

## Pantheon Report

Generated at 2018-02-21 12:05:07 (UTC).

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

Repeated the test of 17 congestion control schemes 10 times.

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

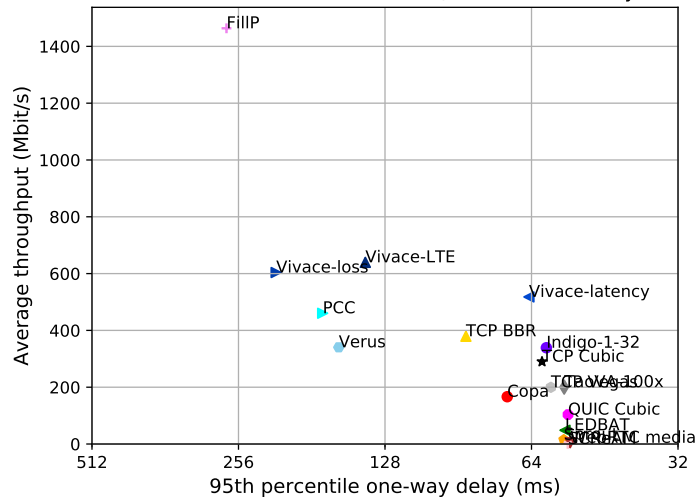
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

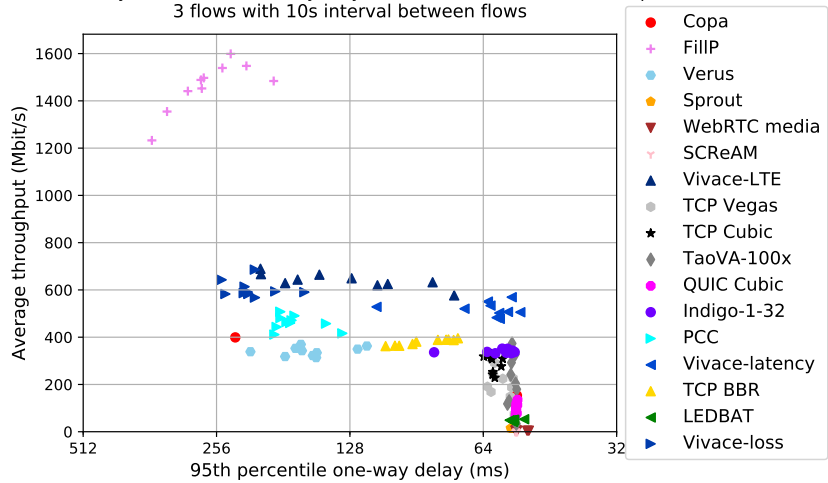
Git summary:

```
branch: master @ f12c42a2c63fdd9a862eefa0468859bf379b6623
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/fillp @ 828bbf95fd4941149b5cec90f281d1c69ae1a5c6
third_party/genericCC @ 9249eea3238475c4d8cca1443d28df70bff6c4a2
third_party/indigo @ a9b2060d39e4da2e8987e893e3eca2a6c7cd0ab9
third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db7484501f82ce8b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b540c0fd3505939528e2a5f
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
  M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcf993
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
third_party/proto-quirk @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaeeb30b267cde681
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 @ a488197ddd041ace68a42849b2540ad834825f42
```

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



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



| scheme         | # runs | mean avg tput (Mbit/s) |        |        | mean 95th-%ile delay (ms) |        |        | mean loss rate (%) |        |        |
|----------------|--------|------------------------|--------|--------|---------------------------|--------|--------|--------------------|--------|--------|
|                |        | flow 1                 | flow 2 | flow 3 | flow 1                    | flow 2 | flow 3 | flow 1             | flow 2 | flow 3 |
| TCP BBR        | 10     | 201.18                 | 189.29 | 159.59 | 84.32                     | 87.28  | 91.44  | 0.37               | 0.57   | 1.45   |
| TCP Cubic      | 10     | 181.98                 | 110.97 | 103.86 | 60.52                     | 60.32  | 59.87  | 0.31               | 0.98   | 1.77   |
| LEDBAT         | 10     | 31.03                  | 21.19  | 10.02  | 54.53                     | 54.84  | 54.60  | 0.66               | 1.05   | 2.19   |
| PCC            | 10     | 390.06                 | 77.43  | 58.08  | 172.14                    | 169.84 | 158.91 | 1.79               | 1.91   | 3.26   |
| QUIC Cubic     | 10     | 57.70                  | 53.06  | 32.33  | 52.87                     | 52.87  | 52.85  | 0.31               | 0.69   | 1.01   |
| SCReAM         | 10     | 0.20                   | 0.21   | 0.22   | 53.87                     | 52.76  | 53.81  | 0.28               | 0.47   | 1.10   |
| WebRTC media   | 10     | 2.32                   | 1.46   | 0.63   | 52.38                     | 52.29  | 52.93  | 0.40               | 0.66   | 1.31   |
| Sprout         | 10     | 7.77                   | 7.76   | 7.42   | 54.94                     | 54.89  | 54.50  | 0.34               | 0.57   | 1.21   |
| TaoVA-100x     | 10     | 111.64                 | 105.27 | 131.81 | 53.58                     | 55.14  | 56.87  | 0.18               | 0.52   | 0.86   |
| TCP Vegas      | 10     | 96.65                  | 123.26 | 63.88  | 58.09                     | 57.32  | 55.08  | 0.28               | 0.51   | 1.40   |
| Verus          | 10     | 212.60                 | 147.12 | 96.56  | 152.30                    | 164.79 | 166.13 | 1.13               | 1.52   | 2.41   |
| Copa           | 10     | 107.50                 | 62.17  | 53.65  | 71.79                     | 64.79  | 64.55  | 4.17               | 0.91   | 2.43   |
| FillP          | 10     | 775.62                 | 733.45 | 615.59 | 251.27                    | 272.55 | 254.54 | 9.26               | 9.59   | 14.38  |
| Indigo-1-32    | 10     | 181.72                 | 165.77 | 145.77 | 58.49                     | 59.80  | 61.34  | 0.31               | 0.50   | 1.17   |
| Vivace-latency | 10     | 313.49                 | 274.71 | 67.48  | 73.33                     | 70.71  | 56.13  | 0.50               | 0.57   | 1.93   |
| Vivace-loss    | 10     | 322.96                 | 300.17 | 250.81 | 173.27                    | 205.39 | 183.95 | 2.33               | 2.14   | 3.65   |
| Vivace-LTE     | 10     | 361.09                 | 306.75 | 230.43 | 140.03                    | 131.67 | 124.34 | 0.62               | 0.82   | 1.68   |

Run 1: Statistics of TCP BBR

Start at: 2018-02-21 03:40:26

End at: 2018-02-21 03:40:56

# Below is generated by plot.py at 2018-02-21 09:52:48

# Datalink statistics

-- Total of 3 flows:

Average throughput: 364.05 Mbit/s

95th percentile per-packet one-way delay: 101.305 ms

Loss rate: 0.64%

-- Flow 1:

Average throughput: 195.63 Mbit/s

95th percentile per-packet one-way delay: 98.377 ms

Loss rate: 0.41%

-- Flow 2:

Average throughput: 179.92 Mbit/s

95th percentile per-packet one-way delay: 101.162 ms

Loss rate: 0.67%

-- Flow 3:

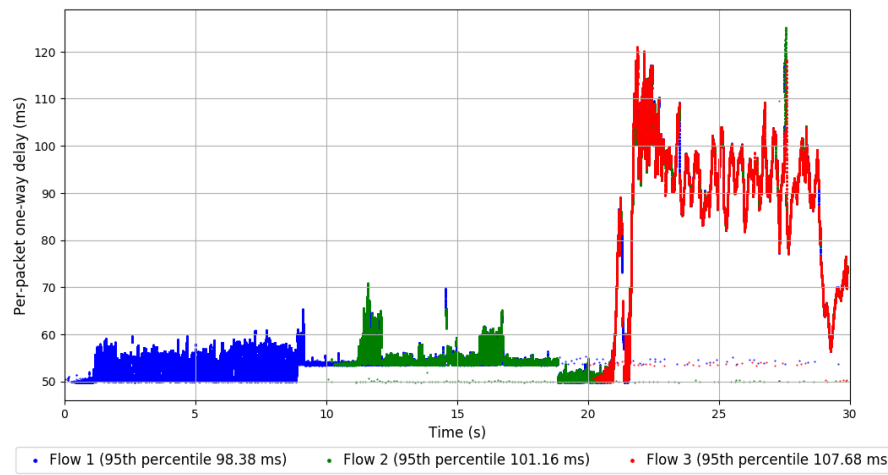
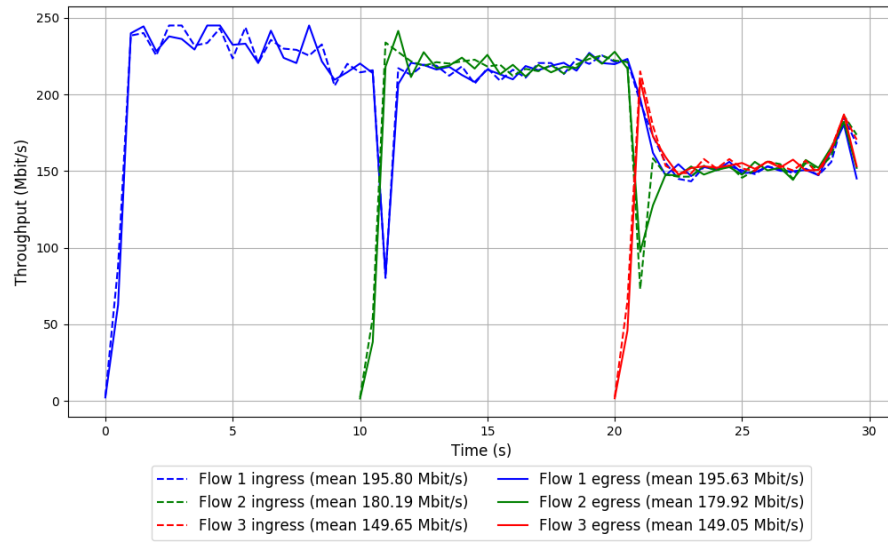
Average throughput: 149.05 Mbit/s

95th percentile per-packet one-way delay: 107.677 ms

Loss rate: 1.48%



# Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-02-21 03:58:40

End at: 2018-02-21 03:59:10

# Below is generated by plot.py at 2018-02-21 09:53:12

# Datalink statistics

-- Total of 3 flows:

Average throughput: 381.32 Mbit/s

95th percentile per-packet one-way delay: 90.661 ms

Loss rate: 0.67%

-- Flow 1:

Average throughput: 200.21 Mbit/s

95th percentile per-packet one-way delay: 84.370 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 195.00 Mbit/s

95th percentile per-packet one-way delay: 90.629 ms

Loss rate: 0.64%

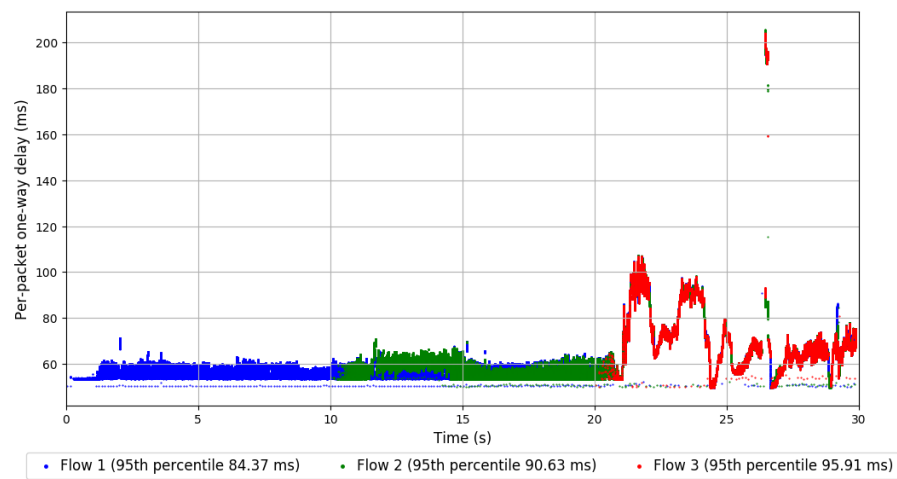
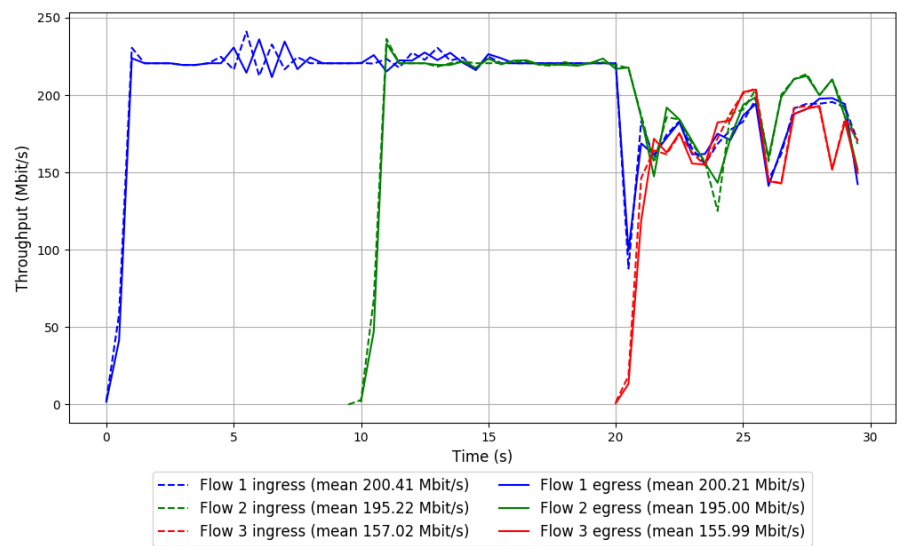
-- Flow 3:

Average throughput: 155.99 Mbit/s

95th percentile per-packet one-way delay: 95.907 ms

Loss rate: 1.67%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-02-21 04:16:01

End at: 2018-02-21 04:16:31

# Below is generated by plot.py at 2018-02-21 09:53:26

# Datalink statistics

-- Total of 3 flows:

Average throughput: 395.53 Mbit/s

95th percentile per-packet one-way delay: 73.035 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 207.80 Mbit/s

95th percentile per-packet one-way delay: 72.364 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 200.59 Mbit/s

95th percentile per-packet one-way delay: 72.870 ms

Loss rate: 0.59%

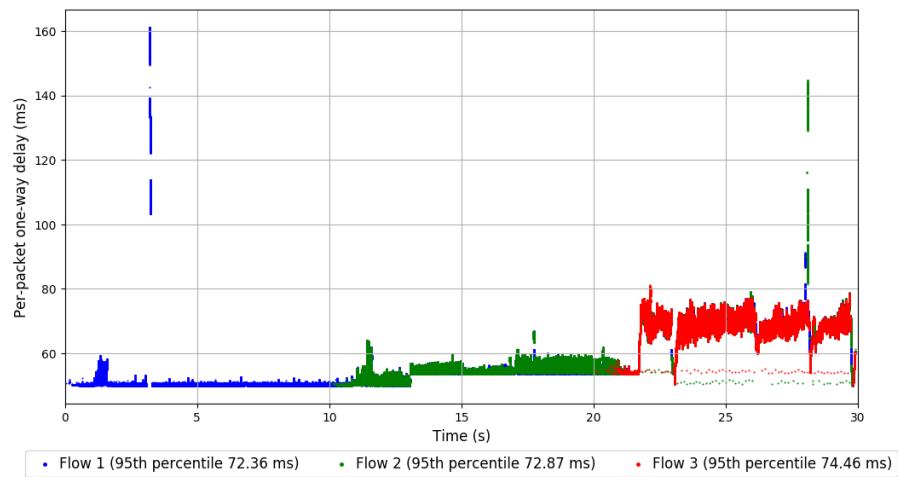
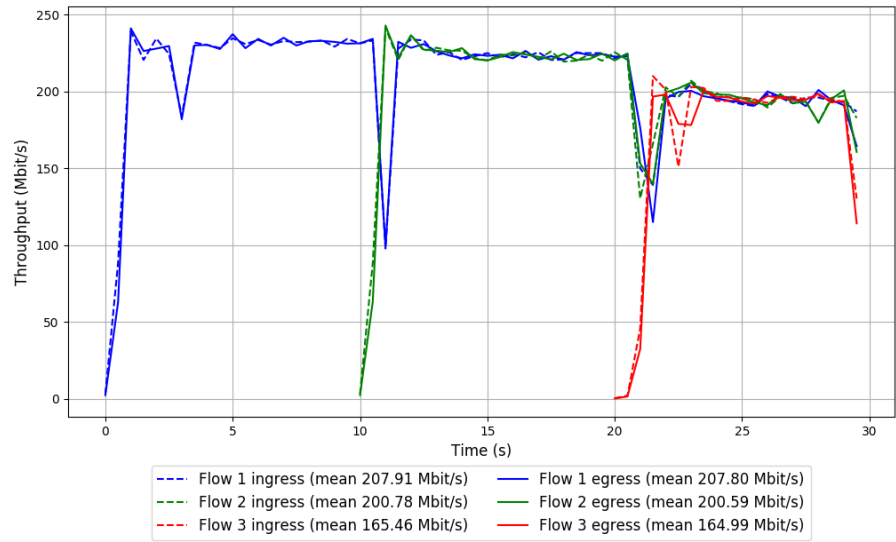
-- Flow 3:

Average throughput: 164.99 Mbit/s

95th percentile per-packet one-way delay: 74.464 ms

Loss rate: 1.33%

### Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-02-21 04:33:44

End at: 2018-02-21 04:34:14

# Below is generated by plot.py at 2018-02-21 09:53:26

# Datalink statistics

-- Total of 3 flows:

Average throughput: 388.70 Mbit/s

95th percentile per-packet one-way delay: 81.038 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 203.35 Mbit/s

95th percentile per-packet one-way delay: 77.934 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 194.85 Mbit/s

95th percentile per-packet one-way delay: 80.447 ms

Loss rate: 0.58%

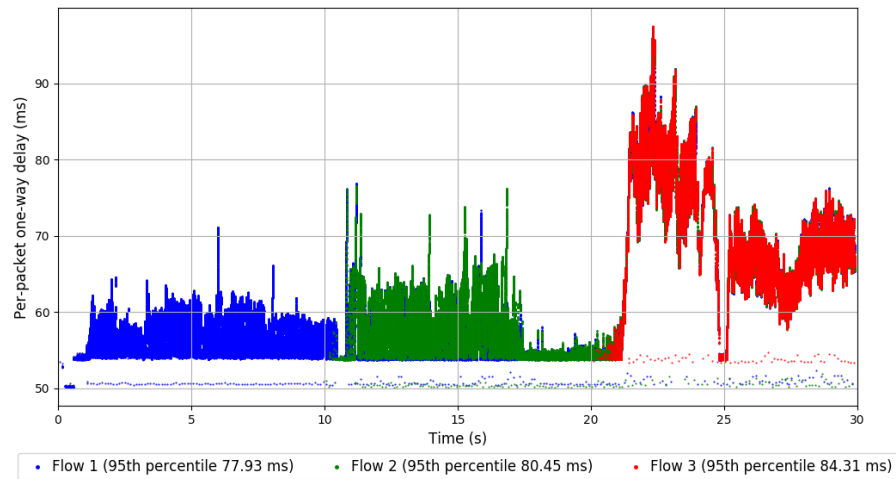
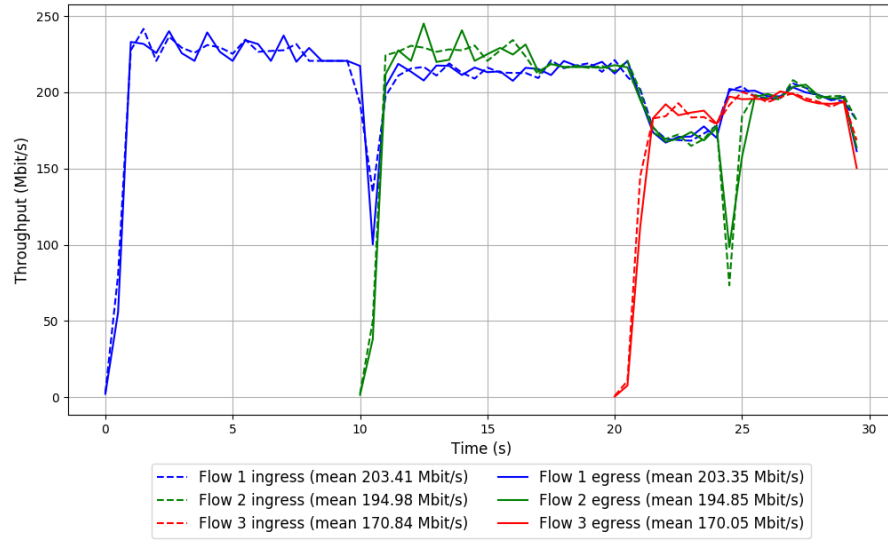
-- Flow 3:

Average throughput: 170.05 Mbit/s

95th percentile per-packet one-way delay: 84.305 ms

Loss rate: 1.31%

# Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-02-21 04:50:58

End at: 2018-02-21 04:51:28

# Below is generated by plot.py at 2018-02-21 09:53:26

# Datalink statistics

-- Total of 3 flows:

Average throughput: 371.12 Mbit/s

95th percentile per-packet one-way delay: 92.448 ms

Loss rate: 0.68%

-- Flow 1:

Average throughput: 200.91 Mbit/s

95th percentile per-packet one-way delay: 89.192 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 182.96 Mbit/s

95th percentile per-packet one-way delay: 92.514 ms

Loss rate: 0.67%

-- Flow 3:

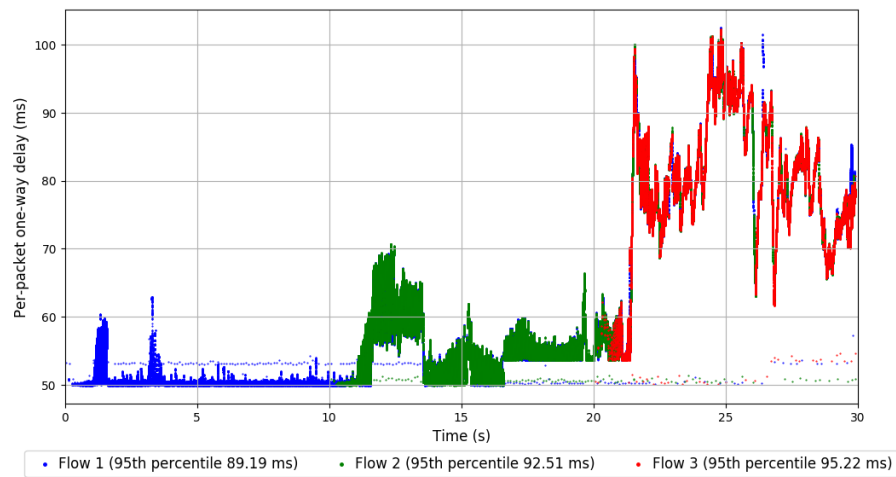
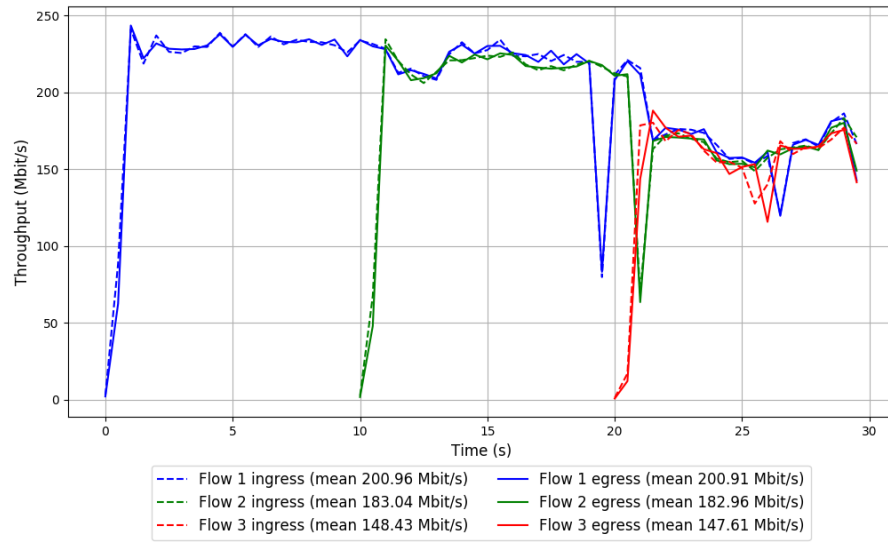
Average throughput: 147.61 Mbit/s

95th percentile per-packet one-way delay: 95.225 ms

Loss rate: 1.70%



## Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2018-02-21 05:08:44

End at: 2018-02-21 05:09:14

# Below is generated by plot.py at 2018-02-21 09:53:26

# Datalink statistics

-- Total of 3 flows:

Average throughput: 387.89 Mbit/s

95th percentile per-packet one-way delay: 74.666 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 205.18 Mbit/s

95th percentile per-packet one-way delay: 71.864 ms

Loss rate: 0.34%

-- Flow 2:

Average throughput: 188.68 Mbit/s

95th percentile per-packet one-way delay: 75.131 ms

Loss rate: 0.64%

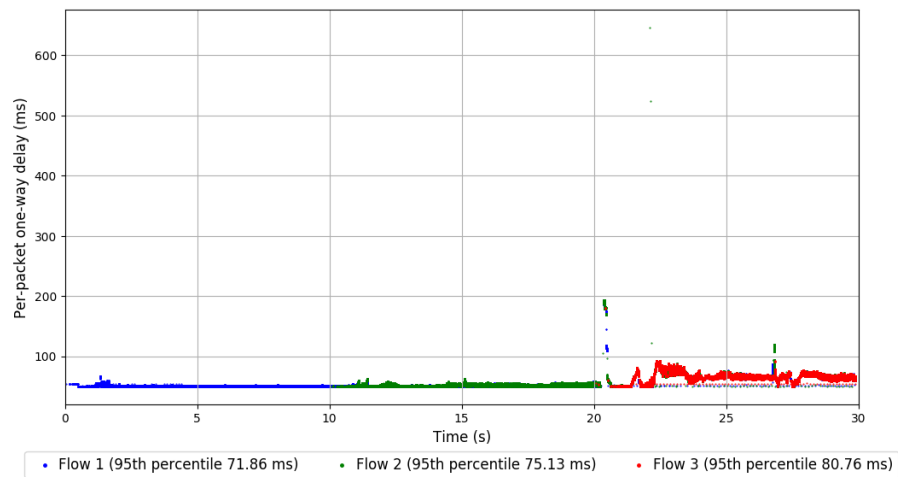
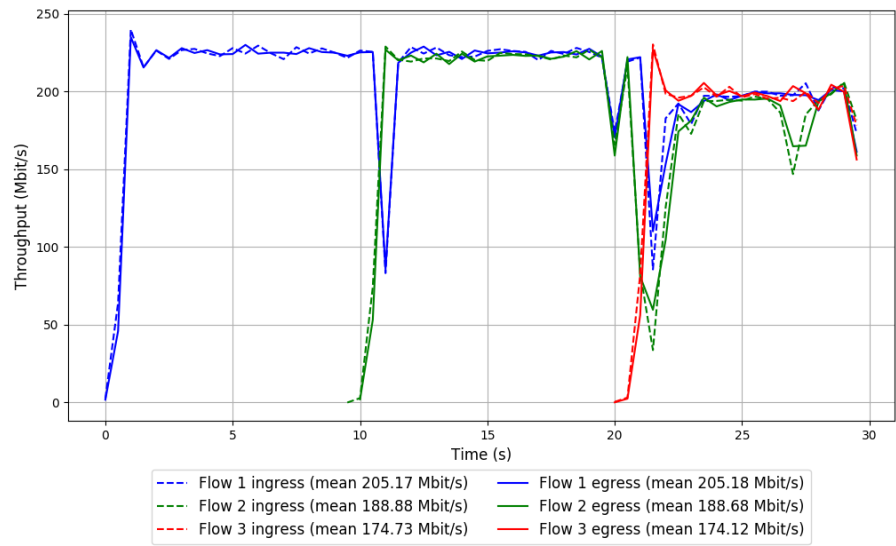
-- Flow 3:

Average throughput: 174.12 Mbit/s

95th percentile per-packet one-way delay: 80.757 ms

Loss rate: 1.35%

## Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2018-02-21 05:26:25

End at: 2018-02-21 05:26:55

# Below is generated by plot.py at 2018-02-21 09:53:26

# Datalink statistics

-- Total of 3 flows:

Average throughput: 389.35 Mbit/s

95th percentile per-packet one-way delay: 77.626 ms

Loss rate: 0.38%

-- Flow 1:

Average throughput: 203.07 Mbit/s

95th percentile per-packet one-way delay: 76.308 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 196.55 Mbit/s

95th percentile per-packet one-way delay: 77.427 ms

Loss rate: 0.00%

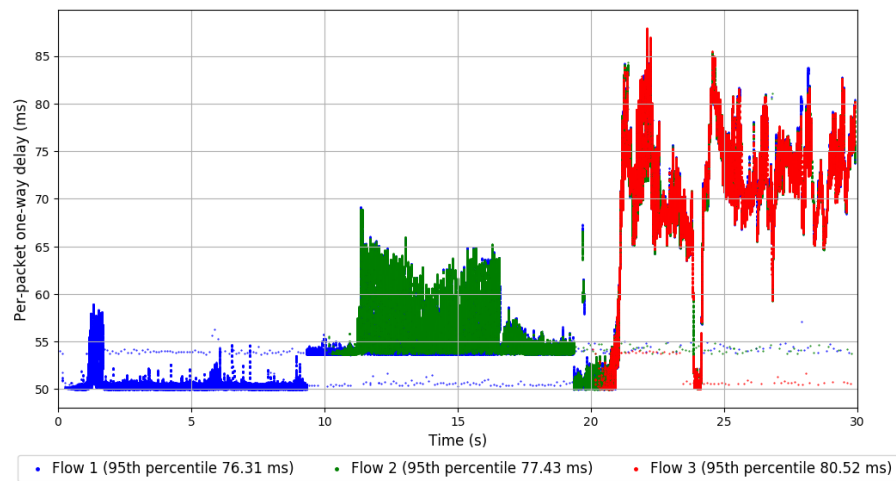
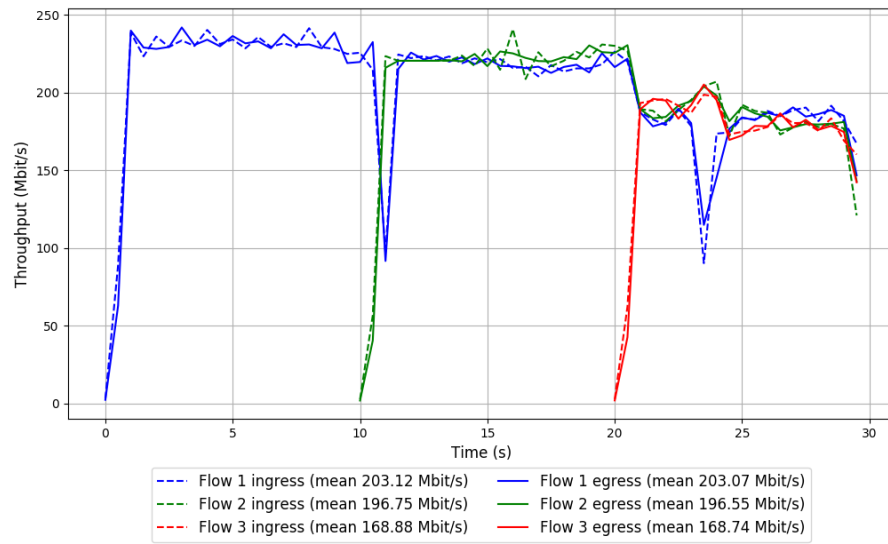
-- Flow 3:

Average throughput: 168.74 Mbit/s

95th percentile per-packet one-way delay: 80.522 ms

Loss rate: 1.26%

# Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2018-02-21 05:44:13

End at: 2018-02-21 05:44:43

# Below is generated by plot.py at 2018-02-21 09:53:26

# Datalink statistics

-- Total of 3 flows:

Average throughput: 363.72 Mbit/s

95th percentile per-packet one-way delay: 99.059 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 194.29 Mbit/s

95th percentile per-packet one-way delay: 96.403 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 179.18 Mbit/s

95th percentile per-packet one-way delay: 99.227 ms

Loss rate: 0.64%

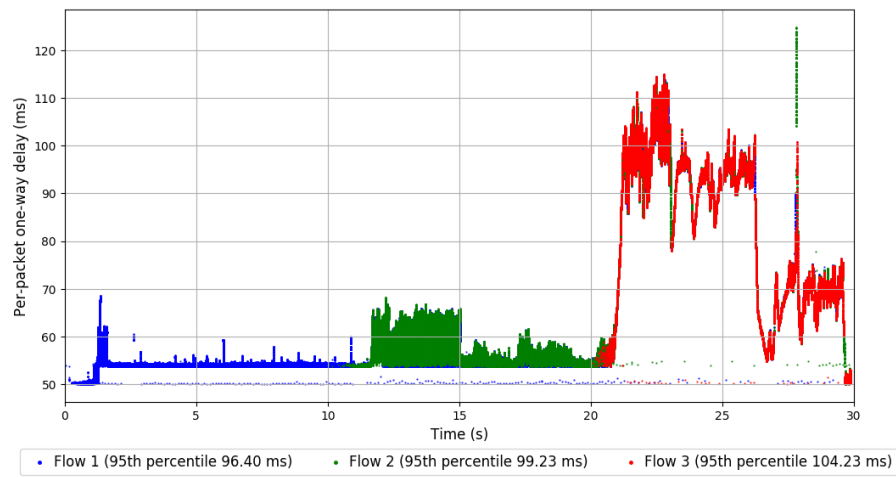
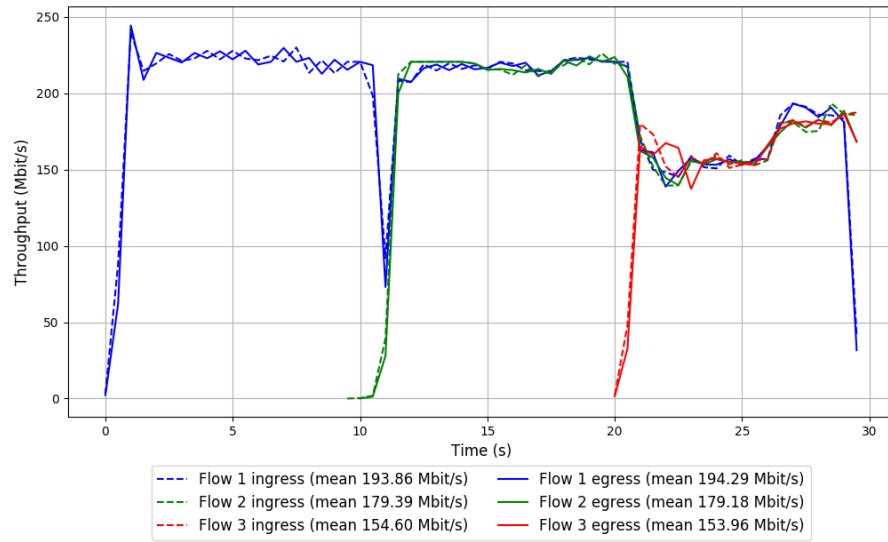
-- Flow 3:

Average throughput: 153.96 Mbit/s

95th percentile per-packet one-way delay: 104.233 ms

Loss rate: 1.46%

## Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2018-02-21 06:01:45

End at: 2018-02-21 06:02:15

# Below is generated by plot.py at 2018-02-21 09:58:58

# Datalink statistics

-- Total of 3 flows:

Average throughput: 362.26 Mbit/s

95th percentile per-packet one-way delay: 106.328 ms

Loss rate: 0.62%

-- Flow 1:

Average throughput: 195.31 Mbit/s

95th percentile per-packet one-way delay: 102.081 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 182.05 Mbit/s

95th percentile per-packet one-way delay: 106.318 ms

Loss rate: 0.62%

-- Flow 3:

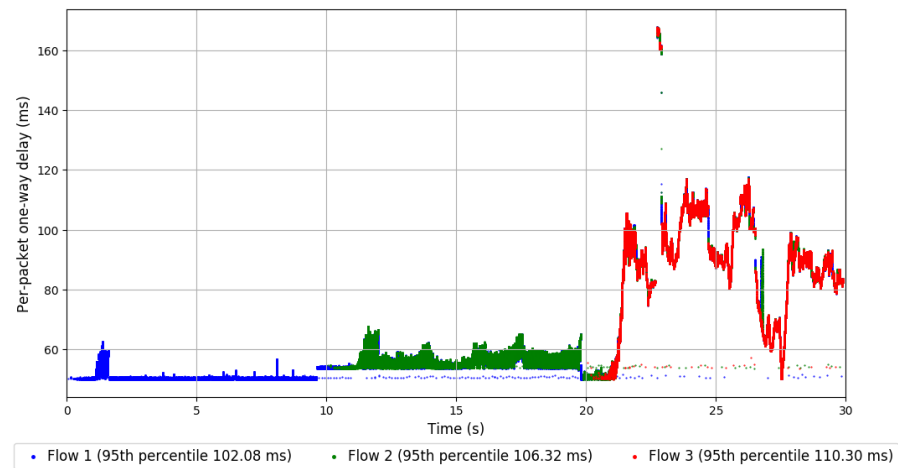
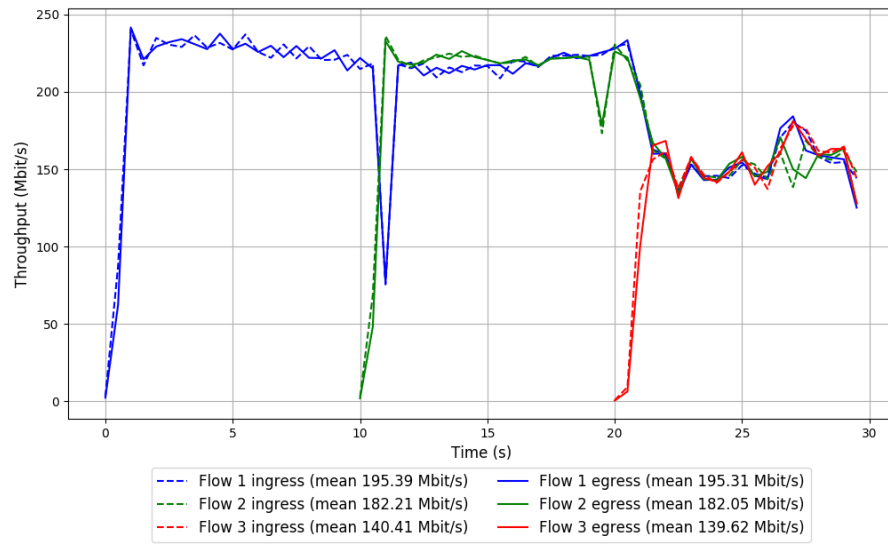
Average throughput: 139.62 Mbit/s

95th percentile per-packet one-way delay: 110.301 ms

Loss rate: 1.63%



# Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2018-02-21 06:19:09

End at: 2018-02-21 06:19:39

# Below is generated by plot.py at 2018-02-21 09:59:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 390.29 Mbit/s

95th percentile per-packet one-way delay: 76.704 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 206.05 Mbit/s

95th percentile per-packet one-way delay: 74.280 ms

Loss rate: 0.23%

-- Flow 2:

Average throughput: 193.13 Mbit/s

95th percentile per-packet one-way delay: 77.064 ms

Loss rate: 0.62%

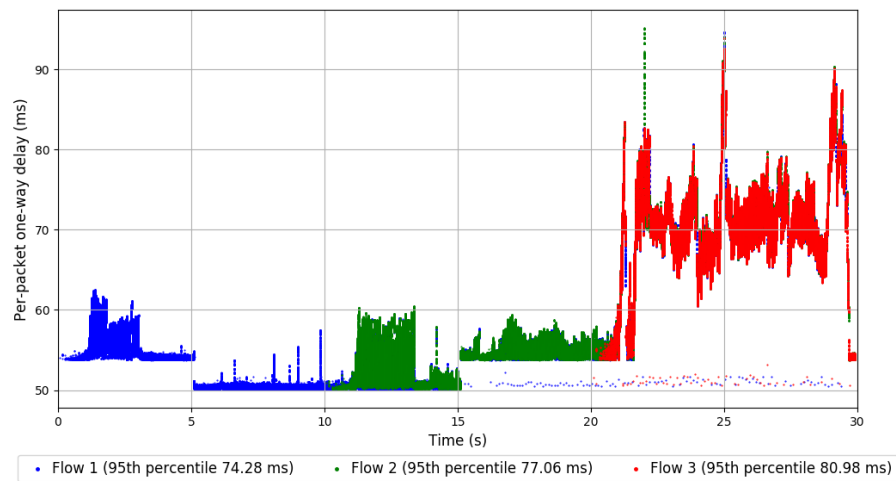
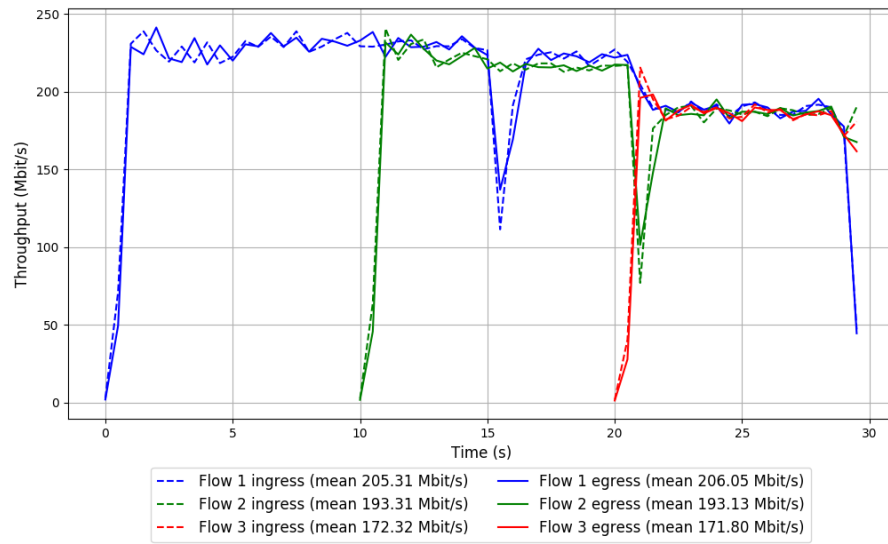
-- Flow 3:

Average throughput: 171.80 Mbit/s

95th percentile per-packet one-way delay: 80.983 ms

Loss rate: 1.33%

# Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-02-21 03:46:02

End at: 2018-02-21 03:46:32

# Below is generated by plot.py at 2018-02-21 09:59:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 318.13 Mbit/s

95th percentile per-packet one-way delay: 63.840 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 166.01 Mbit/s

95th percentile per-packet one-way delay: 63.549 ms

Loss rate: 0.48%

-- Flow 2:

Average throughput: 161.07 Mbit/s

95th percentile per-packet one-way delay: 64.631 ms

Loss rate: 0.49%

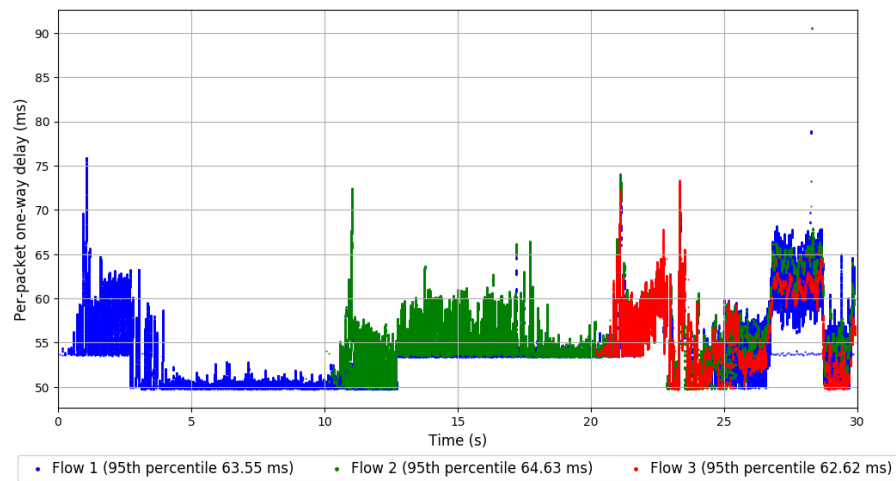
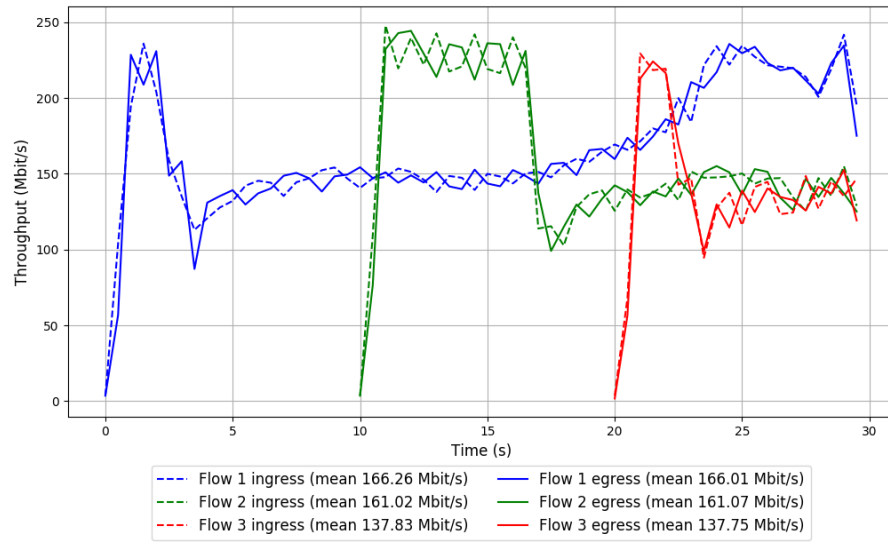
-- Flow 3:

Average throughput: 137.75 Mbit/s

95th percentile per-packet one-way delay: 62.618 ms

Loss rate: 1.14%

# Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-02-21 04:04:14

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

# Below is generated by plot.py at 2018-02-21 09:59:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 241.96 Mbit/s

95th percentile per-packet one-way delay: 60.955 ms

Loss rate: 0.78%

-- Flow 1:

Average throughput: 169.03 Mbit/s

95th percentile per-packet one-way delay: 61.311 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 52.01 Mbit/s

95th percentile per-packet one-way delay: 57.666 ms

Loss rate: 2.20%

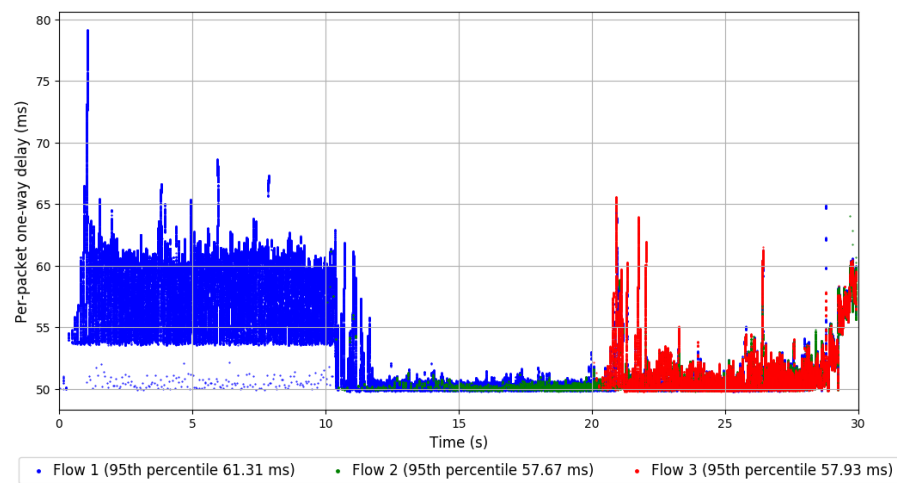
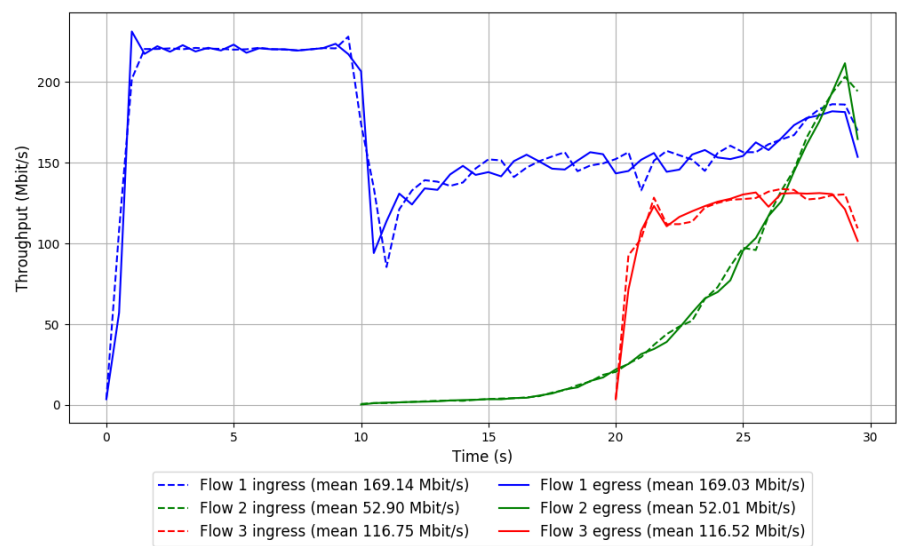
-- Flow 3:

Average throughput: 116.52 Mbit/s

95th percentile per-packet one-way delay: 57.931 ms

Loss rate: 1.16%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-02-21 04:21:26

End at: 2018-02-21 04:21:56

# Below is generated by plot.py at 2018-02-21 09:59:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 228.45 Mbit/s

95th percentile per-packet one-way delay: 60.282 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 158.65 Mbit/s

95th percentile per-packet one-way delay: 59.009 ms

Loss rate: 0.30%

-- Flow 2:

Average throughput: 43.45 Mbit/s

95th percentile per-packet one-way delay: 61.039 ms

Loss rate: 1.20%

-- Flow 3:

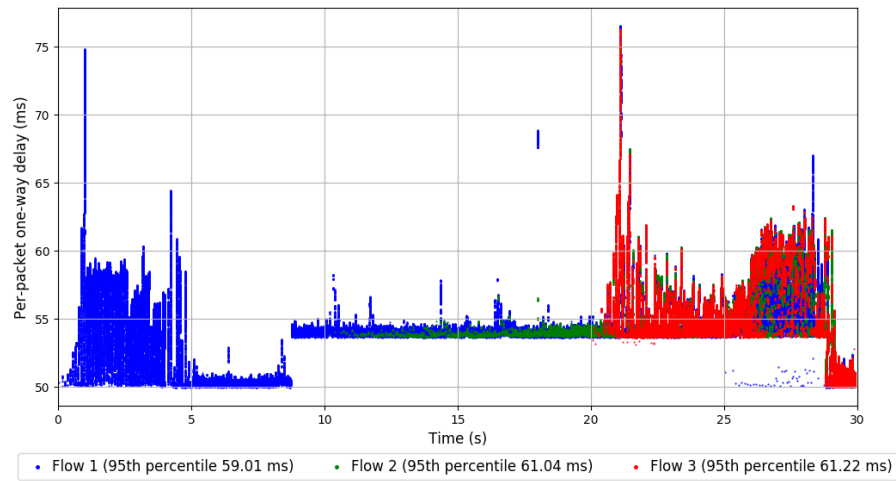
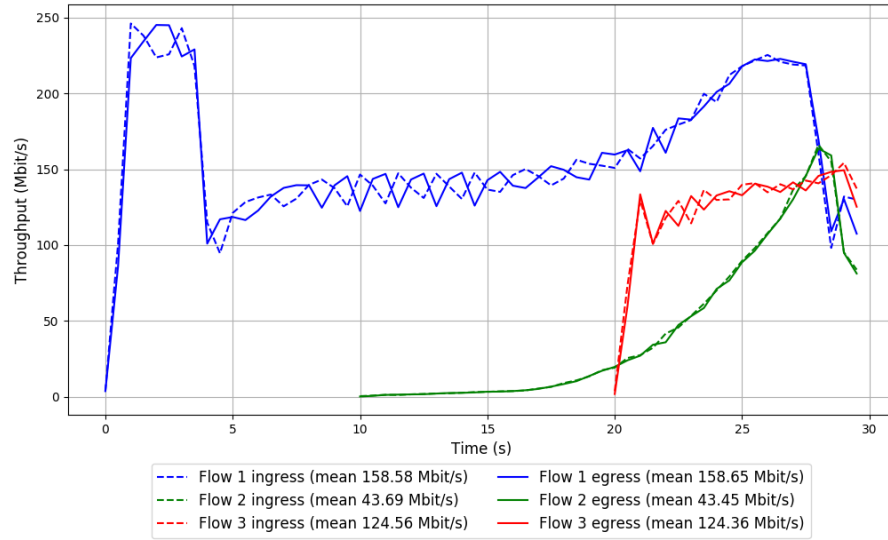
Average throughput: 124.36 Mbit/s

95th percentile per-packet one-way delay: 61.224 ms

Loss rate: 1.24%



### Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-02-21 04:39:16

End at: 2018-02-21 04:39:46

# Below is generated by plot.py at 2018-02-21 09:59:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 308.82 Mbit/s

95th percentile per-packet one-way delay: 57.871 ms

Loss rate: 0.48%

-- Flow 1:

Average throughput: 177.59 Mbit/s

95th percentile per-packet one-way delay: 58.038 ms

Loss rate: 0.21%

-- Flow 2:

Average throughput: 141.61 Mbit/s

95th percentile per-packet one-way delay: 57.353 ms

Loss rate: 0.70%

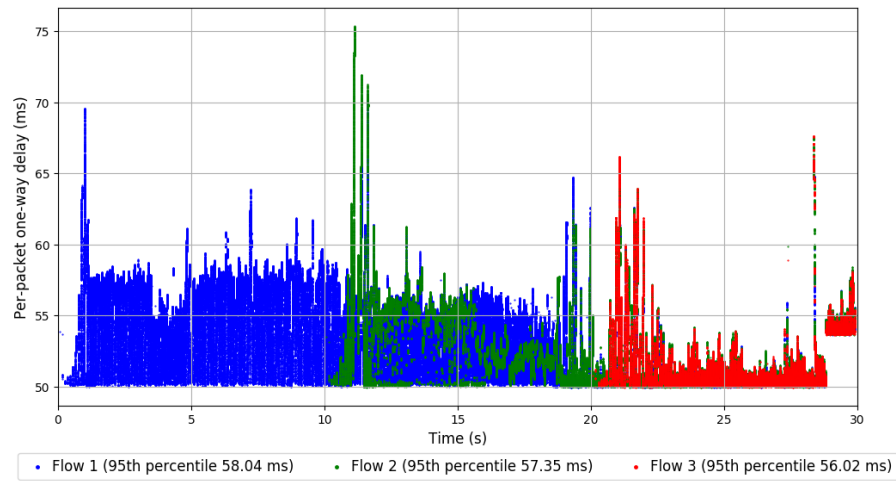
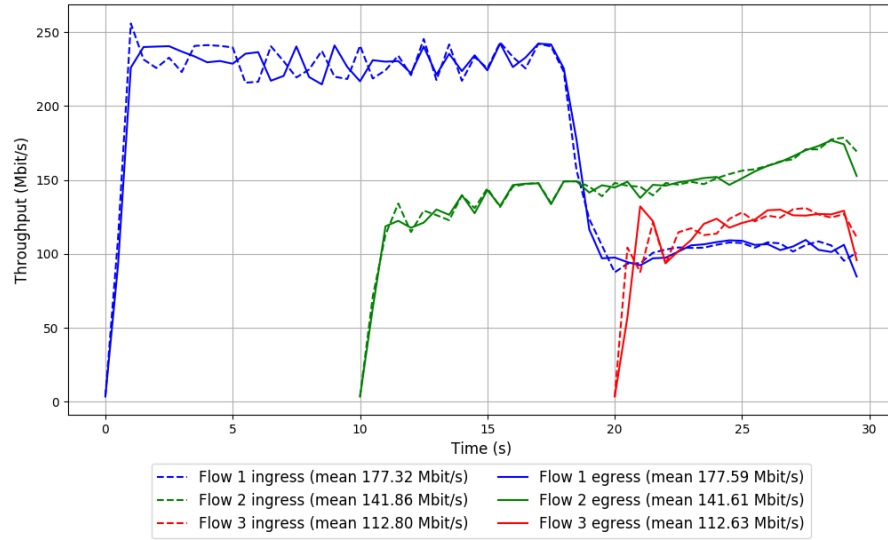
-- Flow 3:

Average throughput: 112.63 Mbit/s

95th percentile per-packet one-way delay: 56.016 ms

Loss rate: 1.20%

# Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-02-21 04:56:28

End at: 2018-02-21 04:56:58

# Below is generated by plot.py at 2018-02-21 09:59:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 252.46 Mbit/s

95th percentile per-packet one-way delay: 60.874 ms

Loss rate: 0.54%

-- Flow 1:

Average throughput: 218.36 Mbit/s

95th percentile per-packet one-way delay: 60.923 ms

Loss rate: 0.22%

-- Flow 2:

Average throughput: 49.14 Mbit/s

95th percentile per-packet one-way delay: 59.376 ms

Loss rate: 2.44%

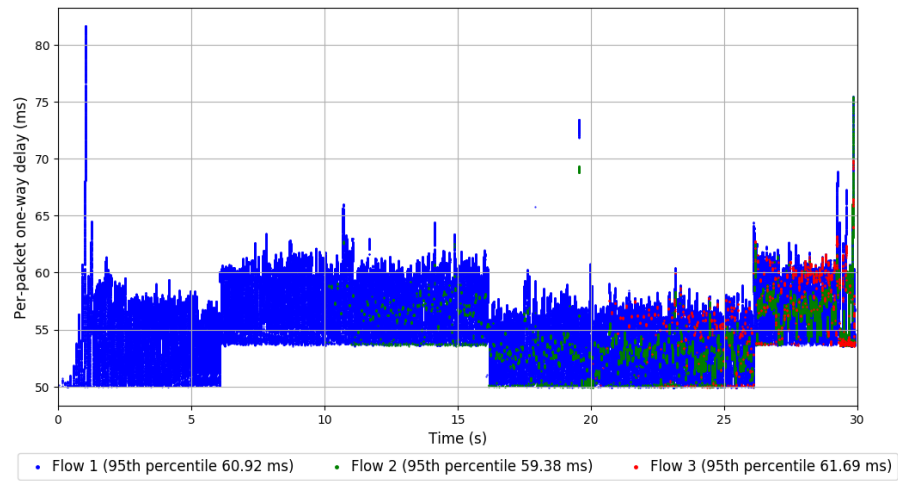
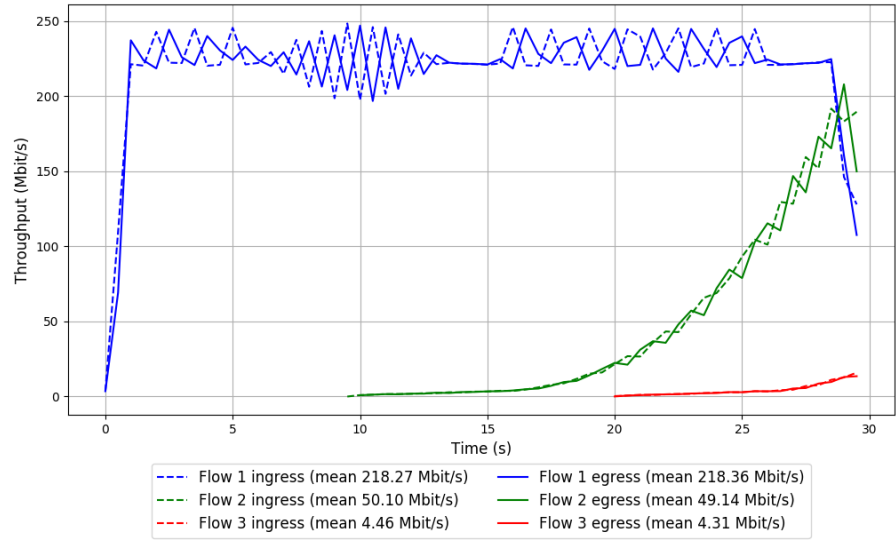
-- Flow 3:

Average throughput: 4.31 Mbit/s

95th percentile per-packet one-way delay: 61.686 ms

Loss rate: 4.49%

# Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2018-02-21 05:14:19

End at: 2018-02-21 05:14:49

# Below is generated by plot.py at 2018-02-21 09:59:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 307.14 Mbit/s

95th percentile per-packet one-way delay: 61.170 ms

Loss rate: 0.35%

-- Flow 1:

Average throughput: 207.38 Mbit/s

95th percentile per-packet one-way delay: 61.448 ms

Loss rate: 0.24%

-- Flow 2:

Average throughput: 147.63 Mbit/s

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

Loss rate: 0.52%

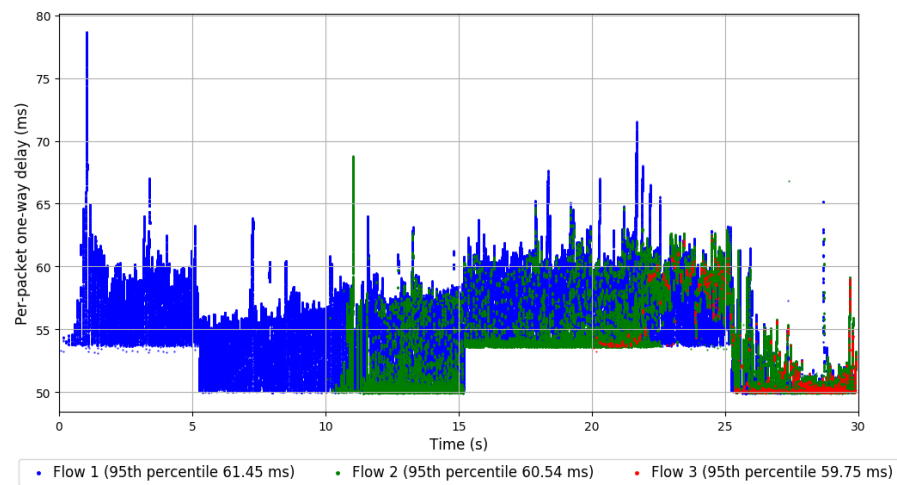
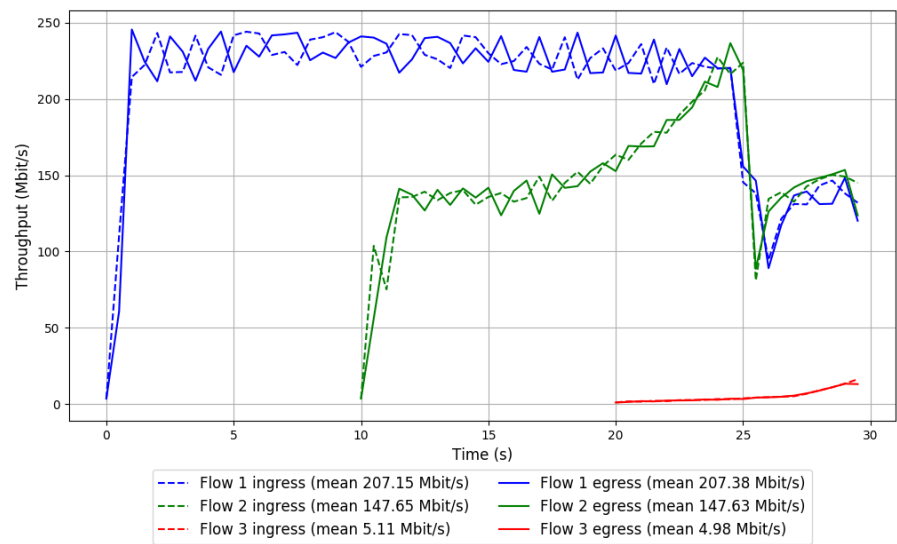
-- Flow 3:

Average throughput: 4.98 Mbit/s

95th percentile per-packet one-way delay: 59.751 ms

Loss rate: 3.59%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2018-02-21 05:32:02

End at: 2018-02-21 05:32:32

# Below is generated by plot.py at 2018-02-21 10:02:34

# Datalink statistics

-- Total of 3 flows:

Average throughput: 314.49 Mbit/s

95th percentile per-packet one-way delay: 61.515 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 189.15 Mbit/s

95th percentile per-packet one-way delay: 61.851 ms

Loss rate: 0.28%

-- Flow 2:

Average throughput: 132.45 Mbit/s

95th percentile per-packet one-way delay: 59.381 ms

Loss rate: 0.58%

-- Flow 3:

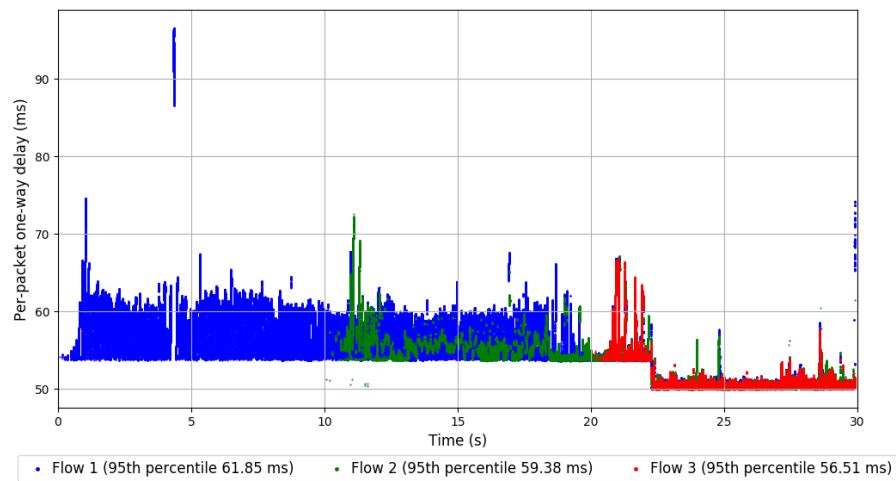
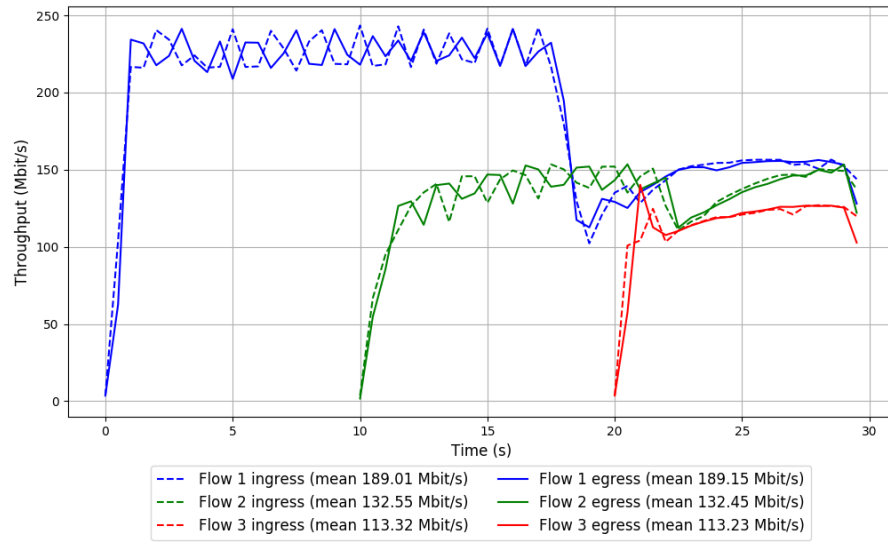
Average throughput: 113.23 Mbit/s

95th percentile per-packet one-way delay: 56.510 ms

Loss rate: 1.12%



## Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2018-02-21 05:49:45

End at: 2018-02-21 05:50:15

# Below is generated by plot.py at 2018-02-21 10:02:57

# Datalink statistics

-- Total of 3 flows:

Average throughput: 329.17 Mbit/s

95th percentile per-packet one-way delay: 61.452 ms

Loss rate: 0.61%

-- Flow 1:

Average throughput: 167.73 Mbit/s

95th percentile per-packet one-way delay: 58.454 ms

Loss rate: 0.29%

-- Flow 2:

Average throughput: 141.09 Mbit/s

95th percentile per-packet one-way delay: 62.003 ms

Loss rate: 0.70%

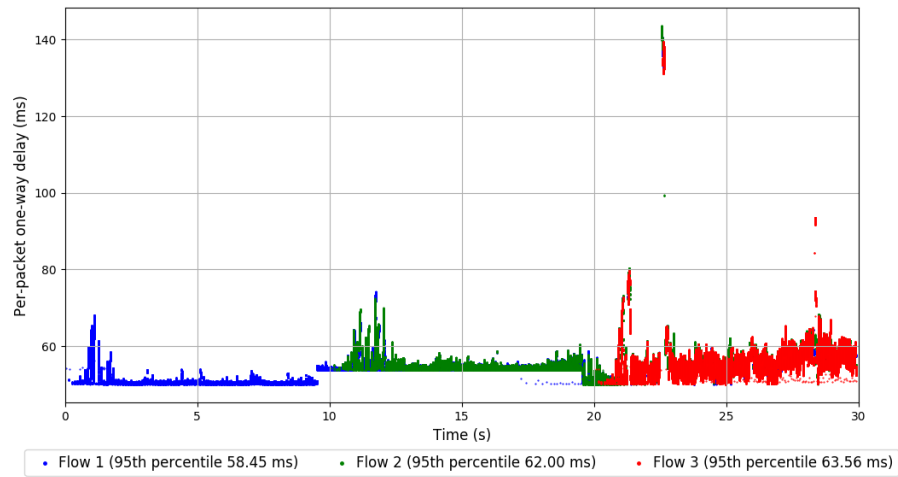
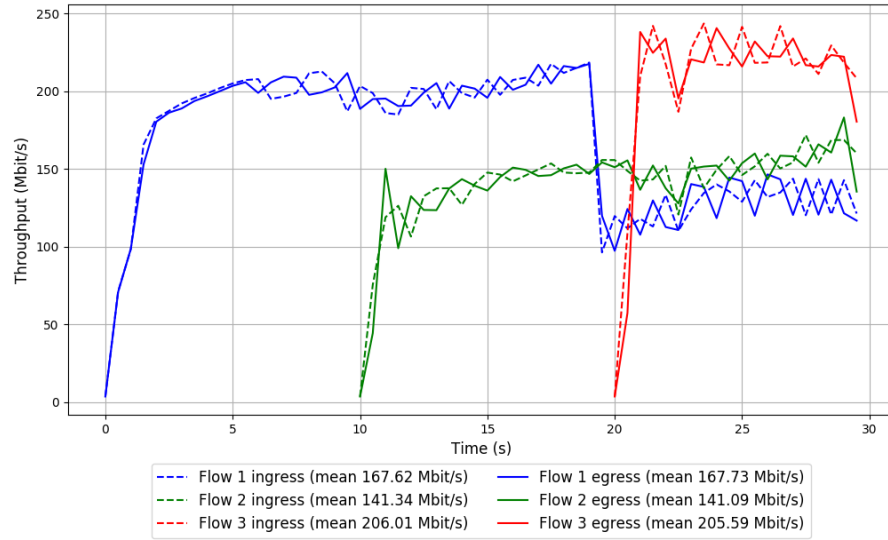
-- Flow 3:

Average throughput: 205.59 Mbit/s

95th percentile per-packet one-way delay: 63.565 ms

Loss rate: 1.28%

# Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2018-02-21 06:07:11

End at: 2018-02-21 06:07:41

# Below is generated by plot.py at 2018-02-21 10:03:01

# Datalink statistics

-- Total of 3 flows:

Average throughput: 321.54 Mbit/s

95th percentile per-packet one-way delay: 62.711 ms

Loss rate: 0.47%

-- Flow 1:

Average throughput: 195.13 Mbit/s

95th percentile per-packet one-way delay: 62.673 ms

Loss rate: 0.19%

-- Flow 2:

Average throughput: 128.10 Mbit/s

95th percentile per-packet one-way delay: 62.263 ms

Loss rate: 0.72%

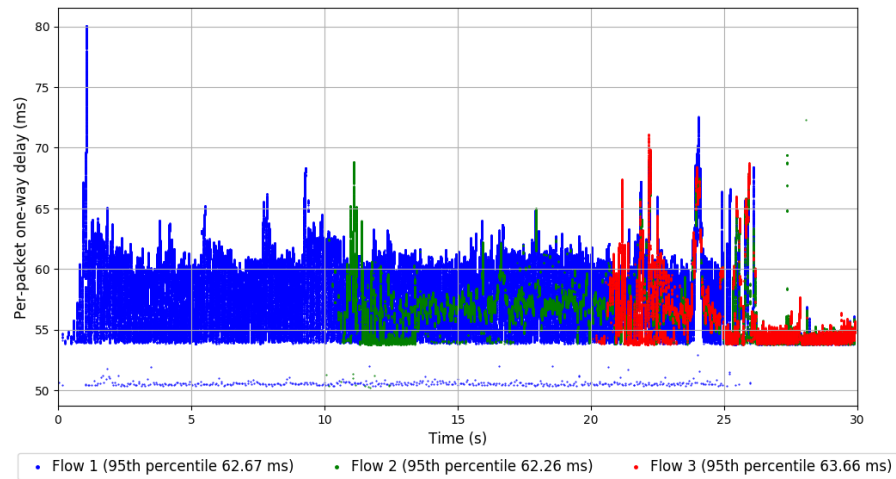
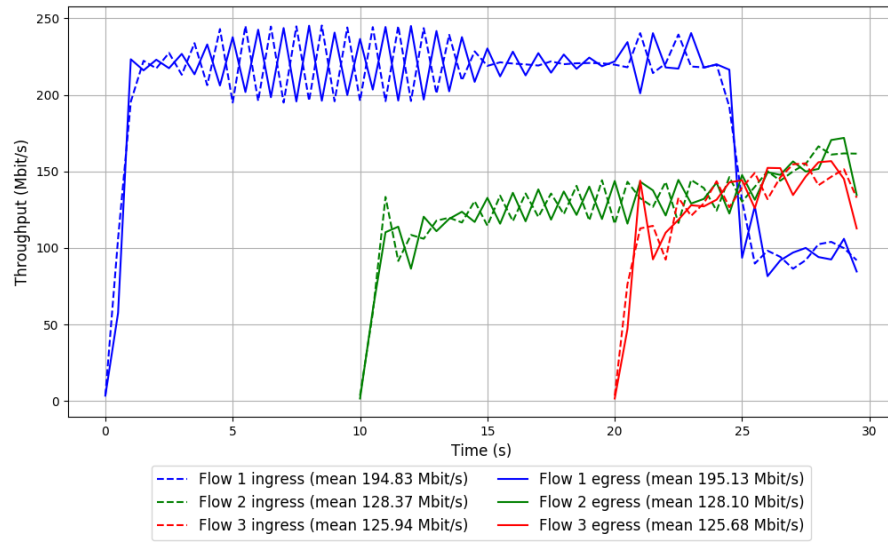
-- Flow 3:

Average throughput: 125.68 Mbit/s

95th percentile per-packet one-way delay: 63.659 ms

Loss rate: 1.26%

# Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2018-02-21 06:24:42

End at: 2018-02-21 06:25:12

# Below is generated by plot.py at 2018-02-21 10:03:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 276.56 Mbit/s

95th percentile per-packet one-way delay: 58.299 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 170.75 Mbit/s

95th percentile per-packet one-way delay: 57.987 ms

Loss rate: 0.46%

-- Flow 2:

Average throughput: 113.14 Mbit/s

95th percentile per-packet one-way delay: 58.907 ms

Loss rate: 0.28%

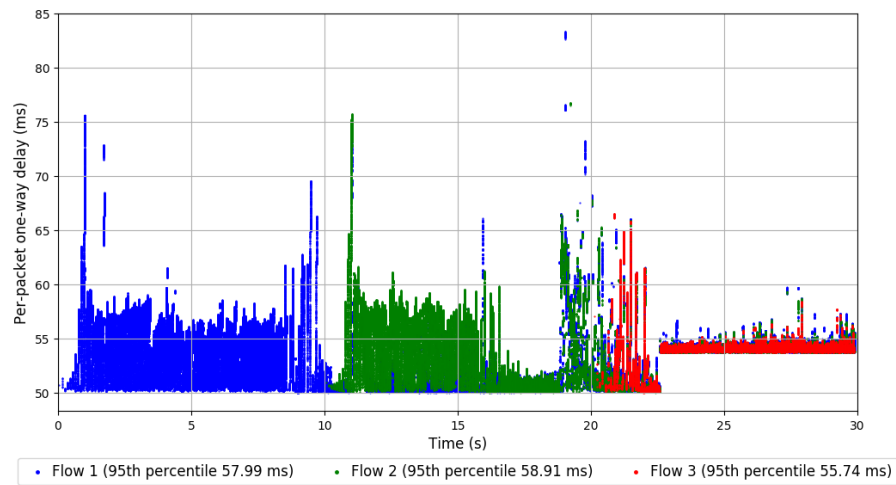
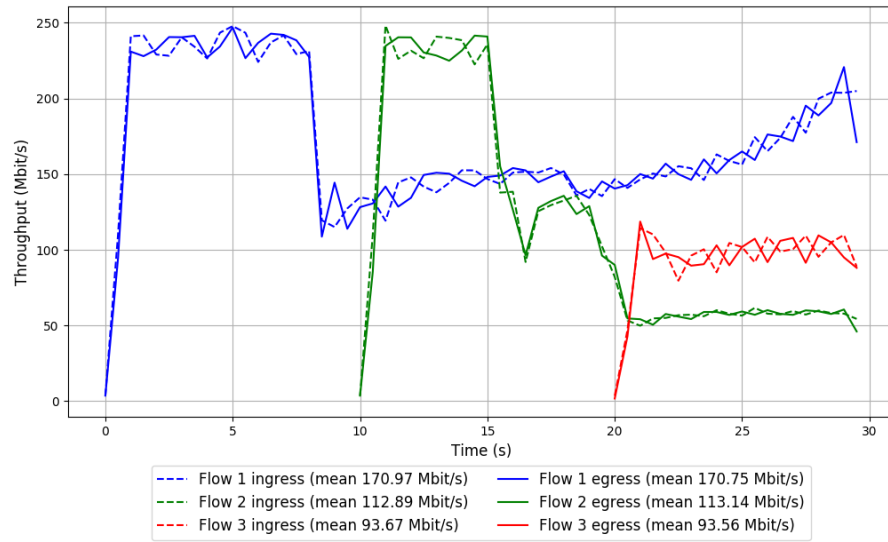
-- Flow 3:

Average throughput: 93.56 Mbit/s

95th percentile per-packet one-way delay: 55.744 ms

Loss rate: 1.21%

# Run 10: Report of TCP Cubic — Data Link



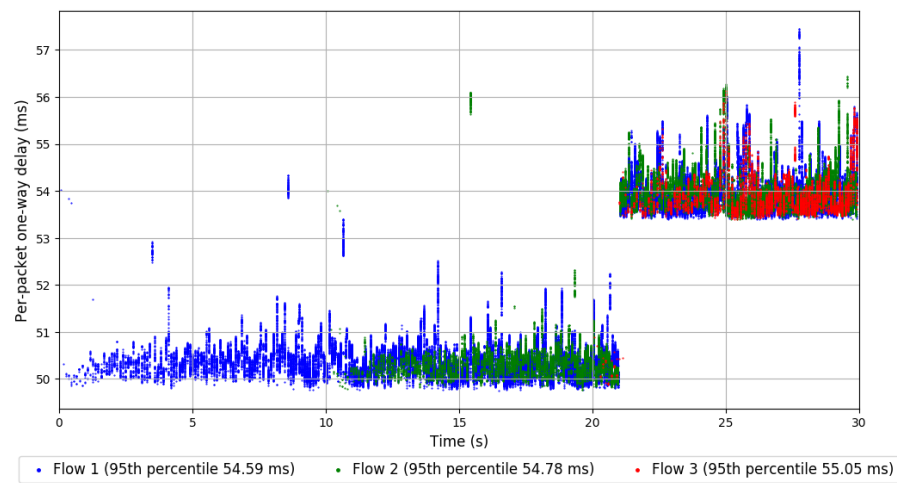
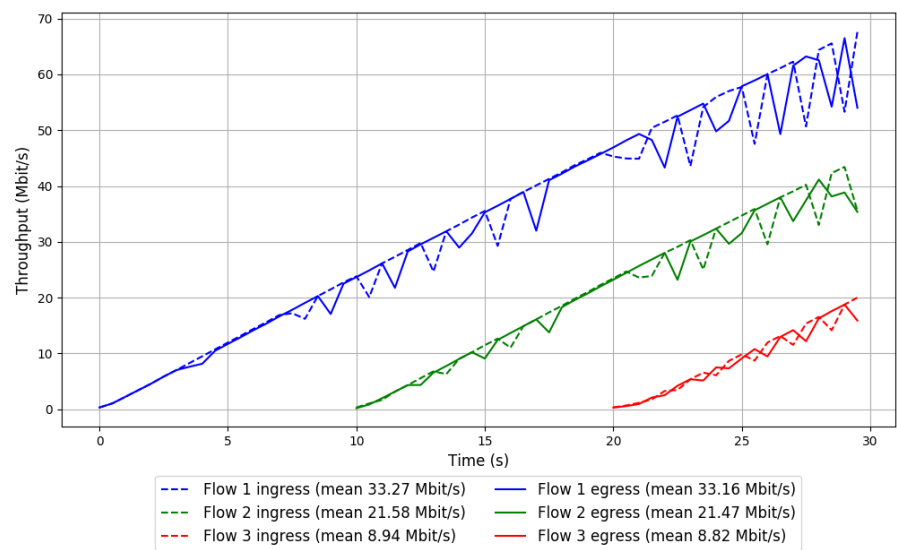
```
Run 1: Statistics of LEDBAT

Start at: 2018-02-21 03:39:03
End at: 2018-02-21 03:39:33

# Below is generated by plot.py at 2018-02-21 10:03:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 50.31 Mbit/s
95th percentile per-packet one-way delay: 54.690 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 33.16 Mbit/s
95th percentile per-packet one-way delay: 54.594 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 21.47 Mbit/s
95th percentile per-packet one-way delay: 54.780 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 8.82 Mbit/s
95th percentile per-packet one-way delay: 55.053 ms
Loss rate: 2.31%
```



Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2018-02-21 03:57:18

End at: 2018-02-21 03:57:48

# Below is generated by plot.py at 2018-02-21 10:03:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 50.05 Mbit/s

95th percentile per-packet one-way delay: 54.489 ms

Loss rate: 0.90%

-- Flow 1:

Average throughput: 31.85 Mbit/s

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

Loss rate: 0.70%

-- Flow 2:

Average throughput: 21.87 Mbit/s

95th percentile per-packet one-way delay: 55.104 ms

Loss rate: 1.03%

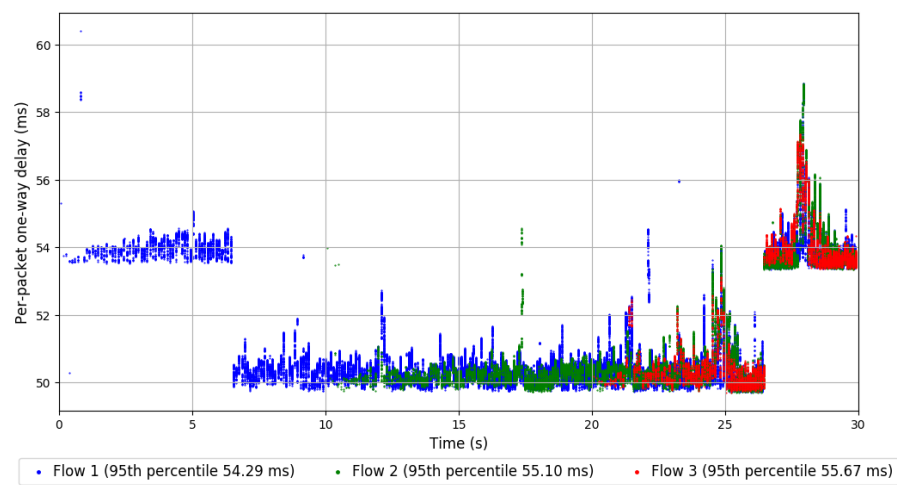
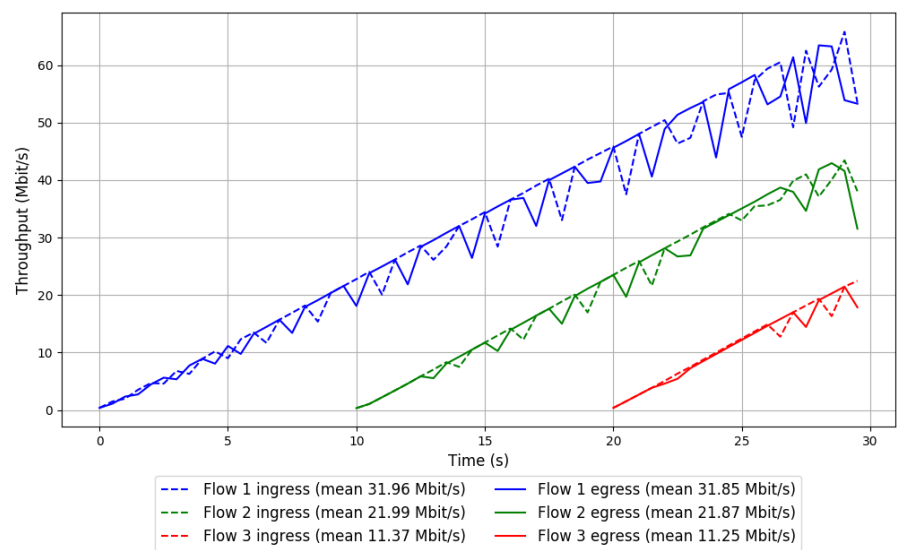
-- Flow 3:

Average throughput: 11.25 Mbit/s

95th percentile per-packet one-way delay: 55.674 ms

Loss rate: 2.04%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-02-21 04:14:39

End at: 2018-02-21 04:15:09

# Below is generated by plot.py at 2018-02-21 10:03:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 48.62 Mbit/s

95th percentile per-packet one-way delay: 54.625 ms

Loss rate: 0.90%

-- Flow 1:

Average throughput: 31.65 Mbit/s

95th percentile per-packet one-way delay: 54.498 ms

Loss rate: 0.70%

-- Flow 2:

Average throughput: 21.25 Mbit/s

95th percentile per-packet one-way delay: 54.951 ms

Loss rate: 1.05%

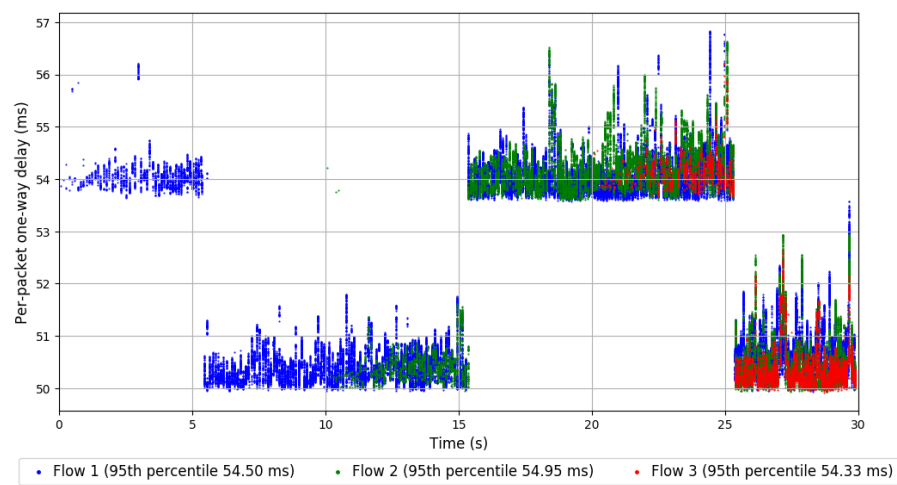
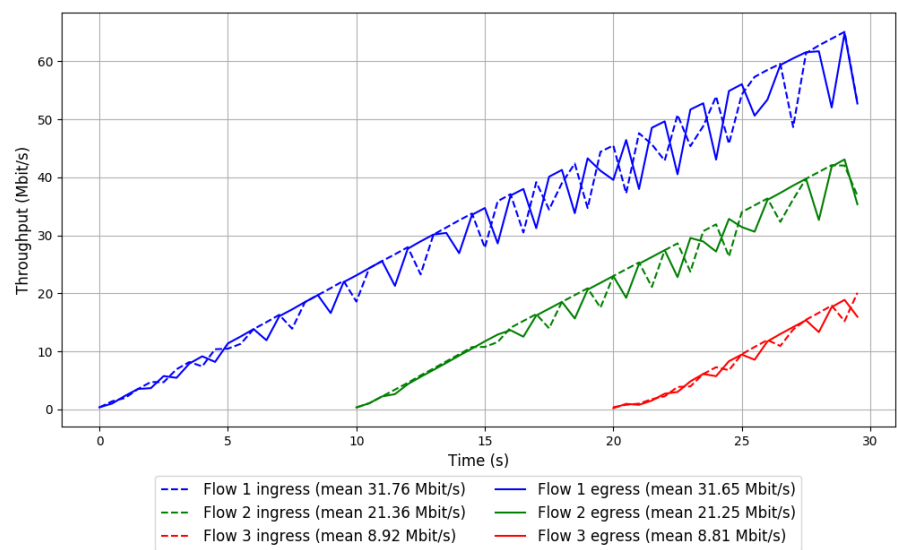
-- Flow 3:

Average throughput: 8.81 Mbit/s

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

Loss rate: 2.34%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-02-21 04:32:22

End at: 2018-02-21 04:32:52

# Below is generated by plot.py at 2018-02-21 10:03:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 48.98 Mbit/s

95th percentile per-packet one-way delay: 55.086 ms

Loss rate: 0.90%

-- Flow 1:

Average throughput: 31.67 Mbit/s

95th percentile per-packet one-way delay: 55.175 ms

Loss rate: 0.70%

-- Flow 2:

Average throughput: 21.00 Mbit/s

95th percentile per-packet one-way delay: 54.925 ms

Loss rate: 1.05%

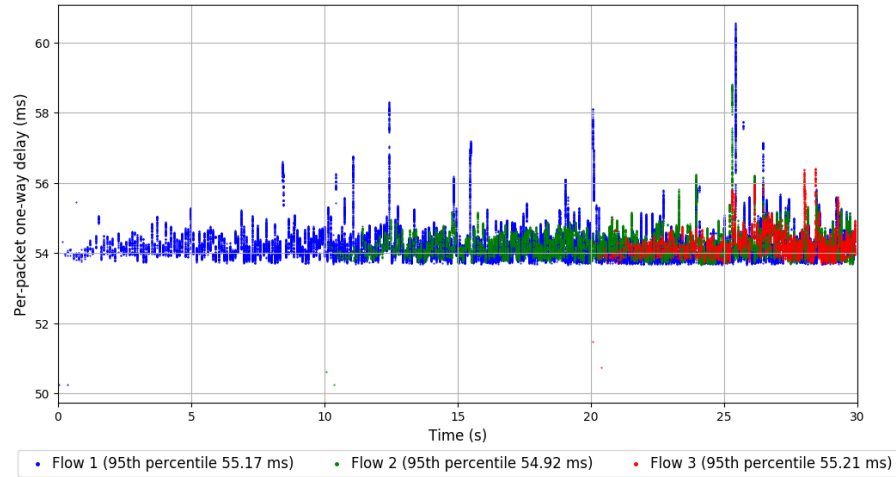
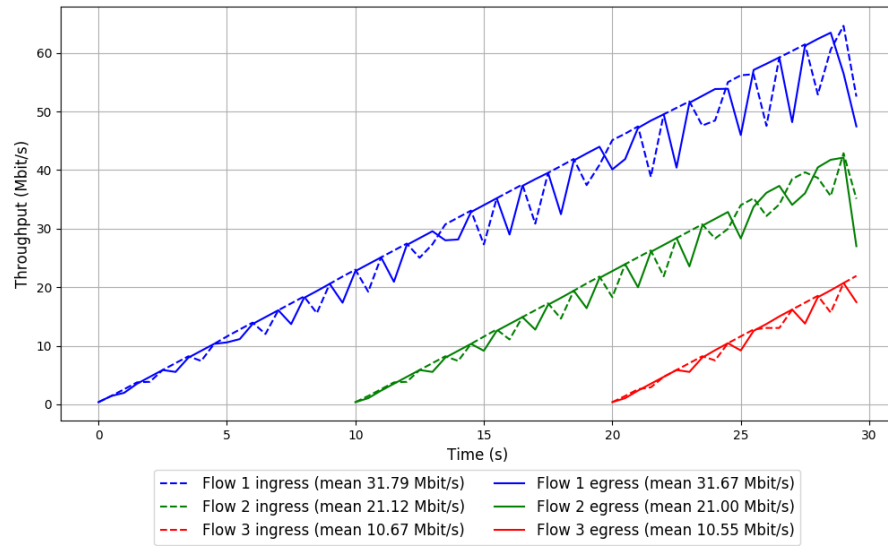
-- Flow 3:

Average throughput: 10.55 Mbit/s

95th percentile per-packet one-way delay: 55.212 ms

Loss rate: 2.11%

#### Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-02-21 04:49:36

End at: 2018-02-21 04:50:06

# Below is generated by plot.py at 2018-02-21 10:03:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 41.62 Mbit/s

95th percentile per-packet one-way delay: 54.847 ms

Loss rate: 0.91%

-- Flow 1:

Average throughput: 23.91 Mbit/s

95th percentile per-packet one-way delay: 54.890 ms

Loss rate: 0.65%

-- Flow 2:

Average throughput: 21.58 Mbit/s

95th percentile per-packet one-way delay: 54.812 ms

Loss rate: 1.05%

-- Flow 3:

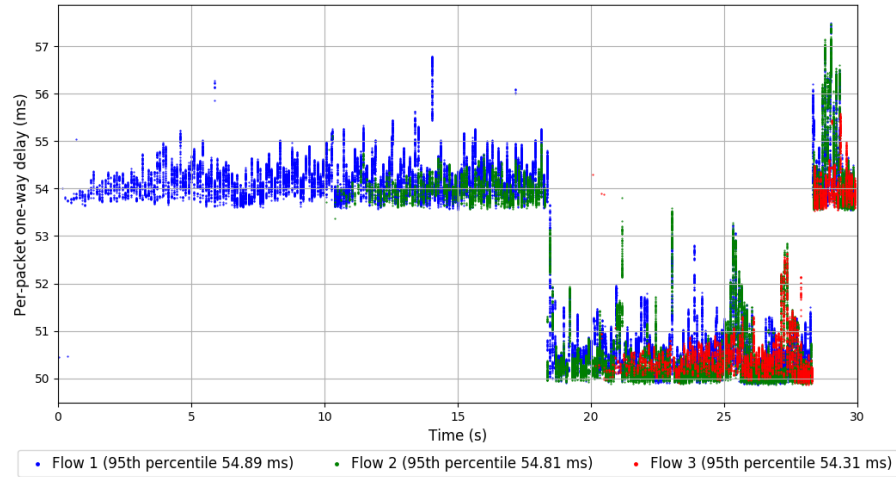
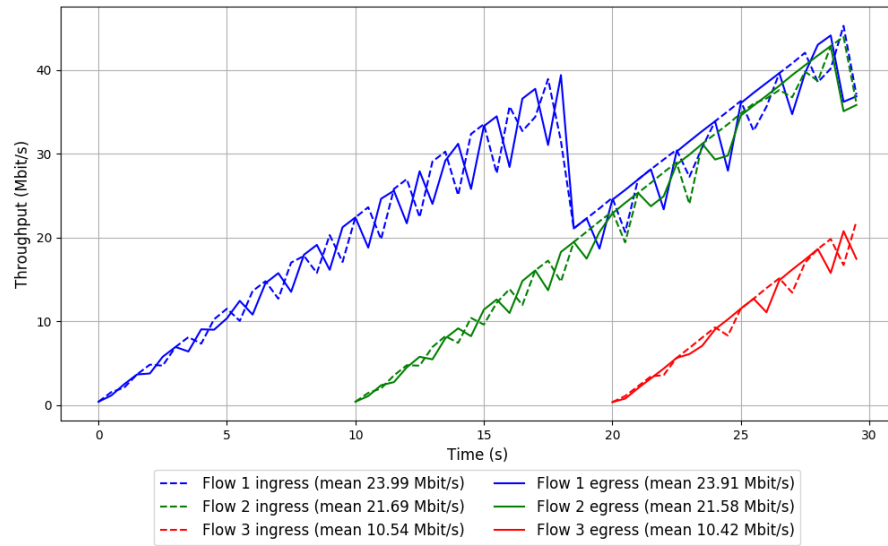
Average throughput: 10.42 Mbit/s

95th percentile per-packet one-way delay: 54.314 ms

Loss rate: 2.14%



## Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2018-02-21 05:07:22

End at: 2018-02-21 05:07:52

# Below is generated by plot.py at 2018-02-21 10:03:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 52.95 Mbit/s

95th percentile per-packet one-way delay: 51.752 ms

Loss rate: 0.88%

-- Flow 1:

Average throughput: 34.06 Mbit/s

95th percentile per-packet one-way delay: 51.602 ms

Loss rate: 0.68%

-- Flow 2:

Average throughput: 22.99 Mbit/s

95th percentile per-packet one-way delay: 52.031 ms

Loss rate: 1.02%

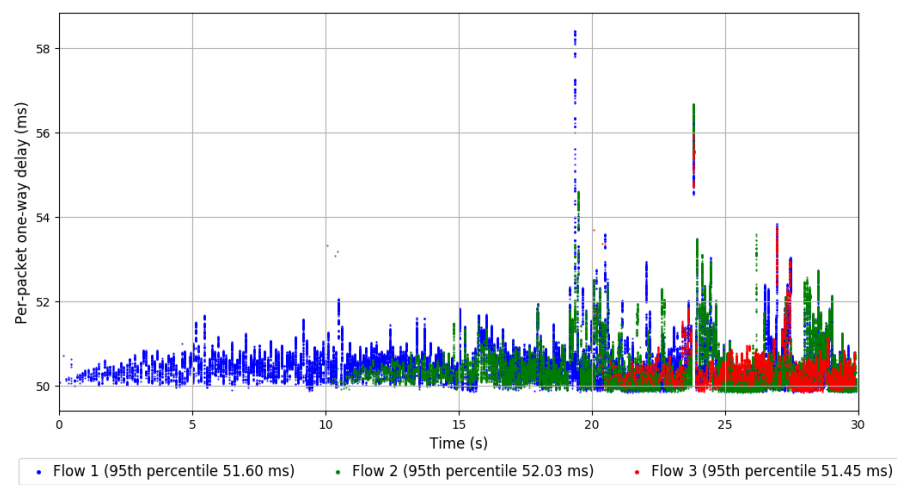
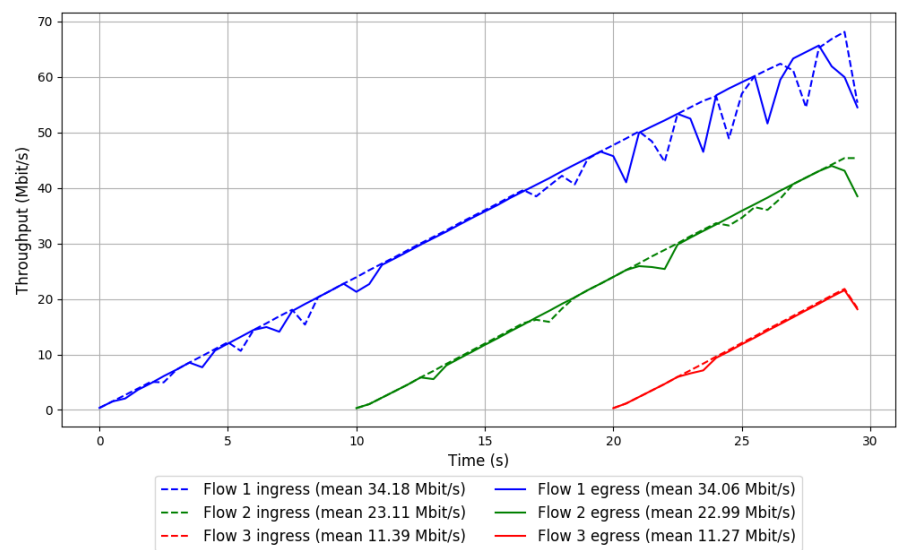
-- Flow 3:

Average throughput: 11.27 Mbit/s

95th percentile per-packet one-way delay: 51.454 ms

Loss rate: 2.08%

Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

Start at: 2018-02-21 05:25:03

End at: 2018-02-21 05:25:33

# Below is generated by plot.py at 2018-02-21 10:03:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 48.19 Mbit/s

95th percentile per-packet one-way delay: 55.311 ms

Loss rate: 0.91%

-- Flow 1:

Average throughput: 31.15 Mbit/s

95th percentile per-packet one-way delay: 55.227 ms

Loss rate: 0.70%

-- Flow 2:

Average throughput: 20.57 Mbit/s

95th percentile per-packet one-way delay: 55.820 ms

Loss rate: 1.08%

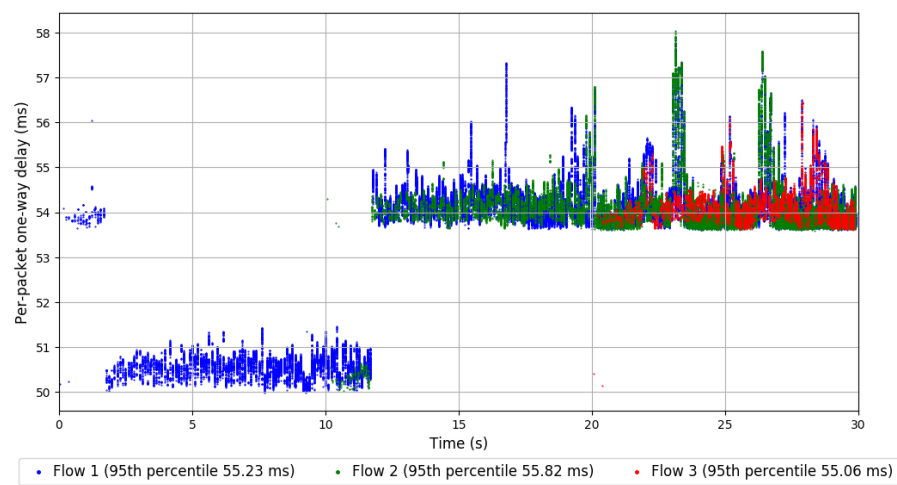
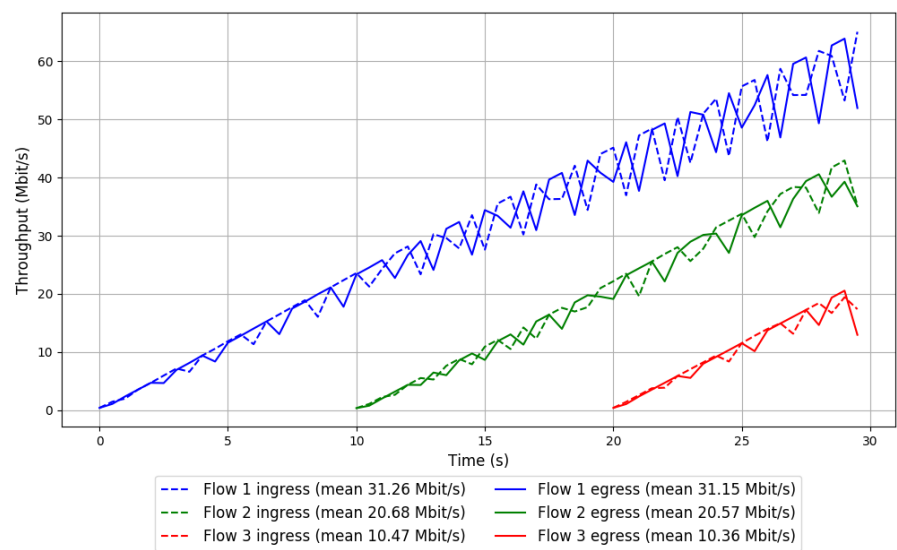
-- Flow 3:

Average throughput: 10.36 Mbit/s

95th percentile per-packet one-way delay: 55.061 ms

Loss rate: 2.14%

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2018-02-21 05:42:51

End at: 2018-02-21 05:43:21

# Below is generated by plot.py at 2018-02-21 10:03:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 49.76 Mbit/s

95th percentile per-packet one-way delay: 54.685 ms

Loss rate: 0.90%

-- Flow 1:

Average throughput: 32.56 Mbit/s

95th percentile per-packet one-way delay: 54.848 ms

Loss rate: 0.69%

-- Flow 2:

Average throughput: 20.33 Mbit/s

95th percentile per-packet one-way delay: 54.534 ms

Loss rate: 1.08%

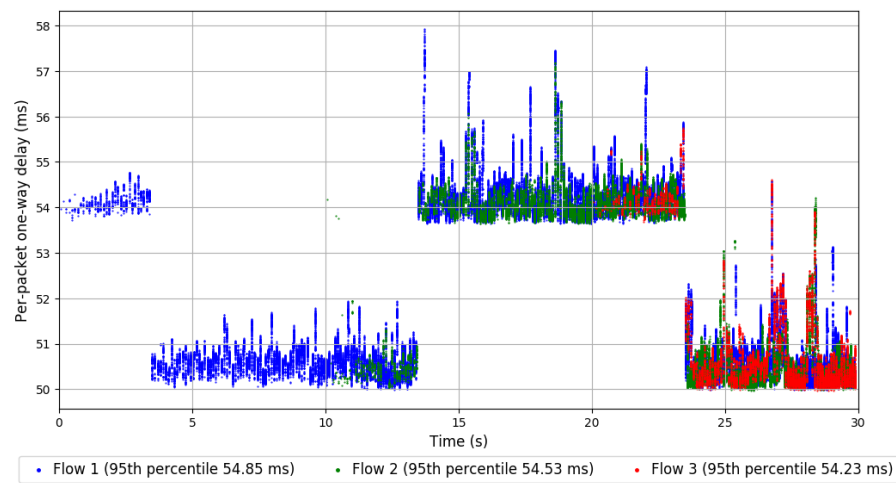
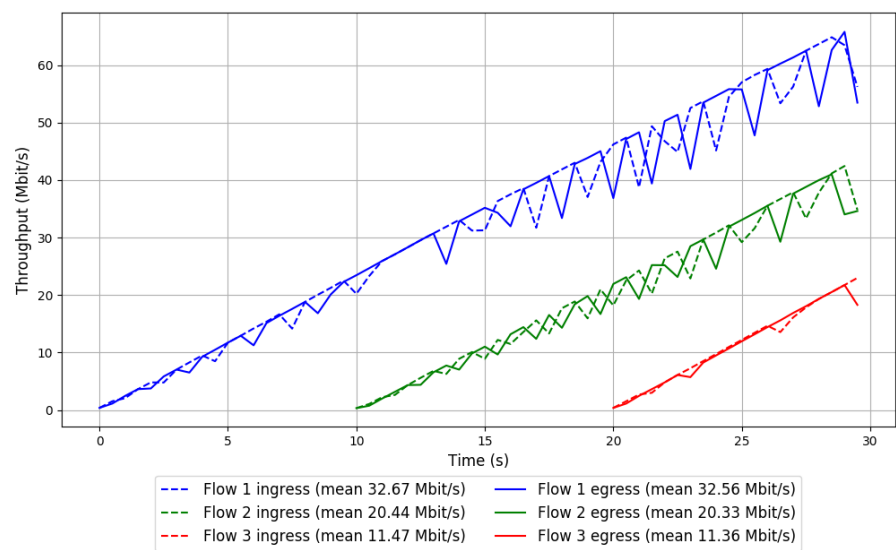
-- Flow 3:

Average throughput: 11.36 Mbit/s

95th percentile per-packet one-way delay: 54.230 ms

Loss rate: 2.06%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2018-02-21 06:00:23

End at: 2018-02-21 06:00:53

# Below is generated by plot.py at 2018-02-21 10:03:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 48.85 Mbit/s

95th percentile per-packet one-way delay: 55.803 ms

Loss rate: 0.84%

-- Flow 1:

Average throughput: 31.55 Mbit/s

95th percentile per-packet one-way delay: 55.207 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 22.39 Mbit/s

95th percentile per-packet one-way delay: 56.285 ms

Loss rate: 1.00%

-- Flow 3:

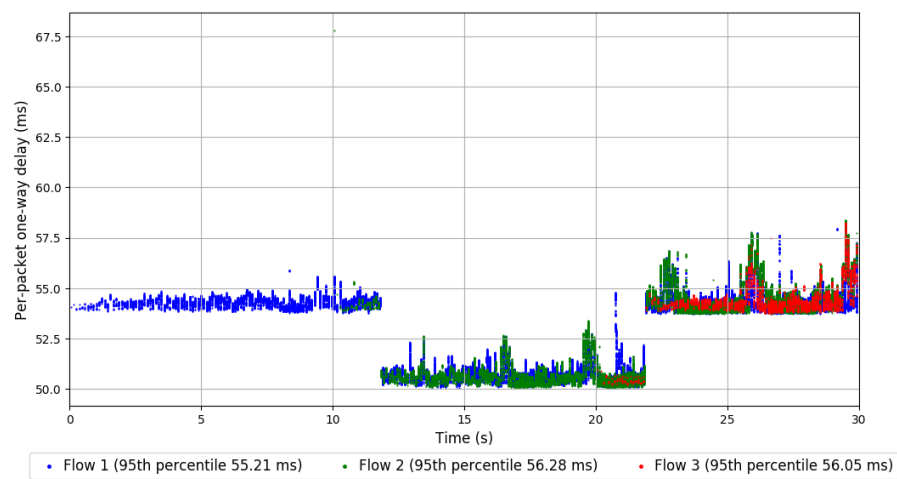
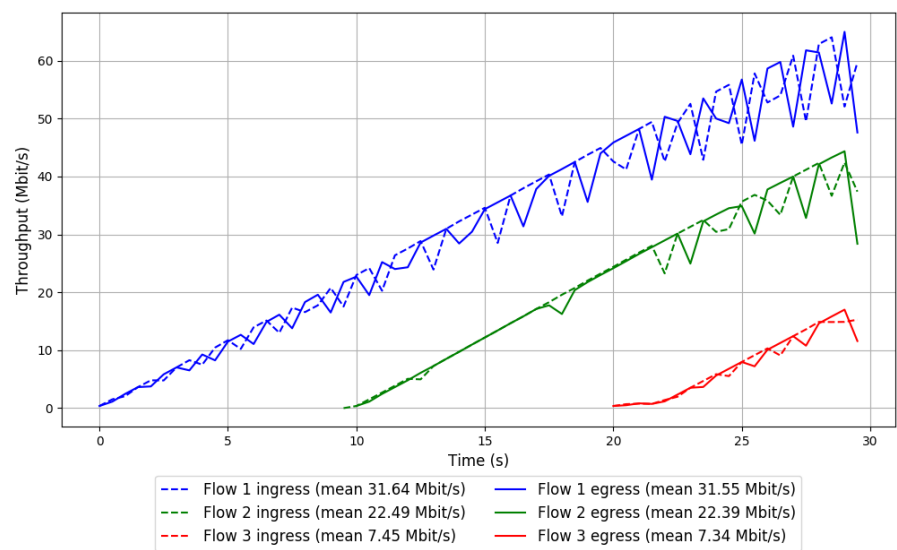
Average throughput: 7.34 Mbit/s

95th percentile per-packet one-way delay: 56.047 ms

Loss rate: 2.49%



Run 9: Report of LEDBAT — Data Link



Run 10: Statistics of LEDBAT

Start at: 2018-02-21 06:17:47

End at: 2018-02-21 06:18:17

# Below is generated by plot.py at 2018-02-21 10:03:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 44.27 Mbit/s

95th percentile per-packet one-way delay: 55.023 ms

Loss rate: 0.75%

-- Flow 1:

Average throughput: 28.72 Mbit/s

95th percentile per-packet one-way delay: 55.020 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 18.49 Mbit/s

95th percentile per-packet one-way delay: 55.197 ms

Loss rate: 1.14%

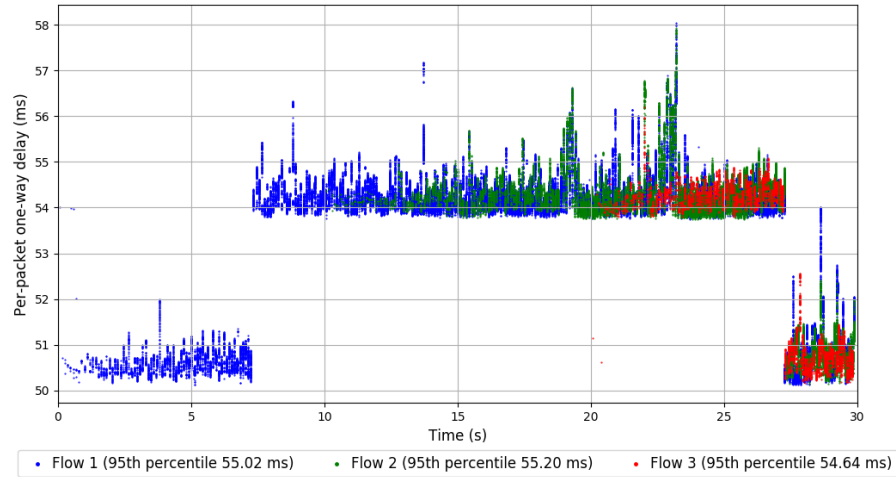
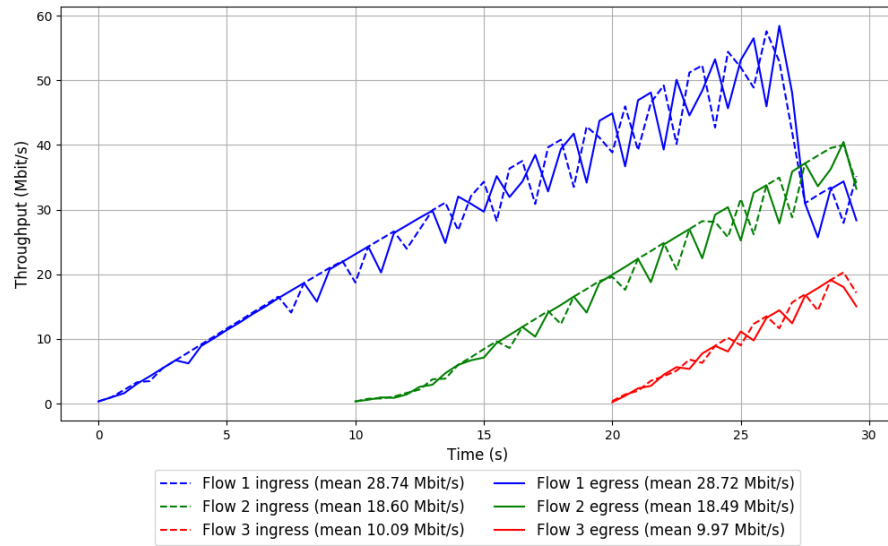
-- Flow 3:

Average throughput: 9.97 Mbit/s

95th percentile per-packet one-way delay: 54.644 ms

Loss rate: 2.20%

## Run 10: Report of LEDBAT — Data Link

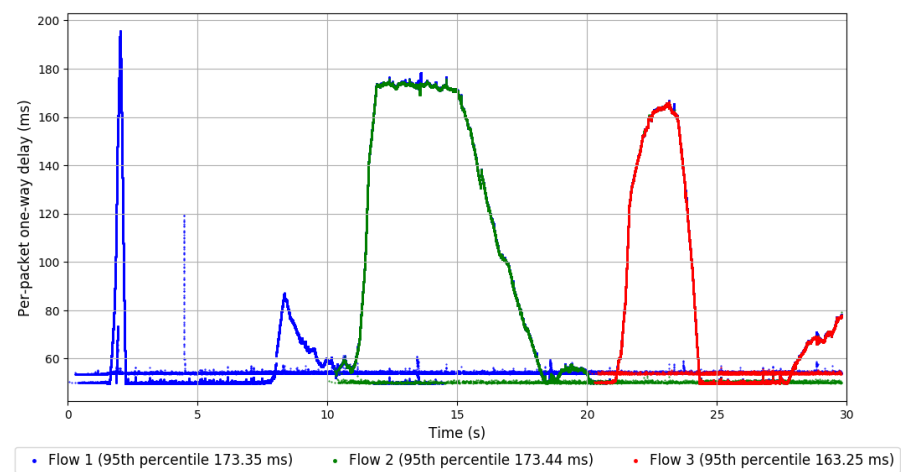
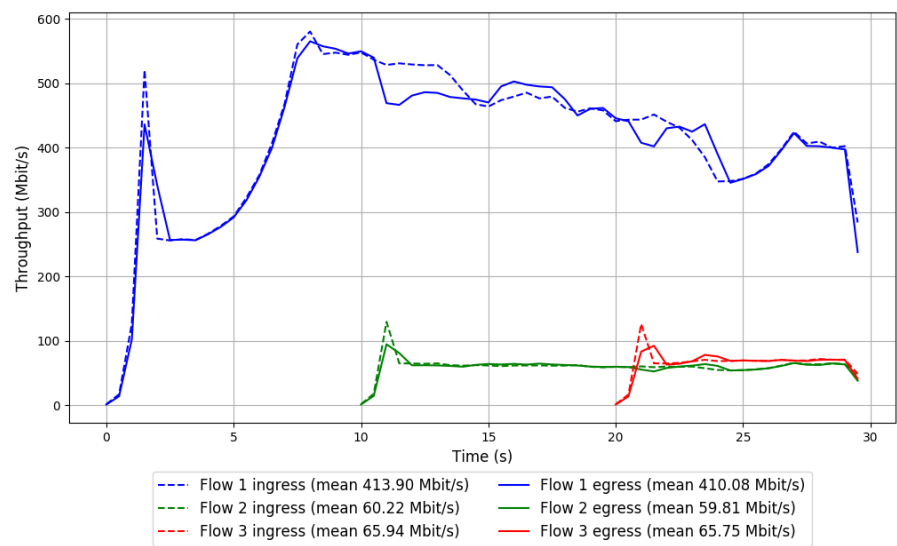


```
Run 1: Statistics of PCC

Start at: 2018-02-21 03:43:03
End at: 2018-02-21 03:43:33

# Below is generated by plot.py at 2018-02-21 10:09:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 471.26 Mbit/s
95th percentile per-packet one-way delay: 173.317 ms
Loss rate: 1.26%
-- Flow 1:
Average throughput: 410.08 Mbit/s
95th percentile per-packet one-way delay: 173.351 ms
Loss rate: 1.26%
-- Flow 2:
Average throughput: 59.81 Mbit/s
95th percentile per-packet one-way delay: 173.439 ms
Loss rate: 1.21%
-- Flow 3:
Average throughput: 65.75 Mbit/s
95th percentile per-packet one-way delay: 163.254 ms
Loss rate: 1.36%
```

Run 1: Report of PCC — Data Link

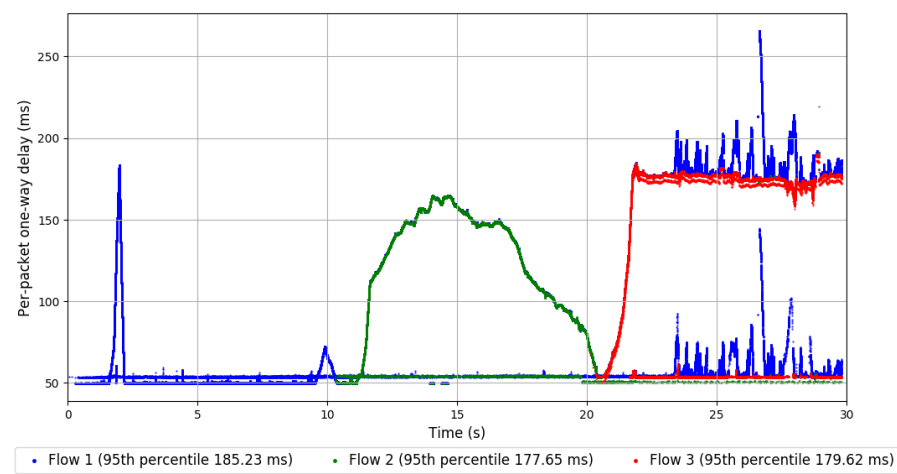
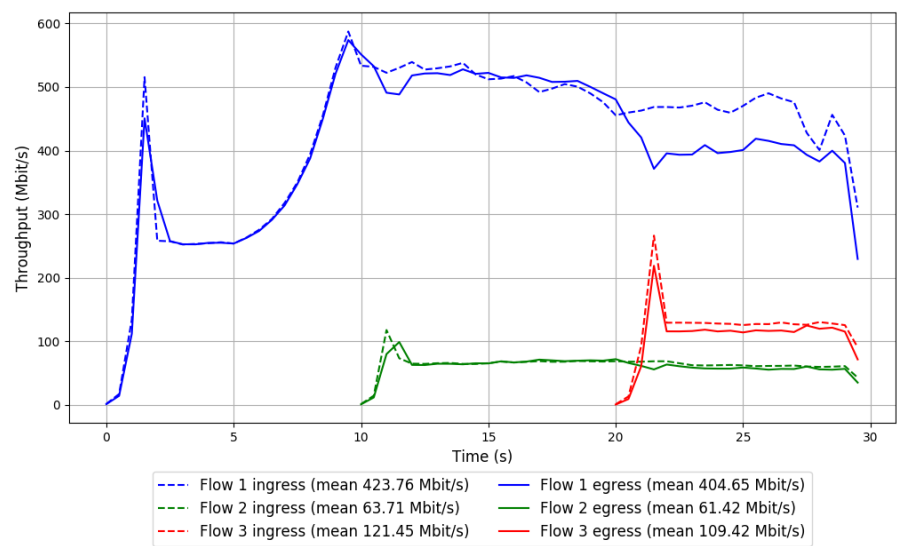


```
Run 2: Statistics of PCC

Start at: 2018-02-21 04:01:15
End at: 2018-02-21 04:01:45

# Below is generated by plot.py at 2018-02-21 10:09:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 480.91 Mbit/s
95th percentile per-packet one-way delay: 183.616 ms
Loss rate: 5.27%
-- Flow 1:
Average throughput: 404.65 Mbit/s
95th percentile per-packet one-way delay: 185.226 ms
Loss rate: 4.85%
-- Flow 2:
Average throughput: 61.42 Mbit/s
95th percentile per-packet one-way delay: 177.646 ms
Loss rate: 4.09%
-- Flow 3:
Average throughput: 109.42 Mbit/s
95th percentile per-packet one-way delay: 179.615 ms
Loss rate: 10.99%
```

Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2018-02-21 04:18:28

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

# Below is generated by plot.py at 2018-02-21 10:09:23

# Datalink statistics

-- Total of 3 flows:

Average throughput: 457.47 Mbit/s

95th percentile per-packet one-way delay: 144.911 ms

Loss rate: 0.54%

-- Flow 1:

Average throughput: 421.47 Mbit/s

95th percentile per-packet one-way delay: 146.167 ms

Loss rate: 0.51%

-- Flow 2:

Average throughput: 38.24 Mbit/s

95th percentile per-packet one-way delay: 145.397 ms

Loss rate: 0.75%

-- Flow 3:

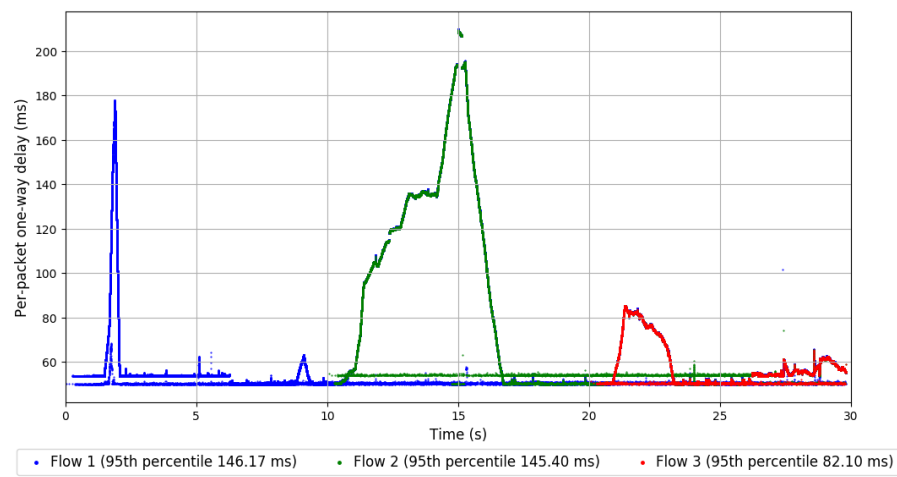
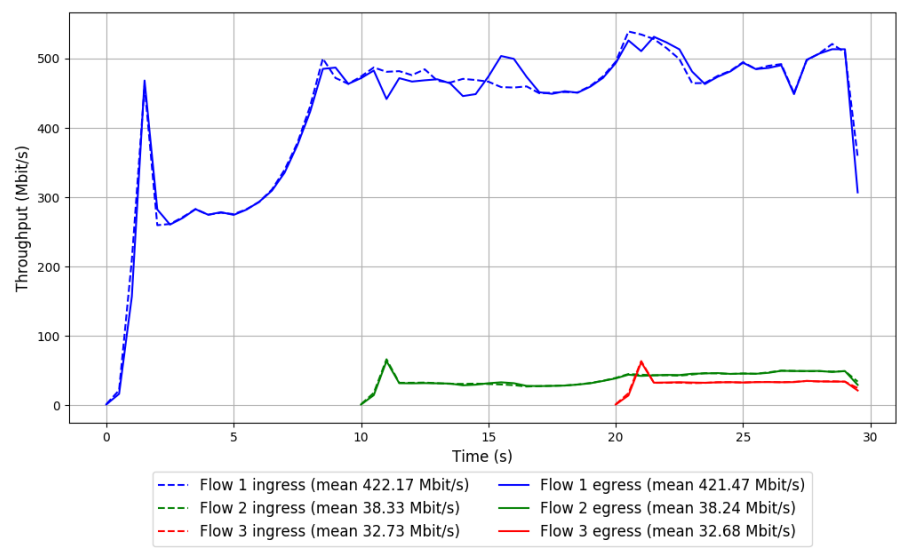
Average throughput: 32.68 Mbit/s

95th percentile per-packet one-way delay: 82.100 ms

Loss rate: 1.19%



Run 3: Report of PCC — Data Link



Run 4: Statistics of PCC

Start at: 2018-02-21 04:36:16

End at: 2018-02-21 04:36:46

# Below is generated by plot.py at 2018-02-21 10:10:12

# Datalink statistics

-- Total of 3 flows:

Average throughput: 490.75 Mbit/s

95th percentile per-packet one-way delay: 170.725 ms

Loss rate: 1.48%

-- Flow 1:

Average throughput: 428.37 Mbit/s

95th percentile per-packet one-way delay: 170.850 ms

Loss rate: 1.52%

-- Flow 2:

Average throughput: 34.01 Mbit/s

95th percentile per-packet one-way delay: 170.622 ms

Loss rate: 1.45%

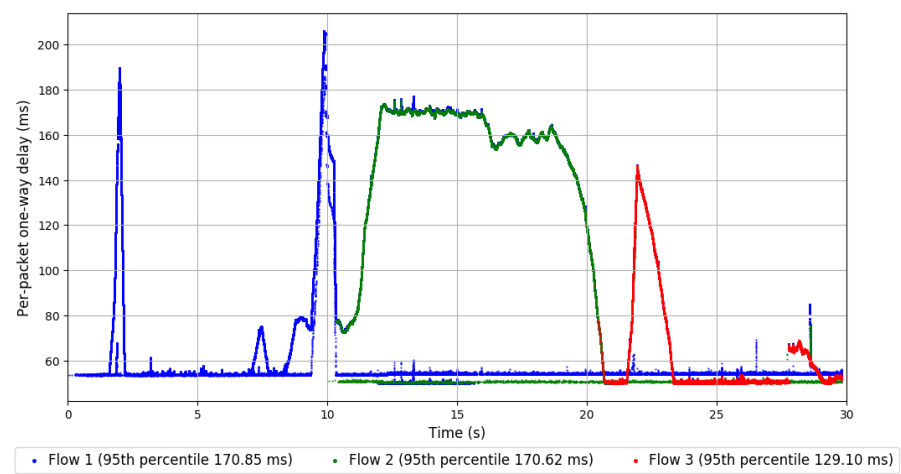
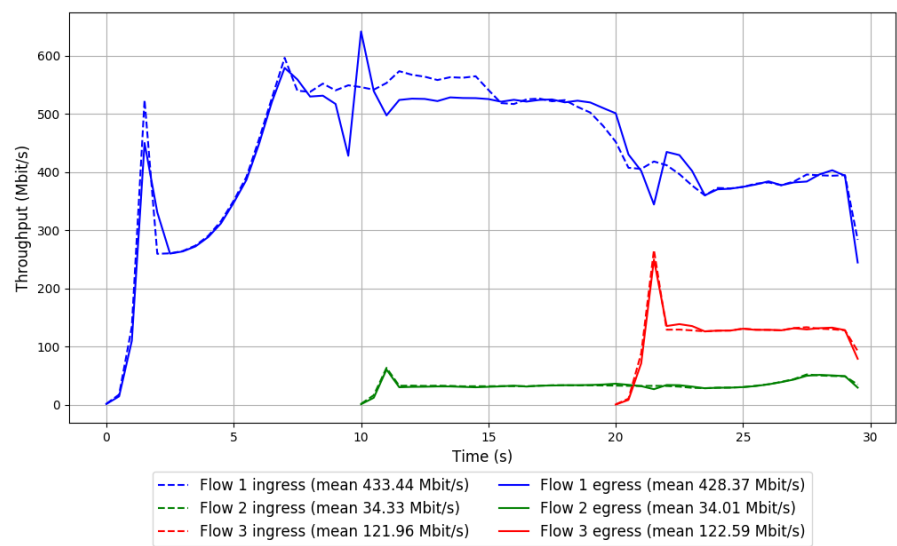
-- Flow 3:

Average throughput: 122.59 Mbit/s

95th percentile per-packet one-way delay: 129.101 ms

Loss rate: 1.11%

Run 4: Report of PCC — Data Link



Run 5: Statistics of PCC

Start at: 2018-02-21 04:53:32

End at: 2018-02-21 04:54:02

# Below is generated by plot.py at 2018-02-21 10:10:12

# Datalink statistics

-- Total of 3 flows:

Average throughput: 411.18 Mbit/s

95th percentile per-packet one-way delay: 189.498 ms

Loss rate: 3.33%

-- Flow 1:

Average throughput: 251.30 Mbit/s

95th percentile per-packet one-way delay: 189.399 ms

Loss rate: 2.59%

-- Flow 2:

Average throughput: 238.84 Mbit/s

95th percentile per-packet one-way delay: 189.601 ms

Loss rate: 4.44%

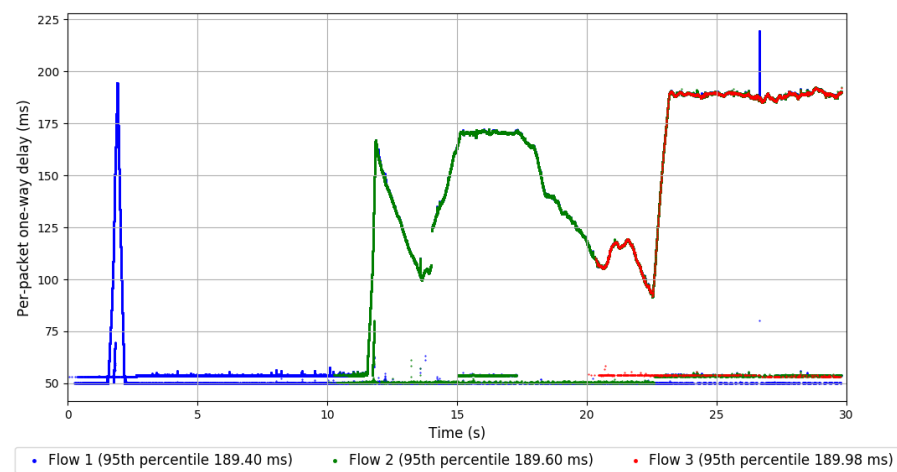
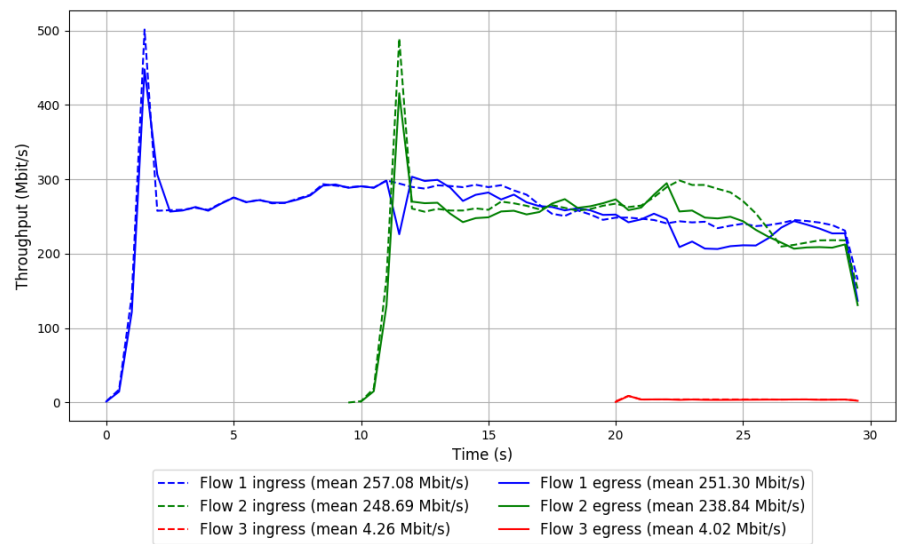
-- Flow 3:

Average throughput: 4.02 Mbit/s

95th percentile per-packet one-way delay: 189.983 ms

Loss rate: 6.59%

Run 5: Report of PCC — Data Link



Run 6: Statistics of PCC

Start at: 2018-02-21 05:11:18

End at: 2018-02-21 05:11:48

# Below is generated by plot.py at 2018-02-21 10:12:07

# Datalink statistics

-- Total of 3 flows:

Average throughput: 507.90 Mbit/s

95th percentile per-packet one-way delay: 183.796 ms

Loss rate: 1.29%

-- Flow 1:

Average throughput: 443.83 Mbit/s

95th percentile per-packet one-way delay: 184.020 ms

Loss rate: 1.30%

-- Flow 2:

Average throughput: 66.26 Mbit/s

95th percentile per-packet one-way delay: 166.888 ms

Loss rate: 0.79%

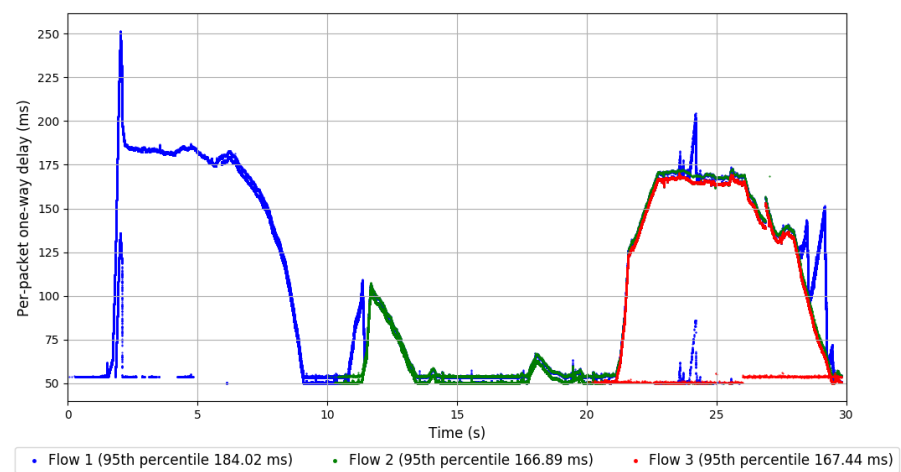
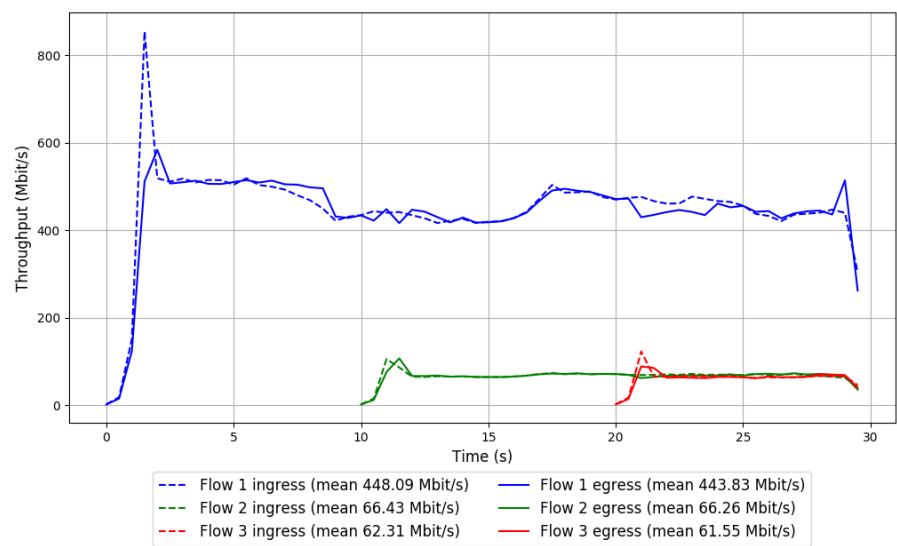
-- Flow 3:

Average throughput: 61.55 Mbit/s

95th percentile per-packet one-way delay: 167.438 ms

Loss rate: 2.24%

Run 6: Report of PCC — Data Link



Run 7: Statistics of PCC

Start at: 2018-02-21 05:29:04

End at: 2018-02-21 05:29:34

# Below is generated by plot.py at 2018-02-21 10:12:07

# Datalink statistics

-- Total of 3 flows:

Average throughput: 443.34 Mbit/s

95th percentile per-packet one-way delay: 187.326 ms

Loss rate: 3.04%

-- Flow 1:

Average throughput: 362.06 Mbit/s

95th percentile per-packet one-way delay: 187.243 ms

Loss rate: 3.08%

-- Flow 2:

Average throughput: 121.44 Mbit/s

95th percentile per-packet one-way delay: 187.687 ms

Loss rate: 2.83%

-- Flow 3:

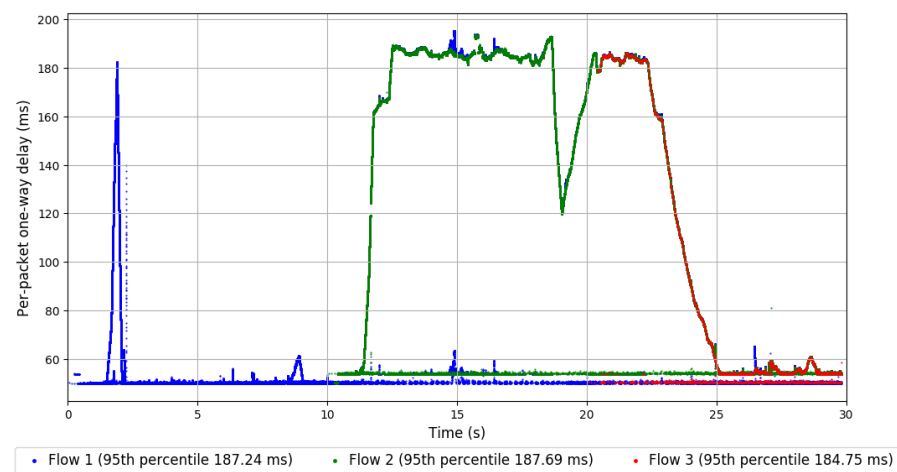
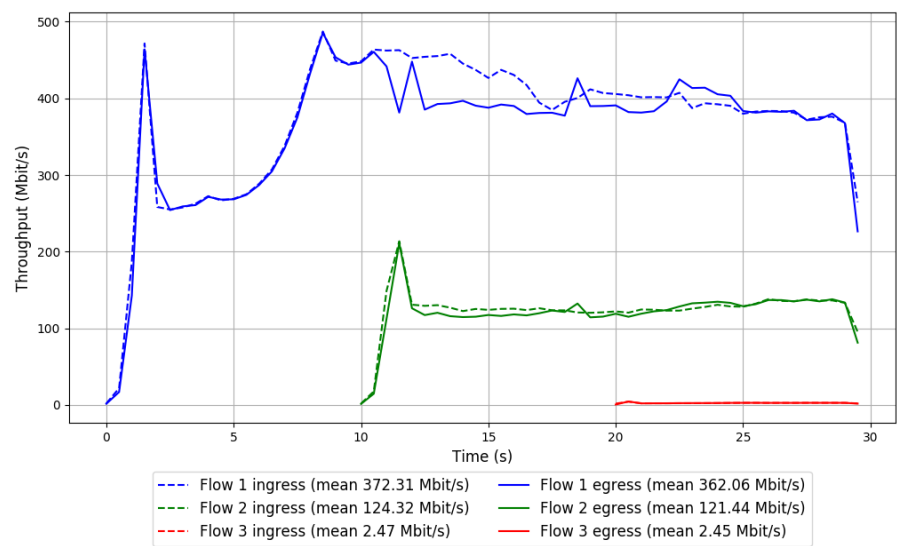
Average throughput: 2.45 Mbit/s

95th percentile per-packet one-way delay: 184.748 ms

Loss rate: 1.95%



Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2018-02-21 05:46:47

End at: 2018-02-21 05:47:17

# Below is generated by plot.py at 2018-02-21 10:12:07

# Datalink statistics

-- Total of 3 flows:

Average throughput: 464.06 Mbit/s

95th percentile per-packet one-way delay: 177.940 ms

Loss rate: 1.32%

-- Flow 1:

Average throughput: 422.65 Mbit/s

95th percentile per-packet one-way delay: 177.880 ms

Loss rate: 1.32%

-- Flow 2:

Average throughput: 61.52 Mbit/s

95th percentile per-packet one-way delay: 178.735 ms

Loss rate: 1.28%

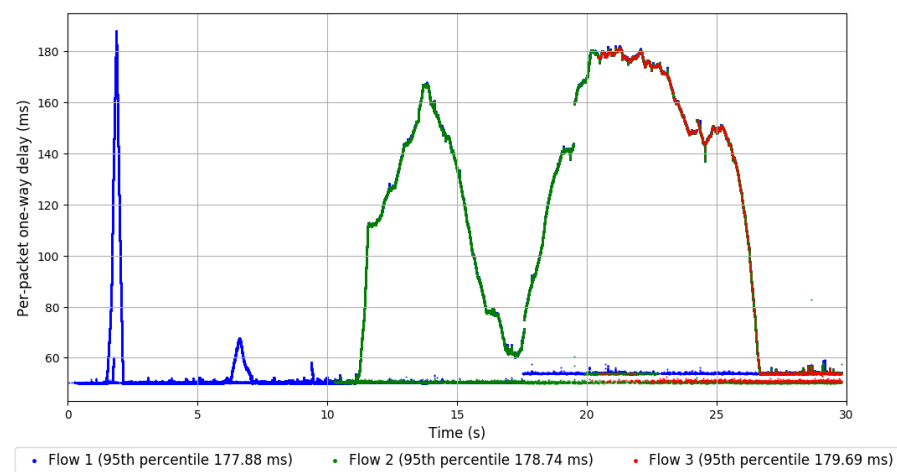
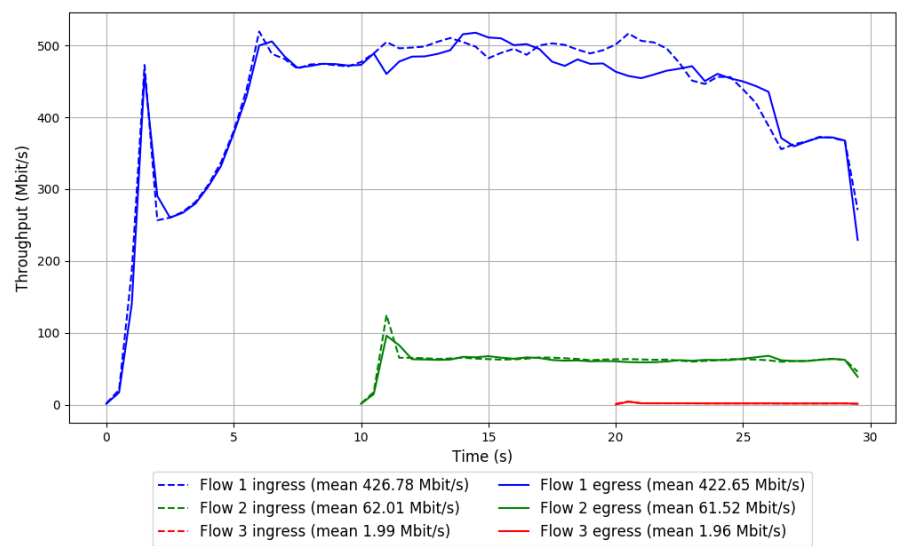
-- Flow 3:

Average throughput: 1.96 Mbit/s

95th percentile per-packet one-way delay: 179.690 ms

Loss rate: 2.55%

Run 8: Report of PCC — Data Link



Run 9: Statistics of PCC

Start at: 2018-02-21 06:04:15

End at: 2018-02-21 06:04:45

# Below is generated by plot.py at 2018-02-21 10:16:47

# Datalink statistics

-- Total of 3 flows:

Average throughput: 416.24 Mbit/s

95th percentile per-packet one-way delay: 133.128 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 373.81 Mbit/s

95th percentile per-packet one-way delay: 133.003 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 32.68 Mbit/s

95th percentile per-packet one-way delay: 133.619 ms

Loss rate: 0.70%

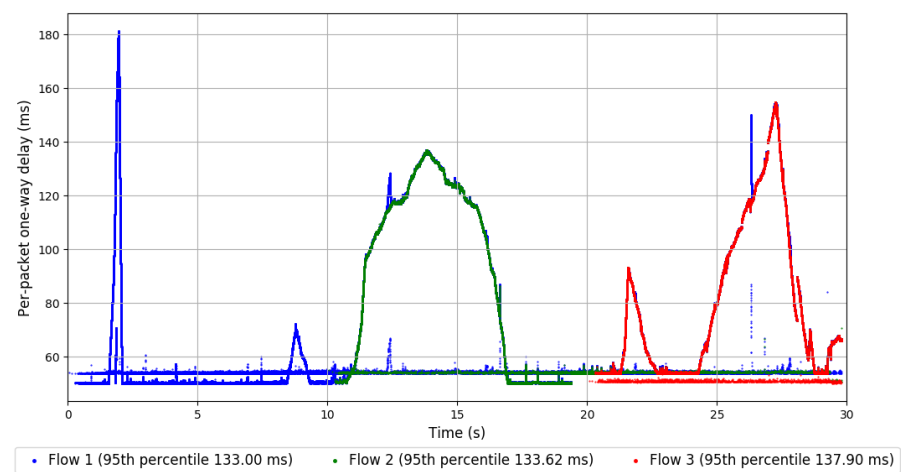
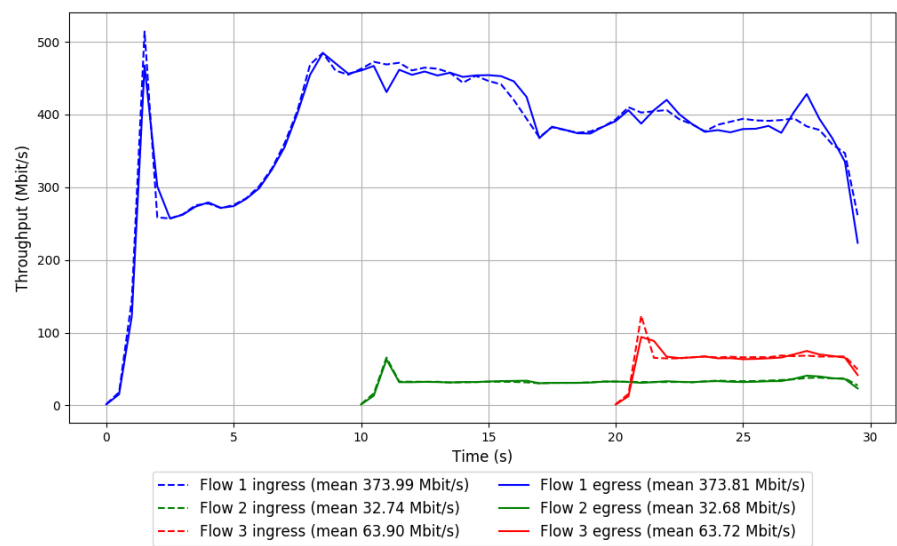
-- Flow 3:

Average throughput: 63.72 Mbit/s

95th percentile per-packet one-way delay: 137.895 ms

Loss rate: 1.31%

Run 9: Report of PCC — Data Link

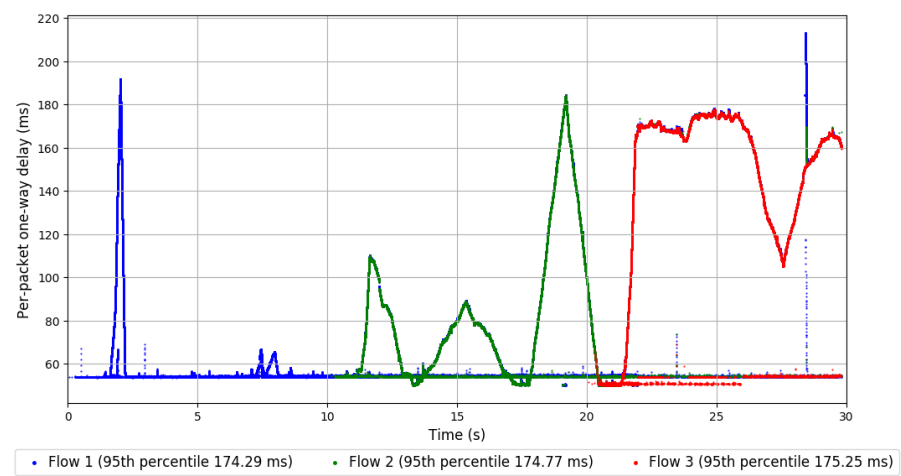
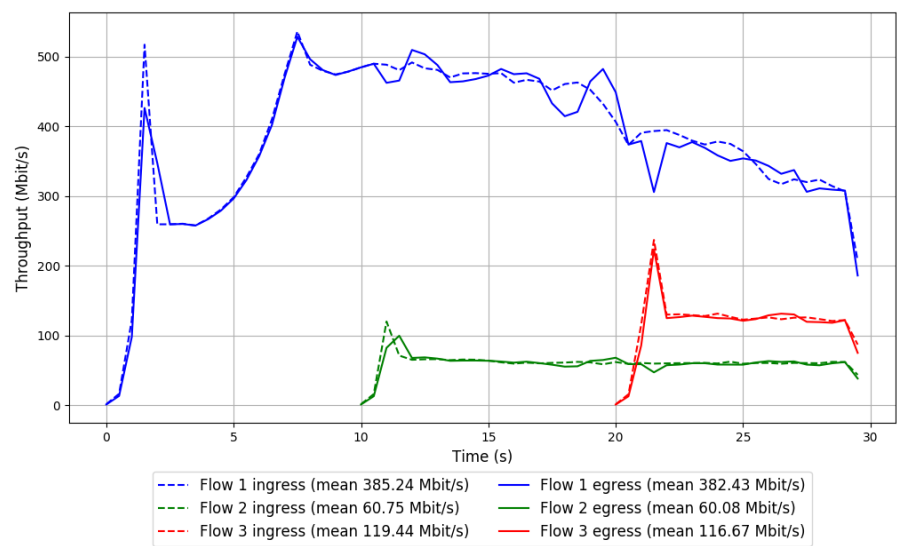


```
Run 10: Statistics of PCC

Start at: 2018-02-21 06:21:42
End at: 2018-02-21 06:22:12

# Below is generated by plot.py at 2018-02-21 10:17:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 460.36 Mbit/s
95th percentile per-packet one-way delay: 174.570 ms
Loss rate: 1.31%
-- Flow 1:
Average throughput: 382.43 Mbit/s
95th percentile per-packet one-way delay: 174.292 ms
Loss rate: 1.08%
-- Flow 2:
Average throughput: 60.08 Mbit/s
95th percentile per-packet one-way delay: 174.769 ms
Loss rate: 1.59%
-- Flow 3:
Average throughput: 116.67 Mbit/s
95th percentile per-packet one-way delay: 175.246 ms
Loss rate: 3.34%
```

Run 10: Report of PCC — Data Link



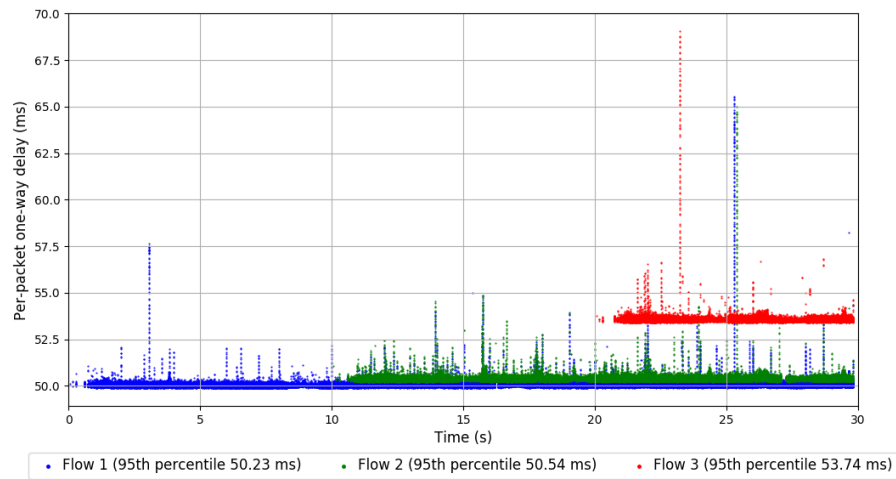
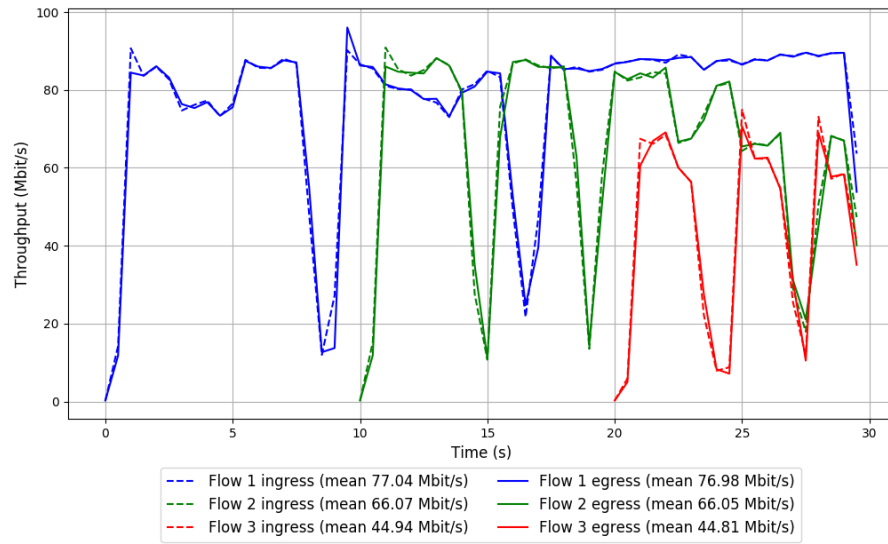
```
Run 1: Statistics of QUIC Cubic

Start at: 2018-02-21 03:42:16
End at: 2018-02-21 03:42:46

# Below is generated by plot.py at 2018-02-21 10:17:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 135.49 Mbit/s
95th percentile per-packet one-way delay: 53.560 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 76.98 Mbit/s
95th percentile per-packet one-way delay: 50.225 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 66.05 Mbit/s
95th percentile per-packet one-way delay: 50.538 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 44.81 Mbit/s
95th percentile per-packet one-way delay: 53.738 ms
Loss rate: 1.38%
```



# Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-02-21 04:00:28

End at: 2018-02-21 04:00:58

# Below is generated by plot.py at 2018-02-21 10:17:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 123.85 Mbit/s

95th percentile per-packet one-way delay: 53.696 ms

Loss rate: 0.55%

-- Flow 1:

Average throughput: 75.04 Mbit/s

95th percentile per-packet one-way delay: 53.733 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 63.89 Mbit/s

95th percentile per-packet one-way delay: 50.506 ms

Loss rate: 0.51%

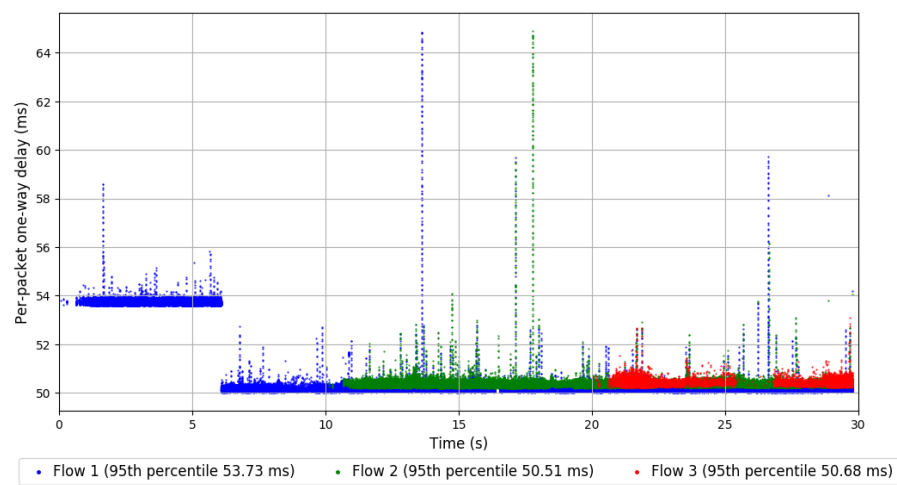
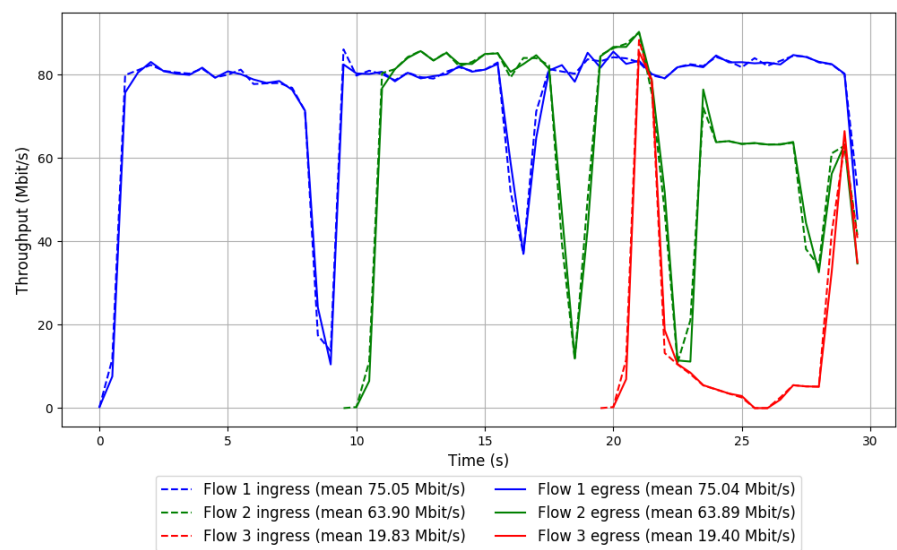
-- Flow 3:

Average throughput: 19.40 Mbit/s

95th percentile per-packet one-way delay: 50.676 ms

Loss rate: 3.16%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-02-21 04:17:44

End at: 2018-02-21 04:18:14

# Below is generated by plot.py at 2018-02-21 10:17:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 87.59 Mbit/s

95th percentile per-packet one-way delay: 54.004 ms

Loss rate: 0.38%

-- Flow 1:

Average throughput: 57.17 Mbit/s

95th percentile per-packet one-way delay: 53.952 ms

Loss rate: 0.07%

-- Flow 2:

Average throughput: 38.58 Mbit/s

95th percentile per-packet one-way delay: 53.947 ms

Loss rate: 1.12%

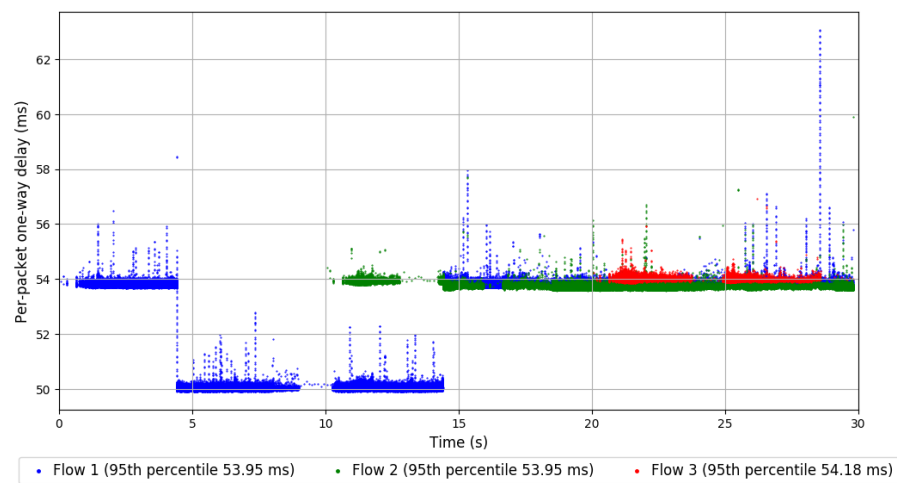
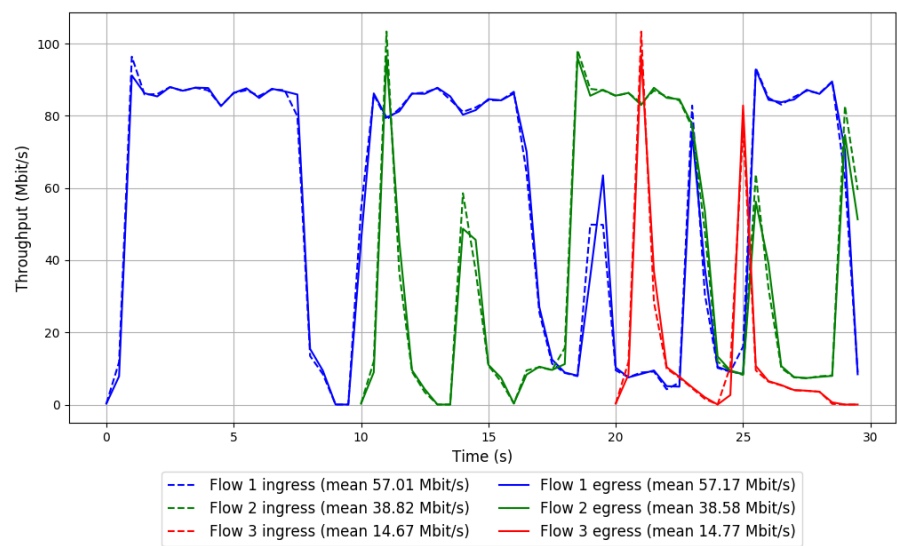
-- Flow 3:

Average throughput: 14.77 Mbit/s

95th percentile per-packet one-way delay: 54.179 ms

Loss rate: 0.00%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-02-21 04:35:30

End at: 2018-02-21 04:36:00

# Below is generated by plot.py at 2018-02-21 10:17:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 118.11 Mbit/s

95th percentile per-packet one-way delay: 53.897 ms

Loss rate: 0.35%

-- Flow 1:

Average throughput: 78.38 Mbit/s

95th percentile per-packet one-way delay: 53.916 ms

Loss rate: 0.14%

-- Flow 2:

Average throughput: 52.78 Mbit/s

95th percentile per-packet one-way delay: 53.824 ms

Loss rate: 0.86%

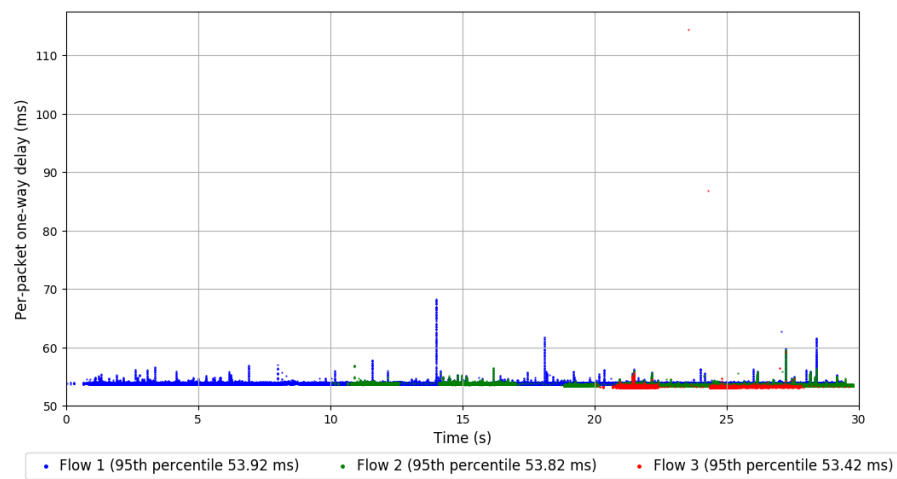
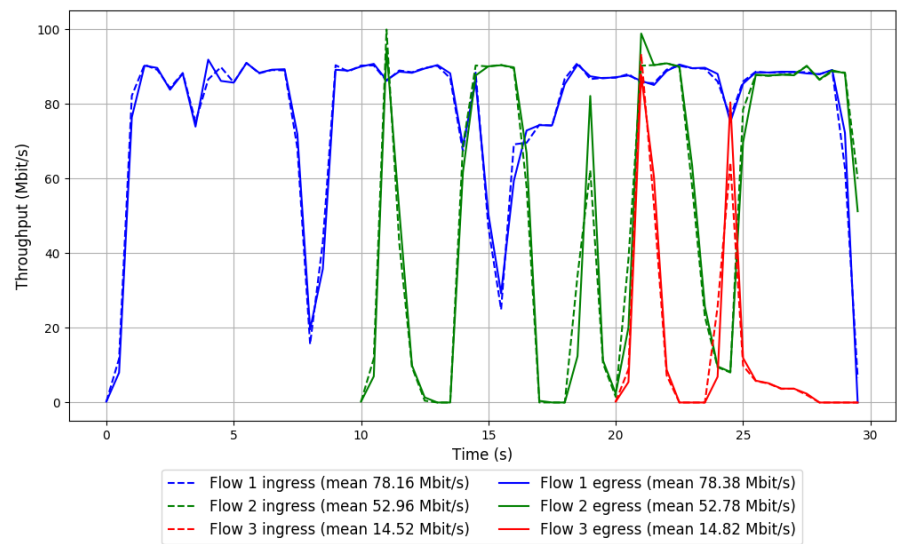
-- Flow 3:

Average throughput: 14.82 Mbit/s

95th percentile per-packet one-way delay: 53.423 ms

Loss rate: 0.00%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-02-21 04:52:47

End at: 2018-02-21 04:53:17

# Below is generated by plot.py at 2018-02-21 10:17:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.70 Mbit/s

95th percentile per-packet one-way delay: 53.884 ms

Loss rate: 0.69%

-- Flow 1:

Average throughput: 54.51 Mbit/s

95th percentile per-packet one-way delay: 53.866 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 46.23 Mbit/s

95th percentile per-packet one-way delay: 53.943 ms

Loss rate: 0.75%

-- Flow 3:

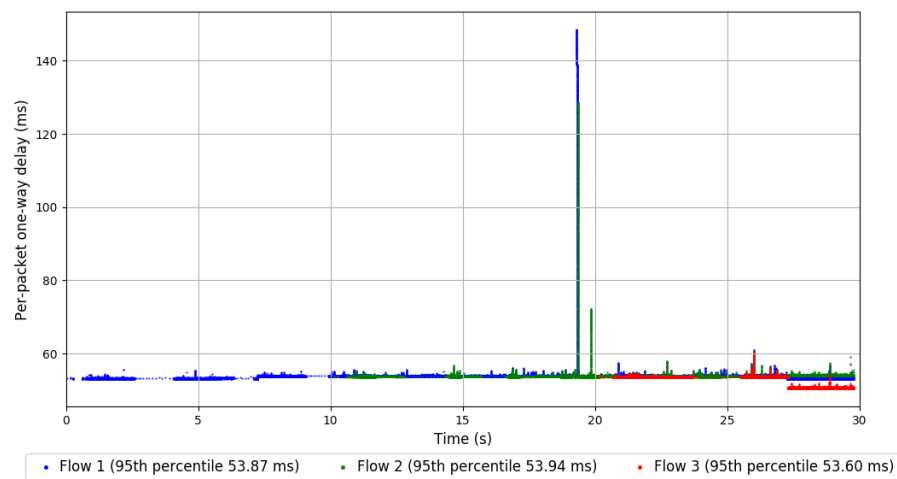
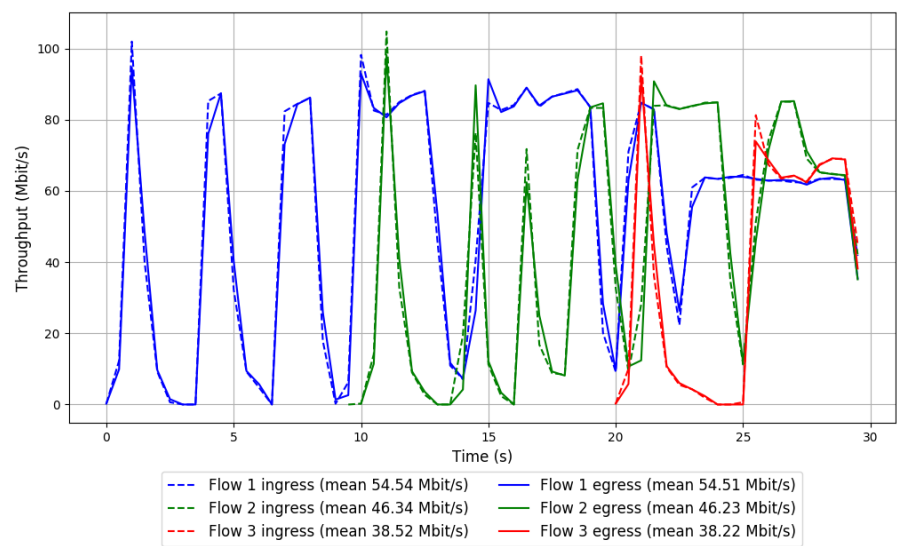
Average throughput: 38.22 Mbit/s

95th percentile per-packet one-way delay: 53.600 ms

Loss rate: 1.83%



Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2018-02-21 05:10:35

End at: 2018-02-21 05:11:05

# Below is generated by plot.py at 2018-02-21 10:17:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 77.85 Mbit/s

95th percentile per-packet one-way delay: 53.741 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 40.02 Mbit/s

95th percentile per-packet one-way delay: 53.742 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 46.97 Mbit/s

95th percentile per-packet one-way delay: 53.751 ms

Loss rate: 0.88%

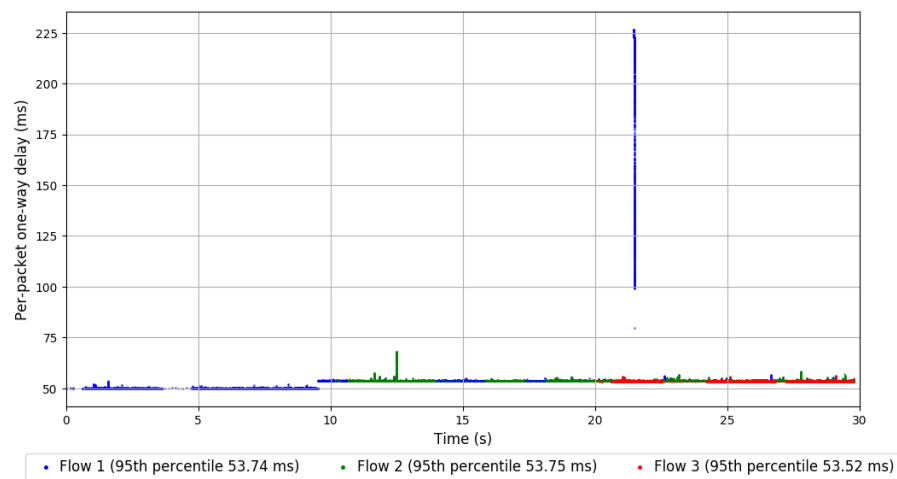
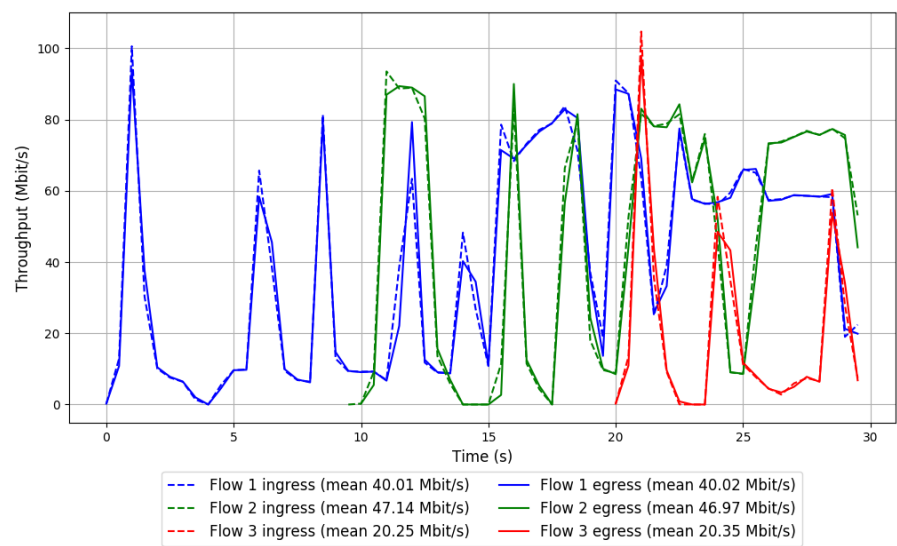
-- Flow 3:

Average throughput: 20.35 Mbit/s

95th percentile per-packet one-way delay: 53.522 ms

Loss rate: 0.52%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2018-02-21 05:28:18

End at: 2018-02-21 05:28:48

# Below is generated by plot.py at 2018-02-21 10:17:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 113.81 Mbit/s

95th percentile per-packet one-way delay: 53.889 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 54.42 Mbit/s

95th percentile per-packet one-way delay: 50.735 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 70.22 Mbit/s

95th percentile per-packet one-way delay: 53.821 ms

Loss rate: 0.53%

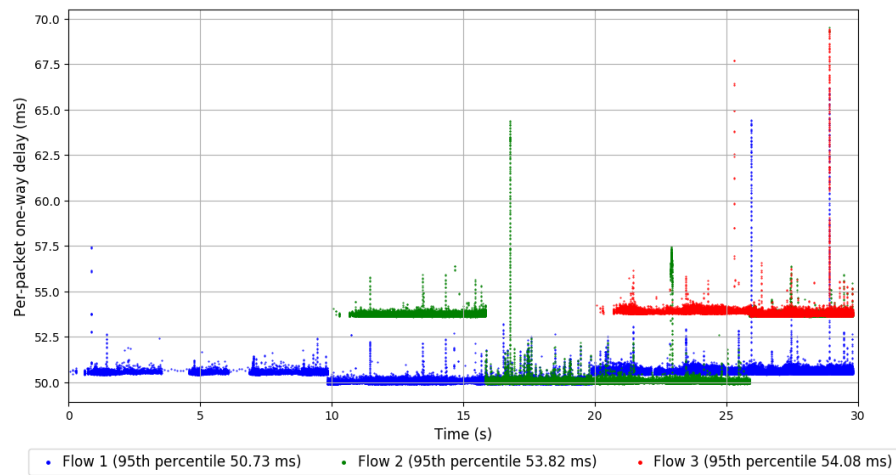
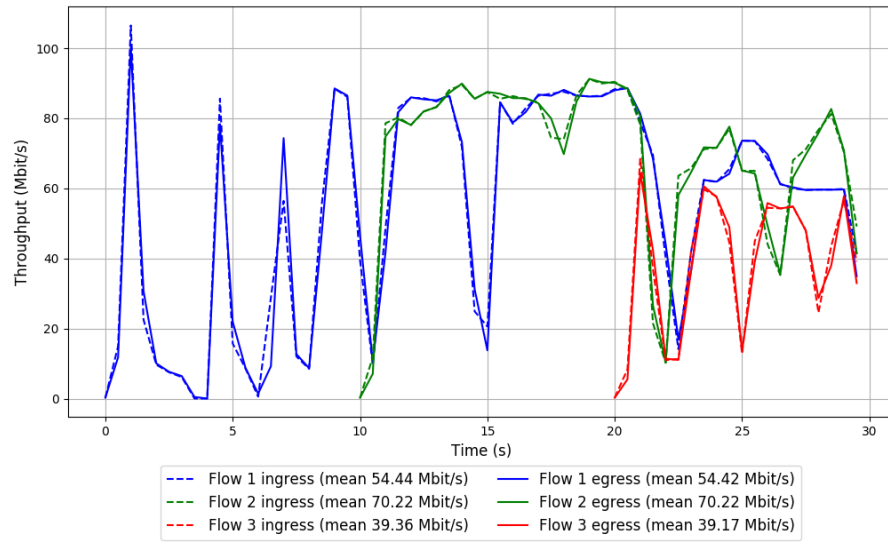
-- Flow 3:

Average throughput: 39.17 Mbit/s

95th percentile per-packet one-way delay: 54.077 ms

Loss rate: 1.54%

## Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2018-02-21 05:46:02

End at: 2018-02-21 05:46:32

# Below is generated by plot.py at 2018-02-21 10:17:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.73 Mbit/s

95th percentile per-packet one-way delay: 54.036 ms

Loss rate: 0.32%

-- Flow 1:

Average throughput: 48.91 Mbit/s

95th percentile per-packet one-way delay: 50.655 ms

Loss rate: 0.47%

-- Flow 2:

Average throughput: 42.41 Mbit/s

95th percentile per-packet one-way delay: 53.972 ms

Loss rate: 0.16%

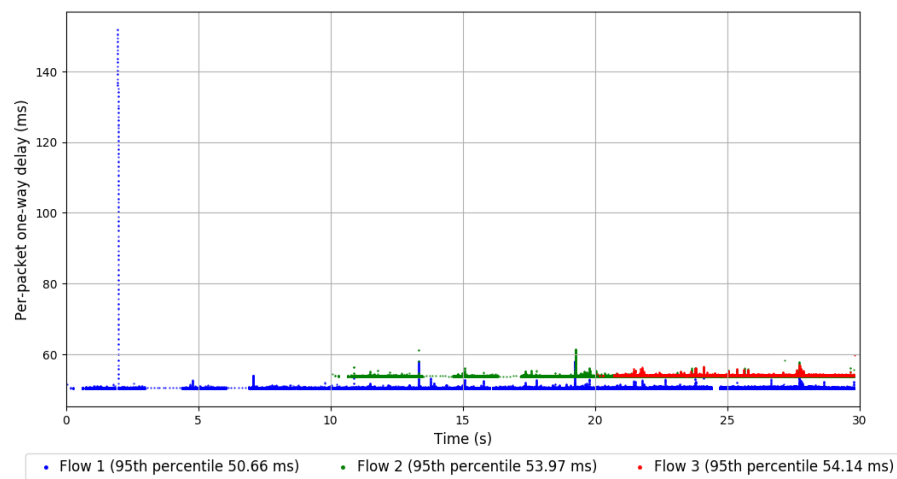
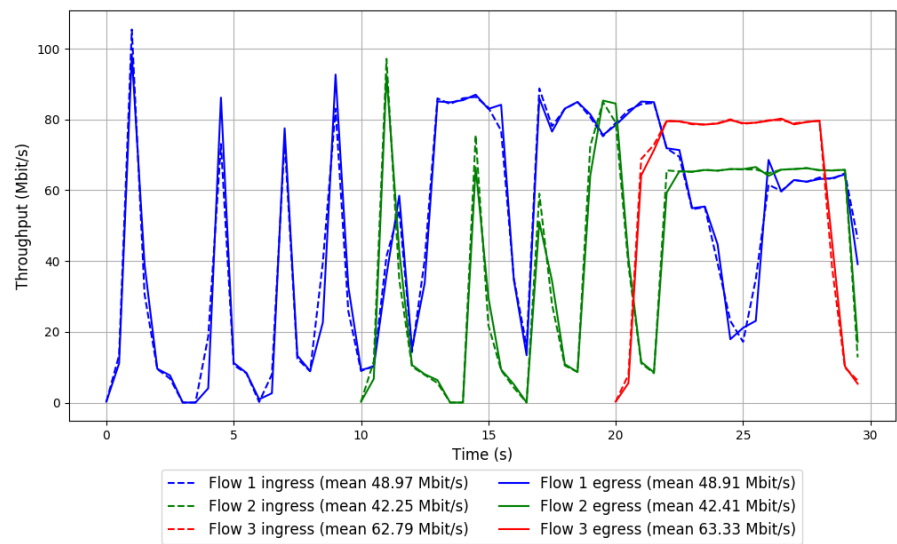
-- Flow 3:

Average throughput: 63.33 Mbit/s

95th percentile per-packet one-way delay: 54.142 ms

Loss rate: 0.16%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2018-02-21 06:03:32

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

# Below is generated by plot.py at 2018-02-21 10:17:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 69.61 Mbit/s

95th percentile per-packet one-way delay: 54.119 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 37.39 Mbit/s

95th percentile per-packet one-way delay: 54.142 ms

Loss rate: 0.10%

-- Flow 2:

Average throughput: 40.08 Mbit/s

95th percentile per-packet one-way delay: 54.090 ms

Loss rate: 1.08%

-- Flow 3:

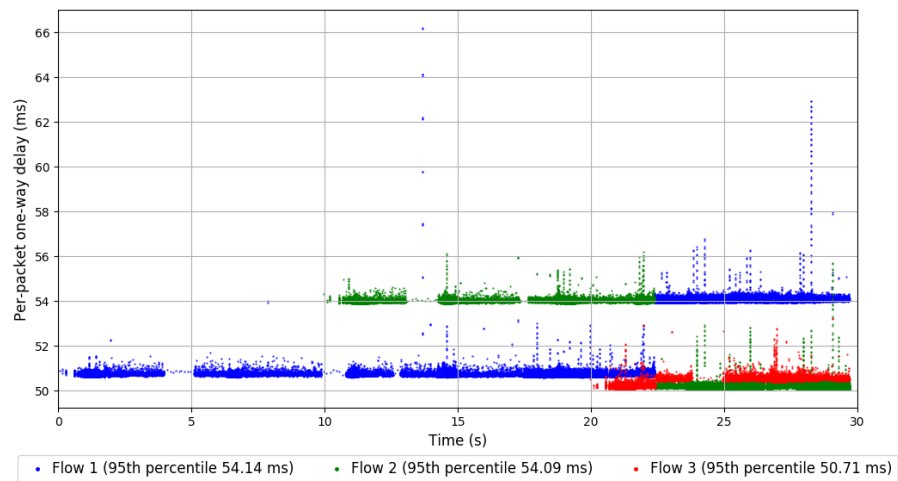
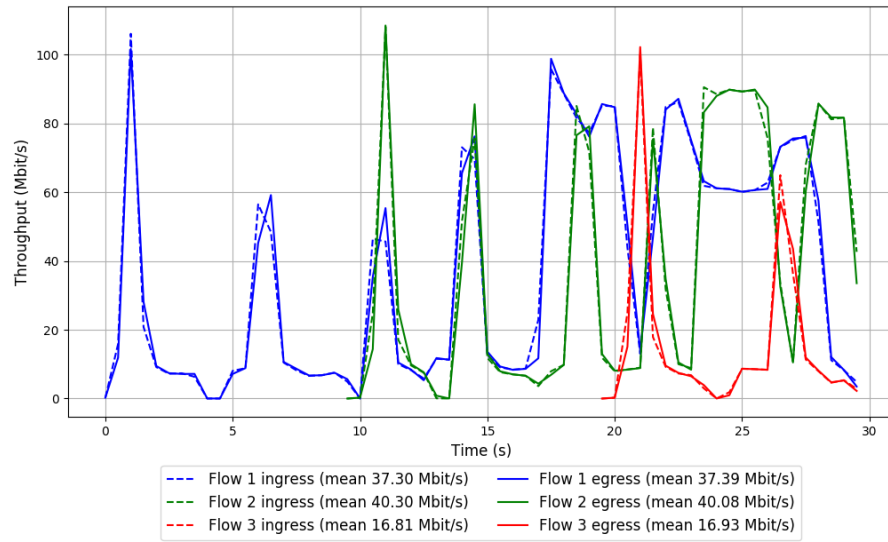
Average throughput: 16.93 Mbit/s

95th percentile per-packet one-way delay: 50.713 ms

Loss rate: 0.34%



## Run 9: Report of QUIC Cubic — Data Link

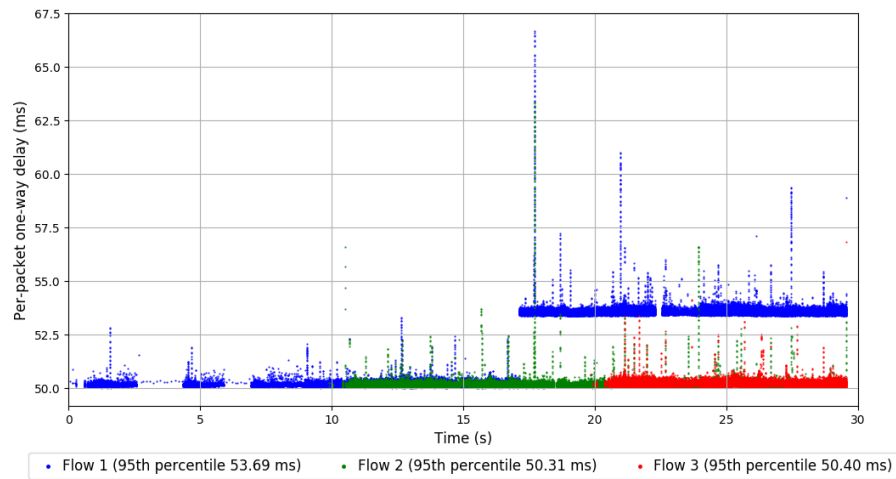
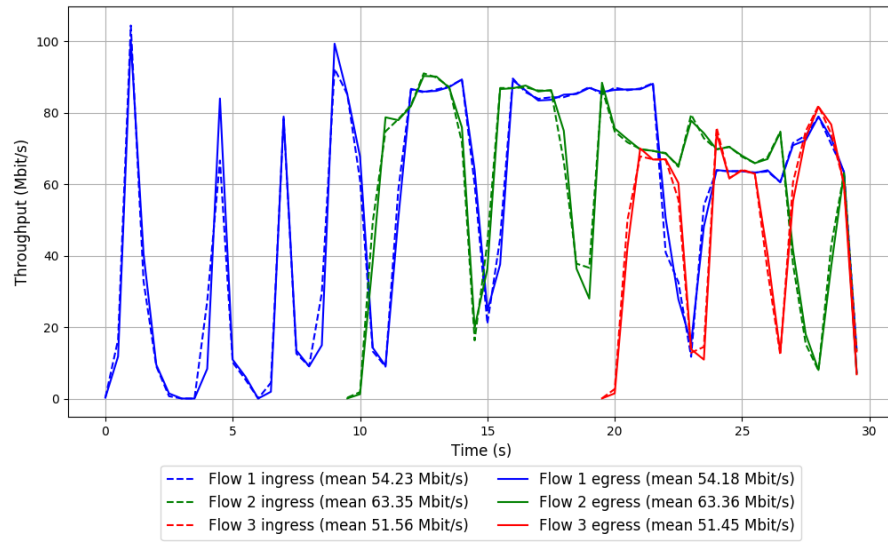


```
Run 10: Statistics of QUIC Cubic

Start at: 2018-02-21 06:20:57
End at: 2018-02-21 06:21:27

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 113.54 Mbit/s
95th percentile per-packet one-way delay: 53.619 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 54.18 Mbit/s
95th percentile per-packet one-way delay: 53.690 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 63.36 Mbit/s
95th percentile per-packet one-way delay: 50.306 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 51.45 Mbit/s
95th percentile per-packet one-way delay: 50.397 ms
Loss rate: 1.20%
```

# Run 10: Report of QUIC Cubic — Data Link

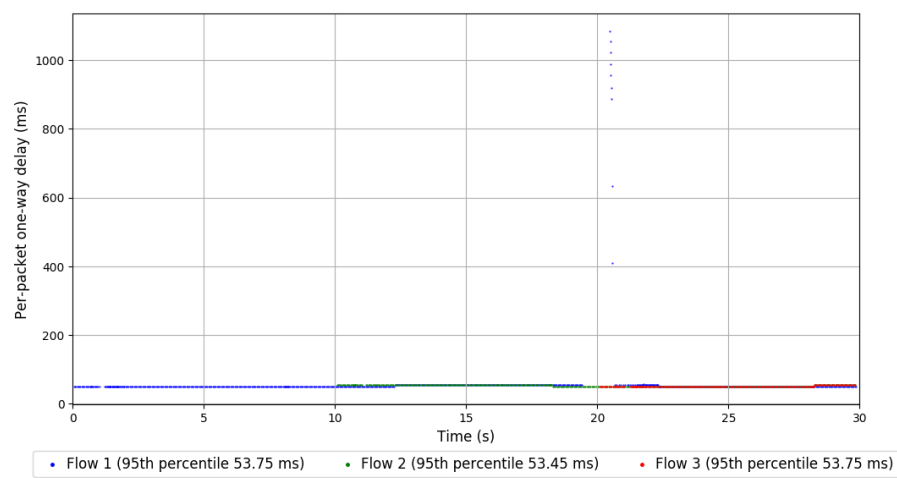
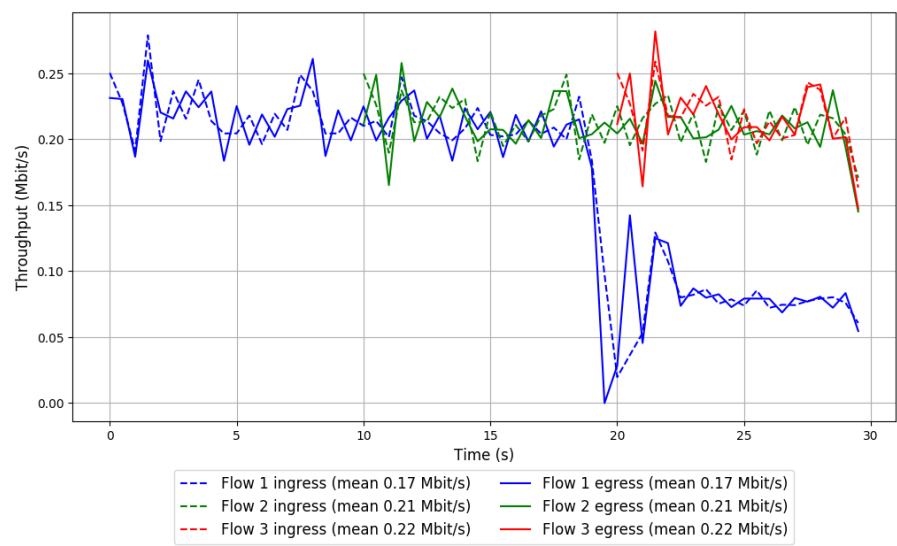


```
Run 1: Statistics of SCReAM

Start at: 2018-02-21 03:39:46
End at: 2018-02-21 03:40:16

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 53.719 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 53.753 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.446 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.751 ms
Loss rate: 1.09%
```

Run 1: Report of SReAM — Data Link

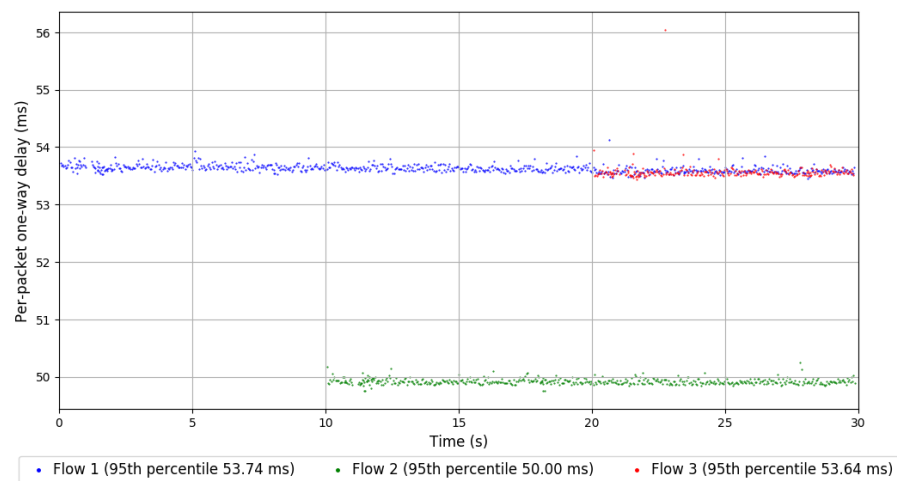
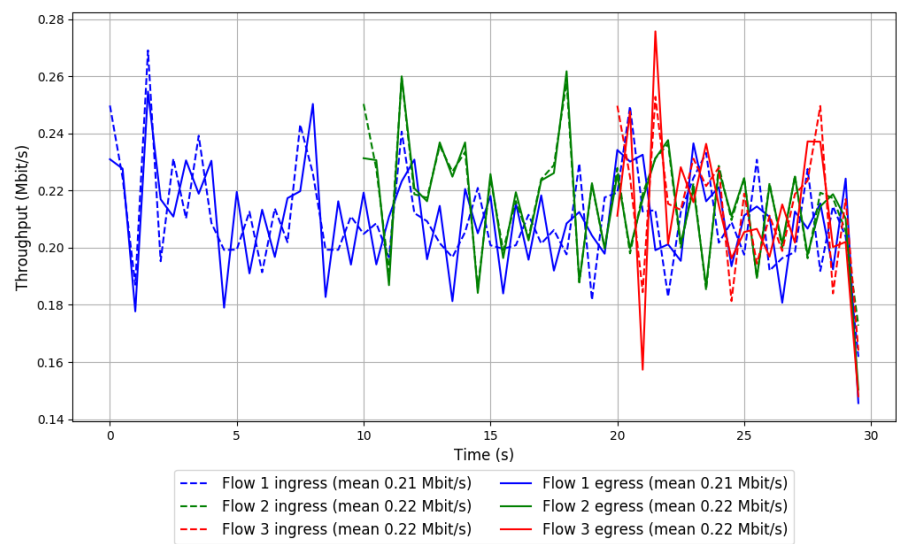


```
Run 2: Statistics of SReAM

Start at: 2018-02-21 03:58:01
End at: 2018-02-21 03:58:31

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.707 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.739 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.999 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.642 ms
Loss rate: 1.11%
```

Run 2: Report of SReAM — Data Link



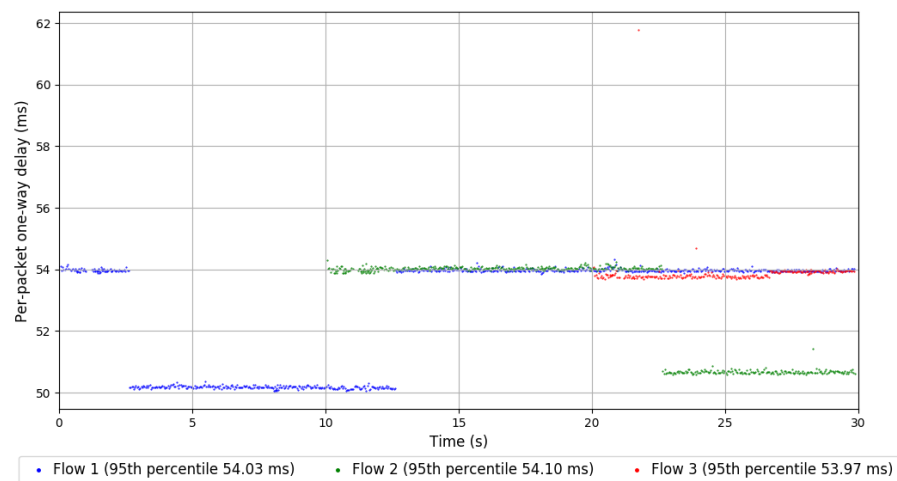
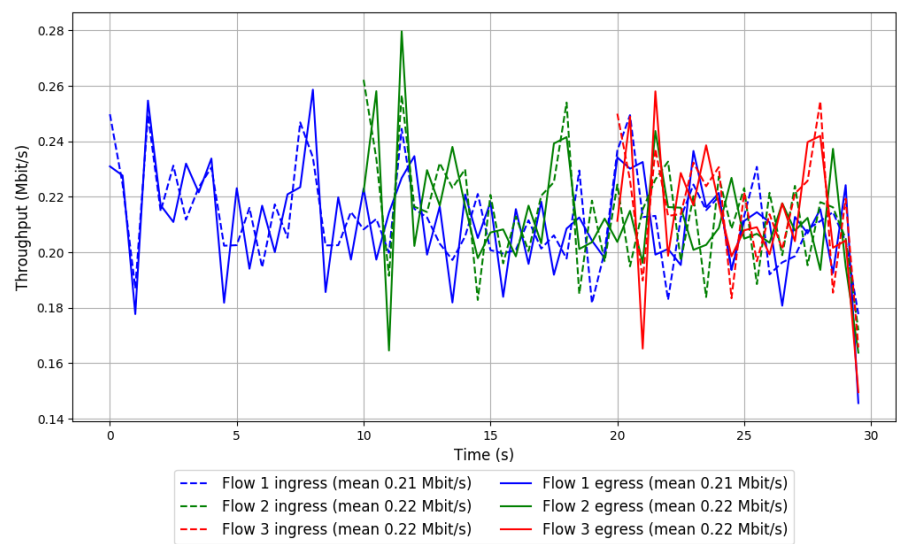
```
Run 3: Statistics of SReAM

Start at: 2018-02-21 04:15:22
End at: 2018-02-21 04:15:52

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 54.070 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 54.030 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 54.099 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.968 ms
Loss rate: 1.11%
```



Run 3: Report of SReAM — Data Link

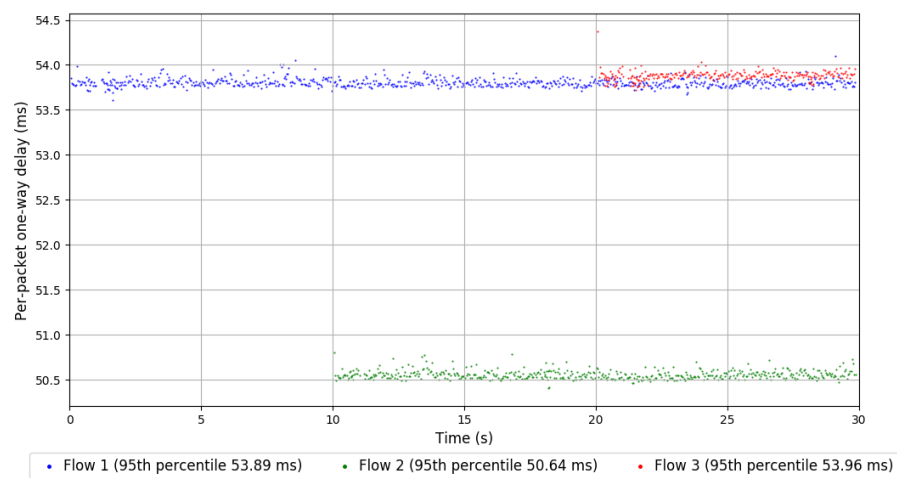
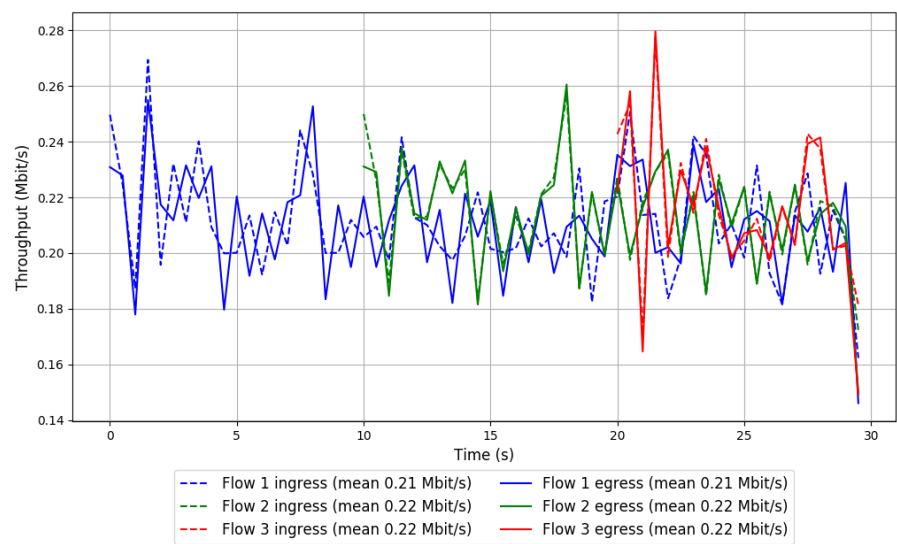


```
Run 4: Statistics of SReAM

Start at: 2018-02-21 04:33:04
End at: 2018-02-21 04:33:34

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.913 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.889 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.643 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.958 ms
Loss rate: 1.10%
```

Run 4: Report of SReAM — Data Link

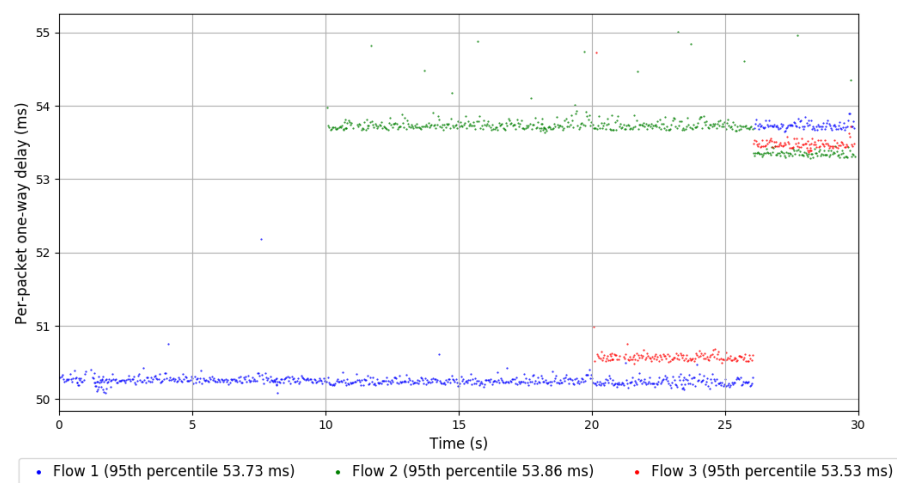
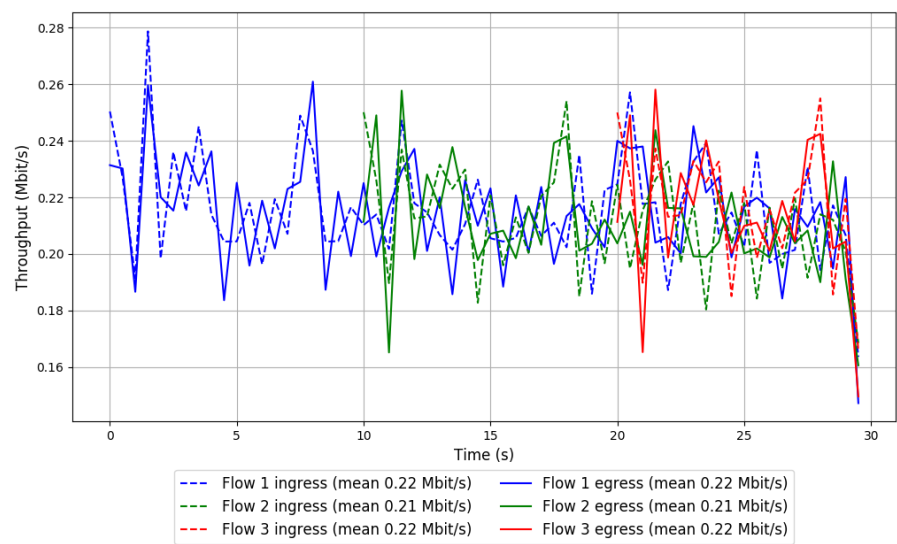


```
Run 5: Statistics of SReAM

Start at: 2018-02-21 04:50:18
End at: 2018-02-21 04:50:48

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.794 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.732 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.858 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.533 ms
Loss rate: 1.11%
```

Run 5: Report of SReAM — Data Link



Run 6: Statistics of SReAM

Start at: 2018-02-21 05:08:04

End at: 2018-02-21 05:08:34

# Below is generated by plot.py at 2018-02-21 10:17:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.731 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.749 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 0.21 Mbit/s

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

Loss rate: 0.43%

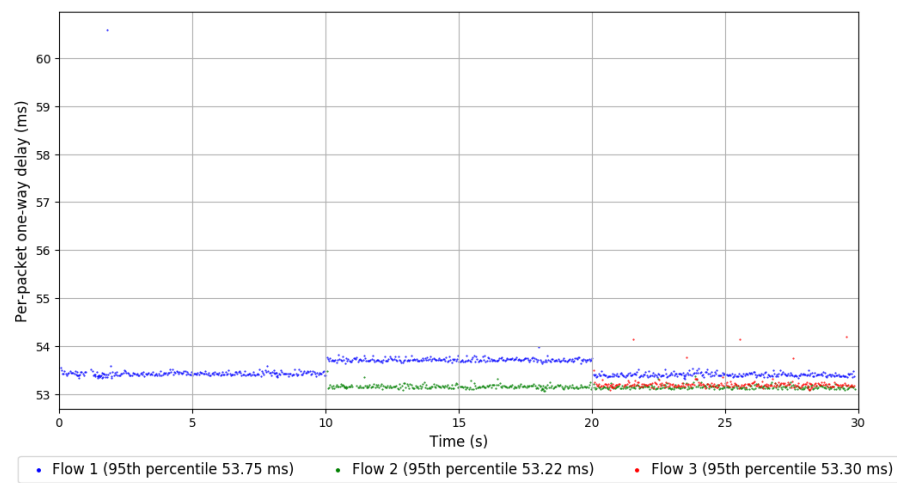
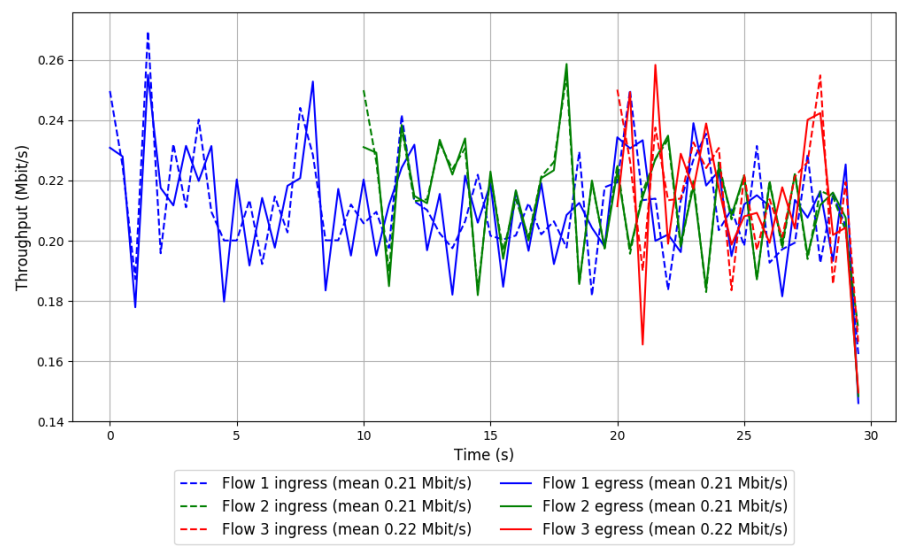
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 53.297 ms

Loss rate: 1.11%

Run 6: Report of SReAM — Data Link



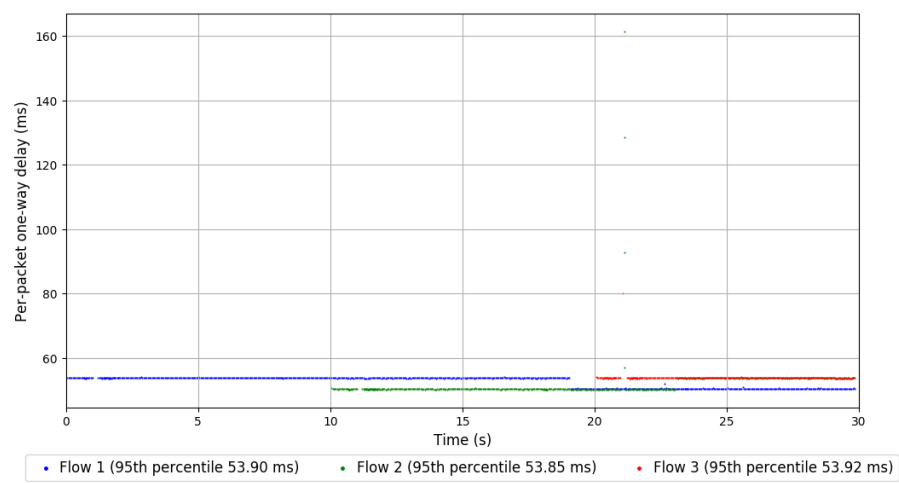
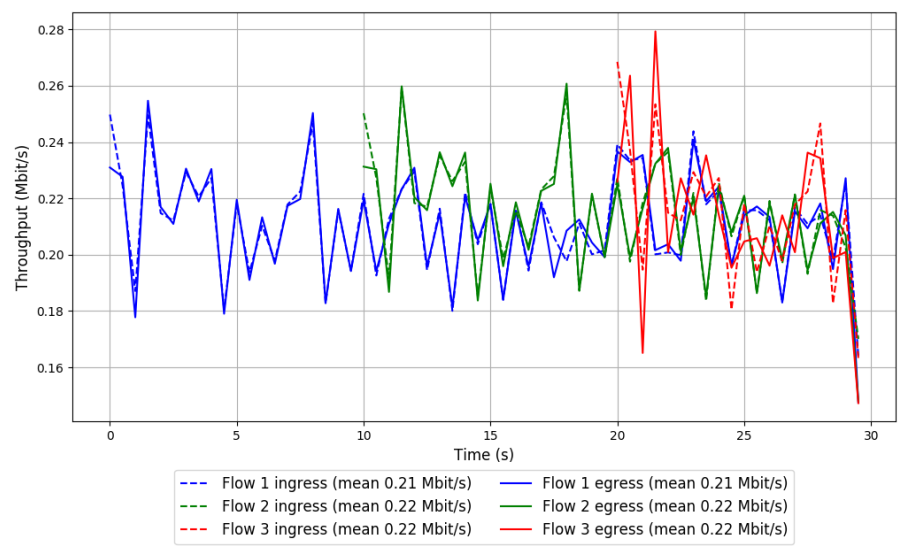
```
Run 7: Statistics of SReAM

Start at: 2018-02-21 05:25:45
End at: 2018-02-21 05:26:15

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.894 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.896 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.854 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.920 ms
Loss rate: 1.09%
```



Run 7: Report of SReAM — Data Link



Run 8: Statistics of SCReAM

Start at: 2018-02-21 05:43:34

End at: 2018-02-21 05:44:04

# Below is generated by plot.py at 2018-02-21 10:17:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.928 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 53.933 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.928 ms

Loss rate: 0.43%

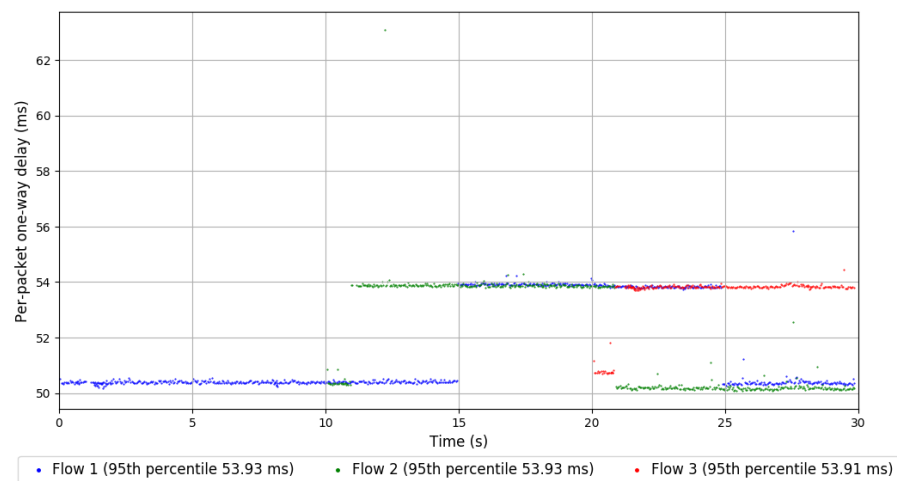
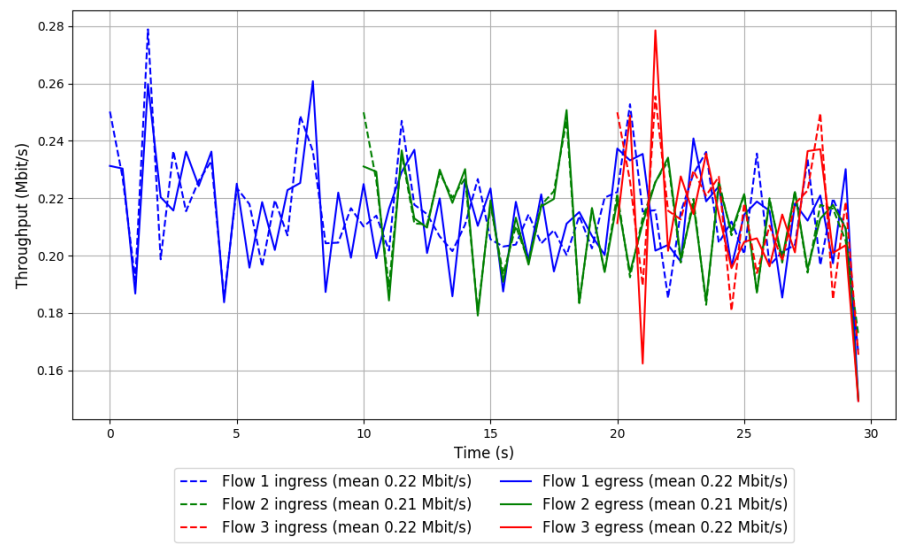
-- Flow 3:

Average throughput: 0.22 Mbit/s

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

Loss rate: 1.11%

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SCReAM

Start at: 2018-02-21 06:01:05

End at: 2018-02-21 06:01:35

# Below is generated by plot.py at 2018-02-21 10:17:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.30 Mbit/s

95th percentile per-packet one-way delay: 54.121 ms

Loss rate: 0.65%

-- Flow 1:

Average throughput: 0.09 Mbit/s

95th percentile per-packet one-way delay: 53.964 ms

Loss rate: 0.33%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.365 ms

Loss rate: 0.63%

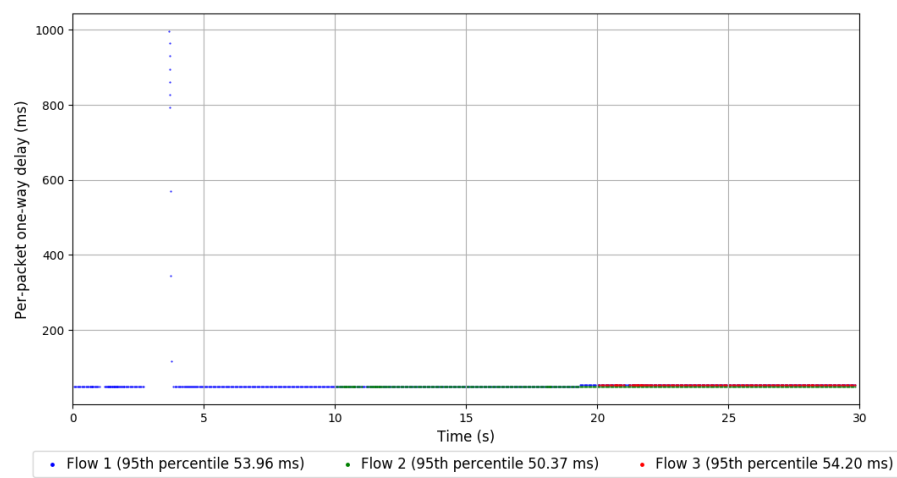
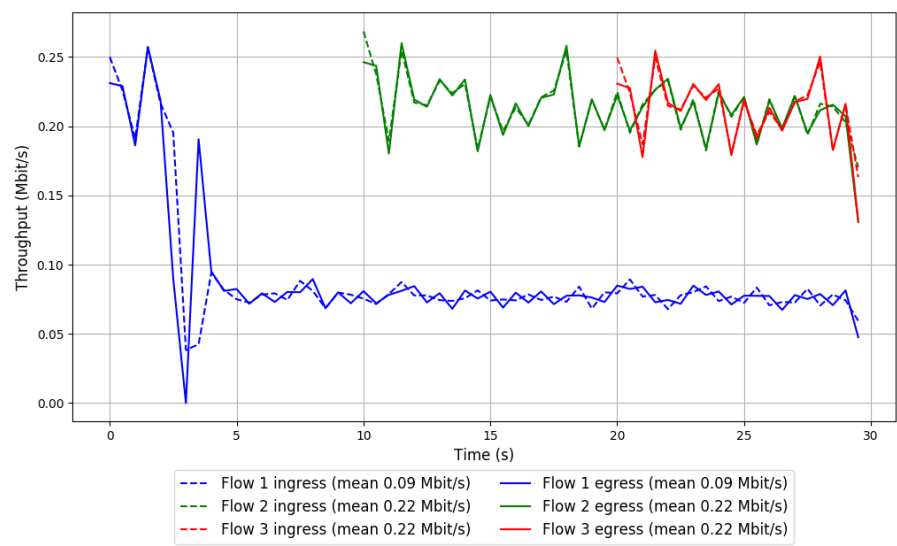
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 54.195 ms

Loss rate: 1.11%

Run 9: Report of SCSReAM — Data Link

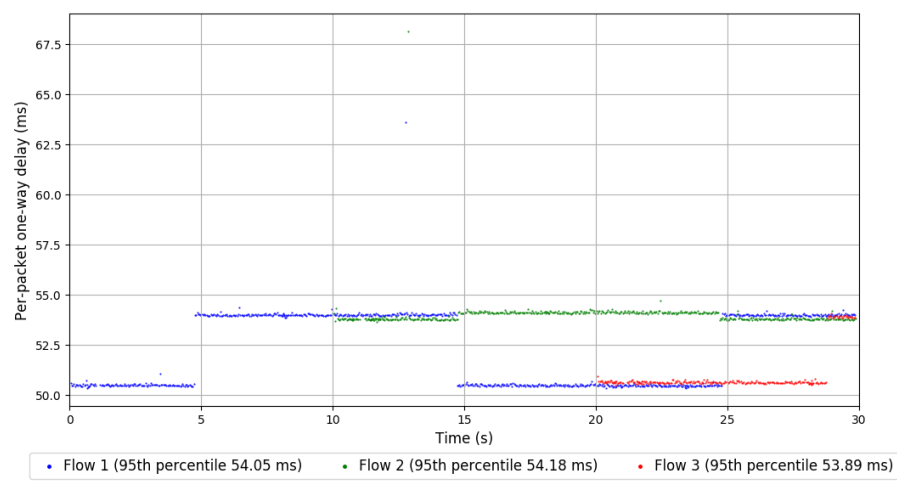
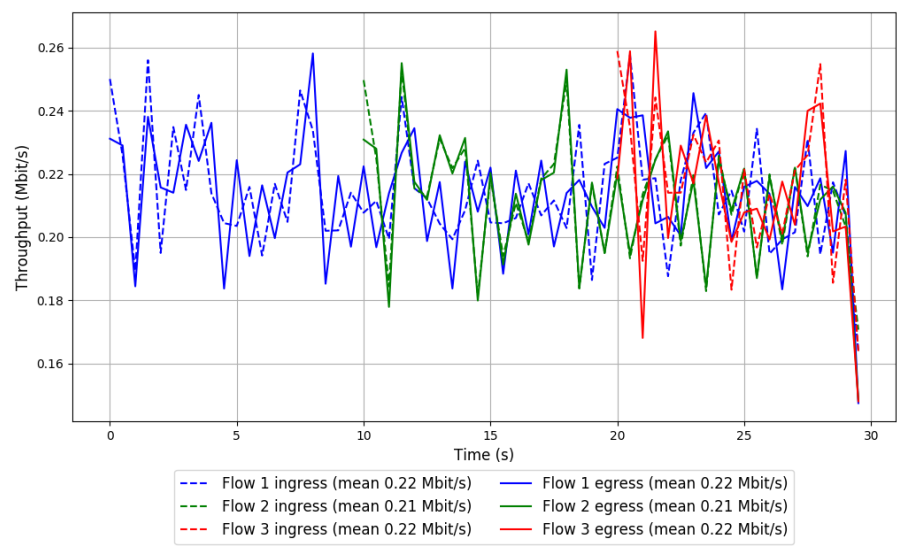


```
Run 10: Statistics of SReAM

Start at: 2018-02-21 06:18:30
End at: 2018-02-21 06:19:00

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 54.142 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 54.050 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 54.183 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.892 ms
Loss rate: 1.09%
```

Run 10: Report of SReAM — Data Link



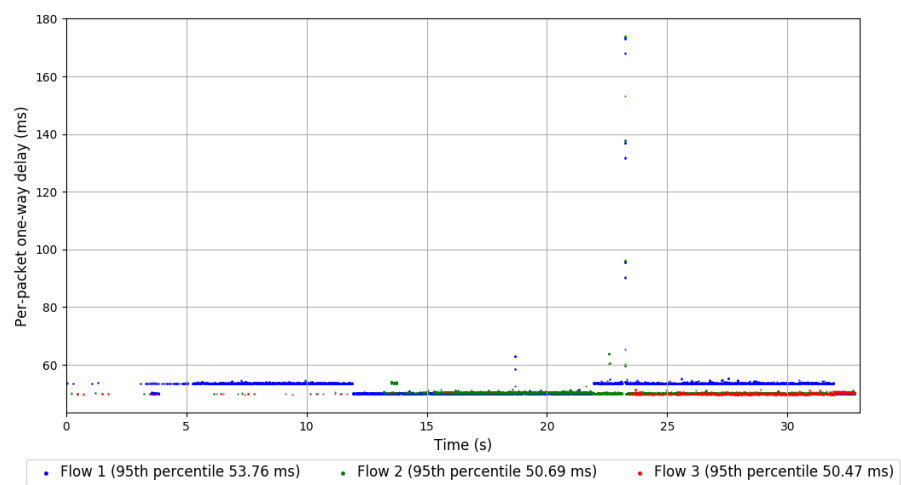
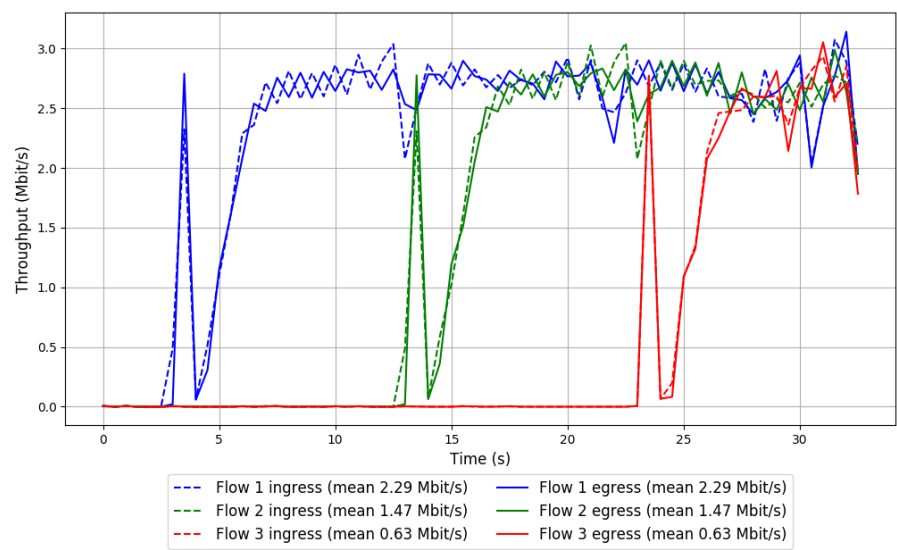
```
Run 1: Statistics of WebRTC media

Start at: 2018-02-21 03:53:25
End at: 2018-02-21 03:53:55

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.37 Mbit/s
95th percentile per-packet one-way delay: 53.718 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 2.29 Mbit/s
95th percentile per-packet one-way delay: 53.764 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 1.47 Mbit/s
95th percentile per-packet one-way delay: 50.689 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 50.465 ms
Loss rate: 1.37%
```



Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-02-21 04:11:08

End at: 2018-02-21 04:11:38

# Below is generated by plot.py at 2018-02-21 10:17:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 4.28 Mbit/s

95th percentile per-packet one-way delay: 53.889 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 2.24 Mbit/s

95th percentile per-packet one-way delay: 50.965 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 1.43 Mbit/s

95th percentile per-packet one-way delay: 53.961 ms

Loss rate: 0.48%

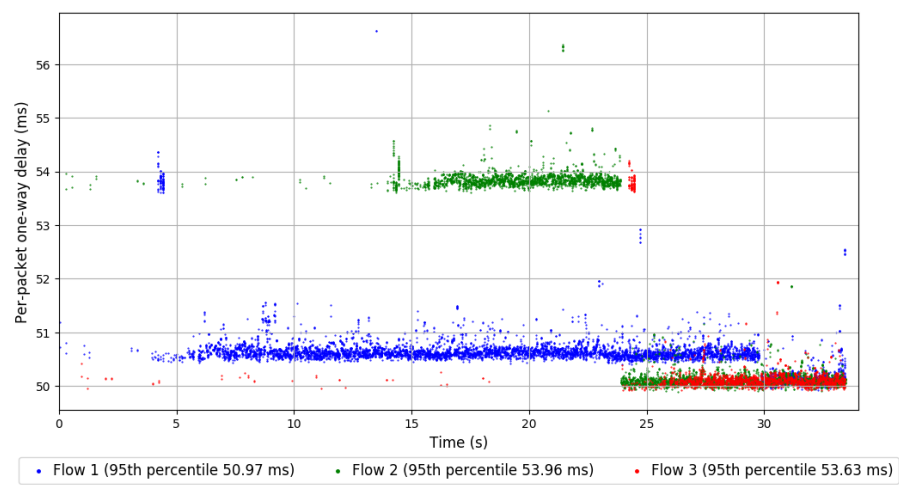
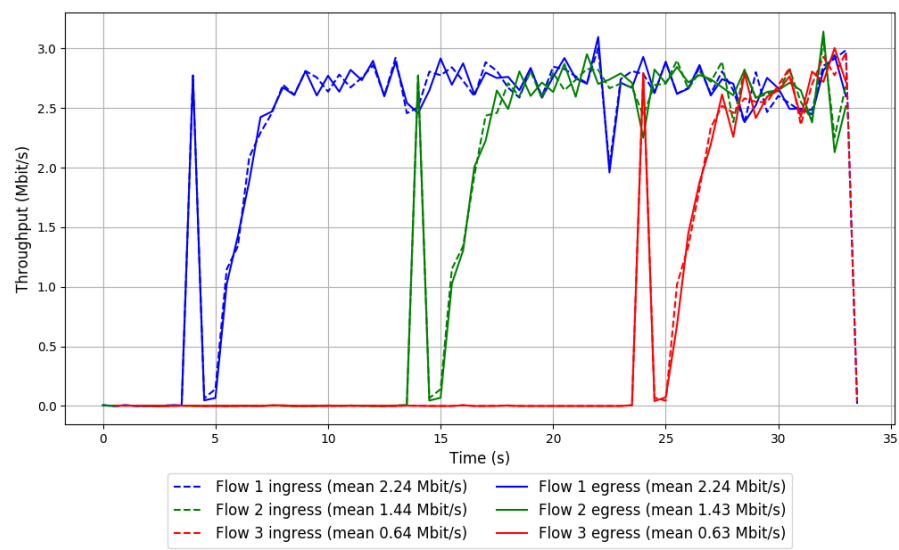
-- Flow 3:

Average throughput: 0.63 Mbit/s

95th percentile per-packet one-way delay: 53.627 ms

Loss rate: 1.24%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-02-21 04:28:25

End at: 2018-02-21 04:28:55

# Below is generated by plot.py at 2018-02-21 10:17:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 4.35 Mbit/s

95th percentile per-packet one-way delay: 54.074 ms

Loss rate: 0.78%

-- Flow 1:

Average throughput: 2.28 Mbit/s

95th percentile per-packet one-way delay: 53.678 ms

Loss rate: 0.52%

-- Flow 2:

Average throughput: 1.46 Mbit/s

95th percentile per-packet one-way delay: 50.432 ms

Loss rate: 0.81%

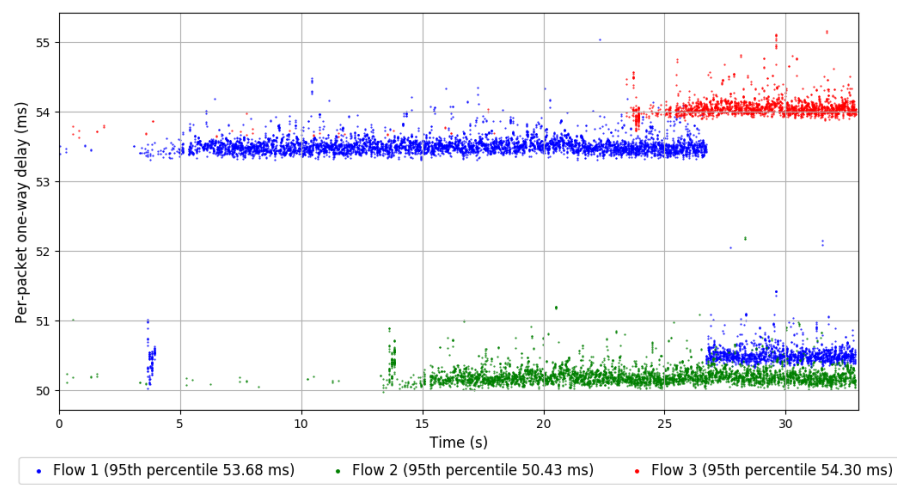
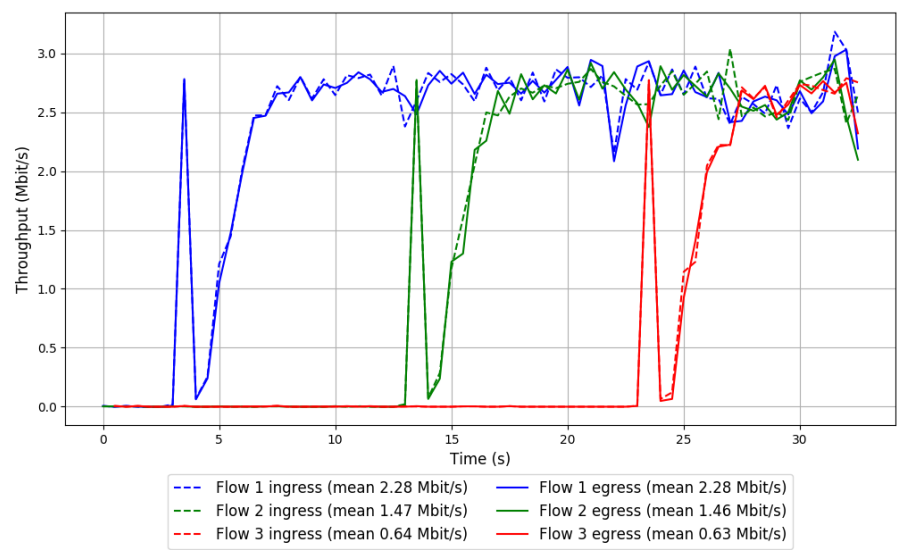
-- Flow 3:

Average throughput: 0.63 Mbit/s

95th percentile per-packet one-way delay: 54.305 ms

Loss rate: 1.66%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-02-21 04:46:15

End at: 2018-02-21 04:46:45

# Below is generated by plot.py at 2018-02-21 10:17:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 4.34 Mbit/s

95th percentile per-packet one-way delay: 53.774 ms

Loss rate: 0.64%

-- Flow 1:

Average throughput: 2.28 Mbit/s

95th percentile per-packet one-way delay: 50.887 ms

Loss rate: 0.30%

-- Flow 2:

Average throughput: 1.46 Mbit/s

95th percentile per-packet one-way delay: 53.924 ms

Loss rate: 0.69%

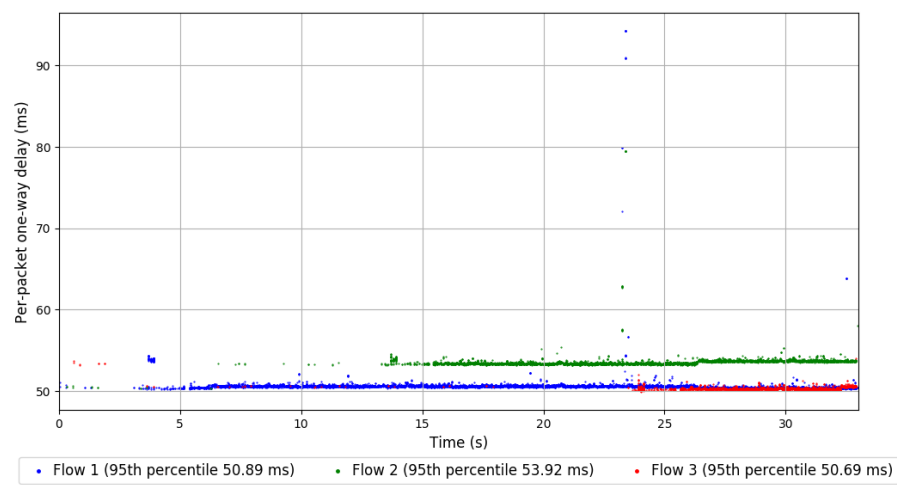
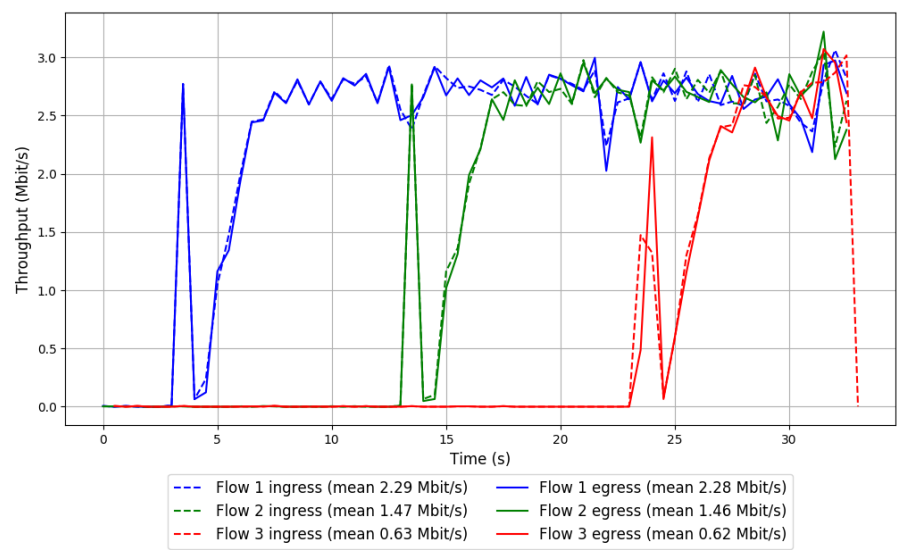
-- Flow 3:

Average throughput: 0.62 Mbit/s

95th percentile per-packet one-way delay: 50.688 ms

Loss rate: 1.80%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-02-21 05:03:29

End at: 2018-02-21 05:03:59

# Below is generated by plot.py at 2018-02-21 10:17:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 4.33 Mbit/s

95th percentile per-packet one-way delay: 50.514 ms

Loss rate: 0.65%

-- Flow 1:

Average throughput: 2.28 Mbit/s

95th percentile per-packet one-way delay: 50.525 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 1.46 Mbit/s

95th percentile per-packet one-way delay: 50.351 ms

Loss rate: 0.66%

-- Flow 3:

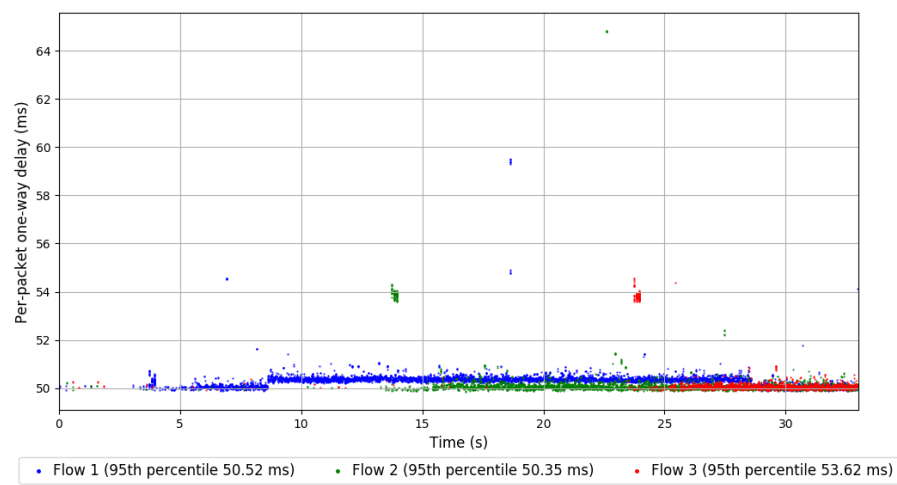
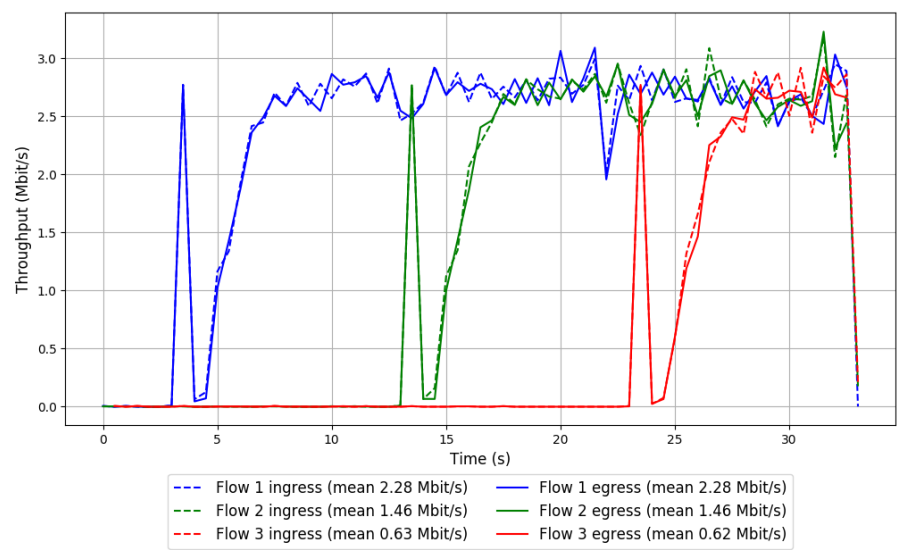
Average throughput: 0.62 Mbit/s

95th percentile per-packet one-way delay: 53.619 ms

Loss rate: 1.72%



Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2018-02-21 05:21:24

End at: 2018-02-21 05:21:54

# Below is generated by plot.py at 2018-02-21 10:17:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 4.37 Mbit/s

95th percentile per-packet one-way delay: 54.063 ms

Loss rate: 0.61%

-- Flow 1:

Average throughput: 2.29 Mbit/s

95th percentile per-packet one-way delay: 54.096 ms

Loss rate: 0.45%

-- Flow 2:

Average throughput: 1.47 Mbit/s

95th percentile per-packet one-way delay: 53.986 ms

Loss rate: 0.72%

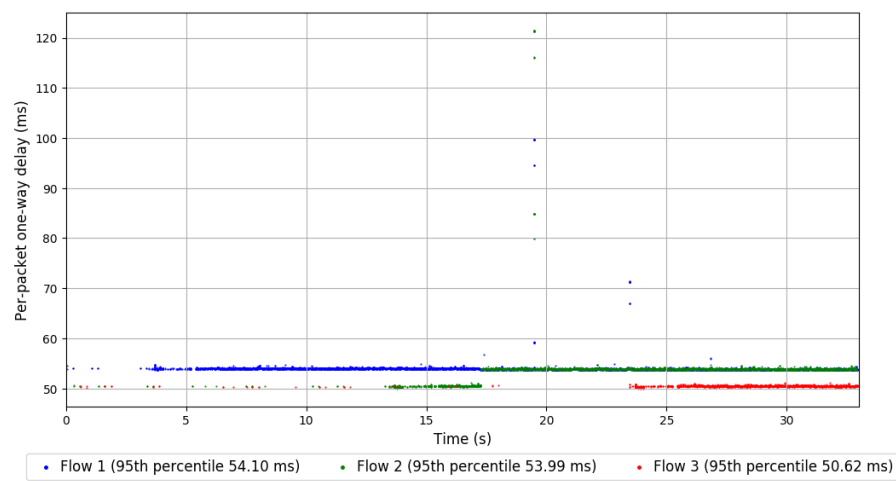
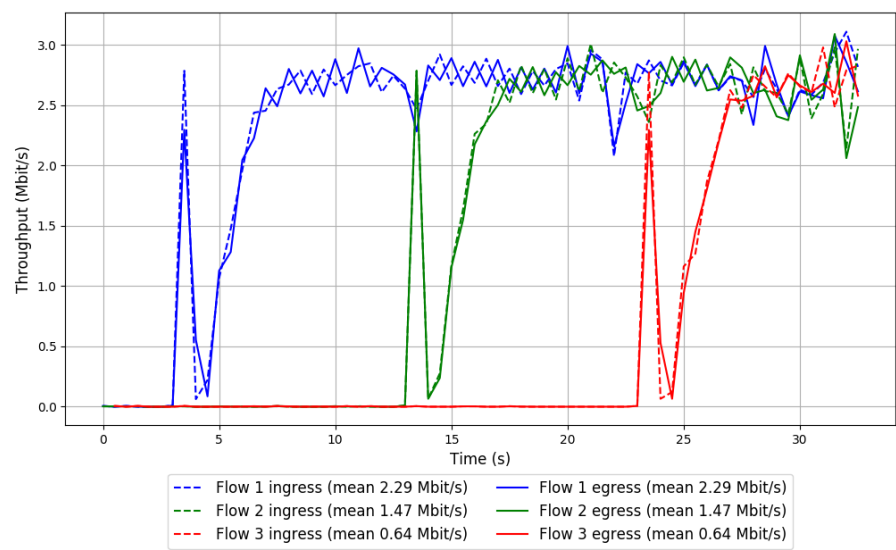
-- Flow 3:

Average throughput: 0.64 Mbit/s

95th percentile per-packet one-way delay: 50.621 ms

Loss rate: 0.97%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2018-02-21 05:39:09

End at: 2018-02-21 05:39:39

# Below is generated by plot.py at 2018-02-21 10:17:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 4.37 Mbit/s

95th percentile per-packet one-way delay: 53.878 ms

Loss rate: 0.55%

-- Flow 1:

Average throughput: 2.28 Mbit/s

95th percentile per-packet one-way delay: 50.942 ms

Loss rate: 0.30%

-- Flow 2:

Average throughput: 1.48 Mbit/s

95th percentile per-packet one-way delay: 50.827 ms

Loss rate: 0.71%

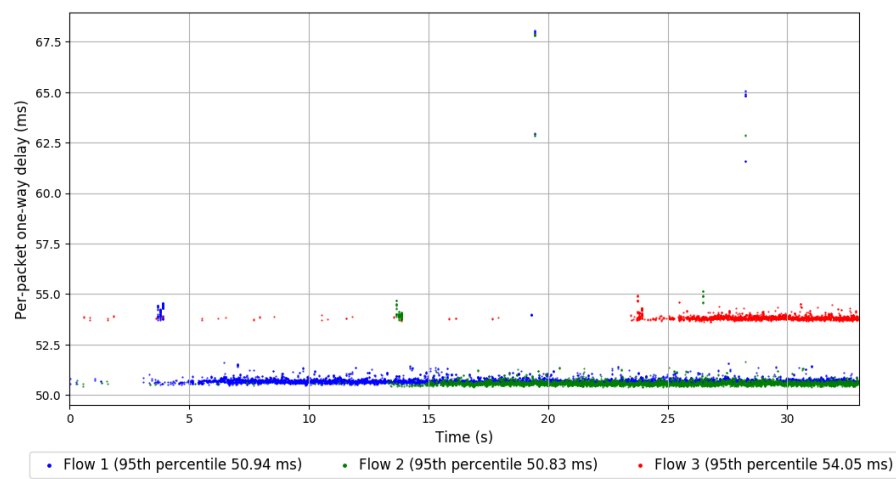
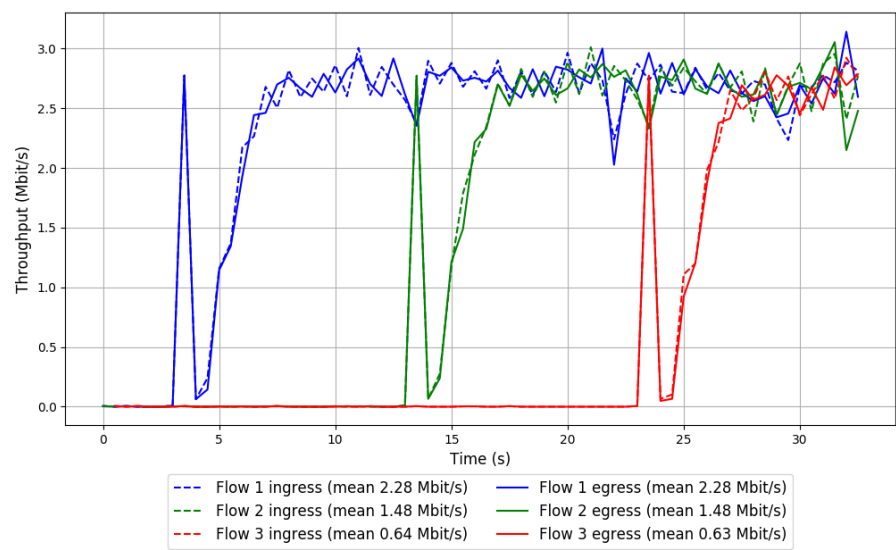
-- Flow 3:

Average throughput: 0.63 Mbit/s

95th percentile per-packet one-way delay: 54.054 ms

Loss rate: 1.08%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2018-02-21 05:56:48

End at: 2018-02-21 05:57:18

# Below is generated by plot.py at 2018-02-21 10:17:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 4.82 Mbit/s

95th percentile per-packet one-way delay: 54.082 ms

Loss rate: 0.67%

-- Flow 1:

Average throughput: 2.75 Mbit/s

95th percentile per-packet one-way delay: 54.034 ms

Loss rate: 0.62%

-- Flow 2:

Average throughput: 1.47 Mbit/s

95th percentile per-packet one-way delay: 54.099 ms

Loss rate: 0.52%

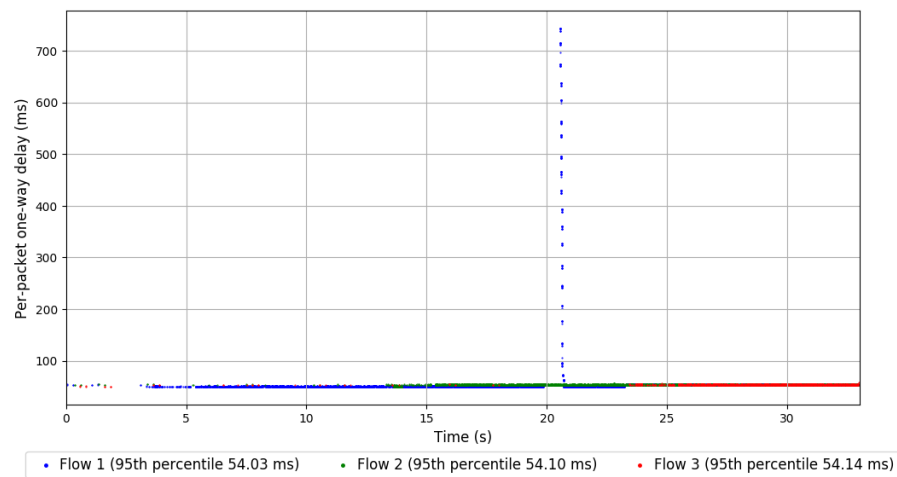
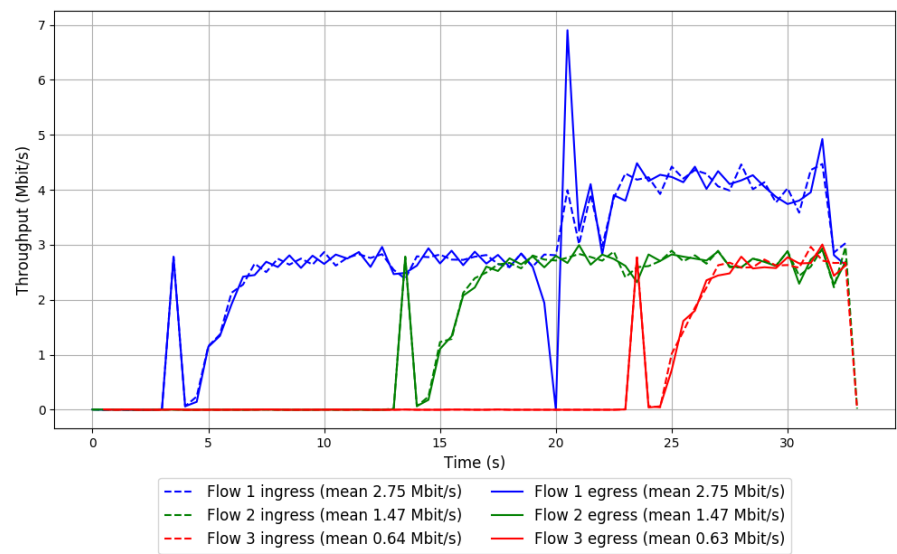
-- Flow 3:

Average throughput: 0.63 Mbit/s

95th percentile per-packet one-way delay: 54.137 ms

Loss rate: 1.24%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2018-02-21 06:14:15

End at: 2018-02-21 06:14:45

# Below is generated by plot.py at 2018-02-21 10:17:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 4.35 Mbit/s

95th percentile per-packet one-way delay: 50.959 ms

Loss rate: 0.62%

-- Flow 1:

Average throughput: 2.27 Mbit/s

95th percentile per-packet one-way delay: 51.014 ms

Loss rate: 0.41%

-- Flow 2:

Average throughput: 1.46 Mbit/s

95th percentile per-packet one-way delay: 50.640 ms

Loss rate: 0.75%

-- Flow 3:

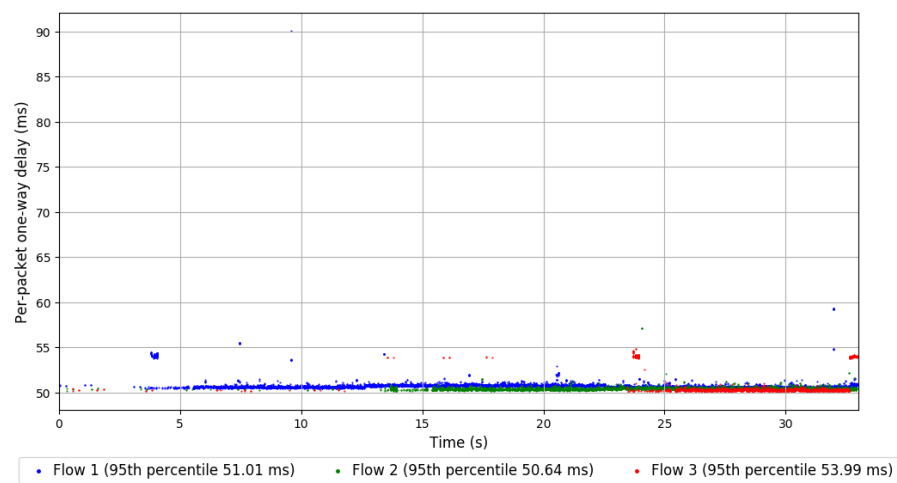
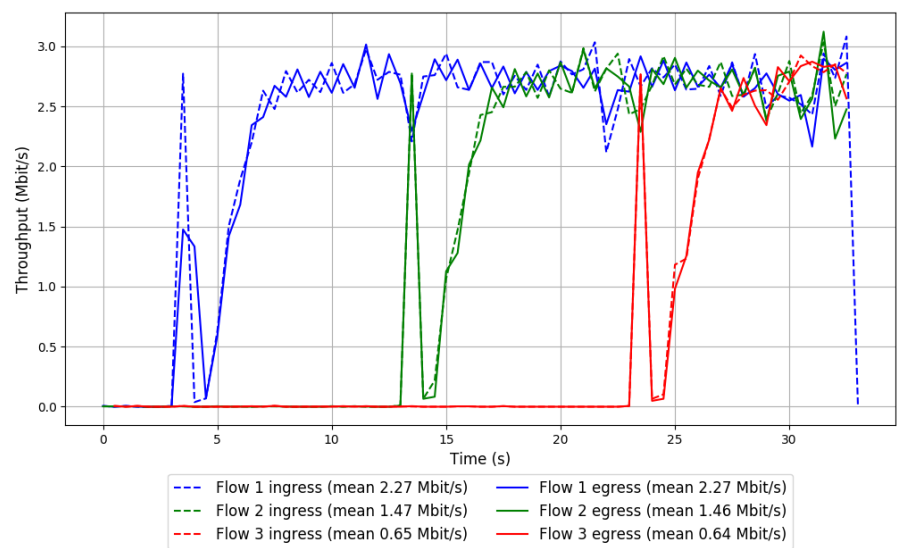
Average throughput: 0.64 Mbit/s

95th percentile per-packet one-way delay: 53.986 ms

Loss rate: 1.05%



Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2018-02-21 06:31:48

End at: 2018-02-21 06:32:18

# Below is generated by plot.py at 2018-02-21 10:17:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 4.36 Mbit/s

95th percentile per-packet one-way delay: 53.956 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 2.28 Mbit/s

95th percentile per-packet one-way delay: 53.922 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 1.46 Mbit/s

95th percentile per-packet one-way delay: 54.007 ms

Loss rate: 0.73%

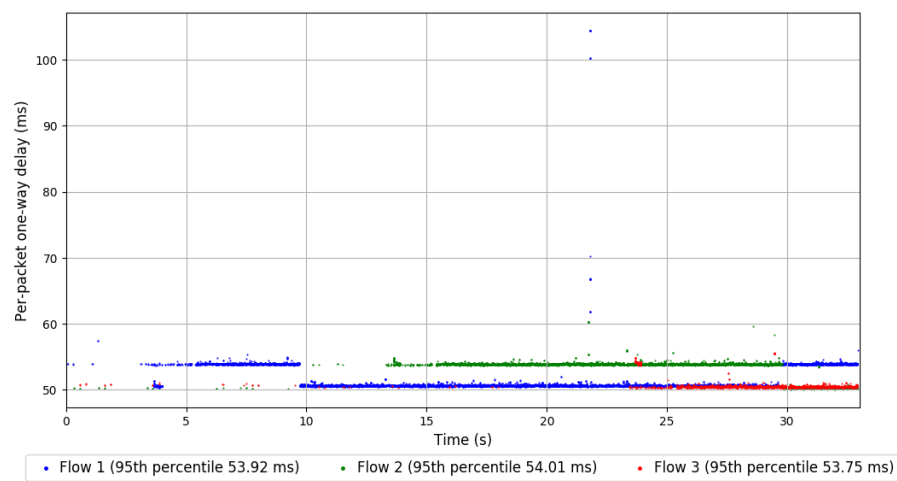
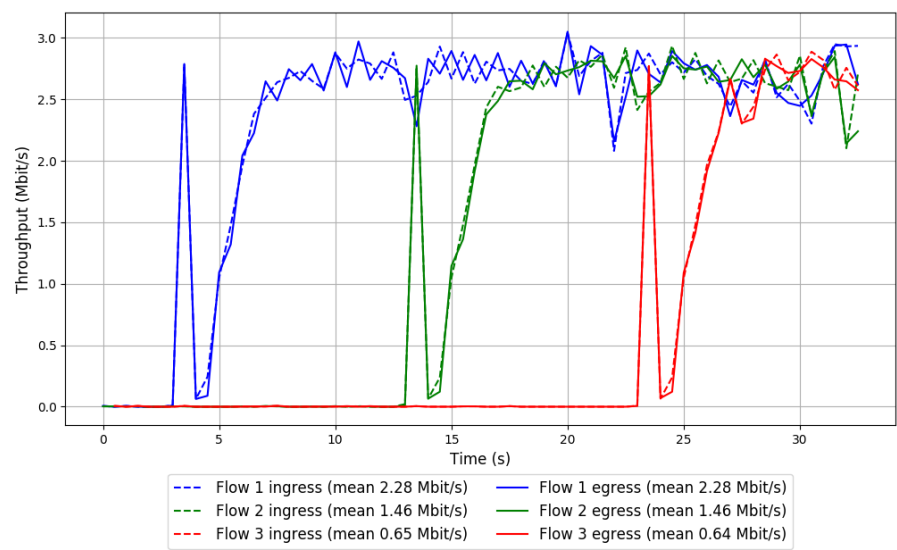
-- Flow 3:

Average throughput: 0.64 Mbit/s

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

Loss rate: 0.99%

Run 10: Report of WebRTC media — Data Link

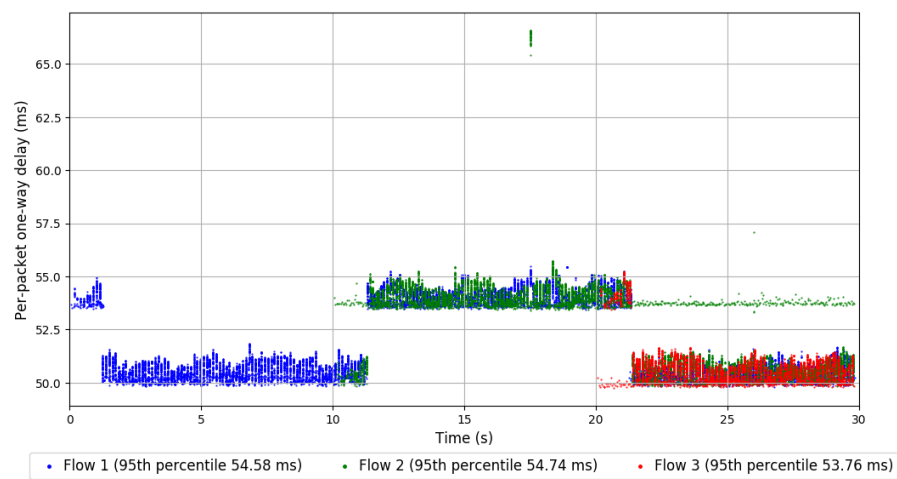
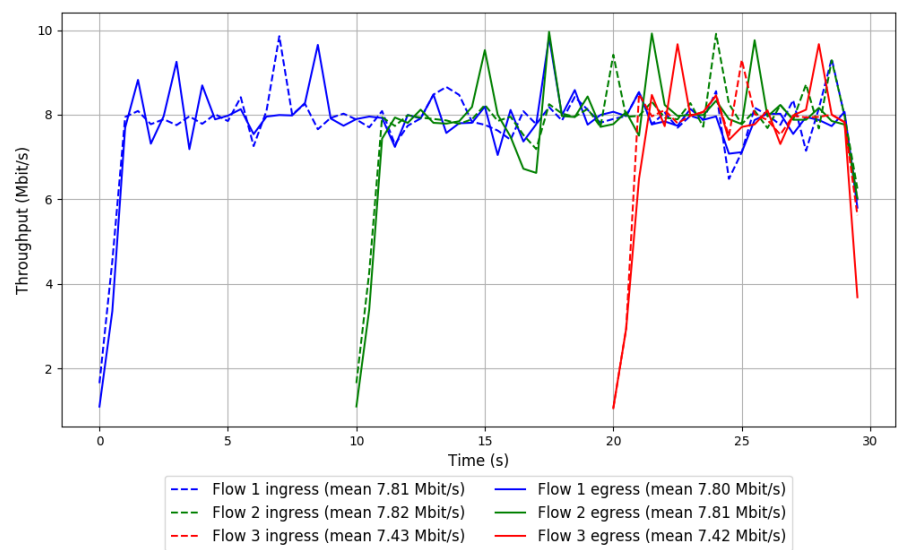


```
Run 1: Statistics of Sprout

Start at: 2018-02-21 03:38:23
End at: 2018-02-21 03:38:53

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.41 Mbit/s
95th percentile per-packet one-way delay: 54.621 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 7.80 Mbit/s
95th percentile per-packet one-way delay: 54.578 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 7.81 Mbit/s
95th percentile per-packet one-way delay: 54.737 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 7.42 Mbit/s
95th percentile per-packet one-way delay: 53.758 ms
Loss rate: 1.33%
```

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2018-02-21 03:56:38

End at: 2018-02-21 03:57:08

# Below is generated by plot.py at 2018-02-21 10:17:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 15.46 Mbit/s

95th percentile per-packet one-way delay: 54.520 ms

Loss rate: 0.62%

-- Flow 1:

Average throughput: 7.88 Mbit/s

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

Loss rate: 0.42%

-- Flow 2:

Average throughput: 7.77 Mbit/s

95th percentile per-packet one-way delay: 54.555 ms

Loss rate: 0.54%

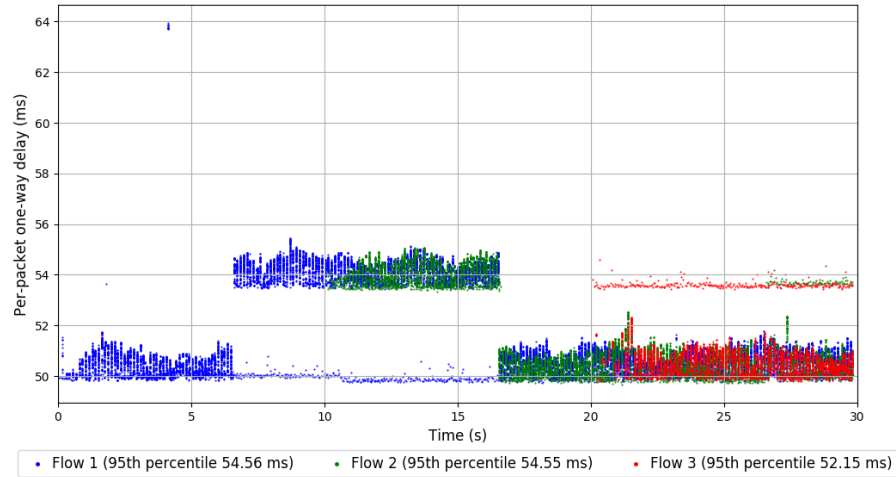
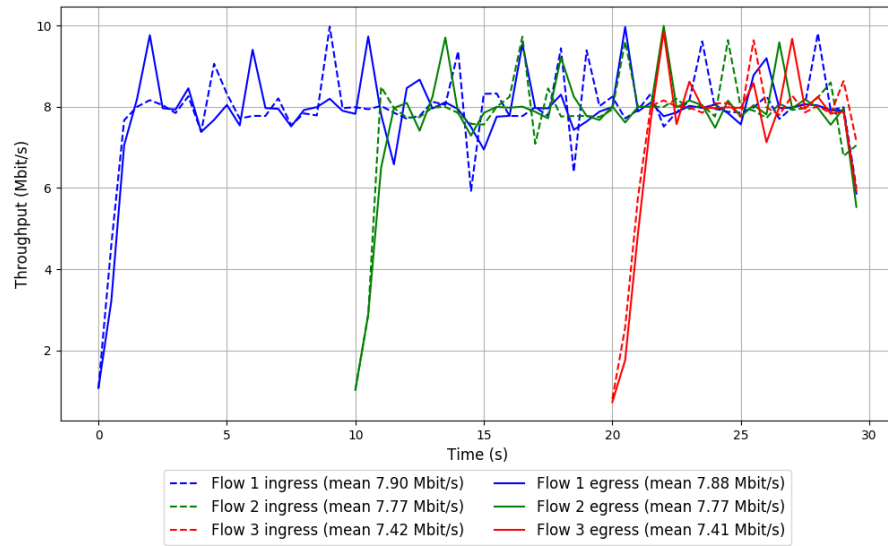
-- Flow 3:

Average throughput: 7.41 Mbit/s

95th percentile per-packet one-way delay: 52.152 ms

Loss rate: 1.40%

## Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2018-02-21 04:13:59

End at: 2018-02-21 04:14:29

# Below is generated by plot.py at 2018-02-21 10:17:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 15.13 Mbit/s

95th percentile per-packet one-way delay: 55.031 ms

Loss rate: 0.63%

-- Flow 1:

Average throughput: 7.54 Mbit/s

95th percentile per-packet one-way delay: 54.992 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 7.78 Mbit/s

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

Loss rate: 0.64%

-- Flow 3:

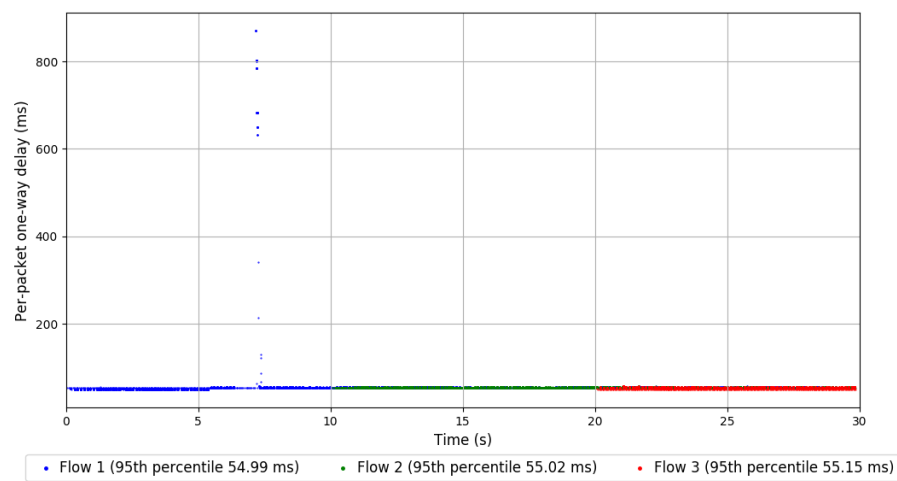
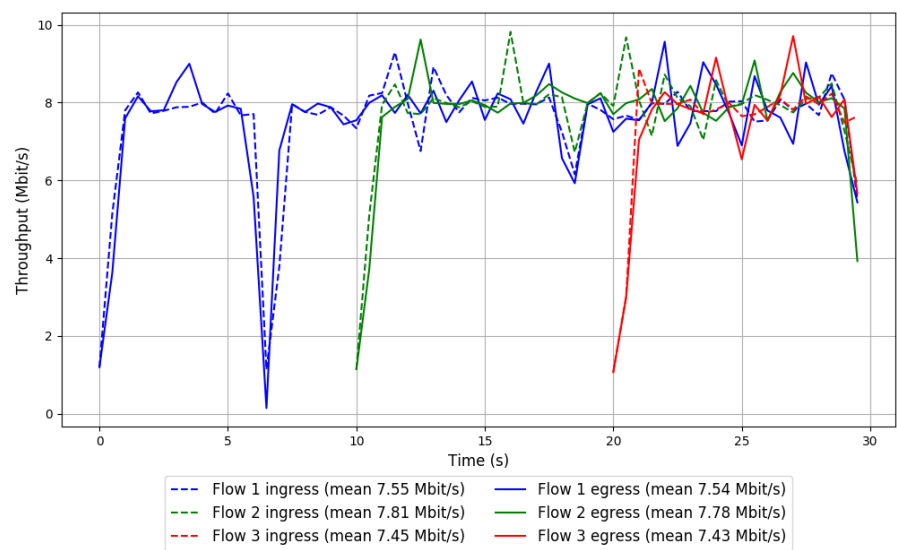
Average throughput: 7.43 Mbit/s

95th percentile per-packet one-way delay: 55.151 ms

Loss rate: 1.35%



Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2018-02-21 04:31:41

End at: 2018-02-21 04:32:11

# Below is generated by plot.py at 2018-02-21 10:17:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 15.40 Mbit/s

95th percentile per-packet one-way delay: 55.009 ms

Loss rate: 0.65%

-- Flow 1:

Average throughput: 7.85 Mbit/s

95th percentile per-packet one-way delay: 54.991 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 7.76 Mbit/s

95th percentile per-packet one-way delay: 55.064 ms

Loss rate: 0.65%

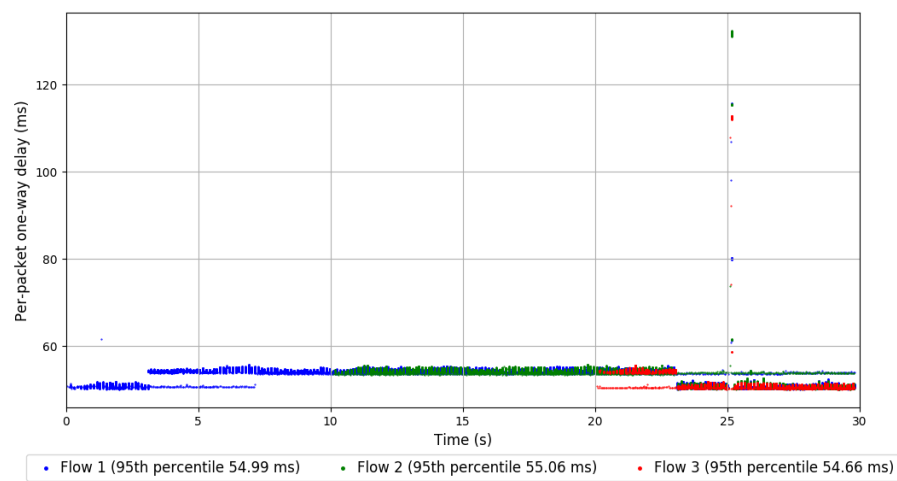
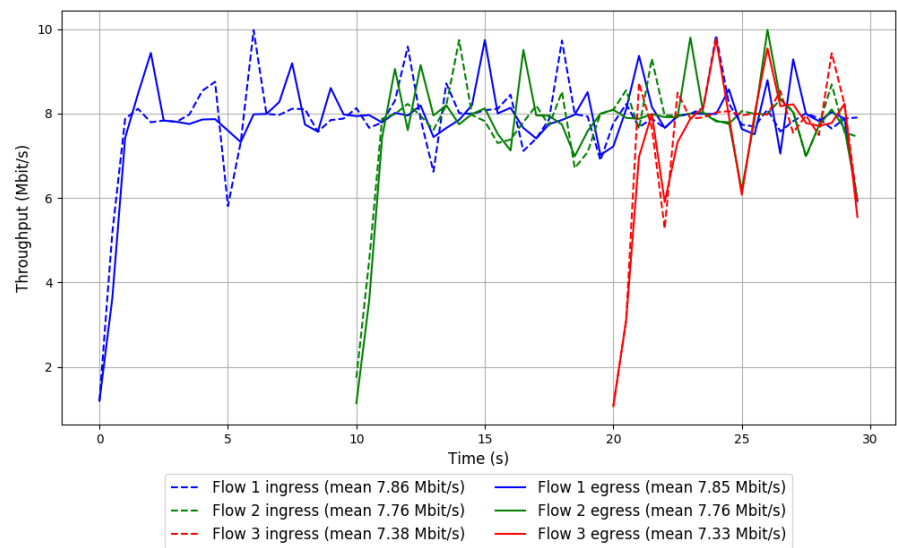
-- Flow 3:

Average throughput: 7.33 Mbit/s

95th percentile per-packet one-way delay: 54.655 ms

Loss rate: 1.40%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2018-02-21 04:48:56

End at: 2018-02-21 04:49:26

# Below is generated by plot.py at 2018-02-21 10:17:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 15.49 Mbit/s

95th percentile per-packet one-way delay: 54.993 ms

Loss rate: 0.49%

-- Flow 1:

Average throughput: 7.89 Mbit/s

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

Loss rate: 0.12%

-- Flow 2:

Average throughput: 7.80 Mbit/s

95th percentile per-packet one-way delay: 54.976 ms

Loss rate: 0.64%

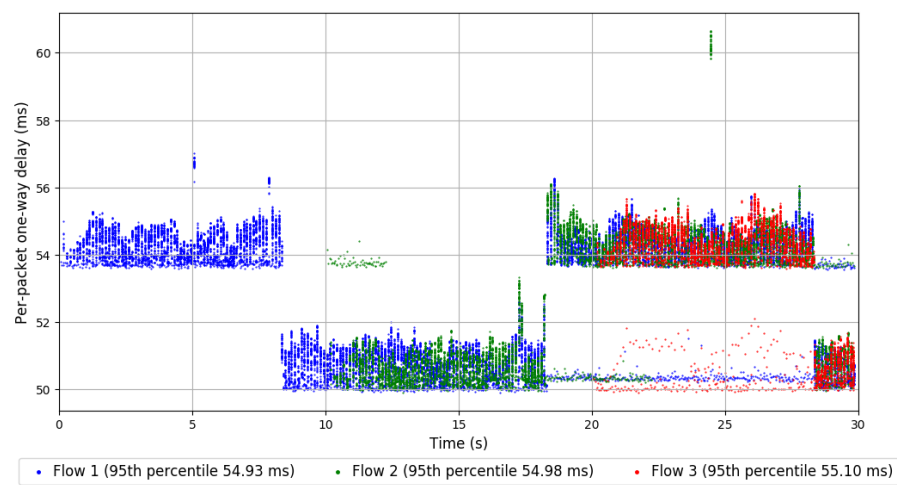
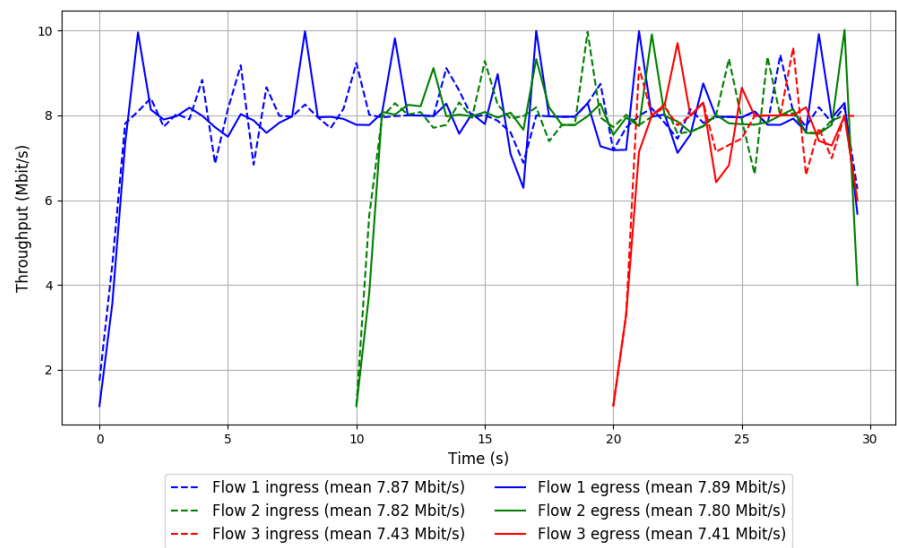
-- Flow 3:

Average throughput: 7.41 Mbit/s

95th percentile per-packet one-way delay: 55.099 ms

Loss rate: 1.36%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2018-02-21 05:06:41

End at: 2018-02-21 05:07:12

# Below is generated by plot.py at 2018-02-21 10:17:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 15.08 Mbit/s

95th percentile per-packet one-way delay: 55.001 ms

Loss rate: 0.57%

-- Flow 1:

Average throughput: 7.46 Mbit/s

95th percentile per-packet one-way delay: 54.870 ms

Loss rate: 0.28%

-- Flow 2:

Average throughput: 7.90 Mbit/s

95th percentile per-packet one-way delay: 54.954 ms

Loss rate: 0.64%

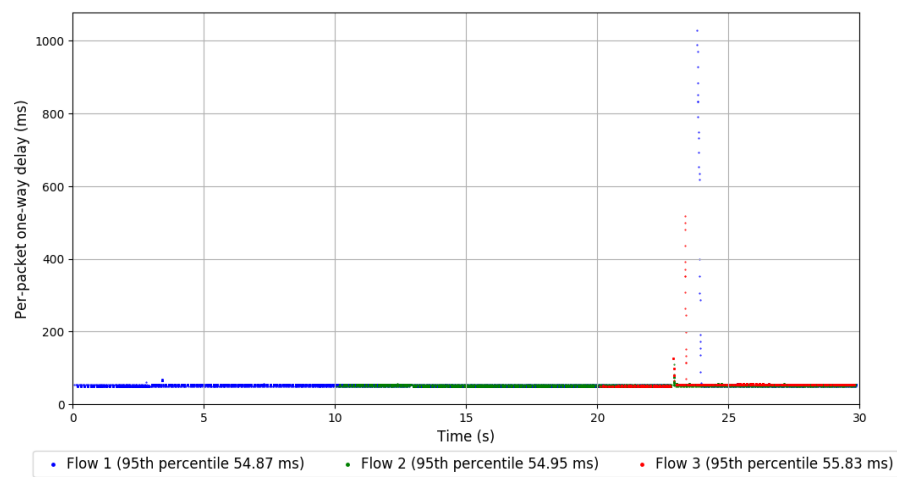
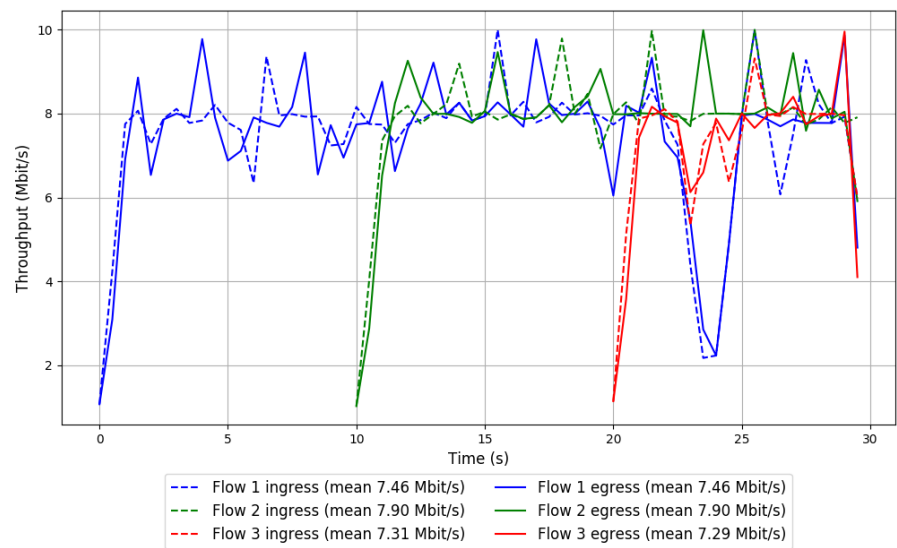
-- Flow 3:

Average throughput: 7.29 Mbit/s

95th percentile per-packet one-way delay: 55.833 ms

Loss rate: 1.32%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2018-02-21 05:24:22

End at: 2018-02-21 05:24:52

# Below is generated by plot.py at 2018-02-21 10:17:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 15.51 Mbit/s

95th percentile per-packet one-way delay: 54.539 ms

Loss rate: 0.45%

-- Flow 1:

Average throughput: 7.82 Mbit/s

95th percentile per-packet one-way delay: 54.690 ms

Loss rate: 0.11%

-- Flow 2:

Average throughput: 7.83 Mbit/s

95th percentile per-packet one-way delay: 54.115 ms

Loss rate: 0.67%

-- Flow 3:

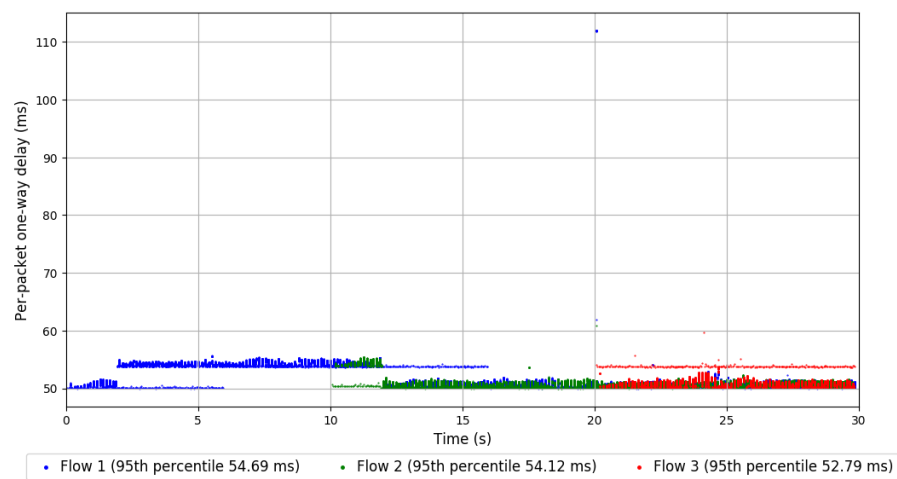
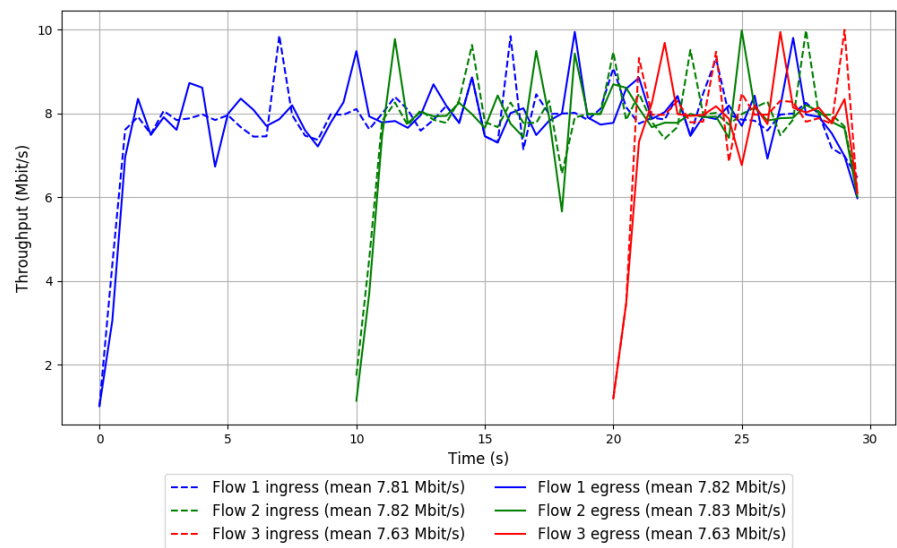
Average throughput: 7.63 Mbit/s

95th percentile per-packet one-way delay: 52.790 ms

Loss rate: 1.07%



Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2018-02-21 05:42:11

End at: 2018-02-21 05:42:41

# Below is generated by plot.py at 2018-02-21 10:17:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 15.31 Mbit/s

95th percentile per-packet one-way delay: 55.040 ms

Loss rate: 0.57%

-- Flow 1:

Average throughput: 7.85 Mbit/s

95th percentile per-packet one-way delay: 55.056 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 7.72 Mbit/s

95th percentile per-packet one-way delay: 54.973 ms

Loss rate: 0.56%

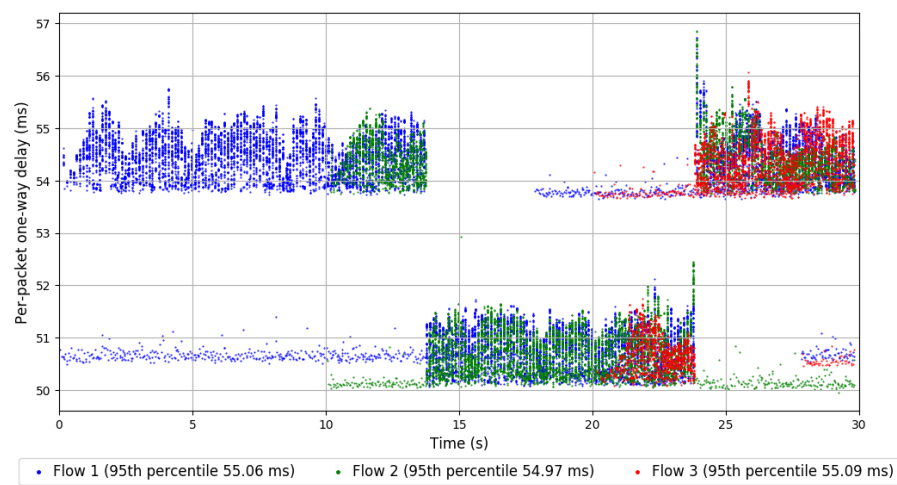
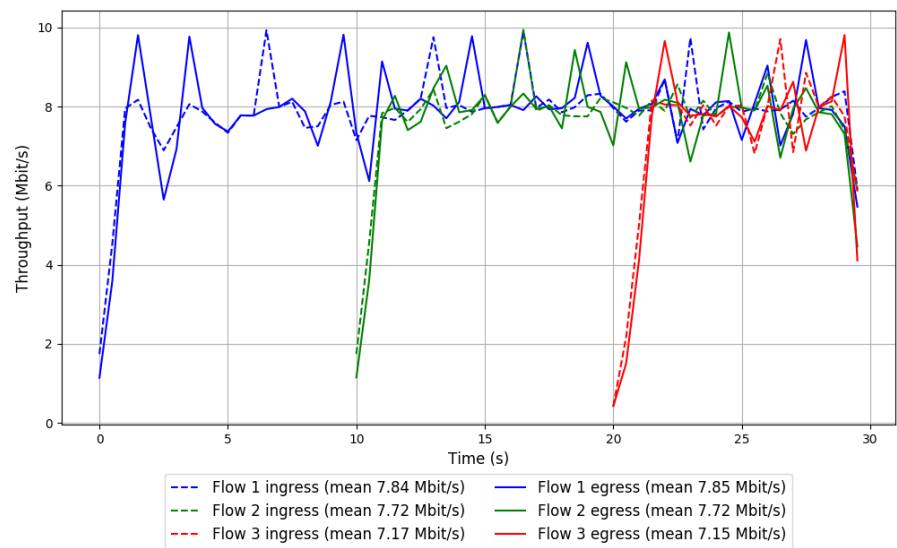
-- Flow 3:

Average throughput: 7.15 Mbit/s

95th percentile per-packet one-way delay: 55.086 ms

Loss rate: 1.28%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2018-02-21 05:59:42

End at: 2018-02-21 06:00:12

# Below is generated by plot.py at 2018-02-21 10:17:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 15.23 Mbit/s

95th percentile per-packet one-way delay: 55.538 ms

Loss rate: 0.57%

-- Flow 1:

Average throughput: 7.80 Mbit/s

95th percentile per-packet one-way delay: 55.518 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 7.51 Mbit/s

95th percentile per-packet one-way delay: 55.520 ms

Loss rate: 0.60%

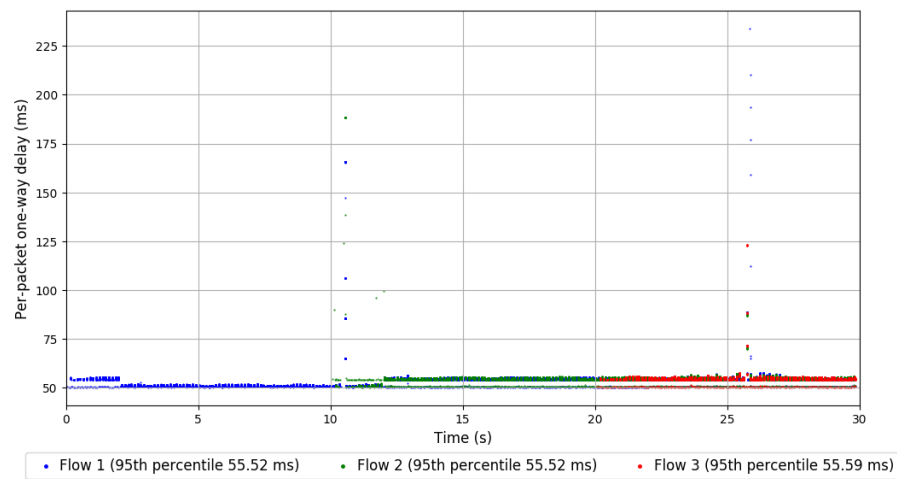
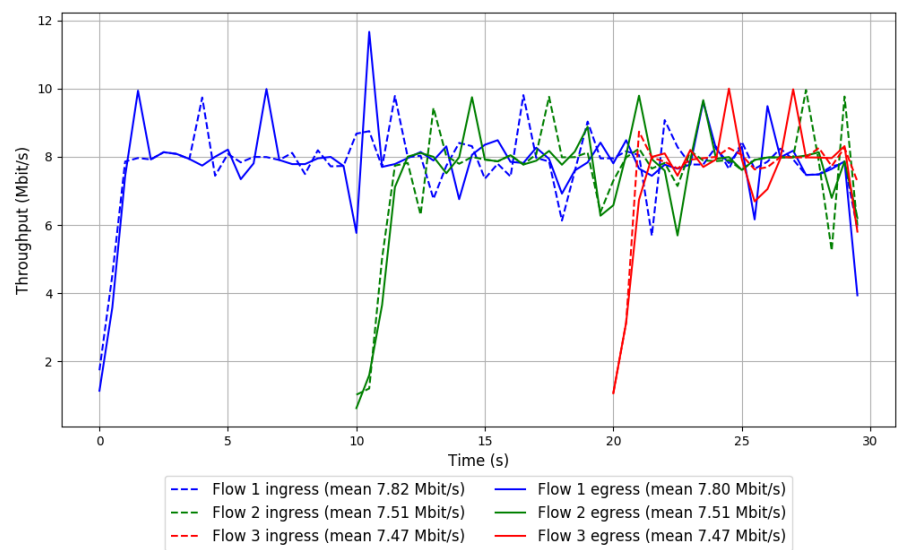
-- Flow 3:

Average throughput: 7.47 Mbit/s

95th percentile per-packet one-way delay: 55.589 ms

Loss rate: 1.00%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2018-02-21 06:17:07

End at: 2018-02-21 06:17:37

# Below is generated by plot.py at 2018-02-21 10:17:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 15.44 Mbit/s

95th percentile per-packet one-way delay: 55.089 ms

Loss rate: 0.33%

-- Flow 1:

Average throughput: 7.82 Mbit/s

95th percentile per-packet one-way delay: 55.170 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 7.70 Mbit/s

95th percentile per-packet one-way delay: 54.983 ms

Loss rate: 0.09%

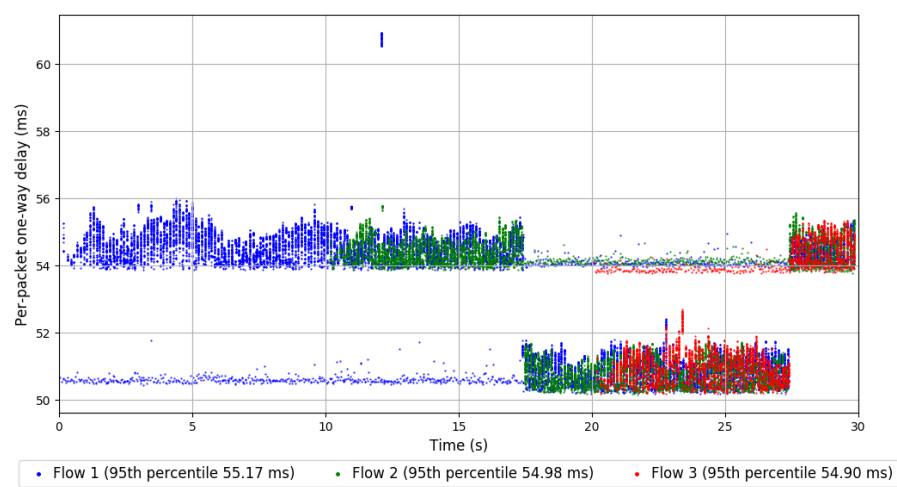
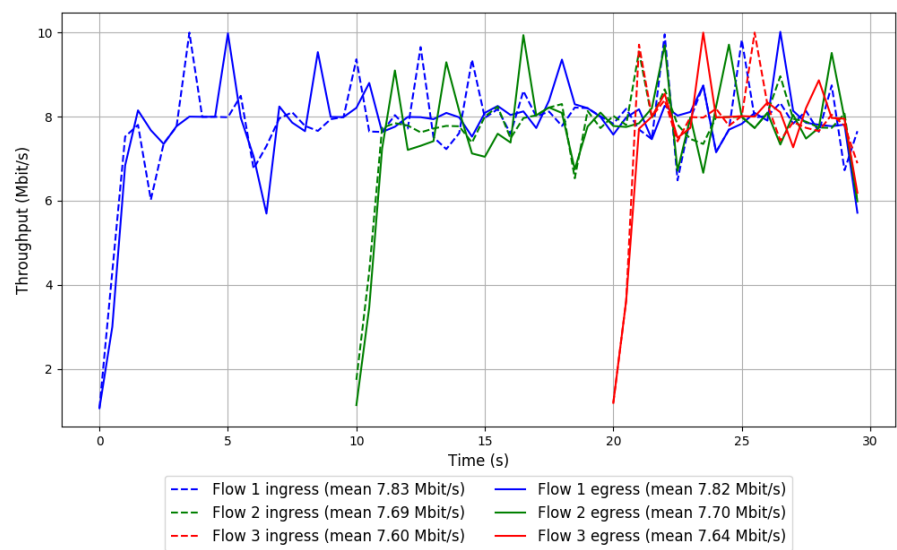
-- Flow 3:

Average throughput: 7.64 Mbit/s

95th percentile per-packet one-way delay: 54.904 ms

Loss rate: 0.54%

Run 10: Report of Sprout — Data Link



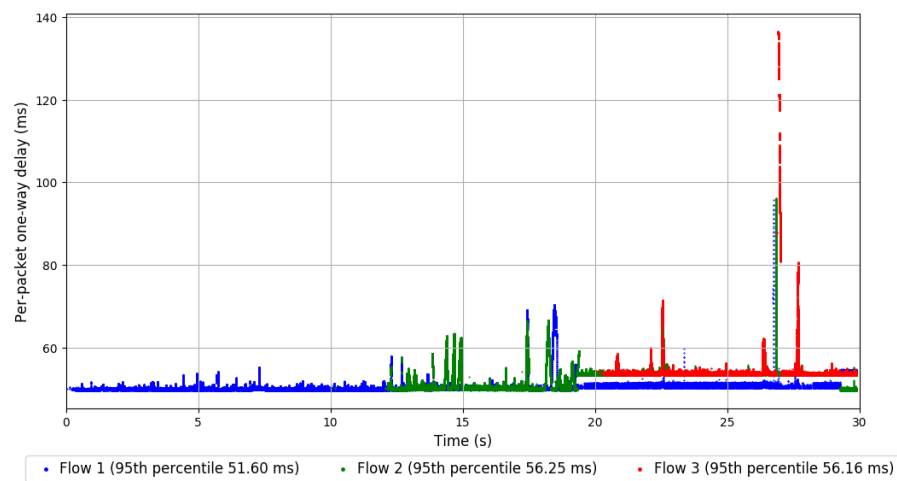
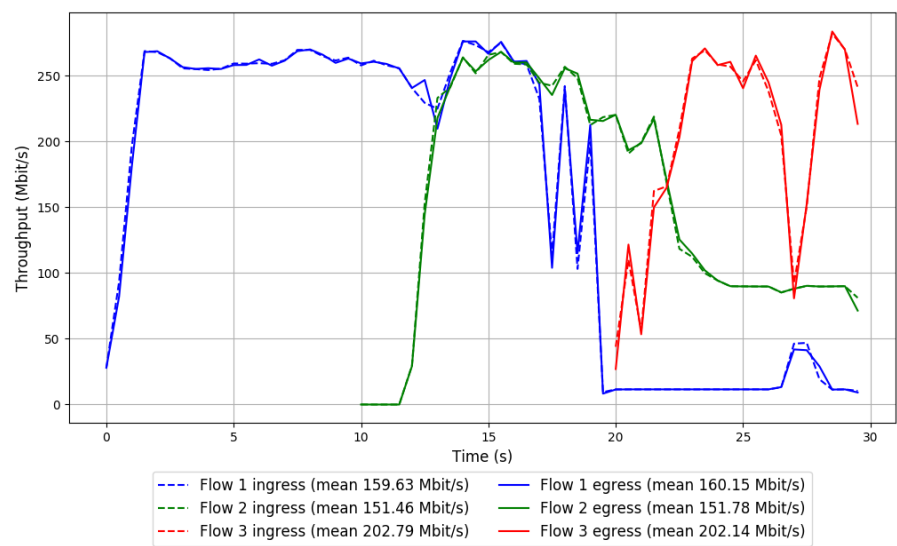
```
Run 1: Statistics of TaoVA-100x

Start at: 2018-02-21 03:54:05
End at: 2018-02-21 03:54:35

# Below is generated by plot.py at 2018-02-21 10:25:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 327.52 Mbit/s
95th percentile per-packet one-way delay: 54.213 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 160.15 Mbit/s
95th percentile per-packet one-way delay: 51.598 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 151.78 Mbit/s
95th percentile per-packet one-way delay: 56.248 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 202.14 Mbit/s
95th percentile per-packet one-way delay: 56.165 ms
Loss rate: 1.41%
```



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

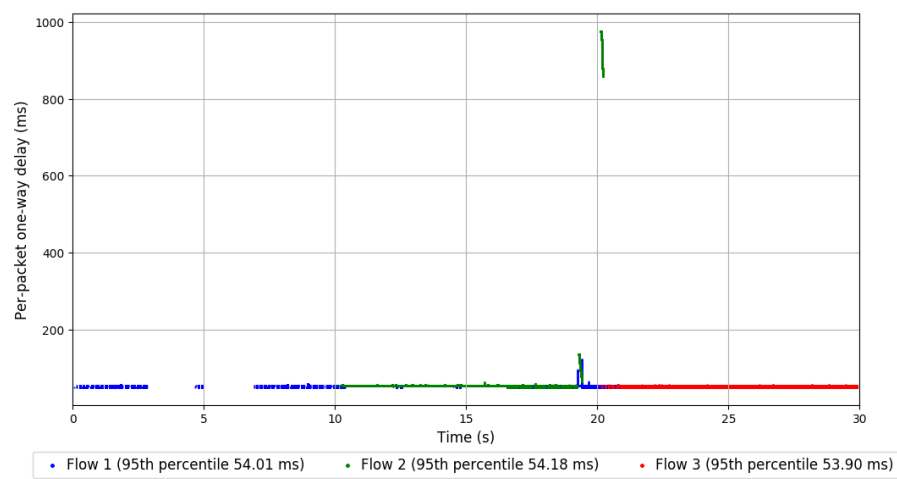
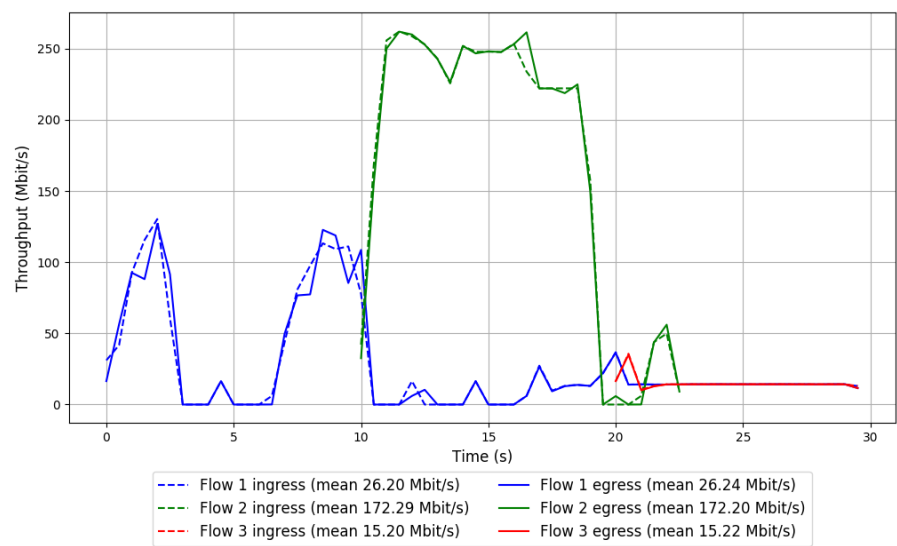


```
Run 2: Statistics of TaoVA-100x

Start at: 2018-02-21 04:11:48
End at: 2018-02-21 04:12:18

# Below is generated by plot.py at 2018-02-21 10:25:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 103.96 Mbit/s
95th percentile per-packet one-way delay: 54.102 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 26.24 Mbit/s
95th percentile per-packet one-way delay: 54.007 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 172.20 Mbit/s
95th percentile per-packet one-way delay: 54.180 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 15.22 Mbit/s
95th percentile per-packet one-way delay: 53.902 ms
Loss rate: 0.96%
```

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

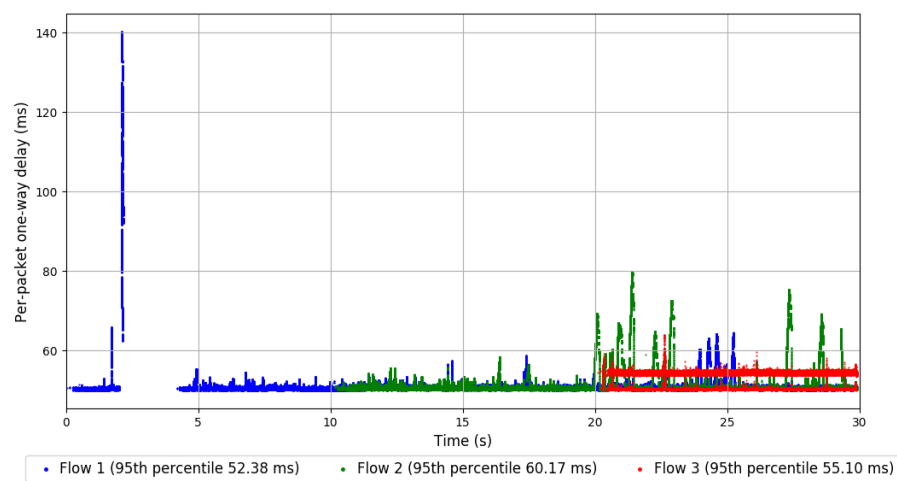
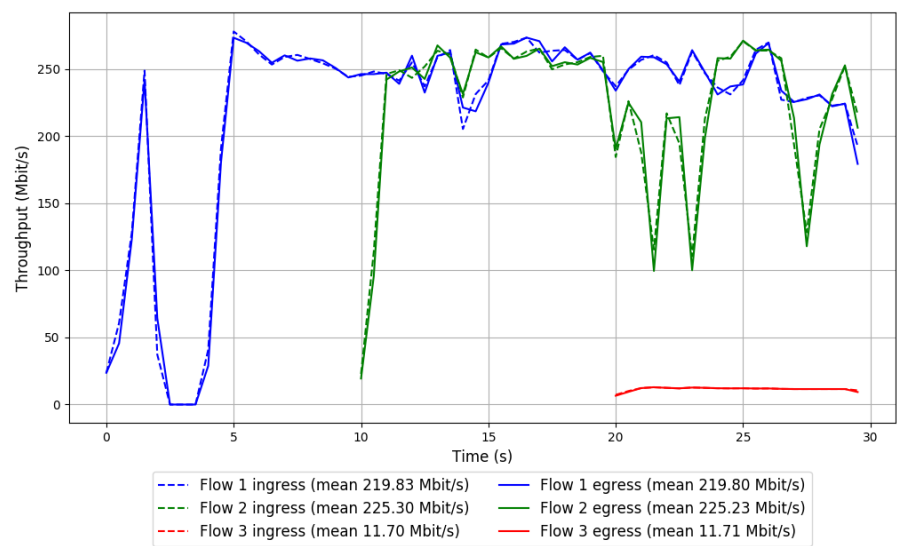


```
Run 3: Statistics of TaoVA-100x

Start at: 2018-02-21 04:29:05
End at: 2018-02-21 04:29:35

# Below is generated by plot.py at 2018-02-21 10:26:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 373.33 Mbit/s
95th percentile per-packet one-way delay: 55.100 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 219.80 Mbit/s
95th percentile per-packet one-way delay: 52.381 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 225.23 Mbit/s
95th percentile per-packet one-way delay: 60.170 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 11.71 Mbit/s
95th percentile per-packet one-way delay: 55.103 ms
Loss rate: 1.04%
```

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-02-21 04:46:55

End at: 2018-02-21 04:47:25

# Below is generated by plot.py at 2018-02-21 10:26:31

# Datalink statistics

-- Total of 3 flows:

Average throughput: 33.48 Mbit/s

95th percentile per-packet one-way delay: 53.895 ms

Loss rate: 1.12%

-- Flow 1:

Average throughput: 32.86 Mbit/s

95th percentile per-packet one-way delay: 53.847 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 25.12 Mbit/s

95th percentile per-packet one-way delay: 53.740 ms

Loss rate: 2.23%

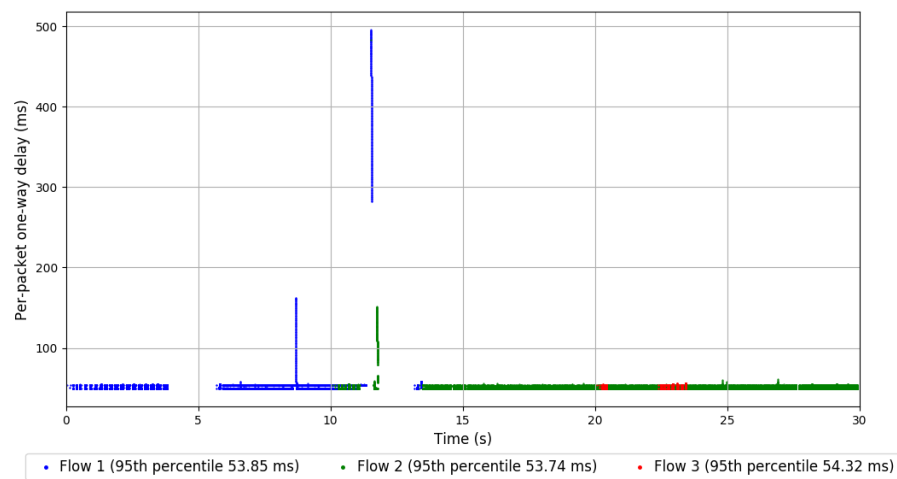
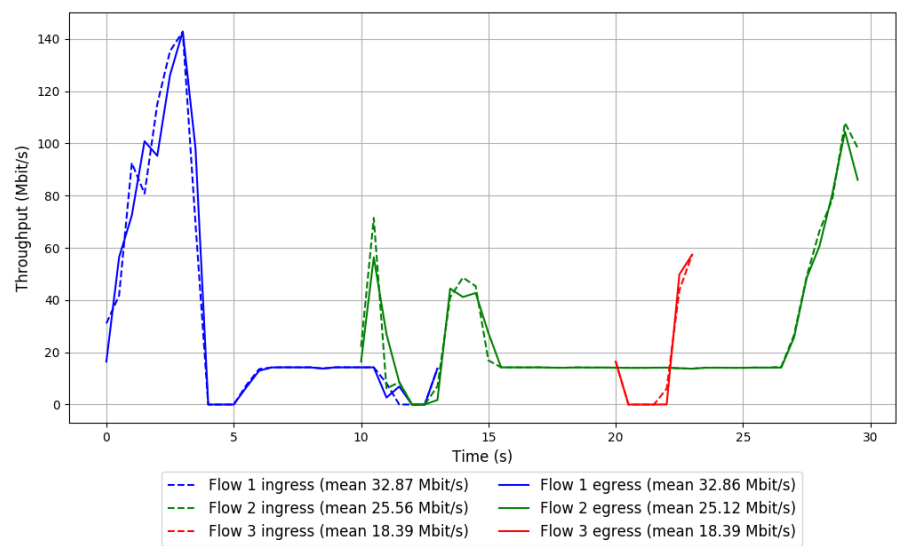
-- Flow 3:

Average throughput: 18.39 Mbit/s

95th percentile per-packet one-way delay: 54.320 ms

Loss rate: 0.00%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-02-21 05:04:09

End at: 2018-02-21 05:04:39

# Below is generated by plot.py at 2018-02-21 10:26:31

# Datalink statistics

-- Total of 3 flows:

Average throughput: 292.47 Mbit/s

95th percentile per-packet one-way delay: 55.285 ms

Loss rate: 0.48%

-- Flow 1:

Average throughput: 216.57 Mbit/s

95th percentile per-packet one-way delay: 54.110 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 18.96 Mbit/s

95th percentile per-packet one-way delay: 54.102 ms

Loss rate: 0.39%

-- Flow 3:

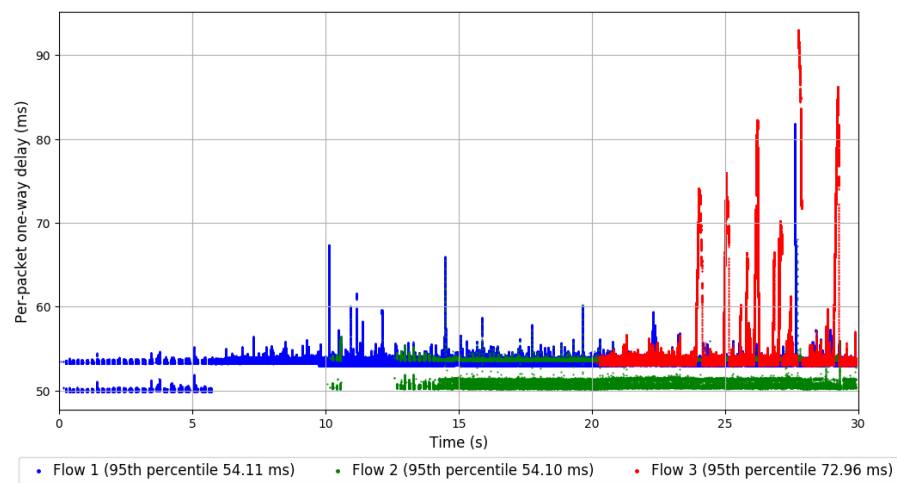
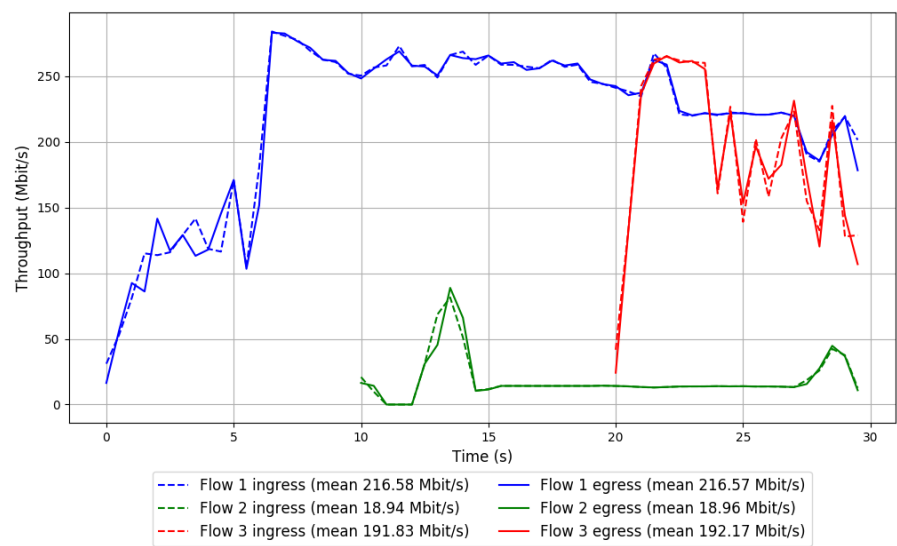
Average throughput: 192.17 Mbit/s

95th percentile per-packet one-way delay: 72.962 ms

Loss rate: 0.90%



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



Run 6: Statistics of TaoVA-100x

Start at: 2018-02-21 05:22:04

End at: 2018-02-21 05:22:34

# Below is generated by plot.py at 2018-02-21 10:26:31

# Datalink statistics

-- Total of 3 flows:

Average throughput: 179.67 Mbit/s

95th percentile per-packet one-way delay: 53.793 ms

Loss rate: 0.57%

-- Flow 1:

Average throughput: 90.58 Mbit/s

95th percentile per-packet one-way delay: 53.797 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 17.33 Mbit/s

95th percentile per-packet one-way delay: 54.117 ms

Loss rate: 0.41%

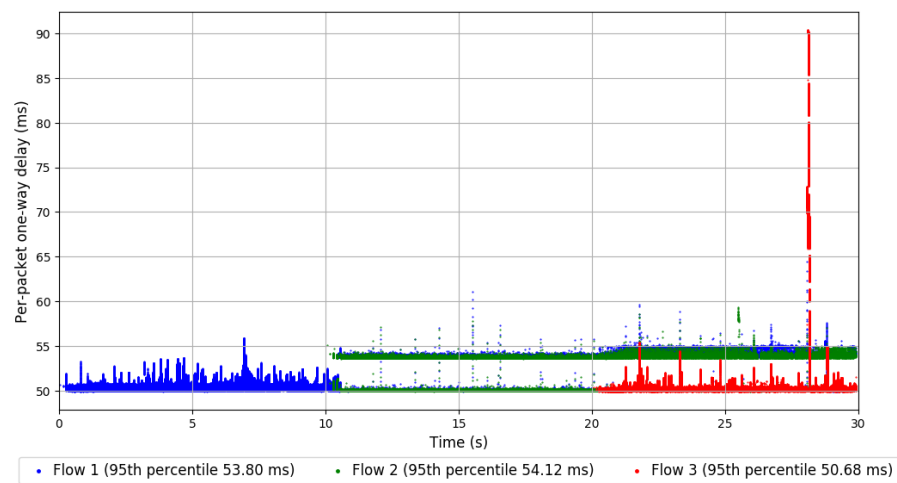
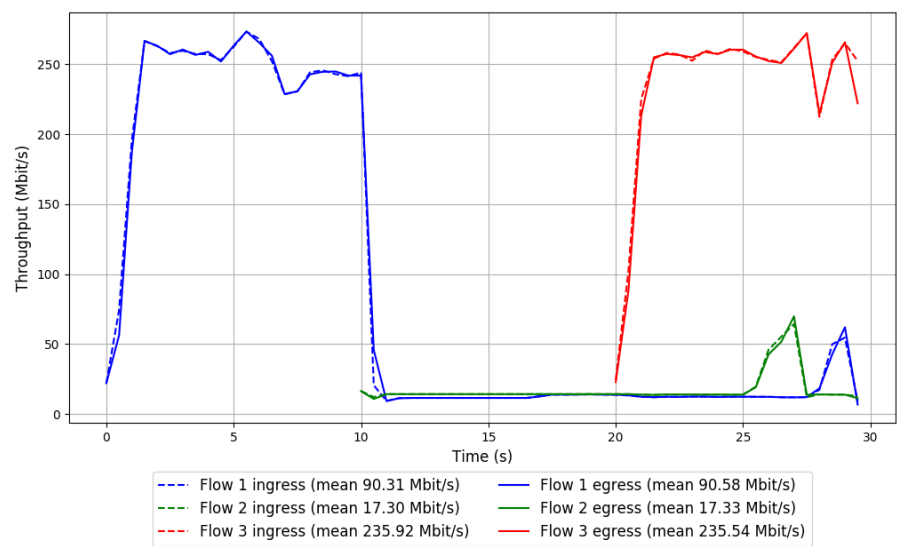
-- Flow 3:

Average throughput: 235.54 Mbit/s

95th percentile per-packet one-way delay: 50.682 ms

Loss rate: 1.20%

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

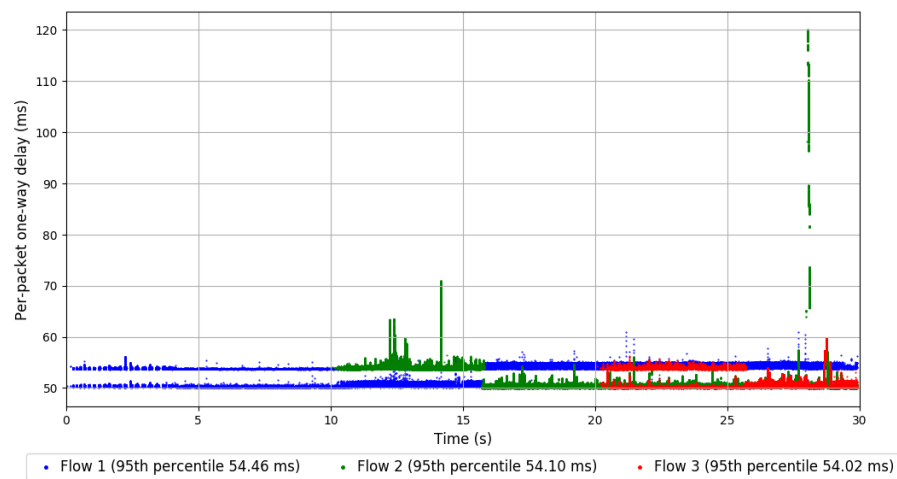
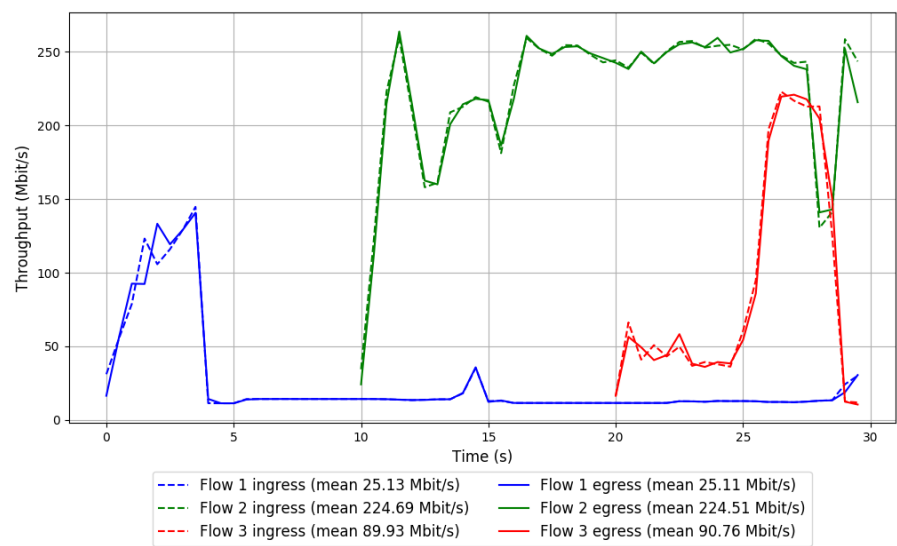


```
Run 7: Statistics of TaoVA-100x

Start at: 2018-02-21 05:39:49
End at: 2018-02-21 05:40:19

# Below is generated by plot.py at 2018-02-21 10:26:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 204.14 Mbit/s
95th percentile per-packet one-way delay: 54.107 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 25.11 Mbit/s
95th percentile per-packet one-way delay: 54.460 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 224.51 Mbit/s
95th percentile per-packet one-way delay: 54.097 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 90.76 Mbit/s
95th percentile per-packet one-way delay: 54.020 ms
Loss rate: 0.15%
```

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



Run 8: Statistics of TaoVA-100x

Start at: 2018-02-21 05:57:29

End at: 2018-02-21 05:57:59

# Below is generated by plot.py at 2018-02-21 10:26:31

# Datalink statistics

-- Total of 3 flows:

Average throughput: 129.17 Mbit/s

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

Loss rate: 0.72%

-- Flow 1:

Average throughput: 227.91 Mbit/s

95th percentile per-packet one-way delay: 52.340 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 14.23 Mbit/s

95th percentile per-packet one-way delay: 54.881 ms

Loss rate: 0.43%

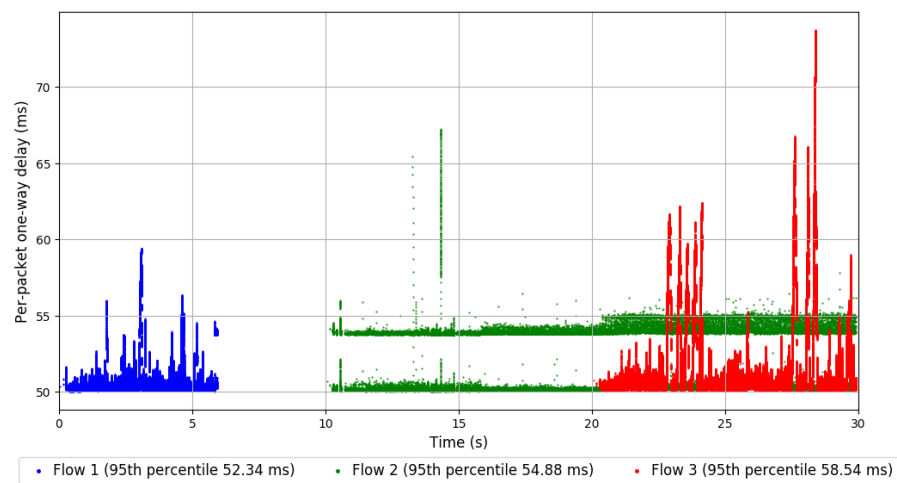
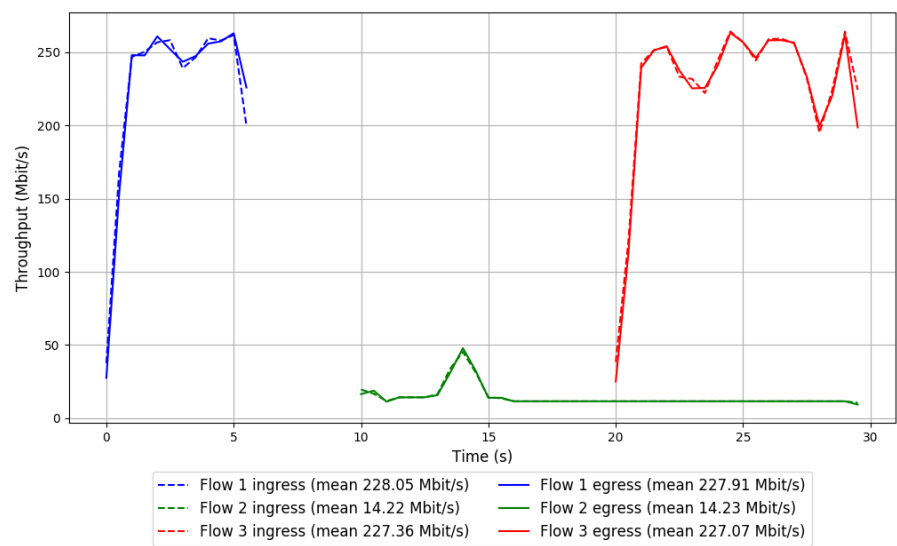
-- Flow 3:

Average throughput: 227.07 Mbit/s

95th percentile per-packet one-way delay: 58.536 ms

Loss rate: 1.18%

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



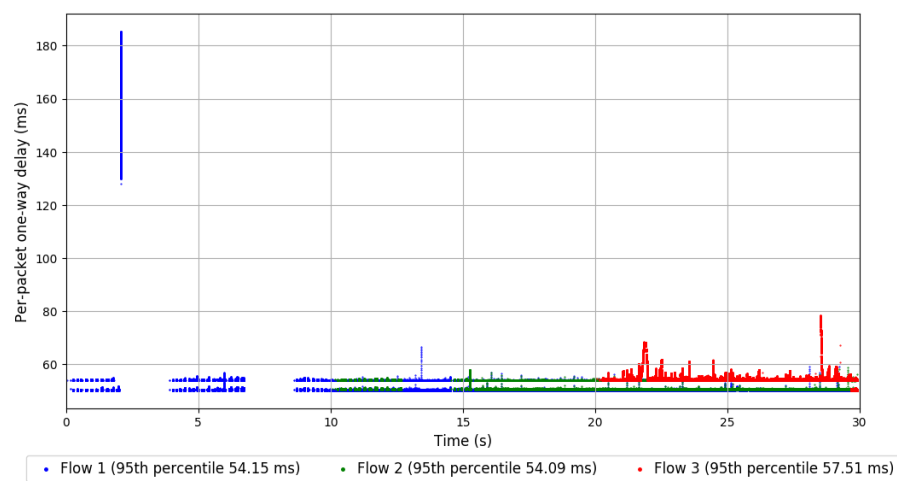
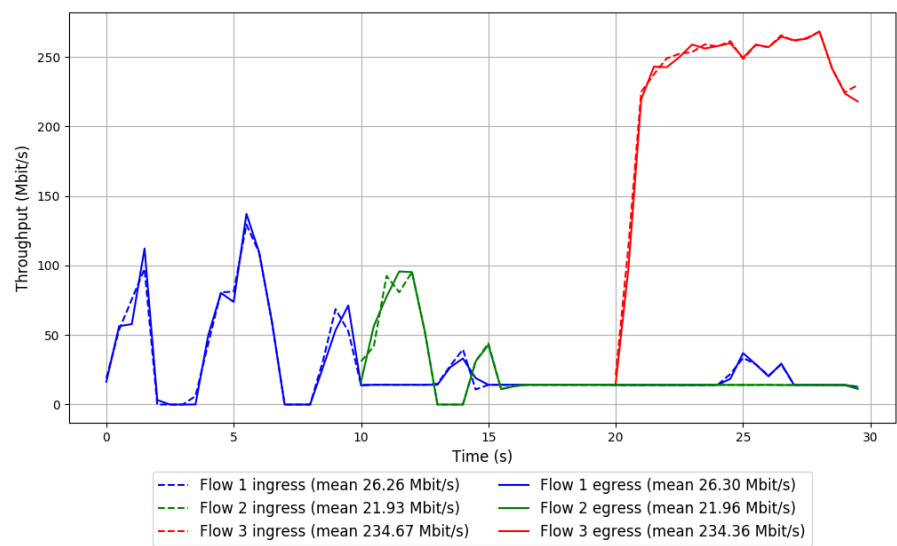
```
Run 9: Statistics of TaoVA-100x

Start at: 2018-02-21 06:14:55
End at: 2018-02-21 06:15:25

# Below is generated by plot.py at 2018-02-21 10:26:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 118.09 Mbit/s
95th percentile per-packet one-way delay: 56.434 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 26.30 Mbit/s
95th percentile per-packet one-way delay: 54.152 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 21.96 Mbit/s
95th percentile per-packet one-way delay: 54.087 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 234.36 Mbit/s
95th percentile per-packet one-way delay: 57.510 ms
Loss rate: 0.89%
```



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

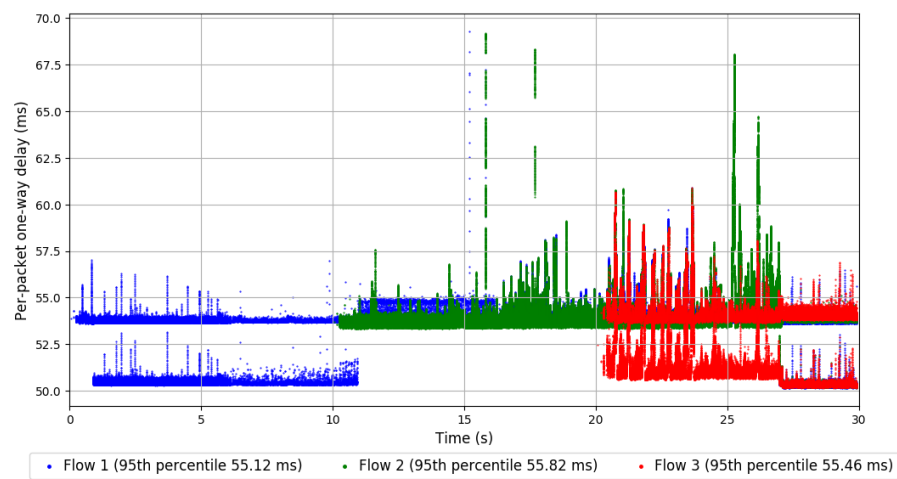
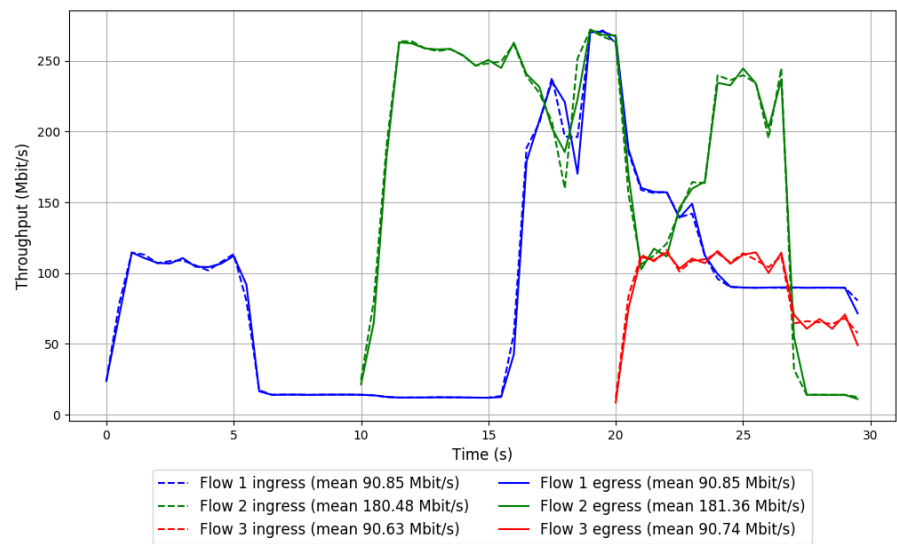


```
Run 10: Statistics of TaoVA-100x

Start at: 2018-02-21 06:32:28
End at: 2018-02-21 06:32:58

# Below is generated by plot.py at 2018-02-21 10:26:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 241.26 Mbit/s
95th percentile per-packet one-way delay: 55.482 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 90.85 Mbit/s
95th percentile per-packet one-way delay: 55.122 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 181.36 Mbit/s
95th percentile per-packet one-way delay: 55.821 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 90.74 Mbit/s
95th percentile per-packet one-way delay: 55.458 ms
Loss rate: 0.91%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2018-02-21 03:41:24

End at: 2018-02-21 03:41:54

# Below is generated by plot.py at 2018-02-21 10:26:31

# Datalink statistics

-- Total of 3 flows:

Average throughput: 246.86 Mbit/s

95th percentile per-packet one-way delay: 60.861 ms

Loss rate: 0.54%

-- Flow 1:

Average throughput: 80.62 Mbit/s

95th percentile per-packet one-way delay: 56.593 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 220.26 Mbit/s

95th percentile per-packet one-way delay: 61.262 ms

Loss rate: 0.60%

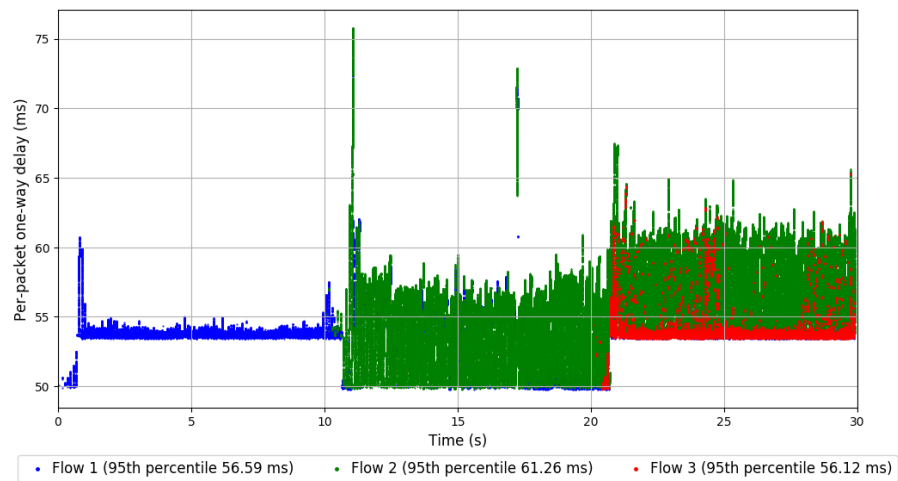
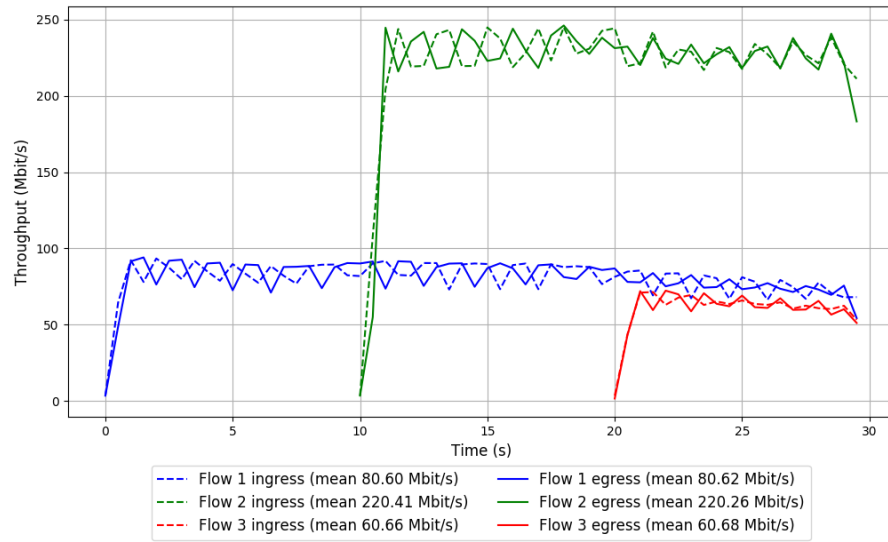
-- Flow 3:

Average throughput: 60.68 Mbit/s

95th percentile per-packet one-way delay: 56.125 ms

Loss rate: 1.07%

## Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-02-21 03:59:39

End at: 2018-02-21 04:00:09

# Below is generated by plot.py at 2018-02-21 10:26:31

# Datalink statistics

-- Total of 3 flows:

Average throughput: 190.68 Mbit/s

95th percentile per-packet one-way delay: 62.636 ms

Loss rate: 0.32%

-- Flow 1:

Average throughput: 137.45 Mbit/s

95th percentile per-packet one-way delay: 63.908 ms

Loss rate: 0.19%

-- Flow 2:

Average throughput: 77.40 Mbit/s

95th percentile per-packet one-way delay: 57.533 ms

Loss rate: 0.61%

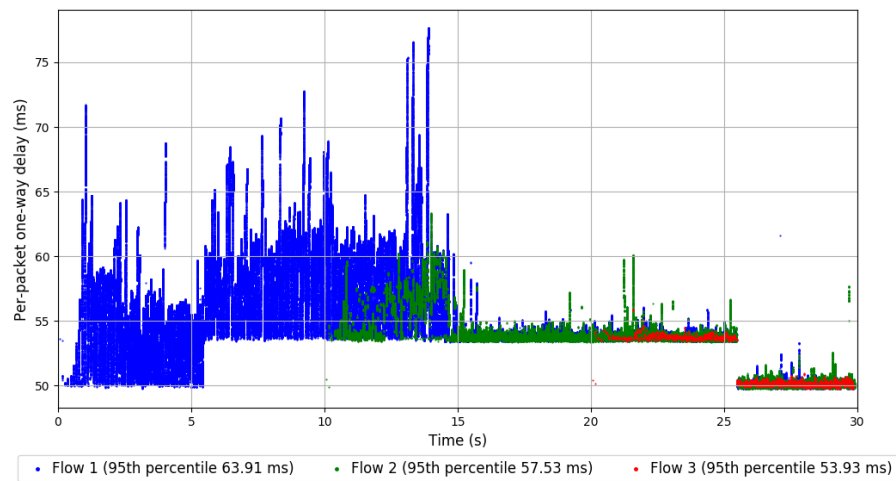
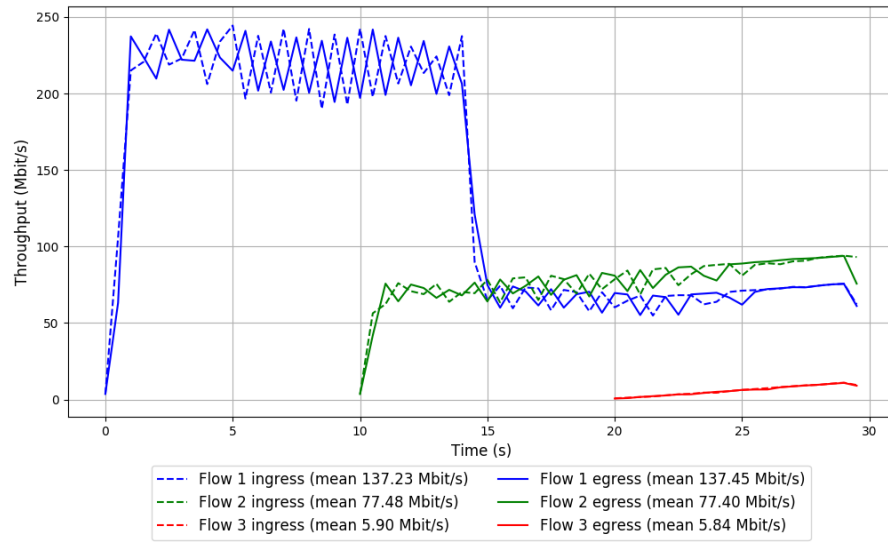
-- Flow 3:

Average throughput: 5.84 Mbit/s

95th percentile per-packet one-way delay: 53.928 ms

Loss rate: 2.14%

## Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-02-21 04:17:01

End at: 2018-02-21 04:17:31

# Below is generated by plot.py at 2018-02-21 10:26:31

# Datalink statistics

-- Total of 3 flows:

Average throughput: 74.23 Mbit/s

95th percentile per-packet one-way delay: 54.480 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 25.98 Mbit/s

95th percentile per-packet one-way delay: 54.403 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 70.24 Mbit/s

95th percentile per-packet one-way delay: 54.544 ms

Loss rate: 0.53%

-- Flow 3:

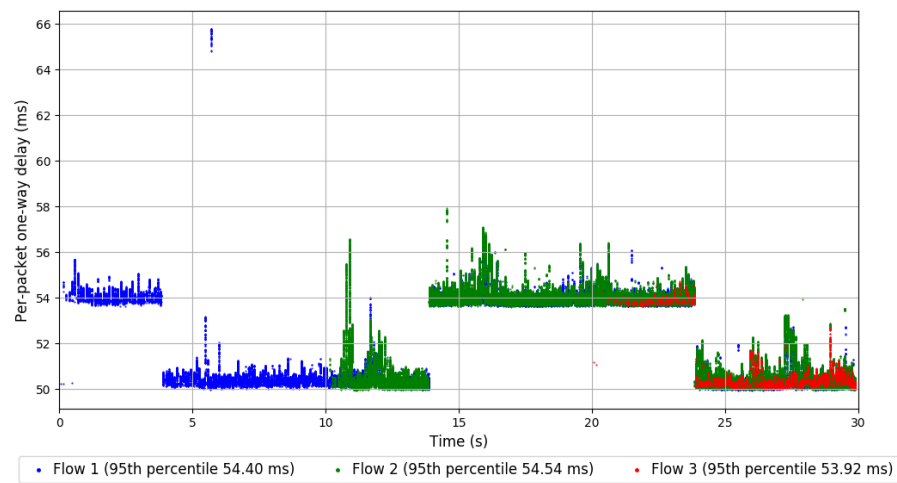
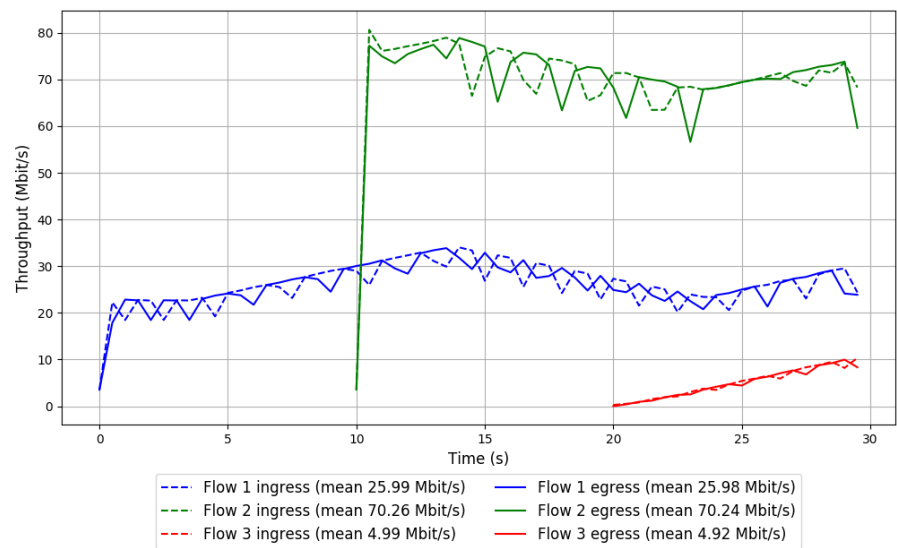
Average throughput: 4.92 Mbit/s

95th percentile per-packet one-way delay: 53.924 ms

Loss rate: 2.43%



Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2018-02-21 04:34:43

End at: 2018-02-21 04:35:13

# Below is generated by plot.py at 2018-02-21 10:26:31

# Datalink statistics

-- Total of 3 flows:

Average throughput: 149.01 Mbit/s

95th percentile per-packet one-way delay: 55.614 ms

Loss rate: 0.43%

-- Flow 1:

Average throughput: 63.43 Mbit/s

95th percentile per-packet one-way delay: 55.289 ms

Loss rate: 0.27%

-- Flow 2:

Average throughput: 110.94 Mbit/s

95th percentile per-packet one-way delay: 56.080 ms

Loss rate: 0.49%

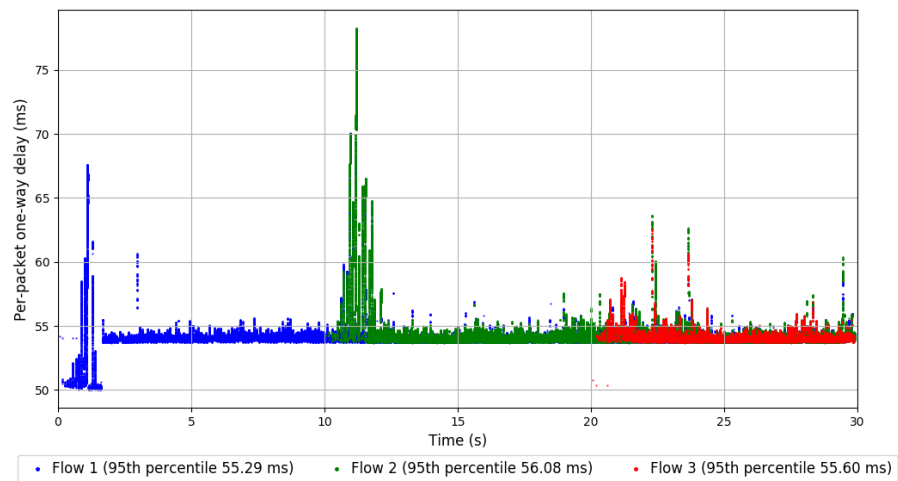
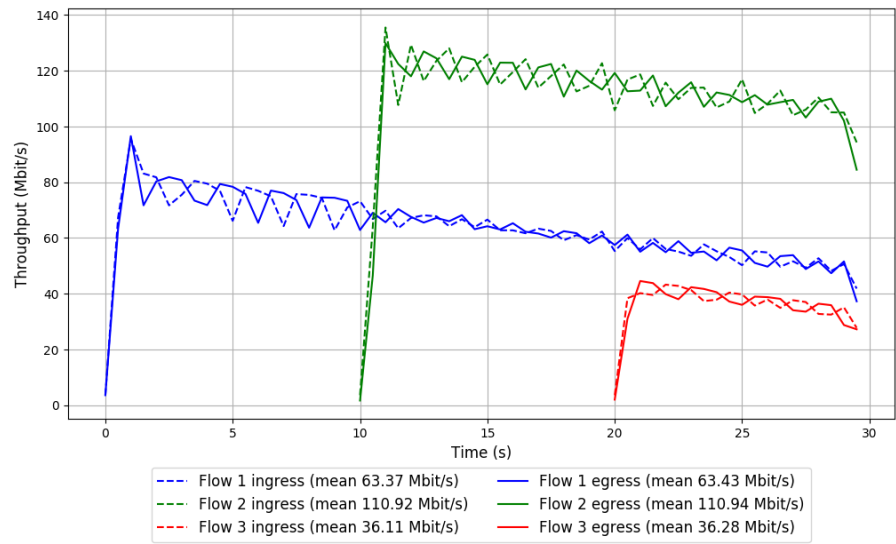
-- Flow 3:

Average throughput: 36.28 Mbit/s

95th percentile per-packet one-way delay: 55.598 ms

Loss rate: 0.97%

# Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-02-21 04:51:56

End at: 2018-02-21 04:52:26

# Below is generated by plot.py at 2018-02-21 10:26:53

# Datalink statistics

-- Total of 3 flows:

Average throughput: 225.37 Mbit/s

95th percentile per-packet one-way delay: 54.786 ms

Loss rate: 0.55%

-- Flow 1:

Average throughput: 114.12 Mbit/s

95th percentile per-packet one-way delay: 54.963 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 97.81 Mbit/s

95th percentile per-packet one-way delay: 55.108 ms

Loss rate: 0.54%

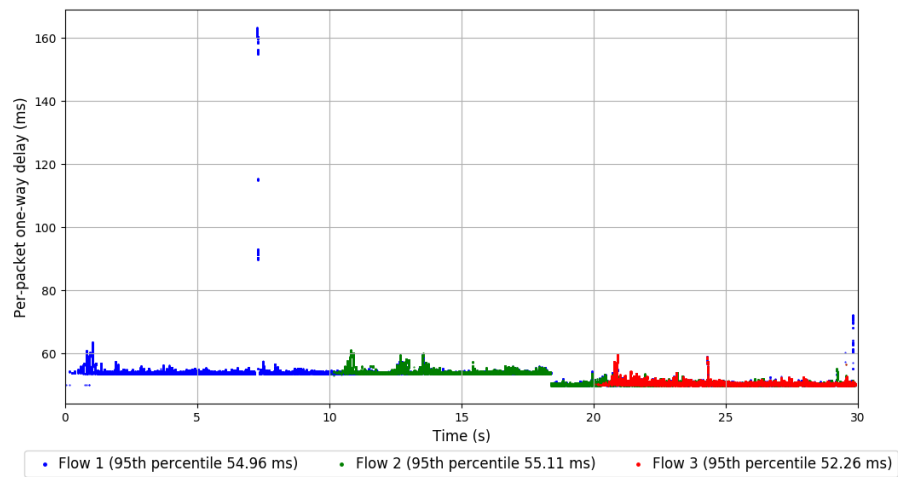
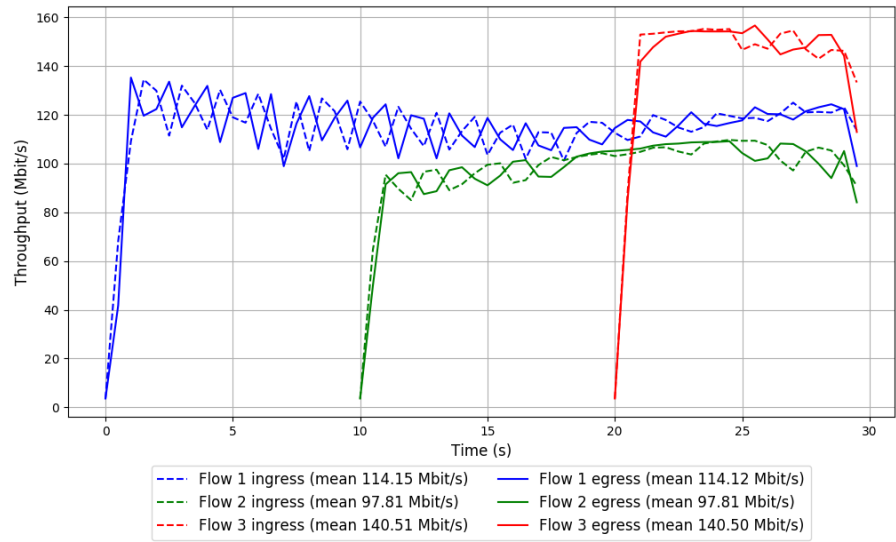
-- Flow 3:

Average throughput: 140.50 Mbit/s

95th percentile per-packet one-way delay: 52.261 ms

Loss rate: 1.02%

# Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2018-02-21 05:09:43

End at: 2018-02-21 05:10:13

# Below is generated by plot.py at 2018-02-21 10:28:25

# Datalink statistics

-- Total of 3 flows:

Average throughput: 237.40 Mbit/s

95th percentile per-packet one-way delay: 60.652 ms

Loss rate: 0.26%

-- Flow 1:

Average throughput: 143.23 Mbit/s

95th percentile per-packet one-way delay: 60.987 ms

Loss rate: 0.18%

-- Flow 2:

Average throughput: 120.23 Mbit/s

95th percentile per-packet one-way delay: 59.729 ms

Loss rate: 0.19%

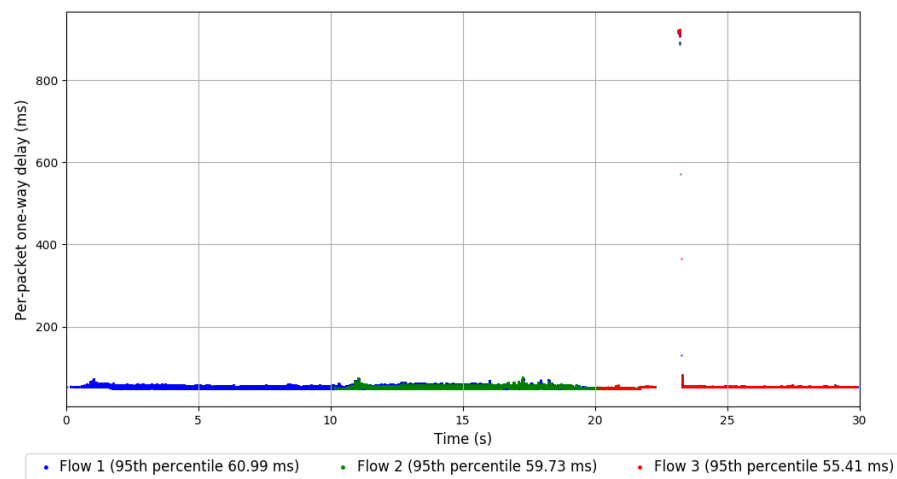
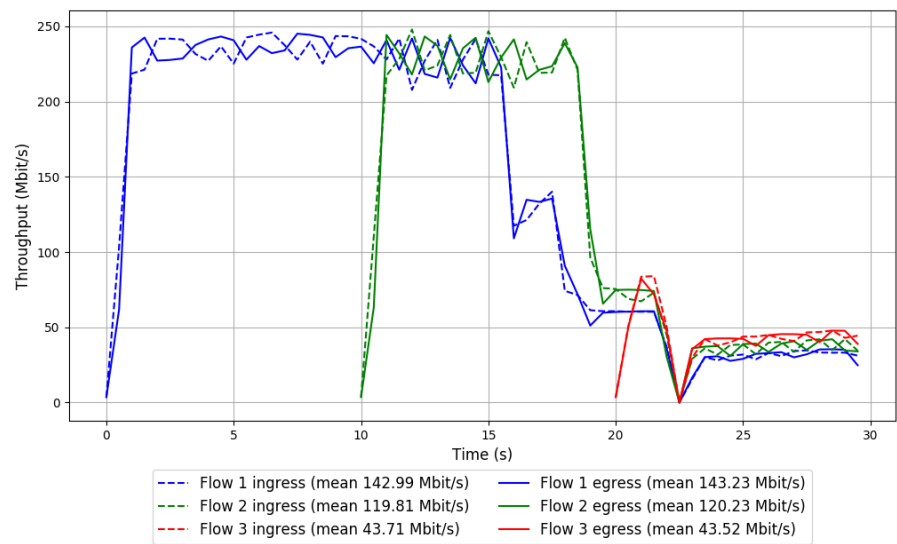
-- Flow 3:

Average throughput: 43.52 Mbit/s

95th percentile per-packet one-way delay: 55.411 ms

Loss rate: 1.50%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2018-02-21 05:27:24

End at: 2018-02-21 05:27:54

# Below is generated by plot.py at 2018-02-21 10:29:39

# Datalink statistics

-- Total of 3 flows:

Average throughput: 291.04 Mbit/s

95th percentile per-packet one-way delay: 60.337 ms

Loss rate: 0.35%

-- Flow 1:

Average throughput: 161.39 Mbit/s

95th percentile per-packet one-way delay: 60.925 ms

Loss rate: 0.16%

-- Flow 2:

Average throughput: 125.52 Mbit/s

95th percentile per-packet one-way delay: 57.752 ms

Loss rate: 0.30%

-- Flow 3:

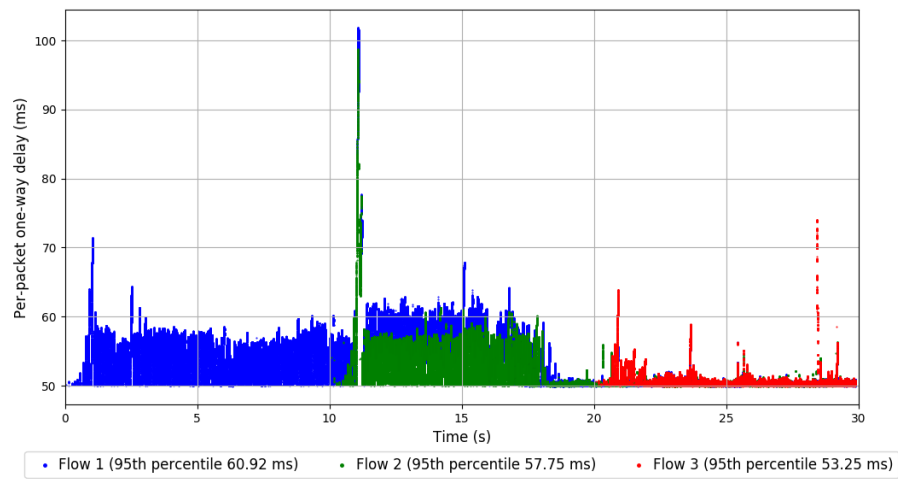
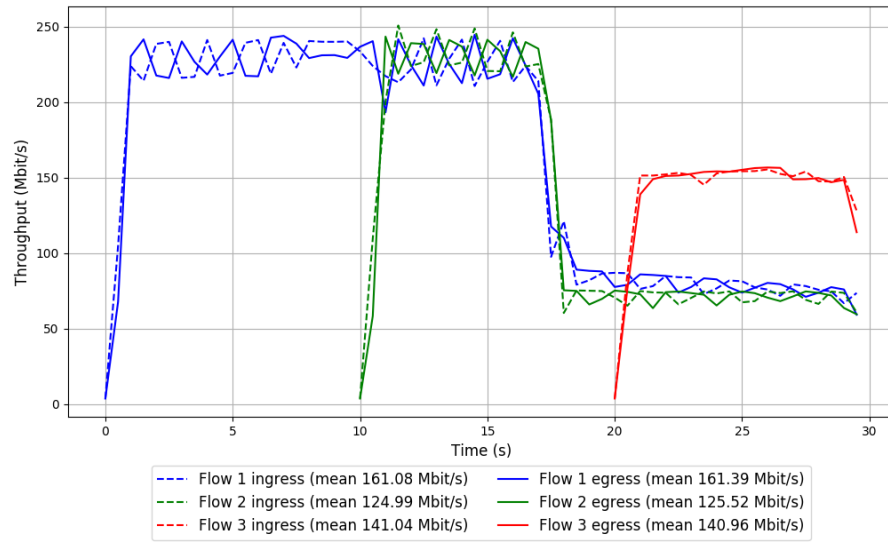
Average throughput: 140.96 Mbit/s

95th percentile per-packet one-way delay: 53.246 ms

Loss rate: 1.11%



# Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2018-02-21 05:45:11

End at: 2018-02-21 05:45:41

# Below is generated by plot.py at 2018-02-21 10:29:39

# Datalink statistics

-- Total of 3 flows:

Average throughput: 224.42 Mbit/s

95th percentile per-packet one-way delay: 57.836 ms

Loss rate: 0.45%

-- Flow 1:

Average throughput: 75.89 Mbit/s

95th percentile per-packet one-way delay: 57.040 ms

Loss rate: 0.33%

-- Flow 2:

Average throughput: 220.63 Mbit/s

95th percentile per-packet one-way delay: 57.970 ms

Loss rate: 0.49%

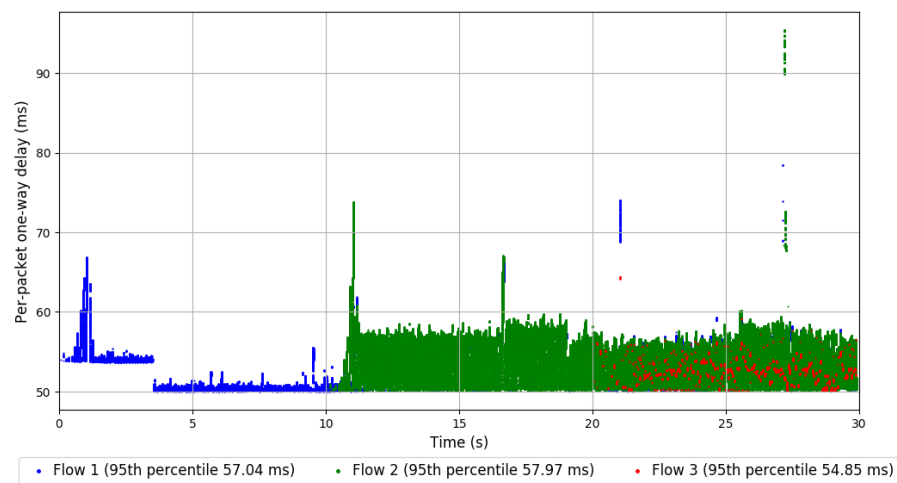
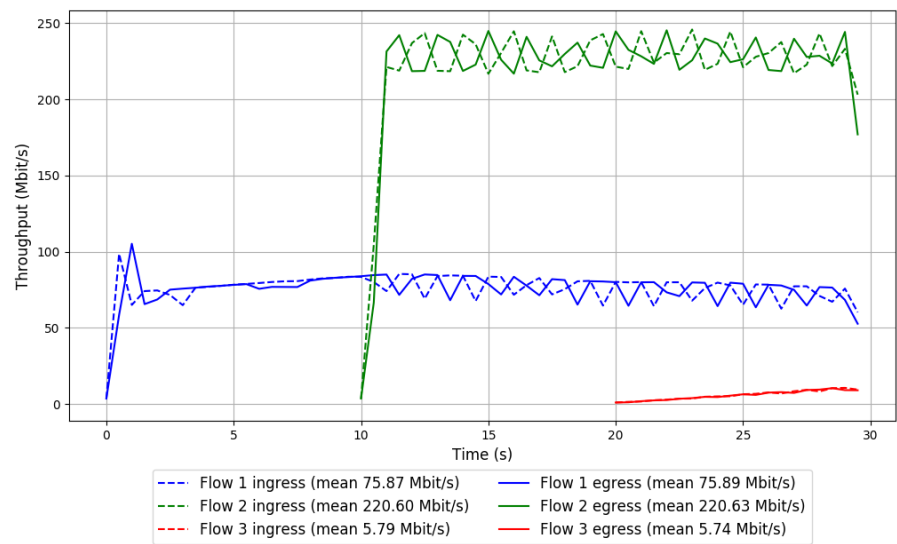
-- Flow 3:

Average throughput: 5.74 Mbit/s

95th percentile per-packet one-way delay: 54.850 ms

Loss rate: 2.05%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2018-02-21 06:02:43

End at: 2018-02-21 06:03:13

# Below is generated by plot.py at 2018-02-21 10:29:39

# Datalink statistics

-- Total of 3 flows:

Average throughput: 187.66 Mbit/s

95th percentile per-packet one-way delay: 55.210 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 59.45 Mbit/s

95th percentile per-packet one-way delay: 55.222 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 180.26 Mbit/s

95th percentile per-packet one-way delay: 55.271 ms

Loss rate: 0.55%

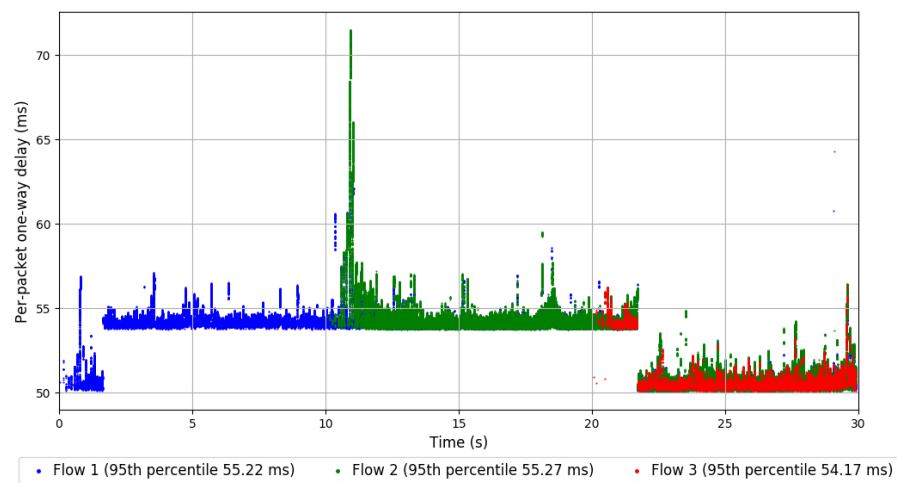
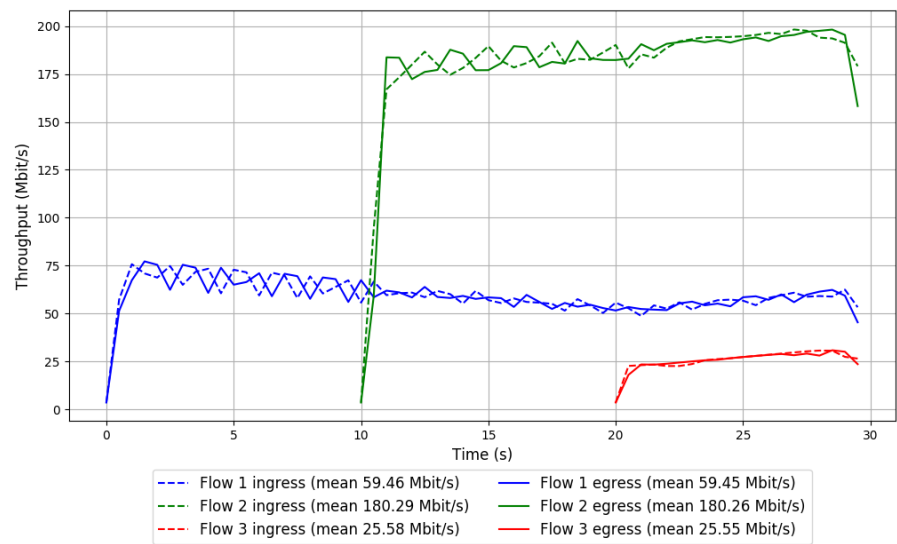
-- Flow 3:

Average throughput: 25.55 Mbit/s

95th percentile per-packet one-way delay: 54.174 ms

Loss rate: 1.16%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2018-02-21 06:20:08

End at: 2018-02-21 06:20:38

# Below is generated by plot.py at 2018-02-21 10:29:39

# Datalink statistics

-- Total of 3 flows:

Average throughput: 168.73 Mbit/s

95th percentile per-packet one-way delay: 61.473 ms

Loss rate: 0.40%

-- Flow 1:

Average throughput: 104.95 Mbit/s

95th percentile per-packet one-way delay: 61.549 ms

Loss rate: 0.26%

-- Flow 2:

Average throughput: 9.28 Mbit/s

95th percentile per-packet one-way delay: 57.968 ms

Loss rate: 0.83%

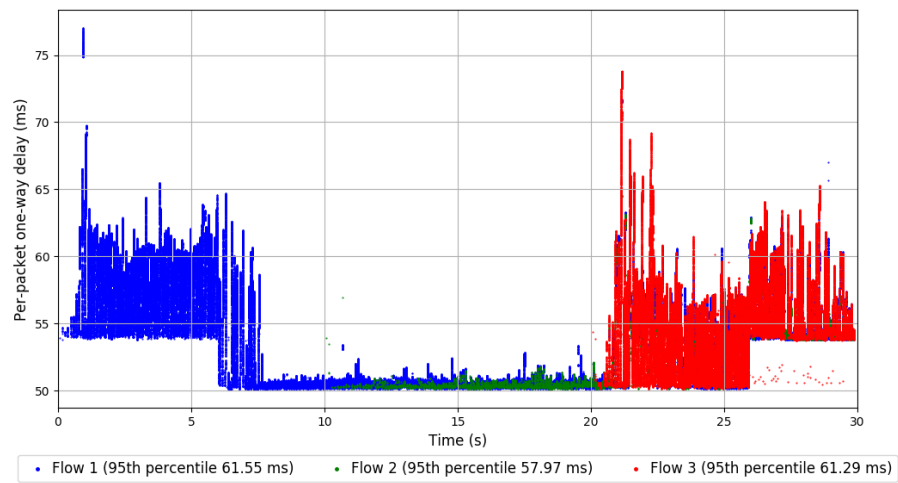
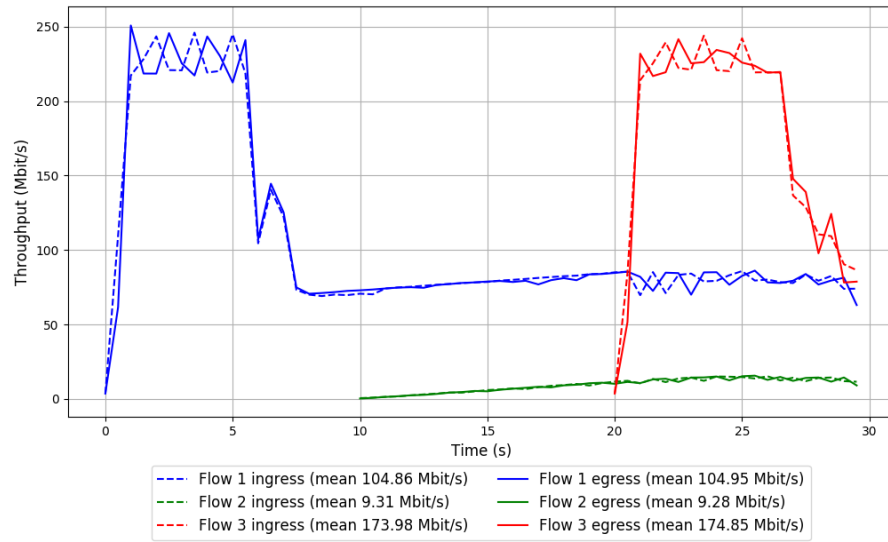
-- Flow 3:

Average throughput: 174.85 Mbit/s

95th percentile per-packet one-way delay: 61.292 ms

Loss rate: 0.59%

# Run 10: Report of TCP Vegas — Data Link



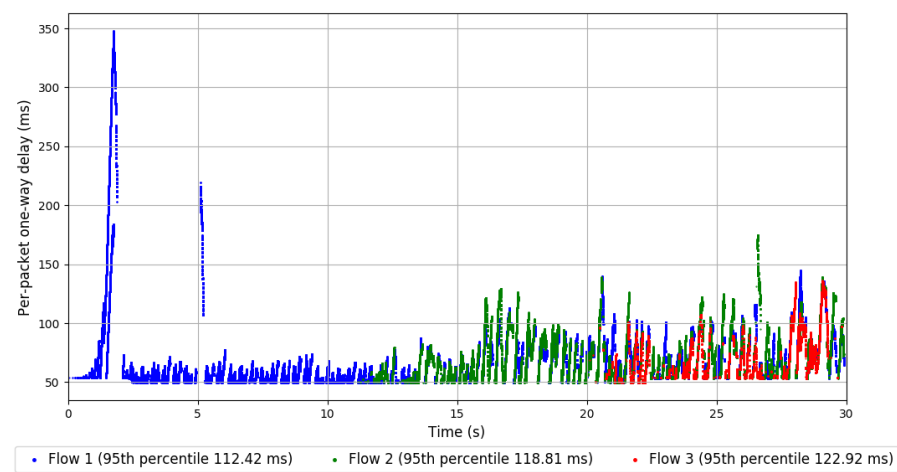
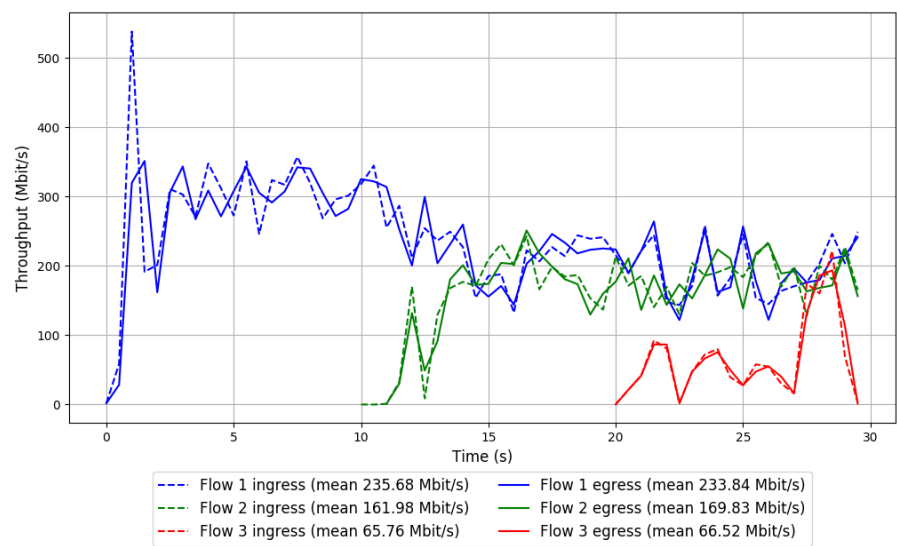
```
Run 1: Statistics of Verus

Start at: 2018-02-21 03:52:22
End at: 2018-02-21 03:52:52

# Below is generated by plot.py at 2018-02-21 10:31:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 362.63 Mbit/s
95th percentile per-packet one-way delay: 117.186 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 233.84 Mbit/s
95th percentile per-packet one-way delay: 112.415 ms
Loss rate: 1.03%
-- Flow 2:
Average throughput: 169.83 Mbit/s
95th percentile per-packet one-way delay: 118.811 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 66.52 Mbit/s
95th percentile per-packet one-way delay: 122.924 ms
Loss rate: 0.12%
```



Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-02-21 04:10:06

End at: 2018-02-21 04:10:36

# Below is generated by plot.py at 2018-02-21 10:32:29

# Datalink statistics

-- Total of 3 flows:

Average throughput: 334.31 Mbit/s

95th percentile per-packet one-way delay: 152.040 ms

Loss rate: 1.33%

-- Flow 1:

Average throughput: 172.53 Mbit/s

95th percentile per-packet one-way delay: 157.792 ms

Loss rate: 1.33%

-- Flow 2:

Average throughput: 205.73 Mbit/s

95th percentile per-packet one-way delay: 131.555 ms

Loss rate: 1.12%

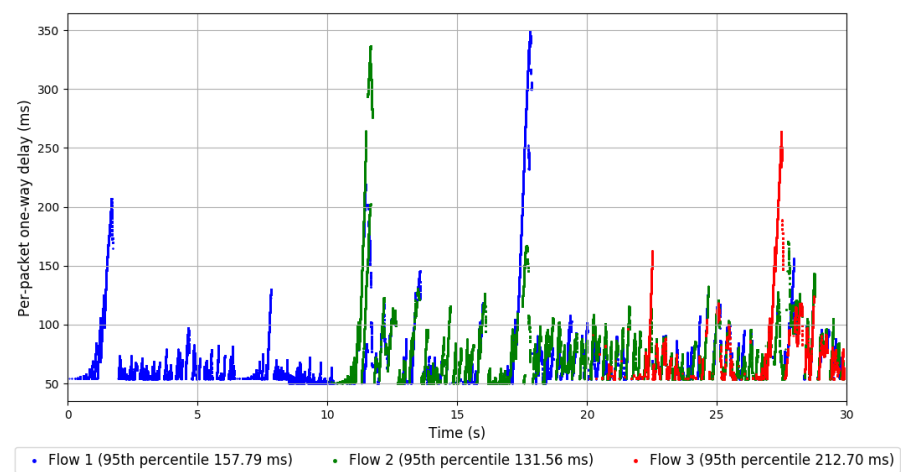
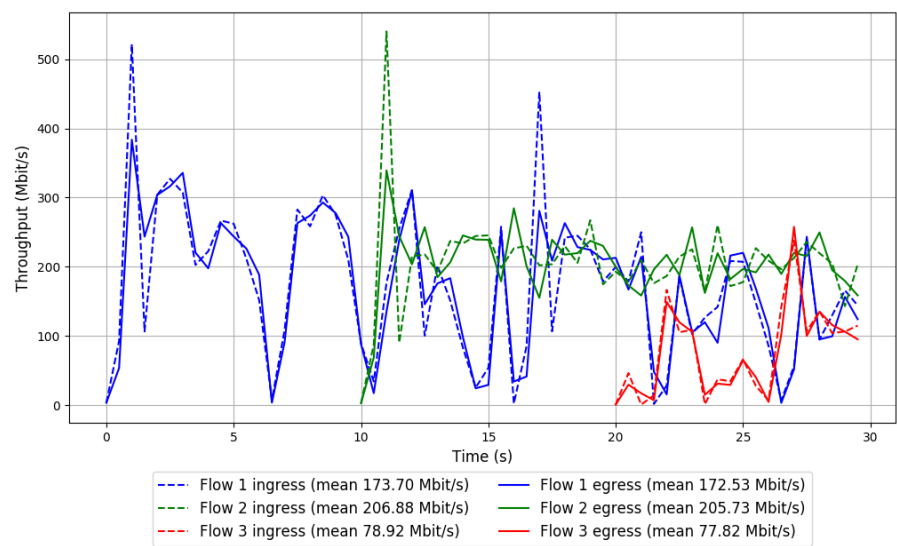
-- Flow 3:

Average throughput: 77.82 Mbit/s

95th percentile per-packet one-way delay: 212.702 ms

Loss rate: 2.45%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-02-21 04:27:22

End at: 2018-02-21 04:27:52

# Below is generated by plot.py at 2018-02-21 10:32:57

# Datalink statistics

-- Total of 3 flows:

Average throughput: 352.86 Mbit/s

95th percentile per-packet one-way delay: 169.892 ms

Loss rate: 0.91%

-- Flow 1:

Average throughput: 240.30 Mbit/s

95th percentile per-packet one-way delay: 180.760 ms

Loss rate: 0.86%

-- Flow 2:

Average throughput: 134.71 Mbit/s

95th percentile per-packet one-way delay: 149.852 ms

Loss rate: 0.43%

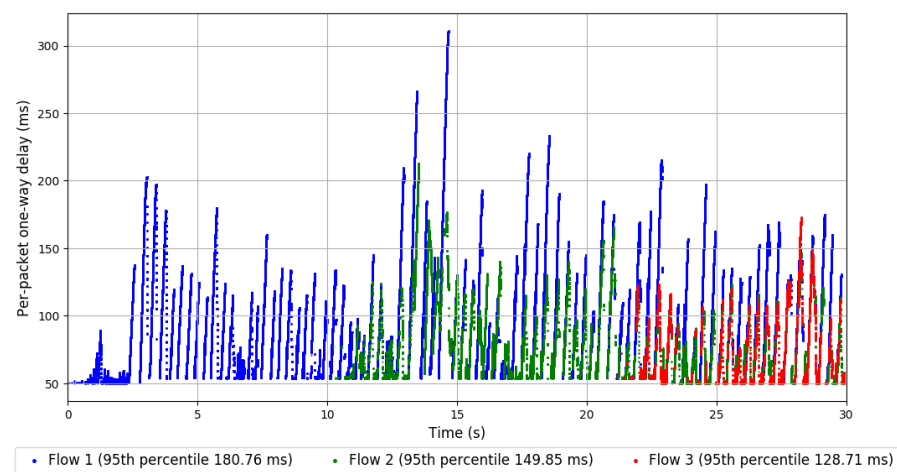
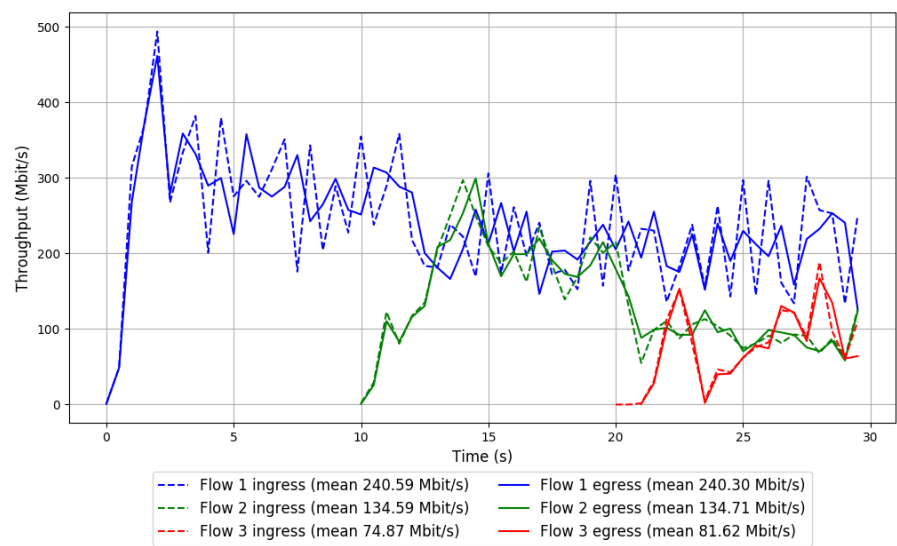
-- Flow 3:

Average throughput: 81.62 Mbit/s

95th percentile per-packet one-way delay: 128.708 ms

Loss rate: 3.08%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-02-21 04:45:13

End at: 2018-02-21 04:45:43

# Below is generated by plot.py at 2018-02-21 10:34:14

# Datalink statistics

-- Total of 3 flows:

Average throughput: 342.99 Mbit/s

95th percentile per-packet one-way delay: 164.211 ms

Loss rate: 2.37%

-- Flow 1:

Average throughput: 206.22 Mbit/s

95th percentile per-packet one-way delay: 113.643 ms

Loss rate: 0.99%

-- Flow 2:

Average throughput: 130.12 Mbit/s

95th percentile per-packet one-way delay: 246.712 ms

Loss rate: 5.21%

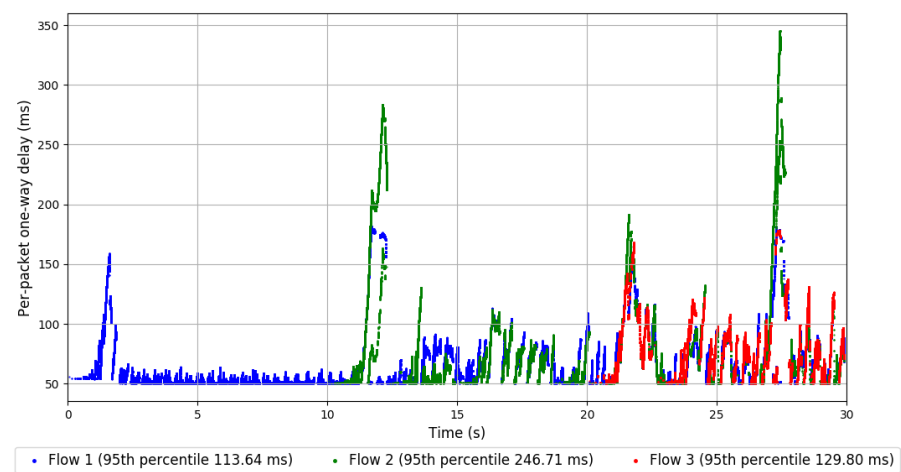
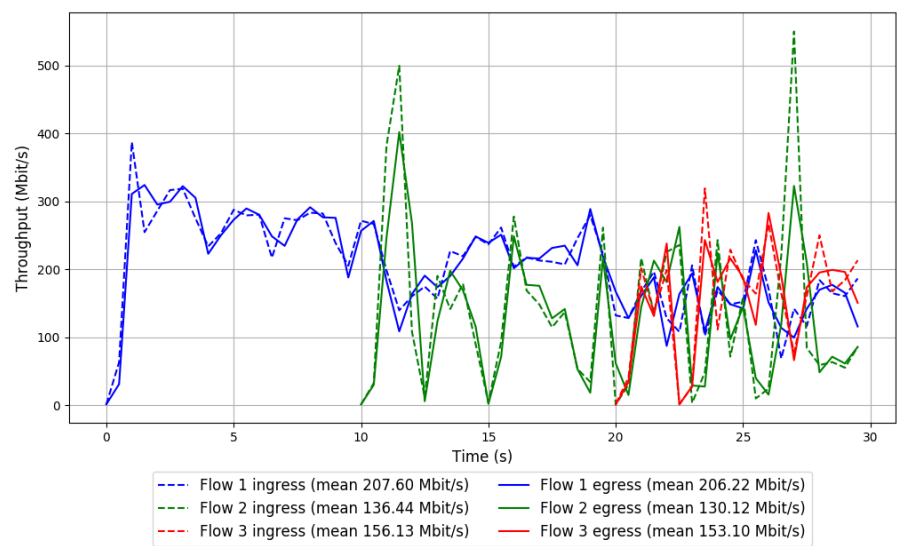
-- Flow 3:

Average throughput: 153.10 Mbit/s

95th percentile per-packet one-way delay: 129.799 ms

Loss rate: 2.96%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-02-21 05:02:27

End at: 2018-02-21 05:02:57

# Below is generated by plot.py at 2018-02-21 10:34:14

# Datalink statistics

-- Total of 3 flows:

Average throughput: 338.61 Mbit/s

95th percentile per-packet one-way delay: 214.654 ms

Loss rate: 1.02%

-- Flow 1:

Average throughput: 235.58 Mbit/s

95th percentile per-packet one-way delay: 230.248 ms

Loss rate: 0.91%

-- Flow 2:

Average throughput: 127.95 Mbit/s

95th percentile per-packet one-way delay: 145.090 ms

Loss rate: 1.20%

-- Flow 3:

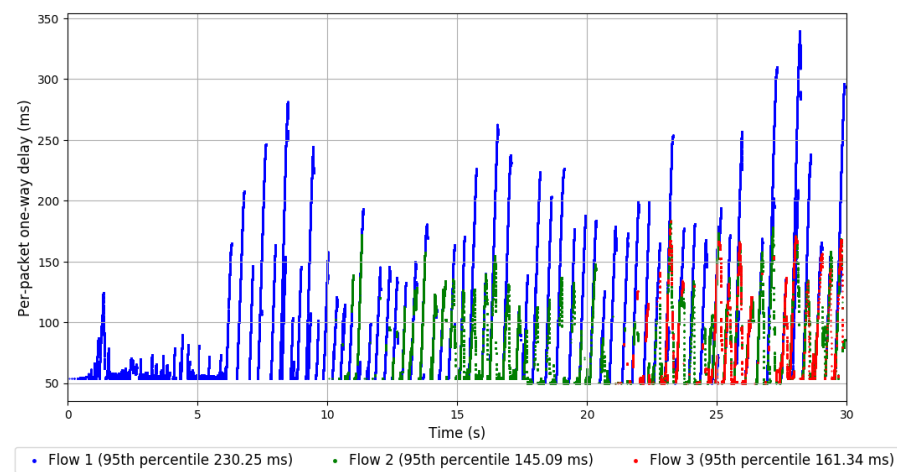
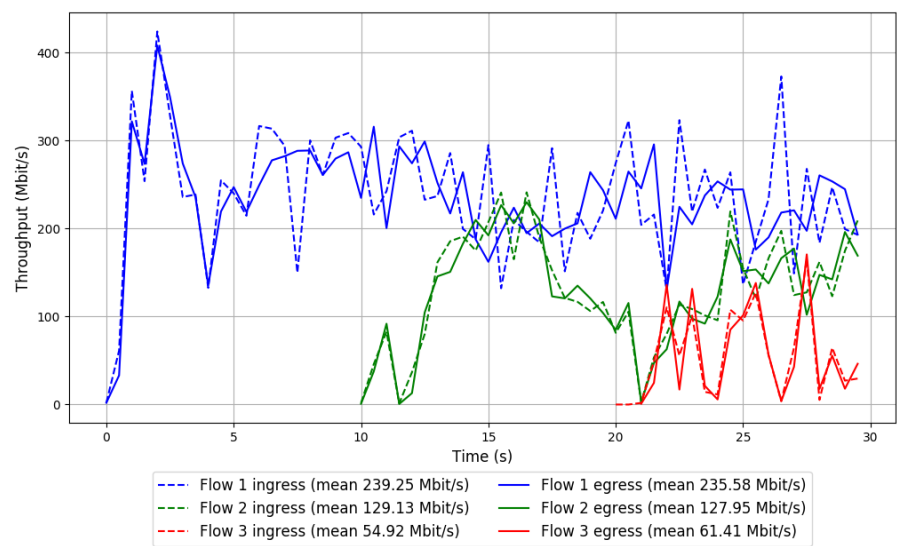
Average throughput: 61.41 Mbit/s

95th percentile per-packet one-way delay: 161.339 ms

Loss rate: 1.59%



Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2018-02-21 05:20:23

End at: 2018-02-21 05:20:53

# Below is generated by plot.py at 2018-02-21 10:34:14

# Datalink statistics

-- Total of 3 flows:

Average throughput: 322.34 Mbit/s

95th percentile per-packet one-way delay: 155.248 ms

Loss rate: 1.24%

-- Flow 1:

Average throughput: 206.46 Mbit/s

95th percentile per-packet one-way delay: 151.242 ms

Loss rate: 0.73%

-- Flow 2:

Average throughput: 110.67 Mbit/s

95th percentile per-packet one-way delay: 207.232 ms

Loss rate: 3.20%

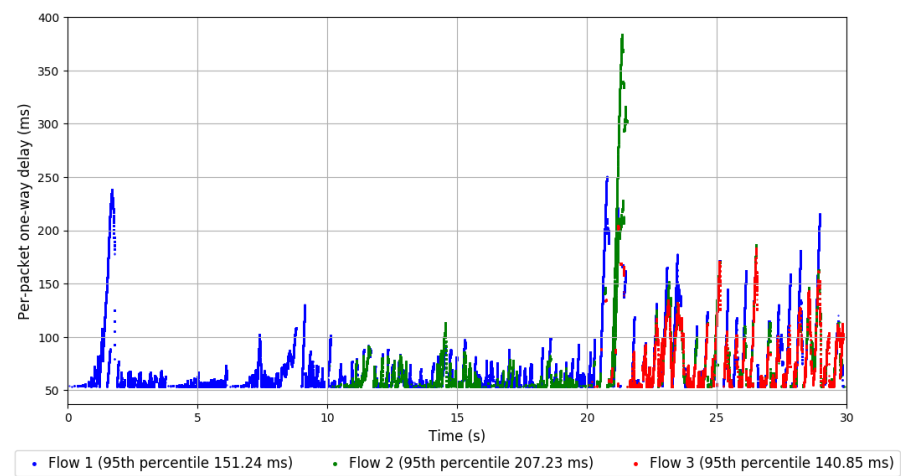
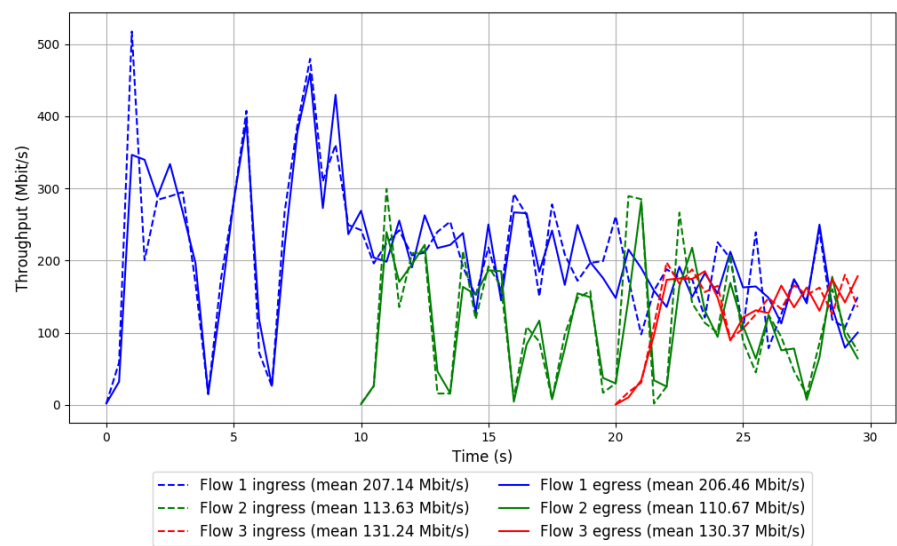
-- Flow 3:

Average throughput: 130.37 Mbit/s

95th percentile per-packet one-way delay: 140.852 ms

Loss rate: 0.19%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2018-02-21 05:38:05

End at: 2018-02-21 05:38:35

# Below is generated by plot.py at 2018-02-21 10:35:17

# Datalink statistics

-- Total of 3 flows:

Average throughput: 369.64 Mbit/s

95th percentile per-packet one-way delay: 165.140 ms

Loss rate: 0.64%

-- Flow 1:

Average throughput: 218.52 Mbit/s

95th percentile per-packet one-way delay: 158.095 ms

Loss rate: 0.50%

-- Flow 2:

Average throughput: 190.51 Mbit/s

95th percentile per-packet one-way delay: 165.538 ms

Loss rate: 0.67%

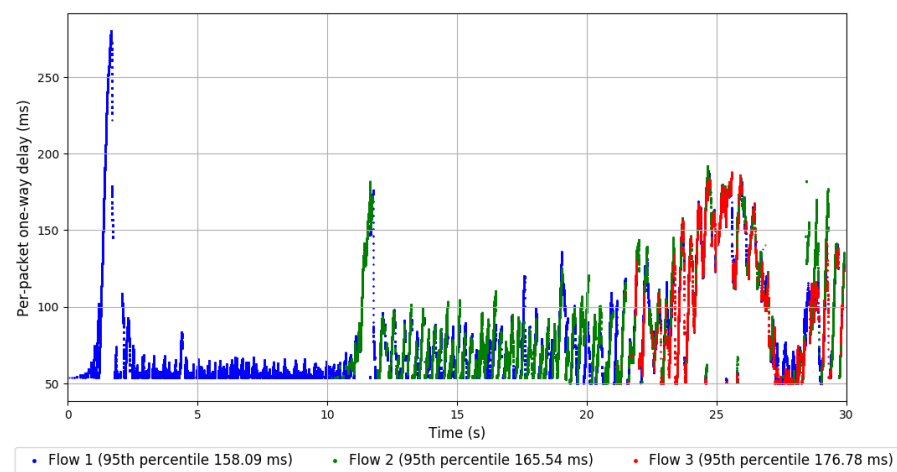
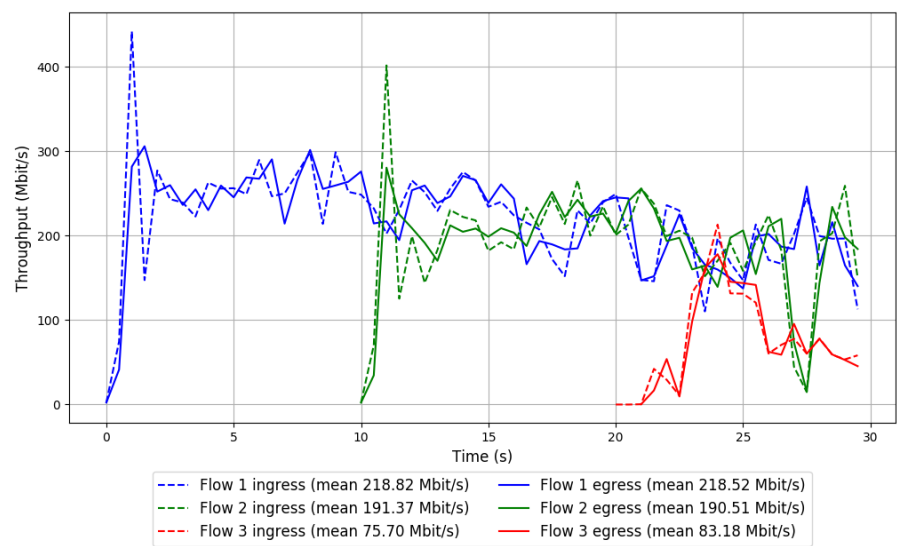
-- Flow 3:

Average throughput: 83.18 Mbit/s

95th percentile per-packet one-way delay: 176.784 ms

Loss rate: 1.66%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2018-02-21 05:55:47

End at: 2018-02-21 05:56:17

# Below is generated by plot.py at 2018-02-21 10:35:32

# Datalink statistics

-- Total of 3 flows:

Average throughput: 318.17 Mbit/s

95th percentile per-packet one-way delay: 179.259 ms

Loss rate: 2.62%

-- Flow 1:

Average throughput: 202.60 Mbit/s

95th percentile per-packet one-way delay: 141.114 ms

Loss rate: 1.87%

-- Flow 2:

Average throughput: 123.14 Mbit/s

95th percentile per-packet one-way delay: 148.636 ms

Loss rate: 1.02%

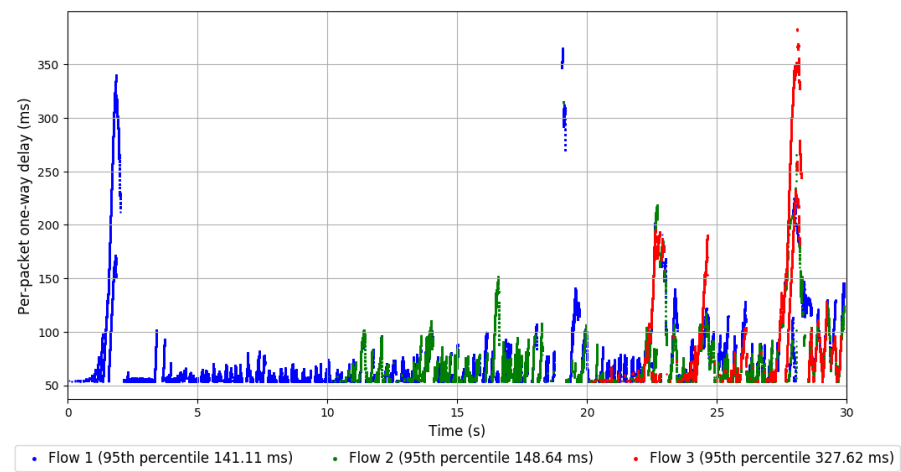
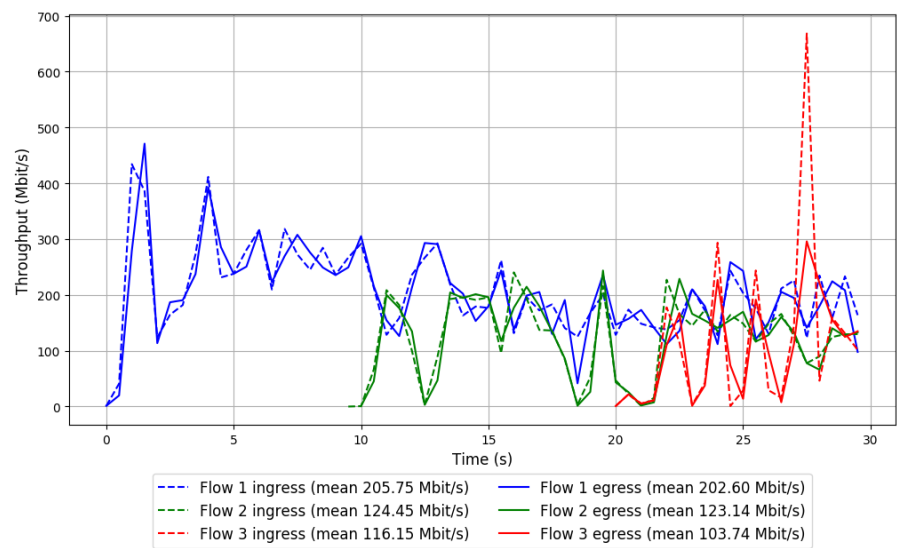
-- Flow 3:

Average throughput: 103.74 Mbit/s

95th percentile per-packet one-way delay: 327.618 ms

Loss rate: 10.29%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2018-02-21 06:13:14

End at: 2018-02-21 06:13:44

# Below is generated by plot.py at 2018-02-21 10:37:39

# Datalink statistics

-- Total of 3 flows:

Average throughput: 313.67 Mbit/s

95th percentile per-packet one-way delay: 152.527 ms

Loss rate: 1.54%

-- Flow 1:

Average throughput: 181.81 Mbit/s

95th percentile per-packet one-way delay: 161.830 ms

Loss rate: 1.67%

-- Flow 2:

Average throughput: 139.04 Mbit/s

95th percentile per-packet one-way delay: 137.536 ms

Loss rate: 1.42%

-- Flow 3:

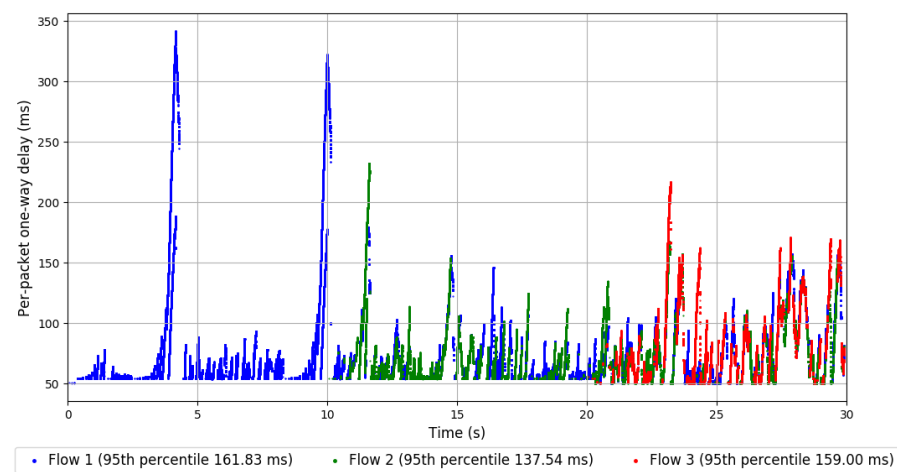
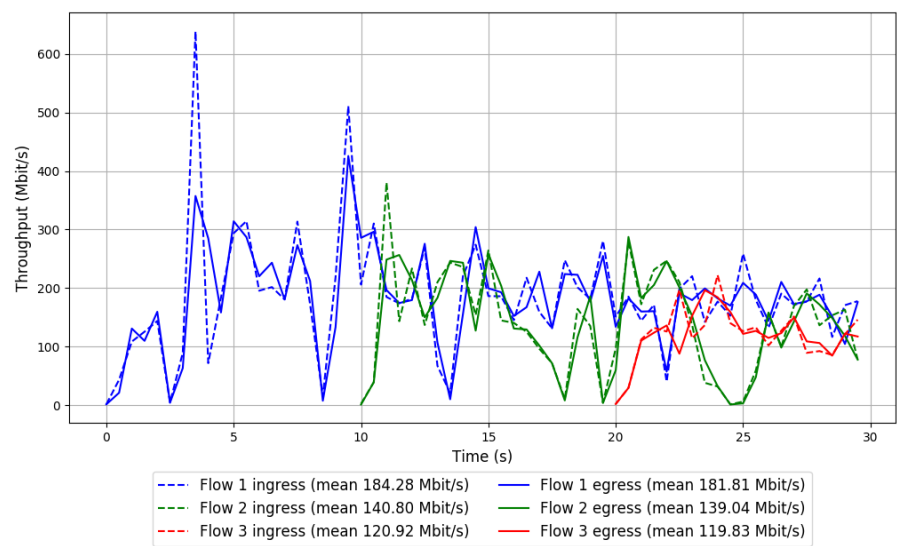
Average throughput: 119.83 Mbit/s

95th percentile per-packet one-way delay: 159.004 ms

Loss rate: 1.20%



Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2018-02-21 06:30:45

End at: 2018-02-21 06:31:15

# Below is generated by plot.py at 2018-02-21 10:38:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 349.51 Mbit/s

95th percentile per-packet one-way delay: 122.989 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 228.13 Mbit/s

95th percentile per-packet one-way delay: 115.898 ms

Loss rate: 1.38%

-- Flow 2:

Average throughput: 139.53 Mbit/s

95th percentile per-packet one-way delay: 196.980 ms

Loss rate: 0.00%

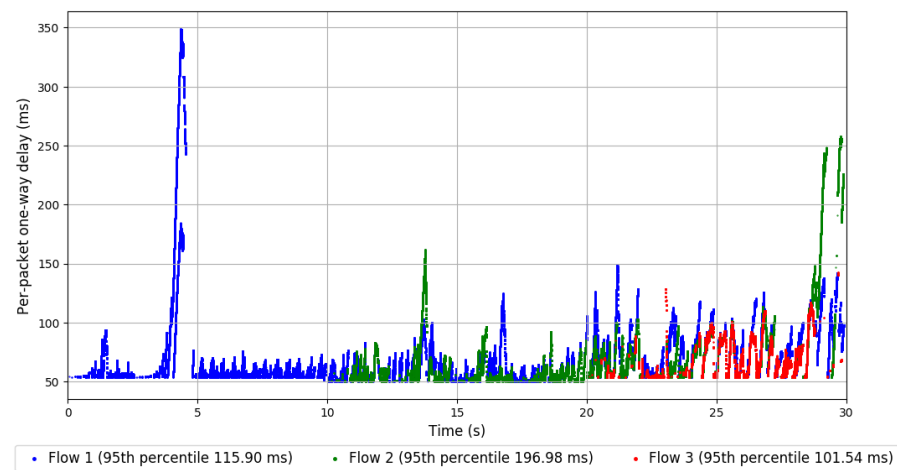
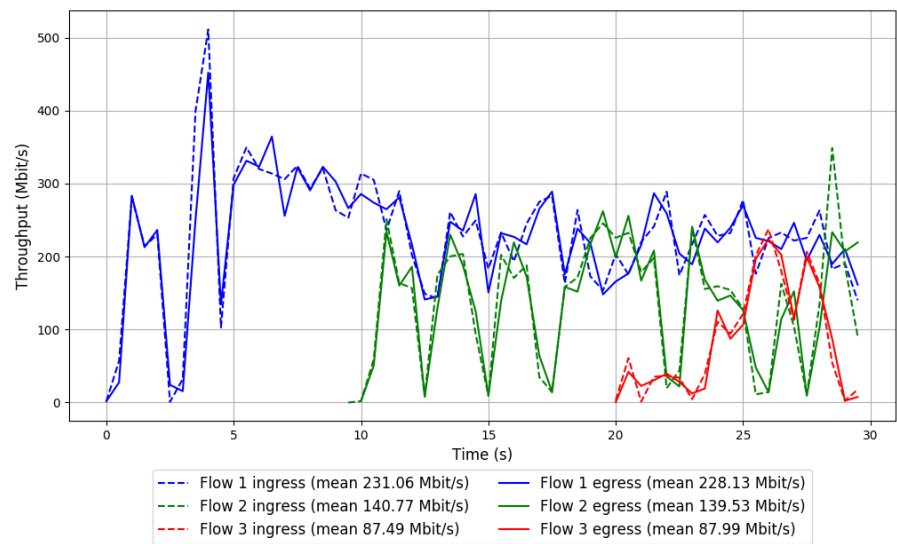
-- Flow 3:

Average throughput: 87.99 Mbit/s

95th percentile per-packet one-way delay: 101.540 ms

Loss rate: 0.59%

Run 10: Report of Verus — Data Link

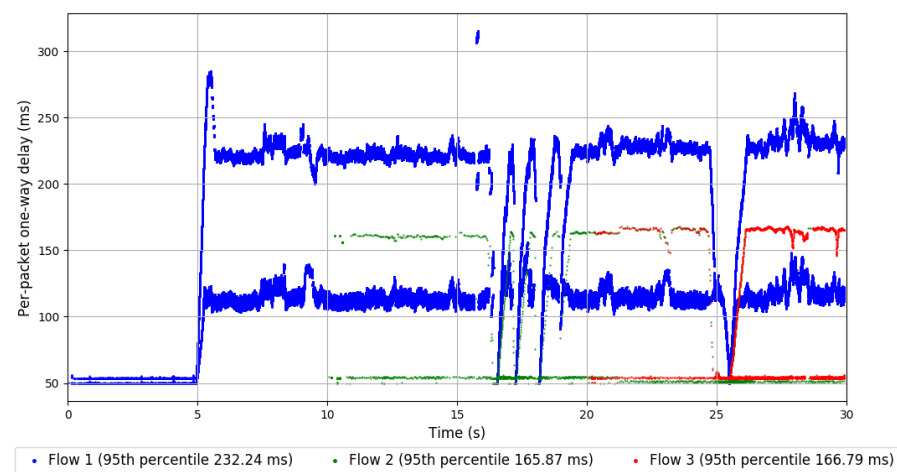
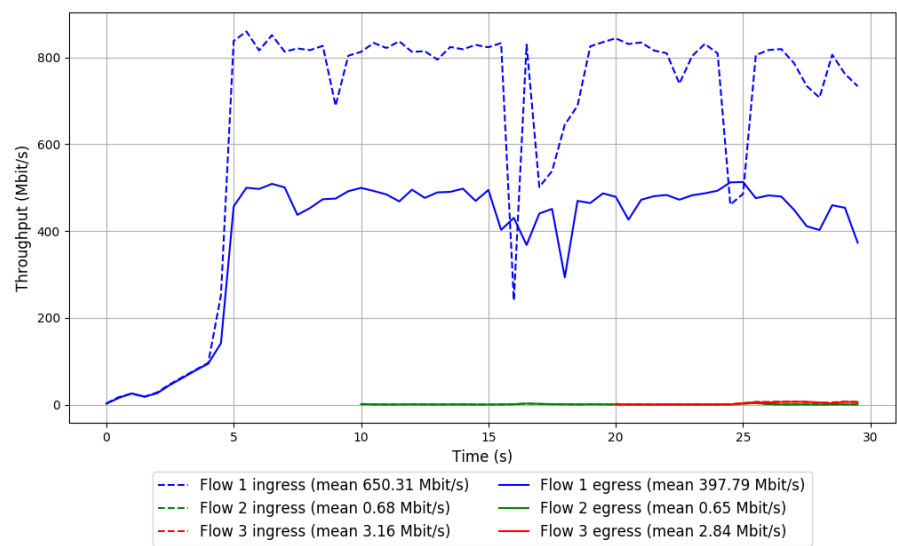


```
Run 1: Statistics of Copa

Start at: 2018-02-21 03:49:33
End at: 2018-02-21 03:50:03

# Below is generated by plot.py at 2018-02-21 10:47:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 399.14 Mbit/s
95th percentile per-packet one-way delay: 232.226 ms
Loss rate: 38.98%
-- Flow 1:
Average throughput: 397.79 Mbit/s
95th percentile per-packet one-way delay: 232.243 ms
Loss rate: 39.04%
-- Flow 2:
Average throughput: 0.65 Mbit/s
95th percentile per-packet one-way delay: 165.872 ms
Loss rate: 5.22%
-- Flow 3:
Average throughput: 2.84 Mbit/s
95th percentile per-packet one-way delay: 166.792 ms
Loss rate: 11.27%
```

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-02-21 04:07:38

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

# Below is generated by plot.py at 2018-02-21 10:47:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 118.35 Mbit/s

95th percentile per-packet one-way delay: 53.984 ms

Loss rate: 0.62%

-- Flow 1:

Average throughput: 48.07 Mbit/s

95th percentile per-packet one-way delay: 54.017 ms

Loss rate: 0.71%

-- Flow 2:

Average throughput: 75.73 Mbit/s

95th percentile per-packet one-way delay: 53.813 ms

Loss rate: 0.30%

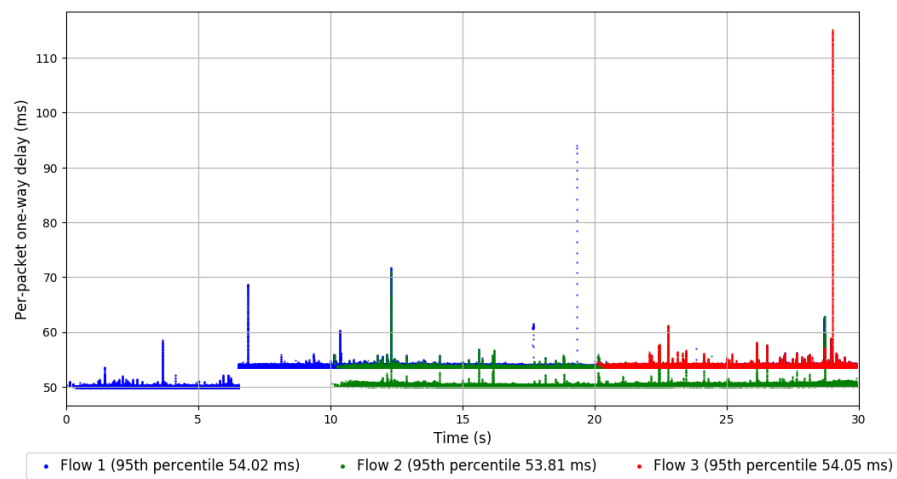
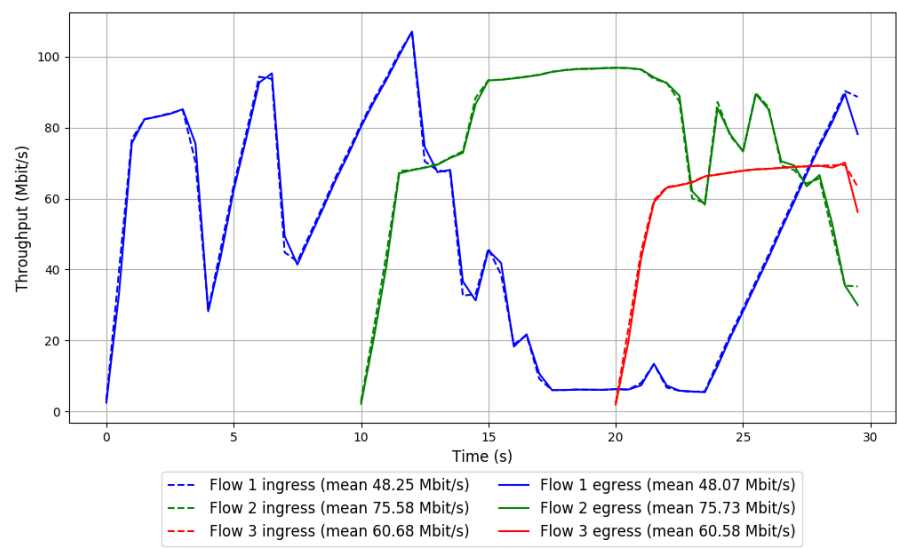
-- Flow 3:

Average throughput: 60.58 Mbit/s

95th percentile per-packet one-way delay: 54.051 ms

Loss rate: 1.21%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-02-21 04:24:49

End at: 2018-02-21 04:25:19

# Below is generated by plot.py at 2018-02-21 10:47:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 136.61 Mbit/s

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

Loss rate: 0.31%

-- Flow 1:

Average throughput: 78.80 Mbit/s

95th percentile per-packet one-way delay: 53.925 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 65.02 Mbit/s

95th percentile per-packet one-way delay: 50.778 ms

Loss rate: 0.46%

-- Flow 3:

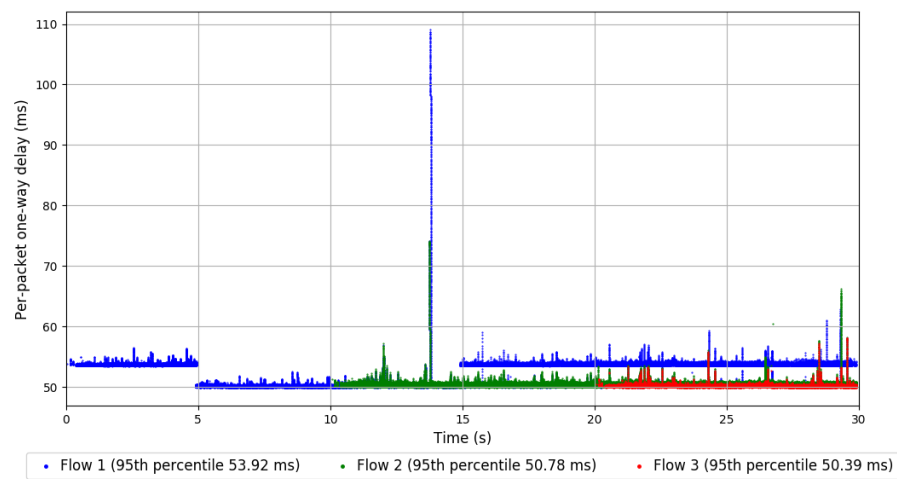
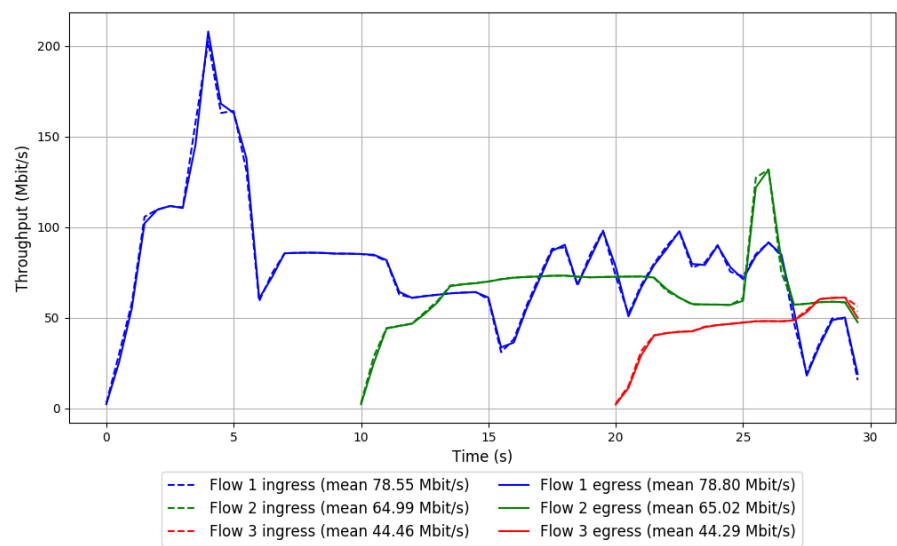
Average throughput: 44.29 Mbit/s

95th percentile per-packet one-way delay: 50.387 ms

Loss rate: 1.41%



Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2018-02-21 04:42:41

End at: 2018-02-21 04:43:11

# Below is generated by plot.py at 2018-02-21 10:47:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 151.88 Mbit/s

95th percentile per-packet one-way delay: 53.927 ms

Loss rate: 0.44%

-- Flow 1:

Average throughput: 82.51 Mbit/s

95th percentile per-packet one-way delay: 53.977 ms

Loss rate: 0.27%

-- Flow 2:

Average throughput: 74.35 Mbit/s

95th percentile per-packet one-way delay: 53.782 ms

Loss rate: 0.43%

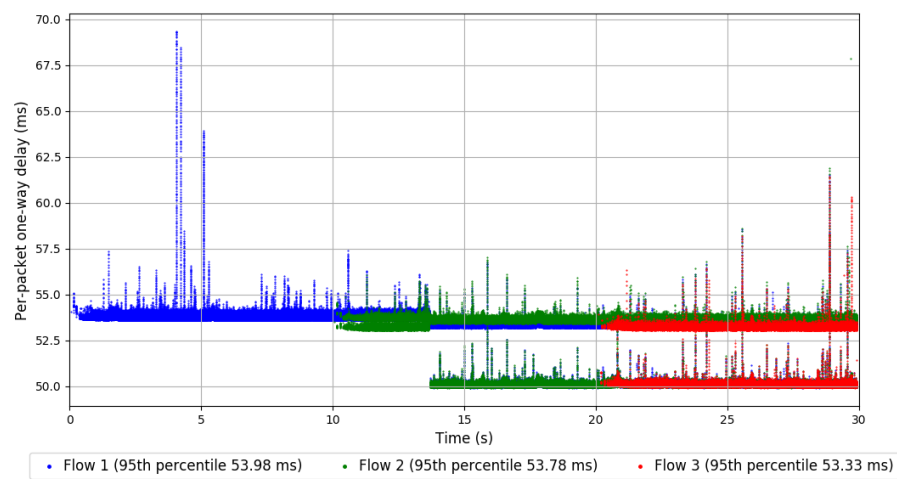
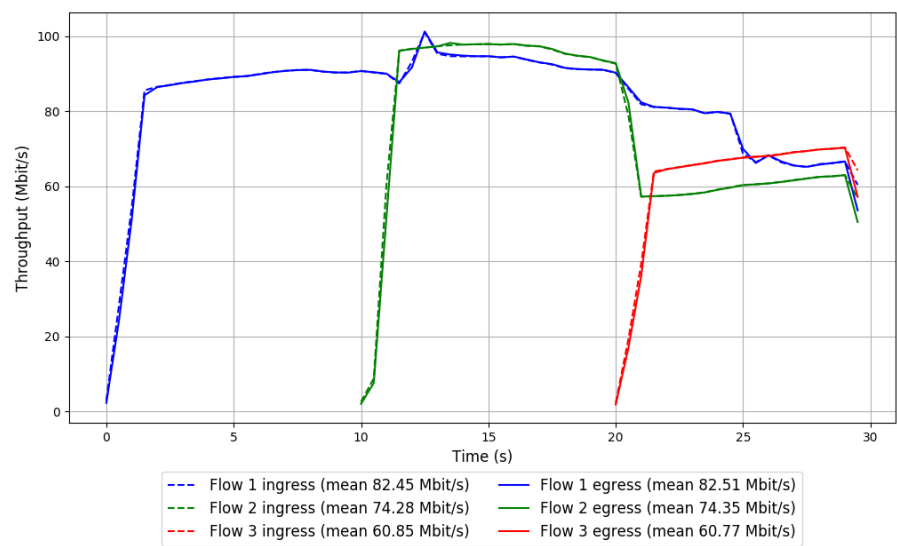
-- Flow 3:

Average throughput: 60.77 Mbit/s

95th percentile per-packet one-way delay: 53.332 ms

Loss rate: 1.18%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2018-02-21 04:59:56

End at: 2018-02-21 05:00:26

# Below is generated by plot.py at 2018-02-21 10:47:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 153.55 Mbit/s

95th percentile per-packet one-way delay: 53.745 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 78.83 Mbit/s

95th percentile per-packet one-way delay: 53.769 ms

Loss rate: 0.28%

-- Flow 2:

Average throughput: 81.53 Mbit/s

95th percentile per-packet one-way delay: 53.723 ms

Loss rate: 0.47%

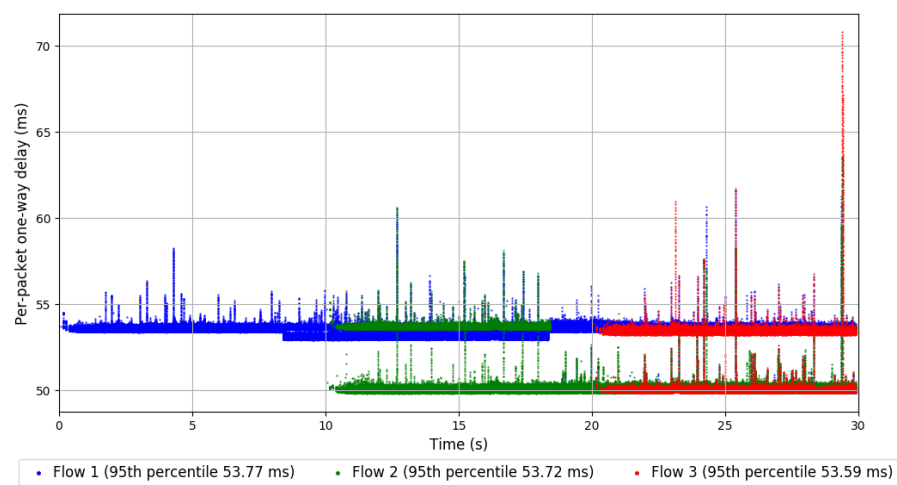
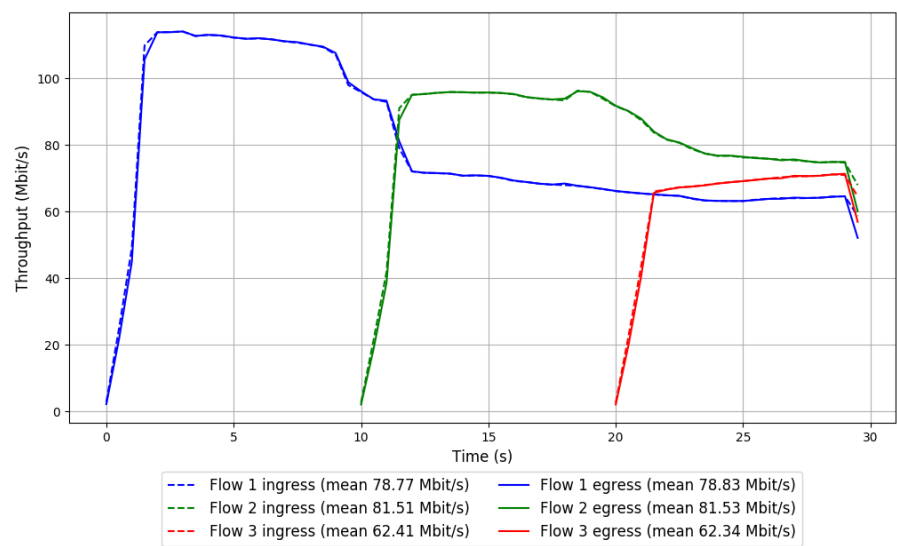
-- Flow 3:

Average throughput: 62.34 Mbit/s

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

Loss rate: 1.16%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2018-02-21 05:17:54

End at: 2018-02-21 05:18:24

# Below is generated by plot.py at 2018-02-21 10:47:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 147.99 Mbit/s

95th percentile per-packet one-way delay: 54.007 ms

Loss rate: 0.60%

-- Flow 1:

Average throughput: 83.26 Mbit/s

95th percentile per-packet one-way delay: 53.899 ms

Loss rate: 0.28%

-- Flow 2:

Average throughput: 58.15 Mbit/s

95th percentile per-packet one-way delay: 54.110 ms

Loss rate: 0.62%

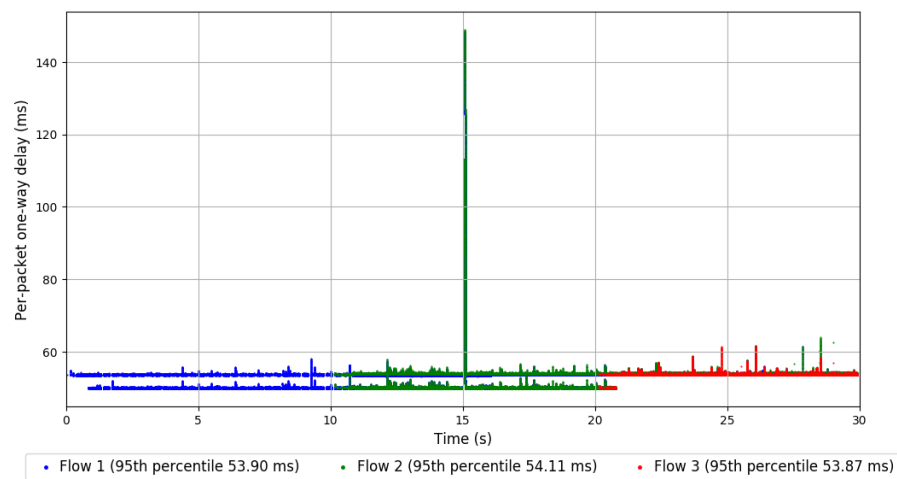
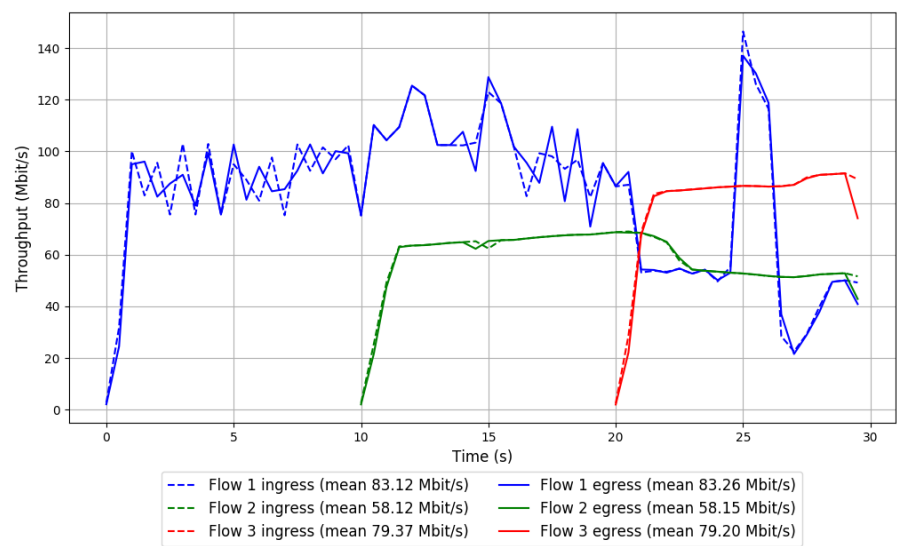
-- Flow 3:

Average throughput: 79.20 Mbit/s

95th percentile per-packet one-way delay: 53.873 ms

Loss rate: 1.58%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2018-02-21 05:35:36

End at: 2018-02-21 05:36:06

# Below is generated by plot.py at 2018-02-21 10:47:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 124.24 Mbit/s

95th percentile per-packet one-way delay: 53.883 ms

Loss rate: 0.53%

-- Flow 1:

Average throughput: 52.29 Mbit/s

95th percentile per-packet one-way delay: 53.821 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 77.00 Mbit/s

95th percentile per-packet one-way delay: 53.868 ms

Loss rate: 0.53%

-- Flow 3:

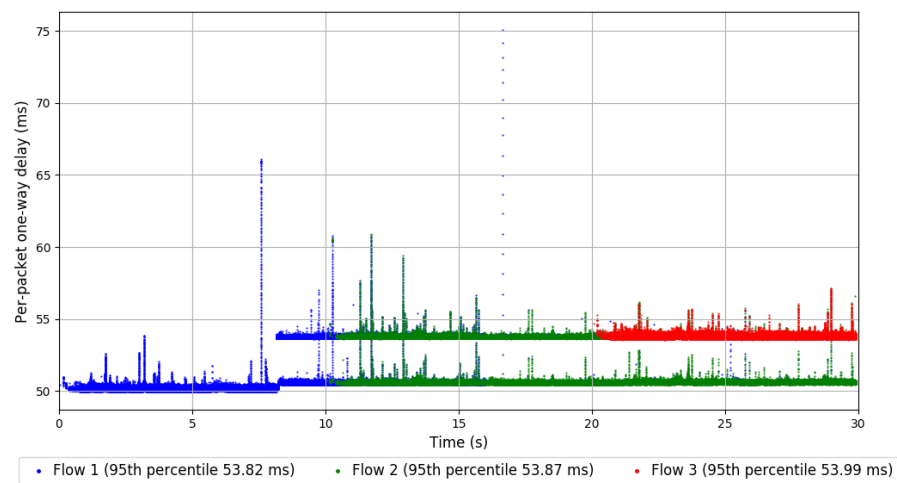
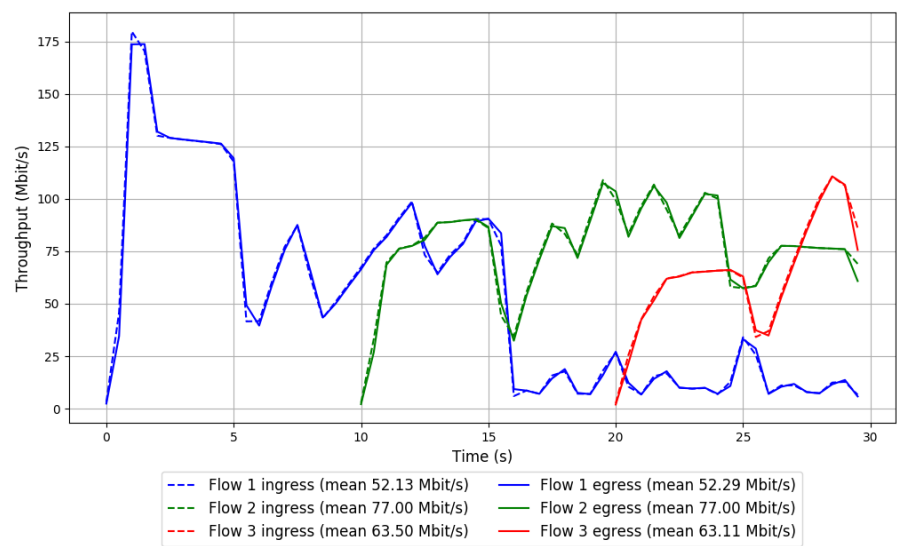
Average throughput: 63.11 Mbit/s

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

Loss rate: 1.70%



Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2018-02-21 05:53:15

End at: 2018-02-21 05:53:45

# Below is generated by plot.py at 2018-02-21 10:47:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 140.20 Mbit/s

95th percentile per-packet one-way delay: 53.974 ms

Loss rate: 0.54%

-- Flow 1:

Average throughput: 77.18 Mbit/s

95th percentile per-packet one-way delay: 53.980 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 72.80 Mbit/s

95th percentile per-packet one-way delay: 53.982 ms

Loss rate: 0.39%

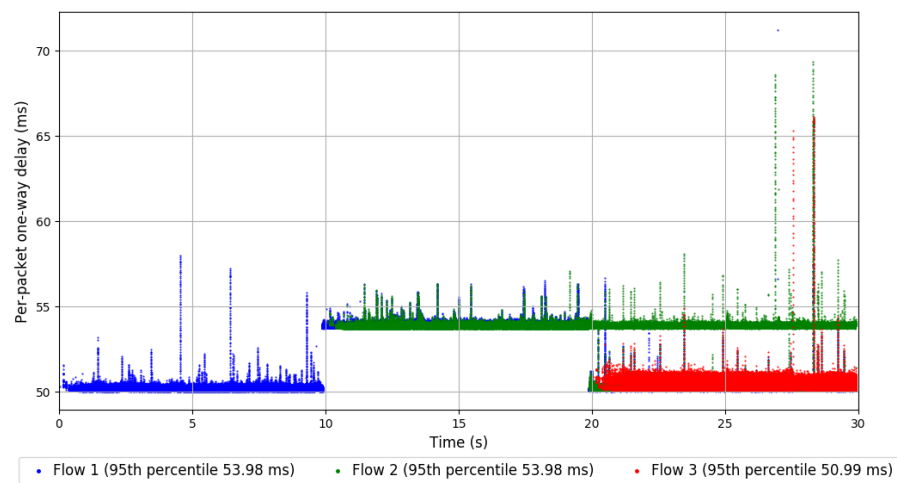
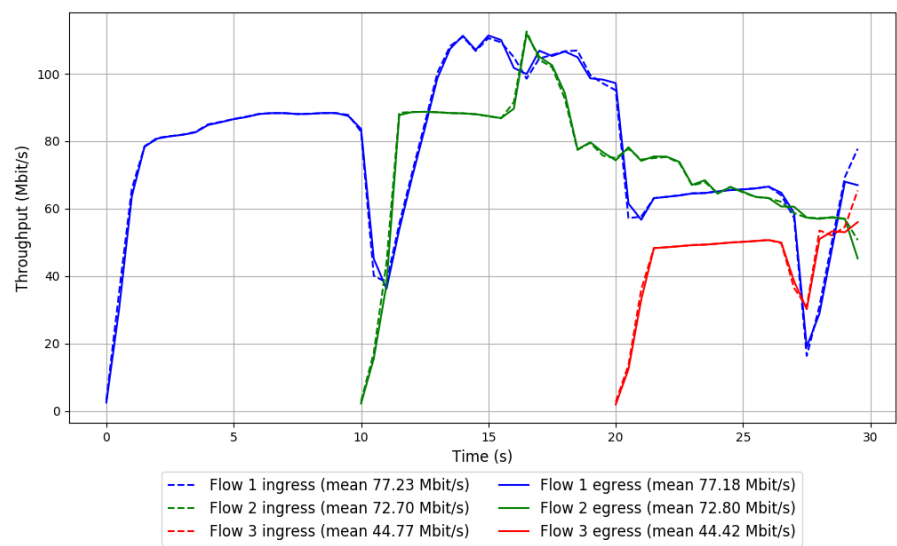
-- Flow 3:

Average throughput: 44.42 Mbit/s

95th percentile per-packet one-way delay: 50.987 ms

Loss rate: 1.81%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2018-02-21 06:10:45

End at: 2018-02-21 06:11:15

# Below is generated by plot.py at 2018-02-21 10:47:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 148.84 Mbit/s

95th percentile per-packet one-way delay: 54.133 ms

Loss rate: 0.49%

-- Flow 1:

Average throughput: 100.48 Mbit/s

95th percentile per-packet one-way delay: 54.044 ms

Loss rate: 0.47%

-- Flow 2:

Average throughput: 46.59 Mbit/s

95th percentile per-packet one-way delay: 54.129 ms

Loss rate: 0.10%

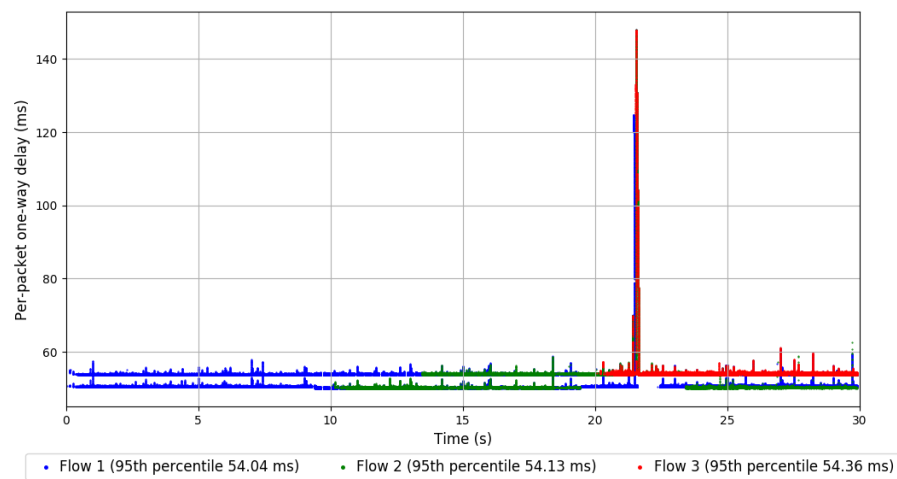
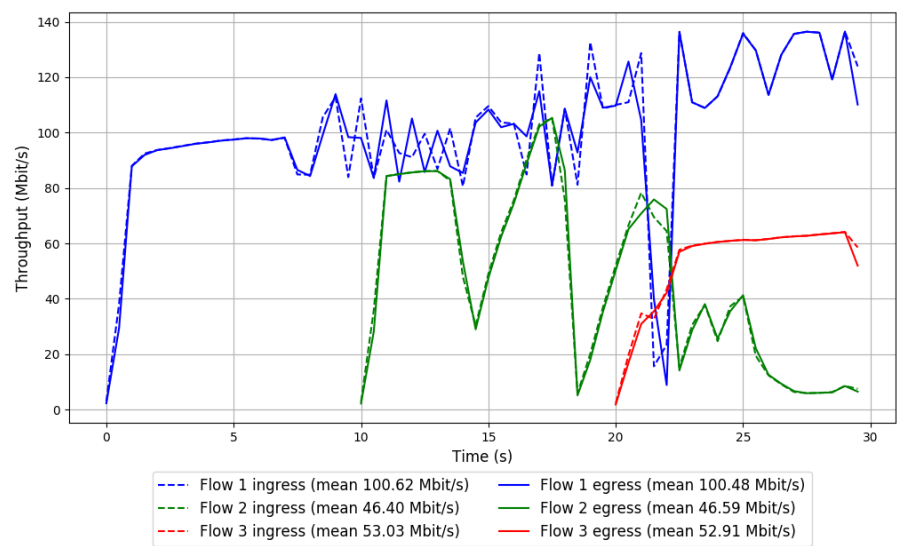
-- Flow 3:

Average throughput: 52.91 Mbit/s

95th percentile per-packet one-way delay: 54.357 ms

Loss rate: 1.29%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2018-02-21 06:28:13

End at: 2018-02-21 06:28:43

# Below is generated by plot.py at 2018-02-21 10:47:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 144.04 Mbit/s

95th percentile per-packet one-way delay: 54.140 ms

Loss rate: 0.53%

-- Flow 1:

Average throughput: 75.81 Mbit/s

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

Loss rate: 0.15%

-- Flow 2:

Average throughput: 69.92 Mbit/s

95th percentile per-packet one-way delay: 53.889 ms

Loss rate: 0.61%

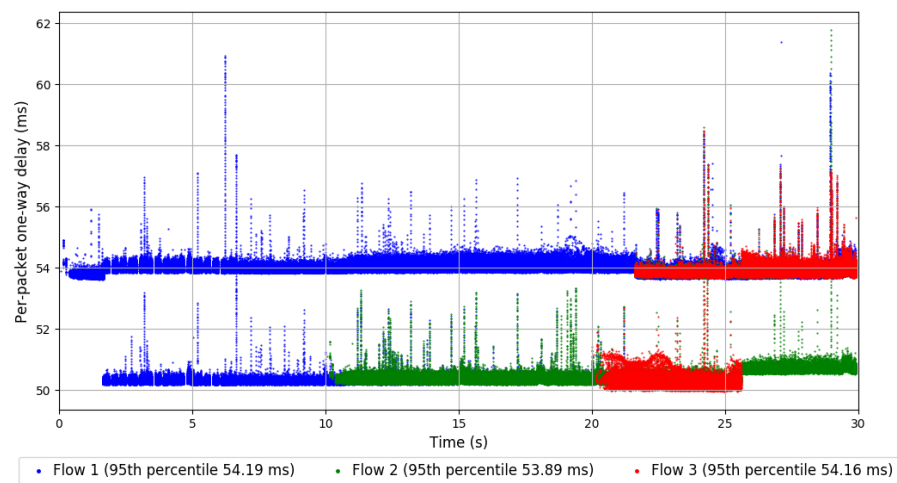
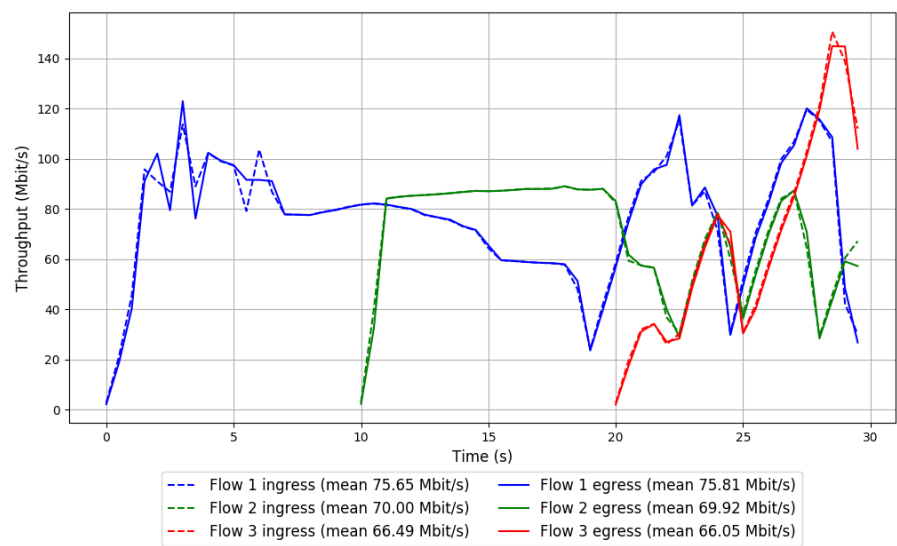
-- Flow 3:

Average throughput: 66.05 Mbit/s

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

Loss rate: 1.65%

Run 10: Report of Copa — Data Link



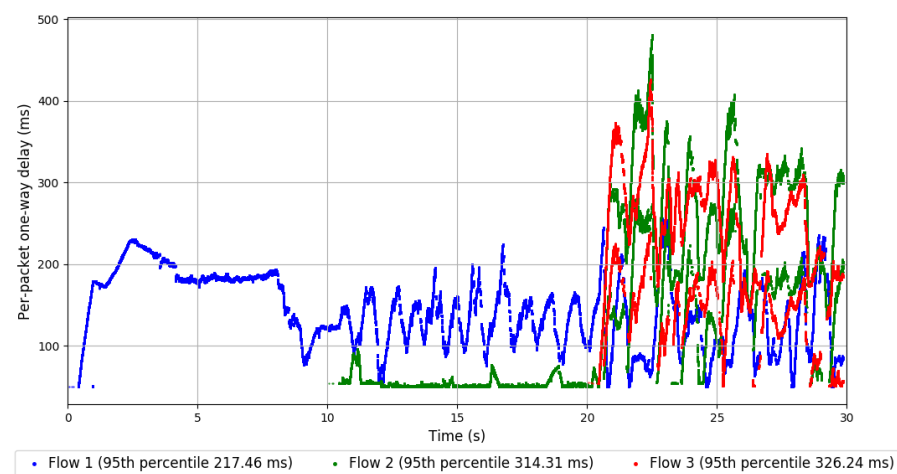
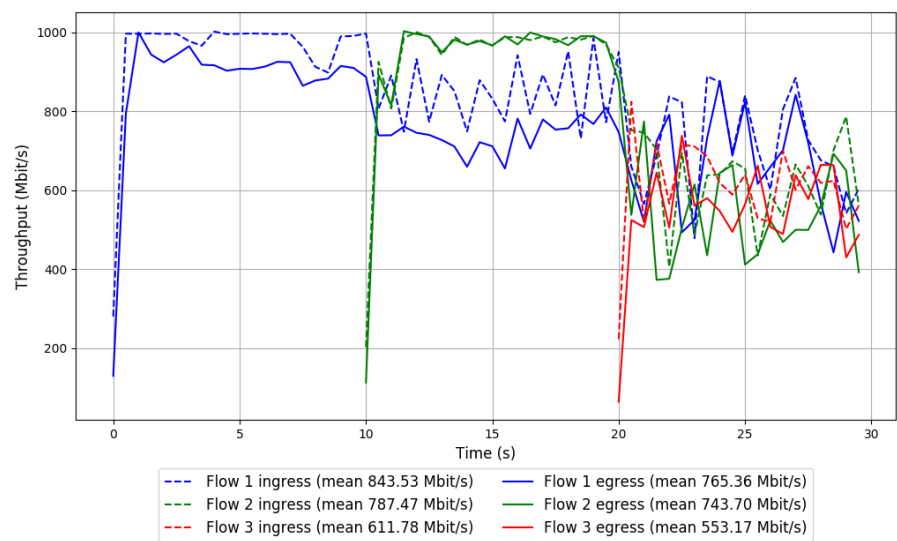
```
Run 1: Statistics of FillP

Start at: 2018-02-21 03:50:46
End at: 2018-02-21 03:51:16

# Below is generated by plot.py at 2018-02-21 11:04:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1441.15 Mbit/s
95th percentile per-packet one-way delay: 297.156 ms
Loss rate: 8.52%
-- Flow 1:
Average throughput: 765.36 Mbit/s
95th percentile per-packet one-way delay: 217.460 ms
Loss rate: 9.57%
-- Flow 2:
Average throughput: 743.70 Mbit/s
95th percentile per-packet one-way delay: 314.312 ms
Loss rate: 6.05%
-- Flow 3:
Average throughput: 553.17 Mbit/s
95th percentile per-packet one-way delay: 326.241 ms
Loss rate: 10.54%
```



Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-02-21 04:08:29

End at: 2018-02-21 04:08:59

# Below is generated by plot.py at 2018-02-21 11:07:30

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1452.49 Mbit/s

95th percentile per-packet one-way delay: 276.370 ms

Loss rate: 10.94%

-- Flow 1:

Average throughput: 763.34 Mbit/s

95th percentile per-packet one-way delay: 285.016 ms

Loss rate: 11.53%

-- Flow 2:

Average throughput: 701.54 Mbit/s

95th percentile per-packet one-way delay: 204.429 ms

Loss rate: 10.68%

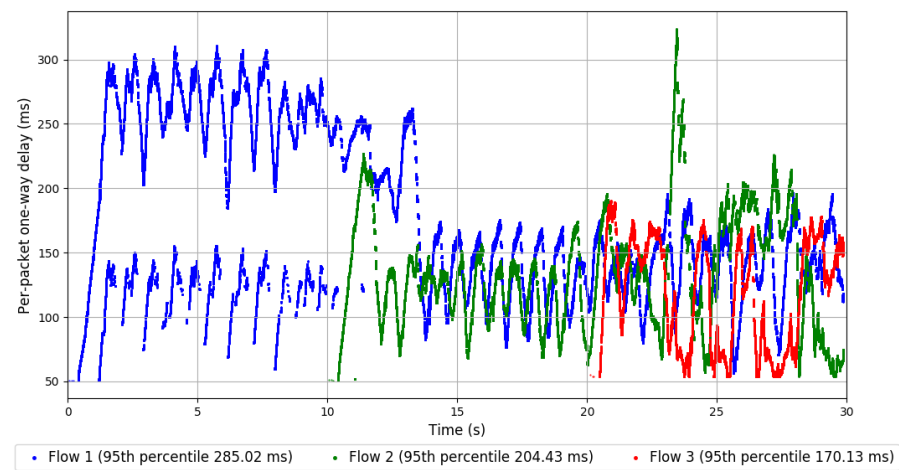
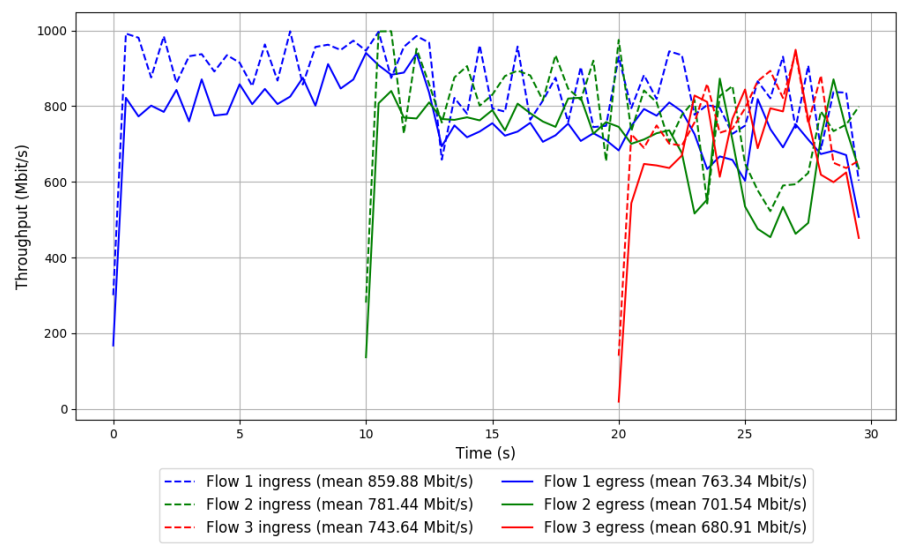
-- Flow 3:

Average throughput: 680.91 Mbit/s

95th percentile per-packet one-way delay: 170.127 ms

Loss rate: 9.41%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-02-21 04:25:42

End at: 2018-02-21 04:26:12

# Below is generated by plot.py at 2018-02-21 11:07:30

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1354.77 Mbit/s

95th percentile per-packet one-way delay: 331.101 ms

Loss rate: 8.97%

-- Flow 1:

Average throughput: 743.23 Mbit/s

95th percentile per-packet one-way delay: 312.131 ms

Loss rate: 6.30%

-- Flow 2:

Average throughput: 616.06 Mbit/s

95th percentile per-packet one-way delay: 353.105 ms

Loss rate: 13.12%

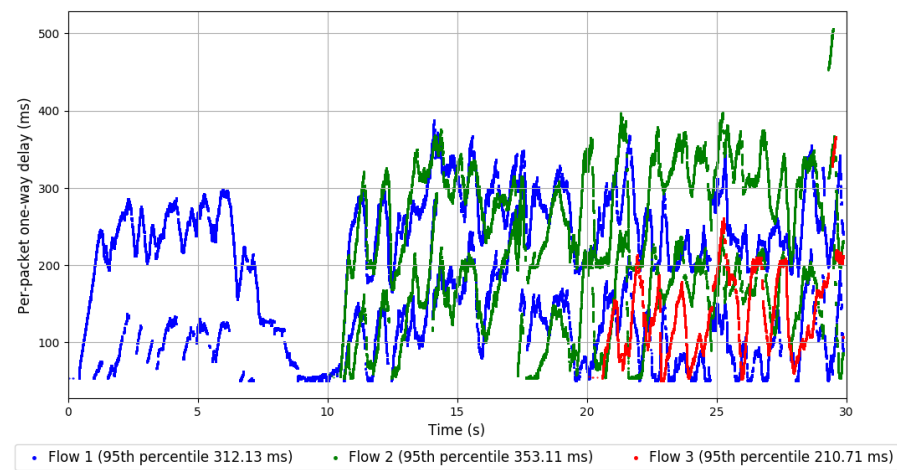
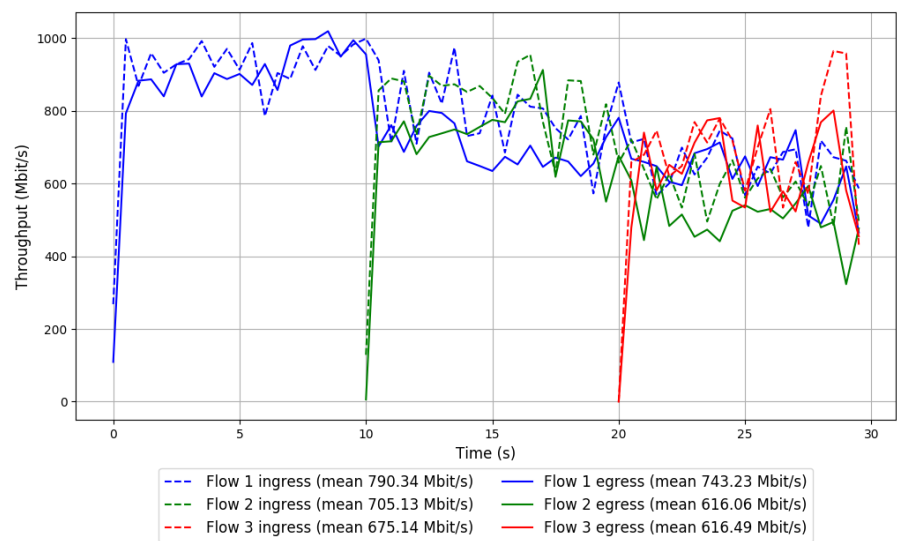
-- Flow 3:

Average throughput: 616.49 Mbit/s

95th percentile per-packet one-way delay: 210.705 ms

Loss rate: 9.70%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-02-21 04:43:35

End at: 2018-02-21 04:44:05

# Below is generated by plot.py at 2018-02-21 11:09:05

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1488.53 Mbit/s

95th percentile per-packet one-way delay: 277.633 ms

Loss rate: 11.16%

-- Flow 1:

Average throughput: 782.74 Mbit/s

95th percentile per-packet one-way delay: 306.032 ms

Loss rate: 9.49%

-- Flow 2:

Average throughput: 766.13 Mbit/s

95th percentile per-packet one-way delay: 222.147 ms

Loss rate: 8.22%

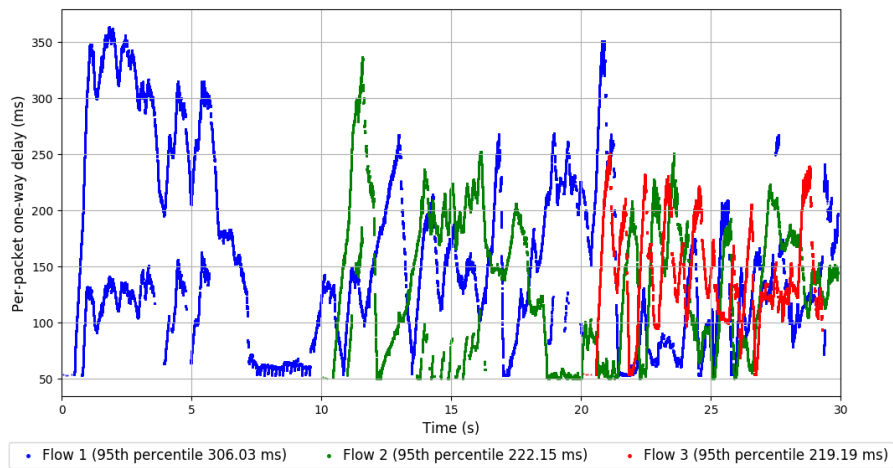
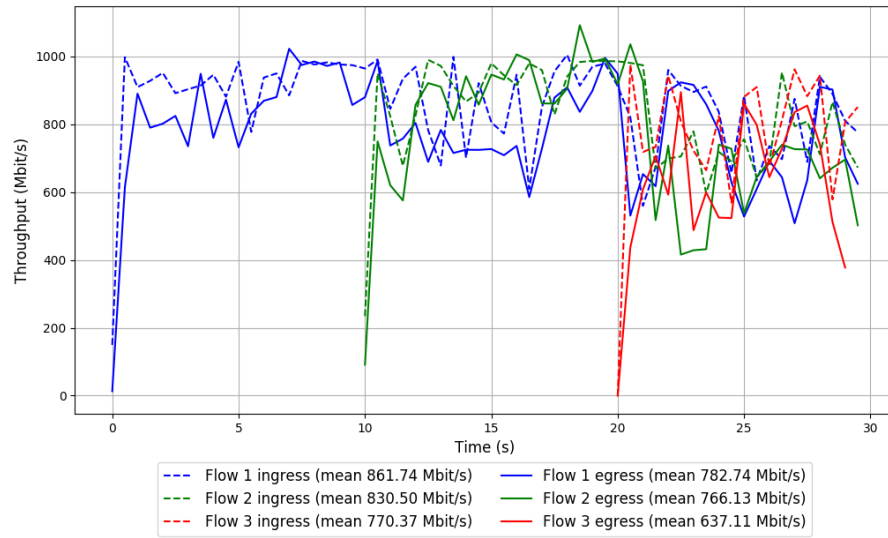
-- Flow 3:

Average throughput: 637.11 Mbit/s

95th percentile per-packet one-way delay: 219.194 ms

Loss rate: 23.16%

# Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-02-21 05:00:50

End at: 2018-02-21 05:01:20

# Below is generated by plot.py at 2018-02-21 11:09:50

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1483.96 Mbit/s

95th percentile per-packet one-way delay: 190.215 ms

Loss rate: 12.37%

-- Flow 1:

Average throughput: 791.99 Mbit/s

95th percentile per-packet one-way delay: 159.170 ms

Loss rate: 10.29%

-- Flow 2:

Average throughput: 731.71 Mbit/s

95th percentile per-packet one-way delay: 261.425 ms

Loss rate: 13.61%

-- Flow 3:

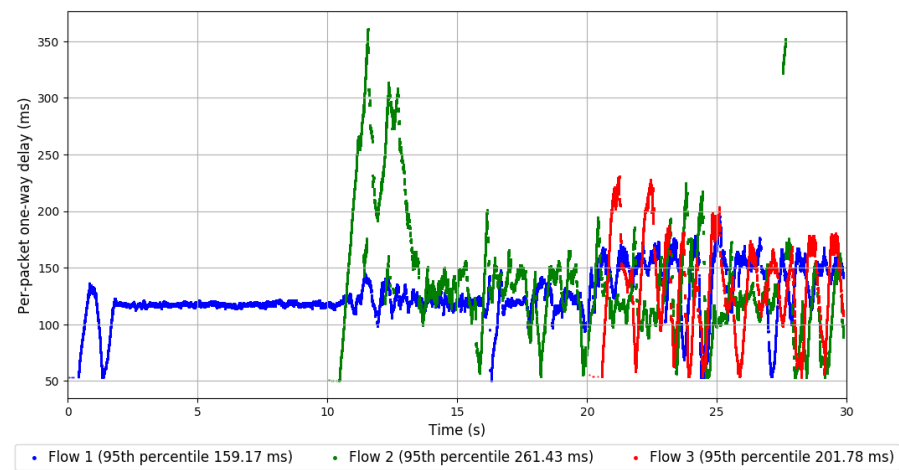
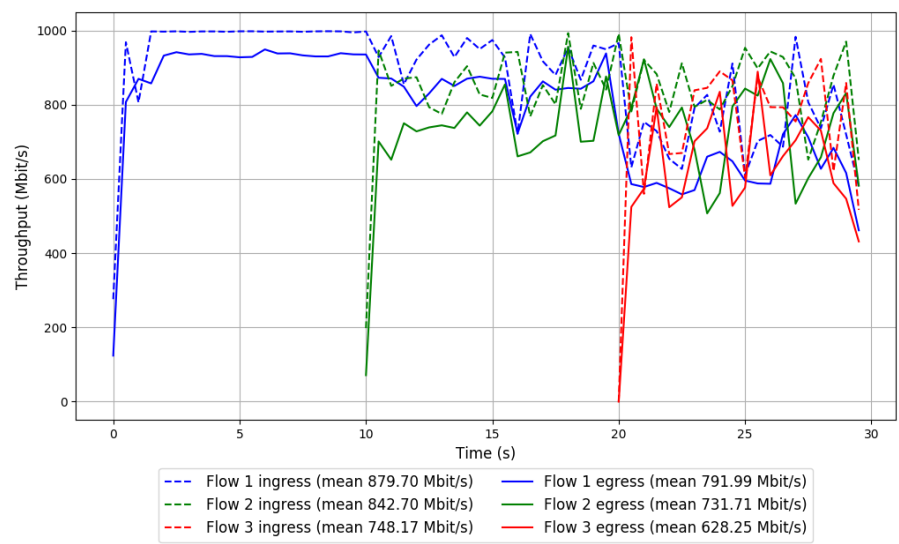
Average throughput: 628.25 Mbit/s

95th percentile per-packet one-way delay: 201.779 ms

Loss rate: 16.94%



Run 5: Report of FillP — Data Link



Run 6: Statistics of FillP

Start at: 2018-02-21 05:18:45

End at: 2018-02-21 05:19:15

# Below is generated by plot.py at 2018-02-21 11:11:51

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1539.03 Mbit/s

95th percentile per-packet one-way delay: 248.343 ms

Loss rate: 9.64%

-- Flow 1:

Average throughput: 777.19 Mbit/s

95th percentile per-packet one-way delay: 248.522 ms

Loss rate: 10.01%

-- Flow 2:

Average throughput: 816.19 Mbit/s

95th percentile per-packet one-way delay: 237.876 ms

Loss rate: 6.94%

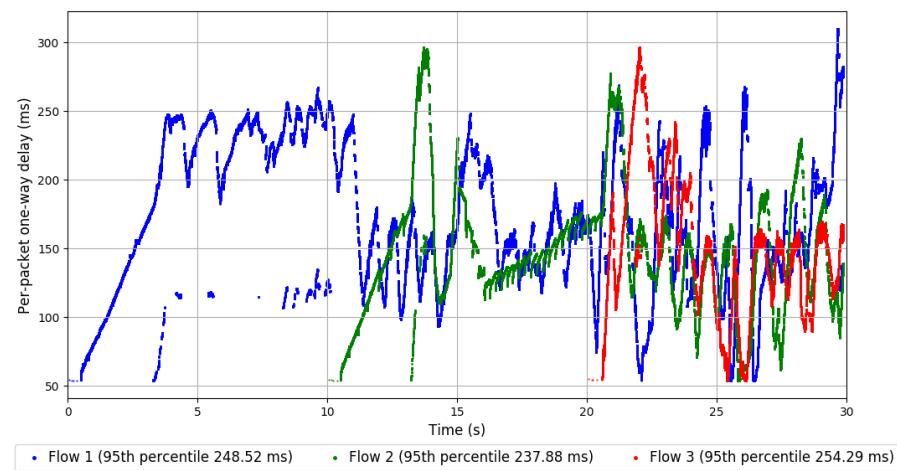
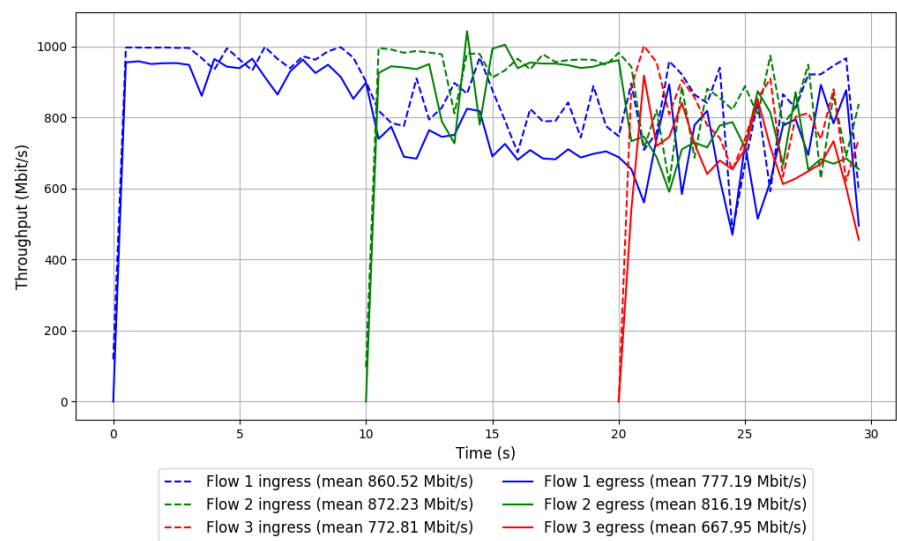
-- Flow 3:

Average throughput: 667.95 Mbit/s

95th percentile per-packet one-way delay: 254.292 ms

Loss rate: 14.52%

Run 6: Report of FillP — Data Link



Run 7: Statistics of FillP

Start at: 2018-02-21 05:36:28

End at: 2018-02-21 05:36:58

# Below is generated by plot.py at 2018-02-21 11:11:51

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1497.21 Mbit/s

95th percentile per-packet one-way delay: 273.600 ms

Loss rate: 9.57%

-- Flow 1:

Average throughput: 773.64 Mbit/s

95th percentile per-packet one-way delay: 274.497 ms

Loss rate: 8.35%

-- Flow 2:

Average throughput: 738.02 Mbit/s

95th percentile per-packet one-way delay: 278.212 ms

Loss rate: 10.53%

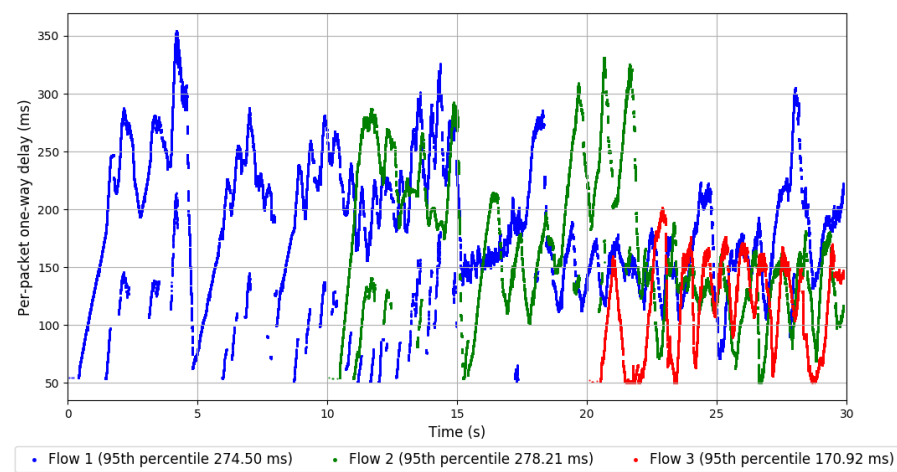
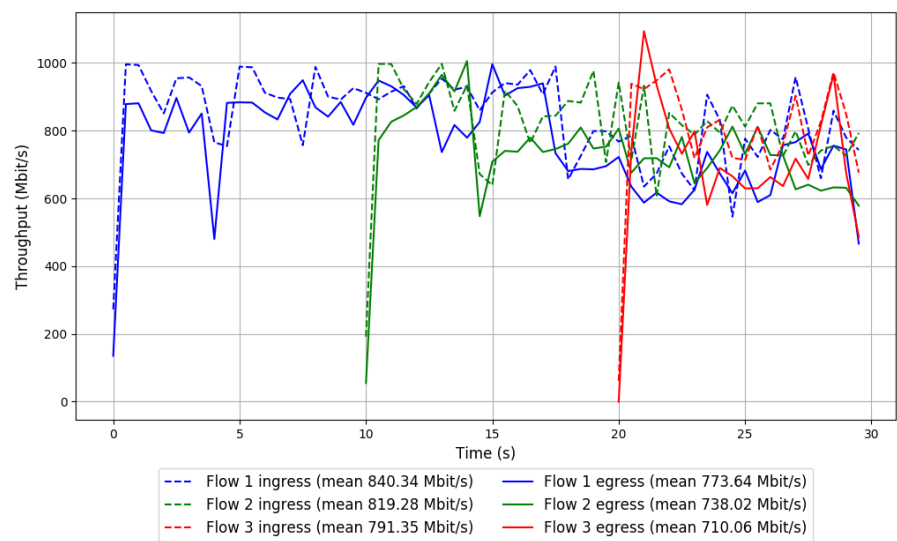
-- Flow 3:

Average throughput: 710.06 Mbit/s

95th percentile per-packet one-way delay: 170.922 ms

Loss rate: 11.46%

Run 7: Report of FillP — Data Link



Run 8: Statistics of FillP

Start at: 2018-02-21 05:54:07

End at: 2018-02-21 05:54:37

# Below is generated by plot.py at 2018-02-21 11:13:18

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1232.70 Mbit/s

95th percentile per-packet one-way delay: 358.267 ms

Loss rate: 11.64%

-- Flow 1:

Average throughput: 704.08 Mbit/s

95th percentile per-packet one-way delay: 329.941 ms

Loss rate: 10.15%

-- Flow 2:

Average throughput: 577.20 Mbit/s

95th percentile per-packet one-way delay: 362.026 ms

Loss rate: 13.16%

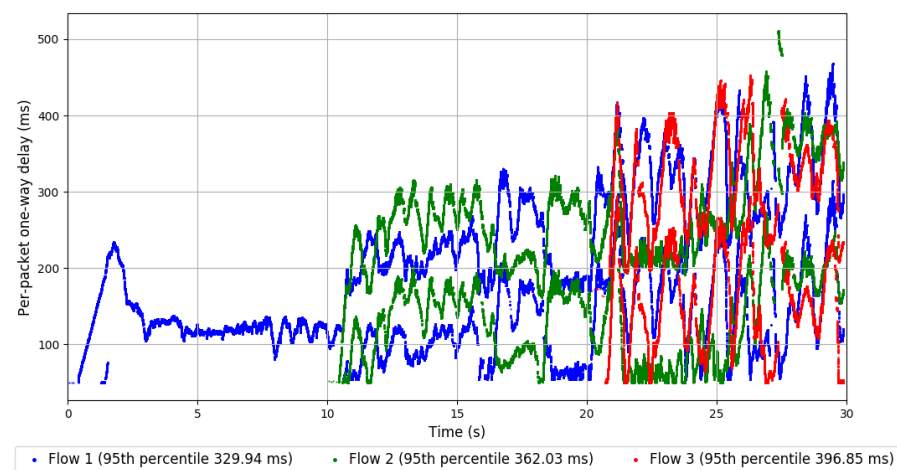
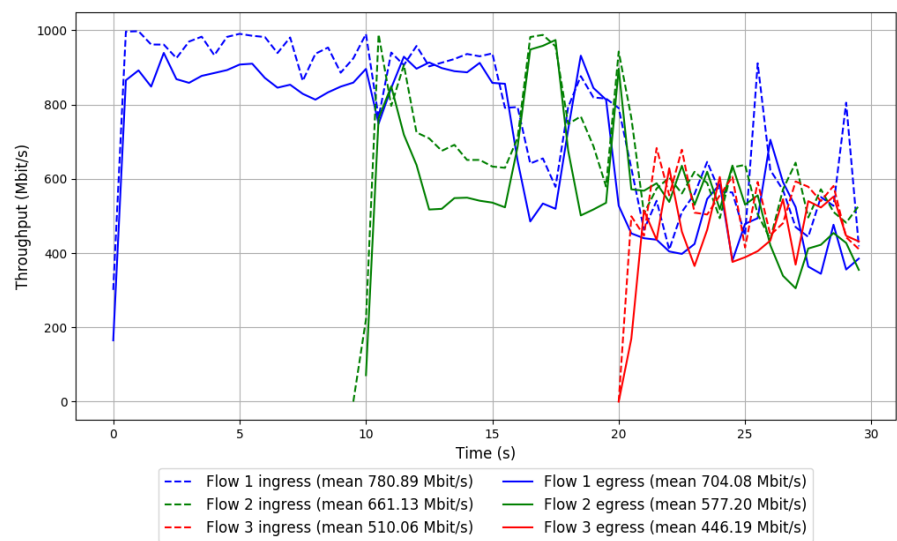
-- Flow 3:

Average throughput: 446.19 Mbit/s

95th percentile per-packet one-way delay: 396.848 ms

Loss rate: 14.51%

Run 8: Report of FillP — Data Link



Run 9: Statistics of FillP

Start at: 2018-02-21 06:11:36

End at: 2018-02-21 06:12:06

# Below is generated by plot.py at 2018-02-21 11:36:14

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1547.85 Mbit/s

95th percentile per-packet one-way delay: 219.189 ms

Loss rate: 10.21%

-- Flow 1:

Average throughput: 818.82 Mbit/s

95th percentile per-packet one-way delay: 211.346 ms

Loss rate: 8.85%

-- Flow 2:

Average throughput: 806.20 Mbit/s

95th percentile per-packet one-way delay: 217.114 ms

Loss rate: 8.62%

-- Flow 3:

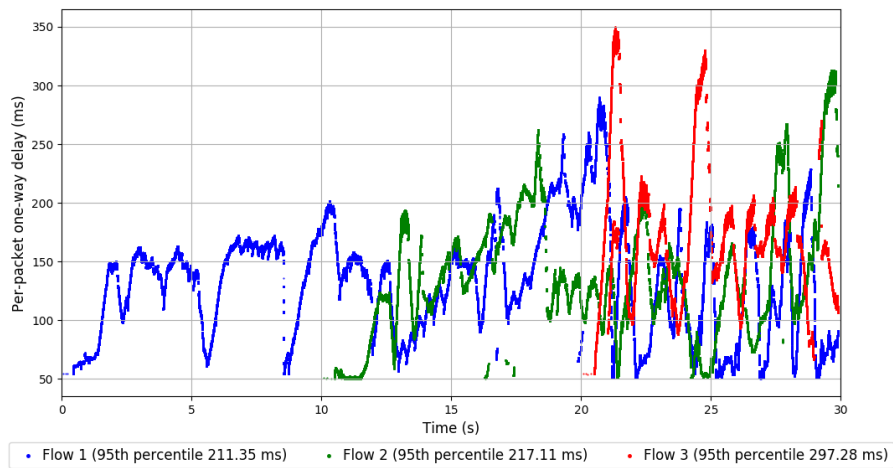
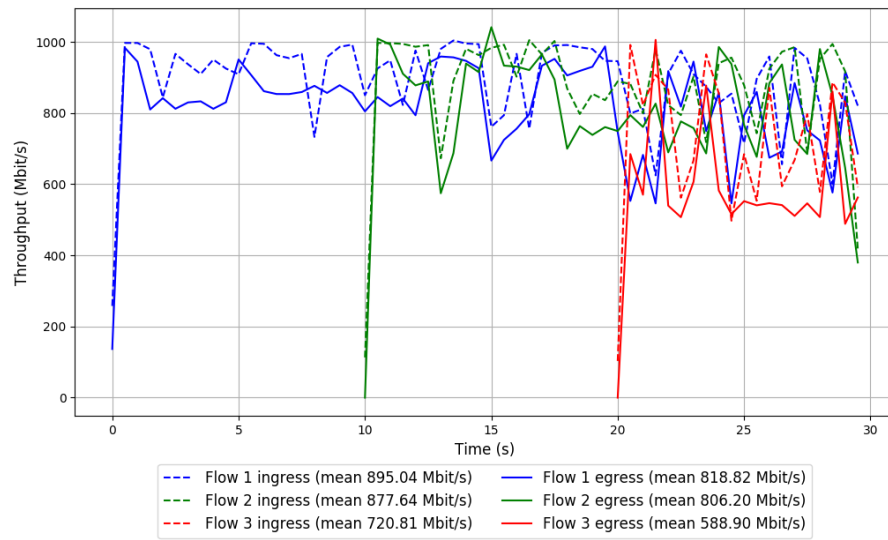
Average throughput: 588.90 Mbit/s

95th percentile per-packet one-way delay: 297.279 ms

Loss rate: 19.20%



### Run 9: Report of FillP — Data Link

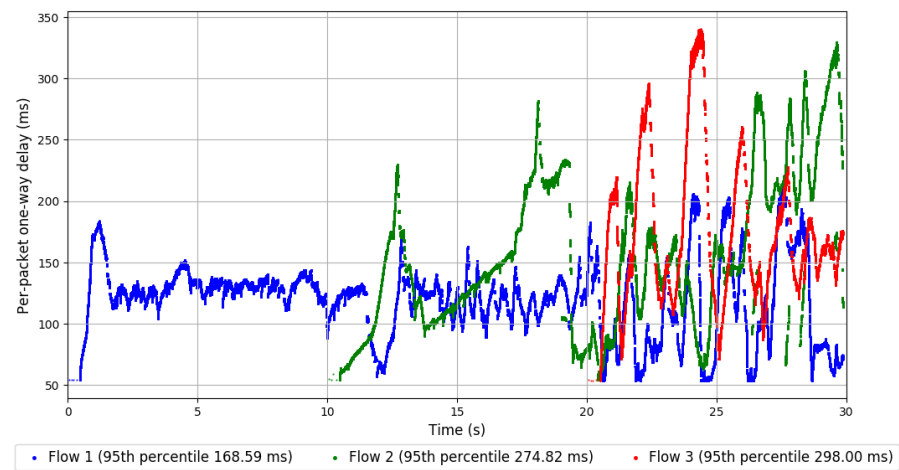
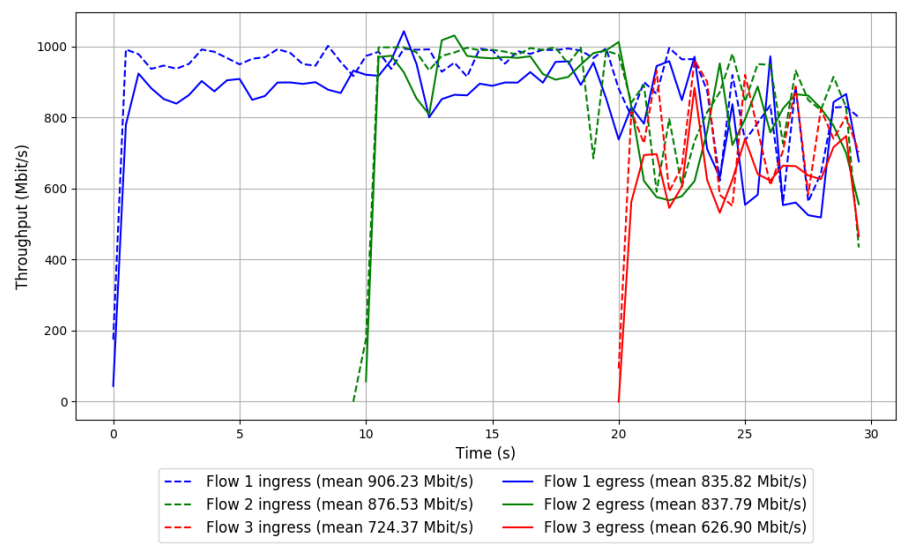


```
Run 10: Statistics of FillP

Start at: 2018-02-21 06:29:05
End at: 2018-02-21 06:29:35

# Below is generated by plot.py at 2018-02-21 11:37:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1598.75 Mbit/s
95th percentile per-packet one-way delay: 237.824 ms
Loss rate: 7.90%
-- Flow 1:
Average throughput: 835.82 Mbit/s
95th percentile per-packet one-way delay: 168.591 ms
Loss rate: 8.09%
-- Flow 2:
Average throughput: 837.79 Mbit/s
95th percentile per-packet one-way delay: 274.823 ms
Loss rate: 4.93%
-- Flow 3:
Average throughput: 626.90 Mbit/s
95th percentile per-packet one-way delay: 298.003 ms
Loss rate: 14.38%
```

Run 10: Report of FillP — Data Link

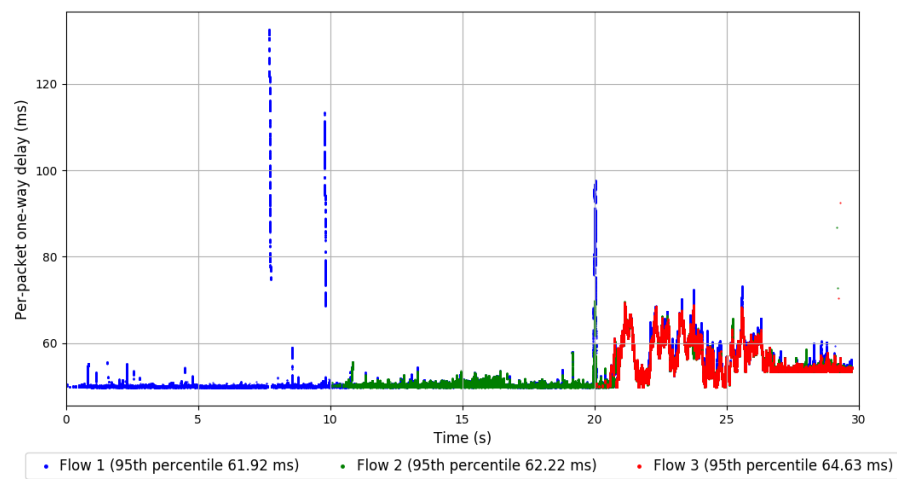
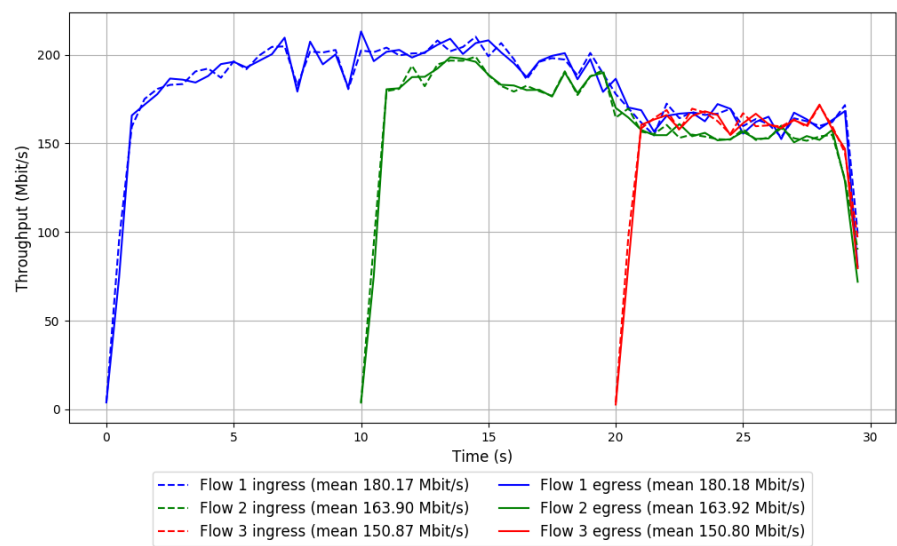


```
Run 1: Statistics of Indigo-1-32

Start at: 2018-02-21 03:43:59
End at: 2018-02-21 03:44:29

# Below is generated by plot.py at 2018-02-21 11:37:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 337.86 Mbit/s
95th percentile per-packet one-way delay: 62.730 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 180.18 Mbit/s
95th percentile per-packet one-way delay: 61.924 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 163.92 Mbit/s
95th percentile per-packet one-way delay: 62.224 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 150.80 Mbit/s
95th percentile per-packet one-way delay: 64.627 ms
Loss rate: 1.12%
```

Run 1: Report of Indigo-1-32 — Data Link

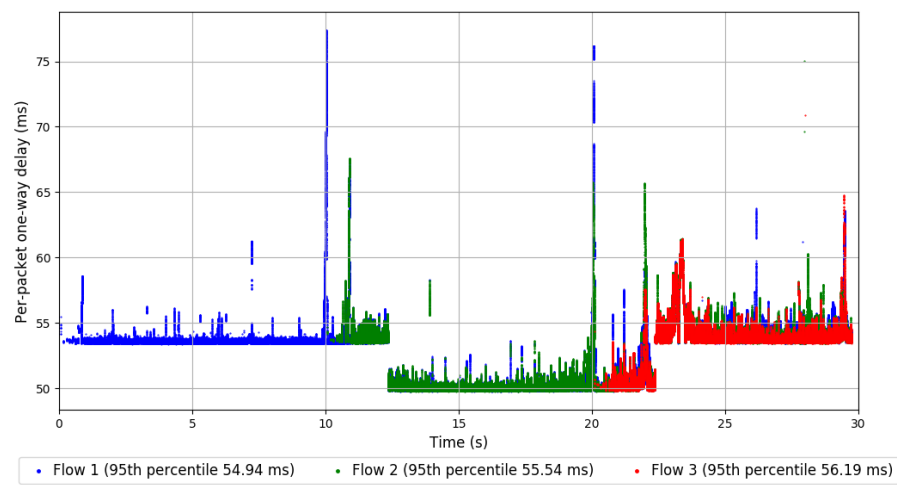
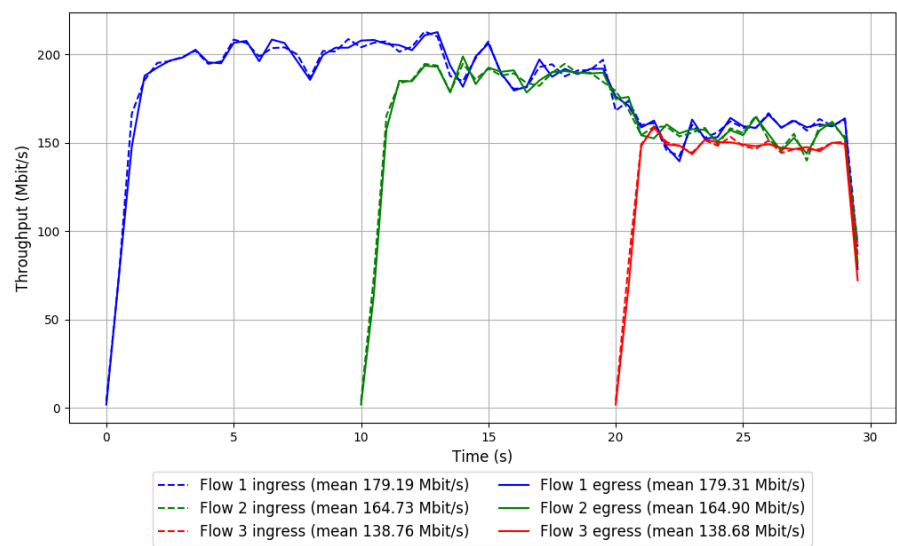


```
Run 2: Statistics of Indigo-1-32

Start at: 2018-02-21 04:02:12
End at: 2018-02-21 04:02:42

# Below is generated by plot.py at 2018-02-21 11:37:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 333.58 Mbit/s
95th percentile per-packet one-way delay: 55.327 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 179.31 Mbit/s
95th percentile per-packet one-way delay: 54.940 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 164.90 Mbit/s
95th percentile per-packet one-way delay: 55.542 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 138.68 Mbit/s
95th percentile per-packet one-way delay: 56.190 ms
Loss rate: 1.11%
```

Run 2: Report of Indigo-1-32 — Data Link



Run 3: Statistics of Indigo-1-32

Start at: 2018-02-21 04:19:24

End at: 2018-02-21 04:19:54

# Below is generated by plot.py at 2018-02-21 11:37:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 334.15 Mbit/s

95th percentile per-packet one-way delay: 56.773 ms

Loss rate: 0.48%

-- Flow 1:

Average throughput: 180.14 Mbit/s

95th percentile per-packet one-way delay: 55.912 ms

Loss rate: 0.29%

-- Flow 2:

Average throughput: 158.81 Mbit/s

95th percentile per-packet one-way delay: 56.790 ms

Loss rate: 0.57%

-- Flow 3:

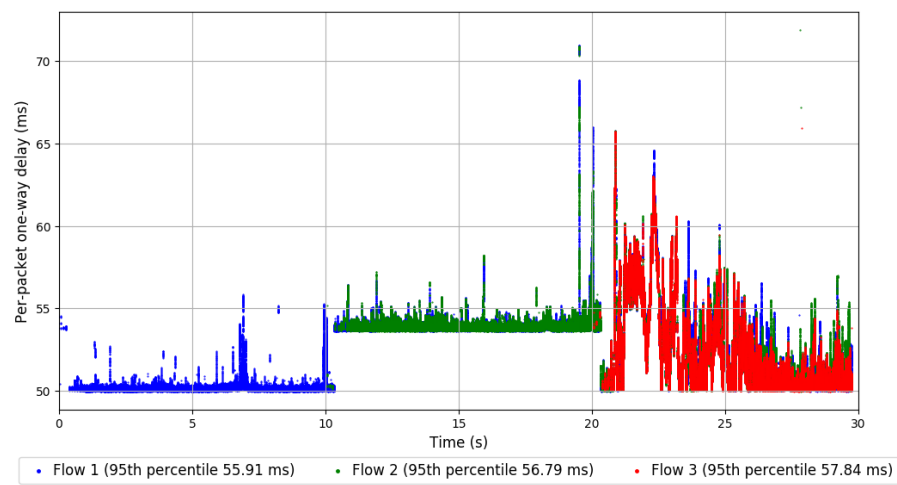
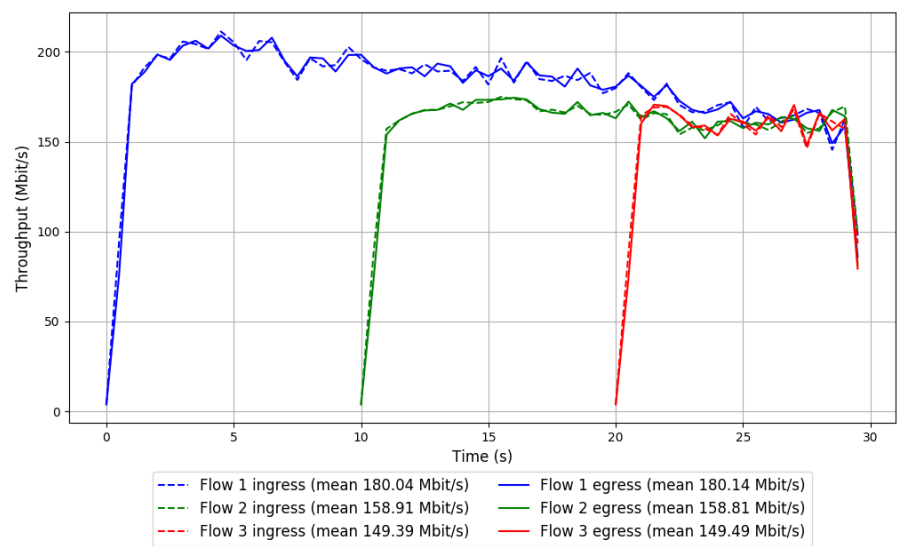
Average throughput: 149.49 Mbit/s

95th percentile per-packet one-way delay: 57.840 ms

Loss rate: 0.97%



Run 3: Report of Indigo-1-32 — Data Link



Run 4: Statistics of Indigo-1-32

Start at: 2018-02-21 04:37:13

End at: 2018-02-21 04:37:43

# Below is generated by plot.py at 2018-02-21 11:37:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 332.53 Mbit/s

95th percentile per-packet one-way delay: 55.276 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 174.86 Mbit/s

95th percentile per-packet one-way delay: 55.155 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 166.85 Mbit/s

95th percentile per-packet one-way delay: 55.496 ms

Loss rate: 0.46%

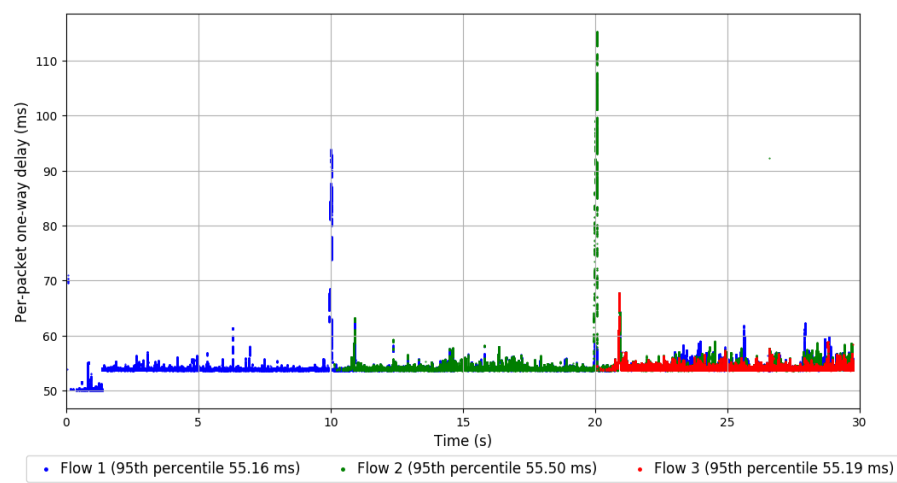
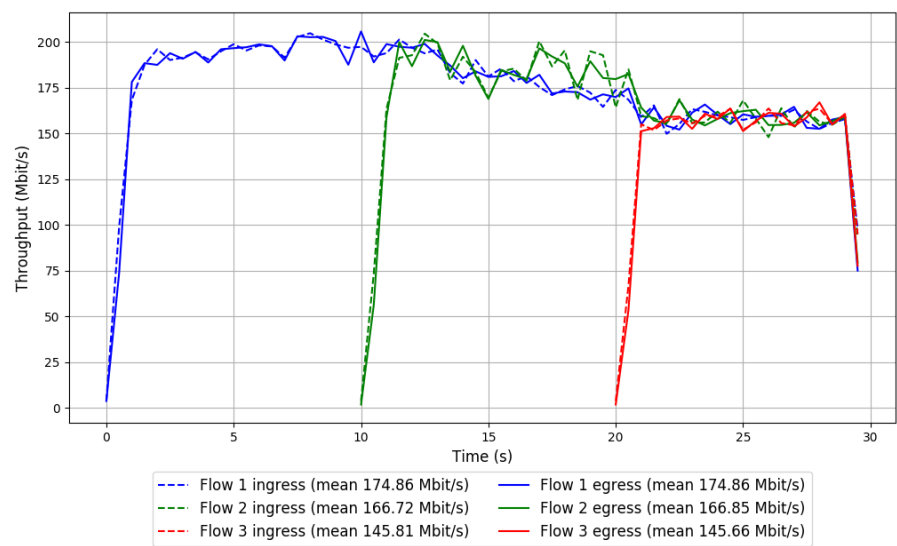
-- Flow 3:

Average throughput: 145.66 Mbit/s

95th percentile per-packet one-way delay: 55.189 ms

Loss rate: 1.14%

Run 4: Report of Indigo-1-32 — Data Link



Run 5: Statistics of Indigo-1-32

Start at: 2018-02-21 04:54:26

End at: 2018-02-21 04:54:56

# Below is generated by plot.py at 2018-02-21 11:37:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 337.07 Mbit/s

95th percentile per-packet one-way delay: 54.369 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 183.80 Mbit/s

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

Loss rate: 0.27%

-- Flow 2:

Average throughput: 162.33 Mbit/s

95th percentile per-packet one-way delay: 54.826 ms

Loss rate: 0.49%

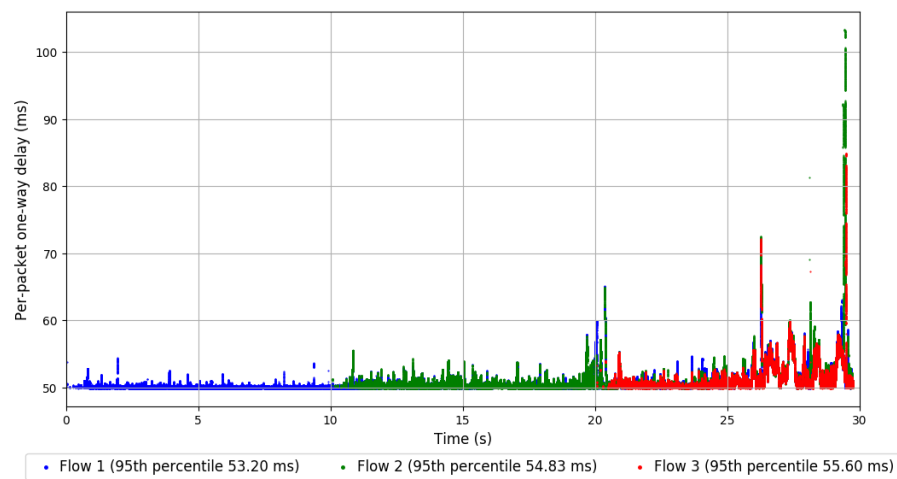
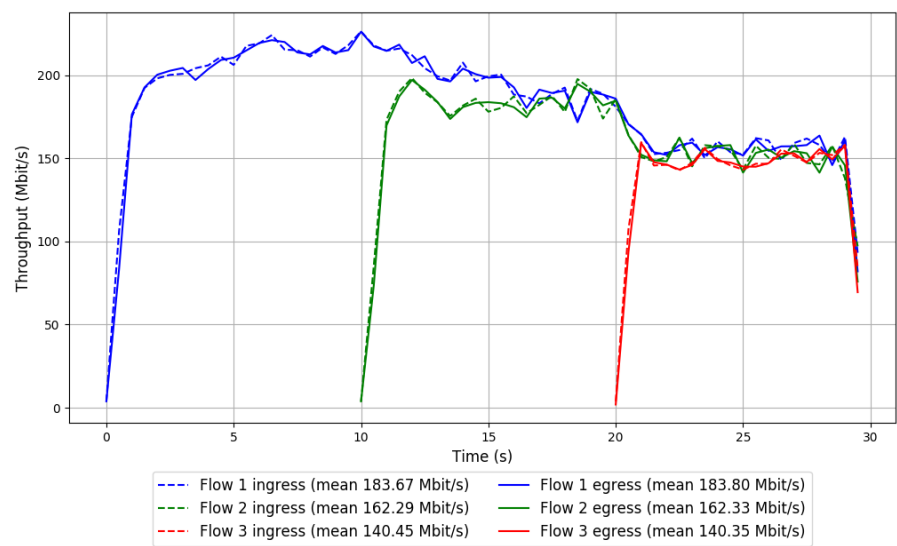
-- Flow 3:

Average throughput: 140.35 Mbit/s

95th percentile per-packet one-way delay: 55.604 ms

Loss rate: 1.12%

Run 5: Report of Indigo-1-32 — Data Link



Run 6: Statistics of Indigo-1-32

Start at: 2018-02-21 05:12:16

End at: 2018-02-21 05:12:46

# Below is generated by plot.py at 2018-02-21 11:37:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 351.06 Mbit/s

95th percentile per-packet one-way delay: 56.413 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 191.25 Mbit/s

95th percentile per-packet one-way delay: 55.670 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 167.98 Mbit/s

95th percentile per-packet one-way delay: 56.703 ms

Loss rate: 0.56%

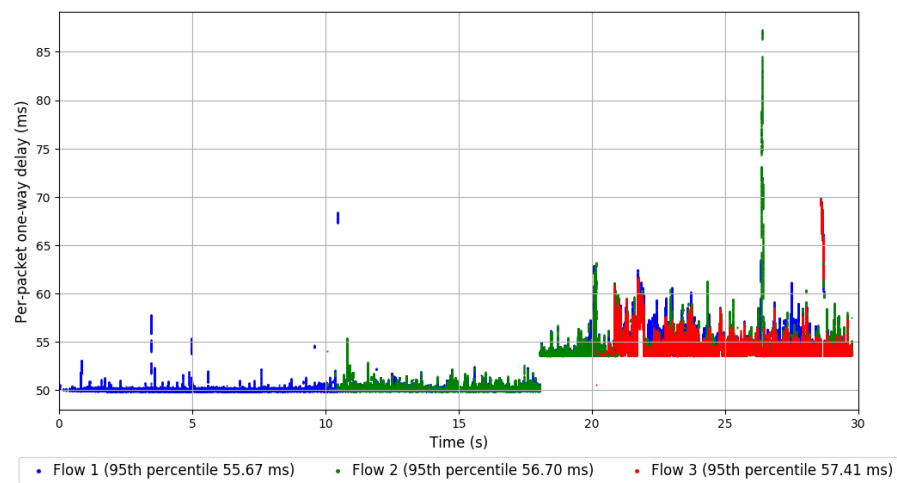
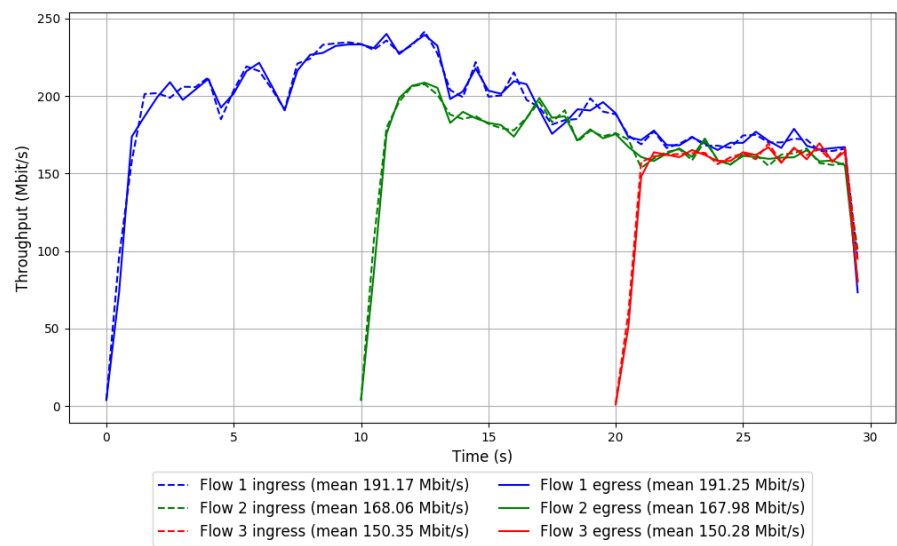
-- Flow 3:

Average throughput: 150.28 Mbit/s

95th percentile per-packet one-way delay: 57.408 ms

Loss rate: 1.12%

Run 6: Report of Indigo-1-32 — Data Link



Run 7: Statistics of Indigo-1-32

Start at: 2018-02-21 05:29:59

End at: 2018-02-21 05:30:29

# Below is generated by plot.py at 2018-02-21 11:37:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 343.12 Mbit/s

95th percentile per-packet one-way delay: 54.968 ms

Loss rate: 0.47%

-- Flow 1:

Average throughput: 186.76 Mbit/s

95th percentile per-packet one-way delay: 54.706 ms

Loss rate: 0.27%

-- Flow 2:

Average throughput: 163.75 Mbit/s

95th percentile per-packet one-way delay: 54.962 ms

Loss rate: 0.50%

-- Flow 3:

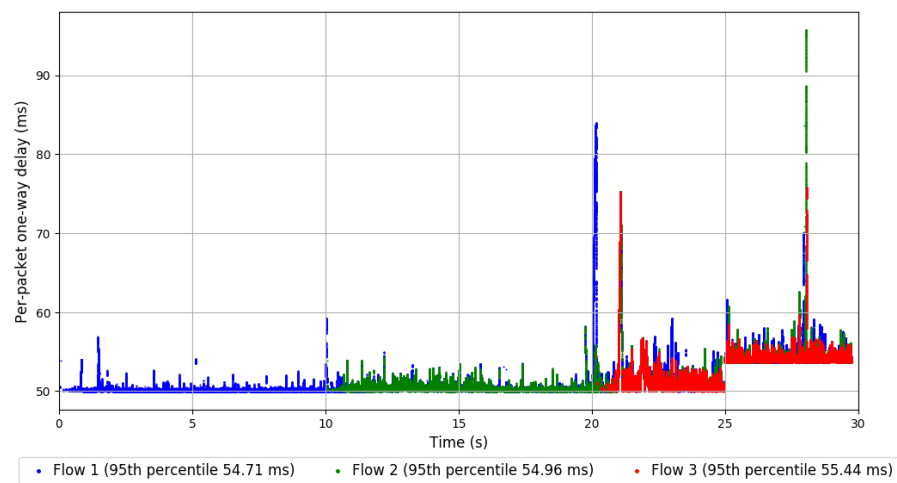
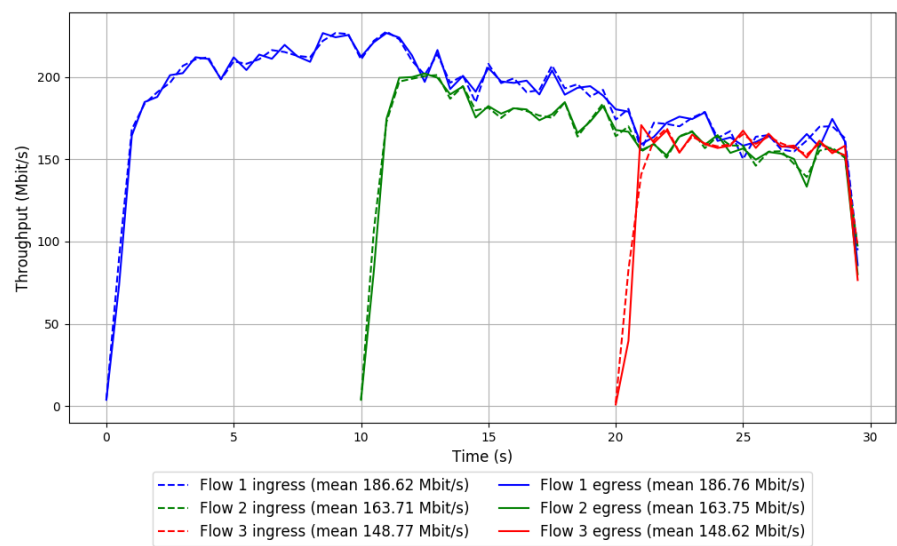
Average throughput: 148.62 Mbit/s

95th percentile per-packet one-way delay: 55.443 ms

Loss rate: 1.19%



Run 7: Report of Indigo-1-32 — Data Link



Run 8: Statistics of Indigo-1-32

Start at: 2018-02-21 05:47:43

End at: 2018-02-21 05:48:13

# Below is generated by plot.py at 2018-02-21 11:37:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 336.18 Mbit/s

95th percentile per-packet one-way delay: 82.639 ms

Loss rate: 0.53%

-- Flow 1:

Average throughput: 178.77 Mbit/s

95th percentile per-packet one-way delay: 79.234 ms

Loss rate: 0.34%

-- Flow 2:

Average throughput: 174.15 Mbit/s

95th percentile per-packet one-way delay: 83.037 ms

Loss rate: 0.52%

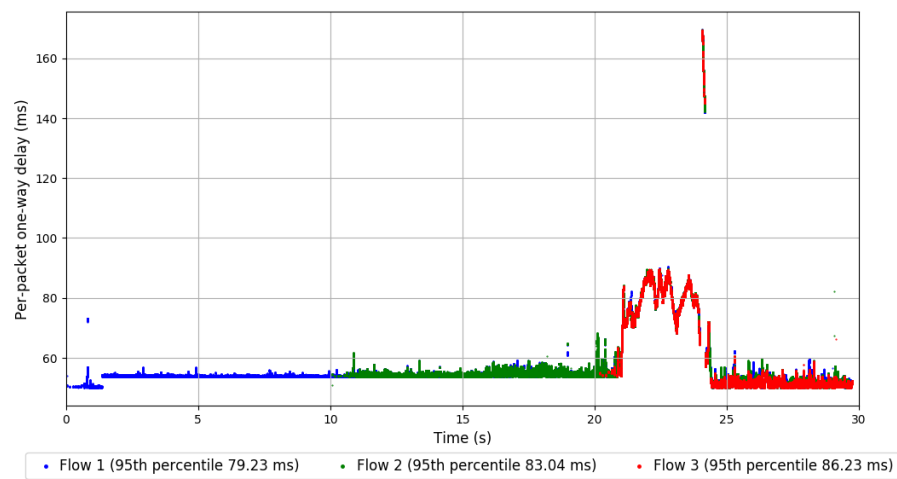
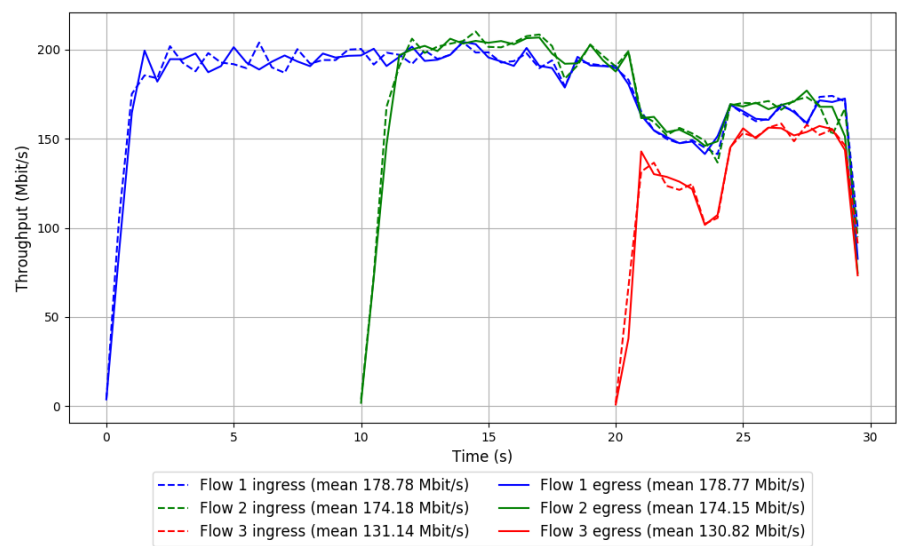
-- Flow 3:

Average throughput: 130.82 Mbit/s

95th percentile per-packet one-way delay: 86.229 ms

Loss rate: 1.33%

Run 8: Report of Indigo-1-32 — Data Link



Run 9: Statistics of Indigo-1-32

Start at: 2018-02-21 06:05:09

End at: 2018-02-21 06:05:39

# Below is generated by plot.py at 2018-02-21 11:37:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 331.98 Mbit/s

95th percentile per-packet one-way delay: 60.123 ms

Loss rate: 0.53%

-- Flow 1:

Average throughput: 173.15 Mbit/s

95th percentile per-packet one-way delay: 56.963 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 167.21 Mbit/s

95th percentile per-packet one-way delay: 60.571 ms

Loss rate: 0.49%

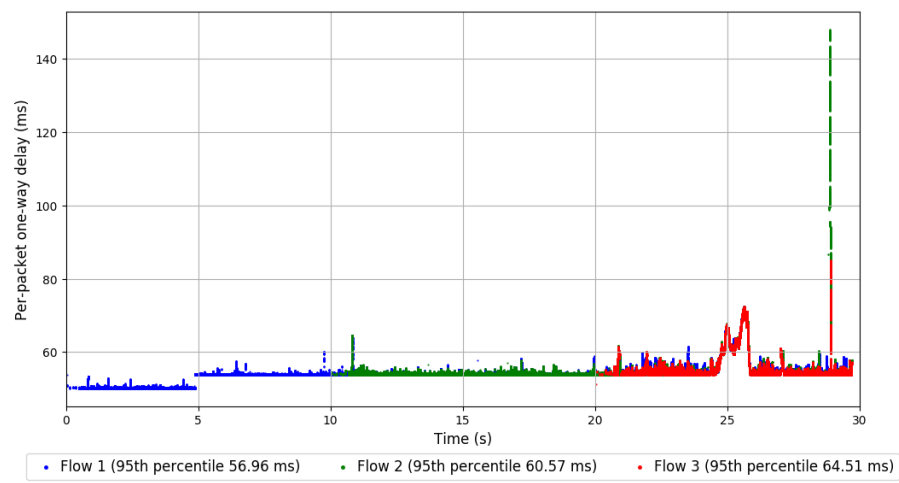
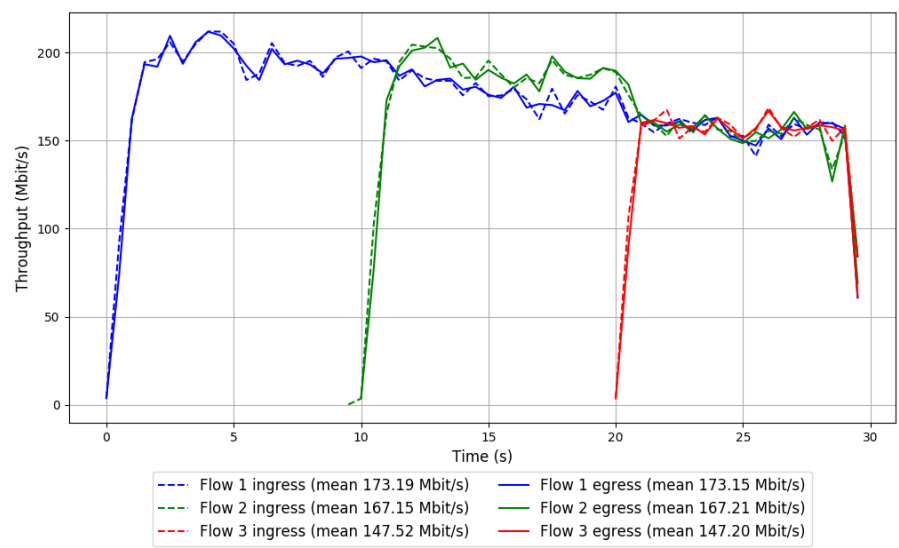
-- Flow 3:

Average throughput: 147.20 Mbit/s

95th percentile per-packet one-way delay: 64.513 ms

Loss rate: 1.26%

Run 9: Report of Indigo-1-32 — Data Link



Run 10: Statistics of Indigo-1-32

Start at: 2018-02-21 06:22:38

End at: 2018-02-21 06:23:09

# Below is generated by plot.py at 2018-02-21 11:37:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 351.55 Mbit/s

95th percentile per-packet one-way delay: 57.984 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 188.94 Mbit/s

95th percentile per-packet one-way delay: 57.181 ms

Loss rate: 0.29%

-- Flow 2:

Average throughput: 167.75 Mbit/s

95th percentile per-packet one-way delay: 57.824 ms

Loss rate: 0.50%

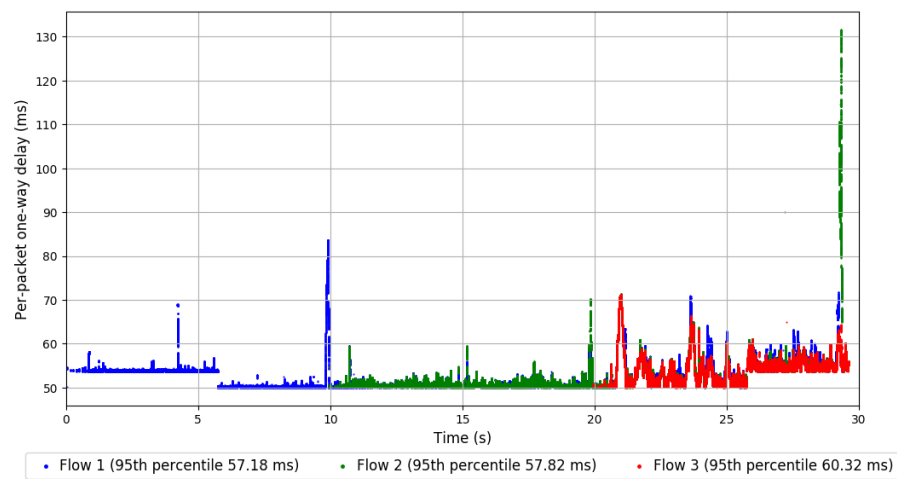
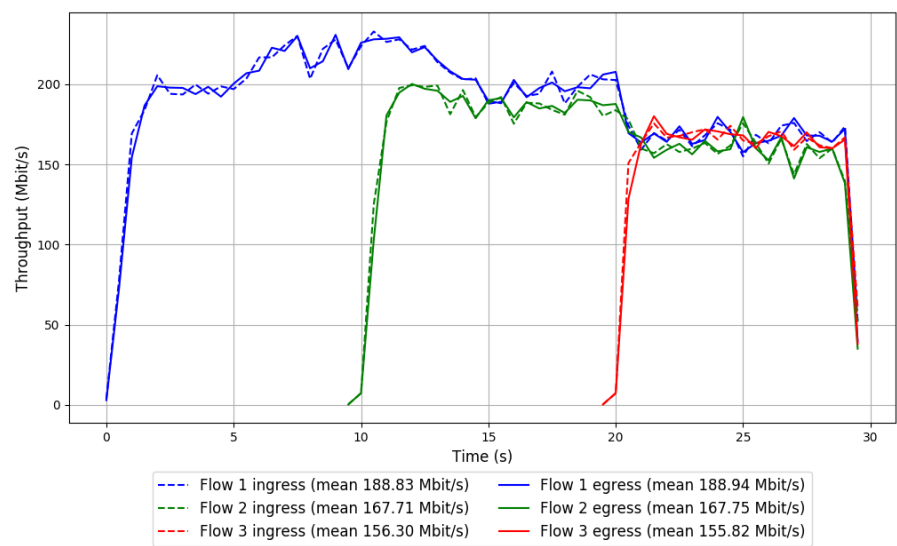
-- Flow 3:

Average throughput: 155.82 Mbit/s

95th percentile per-packet one-way delay: 60.318 ms

Loss rate: 1.36%

Run 10: Report of Indigo-1-32 — Data Link



Run 1: Statistics of Vivace-latency

Start at: 2018-02-21 03:48:18

End at: 2018-02-21 03:48:48

# Below is generated by plot.py at 2018-02-21 11:37:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 528.30 Mbit/s

95th percentile per-packet one-way delay: 111.494 ms

Loss rate: 0.87%

-- Flow 1:

Average throughput: 299.71 Mbit/s

95th percentile per-packet one-way delay: 118.215 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 259.90 Mbit/s

95th percentile per-packet one-way delay: 109.319 ms

Loss rate: 0.56%

-- Flow 3:

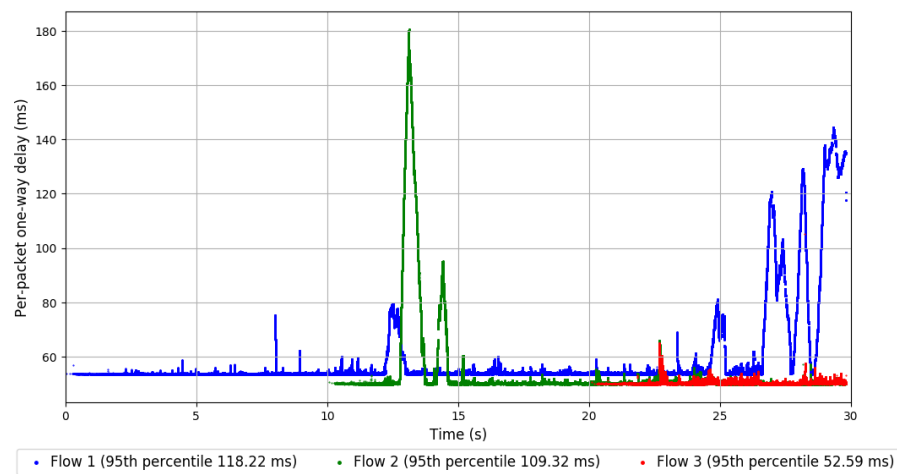
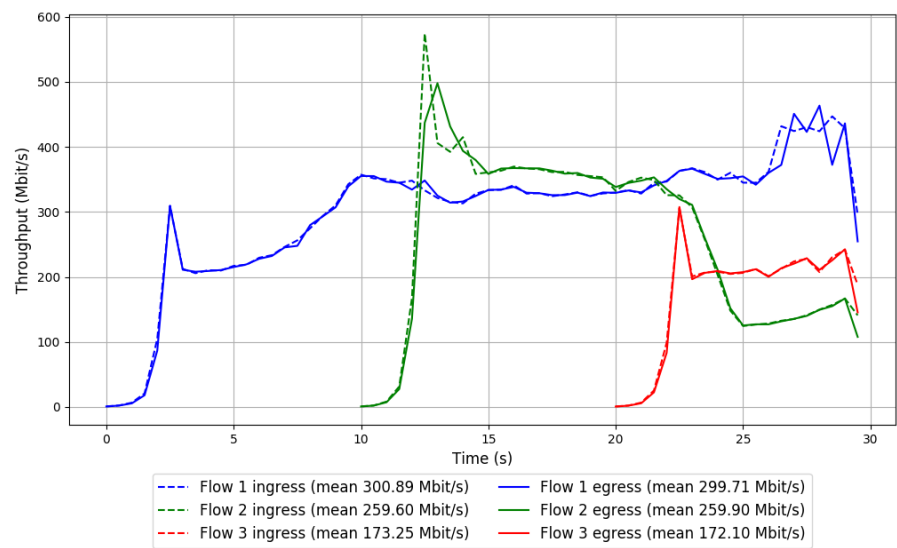
Average throughput: 172.10 Mbit/s

95th percentile per-packet one-way delay: 52.588 ms

Loss rate: 1.94%



Run 1: Report of Vivace-latency — Data Link



Run 2: Statistics of Vivace-latency

Start at: 2018-02-21 04:06:25

End at: 2018-02-21 04:06:55

# Below is generated by plot.py at 2018-02-21 11:37:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 482.81 Mbit/s

95th percentile per-packet one-way delay: 59.725 ms

Loss rate: 0.54%

-- Flow 1:

Average throughput: 265.45 Mbit/s

95th percentile per-packet one-way delay: 57.004 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 314.12 Mbit/s

95th percentile per-packet one-way delay: 67.774 ms

Loss rate: 0.59%

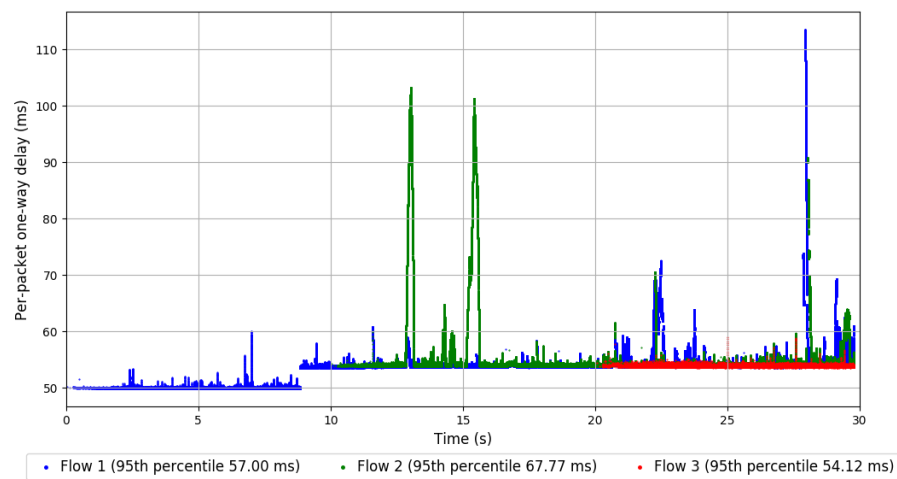
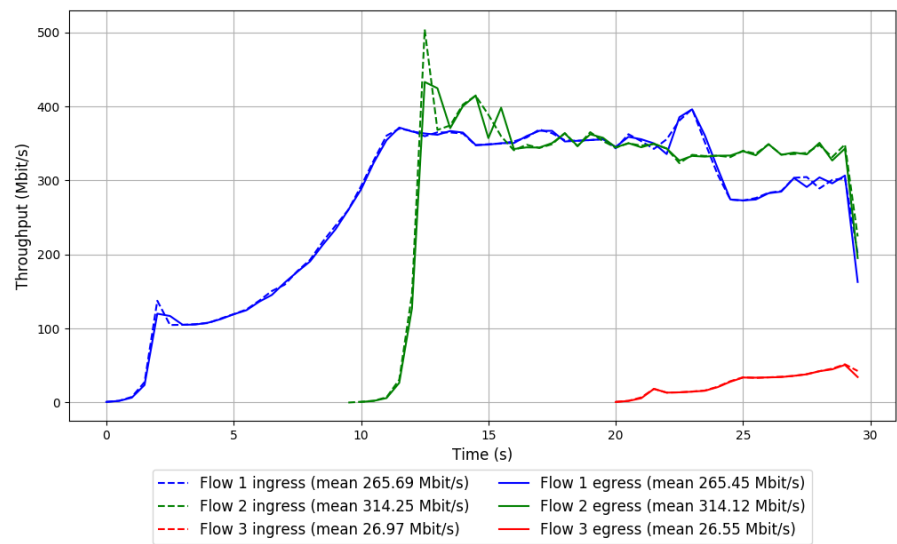
-- Flow 3:

Average throughput: 26.55 Mbit/s

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

Loss rate: 2.66%

Run 2: Report of Vivace-latency — Data Link



Run 3: Statistics of Vivace-latency

Start at: 2018-02-21 04:23:36

End at: 2018-02-21 04:24:06

# Below is generated by plot.py at 2018-02-21 11:37:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 505.66 Mbit/s

95th percentile per-packet one-way delay: 52.802 ms

Loss rate: 0.48%

-- Flow 1:

Average throughput: 324.48 Mbit/s

95th percentile per-packet one-way delay: 52.386 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 261.62 Mbit/s

95th percentile per-packet one-way delay: 51.023 ms

Loss rate: 0.61%

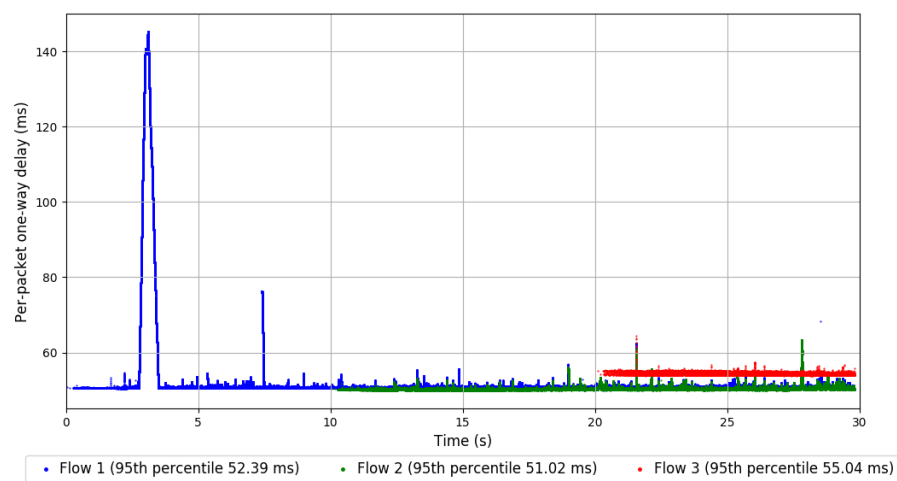
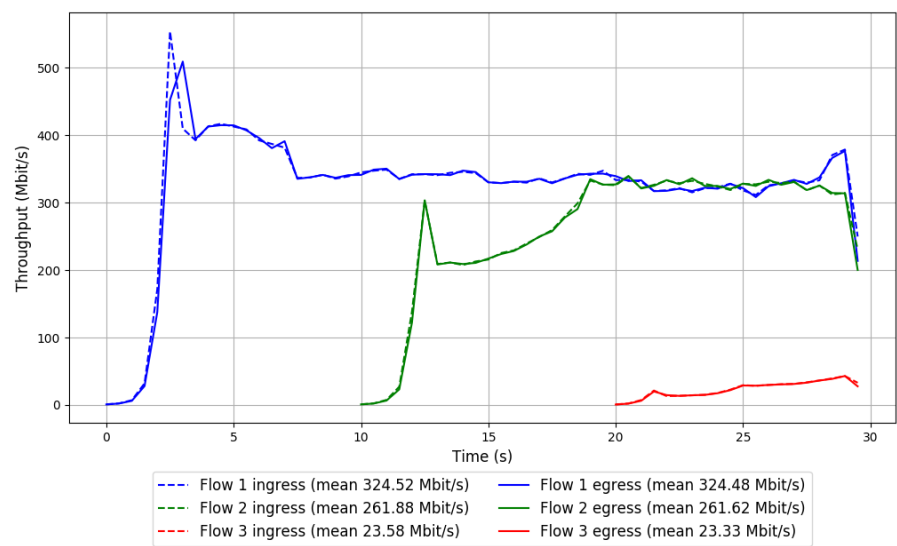
-- Flow 3:

Average throughput: 23.33 Mbit/s

95th percentile per-packet one-way delay: 55.039 ms

Loss rate: 2.14%

Run 3: Report of Vivace-latency — Data Link



Run 4: Statistics of Vivace-latency

Start at: 2018-02-21 04:41:29

End at: 2018-02-21 04:41:59

# Below is generated by plot.py at 2018-02-21 11:37:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 477.76 Mbit/s

95th percentile per-packet one-way delay: 58.741 ms

Loss rate: 0.39%

-- Flow 1:

Average throughput: 315.63 Mbit/s

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

Loss rate: 0.28%

-- Flow 2:

Average throughput: 231.66 Mbit/s

95th percentile per-packet one-way delay: 52.205 ms

Loss rate: 0.56%

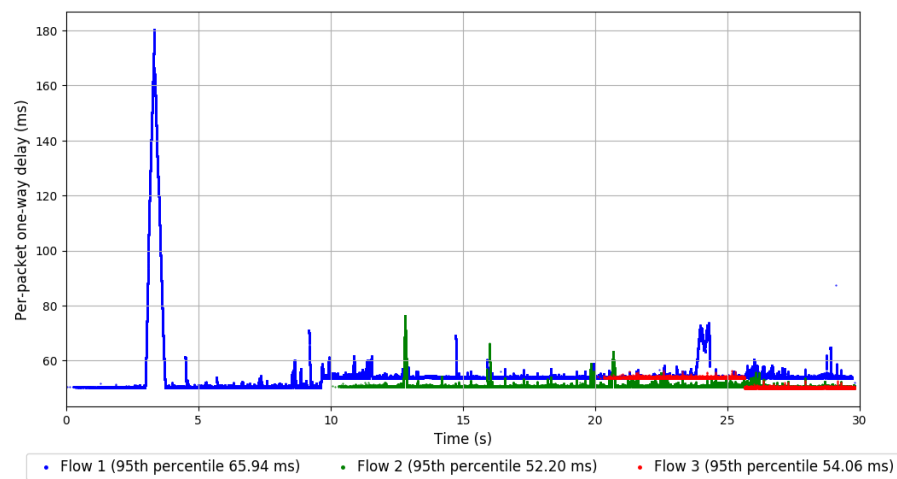
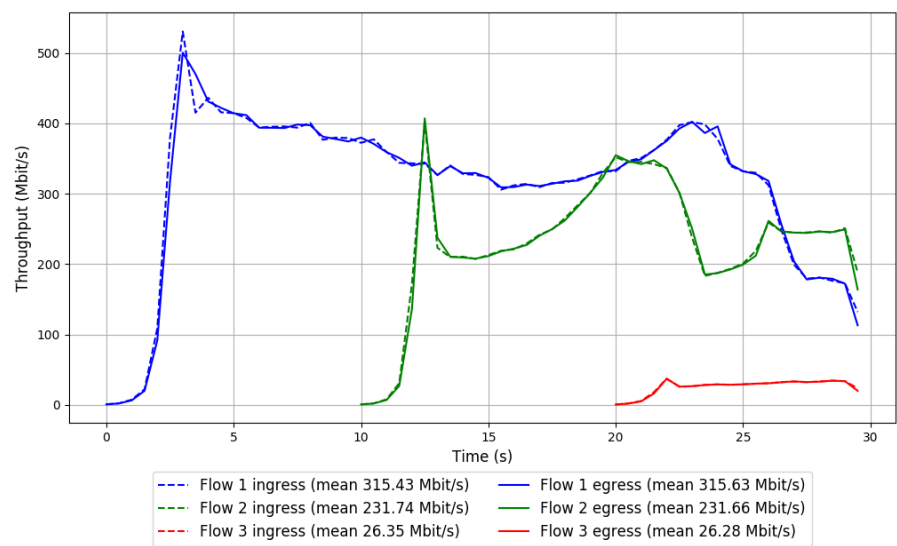
-- Flow 3:

Average throughput: 26.28 Mbit/s

95th percentile per-packet one-way delay: 54.061 ms

Loss rate: 1.36%

Run 4: Report of Vivace-latency — Data Link



Run 5: Statistics of Vivace-latency

Start at: 2018-02-21 04:58:40

End at: 2018-02-21 04:59:10

# Below is generated by plot.py at 2018-02-21 11:37:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 533.68 Mbit/s

95th percentile per-packet one-way delay: 61.660 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 354.36 Mbit/s

95th percentile per-packet one-way delay: 59.621 ms

Loss rate: 0.30%

-- Flow 2:

Average throughput: 227.71 Mbit/s

95th percentile per-packet one-way delay: 102.167 ms

Loss rate: 0.59%

-- Flow 3:

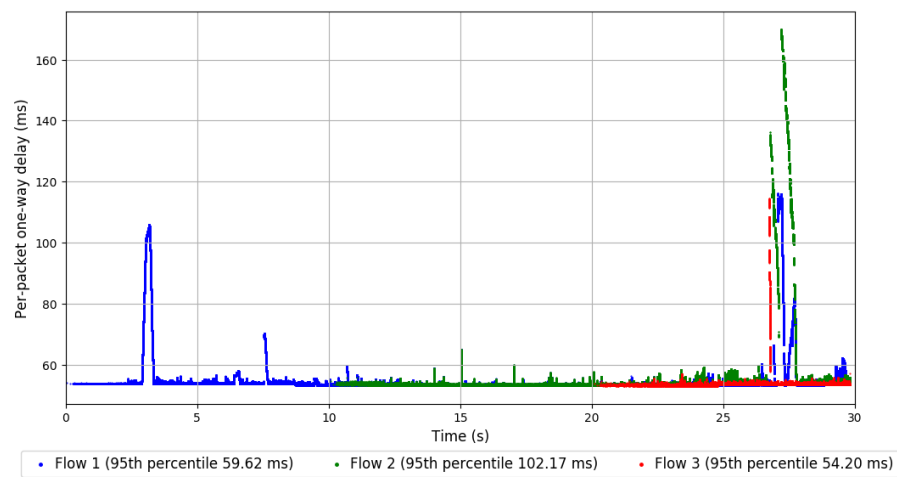
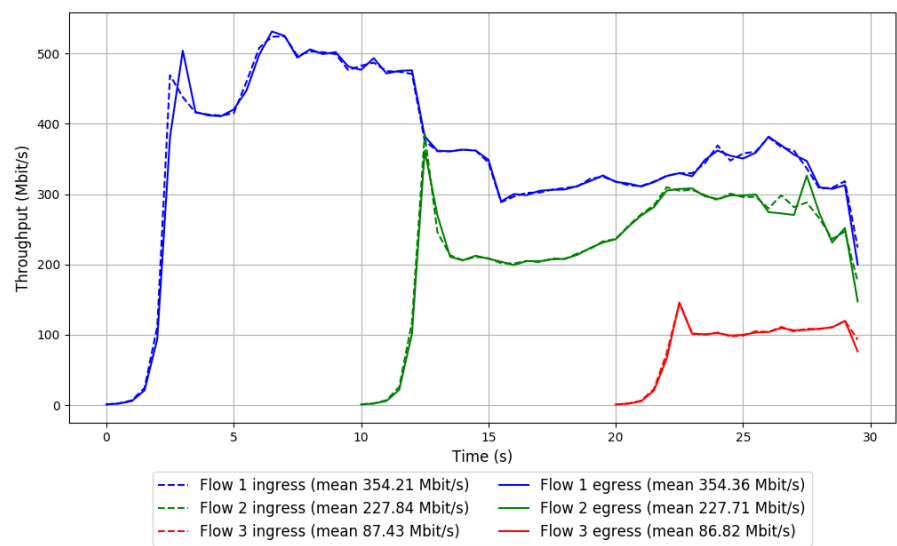
Average throughput: 86.82 Mbit/s

95th percentile per-packet one-way delay: 54.203 ms

Loss rate: 1.69%



Run 5: Report of Vivace-latency — Data Link



Run 6: Statistics of Vivace-latency

Start at: 2018-02-21 05:16:40

End at: 2018-02-21 05:17:10

# Below is generated by plot.py at 2018-02-21 11:37:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 502.32 Mbit/s

95th percentile per-packet one-way delay: 58.927 ms

Loss rate: 0.55%

-- Flow 1:

Average throughput: 280.81 Mbit/s

95th percentile per-packet one-way delay: 93.574 ms

Loss rate: 0.41%

-- Flow 2:

Average throughput: 290.87 Mbit/s

95th percentile per-packet one-way delay: 53.114 ms

Loss rate: 0.61%

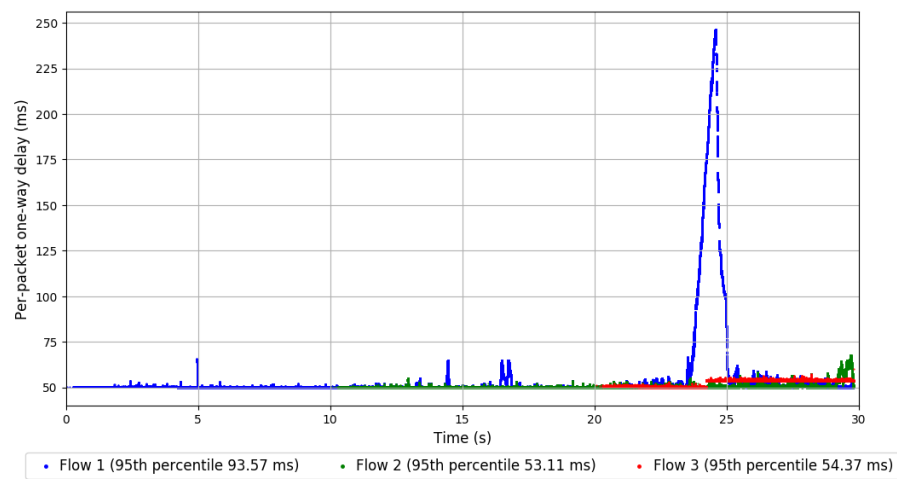
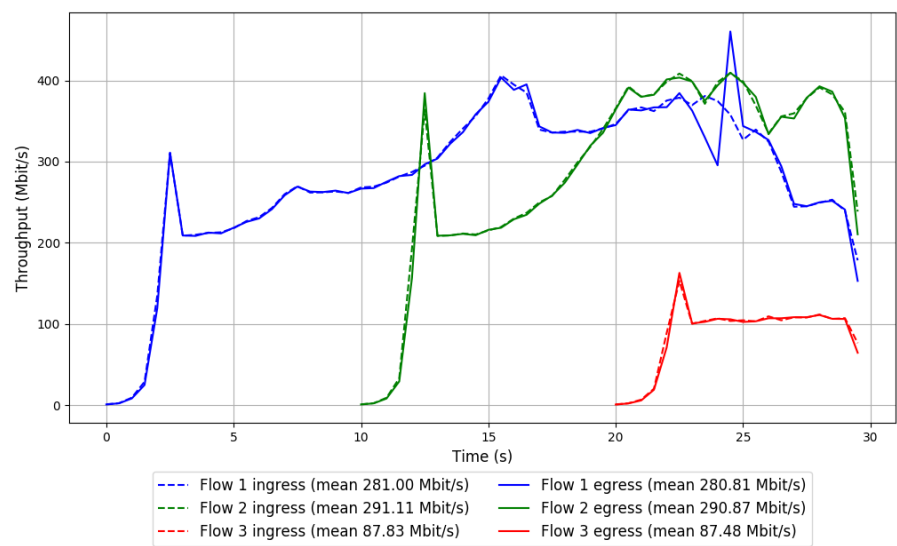
-- Flow 3:

Average throughput: 87.48 Mbit/s

95th percentile per-packet one-way delay: 54.367 ms

Loss rate: 1.41%

Run 6: Report of Vivace-latency — Data Link



Run 7: Statistics of Vivace-latency

Start at: 2018-02-21 05:34:18

End at: 2018-02-21 05:34:48

# Below is generated by plot.py at 2018-02-21 11:38:11

# Datalink statistics

-- Total of 3 flows:

Average throughput: 569.21 Mbit/s

95th percentile per-packet one-way delay: 55.225 ms

Loss rate: 0.41%

-- Flow 1:

Average throughput: 325.71 Mbit/s

95th percentile per-packet one-way delay: 54.988 ms

Loss rate: 0.27%

-- Flow 2:

Average throughput: 286.41 Mbit/s

95th percentile per-packet one-way delay: 54.341 ms

Loss rate: 0.25%

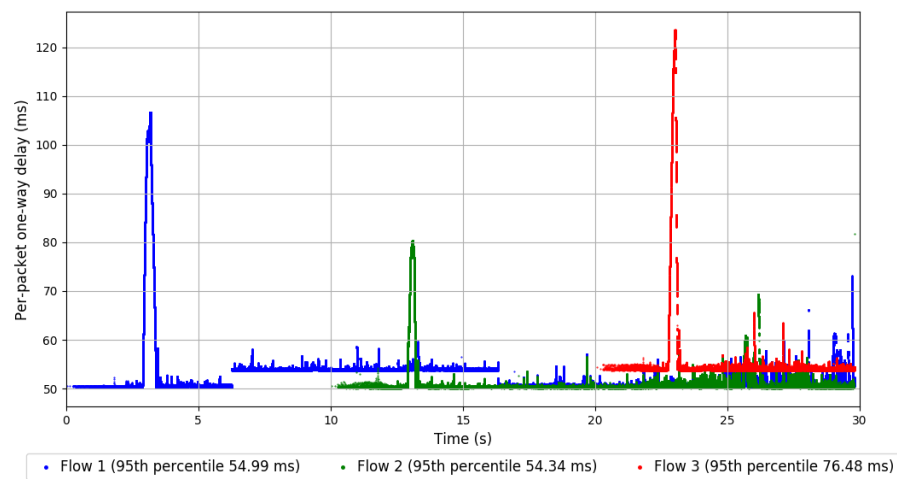
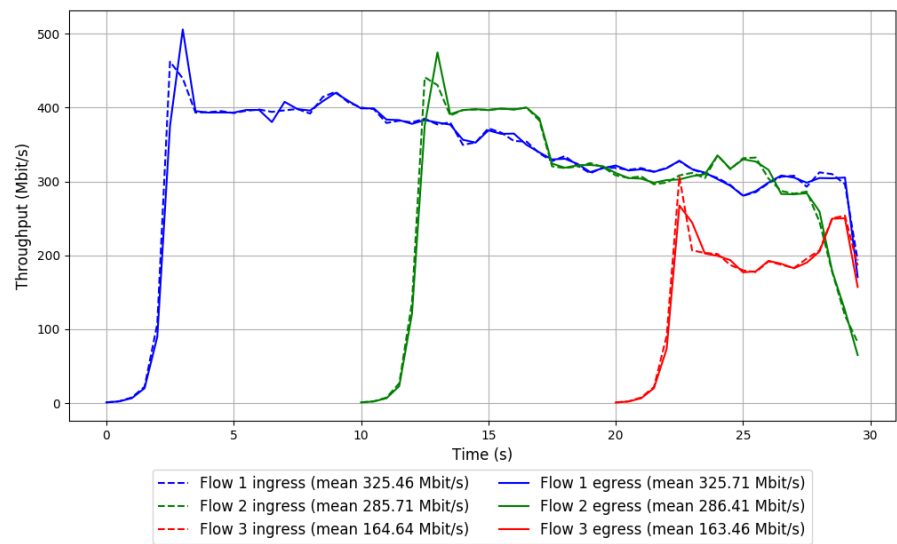
-- Flow 3:

Average throughput: 163.46 Mbit/s

95th percentile per-packet one-way delay: 76.481 ms

Loss rate: 1.81%

Run 7: Report of Vivace-latency — Data Link



Run 8: Statistics of Vivace-latency

Start at: 2018-02-21 05:52:01

End at: 2018-02-21 05:52:31

# Below is generated by plot.py at 2018-02-21 11:38:11

# Datalink statistics

-- Total of 3 flows:

Average throughput: 507.10 Mbit/s

95th percentile per-packet one-way delay: 56.305 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 318.73 Mbit/s

95th percentile per-packet one-way delay: 56.889 ms

Loss rate: 0.46%

-- Flow 2:

Average throughput: 267.58 Mbit/s

95th percentile per-packet one-way delay: 55.630 ms

Loss rate: 0.52%

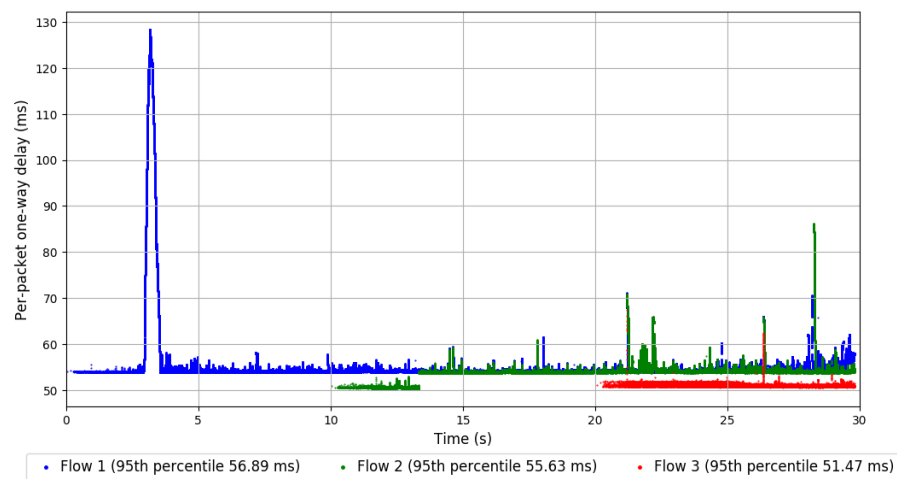
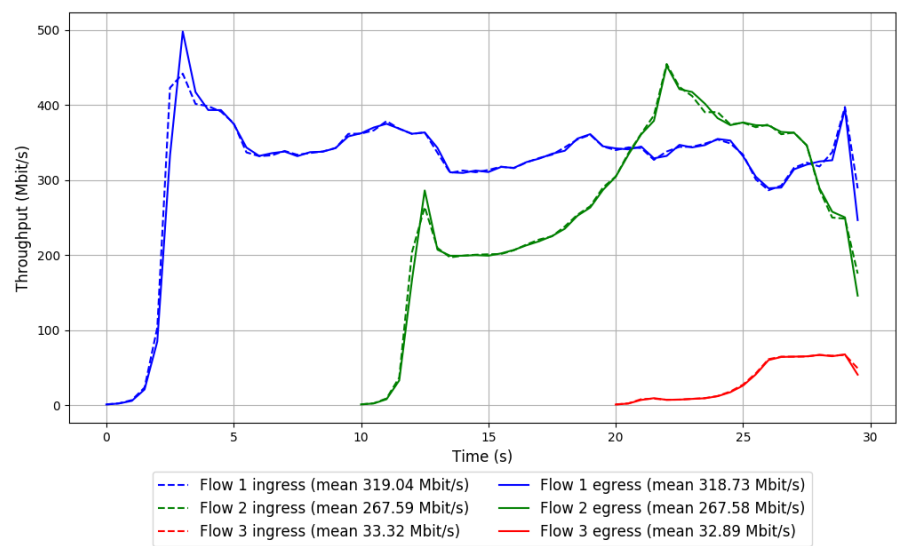
-- Flow 3:

Average throughput: 32.89 Mbit/s

95th percentile per-packet one-way delay: 51.472 ms

Loss rate: 2.29%

Run 8: Report of Vivace-latency — Data Link



Run 9: Statistics of Vivace-latency

Start at: 2018-02-21 06:09:30

End at: 2018-02-21 06:10:00

# Below is generated by plot.py at 2018-02-21 11:38:14

# Datalink statistics

-- Total of 3 flows:

Average throughput: 520.45 Mbit/s

95th percentile per-packet one-way delay: 70.571 ms

Loss rate: 1.02%

-- Flow 1:

Average throughput: 312.13 Mbit/s

95th percentile per-packet one-way delay: 122.034 ms

Loss rate: 1.26%

-- Flow 2:

Average throughput: 295.65 Mbit/s

95th percentile per-packet one-way delay: 53.502 ms

Loss rate: 0.55%

-- Flow 3:

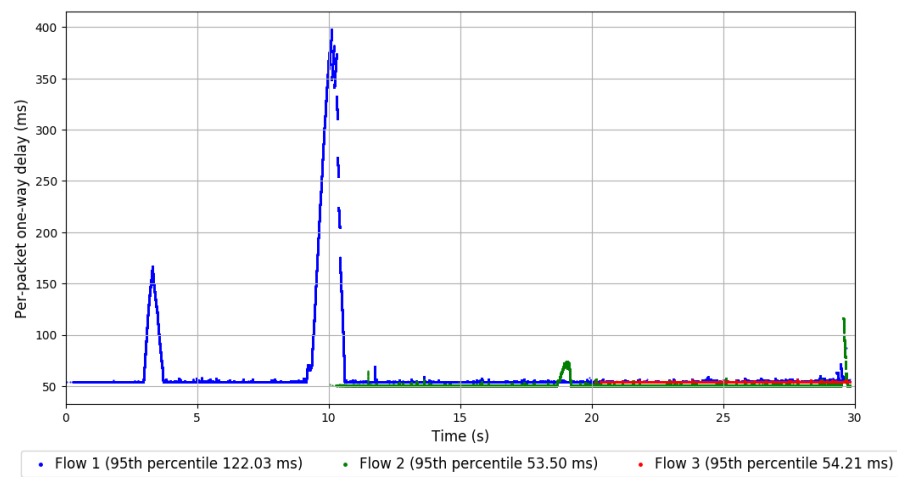
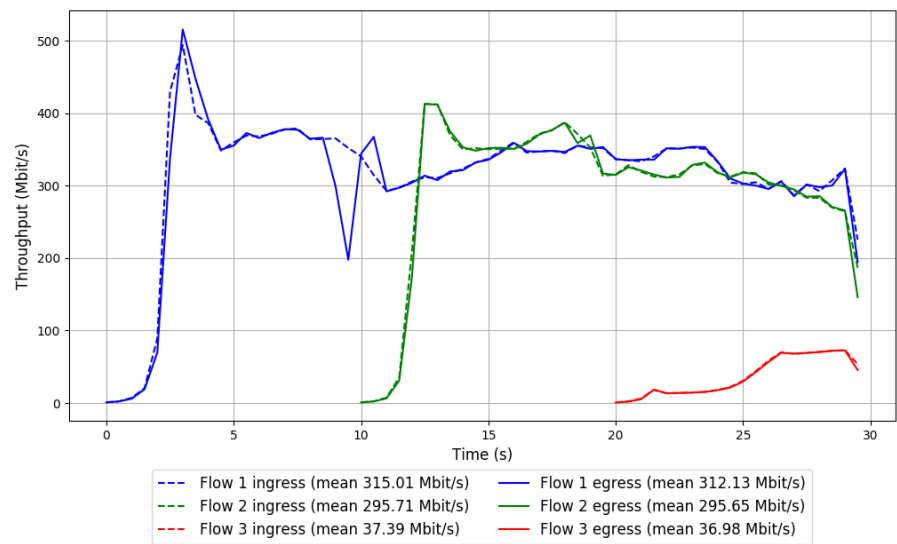
Average throughput: 36.98 Mbit/s

95th percentile per-packet one-way delay: 54.208 ms

Loss rate: 2.19%



Run 9: Report of Vivace-latency — Data Link



Run 10: Statistics of Vivace-latency

Start at: 2018-02-21 06:26:55

End at: 2018-02-21 06:27:25

# Below is generated by plot.py at 2018-02-21 11:39:42

# Datalink statistics

-- Total of 3 flows:

Average throughput: 550.76 Mbit/s

95th percentile per-packet one-way delay: 62.501 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 337.88 Mbit/s

95th percentile per-packet one-way delay: 52.681 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 311.60 Mbit/s

95th percentile per-packet one-way delay: 108.060 ms

Loss rate: 0.89%

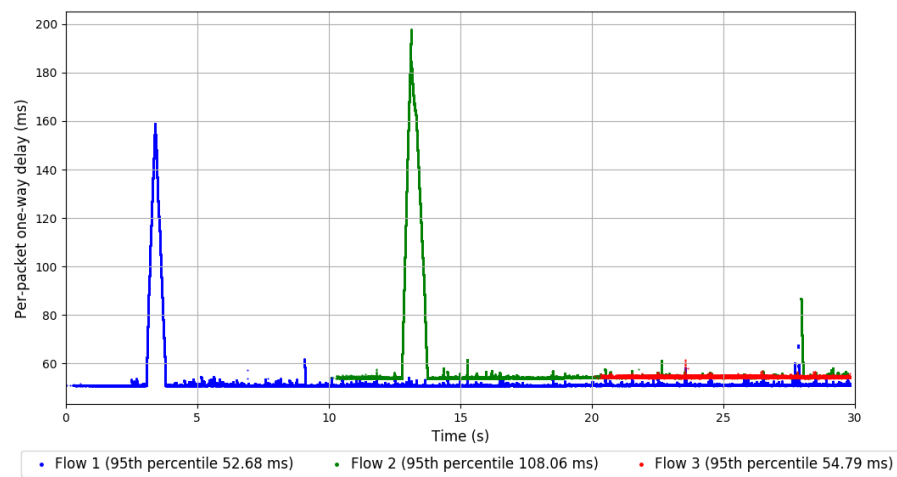
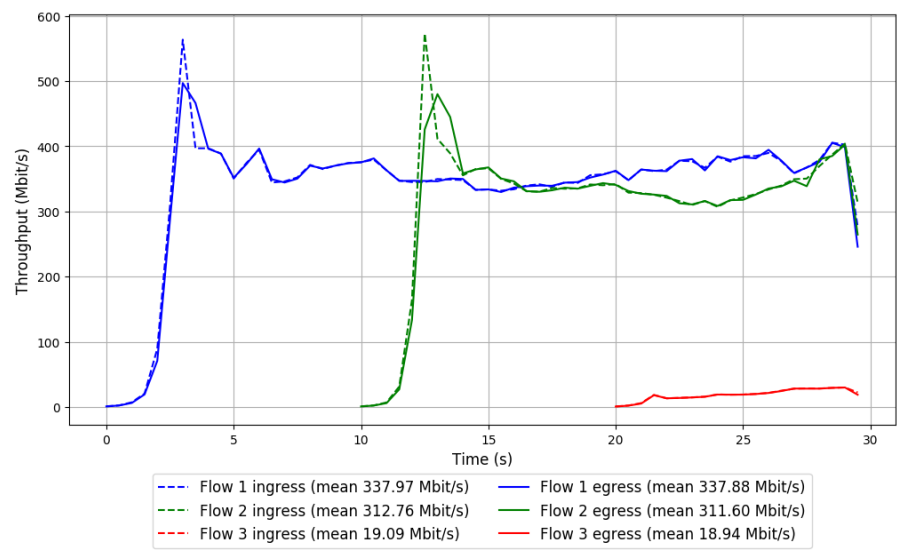
-- Flow 3:

Average throughput: 18.94 Mbit/s

95th percentile per-packet one-way delay: 54.788 ms

Loss rate: 1.81%

Run 10: Report of Vivace-latency — Data Link

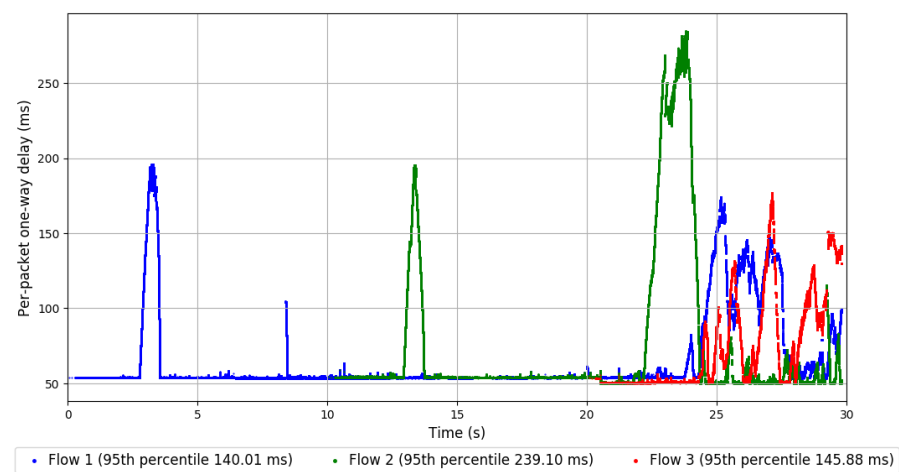
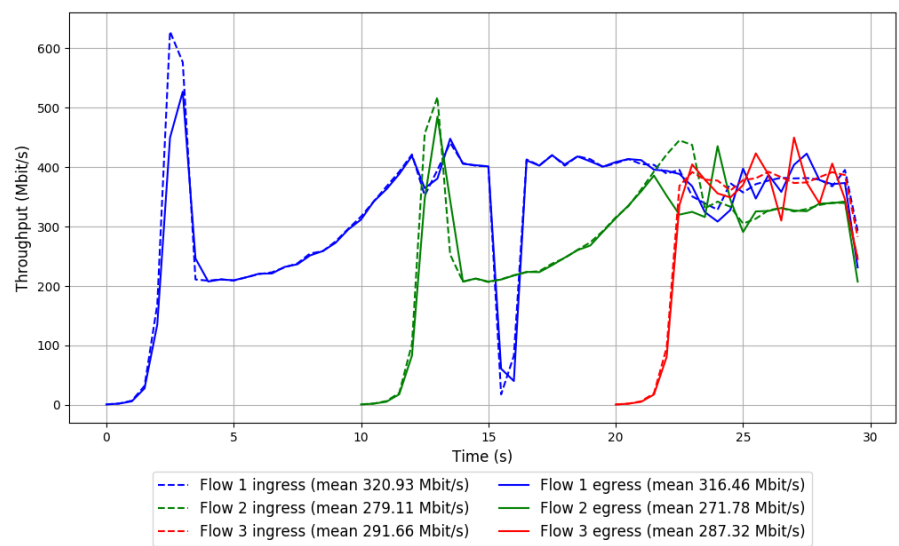


```
Run 1: Statistics of Vivace-loss

Start at: 2018-02-21 03:46:58
End at: 2018-02-21 03:47:28

# Below is generated by plot.py at 2018-02-21 11:42:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 590.57 Mbit/s
95th percentile per-packet one-way delay: 162.166 ms
Loss rate: 2.33%
-- Flow 1:
Average throughput: 316.46 Mbit/s
95th percentile per-packet one-way delay: 140.015 ms
Loss rate: 1.75%
-- Flow 2:
Average throughput: 271.78 Mbit/s
95th percentile per-packet one-way delay: 239.104 ms
Loss rate: 3.19%
-- Flow 3:
Average throughput: 287.32 Mbit/s
95th percentile per-packet one-way delay: 145.884 ms
Loss rate: 2.58%
```

Run 1: Report of Vivace-loss — Data Link

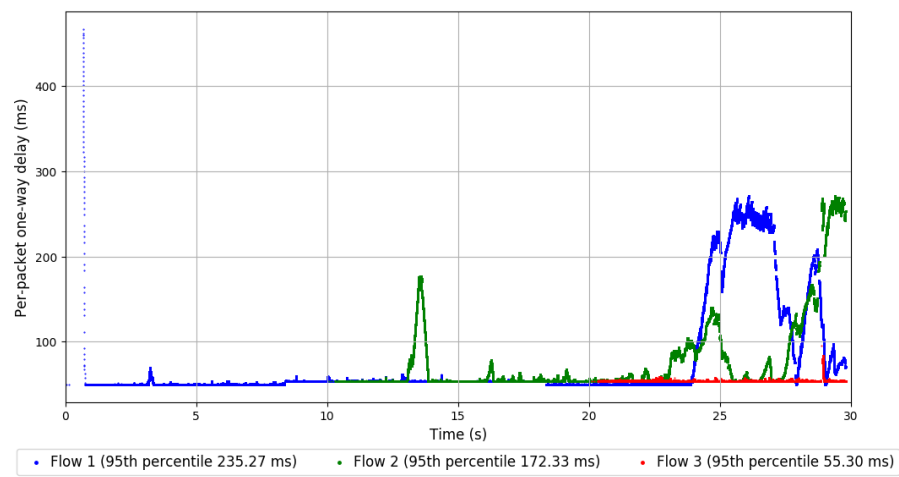
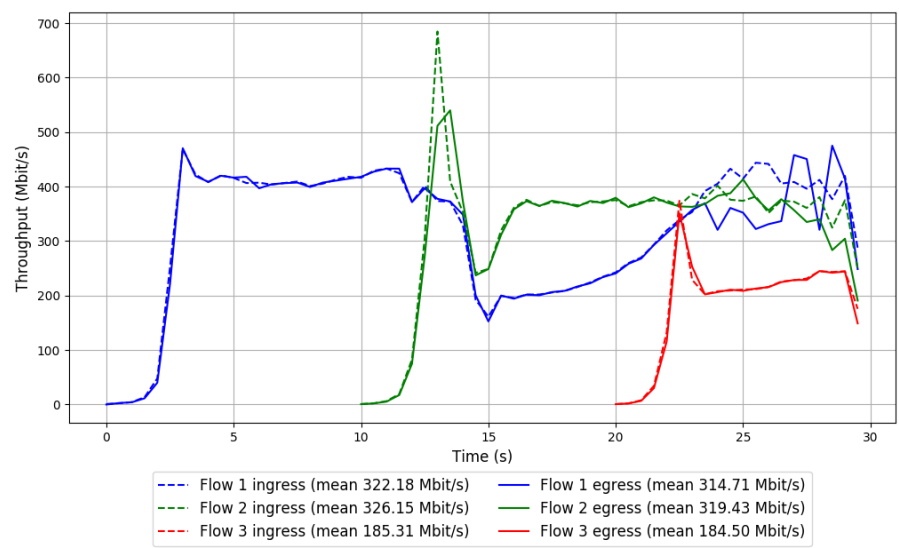


```
Run 2: Statistics of Vivace-loss

Start at: 2018-02-21 04:05:06
End at: 2018-02-21 04:05:36

# Below is generated by plot.py at 2018-02-21 11:43:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 586.69 Mbit/s
95th percentile per-packet one-way delay: 222.270 ms
Loss rate: 2.51%
-- Flow 1:
Average throughput: 314.71 Mbit/s
95th percentile per-packet one-way delay: 235.267 ms
Loss rate: 2.65%
-- Flow 2:
Average throughput: 319.43 Mbit/s
95th percentile per-packet one-way delay: 172.331 ms
Loss rate: 2.58%
-- Flow 3:
Average throughput: 184.50 Mbit/s
95th percentile per-packet one-way delay: 55.298 ms
Loss rate: 1.51%
```

Run 2: Report of Vivace-loss — Data Link



Run 3: Statistics of Vivace-loss

Start at: 2018-02-21 04:22:17

End at: 2018-02-21 04:22:47

# Below is generated by plot.py at 2018-02-21 11:47:07

# Datalink statistics

-- Total of 3 flows:

Average throughput: 582.99 Mbit/s

95th percentile per-packet one-way delay: 217.039 ms

Loss rate: 2.98%

-- Flow 1:

Average throughput: 312.17 Mbit/s

95th percentile per-packet one-way delay: 219.934 ms

Loss rate: 4.67%

-- Flow 2:

Average throughput: 321.29 Mbit/s

95th percentile per-packet one-way delay: 217.126 ms

Loss rate: 0.78%

-- Flow 3:

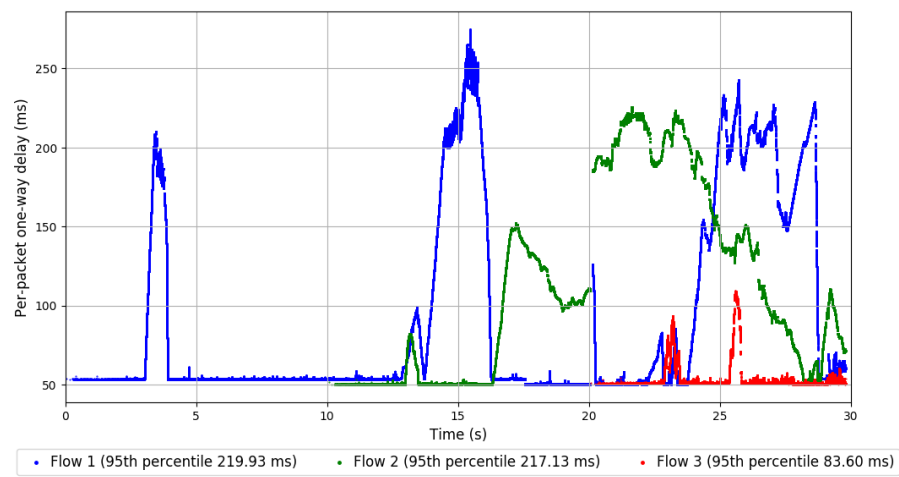
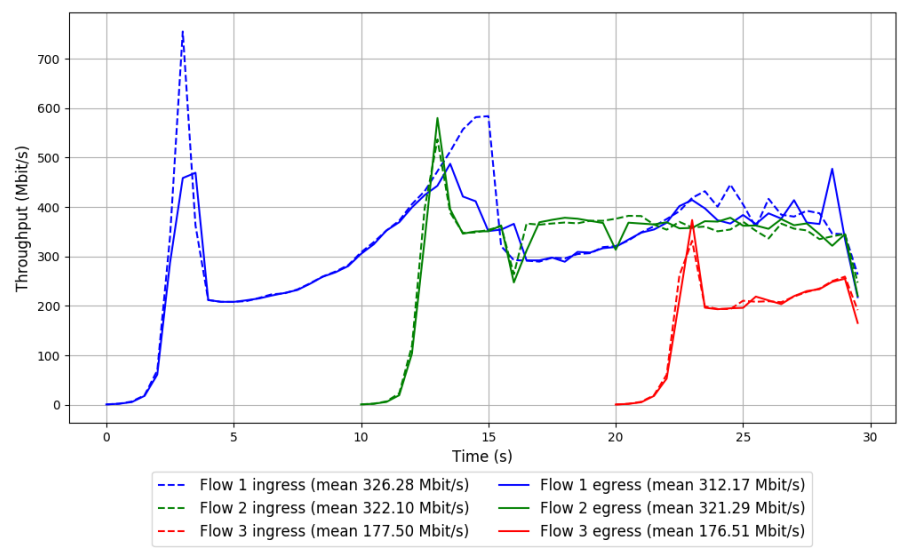
Average throughput: 176.51 Mbit/s

95th percentile per-packet one-way delay: 83.600 ms

Loss rate: 1.59%



Run 3: Report of Vivace-loss — Data Link



Run 4: Statistics of Vivace-loss

Start at: 2018-02-21 04:40:11

End at: 2018-02-21 04:40:41

# Below is generated by plot.py at 2018-02-21 11:47:47

# Datalink statistics

-- Total of 3 flows:

Average throughput: 567.55 Mbit/s

95th percentile per-packet one-way delay: 209.675 ms

Loss rate: 2.07%

-- Flow 1:

Average throughput: 285.44 Mbit/s

95th percentile per-packet one-way delay: 193.097 ms

Loss rate: 1.53%

-- Flow 2:

Average throughput: 289.44 Mbit/s

95th percentile per-packet one-way delay: 196.660 ms

Loss rate: 2.83%

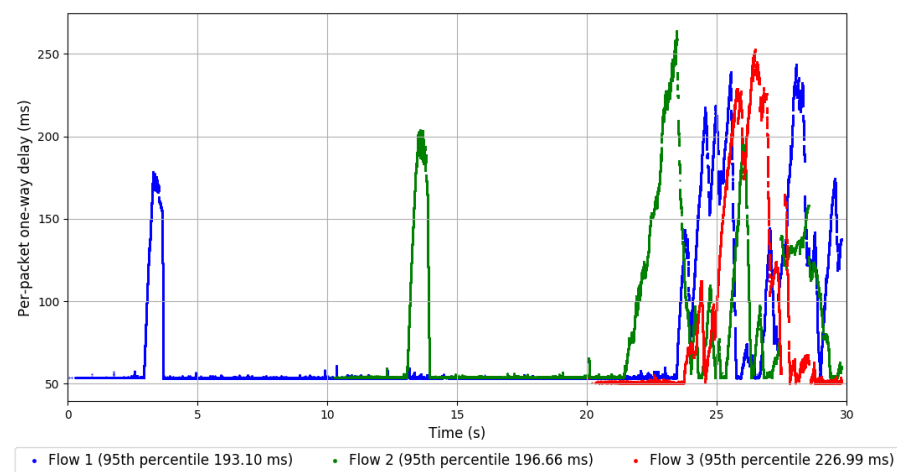
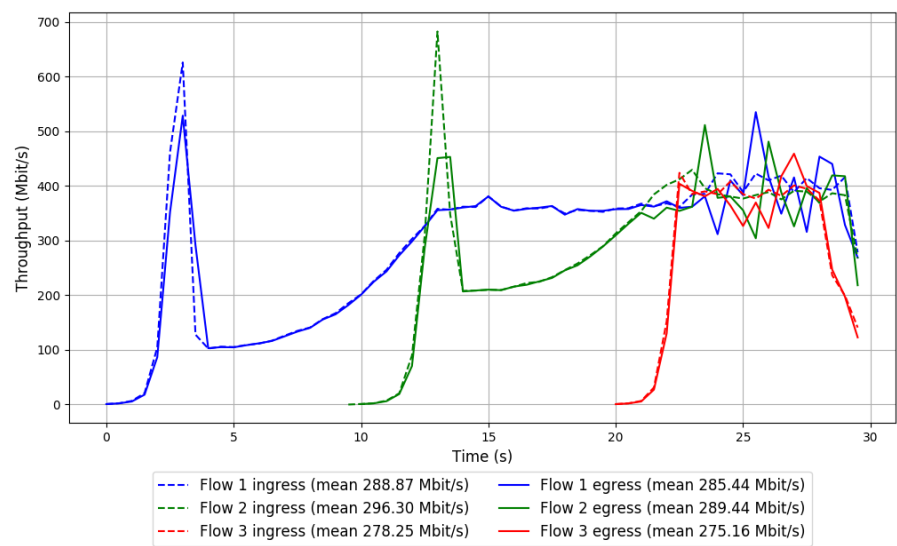
-- Flow 3:

Average throughput: 275.16 Mbit/s

95th percentile per-packet one-way delay: 226.987 ms

Loss rate: 2.15%

Run 4: Report of Vivace-loss — Data Link



Run 5: Statistics of Vivace-loss

Start at: 2018-02-21 04:57:20

End at: 2018-02-21 04:57:50

# Below is generated by plot.py at 2018-02-21 11:48:16

# Datalink statistics

-- Total of 3 flows:

Average throughput: 582.77 Mbit/s

95th percentile per-packet one-way delay: 244.447 ms

Loss rate: 2.03%

-- Flow 1:

Average throughput: 297.93 Mbit/s

95th percentile per-packet one-way delay: 206.969 ms

Loss rate: 1.48%

-- Flow 2:

Average throughput: 315.57 Mbit/s

95th percentile per-packet one-way delay: 57.637 ms

Loss rate: 0.60%

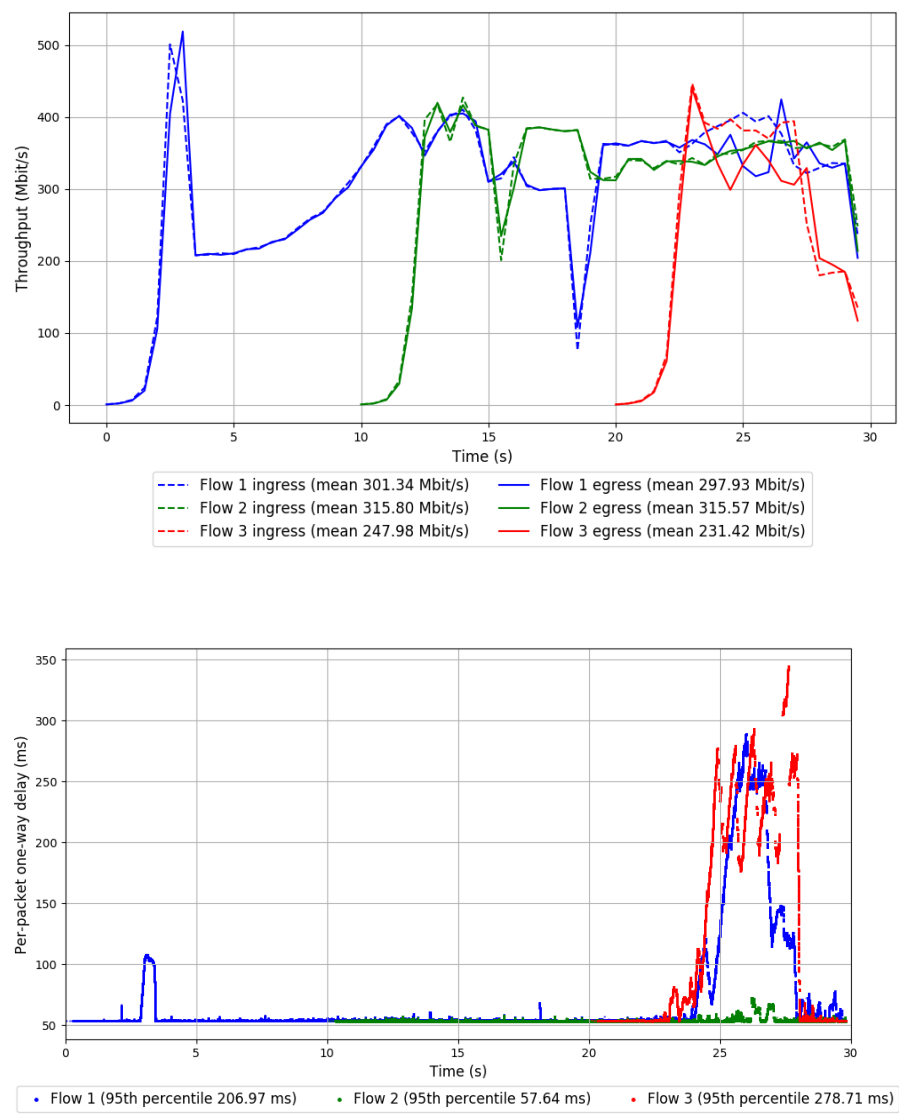
-- Flow 3:

Average throughput: 231.42 Mbit/s

95th percentile per-packet one-way delay: 278.711 ms

Loss rate: 7.73%

Run 5: Report of Vivace-loss — Data Link



Run 6: Statistics of Vivace-loss

Start at: 2018-02-21 05:15:14

End at: 2018-02-21 05:15:44

# Below is generated by plot.py at 2018-02-21 11:50:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 685.92 Mbit/s

95th percentile per-packet one-way delay: 209.801 ms

Loss rate: 1.25%

-- Flow 1:

Average throughput: 368.44 Mbit/s

95th percentile per-packet one-way delay: 63.046 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 340.12 Mbit/s

95th percentile per-packet one-way delay: 234.384 ms

Loss rate: 2.76%

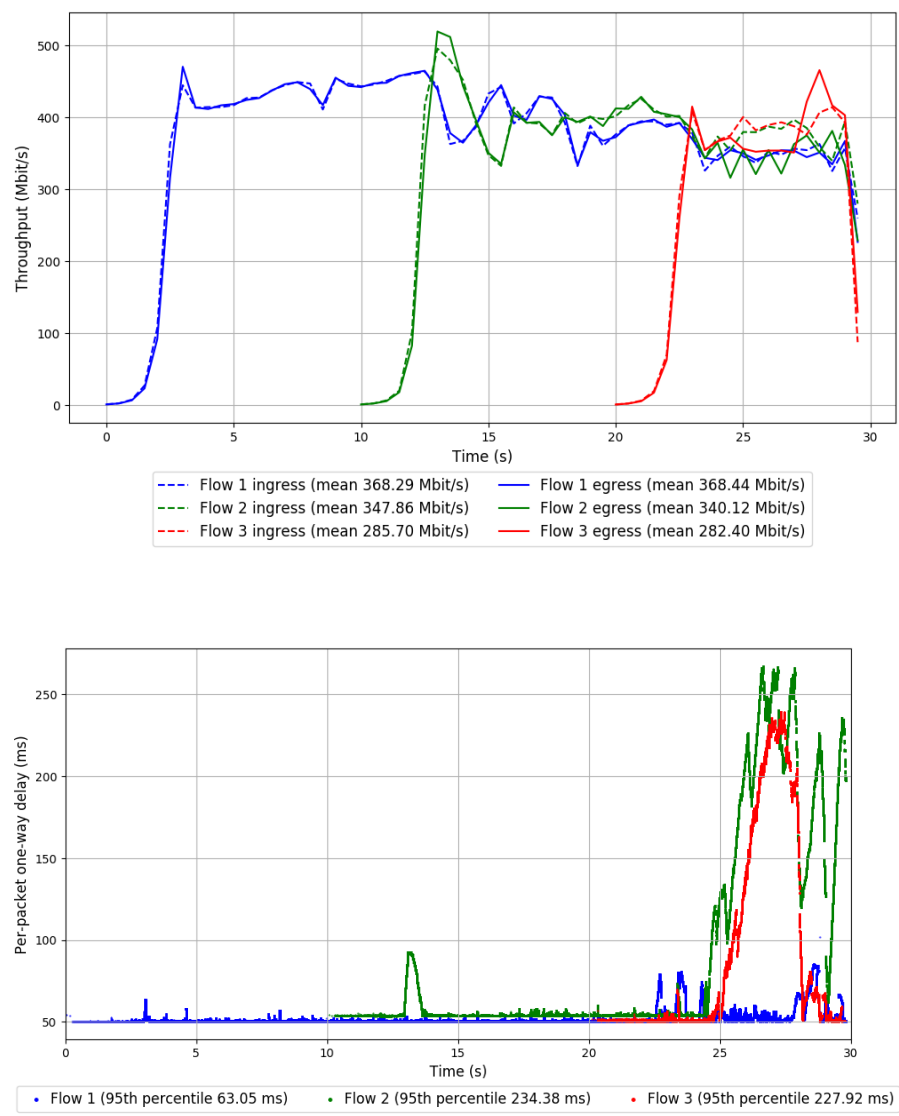
-- Flow 3:

Average throughput: 282.40 Mbit/s

95th percentile per-packet one-way delay: 227.921 ms

Loss rate: 1.17%

Run 6: Report of Vivace-loss — Data Link



Run 7: Statistics of Vivace-loss

Start at: 2018-02-21 05:32:58

End at: 2018-02-21 05:33:28

# Below is generated by plot.py at 2018-02-21 11:50:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 613.75 Mbit/s

95th percentile per-packet one-way delay: 221.272 ms

Loss rate: 1.78%

-- Flow 1:

Average throughput: 337.16 Mbit/s

95th percentile per-packet one-way delay: 66.297 ms

Loss rate: 0.48%

-- Flow 2:

Average throughput: 276.02 Mbit/s

95th percentile per-packet one-way delay: 223.735 ms

Loss rate: 1.04%

-- Flow 3:

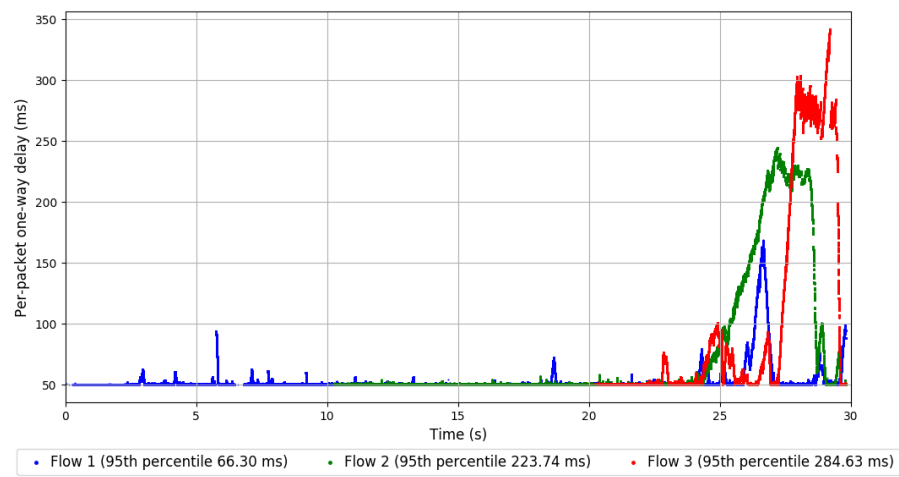
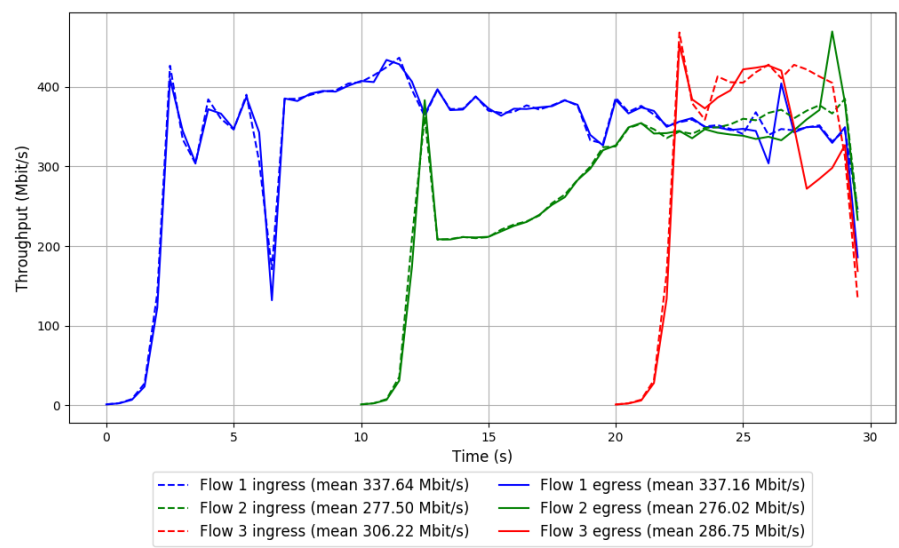
Average throughput: 286.75 Mbit/s

95th percentile per-packet one-way delay: 284.627 ms

Loss rate: 7.54%



Run 7: Report of Vivace-loss — Data Link



Run 8: Statistics of Vivace-loss

Start at: 2018-02-21 05:50:41

End at: 2018-02-21 05:51:11

# Below is generated by plot.py at 2018-02-21 11:50:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 593.82 Mbit/s

95th percentile per-packet one-way delay: 188.655 ms

Loss rate: 4.58%

-- Flow 1:

Average throughput: 336.34 Mbit/s

95th percentile per-packet one-way delay: 188.476 ms

Loss rate: 6.44%

-- Flow 2:

Average throughput: 295.32 Mbit/s

95th percentile per-packet one-way delay: 237.395 ms

Loss rate: 2.18%

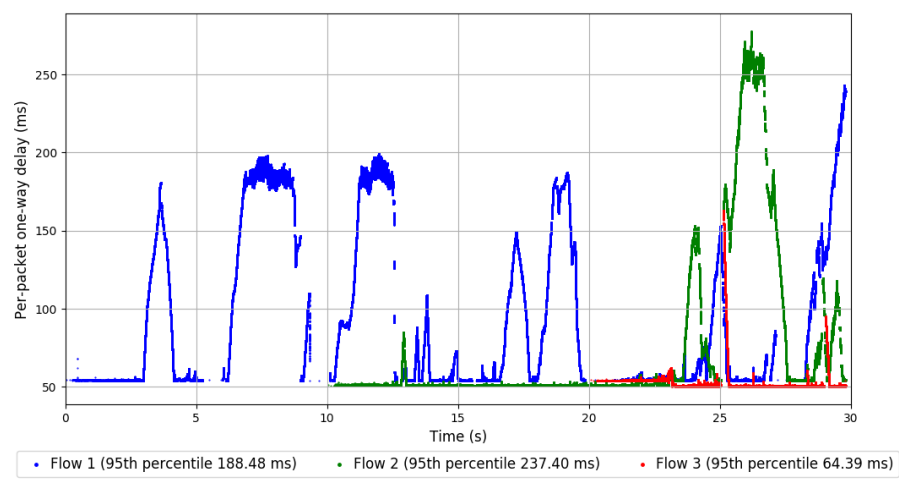
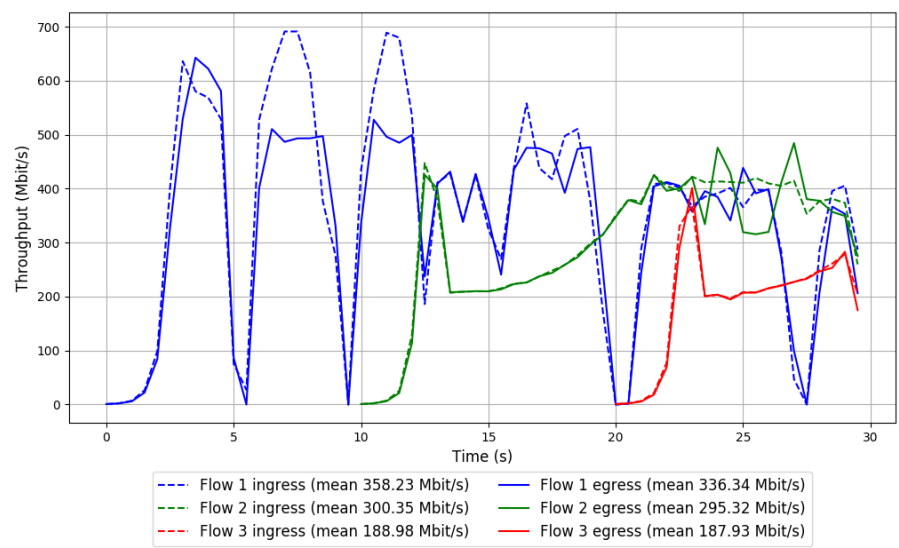
-- Flow 3:

Average throughput: 187.93 Mbit/s

95th percentile per-packet one-way delay: 64.392 ms

Loss rate: 1.61%

Run 8: Report of Vivace-loss — Data Link



Run 9: Statistics of Vivace-loss

Start at: 2018-02-21 06:08:07

End at: 2018-02-21 06:08:37

# Below is generated by plot.py at 2018-02-21 11:54:24

# Datalink statistics

-- Total of 3 flows:

Average throughput: 642.80 Mbit/s

95th percentile per-packet one-way delay: 249.211 ms

Loss rate: 3.16%

-- Flow 1:

Average throughput: 359.48 Mbit/s

95th percentile per-packet one-way delay: 187.112 ms

Loss rate: 1.70%

-- Flow 2:

Average throughput: 285.84 Mbit/s

95th percentile per-packet one-way delay: 252.986 ms

Loss rate: 2.98%

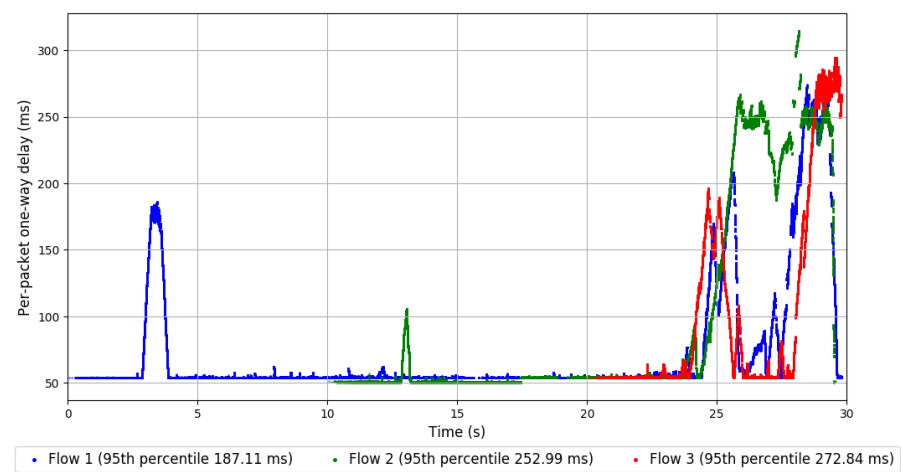
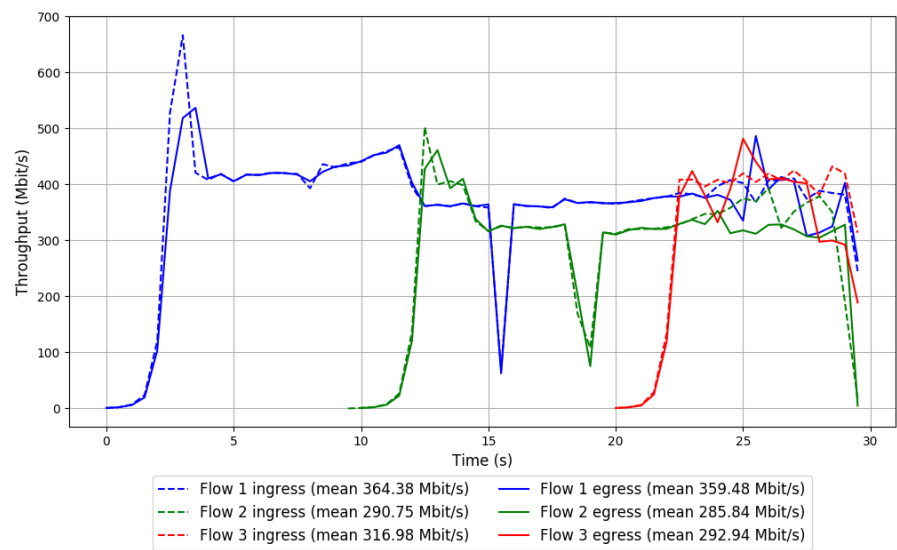
-- Flow 3:

Average throughput: 292.94 Mbit/s

95th percentile per-packet one-way delay: 272.836 ms

Loss rate: 8.60%

Run 9: Report of Vivace-loss — Data Link



Run 10: Statistics of Vivace-loss

Start at: 2018-02-21 06:25:36

End at: 2018-02-21 06:26:06

# Below is generated by plot.py at 2018-02-21 11:54:39

# Datalink statistics

-- Total of 3 flows:

Average throughput: 590.78 Mbit/s

95th percentile per-packet one-way delay: 217.541 ms

Loss rate: 2.26%

-- Flow 1:

Average throughput: 301.44 Mbit/s

95th percentile per-packet one-way delay: 232.481 ms

Loss rate: 2.26%

-- Flow 2:

Average throughput: 286.85 Mbit/s

95th percentile per-packet one-way delay: 222.556 ms

Loss rate: 2.42%

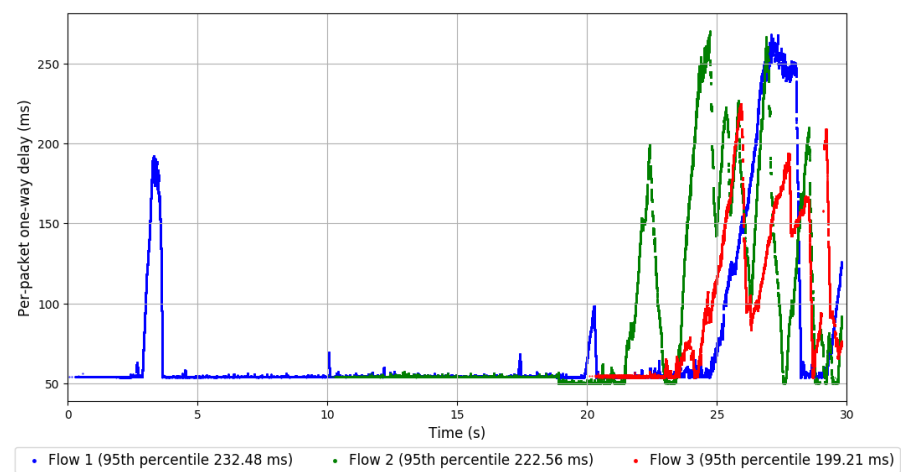
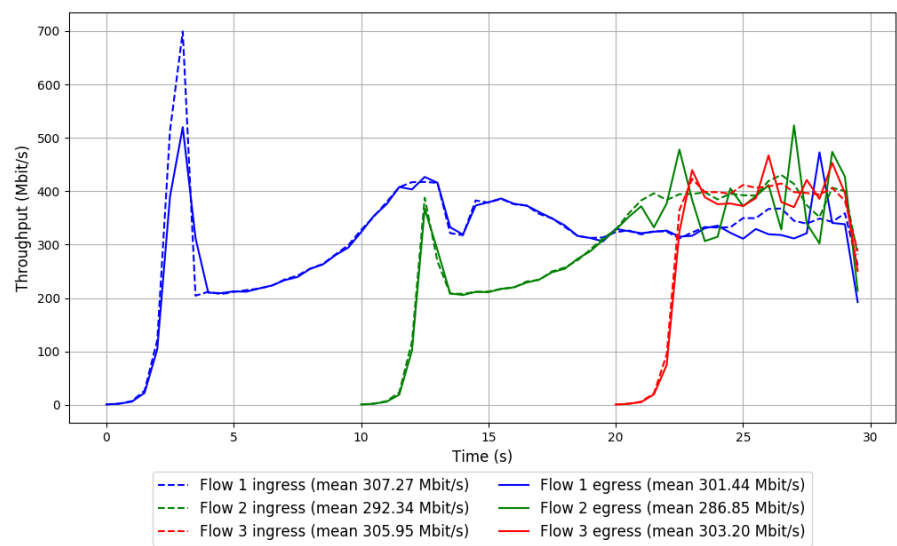
-- Flow 3:

Average throughput: 303.20 Mbit/s

95th percentile per-packet one-way delay: 199.214 ms

Loss rate: 2.00%

Run 10: Report of Vivace-loss — Data Link



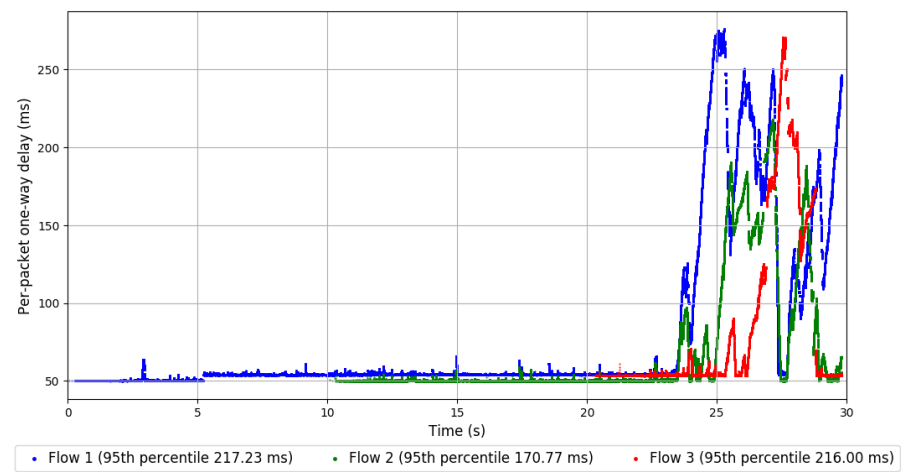
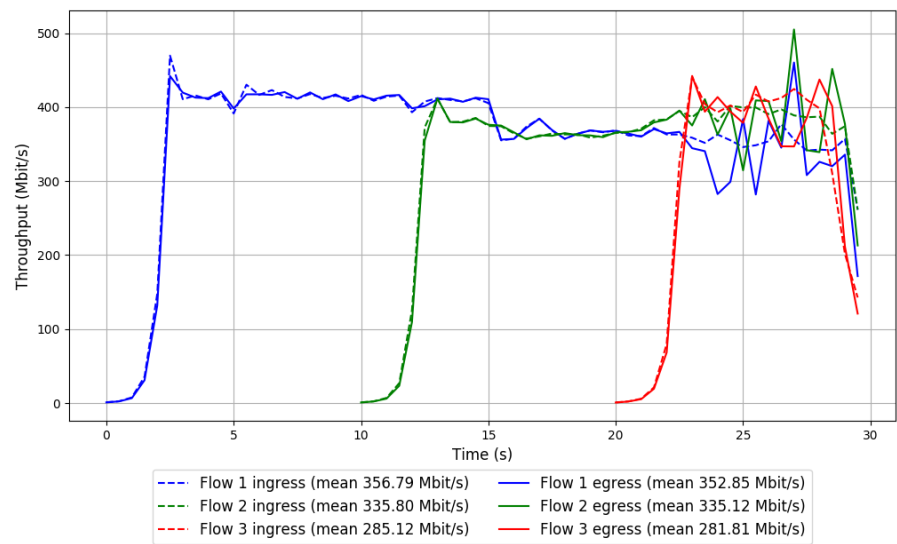
```
Run 1: Statistics of Vivace-LTE

Start at: 2018-02-21 03:36:59
End at: 2018-02-21 03:37:29

# Below is generated by plot.py at 2018-02-21 11:59:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 666.83 Mbit/s
95th percentile per-packet one-way delay: 203.239 ms
Loss rate: 1.31%
-- Flow 1:
Average throughput: 352.85 Mbit/s
95th percentile per-packet one-way delay: 217.231 ms
Loss rate: 1.44%
-- Flow 2:
Average throughput: 335.12 Mbit/s
95th percentile per-packet one-way delay: 170.772 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 281.81 Mbit/s
95th percentile per-packet one-way delay: 216.004 ms
Loss rate: 2.21%
```



Run 1: Report of Vivace-LTE — Data Link



Run 2: Statistics of Vivace-LTE

Start at: 2018-02-21 03:55:15

End at: 2018-02-21 03:55:45

# Below is generated by plot.py at 2018-02-21 11:59:24

# Datalink statistics

-- Total of 3 flows:

Average throughput: 643.83 Mbit/s

95th percentile per-packet one-way delay: 167.967 ms

Loss rate: 0.94%

-- Flow 1:

Average throughput: 338.13 Mbit/s

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

Loss rate: 0.62%

-- Flow 2:

Average throughput: 318.17 Mbit/s

95th percentile per-packet one-way delay: 255.734 ms

Loss rate: 1.56%

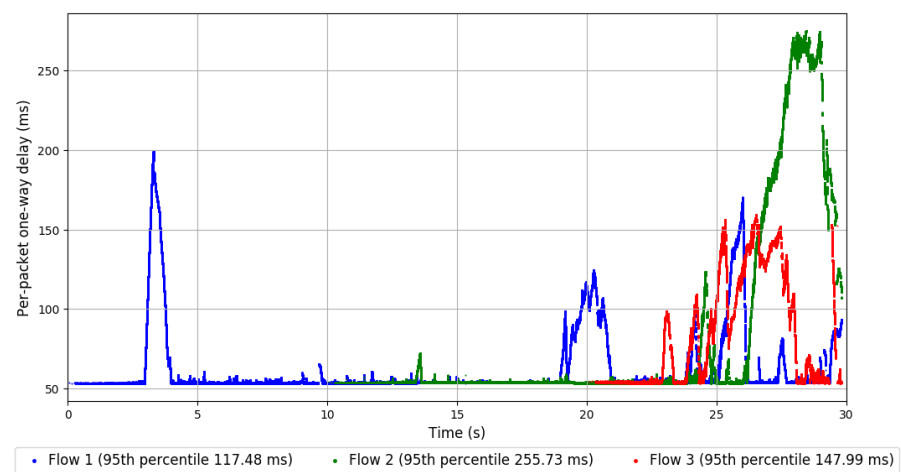
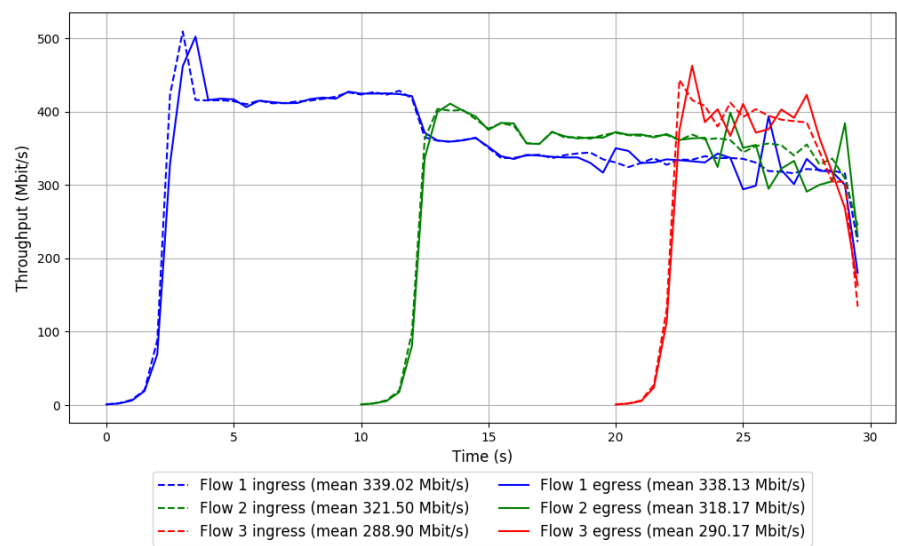
-- Flow 3:

Average throughput: 290.17 Mbit/s

95th percentile per-packet one-way delay: 147.988 ms

Loss rate: 0.71%

Run 2: Report of Vivace-LTE — Data Link



Run 3: Statistics of Vivace-LTE

Start at: 2018-02-21 04:12:37

End at: 2018-02-21 04:13:07

# Below is generated by plot.py at 2018-02-21 11:59:55

# Datalink statistics

-- Total of 3 flows:

Average throughput: 632.56 Mbit/s

95th percentile per-packet one-way delay: 83.280 ms

Loss rate: 0.68%

-- Flow 1:

Average throughput: 355.75 Mbit/s

95th percentile per-packet one-way delay: 94.913 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 327.61 Mbit/s

95th percentile per-packet one-way delay: 82.747 ms

Loss rate: 0.83%

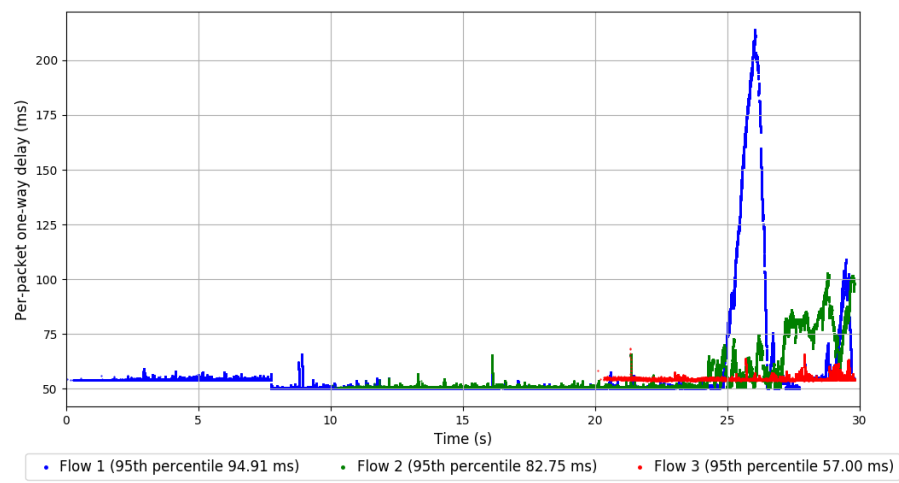
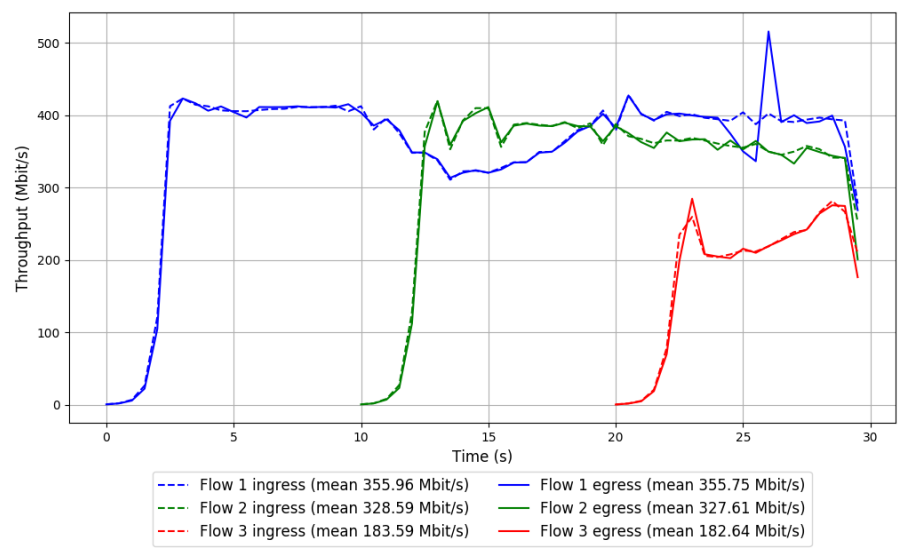
-- Flow 3:

Average throughput: 182.64 Mbit/s

95th percentile per-packet one-way delay: 56.999 ms

Loss rate: 1.66%

Run 3: Report of Vivace-LTE — Data Link



Run 4: Statistics of Vivace-LTE

Start at: 2018-02-21 04:30:18

End at: 2018-02-21 04:30:48

# Below is generated by plot.py at 2018-02-21 12:01:09

# Datalink statistics

-- Total of 3 flows:

Average throughput: 649.33 Mbit/s

95th percentile per-packet one-way delay: 126.873 ms

Loss rate: 0.68%

-- Flow 1:

Average throughput: 370.36 Mbit/s

95th percentile per-packet one-way delay: 147.457 ms

Loss rate: 0.46%

-- Flow 2:

Average throughput: 335.39 Mbit/s

95th percentile per-packet one-way delay: 108.894 ms

Loss rate: 0.76%

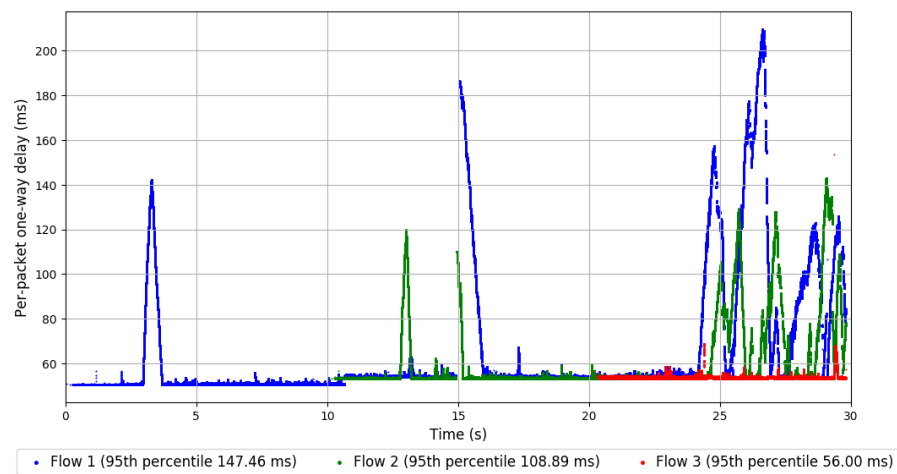
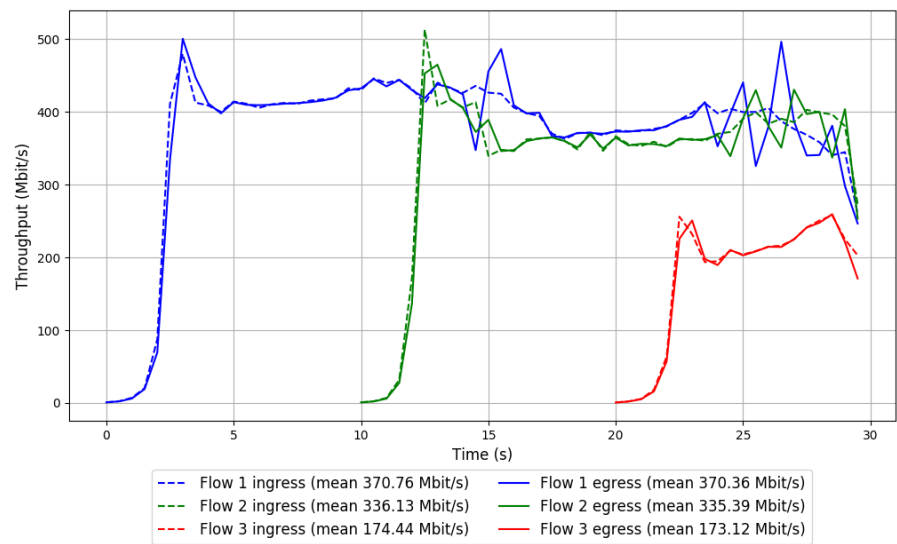
-- Flow 3:

Average throughput: 173.12 Mbit/s

95th percentile per-packet one-way delay: 56.001 ms

Loss rate: 1.80%

Run 4: Report of Vivace-LTE — Data Link



Run 5: Statistics of Vivace-LTE

Start at: 2018-02-21 04:47:38

End at: 2018-02-21 04:48:08

# Below is generated by plot.py at 2018-02-21 12:01:09

# Datalink statistics

-- Total of 3 flows:

Average throughput: 576.97 Mbit/s

95th percentile per-packet one-way delay: 74.445 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 361.13 Mbit/s

95th percentile per-packet one-way delay: 78.200 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 242.03 Mbit/s

95th percentile per-packet one-way delay: 60.340 ms

Loss rate: 0.72%

-- Flow 3:

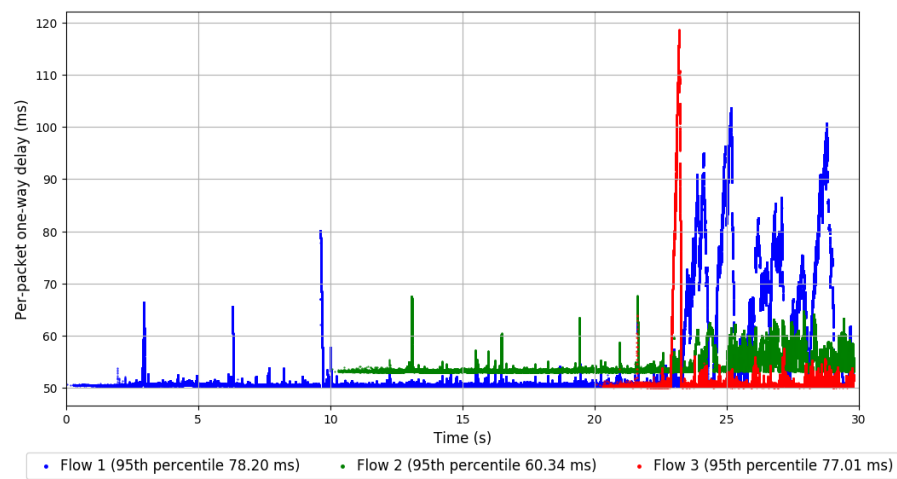
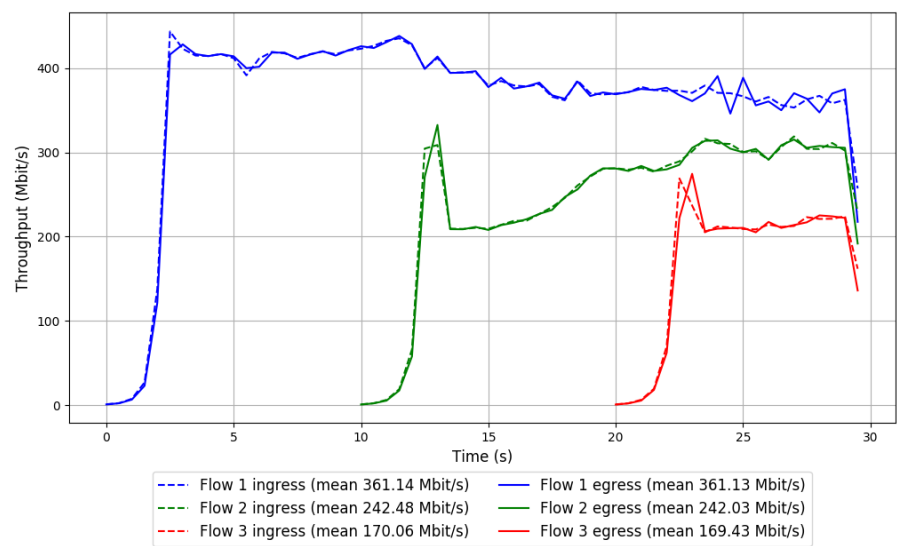
Average throughput: 169.43 Mbit/s

95th percentile per-packet one-way delay: 77.009 ms

Loss rate: 1.43%



Run 5: Report of Vivace-LTE — Data Link



Run 6: Statistics of Vivace-LTE

Start at: 2018-02-21 05:05:15

End at: 2018-02-21 05:05:45

# Below is generated by plot.py at 2018-02-21 12:02:33

# Datalink statistics

-- Total of 3 flows:

Average throughput: 689.67 Mbit/s

95th percentile per-packet one-way delay: 203.751 ms

Loss rate: 0.98%

-- Flow 1:

Average throughput: 387.94 Mbit/s

95th percentile per-packet one-way delay: 168.679 ms

Loss rate: 0.60%

-- Flow 2:

Average throughput: 310.82 Mbit/s

95th percentile per-packet one-way delay: 246.059 ms

Loss rate: 0.94%

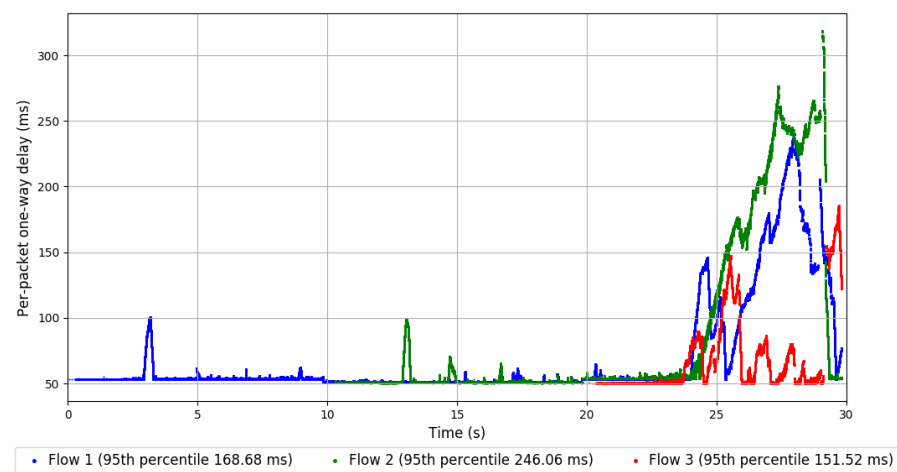
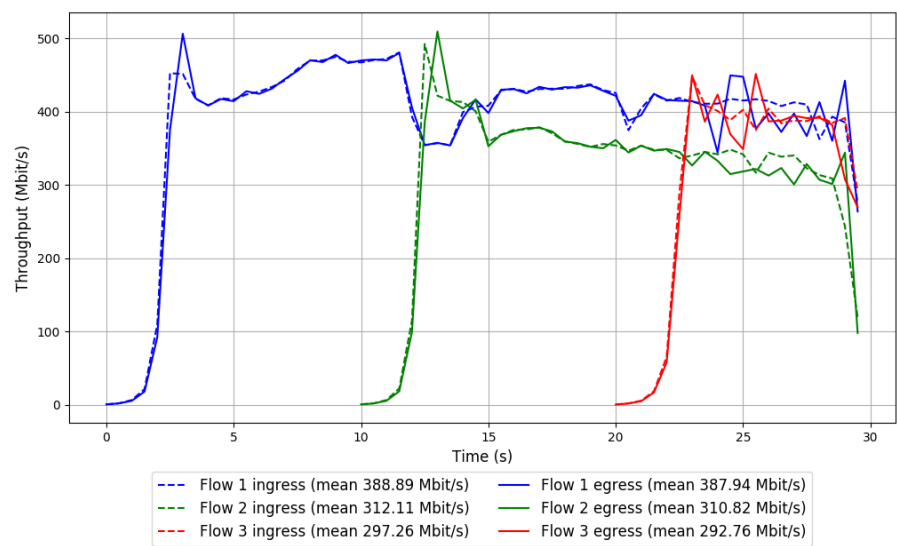
-- Flow 3:

Average throughput: 292.76 Mbit/s

95th percentile per-packet one-way delay: 151.518 ms

Loss rate: 2.56%

Run 6: Report of Vivace-LTE — Data Link



Run 7: Statistics of Vivace-LTE

Start at: 2018-02-21 05:23:01

End at: 2018-02-21 05:23:31

# Below is generated by plot.py at 2018-02-21 12:03:49

# Datalink statistics

-- Total of 3 flows:

Average throughput: 619.77 Mbit/s

95th percentile per-packet one-way delay: 110.929 ms

Loss rate: 0.75%

-- Flow 1:

Average throughput: 391.52 Mbit/s

95th percentile per-packet one-way delay: 137.685 ms

Loss rate: 0.67%

-- Flow 2:

Average throughput: 259.59 Mbit/s

95th percentile per-packet one-way delay: 70.702 ms

Loss rate: 0.71%

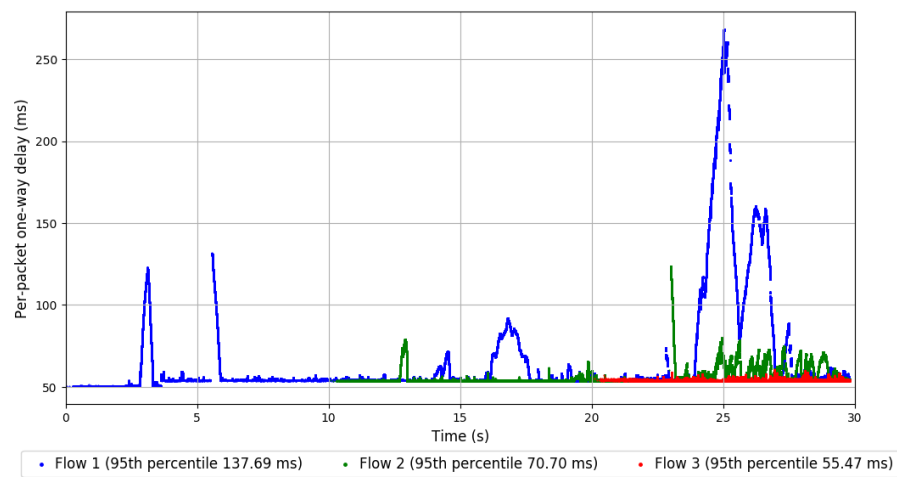
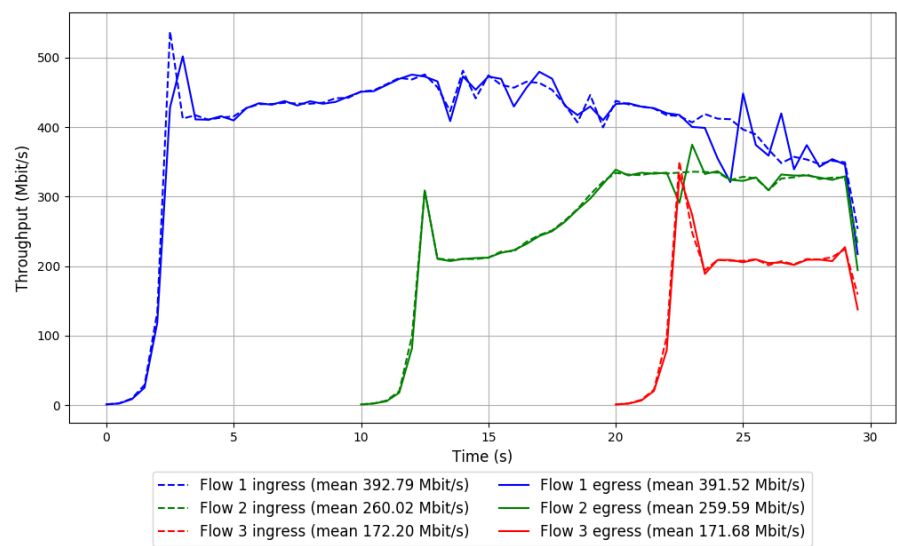
-- Flow 3:

Average throughput: 171.68 Mbit/s

95th percentile per-packet one-way delay: 55.474 ms

Loss rate: 1.41%

Run 7: Report of Vivace-LTE — Data Link



Run 8: Statistics of Vivace-LTE

Start at: 2018-02-21 05:40:46

End at: 2018-02-21 05:41:16

# Below is generated by plot.py at 2018-02-21 12:04:32

# Datalink statistics

-- Total of 3 flows:

Average throughput: 664.64 Mbit/s

95th percentile per-packet one-way delay: 149.997 ms

Loss rate: 0.62%

-- Flow 1:

Average throughput: 353.11 Mbit/s

95th percentile per-packet one-way delay: 145.932 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 321.83 Mbit/s

95th percentile per-packet one-way delay: 60.510 ms

Loss rate: 0.56%

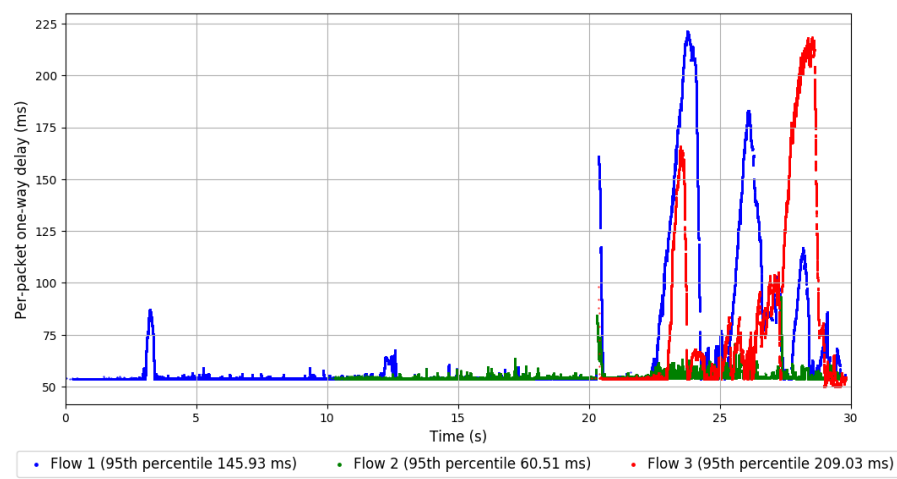
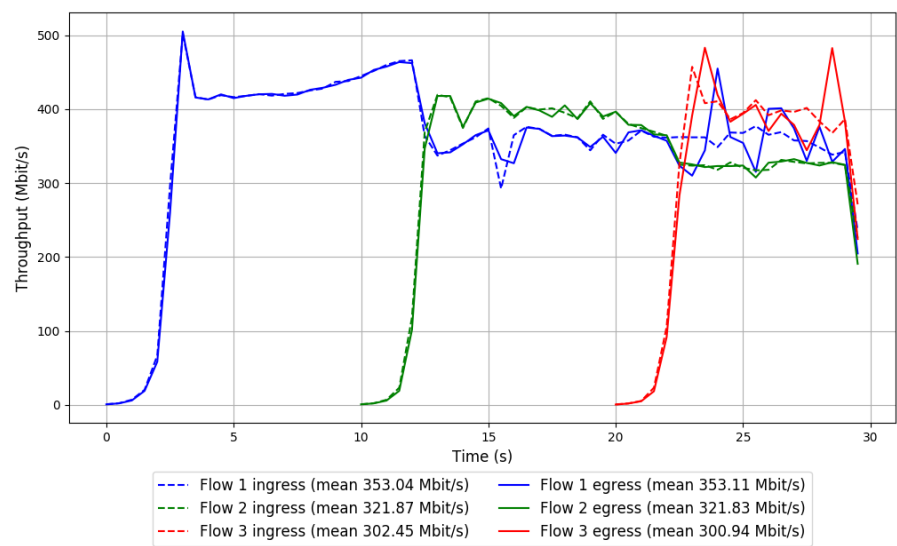
-- Flow 3:

Average throughput: 300.94 Mbit/s

95th percentile per-packet one-way delay: 209.032 ms

Loss rate: 1.62%

Run 8: Report of Vivace-LTE — Data Link



Run 9: Statistics of Vivace-LTE

Start at: 2018-02-21 05:58:21

End at: 2018-02-21 05:58:51

# Below is generated by plot.py at 2018-02-21 12:05:03

# Datalink statistics

-- Total of 3 flows:

Average throughput: 624.81 Mbit/s

95th percentile per-packet one-way delay: 105.152 ms

Loss rate: 0.69%

-- Flow 1:

Average throughput: 355.98 Mbit/s

95th percentile per-packet one-way delay: 136.403 ms

Loss rate: 0.69%

-- Flow 2:

Average throughput: 322.35 Mbit/s

95th percentile per-packet one-way delay: 71.536 ms

Loss rate: 0.53%

-- Flow 3:

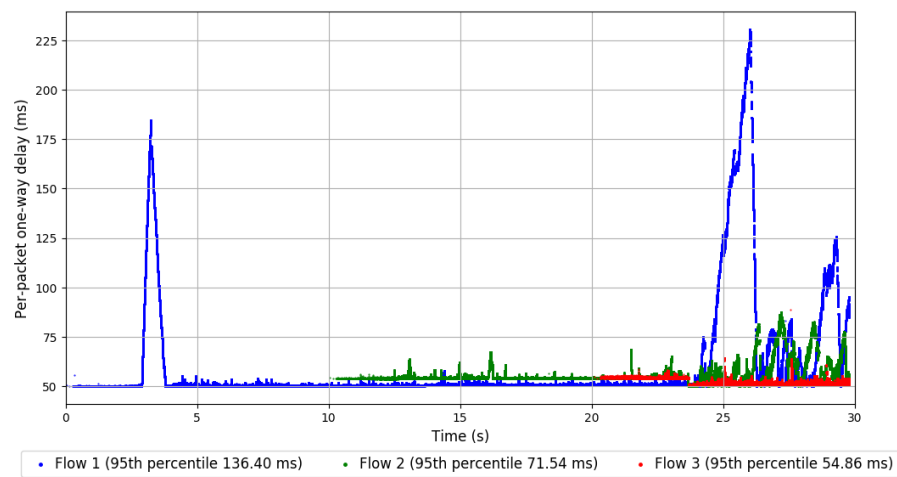
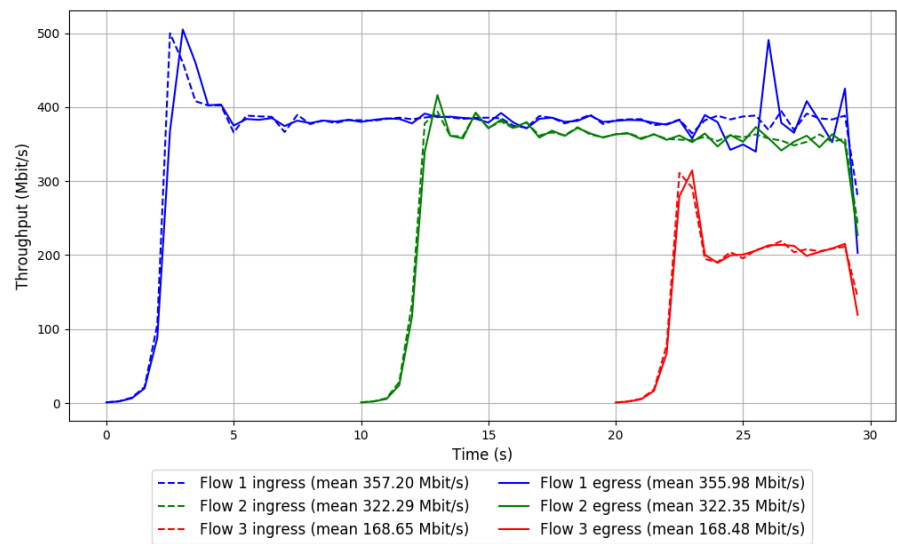
Average throughput: 168.48 Mbit/s

95th percentile per-packet one-way delay: 54.862 ms

Loss rate: 1.27%



Run 9: Report of Vivace-LTE — Data Link



```
Run 10: Statistics of Vivace-LTE

Start at: 2018-02-21 06:15:45
End at: 2018-02-21 06:16:15

# Below is generated by plot.py at 2018-02-21 12:05:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 628.74 Mbit/s
95th percentile per-packet one-way delay: 179.218 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 344.18 Mbit/s
95th percentile per-packet one-way delay: 156.272 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 294.58 Mbit/s
95th percentile per-packet one-way delay: 189.451 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 273.27 Mbit/s
95th percentile per-packet one-way delay: 218.550 ms
Loss rate: 2.16%
```

Run 10: Report of Vivace-LTE — Data Link

