow 1:

Average throughput: 174.12 Mbit/s

95th percentile per-packet one-way delay: 66.434 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 167.18 Mbit/s

95th percentile per-packet one-way delay: 66.402 ms

Loss rate: 0.67%

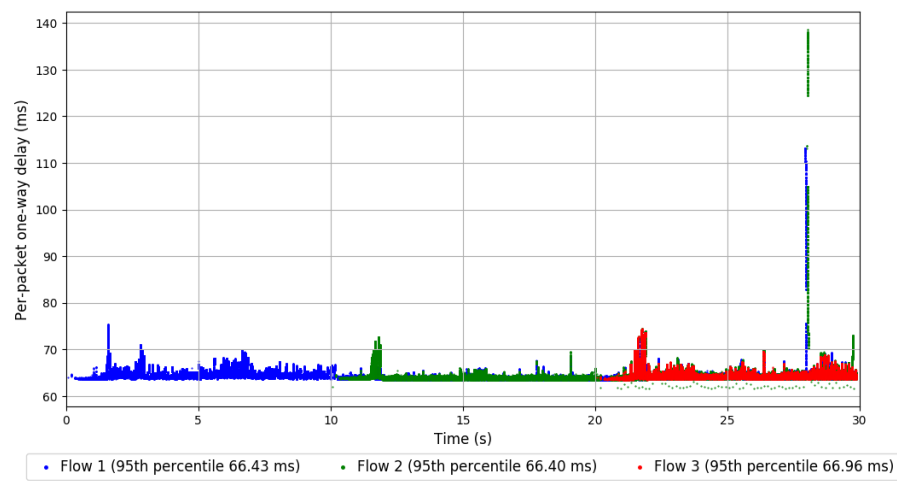
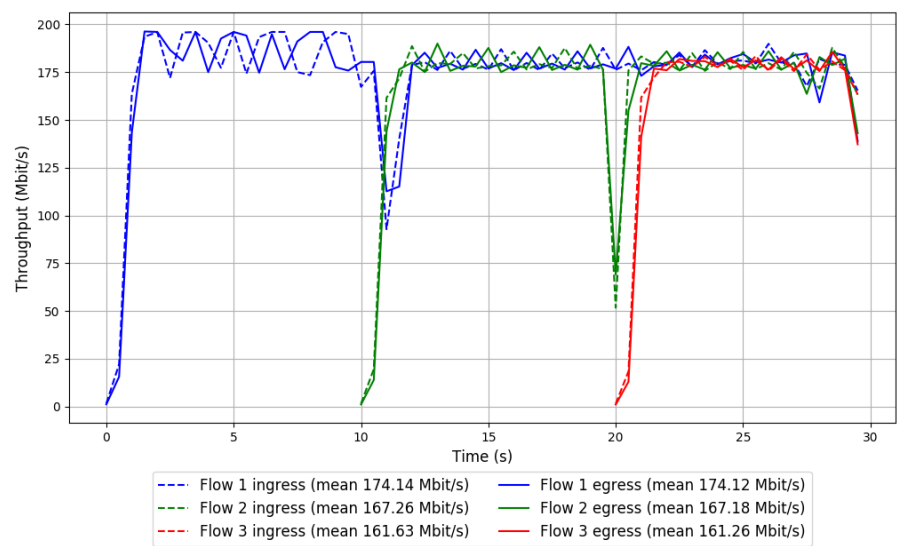
-- Flow 3:

Average throughput: 161.26 Mbit/s

95th percentile per-packet one-way delay: 66.957 ms

Loss rate: 1.44%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-04-18 20:17:30

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

Below is generated by plot.py at 2018-04-19 01:11:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 339.78 Mbit/s

95th percentile per-packet one-way delay: 69.929 ms

Loss rate: 0.67%

-- Flow 1:

Average throughput: 173.89 Mbit/s

95th percentile per-packet one-way delay: 68.129 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 169.38 Mbit/s

95th percentile per-packet one-way delay: 70.687 ms

Loss rate: 0.68%

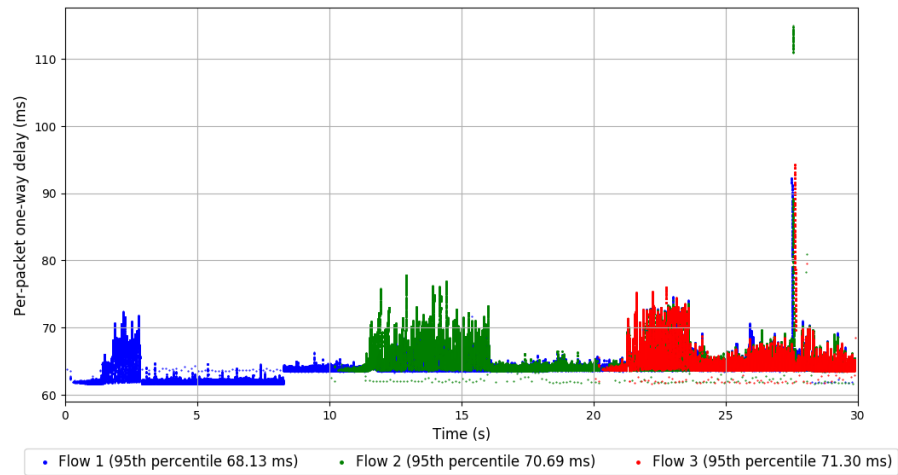
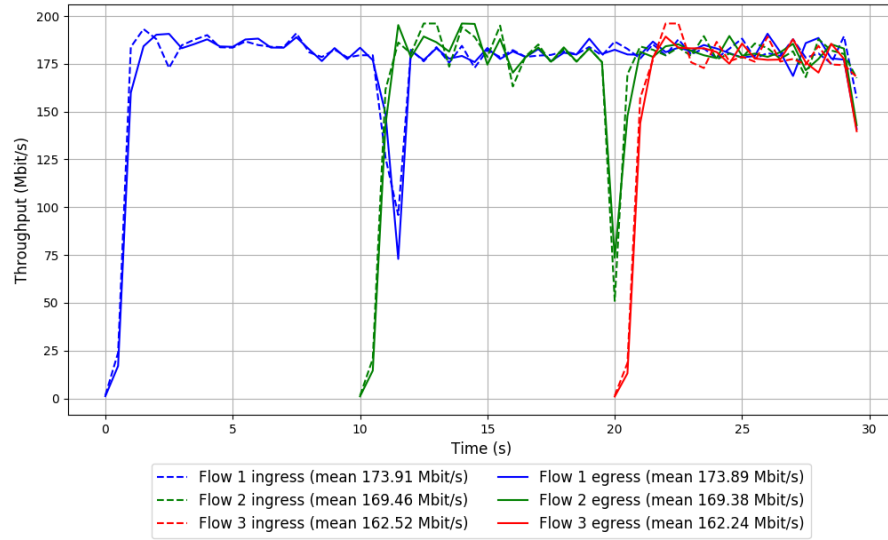
-- Flow 3:

Average throughput: 162.24 Mbit/s

95th percentile per-packet one-way delay: 71.302 ms

Loss rate: 1.41%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-04-18 20:33:23

End at: 2018-04-18 20:33:53

Below is generated by plot.py at 2018-04-19 01:11:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 339.17 Mbit/s

95th percentile per-packet one-way delay: 72.750 ms

Loss rate: 0.67%

-- Flow 1:

Average throughput: 174.21 Mbit/s

95th percentile per-packet one-way delay: 71.672 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 167.76 Mbit/s

95th percentile per-packet one-way delay: 72.840 ms

Loss rate: 0.64%

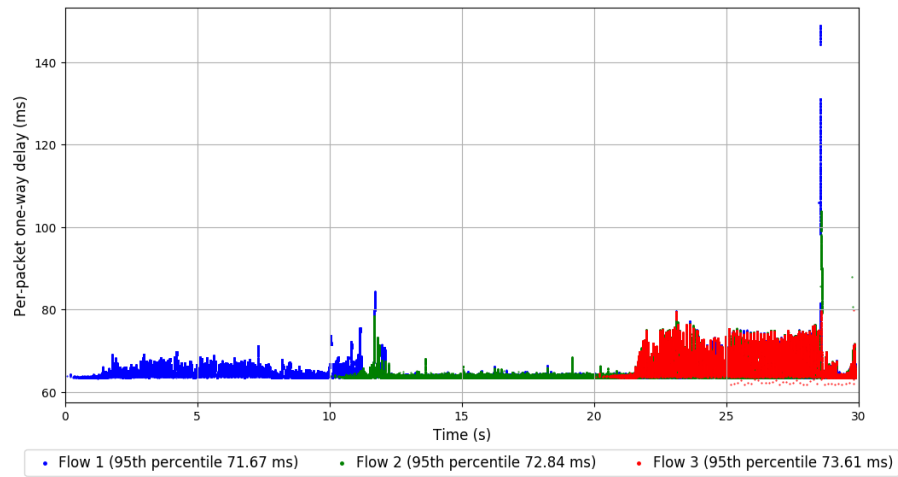
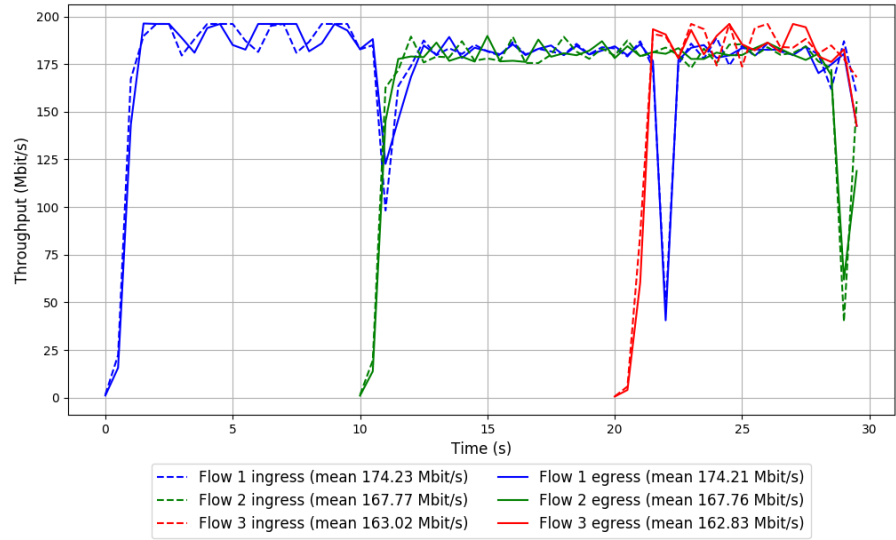
-- Flow 3:

Average throughput: 162.83 Mbit/s

95th percentile per-packet one-way delay: 73.611 ms

Loss rate: 1.51%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-04-18 20:49:16

End at: 2018-04-18 20:49:46

Below is generated by plot.py at 2018-04-19 01:11:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 337.49 Mbit/s

95th percentile per-packet one-way delay: 64.810 ms

Loss rate: 0.67%

-- Flow 1:

Average throughput: 172.21 Mbit/s

95th percentile per-packet one-way delay: 64.428 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 168.40 Mbit/s

95th percentile per-packet one-way delay: 65.233 ms

Loss rate: 0.67%

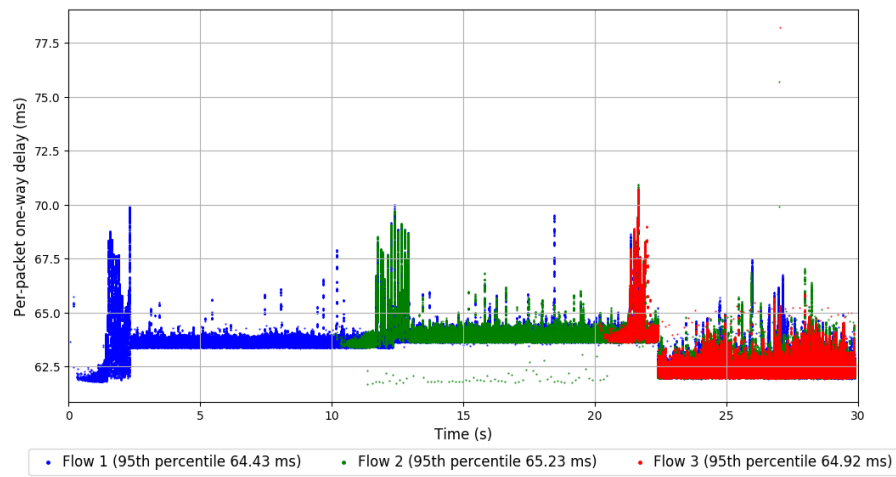
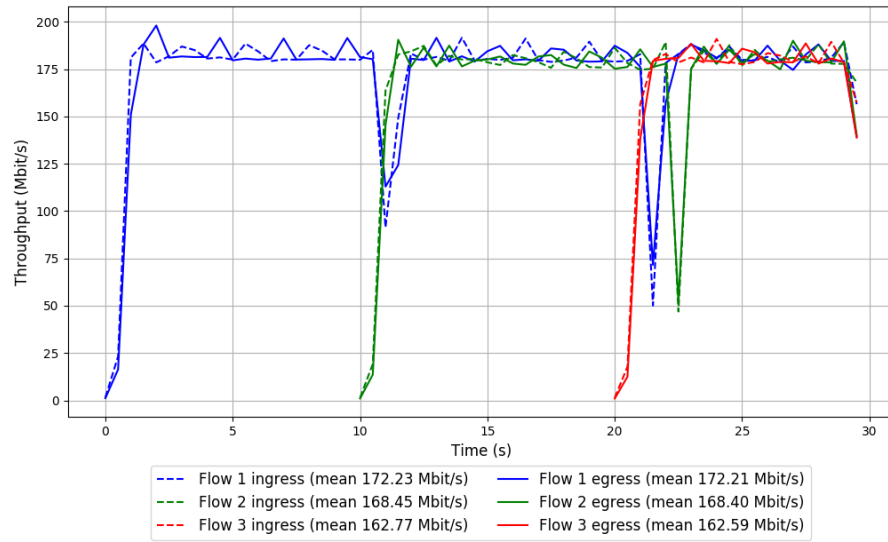
-- Flow 3:

Average throughput: 162.59 Mbit/s

95th percentile per-packet one-way delay: 64.918 ms

Loss rate: 1.40%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2018-04-18 21:05:09

End at: 2018-04-18 21:05:39

Below is generated by plot.py at 2018-04-19 01:11:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 350.99 Mbit/s

95th percentile per-packet one-way delay: 70.895 ms

Loss rate: 0.66%

-- Flow 1:

Average throughput: 179.33 Mbit/s

95th percentile per-packet one-way delay: 70.368 ms

Loss rate: 0.45%

-- Flow 2:

Average throughput: 174.14 Mbit/s

95th percentile per-packet one-way delay: 70.277 ms

Loss rate: 0.66%

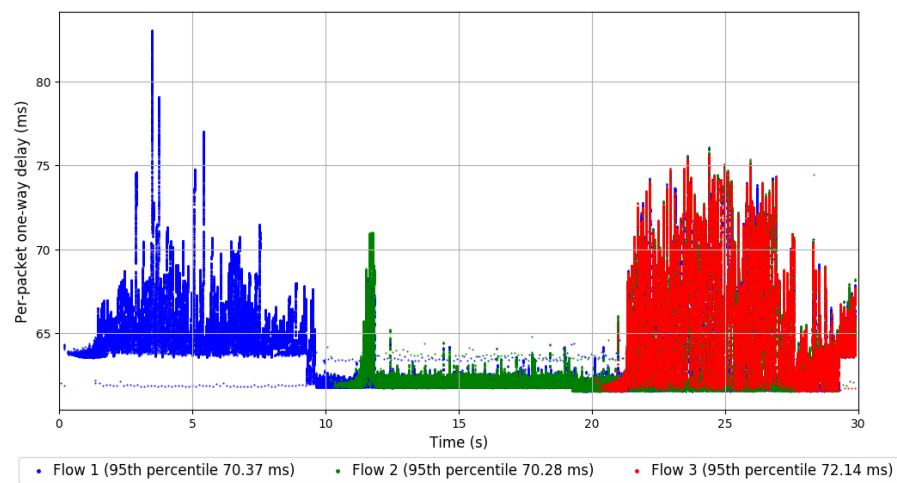
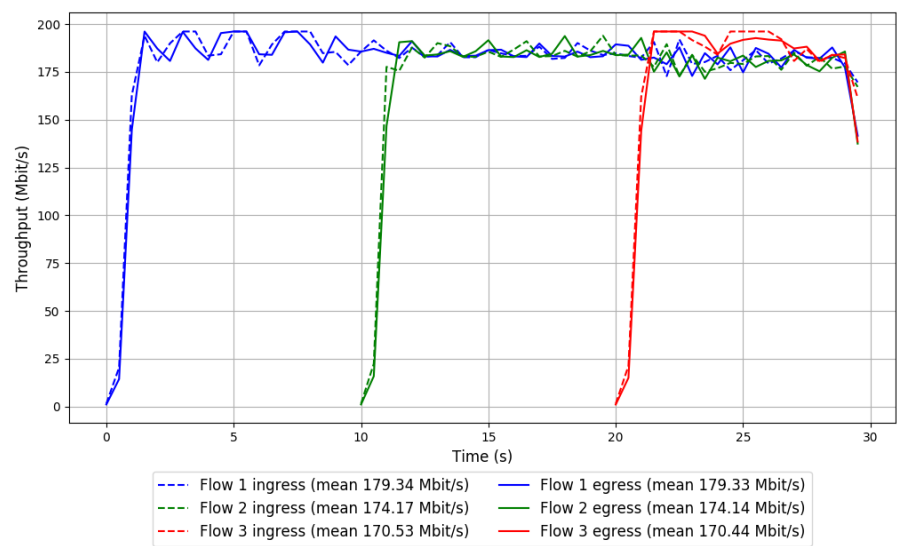
-- Flow 3:

Average throughput: 170.44 Mbit/s

95th percentile per-packet one-way delay: 72.140 ms

Loss rate: 1.35%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

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

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

Below is generated by plot.py at 2018-04-19 01:11:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 342.71 Mbit/s

95th percentile per-packet one-way delay: 74.084 ms

Loss rate: 0.68%

-- Flow 1:

Average throughput: 171.82 Mbit/s

95th percentile per-packet one-way delay: 72.554 ms

Loss rate: 0.47%

-- Flow 2:

Average throughput: 178.64 Mbit/s

95th percentile per-packet one-way delay: 75.091 ms

Loss rate: 0.65%

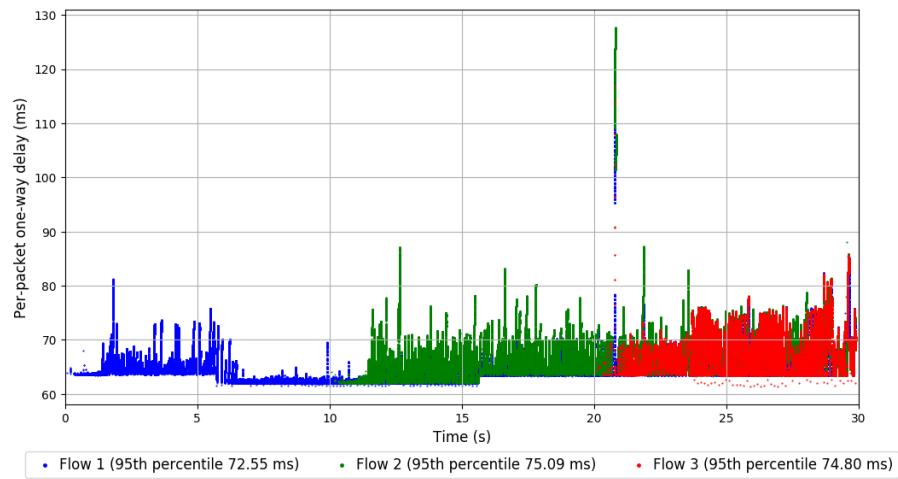
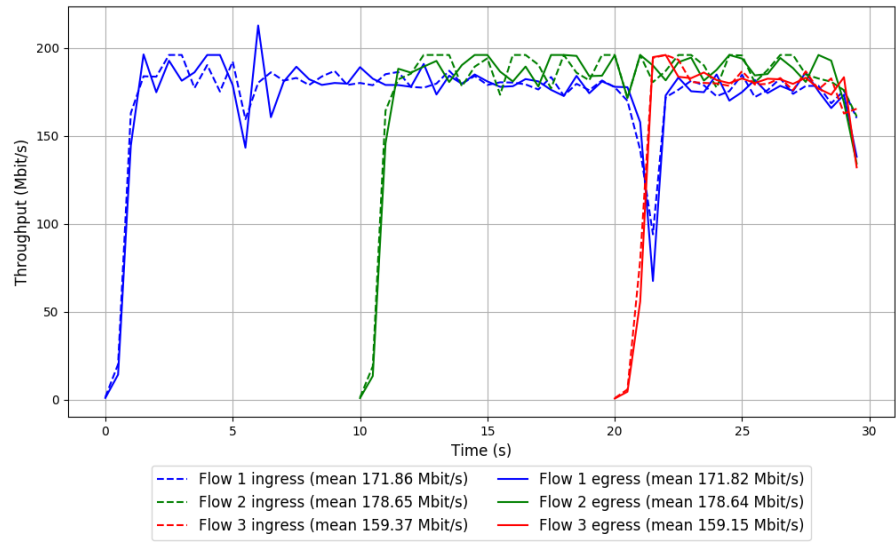
-- Flow 3:

Average throughput: 159.15 Mbit/s

95th percentile per-packet one-way delay: 74.801 ms

Loss rate: 1.43%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2018-04-18 21:36:47

End at: 2018-04-18 21:37:17

Below is generated by plot.py at 2018-04-19 01:11:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 335.88 Mbit/s

95th percentile per-packet one-way delay: 70.665 ms

Loss rate: 0.70%

-- Flow 1:

Average throughput: 171.93 Mbit/s

95th percentile per-packet one-way delay: 68.733 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 171.57 Mbit/s

95th percentile per-packet one-way delay: 72.321 ms

Loss rate: 0.67%

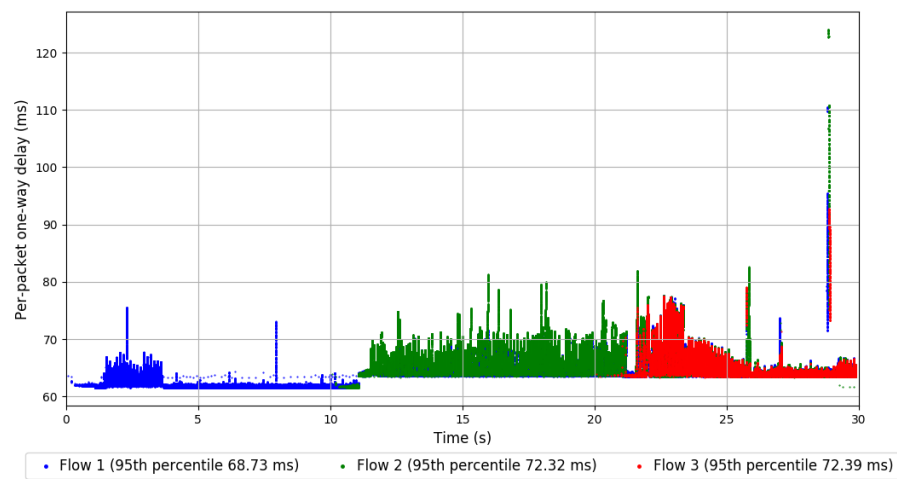
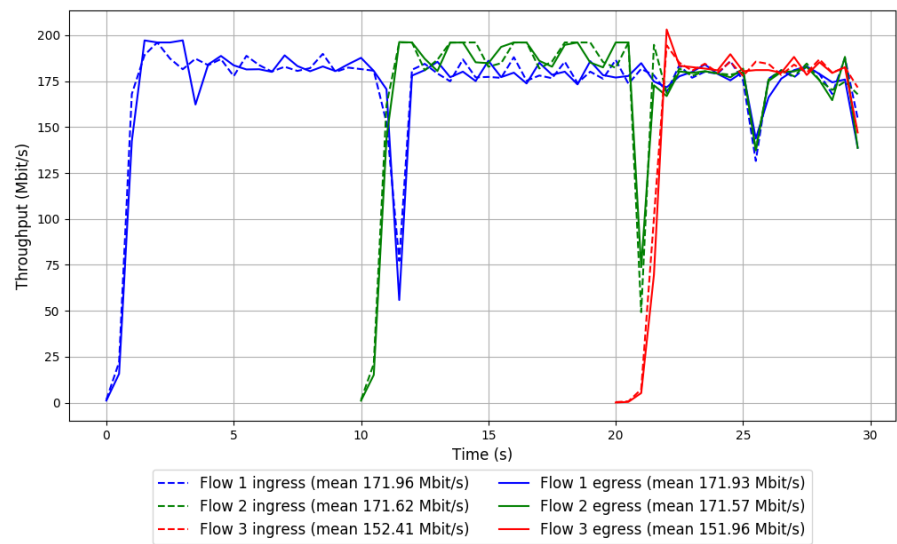
-- Flow 3:

Average throughput: 151.96 Mbit/s

95th percentile per-packet one-way delay: 72.389 ms

Loss rate: 1.63%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2018-04-18 21:52:25

End at: 2018-04-18 21:52:55

Below is generated by plot.py at 2018-04-19 01:17:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 339.24 Mbit/s

95th percentile per-packet one-way delay: 71.279 ms

Loss rate: 0.67%

-- Flow 1:

Average throughput: 173.66 Mbit/s

95th percentile per-packet one-way delay: 69.110 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 168.15 Mbit/s

95th percentile per-packet one-way delay: 71.779 ms

Loss rate: 0.69%

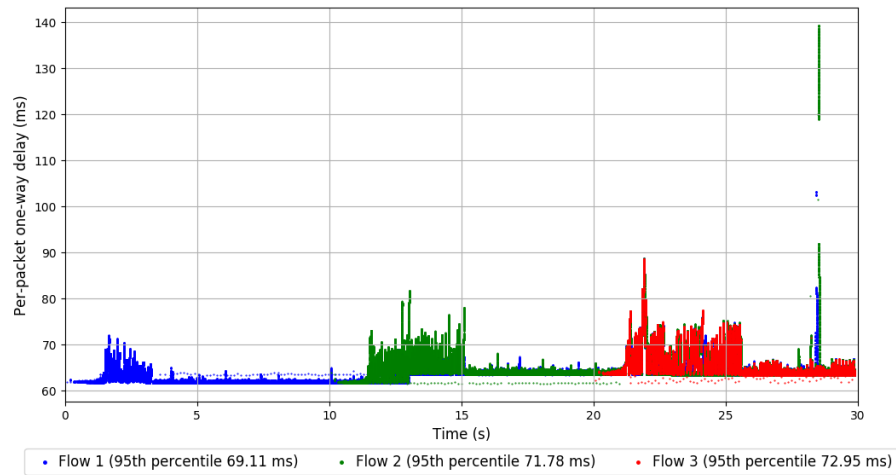
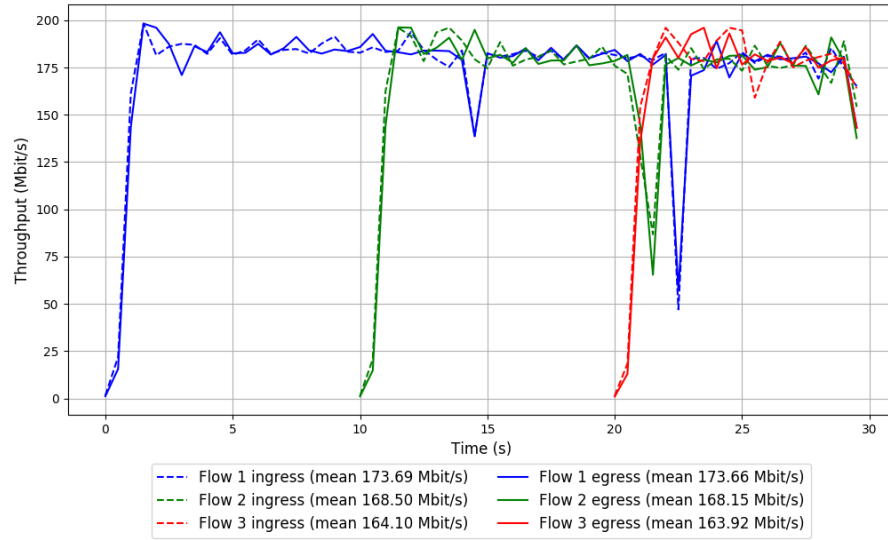
-- Flow 3:

Average throughput: 163.92 Mbit/s

95th percentile per-packet one-way delay: 72.947 ms

Loss rate: 1.39%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2018-04-18 22:08:19

End at: 2018-04-18 22:08:49

Below is generated by plot.py at 2018-04-19 01:17:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 340.37 Mbit/s

95th percentile per-packet one-way delay: 67.931 ms

Loss rate: 0.69%

-- Flow 1:

Average throughput: 171.29 Mbit/s

95th percentile per-packet one-way delay: 66.983 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 173.44 Mbit/s

95th percentile per-packet one-way delay: 68.751 ms

Loss rate: 0.69%

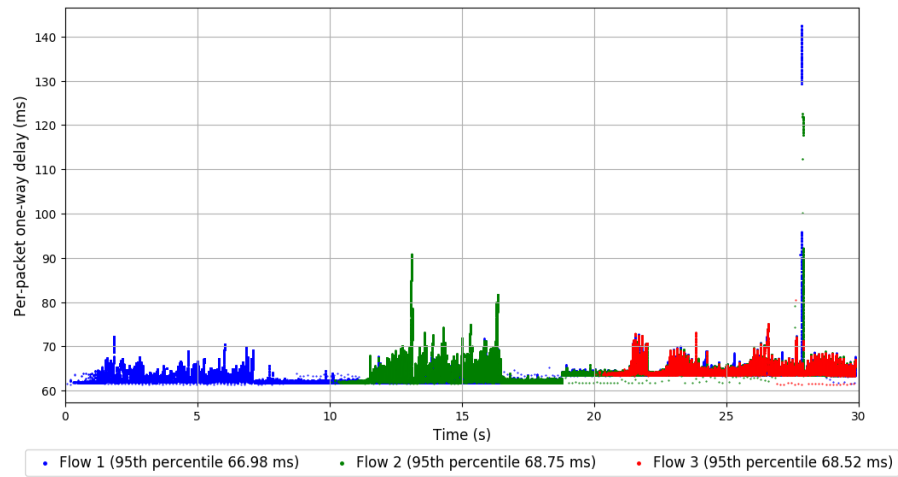
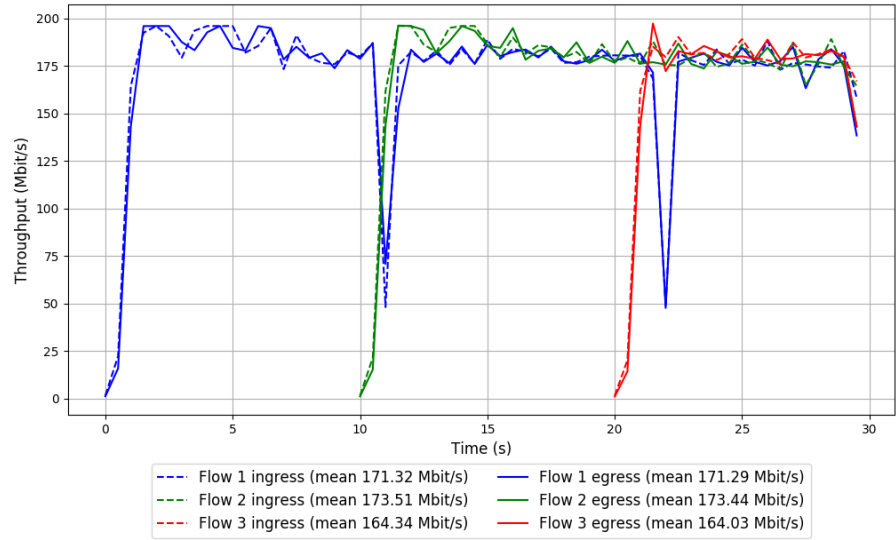
-- Flow 3:

Average throughput: 164.03 Mbit/s

95th percentile per-packet one-way delay: 68.524 ms

Loss rate: 1.49%

Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-04-18 19:46:31

End at: 2018-04-18 19:47:01

Below is generated by plot.py at 2018-04-19 01:17:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 219.73 Mbit/s

95th percentile per-packet one-way delay: 70.881 ms

Loss rate: 0.97%

-- Flow 1:

Average throughput: 135.02 Mbit/s

95th percentile per-packet one-way delay: 71.118 ms

Loss rate: 1.12%

-- Flow 2:

Average throughput: 125.51 Mbit/s

95th percentile per-packet one-way delay: 70.298 ms

Loss rate: 0.66%

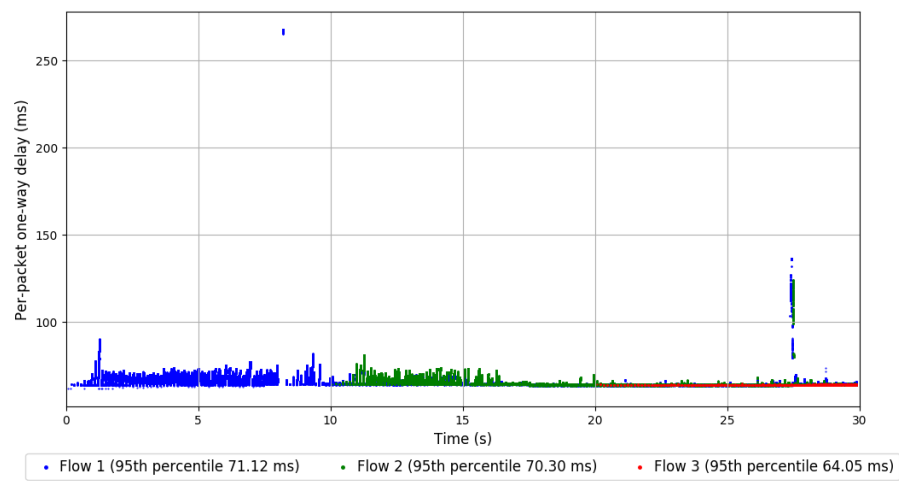
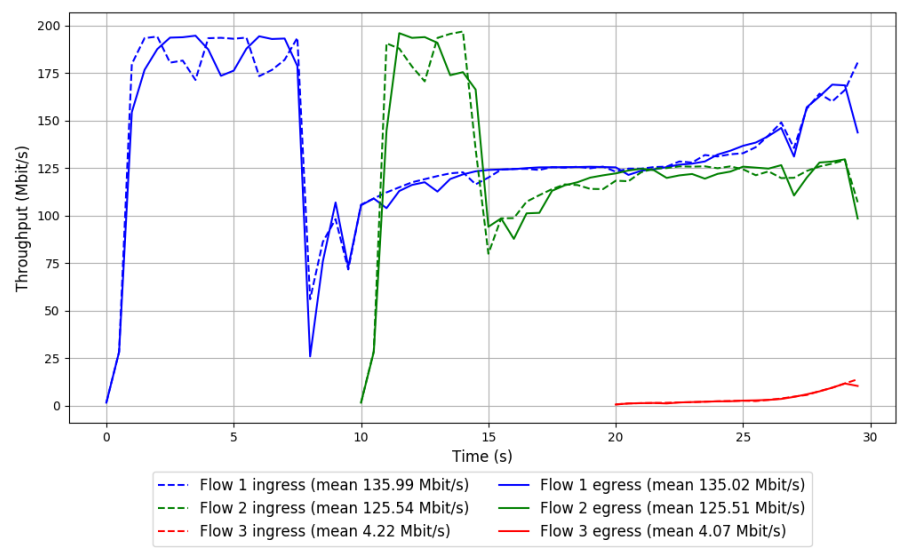
-- Flow 3:

Average throughput: 4.07 Mbit/s

95th percentile per-packet one-way delay: 64.052 ms

Loss rate: 4.71%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-04-18 20:02:25

End at: 2018-04-18 20:02:55

Below is generated by plot.py at 2018-04-19 01:17:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 289.87 Mbit/s

95th percentile per-packet one-way delay: 72.519 ms

Loss rate: 0.53%

-- Flow 1:

Average throughput: 139.64 Mbit/s

95th percentile per-packet one-way delay: 71.280 ms

Loss rate: 0.50%

-- Flow 2:

Average throughput: 172.72 Mbit/s

95th percentile per-packet one-way delay: 74.150 ms

Loss rate: 0.28%

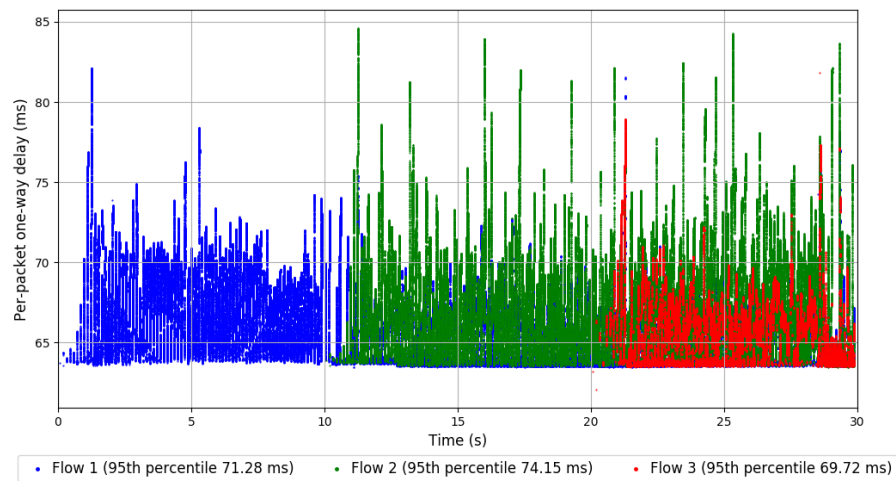
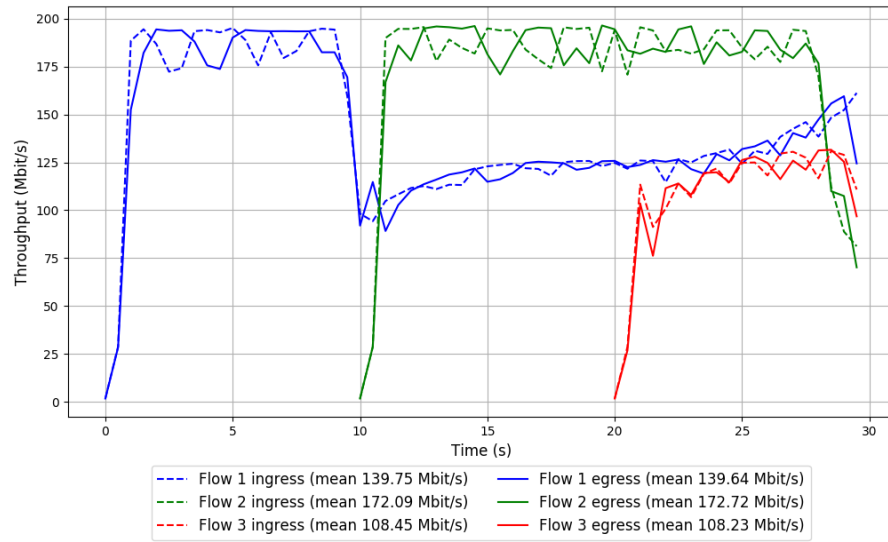
-- Flow 3:

Average throughput: 108.23 Mbit/s

95th percentile per-packet one-way delay: 69.725 ms

Loss rate: 1.46%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

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

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

Below is generated by plot.py at 2018-04-19 01:17:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 252.75 Mbit/s

95th percentile per-packet one-way delay: 72.367 ms

Loss rate: 0.80%

-- Flow 1:

Average throughput: 139.71 Mbit/s

95th percentile per-packet one-way delay: 73.963 ms

Loss rate: 0.59%

-- Flow 2:

Average throughput: 116.43 Mbit/s

95th percentile per-packet one-way delay: 69.443 ms

Loss rate: 0.82%

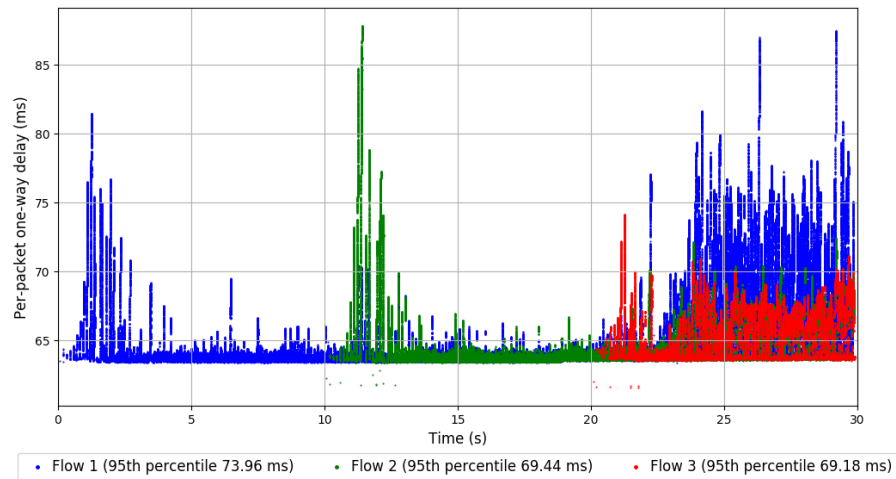
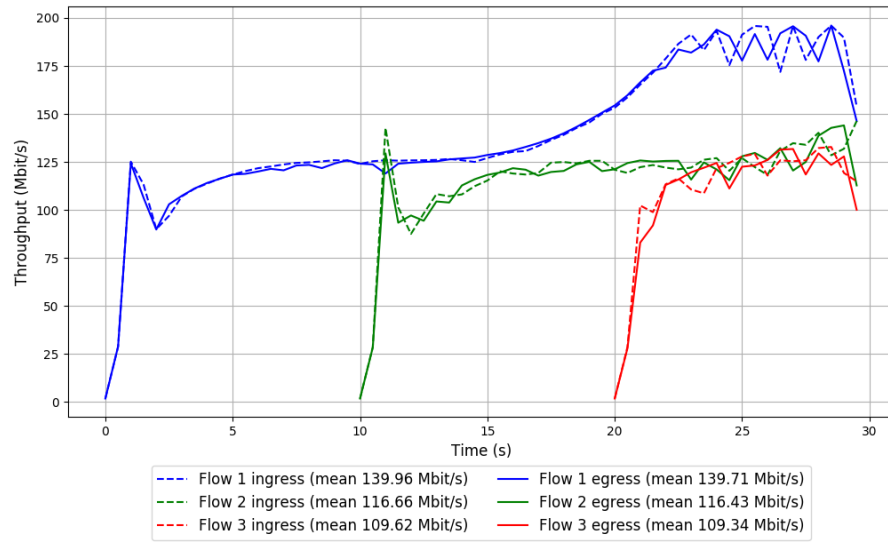
-- Flow 3:

Average throughput: 109.34 Mbit/s

95th percentile per-packet one-way delay: 69.178 ms

Loss rate: 1.52%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-04-18 20:34:22

End at: 2018-04-18 20:34:52

Below is generated by plot.py at 2018-04-19 01:17:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 205.59 Mbit/s

95th percentile per-packet one-way delay: 71.146 ms

Loss rate: 0.82%

-- Flow 1:

Average throughput: 149.98 Mbit/s

95th percentile per-packet one-way delay: 71.545 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 41.48 Mbit/s

95th percentile per-packet one-way delay: 63.063 ms

Loss rate: 2.67%

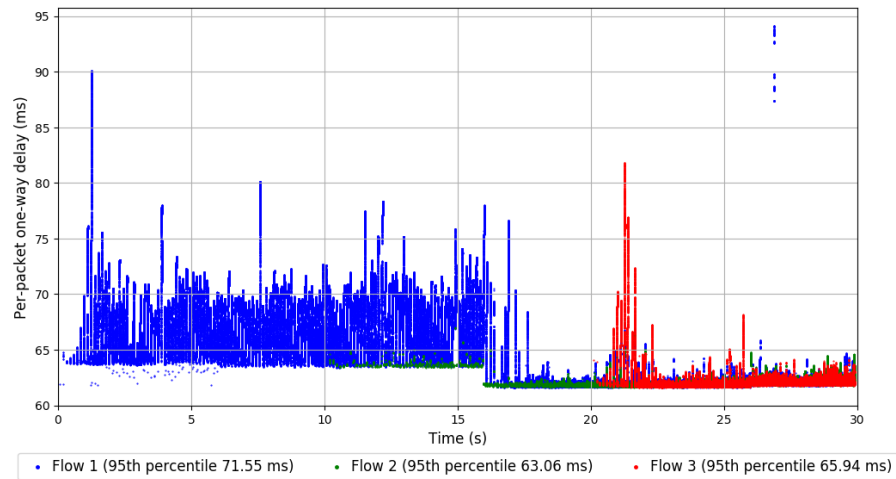
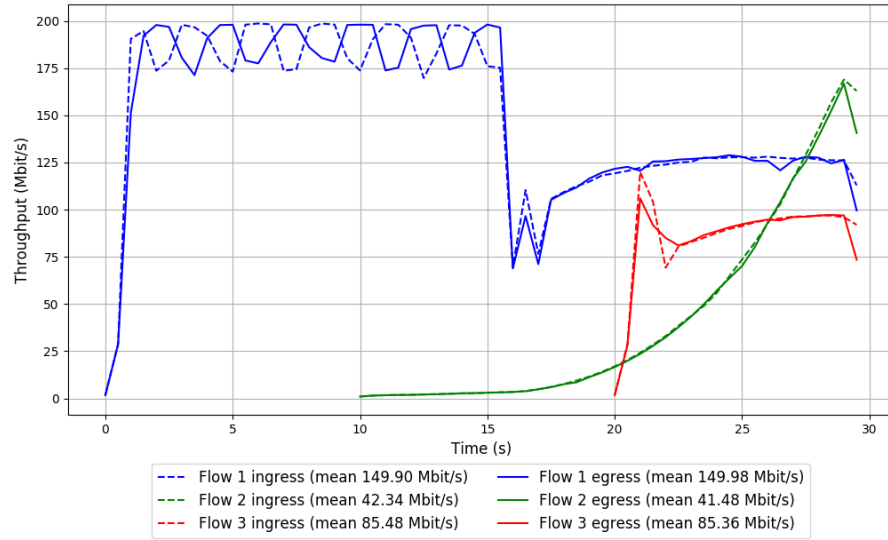
-- Flow 3:

Average throughput: 85.36 Mbit/s

95th percentile per-packet one-way delay: 65.941 ms

Loss rate: 1.42%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-04-18 20:50:15

End at: 2018-04-18 20:50:45

Below is generated by plot.py at 2018-04-19 01:17:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 228.99 Mbit/s

95th percentile per-packet one-way delay: 67.198 ms

Loss rate: 0.78%

-- Flow 1:

Average throughput: 110.36 Mbit/s

95th percentile per-packet one-way delay: 66.866 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 101.65 Mbit/s

95th percentile per-packet one-way delay: 67.389 ms

Loss rate: 0.85%

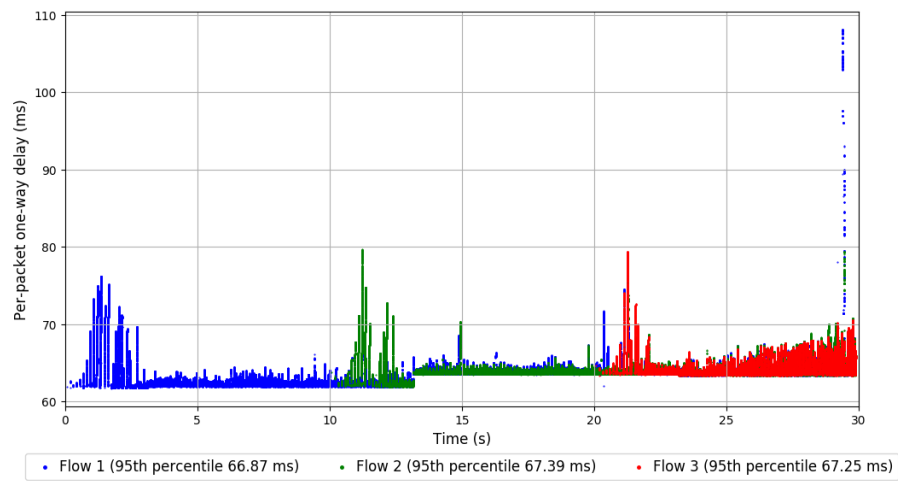
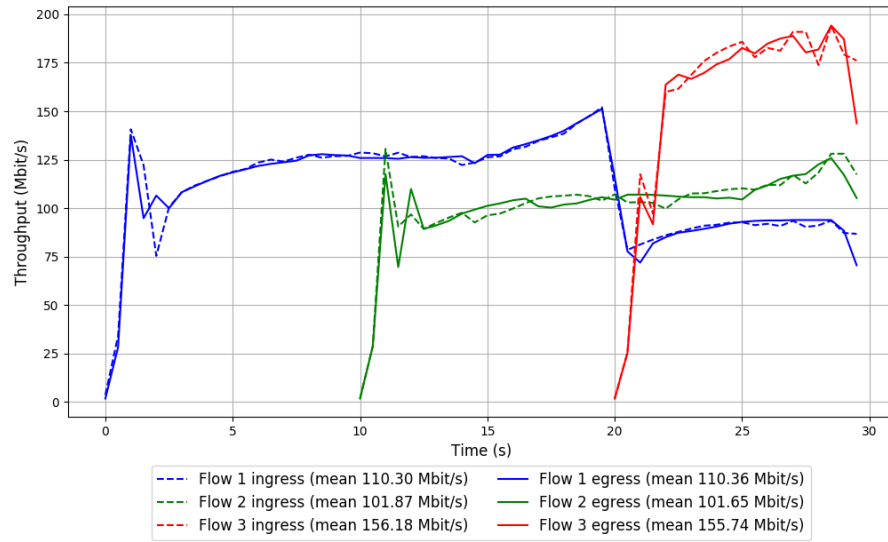
-- Flow 3:

Average throughput: 155.74 Mbit/s

95th percentile per-packet one-way delay: 67.253 ms

Loss rate: 1.57%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2018-04-18 21:06:09

End at: 2018-04-18 21:06:39

Below is generated by plot.py at 2018-04-19 01:17:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 181.99 Mbit/s

95th percentile per-packet one-way delay: 65.772 ms

Loss rate: 0.57%

-- Flow 1:

Average throughput: 107.95 Mbit/s

95th percentile per-packet one-way delay: 65.755 ms

Loss rate: 0.48%

-- Flow 2:

Average throughput: 109.66 Mbit/s

95th percentile per-packet one-way delay: 65.878 ms

Loss rate: 0.62%

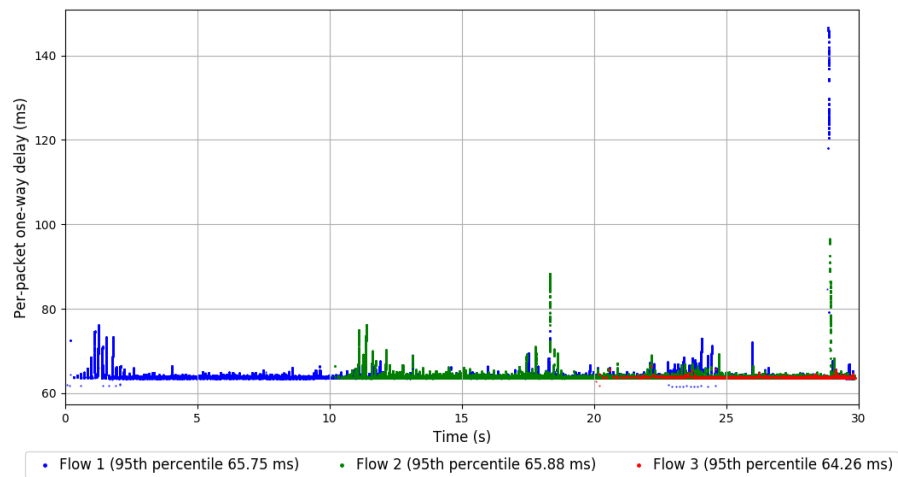
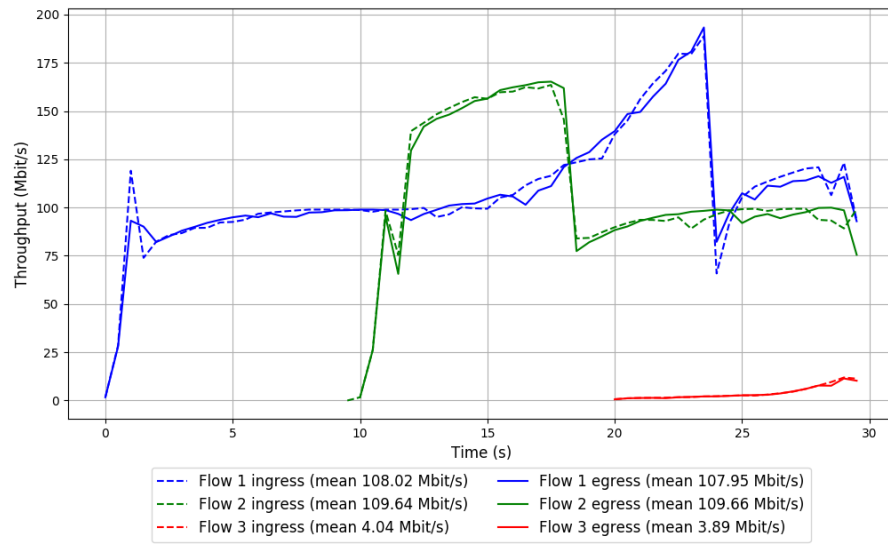
-- Flow 3:

Average throughput: 3.89 Mbit/s

95th percentile per-packet one-way delay: 64.262 ms

Loss rate: 4.89%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2018-04-18 21:22:02

End at: 2018-04-18 21:22:32

Below is generated by plot.py at 2018-04-19 01:18:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 177.08 Mbit/s

95th percentile per-packet one-way delay: 69.464 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 123.51 Mbit/s

95th percentile per-packet one-way delay: 69.934 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 41.06 Mbit/s

95th percentile per-packet one-way delay: 67.607 ms

Loss rate: 2.89%

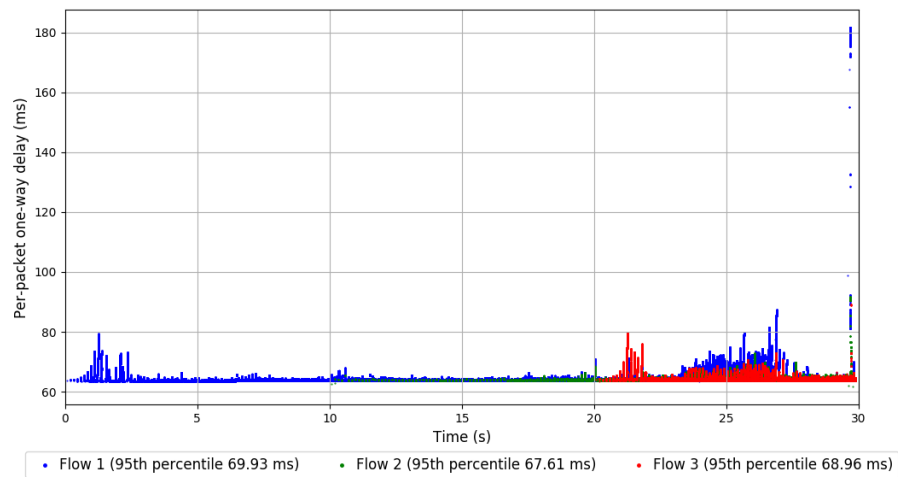
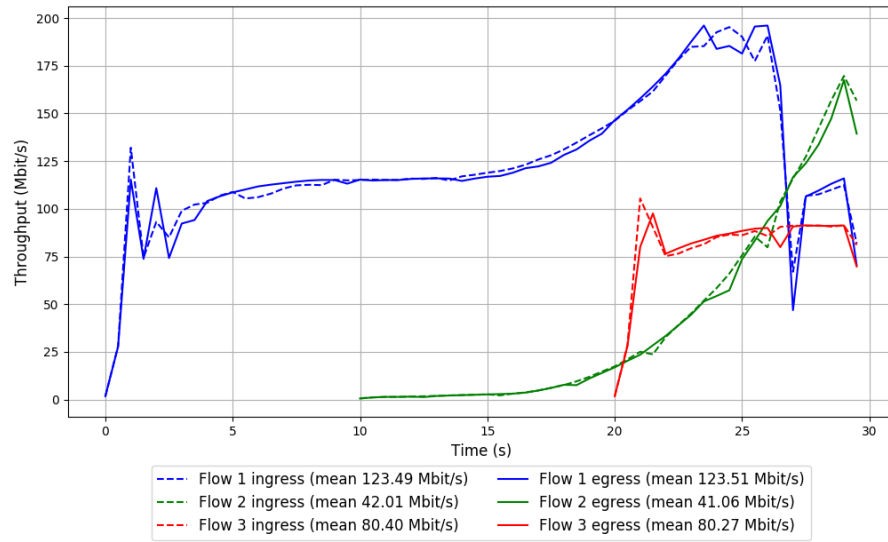
-- Flow 3:

Average throughput: 80.27 Mbit/s

95th percentile per-packet one-way delay: 68.956 ms

Loss rate: 1.43%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2018-04-18 21:37:46

End at: 2018-04-18 21:38:16

Below is generated by plot.py at 2018-04-19 01:18:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 192.22 Mbit/s

95th percentile per-packet one-way delay: 68.652 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 113.87 Mbit/s

95th percentile per-packet one-way delay: 69.164 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 116.27 Mbit/s

95th percentile per-packet one-way delay: 67.706 ms

Loss rate: 0.82%

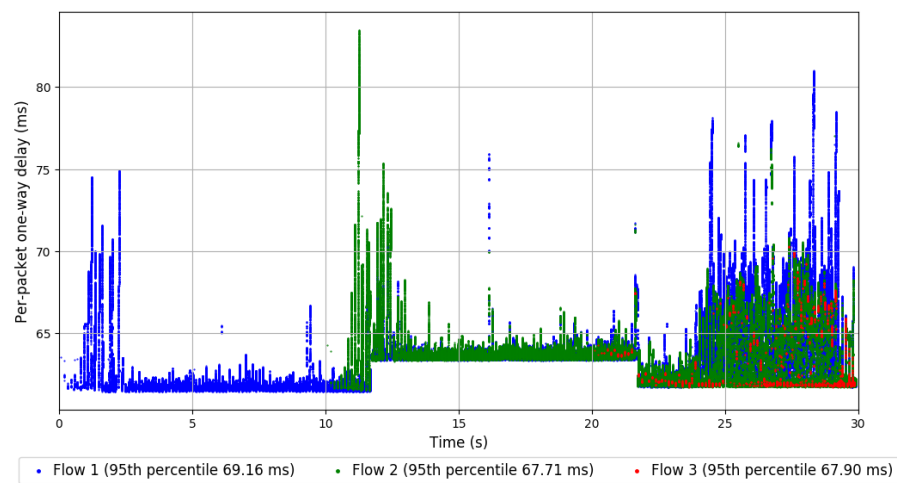
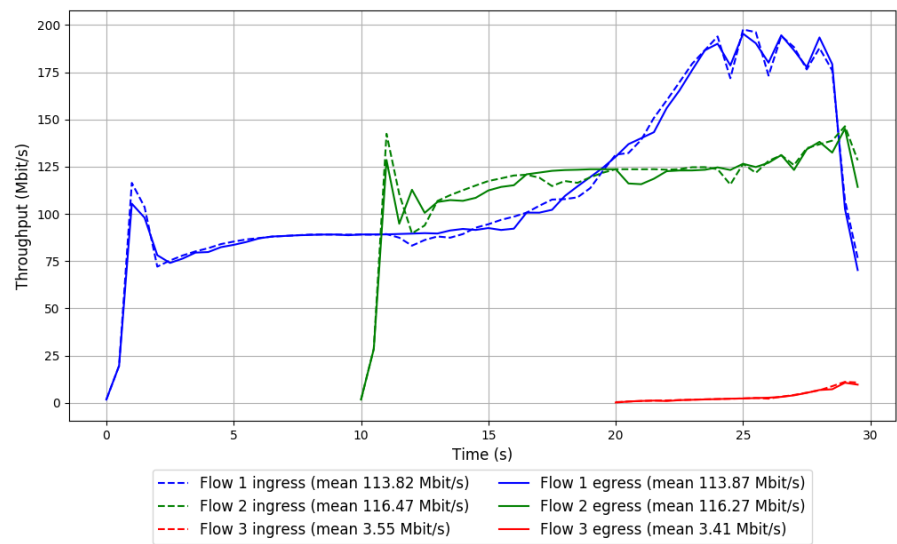
-- Flow 3:

Average throughput: 3.41 Mbit/s

95th percentile per-packet one-way delay: 67.899 ms

Loss rate: 5.29%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2018-04-18 21:53:25

End at: 2018-04-18 21:53:55

Below is generated by plot.py at 2018-04-19 01:19:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 213.05 Mbit/s

95th percentile per-packet one-way delay: 69.577 ms

Loss rate: 0.70%

-- Flow 1:

Average throughput: 140.66 Mbit/s

95th percentile per-packet one-way delay: 69.762 ms

Loss rate: 0.59%

-- Flow 2:

Average throughput: 107.47 Mbit/s

95th percentile per-packet one-way delay: 68.805 ms

Loss rate: 0.84%

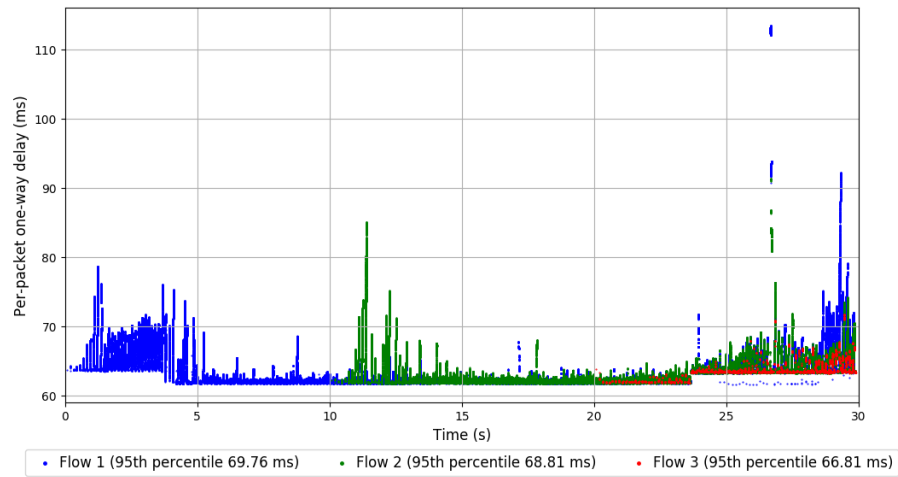
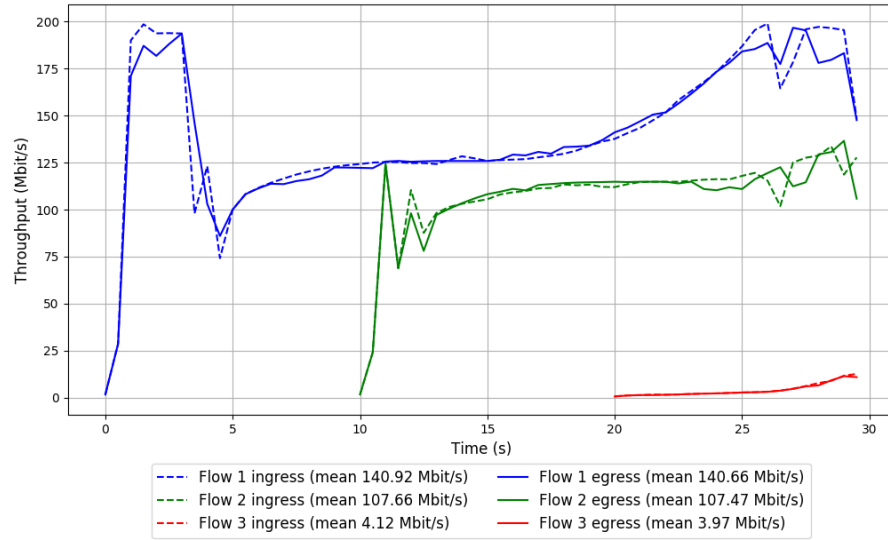
-- Flow 3:

Average throughput: 3.97 Mbit/s

95th percentile per-packet one-way delay: 66.813 ms

Loss rate: 4.75%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2018-04-18 22:09:19

End at: 2018-04-18 22:09:49

Below is generated by plot.py at 2018-04-19 01:20:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 263.21 Mbit/s

95th percentile per-packet one-way delay: 73.271 ms

Loss rate: 0.60%

-- Flow 1:

Average throughput: 140.06 Mbit/s

95th percentile per-packet one-way delay: 73.138 ms

Loss rate: 0.58%

-- Flow 2:

Average throughput: 144.70 Mbit/s

95th percentile per-packet one-way delay: 73.741 ms

Loss rate: 0.38%

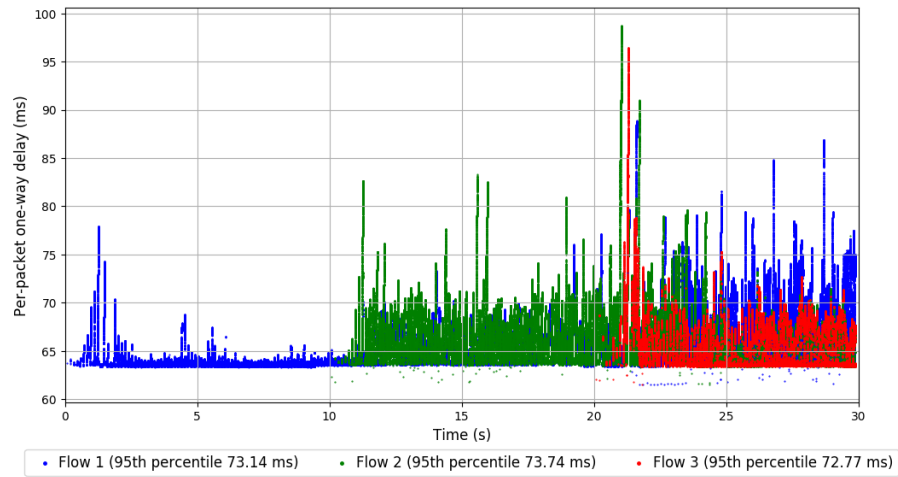
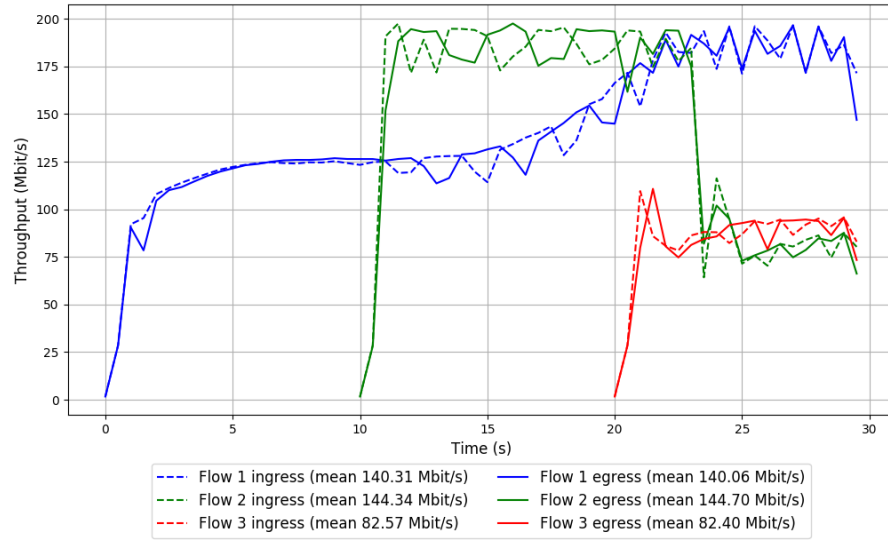
-- Flow 3:

Average throughput: 82.40 Mbit/s

95th percentile per-packet one-way delay: 72.765 ms

Loss rate: 1.45%

Run 10: Report of TCP Cubic — Data Link

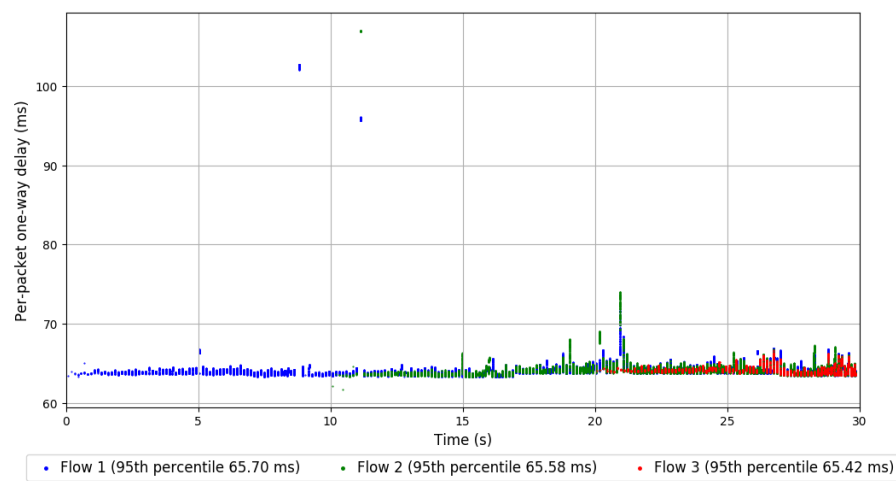
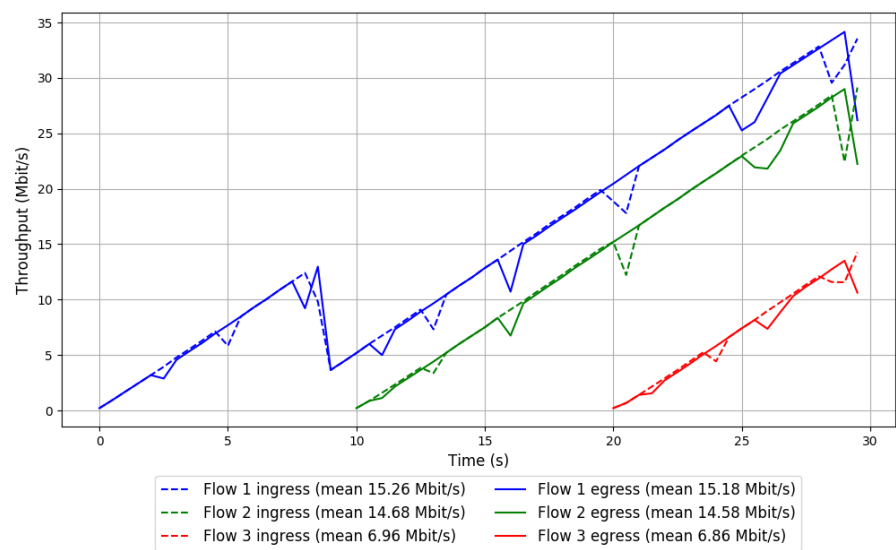


```
Run 1: Statistics of LEDBAT

Start at: 2018-04-18 19:42:41
End at: 2018-04-18 19:43:11

# Below is generated by plot.py at 2018-04-19 01:20:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 27.11 Mbit/s
95th percentile per-packet one-way delay: 65.621 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 15.18 Mbit/s
95th percentile per-packet one-way delay: 65.699 ms
Loss rate: 0.97%
-- Flow 2:
Average throughput: 14.58 Mbit/s
95th percentile per-packet one-way delay: 65.576 ms
Loss rate: 1.29%
-- Flow 3:
Average throughput: 6.86 Mbit/s
95th percentile per-packet one-way delay: 65.415 ms
Loss rate: 2.64%
```


Run 1: Report of LEDBAT — Data Link

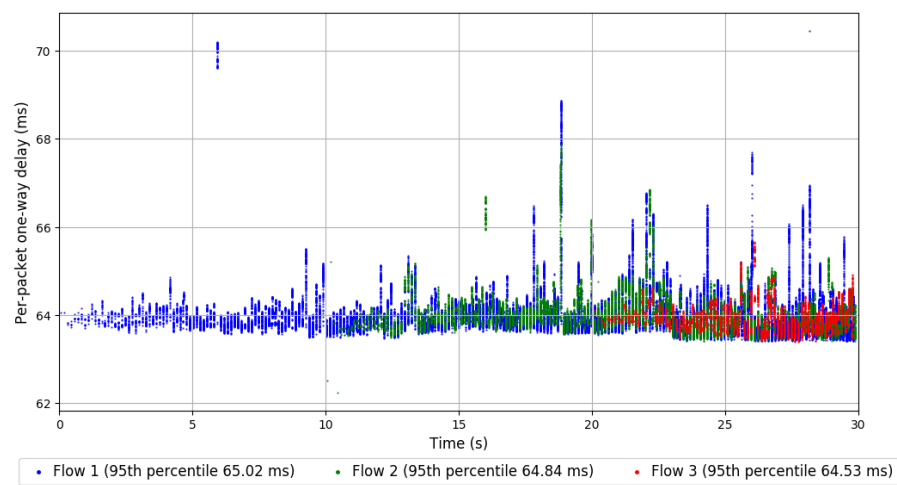
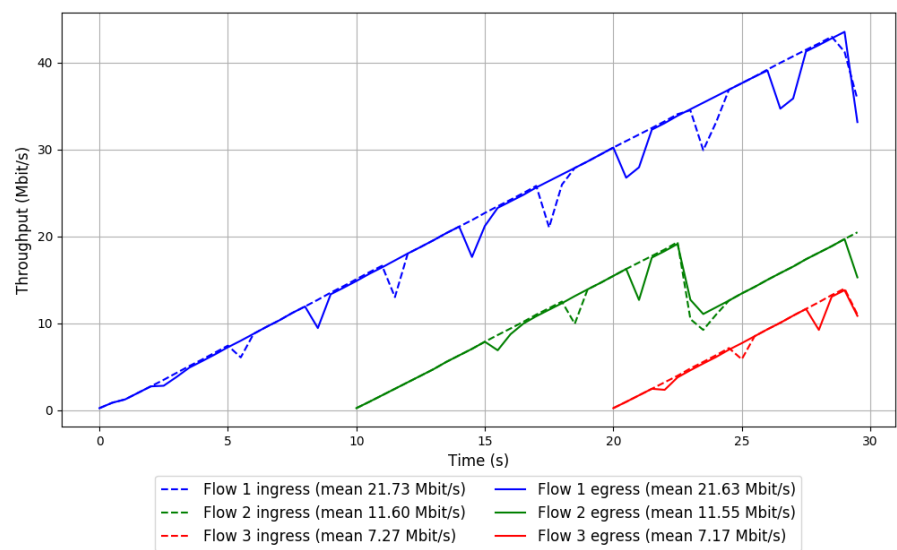


```
Run 2: Statistics of LEDBAT

Start at: 2018-04-18 19:58:35
End at: 2018-04-18 19:59:05

# Below is generated by plot.py at 2018-04-19 01:20:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 31.60 Mbit/s
95th percentile per-packet one-way delay: 64.939 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 21.63 Mbit/s
95th percentile per-packet one-way delay: 65.020 ms
Loss rate: 0.86%
-- Flow 2:
Average throughput: 11.55 Mbit/s
95th percentile per-packet one-way delay: 64.837 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 7.17 Mbit/s
95th percentile per-packet one-way delay: 64.531 ms
Loss rate: 2.61%
```

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-04-18 20:14:39

End at: 2018-04-18 20:15:09

Below is generated by plot.py at 2018-04-19 01:20:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 34.57 Mbit/s

95th percentile per-packet one-way delay: 64.807 ms

Loss rate: 1.09%

-- Flow 1:

Average throughput: 21.97 Mbit/s

95th percentile per-packet one-way delay: 65.078 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 15.36 Mbit/s

95th percentile per-packet one-way delay: 64.427 ms

Loss rate: 1.26%

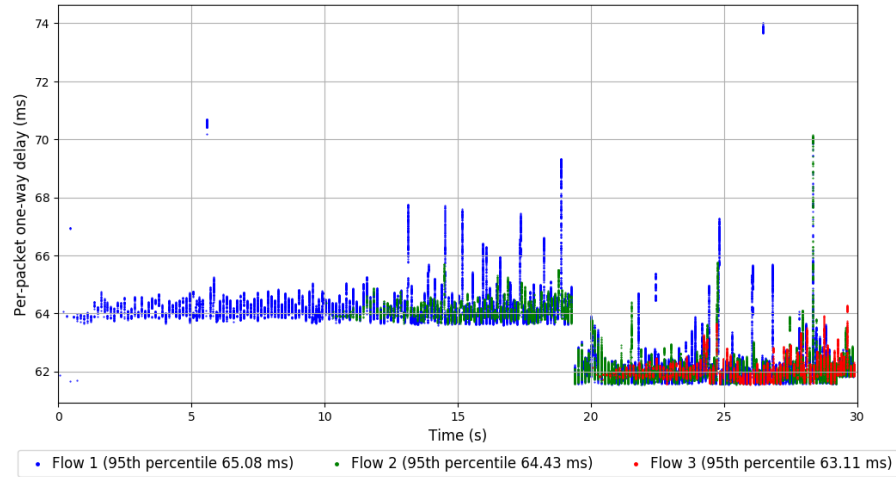
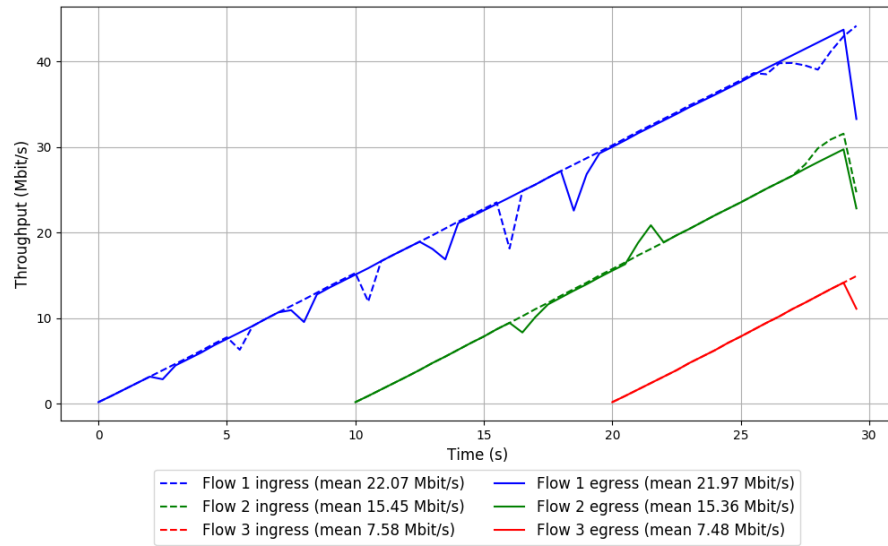
-- Flow 3:

Average throughput: 7.48 Mbit/s

95th percentile per-packet one-way delay: 63.114 ms

Loss rate: 2.54%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-04-18 20:30:32

End at: 2018-04-18 20:31:02

Below is generated by plot.py at 2018-04-19 01:20:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 34.30 Mbit/s

95th percentile per-packet one-way delay: 64.800 ms

Loss rate: 1.09%

-- Flow 1:

Average throughput: 22.09 Mbit/s

95th percentile per-packet one-way delay: 64.948 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 14.78 Mbit/s

95th percentile per-packet one-way delay: 64.611 ms

Loss rate: 1.28%

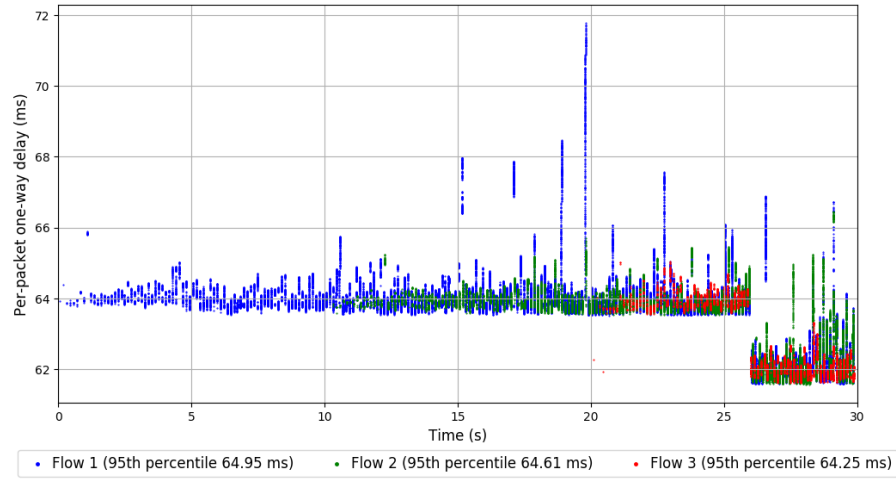
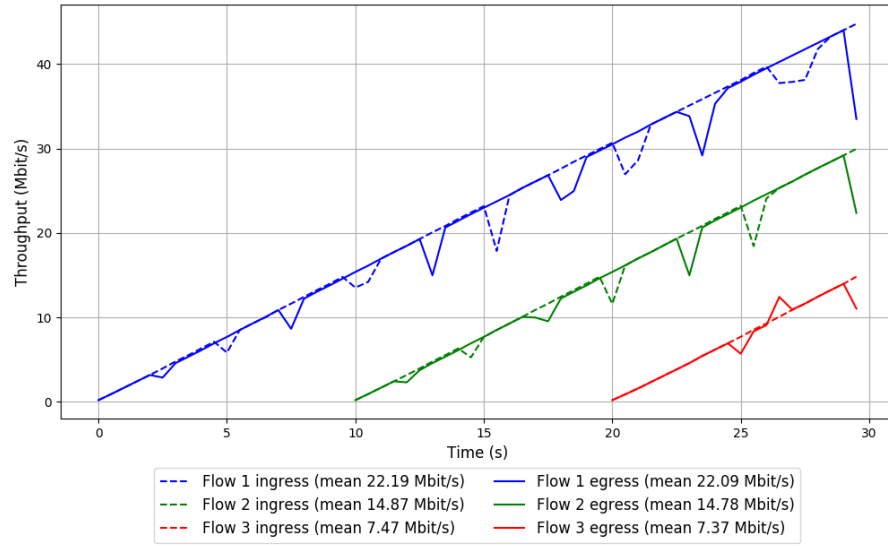
-- Flow 3:

Average throughput: 7.37 Mbit/s

95th percentile per-packet one-way delay: 64.248 ms

Loss rate: 2.56%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-04-18 20:46:26

End at: 2018-04-18 20:46:56

Below is generated by plot.py at 2018-04-19 01:20:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 32.65 Mbit/s

95th percentile per-packet one-way delay: 64.867 ms

Loss rate: 1.11%

-- Flow 1:

Average throughput: 21.82 Mbit/s

95th percentile per-packet one-way delay: 64.886 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 12.76 Mbit/s

95th percentile per-packet one-way delay: 64.855 ms

Loss rate: 1.37%

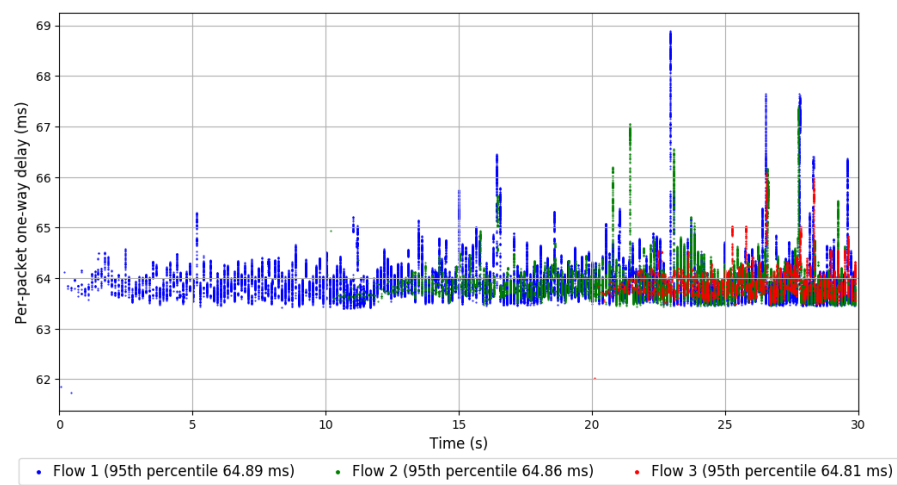
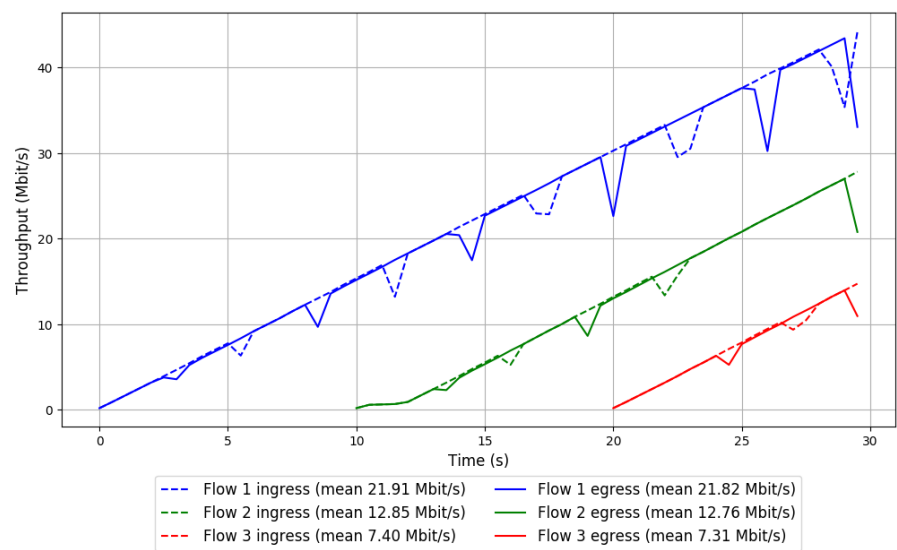
-- Flow 3:

Average throughput: 7.31 Mbit/s

95th percentile per-packet one-way delay: 64.805 ms

Loss rate: 2.57%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2018-04-18 21:02:22

End at: 2018-04-18 21:02:52

Below is generated by plot.py at 2018-04-19 01:20:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 33.63 Mbit/s

95th percentile per-packet one-way delay: 64.628 ms

Loss rate: 1.08%

-- Flow 1:

Average throughput: 22.20 Mbit/s

95th percentile per-packet one-way delay: 64.572 ms

Loss rate: 0.84%

-- Flow 2:

Average throughput: 14.47 Mbit/s

95th percentile per-packet one-way delay: 64.714 ms

Loss rate: 1.28%

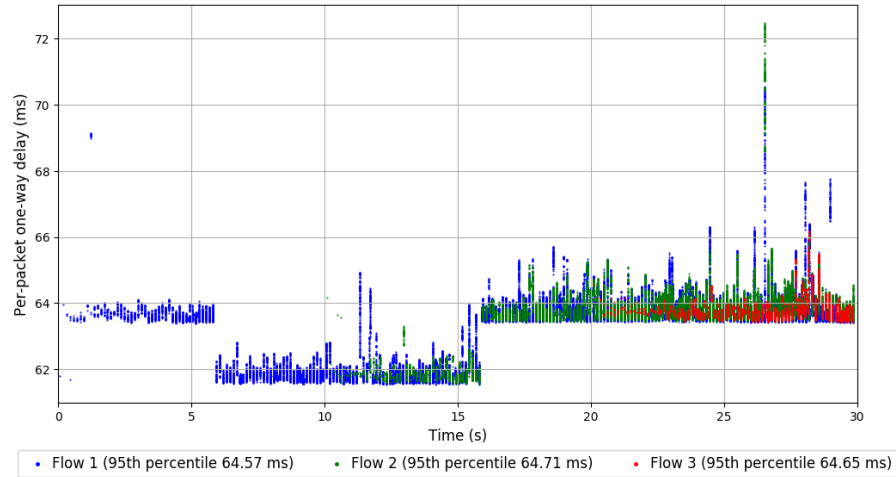
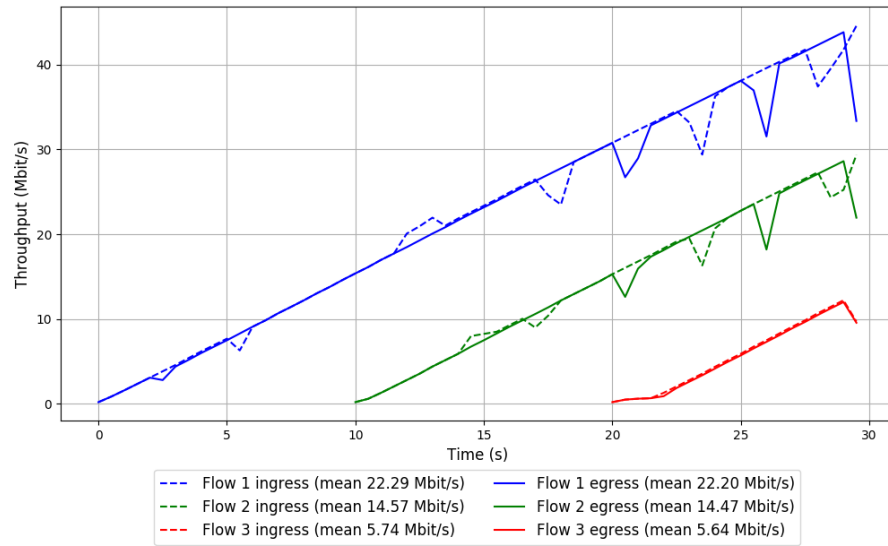
-- Flow 3:

Average throughput: 5.64 Mbit/s

95th percentile per-packet one-way delay: 64.648 ms

Loss rate: 2.91%

Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

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

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

Below is generated by plot.py at 2018-04-19 01:20:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 33.54 Mbit/s

95th percentile per-packet one-way delay: 64.570 ms

Loss rate: 1.10%

-- Flow 1:

Average throughput: 21.74 Mbit/s

95th percentile per-packet one-way delay: 64.475 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 14.50 Mbit/s

95th percentile per-packet one-way delay: 64.731 ms

Loss rate: 1.28%

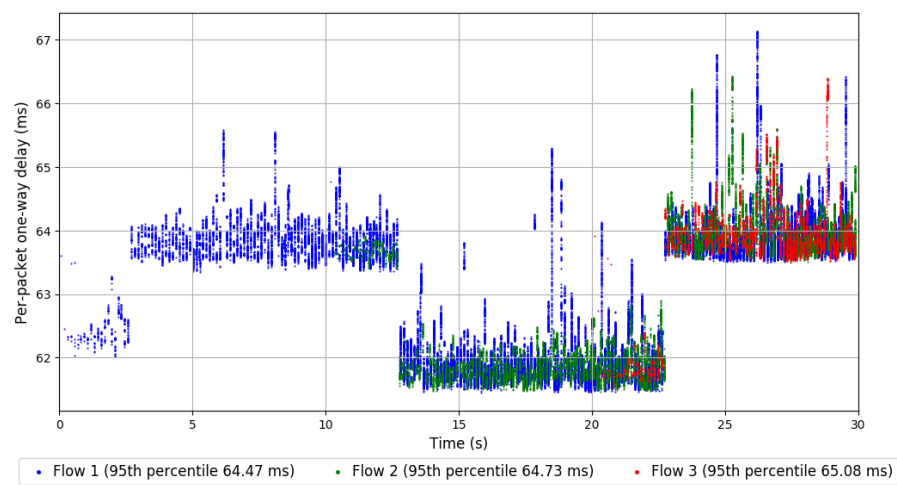
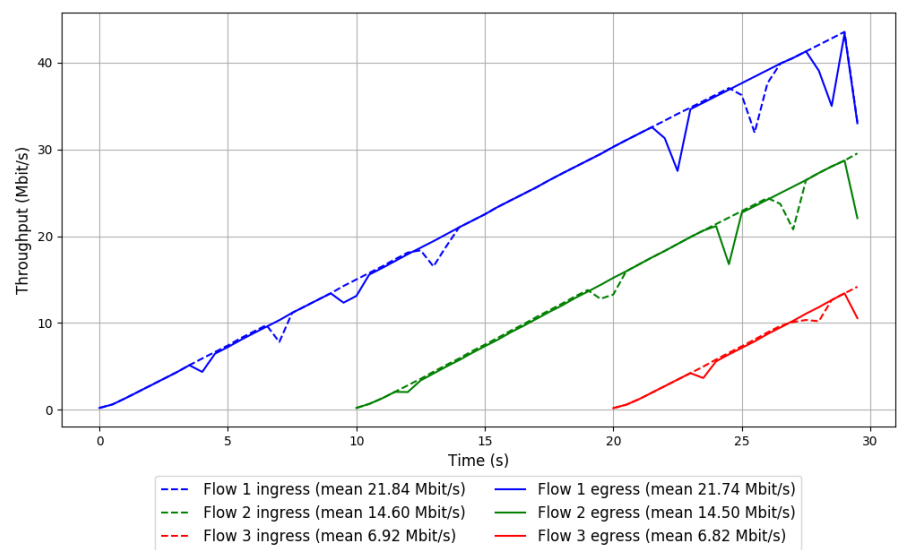
-- Flow 3:

Average throughput: 6.82 Mbit/s

95th percentile per-packet one-way delay: 65.085 ms

Loss rate: 2.64%

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2018-04-18 21:33:57

End at: 2018-04-18 21:34:27

Below is generated by plot.py at 2018-04-19 01:20:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 33.46 Mbit/s

95th percentile per-packet one-way delay: 65.159 ms

Loss rate: 1.10%

-- Flow 1:

Average throughput: 21.46 Mbit/s

95th percentile per-packet one-way delay: 65.100 ms

Loss rate: 0.86%

-- Flow 2:

Average throughput: 14.73 Mbit/s

95th percentile per-packet one-way delay: 65.501 ms

Loss rate: 1.26%

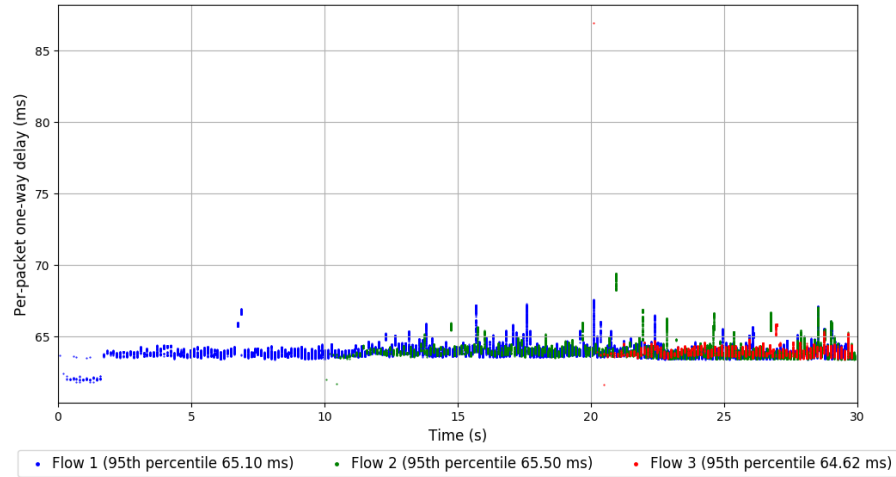
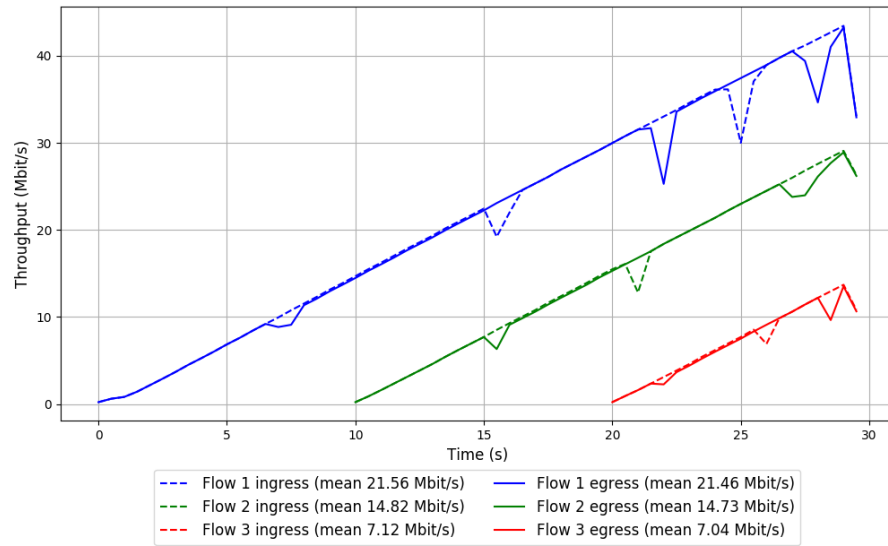
-- Flow 3:

Average throughput: 7.04 Mbit/s

95th percentile per-packet one-way delay: 64.616 ms

Loss rate: 2.62%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

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 01:20:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 34.11 Mbit/s

95th percentile per-packet one-way delay: 65.182 ms

Loss rate: 1.09%

-- Flow 1:

Average throughput: 22.07 Mbit/s

95th percentile per-packet one-way delay: 65.239 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 14.73 Mbit/s

95th percentile per-packet one-way delay: 65.029 ms

Loss rate: 1.28%

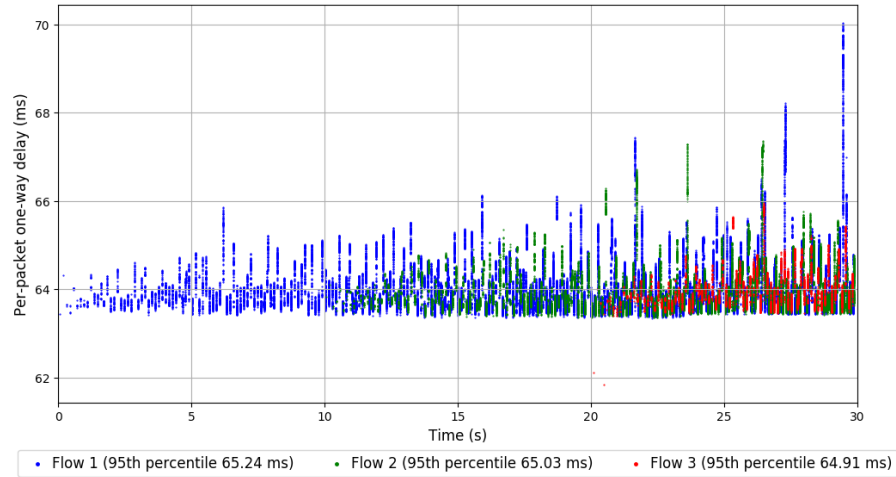
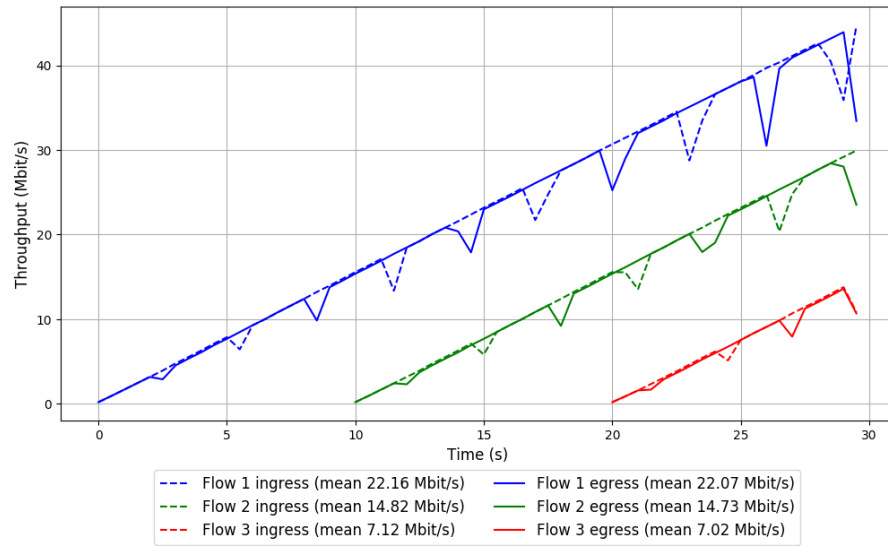
-- Flow 3:

Average throughput: 7.02 Mbit/s

95th percentile per-packet one-way delay: 64.914 ms

Loss rate: 2.61%

Run 9: Report of LEDBAT — Data Link



Run 10: Statistics of LEDBAT

Start at: 2018-04-18 22:05:29

End at: 2018-04-18 22:05:59

Below is generated by plot.py at 2018-04-19 01:20:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 32.53 Mbit/s

95th percentile per-packet one-way delay: 64.272 ms

Loss rate: 1.07%

-- Flow 1:

Average throughput: 22.84 Mbit/s

95th percentile per-packet one-way delay: 64.393 ms

Loss rate: 0.83%

-- Flow 2:

Average throughput: 11.31 Mbit/s

95th percentile per-packet one-way delay: 64.033 ms

Loss rate: 1.29%

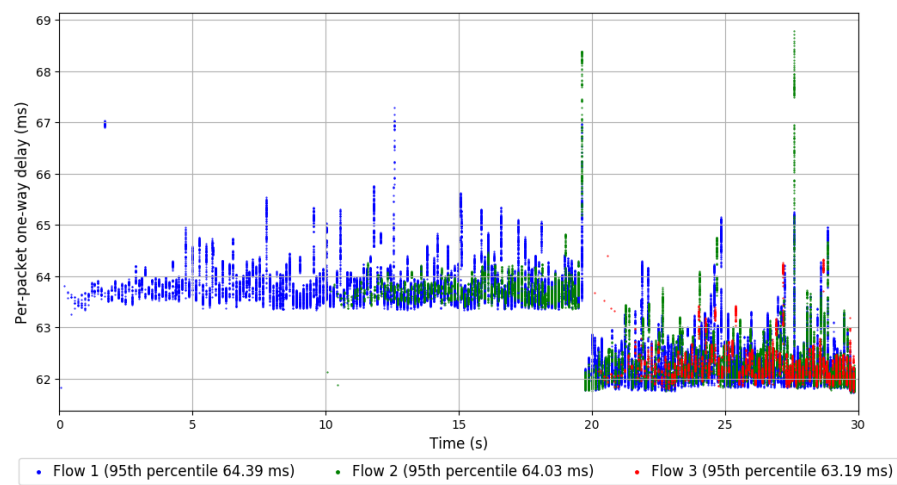
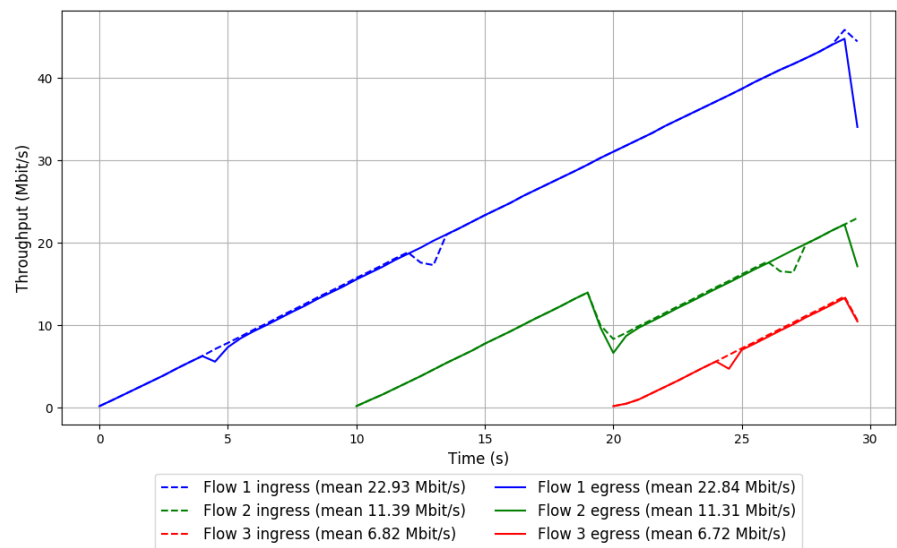
-- Flow 3:

Average throughput: 6.72 Mbit/s

95th percentile per-packet one-way delay: 63.192 ms

Loss rate: 2.67%

Run 10: Report of LEDBAT — Data Link

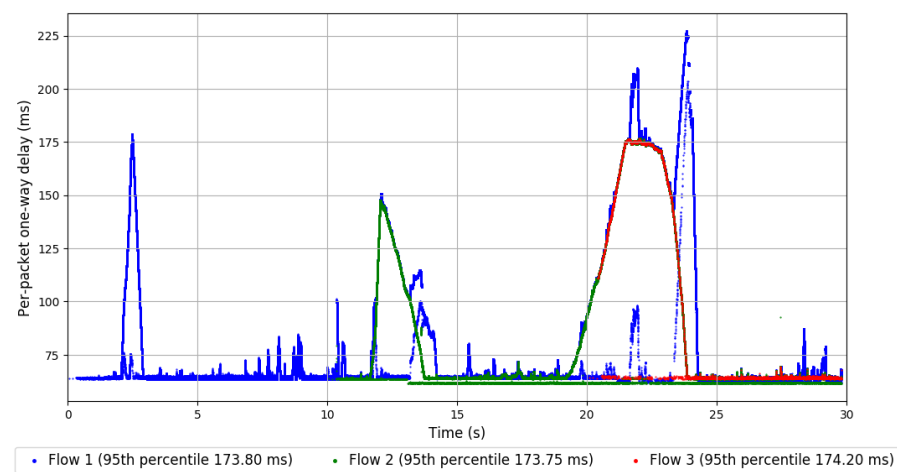
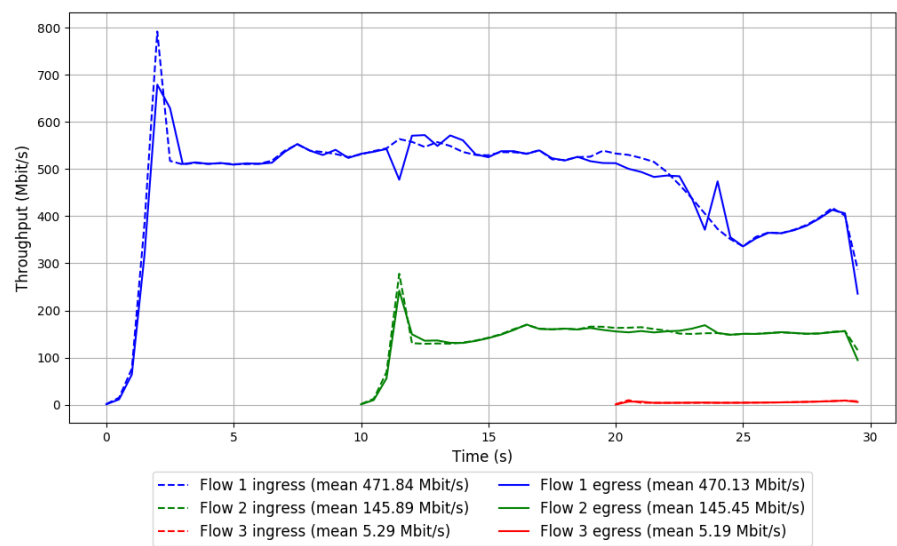


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-04-18 19:52:05
End at: 2018-04-18 19:52:35

# Below is generated by plot.py at 2018-04-19 01:28:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 568.22 Mbit/s
95th percentile per-packet one-way delay: 173.789 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 470.13 Mbit/s
95th percentile per-packet one-way delay: 173.800 ms
Loss rate: 0.79%
-- Flow 2:
Average throughput: 145.45 Mbit/s
95th percentile per-packet one-way delay: 173.745 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 5.19 Mbit/s
95th percentile per-packet one-way delay: 174.200 ms
Loss rate: 3.02%
```

Run 1: Report of PCC-Allegro — Data Link

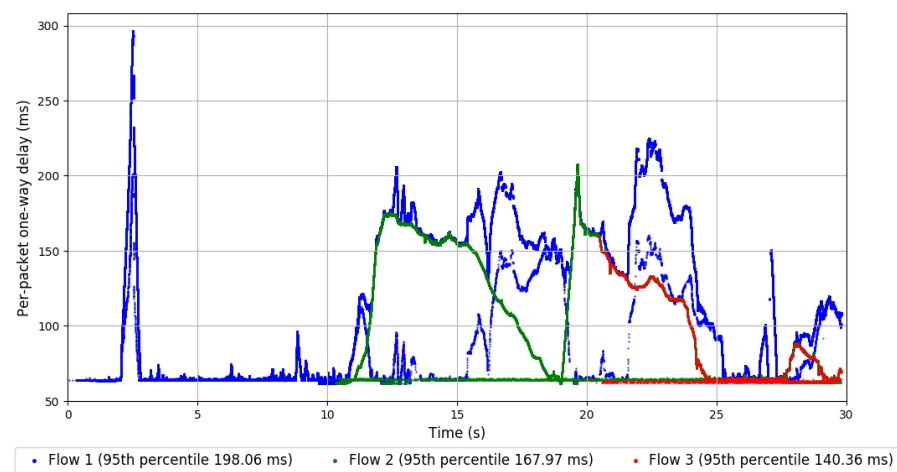
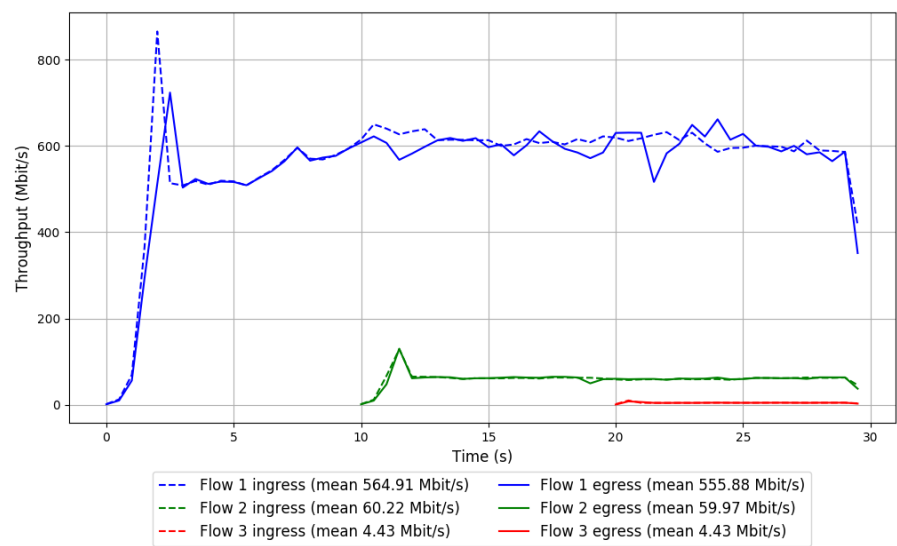


```
Run 2: Statistics of PCC-Allegro

Start at: 2018-04-18 20:08:08
End at: 2018-04-18 20:08:38

# Below is generated by plot.py at 2018-04-19 01:29:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 597.11 Mbit/s
95th percentile per-packet one-way delay: 195.279 ms
Loss rate: 1.95%
-- Flow 1:
Average throughput: 555.88 Mbit/s
95th percentile per-packet one-way delay: 198.065 ms
Loss rate: 2.01%
-- Flow 2:
Average throughput: 59.97 Mbit/s
95th percentile per-packet one-way delay: 167.967 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 4.43 Mbit/s
95th percentile per-packet one-way delay: 140.359 ms
Loss rate: 1.29%
```

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-04-18 20:24:06

End at: 2018-04-18 20:24:36

Below is generated by plot.py at 2018-04-19 01:29:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 498.68 Mbit/s

95th percentile per-packet one-way delay: 271.744 ms

Loss rate: 6.14%

-- Flow 1:

Average throughput: 397.77 Mbit/s

95th percentile per-packet one-way delay: 283.762 ms

Loss rate: 6.20%

-- Flow 2:

Average throughput: 123.70 Mbit/s

95th percentile per-packet one-way delay: 208.708 ms

Loss rate: 5.67%

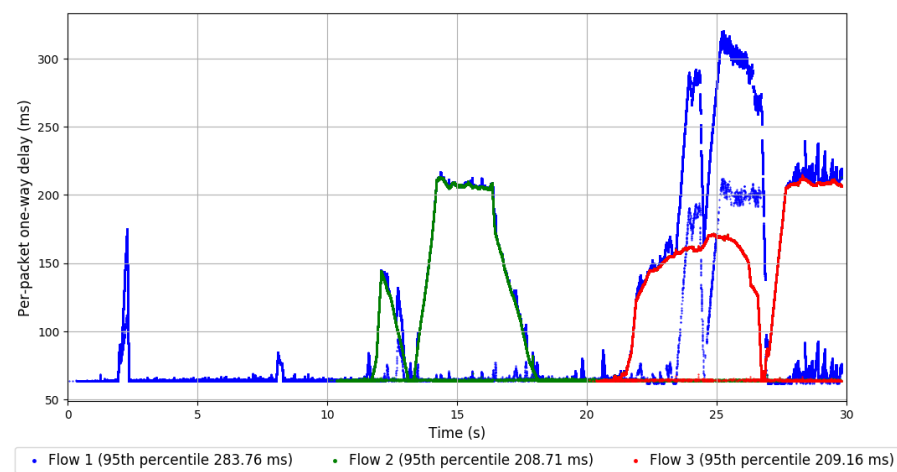
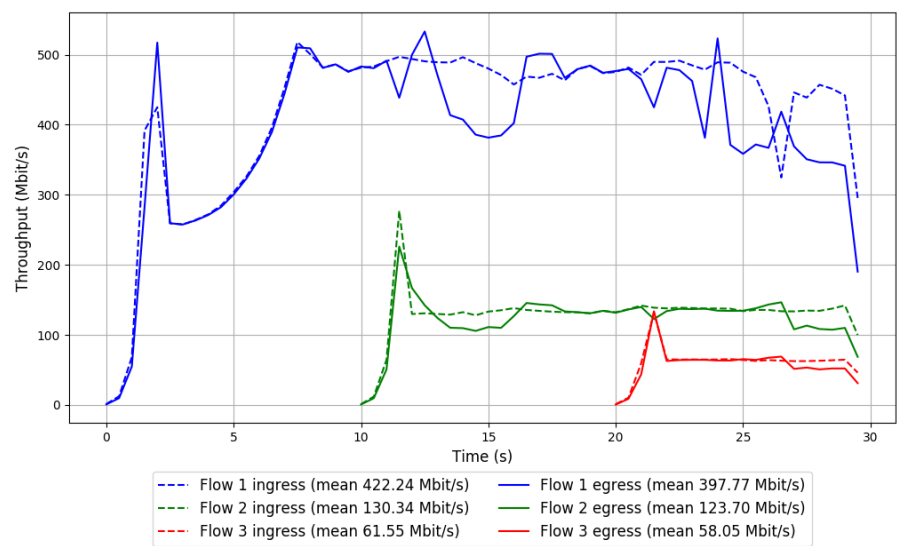
-- Flow 3:

Average throughput: 58.05 Mbit/s

95th percentile per-packet one-way delay: 209.155 ms

Loss rate: 6.92%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-04-18 20:39:53

End at: 2018-04-18 20:40:23

Below is generated by plot.py at 2018-04-19 01:29:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 595.63 Mbit/s

95th percentile per-packet one-way delay: 175.767 ms

Loss rate: 1.33%

-- Flow 1:

Average throughput: 501.83 Mbit/s

95th percentile per-packet one-way delay: 177.957 ms

Loss rate: 1.34%

-- Flow 2:

Average throughput: 139.38 Mbit/s

95th percentile per-packet one-way delay: 171.690 ms

Loss rate: 1.25%

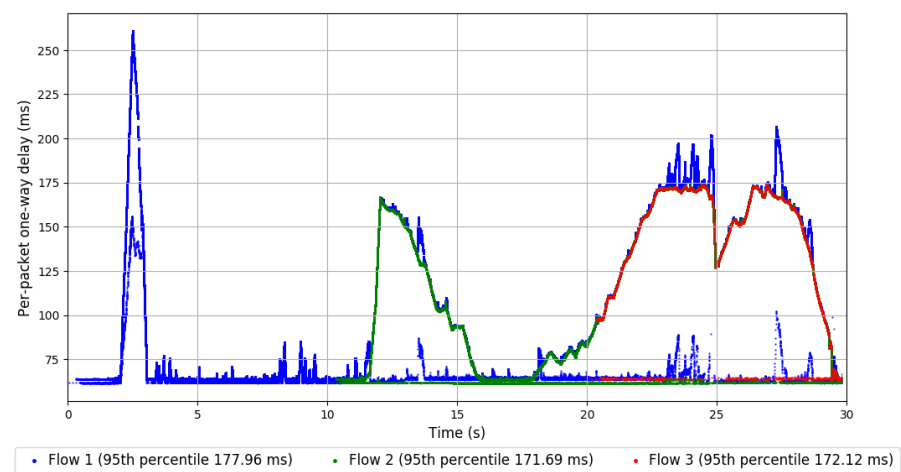
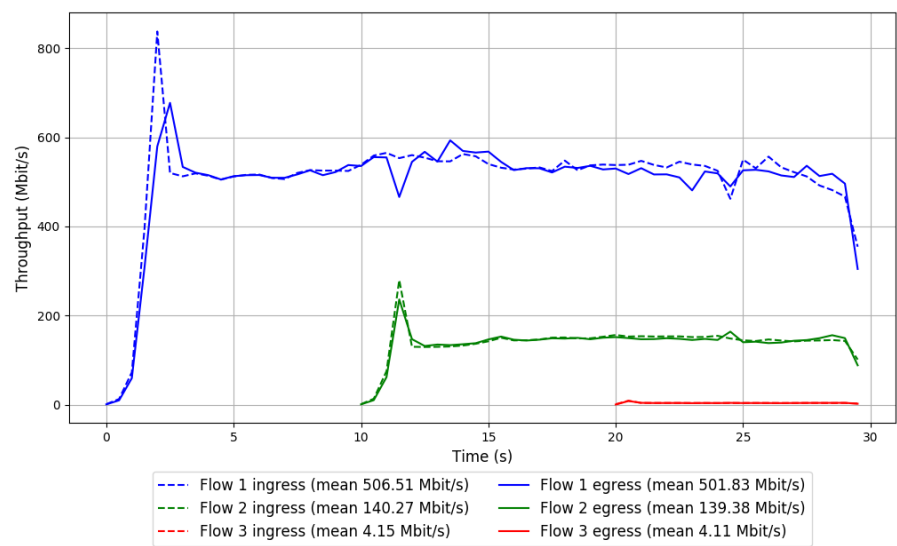
-- Flow 3:

Average throughput: 4.11 Mbit/s

95th percentile per-packet one-way delay: 172.124 ms

Loss rate: 2.26%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-04-18 20:55:57

End at: 2018-04-18 20:56:27

Below is generated by plot.py at 2018-04-19 01:29:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 577.88 Mbit/s

95th percentile per-packet one-way delay: 178.041 ms

Loss rate: 1.89%

-- Flow 1:

Average throughput: 494.91 Mbit/s

95th percentile per-packet one-way delay: 178.402 ms

Loss rate: 1.98%

-- Flow 2:

Average throughput: 123.04 Mbit/s

95th percentile per-packet one-way delay: 176.584 ms

Loss rate: 1.34%

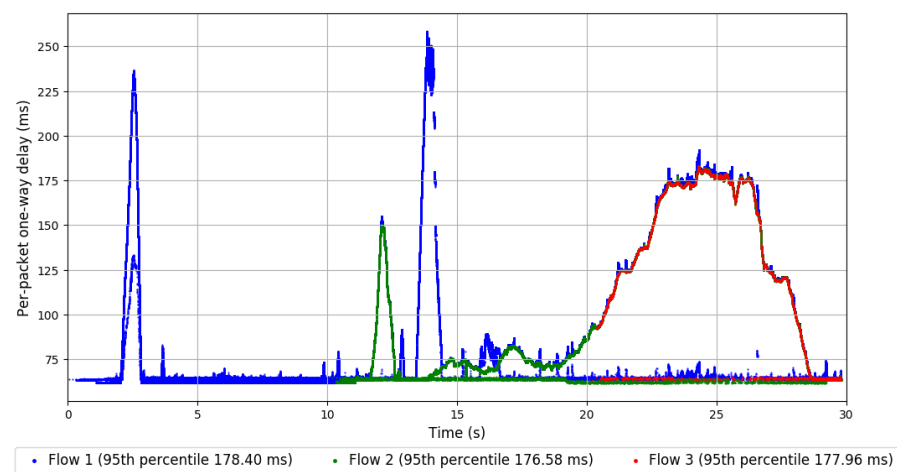
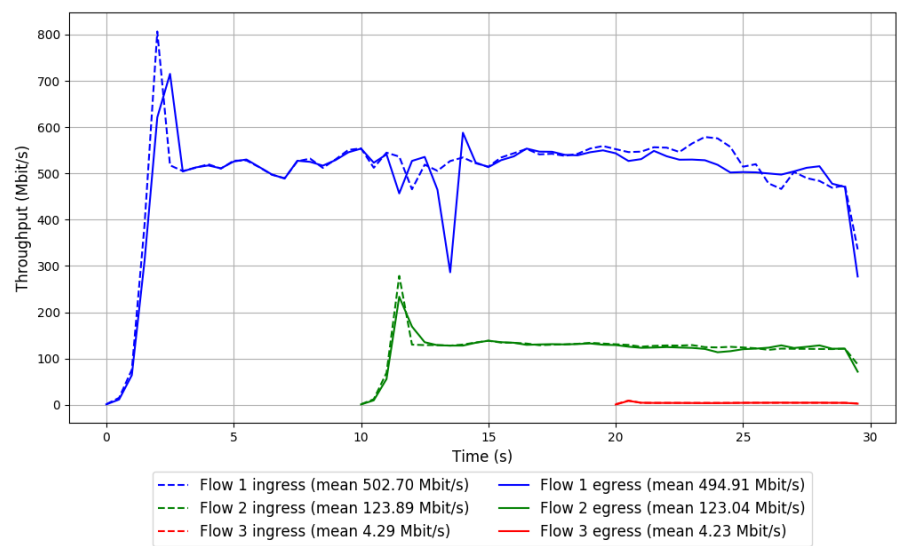
-- Flow 3:

Average throughput: 4.23 Mbit/s

95th percentile per-packet one-way delay: 177.962 ms

Loss rate: 2.87%

Run 5: Report of PCC-Allegro — Data Link



Run 6: Statistics of PCC-Allegro

Start at: 2018-04-18 21:11:44

End at: 2018-04-18 21:12:14

Below is generated by plot.py at 2018-04-19 01:29:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 553.94 Mbit/s

95th percentile per-packet one-way delay: 183.837 ms

Loss rate: 1.36%

-- Flow 1:

Average throughput: 469.81 Mbit/s

95th percentile per-packet one-way delay: 183.731 ms

Loss rate: 1.18%

-- Flow 2:

Average throughput: 111.32 Mbit/s

95th percentile per-packet one-way delay: 183.935 ms

Loss rate: 2.14%

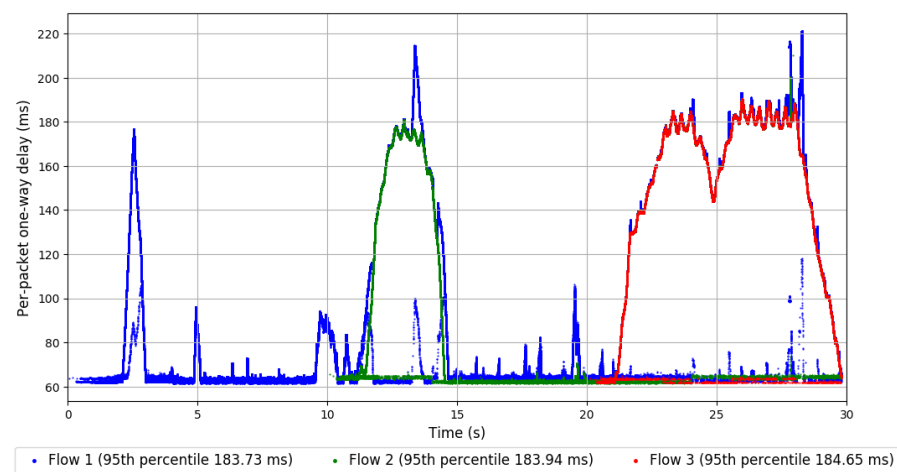
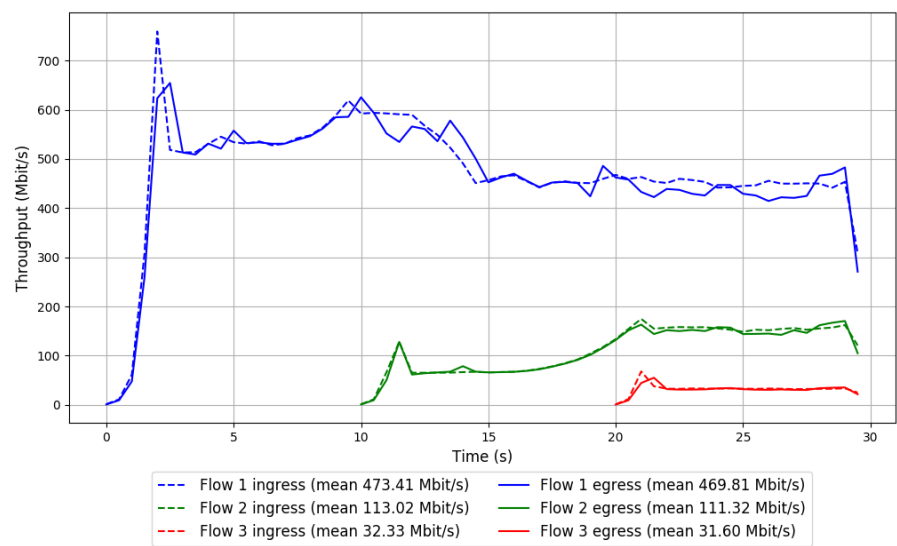
-- Flow 3:

Average throughput: 31.60 Mbit/s

95th percentile per-packet one-way delay: 184.654 ms

Loss rate: 3.51%

Run 6: Report of PCC-Allegro — Data Link



Run 7: Statistics of PCC-Allegro

Start at: 2018-04-18 21:27:26

End at: 2018-04-18 21:27:56

Below is generated by plot.py at 2018-04-19 01:30:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 589.23 Mbit/s

95th percentile per-packet one-way delay: 175.038 ms

Loss rate: 2.15%

-- Flow 1:

Average throughput: 501.57 Mbit/s

95th percentile per-packet one-way delay: 175.319 ms

Loss rate: 2.03%

-- Flow 2:

Average throughput: 130.26 Mbit/s

95th percentile per-packet one-way delay: 173.848 ms

Loss rate: 2.82%

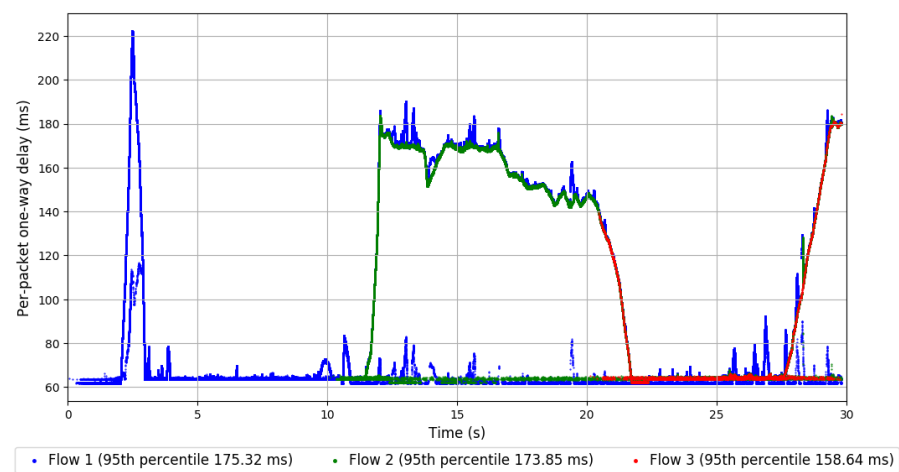
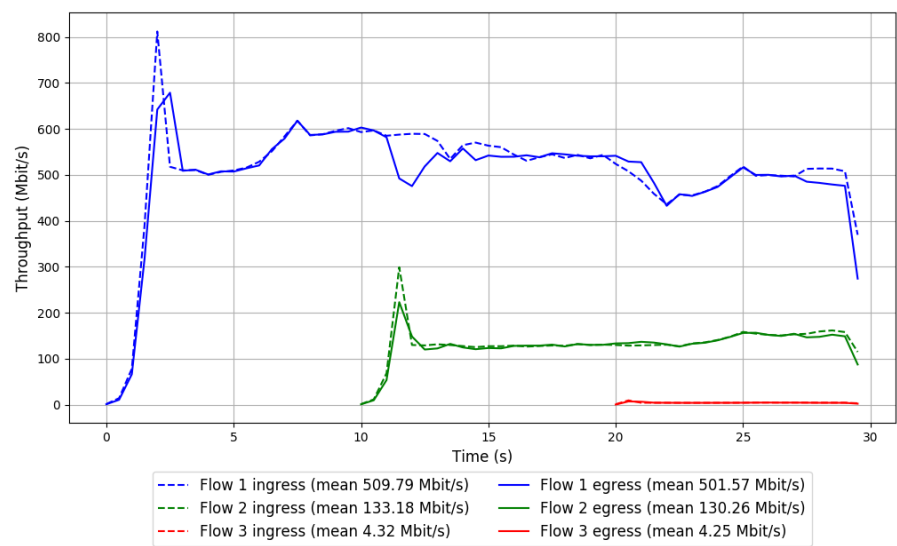
-- Flow 3:

Average throughput: 4.25 Mbit/s

95th percentile per-packet one-way delay: 158.636 ms

Loss rate: 2.89%

Run 7: Report of PCC-Allegro — Data Link



Run 8: Statistics of PCC-Allegro

Start at: 2018-04-18 21:43:06

End at: 2018-04-18 21:43:36

Below is generated by plot.py at 2018-04-19 01:30:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 541.48 Mbit/s

95th percentile per-packet one-way delay: 208.499 ms

Loss rate: 3.85%

-- Flow 1:

Average throughput: 448.58 Mbit/s

95th percentile per-packet one-way delay: 208.149 ms

Loss rate: 3.68%

-- Flow 2:

Average throughput: 132.33 Mbit/s

95th percentile per-packet one-way delay: 209.142 ms

Loss rate: 4.62%

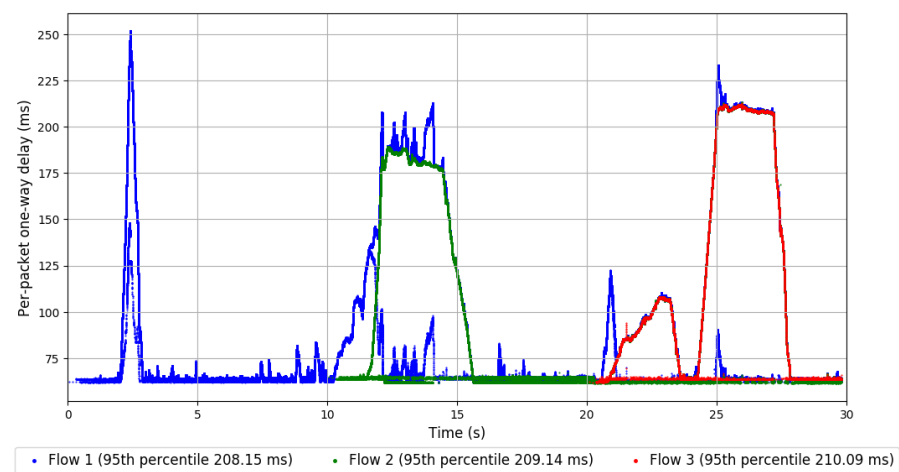
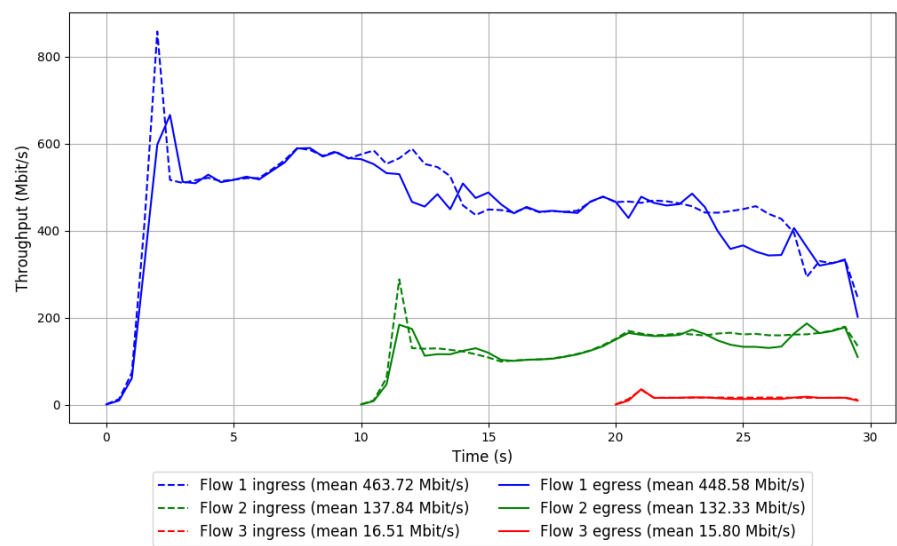
-- Flow 3:

Average throughput: 15.80 Mbit/s

95th percentile per-packet one-way delay: 210.094 ms

Loss rate: 5.52%

Run 8: Report of PCC-Allegro — Data Link



Run 9: Statistics of PCC-Allegro

Start at: 2018-04-18 21:58:59

End at: 2018-04-18 21:59:29

Below is generated by plot.py at 2018-04-19 01:38:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 576.01 Mbit/s

95th percentile per-packet one-way delay: 140.506 ms

Loss rate: 1.69%

-- Flow 1:

Average throughput: 509.49 Mbit/s

95th percentile per-packet one-way delay: 139.929 ms

Loss rate: 1.45%

-- Flow 2:

Average throughput: 98.24 Mbit/s

95th percentile per-packet one-way delay: 183.549 ms

Loss rate: 3.51%

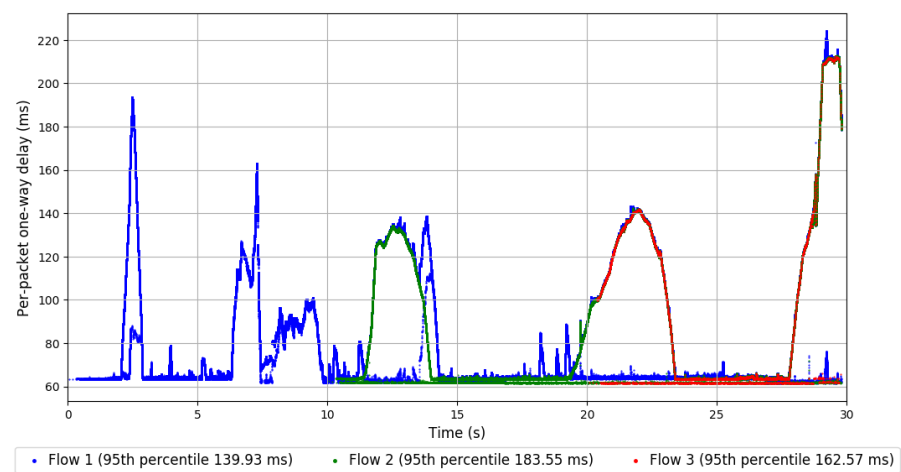
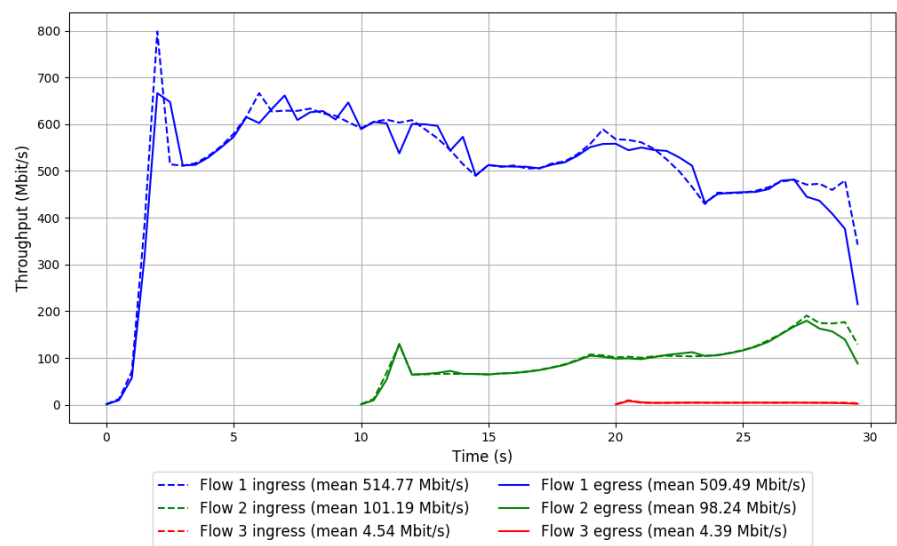
-- Flow 3:

Average throughput: 4.39 Mbit/s

95th percentile per-packet one-way delay: 162.566 ms

Loss rate: 4.36%

Run 9: Report of PCC-Allegro — Data Link

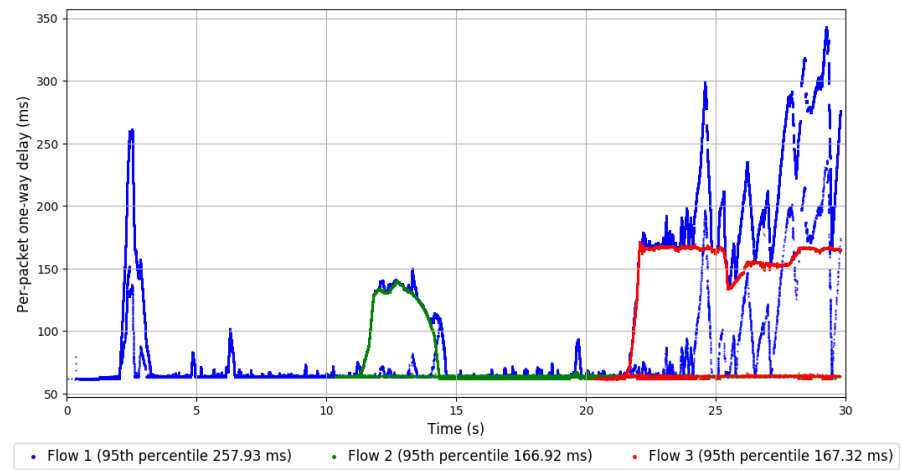
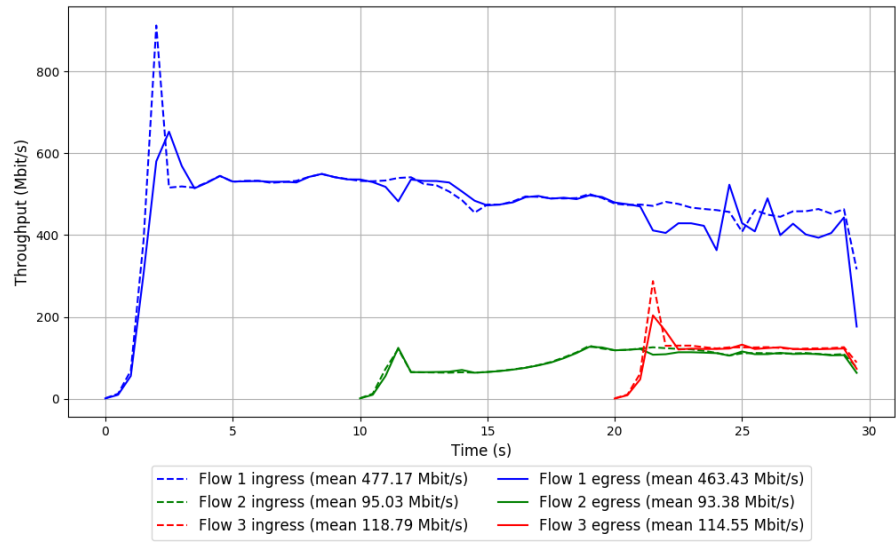


```
Run 10: Statistics of PCC-Allegro

Start at: 2018-04-18 22:14:55
End at: 2018-04-18 22:15:25

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 562.72 Mbit/s
95th percentile per-packet one-way delay: 244.855 ms
Loss rate: 3.28%
-- Flow 1:
Average throughput: 463.43 Mbit/s
95th percentile per-packet one-way delay: 257.927 ms
Loss rate: 3.28%
-- Flow 2:
Average throughput: 93.38 Mbit/s
95th percentile per-packet one-way delay: 166.920 ms
Loss rate: 2.37%
-- Flow 3:
Average throughput: 114.55 Mbit/s
95th percentile per-packet one-way delay: 167.316 ms
Loss rate: 4.79%
```

Run 10: Report of PCC-Allegro — Data Link

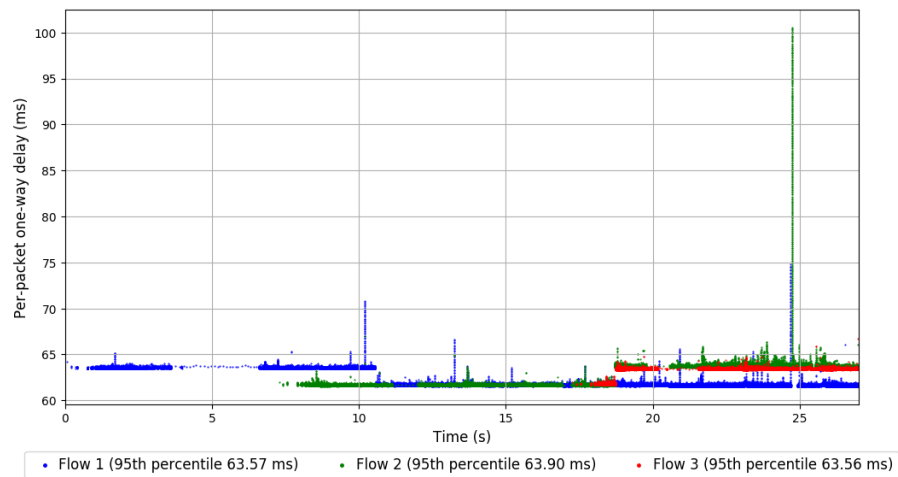
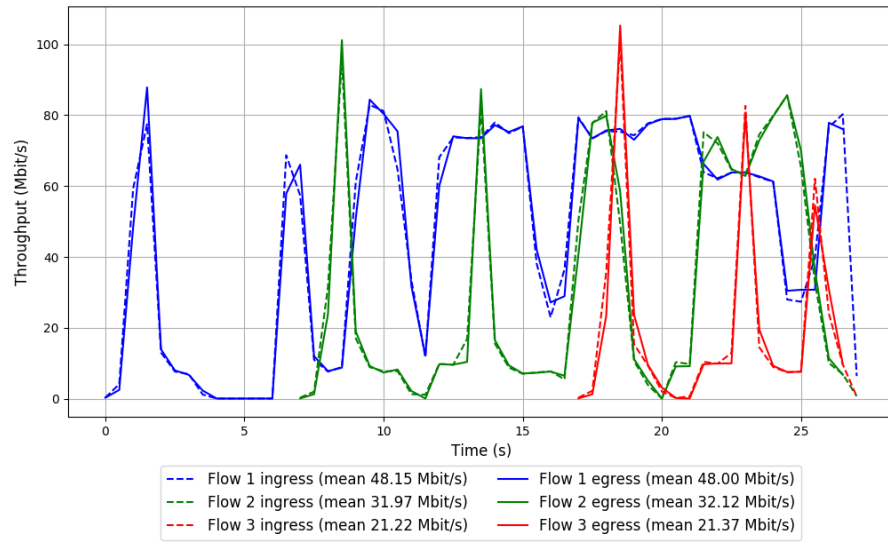


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-04-18 19:49:45
End at: 2018-04-18 19:50:15

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.21 Mbit/s
95th percentile per-packet one-way delay: 63.766 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 48.00 Mbit/s
95th percentile per-packet one-way delay: 63.569 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 32.12 Mbit/s
95th percentile per-packet one-way delay: 63.904 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 21.37 Mbit/s
95th percentile per-packet one-way delay: 63.559 ms
Loss rate: 0.50%
```


Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-04-18 20:05:50

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

Below is generated by plot.py at 2018-04-19 01:39:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 75.67 Mbit/s

95th percentile per-packet one-way delay: 63.878 ms

Loss rate: 0.82%

-- Flow 1:

Average throughput: 45.41 Mbit/s

95th percentile per-packet one-way delay: 63.843 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 31.45 Mbit/s

95th percentile per-packet one-way delay: 63.978 ms

Loss rate: 0.20%

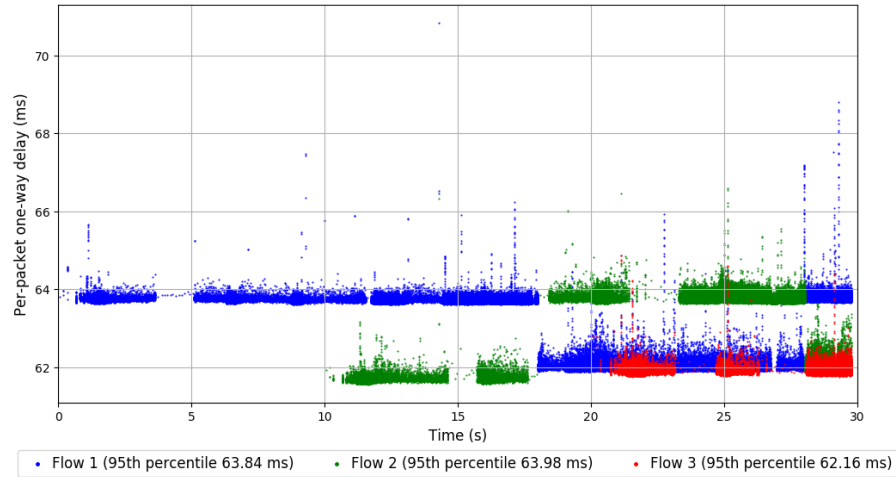
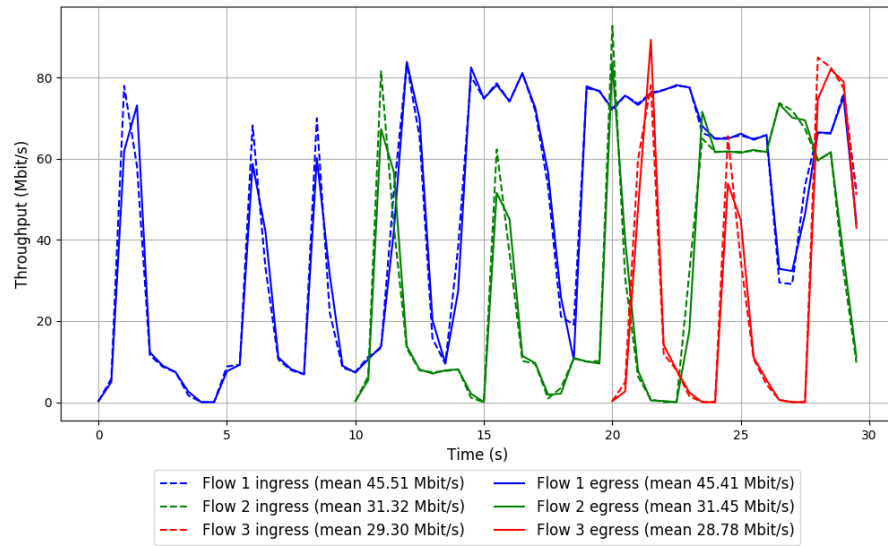
-- Flow 3:

Average throughput: 28.78 Mbit/s

95th percentile per-packet one-way delay: 62.159 ms

Loss rate: 3.00%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-04-18 20:21:47

End at: 2018-04-18 20:22:17

Below is generated by plot.py at 2018-04-19 01:39:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 70.82 Mbit/s

95th percentile per-packet one-way delay: 63.881 ms

Loss rate: 0.91%

-- Flow 1:

Average throughput: 42.87 Mbit/s

95th percentile per-packet one-way delay: 63.606 ms

Loss rate: 0.60%

-- Flow 2:

Average throughput: 28.42 Mbit/s

95th percentile per-packet one-way delay: 64.032 ms

Loss rate: 0.46%

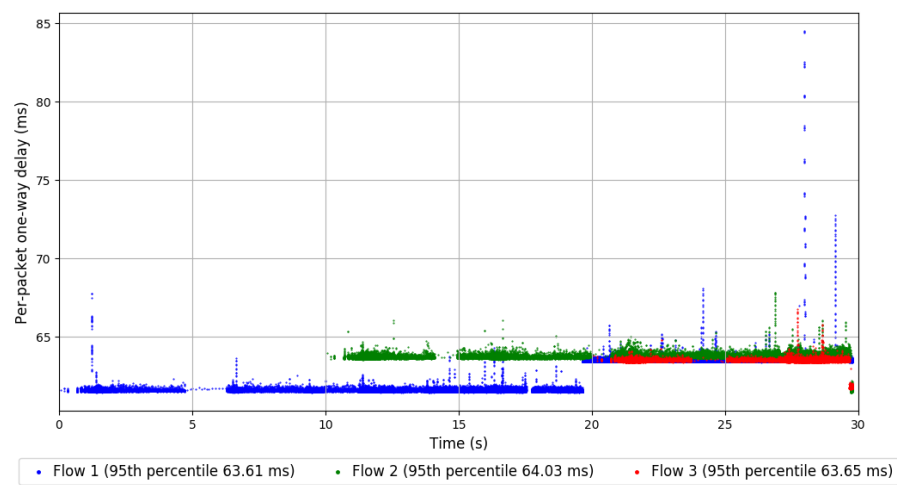
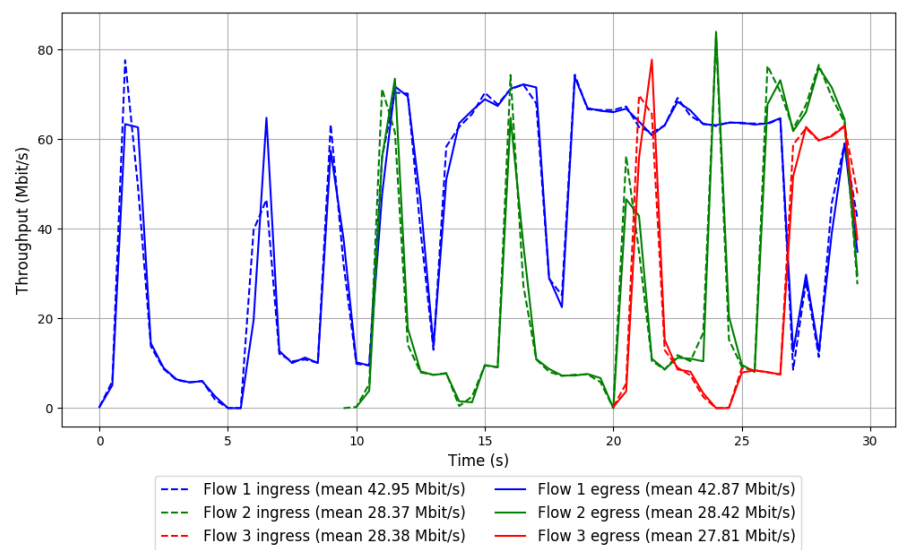
-- Flow 3:

Average throughput: 27.81 Mbit/s

95th percentile per-packet one-way delay: 63.649 ms

Loss rate: 3.27%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-04-18 20:37:31

End at: 2018-04-18 20:38:01

Below is generated by plot.py at 2018-04-19 01:39:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 86.69 Mbit/s

95th percentile per-packet one-way delay: 63.850 ms

Loss rate: 0.93%

-- Flow 1:

Average throughput: 55.13 Mbit/s

95th percentile per-packet one-way delay: 63.891 ms

Loss rate: 0.60%

-- Flow 2:

Average throughput: 36.63 Mbit/s

95th percentile per-packet one-way delay: 63.814 ms

Loss rate: 0.94%

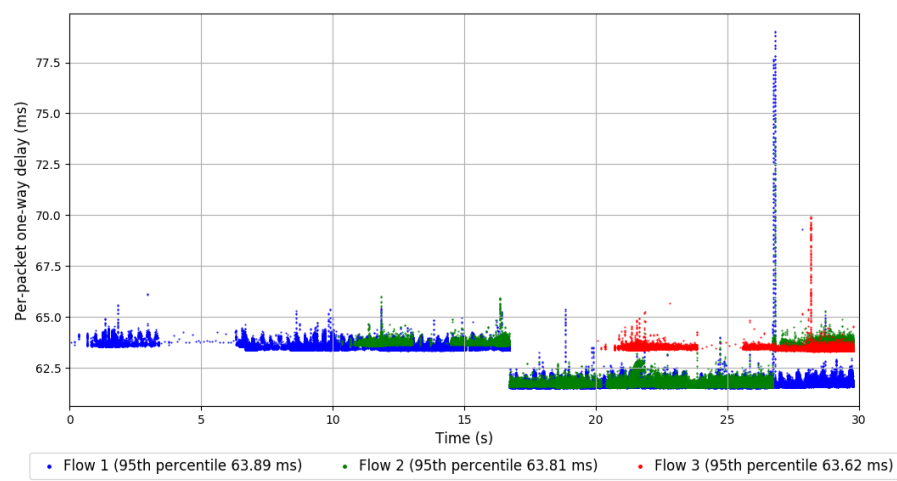
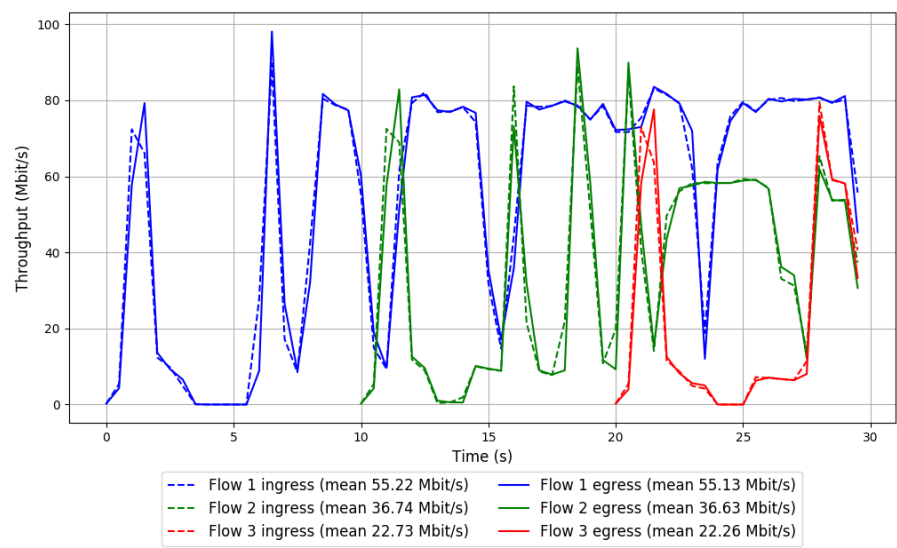
-- Flow 3:

Average throughput: 22.26 Mbit/s

95th percentile per-packet one-way delay: 63.625 ms

Loss rate: 3.30%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-04-18 20:53:35

End at: 2018-04-18 20:54:05

Below is generated by plot.py at 2018-04-19 01:39:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 83.35 Mbit/s

95th percentile per-packet one-way delay: 63.672 ms

Loss rate: 0.93%

-- Flow 1:

Average throughput: 49.92 Mbit/s

95th percentile per-packet one-way delay: 63.697 ms

Loss rate: 0.53%

-- Flow 2:

Average throughput: 39.61 Mbit/s

95th percentile per-packet one-way delay: 63.650 ms

Loss rate: 0.96%

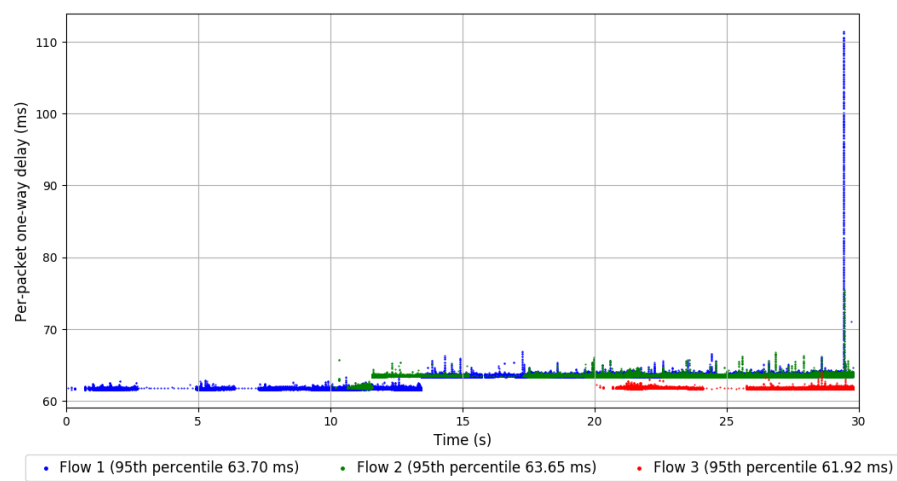
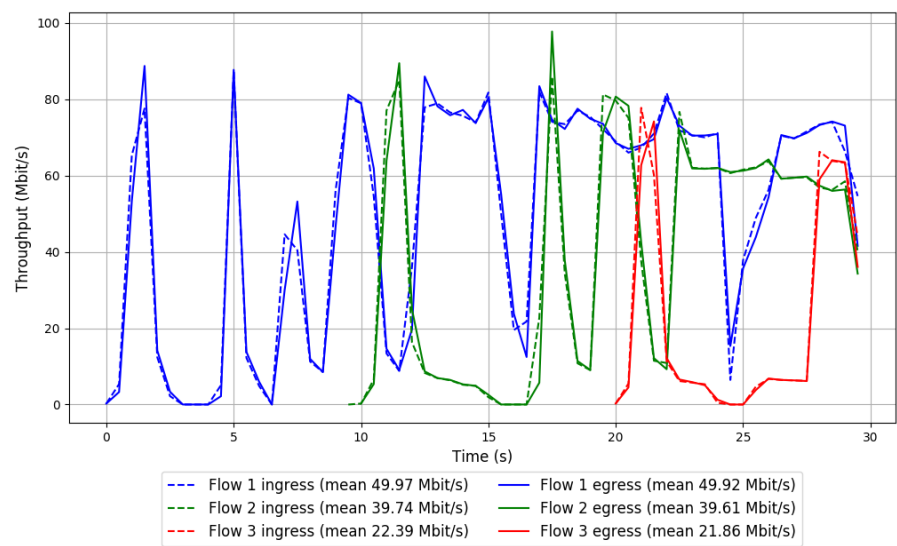
-- Flow 3:

Average throughput: 21.86 Mbit/s

95th percentile per-packet one-way delay: 61.923 ms

Loss rate: 3.58%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2018-04-18 21:09:24

End at: 2018-04-18 21:09:54

Below is generated by plot.py at 2018-04-19 01:39:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 74.24 Mbit/s

95th percentile per-packet one-way delay: 63.878 ms

Loss rate: 0.63%

-- Flow 1:

Average throughput: 46.73 Mbit/s

95th percentile per-packet one-way delay: 63.662 ms

Loss rate: 0.75%

-- Flow 2:

Average throughput: 31.38 Mbit/s

95th percentile per-packet one-way delay: 64.064 ms

Loss rate: 0.29%

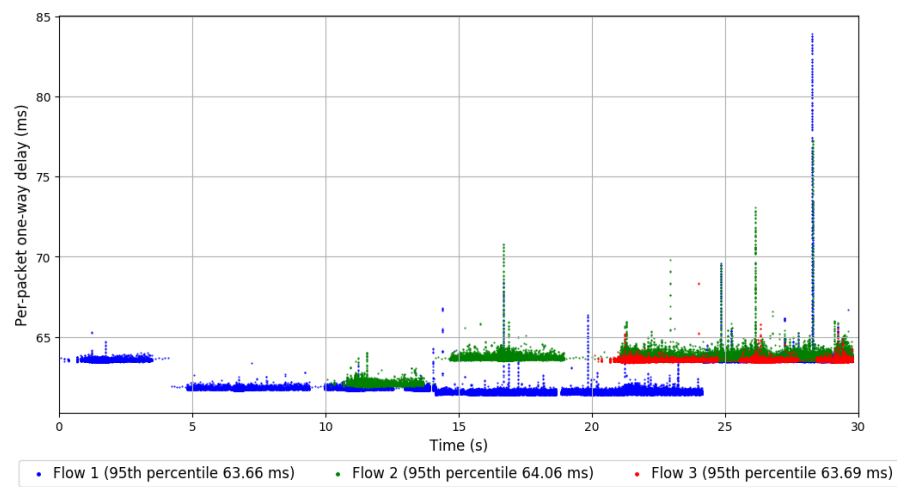
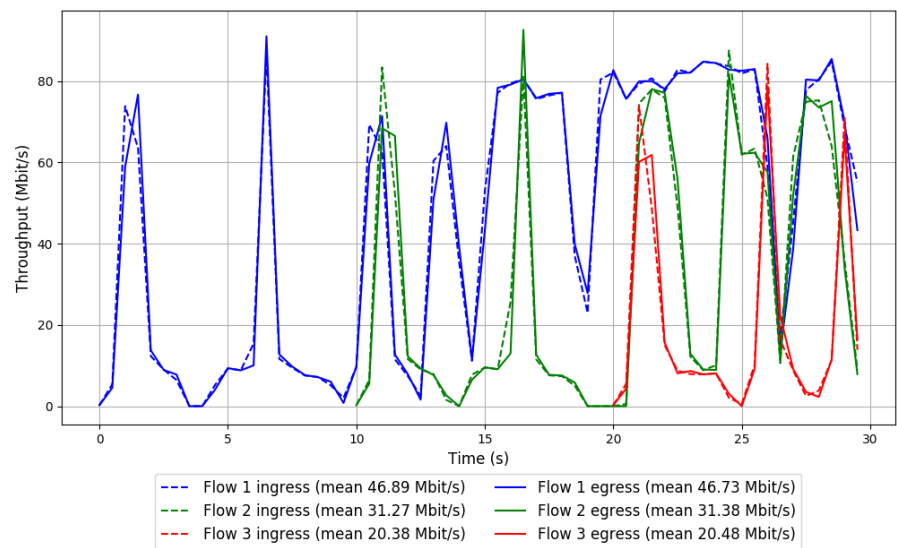
-- Flow 3:

Average throughput: 20.48 Mbit/s

95th percentile per-packet one-way delay: 63.691 ms

Loss rate: 0.80%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2018-04-18 21:25:06

End at: 2018-04-18 21:25:36

Below is generated by plot.py at 2018-04-19 01:39:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 75.36 Mbit/s

95th percentile per-packet one-way delay: 63.925 ms

Loss rate: 0.87%

-- Flow 1:

Average throughput: 45.90 Mbit/s

95th percentile per-packet one-way delay: 63.942 ms

Loss rate: 0.62%

-- Flow 2:

Average throughput: 31.20 Mbit/s

95th percentile per-packet one-way delay: 63.928 ms

Loss rate: 0.28%

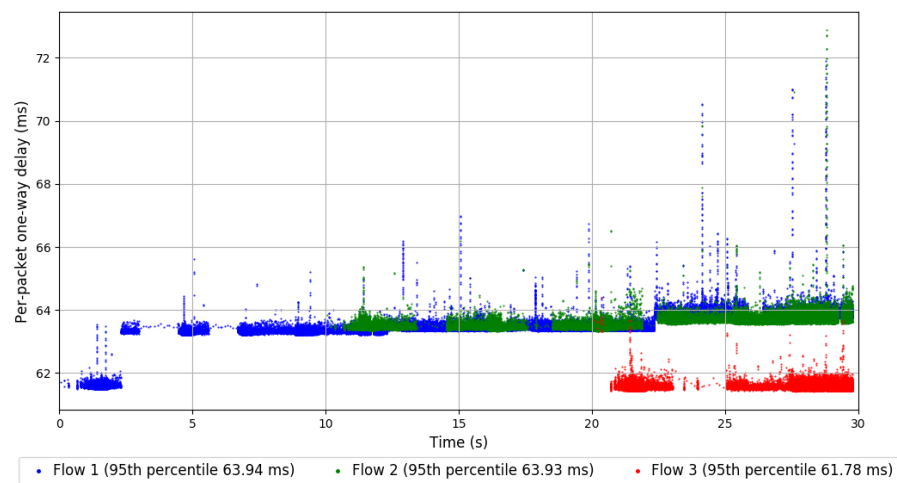
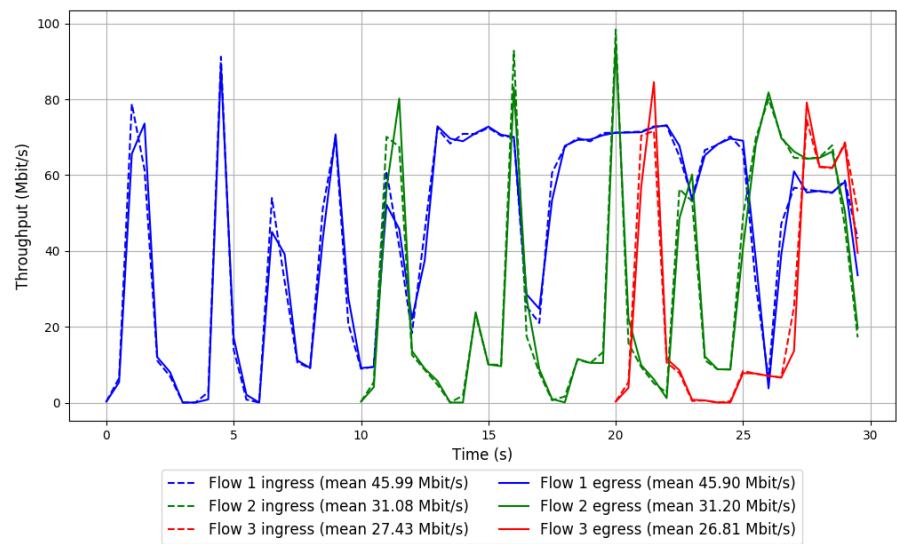
-- Flow 3:

Average throughput: 26.81 Mbit/s

95th percentile per-packet one-way delay: 61.782 ms

Loss rate: 3.52%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2018-04-18 21:40:43

End at: 2018-04-18 21:41:13

Below is generated by plot.py at 2018-04-19 01:39:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 78.87 Mbit/s

95th percentile per-packet one-way delay: 63.623 ms

Loss rate: 0.98%

-- Flow 1:

Average throughput: 45.23 Mbit/s

95th percentile per-packet one-way delay: 63.677 ms

Loss rate: 0.57%

-- Flow 2:

Average throughput: 39.12 Mbit/s

95th percentile per-packet one-way delay: 61.914 ms

Loss rate: 1.01%

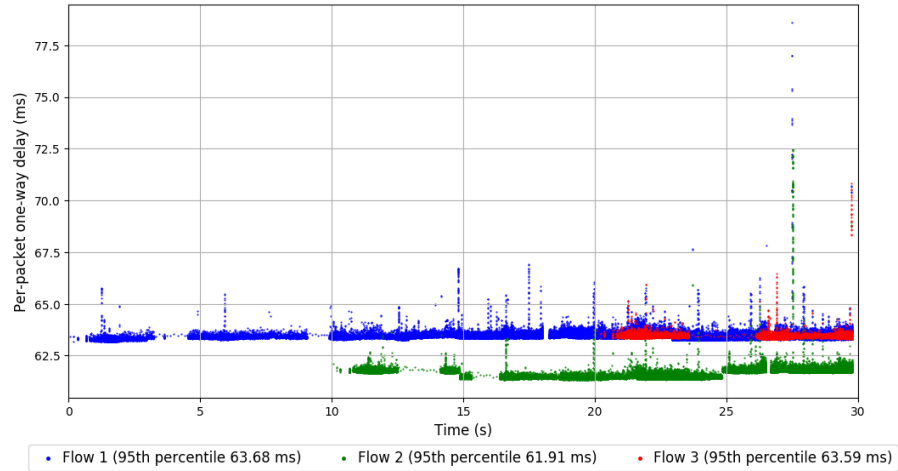
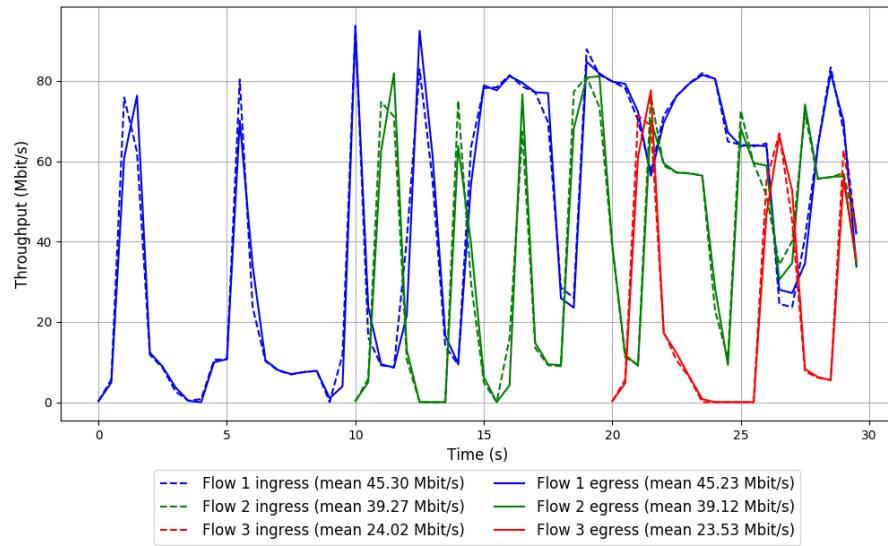
-- Flow 3:

Average throughput: 23.53 Mbit/s

95th percentile per-packet one-way delay: 63.589 ms

Loss rate: 3.30%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2018-04-18 21:56:42

End at: 2018-04-18 21:57:12

Below is generated by plot.py at 2018-04-19 01:39:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 74.05 Mbit/s

95th percentile per-packet one-way delay: 63.638 ms

Loss rate: 0.93%

-- Flow 1:

Average throughput: 43.66 Mbit/s

95th percentile per-packet one-way delay: 61.817 ms

Loss rate: 0.56%

-- Flow 2:

Average throughput: 31.34 Mbit/s

95th percentile per-packet one-way delay: 63.651 ms

Loss rate: 0.93%

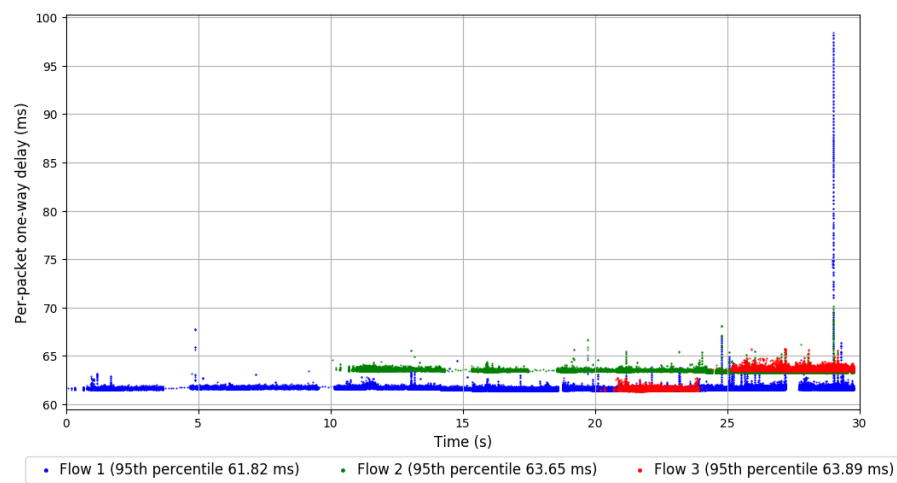
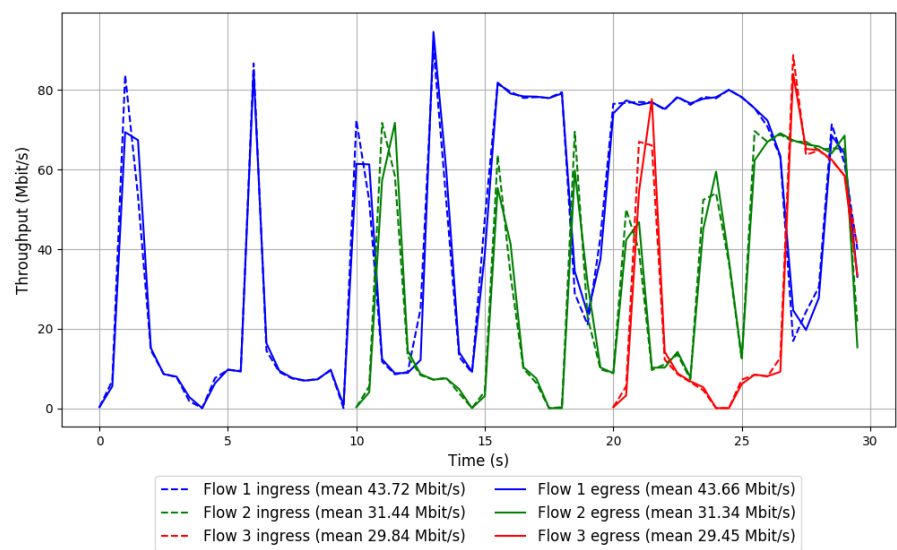
-- Flow 3:

Average throughput: 29.45 Mbit/s

95th percentile per-packet one-way delay: 63.893 ms

Loss rate: 2.55%

Run 9: Report of QUIC Cubic — Data Link



Run 10: Statistics of QUIC Cubic

Start at: 2018-04-18 22:12:36

End at: 2018-04-18 22:13:06

Below is generated by plot.py at 2018-04-19 01:39:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 72.46 Mbit/s

95th percentile per-packet one-way delay: 63.812 ms

Loss rate: 0.86%

-- Flow 1:

Average throughput: 44.08 Mbit/s

95th percentile per-packet one-way delay: 63.847 ms

Loss rate: 0.73%

-- Flow 2:

Average throughput: 34.63 Mbit/s

95th percentile per-packet one-way delay: 63.653 ms

Loss rate: 1.14%

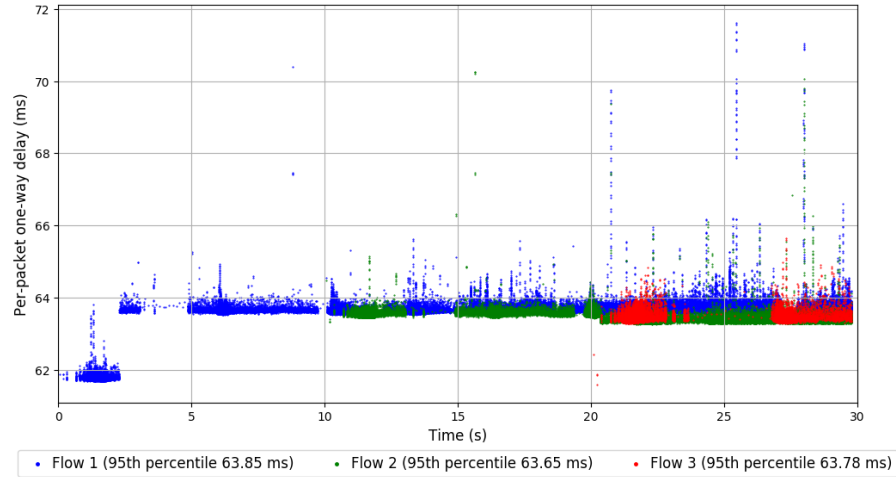
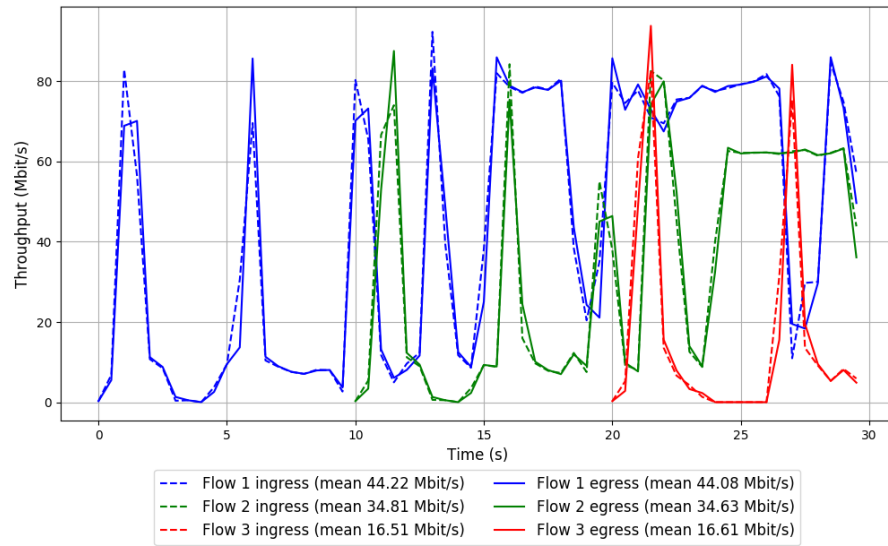
-- Flow 3:

Average throughput: 16.61 Mbit/s

95th percentile per-packet one-way delay: 63.782 ms

Loss rate: 0.66%

Run 10: Report of QUIC Cubic — Data Link

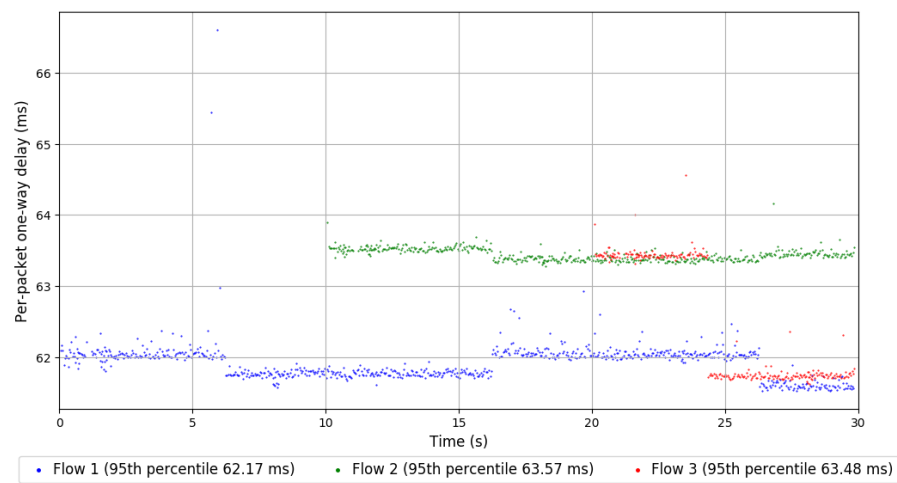
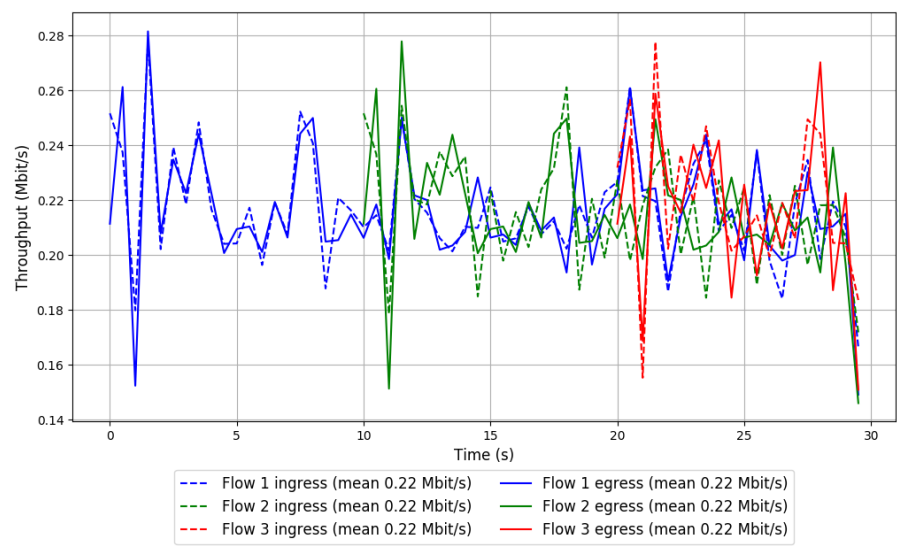


```
Run 1: Statistics of SCReAM

Start at: 2018-04-18 19:39:52
End at: 2018-04-18 19:40:22

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 63.535 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.172 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.574 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.479 ms
Loss rate: 1.10%
```

Run 1: Report of SReAM — Data Link

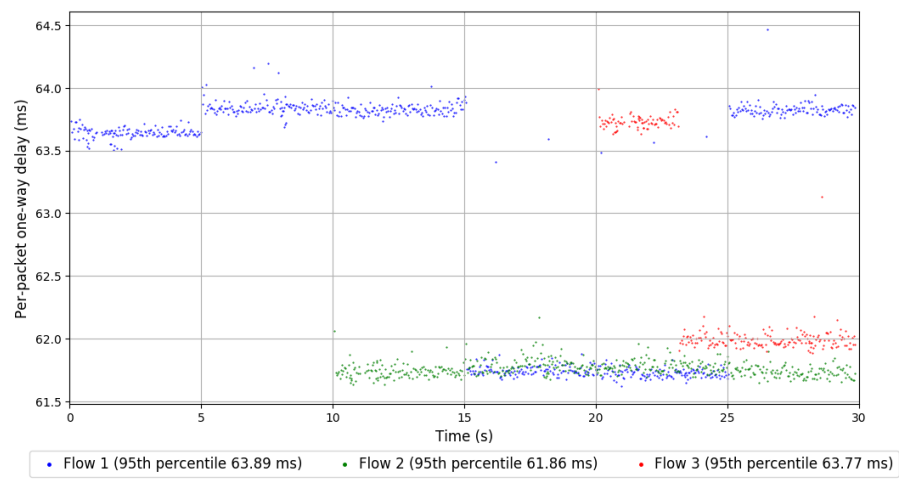
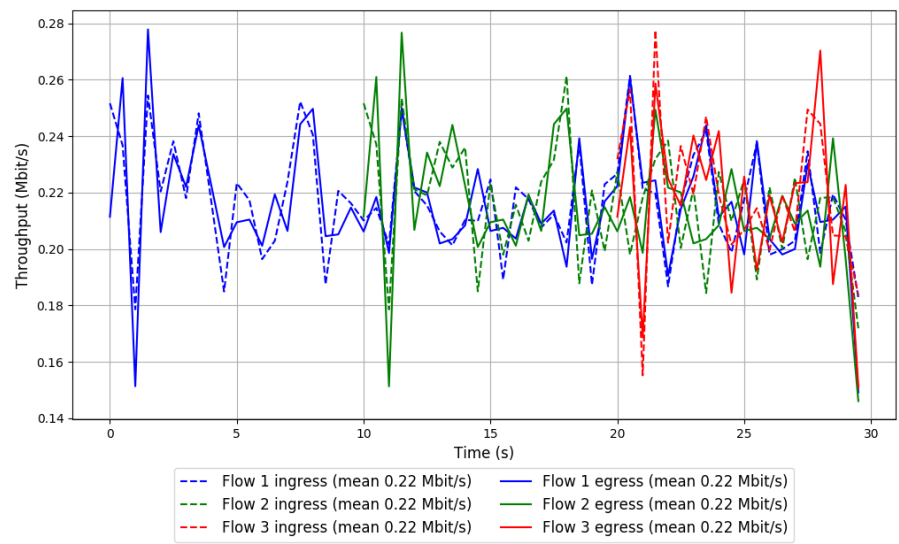


```
Run 2: Statistics of SReAM

Start at: 2018-04-18 19:55:43
End at: 2018-04-18 19:56:13

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 63.860 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.886 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.863 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.767 ms
Loss rate: 1.10%
```

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

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 01:39:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 63.883 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.867 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.904 ms

Loss rate: 0.63%

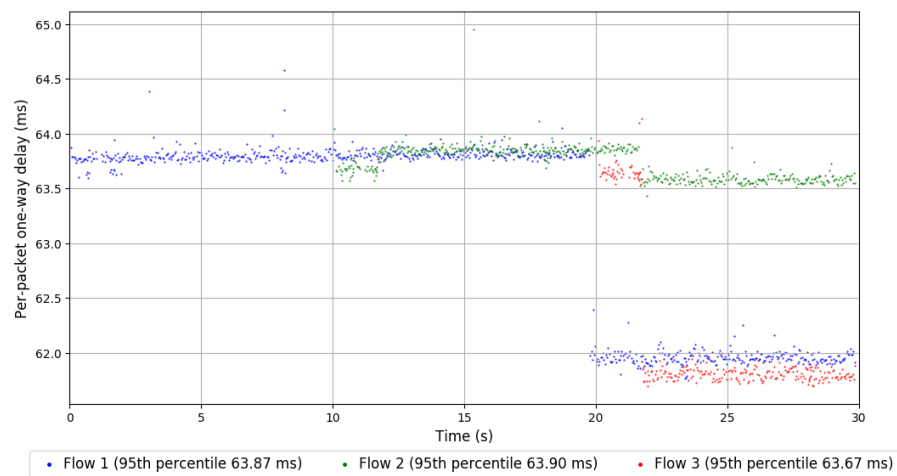
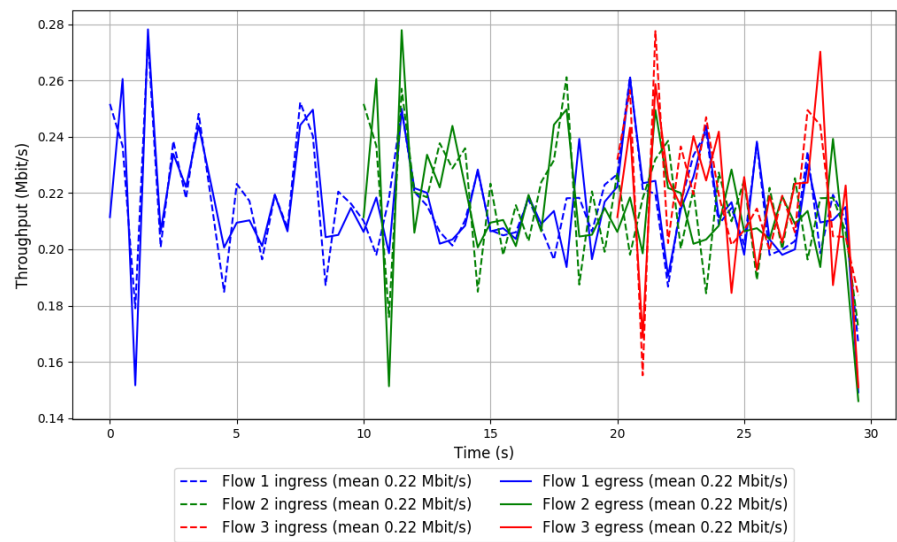
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.668 ms

Loss rate: 1.10%

Run 3: Report of SCRaM — Data Link

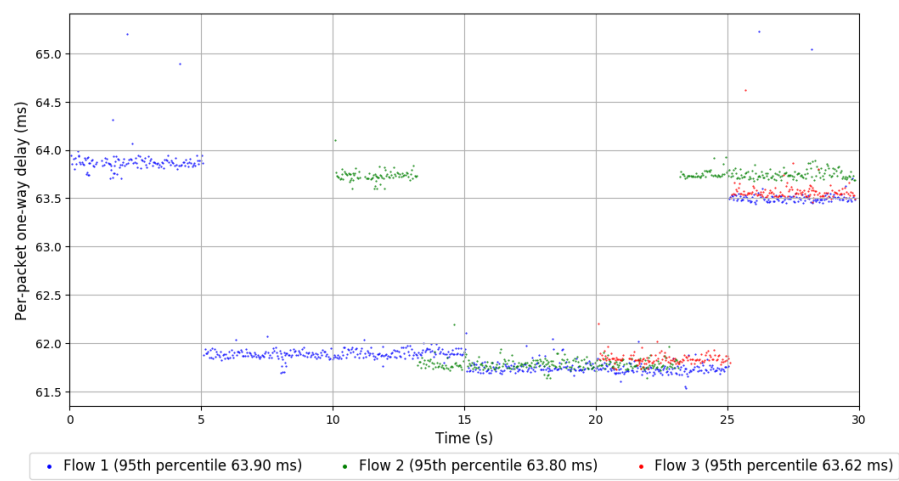
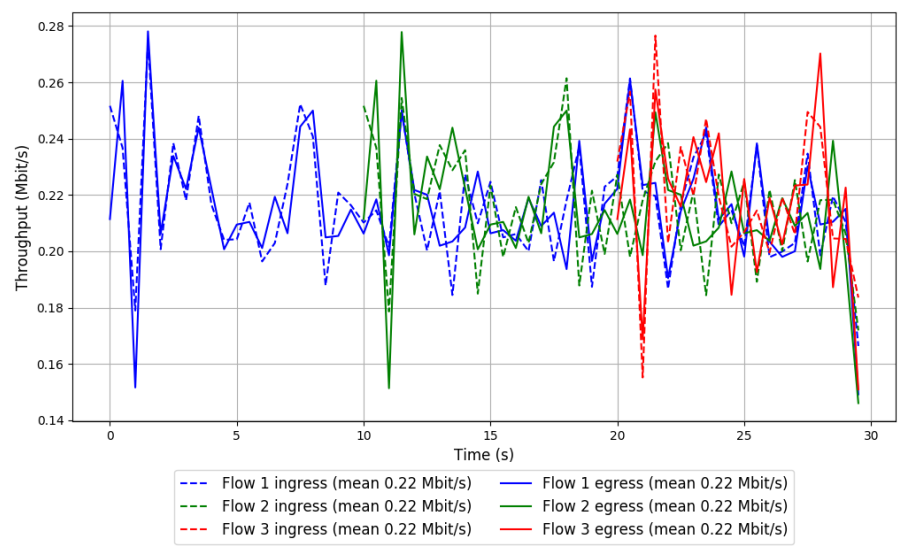


```
Run 4: Statistics of SReAM

Start at: 2018-04-18 20:27:43
End at: 2018-04-18 20:28:13

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 63.866 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.898 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.805 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.620 ms
Loss rate: 1.10%
```

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2018-04-18 20:43:34

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

Below is generated by plot.py at 2018-04-19 01:39:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 63.851 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.892 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.673 ms

Loss rate: 0.63%

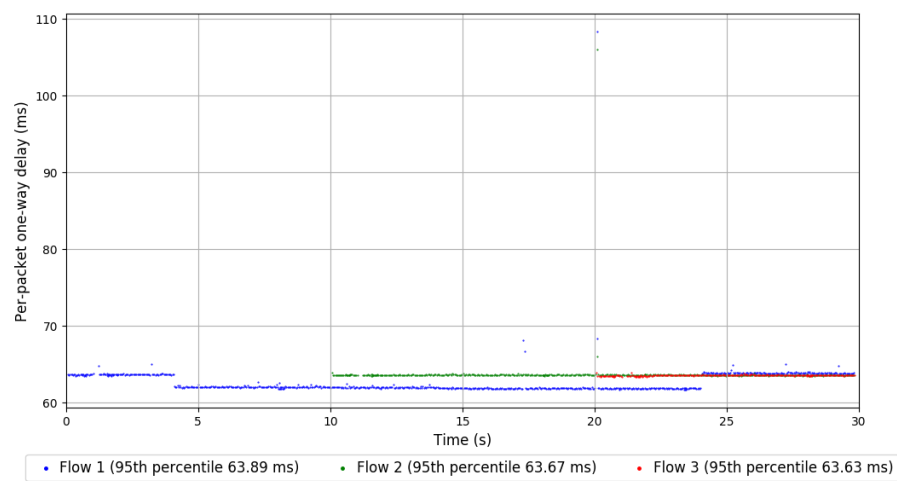
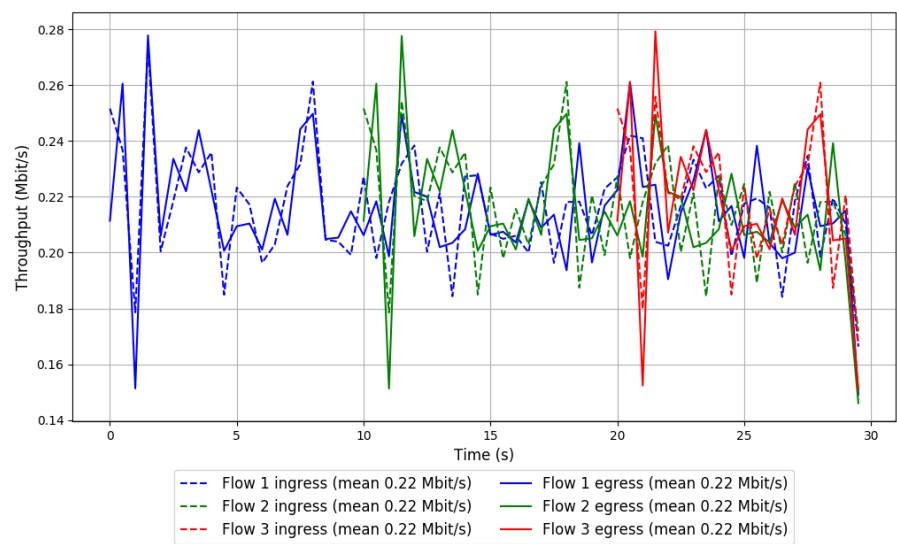
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.629 ms

Loss rate: 1.10%

Run 5: Report of SReAM — Data Link



Run 6: Statistics of SCReAM

Start at: 2018-04-18 20:59:35

End at: 2018-04-18 21:00:05

Below is generated by plot.py at 2018-04-19 01:39:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 63.788 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 62.005 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.817 ms

Loss rate: 0.63%

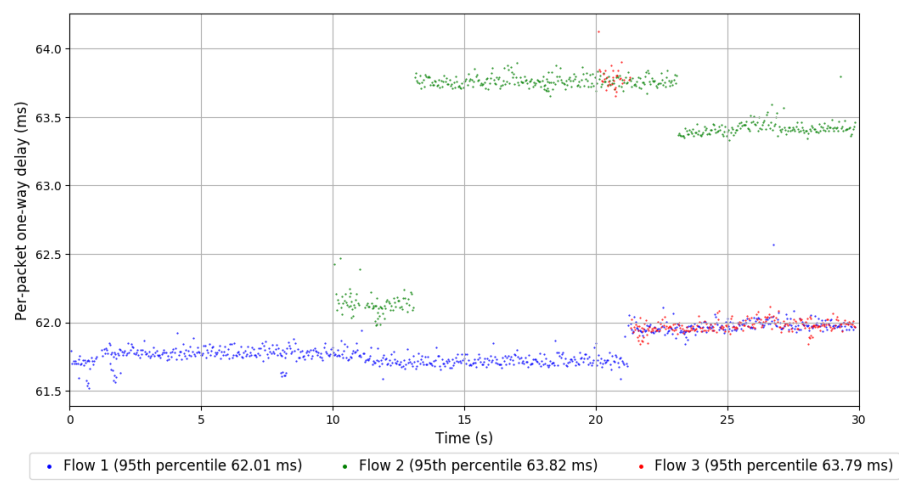
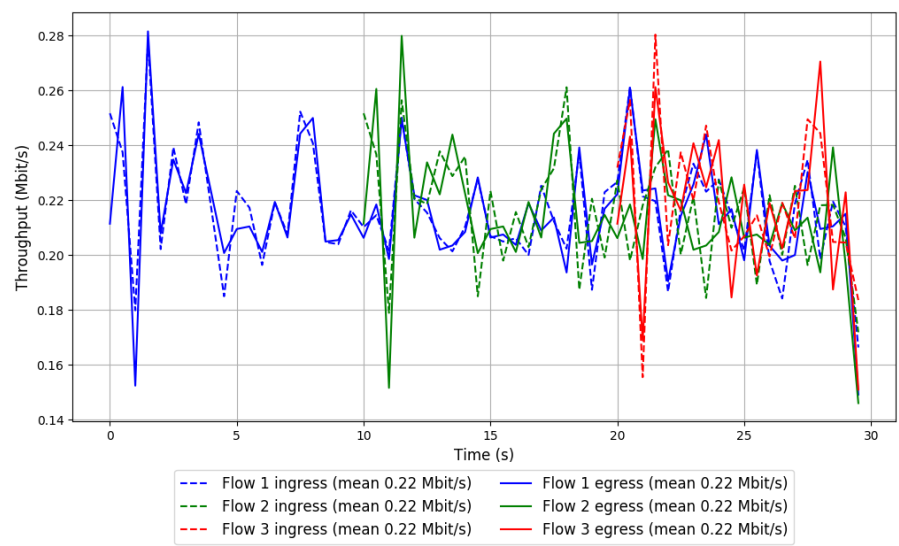
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.788 ms

Loss rate: 1.10%

Run 6: Report of SReAM — Data Link

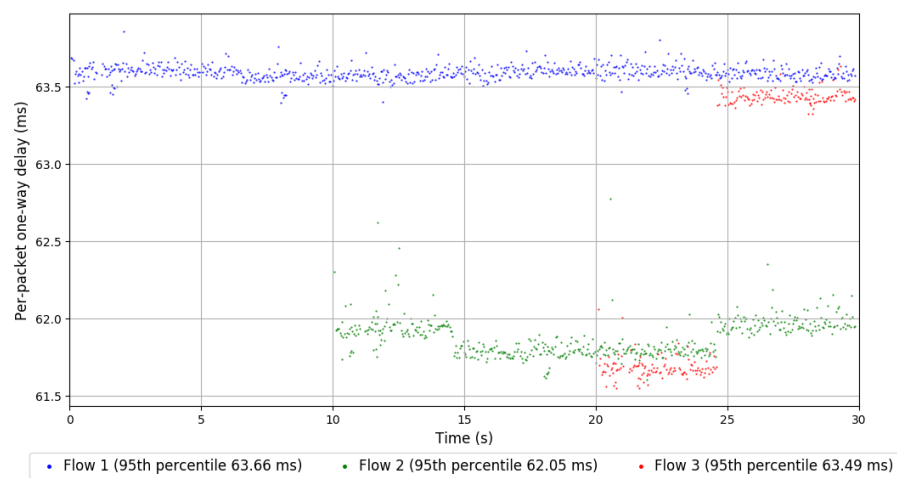
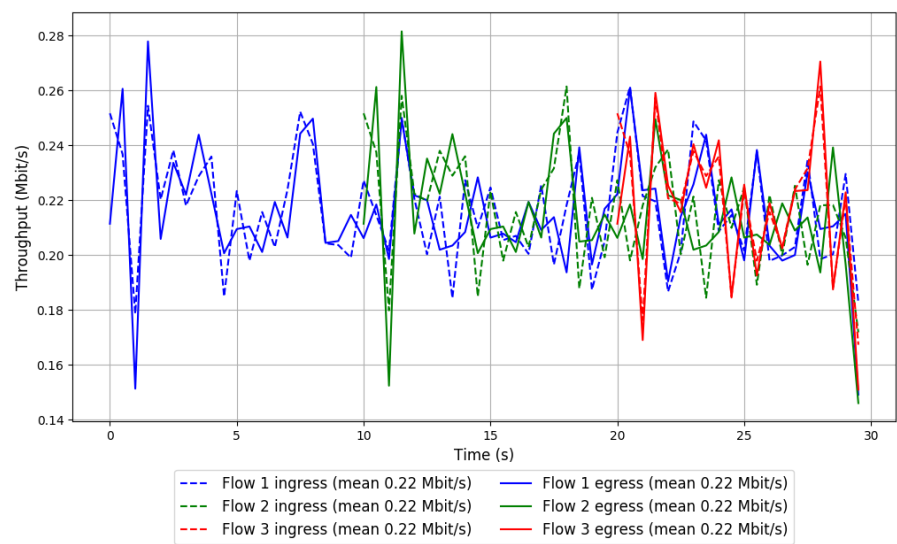


```
Run 7: Statistics of SReAM

Start at: 2018-04-18 21:15:22
End at: 2018-04-18 21:15:52

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 63.643 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.660 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.048 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.493 ms
Loss rate: 1.10%
```


Run 7: Report of SReAM — Data Link



Run 8: Statistics of SCReAM

Start at: 2018-04-18 21:31:05

End at: 2018-04-18 21:31:35

Below is generated by plot.py at 2018-04-19 01:39:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 63.579 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.576 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.660 ms

Loss rate: 0.63%

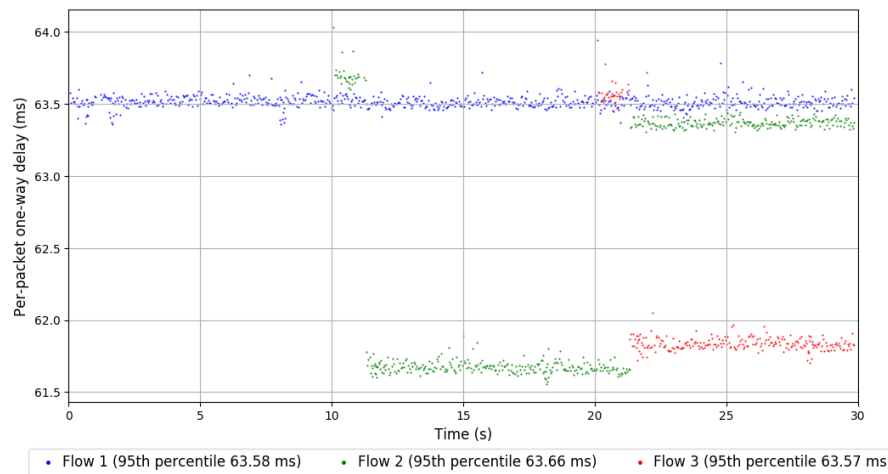
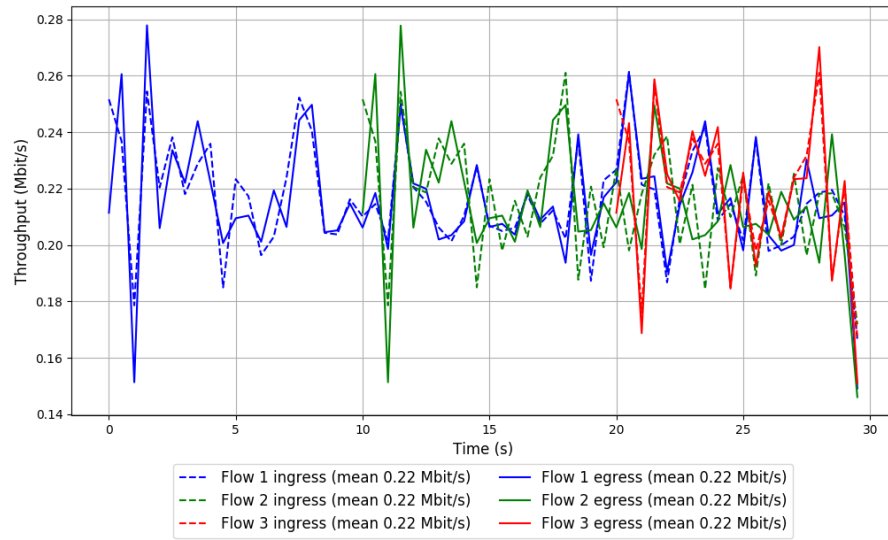
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.572 ms

Loss rate: 1.10%

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SReAM

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

End at: 2018-04-18 21:47:16

Below is generated by plot.py at 2018-04-19 01:39:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 63.655 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 61.881 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 61.842 ms

Loss rate: 0.63%

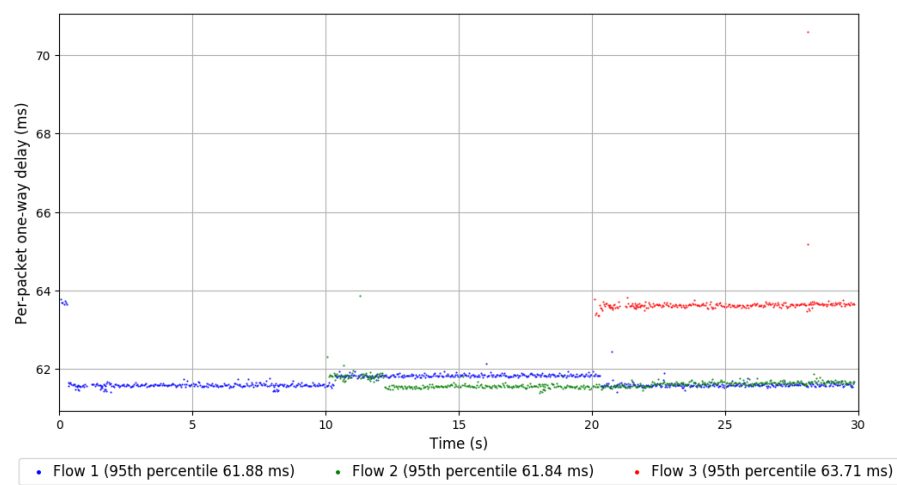
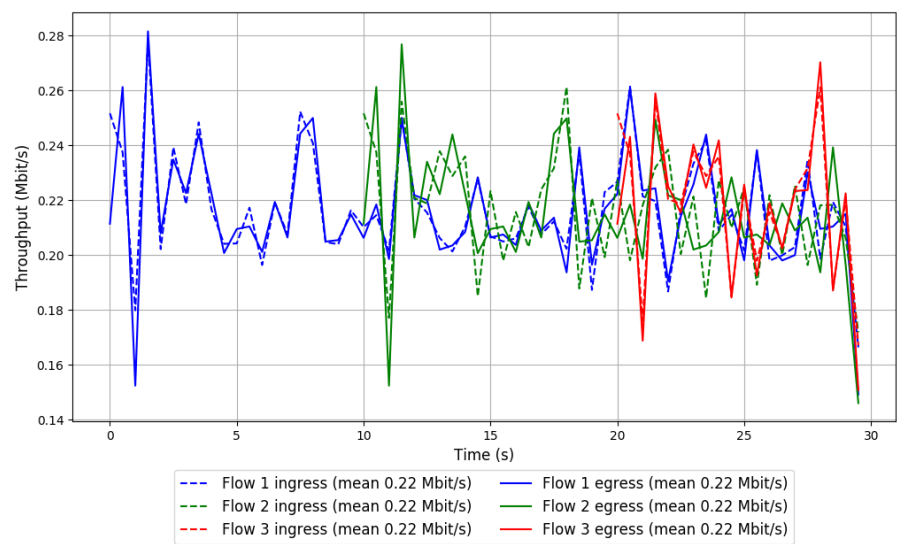
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.709 ms

Loss rate: 1.10%

Run 9: Report of SReAM — Data Link

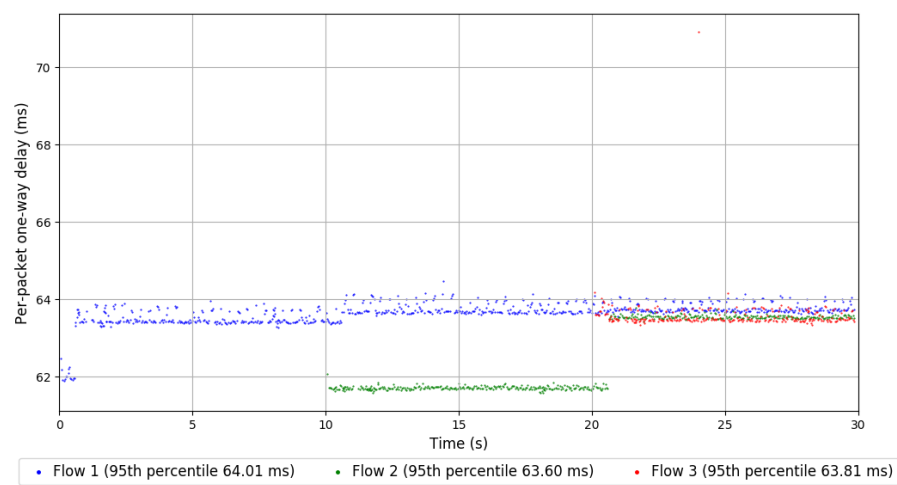
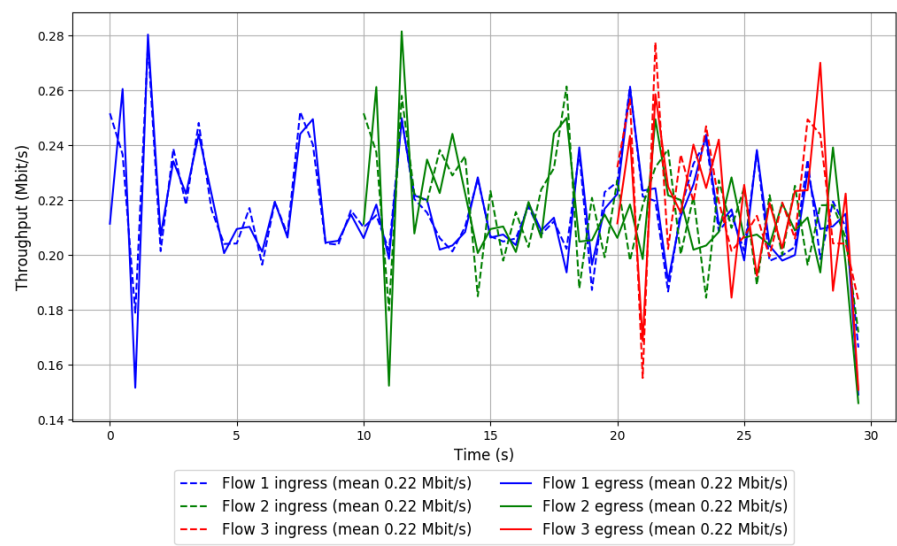


```
Run 10: Statistics of SReAM

Start at: 2018-04-18 22:02:38
End at: 2018-04-18 22:03:08

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 63.963 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 64.012 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.602 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.815 ms
Loss rate: 1.10%
```

Run 10: Report of SReAM — Data Link

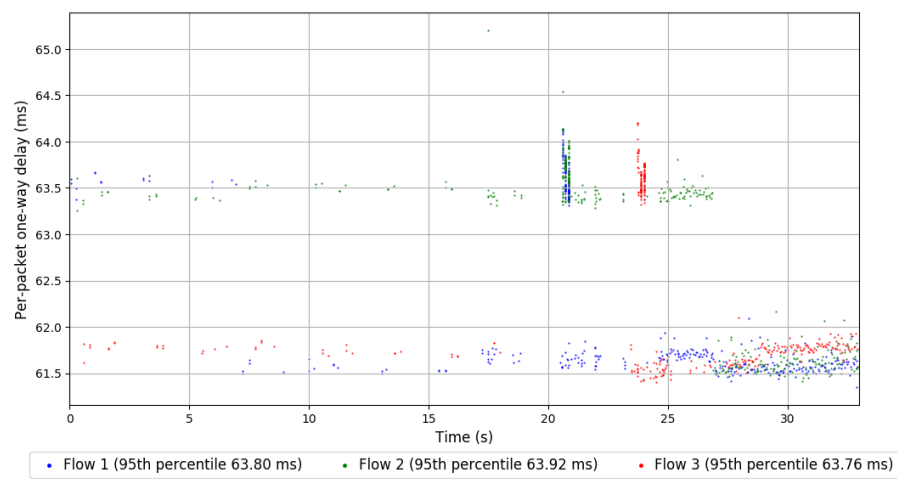
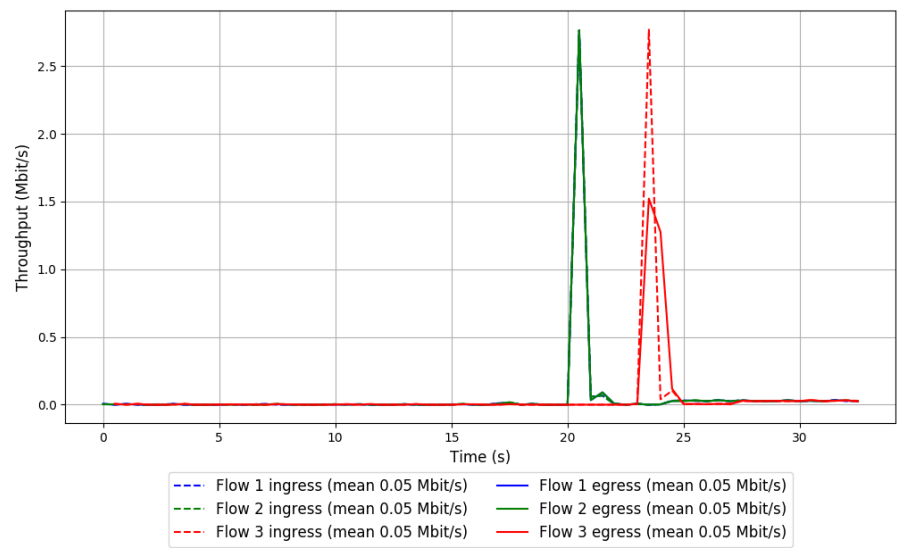


```
Run 1: Statistics of WebRTC media

Start at: 2018-04-18 19:40:32
End at: 2018-04-18 19:41:02

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 63.830 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 63.801 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 63.919 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 63.758 ms
Loss rate: 0.24%
```


Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

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 01:39:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 64.208 ms

Loss rate: 0.07%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 64.109 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 64.179 ms

Loss rate: 0.00%

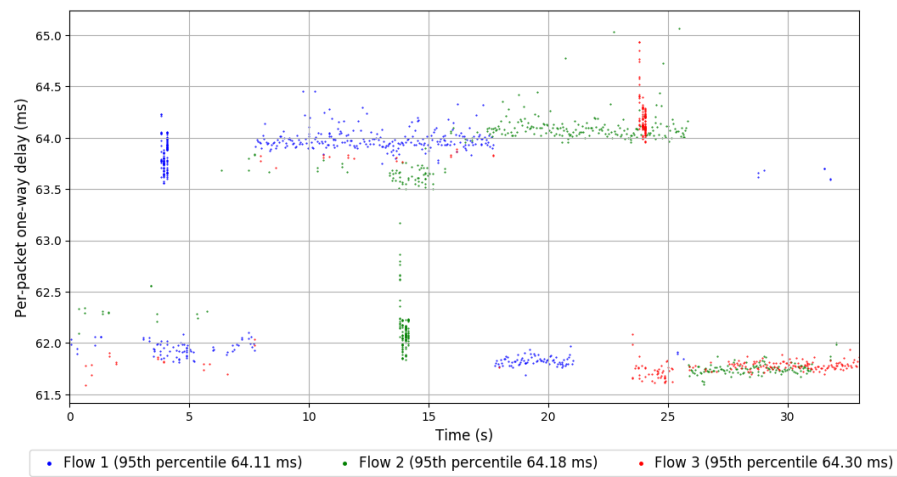
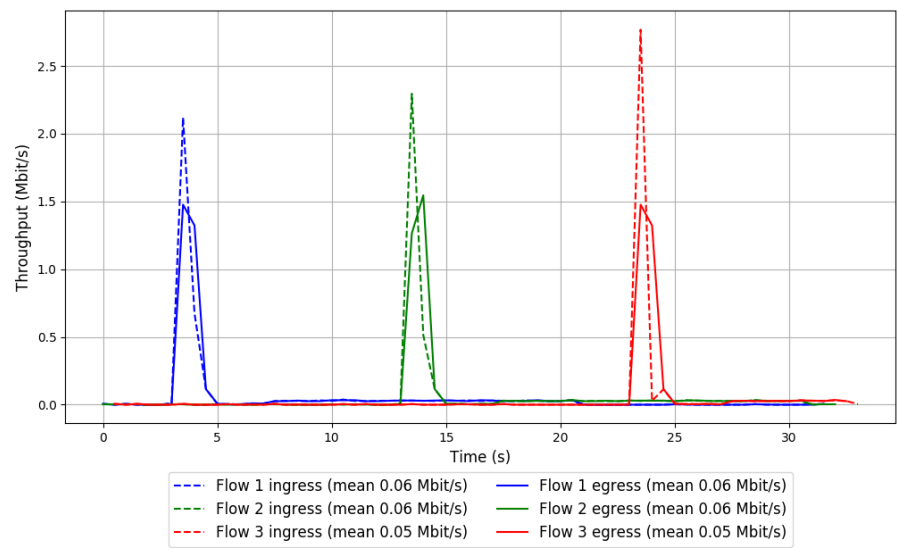
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 64.300 ms

Loss rate: 0.24%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-04-18 20:12:27

End at: 2018-04-18 20:12:57

Below is generated by plot.py at 2018-04-19 01:39:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 64.217 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 63.975 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 64.196 ms

Loss rate: 0.00%

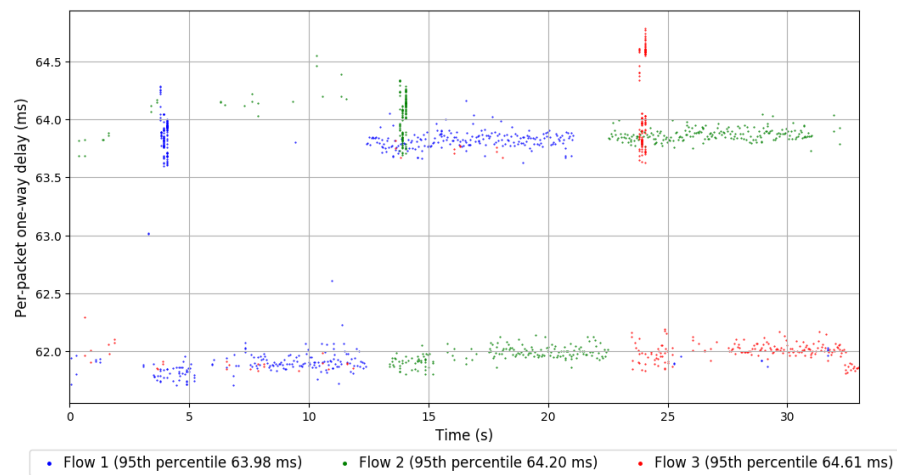
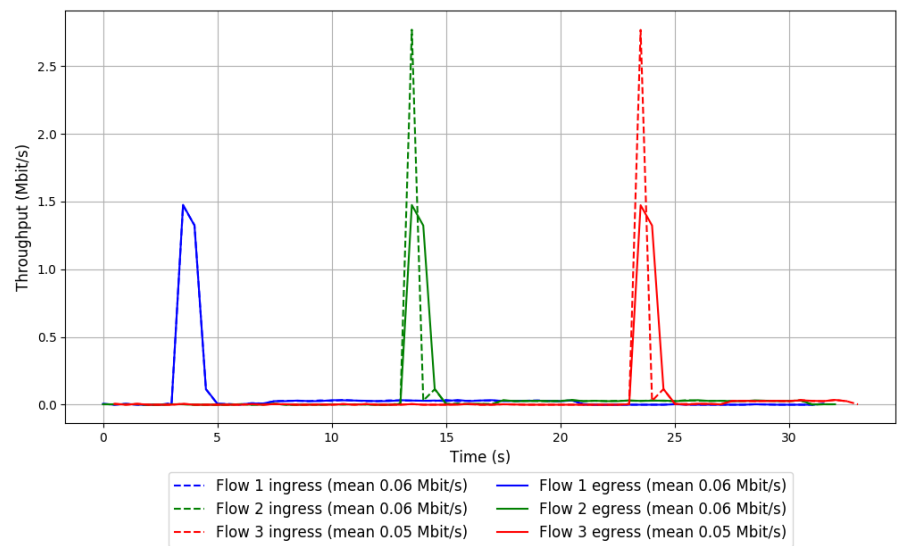
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 64.605 ms

Loss rate: 0.16%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-04-18 20:28:24

End at: 2018-04-18 20:28:54

Below is generated by plot.py at 2018-04-19 01:39:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 63.954 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 63.633 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 64.008 ms

Loss rate: 0.00%

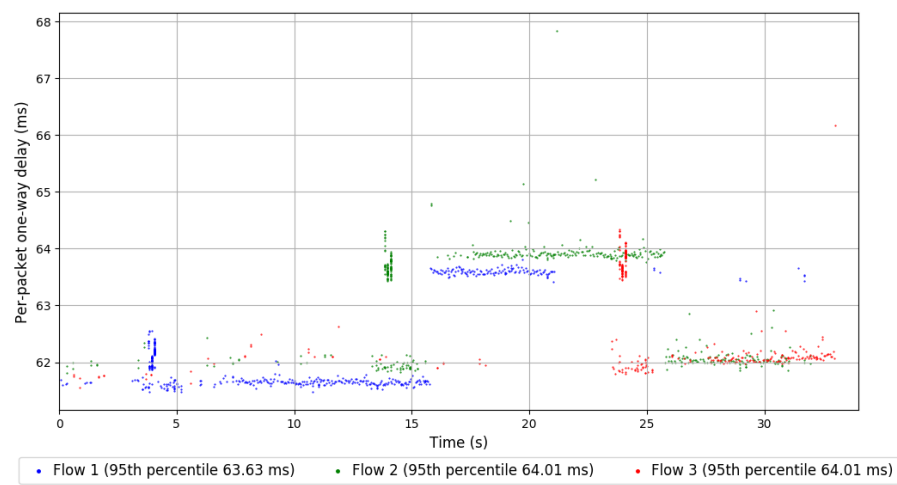
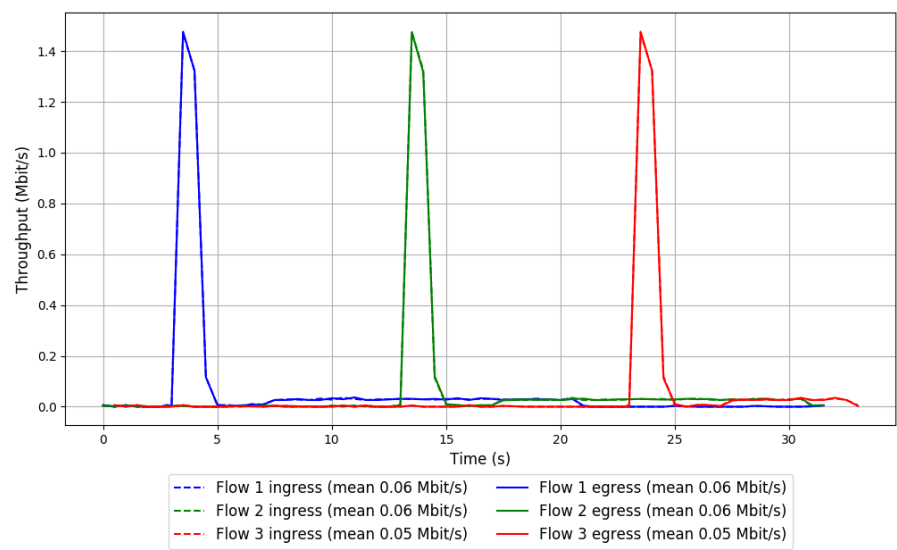
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 64.010 ms

Loss rate: 0.16%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-04-18 20:44:15

End at: 2018-04-18 20:44:45

Below is generated by plot.py at 2018-04-19 01:39:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 63.976 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 64.148 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 63.794 ms

Loss rate: 0.00%

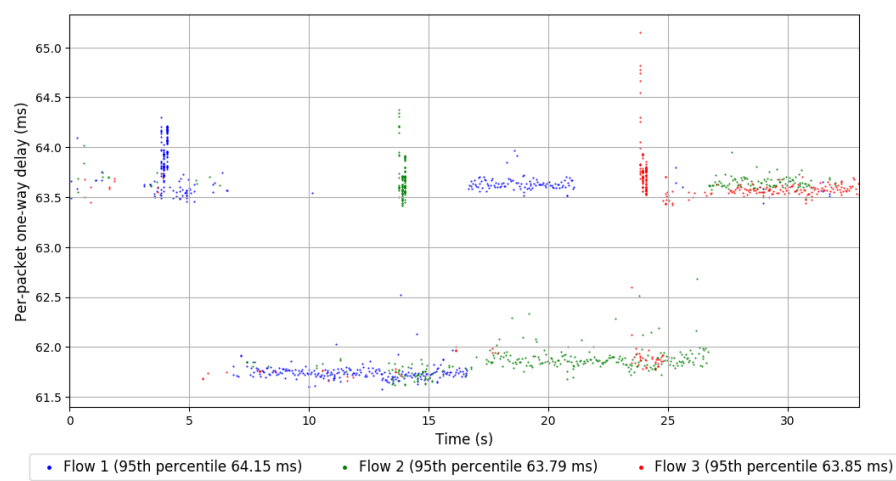
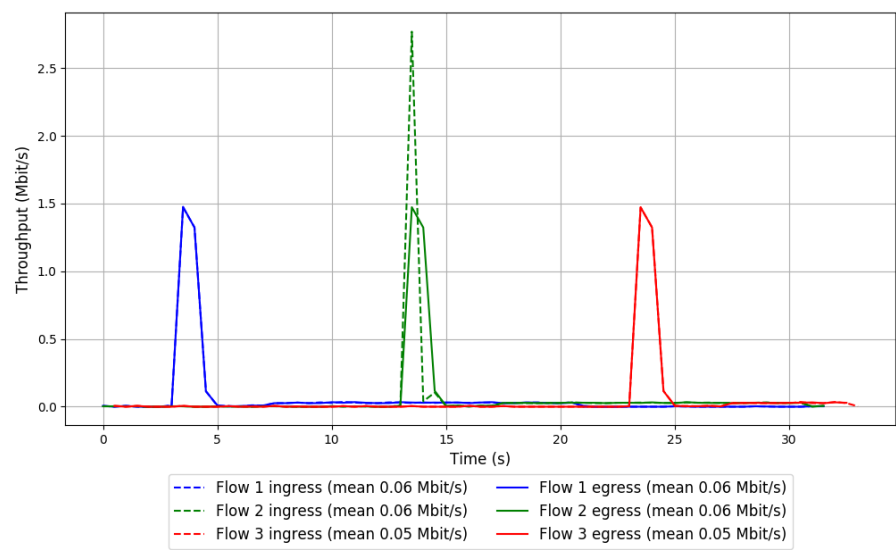
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 63.853 ms

Loss rate: 0.16%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2018-04-18 21:00:16

End at: 2018-04-18 21:00:46

Below is generated by plot.py at 2018-04-19 01:39:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.17 Mbit/s

95th percentile per-packet one-way delay: 63.785 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 63.809 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 63.788 ms

Loss rate: 0.00%

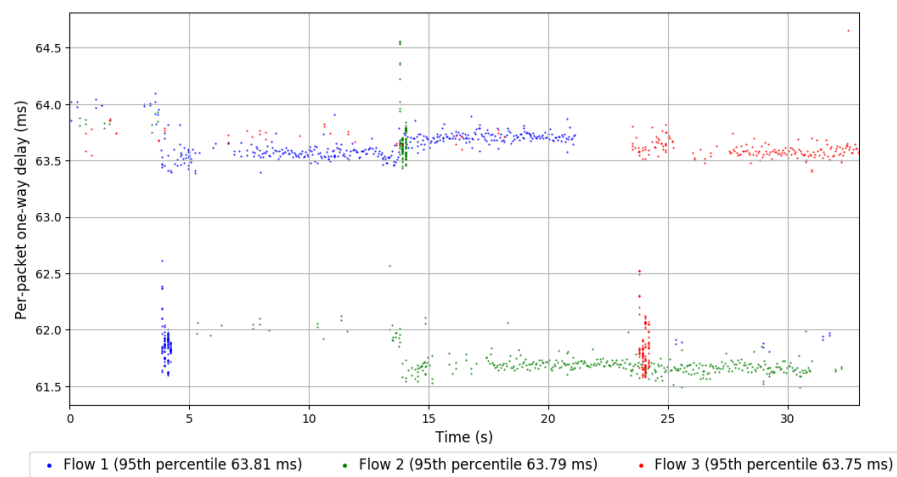
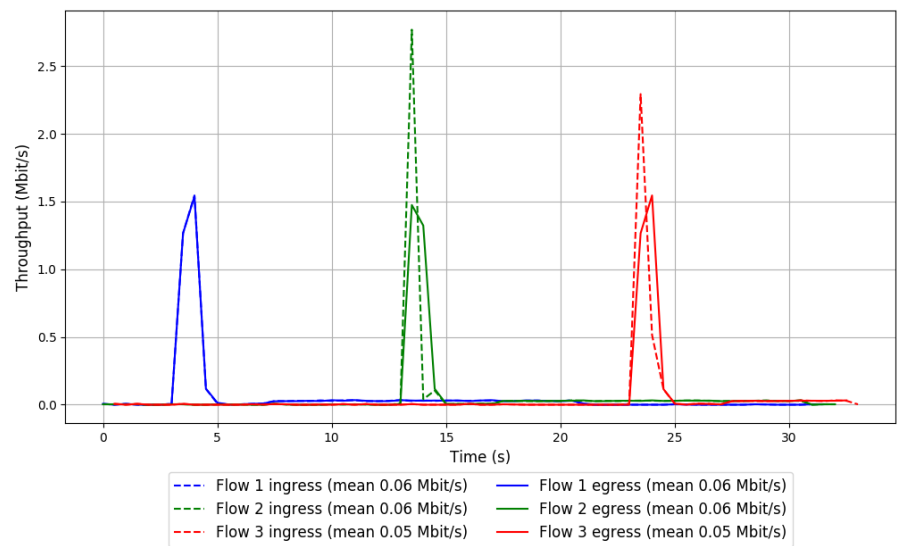
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 63.750 ms

Loss rate: 0.16%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2018-04-18 21:16:02

End at: 2018-04-18 21:16:32

Below is generated by plot.py at 2018-04-19 01:39:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

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

Loss rate: 0.09%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 64.005 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 64.068 ms

Loss rate: 0.00%

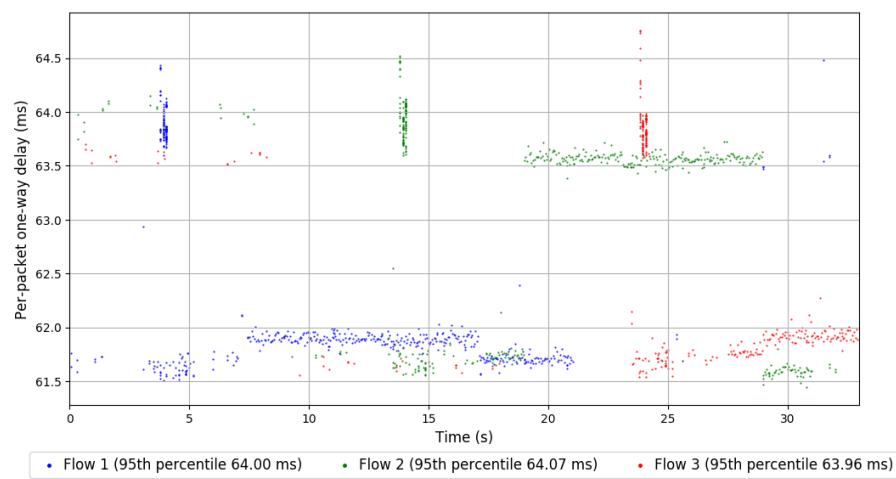
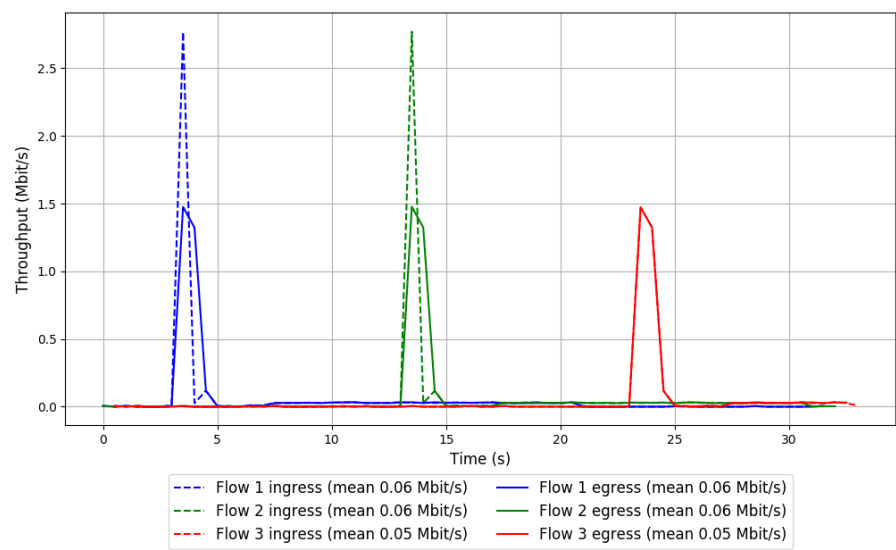
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 63.960 ms

Loss rate: 0.28%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2018-04-18 21:31:46

End at: 2018-04-18 21:32:16

Below is generated by plot.py at 2018-04-19 01:39:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 63.906 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 63.705 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 63.928 ms

Loss rate: 0.00%

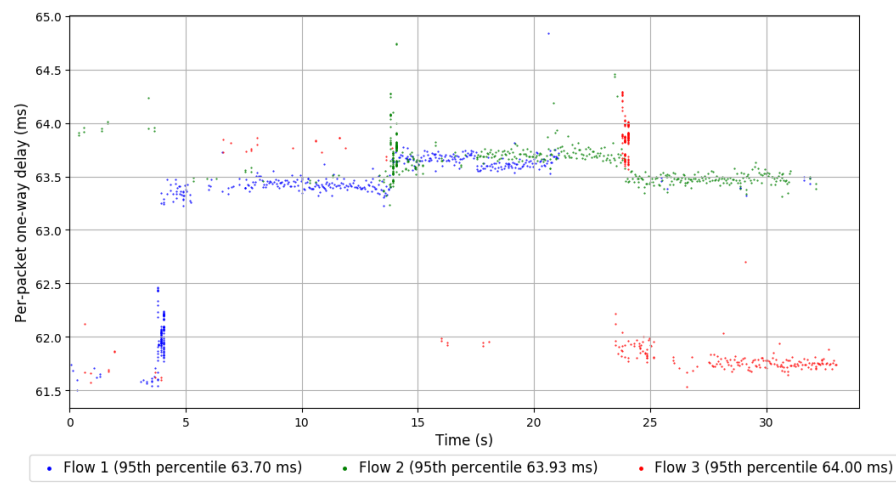
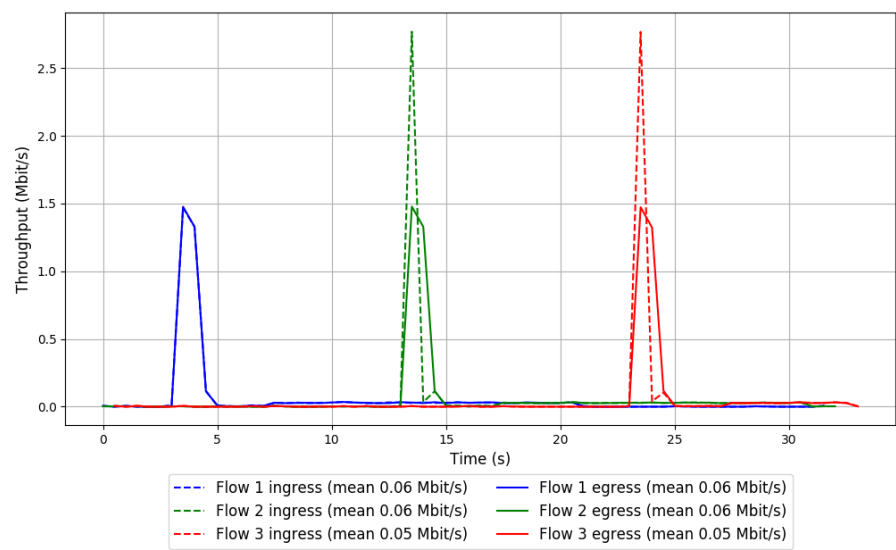
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 64.001 ms

Loss rate: 0.16%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2018-04-18 21:47:27

End at: 2018-04-18 21:47:57

Below is generated by plot.py at 2018-04-19 01:39:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 63.753 ms

Loss rate: 0.07%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 63.576 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 63.891 ms

Loss rate: 0.00%

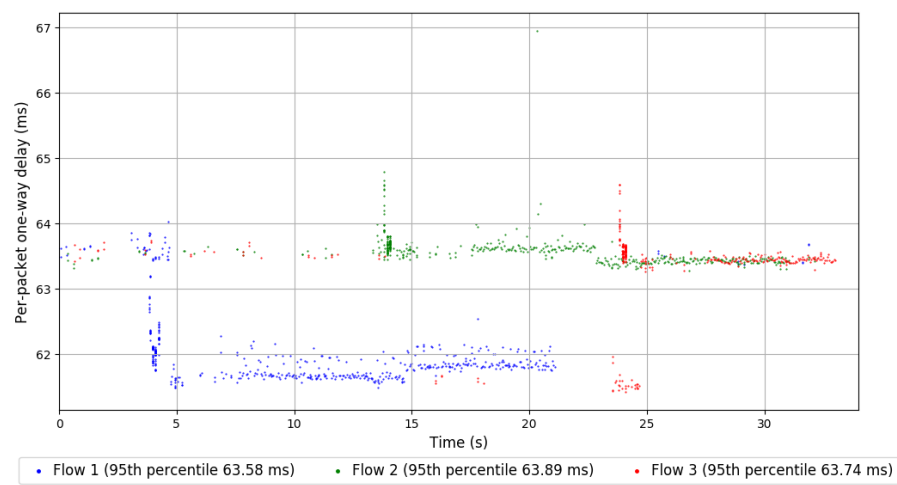
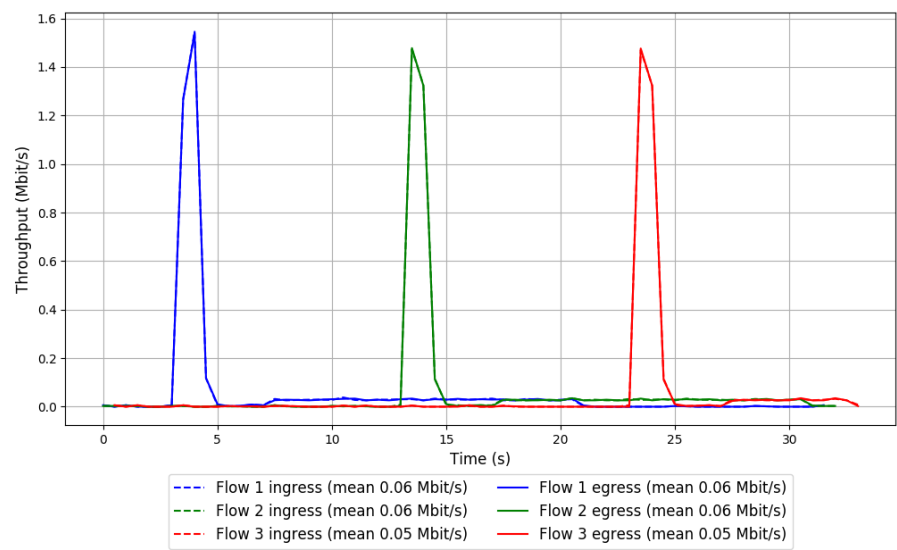
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 63.745 ms

Loss rate: 0.24%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

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

End at: 2018-04-18 22:03:48

Below is generated by plot.py at 2018-04-19 01:39:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 63.864 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 63.765 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 64.022 ms

Loss rate: 0.00%

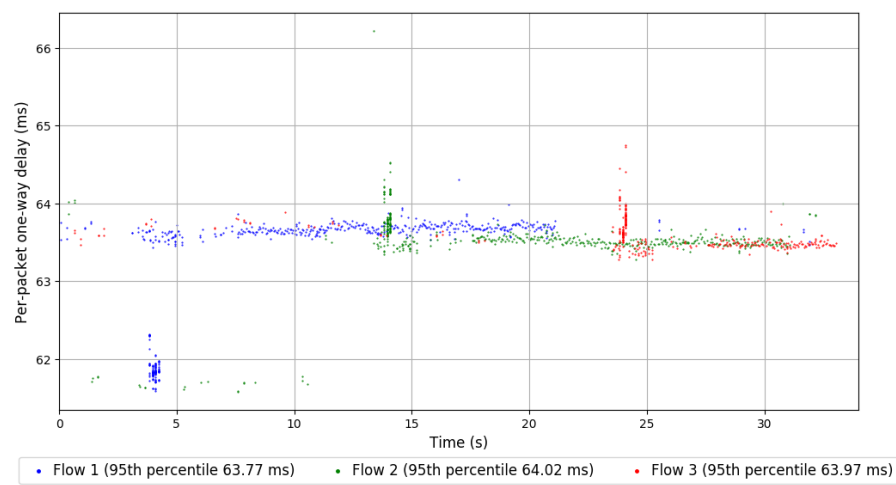
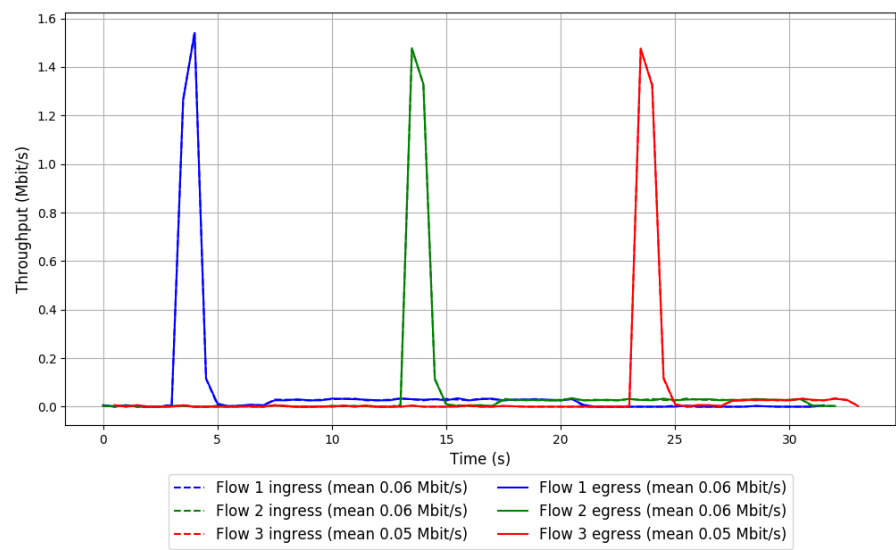
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 63.965 ms

Loss rate: 0.16%

Run 10: Report of WebRTC media — Data Link



Run 1: Statistics of Sprout

Start at: 2018-04-18 19:41:13

End at: 2018-04-18 19:41:43

Below is generated by plot.py at 2018-04-19 01:39:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.66 Mbit/s

95th percentile per-packet one-way delay: 64.780 ms

Loss rate: 0.72%

-- Flow 1:

Average throughput: 6.52 Mbit/s

95th percentile per-packet one-way delay: 64.849 ms

Loss rate: 0.48%

-- Flow 2:

Average throughput: 6.34 Mbit/s

95th percentile per-packet one-way delay: 64.772 ms

Loss rate: 0.73%

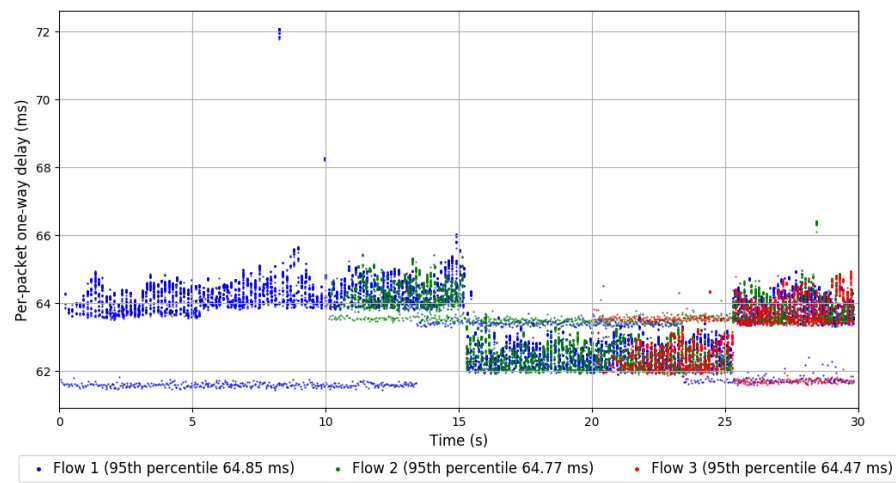
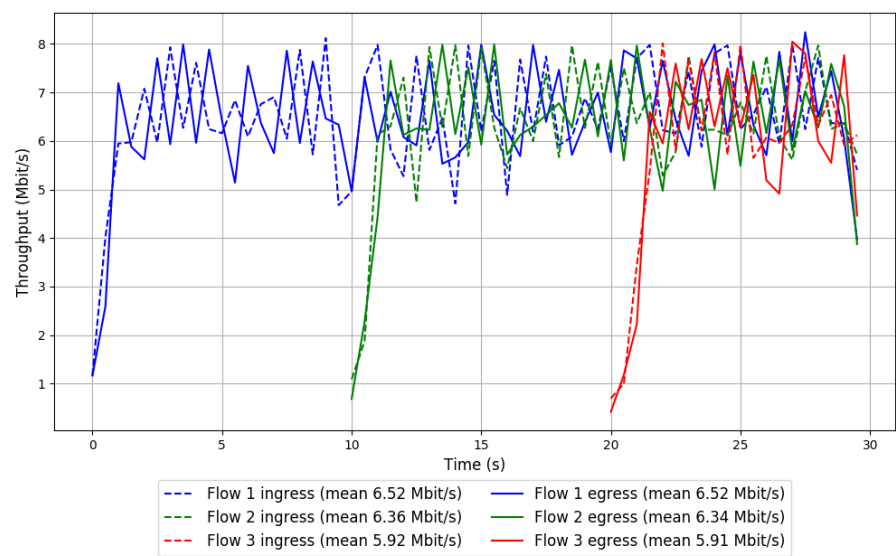
-- Flow 3:

Average throughput: 5.91 Mbit/s

95th percentile per-packet one-way delay: 64.474 ms

Loss rate: 1.50%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

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

End at: 2018-04-18 19:57:34

Below is generated by plot.py at 2018-04-19 01:39:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.86 Mbit/s

95th percentile per-packet one-way delay: 64.618 ms

Loss rate: 0.62%

-- Flow 1:

Average throughput: 6.54 Mbit/s

95th percentile per-packet one-way delay: 64.640 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 6.49 Mbit/s

95th percentile per-packet one-way delay: 64.604 ms

Loss rate: 0.60%

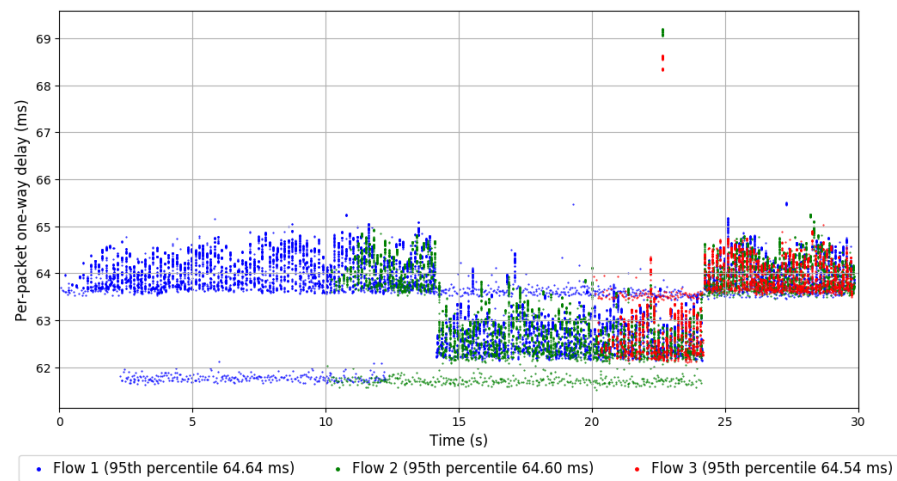
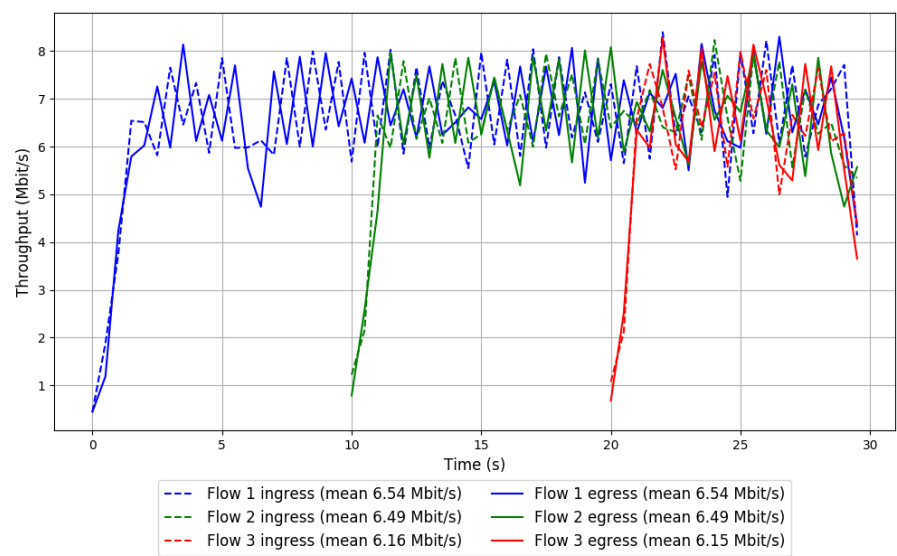
-- Flow 3:

Average throughput: 6.15 Mbit/s

95th percentile per-packet one-way delay: 64.536 ms

Loss rate: 1.46%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

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

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

Below is generated by plot.py at 2018-04-19 01:39:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.70 Mbit/s

95th percentile per-packet one-way delay: 64.830 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 6.48 Mbit/s

95th percentile per-packet one-way delay: 64.892 ms

Loss rate: 0.17%

-- Flow 2:

Average throughput: 6.33 Mbit/s

95th percentile per-packet one-way delay: 64.822 ms

Loss rate: 0.74%

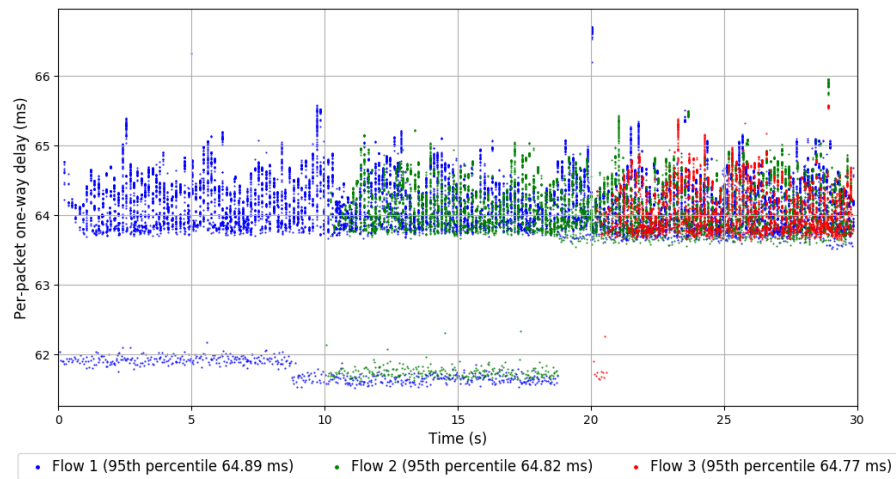
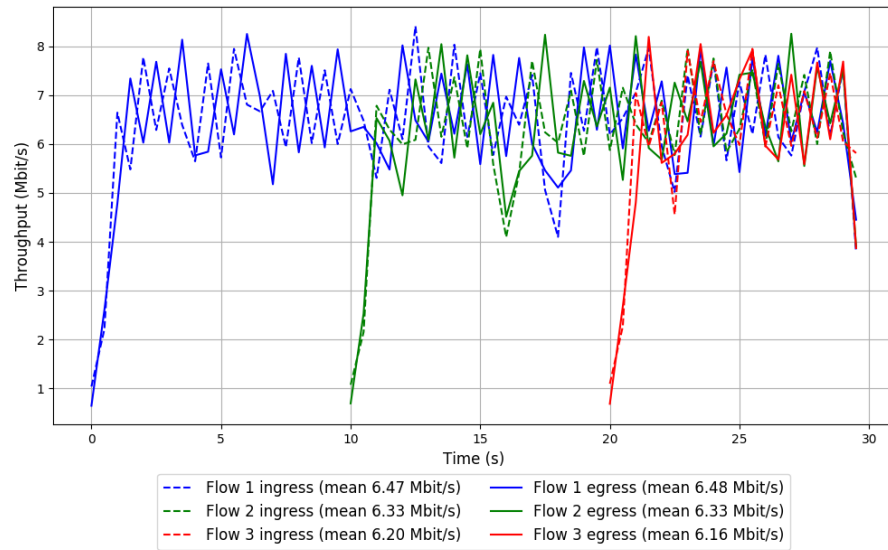
-- Flow 3:

Average throughput: 6.16 Mbit/s

95th percentile per-packet one-way delay: 64.772 ms

Loss rate: 1.59%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

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

End at: 2018-04-18 20:29:34

Below is generated by plot.py at 2018-04-19 01:39:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.72 Mbit/s

95th percentile per-packet one-way delay: 64.690 ms

Loss rate: 0.75%

-- Flow 1:

Average throughput: 6.51 Mbit/s

95th percentile per-packet one-way delay: 64.693 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 6.42 Mbit/s

95th percentile per-packet one-way delay: 64.728 ms

Loss rate: 0.84%

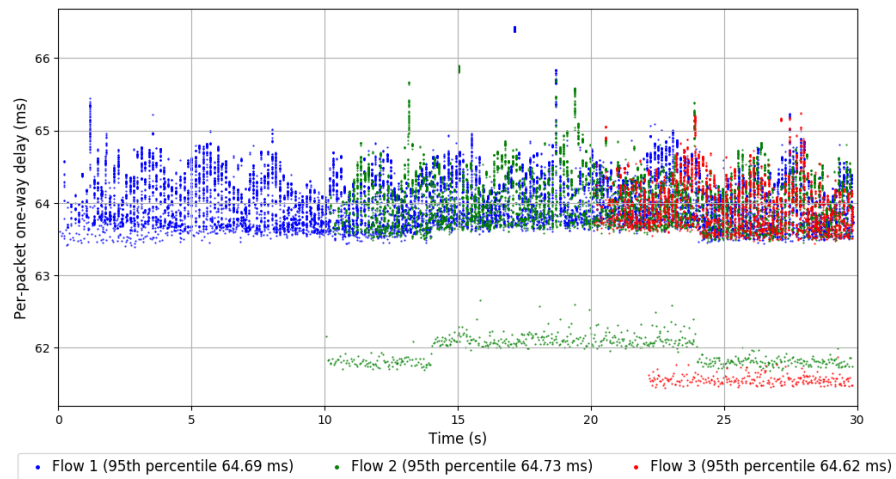
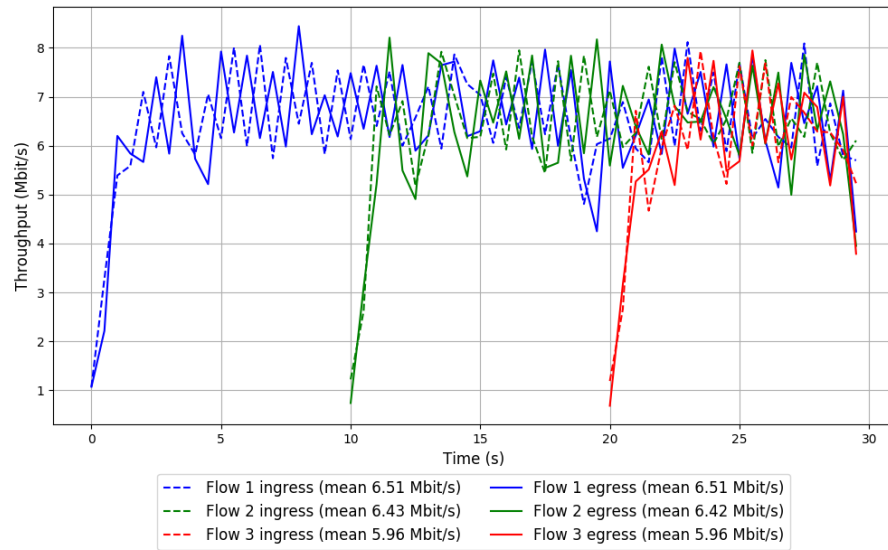
-- Flow 3:

Average throughput: 5.96 Mbit/s

95th percentile per-packet one-way delay: 64.619 ms

Loss rate: 1.56%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2018-04-18 20:44:55

End at: 2018-04-18 20:45:25

Below is generated by plot.py at 2018-04-19 01:39:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.78 Mbit/s

95th percentile per-packet one-way delay: 64.713 ms

Loss rate: 0.67%

-- Flow 1:

Average throughput: 6.48 Mbit/s

95th percentile per-packet one-way delay: 64.679 ms

Loss rate: 0.47%

-- Flow 2:

Average throughput: 6.45 Mbit/s

95th percentile per-packet one-way delay: 64.814 ms

Loss rate: 0.59%

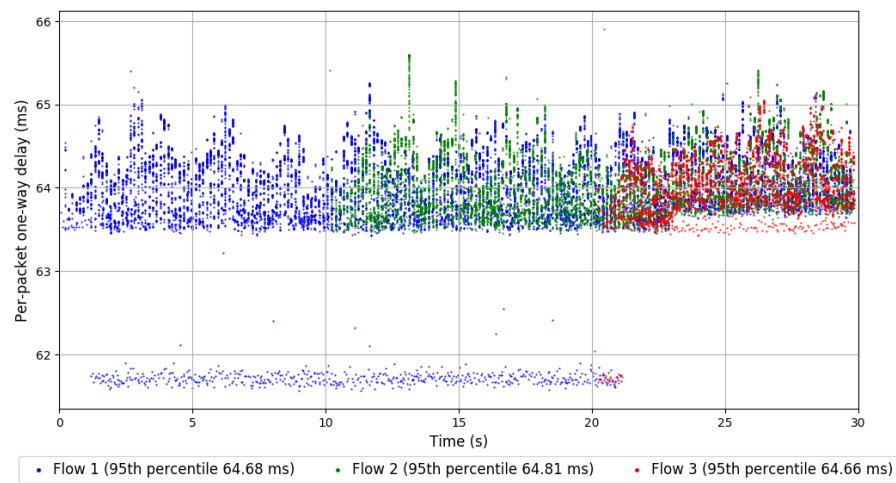
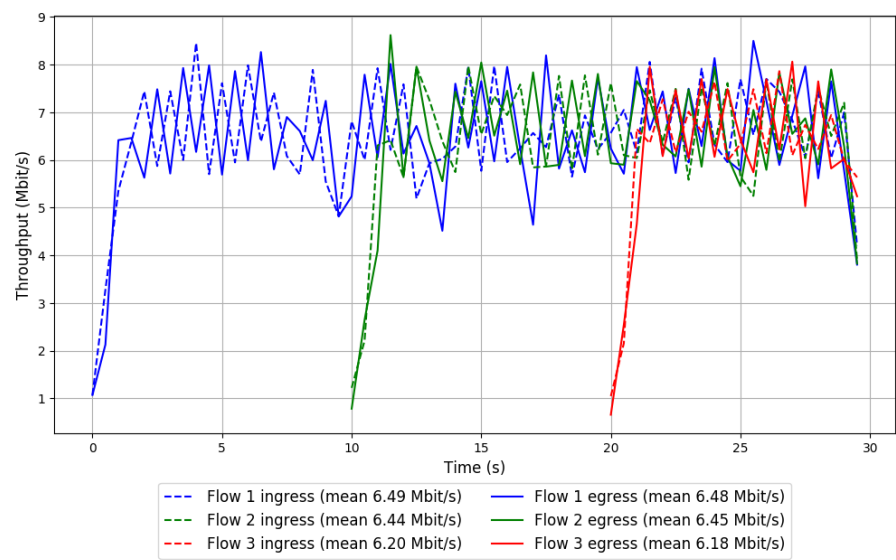
-- Flow 3:

Average throughput: 6.18 Mbit/s

95th percentile per-packet one-way delay: 64.660 ms

Loss rate: 1.45%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

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

End at: 2018-04-18 21:01:26

Below is generated by plot.py at 2018-04-19 01:39:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.82 Mbit/s

95th percentile per-packet one-way delay: 64.651 ms

Loss rate: 0.65%

-- Flow 1:

Average throughput: 6.56 Mbit/s

95th percentile per-packet one-way delay: 64.630 ms

Loss rate: 0.23%

-- Flow 2:

Average throughput: 6.46 Mbit/s

95th percentile per-packet one-way delay: 64.746 ms

Loss rate: 0.76%

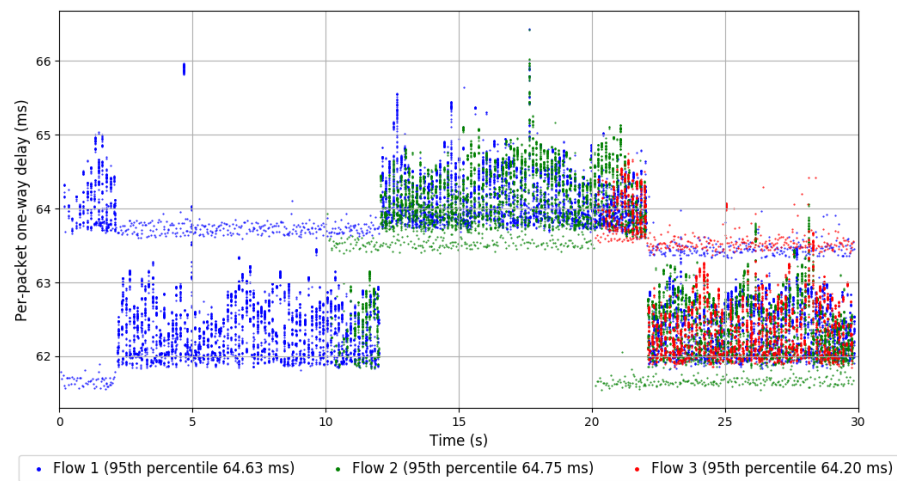
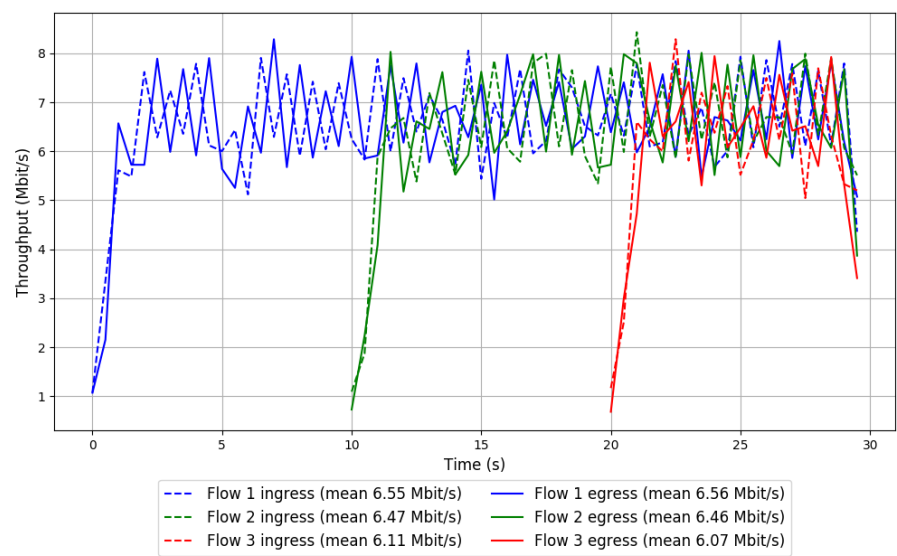
-- Flow 3:

Average throughput: 6.07 Mbit/s

95th percentile per-packet one-way delay: 64.197 ms

Loss rate: 1.82%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

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

End at: 2018-04-18 21:17:13

Below is generated by plot.py at 2018-04-19 01:39:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 13.01 Mbit/s

95th percentile per-packet one-way delay: 64.408 ms

Loss rate: 0.71%

-- Flow 1:

Average throughput: 6.65 Mbit/s

95th percentile per-packet one-way delay: 64.302 ms

Loss rate: 0.48%

-- Flow 2:

Average throughput: 6.52 Mbit/s

95th percentile per-packet one-way delay: 64.369 ms

Loss rate: 0.75%

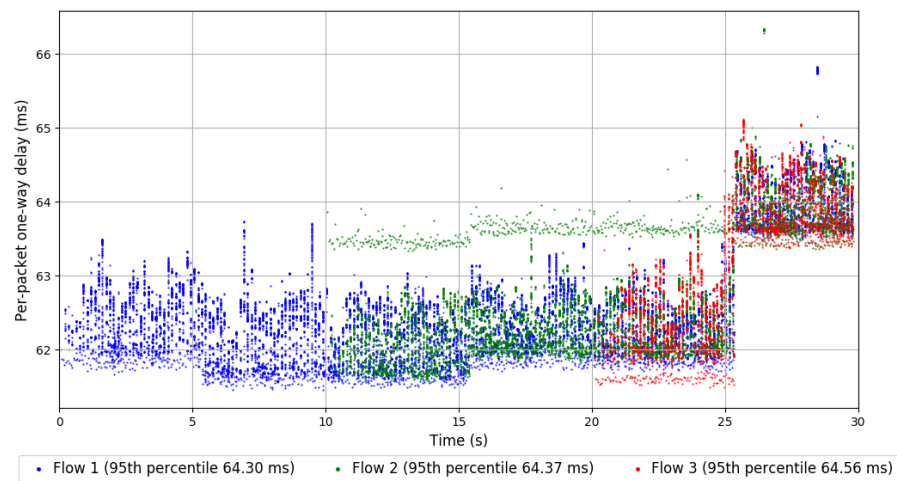
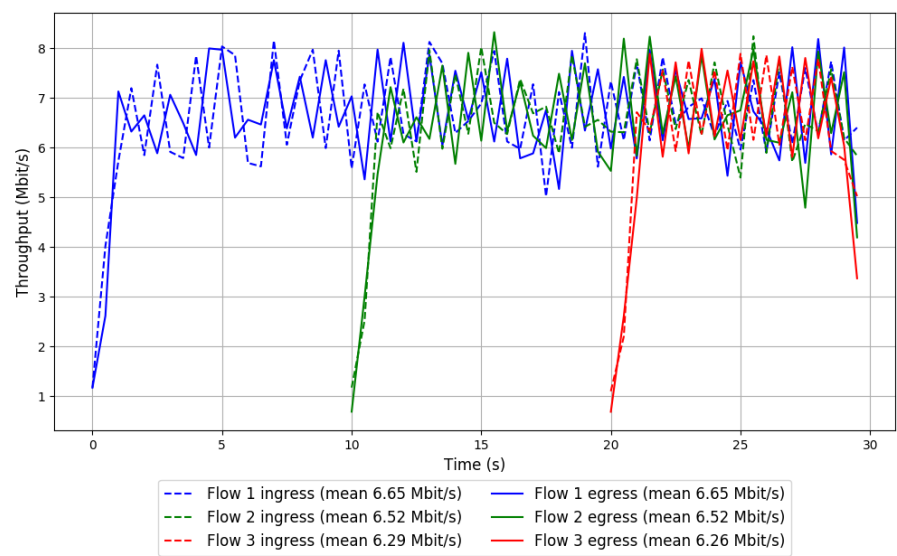
-- Flow 3:

Average throughput: 6.26 Mbit/s

95th percentile per-packet one-way delay: 64.558 ms

Loss rate: 1.34%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2018-04-18 21:32:26

End at: 2018-04-18 21:32:56

Below is generated by plot.py at 2018-04-19 01:39:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.63 Mbit/s

95th percentile per-packet one-way delay: 64.558 ms

Loss rate: 0.83%

-- Flow 1:

Average throughput: 6.56 Mbit/s

95th percentile per-packet one-way delay: 64.487 ms

Loss rate: 0.57%

-- Flow 2:

Average throughput: 6.05 Mbit/s

95th percentile per-packet one-way delay: 64.514 ms

Loss rate: 0.74%

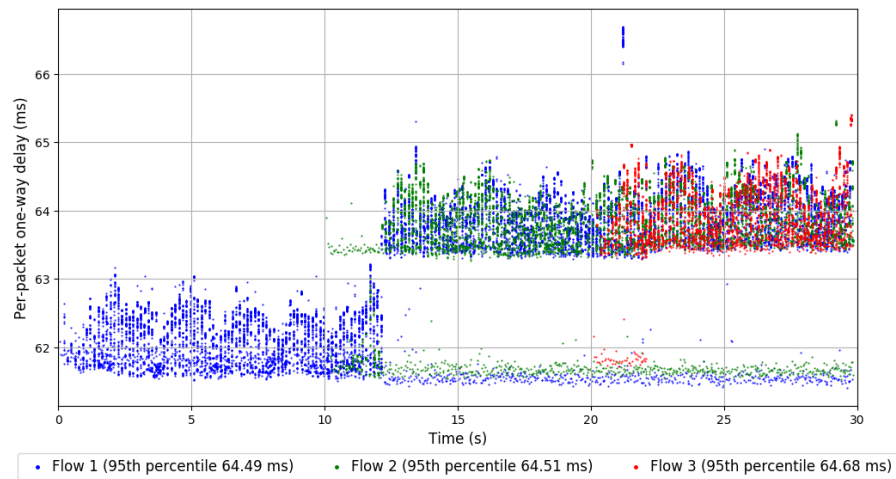
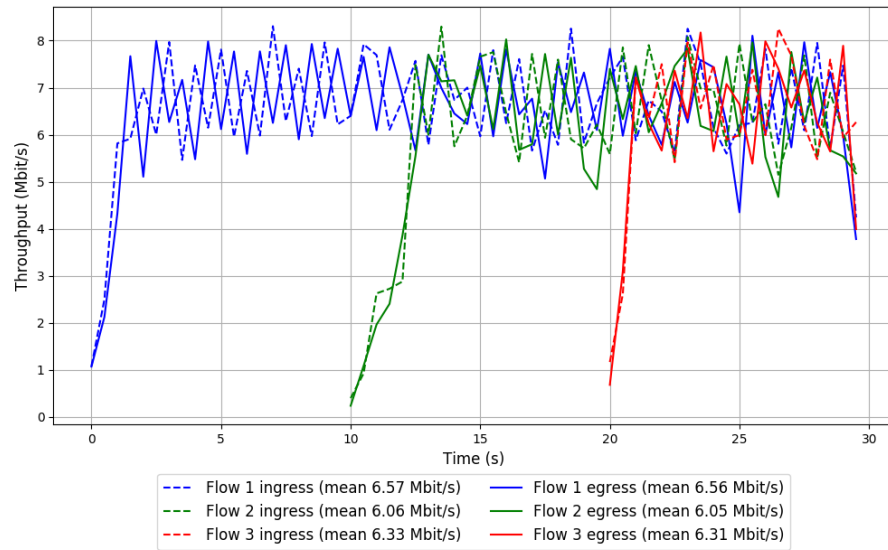
-- Flow 3:

Average throughput: 6.31 Mbit/s

95th percentile per-packet one-way delay: 64.682 ms

Loss rate: 1.82%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

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

End at: 2018-04-18 21:48:37

Below is generated by plot.py at 2018-04-19 01:39:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.71 Mbit/s

95th percentile per-packet one-way delay: 64.915 ms

Loss rate: 0.76%

-- Flow 1:

Average throughput: 6.45 Mbit/s

95th percentile per-packet one-way delay: 64.936 ms

Loss rate: 0.49%

-- Flow 2:

Average throughput: 6.36 Mbit/s

95th percentile per-packet one-way delay: 64.908 ms

Loss rate: 0.79%

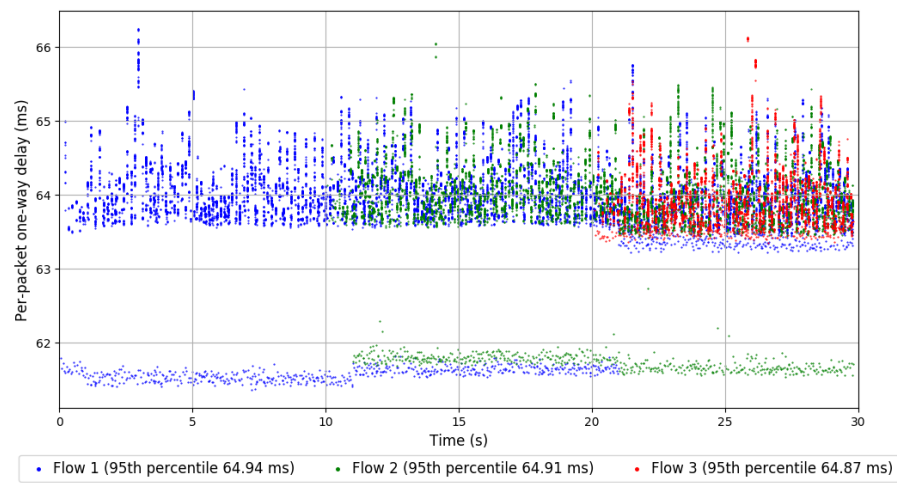
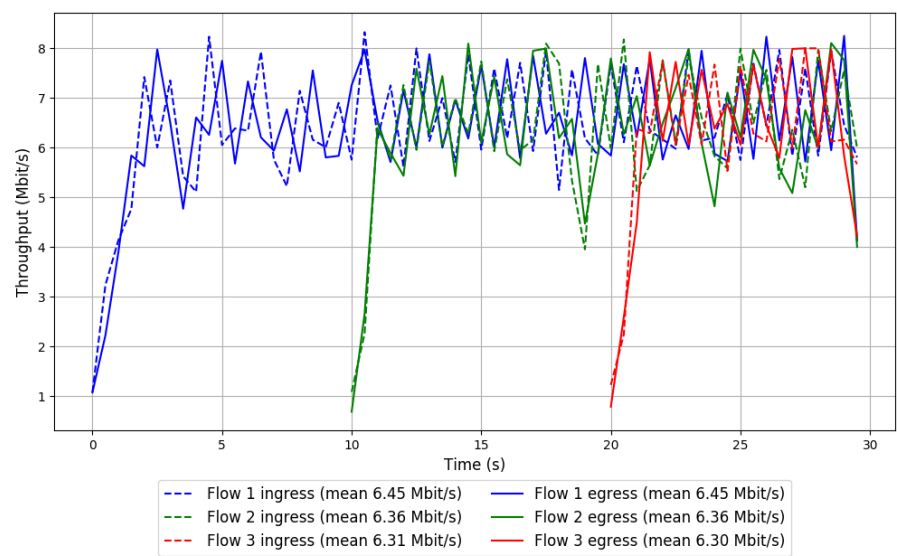
-- Flow 3:

Average throughput: 6.30 Mbit/s

95th percentile per-packet one-way delay: 64.871 ms

Loss rate: 1.55%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2018-04-18 22:03:58

End at: 2018-04-18 22:04:28

Below is generated by plot.py at 2018-04-19 01:39:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.91 Mbit/s

95th percentile per-packet one-way delay: 64.546 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 6.53 Mbit/s

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

Loss rate: 0.49%

-- Flow 2:

Average throughput: 6.51 Mbit/s

95th percentile per-packet one-way delay: 64.408 ms

Loss rate: 0.09%

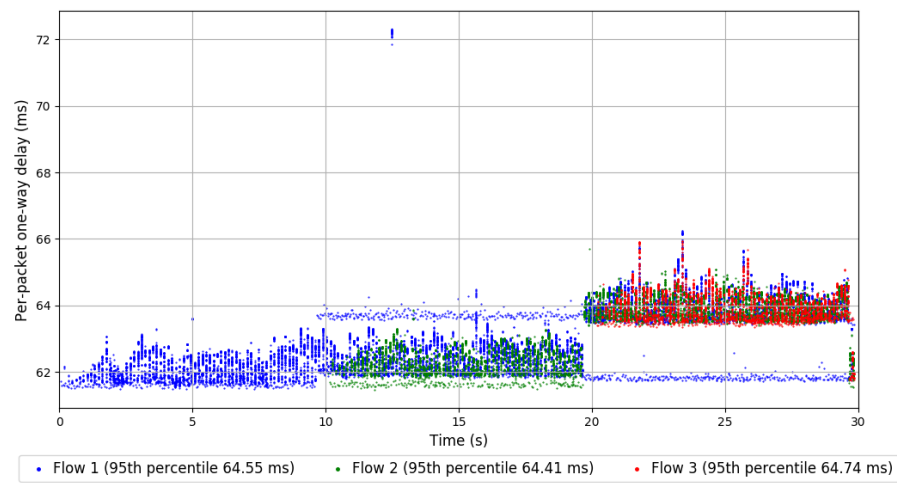
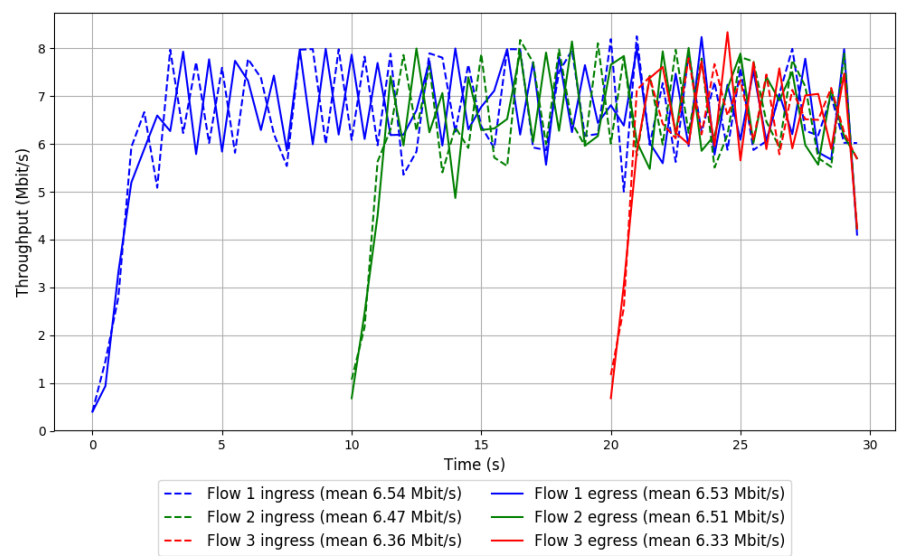
-- Flow 3:

Average throughput: 6.33 Mbit/s

95th percentile per-packet one-way delay: 64.741 ms

Loss rate: 1.38%

Run 10: Report of Sprout — Data Link

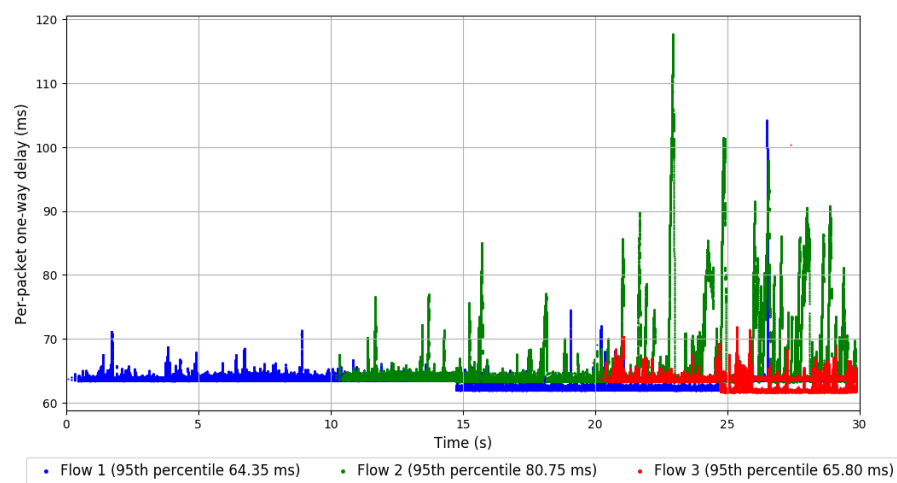
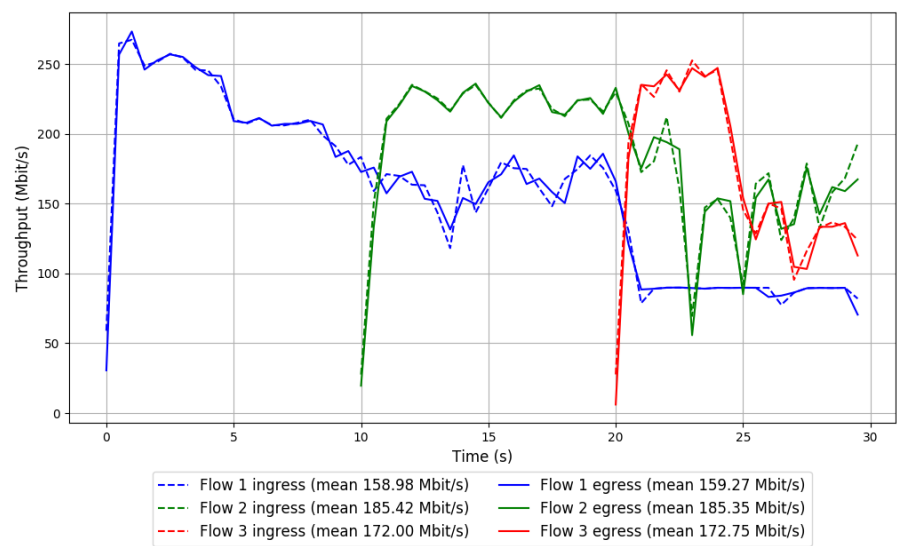


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-04-18 19:47:23
End at: 2018-04-18 19:47:53

# Below is generated by plot.py at 2018-04-19 01:45:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 339.03 Mbit/s
95th percentile per-packet one-way delay: 70.803 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 159.27 Mbit/s
95th percentile per-packet one-way delay: 64.346 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 185.35 Mbit/s
95th percentile per-packet one-way delay: 80.754 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 172.75 Mbit/s
95th percentile per-packet one-way delay: 65.800 ms
Loss rate: 0.86%
```


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

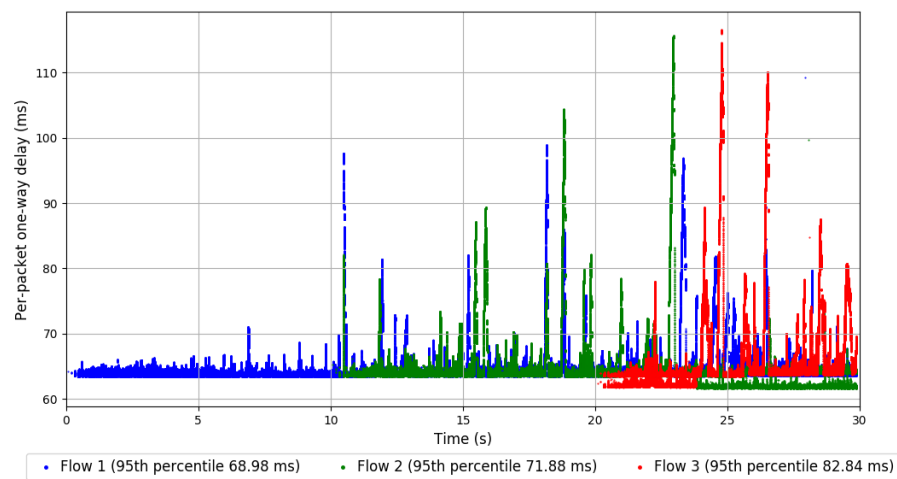
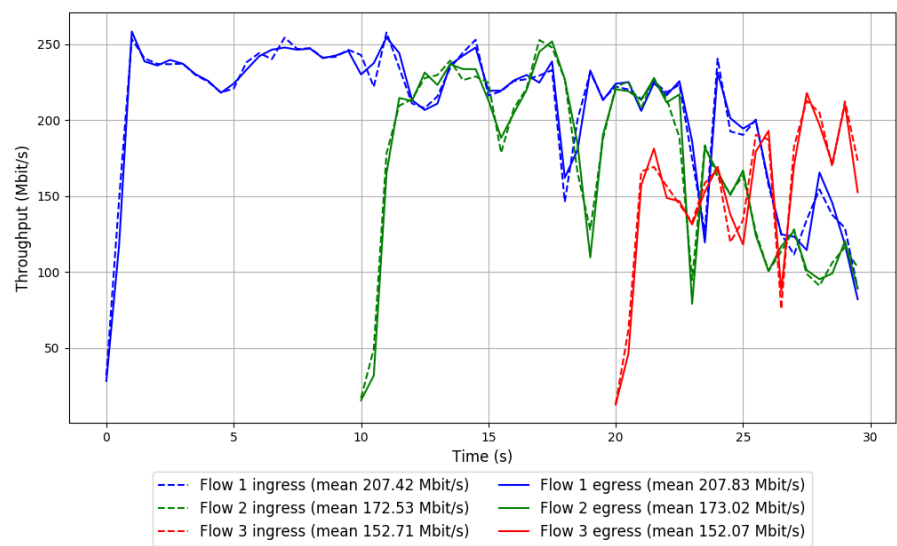


```
Run 2: Statistics of TaoVA-100x

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 01:46:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 372.74 Mbit/s
95th percentile per-packet one-way delay: 72.631 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 207.83 Mbit/s
95th percentile per-packet one-way delay: 68.984 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 173.02 Mbit/s
95th percentile per-packet one-way delay: 71.879 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 152.07 Mbit/s
95th percentile per-packet one-way delay: 82.838 ms
Loss rate: 1.70%
```

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-04-18 20:19:25

End at: 2018-04-18 20:19:55

Below is generated by plot.py at 2018-04-19 01:46:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 281.99 Mbit/s

95th percentile per-packet one-way delay: 65.767 ms

Loss rate: 0.68%

-- Flow 1:

Average throughput: 173.51 Mbit/s

95th percentile per-packet one-way delay: 66.705 ms

Loss rate: 0.54%

-- Flow 2:

Average throughput: 104.89 Mbit/s

95th percentile per-packet one-way delay: 64.326 ms

Loss rate: 0.59%

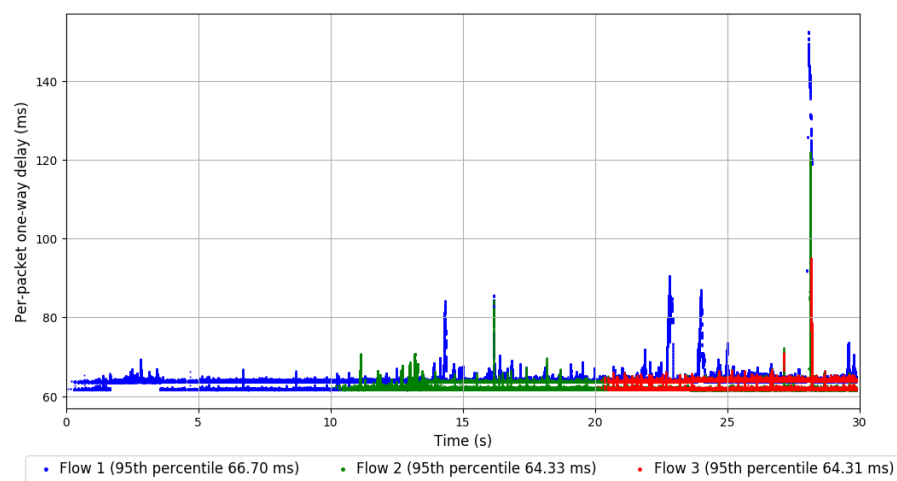
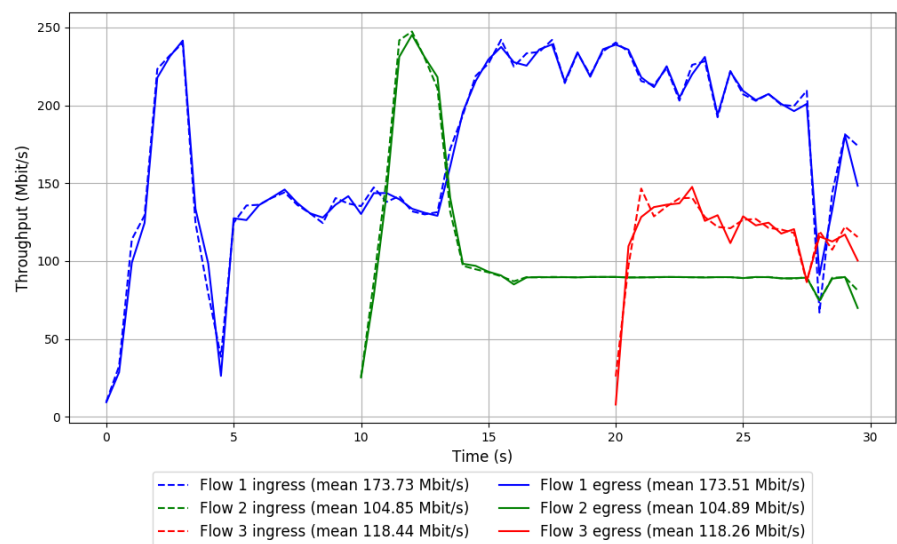
-- Flow 3:

Average throughput: 118.26 Mbit/s

95th percentile per-packet one-way delay: 64.306 ms

Loss rate: 1.43%

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-04-18 20:35:15

End at: 2018-04-18 20:35:45

Below is generated by plot.py at 2018-04-19 01:46:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 248.56 Mbit/s

95th percentile per-packet one-way delay: 65.985 ms

Loss rate: 0.79%

-- Flow 1:

Average throughput: 95.71 Mbit/s

95th percentile per-packet one-way delay: 63.893 ms

Loss rate: 0.41%

-- Flow 2:

Average throughput: 138.09 Mbit/s

95th percentile per-packet one-way delay: 69.302 ms

Loss rate: 0.80%

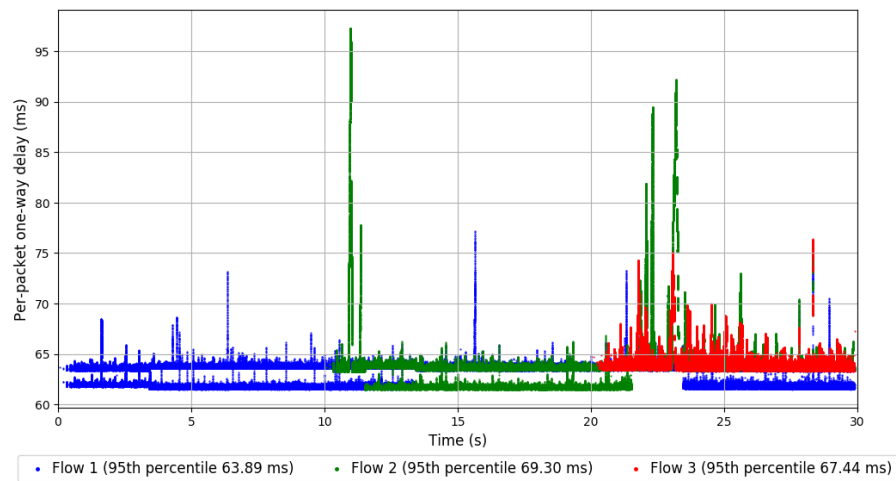
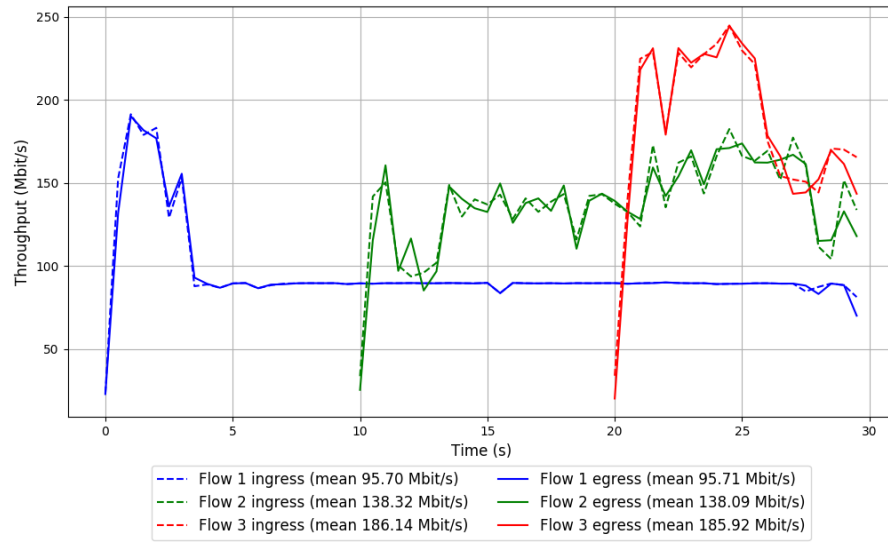
-- Flow 3:

Average throughput: 185.92 Mbit/s

95th percentile per-packet one-way delay: 67.436 ms

Loss rate: 1.36%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-04-18 20:51:09

End at: 2018-04-18 20:51:39

Below is generated by plot.py at 2018-04-19 01:46:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 307.04 Mbit/s

95th percentile per-packet one-way delay: 64.877 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 151.32 Mbit/s

95th percentile per-packet one-way delay: 64.769 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 174.63 Mbit/s

95th percentile per-packet one-way delay: 65.448 ms

Loss rate: 0.82%

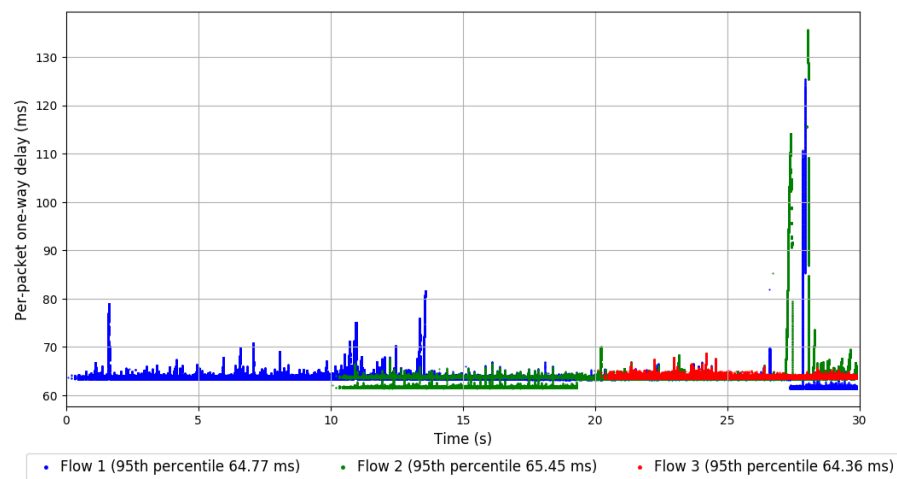
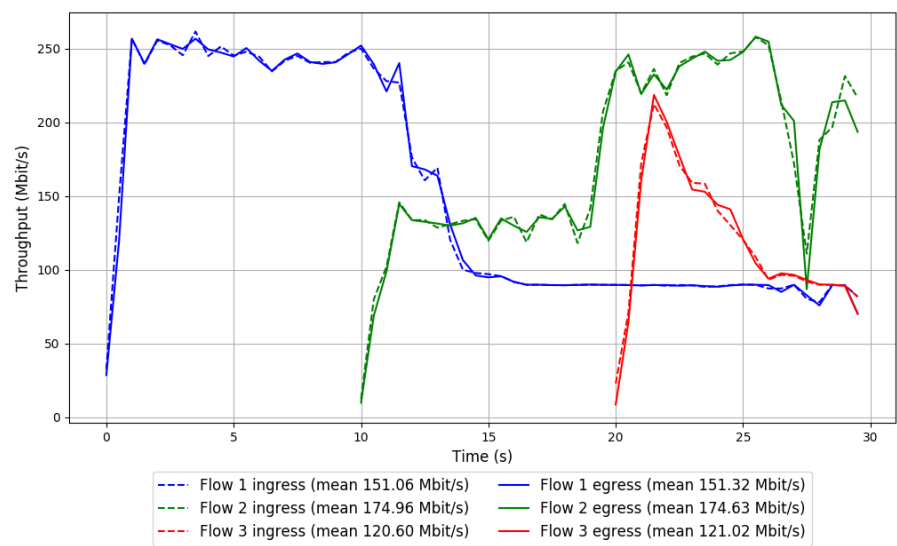
-- Flow 3:

Average throughput: 121.02 Mbit/s

95th percentile per-packet one-way delay: 64.358 ms

Loss rate: 0.96%

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



Run 6: Statistics of TaoVA-100x

Start at: 2018-04-18 21:07:00

End at: 2018-04-18 21:07:30

Below is generated by plot.py at 2018-04-19 01:46:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 314.75 Mbit/s

95th percentile per-packet one-way delay: 71.709 ms

Loss rate: 0.65%

-- Flow 1:

Average throughput: 127.42 Mbit/s

95th percentile per-packet one-way delay: 64.784 ms

Loss rate: 0.30%

-- Flow 2:

Average throughput: 193.45 Mbit/s

95th percentile per-packet one-way delay: 69.587 ms

Loss rate: 0.58%

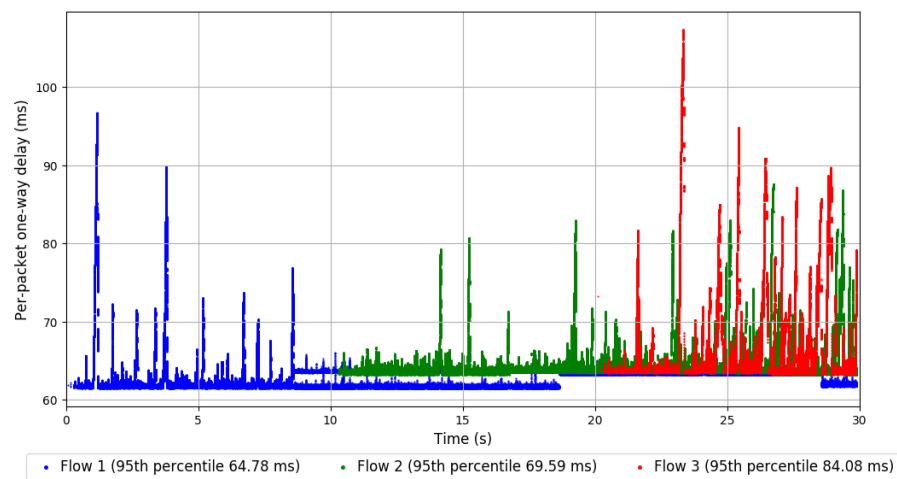
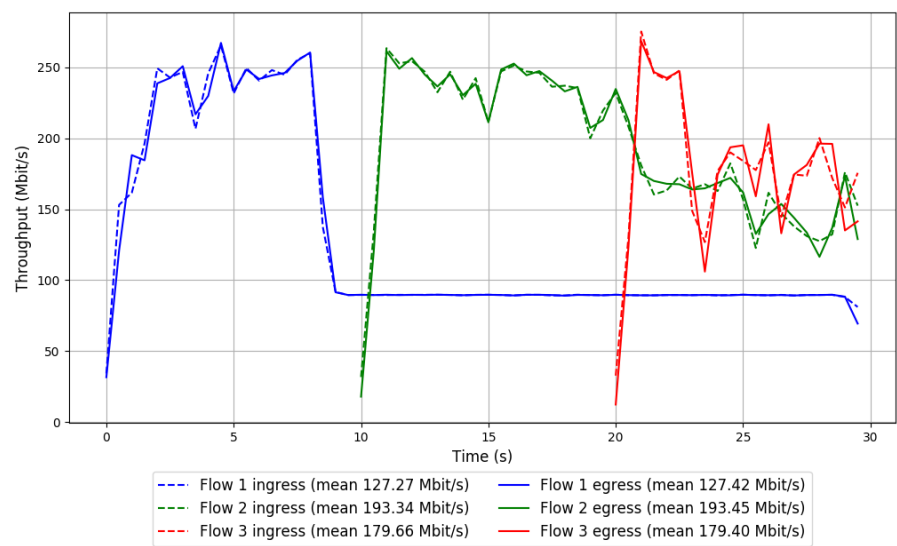
-- Flow 3:

Average throughput: 179.40 Mbit/s

95th percentile per-packet one-way delay: 84.082 ms

Loss rate: 1.52%

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

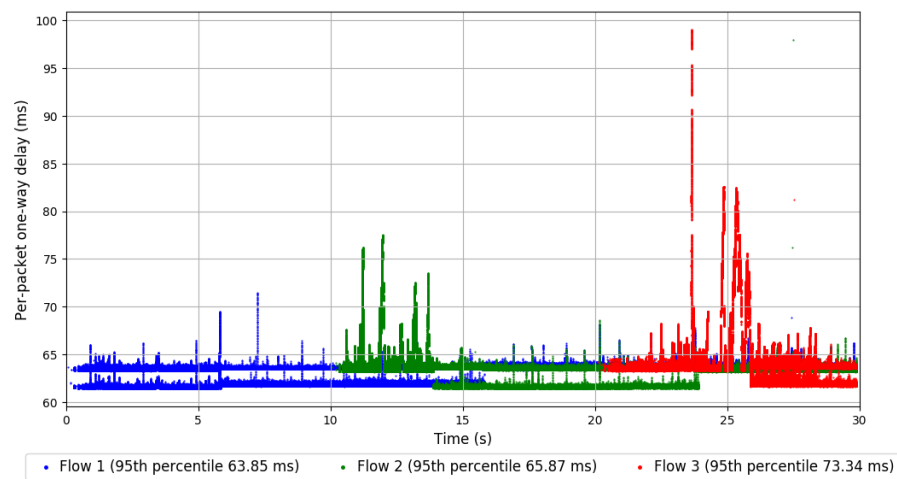
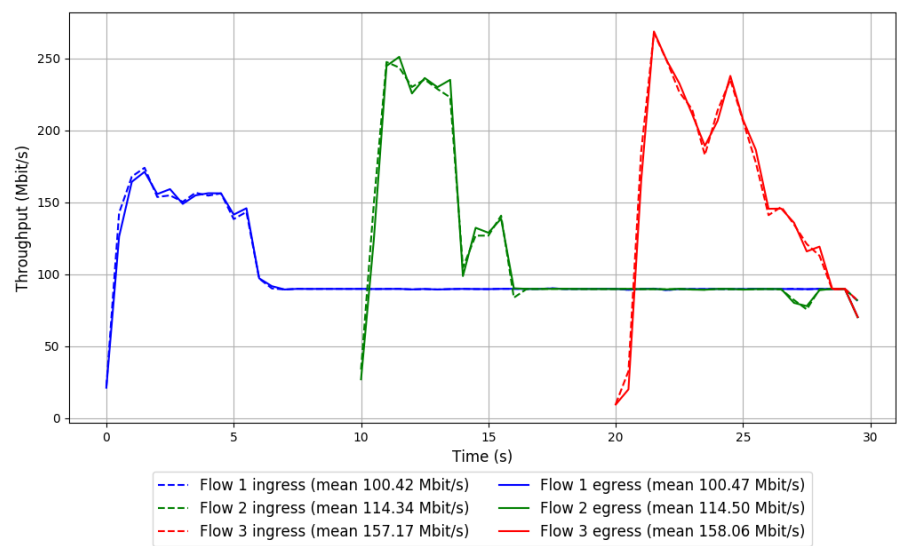


```
Run 7: Statistics of TaoVA-100x

Start at: 2018-04-18 21:22:52
End at: 2018-04-18 21:23:22

# Below is generated by plot.py at 2018-04-19 01:47:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 228.39 Mbit/s
95th percentile per-packet one-way delay: 65.833 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 100.47 Mbit/s
95th percentile per-packet one-way delay: 63.851 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 114.50 Mbit/s
95th percentile per-packet one-way delay: 65.872 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 158.06 Mbit/s
95th percentile per-packet one-way delay: 73.344 ms
Loss rate: 0.73%
```

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



Run 8: Statistics of TaoVA-100x

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

End at: 2018-04-18 21:39:08

Below is generated by plot.py at 2018-04-19 01:47:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 103.15 Mbit/s

95th percentile per-packet one-way delay: 63.863 ms

Loss rate: 0.79%

-- Flow 1:

Average throughput: 12.89 Mbit/s

95th percentile per-packet one-way delay: 63.740 ms

Loss rate: 0.45%

-- Flow 2:

Average throughput: 88.78 Mbit/s

95th percentile per-packet one-way delay: 63.900 ms

Loss rate: 0.65%

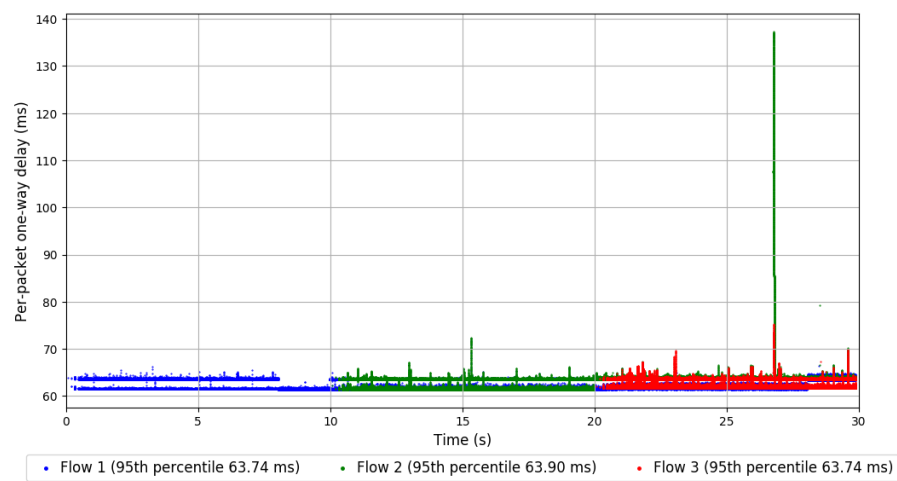
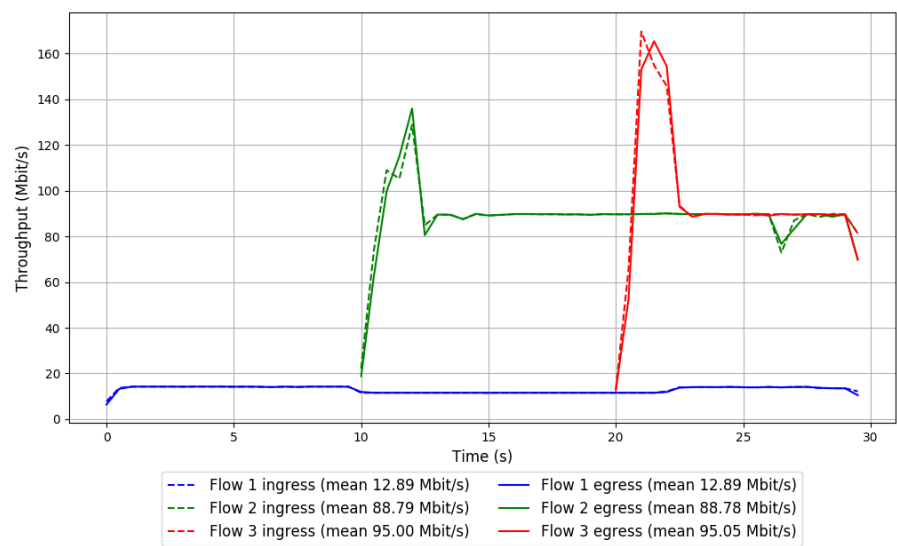
-- Flow 3:

Average throughput: 95.05 Mbit/s

95th percentile per-packet one-way delay: 63.740 ms

Loss rate: 1.21%

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



Run 9: Statistics of TaoVA-100x

Start at: 2018-04-18 21:54:17

End at: 2018-04-18 21:54:47

Below is generated by plot.py at 2018-04-19 01:53:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 336.15 Mbit/s

95th percentile per-packet one-way delay: 67.292 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 159.39 Mbit/s

95th percentile per-packet one-way delay: 65.512 ms

Loss rate: 0.24%

-- Flow 2:

Average throughput: 173.07 Mbit/s

95th percentile per-packet one-way delay: 69.672 ms

Loss rate: 0.71%

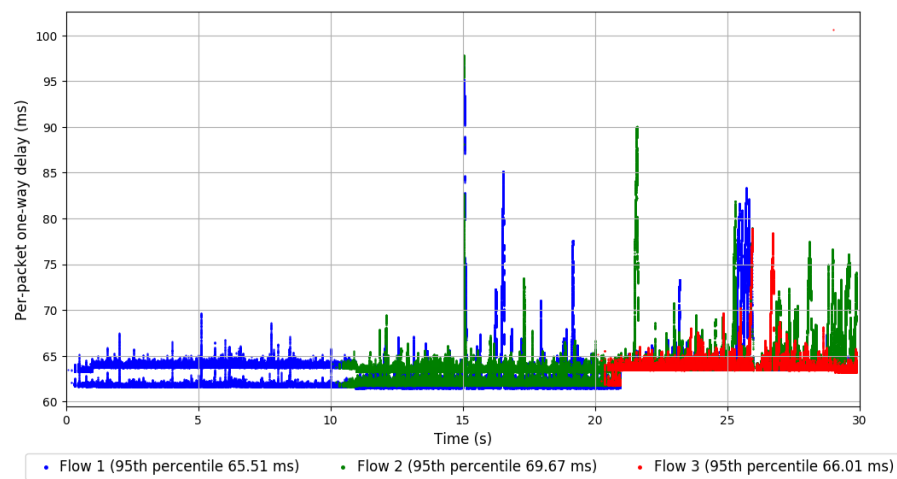
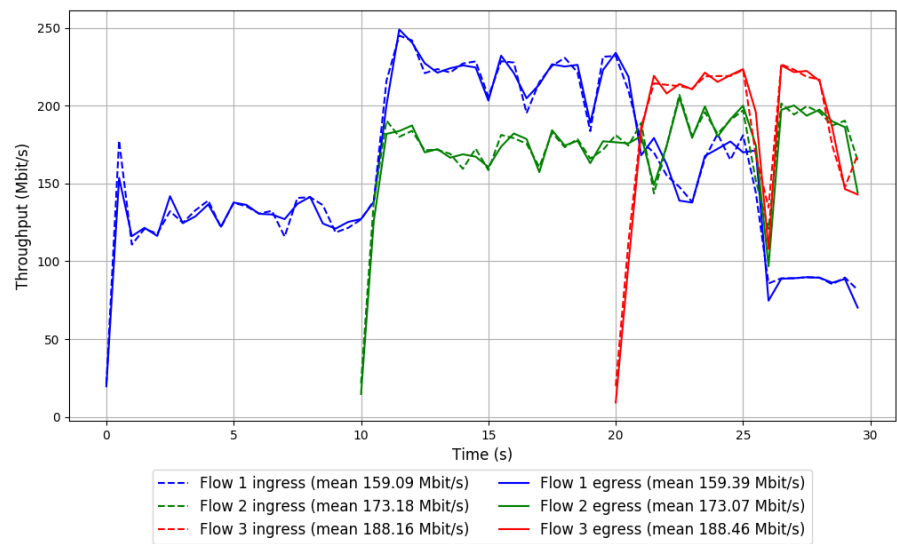
-- Flow 3:

Average throughput: 188.46 Mbit/s

95th percentile per-packet one-way delay: 66.010 ms

Loss rate: 1.11%

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

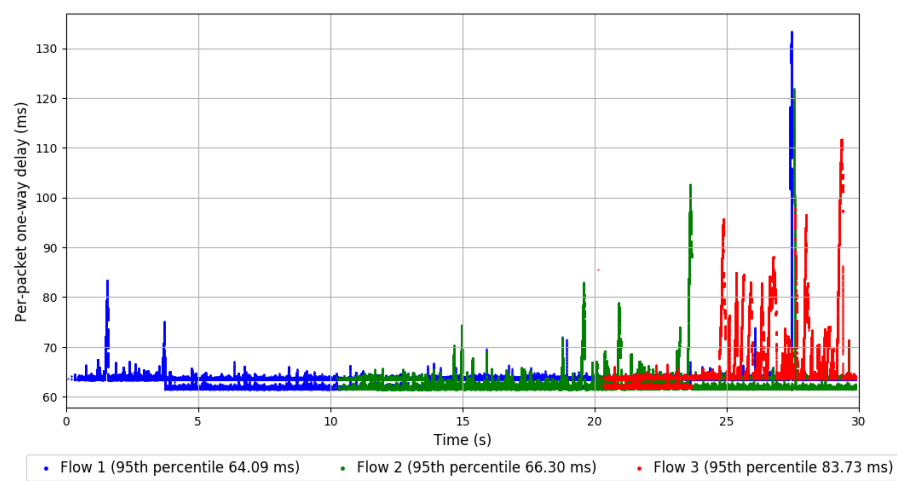
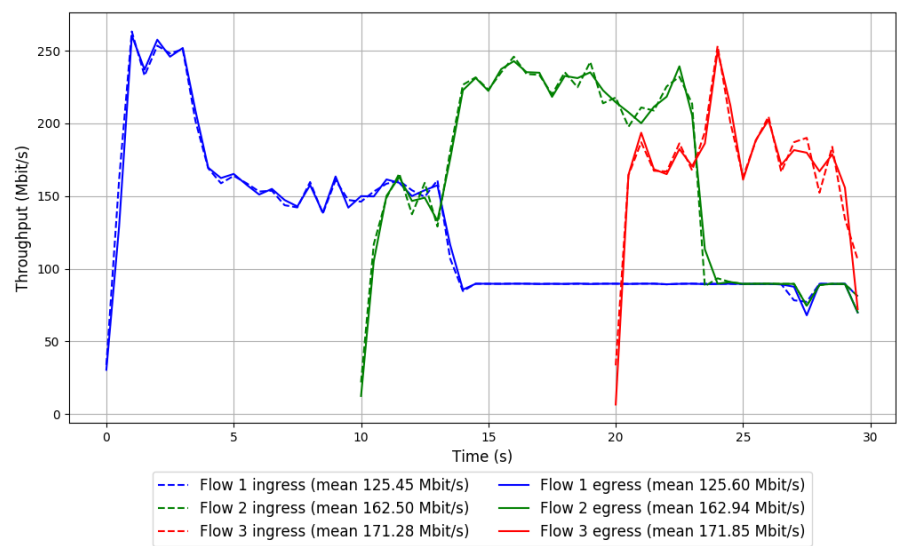


```
Run 10: Statistics of TaoVA-100x

Start at: 2018-04-18 22:10:15
End at: 2018-04-18 22:10:45

# Below is generated by plot.py at 2018-04-19 01:53:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 290.07 Mbit/s
95th percentile per-packet one-way delay: 70.901 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 125.60 Mbit/s
95th percentile per-packet one-way delay: 64.088 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 162.94 Mbit/s
95th percentile per-packet one-way delay: 66.296 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 171.85 Mbit/s
95th percentile per-packet one-way delay: 83.733 ms
Loss rate: 1.16%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2018-04-18 19:41:54

End at: 2018-04-18 19:42:24

Below is generated by plot.py at 2018-04-19 01:53:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 115.47 Mbit/s

95th percentile per-packet one-way delay: 64.759 ms

Loss rate: 0.65%

-- Flow 1:

Average throughput: 72.92 Mbit/s

95th percentile per-packet one-way delay: 64.737 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 37.63 Mbit/s

95th percentile per-packet one-way delay: 64.370 ms

Loss rate: 0.72%

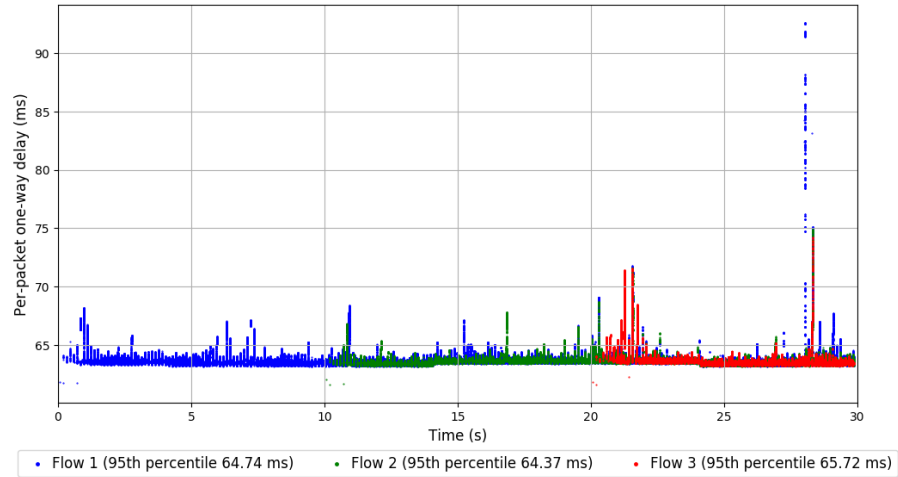
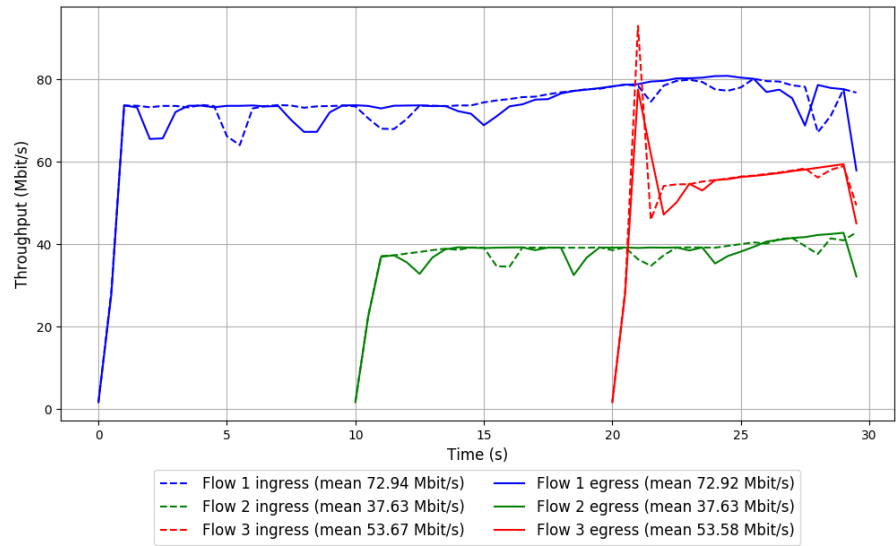
-- Flow 3:

Average throughput: 53.58 Mbit/s

95th percentile per-packet one-way delay: 65.715 ms

Loss rate: 1.41%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-04-18 19:57:45

End at: 2018-04-18 19:58:15

Below is generated by plot.py at 2018-04-19 01:53:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 161.12 Mbit/s

95th percentile per-packet one-way delay: 71.807 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 64.41 Mbit/s

95th percentile per-packet one-way delay: 66.952 ms

Loss rate: 0.46%

-- Flow 2:

Average throughput: 120.13 Mbit/s

95th percentile per-packet one-way delay: 73.589 ms

Loss rate: 0.40%

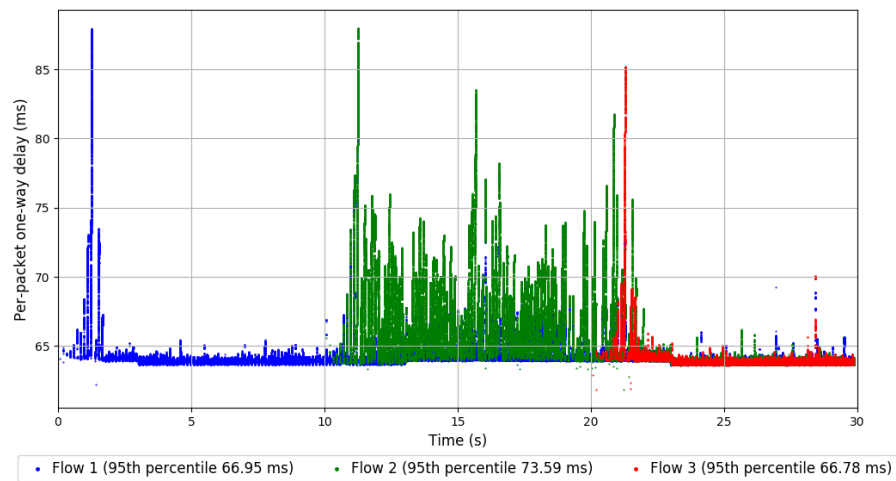
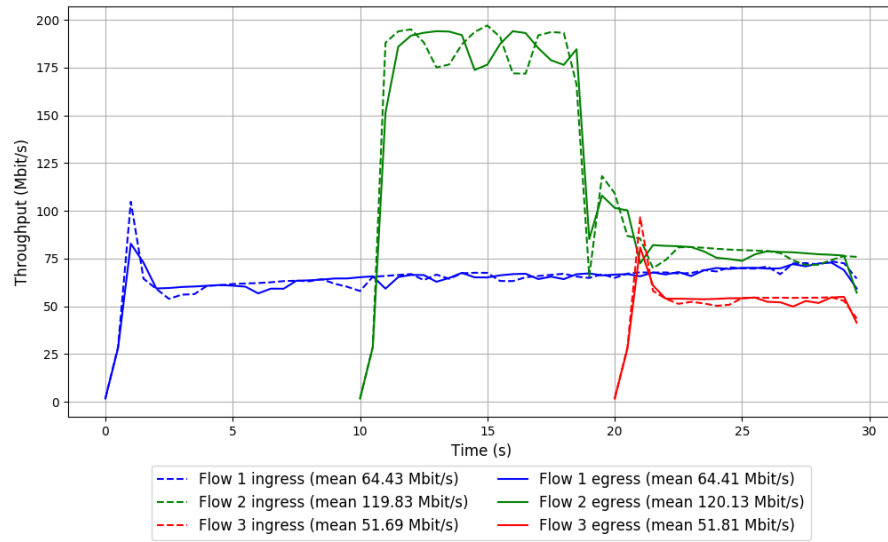
-- Flow 3:

Average throughput: 51.81 Mbit/s

95th percentile per-packet one-way delay: 66.780 ms

Loss rate: 1.34%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-04-18 20:13:49

End at: 2018-04-18 20:14:19

Below is generated by plot.py at 2018-04-19 01:53:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 158.33 Mbit/s

95th percentile per-packet one-way delay: 67.880 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 93.81 Mbit/s

95th percentile per-packet one-way delay: 65.232 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 60.58 Mbit/s

95th percentile per-packet one-way delay: 71.884 ms

Loss rate: 0.54%

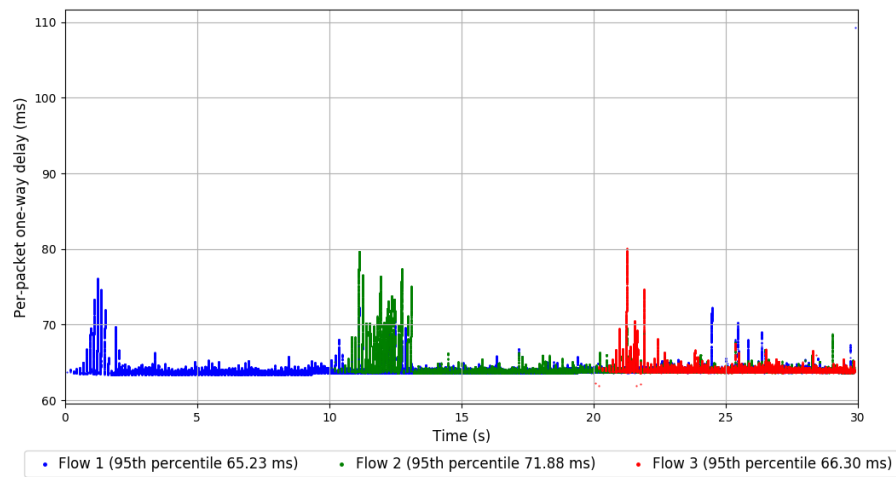
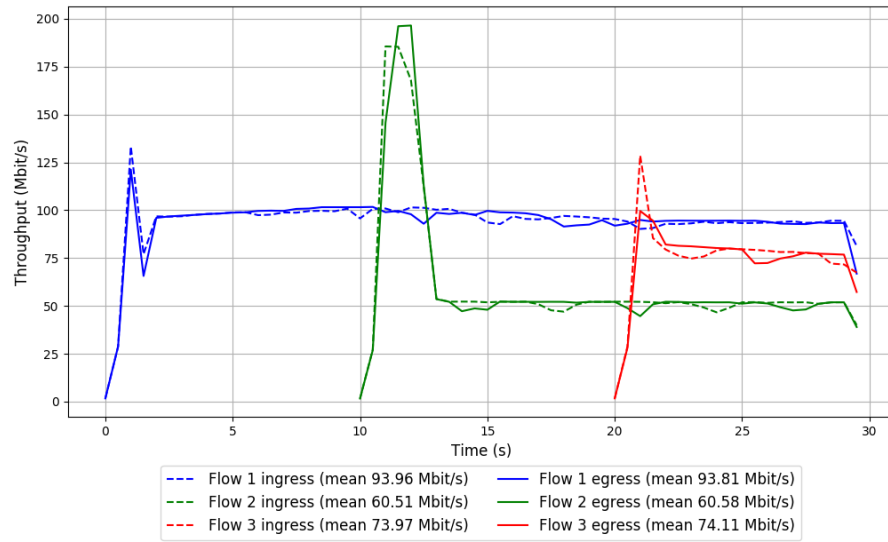
-- Flow 3:

Average throughput: 74.11 Mbit/s

95th percentile per-packet one-way delay: 66.301 ms

Loss rate: 1.30%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2018-04-18 20:29:45

End at: 2018-04-18 20:30:15

Below is generated by plot.py at 2018-04-19 01:53:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 107.85 Mbit/s

95th percentile per-packet one-way delay: 65.907 ms

Loss rate: 0.66%

-- Flow 1:

Average throughput: 53.21 Mbit/s

95th percentile per-packet one-way delay: 65.705 ms

Loss rate: 0.56%

-- Flow 2:

Average throughput: 61.18 Mbit/s

95th percentile per-packet one-way delay: 65.331 ms

Loss rate: 0.63%

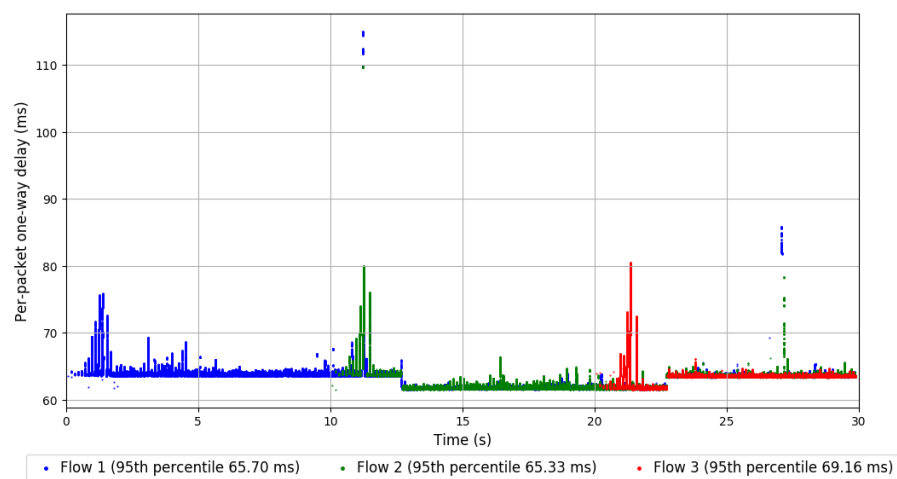
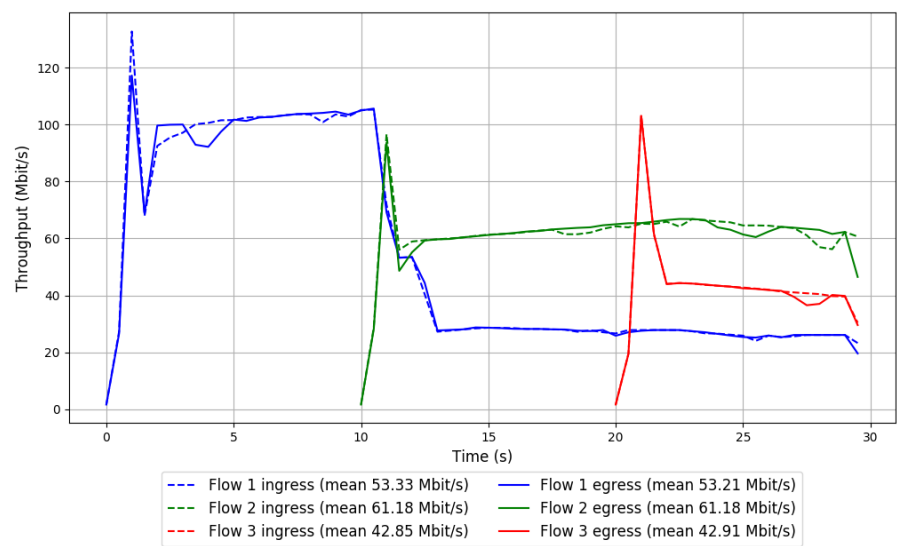
-- Flow 3:

Average throughput: 42.91 Mbit/s

95th percentile per-packet one-way delay: 69.158 ms

Loss rate: 1.16%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-04-18 20:45:37

End at: 2018-04-18 20:46:07

Below is generated by plot.py at 2018-04-19 01:53:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 160.61 Mbit/s

95th percentile per-packet one-way delay: 65.435 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 110.41 Mbit/s

95th percentile per-packet one-way delay: 64.924 ms

Loss rate: 0.45%

-- Flow 2:

Average throughput: 47.66 Mbit/s

95th percentile per-packet one-way delay: 68.896 ms

Loss rate: 0.55%

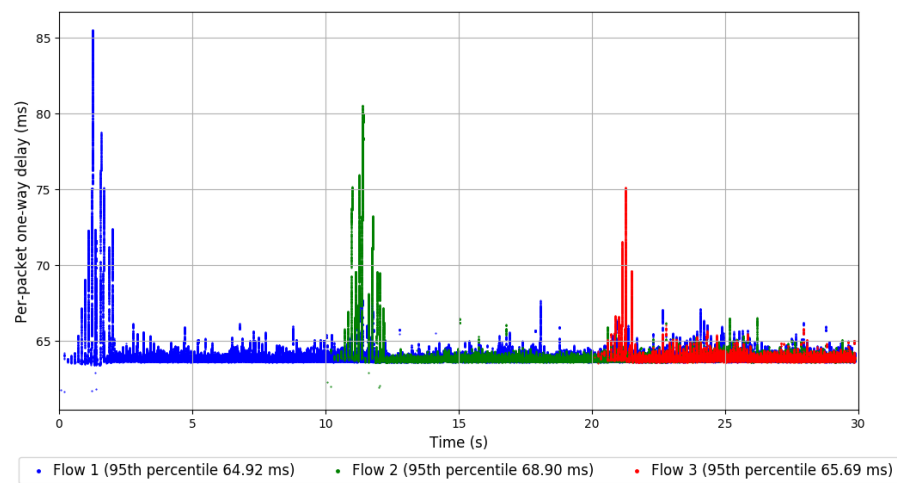
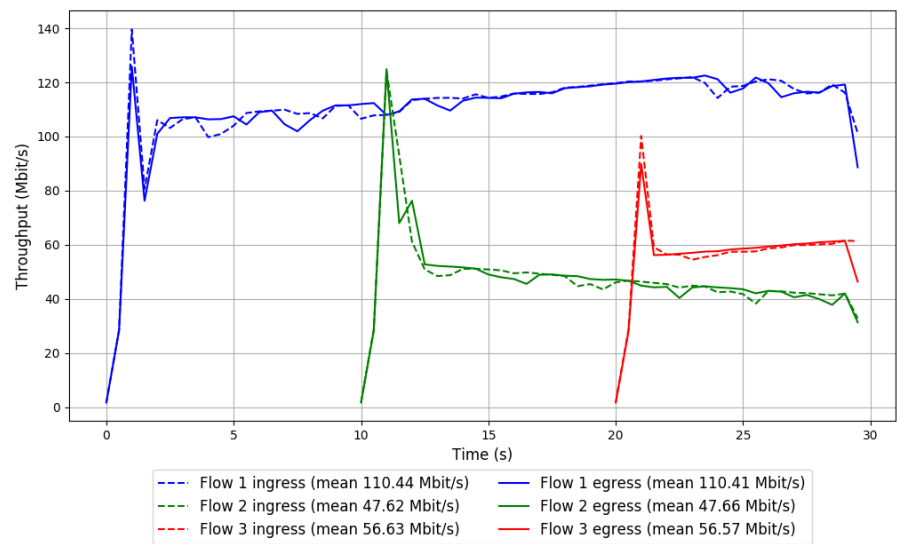
-- Flow 3:

Average throughput: 56.57 Mbit/s

95th percentile per-packet one-way delay: 65.695 ms

Loss rate: 1.38%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2018-04-18 21:01:38

End at: 2018-04-18 21:02:08

Below is generated by plot.py at 2018-04-19 01:53:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 75.70 Mbit/s

95th percentile per-packet one-way delay: 64.207 ms

Loss rate: 0.80%

-- Flow 1:

Average throughput: 29.96 Mbit/s

95th percentile per-packet one-way delay: 64.080 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 28.19 Mbit/s

95th percentile per-packet one-way delay: 64.551 ms

Loss rate: 0.56%

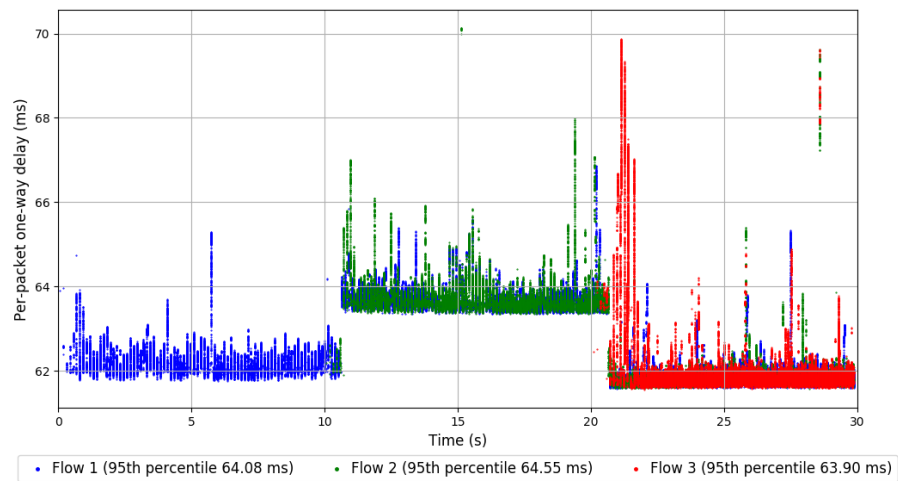
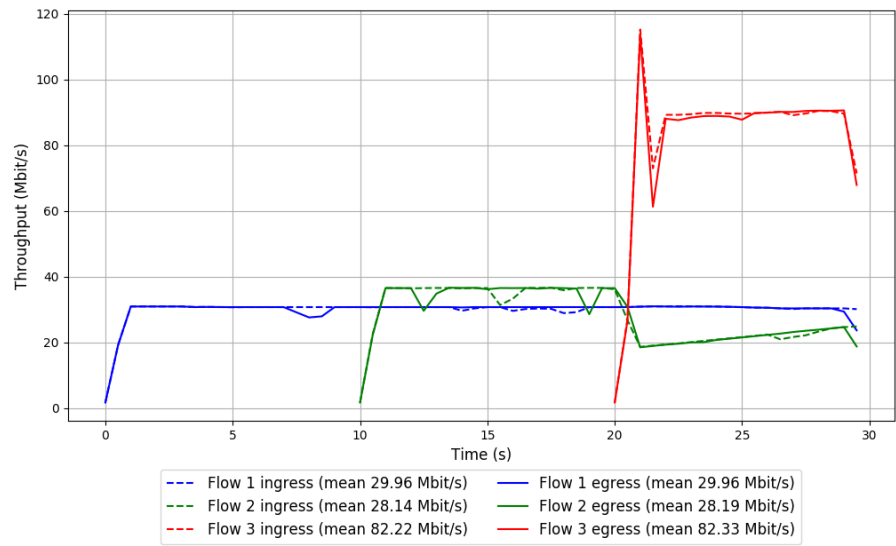
-- Flow 3:

Average throughput: 82.33 Mbit/s

95th percentile per-packet one-way delay: 63.899 ms

Loss rate: 1.39%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

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

End at: 2018-04-18 21:17:54

Below is generated by plot.py at 2018-04-19 01:53:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 182.66 Mbit/s

95th percentile per-packet one-way delay: 69.481 ms

Loss rate: 0.44%

-- Flow 1:

Average throughput: 105.01 Mbit/s

95th percentile per-packet one-way delay: 70.249 ms

Loss rate: 0.22%

-- Flow 2:

Average throughput: 90.94 Mbit/s

95th percentile per-packet one-way delay: 65.032 ms

Loss rate: 0.60%

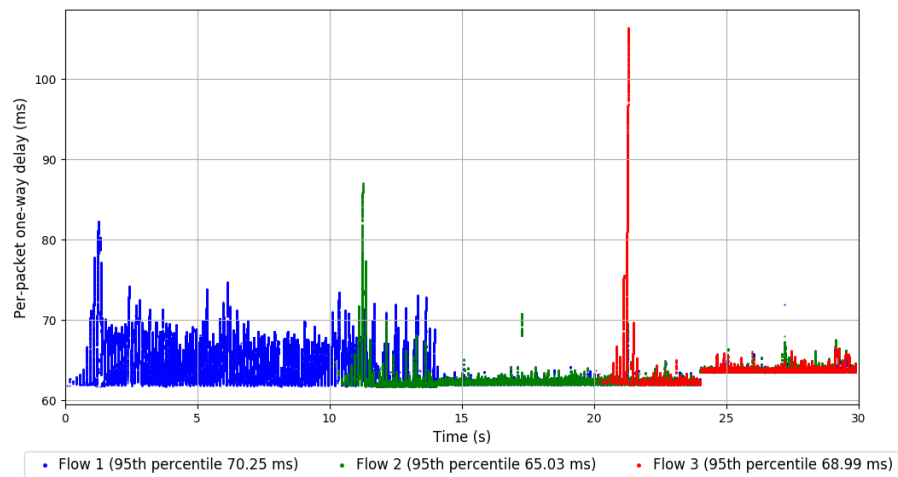
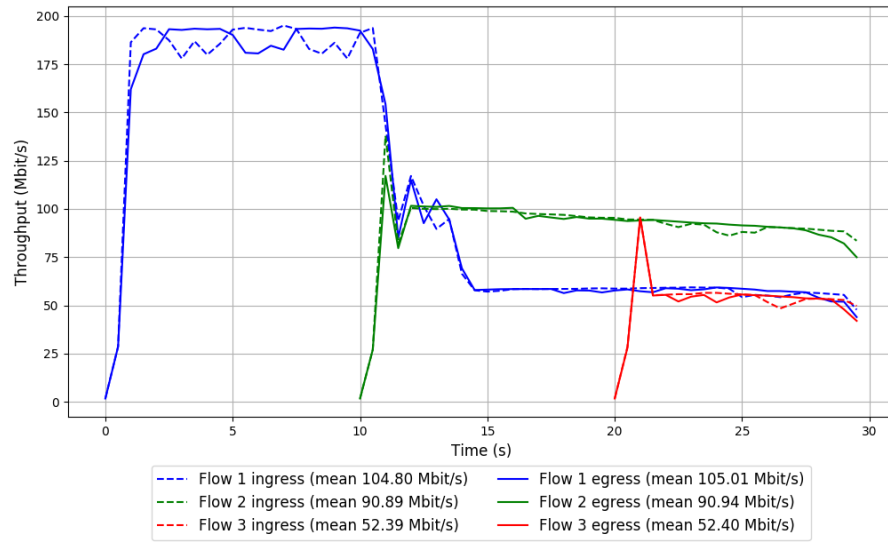
-- Flow 3:

Average throughput: 52.40 Mbit/s

95th percentile per-packet one-way delay: 68.986 ms

Loss rate: 1.25%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2018-04-18 21:33:07

End at: 2018-04-18 21:33:37

Below is generated by plot.py at 2018-04-19 01:53:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 146.16 Mbit/s

95th percentile per-packet one-way delay: 64.432 ms

Loss rate: 0.55%

-- Flow 1:

Average throughput: 105.81 Mbit/s

95th percentile per-packet one-way delay: 64.194 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 30.82 Mbit/s

95th percentile per-packet one-way delay: 64.219 ms

Loss rate: 0.60%

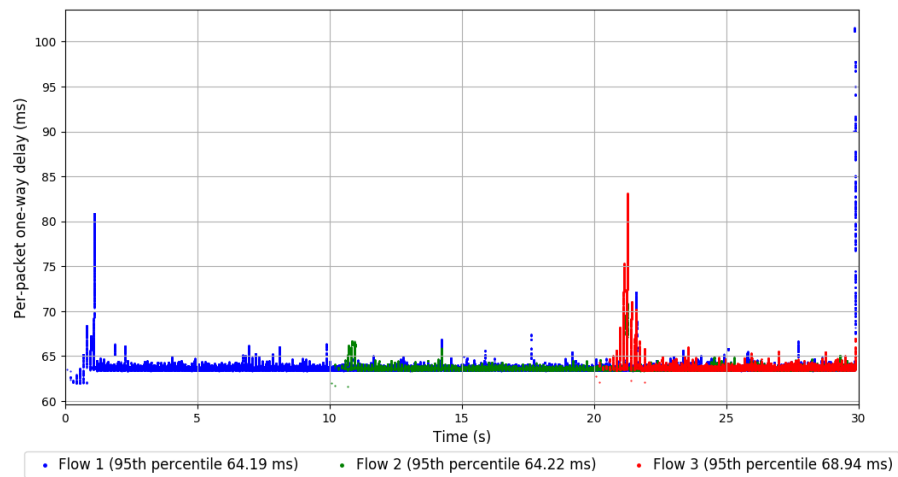
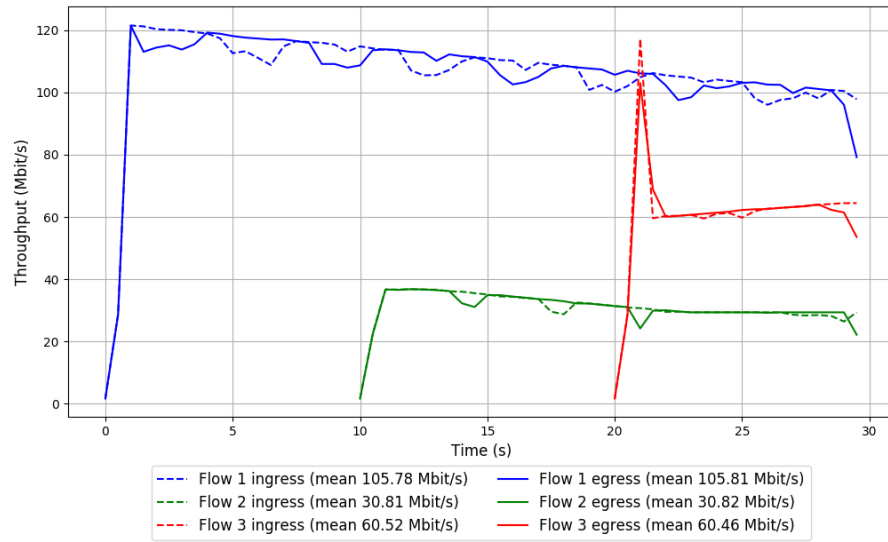
-- Flow 3:

Average throughput: 60.46 Mbit/s

95th percentile per-packet one-way delay: 68.941 ms

Loss rate: 1.35%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

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

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

Below is generated by plot.py at 2018-04-19 01:53:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.59 Mbit/s

95th percentile per-packet one-way delay: 65.484 ms

Loss rate: 0.64%

-- Flow 1:

Average throughput: 37.55 Mbit/s

95th percentile per-packet one-way delay: 64.846 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 62.51 Mbit/s

95th percentile per-packet one-way delay: 65.096 ms

Loss rate: 0.60%

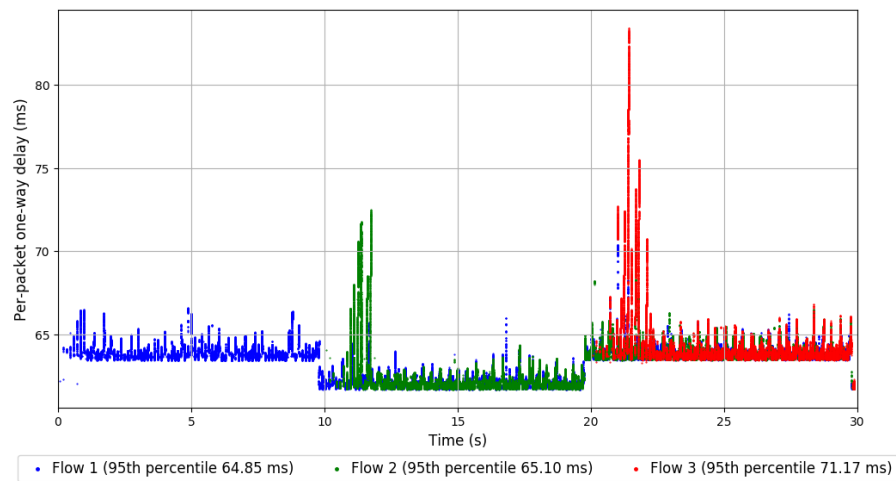
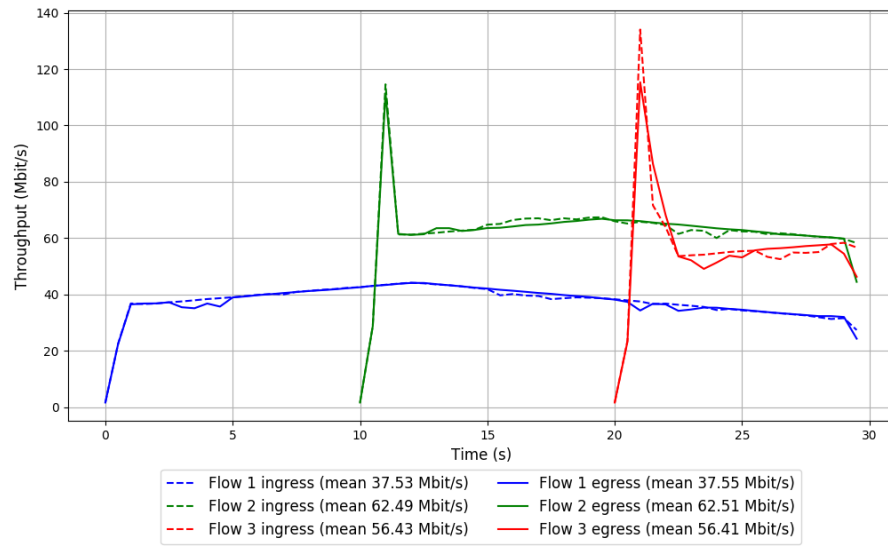
-- Flow 3:

Average throughput: 56.41 Mbit/s

95th percentile per-packet one-way delay: 71.167 ms

Loss rate: 1.31%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2018-04-18 22:04:40

End at: 2018-04-18 22:05:10

Below is generated by plot.py at 2018-04-19 01:53:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 144.33 Mbit/s

95th percentile per-packet one-way delay: 64.057 ms

Loss rate: 0.68%

-- Flow 1:

Average throughput: 61.73 Mbit/s

95th percentile per-packet one-way delay: 63.791 ms

Loss rate: 0.47%

-- Flow 2:

Average throughput: 95.10 Mbit/s

95th percentile per-packet one-way delay: 64.087 ms

Loss rate: 0.68%

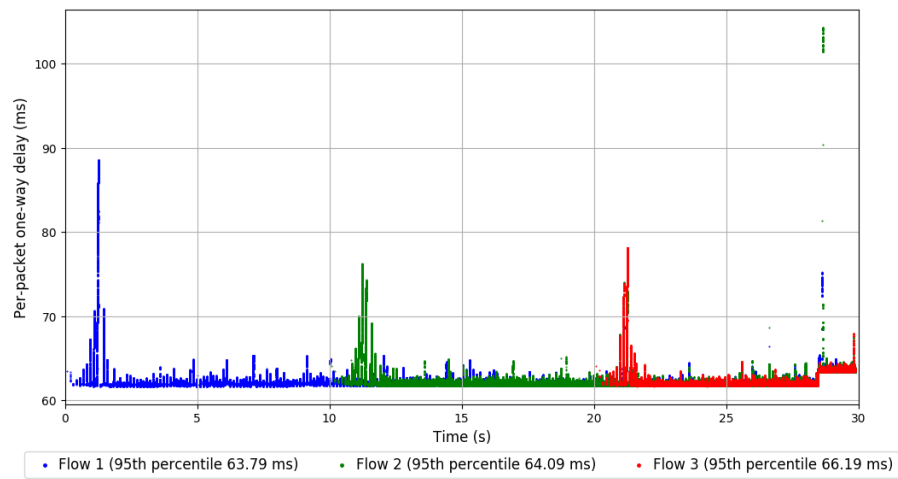
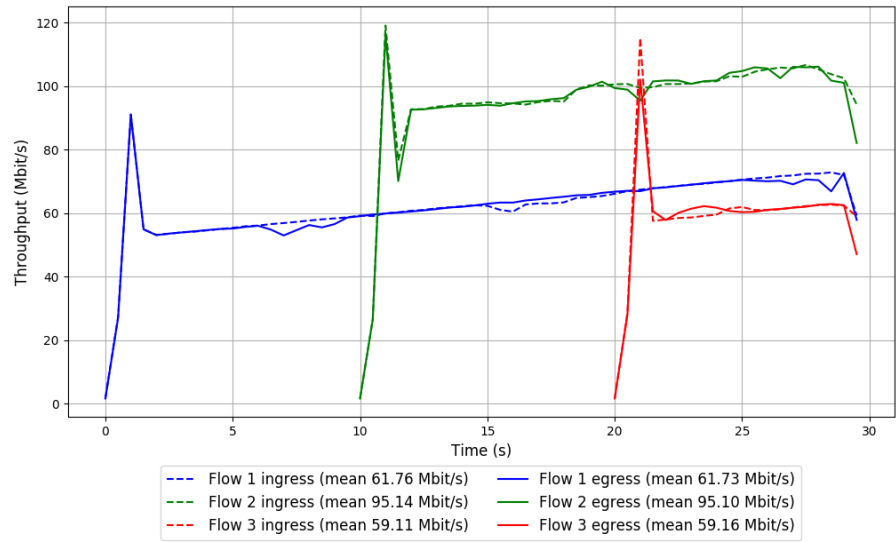
-- Flow 3:

Average throughput: 59.16 Mbit/s

95th percentile per-packet one-way delay: 66.195 ms

Loss rate: 1.32%

Run 10: Report of TCP Vegas — Data Link

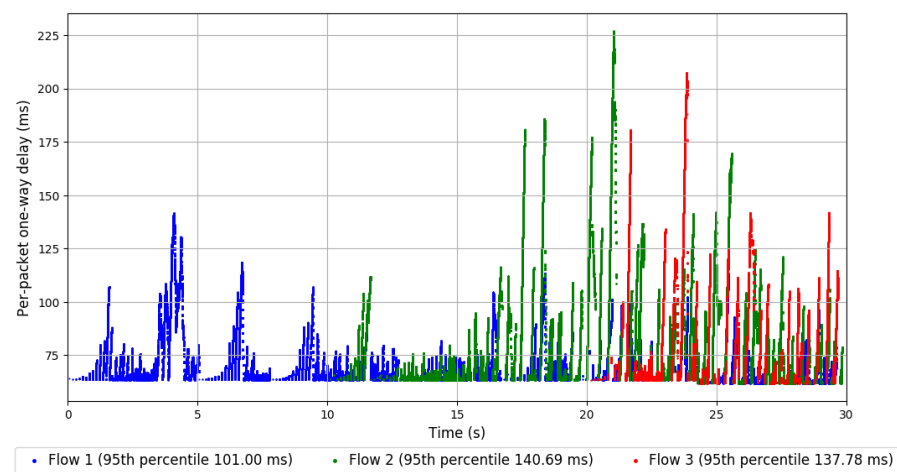
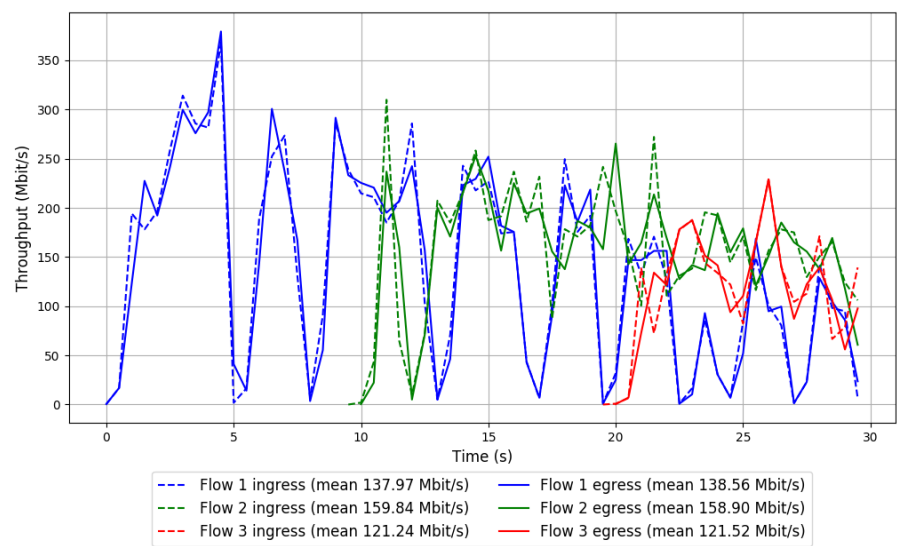


```
Run 1: Statistics of Verus

Start at: 2018-04-18 19:43:24
End at: 2018-04-18 19:43:54

# Below is generated by plot.py at 2018-04-19 01:53:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 283.38 Mbit/s
95th percentile per-packet one-way delay: 124.832 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 138.56 Mbit/s
95th percentile per-packet one-way delay: 100.999 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 158.90 Mbit/s
95th percentile per-packet one-way delay: 140.695 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 121.52 Mbit/s
95th percentile per-packet one-way delay: 137.779 ms
Loss rate: 2.68%
```


Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

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

End at: 2018-04-18 19:59:48

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 309.25 Mbit/s

95th percentile per-packet one-way delay: 123.750 ms

Loss rate: 0.83%

-- Flow 1:

Average throughput: 170.06 Mbit/s

95th percentile per-packet one-way delay: 133.798 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 155.47 Mbit/s

95th percentile per-packet one-way delay: 110.606 ms

Loss rate: 0.72%

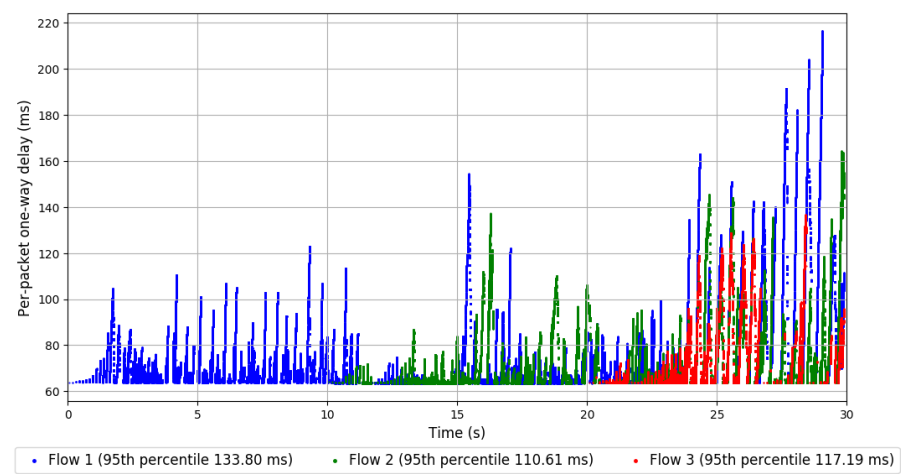
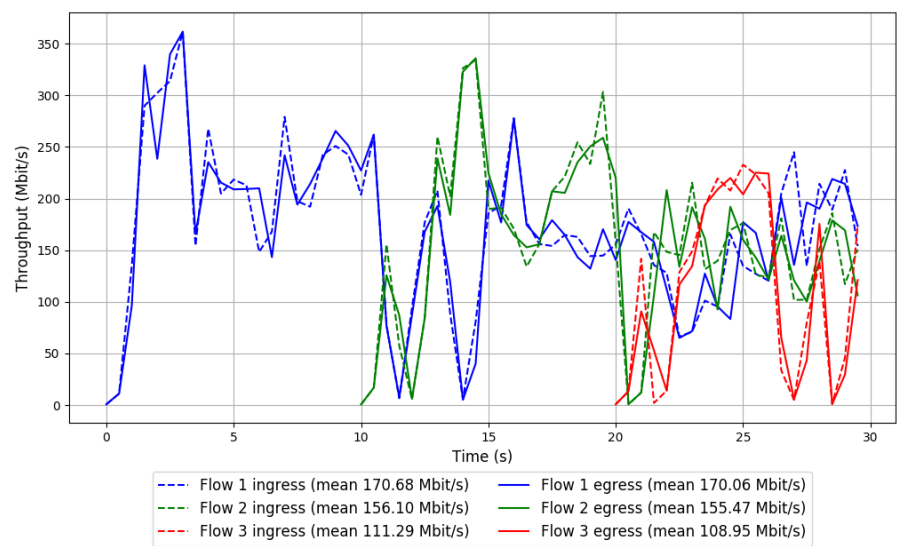
-- Flow 3:

Average throughput: 108.95 Mbit/s

95th percentile per-packet one-way delay: 117.191 ms

Loss rate: 3.11%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

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

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

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 279.93 Mbit/s

95th percentile per-packet one-way delay: 181.959 ms

Loss rate: 0.83%

-- Flow 1:

Average throughput: 187.30 Mbit/s

95th percentile per-packet one-way delay: 188.225 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 69.32 Mbit/s

95th percentile per-packet one-way delay: 104.494 ms

Loss rate: 0.02%

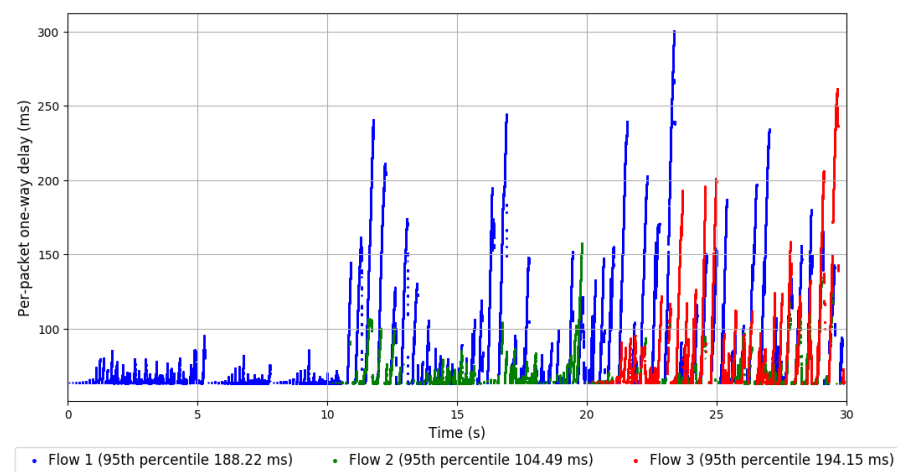
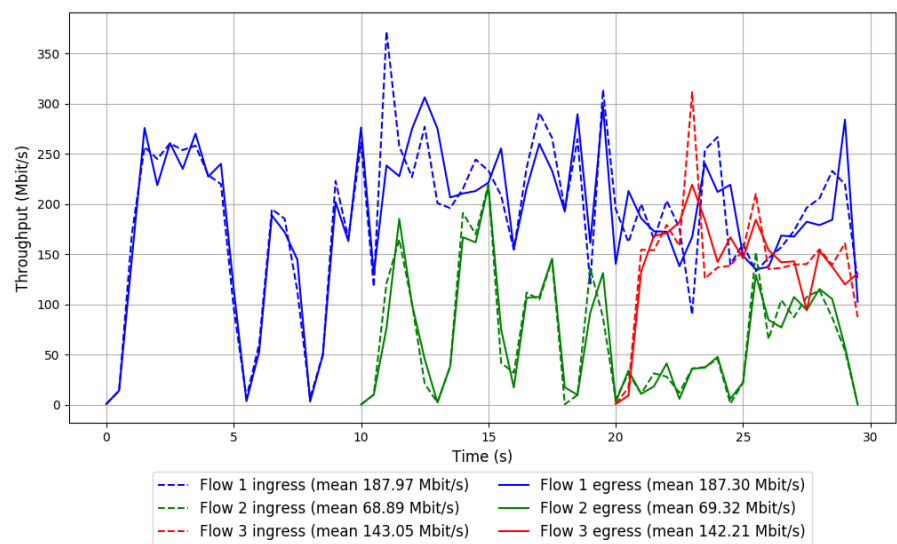
-- Flow 3:

Average throughput: 142.21 Mbit/s

95th percentile per-packet one-way delay: 194.153 ms

Loss rate: 1.86%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-04-18 20:31:16

End at: 2018-04-18 20:31:46

Below is generated by plot.py at 2018-04-19 01:55:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 300.76 Mbit/s

95th percentile per-packet one-way delay: 248.826 ms

Loss rate: 4.70%

-- Flow 1:

Average throughput: 209.03 Mbit/s

95th percentile per-packet one-way delay: 251.923 ms

Loss rate: 5.88%

-- Flow 2:

Average throughput: 108.84 Mbit/s

95th percentile per-packet one-way delay: 244.773 ms

Loss rate: 1.82%

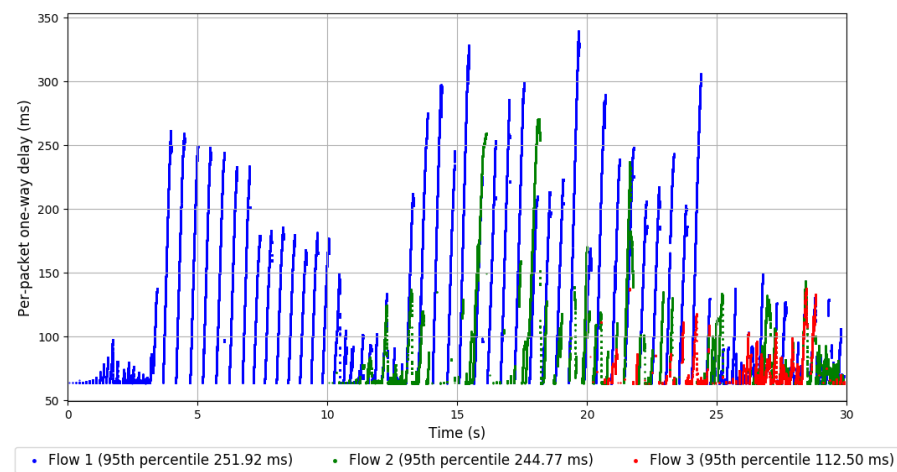
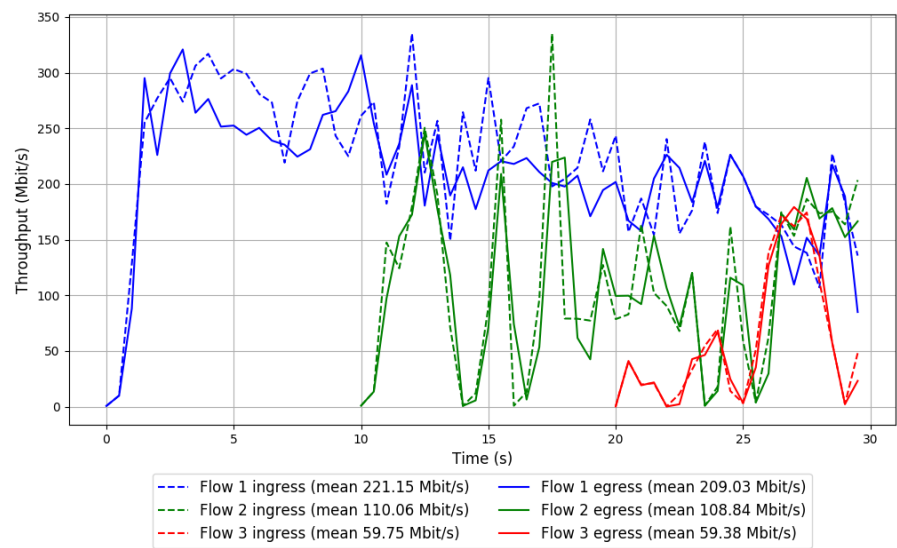
-- Flow 3:

Average throughput: 59.38 Mbit/s

95th percentile per-packet one-way delay: 112.502 ms

Loss rate: 2.10%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-04-18 20:47:09

End at: 2018-04-18 20:47:39

Below is generated by plot.py at 2018-04-19 01:55:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 288.68 Mbit/s

95th percentile per-packet one-way delay: 152.165 ms

Loss rate: 0.83%

-- Flow 1:

Average throughput: 173.81 Mbit/s

95th percentile per-packet one-way delay: 159.761 ms

Loss rate: 0.23%

-- Flow 2:

Average throughput: 145.26 Mbit/s

95th percentile per-packet one-way delay: 139.888 ms

Loss rate: 1.27%

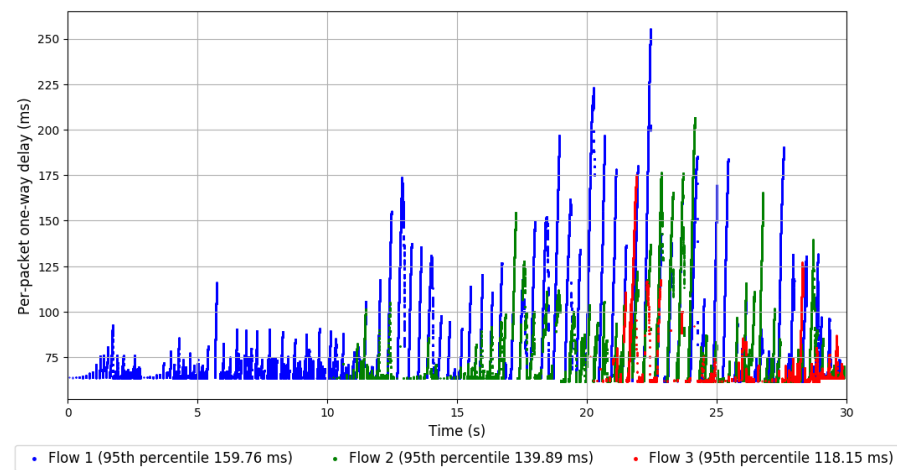
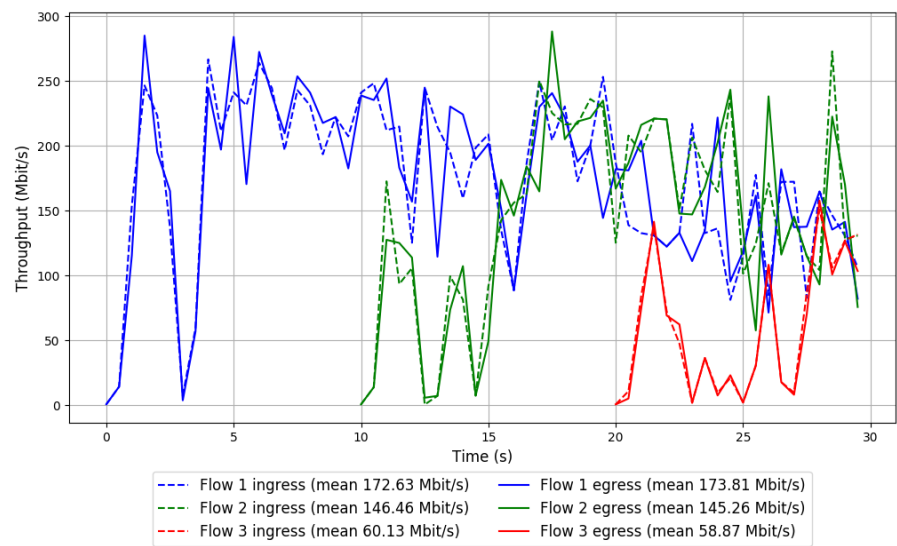
-- Flow 3:

Average throughput: 58.87 Mbit/s

95th percentile per-packet one-way delay: 118.150 ms

Loss rate: 3.86%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2018-04-18 21:03:05

End at: 2018-04-18 21:03:35

Below is generated by plot.py at 2018-04-19 01:56:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 280.72 Mbit/s

95th percentile per-packet one-way delay: 133.168 ms

Loss rate: 0.71%

-- Flow 1:

Average throughput: 158.06 Mbit/s

95th percentile per-packet one-way delay: 135.687 ms

Loss rate: 0.86%

-- Flow 2:

Average throughput: 134.11 Mbit/s

95th percentile per-packet one-way delay: 102.469 ms

Loss rate: 0.00%

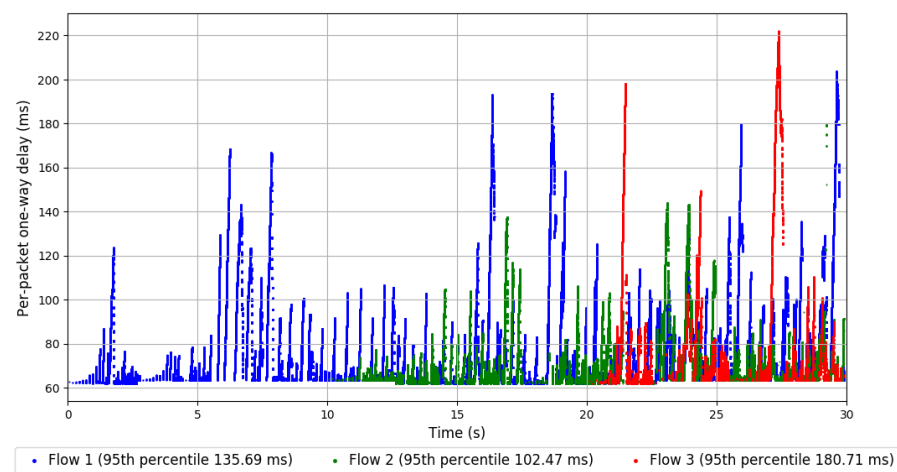
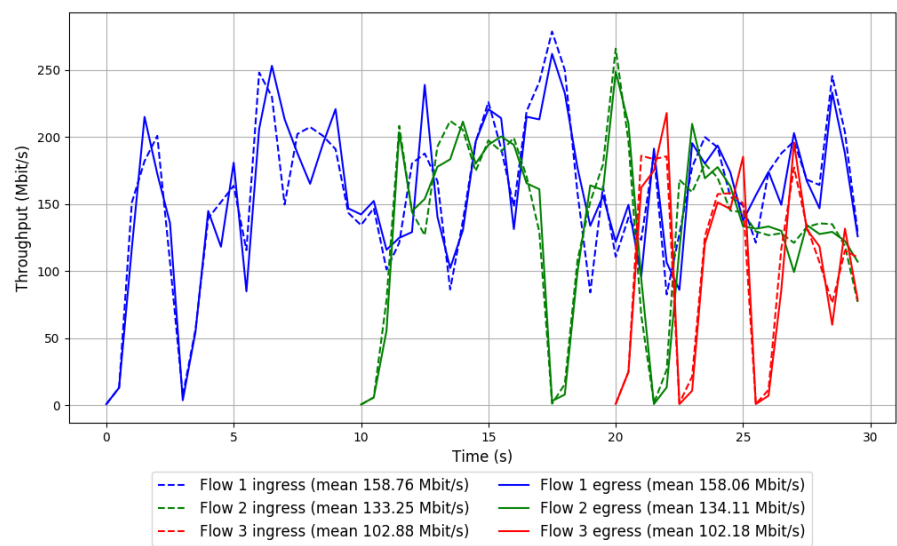
-- Flow 3:

Average throughput: 102.18 Mbit/s

95th percentile per-packet one-way delay: 180.707 ms

Loss rate: 1.90%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2018-04-18 21:18:59

End at: 2018-04-18 21:19:29

Below is generated by plot.py at 2018-04-19 01:58:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 254.82 Mbit/s

95th percentile per-packet one-way delay: 198.746 ms

Loss rate: 2.26%

-- Flow 1:

Average throughput: 137.49 Mbit/s

95th percentile per-packet one-way delay: 119.237 ms

Loss rate: 0.63%

-- Flow 2:

Average throughput: 97.83 Mbit/s

95th percentile per-packet one-way delay: 164.176 ms

Loss rate: 1.57%

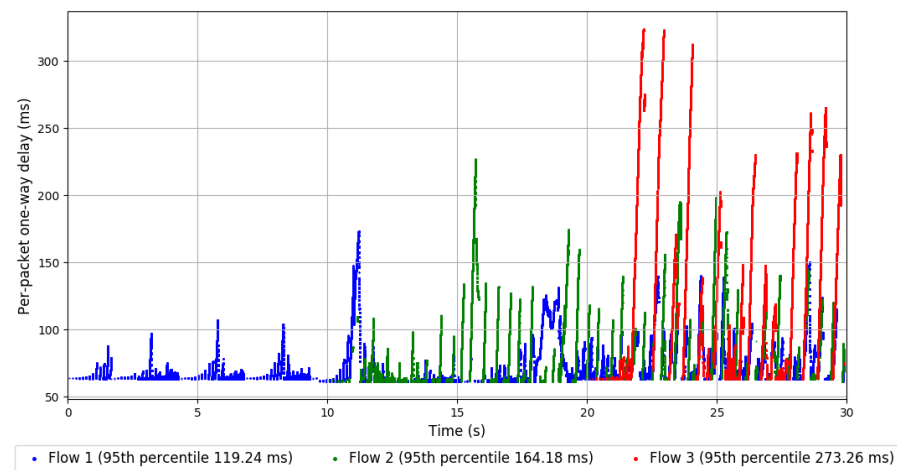
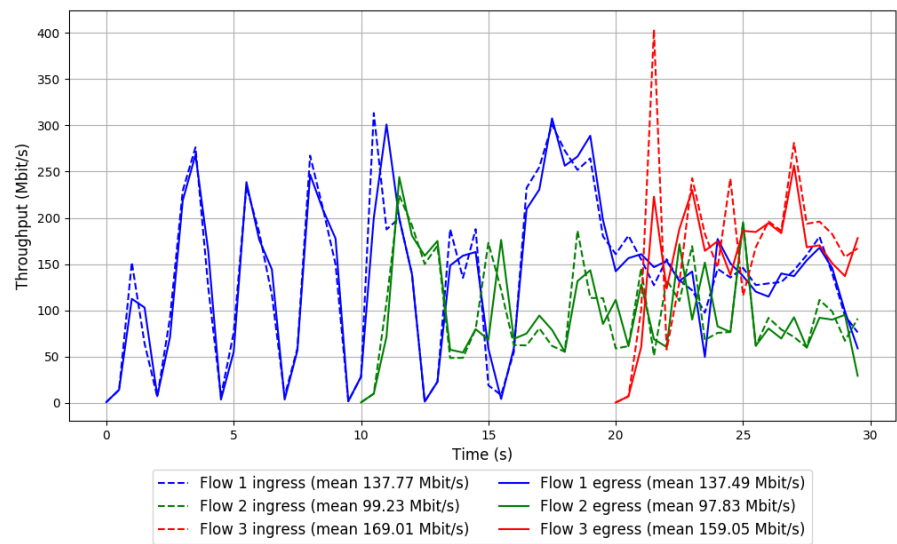
-- Flow 3:

Average throughput: 159.05 Mbit/s

95th percentile per-packet one-way delay: 273.262 ms

Loss rate: 7.11%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2018-04-18 21:34:40

End at: 2018-04-18 21:35:10

Below is generated by plot.py at 2018-04-19 01:59:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 304.01 Mbit/s

95th percentile per-packet one-way delay: 197.616 ms

Loss rate: 1.38%

-- Flow 1:

Average throughput: 181.14 Mbit/s

95th percentile per-packet one-way delay: 143.961 ms

Loss rate: 0.99%

-- Flow 2:

Average throughput: 165.36 Mbit/s

95th percentile per-packet one-way delay: 253.694 ms

Loss rate: 1.62%

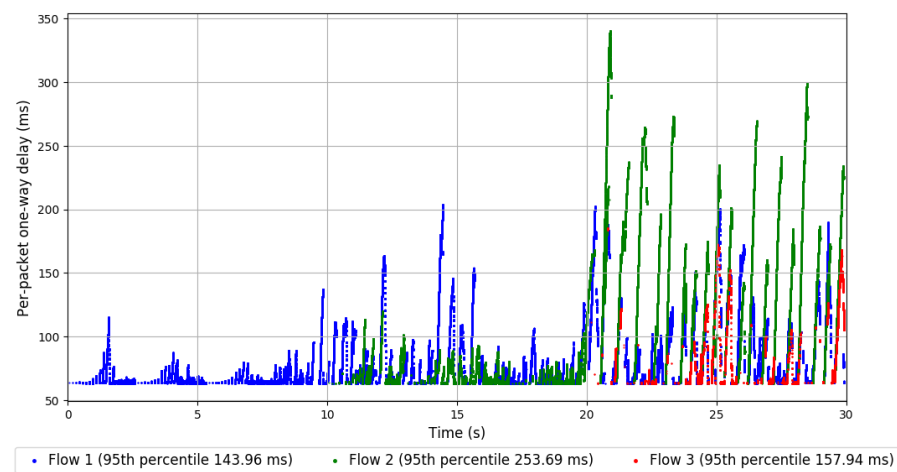
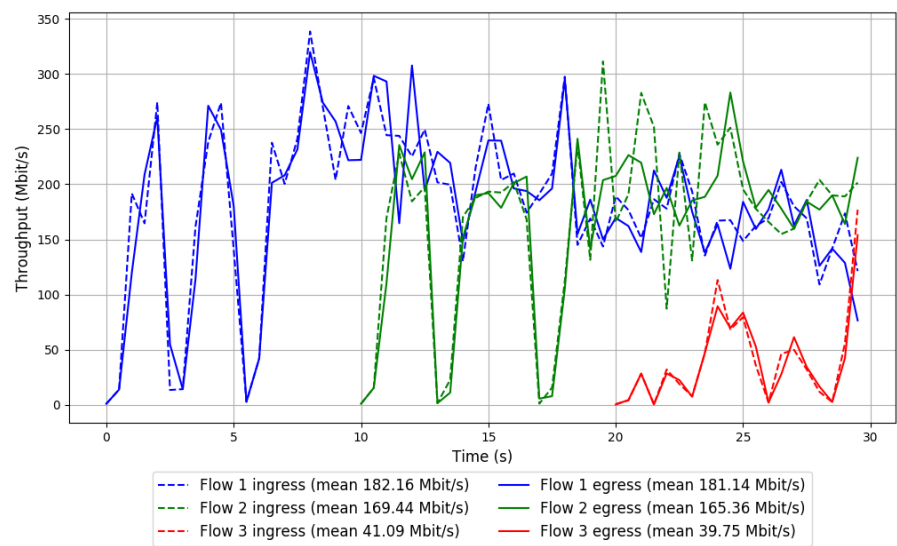
-- Flow 3:

Average throughput: 39.75 Mbit/s

95th percentile per-packet one-way delay: 157.938 ms

Loss rate: 4.65%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

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

End at: 2018-04-18 21:50:48

Below is generated by plot.py at 2018-04-19 02:00:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 300.37 Mbit/s

95th percentile per-packet one-way delay: 233.780 ms

Loss rate: 2.45%

-- Flow 1:

Average throughput: 150.39 Mbit/s

95th percentile per-packet one-way delay: 127.973 ms

Loss rate: 0.20%

-- Flow 2:

Average throughput: 176.57 Mbit/s

95th percentile per-packet one-way delay: 313.238 ms

Loss rate: 4.56%

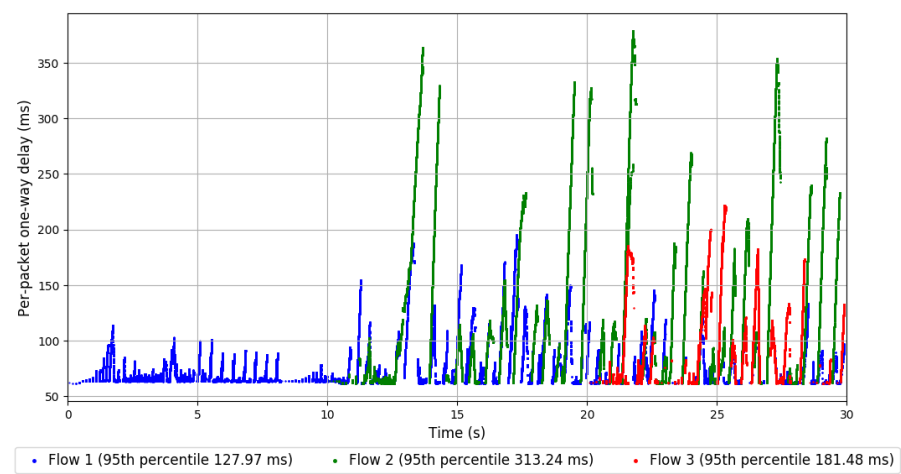
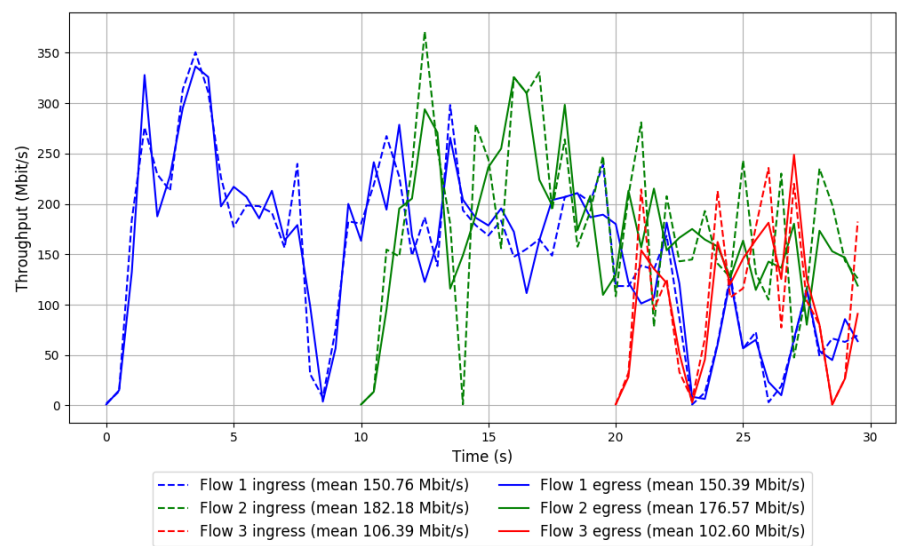
-- Flow 3:

Average throughput: 102.60 Mbit/s

95th percentile per-packet one-way delay: 181.479 ms

Loss rate: 4.79%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2018-04-18 22:06:12

End at: 2018-04-18 22:06:42

Below is generated by plot.py at 2018-04-19 02:00:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 294.40 Mbit/s

95th percentile per-packet one-way delay: 197.104 ms

Loss rate: 1.56%

-- Flow 1:

Average throughput: 198.25 Mbit/s

95th percentile per-packet one-way delay: 161.905 ms

Loss rate: 0.61%

-- Flow 2:

Average throughput: 73.91 Mbit/s

95th percentile per-packet one-way delay: 249.967 ms

Loss rate: 4.82%

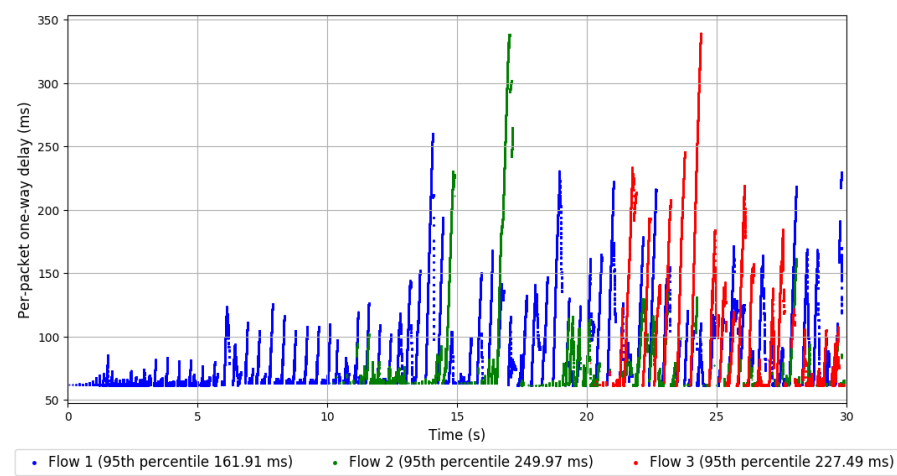
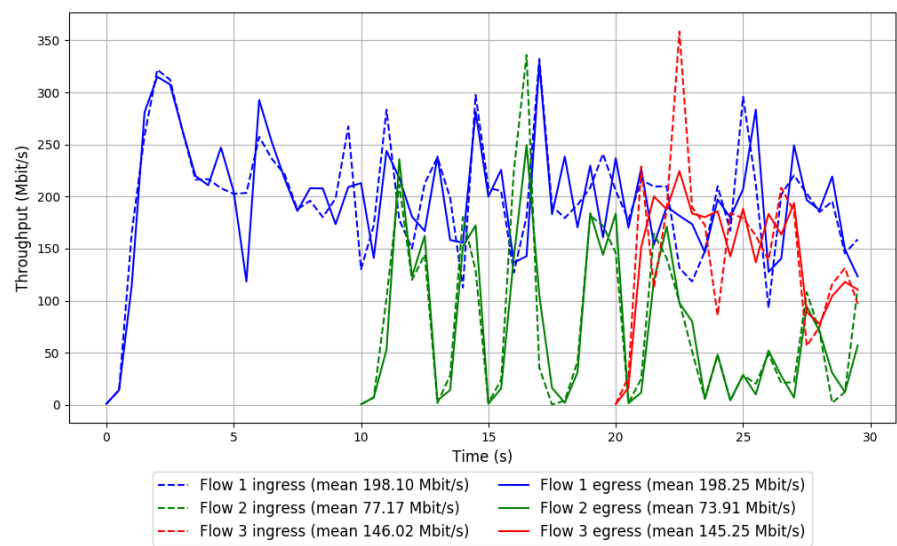
-- Flow 3:

Average throughput: 145.25 Mbit/s

95th percentile per-packet one-way delay: 227.487 ms

Loss rate: 2.01%

Run 10: Report of Verus — Data Link



Run 1: Statistics of Copa

Start at: 2018-04-18 19:51:10

End at: 2018-04-18 19:51:40

Below is generated by plot.py at 2018-04-19 02:00:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 142.59 Mbit/s

95th percentile per-packet one-way delay: 64.121 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 77.76 Mbit/s

95th percentile per-packet one-way delay: 64.075 ms

Loss rate: 0.34%

-- Flow 2:

Average throughput: 66.88 Mbit/s

95th percentile per-packet one-way delay: 64.146 ms

Loss rate: 0.58%

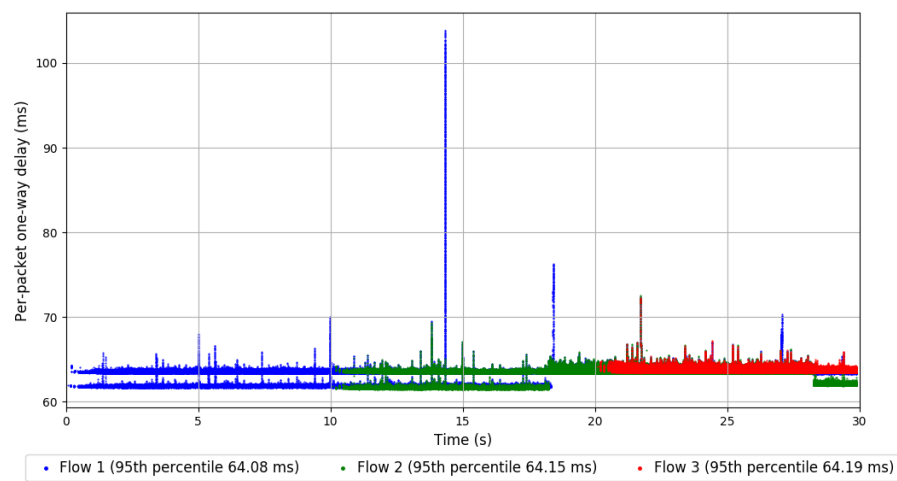
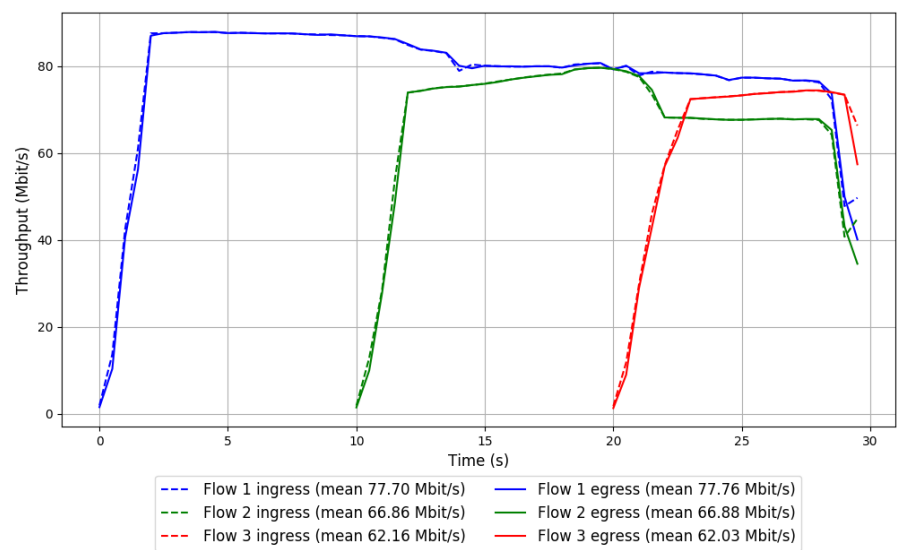
-- Flow 3:

Average throughput: 62.03 Mbit/s

95th percentile per-packet one-way delay: 64.189 ms

Loss rate: 1.48%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-04-18 20:07:16

End at: 2018-04-18 20:07:46

Below is generated by plot.py at 2018-04-19 02:00:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 118.58 Mbit/s

95th percentile per-packet one-way delay: 63.935 ms

Loss rate: 0.60%

-- Flow 1:

Average throughput: 72.01 Mbit/s

95th percentile per-packet one-way delay: 63.777 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 52.74 Mbit/s

95th percentile per-packet one-way delay: 64.029 ms

Loss rate: 0.88%

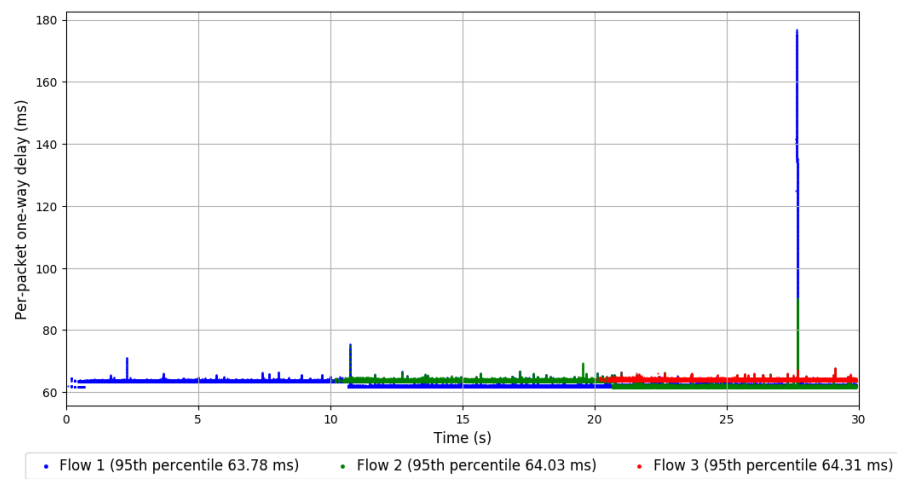
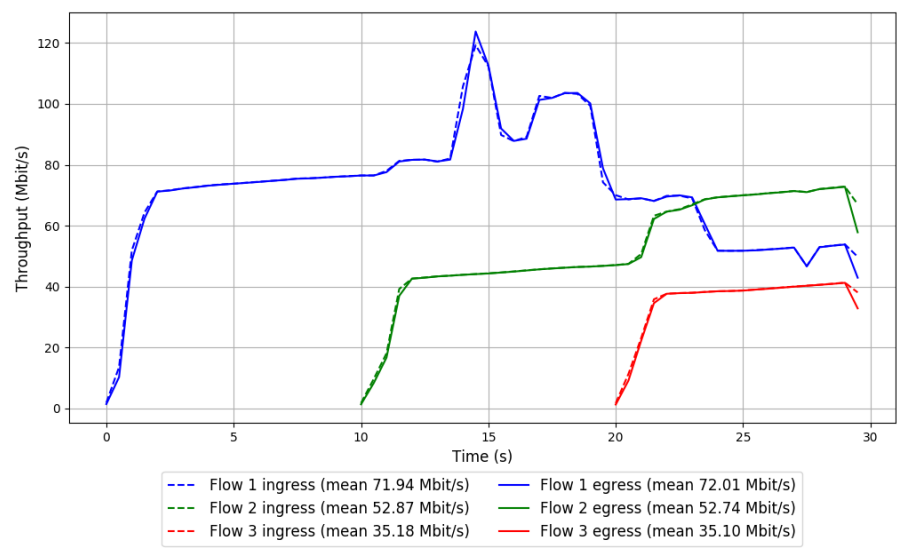
-- Flow 3:

Average throughput: 35.10 Mbit/s

95th percentile per-packet one-way delay: 64.315 ms

Loss rate: 1.50%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-04-18 20:23:12

End at: 2018-04-18 20:23:42

Below is generated by plot.py at 2018-04-19 02:00:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 127.03 Mbit/s

95th percentile per-packet one-way delay: 64.039 ms

Loss rate: 0.63%

-- Flow 1:

Average throughput: 70.80 Mbit/s

95th percentile per-packet one-way delay: 63.969 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 69.33 Mbit/s

95th percentile per-packet one-way delay: 64.056 ms

Loss rate: 0.60%

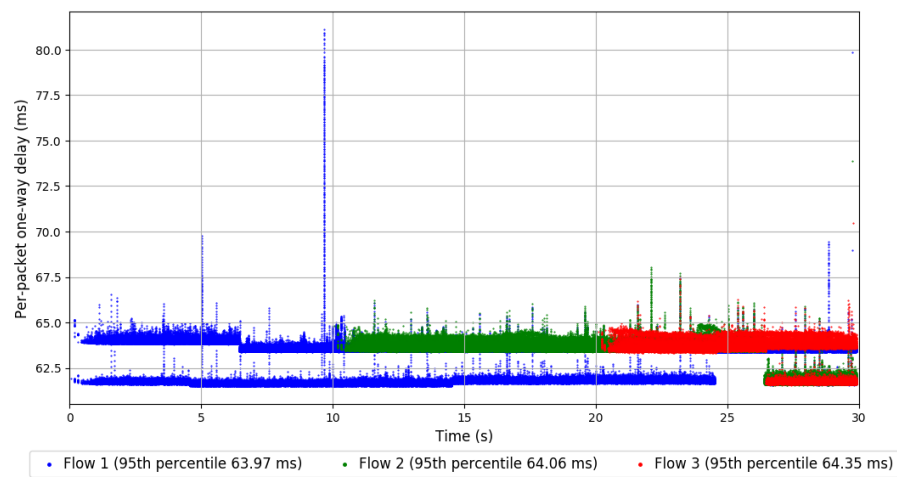
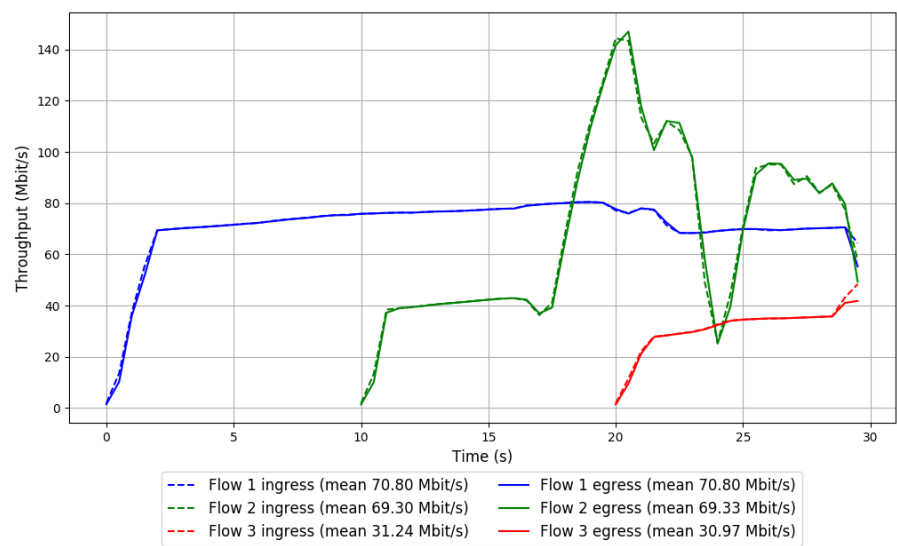
-- Flow 3:

Average throughput: 30.97 Mbit/s

95th percentile per-packet one-way delay: 64.351 ms

Loss rate: 2.13%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2018-04-18 20:38:58

End at: 2018-04-18 20:39:28

Below is generated by plot.py at 2018-04-19 02:01:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 145.53 Mbit/s

95th percentile per-packet one-way delay: 63.919 ms

Loss rate: 0.44%

-- Flow 1:

Average throughput: 60.77 Mbit/s

95th percentile per-packet one-way delay: 64.121 ms

Loss rate: 0.24%

-- Flow 2:

Average throughput: 90.05 Mbit/s

95th percentile per-packet one-way delay: 63.614 ms

Loss rate: 0.28%

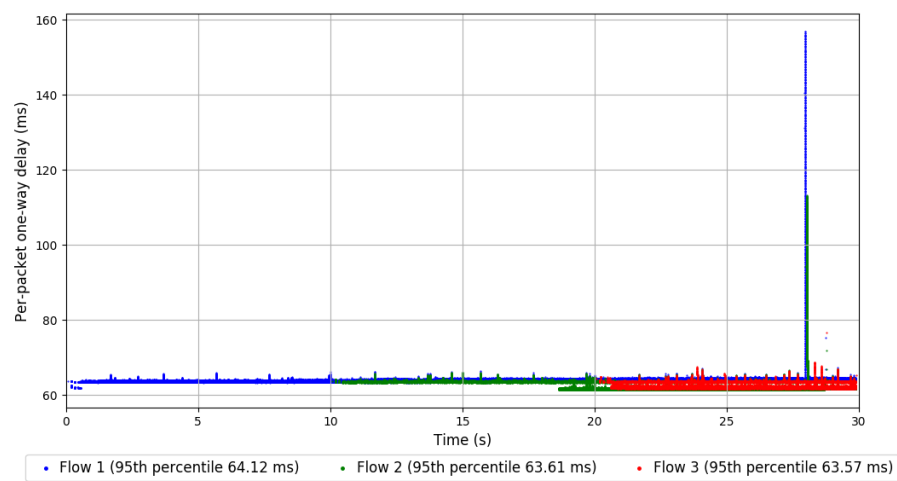
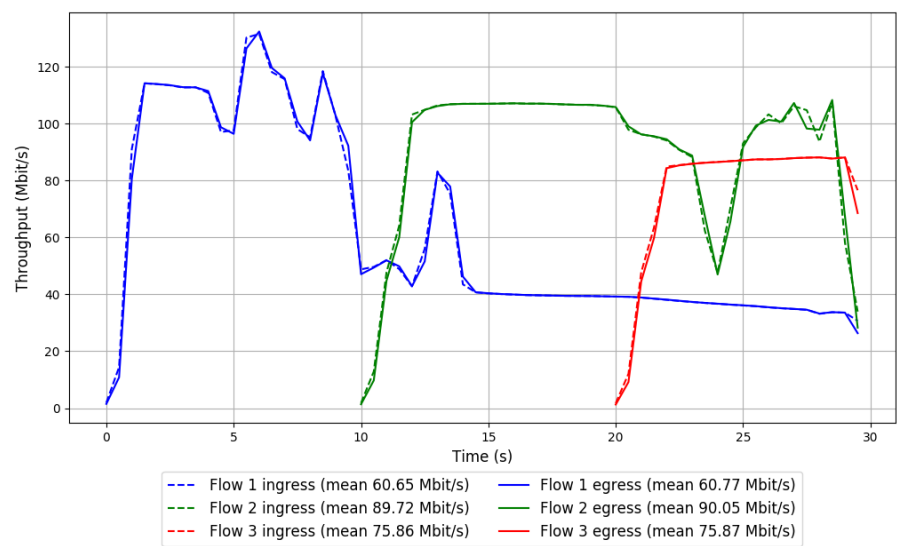
-- Flow 3:

Average throughput: 75.87 Mbit/s

95th percentile per-packet one-way delay: 63.570 ms

Loss rate: 1.28%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2018-04-18 20:55:01

End at: 2018-04-18 20:55:31

Below is generated by plot.py at 2018-04-19 02:03:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 152.27 Mbit/s

95th percentile per-packet one-way delay: 63.775 ms

Loss rate: 0.40%

-- Flow 1:

Average throughput: 81.00 Mbit/s

95th percentile per-packet one-way delay: 63.763 ms

Loss rate: 0.07%

-- Flow 2:

Average throughput: 76.59 Mbit/s

95th percentile per-packet one-way delay: 63.781 ms

Loss rate: 0.47%

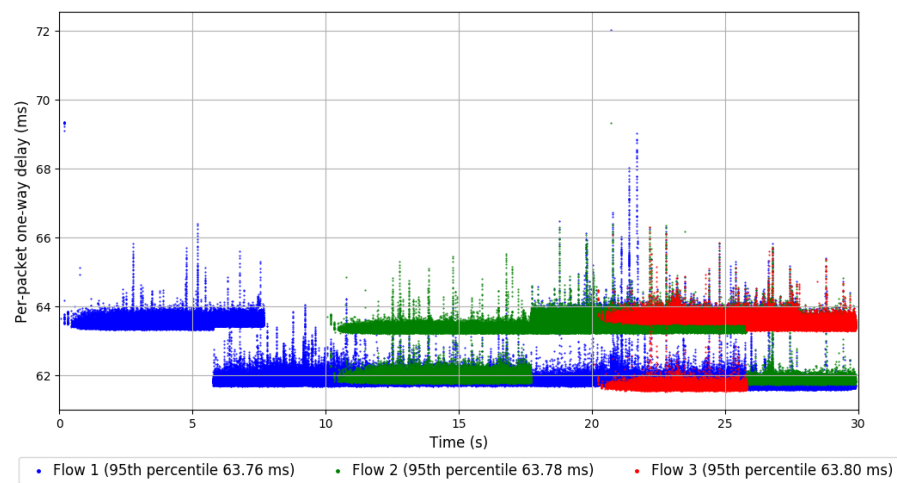
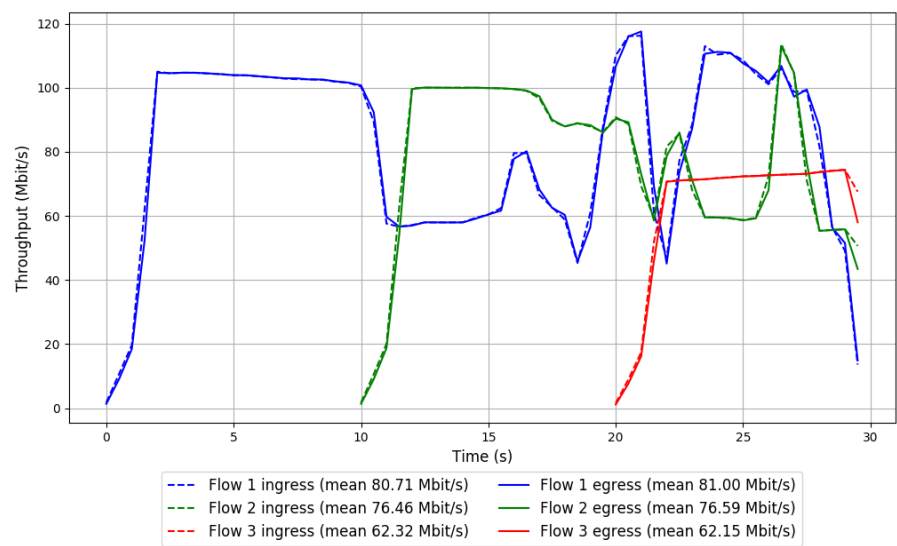
-- Flow 3:

Average throughput: 62.15 Mbit/s

95th percentile per-packet one-way delay: 63.800 ms

Loss rate: 1.54%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2018-04-18 21:10:49

End at: 2018-04-18 21:11:20

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 133.84 Mbit/s

95th percentile per-packet one-way delay: 63.588 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 73.55 Mbit/s

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

Loss rate: 0.23%

-- Flow 2:

Average throughput: 78.62 Mbit/s

95th percentile per-packet one-way delay: 63.570 ms

Loss rate: 0.57%

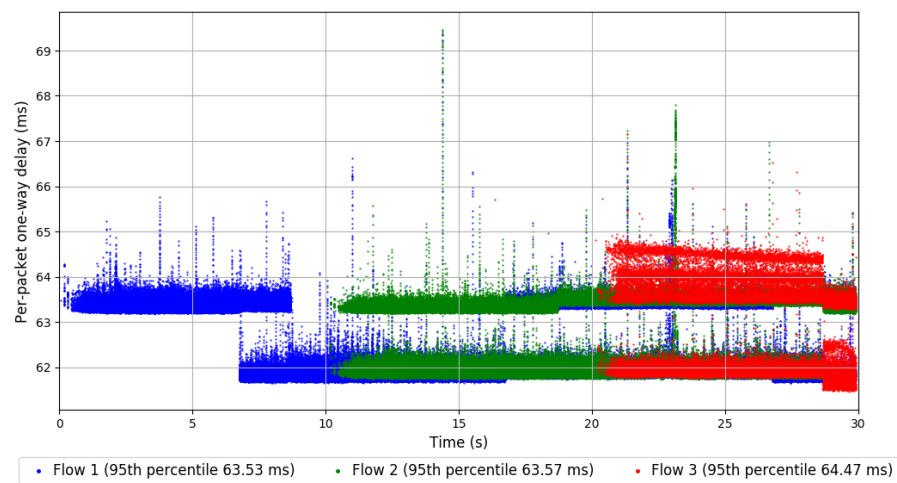
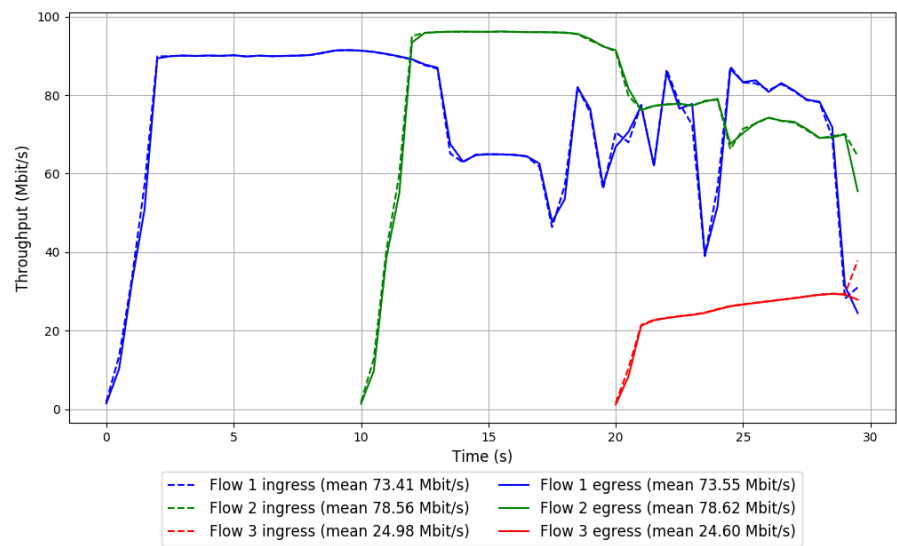
-- Flow 3:

Average throughput: 24.60 Mbit/s

95th percentile per-packet one-way delay: 64.471 ms

Loss rate: 2.78%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2018-04-18 21:26:31

End at: 2018-04-18 21:27:01

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 126.91 Mbit/s

95th percentile per-packet one-way delay: 63.917 ms

Loss rate: 0.62%

-- Flow 1:

Average throughput: 63.76 Mbit/s

95th percentile per-packet one-way delay: 63.927 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 80.76 Mbit/s

95th percentile per-packet one-way delay: 63.701 ms

Loss rate: 0.66%

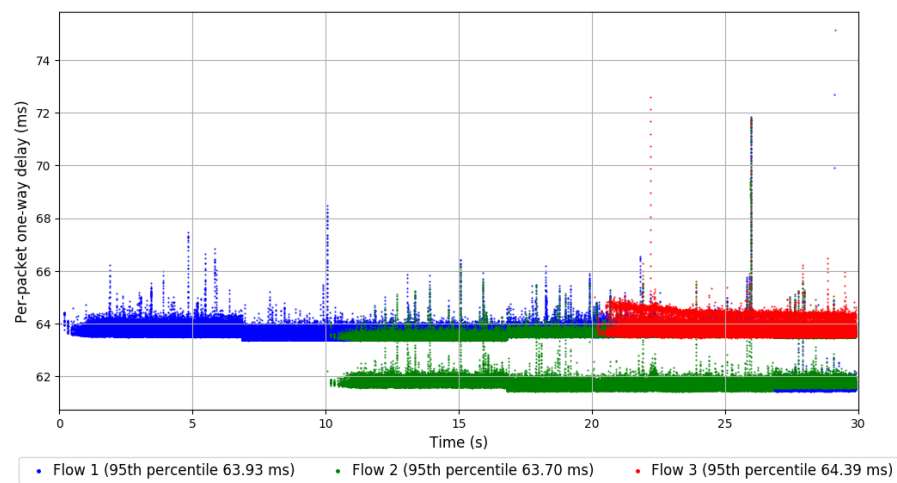
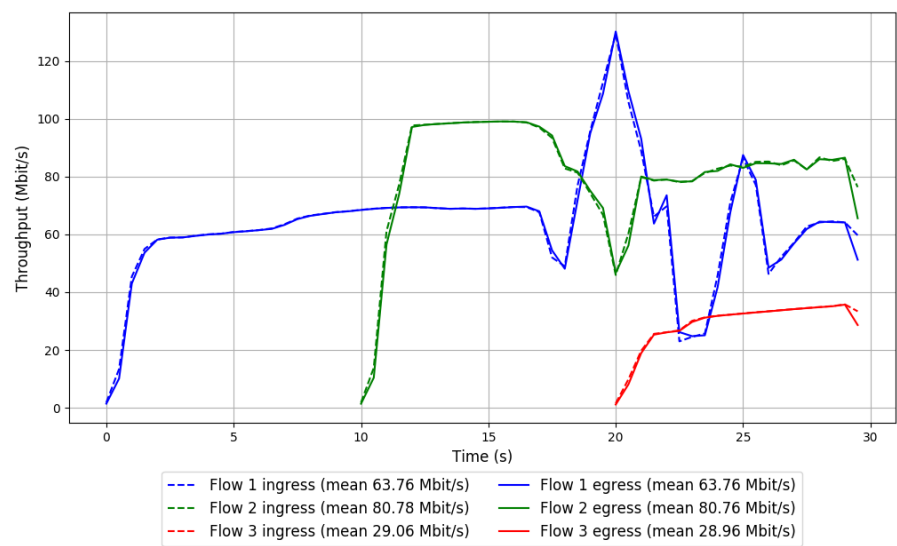
-- Flow 3:

Average throughput: 28.96 Mbit/s

95th percentile per-packet one-way delay: 64.393 ms

Loss rate: 1.62%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2018-04-18 21:42:09

End at: 2018-04-18 21:42:39

Below is generated by plot.py at 2018-04-19 02:05:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 154.68 Mbit/s

95th percentile per-packet one-way delay: 63.665 ms

Loss rate: 0.67%

-- Flow 1:

Average throughput: 77.86 Mbit/s

95th percentile per-packet one-way delay: 63.662 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 85.57 Mbit/s

95th percentile per-packet one-way delay: 63.656 ms

Loss rate: 0.50%

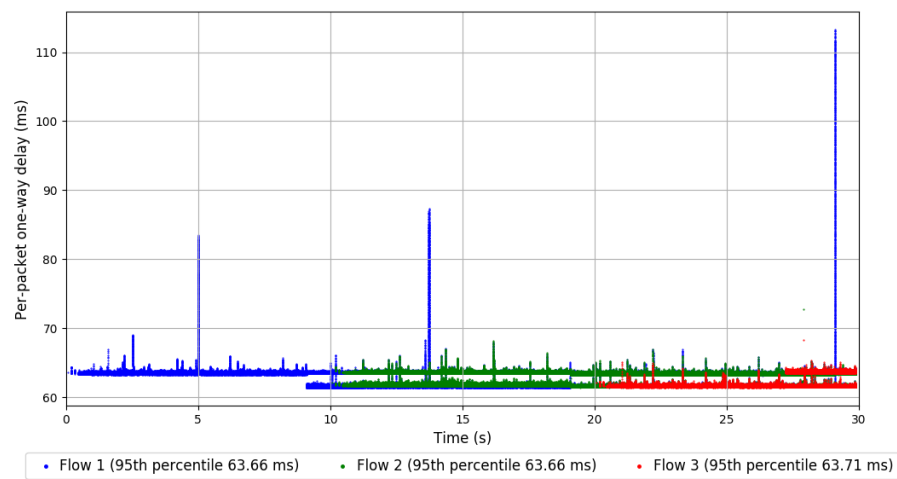
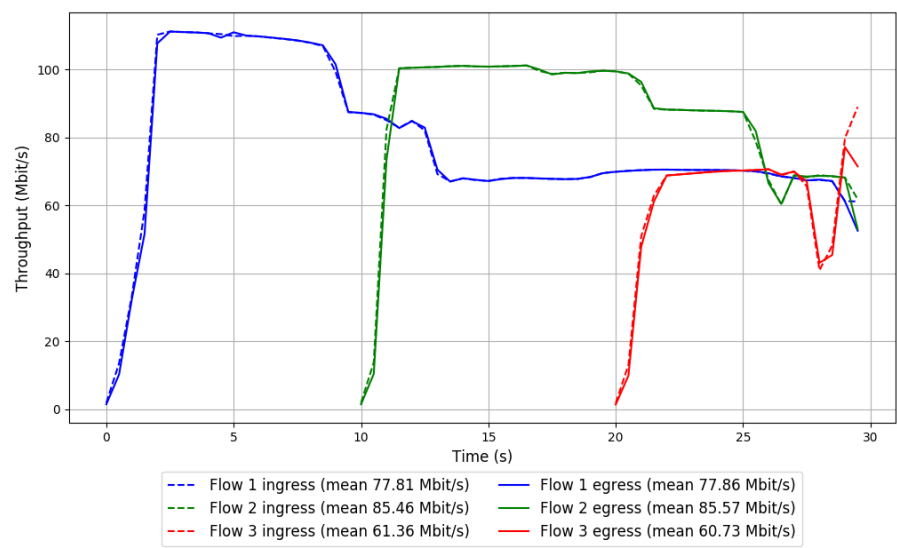
-- Flow 3:

Average throughput: 60.73 Mbit/s

95th percentile per-packet one-way delay: 63.708 ms

Loss rate: 2.28%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2018-04-18 21:58:07

End at: 2018-04-18 21:58:37

Below is generated by plot.py at 2018-04-19 02:05:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 108.90 Mbit/s

95th percentile per-packet one-way delay: 63.901 ms

Loss rate: 0.55%

-- Flow 1:

Average throughput: 61.71 Mbit/s

95th percentile per-packet one-way delay: 63.844 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 51.65 Mbit/s

95th percentile per-packet one-way delay: 63.871 ms

Loss rate: 0.14%

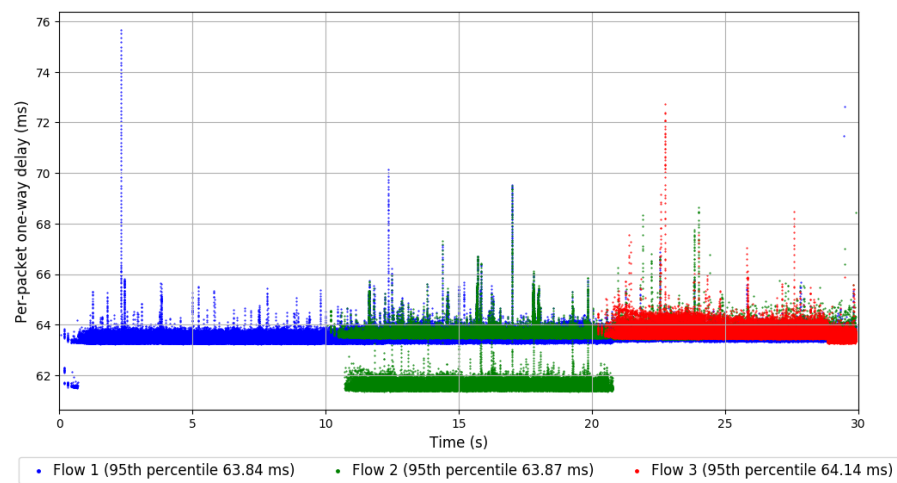
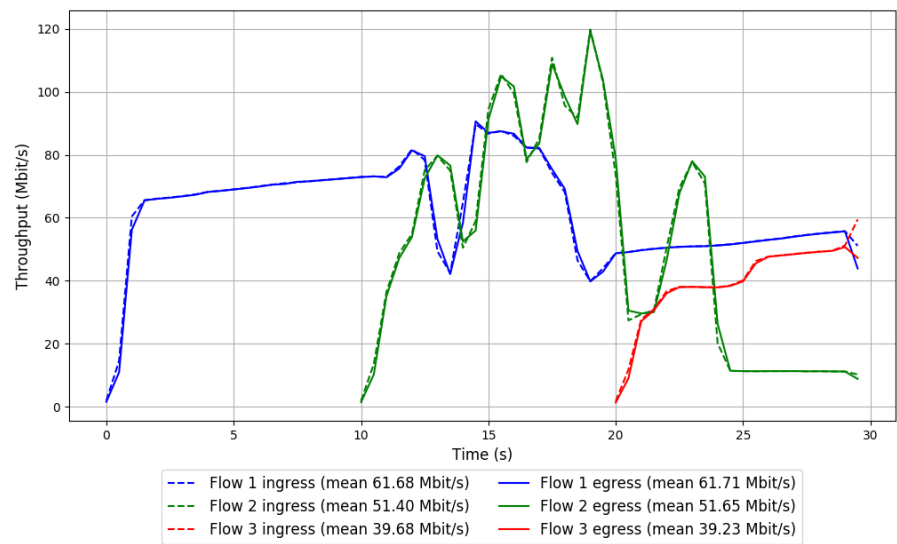
-- Flow 3:

Average throughput: 39.23 Mbit/s

95th percentile per-packet one-way delay: 64.145 ms

Loss rate: 2.42%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2018-04-18 22:14:01

End at: 2018-04-18 22:14:31

Below is generated by plot.py at 2018-04-19 02:05:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 130.94 Mbit/s

95th percentile per-packet one-way delay: 63.799 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 72.54 Mbit/s

95th percentile per-packet one-way delay: 63.697 ms

Loss rate: 0.17%

-- Flow 2:

Average throughput: 62.13 Mbit/s

95th percentile per-packet one-way delay: 63.830 ms

Loss rate: 0.83%

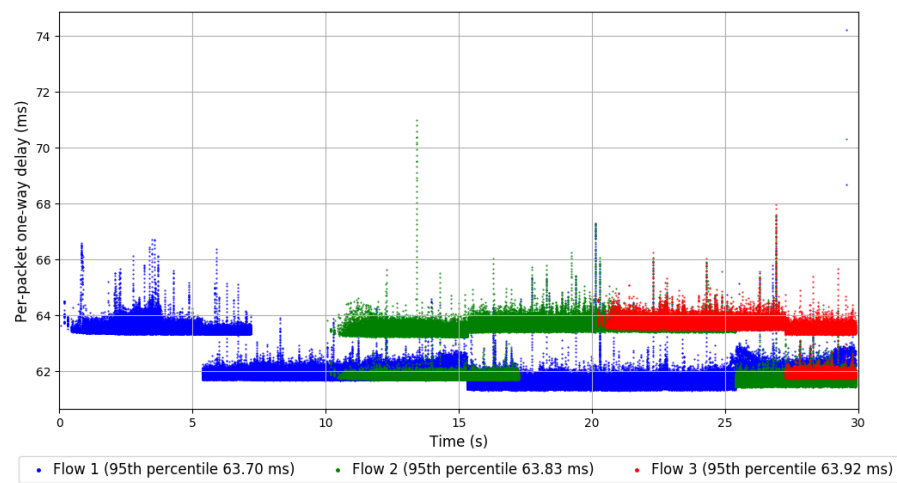
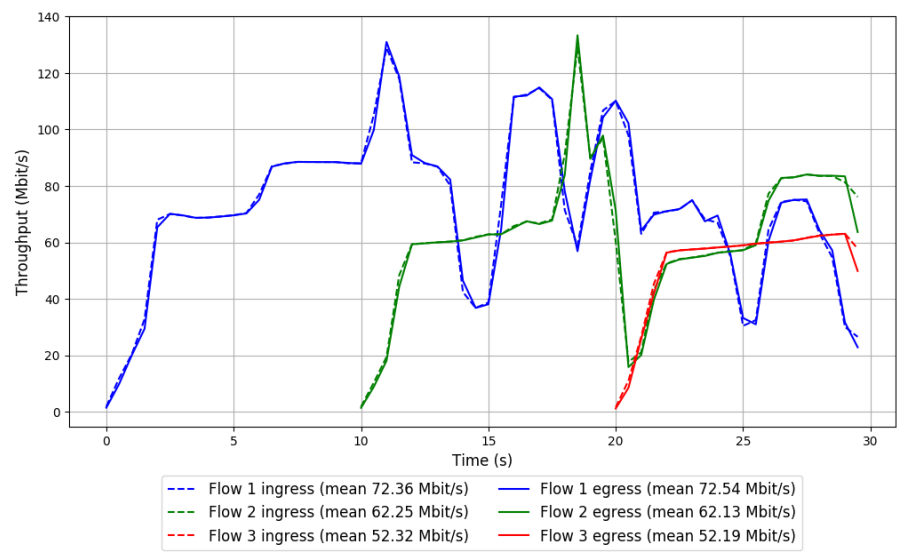
-- Flow 3:

Average throughput: 52.19 Mbit/s

95th percentile per-packet one-way delay: 63.921 ms

Loss rate: 1.52%

Run 10: Report of Copa — Data Link

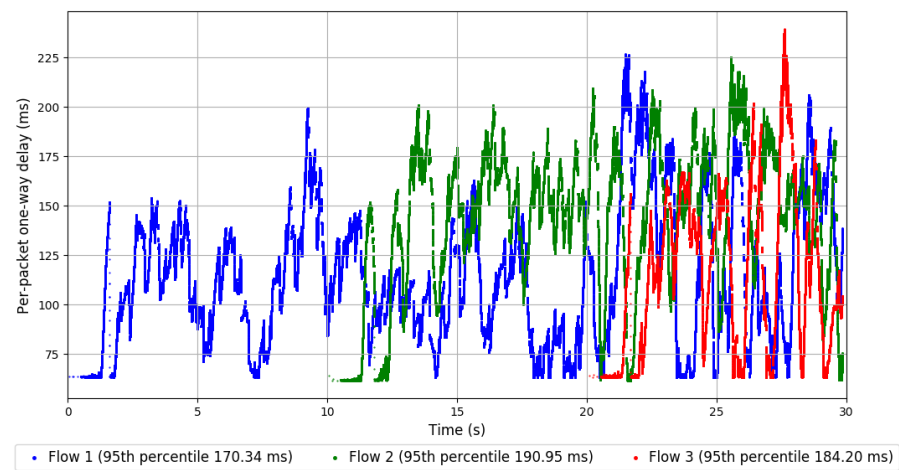
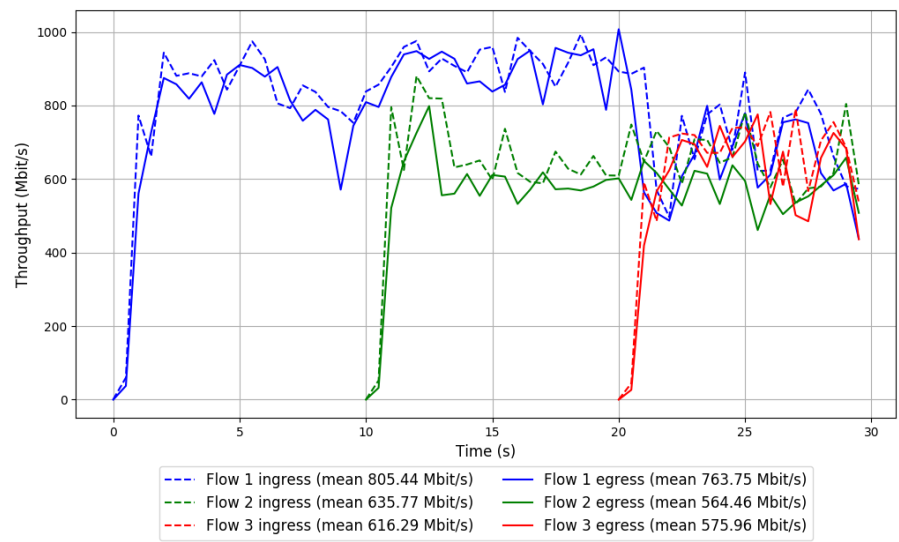


```
Run 1: Statistics of FillP

Start at: 2018-04-18 19:37:16
End at: 2018-04-18 19:37:46

# Below is generated by plot.py at 2018-04-19 02:27:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1327.31 Mbit/s
95th percentile per-packet one-way delay: 181.534 ms
Loss rate: 7.71%
-- Flow 1:
Average throughput: 763.75 Mbit/s
95th percentile per-packet one-way delay: 170.345 ms
Loss rate: 5.57%
-- Flow 2:
Average throughput: 564.46 Mbit/s
95th percentile per-packet one-way delay: 190.946 ms
Loss rate: 11.78%
-- Flow 3:
Average throughput: 575.96 Mbit/s
95th percentile per-packet one-way delay: 184.201 ms
Loss rate: 7.74%
```


Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-04-18 19:53:08

End at: 2018-04-18 19:53:38

Below is generated by plot.py at 2018-04-19 02:28:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 1285.13 Mbit/s

95th percentile per-packet one-way delay: 188.028 ms

Loss rate: 9.25%

-- Flow 1:

Average throughput: 655.66 Mbit/s

95th percentile per-packet one-way delay: 174.842 ms

Loss rate: 6.46%

-- Flow 2:

Average throughput: 694.37 Mbit/s

95th percentile per-packet one-way delay: 190.753 ms

Loss rate: 10.58%

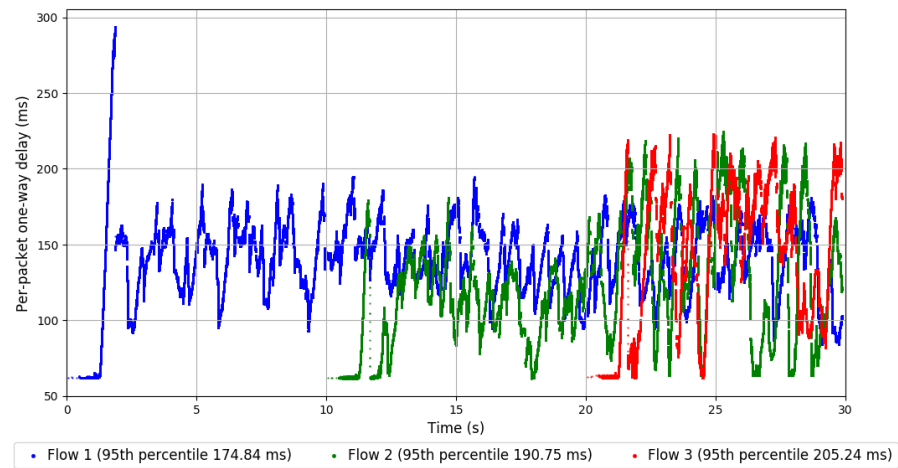
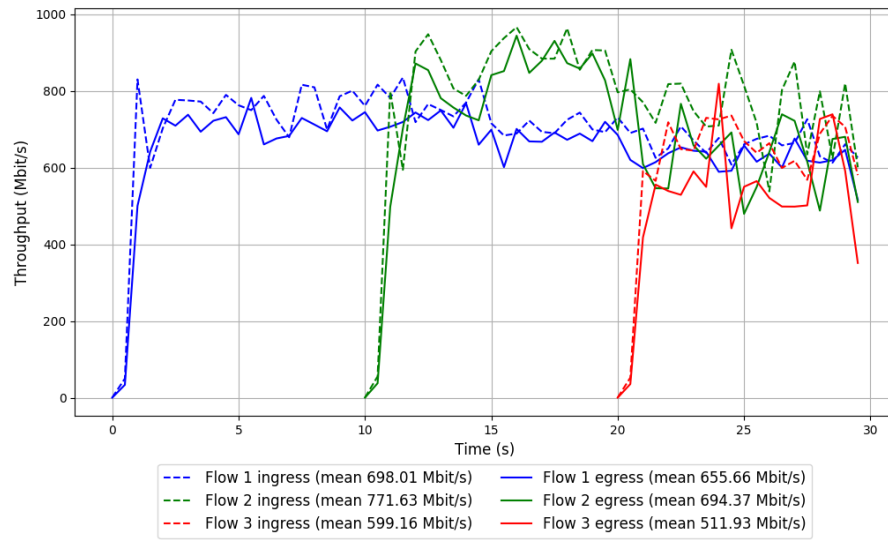
-- Flow 3:

Average throughput: 511.93 Mbit/s

95th percentile per-packet one-way delay: 205.242 ms

Loss rate: 15.64%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-04-18 20:09:13

End at: 2018-04-18 20:09:43

Below is generated by plot.py at 2018-04-19 02:29:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 1243.25 Mbit/s

95th percentile per-packet one-way delay: 182.801 ms

Loss rate: 9.08%

-- Flow 1:

Average throughput: 672.87 Mbit/s

95th percentile per-packet one-way delay: 180.315 ms

Loss rate: 10.00%

-- Flow 2:

Average throughput: 724.78 Mbit/s

95th percentile per-packet one-way delay: 169.905 ms

Loss rate: 6.18%

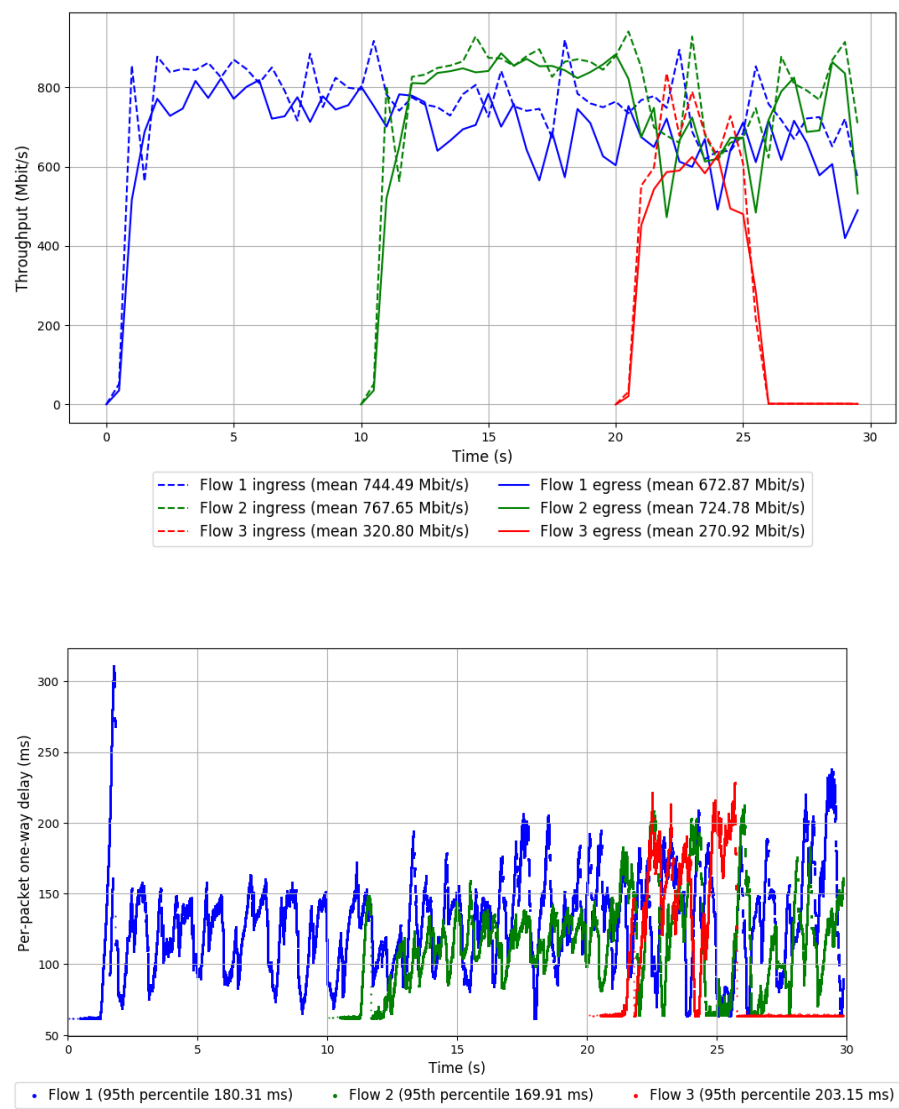
-- Flow 3:

Average throughput: 270.92 Mbit/s

95th percentile per-packet one-way delay: 203.151 ms

Loss rate: 16.60%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-04-18 20:25:07

End at: 2018-04-18 20:25:37

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 1275.34 Mbit/s

95th percentile per-packet one-way delay: 187.468 ms

Loss rate: 9.03%

-- Flow 1:

Average throughput: 688.80 Mbit/s

95th percentile per-packet one-way delay: 170.506 ms

Loss rate: 6.87%

-- Flow 2:

Average throughput: 625.41 Mbit/s

95th percentile per-packet one-way delay: 194.869 ms

Loss rate: 9.93%

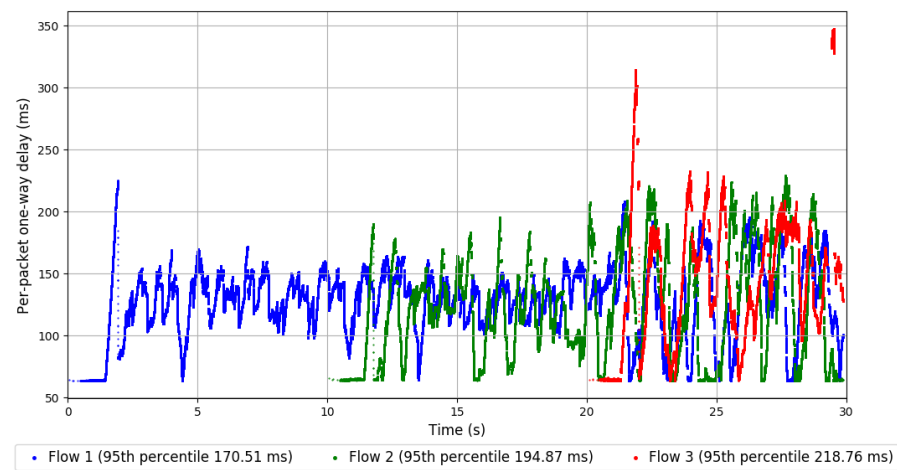
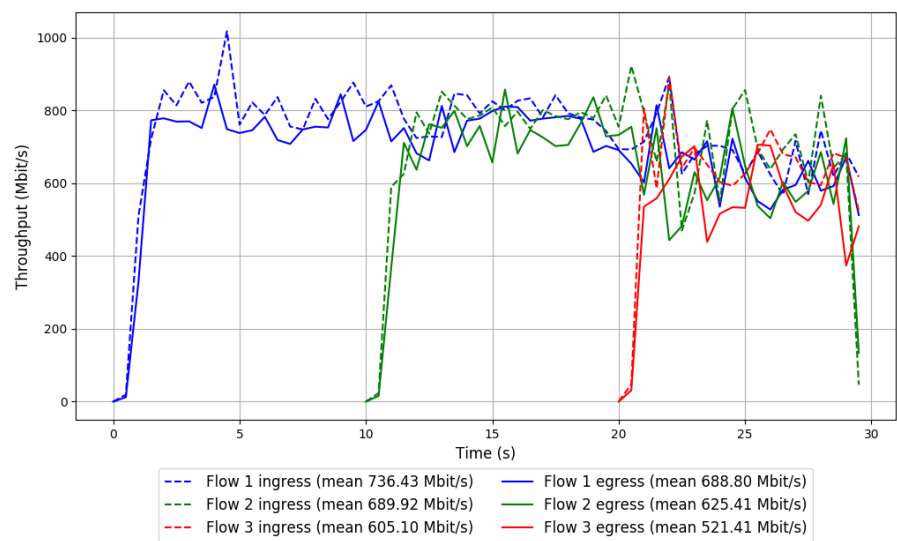
-- Flow 3:

Average throughput: 521.41 Mbit/s

95th percentile per-packet one-way delay: 218.757 ms

Loss rate: 14.95%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-04-18 20:40:58

End at: 2018-04-18 20:41:28

Below is generated by plot.py at 2018-04-19 02:30:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 1294.52 Mbit/s

95th percentile per-packet one-way delay: 196.353 ms

Loss rate: 10.51%

-- Flow 1:

Average throughput: 685.30 Mbit/s

95th percentile per-packet one-way delay: 194.300 ms

Loss rate: 9.23%

-- Flow 2:

Average throughput: 648.31 Mbit/s

95th percentile per-packet one-way delay: 199.017 ms

Loss rate: 10.49%

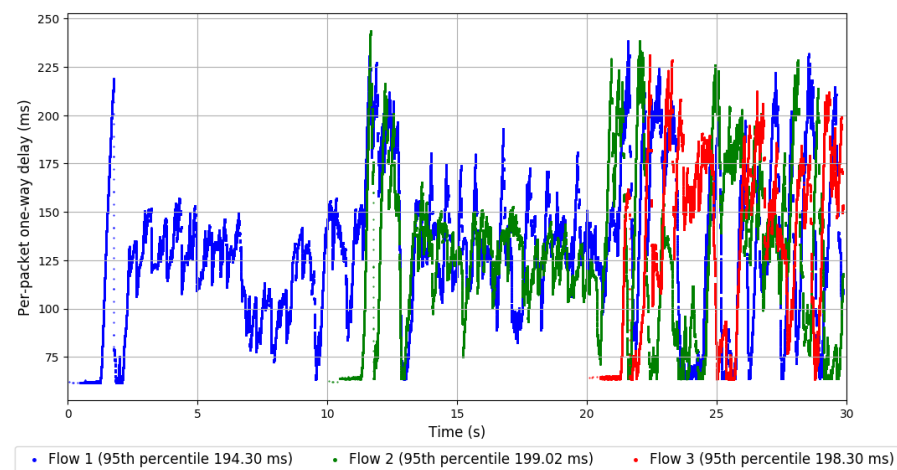
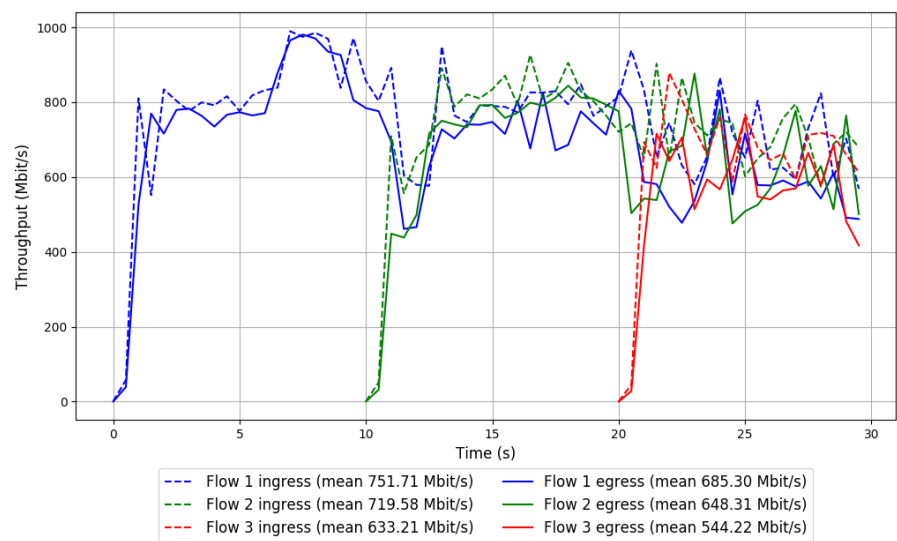
-- Flow 3:

Average throughput: 544.22 Mbit/s

95th percentile per-packet one-way delay: 198.298 ms

Loss rate: 15.19%

Run 5: Report of FillP — Data Link



Run 6: Statistics of FillP

Start at: 2018-04-18 20:57:00

End at: 2018-04-18 20:57:31

Below is generated by plot.py at 2018-04-19 02:30:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 1306.91 Mbit/s

95th percentile per-packet one-way delay: 168.648 ms

Loss rate: 6.70%

-- Flow 1:

Average throughput: 715.02 Mbit/s

95th percentile per-packet one-way delay: 159.249 ms

Loss rate: 6.46%

-- Flow 2:

Average throughput: 735.70 Mbit/s

95th percentile per-packet one-way delay: 166.135 ms

Loss rate: 5.44%

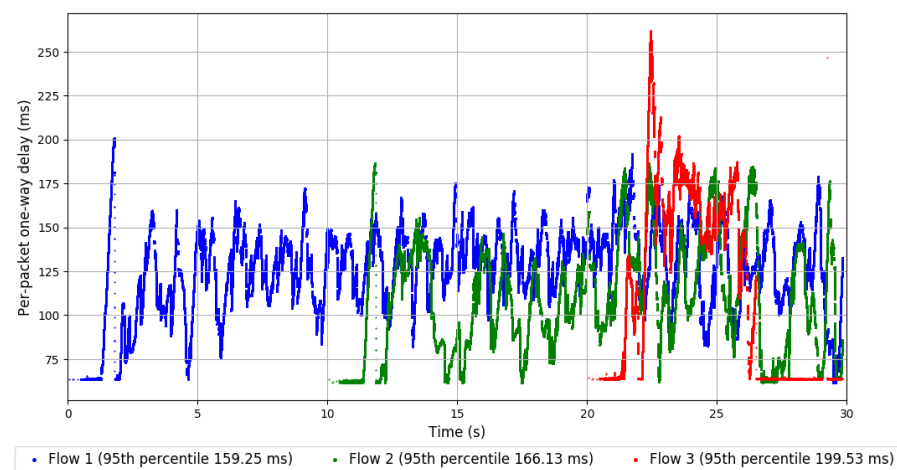
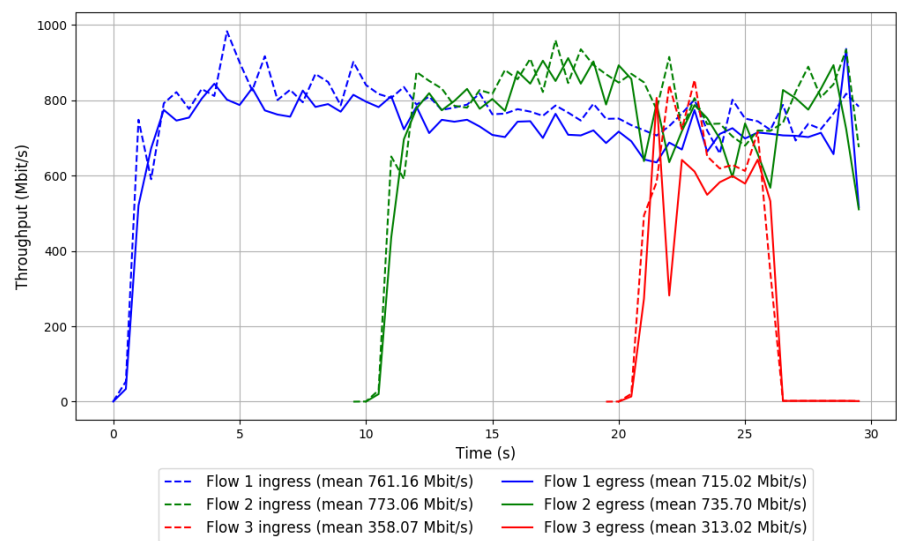
-- Flow 3:

Average throughput: 313.02 Mbit/s

95th percentile per-packet one-way delay: 199.526 ms

Loss rate: 13.71%

Run 6: Report of FillP — Data Link



Run 7: Statistics of FillP

Start at: 2018-04-18 21:12:47

End at: 2018-04-18 21:13:17

Below is generated by plot.py at 2018-04-19 02:31:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 1289.79 Mbit/s

95th percentile per-packet one-way delay: 187.248 ms

Loss rate: 10.38%

-- Flow 1:

Average throughput: 678.31 Mbit/s

95th percentile per-packet one-way delay: 179.593 ms

Loss rate: 9.01%

-- Flow 2:

Average throughput: 647.10 Mbit/s

95th percentile per-packet one-way delay: 191.650 ms

Loss rate: 10.05%

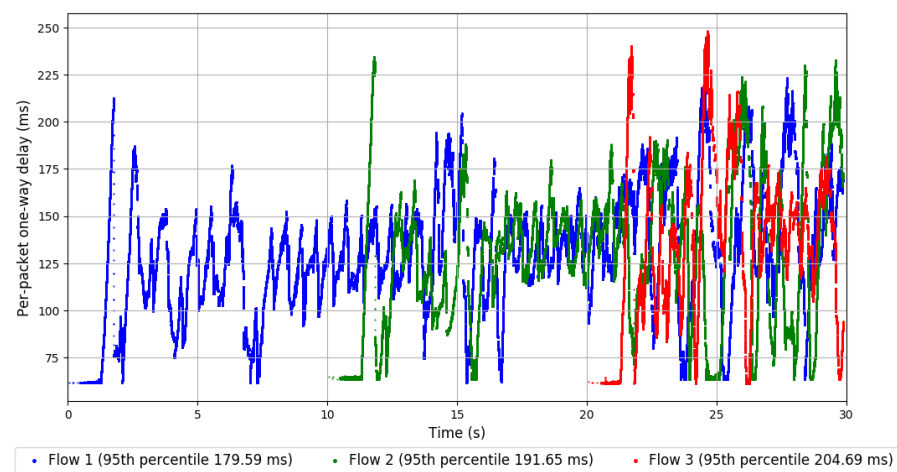
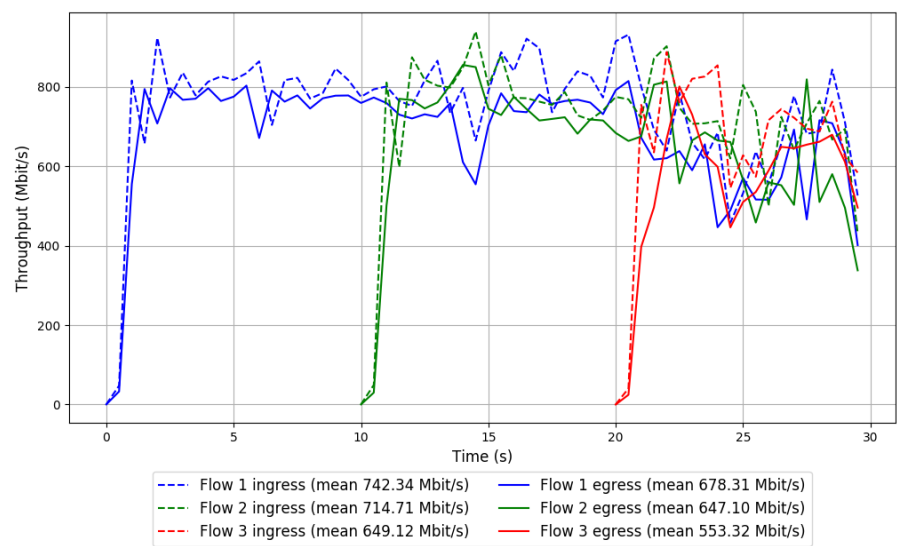
-- Flow 3:

Average throughput: 553.32 Mbit/s

95th percentile per-packet one-way delay: 204.695 ms

Loss rate: 15.85%

Run 7: Report of FillP — Data Link



Run 8: Statistics of FillP

Start at: 2018-04-18 21:28:30

End at: 2018-04-18 21:29:00

Below is generated by plot.py at 2018-04-19 02:31:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 1229.55 Mbit/s

95th percentile per-packet one-way delay: 180.243 ms

Loss rate: 8.05%

-- Flow 1:

Average throughput: 642.23 Mbit/s

95th percentile per-packet one-way delay: 178.205 ms

Loss rate: 6.56%

-- Flow 2:

Average throughput: 757.14 Mbit/s

95th percentile per-packet one-way delay: 175.515 ms

Loss rate: 8.42%

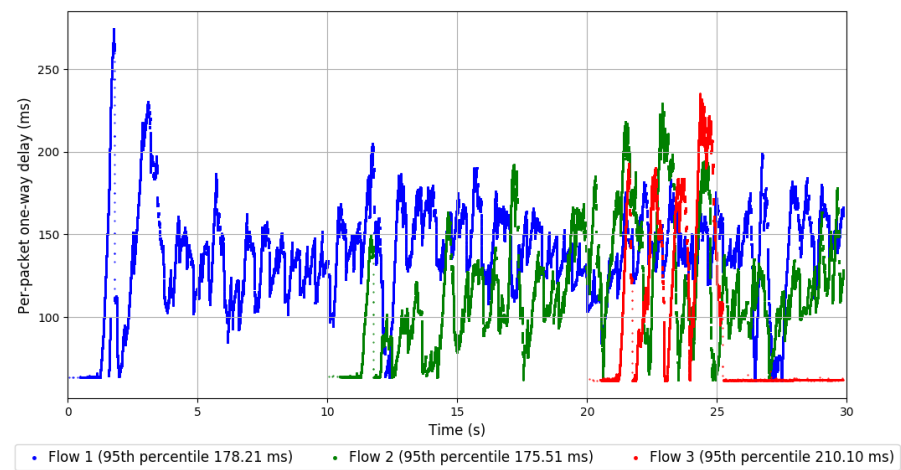
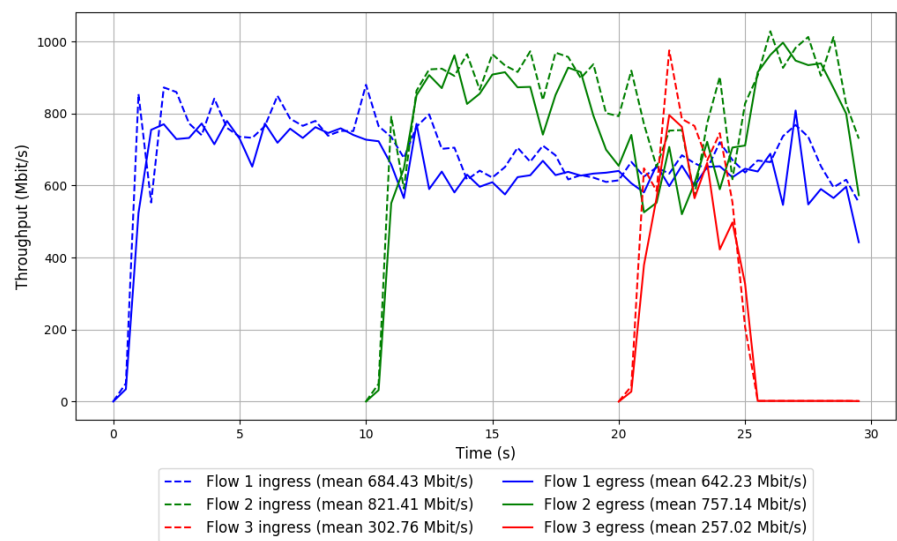
-- Flow 3:

Average throughput: 257.02 Mbit/s

95th percentile per-packet one-way delay: 210.098 ms

Loss rate: 16.19%

Run 8: Report of FillP — Data Link



Run 9: Statistics of FillP

Start at: 2018-04-18 21:44:09

End at: 2018-04-18 21:44:39

Below is generated by plot.py at 2018-04-19 02:53:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 1335.34 Mbit/s

95th percentile per-packet one-way delay: 172.894 ms

Loss rate: 7.55%

-- Flow 1:

Average throughput: 694.12 Mbit/s

95th percentile per-packet one-way delay: 174.767 ms

Loss rate: 7.59%

-- Flow 2:

Average throughput: 672.92 Mbit/s

95th percentile per-packet one-way delay: 166.648 ms

Loss rate: 6.22%

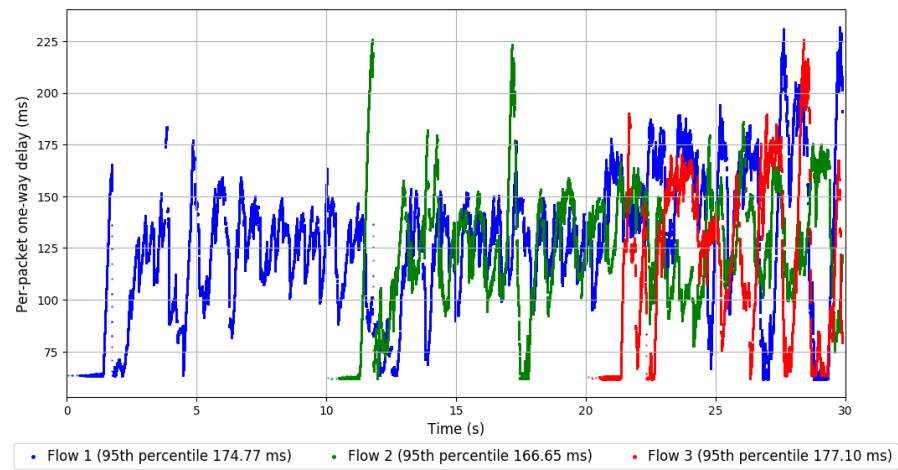
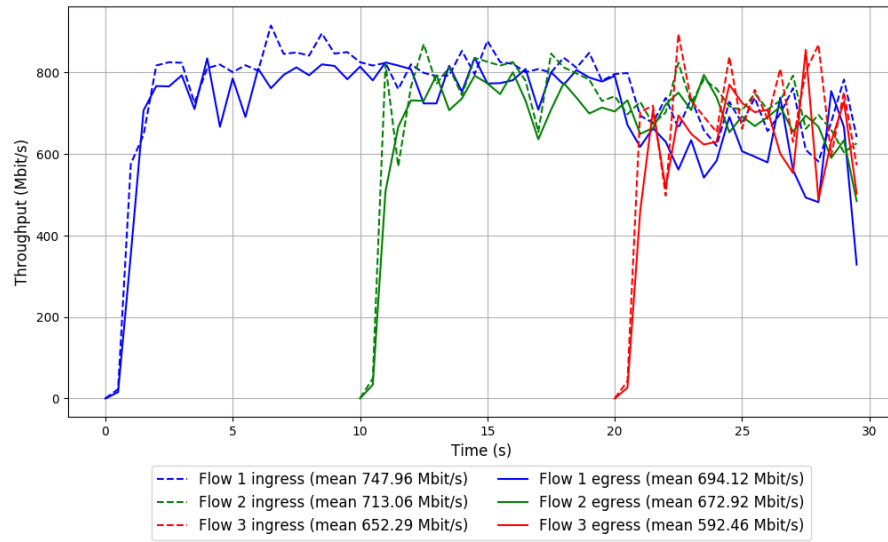
-- Flow 3:

Average throughput: 592.46 Mbit/s

95th percentile per-packet one-way delay: 177.099 ms

Loss rate: 10.34%

Run 9: Report of FillP — Data Link



Run 10: Statistics of FillP

Start at: 2018-04-18 22:00:03

End at: 2018-04-18 22:00:33

Below is generated by plot.py at 2018-04-19 02:53:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 1235.51 Mbit/s

95th percentile per-packet one-way delay: 273.351 ms

Loss rate: 7.79%

-- Flow 1:

Average throughput: 662.49 Mbit/s

95th percentile per-packet one-way delay: 287.087 ms

Loss rate: 8.15%

-- Flow 2:

Average throughput: 593.78 Mbit/s

95th percentile per-packet one-way delay: 192.237 ms

Loss rate: 7.82%

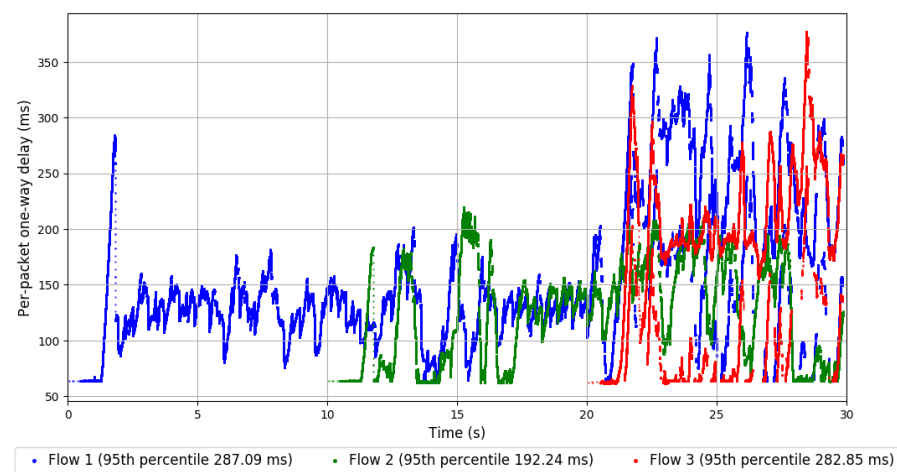
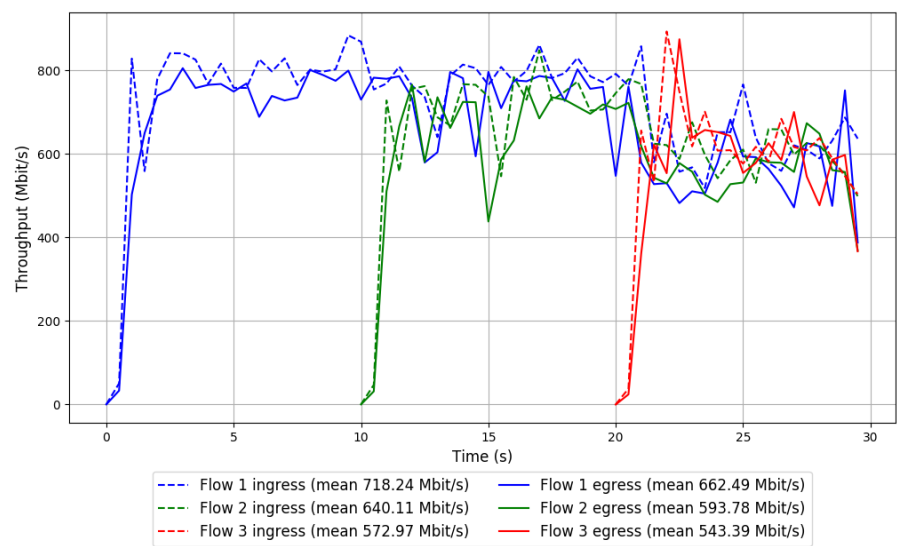
-- Flow 3:

Average throughput: 543.39 Mbit/s

95th percentile per-packet one-way delay: 282.854 ms

Loss rate: 6.35%

Run 10: Report of FillP — Data Link

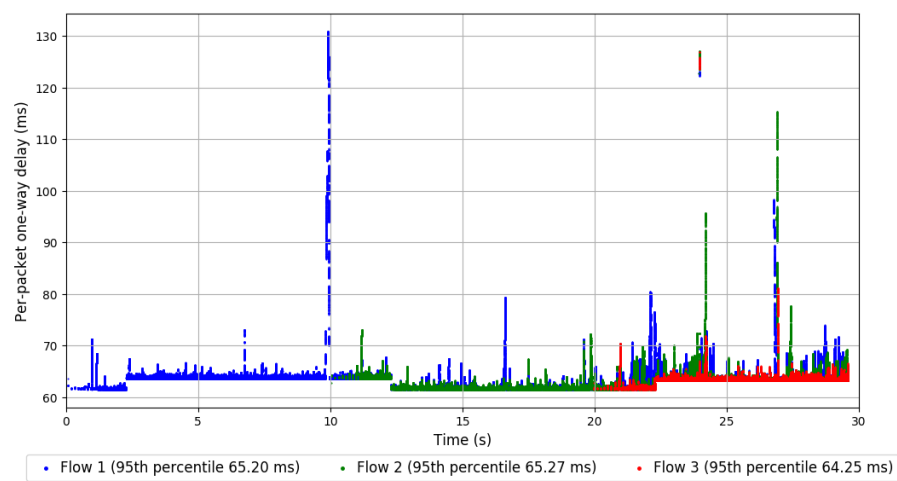
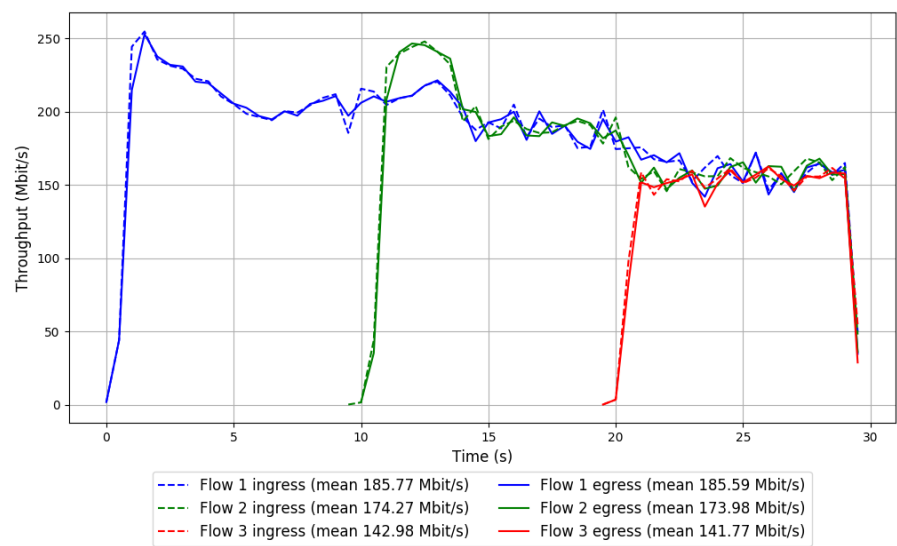


```
Run 1: Statistics of Indigo-1-32

Start at: 2018-04-18 19:44:26
End at: 2018-04-18 19:44:56

# Below is generated by plot.py at 2018-04-19 02:53:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 346.89 Mbit/s
95th percentile per-packet one-way delay: 65.043 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 185.59 Mbit/s
95th percentile per-packet one-way delay: 65.205 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 173.98 Mbit/s
95th percentile per-packet one-way delay: 65.268 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 141.77 Mbit/s
95th percentile per-packet one-way delay: 64.246 ms
Loss rate: 2.11%
```

Run 1: Report of Indigo-1-32 — Data Link

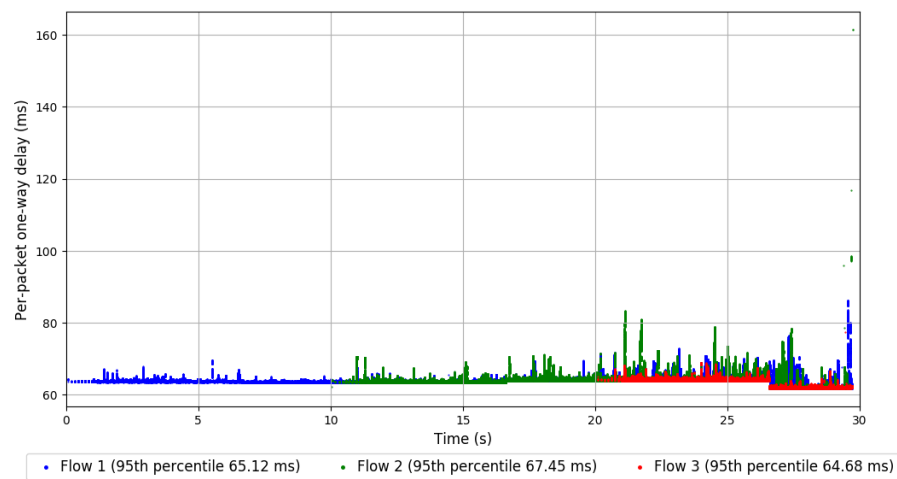
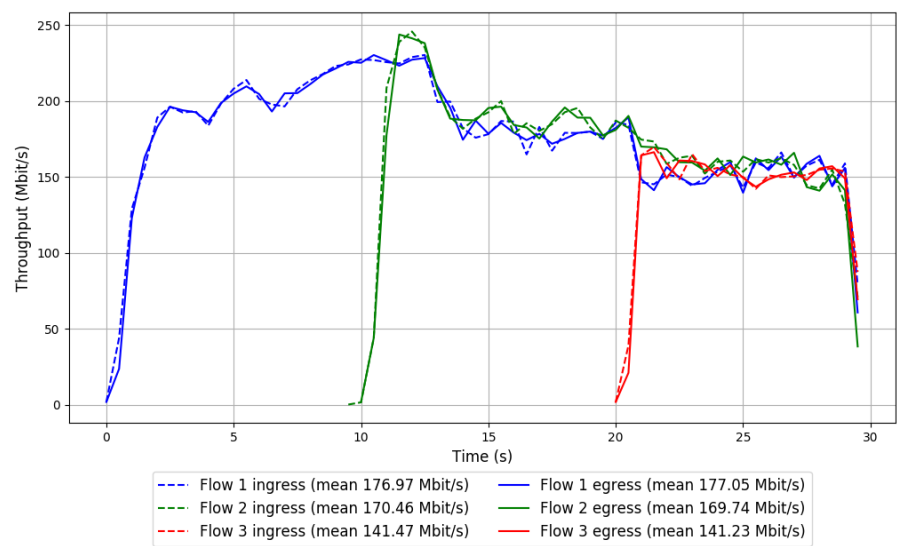


```
Run 2: Statistics of Indigo-1-32

Start at: 2018-04-18 20:00:21
End at: 2018-04-18 20:00:51

# Below is generated by plot.py at 2018-04-19 02:53:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 335.26 Mbit/s
95th percentile per-packet one-way delay: 65.754 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 177.05 Mbit/s
95th percentile per-packet one-way delay: 65.124 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 169.74 Mbit/s
95th percentile per-packet one-way delay: 67.449 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 141.23 Mbit/s
95th percentile per-packet one-way delay: 64.682 ms
Loss rate: 1.45%
```

Run 2: Report of Indigo-1-32 — Data Link



Run 3: Statistics of Indigo-1-32

Start at: 2018-04-18 20:16:23

End at: 2018-04-18 20:16:54

Below is generated by plot.py at 2018-04-19 02:53:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 354.30 Mbit/s

95th percentile per-packet one-way delay: 65.470 ms

Loss rate: 0.53%

-- Flow 1:

Average throughput: 194.60 Mbit/s

95th percentile per-packet one-way delay: 65.570 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 171.07 Mbit/s

95th percentile per-packet one-way delay: 65.823 ms

Loss rate: 0.47%

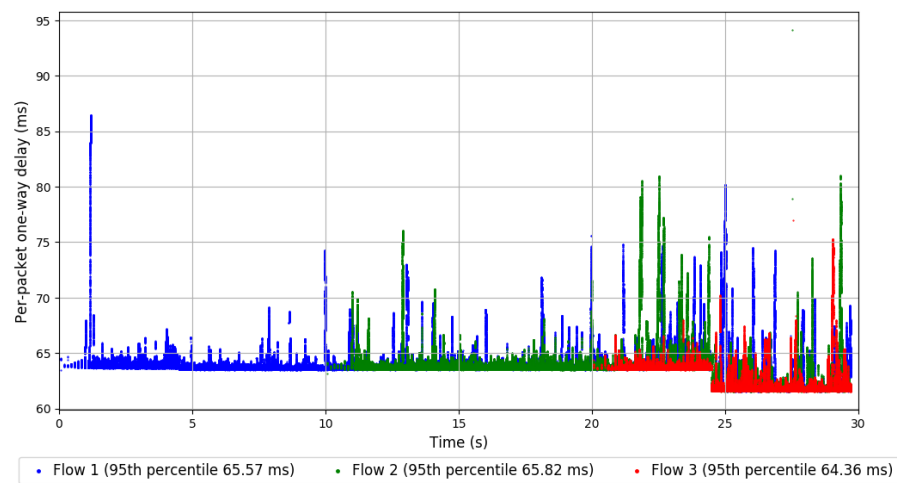
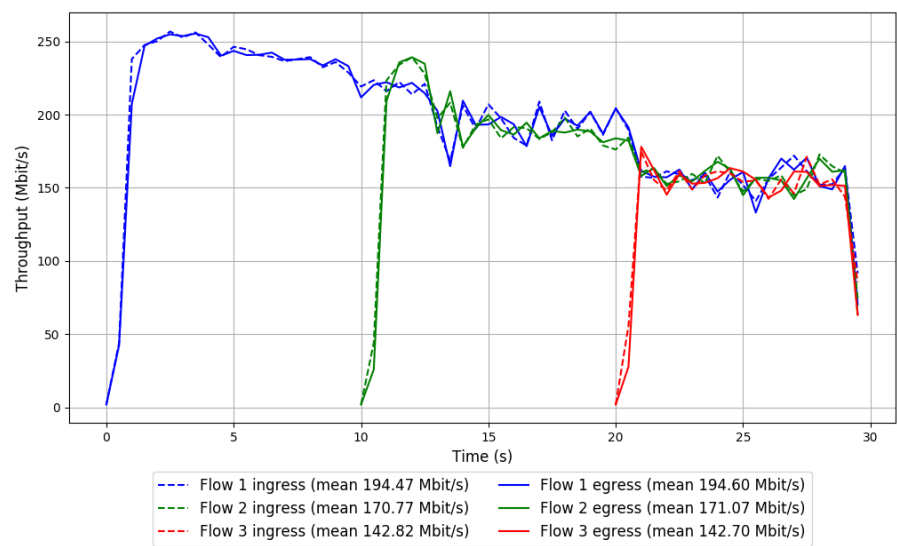
-- Flow 3:

Average throughput: 142.70 Mbit/s

95th percentile per-packet one-way delay: 64.356 ms

Loss rate: 1.40%

Run 3: Report of Indigo-1-32 — Data Link



Run 4: Statistics of Indigo-1-32

Start at: 2018-04-18 20:32:19

End at: 2018-04-18 20:32:49

Below is generated by plot.py at 2018-04-19 02:53:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 334.48 Mbit/s

95th percentile per-packet one-way delay: 65.145 ms

Loss rate: 0.53%

-- Flow 1:

Average throughput: 188.06 Mbit/s

95th percentile per-packet one-way delay: 65.209 ms

Loss rate: 0.28%

-- Flow 2:

Average throughput: 153.47 Mbit/s

95th percentile per-packet one-way delay: 65.519 ms

Loss rate: 0.58%

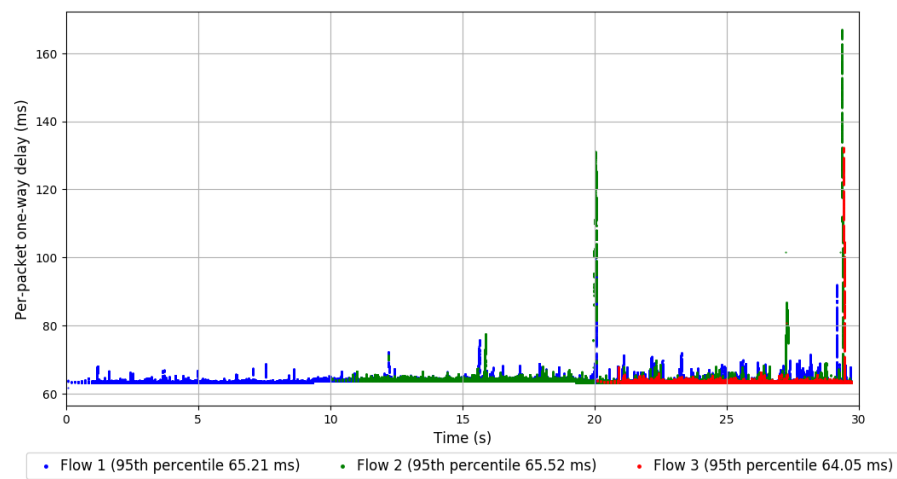
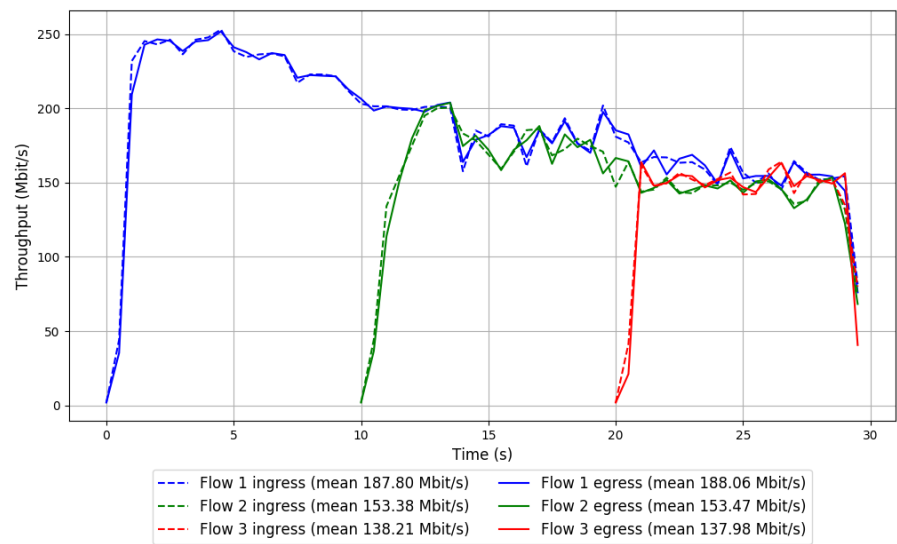
-- Flow 3:

Average throughput: 137.98 Mbit/s

95th percentile per-packet one-way delay: 64.052 ms

Loss rate: 1.46%

Run 4: Report of Indigo-1-32 — Data Link



Run 5: Statistics of Indigo-1-32

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

End at: 2018-04-18 20:48:41

Below is generated by plot.py at 2018-04-19 02:53:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 338.38 Mbit/s

95th percentile per-packet one-way delay: 64.542 ms

Loss rate: 0.54%

-- Flow 1:

Average throughput: 182.34 Mbit/s

95th percentile per-packet one-way delay: 64.245 ms

Loss rate: 0.33%

-- Flow 2:

Average throughput: 165.11 Mbit/s

95th percentile per-packet one-way delay: 65.538 ms

Loss rate: 0.53%

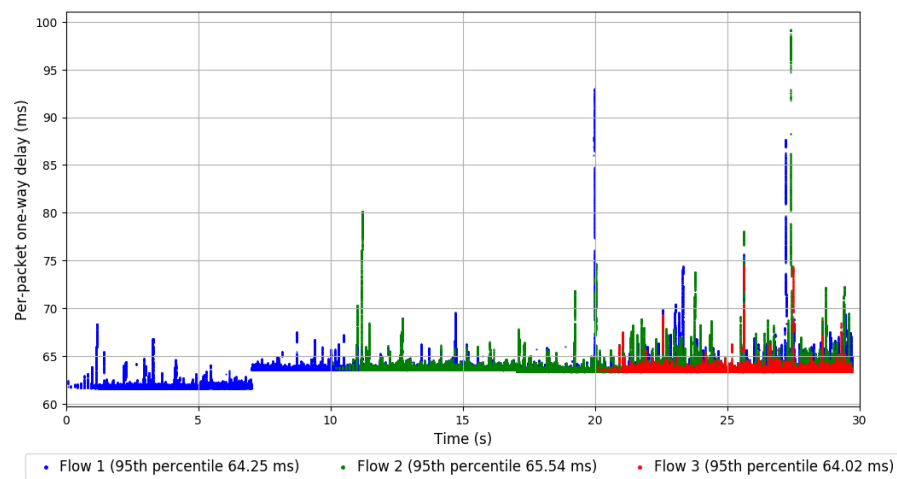
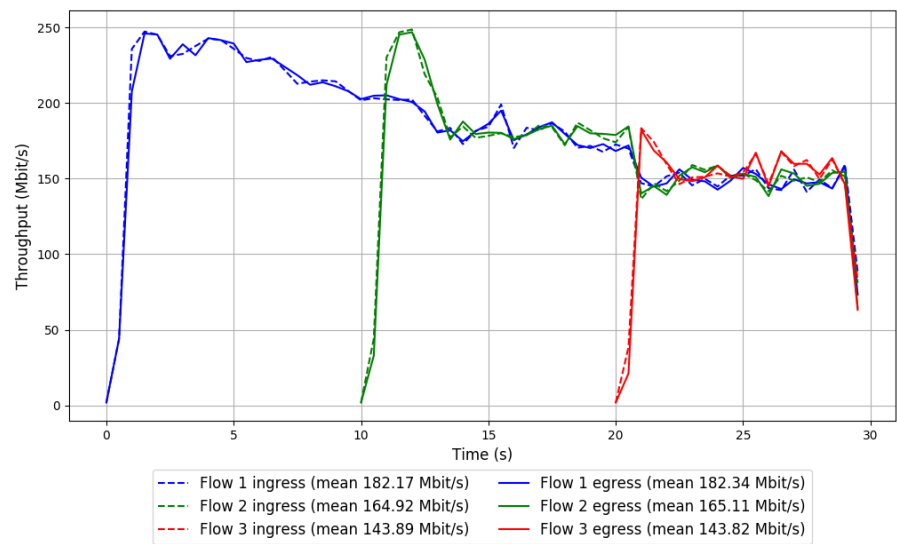
-- Flow 3:

Average throughput: 143.82 Mbit/s

95th percentile per-packet one-way delay: 64.023 ms

Loss rate: 1.36%

Run 5: Report of Indigo-1-32 — Data Link



Run 6: Statistics of Indigo-1-32

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

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

Below is generated by plot.py at 2018-04-19 02:53:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 306.24 Mbit/s

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

Loss rate: 0.61%

-- Flow 1:

Average throughput: 164.71 Mbit/s

95th percentile per-packet one-way delay: 64.467 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 149.55 Mbit/s

95th percentile per-packet one-way delay: 65.183 ms

Loss rate: 0.66%

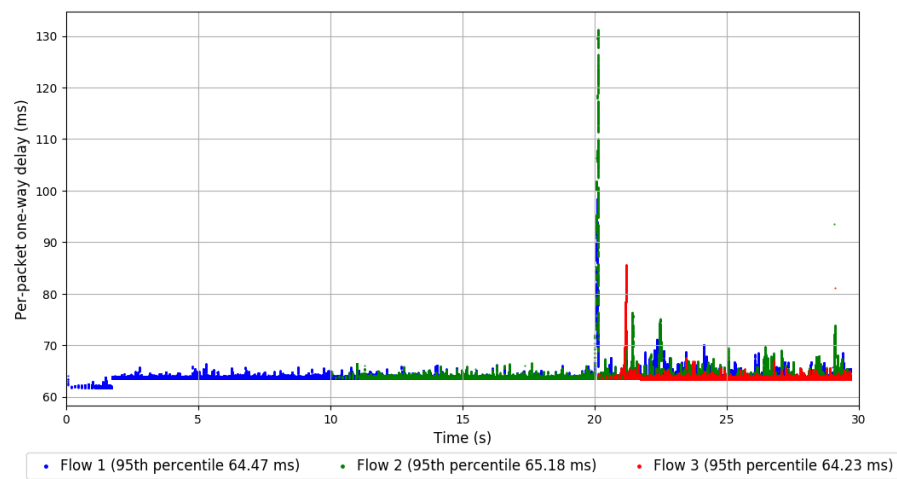
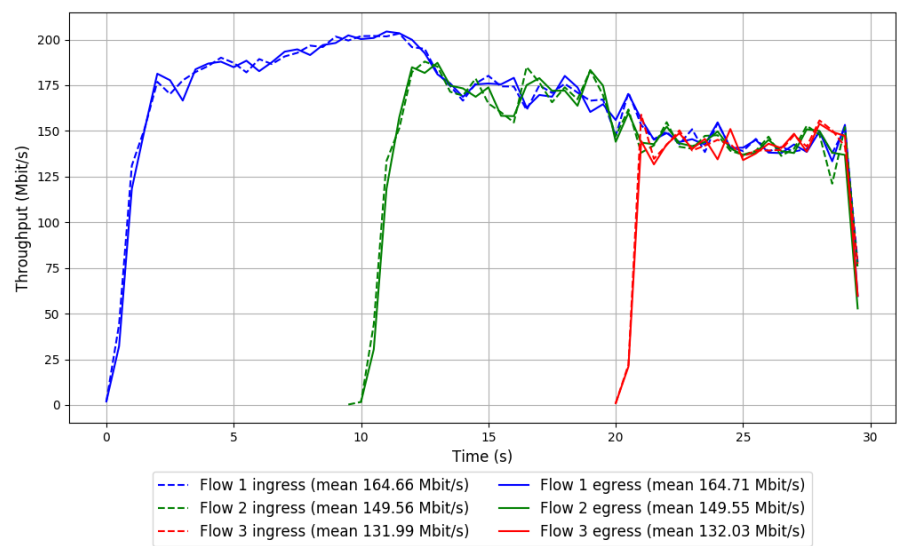
-- Flow 3:

Average throughput: 132.03 Mbit/s

95th percentile per-packet one-way delay: 64.232 ms

Loss rate: 1.29%

Run 6: Report of Indigo-1-32 — Data Link



Run 7: Statistics of Indigo-1-32

Start at: 2018-04-18 21:19:58

End at: 2018-04-18 21:20:28

Below is generated by plot.py at 2018-04-19 02:53:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 339.69 Mbit/s

95th percentile per-packet one-way delay: 65.453 ms

Loss rate: 0.57%

-- Flow 1:

Average throughput: 184.59 Mbit/s

95th percentile per-packet one-way delay: 65.959 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 165.99 Mbit/s

95th percentile per-packet one-way delay: 65.359 ms

Loss rate: 0.54%

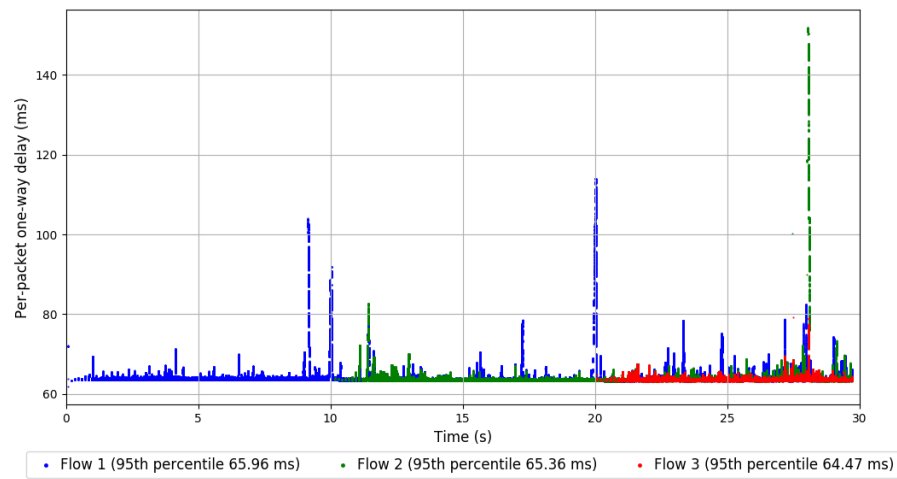
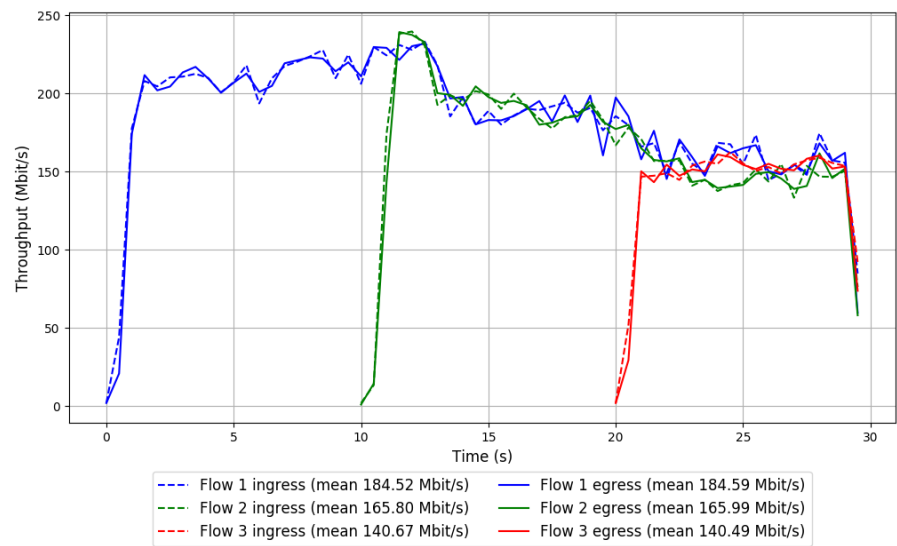
-- Flow 3:

Average throughput: 140.49 Mbit/s

95th percentile per-packet one-way delay: 64.465 ms

Loss rate: 1.43%

Run 7: Report of Indigo-1-32 — Data Link



Run 8: Statistics of Indigo-1-32

Start at: 2018-04-18 21:35:42

End at: 2018-04-18 21:36:12

Below is generated by plot.py at 2018-04-19 02:53:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 335.06 Mbit/s

95th percentile per-packet one-way delay: 66.789 ms

Loss rate: 0.64%

-- Flow 1:

Average throughput: 184.26 Mbit/s

95th percentile per-packet one-way delay: 65.914 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 158.52 Mbit/s

95th percentile per-packet one-way delay: 69.962 ms

Loss rate: 0.62%

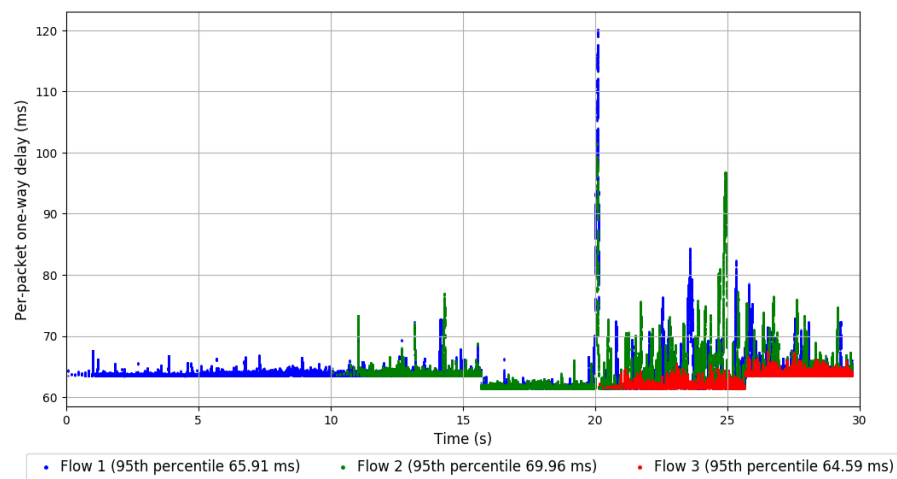
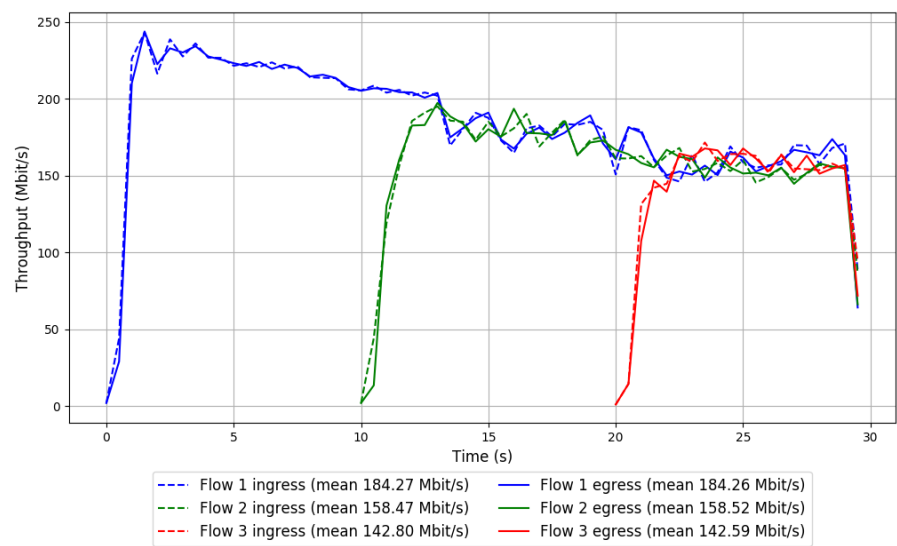
-- Flow 3:

Average throughput: 142.59 Mbit/s

95th percentile per-packet one-way delay: 64.590 ms

Loss rate: 1.46%

Run 8: Report of Indigo-1-32 — Data Link



Run 9: Statistics of Indigo-1-32

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

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

Below is generated by plot.py at 2018-04-19 02:53:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 336.13 Mbit/s

95th percentile per-packet one-way delay: 64.575 ms

Loss rate: 0.53%

-- Flow 1:

Average throughput: 181.66 Mbit/s

95th percentile per-packet one-way delay: 64.485 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 167.44 Mbit/s

95th percentile per-packet one-way delay: 65.016 ms

Loss rate: 0.61%

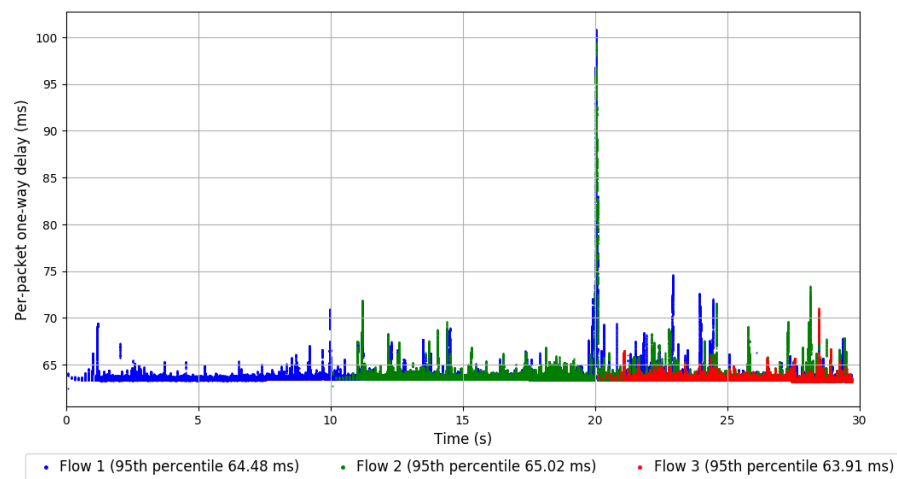
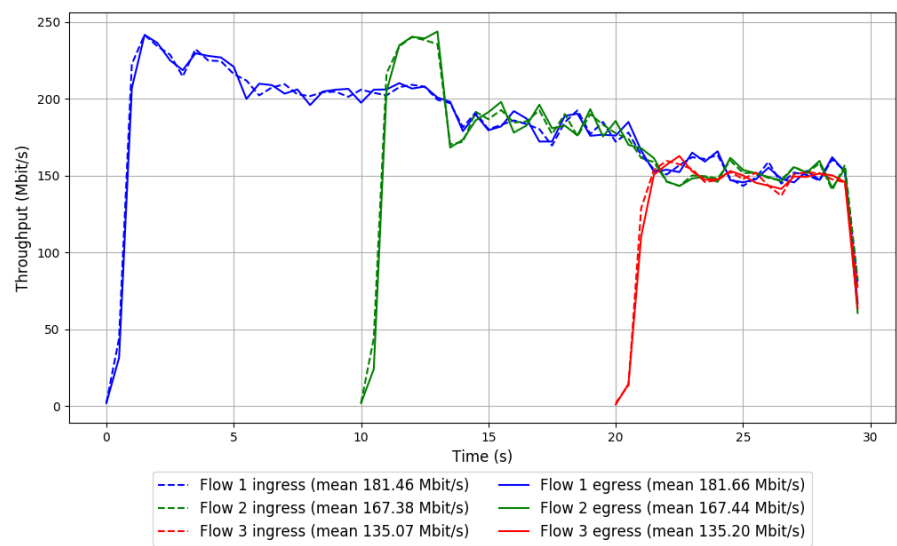
-- Flow 3:

Average throughput: 135.20 Mbit/s

95th percentile per-packet one-way delay: 63.913 ms

Loss rate: 1.22%

Run 9: Report of Indigo-1-32 — Data Link



Run 10: Statistics of Indigo-1-32

Start at: 2018-04-18 22:07:13

End at: 2018-04-18 22:07:43

Below is generated by plot.py at 2018-04-19 02:53:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 357.48 Mbit/s

95th percentile per-packet one-way delay: 65.067 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 195.01 Mbit/s

95th percentile per-packet one-way delay: 64.403 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 176.20 Mbit/s

95th percentile per-packet one-way delay: 66.696 ms

Loss rate: 0.54%

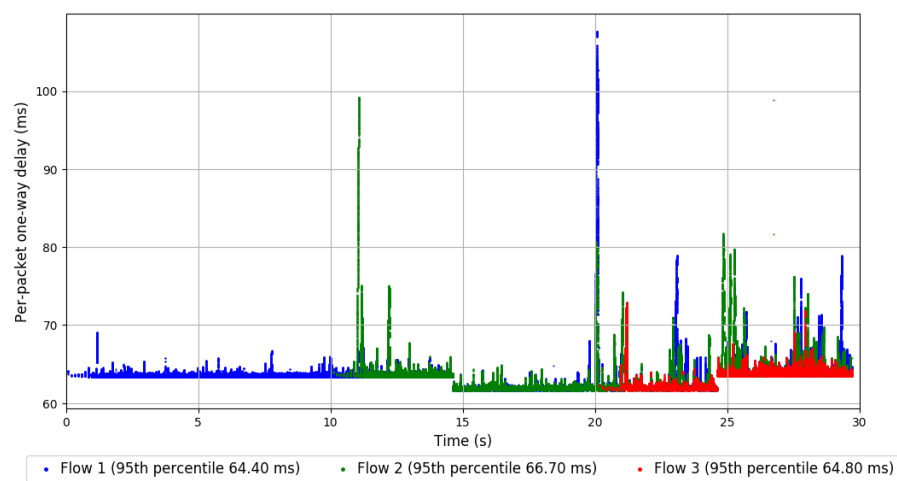
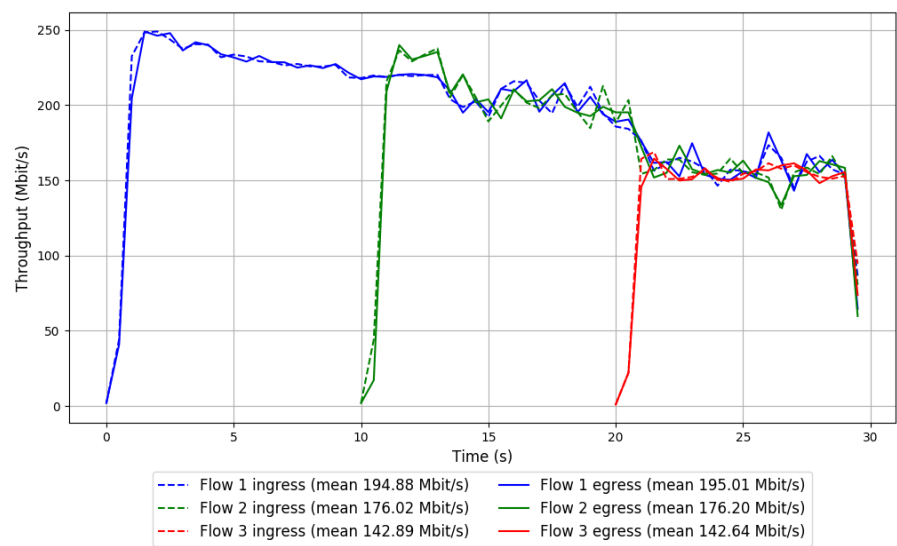
-- Flow 3:

Average throughput: 142.64 Mbit/s

95th percentile per-packet one-way delay: 64.799 ms

Loss rate: 1.48%

Run 10: Report of Indigo-1-32 — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2018-04-18 19:48:36

End at: 2018-04-18 19:49:06

Below is generated by plot.py at 2018-04-19 02:53:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 370.53 Mbit/s

95th percentile per-packet one-way delay: 64.349 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 228.50 Mbit/s

95th percentile per-packet one-way delay: 63.984 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 200.65 Mbit/s

95th percentile per-packet one-way delay: 65.739 ms

Loss rate: 0.66%

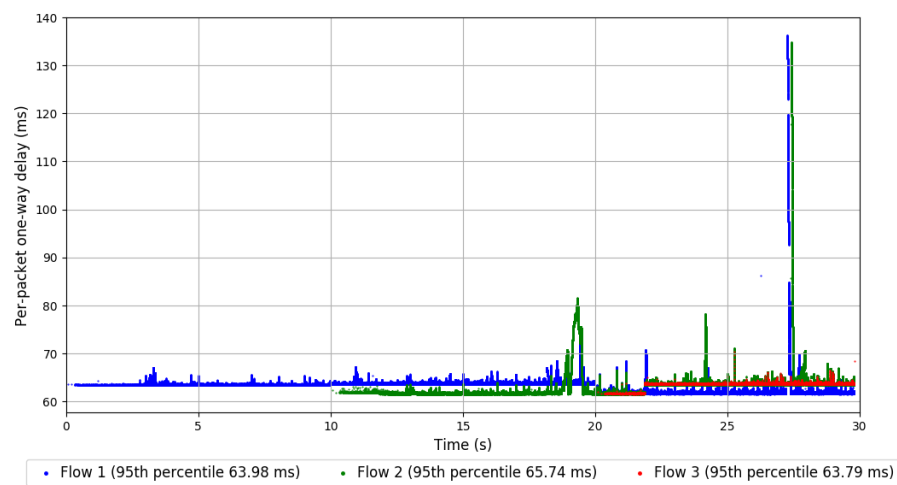
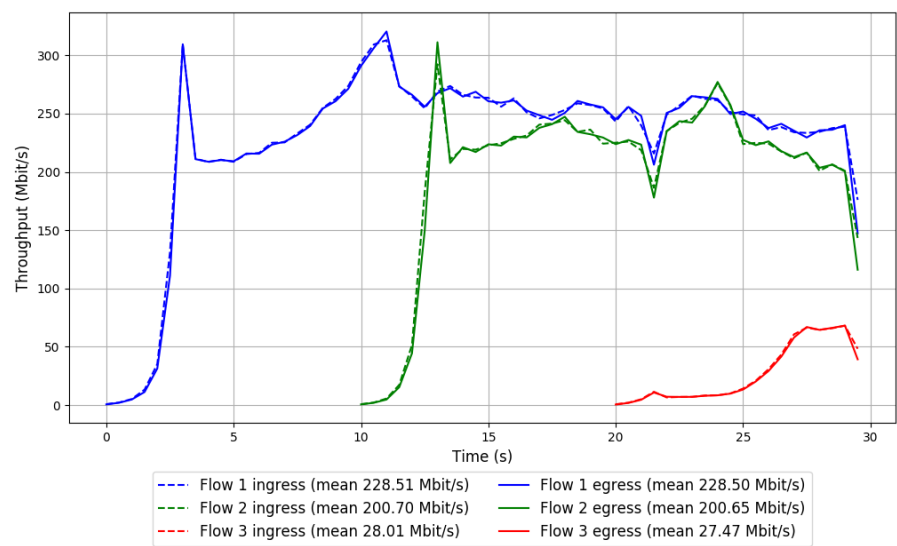
-- Flow 3:

Average throughput: 27.47 Mbit/s

95th percentile per-packet one-way delay: 63.787 ms

Loss rate: 3.11%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

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

End at: 2018-04-18 20:05:09

Below is generated by plot.py at 2018-04-19 02:53:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 412.82 Mbit/s

95th percentile per-packet one-way delay: 65.869 ms

Loss rate: 0.61%

-- Flow 1:

Average throughput: 227.43 Mbit/s

95th percentile per-packet one-way delay: 65.614 ms

Loss rate: 0.33%

-- Flow 2:

Average throughput: 201.50 Mbit/s

95th percentile per-packet one-way delay: 65.168 ms

Loss rate: 0.63%

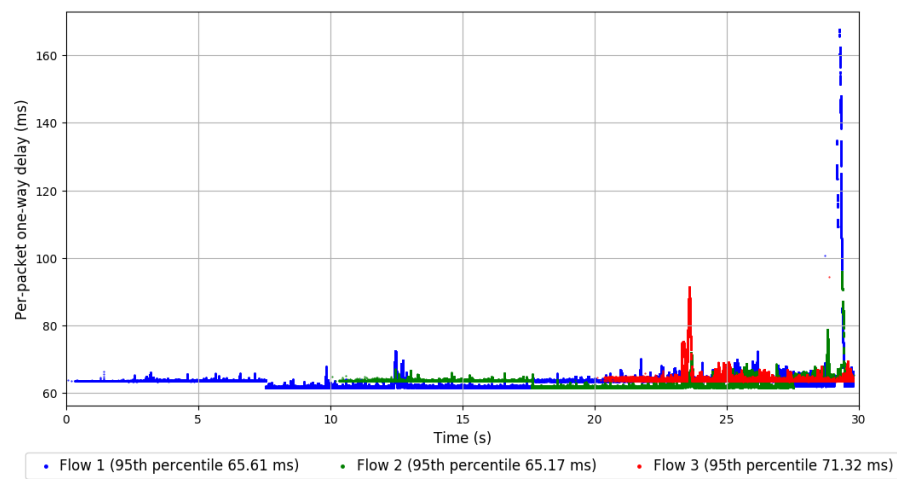
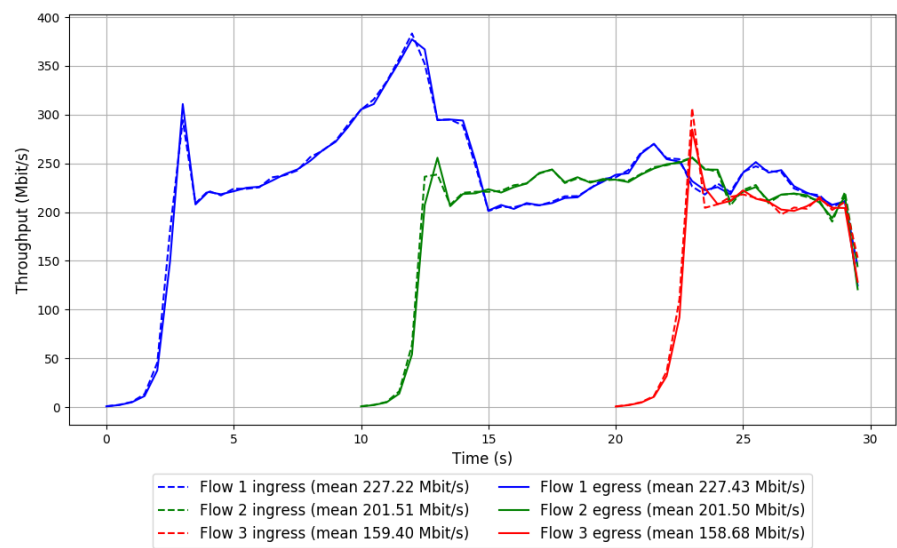
-- Flow 3:

Average throughput: 158.68 Mbit/s

95th percentile per-packet one-way delay: 71.321 ms

Loss rate: 1.74%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

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

End at: 2018-04-18 20:21:02

Below is generated by plot.py at 2018-04-19 02:53:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 453.88 Mbit/s

95th percentile per-packet one-way delay: 69.654 ms

Loss rate: 0.63%

-- Flow 1:

Average throughput: 277.78 Mbit/s

95th percentile per-packet one-way delay: 74.225 ms

Loss rate: 0.41%

-- Flow 2:

Average throughput: 193.25 Mbit/s

95th percentile per-packet one-way delay: 65.479 ms

Loss rate: 0.66%

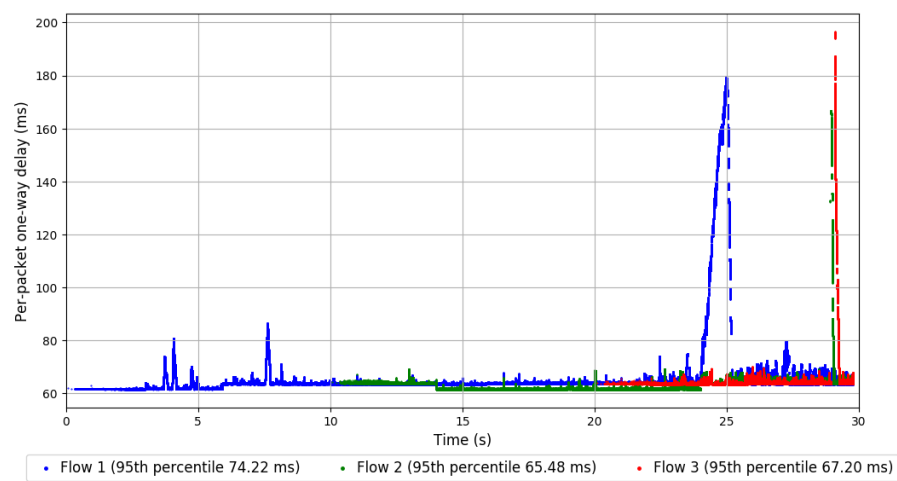
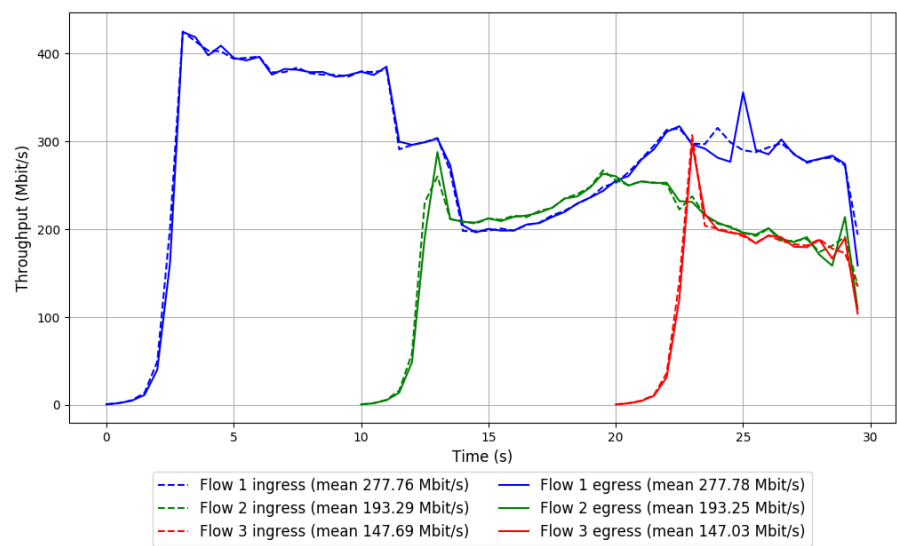
-- Flow 3:

Average throughput: 147.03 Mbit/s

95th percentile per-packet one-way delay: 67.196 ms

Loss rate: 1.74%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2018-04-18 20:36:19

End at: 2018-04-18 20:36:49

Below is generated by plot.py at 2018-04-19 02:53:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 428.99 Mbit/s

95th percentile per-packet one-way delay: 68.069 ms

Loss rate: 0.65%

-- Flow 1:

Average throughput: 233.95 Mbit/s

95th percentile per-packet one-way delay: 65.501 ms

Loss rate: 0.45%

-- Flow 2:

Average throughput: 249.95 Mbit/s

95th percentile per-packet one-way delay: 79.433 ms

Loss rate: 0.70%

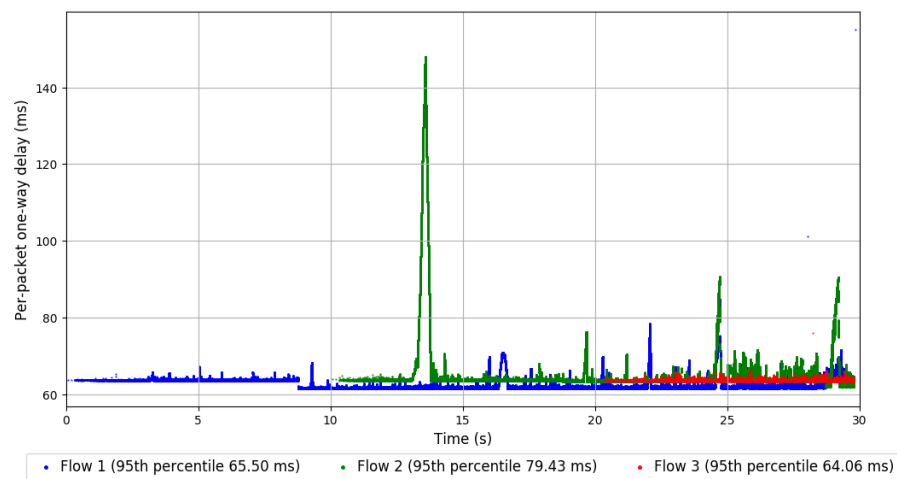
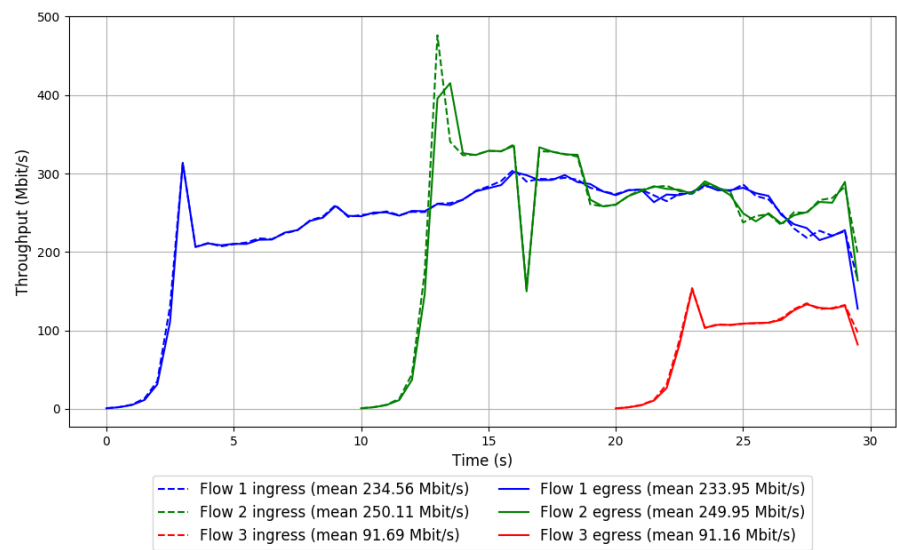
-- Flow 3:

Average throughput: 91.16 Mbit/s

95th percentile per-packet one-way delay: 64.061 ms

Loss rate: 1.86%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2018-04-18 20:52:19

End at: 2018-04-18 20:52:49

Below is generated by plot.py at 2018-04-19 02:53:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 476.37 Mbit/s

95th percentile per-packet one-way delay: 105.108 ms

Loss rate: 0.65%

-- Flow 1:

Average throughput: 275.92 Mbit/s

95th percentile per-packet one-way delay: 87.688 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 225.08 Mbit/s

95th percentile per-packet one-way delay: 135.503 ms

Loss rate: 0.83%

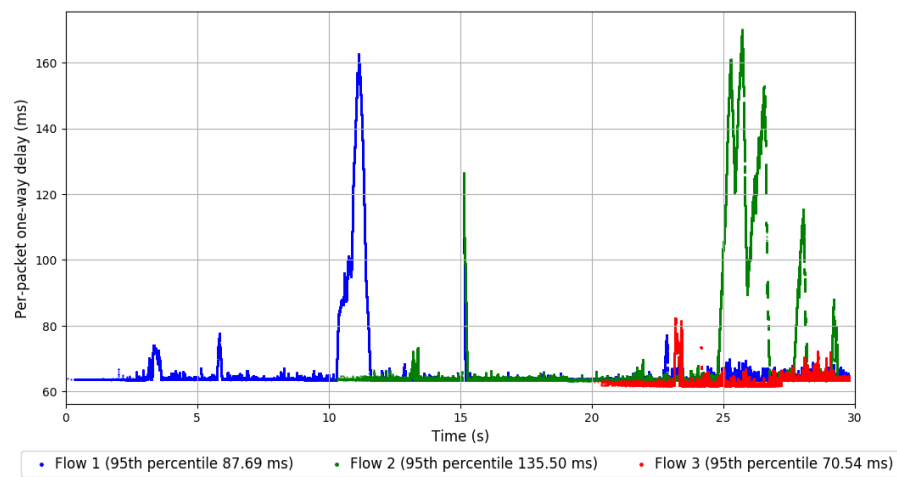
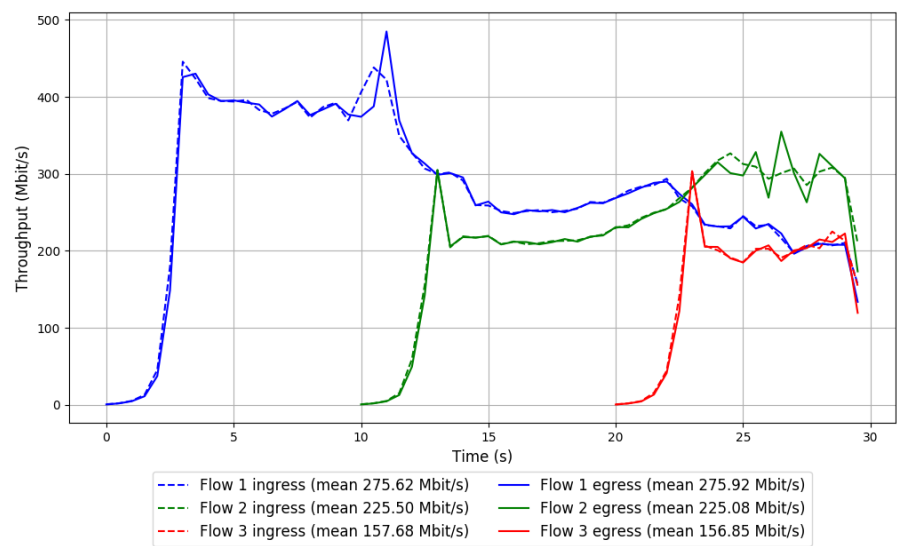
-- Flow 3:

Average throughput: 156.85 Mbit/s

95th percentile per-packet one-way delay: 70.536 ms

Loss rate: 1.82%

Run 5: Report of PCC-Vivace — Data Link



Run 6: Statistics of PCC-Vivace

Start at: 2018-04-18 21:08:11

End at: 2018-04-18 21:08:41

Below is generated by plot.py at 2018-04-19 02:53:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 435.28 Mbit/s

95th percentile per-packet one-way delay: 65.936 ms

Loss rate: 0.73%

-- Flow 1:

Average throughput: 225.16 Mbit/s

95th percentile per-packet one-way delay: 64.724 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 233.69 Mbit/s

95th percentile per-packet one-way delay: 69.572 ms

Loss rate: 0.77%

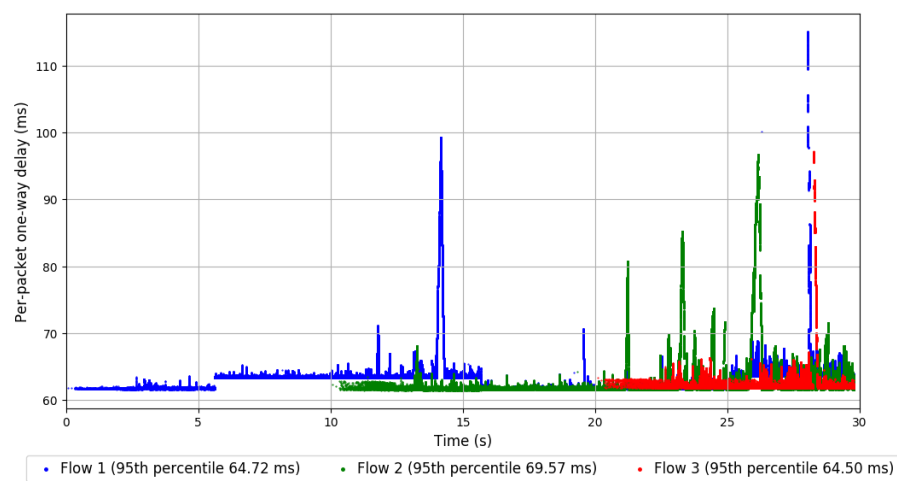
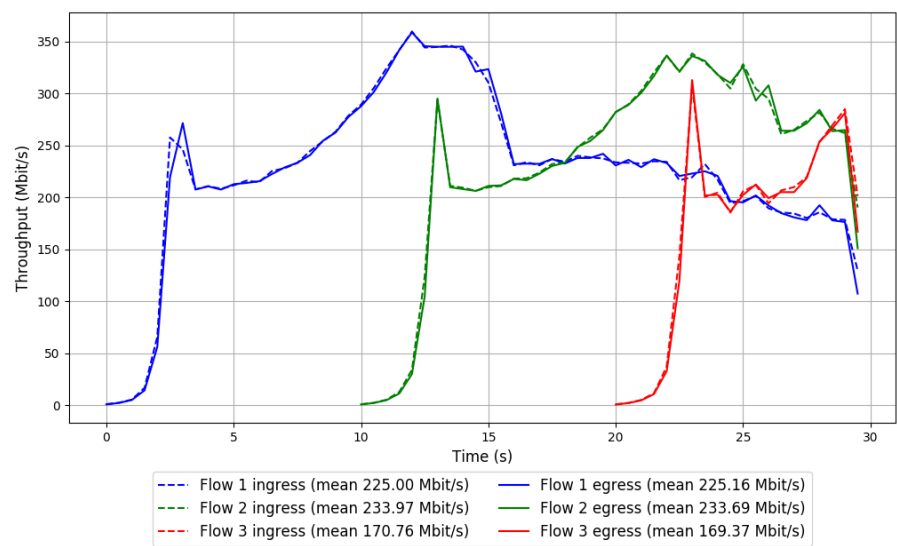
-- Flow 3:

Average throughput: 169.37 Mbit/s

95th percentile per-packet one-way delay: 64.502 ms

Loss rate: 2.10%

Run 6: Report of PCC-Vivace — Data Link



Run 7: Statistics of PCC-Vivace

Start at: 2018-04-18 21:23:55

End at: 2018-04-18 21:24:25

Below is generated by plot.py at 2018-04-19 02:53:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 407.52 Mbit/s

95th percentile per-packet one-way delay: 65.564 ms

Loss rate: 0.69%

-- Flow 1:

Average throughput: 233.75 Mbit/s

95th percentile per-packet one-way delay: 65.280 ms

Loss rate: 0.59%

-- Flow 2:

Average throughput: 216.36 Mbit/s

95th percentile per-packet one-way delay: 66.245 ms

Loss rate: 0.65%

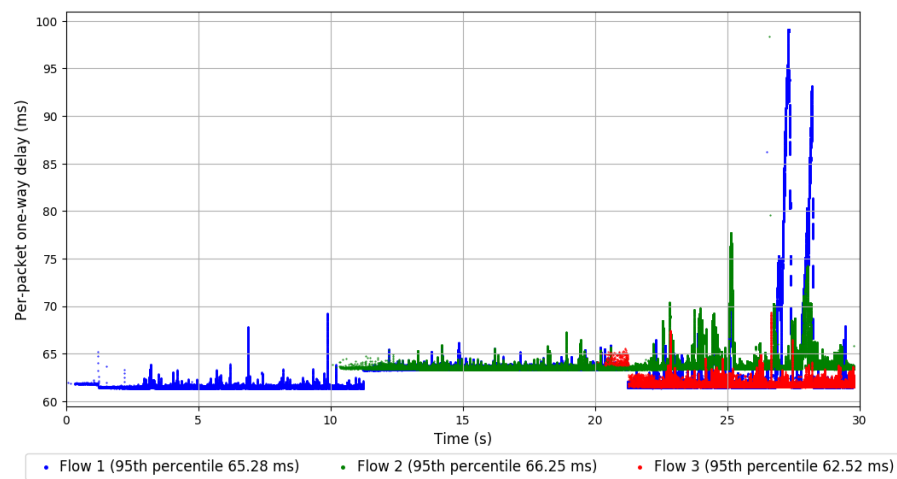
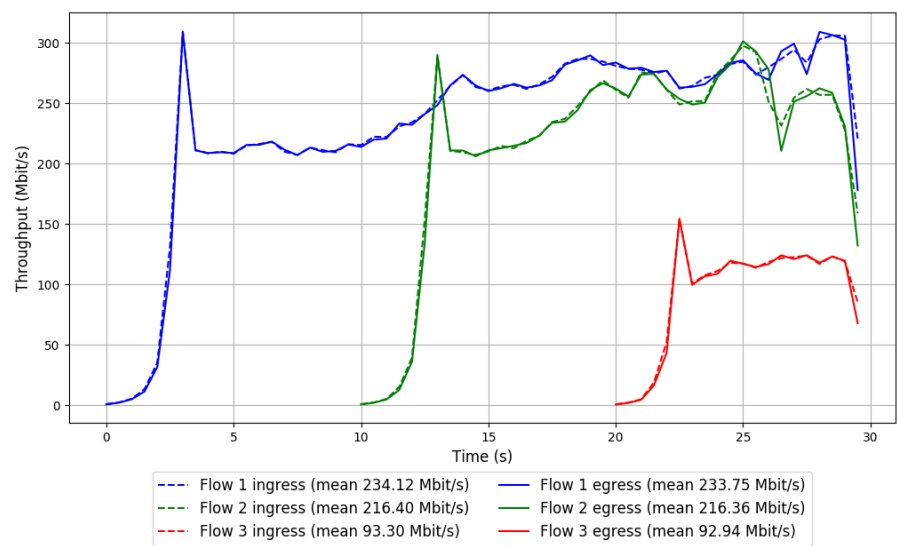
-- Flow 3:

Average throughput: 92.94 Mbit/s

95th percentile per-packet one-way delay: 62.524 ms

Loss rate: 1.68%

Run 7: Report of PCC-Vivace — Data Link



Run 8: Statistics of PCC-Vivace

Start at: 2018-04-18 21:39:30

End at: 2018-04-18 21:40:00

Below is generated by plot.py at 2018-04-19 02:53:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 452.38 Mbit/s

95th percentile per-packet one-way delay: 83.469 ms

Loss rate: 0.61%

-- Flow 1:

Average throughput: 253.86 Mbit/s

95th percentile per-packet one-way delay: 96.244 ms

Loss rate: 0.23%

-- Flow 2:

Average throughput: 214.64 Mbit/s

95th percentile per-packet one-way delay: 67.603 ms

Loss rate: 0.82%

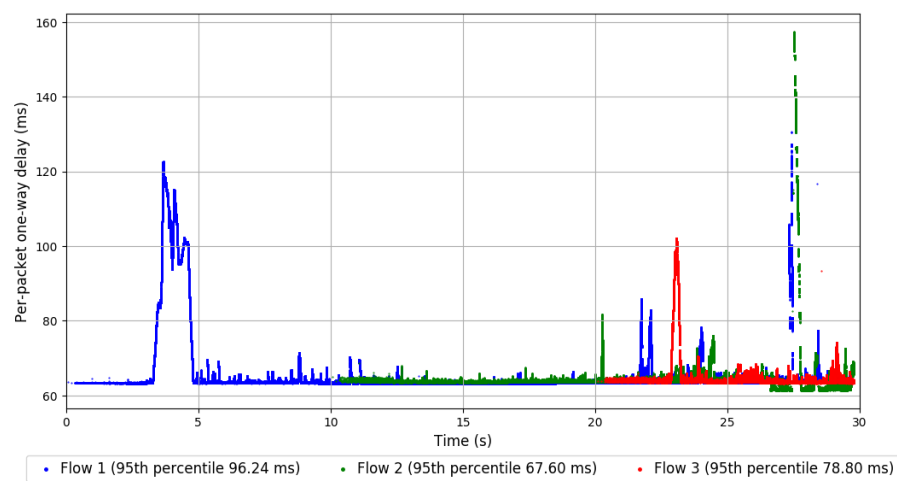
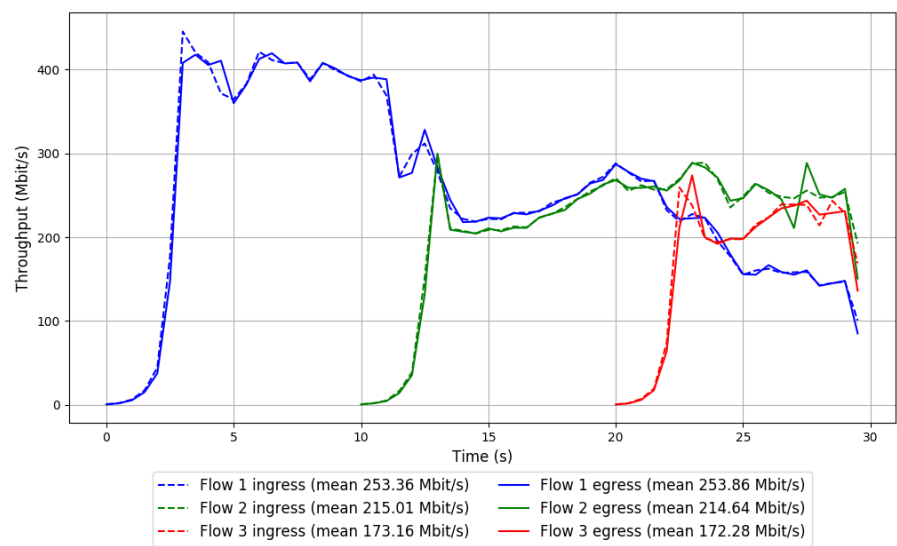
-- Flow 3:

Average throughput: 172.28 Mbit/s

95th percentile per-packet one-way delay: 78.801 ms

Loss rate: 1.81%

Run 8: Report of PCC-Vivace — Data Link



Run 9: Statistics of PCC-Vivace

Start at: 2018-04-18 21:55:30

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

Below is generated by plot.py at 2018-04-19 02:54:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 415.90 Mbit/s

95th percentile per-packet one-way delay: 88.957 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 250.11 Mbit/s

95th percentile per-packet one-way delay: 96.694 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 205.93 Mbit/s

95th percentile per-packet one-way delay: 80.124 ms

Loss rate: 0.53%

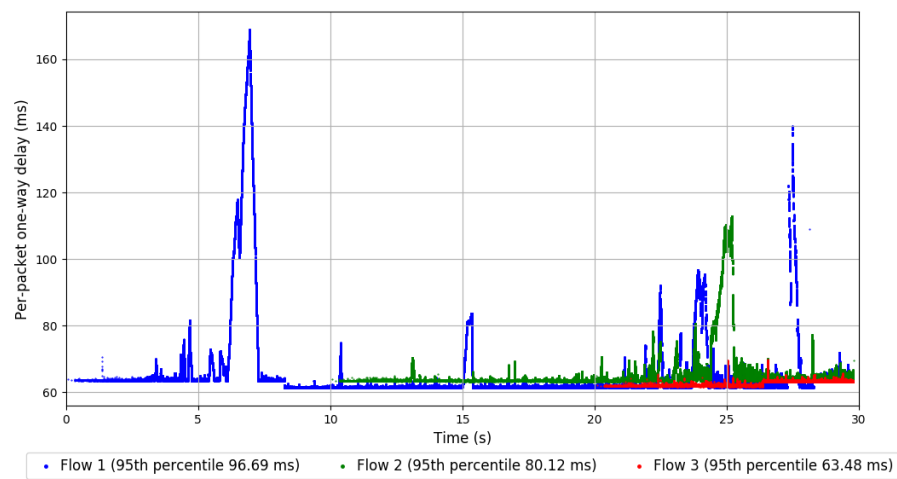
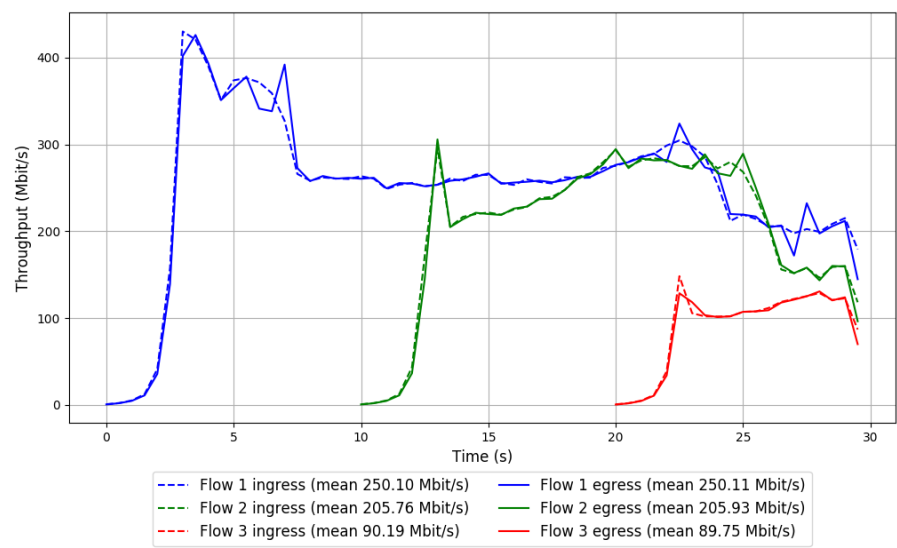
-- Flow 3:

Average throughput: 89.75 Mbit/s

95th percentile per-packet one-way delay: 63.475 ms

Loss rate: 1.77%

Run 9: Report of PCC-Vivace — Data Link



Run 10: Statistics of PCC-Vivace

Start at: 2018-04-18 22:11:23

End at: 2018-04-18 22:11:53

Below is generated by plot.py at 2018-04-19 02:54:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 430.60 Mbit/s

95th percentile per-packet one-way delay: 66.906 ms

Loss rate: 0.67%

-- Flow 1:

Average throughput: 247.45 Mbit/s

95th percentile per-packet one-way delay: 68.640 ms

Loss rate: 0.53%

-- Flow 2:

Average throughput: 194.57 Mbit/s

95th percentile per-packet one-way delay: 64.594 ms

Loss rate: 0.46%

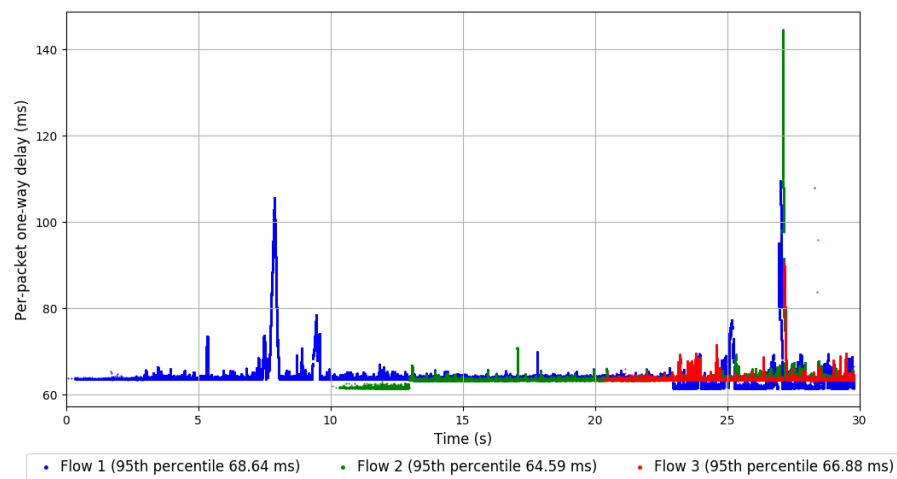
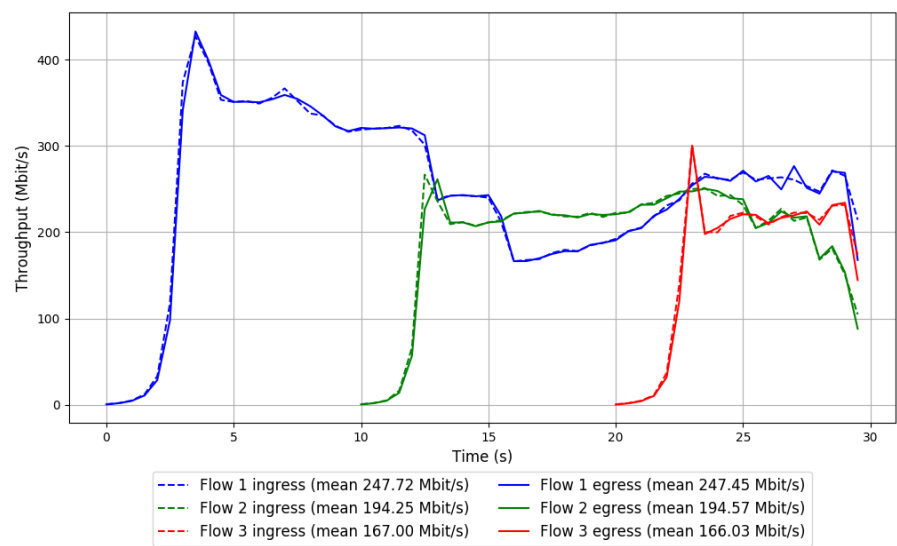
-- Flow 3:

Average throughput: 166.03 Mbit/s

95th percentile per-packet one-way delay: 66.883 ms

Loss rate: 1.79%

Run 10: Report of PCC-Vivace — Data Link



Run 1: Statistics of PCC-Expr

Start at: 2018-04-18 19:50:30

End at: 2018-04-18 19:51:00

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 20:06:35

End at: 2018-04-18 20:07:05

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 20:22:31

End at: 2018-04-18 20:23:01

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 20:38:17

End at: 2018-04-18 20:38:47

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 20:54:20

End at: 2018-04-18 20:54:50

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 21:10:09

End at: 2018-04-18 21:10:39

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 21:25:51

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

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 21:41:29

End at: 2018-04-18 21:41:59

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 21:57:27

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

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 22:13:21

End at: 2018-04-18 22:13:51

Run 10: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing