

## Pantheon Report

Generated at 2017-08-21 10:00:01 (UTC).

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

Repeated the test of 15 congestion control schemes 10 times.

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

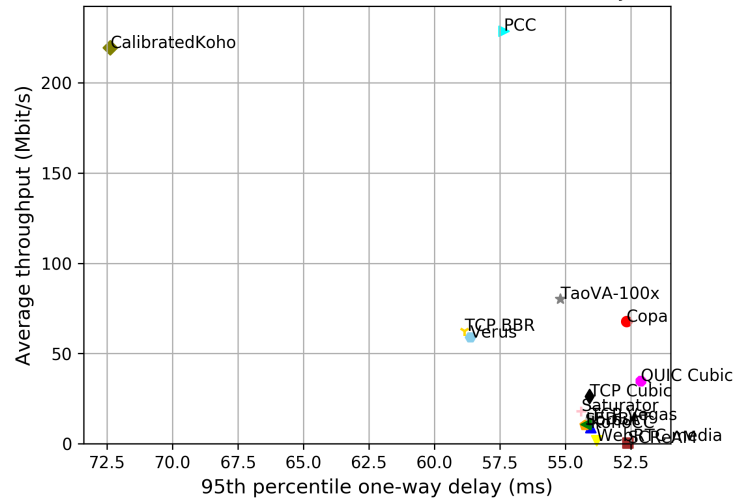
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

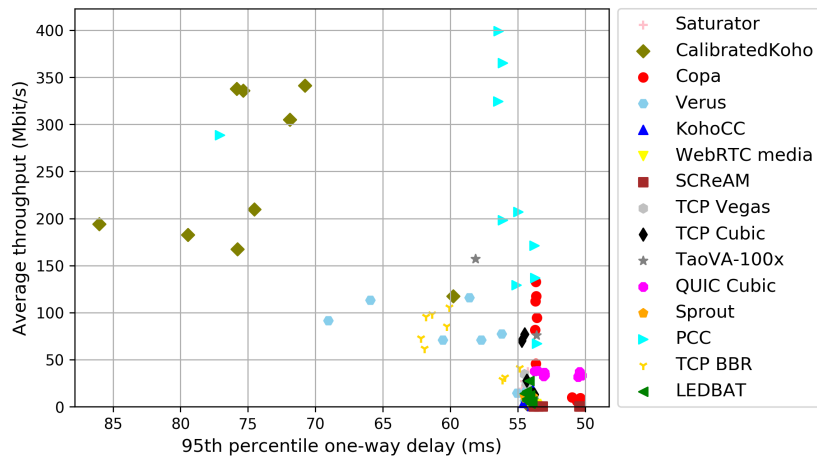
Git summary:

```
branch: master @ e43be7582298d552838afcf6382342bf187fbbd6
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/genericCC @ dae96123232f1bcb37725348fa2378691ce26725
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
  M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-stimuli @ fc73a85ca16c34366d1888dc8a0d0d88d4ebf2a7
third_party/pantheon-tunnel @ baf443516dea3eeddeccaf9b916cc313273ca4f4
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-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaaeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
  M src/examples/cellsim.cc
  M src/examples/sproutbt2.cc
  M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
  M src/verus.hpp
  M tools/plot.py
third_party/webrtc @ a488197ddd041ace68a42849b2540ad834825f42
```

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



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





| 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     | 27.55                  | 46.54  | 12.28  | 55.74                     | 57.41  | 55.13  | 27.51              | 23.82  | 34.02  |
| CalibratedKoho | 10     | 122.28                 | 128.02 | 36.39  | 64.15                     | 67.97  | 65.17  | 39.30              | 29.85  | 53.73  |
| Copa           | 9      | 50.17                  | 36.09  | 30.69  | 52.68                     | 53.35  | 53.89  | 42.21              | 38.54  | 44.28  |
| TCP Cubic      | 10     | 11.62                  | 14.53  | 15.24  | 53.95                     | 53.95  | 54.05  | 2.53               | 5.22   | 6.69   |
| KohoCC         | 9      | 5.01                   | 3.91   | 3.92   | 53.93                     | 53.91  | 54.14  | 53.52              | 64.02  | 61.54  |
| LEDBAT         | 10     | 5.95                   | 4.98   | 4.62   | 54.13                     | 54.11  | 54.20  | 3.29               | 3.40   | 4.35   |
| PCC            | 10     | 140.97                 | 78.31  | 109.77 | 57.05                     | 53.69  | 54.93  | 34.69              | 18.53  | 20.14  |
| QUIC Cubic     | 10     | 0.06                   | 38.81  | 28.04  | 52.48                     | 51.72  | 50.83  | 0.00               | 0.00   | 0.00   |
| Saturator      | 8      | 12.46                  | 14.09  | 11.01  | 54.30                     | 54.34  | 54.17  | 35.73              | 29.96  | 38.28  |
| SCReAM         | 10     | 0.21                   | 0.21   | 0.22   | 51.62                     | 51.85  | 51.19  | 0.00               | 0.00   | 0.00   |
| Sprout         | 10     | 5.01                   | 5.56   | 4.96   | 54.06                     | 54.10  | 54.18  | 11.08              | 10.01  | 11.04  |
| TaoVA-100x     | 3      | 9.24                   | 82.99  | 91.89  | 52.51                     | 54.64  | 52.57  | 30.39              | 60.78  | 49.09  |
| TCP Vegas      | 10     | 4.60                   | 8.33   | 9.34   | 53.96                     | 53.99  | 53.97  | 2.25               | 2.38   | 3.33   |
| Verus          | 10     | 43.05                  | 13.88  | 21.53  | 58.37                     | 54.83  | 56.22  | 52.84              | 75.07  | 48.51  |
| WebRTC media   | 10     | 0.21                   | 1.41   | 0.33   | 53.92                     | 52.17  | 54.01  | 0.00               | 0.00   | 0.00   |

Run 1: Statistics of TCP BBR

Start at: 2017-08-21 07:14:51

End at: 2017-08-21 07:15:21

# Below is generated by plot.py at 2017-08-21 09:43:12

# Datalink statistics

-- Total of 3 flows:

Average throughput: 95.81 Mbit/s

95th percentile per-packet one-way delay: 61.822 ms

Loss rate: 5.93%

-- Flow 1:

Average throughput: 1.19 Mbit/s

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

Loss rate: 30.73%

-- Flow 2:

Average throughput: 100.27 Mbit/s

95th percentile per-packet one-way delay: 60.712 ms

Loss rate: 5.26%

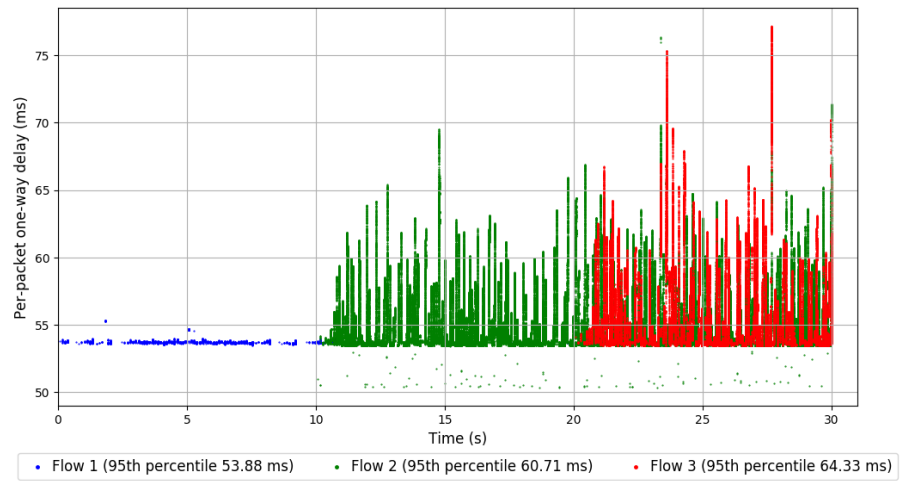
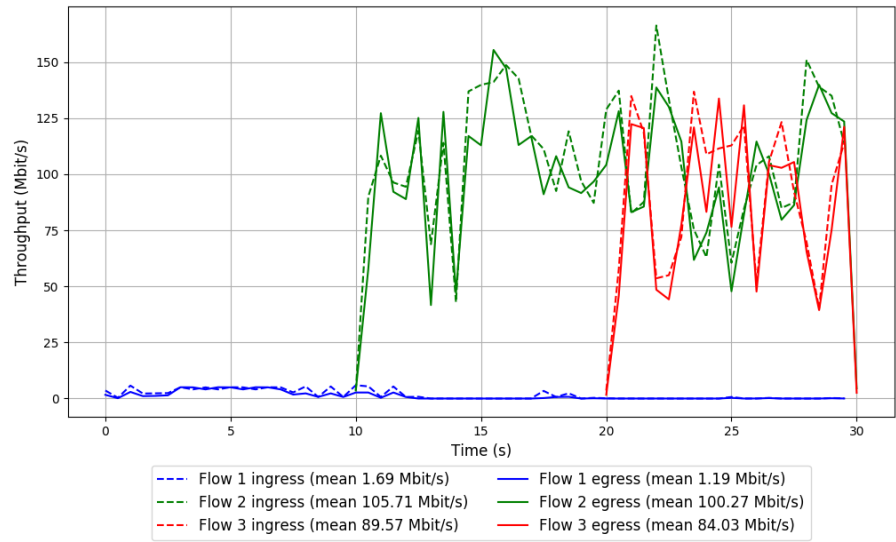
-- Flow 3:

Average throughput: 84.03 Mbit/s

95th percentile per-packet one-way delay: 64.328 ms

Loss rate: 6.11%

# Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2017-08-21 07:25:32

End at: 2017-08-21 07:26:02

# Below is generated by plot.py at 2017-08-21 09:43:12

# Datalink statistics

-- Total of 3 flows:

Average throughput: 4.76 Mbit/s

95th percentile per-packet one-way delay: 53.861 ms

Loss rate: 25.27%

-- Flow 1:

Average throughput: 2.30 Mbit/s

95th percentile per-packet one-way delay: 53.839 ms

Loss rate: 29.25%

-- Flow 2:

Average throughput: 2.74 Mbit/s

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

Loss rate: 19.46%

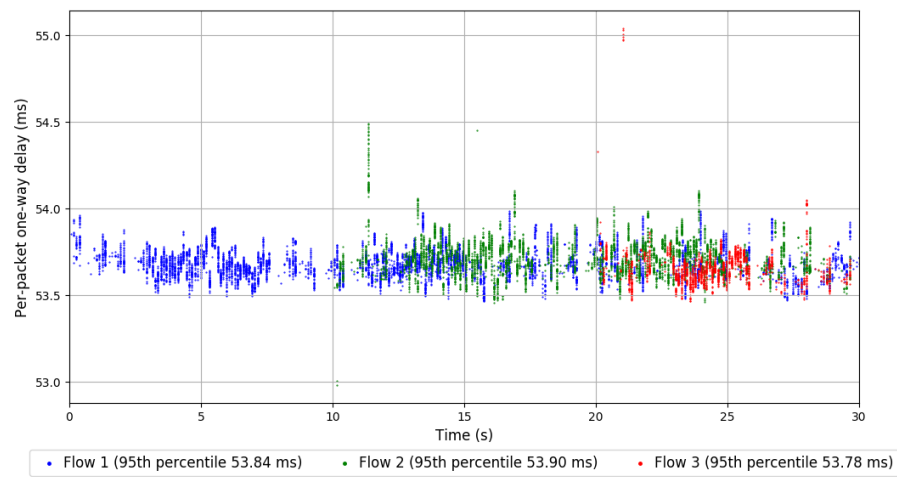
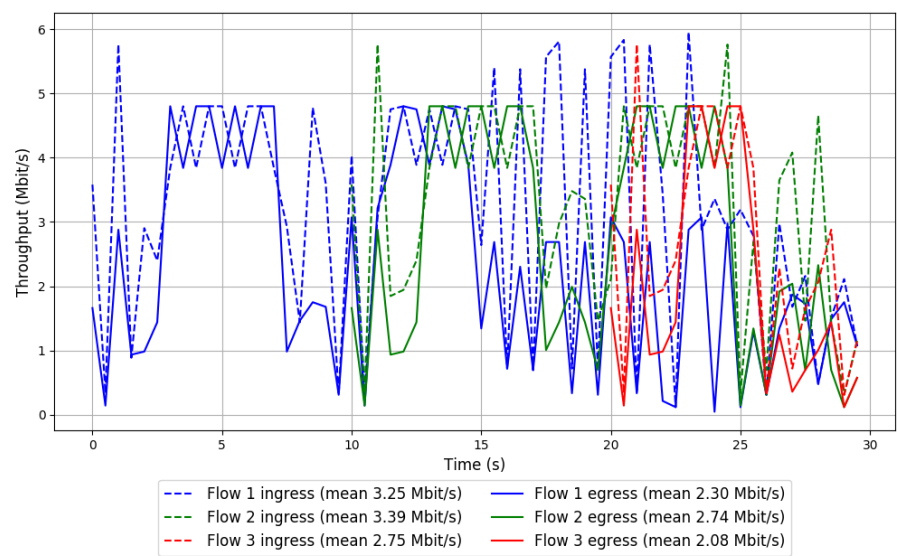
-- Flow 3:

Average throughput: 2.08 Mbit/s

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

Loss rate: 25.27%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2017-08-21 07:36:20

End at: 2017-08-21 07:36:50

# Below is generated by plot.py at 2017-08-21 09:43:13

# Datalink statistics

-- Total of 3 flows:

Average throughput: 73.04 Mbit/s

95th percentile per-packet one-way delay: 62.172 ms

Loss rate: 6.42%

-- Flow 1:

Average throughput: 1.95 Mbit/s

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

Loss rate: 31.99%

-- Flow 2:

Average throughput: 106.26 Mbit/s

95th percentile per-packet one-way delay: 62.245 ms

Loss rate: 5.25%

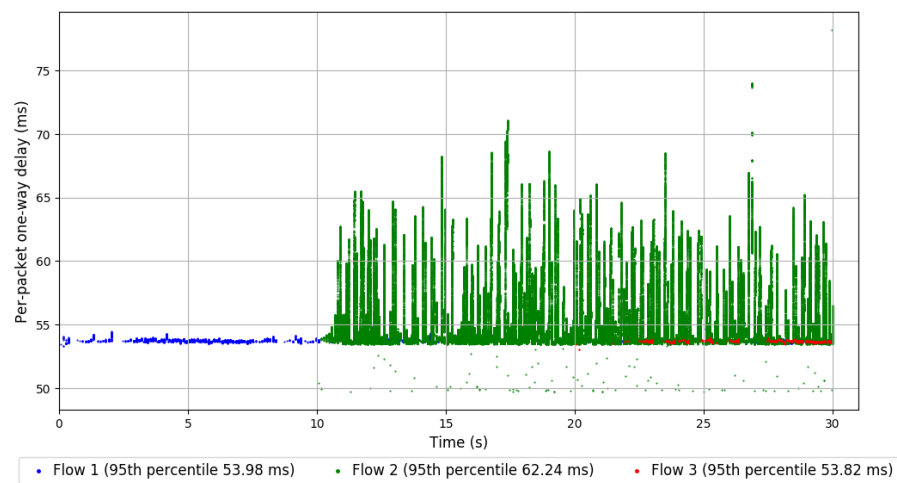
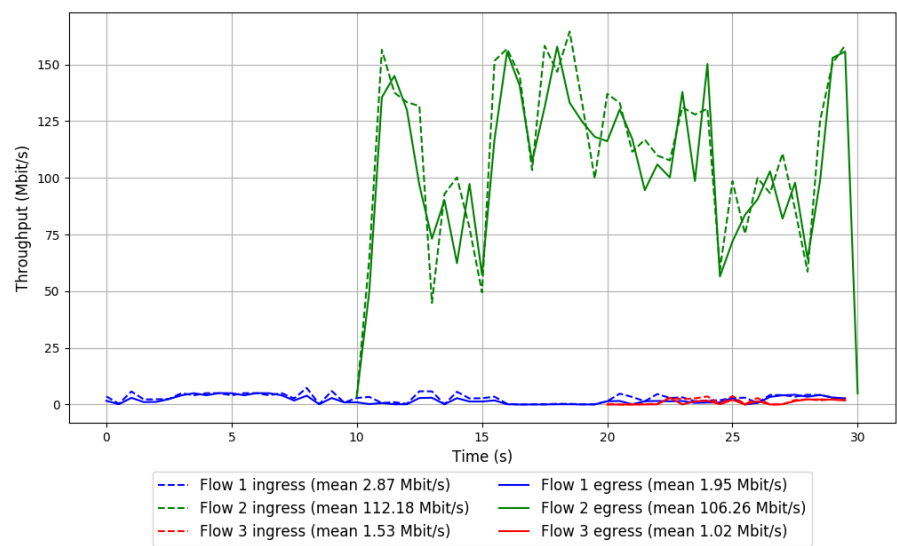
-- Flow 3:

Average throughput: 1.02 Mbit/s

95th percentile per-packet one-way delay: 53.819 ms

Loss rate: 33.99%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2017-08-21 07:47:28

End at: 2017-08-21 07:47:58

# Below is generated by plot.py at 2017-08-21 09:43:20

# Datalink statistics

-- Total of 3 flows:

Average throughput: 31.44 Mbit/s

95th percentile per-packet one-way delay: 55.965 ms

Loss rate: 35.04%

-- Flow 1:

Average throughput: 29.48 Mbit/s

95th percentile per-packet one-way delay: 56.064 ms

Loss rate: 34.69%

-- Flow 2:

Average throughput: 1.35 Mbit/s

95th percentile per-packet one-way delay: 54.307 ms

Loss rate: 51.27%

-- Flow 3:

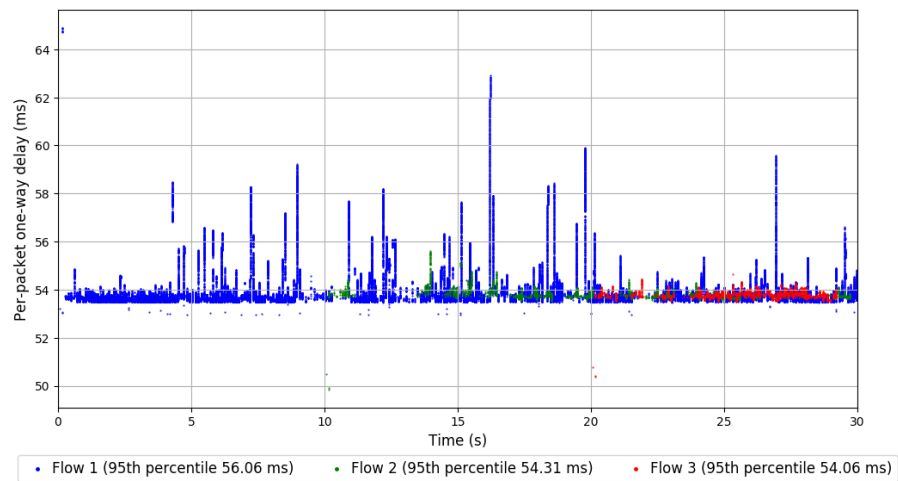
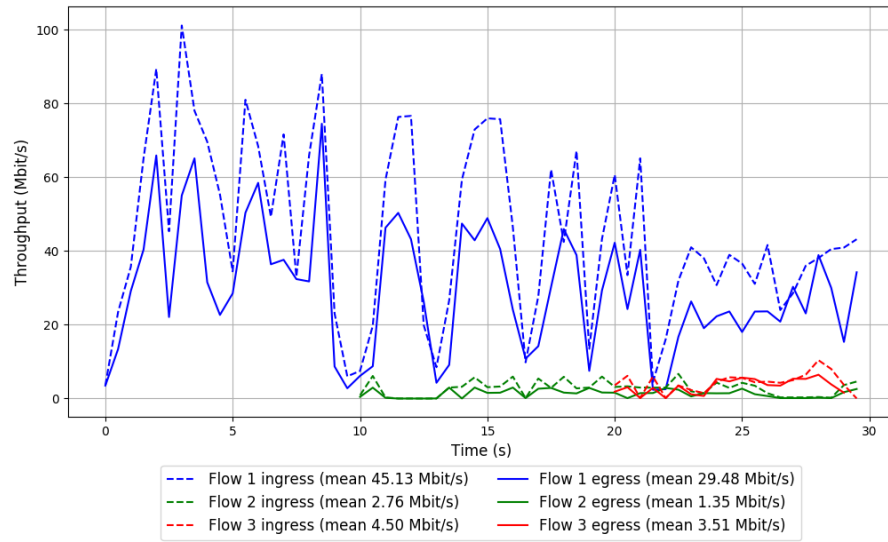
Average throughput: 3.51 Mbit/s

95th percentile per-packet one-way delay: 54.065 ms

Loss rate: 25.60%



# Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2017-08-21 07:58:11

End at: 2017-08-21 07:58:41

# Below is generated by plot.py at 2017-08-21 09:43:23

# Datalink statistics

-- Total of 3 flows:

Average throughput: 41.08 Mbit/s

95th percentile per-packet one-way delay: 54.874 ms

Loss rate: 35.32%

-- Flow 1:

Average throughput: 24.84 Mbit/s

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

Loss rate: 34.50%

-- Flow 2:

Average throughput: 23.83 Mbit/s

95th percentile per-packet one-way delay: 54.903 ms

Loss rate: 36.08%

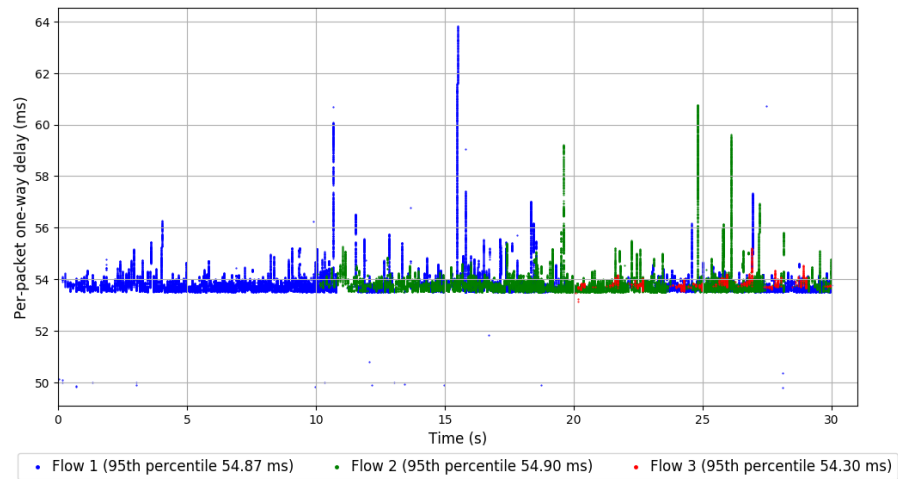
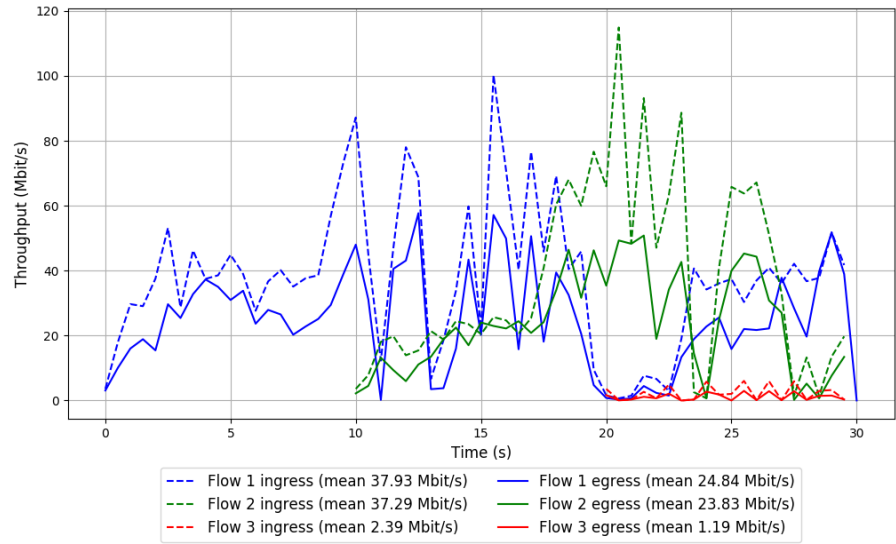
-- Flow 3:

Average throughput: 1.19 Mbit/s

95th percentile per-packet one-way delay: 54.303 ms

Loss rate: 50.48%

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



Run 6: Statistics of TCP BBR

Start at: 2017-08-21 08:08:59

End at: 2017-08-21 08:09:29

# Below is generated by plot.py at 2017-08-21 09:43:32

# Datalink statistics

-- Total of 3 flows:

Average throughput: 61.74 Mbit/s

95th percentile per-packet one-way delay: 61.932 ms

Loss rate: 6.50%

-- Flow 1:

Average throughput: 1.39 Mbit/s

95th percentile per-packet one-way delay: 53.994 ms

Loss rate: 36.58%

-- Flow 2:

Average throughput: 90.23 Mbit/s

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

Loss rate: 5.02%

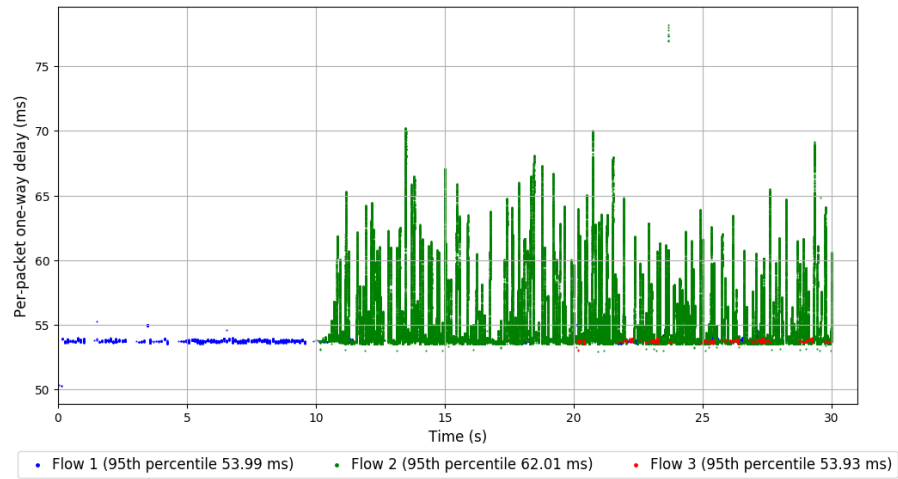
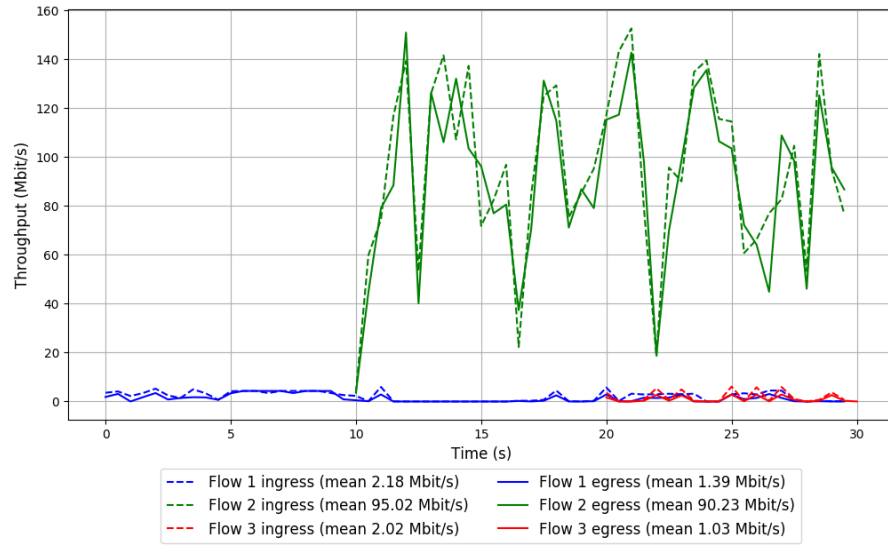
-- Flow 3:

Average throughput: 1.03 Mbit/s

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

Loss rate: 49.13%

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



Run 7: Statistics of TCP BBR

Start at: 2017-08-21 08:20:07

End at: 2017-08-21 08:20:37

# Below is generated by plot.py at 2017-08-21 09:43:49

# Datalink statistics

-- Total of 3 flows:

Average throughput: 105.56 Mbit/s

95th percentile per-packet one-way delay: 60.081 ms

Loss rate: 7.32%

-- Flow 1:

Average throughput: 99.68 Mbit/s

95th percentile per-packet one-way delay: 60.183 ms

Loss rate: 4.77%

-- Flow 2:

Average throughput: 8.57 Mbit/s

95th percentile per-packet one-way delay: 54.523 ms

Loss rate: 35.65%

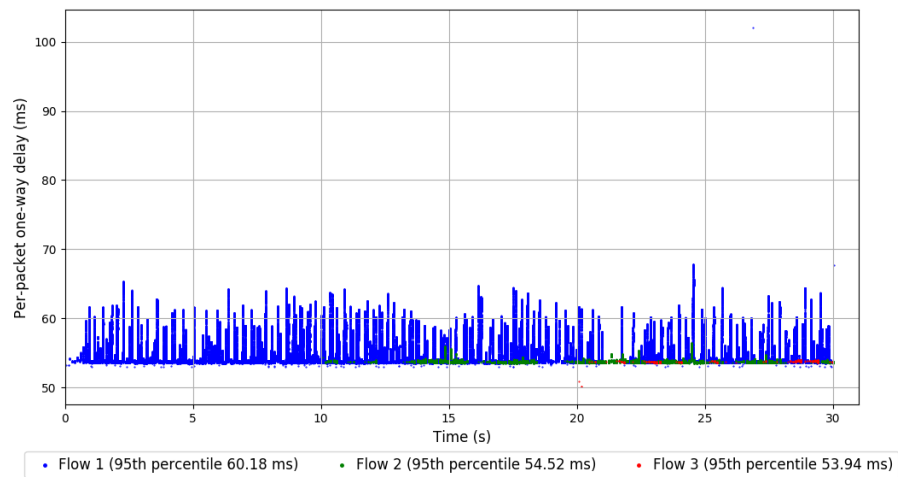
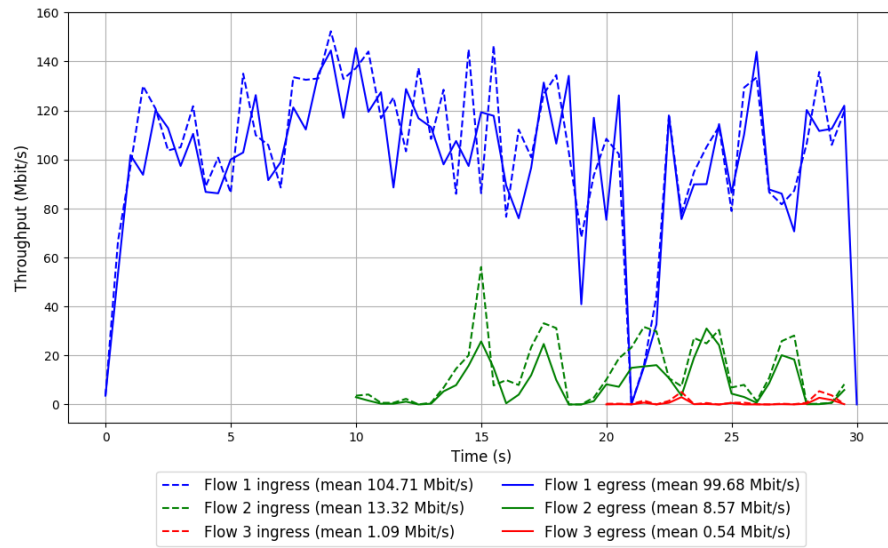
-- Flow 3:

Average throughput: 0.54 Mbit/s

95th percentile per-packet one-way delay: 53.936 ms

Loss rate: 50.21%

# Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2017-08-21 08:30:58

End at: 2017-08-21 08:31:28

# Below is generated by plot.py at 2017-08-21 09:43:53

# Datalink statistics

-- Total of 3 flows:

Average throughput: 98.27 Mbit/s

95th percentile per-packet one-way delay: 61.370 ms

Loss rate: 5.75%

-- Flow 1:

Average throughput: 97.25 Mbit/s

95th percentile per-packet one-way delay: 61.396 ms

Loss rate: 5.20%

-- Flow 2:

Average throughput: 1.29 Mbit/s

95th percentile per-packet one-way delay: 54.100 ms

Loss rate: 37.56%

-- Flow 3:

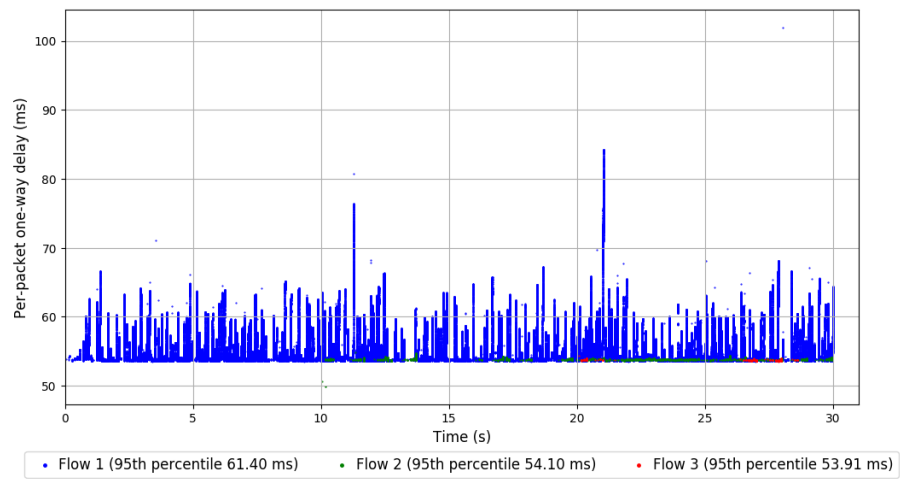
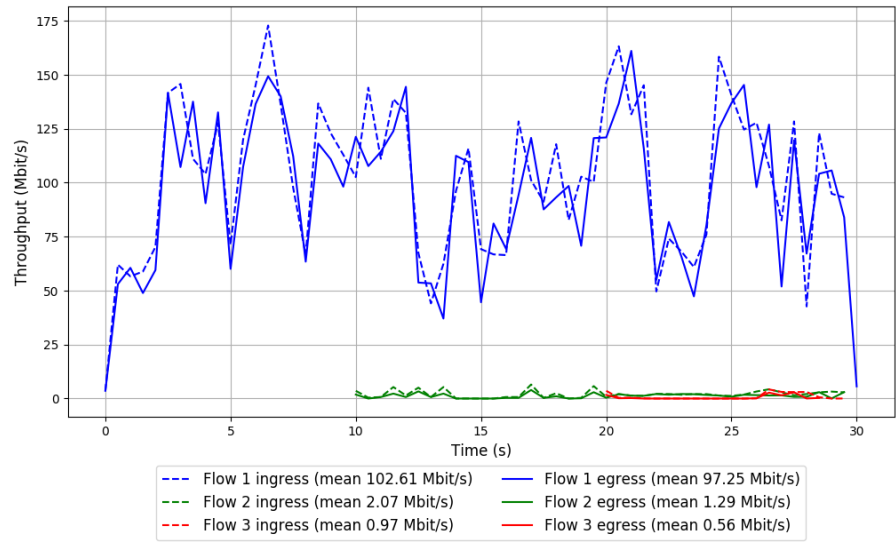
Average throughput: 0.56 Mbit/s

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

Loss rate: 48.37%



# Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2017-08-21 08:41:48

End at: 2017-08-21 08:42:18

# Below is generated by plot.py at 2017-08-21 09:44:05

# Datalink statistics

-- Total of 3 flows:

Average throughput: 85.40 Mbit/s

95th percentile per-packet one-way delay: 60.272 ms

Loss rate: 13.71%

-- Flow 1:

Average throughput: 15.25 Mbit/s

95th percentile per-packet one-way delay: 54.933 ms

Loss rate: 37.11%

-- Flow 2:

Average throughput: 100.45 Mbit/s

95th percentile per-packet one-way delay: 60.839 ms

Loss rate: 4.74%

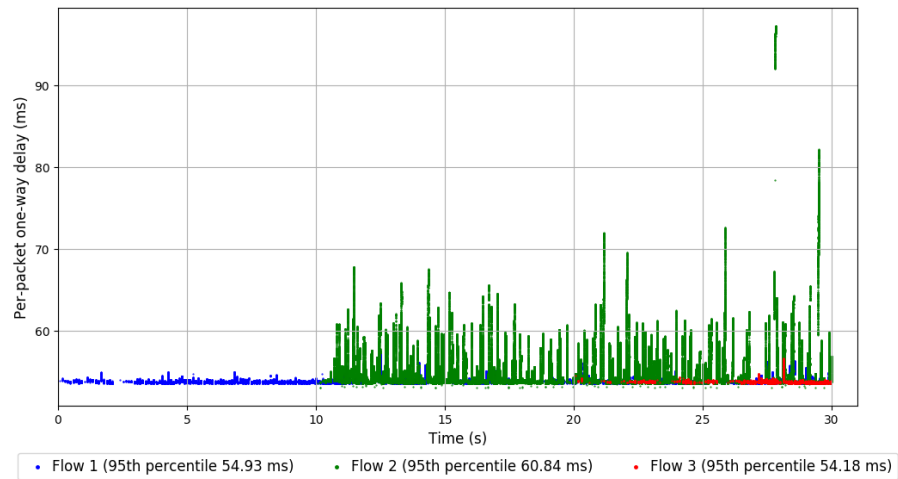
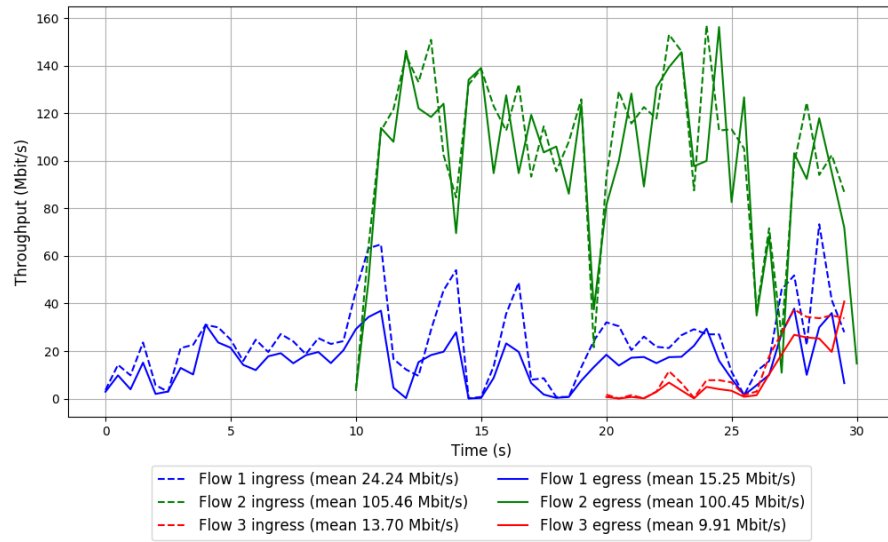
-- Flow 3:

Average throughput: 9.91 Mbit/s

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

Loss rate: 27.66%

# Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2017-08-21 08:52:40

End at: 2017-08-21 08:53:10

# Below is generated by plot.py at 2017-08-21 09:44:05

# Datalink statistics

-- Total of 3 flows:

Average throughput: 28.62 Mbit/s

95th percentile per-packet one-way delay: 56.140 ms

Loss rate: 34.72%

-- Flow 1:

Average throughput: 2.13 Mbit/s

95th percentile per-packet one-way delay: 54.310 ms

Loss rate: 30.33%

-- Flow 2:

Average throughput: 30.45 Mbit/s

95th percentile per-packet one-way delay: 56.603 ms

Loss rate: 37.95%

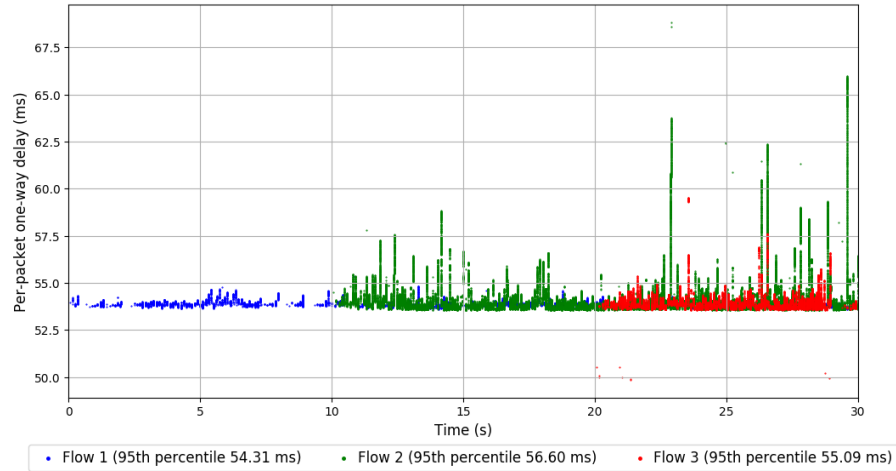
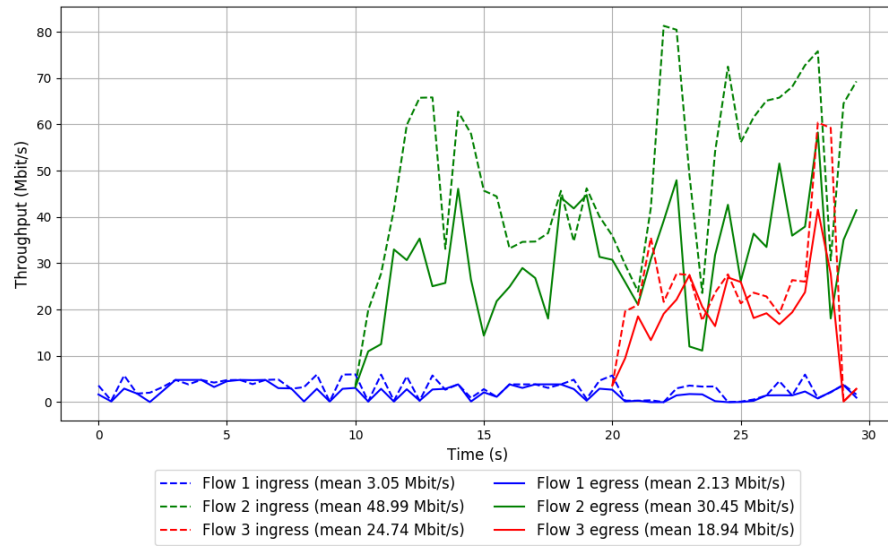
-- Flow 3:

Average throughput: 18.94 Mbit/s

95th percentile per-packet one-way delay: 55.094 ms

Loss rate: 23.41%

## Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of CalibratedKoho

Start at: 2017-08-21 07:16:18

End at: 2017-08-21 07:16:48

# Below is generated by plot.py at 2017-08-21 09:44:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 117.40 Mbit/s

95th percentile per-packet one-way delay: 59.783 ms

Loss rate: 57.18%

-- Flow 1:

Average throughput: 116.13 Mbit/s

95th percentile per-packet one-way delay: 59.816 ms

Loss rate: 57.07%

-- Flow 2:

Average throughput: 1.40 Mbit/s

95th percentile per-packet one-way delay: 54.445 ms

Loss rate: 67.69%

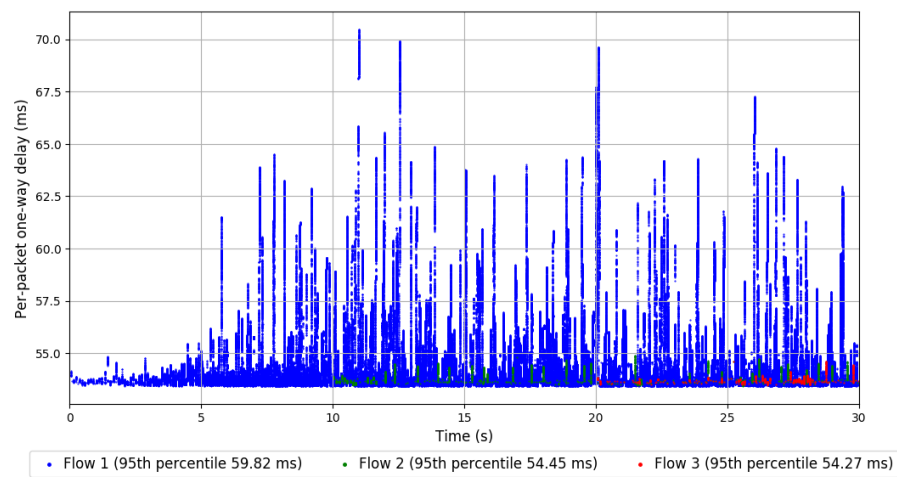
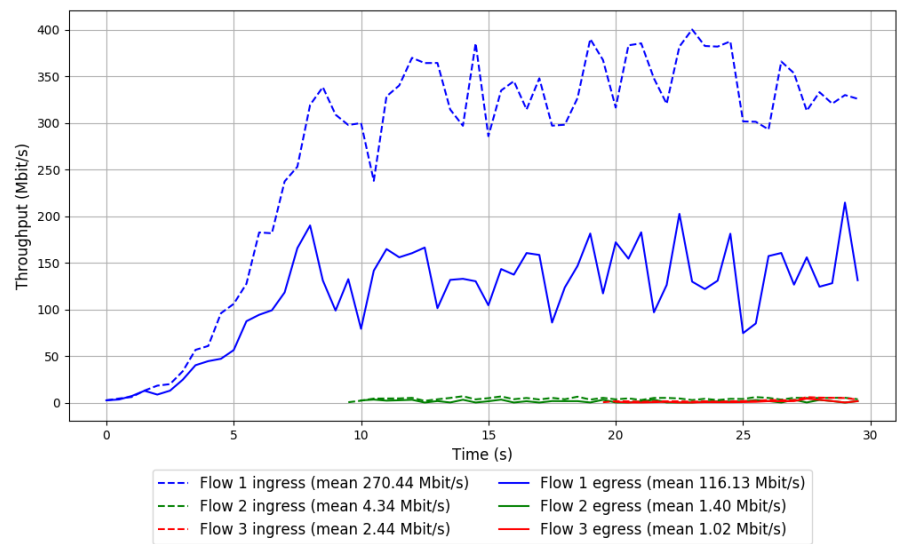
-- Flow 3:

Average throughput: 1.02 Mbit/s

95th percentile per-packet one-way delay: 54.275 ms

Loss rate: 57.92%

Run 1: Report of CalibratedKoho — Data Link



Run 2: Statistics of CalibratedKoho

Start at: 2017-08-21 07:26:53

End at: 2017-08-21 07:27:23

# Below is generated by plot.py at 2017-08-21 09:45:01

# Datalink statistics

-- Total of 3 flows:

Average throughput: 304.91 Mbit/s

95th percentile per-packet one-way delay: 71.909 ms

Loss rate: 0.25%

-- Flow 1:

Average throughput: 304.90 Mbit/s

95th percentile per-packet one-way delay: 71.909 ms

Loss rate: 0.16%

-- Flow 2:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 53.546 ms

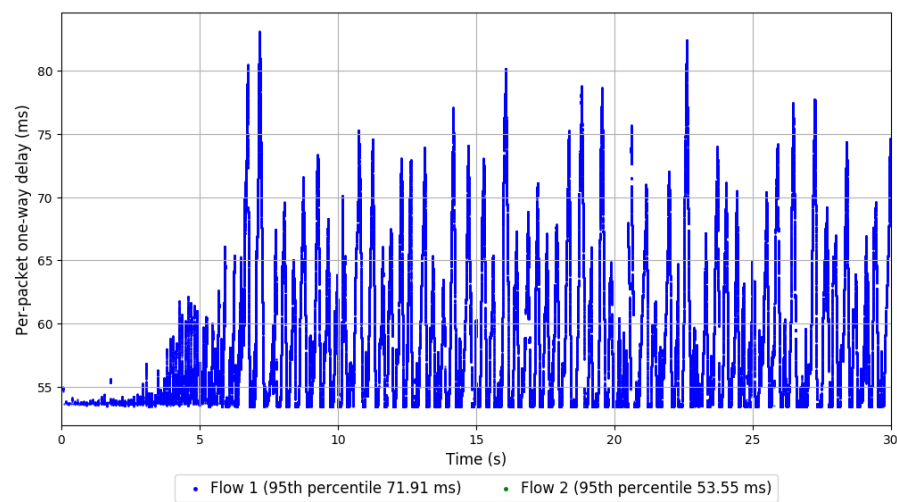
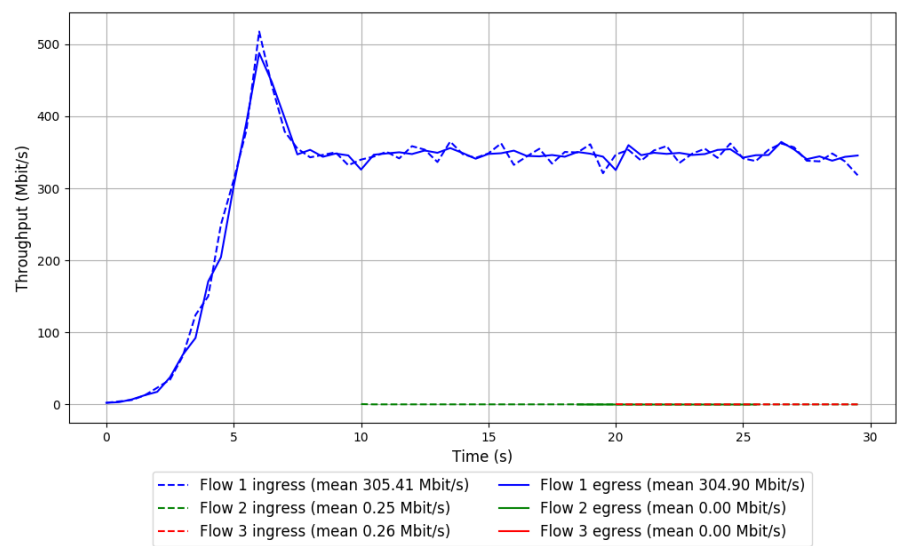
Loss rate: 99.52%

-- Flow 3:

Average throughput: 0.00 Mbit/s



Run 2: Report of CalibratedKoho — Data Link



Run 3: Statistics of CalibratedKoho

Start at: 2017-08-21 07:37:45

End at: 2017-08-21 07:38:15

# Below is generated by plot.py at 2017-08-21 09:45:37

# Datalink statistics

-- Total of 3 flows:

Average throughput: 337.90 Mbit/s

95th percentile per-packet one-way delay: 75.831 ms

Loss rate: 3.05%

-- Flow 1:

Average throughput: 246.34 Mbit/s

95th percentile per-packet one-way delay: 77.415 ms

Loss rate: 0.13%

-- Flow 2:

Average throughput: 138.35 Mbit/s

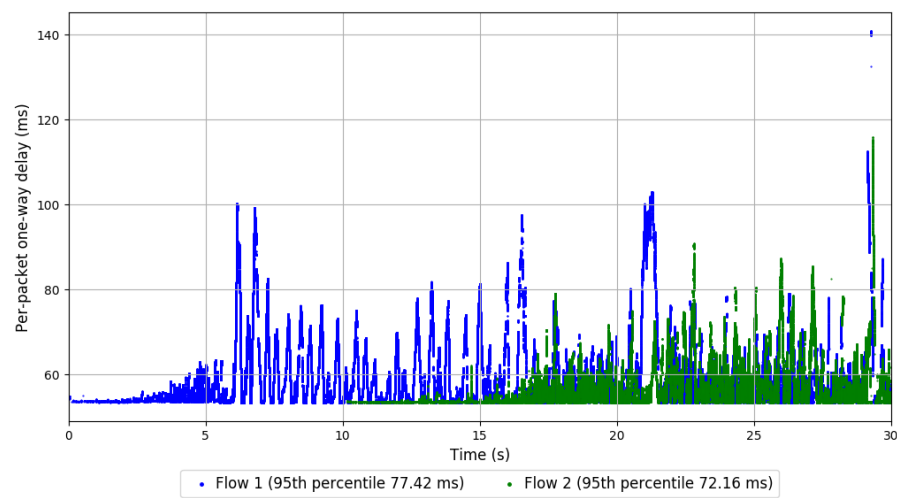
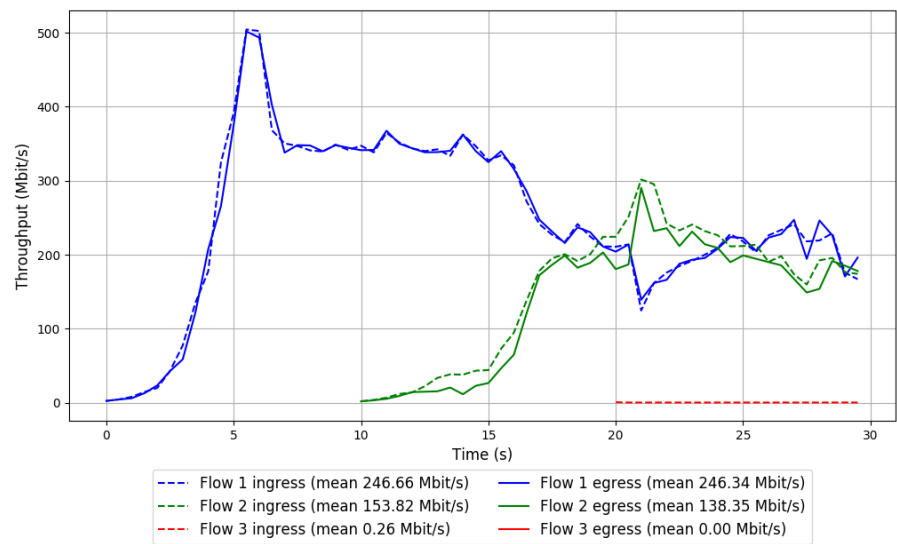
95th percentile per-packet one-way delay: 72.164 ms

Loss rate: 10.04%

-- Flow 3:

Average throughput: 0.00 Mbit/s

Run 3: Report of CalibratedKoho — Data Link



Run 4: Statistics of CalibratedKoho

Start at: 2017-08-21 07:48:52

End at: 2017-08-21 07:49:22

# Below is generated by plot.py at 2017-08-21 09:45:37

# Datalink statistics

-- Total of 3 flows:

Average throughput: 2.76 Mbit/s

95th percentile per-packet one-way delay: 54.308 ms

Loss rate: 69.23%

-- Flow 1:

Average throughput: 1.45 Mbit/s

95th percentile per-packet one-way delay: 54.338 ms

Loss rate: 70.75%

-- Flow 2:

Average throughput: 1.24 Mbit/s

95th percentile per-packet one-way delay: 54.202 ms

Loss rate: 68.66%

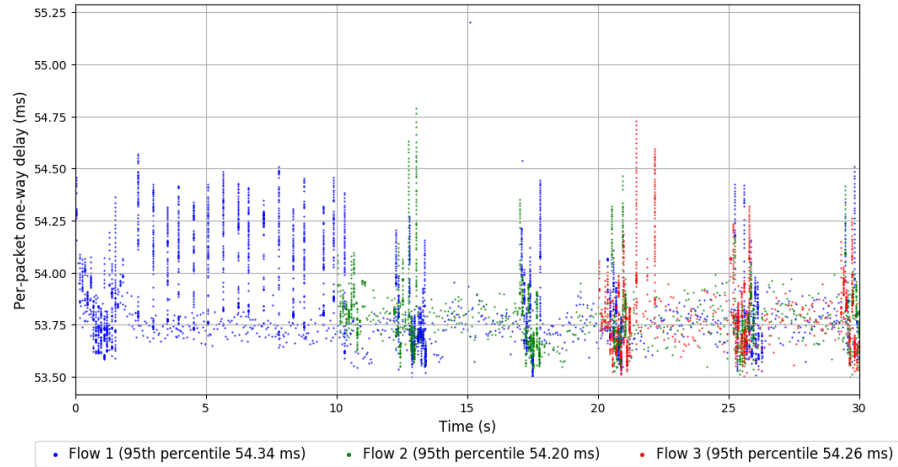
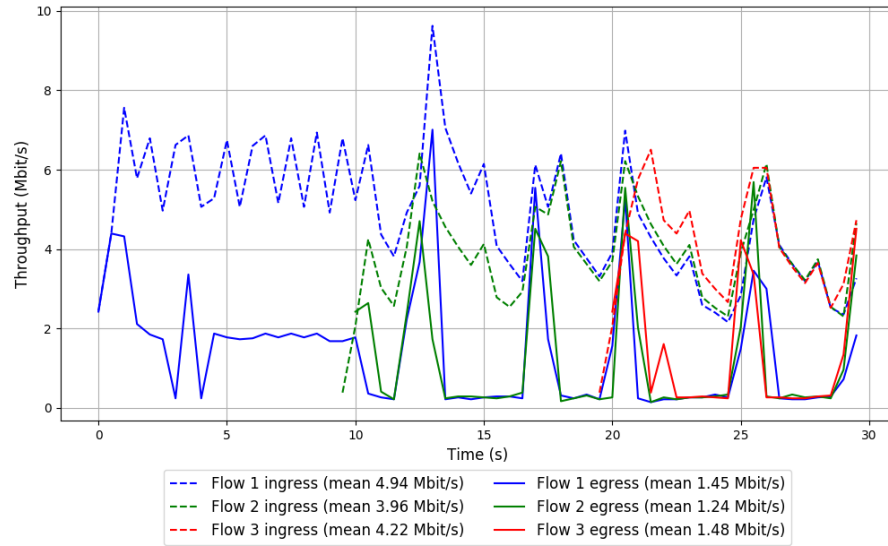
-- Flow 3:

Average throughput: 1.48 Mbit/s

95th percentile per-packet one-way delay: 54.260 ms

Loss rate: 64.96%

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



Run 5: Statistics of CalibratedKoho

Start at: 2017-08-21 07:59:34

End at: 2017-08-21 08:00:04

# Below is generated by plot.py at 2017-08-21 09:46:09

# Datalink statistics

-- Total of 3 flows:

Average throughput: 341.22 Mbit/s

95th percentile per-packet one-way delay: 70.779 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 239.02 Mbit/s

95th percentile per-packet one-way delay: 71.612 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 154.27 Mbit/s

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

Loss rate: 0.03%

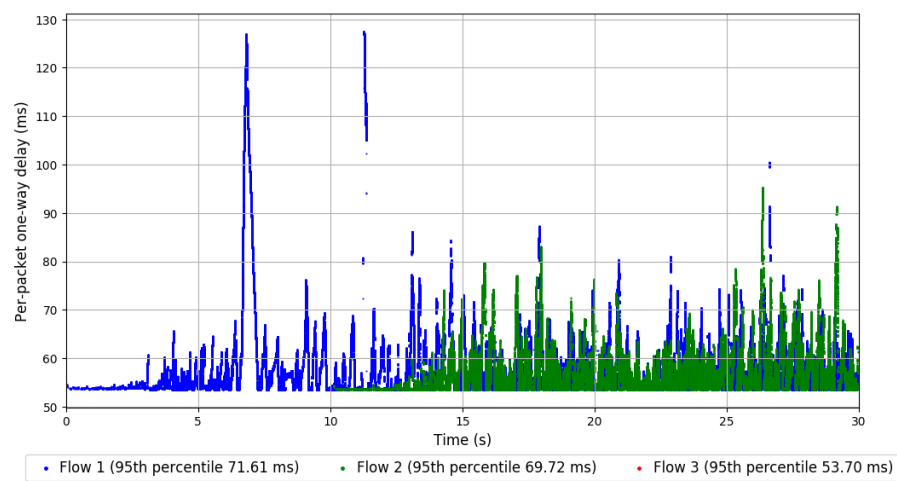
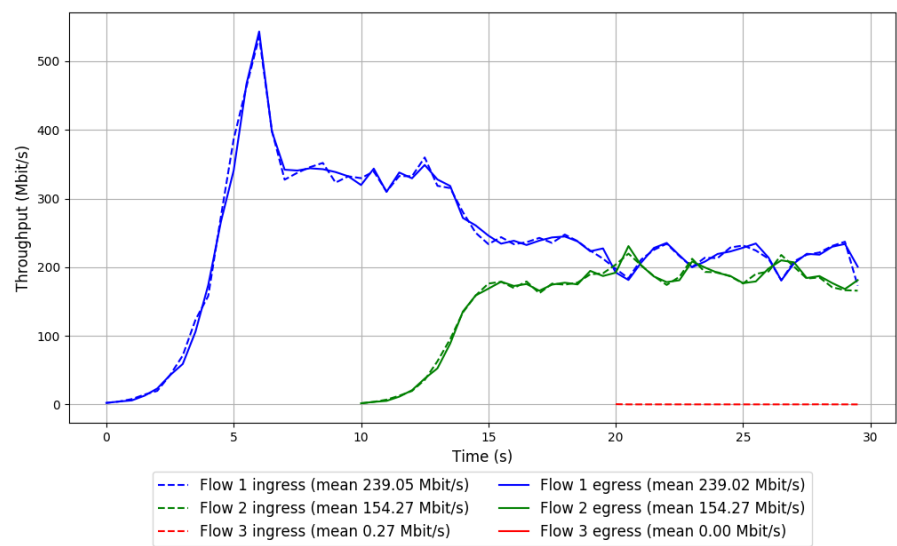
-- Flow 3:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 53.697 ms

Loss rate: 99.54%

Run 5: Report of CalibratedKoho — Data Link



Run 6: Statistics of CalibratedKoho

Start at: 2017-08-21 08:10:23

End at: 2017-08-21 08:10:53

# Below is generated by plot.py at 2017-08-21 09:46:50

# Datalink statistics

-- Total of 3 flows:

Average throughput: 335.87 Mbit/s

95th percentile per-packet one-way delay: 75.349 ms

Loss rate: 1.58%

-- Flow 1:

Average throughput: 218.21 Mbit/s

95th percentile per-packet one-way delay: 81.526 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 132.10 Mbit/s

95th percentile per-packet one-way delay: 71.324 ms

Loss rate: 5.72%

-- Flow 3:

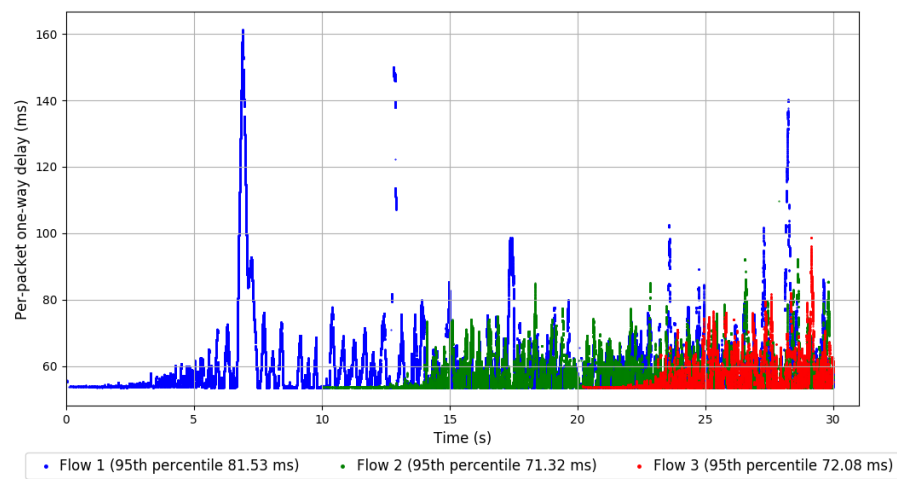
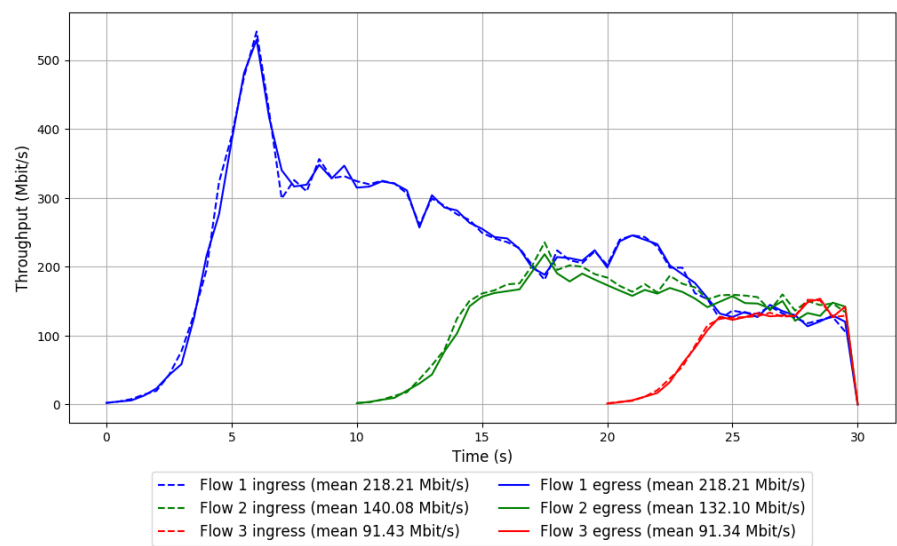
Average throughput: 91.34 Mbit/s

95th percentile per-packet one-way delay: 72.084 ms

Loss rate: 0.08%



Run 6: Report of CalibratedKoho — Data Link



Run 7: Statistics of CalibratedKoho

Start at: 2017-08-21 08:21:35

End at: 2017-08-21 08:22:05

# Below is generated by plot.py at 2017-08-21 09:46:58

# Datalink statistics

-- Total of 3 flows:

Average throughput: 209.57 Mbit/s

95th percentile per-packet one-way delay: 74.526 ms

Loss rate: 2.74%

-- Flow 1:

Average throughput: 1.06 Mbit/s

95th percentile per-packet one-way delay: 54.506 ms

Loss rate: 69.51%

-- Flow 2:

Average throughput: 261.82 Mbit/s

95th percentile per-packet one-way delay: 74.492 ms

Loss rate: 0.03%

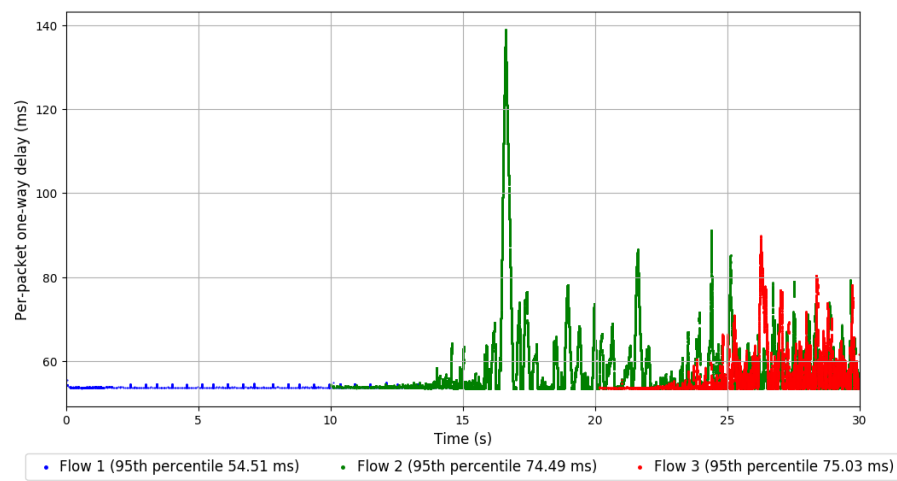
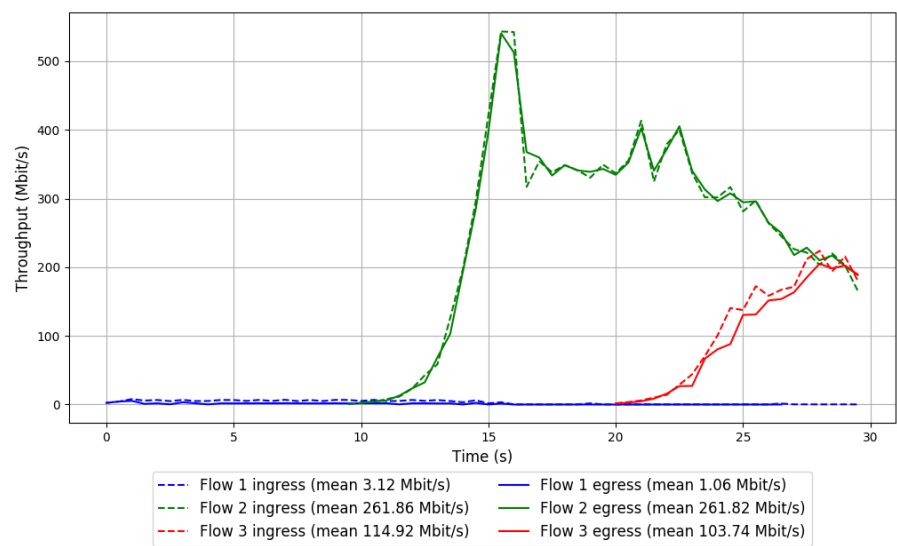
-- Flow 3:

Average throughput: 103.74 Mbit/s

95th percentile per-packet one-way delay: 75.034 ms

Loss rate: 9.76%

Run 7: Report of CalibratedKoho — Data Link



Run 8: Statistics of CalibratedKoho

Start at: 2017-08-21 08:32:25

End at: 2017-08-21 08:32:55

# Below is generated by plot.py at 2017-08-21 09:47:22

# Datalink statistics

-- Total of 3 flows:

Average throughput: 193.99 Mbit/s

95th percentile per-packet one-way delay: 86.036 ms

Loss rate: 1.45%

-- Flow 1:

Average throughput: 1.00 Mbit/s

95th percentile per-packet one-way delay: 54.547 ms

Loss rate: 68.83%

-- Flow 2:

Average throughput: 289.65 Mbit/s

95th percentile per-packet one-way delay: 86.116 ms

Loss rate: 0.33%

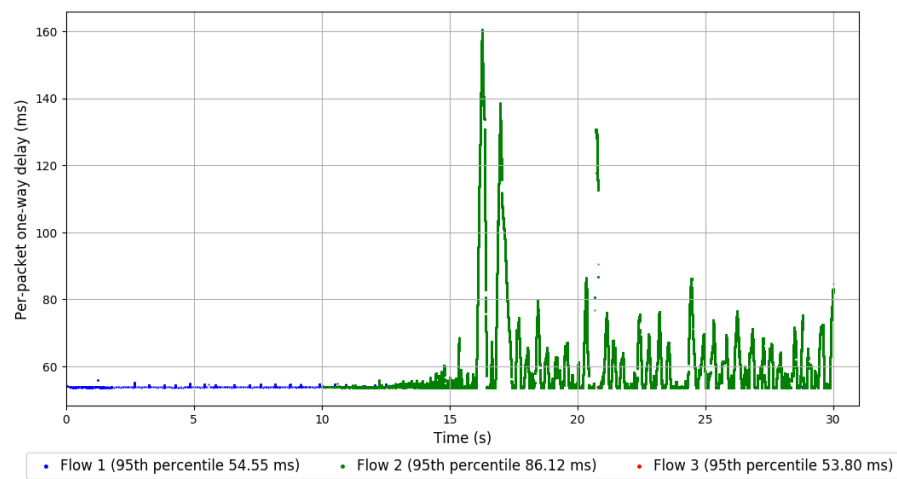
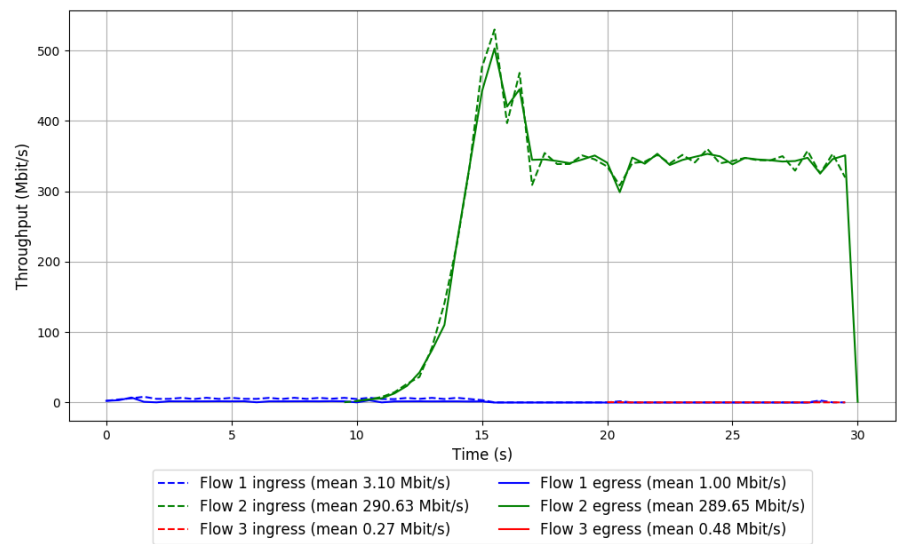
-- Flow 3:

Average throughput: 0.48 Mbit/s

95th percentile per-packet one-way delay: 53.798 ms

Loss rate: 99.11%

Run 8: Report of CalibratedKoho — Data Link



Run 9: Statistics of CalibratedKoho

Start at: 2017-08-21 08:43:14

End at: 2017-08-21 08:43:44

# Below is generated by plot.py at 2017-08-21 09:47:38

# Datalink statistics

-- Total of 3 flows:

Average throughput: 167.61 Mbit/s

95th percentile per-packet one-way delay: 75.785 ms

Loss rate: 45.69%

-- Flow 1:

Average throughput: 93.69 Mbit/s

95th percentile per-packet one-way delay: 61.025 ms

Loss rate: 57.08%

-- Flow 2:

Average throughput: 28.37 Mbit/s

95th percentile per-packet one-way delay: 64.171 ms

Loss rate: 46.41%

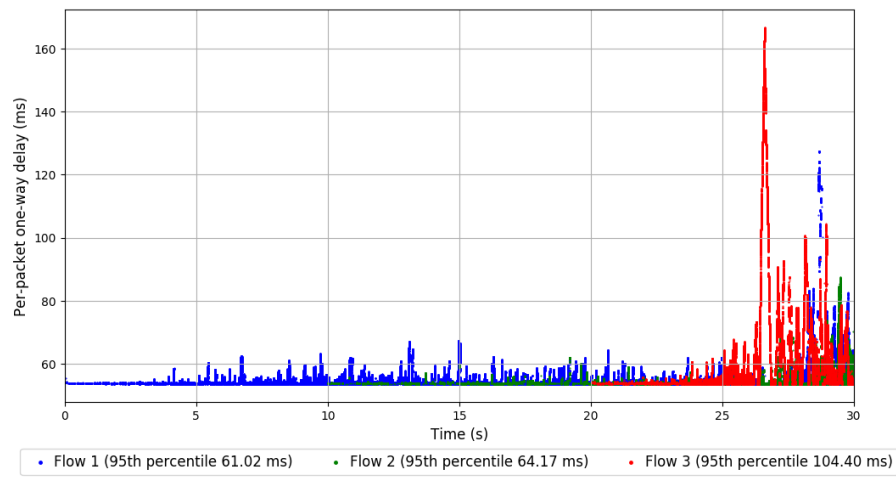
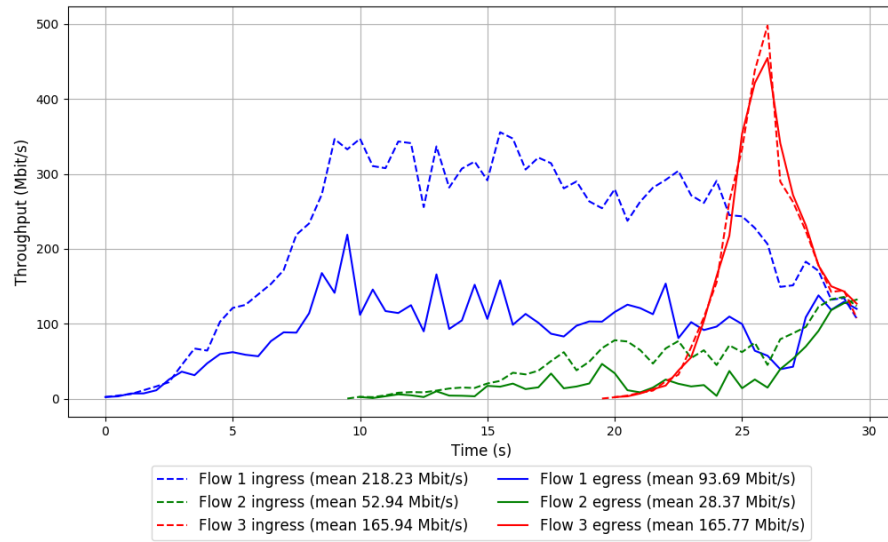
-- Flow 3:

Average throughput: 165.77 Mbit/s

95th percentile per-packet one-way delay: 104.396 ms

Loss rate: 0.10%

## Run 9: Report of CalibratedKoho — Data Link



Run 10: Statistics of CalibratedKoho

Start at: 2017-08-21 08:54:02

End at: 2017-08-21 08:54:32

# Below is generated by plot.py at 2017-08-21 09:48:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 182.84 Mbit/s

95th percentile per-packet one-way delay: 79.450 ms

Loss rate: 1.25%

-- Flow 1:

Average throughput: 0.98 Mbit/s

95th percentile per-packet one-way delay: 54.776 ms

Loss rate: 69.41%

-- Flow 2:

Average throughput: 272.99 Mbit/s

95th percentile per-packet one-way delay: 79.559 ms

Loss rate: 0.04%

-- Flow 3:

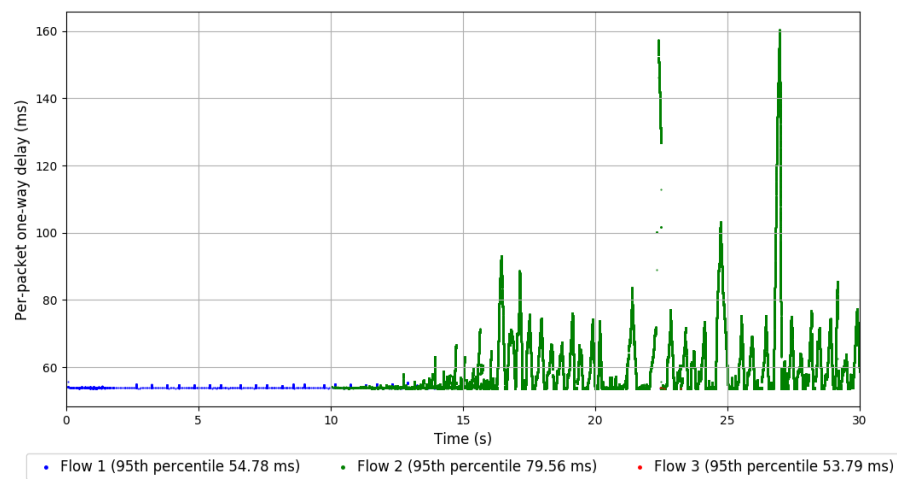
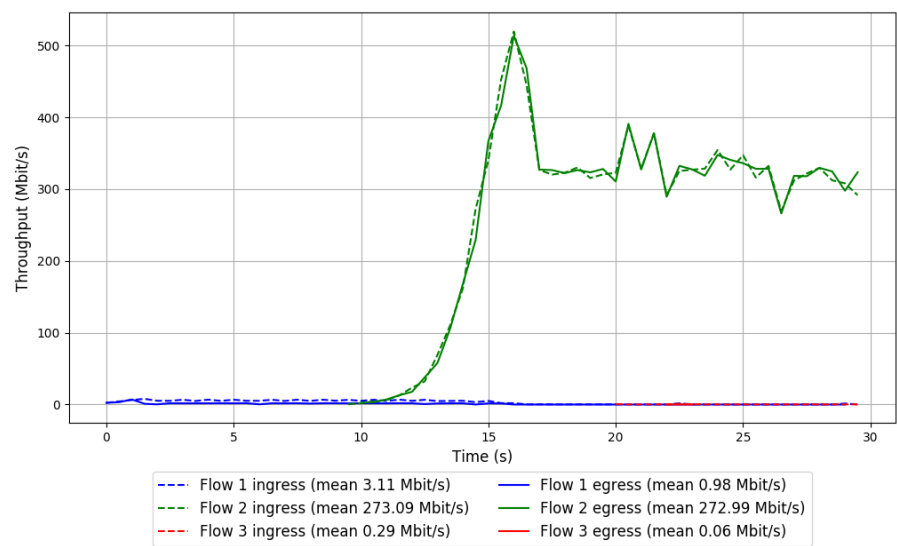
Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 53.790 ms

Loss rate: 98.35%



Run 10: Report of CalibratedKoho — Data Link

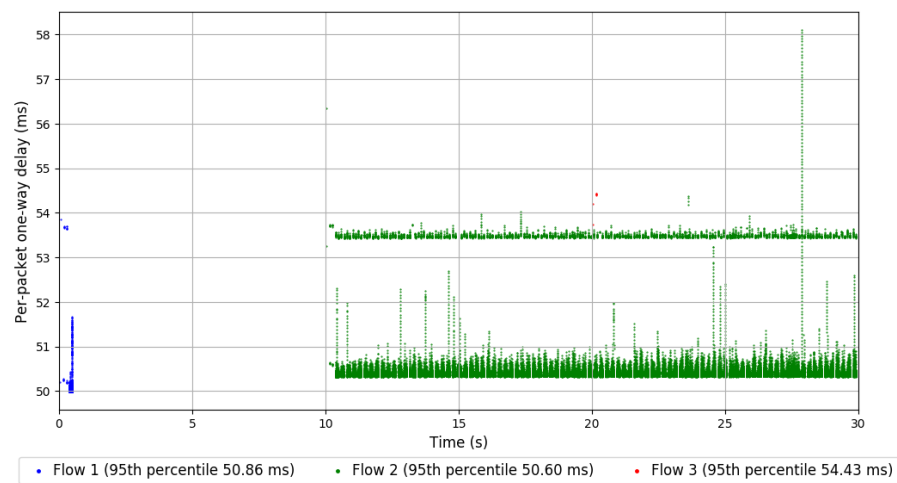
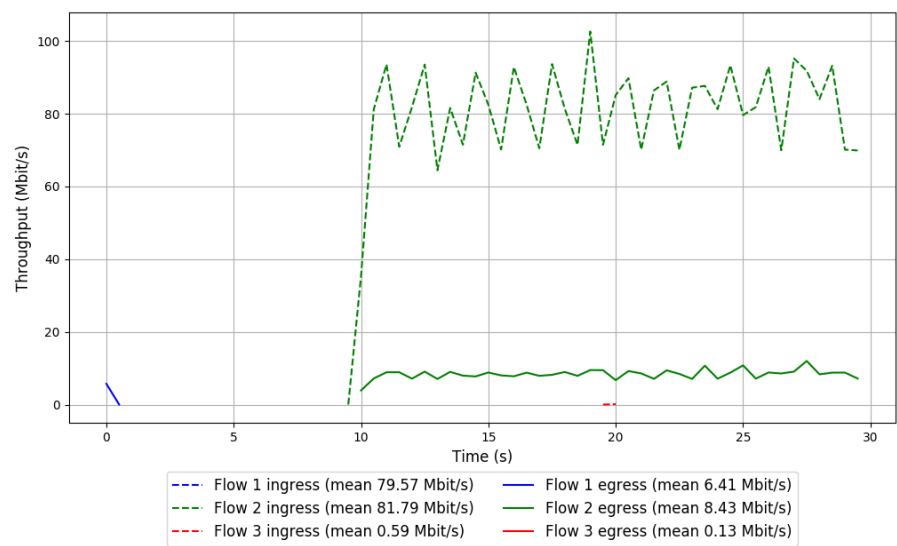


```
Run 1: Statistics of Copa

Start at: 2017-08-21 07:17:48
End at: 2017-08-21 07:18:18

# Below is generated by plot.py at 2017-08-21 09:48:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.71 Mbit/s
95th percentile per-packet one-way delay: 50.602 ms
Loss rate: 89.74%
-- Flow 1:
Average throughput: 6.41 Mbit/s
95th percentile per-packet one-way delay: 50.862 ms
Loss rate: 91.95%
-- Flow 2:
Average throughput: 8.43 Mbit/s
95th percentile per-packet one-way delay: 50.600 ms
Loss rate: 89.69%
-- Flow 3:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 54.428 ms
Loss rate: 76.95%
```

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2017-08-21 07:28:29

End at: 2017-08-21 07:28:59

# Below is generated by plot.py at 2017-08-21 09:48:30

# Datalink statistics

-- Total of 3 flows:

Average throughput: 94.66 Mbit/s

95th percentile per-packet one-way delay: 53.587 ms

Loss rate: 11.23%

-- Flow 1:

Average throughput: 74.44 Mbit/s

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

Loss rate: 16.63%

-- Flow 2:

Average throughput: 84.30 Mbit/s

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

Loss rate: 0.01%

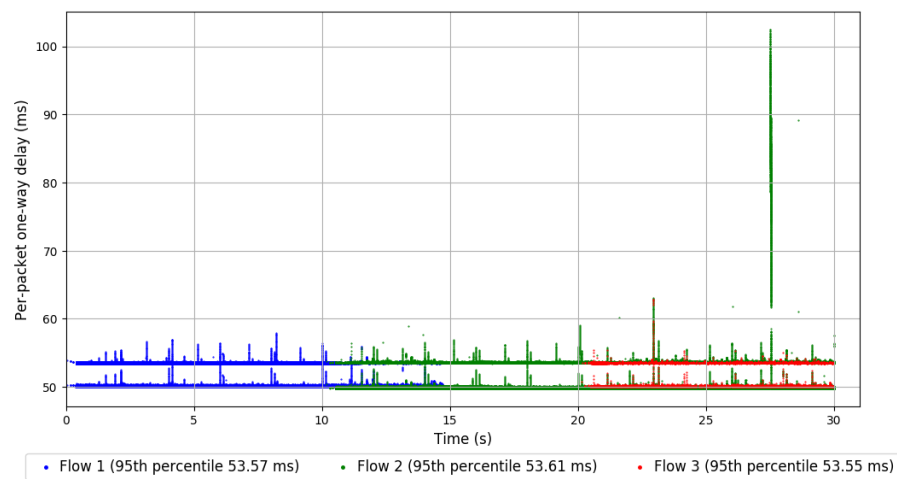
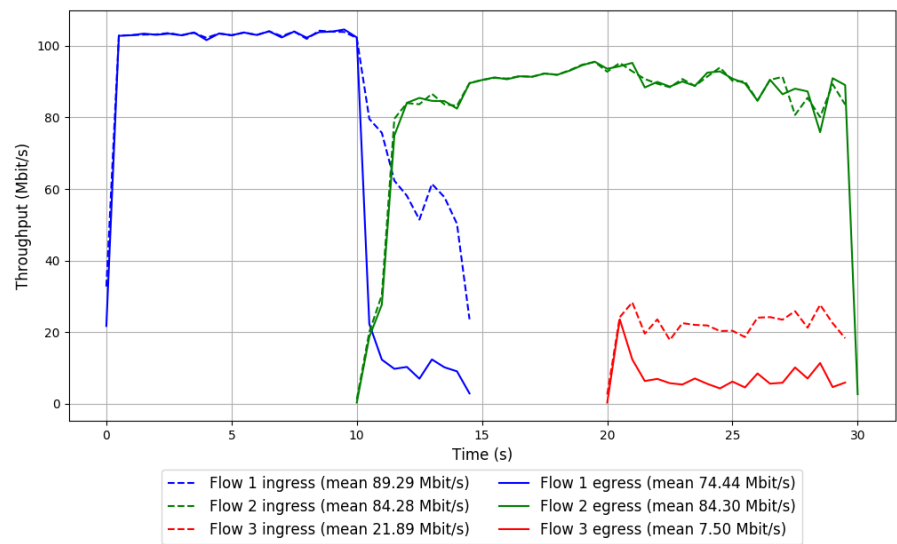
-- Flow 3:

Average throughput: 7.50 Mbit/s

95th percentile per-packet one-way delay: 53.553 ms

Loss rate: 65.72%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2017-08-21 07:39:24

End at: 2017-08-21 07:39:54

# Below is generated by plot.py at 2017-08-21 09:48:39

# Datalink statistics

-- Total of 3 flows:

Average throughput: 81.47 Mbit/s

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

Loss rate: 1.37%

-- Flow 1:

Average throughput: 6.70 Mbit/s

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

Loss rate: 91.95%

-- Flow 2:

Average throughput: 97.82 Mbit/s

95th percentile per-packet one-way delay: 53.718 ms

Loss rate: 0.00%

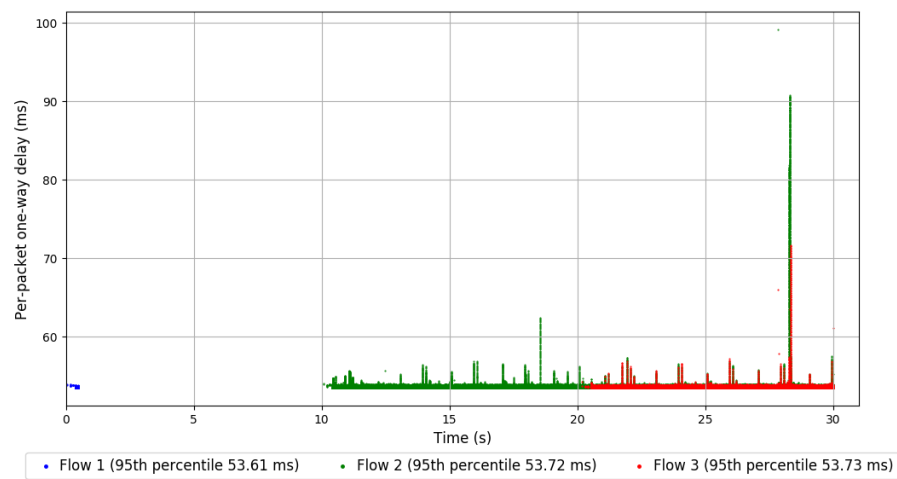
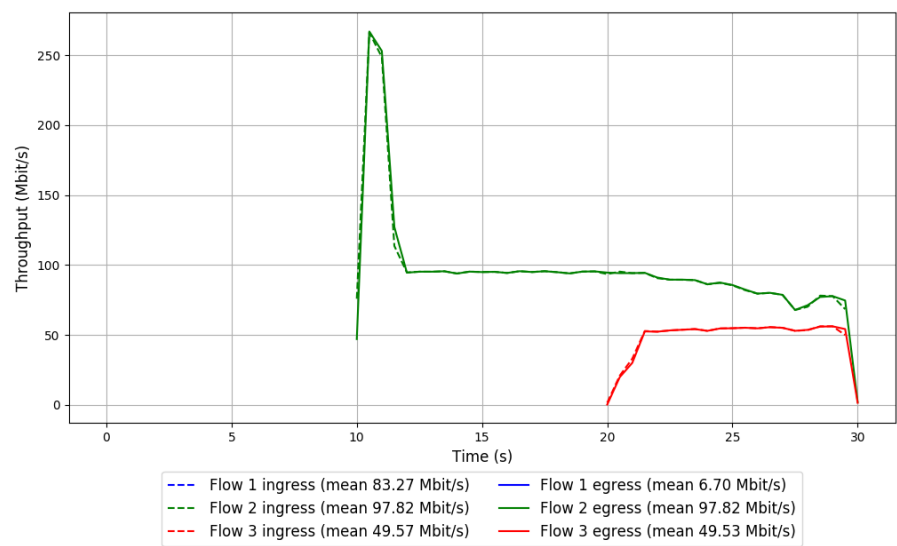
-- Flow 3:

Average throughput: 49.53 Mbit/s

95th percentile per-packet one-way delay: 53.729 ms

Loss rate: 0.03%

Run 3: Report of Copa — Data Link



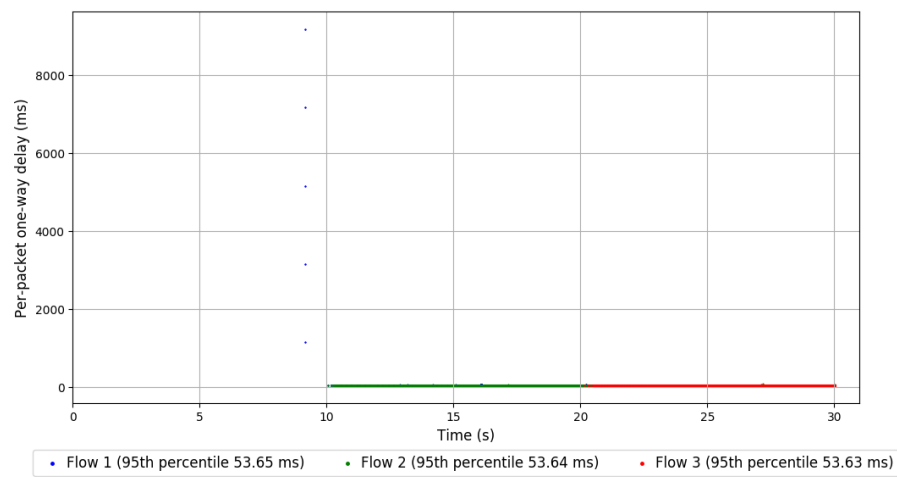
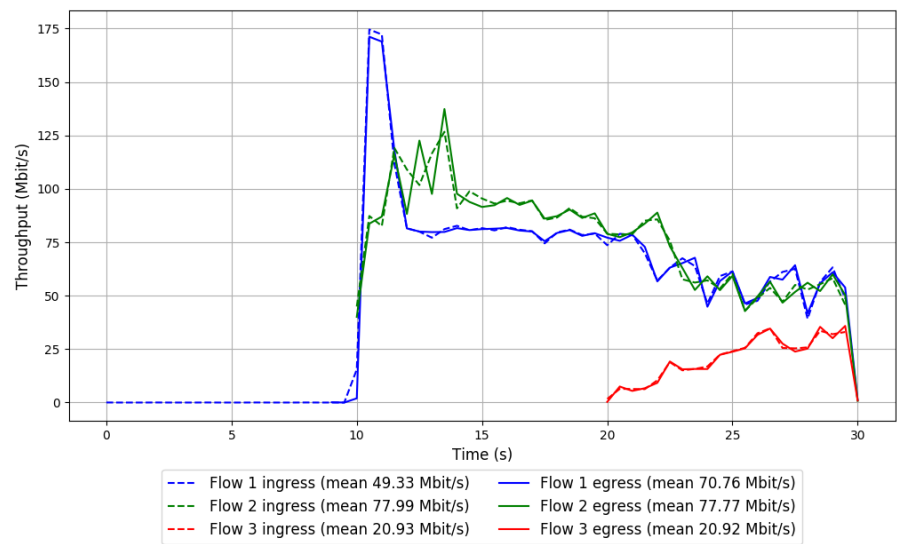
Run 4: Statistics of Copa

Start at: 2017-08-21 07:50:11

End at: 2017-08-21 07:50:41



Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2017-08-21 08:01:17

End at: 2017-08-21 08:01:47

# Below is generated by plot.py at 2017-08-21 09:49:06

# Datalink statistics

-- Total of 3 flows:

Average throughput: 9.21 Mbit/s

95th percentile per-packet one-way delay: 50.371 ms

Loss rate: 88.43%

-- Flow 1:

Average throughput: 9.12 Mbit/s

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

Loss rate: 88.51%

-- Flow 2:

Average throughput: 4.79 Mbit/s

95th percentile per-packet one-way delay: 53.571 ms

Loss rate: 48.17%

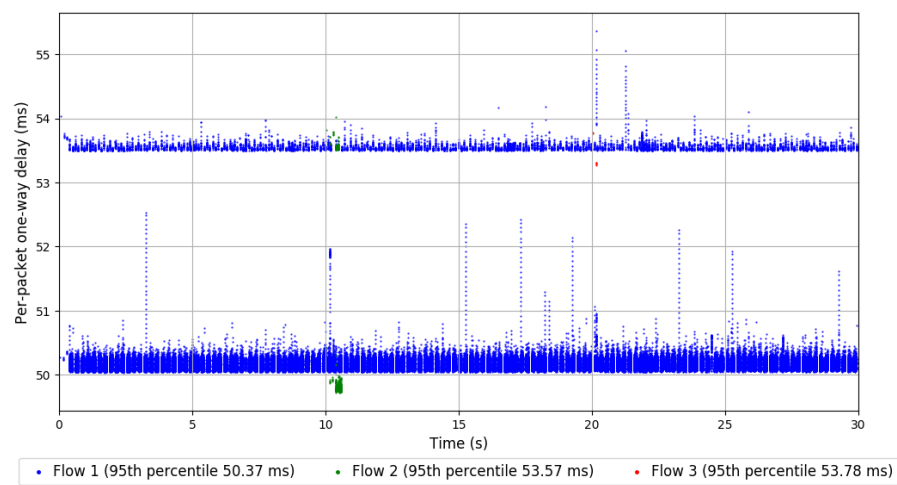
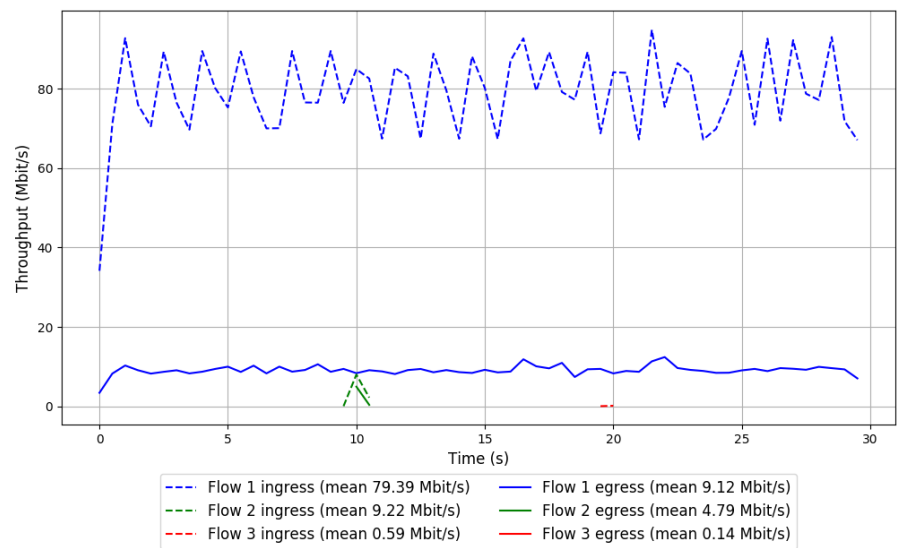
-- Flow 3:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 53.776 ms

Loss rate: 76.95%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2017-08-21 08:12:07

End at: 2017-08-21 08:12:37

# Below is generated by plot.py at 2017-08-21 09:49:44

# Datalink statistics

-- Total of 3 flows:

Average throughput: 112.07 Mbit/s

95th percentile per-packet one-way delay: 53.691 ms

Loss rate: 1.65%

-- Flow 1:

Average throughput: 81.17 Mbit/s

95th percentile per-packet one-way delay: 53.635 ms

Loss rate: 3.22%

-- Flow 2:

Average throughput: 44.46 Mbit/s

95th percentile per-packet one-way delay: 53.903 ms

Loss rate: 0.00%

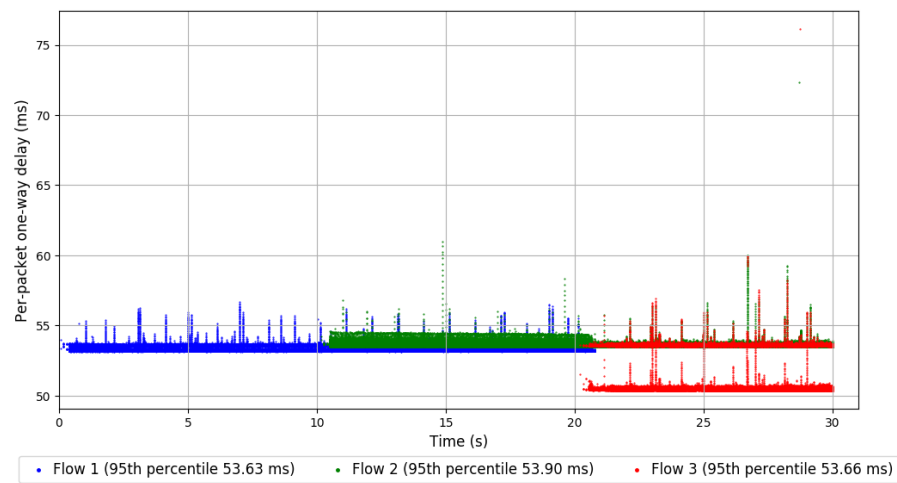
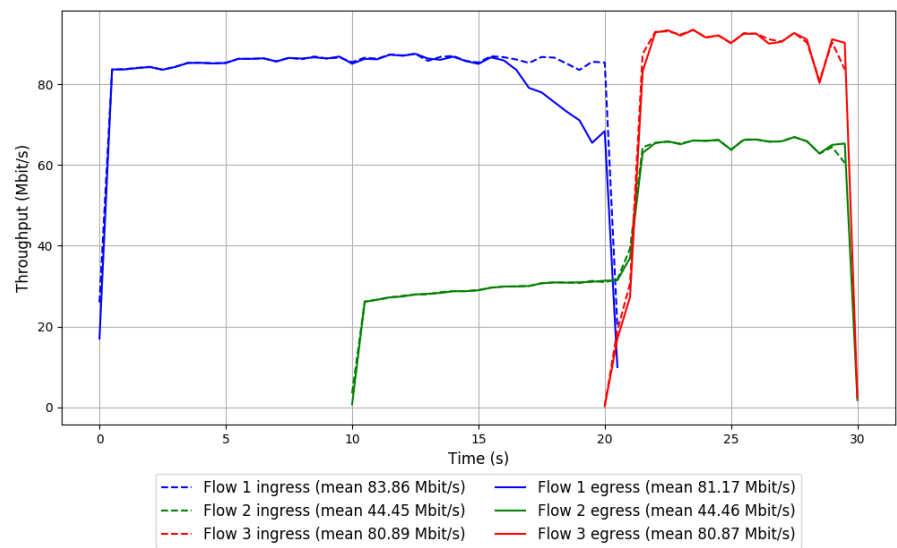
-- Flow 3:

Average throughput: 80.87 Mbit/s

95th percentile per-packet one-way delay: 53.659 ms

Loss rate: 0.07%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2017-08-21 08:23:09

End at: 2017-08-21 08:23:39

# Below is generated by plot.py at 2017-08-21 09:49:57

# Datalink statistics

-- Total of 3 flows:

Average throughput: 117.40 Mbit/s

95th percentile per-packet one-way delay: 53.656 ms

Loss rate: 1.41%

-- Flow 1:

Average throughput: 116.85 Mbit/s

95th percentile per-packet one-way delay: 53.656 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 3.79 Mbit/s

95th percentile per-packet one-way delay: 53.616 ms

Loss rate: 71.08%

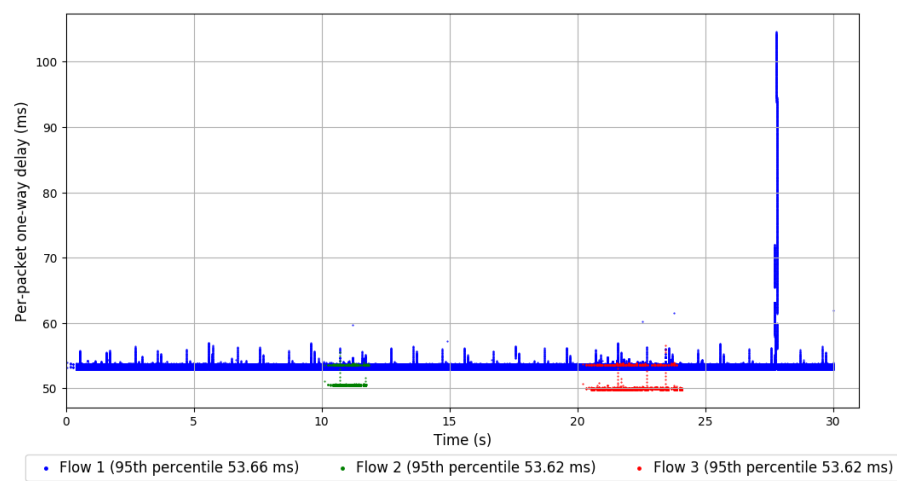
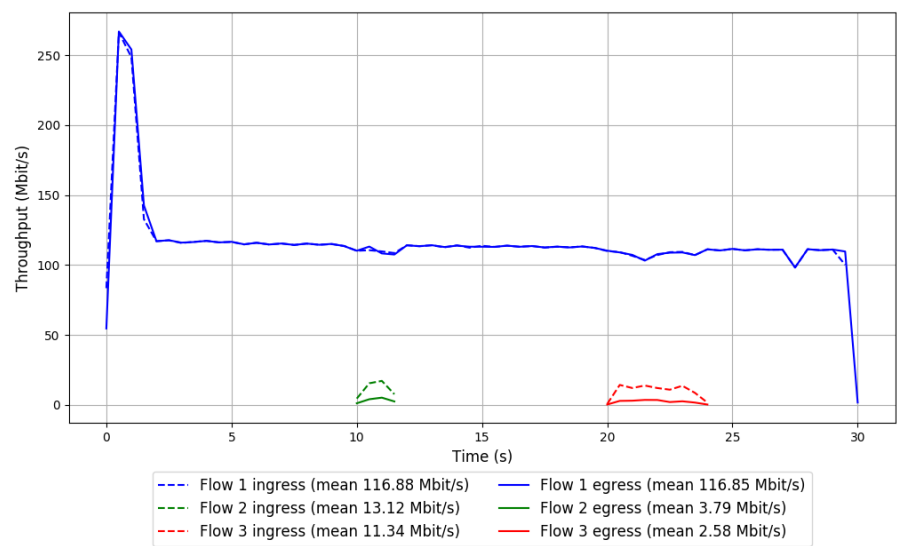
-- Flow 3:

Average throughput: 2.58 Mbit/s

95th percentile per-packet one-way delay: 53.616 ms

Loss rate: 77.22%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2017-08-21 08:33:58

End at: 2017-08-21 08:34:28

# Below is generated by plot.py at 2017-08-21 09:49:58

# Datalink statistics

-- Total of 3 flows:

Average throughput: 10.16 Mbit/s

95th percentile per-packet one-way delay: 50.995 ms

Loss rate: 87.65%

-- Flow 1:

Average throughput: 10.16 Mbit/s

95th percentile per-packet one-way delay: 50.946 ms

Loss rate: 87.66%

-- Flow 2:

Average throughput: 0.35 Mbit/s

95th percentile per-packet one-way delay: 53.753 ms

Loss rate: 46.17%

-- Flow 3:

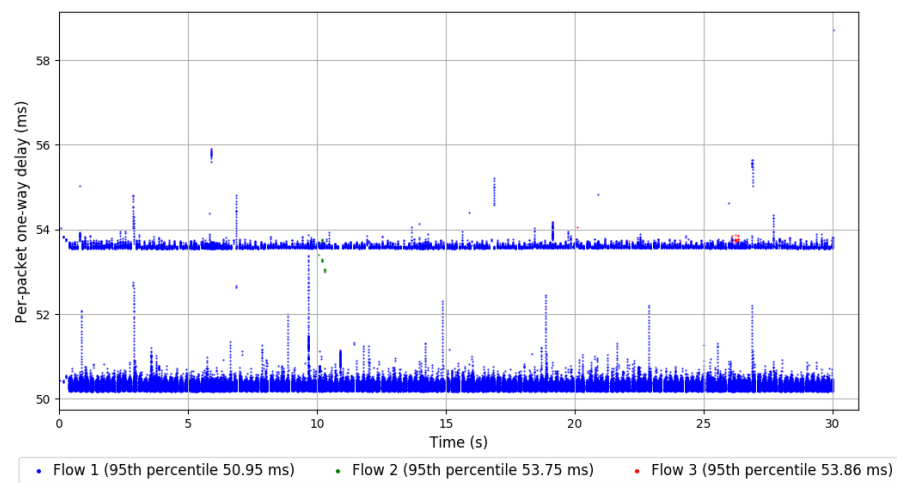
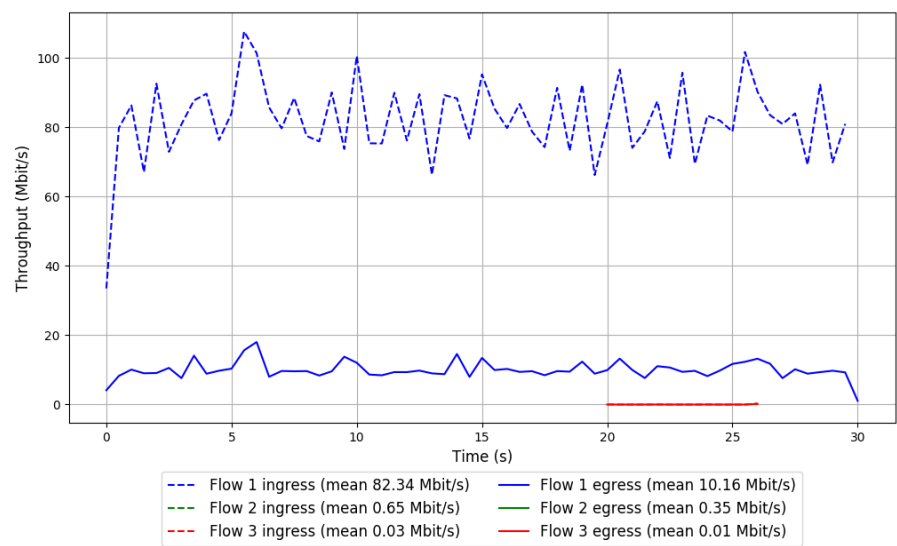
Average throughput: 0.01 Mbit/s

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

Loss rate: 55.41%



Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2017-08-21 08:44:47

End at: 2017-08-21 08:45:18

# Below is generated by plot.py at 2017-08-21 09:50:50

# Datalink statistics

-- Total of 3 flows:

Average throughput: 132.65 Mbit/s

95th percentile per-packet one-way delay: 53.676 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 81.95 Mbit/s

95th percentile per-packet one-way delay: 53.680 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 76.28 Mbit/s

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

Loss rate: 0.00%

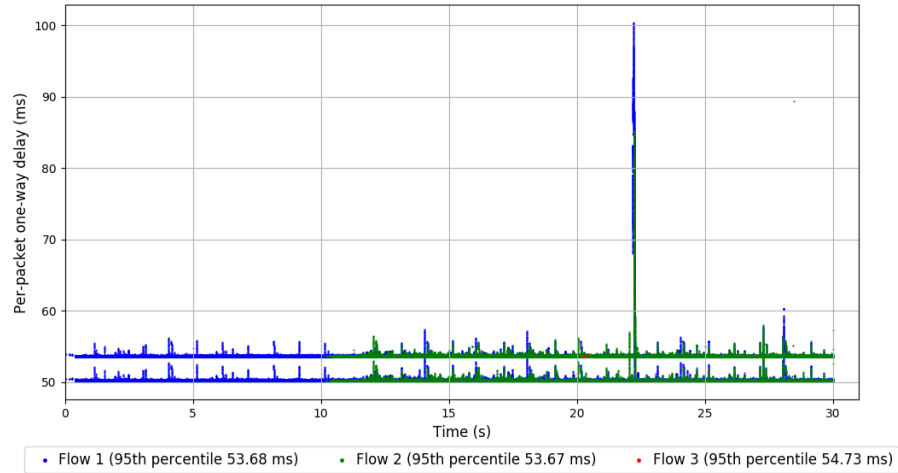
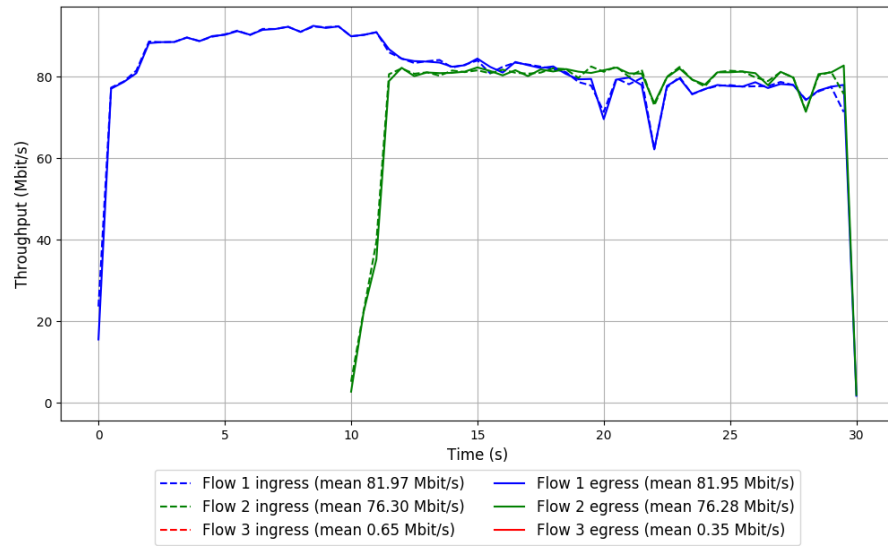
-- Flow 3:

Average throughput: 0.35 Mbit/s

95th percentile per-packet one-way delay: 54.727 ms

Loss rate: 46.17%

# Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2017-08-21 08:55:34

End at: 2017-08-21 08:56:04

# Below is generated by plot.py at 2017-08-21 09:50:50

# Datalink statistics

-- Total of 3 flows:

Average throughput: 45.87 Mbit/s

95th percentile per-packet one-way delay: 53.666 ms

Loss rate: 1.68%

-- Flow 1:

Average throughput: 64.70 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 4.63 Mbit/s

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

Loss rate: 91.78%

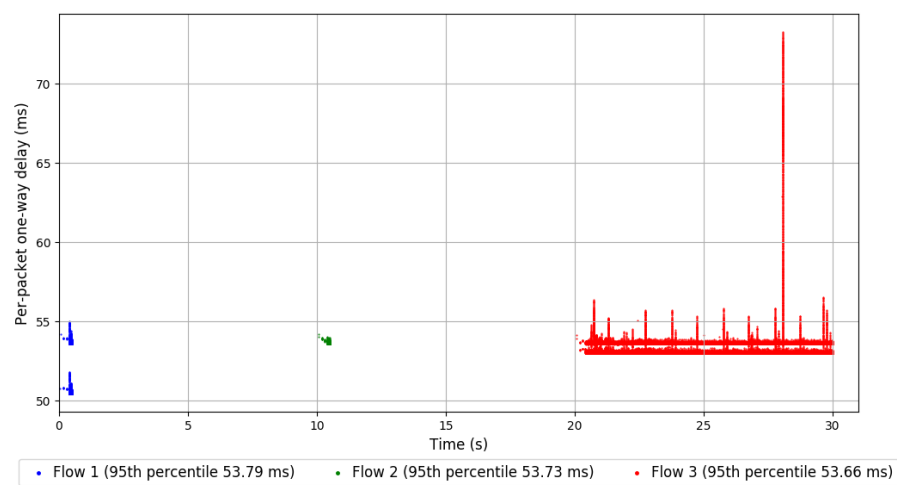
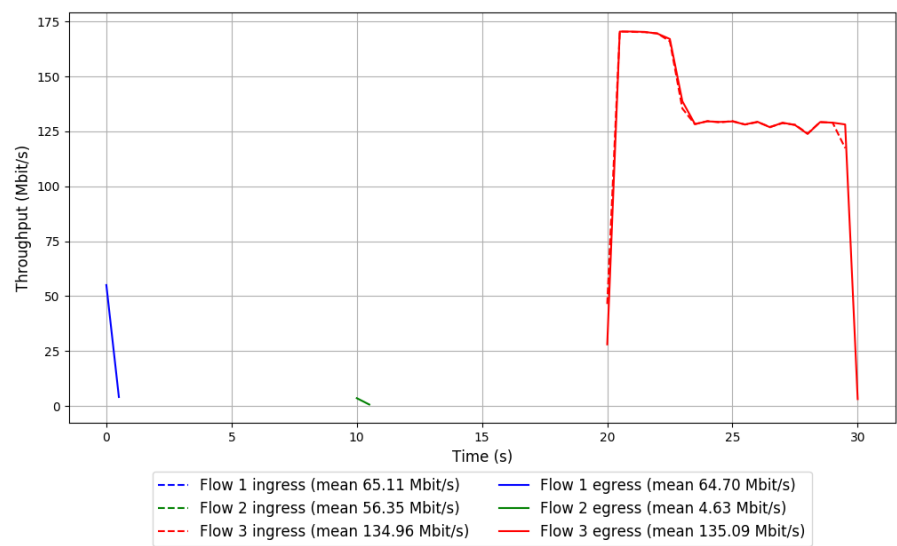
-- Flow 3:

Average throughput: 135.09 Mbit/s

95th percentile per-packet one-way delay: 53.659 ms

Loss rate: 0.00%

Run 10: Report of Copa — Data Link

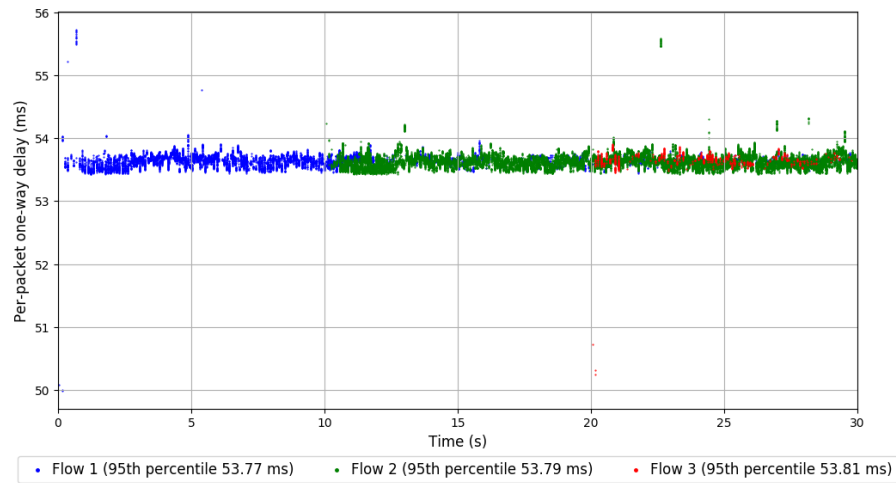
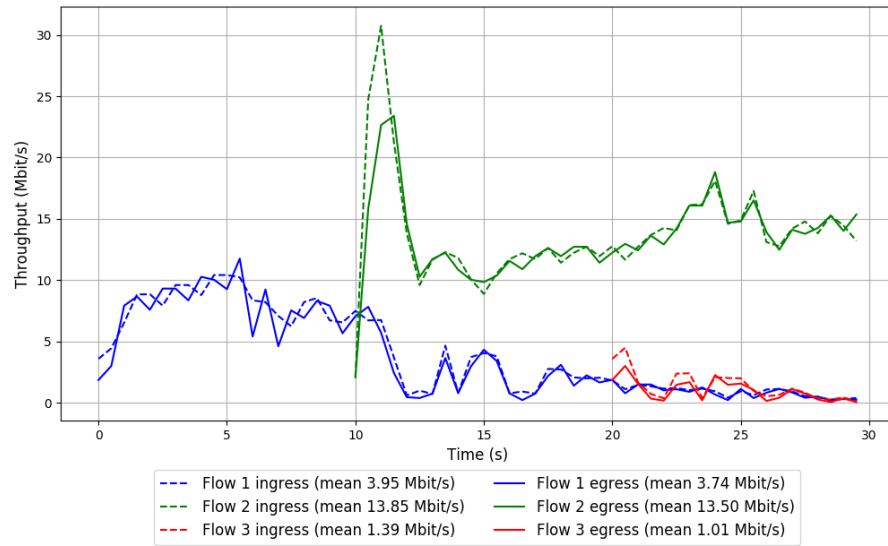


```
Run 1: Statistics of TCP Cubic

Start at: 2017-08-21 07:12:50
End at: 2017-08-21 07:13:20

# Below is generated by plot.py at 2017-08-21 09:50:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.02 Mbit/s
95th percentile per-packet one-way delay: 53.789 ms
Loss rate: 4.30%
-- Flow 1:
Average throughput: 3.74 Mbit/s
95th percentile per-packet one-way delay: 53.773 ms
Loss rate: 5.80%
-- Flow 2:
Average throughput: 13.50 Mbit/s
95th percentile per-packet one-way delay: 53.793 ms
Loss rate: 2.49%
-- Flow 3:
Average throughput: 1.01 Mbit/s
95th percentile per-packet one-way delay: 53.815 ms
Loss rate: 27.88%
```

# Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2017-08-21 07:23:30

End at: 2017-08-21 07:24:00

# Below is generated by plot.py at 2017-08-21 09:50:50

# Datalink statistics

-- Total of 3 flows:

Average throughput: 12.94 Mbit/s

95th percentile per-packet one-way delay: 53.830 ms

Loss rate: 1.54%

-- Flow 1:

Average throughput: 5.93 Mbit/s

95th percentile per-packet one-way delay: 53.842 ms

Loss rate: 2.69%

-- Flow 2:

Average throughput: 9.44 Mbit/s

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

Loss rate: 0.30%

-- Flow 3:

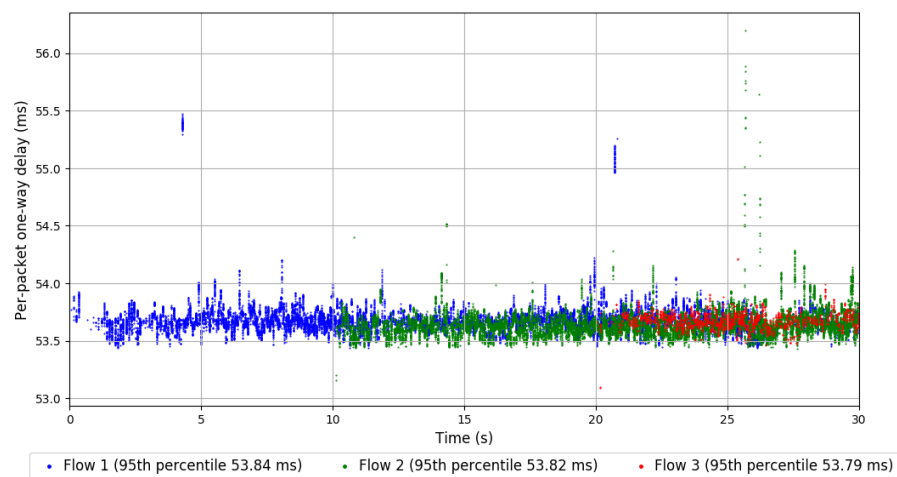
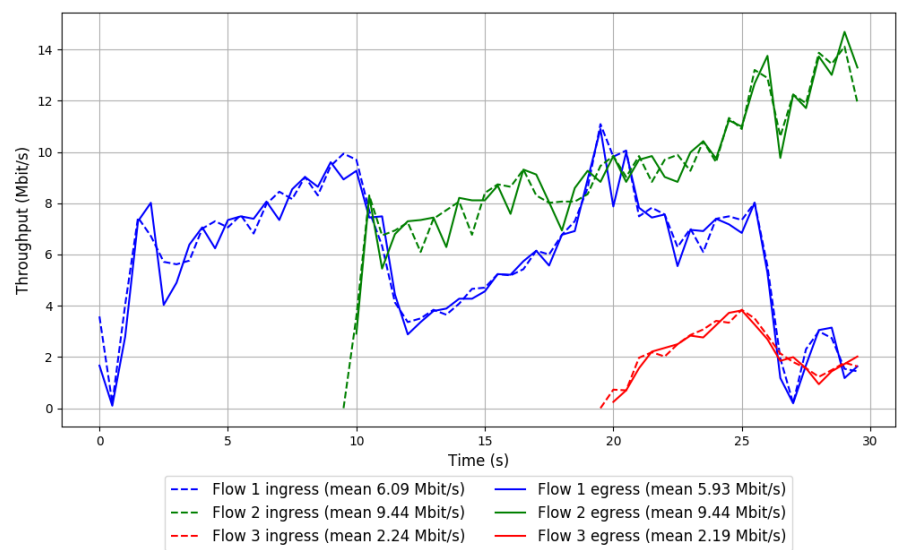
Average throughput: 2.19 Mbit/s

95th percentile per-packet one-way delay: 53.790 ms

Loss rate: 2.59%



Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2017-08-21 07:34:19

End at: 2017-08-21 07:34:49

# Below is generated by plot.py at 2017-08-21 09:50:50

# Datalink statistics

-- Total of 3 flows:

Average throughput: 12.63 Mbit/s

95th percentile per-packet one-way delay: 53.846 ms

Loss rate: 2.56%

-- Flow 1:

Average throughput: 6.45 Mbit/s

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

Loss rate: 2.70%

-- Flow 2:

Average throughput: 6.56 Mbit/s

95th percentile per-packet one-way delay: 53.831 ms

Loss rate: 2.36%

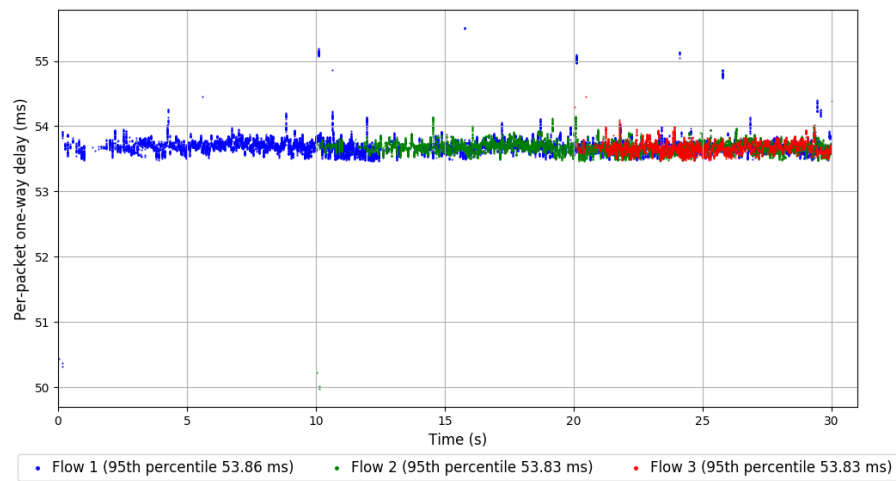
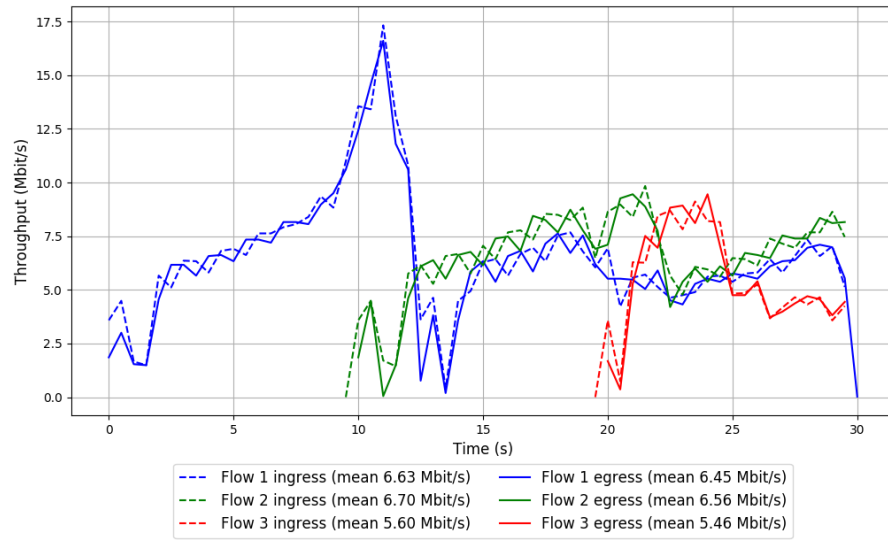
-- Flow 3:

Average throughput: 5.46 Mbit/s

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

Loss rate: 2.58%

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



Run 4: Statistics of TCP Cubic

Start at: 2017-08-21 07:45:27

End at: 2017-08-21 07:45:57

# Below is generated by plot.py at 2017-08-21 09:50:50

# Datalink statistics

-- Total of 3 flows:

Average throughput: 12.75 Mbit/s

95th percentile per-packet one-way delay: 53.863 ms

Loss rate: 2.49%

-- Flow 1:

Average throughput: 10.55 Mbit/s

95th percentile per-packet one-way delay: 53.865 ms

Loss rate: 1.04%

-- Flow 2:

Average throughput: 0.90 Mbit/s

95th percentile per-packet one-way delay: 53.823 ms

Loss rate: 14.68%

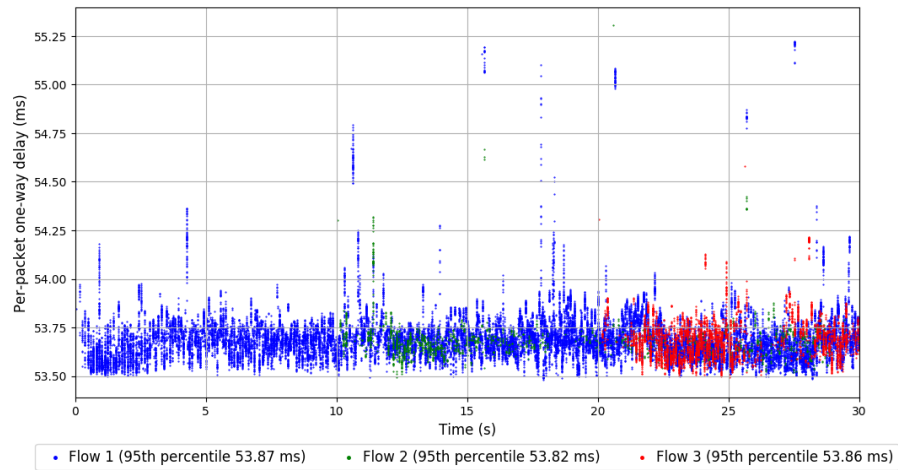
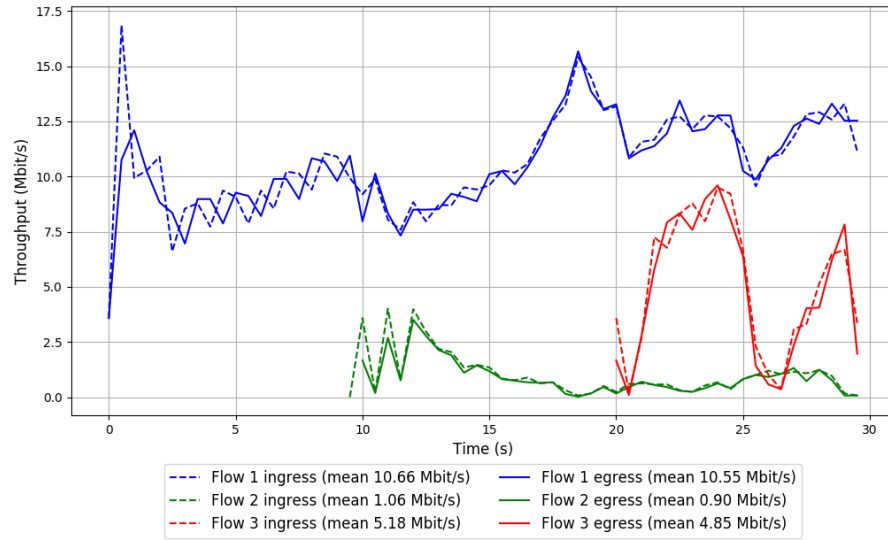
-- Flow 3:

Average throughput: 4.85 Mbit/s

95th percentile per-packet one-way delay: 53.857 ms

Loss rate: 6.46%

#### Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2017-08-21 07:56:06

End at: 2017-08-21 07:56:36

# Below is generated by plot.py at 2017-08-21 09:50:50

# Datalink statistics

-- Total of 3 flows:

Average throughput: 77.21 Mbit/s

95th percentile per-packet one-way delay: 54.490 ms

Loss rate: 0.29%

-- Flow 1:

Average throughput: 54.74 Mbit/s

95th percentile per-packet one-way delay: 54.393 ms

Loss rate: 0.16%

-- Flow 2:

Average throughput: 1.22 Mbit/s

95th percentile per-packet one-way delay: 53.811 ms

Loss rate: 7.93%

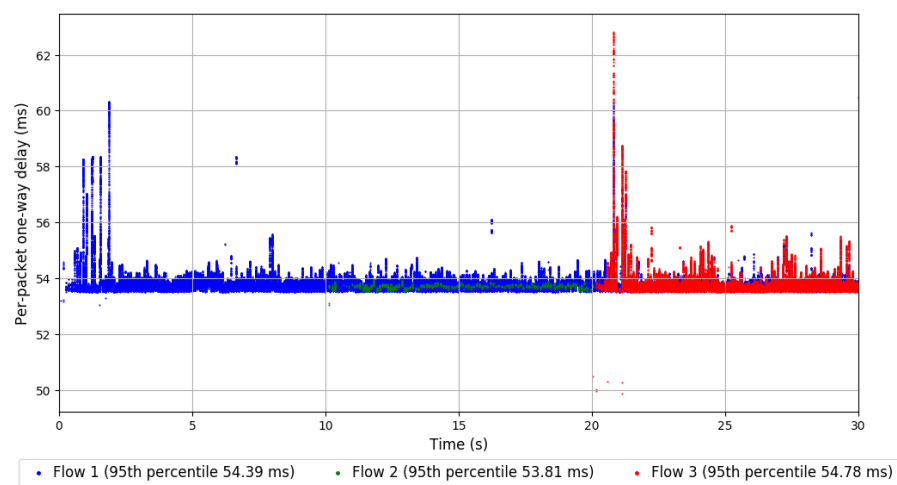
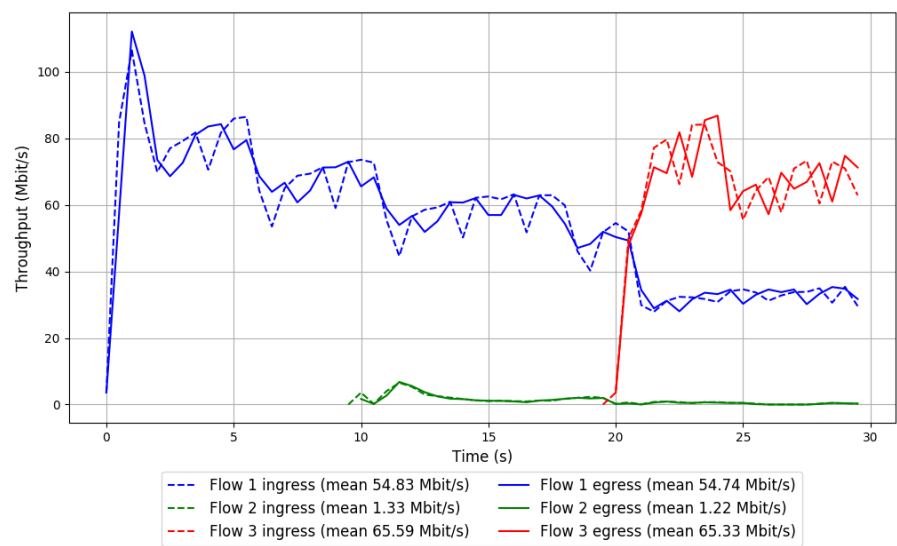
-- Flow 3:

Average throughput: 65.33 Mbit/s

95th percentile per-packet one-way delay: 54.779 ms

Loss rate: 0.33%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2017-08-21 08:06:56

End at: 2017-08-21 08:07:26

# Below is generated by plot.py at 2017-08-21 09:51:05

# Datalink statistics

-- Total of 3 flows:

Average throughput: 70.11 Mbit/s

95th percentile per-packet one-way delay: 54.705 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 2.96 Mbit/s

95th percentile per-packet one-way delay: 53.891 ms

Loss rate: 5.40%

-- Flow 2:

Average throughput: 99.61 Mbit/s

95th percentile per-packet one-way delay: 54.740 ms

Loss rate: 0.24%

-- Flow 3:

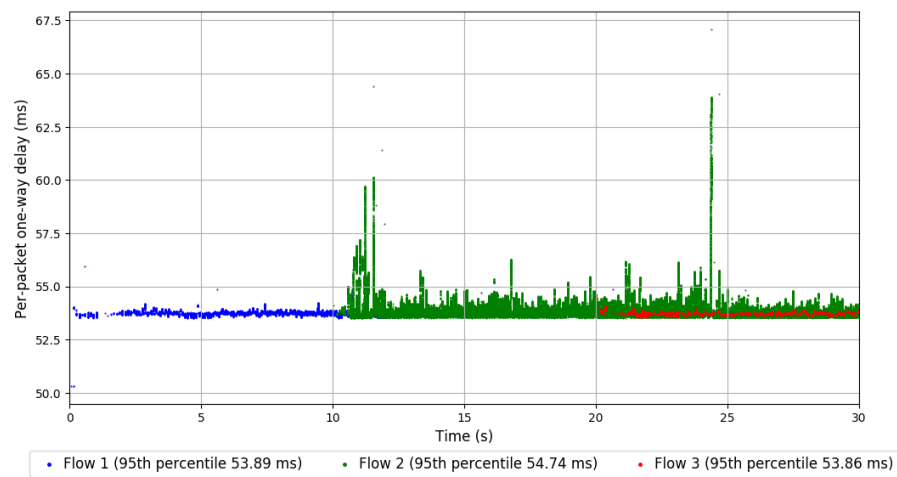
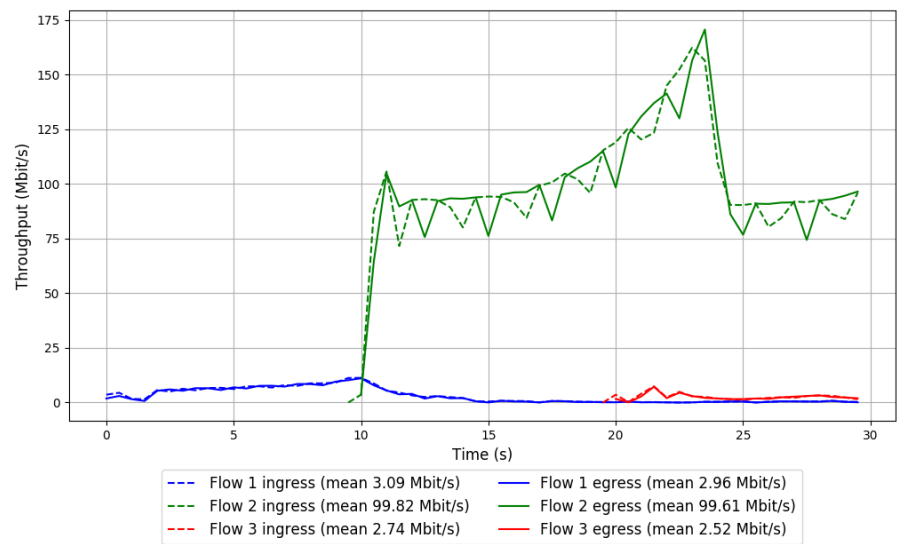
Average throughput: 2.52 Mbit/s

95th percentile per-packet one-way delay: 53.858 ms

Loss rate: 7.88%



Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2017-08-21 08:18:04

End at: 2017-08-21 08:18:34

# Below is generated by plot.py at 2017-08-21 09:51:05

# Datalink statistics

-- Total of 3 flows:

Average throughput: 27.75 Mbit/s

95th percentile per-packet one-way delay: 54.343 ms

Loss rate: 1.21%

-- Flow 1:

Average throughput: 5.06 Mbit/s

95th percentile per-packet one-way delay: 53.937 ms

Loss rate: 3.42%

-- Flow 2:

Average throughput: 3.96 Mbit/s

95th percentile per-packet one-way delay: 53.852 ms

Loss rate: 3.12%

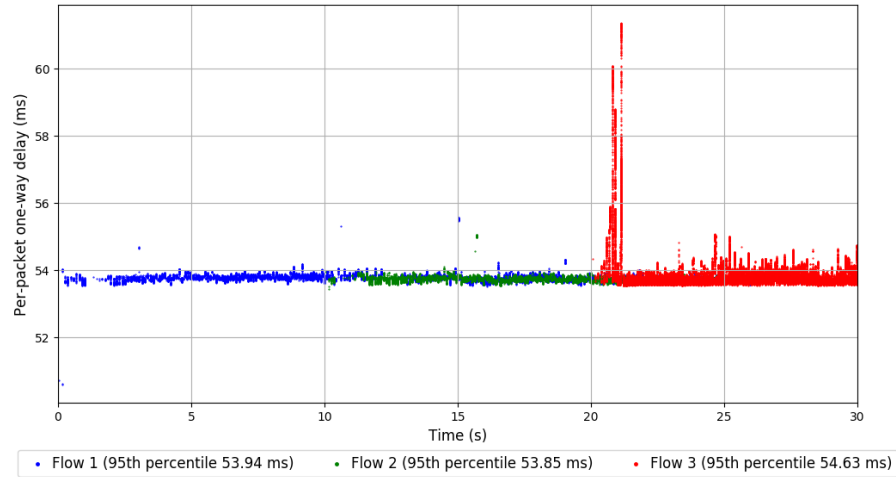
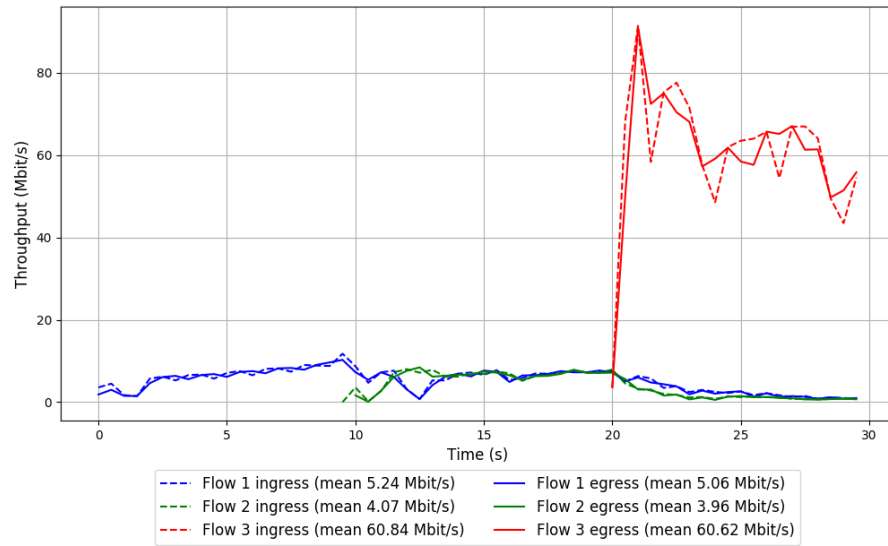
-- Flow 3:

Average throughput: 60.62 Mbit/s

95th percentile per-packet one-way delay: 54.629 ms

Loss rate: 0.38%

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



Run 8: Statistics of TCP Cubic

Start at: 2017-08-21 08:28:57

End at: 2017-08-21 08:29:27

# Below is generated by plot.py at 2017-08-21 09:51:05

# Datalink statistics

-- Total of 3 flows:

Average throughput: 12.92 Mbit/s

95th percentile per-packet one-way delay: 53.877 ms

Loss rate: 2.65%

-- Flow 1:

Average throughput: 8.39 Mbit/s

95th percentile per-packet one-way delay: 53.870 ms

Loss rate: 1.30%

-- Flow 2:

Average throughput: 5.29 Mbit/s

95th percentile per-packet one-way delay: 53.887 ms

Loss rate: 4.18%

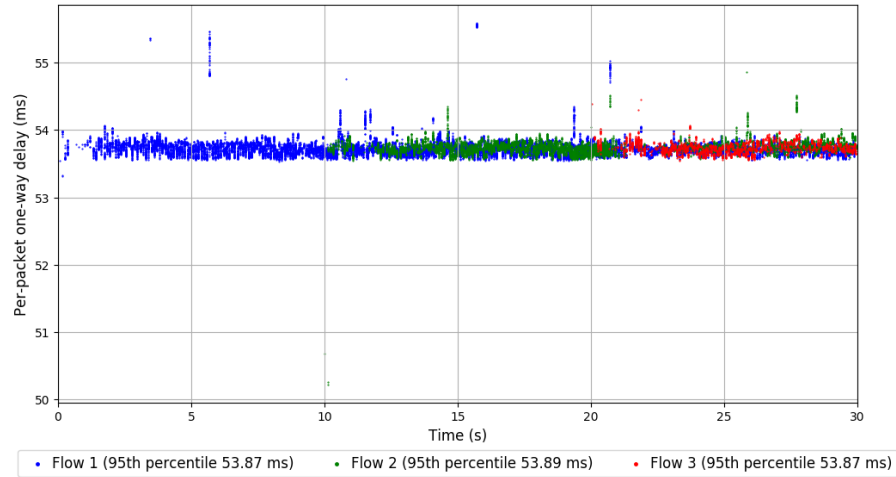
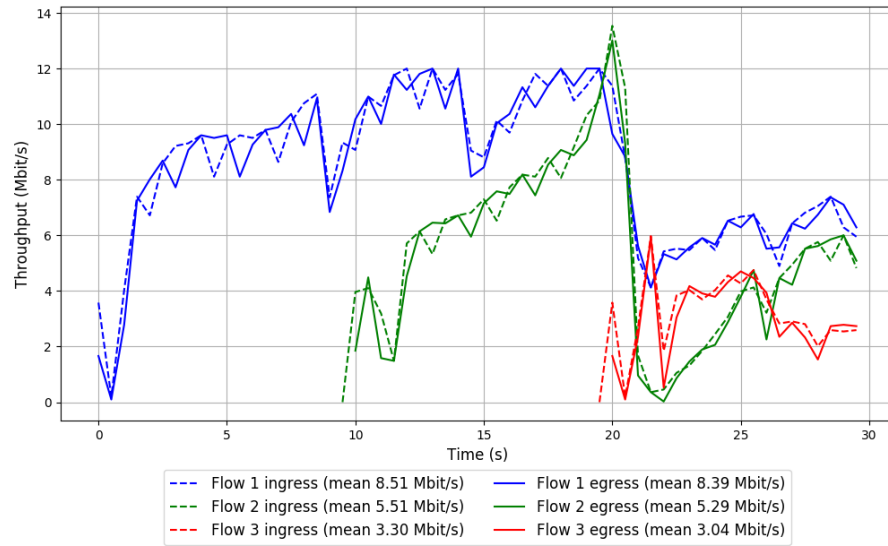
-- Flow 3:

Average throughput: 3.04 Mbit/s

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

Loss rate: 7.96%

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



Run 9: Statistics of TCP Cubic

Start at: 2017-08-21 08:39:46

End at: 2017-08-21 08:40:16

# Below is generated by plot.py at 2017-08-21 09:51:05

# Datalink statistics

-- Total of 3 flows:

Average throughput: 11.54 Mbit/s

95th percentile per-packet one-way delay: 53.949 ms

Loss rate: 2.13%

-- Flow 1:

Average throughput: 7.63 Mbit/s

95th percentile per-packet one-way delay: 53.955 ms

Loss rate: 1.70%

-- Flow 2:

Average throughput: 3.71 Mbit/s

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

Loss rate: 2.31%

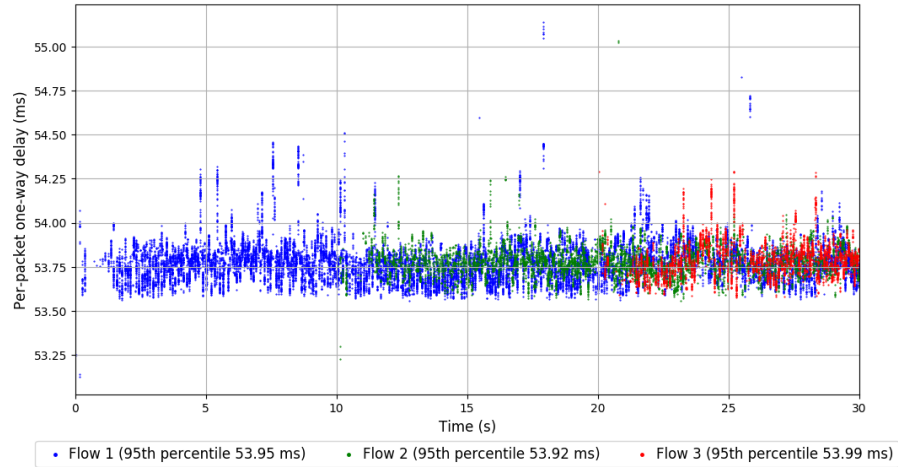
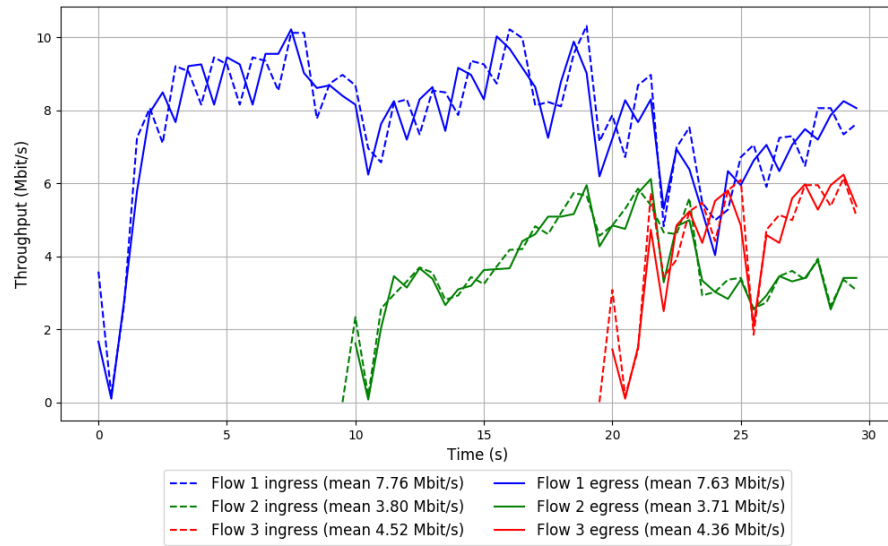
-- Flow 3:

Average throughput: 4.36 Mbit/s

95th percentile per-packet one-way delay: 53.994 ms

Loss rate: 4.05%

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



Run 10: Statistics of TCP Cubic

Start at: 2017-08-21 08:50:39

End at: 2017-08-21 08:51:09

# Below is generated by plot.py at 2017-08-21 09:51:07

# Datalink statistics

-- Total of 3 flows:

Average throughput: 12.54 Mbit/s

95th percentile per-packet one-way delay: 54.097 ms

Loss rate: 2.52%

-- Flow 1:

Average throughput: 10.76 Mbit/s

95th percentile per-packet one-way delay: 54.107 ms

Loss rate: 1.10%

-- Flow 2:

Average throughput: 1.15 Mbit/s

95th percentile per-packet one-way delay: 53.971 ms

Loss rate: 14.57%

-- Flow 3:

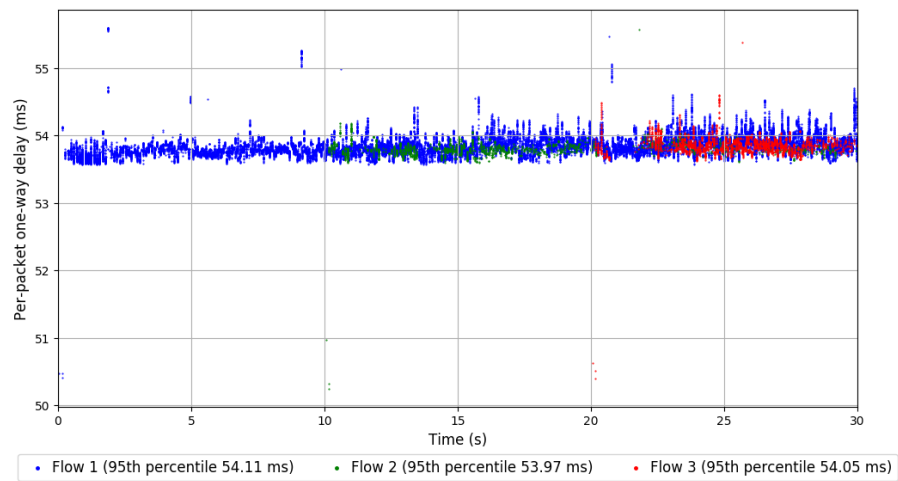
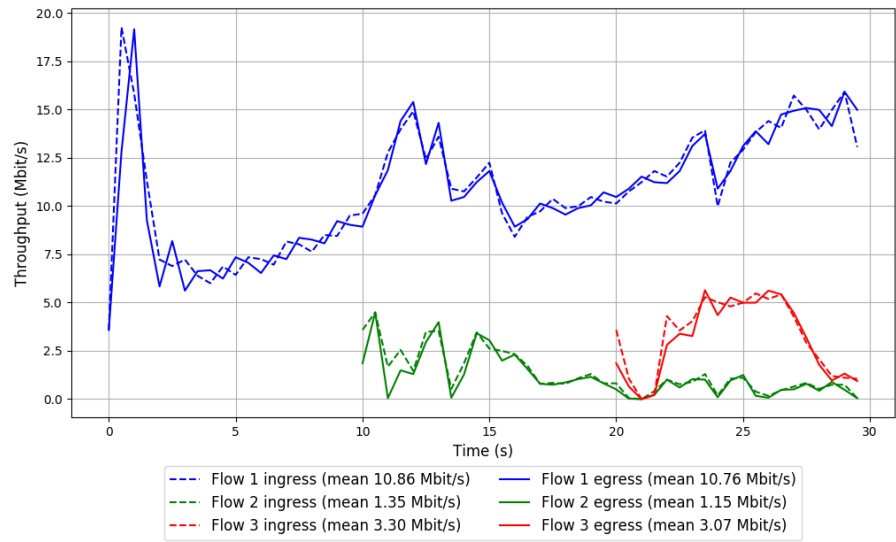
Average throughput: 3.07 Mbit/s

95th percentile per-packet one-way delay: 54.050 ms

Loss rate: 6.78%



## Run 10: Report of TCP Cubic — Data Link

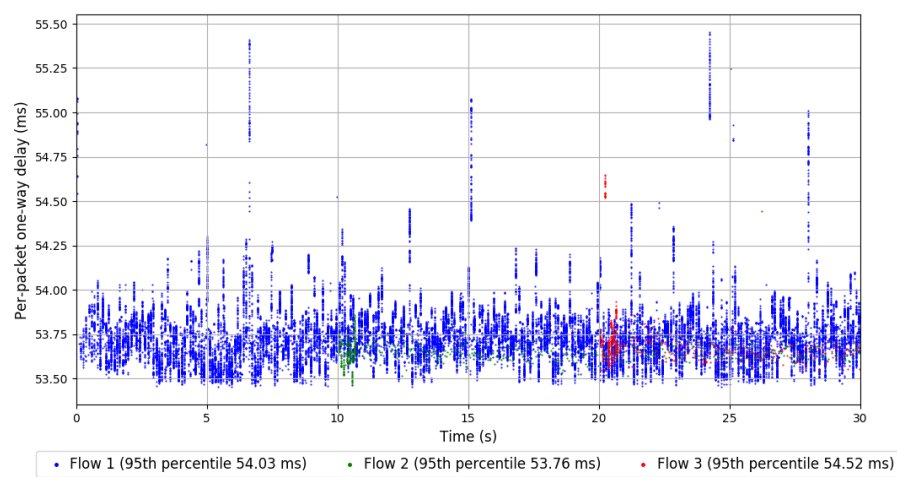
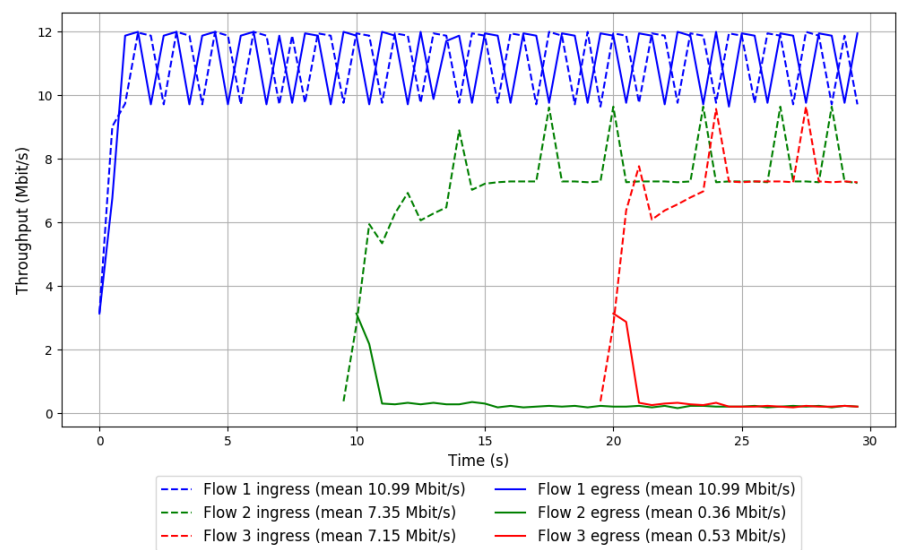


```
Run 1: Statistics of KohoCC

Start at: 2017-08-21 07:18:30
End at: 2017-08-21 07:19:00

# Below is generated by plot.py at 2017-08-21 09:51:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.41 Mbit/s
95th percentile per-packet one-way delay: 54.024 ms
Loss rate: 37.51%
-- Flow 1:
Average throughput: 10.99 Mbit/s
95th percentile per-packet one-way delay: 54.027 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 53.756 ms
Loss rate: 95.05%
-- Flow 3:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 54.521 ms
Loss rate: 92.56%
```

Run 1: Report of KohoCC — Data Link

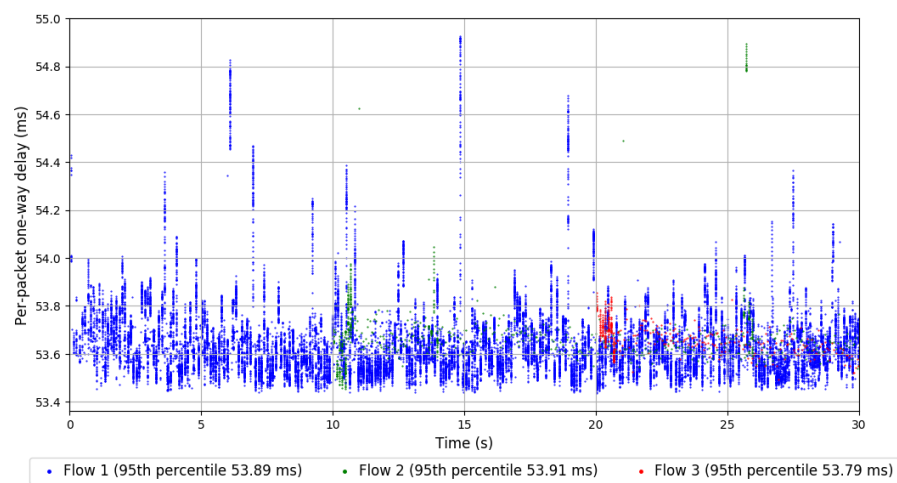
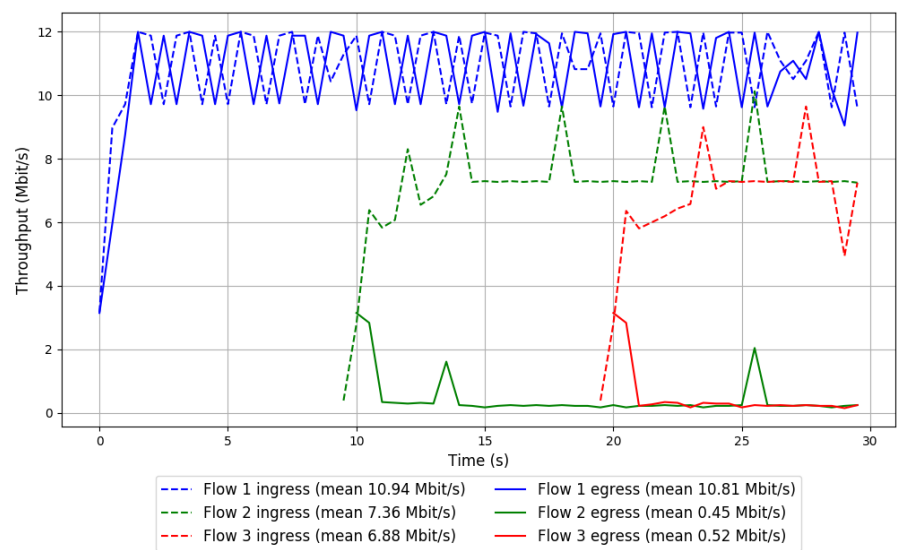


```
Run 2: Statistics of KohoCC

Start at: 2017-08-21 07:29:19
End at: 2017-08-21 07:29:49

# Below is generated by plot.py at 2017-08-21 09:51:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.28 Mbit/s
95th percentile per-packet one-way delay: 53.887 ms
Loss rate: 37.78%
-- Flow 1:
Average throughput: 10.81 Mbit/s
95th percentile per-packet one-way delay: 53.888 ms
Loss rate: 1.18%
-- Flow 2:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 53.910 ms
Loss rate: 93.91%
-- Flow 3:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 53.793 ms
Loss rate: 92.47%
```

Run 2: Report of KohoCC — Data Link



Run 3: Statistics of KohoCC

Start at: 2017-08-21 07:40:12

End at: 2017-08-21 07:40:42

# Below is generated by plot.py at 2017-08-21 09:51:15

# Datalink statistics

-- Total of 3 flows:

Average throughput: 11.33 Mbit/s

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

Loss rate: 37.78%

-- Flow 1:

Average throughput: 10.91 Mbit/s

95th percentile per-packet one-way delay: 53.846 ms

Loss rate: 0.67%

-- Flow 2:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 53.819 ms

Loss rate: 94.93%

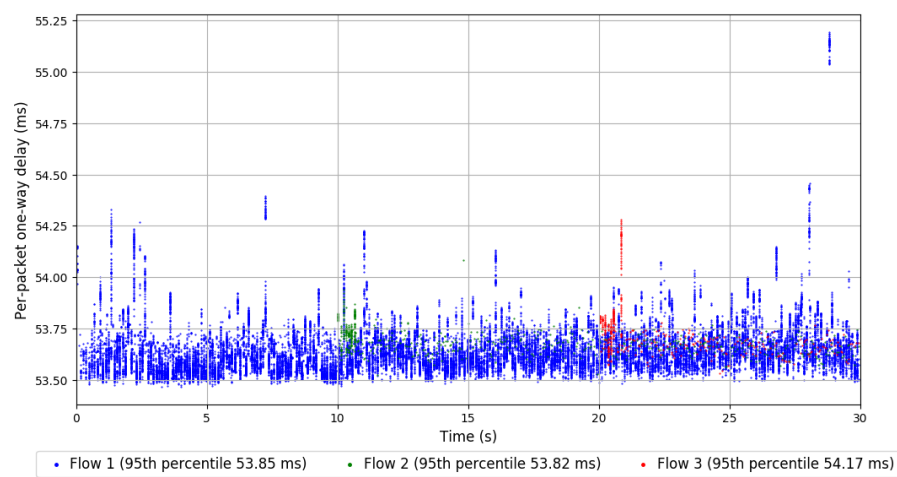
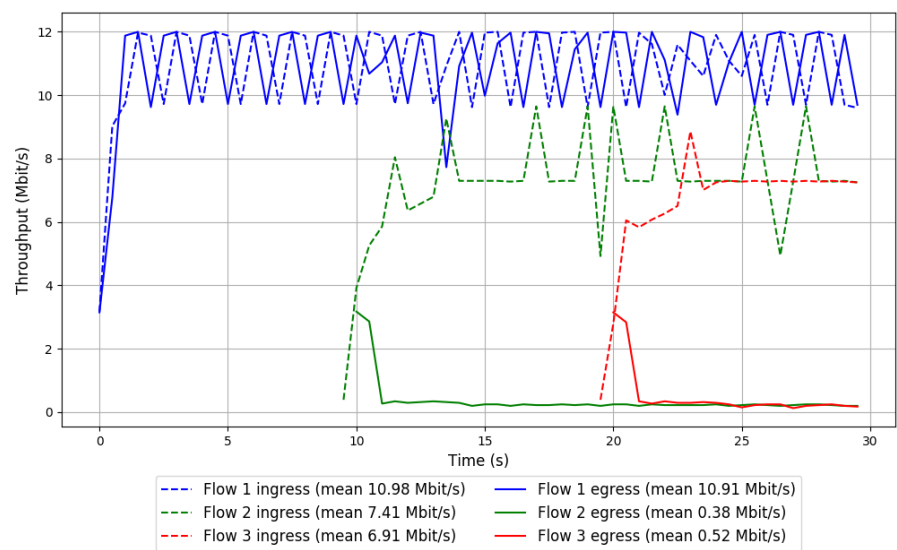
-- Flow 3:

Average throughput: 0.52 Mbit/s

95th percentile per-packet one-way delay: 54.167 ms

Loss rate: 92.49%

Run 3: Report of KohoCC — Data Link



Run 4: Statistics of KohoCC

Start at: 2017-08-21 07:51:02

End at: 2017-08-21 07:51:32

# Below is generated by plot.py at 2017-08-21 09:51:15

# Datalink statistics

-- Total of 3 flows:

Average throughput: 4.07 Mbit/s

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

Loss rate: 74.36%

-- Flow 1:

Average throughput: 0.33 Mbit/s

95th percentile per-packet one-way delay: 53.832 ms

Loss rate: 95.61%

-- Flow 2:

Average throughput: 0.37 Mbit/s

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

Loss rate: 95.00%

-- Flow 3:

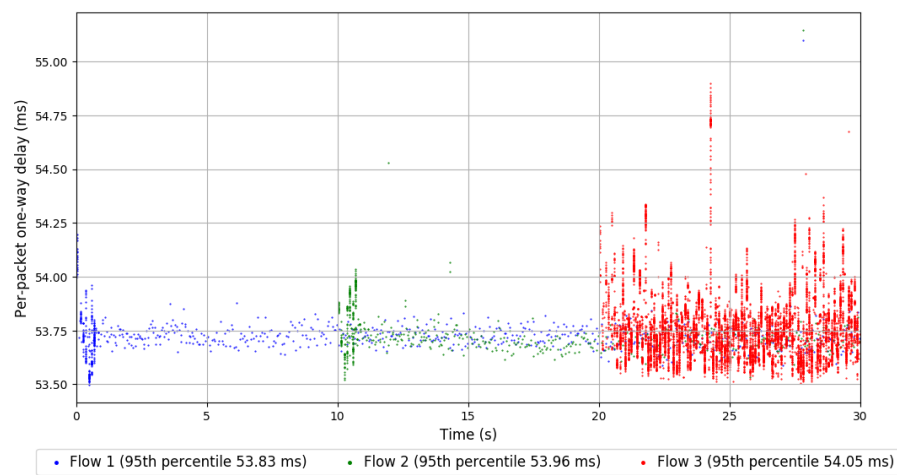
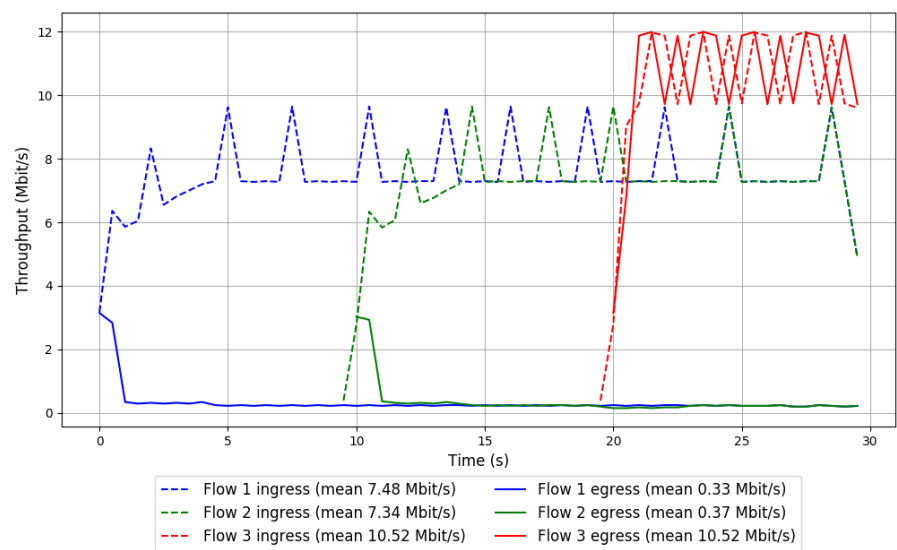
Average throughput: 10.52 Mbit/s

95th percentile per-packet one-way delay: 54.052 ms

Loss rate: 0.00%



Run 4: Report of KohoCC — Data Link



Run 5: Statistics of KohoCC

Start at: 2017-08-21 08:02:01

End at: 2017-08-21 08:02:31

# Below is generated by plot.py at 2017-08-21 09:51:20

# Datalink statistics

-- Total of 3 flows:

Average throughput: 18.39 Mbit/s

95th percentile per-packet one-way delay: 53.919 ms

Loss rate: 11.66%

-- Flow 1:

Average throughput: 10.77 Mbit/s

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

Loss rate: 1.88%

-- Flow 2:

Average throughput: 11.17 Mbit/s

95th percentile per-packet one-way delay: 53.811 ms

Loss rate: 0.77%

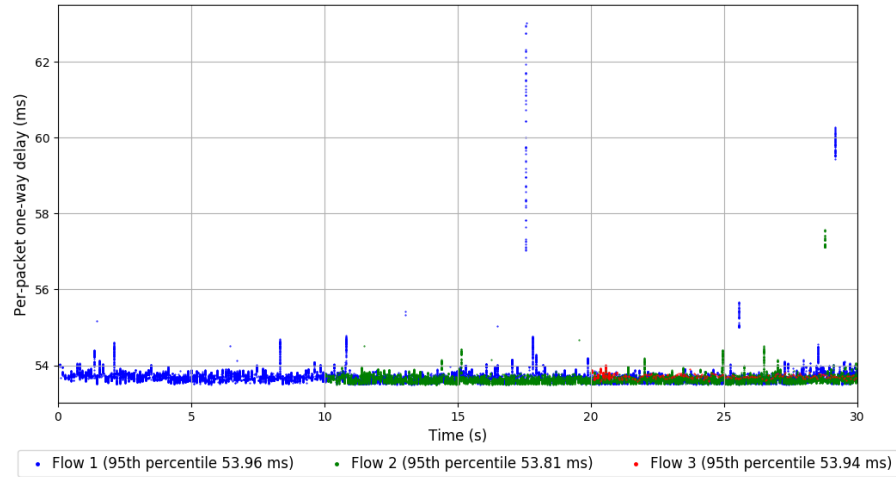
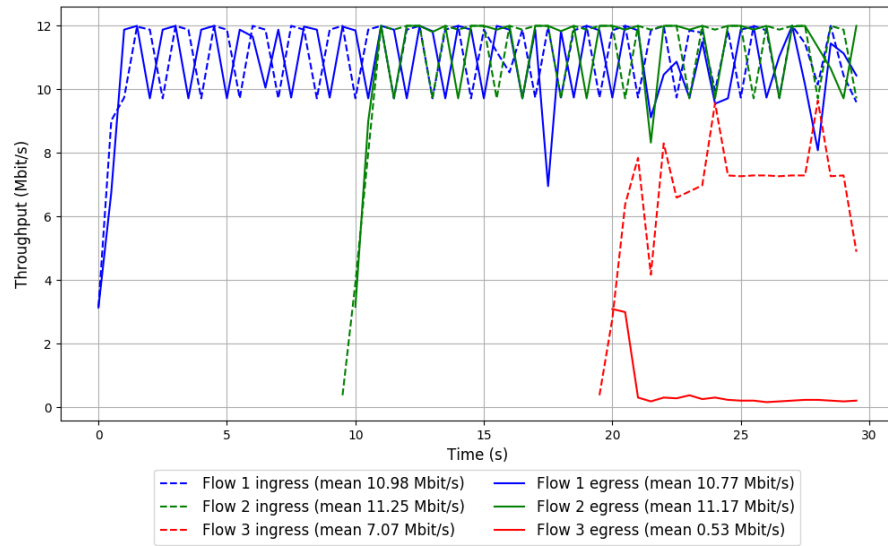
-- Flow 3:

Average throughput: 0.53 Mbit/s

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

Loss rate: 92.49%

# Run 5: Report of KohoCC — Data Link

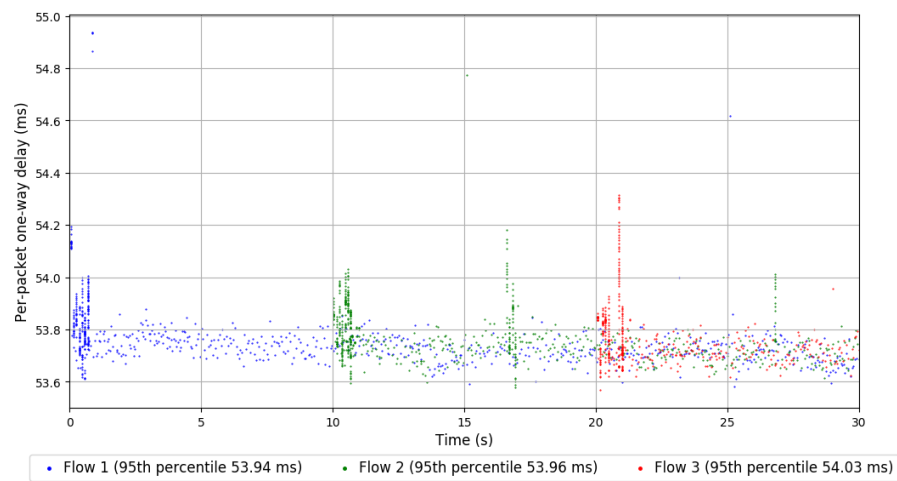
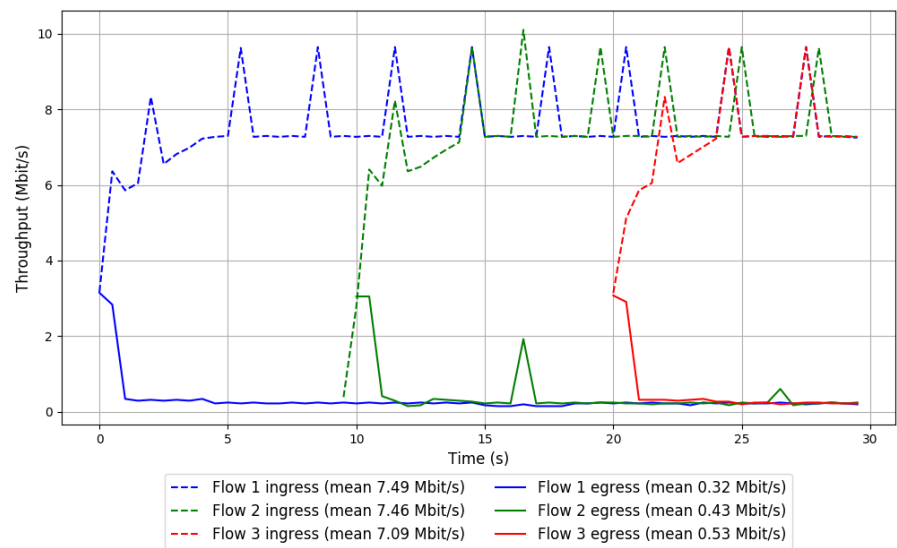


```
Run 6: Statistics of KohoCC

Start at: 2017-08-21 08:12:58
End at: 2017-08-21 08:13:28

# Below is generated by plot.py at 2017-08-21 09:51:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.78 Mbit/s
95th percentile per-packet one-way delay: 53.963 ms
Loss rate: 94.74%
-- Flow 1:
Average throughput: 0.32 Mbit/s
95th percentile per-packet one-way delay: 53.938 ms
Loss rate: 95.75%
-- Flow 2:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.957 ms
Loss rate: 94.29%
-- Flow 3:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 54.029 ms
Loss rate: 92.49%
```

Run 6: Report of KohoCC — Data Link



Run 7: Statistics of KohoCC

Start at: 2017-08-21 08:24:00

End at: 2017-08-21 08:24:30

Run 7: Report of KohoCC — Data Link

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Figure is missing

Run 8: Statistics of KohoCC

Start at: 2017-08-21 08:34:42

End at: 2017-08-21 08:35:12

# Below is generated by plot.py at 2017-08-21 09:51:20

# Datalink statistics

-- Total of 3 flows:

Average throughput: 4.10 Mbit/s

95th percentile per-packet one-way delay: 54.562 ms

Loss rate: 74.26%

-- Flow 1:

Average throughput: 0.32 Mbit/s

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

Loss rate: 95.69%

-- Flow 2:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 53.970 ms

Loss rate: 94.93%

-- Flow 3:

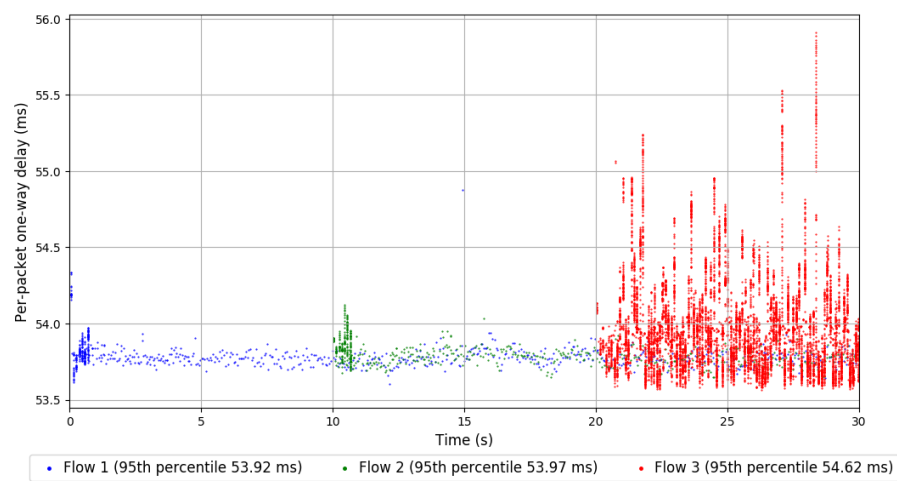
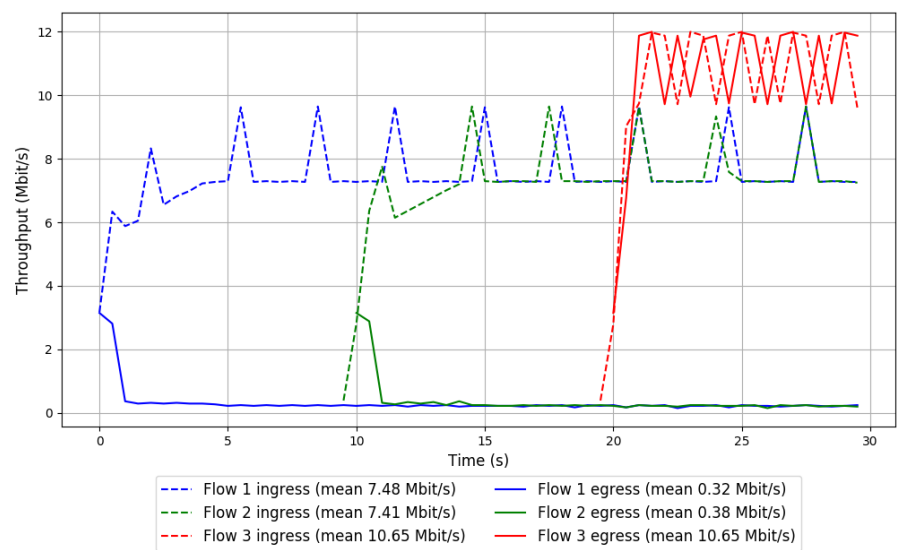
Average throughput: 10.65 Mbit/s

95th percentile per-packet one-way delay: 54.618 ms

Loss rate: 0.00%



Run 8: Report of KohoCC — Data Link



Run 9: Statistics of KohoCC

Start at: 2017-08-21 08:45:41

End at: 2017-08-21 08:46:11

# Below is generated by plot.py at 2017-08-21 09:51:23

# Datalink statistics

-- Total of 3 flows:

Average throughput: 7.72 Mbit/s

95th percentile per-packet one-way delay: 53.976 ms

Loss rate: 51.52%

-- Flow 1:

Average throughput: 0.30 Mbit/s

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

Loss rate: 95.43%

-- Flow 2:

Average throughput: 10.88 Mbit/s

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

Loss rate: 2.88%

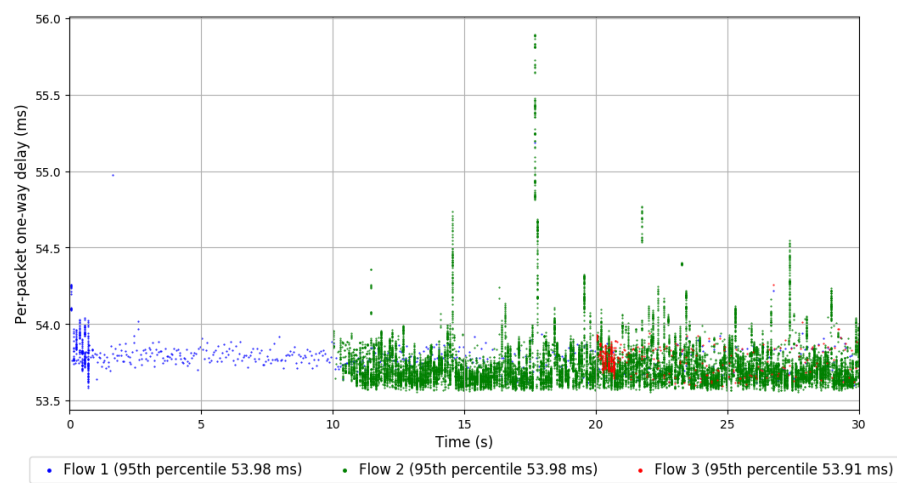
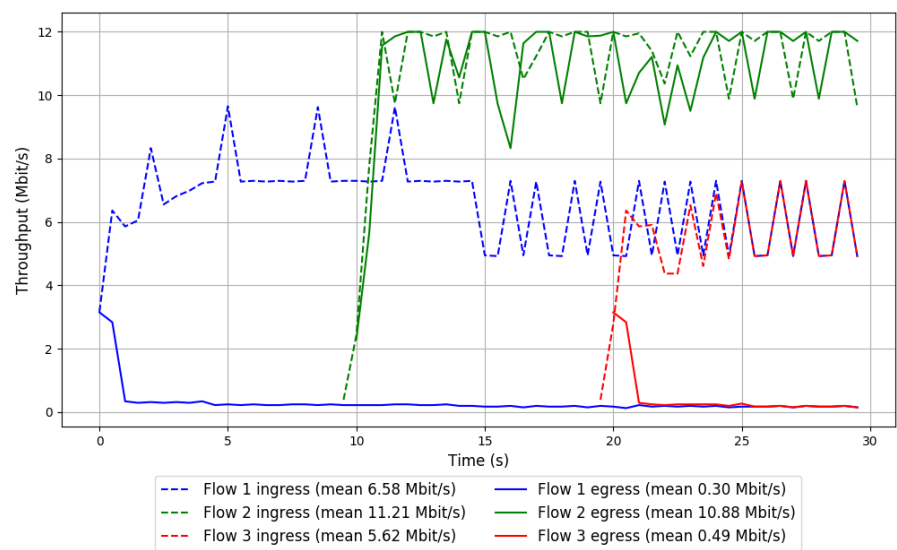
-- Flow 3:

Average throughput: 0.49 Mbit/s

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

Loss rate: 91.33%

Run 9: Report of KohoCC — Data Link



Run 10: Statistics of KohoCC

Start at: 2017-08-21 08:56:19

End at: 2017-08-21 08:56:49

# Below is generated by plot.py at 2017-08-21 09:51:25

# Datalink statistics

-- Total of 3 flows:

Average throughput: 11.12 Mbit/s

95th percentile per-packet one-way delay: 54.120 ms

Loss rate: 37.81%

-- Flow 1:

Average throughput: 0.31 Mbit/s

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

Loss rate: 95.44%

-- Flow 2:

Average throughput: 10.74 Mbit/s

95th percentile per-packet one-way delay: 53.991 ms

Loss rate: 4.45%

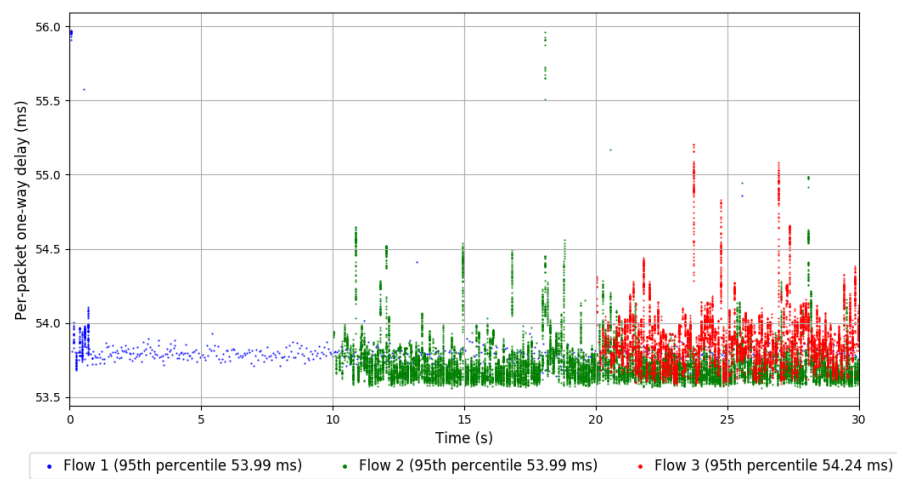
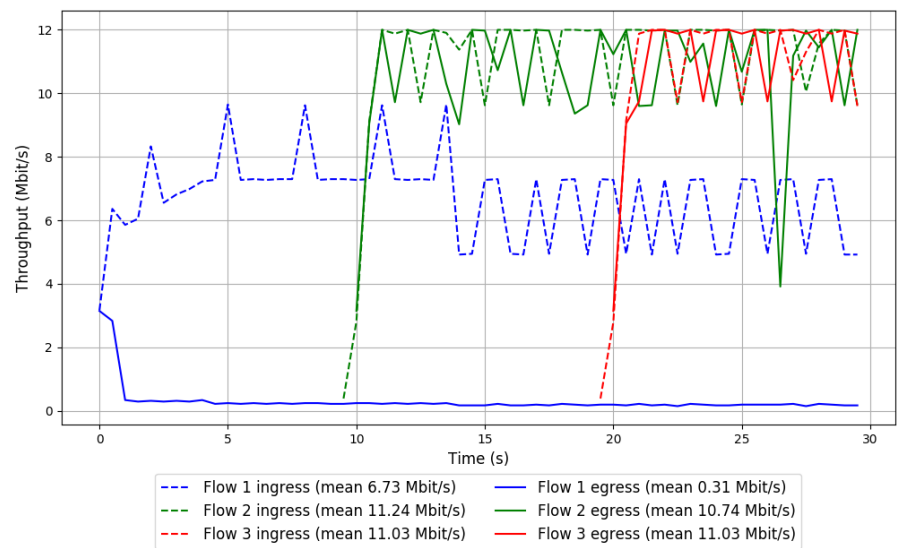
-- Flow 3:

Average throughput: 11.03 Mbit/s

95th percentile per-packet one-way delay: 54.244 ms

Loss rate: 0.00%

Run 10: Report of KohoCC — Data Link

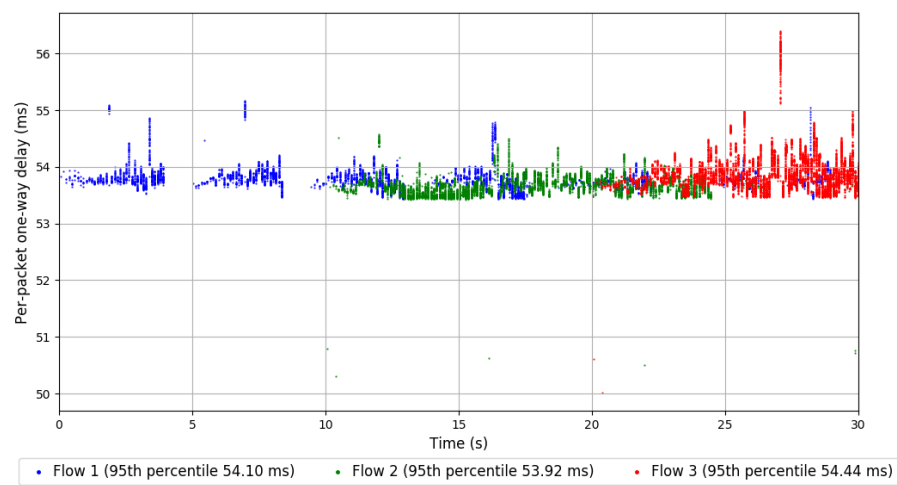
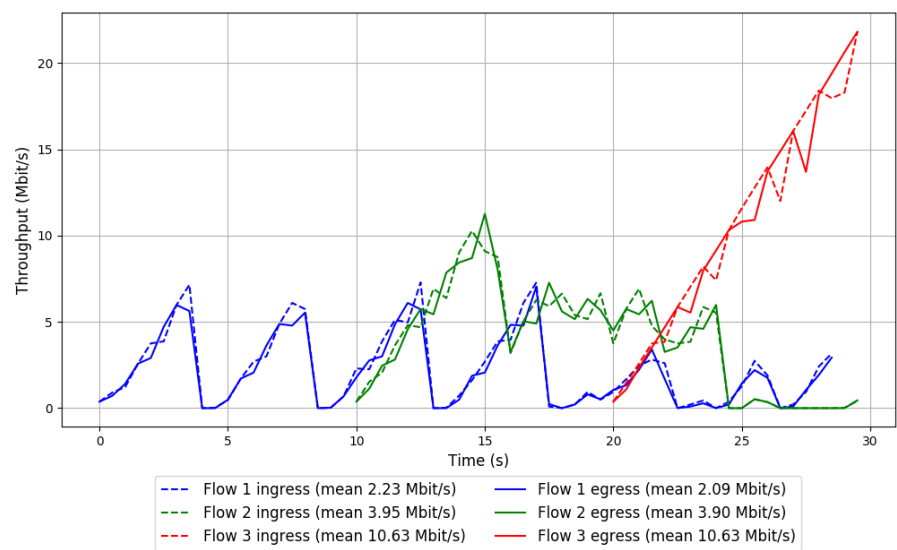


```
Run 1: Statistics of LEDBAT

Start at: 2017-08-21 07:14:10
End at: 2017-08-21 07:14:40

# Below is generated by plot.py at 2017-08-21 09:51:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.13 Mbit/s
95th percentile per-packet one-way delay: 54.290 ms
Loss rate: 2.13%
-- Flow 1:
Average throughput: 2.09 Mbit/s
95th percentile per-packet one-way delay: 54.100 ms
Loss rate: 6.68%
-- Flow 2:
Average throughput: 3.90 Mbit/s
95th percentile per-packet one-way delay: 53.923 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 10.63 Mbit/s
95th percentile per-packet one-way delay: 54.439 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link



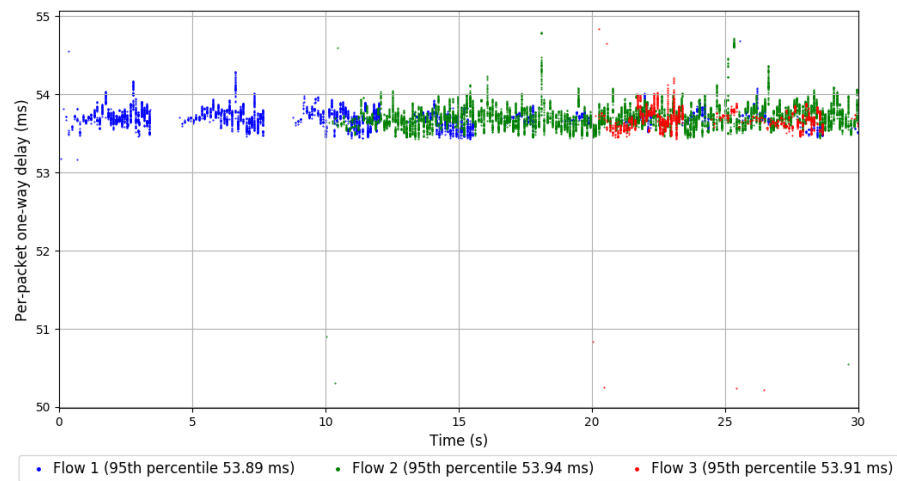
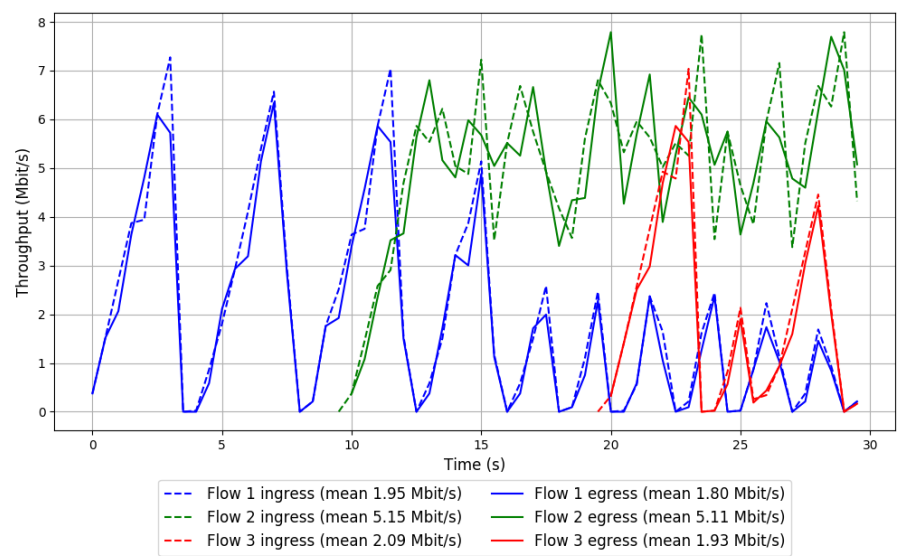
```
Run 2: Statistics of LEDBAT

Start at: 2017-08-21 07:24:51
End at: 2017-08-21 07:25:21

# Below is generated by plot.py at 2017-08-21 09:51:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.85 Mbit/s
95th percentile per-packet one-way delay: 53.924 ms
Loss rate: 3.72%
-- Flow 1:
Average throughput: 1.80 Mbit/s
95th percentile per-packet one-way delay: 53.887 ms
Loss rate: 7.81%
-- Flow 2:
Average throughput: 5.11 Mbit/s
95th percentile per-packet one-way delay: 53.936 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 53.912 ms
Loss rate: 7.36%
```



Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2017-08-21 07:35:39

End at: 2017-08-21 07:36:09

# Below is generated by plot.py at 2017-08-21 09:51:32

# Datalink statistics

-- Total of 3 flows:

Average throughput: 16.64 Mbit/s

95th percentile per-packet one-way delay: 54.329 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 10.54 Mbit/s

95th percentile per-packet one-way delay: 54.340 ms

Loss rate: 0.15%

-- Flow 2:

Average throughput: 8.33 Mbit/s

95th percentile per-packet one-way delay: 54.318 ms

Loss rate: 0.30%

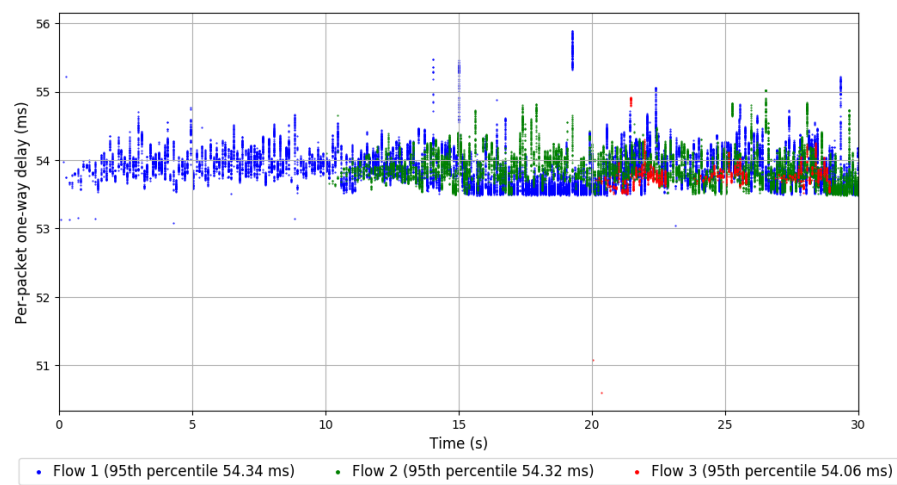
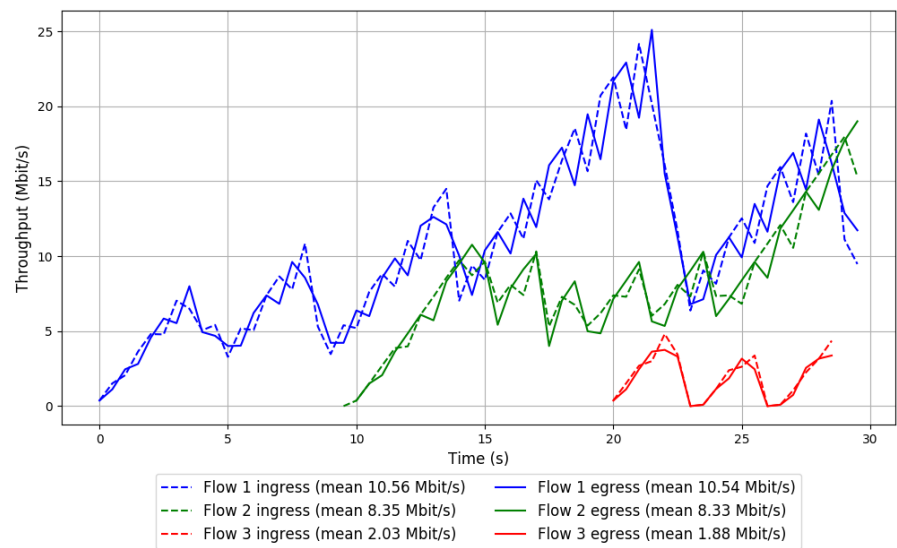
-- Flow 3:

Average throughput: 1.88 Mbit/s

95th percentile per-packet one-way delay: 54.062 ms

Loss rate: 8.50%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2017-08-21 07:46:48

End at: 2017-08-21 07:47:18

# Below is generated by plot.py at 2017-08-21 09:51:32

# Datalink statistics

-- Total of 3 flows:

Average throughput: 8.35 Mbit/s

95th percentile per-packet one-way delay: 54.340 ms

Loss rate: 1.64%

-- Flow 1:

Average throughput: 6.72 Mbit/s

95th percentile per-packet one-way delay: 54.373 ms

Loss rate: 0.17%

-- Flow 2:

Average throughput: 2.22 Mbit/s

95th percentile per-packet one-way delay: 54.097 ms

Loss rate: 6.46%

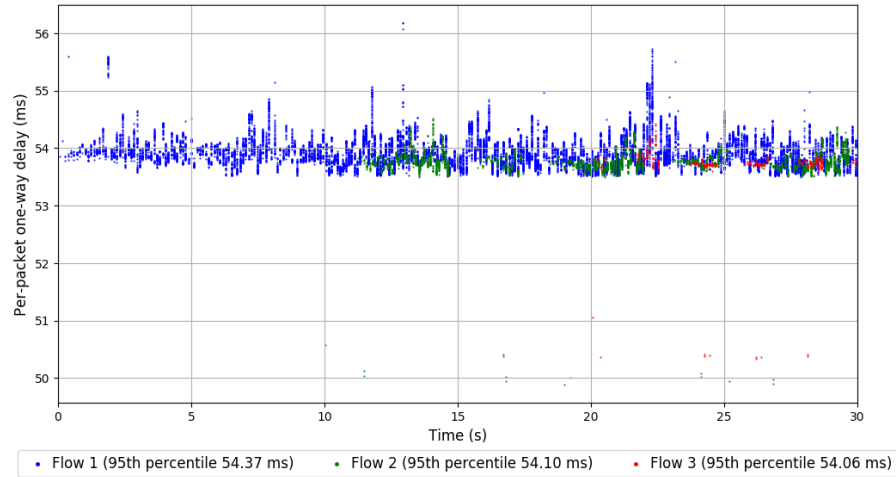
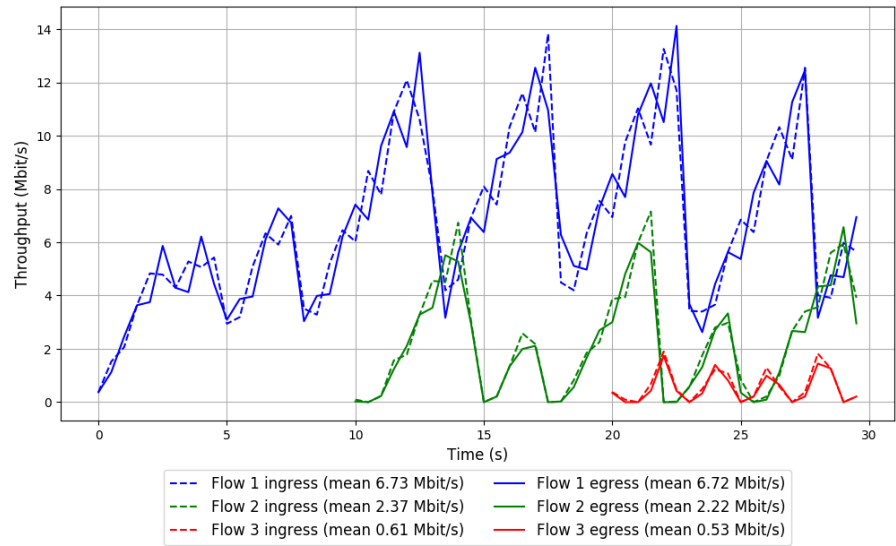
-- Flow 3:

Average throughput: 0.53 Mbit/s

95th percentile per-packet one-way delay: 54.059 ms

Loss rate: 13.38%

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



Run 5: Statistics of LEDBAT

Start at: 2017-08-21 07:57:31

End at: 2017-08-21 07:58:01

# Below is generated by plot.py at 2017-08-21 09:51:33

# Datalink statistics

-- Total of 3 flows:

Average throughput: 4.70 Mbit/s

95th percentile per-packet one-way delay: 54.055 ms

Loss rate: 6.15%

-- Flow 1:

Average throughput: 2.24 Mbit/s

95th percentile per-packet one-way delay: 53.950 ms

Loss rate: 6.81%

-- Flow 2:

Average throughput: 2.23 Mbit/s

95th percentile per-packet one-way delay: 54.144 ms

Loss rate: 5.70%

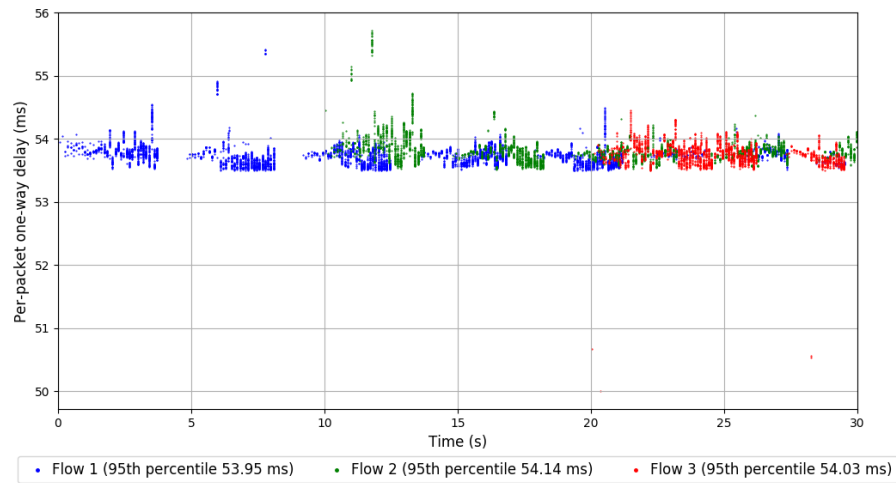
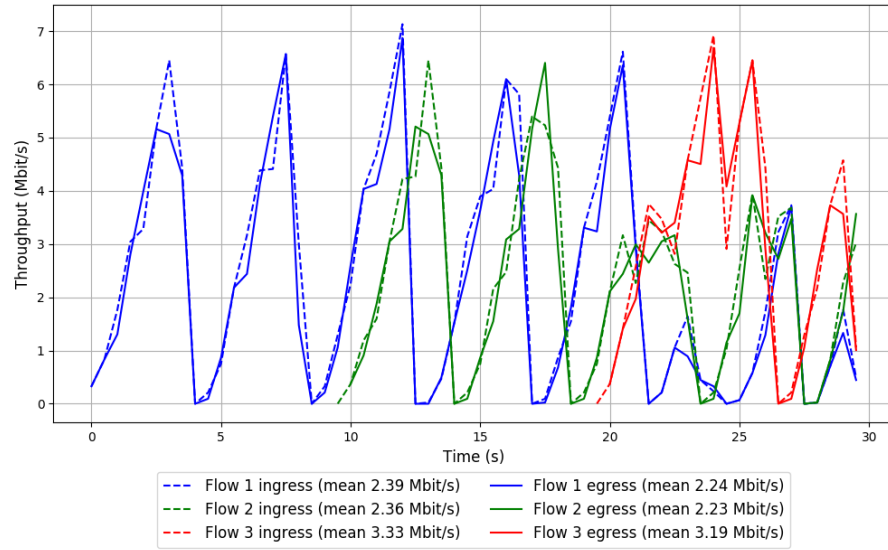
-- Flow 3:

Average throughput: 3.19 Mbit/s

95th percentile per-packet one-way delay: 54.027 ms

Loss rate: 5.34%

## Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2017-08-21 08:08:19

End at: 2017-08-21 08:08:49

# Below is generated by plot.py at 2017-08-21 09:51:34

# Datalink statistics

-- Total of 3 flows:

Average throughput: 3.56 Mbit/s

95th percentile per-packet one-way delay: 54.065 ms

Loss rate: 6.26%

-- Flow 1:

Average throughput: 2.19 Mbit/s

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

Loss rate: 6.68%

-- Flow 2:

Average throughput: 1.39 Mbit/s

95th percentile per-packet one-way delay: 53.991 ms

Loss rate: 6.86%

-- Flow 3:

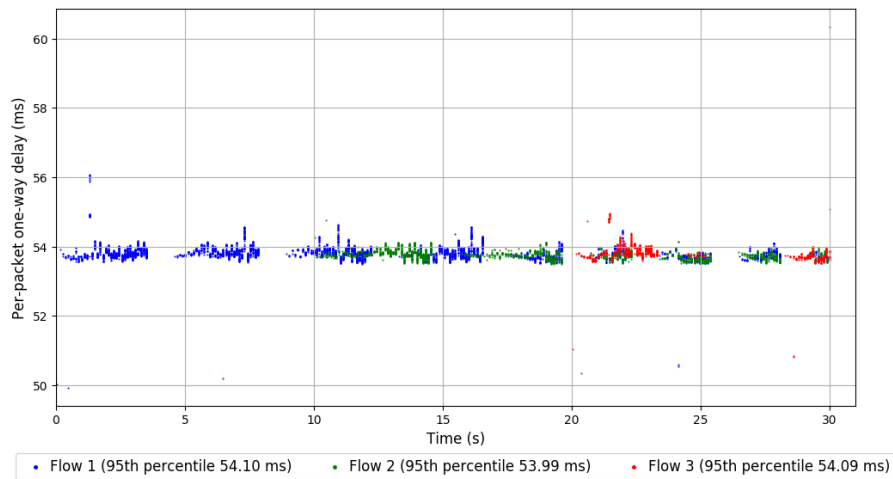
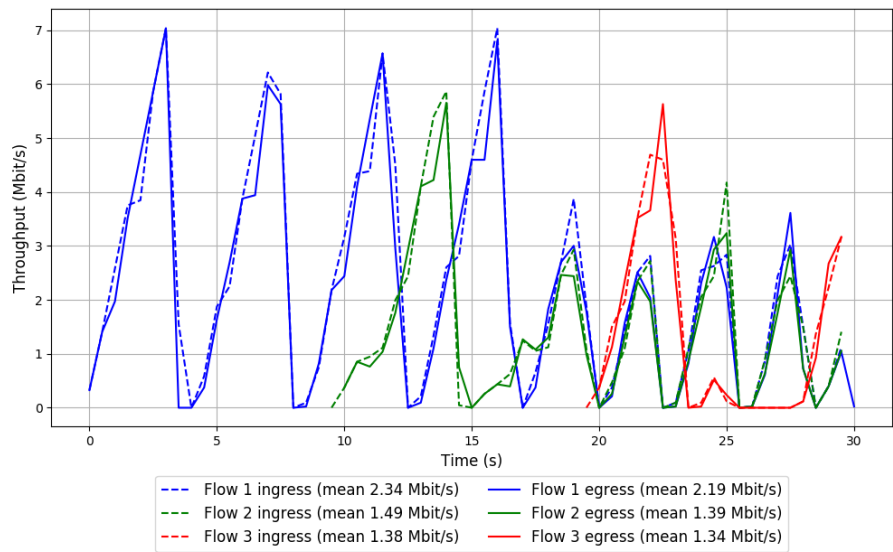
Average throughput: 1.34 Mbit/s

95th percentile per-packet one-way delay: 54.087 ms

Loss rate: 2.82%



Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

Start at: 2017-08-21 08:19:25

End at: 2017-08-21 08:19:55

# Below is generated by plot.py at 2017-08-21 09:51:39

# Datalink statistics

-- Total of 3 flows:

Average throughput: 27.46 Mbit/s

95th percentile per-packet one-way delay: 54.144 ms

Loss rate: 0.30%

-- Flow 1:

Average throughput: 21.59 Mbit/s

95th percentile per-packet one-way delay: 54.157 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 4.13 Mbit/s

95th percentile per-packet one-way delay: 53.914 ms

Loss rate: 2.75%

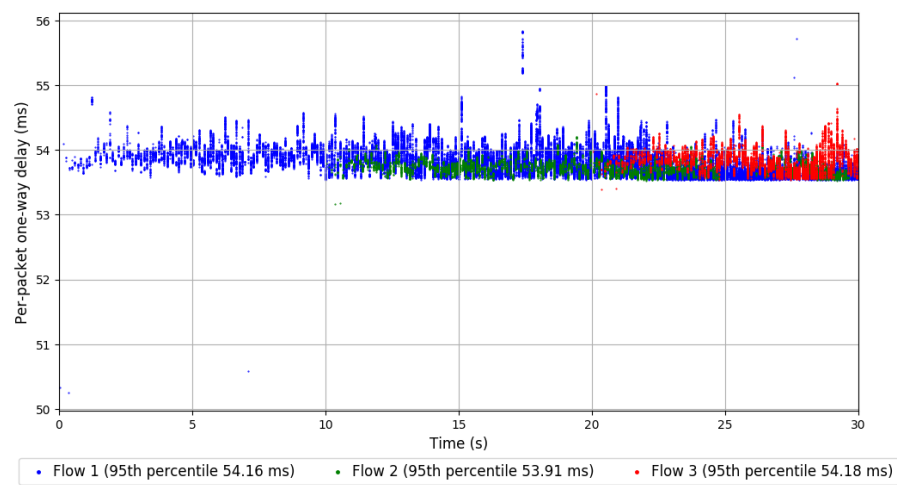
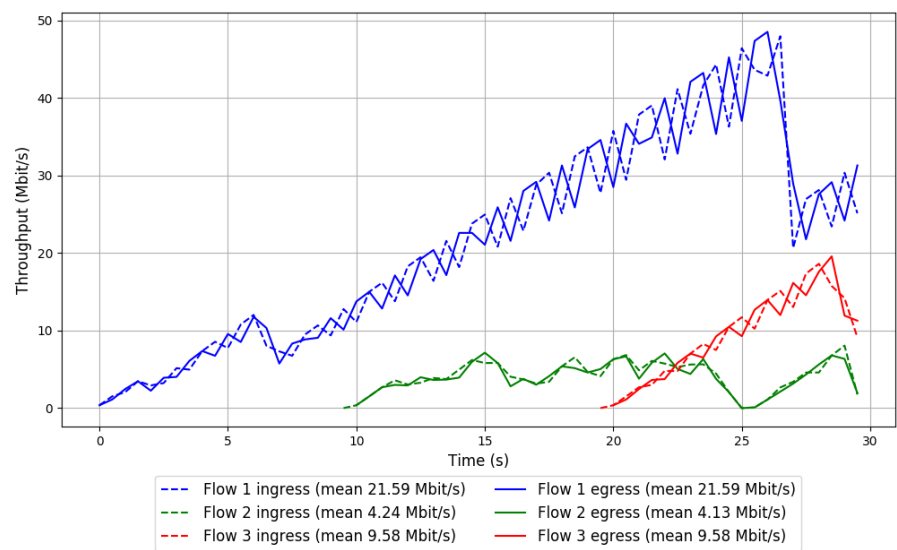
-- Flow 3:

Average throughput: 9.58 Mbit/s

95th percentile per-packet one-way delay: 54.178 ms

Loss rate: 0.05%

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2017-08-21 08:30:18

End at: 2017-08-21 08:30:48

# Below is generated by plot.py at 2017-08-21 09:51:39

# Datalink statistics

-- Total of 3 flows:

Average throughput: 14.05 Mbit/s

95th percentile per-packet one-way delay: 54.492 ms

Loss rate: 0.53%

-- Flow 1:

Average throughput: 4.25 Mbit/s

95th percentile per-packet one-way delay: 54.109 ms

Loss rate: 1.66%

-- Flow 2:

Average throughput: 10.37 Mbit/s

95th percentile per-packet one-way delay: 54.531 ms

Loss rate: 0.05%

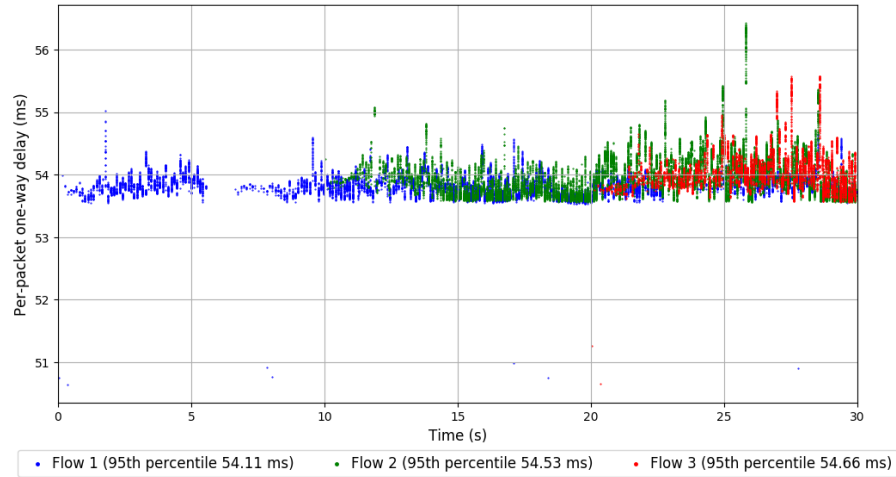
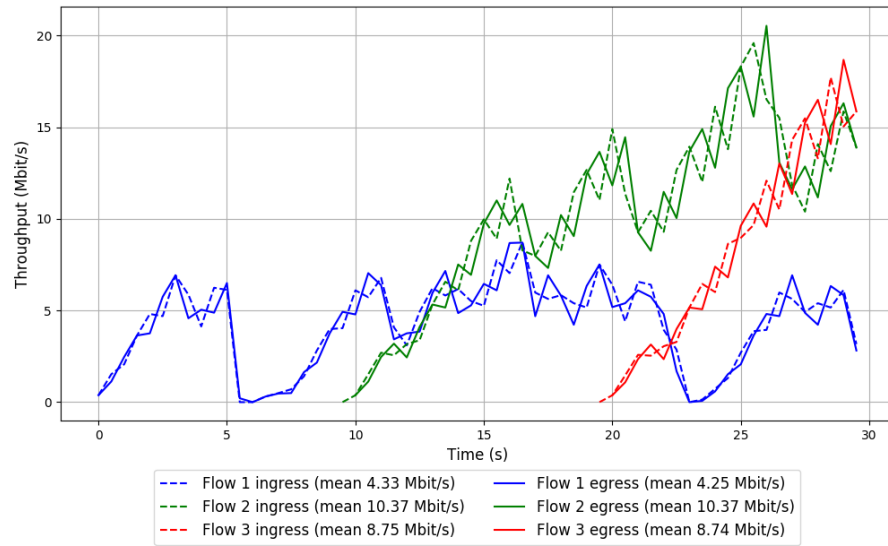
-- Flow 3:

Average throughput: 8.74 Mbit/s

95th percentile per-packet one-way delay: 54.662 ms

Loss rate: 0.00%

# Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2017-08-21 08:41:07

End at: 2017-08-21 08:41:37

# Below is generated by plot.py at 2017-08-21 09:51:43

# Datalink statistics

-- Total of 3 flows:

Average throughput: 12.34 Mbit/s

95th percentile per-packet one-way delay: 54.101 ms

Loss rate: 0.92%

-- Flow 1:

Average throughput: 4.01 Mbit/s

95th percentile per-packet one-way delay: 54.112 ms

Loss rate: 1.15%

-- Flow 2:

Average throughput: 11.23 Mbit/s

95th percentile per-packet one-way delay: 54.112 ms

Loss rate: 0.22%

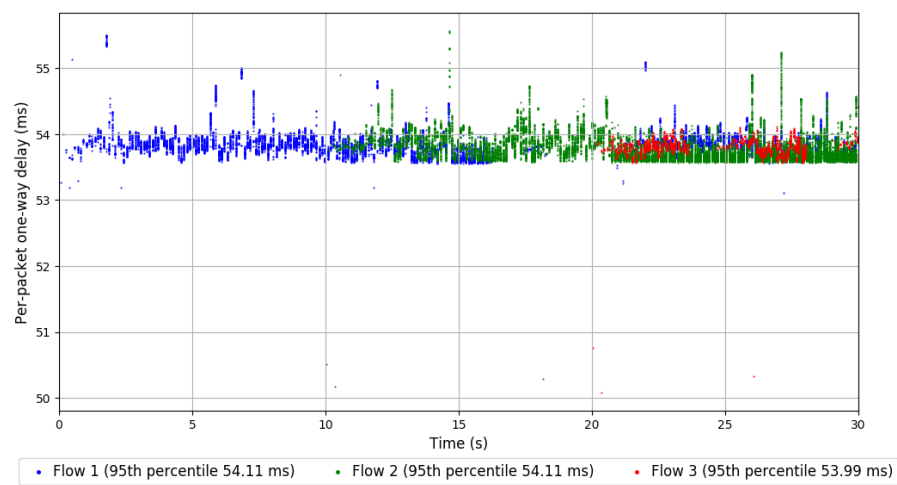
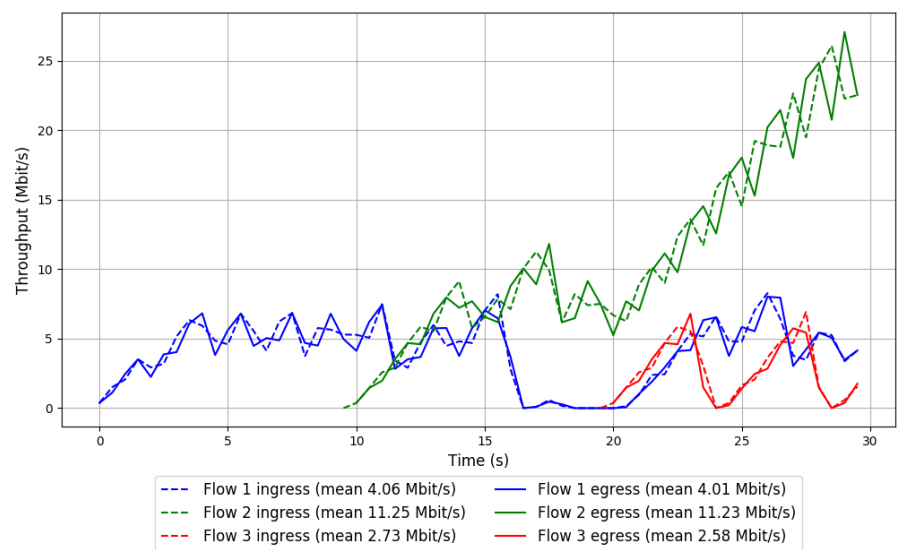
-- Flow 3:

Average throughput: 2.58 Mbit/s

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

Loss rate: 5.66%

Run 9: Report of LEDBAT — Data Link



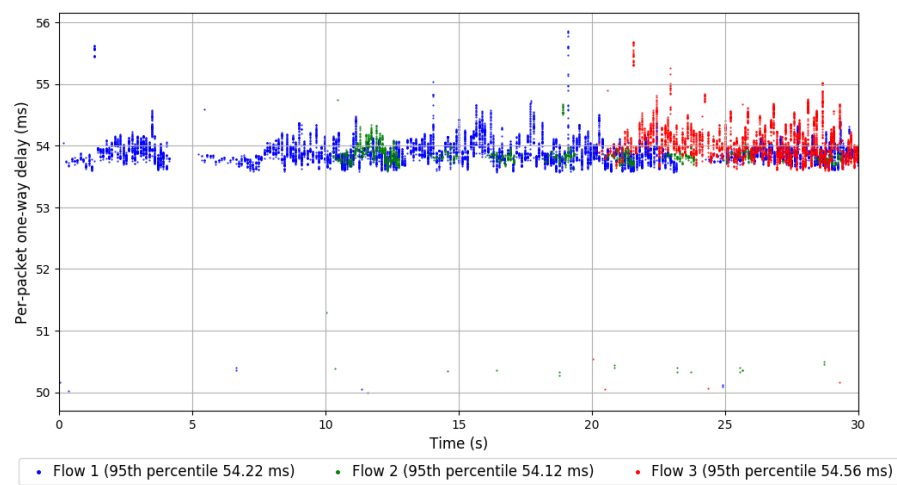
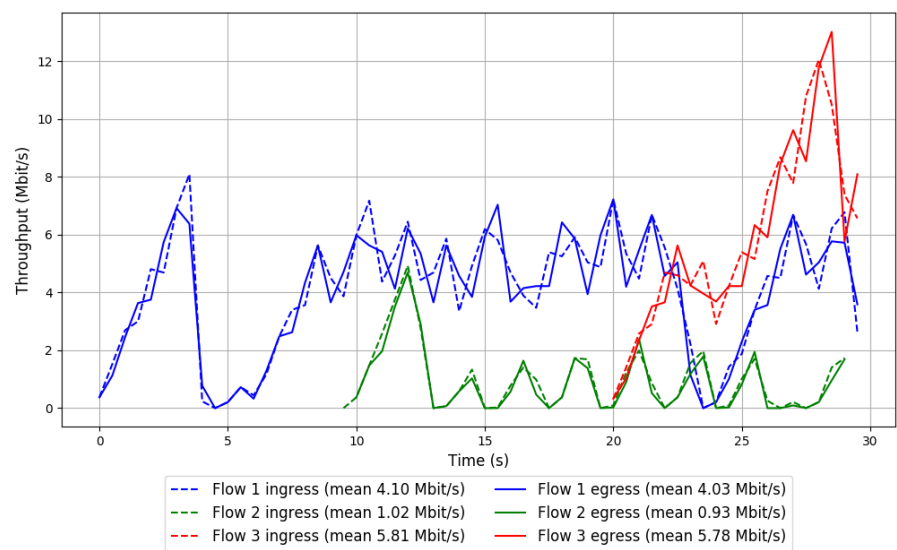
```
Run 10: Statistics of LEDBAT

Start at: 2017-08-21 08:52:00
End at: 2017-08-21 08:52:30

# Below is generated by plot.py at 2017-08-21 09:51:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.53 Mbit/s
95th percentile per-packet one-way delay: 54.348 ms
Loss rate: 2.17%
-- Flow 1:
Average throughput: 4.03 Mbit/s
95th percentile per-packet one-way delay: 54.215 ms
Loss rate: 1.78%
-- Flow 2:
Average throughput: 0.93 Mbit/s
95th percentile per-packet one-way delay: 54.124 ms
Loss rate: 9.78%
-- Flow 3:
Average throughput: 5.78 Mbit/s
95th percentile per-packet one-way delay: 54.558 ms
Loss rate: 0.39%
```



Run 10: Report of LEDBAT — Data Link

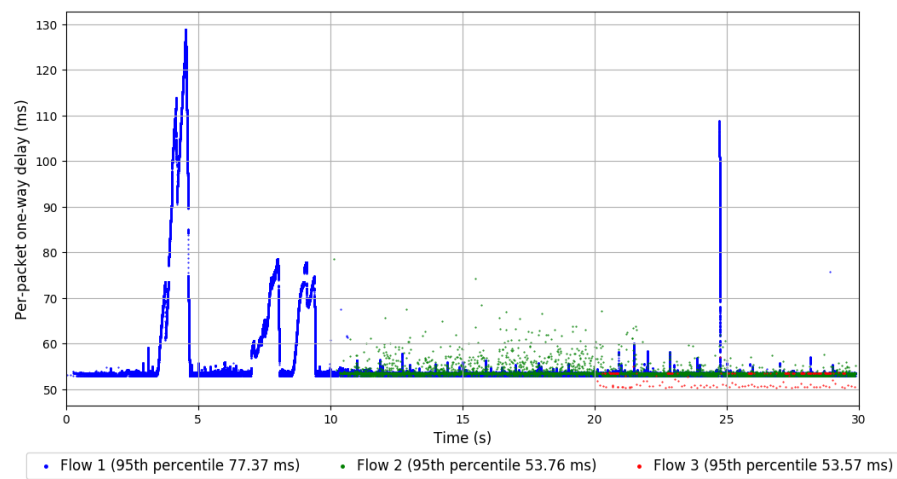
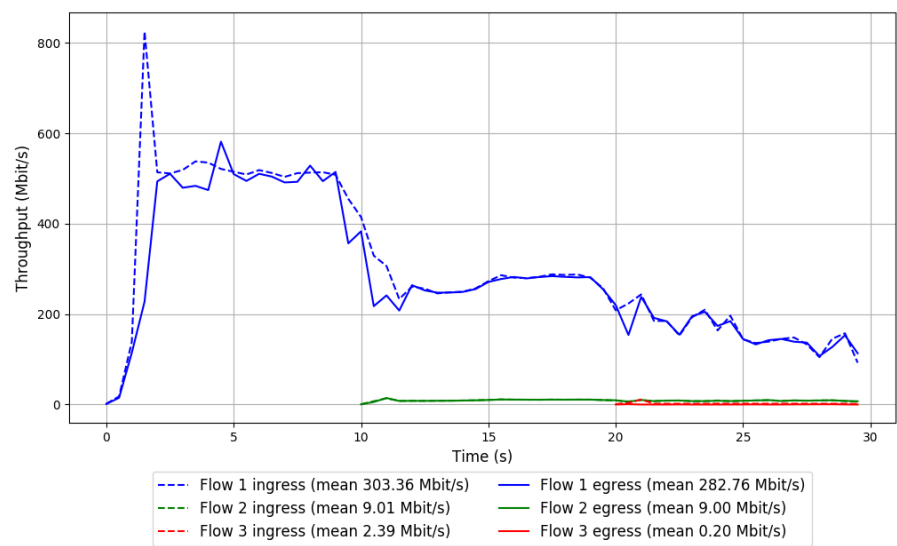


```
Run 1: Statistics of PCC

Start at: 2017-08-21 07:09:55
End at: 2017-08-21 07:10:25

# Below is generated by plot.py at 2017-08-21 09:52:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 288.78 Mbit/s
95th percentile per-packet one-way delay: 77.092 ms
Loss rate: 6.88%
-- Flow 1:
Average throughput: 282.76 Mbit/s
95th percentile per-packet one-way delay: 77.374 ms
Loss rate: 6.79%
-- Flow 2:
Average throughput: 9.00 Mbit/s
95th percentile per-packet one-way delay: 53.762 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 53.573 ms
Loss rate: 91.46%
```

Run 1: Report of PCC — Data Link

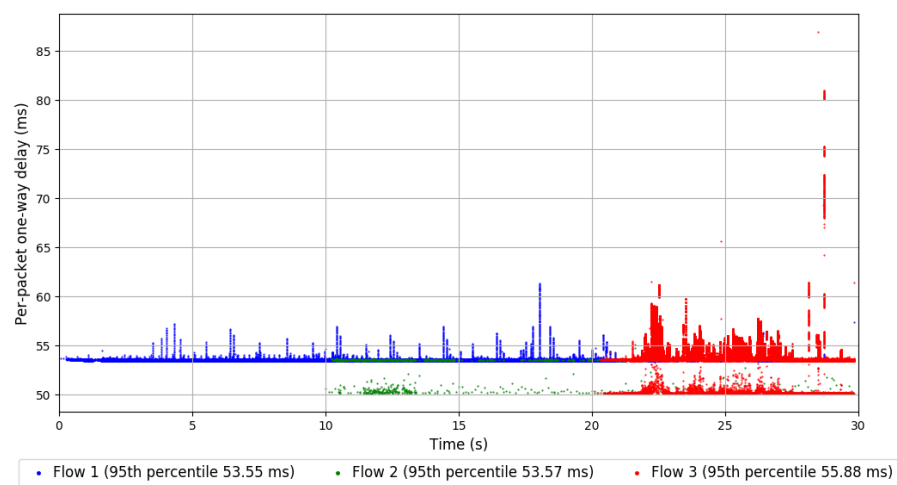
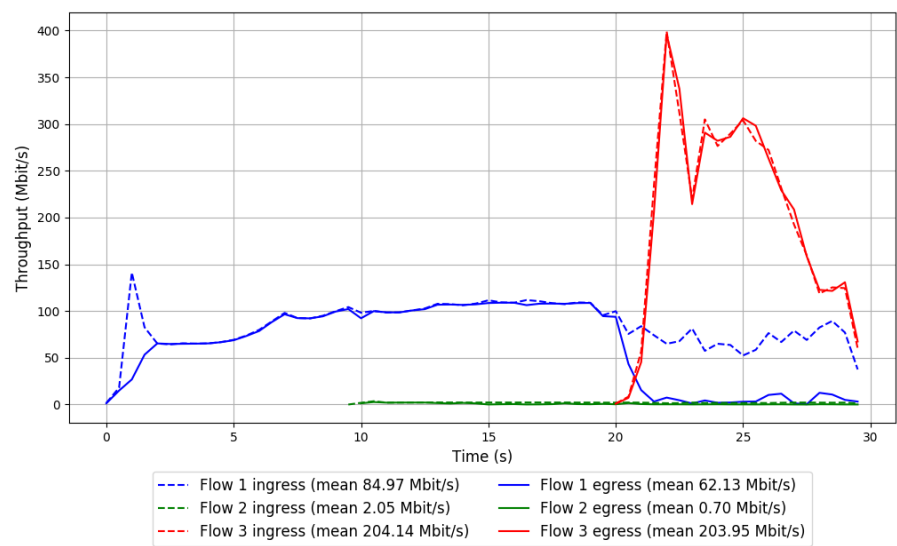


```
Run 2: Statistics of PCC

Start at: 2017-08-21 07:20:41
End at: 2017-08-21 07:21:11

# Below is generated by plot.py at 2017-08-21 09:52:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 129.27 Mbit/s
95th percentile per-packet one-way delay: 55.120 ms
Loss rate: 15.52%
-- Flow 1:
Average throughput: 62.13 Mbit/s
95th percentile per-packet one-way delay: 53.553 ms
Loss rate: 26.88%
-- Flow 2:
Average throughput: 0.70 Mbit/s
95th percentile per-packet one-way delay: 53.570 ms
Loss rate: 65.72%
-- Flow 3:
Average throughput: 203.95 Mbit/s
95th percentile per-packet one-way delay: 55.878 ms
Loss rate: 0.02%
```

Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2017-08-21 07:31:25

End at: 2017-08-21 07:31:55

# Below is generated by plot.py at 2017-08-21 09:52:42

# Datalink statistics

-- Total of 3 flows:

Average throughput: 67.00 Mbit/s

95th percentile per-packet one-way delay: 53.590 ms

Loss rate: 24.84%

-- Flow 1:

Average throughput: 57.71 Mbit/s

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

Loss rate: 27.12%

-- Flow 2:

Average throughput: 10.40 Mbit/s

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

Loss rate: 7.71%

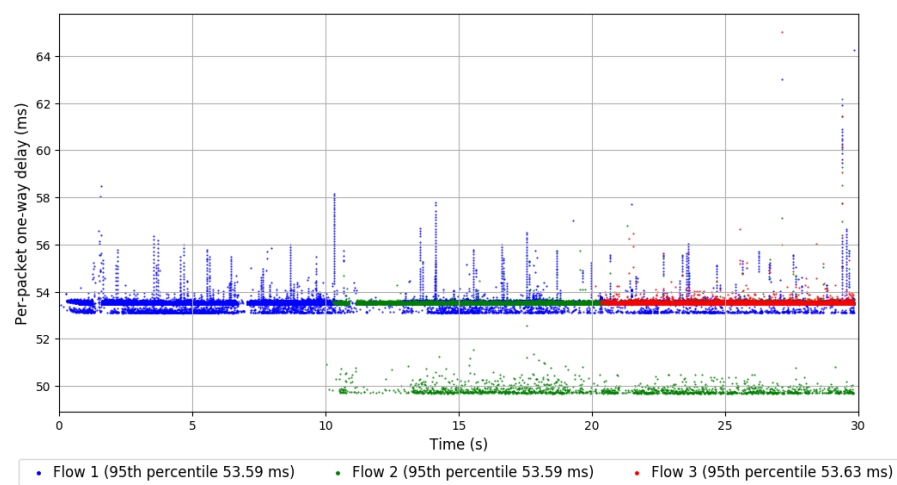
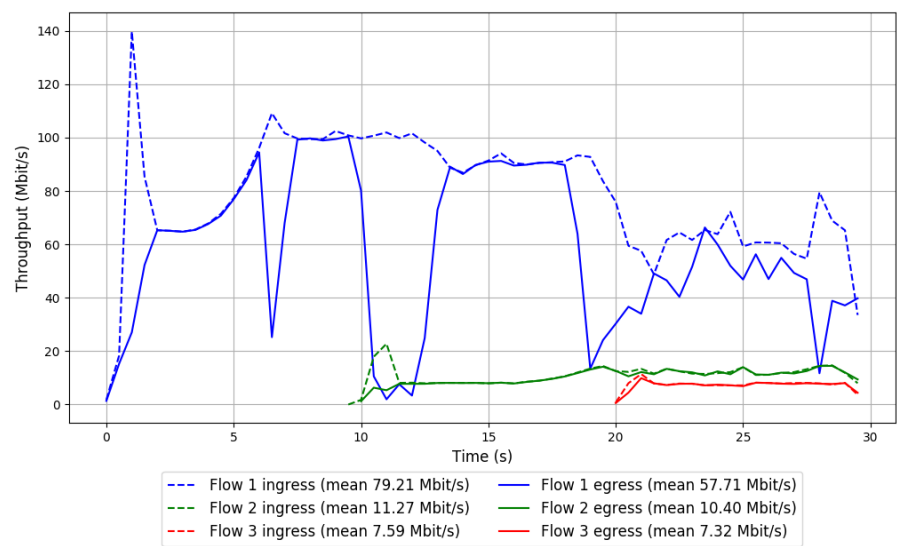
-- Flow 3:

Average throughput: 7.32 Mbit/s

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

Loss rate: 3.56%

Run 3: Report of PCC — Data Link



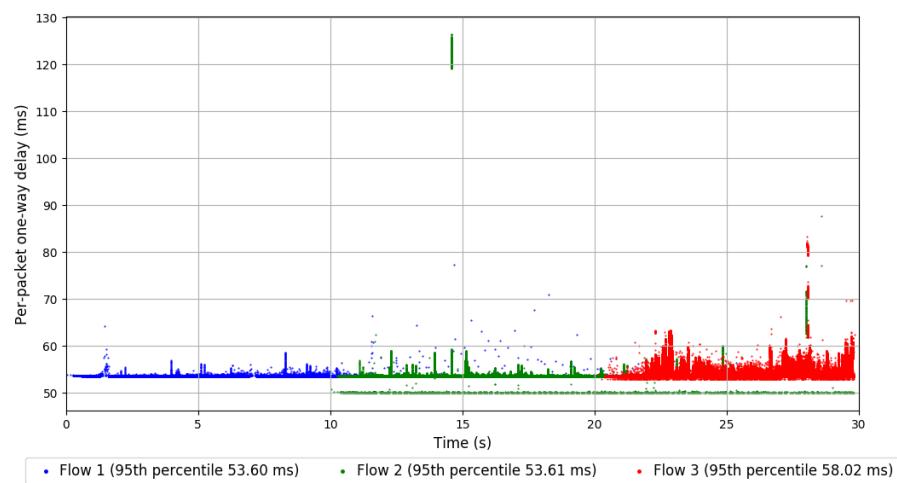
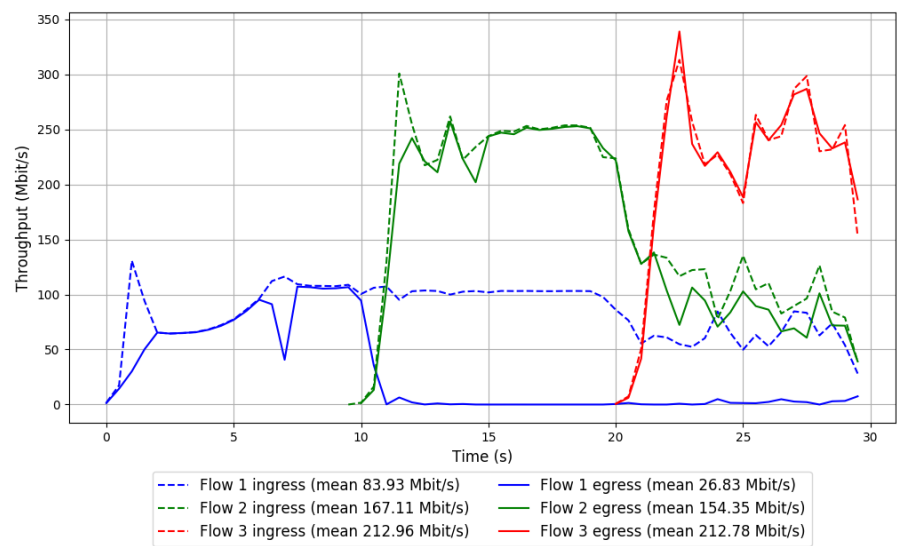
```
Run 4: Statistics of PCC

Start at: 2017-08-21 07:42:28
End at: 2017-08-21 07:42:58

# Below is generated by plot.py at 2017-08-21 09:53:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 198.44 Mbit/s
95th percentile per-packet one-way delay: 56.130 ms
Loss rate: 24.85%
-- Flow 1:
Average throughput: 26.83 Mbit/s
95th percentile per-packet one-way delay: 53.605 ms
Loss rate: 68.10%
-- Flow 2:
Average throughput: 154.35 Mbit/s
95th percentile per-packet one-way delay: 53.607 ms
Loss rate: 7.61%
-- Flow 3:
Average throughput: 212.78 Mbit/s
95th percentile per-packet one-way delay: 58.016 ms
Loss rate: 0.03%
```



Run 4: Report of PCC — Data Link



Run 5: Statistics of PCC

Start at: 2017-08-21 07:53:06

End at: 2017-08-21 07:53:36

# Below is generated by plot.py at 2017-08-21 09:53:42

# Datalink statistics

-- Total of 3 flows:

Average throughput: 324.58 Mbit/s

95th percentile per-packet one-way delay: 56.459 ms

Loss rate: 0.51%

-- Flow 1:

Average throughput: 321.50 Mbit/s

95th percentile per-packet one-way delay: 56.487 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 3.07 Mbit/s

95th percentile per-packet one-way delay: 53.649 ms

Loss rate: 9.30%

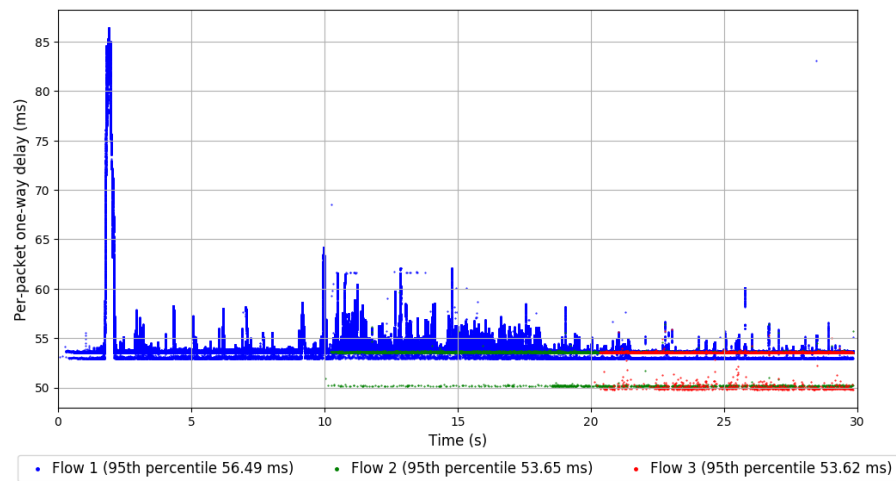
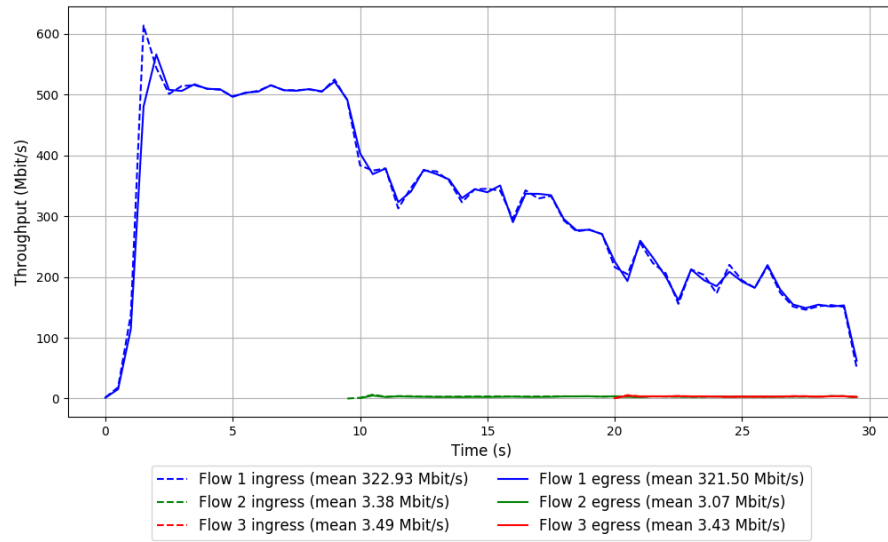
-- Flow 3:

Average throughput: 3.43 Mbit/s

95th percentile per-packet one-way delay: 53.622 ms

Loss rate: 1.94%

## Run 5: Report of PCC — Data Link



Run 6: Statistics of PCC

Start at: 2017-08-21 08:04:05

End at: 2017-08-21 08:04:35

# Below is generated by plot.py at 2017-08-21 09:53:44

# Datalink statistics

-- Total of 3 flows:

Average throughput: 207.05 Mbit/s

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

Loss rate: 24.96%

-- Flow 1:

Average throughput: 25.29 Mbit/s

95th percentile per-packet one-way delay: 53.623 ms

Loss rate: 70.16%

-- Flow 2:

Average throughput: 176.20 Mbit/s

95th percentile per-packet one-way delay: 53.650 ms

Loss rate: 7.43%

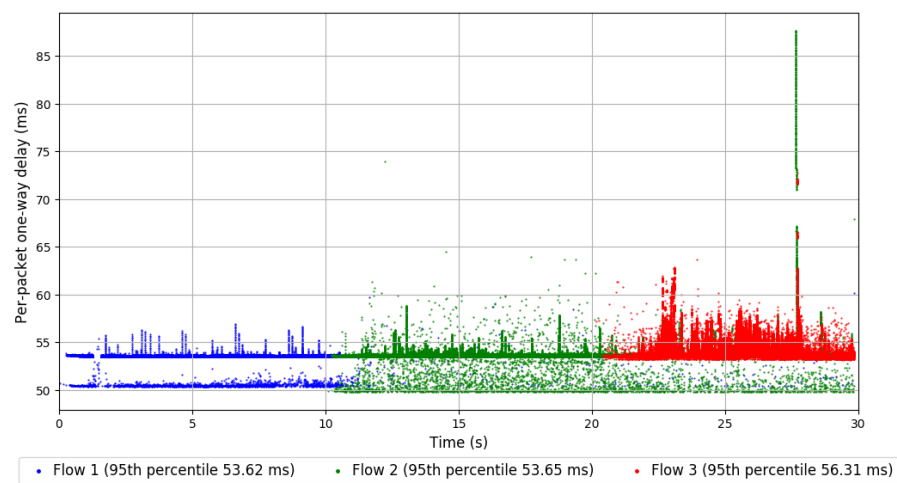
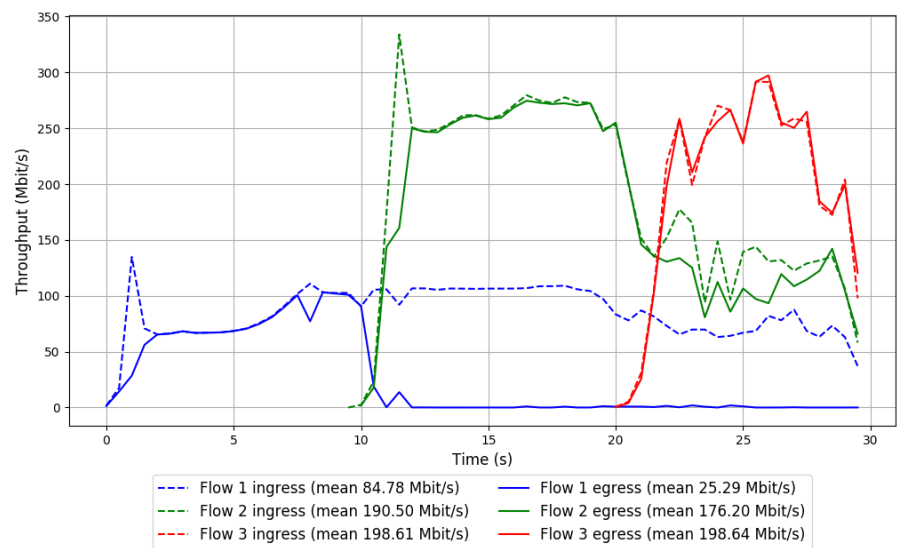
-- Flow 3:

Average throughput: 198.64 Mbit/s

95th percentile per-packet one-way delay: 56.315 ms

Loss rate: 0.02%

Run 6: Report of PCC — Data Link



Run 7: Statistics of PCC

Start at: 2017-08-21 08:15:05

End at: 2017-08-21 08:15:35

# Below is generated by plot.py at 2017-08-21 09:54:55

# Datalink statistics

-- Total of 3 flows:

Average throughput: 399.40 Mbit/s

95th percentile per-packet one-way delay: 56.432 ms

Loss rate: 1.16%

-- Flow 1:

Average throughput: 329.46 Mbit/s

95th percentile per-packet one-way delay: 56.286 ms

Loss rate: 1.11%

-- Flow 2:

Average throughput: 0.33 Mbit/s

95th percentile per-packet one-way delay: 53.738 ms

Loss rate: 81.87%

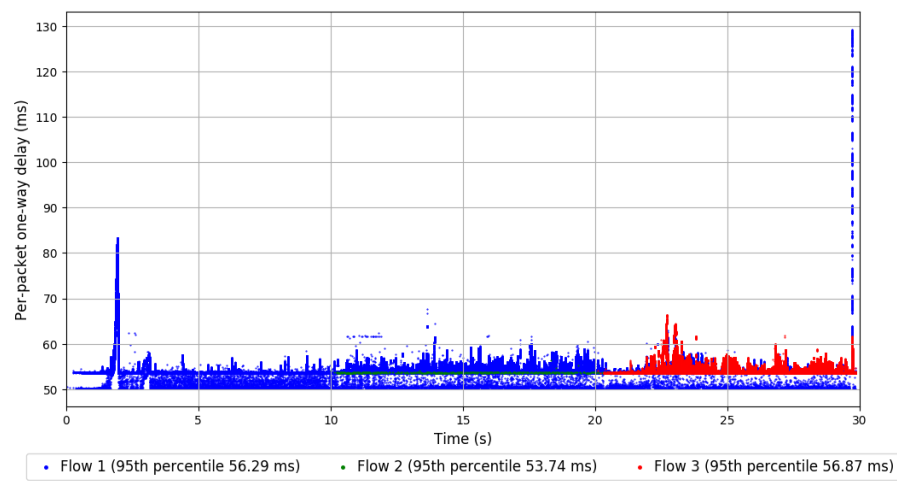
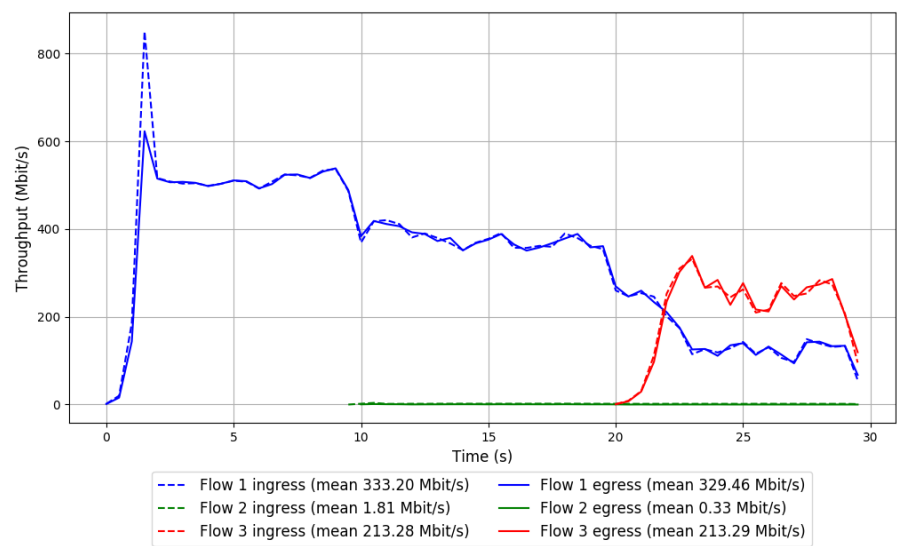
-- Flow 3:

Average throughput: 213.29 Mbit/s

95th percentile per-packet one-way delay: 56.866 ms

Loss rate: 0.00%

Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2017-08-21 08:26:03

End at: 2017-08-21 08:26:33

# Below is generated by plot.py at 2017-08-21 09:54:55

# Datalink statistics

-- Total of 3 flows:

Average throughput: 171.33 Mbit/s

95th percentile per-packet one-way delay: 53.780 ms

Loss rate: 24.22%

-- Flow 1:

Average throughput: 25.60 Mbit/s

95th percentile per-packet one-way delay: 53.659 ms

Loss rate: 67.14%

-- Flow 2:

Average throughput: 160.42 Mbit/s

95th percentile per-packet one-way delay: 53.844 ms

Loss rate: 0.02%

-- Flow 3:

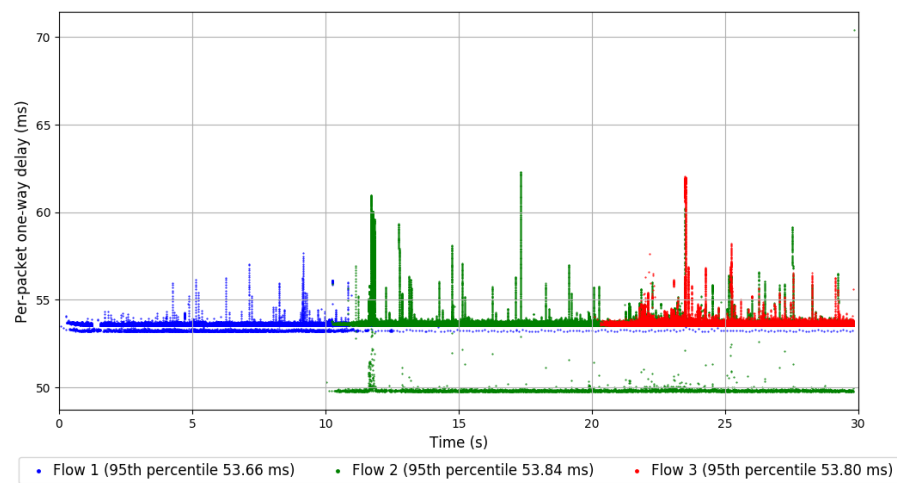
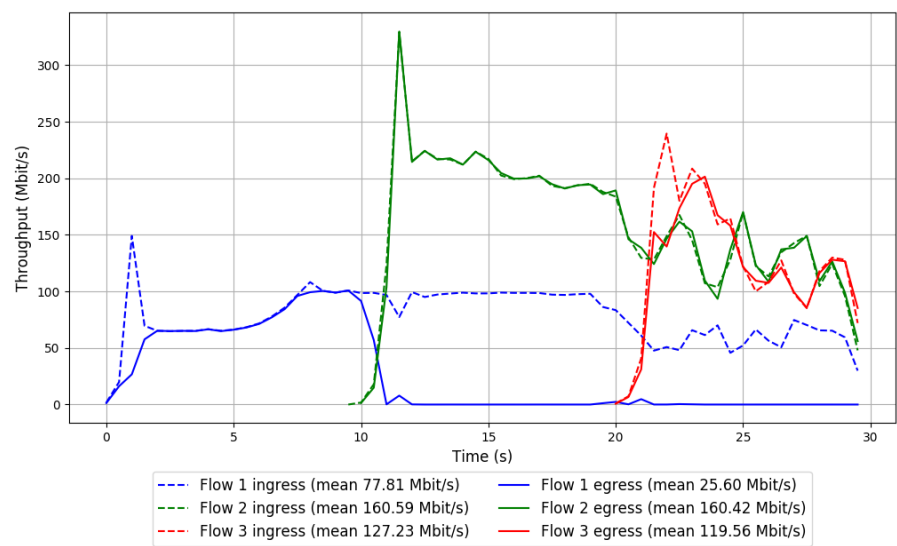
Average throughput: 119.56 Mbit/s

95th percentile per-packet one-way delay: 53.805 ms

Loss rate: 6.06%



Run 8: Report of PCC — Data Link



Run 9: Statistics of PCC

Start at: 2017-08-21 08:36:44

End at: 2017-08-21 08:37:14

# Below is generated by plot.py at 2017-08-21 09:55:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 365.19 Mbit/s

95th percentile per-packet one-way delay: 56.127 ms

Loss rate: 11.05%

-- Flow 1:

Average throughput: 250.33 Mbit/s

95th percentile per-packet one-way delay: 58.618 ms

Loss rate: 13.00%

-- Flow 2:

Average throughput: 105.52 Mbit/s

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

Loss rate: 5.41%

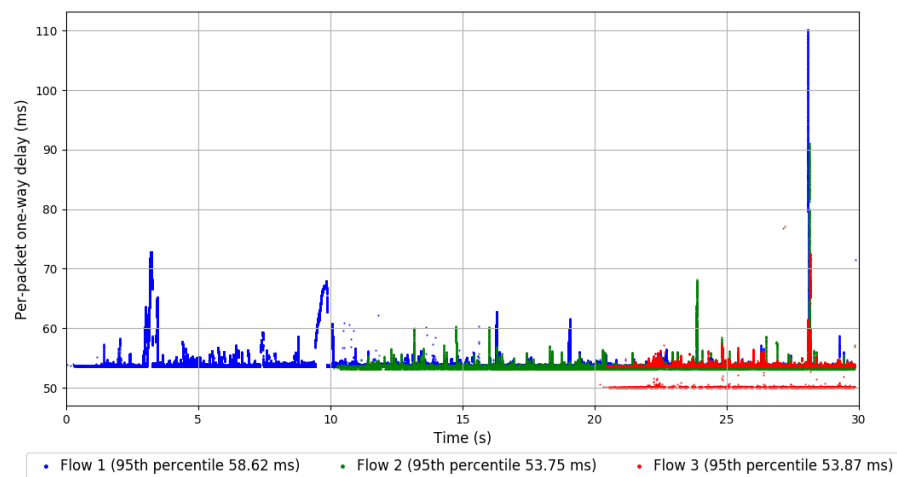
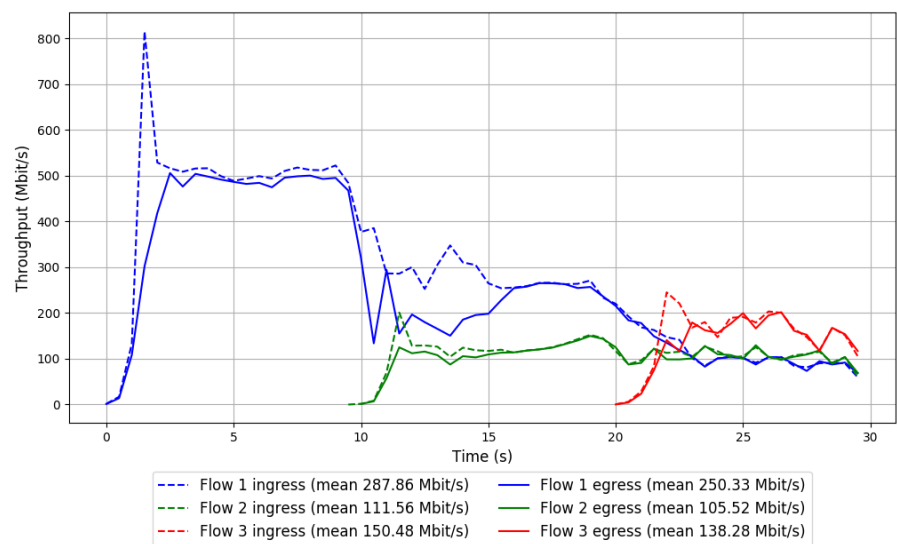
-- Flow 3:

Average throughput: 138.28 Mbit/s

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

Loss rate: 8.07%

Run 9: Report of PCC — Data Link

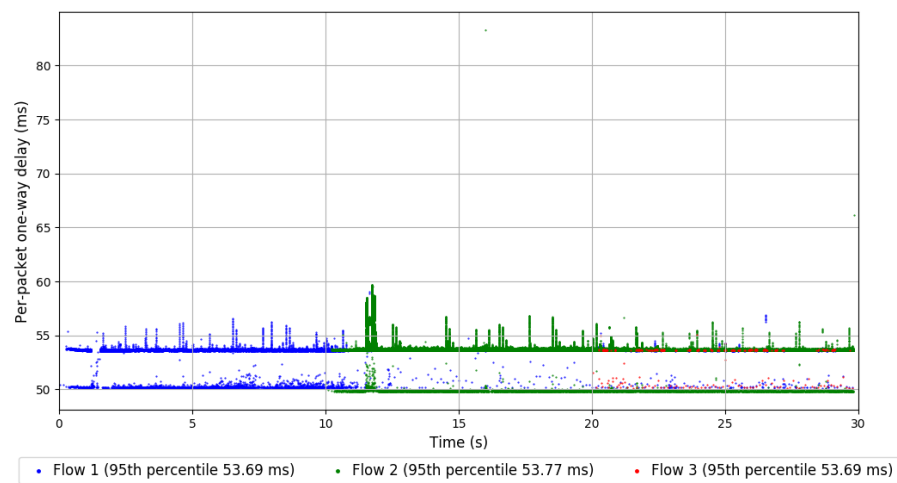
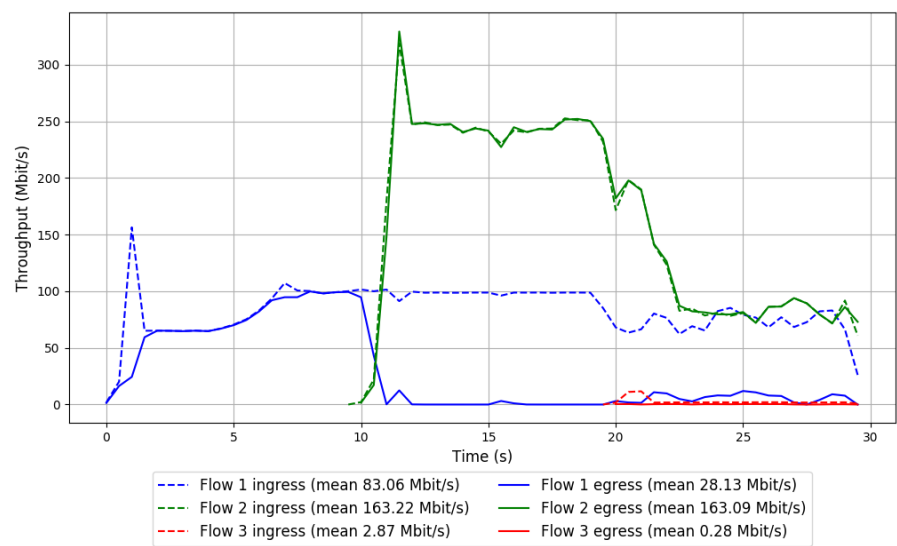


```
Run 10: Statistics of PCC

Start at: 2017-08-21 08:47:45
End at: 2017-08-21 08:48:15

# Below is generated by plot.py at 2017-08-21 09:55:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 136.76 Mbit/s
95th percentile per-packet one-way delay: 53.735 ms
Loss rate: 28.97%
-- Flow 1:
Average throughput: 28.13 Mbit/s
95th percentile per-packet one-way delay: 53.689 ms
Loss rate: 66.18%
-- Flow 2:
Average throughput: 163.09 Mbit/s
95th percentile per-packet one-way delay: 53.770 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 53.688 ms
Loss rate: 90.29%
```

Run 10: Report of PCC — Data Link

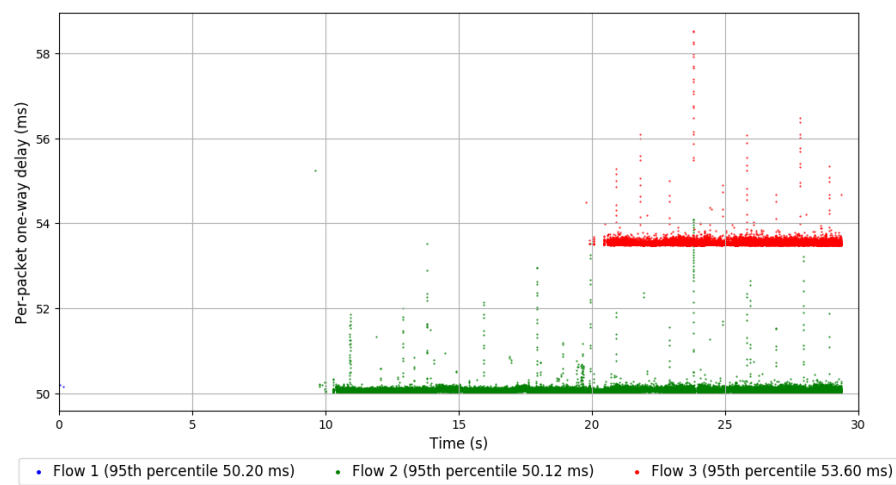
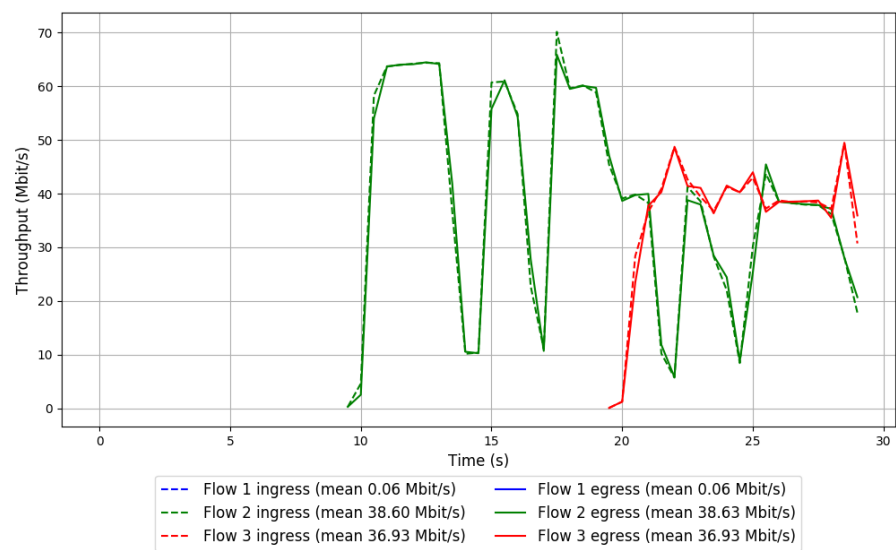


```
Run 1: Statistics of QUIC Cubic

Start at: 2017-08-21 07:19:11
End at: 2017-08-21 07:19:41

# Below is generated by plot.py at 2017-08-21 09:55:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 38.08 Mbit/s
95th percentile per-packet one-way delay: 53.548 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 50.198 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 38.63 Mbit/s
95th percentile per-packet one-way delay: 50.120 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 36.93 Mbit/s
95th percentile per-packet one-way delay: 53.601 ms
Loss rate: 0.03%
```

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2017-08-21 07:29:59

End at: 2017-08-21 07:30:29

# Below is generated by plot.py at 2017-08-21 09:55:46

# Datalink statistics

-- Total of 3 flows:

Average throughput: 36.99 Mbit/s

95th percentile per-packet one-way delay: 50.433 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 53.162 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 39.32 Mbit/s

95th percentile per-packet one-way delay: 50.445 ms

Loss rate: 0.00%

-- Flow 3:

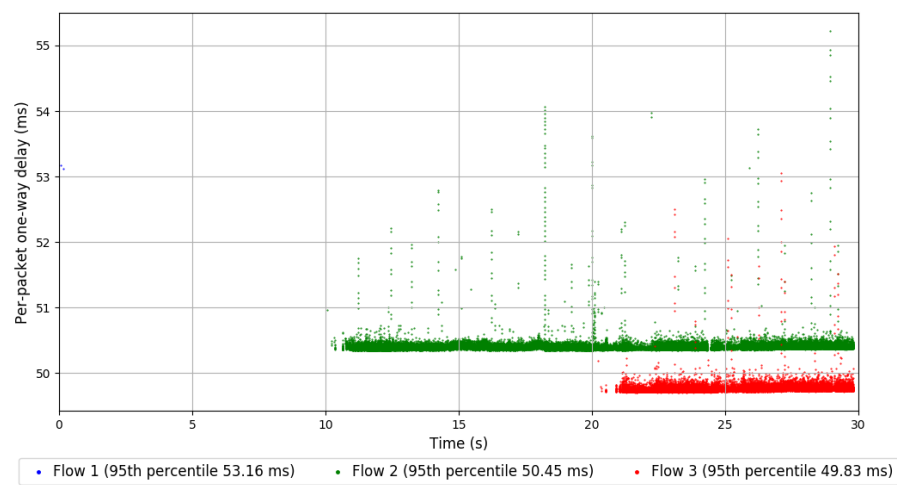
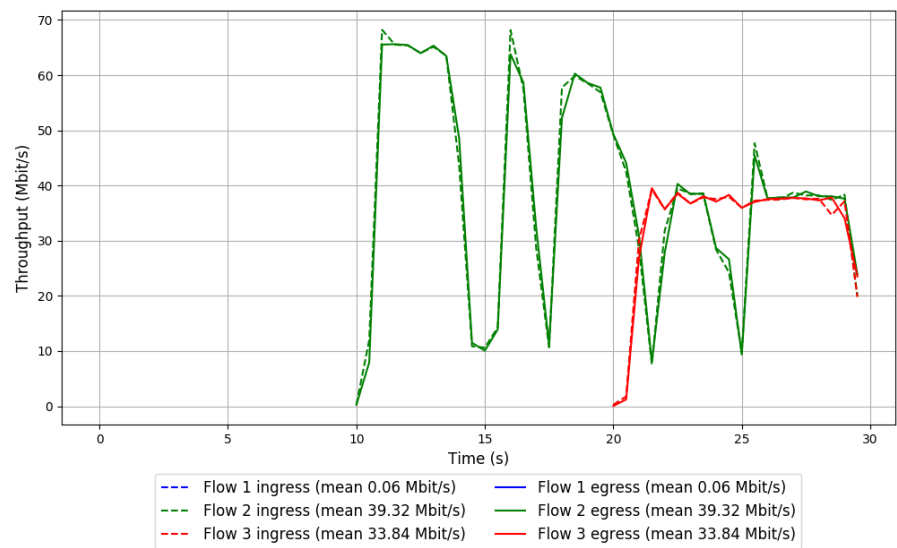
Average throughput: 33.84 Mbit/s

95th percentile per-packet one-way delay: 49.828 ms

Loss rate: 0.00%



Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2017-08-21 07:40:53

End at: 2017-08-21 07:41:23

# Below is generated by plot.py at 2017-08-21 09:55:47

# Datalink statistics

-- Total of 3 flows:

Average throughput: 33.51 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.246 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 36.66 Mbit/s

95th percentile per-packet one-way delay: 50.207 ms

Loss rate: 0.00%

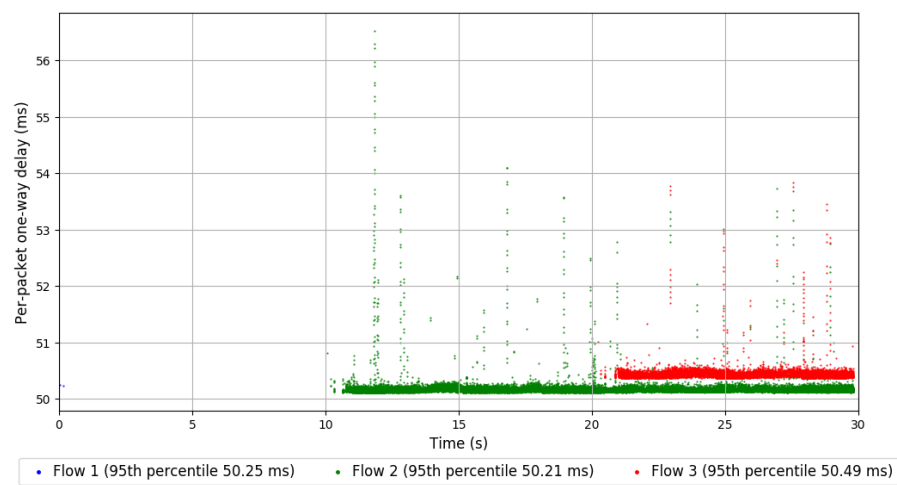
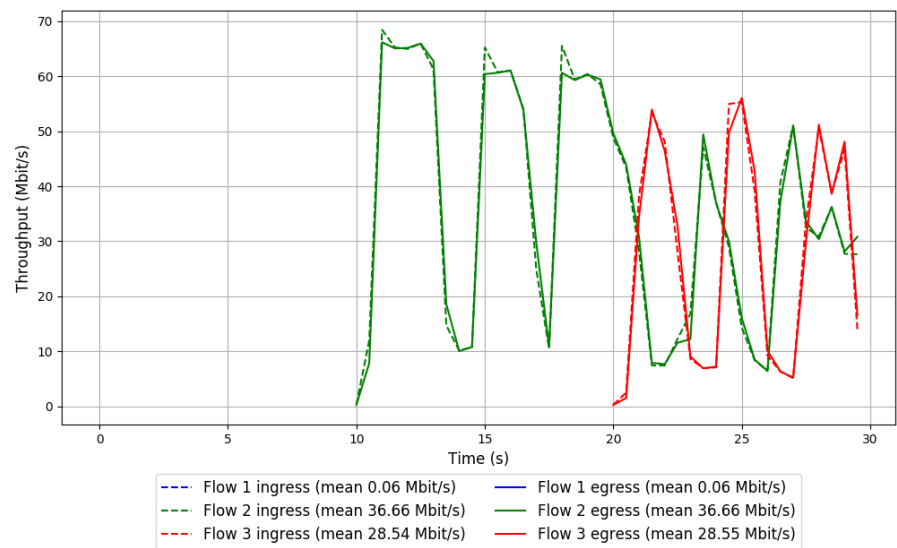
-- Flow 3:

Average throughput: 28.55 Mbit/s

95th percentile per-packet one-way delay: 50.488 ms

Loss rate: 0.00%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2017-08-21 07:51:42

End at: 2017-08-21 07:52:12

# Below is generated by plot.py at 2017-08-21 09:55:55

# Datalink statistics

-- Total of 3 flows:

Average throughput: 34.13 Mbit/s

95th percentile per-packet one-way delay: 53.013 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 39.90 Mbit/s

95th percentile per-packet one-way delay: 52.993 ms

Loss rate: 0.00%

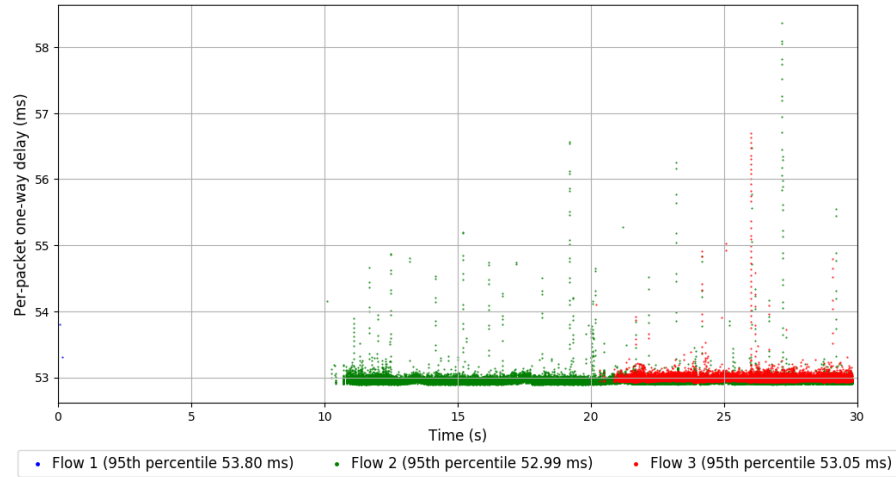
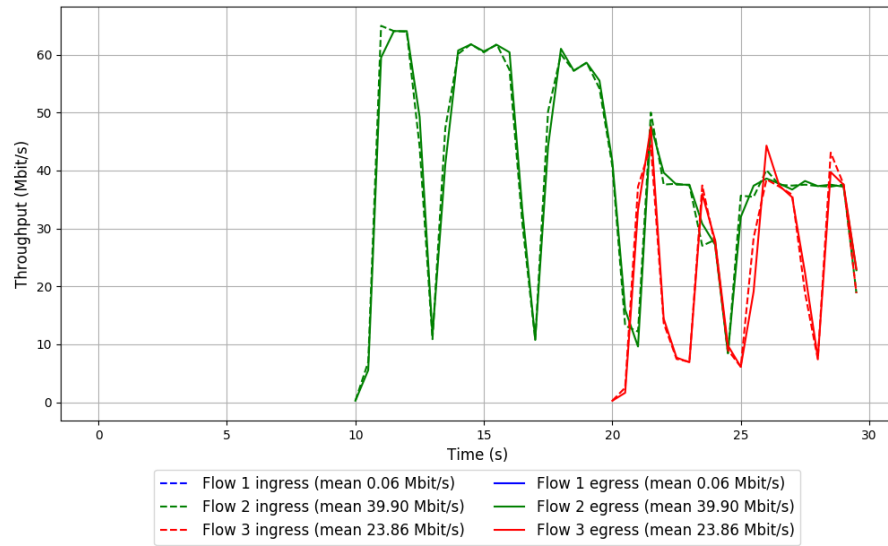
-- Flow 3:

Average throughput: 23.86 Mbit/s

95th percentile per-packet one-way delay: 53.048 ms

Loss rate: 0.00%

# Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2017-08-21 08:02:42

End at: 2017-08-21 08:03:12

# Below is generated by plot.py at 2017-08-21 09:55:56

# Datalink statistics

-- Total of 3 flows:

Average throughput: 36.29 Mbit/s

95th percentile per-packet one-way delay: 53.026 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 53.324 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 37.56 Mbit/s

95th percentile per-packet one-way delay: 53.039 ms

Loss rate: 0.00%

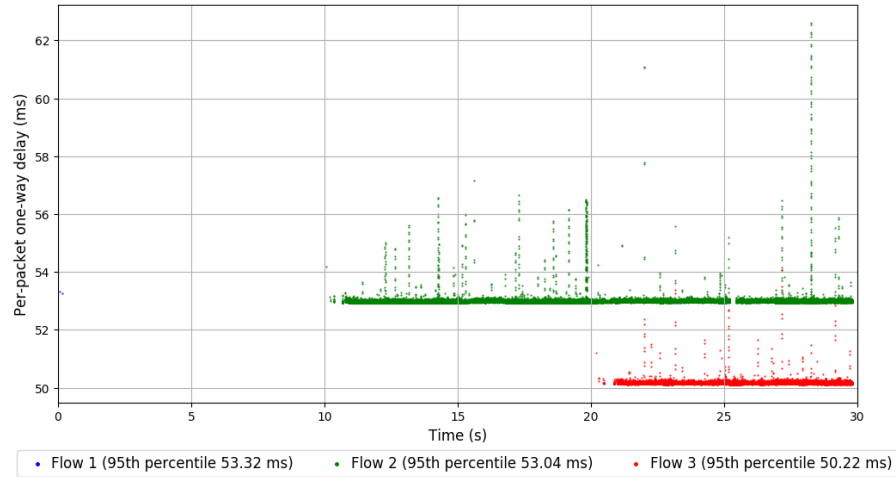
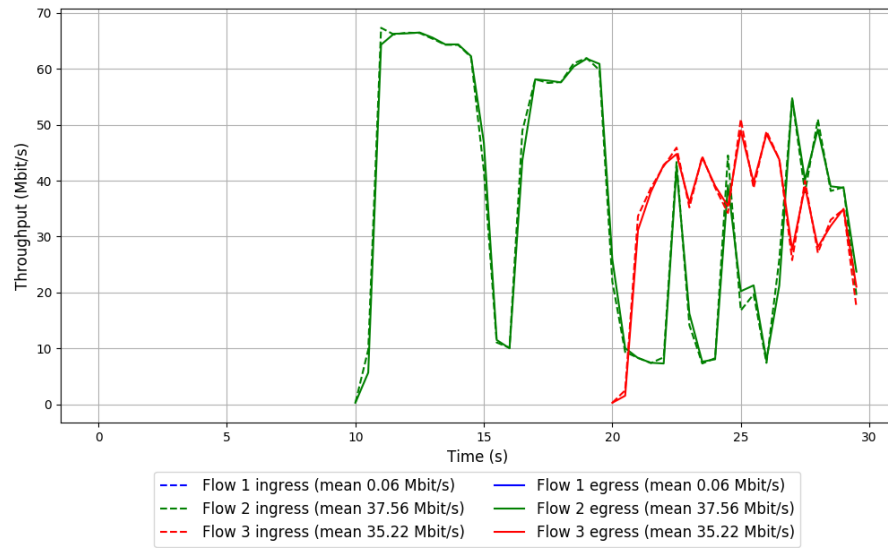
-- Flow 3:

Average throughput: 35.22 Mbit/s

95th percentile per-packet one-way delay: 50.216 ms

Loss rate: 0.00%

## Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2017-08-21 08:13:38

End at: 2017-08-21 08:14:08

# Below is generated by plot.py at 2017-08-21 09:56:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 37.78 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 40.76 Mbit/s

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

Loss rate: 0.00%

-- Flow 3:

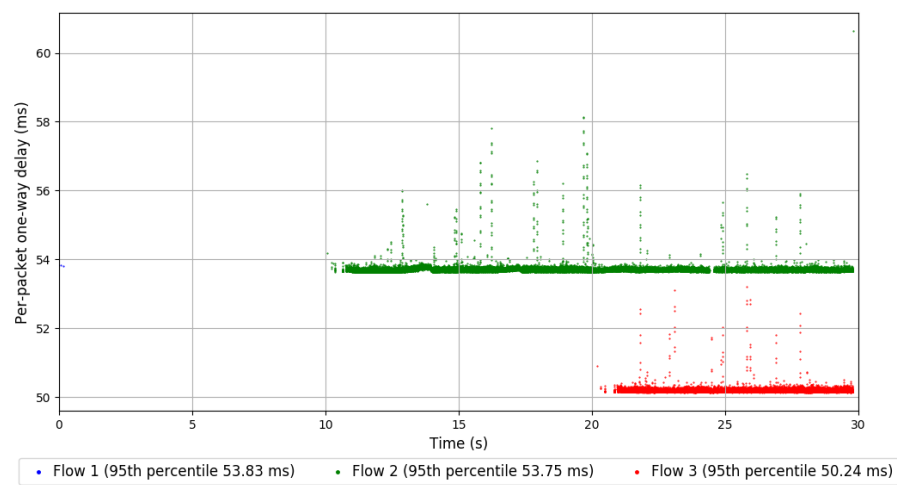
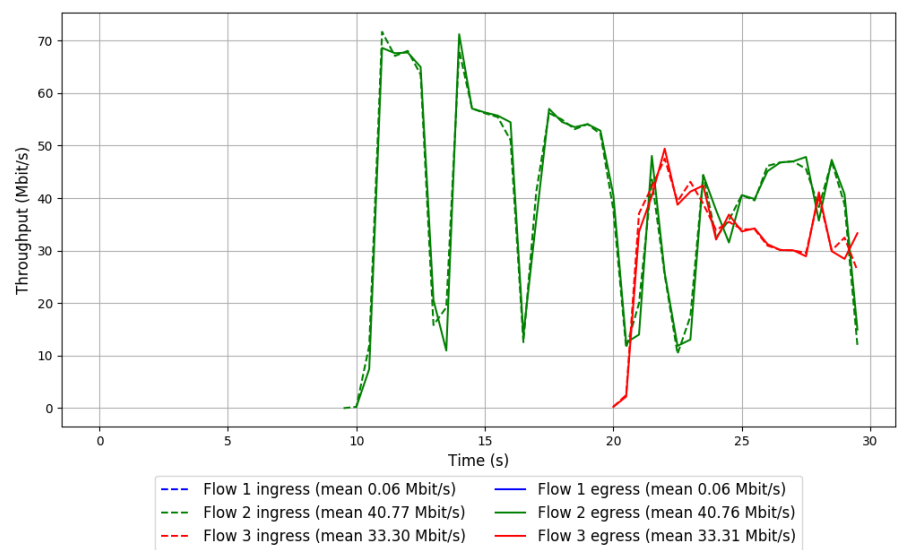
Average throughput: 33.31 Mbit/s

95th percentile per-packet one-way delay: 50.242 ms

Loss rate: 0.00%



Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2017-08-21 08:24:41

End at: 2017-08-21 08:25:11

# Below is generated by plot.py at 2017-08-21 09:56:05

# Datalink statistics

-- Total of 3 flows:

Average throughput: 34.50 Mbit/s

95th percentile per-packet one-way delay: 53.077 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 53.799 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 39.79 Mbit/s

95th percentile per-packet one-way delay: 53.088 ms

Loss rate: 0.02%

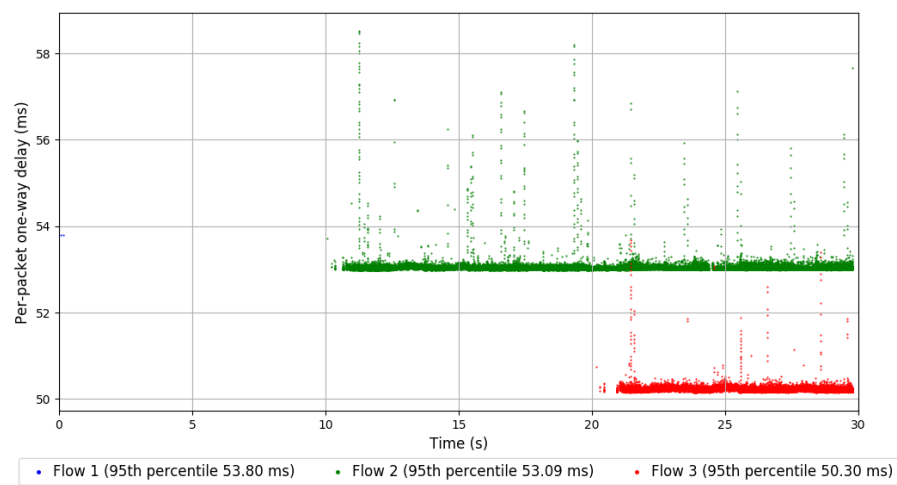
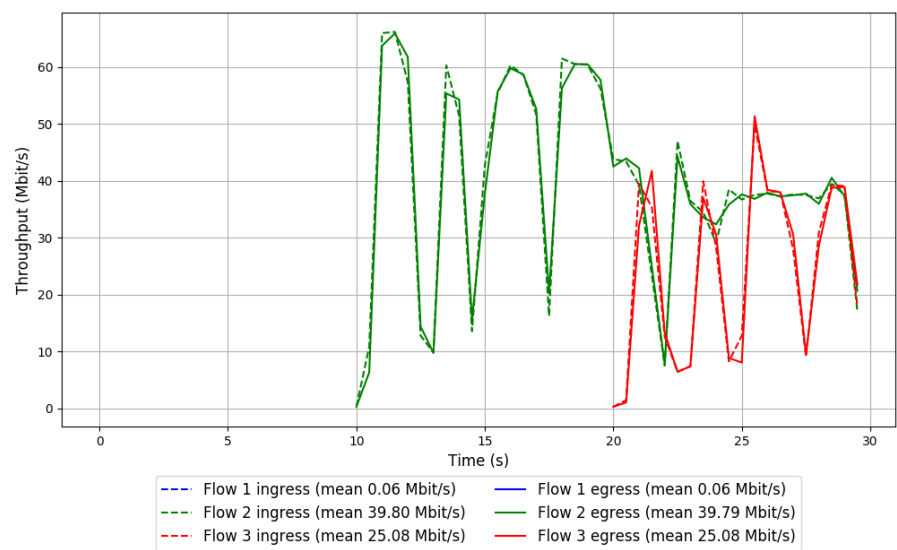
-- Flow 3:

Average throughput: 25.08 Mbit/s

95th percentile per-packet one-way delay: 50.296 ms

Loss rate: 0.00%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2017-08-21 08:35:22

End at: 2017-08-21 08:35:52

# Below is generated by plot.py at 2017-08-21 09:56:12

# Datalink statistics

-- Total of 3 flows:

Average throughput: 31.64 Mbit/s

95th percentile per-packet one-way delay: 50.534 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.334 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 37.63 Mbit/s

95th percentile per-packet one-way delay: 50.541 ms

Loss rate: 0.00%

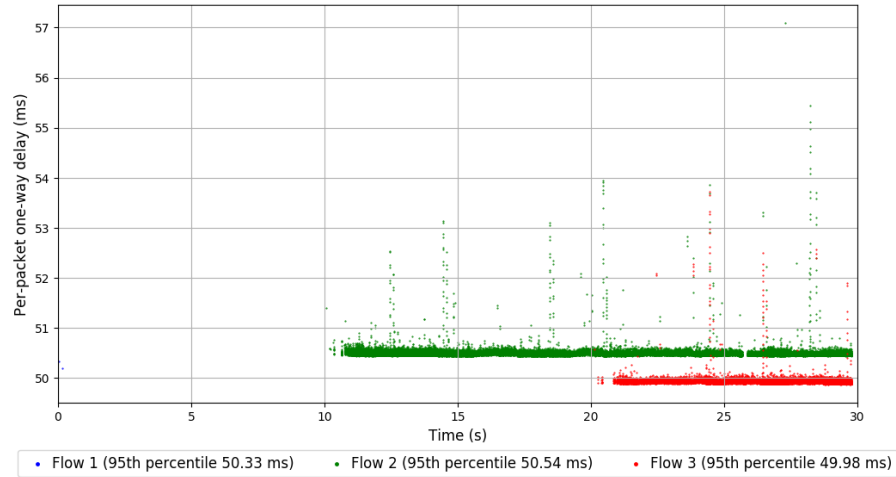
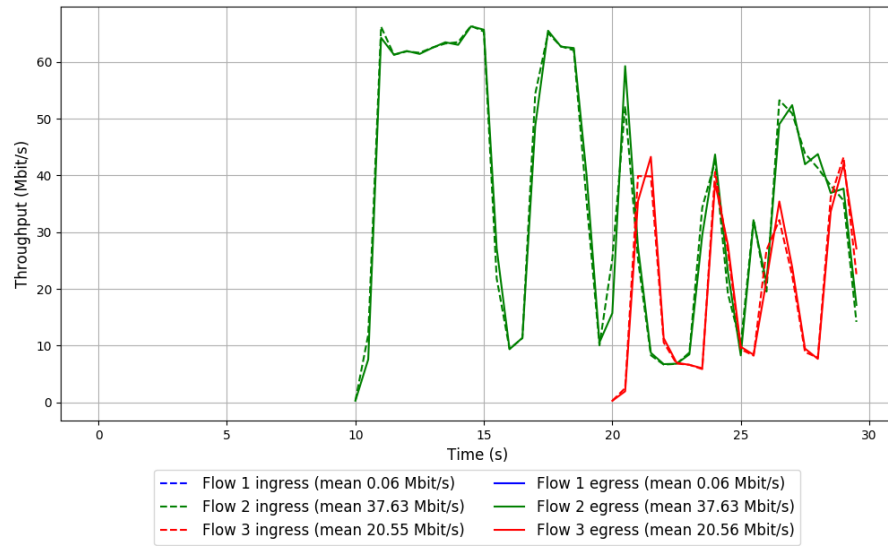
-- Flow 3:

Average throughput: 20.56 Mbit/s

95th percentile per-packet one-way delay: 49.984 ms

Loss rate: 0.01%

## Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2017-08-21 08:46:21

End at: 2017-08-21 08:46:51

# Below is generated by plot.py at 2017-08-21 09:56:14

# Datalink statistics

-- Total of 3 flows:

Average throughput: 32.42 Mbit/s

95th percentile per-packet one-way delay: 53.093 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.446 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 37.68 Mbit/s

95th percentile per-packet one-way delay: 53.102 ms

Loss rate: 0.01%

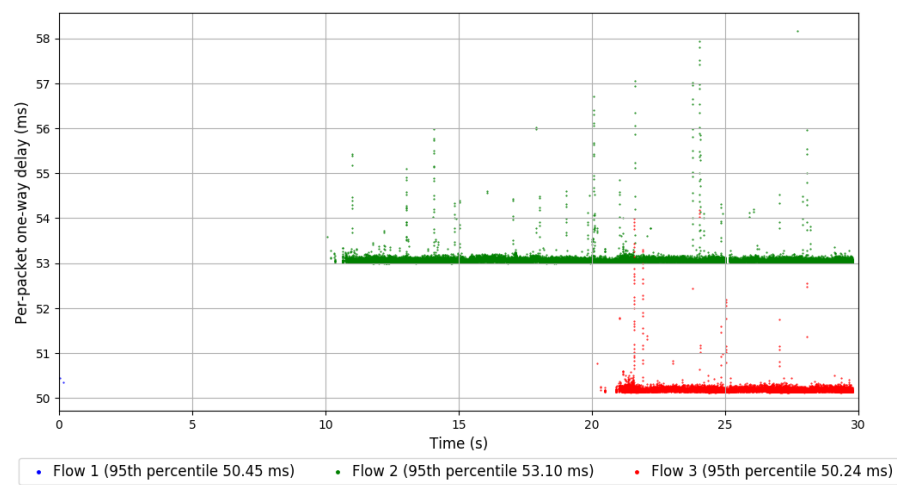
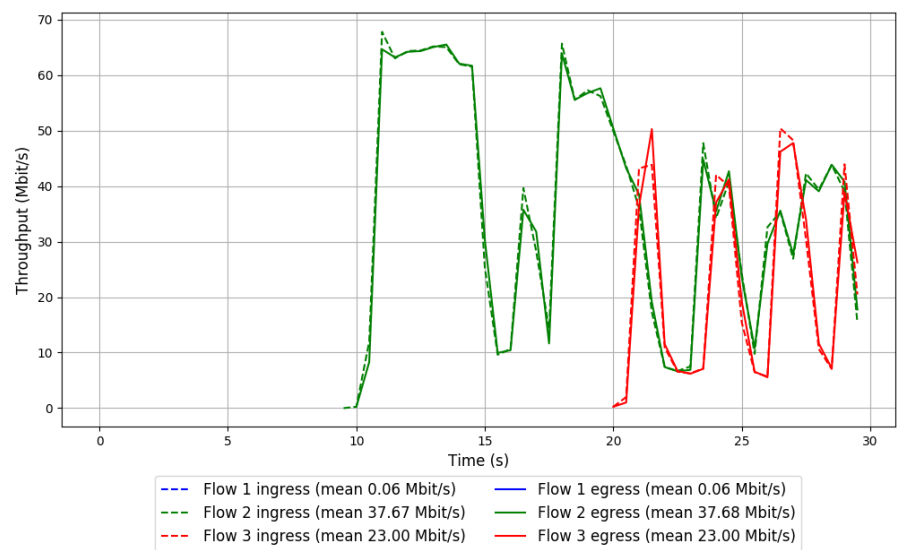
-- Flow 3:

Average throughput: 23.00 Mbit/s

95th percentile per-packet one-way delay: 50.242 ms

Loss rate: 0.00%

Run 9: Report of QUIC Cubic — Data Link



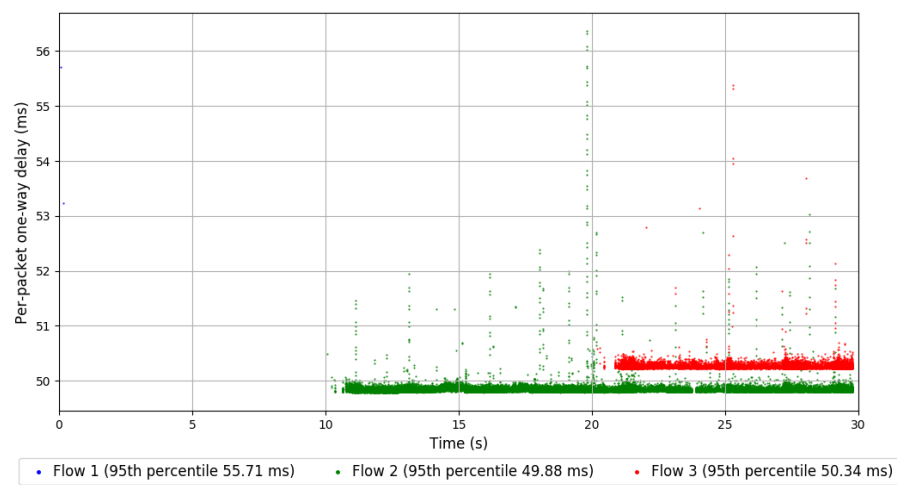
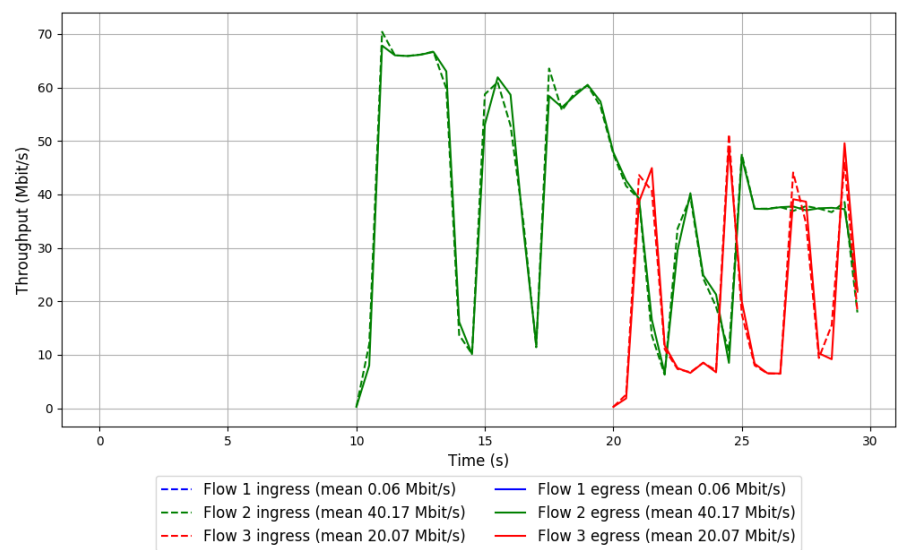
```
Run 10: Statistics of QUIC Cubic

Start at: 2017-08-21 08:56:59
End at: 2017-08-21 08:57:29

# Below is generated by plot.py at 2017-08-21 09:56:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 33.14 Mbit/s
95th percentile per-packet one-way delay: 50.268 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 55.706 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 40.17 Mbit/s
95th percentile per-packet one-way delay: 49.885 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 20.07 Mbit/s
95th percentile per-packet one-way delay: 50.338 ms
Loss rate: 0.00%
```



Run 10: Report of QUIC Cubic — Data Link



Run 1: Statistics of Saturator

Start at: 2017-08-21 07:10:46

End at: 2017-08-21 07:11:16

# Below is generated by plot.py at 2017-08-21 09:56:20

# Datalink statistics

-- Total of 3 flows:

Average throughput: 15.25 Mbit/s

95th percentile per-packet one-way delay: 54.461 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 6.60 Mbit/s

95th percentile per-packet one-way delay: 54.125 ms

Loss rate: 57.14%

-- Flow 2:

Average throughput: 22.84 Mbit/s

95th percentile per-packet one-way delay: 54.464 ms

Loss rate: 0.04%

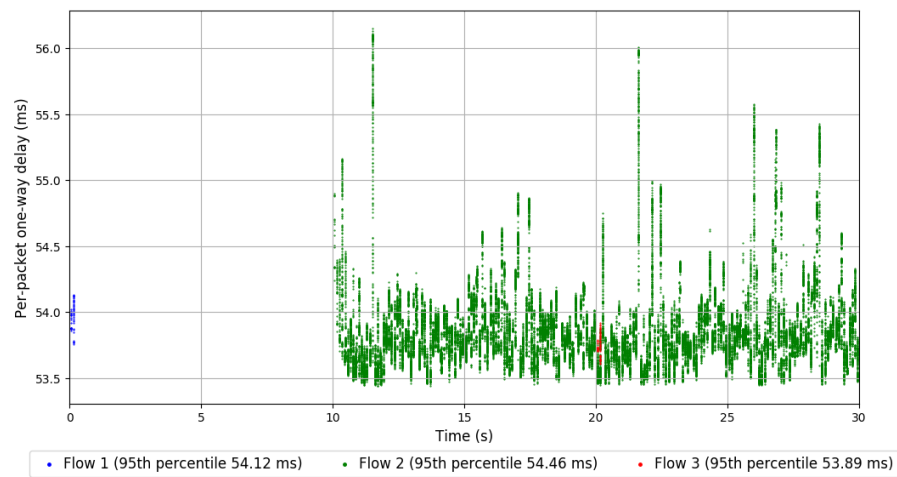
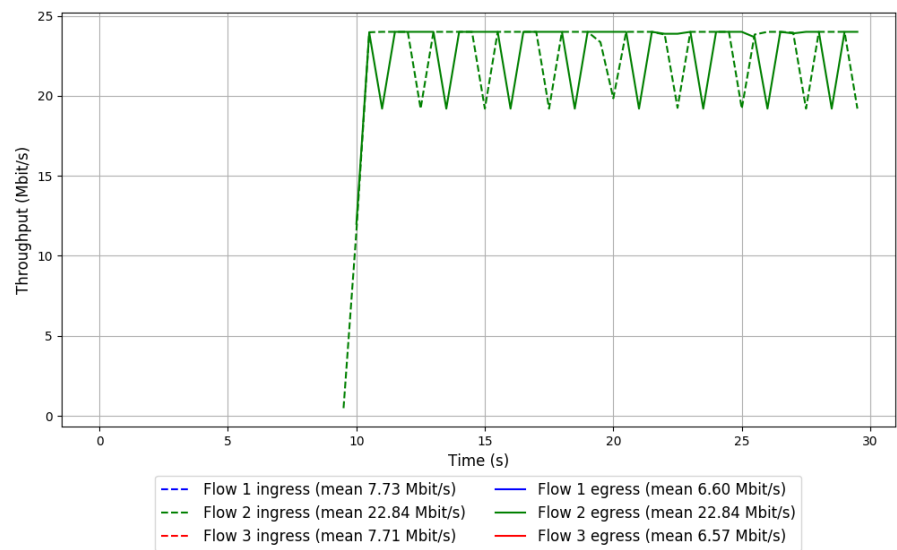
-- Flow 3:

Average throughput: 6.57 Mbit/s

95th percentile per-packet one-way delay: 53.887 ms

Loss rate: 57.14%

Run 1: Report of Saturator — Data Link



Run 2: Statistics of Saturator

Start at: 2017-08-21 07:21:26

End at: 2017-08-21 07:21:56

# Below is generated by plot.py at 2017-08-21 09:56:22

# Datalink statistics

-- Total of 3 flows:

Average throughput: 19.22 Mbit/s

95th percentile per-packet one-way delay: 54.669 ms

Loss rate: 7.17%

-- Flow 1:

Average throughput: 6.59 Mbit/s

95th percentile per-packet one-way delay: 54.457 ms

Loss rate: 57.14%

-- Flow 2:

Average throughput: 17.58 Mbit/s

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

Loss rate: 11.05%

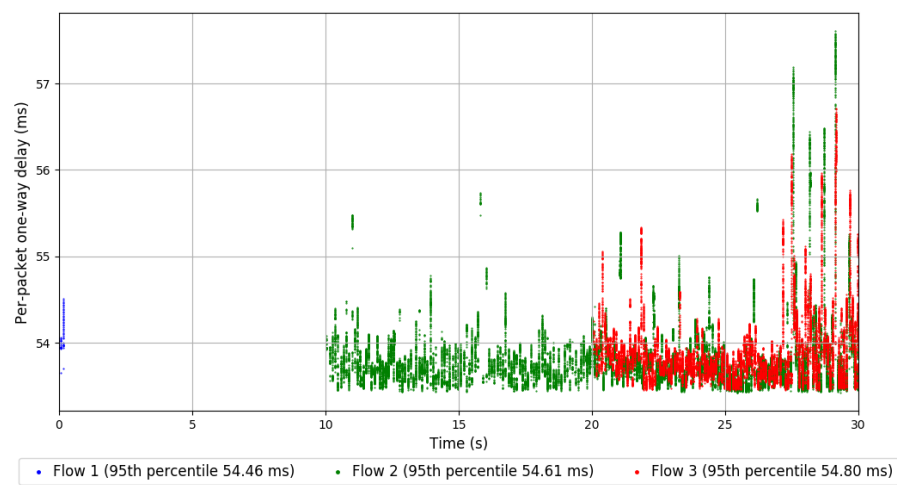
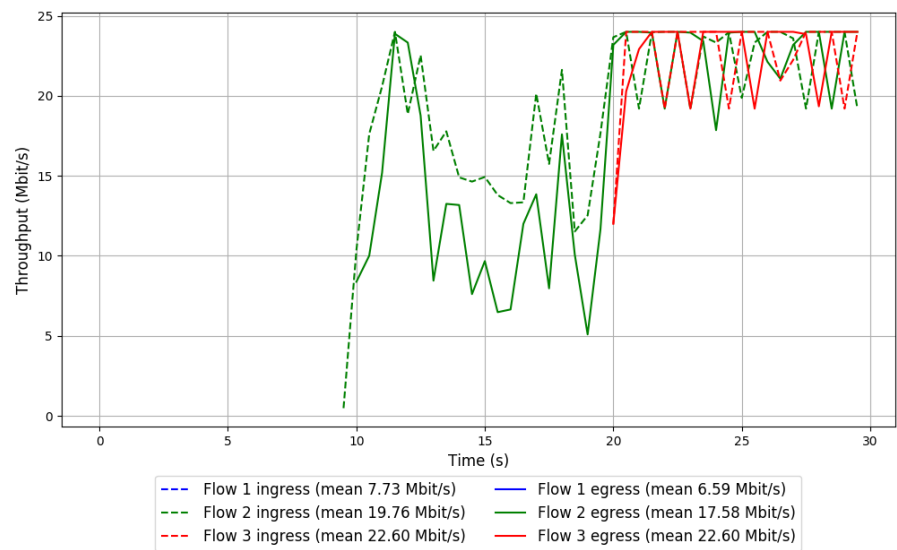
-- Flow 3:

Average throughput: 22.60 Mbit/s

95th percentile per-packet one-way delay: 54.800 ms

Loss rate: 0.00%

Run 2: Report of Saturator — Data Link



Run 3: Statistics of Saturator

Start at: 2017-08-21 07:32:08

End at: 2017-08-21 07:32:38

# Below is generated by plot.py at 2017-08-21 09:56:29

# Datalink statistics

-- Total of 3 flows:

Average throughput: 27.22 Mbit/s

95th percentile per-packet one-way delay: 54.510 ms

Loss rate: 4.01%

-- Flow 1:

Average throughput: 22.14 Mbit/s

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

Loss rate: 0.02%

-- Flow 2:

Average throughput: 6.79 Mbit/s

95th percentile per-packet one-way delay: 54.156 ms

Loss rate: 57.14%

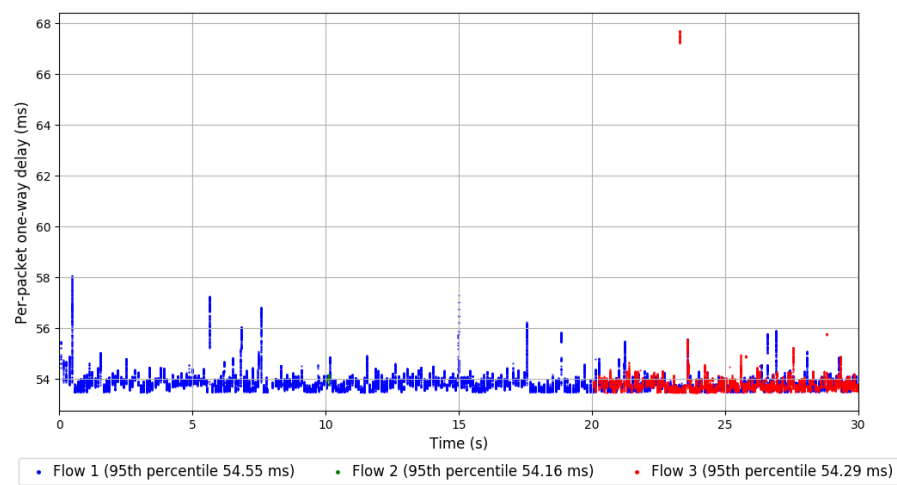
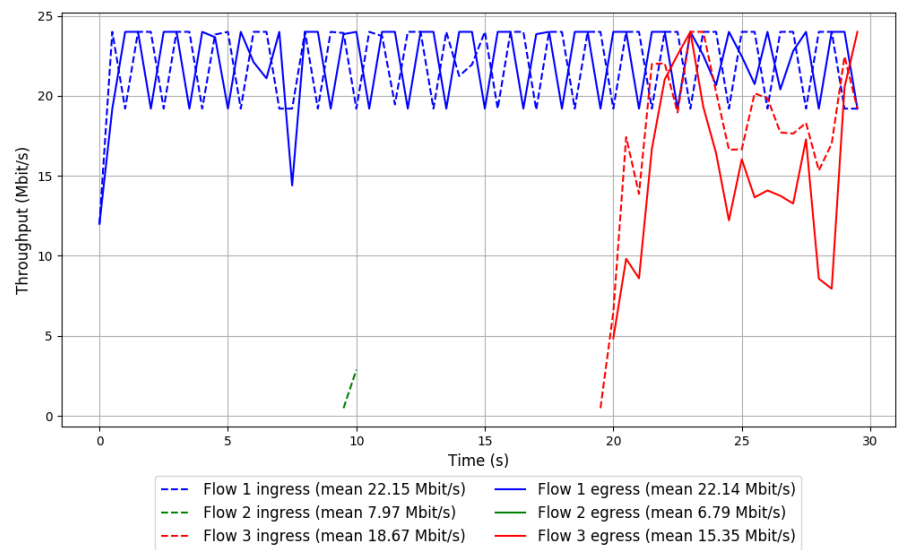
-- Flow 3:

Average throughput: 15.35 Mbit/s

95th percentile per-packet one-way delay: 54.288 ms

Loss rate: 17.77%

Run 3: Report of Saturator — Data Link



Run 4: Statistics of Saturator

Start at: 2017-08-21 07:43:17

End at: 2017-08-21 07:43:47

# Below is generated by plot.py at 2017-08-21 09:56:32

# Datalink statistics

-- Total of 3 flows:

Average throughput: 37.27 Mbit/s

95th percentile per-packet one-way delay: 54.264 ms

Loss rate: 0.14%

-- Flow 1:

Average throughput: 22.07 Mbit/s

95th percentile per-packet one-way delay: 54.275 ms

Loss rate: 0.08%

-- Flow 2:

Average throughput: 22.78 Mbit/s

95th percentile per-packet one-way delay: 54.255 ms

Loss rate: 0.02%

-- Flow 3:

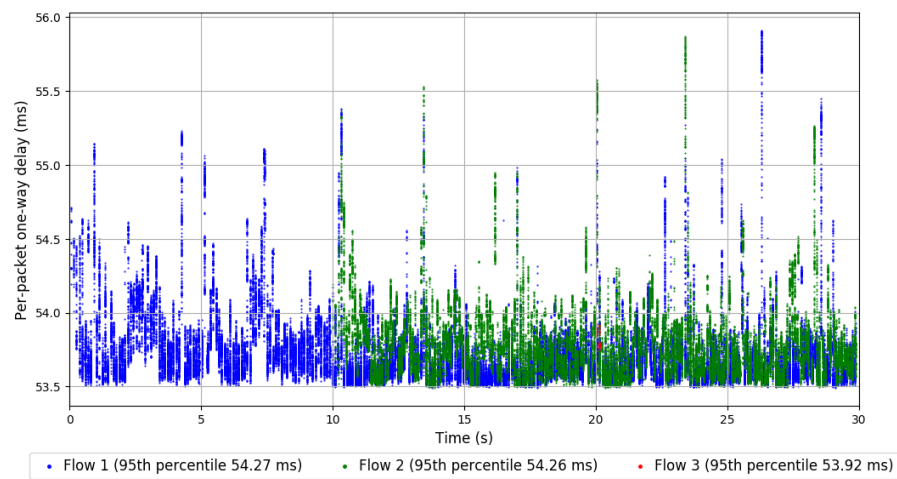
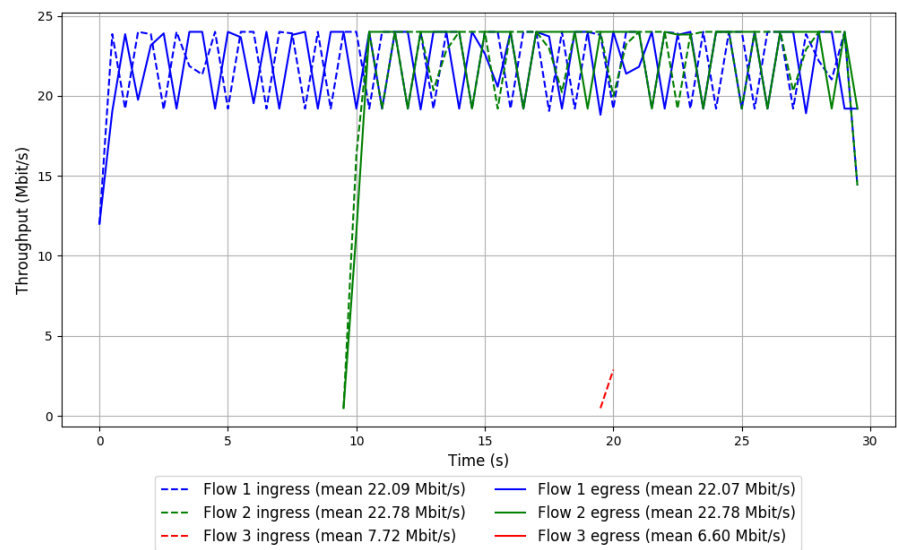
Average throughput: 6.60 Mbit/s

95th percentile per-packet one-way delay: 53.917 ms

Loss rate: 57.14%



Run 4: Report of Saturator — Data Link



Run 5: Statistics of Saturator

Start at: 2017-08-21 07:53:59

End at: 2017-08-21 07:54:29

# Below is generated by plot.py at 2017-08-21 09:56:34

# Datalink statistics

-- Total of 3 flows:

Average throughput: 22.24 Mbit/s

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

Loss rate: 0.37%

-- Flow 1:

Average throughput: 22.19 Mbit/s

95th percentile per-packet one-way delay: 54.361 ms

Loss rate: 0.08%

-- Flow 2:

Average throughput: 6.60 Mbit/s

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

Loss rate: 57.14%

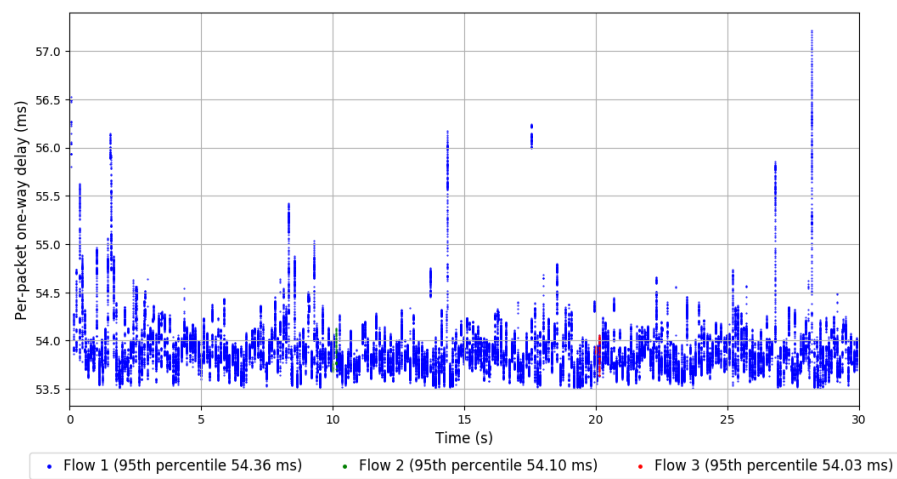
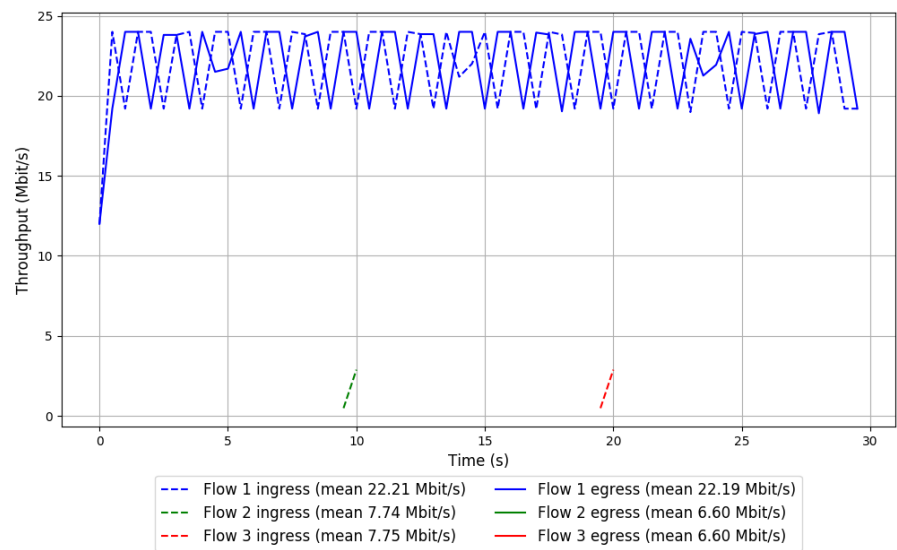
-- Flow 3:

Average throughput: 6.60 Mbit/s

95th percentile per-packet one-way delay: 54.030 ms

Loss rate: 57.14%

Run 5: Report of Saturator — Data Link

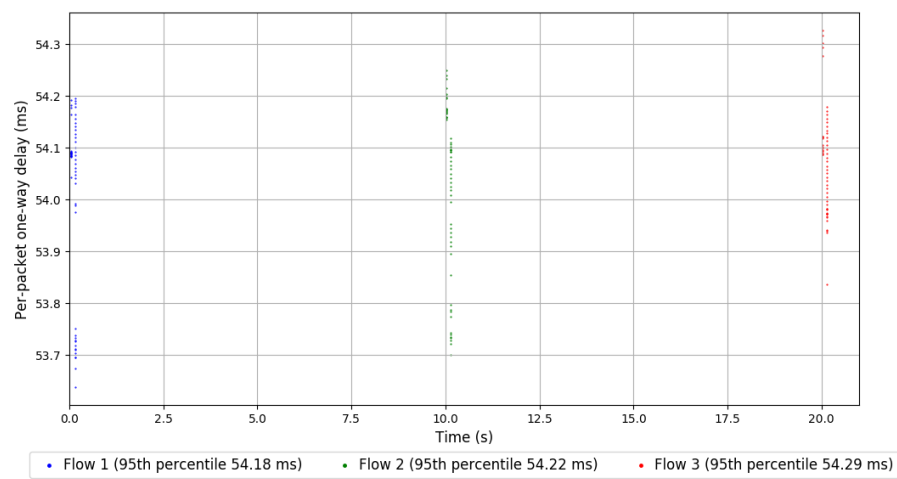
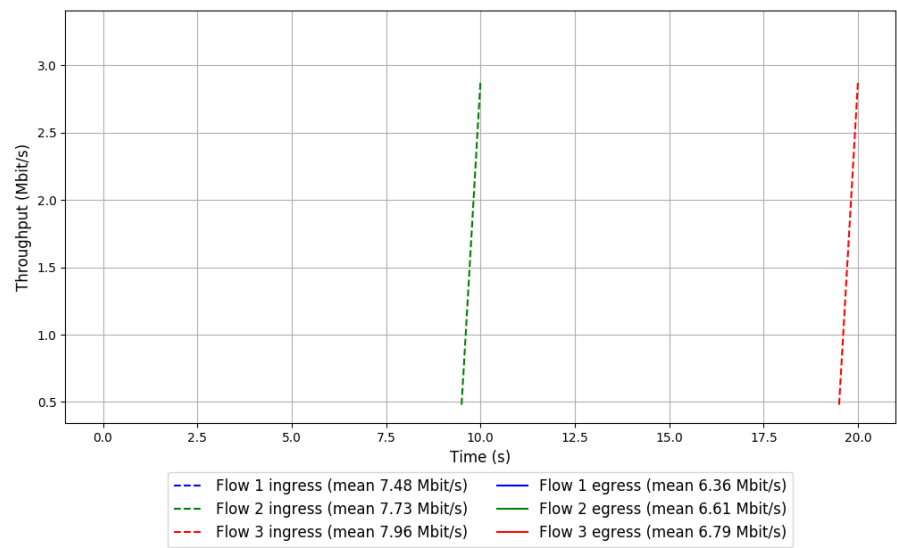


Run 6: Statistics of Saturator

Start at: 2017-08-21 08:04:54

End at: 2017-08-21 08:05:24

Run 6: Report of Saturator — Data Link



Run 7: Statistics of Saturator

Start at: 2017-08-21 08:16:00

End at: 2017-08-21 08:16:30

# Below is generated by plot.py at 2017-08-21 09:56:38

# Datalink statistics

-- Total of 3 flows:

Average throughput: 15.20 Mbit/s

95th percentile per-packet one-way delay: 54.588 ms

Loss rate: 0.45%

-- Flow 1:

Average throughput: 6.63 Mbit/s

95th percentile per-packet one-way delay: 54.254 ms

Loss rate: 57.14%

-- Flow 2:

Average throughput: 22.72 Mbit/s

95th percentile per-packet one-way delay: 54.588 ms

Loss rate: 0.02%

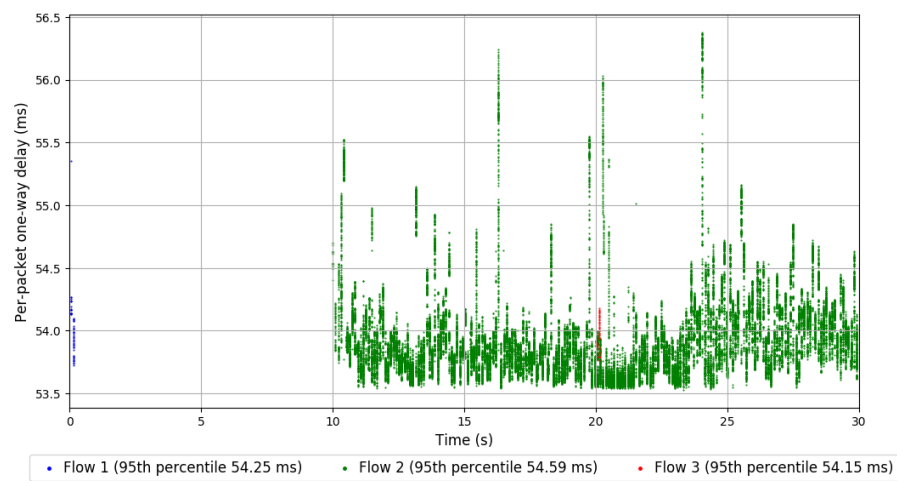
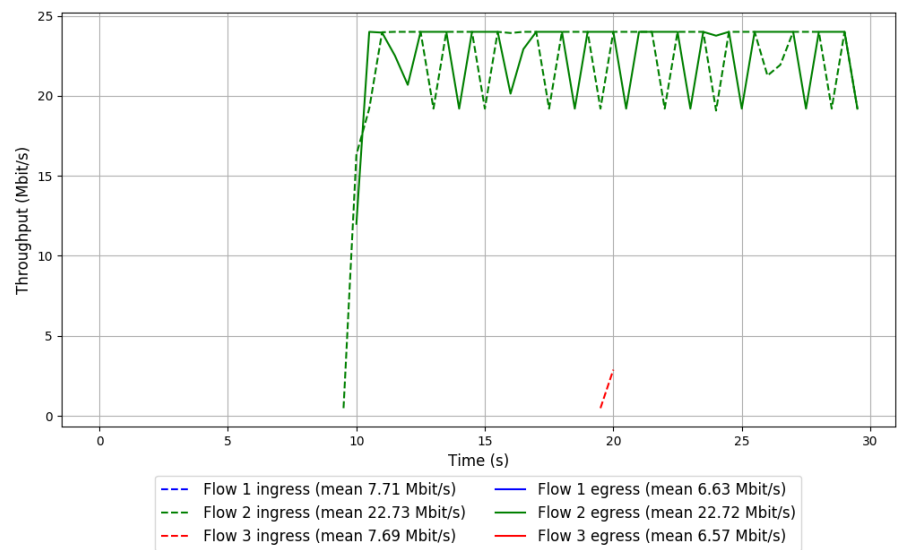
-- Flow 3:

Average throughput: 6.57 Mbit/s

95th percentile per-packet one-way delay: 54.150 ms

Loss rate: 57.14%

Run 7: Report of Saturator — Data Link



Run 8: Statistics of Saturator

Start at: 2017-08-21 08:26:51

End at: 2017-08-21 08:27:21

# Below is generated by plot.py at 2017-08-21 09:56:38

# Datalink statistics

-- Total of 3 flows:

Average throughput: 2.76 Mbit/s

95th percentile per-packet one-way delay: 54.101 ms

Loss rate: 42.65%

-- Flow 1:

Average throughput: 6.64 Mbit/s

95th percentile per-packet one-way delay: 54.235 ms

Loss rate: 57.14%

-- Flow 2:

Average throughput: 6.60 Mbit/s

95th percentile per-packet one-way delay: 54.237 ms

Loss rate: 57.14%

-- Flow 3:

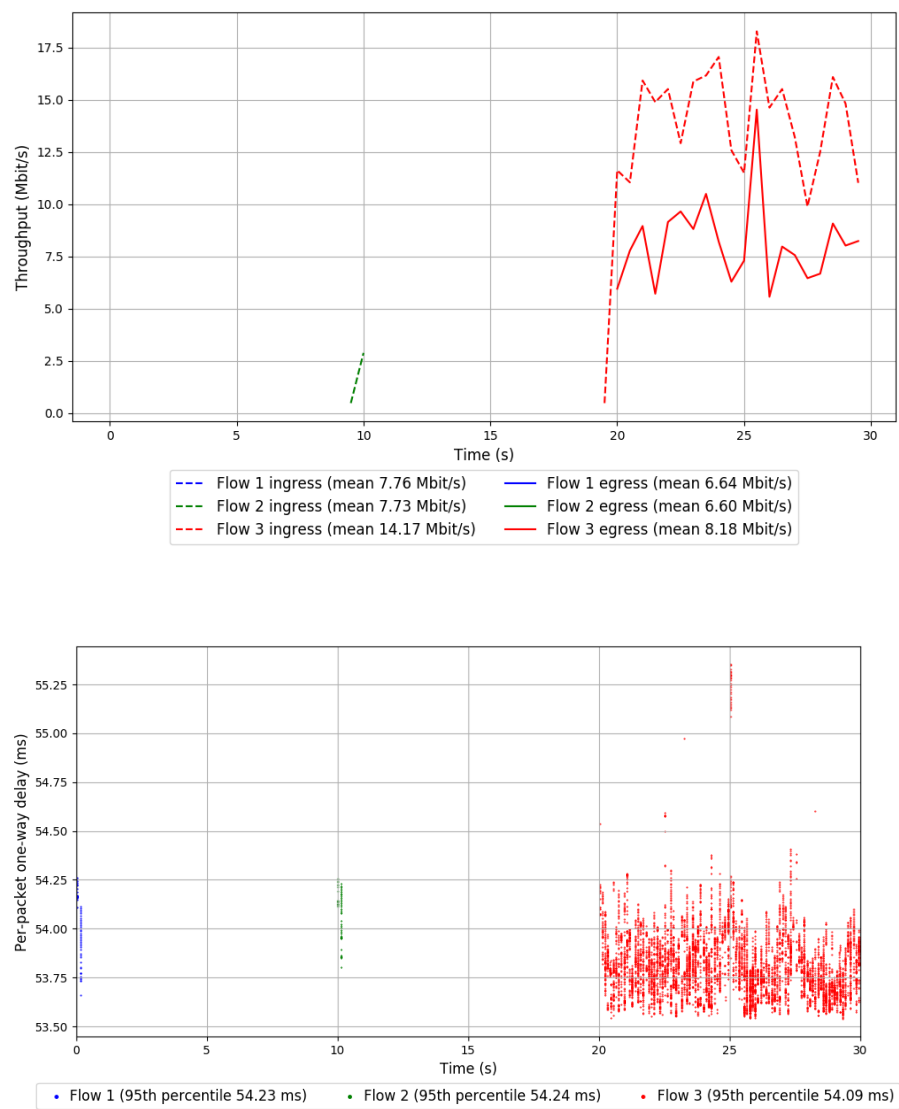
Average throughput: 8.18 Mbit/s

95th percentile per-packet one-way delay: 54.086 ms

Loss rate: 42.30%



Run 8: Report of Saturator — Data Link



Run 9: Statistics of Saturator

Start at: 2017-08-21 08:37:39

End at: 2017-08-21 08:38:10

# Below is generated by plot.py at 2017-08-21 09:56:41

# Datalink statistics

-- Total of 3 flows:

Average throughput: 5.21 Mbit/s

95th percentile per-packet one-way delay: 54.218 ms

Loss rate: 18.32%

-- Flow 1:

Average throughput: 6.81 Mbit/s

95th percentile per-packet one-way delay: 54.128 ms

Loss rate: 57.14%

-- Flow 2:

Average throughput: 6.81 Mbit/s

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

Loss rate: 57.14%

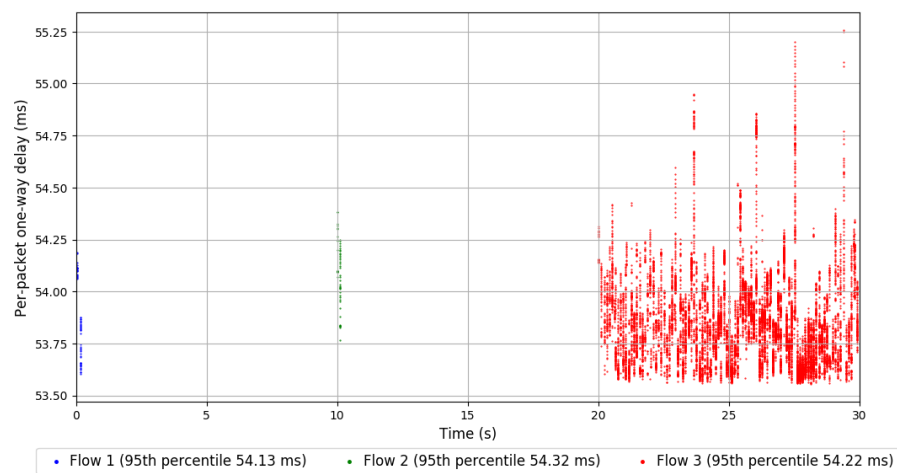
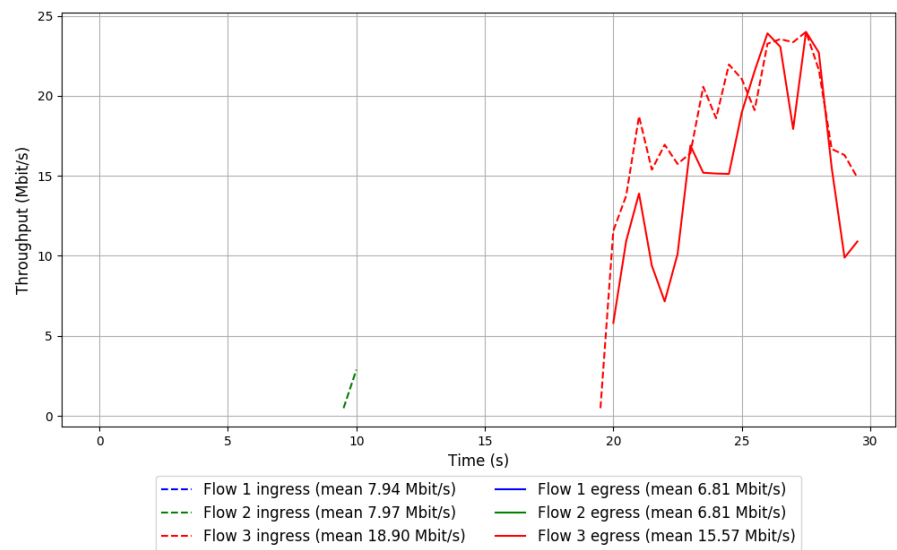
-- Flow 3:

Average throughput: 15.57 Mbit/s

95th percentile per-packet one-way delay: 54.216 ms

Loss rate: 17.63%

Run 9: Report of Saturator — Data Link

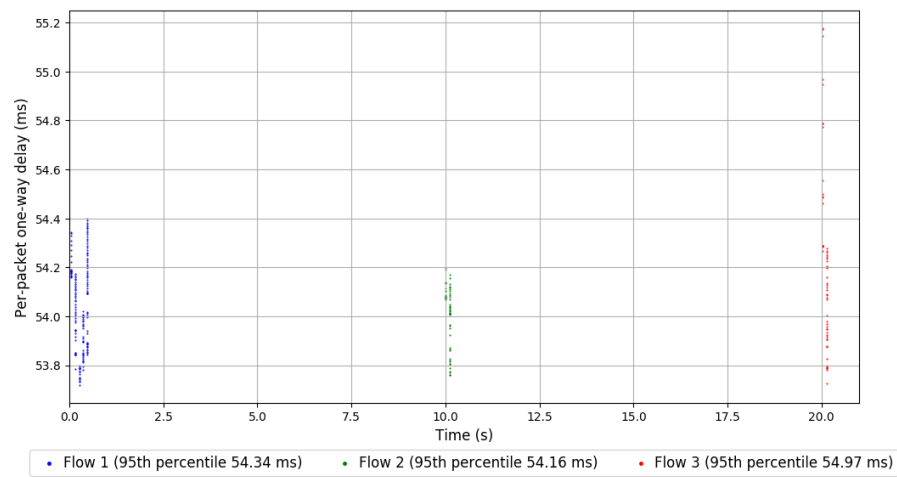
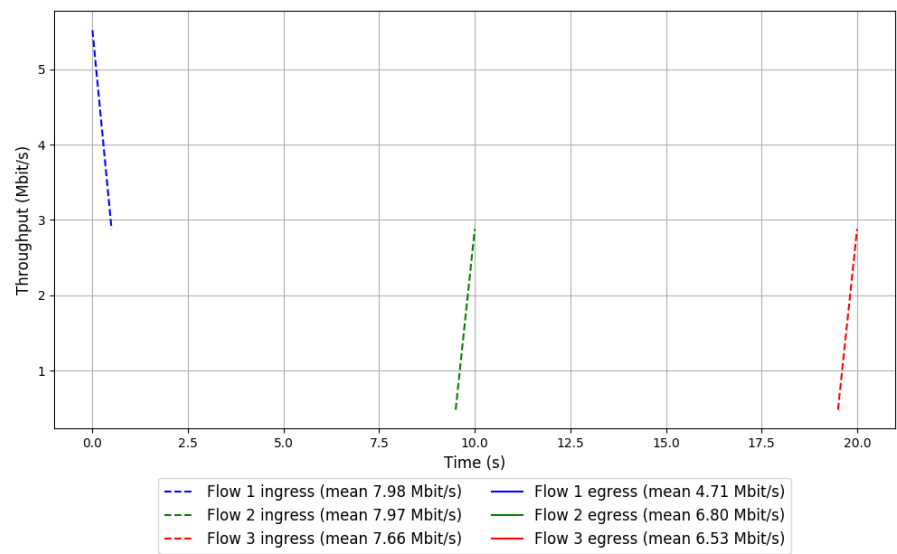


Run 10: Statistics of Saturator

Start at: 2017-08-21 08:48:31

End at: 2017-08-21 08:49:01

Run 10: Report of Saturator — Data Link

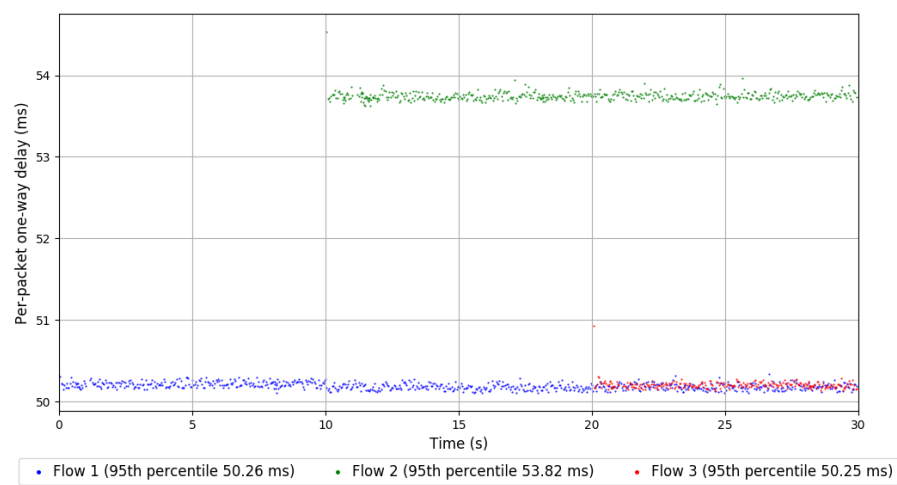
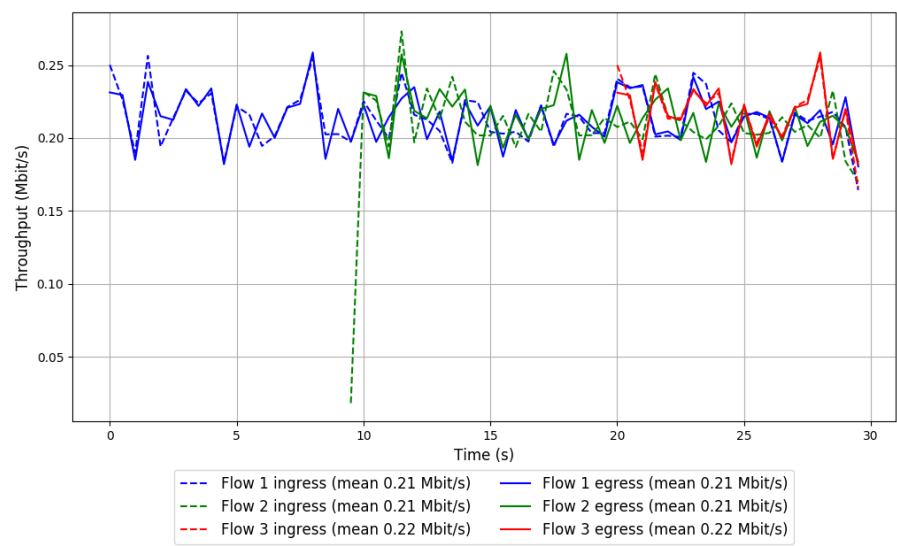


```
Run 1: Statistics of SCReAM

Start at: 2017-08-21 07:17:08
End at: 2017-08-21 07:17:38

# Below is generated by plot.py at 2017-08-21 09:56:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.788 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 50.261 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.824 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.254 ms
Loss rate: 0.00%
```

Run 1: Report of SCReAM — Data Link



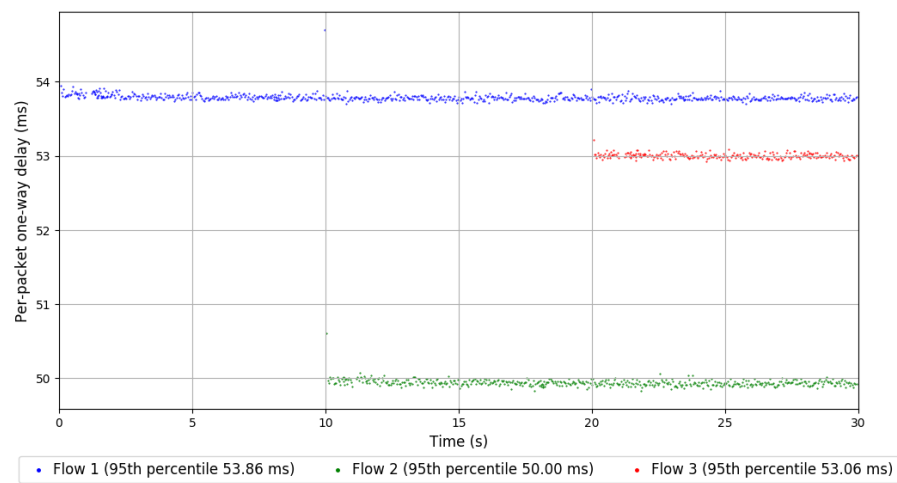
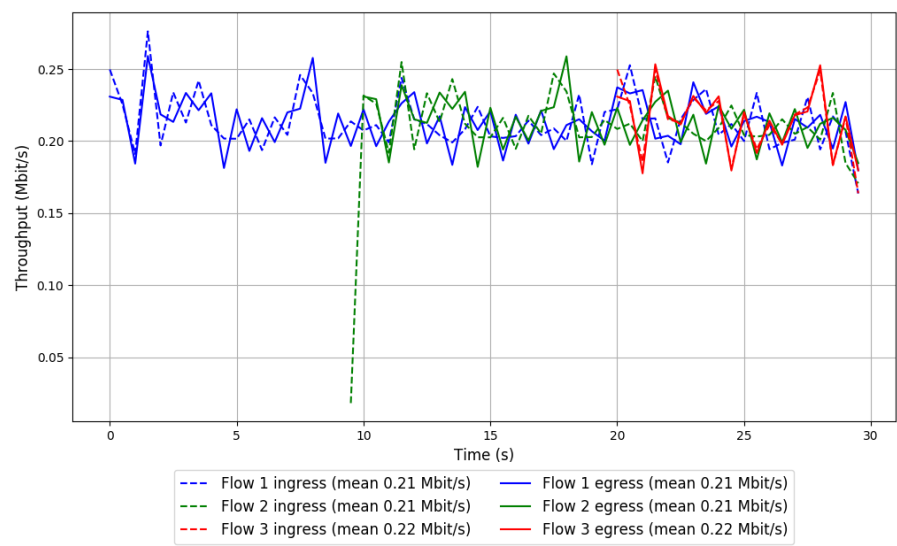
```
Run 2: Statistics of SReAM

Start at: 2017-08-21 07:27:49
End at: 2017-08-21 07:28:19

# Below is generated by plot.py at 2017-08-21 09:56:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.836 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.857 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 49.998 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.063 ms
Loss rate: 0.00%
```



Run 2: Report of SReAM — Data Link

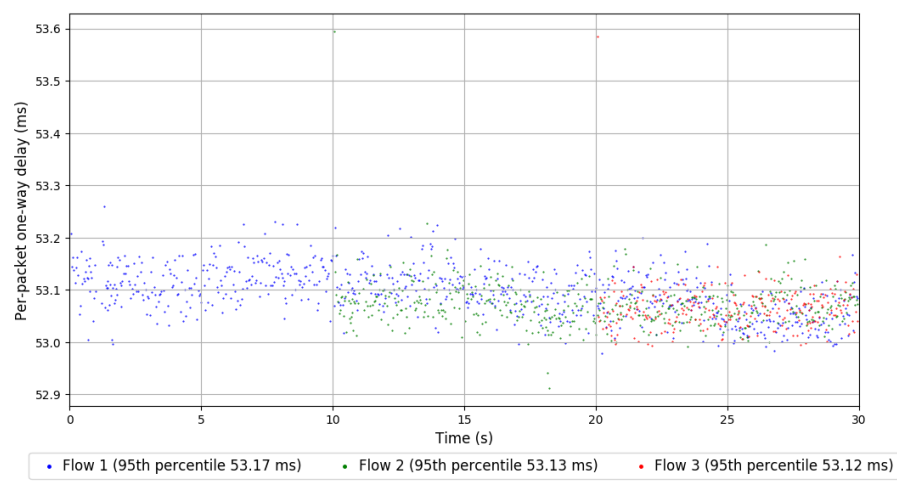
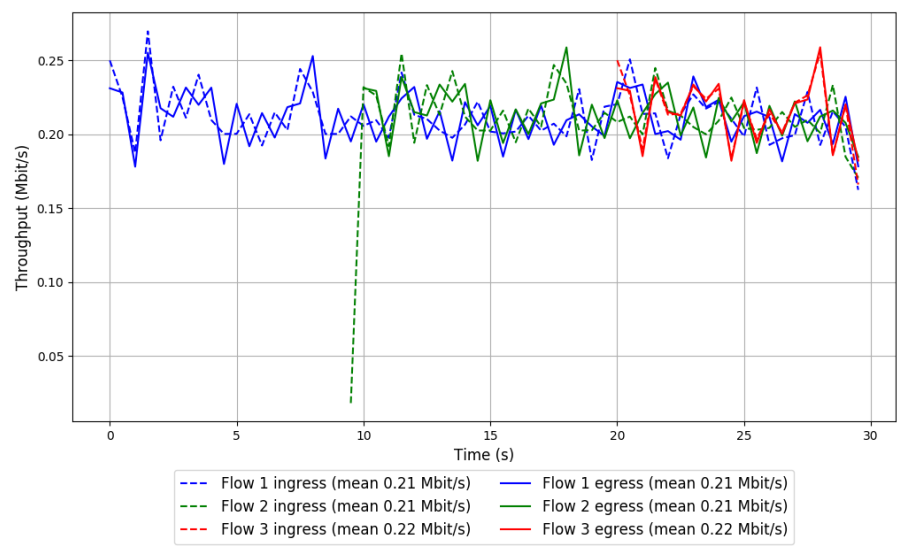


```
Run 3: Statistics of SCReAM

Start at: 2017-08-21 07:38:44
End at: 2017-08-21 07:39:14

# Below is generated by plot.py at 2017-08-21 09:56:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.160 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.168 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.135 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.117 ms
Loss rate: 0.00%
```

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2017-08-21 07:49:32

End at: 2017-08-21 07:50:02

# Below is generated by plot.py at 2017-08-21 09:56:44

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.823 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 50.634 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 50.309 ms

Loss rate: 0.00%

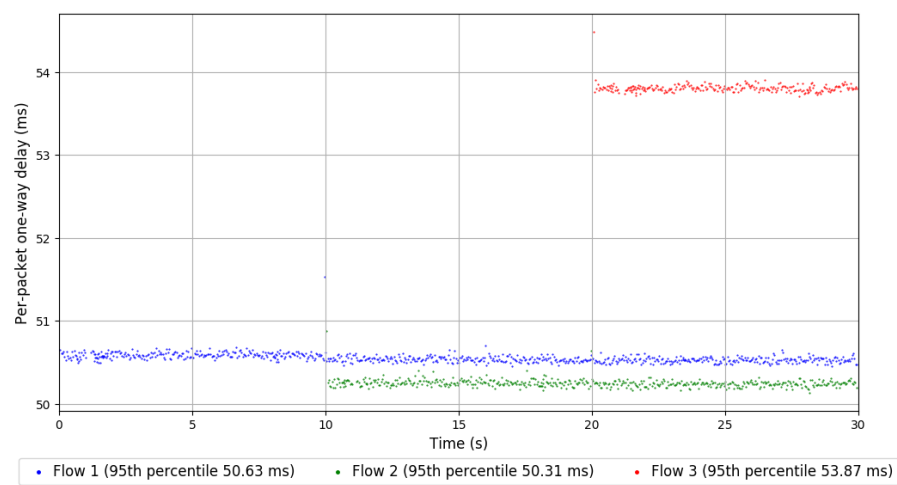
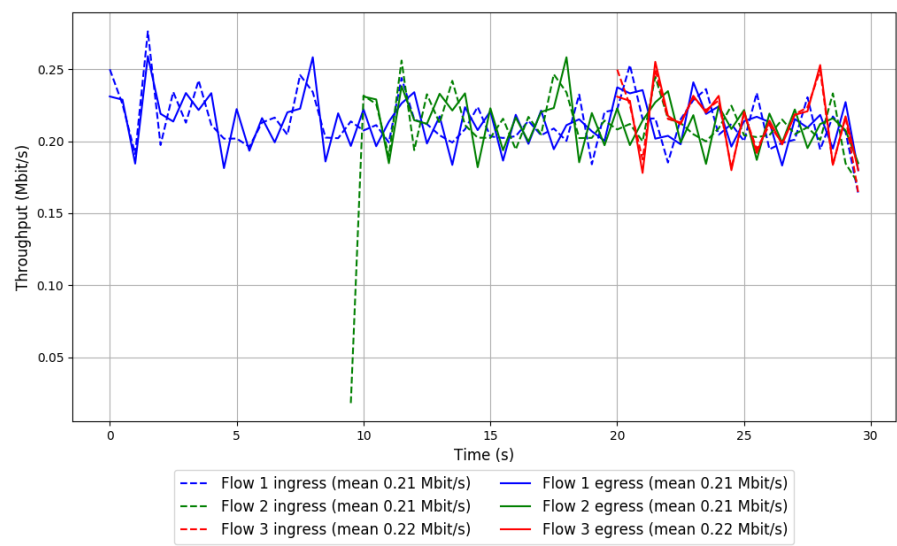
-- Flow 3:

Average throughput: 0.22 Mbit/s

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

Loss rate: 0.00%

Run 4: Report of SCReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2017-08-21 08:00:38

End at: 2017-08-21 08:01:08

# Below is generated by plot.py at 2017-08-21 09:56:44

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 50.005 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.21 Mbit/s

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

Loss rate: 0.00%

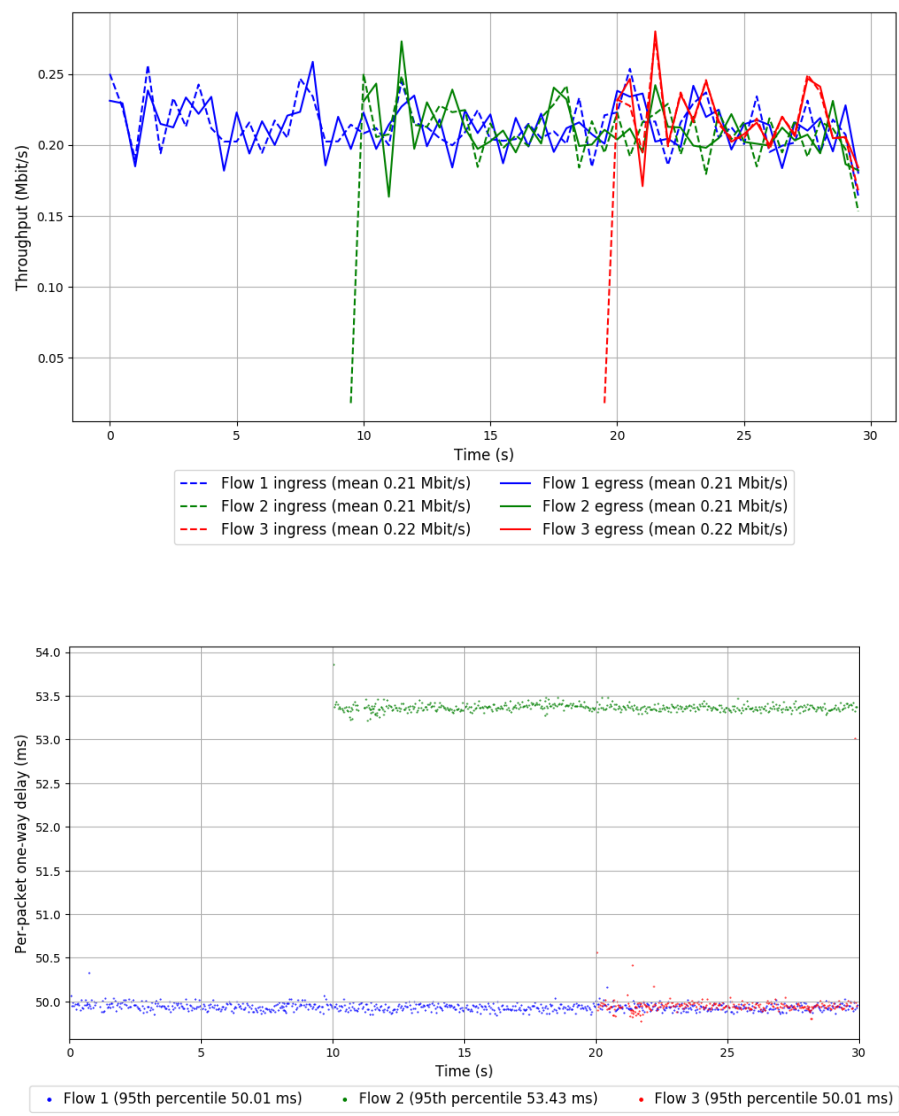
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.010 ms

Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



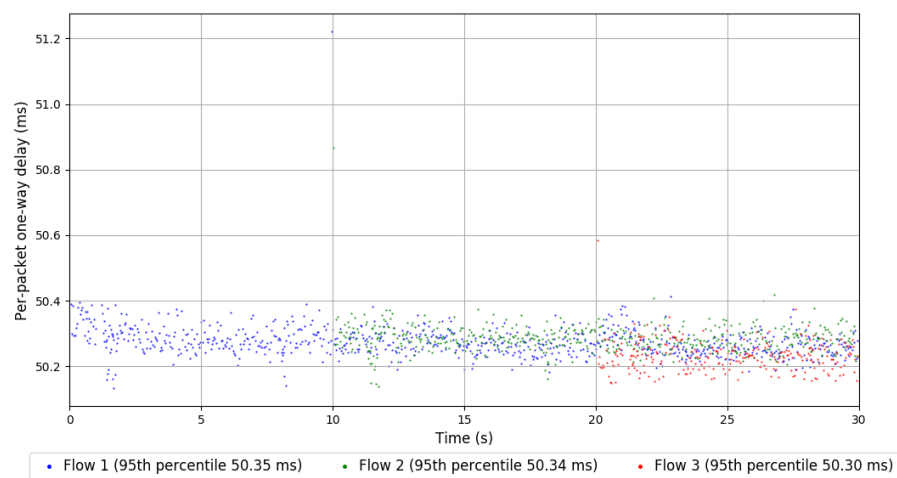
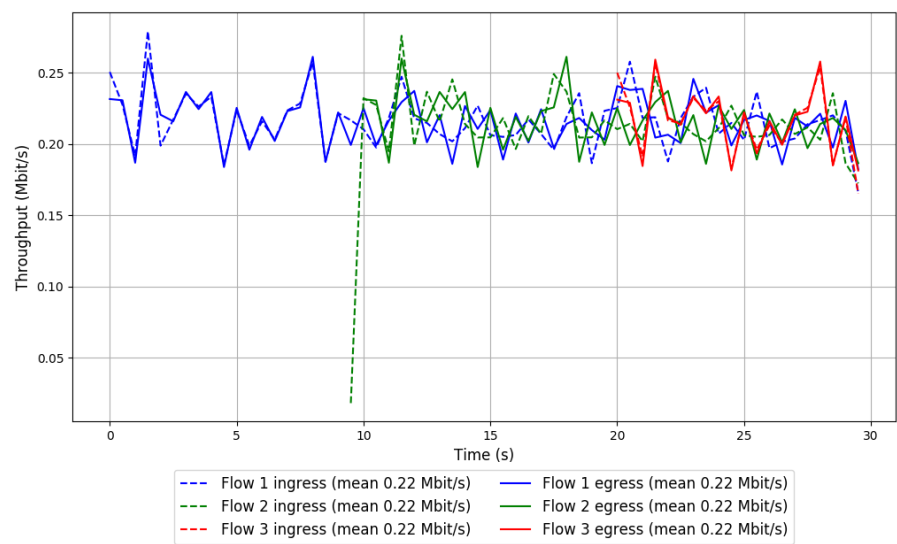
```
Run 6: Statistics of SCReAM

Start at: 2017-08-21 08:11:27
End at: 2017-08-21 08:11:57

# Below is generated by plot.py at 2017-08-21 09:56:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.342 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.353 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.342 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.304 ms
Loss rate: 0.00%
```



Run 6: Report of SReAM — Data Link

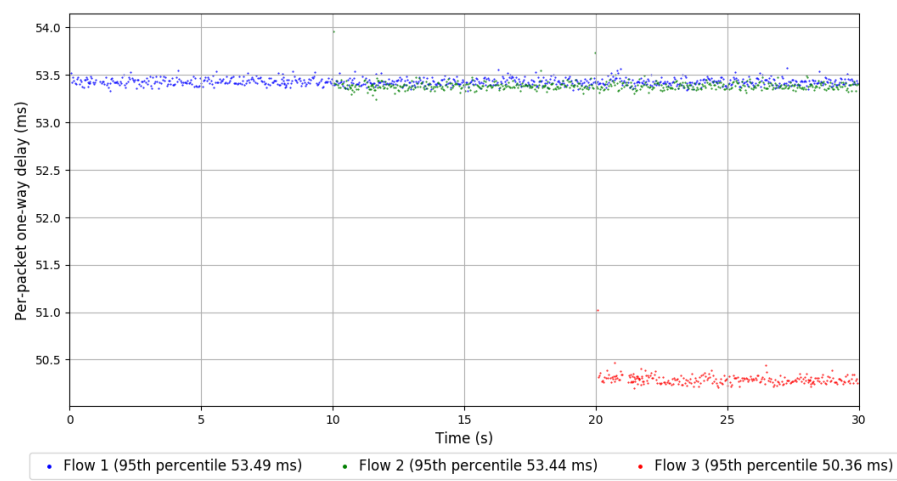
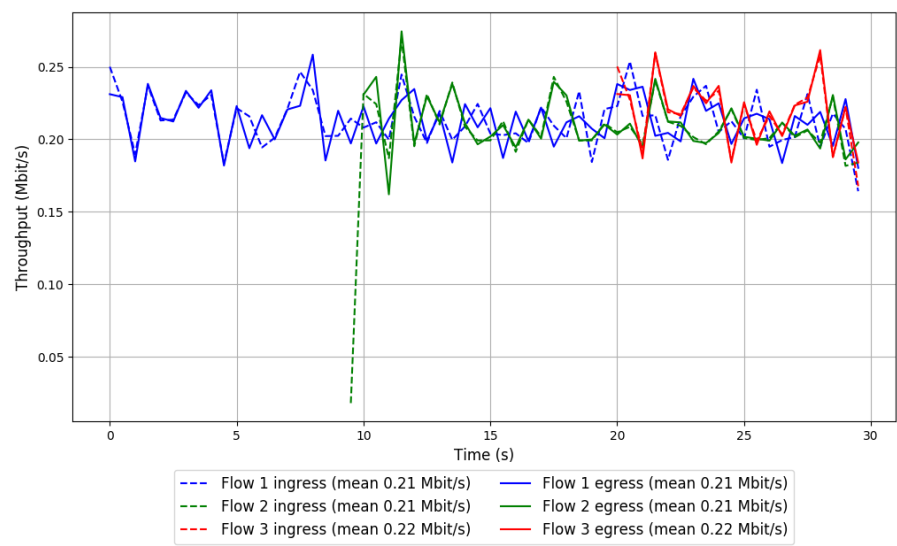


```
Run 7: Statistics of SReAM

Start at: 2017-08-21 08:22:29
End at: 2017-08-21 08:22:59

# Below is generated by plot.py at 2017-08-21 09:56:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.476 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.486 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.442 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.361 ms
Loss rate: 0.00%
```

Run 7: Report of SReAM — Data Link



Run 8: Statistics of SCReAM

Start at: 2017-08-21 08:33:18

End at: 2017-08-21 08:33:48

# Below is generated by plot.py at 2017-08-21 09:56:47

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 50.449 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.466 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.377 ms

Loss rate: 0.00%

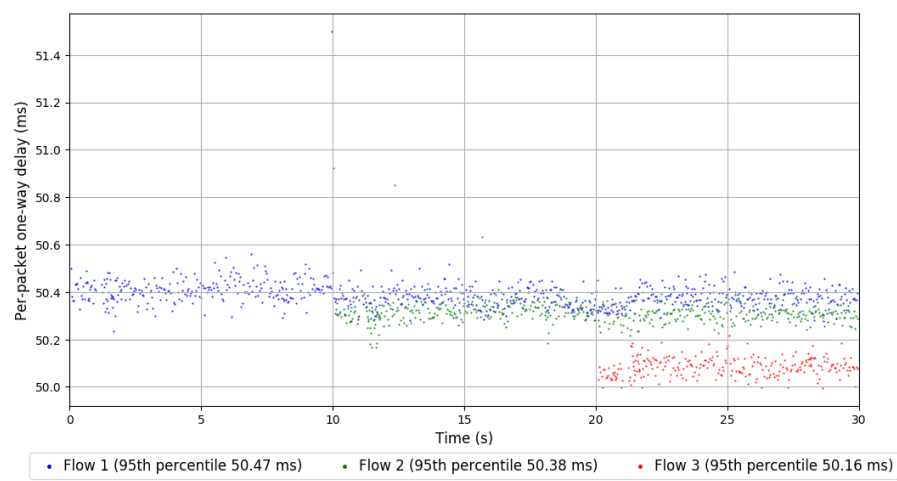
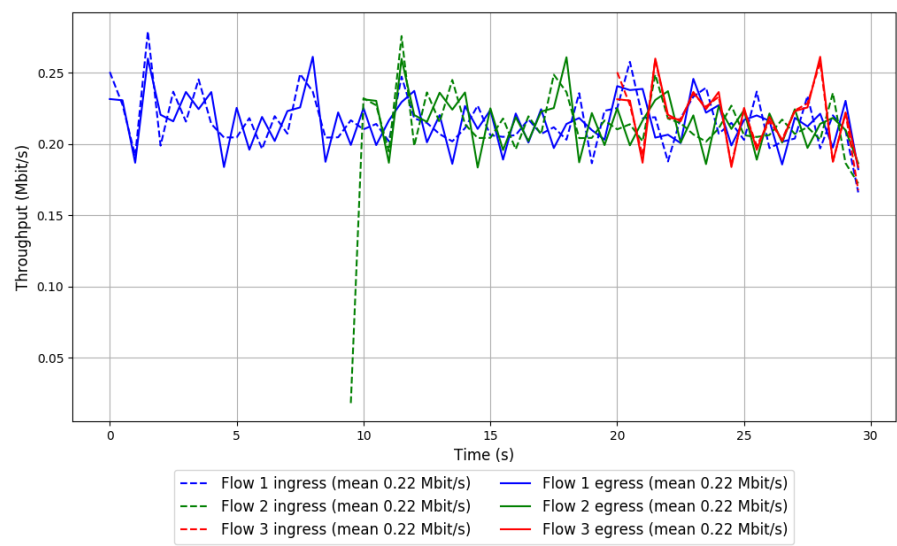
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.155 ms

Loss rate: 0.00%

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SCReAM

Start at: 2017-08-21 08:44:08

End at: 2017-08-21 08:44:38

# Below is generated by plot.py at 2017-08-21 09:56:48

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.504 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.21 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.255 ms

Loss rate: 0.00%

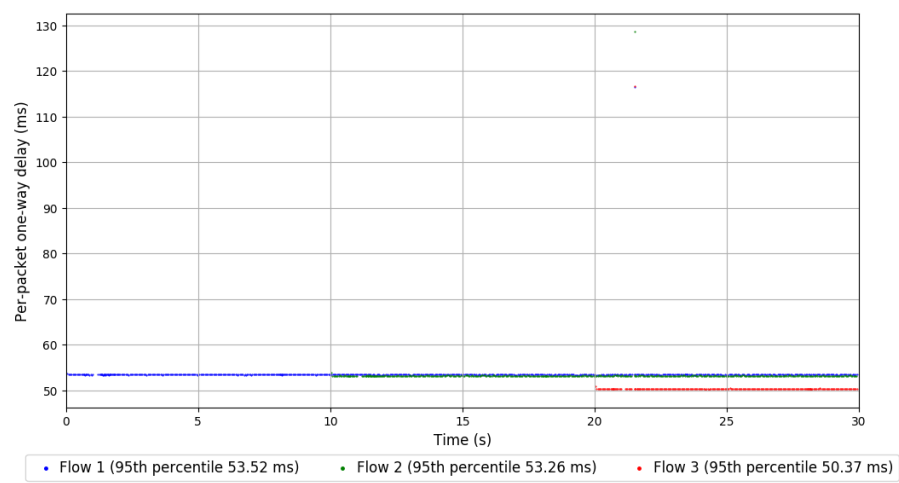
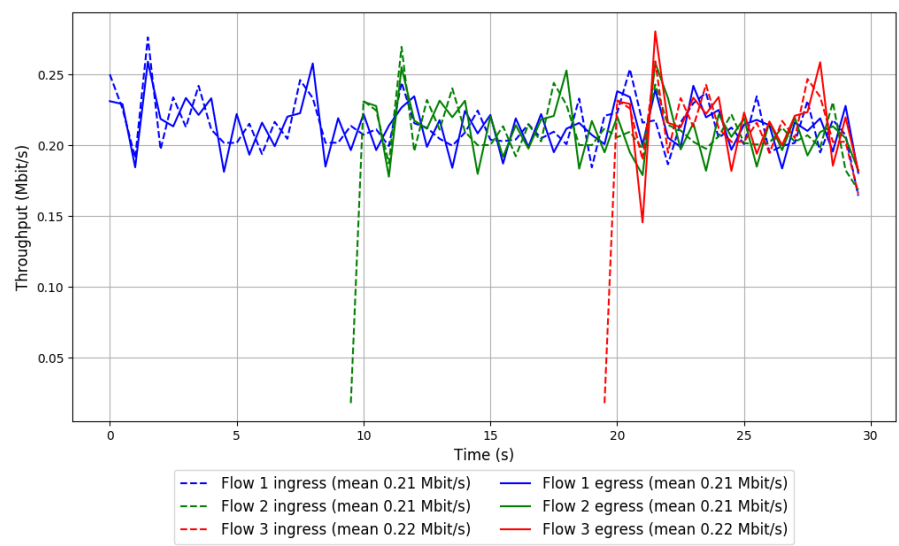
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.371 ms

Loss rate: 0.00%

Run 9: Report of SReAM — Data Link



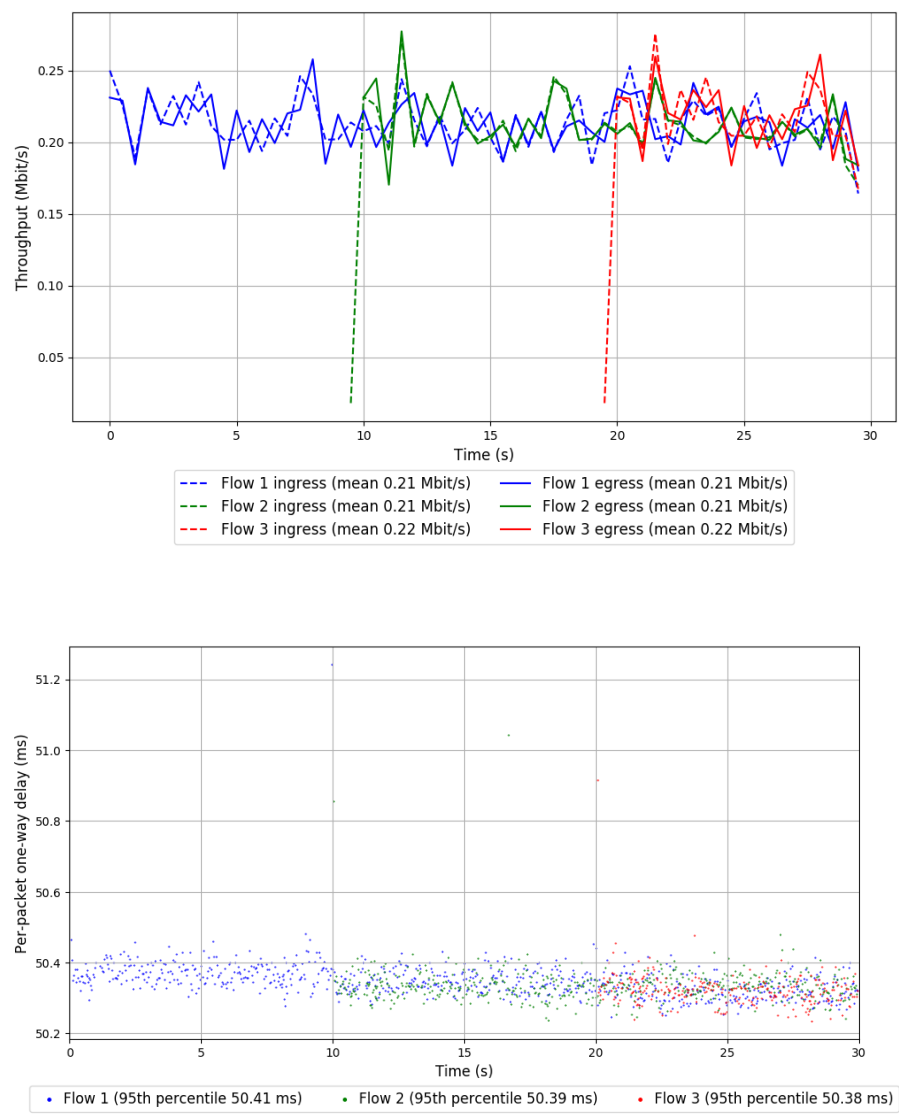
```
Run 10: Statistics of SReAM

Start at: 2017-08-21 08:54:54
End at: 2017-08-21 08:55:24

# Below is generated by plot.py at 2017-08-21 09:56:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.405 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 50.414 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 50.394 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.382 ms
Loss rate: 0.00%
```



Run 10: Report of SCReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2017-08-21 07:13:30

End at: 2017-08-21 07:14:00

# Below is generated by plot.py at 2017-08-21 09:56:52

# Datalink statistics

-- Total of 3 flows:

Average throughput: 10.82 Mbit/s

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

Loss rate: 6.78%

-- Flow 1:

Average throughput: 6.74 Mbit/s

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

Loss rate: 5.08%

-- Flow 2:

Average throughput: 5.67 Mbit/s

95th percentile per-packet one-way delay: 53.836 ms

Loss rate: 8.27%

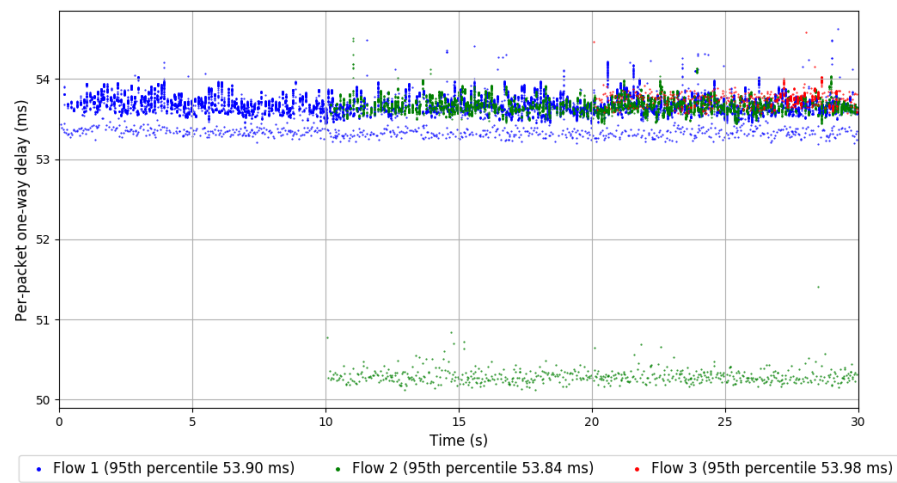
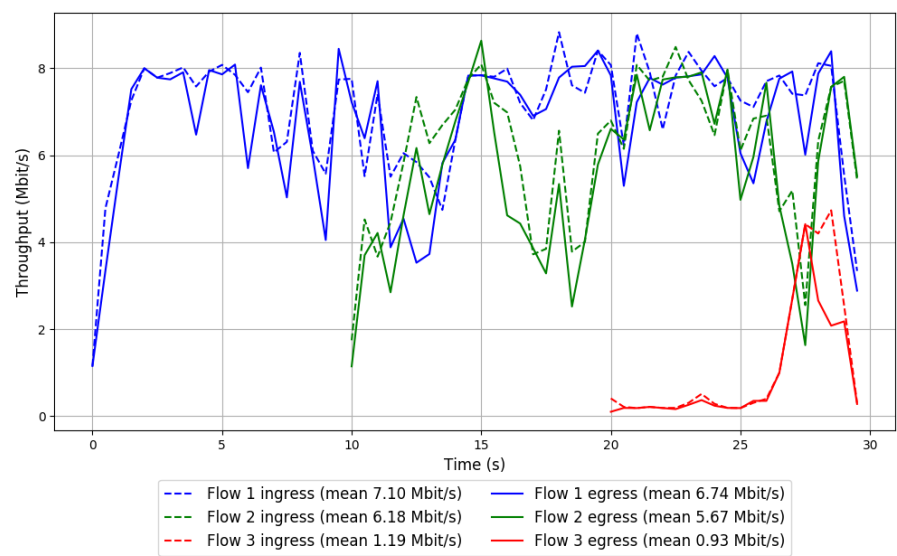
-- Flow 3:

Average throughput: 0.93 Mbit/s

95th percentile per-packet one-way delay: 53.981 ms

Loss rate: 22.04%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2017-08-21 07:24:11

End at: 2017-08-21 07:24:41

# Below is generated by plot.py at 2017-08-21 09:56:54

# Datalink statistics

-- Total of 3 flows:

Average throughput: 12.28 Mbit/s

95th percentile per-packet one-way delay: 54.355 ms

Loss rate: 4.35%

-- Flow 1:

Average throughput: 4.71 Mbit/s

95th percentile per-packet one-way delay: 53.893 ms

Loss rate: 10.59%

-- Flow 2:

Average throughput: 7.65 Mbit/s

95th percentile per-packet one-way delay: 54.429 ms

Loss rate: 0.00%

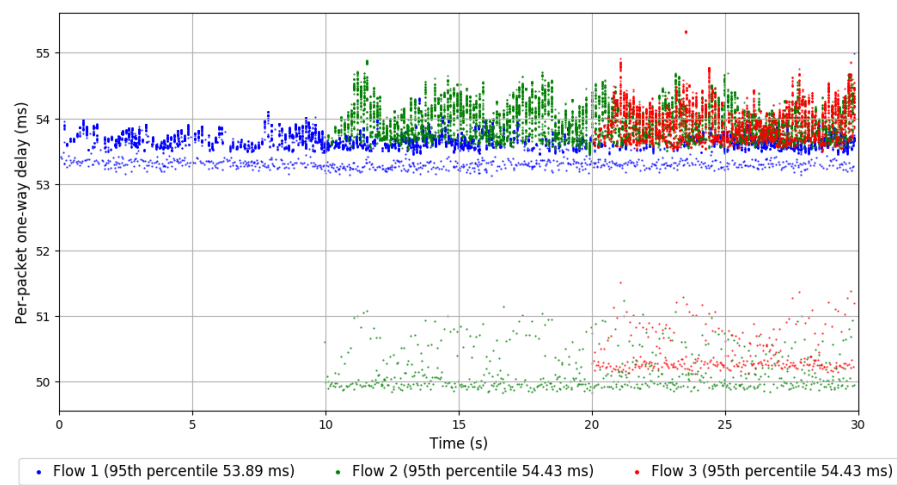
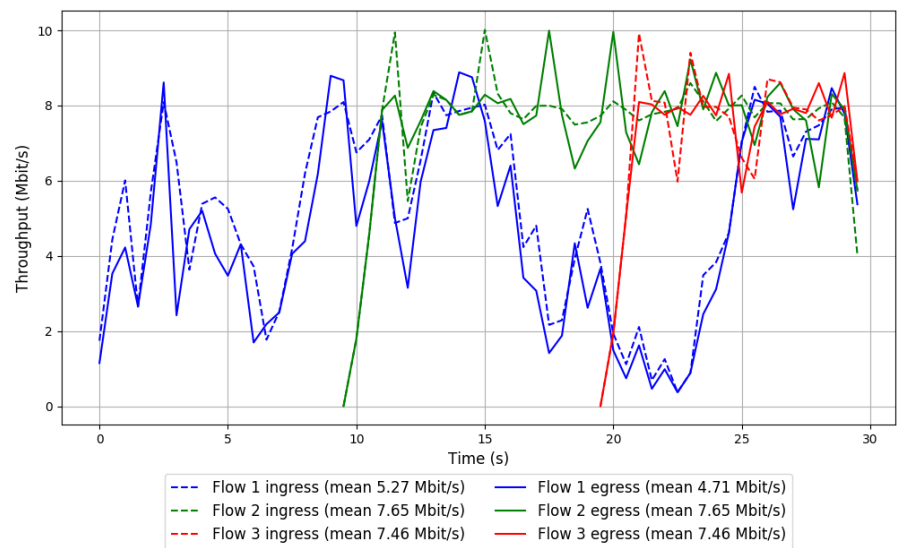
-- Flow 3:

Average throughput: 7.46 Mbit/s

95th percentile per-packet one-way delay: 54.428 ms

Loss rate: 0.00%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2017-08-21 07:34:59

End at: 2017-08-21 07:35:29

# Below is generated by plot.py at 2017-08-21 09:56:54

# Datalink statistics

-- Total of 3 flows:

Average throughput: 10.17 Mbit/s

95th percentile per-packet one-way delay: 54.309 ms

Loss rate: 5.91%

-- Flow 1:

Average throughput: 7.57 Mbit/s

95th percentile per-packet one-way delay: 54.347 ms

Loss rate: 0.07%

-- Flow 2:

Average throughput: 2.96 Mbit/s

95th percentile per-packet one-way delay: 53.846 ms

Loss rate: 18.63%

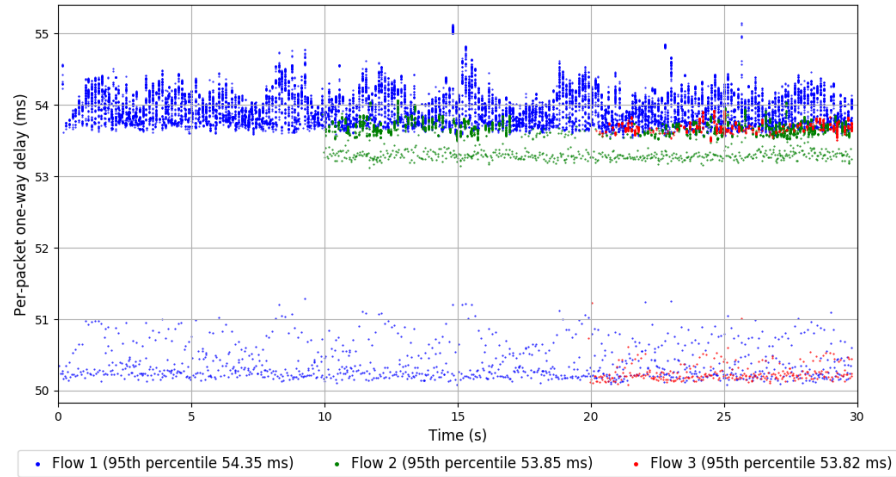
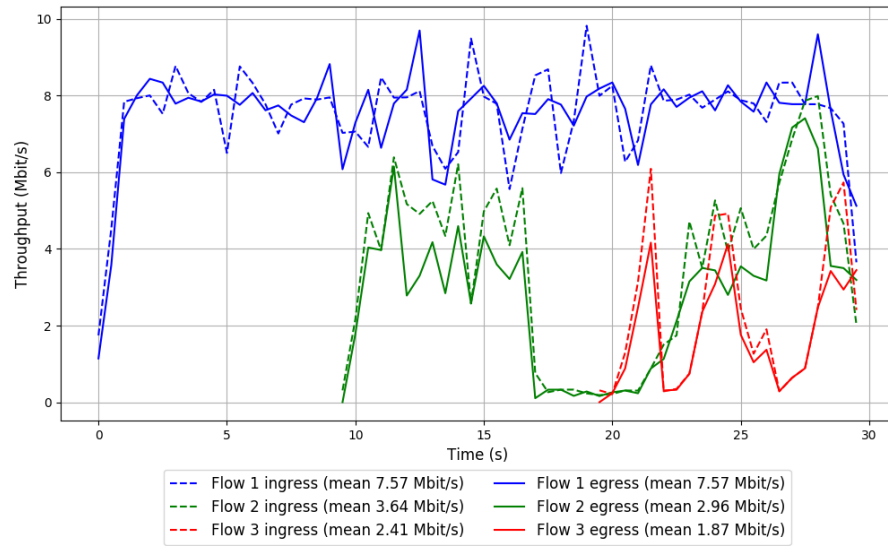
-- Flow 3:

Average throughput: 1.87 Mbit/s

95th percentile per-packet one-way delay: 53.822 ms

Loss rate: 22.47%

### Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2017-08-21 07:46:07

End at: 2017-08-21 07:46:37

# Below is generated by plot.py at 2017-08-21 09:56:56

# Datalink statistics

-- Total of 3 flows:

Average throughput: 9.16 Mbit/s

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

Loss rate: 13.14%

-- Flow 1:

Average throughput: 4.78 Mbit/s

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

Loss rate: 11.24%

-- Flow 2:

Average throughput: 3.62 Mbit/s

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

Loss rate: 20.84%

-- Flow 3:

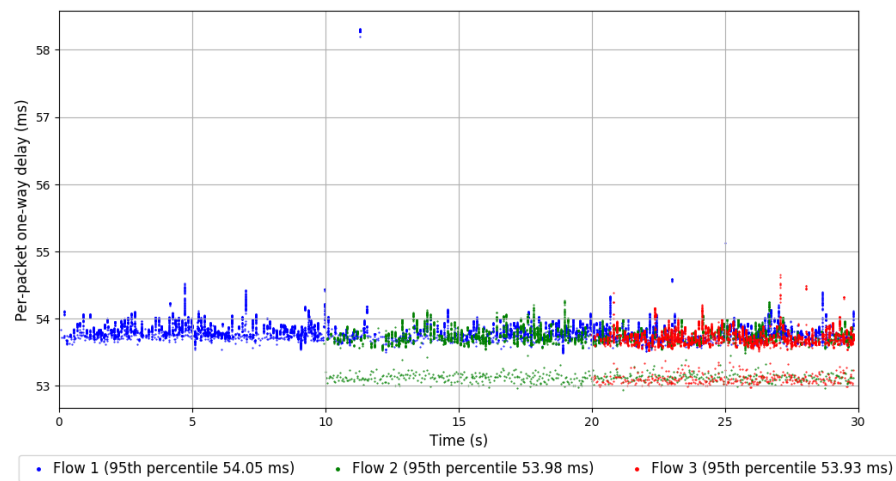
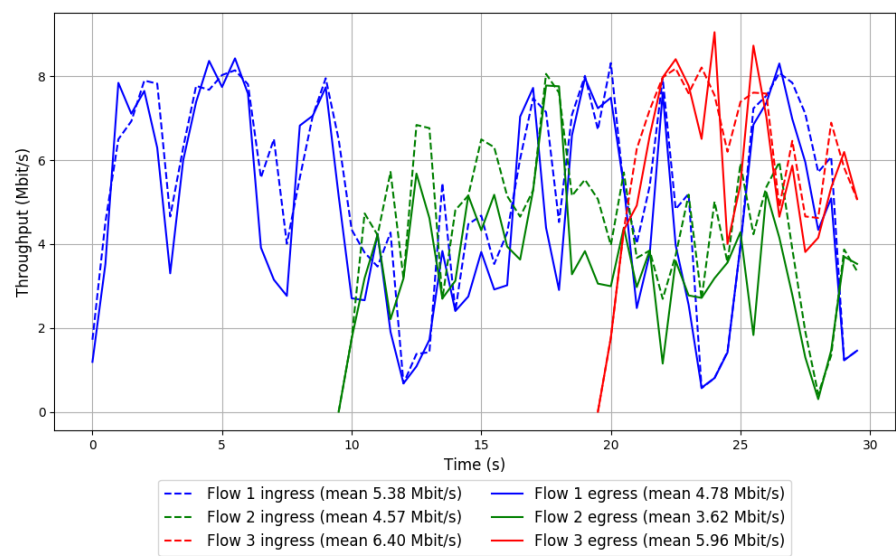
Average throughput: 5.96 Mbit/s

95th percentile per-packet one-way delay: 53.930 ms

Loss rate: 6.87%



Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2017-08-21 07:56:50

End at: 2017-08-21 07:57:20

# Below is generated by plot.py at 2017-08-21 09:56:59

# Datalink statistics

-- Total of 3 flows:

Average throughput: 9.31 Mbit/s

95th percentile per-packet one-way delay: 54.296 ms

Loss rate: 8.51%

-- Flow 1:

Average throughput: 2.69 Mbit/s

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

Loss rate: 18.64%

-- Flow 2:

Average throughput: 7.53 Mbit/s

95th percentile per-packet one-way delay: 54.395 ms

Loss rate: 0.00%

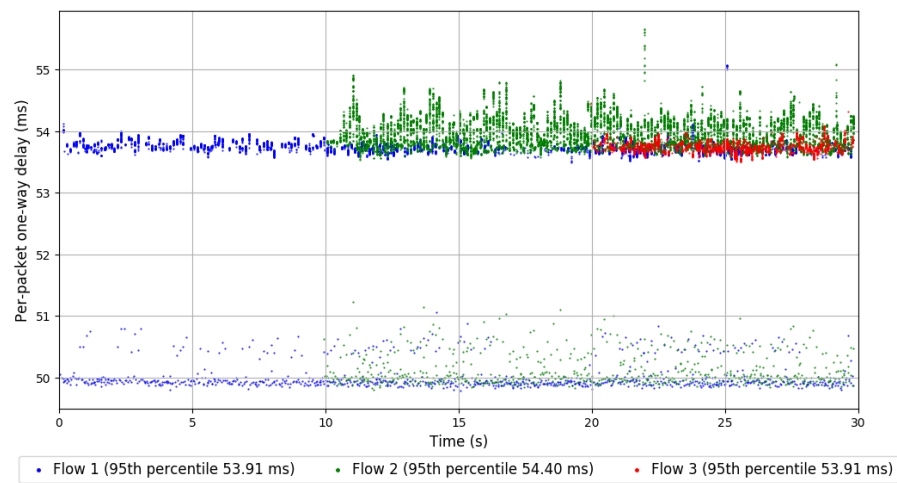
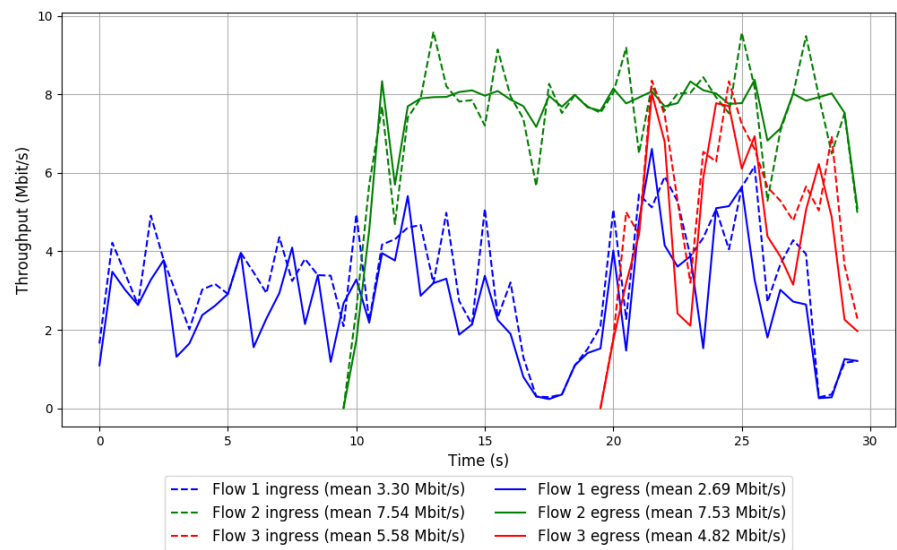
-- Flow 3:

Average throughput: 4.82 Mbit/s

95th percentile per-packet one-way delay: 53.914 ms

Loss rate: 13.61%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2017-08-21 08:07:39

End at: 2017-08-21 08:08:09

# Below is generated by plot.py at 2017-08-21 09:57:01

# Datalink statistics

-- Total of 3 flows:

Average throughput: 8.98 Mbit/s

95th percentile per-packet one-way delay: 53.949 ms

Loss rate: 13.30%

-- Flow 1:

Average throughput: 3.23 Mbit/s

95th percentile per-packet one-way delay: 53.976 ms

Loss rate: 21.83%

-- Flow 2:

Average throughput: 7.00 Mbit/s

95th percentile per-packet one-way delay: 53.936 ms

Loss rate: 3.34%

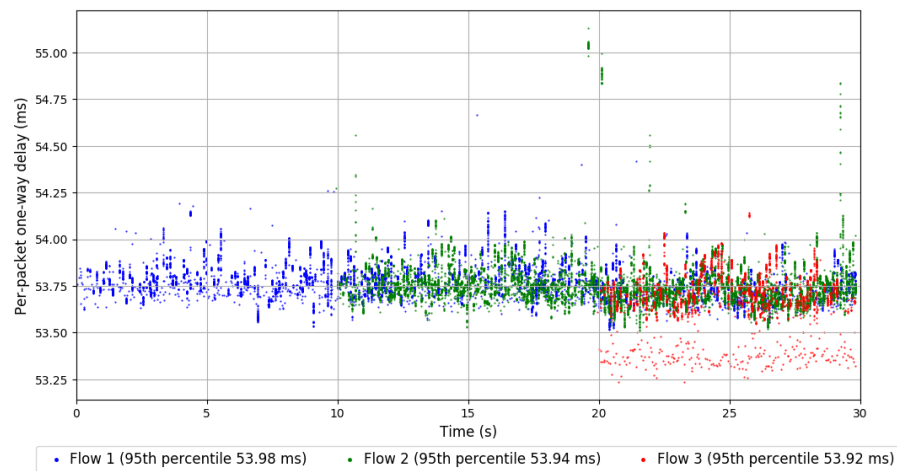
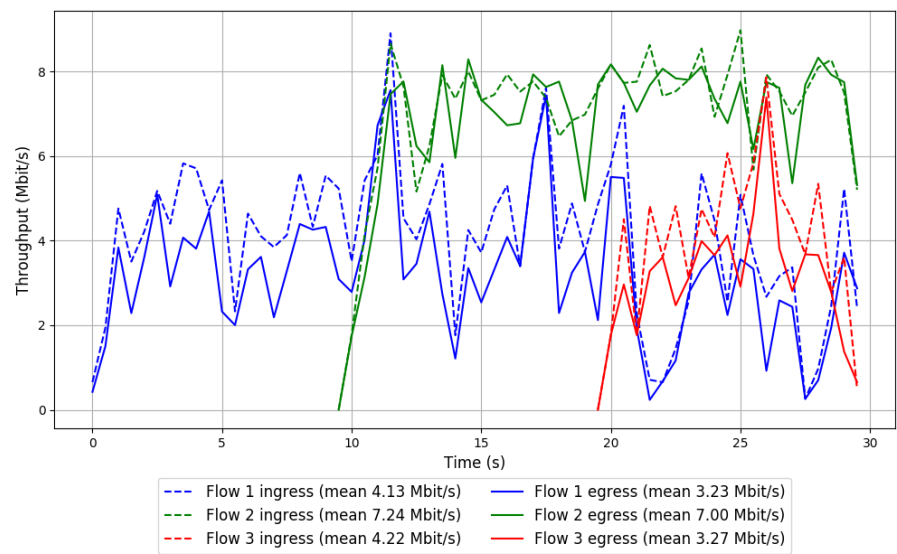
-- Flow 3:

Average throughput: 3.27 Mbit/s

95th percentile per-packet one-way delay: 53.921 ms

Loss rate: 22.60%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2017-08-21 08:18:45

End at: 2017-08-21 08:19:15

# Below is generated by plot.py at 2017-08-21 09:57:02

# Datalink statistics

-- Total of 3 flows:

Average throughput: 11.20 Mbit/s

95th percentile per-packet one-way delay: 54.448 ms

Loss rate: 4.92%

-- Flow 1:

Average throughput: 3.55 Mbit/s

95th percentile per-packet one-way delay: 53.967 ms

Loss rate: 14.03%

-- Flow 2:

Average throughput: 7.74 Mbit/s

95th percentile per-packet one-way delay: 54.493 ms

Loss rate: 0.00%

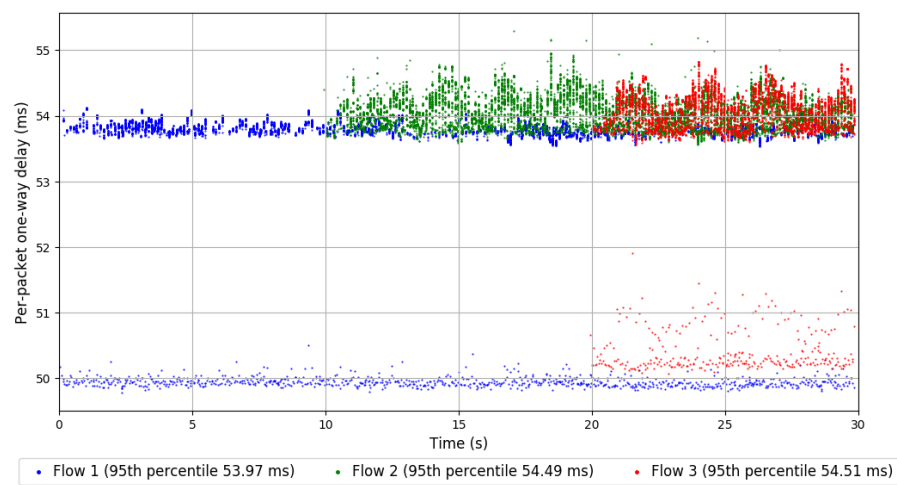
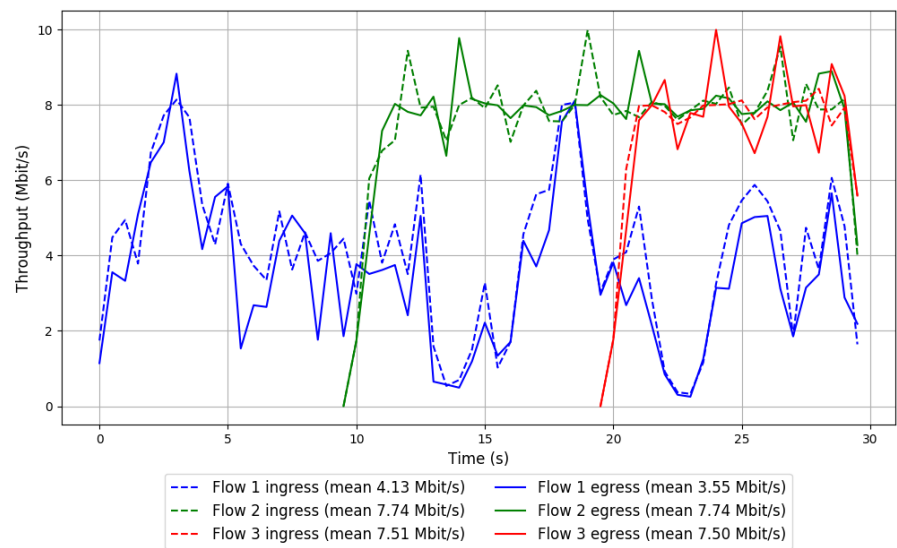
-- Flow 3:

Average throughput: 7.50 Mbit/s

95th percentile per-packet one-way delay: 54.511 ms

Loss rate: 0.00%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2017-08-21 08:29:37

End at: 2017-08-21 08:30:07

# Below is generated by plot.py at 2017-08-21 09:57:05

# Datalink statistics

-- Total of 3 flows:

Average throughput: 10.73 Mbit/s

95th percentile per-packet one-way delay: 54.343 ms

Loss rate: 10.15%

-- Flow 1:

Average throughput: 4.69 Mbit/s

95th percentile per-packet one-way delay: 53.966 ms

Loss rate: 13.89%

-- Flow 2:

Average throughput: 5.35 Mbit/s

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

Loss rate: 11.35%

-- Flow 3:

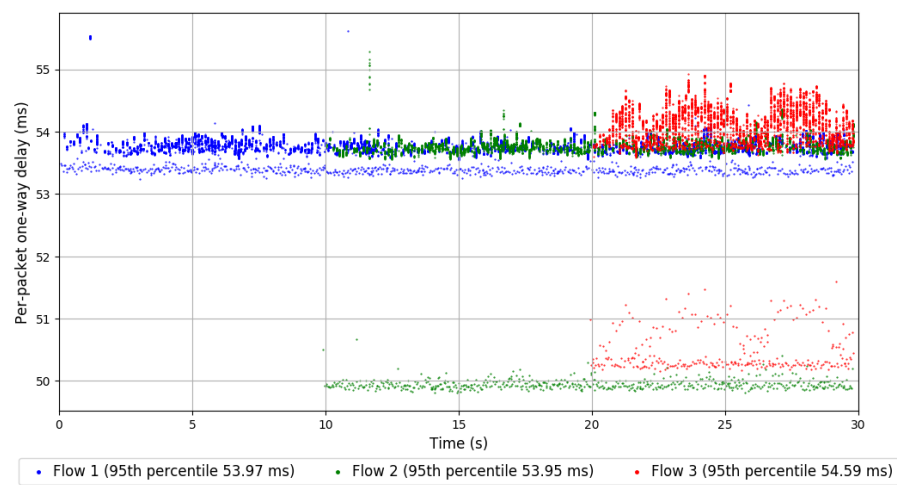
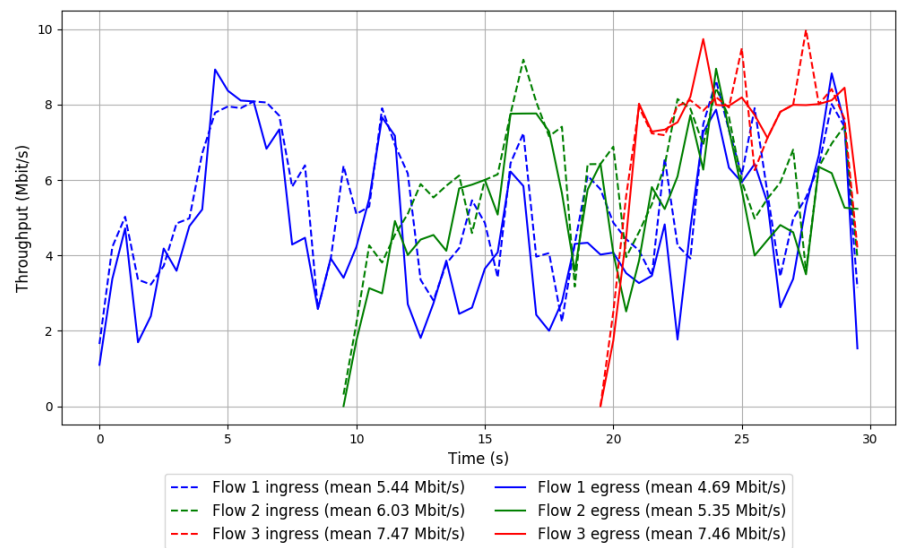
Average throughput: 7.46 Mbit/s

95th percentile per-packet one-way delay: 54.589 ms

Loss rate: 0.00%



Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2017-08-21 08:40:27

End at: 2017-08-21 08:40:57

# Below is generated by plot.py at 2017-08-21 09:57:06

# Datalink statistics

-- Total of 3 flows:

Average throughput: 9.11 Mbit/s

95th percentile per-packet one-way delay: 54.429 ms

Loss rate: 13.77%

-- Flow 1:

Average throughput: 4.44 Mbit/s

95th percentile per-packet one-way delay: 54.037 ms

Loss rate: 15.40%

-- Flow 2:

Average throughput: 3.25 Mbit/s

95th percentile per-packet one-way delay: 53.999 ms

Loss rate: 22.83%

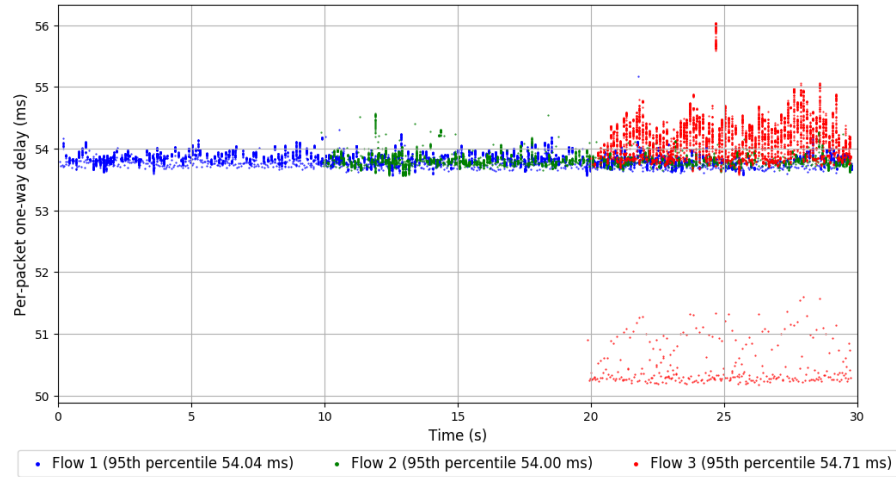
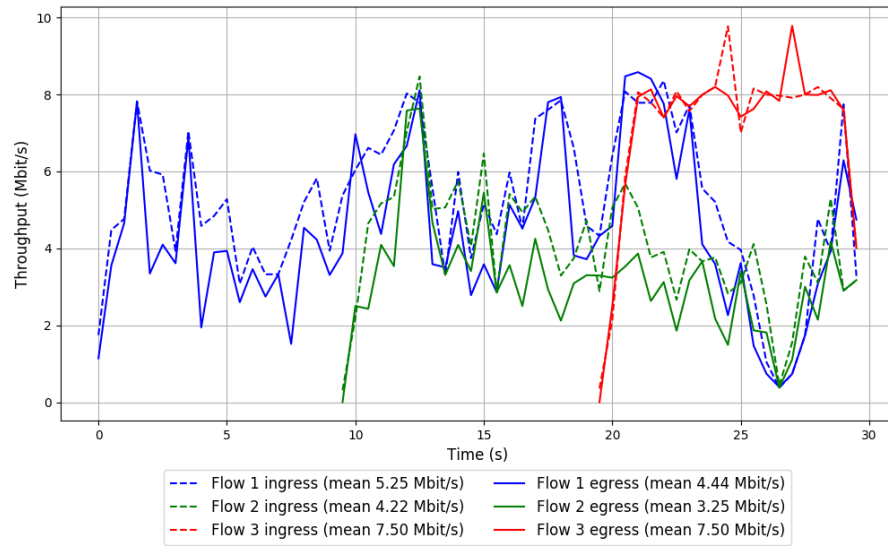
-- Flow 3:

Average throughput: 7.50 Mbit/s

95th percentile per-packet one-way delay: 54.709 ms

Loss rate: 0.08%

## Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2017-08-21 08:51:19

End at: 2017-08-21 08:51:49

# Below is generated by plot.py at 2017-08-21 09:57:08

# Datalink statistics

-- Total of 3 flows:

Average throughput: 11.87 Mbit/s

95th percentile per-packet one-way delay: 54.512 ms

Loss rate: 6.61%

-- Flow 1:

Average throughput: 7.71 Mbit/s

95th percentile per-packet one-way delay: 54.591 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 4.85 Mbit/s

95th percentile per-packet one-way delay: 54.087 ms

Loss rate: 14.88%

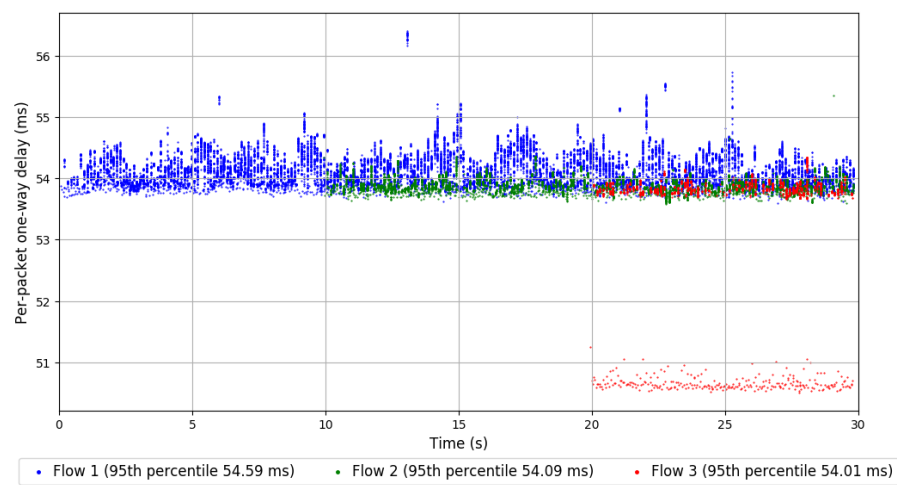
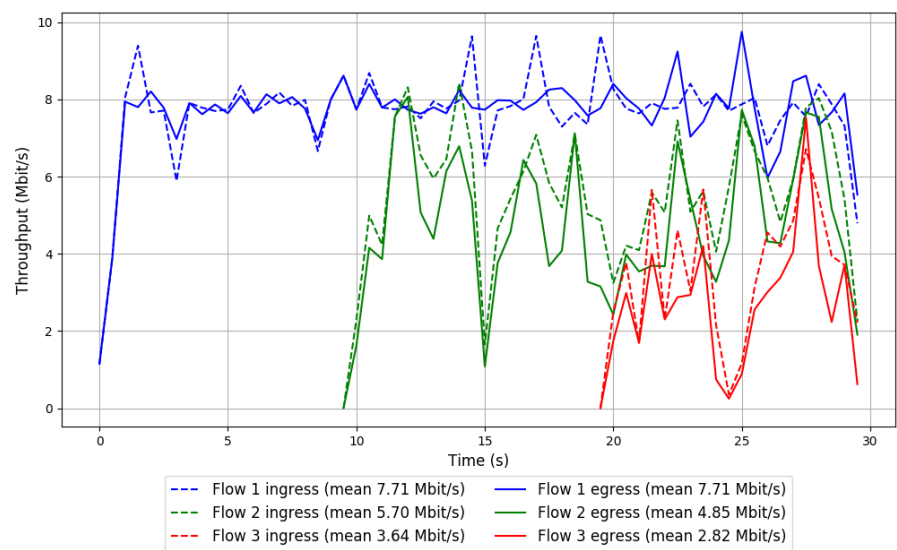
-- Flow 3:

Average throughput: 2.82 Mbit/s

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

Loss rate: 22.70%

Run 10: Report of Sprout — Data Link

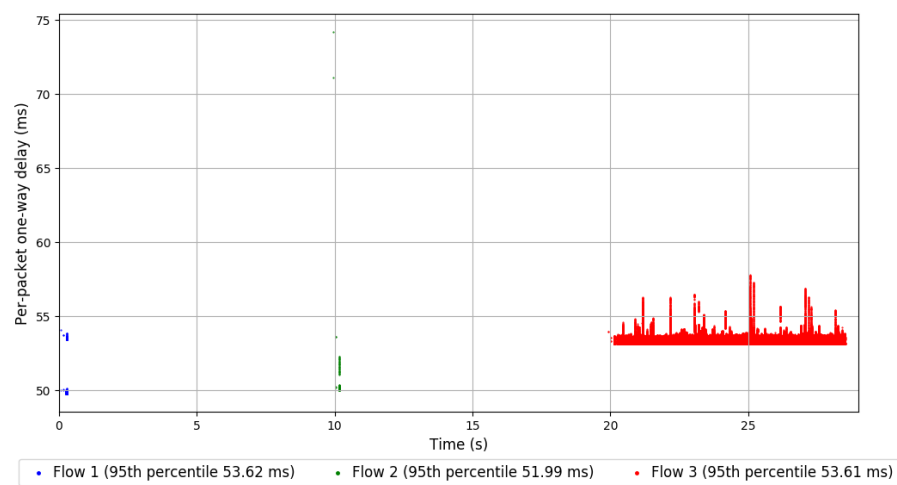
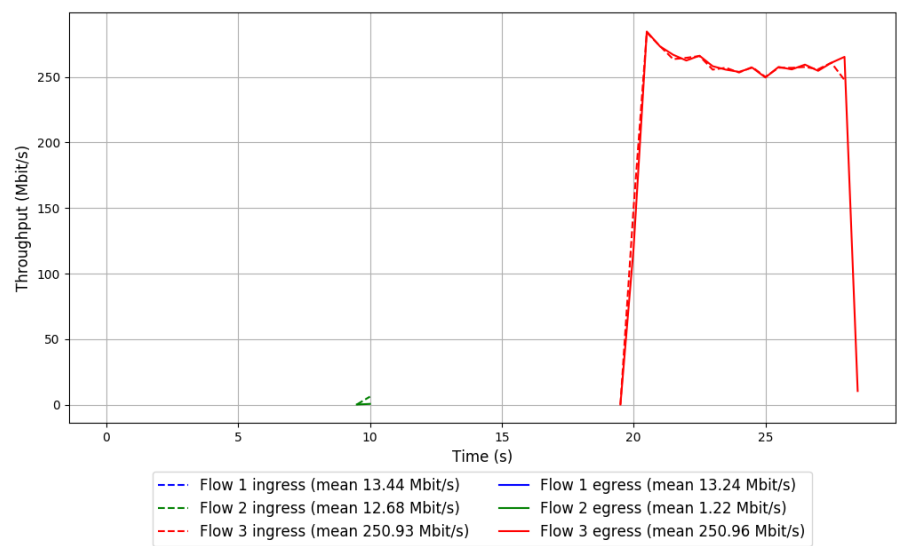


```
Run 1: Statistics of TaoVA-100x

Start at: 2017-08-21 07:19:54
End at: 2017-08-21 07:20:24

# Below is generated by plot.py at 2017-08-21 09:57:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.85 Mbit/s
95th percentile per-packet one-way delay: 53.607 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 13.24 Mbit/s
95th percentile per-packet one-way delay: 53.624 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.22 Mbit/s
95th percentile per-packet one-way delay: 51.989 ms
Loss rate: 91.17%
-- Flow 3:
Average throughput: 250.96 Mbit/s
95th percentile per-packet one-way delay: 53.607 ms
Loss rate: 0.00%
```

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



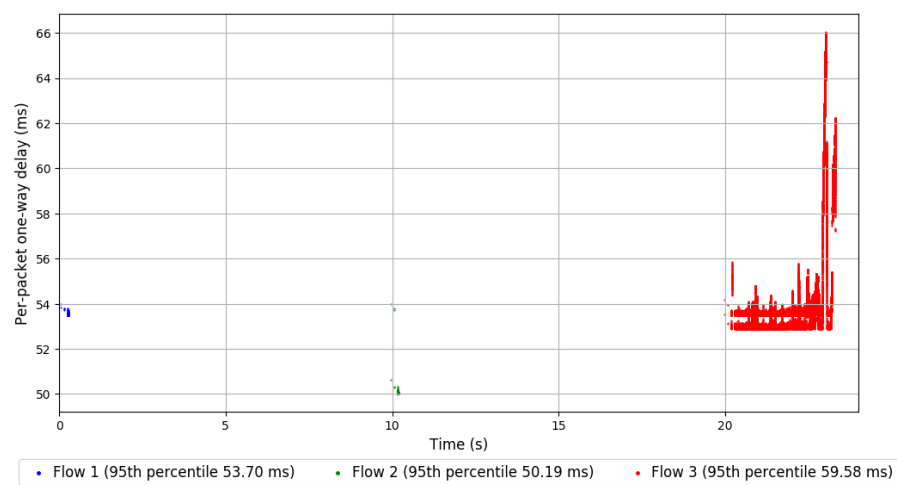
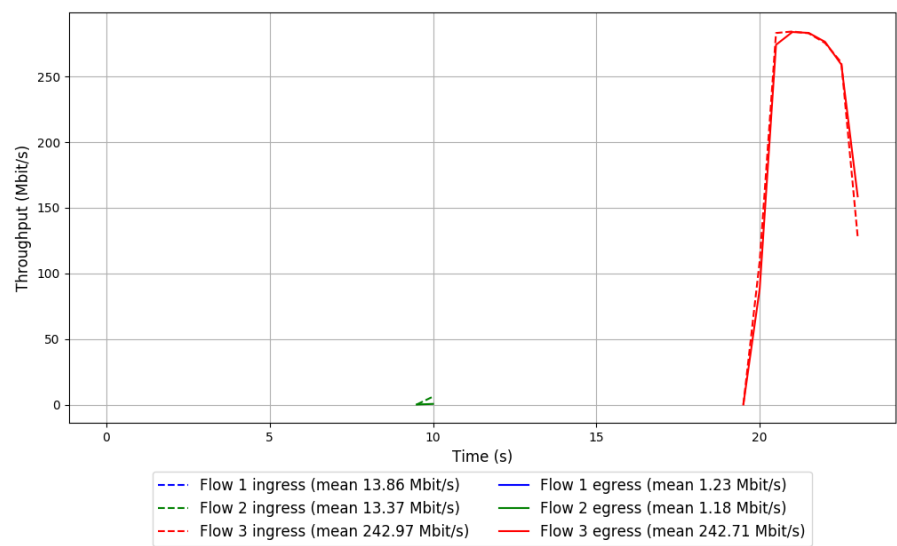
Run 2: Statistics of TaoVA-100x

Start at: 2017-08-21 07:30:42

End at: 2017-08-21 07:31:12



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

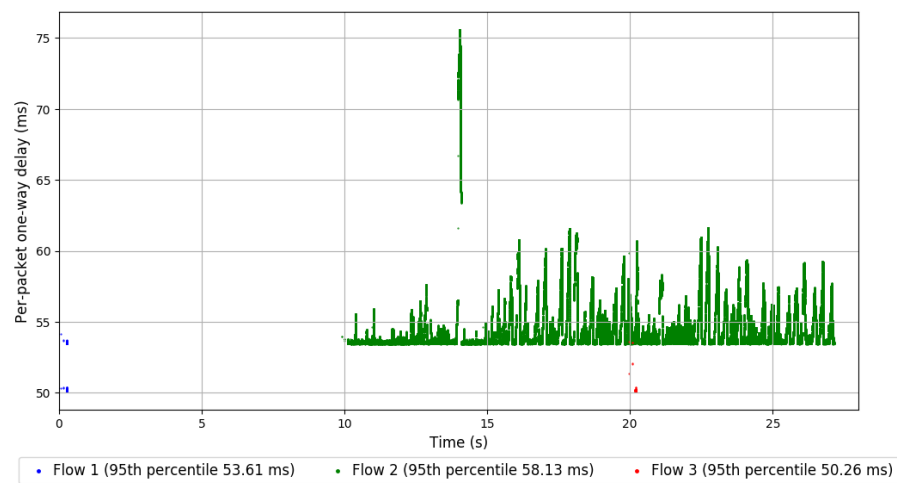
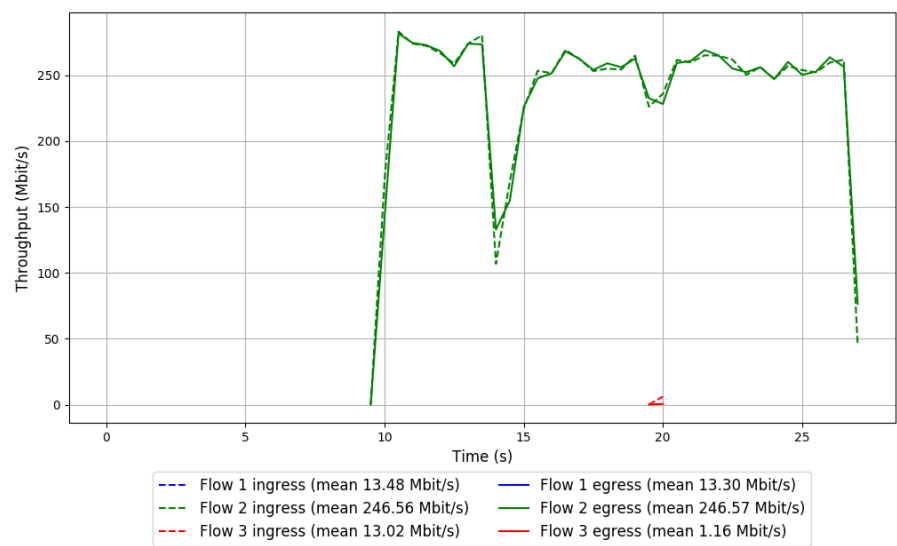


```
Run 3: Statistics of TaoVA-100x

Start at: 2017-08-21 07:41:35
End at: 2017-08-21 07:42:05

# Below is generated by plot.py at 2017-08-21 09:58:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 157.07 Mbit/s
95th percentile per-packet one-way delay: 58.128 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 13.30 Mbit/s
95th percentile per-packet one-way delay: 53.612 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 246.57 Mbit/s
95th percentile per-packet one-way delay: 58.130 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.16 Mbit/s
95th percentile per-packet one-way delay: 50.260 ms
Loss rate: 91.17%
```

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

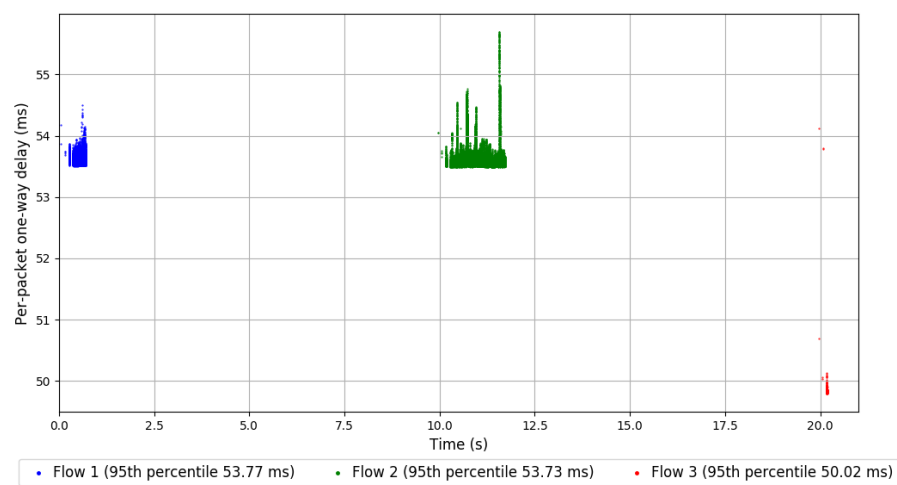
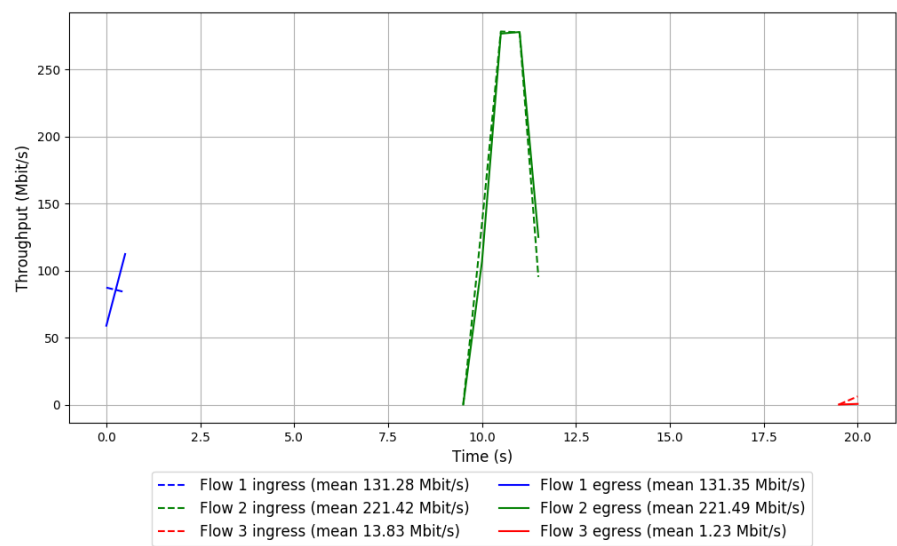


Run 4: Statistics of TaoVA-100x

Start at: 2017-08-21 07:52:25

End at: 2017-08-21 07:52:55

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

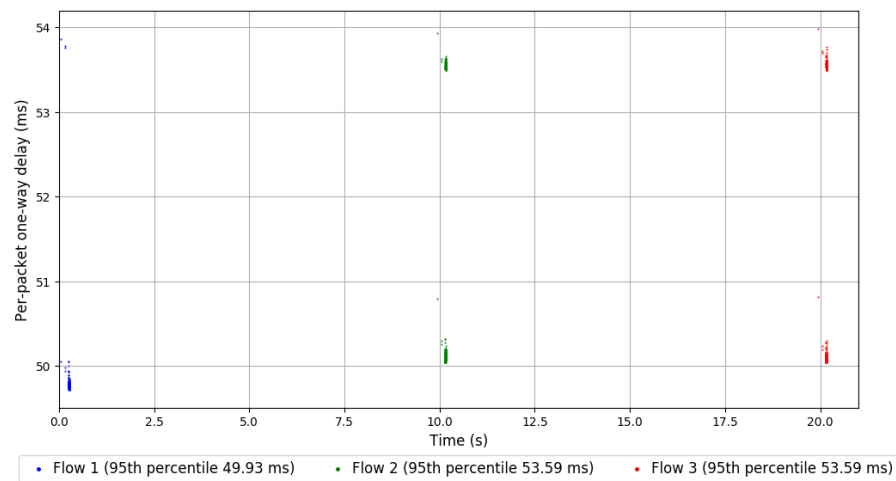
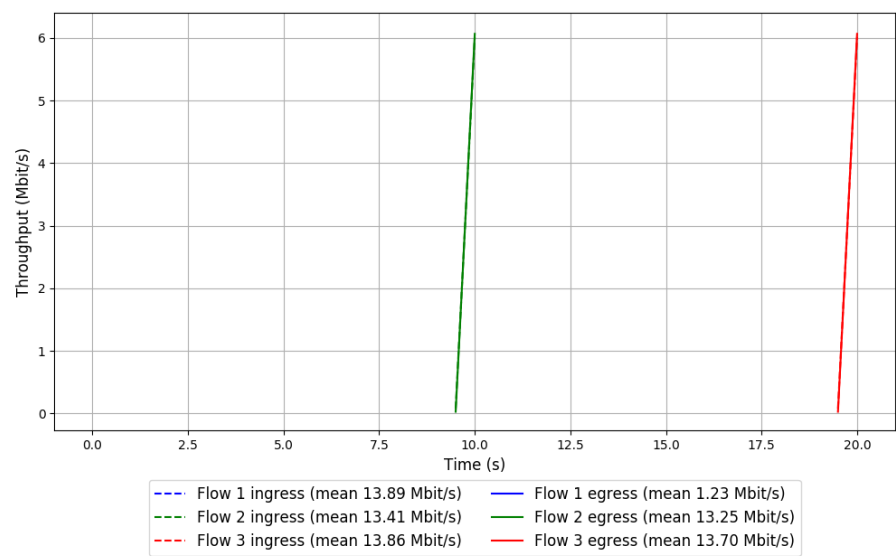


Run 5: Statistics of TaoVA-100x

Start at: 2017-08-21 08:03:25

End at: 2017-08-21 08:03:55

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



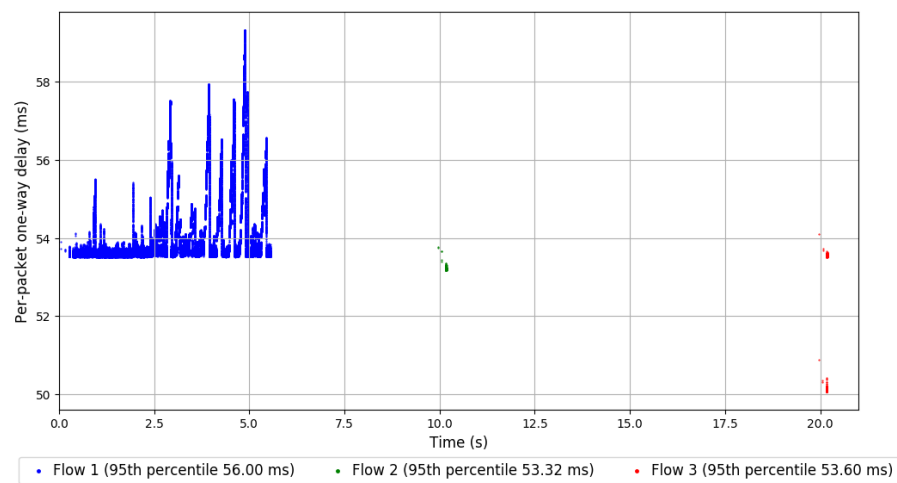
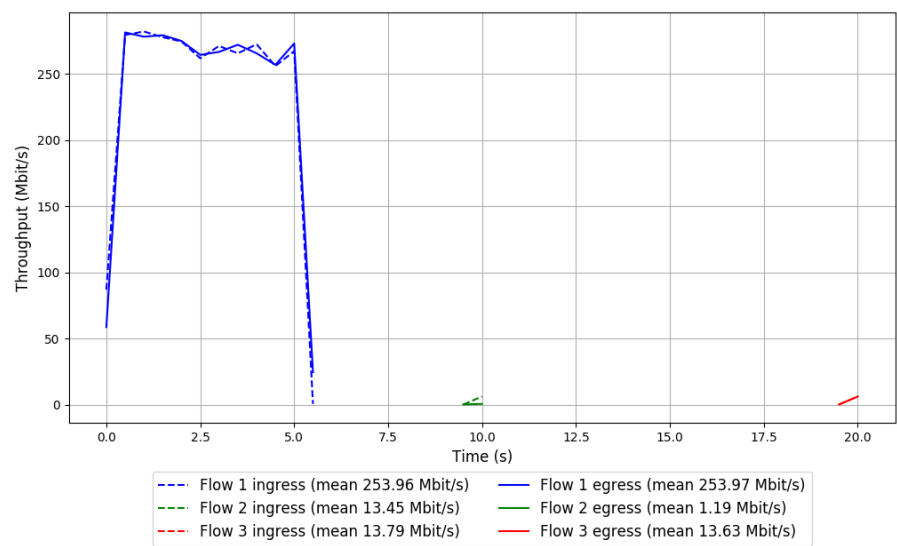
Run 6: Statistics of TaoVA-100x

Start at: 2017-08-21 08:14:21

End at: 2017-08-21 08:14:51



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

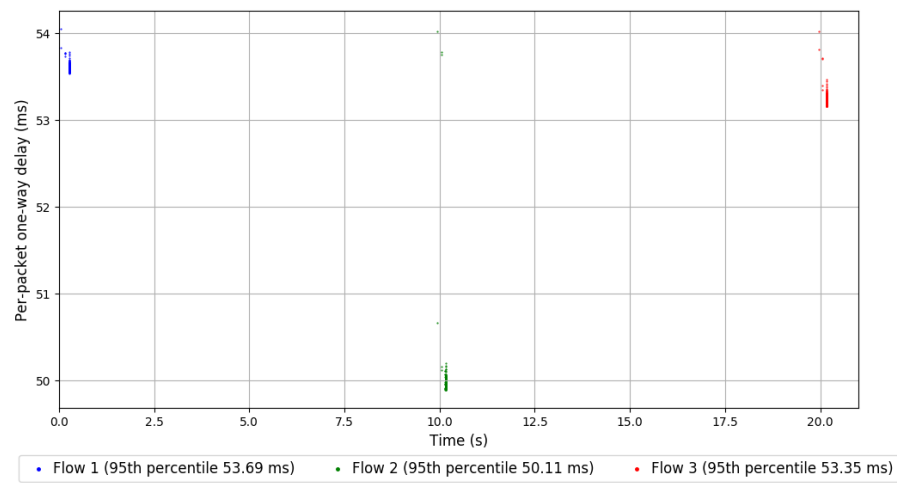
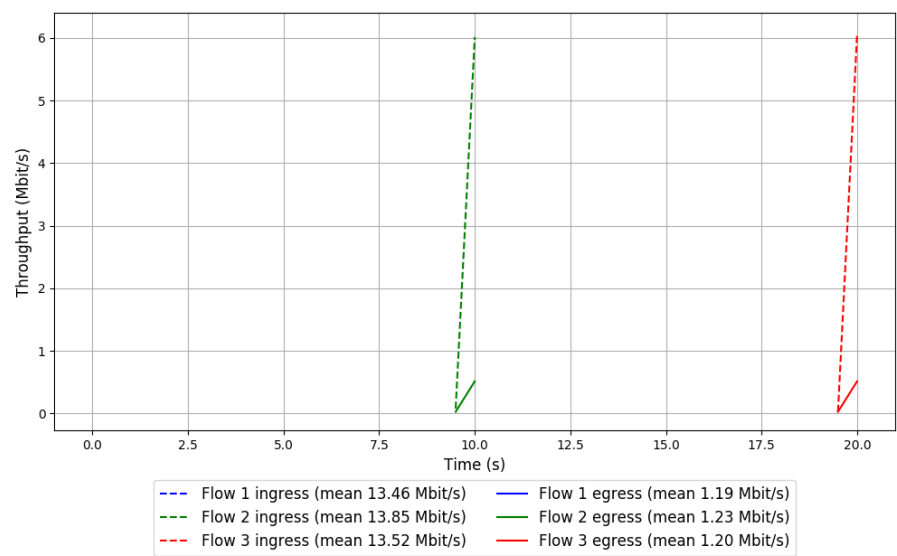


Run 7: Statistics of TaoVA-100x

Start at: 2017-08-21 08:25:24

End at: 2017-08-21 08:25:54

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

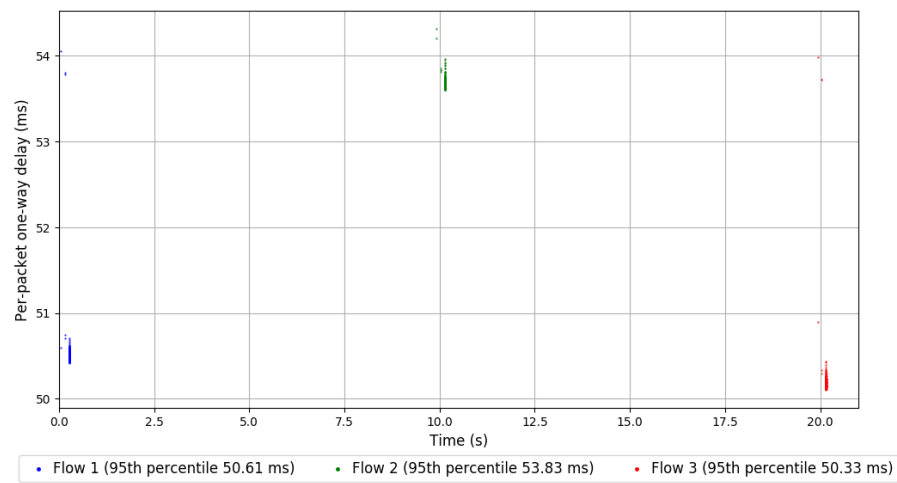
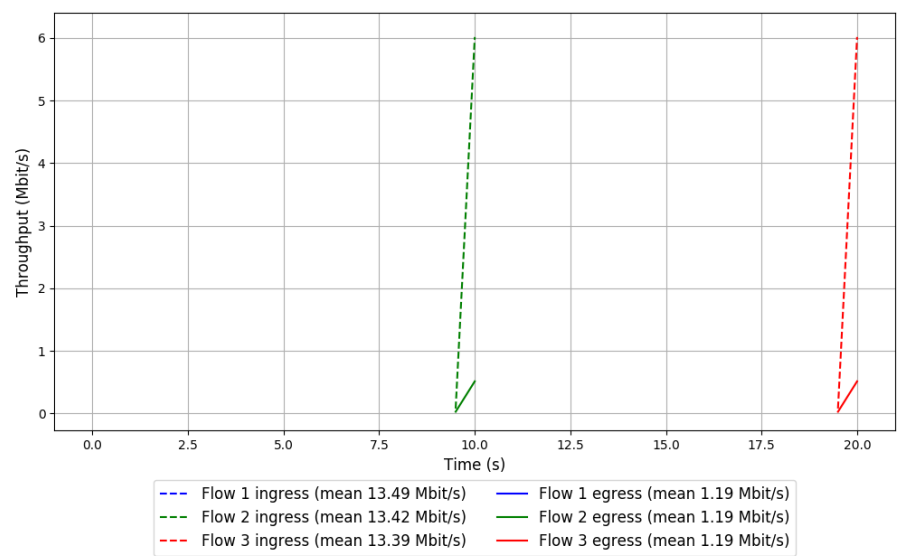


Run 8: Statistics of TaoVA-100x

Start at: 2017-08-21 08:36:05

End at: 2017-08-21 08:36:35

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

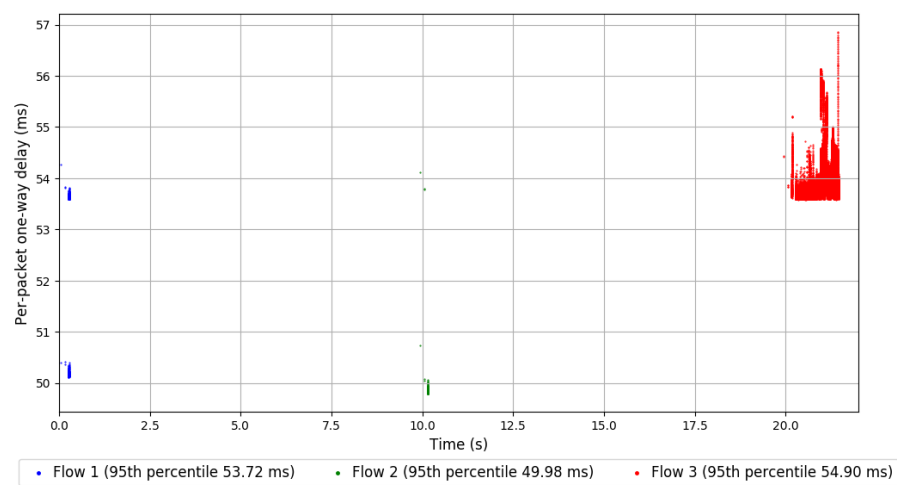
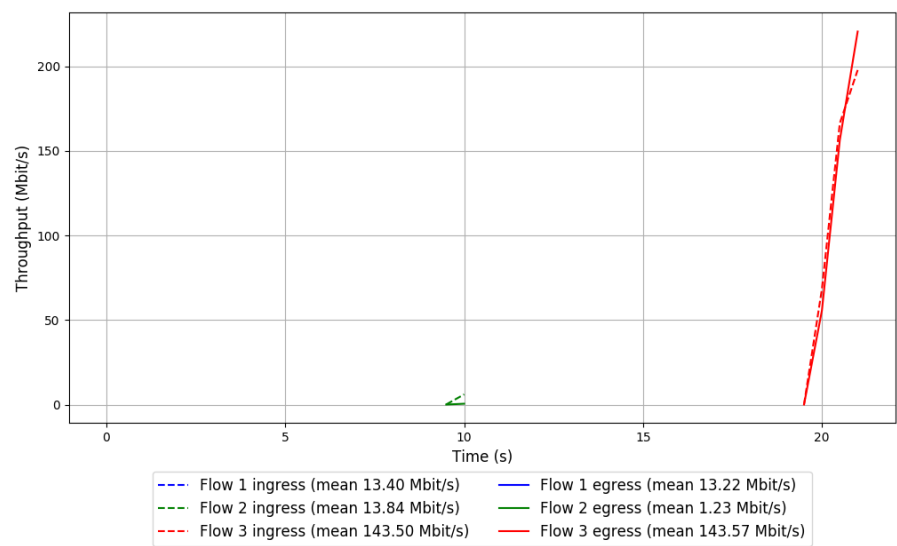


Run 9: Statistics of TaoVA-100x

Start at: 2017-08-21 08:47:04

End at: 2017-08-21 08:47:34

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



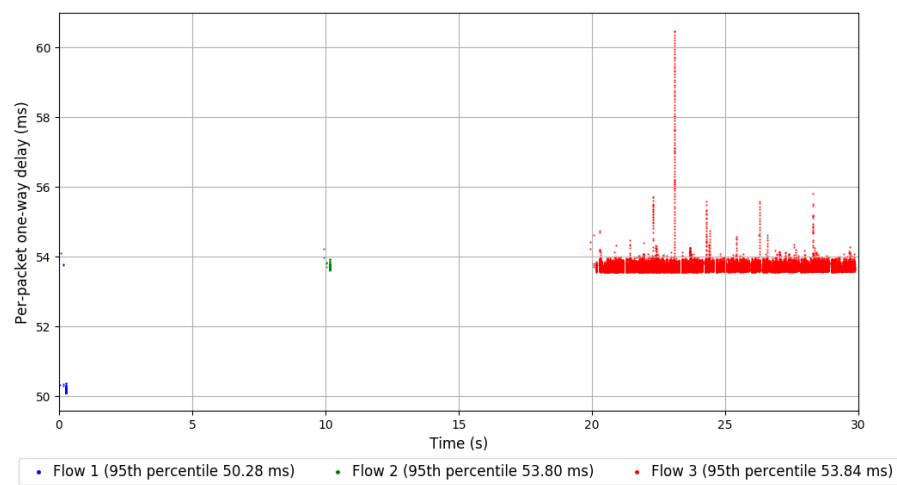
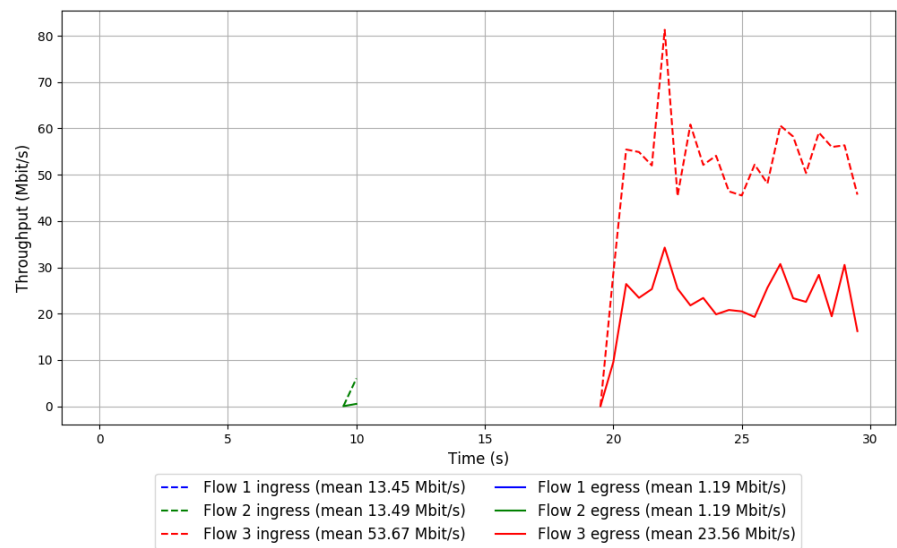
```
Run 10: Statistics of TaoVA-100x

Start at: 2017-08-21 08:57:42
End at: 2017-08-21 08:58:12

# Below is generated by plot.py at 2017-08-21 09:58:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.85 Mbit/s
95th percentile per-packet one-way delay: 53.840 ms
Loss rate: 56.51%
-- Flow 1:
Average throughput: 1.19 Mbit/s
95th percentile per-packet one-way delay: 50.280 ms
Loss rate: 91.17%
-- Flow 2:
Average throughput: 1.19 Mbit/s
95th percentile per-packet one-way delay: 53.803 ms
Loss rate: 91.17%
-- Flow 3:
Average throughput: 23.56 Mbit/s
95th percentile per-packet one-way delay: 53.841 ms
Loss rate: 56.11%
```



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



Run 1: Statistics of TCP Vegas

Start at: 2017-08-21 07:15:37

End at: 2017-08-21 07:16:07

# Below is generated by plot.py at 2017-08-21 09:58:15

# Datalink statistics

-- Total of 3 flows:

Average throughput: 11.34 Mbit/s

95th percentile per-packet one-way delay: 53.832 ms

Loss rate: 1.42%

-- Flow 1:

Average throughput: 7.70 Mbit/s

95th percentile per-packet one-way delay: 53.857 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 2.81 Mbit/s

95th percentile per-packet one-way delay: 53.784 ms

Loss rate: 4.56%

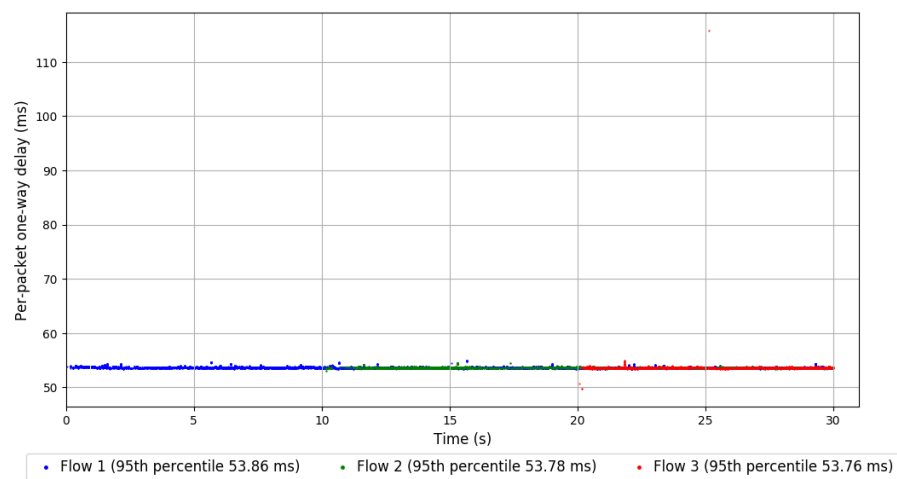
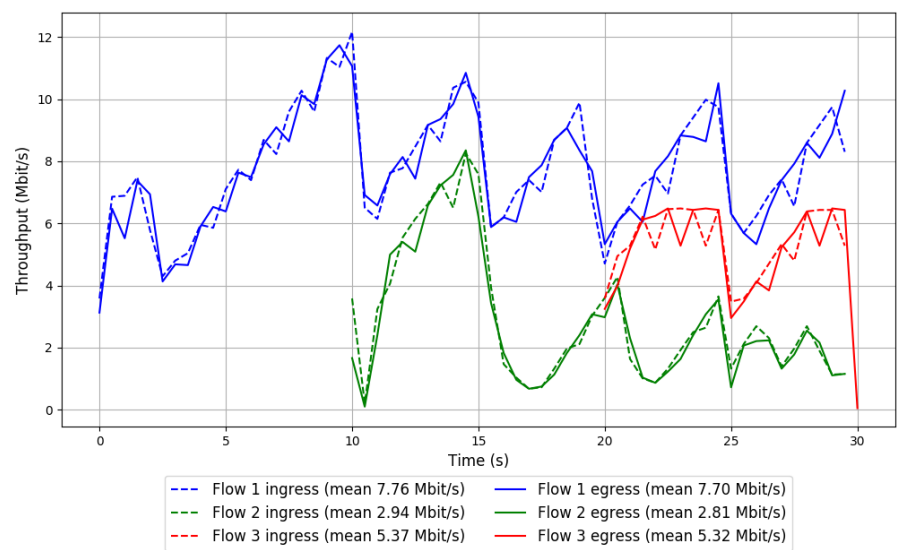
-- Flow 3:

Average throughput: 5.32 Mbit/s

95th percentile per-packet one-way delay: 53.761 ms

Loss rate: 0.85%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2017-08-21 07:26:12

End at: 2017-08-21 07:26:42

# Below is generated by plot.py at 2017-08-21 09:58:21

# Datalink statistics

-- Total of 3 flows:

Average throughput: 24.66 Mbit/s

95th percentile per-packet one-way delay: 54.376 ms

Loss rate: 0.77%

-- Flow 1:

Average throughput: 4.31 Mbit/s

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

Loss rate: 2.37%

-- Flow 2:

Average throughput: 2.68 Mbit/s

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

Loss rate: 1.81%

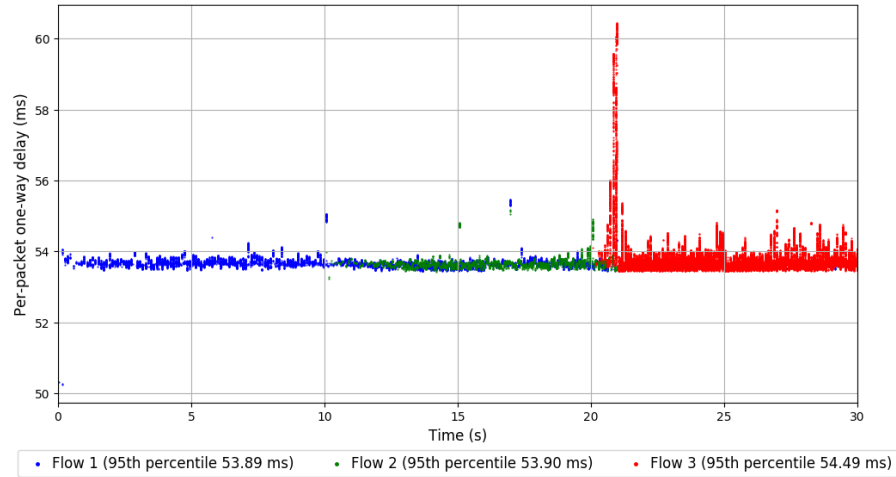
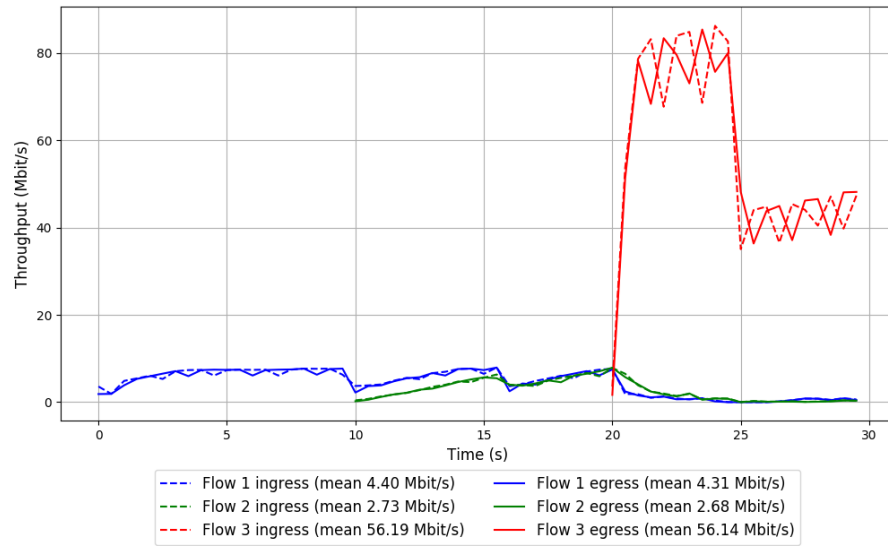
-- Flow 3:

Average throughput: 56.14 Mbit/s

95th percentile per-packet one-way delay: 54.486 ms

Loss rate: 0.29%

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



Run 3: Statistics of TCP Vegas

Start at: 2017-08-21 07:37:05

End at: 2017-08-21 07:37:35

# Below is generated by plot.py at 2017-08-21 09:58:21

# Datalink statistics

-- Total of 3 flows:

Average throughput: 8.13 Mbit/s

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

Loss rate: 1.39%

-- Flow 1:

Average throughput: 3.46 Mbit/s

95th percentile per-packet one-way delay: 53.915 ms

Loss rate: 2.02%

-- Flow 2:

Average throughput: 6.64 Mbit/s

95th percentile per-packet one-way delay: 53.911 ms

Loss rate: 0.42%

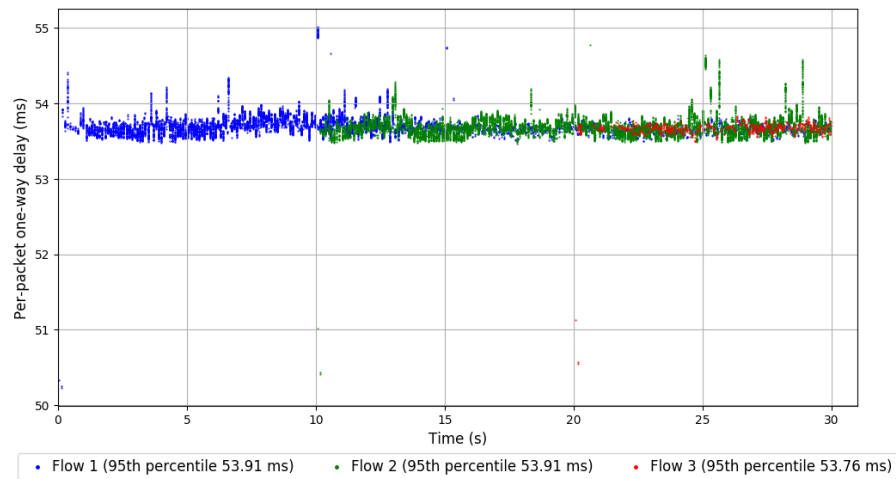
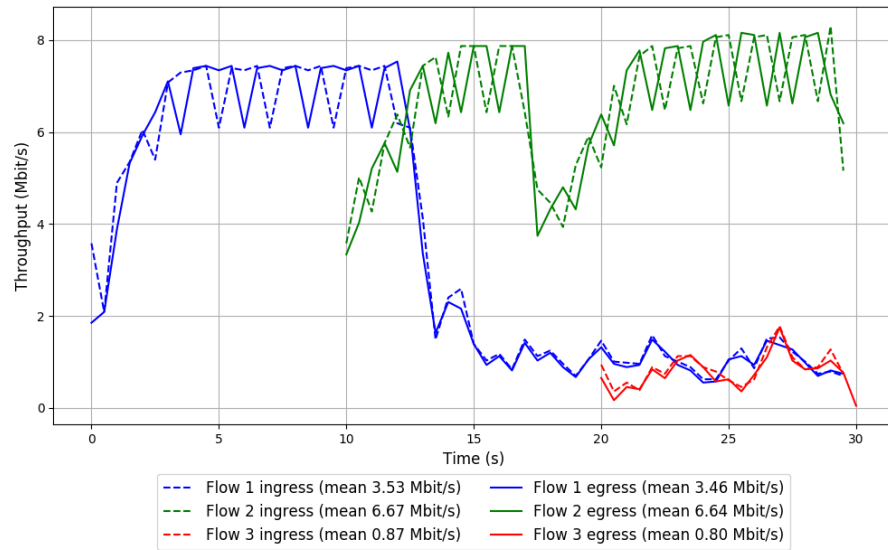
-- Flow 3:

Average throughput: 0.80 Mbit/s

95th percentile per-packet one-way delay: 53.757 ms

Loss rate: 8.40%

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



Run 4: Statistics of TCP Vegas

Start at: 2017-08-21 07:48:10

End at: 2017-08-21 07:48:40

# Below is generated by plot.py at 2017-08-21 09:58:26

# Datalink statistics

-- Total of 3 flows:

Average throughput: 34.65 Mbit/s

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

Loss rate: 0.43%

-- Flow 1:

Average throughput: 2.78 Mbit/s

95th percentile per-packet one-way delay: 54.060 ms

Loss rate: 3.28%

-- Flow 2:

Average throughput: 44.98 Mbit/s

95th percentile per-packet one-way delay: 54.560 ms

Loss rate: 0.00%

-- Flow 3:

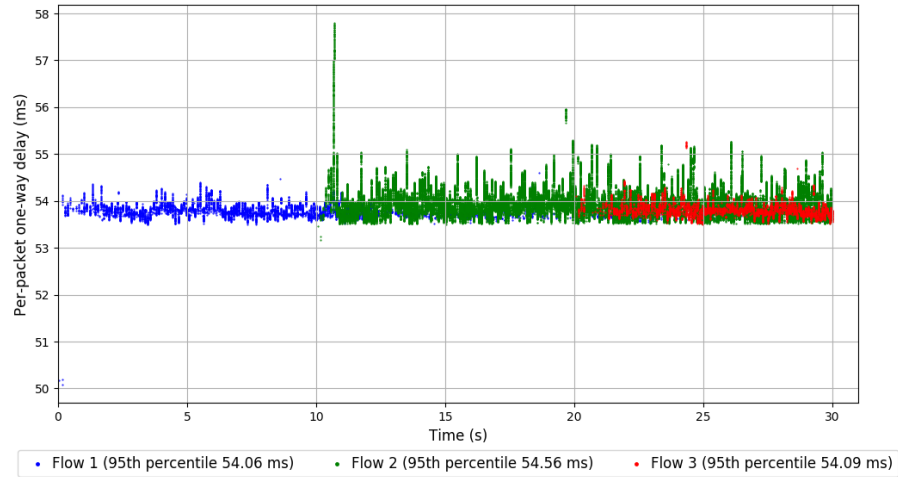
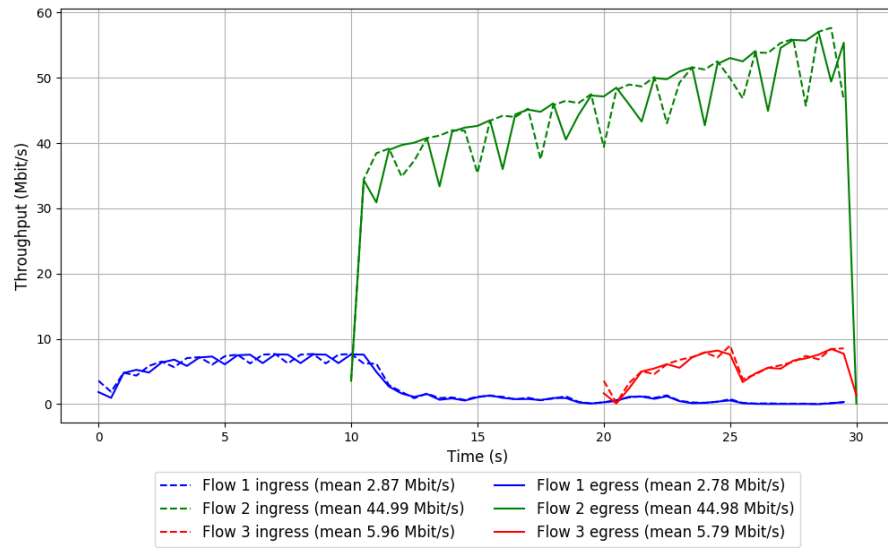
Average throughput: 5.79 Mbit/s

95th percentile per-packet one-way delay: 54.088 ms

Loss rate: 2.86%



#### Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2017-08-21 07:58:54

End at: 2017-08-21 07:59:24

# Below is generated by plot.py at 2017-08-21 09:58:26

# Datalink statistics

-- Total of 3 flows:

Average throughput: 9.35 Mbit/s

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

Loss rate: 2.39%

-- Flow 1:

Average throughput: 5.35 Mbit/s

95th percentile per-packet one-way delay: 54.040 ms

Loss rate: 1.52%

-- Flow 2:

Average throughput: 3.60 Mbit/s

95th percentile per-packet one-way delay: 53.973 ms

Loss rate: 4.01%

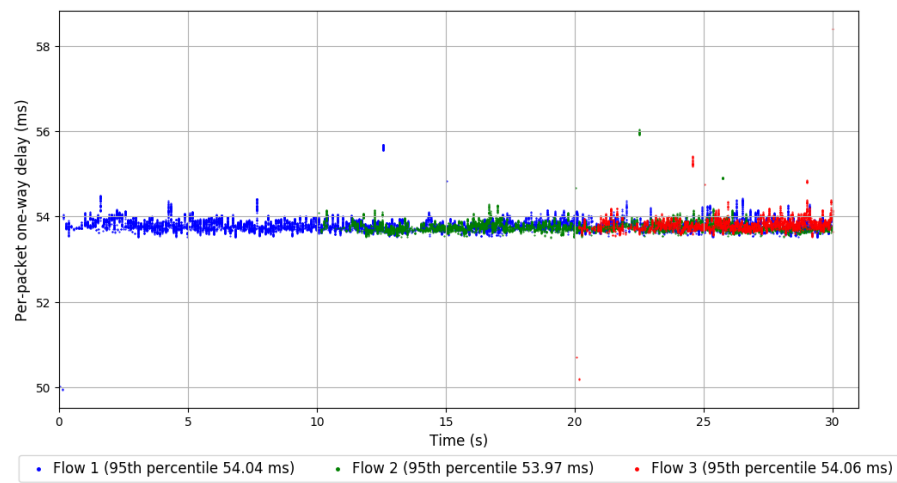
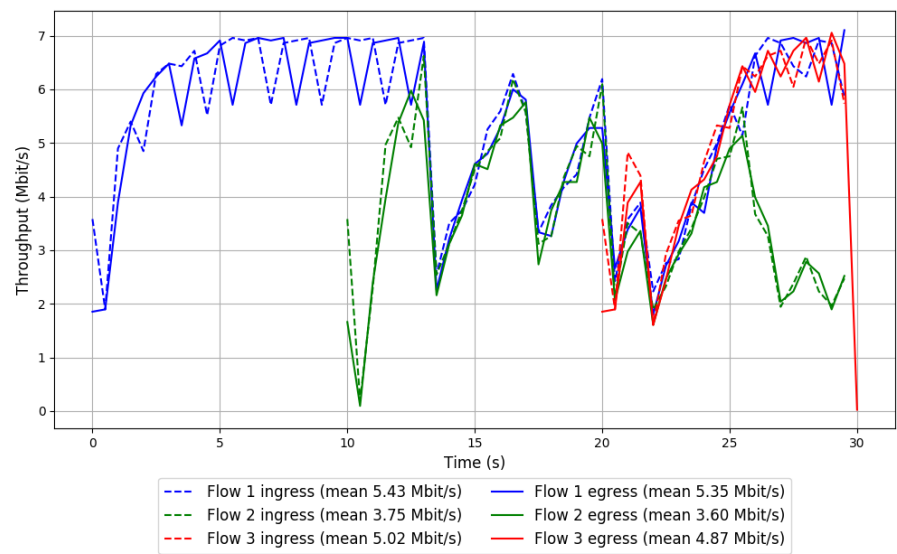
-- Flow 3:

Average throughput: 4.87 Mbit/s

95th percentile per-packet one-way delay: 54.057 ms

Loss rate: 2.79%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2017-08-21 08:09:43

End at: 2017-08-21 08:10:13

# Below is generated by plot.py at 2017-08-21 09:58:29

# Datalink statistics

-- Total of 3 flows:

Average throughput: 9.61 Mbit/s

95th percentile per-packet one-way delay: 53.881 ms

Loss rate: 1.11%

-- Flow 1:

Average throughput: 6.17 Mbit/s

95th percentile per-packet one-way delay: 53.896 ms

Loss rate: 0.41%

-- Flow 2:

Average throughput: 4.46 Mbit/s

95th percentile per-packet one-way delay: 53.857 ms

Loss rate: 1.37%

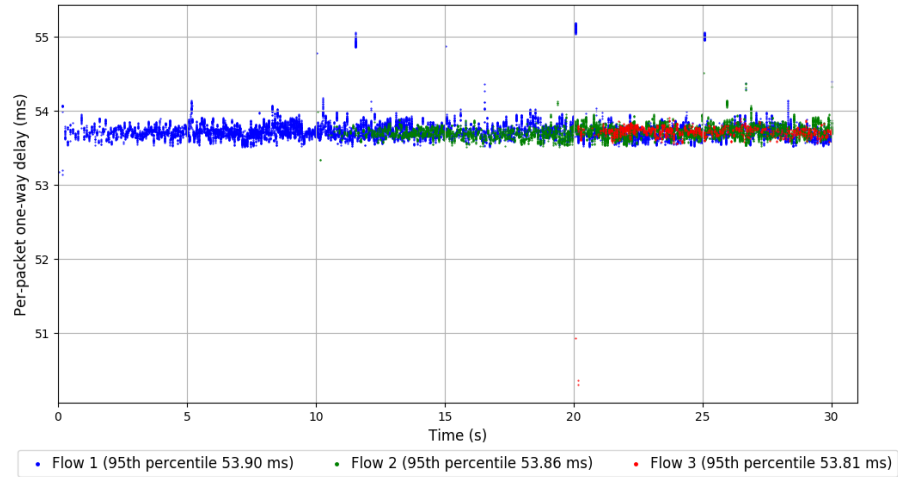
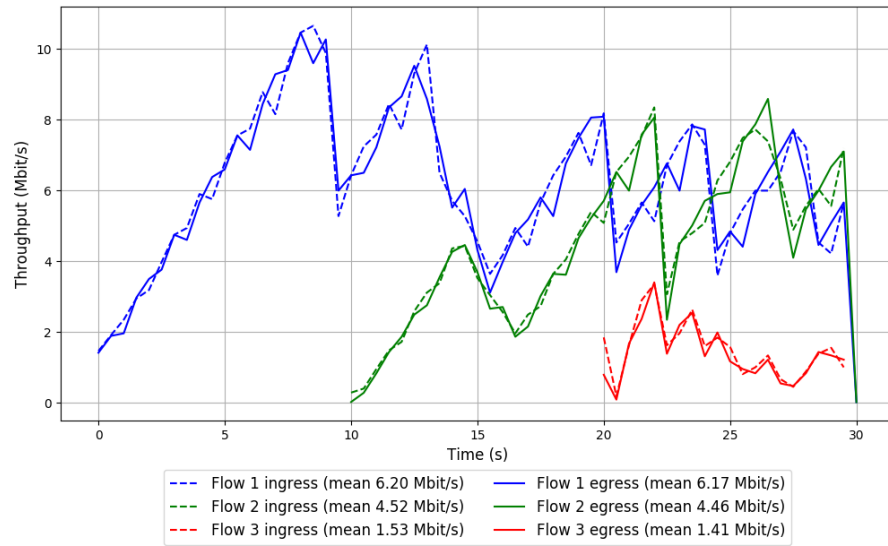
-- Flow 3:

Average throughput: 1.41 Mbit/s

95th percentile per-packet one-way delay: 53.808 ms

Loss rate: 8.14%

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



Run 7: Statistics of TCP Vegas

Start at: 2017-08-21 08:20:54

End at: 2017-08-21 08:21:24

# Below is generated by plot.py at 2017-08-21 09:58:29

# Datalink statistics

-- Total of 3 flows:

Average throughput: 8.25 Mbit/s

95th percentile per-packet one-way delay: 53.904 ms

Loss rate: 2.80%

-- Flow 1:

Average throughput: 4.13 Mbit/s

95th percentile per-packet one-way delay: 53.912 ms

Loss rate: 3.03%

-- Flow 2:

Average throughput: 3.39 Mbit/s

95th percentile per-packet one-way delay: 53.900 ms

Loss rate: 4.25%

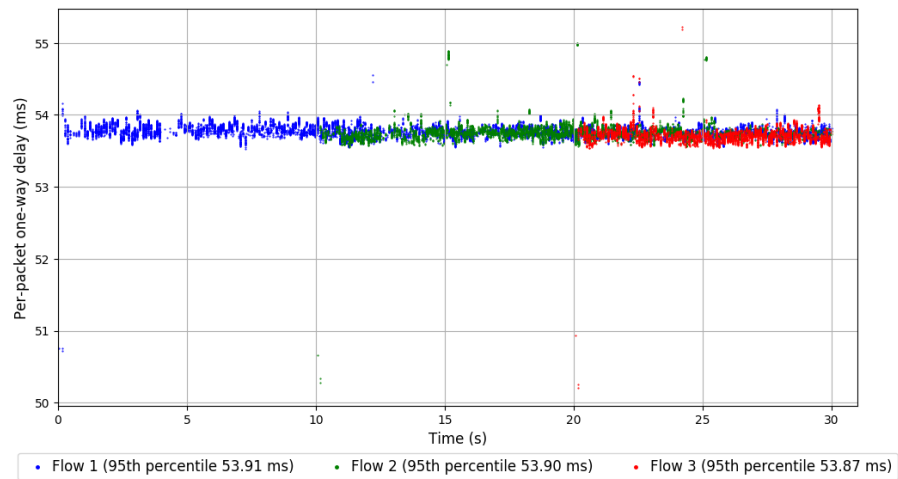
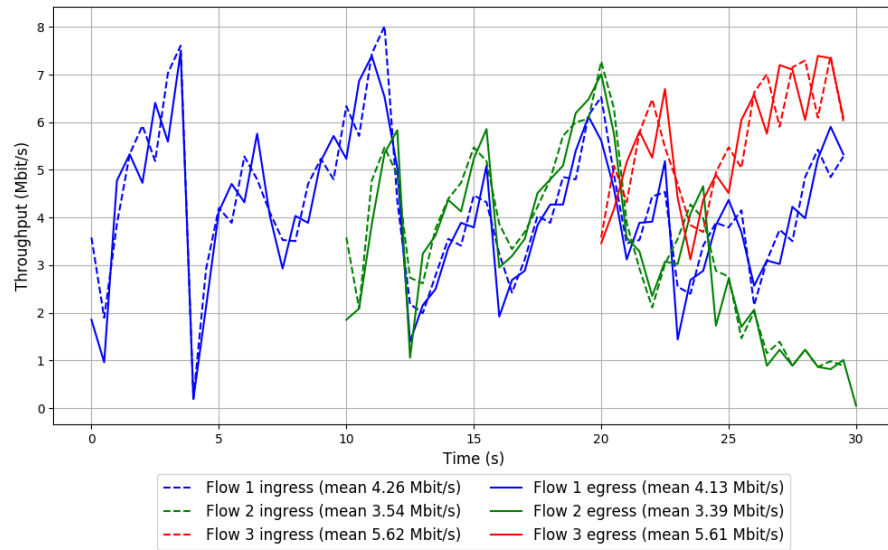
-- Flow 3:

Average throughput: 5.61 Mbit/s

95th percentile per-packet one-way delay: 53.867 ms

Loss rate: 0.43%

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



Run 8: Statistics of TCP Vegas

Start at: 2017-08-21 08:31:45

End at: 2017-08-21 08:32:15

# Below is generated by plot.py at 2017-08-21 09:58:32

# Datalink statistics

-- Total of 3 flows:

Average throughput: 8.69 Mbit/s

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

Loss rate: 1.43%

-- Flow 1:

Average throughput: 2.86 Mbit/s

95th percentile per-packet one-way delay: 54.022 ms

Loss rate: 2.41%

-- Flow 2:

Average throughput: 6.01 Mbit/s

95th percentile per-packet one-way delay: 53.912 ms

Loss rate: 0.57%

-- Flow 3:

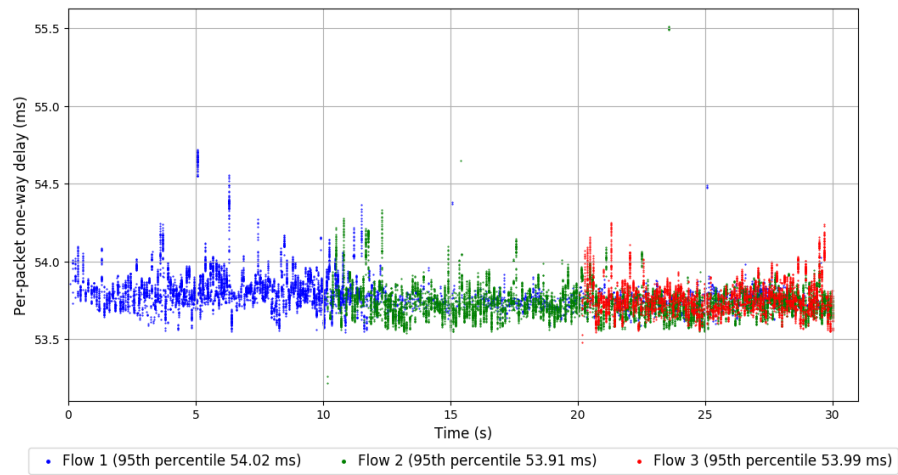
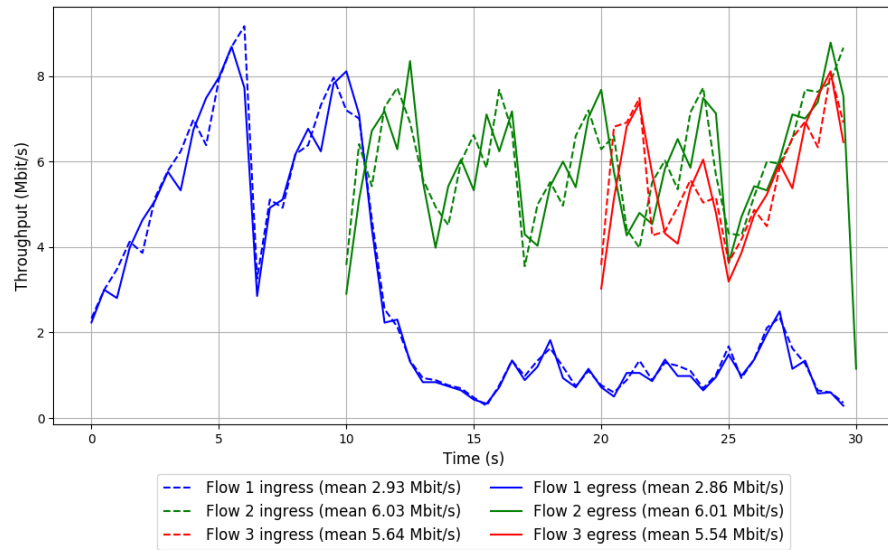
Average throughput: 5.54 Mbit/s

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

Loss rate: 1.76%



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



Run 9: Statistics of TCP Vegas

Start at: 2017-08-21 08:42:34

End at: 2017-08-21 08:43:04

# Below is generated by plot.py at 2017-08-21 09:58:33

# Datalink statistics

-- Total of 3 flows:

Average throughput: 8.85 Mbit/s

95th percentile per-packet one-way delay: 53.946 ms

Loss rate: 3.46%

-- Flow 1:

Average throughput: 5.49 Mbit/s

95th percentile per-packet one-way delay: 53.966 ms

Loss rate: 2.64%

-- Flow 2:

Average throughput: 3.97 Mbit/s

95th percentile per-packet one-way delay: 53.917 ms

Loss rate: 4.05%

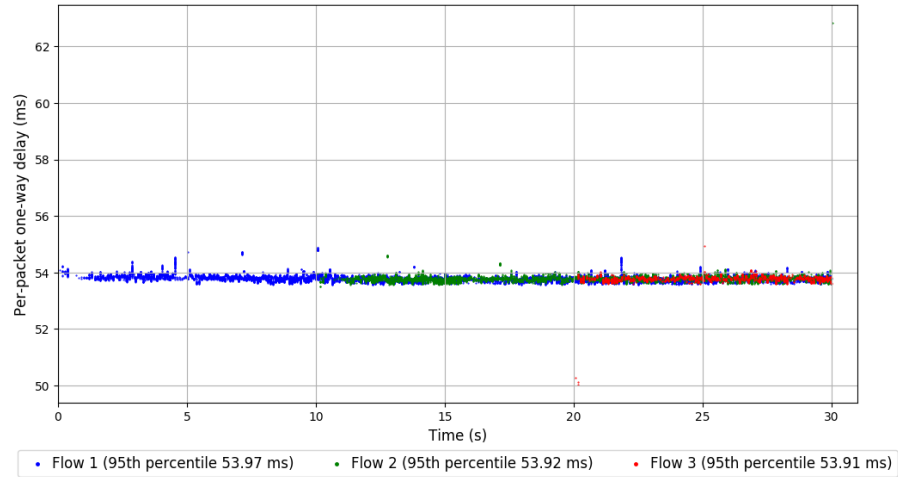
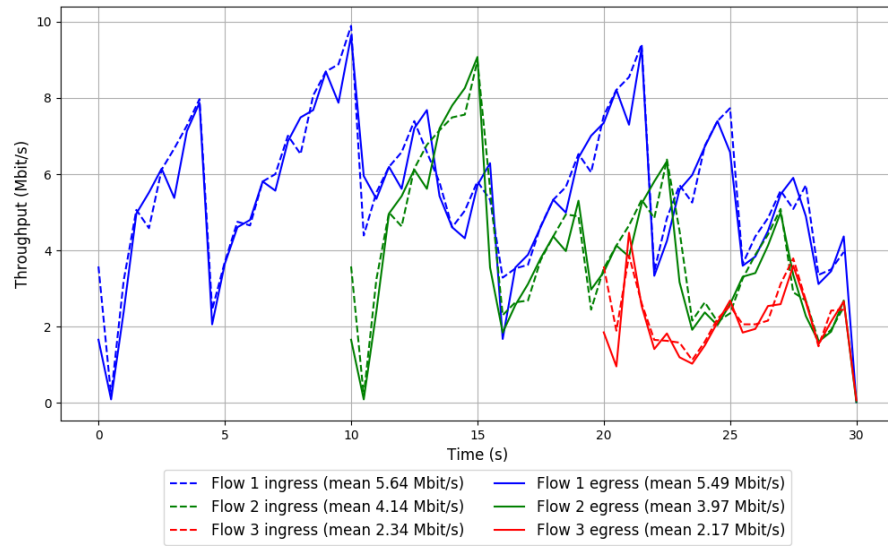
-- Flow 3:

Average throughput: 2.17 Mbit/s

95th percentile per-packet one-way delay: 53.914 ms

Loss rate: 7.27%

## Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2017-08-21 08:53:22

End at: 2017-08-21 08:53:52

# Below is generated by plot.py at 2017-08-21 09:58:34

# Datalink statistics

-- Total of 3 flows:

Average throughput: 8.89 Mbit/s

95th percentile per-packet one-way delay: 54.070 ms

Loss rate: 2.82%

-- Flow 1:

Average throughput: 3.78 Mbit/s

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

Loss rate: 4.05%

-- Flow 2:

Average throughput: 4.80 Mbit/s

95th percentile per-packet one-way delay: 54.145 ms

Loss rate: 2.74%

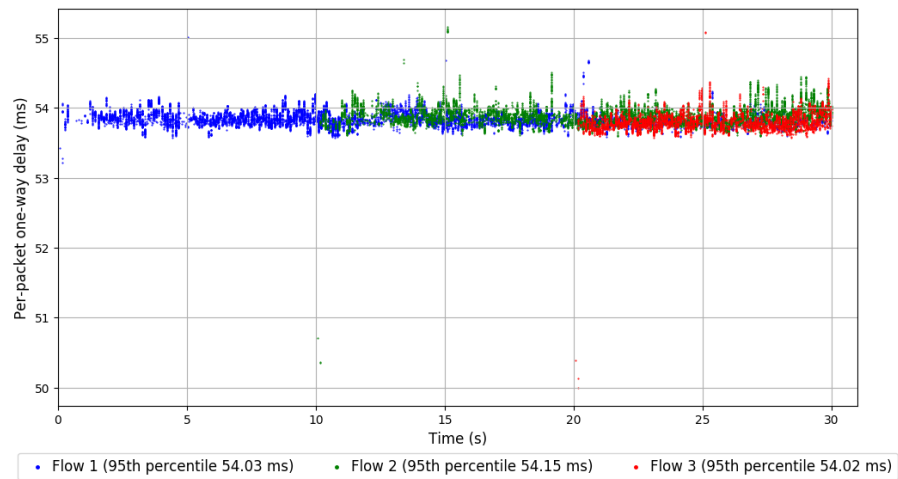
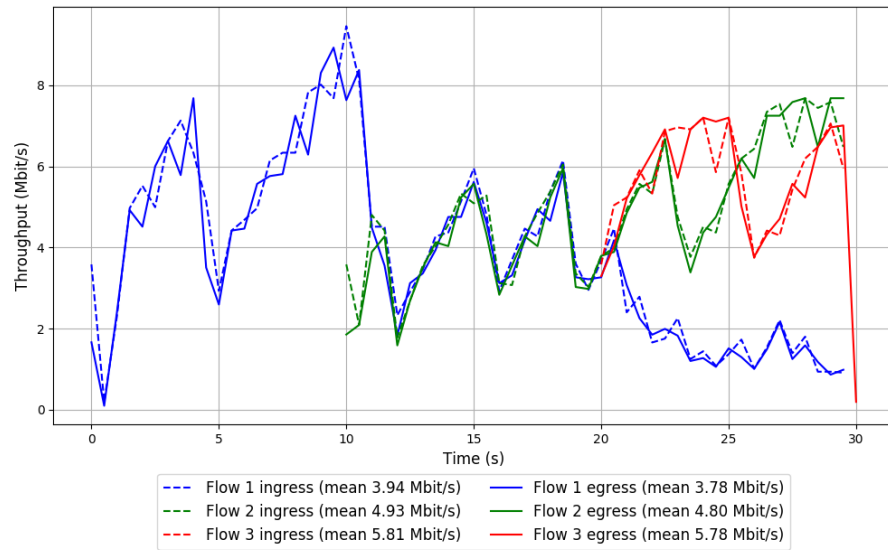
-- Flow 3:

Average throughput: 5.78 Mbit/s

95th percentile per-packet one-way delay: 54.024 ms

Loss rate: 0.46%

# Run 10: Report of TCP Vegas — Data Link

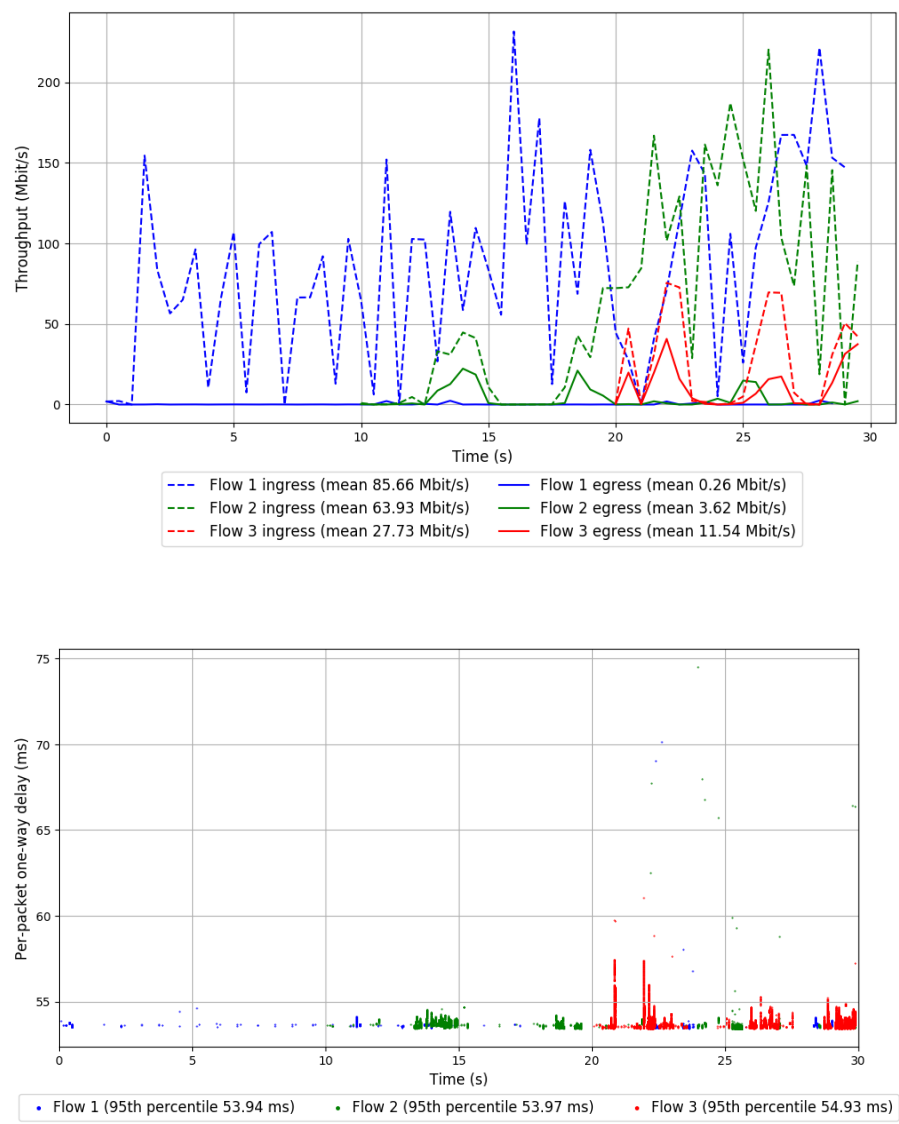


```
Run 1: Statistics of Verus

Start at: 2017-08-21 07:11:27
End at: 2017-08-21 07:11:57

# Below is generated by plot.py at 2017-08-21 09:58:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.46 Mbit/s
95th percentile per-packet one-way delay: 54.488 ms
Loss rate: 95.25%
-- Flow 1:
Average throughput: 0.26 Mbit/s
95th percentile per-packet one-way delay: 53.942 ms
Loss rate: 99.70%
-- Flow 2:
Average throughput: 3.62 Mbit/s
95th percentile per-packet one-way delay: 53.967 ms
Loss rate: 94.35%
-- Flow 3:
Average throughput: 11.54 Mbit/s
95th percentile per-packet one-way delay: 54.928 ms
Loss rate: 58.37%
```

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2017-08-21 07:22:08

End at: 2017-08-21 07:22:38

# Below is generated by plot.py at 2017-08-21 09:58:43

# Datalink statistics

-- Total of 3 flows:

Average throughput: 17.62 Mbit/s

95th percentile per-packet one-way delay: 54.368 ms

Loss rate: 85.39%

-- Flow 1:

Average throughput: 14.92 Mbit/s

95th percentile per-packet one-way delay: 54.380 ms

Loss rate: 84.80%

-- Flow 2:

Average throughput: 4.07 Mbit/s

95th percentile per-packet one-way delay: 54.313 ms

Loss rate: 87.98%

-- Flow 3:

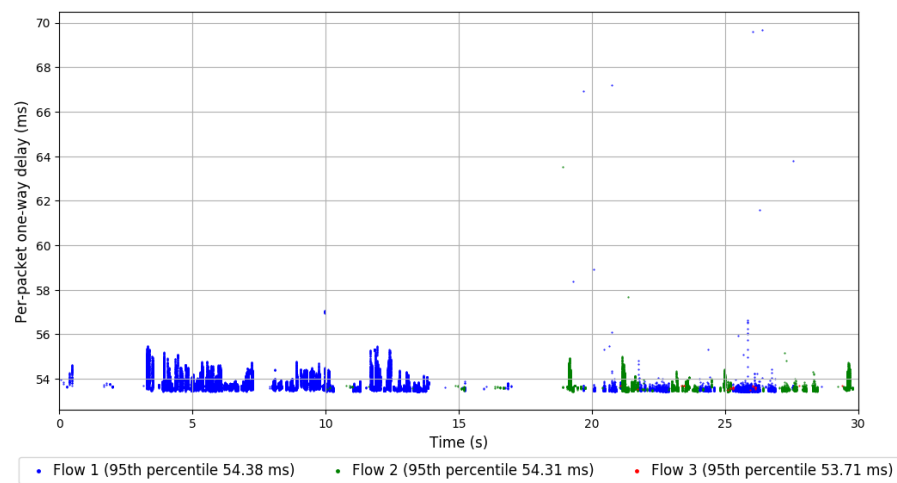
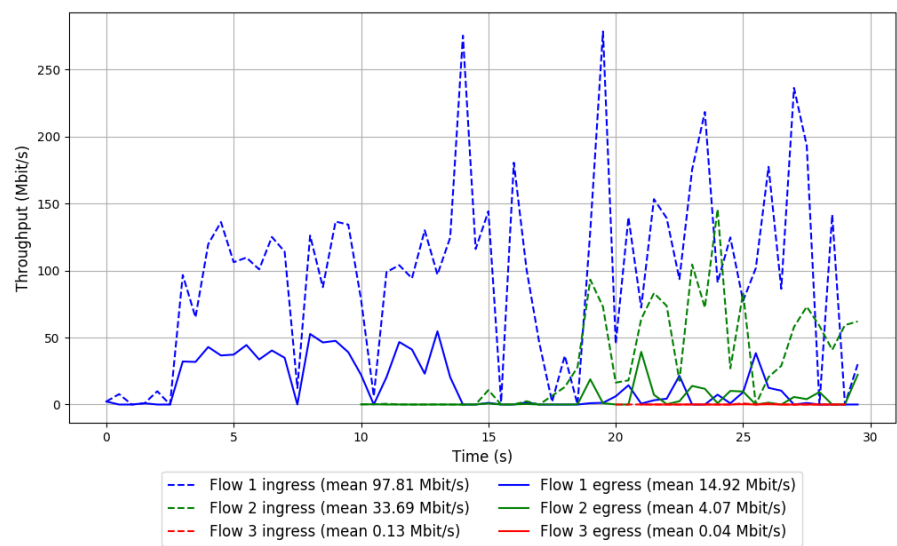
Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 53.710 ms

Loss rate: 75.25%



Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2017-08-21 07:32:49

End at: 2017-08-21 07:33:19

# Below is generated by plot.py at 2017-08-21 09:59:05

# Datalink statistics

-- Total of 3 flows:

Average throughput: 115.87 Mbit/s

95th percentile per-packet one-way delay: 58.597 ms

Loss rate: 10.58%

-- Flow 1:

Average throughput: 72.28 Mbit/s

95th percentile per-packet one-way delay: 60.160 ms

Loss rate: 0.58%

-- Flow 2:

Average throughput: 54.95 Mbit/s

95th percentile per-packet one-way delay: 55.399 ms

Loss rate: 21.51%

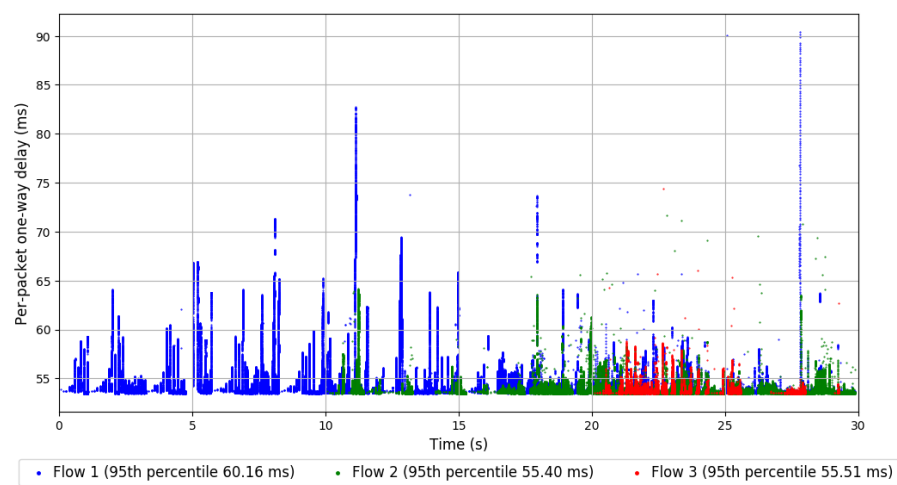
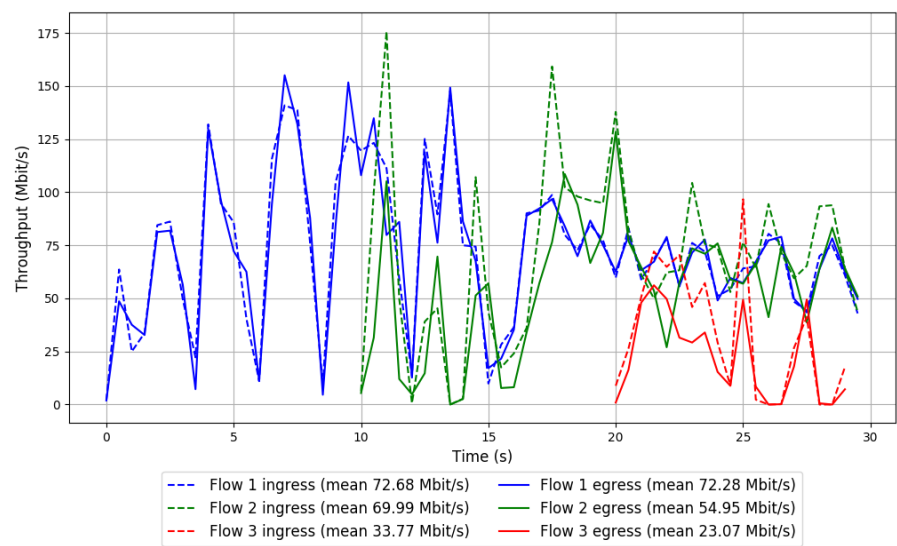
-- Flow 3:

Average throughput: 23.07 Mbit/s

95th percentile per-packet one-way delay: 55.513 ms

Loss rate: 31.69%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2017-08-21 07:43:59

End at: 2017-08-21 07:44:29

# Below is generated by plot.py at 2017-08-21 09:59:05

# Datalink statistics

-- Total of 3 flows:

Average throughput: 91.61 Mbit/s

95th percentile per-packet one-way delay: 69.055 ms

Loss rate: 32.34%

-- Flow 1:

Average throughput: 85.09 Mbit/s

95th percentile per-packet one-way delay: 70.415 ms

Loss rate: 1.07%

-- Flow 2:

Average throughput: 1.31 Mbit/s

95th percentile per-packet one-way delay: 53.830 ms

Loss rate: 98.16%

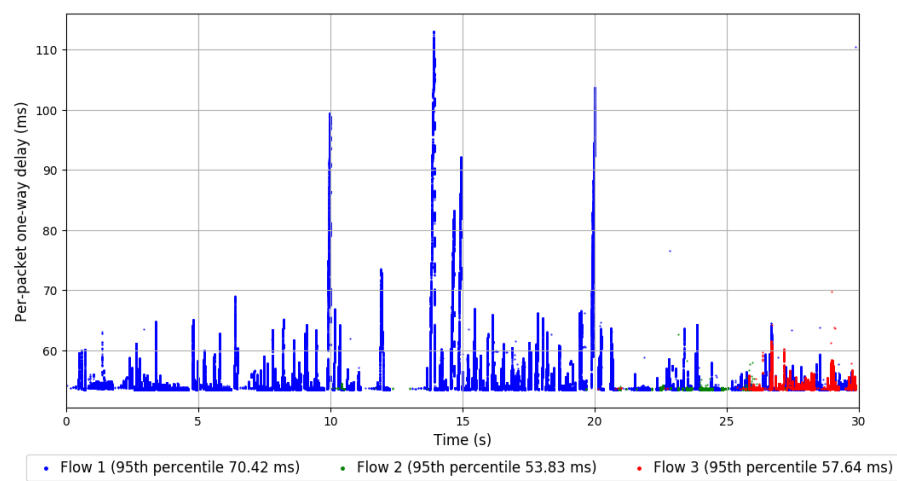
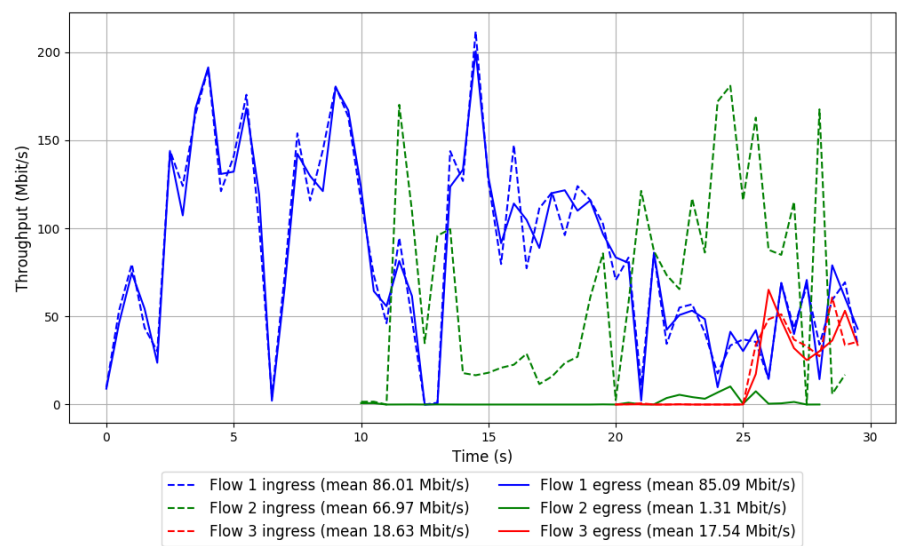
-- Flow 3:

Average throughput: 17.54 Mbit/s

95th percentile per-packet one-way delay: 57.640 ms

Loss rate: 5.84%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2017-08-21 07:54:40

End at: 2017-08-21 07:55:11

# Below is generated by plot.py at 2017-08-21 09:59:23

# Datalink statistics

-- Total of 3 flows:

Average throughput: 71.05 Mbit/s

95th percentile per-packet one-way delay: 60.571 ms

Loss rate: 45.26%

-- Flow 1:

Average throughput: 9.60 Mbit/s

95th percentile per-packet one-way delay: 54.681 ms

Loss rate: 85.95%

-- Flow 2:

Average throughput: 60.20 Mbit/s

95th percentile per-packet one-way delay: 59.465 ms

Loss rate: 0.36%

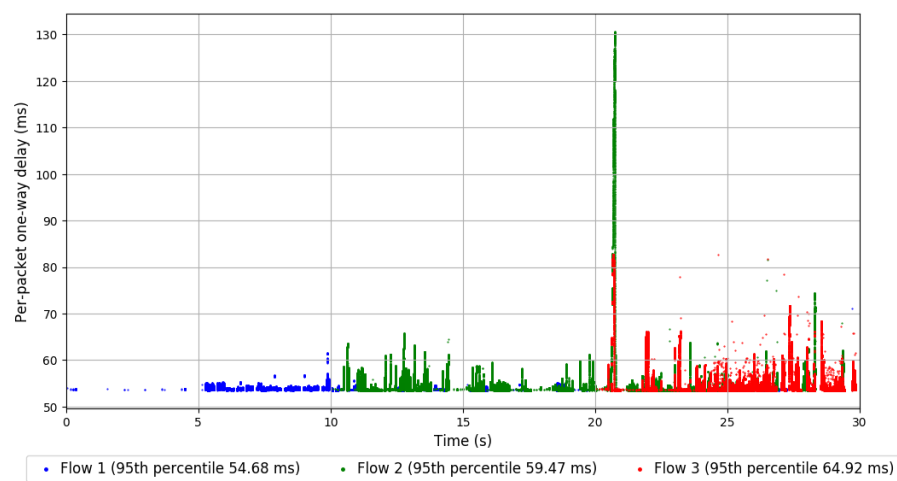
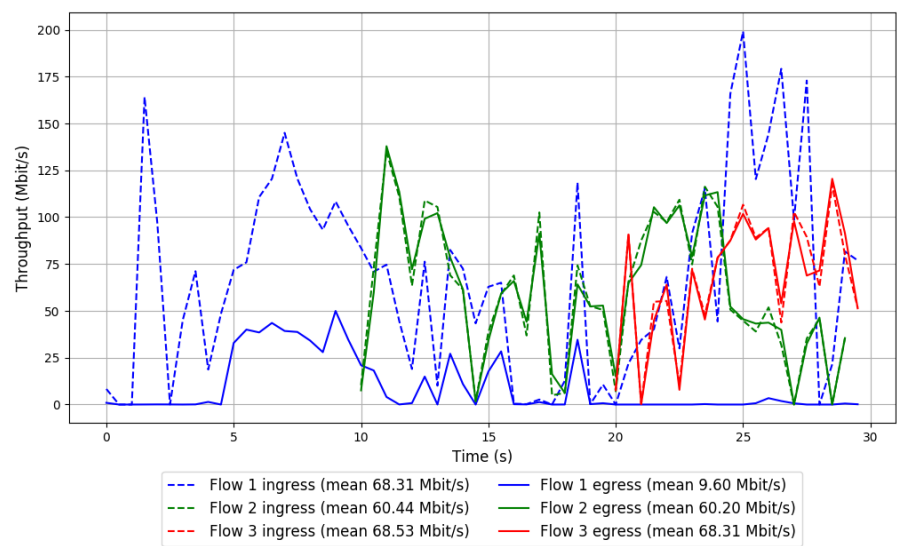
-- Flow 3:

Average throughput: 68.31 Mbit/s

95th percentile per-packet one-way delay: 64.917 ms

Loss rate: 0.47%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2017-08-21 08:05:34

End at: 2017-08-21 08:06:04

# Below is generated by plot.py at 2017-08-21 09:59:23

# Datalink statistics

-- Total of 3 flows:

Average throughput: 12.41 Mbit/s

95th percentile per-packet one-way delay: 54.276 ms

Loss rate: 85.56%

-- Flow 1:

Average throughput: 12.42 Mbit/s

95th percentile per-packet one-way delay: 54.275 ms

Loss rate: 82.87%

-- Flow 2:

Average throughput: 0.28 Mbit/s

95th percentile per-packet one-way delay: 54.521 ms

Loss rate: 98.73%

-- Flow 3:

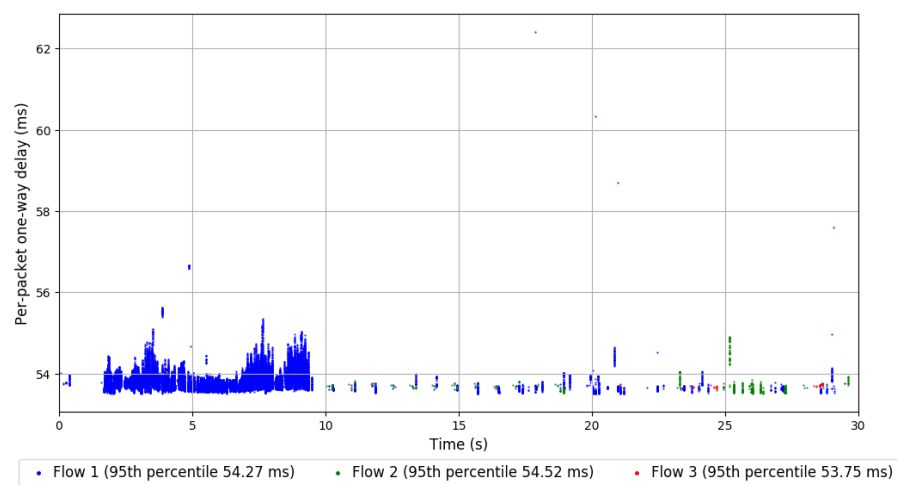
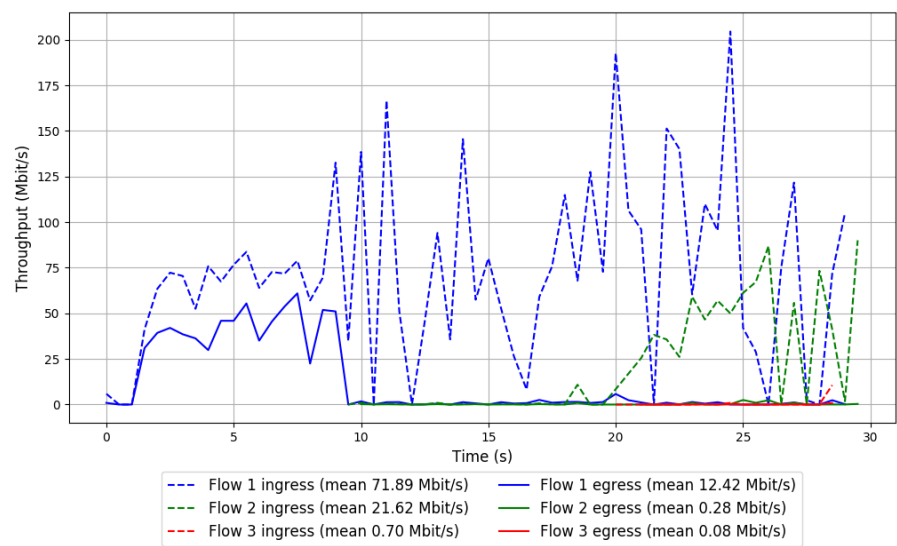
Average throughput: 0.08 Mbit/s

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

Loss rate: 89.92%



Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2017-08-21 08:16:41

End at: 2017-08-21 08:17:11

# Below is generated by plot.py at 2017-08-21 09:59:23

# Datalink statistics

-- Total of 3 flows:

Average throughput: 14.64 Mbit/s

95th percentile per-packet one-way delay: 55.043 ms

Loss rate: 85.74%

-- Flow 1:

Average throughput: 0.70 Mbit/s

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

Loss rate: 98.84%

-- Flow 2:

Average throughput: 6.93 Mbit/s

95th percentile per-packet one-way delay: 54.251 ms

Loss rate: 82.39%

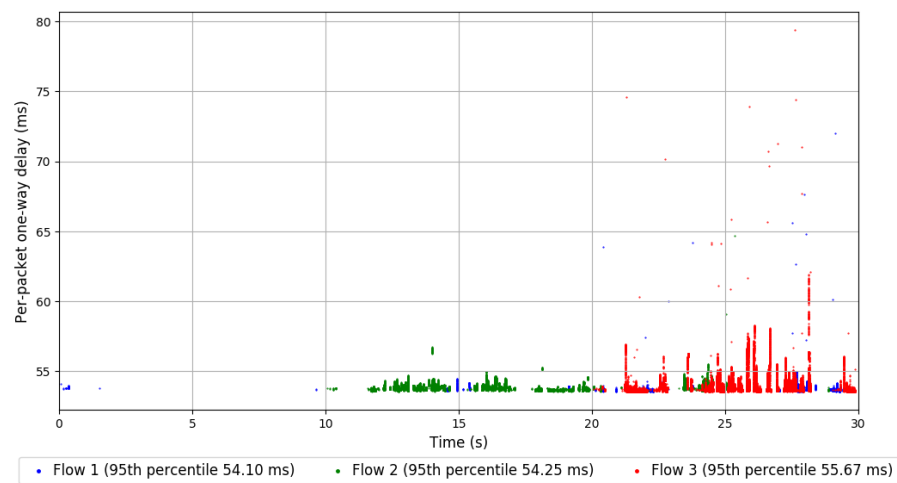
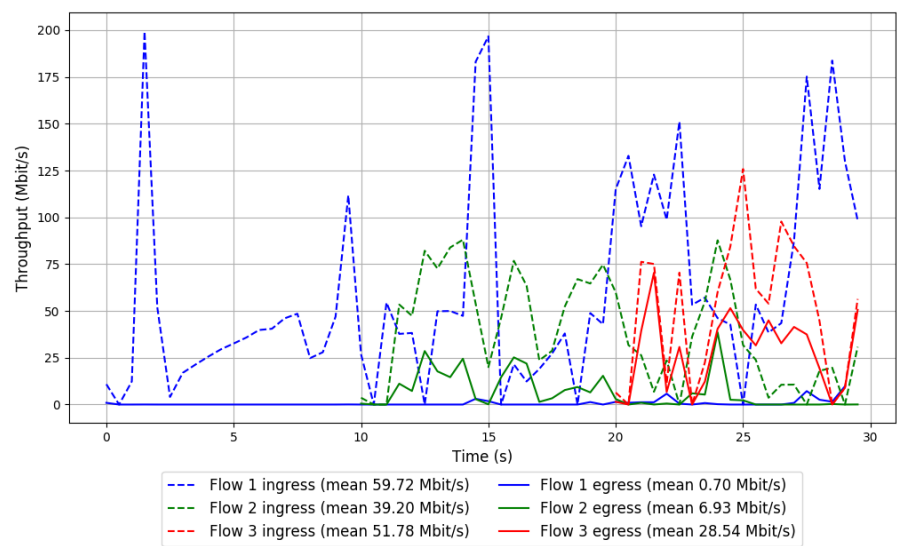
-- Flow 3:

Average throughput: 28.54 Mbit/s

95th percentile per-packet one-way delay: 55.670 ms

Loss rate: 44.91%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2017-08-21 08:27:31

End at: 2017-08-21 08:28:01

# Below is generated by plot.py at 2017-08-21 09:59:34

# Datalink statistics

-- Total of 3 flows:

Average throughput: 70.79 Mbit/s

95th percentile per-packet one-way delay: 57.707 ms

Loss rate: 45.64%

-- Flow 1:

Average throughput: 67.44 Mbit/s

95th percentile per-packet one-way delay: 57.812 ms

Loss rate: 38.22%

-- Flow 2:

Average throughput: 4.14 Mbit/s

95th percentile per-packet one-way delay: 54.245 ms

Loss rate: 83.21%

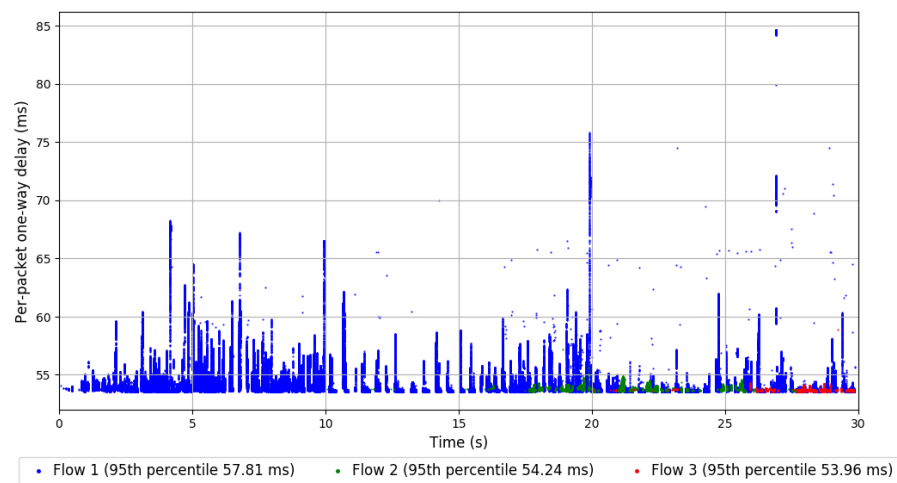
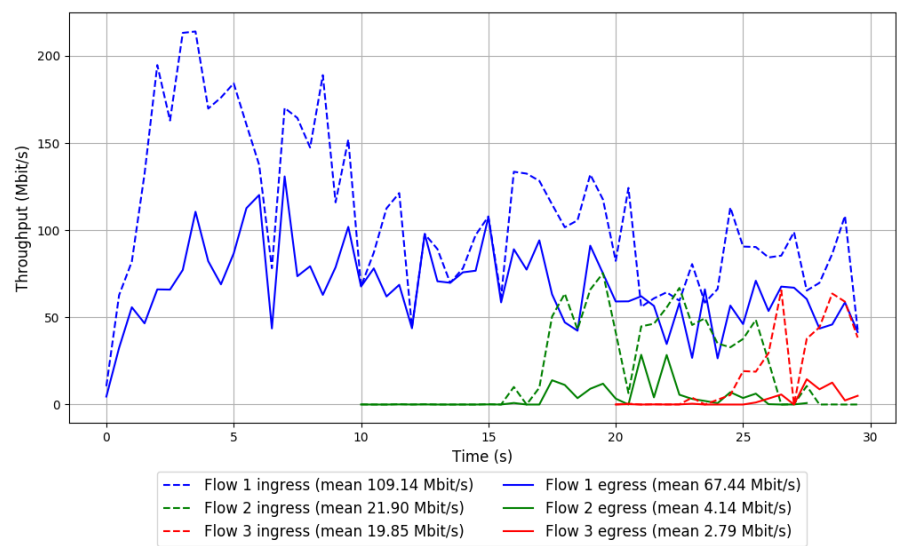
-- Flow 3:

Average throughput: 2.79 Mbit/s

95th percentile per-packet one-way delay: 53.960 ms

Loss rate: 86.01%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2017-08-21 08:38:20

End at: 2017-08-21 08:38:50

# Below is generated by plot.py at 2017-08-21 09:59:41

# Datalink statistics

-- Total of 3 flows:

Average throughput: 77.37 Mbit/s

95th percentile per-packet one-way delay: 56.208 ms

Loss rate: 46.23%

-- Flow 1:

Average throughput: 74.90 Mbit/s

95th percentile per-packet one-way delay: 56.277 ms

Loss rate: 34.71%

-- Flow 2:

Average throughput: 1.43 Mbit/s

95th percentile per-packet one-way delay: 54.175 ms

Loss rate: 88.30%

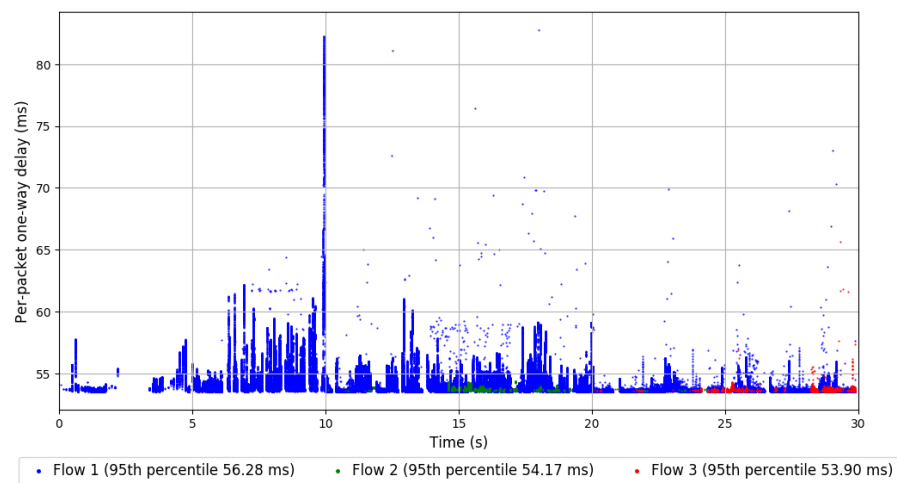
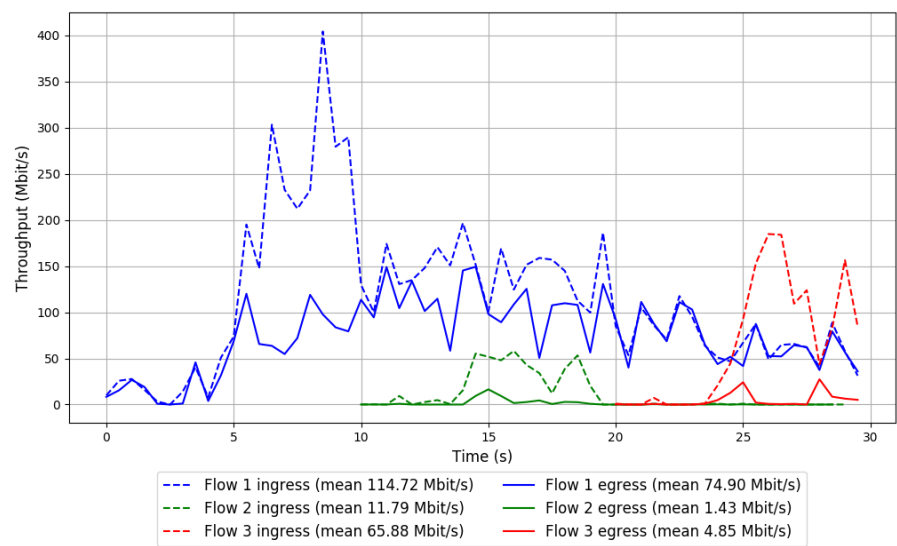
-- Flow 3:

Average throughput: 4.85 Mbit/s

95th percentile per-packet one-way delay: 53.901 ms

Loss rate: 92.64%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2017-08-21 08:49:10

End at: 2017-08-21 08:49:40

# Below is generated by plot.py at 2017-08-21 09:59:59

# Datalink statistics

-- Total of 3 flows:

Average throughput: 113.12 Mbit/s

95th percentile per-packet one-way delay: 65.940 ms

Loss rate: 18.57%

-- Flow 1:

Average throughput: 92.84 Mbit/s

95th percentile per-packet one-way delay: 67.647 ms

Loss rate: 1.64%

-- Flow 2:

Average throughput: 1.82 Mbit/s

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

Loss rate: 95.75%

-- Flow 3:

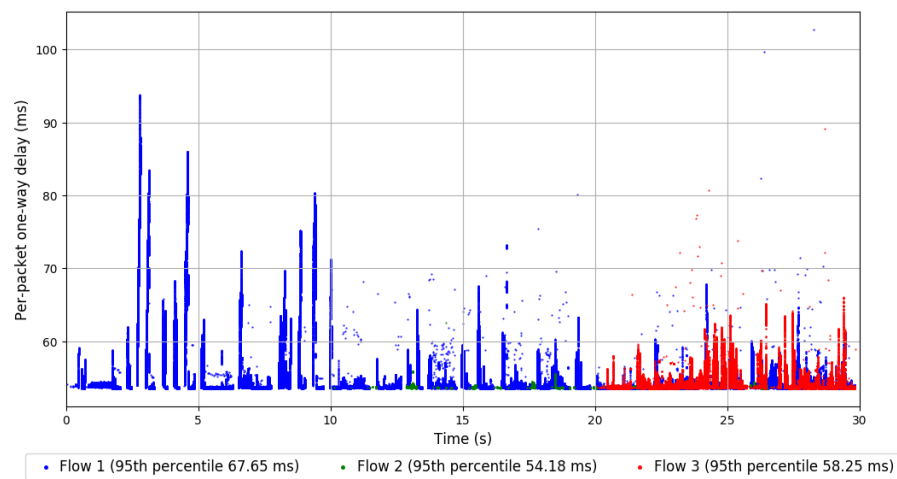
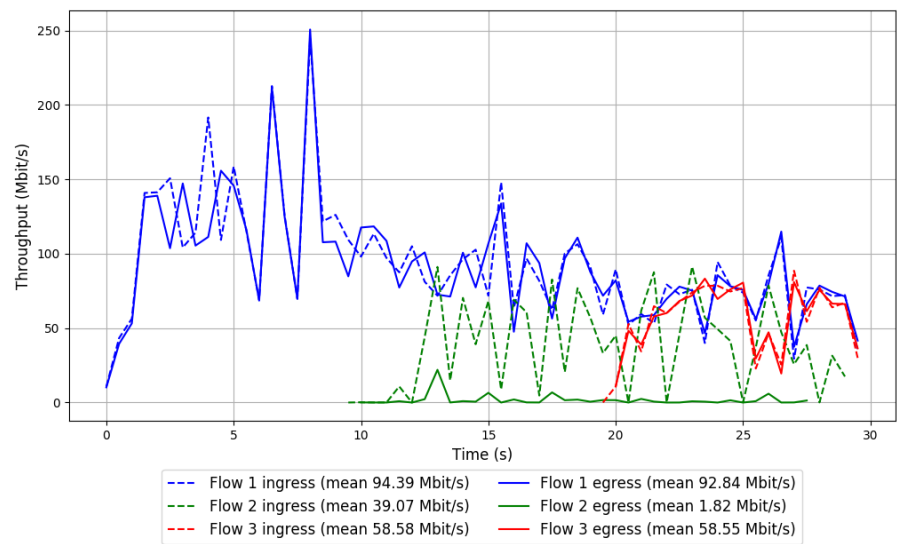
Average throughput: 58.55 Mbit/s

95th percentile per-packet one-way delay: 58.254 ms

Loss rate: 0.00%



Run 10: Report of Verus — Data Link

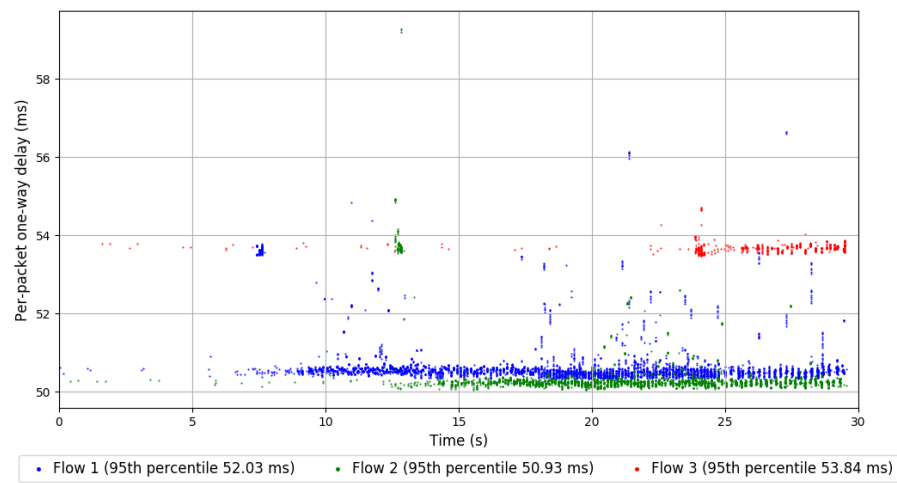
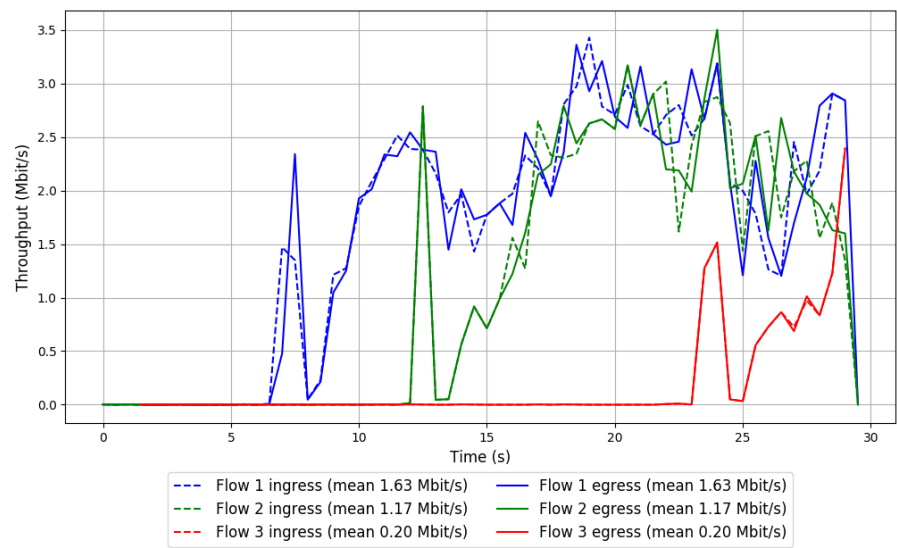


```
Run 1: Statistics of WebRTC media

Start at: 2017-08-21 07:12:10
End at: 2017-08-21 07:12:40

# Below is generated by plot.py at 2017-08-21 09:59:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.97 Mbit/s
95th percentile per-packet one-way delay: 53.652 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.63 Mbit/s
95th percentile per-packet one-way delay: 52.034 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.17 Mbit/s
95th percentile per-packet one-way delay: 50.927 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 53.843 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2017-08-21 07:22:51

End at: 2017-08-21 07:23:21

# Below is generated by plot.py at 2017-08-21 09:59:59

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.63 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.44 Mbit/s

95th percentile per-packet one-way delay: 50.497 ms

Loss rate: 0.00%

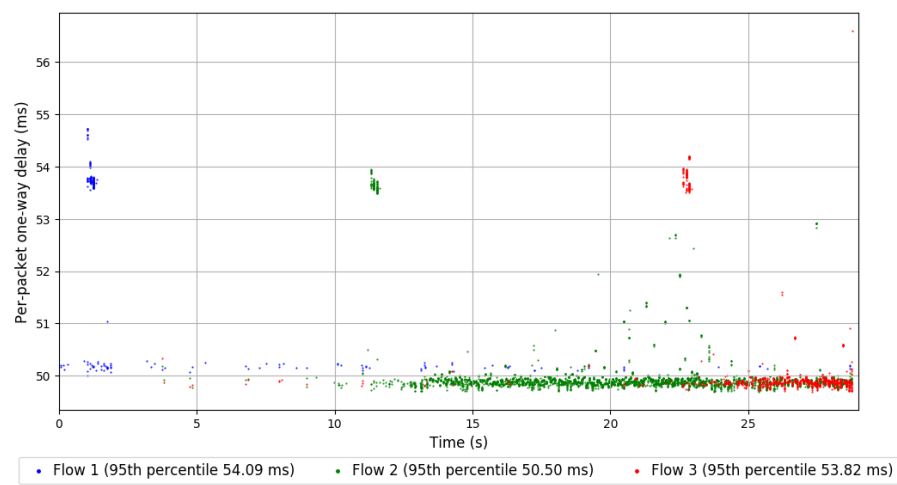
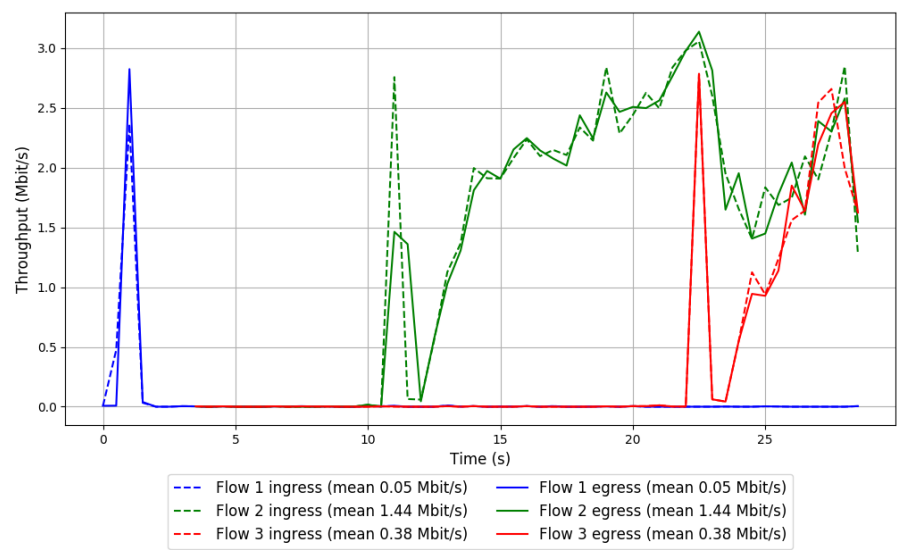
-- Flow 3:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 53.817 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2017-08-21 07:33:39

End at: 2017-08-21 07:34:09

# Below is generated by plot.py at 2017-08-21 09:59:59

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.66 Mbit/s

95th percentile per-packet one-way delay: 53.805 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 53.900 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.50 Mbit/s

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

Loss rate: 0.00%

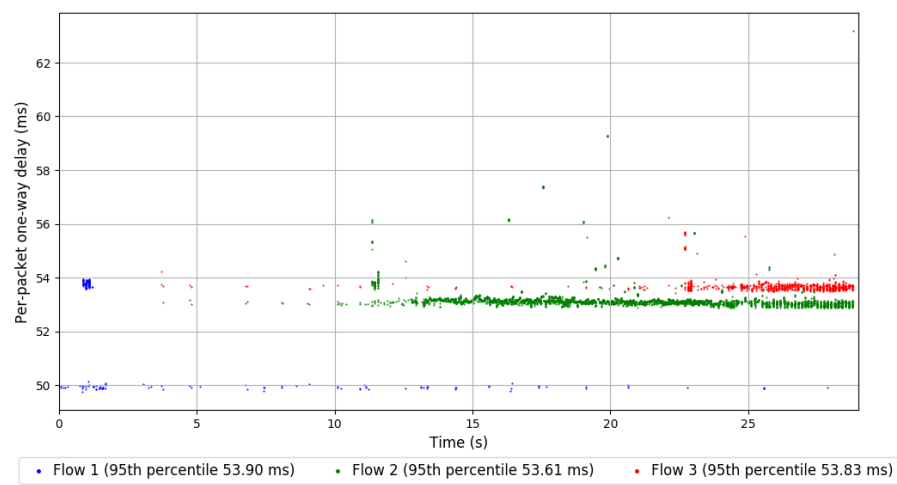
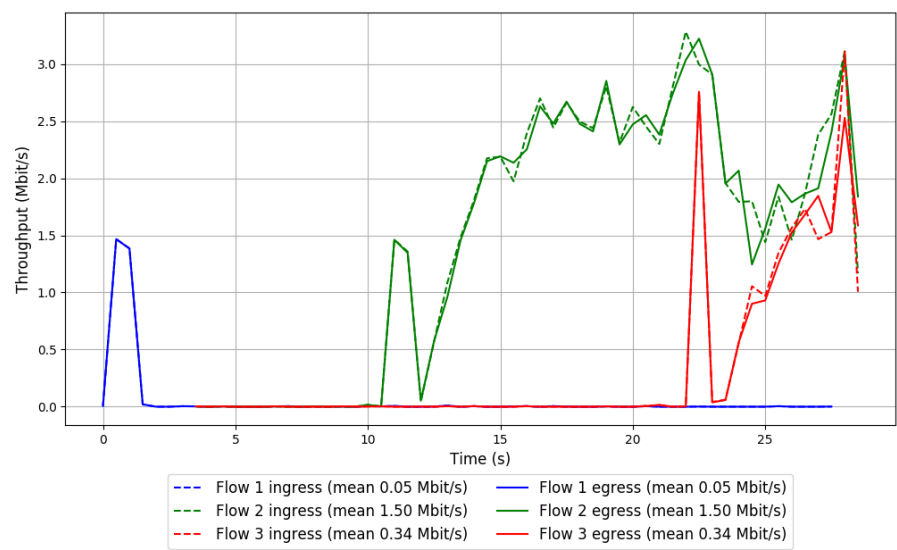
-- Flow 3:

Average throughput: 0.34 Mbit/s

95th percentile per-packet one-way delay: 53.833 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2017-08-21 07:44:47

End at: 2017-08-21 07:45:17

# Below is generated by plot.py at 2017-08-21 09:59:59

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.64 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 53.912 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.44 Mbit/s

95th percentile per-packet one-way delay: 50.717 ms

Loss rate: 0.00%

-- Flow 3:

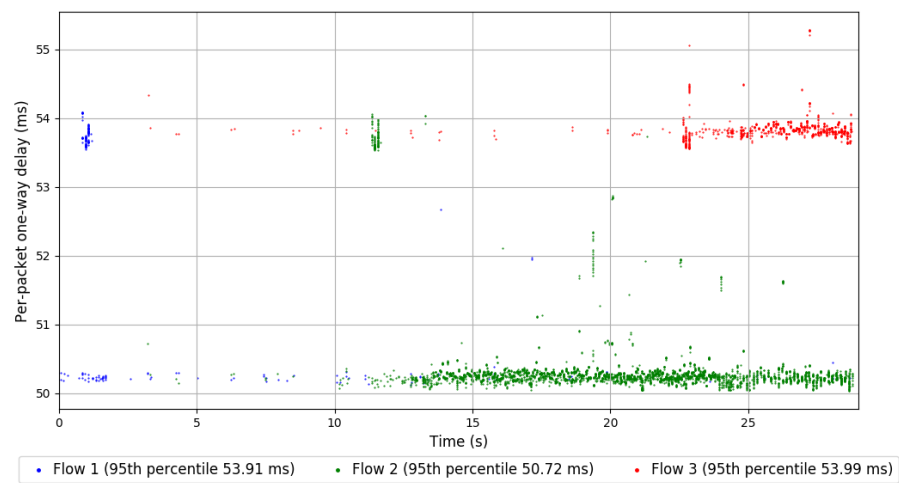
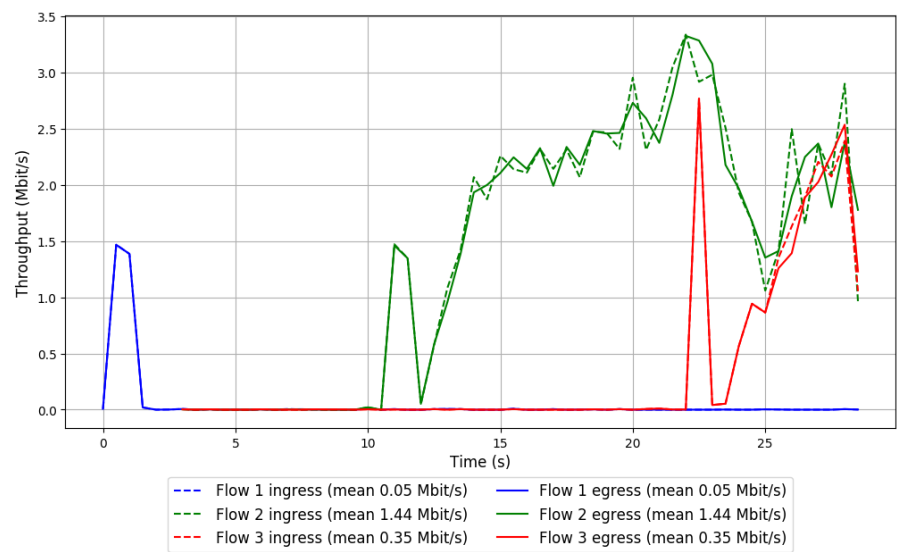
Average throughput: 0.35 Mbit/s

95th percentile per-packet one-way delay: 53.989 ms

Loss rate: 0.00%



Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2017-08-21 07:55:27

End at: 2017-08-21 07:55:57

# Below is generated by plot.py at 2017-08-21 09:59:59

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.54 Mbit/s

95th percentile per-packet one-way delay: 54.101 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 54.039 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.31 Mbit/s

95th percentile per-packet one-way delay: 54.143 ms

Loss rate: 0.00%

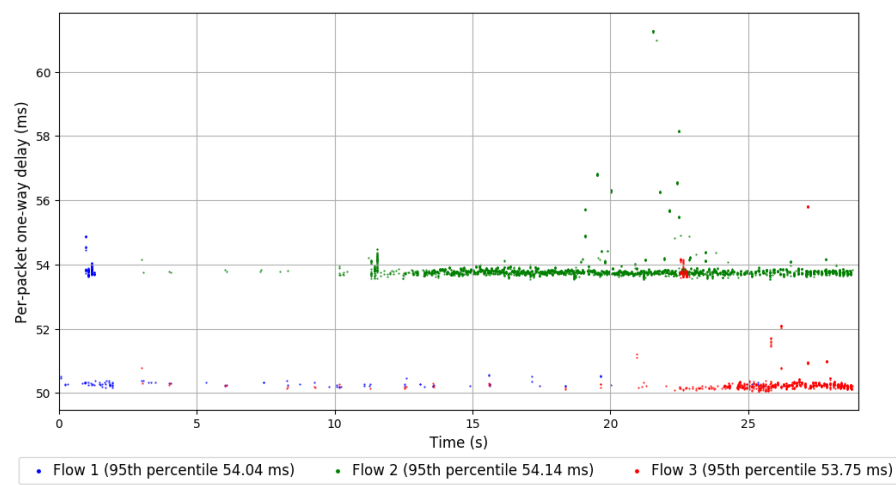
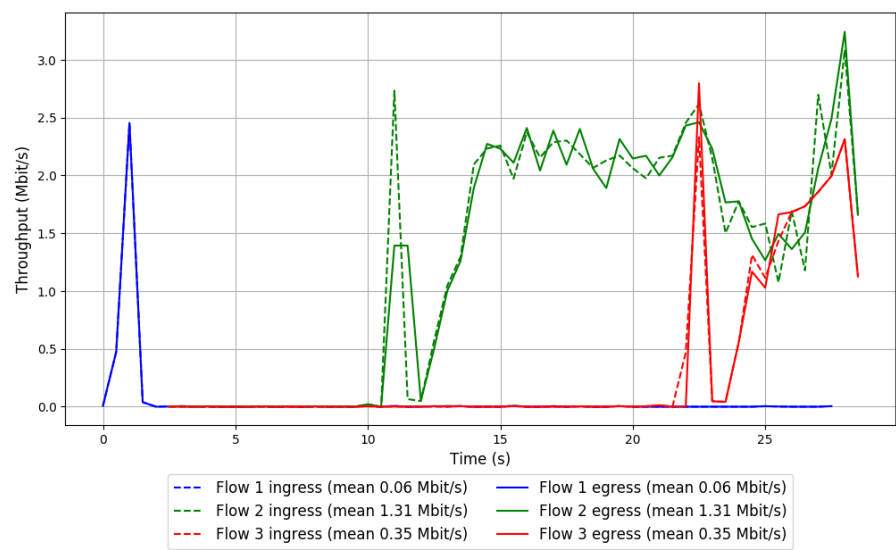
-- Flow 3:

Average throughput: 0.35 Mbit/s

95th percentile per-packet one-way delay: 53.746 ms

Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2017-08-21 08:06:16

End at: 2017-08-21 08:06:46

# Below is generated by plot.py at 2017-08-21 09:59:59

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.65 Mbit/s

95th percentile per-packet one-way delay: 53.864 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 53.915 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.45 Mbit/s

95th percentile per-packet one-way delay: 53.681 ms

Loss rate: 0.00%

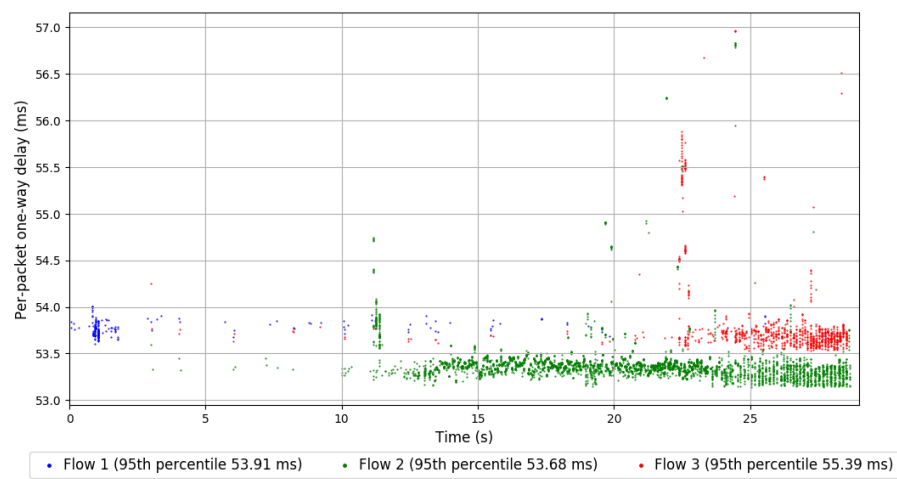
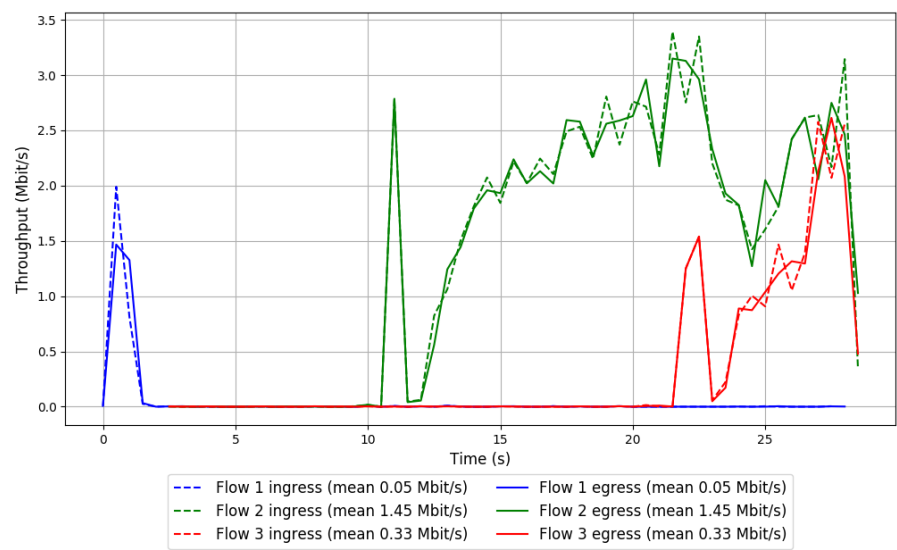
-- Flow 3:

Average throughput: 0.33 Mbit/s

95th percentile per-packet one-way delay: 55.394 ms

Loss rate: 0.00%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2017-08-21 08:17:24

End at: 2017-08-21 08:17:54

# Below is generated by plot.py at 2017-08-21 09:59:59

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.50 Mbit/s

95th percentile per-packet one-way delay: 53.775 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 54.010 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.38 Mbit/s

95th percentile per-packet one-way delay: 52.044 ms

Loss rate: 0.00%

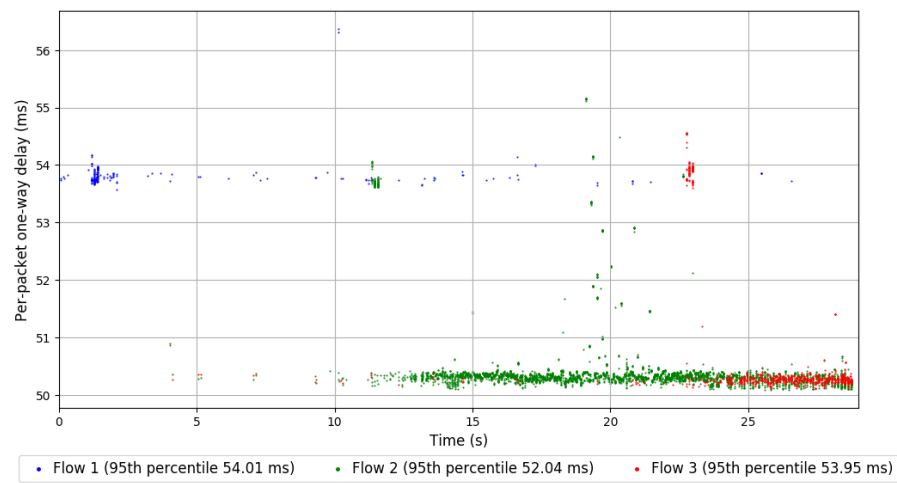
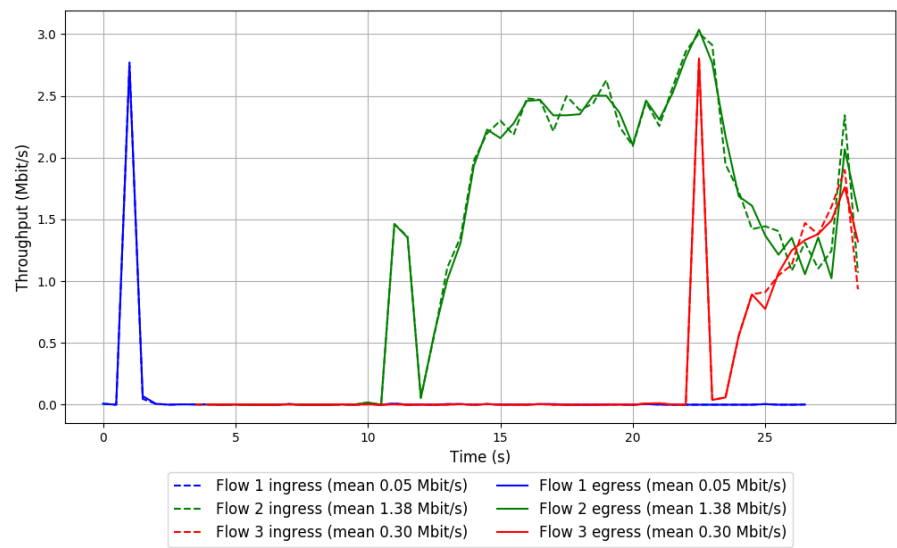
-- Flow 3:

Average throughput: 0.30 Mbit/s

95th percentile per-packet one-way delay: 53.950 ms

Loss rate: 0.00%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2017-08-21 08:28:17

End at: 2017-08-21 08:28:47

# Below is generated by plot.py at 2017-08-21 09:59:59

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.65 Mbit/s

95th percentile per-packet one-way delay: 53.934 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.40 Mbit/s

95th percentile per-packet one-way delay: 53.800 ms

Loss rate: 0.00%

-- Flow 3:

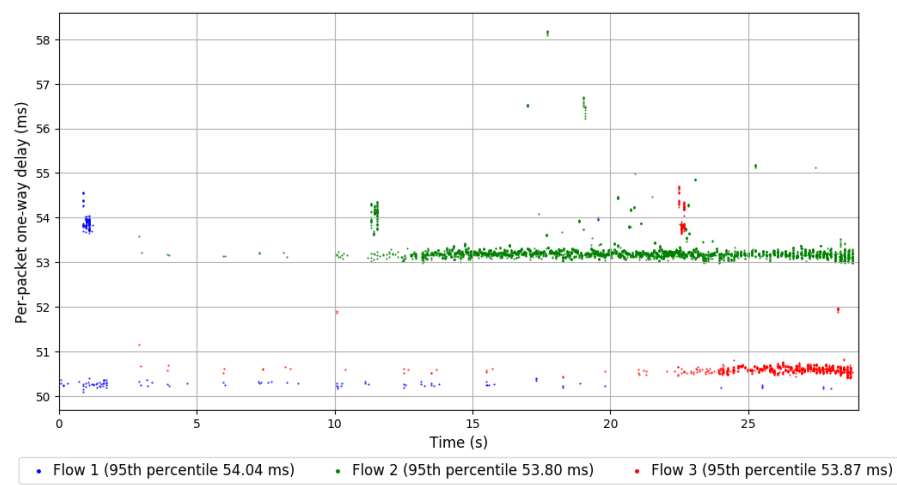
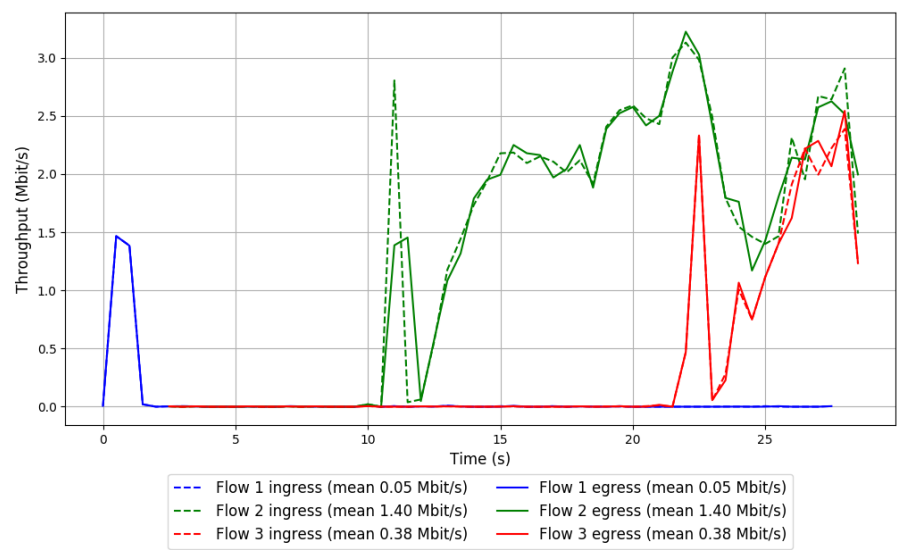
Average throughput: 0.38 Mbit/s

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

Loss rate: 0.00%



Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2017-08-21 08:39:06

End at: 2017-08-21 08:39:36

# Below is generated by plot.py at 2017-08-21 09:59:59

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.70 Mbit/s

95th percentile per-packet one-way delay: 53.760 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 54.085 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.49 Mbit/s

95th percentile per-packet one-way delay: 50.979 ms

Loss rate: 0.00%

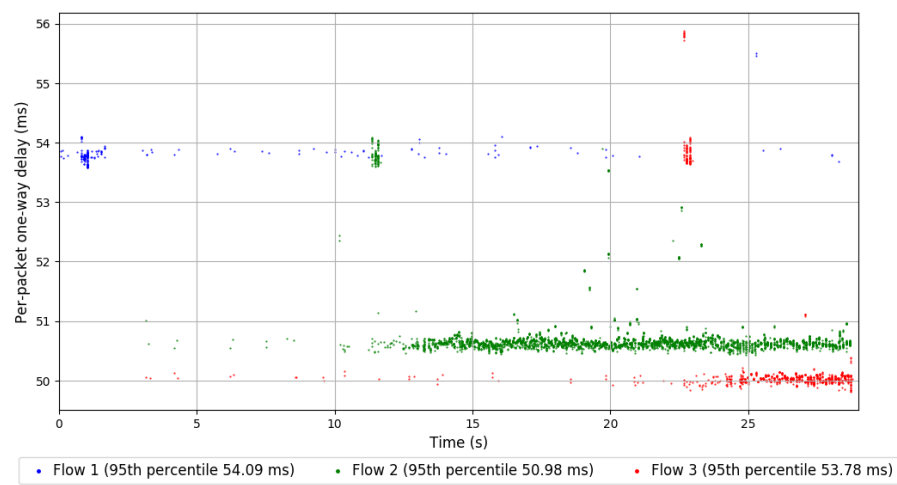
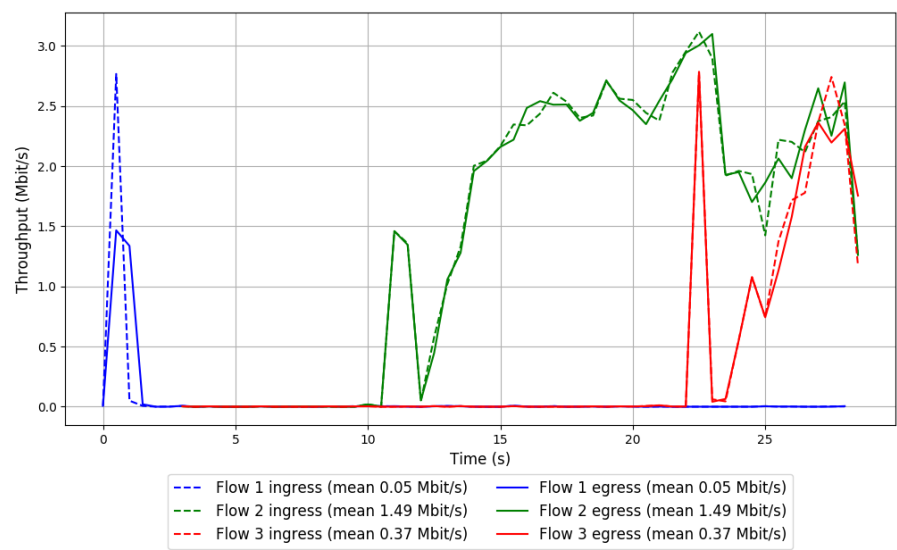
-- Flow 3:

Average throughput: 0.37 Mbit/s

95th percentile per-packet one-way delay: 53.784 ms

Loss rate: 0.00%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2017-08-21 08:49:59

End at: 2017-08-21 08:50:29

# Below is generated by plot.py at 2017-08-21 09:59:59

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.63 Mbit/s

95th percentile per-packet one-way delay: 53.760 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 55.194 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.47 Mbit/s

95th percentile per-packet one-way delay: 51.332 ms

Loss rate: 0.00%

-- Flow 3:

Average throughput: 0.30 Mbit/s

95th percentile per-packet one-way delay: 53.840 ms

Loss rate: 0.00%

Run 10: Report of WebRTC media — Data Link

